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# 10/100 PC CARD LAN MAGNETICS MODULES



- RoHS-5 peak reflow temperature rating 235°C
- RoHS-6 peak reflow temperature rating 245°C
- Low profile packages from .094" (2,39mm) to .078" (1,98mm) for PC card and cardbus applications

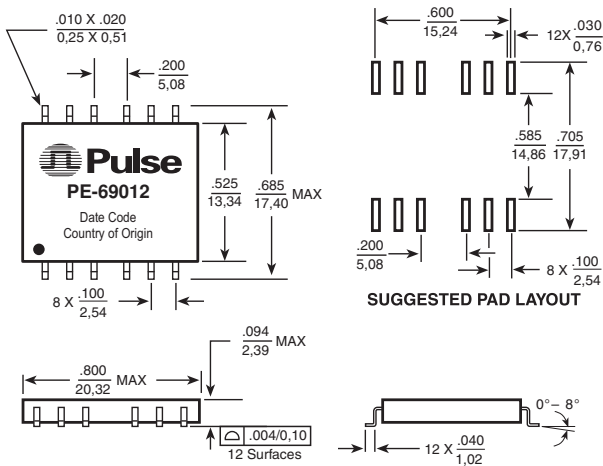
## Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

RoHS-5 <sup>3</sup> Compliant Part Number	RoHS-6 <sup>4</sup> Compliant Part Number	Turns Ratio (±5%)		Insertion Loss (dB MAX)	Return Loss (dB MIN)			Differential to Common Mode Rejection (dB MIN)			Crosstalk (dB MIN)			Hipot (Vrms MIN)
		TX	RX		100 kHz-100 MHz	30 MHz	60 MHz	80 MHz	30 MHz	50 MHz	100 MHz	30 MHz	62 MHz	
PE-69012	—	1:1	1:1	-1.3	-18	-13	-11	-40	-35	-30	-40	-40	-35	1500
H0002	—	1:1	1:1	-1.3	-18	-13	-11	-30	-30	-30	-40	-35	-30	1500
H0009	H0009 NL <sup>2a</sup>	1:1	1:1	-0.9	-16	-12	-11	-35	-33	-20	-50	-45	-40	1500
H0013	H0013 NL <sup>2a</sup>	1:1	1:1	-0.9	-16	-12	-11	-35	-33	-20	-50	-45	-40	1500
H0019	H0019NL <sup>2a</sup>	1:1	1:1	-0.9	-18	-12	-11	-40	—	-30	-45	-45	-37	1500
H0020	H0020NL <sup>2a</sup>	1:1	1:1	-1.0	-16	-12	-12	-42	—	-33	-45	-40	-35	1500
H0022	H0022NL <sup>2a</sup>	1:1	1:1	-2.0	-18	-14	-12	-40	-35	-30	-50	-45	-40	1500
H0025	H0025NL <sup>2a</sup>	1:1	1:1	-2.0	-18	-12	-12	-40	-35	-30	-45	-45	-37	1500

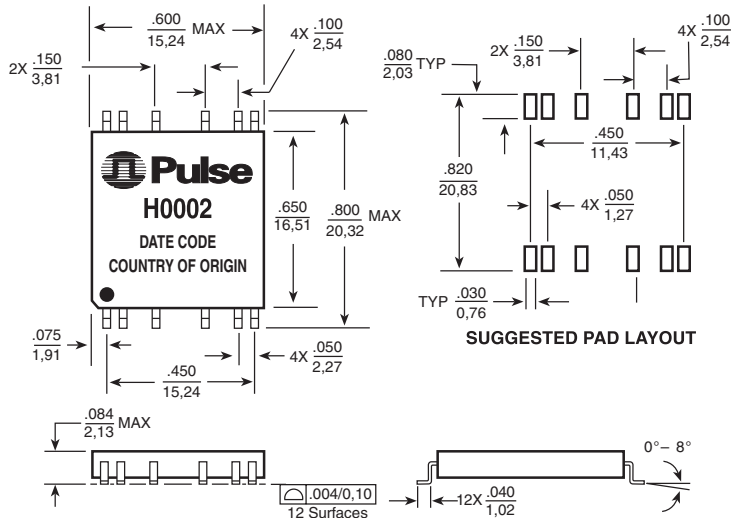
1. Add "T" for Tape & Reel packaging, e.g. PE-69012T.
2. MSL (Moisture Sensitivity Level): a=1, b=2, c=3, d=4, e=5.
3. **RoHS-5:** Product does not contain 5 out of the 6 banned substances specified in the RoHS directive (product contains lead in applications considered solder).
4. **RoHS-6:** Product 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

### PE-69012



### H0002



Weight . . . . . 1.3 grams  
Tape & Reel . . . . . 600/reel  
Tube . . . . . 25/tube

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

Weight . . . . . 1.2 grams  
Tape & Reel . . . . . 900/reel  
Tube . . . . . 35/tube

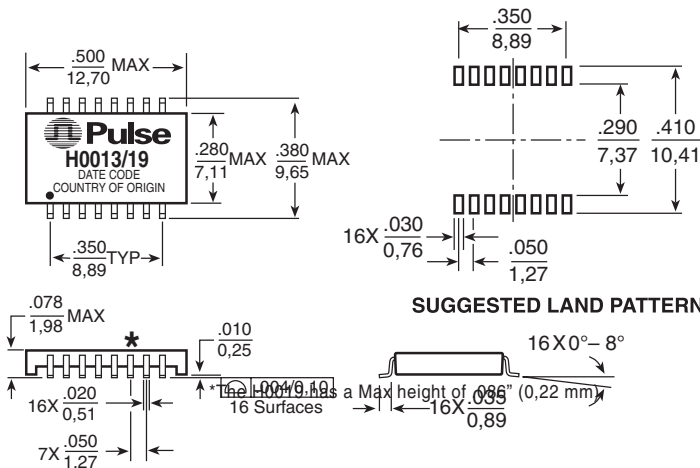
USA 858 674 8100 • Germany 49 7032 7806 0 • Singapore 65 6287 8998 • Shanghai 86 21 32181071 • China 86 755 33966678 • Taiwan 886 3 4643715

# 10/100 PC CARD LAN MAGNETICS MODULES



## Mechanicals

### H0013, H0019\*

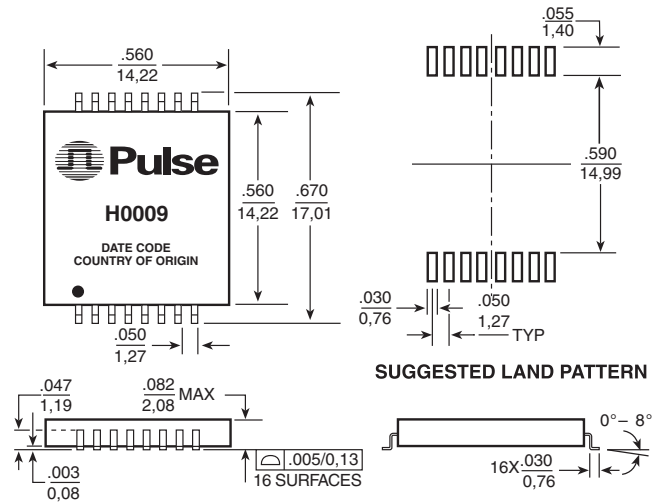


Weight .....3 grams  
Tape & Reel .....2000/reel  
Tube .....40/tube

Dimensions: Inches  
mm

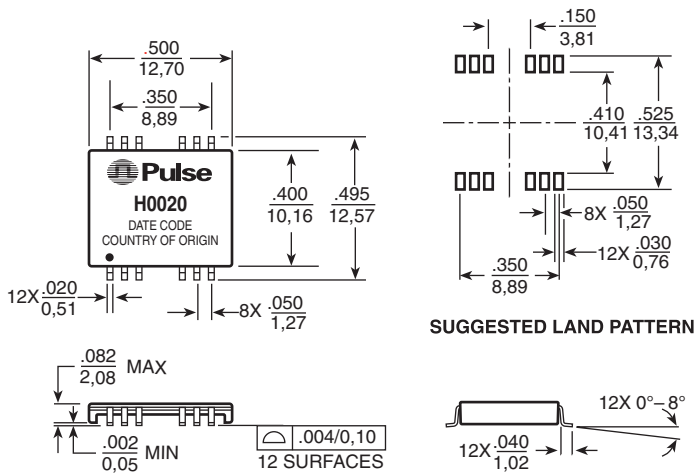
Unless otherwise specified, all tolerances are ± .010  
0,25

### H0009



Weight .....1.3 grams  
Tape & Reel .....900/reel  
Tube .....25/tube

### H0020

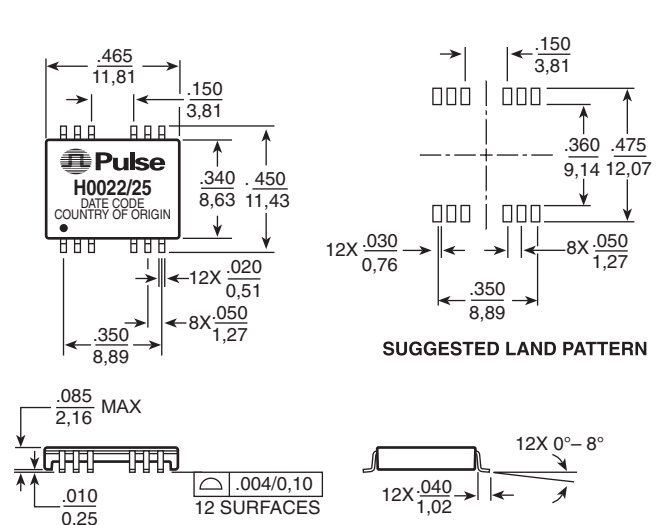


Weight .....4 grams  
Tape & Reel .....500/reel  
Tube .....40/tube

Dimensions: Inches  
mm

Unless otherwise specified, all tolerances are ± .010  
0,25

### H0022, H0025



Weight .....355 grams  
Tape & Reel .....1000/reel  
Tube .....40/tube



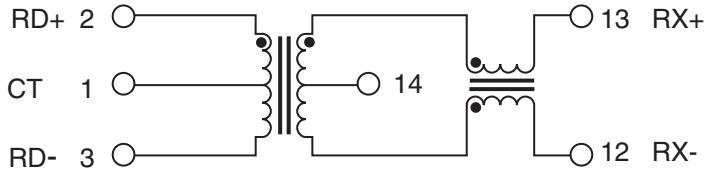
# 10/100 PC CARD LAN MAGNETICS MODULES



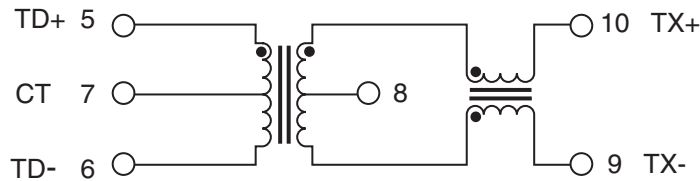
## Schematics

**PE-69012**

**RECEIVE**



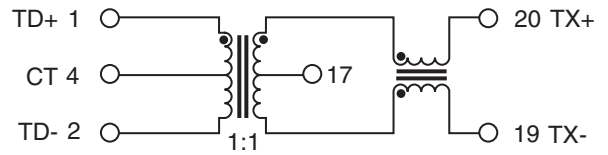
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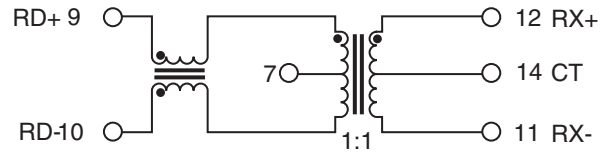
NOTE: Transmit and receive channels are interchangeable on the PE-69012.

**H0002**

**TRANSMIT**

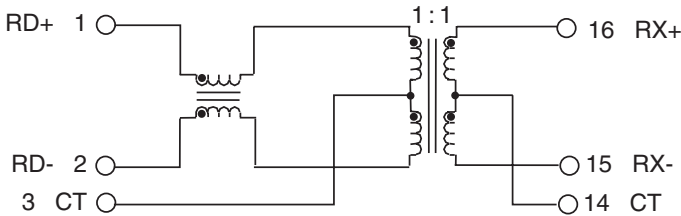


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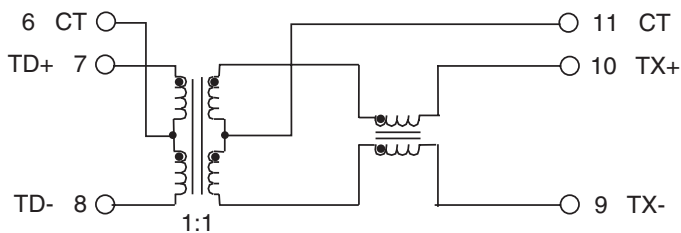


**H0009, H0013,  
H0019, H0025**

**RECEIVE**

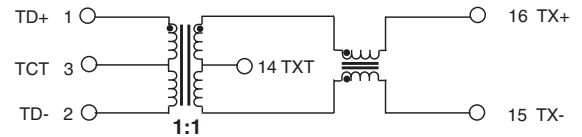


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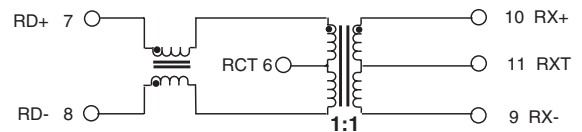


**H0020**

**TRANSMIT**

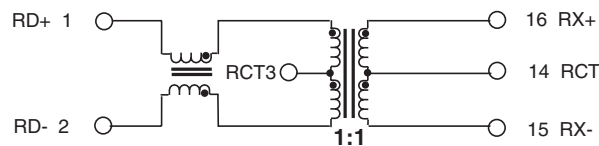


**RECEIVE**

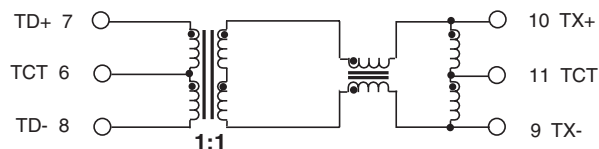


**H0022**

**RECEIVE**



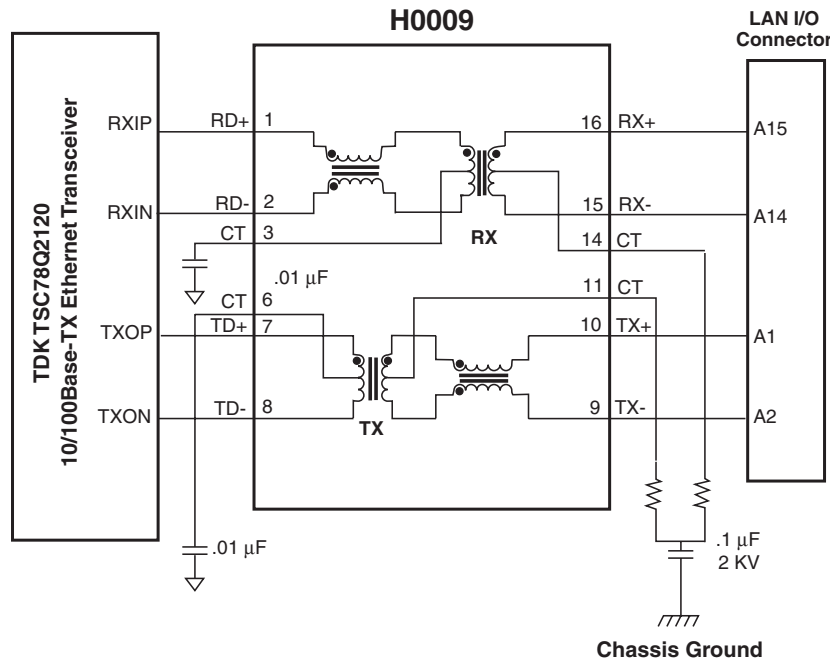
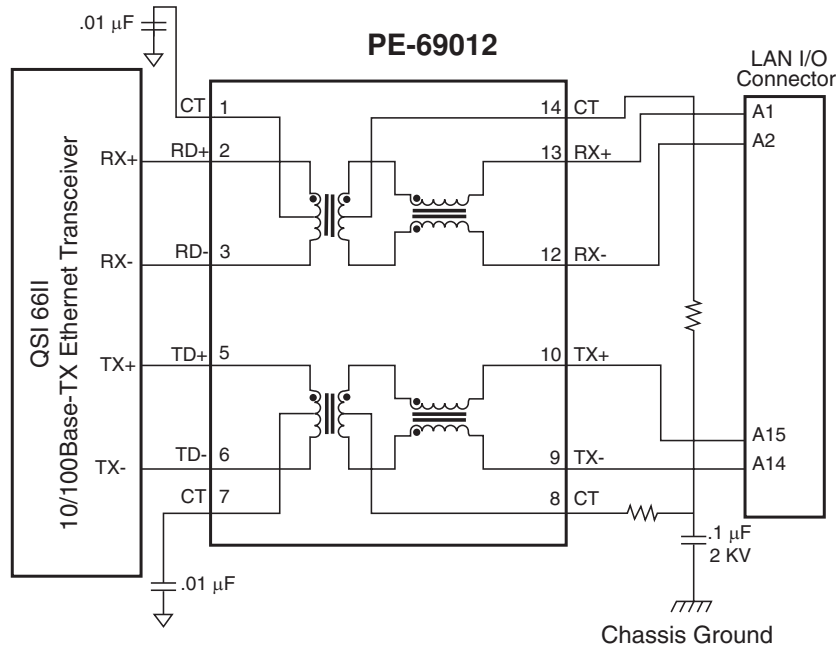
**TRANSMIT**



# 10/100 PC CARD LAN MAGNETICS MODULES



## Application Circuits



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