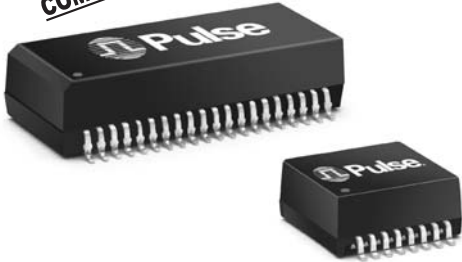


# 10/100BASE-TX TRANSFORMER MODULES

## For Auto MDI/MDIX Applications



- For RoHS part add suffix **NL**<sup>5</sup>
- Peak solder temperature rating per Table 5-2 in IPC/JEDEC J-STD-020C
- Symmetrical TX and RX channels for Auto MDI/MDIX capability
- Approved for use with the Broadcom BCM5226 and Level One LXT9784
- Meets IEEE 802.3 specification

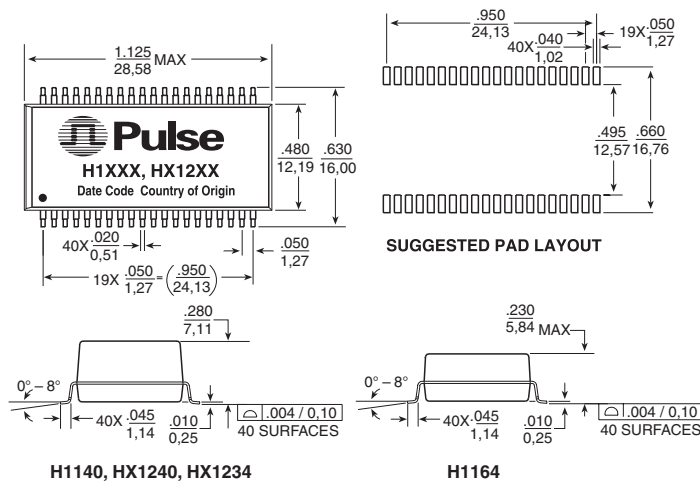
### Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

| Part <sup>2</sup><br>Number | RoHS <sup>5</sup> | Insertion<br>Loss<br>(MAX) | Return Loss<br>(dB MIN) |       |       |          | Crosstalk<br>(dB MIN) |       |       |        | Differential to<br>Common Mode<br>Rejection (dB MIN) |           | Hipot<br>(Vrms MIN) |
|-----------------------------|-------------------|----------------------------|-------------------------|-------|-------|----------|-----------------------|-------|-------|--------|------------------------------------------------------|-----------|---------------------|
|                             |                   | 0.1-100MHz                 | 2-30MHz                 | 40MHz | 50MHz | 60-80MHz | 1kHz                  | 30MHz | 60MHz | 100MHz | 1-60MHz                                              | 60-200MHz |                     |
| H1140                       | 3, 4c             | -1.0                       | -18                     | -14.4 | -13.1 | -12      | -65                   | -50   | -40   | -35    | -40                                                  | -35       | 1500                |
| H1141                       | 3, 4c             | -1.0                       | -18                     | -14.4 | -13.1 | -12      | -65                   | -50   | -40   | -35    | -40                                                  | -35       | 1500                |
| H1164                       | NL <sup>4d</sup>  | -1.0                       | -18                     | -14.4 | -13.1 | -12      | -55                   | -45   | -40   | -33    | -37                                                  | -25       | 1500                |
| HX1234 <sup>1</sup>         | NL <sup>4c</sup>  | -1.4                       | -18                     | -14.4 | -13.1 | -12      | -55                   | -45   | -40   | -33    | -37                                                  | -25       | 1500                |
| HX1240 <sup>1</sup>         | 3, 4c             | -1.0                       | -16.5                   | -16   | -15.5 | -12      | -60                   | -43   | -38   | -33    | -43                                                  | -27       | 1500                |

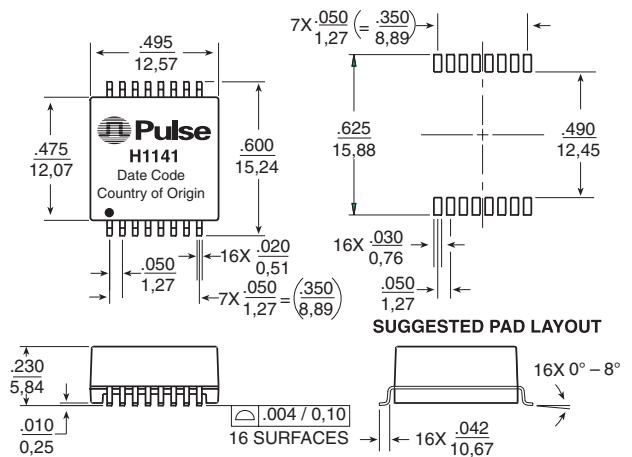
- Operating Temperature -40°C to +85°C
- For Tape & Reel packaging, add a "T" suffix at the end of the part number when ordering, e.g. H1164T
- Contact Pulse for RoHS compliant part availability
- MSL=Moisture Sensitivity Level a=1 b=2 c=3 d=4
- Add suffix **NL** for RoHS compliant parts, e.g. H1164 changes to H1164NL or H1164NLT (for Tape and Reel)

## Mechanicals

### H1140, H1164, HX1234, HX1240



### H1141



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

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

Unless otherwise specified, all tolerances are  $\pm .010$   
0,25

Weight ..... .1 gram  
Tape & Reel ..... .350/reel  
Tube ..... .35/tube

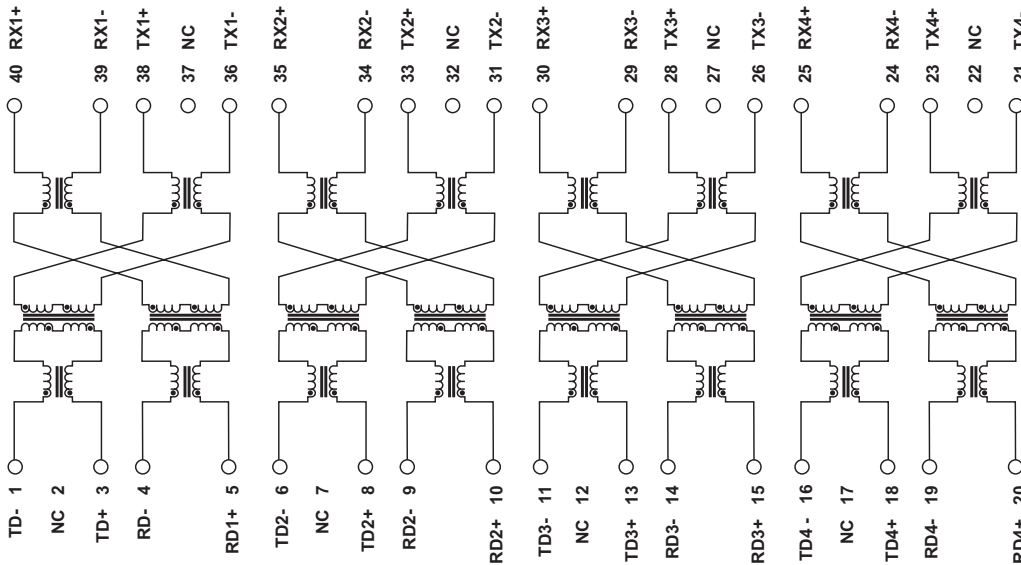
# 10/100BASE-TX TRANSFORMER MODULES

## For Auto MDI/MDIX Applications

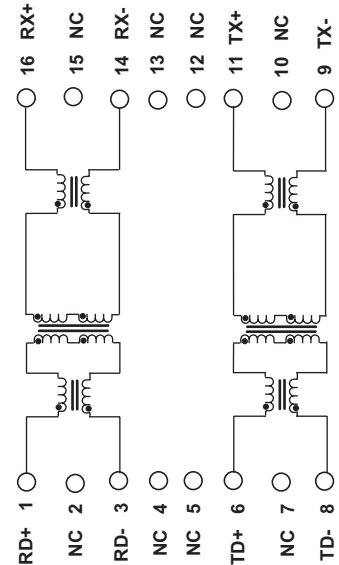


### Schematics

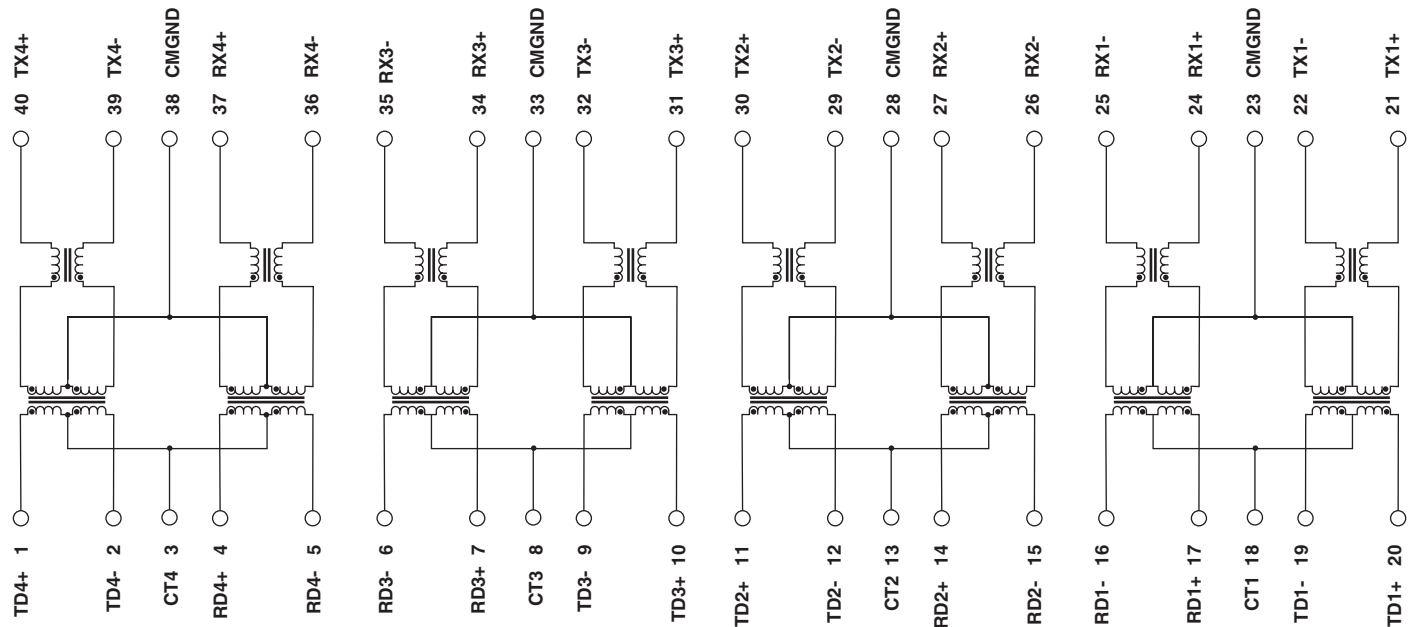
**H1140, HX1240**



**H1141**



**H1164, HX1234**



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