

1000BASE-T MAGNETICSMODULES

Designed to Support 1:1 Turns Ratio Transceivers



- RoHS peak reflow temperature rating 245°C
- Meets IEEE 802.3 specification

Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

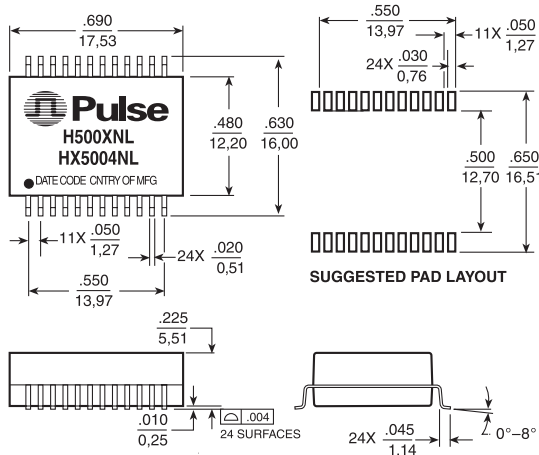
| RoHS Compliant Part Number | Number of Ports | Insertion Loss (dB MAX) | Return Loss (dB MIN) | | | | | Differential to Common Mode Rejection (dB MIN) | | | Crosstalk (dB MIN) | | | Hipot (Vrms) |
|----------------------------|-----------------|-------------------------|----------------------|----------|--------|--------|-----------|--|--------|--------|--------------------|--------|--------|--------------|
| | | | 1-100 MHz | 1-30 MHz | 40 MHz | 50 MHz | 60-80 MHz | 100 MHz | 30 MHz | 60 MHz | 100 MHz | 30 MHz | 60 MHz | |
| H5004NL 3d | 1 | 1 | -18 | -18 | -16 | -12 | -10 | -43 | -37 | -33 | -43 | -37 | -33 | 1500 |
| HX5004NL 1,3d | 1 | 1 | -18 | -18 | -16 | -12 | -10 | -43 | -37 | -33 | -43 | -37 | -33 | 1500 |
| H5007NL 3d | 1 | 1 | -18 | -18 | -16 | -12 | -10 | -43 | -37 | -33 | -43 | -37 | -33 | 1500 |
| H5008NL 3a | 1 | 1 | -18 | -18 | -16 | -12 | -10 | -43 | -37 | -33 | -43 | -37 | -33 | 1500 |
| HX5008NL 1,3a | 1 | 1 | -18 | -18 | -16 | -12 | -10 | -43 | -37 | -33 | -43 | -37 | -33 | 1500 |
| H5009NL 3a | 1 | 1 | -18 | -18 | -16 | -12 | -10 | -43 | -37 | -33 | -43 | -37 | -33 | 1500 |
| H5012NL 3a | 2 | 1.4 | -16 | -14.4 | -13.1 | -12 | -10 | -45 | -40 | -35 | -43.5 | -37.5 | -33 | 1500 |
| H5014NL 3a | 2 | 1.4 | -16 | -14.4 | -13.1 | -12 | -10 | -45 | -40 | -35 | -43.5 | -37.5 | -33 | 1500 |
| HX5014NL 1,3a | 2 | 1.4 | -16 | -14.4 | -13.1 | -12 | -10 | -45 | -40 | -35 | -43.5 | -37.5 | -33 | 1500 |
| H5015NL 3a | 1 | 1 | -18 | -18 | -16 | -12 | -10 | -43 | -37 | -33 | -43 | -37 | -33 | 1500 |
| H5020NL 3a | 2 | 1 | -18 | -14.4 | -13.1 | -12 | -10 | -40 | -35 | -30 | -40 | -33 | -28 | 1500 |
| HX5020NL 1,3a | 2 | 1 | -18 | -14.4 | -13.1 | -12 | -10 | -40 | -35 | -30 | -40 | -33 | -28 | 1500 |
| H5089NL 3a | 2 | 1.4 | -16 | -14.4 | -13.1 | -12 | -10 | -45 | -40 | -35 | -43.5 | -37.5 | -33 | 1500 |

1. HX = extended temperature version -40°C to +85°C
2. For Tape & Reel packaging, add a "T" suffix at the end of the part number, e.g. H5007NL.T.
3. MSL = Moisture Sensitivity Level: a = 1, b = 2, c = 3, d = 4

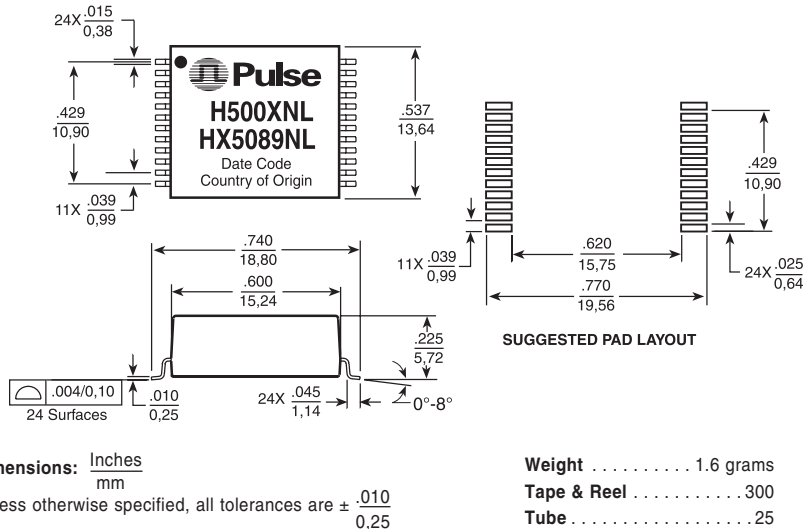
Mechanicals

H5004NL, HX5004NL*, H5007NL*

H5004NL, H5007NL, and HX5004NL are footprint-compatible to 10/100BASE-TX part H1267.



H5008NL, H5009NL, HX5008NL



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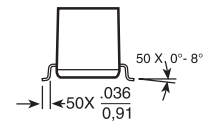
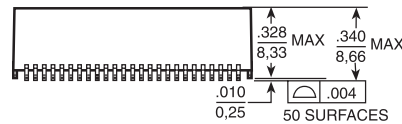
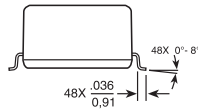
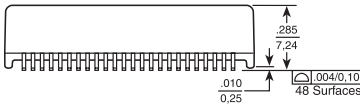
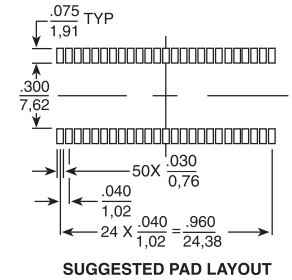
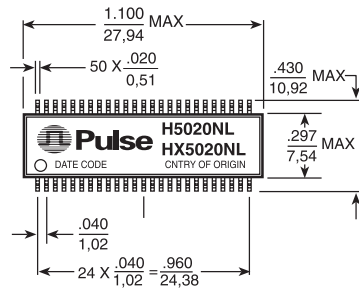
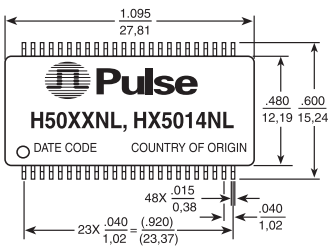
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Mechanicals (continued)

H5012NL, H5014NL, HX5014NL, H5089NL

H5020NL, HX5020NL

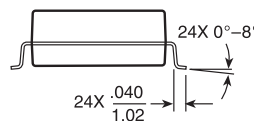
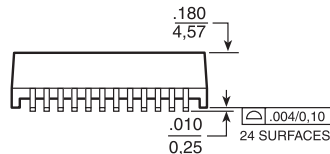
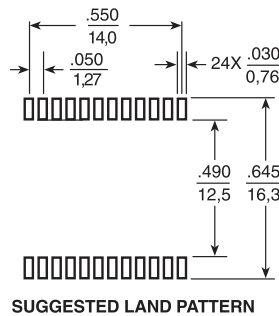
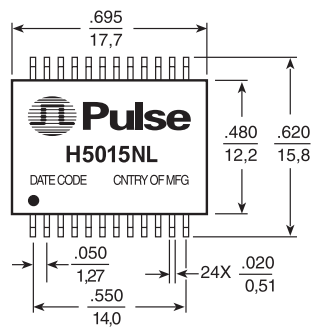


Weight 4.0 grams
Tape & Reel 250/reel
Tube 15/tube

Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified, all tolerances are $\pm \frac{.010}{0.25}$

Weight 1.6 grams
Tape & Reel 250/reel
Tube 15/tube

H5015NL



Weight 1.5 grams
Tape & Reel 400/reel

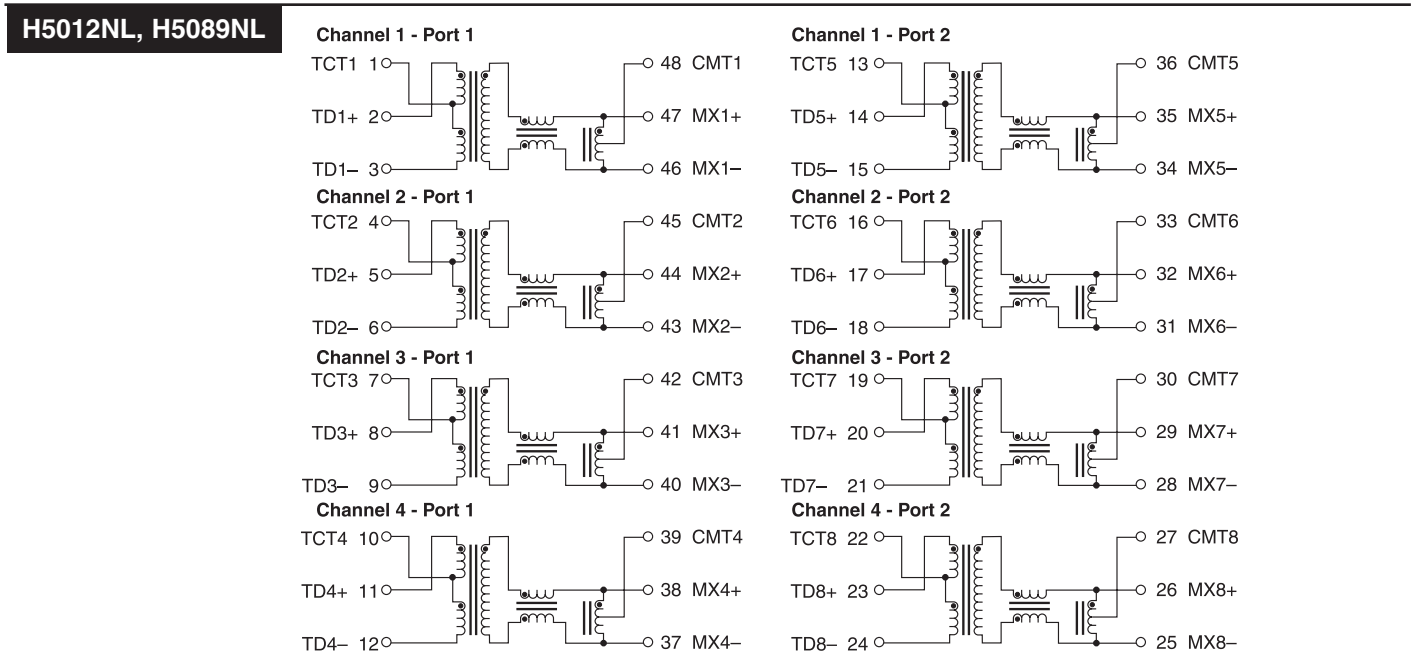
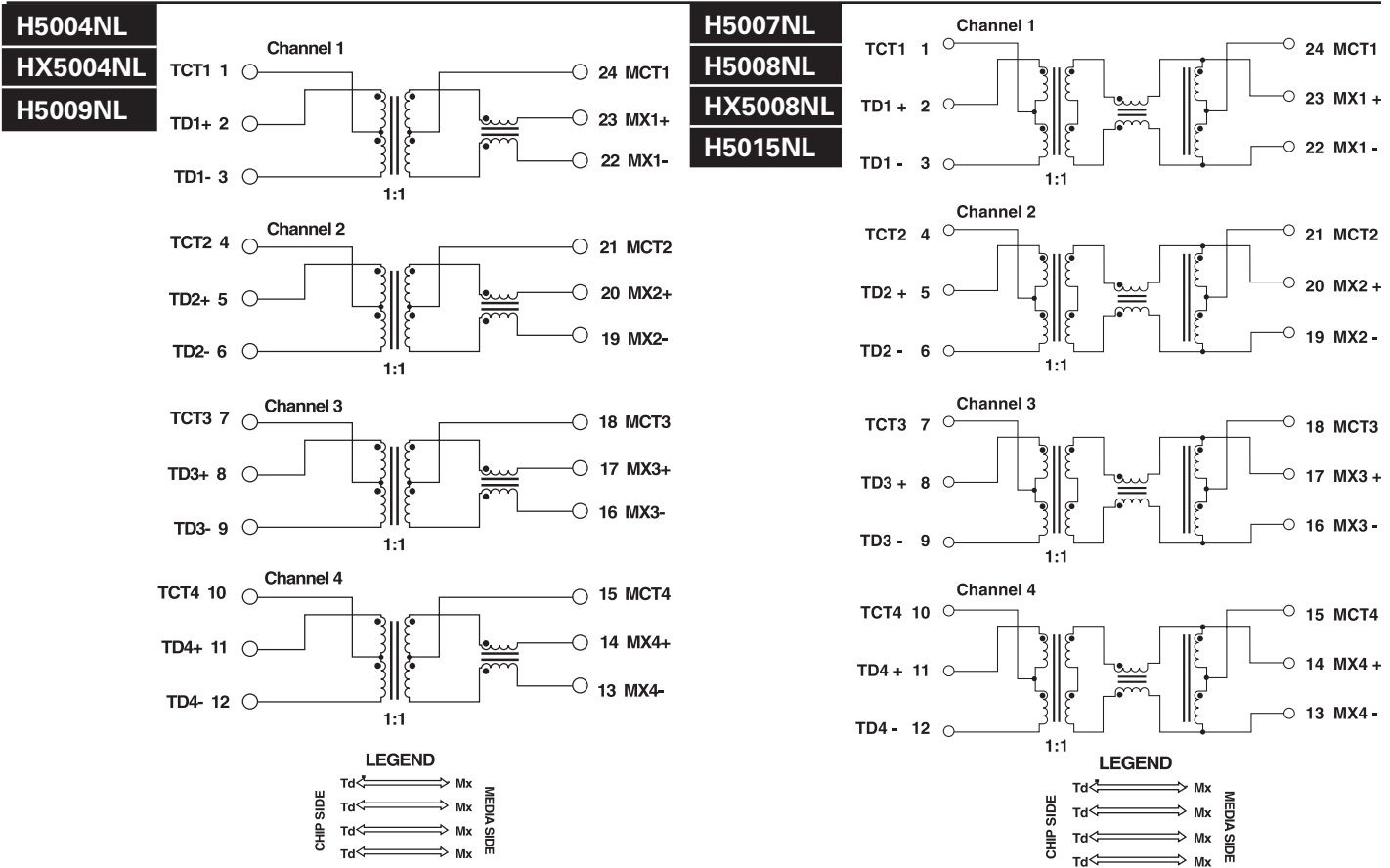
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
Unless otherwise specified, all tolerances are $\pm \frac{.005}{0.13}$

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Schematics



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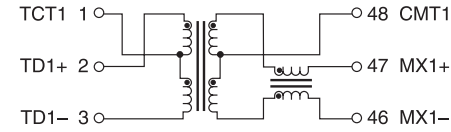
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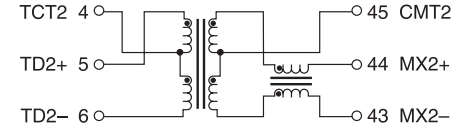
Schematics (continued)

H5014NL, HX5014NL

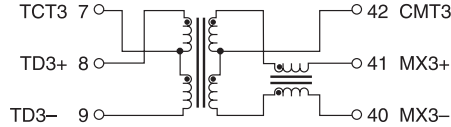
Channel 1 - Port 1



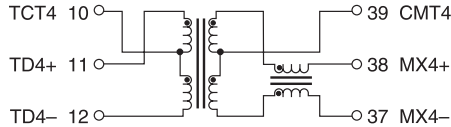
Channel 2 - Port 1



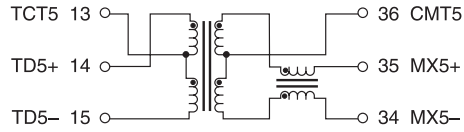
Channel 3 - Port 1



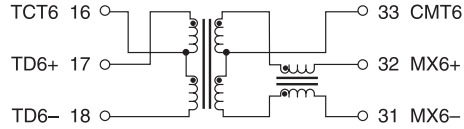
Channel 4 - Port 1



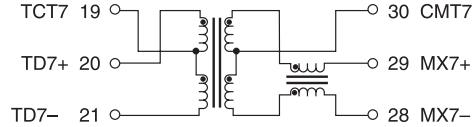
Channel 1 - Port 2



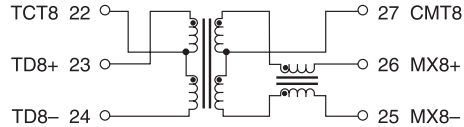
Channel 2 - Port 2



Channel 3 - Port 2

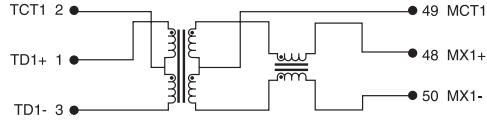


Channel 4 - Port 2

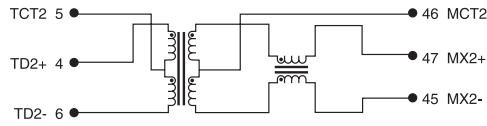


H5020NL, HX5020NL

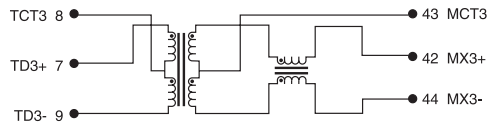
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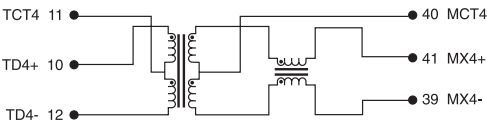
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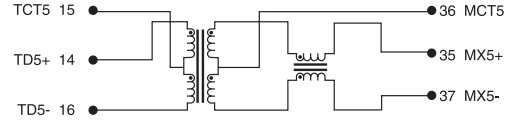
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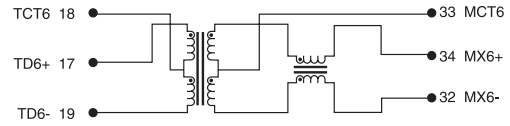
Channel 4 - Port 1



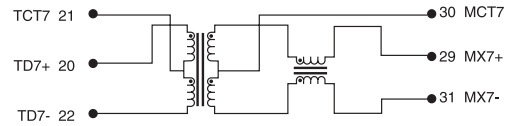
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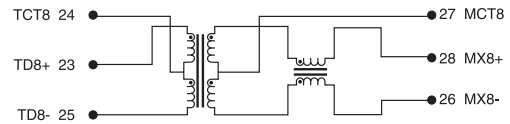
Channel 2 - Port 2



Channel 3 - Port 2



Channel 4 - Port 2



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