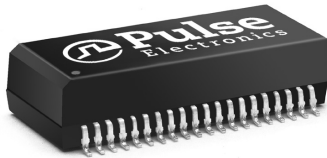


# 10/100Base-TX Transformer Modules

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<br>Compliant<br>Part Number <sup>2</sup> | Insertion<br>Loss<br>(MAX) | Return Loss<br>(dB MIN) |        |        |           | Crosstalk<br>(dB MIN) |        |        |         | Differential to Common<br>Mode Rejection<br>(dB MIN) |            | Hipot<br>(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                                             | 60-200 MHz |                     |
| HT164NL <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                |

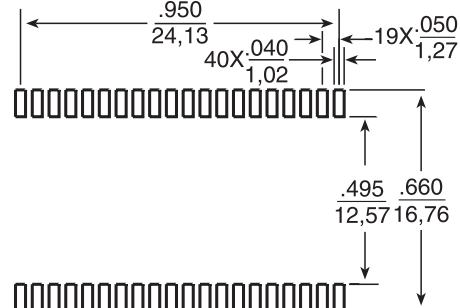
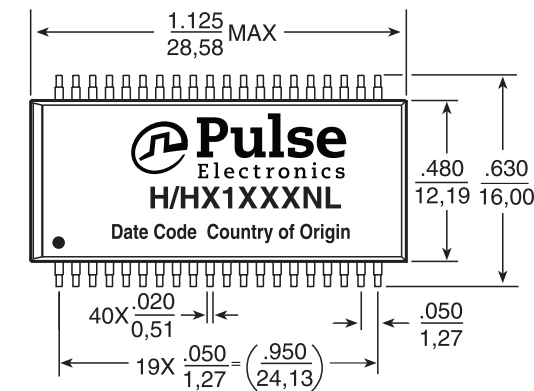
1. Operating Temperature -40°C to +85°

2. For Tape & Reel packaging, add "T" suffix to the end of the part number when ordering, (Ex. H1164NLT)

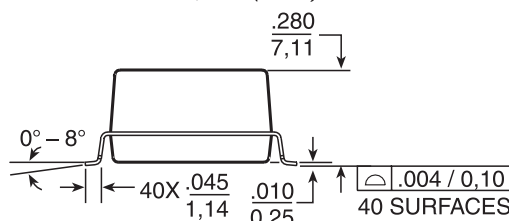
3. MSL = Moisture Sensitivity Level a=1 b=2 c=3 d=4

## Mechanicals

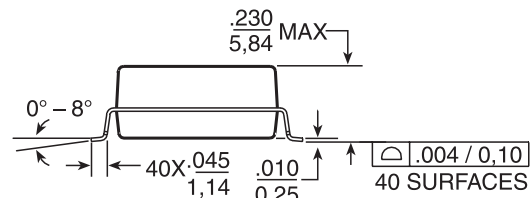
### H1164NL, HX1234NL



### 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

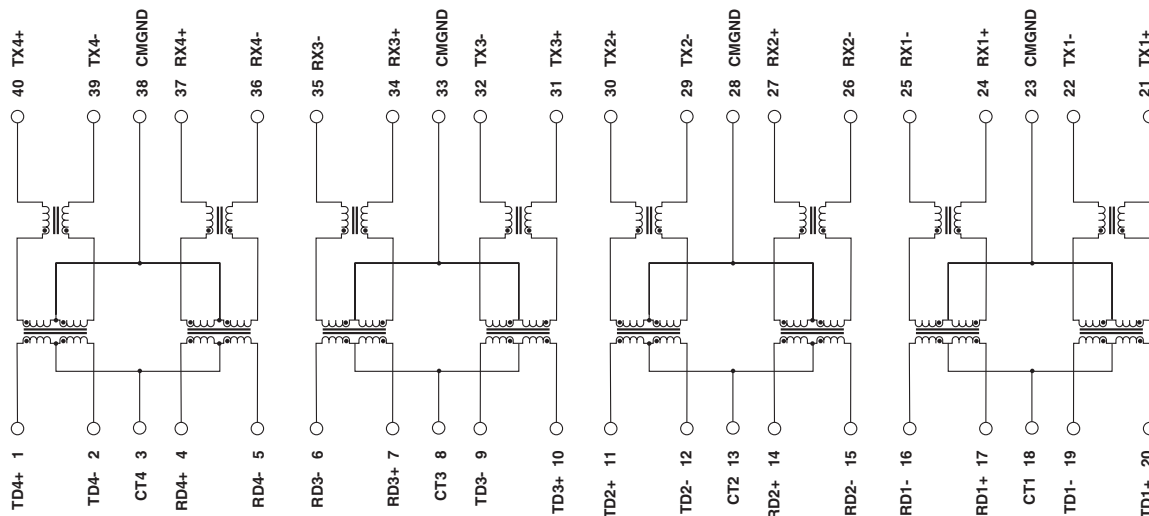
Taiwan 886 3 4356768

# 10/100Base-TX Transformer Modules

For Auto MDI/MDIX Applications

## Schematic

### HT164NL, HX1234NL



## For More Information

### Pulse Worldwide Headquarters

12220 World Trade Drive  
San Diego, CA  
92128  
U.S.A.

Tel: 858 674 8100

### Pulse Europe

Einsteinstrasse 1  
D-71083 Herren-  
berg  
Germany

Tel: 49 7032 7806

### Pulse China Headquarters

B402, Shenzhen Academy of  
Aerospace Technol-  
ogy Bldg.  
10th Kejian Road  
High-Tech Zone  
Nanshan District  
Shenzhen, PR China  
518057

### Pulse North China

Room 2704/2705  
Super Ocean Finance  
Ctr.  
2067 Yan An Road  
West  
Shanghai 200336  
China

### Pulse South Asia

135 Joo Seng Road  
#03-02  
PM Industrial Bldg.  
Singapore 368363

Tel: 65 6287 8998  
Fax: 65 6287 8998

### Pulse North Asia

3F, No. 198  
Zhongyuan Road  
Zhongli City  
Taoyuan County 320  
Taiwan R. O. C.  
Tel: 886 3 4356768  
Fax: 886 3 4356823  
(Pulse)

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