



TWIN GIGABIT FIBRE CHANNEL TRANSFORMER 0.185" MAXIMUM HEIGHT

DESCRIPTION AND APPLICATIONS

The Twin Gigabit Series of transformers are designed and manufactured to meet MIL-PRF-21038 mechanical and reliability performance for use in aerospace and military applications. The low profile of this series makes them ideally suited for designs using PMC, VME, PCI and CompactPCI configured circuit cards. The Twin Gigabit Series offers excellent frequency response in addition to signal isolation between the transmitter/receiver and the data line.

FEATURES

- *Compliant with ANSI X3T11, Fibre Channel, FC-PH-3*
- *For use with 150 ohm twinax cable*
- *Weighs less than 1.0 Gram*
- *Low Profile: 0.185" Max Height*
- *-40°C to +85°C Operating Temperature Range*
- *IR/Convection Reflow Compatible*

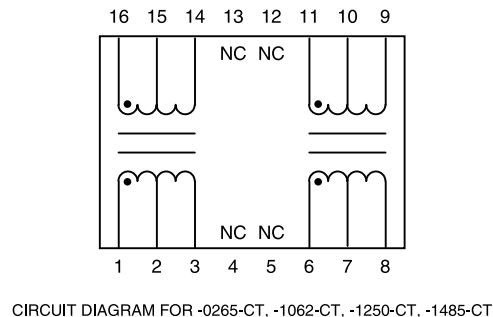
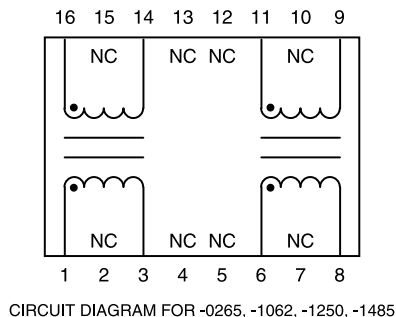
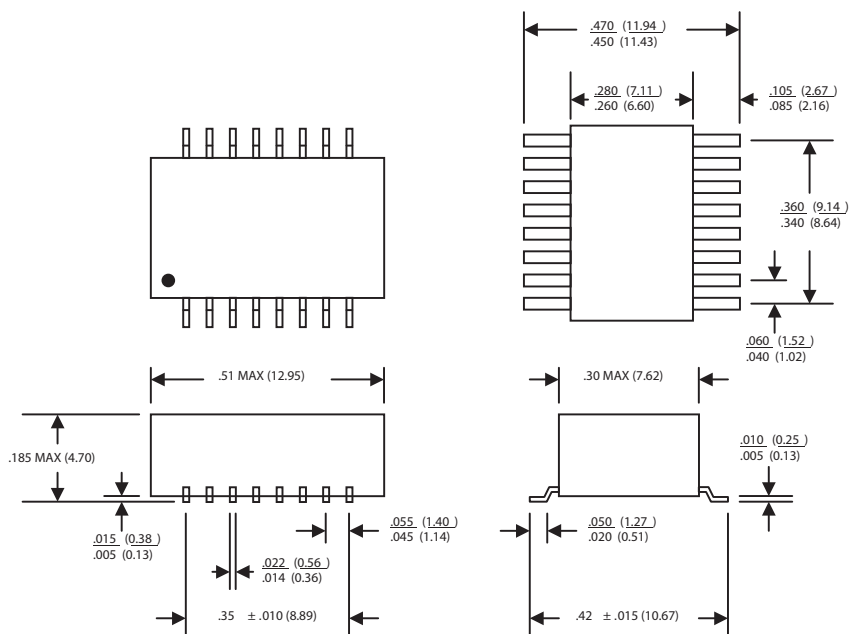


FIGURE 1. CONFIGURATION

| TABLE 1. GENERAL SPECIFICATIONS | | | |
|---------------------------------|------|-------------|---|
| PARAMETER | UNIT | VALUE | REMARK |
| Case | — | — | Flame Resistant, Diallyl Phthalate |
| Terminals | — | — | Alloy 42, Sn60Pb40 Plated, over Nickel Underplating |
| Terminals (RoHS Version) | — | — | Alloy 42, Matte Sn100 Plating, over Nickel Underplating |
| Weight | gm. | 1.0 max. | |
| Terminal Strength | lbs. | 2 | 2 pounds applied force, Method 211, MIL-STD-202, Test Condition A |
| Dielectric Withstanding Voltage | Vrms | 1500 | Method 301, MIL-STD-202 |
| Life (expectancy "X") | Hrs. | 10,000 min. | In accordance with MIL-PRF-21038 |
| Operating Temperature Range | °C | -40 to +85 | — |
| Storage Temperature Range | °C | -40 to +85 | — |
| Low Frequency Cutoff (-3 dB) | MHz | 2.5 max. | — |
| Shock | | | Method 213 of MIL-STD-202, Condition I |
| Vibration, High Frequency | | | Method 204 of MIL-STD-202, Condition B |
| Rise Time (output pulse) | ns | — | See respective ELECTRICAL CHARACTERISTICS TABLE |
| Resistance to Solvents | | | Method 215 of MIL-STD-202 |
| DC Resistance | Ω | — | See respective ELECTRICAL CHARACTERISTICS TABLE |
| Primary Inductance | μH | — | See respective ELECTRICAL CHARACTERISTICS TABLE |

| TABLE 2. ELECTRICAL CHARACTERISTICS (WITHOUT CENTER TAPS) | | | | | |
|---|--------------------|-------------------------------------|----------------------------------|-------------------------------------|---|
| BETA P/N | URNS RATIO ± 3% | OCL @ 20 mV, 100 kHz (μH, MIN) | RISE TIME 20% - 80% (ps, MAX) | DC RESISTANCE @ 25C, (OHMS, MAX) | APPLICATION NOMINAL BIT RATE (M BAUD) |
| TGB-0265 | 1.0 : 1.0 | 26.0 | 350.00 | 0.18 | 265 |
| TGB-1062 | 1.0 : 1.0 | 4.0 | 230.00 | 0.15 | 1062 |
| TGB-1250 | 1.0 : 1.0 | 4.0 | 230.00 | 0.15 | 1250 |
| TGB-1485 | 1.0 : 1.0 | 4.0 | 230.00 | 0.15 | 1485 |

RoHS Ordering Information: Add "-R" to standard part number (i.e., TGB-1250-R) (See Note 1)

| TABLE 3. ELECTRICAL CHARACTERISTICS (WITH CENTER TAPS) | | | | | |
|--|--------------------|-------------------------------------|----------------------------------|-------------------------------------|---|
| BETA P/N | URNS RATIO ± 3% | OCL @ 20 mV, 100 kHz (μH, MIN) | RISE TIME 20% - 80% (ps, MAX) | DC RESISTANCE @ 25C, (OHMS, MAX) | APPLICATION NOMINAL BIT RATE (M BAUD) |
| TGB-0265-CT | 1.0CT : 1.0CT | 26.0 | 350.00 | 0.18 | 265 |
| TGB-1062-CT | 1.0CT : 1.0CT | 4.0 | 280.00 | 0.15 | 1062 |
| TGB-1250-CT | 1.0CT : 1.0CT | 4.0 | 280.00 | 0.15 | 1250 |
| TGB-1485-CT | 1.0CT : 1.0CT | 4.0 | 280.00 | 0.15 | 1485 |

RoHS Ordering Information: Add "-R" to standard part number (i.e., TGB-1250-CT-R) (See Note 1)

Note 1: The Lead-Free/RoHS compliant versions use Sn10Pb88Ag02 for internal solder joints. High melting temperature solder in excess of 85% lead is exempt until a suitable alternative is available. The external lead finish is matte-tin with a nickel barrier layer that has been certified to pass JESD22A121.01 tin whisker limits. The magnet wire used has a minimum Thermo-plastic Flow rating of 250°C. These transformers are classified as IPC-9503 level 5A. The peak body temperature shall not exceed 245°C, and the time over 183°C shall not exceed 150 seconds. The Lead-Free/RoHS compliant part numbers are the standard part, with a "-R" as the part number suffix. The bottom of the header has the Pb-free symbol embossed on it.