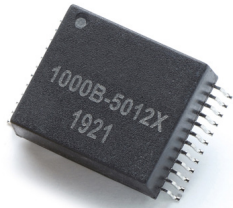


10/100/1000 BASE-T SINGLE & DUAL PORT TRANSFORMER MODULE



Ruggedized



- Compliant with IEEE 802.3ab for 1000 Base-T
- 350µH OCL with 8mA bias at extended temperatures
- Storage Temperature: -55°C to +125°C
- Two Operating Temperature versions available:
 - Standard: -40°C to +85°C
 - Extended: -55°C to +125°C
- 235°C peak reflow temperature (MSL 3)
- Lead finish: Sn63/Pb37 (RoHS-compliant version available with 100% pure tin)
- 245°C peak reflow temperature for RoHS version (MSL 4)

Electrical Specifications @ 25°C

| Part Number | Insertion Loss (dB MAX) | | | | Return Loss (dB MIN) | | | | Crosstalk (dB MIN) | | | CM to CM Rejection (dB MIN) | | | DM to CM Rejection (dB MIN) | | | HiPot (Vrms) |
|-------------|-------------------------|--------|--------|---------|----------------------|--------|--------|---------|--------------------|--------|---------|-----------------------------|--------|---------|-----------------------------|--------|---------|--------------|
| | 0.10 MHz | 30 MHz | 60 MHz | 100 MHz | 30 MHz | 60 MHz | 80 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | |
| 1000B-5009 | 1.4 | 1.4 | 1.4 | 1.4 | 18 | 12 | 10 | 8 | 43 | 37 | 31 | 30 | 25 | 18 | 40 | 35 | 30 | 1500 |
| 1000B-5009X | 1.4 | 1.4 | 1.4 | 1.4 | 18 | 12 | 10 | 8 | 43 | 37 | 31 | 30 | 25 | 18 | 40 | 35 | 30 | 1500 |
| 1000B-5012 | 1.2 | 1.2 | 1.2 | 1.2 | 18 | 12 | 10 | 8 | 43 | 37 | 31 | 40 | 35 | 30 | 43 | 37 | 30 | 1500 |
| 1000B-5012X | 1.2 | 1.2 | 1.2 | 1.2 | 18 | 12 | 10 | 8 | 43 | 37 | 31 | 40 | 35 | 30 | 43 | 37 | 30 | 1500 |
| 1000B-5014 | 1.4 | 1.4 | 1.4 | 1.4 | 16 | 12 | 10 | 8 | 43 | 37 | 31 | 33 | 30 | 28 | 43 | 37 | 30 | 1500 |
| 1000B-5014X | 1.4 | 1.4 | 1.4 | 1.4 | 16 | 12 | 10 | 8 | 43 | 37 | 31 | 33 | 30 | 28 | 43 | 37 | 30 | 1500 |
| 1000B-5016 | 1.2 | 1.2 | 1.2 | 1.2 | 18 | 12 | 12 | 10 | 43 | 37 | 31 | 30 | 23 | 17 | 40 | 35 | 30 | 1500 |

NOTES:

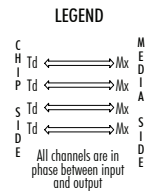
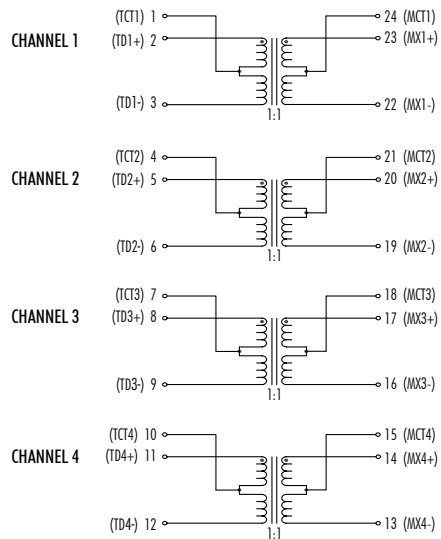
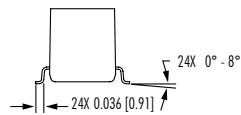
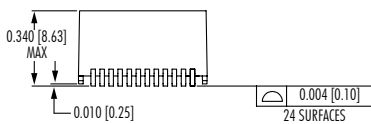
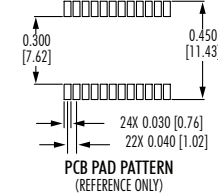
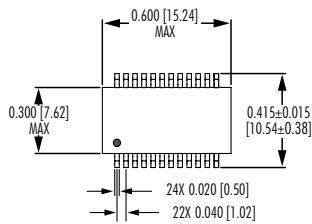
- Add suffix "NL" for RoHS compliant version; i.e. 1000B-5009 becomes 1000B-5009NL. NL parts have 100% SN Lead Finish (MSL:4)
- For Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. 1000B-5009NLT.
- Add suffix "X" for extended temperature version; i.e. 1000B-5009 becomes 1000B-5009X. (*1000B-5016 does not offer X-version)

Mechanicals

Electrical Schematics

1000B-5009/X

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



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10/100/1000 BASE-T SINGLE & DUAL PORT TRANSFORMER MODULE



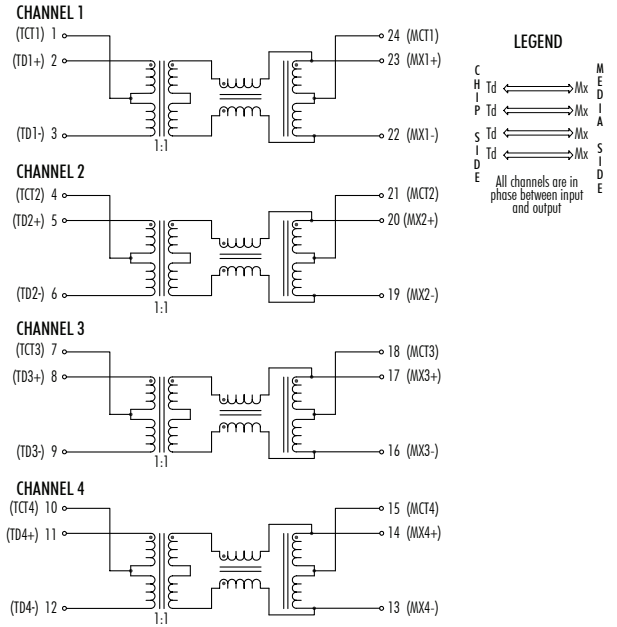
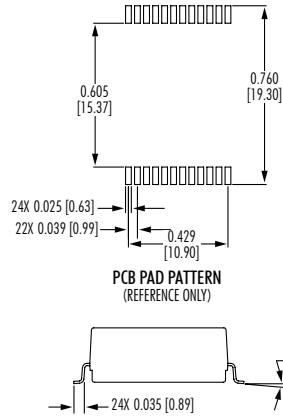
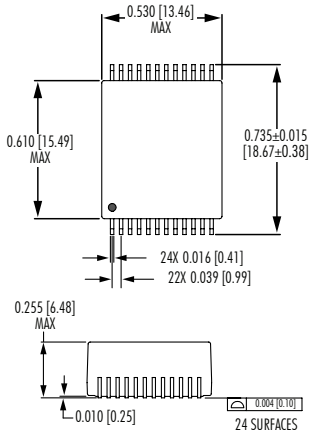
Ruggedized

Mechanicals

Electrical Schematics

1000B-5012/X

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

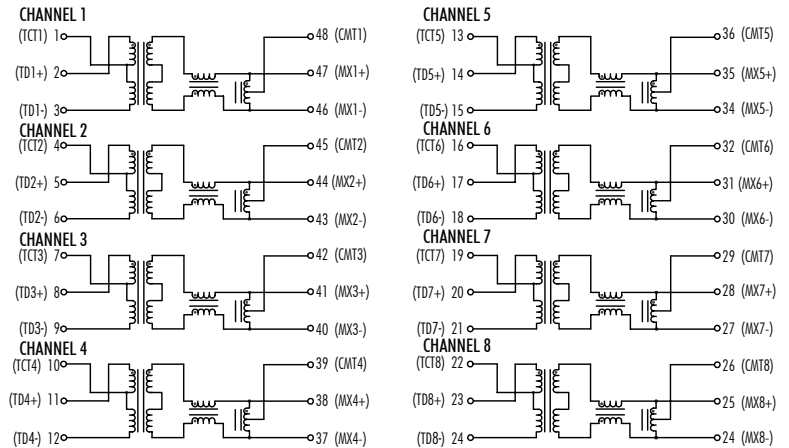
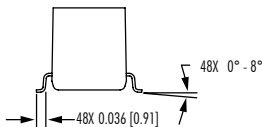
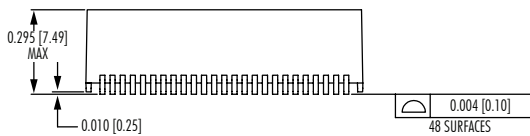
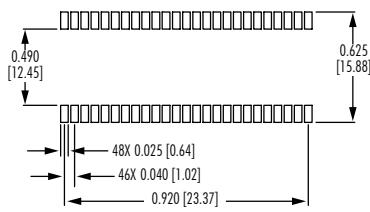
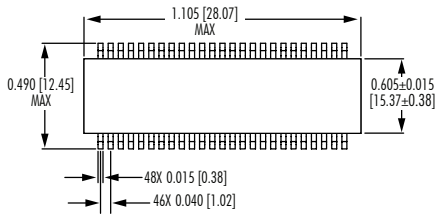


Mechanicals

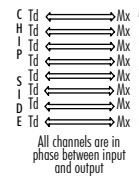
Electrical Schematics

1000B-5014/X

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



LEGEND



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M557.B (11/21)

10/100/1000 BASE-T SINGLE & DUAL PORT TRANSFORMER MODULE

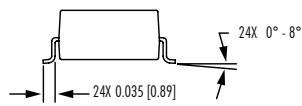
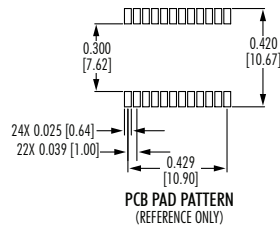
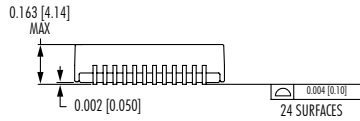
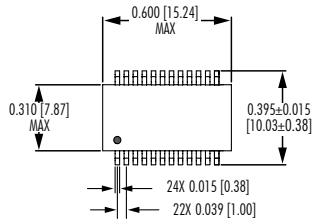


Ruggedized

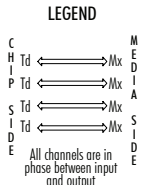
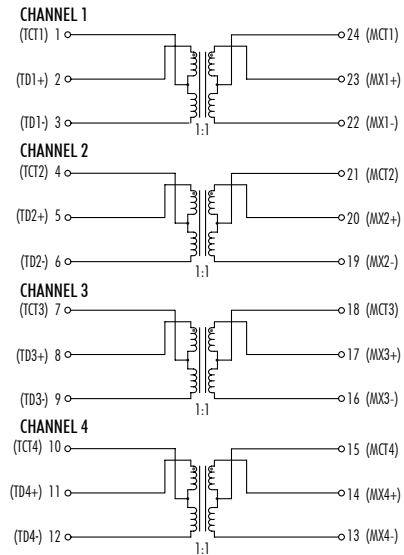
1000B-5016

Mechanicals

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



Electrical Schematics

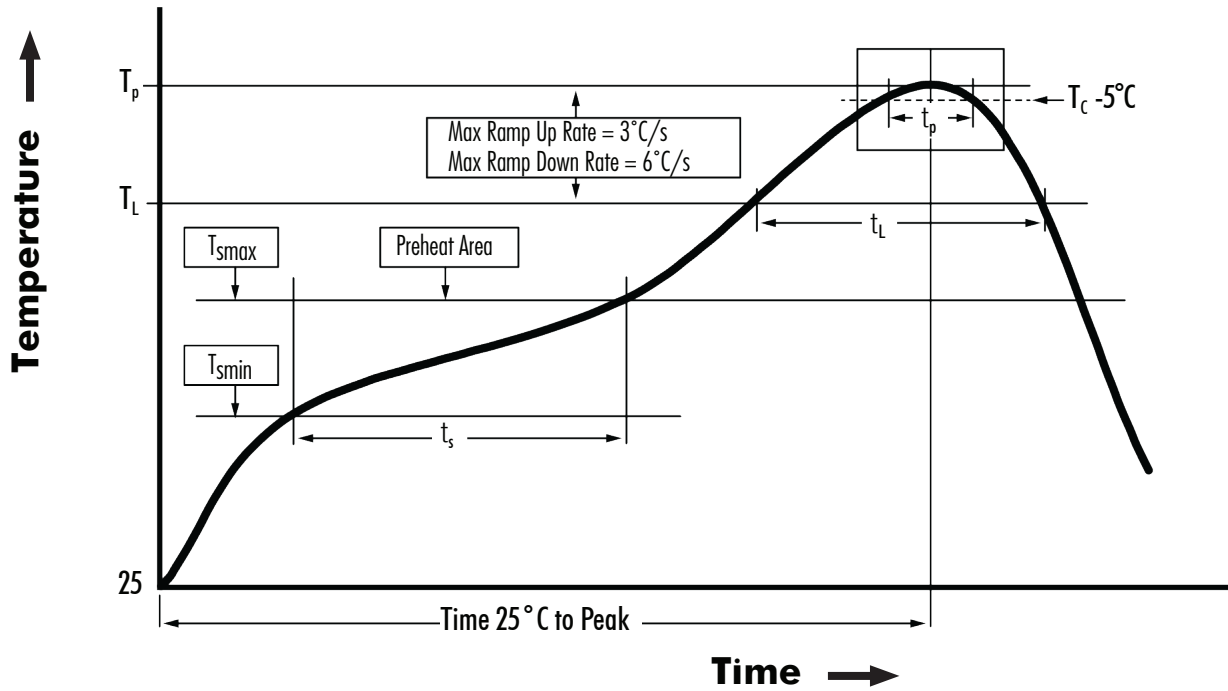


10/100/1000 BASE-T SINGLE & DUAL PORT TRANSFORMER MODULE



Ruggedized

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

