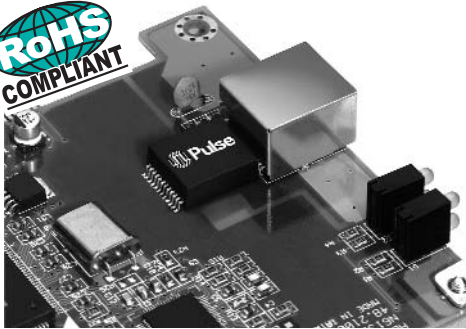


# 1000BASE-T MAGNETICS MODULES

Designed to Support 1:1 Turns

Ratio Transceivers



- For RoHS part add suffix **NL**<sup>7</sup>
- RoHS “NL” peak solder rating 260°C, non-RoHS peak solder rating 235°C
- Designed for long haul Gigabit Ethernet (10/100/1000BASE-T) applications
- H5008/9 designed to fit behind 1x1 RJ45 connector
- Cable interface for isolation and low common mode emissions
- Meets IEEE 802.3 specification

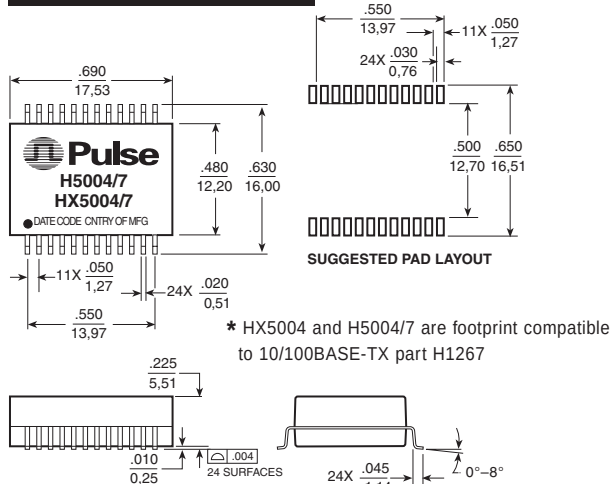
## Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

| Part 4<br>Number       | RoHS 7           | Number<br>of<br>Ports | Insertion<br>Loss<br>(dB MAX) | Return Loss<br>(dB MIN) |           |           |              |            | Differential to Common<br>Mode Rejection<br>(dB MIN) |           |            | Crosstalk<br>(dB MIN) |           |            | Hipot<br>(Vrms<br>MIN) |
|------------------------|------------------|-----------------------|-------------------------------|-------------------------|-----------|-----------|--------------|------------|------------------------------------------------------|-----------|------------|-----------------------|-----------|------------|------------------------|
|                        |                  |                       | 1-100<br>MHz                  | 1-30<br>MHz             | 40<br>MHz | 50<br>MHz | 60-80<br>MHz | 100<br>MHz | 30<br>MHz                                            | 60<br>MHz | 100<br>MHz | 30<br>MHz             | 60<br>MHz | 100<br>MHz |                        |
| H5004 <sup>1</sup>     | 5, 6c            | 1                     | 1                             | -18                     | -18       | -16       | -12          | -10        | -43                                                  | -37       | -33        | -45                   | -40       | -35        | 1500                   |
| HX5004 <sup>1, 2</sup> | 5, 6c            | 1                     | 1                             | -18                     | -18       | -16       | -12          | -10        | -43                                                  | -37       | -33        | -45                   | -40       | -35        | 1500                   |
| H5007 <sup>1, 3</sup>  | NL <sup>6d</sup> | 1                     | 1                             | -18                     | -18       | -16       | -12          | -10        | -43                                                  | -37       | -33        | -45                   | -40       | -35        | 1500                   |
| H5008                  | 5, 6c            | 1                     | 1                             | -18                     | -18       | -16       | -12          | -10        | -43                                                  | -37       | -33        | -45                   | -40       | -35        | 1500                   |
| HX5008 <sup>2</sup>    | 5, 6a            | 1                     | 1                             | -18                     | -18       | -16       | -12          | -10        | -43                                                  | -37       | -33        | -45                   | -40       | -35        | 1500                   |
| H5009                  | 5, 6a            | 1                     | 1                             | -18                     | -18       | -16       | -12          | -10        | -43                                                  | -37       | -33        | -45                   | -40       | -35        | 1500                   |
| H5012 <sup>3</sup>     | NL <sup>6a</sup> | 2                     | 1.4                           | -16                     | -14.4     | -13.1     | -12          | -10        | -45                                                  | -40       | -35        | -43.5                 | -37.5     | -33        | 1500                   |
| H5014                  | 5, 6a            | 2                     | 1.4                           | -16                     | -14.4     | -13.1     | -12          | -10        | -45                                                  | -40       | -35        | -43.5                 | -37.5     | -33        | 1500                   |
| HX5014 <sup>2</sup>    | 5, 6a            | 2                     | 1.4                           | -16                     | -14.4     | -13.1     | -12          | -10        | -45                                                  | -40       | -35        | -43.5                 | -37.5     | -33        | 1500                   |
| H5015                  | 5, 6a            | 1                     | 1                             | -18                     | -18       | -16       | -12          | -10        | -43                                                  | -37       | -33        | -45                   | -40       | -35        | 1500                   |
| H5020                  | NL <sup>6c</sup> | 2                     | 1                             | -18                     | -14.4     | -13.1     | -12          | -10        | -40                                                  | -35       | -30        | -40                   | -35       | -30        | 1500                   |
| HX5020 <sup>2</sup>    | 5, 6c            | 2                     | 1                             | -18                     | -14.4     | -13.1     | -12          | -10        | -40                                                  | -35       | -30        | -40                   | -35       | -30        | 1500                   |

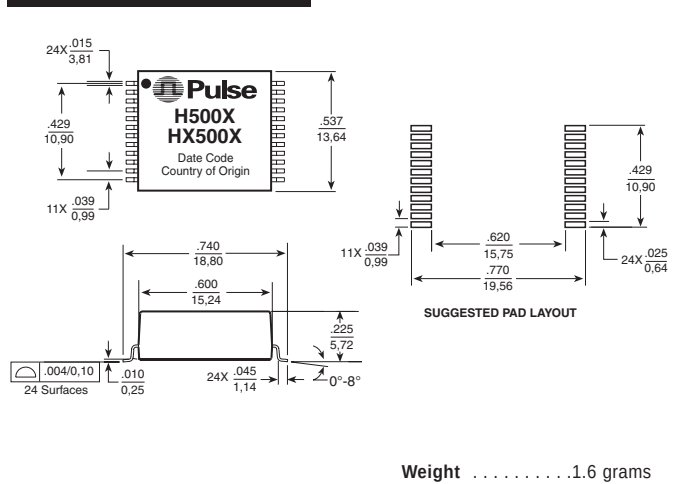
- Footprint compatible product to H1267
- HX: Extended temperature version -40°C to +85°C
- Extended temperature part not available, select HX5004 or HX5014
- For Tape & Reel packaging, add a “T” suffix at the end of the part number when ordering. e.g. H5007T
- Contact Pulse for RoHS compliant part availability
- MSL=Moisture Sensitivity Level a=1 b=2 c=3 d=4
- Add suffix **NL** for RoHS compliant parts, e.g. H5007 changes to H5007NL or H5007NLT (for Tape and Reel)

## Mechanicals

### H5004, HX5004, H5007\*



### H5008, HX5008, H5009



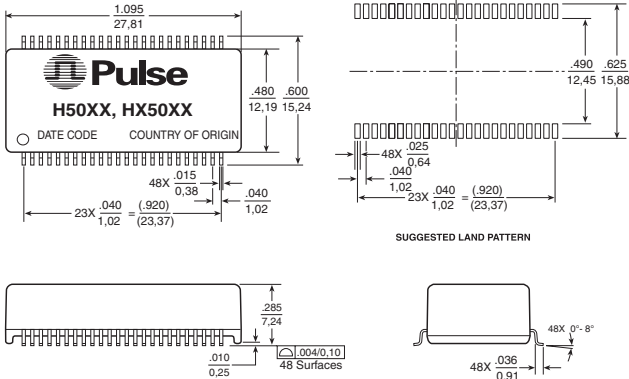
# 1000BASE-T MAGNETICS MODULES

## Designed to Support 1:1 Turns Ratio Transceivers



### Mechanicals (continued)

#### H5012, H5014, HX5014

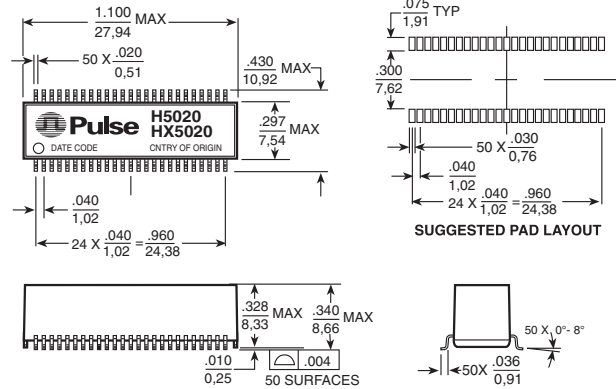


Weight ..... 4.0 grams  
Tape & Reel ..... .250/reel  
Tube ..... .15/tube

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

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

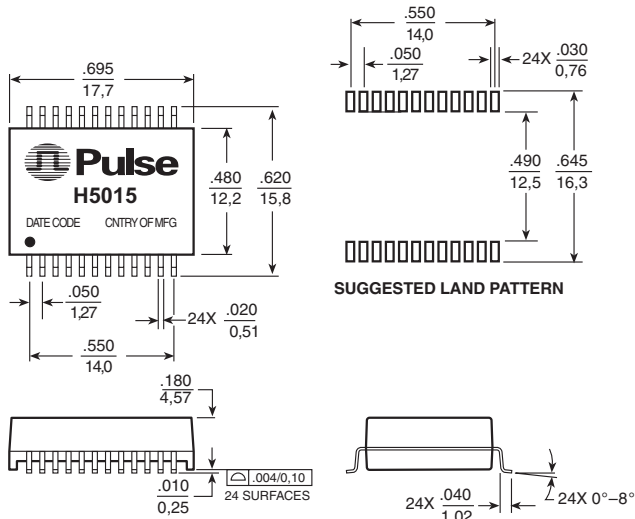
#### H5020, HX5020



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

### Mechanicals (continued)

#### H5015



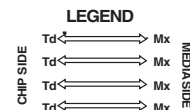
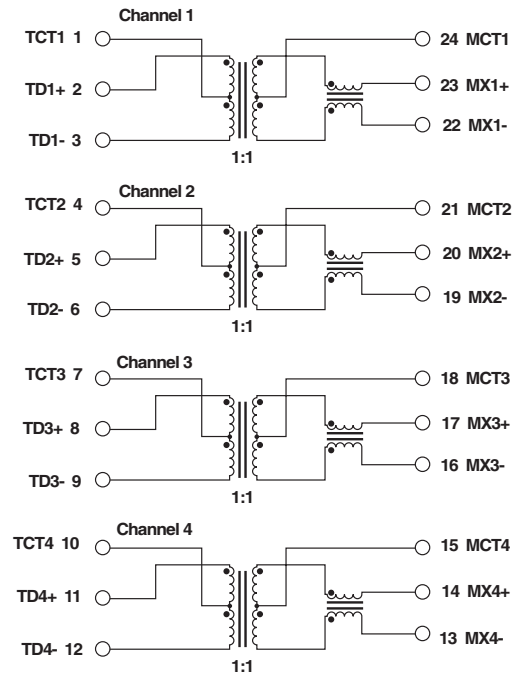
Weight ..... 1.5 grams  
Tape & Reel ..... .400/reel

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

Unless otherwise specified, all tolerances are  $\pm \frac{.005}{0.13}$

### Schematics

#### H5004, HX5004, H5009



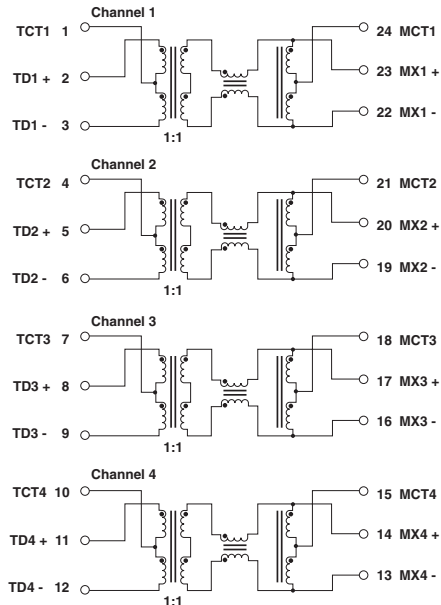
# 1000BASE-T MAGNETICS MODULES

## Designed to Support 1:1 Turns Ratio Transceivers



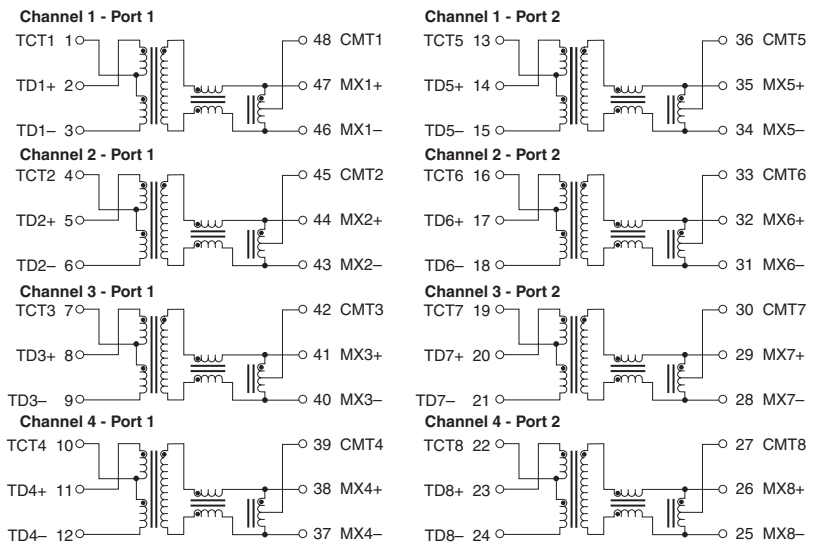
### Schematics (continued)

#### H5007\*, H5008, HX5008, H5015



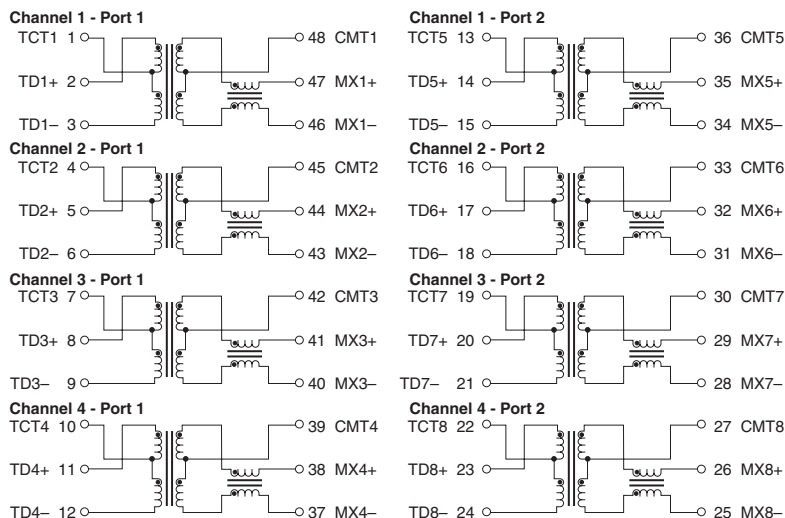
\* Extended temperature part for H5007 (HX5007) is not available. Select HX5004.

#### H5012 \*



\* Extended temperature part for H5012 is not available. Select HX5014.

#### H5014, HX5014



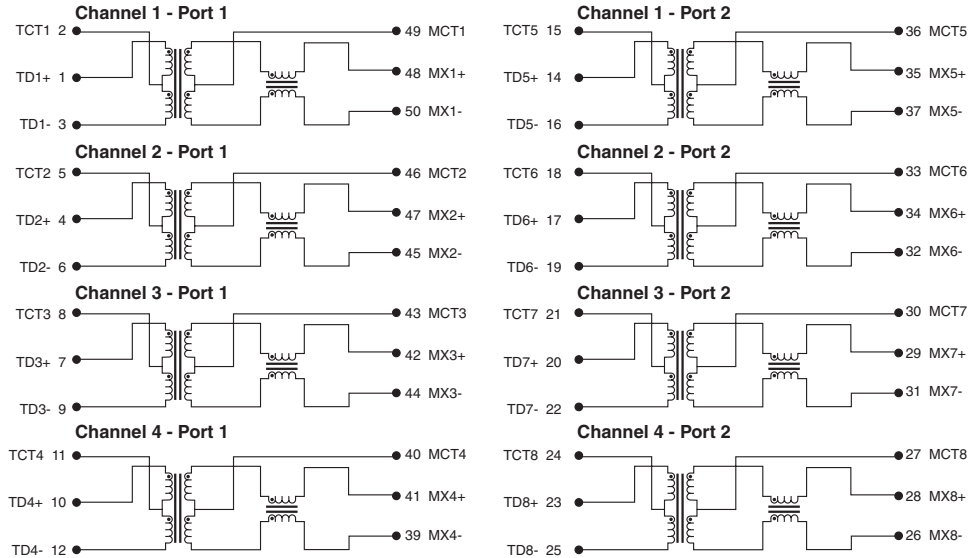
# 1000BASE-T MAGNETICS MODULES

Designed to Support 1:1 Turns  
Ratio Transceivers



## Schematics (continued)

### H5020, HX5020



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