

10/100BASE - TX SINGLE PORT TRANSFORMER MODULE



Ruggedized



- ⊗ Compliant with IEEE 802.3u & ANSI X3.263 standards
- ⊗ 350μH OCL with 8mA bias at extended temperatures
- ⊗ Operating and storage temperature:
100B-2002F: -40°C to +85°C
100B-2002FX: -55°C to +125°C
- ⊗ Moisture Sensitivity Level: 3
- ⊗ Epoxy encapsulated package withstands 235°C peak temperature
- ⊗ Terminal Finish: matte tin allow solder over nickel layer
- ⊗ Lead Finish: Sn63 Pb37 finish for non-RoHS products
- ⊗ Sn100 Finish: for RoHS products using NL suffix

Electrical Specifications @ 25°C

| Part Number | Insertion Loss (dB MAX) | | | | Return Loss (dB MIN) | | | | | | Crosstalk (dB MIN) | | | | DM to CM Rejection Ratio (dB MIN) | | | DWW (Vrms) |
|-------------|-------------------------|--------|--------|---------|----------------------|--------|--------|--------|--------|--------|--------------------|--------|--------|---------|-----------------------------------|--------|---------|------------|
| | 0.10 MHz | 30 MHz | 60 MHz | 100 MHz | 2 MHz | 30 MHz | 40 MHz | 50 MHz | 60 MHz | 80 MHz | 1 MHz | 30 MHz | 60 MHz | 100 MHz | 1 MHz | 60 MHz | 100 MHz | |
| 100B-2002F | 1.2 | 1.2 | 1.2 | 1.2 | 18 | 18 | 16 | 15 | 12 | 12 | 50 | 43 | 37 | 33 | 43 | 37 | 33 | 1500 |
| 100B-2002FX | 1.2 | 1.2 | 1.2 | 1.2 | 18 | 18 | 16 | 15 | 12 | 12 | 50 | 43 | 37 | 33 | 43 | 37 | 33 | 1500 |

NOTES:

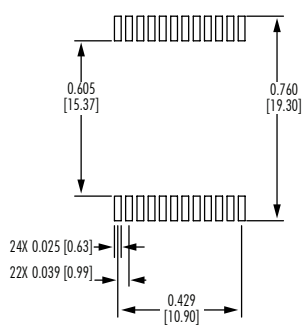
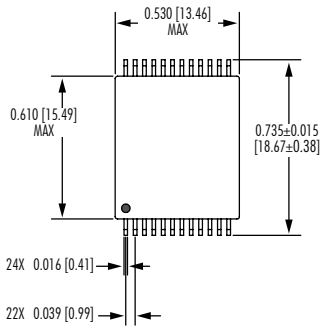
1. Add suffix "NL" for RoHS (Sn100 Lead Finish) compliant version; i.e. 100B-2002F becomes 100B-2002FNL
2. For Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. 100B-2002FXLT
3. IC Grade transfer-molded package withstands 235°C peak temperature profile; RoHS version withstands 245°C.

Mechanicals

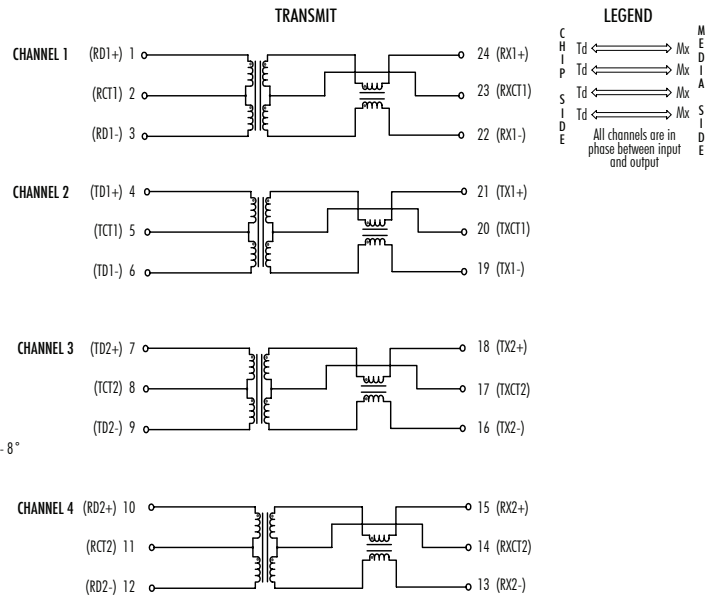
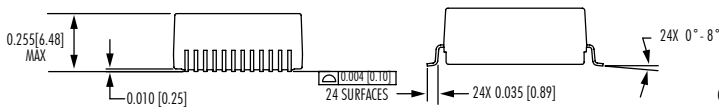
Electrical Schematics

100B-2002FX

Dimensions: inch [mm]
Tolerance (unless otherwise specified): ±0.010 [0.25]



PCB PAD PATTERN
(REFERENCE ONLY)



LEGEND

CHIP SIDE

Td ← Mx
Td → Mx
Td ← Mx
Td → Mx

All channels are in phase between input and output

MEDIA SIDE

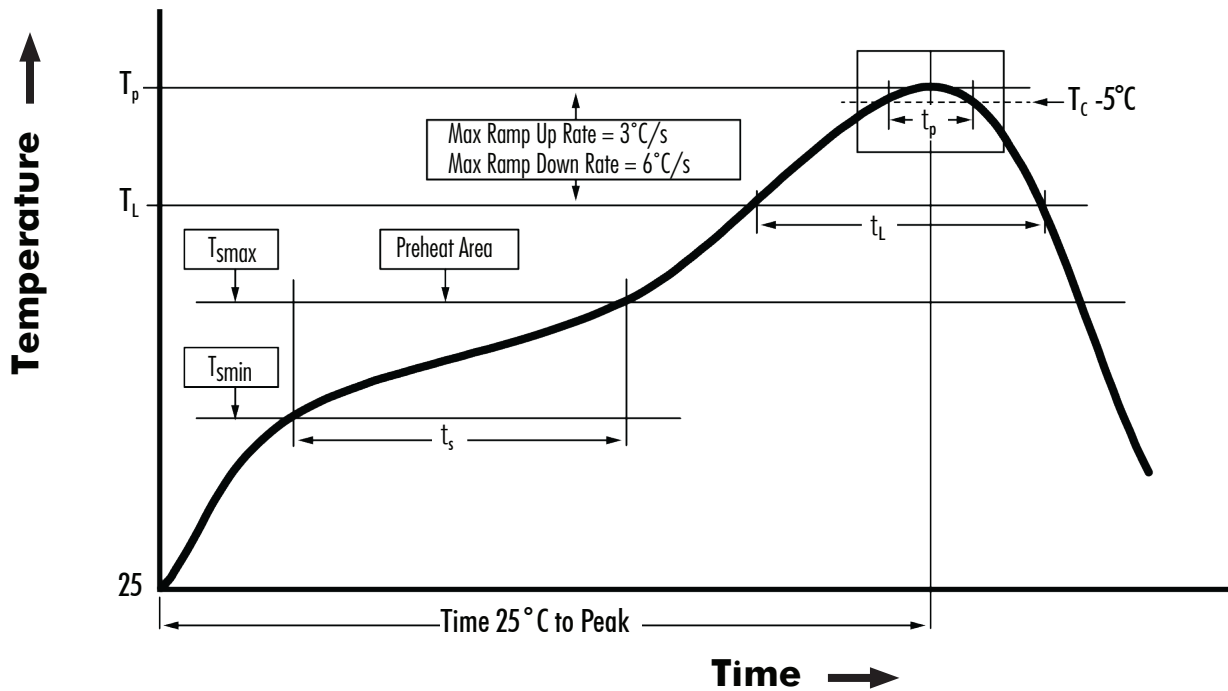


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Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



| T_{SMIN} (°C) | T_{SMAX} (°C) | T_L (°C) | T_P (°C MAX) | t_s (s) | t_L (s) | t_p (s MAX) | Ramp-up rate (T_L to T_p) | Ramp-down rate (T_p to T_L) | Time 25°C to peak temperature (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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