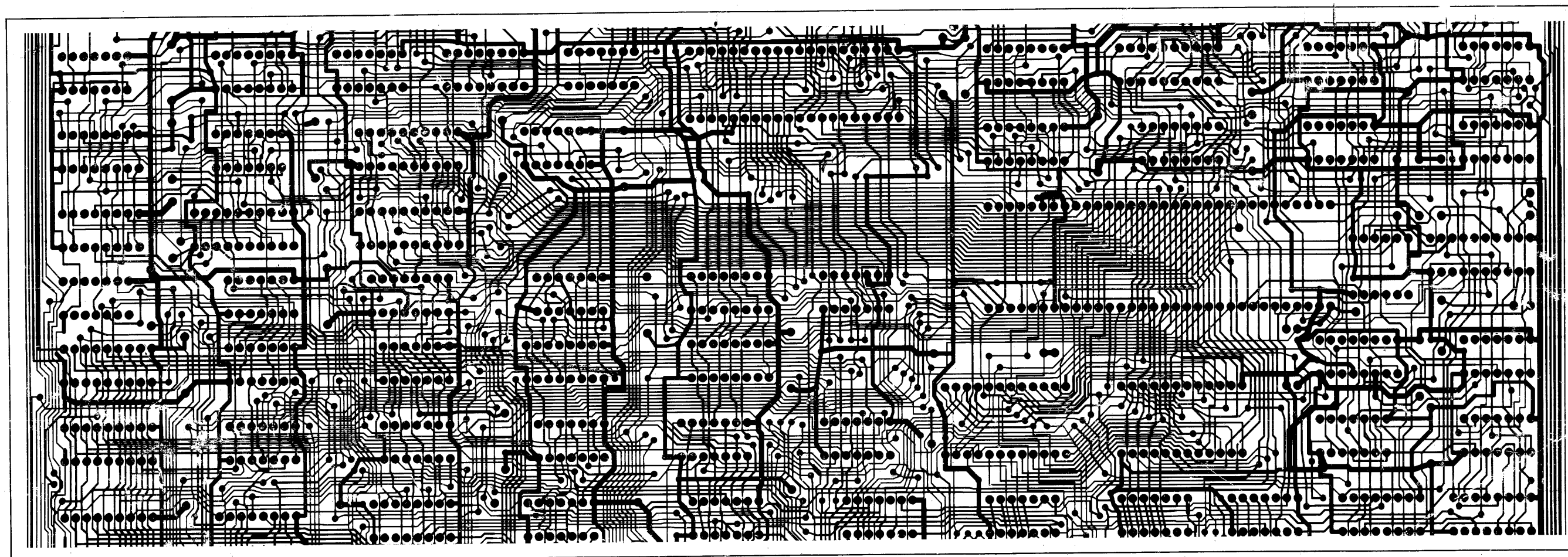


948202-0001 D000  
948243-0002 Lamp  
(L-378)

# Model 979A Tape Transport Subsystem Drawings

0233015-0050 K1

979  
948272-0001 FIELD



Part No. 949613-9702 \*A  
15 April 1980

# TEXAS INSTRUMENTS

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### MANUAL REVISION HISTORY

Model 979A Tape Transport and Subsystem Drawings (949613-9702)

Original Issue ..... 15 March 1978  
Revised ..... 15 February 1979 (ECN 419631)  
Revised ..... 15 April 1980 (MCR 000349)

Total number of pages in this publication is 190.

979A

referenced  
to LED  
array ground.

TOP	COLOR	OPEN	BLOCKED	
SUPPLY TOP	BROWN	+4.8	-5.8	Q1
SUPPLY MIDDLE	RED	↓	↓	Q2
SUPPLY BOTTOM	ORANGE	↓	↓	Q3
	GRAY	+5.0	+5.0	+ Supply
	<del>XXXXX</del>	=====	=====	
	<del>XXXXX</del>	=====	=====	
TAIL SAFE	YELLOW	+4.8	-5.8	Q4
TAKE-UP "BOTTOM"	GREEN	+ .74	-5.8	Q5
TAKE-UP MIDDLE	BLUE	+4.8	- .6	Q6
TAKE-UP "TOP"	PURPLE	+4.8	-5.8	Q7

BOTTOM



## PREFACE

This manual should be used as a supplement to the Model 979A *Tape Transport Subsystem Manual*, part number 949613-9701. The Model 979A Tape Transport and Field Tester drawings included in this manual are presented in two sections:

- 1 Assembly Drawings and Lists of Materials
- 2 Logic, Schematic, and Wiring Diagrams

Additional information related to the use of the tape transport and controllers may be found in the following documents:

Title	Part Number
<i>Model 960/980 Computers Direct Memory Access Channel Manual</i>	966312-9701
<i>Model 960/980 Computers Direct Memory Access Channel Controller Manual</i>	966312-9702
<i>Block Transfer Controller Maintenance Manual</i>	240802-9701
<i>Model 990 Transport Interface Unit Maintenance Manual</i>	240976-9701
<i>Model 960/980 Computer 1600-bpi Transport Command Controller Maintenance Manual</i>	941689-9701
<i>Model 979 Tape Transport Controller Maintenance Manual</i>	240801-9701
<i>Model 990 Computer Model 979A Magnetic Tape System Installation and Operation</i>	946229-9701
<i>Model 979A Tape Transport Installation and Operation</i>	949612-9701
<i>Model 979 Tape Transport Maintenance Manual</i>	216318-9701
<i>Model 990/10 Computer System Hardware Reference Manual</i>	945417-9701
<i>Model 990/10 Computer System Depot Maintenance Manual</i>	945404-9701
<i>Model 990 Computer Family Maintenance Drawings Volume I — Processors</i>	945421-9701
<i>Model 990 Computer Family Maintenance Drawings Volume II — Peripherals</i>	945421-9702
<i>Model 990 Computer Diagnostics Handbook</i>	945400-9701
<i>PD, TAPTST</i>	945437-9901



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AD = Assembly Drawing  
LM = List of Materials  
SI = Supplementary Information

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SD = Schematic Diagram  
LD = Logic Diagram  
WD = Wiring Diagram





949613-9702

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SECTION 1. ASSEMBLY DRAWINGS AND  
LISTS OF MATERIALS FOR THE MODEL 979A  
TAPE TRANSPORT AND FIELD TESTER







TEXAS INSTRUMENTS INCORPORATED DATE 09/27/78 LIST OF MATERIAL PAGE 1 of 4 PART NUMBER LM 1216516-0001 REV L

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00001.000	EA		0216536-0001	PRINTED WIRING BOARD DATA	
0002	00001.000	EA		0413277-0007	SWITCH, PUSH, MOM-LOCKING, PURPLE	SEA -S-200(PURPLE)
0003	00001.000	EA		0413277-0011	SWITCH, PUSH, MOM-LOCKING, WHITE	SEA -S-100(NATURAL)
0004	00001.000	EA		0227224-7732	NETWORK SWITCHING OPERATIONAL AMP	-SN72702N
0004A					Z1,Z7	
0005	00002.000	EA		0208192-0018	NETWORK SWITCHING	
0005A					Z3,Z5	
0006	00001.000	EA		0227224-7711	NETWORK SWITCHING	-SN72711N
0006A					Z2,Z6	
0007	00001.000	EA		0227222-7405	NETWORK SWITCHING	
0007A					Z4	
0008	00002.000	EA		0472947-0012	CAP FIX MICA 500V 24.0 PF 5 X	UPL -C405E240J00
0008A					C3,C34	
0009	00002.000	EA		0472929-0047	CAP FIX CERAMIC .001 UF 100 200V	UPL -M49314/31-1197
0009A					C4,C19	
0010	00004.000	EA		0414051-0102	CAP FIX FILM FOLI .001 UF 5% 200VDC	TRW - 4630H
0010A					C20,C10,C24,C38	
0011	00001.000	EA		0414051-0103	CAP FIX CERAMIC .05 MF 20V X R07-20R	CAL - 0423-503
0011A					C7,C13	
0012	00002.000	EA		0053073-0018	CAP FIX .010 MF 5 X 100V MYLAR FOLI	TRW - 4630H
0012A						
CARD ASSY, PE DATA						
8979						

TEXAS INSTRUMENTS INCORPORATED DATE 09/27/78 LIST OF MATERIAL PAGE 2 of 4 PART NUMBER LM 1216516-0001 REV L

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0012A					C21,C22	
0013	00021.000	EA		0517756-0002	CAP FIX CERAMIC .02 MF 20V 80X 25 VOLT	CAL - 211J6JE2037A
0013A					C6,C5,C2,C10,C14,C17,C14	
0013B					C16,C15,C15,C33,C40,C37	
0013C					C23,C24,C31,C33,C32,C29	
0013D					C74,C42	
0014	00006.000	EA		0472924-0014	CAP FIX TANT SOLID 15 MF 10 X 20 VOL	UPL -489333/1-2249
0014A					C7,C11,C12,C35,C27,C28	
0015	00002.000	EA		0539370-0240	RES FIX FILM 47.5 OHM 1/4 .25 WATT	COR - N455
0015A					R4,R41	
0016	00004.000	EA		0472947-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM	ROH - R-53
0016A					R25,R24,R66,R65	
0017	00001.000	EA		0472974-0131	RES FIX COMP 1.0K OHM 5% .25 WATT	QPI - 4032010245
0017A					R11,R12	
0018	00013.000	EA		0519473-0451	RES FIX FILM 4.7K OHM 1/4 .25 WATT	COR - N4553-100PPH/C
0018A					R14,R14,R11,R13,R19,R10,R15	
0018B					R43,R42,R41	
0019	00004.000	EA		0472946-0033	RES FIX 47.5 OHM 5% .25 W CARBON FILM	ROH - R-25
0019A					R12,R17,R14,R19	
0020	00015.000	EA		0472946-0053	RES FIX 33 OHM 5% .25 W CARBON FILM	ROH - R-25
CARD ASSY, PE DATA						

TEXAS INSTRUMENTS INCORPORATED DATE 09/27/78 LIST OF MATERIAL PAGE 3 of 4 PART NUMBER LM 1216516-0001 REV L

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0020A					R26,R44,R62,R65,R66	
0021	00004.000	EA		0472946-0057	RES FIX 470 OHM 5% .25 W CARBON FILM	ROH - R-25
0021A					R33,R37,R41,R44,R52,R58,R90	
0021B					R92	
0022	00002.000	EA		0472946-0061	RES FIX 680 OHM 5% .25 W CARBON FILM	ROH - R-25
0022A					R32,R57	
0023	00014.000	EA		0472946-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM	ROH - R-25
0023A					R2,R22,R28,R23,R18,R19,R17	
0023B					R20,R34,R75,R61,R59,R63,R63	
0023C					R69,R71,R79,R55	
0024	00002.000	EA		0472946-0071	RES FIX 1.0K OHM 5% .25 W CARBON FILM	ROH - R-25
0024A					R35,R54	
0025	00010.000	EA		0472946-0075	RES FIX 2.7K OHM 5% .25 W CARBON FILM	ROH - R-25
0025A					R6,R5,R21,R40,R39,R78,R77	
0025B					R45,R50,R67	
0026	00002.000	EA		0472946-0079	RES FIX 3.0K OHM 5% .25 W CARBON FILM	ROH - R-25
0026A					R36,R53	
0027	00004.000	EA		0472946-0081	RES FIX 4.7K OHM 5% .25 W CARBON FILM	ROH - R-25
0027A					R33,R42,R47,R56	
0028	00001.000	EA		0472946-0091	RES FIX 12 K OHM 5% .25 W CARBON FILM	ROH - R-25
CARD ASSY, PE DATA						

TEXAS INSTRUMENTS INCORPORATED DATE 09/27/78 LIST OF MATERIAL PAGE 4 of 4 PART NUMBER LM 1216516-0001 REV L

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0028A					R34,R51	
0029	00001.000	EA		0472946-0100	RES FIX 30 K OHM 5% .25 W CARBON FILM	ROH - R-25
0029A					R3,R4,R27,R01,R73,R74	
0030	00002.000	EA		0472946-0107	RES FIX 56 K OHM 5% .25 W CARBON FILM	ROH - R-25
0030A					R1,R76	
0031	00004.000	EA		0472946-0084	RES FIX 9.1K OHM 5% .25 W CARBON FILM	ROH - R-25
0031A					R15,R16,R17,R18	
0032	00002.000	EA		0472946-0108	RES FIX 62 K OHM 5% .25 W CARBON FILM	ROH - R-25
0032A					R25,R61	
0033	00001.000	EA		0472946-0063	RES FIX 470 OHM 5% .25 W CARBON FILM	ROH - R-25
0033A					R43	
0034	00004.000	EA		0433523-0001	TRANSISTOR 4572407 PNP SILICON	TI - 4572907
0034A					Q5,Q6,Q17,Q18	
0035	00012.000	EA		0472946-0001	TRANSISTOR 4572222 NPN SILICON	TI - 4572222
0035A					Q7,Q9,Q13,Q11,Q14,Q4,Q16,Q19	
0035B					Q12,Q15,Q14,Q15	
0037	00001.000	EA		0434108-0046	EXT NPN EPITAXIAL PLANAR SILICON	TI - 115-86
0037A					Q1,Q22	
0038	00002.000	EA		0472946-0032	TRANSISTOR 2N2222A NPN GEN PURP 5M TO-18	TI - 2N2222A
0038A					Q2,Q21	
CARD ASSY, PE DATA						



949613-9702

PART NUMBER		QUANTITY PER ASSEMBLY	UNIT OF QUOTE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0039		00002.000	FA		0972955-0001	XSTR 2N2369A, NPN, HIGH SPEED SW, 10-18	NOT - 2N2369A
0039A						Q3, Q20	
0042	REF		FA		0216610-9901	CHART SPEED SELECTION PF	
0043	REF		FA		0216937-9901	DIAGRAM, ELTN SCHEMATIC-PE DATA	
0044		00001.000	FA		0418356-2244	CAP FIX 47 MF 6 V 10% TANTALUM SOLID	QPL -43933/1-2244
0044A						C1	
0045		00002.000	FA		0232132-0032	INDUCTOR 100UH ± M 35%	MEP -9210-76
0045A						L1, L2	
0046		00002.000	FA		0572427-0051	CAP FIX MICA 100V 10% PF 5%	QPL -LM05F102J04
0046A						C4, C41	
0047		00002.000	FA		0972446-0049	RES FIX 220 OHM 5% ±.25 W CARBON FILM	R0H - R-75
0047A						R4, R41	
0048		00002.000	FA		0972929-0347	CAP FIX CERAMIC 270 PF 10% 200 V	QPL -43931+/31-1387
0048A						C43, C44	
0049	REF		FA		0947010-9901	TEST PROC., P.F. CONTROL AND DATA CARDS	

DATE	DATE	DATE	DATE	DATE	TITLE
09/10/78	09/10/78	09/10/78	09/10/78	09/10/78	CARD ASSY, PE DATA
DATE	DATE	DATE	DATE	DATE	PROJECT NO.

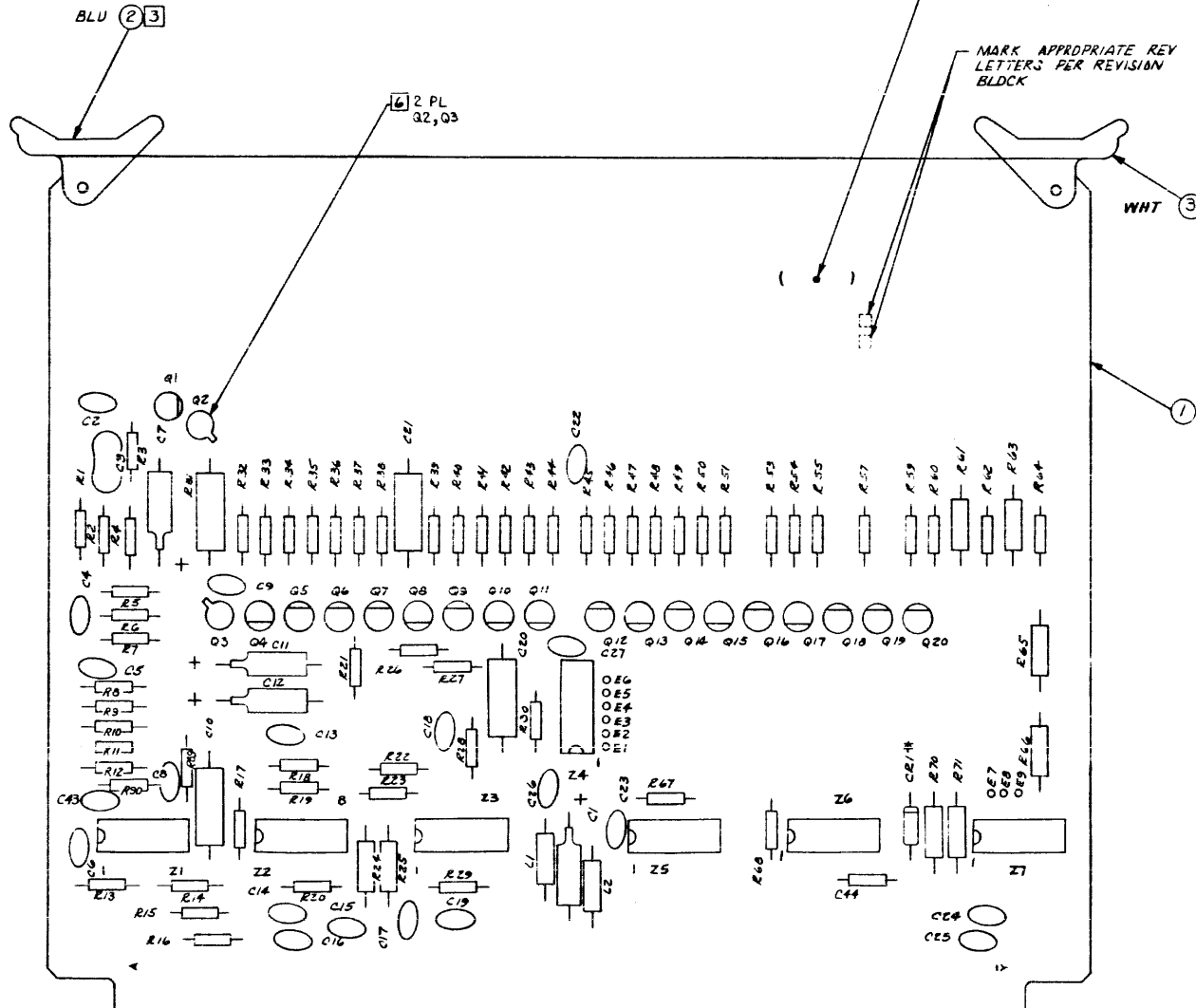
  

PART NUMBER	REV
LM 0216536-0001	L1



NOTES: UNLESS OTHERWISE SPECIFIED:

- 1. DO NOT CLINCH COMPONENTS LEADS
- 2. MASK ALL CONNECTOR FINGERS ON BOTH SIDES OF BOARD WHEN SOLDERING TO PREVENT SOLDER FROM WICKING DOWN CONNECTOR FINGERS
- 3. EJECTORS (ITEM 2 AND 3) ARE TO BE INSTALLED AFTER PROCESS 1
- 4. MAXIMUM COMPONENT HEIGHT FROM COMPONENT SIDE OF BOARD IS 0.40
- 5. FOR SPEEDS GREATER THAN 37.5 IPS, R3, R4, R33 AND C4 SHALL BE CHANGED AT SYSTEM TEST PER ITEM 54 AND 979 MAINTENANCE MANUAL 216318-9701
- 6. ITEMS 46 AND 51 ARE TO BE MECHANICALLY MACHINE PREPPED PRIOR TO INSERTION



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
E	CM422617 (B) 3 THRU 12 (1) RE-PLACES REV D WITH CHANGE (2) REV LM AND COMPONENT ASSY PICTORIAL PER EXTENSIVE ENGR CHANGES	1-15-77	[Signature]
F	CM417150 (E) 3 THRU 12 (1) UPDATED REV REV BLK	1-14-77	[Signature]
G	CM424344 (B) 3 THRU 12 (1) DELETED BALLOON 52, WAS 20 PLACES Q1 THRU Q20 (2) ADDED 52 2 PLACES Q2 Q3 (3) ADDED ITEM 62 (4) UPDATED REV LEVEL BLOCK	5-12-77	[Signature]
H	CM442617 (C) 3 THRU 12 (1) ON LM DELETED ITEM 52 (2) ADDED NOTE 5 (3) 211D-6 PLACED WAS BALLOON 52 (4) DELETED BREAK OUT PART ON Q2 (5) UPDATED REV LEVEL BLOCK	3-8-78	[Signature]
J	CM440472 (C) 3 THRU 12 (1) ADDED TEST PROCEDURE 937010-9901 TO REV LEVEL BLOCK (2) ON LM ADDED ITEM 63 (3) UPDATED REV LEVEL BLOCK	10-9-78	[Signature]

REVISION LEVEL

TEST PROCEDURE	937010-9901								
PWB	216541			F	G	H	H		
SCHEMATIC DIAGRAM FOR -0001 ASSY (216540-9901)		B	C	D	E	F	F	G	G
ASSEMBLY	216539	A	B	C	D	E	F	G	H

PROCESSES:  
 1. WAVE SOLDER PER F-124, METHOD 2 AND (OR) F-127, METHOD 1  
 2. MARK PER F-100, METHOD II CLASS 1 HEIGHT .03, COLOR BLK

SEQ NO	IDENT	E SPEC	NO	ADDITIONAL	NOTES

QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION	NOTES

PARTS LIST		DATE	
DATE	BY	DATE	BY
1-14-77	[Signature]	1-16-77	[Signature]
1-17-77	[Signature]	1-17-77	[Signature]
1-17-77	[Signature]	1-17-77	[Signature]
1-17-77	[Signature]	1-17-77	[Signature]

UNLESS OTHERWISE SPECIFIED:	
DIMENSIONS ARE IN INCHES	
TOLERANCES - ANGLES ±1°	
3 PLACE DECIMALS ± 0.010	
2 PLACE DECIMALS ± 0.02	
INTERPRET DRAWING PER Y14.1-1963	
REMOVE ALL BURRS AND SHARP EDGES	
CONCENTRICITY MACHINED DIAMETERS 0.010 FIM	
DIMENSIONAL LIMITS APPLY BEFORE PROCESSES	
PARENTHESES INDIC FOR REF ONLY	

HOLE TOLERANCE	
0.13 - 0.04	0.25 - 0.06
THRU - 0.01	THRU - 0.01
1.25 - 0.01	2.50 - 0.01
5.01 - 0.08	7.51 - 0.10
THRU - 0.01	THRU - 0.01
7.50 - 0.01	10.00 - 0.01

216361	0979		
NEXT ASSY	USED ON		
APPLICATION			

DATE	BY	DATE	BY
1-17-77	[Signature]	1-17-77	[Signature]

DATE	BY	DATE	BY
1-17-77	[Signature]	1-17-77	[Signature]

DATE	BY	DATE	BY
1-17-77	[Signature]	1-17-77	[Signature]

DATE	BY	DATE	BY
1-17-77	[Signature]	1-17-77	[Signature]

TEXAS INSTRUMENTS  
 INCORPORATED  
 Dallas, Texas

PE CONTROL

216539

D96214

216539



949613-9702

**TEXAS INSTRUMENTS INCORPORATED** LIST OF MATERIAL PAGE 1 of 4  
DATE 09/27/78 PART NUMBER LM0216539-0001 REV J

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	0001.000	EA		0216541-0001	CARD, PE-PE CONTROL	
0002	00001.000	EA		0413777-0011	JECTOR, PE, NON-LOCKING, BLUE	SCA -S-2031P, BLUE
0003	00001.000	EA		0413777-0001	JECTOR, PE, NON-LOCKING, WHITE	SCA -S-2031NATURAL
0004	00001.000	EA		0222224-7702	NETWORK SN72702N OPERATIONAL AMP	-SN72702N
0004A					Z1	
0005	00001.000	EA		0204102-0014	NETWORK SN 72710N	
0005A					Z3	
0006	00001.000	EA		0222225-7211	NETWORK SN72711N	-SN72711N
0006A					Z2	
0007	00001.000	EA		0222222-7400	NETWORK SN7400N	-SN7400N
0007A					Z5	
0008	00001.000	EA		0222222-7402	NETWORK SN7402N	TI- -SN7402N
0008A					Z7	
0009	00001.000	EA		0222222-7405	NETWORK SN7405N	
0009A					Z4, Z6	
0010	00001.000	EA		0472477-0012	CAP FIX MICA 500V 24.0 PF 5%	QPL -GND5F240JUD
0010A					C3	
0011	00001.000	EA		0472429-00397	CAP FIX CERAMIC .001 UF 10% 200V	QPL -M39J14701-1397
0011A					L8	
0012	00001.000	EA		0419351-0102	CAP FIX FILM FOIL .001 UF 5% 200VDC	TRW - 663JM
0012A						
0013	00001.000	EA		0419351-0102	CAP FIX FILM FOIL .001 UF 5% 200VDC	TRW - 663JM
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE APPROVED DATE APPD PROJECT ENGINEER DATE RELEASE DATE PROJECT NO						
CARD ASSY, PE CONTROL LM0216539-0001 REV J 8979						

**TEXAS INSTRUMENTS INCORPORATED** LIST OF MATERIAL PAGE 2 of 4  
DATE 09/27/78 PART NUMBER LM0216539-0001 REV J

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0013A					C10, C20	
0014	00001.000	EA		0419359-0003	CAP FIX CERAMIC .05 MF 20V + 40/-20%	CAL - JK70-503
0014A					C9	
0015	00016.000	EA		0532736-0002	CAP FIX CERAMIC .02 MF 20/80% 25 VOLT	CAL - 200J60F2032A
0015A					C7, C5, C6, C13 THRU C15, C22	
0015B					THRU C27	
0016	00003.000	EA		0472924-0014	CAP FIX TANT SOLID 15 MFD 10% 20 VOLT	QPL -M39J3571-2289
0016A					C7, C11, C12	
0017	00001.000	EA		0472942-0001	DIODE, 1N914B SWITCHING 75V PIV 75MA RMS	TI - 1N914B
0017A					CK1	
0018	00001.000	EA		0472978-0101	RES FIX COMP 1.0 M 1.0 K OHMS 5%	QPL -RC320102J5
0018A					R31	
0019	00005.000	EA		0539370-0452	RES FIX FILM 4.99K OHM 1% .25 WATT	COP -NA553-103PPM/C
0019A					R7, R10, R11, R13, R14	
0020	00007.000	EA		0472447-0003	RES FIX 330 OHM 5% .5 W CARBON FILM	ROH - R-50
0020A					R70, R71	
0021	00002.000	EA		0472447-0005	RES FIX 1.0K OHM 5% .5 W CARBON FILM	ROH - R-50
0021A					R24, R25	
0022	00001.000	EA		0472446-0017	RES FIX 10.0 OHM 5% .25 W CARBON FILM	ROH - R-25
0022A					R46	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE APPROVED DATE APPD PROJECT ENGINEER DATE RELEASE DATE PROJECT NO						
CARD ASSY, PE CONTROL LM0216539-0001 REV J						

**TEXAS INSTRUMENTS INCORPORATED** LIST OF MATERIAL PAGE 3 of 4  
DATE 09/27/78 PART NUMBER LM0216539-0001 REV J

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0023	00002.000	EA		0472946-0033	RES FIX 47.0 OHM 5% .25 W CARBON FILM	ROH - R-25
0023A					R7, R12	
0024	00001.000	EA		0539370-0260	RES FIX FILM 49.9 OHM 1% .25 WATT	COP - NA55
0024A					R8	
0027	00002.000	EA		0472946-0003	RES FIX 330 OHM 5% .25 W CARBON FILM	ROH - R-25
0027A					R26, R44	
0028	00006.000	EA		0472946-0057	RES FIX 470 OHM 5% .25 W CARBON FILM	ROH - R-25
0028A					R30, R37, R41, R45, R47, R48, R57	
0028B					R90	
0029	00001.000	EA		0472946-0061	RES FIX 660 OHM 5% .25 W CARBON FILM	ROH - R-25
0029A					R32	
0030	00016.000	EA		0472946-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM	ROH - R-25
0030A					R2, R17, R18, R19, R20, R23, R23.	
0030B					R28, R34, R49, R51, R53, R54	
0030C					R55, R67, R69	
0031	00001.000	EA		0472946-0071	RES FIX 1.4K OHM 5% .25 W CARBON FILM	ROH - R-25
0031A					R35	
0032	00005.000	EA		0472946-0075	RES FIX 2.7K OHM 5% .25 W CARBON FILM	ROH - R-25
0032A					R5, R6, R71, R73, R40	
0033	00001.000	EA		0472946-0078	RES FIX 3.6K OHM 5% .25 W CARBON FILM	ROH - R-25
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE APPROVED DATE APPD PROJECT ENGINEER DATE RELEASE DATE PROJECT NO						
CARD ASSY, PE CONTROL LM0216539-0001 REV J						

**TEXAS INSTRUMENTS INCORPORATED** LIST OF MATERIAL PAGE 4 of 4  
DATE 09/27/78 PART NUMBER LM0216539-0001 REV J

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0033A					R36	
0034	00004.000	EA		0472946-0081	RES FIX 4.7K OHM 5% .25 W CARBON FILM	ROH - R-25
0034A					R33, R42, R50, R60	
0035	00001.000	EA		0472946-0039	RES FIX 10K OHM 5% .25 W CARBON FILM	ROH - R-25
0035A					R59	
0036	00001.000	EA		0472946-0091	RES FIX 12 K OHM 5% .25 W CARBON FILM	ROH - R-25
0036A					R38	
0037	00001.000	EA		0472946-0073	RES FIX 2.2K OHM 5% .25 W CARBON FILM	ROH - R-25
0037A					R64	
0039	00003.000	EA		0472946-0100	RES FIX 30 K OHM 5% .25 W CARBON FILM	ROH - R-25
0039A					R3, R4, R27	
0040	00001.000	EA		0472946-0107	RES FIX 56 K OHM 5% .25 W CARBON FILM	ROH - R-25
0040A					R1	
0041	00002.000	EA		0472946-0088	RES FIX 9.1K OHM 5% .25 W CARBON FILM	ROH - R-25
0041A					R15, R16	
0042	00001.000	EA		0472946-0104	RES FIX 62 K OHM 5% .25 W CARBON FILM	ROH - R-25
0042A					R29	
0043	00003.000	EA		0800523-0001	TRANSISTOR 45T2907 PNP SILICON	TI- -A542907
0043A					Q5, Q6, Q20	
0044	00014.000	EA		0472957-0001	TRANSISTOR 45T2222 NPN SILICON	TI- -A542222
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE APPROVED DATE APPD PROJECT ENGINEER DATE RELEASE DATE PROJECT NO						
CARD ASSY, PE CONTROL LM0216539-0001 REV J						

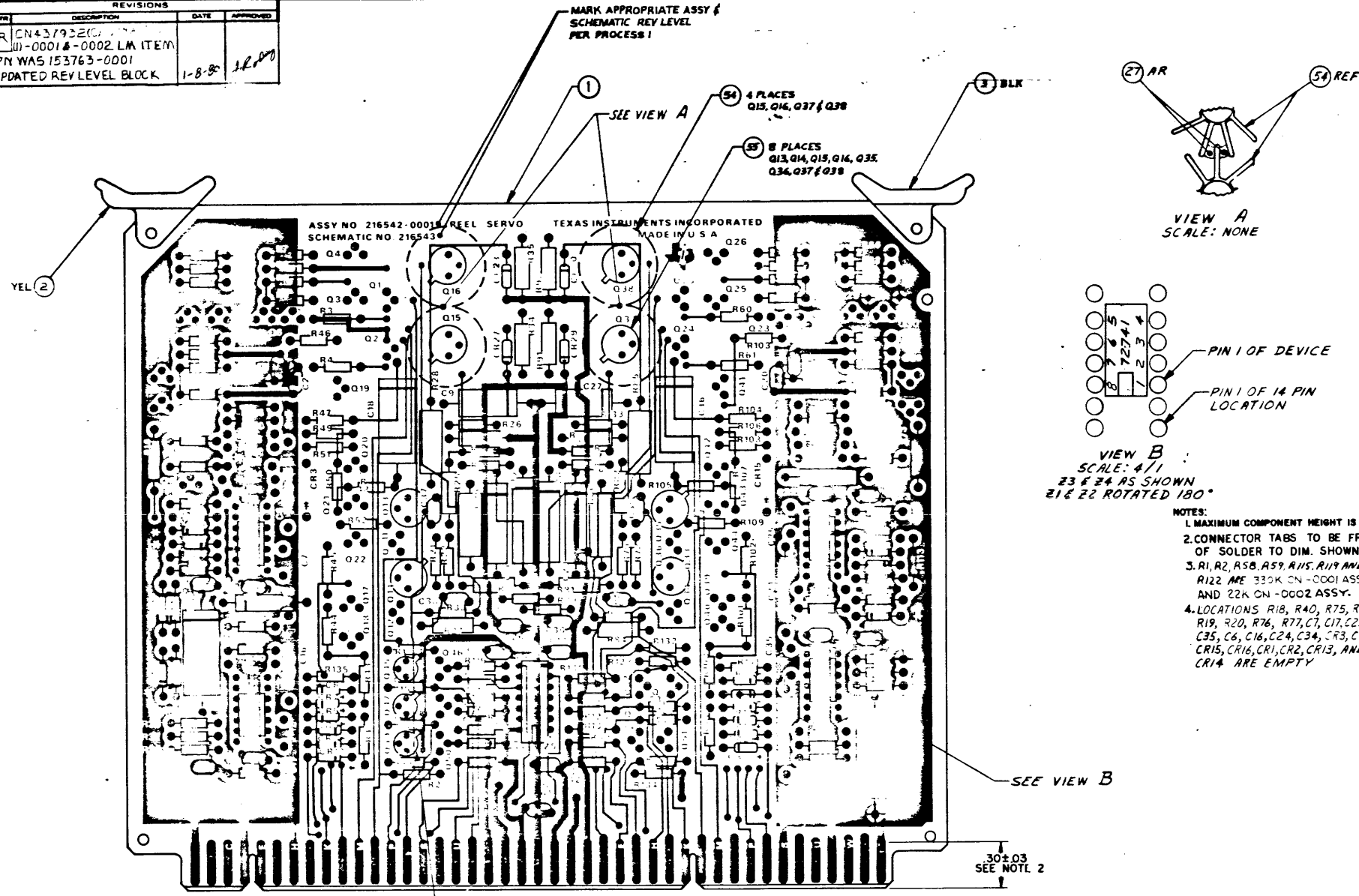


TEXAS INSTRUMENTS INCORPORATED		DATE 09/27/78		LIST OF MATERIAL		PAGE 5 of		PART NUMBER LM0216539-0001		REV J	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	WGTG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
00444					Q4, Q7 THRU Q19						
0045	00001.000	EA		0216109-0006	XST NPN EPITAXIAL PLANAR SILICON	TI	-TIS-86				
0045A					Q1						
0046	00001.000	EA		0972948-0002	TRANSISTOR, 2N2222A NPN GEN PURP SW TO-18	TI	- 2N2222A				
0046A					Q2						
0047	00007.000	EA		0972947-0057	RES FIX 470 OHM 5% .5 W CARBON FILM	ROH	- R-50				
0047A					R61, R65						
0048	00001.000	EA		0972946-0063	RES FIX 420 OHM 5% .25 W CARBON FILM	ROH	- R-25				
0048A					R43						
0049	00002.000	EA		0972947-0062	RES FIX 150 OHM 5% .5 W CARBON FILM	ROH	- R-50				
0049A					R61, R66						
0050	00001.000	EA		0058023-0008	CAP FIX .010 MFD 5% 100V NYLAR FOIL	TPW	- 651JW				
0050A					C21						
0051	00001.000	EA		0972955-0001	XSTR 2N2369A, NPN, HIGH SPEED SW, TO-18	MDT	- 2N2369A				
0051A					Q3						
0054	REF	EA		0216610-9901	LIGHT SPEED SELECTION PE						
0055	REF	EA		0216543-9901	DIAGRAM, ELTN SCHEMATIC-PE CONTROL						
0056	00002.000	EA		0712132-0002	INDUCTOR 100.UH .1 W 05.	MIR	- 9213-76				
0056A					L1, L2						
0057	00001.000	EA		0418356-2244	CAP FIX 47 MF 6 V 10% TANTALUM SOLID	OPL	- M3133/1-2244				
DRAFTSMAN _____ DATE _____ CED DRAFTSMAN _____ DATE _____ DESIGN ENGINEER _____ DATE _____ TITLE _____ CARD ASSY, PE CONTROL APPR MGR _____ DATE _____ APPR PROJECT ENGINEER _____ DATE _____ RELEASED _____ DATE _____ PROJECT NO. _____ PART NUMBER: LM0216539-0001 REV: J											

TEXAS INSTRUMENTS INCORPORATED		DATE 09/27/78		LIST OF MATERIAL		PAGE 6 of		PART NUMBER LM0216539-0001		REV J	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	WGTG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0057A					C1						
0058	00001.000	EA		0972946-0099	RES FIX 27 K OHM 5% .25 W CARBON FILM	ROH	- R-25				
0058A					R67						
0059	00001.000	EA		0972927-0051	CAP FIX MICA 100V 1000 PF 5%	QPL	- C405F102JUA				
0059A					C4						
0060	00001.000	EA		0972946-0046	RES FIX 220 OHM 5% .25 W CARBON FILM	ROH	- R-25				
0060A					R89						
0061	00001.000	EA		0972929-0387	CAP FIX CERAMIC 270 PF 10% 200 V	QPL	- M39314/01-1487				
0061A					C43						
0062	00001.000	EA		0972757-0037	CAP FIX LSK 0.1MF 10% 50V						
0062A					C44						
0063	REF	EA		0937010-9901	TEST PROC., P.E. CONTROL AND DATA CARDS						
DRAFTSMAN _____ DATE _____ CED DRAFTSMAN _____ DATE _____ DESIGN ENGINEER _____ DATE _____ TITLE _____ CARD ASSY, PE CONTROL APPR MGR _____ DATE _____ APPR PROJECT ENGINEER _____ DATE _____ RELEASED _____ DATE _____ PROJECT NO. _____ PART NUMBER: LM0216539-0001 REV: J											



REVISIONS				
REV	DATE	DESCRIPTION	APPROVED	BY
R		CM 4379320		
		(1) -0001 & -0002 LM ITEM		
		55 PIN WAS 153763-0001		
		(2) UPDATED REV LEVEL BLOCK	1-8-80	J.R.P.



- NOTES:
1. MAXIMUM COMPONENT HEIGHT IS .40
  2. CONNECTOR TABS TO BE FREE OF SOLDER TO DIM. SHOWN.
  3. R1, R2, R58, R59, R15, R19 AND R22 ARE 330K ON -0001 ASSY AND 22K ON -0002 ASSY.
  4. LOCATIONS R18, R40, R75, R97, R19, R20, R76, R77, C7, C17, C25, C35, C6, C16, C24, C34, C73, C84, CR15, CR16, CR1, CR2, CR13, AND CR14 ARE EMPTY

REV	DATE	DESCRIPTION	APPROVED	BY
A		368870(C) 12-8-78		
		DELETED 13 IT. 26 & WAS R54, R11, R14, R25, R38		
		2) IT. 43 & WAS R46, R47, R48, R54, R83, R104		
		CMG: 1) IT. 9 WAS QTY 16		
		2) IT. 25 WAS QTY 4		
		3) IT. 26 WAS QTY 5		
		4) IT. 41 WAS QTY 2		
		5) IT. 42 WAS QTY 8		
		ADDED 13 IT. 9:		
		2) IT. 25A:		
		3) IT. 41A:		
B	1/24/77	CMG: 1) LM ITEM #40 PIN WAS 294894-9000		
		UPDATE REVISION LEVEL BLOCK.		
C	9/28/78	CMG: 1) LM ITEM #43 WAS 21EA1294711-9000		
		2) MID. ZONE B-CZ TRANSISTOR Q36 & Q35 WERE:		
D	4-19-77	CMG: LM ITEM NO. 55 PIN WAS 184262-0001		
E	12-26-73	ITEM 53 CHANGED QTY TO 3 READ 47 PLACES (Q1-Q12, Q17-Q34 & Q39-G55) ALSO CHANGED ON LM # REV. LEVEL BLOCK WAS UP-DATED		
F		CREATED -0002 LM # 216542		
G		REV. LEVEL BLOCK		
H		CMG: 1) IT. 33(-1) WAS QTY 4		
		2) IT. 33(-2) WAS QTY 11		
		3) IT. 37 WAS QTY 5		
		4) UPDATED REV. LEVEL BLK.		
I		ADDED: 1) -140 REF. DESIG. TO ITEM 33A		
		DELETED: 3) R-140 REF. DESIG. ITEM 37A		
J		CMG: 1) IT. 2 PIN WAS 231802-0004		
		2) IT. 3 PIN WAS 231802-0000		
		3) IT. 44 PIN WAS 236091-5447		
		4) IT. 45 PIN WAS 236091-5449		
K		CMG: 1) IT. 2 PIN WAS 231802-0004		
		2) IT. 3 PIN WAS 231802-0000		
L		CMG: 1) LM 979 ADDED TO TITLE BLOCK AND -2 LM 870A		
M		CMG: 1) LM IT. 4 WAS 222224-7779; IT. 6 WAS 972927-0034; IT. 4 DELETED; IT. 5 B & 13; QTY OF IT. 5 14 & 25 WERE 22 & 5 RESP.; IT. 27 WAS 972946-0074; IT. 4 (2) ADDED NOTE 4 (3) ADDED VIEWS A & B (4) UPDATED REVISION LEVEL BLOCK		
N		CMG: 1) TEST PROCEDURE 936991-9901 TO REV LEVEL BLOCK (2) ON LM-SC01 ADDED ITEM 57 (3) ON LM-0002 ADDED ITEM 67 (4) UPDATED REV LEVEL BLOCK		
P		REV. LEVEL BLOCK		

REVISION LEVEL

REV	DATE	DESCRIPTION	APPROVED	BY
		SCHEMATIC DIAGRAM FOR -0001 ASSY, 216543-9901		
		ASSEMBLY		

UNLESS OTHERWISE SPECIFIED  
 DECIMAL XX.XX XXX & 010  
 FRACTIONAL 8/16 ANGULAR 8:1  
 CONCENTRICITY MACHINED DIAMETERS .004 MIN  
 ALL DIMENSIONS TO BE MET BEFORE PLATING  
 REMOVE ALL BURRS AND SHARP EDGES  
 DO NOT SCALE THIS DRAWING  
 ALL DIMENSIONS IN INCHES  
 SURFACES MARKED ✓ TO HAVE

QTY REQD		PART NUMBER		DESCRIPTION		VEHICLE PART NUMBER
1						
1						
1						
1						

TEXAS INSTRUMENTS INCORPORATED INDUSTRIAL PRODUCTS DIVISION HOUSTON TEXAS

CARD ASSY, REEL SERVO

979 COMPUTER TAPE TRANSPORT

2/1 D 216542



TEXAS INSTRUMENTS INCORPORATED DATE 11/14/79 LIST OF MATERIAL PAGE 1 of 4 PART NUMBER LM 0210542-0001 REV H

PART NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J001	0001.000	EA		J210544-0001	CARD, REEL SERV	
J002	0001.000	EA		J413277-0005	EJECTOR, PCB, NORM-LUCTION, YELLOW	SLA -S-200(YELLOW)
J003	0001.000	EA		J413277-0003	EJECTOR, PCB, NORM-LUCTION, BLACK	SLA -S-200(BLACK)
J004	0004.000	EA		022224-2741	NETWORK SN72741P OPERATIONAL AMP	-SN72741P
J004A					Z1 Z2 Z3 Z4	
J005	0001.000	EA		022222-7410	NETWORK SN7410N	SN7410N
J005A					Z5	
J006	0002.000	EA		0972943-0039	K CAP, FIX, .047 MF 54 200V MYLAR	TKM X663F
J006A					C3 C21	
J007	0004.000	EA		J23059-0001	CAP .750 PF 1000V 1J	EMI -B31A5F0-47K
J007A					C37, C38, C39, C40	
J009	0010.000	EA		J532736-0002	CAP FIX CERAMIC .02 MF 207034 25 VOLT	CKL - 200062E232AL
J009A					C1, C2, C4, C5, C8, C12, C13, C15	
J009B					C19, C20, C22, C23, C26, C30, C31	
J009C					C33 C41 C42	
J010	0004.000	EA		0419051-0333	CAP FIX FILM FOIL .033 UF 54 200VDC	TKM - 6630W
J010A					C10, C11, C28, C29	
J011	0002.000	EA		0972943-0043	CAP FIX .100 MF 54 200V MYLAR METALIZED TRM	- X663F
J011A					L9, C27	
J012	0004.000	EA		0972943-0019	CAP FIX 1.00 MF 54 200V MYLAR METALIZED TRM	- X663F
DRAFTSMAN DATE 11-16-79 DESIGN ENGINEER TITLE CARD ASSY, REEL SERV, 979 APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. PART NUMBER LM 0210542-0001 REV H						

TEXAS INSTRUMENTS INCORPORATED DATE 11/14/79 LIST OF MATERIAL PAGE 2 of 4 PART NUMBER LM 0210542-0001 REV H

PART NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J012A					C14, C18, C32, C36	
J014	00018.000	EA		0972932-0001	DIODE 1N914B	SEE TI- DRAWING
J014A					CR5 THRU CR12,	
J014B					CR17 THRU CR26	
J015	00004.000	EA		J539468-0602	DIODE, 1N4002 LAMP 100PIV RECTIFIER	TI - 1N4002
J015A					CR27, CR28, CR29, CR30	
J016	00004.000	EA		0972947-0025	RES FIX 22 OHM 5 4 .5 W CARBON FILM	KOH - K-50
J016A					R34, R35, R91, R92	
J017	00008.000	EA		0972947-0041	RES FIX 100 OHM 5 4 .5 W CARBON FILM	FUH - K-50
J017A					R23, R24, R25, R27, R80, R81, R82	
J017B					R84	
J018	00004.000	EA		0972978-0090	RES FIX COMP 1.0 W 360 OHMS 5 4	WPL -RL326361JS
J018A					R28, R29, R85, R86	
J019	00002.000	EA		0972947-0100	RES FIX 30 K OHM 5 4 .5 W CARBON FILM	KOH - K-50
J019A					R16, R73	
J020	00002.000	EA		0972946-0017	RES FIX 10.0 OHM 5 4 .25 W CARBON FILM	KOH - K-25
J020A					R26, R83	
J021	00004.000	EA		0972946-0041	RES FIX 100 OHM 5 4 .25 W CARBON FILM	KUH - K-25
J021A					R55, R56, R112, R113	
J022	00004.000	EA		0972946-0052	RES FIX 330 OHM 5 4 .25 W CARBON FILM	KOH - K-25
DRAFTSMAN DATE 11-16-79 DESIGN ENGINEER TITLE CARD ASSY, REEL SERV, 979 APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. PART NUMBER LM 0210542-0001 REV H						

TEXAS INSTRUMENTS INCORPORATED DATE 11/14/79 LIST OF MATERIAL PAGE 3 of 4 PART NUMBER LM 0210542-0001 REV H

PART NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J022A					R30, R31, R32, R33, R87, R88, R89	
J022B					R90	
J023	00002.000	EA		0972946-0057	RES FIX 470 OHM 5 4 .25 W CARBON FILM	KOH - K-25
J023A					R135, R141	
J024	00008.000	EA		0972946-0065	RES FIX 1.0K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J024A					R36, R44, R57, R93, R101, R118	
J024B					R126, R139	
J025	00001.000	EA		0972946-0069	RES FIX 1.5K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J025A					R125	
J026	00004.000	EA		0972946-0073	RES FIX 2.2K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J026A					R54 R111 R114 R138	
J027	AK	EA		0996069-0003	ADM, SOLID, THK, MPLSTC 25# BAG ANAEROBIC	PERKAL-917-6302
J028	00002.000	EA		0972946-0077	RES FIX 3.3K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J028A					R43, R100	
J029	00008.000	EA		0972946-0081	RES FIX 4.7K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J029A					R9, R10, R11, R38, R66, R67, R68	
J029B					R95	
J030	00004.000	EA		0972946-0083	RES FIX 5.6K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J030A					R39, R48, R96, R105	
J031	00001.000	EA		0972946-0085	RES FIX 10K OHM 5 4 .25 W CARBON FILM	KOH - K-25
DRAFTSMAN DATE 11-16-79 DESIGN ENGINEER TITLE CARD ASSY, REEL SERV, 979 APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. PART NUMBER LM 0210542-0001 REV H						

TEXAS INSTRUMENTS INCORPORATED DATE 11/14/79 LIST OF MATERIAL PAGE 4 of 4 PART NUMBER LM 0210542-0001 REV H

PART NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J031A					R5, R6, R7, R8, R12, R13, R14, R15	
J031B					R17, R41, R42, R45, R62, R63, R64	
J031C					R65, R69, R70, R71, R72, R74, R98	
J031D					R99 R102 R117 R121 R124	
J031E					R127 R128 R129 R132	
J032	00004.000	EA		0972946-0095	RES FIX 18K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J032A					R21, R22, R78, R79	
J033	00005.000	EA		0972946-0097	RES FIX 22 K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J033A					R131 R133 R137 R140 R142	
J034	00002.000	EA		0972946-0100	RES FIX 30 K OHM 5 4 .25 W CARBON FILM	KUH - K-25
J034A					R37, R94	
J035	00004.000	EA		0972946-0107	RES FIX 56 K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J035A					R51, R52, R108, R109	
J036	00001.000	EA		0972946-0108	RES FIX 62 K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J036A					R130	
J037	00004.000	EA		0972946-0113	RES FIX 100K OHM 5 4 .25 W CARBON FILM	KUH - K-25
J037A					R116 R120 R123 R134	
J038	00004.000	EA		0972946-0121	RES FIX 220K OHM 5 4 .25 W CARBON FILM	KOH - K-25
J038A					R4 R47 R61 R104	
J039	00002.000	EA		0972946-0122	RES FIX 250K OHM 5 4 .25 W CARBON FILM	KOH - K-25
DRAFTSMAN DATE 11-16-79 DESIGN ENGINEER TITLE CARD ASSY, REEL SERV, 979 APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. PART NUMBER LM 0210542-0001 REV H						





949613-9702

TEXAS INSTRUMENTS INCORPORATED  
 DATE 11/14/79 LIST OF MATERIAL PAGE 5 of  
 PART NUMBER LM 0216542-0001 REV K

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ39A					R3,R60	
JJ40	00001.000	EA		0972946-0117	KES FIX 150K OHM 5 % .25 W CARBON FILM	KOH - F-25
JJ40A					R53	
JJ41	CJ002.000	EA		0972946-0131	KES FIX 563K OHM 5 % .25 W CARBON FILM	KOH - K-25
JJ41A					R110 R136	
JJ42	00006.000	EA		0972946-0137	KES FIX 1.0M OHM 5 % .25 W CARBON FILM	KOH - F-25
JJ42A					R46 R49 R50 R103	
JJ42B					R106,R107	
JJ43	00007.000	EA		0972946-0125	KES FIX 330K OHM 5 % .25 W CARBON FILM	KUH - K-25
JJ43A					R1 R2 R58 R59 R115 R119	
JJ43B					F122	
JJ44	00020.000	EA		0800523-0001	TRANSISTOR AST2907 PNP SILICON	TI - -AST2907
JJ44A					Q1 Q4 Q5 Q8 Q9 Q11 Q18 Q20	
JJ44B					Q21 Q24 Q26 Q27 Q30 Q31	
JJ44C					Q33 Q40 Q42 Q43 Q51 Q54	
JJ45	00022.000	EA		0972057-0001	TRANSISTOR AST2222 NPN SILICON	TI - -AST2222
JJ45A					Q2 Q3 Q6 Q7 Q10 Q12 Q17 Q22	
JJ45B					Q23 Q25 Q28 Q29 Q32 Q34 Q39	
JJ45C					Q44 Q46 Q48 Q50 Q52 Q53 Q55	
JJ45D					TRANSISTOR, NPN, GEN, PNP, SW TU-5	TI - 2N2214A
DRAFTSMAN: WMMZ, WMMZ DATE: 11/14/79 DESIGN ENGINEER: CARU ASSY, REEL SERVO, 979						
APPROVED: [Signature] DATE: 11/14/79 PROJECT NO: LM 0216542-0001 REV K						

TEXAS INSTRUMENTS INCORPORATED  
 DATE 11/14/79 LIST OF MATERIAL PAGE 6 of  
 PART NUMBER LM 0216542-0001 REV K

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ46A					Q13, Q35	
JJ47	00003.000	EA		0418000-0002	TRANSISTOR, 2N2605	UPL - 2N2605
JJ47A					Q45, Q47, Q49	
JJ48	00002.000	EA		0572958-0001	TRANSISTOR, PNP, GEN, PNP, SW TU-5	TI - 2N2905A
JJ48A					Q14, Q36	
JJ49	00002.000	EA		0230091-5245	TRANSISTOR 2N5245 N-CHAN FET PLANAR SIL	TI - 2N5245
JJ49A					Q19, Q41	
JJ50	00002.000	EA		0230091-5321	XST 2N5321	KCA - 2N5321
JJ50A					Q16, Q38	
JJ51	00002.000	EA		0230091-5323	XST 2N5323	KCA - 2N5323
JJ51A					Q15, Q37	
JJ52	REF	EA		0216542-9901	DIAGRAM, ELECTRONIC SCHEMATIC-REEL SERVO	
JJ53	00003.000	EA		0180113-0001	X SPACER XST TU-18 CASE	* -
JJ54	00004.000	EA		0419253-0003	HEATSINK, TRANSISTOR	WAK - 205
JJ55	00008.000	EA		0232583-0006	TU-5 MOUNTING PAD, 4-LEADS, NYLON	SEE TI- DRAWING
JJ57	REF	EA		0936991-9901	TEST PROCEDURE, REEL SERVO ASSY	
DRAFTSMAN: [Signature] DATE: 11/14/79 DESIGN ENGINEER: CARU ASSY, REEL SERVO, 979						
APPROVED: [Signature] DATE: 11/14/79 PROJECT NO: LM 0216542-0001 REV K						

TEXAS INSTRUMENTS INCORPORATED  
 DATE 11/14/79 LIST OF MATERIAL PAGE 1 of  
 PART NUMBER LM 0216542-0002 REV K

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ01	00001.000	EA		0216542-0001	CARD, REEL SERVO	
JJ02	00001.000	EA		0413277-0005	EJECTOR, PCB, NON-LOCKING, YELLOW	SCA - S-200(YELLOW)
JJ03	00001.000	EA		0413277-0003	EJECTOR, PCB, NON-LOCKING, BLACK	SCA - S-200(BLACK)
JJ04	00004.000	EA		0222224-2741	NETWORK SN72741P OPERATIONAL AMP	-SN72741P
JJ04A					Z1 Z2 Z3 Z4	
JJ05	CJ001.000	EA		0222222-7410	NETWORK SN7410N	-SN7410N
JJ05A					Z5	
JJ06	CJ002.000	EA		0972943-0339	X CAP. FIX. .047 MF 5% 200V MYLAK	TRW - X663F
JJ06A					C3 C21	
JJ07	00004.000	EA		0230459-0301	CAP 470.0 PF 100V 10	EKI - 831X5FJ-471K
JJ07A					C37 C38 C39 C40	
JJ09	00016.000	EA		0532736-0002	CAP FIX CERAMIC .02 MF 20V/804 25 VOLT	CKL - 200060E2032A
JJ09A					C1 C2 C4 C5 C8 C12 C13 C15	
JJ09B					C19 C20 C22 C23 C26 C30 C31	
JJ09C					C33 C41 C42	
JJ10	00004.000	EA		0419051-0333	CAP FIX FILM POLY .033 UF 5% 200VDC	TRW - 6630H
JJ10A					C10 C11 C28 C29	
JJ11	00002.000	EA		0972943-0343	CAP FIX .100 MF 5% 200V MYLAK METALIZED	TRW - X663F
JJ11A					C9 C27	
JJ12	00004.000	EA		0972943-0319	CAP FIX 1.00 MF 5% 50V MYLAK METALIZED	TRW - X663F
DRAFTSMAN: [Signature] DATE: 11/14/79 DESIGN ENGINEER: CARU ASSY, REEL SERVO, 979A						
APPROVED: [Signature] DATE: 11/14/79 PROJECT NO: LM 0216542-0002 REV K						

TEXAS INSTRUMENTS INCORPORATED  
 DATE 11/14/79 LIST OF MATERIAL PAGE 2 of  
 PART NUMBER LM 0216542-0002 REV K

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ12A					C14 C18 C32 C36	
JJ14	00016.000	EA		0972932-0001	DIODE 1N914B	SEE TI- DRAWING
JJ14A					CK5 THRU CK12,	
JJ14B					CK17 THRU CK26	
JJ15	00004.000	EA		0539668-0002	DIODE, 1N4002 1AMP 1UJPIV RECTIFIER	TI - 1N4002
JJ15A					CK27 CK28 CK29 CK30	
JJ16	00004.000	EA		0972947-0025	KES FIX 22 OHM 5 % .25 W CARBON FILM	KUH - K-50
JJ16A					R34 R35 R51 R92	
JJ17	00008.000	EA		0972947-0041	KES FIX 100 OHM 5 % .25 W CARBON FILM	KOH - K-50
JJ17A					R23 R24 R25 R27 R80 R81 R82	
JJ17B					R84	
JJ18	00004.000	EA		0972978-0000	KES FIX COMP 1.0 W 360 OHMS 5 %	UPL - K-32G361JS
JJ18A					R28 R29 R85 R86	
JJ19	00002.000	EA		0972947-0100	KES FIX 30 K OHM 5 % .25 W CARBON FILM	KOH - F-50
JJ19A					R16 R73	
JJ20	00002.000	EA		0972946-0017	KES FIX 10.0 OHM 5 % .25 W CARBON FILM	KOH - K-25
JJ20A					R26 R83	
JJ21	00004.000	EA		0972946-0341	KES FIX 100 OHM 5 % .25 W CARBON FILM	KOH - K-25
JJ21A					R55 R56 R112 R113	
JJ22	00004.000	EA		0972946-0053	KES FIX 330 OHM 5 % .25 W CARBON FILM	KOH - K-25
DRAFTSMAN: [Signature] DATE: 11/14/79 DESIGN ENGINEER: CARU ASSY, REEL SERVO, 979A						
APPROVED: [Signature] DATE: 11/14/79 PROJECT NO: LM 0216542-0002 REV K						



**TEXAS INSTRUMENTS**  
INCORPORATED

DATE 11/14/79 LIST OF MATERIAL PAGE 3 of PART NUMBER LM 0216542-0002 REV R

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ22A				R30 R31 R32 R33 R07 R08 R09		
JJ22B				R90		
JJ23	00002.000	EA		0972946-0057	RES FIX 470 OHM 5 % .25 W CARBON FILM	KGH - F-25
JJ23A				R135 R141		
JJ24	00006.000	EA		0972946-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM	KDH - F-25
JJ24A				R44 R57 R101 R118		
JJ24B				R126 R139		
JJ25	00001.000	EA		0972946-0069	RES FIX 1.5K OHM 5 % .25 W CARBON FILM	KUH - R-25
JJ25A				R125		
JJ26	00004.000	EA		0972946-0073	RES FIX 2.2K OHM 5 % .25 W CARBON FILM	KUH - R-25
JJ26A				R54 R111 R114 R138		
JJ27	AK	EA		0496069-0003	AUM, SOLID, THRMPLSTC 25# BAG ANAEROBIC	PERKAL-917-8302
JJ28	00002.000	EA		0972946-0077	RES FIX 3.3K OHM 5 % .25 W CARBON FILM	KDH - R-25
JJ28A				R43 R100		
JJ29	00008.000	EA		0972946-0081	RES FIX 4.7K OHM 5 % .25 W CARBON FILM	KDH - R-25
JJ29A				R9 R10 R11 R38 R66 R67 R68		
JJ29B				R95		
JJ30	00004.000	EA		0972946-0083	RES FIX 5.6K OHM 5 % .25 W CARBON FILM	KUH - R-25
JJ30A				R39 R48 R96 R105		
JJ31	00001.000	EA		0972946-0089	RES FIX 10K OHM 5% .25 W CARBON FILM	KUH - R-25
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, KEEL SERVO, 979A						
APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER REV LM 0216542-0002 R						

**TEXAS INSTRUMENTS**  
INCORPORATED

DATE 11/14/79 LIST OF MATERIAL PAGE 4 of PART NUMBER LM 0216542-0002 REV R

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ31A					R6 R5 R7 R8 R12 R13 R14 R15	
JJ31B					R17 R41 R42 R45 R62 R63 R64	
JJ31C					R65 R69 R70 R71 R72 R74 R98	
JJ31J					R99 R102 R117 R121 R124	
JJ31E					R127 R128 R129 R132	
JJ32	00004.000	EA		0972946-0095	RES FIX 10K OHM 5% .25 W CARBON FILM	FUH - R-25
JJ32A					R21 R22 R78 R79	
JJ33	00012.000	EA		0972946-0097	RES FIX 22 K OHM 5 % .25 W CARBON FILM	KUH - R-25
JJ33A					R131 R133 R137 R142	
JJ33B					R1 R2 R56 R59 R115 R119	
JJ33C					R122 R140	
JJ34	00002.000	EA		0972946-0100	RES FIX 30 K OHM 5 % .25 W CARBON FILM	FDH - R-25
JJ34A					R37 R94	
JJ35	00004.000	EA		0972946-0107	RES FIX 36 K OHM 5 % .25 W CARBON FILM	FDH - R-25
JJ35A					R51 R52 R108 R109	
JJ36	00001.000	EA		0972946-0108	RES FIX 62 K OHM 5 % .25 W CARBON FILM	FUH - R-25
JJ36A					R130	
JJ37	00004.000	EA		0972946-0113	RES FIX 100K OHM 5 % .25 W CARBON FILM	FDH - R-25
JJ37A					R116 R120 R123 R134	
JJ38	00004.000	EA		0972946-0121	RES FIX 220K OHM 5 % .25 W CARBON FILM	FUH - R-25
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, KEEL SERVO, 979A						
APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER REV LM 0216542-0002 R						

**TEXAS INSTRUMENTS**  
INCORPORATED

DATE 11/14/79 LIST OF MATERIAL PAGE 5 of PART NUMBER LM 0216542-0002 REV R

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ38A					R4 R47 R61 R104	
JJ39	00002.000	EA		0972946-0122	RES FIX 240K OHM 5 % .25 W CARBON FILM	KGH - R-25
JJ39A					R3 R60	
JJ40	00001.000	EA		0972946-0117	RES FIX 150K OHM 5 % .25 W CARBON FILM	KDH - R-25
JJ40A					R53	
JJ41	00002.000	EA		0972946-0131	RES FIX 560K OHM 5 % .25 W CARBON FILM	KUH - R-25
JJ41A					R110 R136	
JJ42	00006.000	EA		0972946-0137	RES FIX 1.0M OHM 5 % .25 W CARBON FILM	KDH - R-25
JJ42A					R46 R49 R50 F103 R136 R107	
JJ44	00020.000	EA		0800523-0001	TRANSISTOR 5T2907 PNP SILICON	TI - -A512907
JJ44A					Q1 Q4 Q5 Q6 Q9 Q11 Q18 Q20	
JJ44B					Q21 Q24 Q26 Q27 Q30 Q31 Q33	
JJ44C					Q40 Q42 Q43 Q51 Q54	
JJ45	00022.000	EA		0972057-0001	TRANSISTOR 5T2222 NPN SILICON	TI - -A512222
JJ45A					Q2 Q3 Q6 Q7 Q10 Q12 Q17 Q22	
JJ45B					Q23 Q25 Q28 Q29 Q32 Q34 Q39	
JJ45C					Q44 Q46 Q48 Q50 Q52 Q53 Q55	
JJ46	00002.000	EA		0972946-0001	TRANSISTOR, NPN, GEN. PURP. SW TU-5	TI - 2N2219A
JJ46A					Q13 Q35	
JJ47	00001.000	EA		0418600-0002	TRANSISTOR, 2N2635	UPL - 2N2605
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, KEEL SERVO, 979A						
APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER REV LM 0216542-0002 R						

**TEXAS INSTRUMENTS**  
INCORPORATED

DATE 11/14/79 LIST OF MATERIAL PAGE 6 of PART NUMBER LM 0216542-0002 REV R

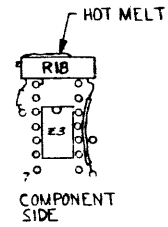
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ47A					Q45 Q47 Q49	
JJ48	00002.000	EA		0972958-0001	TRANSISTOR, PNP, GEN. PURP. SW TU-5	TI - 2N2905A
JJ48A					Q14 Q36	
JJ49	00002.000	EA		0236091-5245	TRANSISTOR 2N5245 N-CHAN FET PLANAR SIL	TI - 2N5245
JJ49A					Q19 Q41	
JJ50	00002.000	EA		0236091-5321	XST 2N5321	RCA - 2N5321
JJ50A					Q16 Q38	
JJ51	00002.000	EA		0236091-5323	XST 2N5323	RCA - 2N5323
JJ51A					Q15 Q37	
JJ52	REF	EA		0216543-5901	DIAGRAM, ELECTRONIC SCHEMATIC, KEEL SERVO	
JJ53	00003.000	EA		0185113-0001	X SPACER XST TO-18 CASE	
JJ54	00004.000	EA		0419253-0003	HEATSINK, TRANSISTOR	WAK - 205
JJ55	00008.000	EA		0232583-0008	TO-5 MOUNTING PAD, 4-LEADS, NYLON	SEE TI- DRAWING
JJ56	00002.000	EA		0972976-0093	RES FIXED 1.8 K OHMS 5% 1/4 WATT	UPL - 3900B
JJ56A					R36 R93	
JJ57	REF	EA		0936491-5901	TEST PROCEDURE, KEEL SERVO ASSY	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, KEEL SERVO, 979A						
APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER REV LM 0216542-0002 R						



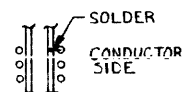


NOTES CONT

6. CONT.  
B. INSTALL VARIABLE RESISTOR R18 AS SHOWN BELOW

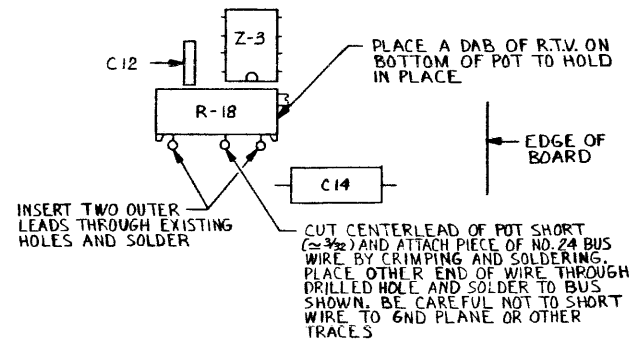
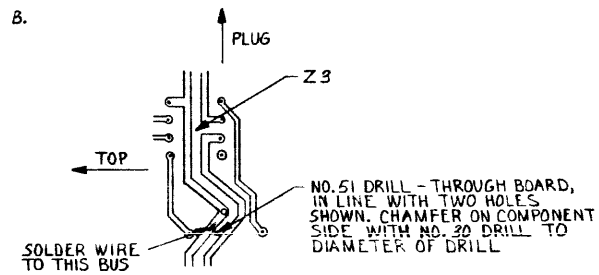
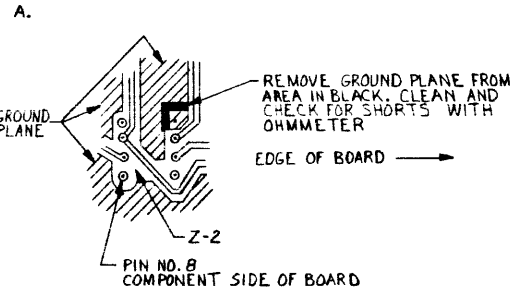


R18 IS SHOWN MOUNTED ON ITS SIDE WITH CENTER CONTACT BENT 90° PLACED THRU HOLE SHOWN, BENT OVER AND SOLDERED TO -12V BUSS, AS FOLLOWS



THE OTHER TWO CONTACTS OF R18 ARE CONNECTED AS SHOWN USING #24 AWG SOLID INSULATED WIRE.

7. THE FOLLOWING PROCEDURES APPLY TO REV F PWB ONLY



TEXAS INSTRUMENTS	OWN	DATE	SIZE FROM NO.	DRAWING NO.	REV
	ISSUE DATE	9-74	D96214	216545	W
			SCALE NONE	SHEET	2



949613-9702

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 1 of 4 PART NUMBER LM0216545-0001 REV AB

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00001.000	EA		0216547-0001	CARD, PC-CAPTAN/REGULATOR	
0002	00001.000	FA		0413277-0009	EJECTOR, PCB, NON-LOCKING, D. GREEN	SCA -S-200(D. GREEN)
0003	00001.000	FA		0413277-0003	EJECTOR, PCB, NON-LOCKING, BLACK	SCA -S-200(BLACK)
0004	00003.000	EA		0222224-7759	NETWORK SWITCHING OPERATIONAL AMP	-SN727094
0004A					Z1, Z2, Z3	
0005	00003.000	EA		0972927-0034	CAP FIX MICA 500V 200 PF 5%	QPL -CM05E201J00
0005A					C4, C8, C15	
0006	00002.000	EA		0972927-0043	CAP FIX MICA 300V 470 PF 5%	QPL -CM05F671J00
0006A					C40, C41	
0007	00001.000	FA		0419051-0102	CAP FIX FILM FOIL .001 UF 5% 200VDC	TRW - 553J4
0007A					C11	
0008	00003.000	EA		0419051-0472	CAP FIX FILM FOIL .0047 UF 5% 200VDC	TRW - 553J4
0008A					C5, C9, C16	
0009	00016.000	FA		0532736-0002	CAP FIX CERAMIC .02 MF 20/80% 25 VOLT	CHL - 200J50E203ZAG
0009A					C2, C3, C6, C7, C10, C12, C13, C18	
0009B					C22, C24, C27, C30, C31, C32, C34	
0009C					C36	
0010	00002.000	FA		0419051-0333	CAP FIX FILM FOIL .033 UF 5% 200VDC	TRW - 663J4
0010A					C20, C21	
0011	00001.000	FA		0059023-0014	CAP FIX .068 MFD 5% 100V MYLAR FOIL	TRW - 653J4

DRAFTSMAN DATE CDD DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REG SER #1 THRU 10  
 APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. 8979 LM0216545-0001 REV AB

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 2 of 4 PART NUMBER LM0216545-0001 REV AB

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0011A					C14	
0012	00006.000	EA		0419058-0003	CAP. FIX CERAMIC .05 MF 20V + 80/-20%	CRL - JK20-503
0012A					C37, C38, C39, C42, C43, C44	
0013	00001.000	FA		0419051-0823	CAP FIX FILM FOIL .082 UF 5% 200VDC	TRW - 653J4
0013A					C17	
0014	00001.000	EA		0972943-0043	CAP FIX .100 MF 5% 200V MYLAR METALIZED	TPW - X653F
0014A					C19	
0015	00001.000	FA		0972943-0019	CAP FIX 1.00 MF 5% 50V MYLAR METALIZED	TRW - X553F
0015A					C1	
0016	00001.000	EA		0419356-2286	CAP FIX 10 MF 20V 10% TANTALUM SOLID	QPL -M3333/1-2286
0016A					C23	
0017	00001.000	EA		0972924-0014	CAP FIX TANT SOLID 15 MFD 10% 20 VOLT	QPL -M3333/1-2289
0017A					C26	
0018	00004.000	FA		0972924-0019	CAP FIX TANT SOLID 22 MFD 10% 35 VOLT	QPL -M3333/1-2306
0018A					C25, C28, C33, C35	
0019	00001.000	EA		0972924-0002	CAP FIX TANT SOLID 56 MFD 10% 6 VOLT	QPL -M3333/1-2246
0019A					C29	
0020	00018.000	EA		0972932-0001	DIODE, 1N914B SWITCHING 75V PIV 75MA 4NS	TI - 1N914B
0020A					CR1 THRU CR8, CR11, CR12, CR19	
0020B					CR22, CR23, CR24, CR25, CR29	

DRAFTSMAN DATE CDD DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REG SER #1 THRU 10  
 APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. LM0216545-0001 REV AB

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 3 of 4 PART NUMBER LM0216545-0001 REV AB

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0020C					CR31, CR32	
0021	00002.000	FA		0972934-0001	DIODE, 1N746A 3.3 V 5% SIL VOLT REG	QPL - 1N746A
0021A					CR20, CR26	
0022	00005.000	EA		0972934-0006	DIODE, 1N751A 5.1 V 5% SIL VOLT REG	QPL - 1N751A
0022A					CR17, CR18, CR21, CR27, CR30	
0024	00004.000	EA		0972934-0011	DIODE, 1N756A 8.2 V 5% SIL VOLT REG	QPL - 1N756A
0024A					CR9, CR10, CR13, CR14	
0025	00006.000	EA		0539468-0002	DIODE, 1N4002 1AMP 100PIV RECTIFIER	TI - 1N4002
0025A					CR15, CR16, CR33, CR34, CR35	
0025B					CR36	
0026	00002.000	EA		0539795-0005	RES VAR CERMET 200 OHMS 10% .75 WATT	BOU - 3359P-1-201
0026A					R76, R118	
0027	00002.000	FA		0539795-0009	RES VAR CERMET 5.0 K OHMS 10% .75 WATT	BOU - 3359P-1-502
0027A					R47, R48	
0028	00002.000	FA		0539795-0012	RES VAR CERMET 50 K OHMS 10% .75 WATT	BOU - 3359P-1-503
0028A					R1, R4	
0029	00003.000	EA		0233307-0004	RES 27.000 OHM 2% W 5%	AB -HB2735
0029A					R82, R85, R88	
0030	00002.000	FA		0972978-0090	RES FIX COMP 1.0 W 760 OHMS 5%	QPL -RC32G361JS
0030A					R30, R31	

DRAFTSMAN DATE CDD DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REG SER #1 THRU 10  
 APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. LM0216545-0001 REV AB

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 4 of 4 PART NUMBER LM0216545-0001 REV AB

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0031	00002.000	EA		0972947-0025	RES FIX 22 OHM 5% .5 W CARBON FILM	ROH - R-57
0031A					R37, R39	
0032	00006.000	FA		0972947-0041	RES FIX 100 OHM 5% .5 W CARBON FILM	ROH - R-50
0032A					R26, R27, R29, R32, R69, R138	
0033	00001.000	EA		0539370-0335	RES FIX FILM 301 OHM 1% .25 WATT	COR - NA55
0033A					R122	
0034	00003.000	EA		0539370-0318	RES FIX FILM 200 OHM 1% .25 WATT	COR - NA55
0034A					R75, R119, R121	
0036	00001.000	FA		0539370-0347	RES FIX FILM 402 OHM 1% .25 WATT	COR - NA55
0036A					R79	
0037	00004.000	EA		0539370-0442	RES FIX FILM 3.92K OHM 1% .25 WATT	COR - NA55
0037A					R2, R3, R7, R5	
0038	00003.000	EA		0539374-0385	RES FIX FILM 1.00K OHM 1% .25 WATT	COR - NC5
0038A					R73, R74, R116	
0039	00001.000	FA		0539370-0399	RES FIX FILM 1.40K OHM 1% .25 WATT	COR - NA55
0039A					R115	
0040	00001.000	EA		0234152-0000	RES 10000. OHM .25W 1%	TI -CR-1/4-10.0K
0040A					R22	
0041	00001.000	EA		0539370-0539	RES FIX FILM 40.2K OHM 1% .25 WATT	COR - NA55
0041A					R11	

DRAFTSMAN DATE CDD DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REG SER #1 THRU 10  
 APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. LM0216545-0001 REV AB



949613-9702

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 5 of 7 PART NUMBER LM0216545-0001 REV AB

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0042	0001.000	EA		0972946-0017	RES FIX 10.0 OHM 5 % .25 W CARBON FILM R28	ROH - R-25
0043	0001.000	EA		0972946-0029	RES FIX 33.0 OHM 5 % .25 W CARBON FILM R124	ROH - R-25
0044	0003.000	EA		0972946-0033	RES FIX 47.0 OHM 5 % .25 W CARBON FILM R61,R71,R100	ROH - R-25
0045	0001.000	EA		0972946-0037	RES FIX 68.0 OHM 5 % .25 W CARBON FILM R63	ROH - R-25
0046	0006.000	EA		0972946-0041	RES FIX 100 OHM 5 % .25 W CARBON FILM R59,R68,R70,R78,R103,R107	ROH - R-25
0047	0006.000	EA		0972946-0048	RES FIX 200 OHM 5 % .25 W CARBON FILM R66 R72 R117 R123 R139	ROH - R-25
0048	0002.000	EA		0972946-0051	RES FIX 270 OHM 5 % .25 W CARBON FILM R98,R113	ROH - R-25
0049	0007.000	EA		0972946-0053	RES FIX 330 OHM 5 % .25 W CARBON FILM R33 R34 R35 R38 R65 R77	ROH - R-25
0050	0003.000	EA		0972946-0057	RES FIX 470 OHM 5 % .25 W CARBON FILM R120	ROH - R-25
0050A					R70 R46 R51 R64 R67 R106	

DEPARTMENT DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY,CAPSTAN/REG SER #1 THR J 10  
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ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0050B					R109 R110 R111 R114 R140	
0050C					R142 R143	
0051	0001.000	EA		0972946-0064	RES FIX 910 OHM 5 % .25 W CARBON FILM R44	ROH - R-25
0051A						
0052	00016.000	EA		0972946-0065	RES FIX 1.0K OHM 5 % .25 W CARBON FILM R41,R42,R60,R62,P81,P84,P87	ROH - R-25
0052A					R49,R93,R99,R101,R104,R105	
0052B					R108 R112 R24	
0052C						
0053	00005.000	EA		0972946-0069	RES FIX 1.5K OHM 5 % .25 W CARBON FILM R6,R10,R18,R43,R45	ROH - R-25
0053A						
0054	00004.000	EA		0972946-0073	RES FIX 2.2K OHM 5 % .25 W CARBON FILM R126,R129,R133,R136	ROH - R-25
0054A						
0055	00004.000	EA		0972946-0074	RES FIX 2.4K OHM 5 % .25 W CARBON FILM R12,R13,R19,R21	ROH - R-25
0055A						
0056	00005.000	EA		0972946-0077	RES FIX 3.3K OHM 5 % .25 W CARBON FILM R40,R80,R83,R86,R144	ROH - R-25
0056A						
0057	00002.000	EA		0972946-0081	RES FIX 4.7K OHM 5 % .25 W CARBON FILM R14 R90	ROH - R-25
0057A						
0058	00001.000	EA		0972946-0086	RES FIX 7.5K OHM 5 % .25 W CARBON FILM R17	ROH - R-25
0058A						

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ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0059	00011.000	EA		0972946-0089	RES FIX 10K OHM 5% .25 W CARBON FILM R8 R53 R55 R91 R92 R95	ROH - R-25
0059A					R96,R127,R128,R134,R135	
0059B						
0060	00002.000	EA		0972946-0095	RES FIX 18K OHM 5% .25 W CARBON FILM R23,R25	ROH - R-25
0060A						
0061	00002.000	EA		0972946-0096	RES FIX 20 K OHM 5 % .25 W CARBON FILM R36,R94	ROH - R-25
0061A						
0062	00001.000	EA		0972946-0097	RES FIX 22 K OHM 5 % .25 W CARBON FILM R56	ROH - R-25
0062A						
0063	00001.000	EA		0972946-0101	RES FIX 33 K OHM 5 % .25 W CARBON FILM R52	ROH - R-25
0063A						
0064	00002.000	EA		0972946-0105	RES FIX 47 K OHM 5 % .25 W CARBON FILM P97,P132	ROH - R-25
0064A						
0065	00001.000	EA		0972946-0129	RES FIX 470K OHM 5 % .25 W CARBON FILM R57	ROH - R-25
0065A						
0066	00003.000	EA		0972946-0137	RES FIX 1.0M OHM 5 % .25 W CARBON FILM R9 R16 R58	ROH - R-25
0066A						
0067	00001.000	EA		0972957-0001	TRANSISTOR,2N930A NPN LOW CUR AMP,TO-18 Q29	MOY - 2N333A
0067A						
0068	00001.000	EA		0972948-0001	TRANSISTOR, NPN, GEN. PURP. SM TO-5	TI - 2N2219A

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ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0068A					Q3	
0069	00005.000	EA		0972958-0001	TRANSISTOR, PNP, GEN. PURP. SM TO-5 Q4,Q15,Q20,Q31,Q41	TI - 2N2925A
0069A						
0070	00015.000	EA		0236091-5447	XST 2N5447/SX3702	TI - 2N5447
0070A					Q1 Q9 Q11 Q16 Q17 Q18 Q21	
0070B					Q22 Q23 Q28 Q30 Q36 Q40	
0070C					Q46 Q48	
0071	00028.000	EA		0236091-5449	XST 2N5449/SX3704	TI - 2N5449
0071A					Q2 Q7 Q8 Q10 Q12 Q13 Q14	
0071B					Q19 Q24 Q25 Q26 Q27 Q32	
0071C					Q33 Q34 Q35 Q37 Q38 Q39	
0071D					Q42 Q43 Q44 Q45 Q47 Q49	
0071E					Q50 Q51 Q52	
0072	00001.000	EA		0236091-5323	XST 2N5323	RCA - 2N5323
0072A					Q5	
0073	00001.000	EA		0236091-5321	XST 2N5321	RCA - 2N5321
0073A					Q6	
0074	00002.000	EA		0419293-0003	HEATSINK, TRANSISTOR	WAK - 205
0076	00008.000	EA		0153763-0001	INSULATOR XISTOR TO-5CTO-9CASE	TI - 153763
0077	00002.000	EA		0083694-0003	TERMINAL TURRET TYPE	USE - 2013B

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PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0077A					TP1E1, TP2E2	
0078	REF	EA		0216546-9901	DIAGRAM, SCHEMATIC-CAPSTAN REGULATOR	
0079	00002.000	EA		0539370-0412	RES FIX FILM 1.91K OHM 1% .25 WATT	COR - N455
0079A					R49 R50	
0080	00001.000	EA		0972946-3123	RES FIX 270K OHM 5% .25 W CARBON FILM	ROH - R-25
0080A					R15	
0081	00001.000	EA		0972946-0134	RES FIX 750K OHM 5% .25 W CARBON FILM	ROH - R-25
0081A					R54	
0082	00002.000	EA		0972946-0125	RES FIX 330K OHM 5% .25 W CARBON FILM	ROH - R-25
0082A					R125, R131	
0083	00001.000	EA		0972946-0056	RES FIX 430 OHM 5% .25 W CARBON FILM	ROH - R-25
0083A					R102	
0084	00001.000	EA		0410529-0014	CAP FIX CERAMIC .0016 MF 10% 1 KV	CRL - DD-162
0084A					C45	
0087	REF	EA		2267021-9901	TEST PROCEDURE, UNIT, CAPSTAN REGULATOR	

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PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00001.000	EA		0216547-0001	CARD, PC-CAPTAN/REGULATOR	
0002	00001.000	EA		0413277-0009	EJECTOR, PCB, NON-LOCKING, D. GREEN	SCA -S-2301D, GREEN
0003	00001.000	EA		0413277-0003	EJECTOR, PCB, NON-LOCKING, BLACK	SCA -S-2001(BLACK)
0004	00003.000	EA		0222224-2741	NETWORK SN72741P OPERATIONAL AMP	-SN72741P
0004A					Z1, Z2, Z3	
0006	00007.000	EA		0972927-0043	CAP FIX MICA 300V 470 PF 5%	QPL -CM05F471JDC
0006A					C40 C41	
0007	00001.000	EA		0419051-0102	CAP FIX FILM FOIL .001 UF 5% 200VDC	TRW - 663JM
0007A					C11	
0009	00016.000	EA		0532736-0002	CAP FIX CERAMIC .02 MF 20/80% 25 VOLT	CRL - 200360E203ZAC
0009A					C2 C3 C6 C7 C10 C12 C13 C18	
0009B					C22 C24 C27 C30 C31 C32 C34	
0009C					C36	
0010	00002.600	EA		0419051-0333	CAP FIX FILM FOIL .033 UF 5% 200VDC	TRW - 663JM
0010A					C20 C21	
0011	00001.000	EA		0058023-0016	CAP FIX .100 MFD 5% 100V NYLAR FOIL	TRW - 663JM
0011A					C14	
0012	00006.000	EA		0419058-0003	CAP, FIX CERAMIC .05 MF 20V + 80/-20%	CRL - JK20-503
0012A					C37, C38, C39, C42, C43, C44	
0014	00001.000	EA		0972943-0043	CAP FIX .100 MF 5% 200V NYLAR METALIZED	TRW - X653F

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PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0014A					C19	
0015	00001.000	EA		0972943-0019	CAP FIX 1.00 MF 5% 50V NYLAR METALIZED	TRW - X653F
0015A					C1	
0016	00001.000	EA		0418356-2286	CAP FIX 10 MF 20V 10% TANTALUM SOLID	QPL -M39303/1-2286
0016A					C23	
0017	00001.000	EA		0972924-0314	CAP FIX TANT SOLID 15 MFD 10% 20 VOLT	QPL -M39303/1-2289
0017A					C26	
0018	00004.000	EA		0972924-0019	CAP FIX TANT SOLID 22 MFD 10% 35 VOLT	QPL -M39303/1-2306
0018A					C25 C28 C33 C35	
0019	00001.000	EA		0972924-0002	CAP FIX TANT SOLID 56 MFD 10% 6 VOLT	QPL -M39303/1-2246
0019A					C29	
0020	00018.000	EA		0972932-0001	DIODE, 1N914B SWITCHING 75V PIV 75MA 4MS	TI - 1N914B
0020A					CR1 THRU CR8, CR11 CR12 CR19	
0020B					CR22 CR23 CR24 CR25 CR29	
0020C					CR31 CR32	
0021	00007.000	EA		0972934-0001	DIODE, 1N746A 3.3 V 5% SIL VOLT REG	QPL - 1N746A
0021A					CR20 CR26	
0022	00004.000	EA		0972934-0006	DIODE, 1N751A 5.1 V 5% SIL VOLT REG	QPL - 1N751A
0022A					CR17 CR18 CR21 CR27	
0023	00001.000	EA		0972934-0007	DIODE, 1N752A 5.6 V 5% SIL VOLT REG	QPL - 1N752A

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PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0023A					CR30	
0024	00004.000	EA		0972934-0011	DIODE, 1N756A 8.2 V 5% SIL VOLT REG	QPL - 1N756A
0024A					CR9 CR10 CR13 CR14	
0025	00006.000	EA		0539468-0002	DIODE, 1N4002 1AMP 100PIV RECTIFIER	TI - 1N4002
0025A					CR15 CR16 CR33 CR34 CR35	
0025B					CR36	
0026	00002.000	EA		0539795-0005	RES VAR CERMET 200 OHMS 10% .75 WATT	BOU - 3069P-1-281
0026A					R76 R118	
0027	00002.000	EA		0539795-0009	RES VAR CERMET 5.0 K OHMS 10% .75 WATT	BOU - 3069P-1-502
0027A					R47 R48	
0028	00002.000	EA		0539795-0012	RES VAR CERMET 50 K OHMS 10% .75 WATT	BOU - 3069P-1-503
0028A					R1 R4	
0029	00003.000	EA		0233307-0004	RES 27.000 OHM 2% W 5%	AB -HB2735
0029A					R82 R85 R88	
0030	00002.000	EA		0972978-0090	RES FIX COMP 1.0 W 360 OHMS 5%	QPL -RC32G361J5
0030A					R30 R31	
0031	00002.000	EA		0972947-0025	RES FIX 22 OHM 5% .5 W CARBON FILM	ROH - R-50
0031A					R37 R39	
0032	00006.000	EA		0972947-0041	RES FIX 100 OHM 5% .5 W CARBON FILM	ROH - R-50
0032A					R26 R27 R29 R32 R49 R138	

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PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0033	00001.000	EA		0539370-0335	RES FIX FILM 301 OHM 1% .25 WATT	CDR - N455
0033A					R122	
0034	00003.000	EA		0539370-0318	RES FIX FILM 200 OHM 1% .25 WATT	CDR - N455
0034A					R75 R119 R121	
0036	00001.000	EA		0539370-0347	RES FIX FILM 402 OHM 1% .25 WATT	CDR - N455
0036A					R79	
0037	00004.000	EA		0539370-0442	RES FIX FILM 3.92K OHM 1% .25 WATT	CDR - N455
0037A					R2 R3 R7 R5	
0038	00003.000	EA		0539374-0385	RES FIX FILM 1.00K OHM 1% .25 WATT	CDR - N45
0038A					R73 R74 R116	
0039	00001.000	EA		0539370-0399	RES FIX FILM 1.40K OHM 1% .25 WATT	CDR - N455
0039A					R115	
0040	00001.000	EA		0539370-0473	RES FIX FILM 8.25K OHM 1% .25 WATT	CDR - N455
0040A					R22	
0041	00001.000	EA		0539370-0539	RES FIX FILM 40.2K OHM 1% .25 WATT	CDR - N455
0041A					R11	
0042	00001.000	EA		0972946-0017	RES FIX 10.0 OHM 5% .25 W. CARBON FILM	ROH - R-25
0042A					R28	
0043	00001.000	EA		0972946-0029	RES FIX 33.0 OHM 5% .25 W. CARBON FILM	ROH - R-25
0043A					R124	

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PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0044	00003.000	EA		0972946-0033	RES FIX 47.0 OHM 5% .25 W. CARBON FILM	ROH - R-25
0044A					R61 R71 R100	
0045	00001.000	EA		0972946-0037	RES FIX 68.0 OHM 5% .25 W. CARBON FILM	ROH - R-25
0045A					R63	
0046	00006.000	EA		0972946-0041	RES FIX 100 OHM 5% .25 W CARBON FILM	ROH - R-25
0046A					R59 R68 R70 R78 R103 R107	
0047	00006.000	EA		0972946-0048	RES FIX 200 OHM 5% .25 W CARBON FILM	ROH - R-25
0047A					R66 R72 R117 R123 R139 R141	
0048	00002.000	EA		0972946-0051	RES FIX 270 OHM 5% .25 W CARBON FILM	ROH - R-25
0048A					R98 R113	
0049	00007.000	EA		0972946-0053	RES FIX 330 OHM 5% .25 W CARBON FILM	ROH - R-25
0049A					R33 R34 R35 R38 R65 R77	
0049B					R120	
0050	00013.000	EA		0972946-0057	RES FIX 470 OHM 5% .25 W CARBON FILM	ROH - R-25
0050A					R20 R46 R51 R64 R67 R106	
0050B					R109 R110 R111 R114 R140	
0050C					R142 R143	
0051	00001.000	EA		0972946-0064	RES FIX 910 OHM 5% .25 W CARBON FILM	ROH - R-25
0051A					R44	
0052	00015.000	EA		0972946-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM	ROH - R-25

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PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0052A					R41 R42 R60 R62 R81 R84 R87	
0052B					R89 R93 R99 R101 R104 R105	
0052C					R108 R112	
0053	00002.000	EA		0972946-0069	RES FIX 1.5K OHM 5% .25 W CARBON FILM	ROH - R-25
0053A					R43 R45	
0054	00004.000	EA		0972946-0073	RES FIX 2.2K OHM 5% .25 W CARBON FILM	ROH - R-25
0054A					R126 R129 R133 R136	
0055	00004.000	EA		0972946-0074	RES FIX 2.4K OHM 5% .25 W CARBON FILM	ROH - R-25
0055A					R12 R13 R19 R21	
0056	00005.000	EA		0972946-0077	RES FIX 3.3K OHM 5% .25 W CARBON FILM	ROH - R-25
0056A					R40 R80 R83 R86 R144	
0057	00002.000	EA		0972946-0081	RES FIX 4.7K OHM 5% .25 W CARBON FILM	ROH - R-25
0057A					R14 R90	
0059	00012.000	EA		0972946-0089	RES FIX 10K OHM 5% .25 W CARBON FILM	ROH - R-25
0059A					R8 R17 R53 R55 R91 R92 R95	
0059B					R96 R127 R128 R134 R135	
0060	00002.000	EA		0972946-0095	RES FIX 18K OHM 5% .25 W CARBON FILM	ROH - R-25
0060A					R23 R25	
0061	00002.000	EA		0972946-0096	RES FIX 20 K OHM 5% .25 W CARBON FILM	ROH - R-25
0061A					R36 R94	

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PART NUMBER: LM0216545-0002 REV: AB

PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0062	00001.000	EA		0972946-0097	RES FIX 22 K OHM 5% .25 W CARBON FILM	ROH - R-25
0062A					R56	
0063	00001.000	EA		0972946-0101	RES FIX 33 K OHM 5% .25 W CARBON FILM	ROH - R-25
0063A					R52	
0064	00002.000	EA		0972946-0105	RES FIX 47 K OHM 5% .25 W CARBON FILM	ROH - R-25
0064A					R97 R132	
0065	00001.000	EA		0972946-0129	RES FIX 470K OHM 5% .25 W CARBON FILM	ROH - R-25
0065A					R57	
0066	00003.000	EA		0972946-0137	RES FIX 1.0M OHM 5% .25 W CARBON FILM	ROH - R-25
0066A					R9 R16 R58	
0067	00001.000	EA		0972957-0001	TRANSISTOR, 2N930A NPN LOW CUR AMP, TO-18	ROH - 2N930A
0067A					Q29	
0068	00001.000	EA		0972948-0001	TRANSISTOR, NPN, GEN. PURP. SW TO-5	TI - 2N2219A
0068A					Q3	
0069	00005.000	EA		0972958-0001	TRANSISTOR, PNP, GEN. PURP. SW TO-5	TI - 2N2935A
0069A					Q4 Q15 Q20 Q31 Q41	
0070	00015.000	EA		0800523-0001	TRANSISTOR 45T2907 PNP SILICON	TI - 45T2907
0070A					Q1 Q9 Q11 Q16 Q17 Q18 Q21	
0070B					Q22 Q23 Q28 Q30 Q36 Q40	
0070C					Q46 Q48	

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949613-9702

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 8 of PART NUMBER LMD216545-0002 REV AB

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0071	00028.000	EA		0972057-0001	TRANSISTOR-A572222 NPN SILICON	TI- -A572222
0071A					Q2 Q7 Q8 Q10 Q12 Q13 Q14	
0071B					Q19 Q24 Q25 Q26 Q27 Q32	
0071C					Q33 Q34 Q35 Q37 Q38 Q39	
0071D					Q42 Q43 Q44 Q45 Q47 Q49	
0071E					Q50 Q51 Q52	
0072	00001.000	EA		0236091-5323	XST 2N5323	RCA -2N5323
0072A					Q5	
0073	00001.000	EA		0236091-5321	XST 2N5321	RCA -2N5321
0073A					Q6	
0074	00002.000	EA		0419253-0003	HEATSINK, TRANSISTOR	WAK - 205
0076	00008.000	EA		0153763-0001	INSULATOR XISTOP T0-56T0-9CASE	TI -153763
0077	00002.000	EA		0083694-0003	TERMINAL TURRET TYPE	USE - 23108
0077A					TP1E1 TP2E2	
0078	FFF	EA		0216508-9901	DIAGRAM, ELTN SCHEMATIC-CAPSTAN REGULATOR	
0079	00007.000	FA		0539370-0412	RES FIX FILM 1.01K OHM 1% .25 WATT	COM - M455
0079A					R49 R50	
0080	00001.000	EA		0972946-0107	RES FIX 56 K OHM 5% .25 W CARBON FILM	ROH - R-25
0080A					R15	
0081	00001.000	EA		0972946-0134	RES FIX 750K OHM 5% .25 W CARBON FILM	ROH - R-25
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REG SER #11/JP						
APPD MGR DATE APPD PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LMD216545-0002 REV AB						

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 9 of PART NUMBER LMD216545-0002 REV AB

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0081A					R54	
0082	00002.000	EA		0972946-0115	RES FIX 120K OHM 5% .25 W CARBON FILM	ROH - R-25
0082A					R125 R131	
0083	00001.000	EA		0972946-0056	RES FIX 430 OHM 5% .25 W CARBON FILM	ROH - R-25
0083A					R102	
0084	00001.000	FA		0410529-0014	CAP FIX CERAMIC .0016 MF 10% 1 KV	CRL - 00-162
0084A					C45	
0085	00001.000	EA		0972228-0010	RESISTOR, VARIABLE 10K OHM CERMET FILM	BOU - 3006P-1-103
0085A					R18	
0086	00001.000	FT		0457313-0006	WIRE 24 AWG SOLID, TEFLON, WHITE	QPL - MIL-W-16878/4
0087	REF	EA		2267021-9901	TEST PROCEDURE, UNIT, CAPSTAN REGULATOR	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REG SER #11/JP						
APPD MGR DATE APPD PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LMD216545-0002 REV AB						

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 1 of PART NUMBER LMD216545-0003 REV AB

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00001.000	EA		0216547-0001	CARD, PC-CAPTAN/REGULATOR	
0002	00001.000	EA		0413277-0009	EJECTOR, PCB, NON-LOCKING, D. GREEN	SCA -S-200(D. GREEN)
0003	00001.000	EA		0413277-0003	EJECTOR, PCB, NON-LOCKING, BLACK	SCA -S-200(BLACK)
0004	00003.000	FA		0222224-2741	NETWORK SN72741P OPERATIONAL AMP	-SN72741P
0004A					Z1, Z2, Z3	
0006	00002.000	EA		0972927-0043	CAP FIX MICA 300V 470 PF 5%	QPL -CN05F471JQC
0006A					C40, C41	
0007	00001.000	FA		0419051-0102	CAP FIX FILM FOIL .001 UF 5% 200VDC	TRW - 663UM
0007A					C11	
0009	00016.000	FA		0532736-0002	CAP FIX CERAMIC .02 MF 20/80% 25 VOLT	CRL - 200U60E2032AC
0009A					C2, C3, C6, C7, C10, C12, C13, C18	
0009B					C22, C24, C27, C30, C31, C32, C34	
0009C					C36	
0010	00002.000	FA		0419051-0333	CAP FIX FILM FOIL .033 UF 5% 200VDC	TRW - 663UM
0010A					C20, C21	
0011	00001.000	FA		0058023-0016	CAP FIX .100 MFD 5% 100V NYLAR FOIL	TRW - 663UM
0011A					C14	
0012	00006.000	EA		0419058-0003	CAP. FIX CERAMIC .05 MF 20V + 80/-20%	CRL - JK20-503
0012A					C37, C38, C39, C42, C43, C44	
0014	00001.000	FA		0972943-0043	CAP FIX .100 MF 5% 200V NYLAR METALIZED	TRW - X663F
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REGULATOR FOR 979A						
APPD MGR DATE APPD PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LMD216545-0003 REV AB						

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 2 of PART NUMBER LMD216545-0003 REV AB

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0014A					C19	
0015	00001.000	EA		0972943-0019	CAP FIX 1.00 MF 5% 50V NYLAR METALIZED	TRW - X663F
0015A					C1	
0016	00001.000	EA		0418356-2286	CAP FIX 10 MF 20V 10% TANTALUM SOLID	QPL -M39003/1-2286
0016A					C23	
0017	00001.000	EA		0972924-0014	CAP FIX TANT SOLID 15 MFD 10% 20 VOLT	QPL -M39003/1-2289
0017A					C26	
0018	00004.000	EA		0972924-0019	CAP FIX TANT SOLID 22 MFD 10% 35 VOLT	QPL -M39003/1-2306
0018A					C25 C28 C33 C35	
0019	00001.000	EA		0972924-0002	CAP FIX TANT SOLID 56 MFD 10% 6 VOLT	QPL -M39003/1-2246
0019A					C29	
0020	00018.000	EA		0972932-0001	DIODE, 1N914B SWITCHING 75V PIV 75MA 4MS	TI - 1N914B
0020A					CR1 THRU CR8, CR11, CR12, CR19	
0020B					CR22, CR23, CR24, CR25, CR29,	
0020C					CR31, CR32	
0021	00002.000	FA		0972934-0001	DIODE, 1N746A 3.3 V 5% SIL VOLT REG	QPL - 1N746A
0021A					CR20, CR26	
0022	00004.000	EA		0972934-0006	DIODE, 1N751A 5.1 V 5% SIL VOLT REG	QPL - 1N751A
0022A					CR17, CR18, CR21, CR27	
0023	00001.000	EA		0972934-0007	DIODE, 1N752A 5.6 V 5% SIL VOLT REG	QPL - 1N752A
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REGULATOR FOR 979A						
APPD MGR DATE APPD PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LMD216545-0003 REV AB						



TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 3 of PART NUMBER LM0216545-0003 REV AB

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
00234					CR30	
0024	00004.000	EA		0972934-0011	DIODE, 1N756A 8.2 V 5% SIL VOLT REG	QPL - 1N756A
00244					CR9, CR10, CR13, CR14	
0025	00006.000	EA		0539468-0002	DIODE, 1N4002 1AMP 100PIV RECTIFIER	TI - 1N4002
0025A					CR15, CR16, CP33, CP34, CR35	
0025B					CR36	
0026	00002.000	EA		0539795-0005	RES VAR CERMET 200 OHMS 10% .75 WATT	BOU - 3069P-1-201
0026A					R76, R118	
0027	00002.000	EA		0539795-0009	RES VAR CERMET 5.0 K OHMS 10% .75 WATT	BOU - 3069P-1-502
0027A					R47, R48	
0028	00002.000	FA		0539795-0012	RES VAR CERMET 50 K OHMS 10% .75 WATT	BOU - 3069P-1-503
0028A					R1, P4	
0029	00003.000	FA		0233307-0004	RES 27.000 OHM 2% W 5%	AB - HB2705
0029A					P02, P05, P08	
0030	00002.000	EA		0972978-0090	RES FIX COMP 1.0 W 360 OHMS 5%	QPL - RE32G361J5
0030A					R30, R31	
0031	00002.000	EA		0972947-0025	RES FIX 22 OHM 5% .5 W CARBON FILM	ROH - R-50
0031A					R37, R39	
0032	00006.000	EA		0972947-0041	RES FIX 100 OHM 5% .5 W CARBON FILM	ROH - R-50
0032A					R26, R27, R29, R32, R69, R138	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REGULATOR FOR 979A						
APPD MFG DATE APPD PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LM0216545-0003 REV AB						

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 4 of PART NUMBER LM0216545-0003 REV AB

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0033	00001.000	EA		0539370-0335	RES FIX FILM 391 OHM 1% .25 WATT	COR - N455
0033A					R122	
0034	00003.000	EA		0539370-0318	RES FIX FILM 200 OHM 1% .25 WATT	COR - N455
0034A					R75, R119, R121	
0036	00001.000	EA		0539370-0347	RES FIX FILM 402 OHM 1% .25 WATT	COR - N455
0036A					R79	
0037	00004.000	EA		0539370-0442	RES FIX FILM 3.92K OHM 1% .25 WATT	COR - N455
0037A					R2, R3, R5, R7	
0038	00003.000	EA		0539374-0385	RES FIX FILM 1.00K OHM 1% .25 WATT	COR - N05
0038A					R73, R74, R116	
0039	00001.000	EA		0539370-0399	RES FIX FILM 1.40K OHM 1% .25 WATT	COR - N455
0039A					R115	
0040	00001.000	EA		0539370-0473	RES FIX FILM 8.25K OHM 1% .25 WATT	COR - N455
0040A					R22	
0041	00001.000	FA		0539370-0539	RES FIX FILM 40.2K OHM 1% .25 WATT	COR - N455
0041A					R11	
0042	00001.000	EA		0972946-0017	RES FIX 10.0 OHM 5% .25 W CARBON FILM	ROH - R-25
0042A					R28	
0043	00001.000	EA		0972946-0029	RES FIX 33.0 OHM 5% .25 W CARBON FILM	ROH - R-25
0043A					R124	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REGULATOR FOR 979A						
APPD MFG DATE APPD PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LM0216545-0003 REV AB						

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 5 of PART NUMBER LM0216545-0003 REV AB

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0044	00003.000	FA		0972946-0033	RES FIX 47.0 OHM 5% .25 W CARBON FILM	ROH - R-25
0044A					R61, R71, R100	
0045	00001.000	EA		0972946-0037	RES FIX 68.0 OHM 5% .25 W CARBON FILM	ROH - R-25
0045A					R63	
0046	00006.000	EA		0972946-0041	RES FIX 100 OHM 5% .25 W CARBON FILM	ROH - R-25
0046A					R59, R68, R70, R78, R103, R107	
0047	00006.000	EA		0972946-0048	RES FIX 200 OHM 5% .25 W CARBON FILM	ROH - R-25
0047A					R66, R72, R117, R123, R139, R141	
0048	00002.000	FA		0972946-0051	RES FIX 270 OHM 5% .25 W CARBON FILM	ROH - R-25
0048A					R98, R113	
0049	00007.000	EA		0972946-0053	RES FIX 330 OHM 5% .25 W CARBON FILM	ROH - R-25
0049A					R33, R34, R35, R38, R65, R77,	
0049B					R120	
0050	00013.000	EA		0972946-0057	RES FIX 470 OHM 5% .25 W CARBON FILM	ROH - R-25
0050A					R20, R46, R51, R64, R67, R106,	
0050B					R109, R110, R111, R114, R140,	
0050C					R142, R143	
0051	00001.000	EA		0972946-0064	RES FIX 910 OHM 5% .25 W CARBON FILM	ROH - R-25
0051A					P44	
0052	00015.000	EA		0972946-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM	ROH - R-25
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REGULATOR FOR 979A						
APPD MFG DATE APPD PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LM0216545-0003 REV AB						

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 6 of PART NUMBER LM0216545-0003 REV AB

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0052A					R41, R42, R60, R62, R81, R84, R87	
0052B					R89, R93, P99, R101, R104, R105,	
0052C					R108, R112	
0053	00002.000	EA		0972946-0069	RES FIX 1.5K OHM 5% .25 W CARBON FILM	ROH - R-25
0053A					R43, R45	
0054	00004.000	EA		0972946-0073	RES FIX 2.2K OHM 5% .25 W CARBON FILM	ROH - R-25
0054A					R126, R129, R133, R136	
0055	00004.000	FA		0972946-0074	RES FIX 2.4K OHM 5% .25 W CARBON FILM	ROH - R-25
0055A					R12, R13, R19, P21	
0056	00005.000	EA		0972946-0077	RES FIX 3.3K OHM 5% .25 W CARBON FILM	ROH - R-25
0056A					R40, R80, R83, R86, R144	
0057	00002.000	EA		0972946-0081	RES FIX 4.7K OHM 5% .25 W CARBON FILM	ROH - R-25
0057A					R14, R90	
0059	00012.000	FA		0972946-0089	RES FIX 10K OHM 5% .25 W CARBON FILM	ROH - R-25
0059A					R8, R17, R53, R55, R91, R92, R95,	
0059B					P96, R127, R128, R134, R135	
0060	00002.000	EA		0972946-0095	RES FIX 18K OHM 5% .25 W CARBON FILM	ROH - R-25
0060A					R23, R25	
0061	00002.000	FA		0972946-0096	RES FIX 20 K OHM 5% .25 W CARBON FILM	ROH - R-25
0061A					R36, R94	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, CAPSTAN/REGULATOR FOR 979A						
APPD MFG DATE APPD PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LM0216545-0003 REV AB						



949613-9702

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 7 of PART NUMBER LM0216545-0003 REV AB

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0062	00001.000	EA		0972946-0097	RES FIX 22 K OHM 5 % .25 W CARBON FILM	RDH - R-25
0062A					R56	
0063	00001.000	EA		0972946-0101	RES FIX 33 K OHM 5 % .25 W CARBON FILM	RDH - R-25
0063A					P52	
0064	00002.000	EA		0972946-0105	RES FIX 47 K OHM 5 % .25 W CARBON FILM	RDH - R-25
0064A					R97,R132	
0065	00001.000	EA		0972946-0129	RES FIX 470K OHM 5 % .25 W CARBON FILM	RDH - R-25
0065A					R57	
0066	00003.000	EA		0972946-0137	RES FIX 1.0M OHM 5 % .25 W CARBON FILM	RDH - R-25
0066A					R9,R16,R58	
0067	00001.000	EA		0972957-0001	TRANSISTOR,2N930A NPN LOW CUR AMP,TD-18	MOT - 2N930A
0067A					Q29	
0068	00001.000	EA		0972948-0001	TRANSISTOR, NPN,GEN.PURP.SM TD-5	TI - 2N2219A
0068A					Q3	
0069	00005.000	EA		0972958-0001	TRANSISTOR, PNP,GEN.PURP.SM TD-5	TI - 2N2905A
0069A					Q4,Q15,Q20,Q31,Q41	
0070	00015.000	EA		0800523-0001	TRANSISTOR A572907 PNP SILICON	TI- -A572907
0070A					Q1,Q9,Q11,Q16,Q17,Q18,Q21,	
0070B					Q22,Q23,Q28,Q30,Q36,Q40,Q46	
0070C					Q48	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY,CAPSTAN/REGULATOR FOR 979A						
APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LM0216545-0003 REV AB						

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 8 of PART NUMBER LM0216545-0003 REV AB

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0071	00028.000	EA		0972957-0001	TRANSISTOR-A572222 NPN SILICON	TI- -A572222
0071A					Q2,Q7,Q8,Q10,Q12,Q13,Q14,	
0071B					Q19,Q24,Q25,Q26,Q27,Q32,Q33	
0071C					Q34,Q35,Q37,Q38,Q39,Q42,Q43	
0071D					Q44,Q45,Q47,Q49,Q50,Q51,Q52	
0072	00001.000	EA		0236091-5323	XST 2N5323	RCA -2N5323
0072A					Q5	
0073	00001.000	EA		0236091-5321	XST 2N5321	RCA -2N5321
0073A					Q6	
0074	00002.000	EA		0419253-0003	HEATSINK,TRANSISTOR	WAK - 205
0076	00008.000	EA		0153763-0001	INSULATOR XISTOR TD-56TD-9CASE	TI -153763
0077	00002.000	EA		0083694-0003	TERMINAL TURRET TYPE	USE - 20108
0077A					TP1F1,TP2E2	
0078	RFF	EA		0216508-9901	DIAGRAM,ELTN SCHEMATIC-CAPSTAN REGULATOR	
0079	00002.000	EA		0539370-0412	RES FIX FILM 1.91K OHM 1% .25 WATT	COR - NA55
0079A					R49,R50	
0080	00001.000	EA		0972946-0107	RES FIX 56 K OHM 5 % .25 W CARBON FILM	RDH - R-25
0080A					R15	
0081	00001.000	EA		0972946-0134	RES FIX 750K OHM 5 % .25 W CARBON FILM	RDH - R-25
0081A					R54	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY,CAPSTAN/REGULATOR FOR 979A						
APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LM0216545-0003 REV AB						

TEXAS INSTRUMENTS INCORPORATED DATE 12/21/78 LIST OF MATERIAL PAGE 9 of PART NUMBER LM0216545-0003 REV AB

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0082	00002.000	EA		0972946-0109	RES FIX 68 K OHM 5 % .25 W CARBON FILM	RDH - R-25
0082A					R125,R131	
0083	00001.000	EA		0972946-0056	RES FIX 430 OHM 5 % .25 W CARBON FILM	RDH - R-25
0083A					R102	
0084	00001.000	EA		0410529-0014	CAP FIX CERAMIC .0016 MF 10% 1 KV	CRL - 00-162
0084A					C45	
0085	00001.000	EA		0972228-0010	RESISTOR,VARIABLE 10K OHM CERMET FILM	BOU - 3006P-1-103
0085A					R18	
0086	00001.000	FT		0457313-0006	WIRE 24 AWG SOLID,TEFLON,WHITE	QPL - MIL-W-16078/4
0087	REF	EA		2267021-9901	TEST PROCEDURE,UNIT,CAPSTAN REGULATOR	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY,CAPSTAN/REGULATOR FOR 979A						
APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LM0216545-0003 REV AB						





ZONE		REVISIONS	
N	CN 421876 (B) J. Campbell	11/21/77	AM
C-2	(1) ONLM-0001 ADDED ITEM 45 (2) ADDED CAPACITANCE-39 TO PICTORIAL (3) ADDED NOTE [3] (4) UPDATED REV LEVEL BLK & DELETED FOR -0001 ASSY FROM LOGIC DIAGRAM		
P	CN 448823 (C) B. Bur	(1) ADDED 3-21-79	B. Bur
D-1	TEST PROCEDURE TO REV STATUS BLOCK & UPDATED (2) ADDED ITEM 46 TO -0001 & -0002 LM		

SIZE	CODE IDENT NO	DRAWING NO
D	96214	216548
SCALE	REVP	SHEET 2

T121679



TEXAS INSTRUMENTS INCORPORATED		DATE 12/20/78		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0216548-0001		REV P	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0001	00101.000	FA		0216550-0001	CARD,PC-LOGIC						
0002	00001.000	FA		0413277-0004	EJECTOR,PCB,NON-LOCKING,ORANGE	SCA -S-2301(ORANGE)					
0003	00001.000	FA		0413277-0003	EJECTOR,PCB,NON-LOCKING,BLACK	SCA -S-2001(BLACK)					
0004	00006.000	FA		0222222-7400	NETWURK SN7400N	-SN7400N					
0004A					Z3 Z6 Z7 Z14 Z16 Z17						
0005	00001.000	EA		0222222-7402	NETWURK SN7402N	TI- -SN7402N					
0005A					Z1,Z7,Z11						
0006	00001.000	FA		0222222-7404	NETWORK SN7404N						
0006A					Z8						
0007	00001.000	EA		0222222-7405	NETWORK SN7405N						
0007A					Z10						
0008	00004.000	FA		0222222-7410	NETWORK SN7410N	-SN7410N					
0008A					Z4,Z9,Z12,Z15						
0009	00001.000	EA		0222222-7420	NETWORK SN7420N	-SN7420N					
0009A					Z13						
0010	00001.000	FA		0222222-7473	NETWORK-SN7473N						
0010A					Z5						
0011	00000.000	EA		0532736-0007	CAP FIX CERAMIC .02 MF 20/80X 25 VOLT	CRL - 200040F2032AC					
0011A					C2 C5 C8 C9 C10 C12 THRU						
0011B					C31 C33 THRU C37						
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE				
APPROVED		DATE	APPROVED PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO				
								CARD ASSY,LOGIC 24.5-45 IPS			
								PART NUMBER LM0216548-0001 REV P			

TEXAS INSTRUMENTS INCORPORATED		DATE 12/20/78		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM0216548-0001		REV P	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0012	00001.000	FA		0972924-0014	CAP FIX TANT SOLID 15 MFD 10 X 20 VOL	QPL -M39303/1-2289					
0012A					C38						
0013	00002.000	FA		0972924-0010	CAP FIX TANT SOLID 22 MFD 10 X 15 VOL	QPL -M39303/1-2271					
0013A					C1,C6						
0014	00002.000	EA		0418356-2257	CAP FIX 33 MF 10V 10X TANTALUM SOLID	QPL -M39303/1-2257					
0014A					C4 C11						
0015	00001.000	EA		0418356-2244	CAP FIX 47 MF 6 V 10X TANTALUM SOLID	QPL -M39303/1-2244					
0015A					C32						
0016	00001.000	EA		0972924-0002	CAP FIX TANT SOLID 56 MFD 10 X 6 VOL	QPL -M39303/1-2246					
0016A					C7						
0018	00006.000	EA		0972932-0001	DIODE,1M514B SWITCHING 75V PIV 75MA 4MS	TI - 1M914B					
0018A					CRL,THRU,C6						
0019	00004.000	EA		0972946-0033	RES FIX 47.0 OHM 5 X .25 W,CARBON FILM	ROH - R-25					
0019A					R60,R61,R62,R63						
0020	00004.000	EA		0972946-0041	RES FIX 100 OHM 5 X .25 W CARBON FILM	ROH - R-25					
0020A					R22,R29,R30,R56						
0021	00001.000	FA		0972946-0047	RES FIX 180 OHM 5 X .25 W CARBON FILM	ROH - R-25					
0021A					R16,R17,R18						
0022	00001.000	EA		0972946-0048	RES FIX 200 OHM 5 X .25 W CARBON FILM	ROH - R-25					
0022A					R71						
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE				
APPROVED		DATE	APPROVED PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO				
								CARD ASSY,LOGIC 24.5-45 IPS			
								PART NUMBER LM0216548-0001 REV P			

TEXAS INSTRUMENTS INCORPORATED		DATE 12/20/78		LIST OF MATERIAL		PAGE 3 of		PART NUMBER LM0216548-0001		REV P	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0023	00005.000	FA		0972946-0057	RES FIX 470 OHM 5 X .25 W CARBON FILM	ROH - R-25					
0023A					R12 R41 R46 R51 R54						
0024	00014.000	EA		0972946-0065	RES FIX 1.0K OHM 5X .25 W CARBON FILM	ROH - R-25					
0024A					R2,R11,R13,R21,R24,R32,R34						
0024B					R38 R48 R57 R59 R65 R73 R3						
0025	00005.000	EA		0972946-0071	RES FIX 1.8K OHM 5 X .25 W CARBON FILM	ROH - R-25					
0025A					R20 R36 R70 R77 R77						
0026	00002.000	EA		0972946-0079	RES FIX 3.5K OHM 5 X .25 W CARBON FILM	ROH - R-25					
0026A					R9,R78						
0027	00004.000	FA		0972946-0089	RES FIX 13K OHM 5X .25 W CARBON FILM	ROH - R-25					
0027A					R1 R4 R15 R19 R23 R28 P35						
0027B					R39 R40 R42 R44 R45						
0027C					R50,R53,R55,R64,R66,R67,R68						
0027D					R75 R52 R74 R80 R81						
0028	00001.000	FA		0972946-0091	RES FIX 12 K OHM 5X .25 W CARBON FILM	ROH - R-25					
0028A					R69						
0029	00001.000	EA		0972946-0099	RES FIX 27 K OHM 5 X .25 W CARBON FILM	ROH - R-25					
0029A					R33						
0030	00006.000	EA		0972946-0105	RES FIX 47 K OHM 5 X .25 W CARBON FILM	ROH - R-25					
0030A					R5 R6 R7 R8 R37 R58						
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE				
APPROVED		DATE	APPROVED PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO				
								CARD ASSY,LOGIC 24.5-45 IPS			
								PART NUMBER LM0216548-0001 REV P			

TEXAS INSTRUMENTS INCORPORATED		DATE 12/20/78		LIST OF MATERIAL		PAGE 4 of		PART NUMBER LM0216548-0001		REV P	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0031	00001.000	EA		0972946-0133	RES FIX 680K OHM 5 X .25 W CARBON FILM	ROH - R-25					
0031A					R10						
0032	00001.000	EA		0972946-0137	RES FIX 1.0K OHM 5 X .25 W CARBON FILM	ROH - R-25					
0032A					R14						
0033	00003.000	EA		0807573-0001	TRANSISTOR AST2907 PNP SILICON	TI- -AST2907					
0033A					Q4 Q5 Q25						
0034	00019.000	EA		0972957-0001	TRANSISTOR-AST2222 NPN SILICON	TI- -AST2222					
0034A					Q1 Q2 Q3 Q6 Q7 Q8 Q10 Q11						
0034B					Q13 THRU Q16,Q18 THRU Q24						
0035	00001.000	EA		0972952-0001	TRANSISTOR, UNIUNCTION,GEN PURPOSE	TI - 2N4893					
0035A					Q12						
0036	REF	EA		0216549-9901	DIAGRAM,LOGIC-LOGIC						
0037	00001.000	EA		0185113-0001	X SPACER XST TO-18 CASE	-					
0038	00002.000	FA		0972946-0091	RES FIX 4.7K OHM 5 X .25 W CARBON FILM	ROH - R-25					
0038A					R76 R79						
0039	00001.000	FA		0972946-0129	RES FIX 470K OHM 5 X .25 W CARBON FILM	ROH - R-25					
0039A					R31						
0040	00001.000	EA		0972946-0053	RES FIX 330 OHM 5 X .25 W CARBON FILM	ROH - R-25					
0040A					R47						
0041	00001.000	FA		0972946-0095	RES FIX 18K OHM 5X .25 W CARBON FILM	ROH - R-25					
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE				
APPROVED		DATE	APPROVED PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO				
								CARD ASSY,LOGIC 24.5-45 IPS			
								PART NUMBER LM0216548-0001 REV P			



949613-9702

TEXAS INSTRUMENTS INCORPORATED		DATE 12/20/78		LIST OF MATERIAL		PAGE 5 of		PART NUMBER LM0216548-0001		REV P	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0042	00001.000	FA		0972957-0001	TRANSISTOR, 2N930A NPN LOW CUR AMP, TO-18	MOT - 2N930A					
0042A					Q17						
0044	AR	FT		0457313-0017	WIRE 26 AWG SOLID, TEFLON BK/WH	QPL - MIL-W-16878/4					
0045	00001.000	FA		0972924-0015	CAP FIX TANT SOLID 47 MFD 10 % 20 VOLT	QPL -M39303/1-2295					
0045A					C39						
0046	REF	EA		0937014-9901	TEST PROCEDURE, UNIT, LOGIC CARD						
DRAFTSMAN DATE CDD DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, LOGIC 24.5-45 IPS											
APP'D DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. PART NUMBER LM0216548-0001 REV P											

TEXAS INSTRUMENTS INCORPORATED		DATE 12/20/78		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0216548-0002		REV P	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0001	00001.000	EA		0216550-0001	CARD, PC-LOGIC						
0002	00001.000	EA		0413277-0004	EJECTOR, PCB, NON-LOCKING, ORANGE	SCA -S-200(ORANGE)					
0003	00001.000	EA		0413277-0003	EJECTOR, PCB, NON-LOCKING, BLACK	SCA -S-200(BLACK)					
0004	00006.000	EA		0222722-7400	NETWORK SN7400N	-SN7400N					
0004A					Z3 Z6 Z7 Z14 Z16 Z17						
0005	00003.000	EA		0227722-7402	NETWORK SN7402N	TI- -SN7402N					
0005A					Z1, Z2, Z11						
0006	00001.000	EA		0222222-7404	NETWORK SN7404N						
0006A					Z8						
0007	00001.000	EA		0222222-7405	NETWORK SN7405N						
0007A					Z10						
0008	00004.000	EA		0222222-7410	NETWORK SN7410N	-SN7410N					
0008A					Z4, Z9, Z12, Z15						
0009	00001.000	EA		0222222-7420	NETWORK SN7420N	-SN7420N					
0009A					Z13						
0010	00001.000	EA		0222222-7473	NETWORK-SN7473N						
0010A					Z5						
0011	00003.000	EA		0532736-0002	CAP FIX CERAMIC .02 MFD 20/808 25 VOLT	CRL - 200U60E2032A6					
0011A					C2 C5 C8 C9 C10						
0011B					C12 THRU C31, C33 THRU 37						
DRAFTSMAN DATE CDD DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, LOGIC 15-24 IPS											
APP'D DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. PART NUMBER LM0216548-0002 REV P											

TEXAS INSTRUMENTS INCORPORATED		DATE 12/20/78		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM0216548-0002		REV P	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0012	00001.000	EA		0972924-0014	CAP FIX TANT SOLID 15 MFD 10 % 20 VOLT	QPL -M39303/1-2289					
0012A					C38						
0013	00002.000	FA		0972924-0010	CAP FIX TANT SOLID 22 MFD 10 % 15 VOLT	QPL -M39303/1-2271					
0013A					C1, C6						
0014	00002.000	EA		0418356-2257	CAP FIX 33 MFD 10V 10% TANTALUM SOLID	QPL -M39303/1-2257					
0014A					C4 C11						
0015	00001.000	EA		0418356-2244	CAP FIX 47 MFD 6 V 10% TANTALUM SOLID	QPL -M39303/1-2244					
0015A					C32						
0016	00001.000	FA		0972924-0002	CAP FIX TANT SOLID 56 MFD 10 % 6 VOLT	QPL -M39303/1-2244					
0016A					C7						
0018	00006.000	EA		0972932-0001	DIODE, 1N914B SWITCHING 75V PIV 75MA 4MS	TI - 1N914B					
0018A					CRI THRU CR6						
0019	00004.000	EA		0972946-0033	RES FIX 47.0 OHM 5 % .25 W CARBON FILM	ROH - R-25					
0019A					R60 R61 R62 R63						
0023	00004.000	FA		0972946-0041	RES FIX 100 OHM 5 % .25 W CARBON FILM	ROH - R-25					
0020A					R22, R29, R30, R56						
0021	00003.000	FA		0972946-0047	RES FIX 180 OHM 5 % .25 W CARBON FILM	ROH - R-25					
0021A					R16, R17, R18						
0022	00001.000	EA		0972946-0048	RES FIX 200 OHM 5 % .25 W CARBON FILM	ROH - R-25					
0022A					R71						
DRAFTSMAN DATE CDD DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, LOGIC 15-24 IPS											
APP'D DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. PART NUMBER LM0216548-0002 REV P											

TEXAS INSTRUMENTS INCORPORATED		DATE 12/20/78		LIST OF MATERIAL		PAGE 3 of		PART NUMBER LM0216548-0002		REV P	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0023	00005.000	EA		0972946-0057	RES FIX 470 OHM 5 % .25 W CARBON FILM	ROH - R-25					
0023A					R12 R41 R46 R51 R54						
0024	00004.000	EA		0972946-0065	RES FIX 1.0K OHM 5 % .25 W CARBON FILM	ROH - R-25					
0024A					R2 R3 R11 R13 R21 R24 R32						
0024B					R34 R38 R48 R57 R59 R65 R73						
0025	00005.000	EA		0972946-0071	RES FIX 1.8K OHM 5 % .25 W CARBON FILM	ROH - R-25					
0025A					R20, R36, R70, R72, R77						
0026	00002.000	EA		0972946-0079	RES FIX 3.9K OHM 5 % .25 W CARBON FILM	ROH - R-25					
0026A					R9, R78						
0027	00024.000	EA		0972946-0084	RES FIX 10K OHM 5 % .25 W CARBON FILM	ROH - R-25					
0027A					R52 R74 R80 R81 R75						
0027B					R39 R40 R42 R44 R45						
0027C					R80, R53, R55, R64, R66, R67, R68						
0027D					R1 R4 R15 R19 R28 R35 R23						
0028	00001.000	EA		0972946-0091	RES FIX 12 K OHM 5 % .25 W CARBON FILM	ROH - R-25					
0028A					R69						
0029	00001.000	EA		0972946-0099	RES FIX 27 K OHM 5 % .25 W CARBON FILM	ROH - R-25					
0029A					R33						
0030	00004.000	EA		0972946-0105	RES FIX 47 K OHM 5 % .25 W CARBON FILM	ROH - R-25					
0030A					R5 R6 R7 R8 R37 R58						
DRAFTSMAN DATE CDD DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, LOGIC 15-24 IPS											
APP'D DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. PART NUMBER LM0216548-0002 REV P											



TEXAS INSTRUMENTS INCORPORATED DATE 12/20/78 LIST OF MATERIAL PAGE 4 of PART NUMBER LM0216548-0002 REV P

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0031	00001.000	EA		0972946-0133	RES FIX 680K OHM 5 % .25 W CARBON FILM	ROH - R-25
0031A					R10	
0032	00001.000	EA		0972946-0137	RES FIX 1.0M OHM 5 % .25 W CARBON FILM	ROH - R-25
0032A					R14	
0033	00003.000	EA		0800523-0001	TRANSISTOR A5T2907 PNP SILICON	TI- -A5T2907
0033A					Q4, Q5, Q25	
0034	00019.000	EA		0972057-0001	TRANSISTOR-A5T2222 NPN SILICON	TI- -A5T2222
0034A					Q1 Q2 Q3 Q6 Q7 Q8 Q10 Q11	
0034B					Q13 THRU Q16, Q18 THRU Q24	
0035	00001.000	EA		0972952-0001	TRANSISTOR, UNIJUNCTION, GEN PURPOSE	TI - 2N4893
0035A					U12	
0036	REF	EA		0216549-9901	DIAGRAM, LOGIC-LOGIC	
0037	00001.000	EA		0195113-0001	X SPACER XST TO-18 CASE	* -
0038	00002.000	EA		0972946-0081	RES FIX 4.7K OHM 5 % .25 W CARBON FILM	ROH - R-25
0038A					R76 R79	
0039	00001.000	EA		0972946-0137	RES FIX 1.0M OHM 5 % .25 W CARBON FILM	ROH - R-25
0039A					R31	
0040	00001.000	EA		0972946-0053	RES FIX 330 OHM 5 % .25 W CARBON FILM	ROH - R-25
0040A					R47	
0041	00001.000	EA		0972946-0095	RES FIX 18K OHM 5% .25 W CARBON FILM	ROH - R-25
DRAFTSMAN DATE CAD DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, LOGIC 15-24 IPS APPD ENG DATE APPD PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LM0216548-0002 REV P						

TEXAS INSTRUMENTS INCORPORATED DATE 12/20/78 LIST OF MATERIAL PAGE 5 of PART NUMBER LM0216548-0002 REV P

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0041A					P49	
0042	00001.000	EA		0972957-0001	TRANSISTOR, 2N930A NPN LOW CUR AMP, TO-18	ROH - 2N930A
0042A					Q17	
0044	AR	FT		0457313-0017	WIRE 26 AWG SOLID, TEPLON BK/WH	UPL - MIL-W-16878/4
0046	REF	EA		0937014-9901	TEST PROCEDURE, UNIT, LOGIC CARD	
DRAFTSMAN DATE CAD DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE CARD ASSY, LOGIC 15-24 IPS APPD ENG DATE APPD PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER LM0216548-0002 REV P						







**TEXAS INSTRUMENTS**  
INCORPORATED

DATE: 02/24/77 LIST OF MATERIAL PAGE: 1 of 1

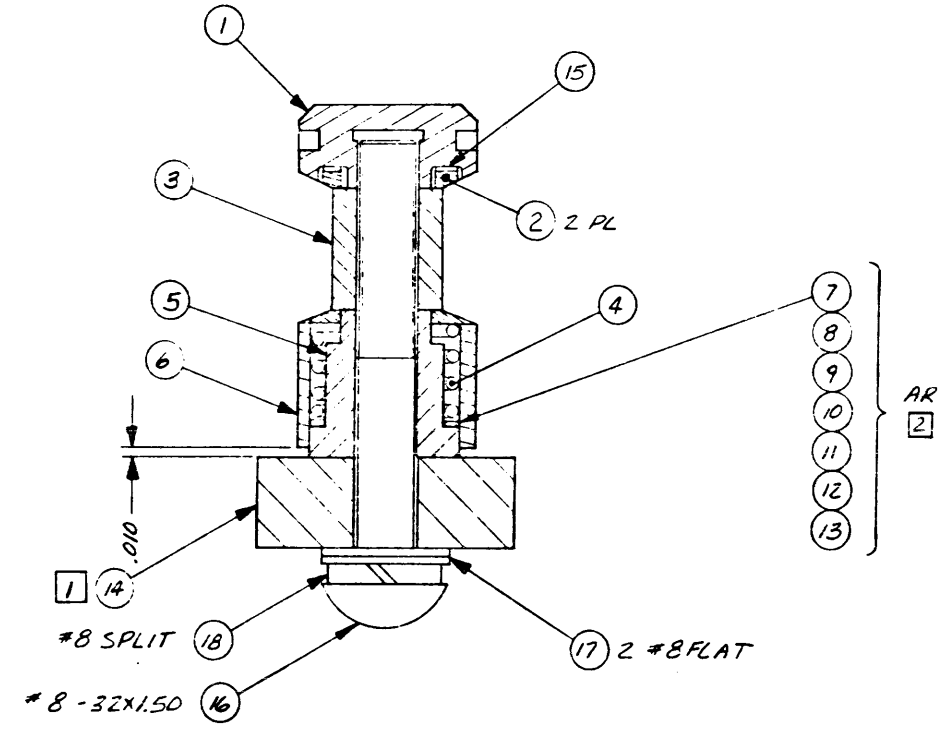
ITEM NUMBER	QUANTITY OR ASSEMBLY	UNIT OF MEAS.	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00002.000	EA	0948133-0001	SIDE, DOOR, LEFT OR RIGHT	
0007	00002.000	EA	0948134-0001	TOP OR BOTTOM DOOR	
0003	00002.000	EA	0948138-0004	BLOCK, DOOR HINGE	
0004	00002.000	EA	0948138-0003	BLOCK DOOR HINGE	
0005	00001.000	EA	0948135-0001	WINDOW, FRONT DOOR	
0008	00002.000	EA	0948244-0001	HINGE, TRANSPORT DOOR	
0009	00001.000	EA	0948148-0001	RACKET, LATCH	
0013	00001.000	EA	0948140-0001	RACKET, WINDOW	
0011	00001.000	EA	0539665-0005	FASTENER, 3M #5220	
0012	00001.000	EA	0539665-0006	FASTENER, PLASTIC, INTLK MULTIPLE HEADS	MHM - 533310
0013	00004.000	EA	0972990-0022	SCREW 6-32 X .188 FLT HEAD CPFS	
0014	00020.000	EA	0972990-0013	SCREW 4-40 X .312 FLT HEAD CPFS	
0015	00001.000	EA	0972988-0014	SCREW 4-40 X .312 PAN HEAD CPFS	
0016	00001.000	EA	041622-0011	WASHER #4 FLAT	OPL - 44960641
0017	00001.000	EA	0411104-0135	WASHER #4 LOCKSPLIT	OPL - M535338-135
0018	AF	RL	0996231-0001	TAPE, ADHESIVE TRANSFER 1/2"WIDE	MHM - 950

DRAWN BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 CHECKED BY: *R. Davis* DATE: *2-25-77*  
 TITLE: DOOR ASSEMBLY  
 PART NUMBER: 0948132-0001



NOTES:  
 1 ITEM A MAY BE DELETED WHEN ASSEMBLY ADJUSTMENT PROCEDURE IS CARRIED OUT AT U.M.A.  
 2 INSTALL PER STEP 2 OF SI548167

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED



QTY REQD	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION
----------	---------	------------	----------------------------	-----------------------------	---------------------------

UNLESS OTHERWISE SPECIFIED

- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS .010 FIR
- DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING
- IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY
- INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100

HOLE TOLERANCE

013 THRU 125	+ .004	- .001	126 THRU 250	+ .005	- .001	251 THRU 500	+ .006	- .001
501 THRU 750	+ .008	- .001	751 THRU 1000	+ .010	- .001	1001 THRU 2000	+ .012	- .001

QTY REQD	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION

UNLESS OTHERWISE SPECIFIED

- DIMENSIONS ARE IN INCHES
- TOLERANCES: ANGLES ± 1°
- 3 PLACE DECIMALS ± .010
- 2 PLACE DECIMALS ± .02

MATERIAL

APPROVED: [Signature] 7/13/76

DATE: 3 4 2-76

DESIGN ACTIVITY RELEASE

TEXAS INSTRUMENTS INCORPORATED  
 Equipment Group Dallas, Texas

TAPE GUIDE ASSY

SIZE: C CODE IDENT NO: 96214 DRAWING NO: 948167

SCALE: SHEET:



949613-9702

**TEXAS INSTRUMENTS**  
INCORPORATED

DATE 09/08/76 LIST OF MATERIAL PAGE 1 of 1

PART NUMBER  
**LM 948167-0001**

ITEM NUMBER	QUANTITY ASSEMBLY	UNIT OF MEAS	OWNG UNIT	PART NUMBER	DESCRIPTION	QTY	VENDOR PART NUMBER
0001	0001.000	EA		228190-0001	CAP-HEAD TAPE GUIDE	01+00+00	
0002	00002.000	EA		228096-0001	FLANGE-TAPE GUIDE		
0003	00001.000	EA		948168-0001	SLEEVE, TAPE GUIDE		
0004	00001.000	EA		228184-0001	COMPRESSION SPRING		
0005	00001.000	EA		228059-0001	BASE-HEAD TAPE GUIDE	01+00+00	
0006	00001.000	EA		228188-0001	COVER-HEAD TAPE GUIDE	01+00+00	
0007	AR	EA		228189-0001	SHIM-HEAD TAPE GUIDE	02+00+00	
0008	AR	EA		228189-0002	SHIM-.035 TK	02+00+00	
0009	AR	EA		228189-0003	SHIM-.040 TK	02+00+00	
0010	AR	EA		228189-0004	SHIM-.045 TK	02+00+00	
0011	AR	EA		228189-0005	SHIM-.050 TK	02+00+00	
0012	AR	EA		228189-0006	SHIM-.055 TK	02+00+00	
0013	AR	EA		228189-0007	SHIM-.060 TK	02+00+00	
0014	AR	EA		228241-0001	SPACER-TEMPORARY HEAD GUIDE		
0015	00001.000	EA		235409-0010	SPRING BALL-BRG PRELOAD WASHER TYPE		PIC-06-1
0016	00001.000	EA		972988-0051	SCRFW 8-32 X 1.50 PAN HEAD CRCS		
0017	00002.000	EA		418154-0060	WASHER, FLAT #8 CRCS		OPL- NAS620-C8
0018	00001.000	EA		418431-0026	LOCKWASHER #8 SPLIT, HELICAL CRCS		OPL- NAS1676-C8

DESIGNED: SD, DATE: 9-9-76, CHECKED: J. J. B. DATE: 9/17/76, DRAWN: J. J. B. DATE: 9/17/76, TITLE: TAPE GUIDE ASSY  
 1513

PART NUMBER  
**LM 948167-0001**



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

ASSEMBLY PROCEDURE

1. ASSEMBLE ITEMS 2, 4 AND 5 AS SHOWN IN FIGURE 1
2. AFTER MEASURING DIM "X" (WITHIN .002), ADD .020 TO DIM "X". ROUND OFF TO NEAREST .005 AND SELECT SHIM FROM ITEMS #7 THRU #13

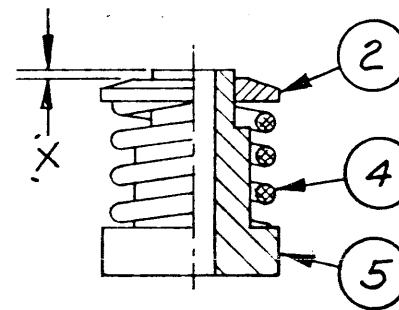


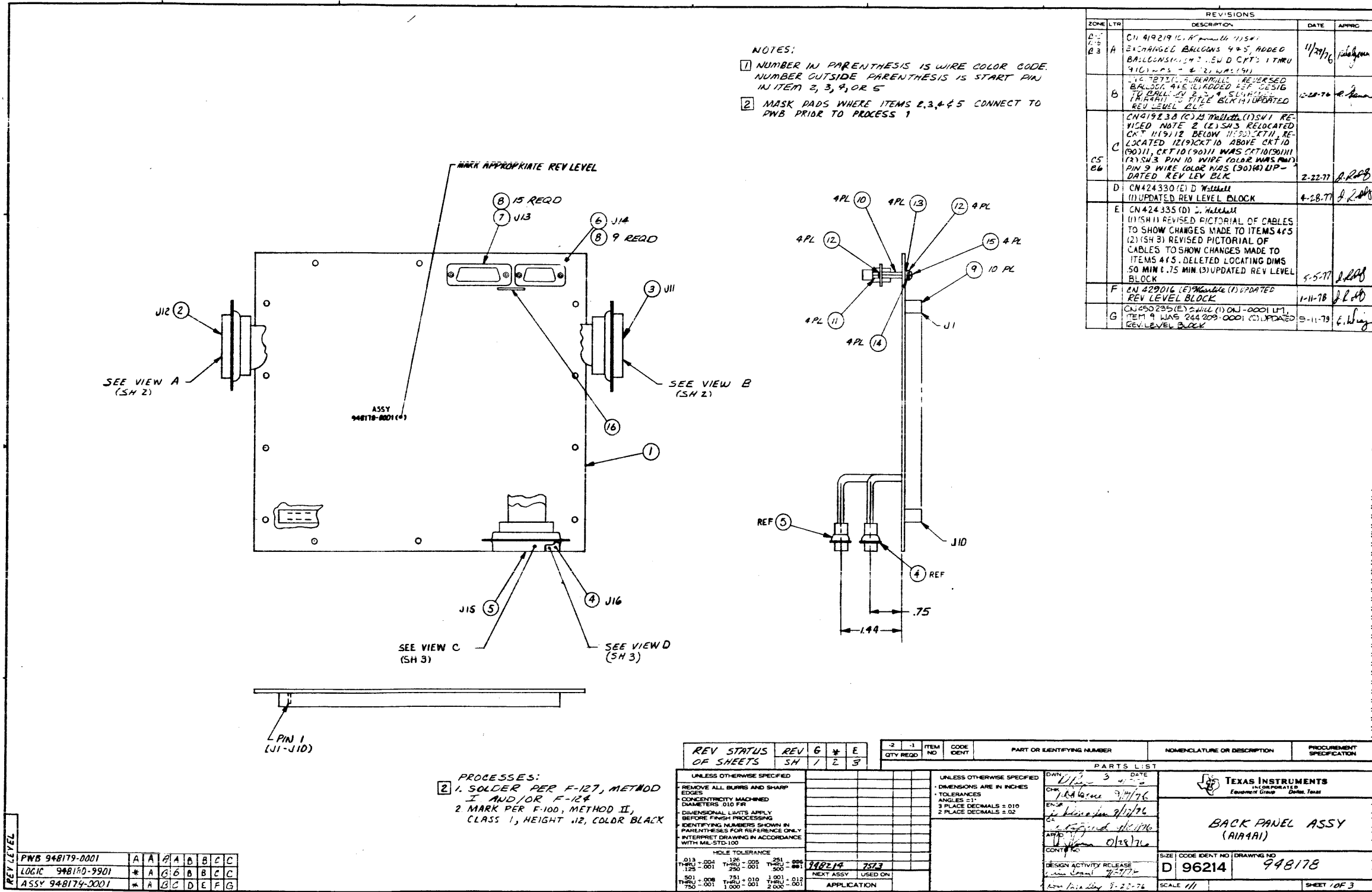
FIGURE 1  
NO SCALE

3. PRESS FIT ITEM 5 INTO ITEM 6. ENSURE THAT ITEM 6 IS APPROX .010 ABOVE BASE AS SHOWN. REASSEMBLE ITEMS AND SECURE AS AN ASSEMBLY
4. PROTECT SURFACES OF ITEMS NO 2 + 3 DURING HANDLING

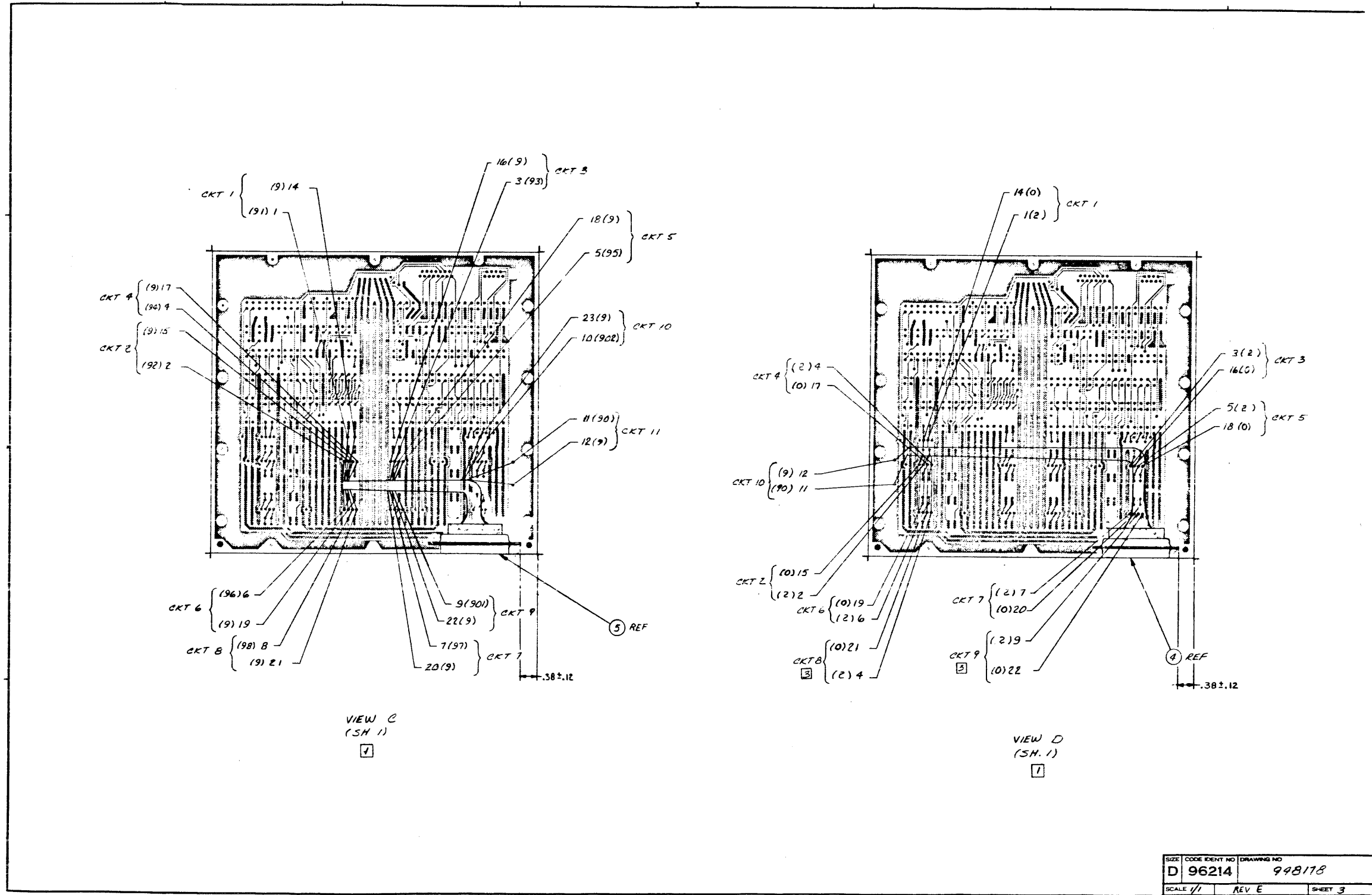
-2	-1	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION
QTY REQD						

PARTS LIST

UNLESS OTHERWISE SPECIFIED • REMOVE ALL BURRS AND SHARP EDGES • CONCENTRICITY MACHINED DIAMETERS .010 FIR • DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING • IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY • INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100	UNLESS OTHERWISE SPECIFIED • DIMENSIONS ARE IN INCHES • TOLERANCES: ANGLES ± 1° 3 PLACE DECIMALS ± .010 2 PLACE DECIMALS ± .02	DWG: <i>9-7-76</i> DATE CHK: <i>3/9/76</i> ENGR: <i>9/13/76</i> QA: <i>9/14/76</i> APVD: <i>9/13/76</i>		<b>TEXAS INSTRUMENTS</b> INCORPORATED Equipment Group Dallas, Texas	
		MATERIAL:		<b>TAPE GUIDE ASSY</b>	
HOLE TOLERANCE .013 THRU +.004 .125 THRU -.001 .501 THRU +.008 .750 THRU -.001 .126 THRU +.005 .250 THRU -.001 .750 THRU +.010 1.000 THRU -.001 .250 THRU +.006 .500 THRU -.001 1.001 THRU +.012 2.000 THRU -.001	948167 7513	CONTR NO DESIGN ACTIVITY RELEASE <i>9/15/76</i> <i>MPG</i>	SIZE <b>B</b>	CODE IDENT NO <b>96214</b>	DRAWING NO <b>SI 948167</b>
APPLICATION NEXT ASSY USED ON	SCALE <i>NONE</i>	SHEET			











949613-9702

PART NUMBER		REV		
LM948179-3331		G		
TEXAS INSTRUMENTS INCORPORATED DATE 08/13/79 LIST OF MATERIAL PAGE 1 of				
QTY	UNIT	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	EA	0948179-3331	PWR, 979A RACKPANFL	
0002	EA	0948187-3331	PIGTAIL, LOGIC POWER (A1A4J12)	
0003	EA	0948183-0001	PIGTAIL, SERVO/REGULATOR	
0004	EA	0948185-0001	PIGTAIL, READ HEAD (A1A4J16)	
0005	EA	0948181-3331	PIGTAIL, WRITE HEAD (A1A4J15)	
0006	EA	0539409-0002	CONNECTOR, RCPT 9 PINS	AMP -205203-1
0006A			J14	
0007	EA	0539409-0004	CONNECTOR, RCPT 15 PINS	AMP -205205-1
0007A			J13	
0008	EA	0977422-3332	SOCKET, CONTACT	
0009	EA	2210497-0001	CONNECTOR, 196 CENTERS, PWR	035574-SEE TI DWG
0009A			J1 THRU J13	
0010	EA	0532353-0405	NUT, SLEEFVE-CRES #4-40 X 3/16 .250	
0011	EA	0532348-0400	STUD, EXTENSION-CRES #4-40 X .188	
0012	EA	0411101-3357	LOCKWASHER # 4 EXTERNAL TOOTH CRES	QPL - MS35335-57
0013	EA	0736780-0110	WASHER FLAT NYLON .2500X.1101X.1/16TH	SMT -2671
0014	EA	0411327-3833	WASHER .125 X .250 X .022 FLAT CRES	OPL - MS15795-003
0015	EA	0977999-0014	SCREW 4-40 X .312 PAN HEAD CRES	
0016	AR	0411470-0022	WIRE 22AWG FLETPD-TIN-PLATED, COPPER	
0017	REF	0948180-9901	WIRING DIAGRAM, RACKPANFL	
DRAFTSMAN DATE CHK DATE DESIG DATE TITLE J. Kelly 8-16-79 RACKPANFL ASSEMBLY APPR DATE PROJ ENG DATE RELEASE DATE PROJ NO 7513				
PART NUMBER		REV		
LM948179-3331		G		



**REVISIONS**

ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		CL 419443 (D) R. ... (11/1/76) ITEM 5 FROM WAS - 0019 & ITEM 6 WAS - 0021 (2) UPDATED REV LEVEL 5 - J.S.K. 1-25-77	1-25-77	
B		CN447923 (C); BULK CABLE CREATED - 5001 LM (2) ADDED ITEM 101 TO - 0001 LM (3) ADDED NOTE (14) ADDED PIN BLOCK & UPDATED REV LEVEL	10-2-77	

**NOTES:**  
 [1] ITEM 101 IN -0001 LM CONSISTS OF BULK CABLE ASSEMBLY MATERIAL

**WIRING LIST 948193-9901** \* A A  
**CABLE ASSY 948192** \* A B

**REVISIONS**

QTY REQ	ITEM NO	TEXAS INSTRUMENTS GOVT OR INDUSTRY PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION
	948192-5001		BULK CABLE ASSY MATL FOR -0001
	948192-0001		CABLE ASSY, 979A/TIU
	PART NO		DESCRIPTION

**PROCESSES:**  
 1. MARK PER F-100, METHOD III, CLASS 12, COLOR BLACK, TYPE 6

**UNLESS OTHERWISE SPECIFIED**

REMOVE ALL BURRS AND SHARP EDGES	CONCENTRICITY MACHINED DIAMETERS .004 TIR	DIMENSIONAL LIMITS APPLY BEFORE PLATING
DRILLED HOLE TOLERANCES .014 + .004 THRU - .001 .125 - .001 .500 - .001 1.00 + .005 THRU - .001 .750 - .001		

**UNLESS OTHERWISE SPECIFIED**

DIMENSIONS ARE IN INCHES	TOLERANCES: ANGLES ± 1° 3 PLACE DECIMALS ± .010 2 PLACE DECIMALS ± .02
MATERIAL:	7513

**PARTS LIST**

DR	CHK	ENGR	APP'D	DATE	TITLE	SIZE	CLD IDENT NO	DRAWING NO
				3 8/11/76	CABLE ASSY, 979A TO TIU	C	96214	948192

DESIGN ACTIVITY RELEASE  
 MFG  
 SA [Signature]



949613-9702

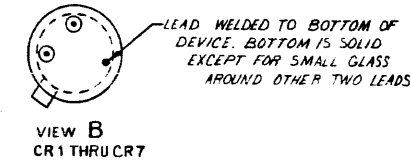
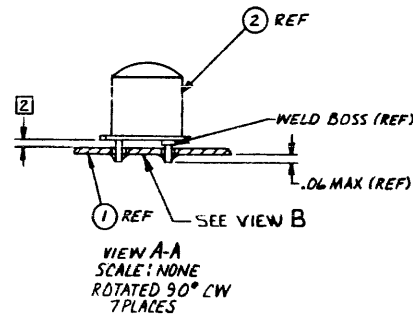
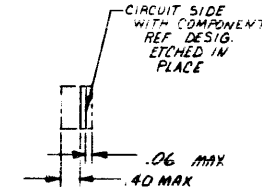
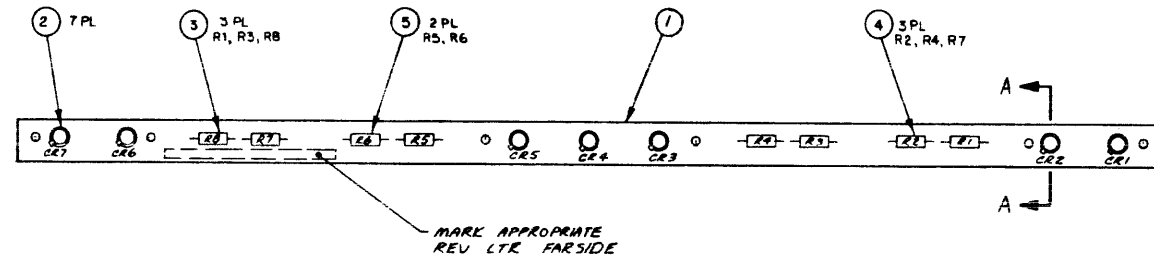
TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LMJ48192-0001		REV B		
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER				
0001	00001.000	EA		0800211-0003	CONNECTOR, ELECTRICAL PWB	SVH --40/1CN5				
0001A					P1					
0002	00001.000	EA		0231297-0001	CONNECTOR-- RECP,120PIN WIRE CRIMP CONN.	--SEE DRAWING				
J002A					P2					
0003	00001.000	EA		0231297-0002	CONNECTOR-- COVER ASSY,120PIN ELCO	--SEE DRAWING				
0011	00001.000	EA		0973983-0001	HC JD,CONNECTOR					
0012	00001.000	EA		0973984-0001	COVER,CONNECTOR					
0017	REL			0943193-9901	WIRE LIST,TIU CABLE					
0101	00001.000	EA		0948192-0001	BULK CABLE ASSEMBLY MATERIAL FOR-0001					
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE			
			J.R. [Signature]	9-6-79			CABLE ASSY,979A/TIU			
APPROVING		DATE	APPROVING ENGINEER	DATE	RELEASED	DATE	PROJECT NO.			
							7513			
							PART NUMBER		REV	
							LMJ48192-0001		B	

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LMJ48192-0001		REV B		
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER				
0004	00074.000	EA		0227919-0002	CONTACT-REEL	ELC --60-3017-0323-3				
0005	00022.000	FT		0972436-0017	INSULATION SLEEVING 3/8 X .375 PVC	MNL -- HF-1050-1/B				
0006	00011.000	FT		0972436-0019	INSULATION SLEEVING PVC CHLORIDE	LFS -- HT-1050-24				
0007	00011.000	FT		0236303-1000	TUBING ZIPPER BLK 1 IN DIA W/ OVERLAP	ZIP --272-1000-0P-20				
0008	00003.000	EA		0418201-0060	STRAP,MARKER,ADJUSTABLE,PLASTIC	QPL-MS-3360-1-58				
0009	00002.000	EA		0418212-0004	STRAP, TIE-DOWN, ADJUSTABLE, BLACK					
0010	00002.000	EA		0972988-0316	SCREW 4-40 X .438 PAN. HEAD CRES					
0013	00307.000	FT		0966700-2496	WIRE,TWISTED PAIR #2+ WHT/GPN 1PVL	UL -- 1472 1STR UL6				
0014	00022.000	FT		2210012-5999	WIRE,ELECT,WHT,U/L 1429,19 X 30,1d AWG	090484--XV8193009P				
0015	00022.000	FT		0935170-5299	WIRE,UL 1429,19 STRU,10AWG,WHT/RED					
0016	00074.000	EA		0972053-0002	SLEEVE,SOLDER,TAB TERMINAL	KCH --C-704-02				
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE			
							BULK CABLE ASSEMBLY MATERIAL FOR-0001			
APPROVING		DATE	APPROVING ENGINEER	DATE	RELEASED	DATE	PROJECT NO.			
							PART NUMBER		REV	
							LMJ48192-0001		B	



NOTES:  
 1. DEVICES CR1 THRU CR7 SIMILAR IN APPEARANCE TO THOSE USED ELSEWHERE. OBSERVE SOLID METAL BOTTOM SURFACE WITH ONE OF THREE LEADS WELDED TO CASE. GENERIC PN TIL31  
 2. REFER TO DWG SI 948197

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVE
A	C-3	CN 417859 (C) D Computer (1) ADDED BALLOONS 2, 3, 4 & (2) CHS'D CALLOUT ON LEAD VIEW FROM COMPONENT SIDE (3) PROCESS 1 DELETED AND/OR F124 (4) ADDED VIEW B (SHADDED ASSY REF DESIG TO TITLE BLK (6) ADDED REV LEVEL BLK (7) ADDED 948265-9901 TO L.M.	12/1/77	rdg
B		CN451991 (D) 77. Bill (1) ORIGINAL L.M. LOST (2) UPDATED REV LEVEL BLOCK	5-9-79	rdg



PROCESSES:  
 1. SOLDER PER F-121, METHOD I  
 2. MARK PER F-100, METHOD II, CLASS 1, HEIGHT .09, COLOR BLACK

REV LEVEL BLK

SCHEMATIC	948265-9901	*	*
PWB	948198-0001	*	A
ASSY	948197-0001	A	B

QTY REQD	QTY	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION

UNLESS OTHERWISE SPECIFIED		UNLESS OTHERWISE SPECIFIED	
REMOVE ALL BURRS AND SHARP EDGES	CONCENTRICITY MACHINED DIAMETERS .010 FIR	DIMENSIONS ARE IN INCHES	TOLERANCES ANGLES ±1°
DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING	IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY	3 PLACE DECIMALS ± 0.10	2 PLACE DECIMALS ± 0.2
INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100	HOLE TOLERANCE		
	.013 +.004 THRU .001	.125 +.005 THRU .001	.251 +.006 THRU .001
	.501 +.008 THRU .001	.751 +.010 THRU .001	1.001 +.012 THRU .001
	1.750 +.001 THRU .001	2.000 +.001 THRU .001	

DATE	DATE	DATE
9/15/76	9/15/76	9/15/76

DESIGN ACTIVITY RELEASE	DATE	BY
	9/15/76	

TXAS INSTRUMENTS INCORPORATED Equipment Group Dallas, Texas	VACUUM COLUMN LED ASSY (A1A1A2)	
SIZE	CODE IDENT NO	DRAWING NO
D	96214	948197
SCALE		SHEET



PART NUMBER		REV				
LM949137-0001		4B				
TEXAS INSTRUMENTS INCORPORATED		DATE 04/17/70				
LIST OF MATERIAL		PAGE 1 of				
PRICE ITEM N. 1081	QUANTITY BY ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00001.000	EA		0944104-0001	1/2 LED PWR,VAC COLUMN	
0002	00007.000	EA		0772344-0001	DIODE TEL 31 LIGHT EMITTING	TI -TEL 31
0002A					CR1 THRU CR7	
0003	00003.000	EA		0972977-0043	RES, FIXED 15 OHMS 5% 1/2 WATT	QPI - 3900R
0003A					R1 R3 RA	
0004	00003.000	EA		0972977-0047	RES, FIXED 22 OHMS 5% WATT	QPL - 3900R
0004A					P2 P4 P7	
0005	00002.000	EA		0972977-0049	RES, FIXED 27 OHMS 5% 1/2 WATT	QPL - 3900R
0005A					R5 RA	
0006	PEE	EA		0949265-9901	SCHEMATIC, DIA VAC COLUMN EMITTERS	
DRAFTER: DATE: 04/17/70 CHECKED: DATE: 1-15-77 APPROVED: DATE: PROJECT ENGINEER: RELEASED: DATE: PROJECT NO: 7513				1/2 LED ASSY,VAC COLUMN (A1A1A?) PART NUMBER: LM949137-0001 REV: 4B		

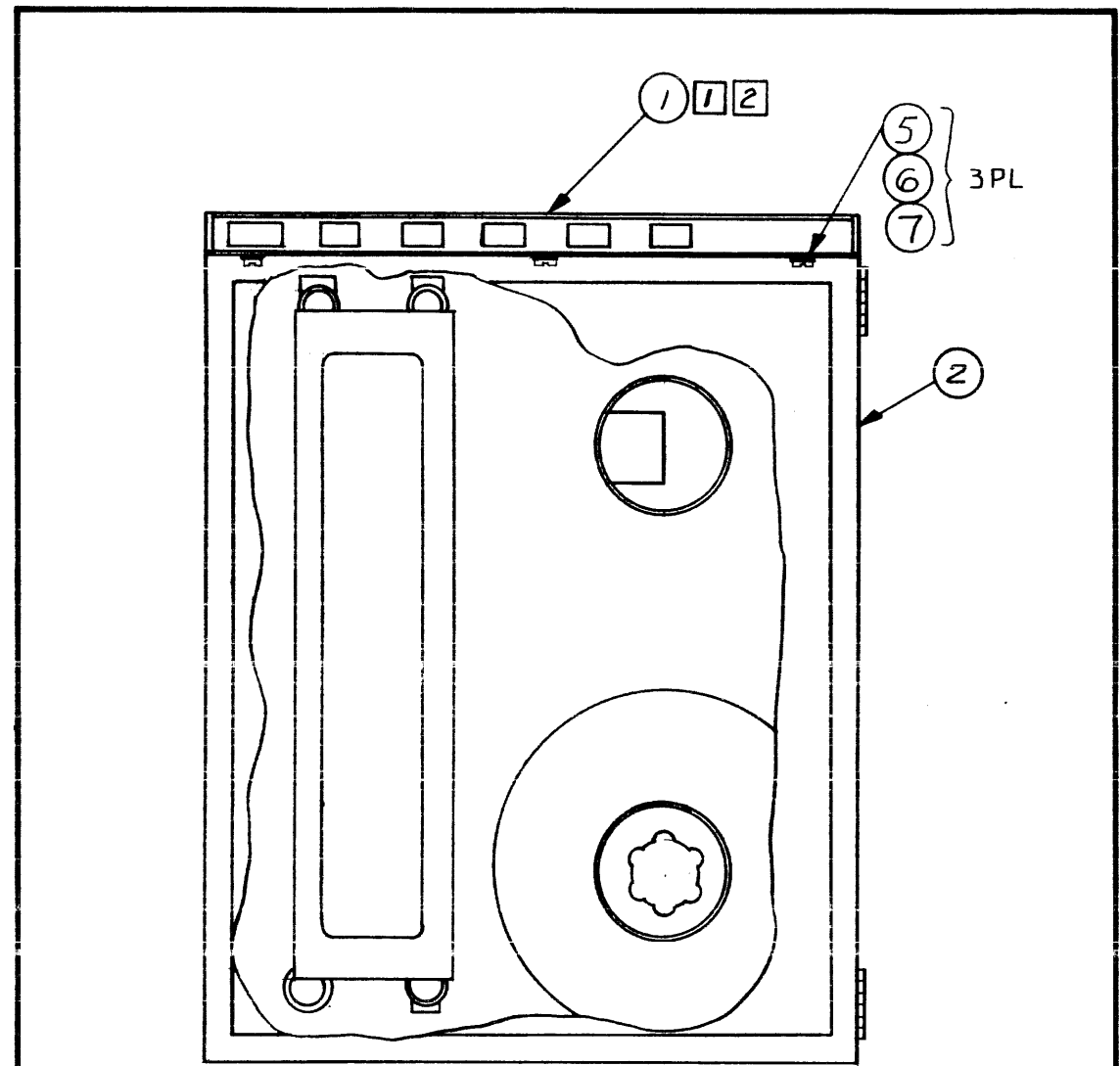


APPLICATION		REVISIONS			
NEXT ASSY	USED ON	LTR	DESCRIPTION	DATE	APPROVED
948207	7513	A	CN 417853 (C) A JARAMILLO (D) DD 914	5-77	<i>[Signature]</i>
		B	CN 440466 (C) B. RAO	10-12-78	<i>[Signature]</i>
		C	CN 432286 (B) <i>[Signature]</i>	3-26-79	<i>[Signature]</i>
		D	CN 437921 (E) <i>[Signature]</i>	6-26-79	<i>[Signature]</i>
		E	CN 441394 (C) <i>[Signature]</i>	1-2-80	<i>[Signature]</i>
		F	CN 461384 (D) <i>[Signature]</i>	1-2-80	<i>[Signature]</i>

948209-0008		TAPE TRANSPORT, 50 HZ P.E., STD HUB , 60 HZ P.E., STD HUB , 50 HZ NRZI, STD HUB , 60 HZ NRZI, STD HUB , 50 HZ P.E., QR HUB , 60 HZ P.E., QR HUB , 50 HZ NRZI, QR HUB TAPE TRANSPORT, 60 HZ NRZI, QR HUB
-0007		
-0006		
-0005		
-0004		
-0003		
-0002		
948209-0001		
PART NO		DESCRIPTION

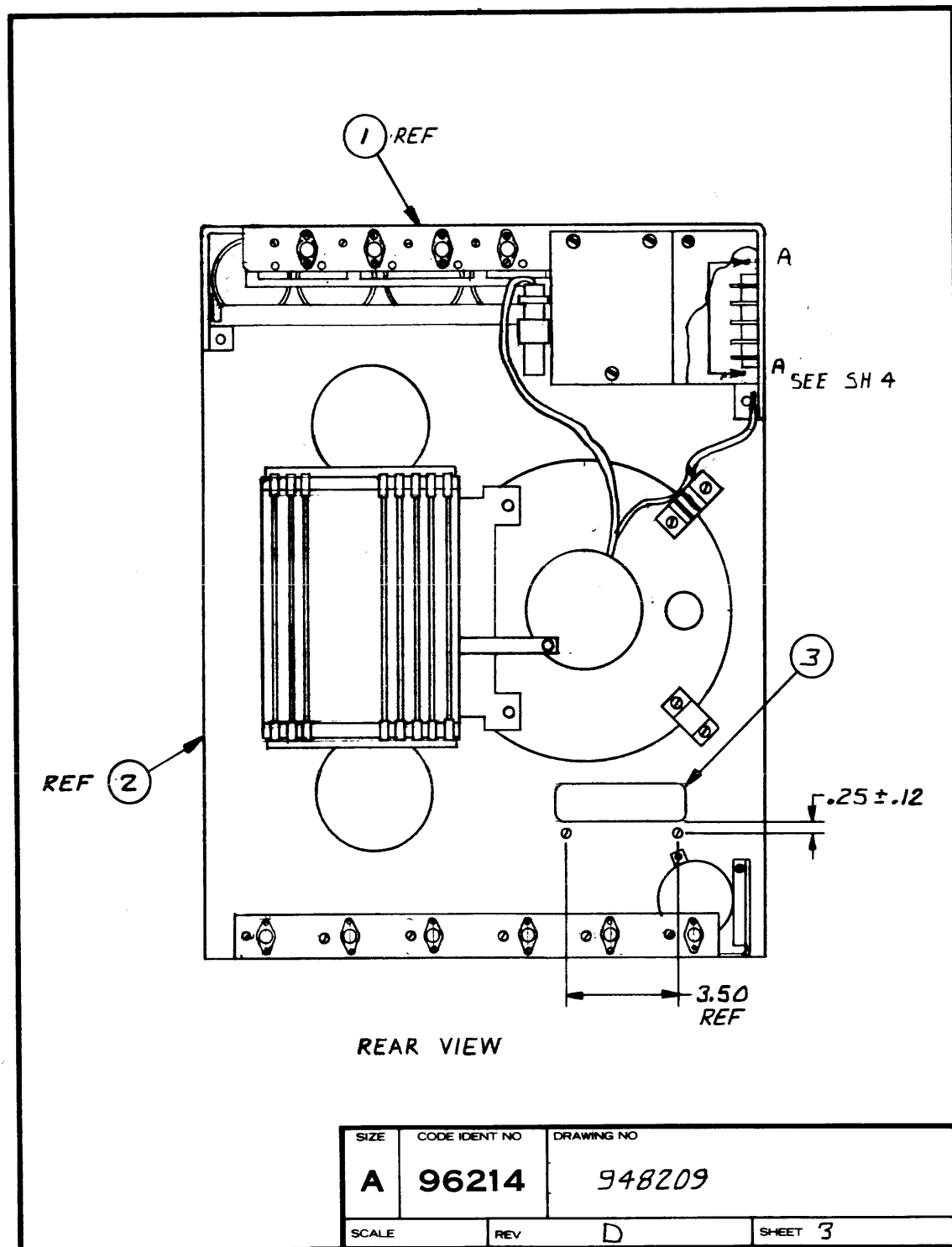
REV																				
SHEET																				
REV STATUS OF SHEETS	REV	E	F	D	A															
	SHEET	1	2	3	4															

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES ± 1° 3 PLACE DECIMAL ± .010 2 PLACE DECIMAL ± .02	DATE: 9-21-76 BY: <i>[Signature]</i> CHECKED: <i>[Signature]</i> 9-23-76 APPROVED: <i>[Signature]</i> 9/24/76 AT: <i>[Signature]</i> 9/24/76 CONT. NO.	TEXAS INSTRUMENTS INCORPORATED Equipment Group Dallas, Texas
IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY		
INTERPRET DWGS IN ACCORDANCE WITH MIL-STD-100		
DESIGN ACTIVITY RELEASE DATE: 10/4/76 BY: <i>[Signature]</i> 10-1-76		TAPE TRANSPORT, 979A
SIZE	CODE IDENT NO	DRAWING NO
A	96214	948209
SCALE	NONE	SHEET 1 OF 4

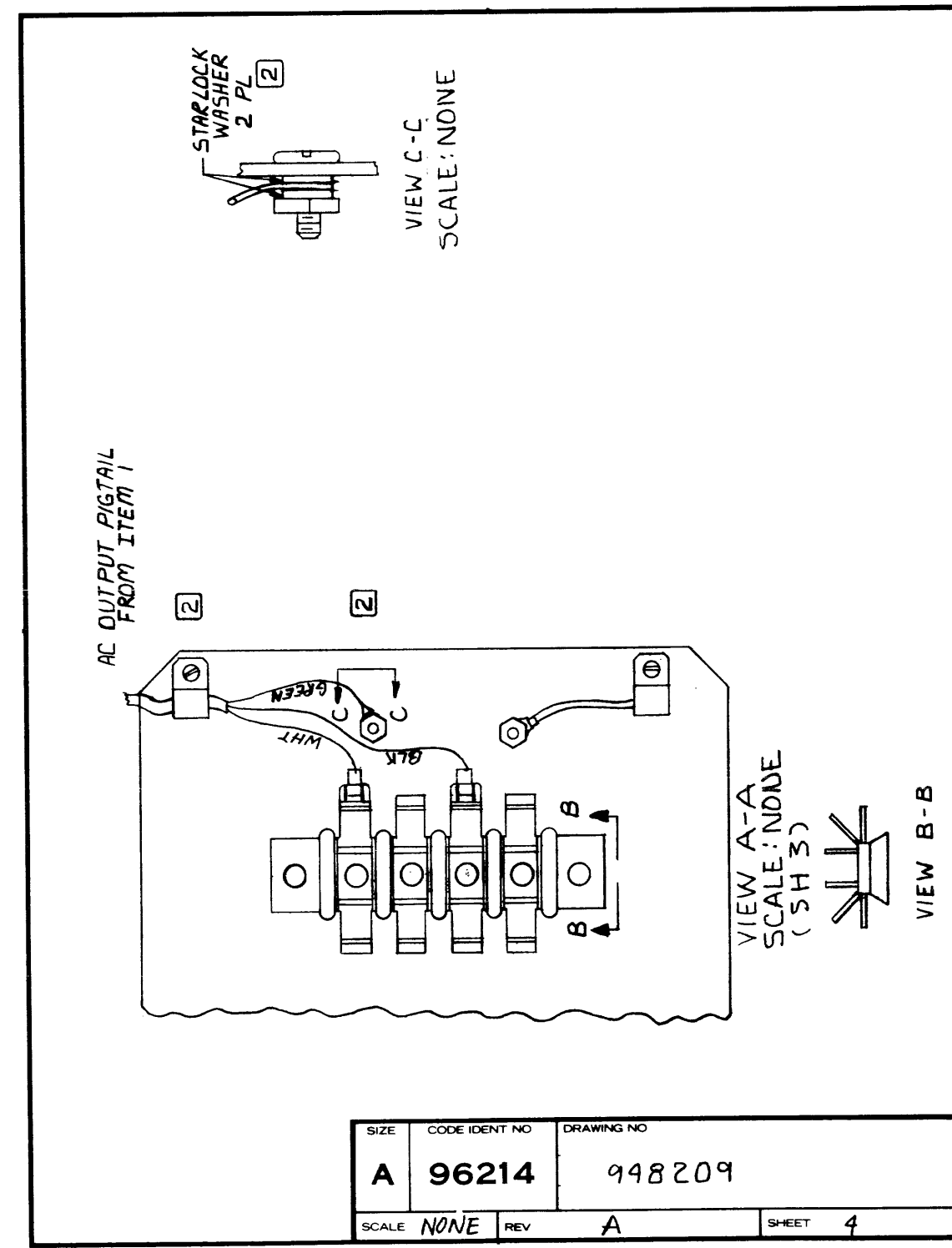


- NOTES:
- 1 MOUNTING HARDWARE SUPPLIED WITH ITEM 1
  - 2 POWER CORD CLAMP & GNDG. HARDWARE SUPPLIED WITH ITEM 2.

SIZE	CODE IDENT NO	DRAWING NO
A	96214	948209
SCALE	NONE	REV F
		SHEET 2



TI-7915C



TI-7915C



949613-9702

TEXAS INSTRUMENTS INCORPORATED DATE 11/14/79 LIST OF MATERIAL PAGE 1 of 1 PART NUMBER LM 0948209-0001 REV F

PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DRWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ01	00001.000	EA		0948215-0001	CONTROL PANEL ASSY	
JJ02	00001.000	EA		0948210-0001	MAINFRAME ASSY, 60 HZ, NRZ1, QR HUB	
JJ03	00001.000	EA		0948208-0001	NAMEPLATE, TAPE TRANSPORT, 60 HZ NRZ1, QR	
JJ04	REF	EA		0948219-9901	PROCEDURE, TAPE TRANSPORT ALIGNMENT	
JJ05	00003.000	EA		0411027-0806	WASHER .156 X .375 X .049 FLAT CRES	UPL - MS15795-806
JJ06	00003.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	UPL - MS35330-136
JJ07	00003.000	EA		0972988-0330	SCREW 6-32 X .500 PAN HEAD CRES	

DRAFTSMAN: [Signature] DATE: 1-2-80  
 APPR: [Signature] DATE: [ ]  
 PROJECT NO: 7513 PART NUMBER: LM 0948209-0001 REV F

TEXAS INSTRUMENTS INCORPORATED DATE 11/14/79 LIST OF MATERIAL PAGE 1 of 1 PART NUMBER LM 0948209-0002 REV F

PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DRWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ01	00001.000	EA		0948215-0001	CONTROL PANEL ASSY	
JJ02	00001.000	EA		0948210-0002	MAINFRAME ASSY, 50 HZ, NRZ1, QR HUB	
JJ03	00001.000	EA		0948208-0002	NAMEPLATE, TAPE TRANSPORT, 50 HZ NRZ1, QR	
JJ04	REF	EA		0948219-9901	PROCEDURE, TAPE TRANSPORT ALIGNMENT	
JJ05	00003.000	EA		0411027-0806	WASHER .156 X .375 X .049 FLAT CRES	UPL - MS15795-806
JJ06	00003.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	UPL - MS35330-136
JJ07	00003.000	EA		0972988-0330	SCREW 6-32 X .500 PAN HEAD CRES	

DRAFTSMAN: [Signature] DATE: [ ]  
 APPR: [Signature] DATE: [ ]  
 PROJECT NO: [ ] PART NUMBER: LM 0948209-0002 REV F

ON-OFF } 948227-0001 (S1)  
 RESET/LOAD }  
 REWIND/UNLOAD } 948228-0002 (S3/S3)

TEXAS INSTRUMENTS INCORPORATED DATE 11/14/79 LIST OF MATERIAL PAGE 1 of 1 PART NUMBER LM 0948209-0003 REV F

PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DRWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ01	00001.000	EA		0948215-0001	CONTROL PANEL ASSY	
JJ02	00001.000	EA		0948210-0003	MAINFRAME ASSY, 60 HZ, PE, QR HUB	
JJ03	00001.000	EA		0948208-0003	NAMEPLATE, TAPE TRANSPORT, 60 HZ P.E., QR	
JJ04	REF	EA		0948219-9901	PROCEDURE, TAPE TRANSPORT ALIGNMENT	
JJ05	00003.000	EA		0411027-0806	WASHER .156 X .375 X .049 FLAT CRES	UPL - MS15795-806
JJ06	00003.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	UPL - MS35330-136
JJ07	00003.000	EA		0972988-0330	SCREW 6-32 X .500 PAN HEAD CRES	

DRAFTSMAN: [Signature] DATE: [ ]  
 APPR: [Signature] DATE: [ ]  
 PROJECT NO: [ ] PART NUMBER: LM 0948209-0003 REV F

TEXAS INSTRUMENTS INCORPORATED DATE 11/14/79 LIST OF MATERIAL PAGE 1 of 1 PART NUMBER LM 0948209-0004 REV F

PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DRWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
JJ01	00001.000	EA		0948215-0001	CONTROL PANEL ASSY	
JJ02	00001.000	EA		0948210-0004	MAINFRAME ASSY, 50 HZ, PE, QR HUB	
JJ03	00001.000	EA		0948208-0004	NAMEPLATE, TAPE TRANSPORT, 50 HZ P.E., QR	
JJ04	REF	EA		0948219-9901	PROCEDURE, TAPE TRANSPORT ALIGNMENT	
JJ05	00003.000	EA		0411027-0806	WASHER .156 X .375 X .049 FLAT CRES	UPL - MS15795-806
JJ06	00003.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	UPL - MS35330-136
JJ07	00003.000	EA		0972988-0330	SCREW 6-32 X .500 PAN HEAD CRES	

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 APPR: [Signature] DATE: [ ]  
 PROJECT NO: [ ] PART NUMBER: LM 0948209-0004 REV F





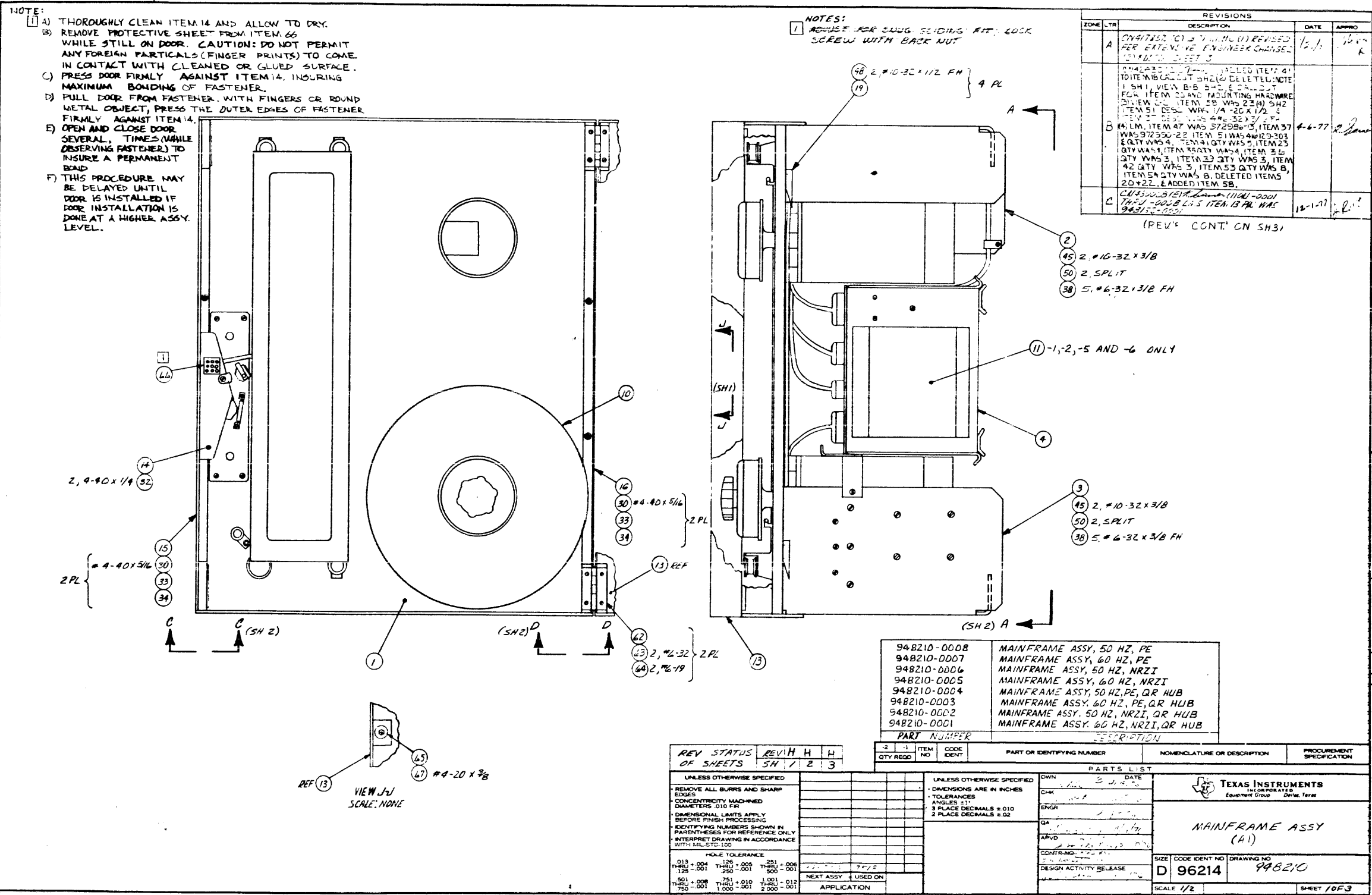
949613-9702

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 0948209-0005		REV F	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
JJ01	00031.000	EA		0948215-0001	CONTROL PANEL ASSY				
JJ02	00031.000	EA		0948210-0005	MAINFRAME ASSY, 60 HZ, NRZ1				
JJ03	00031.000	EA		0948238-0005	NAMEPLATE, TAPE TRANSPORT 60HZ NRZ1, STD				
JJ04	REF	EA		0948219-9901	PROCEDURE, TAPE TRANSPORT ALIGNMENT				
JJ05	00003.000	EA		0411027-3006	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806			
JJ06	00003.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35338-136			
JJ07	00033.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES				
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	TAPE TRANSPORT, 60 HZ NRZ1, STD HUB	
APPD MGR		DATE	APPD PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO.	LM 0948209-0005 F	

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 0948209-0006		REV F	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
JJ01	00031.000	EA		0948215-0001	CONTROL PANEL ASSY				
JJ02	00031.000	EA		0948210-0006	MAINFRAME ASSY, 50 HZ, NRZ1				
JJ03	00031.000	EA		0948238-0006	NAMEPLATE, TAPE TRANSPORT, 50 HZ NRZ1, STD				
JJ04	REF	EA		0948219-9901	PROCEDURE, TAPE TRANSPORT ALIGNMENT				
JJ05	00003.000	EA		0411027-3006	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806			
JJ06	00003.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35338-136			
JJ07	00033.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES				
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	TAPE TRANSPORT, 50 HZ NRZ1, STD HUB	
APPD MGR		DATE	APPD PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO.	LM 0948209-0006 F	

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 0948209-0007		REV F	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
JJ01	00031.000	EA		0948215-0001	CONTROL PANEL ASSY				
JJ02	00031.000	EA		0948210-0007	MAINFRAME ASSY, 60 HZ, PE				
JJ03	00031.000	EA		0948238-0007	NAMEPLATE, TAPE TRANSPORT, 60 HZ P.E., STD				
JJ04	REF	EA		0948219-9901	PROCEDURE, TAPE TRANSPORT ALIGNMENT				
JJ05	00003.000	EA		0411027-3006	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806			
JJ06	00003.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35338-136			
JJ07	00033.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES				
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	TAPE TRANSPORT, 60 HZ P.E., STD HUB	
APPD MGR		DATE	APPD PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO.	LM 0948209-0007 F	

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 0948209-0008		REV F	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
JJ01	00031.000	EA		0948215-0001	CONTROL PANEL ASSY				
JJ02	00031.000	EA		0948210-0008	MAINFRAME ASSY, 50 HZ, PE				
JJ03	00031.000	EA		0948238-0008	NAMEPLATE, TAPE TRANSPORT, 50 HZ P.E., STD				
JJ04	REF	EA		0948219-9901	PROCEDURE, TAPE TRANSPORT ALIGNMENT				
JJ05	00003.000	EA		0411027-3006	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806			
JJ06	00003.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35338-136			
JJ07	00033.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES				
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	TAPE TRANSPORT, 50 HZ P.E., STD HUB	
APPD MGR		DATE	APPD PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO.	LM 0948209-0008 F	



NOTE:  
 1) THOROUGHLY CLEAN ITEM 14 AND ALLOW TO DRY.  
 2) REMOVE PROTECTIVE SHEET FROM ITEM 66 WHILE STILL ON DOOR. CAUTION: DO NOT PERMIT ANY FOREIGN PARTICLES (FINGER PRINTS) TO COME IN CONTACT WITH CLEANED OR GLUED SURFACE.  
 3) PRESS DOOR FIRMLY AGAINST ITEM 14, INSURING MAXIMUM BONDING OF FASTENER.  
 4) PULL DOOR FROM FASTENER, WITH FINGERS OR ROUND METAL OBJECT, PRESS THE OUTER EDGES OF FASTENER FIRMLY AGAINST ITEM 14.  
 5) OPEN AND CLOSE DOOR SEVERAL TIMES (WHILE OBSERVING FASTENER) TO INSURE A PERMANENT BOND.  
 6) THIS PROCEDURE MAY BE DELAYED UNTIL DOOR IS INSTALLED IF DOOR INSTALLATION IS DONE AT A HIGHER ASSY. LEVEL.

NOTES:  
 1) ADJUST FOR SUBG. BONDING FIT; LOCK SCREW WITH BACK NUT

ZONE	LTR	DESCRIPTION	DATE	APPRO
A		REVISED (1) 2 1/2 INCH (1) REVISED PER EXTENSIVE ENGINEER CHANGE	12-1-77	16
B		ADDED ITEM 14 TO ITEM 10. DELETED ITEM 61 TO ITEM 10. DELETED ITEM 10 FROM SH1. VIEW B-B B-2, B-3, B-4 FOR ITEM 10 AND MOUNTING HARDWARE. ITEM 51 DESG. WAS 1/A-20X1/2-5. ITEM 52 DESG. WAS 4-#6-32X1/2-F. (M.L.M. ITEM 47 WAS 5729B-13, ITEM 37 WAS 972550-22, ITEM 51 WAS 40120-303, QTY WAS 4, ITEM 4 QTY WAS 5, ITEM 23 QTY WAS 1, ITEM 3 QTY WAS 3, ITEM 34 QTY WAS 3, ITEM 33 QTY WAS 3, ITEM 42 QTY WAS 3, ITEM 53 QTY WAS 8, ITEM 54 QTY WAS 8, DELETED ITEMS 20+22, ADDED ITEM 5B.	4-6-77	16
C		CHANGED (1) FROM (110A)-0001 TO (110B)-0001 (110B) WAS 13 PL WAS 948210-0001	12-1-77	16

(REV'S CONT' ON SH3)

- 2
- 45 2, #10-32 X 3/8
- 50 2, SPLIT
- 38 5, #6-32 X 3/8 FH

- 3
- 45 2, #10-32 X 3/8
- 50 2, SPLIT
- 38 5, #6-32 X 3/8 FH

PART NUMBER	DESCRIPTION
948210-0008	MAINFRAME ASSY, 50 HZ, PE
948210-0007	MAINFRAME ASSY, 60 HZ, PE
948210-0006	MAINFRAME ASSY, 50 HZ, NRZI
948210-0005	MAINFRAME ASSY, 60 HZ, NRZI
948210-0004	MAINFRAME ASSY, 50 HZ, PE, QR HUB
948210-0003	MAINFRAME ASSY, 60 HZ, PE, QR HUB
948210-0002	MAINFRAME ASSY, 50 HZ, NRZI, QR HUB
948210-0001	MAINFRAME ASSY, 60 HZ, NRZI, QR HUB

REV	STATUS	REV	H	H
OF SHEETS	SH	1	2	3
1				

2	3	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION

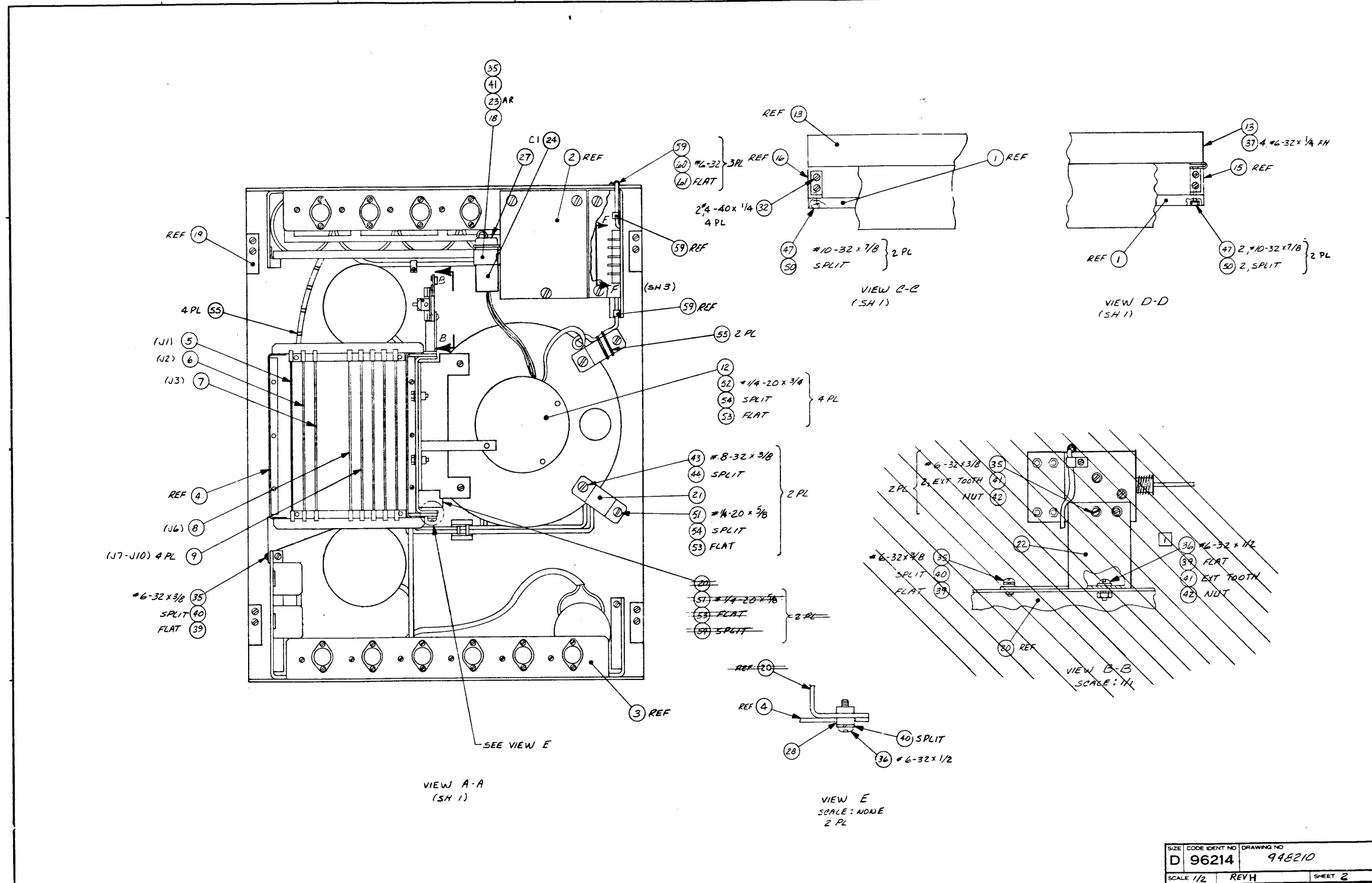
PARTS LIST	DATE
	5-2-77

UNLESS OTHERWISE SPECIFIED	UNLESS OTHERWISE SPECIFIED
REMOVE ALL BURRS AND SHARP EDGES	DIMENSIONS ARE IN INCHES
CONCENTRICITY MACHINED DIAMETERS .010 FH	TOLERANCES
DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING	ANGLES ±1°
IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY	3 PLACE DECIMALS ±0.010
INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100	2 PLACE DECIMALS ±0.02

CONF. NO.	DATE	BY	CHK	ENGR	QA	APVD

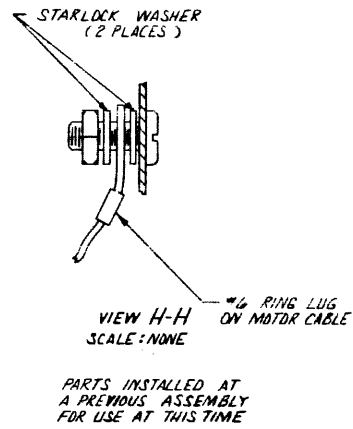
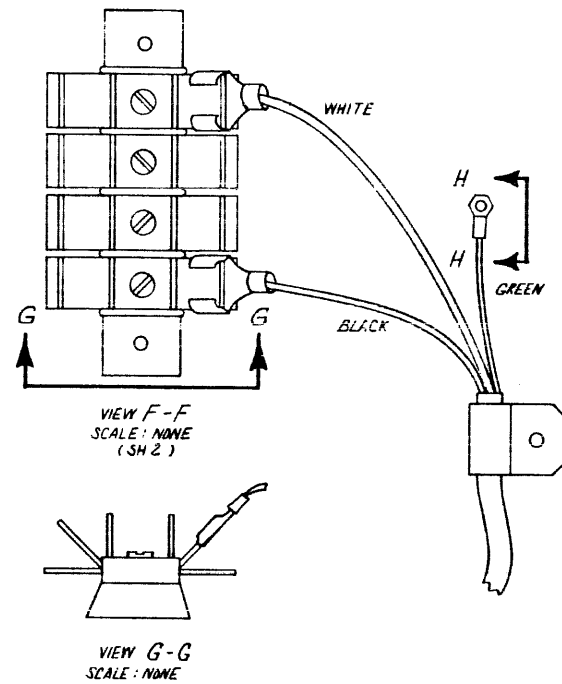
SIZE	CODE IDENT NO	DRAWING NO
D	96214	948210

SCALE	SHEET
1/2	10F3





REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
D		CN 440556 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	1-31-78	<i>[Signature]</i>
E		CN 440556 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	7-11-78	<i>[Signature]</i>
F		CN 440556 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	7-11-78	<i>[Signature]</i>
C		CN 440463 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	10-9-78	<i>[Signature]</i>
H		CN 450231 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)	8-20-78	<i>[Signature]</i>



SIZE	CODE IDENT NO	DRAWING NO
D	96214	948210
SCALE	REV	SHEET
NONE	H	3



949613-9702

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 1 of PART NUMBER LMO948210-0001 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00001.000	EA		0948211-0001	MAINFRAME ASSY STEP 1,QR HUB	
0001A					A1	
0002	00001.000	EA		0948212-0001	POWER SUPPLY ASSY	
0002A					A2	
0003	00001.000	EA		0948213-0001	SERVO AMPLIFIER ASSY	
0003A					A3	
0004	00001.000	EA		0948214-0001	LOGIC MODULE ASSY	
0004A					A4	
0005	00001.000	EA		0216545-0003	CARD ASSY,CAPSTAN/REGULATOR FOR 979A	
0006	00001.000	EA		0216542-0002	CARD ASSY,REEL SERVO,979A	
0007	00001.000	EA		0937027-0001	LOGIC BOARD,979A	
0008	00001.000	EA		0948235-0001	NRZI CONTROL MODULE ASSY	
0009	00004.000	EA		0948232-0001	NRZI DATA MODULE ASSY	
0010	00001.000	EA		0232943-0043	REEL PLSTC 10-1/2*LT GRY PLSTC HUB	IBM -SGL APEAT PLST
0011	00001.000	EA		0948151-0001	LABEL,NRZI	
0012	00001.000	EA		0948248-0001	BLOWER,FIVE STAGE	
0012A					B1	
0013	00001.000	EA		0948202-0001	DOOR,979A TAPE TRANSPORT	
0014	00001.000	EA		0948170-0001	COVER,HEAD PLATE	
0015	00001.000	EA		0948217-0001	RAIL,LATCH	

DATE 06/11/79  
 DRAFTSMAN: [Signature] DATE: 6-12-79  
 PROJECT ENGINEER: [Signature] DATE: [Blank]  
 RELEASED: [Blank] DATE: [Blank]  
 MAINFRAME ASSY,60 HZ,NRZI,QR HUB  
 7513  
 PART NUMBER LMO948210-0001 REV H

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 2 of PART NUMBER LMO948210-0001 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0016	00001.000	EA		0948231-0001	RAIL,HINGE	
0018	00001.000	EA		0216521-0001	CAPACITOR CLAMP	
0019	00004.000	EA		0216524-0001	HANGER,TAPE UNIT	
0021	00002.000	EA		0948131-0001	BRACE,PUMP	
0023	AR	RL		0972301-0002	TAPE, FOAM, VINYL, SELF ADM 3/8 WIDE	NRS --V544
0024	00001.000	EA		0972752-0001	CAP 4.0 MF 104 FX,PAPER,IMPREGNATER SP	500P-37004KA24P4X
0024A					C1	
0027	00001.000	EA		0948245-0001	BOOT,CAPACITOR TERMINAL COVER	
0028	00002.000	EA		0084813-0003	SPACER #6 SCREW 1/40Dx3/16LG ALUM	3 -
0030	00004.000	EA		0972988-0014	SCREW 4-40 X .312 PAN HEAD CRES	
0032	00010.000	EA		0972990-0012	SCREW 4-40 X .250 FLT HEAD CRES	
0033	00004.000	EA		0416622-0011	WASHER #4 FLAT	QPL - AN960C4L
0034	00004.000	EA		0411104-0135	WASHER, LOCK-SPRING, HELICAL, #4	QPL - MS35338-135
0035	00003.000	EA		0972988-0028	SCREW 6-32 X .375 PAN HEAD CRES	
0036	00002.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES	
0037	00004.000	EA		0972990-0023	SCREW 6-32 X .250 FLT HEAD CRES	
0038	00010.000	EA		0972990-0025	SCREW 6-32 X .375 FLT HEAD CRES	
0039	00001.000	EA		0411027-0806	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806
0040	00004.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35338-136
0041	00001.000	EA		0411101-0058	LOCKWASHER #6 EXTERNAL TOOTH CRES	QPL - MS35335-58

DATE 06/11/79  
 DRAFTSMAN: [Signature] DATE: [Blank]  
 PROJECT ENGINEER: [Signature] DATE: [Blank]  
 RELEASED: [Blank] DATE: [Blank]  
 MAINFRAME ASSY,60 HZ,NRZI,QR HUB  
 PART NUMBER LMO948210-0001 REV H

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 3 of PART NUMBER LMO948210-0001 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0042	00001.000	EA		0411115-0064	NUT,PLAIN 6-32 UNC-2B HEX CRES	QPL - MS35649-264
0043	00002.000	EA		0972988-0043	SCREW 8-32 X .375 PAN HEAD CRES	
0044	00002.000	EA		0411104-0137	WASHER, LOCK-SPRING, HELICAL, #8	QPL - MS35338-137
0045	00004.000	EA		0972986-0008	SCREW 10-32 .375 PAN HEAD CRES	
0047	00006.000	EA		0972986-0011	SCREW 10-32 .625 PAN HEAD CRES	
0048	00008.000	EA		0972992-0011	SCREW 10-32 .500 FLT HEAD CRES	
0050	00010.000	EA		0411104-0138	WASHER, LOCK-SPRING, HELICAL, #10	QPL - MS35338-138
0051	00002.000	EA		0972988-0062	SCREW 1/4-20 .625 PAN HEAD CRES	
0052	00004.000	EA		0416129-0306	SCREW CAP 1/4-20 HEX BOLT	
0053	00006.000	EA		0996391-0003	WASHER #1/4 FLAT STEEL	
0054	00006.000	EA		0411104-0139	WASHER, LOCK-SPRING, HELICAL, 1/4	QPL - MS35338-139
0055	00006.000	EA		0418212-0010	STRAP,TIEDOWN,ADJUSTABLE,PLASTIC	QPL - MS3367-1-9
0056	REF	EA		0948219-9901	PROCEDURE,TAPE TRANSPORT ALIGNMENT	
0057	REF	EA		0948220-9901	WIRING DIAG,LOW VOLTAGE AND SIGNAL DIST	
0059	00003.000	EA		0054907-0005	CLAMP,LOOP	
0060	00003.000	EA		0972684-0011	SCREW, THREAD FORMING, #6-32	
0061	00003.000	EA		0411027-0805	WASHER,FLAT,.15610 X .312 00 X .035THK	
0062	00002.000	EA		0948244-0001	HINGE,TRANSPORT DOOR	
0063	00004.000	EA		0972990-0022	SCREW 6-32 X .188 FLT HEAD CRES	
0064	00004.000	EA		0972304-0607	SCREW,6-19 X 1.09 CM LG,SLT FLAT HD B204	-CAD PLASTITE

DATE 06/11/79  
 DRAFTSMAN: [Signature] DATE: [Blank]  
 PROJECT ENGINEER: [Signature] DATE: [Blank]  
 RELEASED: [Blank] DATE: [Blank]  
 MAINFRAME ASSY,60 HZ,NRZI,QR HUB  
 PART NUMBER LMO948210-0001 REV H

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 4 of PART NUMBER LMO948210-0001 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0065	00001.000	EA		0539605-0005	FASTENER, 3M #3263	
0066	00001.000	EA		0539605-0006	FASTENER,PLASTIC,INTLK MULTIPLE HEADS	MMH -SJ3310
0067	00001.000	EA		0972679-0009	SCREW #4-20 X 3/8*LG THD FORM,HEX	

DATE 06/11/79  
 DRAFTSMAN: [Signature] DATE: [Blank]  
 PROJECT ENGINEER: [Signature] DATE: [Blank]  
 RELEASED: [Blank] DATE: [Blank]  
 MAINFRAME ASSY,60 HZ,NRZI,QR HUB  
 PART NUMBER LMO948210-0001 REV H



949613-9702

TEXAS INSTRUMENTS INCORPORATED		DATE 06/11/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948210-0002		REV H	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
J001	00001.000	EA		0948211-0001	MAINFRAME ASSY STEP 1, QR HUB						
J001A					A1						
J002	00001.000	EA		0948212-0001	POWER SUPPLY ASSY						
J002A					A2						
J003	00001.000	EA		0948213-0001	SERVO AMPLIFIER ASSY						
J003A					A3						
J004	00001.000	EA		0948214-0001	LOGIC MODULE ASSY						
J004A					A4						
J005	00001.000	EA		0210545-0003	CARD ASSY,CAPSTAN/REGULATOR FOR 979A						
J006	00001.000	EA		0210542-0002	CARD ASSY,REEL SERVO,979A						
J007	00001.000	EA		0937027-0001	LOGIC BOARD,979A						
J008	00001.000	EA		0948235-0001	NRZI CONTROL MODULE ASSY						
J009	00004.000	EA		0948232-0001	NRZI DATA MODULE ASSY						
J010	00001.000	EA		0232943-0043	REEL PLSTC 10-1/2"LT GRY PLSTC HUB	IBM -SGL APERT PLST					
J011	00001.000	EA		0948151-0001	LABEL,NRZI						
J012	00001.000	EA		0948248-0002	BLOWER,SEVEN STAGE						
J012A					B1						
J013	00001.000	EA		0948202-0001	DOOR,979A TAPE TRANSPORT						
J014	00001.000	EA		0948170-0001	COVER,HEAD PLATE						
J015	00001.000	EA		0948217-0001	RAIL,LATCH						
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	MAINFRAME ASSY,50 HZ,NRZI,QR HUB				
APP'D MGR		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PART NUMBER LM0948210-0002				

TEXAS INSTRUMENTS INCORPORATED		DATE 06/11/79		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM0948210-0002		REV H	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
J016	00001.000	EA		0948231-0001	RAIL,HINGE						
J018	00001.000	EA		0210521-0001	CAPACITOR CLAMP						
J019	00004.000	EA		0210524-0001	HANGER,TAPE UNIT						
J021	00002.000	EA		0948131-0002	BRACE,PUMP						
J023	AR	RL		0972361-0002	TAPE, FOAM, VINYL, SELF ADH 3/8 WIDE	NRS --V544					
J024	00001.000	EA		0972752-0001	LAP 4.0 MF 104 FX,PAPER,IMPREGNATER SPR	500P-37004KAZ4P4A					
J024A					C1						
J027	00001.000	EA		0948245-0001	BOOT,CAPACITOR TERMINAL COVER						
J028	00002.000	EA		0084813-0003	SPACER #6 SCREW 1/40X3/16LG ALUM	3 -					
J030	00004.000	EA		0972988-0014	SCREW 4-40 X .312 PAN HEAD CRES						
J032	00010.000	EA		0972990-0012	SCREW 4-40 X .250 FLT HEAD CRES						
J033	00004.000	EA		0410622-0011	WASHER #4 FLAT	QPL - AN960C4L					
J034	00004.000	EA		0411104-0135	WASHER, LOCK-SPRING, HELICAL, #4	QPL - MS3533B-135					
J035	00003.000	EA		0972988-0020	SCREW 6-32 X .375 PAN HEAD CRES						
J036	00002.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES						
J037	00004.000	EA		0972990-0023	SCREW 6-32 X .250 FLT HEAD CRES						
J038	00010.000	EA		0972990-0025	SCREW 6-32 X .375 FLT HEAD CRES						
J039	00001.000	EA		0411027-0006	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806					
J040	00004.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS3533B-136					
J041	00001.000	EA		0411101-0058	LOCKWASHER #6 EXTERNAL TOOTH CRES	QPL - MS35335-58					
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	MAINFRAME ASSY,50 HZ,NRZI,QR HUB				
APP'D MGR		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PART NUMBER LM0948210-0002				

TEXAS INSTRUMENTS INCORPORATED		DATE 06/11/79		LIST OF MATERIAL		PAGE 3 of		PART NUMBER LM0948210-0002		REV H	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
J042	00001.000	EA		0411115-0064	NUT,PLAIN 6-32 UNC-2B HEX CRES	QPL - MS35649-264					
J043	00002.000	EA		0972988-0043	SCREW 8-32 X .375 PAN HEAD CRES						
J044	00002.000	EA		0411104-0137	WASHER, LOCK-SPRING, HELICAL, #8	QPL - MS3533B-137					
J045	00004.000	EA		0972988-0008	SCREW 10-32 .375 PAN HEAD CRES						
J047	00006.000	EA		0972988-0011	SCREW 10-32 .625 PAN HEAD CRES						
J048	00008.000	EA		0972992-0011	SCREW 10-32 .500 FLT HEAD CRES						
J050	00010.000	EA		0411104-0138	WASHER, LOCK-SPRING, HELICAL, #10	QPL - MS3533B-138					
J051	00002.000	EA		0972988-0062	SCREW 1/4-20 .625 PAN HEAD CRES						
J052	00004.000	EA		0410129-0306	SCREW CAP 1/4-20 HEX BOLT						
J053	00006.000	EA		0996391-0003	WASHER #1/4 FLAT STEEL						
J054	00006.000	EA		0411104-0139	WASHER, LOCK-SPRING, HELICAL, 1/4	QPL - MS35388-139					
J055	00006.000	EA		0410212-0010	STRAP,TIEDOWN,ADJUSTABLE,PLASTIC	QPL - MS3367-1-9					
J056	REF	EA		0948219-9901	PROCEDURE,TAPE TRANSPORT ALIGNMENT						
J057	REF	EA		0948226-9901	WIRING DIAG,LDW VOLTAGE AND SIGNAL DIST						
J059	00003.000	EA		0054967-0005	CLAMP,LOOP						
J060	00003.000	EA		0972684-0011	SCREW, THREAD FORMING, #6-32						
J061	00003.000	EA		0411027-0805	WASHER,FLAT,.156ID X .312 OD X .035THK						
J062	00002.000	EA		0948244-0001	HINGE,TRANSPORT DOOR						
J063	00004.000	EA		0972990-0022	SCREW 6-32 X .188 FLT HEAD CRES						
J064	00004.000	EA		0972364-0607	SCREW,6-19 X 1.09 CM LG,SLT FLAT HD 82DR	-CAD PLASTITE					
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	MAINFRAME ASSY,50 HZ,NRZI,QR HUB				
APP'D MGR		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PART NUMBER LM0948210-0002				

TEXAS INSTRUMENTS INCORPORATED		DATE 06/11/79		LIST OF MATERIAL		PAGE 4 of		PART NUMBER LM0948210-0002		REV H	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
J065	00001.000	EA		0539665-0005	FASTENER, 3M #3263						
J066	00001.000	EA		0539665-0006	FASTENER,PLASTIC,INTLK MULTIPLE HEADS	MMH -5J3310					
J067	00001.000	EA		0972679-0009	SCREW #4-20 X 3/8"LG THD FORM,HEX						
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	MAINFRAME ASSY,50 HZ,NRZI,QR HUB				
APP'D MGR		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PART NUMBER LM0948210-0002				



TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 1 of PART NUMBER LM0948210-0003 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J001	0001.000	EA		0948211-0001	MAINFRAME ASSY STEP 1, QR HUB	
J001A					A1	
J002	0001.000	EA		0948212-0001	POWER SUPPLY ASSY	
J002A					A2	
J003	0001.000	EA		0948213-0001	SERVO AMPLIFIER ASSY	
J003A					A3	
J004	0001.000	EA		0948214-0001	LOGIC MODULE ASSY	
J004A					A4	
J005	0001.000	EA		0216545-0003	CARD ASSY, CAPSTAN/REGULATOR FOR 979A	
J006	0001.000	EA		0216542-0002	CARD ASSY, REEL SERVO, 979A	
J007	0001.000	EA		0937027-0001	LOGIC BOARD, 979A	
J008	0001.000	EA		0216539-0001	CARD ASSY, PE CONTROL	
J009	0004.000	EA		0216536-0001	CARD ASSY, PE DATA	
J010	0001.000	EA		0212943-0043	REEL PLSTC 10-1/2"LT GRY PLSTC HUB	IBM -SGL APERT PLST
J012	0001.000	EA		0948248-0001	BLOWER, FIVE STAGE	
J012A					B1	
J013	0001.000	EA		0948202-0001	DOOR, 979A TAPE TRANSPORT	
J014	0001.000	EA		0948170-0001	COVER, HEAD PLATE	
J015	0001.000	EA		0948217-0001	RAIL, LATCH	
J016	0001.000	EA		0948231-0001	RAIL, HINGE	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE MAINFRAME ASSY, 60 HZ, PE, QR HUB APP'D MFC DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PART NUMBER LM0948210-0003 REV H						

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 2 of PART NUMBER LM0948210-0003 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J018	0001.000	EA		0216521-0001	CAPACITOR CLAMP	
J019	0004.000	EA		0216524-0001	HANGER, TAPE UNIT	
J021	0002.000	EA		0948131-0001	BRACE, PUMP	
J023	AR	RL		0972361-0002	TAPE, FOAM, VINYL, SELF ADH 3/8 WIDE	NRS --V544
J024	0001.000	EA		0972752-0001	CAP 4.0 MF 10% FX, PAPER, IMPREGNATED SPR	500P-37004KA24P4X
J024A					C1	
J027	0001.000	EA		0948245-0001	BOOT, CAPACITOR TERMINAL COVER	
J028	0002.000	EA		0084813-0003	SPACER #6 SCREW 1/400X3/16LG ALUM	3 -
J030	0004.000	EA		0972988-0014	SCREW 4-40 X .312 PAN HEAD CRES	
J032	0010.000	EA		0972990-0012	SCREW 4-40 X .250 FLT HEAD CRES	
J033	0004.000	EA		0416622-0011	WASHER #4 FLAT	QPL - AN960C4L
J034	0004.000	EA		0411104-0135	WASHER, LOCK-SPRING, HELICAL, #4	QPL - MS35338-135
J035	0003.000	EA		0972988-0028	SCREW 6-32 X .375 PAN HEAD CRES	
J036	0002.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES	
J037	0004.000	EA		0972990-0023	SCREW 6-32 X .250 FLT HEAD CRES	
J038	0010.000	EA		0972990-0025	SCREW 6-32 X .375 FLT HEAD CRES	
J039	0001.000	EA		0411027-0806	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806
J040	0004.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35338-136
J041	0001.000	EA		0411101-0058	LOCKWASHER #6 EXTERNAL TOOTH CRES	QPL - MS35335-58
J042	0001.000	EA		0411115-0064	NUT, PLAIN 6-32 UNC-2B HEX CRES	QPL - MS35649-264
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE MAINFRAME ASSY, 60 HZ, PE, QR HUB APP'D MFC DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PART NUMBER LM0948210-0003 REV H						

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 3 of PART NUMBER LM0948210-0003 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J043	0002.000	EA		0972988-0043	SCREW 8-32 X .375 PAN HEAD CRES	
J044	0002.000	EA		0411104-0137	WASHER, LOCK-SPRING, HELICAL, #8	QPL - MS35338-137
J045	0004.000	EA		0972986-0008	SCREW 10-32 .375 PAN HEAD CRES	
J047	0006.000	EA		0972986-0011	SCREW 10-32 .625 PAN HEAD CRES	
J048	0008.000	EA		0972992-0011	SCREW 10-32 .500 FLT HEAD CRES	
J050	0010.000	EA		0411104-0138	WASHER, LOCK-SPRING, HELICAL, #10	QPL - MS35338-138
J051	0002.000	EA		0972988-0062	SCREW 1/4-20 .625 PAN HEAD CRES	
J052	0004.000	EA		0416129-0306	SCREW CAP 1/4-20 HEX BOLT	
J053	0006.000	EA		0996391-0003	WASHER #1/4 FLAT STEEL	
J054	0006.000	EA		0411104-0139	WASHER, LOCK-SPRING, HELICAL, 1/4	QPL - MS35388-139
J055	0006.000	EA		0418212-0010	STRAP, TIEDOWN, ADJUSTABLE, PLASTIC	QPL - MS3367-1-9
J056	REF	EA		0948219-9901	PROCEDURE, TAPE TRANSPORT ALIGNMENT	
J057	REF	EA		0948226-9901	WIRING DIAG, LOW VOLTAGE AND SIGNAL DIST	
J059	0003.000	EA		0054967-0005	CLAMP, LOOP	
J060	0003.000	EA		0972684-0011	SCREW, THREAD FORMING, #6-32	
J061	0003.000	EA		0411027-0805	WASHER, FLAT, .156 ID X .312 OD X .035 THK	
J062	0002.000	EA		0948244-0001	HINGE, TRANSPORT DOOR	
J063	0004.000	EA		0972990-0022	SCREW 6-32 X .188 FLT HEAD CRES	
J064	0004.000	EA		0972364-0607	SCREW, 6-19 X 1.09 CM LG, SLT FLAT HD 8206	-CAD PLASTITE
J065	0001.000	EA		0539665-0005	FASTENER, 3M #3263	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE MAINFRAME ASSY, 60 HZ, PE, QR HUB APP'D MFC DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PART NUMBER LM0948210-0003 REV H						

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 4 of PART NUMBER LM0948210-0003 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J066	0001.000	EA		0539665-0006	FASTENER, PLASTIC, INTLK MULTIPLE HEADS	MHM -S3310
J067	0001.000	EA		0972679-0009	SCREW #4-20 X 3/8" LG THD FORM, HEX	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE MAINFRAME ASSY, 60 HZ, PE, QR HUB APP'D MFC DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PART NUMBER LM0948210-0003 REV H						



949613-9702

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948210-0004		REV H	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
J001	00001.000	EA		0948211-0001	MAINFRAME ASSY STEP 1, QR HUB				
J001A					A1				
J002	00001.000	EA		0948212-0001	POWER SUPPLY ASSY				
J002A					A2				
J003	00001.000	EA		0948213-0001	SERVO AMPLIFIER ASSY				
J003A					A3				
J004	00001.000	EA		0948214-0001	LOGIC MODULE ASSY				
J004A					A4				
J005	00001.000	EA		0216545-0003	CARD ASSY, CAPSTAN/REGULATOR FOR 979A				
J006	00001.000	EA		0216542-0002	CARD ASSY, REEL SERVO, 979A				
J007	00001.000	EA		0937027-0001	LOGIC BOARD, 979A				
J008	00001.000	EA		0216539-0001	CARD ASSY, PE CONTROL				
J009	00004.000	EA		0216536-0001	CARD ASSY, PE DATA				
J010	00001.000	EA		0212943-0043	REEL PLSTC 10-1/2"LT GRV PLSTC HUB	IBM -SGL APERT PLST			
J012	00001.000	EA		0948248-0002	BLOWER, SEVEN STAGE				
J012A					B1				
J013	00001.000	EA		0948202-0001	DOOR, 979A TAPE TRANSPORT				
J014	00001.000	EA		0948170-0001	COVER, HEAD PLATE				
J015	00001.000	EA		0948217-0001	RAIL, LATCH				
J016	00001.000	EA		0948231-0001	RAIL, HINGE				
DRAFTSMAN DATE					DESIGN ENGINEER DATE				
APPRO PROJECT ENGINEER DATE					RELEASED DATE				
					MAINFRAME ASSY, 50 HZ, PE, QR HUB				
					PART NUMBER LM0948210-0004				
					REV H				

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM0948210-0004		REV H	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
J018	00001.000	EA		0216521-0001	CAPACITOR CLAMP				
J019	00004.000	EA		0216524-0001	HANGER, TAPE UNIT				
J021	00002.000	EA		0948131-0002	BRACE, PUMP				
J023	AR	RL		0972361-0002	TAPE, FOAM, VINYL, SELF ADH 3/8 WIDE	NRS --V544			
J024	00001.000	EA		0972752-0001	CAP 4.0 MF 10% FX, PAPER, IMPREGNATED SPR	500P-37004KA24P4X			
J024A					C1				
J027	00001.000	EA		0948245-0001	BOOT, CAPACITOR TERMINAL COVER				
J028	00002.000	EA		0084813-0003	SPACER #6 SCREW 1/400X3/16LG ALUM	3 -			
J030	00004.000	EA		0972988-0014	SCREW 4-40 X .312 PAN HEAD CRES				
J032	00010.000	EA		0972990-0012	SCREW 4-40 X .250 FLT HEAD CRES				
J033	00004.000	EA		0416622-0011	WASHER #4 FLAT	QPL - AN960C4L			
J034	00004.000	EA		0411104-0135	WASHER, LOCK-SPRING, HELICAL, #4	QPL - MS35330-135			
J035	00003.000	EA		0972988-0028	SCREW 6-32 X .375 PAN HEAD CRES				
J036	00002.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES				
J037	00004.000	EA		0972990-0023	SCREW 6-32 X .250 FLT HEAD CRES				
J038	00010.000	EA		0972990-0025	SCREW 6-32 X .375 FLT HEAD CRES				
J039	00001.000	EA		0411027-0808	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806			
J040	00004.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35330-136			
J041	00001.000	EA		0411101-0058	LOCKWASHER #6 EXTERNAL TOOTH CRES	QPL - MS35335-98			
J042	00001.000	EA		0411115-0064	NUT, PLAIN 6-32 UNC-2B HEX CRES	QPL - MS35449-264			
DRAFTSMAN DATE					DESIGN ENGINEER DATE				
APPRO PROJECT ENGINEER DATE					RELEASED DATE				
					MAINFRAME ASSY, 50 HZ, PE, QR HUB				
					PART NUMBER LM0948210-0004				
					REV H				

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 3 of		PART NUMBER LM0948210-0004		REV H	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
J043	00002.000	EA		0972988-0043	SCREW 8-32 X .375 PAN HEAD CRES				
J044	00002.000	EA		0411104-0137	WASHER, LOCK-SPRING, HELICAL, #8	QPL - MS35330-137			
J045	00004.000	EA		0972988-0008	SCREW 10-32 .375 PAN HEAD CRES				
J047	00006.000	EA		0972988-0011	SCREW 10-32 .625 PAN HEAD CRES				
J048	00008.000	EA		0972992-0011	SCREW 10-32 .500 FLT HEAD CRES				
J050	00010.000	EA		0411104-0138	WASHER, LOCK-SPRING, HELICAL, #10	QPL - MS35330-138			
J051	00002.000	EA		0972988-0062	SCREW 1/4-20 .625 PAN HEAD CRES				
J052	00004.000	EA		0416129-0306	SCREW CAP 1/4-20 HEX BOLT				
J053	00006.000	EA		0996391-0003	WASHER #1/4 FLAT STEEL				
J054	00006.000	EA		0411104-0139	WASHER, LOCK-SPRING, HELICAL, 1/4	QPL - MS35300-139			
J055	00006.000	EA		0418212-0010	STRAP, TIEDOWN, ADJUSTABLE, PLASTIC	QPL - MS3367-1-9			
J056	REF	EA		0948219-9901	PROCEDURE, TAPE TRANSPORT ALIGNMENT				
J057	REF	EA		0948226-9901	WIRING DIAG, LOW VOLTAGE AND SIGNAL DIST				
J059	00003.000	EA		0054967-0005	CLAMP, LOOP				
J060	00003.000	EA		0972684-0011	SCREW, THREAD FORMING, #6-32				
J061	00003.000	EA		0411027-0805	WASHER, FLAT, .156ID X .312 OD X .035THK				
J062	00002.000	EA		0948244-0001	HINGE, TRANSPORT DOOR				
J063	00004.000	EA		0972990-0022	SCREW 6-32 X .188 FLT HEAD CRES				
J064	00004.000	EA		0972364-0607	SCREW, 6-19 X 1.09 CM LG, SLT FLAT HD #208	-CAD PLASTITE			
J065	00001.000	EA		0539665-0005	FASTENER, 3M #3263				
DRAFTSMAN DATE					DESIGN ENGINEER DATE				
APPRO PROJECT ENGINEER DATE					RELEASED DATE				
					MAINFRAME ASSY, 50 HZ, PE, QR HUB				
					PART NUMBER LM0948210-0004				
					REV H				

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 4 of		PART NUMBER LM0948210-0004		REV H	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
J066	00001.000	EA		0539665-0006	FASTENER, PLASTIC, INTLK MULTIPLE HEADS	MMH -S33310			
J067	00001.000	EA		0972679-0009	SCREW #4-20 X 3/8"LG THD FORM, HEX				
DRAFTSMAN DATE					DESIGN ENGINEER DATE				
APPRO PROJECT ENGINEER DATE					RELEASED DATE				
					MAINFRAME ASSY, 50 HZ, PE, QR HUB				
					PART NUMBER LM0948210-0004				
					REV H				





949613-9702

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 1 of PART NUMBER LM0948210-0005 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J001	0001.000	EA		0948211-0002	MAINFRAME ASSY STEP 1	
J001A					A1	
J002	0001.000	EA		0948212-0001	POWER SUPPLY ASSY	
J002A					A2	
J003	0001.000	EA		0948213-0001	SERVO AMPLIFIER ASSY	
J003A					A3	
J004	0001.000	EA		0948214-0001	LOGIC MODULE ASSY	
J004A					A4	
J005	0001.000	EA		0216545-0003	CARD ASSY,CAPSTAN/REGULATOR FOR 979A	
J006	0001.000	EA		0216542-0002	CARD ASSY,REEL SERVO,979A	
J007	0001.000	EA		0937027-0001	LOGIC BOARD,979A	
J008	0001.000	EA		0948235-0001	NRZI CONTROL MODULE ASSY	
J009	0004.000	EA		0948232-0001	NRZI DATA MODULE ASSY	
J010	0001.000	EA		0232943-0043	KEEL PLSTC 10-1/2"LT GRY PLSTC HUB	IBM -SGL APERT PLST
J011	0001.000	EA		0948151-0001	LABEL,NRZI	
J012	0001.000	EA		0948248-0001	BLOWER,FIVE STAGE	
J012A					B1	
J013	0001.000	EA		0948202-0001	DOOR,979A TAPE TRANSPORT	
J014	0001.000	EA		0948170-0001	COVER,HEAD PLATE	
J015	0001.000	EA		0948217-0001	RAIL,LATCH	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE MAINFRAME ASSY,60 HZ,NRZI APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PART NO. PART NUMBER REV H LM0948210-0005						

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 2 of PART NUMBER LM0948210-0005 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J016	0001.000	EA		0948231-0001	RAIL,HINGE	
J018	0001.000	EA		0216521-0001	CAPACITOR CLAMP	
J019	0004.000	EA		0216524-0001	HANGER,TAPE UNIT	
J021	0002.000	EA		0948131-0001	BRACE,PUMP	
J023	AR	RL		0972361-0002	TAPE, FOAM, VINYL, SELF ADH 3/8 WIDE	NRS --V544
J024	0001.000	EA		0972752-0001	CAP 4.0 MF 10V FX,PAPER,IMPREGNATER	SPR 500P-37004KA24P4X
J024A					C1	
J027	0001.000	EA		0948245-0001	BOOT,CAPACITOR TERMINAL COVER	
J028	0002.000	EA		0084813-0003	SPACER #6 SCREW 1/400X3/16LG ALUM	3 -
J030	0004.000	EA		0972988-0014	SCREW 4-40 X .312 PAN HEAD CRES	
J032	00010.000	EA		0972990-0012	SCREW 4-40 X .250 FLT HEAD CRES	
J033	0004.000	EA		0416622-0011	WASHER #4 FLAT	QPL - AN960C4L
J034	0004.000	EA		0411104-0135	WASHER, LOCK-SPRING, HELICAL, #4	QPL - MS35338-135
J035	0003.000	EA		0972988-0028	SCREW 6-32 X .375 PAN HEAD CRES	
J036	0002.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES	
J037	0004.000	EA		0972990-0023	SCREW 6-32 X .250 FLT HEAD CRES	
J038	00010.000	EA		0972990-0025	SCREW 6-32 X .375 FLT HEAD CRES	
J039	0001.000	EA		0411027-0806	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806
J040	0004.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35338-136
J041	0001.000	EA		0411101-0058	LOCKWASHER #6 EXTERNAL TCOOTH CRES	QPL - MS35335-58
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE MAINFRAME ASSY,60 HZ,NRZI APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PART NO. PART NUMBER REV H LM0948210-0005						

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 3 of PART NUMBER LM0948210-0005 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J042	0001.000	EA		0411115-0064	NUT,PLAIN 6-32 UNC-2B HEX CRES	QPL - MS35649-264
J043	0002.000	EA		0972988-0043	SCREW 8-32 X .375 PAN HEAD CRES	
J044	0002.000	EA		0411104-0137	WASHER, LOCK-SPRING, HELICAL, #8	QPL - MS35338-137
J045	0004.000	EA		0972988-0008	SCREW 10-32 .375 PAN HEAD CRES	
J047	0006.000	EA		0972988-0011	SCREW 10-32 .625 PAN HEAD CRES	
J048	0008.000	EA		0972992-0011	SCREW 10-32 .500 FLT HEAD CRES	
J050	00010.000	EA		0411104-0138	WASHER, LOCK-SPRING, HELICAL, #10	QPL - MS35338-138
J051	0002.000	EA		0972988-0062	SCREW 1/4-20 .625 PAN HEAD CRES	
J052	0004.000	EA		0416129-0306	SCREW CAP 1/4-20 HEX BOLT	
J053	0006.000	EA		0996391-0003	WASHER #1/4 FLAT STEEL	
J054	0006.000	EA		0411104-0139	WASHER, LOCK-SPRING, HELICAL, 1/4	QPL - MS35388-139
J055	0006.000	EA		0418212-0010	STRAP,TIEDOWN,ADJUSTABLE,PLASTIC	QPL - MS3367-1-9
J056	REF	EA		0948219-9901	PROCEDURE,TAPE TRANSPORT ALIGNMENT	
J057	REF	EA		0948226-9901	WIRING DIAG,LOW VOLTAGE AND SIGNAL DIST	
J059	0003.000	EA		0054967-0005	CLAMP,LOOP	
J060	0003.000	EA		0972684-0011	SCREW, THREAD FORMING, #6-32	
J061	0003.000	EA		0411027-0805	WASHER,FLAT,.156ID X .312 OD X .035THK	
J062	0002.000	EA		0948244-0001	HINGE,TRANSPORT DOOR	
J063	0004.000	EA		0972990-0022	SCREW 6-32 X .188 FLT HEAD CRES	
J064	0004.000	EA		0972364-0007	SCREW,6-19 X 1.09 CH LG,SLT FLAT HD 8204	-CAD PLASTITE
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE MAINFRAME ASSY,60 HZ,NRZI APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PART NO. PART NUMBER REV H LM0948210-0005						

TEXAS INSTRUMENTS INCORPORATED DATE 06/11/79 LIST OF MATERIAL PAGE 4 of PART NUMBER LM0948210-0005 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J065	0001.000	EA		0539665-0005	FASTENER, 3M #3263	
J066	0001.000	EA		0539665-0006	FASTENER,PLASTIC,INTLK MULTIPLE HEADS	MMH -S3310
J067	0001.000	EA		0972679-0009	SCREW #4-20 X 3/8"LG THD FORM,HEX	
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE MAINFRAME ASSY,60 HZ,NRZI APP'D MFG DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PART NO. PART NUMBER REV H LM0948210-0005						



949613-9702

TEXAS INSTRUMENTS INCORPORATED  
 DATE 06/11/79 LIST OF MATERIAL PAGE 1 of 4  
 PART NUMBER LMD948210-0006 REV H

ITEM NO	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00001.000	EA		0948211-0002	MAINFRAME ASSY STEP 1	
0001A					A1	
0002	00001.000	EA		0948212-0001	POWER SUPPLY ASSY	
0002A					A2	
0003	00001.000	EA		0948213-0001	SERVO AMPLIFIER ASSY	
0003A					A3	
0004	00001.000	EA		0948214-0001	LOGIC MODULE ASSY	
0004A					A4	
0005	00001.000	EA		0210545-0003	CARD ASSY,CAPSTAN/REGULATOR FOR 979A	
0006	00001.000	EA		0210542-0002	CARD ASSY,REEL SERVO,979A	
0007	00001.000	EA		0937027-0001	LOGIC BOARD,979A	
0008	00001.000	EA		0948235-0001	NRZI CONTROL MODULE ASSY	
0009	00004.000	EA		0948232-0001	NRZI DATA MODULE ASSY	
0010	00001.000	EA		0232943-0043	REEL PLSTC 10-1/2"LT WRY PLSTC HUB	IBM -SGL APERT PLST
0011	00001.000	EA		0948151-0001	LAMEL,NRZI	
0012	00001.000	EA		0948248-0002	BLOWER,SEVEN STAGE	
0012A					B1	
0013	00001.000	EA		0948202-0001	DOOR,979A TAPE TRANSPORT	
0014	00001.000	EA		0948170-0001	COVER,HEAD PLATE	
0015	00001.000	EA		0948217-0001	RAIL,LATCH	

MAINFRAME ASSY,50 HZ,NRZI  
 PART NUMBER LMD948210-0006 REV H

TEXAS INSTRUMENTS INCORPORATED  
 DATE 06/11/79 LIST OF MATERIAL PAGE 2 of 4  
 PART NUMBER LMD948210-0006 REV H

ITEM NO	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0016	00001.000	EA		0948231-0001	RAIL,HINGE	
0018	00001.000	EA		0210521-0001	CAPACITOR CLAMP	
0019	00004.000	EA		0210524-0001	HANGER,TAPE UNIT	
0021	00002.000	EA		0948131-0002	BRACE,PUMP	
0023	AR	RL		0972361-0002	TAPE, FOAM, VINYL, SELF ADM 3/8 WIDE	MRS --V544
0024	00001.000	EA		0972752-0001	CAP 4.0 MF 10% FX,PAPER,IMPREGMATER SPR	500P-37004KA24P4X
0024A					C1	
0027	00001.000	EA		0948245-0001	BOOT,CAPACITOR TERMINAL COVER	
0028	00002.000	EA		0084813-0003	SPACER #6 SCREW 1/400X3/16LG ALUM	3 -
0030	00004.000	EA		0972988-0014	SCREW 4-40 X .312 PAN HEAD CRES	
0032	00010.000	EA		0972990-0012	SCREW 4-40 X .250 FLT HEAD CRES	
0033	00004.000	EA		0410622-0011	WASHER #4 FLAT	UPL - AN960C4L
0034	00004.000	EA		0411104-0135	WASHER, LOCK-SPRING, HELICAL, #4	UPL - MS35330-135
0035	00003.000	EA		0972988-0028	SCREW 6-32 X .375 PAN HEAD CRES	
0036	00002.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES	
0037	00004.000	EA		0972990-0023	SCREW 6-32 X .250 FLT HEAD CRES	
0038	00010.000	EA		0972990-0025	SCREW 6-32 X .375 FLT HEAD CRES	
0039	00001.000	EA		0411027-0806	WASHER .156 X .375 X .049 FLAT CRES	UPL - MS15795-806
0040	00004.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	UPL - MS35330-136
0041	00001.000	EA		0411101-0058	LOCKWASHER #6 EXTERNAL TOOTH CRES	UPL - MS35335-58

MAINFRAME ASSY,50 HZ,NRZI  
 PART NUMBER LMD948210-0006 REV H

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 PART NUMBER LMD948210-0006 REV H

ITEM NO	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0042	00001.000	EA		0411115-0064	NUT,PLAIN 6-32 UNC-28 HEX CRES	UPL - MS35649-264
0043	00002.000	EA		0972988-0043	SCREW 6-32 X .375 PAN HEAD CRES	
0044	00002.000	EA		0411104-0137	WASHER, LOCK-SPRING, HELICAL, #8	UPL - MS35330-137
0045	00004.000	EA		0972988-0008	SCREW 10-32 .375 PAN HEAD CRES	
0047	00006.000	EA		0972988-0011	SCREW 10-32 .625 PAN HEAD CRES	
0048	00008.000	EA		0972992-0011	SCREW 10-32 .500 FLT HEAD CRES	
0050	00010.000	EA		0411104-0138	WASHER, LOCK-SPRING, HELICAL, #10	UPL - MS35330-138
0051	00002.000	EA		0972988-0062	SCREW 1/4-20 .625 PAN HEAD CRES	
0052	00004.000	EA		0410129-0306	SCREW CAP 1/4-20 HEX BOLT	
0053	00006.000	EA		0996391-0003	WASHER #1/4 FLAT STEEL	
0054	00006.000	EA		0411104-0139	WASHER, LOCK-SPRING, HELICAL, 1/4	UPL - MS35380-139
0055	00006.000	EA		0410212-0010	STRAP,TIEDOWN,ADJUSTABLE,PLASTIC	UPL - MS3367-1-9
0056	REF	EA		0948219-9901	PROCEDURE,TAPE TRANSPORT ALIGNMENT	
0057	REF	EA		0948226-9901	WIRING DIAG,LIN VOLTAGE AND SIGNAL DIST	
0059	00003.000	EA		0054967-0005	CLAMP,LOOP	
0060	00003.000	EA		0972684-0011	SCREW, THREAD FORMING, #6-32	
0061	00003.000	EA		0411027-0805	WASHER,FLAT,.156LD X .312 OD X .035THK	
0062	00002.000	EA		0948244-0001	HINGE,TRANSPORT DOOR	
0063	00004.000	EA		0972990-0022	SCREW 6-32 X .188 FLT HEAD CRES	
0064	00004.000	EA		0972364-0607	SCREW,6-19 X 1.09 CM LG,SLT FLAT HD 82DE	-CAD PLASTITE

MAINFRAME ASSY,50 HZ,NRZI  
 PART NUMBER LMD948210-0006 REV H

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 DATE 06/11/79 LIST OF MATERIAL PAGE 4 of 4  
 PART NUMBER LMD948210-0006 REV H

ITEM NO	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0065	00001.000	EA		0539065-0005	FASTENER, 3M #3263	
0066	00001.000	EA		0539065-0006	FASTENER,PLASTIC,INTLK MULTIPLE HEADS	MM -S3310
0067	00001.000	EA		0972679-0009	SCREW #4-20 X 3/8"LG THD FORM,HEX	

MAINFRAME ASSY,50 HZ,NRZI  
 PART NUMBER LMD948210-0006 REV H



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DATE 06/11/79 LIST OF MATERIAL PAGE 1 of 4  
PART NUMBER LM0948210-0007 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J001	0001.000	EA		0948211-0002	MAINFRAME ASSY STEP 1	
J001A					A1	
J002	0001.000	EA		0948212-0001	POWER SUPPLY ASSY	
J002A					A2	
J003	0001.000	EA		0948213-0001	SERVO AMPLIFIER ASSY	
J003A					A3	
J004	0001.000	EA		0948214-0001	LOGIC MODULE ASSY	
J004A					A4	
J005	0001.000	EA		0216545-0003	CARD ASSY,CAPSTAN/REGULATOR FOR 979A	
J006	0001.000	EA		0216542-0002	CARD ASSY,REEL SERVO,979A	
J007	0001.000	EA		0937027-0001	LOGIC BOARD,979A	
J008	0001.000	EA		0216539-0001	CARD ASSY,PE CONTROL	
J009	0004.000	EA		0216536-0001	CARD ASSY,PE DATA	
J010	0001.000	EA		0232943-0043	REEL PLSTC 10-1/2"LT GRY PLSTC HUB	IBM -SGL APERT PLST
J012	0001.000	EA		0948248-0001	BLOWER,FIVE STAGE	
J012A					B1	
J013	0001.000	EA		0948202-0001	DOOR,979A TAPE TRANSPORT	
J014	0001.000	EA		0948170-0001	COVER,HEAD PLATE	
J015	0001.000	EA		0948217-0001	RAIL,LATCH	
J016	0001.000	EA		0948231-0001	RAIL,HINGE	

MAINFRAME ASSY,60 HZ,PE  
PART NUMBER LM0948210-0007 REV H

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DATE 06/11/79 LIST OF MATERIAL PAGE 2 of 4  
PART NUMBER LM0948210-0007 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J018	0001.000	EA		0216521-0001	CAPACITOR CLAMP	
J019	0004.000	EA		0216524-0001	HANGER,TAPE UNIT	
J021	0002.000	EA		0948131-0001	BRACE,PUMP	
J023	AR	RL		0972361-0002	TAPE, FOAM, VINYL, SELF ADH 3/8 WIDE	NRS --V544
J024	0001.000	EA		097272-0001	CAP 4.0 MF 10% FX,PAPER,IMPREGNATER SPR	50UP-37004KA24P4X
J024A					C1	
J027	0001.000	EA		0948245-0001	BOOT,CAPACITOR TERMINAL COVER	
J028	0002.000	EA		0084013-0003	SPACER #6 SCREW 1/40X3/16LG ALUM	3 -
J030	0004.000	EA		0972988-0014	SCREW 4-40 X .312 PAN HEAD CRES	
J032	0001.000	EA		0972990-0012	SCREW 4-40 X .250 FLT HEAD CRES	
J033	0004.000	EA		0416622-0011	WASHER #4 FLAT	QPL - AN960C4L
J034	0004.000	EA		0411104-0135	WASHER, LOCK-SPRING, HELICAL, #4	QPL - MS35338-135
J035	0003.000	EA		0972988-0026	SCREW 6-32 X .375 PAN HEAD CRES	
J036	0002.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES	
J037	0004.000	EA		0972990-0023	SCREW 6-32 X .250 FLT HEAD CRES	
J038	0001.000	EA		0972990-0025	SCREW 6-32 X .375 FLT HEAD CRES	
J039	0001.000	EA		0411027-0006	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806
J040	0004.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35338-136
J041	0001.000	EA		0411101-0058	LOCKWASHER #6 EXTERNAL TIGHT CRES	QPL - MS35335-58
J042	0001.000	EA		0411115-0004	NUT,PLAIN 6-32 UNC-2B HEX CRES	QPL - MS35649-264

MAINFRAME ASSY,60 HZ,PE  
PART NUMBER LM0948210-0007 REV H

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PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J043	0002.000	EA		0972988-0043	SCREW 8-32 X .375 PAN HEAD CRES	
J044	0002.000	EA		0411104-0137	WASHER, LOCK-SPRING, HELICAL, #8	QPL - MS35338-137
J045	0004.000	EA		0972986-0008	SCREW 10-32 .375 PAN HEAD CRES	
J047	0006.000	EA		0972986-0011	SCREW 10-32 .625 PAN HEAD CRES	
J048	0008.000	EA		0972992-0011	SCREW 10-32 .500 FLT HEAD CRES	
J050	0001.000	EA		0411104-0138	WASHER, LOCK-SPRING, HELICAL, #10	QPL - MS35338-138
J051	0002.000	EA		0972988-0062	SCREW 1/4-20 .625 PAN HEAD CRES	
J052	0004.000	EA		0416129-0306	SCREW CAP 1/4-20 HEX BOLT	
J053	0006.000	EA		0996391-0003	WASHER #1/4 FLAT STEEL	
J054	0006.000	EA		0411104-0139	WASHER, LOCK-SPRING, HELICAL, 1/4	QPL - MS35388-139
J055	0006.000	EA		0418212-0010	STRAP,TIEDOWN,ADJUSTABLE,PLASTIC	QPL - MS3367-1-9
J056	REF	EA		0948219-9901	PROCEDURE,TAPE TRANSPORT ALIGNMENT	
J057	REF	EA		0948226-9901	WIRING DIAG,LOW VOLTAGE AND SIGNAL DIST	
J059	0003.000	EA		0054967-0005	CLAMP,LOOP	
J060	0003.000	EA		0972684-0011	SCREW, THREAD FORMING, #6-32	
J061	0003.000	EA		0411027-0805	WASHER,FLAT,.156ID X .312 OD X .035THK	
J062	0002.000	EA		0948244-0001	HINGE,TRANSPORT DOOR	
J063	0004.000	EA		0972990-0022	SCREW 6-32 X .188 FLT HEAD CRES	
J064	0004.000	EA		0972364-0607	SCREW,6-19 X 1.09 CM LG,SLT FLAT HD 8206	-CAD PLASTITE
J065	0001.000	EA		0539665-0005	FASTENER, 3M #3263	

MAINFRAME ASSY,60 HZ,PE  
PART NUMBER LM0948210-0007 REV H

TEXAS INSTRUMENTS INCORPORATED  
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PART NUMBER LM0948210-0007 REV H

PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J066	0001.000	EA		0539665-0006	FASTENER,PLASTIC,INTELK MULTIPLE HEADS	NHM -S33310
J067	0001.000	EA		0972679-0009	SCREW #4-20 X 3/8"LG THD FORM,HEX	

MAINFRAME ASSY,60 HZ,PE  
PART NUMBER LM0948210-0007 REV H

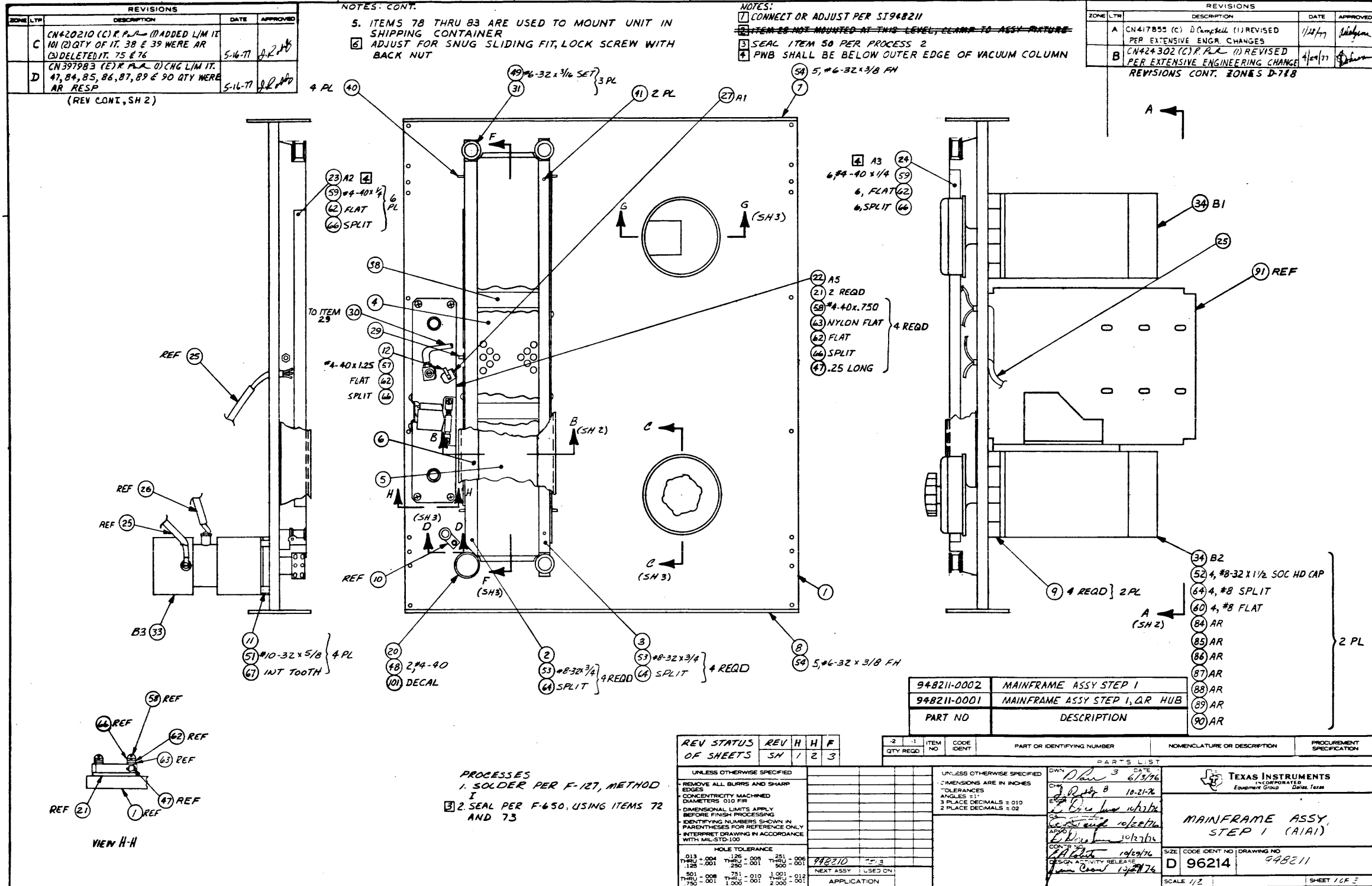


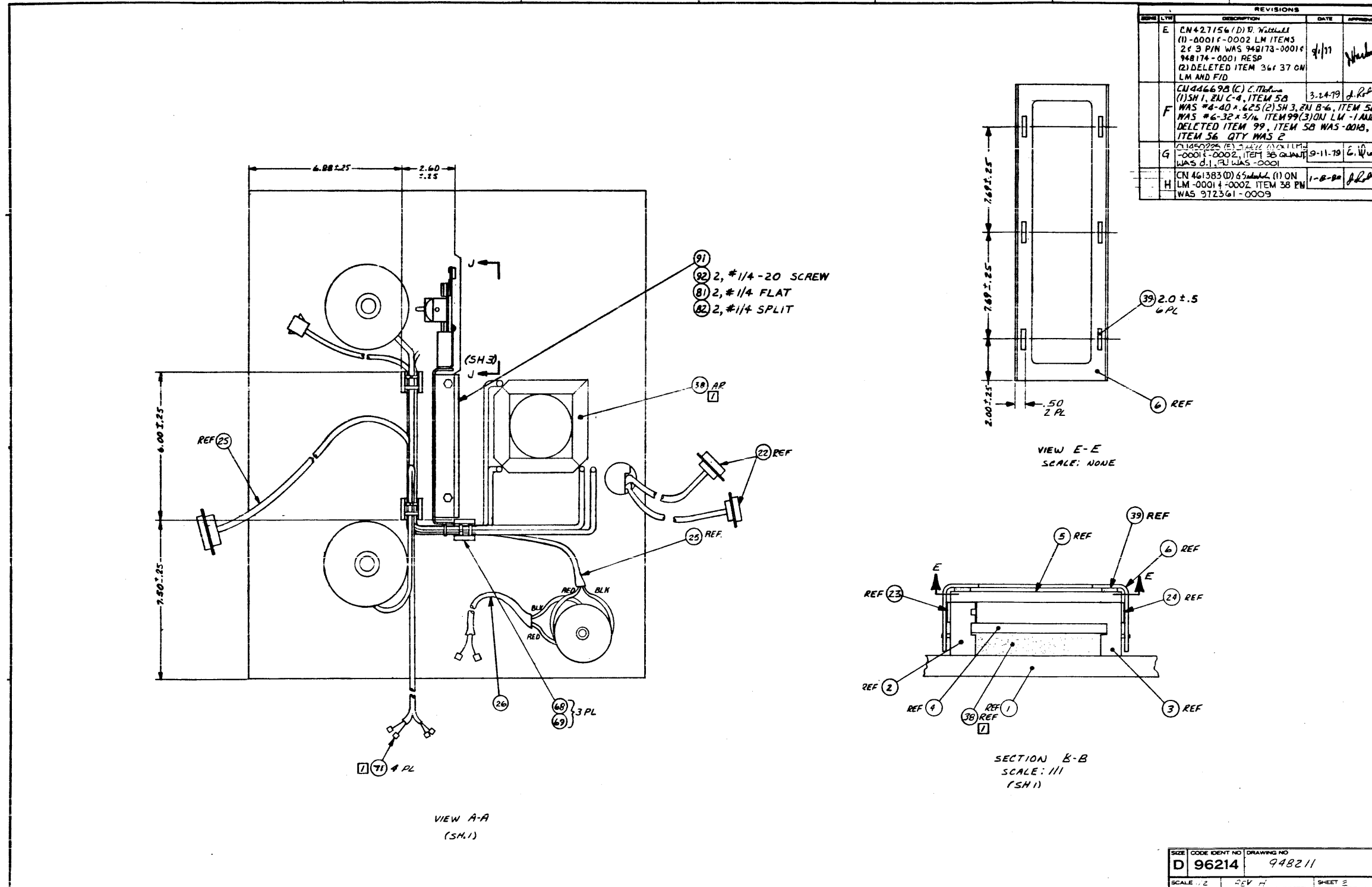
TEXAS INSTRUMENTS INCORPORATED		DATE 06/11/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948210-0008		REV H	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0001	00001.000	EA		0948211-0002	MAINFRAME ASSY STEP 1						
0001A					A1						
0002	00001.000	EA		0948212-0001	POWER SUPPLY ASSY						
0002A					A2						
0003	00001.000	EA		0948213-0001	SERVU AMPLIFIER ASSY						
0003A					A3						
0004	00001.000	EA		0948214-0001	LOGIC MODULE ASSY						
0004A					A4						
0005	00001.000	EA		0216545-0003	CARD ASSY,CAPSTAN/REGULATOR FOR 979A						
0006	00001.000	EA		0216542-0002	CARD ASSY,REEL SERVU,979A						
0007	00001.000	EA		0927027-0001	LOGIC BOARD,979A						
0008	00001.000	EA		0216539-0001	CARD ASSY,PE CONTROL						
0009	00004.000	EA		0216536-0001	CARD ASSY,PE DATA						
0010	00001.000	EA		0232943-0043	REEL PLSTC 10-1/2"LT GRV PLSTC HUB	IBM -SGL APERT PLST					
0012	00001.000	EA		0948248-0002	BLOWER,SEVEN STAGE						
0012A					B1						
0013	00001.000	EA		0948202-0001	DOOR,979A TAPE TRANSPORT						
0014	00001.000	EA		0948170-0001	COVER,HEAD PLATE						
0015	00001.000	EA		0948217-0001	RAIL,LATCH						
0016	00001.000	EA		0948231-0001	RAIL,HINGE						
DRAFTSMAN				DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	MAINFRAME ASSY,50 HZ,PE		
APP'D MGR				DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PART NUMBER LM0948210-0008		

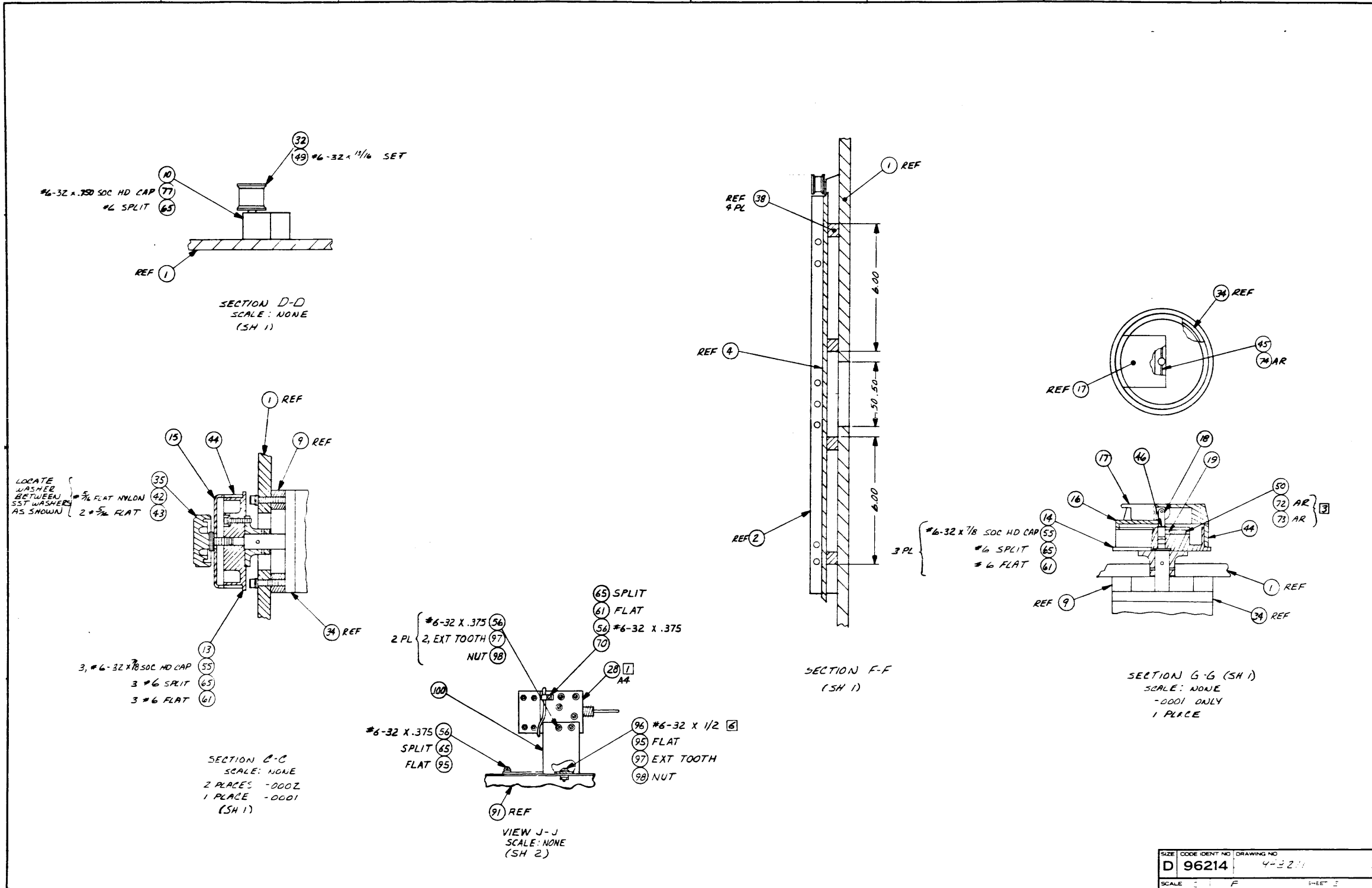
TEXAS INSTRUMENTS INCORPORATED		DATE 06/11/79		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM0948210-0008		REV H	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0018	00001.000	EA		0216521-0001	CAPACITOR CLAMP						
0019	00004.000	EA		0216524-0001	HANGER,TAPE UNIT						
0021	00002.000	EA		0948131-0002	BRACE,PUMP						
0023	AR	RL		0972361-0002	TAPE, FOAM, VINYL, SELF ADM 3/8 WIDE	MRS ---V544					
0024	00001.000	EA		0972752-0001	CAP 4.0 MF 106 FX,PAPER,IMPREGMATER SP	500P-37004A24P4A					
0024A					C1						
0027	00001.000	EA		0948245-0001	BOOT,CAPACITOR TERMINAL COVER						
0028	00002.000	EA		0084813-0003	SPACER #6 SCREW 1/400X3/16LG ALUM	3 -					
0030	00004.000	EA		0972988-0014	SCREW 4-40 X .312 PAN HEAD CRES						
0032	00002.000	EA		0972990-0012	SCREW 4-40 X .250 FLT HEAD CRES						
0033	00004.000	EA		0416622-0011	WASHER #4 FLAT	QPL - AN960C4L					
0034	00004.000	EA		0411104-0135	WASHER, LOCK-SPRING, HELICAL, #4	QPL - MS35330-135					
0035	00003.000	EA		0972988-0028	SCREW 4-32 X .375 PAN HEAD CRES						
0036	00002.000	EA		0972988-0030	SCREW 4-32 X .500 PAN HEAD CRES						
0037	00006.000	EA		0972990-0023	SCREW 4-32 X .250 FLT HEAD CRES						
0038	00010.000	EA		0972990-0025	SCREW 4-32 X .375 FLT HEAD CRES						
0039	00001.000	EA		0411027-0006	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-006					
0040	00004.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35330-136					
0041	00001.000	EA		0411101-0038	LOCKWASHER #6 EXTERNAL TOOTH CRES	QPL - MS35335-50					
0042	00001.000	EA		0411115-0064	NUT,PLAIN 4-32 UNCL-2B HEX CRES	QPL - MS35649-264					
DRAFTSMAN				DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	MAINFRAME ASSY,50 HZ,PE		
APP'D MGR				DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PART NUMBER LM0948210-0008		

TEXAS INSTRUMENTS INCORPORATED		DATE 06/11/79		LIST OF MATERIAL		PAGE 3 of		PART NUMBER LM0948210-0008		REV H	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0043	00002.000	EA		0972988-0043	SCREW 8-32 X .375 PAN HEAD CRES						
0044	00002.000	EA		0411104-0137	WASHER, LOCK-SPRING, HELICAL, #8	QPL - MS35330-187					
0045	00004.000	EA		0972988-0008	SCREW 10-32 .375 PAN HEAD CRES						
0047	00006.000	EA		0972988-0011	SCREW 10-32 .625 PAN HEAD CRES						
0048	00008.000	EA		0972992-0011	SCREW 10-32 .500 FLT HEAD CRES						
0050	00010.000	EA		0411104-0138	WASHER, LOCK-SPRING, HELICAL, #10	QPL - MS35330-138					
0051	00002.000	EA		0972988-0062	SCREW 1/4-20 .625 PAN HEAD CRES						
0052	00004.000	EA		0230099-0000	BOLT 1/4-20X3/4 HEX HD	-SEE TI DRAWING					
0053	00006.000	EA		0596391-0003	WASHER #1/4 FLAT STEEL						
0054	00006.000	EA		0411104-0139	WASHER, LOCK-SPRING, HELICAL, 1/4	QPL - MS35380-139					
0055	00006.000	EA		0418212-0010	STRAP,TIEDOWN,ADJUSTABLE,PLASTIC	QPL - MS3367-1-9					
0056	REF	EA		0948219-9901	PROCEDURE,TAPE TRANSPORT ALIGNMENT						
0057	REF	EA		0948226-9901	WIRING DIAG,LOW VOLTAGE AND SIGNAL DIST						
0059	00003.000	EA		0054967-0005	CLAMP,LOOP						
0060	00003.000	EA		0972684-0011	SCREW, THREAD FORMING, #6-32						
0061	00003.000	EA		0411027-0005	WASHER,FLAT,.156ID X .312 OD X .035THK						
0062	00002.000	EA		0948244-0001	HINGE,TRANSPORT DOOR						
0063	00004.000	EA		0972990-0022	SCREW 4-32 X .188 FLT HEAD CRES						
0064	00004.000	EA		0972364-0007	SCREW,4-19 X 1.09 CM LG,SLT FLAT HD 8208	-CAD PLASTITE					
0065	00001.000	EA		0539665-0005	FASTENER, 3M #32-3						
DRAFTSMAN				DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	MAINFRAME ASSY,50 HZ,PE		
APP'D MGR				DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PART NUMBER LM0948210-0008		

TEXAS INSTRUMENTS INCORPORATED		DATE 06/11/79		LIST OF MATERIAL		PAGE 4 of		PART NUMBER LM0948210-0008		REV H	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0066	00001.000	EA		0539665-0006	FASTENER,PLASTIC,INTLK MULTIPLE HEADS	MMN -S43310					
0067	00001.000	EA		0972679-0009	SCREW #4-20 X 3/8"LG THD FORM,HEX						
DRAFTSMAN				DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	MAINFRAME ASSY,50 HZ,PE		
APP'D MGR				DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PART NUMBER LM0948210-0008		







SIZE	CODE	IDENT NO	DRAWING NO
D	96214		4-227
SCALE	F	SHEET 2	



949613-9702

948247-0001  
HUB  
MOTOR

TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 0948211-0001		REV H	
ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	INWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0001	0001.000	EA		0948139-0001	PLATE, COMPONENT MOUNTING						
0002	0001.000	EA		0937033-0001	RAIL, LED, VACUUM COLUMN ASSY						
0003	0001.000	EA		0937034-0001	RAIL, LED SENSOR, VACUUM COLUMN ASSY						
0004	0001.000	EA		0948142-0001	PLATE, REAR, VAC COLUMN						
0005	0001.000	EA		0948143-0001	PLATE, FRONT, VAC COLUMN						
0006	0001.000	EA		0948144-0001	TRIM, VAC COLUMN						
0007	0001.000	EA		0948145-0001	FRAME, TCP						
0008	0001.000	EA		0948146-0001	FRAME, BOTTOM						
0009	00008.000	EA		0948147-0001	SPACER, REEL MOTOR						
0010	0001.000	EA		0216567-0001	BLOCK, TAPE GUIDE PLATE						
0011	00004.000	EA		0227124-0001	CLAMP, CAPSTAN MOTOR MTG.						
0012	0001.000	EA		0948254-0001	BRACKET, PHOTO TAB						
0013	0001.000	EA		0216296-0001	HUB, REEL MTG	61-00-00					
0014	0001.000	EA		0216510-0001	HUB, REEL MTG						
0015	0001.000	EA		0216304-0001	COVER, COMPRESSION- RUBBER RING						
0016	0001.000	EA		0240865-0001	RING COMPRESSION HUB						
0017	0001.000	EA		0240868-0001	HANDLE, HUB						
0018	0001.000	EA		0240866-0001	DRUM BOLT, HUB						
0019	0001.000	EA		0240869-0001	PLUG, LOCKING-HUB						
0020	0001.000	EA		0216484-0002	CAPSTAN, .332 ID						
DRAFTSMAN		DATE	CAD DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	MAINFRAME ASSY STEP 1, OR HUB			
APP'D ENG		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	7513			
								PART NUMBER LM 0948211-0001			
								REV H			

TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM 0948211-0001		REV H	
ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	INWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0021	0002.000	EA		0948256-0001	INSULATOR, HEAD/PLATE						
0022	0001.000	EA		0948216-0001	HEAD/PLATE ASSY (A1A1A5)						
0022A					A5						
0023	0001.000	EA		0948197-0001	1/R LED ASSY, VAC COLUMN (A1A1A2)						
0023A					A2						
0024	0001.000	EA		0948249-0001	1/R SENSOR ASSY, VAC COLUMN (A1A1A3)						
0024A					A3						
0025	0001.000	EA		0948150-0001	WIRING HARNESS ASSY, MAINFRAME						
0026	0001.000	EA		0948241-0001	CAPSTAN CABLE ASSY						
0027	0001.000	EA		0948257-0001	PHOTO SENSOR ASSY						
0027A					A1						
0028	0001.000	EA		0948230-0001	FILE PROTECT SWITCH ASSY						
0028A					A4						
0029	0001.000	EA		0772520-0002	TUBE FITTING, MINTR 1/8 ID	IOS -0F0-125					
0030	00003.000	IN		0772500-0001	TUBING 1/8 ID VINYL BLACK	CLP -3014-1					
0031	00003.000	EA		0539453-0001	TAPE GUIDE	ROT -3328					
0032	0001.000	EA		0539454-0001	TAPE GUIDE-TROUGH	ROT -4C3230					
0033	0001.000	EA		0216295-0001	SERVO MOTOR, DC-CAPSTAN						
0033A					B3						
0034	0002.000	EA		0948247-0001	MOTOR/TURNABLE, REEL DRIVE						
DRAFTSMAN		DATE	CAD DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	MAINFRAME ASSY STEP 1, OR HUB			
APP'D ENG		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER LM 0948211-0001			
								REV H			

TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 3 of		PART NUMBER LM 0948211-0001		REV H	
ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	INWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0034A					B1, B2						
0035	0001.000	EA		0232190-5000	KNOB BLK, SPECIAL 5/16-18 X 1 IN STUD	DAV -5676-5/16-18					
0038	00000.160	RL		0972361-0010	TAPE, FOAM, VINYL, 27 FEET	SEE TI- DRAWING					
0039	00000.040	RL		0972361-0002	TAPE, FOAM, VINYL, SELF ADH 3/8 WIDE	HRS -V544					
0040	00004.000	EA		0232654-0005	PIN ROLL 79-028-125-0750	TOS -790281250750					
0041	00002.000	EA		0418616-0194	ROLLPIN 1/16X.012X.500 CRES	QPL - M516562-194					
0042	00001.000	EA		0236413-5000	WASHER NYLON .312ID X .50000 X 1/16THK	SMI -2677					
0043	00002.000	EA		0996391-0001	WASHER #5/16 FLAT STEEL						
0044	00002.000	EA		0216303-0001	RING, COMPRESSION-RUBBER						
0045	0001.000	EA		0232635-0075	PIN DOWEL 1/8X2 ALLENCY STEEL	ACO -1/8X2					
0046	0001.000	FA		0234914-0000	RING GRIP 1/4 ID X .035 THK	MAL -5555-25					
0047	00000.300	FT		0410499-0010	INSULATION SLEEVING, TEFLON #14 NATURAL	QPL -81349					
0048	00002.000	EA		0411121-0010	SETSCREW 4-40 UNC-3A X .188 CUP POINT	QPL - M551021-10					
0049	00005.000	EA		0411121-0022	SETSCREW 6-32 UNC-3A X .188 CUP POINT	QPL - M551021-22					
0050	00001.000	EA		0235099-0006	SCREW 10-32X1/4HXSOC HDSET						
0051	00004.000	EA		0972986-0011	SCREW 10-32 .625 PAN HEAD CRES						
0052	00008.000	EA		0235083-0010	SCREW 8-32X1-1/2 SOC HD CAP SST						
0053	00008.000	EA		0418262-0028	SCREW 8-32 X .750 CAP, HEX SOCKET, CRES	QPL - M516995-28					
0054	00010.000	EA		0972990-0029	SCREW 6-32 X .375 FLT HEAD CRES						
0055	00006.000	EA		0235060-0008	SCREW 8-32X7/8 SOC HD CAP						
DRAFTSMAN		DATE	CAD DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	MAINFRAME ASSY STEP 1, OR HUB			
APP'D ENG		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER LM 0948211-0001			
								REV H			

TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 4 of		PART NUMBER LM 0948211-0001		REV H	
ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS	INWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0056	00004.000	EA		0972988-0028	SCREW 6-32 X .375 PAN HEAD CRES						
0057	00001.000	EA		0972988-0022	SCREW 4-40 X 1.25 PAN HEAD CRES						
0058	00004.000	EA		0972988-0019	SCREW 4-40 X .750 PAN HEAD CRES						
0059	00012.000	EA		0972988-0013	SCREW 4-40 X .250 PAN HEAD CRES						
0060	00008.000	EA		0411027-0807	WASHER .188 X .375 X .049 FLAT CRES	QPL - M515795-807					
0061	00007.000	EA		0416622-0013	WASHER #6 FLAT	QPL - M4960C6L					
0062	00017.000	EA		0418154-0054	WASHER #4 FLAT .115 X .209 X .03 SST						
0063	00004.000	EA		0418730-0103	WASHER, NO. 4 X .125, PLASTIC	QPL - M51515H04L					
0064	00016.000	EA		0411104-0137	WASHER, LOCK-SPRING, HELICAL, #8	QPL - M535338-137					
0065	00009.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - M535338-136					
0066	00017.000	EA		0411104-0135	WASHER, LOCK-SPRING, HELICAL, #4	QPL - M535338-135					
0067	00004.000	EA		0411100-0073	LOCKWASHER #10 INTERNAL TOOTH CRES						
0068	00003.000	EA		0232423-3000	MOUNT WIRING HARNESS-ADHESIVE BACKED	PND -A8M5-A					
0069	00003.000	EA		0418212-0010	STRAP, TIEDOWN, ADJUSTABLE, PLASTIC	QPL - M53367-1-9					
0070	00001.000	EA		0054967-0002	CLAMP LOOP .1 DIA.	BUR -HP-2H					
0071	00004.000	EA		0235833-0211	TERMINAL RECP PRE-INS BLUE TIN PLTD BRAS	AMP -42332-4 TAPE					
0072		AR	TU	0235182-0003	SEALANT LOCTITE GRADE E PURPLE	LOC -#0					
0073		AR	TU	0415804-0011	SURFACE PRIMER, COMPOUND GRADE Y YELLOW						
0074		AR	TU	0232334-6050	LUBRICANT SILICONE GRS LT GR 2 OZ TUBE	SEE TI- DRAWING					
0077	00001.000	EA		0418262-0020	SCREW 6-32 X .750 CAP, HEX SOCKET, CRES	QPL - M516995-20					
DRAFTSMAN		DATE	CAD DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	MAINFRAME ASSY STEP 1, OR HUB			
APP'D ENG		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER LM 0948211-0001			
								REV H			





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TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 5 of		PART NUMBER LM 0948211-0001		REV H		
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER						
0078	00002.000	EA		0916778-0001	979A TRANSPORT SIDE MOUNT BRKT							
0079	00006.000	EA		0972988-0062	SCREW 1/4-20 .625 PAN HEAD CRES							
0080	00004.000	EA		0972988-0066	SCREW 1/4-20 1.25 PAN HEAD CRES							
0081	00010.000	EA		0996391-0003	WASHER #1/4 FLAT STEEL							
0082	00012.000	EA		0411104-0139	WASHER, LOCK-SPRING, HELICAL, 1/4	QPL - MS35388-139						
0083	00004.000	EA		0232477-0000	NUT 1/4-20X7/16 X3/16THK							
0084	00001.000	EA		0196939-0001	WASHER-PRECISION .010							
0085	00010.000	EA		0196939-0002	WASHER-PRECISION .002							
0086	00005.000	EA		0196939-0003	WASHER-PRECISION .005							
0087	00001.000	EA		0196939-0004	WASHER-PRECISION .020							
0088	AR	EA		0196939-0005	WASHER-PRECISION .030							
0089	00004.000	EA		0196939-0006	WASHER-PRECISION .003							
0090	00003.000	EA		0196939-0007	WASHER-PRECISION .004							
0091	00001.000	EA		0948129-0001	BRACKET,SUBASSEMBLY							
0092	00002.000	EA		0416129-0303	SCREW CAP 1/4-20 HEX BOLT							
0095	00002.000	EA		0411027-0806	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806						
0096	00001.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES							
0097	00005.000	EA		0411101-0058	LOCKWASHER #6 EXTERNAL TOOTH CRES	QPL - MS35335-58						
0098	00003.000	EA		0411115-0064	NUT,PLAIN 6-32 UNC-2B HEX CRES	QPL - MS35649-264						
0100	00001.000	EA		0948130-0001	BRACKET,FILE PROTECT SWITCH							
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE					
APP'D MGR		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO					
							PART NUMBER		REV			
							LM 0948211-0001		H			

TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 6 of		PART NUMBER LM 0948211-0001		REV H		
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER						
0101	00001.000	EA		0948242-0001	DECAL,CAPSTAN							
DRAFTSMAN		DATE	CED DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE					
APP'D MGR		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO					
							PART NUMBER		REV			
							LM 0948211-0001		H			



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TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 0948211-0002		REV H	
ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0001	00001.000	EA		0948139-0001	PLATE, COMPONENT MOUNTING						
0002	00001.000	EA		0937033-0001	RAIL, LED, VACUUM COLUMN ASSY						
0003	00001.000	EA		0937034-0001	RAIL, LED SENSOR, VACUUM COLUMN ASSY						
0004	00001.000	EA		0948142-0001	PLATE, REAR, VAC COLUMN						
0005	00001.000	EA		0948143-0001	PLATE, FRONT, VAC COLUMN						
0006	00001.000	EA		0948144-0001	TRIM, VAC COLUMN						
0007	00001.000	EA		0948145-0001	FRAME, TOP						
0008	00001.000	EA		0948146-0001	FRAME, BOTTOM						
0009	00008.000	EA		0948147-0001	SPACER, REEL MOTOR						
0010	00001.000	EA		0216567-0001	BLOCK, TAPE GUIDE PLATE						
0011	00004.000	EA		0227124-0001	CLAMP, CAPSTAN MOTOR MTG.						
0012	00001.000	EA		0948254-0001	BRACKET, PHOTO TAB						
0013	00002.000	EA		0216296-0001	HUB, PEEL MTG	01+00+00					
0015	00002.000	EA		0216304-0001	COVER, COMPRESSION- RUBBER RING						
0020	00001.000	EA		0216484-0002	CAPSTAN, .312 ID						
0021	00002.000	EA		0948256-0001	INSULATOR, HEAD/PLATE						
0022	00001.000	EA		0948216-0001	HEAD/PLATE ASSY (A1A1A5)						
0022A				A5							
0023	00001.000	EA		0948197-0001	I/R LED ASSY, VAC COLUMN (A1A1A2)						
0023A				A2							
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	MAINFRAME ASSY STEP 1			
APPROVED	DATE	APPROVED	PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER LM 0948211-0002		REV H	

TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM 0948211-0002		REV H	
ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0024	00001.000	EA		0948249-0001	I/R SENSOR ASSY, VAC COLUMN (A1A1A3)						
0024A				A3							
0025	00001.000	EA		0948150-0001	WIRING HARNESS ASSY, MAINFRAME						
0026	00001.000	EA		0948241-0001	CAPSTAN CABLE ASSY						
0027	00001.000	EA		0948257-0001	PHOTO SENSOR ASSY						
0027A				A1							
0028	00001.000	EA		0948230-0001	FILE PROTECT SWITCH ASSY						
0028A				A4							
0029	00001.000	EA		0772528-0002	TUBE FITTING, MINTRA 1/8 ID					IDS -8FO-125	
0030	00003.000	EM		0772580-0001	TUBING 1/8 ID VINYL BLACK					CLP -3814-1	
0031	00003.000	EA		0539453-0001	TAPE GUIDE					ROT -3328	
0032	00001.000	EA		0539454-0001	TAPE GUIDE-TROUGH					ROT -RC3230	
0033	00001.000	EA		0216295-0001	SERVO MOTOR, DC-CAPSTAN						
0033A				B3							
0034	00002.000	EA		0948247-0001	MOTOR/TURNABLE, REEL DRIVE						
0034A				B1, B2							
0035	00002.000	EA		0232198-5000	KNOB BLK, SPECIAL 5/16-18 X 1 IN STUD					DAV -5676-5/16-18X	
0038	00000.160	RL		0972361-0010	TAPE, FOAM, VINYL, 27 FEET					SEE TI- DRAWING	
0039	00000.040	RL		0972361-0002	TAPE, FOAM, VINYL, SELF ADM 3/8 WIDE					MRS -V544	
0040	00004.000	EA		0232654-0005	PIN ROLL 79-026-125-0750					YDS -790261250750	
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	MAINFRAME ASSY STEP 1			
APPROVED	DATE	APPROVED	PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER LM 0948211-0002		REV H	

TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 3 of		PART NUMBER LM 0948211-0002		REV H	
ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF MEAS.	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0041	00002.000	EA		0418416-0194	ROLLPIN 1/16X.012X.900 CRES	QPL - MS16562-194					
0042	00002.000	EA		0236413-5000	WASHER NYLON .312ID X .50000 X 1/16THK	SHI -2677					
0043	00004.000	EA		0996391-0001	WASHER #5/16 FLAT STEEL						
0044	00002.000	EA		0216303-0001	RING, COMPRESSION-RUBBER						
0047	00000.300	FT		0410499-0010	INSULATION SLEEVING, TEFLON #14 NATURAL	QPL -81349					
0048	00002.000	EA		0411121-0010	SETSCREW 4-40 UNC-3A X .100 CUP POINT	QPL - MS51021-10					
0049	00005.000	EA		0411121-0022	SETSCREW 6-32 UNC-3A X .100 CUP POINT	QPL - MS51021-22					
0051	00004.000	EA		0972986-0011	SCREW 10-32 .625 PAN HEAD CRES						
0052	00008.000	EA		0235083-0010	SCREW 8-32X1-1/2 SOC HD CAP SST						
0053	00008.000	EA		0418262-0028	SCREW 8-32 X .750 CAP, HEX SOCKET, CRES	QPL - MS16995-28					
0054	00010.000	EA		0972990-0025	SCREW 6-32 X .375 FLT HEAD CRES						
0055	00006.000	EA		0235060-0006	SCREW 6-32X7/8 SOC. HD. CAP						
0056	00004.000	EA		0972988-0028	SCREW 6-32 X .375 PAN HEAD CRES						
0057	00001.000	EA		0972988-0022	SCREW 4-40 X 1.25 PAN HEAD CRES						
0058	00004.000	EA		0972988-0019	SCREW 4-40 X .750 PAN HEAD CRES						
0059	00012.000	EA		0972988-0013	SCREW 4-40 X .250 PAN HEAD CRES						
0060	00008.000	EA		0411027-0807	WASHER .100 X .375 X .049 FLAT CRES	QPL - MS15795-807					
0061	00007.000	EA		0416422-0013	WASHER #6 FLAT	QPL - AN9606L					
0062	00017.000	EA		0418154-0054	WASHER #4 FLAT .115 X .209 X .03 SST						
0063	00004.000	EA		0418730-0103	WASHER, NO. 4 X .125, PLASTIC	QPL - MS1515H04L					
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	MAINFRAME ASSY STEP 1			
APPROVED	DATE	APPROVED	PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER LM 0948211-0002		REV H	



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TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 4 of		PART NUMBER LM 0948211-0002		REV H	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0064	00016.000	EA		0411104-0137	WASHER, LOCK-SPRING, HELICAL, #8	QPL - MS35338-137					
0065	00013.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35338-136					
0066	00017.000	EA		0411104-0135	WASHER, LOCK-SPRING, HELICAL, #4	QPL - MS35338-135					
0067	00004.000	EA		0411100-0073	LOCKWASHER #10 INTERNAL TOOTH CRES						
0068	00003.000	EA		0232423-3000	MOUNT WIRING HARNESS-ADHESIVE BACKED	PND -ABMS-A					
0069	00003.000	EA		0418212-0010	STRAP, TIEDOWN, ADJUSTABLE, PLASTIC	QPL - MS3367-1-9					
0070	00004.000	EA		0054967-0002	CLAMP LOOP .1 DIA.	BUR -HP-2M					
0071	00004.000	EA		0235833-0211	TERMINAL RECP PRE-INS BLUE TIN PLTD BRAS	AMP -42332-4 TAPE					
0077	00001.000	EA		0418262-0020	SCREW 6-32 X .750 CAP, HEX SOCKET, CRES	QPL - MS16995-20					
0078	00002.000	EA		0916778-0001	979A TRANSPORT SIDE MOUNT BRKT						
0079	00006.000	EA		0972988-0062	SCREW 1/4-20 .625 PAN HEAD CRES						
0080	00004.000	EA		0972988-0066	SCREW 1/4-20 1.25 PAN HEAD CRES						
0081	00010.000	EA		0996391-0003	WASHER #1/4 FLAT STEEL						
0082	00012.000	EA		0411104-0139	WASHER, LOCK-SPRING, HELICAL, 1/4	QPL - MS35388-139					
0083	00004.000	EA		0232477-0000	NUT 1/4-20X7/16 X3/16THK						
0084	00001.000	EA		0196939-0001	WASHER-PRECISION .010						
0085	00010.000	EA		0196939-0002	WASHER-PRECISION .002						
0086	00005.000	EA		0196939-0003	WASHER-PRECISION .005						
0087	00001.000	EA		0196939-0004	WASHER-PRECISION .020						
0088	AP	EA		0196939-0005	WASHER-PRECISION .030						
DRAFTSMAN		DATE	CVD DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	MAINFRAME ASSY STEP 1			
APPROVED		DATE	APPRO PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER LM 0948211-0002			
								REV H			

TEXAS INSTRUMENTS INCORPORATED		DATE 11/20/79		LIST OF MATERIAL		PAGE 5 of		PART NUMBER LM 0948211-0002		REV H	
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0089	00004.000	EA		0196939-0006	WASHER-PRECISION .003						
0090	00003.000	EA		0196939-0007	WASHER-PRECISION .004						
0091	00001.000	EA		0948129-0001	BRACKET, SUBASSEMBLY						
0092	00002.000	EA		0416129-0303	SCREW CAP 1/4-20 HEX BOLT						
0095	00002.000	EA		0411027-0806	WASHER .156 X .375 X .049 FLAT CRES	QPL - MS15795-806					
0096	00001.000	EA		0972988-0030	SCREW 6-32 X .500 PAN HEAD CRES						
0097	00005.000	EA		0411101-0058	LOCKWASHER #6 EXTERNAL TOOTH CRES	QPL - MS35335-58					
0098	00003.000	EA		0411115-0044	NUT, PLAIN 6-32 UNC-2B HEX CRES	QPL - MS35649-264					
0100	00001.000	EA		0948130-0001	BRACKET, FILE PROTECT SWITCH						
0101	00001.000	EA		0948242-0001	DECAL, CAPSTAN						
DRAFTSMAN		DATE	CVD DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	MAINFRAME ASSY STEP 1			
APPROVED		DATE	APPRO PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER LM 0948211-0002			
								REV H			



APPLICATION		REVISIONS			
NEXT ASSY	USED ON	REV	DESCRIPTION	DATE	APPROVED
948211	7513	A	CN420894 (D) C. Simmons	8-23-77	J. R. ...
		B	CN425150 (C) C.G. ...	10-24-77	J. R. ...
		C	CN429410 (D) D.D. Darby	3-8-78	D. R. ...

ASSEMBLY INSTRUCTION  
FOR  
948211-0001  
948211-0002

REV																					
SHEET																					
REV STATUS OF SHEETS	REV	C	B	A										C	B						
	SHEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

UNLESS OTHERWISE SPECIFIED • DIMENSIONS ARE IN INCHES • TOLERANCES: ANGLES ±1° 3 PLACE DECIMALS ± .010 2 PLACE DECIMALS ± .02 • PARENTHETICAL INFO FOR REF ONLY	DWG	DATE	<b>TEXAS INSTRUMENTS</b> INCORPORATED Dallas, Texas	
	DESIGNED BY	DATE		
	ENGR	DATE	ASSEMBLY INSTRUCTION FOR	
	APPROVED BY	DATE	948211-0001, 948211-0002	
CONTR	DATE	SIZE	FSCM NO	DRAWING NO
		A	96214	SI 948211
		SCALE	NONE	SHEET 1 OF 20

TI-9923D 40

1.0 PURPOSE  
This assembly instruction establishes procedures for the erection of Step 1 mainframe assemblies. Strict adherence to the cautions in this instruction is necessary to uniform operation at next assembly.

1.1 Scope  
This instruction completes the Step 1 Assembly through operational verification of tape path adjustment and motion control sensors.

1.2 Equipment required:  
 Assembly Stand  
 Electro-Logic Test Set  
 Dial Caliper  
 Tri-Square, 12 inch  
 Tool, Turnaround Roll: TI #D248  
 Tool, Capstan Idler TI #B255  
 Tool, Hub Positioning TI #B249  
 Feeler Gauge, .001 - .030  
 "C" Clamp, 5" Throat  
 Dial Depth Gauge, 1" to 2"  
 Tool, Capstan Idler Adjustment TI #B342

1.3 Reference Documentation

Mainframe, Step 1	948211
File Protect Assembly	948230
Head/Plate Assembly	948216
Photo Sensor Assembly	948257
V/C IR Sensor Assembly	948249
V/C IR LED Assembly	948197
Mainframe Cable Assembly	948150

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET
	B	2

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2.0 TABLE OF CONTENTS

Para.	Title
3.1	Lamp Rail Assembly
3.2	Sensor Rail Assembly
3.3	Component Plate Assembly
3.4	Set/Adjust Mechanical Assembly
3.5	Static Tape Path Adjustment
3.6	Active Tape Path Adjustment

2.1 List of Figures

Figure	Title
1	Turnaround Roller Positioning
2	Capstan Positioning
3	Test for Rail Tilt
3A	Test for Rail Height
4	Reel Hub Positioning
5	Set Idler Pulley
6	Test for Back Surface Clearance
7	Test for Back Surface Clearance

3.0 ASSEMBLY

This assembly can be best accomplished by pre-preparation of sub-groups to avoid tool interference at later stages. Sub-groups may be assembled and stocked as individual subassemblies. Rail subassemblies must be carefully wrapped and protected from damage or distortion if set aside for later use.

3.1 Lamp Rail Assembly

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 3

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3.1.1 Inspect rail, Item 2 for broken edges and/or scratches on top, bottom, or tape face surfaces. If problems are apparent reject rail and return for rework. Deep scratches across the top surface are not repairable.

CAUTION: The following assembly operations and handling must be carefully performed to avoid breaking edges and/or denting surfaces.

3.1.2 Install roll pins, Item 40, in outside surface with slot in pin toward PWB side of rail. Pins should extend 3/8" to 7/16" from side.

~~3.1.3 Install bearing tape Item 36, using adhesive directions. When adhesive has set, trim around edges with a sharp blade, cutting toward metal. Use caution to avoid nicking sharp edge of metal rail. After edge trimming, run a fine flat file along top, bottom and ends of tape to ensure an even edge. File toward the metal rail, gently. Cut through tape at lamp holes and finish holes by carefully rotating a small rat tail file counterclockwise into the hole. When completed, each hole must be defined in the tape the same as it is in the metal rail.~~

3.1.4 Install the LED PWB assembly Item 23, using steel screws, flat and split washers, Items 59, 62 and 66. Ensure that the connection tabs are toward the bottom side of the rail.

NOTE: THIS BOARD WILL ALMOST FIT WHEN INVERTED.

3.1.5 Install turnaround roller, Item 31, with set screw Item 49, just touching flat of roller shaft. Set turnaround roller position using special tool (TI DWG # D248) per Figure 1.

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV A	SHEET 4

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3.1.5.1 Depress roller to position below intended final location.

3.1.5.2 Insert tool tongue under top roller flange and gently "pry" upward until tool rests on rail surface.

3.1.5.3 Tighten set screw (DO NOT OVER-TIGHTEN)

3.1.6 Install vacuum fitting, Item 29. Rail subassembly is now complete.

3.2 Sensor Rail Assembly

3.2.1 Same as 3.1.1

3.2.2 Same as 3.1.2

3.2.3. Install roll pin, Item 41, in top of surface. Pins should extend 3/16" above surface.

3.2.4 Same as 3.1.3

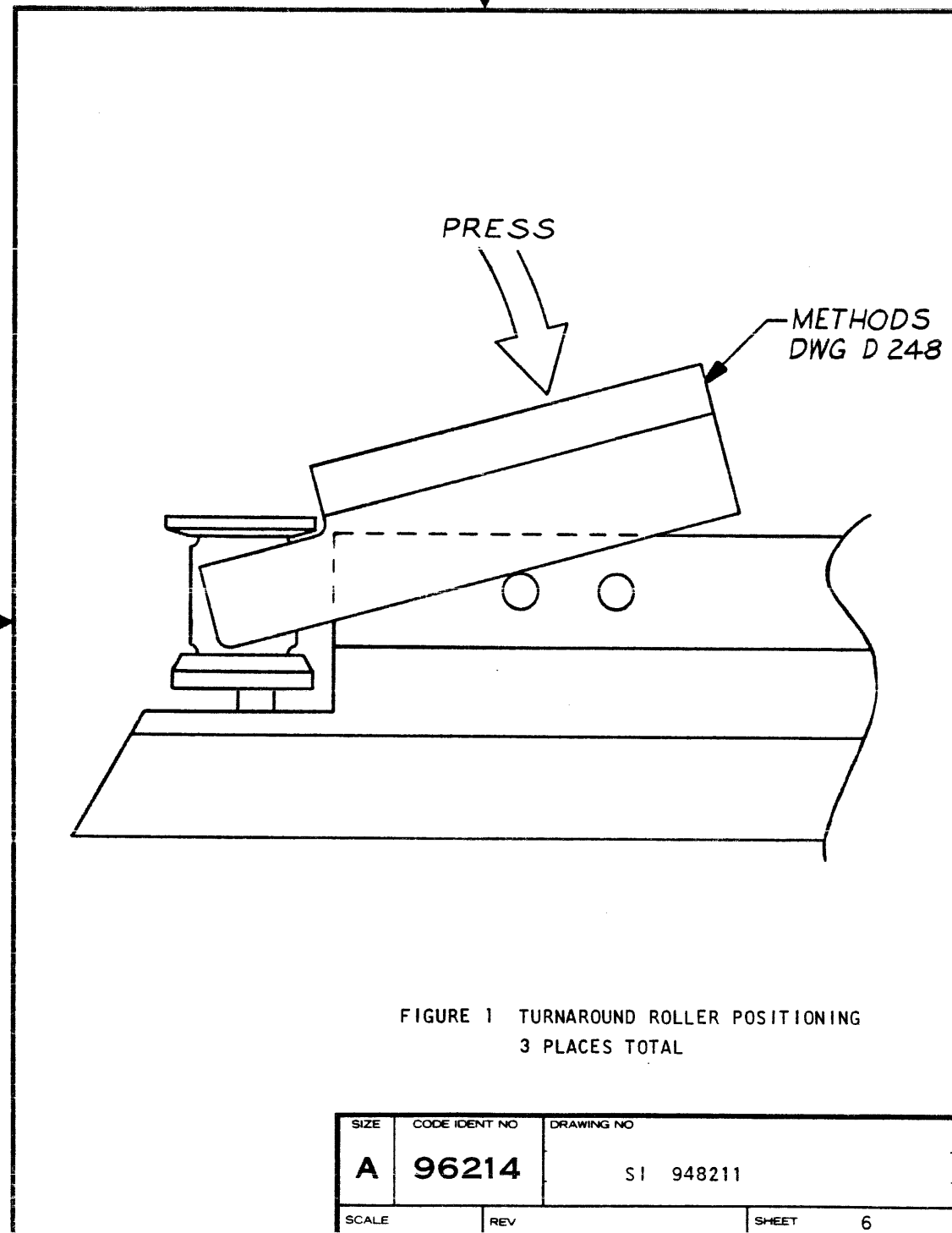
3.2.5 Install the sensor PWB assembly Item 24, as in 3.1.4

3.2.6 Install both turnaround rollers, Item 49 as in 3.1.5 and Figure 1.  
NOTE: The tool must be reversed at opposite ends of this rail.

3.3 Component Mounting Plate Assembly

Mount plate, Item 1 on assembly stand and lock in place for secure reference, painted side up. Check for scratches, dents or foreign material in the area to be covered by vacuum column rail. Check for any irregularity in the cut-out at the CAPSTAN motor location on the rear, unpainted side.

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 5





3.3 Check for any irregularity about the reel motor spacer locations, (CON'T.) eight places. It is important that these be checked now. Any scratches, dents or irregularities causing misalignment of parts at a later stage could cause the assembly to revert to this stage for clean up.

3.3.1 Rotate tool to set painted side of panel down. Mount adhesive tie plates, Item 68, per view AA of assembly drawing. Note correct slot reference for proper cable direction.

3.3.2 Rotate panel to place painted side up. Check plate area to be covered by rails for flaws and remove with fine emory cloth. Set lamp and sensor rails loosely in place with top and bottom screws, Items 53 and 64, only. Observe that neither rail overlaps painted panel area. If panel masking has allowed a paint line to violate the rail area or head plate MTG area, paint must be removed from this area.

3.3.3 Cut eight pieces of 1/4" x 1" sponge tape, item 38, 3 1/2" long. Ends should be reasonably square but need not be perfect. Either scalpel or scissor cut is acceptable. Tape will appear too long but should be carefully forced against the rails at either end and compressed into the three inch gap. Resulting pressure will increase the apparent thickness of the tape. Remove tape backing and place outer edge of tape at paint lines on panel and about 1/16" above and below center holes (four places) per Section F-F of Assembly Drawing. Press to adhere tape to panel and repeat with a second layer at the same locations.

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 7

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3.3.4 While applying upward force to the LED rail. Tighten firmly the "bottom" screw of the rail. Using a distance gauge, (such as a trisquare), set the distance between the panel edge and the outside of the rail at the bottom screw location. Transfer this dimension to the similar point at the top mounting screw and tighten all four securely. The LED rail should now be parallel to the left panel edge.

3.3.5 Remove the sensor rail in order to install the vacuum column rear plate, Item 4, Notch the foam tape next to the MTG plate so that the rail will not sit on it, by buttoning into the lamp rail slot. Observe that one of the four corner cutouts has a different radius. Place this corner toward the CAPSTAN. Align the edge of the corner cutout even with the angled end of the rail. Slip the sensor rail over the opposite edge of the rear vacuum column plate and install screws at top and bottom locations. Tighten firmly at bottom screw only. Push sensor rail tight against V.C. rear plate and tighten the upper and lower screws. Install two center screws and tighten all four securely.

3.3.5.1 Determine that pressure exists against the rear vacuum column plate edges along the entire length and that the cavity behind the rear plate is entirely blocked by the doubled rubber sponge. It may be necessary to add a third layer of tape (1/8" thick) to insure both conditions are met.

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 8

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3.3.6 Rotate the panel painted side down and install CAPSTAN motor, Item 33 and Items 11, 51 and 67. Starting location places tachometer brush holders at 45 degrees across the corner with the odd motor brush holder toward the center of the panel. Install CAPSTAN, Item 20 and 48, with outer rim .050 inches beyond the top surface of lamp rail using the notch in the back end of the turnaround roller adjusting tool. (TI diag. # D 248 ).

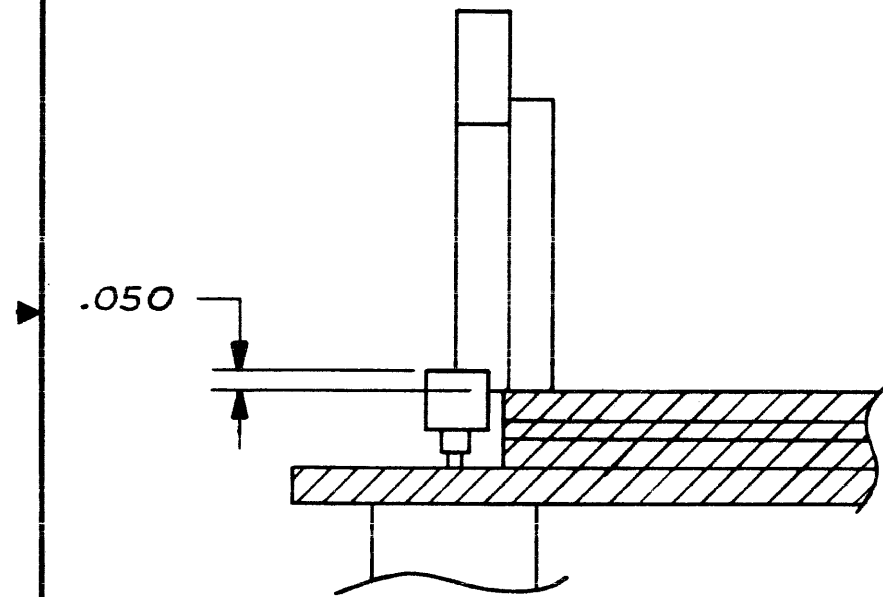


FIGURE 2  
CAPSTAN POSITIONING

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 9

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3.3.7 Vacuum Column Position

3.3.7.1 Position vacuum column rear plate between turnaround roller flanges and CAPSTAN drive surface to average the gaps by slipping it against the resistance of the foam tape behind. Locate and install the set screw, Item 77, in the lamp rail just above the CAPSTAN.

NOTE: Do not overtighten this screw as resulting side load will cause tilting of the rail. No more than 1/4 turn is allowable after plate movement has been stopped by engagement.

3.3.7.2 Check clearance to plate at four corners by holding a .040 diameter rod or No. 60 drill shaft against roller flanges and CAPSTAN drive surface perpendicular to the plate and rotating roller or CAPSTAN through the arc of interference. No contact with the plate is allowable. Should contact occur, release set screw and relocate plate.

3.3.8 Install lugs, Item 71, on reel motor leads, Item 34, both motors.

3.3.9 Set eight reel motor spacers Item 9 in place.

3.3.10 Install reel motors Item 34 with wire lead outlets directed toward the center of the panel. Tighten screws evenly and securely.

3.4 Set/Adjust Mechanical Assembly

3.4.1 NOTE: The operations of this and the following paragraph will determine the ultimate personality of this transport. Corrections to errors made in these paragraphs will be extremely difficult or impossible to accomplish in the field. Therefore, close adherence is necessary to Paragraphs 3.4 and 3.5.

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 10

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3.4.2 Reel Hub Position (2 places)

3.4.2.1 Set the appropriate reel hub, Item 13 or 14 and 55, 65, and 61, in position on its turntable and tighten firmly.

3.4.2.2 Using special tool per Figure 3 check hub runout.

3.4.2.2.1 Set tool over reel hub and across rails and lightly clamp in place using special "C" clamp.

3.4.2.2.2 Attempt to place .001" feeler gauge blade between tool and V.C. edges as shown at four locations. If feeler gauge will fit at any location rail tilt is excessive. Remove that rail and inspect for burns, deep scratches, etc. on both the rail bottom surface and the area of the mounting plate where the rail was placed. Remove source of problem or replace rail as appropriate and repeat step 3.1 or 3.2 as appropriate.

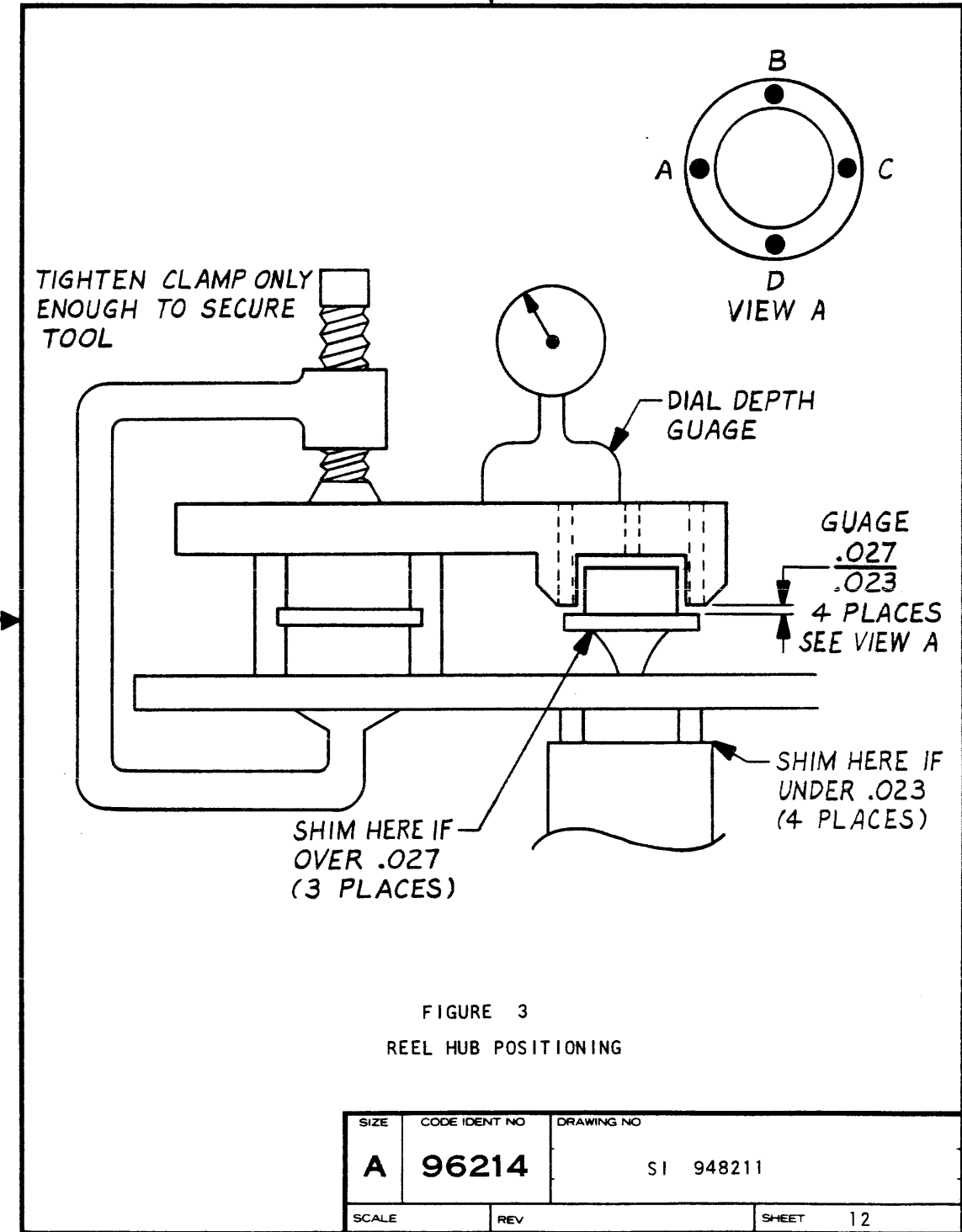
3.4.2.2.3 Place dial depth gauge in Hub measurement location "A" and zero dial indication.

3.4.2.2.4 Rotate hub 360° while observing dial indication. Maximum reading minus minimum reading should not exceed .002".

3.4.2.2.5 If runout is excessive remove hub and inspect for burns, etc. Repair and/or replace hub or motor as appropriate.

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 11

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3.4.2.3 Using special tool per Figure 3, check shaft perpendicularity and alignment.

3.4.2.3.1 Place the special tool on a flat surface per Figure 4. Insert dial depth gauge into one of the measurement holes and zero the dial indication.

FIGURE 4  
DIAL DEPTH GAUGE ZEROING

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 13

3.4.2.3.2 Set the tool over reel hub and across rails and lightly clamp in place.

3.4.2.3.3 Measure incremental depth to measurement location A and C (Record).

3.4.2.3.4 Move tool to make measurements at locations B and D using center hole in tool (Record).

3.4.2.3.5 If all four measurements are between 0.023 and 0.027 proceed to 3.4.2.4.

3.4.2.3.6 If all four measurements are less than 0.025 calculate respective shim thickness to be placed between the motor and associated spaces by subtracting each reading from 0.025 (Record).

3.4.2.3.7 If any of the four measurements are over 0.025 calculate respective shim thickness to be placed between the motor and associated spacers by subtracting the three smallest readings from the largest reading. Install shims to make smaller readings equal to the largest. (Record) then calculate thickness of three equal shims to be placed between reel hub and motor hub (at screws with tabs toward the center) by subtracting 0.025 from the largest reading. (record)

3.4.2.3.8 Install all shims then repeat steps 2,3, and 4 (Record) verify that all readings range from .023 to .027. If not repeat steps 6 and/or 7.

3.4.2.4 Repeat 3.4.2.1 thru 3.4.2.3 for the other hub.

3.4.3 Complete Rough Adjustment.

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 14



- 3.4.3.0.1 Install the CAPSTAN guide roller, Item 32 and 49 and block, Item 10, 77, and 65. Set roller shaft loosely with setscrew on flat of shaft. Do not tighten setscrew.
- 3.4.3.1 Position CAPSTAN idler block and roller with special tool per Figure 5.
- With block mounting screw just snug, rotate the assembly to position the roller face relative to the Capstan and Tape Guide using Tool B342.
  - Depress the roller below what will be its final location. Then, insert Tool B255 and gently lift the roller by prying with the tool to position the height of the roller. Secure the roller position by tightening the set screw making sure it engages the flat side of the roller shaft. Check that the Tool exerts no force on the roller when the Tool is against both vacuum column rails.
- 3.4.3.1.1 Tie mainframe cable, Item 25 and route front side breakouts through holes. Also, install CAPSTAN MTR lead 26 and tie down reel MTR leads to harness mounts.
- NOTE: Correct placement of cable results when right hand end of shrink tube is located at lower right hand pad. Note that the logic module pigtail having the 15-pin connector is not clamped at the upper pad.
- 3.4.3.1.2 Install file protect switch assembly. Item 28, location on assembly.
- 3.4.3.1.3 Connect mainframe cable to file protect assembly. (Per 948230)
- 3.4.3.2 Install head/plate assembly and tape cleaner hose. Mount photo sensor assembly and dress cable. Position plane of photo sensor assembly face approximately 0.2" away from tape path and parallel to tape path. Secure head cables to prevent damage during rotation of the mainframe.

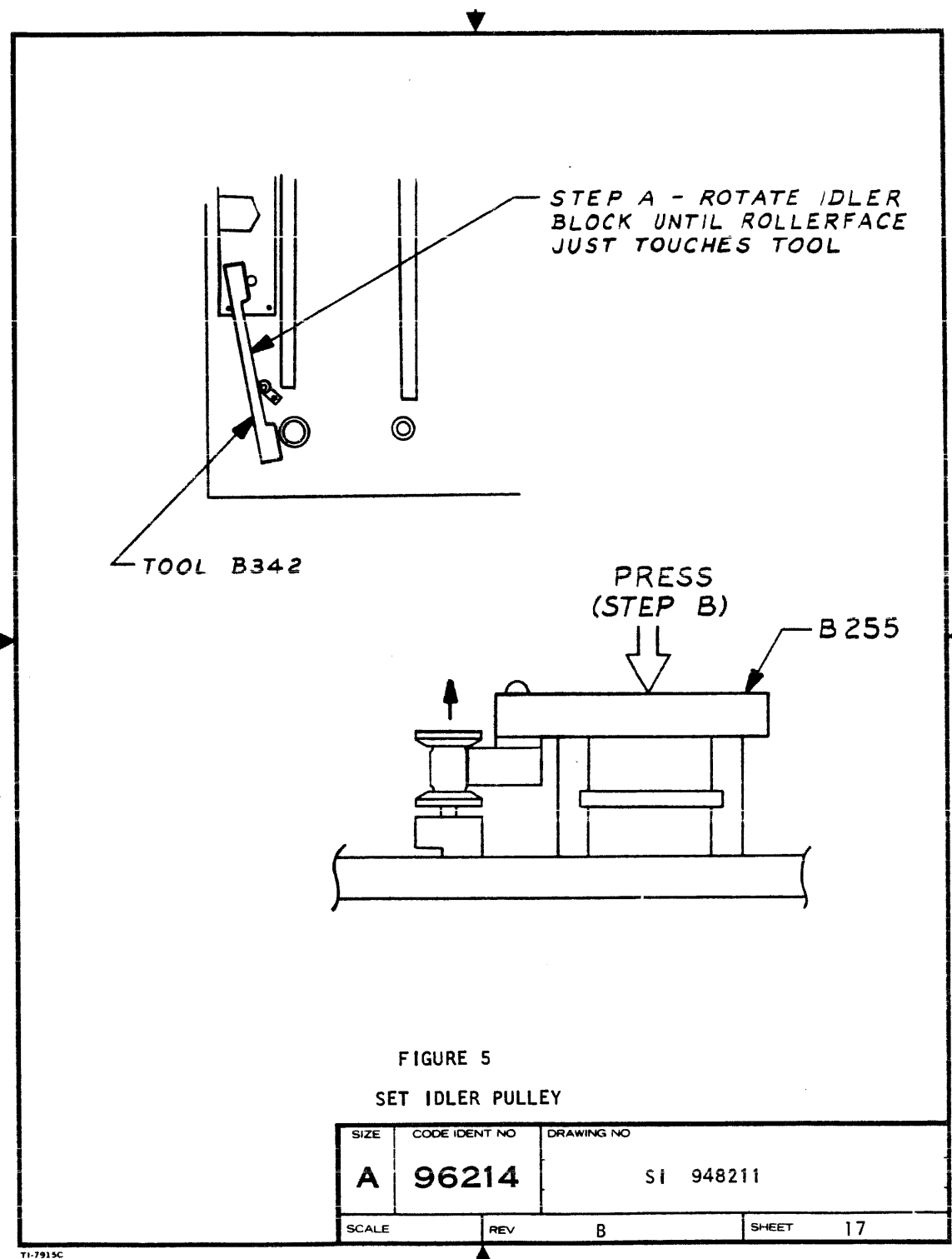
SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	C
		SHEET 15

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- 3.4.3.2.1 Rotate the panel to painted side up. Connect phototab sensor assembly, Item 24, to mainframe cable. Loosely attach to the head plate area using Items 12, 57, 62 and 66. Connect the column sensor and source PWB assemblies to the mainframe cable. Connect file protect assy. to mainframe cable.
- 3.4.3.3 Mount outer vacuum column plate over locating pins and check for adequate clearance at CAPSTAN and turnaround rollers using a .040 diameter rod or No. 60 drill shaft as in 3.4.1.6. Minor discrepancies may be cleaned up with a fine round file or sand paper in the clearance cut out of the plastic plate.
- 3.4.3.4. Install vacuum column front cover.
- 3.5.3.5 Install 6 inch reel of scratch tape on supply hub. Install empty take-up reel and thread tape for loading.
- 3.6 Electrical operation of Mainframe Step 1 Assembly.
- 3.6.1 Connect ground, control, servo amp cables, and vacuum hose from test set. (TI PN 936994)
- 3.6.1.1 Set power switch "ON". Manually move tape until BOT marker is near photo-tab sensor. Adjust position of photo-tab sensor assembly to turn LED off when BOT marker is not under sensor. It may be necessary to rotate the assembly relative to the tape to obtain an optimum adjustment.
- 3.6.1.2 Check status of column indicators on test set. All should be "ON". If not, see 3.6.2.1.
- 3.6.1.3 Press the "LOAD" switch. Mainframe should load tape in normal manner, seek BOT and signal "READY".

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A	96214	SI 948211
SCALE	REV	
		SHEET 16

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3.6.2 Troubleshooting

NOTE: This paragraph may be ignored if the conditions of 3.6.1.3 are correctly met. Should the tape fail to load on first attempt, make the following tests as required.

3.6.2.1 If tape did not load remove tape from load loop and remove vacuum column cover and front plate. Set test set power switch ON and observe the indicators on the front of the test set panel representing vacuum column sensor location S1 S7. Run a finger down the sensor rail and observe that the indicators on the test set panel change state as each aperture is covered. Failure to change state can be due to wiring, to defective sensor or to defective infra-red source. Using a penlight or flashlight, direct light into the aperture related to the failure and switch light with the finger. If an indication now exists the problem is the LED source. If the circuit continues in failure the problem is a sensor or a cable connection. Correct as necessary.

3.6.2.2. If tape did not stop on "BOT" use a small inspection mirror to reflect light back into the "end of tape" and "beginning of tape" sensors and observe the change of state of the panel lamps on the test set. Should either panel lamp fail to change states, the problem is a defective or misadjusted detector or defective cabling. Repair or adjust as necessary and repeat 3.6.1.1.

3.6.2.3 Motor wiring errors give the following failures:  
 SUPPLY MOTOR wrong - tape will not feed into column.  
 TAKE UP MOTOR wrong - bottom sensor blinks in forward mode unit dumps VAC.in reverse mode.

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 18



3.6.2 (CON'T.) CAPSTAN MOTOR wrong - tape slips on CAPSTAN and supply dumps tape.  
TACH wired wrong - CAPSTAN will run away.

3.7 Active Tape Path Adjustment

3.7.1 With tape loaded and stationary, listen carefully for flutter of tape against column walls. This would normally be caused by incorrect turnaround roller positioning or by tilted or defective rails. Testing with a finger inserted into the column at each roller position to force the tape toward front or back should modify the sound produced and identify the bad location. Take note, but do not correct at this time.

3.7.2 Select and run tape forward for at least 2 minutes while making the following observation:

- (a) Reels are seated correctly on hubs and are free of wobble or distortion.
- (b) Tape has not run to either edge of CAPSTAN.
- (c) Tape is not wrinkling or attempting to climb out of turnaround rollers or CAPSTAN idler.

3.7.2.1 Run tape to EOT and check levels, same as 3.6.1.1.

3.7.3 Stop tape forward motion and set for forward/reverse operation of such duration as to cause at least one full revolution of each reel.

3.7.3.1 Observe tape position on CAPSTAN. If movement front to back is less than .005 inches no adjustment is necessary. Proceed to 3.8. If movement is not within .005 tolerance, recheck guides, rails and reels to locate misalignment.

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A	96214	SI 948211
SCALE	REV	SHEET 19

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3.8 Unload the small reel and load a 10 1/2 inch reel of tape. Run the tape forward for about 3 minutes. Observe the condition of the tape pack on the take-up reel. If all adjustments have been done properly, the pack should be smooth and should not touch either flange of the reel. If the tape packs on either reel flange check step 3.4.2.

3.8.1 If tape packs too near either side of reel now, measure the offset and shim equally to correct.

3.8.2 Move tape in the reverse direction and observe the tape as it packs on the supply reel. If the pack tends to either reel flange, check step 3.4.2.

3.8.3 Same as 3.8.1.

3.9 With test set controls adjusted to shuttle tape forward/reverse for periods of approximately 20 seconds in each direction, recheck the following points.

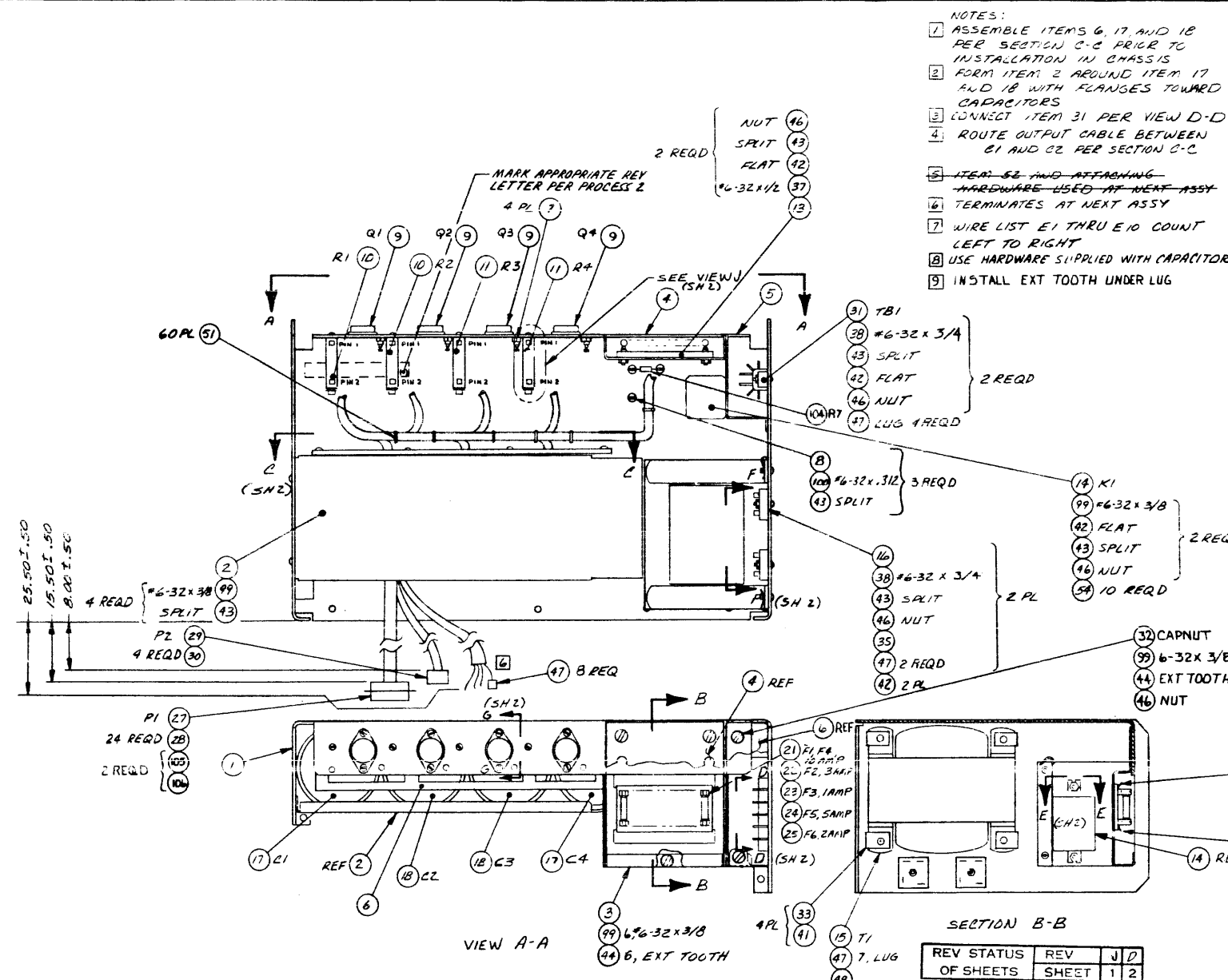
3.9.1 Tape is running against the "TOP" of each Head/Plate guide but is not curling or wrinkling.

3.9.2 Tape is not curling or wrinkling at CAPSTAN guide roller or at three turnaround rollers.

3.9.3 Tape is not rubbing either "FRONT" or "BACK" surfaces of vacuum column cavity, four places.

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948211
SCALE	REV	SHEET 20

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- NOTES:
- ASSEMBLE ITEMS 6, 17 AND 18 PER SECTION C-C PRIOR TO INSTALLATION IN CHASSIS
  - FORM ITEM 2 AROUND ITEM 17 AND 18 WITH FLANGES TOWARD CAPACITORS
  - CONNECT ITEM 31 PER VIEW D-D
  - ROUTE OUTPUT CABLE BETWEEN C1 AND C2 PER SECTION C-C
  - ITEMS 52 AND ATTACHING HARDWARE USED AT NEXT ASSY
  - TERMINATES AT NEXT ASSY
  - WIRE LIST E1 THRU E10 COUNT LEFT TO RIGHT
  - USE HARDWARE SUPPLIED WITH CAPACITOR
  - INSTALL EXT TOOTH UNDER LUG

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROV.
	A	CN4893 (C) D Conhill (1) REVISED PER EXTENSIVE ENGR CHANGES	12/77	J. R. ...
C-6	B	CN4786B (C) D Conhill (1) ADDED ON SH. 2, VIEW D-D SCREW, ITEM 99, 2 PLACES (2) ON SHEET 2, ADDED VIEW L-L (3) QTY OF ITEM 44 WAS 11, QTY OF ITEM 46 WAS 13, QTY OF ITEM 99 WAS 17	12/77	J. R. ...
	C	CN41943B (1) D Conhill (1) REVISED PER EXTENSIVE ENGR CHANGES	6-1-77	J. R. ...
	D	CN420212 (C) L. Toth (1) ADDED REV LEVEL BLOCK (2) SH 2 DELETED ITEM 95 CALLOUT (3) SH 1 ADDED ITEM 42 CALLOUT (4) LM ADDED ITEM 107 - ITEM 20 WAS 330703-J, ITEM 42 WAS QTY 13 - ITEM 44 QTY WAS 16.	5-16-77	J. R. ...
	E	CN427247 (D) N. Jones (C) L.M., ITEM 96 P/N WAS 411634-1700; ITEM 97 P/N WAS 411634-7500 (2) UPDATED REV LEVEL BLOCK	4-3-77	J. R. ...
	F	CN430780(E) H. D. R. (1) PIN OF ITEM 28 WAS 539430-0005(R) UPDATED REV LEVEL BLOCK	1-10-78	J. R. ...
B-AMB	G	CN429437(C) J. R. Jones (1) DELETED ITEMS 52 AND 53 (2) ITEM #2 QTY WAS 15 (3) DELETED NOTE 5 (4) UPDATED REV LEVEL BLOCK	6-6-78	J. R. ...
	H	CN442321(E) J. R. Jones (1) L.M. P/N OF ITEM 13 WAS 232425-4999 (2) UPDATED REV LEVEL BLOCK	8-10-78	J. R. ...
	J	CN441779 (C) R. Jones (1) UPDATED REV LEVEL BLOCK	3-26-79	J. R. ...

- PROCESSES:
- SOLDER PER F-127, METHOD I
  - MARK PER F-100, METHOD II, COLOR BLACK

REVISION LEVEL	TEST PROCEDURE	94B221	*	*	*	*	*
	WIRE LIST	94B160	A	A	B	B	B
	SCHEMATIC	94B159	B	B	B	B	B
	ASSEMBLY	94B212	D	E	F	G	H

UNLESS OTHERWISE SPECIFIED	
REMOVE ALL BURRS AND SHARP EDGES	
CONCENTRICITY MACHINED DIAMETERS .010 FIR	
DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING	
IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY	
INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100	
HOLE TOLERANCE	
.013 - .024 THRU .005	.251 - .006
.125 - .001	.250 - .001
.001 - .008 THRU .010	.001
.750 - .001	1.000 - .001
2.000 - .001	

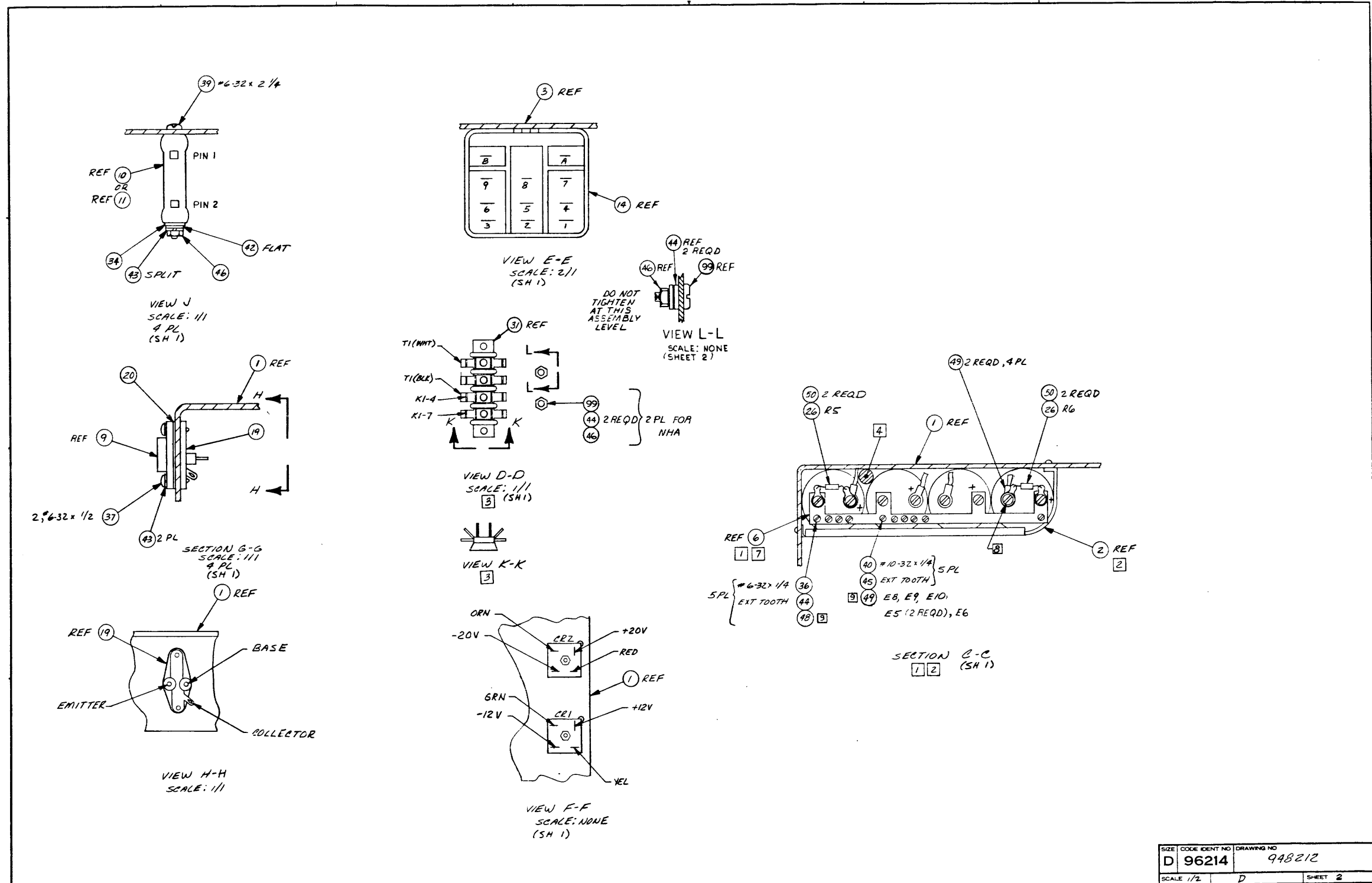
UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
TOLERANCES	
ANGLES ±1°	
3 PLACE DECIMALS ± 0.10	
2 PLACE DECIMALS ± 0.2	

REV STATUS OF SHEETS	REV SHEET	J D
2	1	1

QTY REQD	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION
24	28				
4	30				
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DATE	BY	CHKD	ENGR	CA	APVD	CONTR
3 4/10	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones
10-21-76	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones
10/21/76	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones
10/21/76	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones
10/21/76	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones	J. R. Jones

TXAS INSTRUMENTS	Equipment Group	Dallas, Texas
POWER SUPPLY ASSY (A1A2)		
SIZE	CODE IDENT NO	DRAWING NO
D	96214	948212
SCALE	1/2	SHEET 1 OF 2



SIZE	CODE IDENT NO	DRAWING NO
D	96214	948212
SCALE	1/2	D SHEET 2



949613-9702

TEXAS INSTRUMENTS INCORPORATED

DATE 03/02/79 LIST OF MATERIAL PAGE 1 of 4

PART NUMBER LM 0948212-0001 REV J

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00001.000	EA		0948152-0001	CHASSIS, POWER SUPPLY	
0002	00001.000	EA		0948153-0001	CLAMP, CAPACITORS	
0003	00001.000	EA		0948149-0001	FUSE BRACKET	
0004	00001.000	EA		0948156-0001	COVER, FUSE PANEL	
0005	00001.000	EA		0948157-0001	COVER, AC JUNCTION	
0006	00001.000	EA		0948154-0001	BUS, CAPACITOR GROUND	
0007	00004.000	EA		0411028-0002	JACKS, TIP, LOW VOLTAGE, RED	
0008	00003.000	EA		0083703-0004	TERMINAL-STAND-OFF THREADED INSERT 6-32	-SEE TI DRAWING
0009	00004.000	EA		0977954-0001	TRANSISTOR, 2N3055 NPN 70V 115M TO-3	TI - 2N3055
0010	00002.000	EA		0243110-0003	RFS 1.0000 OHM 12W 5% Q1 Q2 Q3 Q4	DHM - 3730
0010A					R1 R2	
0011	00002.000	EA		0243145-0003	RFS 2.200 OHM 12W 5% R3 R4	DHM - 3738
0011A					R3 R4	
0013	00001.000	EA		2210007-0005	FUSE CART TERM BLOCK, 3AG 6POLE 30AMPERES	071400-3828-6
0014	00001.000	EA		0233015-0050	RELAY 12V DC 10 AMP 3PDT	-SEE TI DWG
0014A					R1	
0015	00001.000	EA		0216299-0001	TRANSFORMER, POWER- 10V CENTER TAP-10AMP	
0015A					T1	
0016	00002.000	EA		0232933-0000	RECTIFIER SILICON BRIDGE 200V 25 AMP	SEM -5C8A2
POWER SUPPLY ASSY						
7513						
LM 0948212-0001 REV J						

TEXAS INSTRUMENTS INCORPORATED

DATE 03/02/79 LIST OF MATERIAL PAGE 2 of 4

PART NUMBER LM 0948212-0001 REV J

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0016A					CR1 CR2	
0017	00002.000	EA		0230983-0430	CAPACITOR, 43000 MF, 25 VDC, ELECTROLYTIC	-SEE TI DRAWING
0017A					C1 C4	
0018	00002.000	EA		0230983-0400	CAPACITOR, 80000 MF, 25 VDC, ELECTROLYTIC	-SEE TI DRAWING
0018A					C2 C3	
0019	00004.000	EA		0235341-0000	SOLDER KIT TO-3 CASE	EDY -9866-15-1
0020	00004.000	EA		0594521-0003	INSULATOR GRAY .009 THERMALLY COND	055285-7403-04FP-04
0021	00002.000	EA		0354186-0001	FUSE 10 A 250V 3AG ANTI VIBRATION	LIT - 314210
0021A					F1 F4	
0022	00001.000	EA		0414434-0003	FUSE 3.0 A 250V 3AG	LIT - 312003
0022A					F2	
0023	00001.000	EA		0416434-0103	FUSE 1.0 A 250V 3AG	LIT - 312001
0023A					F3	
0024	00001.000	EA		0416434-0503	FUSE 5.0 A 250V 3AG	LIT - 312005
0024A					F5	
0025	00001.000	EA		0416434-0703	FUSE 2.0 A 250V 3AG	LIT - 312002
0025A					F6	
0026	00002.000	EA		0977947-0069	RES FIX 1.5K OHM 5% .5 W CARBON FILM	RGH - R-50
0026A					R5 R6	
0027	00001.000	EA		0539409-0004	CONNECTOR, RCPT 25 PINS	AMP -205207-1
POWER SUPPLY ASSY						
LM 0948212-0001 REV J						

TEXAS INSTRUMENTS INCORPORATED

DATE 03/02/79 LIST OF MATERIAL PAGE 3 of 4

PART NUMBER LM 0948212-0001 REV J

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0027A					P1	
0028	00024.000	EA		0539430-0003	CONTACT, PIN 24-20AWG .068 INSUL DIA	AMP -205202-2 S
0029	00001.000	EA		0972576-0007	HOUSING, CUMM, PLUG, LOCKING 4 CONTACTS	AMP --1-80702-0
0029A					P2	
0030	00004.000	EA		0472577-0001	CONTACT, SOCKET-DUAL LANCE (REFL)	AMP - 353537-1
0031	00001.000	EA		0975270-0004	TERMINAL BLOCK	
0031A					T01	
0032	00005.000	EA		0232577-0000	NUT CAP NC-632 BLK NYLON	MFC -
0033	00004.000	EA		0977807-0010	FASTENER, SPEED NUT, STEEL	
0034	00004.000	EA		0083997-0001	WASHER-FIBER SHOULDER BLK SCREW SIZE #6	HAL - 7856
0035	AR	TI		0415886-0003	GREASE, SILICONE, HEAT COND.	CGM - DC 340
0036	00005.000	EA		0572999-0026	SCREW 6-32 X .250 PAN HEAD CRCS	
0037	00010.000	EA		0972999-0030	SCREW 6-32 X .500 PAN HEAD CRCS	
0038	00004.000	EA		0972999-0032	SCREW 6-32 X .750 PAN HEAD CRCS	
0039	00004.000	EA		0972999-0076	SCREW, PAN HD 6-32 X 2-1/4" CRCS PASS	-SEE DRAWING
0040	00005.000	EA		0972999-0006	SCREW 10-32 .250 PAN HEAD CRCS	
0041	00004.000	EA		0572683-0019	SCREW 10-16 X 1/2 THD FRM, SLOT HX MSR HD	
0042	00012.000	EA		0411027-0805	WASHER, FLAT, .15610 X .212 OD X .035THK	
0043	00031.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - 453538-136
0044	00015.000	EA		0411101-0054	WASHER #6 EXTERNAL TOOTH CRCS	QPL - 453535-58
POWER SUPPLY ASSY						
LM 0948212-0001 REV J						

TEXAS INSTRUMENTS INCORPORATED

DATE 03/02/79 LIST OF MATERIAL PAGE 4 of 4

PART NUMBER LM 0948212-0001 REV J

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0045	00005.000	EA		0411101-0060	LOCKWASHER #10 EXTERNAL TOOTH CRCS	---
0046	00015.000	EA		3416453-0022	NUT, PLAIN 6-32 UNC-28 HEX CRCS, SMALL	QPL - 45367106
0047	00020.000	EA		0972171-0048	TERMINAL, RCPT-022-18AWG .032TABS PUSH/UN	AMP -42599-4 STRIP
0048	00005.000	EA		0232151-0004	LUG 6 STUD RING TNG VINYL INS AWG 22-16	AMP -2-31875-2
0049	00014.000	EA		0232154-0004	LUG, CRIMP, 22-16 AWG #10 RING, STRIP-REEL	-SEE TI DRAWING
0050	00004.000	EA		0416406-0010	TERMINAL, SHIELD BRAID #10	SHA - 2138-10-00
0051	00005.000	EA		0418212-0010	STRAP, TIE DOWN, ADJUSTABLE, PLASTIC	QPL - 453367-1-9
0054	00010.000	EA		0972171-0055	TERMINAL, PUSH-ON	
0059	00003.000	FT		0538347-4054	WIRE HOOKUP B-20 AWG 14 STR BK/WH	JUD - HH0118
0060	00003.000	FT		0538347-4299	WIRE HOOKUP B-20 AWG 19 STR RD/WH	JUD - HH0116
0061	00003.000	FT		0538347-4393	WIRE HOOKUP B-20 AWG 16 STR BK/WH	JUD - HH0118
0062	00003.000	FT		0538347-4499	WIRE HOOKUP B-20 AWG 19 STR YL/WH	JUD - HH0118
0063	00003.000	FT		0538347-4699	WIRE HOOKUP B-20 AWG 19 STR BL/WH	JUD - HH0118
0064	00003.000	FT		0538347-4754	WIRE HOOKUP B-20 AWG 19 STR W/WH	JUD - HH0118
0065	00003.000	FT		0538347-4899	WIRE HOOKUP B-20 AWG 19 STR GR/WH	JUD - HH0118
0066	00003.000	FT		0538347-4014	WIRE HOOKUP B-20 AWG 16 STR BK/WH/WH	JUD - HH0118
0067	00003.000	FT		0538347-4029	WIRE HOOKUP B-20 AWG 19 STR BK/WH/WH	JUD - HH0118
0068	00003.000	FT		0538347-4039	WIRE HOOKUP B-20 AWG 16 STR BK/WH/WH	JUD - HH0118
0069	00003.000	FT		0538347-4049	WIRE HOOKUP B-20 AWG 19 STR BK/WH/WH	JUD - HH0118
0070	00003.000	FT		0538347-4069	WIRE HOOKUP B-20 AWG 19 STR BK/WH/WH	JUD - HH0118
POWER SUPPLY ASSY						
LM 0948212-0001 REV J						

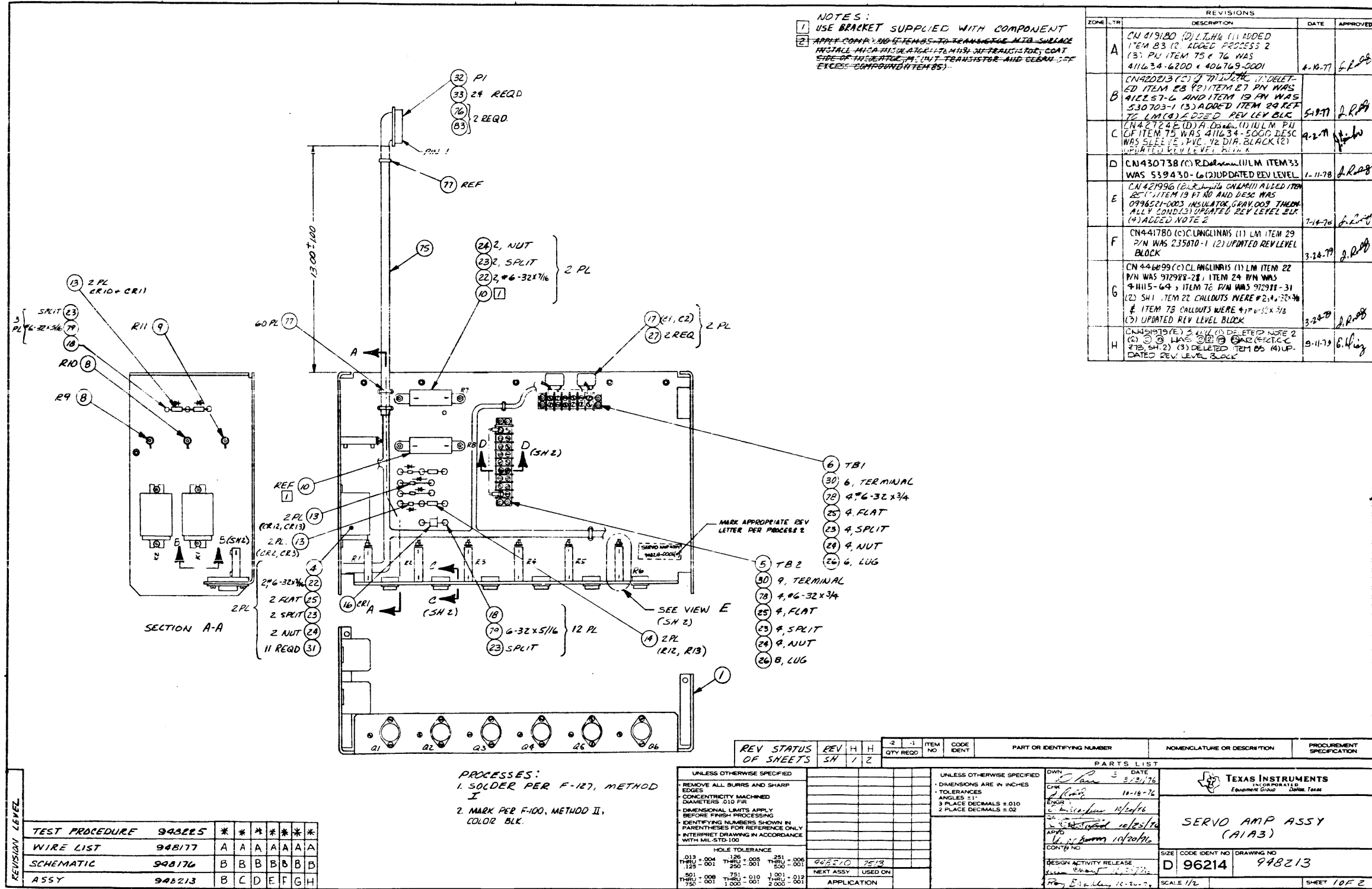


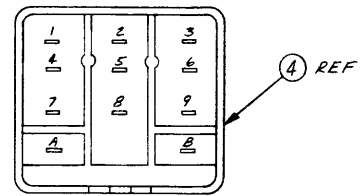


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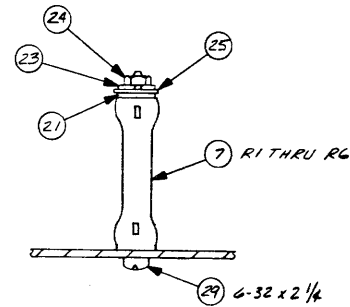
TEXAS INSTRUMENTS INCORPORATED		DATE 03/22/79		LIST OF MATERIAL		PAGE 5 of		PART NUMBER LM 0948212-0001		REV J	
REV NUMBER	QUANTITY REQD	UNIT ISSUE	DWG SYM	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0071	00003.000	FT		0538347-4129	WIRE HOOKUP B-20 AWG 15 STR BN/RO/WH	JUD	- 440118				
0072	00003.000	FT		0538347-4139	WIRE HOOKUP B-20 AWG 19 STR BN/OK/WH	JUD	- 440118				
0073	00003.000	FT		0538347-4169	WIRE HOOKUP B-20 AWG 19 STR BN/BL/WH	JUD	- 440118				
0074	00003.000	FT		0538347-4289	WIRE HOOKUP B-20 AWG 19 STR RO/GR/WH	JUD	- 440118				
0075	00003.000	FT		0538347-4449	WIRE HOOKUP B-20 AWG 19 STR OR/YL/WH	JUD	- 440118				
0076	00003.000	FT		0538347-4359	WIRE HOOKUP B-20 AWG 15 STR OR/GR/WH	JUD	- 440118				
0077	00003.000	FT		0538347-5049	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JUD	- 440203				
0078	00003.000	FT		0538347-5199	WIRE HOOKUP B-18 AWG 15 STR BK/WH	JUD	- 440203				
0079	00003.000	FT		0538347-5299	WIRE HOOKUP B-18 AWG 19 STR RO/WH	JUD	- 440203				
0080	00003.000	FT		0538347-5399	WIRE HOOKUP B-18 AWG 19 STR OR/WH	JUD	- 440203				
0081	00003.000	FT		0538347-5499	WIRE HOOKUP B-18 AWG 15 STR YL/WH	JUD	- 440203				
0082	00003.000	FT		0538347-5599	WIRE HOOKUP B-18 AWG 19 STR GN/WH	JUD	- 440203				
0083	00003.000	FT		0538347-5699	WIRE HOOKUP B-18 AWG 15 STR BL/WH	JUD	- 440203				
0084	00003.000	FT		0538347-5799	WIRE HOOKUP B-18 AWG 19 STR VI/WH	JUD	- 440203				
0085	00003.000	FT		0538347-5899	WIRE HOOKUP B-18 AWG 15 STR GR/WH	JUD	- 440203				
0086	00003.000	FT		0538347-5029	WIRE HOOKUP B-18 AWG 19 STR BK/RO/WH	JUD	- 440203				
0087	00003.000	FT		0538347-5049	WIRE HOOKUP B-18 AWG 15 STR BK/YL/WH	JUD	- 440203				
0088	00003.000	FT		0538347-5139	WIRE HOOKUP B-18 AWG 19 STR BN/OK/WH	JUD	- 440203				
0089	00003.000	FT		0538347-5169	WIRE HOOKUP B-18 AWG 19 STR BR/BL/WH	JUD	- 440203				
0091	00003.000	FT		0538347-5199	WIRE HOOKUP B-18 AWG 19 STR OR/YL/WH	JUD	- 440203				
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	POWER SUPPLY ASSY			
APP'D MFG		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER		REV	
								LM 0948212-0001		J	

TEXAS INSTRUMENTS INCORPORATED		DATE 03/02/79		LIST OF MATERIAL		PAGE 6 of		PART NUMBER LM 0948212-0001		REV J	
REV NUMBER	QUANTITY REQD	UNIT ISSUE	DWG SYM	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0002	00003.000	FT		0538347-5459	WIRE HOOKUP B-18 AWG 15 STR OR/GR/WH	JUD	- 440203				
0093	00003.000	FT		0417632-9059	WIRE HOOKUP 16 AWG TYPE B 175 BK/WH	JUD	- 440203				
0094	00003.000	FT		7411400-0020	WIRE #20 ELECTRO-TIN-PLATED, COPPER	IWP	- 18-630				
0095	00003.000	FT		0411400-0018	WIRE, BARE TINNED, 18AWG, COPPER BIS	IWP	- 18-630				
0096	00001.000	FT		0977436-0012	INSULATION, FLEXIBLE						
0097	00001.500	FT		0972446-0022	INSULATION SLEEVING 3/4 X .750 ID	MKL	- HT 105C-3/4				
0098	00003.000	FT		0538347-5299	WIRE HOOKUP B-20 AWG 19 STR GN/WH	JUD	- 440118				
0099	00014.000	EA		0572998-0028	SCREW 6-32 X .375 PAN HEAD CRCS						
0100	00003.000	EA		0572998-0027	SCREW 6-32 X .312 PAN HEAD CRCS						
0101	REF	EA		0548155-0001	SCHEMATIC DIAGRAM, POWER SUPPLY						
0102	REF	EA		0948100-9901	WIRING LIST, POWER SUPPLY						
0103	REF	EA		0548252-0001	TEMPLATE, CHASSIS WIRING, POWER SUPPLY						
0104	00001.000	EA		0972446-0021	RES, FIXED 56 OHMS 1 WATT 10%	813494-CR32G560J5					
0105	00002.000	EA		0406768-0001	ADAPTER, CONNECTOR LOCKING .547X.250	CIE - D20419					
0106	00002.000	EA		0411161-0003	PACKING, PREFORMED HYDR .056ID .275 F						
0107	REF	EA		0548271-9901	PROCEDURE, POWER SUPPLY UNIT TEST						
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	POWER SUPPLY ASSY			
APP'D MFG		DATE	APP'D PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER		REV	
								LM 0948212-0001		J	

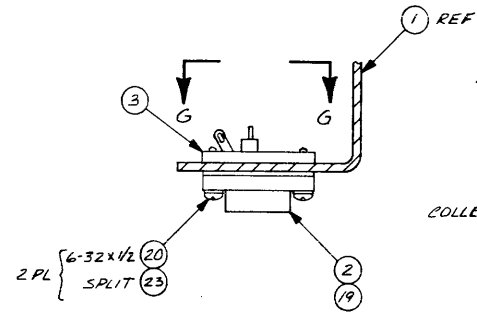




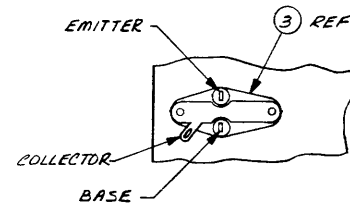
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SCALE: 2/1  
2 PL  
(K1, K2)



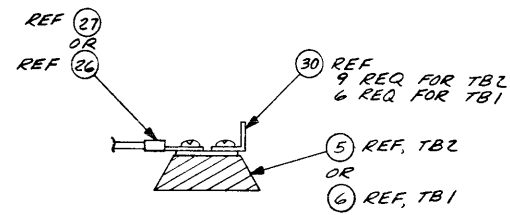
VIEW E  
SCALE: NONE  
9 PL  
(R1 THRU R6, R9 THRU R11)



SECTION C-C  
SCALE: 1/1  
6 PL  
(Q1 THRU Q6)



VIEW G-G  
6 PL  
(Q1-Q6)



SECTION D-D  
SCALE: NONE

SIZE	CODE IDENT NO	DRAWING NO
D	96214	948213
SCALE 1/2	REV H	SHEET 2



949613-9702

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		LM 949213-0001		REV H	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
0001	00001.000	EA		0948175-0001	CHASSIS, SEVEN AMPLIFIER				
0002	00006.000	EA		0977759-0001	TRANSISTOR, 2N4055 NPN 70V 115V TC-3	TI - 7N3055			
0002A					Q1 Q2 Q3 Q4 Q5 Q6				
0003	00006.000	EA		0235341-0001	SOCKET XST TD-3 CASP	EBY -9866-15-1			
0004	00002.000	EA		0233015-0050	RELAY 12V DC 10 AMP 3PDT	-SEE TI DWG			
0004A					K1 K2				
0005	00001.000	EA		0414728-0008	TERMINAL BOARD 9 TERMINAL				
0005A					TB2				
0006	00001.000	EA		0414728-0005	TERMINAL BOARD 6 TERMINAL				
0006A					TB1				
0007	00006.000	EA		0233110-0001	RES 1.0000 OHM 12W 5%	OHM -3730			
0007A					R1 R2 R3 R4 R5 R6				
0008	00002.000	EA		0233082-2000	RES 0.5100 OHM 12W 5%	OHM -3723			
0008A					R9 R10				
0009	00001.000	EA		0233235-0025	RES 22.000 OHM 12W 5%	OHM -3762 TYPE 270			
0009A					R11				
0010	00002.000	EA		0233193-0001	RES 5.00 OHM 25W 5% W/HDW	OHM -270-25			
0010A					R7 R8				
0013	00006.000	EA		0539468-0003	DIODE, 1N4003 1AMP 200PIV RECTIFIER	TI - 1N4003			
0013A					CR2 CR3 CR10 CR11 CR12 CR13				
DRAFTSMAN: DATE: 3/4/74 CHECKED: DATE: 3/14/74 APPR. ENG: DATE: 3/14/74 RELEASED: DATE: 3/14/74 PROJECT NO: 7513 TITLE: SEVEN AMPLIFIER ASSY PART NUMBER: LM 949213-0001 REV: H									

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 2 of		LM 949213-0001		REV H	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
0014	00002.000	EA		0233070-0001	RES 1.0000 OHM 25W 5%	OHM -270-25			
0014A					R17 R18				
0016	00001.000	EA		0231769-0003	DIODE 1N4710	MOT -1N4710			
0016A					CR1				
0017	00001.000	EA		0233692-5000	CAP 1.0000 MF 200V 47R-5%	TAM -K601PE			
0017A					C1 C2				
0018	00001.000	EA		0233703-0004	TERMINAL-STAND-OFF THREADED INSERT 6-32	-JIF JRCATED TYP			
0019	00001.000	EA		0906047-0002	WASHER, INSULATING, FLAT, MICA, XST MTG	013133-56-03-24P12000			
0020	00001.000	EA		0977988-0001	SCREW 6-32 X .500 PAN HEAD CRFS				
0021	00004.000	EA		0083097-0001	WASHER-FIBER SHOULDER HEK SCREW SIZE #6	WAL - 7856			
0022	00001.000	EA		0077444-0029	SCREW 6-32 X .438 PAN HEAD CRFS				
0023	00001.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	QPL - MS35338-136			
0024	00001.000	EA		0414453-0002	NUT, PLAIN 6-32 UNF-2B HEK CRFS, SMALL	QPL - MS567106			
0025	00001.000	EA		0411027-0405	WASHER, FLAT, .15610 X .312 OD X .035THK				
0026	00001.000	EA		0233351-0004	LUG & STUD KIT, INSUL VINYL DMS AWG 22-16	AMP -2-31874-2			
0027	00004.000	EA		0412257-0004	TERMINAL LUG #4 12-20 AWG	QPL - MS77368-1			
0028	AR	TI		0415984-0003	GREASE, SILICONE, HEAT COND.	COR - RC 340			
0029	00001.000	EA		0414444-0006	SCREW, PAN HD 6-32 X 2-1/4 CRFS PASS	-SEE DRAWING			
0030	00001.000	EA		0233437-1000	TERMINAL TAB EASTON .032 THICK BRASS	AMP -61570-1			
0031	00001.000	EA		0233437-1000	TERMINAL LUG EASTON INSUL AWG 22-18	AMP -60972-3 TAPE M			
DRAFTSMAN: DATE: 3/4/74 CHECKED: DATE: 3/14/74 APPR. ENG: DATE: 3/14/74 RELEASED: DATE: 3/14/74 PROJECT NO: 7513 TITLE: SEVEN AMPLIFIER ASSY PART NUMBER: LM 949213-0001 REV: H									

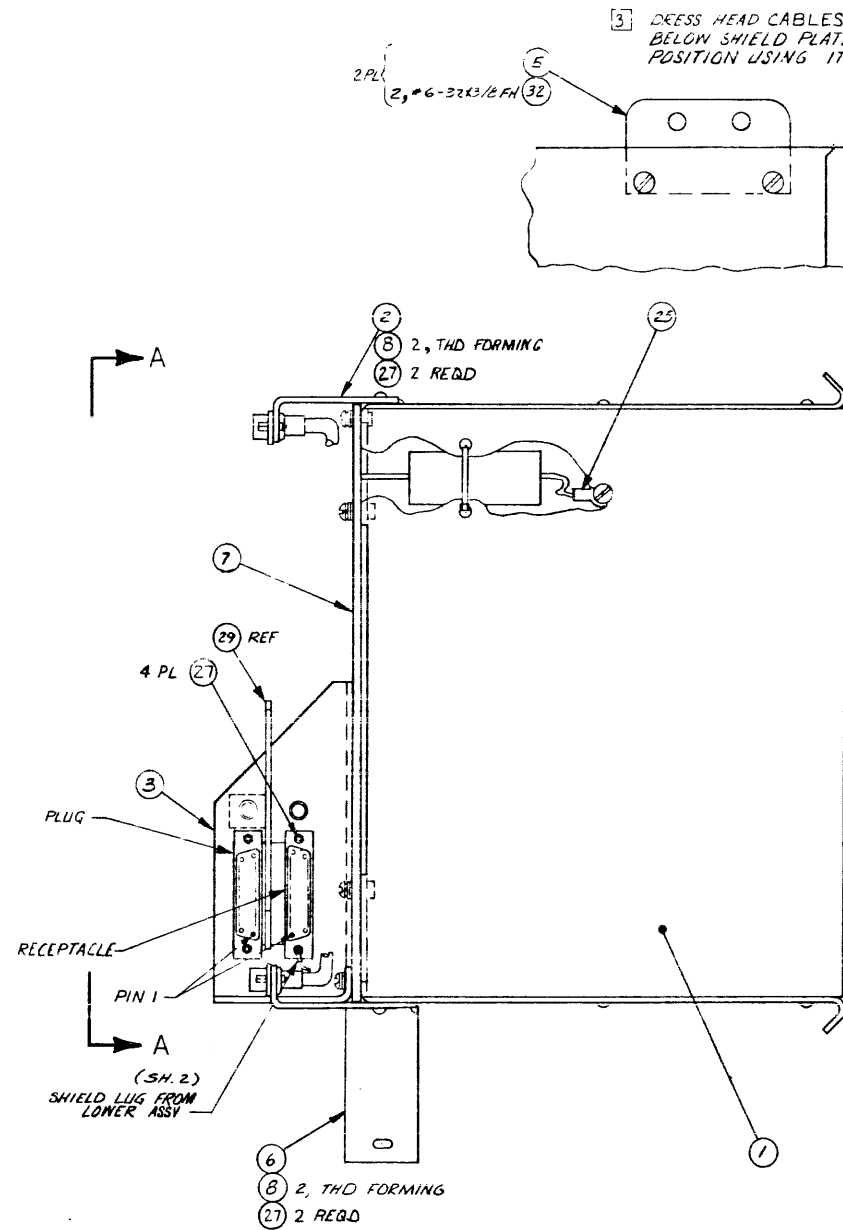
TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 3 of		LM 949213-0001		REV H	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
0032	00001.000	EA		0534439-0005	CONNECTOR, PLUG 25 PINS	AMP -735739-1			
0032A					P1				
0033	00004.000	EA		0539430-0003	CONTACT PIN 24-20AWG .059 INSUL DIA	AMP -735732-2 ST			
0034	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BR/WH	JUD - H40118			
0035	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BR/WH	JUD - H40118			
0036	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BR/WH	JUD - H40118			
0037	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR YL/WH	JUD - H40118			
0038	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR GN/WH	JUD - H40118			
0039	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR VI/WH	JUD - H40118			
0040	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR GR/WH	JUD - H40118			
0041	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/RY/WH	JUD - H40118			
0042	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/RY/WH	JUD - H40118			
0043	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/RY/WH	JUD - H40118			
0044	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/YL/WH	JUD - H40118			
0045	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/RY/WH	JUD - H40118			
0046	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/RY/WH	JUD - H40118			
0047	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/RY/WH	JUD - H40118			
0048	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/RY/WH	JUD - H40118			
0049	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/RY/WH	JUD - H40118			
0050	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/RY/WH	JUD - H40118			
0051	00003.000	FT		0538347-4199	WIRE HOOKUP 8-20 AWG 19 STR BK/RY/WH	JUD - H40118			
DRAFTSMAN: DATE: 3/4/74 CHECKED: DATE: 3/14/74 APPR. ENG: DATE: 3/14/74 RELEASED: DATE: 3/14/74 PROJECT NO: 7513 TITLE: SEVEN AMPLIFIER ASSY PART NUMBER: LM 949213-0001 REV: H									



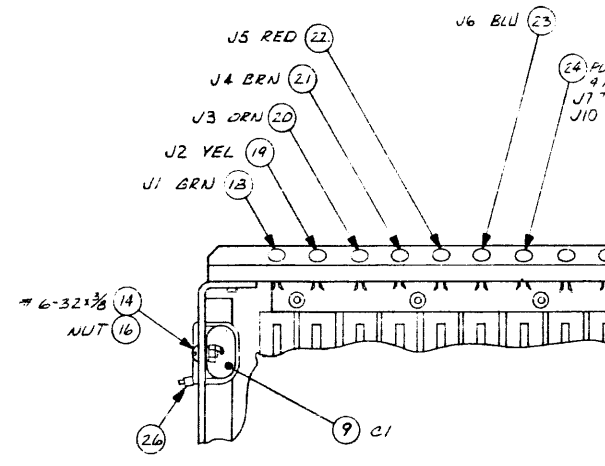
949613-9702

TEXAS INSTRUMENTS INCORPORATED		DATE 08/13/77		LIST OF MATERIAL		PAGE 4 of		PART NUMBER LM949213-3301		REV H	
QTY	UNIT	QTY	UNIT	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0053	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0054	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0055	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0056	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0057	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0058	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0059	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0060	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0061	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0062	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0063	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0064	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0065	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0066	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0067	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0068	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0069	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0070	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0071	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0072	FT	053347-5109	FT	053347-5109	WIRE HOOKUP B-18 AWG 19 STR BK/WH	JTD - H43203					
0073	FT	341143-3313	FT	341143-3313	WIRE, BARE TINNED, 18AWG, COPPER BUS	1WP - 18-630					

TEXAS INSTRUMENTS INCORPORATED		DATE 08/13/77		LIST OF MATERIAL		PAGE 5 of		PART NUMBER LM949213-3301		REV H	
QTY	UNIT	QTY	UNIT	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0074	FT	341143-3313	FT	341143-3313	WIRE, BARE TINNED, 18AWG, COPPER						
0075	FT	0972426-3319	FT	0972426-3319	INSULATION SLEEVING PVC CHLORIDE	LFS - HI-135C-24					
0076	EA	0406769-3301	EA	0406769-3301	ADAPTER, CONNECTOR LOCKING .547X.253	CIF - 023419					
0077	EA	0419212-3310	EA	0419212-3310	STRAP, TIE DOWN, ADJUSTABLE, PLASTIC	QPL - 453367-1-9					
0078	EA	0972048-3332	EA	0972048-3332	SCREW 6-32 X .750 PAN HEAD CRES						
0079	EA	0972048-3332	EA	0972048-3332	SCREW 6-32 X .750 PAN HEAD CRES						
0080	EA	048176-9901	EA	048176-9901	SCHEMATIC DIAGRAM, SERVO AMP						
0081	EA	048176-9901	EA	048176-9901	WIRE LIST, SERVO AMP						
0082	EA	0444351-9901	EA	0444351-9901	TEMPLATE, CHASSIS WIRING, SERVO AMP						
0083	EA	0411161-3303	EA	0411161-3303	PACKING, PERFORMED HYBR, 05610 4275 F						
0084	EA	0442255-9901	EA	0442255-9901	PROCEDURE, SERVO AMP UNIT TEST						



NOTES:  
 1. CUT ITEM 4 PER VENDOR AND INSTALL UNDER ITEM 3. SEE 4 ITEM 4 BETWEEN ITEMS 1 AND 7.  
 2. INSTALL KEYS BETWEEN LISTED PINS OF J1 THRU J10 PRIOR TO MOUNTING BACK PANEL.



REVISONS		DATE	APPROVED
A	CN 419220 (C) CHG (1) EXCHANGED PIN 1 CALLOUTS (2) ADDED NOTE (3) ADDED ITEM 29 (30 TO LM 1 FD (4) QTY OF ITEM 14 (26 WAS 1 (5) QTY OF ITEM 28 WAS 16	12-7-76	J.R. Hoff
B	CN 419236 (C) B. WALKER (1) REVISED PER EXTENSIVE ENGR. CHANGES	3-10-77	J. Lane
C	CHG 50211 (D) R. J. JAMES (1) DELETED KEY #1 IN KEY SCHEDULE (2) ON LM ITEM 28 QTY WAS 20, ITEM 14 WAS 6, ITEM 30 WAS 5, ADDED ITEM 32	5-6-77	J.R. Hoff
D	CN 426899 (B) R. J. JAMES (1) DELETED NOTE (2) AND KEY SCHEDULE FROM F/D (2) ON LM DELETED ITEM 28 (3) UPDATED REV STATUS OF SHEETS	8-31-77	J.R. Hoff

E	CN 446799 (C) B. WALKER (1) SH. 2, 2 C 8 ADDED ITEM 13, 11, 12 (33) (2) SH. 2 B 7 AT ITEM 3, 3 RECD WAS (13) SH. 2, 2 C 4 AT ITEM 13, 7 PL WAS 10 PL	8-25-78	E. Wong
---	--	---------	---------

CONNECTOR	KEY # 1	KEY # 2
J1	<del>29 AND 30</del>	<del>29 AND 30</del>
J2	<del>31 AND 32</del>	<del>31 AND 32</del>
J3	<del>25 AND 26</del>	<del>25 AND 26</del>
J4	<del>35 AND 34</del>	<del>35 AND 34</del>
J5	<del>33 AND 34</del>	<del>33 AND 34</del>
J6	<del>35 AND 36</del>	<del>35 AND 36</del>
J7	<del>38 AND 39</del>	<del>38 AND 39</del>
J8	<del>38 AND 39</del>	<del>38 AND 39</del>
J9	<del>38 AND 39</del>	<del>38 AND 39</del>
J10	<del>38 AND 39</del>	<del>38 AND 39</del>

PROCESSES:  
 1. SOLDER PER F-127, METHOD I

REV STATUS OF SHEETS	REV SHEET	E	E
	1	2	

UNLESS OTHERWISE SPECIFIED
REMOVE ALL BURRS AND SHARP EDGES
CONCENTRICITY MACHINED
DIAMETERS ±0.010 FID
DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING
IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY
INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100
HOLE TOLERANCE
013 - .004
THRU .001
126 - .005
THRU .001
231 - .006
THRU .001
501 - .008
THRU .001
711 - .010
THRU .001
1001 - .012
THRU .001
2000 - .001

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE ±
ANGLES ±1°
3 PLACE DECIMALS ±0.01
2 PLACE DECIMALS ±0.02
APPROVED
DATE
DESIGNED
DATE
ENGR.
DATE
CHKD.
DATE
DWN.
DATE

QTY	REQD	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION

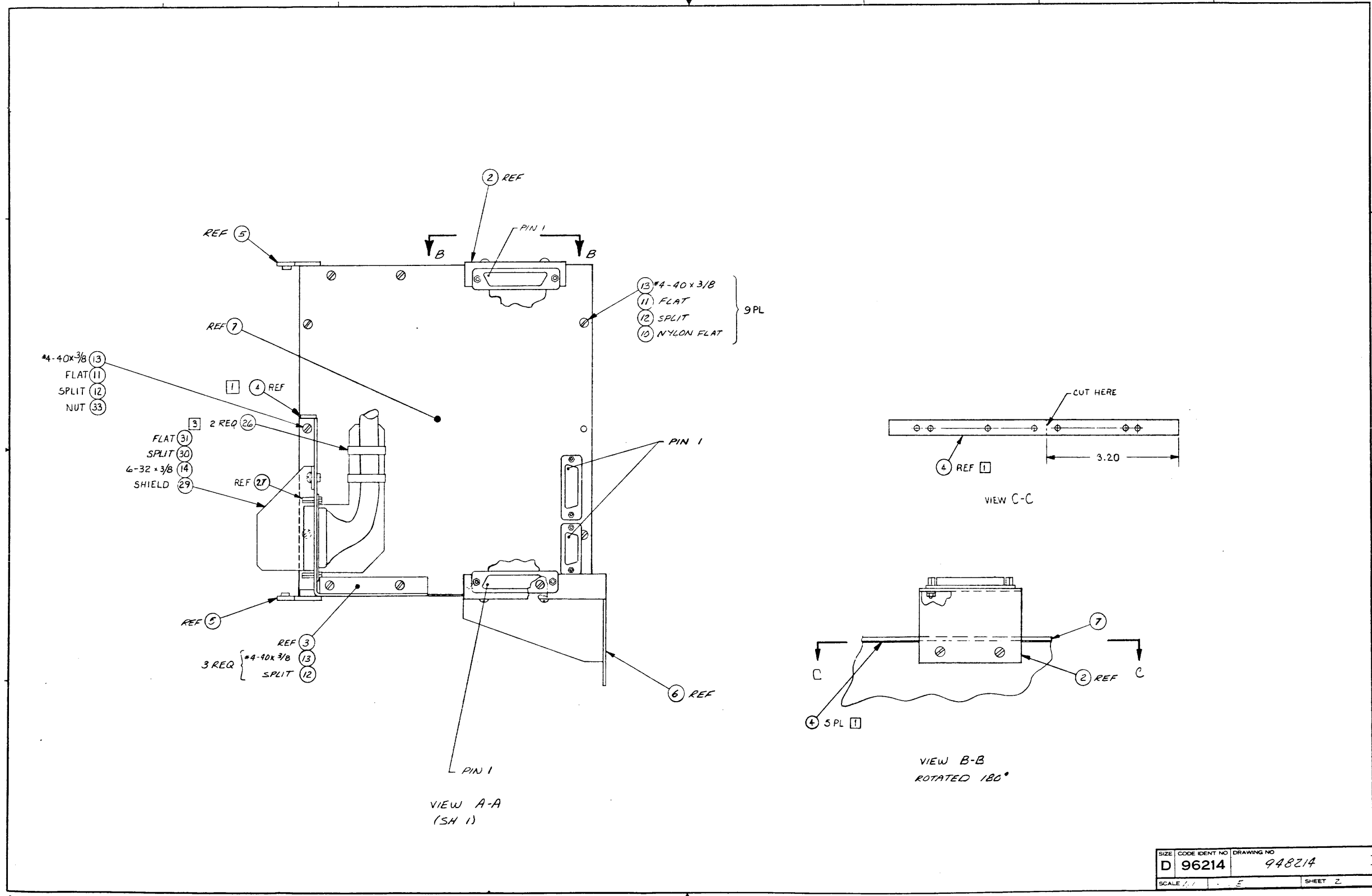
  

SIZE	CODE IDENT NO	DRAWING NO
D	96214	948214

TEXAS INSTRUMENTS  
 INCORPORATED  
 Equipment Group Dallas, Texas

LOGIC MODULE ASSY  
 (91.04)

SCALE: SHEET 1 OF 2



SIZE	CODE IDENT NO	DRAWING NO
D	96214	948214
SCALE	E	SHEET 2



949613-9702

TEXAS INSTRUMENTS INCORPORATED DATE 08/14/78 LIST OF MATERIAL PAGE 1 of PART NUMBER LMP948214-0001 REV F

ITEM NUMBER	QUANTITY	UNIT OF MEAS.	DESCRIPTION	PART NUMBER	VENDOR PART NUMBER
0001	00001.000	EA	FRAME, LOGIC MODULE	0948184-0001	
0002	00001.000	FA	BRACKET, CONNECTOR	0948189-0001	
0003	00001.000	FA	BRACKET, HEAD CONNECTORS	0948188-0001	
0004	00005.000	FA	INSULATOR, BACK PANEL	0948187-0001	
0005	00002.000	FA	ARM, CARD FILE	0948190-0001	
0006	00001.000	FA	BRACKET, LOGIC MODULE	0948127-0001	
0007	00001.000	FA	BACK PANEL ASSEMBLY	0948178-0001	
0008	00004.000	EA	SCREW, THREAD FORMING, #6-32	0972694-0011	
0009	00001.000	EA	CAP FIX 3.00 WF 5X 200V NYLAR METALIZED	TKW - K663F	
0010	00004.000	FA	WASHER FLAT NYLON .750X.1101X.1/16THK	SMI -2671	
0011	00010.000	FA	WASHER #4 FLAT	QPL - AN960C4L	
0012	00003.000	FA	WASHER #4 LOCKSPLIT	QPL - MS35338-135	
0013	00003.000	EA	SCREW 4-40 X .375 PAN HEAD CRCS		
0014	00002.000	FA	SCREW 6-32 X .375 PAN HEAD CRCS		
0016	00001.000	EA	NUT, PLAIN 6-32 UNC-2B HEX CRCS	QPL - MS35649-264	
0018	00001.000	EA	COLOR DOT, GREEN .250 DIA.	854805-EE DRAWING	
0019	00001.000	SH	COLOR DOT, YELLOW .250 DIA.	854805-EE DRAWING	
0020	00001.000	FA	COLOR DOT, ORANGE .250 DIA.	854805-EE DRAWING	
0021	00001.000	SH	COLOR DOT, BROWN .250 DIA.	854805-EE DRAWING	

DESIGNER: [Signature] DATE: 8-21-78 TITLE: LOGIC MODULE ASSY  
 APPR: [Signature] DATE: 12/13 PART NUMBER: LMP948214-0001 REV: F

TEXAS INSTRUMENTS INCORPORATED DATE 08/14/78 LIST OF MATERIAL PAGE 2 of PART NUMBER LMP948214-0001 REV E

ITEM NUMBER	QUANTITY	UNIT OF MEAS.	DESCRIPTION	PART NUMBER	VENDOR PART NUMBER
0022	00001.000	EA	COLOR DOT, RED .250 DIA.	0231792-0002	854805-EE DRAWING
0023	00001.000	FA	COLOR DOT, BLUE .250 DIA.	0231792-0006	854805-EE DRAWING
0024	00005.000	SH	COLOR DOT, PURPLE .250 DIA.	0231792-0007	854805-EE DRAWING
0025	00001.000	EA	TERMINAL, LUG #6 12-7J AWG	0412257-0006	QPL - MS77068-2
0026	00001.000	FA	STRAP, TIE DOWN, ADJUSTABLE, PLASTIC	0418212-0010	QPL - MS3367-1-9
0027	00005.000	EA	SCREW, SPECIAL, CONNECTOR LOCKING	0406769-0001	CIE - 023418-2
0029	00001.000	EA	SHIELD, HEAT CONNECTOR	0948260-0001	
0030	00001.000	EA	WASHER #6 LOCKSPLIT	0411104-0136	QPL - MS35338-136
0031	00001.000	FA	WASHER .156 X .375 X .049 FLAT CRCS	011027-0876	QPL - MS15795-806
0032	00004.000	EA	SCREW 6-32 X .375 FLT HEAD CRCS	0572990-0025	
0033	00001.000	EA	NUT, 4-40 HEXAGON CRCS STEEL	0411115-0044	MS -35649-244

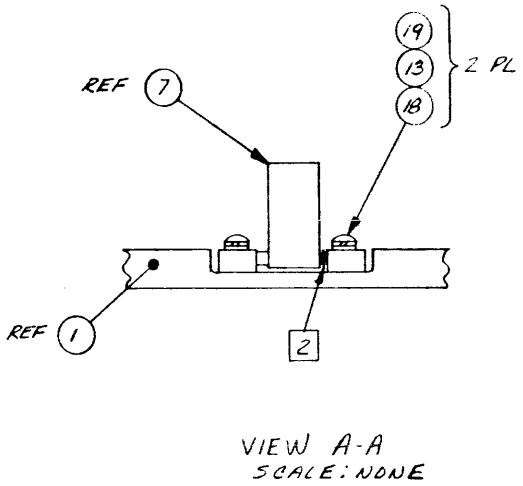
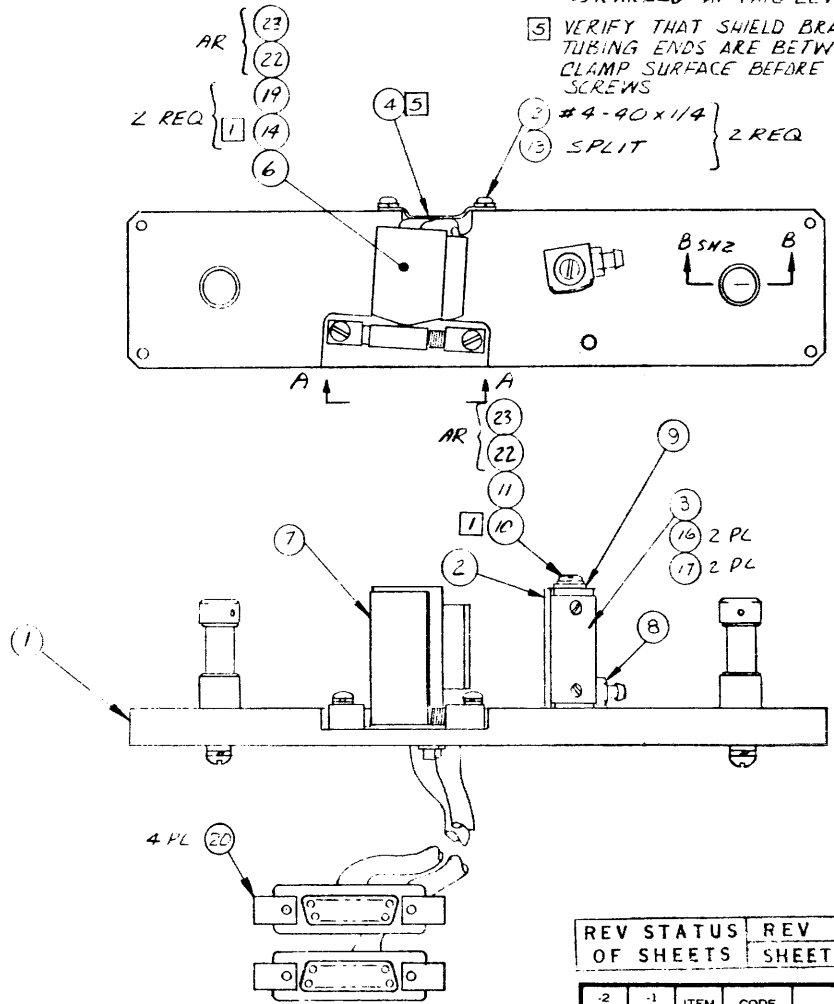
DESIGNER: [Signature] DATE: 8-21-78 TITLE: LOGIC MODULE ASSY  
 APPR: [Signature] DATE: [ ] PART NUMBER: LMP948214-0001 REV: E





NOTE: BUILD ONLY: ALIGN HEAD PLATE ASSY AS OUTLINED IN THE TALE TRANSPORT MAINT MANUAL (149613-9701, FIGURE V). PLATE COMPLETED DESKTOP ELECTRONICS ADJUSTMENT LABEL (148151-0001) IN SHIPPING CARTON WITH THE HEAD PLATE ASSY

- NOTES:
- 1 SEAL PER PROCESS 1
  - 2 REFER TO 948216 FOR ALL ASSEMBLY INSTRUCTIONS
  - 3 ADJUST MOUNTING FOR EVEN FIT ON SHIELD ALONG HEAD
  - 4 REFER TO 948216 WHEN ITEMS 5 IS ASSEMBLED AT THIS LEVEL
  - 5 VERIFY THAT SHIELD BRAID AND PLASTIC TUBING ENDS ARE BETWEEN HEAD AND CLAMP SURFACE BEFORE TIGHTENING CLAMP SCREWS



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A	CN417965 (C) 3 D. H. H. (1) REVISED DRAWING PER EXT. ENGINEER CHANGE	1-27-77	[Signature]
	B	CN 397984 (C) M. L. W. (1) REV COMP LM; ITEM 20 WAS 406769-1, ITEM 26 QTY WAS AR, ITEM 27 QTY WAS AR	6-13-77	[Signature]
	C	CN 406471 (C) J. W. C. (1) LM, ITEM 10 WAS 972428-00358	10-4-77	[Signature]
	D	CN 429415 (D) J. W. C. (1) REVISED LM PER EXT. ENGINEER CHANGE (1) LEFT NOTE 4(B) SH 1 REVISED FIG-TORIAL (1) ADDED SH 2	7-26-78	[Signature]
	E	CN 446543 (C) R. K. M. (1) ADDED NOTE 6 TO SH 1 (2) CREATED NEW LM-948216-8001 (REV CONT SH 2)	12-5-78	[Signature]

REV STATUS OF SHEETS	REV	H	H
	SHEET	1	2

QTY REQD	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION

PROCESSES:  
 1. SEAL PER F-650  
 USING ITEMS 22 AND 23

UNLESS OTHERWISE SPECIFIED			
• REMOVE ALL BURRS AND SHARP EDGES			
• CONCENTRICITY MACHINED DIAMETERS .010 FIR			
• DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING			
• IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY			
• INTERPRET DRAWING IN ACCORDANCE WITH MIL STD 100			
FINISH TOLERANCE			
013 THRU + .004	126 THRU + .005	251 THRU + .006	
125 THRU - .001	250 THRU - .001	500 THRU - .001	
501 THRU + .008	751 THRU + .010	1 001 THRU + .012	
750 THRU - .001	1 000 THRU - .001	2 000 THRU - .001	
	499700	757	
	NEXT ASSY	USED ON	
	APPLICATION		

UNLESS OTHERWISE SPECIFIED	
• DIMENSIONS ARE IN INCHES	
• TOLERANCES:	
ANGLES ± 1°	
3 PLACE DECIMALS ± .010	
2 PLACE DECIMALS ± .02	
MATERIAL:	

DWN	DATE
CHK	
ENGR	
QA	
APLD	
MONTH NO	
DESIGN ACTIVITY RELEASE	

TEXAS INSTRUMENTS  
 INCORPORATED  
 Equipment Group Dallas, Texas

HEAD PLATE ASSY  
 (A1 A1 A5)

SIZE CODE IDENT NO DRAWING NO  
 C 96214 948216

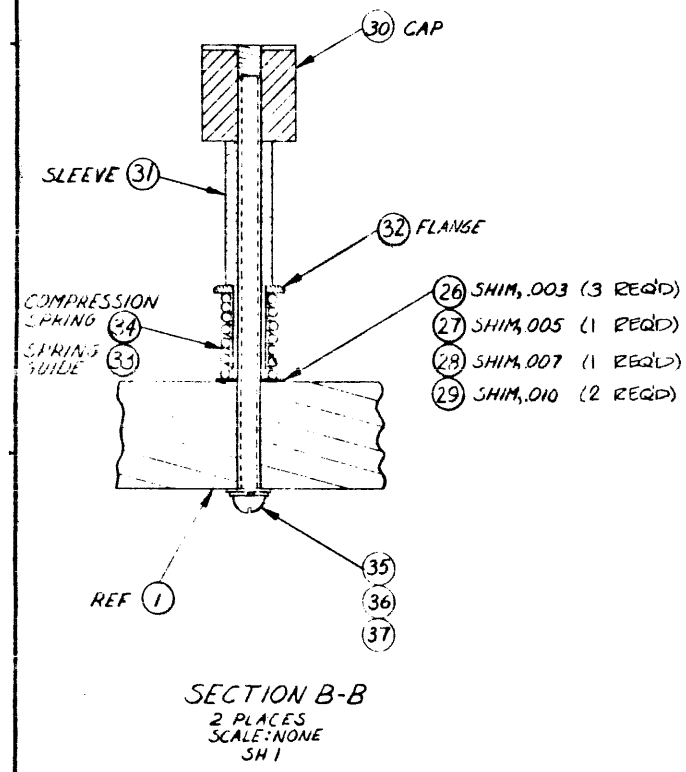
SCALE 1/1

SHEET 1/2



DRAWING REQUEST TO BE FULFILLED BY BEST SOURCE		
REVISION NUMBER	TEXT NUMBER	DRAWING CHANGE
STANDARDIZATION & WHAT TYPICAL TOLERANCES WILL BE USED UNLESS OTHERWISE SPECIFIED		

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	F	ON 451936 (D) REVISION (1) ON L.M. CHGED DASH NO ON ITEM 26 WAS -35, ITEM 27 WAS -36, ITEM 28 WAS -37 AND ITEM 29 WAS -38 (2) SHIM, .010 SHIM DISCH TION FOR ITEM 28 WAS SHIM .0010	5-23-79	E. Kraig
	G	ON 449836 (D) REVISION (1) ADDED ITEM 5 ON L.M. DASH NO. -B001	5-23-79	E. Kraig
	H	ON 451936 (E) SHIM (1) ADDED TO ITEM 26 ENCLOSED 26, 27, 28, 29 WITH S, 1, 2 REPAIR (OULETED PUNCH PINS)	5-5-79	E. Kraig



SIZE	CODE IDENT NO	DRAWING NO.
C	96214	948216
SCALE	REV H	SHEET 2



949613-9702

TEXAS INSTRUMENTS INCORPORATED		DATE 09/10/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM948216-0001		REV H		
QTY	UNIT	DESCRIPTION	PART NUMBER	VENDOR PART NUMBER								
0001	EA	PLATE, HEAD CARRIER	0948166-0001									
0002	EA	HOUSING, TAPE CLEANER	0948172-0001									
0003	EA	BLADE-1/2" TAPE CLEANER	0228121-0001									
0004	EA	CLAMP, HEAD CABLES	0948171-0001									
0006	EA	HEAD/WHITE HEAD, 9 TRACK	0948201-0001									
0007	EA	SPECIFICATION, MAG HEAD CROSSTALK SHIELD	0948169-0001									
0008	EA	TUBE FITTING, MINTP 1/8 ID	0772528-0002	EOS -BF0-125								
0009	EA	WASHER, NH-SHLDR, #10	0537720-0005									
0010	EA	SCREW 6-32 X 1.50 PAN HEAD CRFS	0972444-0001									
0011	EA	WASHER .156 X .375 X .049 FLAT CRFS	0411027-0006	QPL - MS15755-806								
0012	EA	SCREW 4-40 X .250 PAN HEAD CRFS	0972584-0013									
0013	EA	WASHER, LOCK-SPRING, HELICAL, #4	0411104-0135	QPL - MS35338-135								
0014	EA	SCREW 4-40 X .500 CAP, HEX SOCKET, CRFS	0518262-0011	QPL - MS16995-11								
0016	EA	SCREW 2-56 X .125 PAN HEAD CRFS	0472488-0001									
0017	EA	WASHER, LOCK-SPRING, HELICAL, #2	0411134-0134	QPL - MS35338-134								
0018	EA	SCREW 4-40 X .375 PAN HEAD CRFS	0972988-0015									
0019	EA	WASHER #4 FLAT .115 X .209 X .03 SST	0418154-0004									
0020	EA	ADAPTER, CONNECTOR LOCKING .547X.253	0476768-0001	CTE - 023419								
0022	QT	SEALING COMPOUND, ANAEROBIC-BLUE GRADE C	0415804-0105									
0023	EA	SURFACE PRIMER, COMPOUND GRADE T YELLOW	0415874-0011									
DRAFTSMAN		DATE	CEO DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	HEAD/PLATE ASSY (A1A1A5)				
APPROV		DATE	APPROV PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	7513	PART NUMBER	LM948216-0001	REV	H

TEXAS INSTRUMENTS INCORPORATED		DATE 08/13/79		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM948216-0001		REV H		
QTY	UNIT	DESCRIPTION	PART NUMBER	VENDOR PART NUMBER								
0026	EA	SPACER, SLEEVE, .003 THK	0533472-0031									
0027	EA	SPACER, SLEEVE, .005 THK	0533472-0032									
0028	EA	SPACER, SLEEVE, .007 THK	0533472-0033									
0029	EA	SPACER, SLEEVE, .010 THK	0533472-0034									
0030	EA	CAP, TAPE GUIDE	0948274-0001									
0031	EA	SLEEVE, TAPE GUIDE	0948164-0001									
0032	EA	FLANGE-TAPE GUIDE	0228096-0001									
0033	EA	GUIDE, SPRING	0948223-0001									
0034	EA	SPRING, COMPRESSION	0948222-0001									
0035	EA	SCREW 4-32 X 1.50 PAN HEAD CRFS	0972988-0001									
0036	EA	WASHER #4 FLAT	0416622-0024	OPL - AN960CBL								
0037	EA	WASHER, LOCK-SPRING, HELICAL, #8	0411104-0137	OPL - MS35338-137								
DRAFTSMAN		DATE	CEO DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	HEAD/PLATE ASSY (A1A1A5)				
APPROV		DATE	APPROV PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO		PART NUMBER	LM948216-0001	REV	H

TEXAS INSTRUMENTS INCORPORATED		DATE 04/13/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM948216-0001		REV H		
QTY	UNIT	DESCRIPTION	PART NUMBER	VENDOR PART NUMBER								
0001	EA	HEAD/PLATE ASSY (A1A1A5)	0948216-0001									
0002	EA	LABEL, NRZ1	0948151-0001									
0003	EA	WASHER-PRECISION .005	0196939-0003									
0004	EA	WASHER-PRECISION .002	0196939-0002									
0005	EA	CARTON, COMPUTED FLAP LOCK 9.5x7.3x3.5	0936808-0002									
DRAFTSMAN		DATE	CEO DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	HEAD/PLATE ASSY (A1A1A5)				
APPROV		DATE	APPROV PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO		PART NUMBER	LM948216-0001	REV	H





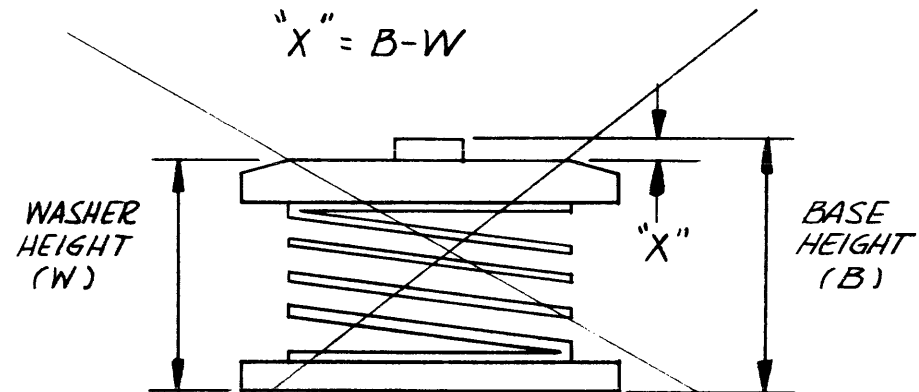
- 2.2 Loosely install head to plate using screws, Item ⑭ and washers, Item ⑰ with primer and locktite, Items ⑳ and ㉔.
- 2.3 Using head positioner tool per Figure 2, position head and tighten screws. Do not overtighten.
- 2.4 Install Cable Clamp, Item ④ with screws and washers, Items ⑫ and ⑬. Before tightening slip sleeving up well above clamp for a secure grip of the cables.

~~2.5 Calibrate Guide A (Reference 948167, Figure 1. Item numbers for 2.5, 2.6, and 2.7 refer to this drawing).~~

~~2.5.1 Place spring ① over base ⑤.~~

~~2.5.2 Place ceramic washer ② over end of base ⑤.~~

~~2.5.3 Gauge dimension "X" of Figure 3. Dimension "X" is the carefully measured extension of base ⑤ beyond washer ② using a dial caliper and subtraction.~~



~~FIGURE 3 TAPE GUIDE SPRING CALIBRATION~~

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948216
SCALE NONE	REV A	SHEET 3

TI-7915C

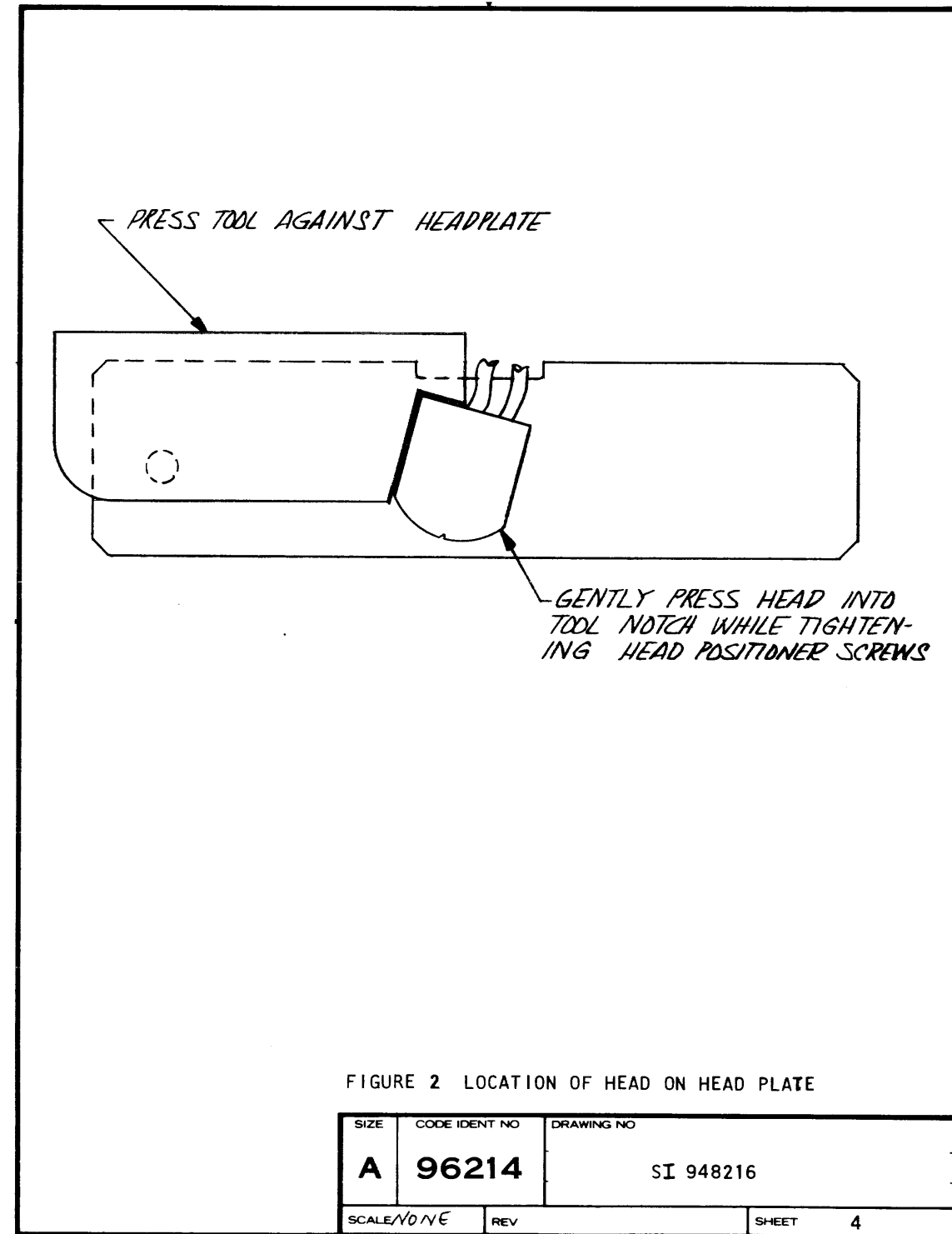


FIGURE 2 LOCATION OF HEAD ON HEAD PLATE

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948216
SCALE NONE	REV	SHEET 4

TI-7915C



~~2.5.4 Add .005 to dia .010, round off to nearest .005 and select a shim from items ① through ④ of 948216. Caliper the selected shim to confirm its thickness.~~

~~2.6 Press cover, item ⑤ of 948216, onto base with base protruding from bottom approximately .010 inches per Figure 4. Use shim and spring guide, item ⑥, to press cover onto the base.~~

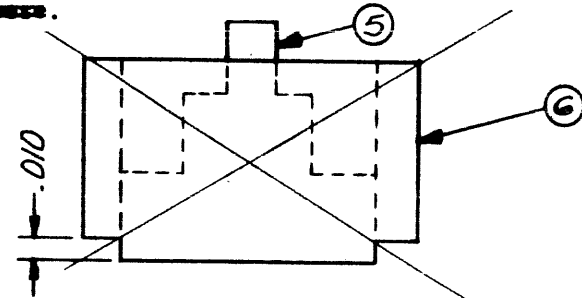


FIGURE 4 BASE AND COVER FIT

2.7 Assemble guide to the plate.

2.7.1 Insert screw, item ⑩ with washers items ⑪ and ⑫ in place, from bottom side.

2.7.2 Set .010 shim ⑬, spring guide ⑭, spring ⑮, and flange washer ⑯ over screw.

2.7.3 Slip sleeve, item ⑰ onto assembly being sure that the flange washer will not be trapped. Screw cap ⑱ on and tighten finger tight, as this is adjusted at NHA.

~~2.7.4 Place spring washer, item ⑲, and opposing flange washer, item ⑲, into cap, item ⑱, and screw guide together loosely.~~

~~CAUTION: FLANGES ARE PROCELTA MATERIAL AND WILL SHATTER IF TRAPPED BETWEEN METAL PARTS.~~

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948216
SCALE NONE	REV B	SHEET 5

TI-7915C

~~2.7.5 Insert a .010 shim, item ⑬, between base and head plate and tighten assembly.~~

2.8 Repeat 2.7 for other guide location location.

2.9 Assemble scraper blade, item ③, to tape cleaner housing, item ②, and mount on head plate with screw and washer, items ⑩ and ⑪. Use primer and locktite, items ⑲ and ⑲ on screw.

2.10 Using positioning tool per Figure 5, position scraper and tighten.

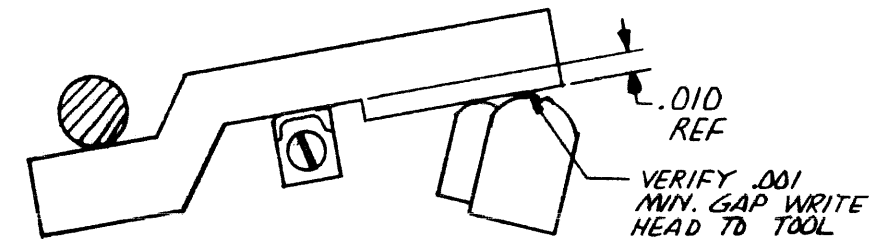


FIGURE 5 TAPE SCRAPER LOCATION

2.11 Install tube filling, item ⑧.

2.12 Crosstalk Shield Assembly, item ⑦  
Locate shield kit bag. Place spring on shaft, shaft into upper pivot block, and engage spring into pivot block hole. Place shield onto shaft engaging spring into shield hole to provide approximately 1/2 turn spring action when shield is in position shown below. Attach upper pivot block to head plate, but do not tighten. Place nylon washer on shaft followed by lower pivot block. Loosely secure lower pivot block to head plate. Place a 0.5" wide strip of .010" mylar shim stock between the head and shield. Position the shield parallel to the plane of the head active surfaces with the junction of the copper and ferrite shield inserts even with the read head gap. Press the shield firmly against the head and shim and tighten pivot block screws to secure the shield. See Figure 6. Shield may need to be readjusted at unit test for

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948216
SCALE NONE	REV A	SHEET 6

TI-7915C



2.12 minimum electrical crosstalk.  
(CON'T.)

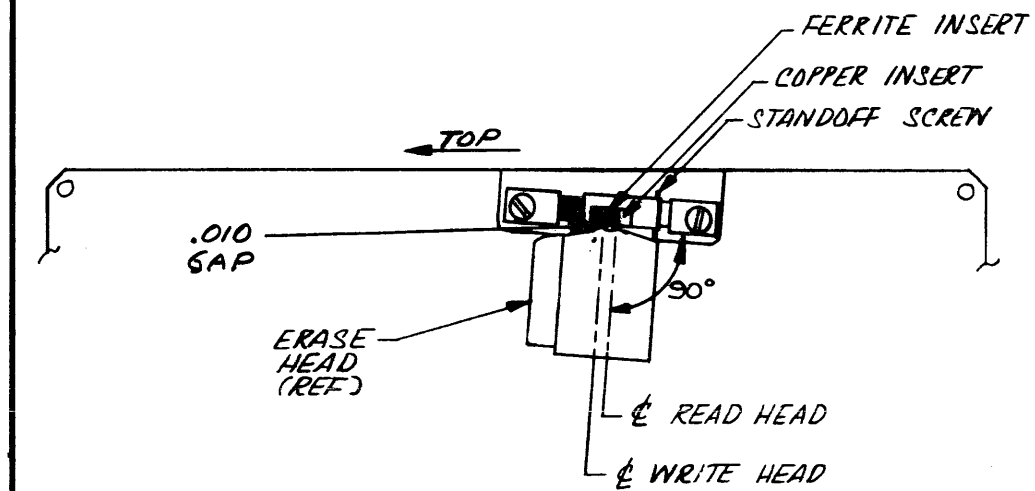


FIGURE 6 CROSSTALK SHIELD LOCATION

SIZE	CODE IDENT NO	DRAWING NO
A	96214	SI 948216
SCALE <i>NONE</i>	REV	SHEET 7

TI-7915C







949613-9702

TEXAS INSTRUMENTS INCORPORATED		DATE 09/06/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM948218-0001		REV. E	
QTY	UNIT	DESCRIPTION	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER	QTY	UNIT	DESCRIPTION	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	EA	CONNECTOR, ELECTRICAL PWB	0800211-0003		3VH -43/1CN5						
0001A				P1 P2							
0002	EA	HOOD,CONNECTOR	0973583-0001								
0003	EA	COVER,CONNECTOR	0973584-0001								
0004	EA	SLEEVE,SOLDER,TAB TERMINAL	0972053-0002		RCH --C-704-02						
0005	EA	SCREW 4-40 X .438 PAN HEAD CRES	0972988-0016								
0006	EA	STRAP, TIEDOWN, ADJUSTABLE, BLACK	0418212-0001								
0007	EA	STRAP,MAKKEK,ADJUSTABLE,PLASTIC	0418201-0060		GPL-MS-3368-1-98						
0008	FT	TUBING ZIPPER BLK 1 IN DIA W/ OVERLAP	0236303-1000		ZIP -ZTZ-1000-GP-20						
0009	FT	WIRE,BRAID,FLAT,.188 WIDE	0417371-0003		070903-8660						
0010	FT	WIRE,TWISTED PAIR #24 WHT/GRN IPVC	0966760-2495		UL - 1472 7STR UL6						
0011	FT	TUBING, 1/2 ID BLACK HEAT SHRINK PVC	0972146-0008		003890-PC-135-125C						
0012	FT	WIRE HOOKUP B-18 AWG 19 STR WHITE	0538347-5999		JUD - HHJ233						
0013	FT	WIRE HOOKUP B-18 AWG 19 STR BK/WH	0538347-5299		JUD - HHJ233						
0014	REF	WIRE LIST,DAISY CHAIN CABLE	0948194-9901								
0015	FT	TUBING, 1 D BLK HEAT SHRINK PVC	0972146-0010		003890-PC-135-125C						
0016	FT	WIRE HOOKUP B-18 AWG 19 STR BK/WH	0538347-5099		JUD - HHJ233						
DRAFTSMAN: DATE: CVD DRAFTSMAN: DATE: DESIGN ENGINEER: DATE: TITLE: CABLE ASSY,INTERTRANSPORT 1/D APPR. ENG: DATE: APPR. PROJECT ENGINEER: DATE: RELEASED: DATE: PROJECT NO: 7513 PART NUMBER: LM948218-0001 REV. E											

TEXAS INSTRUMENTS INCORPORATED		DATE 09/06/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM948218-0002		REV. E	
QTY	UNIT	DESCRIPTION	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER	QTY	UNIT	DESCRIPTION	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	EA	CONNECTOR, ELECTRICAL PWB	0800211-0003		3VH -43/1CN5						
0001A				P1 P2							
0002	EA	HOOD,CONNECTOR	0973583-0001								
0003	EA	COVER,CONNECTOR	0973584-0001								
0014	REF	WIRE LIST,DAISY CHAIN CABLE	0948194-9901								
0101	EA	BULK CABLE ASSEMBLY MATERIAL FOR-0002	0948218-5002								
DRAFTSMAN: DATE: CVD DRAFTSMAN: DATE: DESIGN ENGINEER: DATE: TITLE: CABLE ASSY,INTERTRANSPORT 1/D APPR. ENG: DATE: APPR. PROJECT ENGINEER: DATE: RELEASED: DATE: PROJECT NO: PART NUMBER: LM948218-0002 REV. E											

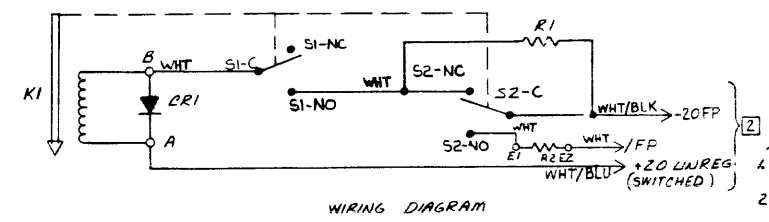
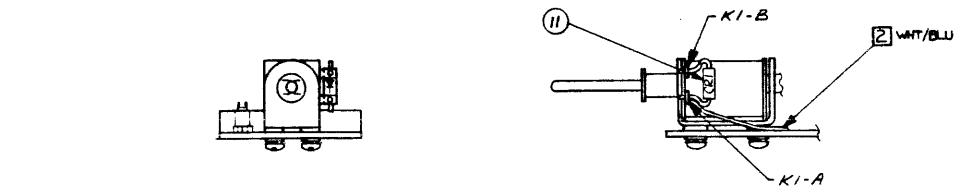
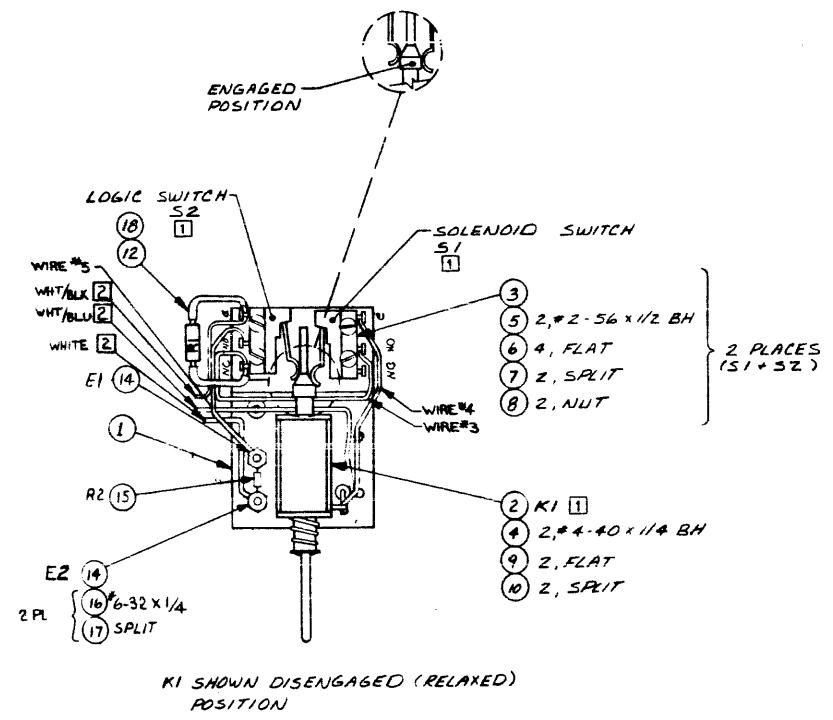
TEXAS INSTRUMENTS INCORPORATED		DATE 09/06/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM948218-5002		REV. E	
QTY	UNIT	DESCRIPTION	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER	QTY	UNIT	DESCRIPTION	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0004	EA	SLEEVE,SOLDER,TAB TERMINAL	0972053-0002		RCH --C-704-02						
0005	EA	SCREW 4-40 X .438 PAN HEAD CRES	0972988-0016								
0006	EA	STRAP, TIEDOWN, ADJUSTABLE, BLACK	0418212-0001								
0007	EA	STRAP,MAKKEK,ADJUSTABLE,PLASTIC	0418201-0060		GPL-MS-3368-1-98						
0008	FT	TUBING ZIPPER BLK 1 IN DIA W/ OVERLAP	0236303-1000		ZIP -ZTZ-1000-GP-20						
0009	FT	WIRE,BRAID 30AWG ANL IND COP 24-4-30	0416445-0041		074116-24-4-30						
0010	FT	WIRE,TWISTED PAIR #24 WHT/GRN IPVC	0966760-2495		UL - 1472 7STR UL6						
0011	FT	TUBING, 1/2 ID BLACK HEAT SHRINK PVC	0972146-0008		003890-PC-135-125C						
0012	FT	WIRE,ELECT,WHT,0/1 1425,19 X 30,18 AWG	2210312-5599		090484-XV0193009P						
0013	FT	WIRE,UL 1425,19 STR,18AWG,WHT/RED	0935170-5299		-						
0015	FT	TUBING, 1 D BLK HEAT SHRINK PVC	0972146-0010		003890-PC-135-125C						
0016	FT	WIRE,UL 1425,19 STR,18AWG,WHT/BLK	0935170-5099		-						
DRAFTSMAN: DATE: CVD DRAFTSMAN: DATE: DESIGN ENGINEER: DATE: TITLE: BULK CABLE ASSEMBLY MATERIAL FOR-0002 APPR. ENG: DATE: APPR. PROJECT ENGINEER: DATE: RELEASED: DATE: PROJECT NO: PART NUMBER: LM948218-5002 REV. E											



WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	END STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	QTY	REF.
1	R1				S2-NC	S2-C	NO SOLDER AT S2-C	2	12
2	CR1				K1-A	K1-B	A-B NO SOLDER	2	11
3	NO 26	WHT			S1-NO	S2-NC			13
4	NO 26	WHT			K1-B	S1-C			13
5	NO 26	WHT			S2-NO	E1			13
6	R2				E1	E2	NO SOLDER AT E2	2	15

NOTES:  
 1 REFER TO SI 948230 FOR SWITCH AND SOLENOID LOCATION INSTRUCTIONS  
 2 WIRES FROM CABLE ASSY 2267011-000  
 3 REFER TO SI 948211 FOR FINAL ADJUSTMENT ON NHA

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
B-7	A	CN 417154 (C) R. J. P. (1) ADDED WIRE S16 (2) CHANGED PICTORIAL 13 REVERSE DIODE SYMBOL. CHANGED PICTORIAL (A) CHANGED SCHEMATIC (5) ITEM 1 WAS 293 (4) 1 - ADDED ITEM 15 IN 17 TO LHM	11/9/76	R. J. P.
	B	CN 418194 (C) R. J. P. (1) REVISED PER EXTENSIVE ENGR CHANGES	1/28/77	R. J. P.
	C	CN 424306 (C) L. T. H. (1) REVISED PER EXTENSIVE ENGR CHANGES	2-20-77	R. J. P.
	D	CN 429409 (D) H. A. W. (1) REV PER EXTENSIVE ENGR CHANGES	3-15-78	R. J. P.
	E	CN 437025 (C) R. J. P. (1) NOTE 2 WAS 948150 (2) ADDED ITEM 19 TO LHM	11-8-79	E. W. W.
	F	CN 433554 (C) M. T. L. (1) ADDED NOTE 3	1-8-80	E. W. W.



PROCESSES:  
 1. SOLDER PER F-127, METHOD I  
 2. MARK PER F-100, METHOD II, CLASS 1, HEIGHT .09, COLOR BLACK

QTY REQD	-1	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION
PARTS LIST						
					DATE	
					6/11/76	
UNLESS OTHERWISE SPECIFIED						
REMOVE ALL BURRS AND SHARP EDGES			DIMENSIONS ARE IN INCHES			
CONCENTRICITY MATCHED			TOLERANCES			
DIAMETERS 0.10 MIN			ANGLES 5:1			
DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING			3 PLACE DECIMALS = .010			
IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY			2 PLACE DECIMALS = .02			
INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100						
HOLE TOLERANCE						
0.13 +.004	-.001	1.25 +.008	THRU -	2.51 +.008	THRU -	992-11 7015
1.25 -.001	1.50 +.001	2.50 +.001	THRU -	5.00 +.001	THRU -	
5.00 +.001	7.51 +.001	1.001	THRU -	0.12	THRU -	
7.51 -.001	1.000	2.000	THRU -	0.01	THRU -	
NEXT ASSY USED ON						
APPLICATION						
DESIGN ACTIVITY/RELEASE				SCALE		
D 96214				948230		
SIZE				DRAWING NO		
D 96214				948230		
SCALE				SHEET		



949613-9702

TEXAS INSTRUMENTS INCORPORATED		DATE 10/17/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948230-0001		REV F		
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER						
0001	00001.000	EA		0949759-0001	SUPPORT, WHITE INHIBIT SWITCH							
0002	00001.000	EA		0228127-0001	SCLENCIC ASSY							
0002A					K1							
0003	00007.000	EA		0235031-0001	SWITCH, MINI, SPDT	SEE TI- DRAWING						
0003A					S1 S2							
0004	00007.000	EA		0972984-0013	SCREW 4-40 X .250 PAN HEAD CRCS							
0005	00004.000	EA		0972488-0007	SCREW 2-56 X .500 PAN HEAD CRCS							
0006	00008.000	EA		0415022-0020	WASHER, FLAT .105 ID X.250 OD X.016 THK	UPL - AN960C3L						
0007	00004.000	EA		0411104-0134	WASHER, LOCK-SPRING, HELICAL, #2	UPL - MS3533B-134						
0008	00004.000	EA		0411115-0024	NUT, PLAIN 2-56 UNC-2B HEX CRCS	UPL - MS35049-224						
0009	00007.000	EA		0410022-0011	WASHER #4 FLAT	UPL - AN960C4L						
0010	00007.000	EA		0418431-0024	LOCKWASHER # 4 SPLIT, HELICAL CRCS	UPL - NAS1676-C4						
0011	00001.000	EA		0416377-0001	DIODE 1N645	GPL - 1N645						
0011A					CR1							
0012	00001.000	EA		0972978-0099	RES, FIXED 820 OHMS 1 WATT 10%	81349H-CR320R20J5						
0012A					K1							
0013	00000.500	FT		0538347-4999	WIRE HOOKUP #20 AWG 19 STR WHITE	JUD - MH0118						
0014	00002.000	EA		0083703-0004	TERMINAL-STAND-OFF THREADED INSERT 6-32	-BIFURCATED TYPE						
0014A					E1 E2							
0015	00001.000	EA		0972947-0067	RES FIA 1/2W OHM 5% .5 W CARBON FILM	RUM - R-50						
DRAFTSMAN		DATE	CKD	DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	FILE PROTECT SWITCH ASSY			
APPROVED		DATE	APPROVED	PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER LM0948230-0001			
								7513	REV F			

TEXAS INSTRUMENTS INCORPORATED		DATE 10/17/79		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM0948230-0001		REV F		
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER						
0015A					F2							
0016	00007.000	EA		0972984-0026	SCREW 6-32 X .250 PAN HEAD CRCS							
0017	00007.000	EA		0411104-0136	WASHER, LOCK-SPRING, HELICAL, #6	UPL - MS3533B-136						
0018	24	FT		0410449-0007	INSULATION SLEEVING, TEFLON #20 NATURAL	CPL - 81349						
0019	00001.000	EA		2267011-0001	CABLE ASSY, FILE PROTECT							
DRAFTSMAN		DATE	CKD	DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	FILE PROTECT SWITCH ASSY			
APPROVED		DATE	APPROVED	PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	PART NUMBER LM0948230-0001			
									REV F			







TEXAS INSTRUMENTS INCORPORATED DATE 10/17/78 LIST OF MATERIAL PAGE 2 of PART NUMBER LM0948232-5001 REV G

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0012	00014.000	EA		0539371-0452	RES FIX FILM 4.99K OHMS 14 .13 WATT	CRK - NC4
0012A					R2 R3 R4 R5 R7 R12 R25 R43	
0012B					R44 R45 R47 R48 R53 R66	
0013	00078.000	EA		0539371-0453	RES FIX FILM 5.11K OHMS 14 .13WATT	CRK - NC4
0013A					R15 R19 R28 R32 R56 R60 R69	
0013B					R73	
0014	00009.000	EA		0539371-0457	RES FIX FILM 5.62K OHMS 14 .13WATT	CRK - NC4
0014A					R16 R18 R29 R31 R57 R59 R70	
0014B					R72	
0015	00005.000	EA		0539371-0481	RES FIX FILM 10.0K OHMS 14 .13 WATT	CRK - NC4
0015A					R10 R13 R26 R51 R67	
0016	00002.000	EA		0539371-0594	RES FIX FILM 150K OHMS 14 .13 WATT	CRK - NC4
0016A					R11 R52	
0017	00004.000	EA		0539371-0611	RES FIX FILM 220K OHMS 14 .13 WATT	CRK - NC4
0017A					R20 R30 R61 R71	
0021	00031.000	EA		0972763-0021	CAP. FIX FILM, AXIAL LEAD, .047 UF, +50V, -20%	
0021A					C1 C3 C5 C7 THRU C15 C17	
0021B					C19 C21 THRU C28	
0021C					C32 THRU C40	
0024	00003.000	EA		0972924-0010	CAP FIX TANT SOLID 22 MFD 10 X 15 VOLT	UPL -M39003/1-2271

DRAFTSMAN DATE CDR DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE  
 AUTO INSERTED PARTS LIST FOR 948232-0001  
 APP'D DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. PART NUMBER LM0948232-5001 REV G

TEXAS INSTRUMENTS INCORPORATED DATE 10/17/78 LIST OF MATERIAL PAGE 3 of PART NUMBER LM0948232-5001 REV G

ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0024A					C29 C30 C31	
0037	00016.000	EA		0972932-0001	DIODE, 1N914B SWITCHING 75V PIV 75MA 4MS	TI - 1N914B
0037A					CR1 THRU CR16	

DRAFTSMAN DATE CDR DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE  
 AUTO INSERTED PARTS LIST FOR 948232-0001  
 APP'D DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO. PART NUMBER LM0948232-5001 REV G





TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948235-0001		REV F			
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0012	00011.000	EA		0535371-0289	RES FIX FILM 100 OHMS 1/8 .13 WATT	COR - VC4					
0012A					R9						
0014	00002.000	EA		0539371-0452	RES FIX FILM 4.99K OHM 1/8 .13 WATT	COR - VC4					
0014A					R2 R4						
0018	00001.000	EA		0539371-0481	RES FIX FILM 10.0K OHM 1/8 .13 WATT	COR - VC4					
0018A					R13						
0021	00001.000	EA		0472141-0078	NETWORK,RES. 100.0K OHMS 28 14 PINS	BFC --899-1-R100.0K					
0021A					U2						
0022	00001.000	EA		0539795-0036	RESISTOR,VARIABLE 500 OHM CERMET FILM	BDU - 3059P-1-501					
0022A					R8						
0023	00001.000	EA		0572926-0006	CAP FIX MICA 500V 10.0 PF +/- 0.5 PF	QPL -C404C10000D					
0023A					C6						
0025	00001.000	EA		0572543-0049	CAP FIX .330 MF 5% 200V MYLAR METALLIZED	TPM - X663F					
0025A					C4						
0026	00001.000	EA		0977924-0010	CAP FIX TANT SOLID 22 MFD 10 X 15 VOLT	QPL -M39003/1-2271					
0026A					C28						
0027	00001.000	EA		0996206-0002	IC,LF356N,AMPLIFIER,OPERATIONAL	NSC - LF356N					
0027A					U19						
0028	00001.000	EA		0996206-0003	IC,LF357N,AMPLIFIER,OPERATIONAL	NSC - LF357N					
0028A					U27						
DRAFTSMAN		DATE	CEO DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	NRZI CONTROL MODULE ASSY			
APPROVED		DATE	APPROVED	DATE	RELEASED	DATE	PROJECT NO	7513		PART NUMBER LM0948235-0001	REV F

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM0948235-0001		REV F			
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0029	00002.000	EA		0496221-0001	IC,LM319N,VOLTAGE COMPARATOR DUAL	NSC - LM319N					
0029A					U4 U18						
0030	00001.000	EA		0972463-0001	NETWORK,SN7558P/MC1458P1 OP AMP	SEE - TI DRAWING					
0030A					U26						
0031	00007.000	EA		0437938-0001	INTEGRATED CIRCUIT,LOGIC GATE SN75452P	TI -SN75452P					
0031A					U17 U32						
0042	00001.000	EA		0972999-4001	X NETWORK 4001	-SEE TI DRAWING					
0042A					U33						
0044	00001.000	EA		0996770-0001	IC,MC14557CP,1 TO 64 HIT SHIFT REGISTER	MOT - MC14557CP					
0044A					U5						
0045	00001.000	EA		0996359-0007	OSCILLATOR,CRYSTAL CONTROLLED 4.000 MHZ	MOT - K-1114 A					
0045A					U8						
0047	00003.000	EA		0972057-0001	TRANSISTOR-AST2222 NPN SILICON	TI -AST2222					
0047A					Q1 Q3 Q5						
0048	00002.000	EA		0803523-0001	TRANSISTOR AST2907 PNP SILICON	TI -AST2907					
0048A					Q2 Q4						
0049	00002.000	EA		0972699-0002	HEADER W/M PIN 5 POSTS						
0049A					TP1 THRU TP10						
0050	00007.000	EA		0772923-0003	SWITCH DIAL IN LINE, 6 POSITION	AMP -435166-4					
0050A					U1113						
DRAFTSMAN		DATE	CEO DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	NRZI CONTROL MODULE ASSY			
APPROVED		DATE	APPROVED	DATE	RELEASED	DATE	PROJECT NO	7513		PART NUMBER LM0948235-0001	REV F

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 3 of		PART NUMBER LM0948235-0001		REV F			
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0051	00001.000	EA		0413277-0011	EJECTOR,PCB,NON-LOCKING,P,BLUE	SCA -S-2001R,BLUE					
0052	00001.000	EA		0413277-0003	EJECTOR,PCB,NON-LOCKING,BLACK	SCA -S-2001(BLACK)					
0053	REF			0948737-9901	LOGIC SCHEMATIC,NRZI CONTROL MODULE						
0055	00001.000	EA		0948235-5001	AUTO INSERTED PARTS LIST FOR 948235-0001						
0056	REF	EA		0937023-9901	960ATS TEST PROCEDURE CONTROL MOD,979A						
DRAFTSMAN		DATE	CEO DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	NRZI CONTROL MODULE ASSY			
APPROVED		DATE	APPROVED	DATE	RELEASED	DATE	PROJECT NO	7513		PART NUMBER LM0948235-0001	REV F





949613-9702

TEXAS INSTRUMENTS INCORPORATED		DATE 03/13/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948235-5001		REV F	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0001	00001.000	EA		0949236-0001	PMB,NR21 CONTRL MODULE	ROH - R-25					
0002	00005.000	EA		0972946-0041	RES FIX 100 OHM 5% .25 W CARBON FILM	ROH - R-25					
0002A					F1 R6 R63 R64 R65						
0003	00003.000	EA		0972946-0061	RES FIX 680 OHM 5% .25 W CARBON FILM	ROH - R-25					
0003A					R35 R37 R46						
0005	00001.000	EA		0972946-0063	RES FIX 820 OHM 5% .25 W CARBON FILM	ROH - R-25					
0005A					R45						
0006	00008.000	EA		0972946-0065	RES FIX 1.0K OHM 5% .25 W CARBON FILM	ROH - R-25					
0006A					R36 R38 R39 R44 R41 R47 R51						
0006H					R60						
0007	00007.000	EA		0972946-0077	RES FIX 3.3K OHM 5% .25 W CARBON FILM	ROH - R-25					
0007A					R27 R34 R40 R43 R48 R45 R52						
0009	00002.000	EA		0972946-0089	RES FIX 10K OHM 5% .25 W CARBON FILM	ROH - R-25					
0008A					R17 R23						
0009	00001.000	EA		0972946-0091	RES FIX 12 K OHM 5% .25 W CARBON FILM	ROH - R-25					
0009A					R24						
0010	00002.000	EA		0972946-0143	RES FIX 1.8M OHM 5% .25 W CARBON FILM	ROH - R-50					
0010A					R21 R33						
0011	00002.000	EA		0972947-0053	RES FIX 330 OHM 5% .5 W CARBON FILM	ROH - R-50					
0011A					R61 R62						
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE AUTO INSERTED PARTS LIST FOR 948235-0001											
APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER REV LM0948235-5001 F											

TEXAS INSTRUMENTS INCORPORATED		DATE 03/13/79		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM0948235-5001		REV F	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0013	00002.000	EA		0539371-0441	RES FIX FILM 3.63K OHMS 1% .13WATT	COR - NC4					
0013A					R14 R27						
0014	00007.000	EA		0539371-0452	RES FIX FILM 4.99K OHM 1% .13 WATT	COR - NC4					
0014A					R3 R5 R7 R12 R25 R53 R58						
0015	00004.000	EA		0539371-0453	RES FIX FILM 5.11K OHMS 1% .13WATT	COR - NC4					
0015A					R15 R19 R28 R32						
0016	00006.000	EA		0539371-0457	RES FIX FILM 5.62K OHMS 1% .13WATT	COR - NC4					
0016A					R16 R18 R29 R31						
0017	00001.000	EA		0539371-0458	RES FIX FILM 5.76K OHMS 1% .13WATT	COR - NC4					
0017A					R56						
0018	00007.000	EA		0539371-0481	RES FIX FILM 10.0K OHM 1% .13 WATT	COR - NC4					
0018A					R10 R26 R50 R54 R55 R57 R59						
0019	00001.000	EA		0539371-0594	RES FIX FILM 150K OHMS 1% .13 WATT	COR - NC4					
0019A					R11						
0020	00002.000	EA		0539371-0611	RES FIX FILM 226K OHMS 1% .13 WATT	COR - NC4					
0020A					R20 R30						
0024	00024.000	EA		0972763-0021	CAP.,FIXED,AXIAL LEAD,.047 UF,+80%, -20%	COR - NC4					
0024A					C1 C3 C5 C7 THRU C25 C29						
0024B					C30						
0024C	00002.000	EA		0972924-0010	CAP FIX TANT SOLID 22 MFD 10% 15 VOLT OPL	-M39003/1-2271					
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE AUTO INSERTED PARTS LIST FOR 948235-0001											
APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER REV LM0948235-5001 F											

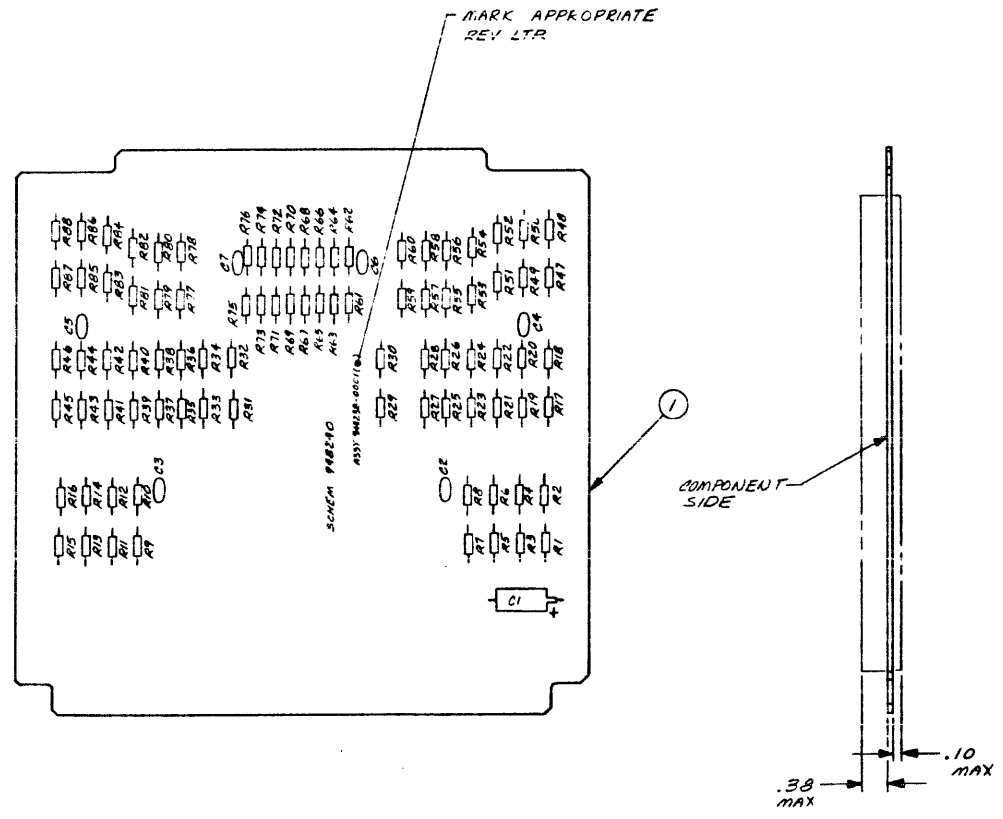
TEXAS INSTRUMENTS INCORPORATED		DATE 03/13/79		LIST OF MATERIAL		PAGE 3 of		PART NUMBER LM0948235-5001		REV F	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0026A					C26 C27						
0031	00001.000	EA		0537938-0001	INTEGRATED CIRCUIT,LOGIC GATE SN75452P	TI -SN75452P					
0031A					U11						
0032	00002.000	EA		0972900-7400	NETWORK SN74LS00N	TI -SN74LS00N					
0032A					U9 U12						
0033	00002.000	EA		0972900-7402	NETWORK SN74LS02N	TI -SN74LS02N					
0033A					U20 U31						
0034	00004.000	EA		0972900-7404	NETWORK SN74LS04N	TI -SN74LS04N					
0034A					U25 U28 U29 U30						
0035	00002.000	EA		0972900-7474	NETWORK SN74LS74N	TI -SN74LS74N					
0035A					U14 U22						
0036	00002.000	EA		0972900-7109	NETWORK SN74LS109N	TI -SN74LS109N					
0036A					U21 U23						
0037	00001.000	EA		0972914-0001	NETWORK-SN74LS27N	TI -SN74LS27N					
0037A					U24						
0038	00001.000	EA		0972688-0001	NETWORK SN74LS164N	TI -SN74LS164N					
0038A					U16						
0039	00001.000	EA		0222272-7407	NETWORK-SN7407N	TI -SN7407N					
0039A					U13						
0040	00001.000	EA		0222272-7400	NETWORK SN7400N	TI -SN7400N					
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE AUTO INSERTED PARTS LIST FOR 948235-0001											
APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER REV LM0948235-5001 F											

TEXAS INSTRUMENTS INCORPORATED		DATE 03/13/79		LIST OF MATERIAL		PAGE 4 of		PART NUMBER LM0948235-5001		REV F	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0040A					U15						
0041	00001.000	EA		0996035-0002	IC,4 BIT COUNTER SN74393N	TI -SN74393N					
0041A					U10						
0043	00001.000	EA		0972999-4049	X NETWORK 4049	-SEE TI DRAWING					
0043A					U6						
0044	00001.000	EA		0996220-0001	IC,MCI4557CP,1 TO 64 BIT SHIFT REGISTER	MUT - MCI4557CP					
0044A					U7						
0046	00005.000	EA		0972932-0001	DIODE,IN914B SWITCHING 75V PIV 75MA 4MS	TI -IN914B					
0046A					CR1 THRU CR9						
0054	00001.000	EA		0972924-0017	CAP FIX TANT SOLID 1.0 MFD 10% 35 VOLT	SPR -1500105X9035A					
0054A					C2						
DRAFTSMAN DATE CED DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE AUTO INSERTED PARTS LIST FOR 948235-0001											
APP'D MGR DATE APP'D PROJECT ENGINEER DATE RELEASED DATE PROJECT NO PART NUMBER REV LM0948235-5001 F											



- NOTES:
- 1 ITEM 7 IN -0001 LM CONSISTS OF COMPONENTS WHICH ARE AUTO INSERTED AND CONTAINED IN THE -0001 LM.
  - 2 R1-R38 (ITEMS 4,5) OMITTED ON -0002.

REVISIONS			
ZONE	LTR	DESCRIPTION	DATE
A		948238-0001 (UNUPDATED)	4-2-78
B		948238-0001 (UNUPDATED)	5-2-78
C		948238-0001 (UNUPDATED)	6-2-78
D		948238-0001 (UNUPDATED)	7-11-78
E		948238-0001 (UNUPDATED) - 948238-0002 (NEW) - 948238-0001 (UNUPDATED) - 948238-0002 (NEW) - 948238-0001 (UNUPDATED) - 948238-0002 (NEW)	7-11-78
F		948238-0001 (UNUPDATED) - 948238-0002 (NEW) - 948238-0001 (UNUPDATED) - 948238-0002 (NEW) - 948238-0001 (UNUPDATED) - 948238-0002 (NEW)	7-11-78



PART NO	DESCRIPTION
948238-0002	TERMINATOR, CABLE CHAIN
948238-0001	AUTO INSERTED PART LIST FOR 948238-0001
948238-0001	SIGNAL TERMINATOR ASSY

REVISION LEVEL

PWB (948239-0001)	A	C	D	E	F
SCHEMATIC (948240-0001)	*	*	A	A	A
ASSY (948238-0001)	*	A	B	C	D

- PROCESSES:
- SOLDER PER F-127, METHOD I, HAND OR F-124
  - MARK PER F-100, METHOD II, CLASS I, HEIGHT .09, COLOR BLACK

QTY REQD	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION

UNLESS OTHERWISE SPECIFIED		UNLESS OTHERWISE SPECIFIED	
REMOVE ALL BURRS AND SHARP EDGES	CONCENTRICITY MACHINED DIAMETERS .010 FIR	DIMENSIONS ARE IN INCHES	TOLERANCES ANGLES ±1°
DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING	IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY	3 PLACE DECIMALS ±.010	2 PLACE DECIMALS ±.02
INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100			

DATE	BY	CHK	ENGR	QA	APVD	CONTRNG
5/12/78						

SIZE	CODE IDENT NO	DRAWING NO
D	96214	948238



949613-9702

TEXAS INSTRUMENTS INCORPORATED		DATE 06/28/78		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 948238-0001		REV F	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0001	00001.000	EA		0948239-0001	PWB, SIGNAL TERMINATOR						
0002	00001.000	EA		0572924-0002	CAP. FIX TANT SOLID 56 MFD 10% 6 VOLT	QPL	-M35033/1-2246				
0002A					C1						
0003	00006.000	EA		0532736-0002	CAP. FIX CERAMIC .02 MF 20/80% 25 VOLT	CFL	- 200J60F2032AC				
0003A					C2 C3 C4 C5 C6 C7						
0006	REF	EA		0948240-9901	SCHEMATIC DIAGRAM, SIGNAL TERMINATOR						
0007	00001.000	EA		0548238-5001	ASSEMBLY PARTS LIST FOR 948238-0001						
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE				
			<i>J.K. [Signature]</i>	06-28-78			SIGNAL TERMINATOR ASSY, COMPLETE				
APPROVED		DATE	APPROVED ENGINEER	DATE	RELEASED	DATE	PROJECT NO.				
							1513				
							PART NUMBER LM 948238-0001				
							REV F				

TEXAS INSTRUMENTS INCORPORATED		DATE 06/28/78		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 948238-0002		REV F	
PRINT ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEASURE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
0001	00001.000	EA		0948239-0001	PWB, SIGNAL TERMINATOR						
0002	00001.000	EA		0572924-0002	CAP. FIX TANT SOLID 56 MFD 10% 6 VOLT	QPL	-M35033/1-2246				
0002A					C1						
0003	00006.000	EA		0532736-0002	CAP. FIX CERAMIC .02 MF 20/80% 25 VOLT	CFL	- 200J60F2032AC				
0003A					C2 C3 C4 C5 C6 C7						
0006	REF	EA		0948240-9901	SCHEMATIC DIAGRAM, SIGNAL TERMINATOR						
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE				
							SIGNAL TERMINATOR ASSY, DAISY CHAIN				
APPROVED		DATE	APPROVED ENGINEER	DATE	RELEASED	DATE	PROJECT NO.				
							PART NUMBER LM 948238-0002				
							REV F				

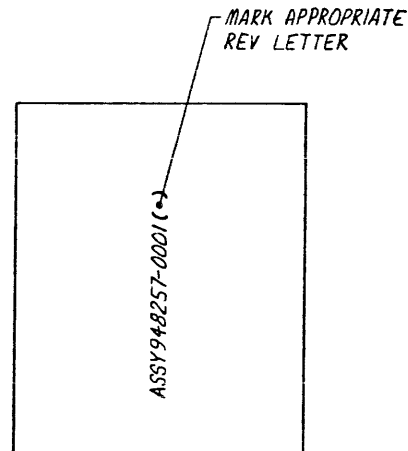
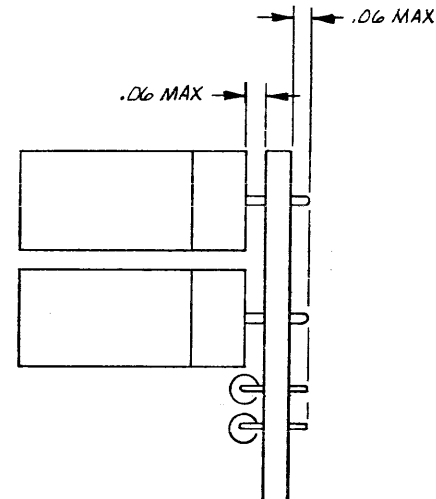
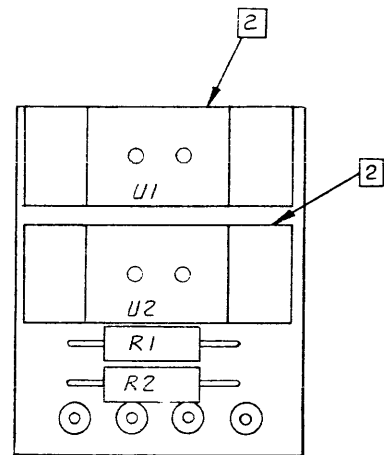
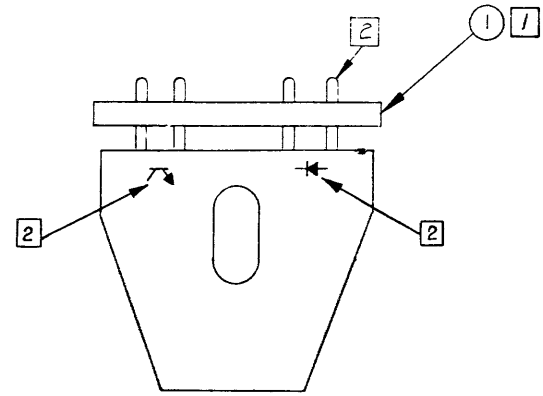


TEXAS INSTRUMENTS INCORPORATED		DATE 06/28/78		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 948238-5001		REV F		
PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS	ORIG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER						
0004	00144.000	EA		0977946-0051	RES FIX 275 OHM 5 % .25 W CARBON FILM	KDH - R-25						
0004A					F1 F3 F5 F7 F9 F11 F13 R15							
0004B					R17 R19 R21 R23 R25 R27 R29							
0004C					R31 R33 R35 R37 R39 R41 F43							
0004D					R45 R47 R49 R51 R53 R55 R57							
0004E					R59 R61 R63 R65 R67 R69 R71							
0004F					R73 R75 R77 R79 R81 R83 R85							
0004G					R87							
0005	00744.000	EA		0972946-0047	RES FIX 180 OHM 5 % .25 W CARBON FILM	FDH - R-25						
0005A					R7 R9 R11 R13 R15 R17 R19							
0005B					R21 R23 R25 R27 R29 R31 R33							
0005C					R35 R37 R39 R41 R43 R45 R47							
0005D					R49 R51 R53 R55 R57 R59 R61							
0005E					R63 R65 R67 R69 R71 R73 R75							
0005F					R77 R79 R81 R83 R85 R87							
0005G					R89							
DRAFTSMAN DATE CDR DRAFTSMAN DATE DESIGN ENGINEER DATE TITLE												
APP'D DATE APP'D PROJECT ENGINEER DATE RELEASE DATE PROJECT NO												
										PART NUMBER LM 948238-5001		REV F



NOTES:

- 1 COMPONENT MOUNT ON CIRCUIT SIDE.
- 2 MOUNT U1,U2 WITH SYMBOLIZATION ON TOP AS SHOWN



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
D-3	A	CN 417885 (C) 20 Comp. Rev. (1) NOTE 2 WAS MOUNT U1,U2 WITH GOLD LEADS ..... TO RIGHT, AS SHOWN (2) ADDED (A1A1A1) TO TITLE BLK (3) ADDED SYMBOLIZATION TO TOP VIEW (4) ADDED REV LEVEL BLK (5) ADDED TEM 4 TO LM	1-14-77	J.R. King
	B	CN 42432 (D) A. O. Bado (1) UPDATED REV LEVEL BLOCK	4-15-77	J.R. King

REV LEVEL	DESCRIPTION	REV	LETTER
	PWB 948258-0001	*	A
	SCHEMATIC 948266-9901	*	*
	ASSY 948257-0001	A	B

- PROCESSES:
1. SOLDER PER F-127, METHOD I
  2. MARK PER F-100, METHOD II, CLASS I, HEIGHT .09, COLOR BLACK

UNLESS OTHERWISE SPECIFIED	
REMOVE ALL BURRS AND SHARP EDGES	
CONCENTRICITY MACHINED DIAMETERS .004 TIR	
DIMENSIONAL LIMITS APPLY BEFORE PLATING	
DRILLED HOLE TOLERANCES	
013 THRU .125	+004 -001
251 THRU .500	+006 -001
126 THRU 250	+005 -001
501 THRU 750	+006 -001
INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED IN MIL-STD-100	

UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
TOLERANCES:	
ANGLES ± 1°	
3 PLACE DECIMALS ± .010	
2 PLACE DECIMALS ± .02	
MATERIAL:	
945211	7513
NEXT ASSY	USED ON
APPLICATION	

QTY REQD	ITEM NO	TEXAS INSTRUMENTS GOVT OR INDUSTRY PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION
-2	-1		

PARTS LIST

DR	DATE	9/3/76
CHK	9/20/76	
ENGR	9/21/76	
APPR	9/27/76	
CONT'D	9/27/76	
DESIGN ACTIVITY RELEASE	9/29/76	
MFG:	Roy Bradley	9-27-76

TEXAS INSTRUMENTS		
INCORPORATED		
Government Products Division		
Dallas, Texas		
TITLE		
PHOTO SENSOR ASSEMBLY (A1A1A1)		
SIZE	CODE IDENT NO	DRAWING NO.
C	96214	948257
SCALE	SHEET	
NON E		



**TEXAS INSTRUMENTS**  
INCORPORATED

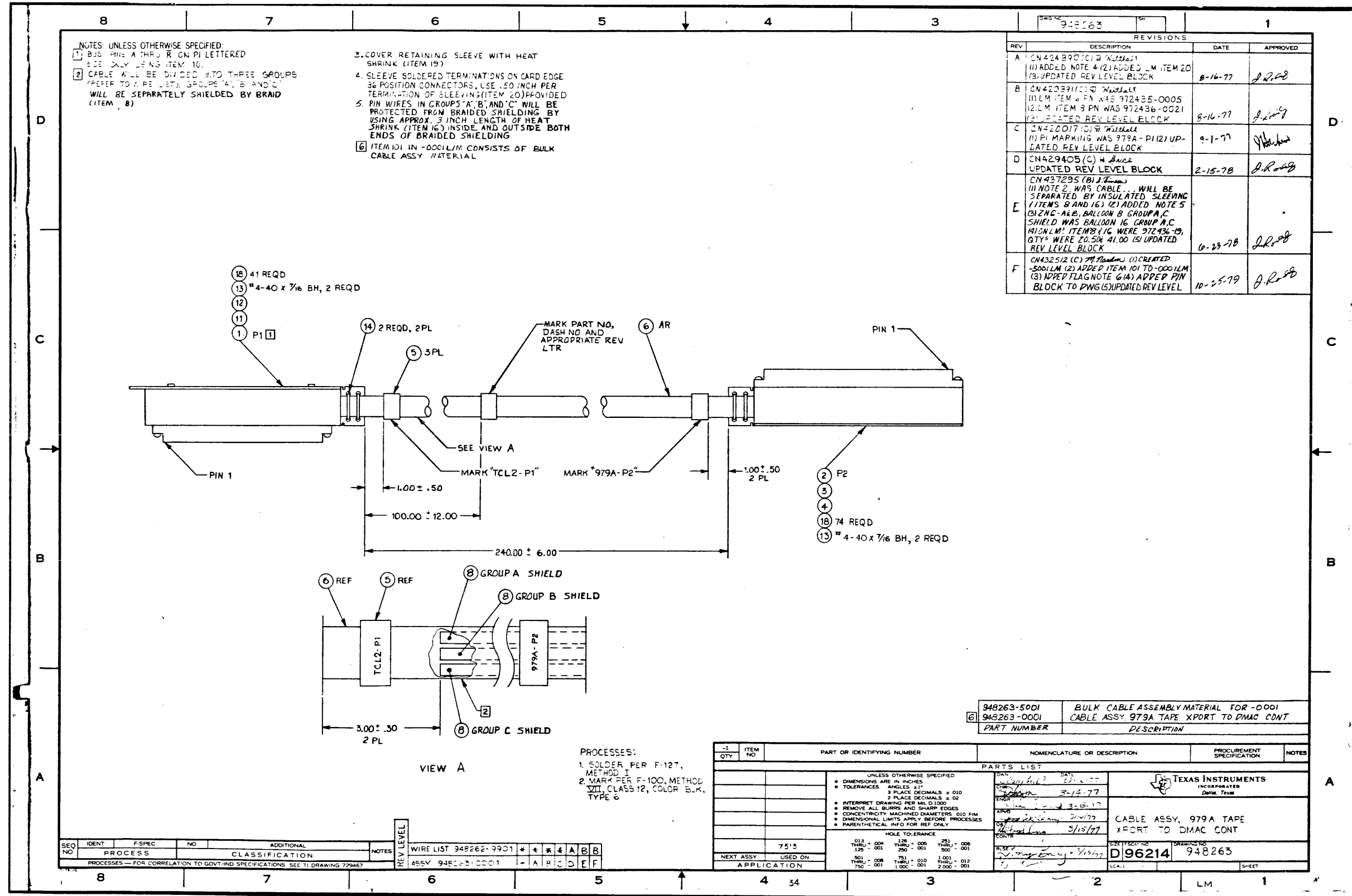
DATE 12/29/76 **LIST OF MATERIAL** PAGE 1 of 1

PART NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF ISSUE	BNG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	0001.000	EA		0948258-0001	PWR. PHOTO SENSOR	
0007	00002.000	EA		0972155-0001	X SENSOR, w/ SOURCE-REFLECTIVE MODULE	
0002A					U1, U2	
0003	00002.000	EA		0972946-0047	RES FIX 120 OHM 5% .25 W CARBON FILM	KIHK - R-25
0003A					R1, R2	
0034	REF	EA		0948266-9901	SCHEMATIC DIAGRAM, PHOTO TAB SENSOR ASSY	

DRAFTSMAN	DATE	ENGR. BAULTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE
		<i>[Signature]</i>	12-30-76			PHOTO SENSOR ASSY
APPROV. ENG.	DATE	APPROV. PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO.
					12/13	

PART NUMBER: **LM 0948257-0001** REV: **B**



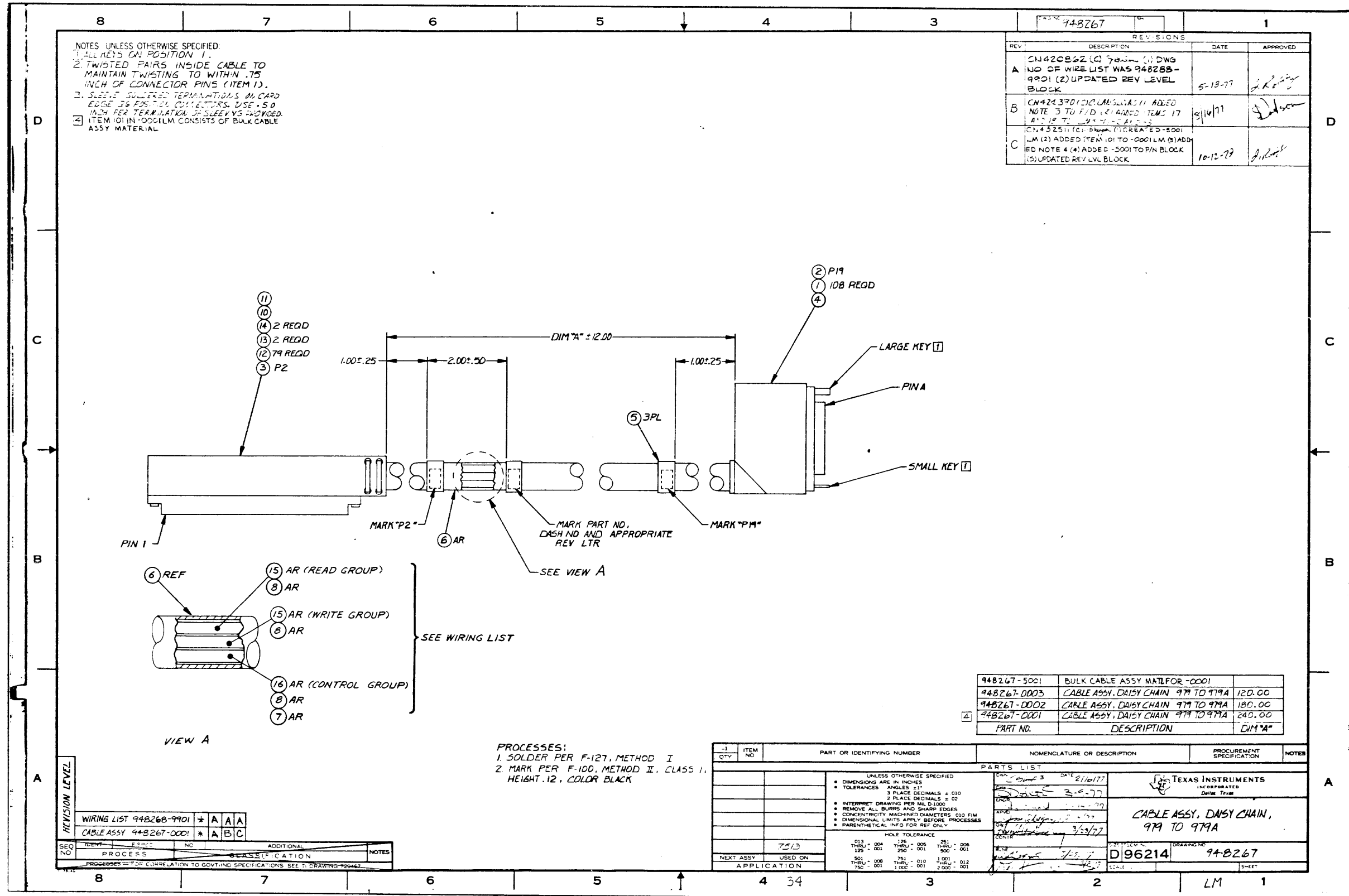


949613-9702

TEXAS INSTRUMENTS INCORPORATED		DATE 08/30/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948263-0001		REV F		
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER						
0001	0001.000	EA		0231447-0800	CONNECTOR, PRINTED CIRCUIT BOARD EDGE	005574- SEE DRAWING						
0001A					P1							
0002	0001.000	EA		0800211-0003	CONNECTOR, ELECTRICAL PWB	3VH -43/1CN5						
0002A					P2							
0003	0001.000	EA		0973583-0001	HOOD, CONNECTOR							
0004	0001.000	EA		0973584-0001	COVER, CONNECTOR							
0011	0001.000	EA		0216138-0001	COVER, CONNECTOR							
0012	0001.000	EA		0216136-0001	HOOD, CONNECTOR							
0015	REF	EA		0948262-9901	WIRING LIST, 979A TAPE EXPORT TO DMAC CONT							
0101	0001.000	EA		0948263-5001	BULK CABLE ASSEMBLY MATERIAL FOR-0001							
DRAFTSMAN		DATE	CHKD DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE					
							CABLE ASSY, 979A TAPE EXPORT TO DMAC CONT					
APPRO. MFG.		DATE	APPRO. PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO.	PART NUMBER		REV		
							7513	LM0948263-0001		F		
T.I. 1284P						34				1/2		

TEXAS INSTRUMENTS INCORPORATED		DATE 08/30/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948263-5001		REV F		
ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER						
0005	0003.000	EA		0418201-0060	STRAP, MARKER, ADJUSTABLE, PLASTIC	UPL-MS-3368-1-9B						
0006	0020.300	FT		0972435-0007	INSUL SLEEVING, 1.0" ID ZIPPER TUBE PVC	ZIP - ZTR-1000-63-2						
0007	00867.000	FT		0966760-2692	WIRE, TWISTED PAIR #26 WHT/RED IPVC	UL - 1472 7STR UL						
0008	00061.500	FT		0416445-0041	WIRE, BRAID 30AWG ANL TND COP 24-4-30	074116-24-4-30						
0009	00040.500	FT		0935170-5299	WIRE, UL 1429, 19 STRD, 18AWG, WHT/RED	-						
0010	00001.000	FT		0411400-0018	WIRE, BARE TINNED, 18AWG, COPPER BUS	IMP -18-630						
0013	00004.000	EA		0572988-0016	SCREW 4-40 X .438 PAN HEAD L&ES							
0014	00004.000	EA		0418212-0040	STRAP, TIEDOWN, ADJUSTABLE, PLASTIC	UPL - MS3367-4-9						
0016	00003.000	FT		0972146-0008	TUBING, 1/2 ID BLACK HEAT SHRINK PVC	003890-PD-135-125C						
0017	00003.000	FT		0935170-5099	WIRE, UL 1429, 19 STRD, 18AWG, WHT/BLK	-						
0018	00115.000	EA		0972053-0002	SLEEVE, SOLDER TAB TERMINAL	RCH --C-704-02						
0015	00001.000	FT		0417177-0005	INSULATION SLEEVING BLK. 750ID X.030THK	RTI -						
0020	00002.500	FT		0410499-0009	INSULATION, SLEEVING #16 NATURAL	UPL - MIL-I-22129						
0021	00000.167	FT		0410499-0011	INSULATION SLEEVING, TEFLON #12 NATURAL							
DRAFTSMAN		DATE	CHKD DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE					
							BULK CABLE ASSEMBLY MATERIAL FOR-0001					
APPRO. MFG.		DATE	APPRO. PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO.	PART NUMBER		REV		
								LM0948263-5001		F		
T.I. 1284P												





NOTES UNLESS OTHERWISE SPECIFIED:  
 1. ALL KEYS ON POSITION 1.  
 2. TWISTED PAIRS INSIDE CABLE TO MAINTAIN TWISTING TO WITHIN .75 INCH OF CONNECTOR PINS (ITEM 13).  
 3. SLEEVE SOLDERED TERMINATIONS ON CARD EDGE IS POSITION COLLECTORS. USE .50 INCH PER TERMINATION IF SLEEVES PROVIDED.  
 4. ITEM 10 IN -0001LM CONSISTS OF BULK CABLE ASSY MATERIAL.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	CN420862 (C) 7-18-77 (1) DWG NO OF WIRE LIST WAS 948288-9901 (2) UPDATED REV LEVEL BLOCK	5-18-77	J. K. [Signature]
B	CN424370 (1) DIMENSIONS 11 ADDED NOTE 3 TO FID. CLAIMED ITEMS 17	8/16/77	[Signature]
C	CN432511 (1) BULK CABLE (1) CREATED -5001 LM (2) ADDED ITEM 101 TO -0001LM (3) ADDED NOTE 4 (4) ADDED -5001 TO PIN BLOCK (5) UPDATED REV LVL BLOCK	10-12-77	[Signature]

PART NO.	DESCRIPTION	DIM 'A'
948267-5001	BULK CABLE ASSY MATFOR -0001	
948267-0003	CABLE ASSY, DAISY CHAIN 979 TO 979A	120.00
948267-0002	CABLE ASSY, DAISY CHAIN 979 TO 979A	180.00
948267-0001	CABLE ASSY, DAISY CHAIN 979 TO 979A	240.00

PROCESSES:  
 1. SOLDER PER F-127, METHOD I  
 2. MARK PER F-100, METHOD II, CLASS 1, HEIGHT .12, COLOR BLACK

REV	NO	DATE	DESCRIPTION
1			WIRING LIST 948268-9901 * A A A
2			CABLE ASSY 948267-0001 * A B C

QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION	NOTES
			UNLESS OTHERWISE SPECIFIED * DIMENSIONS ARE IN INCHES * TOLERANCES ANGLES ±1° * 3 PLACE DECIMALS ± 0.10 * 2 PLACE DECIMALS ± .02 * INTERPRET DRAWING PER MIL D-1000 * REMOVE ALL BURRS AND SHARP EDGES * CONCENTRICITY MACHINED DIAMETERS 0.10 FIM * DIMENSIONAL LIMITS APPLY BEFORE PROCESSES * PARENTHETICAL INFO FOR REF ONLY		
			HOLE TOLERANCE 013 - .004 THRU .126 - .005 THRU .251 - .006 THRU .125 - .001 THRU .250 - .001 THRU .500 - .001		
			501 - .008 THRU .751 - .010 THRU .752 - .001 THRU 1.000 - .001		
			APPLICATION		

DATE: 2/10/77  
 3-5-77  
 3/23/77

TEXAS INSTRUMENTS  
 INCORPORATED  
 Dallas, Texas

CABLE ASSY, DAISY CHAIN,  
 979 TO 979A

DRAWING NO: D96214  
 94-8267

SCALE: LM

SHEET



949613-9702

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948267-0001		REV C	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
J002	00001.000	EA		0231257-0050	CONNECTOR- PLUG 120PIN WIRE CRIMP CONT-	-SEE DRAWING			
0002A					P19				
0003	00001.000	EA		0800211-0003	CONNECTOR, ELECTRICAL PWB	3VH	-40/LCN5		
0003A					P2				
0004	00002.000	EA		0231257-0052	CONNECTOR- COVER ASSY,120PIN ELCO	-SEE DRAWING			
0009	REF	EA		0948268-9901	WIRING LIST,979 TO 979A DAISY CHAIN				
0010	00001.000	EA		0973583-0001	HOOD,CONNECTOR				
0011	00001.000	EA		0973584-0001	COVER,CONNECTOR				
0101	00001.000	EA		0948267-5001	BULK CABLE ASSEMBLY MATERIAL FOR-0001				

DRAFTSMAN: J.R. [Signature] DATE: 9-10-79  
 TITLE: CABLE ASSY,DAISY CHAIN,979 TO 979A,20FT  
 PROJECT NO: 7513  
 PART NUMBER: LM0948267-0001  
 REV: C

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948267-0002		REV C	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
0001	00108.000	EA		0227919-0002	CONTACT-REEL	ELC -60-8017-0323-0			
0002	00001.000	EA		0231257-0050	CONNECTOR- PLUG 120PIN WIRE CRIMP CONT-	-SEE DRAWING			
0002A					P19				
0003	00001.000	EA		0800211-0003	CONNECTOR, ELECTRICAL PWB	3VH	-40/LCN5		
0003A					P2				
0004	00002.000	EA		0231257-0052	CONNECTOR- COVER ASSY,120PIN ELCO	-SEE DRAWING			
0005	00003.000	EA		0418201-0060	STRAP,MARKER,ADJUSTABLE,PLASTIC	QPL-MS-3368-1-98			
0006	00015.000	FT		0236303-1000	TUBING ZIPPER BLK 1 IN DIA W/ OVERLAP	ZIP -2TZ-1000-GP-20			
0007	00032.000	FT		0538347-5299	WIRE HOOKUP 8-18 AWG 19 STR RD/WH	JUD - MH0203			
0008	00810.000	FT		0966760-2495	WIRE,TWISTED PAIR #24 WHT/GRN IPVC	UL - 1472 75TR ULG			
0009	REF	EA		0948268-9901	WIRING LIST,979 TO 979A DAISY CHAIN				
0010	00001.000	EA		0973583-0001	HOOD,CONNECTOR				
0011	00001.000	EA		0973584-0001	COVER,CONNECTOR				
0012	00079.000	EA		0972053-0002	SLEEVE,SOLDER,TAB TERMINAL	RCH -C-704-02			
0013	00002.000	EA		0972986-0016	SCREW 10-32X1.50 PAN HD CRES				
0014	00002.000	EA		0418212-0001	STRAP, TIEDOWN, ADJUSTABLE, BLACK				
0015	00015.000	FT		0972436-0019	INSULATION SLEEVING PVC CHLORIDE	LFS - HT-105C-24			
0016	00015.000	FT		0972436-0021	INSULATION SLEEVING 5/8 X .625	MKL - HT-105C-5/8			
0017	00002.333	FT		0410499-0010	INSULATION SLEEVING,TEFLON #14 NATURAL	QPL -81349			
0018	00000.167	FT		0410499-0011	INSULATION SLEEVING,TEFLON #12 NATURAL				

DRAFTSMAN: [Signature] DATE: 09/06/79  
 TITLE: CABLE ASSY,DAISY CHAIN,979 TO 979A,15FT  
 PROJECT NO: [Blank]  
 PART NUMBER: LM0948267-0002  
 REV: C

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948267-0003		REV C	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
0001	00108.000	EA		0227919-0002	CONTACT-REEL	ELC -60-8017-0323-0			
0002	00001.000	EA		0231257-0050	CONNECTOR- PLUG 120PIN WIRE CRIMP CONT-	-SEE DRAWING			
0002A					P19				
0003	00001.000	EA		0800211-0003	CONNECTOR, ELECTRICAL PWB	3VH	-40/LCN5		
0003A					P2				
0004	00002.000	EA		0231257-0052	CONNECTOR- COVER ASSY,120PIN ELCO	-SEE DRAWING			
0005	00003.000	EA		0418201-0060	STRAP,MARKER,ADJUSTABLE,PLASTIC	QPL-MS-3368-1-98			
0006	00015.000	FT		0236303-1000	TUBING ZIPPER BLK 1 IN DIA W/ OVERLAP	ZIP -2TZ-1000-GP-20			
0007	00022.000	FT		0538347-5299	WIRE HOOKUP 8-18 AWG 19 STR RD/WH	JUD - MH0203			
0008	00540.000	FT		0966760-2495	WIRE,TWISTED PAIR #24 WHT/GRN IPVC	UL - 1472 75TR ULG			
0009	REF	EA		0948268-9901	WIRING LIST,979 TO 979A DAISY CHAIN				
0010	00001.000	EA		0973583-0001	HOOD,CONNECTOR				
0011	00001.000	EA		0973584-0001	COVER,CONNECTOR				
0012	00079.000	EA		0972053-0002	SLEEVE,SOLDER,TAB TERMINAL	RCH -C-704-02			
0013	00002.000	EA		0972986-0016	SCREW 10-32X1.50 PAN HD CRES				
0014	00002.000	EA		0418212-0001	STRAP, TIEDOWN, ADJUSTABLE, BLACK				
0015	00010.000	FT		0972436-0019	INSULATION SLEEVING PVC CHLORIDE	LFS - HT-105C-24			
0016	00010.000	FT		0972436-0021	INSULATION SLEEVING 5/8 X .625	MKL - HT-105C-5/8			
0017	00002.333	FT		0410499-0010	INSULATION SLEEVING,TEFLON #14 NATURAL	QPL -81349			
0018	00000.167	FT		0410499-0011	INSULATION SLEEVING,TEFLON #12 NATURAL				

DRAFTSMAN: [Signature] DATE: 09/06/79  
 TITLE: CABLE ASSY,DAISY CHAIN,979 TO 979A,10FT  
 PROJECT NO: [Blank]  
 PART NUMBER: LM0948267-0003  
 REV: C

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM0948267-5001		REV C	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
0001	00108.000	EA		0227919-0002	CONTACT-REEL	ELC -60-8017-0323-0			
0005	00003.000	EA		0418201-0060	STRAP,MARKER,ADJUSTABLE,PLASTIC	QPL-MS-3368-1-98			
0006	00020.000	FT		0236303-1000	TUBING ZIPPER BLK 1 IN DIA W/ OVERLAP	ZIP -2TZ-1000-GP-20			
0007	00042.000	FT		0935170-5299	WIRE,UL 1425,19 STRD,18AWG,WHT/RED	-			
0008	01080.000	FT		0966760-2495	WIRE,TWISTED PAIR #24 WHT/GRN IPVC	UL - 1472 75TR ULG			
0012	00079.000	EA		0972053-0002	SLEEVE,SOLDER,TAB TERMINAL	RCH -C-704-02			
0013	00002.000	EA		0972986-0016	SCREW 10-32X1.50 PAN HD CRES				
0014	00002.000	EA		0418212-0001	STRAP, TIEDOWN, ADJUSTABLE, BLACK				
0015	00020.000	FT		0972436-0019	INSULATION SLEEVING PVC CHLORIDE	LFS - HT-105C-24			
0016	00020.000	FT		0972436-0021	INSULATION SLEEVING 5/8 X .625	MKL - HT-105C-5/8			
0017	00002.333	FT		0410499-0010	INSULATION SLEEVING,TEFLON #14 NATURAL	QPL -81349			
0018	00000.167	FT		0410499-0011	INSULATION SLEEVING,TEFLON #12 NATURAL				

DRAFTSMAN: [Signature] DATE: 09/05/79  
 TITLE: BULK CABLE ASSEMBLY MATERIAL FOR-0001  
 PROJECT NO: [Blank]  
 PART NUMBER: LM0948267-5001  
 REV: C





949613-9702

TEXAS INSTRUMENTS INCORPORATED

DATE 08/30/79 LIST OF MATERIAL PAGE 1 of 1

PART NUMBER LM0948269-3331 REV B

PRINT ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0002A	J0001.000	EA		J000211-0003	CONNECTOR, ELECTRICAL PWB P1	3VH -40/1CN5
0004	J0001.000	EA		0231257-0052	CONNECTOR- COVER ASSY,120PIN ELCC	-SEE DRAWING
J009	KEF	EA		0948270-9901	WIRING LIST,DAISY CHAIN,979A TO 979	
J010	J0001.000	EA		J973583-0001	HOOD,CONNECTOR	
J011	J0001.000	EA		J573584-0001	COVER,CONNECTOR	
0101	00001.000	EA		0948269-5001	BULK CABLE ASSEMBLY MATERIAL FOR-0001	

DRAFTSMAN: L. R. ... DATE: 9-6-79 TITLE: CABLE ASSY,DAISY CHAIN,979A TO 979,20FT

APPROVED: ... DATE: ... PROJECT NO: 7513 PART NUMBER: LM0948269-3331 REV B

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TEXAS INSTRUMENTS INCORPORATED

DATE 08/30/79 LIST OF MATERIAL PAGE 1 of 1

PART NUMBER LM0948269-0002 REV B

PRINT ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J001	J0108.000	EA		J227919-0002	CONTACT-REEL	ELC -60-8017-0323-0
J002	J0001.000	EA		J000211-0003	CONNECTOR, ELECTRICAL PWB P1	3VH -40/1CN5
0002A					P1	
0003	00001.000	EA		0231257-0051	CONNECTOR- FECP,120PIN WIRE CRIMP CONT.	-SEE DRAWING
J003A					P18	
0004	J0001.000	EA		0231257-0052	CONNECTOR- COVER ASSY,120PIN ELCC	-SEE DRAWING
0005	00003.000	EA		J418201-0003	STRAP,MARKER,ADJUSTABLE,PLASTIC	QPL-MS-3368-1-98
0006	00015.000	FT		0236303-1000	TUBING ZIPPER BLK 1 IN DIA W/ OVERLAP	ZIP -2TZ-1000-GP-20
0007	00032.000	FT		0538347-5295	WIRE HOOKUP B-18 AWG 15 STR RD/WH	JUD - MH0203
J008	J0810.000	FT		0966760-2495	WIRE,TWISTED PAIR #24 WHT/GRN IPVC	UL - 1472 7STR UL6
0009	KEF	EA		0948270-9901	WIRING LIST,DAISY CHAIN,979A TO 979	
0010	00001.000	EA		0973583-0001	HOOD,CONNECTOR	
0011	00001.000	EA		0973584-0001	COVER,CONNECTOR	
0012	J0079.000	EA		0972053-0002	SLEEVE,SOLDER,TAB TERMINAL	KCH --C-704-02
0013	J0002.000	EA		0972986-0016	SCREW 10-32X1.50 PAN HD CRCS	
0014	00002.000	EA		0418212-0001	STRAP, TIEDOWN, ADJUSTABLE, BLACK	
0015	J0015.000	FT		J572436-0015	INSULATION SLEEVING PVL CHLORIDE	LFS - HT-105C-24
0016	00015.000	FT		0972436-0021	INSULATION SLEEVING 5/8 X .625	MKL - HT-105C-5/8
J017	00002.333	FT		J410499-0010	INSULATION SLEEVING,TEFLON #14 NATURAL	QPL -81345
J018	00000.167	FT		J410499-0011	INSULATION SLEEVING,TEFLON #12 NATURAL	

DRAFTSMAN: ... DATE: ... TITLE: CABLE ASSY,DAISY CHAIN,979A TO 979,15FT

APPROVED: ... DATE: ... PROJECT NO: ... PART NUMBER: LM0948269-0002 REV B

TEXAS INSTRUMENTS INCORPORATED

DATE 08/30/79 LIST OF MATERIAL PAGE 1 of 1

PART NUMBER LM0948269-0003 REV B

PRINT ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
J001	J0108.000	EA		J227919-0002	CONTACT-REEL	ELC -60-8017-0323-0
J002	J0001.000	EA		J000211-0003	CONNECTOR, ELECTRICAL PWB P1	3VH -40/1CN5
0002A					P1	
0003	00001.000	EA		0231257-0051	CONNECTOR- FECP,120PIN WIRE CRIMP CONT.	-SEE DRAWING
J003A					P18	
0004	J0001.000	EA		0231257-0052	CONNECTOR- COVER ASSY,120PIN ELCC	-SEE DRAWING
0005	00003.000	EA		J418201-0003	STRAP,MARKER,ADJUSTABLE,PLASTIC	QPL-MS-3368-1-98
0006	00010.000	FT		0236303-1000	TUBING ZIPPER BLK 1 IN DIA W/ OVERLAP	ZIP -2TZ-1000-GP-20
0007	J0022.000	FT		0538347-5295	WIRE HOOKUP B-18 AWG 15 STR RD/WH	JUD - MH0203
J008	J0583.000	FT		0966760-2495	WIRE,TWISTED PAIR #24 WHT/GRN IPVC	UL - 1472 7STR UL6
0009	KEF	EA		0948270-9901	WIRING LIST,DAISY CHAIN,979A TO 979	
0010	00001.000	EA		0973583-0001	HOOD,CONNECTOR	
J011	J0001.000	EA		0973584-0001	COVER,CONNECTOR	
0012	00079.000	EA		0972053-0002	SLEEVE,SOLDER,TAB TERMINAL	KCH --C-704-02
0013	J0002.000	EA		0972986-0016	SCREW 10-32X1.50 PAN HD CRCS	
0014	00002.000	EA		0418212-0001	STRAP, TIEDOWN, ADJUSTABLE, BLACK	
0015	J0010.000	FT		0972436-0015	INSULATION SLEEVING PVL CHLORIDE	LFS - HT-105C-24
J016	J0010.000	FT		0972436-0021	INSULATION SLEEVING 5/8 X .625	MKL - HT-105C-5/8
J017	J0002.333	FT		J410499-0010	INSULATION SLEEVING,TEFLON #14 NATURAL	QPL -81345
J018	00000.167	FT		J410499-0011	INSULATION SLEEVING,TEFLON #12 NATURAL	

DRAFTSMAN: ... DATE: ... TITLE: CABLE ASSY,DAISY CHAIN,979A TO 979,10FT

APPROVED: ... DATE: ... PROJECT NO: ... PART NUMBER: LM0948269-0003 REV B

TEXAS INSTRUMENTS INCORPORATED

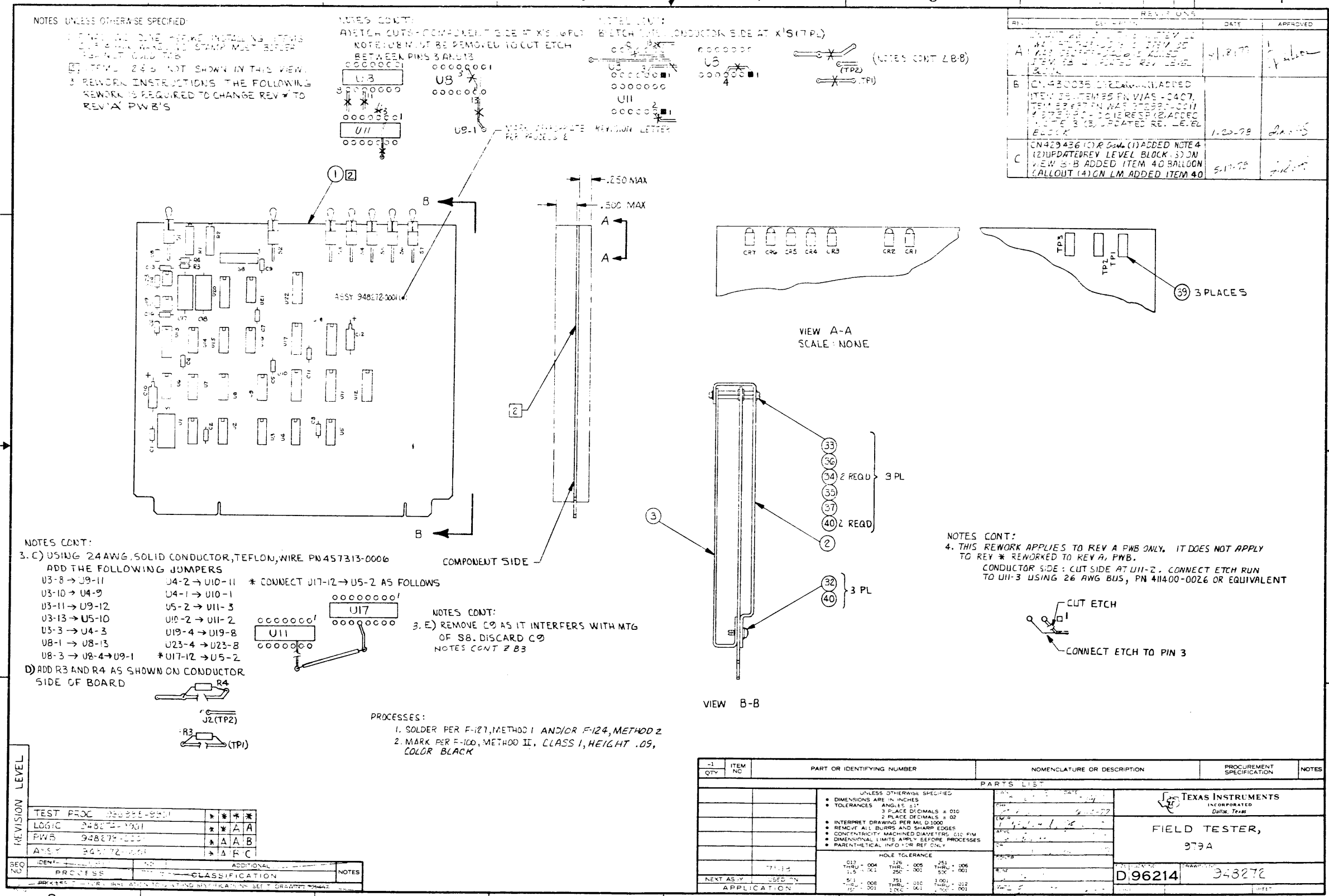
DATE 08/30/79 LIST OF MATERIAL PAGE 1 of 1

PART NUMBER LM0948269-5001 REV B

PRINT ITEM NUMBER	QUANTITY FOR ASSEMBLY	UNIT OF ISSUE	DWG SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00108.000	EA		J227919-0002	CONTACT-REEL	ELC -60-8017-0323-0
J003	00001.000	EA		0231257-0051	CONNECTOR- FECP,120PIN WIRE CRIMP CONT.	-SEE DRAWING
J003A					P18	
J005	J0003.000	EA		J418201-0003	STRAP,MARKER,ADJUSTABLE,PLASTIC	QPL-MS-3368-1-98
J006	00020.000	FT		0236303-1000	TUBING ZIPPER BLK 1 IN DIA W/ OVERLAP	ZIP -2TZ-1000-GP-20
0007	00042.000	FT		0935170-5299	WIRE,UL 1429,19 STRD,18AWG,WHT/RED	
J008	J1080.000	FT		0966760-2495	WIRE,TWISTED PAIR #24 WHT/GRN IPVC	UL - 1472 7STR UL6
J012	J0079.000	EA		0972053-0002	SLEEVE,SOLDER,TAB TERMINAL	KCH --C-704-02
0013	J0002.000	EA		0972986-0016	SCREW 10-32X1.50 PAN HD CRCS	
0014	J0002.000	EA		J418212-0001	STRAP, TIEDOWN, ADJUSTABLE, BLACK	
0015	00020.000	FT		0972436-0015	INSULATION SLEEVING PVL CHLORIDE	LFS - HT-105C-24
J016	J0020.000	FT		0972436-0021	INSULATION SLEEVING 5/8 X .625	MKL - HT-105C-5/8
J017	J0002.333	FT		J410499-0010	INSULATION SLEEVING,TEFLON #14 NATURAL	QPL -81345
J018	00000.167	FT		J410499-0011	INSULATION SLEEVING,TEFLON #12 NATURAL	

DRAFTSMAN: ... DATE: ... TITLE: BULK CABLE ASSEMBLY MATERIAL FOR-0001

APPROVED: ... DATE: ... PROJECT NO: ... PART NUMBER: LM0948269-5001 REV B





TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM948272-0001		REV C	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
0001	10001.000	EA		0543273-1001	PRG, FIELD TESTER				
0002	10001.000	EA		0936947-0001	COVER, FRONT				
0003	10001.000	EA		0936988-0001	COVER, SIDE				
0004	10001.000	EA		0996359-0001	OSCILLATOR CRYSTAL, 12.000 MHZ	MUT - K-1170-A			
0004A					Y1				
0005	10003.000	EA		0222222-7474	NETWORK SN7474N	-SN7474N			
0005A					U1, U6, U7				
0006	10002.000	EA		0222222-7432	NETWORK SN7432N	-SN7432N			
0006A					U2, U9				
0007	10004.000	EA		0222222-7402	NETWORK SN7402N	TI - -SN7402N			
0007A					U3, U15, U16, U21				
0008	10002.000	EA		0222222-7408	NETWORK-SN7408N				
0008A					U5, U8				
0009	10001.000	EA		0222222-7400	NETWORK SN7400N	-SN7400N			
0009A					U10				
0010	10001.000	EA		0972159-7279	NETWORK, QUADRUPLE S-R LATCH	TI - -SN74279N			
0010A					U13				
0011	10001.000	EA		0972999-4049	X NETWORK 4049	-SEE TI DRAWING			
0011A					U11				
0012	10001.000	EA		0103118-0007	RESISTOR, FIXED-ARRAY 680 OHMS 2%	011213-16A581			
DRAFTSMAN: DATE: CVD DRAFTSMAN: DATE: DESIGN ENGINEER: DATE: TITLE: FIELD TESTER, 979A APD MFG: DATE: APD PROJECT ENGINEER: DATE: RELEASED: DATE: PROJECT NO: 7513 PART NUMBER: LM948272-0001 REV: C									

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 2 of		PART NUMBER LM948272-0001		REV C	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
0012A					U12				
0013	10001.000	EA		0972337-4330	NETWORK, 33K 2% RES 16 PIN, 8 ELEMENT	073138-804-3-P37K			
0013A					U13				
0014	10001.000	EA		0222222-7436	NETWORK SN7436N				
0014A					U14				
0015	10002.000	EA		0403118-0012	RESISTOR, FIXED-ARRAY 3.3K 2%	011213-16A332			
0015A					U17, U20				
0016	10001.000	EA		0996223-0001	IC, MC145576P, 1 TO 64 BIT SHIFT REGISTER	MUT - MC145576P			
0016A					U18				
0017	10002.000	EA		0972188-0001	NETWORK, NE555V, MONOLITHIC TIMING, LINEAR	ST - NE555V			
0017A					U19, U23				
0018	10001.000	EA		0972337-4100	NETWORK, RES 16 PIN 8 ELEMENT - 1000.00 OHMS	BFC - 898-3-R1.0K			
0018A					U22				
0019	10001.000	EA		0972763-0001	CAP, FIXED, AXIAL LEAD, .047 UF, +80%, -20%				
0019A					C1, C2, C3, C4, C5, C6, C7, C8, C9,				
0019B					C11				
0020	10002.000	EA		0972974-0010	CAP FIX TANT SOLID 22 MFD 10 & 15 VOLT	UPI - M39003/1-2271			
0020A					C10, C12				
0021	10004.000	EA		0972763-0013	CAP, FIXED .010UF 50 VOLTS	004272-MC105F1032			
0021A					C13, C14, C15, C16				
DRAFTSMAN: DATE: CVD DRAFTSMAN: DATE: DESIGN ENGINEER: DATE: TITLE: FIELD TESTER, 979A APD MFG: DATE: APD PROJECT ENGINEER: DATE: RELEASED: DATE: PROJECT NO: PART NUMBER: LM948272-0001 REV: C									

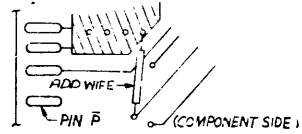
TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 3 of		PART NUMBER LM948272-0001		REV C	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
0022	10002.000	EA		0972974-0006	CAP FIX TANT SOLID 39 MFD 10 & 10 VOLT	QPL - M39003/1-2259			
0022A					C17, C18				
0023	10003.000	EA		0672547-0001	DIODE, LED 540-0103 50 MA 3 V	DIA - 550-0103			
0023A					CR1, CR2, CR3, CR4, CR5, CR6, CR7				
0024	10002.000	EA		0539795-0012	RES VAR CERMET 50 K OHMS 10 & .75 WATT	BOU - 3363P-1-503			
0024A					R1, R2				
0025	10005.000	EA		0996574-0007	Toggle SWITCH, SPDT, PC RIGHT ANGLE, VERT	039353-7103-4-9Y-AV-Q			
0025A					S1, S2, S3, S4, S7				
0026	10001.000	EA		0996574-0003	Toggle SWITCH, SPDT, PC RIGHT ANGLE, VERT	039353-7105-4-9Y-AV-Q			
0026A					S5				
0027	10001.000	EA		0996574-0001	Toggle SWITCH, SPDT, PC RIGHT ANGLE, VERT	009353-7101-4-9Y-AV-Q			
0027A					S6				
0028	10001.000	EA		0972547-0010	SWITCH, SLIDE-SPST, DIP 13 SWITCHES	SEE - TI DRAWING			
0028A					S8				
0029	REF	EA		0948274-9901	LOGIC DIAGRAM, FIELD TESTER				
0030	REF	EA		0936985-9901	TEST PROCEDURE, FIELD TESTER				
0031	REF	EA		0936986-9901	OPERATING PROCEDURE, FIELD TESTER				
0032	10003.000	EA		0972363-0406	SCREW, PLASTITE, 4-20X3/32(SLOT PAN HD)				
0033	10003.000	EA		0972988-0012	SCREW 4-40 X .188 PAN HEAD CPES				
0034	10006.000	EA		0411100-0070	LOCKWASHER #6 INTERNAL TIGHT CRES	QPL - M53533-70			
DRAFTSMAN: DATE: CVD DRAFTSMAN: DATE: DESIGN ENGINEER: DATE: TITLE: FIELD TESTER, 979A APD MFG: DATE: APD PROJECT ENGINEER: DATE: RELEASED: DATE: PROJECT NO: PART NUMBER: LM948272-0001 REV: C									

TEXAS INSTRUMENTS INCORPORATED		LIST OF MATERIAL		PAGE 4 of		PART NUMBER LM948272-0001		REV C	
REV. ITEM NUMBER	QUANTITY PER ASSEMBLY	UNIT OF ISSUE	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER			
0035	10003.000	EA		0532353-0435	NUT, SLEEVE-CRES	069494-130-SS-0440-7			
0036	10003.000	EA		0532348-0401	STUD, EXTENSION-CRES				
0037	10003.000	EA		0972988-0014	SCREW 4-40 X .250 PAN HEAD CPES				
0038	10002.000	EA		0972974-0079	RES, FIX, 470 OHM, 5% 0.25 W, CARBON COMP				
0038A					R3, R4				
0039	10003.000	EA		0232163-0000	TIP JACK, PCH MOUNTING, RED	074970-SEE DRAWING			
0039A					TP1, TP2, TP3				
0040	10009.000	EA		0418622-0011	WASHER #4 FLAT	QPL - AN960C4L			
DRAFTSMAN: DATE: CVD DRAFTSMAN: DATE: DESIGN ENGINEER: DATE: TITLE: FIELD TESTER, 979A APD MFG: DATE: APD PROJECT ENGINEER: DATE: RELEASED: DATE: PROJECT NO: PART NUMBER: LM948272-0001 REV: C									

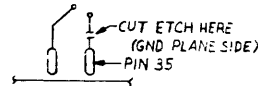


6 MATERIAL ITEMS 516 TO BE CUT AT CENTER OF 2 INCH FLAT SECTION, OVERALL LENGTH TO BE AS SHOWN IN DIMENSIONAL TABLE. DIMENSION A IS NOMINAL AND IS FOR REFERENCE ONLY.

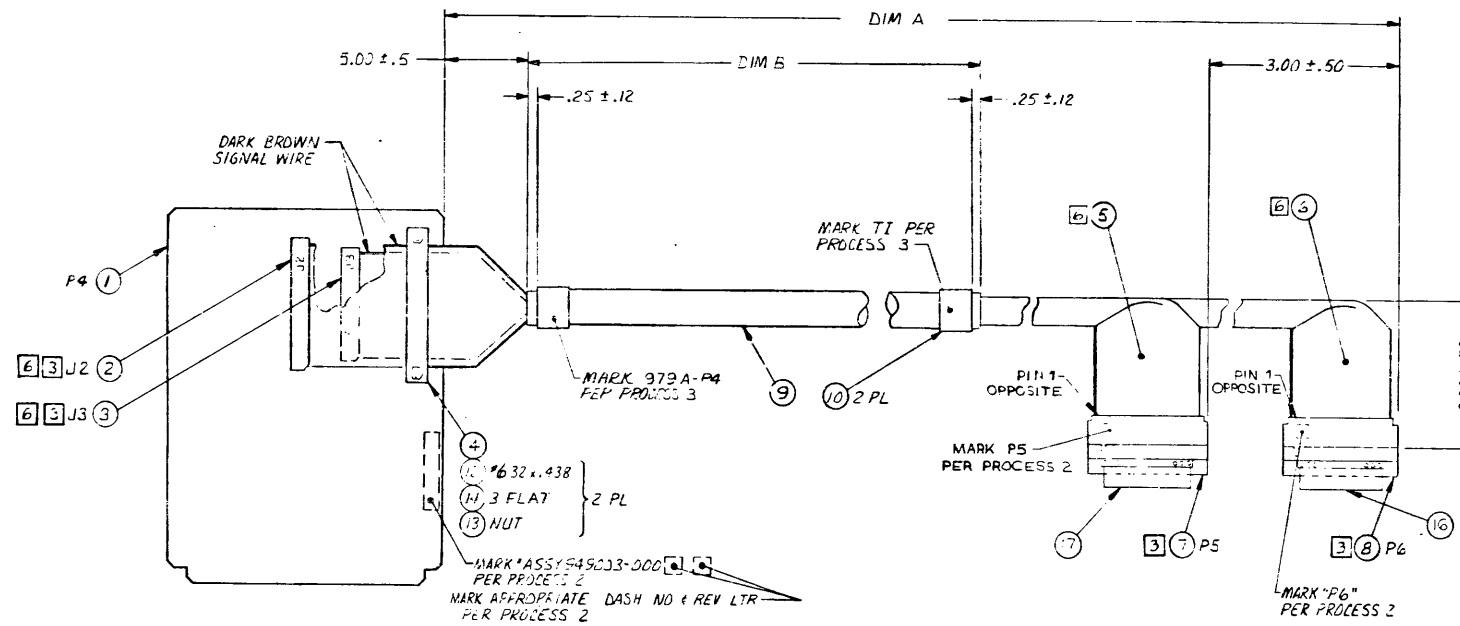
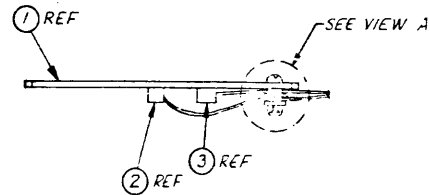
NOTES CONT:  
5. B SOLDER 30 GAUGE INSULATED WIRE AS SHOWN BELOW:



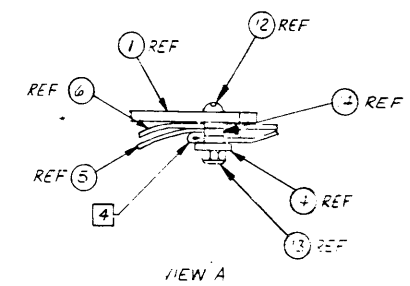
5 REWORK INSTRUCTIONS FOR B AND BELOW REV. LEVEL PWB (948994-1).  
A. CUT ETCH BETWEEN PIN P1-35 AND THE ETCH FEED THROUGH AS BELOW:



NOTES:  
1. FOR ASSY INSTRUCTIONS SEE SI 949003  
2. CONNECTION FOR J2 TO P5 AND J3 TO P6 IS ONE TO ONE. EXAMPLE:  
PIN 1 OF J2 TO PIN 1 OF P5...  
PIN 1 OF J3 TO PIN 1 OF P6...  
3. J2, J3, P5 AND P6 ARE TO BE CONNECTED IN UNTWISTED AREAS OF FLAT CABLE (ITEM 5 AND 6)  
4. FOLD EXCESS CABLE (ITEM 5), IF NECESSARY, UNDER STRAIN RELIEF (ITEM 4) IN ORDER TO MEET FINAL CABLE LENGTH TOLERANCES



ZONE	LTR	REV	DESCRIPTION	DATE	APPROVED
A			CN419264(B) 4 WIRE TO ADD NOTE 5 (2) ADDED REV LEVEL BLOCK	1-17-79	[Signature]
B			CN424816(C) 4 WIRE TO ITEM 5 QTY WAS 15 ITEM 6 QTY WAS 15 ITEM 9 QTY WAS 142 DIM A WAS 175.00 DIM B WAS 230.00 DIM C WAS 175.00 DIM D WAS 230.00 DIM E WAS 175.00 DIM F WAS 230.00 DIM G WAS 175.00 DIM H WAS 230.00 DIM I WAS 175.00 DIM J WAS 230.00 DIM K WAS 175.00 DIM L WAS 230.00 DIM M WAS 175.00 DIM N WAS 230.00 DIM O WAS 175.00 DIM P WAS 230.00 DIM Q WAS 175.00 DIM R WAS 230.00 DIM S WAS 175.00 DIM T WAS 230.00 DIM U WAS 175.00 DIM V WAS 230.00 DIM W WAS 175.00 DIM X WAS 230.00 DIM Y WAS 175.00 DIM Z WAS 230.00 DIM AA WAS 175.00 DIM AB WAS 230.00 DIM AC WAS 175.00 DIM AD WAS 230.00 DIM AE WAS 175.00 DIM AF WAS 230.00 DIM AG WAS 175.00 DIM AH WAS 230.00 DIM AI WAS 175.00 DIM AJ WAS 230.00 DIM AK WAS 175.00 DIM AL WAS 230.00 DIM AM WAS 175.00 DIM AN WAS 230.00 DIM AO WAS 175.00 DIM AP WAS 230.00 DIM AQ WAS 175.00 DIM AR WAS 230.00 DIM AS WAS 175.00 DIM AT WAS 230.00 DIM AU WAS 175.00 DIM AV WAS 230.00 DIM AW WAS 175.00 DIM AX WAS 230.00 DIM AY WAS 175.00 DIM AZ WAS 230.00 DIM BA WAS 175.00 DIM BB WAS 230.00 DIM BC WAS 175.00 DIM BD WAS 230.00 DIM BE WAS 175.00 DIM BF WAS 230.00 DIM BG WAS 175.00 DIM BH WAS 230.00 DIM BI WAS 175.00 DIM BJ WAS 230.00 DIM BK WAS 175.00 DIM BL WAS 230.00 DIM BM WAS 175.00 DIM BN WAS 230.00 DIM BO WAS 175.00 DIM BP WAS 230.00 DIM BQ WAS 175.00 DIM BR WAS 230.00 DIM BS WAS 175.00 DIM BT WAS 230.00 DIM BU WAS 175.00 DIM BV WAS 230.00 DIM BW WAS 175.00 DIM BX WAS 230.00 DIM BY WAS 175.00 DIM BZ WAS 230.00 DIM CA WAS 175.00 DIM CB WAS 230.00 DIM CC WAS 175.00 DIM CD WAS 230.00 DIM CE WAS 175.00 DIM CF WAS 230.00 DIM CG WAS 175.00 DIM CH WAS 230.00 DIM CI WAS 175.00 DIM CJ WAS 230.00 DIM CK WAS 175.00 DIM CL WAS 230.00 DIM CM WAS 175.00 DIM CN WAS 230.00 DIM CO WAS 175.00 DIM CP WAS 230.00 DIM CQ WAS 175.00 DIM CR WAS 230.00 DIM CS WAS 175.00 DIM CT WAS 230.00 DIM CU WAS 175.00 DIM CV WAS 230.00 DIM CW WAS 175.00 DIM CX WAS 230.00 DIM CY WAS 175.00 DIM CZ WAS 230.00 DIM DA WAS 175.00 DIM DB WAS 230.00 DIM DC WAS 175.00 DIM DD WAS 230.00 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E			CN446560 (E) REVISION 51 CHANGED PICTORIAL PER E-7711-1E USE NEW CHANGES (2) ADDED NOTE (6) (3) UPDATED REV LEV BLK (4) PROCESS 2 COLOR WAS BLACK (5) IN LM-1F-2 CHG. PAN 1 DESCRIPTION OF ITEMS 2, 3, 7 (8) IN LM-1F-2, ADDED ITEMS 10, 11 (9) DELETED ITEM 11 IN LM-1F-2 (10) IN LM-1F-2, ITEM 3 IN WAS 972435-5	1-16-79	[Signature]
F			CN448355 (C) REVISION (1) IN ZN.B-34 THE CONNECTORS P5 & P6 WERE ROTATED 180°	1-20-79	[Signature]



949003-0002	CABLE ASSY, TMTC TO 979A TAPE DRIVE, 20 FT	350.00	350.00	1.00
949003-0001	CABLE ASSY, TMTC TO 979A TAPE DRIVE, 20 FT	25.00	25.00	1.00
PART NO	DESCR PTN	QTY	UNIT	PRICE

PROCESSES:  
1. SOLDER PER F-127, METHOD I  
2. MARK PER F-160, METHOD II, CLASS I, HEIGHT .12, COLOR WHITE  
3. MARK PER F-100, METHOD VII, CLASS 12, COLOR BLACK, TYPE 6

REV	NO	DATE	DESCRIPTION
1	1		

UNLESS OTHERWISE SPECIFIED	UNLESS OTHERWISE SPECIFIED
REMOVE ALL BURRS AND SHARP EDGES	DIMENSIONS ARE IN INCHES
CONCENTRICITY TOLERANCE: DIA PER DIA	ANGLES: 1:1
DIRECTIONAL DIMENSIONS APPLY UNLESS OTHERWISE SHOWN IN PAPER	3 PLACE DECIMALS ± 0.01
INTERPRET DIMENSIONS IN ACCORDANCE WITH MIL-STD-20	2 PLACE DECIMALS ± 0.2
HOLE TOLERANCE	
0.13 - 0.04	± 0.005
0.125 - 0.01	± 0.005
0.01 - 0.08	± 0.010
0.01 - 0.01	± 0.005

DESIGN ACTIVITY RELEASE	DATE	BY

TEXAS INSTRUMENTS
CABLE ASSY, TMTC TO 979A TAPE DRIVE
QTY: 350
UNIT: 1.00
PRICE: 350.00
PART NO: 949003



TEXAS INSTRUMENTS INCORPORATED		DATE 02/23/79		LIST OF MATERIAL		PAGE 1 of 1		PART NUMBER LM949003-0001		REV. # 1	
QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT
0001	00001.000	EA	0948994-0001	BOARD,PC,979A FLAT RIBBON INTERCONNECT							
0001A				P4							
0002	00001.000	EA	2210165-0004	HEADER,PADLEAD TO RIBBON CABL. 50 POS					000779-88213-8		
0002A				J2							
0003	00001.000	EA	2210165-0003	HEADER,PADLEAD TO RIBBON CABLE,40 POS					000779-88213-8		
0003A				J3							
0004	00001.000	FA	0949010-0001	STRAIN RELIEF							
0005	00020.000	FT	0996128-0008	CABLE #28 AWG 7-STRAND TWISTED PAIRS PL					SSW - 455-248-50		
0006	00020.000	FT	0996128-0007	CABLE,FLAT,20 TWISTED PR,1.950 WIDE					SSW -455-248-40		
0007	00001.000	EA	0996261-0004	CONNECTOR,RECEPT,50POS W/O STRAIN RELIEF					000779-86916-1		
0007A				P5							
0008	00001.000	EA	0996261-0007	CONN,RECEPTABLE, 40 POSITION					000779-88379-7		
0008A				P6							
0009	00010.000	FT	0972435-0105	INSUL SLEEVING, 3/4" ID ZIP TUBE,PVC					007240-2T20750632080L		
0010	00002.000	EA	0418201-0080	STRAP,MARKER,ADJUSTABLE,PLASTIC					QPL-MS-3768-1-98		
0012	00002.000	EA	0572988-0025	SCREW 6-32 X .438 PAN HEAD CRCS							
0013	00002.000	EA	0413963-0006	NUT# 6-32 SELF-LUCKING,HER 250 F CRCS							
0014	00006.000	EA	0411027-0836	WASHER .156 X .375 X .049 FLAT CRCS					QPL - MS15765-806		
0015	REF	EA	0949007-9901	DIAGRAM,INTER-CONNECTING,979A							
0016	00001.000	EA	2210259-0004	TAB,PULL,PLASTIC LOOP,40 POS, 2.000 L					000779-88450-9		
CABLE ASSY,THTC TO 979A TAPE DRIVE,20 FT											
LM949003-0001											

TEXAS INSTRUMENTS INCORPORATED		DATE 02/23/79		LIST OF MATERIAL		PAGE 2 of 2		PART NUMBER LM949003-0001		REV. # 1	
QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT
0017	00001.000	EA	2210259-0009	TAB,PULL,PLASTIC LOOP, 2.530 L, 50 POS					000779-88450-9		
CABLE ASSY,THTC TO 979A TAPE DRIVE,20 FT											
LM949003-0001											

TEXAS INSTRUMENTS INCORPORATED		DATE 02/23/79		LIST OF MATERIAL		PAGE 1 of 1		PART NUMBER LM949003-0002		REV. # 1	
QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT
0001	00001.000	EA	0948994-0001	BOARD,PC,979A FLAT RIBBON INTERCONNECT							
0001A				P4							
0002	00001.000	EA	2210165-0004	HEADER,PADLEAD TO RIBBON CABL. 50 POS					000779-88213-8		
0002A				J2							
0003	00001.000	EA	2210165-0003	HEADER,PADLEAD TO RIBBON CABLE,40 POS					000779-88213-8		
0003A				J3							
0004	00001.000	FA	0949010-0001	STRAIN RELIEF							
0005	00030.000	FT	0996128-0008	CABLE #28 AWG 7-STRAND TWISTED PAIRS PL					SSW - 455-248-50		
0006	00030.000	FT	0996128-0007	CABLE,FLAT,20 TWISTED PR,1.950 WIDE					SSW -455-248-40		
0007	00001.000	EA	0996261-0004	CONNECTOR,RECEPT,50POS W/O STRAIN RELIEF					000779-86916-1		
0007A				P5							
0008	00001.000	EA	0996261-0007	CONN,RECEPTABLE, 40 POSITION					000779-88379-7		
0008A				P6							
0009	00020.000	FT	0972435-0105	INSUL SLEEVING, 3/4" ID ZIP TUBE,PVC					007240-2T23750632080L		
0010	00002.000	EA	0418201-0080	STRAP,MARKER,ADJUSTABLE,PLASTIC					QPL-MS-3768-1-98		
0012	00002.000	EA	0572988-0025	SCREW 6-32 X .438 PAN HEAD CRCS							
0013	00002.000	EA	0413963-0006	NUT# 6-32 SELF-LUCKING,HER 250 F CRCS							
0014	00006.000	EA	0411027-0836	WASHER .156 X .375 X .049 FLAT CRCS					QPL - MS15765-806		
0015	REF	EA	0949007-9901	DIAGRAM,INTER-CONNECTING,979A							
0016	00001.000	EA	2210259-0004	TAB,PULL,PLASTIC LOOP,40 POS, 2.000 L					000779-88450-9		
CABLE ASSY,THTC TO 979A TAPE DRIVE,30 FT											
LM949003-0002											

TEXAS INSTRUMENTS INCORPORATED		DATE 02/23/79		LIST OF MATERIAL		PAGE 2 of 2		PART NUMBER LM949003-0002		REV. # 1	
QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT	QTY	DESCRIPTION	UNIT
0017	00001.000	EA	2210259-0009	TAB,PULL,PLASTIC LOOP, 2.530 L, 50 POS					000779-88450-9		
CABLE ASSY,THTC TO 979A TAPE DRIVE,30 FT											
LM949003-0002											

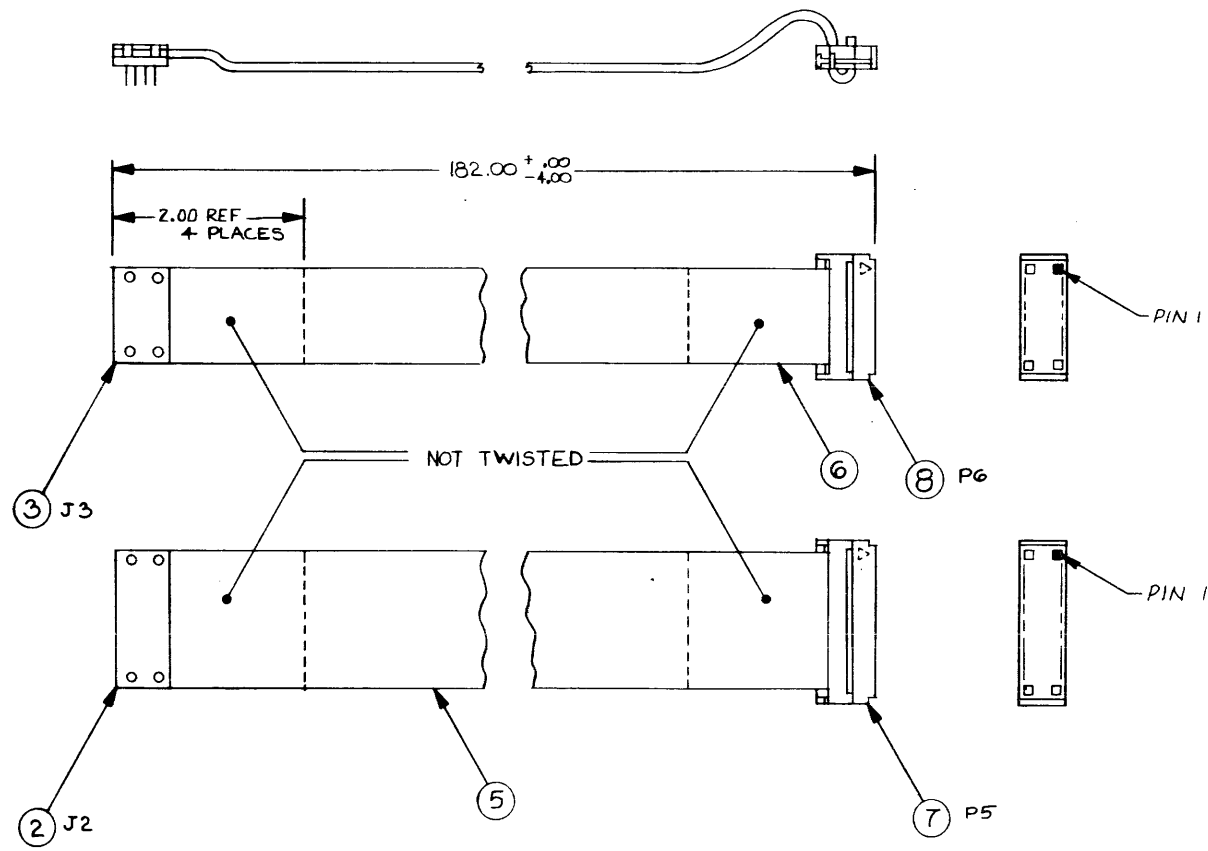




NOTES:

1. PULL CABLE THROUGH HEAT SHRINK SECTIONS BEFORE PRESSING CONNECTORS TO CABLE.
2. BUZZ CABLE PRIOR TO SOLDERING TO PWB.
3. REFER TO LM OF 949003 FOR PART NUMBERS

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED



QTY REQD	ITEM NO	TEXAS INSTRUMENTS	GOVT OR INDUSTRY	NOMENCLATURE OR DESCRIPTION

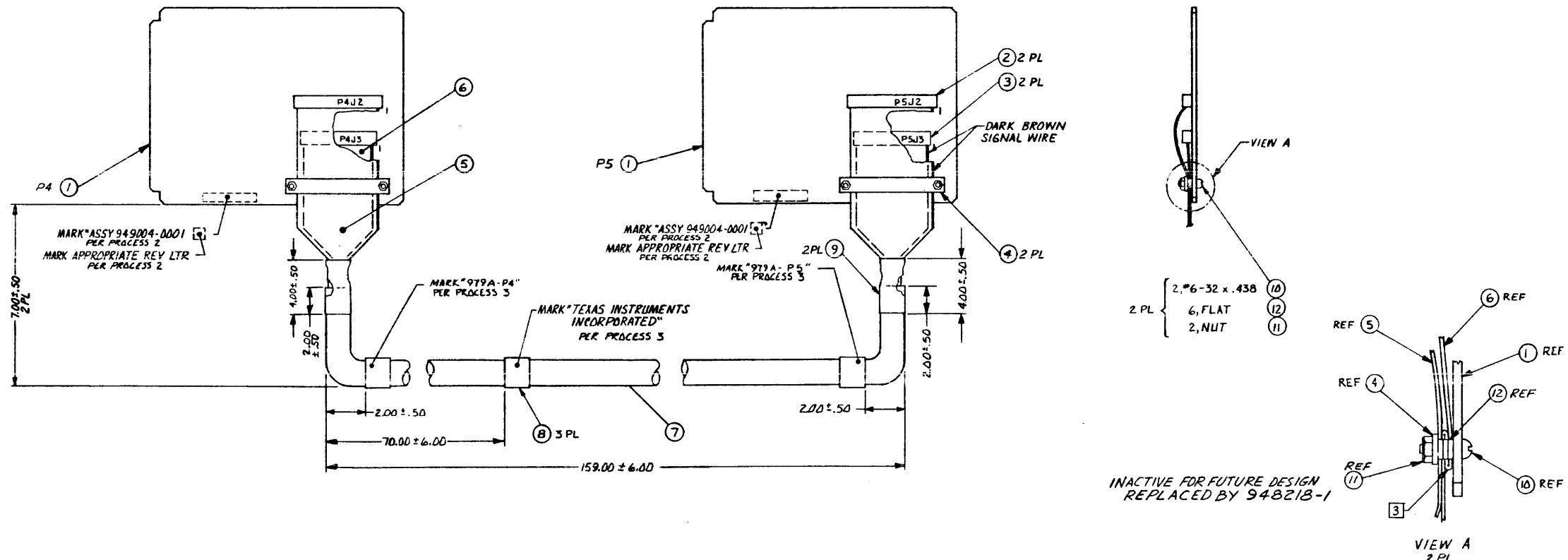
  

PARTS LIST			
UNLESS OTHERWISE SPECIFIED	UNLESS OTHERWISE SPECIFIED	DR. <i>R. Piggini</i> 10/22/70	TEXAS INSTRUMENTS INCORPORATED Government Products Division Dallas, Texas
REMOVE ALL BURRS AND SHARP EDGES	DIMENSIONS ARE IN INCHES	CHK. <i>J. Roll</i> 11-5-76	TITLE CABLE ASSY, TMTc TO 979 A TAPE DRIVE
CONCENTRICITY MACHINED DIAMETERS .004 TIR	TOLERANCES: ANGLES ± 1° 3 PLACE DECIMALS ± .010 2 PLACE DECIMALS ± .02	ENGR. <i>W. S. Amund</i> 11-8-76	SIZE CODE IDENT NO. DRAWING NO. C 96214 SI 949003
DIMENSIONAL LIMITS APPLY BEFORE PLATING	MATERIAL:	APPD. <i>Monte Alford</i> 11-8-76	SCALE NONE SHEET
DRILLED HOLE TOLERANCES .013 + .004 THRU -.001 .251 + .006 THRU -.001 .125 .500 .126 + .005 THRU -.001 .501 + .008 THRU -.001 .250 .750	949003 7500	DESIGN ACTIVITY RELEASE <i>Jim Coover</i> 11/19/76	
INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED IN MIL-STD-100	NEXT ASSY USED ON APPLICATION	<i>Ed W. ...</i> 11/19/76	



NOTES:  
 1. FOR ASSY INSTRUCTIONS REFER TO SI 949004  
 2. CONNECTION FOR P4J2 TO P5J2 AND P4J3 TO P5J3 IS ONE TO ONE.  
 EXAMPLE:  
 PIN 1 OF P4J2 TO PIN 1 OF P5J2...  
 PIN 1 OF P4J3 TO PIN 1 OF P5J3...  
 3. FOLD EXCESS CABLE (ITEM 6), IF NECESSARY, UNDER STRAIN RELIEF (ITEM 4) IN ORDER TO MEET FINAL CABLE LENGTH TOLERANCES

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		CN 446465 (1) R (Suppld) (1) INACTIVATED THIS DRAWING	9-15-78	J.R.



INACTIVE FOR FUTURE DESIGN  
 REPLACED BY 948218-1

PROCESSES:  
 1. SOLDER PER F-127, METHOD I  
 2. MARK PER F-100, METHOD II, CLASS 1, HEIGHT .12, COLOR BLACK  
 3. MARK PER F-100, METHOD VII, CLASS 12, COLOR BLACK, TYPE 6

UNLESS OTHERWISE SPECIFIED			
REMOVE ALL BLURS AND SHARP EDGES			
CONCENTRICITY MACHINED DIAMETERS .010 FIR			
DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING			
IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY			
INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100			
HOLE TOLERANCE			
.013	.125	.251	.005
THRU .004	THRU .005	THRU .006	
.125	.250	.500	.001
.501	.751	1.001	.012
THRU .001	THRU .001	THRU 2.000	.001

QTY REQD	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION
2	1				

PARTS LIST	
DRAWN BY: <i>Dotter</i>	DATE: 9-21-76
CHECKED BY: <i>W.P.</i>	DATE: 11-8-76
ENG'N BY: <i>A.J. Diamond</i>	DATE: 11-8-76
QA BY: <i>W. Handberg</i>	DATE: 11-15-76
CONTR NO:	
DESIGN ACTIVITY RELEASE:	

TEXAS INSTRUMENTS INCORPORATED Equipment Group Dallas, Texas	
CABLE ASSY, 979 A DAISY CHAIN	
SIZE: D	CODE IDENT NO: 96214
DRAWING NO: 949004	
SCALE: NONE	SHEET

T179147

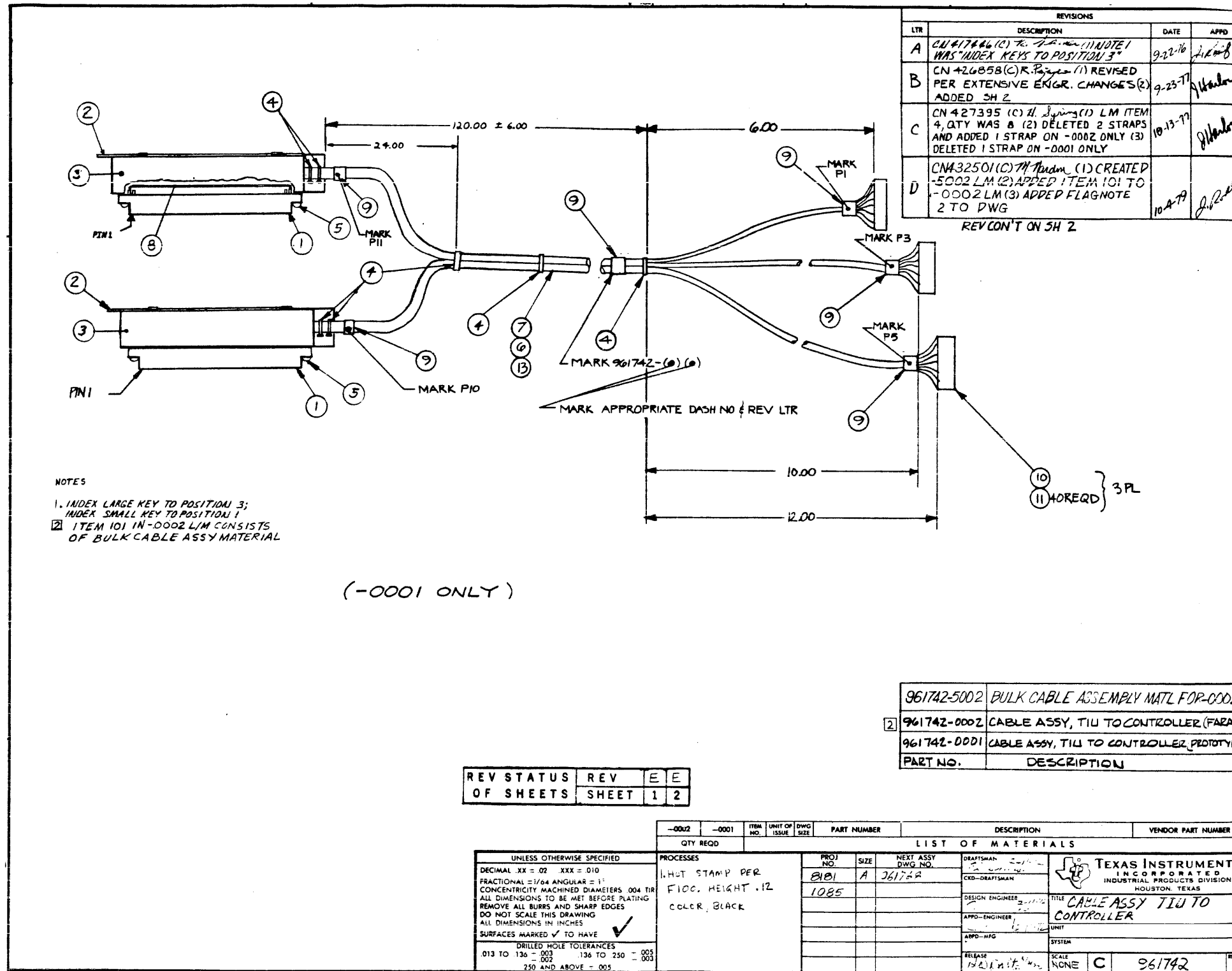


PART NUMBER		QUANTITY PER ASSEMBLY	UNIT OF ISSUE	SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER
0001	00001.000	EA		948994-0001	BOARD, PC, 979A FLAT RIBBON INTERCONNECT		
0001A					P4 P5		
0002	00012.000	EA		972696-0004	CONNECTOR, PWR, 50P, FIXED, FLAT CABLE		
0002A					P4J2 P5J2		
0003	00002.000	EA		972696-0003	CONNECTOR, PWR, 40P, FIXED, FLAT CABLE		
0003A					P4J3 P5J3		
0004	00002.000	EA		949010-0001	STRAIN RELIEF		
0005	00015.000	FT		996128-0008	CABLE #28 AWG 7-STRAND TWISTED PAIRS FL	SSW-455-248-50	
0006	00015.000	FT		996128-0007	CABLE, FLAT, 20 TWISTED PR, 1.950 WIDE	SSW-455-248-40	
0007	00015.000	FT		972419-0005	INSUL SLEEVING, 1/4" ID ZIPPER TUBE PVC	ZIP-ZTR-075J-63-2030L	
0008	00003.000	EA		418201-0000	STRAP, MARKER, ADJUSTABLE, PLASTIC	OPL-MS336R-6-9	
0009	00001.000	FT		417177-0009	INSULATION SLEEVING BLK .750ID X .010THK	RTI-	
0010	00004.000	EA		972688-0029	SCREW 6-32 X .416 PAN HEAD CRES		
0011	00005.000	EA		411963-0006	NUT 6-32 SELF-LOCKING, HEX 750 P CRES		
0012	00012.000	EA		411027-0806	WASHER .156 X .375 X .049 FLAT CRES	QPL-MS15795-806	
0013	REF	EA		949007-9901	DIAGRAM, INTER-CONNECTING, 979A		

**INACTIVE FOR FUTURE DESIGN  
REPLACE BY 948218-1**

CRAFTSMAN	DATE	C/O DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE
		<i>A. P. ...</i>	<i>11.8.76</i>			CABLE ASSY, TACT/979A PWR/CABLE
APP'D MGR	DATE	APP'D PROJECT ENGINEER	DATE	MUZARD	DATE	PROJECT NO
						<i>7506</i>

PART NUMBER: LM 949004-0001 REV: A



REVISIONS			
LTR	DESCRIPTION	DATE	APPD
A	CN 417446 (C) TO P. 1 (1) NOTE 1 WAS INDEX KEYS TO POSITION 3	9-22-76	J. K. ...
B	CN 426858 (C) R. P. ... (1) REVISED PER EXTENSIVE ENGR. CHANGES (2) ADDED SH 2	9-23-77	J. K. ...
C	CN 427395 (C) H. ... (1) LM ITEM 4, QTY WAS 8 (2) DELETED 2 STRAPS AND ADDED 1 STRAP ON -0002 ONLY (3) DELETED 1 STRAP ON -0001 ONLY	10-13-77	J. K. ...
D	CN 32501 (C) H. ... (1) CREATED -5002 LM (2) APPLIED ITEM 101 TO -0002 LM (3) ADDED FLAGNOTE 2 TO DWG	10-2-79	J. K. ...

REV CONT ON SH 2

NOTES  
 1. INDEX LARGE KEY TO POSITION 3;  
 INDEX SMALL KEY TO POSITION 1  
 2. ITEM 101 IN -0002 L/M CONSISTS OF BULK CABLE ASSY MATERIAL

(-0001 ONLY)

961742-5002	BULK CABLE ASSEMBLY MATL FOR -0002
2 961742-0002	CABLE ASSY, TIU TO CONTROLLER (FARAH)
961742-0001	CABLE ASSY, TIU TO CONTROLLER, PROTOTYPE
PART NO.	DESCRIPTION

REV STATUS	REV	E	E
OF SHEETS	SHEET	1	2

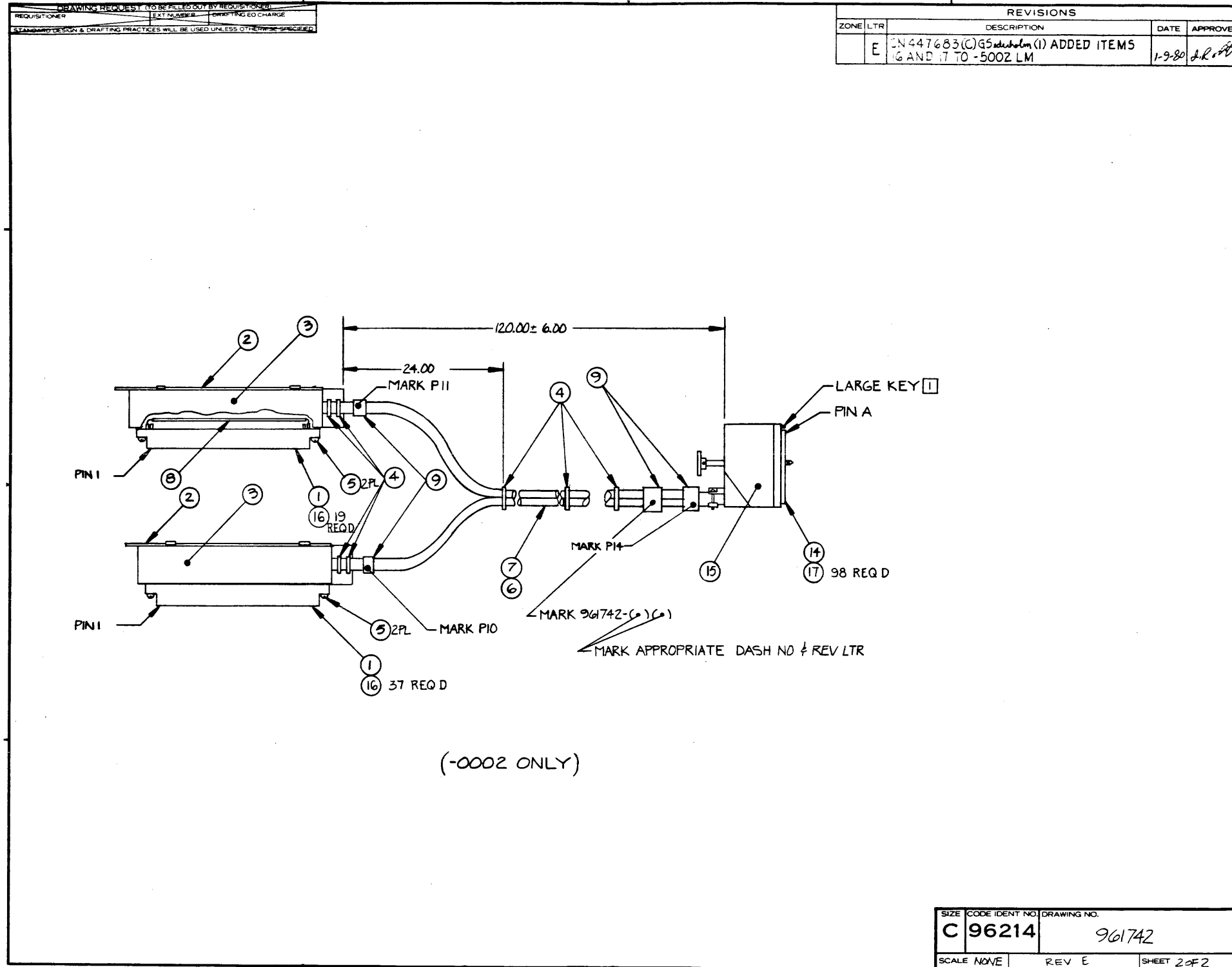
QTY REQD	PROJ NO.	SIZE	NEXT ASSY DWG NO.	DRAFTSMAN	CD-DRAFTSMAN	DESIGN ENGINEER	APPD-ENGINEER	APPD-MFG	RELEASE	SCALE	SYSTEM	REV
	2101	A	261742							NONE	C	961742

UNLESS OTHERWISE SPECIFIED  
 DECIMAL .XX = .02 .XXX = .010  
 FRACTIONAL = 1/64 ANGULAR = 1°  
 CONCENTRICITY MACHINED DIAMETERS .004 TIR  
 ALL DIMENSIONS TO BE MET BEFORE PLATING  
 REMOVE ALL BURRS AND SHARP EDGES  
 DO NOT SCALE THIS DRAWING  
 ALL DIMENSIONS IN INCHES  
 SURFACES MARKED ✓ TO HAVE  
 DRILLED HOLE TOLERANCES  
 013 TO 136 - .003  
 .002 136 TO 250 - .003  
 .002 250 AND ABOVE - .005

PROCESSES  
 1. HOT STAMP PER  
 FIOC. HEIGHT .12  
 COLOR, BLACK

TEXAS INSTRUMENTS  
 INCORPORATED  
 INDUSTRIAL PRODUCTS DIVISION  
 HOUSTON, TEXAS

TITLE: CABLE ASSY TIU TO CONTROLLER





949613-9702

TEXAS INSTRUMENTS INCORPORATED		DATE 11/28/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 0961742-0001		REV E	
PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
J001	00002.000	EA		J23147-0000	CONNECTOR, PRINTED CIRCUIT BOARD EDGE	005574- SEE DRAWING					
J001A					PI0 P11						
J002	00002.000	EA		J216130-0001	COVER, CONNECTOR						
J003	00002.000	EA		J216130-0001	HOOD, CONNECTOR						
J004	00001.000	EA		J410212-0040	STRAP, TIEDOWN, ADJUSTABLE, PLASTIC	WPL - M53307-4-9					
J005	00004.000	EA		J472900-0010	SCREW 4-40 X .438 PAN HEAD CRCS						
J006	00000.000	FT		0960700-2092	WIRE, TWISTED PAIR #26 WHT/RED IPVL	UL - 1472 75TK UL					
J007	00022.000	FT		J472930-0019	INSULATION SLEEVING PVC CHLORIDE	LFS - HT-105C-24					
J008	00003.000	FT		J411400-0018	WIRE, BARE TINNED, 18AWG, COPPER BUS	IWP - 18-630					
J009	00000.000	EA		J410201-0000	STRAP, MARKER, ADJUSTABLE, PLASTIC	WPL-M5-3300-1-90					
J010	00003.000	EA		J535407-0001	CONNECTOR 40 PINS	AMP - 1-00148-1					
J010A					PI P3 P3						
J011	00120.000	EA		J535300-0001	CONTACT, 20-24AWG BERYL COPPER	08Y110-00004-1					
J012	REF	EA		0901742-5001	WIRE LIST, PI-TU-PI						
J013	00049.000	FT		J414970-0001	COAXIAL CABLE, 55 OHM MINIATURE						
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	CABLE ASSY, TIU TO CONTROLLER (PHOTOTYPE)			
APP'G MGR		DATE	APP'G PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	LM 0961742-0001 E			

TEXAS INSTRUMENTS INCORPORATED		DATE 11/28/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 0961742-0002		REV E	
PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
J001	00002.000	EA		J23147-0000	CONNECTOR, PRINTED CIRCUIT BOARD EDGE	005574- SEE DRAWING					
J001A					PI0 P11						
J002	00002.000	EA		J216130-0001	COVER, CONNECTOR						
J003	00002.000	EA		J216130-0001	HOOD, CONNECTOR						
J012	REF	EA		090400-5001	WIRE LIST PI-TU-PI CABLE ASSY						
J014	00001.000	EA		J231207-0001	CONNECTOR- RECP, 12PIN WIRE CRIMP CONN	SEE TI- DRAWING					
J014A					PI4						
J015	00001.000	EA		J231257-0002	CONNECTOR- COVER ASSY, 12PIN ELLG	SEE TI- DRAWING					
J001	00001.000	EA		0961742-0002	BULK CABLE ASSEMBLY MATERIAL FOR-0002						
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	CABLE ASSY, TIU TO CONTROLLER (FABAH)			
APP'G MGR		DATE	APP'G PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	LM 0961742-0002 E			

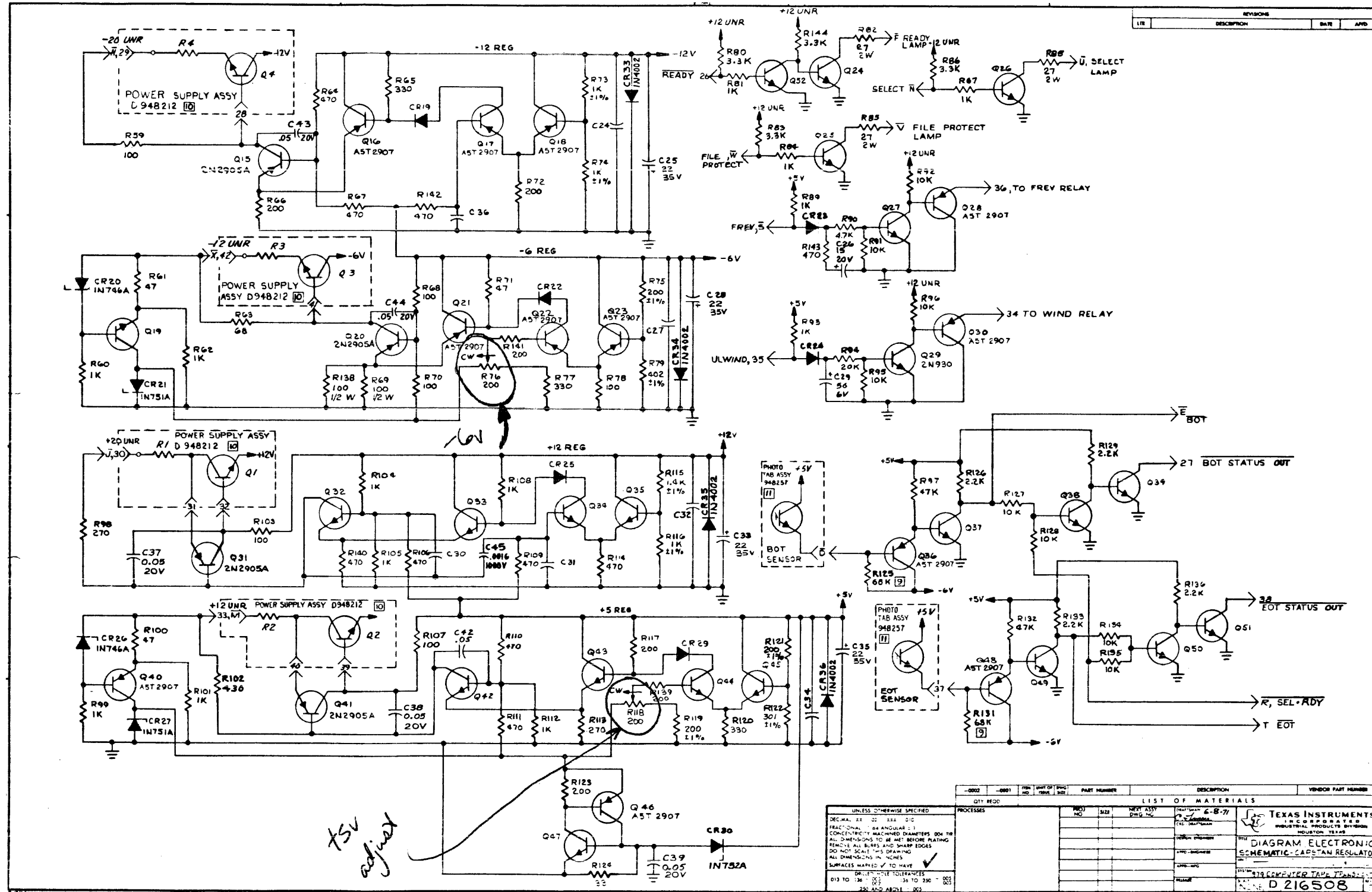
TEXAS INSTRUMENTS INCORPORATED		DATE 11/28/79		LIST OF MATERIAL		PAGE 1 of		PART NUMBER LM 0961742-5002		REV E	
PART NUMBER	QUANTITY PER ASSEMBLY	UNIT OF MEAS.	DWG. SIZE	PART NUMBER	DESCRIPTION	VENDOR PART NUMBER					
J004	00007.000	EA		J410212-0040	STRAP, TIEDOWN, ADJUSTABLE, PLASTIC	WPL - M53307-4-9					
J005	00004.000	EA		J472900-0010	SCREW 4-40 X .438 PAN HEAD CRCS						
J006	00000.000	FT		0960700-2092	WIRE, TWISTED PAIR #26 WHT/RED IPVL	UL - 1472 75TK UL					
J007	00022.000	FT		J472930-0019	INSULATION SLEEVING PVC CHLORIDE	LFS - HT-105C-24					
J008	00003.000	FT		J411400-0018	WIRE, BARE TINNED, 18AWG, COPPER BUS	IWP - 18-630					
J009	00000.000	EA		J410201-0000	STRAP, MARKER, ADJUSTABLE, PLASTIC	WPL-M5-3300-1-90					
J010	00000.000	EA		0972003-0002	SLEEVE, SOLDER, TAB TERMINAL	KCH --L-704-02					
J017	00000.000	EA		J227914-0002	CONTACT-KEEL	ELL -60-0017-0323-0					
DRAFTSMAN		DATE	CDR DRAFTSMAN	DATE	DESIGN ENGINEER	DATE	TITLE	BULK CABLE ASSEMBLY MATERIAL FOR-0002			
APP'G MGR		DATE	APP'G PROJECT ENGINEER	DATE	RELEASED	DATE	PROJECT NO	LM 0961742-5002 E			



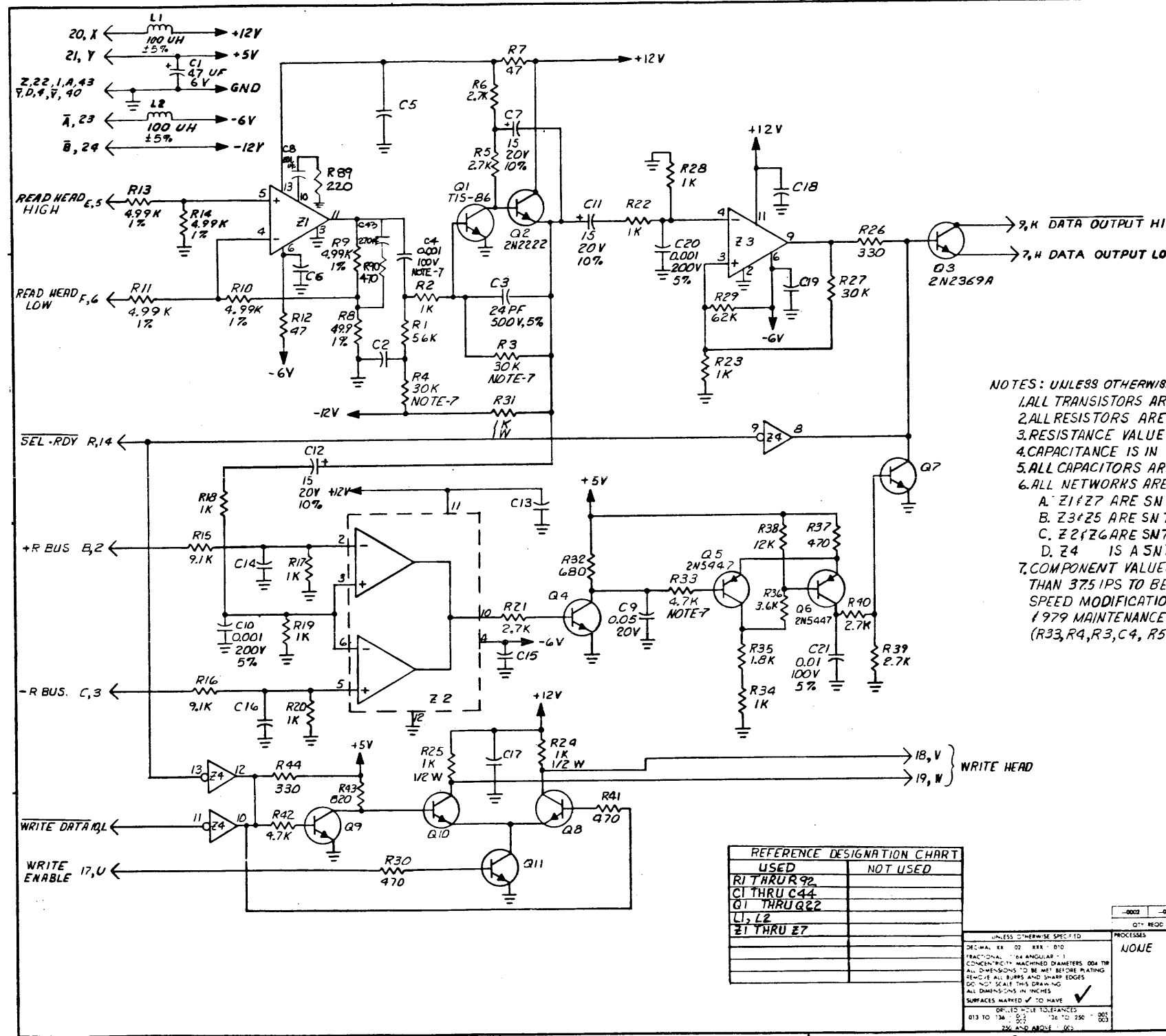
SECTION 2. LOGIC, SCHEMATIC, AND  
WIRING DIAGRAMS FOR THE MODEL 979A  
TAPE TRANSPORT AND FIELD TESTER







UNLESS OTHERWISE SPECIFIED		LIST OF MATERIALS	
DEC. IN.	FRACTIONAL	QTY	DESCRIPTION
010 TO 019	010 TO 019		
020 TO 029	020 TO 029		
030 TO 039	030 TO 039		
040 TO 049	040 TO 049		
050 TO 059	050 TO 059		
060 TO 069	060 TO 069		
070 TO 079	070 TO 079		
080 TO 089	080 TO 089		
090 TO 099	090 TO 099		
100 TO 109	100 TO 109		
110 TO 119	110 TO 119		
120 TO 129	120 TO 129		
130 TO 139	130 TO 139		
140 TO 149	140 TO 149		
150 TO 159	150 TO 159		
160 TO 169	160 TO 169		
170 TO 179	170 TO 179		
180 TO 189	180 TO 189		
190 TO 199	190 TO 199		
200 TO 209	200 TO 209		
210 TO 219	210 TO 219		
220 TO 229	220 TO 229		
230 TO 239	230 TO 239		
240 TO 249	240 TO 249		
250 TO 259	250 TO 259		
260 TO 269	260 TO 269		
270 TO 279	270 TO 279		
280 TO 289	280 TO 289		
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310 TO 319	310 TO 319		
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330 TO 339	330 TO 339		
340 TO 349	340 TO 349		
350 TO 359	350 TO 359		
360 TO 369	360 TO 369		
370 TO 379	370 TO 379		
380 TO 389	380 TO 389		
390 TO 399	390 TO 399		
400 TO 409	400 TO 409		
410 TO 419	410 TO 419		
420 TO 429	420 TO 429		
430 TO 439	430 TO 439		
440 TO 449	440 TO 449		
450 TO 459	450 TO 459		
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470 TO 479	470 TO 479		
480 TO 489	480 TO 489		
490 TO 499	490 TO 499		
500 TO 509	500 TO 509		
510 TO 519	510 TO 519		
520 TO 529	520 TO 529		
530 TO 539	530 TO 539		
540 TO 549	540 TO 549		
550 TO 559	550 TO 559		
560 TO 569	560 TO 569		
570 TO 579	570 TO 579		
580 TO 589	580 TO 589		
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780 TO 789	780 TO 789		
790 TO 799	790 TO 799		
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810 TO 819	810 TO 819		
820 TO 829	820 TO 829		
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840 TO 849	840 TO 849		
850 TO 859	850 TO 859		
860 TO 869	860 TO 869		
870 TO 879	870 TO 879		
880 TO 889	880 TO 889		
890 TO 899	890 TO 899		
900 TO 909	900 TO 909		
910 TO 919	910 TO 919		
920 TO 929	920 TO 929		
930 TO 939	930 TO 939		
940 TO 949	940 TO 949		
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970 TO 979	970 TO 979		
980 TO 989	980 TO 989		
990 TO 999	990 TO 999		

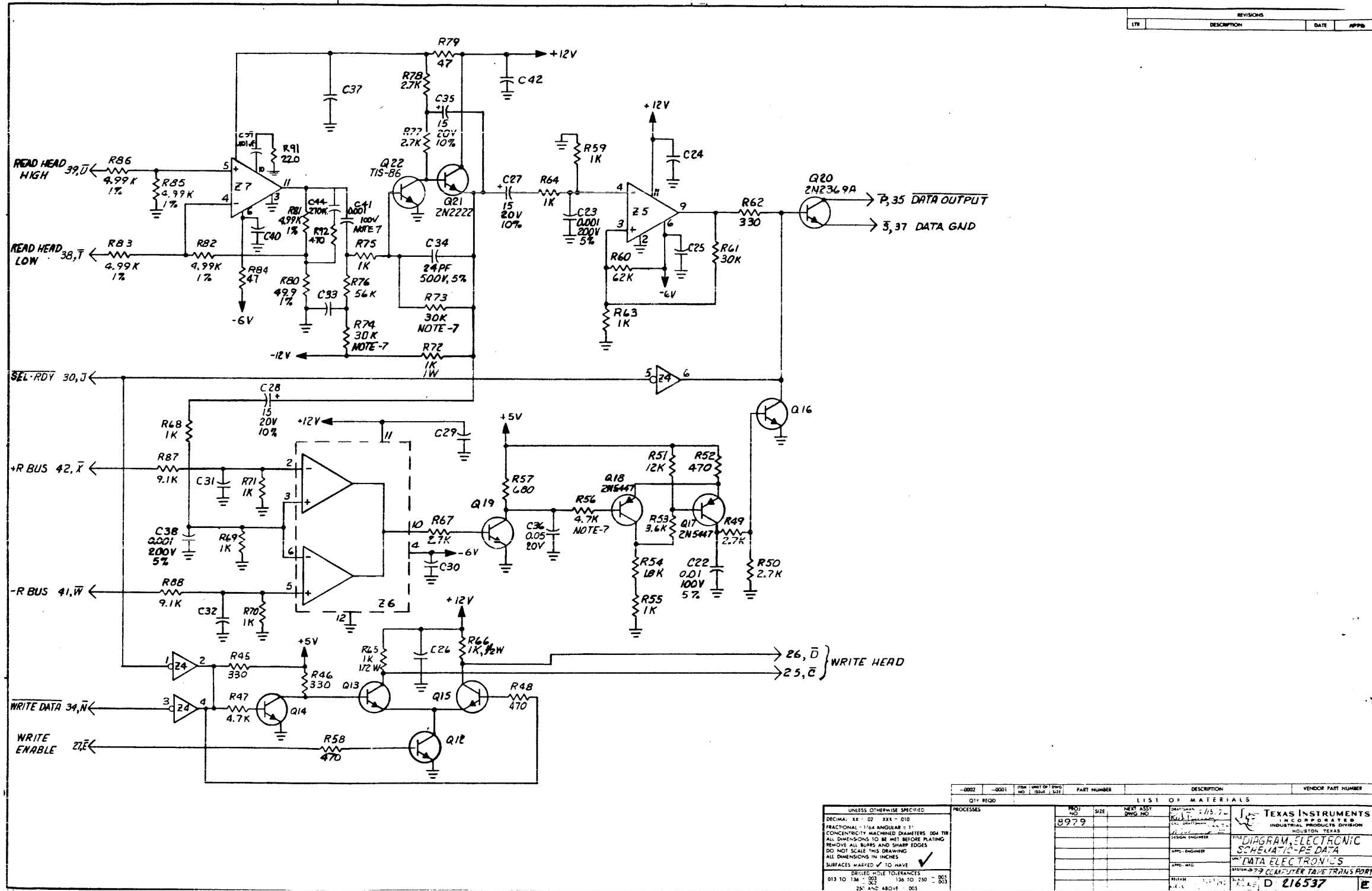


REVISIONS			
LTB	DESCRIPTION	DATE	APPD
C	370741 (L) RICK BUSSEY 2-15-72 REDRAWN WITH CHANGES PER REDESIGN	3/1/72	
D	377041 (C) R. ... 10/16/72 ON NOTE 7 - SPEED MODIFICATION PROCEDURE # WAS 216317		
E	CN 422418 (C) R. ... 1/17/74 AS PER EXTENSIVE ENGR. CHANGES.		

NOTES: UNLESS OTHERWISE SPECIFIED  
 1. ALL TRANSISTORS ARE 2N5449  
 2. ALL RESISTORS ARE 1/4W, 5%  
 3. RESISTANCE VALUE ARE IN OHMS  
 4. CAPACITANCE IS IN MICROFARADS  
 5. ALL CAPACITORS ARE 0.02 U.F. 25V, ±20%  
 6. ALL NETWORKS ARE AS FOLLOWS:  
 A. Z1 & Z7 ARE SN72702N  
 B. Z3 & Z5 ARE SN72710N  
 C. Z2 & Z6 ARE SN72711N  
 D. Z4 IS A SN7405N  
 7. COMPONENT VALUES FOR SPEEDS OTHER THAN 375 IPS TO BE DETERMINED PER SPEED MODIFICATION PROCEDURE 216610 1979 MAINTENANCE MANUAL 216318. (R33, R4, R3, C4, R56, R74, R73, C41)

REFERENCE DESIGNATION CHART	
USED	NOT USED
R1 THRU R92	
C1 THRU C44	
Q1 THRU Q22	
L1, L2	
Z1 THRU Z7	

UNLESS OTHERWISE SPECIFIED		PROCESSES		LIST OF MATERIALS	
DRAWING	REV.	NO.	SIZE	REV.	DATE
8979	D	216536			
SPEC. DIM. 100 ± .010		NONE		TEXAS INSTRUMENTS	
FRACTIONAL ANGULAR 1/16				INDUSTRIAL PRODUCTS DIVISION	
CONCENTRIC MACHINED DIAMETERS 0.04 TIR				HOUSTON, TEXAS	
ALL DIMENSIONS TO BE MET BEFORE PLATING				DIAGRAM ELECTRONIC	
REMOVE ALL BURRS AND SHARP EDGES				SCHEMATIC - PE DATA	
DO NOT SCALE THIS DRAWING				DATA ELECTRONICS	
ALL DIMENSIONS IN INCHES				9799 COMPUTER JACKET	
SURFACES MARKED ✓ TO HAVE				NONE D 216537	
DRILL HOLE TOLERANCES					
.013 TO .125 ± .005					
.125 TO .250 ± .005					
.250 AND ABOVE ± .005					



REVISIONS			
LT#	DESCRIPTION	DATE	APP#

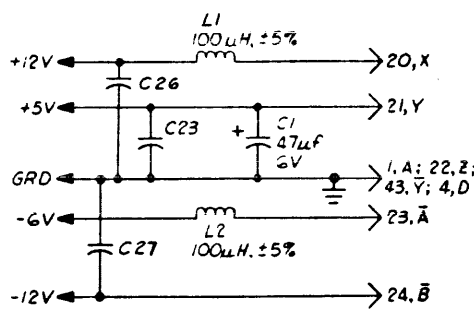
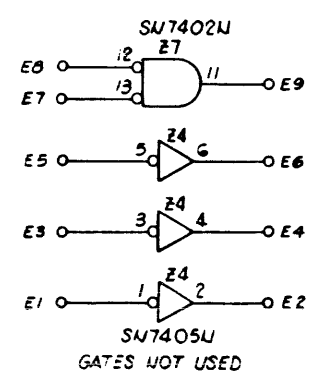
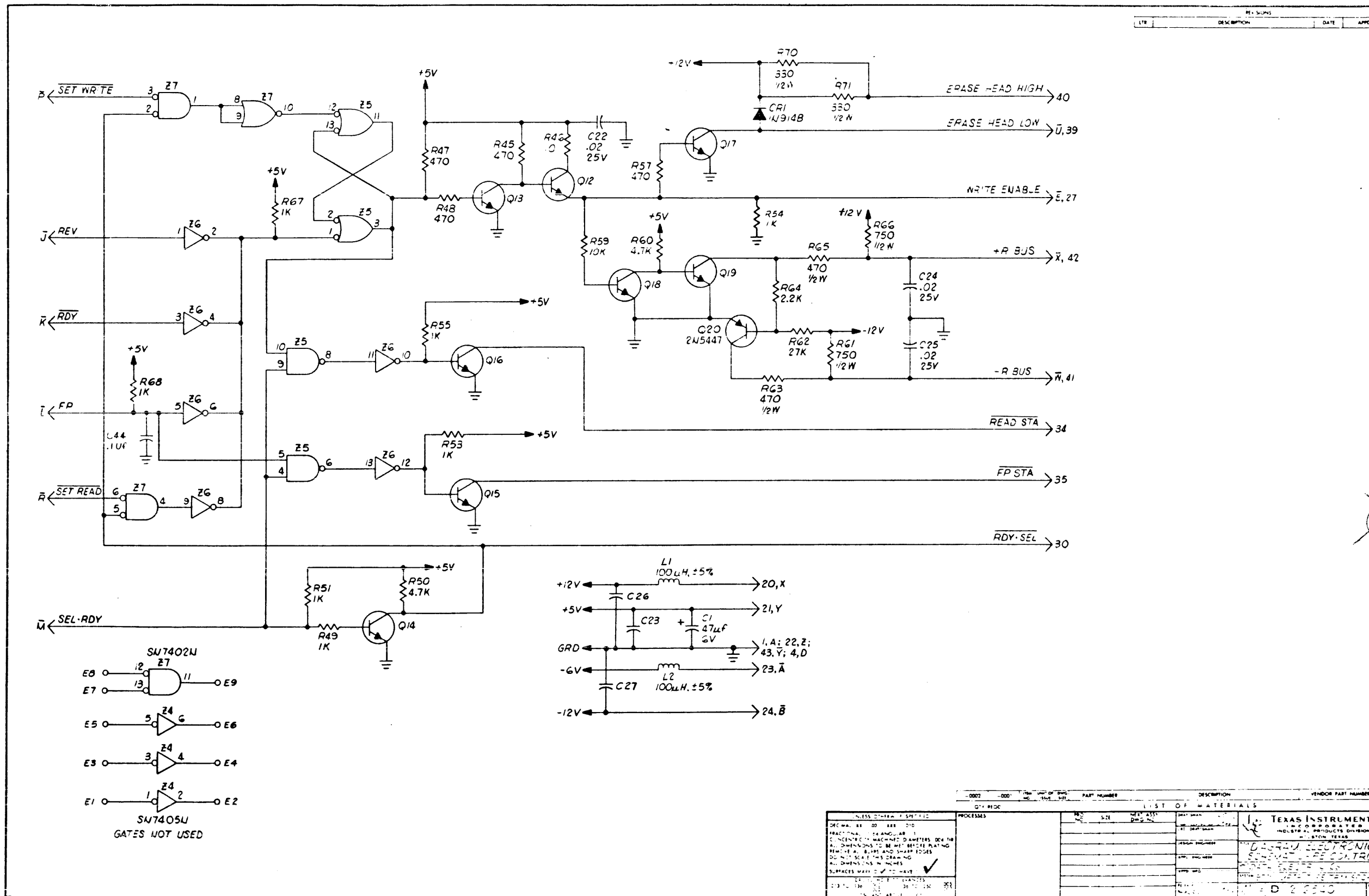
UNLESS OTHERWISE SPECIFIED:		PROCESS		PART NUMBER		DESCRIPTION		VENDOR PART NUMBER	
DECIMAL	XX - 02 XXX - 010	PROCESSES	Q1Y REGO	QTY	NO	SIZE	KEY ASSY	QTY	NO
FRACTIONAL	1/16 ANGULAR ± 1°				8979				
CONCENTRICITY MACHINED DIAMETERS 0.04 TIR									
ALL DIMENSIONS TO BE MET BEFORE PLATING									
REMOVE ALL BURRS AND SHARP EDGES									
DO NOT SCALE THIS DRAWING									
ALL DIMENSIONS IN INCHES									
SURFACES MARKED √ TO HAVE									
DRILLED HOLE TOLERANCES									
013 TO 136	003	136 TO 230	003						
231 TO 242	003	243 TO 250	003						
251 AND ABOVE	003								

TEXAS INSTRUMENTS  
INCORPORATED  
INDUSTRIAL PRODUCTS DIVISION  
HOUSTON, TEXAS

DIAGRAM, ELECTRONIC  
SCHEMATIC-PE DATA  
DATA ELECTRONICS  
COMPUTER TAPE TRANSPORT

D 216537





REV	DATE	DESCRIPTION	APP'D
1			

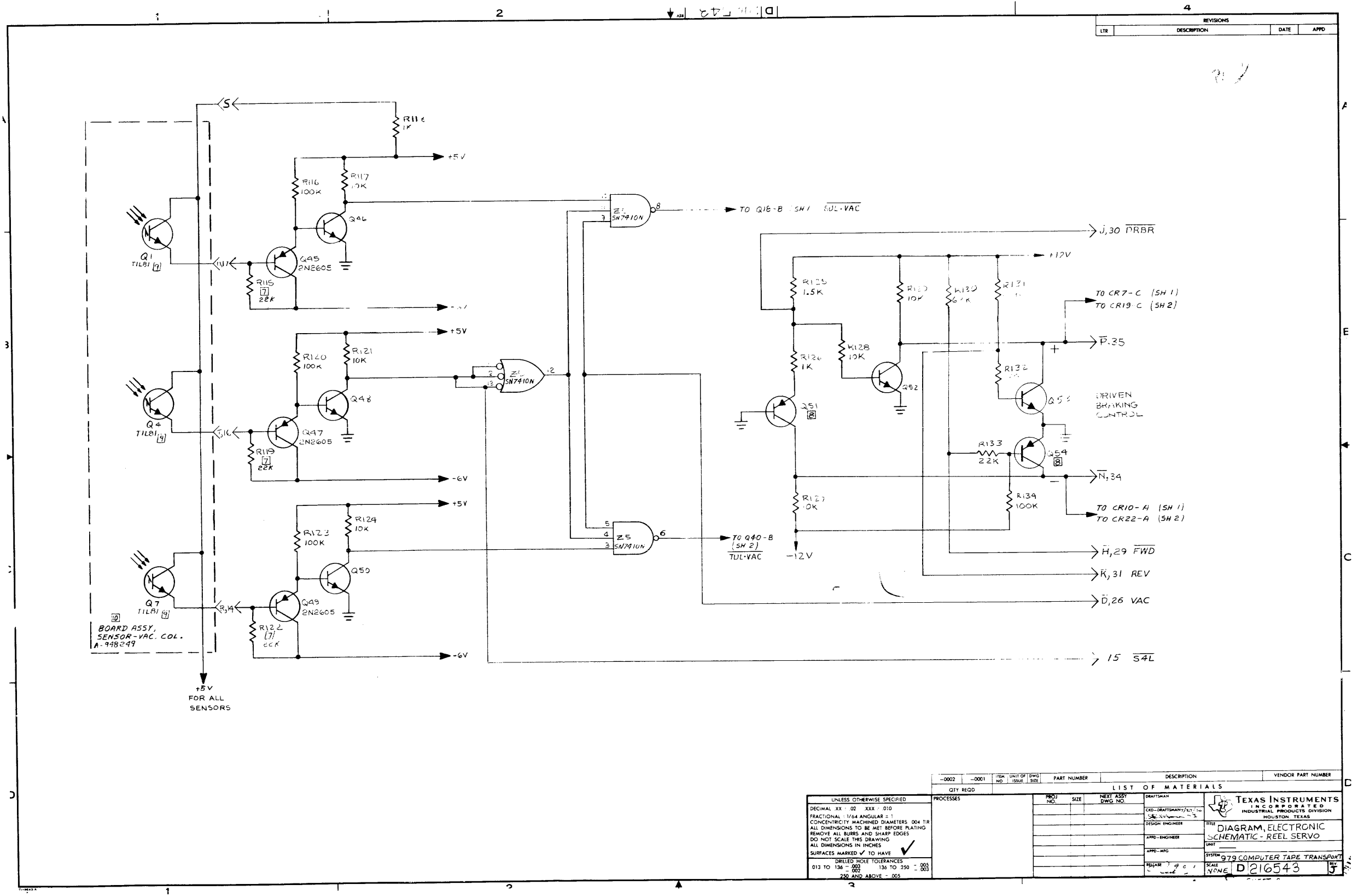
QTY	DESCRIPTION	PART NUMBER	VENDOR PART NUMBER

REV	DATE	DESCRIPTION	APP'D
1			







REVISIONS			
LTR	DESCRIPTION	DATE	APPD

BOARD ASSY,  
SENSOR-VAC. COL.  
A-948247

UNLESS OTHERWISE SPECIFIED		QTY REQD		PART NUMBER		DESCRIPTION		VENDOR PART NUMBER	
DECIMAL	XX - 00 XXX - 010								
FRACTIONAL	1/64 ANGULAR = 1								
CONCENTRICITY MACHINED DIAMETERS .004 TIR									
ALL DIMENSIONS TO BE MET BEFORE PLATING									
REMOVE ALL BURRS AND SHARP EDGES									
DO NOT SCALE THIS DRAWING									
ALL DIMENSIONS IN INCHES									
SURFACES MARKED ✓ TO HAVE ✓									
DRILLED HOLE TOLERANCES									
.012 TO .136 - .002		.136 TO .250 - .003		.250 AND ABOVE - .005					

PROJ. NO.	SIZE	NEXT ASSY DWG NO.	DRAWN	CHKD.	APPD.	DATE

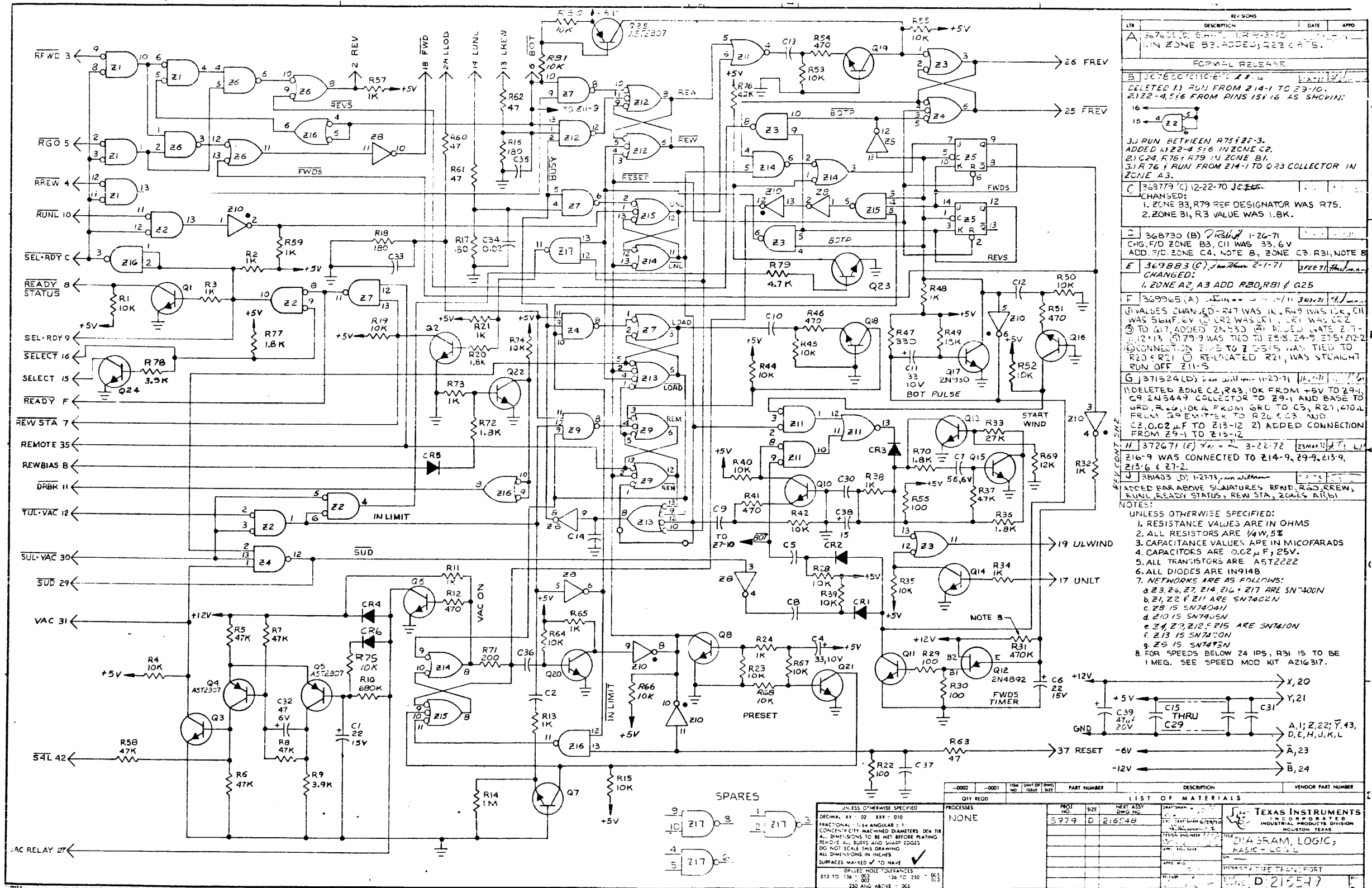
  

LIST OF MATERIALS	
ITEM NO.	DESCRIPTION

<b>TEXAS INSTRUMENTS</b> INCORPORATED INDUSTRIAL PRODUCTS DIVISION HOUSTON, TEXAS	
TITLE: <b>DIAGRAM, ELECTRONIC SCHEMATIC - REEL SERVO</b>	
PART NO: <b>979 COMPUTER TAPE TRANSPORT</b>	
SCALE: <b>NONE</b>	
DRAWING NO: <b>D216543</b>	







NOTES: UNLESS OTHERWISE SPECIFIED:

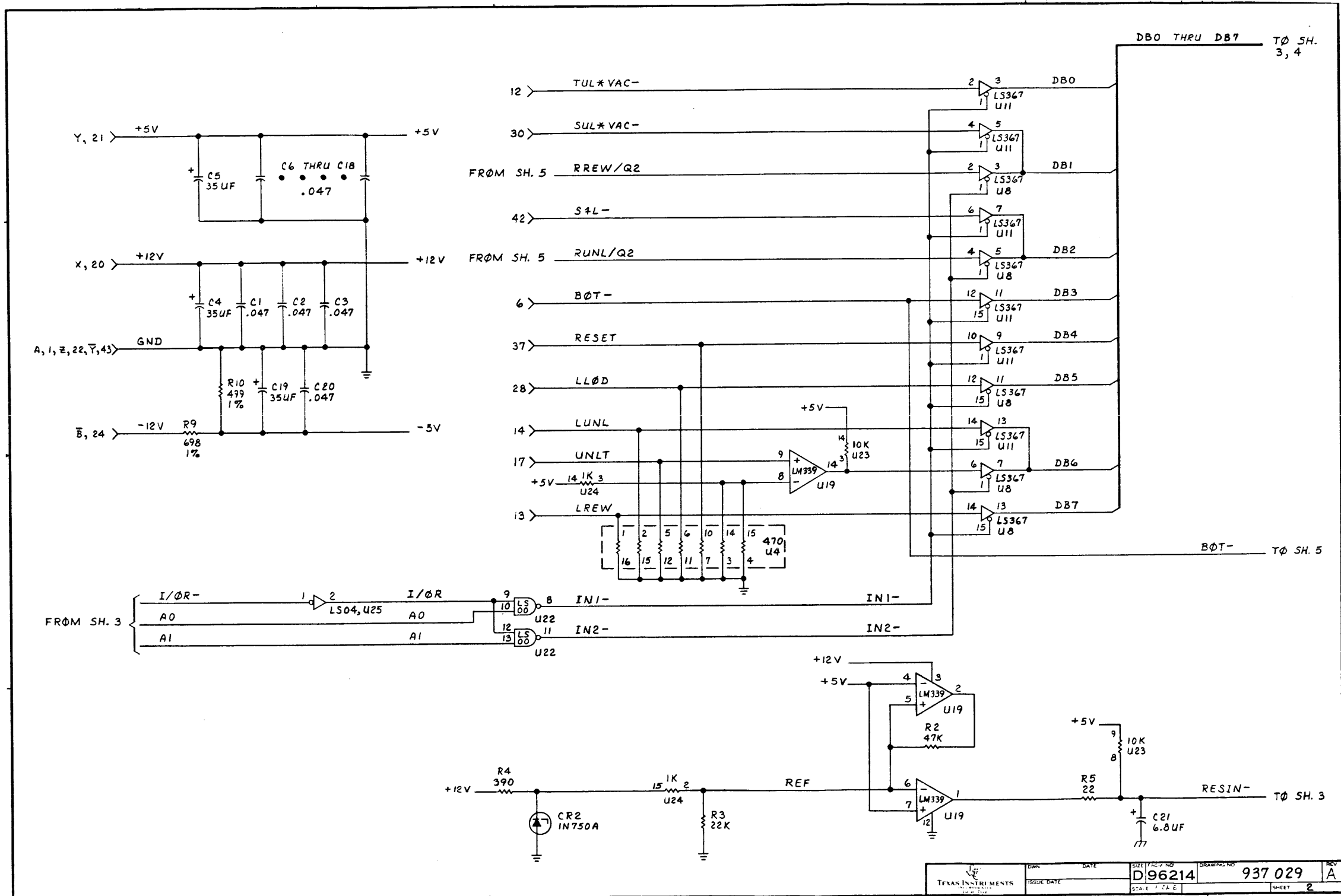
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
K	14.3 D45		
L	11.10.0 + 5		

SEQ NO	IDENT	F-SPEC	NO	ADDITIONAL	NOTES
		PROCESS		CLASSIFICATION	

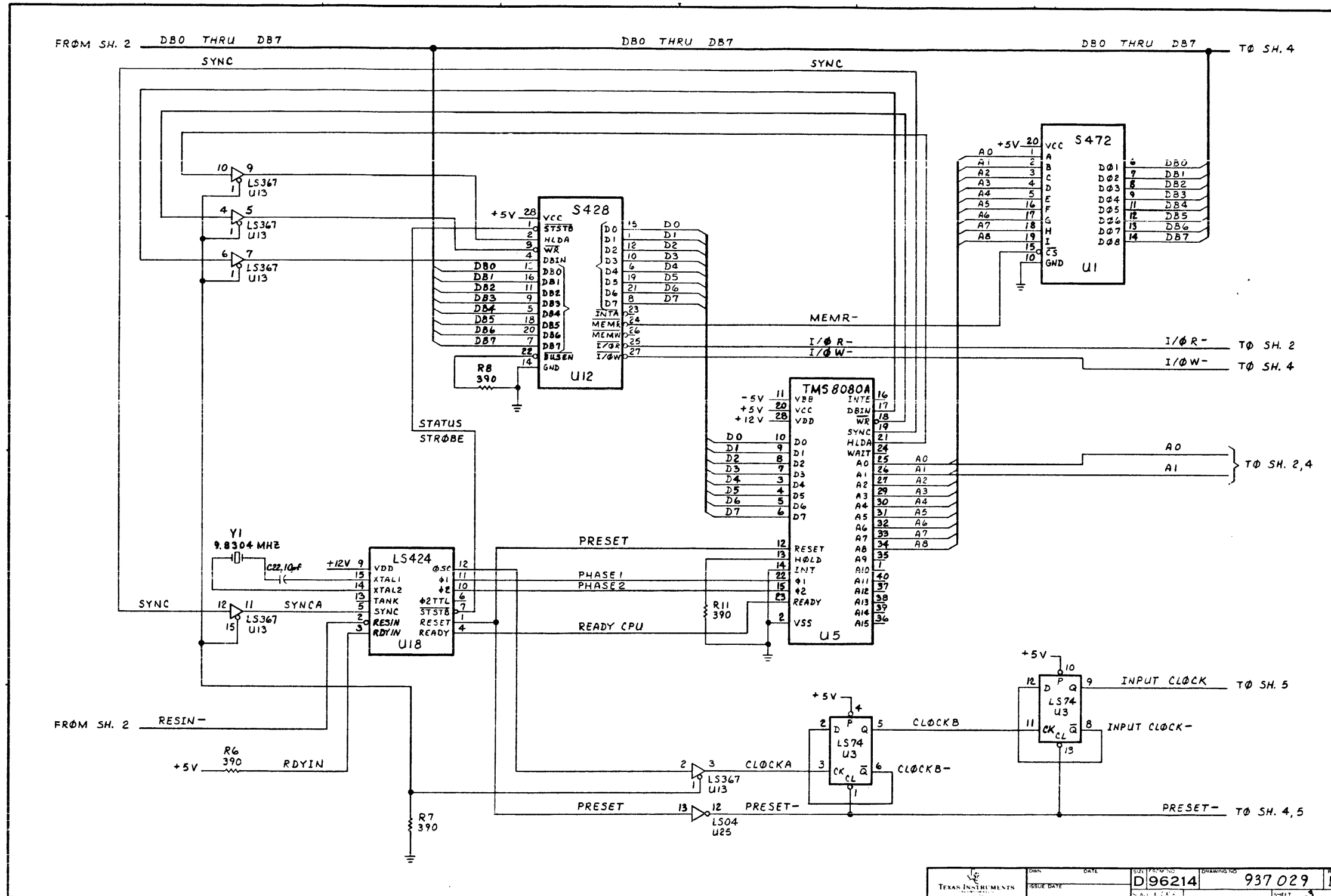
PROCESSES — FOR CORRELATION TO GOVT/IND SPECIFICATIONS, SEE TI DRAWING 729467

QTY	ITEM NO	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION	NOTES
PARTS LIST					
			UNLESS OTHERWISE SPECIFIED • DIMENSIONS ARE IN INCHES • TOLERANCES ANGLES ±1° • 3 PLACE DECIMALS = 010 • 2 PLACE DECIMALS = 02 • INTERPRET DRAWING PER MIL-D-1000 • REMOVE ALL BURRS AND SHARP EDGES • CONCENTRICITY MACHINED DIAMETERS 010 F/M • DIMENSIONAL LIMITS APPLY BEFORE PROCESSES • PARENTHETICAL INFO FOR REF ONLY		
			DRAWN: RODRIGUEZ R. DATE: 12-7-76 CHK: ENGR: APVD: QA: CONTR:		TEXAS INSTRUMENTS INCORPORATED Dallas, Texas
			HOLE TOLERANCE 013 - 004 THRU 125 - 001 .126 - 005 THRU 250 - 001 .251 - 006 THRU 500 - 001 .501 - 008 THRU 750 - 001 1.000 - 001 THRU 2000 - 001		DIAGRAM LOGIC BASIC
			8973 21654A	SIZE: FSCM NO: D 96214 SCALE: NONE	DRAWING NO: 216549 SHEET 2 of 2
			NEXT ASSY USED ON APPLICATION		

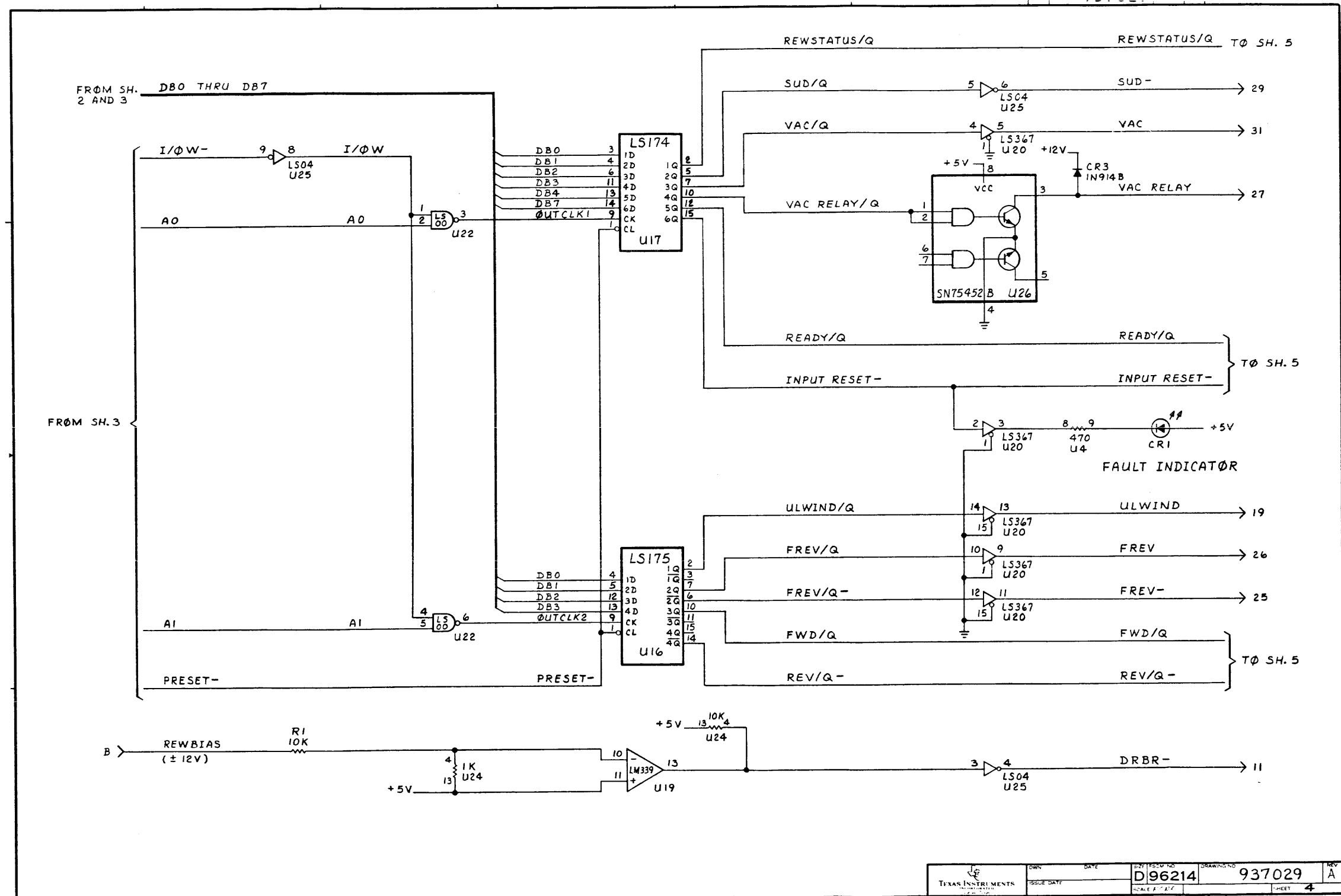




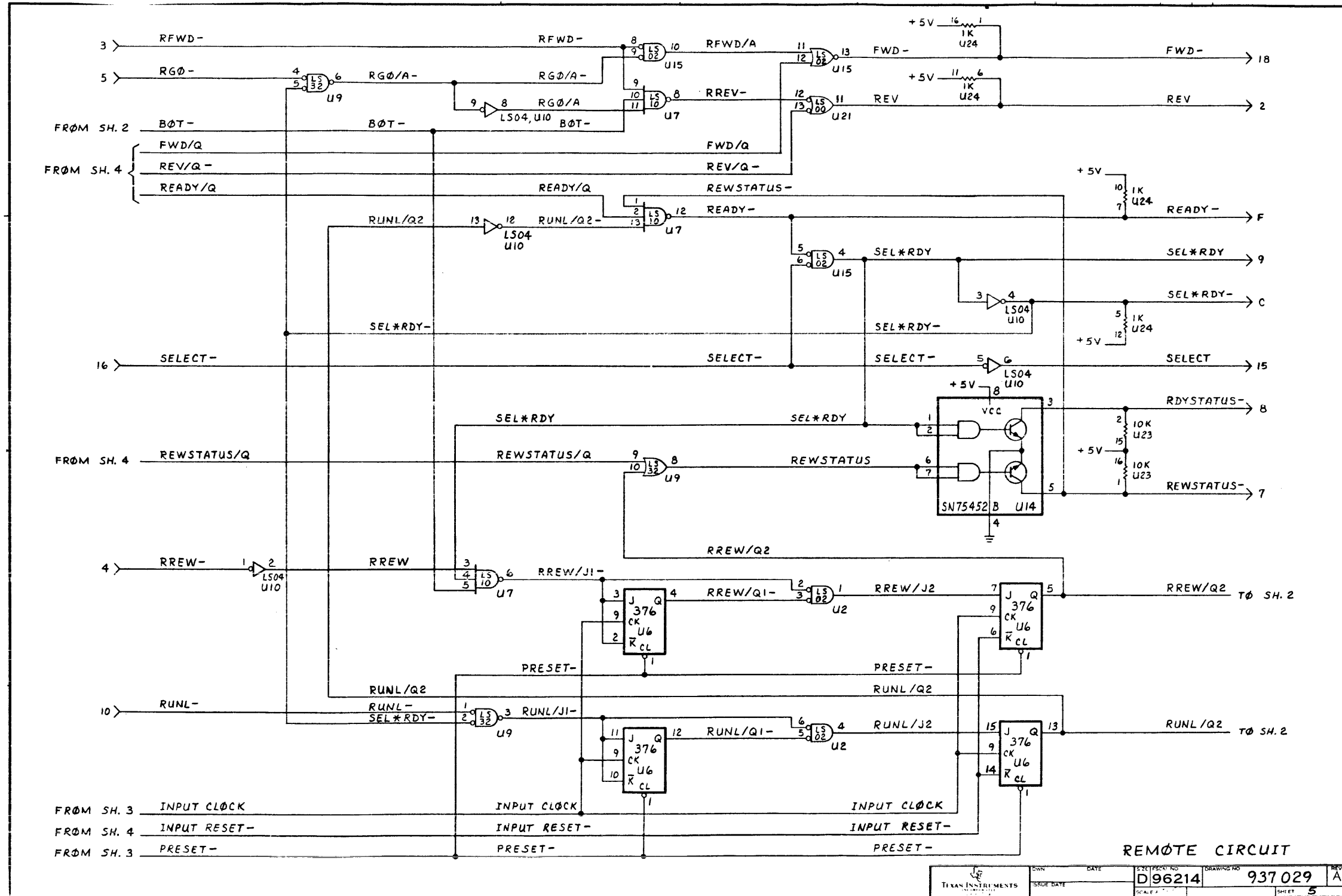
TEXAS INSTRUMENTS	DATE	SIZE 1/2" x 7/8"	DRAWING NO. 937 029	REV. A
ISSUE DATE	SCALE 1:1	SHEET 2		



TEXAS INSTRUMENTS	DATE	ISSUE DATE	DESIGN NO.	DRAWING NO.	REV.
			D 96214	937 029	B
					SHEET 3

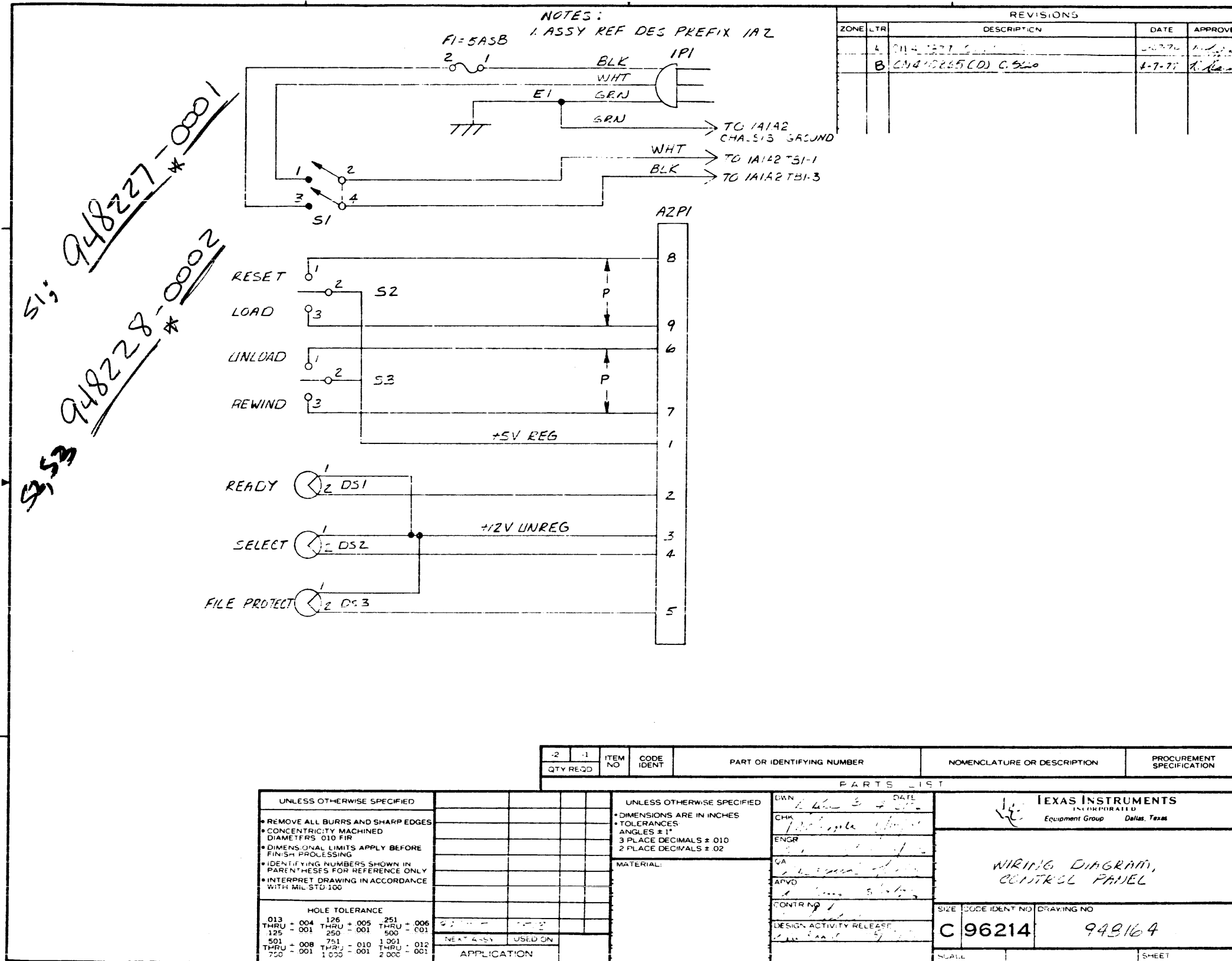


TEXAS INSTRUMENTS	ISSUE DATE	DATE	REV	96214	937029	A
SCALE 1/8"			SHEET 4			













NOTES:  
 1 J4 AND J5 ARE CONNECTED PIN FOR PIN EXCEPT AS MARKED AND CONNECTION TO PINS 41, F, J, M, P, T, AND U  
 2 CABLE INTERCONNECTS:  
 J4 TO CONTROL DEVICE  
 J5 TO NEXT TRANSPORT  
 J11 TO SERVO AMPLIFIER  
 J12 TO POWER SUPPLY  
 J13 TO MOUNTING PLATE  
 J14 TO CONTROL PANEL  
 J15 TO WRITE HEAD  
 J16 TO READ HEAD

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		CN417588 (C) R. McLean	11-18-76	J. L. King
B		CN417849 (C) R. McLean	12-18-76	J. L. King
C		CN427390 (C) R. McLean	9-17-77	J. L. King
D		CN437937 (E) J. McLean	1-3-80	J. L. King

REV STATUS OF SHEETS	REV	D	D	QTY	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION
	SH	1	2						

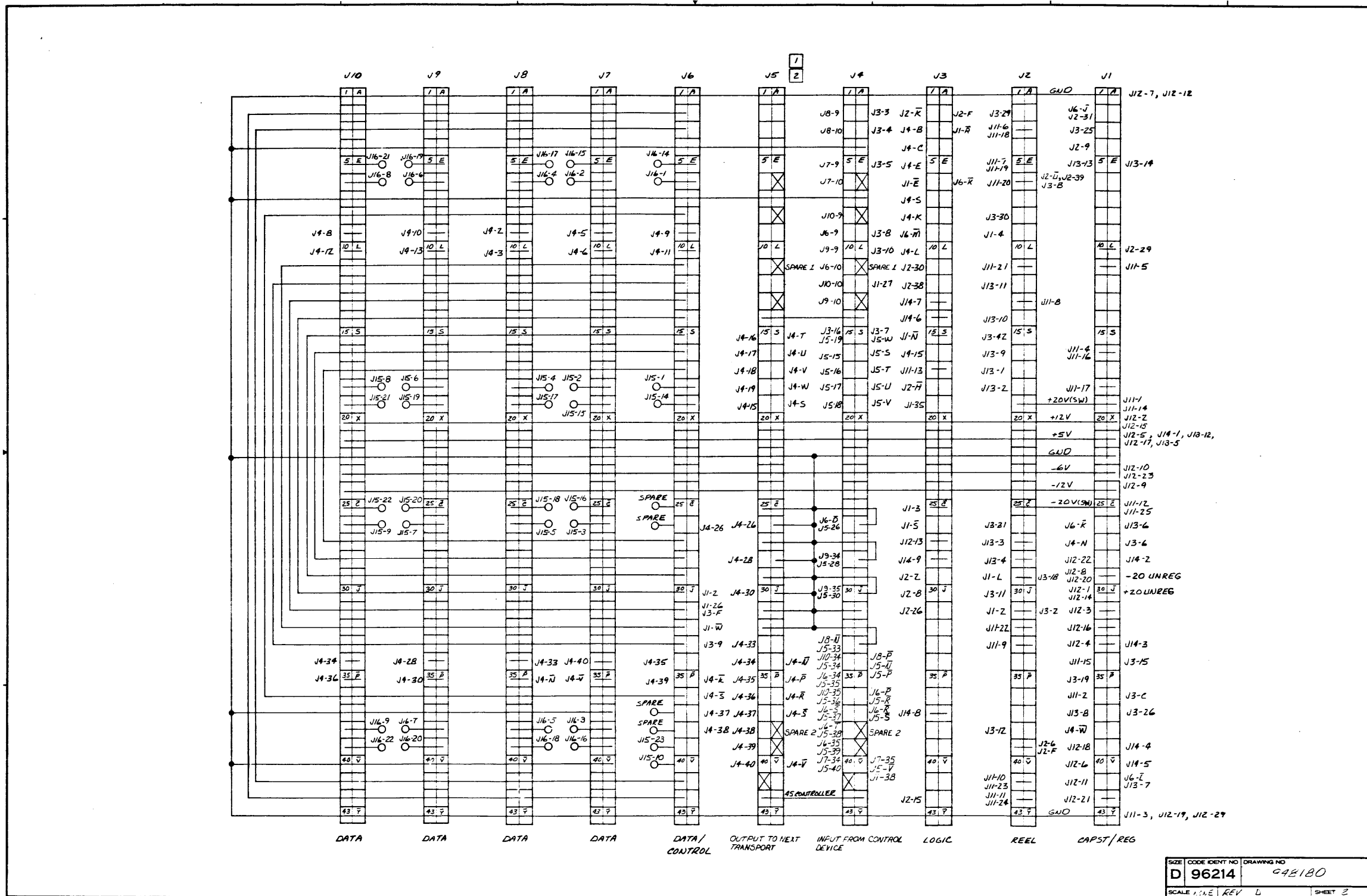
UNLESS OTHERWISE SPECIFIED		UNLESS OTHERWISE SPECIFIED	
REMOVE ALL BURRS AND SHARP EDGES	CONCENTRICITY MACHINED	DIMENSIONS ARE IN INCHES	TOLERANCES
DIAMETERS .010 F.F.	DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING	ANGLES ±1°	3 PLACE DECIMALS ±.010
IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY	INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100	2 PLACE DECIMALS ±.02	
HOLE TOLERANCE			
.013 +.004 THRU -.001	.125 +.005 THRU -.001	.251 +.006 THRU -.001	
.501 +.008 THRU -.001	.751 +.010 THRU -.001	1.001 +.012 THRU -.001	
		2.000 +.001 THRU -.001	

DATE	BY	CHKD	ENGR	QA	APVD	COPIES	DESIGN ACTIVITY RELEASE
3/12/76	J. L. King						
5/13/76	J. L. King						
5/13/76	J. L. King						
5/13/76	J. L. King						
5/13/76	J. L. King						

TEXAS INSTRUMENTS INCORPORATED Equipment Group Dallas, Texas	
WIRING DIAGRAM, BACK PANEL	
SIZE	CODE IDENT NO   DRAWING NO
D	96214   948180
SCALE	SHEET 1 OF 2







WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	FINISH STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	NHA PL ITEM NO.
21	NO 24 WHT	AR			P1-L	P2-L	SET WRT	10
22	GRN				35	35	SGND	
23	WHT				J	J	RD STAT	
24	GRN				27	27	SGND	
25	WHT				N	N	SET RD	
26	GRN				35	35	SGND	
27	WHT				P	P	WRT RST	
28	GRN				36	36	SGND	
29	WHT				S	S	FP STAT	
30	GRN				37	37	SGND	
31	WHT				V	V	EOT STAT	
32	GRN				40	40	SGND	
33	WHT				Y	Y	SELECT 5	10
34	NO 24 GRN				Z	Z	REW STAT 5	13
35	NO 18 RED/WHT				21	21	+5 CONTROL	13
36	NO 18 WHT	AR			P1-22	P2-22	+5 CONTROL	13
37	NO 18 WHT/BLK	AR			P1-27	"CONTROL" SHIELD	GND	16

SIZE	CODE IDENT NO.	DRAWING NO.
A	96214	948194
SCALE	REV	SHEET
	C	3

WIRE NO.	DESCRIPTION	TOTAL LENGTH	SIGNATURE	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	N/A ITEM NO.
1	NO 24 WHT	AR	READ DATA 4	P1-B	P2-B	T-SIGNAL	10
2	GRN		GND	2	2	RETURN	10
3	WHT		READ DATA 2	F	F		10
4	GRN		GND	5	5		10
5	WHT		READ DATA 8	J	J		10
6	GRN		GND	7	7		10
7	WHT		READ DATA 1	L	L		10
8	GRN		GND	8	8		10
9	WHT		READ DATA 6	N	N		10
10	GRN		GND	9	9		10
11	WHT		RD CLK	C	C		10
12	GRN		GND	28	28		10
13	WHT		READ DATA 5	F	F		10
14	GRN		GND	31	31		10
15	WHT		READ DATA 9	K	K		10
16	GRN		GND	33	33		10
17	WHT		READ DATA 3	U	U		10
18	GRN		GND	39	39		10
19	WHT		READ DATA 7	25	25	SIGNAL	10
20	NO 24 GRN	AR	GND	P1-26	P2-26	RETURN	10
21	NO 18 WHT/BLK	AR		P1-33	"READ" SHIELD	GND	16

<b>TEXAS INSTRUMENTS</b> INCORPORATED DIGITAL SYSTEMS DIVISION HOUSTON, TEXAS	A	948194	REV
		SHEET 4	C



WIRE NO.	DESCRIPTION	ENGINEER	SIGNATURE	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	N/A LM ITEM NO.
1	NO 24 WHT	AR	WRITE DATA 4	P1-D	P2-D	↑ SIGNAL	10
2	↑ GRN	↑	GND	3	3	↑ RETURN	10
3	WHT		WRITE DATA 2	H	H	↑	10
4	GRN		GND	6	6		10
5	WHT		WRITE DATA 8	S	S		10
6	GRN		GND	11	11		10
7	WHT		WRITE DATA 7	d	d		10
8	GRN		GND	29	29		10
9	WHT		WRITE DATA 5	e	e		10
10	GRN		GND	30	30		10
11	WHT		WRITE DATA 9	h	h		10
12	GRN		GND	32	32		10
13	WHT		WRT CLK	m	m		10
14	GRN		GND	34	34		10
15	WHT		WRITE DATA 3	t	t		10
16	GRN		GND	38	38		10
17	WHT		WRITE DATA 1	14	14		10
18	GRN		GND	12	12		10
19	↑ WHT	↓	WRITE DATA 6	15	15	↑ SIGNAL	10
20	NO 24 GRN	AR	GND	P1-13	P2-13	↑ RETURN	10
21	NO 18 WHT/BLK	AR		P1-30	"WRITE" SHIELD	GND	16

**TEXAS INSTRUMENTS**  
 INCORPORATED  
 DIGITAL SYSTEMS DIVISION  
 HOUSTON, TEXAS

**A** 948194  
 SHEET 5

REV C







- NOTES: UNLESS OTHERWISE SPECIFIED;
1. ALL DEVICE TYPES ARE PREFIXED WITH SN74.
  2. GROUND IS APPLIED TO PIN 7 OF ALL 14 PIN IC'S AND PIN 8 OF ALL 16 PIN IC'S.
  3. VCC IS APPLIED TO PIN 14 OF ALL 14 PIN IC'S AND PIN 16 OF ALL 16 PIN IC'S.
  4. DEVICE TYPE, PIN NUMBERS, AND REFERENCE DESIGNATOR OF IC ARE SHOWN AS FOLLOWS.

REVISIONS		
ZONE	TR	DATE
2		11/30/70



- OO AND O4 = DEVICE TYPE
- 4,5,6 = PIN NUMBERS
- UE AND U16 = REFERENCE DESIGNATOR
- 5 \* - +12V IS APPLIED TO PIN 14 ON THESE DEVICES, (U8, U10, U11, U12, U14, U19)
- 6 \*\* +5V IS APPLIED TO PIN 1, PIN 8 IS GROUNDED, AND PIN 16 IS OPEN ON THIS DEVICE (U9)

REV	STATUS	REF	A	A	A	A	A	A	A
1	2	3	4	5	6				

QTY REQD	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION
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UNLESS OTHERWISE SPECIFIED		
REMOVE ALL BURRS AND SHARP EDGES		
CONCENTRICITY MACHINED		
DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING		
IDENTIFYING NUMBERS SHOWN IN PARENTHESIS FOR REFERENCE ONLY		
INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100		
HOLE TOLERANCE		
0.13 THRU -004	125 THRU +005	251 THRU -008
125 THRU -001	250 THRU -001	500 THRU -001
501 THRU -008	751 THRU +010	1.001 THRU -012
750 THRU -001	1.000 THRU -001	2.000 THRU -001

UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
TOLERANCES	
ANGLES ±1°	
3 PLACE DECIMALS ±0.010	
2 PLACE DECIMALS ±0.02	

DATE	DATE
11/30/70	11/30/70
12/17/70	12/17/70
12/17/70	12/17/70

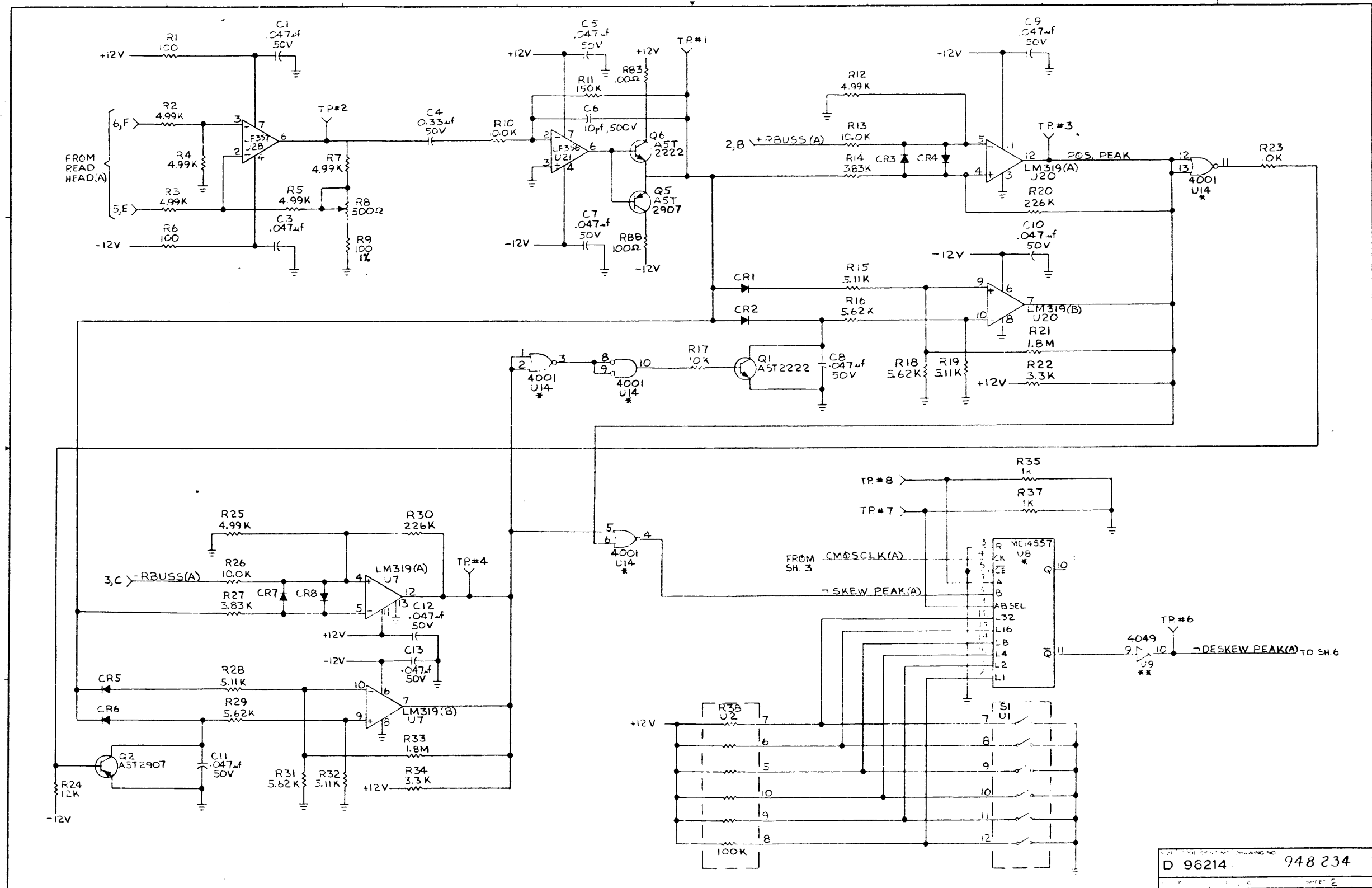
CHK	DATE
DR	11/30/70
ENGR	12/17/70
QA	12/17/70
APVD	12/17/70
CONTR NO	12/17/70

SIZE	CODE IDENT NO	DRAWING NO
D	96214	948234

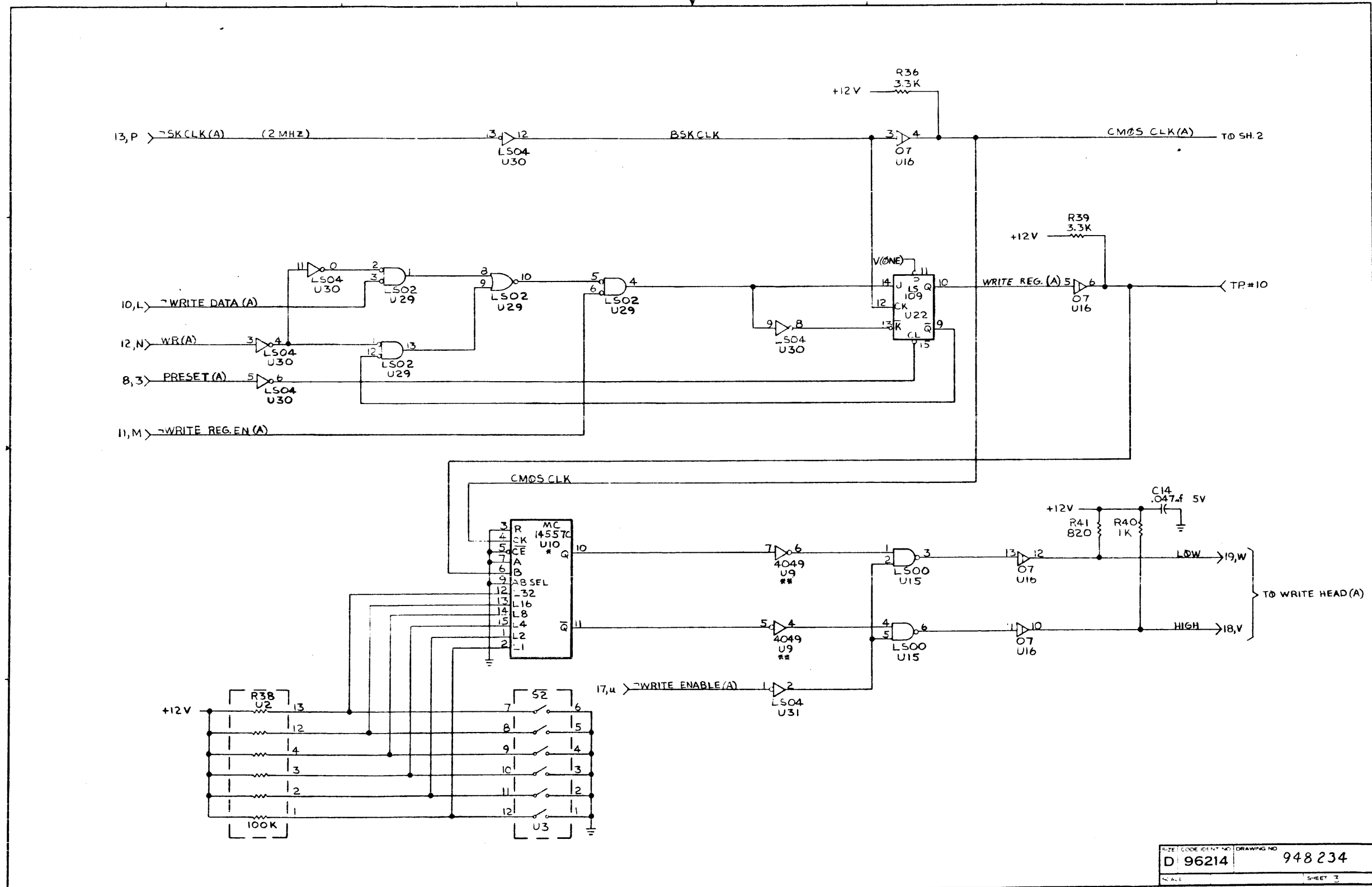


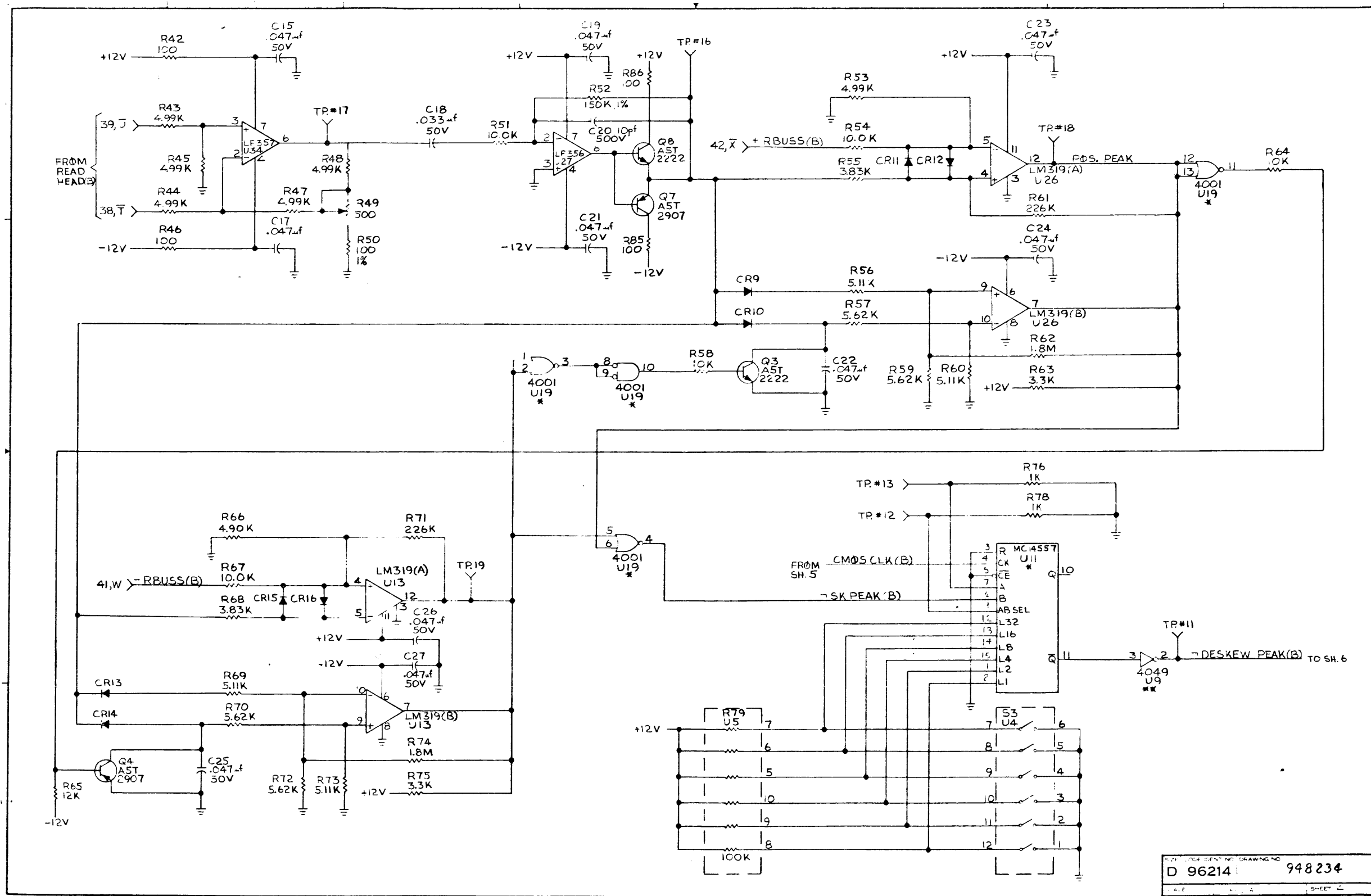
DIAGRAM, LOGIC, DETAILED - NRZI DATA MODULE

T-79141

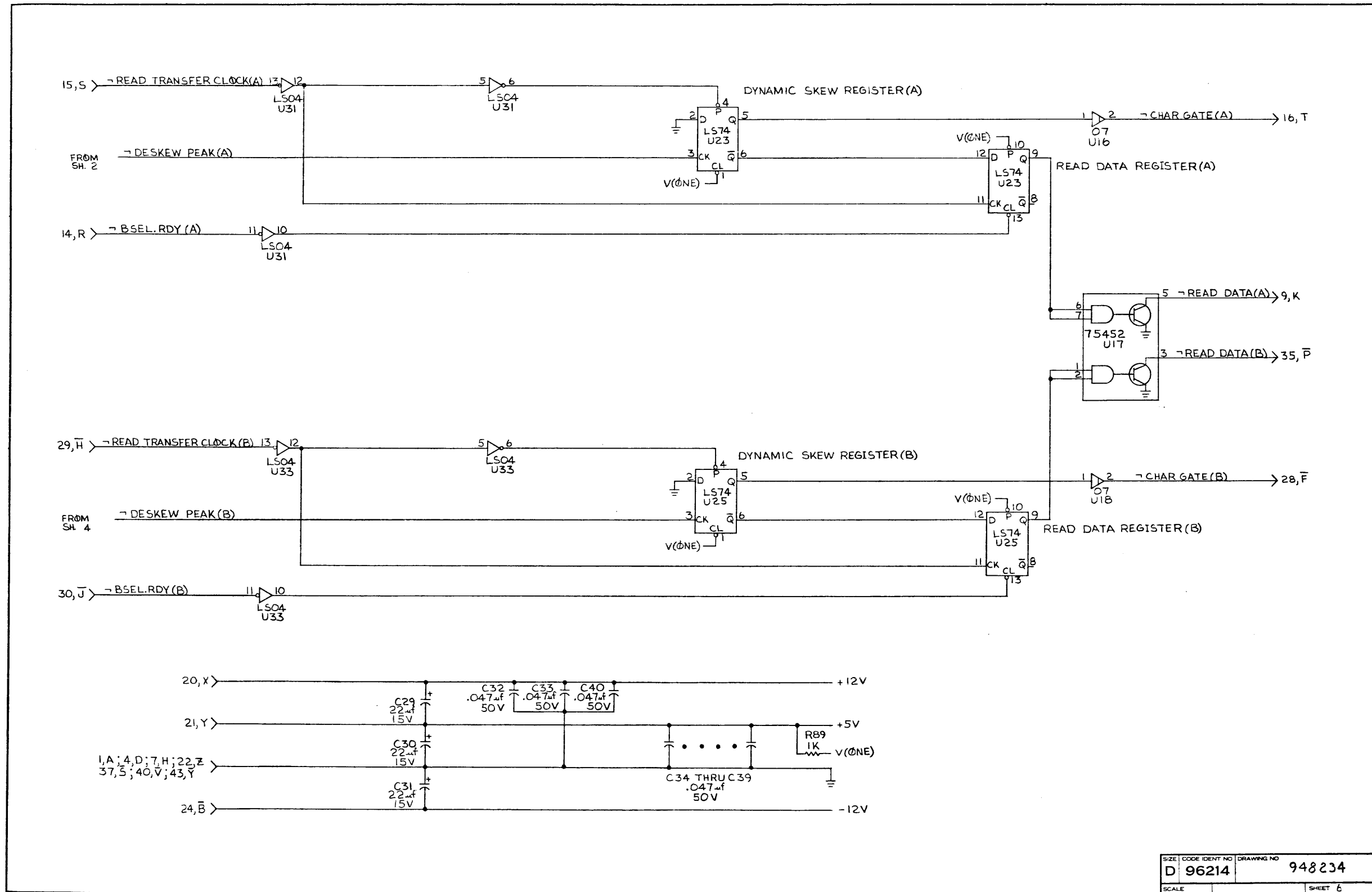


D 96214 948 234









SIZE	CODE IDENT NO	DRAWING NO
D	96214	948234
SCALE		SHEET 6



- NOTES: UNLESS OTHERWISE SPECIFIED:
1. ALL DEVICE TYPES ARE PREFIXED WITH SN74.
  2. GROUND IS APPLIED TO PIN 7 OF ALL 14 PIN IC'S AND PIN 5 OF ALL 16 PIN IC'S.
  3. VCC IS APPLIED TO PIN 14 OF ALL 14 PIN IC'S AND PIN 16 OF ALL 16 PIN IC'S.
  4. DEVICE TYPE, PIN NUMBERS, AND REFERENCE DESIGNATOR OF IC ARE SHOWN AS FOLLOW:



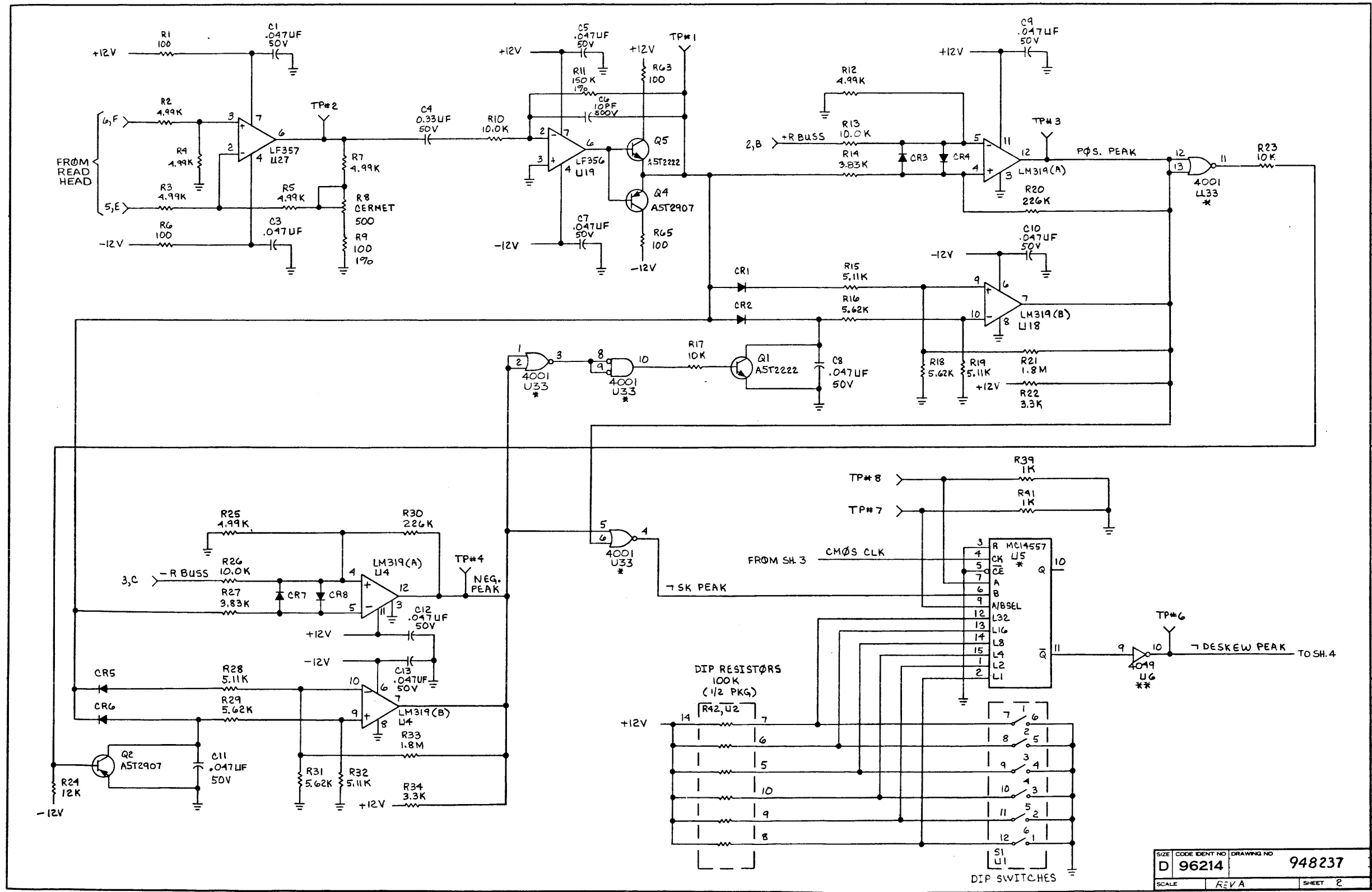
- OO AND O4 = DEVICE TYPE  
 4, 5, 6 = PIN NUMBERS  
 UB AND U16 = REFERENCE DESIGNATOR
5. \* +12V IS APPLIED TO PIN 14 ON THESE DEVICES, (U5, U7, U33)
  6. \*\* +5V IS APPLIED TO PIN 1, PIN 8 IS GROUNDED AND PIN 16 IS OPEN ON THIS DEVICE (U6).

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		CN 424313 (C) J.M.H.	8-6-77	R. K. [Signature]

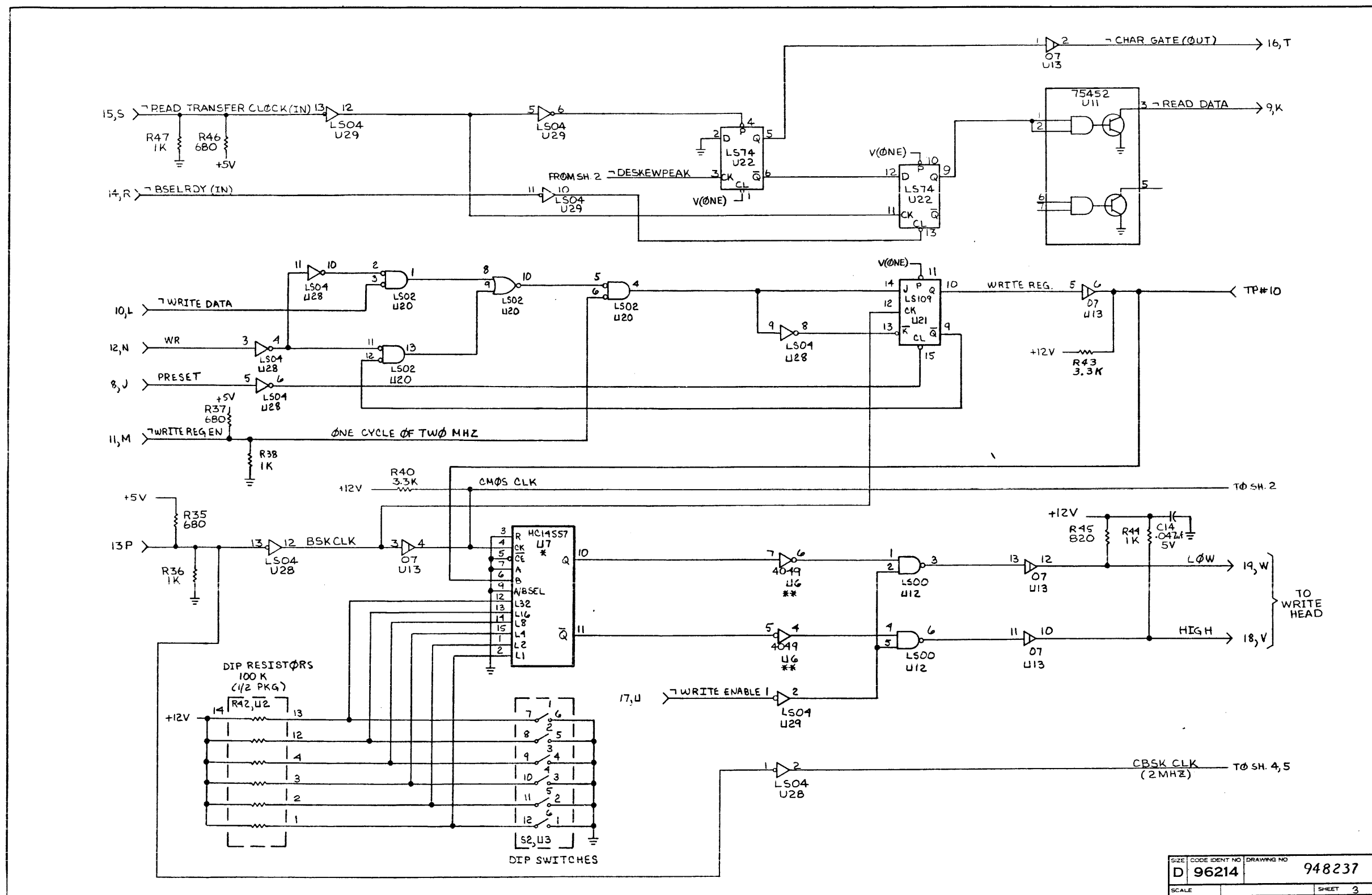
REV STATUS	REV	A	A		
OF SHEETS	1	2	3	4	5

QTY	REGD	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION
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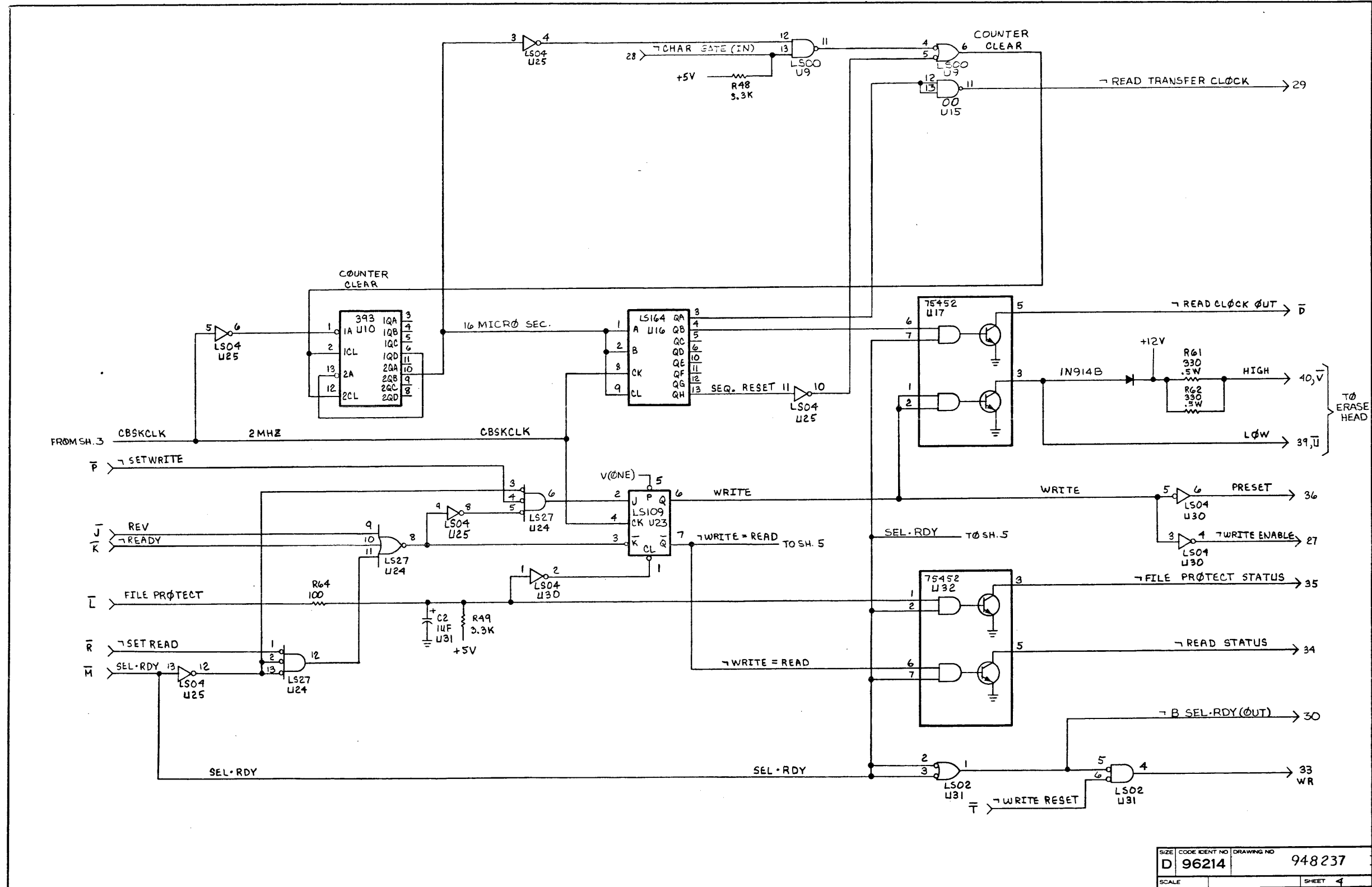
UNLESS OTHERWISE SPECIFIED		UNLESS OTHERWISE SPECIFIED		PARTS LIST																									
<ul style="list-style-type: none"> <li>REMOVE ALL BURRS AND SHARP EDGES</li> <li>CONCENTRICITY MACHINED DIAMETERS .010 FIR</li> <li>DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING</li> <li>IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY</li> <li>INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100</li> </ul>		<ul style="list-style-type: none"> <li>DIMENSIONS ARE IN INCHES</li> <li>TOLERANCES ANGLES ±1°</li> <li>3 PLACE DECIMALS ±.010</li> <li>2 PLACE DECIMALS ±.02</li> </ul>		DWN KLOSNER 11-2-73	DATE																								
<table border="1"> <thead> <tr> <th>HOLE TOLERANCE</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>.013 THRU +.004</td> <td>.126 THRU -.005</td> <td>.251 THRU -.006</td> <td></td> </tr> <tr> <td>.125 -.001</td> <td>.250</td> <td>.500</td> <td></td> </tr> <tr> <td>.501 THRU -.008</td> <td>.751 THRU -.010</td> <td>1.001 THRU -.012</td> <td></td> </tr> <tr> <td>.750 -.001</td> <td>1.000 -.001</td> <td>2.000 -.001</td> <td></td> </tr> </tbody> </table>		HOLE TOLERANCE				.013 THRU +.004	.126 THRU -.005	.251 THRU -.006		.125 -.001	.250	.500		.501 THRU -.008	.751 THRU -.010	1.001 THRU -.012		.750 -.001	1.000 -.001	2.000 -.001		<table border="1"> <thead> <tr> <th>APPLICATION</th> <th>USED ON</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>		APPLICATION	USED ON			CHK A. KOELER 11-2-76	
HOLE TOLERANCE																													
.013 THRU +.004	.126 THRU -.005	.251 THRU -.006																											
.125 -.001	.250	.500																											
.501 THRU -.008	.751 THRU -.010	1.001 THRU -.012																											
.750 -.001	1.000 -.001	2.000 -.001																											
APPLICATION	USED ON																												
<table border="1"> <thead> <tr> <th>SIZE</th> <th>CODE IDENT NO</th> <th>DRAWING NO</th> </tr> </thead> <tbody> <tr> <td>D</td> <td>96214</td> <td>948237</td> </tr> </tbody> </table>		SIZE	CODE IDENT NO	DRAWING NO	D	96214	948237	TEXAS INSTRUMENTS INCORPORATED Equipment Group Dallas, Texas		DIAGRAM, LOGIC, DETAILED- NRZI CONTROL MODULE																			
SIZE	CODE IDENT NO	DRAWING NO																											
D	96214	948237																											
DESIGN ACTIVITY RELEASE [Signature] 3/11/77		SCALE:		SHEET 1 OF 5																									



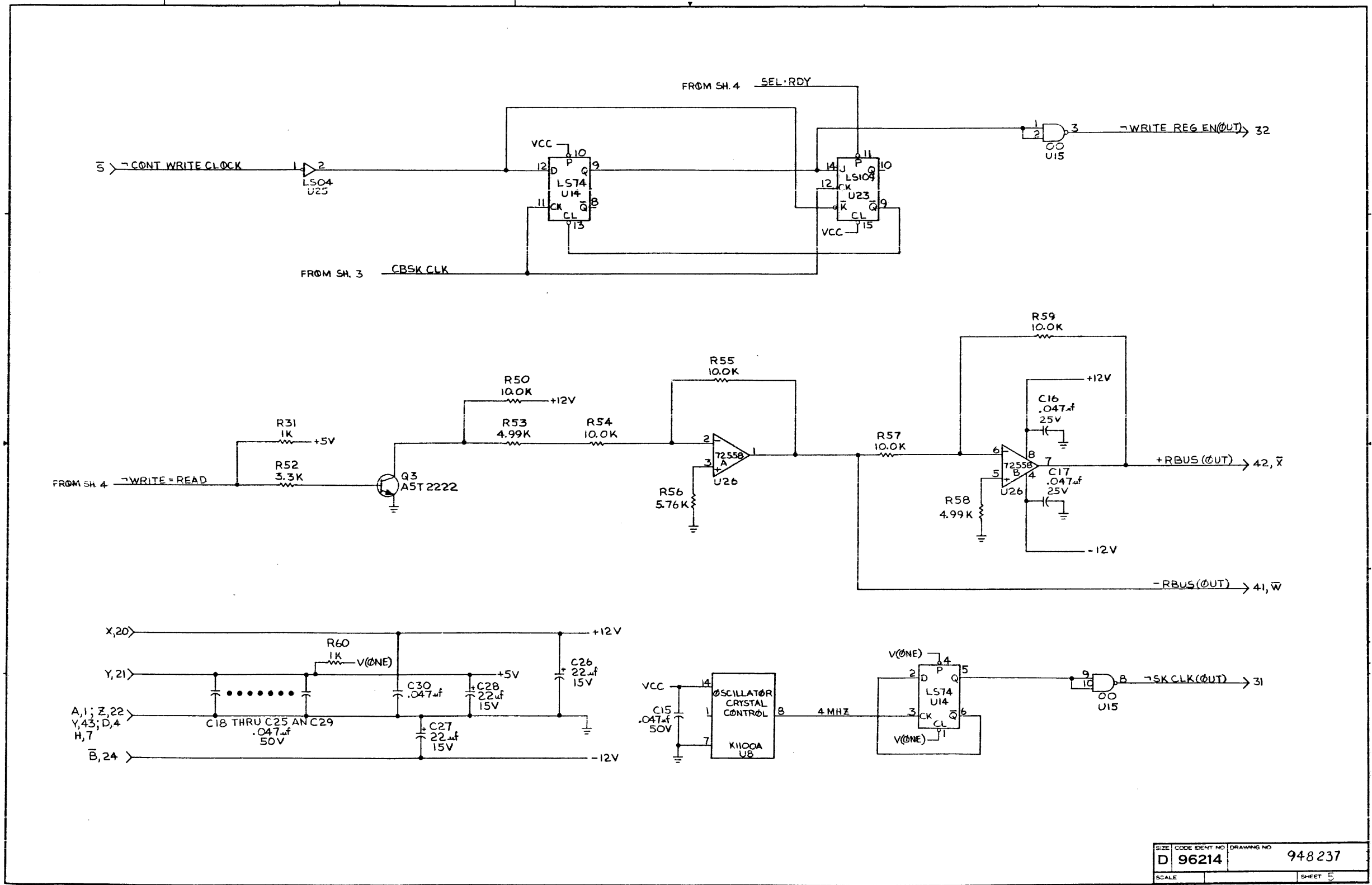




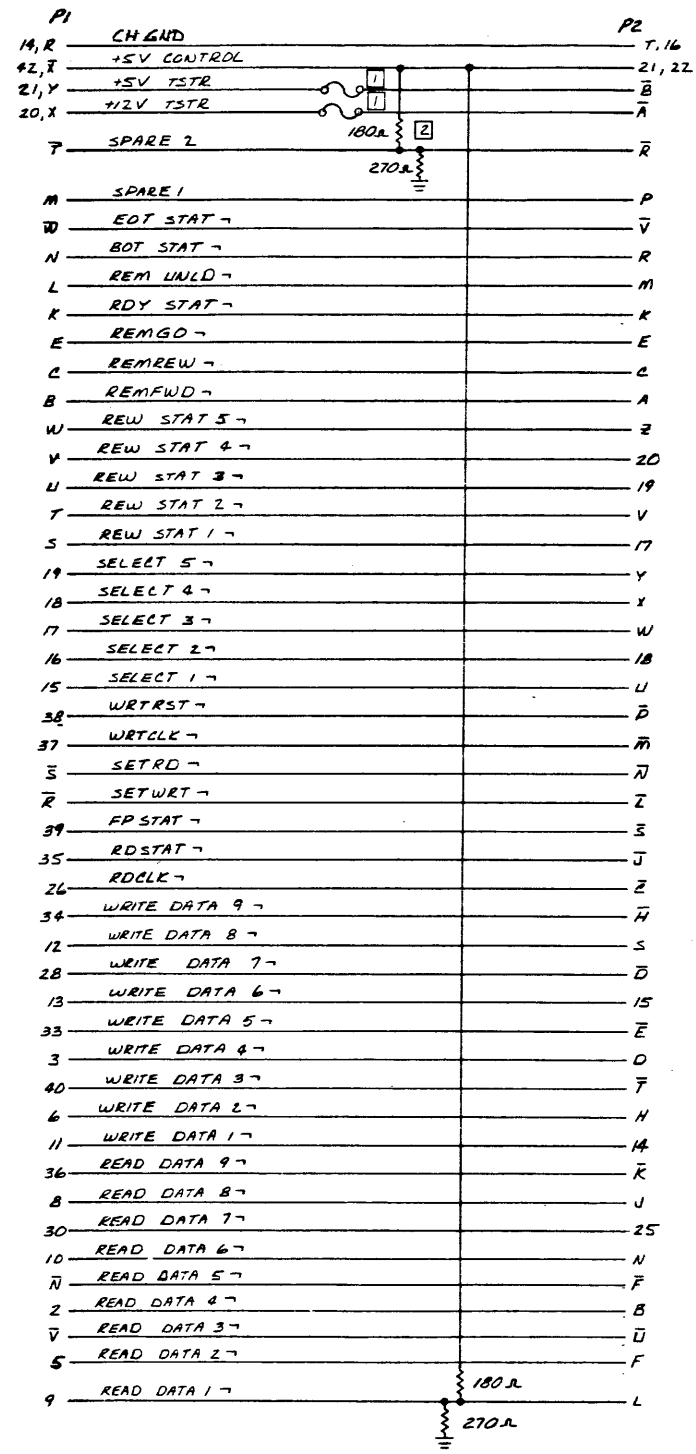
SIZE	CODE IDENT NO	DRAWING NO
D	96214	948237
SCALE		SHEET 3



SIZE	CODE IDENT NO	DRAWING NO
D	96214	948237
SCALE		SHEET 4



SIZE	CODE IDENT NO	DRAWING NO
D	96214	948237
SCALE		SHEET 5



NOTES:  
 1 FUSE IS PART OF ETCH  
 2 TERMINATOR APPEARS IN EACH LINE BELOW THIS POINT  
 3. ALL UNLISTED PINS ON P2 ARE HOOKED TO GROUND PLANE

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A		IN 424 313 (C) A. C. Cole	4-18-77	
B		IN 437939 (E) J. M. Lemay	1-3-80	

-2	-1	ITEM	CODE	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION
QTY	REGD	NO	IDENT			
PARTS LIST						
UNLESS OTHERWISE SPECIFIED		UNLESS OTHERWISE SPECIFIED		DWN: 11 3 2 20 76 DATE: 5/14/76 CHK: [Signature] ENGR: [Signature] QA: [Signature] APVD: [Signature] CONTR NO: [Signature] DESIGN ACTIVITY RELEASE: [Signature]		
REMOVE ALL BURRS AND SHARP EDGES CONCENTRICITY MACHINED DIAMETERS .010 P/R DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100		DIMENSIONS ARE IN INCHES TOLERANCES: ANGLES ±1° 3 PLACE DECIMALS = .010 2 PLACE DECIMALS = .02		TEXAS INSTRUMENTS INCORPORATED Equipment Group Dallas, Texas ELECTRONIC SCHEMATIC DIAGRAM, SIGNAL TERMINATOR SIZE: D 96214 CODE IDENT NO: 948240 DRAWING NO: 948240 SCALE: 1:1 SHEET:		
HOLE TOLERANCE .013 +.004 THRU .125 -.005 .125 -.001 THRU .250 -.001 .250 -.001 THRU .500 -.001 .501 THRU 1.000 THRU 1.001 THRU 1.002 THRU 2.000 -.001		948240 2702 NEXT ASSY USED ON APPLICATION		T.16 21, 22 A B R P V R M K E C A Z 20 19 V 17 Y X W 18 U D M N Z S J Z H S D B F U F L		



DWG NO 948262 SH 1		APPLICATION				REVISIONS			
NEXT ASSY 948263		USED ON 7513		REV	DESCRIPTION	DATE	APPROVED		
				A	CN429404 (C) <i>D. DeLay</i>	2-14-78	<i>J. R. Coffey</i>		
				B	CN437296 (B) <i>D. DeLay</i> (1) ADDED SHEET 6	6-19-78	<i>J. R. Coffey</i>		
NOTES:									
1. Component start stations for all wires marked with an * are connected to GND bus on P1.									
2. Each group A, B and C will be separately shielded with braid wire. Braid wire will be connected as shown in wire list.									
3. These wires have two wires per PIN in P2									
REV SHEET									
REV STATUS OF SHEETS									
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: ANGLES ±1° 3 PLACE DECIMALS ±.010 2 PLACE DECIMALS ±.02 PARENTHEICAL INFO FOR REF ONLY									
P. MCDONALD 3/25/77 <i>DeLay</i> 3-11-77 <i>John Brand</i> 3-14-77 <i>John Schellberg</i> 7/14/77 <i>Callahan</i> 3/9/77 <i>John Brand</i> 5/14/77 <i>John Brand</i>				TEXAS INSTRUMENTS INCORPORATED Dallas, Texas WIRING LIST, 979A TAPE XPORT TO DMAC CONTROLLER CABLE ASSY.					
SIZE A		FSCM NO 96214		DRAWING NO 948262					
SCALE NONE				SHEET 10F-6					

WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	FINISH STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	NPA PR ITEM NO.
A -1	WHT	AR			P1-36	P2-L	RDDA1	7
-2	WHT/RED				P1-*	-8	GND	
-3	WHT				P1-35	-F	RDDA2	
-4	WHT/RED				*	-5	GND	
-5	WHT				-34	-U	RDDA3	
-6	WHT/RED				*	-39	GND	
-7	WHT				-33	-B	RDDA4	
-8	WHT/RED				*	-2	GND	
-9	WHT				-32	-F	RDDA5	
-10	WHT/RED				*	-31	GND	
-11	WHT				-31	-N	RDDA6	
-12	WHT/RED				*	-9	GND	
-13	WHT				-30	-25	RDDA7	
-14	WHT/RED				*	-26	GND	
-15	WHT				-29	-J	RDDA8	
-16	WHT/RED				*	-7	GND	
-17	WHT				-28	-k	RDDA9	
-18	WHT/RED				*	-33	GND	
B -1	WHT				-27	-n	SET READ	
B -2	WHT/RED	AR			P1-*	P2-36[3]	GND	7

SIZE A	CODE IDENT NO. 96214	DRAWING NO. 948262
SCALE	REV	SHEET 2



WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	FINISH STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	NHA PL ITEM NO.
B -3	NO 26 WHT	AR			P1-26	P2-C	READ CLOCK	7
B -4	WHT/RED				*	-28	GND	
C -1	WHT				-25	-14	WDTA1	
-2	WHT/RED				*	-12	GND	
-3	WHT				-24	-H	WTD A2	
-4	WHT/RED				*	-6	GND	
-5	WHT				-23	-T	WTD A3	
-6	WHT/RED				*	-38	GND	
-7	WHT				-22	-D	WTD A4	
-8	WHT/RED				*	-3	GND	
-9	WHT				-21	-e	WTD A5	
-10	WHT/RED				*	-30	GND	
-11	WHT				-20	-15	WTD A6	
-12	WHT/RED				*	-13	GND	
-13	WHT				-X	-d	WTD A7	
-14	WHT/RED				*	-29	GND	
-15	WHT				-19	-S	WTD A8	
-16	WHT/RED				*	-11	GND	
-17	WHT				-W	-h	WTD A9	
C -18	NO 26 WHT/RED	AR			P1-*	P2-32	GND	7

SIZE **A** CODE IDENT NO. **96214** DRAWING NO. **948262**  
 SCALE REV SHEET **3**

WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	FINISH STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	NHA PL ITEM NO.
B -5	NO 26 WHT	AR			P1-18	P2-L	SET WRITE	7
-6	WHT/RED				*	-1 3	GND	
-7	WHT				-V	-m	WRITE CLOCK	
-8	WHT/RED				*	-34	GND	
-9	WHT				-17	-p	WRITE RESET	
-10	WHT/RED				*	-1 3	GND	
-11	WHT				-U	-U	SELT 1	
-12	WHT/RED				*	-4 3	GND	
-13	WHT				-16	-18	SELT 2	
-14	WHT/RED				*	-4 3	GND	
-15	WHT				-T	-W	SELT 3	
-16	WHT/RED				*	-10 3	GND	
-17	WHT				-15	-A	RM FWD	
-18	WHT/RED				*	-10 3	GND	
-19	WHT				-14	-E	RMTGO	
-20	WHT/RED				*	-28 3	GND	
-21	WHT				-13	-C	RMREW	
-22	WHT/RED				*	-29 3	GND	
-23	WHT				-12	-M	RMUNL	
-24	WHT/RED				*	-30 3	GND	
B -25	NO 26 WHT	AR			P1-11	NC	SPARE	7
B -26	NO 26 WHT/RED	AR			P1-*	NC	GND	7

SIZE **A** CODE IDENT NO. **96214** DRAWING NO. **948262**  
 SCALE REV **A** SHEET **4**







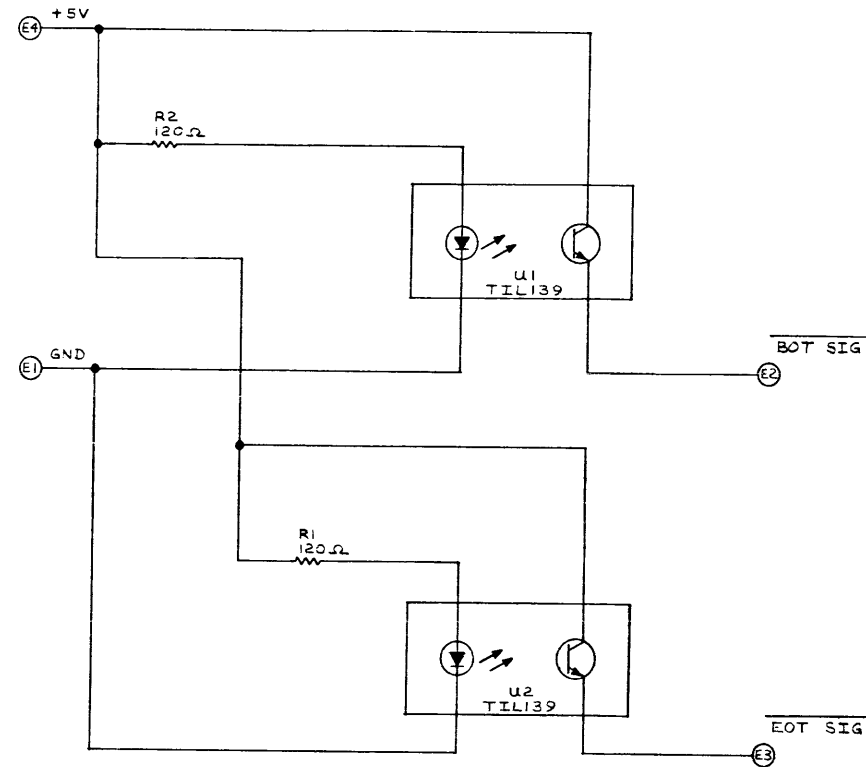




NOTES:

1 SIGNAL LEVELS AT (E2) AND (E3) ARE  
-4V FALSE AND +3.5V TRUE.

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED



QTY REQD	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION

UNLESS OTHERWISE SPECIFIED

- REMOVE ALL BURRS AND SHARP EDGES
- CONCENTRICITY MACHINED DIAMETERS: .010 FIR
- DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING
- IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY
- INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100

HOLE TOLERANCE

.013 +.004	.126	.250 +.006
THRU .125 -.001	THRU .250 -.001	THRU .500 -.001
.501 +.008	.750 +.010	1.001 +.012
THRU .750 -.001	THRU 1.000 -.001	THRU 2.000 -.001

UNLESS OTHERWISE SPECIFIED

- DIMENSIONS ARE IN INCHES
- TOLERANCES
- ANGLES ±1°
- 3 PLACE DECIMALS ±.010
- 2 PLACE DECIMALS ±.02

MATERIAL

APPROVED: *[Signature]* DATE: 12-14-76

ENGR: *[Signature]* DATE: 12-14-76

QA: *[Signature]* DATE: 12/17/76

APPROVED: *[Signature]* DATE: 12/17/76

CONTR NO

DESIGN ACTIVITY RELEASE

APPROVED: *[Signature]* DATE: 12/17/76

TEXAS INSTRUMENTS  
INCORPORATED  
Dallas, Texas

SCHEMATIC DIAGRAM  
PHOTO-TAB  
DETECTOR ASSY.

SIZE: D CODE IDENT NO: 96214 DRAWING NO: 948266

SCALE: AS SHOWN SHEET:





WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	FINISH STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	NHA PL ITEM NO.
B -21	NO 24 WHT	AR			P19 - CD	P2 - Z	REW STAT 5	8
-22	GRN				- CR	- 27	GND	
-23	WHT				- EK	- J	RD STAT	
-24	GRN				- X	- T	SET WRT	
-25	WHT				- BX	- n	SET RD	
-26	GRN				- AD	- p	WRT RST	
-27	WHT				- 2	- r	SPARE 2	
-28	GRN				- 2	- 36	GND	
-29	WHT				- AU	- s	FP STAT	
-30	GRN				- AV	- 37	GND	
-31	WHT				- BN	- v	EOT STAT	
-32	NO 24 GRN				- BP	- 40	GND	8
-33	NO 18 RED/WHT				- AN	- 21	+5V CONTROL	7
-34	NO 18 RED/WHT				- BH	- 22	+5V CONTROL	7
A -1	NO 24 WHT				- CY	- B	READ DATA 4	8
-2	GRN				- CZ	- 2	GND	
-3	WHT				- CU	- F	READ DATA 2	
-4	GRN				- CV	- 5	GND	
-5	WHT				- DJ	- J	READ DATA 8	
A -6	NO 24 GRN	AR			P19 - DK	P2 - 7	GND	8

SIZE	CODE IDENT NO.	DRAWING NO.
A	96214	948268
SCALE	REV	SHEET
	A	3

WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	FINISH STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	NHA PL ITEM NO.
A -7	NO 24 WHT	AR			P19 - CS	P2 - L	READ DATA 1	8
-8	GRN				- CT	- B	GND	
-9	WHT				- DC	- N	READ DATA 6	
-10	GRN				- DD	- 9	GND	
-11	WHT				- CB	- C	RD CLK	
-12	GRN				- CC	- 28	GND	
-13	WHT				- DA	- f	READ DATA 5	
-14	GRN				- DB	- 31 -	GND	
-15	WHT				- DL	- k	READ DATA 9	
-16	GRN				- DM	- 33	GND	
-17	WHT				- CW	- u	READ DATA 3	
-18	GRN				- CX	- 39	GND	
-19	WHT				- DE	- 25	READ DATA 7	
A -20	NO 24 GRN				- DF	- 26	GND	
C -1	WHT				- H	- D	WRITE DATA 4	
-2	GRN				- J	- 3	GND	
-3	WHT				- C	- H	WRITE DATA 2	
-4	GRN				- D	- 6	GND	
-5	WHT				- S	- S	WRITE DATA 8	
C -6	NO 24 GRN	AR			P19 - T	P2 - 11	GND	8

SIZE	CODE IDENT NO.	DRAWING NO.
A	96214	948268
SCALE	REV	SHEET
		4



WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	FINISH STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	NHA PL ITEM NO.
C -7	NO 24 WHT	AR			P19-P	P2-B	WRITE DATA 7	8
-8	GRN				-R	-29	GND	
-9	WHT				-K	-e	WRITE DATA 5	
-10	GRN				-L	-30	GND	
-11	WHT				-V	-R	WRITE DATA 9	
-12	GRN				-W	-32	GND	
-13	WHT				-Z	-M	WRT CLK	
-14	GRN				-AA	-34	GND	
-15	WHT				-E	-E	WRITE DATA 3	
-16	GRN				-F	-38	GND	
-17	WHT				-A	-14	WRITE DATA 1	
-18	GRN				-B	-12	GND	
-19	WHT				-M	-15	WRITE DATA 6	
C -20	NO 24 GRN	AR			P19-N	P2-13	GND	8

SIZE: **A**    CODE IDENT NO.: **96214**    DRAWING NO.: **948268**

SCALE:    REV:    SHEET: **5**

11-7910-8





WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	FINISH STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	NHA PL ITEM NO.
B-21	ND 24 WHT	AR			PI - J	PIB - EK	RD STAT	8
22	GRN				-I	-X	SET WRT	
23	WHT				-R	-BX	SET RD	
24	GRN				-P	-AD	WRT RST	
25	WHT				-F	-2	SPARE 2	
26	GRN				-36	-2	GND	
27	WHT				-3	-AU	FP STAT	
28	GRN				-37	-AV	GND	
29	WHT				-V	-BN	EOT STAT	
30	ND 24 GRN				-40	-BP	GND	8
31	ND 18 RED				-21	-AN	+5V CONTROL	7
B-32	ND 18 WHT				-22	-BH	+5V CONTROL	7
A-1	ND 24 WHT				-B	-CY	READ DATA 4	8
2	GRN				-2	-CZ	GND	
3	WHT				-F	-CU	READ DATA 2	
4	GRN				-5	-CV	GND	
5	WHT				-J	-DJ	READ DATA 8	
6	GRN				-7	-DK	GND	
7	WHT				-L	-CS	READ DATA 1	
A-8	ND 24 GRN	AR			PI - B	PIB - CT	GND	8

SIZE	CODE IDENT NO.	DRAWING NO.
A	96214	94B270
SCALE	REV	SHEET 3

WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	FINISH STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	NHA PL ITEM NO.
A-9	ND 24 WHT	AR			PI - N	PIB - DC	READ DATA 6	8
10	GRN				-9	-DD	GND	
11	WHT				-2	-CB	RD CLK	
12	GRN				-2B	-CC	GND	
13	WHT				-F	-DA	READ DATA 5	
14	GRN				-31	-DB	GND	
15	WHT				-R	-DL	READ DATA 9	
16	GRN				-33	-DM	GND	
17	WHT				-4	-CW	READ DATA 3	
18	GRN				-39	-CX	GND	
19	WHT				-25	-DE	READ DATA 7	
A-20	GRN				-26	-DF	GND	
C-1	WHT				-D	-H	WRITE DATA 4	
2	GRN				-3	-J	GND	
3	WHT				-H	-C	WRITE DATA 2	
4	GRN				-6	-D	GND	
5	WHT				-5	-S	WRITE DATA 8	
6	GRN				-11	-T	GND	
7	WHT				-8	-P	WRITE DATA 7	
C-8	ND 24 GRN	AR			PI - 29	PIB - R	GND	8

SIZE	CODE IDENT NO.	DRAWING NO.
A	96214	94B270
SCALE	REV	SHEET 4



WIRE NO.	DESCRIPTION	TOTAL LENGTH	START STATION	FINISH STATION	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	NHA PL ITEM NO.
C-9	ND24 WHT	AR			P1-ε	P18-K	WRITE DATA 5	8
10	GRN				-30	-L	GND	
11	WHT				-h	-V	WRITE DATA 9	
12	GRN				-32	-W	GND	
13	WHT				-m	-Z	WRT CLK	
14	GRN				-34	-AA	GND	
15	WHT				-ε	-E	WRITE DATA 3	
16	GRN				-38	-F	GND	
17	WHT				-14	-A	WRITE DATA 1	
18	GRN				-12	-B	GND	
19	WHT				-15	-M	WRITE DATA 6	
C-20	NO 24 GRN	AR			P1-13	P18-N	GND	8

SIZE: **A**  
 CODE IDENT NO.: **96214**  
 DRAWING NO.: **948270**  
 SCALE: \_\_\_\_\_ REV: \_\_\_\_\_ SHEET **5**

TI-7918-B





NOTES: UNLESS OTHERWISE SPECIFIED;

1. ALL DEVICE TYPES ARE PREFIXED WITH SN74.
2. GROUND IS APPLIED TO PIN 7 OF ALL 14-PIN IC'S AND PIN 5 OF ALL 16-PIN IC'S.
3. VCC IS APPLIED TO PIN 14 OF ALL 14-PIN IC'S AND PIN 16 OF ALL 16-PIN IC'S.
4. DEVICE TYPE, PIN NUMBERS, AND REFERENCE DESIGNATOR OF IC IS SHOWN AS FOLLOWS;



00 AND 06 = DEVICE TYPE  
 4, 5, AND 6 = PIN NUMBERS  
 U9 AND U14 = REFERENCE DESIGNATOR

REVISIONS			
ZONE	TR	DESCRIPTION	DATE

REV STATUS	REV	A	A	A
OF SHEETS	SHEET	1	2	3

-2	-1	ITEM NO	CODE IDENT	PART OR IDENTIFYING NUMBER	NOMENCLATURE OR DESCRIPTION	PROCUREMENT SPECIFICATION

UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS AND SHARP EDGES CONCENTRICITY MACHINED DIAMETERS .010 F14 DIMENSIONAL LIMITS APPLY BEFORE FINISH PROCESSING IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY INTERPRET DRAWING IN ACCORDANCE WITH MIL-STD-100 HOLE TOLERANCE .013 - .004 THRU .001 .126 - .005 THRU .001 .250 - .006 THRU .001 .500 - .001 THRU .001 .750 - .010 THRU .001 1.000 - .001 THRU .001	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES ±1° 3 PLACE DECIMALS ±.010 2 PLACE DECIMALS ±.02 MATERIAL APPLICATION	DWN C. KEELER 4-15-77 CHK C. KEELER 5-3-77 ENGR QA APVD CONTR NO DESIGN ACTIVITY RELEASE SCALE 1:1	DATE 4-15-77 TEXAS INSTRUMENTS Equipment Group Dallas, Texas LOGIC DIAGRAM- ESD, FIELD TESTER SIZE D CODE IDENT NO 96214 DRAWING NO 948 274 SHEET 1 OF 3
		PARTS LIST QTY REQ ITEM NO CODE IDENT PART OR IDENTIFYING NUMBER NOMENCLATURE OR DESCRIPTION PROCUREMENT SPECIFICATION	







949613-9702

A 948193		REVISIONS			
APPLICATION	DESCRIPTION	DATE	APPROVED		
NEXT ASSY 948192	USED ON 7513	LTR A	CN419444 (D) <i>D. McDonald</i>	4-4-77	<i>J. Robby</i>
NOTES:					
1. This cable contains three groups of wires (Control Group, Read Group, and Write Group).					
2 Control Group					
3 Read Group					
4 Write Group					
REV					
SHEET					
REV STATUS OF SHEETS	REV SHEET	A	A	A	A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES ±1° 3 PLACE DECIMAL ±.010 2 PLACE DECIMAL ±.02		TEXAS INSTRUMENTS INCORPORATED Equipment Group Dallas, Texas			
IDENTIFYING NUMBERS SHOWN IN PARENTHESES FOR REFERENCE ONLY		D. BURKLUND 3/8/1876 <i>D. Burklund 11/8/76</i> <i>D. Burklund 11/8/76</i> <i>D. Burklund 11/8/76</i> <i>D. Burklund 11/8/76</i> <i>D. Burklund 11/8/76</i>			
INTERPRET DWG IN ACCORDANCE WITH MIL-STD-100		WIRING LIST, TIU TO 979A			
SIZE	CODE IDENT NO	DRAWING NO			
A	96214	948193			
SCALE	NONE		SHEET 1 OF 5		

TI-9923-C

42

WIRE NO.	DESCRIPTION	TOTAL LENGTH	SIGNATURE	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	N/A LM ITEM NO.
1	NO 24 WHT	AR	REM FWD	P1-A	P2-AF	SIGNAL	13
2	GRN	↑	REM REW	C	AP	RETURN	13
3	WHT		REM GO	E	AJ		13
4	GRN		GND	4	AK		13
5	WHT		RDY STAT	K	AL		13
6	GRN		REM UNLD	M	AS		13
7	WHT		SPARE 1	P	BL		13
8	GRN		GND	10	BM		13
9	WHT		BOT STAT	R	BJ		13
10	NO 24 GRN		SELECT 1	U	AW		13
11	NO 18 RED		CH GND	T	U		15
12	NO 18 WHT		CH GND	16	BW		15
13	NO 24 WHT		REW STAT 2	V	CF		13
14	GRN		REW STAT 1	17	CD		13
15	WHT		SELECT 3	W	BA		13
16	GRN		SELECT 2	18	AY		13
17	WHT		SELECT 4	X	BC	SIGNAL	13
18	NO 24 GRN	AR	REW STAT 3	P1-19	P2-CJ	RETURN	13

TI-13218B

TEXAS INSTRUMENTS INCORPORATED  
 DIGITAL SYSTEMS DIVISION  
 HOUSTON, TEXAS

A 948193  
 SHEET 2



WIRE NO.	DESCRIPTION	TOTAL LENGTH	SIGNATURE	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	N/A LA ITEM NO.
19	NO 24 WHT	AR	SELECT 5	P1-Y	P2-BE	↑ SIGNAL [3]	13
20	↑ GRN	↑	REW STAT 4	20	CL	↑ RETURN	13
21	WHT		REW STAT 5	Z	CP	↑	13
22	GRN		GND	27	CR		13
23	WHT		RD STAT	J	EK		13
24	GRN		SET WRT	K	X		13
25	WHT		SET RD	R	BX		13
26	GRN		WRT RST	P	AD		13
27	WHT		SPARE 2	F	BU		13
28	GRN		GND	36	BV		13
29	WHT		FP STAT	S	AU		13
30	GRN		GND	37	AV		13
31	WHT		EOT STAT	V	BN		13
32	NO 24 GRN		GND	40	BP	↑	13
33	NO 18 RED	↓	+5V CONTROL	21	AN	↑ SIGNAL	15
34	NO 18 WHT	AR	+5V CONTROL	P1-22	P2-BH	↑ RETURN [2]	15

TEXAS INSTRUMENTS  
INCORPORATED  
DIGITAL SYSTEMS DIVISION  
HOUSTON, TEXAS

A 948190  
SHEET 3 REV A

TI-132188

WIRE NO.	DESCRIPTION	TOTAL LENGTH	SIGNATURE	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	N/A LA ITEM NO.
1	NO 24 WHT	AR	READ DATA 4	P1-B	P2-CY	↑ SIGNAL [3]	13
2	↑ GRN	↑	GND	2	CZ	↑ RETURN	13
3	WHT		READ DATA 2	F	CU	↑	13
4	GRN		GND	5	CV		13
5	WHT		READ DATA 8	J	DJ		13
6	GRN		GND	7	DK		13
7	WHT		READ DATA 1	L	CS		13
8	GRN		GND	8	CT		13
9	WHT		READ DATA 6	N	DC		13
10	GRN		GND	9	DD		13
11	WHT		RD CLK	C	CB		13
12	GRN		GND	28	CC		13
13	WHT		READ DATA 5	F	DA		13
14	GRN		GND	31	DB		13
15	WHT		READ DATA 9	k	DL		13
16	GRN		GND	33	DM		13
17	WHT		READ DATA 3	u	CW		13
18	GRN		GND	39	CX		13
19	WHT	↓	READ DATA 7	25	DE	↑ SIGNAL	13
20	NO 24 GRN	AR	GND	P1-26	P2-DF	↑ RETURN [3]	13

TEXAS INSTRUMENTS  
INCORPORATED  
DIGITAL SYSTEMS DIVISION  
HOUSTON, TEXAS

A 948918  
SHEET 4 REV A

TI-132188



WIRE NO.	DESCRIPTION	TOTAL LENGTH	SIGNATURE	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	N/A LM ITEM NO.
1	NO 24 WHT	AR	WRITE DATA 4	P1-D	P2-H	P1 SIGNAL	13
2	GRN		GND	3	J	RETURN	13
3	WHT		WRITE DATA 2	H	C		13
4	GRN		GND	6	D		13
5	WHT		WRITE DATA 8	S	S		13
6	GRN		GND	11	T		13
7	WHT		WRITE DATA 7	a	P		13
8	GRN		GND	29	R		13
9	WHT		WRITE DATA 5	e	K		13
10	GRN		GND	30	L		13
11	WHT		WRITE DATA 9	h	V		13
12	GRN		GND	32	W		13
13	WHT		WRT CLK	m	Z		13
14	GRN		GND	34	AA		13
15	WHT		WRITE DATA 3	t	E		13
16	GRN		GND	38	F		13
17	WHT		WRITE DATA 1	14	A		13
18	GRN		GND	12	B		13
19	WHT		WRITE DATA 6	15	M	P1 SIGNAL	13
20	NO 24 GRN	AR	GND	P1-13	P2-N	RETURN	13

TI-13218B

TEXAS INSTRUMENTS  
INCORPORATED  
DIGITAL SYSTEMS DIVISION  
HOUSTON, TEXAS

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948193  
SHEET 5

REV  
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WIRE NO.	DESCRIPTION	TOTAL LENGTH	SIGNATURE	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	N/A LM ITEM NO.
11	WHITE	8	CRDY	P1-40	P10-35		6
12	RED		GND	1	BUS		
13		8	LINAD1	39	P		
14			GND	2	BUS		
15		8	CFPT	38	3		
16			GND	3	BUS		
17		8		P1-NC	P10-NC.	SPARE PAIR - FOLD	
18				N.C.	N.C.	BACK TIE	
19		8	CREAD	P1-36	P10-28		
20			GND	5	BUS		
21		8	LINADO	P1-35	P10-C		
22			GND	6	BUS		
23		8	CBOT	P1-34	P10-4		
24			GND	7	BUS		
25		8	CEOT	P1-32	P10-5		
26			GND	9	BUS		
27	COAX (CENTER)		PERFORMAT	P1-31	P10-K		13
28	SHIELD		GND	10	BUS		13
29		8	CRWD1	P1-30	P10-6		6
30			GND	11	BUS		6
31		8	CRWD2	P1-28	P10-7		6
32			GND	13	BUS		6

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961745

SHEET 3

REV A

TI-13218

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WIRE NO.	DESCRIPTION	TOTAL LENGTH	SIGNATURE	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	N/A LM ITEM NO.
33	WHITE	8	RDATA 4	P1-26	P11-14		6
34	RED		GND	15	BUS		
35		8	WDATA 4	P1-25	P11-Y		
36			GND	16	BUS		
37		8	RDATA 1	P1-24	P11-11		
38			GND	17	BUS		
39		8	WDATA 1	P1-23	P11-S		
40			GND	18	BUS		
41		8	RDATA 7	P1-22	P11-17		
42			GND	19	BUS		
43		8	WDATA 7	P1-21	P11-X		
44			GND	20	BUS		
45		8		P1-NC.	P11-9	SPARE - TAPE	
46				NC.	BUS	ENDS ON P1	
47		8	CRWD 3	P3-40	P10-8		
48			GND	1	BUS		6
49	COAX (CENTER)		START	P3-39	P10-D		13
50	SHIELD		GND	2	BUS		13
51	COAX (CENTER)		RDCLK	P3-36	P10-29		13
52	SHIELD		GND	5	BUS		13
53		8		P3-NC.	P10-N.C.	SPARE - TAPE	6
54				P3-N.C.	N.C.	BOTH ENDS	6

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SHEET 4

REV A

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WIRE NO.	DESCRIPTION	TOTAL LENGTH	SIGNATURE	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	N/A LM ITEM NO.
55	WHITE	8	LASTWD	P3-35	P10-7		6
56	RED		GND	6	BUS		
57		8	BUSY	P3-34	-20		
58			GND	7	BUS		
59		8	DATATRU	P3-32	-21		
60			GND	9	BUS		
61		8	WRT	P3-31	-E		
62			GND	10	BUS		6
63	COAX (CENTER)		WRTCLK	P3-30	-22		13
64	SHIELD		GND	2	BUS		13
65		8	ERROR	P3-28	-23		6
66			GND		BUS		
67		8	RDATA5	P3-26	P11-15		
68			GND				
69		8	WDATA5	P3-25	-V		
70			GND				
71		8	RDATA2	P3-24	-12		
72			GND				
73		8	WDATA2	P3-23	-P		
74			GND				
75		8	RDATA8	P3-22	-18		
76			GND				
77		8	WDATA8	P3-21	-R		
78			GND		BUS		6

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SHEET 5

REV A

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TI-13218

WIRE NO.	DESCRIPTION	TOTAL LENGTH	SIGNATURE	COMPONENT CONNECTION FOR START STATION	COMPONENT CONNECTION FOR FINISH STATION	REMARKS	N/A LM ITEM NO.
79	WHITE	8		P3-NC.	P11-NC.	SPARE PAIR -	6
80	RED			NC	NC.	TAPE ENDS	
81		8	FMK	P5-39	P10-F		
82			GND	2	BUS		
83		8		P5-N.C.	P10-N.C.	SPARE PAIR -	
84				N.C.	N.C.	TAPE ENDS	
85		8	ECIN	P5-38	P10-30		
86			GND	3	BUS		
87		8	FMRK	P5-36	P10-25		
88			GND	5	BUS		
89		8	SKP	P5-35	P10-H		
90			GND	6	BUS		
91		8	PEMRK	P5-34	P10-26		
92			GND	7	BUS		
93		8	SXRWD	P5-32	P10-27		
94			GND	9	BUS		
95		8	REV	P5-31	P10-J		
96			GND	10	BUS		
97	UNLOAD	8		P5-28	P10-N		
98			GND	13	BUS		
99	REWIND	8		P5-27	P10-W		
100			GND	14	BUS		6

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