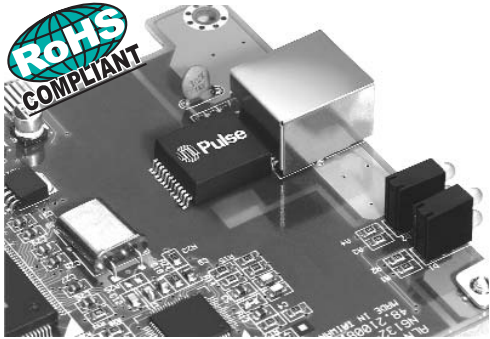


# 1000BASE-T MAGNETICS MODULES

## Designed to Support 1:1 Turns Ratio Transceivers



- RoHS-5 peak reflow temperature rating 235°C
- RoHS-6 peak reflow temperature rating 245°C
- Meets IEEE 802.3 specification

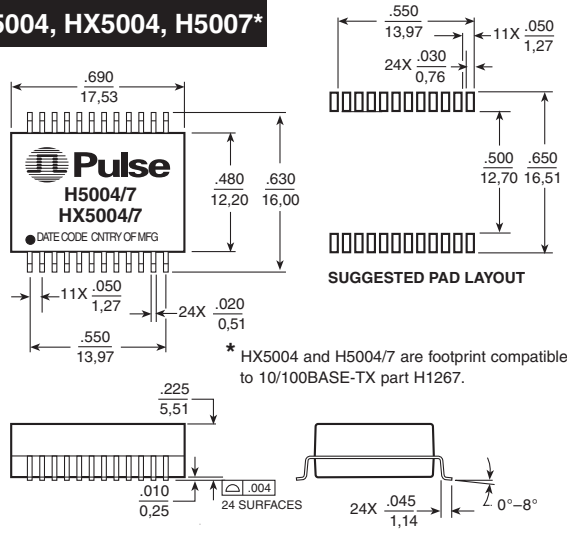
### Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

RoHS-5 <sup>4</sup> Compliant Part Number	RoHS-6 <sup>5</sup> Compliant Part Number	Number of Ports	Insertion Loss (dB MAX)	Return Loss (dB MIN)					Differential to Common Mode Rejection (dB MIN)			Crosstalk (dB MIN)			Hipot (V <sub>RMS</sub> MIN)
				1-100MHz	1-30MHz	40MHz	50MHz	60-80MHz	100MHz	30MHz	60MHz	100MHz	30MHz	60MHz	
H5004 <sup>3c</sup>	H5004NL <sup>3d</sup>	1	1	-18	-18	-16	-12	-10	-43	-37	-33	-43	-37	-33	1500
HX5004 <sup>1,3c</sup>	HX5004NL <sup>1,3d</sup>	1	1	-18	-18	-16	-12	-10	-43	-37	-33	-43	-37	-33	1500
H5007 <sup>3c</sup>	H5007NL <sup>3d</sup>	1	1	-18	-18	-16	-12	-10	-43	-37	-33	-43	-37	-33	1500
H5008 <sup>3a</sup>	H5008NL <sup>3a</sup>	1	1	-18	-18	-16	-12	-10	-43	-37	-33	-43	-37	-33	1500
HX5008 <sup>1,3a</sup>	HX5008NL <sup>1,3a</sup>	1	1	-18	-18	-16	-12	-10	-43	-37	-33	-43	-37	-33	1500
H5009 <sup>3a</sup>	H5009NL <sup>3a</sup>	1	1	-18	-18	-16	-12	-10	-43	-37	-33	-43	-37	-33	1500
H5012 <sup>3a</sup>	H5012NL <sup>3a</sup>	2	1.4	-16	-14.4	-13.1	-12	-10	-45	-40	-35	-43.5	-37.5	-33	1500
H5014 <sup>3a</sup>	H5014NL <sup>3a</sup>	2	1.4	-16	-14.4	-13.1	-12	-10	-45	-40	-35	-43.5	-37.5	-33	1500
HX5014 <sup>1,3a</sup>	HX5014NL <sup>1,3a</sup>	2	1.4	-16	-14.4	-13.1	-12	-10	-45	-40	-35	-43.5	-37.5	-33	1500
H5015 <sup>3a</sup>	H5015NL <sup>3a</sup>	1	1	-18	-18	-16	-12	-10	-43	-37	-33	-43	-37	-33	1500
H5020 <sup>3a</sup>	H5020NL <sup>3a</sup>	2	1	-18	-14.4	-13.1	-12	-10	-40	-35	-30	-40	-33	-28	1500
HX5020 <sup>1,3a</sup>	HX5020NL <sup>1,3a</sup>	2	1	-18	-14.4	-13.1	-12	-10	-40	-35	-30	-40	-33	-28	1500
H5089 <sup>3a</sup>	H5089NL <sup>3a</sup>	2	1.4	-16	-14.4	-13.1	-12	-10	-45	-40	-35	-43.5	-37.5	-33	1500

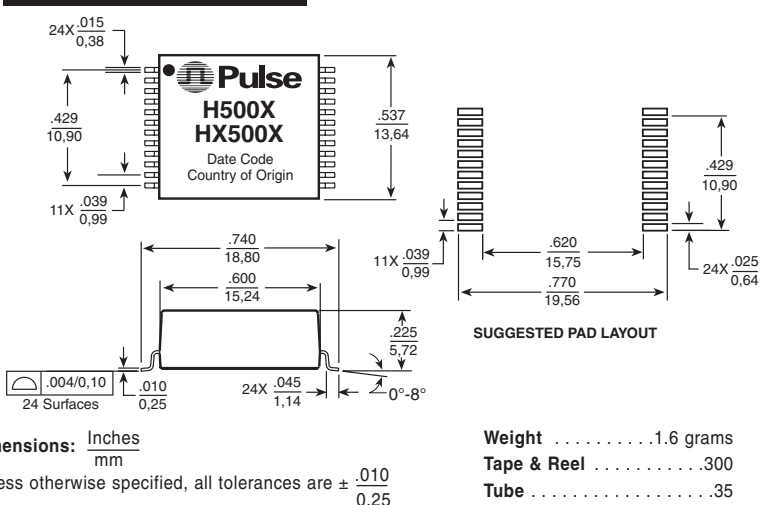
- HX:** Extended temperature version -40°C to +85°C
- For Tape & Reel packaging, add a "T" suffix at the end of the part number, e.g. H5007T.
- MSL=Moisture Sensitivity Level: a=1 b=2 c=3 d=4
- RoHS-5:** Product does not contain 5 out of the 6 banned substances specified in the RoHS directive (product contains lead in applications considered solder).
- RoHS-6:** Product does not contain 5 out of the 6 banned substances specified in the RoHS directive. Some internal connections may contain lead in high-temperature solder (solder alloys containing more than 85% lead)

## Mechanicals

### H5004, HX5004, H5007\*



### H5008, HX5008, H5009



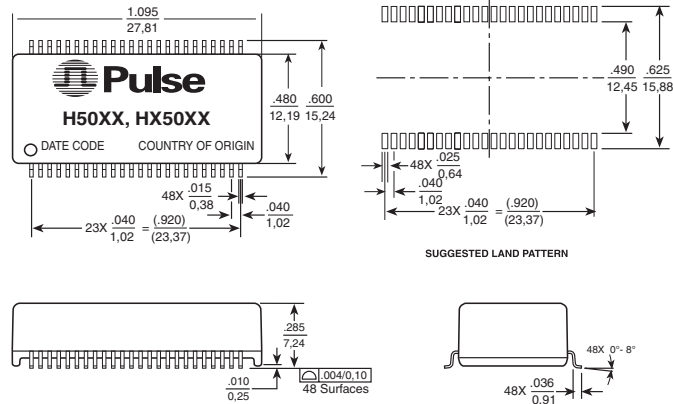
# 1000BASE-T MAGNETICS MODULES

## Designed to Support 1:1 Turns Ratio Transceivers



### Mechanicals (continued)

#### H5012, H5014, HX5014, H5089

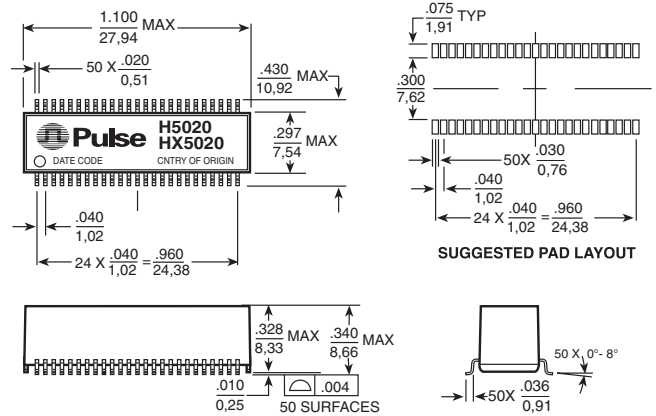


Weight ..... 4.0 grams  
Tape & Reel ..... .250/reel  
Tube ..... .15/tube

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

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

#### H5020, HX5020

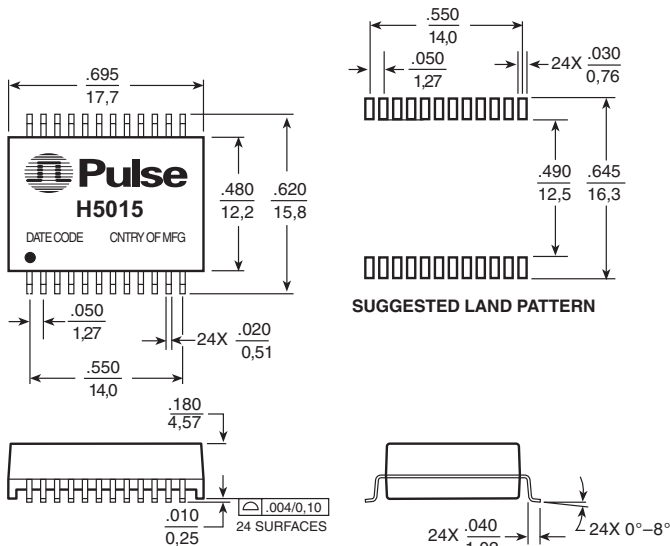


Weight ..... 1.6 grams  
Tape & Reel ..... .250/reel  
Tube ..... .15/tube

### Mechanicals (continued)

### Schematics

#### H5015

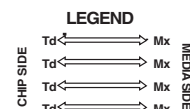
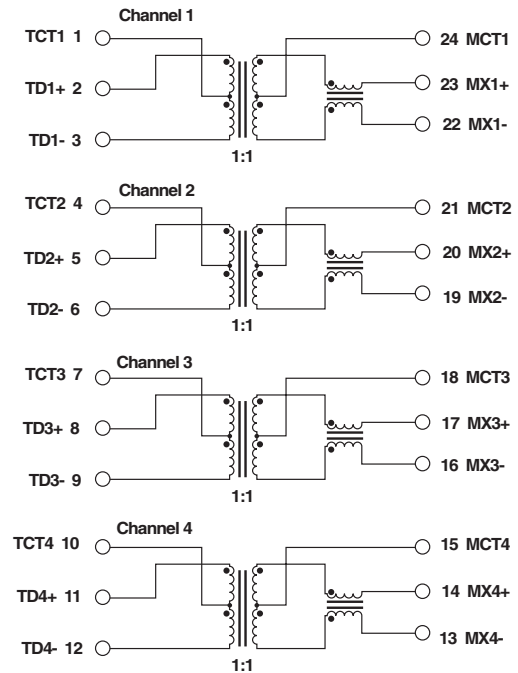


Weight ..... 1.5 grams  
Tape & Reel ..... .400/reel

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

Unless otherwise specified, all tolerances are  $\pm \frac{.005}{0,13}$

#### H5004, HX5004, H5009



# 1000BASE-T MAGNETICS MODULES

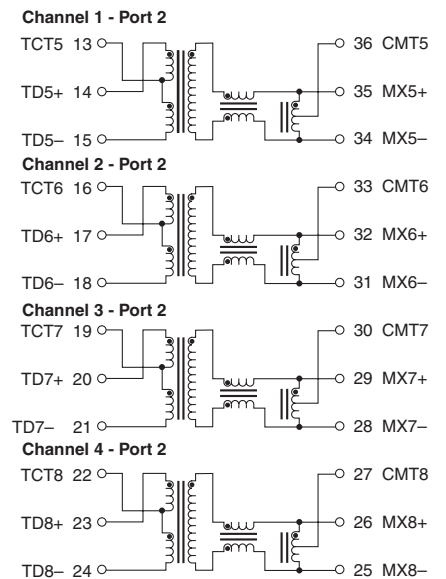
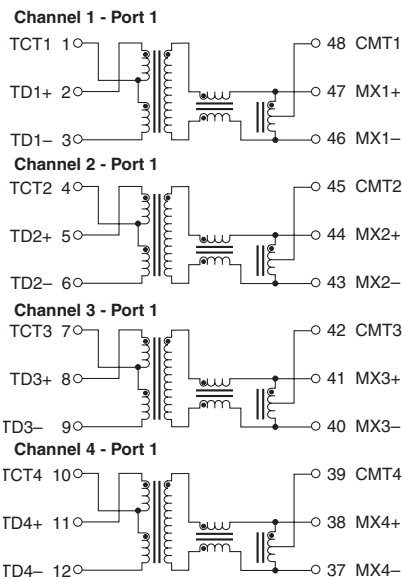
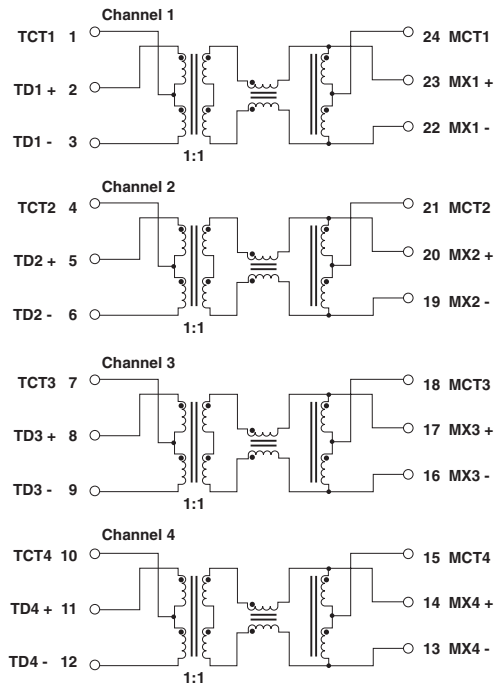
Designed to Support 1:1  
Turns Ratio Transceivers



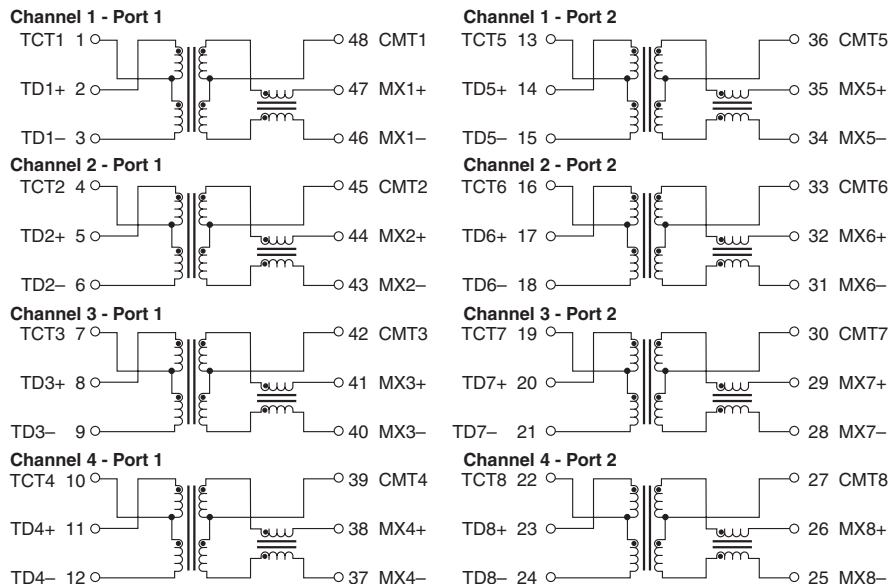
## Schematics (continued)

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

### H5012, H5089



### H5014, HX5014



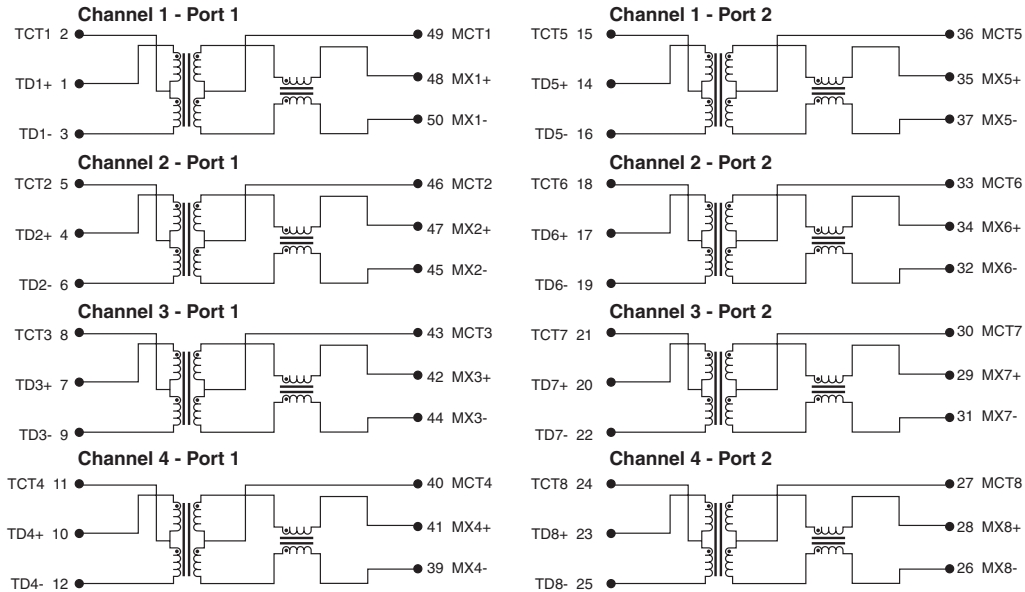
# 1000BASE-T MAGNETICS MODULES

Designed to Support 1:1  
Turns Ratio Transceivers



## Schematics (continued)

### H5020, HX5020



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