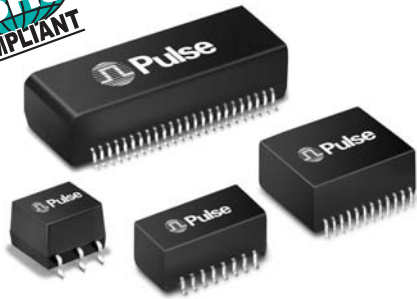


POWER OVER ETHERNET (PoE) MAGNETICS

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-6 ⁴ Compliant Part Number	RoHS-5 ³ 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 (VRMS MIN)	DC Resistance Balance ≤ (%)
				1-100MHz	1-30MHz	40MHz	50MHz	60-80MHz	30MHz	60MHz	100MHz	30MHz	60MHz		
H1180NL ^{2c}	—	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	—
H1187NL ^{2a}	H1187	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	—
H1197NL ^{2c}	H1197	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	—
H2019NL ^{2c}	H2019	1	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	3.5
H2005ANL ^{2c}	H2005A	2	-1.2	-16	-14	-13	-12	-50	-43	-35	-43	-37	-33	1500	3.5
H2006ANL ^{2d}	H2006A	2	-1.2	-16	-14	-13	-12	-43	-37	-33	-43	-37	-31	1500	3.5
H2008NL ^{2d}	H2008	2	-1.2	-16	-14	-13	-12	-40	-35	-30	-43	-37	-33	1500	3.5
H2009NL ^{2a}	—	2	-1.1	-16	-14	-13	-12	-43	-37	-33	-43	-37	-33	1500	3.5
H2014NL ^{2d}	H2014	4	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1500	3.5
H2017NL ^{2c}	H2017	4	-1.2	-16	-14	-13	-12	-43	-37	-33	-45	-40	-35	1800	3.5
HX2019NL ^{1, 2a}	HX2019	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
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
Tube65/tube

H1187

Weight 0.6 grams
Tape & Reel 500/reel
Tube70/tube

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

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Mechanicals

H1197

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

H2019, HX2019

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

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

H2005A

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

H2006A, H2008

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

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

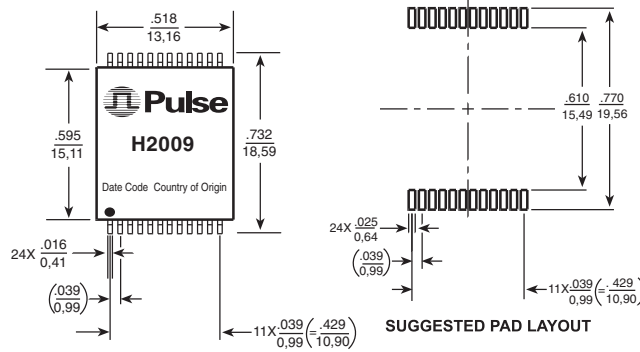
POWER OVER ETHERNET (PoE) MAGNETICS

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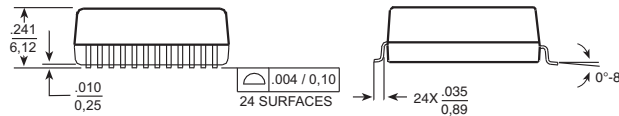


Mechanicals (continued)

H2009

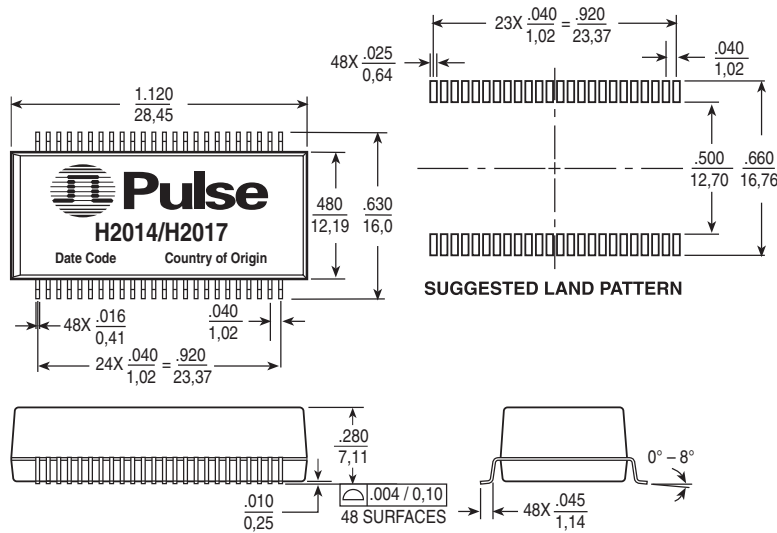


Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{.010}{0,25}$

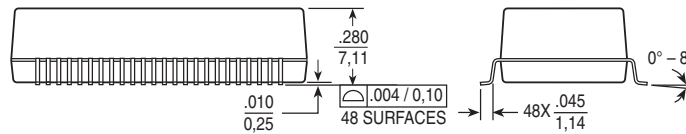


Weight 1.6 grams
Tape & Reel 300/reel
Tube 35/tube

H2014, H2017



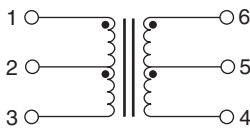
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{.010}{0,25}$



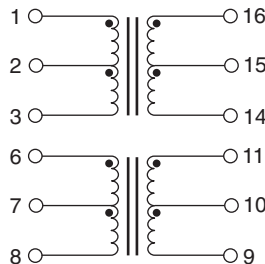
Weight 5.0 grams
Tape & Reel 250 /reel
Tube 15/tube

Schematics

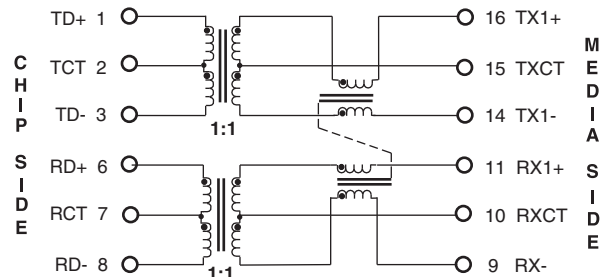
H1180, H1187



H1197



H2019, HX2019

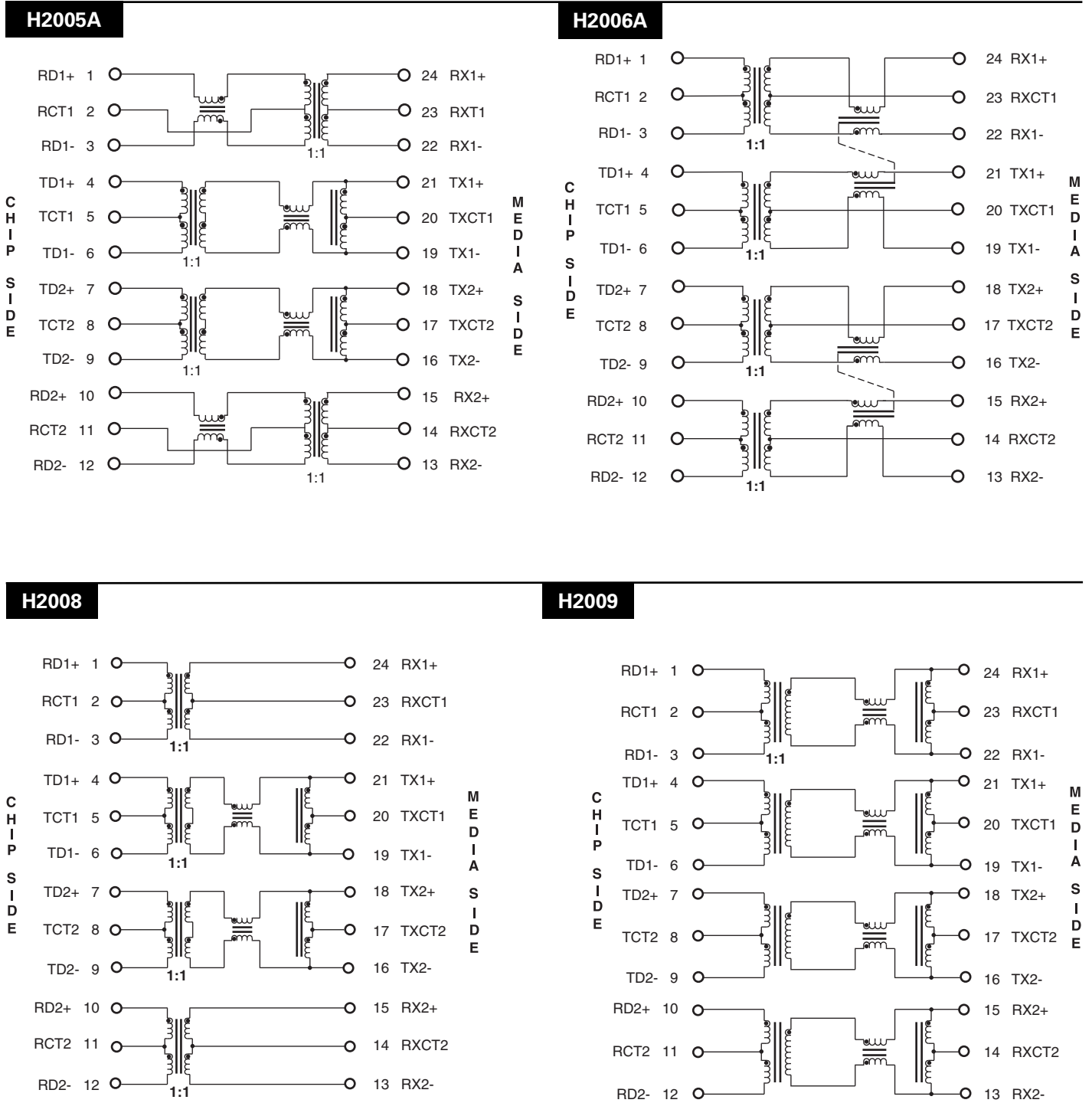


POWER OVER ETHERNET (PoE) MAGNETICS

10/100BASE-TX VoIP Magnetics Modules



Schematics (continued)



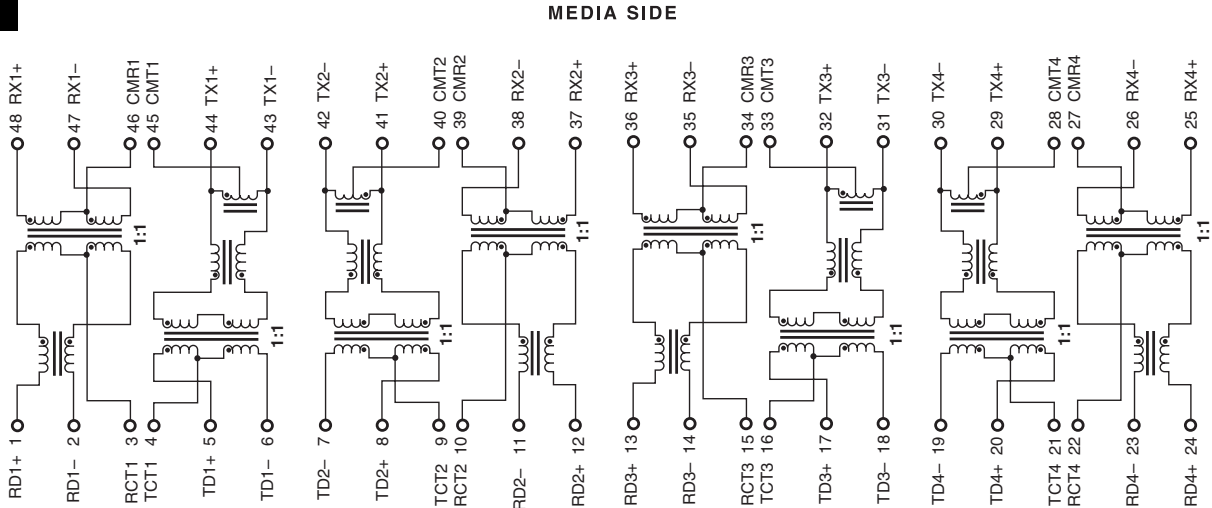
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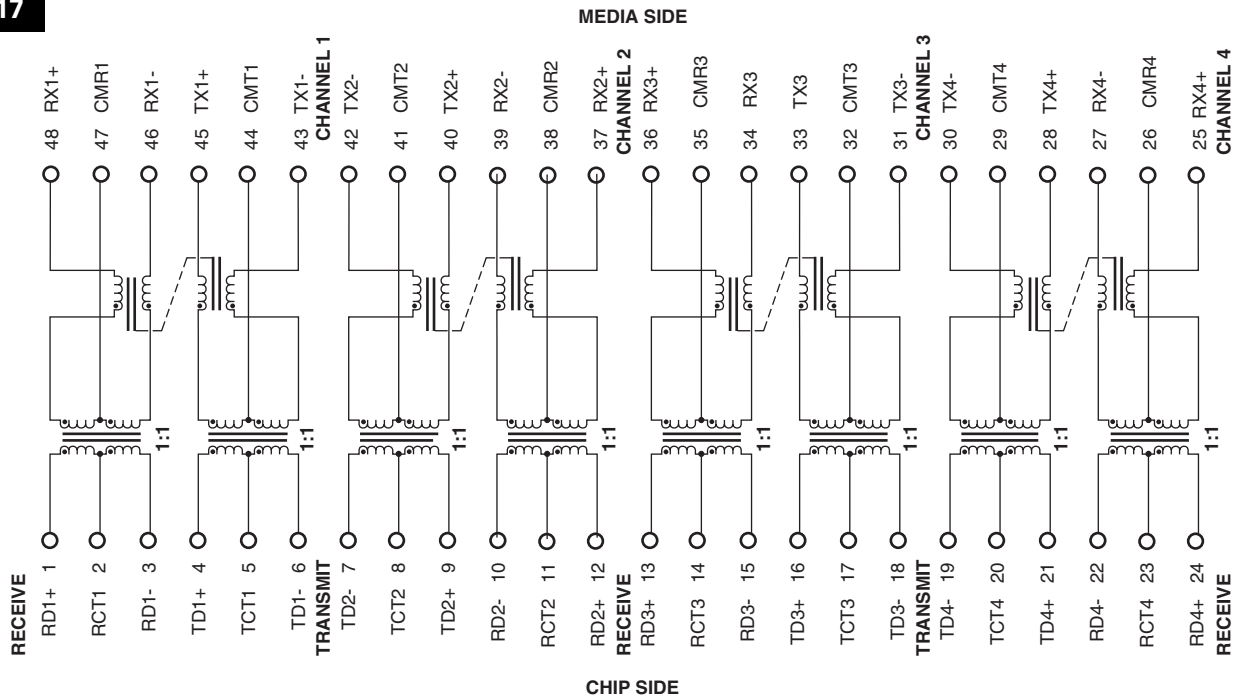
Schematics (continued)

H2014



CHIP SIDE

H2017



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 Kejianan Rd.
High-Tech Zone
Nanshan District
Shenzhen, PR China 518057

Pulse North China

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

Pulse South Asia

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

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: 86 755 33966678
FAX: 86 755 33966700

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

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