





# T3/DS3/E3/STS-1 TRANSFORMERS

## Extended Temperature Range



-  Operating temperature of -40°C to +85°C
-  Models matched to leading transceiver ICs
-  Return loss meets requirements of G.703
-  UL recognized (some parts pending)

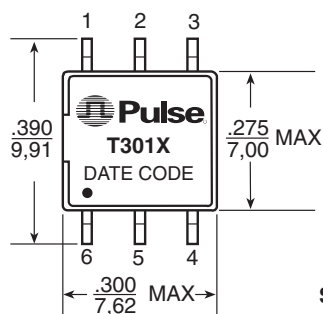
### Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C

RoHS-5 Part No.	RoHS-6 Part No.	Turns Ratio Pri:Sec (±2%)	OCL Primary @ 25°C (µH MIN)	OCL Primary @ -40°C (µH MIN)	L <sub>L</sub> @ 100kHz 0.2Vrms (µH TYP)	C <sub>ww</sub> (pF MAX)	Bandwidth 75Ω System (MHz TYP)	Isolation Voltage (Vrms MIN)	Package/ Schematic	Primary Pins
T3001	T3001NL	1:1	100	40	.110	10	.200 - 340	1500	LS-2/E	1-3
T3002	T3002NL	1:2CT	40	19	.110	12	.250 - 500	1500	LS-2/C	4-6
T3011*	T3011NL*	1:1	100	40	.110	10	.200 - 340	1500	LS-1/E	4-6
T3012*	T3012NL*	1:2CT	40	19	.110	12	.250 - 500	1500	LS-1/C	4-6
T3027	T3027NL	1CT:1CT	40	19	.10	10	.200 - 340	1500	LS-2/F	1-3
T3029	T3029NL	1:1.155CT	40	20	.150	12	.200 - 340	1500	LS-2/C	4-6

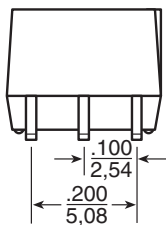
\*Models with alternate pinout configurations.

## Mechanicals

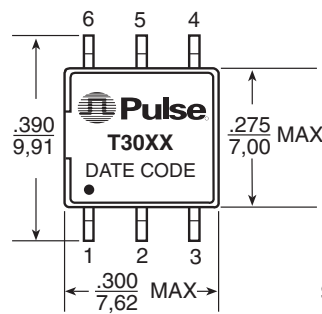
### LS-1



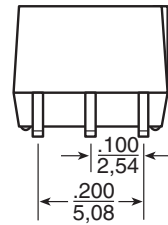
SUGGESTED PAD LAYOUT



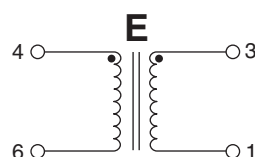
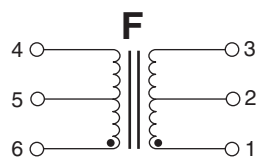
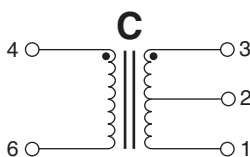
### LS-2



SUGGESTED PAD LAYOUT



## Schematics



Weight ..... 0.6 grams  
 Tape & Reel ..... .600/reel  
 Tube ..... .70/tube

Dimensions: Inches  
 mm

Unless otherwise specified,  
 all tolerances are ± .010  
 0,25

# T3/DS3/E3/STS-1 TRANSFORMERS

## Extended Temperature Range



### Transformer Selection Guide

IC Manufacturer/ IC Part Number	Single SMT				Single THT		Single THT (3 kVrms)	
	Standard Temperature		Extended Temperature		Transmit	Receive	Transmit	Receive
	Transmit	Receive	Transmit	Receive				
<b>Conexant (Rockwell)</b> CN8331, CN8332, CN8333	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	PE-65967	-	T3001	-	PE-65966	-	PE-68629	-
<b>Exar</b> XRT7295, XRT7295E XRT7296, XRT7298 XRT73L00/L03/L04 XRT7300, XRT7302	- 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 78P2361, 78P2362	PE-65968 PE-65968 PE-65968 PE-65968 PE-65968	PE-65967 PE-65967 PE-65967 PE-65967 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-65966 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 TXC-20153G E3LIM TXC-20163	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-65966	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-68629	PE-68629 PE-68629 PE-68629 PE-68629 PE-68629 PE-68629 PE-68629

NOTE: For Standard temperature products, please see data sheet **T606**.

## Application Notes

- The transformers have been developed for use as transmit and receive transformers in T3 or DS3 links, using bit rates of 44.736Mbps 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 34.368Mbps with HDB3 coding or STS-1 applications, at 51.84Mbps according to Bellcore TA-NWT-000253.
- Bandwidth specifications are typical in a 75Ω 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).
- The surface mount LS package is available with optional tape and reel packaging. To order, add a "T" suffix to the part number (i.e.: T3001NLT).

## For More Information:

### Pulse Worldwide Headquarters

12220 World Trade Dr.  
San Diego, CA 92128  
U.S.A.  
[www.pulseeng.com](http://www.pulseeng.com)

Tel: 858 674 8100  
Fax: 858 674 8262

### Pulse Europe

Einsteinstrasse 1  
D-71083 Herrenberg  
Germany

Tel: 49 7032 7806 0  
Fax: 49 7032 7806 12

### Pulse China Headquarters

B402, Shenzhen  
Tech-Innovation International  
Tenth Kejinan Rd.  
High-Tech Industrial Park  
Nanshan District, Shenzhen  
China

Tel: 86 755 33966678  
Fax: 86 755 33966700

### Pulse North China

Room 1503  
XinYin Building  
No. 888 YiShan Rd.  
Shanghai 200233  
China

Tel: 86 21 54643211/2  
Fax: 86 21 54643210

### Pulse South Asia

150 Kampong Ampat  
#07-01/02  
KA Centre  
Singapore 368324

Tel: 65 6287 8998  
Fax: 65 6280 0080

### Pulse North Asia

No. 26  
Kao Ching Rd.  
Yang Mei Chen  
Tao Yuan Hsien  
Taiwan, R. O. C.

Tel: 886 3 4641811  
Fax: 886 3 4641911

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