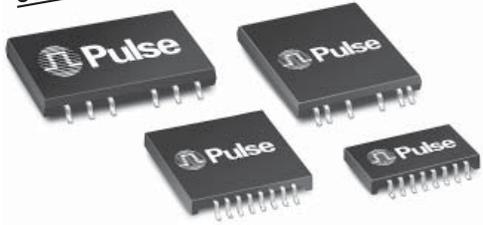


# 10/100 PC CARD LAN MAGNETICS MODULES



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

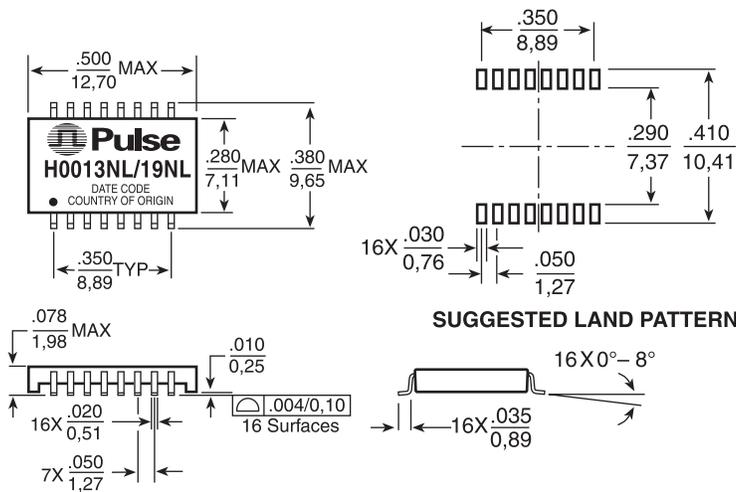
## Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

RoHS 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	
H0009NL <sup>2a</sup>	1:1	1:1	-0.9	-16	-12	-11	-35	-33	-20	-50	-45	-40	1500
H0013 NL <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

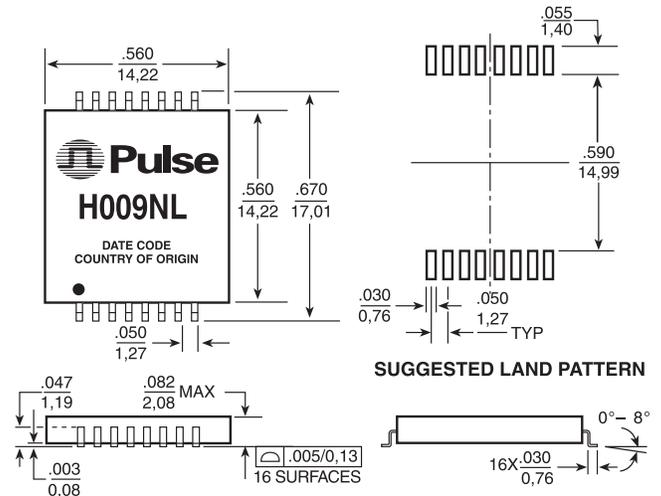
1. For Tape & Reel packaging add a "T" suffix to the end of the part number when ordering, e.g. H009NL<sup>T</sup>
2. MSL = (Moisture Sensitivity Level) w a=1, b=2, c=3, d=4, e=5

## Mechanicals

### H0013NL, H0019NL



### H0009NL



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

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

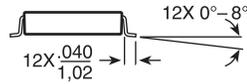
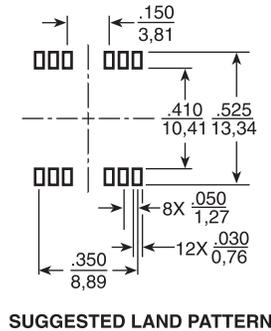
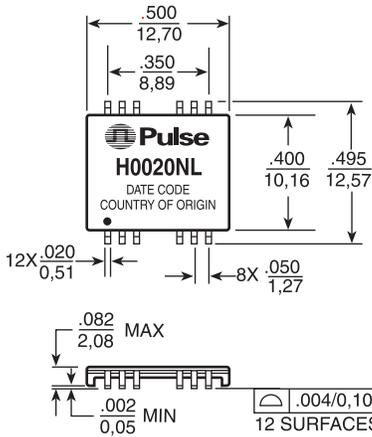
Weight ..... 1.3 grams  
 Tape & Reel ..... .900/reel  
 Tube ..... .25/tube

# 10/100 PC CARD LAN MAGNETICS MODULES

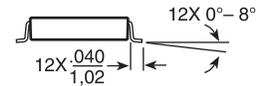
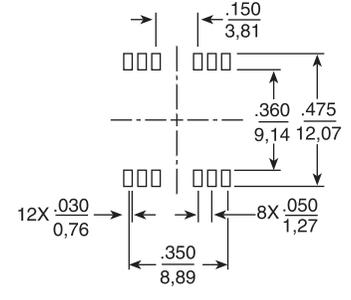
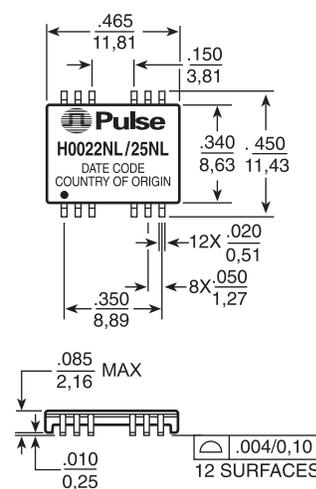


## Mechanicals (continued)

### H0020NL



### H0022NL, H0025NL



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

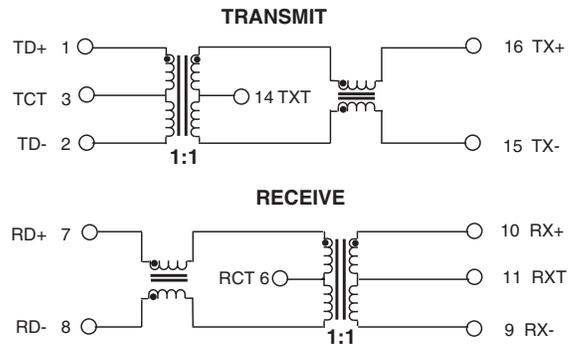
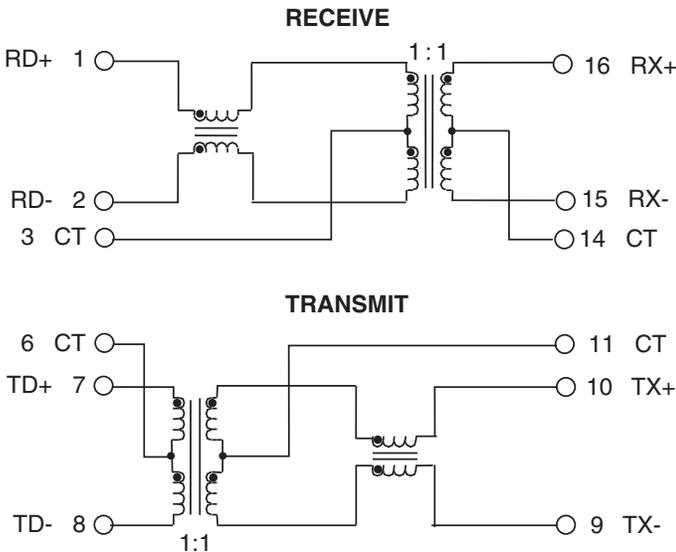
**Dimensions:** Inches mm Unless otherwise specified, all tolerances are  $\pm .010 / 0,25$

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

## Schematics

### H0009NL, H0013NL, H0019NL, H0025NL

### H0020NL

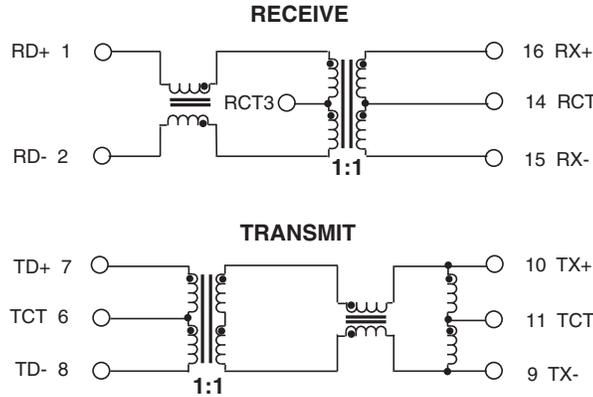


# 10/100 PC CARD LAN MAGNETICS MODULES

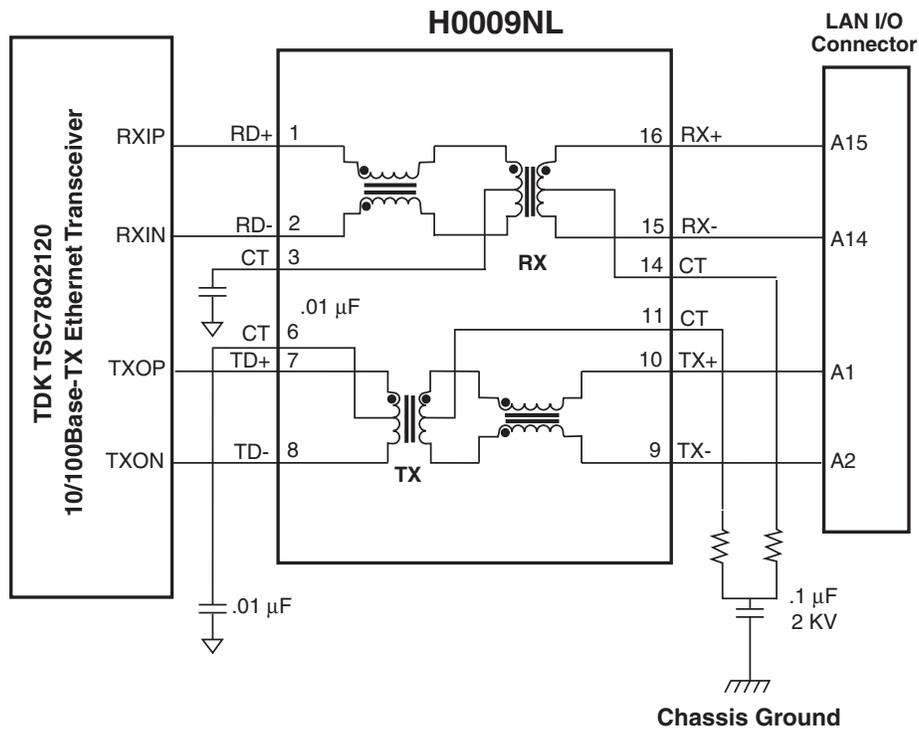


## Schematics (continued)

**H0022NL**



## Application Circuit



### For More Information:

**Pulse Worldwide Headquarters**  
12220 World Trade Dr.  
San Diego, CA 92128  
U.S.A.

**Pulse Europe**  
Einsteinstrasse 1  
D-71083 Herrenberg  
Germany

**Pulse China Headquarters**  
B402, Shenzhen Academy of  
Aerospace Technology Bldg.  
10th Kejinan Rd.  
High-Tech Zone  
Nanshan District  
Shenzhen, PR China 518057  
TEL: 86 755 33966678  
FAX: 86 755 33966700

**Pulse North China**  
Room 1503  
XinYin Building  
No. 888 YiShan Rd.  
Shanghai 200233  
China

**Pulse South Asia**  
135 Joo Seng Rd.  
#03-02  
PM Industrial Bldg.  
Singapore 368363

**Pulse North Asia**  
No. 26, Kao Ching Rd.  
Yang Mei Chen  
Taoyuan Hsien  
Taiwan  
R. O. C.

**www.pulseeng.com**  
Tel: 858 674 8100  
Fax: 858 674 8262

Tel: 49 7032 7806 0  
Fax: 49 7032 7806 135

Tel: 86 21 54643211/2  
Fax: 86 21 54643210

TEL: 65 6287 8998  
FAX: 65 6280 0080

Tel: 886 3 4643715  
Fax: 886 3 4641911

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Pulse:

[H0009](#) [H0019](#) [H0013](#) [H0025](#) [H0022](#) [H0009T](#) [H0019T](#) [H0013T](#) [H0002T](#) [H0022T](#) [H0009NL](#) [H0019NLT](#)  
[H0009NLT](#) [H0022NL](#) [PE-69012T](#)