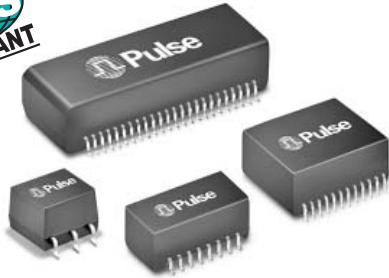


# POWER OVER ETHERNET (PoE) MAGNETICS

## 10/100BASE-TX VoIP Magnetics Modules



- RoHS peak reflow temperature rating 245°C
- IEEE 802.3af/ANSI X3.263 compliant performance
- Designed for IP phone or switch applications

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

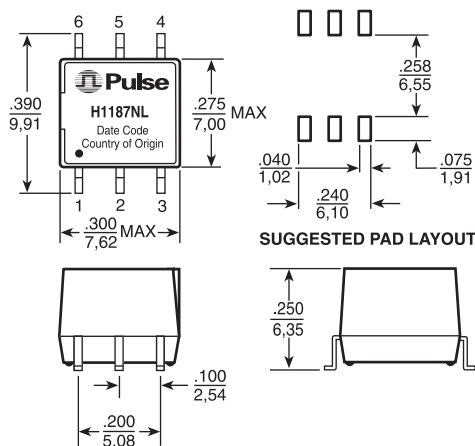
Part Number	Ports	Insertion Loss (dB MAX)	Return Loss (dB MIN @ 100 Ω)					Differential to Common Mode Rejection (dB MIN)			Cross Talk (dB MIN)			Hipot (Vrms MIN))	DC Resistance Balance ≤ (%)
			1-100 MHz	1-30 MHz	40 MHz	50 MHz	60-80 MHz	30 MHz	60 MHz	100 MHz	30 MHz	60 MHz	100 MHz		
H1187NL <sup>2a</sup>	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	—	
H1197NL <sup>2a</sup>	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	—	
H2019NL <sup>2a</sup>	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	3.5	
H2005ANL <sup>2c</sup>	2	-1.2	-16	-14	-13	-12	-50	-43	-35	-43	-37	-33	1500	3.5	
H2006ANL <sup>2c</sup>	2	-1.2	-16	-14	-13	-12	-43	-37	-33	-43	-37	-31	1500	3.5	
H2008NL <sup>2c</sup>	2	-1.2	-16	-14	-13	-12	-40	-35	-30	-43	-37	-33	1500	3.5	
H2009NL <sup>2a</sup>	2	-1.1	-16	-14	-13	-12	-43	-37	-33	-43	-37	-33	1500	3.5	
H2014NL <sup>2d</sup>	4	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	3.5	
H2017NL <sup>2c</sup>	4	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1800	3.5	
HX2019NL <sup>1,2a</sup>	1	-1.4	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	3.5	

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

**NOTE:** When ordering Tape & Reel packaging, add the suffix "T" to the end of the part number. For example: H2008NLT.

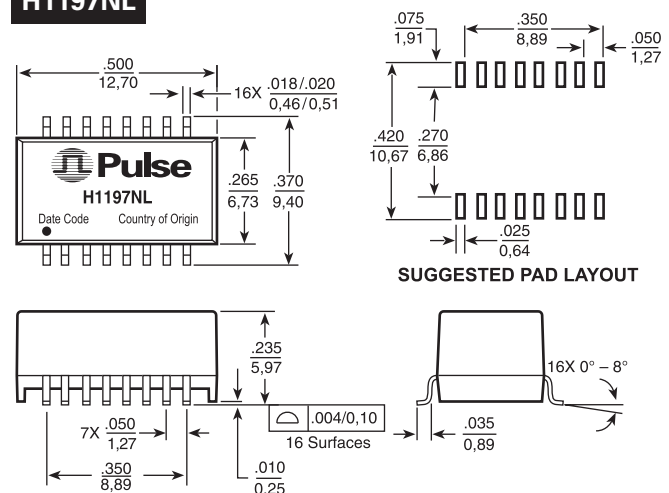
## Mechanics

### H1187NL



Weight . . . . . 0.6 grams  
Tape & Reel . . . . . 500/reel  
Tube . . . . . 70/tube

### H1197NL



Weight . . . . . 2.8 grams  
Tape & Reel . . . . . 600/reel  
Tube . . . . . 45/tube

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

USA 858 674 8100 • Germany 49 7032 78060 • Singapore 65 6287 8998 • Shanghai 86 21 32181071 • China 86 755 33966678 • Taiwan 886 3 4643715

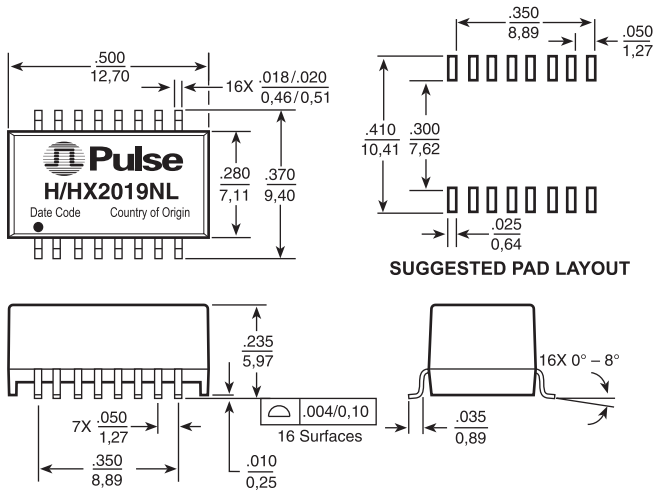
# POWER OVER ETHERNET (PoE) MAGNETICS

## 10/100BASE-TX VoIP Magnetics Modules

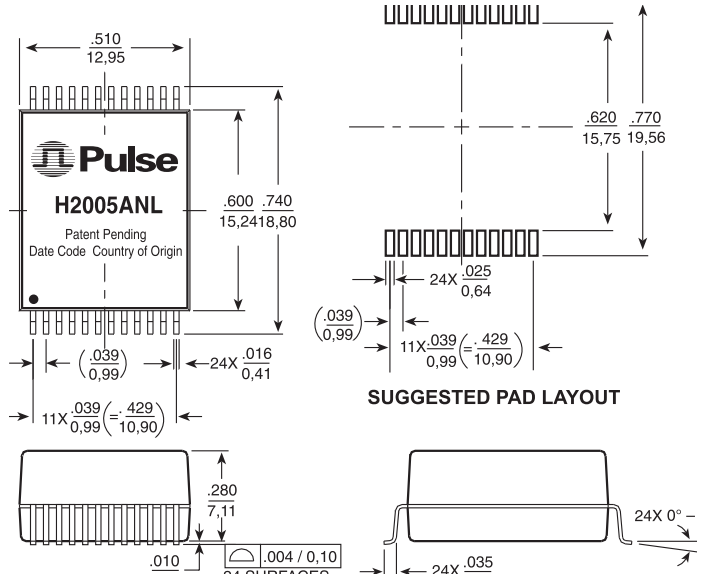


### Mechanicals

#### H2019NL, HX2019NL



#### H2005ANL

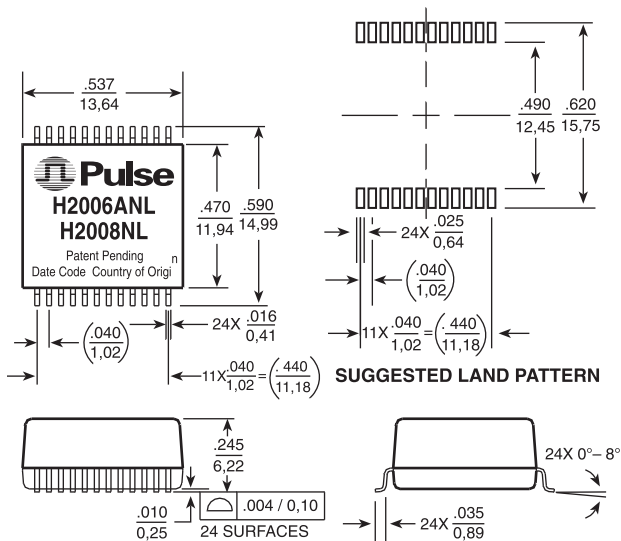


Weight . . . . . 1.0 grams  
Tape & Reel . . . . . 600/reel  
Tube . . . . . 45/tube

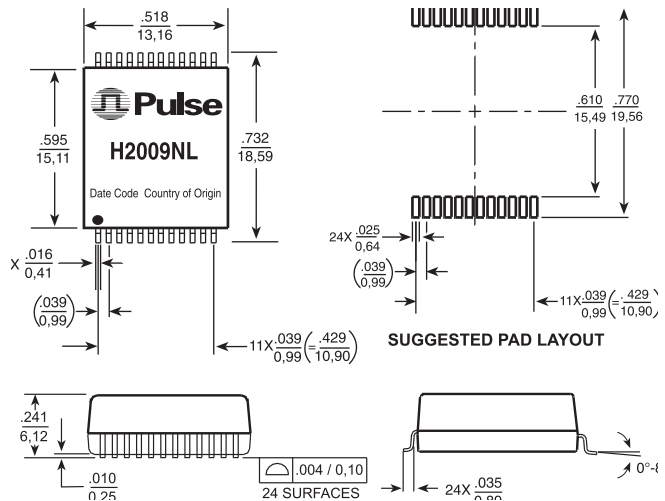
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

Weight . . . . . 2.7 grams  
Tape & Reel . . . . . 300/reel  
Tube . . . . . 25/tube

#### H2006ANL, H2008NL



#### H2009NL



Weight . . . . . 2.4 grams  
Tape & Reel . . . . . 350/reel  
Tube . . . . . 35/tube

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

Weight . . . . . 1.6 grams  
Tape & Reel . . . . . 300/reel  
Tube . . . . . 35/tube

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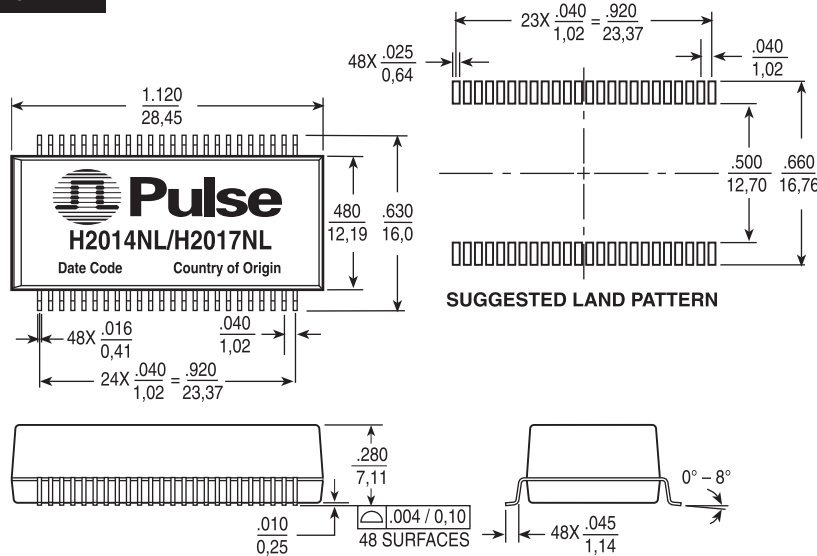
# POWER OVER ETHERNET (PoE) MAGNETICS

## 10/100BASE-TX VoIP Magnetics Modules



### Mechanicals (continued)

#### H2014NL, H2017NL

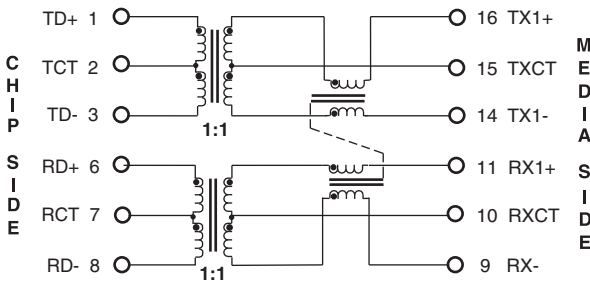


Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

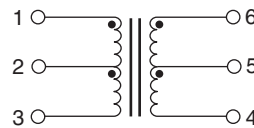
Weight . . . . . 5.0 grams  
Tape & Reel . . . . . 250 /reel  
Tube . . . . . 15/tube

### Schematics

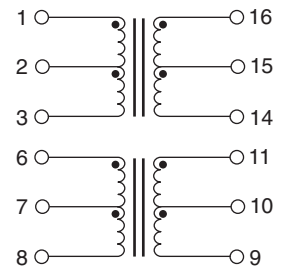
#### H2019NL, HX2019NL



#### H1187NL



#### H1197NL

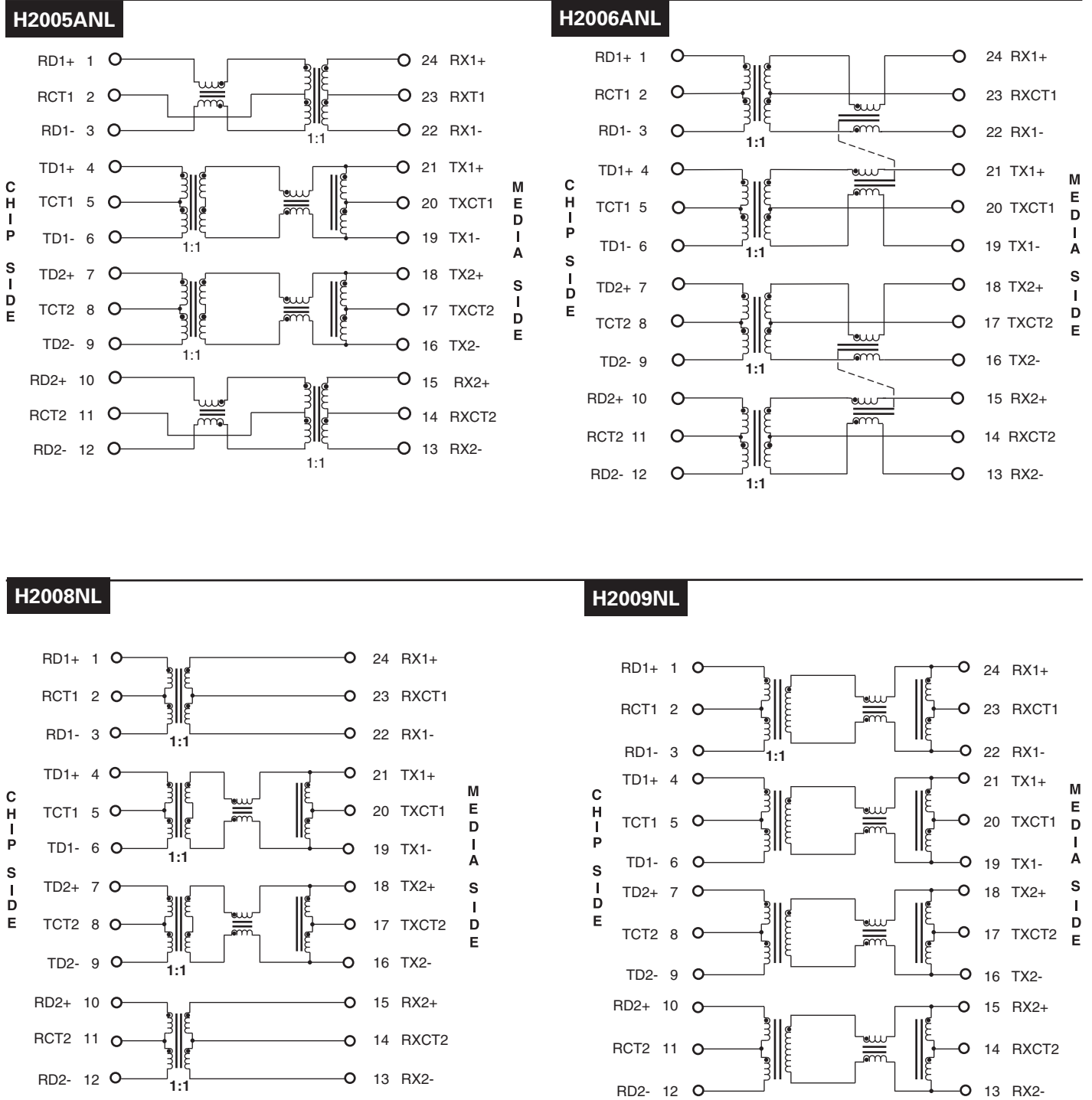


# POWER OVER ETHERNET (PoE) MAGNETICS

## 10/100BASE-TX VoIP Magnetics Modules



### Schematics (continued)



Downloaded from [Elcodis.com](http://Elcodis.com) electronic components distributor

# POWER OVER ETHERNET (PoE) MAGNETICS

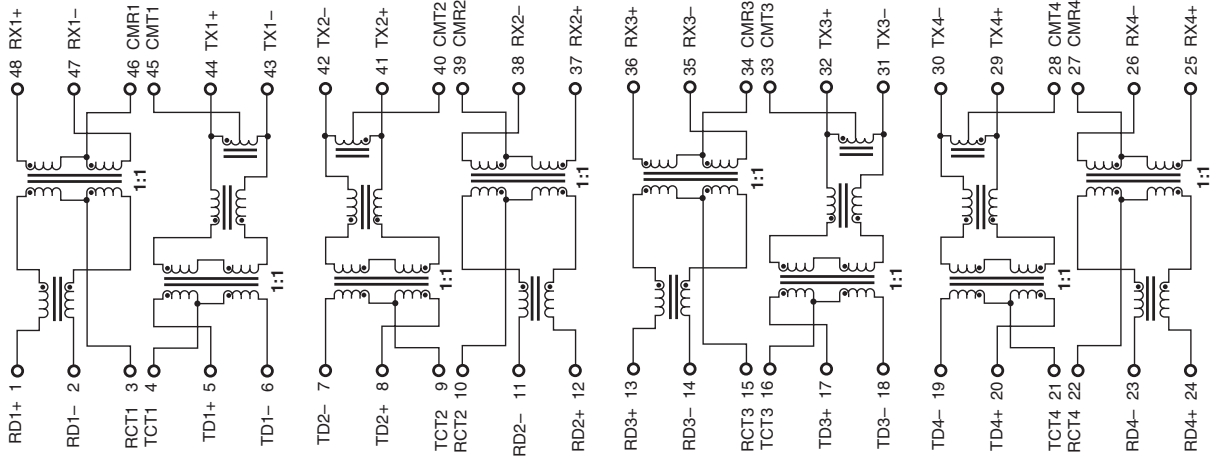
## 10/100BASE-TX VoIP Magnetics Modules



### Schematics (continued)

#### H2014NL

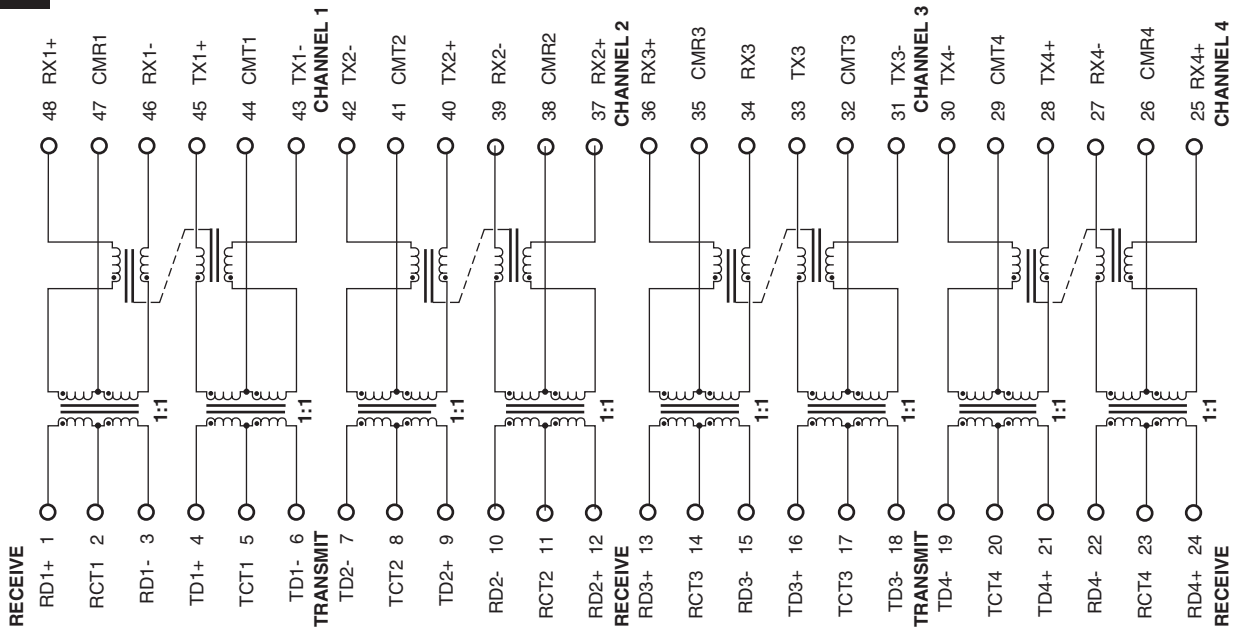
#### MEDIA SIDE



#### CHIP SIDE

#### H2017NL

#### MEDIA SIDE



#### CHIP SIDE

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