

# 10/100 BASE - TX QUAD-PORT TRANSFORMER MODULE



Ruggedized

- Compliant with IEEE 802.3u & ANSI X3.263 standards
- 350µH OCL with 8mA bias
- Operating Temperature:
  - 100B-4005: -40°C to +85°C
  - 100B-4005X: -55°C to +125°C
- IC grade transfer-molded package withstands 235°C peak temperature profile
- Max Reflow Temperature: 235°C
- 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 | 100 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-4005   | 1.0                     | 1.0    | 1.0    | 1.0     | 18                   | 14     | 12     | 10     | 50                 | 44     | 41     | 40     | 40                                | 38     | 35     | 35      |
| 100B-4005X  | 1.2                     | 1.2    | 1.2    | 1.2     | 18                   | 14     | 12     | 10     | 48                 | 42     | 38     | 33     | 45                                | 40     | 35     | 35      |

### NOTES:

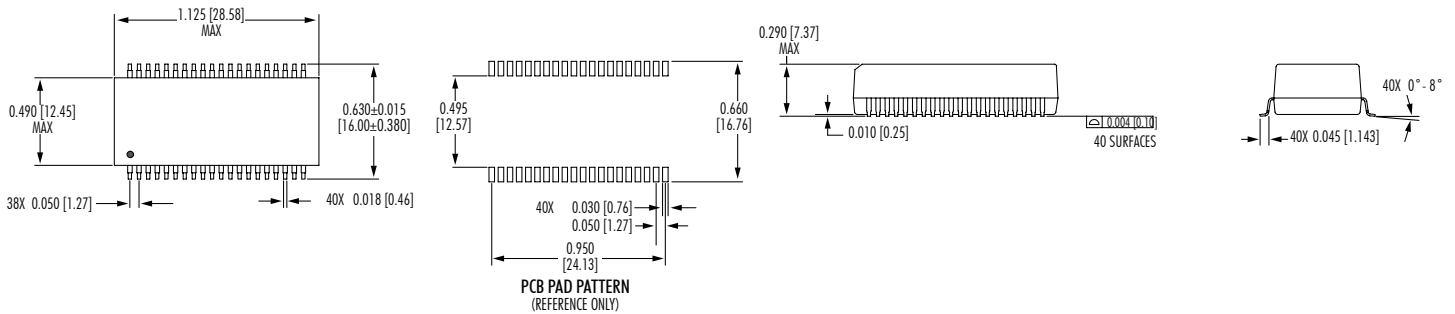
- Add suffix "NL" for RoHS compliant version; i.e. 100B-4005 becomes 100B-4005NL. NL parts have 100% SN Lead Finish (MSL:4)
- For Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. 100B-4005XNLT.

## Mechanicals

Dimensions: inch [mm]

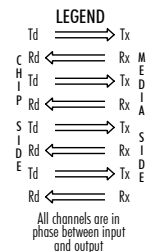
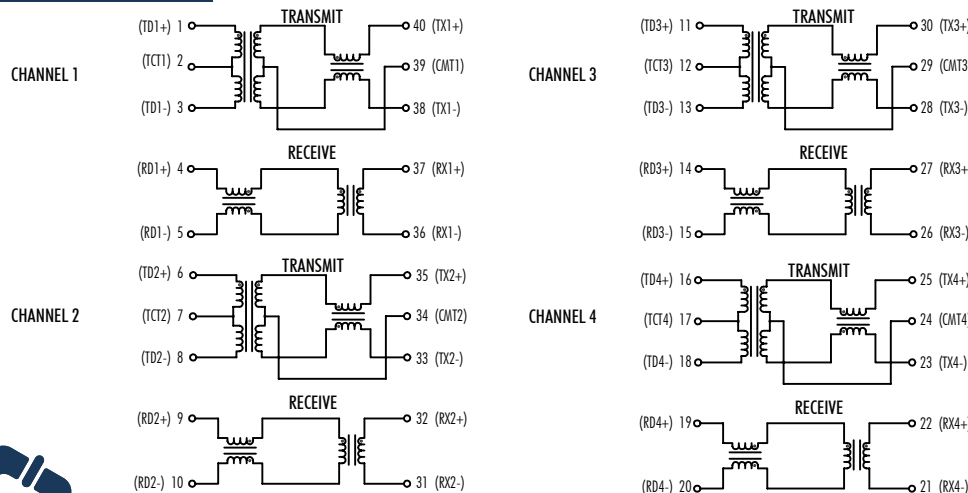
Tolerance (unless otherwise specified): ±0.010 [0.25]

### 100B-4005 / 100B-4005X



## Electrical Schematics

### 100B-4005 / 100B-4005X



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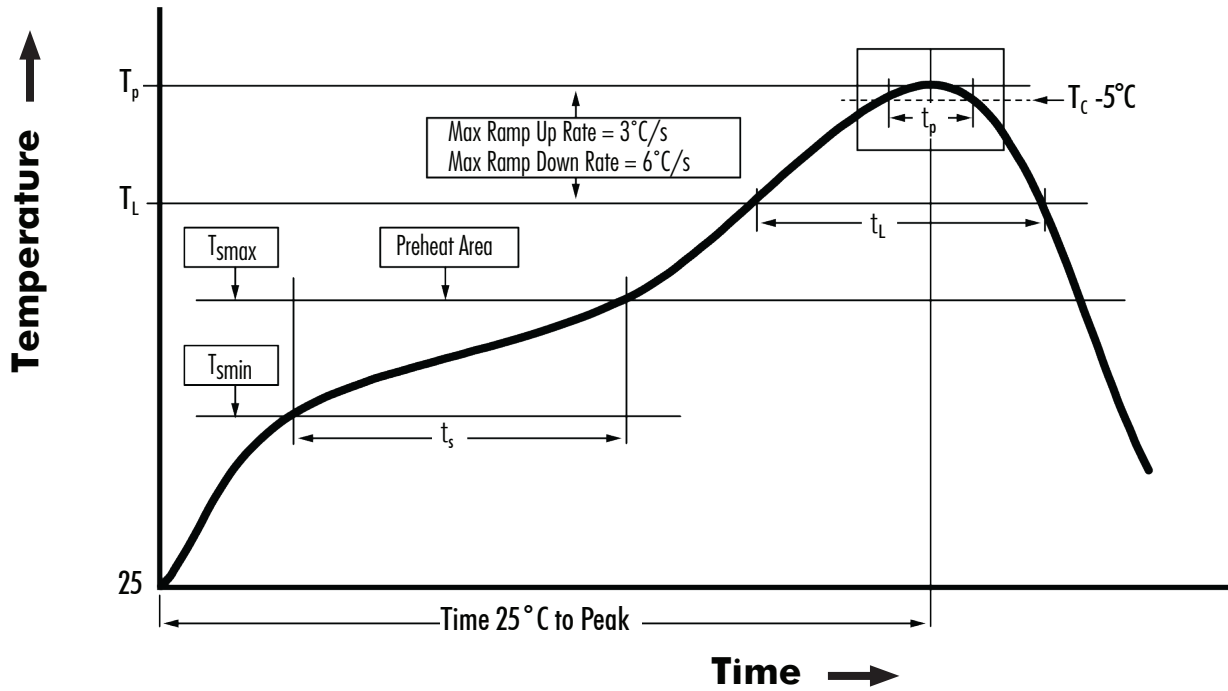
M203.D (08/21)

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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



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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