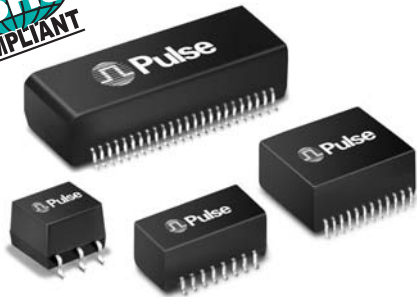


# POWER OVER ETHERNET (PoE) MAGNETICS

## 10/100BASE-TX VoIP Magnetics Modules



- RoHS-5 peak reflow temperature rating 235°C
- RoHS-6 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**

RoHS-5 <sup>3</sup> Compliant Part Number	RoHS-6 <sup>4</sup> Compliant Part Number	Ports	Insertion Loss (dB MAX)	Return Loss (dB MIN @ 100 Ω)				Differential to Common Mode Rejection (dB MIN)			Crosstalk (dB MIN)			Hipot (V <sub>RMS</sub> MIN)	DC Resistance Balance ≤ (%)
				1-100MHz	1-30MHz	40MHz	50MHz	60-80MHz	30MHz	60MHz	100MHz	30MHz	60MHz		
H1180	H1180NL <sup>2c</sup>	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	—
H1187	H1187NL <sup>4c</sup>	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	—
H1197	H1197NL <sup>2c</sup>	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	—
H2019	H2019NL <sup>2c</sup>	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	3.5
H2005A	H2005ANL <sup>2c</sup>	2	-1.2	-16	-14	-13	-12	-50	-43	-35	-43	-37	-33	1500	3.5
H2006A	H2006ANL <sup>2d</sup>	2	-1.2	-16	-14	-13	-12	-43	-37	-33	-43	-37	-31	1500	3.5
H2008	H2008 NL <sup>2d</sup>	2	-1.2	-16	-14	-13	-12	-40	-35	-30	-43	-37	-33	1500	3.5
H2009	H2009NL <sup>2a</sup>	2	-1.1	-16	-14	-13	-12	-43	-37	-33	-43	-37	-33	1500	3.5
H2014	—	4	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	3.5
H2017	H2017NL <sup>2c</sup>	4	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1800	3.5
HX2019 <sup>1</sup>	HX2019NL <sup>1, 2a</sup>	1	-1.4	-16	-14	-13	-12	—	—	—	-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

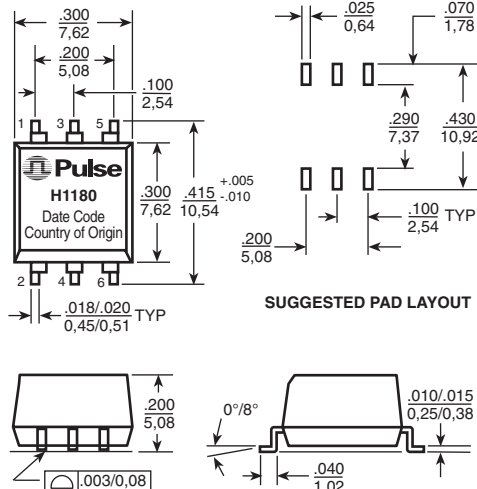
3. RoHS-5: Product does not contain 5 out of the 6 banned substances specified in the RoHS directive (product contains lead in applications considered solder).

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).

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

## Mechanicals

### H1180



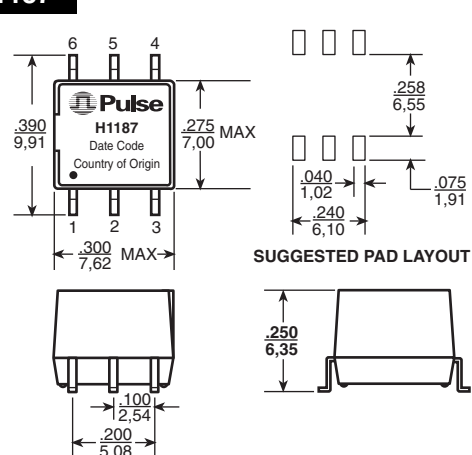
Weight . . . . . 0.6 grams

Tape & Reel . . . . . 500/reel

Tube . . . . . 65/tube

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

### H1187



Weight . . . . . 0.6 grams

Tape & Reel . . . . . 500/reel

Tube . . . . . 70/tube

USA 858 674 8100 • Germany 49 7032 7806 • Singapore 65 6287 8998 • Shanghai 86 21 54643211 / 2 • China 86 755 33966678 • Taiwan 886 3 4641811

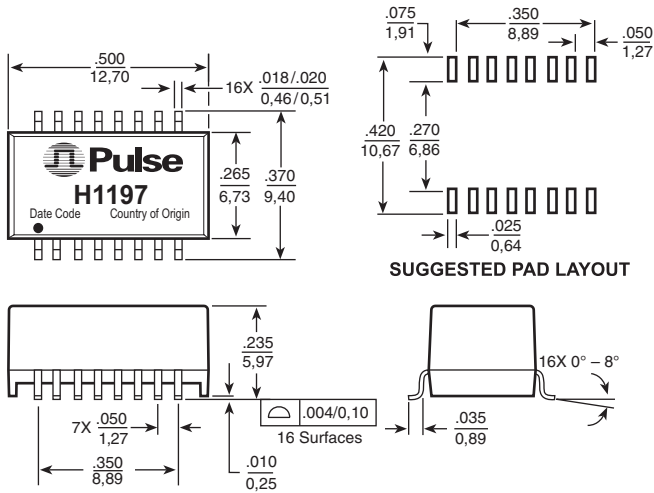
# POWER OVER ETHERNET (PoE) MAGNETICS

## 10/100BASE-TX VoIP Magnetics Modules



### Mechanicals

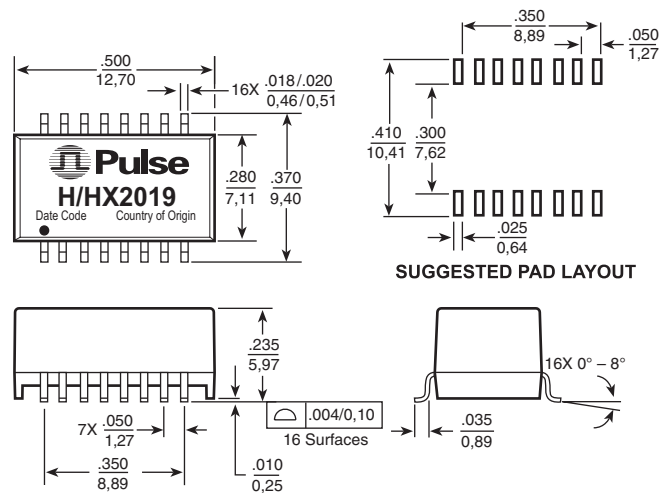
#### H1197



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

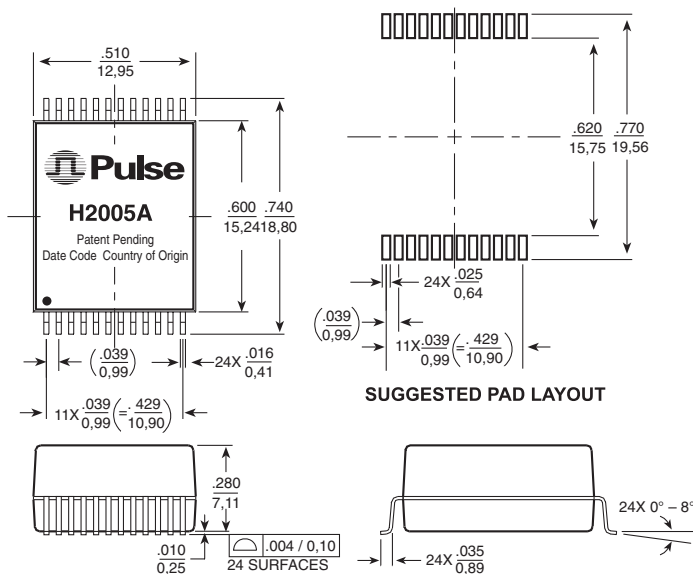
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

#### H2019, HX2019



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

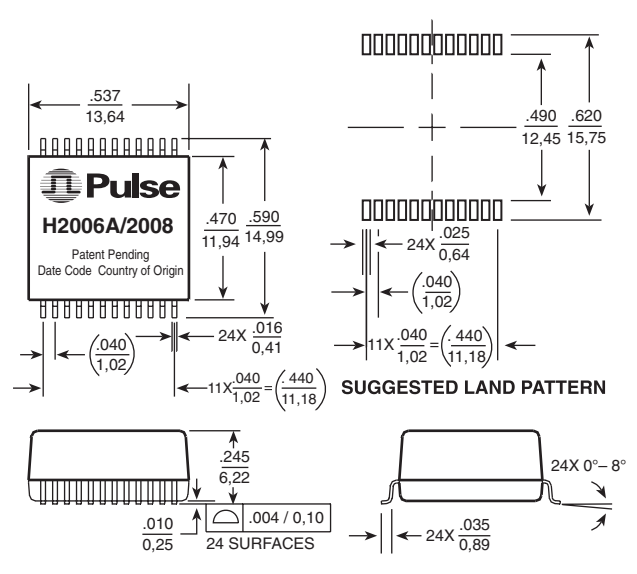
#### H2005A



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

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

#### H2006A, H2008



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

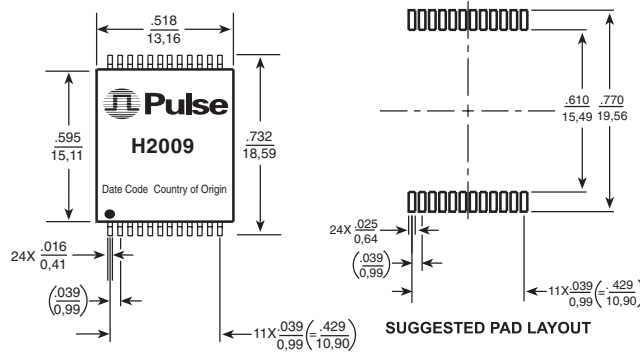
# POWER OVER ETHERNET (PoE) MAGNETICS

## 10/100BASE-TX VoIP Magnetics Modules



### Mechanicals (continued)

#### H2009

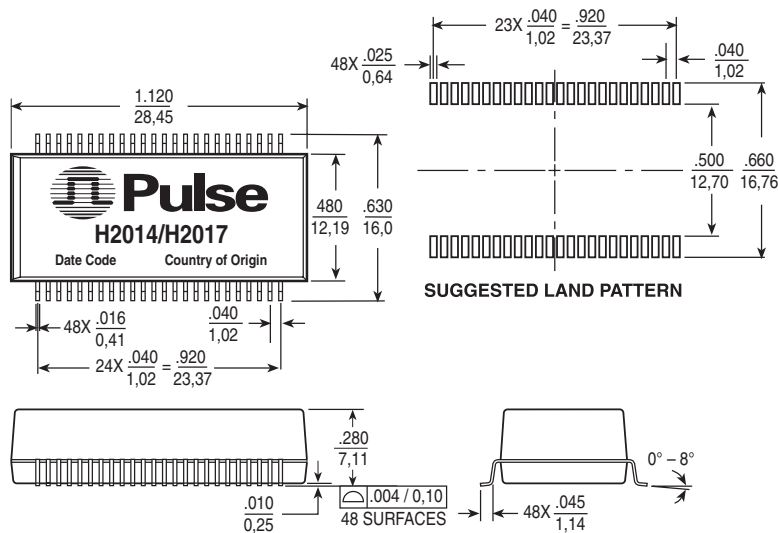


Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0.25}$

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

#### H2014, H2017



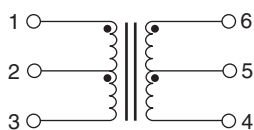
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0.25}$

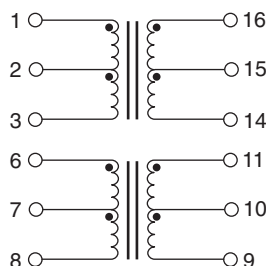
Weight . . . . . 5.0 grams  
Tape & Reel . . . . . 250 /reel  
Tube . . . . . 15/tube

### Schematics

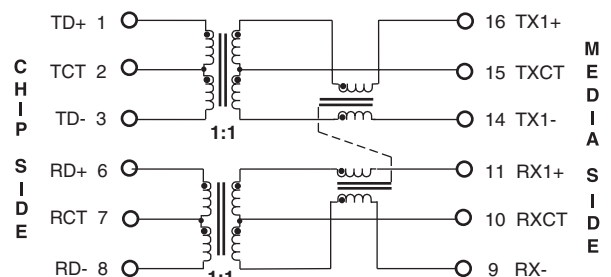
#### H1180, H1187



#### H1197



#### H2019, HX2019



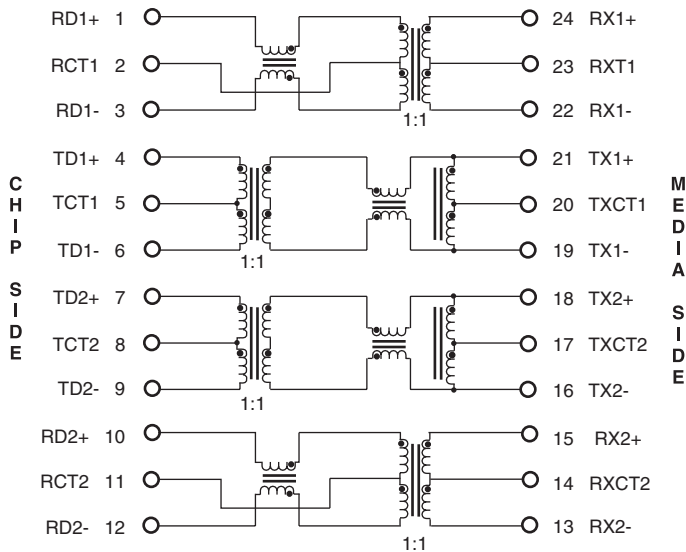
# POWER OVER ETHERNET (PoE) MAGNETICS

## 10/100BASE-TX VoIP Magnetics Modules

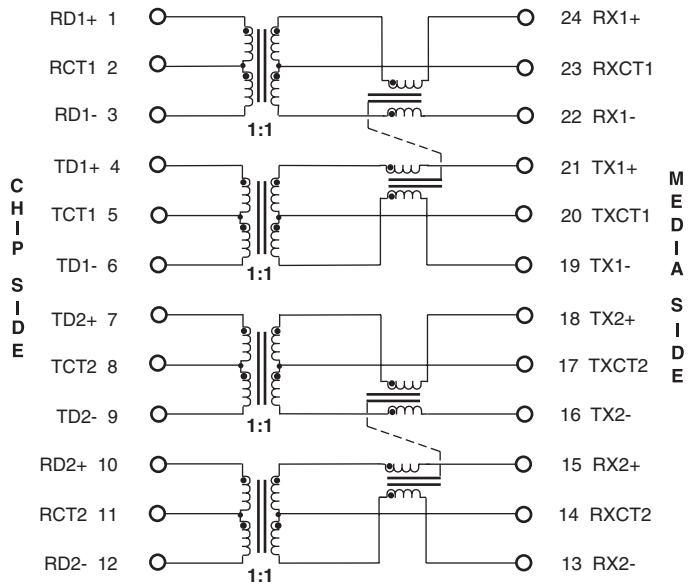


### Schematics (continued)

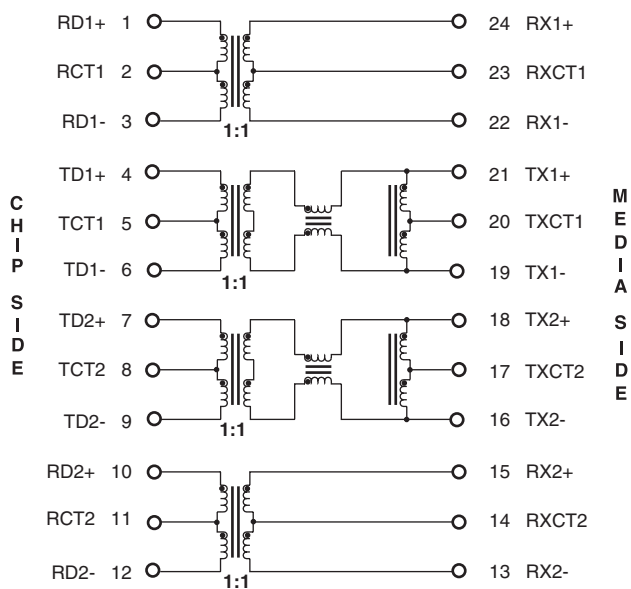
**H2005A**



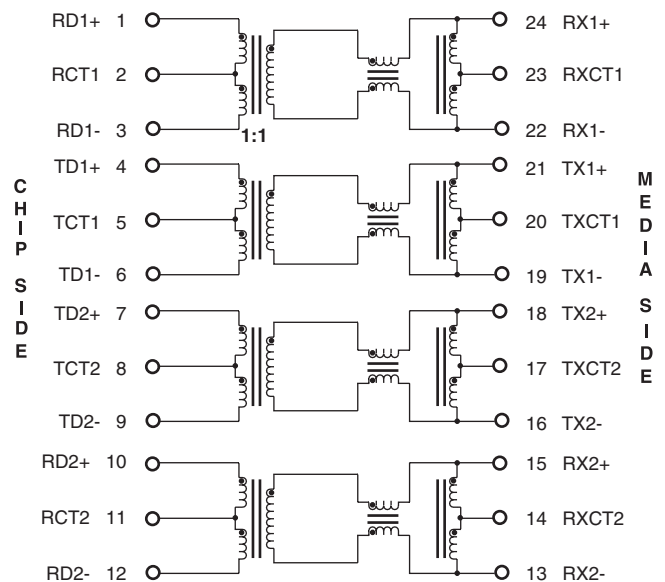
**H2006A**



**H2008**



**H2009**



# POWER OVER ETHERNET (PoE) MAGNETICS

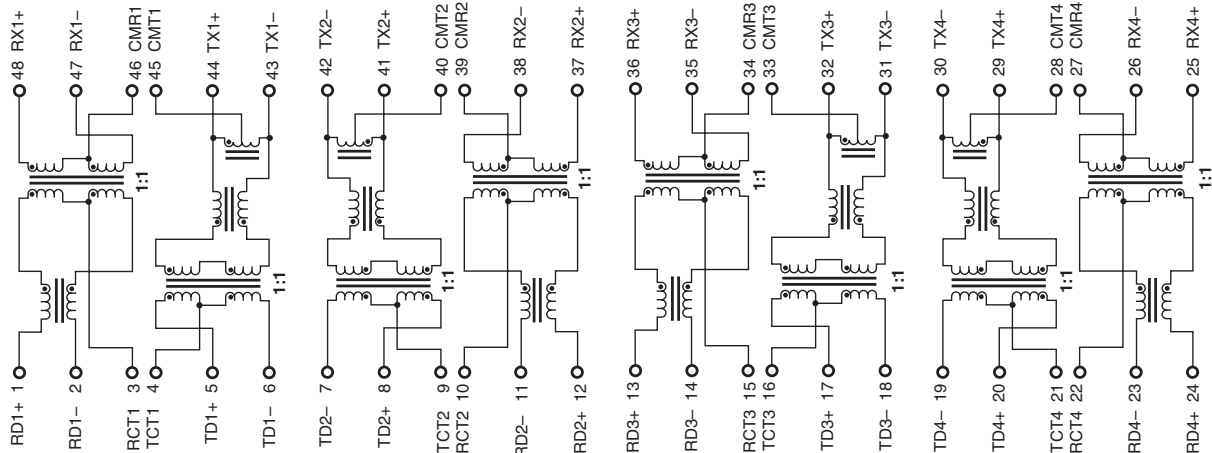
## 10/100BASE-TX VoIP Magnetics Modules



### Schematics (continued)

**H2014**

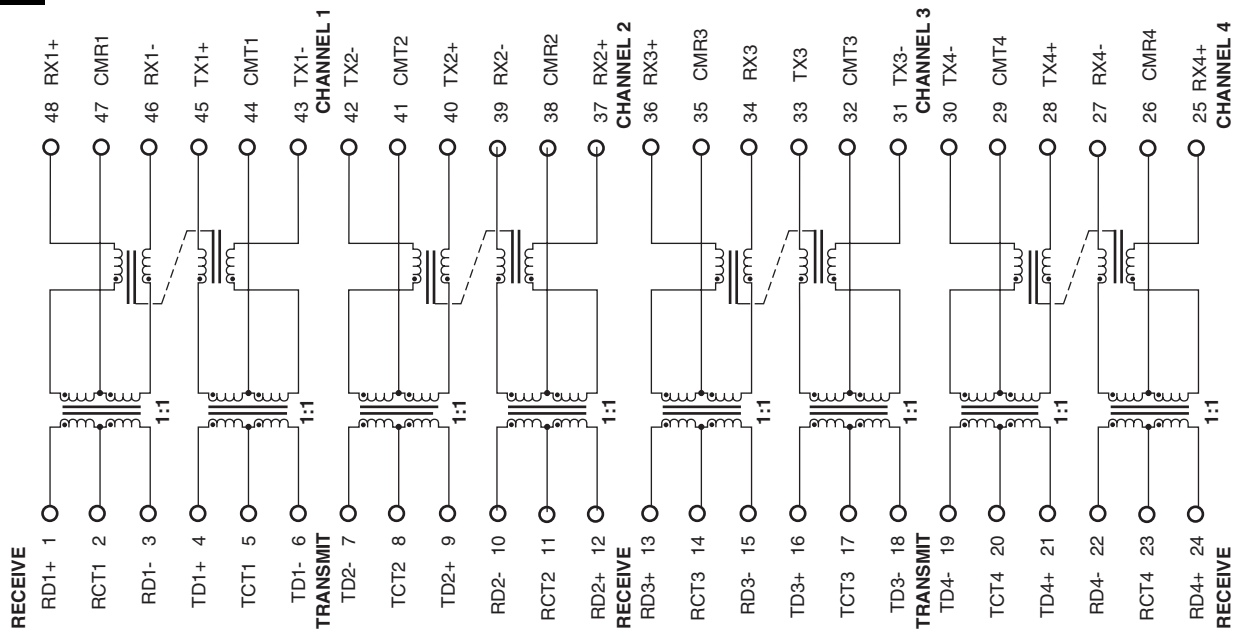
**MEDIA SIDE**



**CHIP SIDE**

**H2017**

**MEDIA SIDE**



**CHIP SIDE**

### For More Information:

#### Pulse Worldwide Headquarters

12220 World Trade Dr.  
San Diego, CA 92128  
U.S.A.

[www.pulseeng.com](http://www.pulseeng.com)

Tel: 858 674 8100

Fax: 858 674 8262

#### Pulse Europe

Einsteinstrasse 1  
D-71083 Herrenberg  
Germany

Tel: 49 7032 7806 0

Fax: 49 7032 7806 135

#### Pulse China Headquarters

B402, Shenzhen  
Tech-Innovation International  
Tenth Kejinan Rd.  
High-Tech Industrial Park  
Nanshan District, Shenzhen  
China

Tel: 86 755 33966678

Fax: 86 755 33966700

#### Pulse North China

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

Tel: 86 21 54643211/2

Fax: 86 21 54643210

#### Pulse South Asia

150 Kampong Ampat  
#07-01/02  
KA Centre  
Singapore 368324

Tel: 65 6287 8998

Fax: 65 6280 0080

#### Pulse North Asia

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

Tel: 886 3 4641811

Fax: 886 3 4641911

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