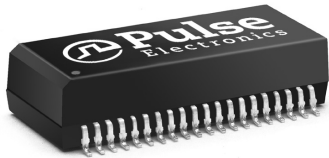


# 10/100Base-TX Transformer Modules

For Auto MDI/MDIX Applications



- RoHS peak reflow temperature rating 245°C
- Symmetrical transmit and receive channels for Auto MDI/MDIX capability
- Approved for use with the Broadcom BCM5226 and Level One LXT9784
- Meets IEEE 802.3 specification

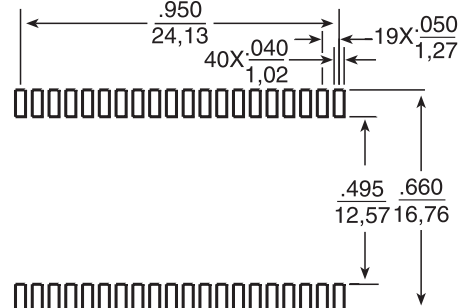
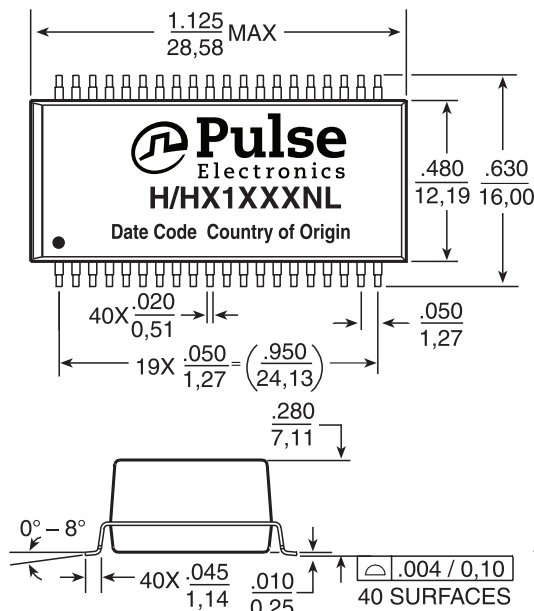
### Electrical Specifications @ 25°C - Operating Temperature 0°C to 70°C

| RoHS Compliant Part Number <sup>2</sup> | Insertion Loss (MAX) | Return Loss (dB MIN) |          |        |        | Crosstalk (dB MIN) |       |        |        | Differential to Common Mode Rejection (dB MIN) |          | Hipot (Vrms MIN) |
|---|----------------------|----------------------|----------|--------|--------|--------------------|-------|--------|--------|--|----------|------------------|
|   |                      | 0.1-100 MHz          | 2-30 MHz | 40 MHz | 50 MHz | 60-80 MHz          | 1 kHz | 30 MHz | 60 MHz | 100 MHz  | 1-60 MHz |                  |
| H1164NL <sup>3d</sup>                   | -1.0                 | -18                  | -14.4    | -13.1  | -12    | -65                | -45   | -40    | -33    | -37  | -25      | 1500             |
| HX1234NL <sup>1,3d</sup>                | -1.4                 | -18                  | -14.4    | -13.1  | -12    | -65                | -45   | -40    | -33    | -37  | -25      | 1500             |

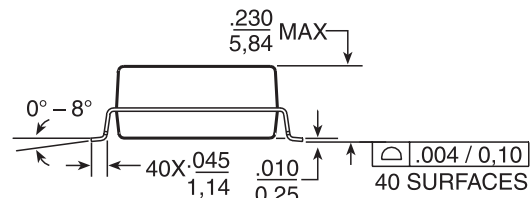
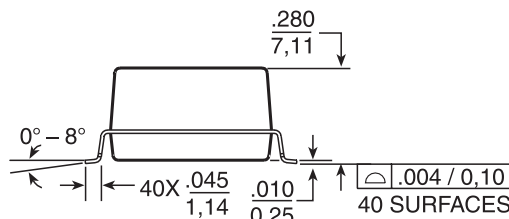
1. Operating Temperature -40°C to +85°C
2. For Tape & Reel packaging, add "T" suffix to the end of the part number when ordering, (Ex. H1164NLT)
3. MSL = Moisture Sensitivity Level a=1 b=2 c=3 d=4

### Mechanicals

#### H1164NL, HX1234NL



#### SUGGESTED PAD LAYOUT



#### HX1234NL

#### H1164NL

Weight .....4.8 grams  
Tape & Reel .....250/reel  
Tube .....15/tube

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

USA 858 674 8100

Germany 49 7032 7806 0

Singapore 65 6287 8998

Shanghai 86 21 62787060

China 86 755 33966678

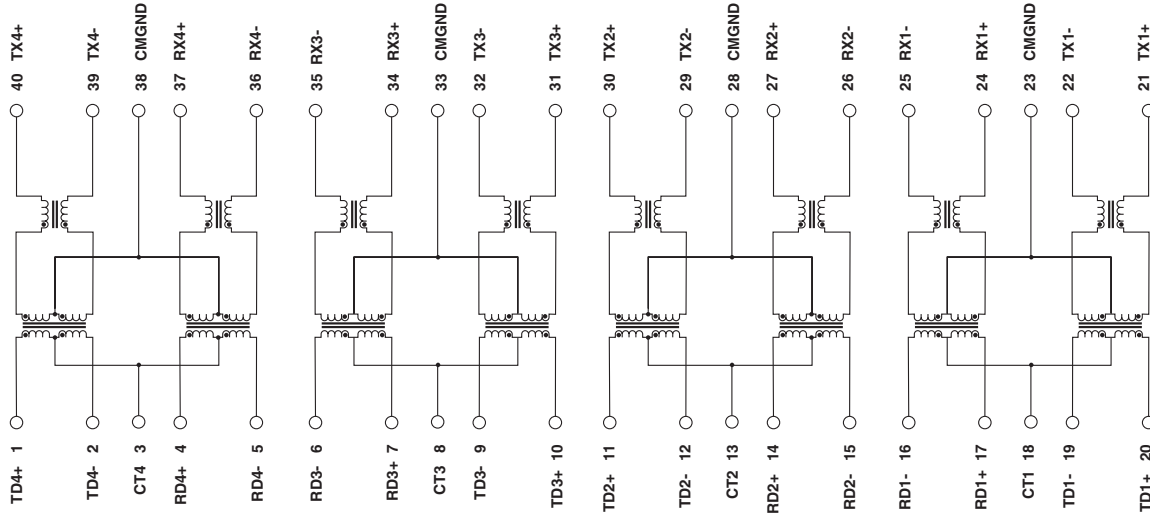
Taiwan 886 3 4356768

# 10/100Base-TX Transformer Modules

For Auto MDI/MDIX Applications

## Schematic

HT164NL, HX1234NL



### For More Information:

Americas - [prodinfonetworkamericas@pulseelectronics.com](mailto:prodinfonetworkamericas@pulseelectronics.com) | Europe - [comms-Apps-Europe@pulseelectronics.com](mailto:comms-Apps-Europe@pulseelectronics.com) | Asia - [prodinfonetworkapac@pulseelectronics.com](mailto:prodinfonetworkapac@pulseelectronics.com)

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[1879732-1](#) [2-1879391-5](#)