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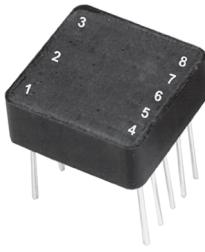
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# MIL-STD-1553 Transformers

Value Series (COTS) THT non-QPL Interface Transformers



| Operating Temp. | Prefix |
|-----------------|--------|
| 0° to 70°C      | C      |
| -40° to +85°C   | N      |
| -55° to +125°C  | TQ     |

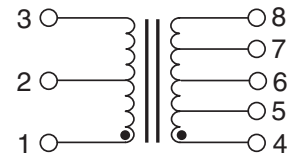
| Summary Performance Specifications |                   |
|------------------------------------|-------------------|
| Impedance                          | (see table below) |
| Droop                              | □ 20%             |
| Overshoot                          | 31V MAX           |
| Common Mode Rejection (CMR)        | □ 45dB            |
| Frequency Range (no load)          | 75kHz to 1MHz     |
| Operating Temperature Range        | (see table above) |
| Weight                             | □ 5 grams         |
| Insulation Resistance (MIN)        | 10K MΩ @ 250Vdc   |
| Dielectric Withstanding Voltage    | 100Vrms           |

These non-QPL interface transformers are built and tested in ISO 9001 approved facilities. They conform to all electrical and physical parameters of MIL-PRF-21038/27. Choose one of three operating temperature ranges including 0° to +70°C, -40° to +85°C, or -55° to +125° C.

- Dual ratio, single interface (see schematic)
- Through-the-board package
- MSL: 1
- For use in MIL-STD-1553 applications
- Standard height: 0.250 in.
- Performance to MIL-PRF-21038 requirements
- Built in ISO 9001 facility
- Applicable specifications:

- MIL-STD-1553B
- MIL-STD-202
- MIL-PRF-21038
- ISO 9001

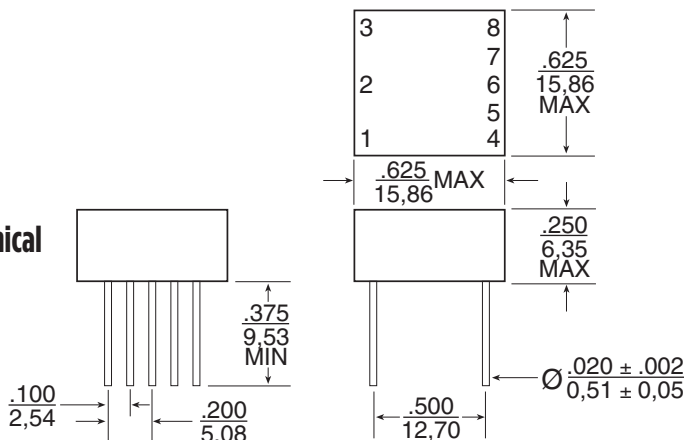
**Schematic**



| Characteristics         |                        |                          |                        |                   |
|-------------------------|------------------------|--------------------------|------------------------|-------------------|
| Part Number             | Terminals              | Ratio (33%)              | RDC (Ω MAX)            | Impedance (Ω MIN) |
| (X)1553-1 <sup>1</sup>  | 1-3 : 4-8<br>1-3 : 5-7 | 1CT:1CT<br>1CT:707CT     | 1-3 = 3.0<br>4-8 = 3.0 | (1-3)<br>4,000    |
| (X)1553-2               | 1-3 : 4-8<br>1-3 : 5-7 | 1.4CT:1CT<br>2CT:1CT     | 1-3 = 3.5<br>4-8 = 3.0 | (1-3)<br>7,200    |
| (X)1553-3               | 1-3 : 4-8<br>1-3 : 5-7 | 1.25CT:1CT<br>1.66CT:1CT | 1-3 = 3.2<br>4-8 = 3.0 | (1-3)<br>4,000    |
| (X)1553-5 <sup>2</sup>  | 1-3 : 4-8<br>1-3 : 5-7 | 1CT:2.12CT<br>1CT:1.5CT  | 1-3 = 1.0<br>4-8 = 3.5 | (4-8)<br>4,000    |
| (X)1553-45 <sup>2</sup> | 1-3 : 4-8<br>1-3 : 5-7 | 1CT:2.5CT<br>1CT:1.79CT  | 1-3 = 1.0<br>4-8 = 3.5 | (4-8)<br>4,000    |

**NOTE:** 1. Refer to prefix table (above) to select temperature range. 2. Designed for transceivers utilizing a single supply voltage (+5V).

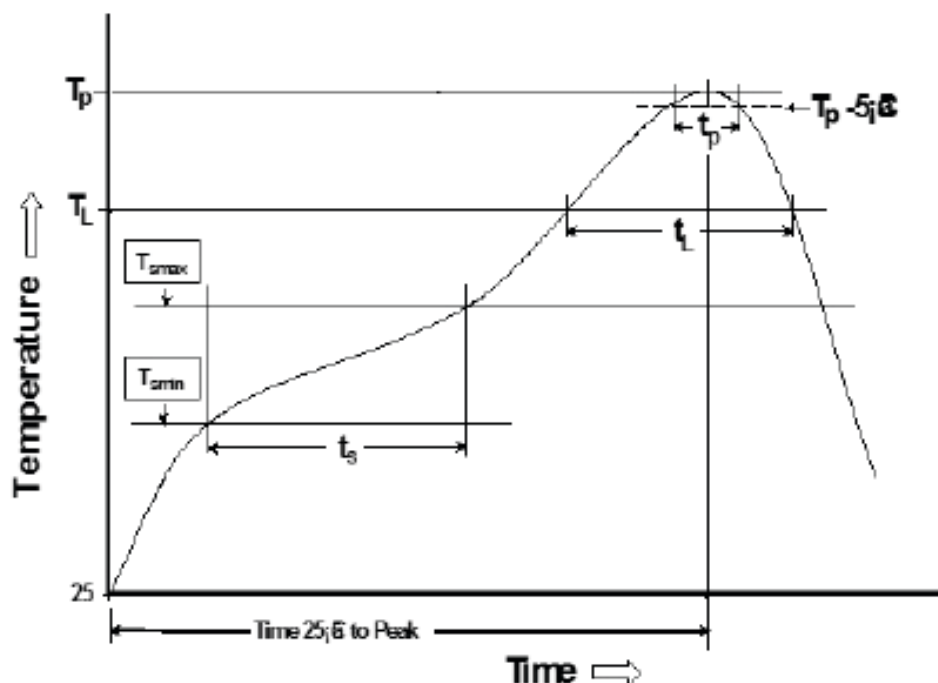
**Mechanical**



**Notes:**

1. All dimensions: in inches.
2. Tolerances: .xx = ±.008
3. All specifications and dimensions are subject to change without notice.

## Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



| $T_{SMIN}$<br>(°C) | $T_{SMAX}$<br>(°C) | $T_L$<br>(°C) | $T_P$<br>(°C MAX) | $t_s$<br>(s) | $t_L$<br>(s) | $t_p$<br>(s MAX) | Ramp-up rate<br>( $T_L$ to $T_P$ ) | Ramp-down rate<br>( $T_P$ to $T_L$ ) | Time<br>25°C to peak temperature<br>(s MAX) |
|--------------------|--------------------|---------------|-------------------|--------------|--------------|------------------|------------------------------------|--------------------------------------|---|
| 100                | 150                | 183           | 235               | 60-120       | 60-150       | 20               | 3°C/s MAX                          | 6°C/s MAX                            | 360   |

### Notes:

1. All temperatures measured on the package leads.
2. Maximum times of reflow cycle: 2.

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