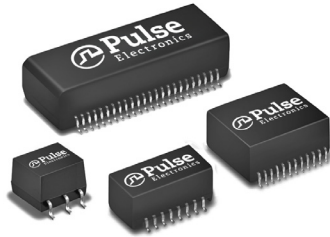


Power OVER Ethernet (PoE) Magnetics and (PoE+) Magnetics

100Base-TX VoIP Magnetics Modules



- RoHS peak reflow temperature rating 245C
- 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 | No. of Ports | Insertion Loss (dB MAX) | Return Loss (dB MIN @ 100 Ω) | | | | Differential to Common Mode Rejection (dB MIN @ 100 Ω) | | | CrossTalk (dB TYP) | | | 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 | | |
| H1187NL ^{2a} | 1 | -1.2 | -16 | -14 | -13 | -12 | -43 | -37 | -33 | -45 | -40 | -35 | 1500 | — |
| H1197NL ^{2a} | 1 | -1.2 | -16 | -14 | -13 | -12 | -43 | -37 | -33 | -45 | -40 | -35 | 1500 | — |
| H2019NL ^{2a} | 1 | -1.2 | -16 | -14 | -13 | -12 | -43 | -37 | -33 | -45 | -40 | -35 | 1500 | 3.5 |
| H2005ANL ^{2c} | 2 | -1.2 | -16 | -14 | -13 | -12 | -50 | -43 | -35 | -43 | -37 | -33 | 1500 | 3.5 |
| H2006ANL ^{2c} | 2 | -1.2 | -16 | -14 | -13 | -12 | -43 | -37 | -33 | -43 | -37 | -31 | 1500 | 3.5 |
| H2008NL ^{2c} | 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 |
| H2017NL ^{2c} | 4 | -1.2 | -16 | -14 | -13 | -12 | -43 | -37 | -33 | -45 | -40 | -35 | 1800 | 3.5 |
| HX2019NL ^{1,2a} | 1 | -1.4 | -16 | -14 | -13 | -12 | -43 | -37 | -33 | -45 | -40 | -35 | 1500 | 3.5 |
| HX2326NL ^{1,2a,3} | 1 | -1.0 | -16 | -14.4 | -13 | -12 | -43 | -37 | -33 | -45 | -40 | -35 | 1500 | 3.5 |

- Extended operating temperature (-40°C to +85°C)
- MSL (Moisture Sensitivity Level): a = 1, b = 2, c = 3, d = 4, e = 5
- PoE+ (IEEE 802.3at compliant)

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

Mechanicals

H1187NL

SUGGESTED PAD LAYOUT

Weight0.4 grams
Tape & Reel500/reel
Tube70/tube

H1197NL

SUGGESTED PAD LAYOUT

Weight0.6 grams
Tape & Reel600/reel
Tube40/tube

Unless otherwise specified, all tolerances are ± $\frac{.010}{0,25}$

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

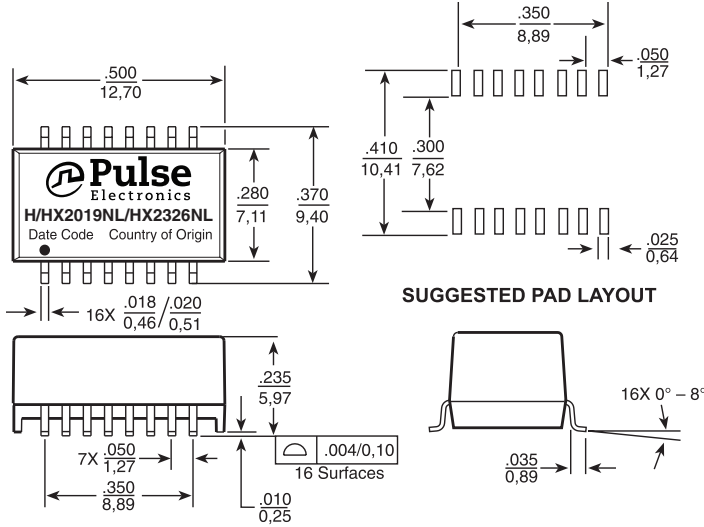
Power OVER Ethernet (PoE) Magnetics and (PoE+) Magnetics

100Base-TX VoIP Magnetics Modules



Mechanicals (continued)

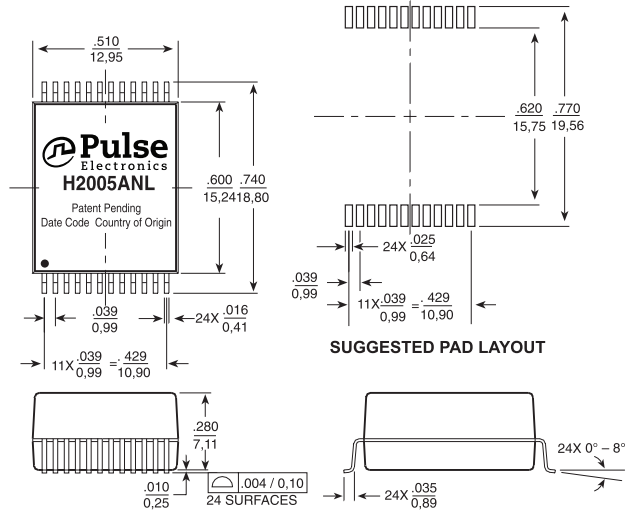
H2019NL, HX2019NL, HX2326NL



Weight1.0 grams
Tape & Reel600/reel
Tube40/tube

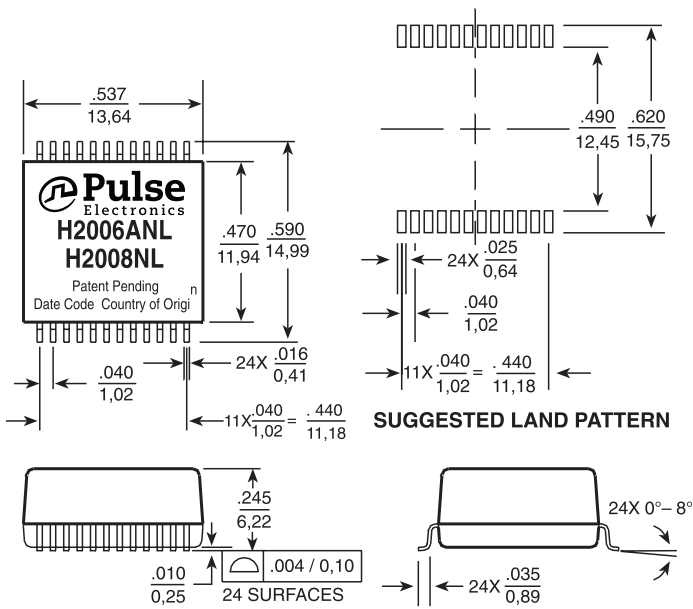
Dimensions: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

H2005ANL



Weight2.7 grams
Tape & Reel250/reel
Tube25/tube

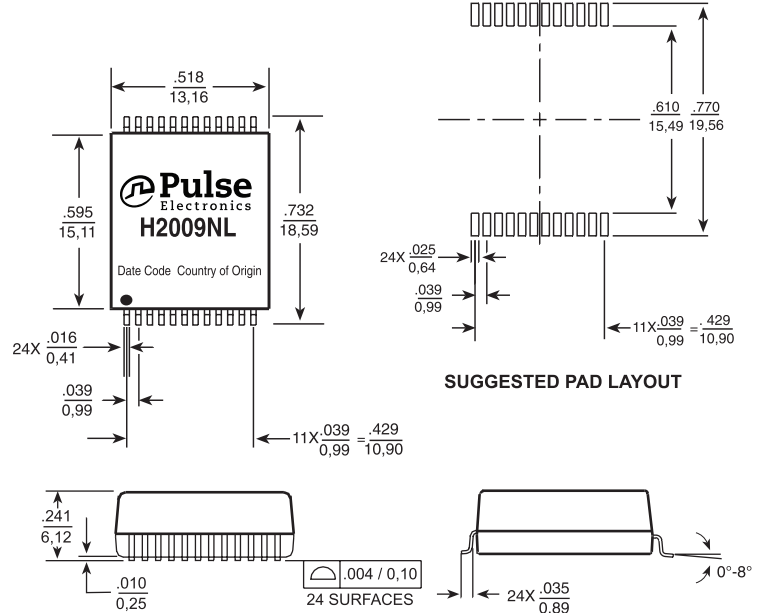
H2006ANL, H2008NL



Weight2.4 grams
Tape & Reel350/reel
Tube35/tube

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

H2009NL



Weight1.6 grams
Tape & Reel300/reel
Tube35/tube

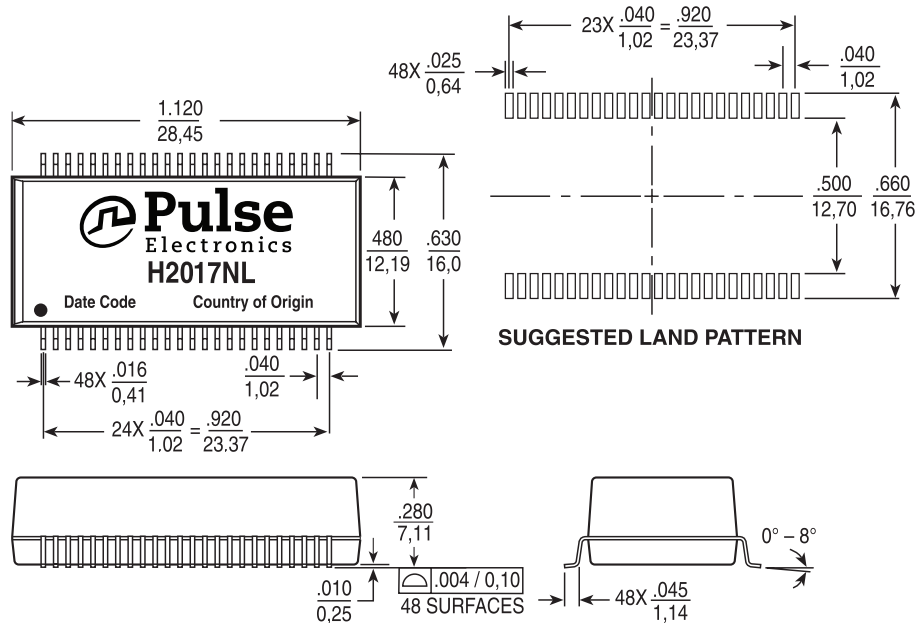
Power OVER Ethernet (PoE) Magnetics and (PoE+) Magnetics

100Base-TX VoIP Magnetics Modules



Mechanicals (continued)

H2017NL

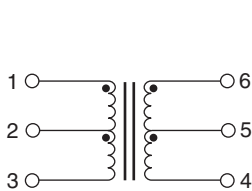


Weight5.0 grams
Tape & Reel250/reel
Tube15/tube

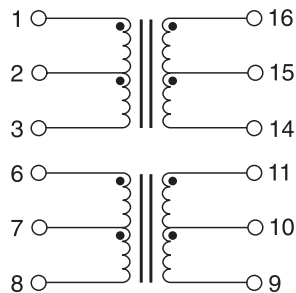
Dimensions: $\frac{\text{Inches}}{\text{mm}}$ Unless otherwise specified, all tolerances are $\pm \frac{.010}{0,25}$

Schematics

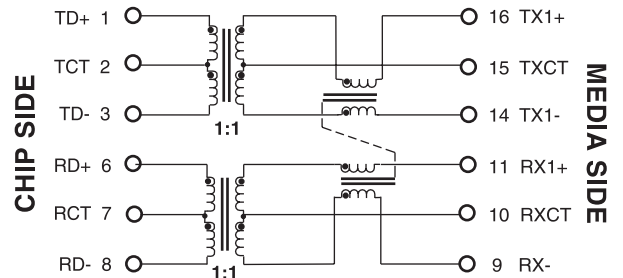
H1187NL



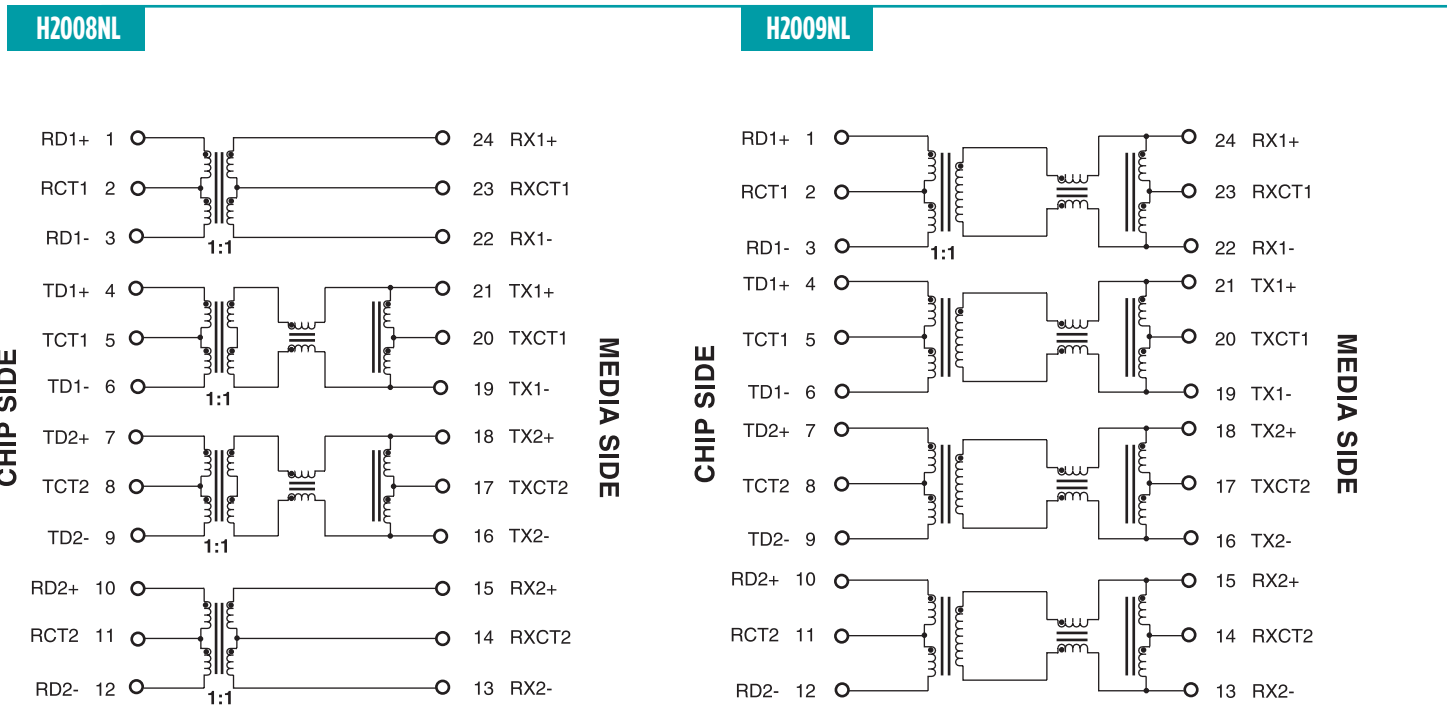
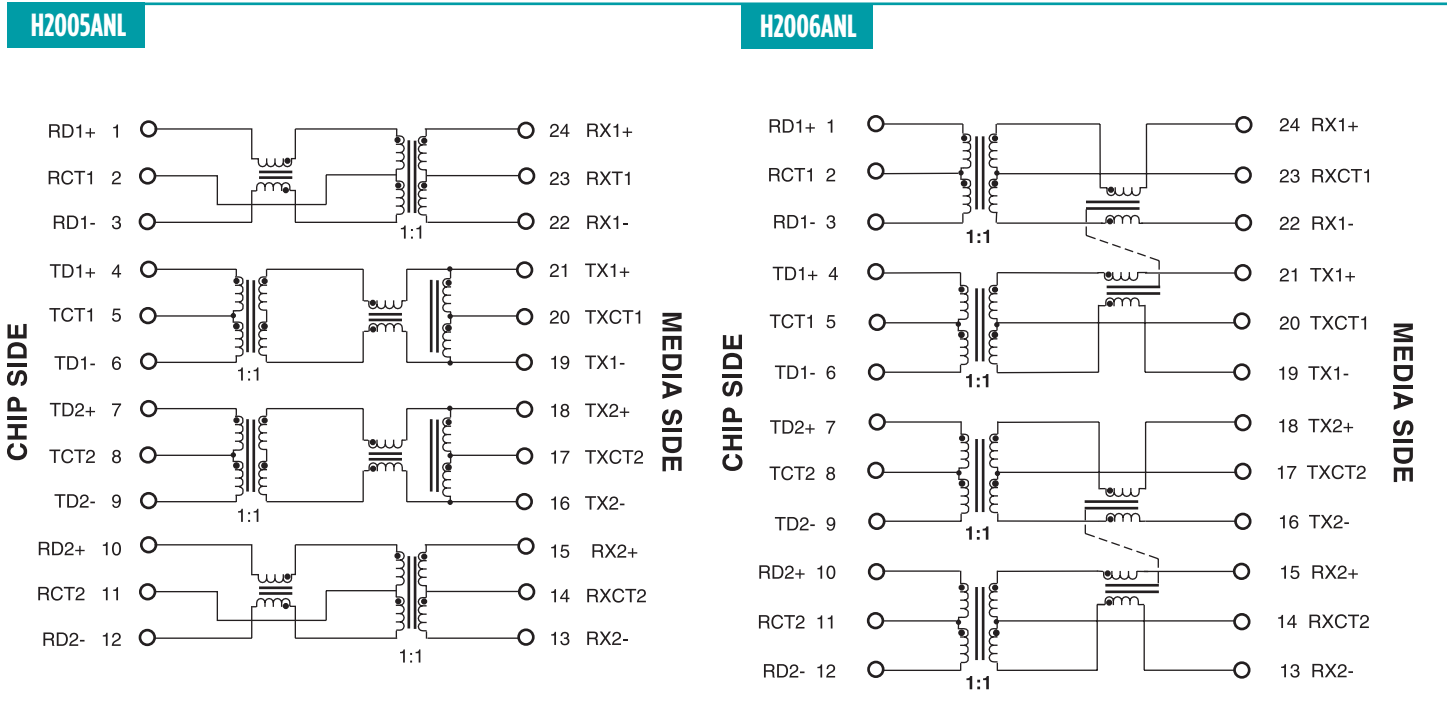
H1197NL



H2019NL, HX2019NL



Schematics (continued)

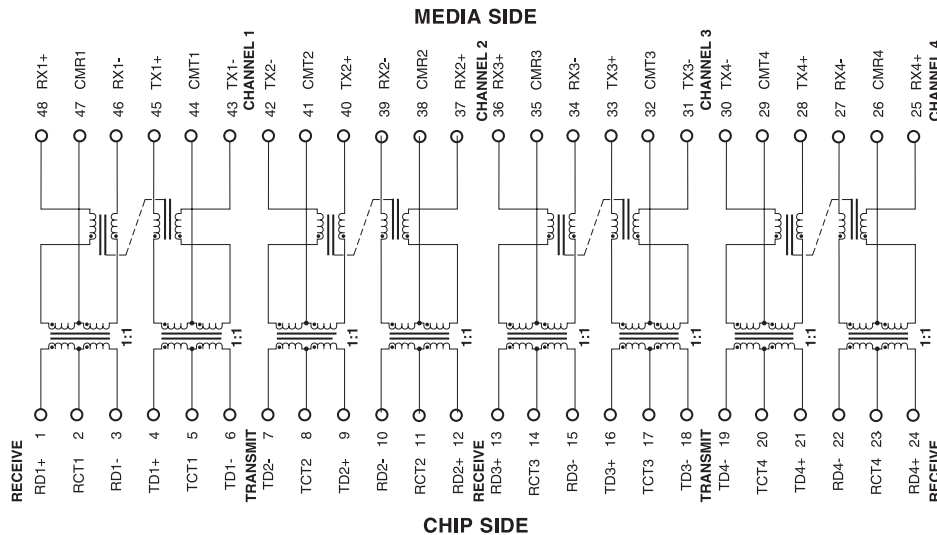


Power OVER Ethernet (PoE) Magnetics and (PoE+) Magnetics

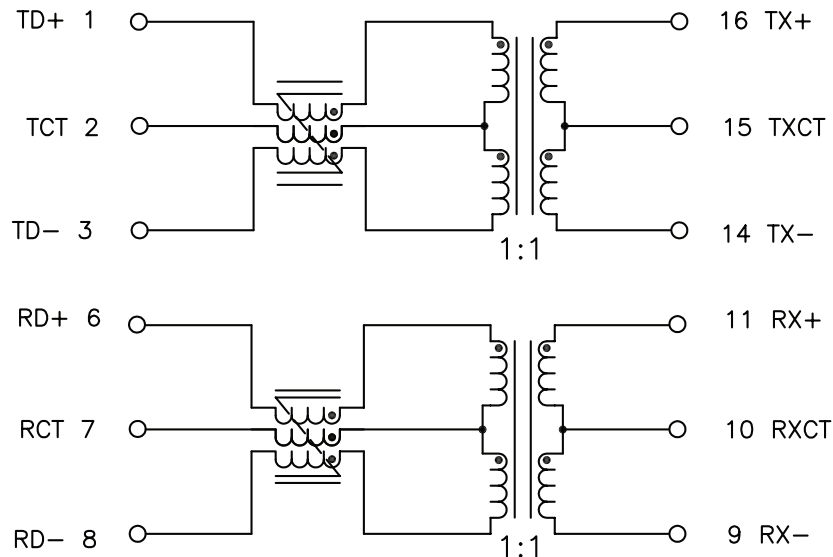
100Base-TX VoIP Magnetics Modules

Schematics (continued)

H2017NL



HX2326NL



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