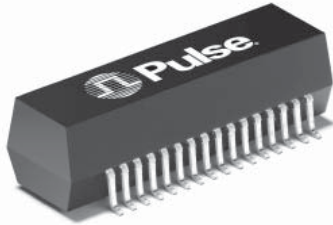


# T3/DS3/E3/STS -1 TRANSFORMERS

## Surface Mount Package



-  RoHS peak reflow temperature rating: 245°C
-  Quad transformers in SMT package supports two T1/E1 ports
-  Available in transmit and/or receive configurations
-  Models matched to leading quad, dual T1/E1/ CEPT transceivers
-  UL recognized
-  Isolation voltage: 1500 Vrms

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

| Part Number          | Turns Ratio <sup>A, B</sup><br>(Pri:Sec ±2%) | OCL @ 25°C<br>(mH MIN) | L <sub>L</sub><br>(μH MAX) | C <sub>w/w</sub><br>(pF MAX) | DCR Pri<br>(MAX) | DCR Sec<br>(MAX) | Package/<br>Schematic <sup>D</sup> | Primary<br>Pins        |
|----------------------|----------------------------------------------|------------------------|----------------------------|------------------------------|------------------|------------------|------------------------------------|------------------------|
| T1001NL <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 |
| T1006NL              | 1:2CT                                        | 1.2                    | 0.35                       | 30                           | 0.6              | 1.0              | YB/1                               | 1-3, 5-7, 10-12, 14-16 |
| T1007NL              | 1:1.15CT                                     | 1.2                    | 0.70                       | 23                           | 0.6              | 0.8              | YB/1                               | 1-3, 5-7, 10-12, 14-16 |
| T1009NL              | 1:1.265 / 1                                  | 1.2                    | 0.80                       | 35                           | 0.6              | 0.8              | YB/1                               | 1-3, 5-7, 10-12, 14-16 |

- A. OCL (primary inductance) and L<sub>L</sub> (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:

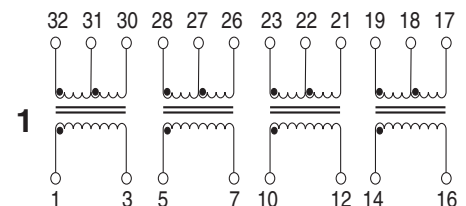
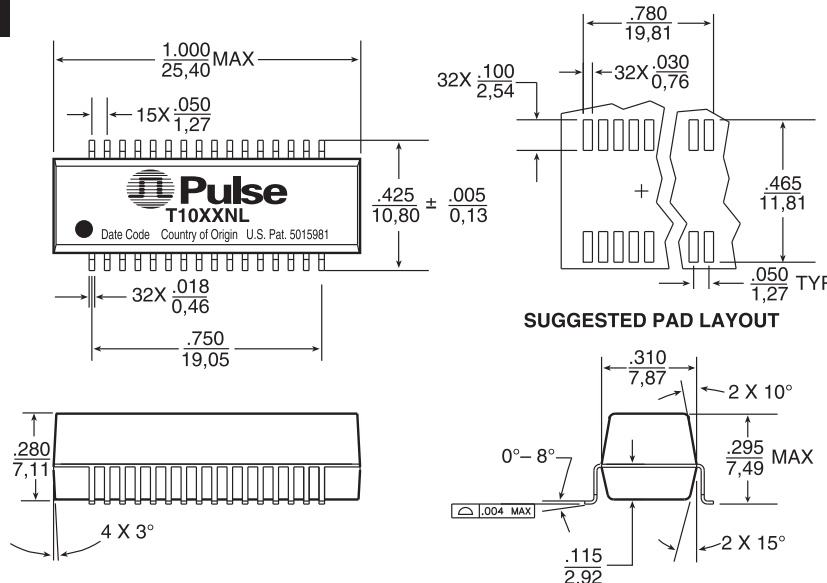
| Part Number | Turns Ratio 1 | Secondary Pins             | Turns Ratio 2 | Secondary Pins             |
|-------------|---------------|----------------------------|---------------|----------------------------|
| T1001NL     | 1:1           | 31-32, 27-28, 22-23, 18-19 | 1:1.36        | 30-32, 26-28, 21-23, 17-19 |

- 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. T006NLT).

## Mechanical

## Schematic

YB



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

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
Unless otherwise specified, all tolerances are  $\pm \frac{.010}{.025}$

USA 858 674 8100 • Germany 49 7032 7806 0 • Singapore 65 6287 8998 • Shanghai 86 21 32181071 • China 86 755 33966678 • Taiwan 886 3 4643715

# T3/DS3/E3/STS -1 TRANSFORMERS

## Surface Mount Package



| IC Manufactur | IC Part Number | Application | Transmit/Receive | Pulse Part Number | Ratio    | Pins                                                                   |
|---------------|----------------|-------------|------------------|-------------------|----------|------------------------------------------------------------------------|
| LEVEL ONE     | LXT3LXT32      | T1          | Receive          | <b>T1006NL</b>    | 1:2CT    | (1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17) |
|               |                | E1/CEPT     | Transmit         | <b>T1006NL</b>    | 1:2      | (1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17) |
|               |                |             | Receive          | <b>T1006NL</b>    | 1:2CT    | (1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17) |
| VLSI          | VP14Q575       | T1          | Transmit         | <b>T1007NL</b>    | 1:1.15   | (1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17) |
|               |                | E1/CEPT     | Receive          | <b>T1006NL</b>    | 1:2CT    | (1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17) |
|               |                |             | Receive          | <b>T1006NL</b>    | 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         | <b>T1007NL</b>    | 1:1.15   | (1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17) |
|               |                |             | Receive          | <b>T1007NL</b>    | 1:1.15CT | (1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17) |
| EXAR          | XR-5793/5795   | T1          | Transmit         | <b>T1009NL</b>    | 1:1.265  | (1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17) |
|               |                |             | Receive          | <b>T1009NL</b>    | 1:1      | (1-3) : (32-31), (5-7) : (28-27), (10-12) : (23-22), (14-16) : (19-18) |
|               |                | 75Ω/E1      | Transmit         | <b>T1009NL</b>    | 1:1      | (1-3) : (32-31), (5-7) : (28-27), (10-12) : (23-22), (14-16) : (19-18) |
|               |                | 120Ω/CEPT   | Transmit         | <b>T1009NL</b>    | 1:1.265  | (1-3) : (32-30), (5-7) : (28-26), (10-12) : (23-21), (14-16) : (19-17) |
|               |                | E1/CEPT     | Receive          | <b>T1009NL</b>    | 1:1      | (1-3) : (32-31), (5-7) : (28-27), (10-12) : (23-22), (14-16) : (19-18) |

## 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) | C <sub>w/w</sub> (pF MAX) | L <sub>L</sub> (μH MAX) | DCR (Ω MAX) | Isolation (Vrms MIN) | Package       |
|---------------------------------------------------|-------------------|--------------|---------------------------|-------------------------|-------------|----------------------|---------------|
| <b>HIGH FREQUENCY COMMON MODE CHOKES, 4-LINES</b> |                   |              |                           |                         |             |                      |               |
| <b>PE-65554NL</b>                                 | 1:1:1:1           | 24.0         | 15                        | .20                     | 0.30        | 500                  | Through Hole  |
| <b>PE-65555NL</b>                                 | 1:1:1:1           | 8.0          | 10                        | .20                     | 0.25        | 500                  | Through Hole  |
| <b>PE-65854NL</b>                                 | 1:1:1:1           | 47.0         | 16                        | .20                     | 0.30        | 500                  | Surface Mount |
| <b>PE-65857NL</b>                                 | 1:1:1:1           | 24.0         | 15                        | .23                     | 0.30        | 500                  | Surface Mount |

**NOTE:** See the "G002" (Common Mode Choke Catalog) for mechanicals and schematics.

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