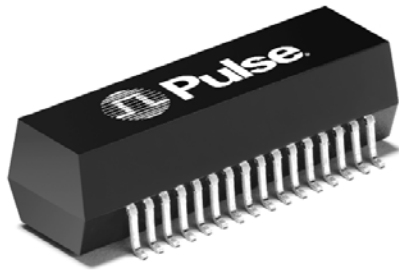


# T1/E1/CEPT/ISDN-PRI QUAD TRANSFORMERS Surface Mount Package



- Quad transformers in a surface mount package supports two T1/E1 ports
- Available in transmit and/or receive configurations
- Models matched to leading quad and dual T1/E1/CEPT transceivers
- Recognized by UL1459 and UL1950
- BAPT approval to EN60950 pending
- Isolation voltage: 1500 Vrms

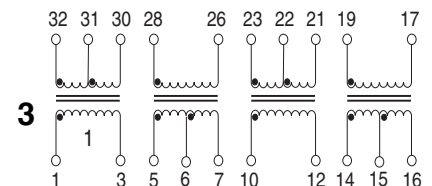
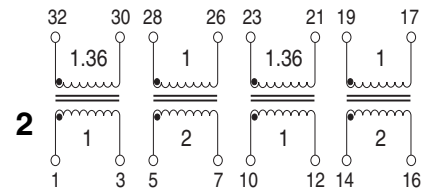
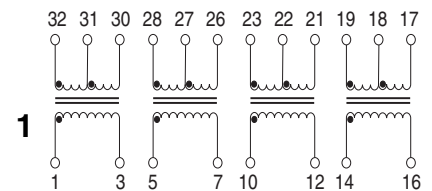
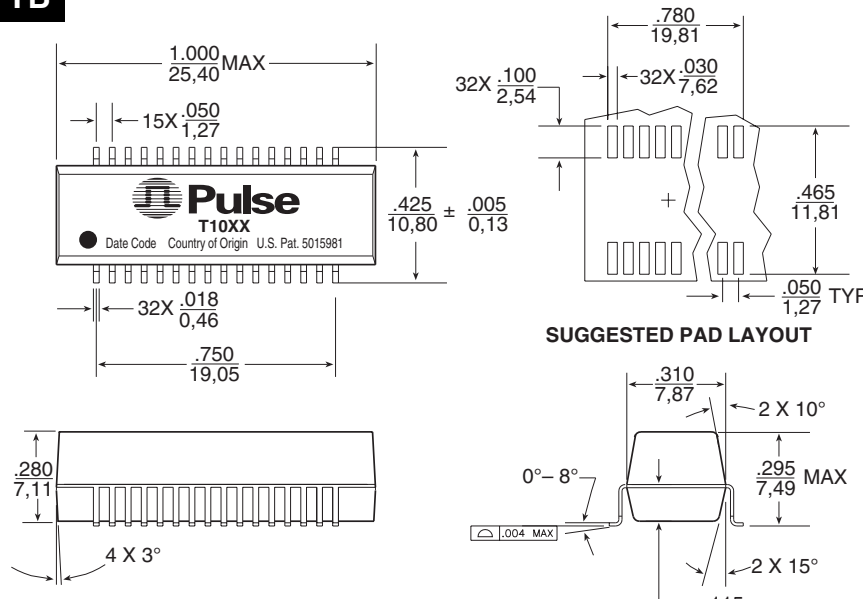
## Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Part Number	Turns Ratio <sup>A,B</sup> (Pri:Sec ±2%)	OCL @ 25°C (mH MIN)	L <sub>L</sub> (μH MAX)	C <sub>w/w</sub> (pF MAX)	DCR Pri (MAX)	DCR Sec (MAX)	Package/ Schematic <sup>D</sup>	Primary Pins
T1001 <sup>C</sup>	1:1.36 / 1	1.2	0.40	30	0.7	1.0	YB/1	1-3, 5-7, 10-12, 14-16
T1005 <sup>C</sup>	1:1.58 / 1.266	1.2	0.50	24	0.6	0.8	YB/1	1-3, 5-7, 10-12, 14-16
T1006	1:2CT	1.2	0.35	30	0.6	1.0	YB/1	1-3, 5-7, 10-12, 14-16
T1007	1:1.15CT	1.2	0.70	23	0.6	0.8	YB/1	1-3, 5-7, 10-12, 14-16
T1008	1:1.36 and 1:2	1.2	0.80	35	0.6	1.0	YB/2	1-3, 10-12, 19-17, 28-26
T1009	1:1.265 / 1	1.2	0.80	35	0.6	0.8	YB/1	1-3, 5-7, 10-12, 14-16
T1010 <sup>C</sup>	1:1.36CT	1.2	0.50	30	0.6	0.8	YB/1	1-3, 5-7, 10-12, 14-16
T1016 <sup>C</sup>	1:2 / 1.15	1.2	0.40	30	0.6	1.0	YB/1	1-3, 5-7, 10-12, 14-16
T1017	1:2.3 / 2	1.2	0.80	35	0.6	1.1	YB/3	1-3, 28-26, 10-12, 19-17

## Mechanical

## Schematics

**YB**



Weight ..... 2.7 grams  
Tape & Reel ..... .200/reel  
Tube ..... .20/tube

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

# T1/E1/CEPT/ISDN-PRI QUAD TRANSFORMERS Surface Mount Package



IC Manufacturer	IC Part Number	Application	T/R	Pulse Part No.	Ratio	Pins
LEVEL ONE	LXT332	T1	Transmit	T1017	1:2.3	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
			Receive	T1006	1:2CT	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
		E1/CEPT	Transmit	T1006	1:2	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
			Receive	T1006	1:2CT	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
VLSI	VP14Q575	T1	Transmit	T1007	1:1.15	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
			Receive	T1006	1:2CT	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
		75Ω/E1	Transmit	T1005	1:1.266	(1-3) : (32-31), (5-7) : (28-27), (10-12) : (23-22), (14-16) : (19-18)
		120Ω/CEPT	Transmit	T1005	1:1.58	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
		E1/CEPT	Receive	T1006	1:2CT	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
AT&T/LUCENT	T7690 (5V)	T1	Transmit	T1007	1:1.15	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
			Receive	T1007	1:1.15CT	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
		E1/CEPT	Transmit	T1010	1:1.36	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
			Receive	T1010	1:1.36CT	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
PMC-SIERRA	PM4314QDSX	T1	Transmit	T1008	1:1.36	(1-3) : (32-30), (10-12) : (23-21)
			Receive	T1008	1:2	(28-26) : (5-7), (19-17) : (14-16)
		E1/CEPT	Transmit	T1008	1:1.36	(1-3) : (32-30), (10-12) : (23-21)
			Receive	T1008	1:2	(28-26) : (5-7), (19-17) : (14-16)
EXAR	XR-5793/5795	T1	Transmit	T1009	1:1.265	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
			Receive	T1009	1:1	(1-3) : (32-31), (5-7) : (28-27), (10-12) : (23-22), (14-16) : (19-18)
		75Ω/E1	Transmit	T1009	1:1	(1-3) : (32-31), (5-7) : (28-27), (10-12) : (23-22), (14-16) : (19-18)
		120Ω/CEPT	Transmit	T1009	1:1.265	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
		E1/CEPT	Receive	T1009	1:1	(1-3) : (32-31), (5-7) : (28-27), (10-12) : (23-22), (14-16) : (19-18)
CRYSTAL	CS61582/3/4 (5V)	T1	Transmit	T1016	1:2	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
			Receive	T1016	1:1.15	(1-3) : (32-31), (5-7) : (28-27), (10-12) : (23-22), (14-16) : (19-18)
		E1/CEPT	Transmit	T1016	1:2	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)
			Receive	T1016	1:1.15	(1-3) : (32-31), (5-7) : (28-27), (10-12) : (23-22), (14-16) : (19-18)
	CS61584 (3V)	T1/E1/CEPT	Trans/Rec	T1016	1:2	(1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17)

## NOTES FROM TABLES

A. OCL (primary inductance) and LL (leakage inductance) are measured at the primary winding. Turns ratio is specified primary: secondary. (CT = Center Tap).

B. To make a 1:1 ratio from a 1:2CT ratio, use one-half of the secondary (2CT) winding.

C. Dual Ratio Transformers — These transformers have tapped secondary windings to provide two turns ratios (T/R). Use entire primary winding and connect secondary pins listed below to obtain desired turns ratio:

Part #	Turns Ratio 1	Secondary Pins	Turns Ratio 2	Secondary Pins
T1001	1:1	31-32, 27-28, 22-23, 18-19	1:1.36	30-32, 26-28, 21-23, 17-19
T1005	1:1.266	31-32, 27-28, 22-23, 18-19	1:1.58	30-32, 26-28, 21-23, 17-19
T1016	1:1.15	31-32, 27-28, 22-23, 18-19	1:2	30-32, 26-28, 21-23, 17-19
T1017	1:2	31-32, 5-6, 22-23, 14-15	1:2.3	30-32, 5-7, 21-23, 14-16

D. Standard packaging is anti-static tubes. Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number, (i.e. T001T).

## Common Mode Chokes for Telecom Applications

### Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

Pulse Part Number	Turns Ratio (±5%)	OCL (μH MIN)	Cw/w (pF MAX)	LL (μH MAX)	DCR (Ω MAX)	Isolation (Vrms MIN)	Package
<b>HIGH FREQUENCY COMMON MODE CHOKES, 4-LINES</b>							
PE-65554	1:1:1:1	24.0	15	.20	0.30	500	Through Hole
PE-65555	1:1:1:1	8.0	10	.20	0.25	500	Through Hole
PE-65854	1:1:1:1	47.0	16	.20	0.30	500	Surface Mount
PE-65857	1:1:1:1	24.0	15	.23	0.30	500	Surface Mount

Note: See G002 for Mechanicals and Schematics of Common Mode Chokes.

## For More Information :

### UNITED STATES (Worldwide)

12220 World Trade Drive  
San Diego, CA 92128  
U.S.A.  
<http://www.pulseeng.com>  
TEL: 858 674 8100  
FAX: 858 674 8262

### UNITED KINGDOM (Northern Europe)

1 & 2 Huxley Road  
The Surrey Research Park  
Guildford, Surrey GU2 5RE  
United Kingdom  
TEL: 44 1483 401700  
FAX: 44 1483 401701

### FRANCE (Southern Europe)

Zone Industrielle  
F-39270  
Orgelet  
France  
TEL: 33 3 84 35 04 04  
FAX: 33 3 84 25 46 41

### SINGAPORE (Southern Asia)

150 Kampong Ampat  
#07-01/02  
KA Centre  
Singapore 368324  
TEL: 65 287 8998  
FAX: 65 280 0080

### TAIWAN, R.O.C. (Northern Asia)

3F-4, No. 81, Sec. 1  
HsinTai Wu Road  
Hsi-Chih, Taipei Hsien  
Taiwan, R.O.C.  
Tel: 886 2 2698 0228  
FAX: 886 2 2698 0948

### DISTRIBUTOR

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be products and/or registered trademarks of their respective owners.