

# T3/DS3/E3/STS-1 TRANSFORMERS

## Dual SMT, Extended Temperature Range



- Dual SMT package contains both transmit and receive transformers
- Operating temperature of -40°C to +85°C
- Models matched to leading transceiver ICs
- Return loss meets requirements of G.703
- 1500 Vrms isolation per UL1459 and UL1950

### Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C

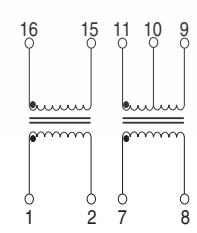
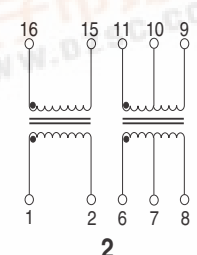
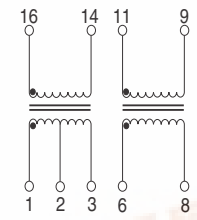
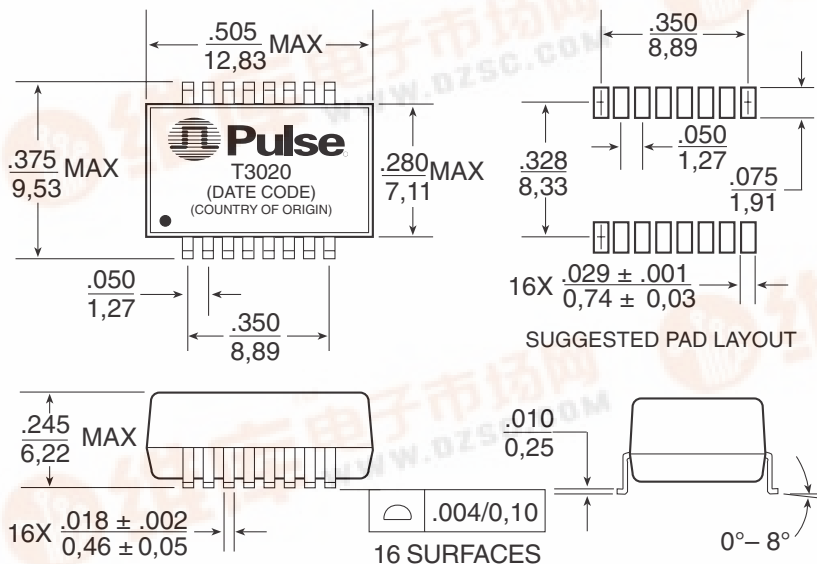
Part Number	Turns Ratio (±2%)		OCL Primary @ 25°C (μH MIN)		OCL Primary @ -40°C (μH MIN)		L <sub>L</sub> (μH MAX)		C <sub>ww</sub> (pF MAX)		Isolation Voltage (Vrms MIN)	Package/ Schematic	Primary Pins	
	TX	RX	TX	RX	TX	RX	TX	RX	TX	RX			TX	RX
T3020	1:2CT	1:1	40	100	19	40	.120	.120	10	10	1500	BH/1	16-14	6-8
TX3025	1CT:1CT	1:1	100	100	40	40	.120	.120	10	10	1500	BH/2	6-8	16-15
TX3026	1:2CT	1:1	100	100	40	40	.120	.120	10	10	1500	BH/3	7-8	16-15

NOTE: Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (ex: T3020T).

### Mechanicals

### Schematics

#### BH



Weight ..... 1.0 grams  
Tape & Reel ..... .600/reel  
Tube ..... .40/tube

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

# T3/DS3/E3/STS-1 TRANSFORMERS

## Dual SMT, Extended Temperature Range



### Transformer Selection Guide

IC Manufacturer IC Part Number	Octal SMT Standard Temp TX & RX	Dual SMT Ext Temp TX & RX	Single SMT				Single THT		Single THT 3 kVrms	
			Standard Temp		Extended Temp		Transmit	Receive	Transmit	Receive
			Transmit	Receive	Transmit	Receive				
<b>Conexant (Rockwell)</b> CN8331, CN8332, CN8333	T3048	T3020 1	PE-65967	PE-65967	T3001	T3001	PE-65966	PE-65966	PE-68629	PE-68629
<b>Infineon Technologies</b> PEB3452	—	—	—	—	T3027	T3011/ T3001	—	—	—	—
<b>Lucent Technologies</b> T7296	T3048	—	PE-65967	—	T3001	—	PE-65966	—	PE-68629	
<b>Exar</b> XRT7295, XRT7295E XRT7296, XRT7298 XRT73L00, L03, L04 XRT7300, XRT7302	T3048 T3048 T3048 T3048	T3020 1 T3020 1 T3020 1 T3020 1	— PE-65967 PE-65967 PE-65967	PE-65967 — PE-65967 PE-65967	— T3001 T3001 T3001	T3001 — T3001 T3001	— PE-65966 PE-65966 PE-65966	PE-65966 — PE-65966 PE-65966	— PE-68629 PE-68629 PE-68629	PE-68629 — PE-68629 PE-68629
<b>TDK Semiconductor</b> 78P2241 78P2244/43/42 78P7200L 78P7200 78P2362, 78P2361	T3049/T3048 T3049/T3048 T3049/T3048 T3049 2 T3049/T3048	T3020 T3020 T3020 T3020 1 T3020	PE-65968 PE-65968 PE-65968 PE-65968 PE-65968	PE-65967 PE-65967 PE-65967 PE-65968 PE-65967	T3002 T3002 T3002 T3002 T3002	T3001 T3001 T3001 T3002 T3001	PE-65969 PE-65969 PE-65969 PE-65969 PE-65969	PE-65966 PE-65966 PE-65966 PE-65969 PE-65966	PE-68630 PE-68630 PE-68630 PE-68630 PE-68630	PE-68629 PE-68629 PE-68629 PE-68630 PE-68629
<b>Transwitch</b> MRT TXC-02050 E3 ART TXC-02020 ARTE TXC-02021 DART TXC-2030, DS3 DART TXC-2030, E3 DS3LIM-SN TXC20153G E3LIM TXC-20163	T3049/T3048 T3048 T3048 T3048 T3049/T3048 T3048 T3049/T3048	T3020 T3020 1 T3020 1 T3020 1 T3020 T3020 1 T3020	PE-65968 PE-65967 PE-65967 PE-65967 PE-65968 PE-65967 PE-65968	PE-65967 PE-65967 PE-65967 PE-65967 PE-65967 PE-65967 PE-65967	T3002 T3001 T3001 T3001 T3002 T3001 T3002	T3001 T3001 T3001 T3001 T3001 T3001 T3001	PE-65969 PE-65966 PE-65966 PE-65966 PE-65969 PE-65966 PE-65969	PE-65966 PE-65966 PE-65966 PE-65966 PE-65966 PE-65966 PE-65966	PE-68630 PE-68629 PE-68629 PE-68629 PE-68630 PE-68629 PE-68630	PE-68629 PE-68629 PE-68629 PE-68629 PE-68629 PE-68629 PE-68629

**NOTE:** For other T3/DS3/E3/STS-1 Transformers, please see data sheets **T606** and **T619**.

## Application Notes

- The transformers have been developed for use as transmit and receive transformers in T3 or DS3 links, using bit rates of 44.736 Mbps and B3ZS coding on coaxial cable. The characteristics allow compliance with the pulse templates of CCITT G.703 as well as ATT T.A.34. The transformers are also suitable for the E3 interface at 34.368 Mbps with HDB3 coding or STS-1 applications, at 51.84 Mbps according to Bellcore TANWT-000253.
- Bandwidth specifications are typical in a 75 Ω system. Return loss meets the requirements of G.703. Materials used in the products are UL94-V0 recognized. Products meet the requirements of IEC 695-2-2 (Needle Flame Test).
- For those applications requiring a 1:1 turns ratio on the transmit side, use only one half of the secondary (2CT) winding.
- Optional Tape & Reel packaging can be ordered by adding a "T" suffix to the part number (i.e. TS3026T)

## For More Information :

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