

# 10/100BASE - TX SINGLE PORT TRANSFORMER MODULE



Ruggedized



- Compliant with IEEE 802.3 standards
- 350µH OCL with 8mA DC bias
- Operating Temperature:
  - 100B-1001 & 100B-1003: -40°C to +85°C
  - 100B-1001X & 100B-1003X: -55°C to +125°C
- Storage Temperature: -55°C to +125°C
- Dielectric Withstanding Voltage (DWV): 1500 Vrms
- Epoxy Encapsulated package withstands 235°C peak temperature profile
- Lead Finish: Sn63Pb37
- Moisture Sensitivity Level: 3

## Electrical Specifications @ 25°C

| Part Number | Insertion Loss (dB MAX) |        |        |        |         | Return Loss (dB MIN) |        |        |        |        | Crosstalk (dB MIN) |        |        |        | DM to CM Rejection Ratio (dB MIN) |        |        |         |
|-------------|-------------------------|--------|--------|--------|---------|----------------------|--------|--------|--------|--------|--------------------|--------|--------|--------|-----------------------------------|--------|--------|---------|
|             | 0.10 MHz                | 30 MHz | 60 MHz | 80 MHz | 100 MHz | 2 MHz                | 30 MHz | 50 MHz | 60 MHz | 80 MHz | 16 MHz             | 30 MHz | 60 MHz | 80 MHz | 0.10 MHz                          | 30 MHz | 60 MHz | 100 MHz |
| 100B-1001   | 1.2                     | 1.2    | 1.2    | 1.2    | 1.2     | 18                   | 18     | 14     | 12     | 10     | 48                 | 44     | 40     | 38     | 45                                | 40     | 30     | 30      |
| 100B-1001X  | 1.2                     | 1.2    | 1.2    | 1.2    | 1.2     | 18                   | 18     | 14     | 12     | 10     | 48                 | 44     | 40     | 38     | 45                                | 40     | 30     | 30      |
| 100B-1003   | 1.0                     | 1.0    | 1.0    | 1.0    | 1.0     | 20                   | 20     | 14     | 12     | 12     | 48                 | 45     | 40     | 38     | 45                                | 40     | 35     | 35      |
| 100B-1003X  | 1.2                     | 1.2    | 1.2    | 1.2    | 1.2     | 20                   | 20     | 14     | 12     | 12     | 48                 | 45     | 40     | 38     | 45                                | 40     | 35     | 35      |

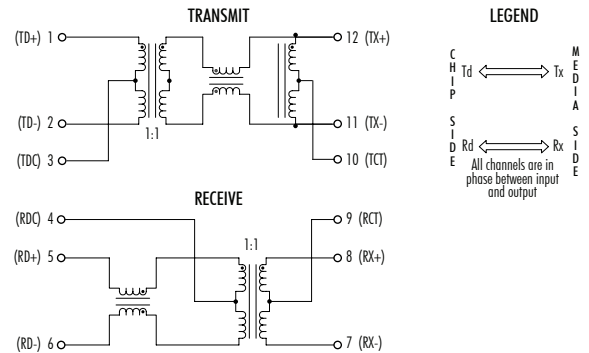
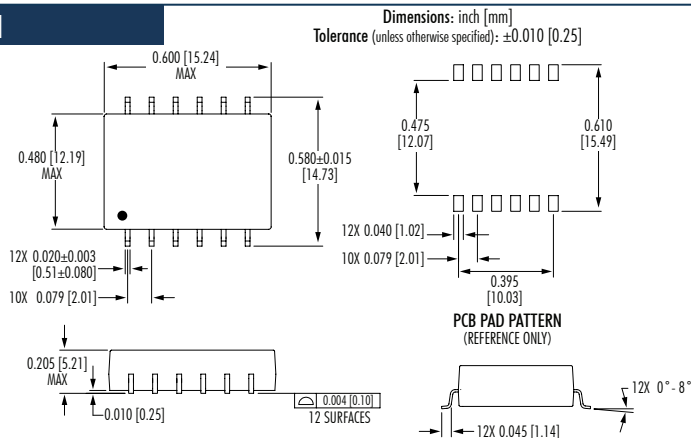
### NOTES:

- Add suffix "NL" for RoHS compliant version; i.e. 100B-1003 becomes 100B-1003NL. NL parts have 100% SN Lead Finish (MSL:3)
- For Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. 100B-1003XNLT

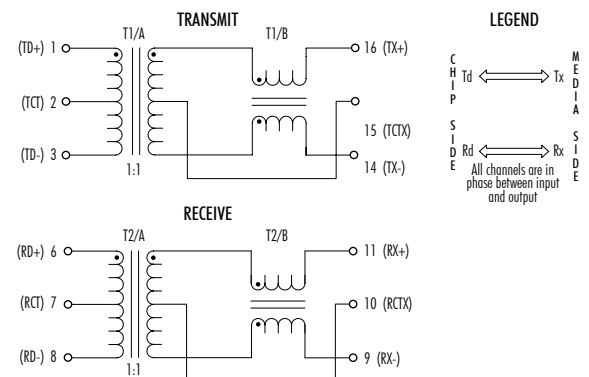
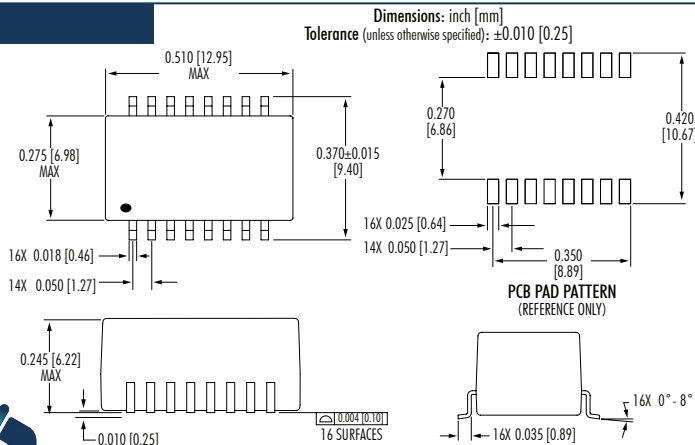
### Mechanicals

### Electrical Schematics

#### 100B-1001



#### 100B-1003



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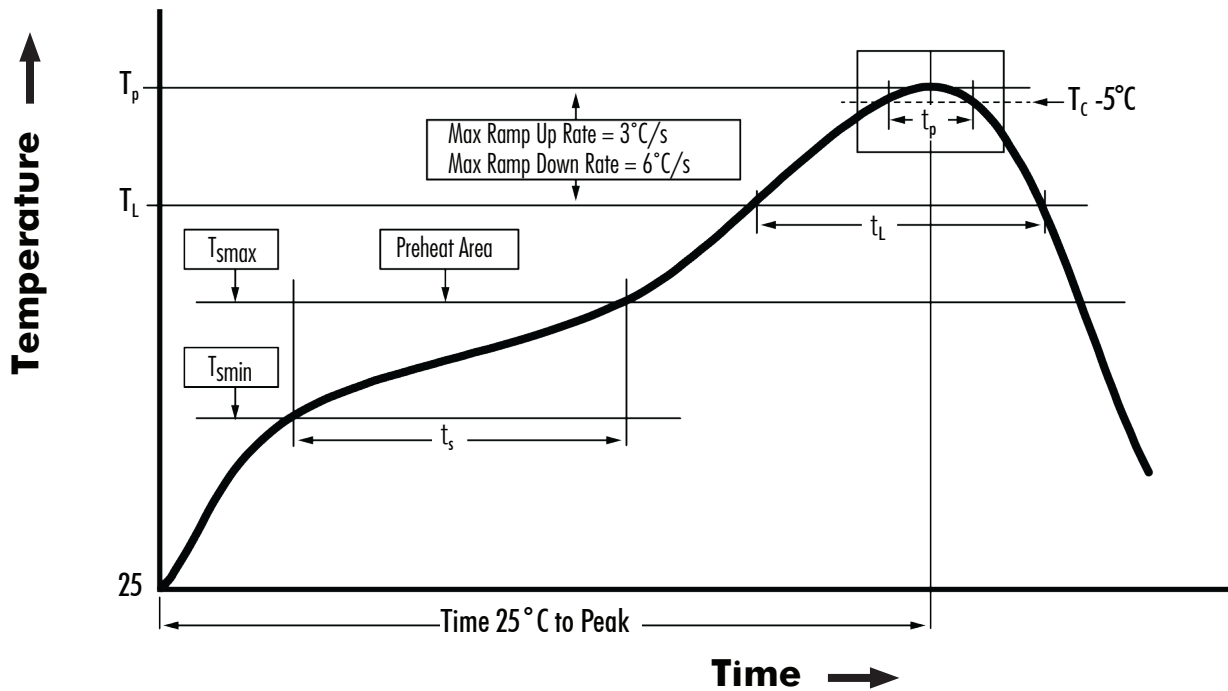
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## Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



| $T_{SMIN}$ (°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 number of reflow cycles not to exceed 2.



iNRCORE, LLC  
 311 Sinclair Road, Bristol, PA 19007-6812 USA  
 Tel: +1.215.781.6400 Fax: +1.215.781.6430

[www.iNRCORE.com](http://www.iNRCORE.com)

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