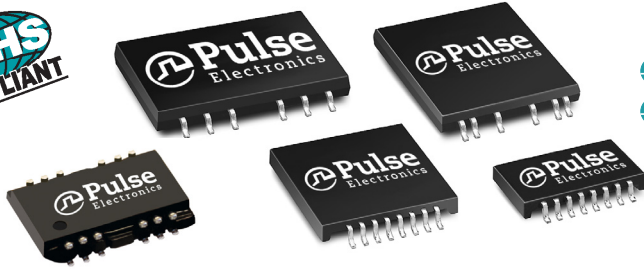


# 10/100 PC Card LAN Magnetic Modules



- RoHS peak reflow temperature rating 260°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

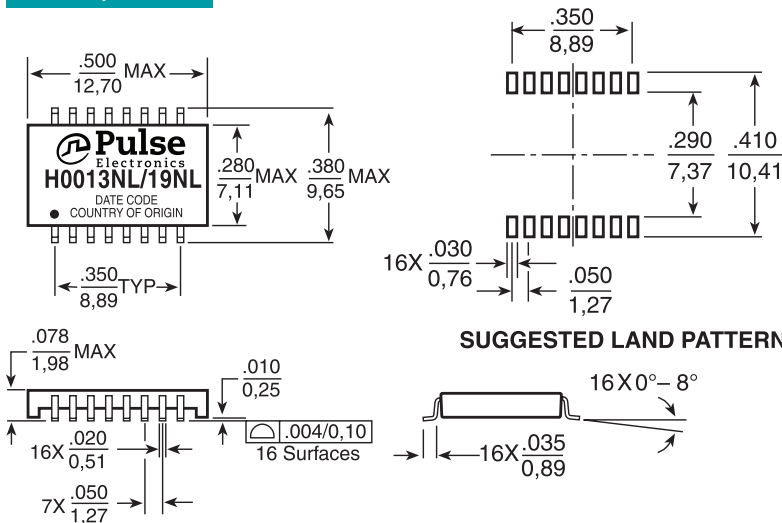
RoHS Compliant Part Number	Turns Ratio (±5%)		Insertion Loss (dB MAX) 100 kHz-100 MHz	Return Loss (dB MIN)			Differential to Common Mode Rejection (dB MIN)			Crosstalk (dB MIN)			Hipot (Vrms MIN)
	TX	wRX		30 MHz	60 MHz	80 MHz	30 MHz	50 MHz	100 MHz	30 MHz	62 MHz	100 MHz	
H0009NL <sup>2a</sup>	1:1	1:1	-0.9	-16	-12	-11	-35	-33	-20	-50	-45	-40	1500
H0013NL <sup>2a</sup>	1:1	1:1	-0.9	-16	-12	-11	-35	-33	-20	-50	-45	-40	1500
H0019NL <sup>2a</sup>	1:1	1:1	-0.9	-18	-12	-11	-40	—	-30	-45	-45	-37	1500
H0020NL <sup>2a</sup>	1:1	1:1	-1.0	-16	-12	-12	-42	—	-33	-45	-40	-35	1500
H0022NL <sup>2a</sup>	1:1	1:1	-2.0	-18	-14	-12	-40	-35	-30	-50	-45	-40	1500
H0025NL <sup>2a</sup>	1:1	1:1	-2.0	-18	-12	-12	-40	-35	-30	-45	-45	-37	1500
H0068ANL <sup>2a</sup>	1:1	1:1	-1.0	-16	-14	-12	-40	-35	-30	-45	-40	-37	1500
HX0068ANL <sup>1,2a</sup>	1:1	1:1	-1.0	-16	-14	-12	-40	-35	-30	-45	-40	-35	1500

- Extended operating temperature (-40°C to +85°C)
- MSL (Moisture Sensitivity Level): a = 1, b = 2, c = 3, d = 4, e = 5

Notes: When ordering Tape & Reel packaging, add the suffix "T" to the end of the part number. For example: HX0068ANLT.

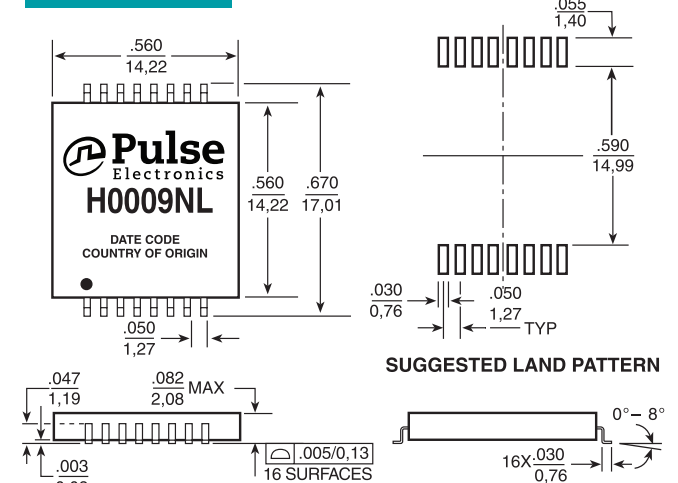
## Mechanicals

### H0013NL, H0019NL



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

### H0009NL



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

Dimensions: Inches / mm Unless otherwise specified, all tolerances are ± .010 / 0,25

USA 858 674 8100

Germany 49 7032 7806 0

Singapore 65 6287 8998

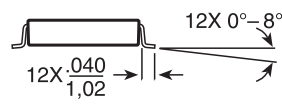
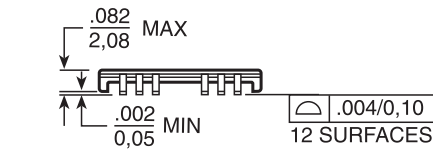
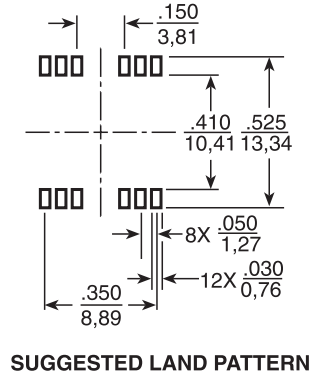
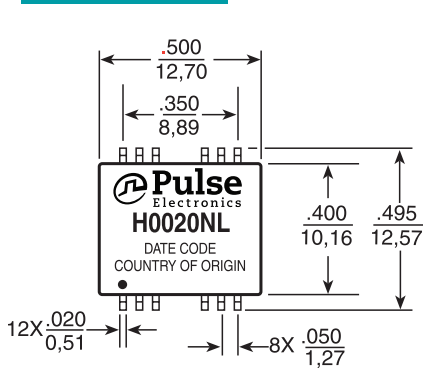
Shanghai 86 21 62787060

China 86 755 33966678

Taiwan 886 3 4356768

## Mechanicals (continued)

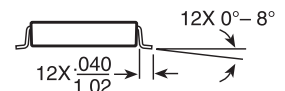
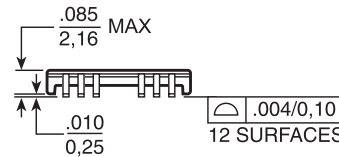
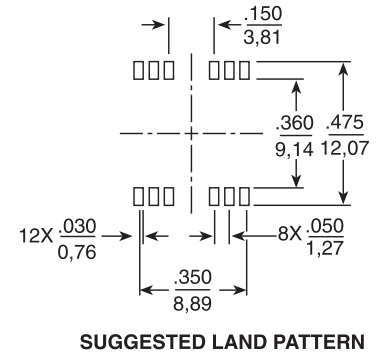
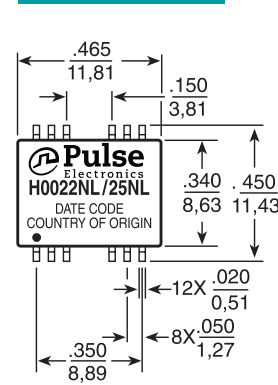
### H0020NL



Weight .....0.3 grams  
Tape & Reel .....500/Reel  
Tube .....40/Tube

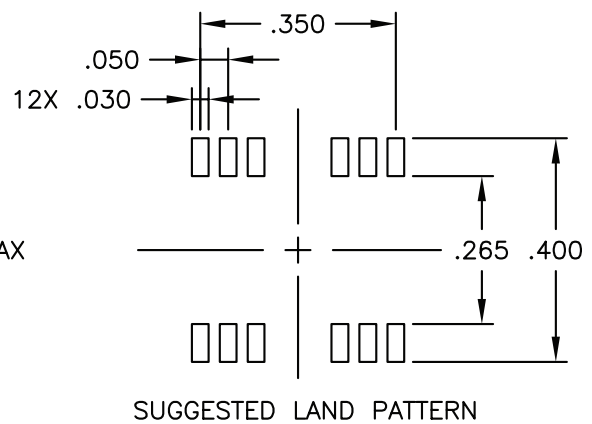
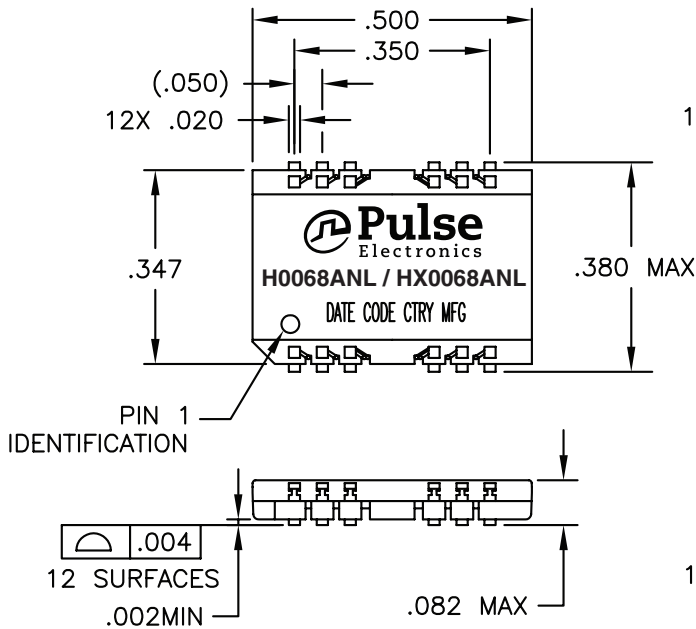
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

### H0022NL, H0025NL



Weight .....0.355 grams  
Tape & Reel .....1000/Reel  
Tube .....40/Tube

### H0068ANL, HX0068ANL



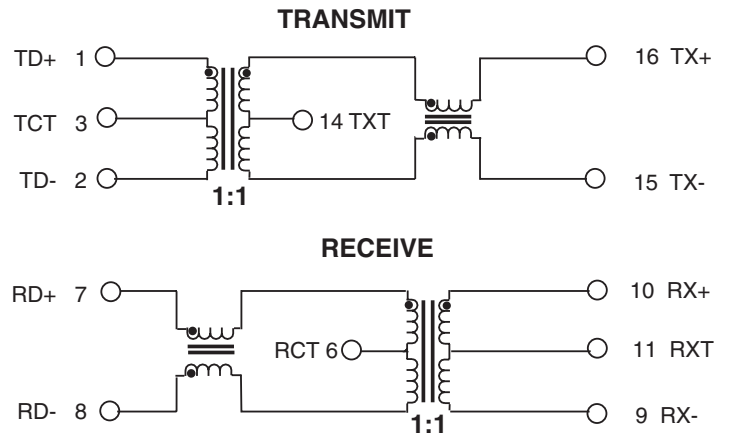
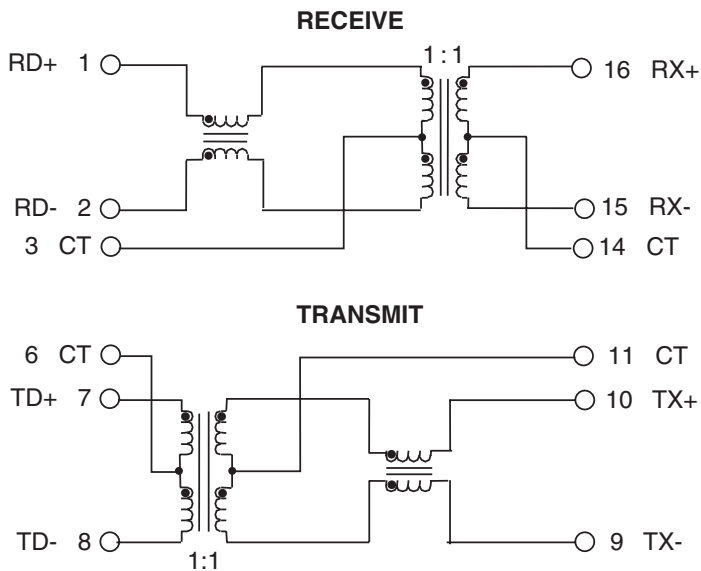
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

Weight .....0.4 grams  
Tape & Reel .....2000/Reel  
Tube .....40/Tube

## Schematics

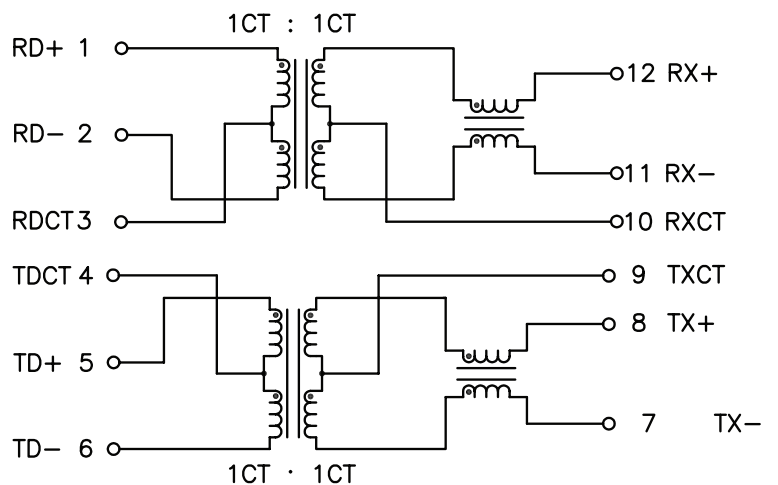
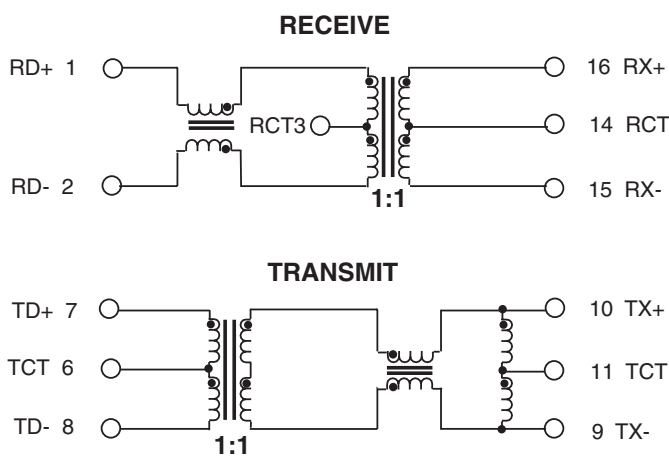
**H0009NL, H0013NL, H0019NL, H0025NL**

**H0020NL**



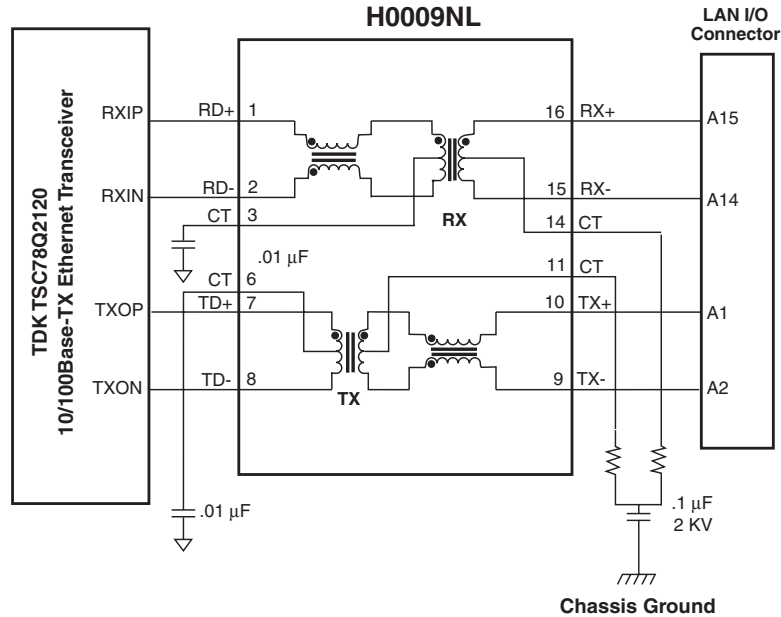
**H0022NL**

**H0068ANL, HX0068ANL**



# 10/100 PC Card LAN Magnetics Modules

## Typical Application Layout



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