





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)

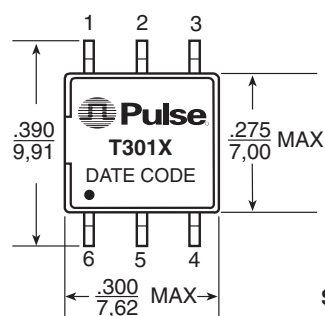
Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C

| 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 _L @ 100kHz 0.2Vrms (µH TYP) | C _{ww} (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 |

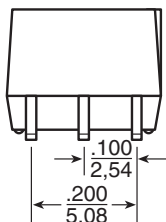
*Models with alternate pinout configurations.

Mechanicals

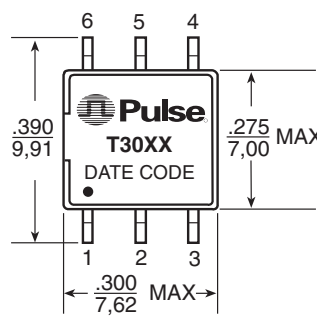
LS-1



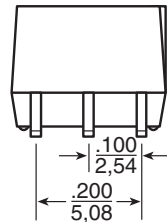
SUGGESTED PAD LAYOUT



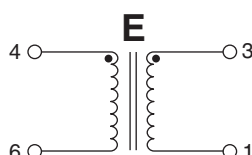
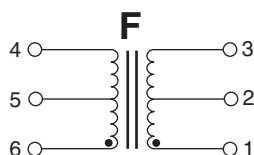
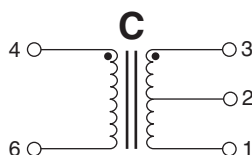
LS-2



SUGGESTED PAD LAYOUT



Schematics



Weight 0.6 grams
Tape & Reel600/reel
Tube70/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 | | | | |
| 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 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 |
| TDK Semiconductor 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 |
| Transwitch 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).

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