

10/100BASE-TX DUAL PORT TRANSFORMER MODULES

For Use with Transceivers Requiring 1:1 Transmit and Receive Turns Ratios



- RoHS reflow temperature rating 245°C
- Meets IEEE 802.3 specification
- Some models offer AutoMDIX capability

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

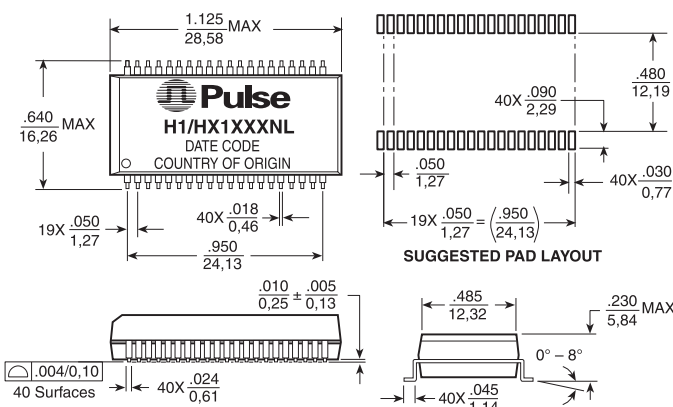
| Part Number ¹ | Insertion Loss (dB TYP) | Return Loss (dB TYP) | | | | | Crosstalk (dB TYP) | | | | Differential to Common Mode Rejection (dB MIN) | |
|------------------------------|-------------------------|----------------------|----------|--------|--------|-----------|--------------------|--------|--------|---------|--|------------|
| | | 0.1-100 MHz | 2-30 MHz | 40 MHz | 50 MHz | 60-80 MHz | 1 MHz | 30 MHz | 60 MHz | 100 MHz | 1-60 MHz | 60-200 MHz |
| H1027NL ^{2d} | -0.5 | -21 | -17 | -14.5 | -12 | -65 | -55 | -45 | -35 | -53 | -40 | |
| H1028NL ^{2d} | -0.5 | -21 | -17 | -14.5 | -12 | -65 | -55 | -45 | -35 | -45 | -35 | |
| H1049NL ^{2d} | -0.5 | -21 | -17 | -14.5 | -12 | -65 | -55 | -45 | -35 | -45 | -35 | |
| H1200NL ^{2d} | -1.0 | -16 | -14.4 | -13 | -12 | -50 | -45 | -40 | -35 | -37 | -33 | |
| H1174NL ^{2a} | -1.2 | -18 | -16 | -14 | -12 | -60 | -45 | -40 | -35 | -45 | -35 | |
| H1244NL ^{2a, 4} | -1.2 | -18 | -16 | -14 | -12 | -60 | -45 | -40 | -35 | -45 | -35 | |
| H1270NL ^{2a, 4} | -1.2 | -18 | -16 | -14 | -12 | -60 | -45 | -40 | -35 | -45 | -35 | |
| HX1294NL ^{2a, 3, 4} | -1.2 | -16 | -14 | -13.5 | -10 | -55 | -45 | -40 | -35 | -30 | -20 | |

1. All products meet input/output breakdown (HiPot) of 1500 Vrms.
2. MSL = Moisture Sensitivity Level a=1, b=2, c=3, d=4

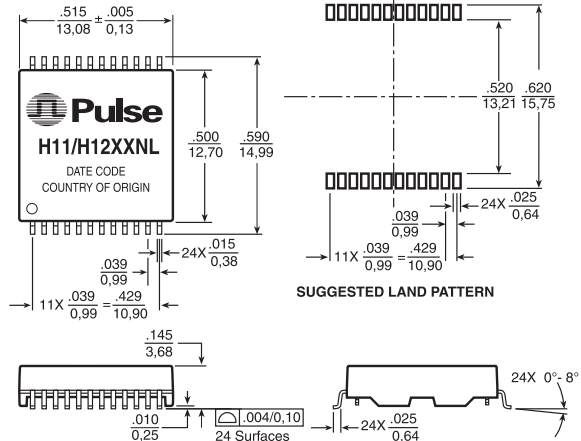
3. Operating Temperature -40°C to +85°C
4. Suitable for AutoMDIX applications

Mechanicals

H1XXXNL



H1174NL, H1244NL, H1270NL



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

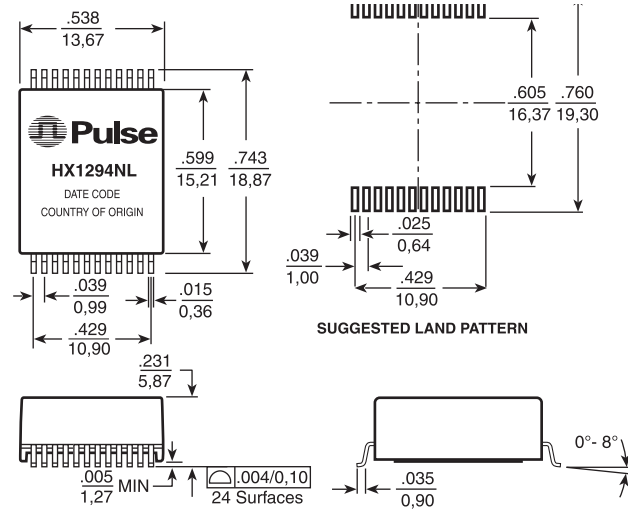
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Mechanicals (continued)

HX1294NL



Dimensions: $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,
all tolerances are $\pm \frac{.010}{0.25}$

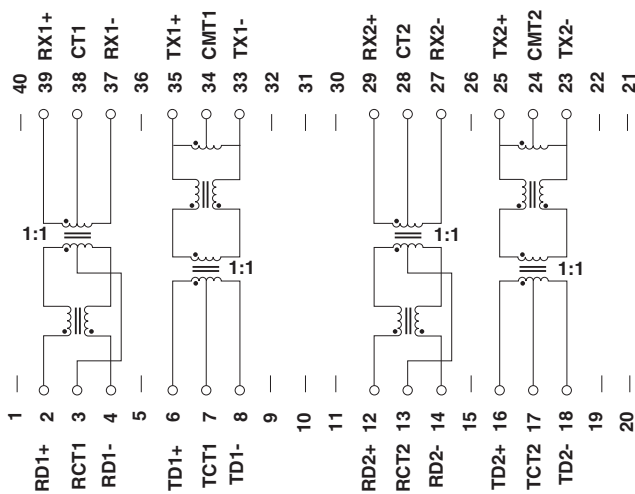
Weight 1.6 grams

Tape & Reel 300/reel

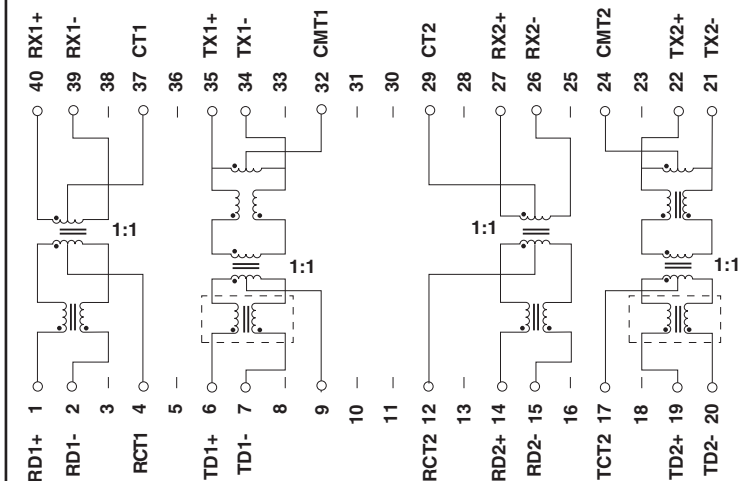
Tube 35/tube

Schematics

H1049NL



H1027NL, H1028NL



NOTE: H1027 has input common mode choke on pins 6-7 and pins 19-20.
H1028 does not have the additional choke.

Dual Port Solutions: The H1027NL, H1028NL, and H1049NL, are designed to support two RJ-45 connectors. The H1027NL and the H1028NL have the same pinout. The H1027NL has an additional common mode choke on both transmit channels. The H1049NL offers a different pinout for design flexibility.

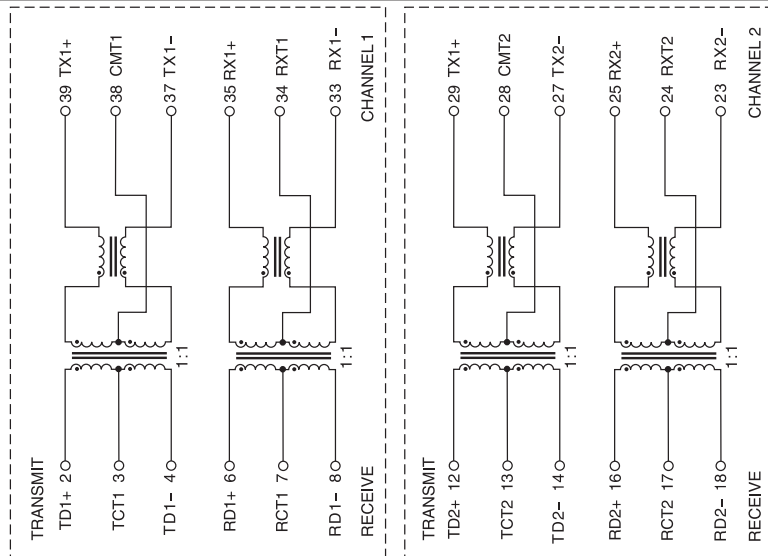
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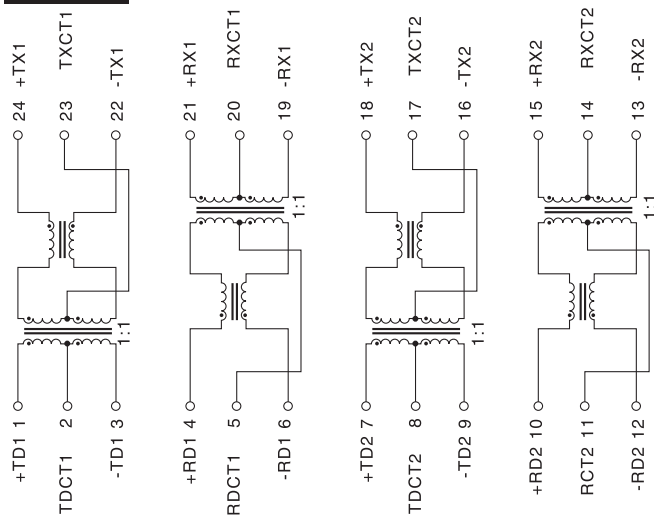


Schematics (continued)

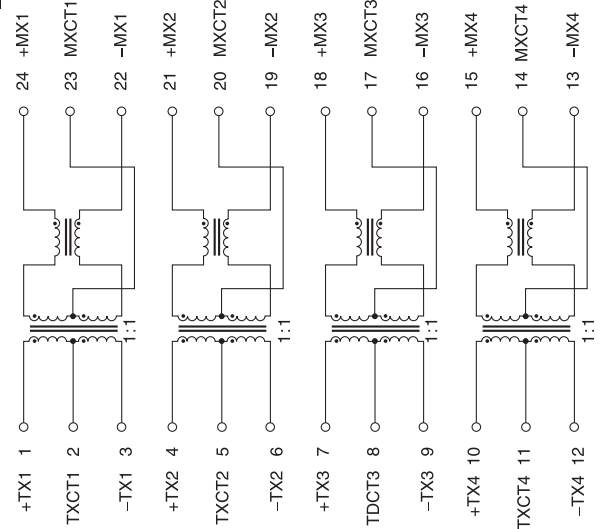
H1200NL



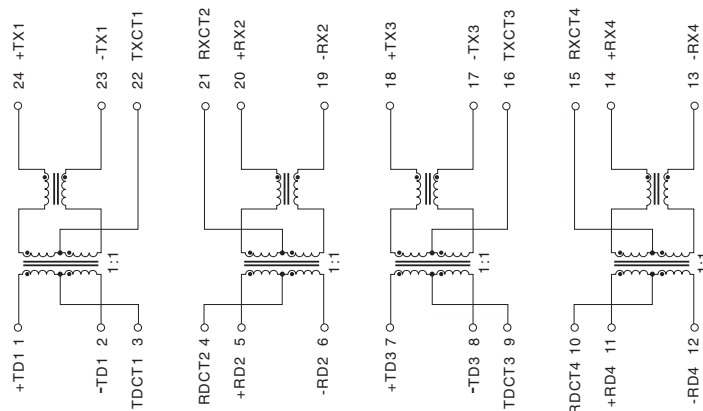
H1174NL



H1244NL



H1270NL, HX1294NL



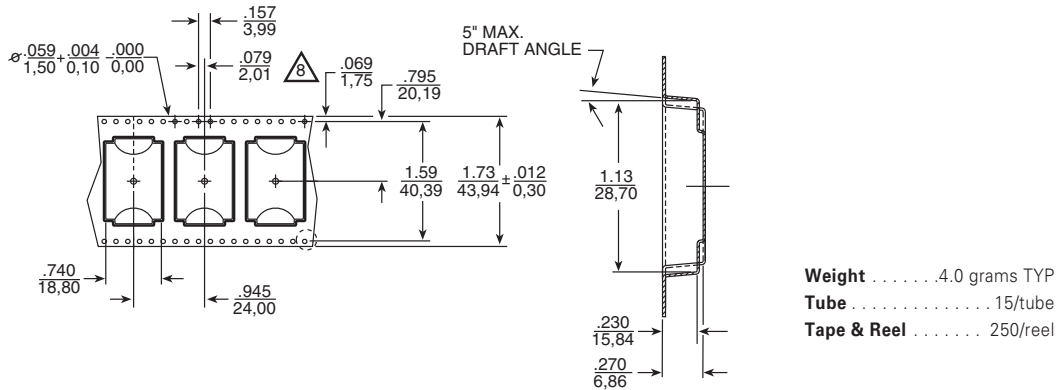
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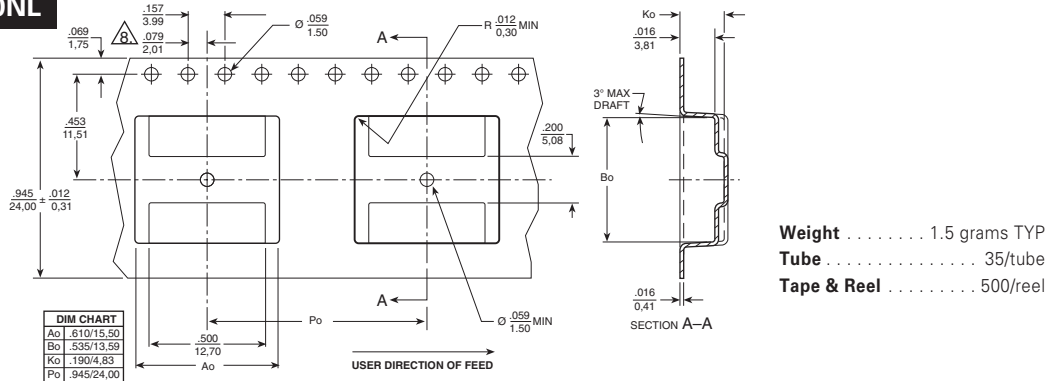


Tape & Reel Specifications

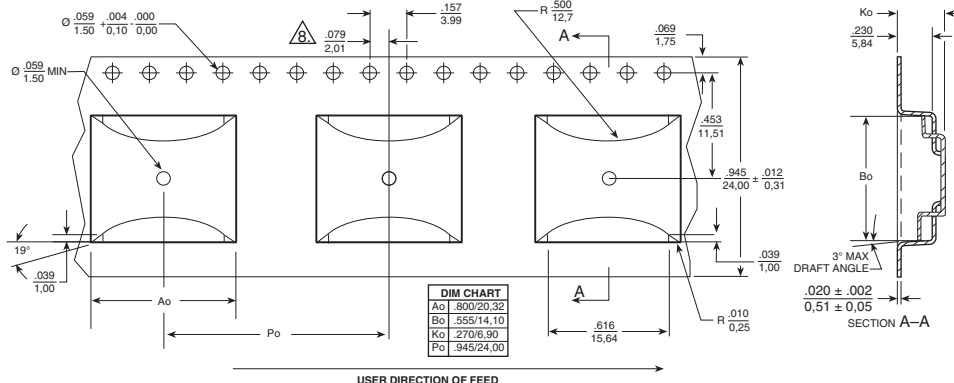
H1XXXNL



H1174NL, H1244NL, H1270NL



HX1294NL



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