T3/DS3/E3/STS-1 TRANSFORMERS
Extended Temperature Range

Pulse
A TECHNITROL COMPANY

RoHS COMPLIANT

- 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)

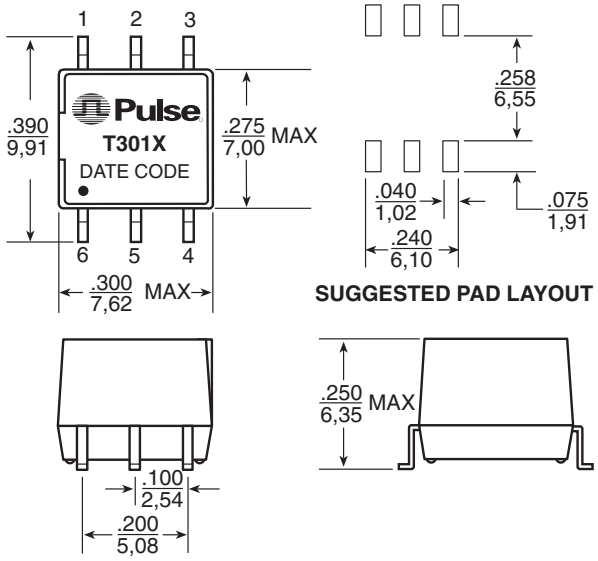
Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C

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_L @ 100kHz 0.2Vrms (µH TYP)	$C_{W/W}$ (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

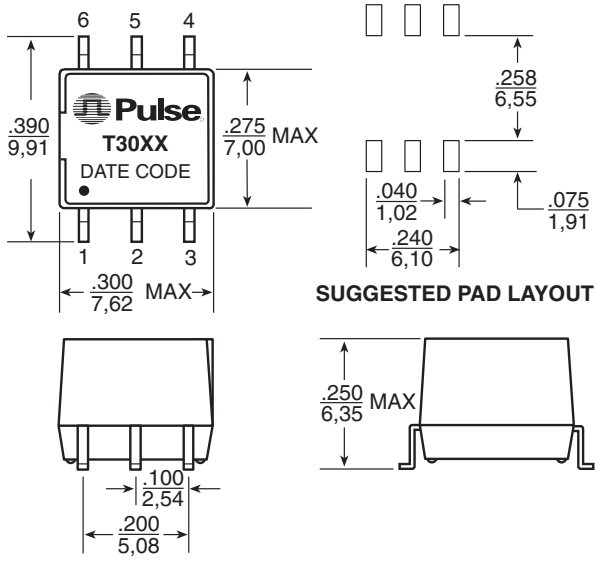
*Models with alternate pinout configurations.

Mechanicals

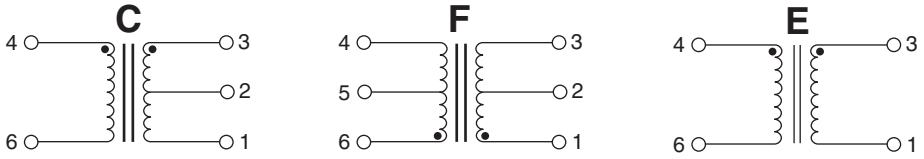
LS-1



LS-2



Schematics



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

Dimensions: Inches / mm

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

USA 858 674 8100 • Germany 49 7032 7806 0 • Singapore 65 6287 8998 • Shanghai 86 21 54643211 / 2 • China 86 755 33966678 • Taiwan 886 3 4641811

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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
Conexant (Rockwell)								
CN8331, CN8332, CN8333	PE-65967	PE-65967	T3001	T3001	PE-65966	PE-65966	PE-68629	PE-68629
Infineon Technologies								
PEB3452	–	–	T3027	T3011/T3001	–	–	–	–
Lucent Technologies								
T7296	PE-65967	–	T3001	–	PE-65966	–	PE-68629	–
Exar								
XRT7295, XRT7295E	–	PE-65967	–	T3001	–	PE-65966	–	PE-68629
XRT7296, XRT7298	PE-65967	–	T3001	–	PE-65966	–	PE-68629	–
XRT73L00/L03/L04	PE-65967	PE-65967	T3001	T3001	PE-65966	PE-65966	PE-68629	PE-68629
XRT7300, XRT7302	PE-65967	PE-65967	T3001	T3001	PE-65966	PE-65966	PE-68629	PE-68629
TDK Semiconductor								
78P2241	PE-65968	PE-65967	T3002	T3001	PE-65969	PE-65966	PE-68630	PE-68629
78P2244/43/42	PE-65968	PE-65967	T3002	T3001	PE-65969	PE-65966	PE-68630	PE-68629
78P7200L	PE-65968	PE-65967	T3002	T3001	PE-65969	PE-65966	PE-68630	PE-68629
78P7200	PE-65968	PE-65967	T3002	T3002	PE-65969	PE-65969	PE-68630	PE-68630
78P2361, 78P2362	PE-65968	PE-65967	T3002	T3001	PE-65969	PE-65966	PE-68630	PE-68629
Transwitch								
MRT TXC-02050, E3	PE-65968	PE-65967	T3002	T3001	PE-65969	PE-65966	PE-68630	PE-68629
ART TXC-02020	PE-65967	PE-65967	T3001	T3001	PE-65966	PE-65966	PE-68629	PE-68629
ARTE TXC-02021	PE-65967	PE-65967	T3001	T3001	PE-65966	PE-65966	PE-68629	PE-68629
DART TXC-2030, DS3	PE-65967	PE-65967	T3001	T3001	PE-65966	PE-65966	PE-68629	PE-68629
DART TXC-2030, E3	PE-65968	PE-65967	T3002	T3001	PE-65969	PE-65966	PE-68630	PE-68629
DS3LIM-SN TXC-20153G	PE-65967	PE-65967	T3001	T3001	PE-65966	PE-65966	PE-68629	PE-68629
E3LIM TXC-20163	PE-65968	PE-65967	T3002	T3001	PE-65969	PE-65966	PE-68630	PE-68629

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

Application Notes

1. 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.
2. Bandwidth specifications are typical in a 75Ω system. Return loss meets the requirements of G.703. Materials used intheproducts are UL94-V0 recognized. Products meet the requirements of IEC 695-2-2 (Needle Flame Test).
3. 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.: T3001NL**T**).

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