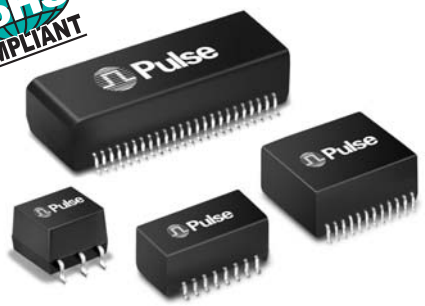
# POWER OVER ETHERNET (PoE) MAGNETICS

## 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**

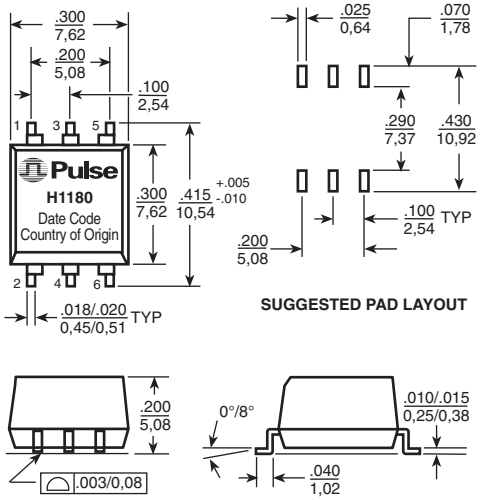
| RoHS-5[3] Compliant Part Number | RoHS-6[4] Compliant Part Number | Ports | Insertion Loss (dB MAX) | Return Loss (dB MIN @ 100 Ω) | | | | Differential to Common Mode Rejection (dB MIN) | | | Crosstalk (dB MIN) | | | Hipot (VRMS MIN) | DC Resistance Balance ≤ (%) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|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

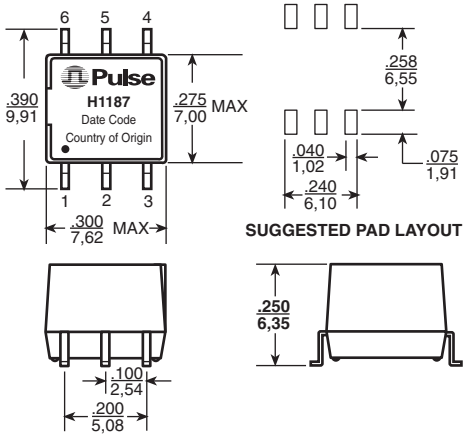
**NOTE**: When ordering Tape & Reel packaging, add the suffix "T" to the end of the part number. For example: H2008NLT.

## Mechanicals

### H1180




### H1187




**Weight** . . . . . .0.6 grams
**Tape & Reel** . . . . . .500/reel
**Tube** . . . . . .65/tube

**Dimensions:** Inches / mm — Unless otherwise specified, all tolerances are ± .010 / 0,25

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

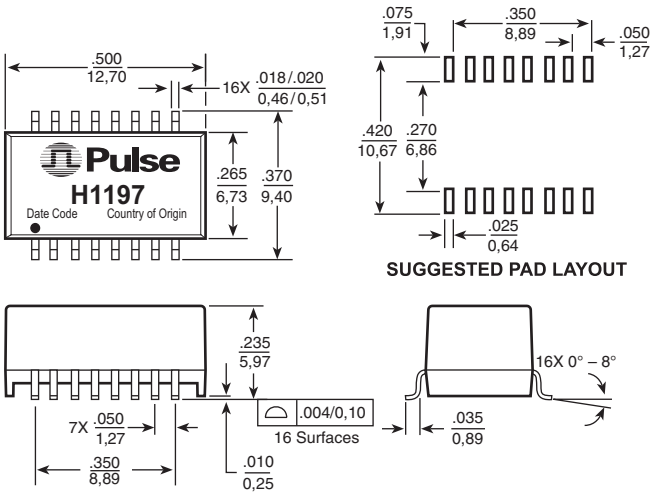
# POWER OVER ETHERNET (PoE) MAGNETICS

## 10/100BASE-TX VoIP Magnetics Modules

Pulse A TECHNITROL COMPANY

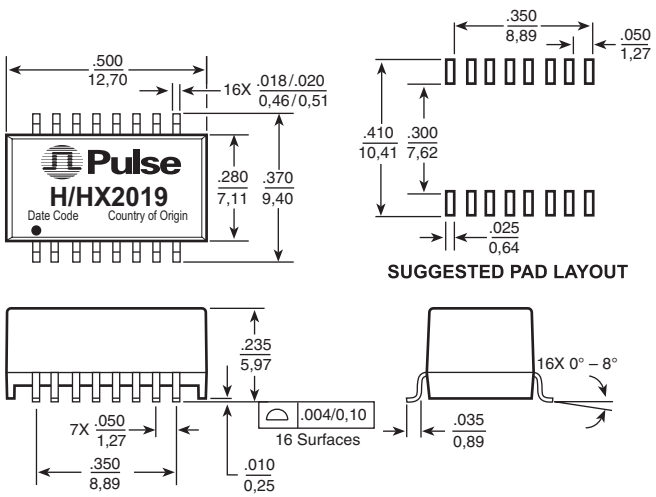
## Mechanicals

### H1197




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

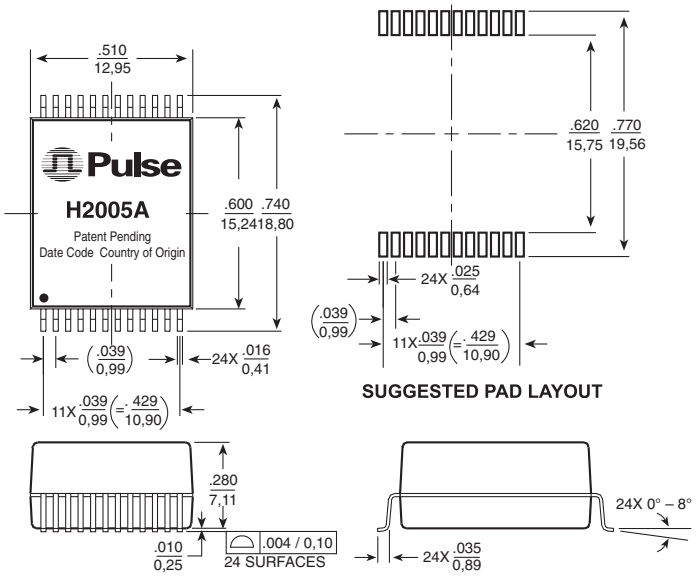
### H2019, HX2019




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

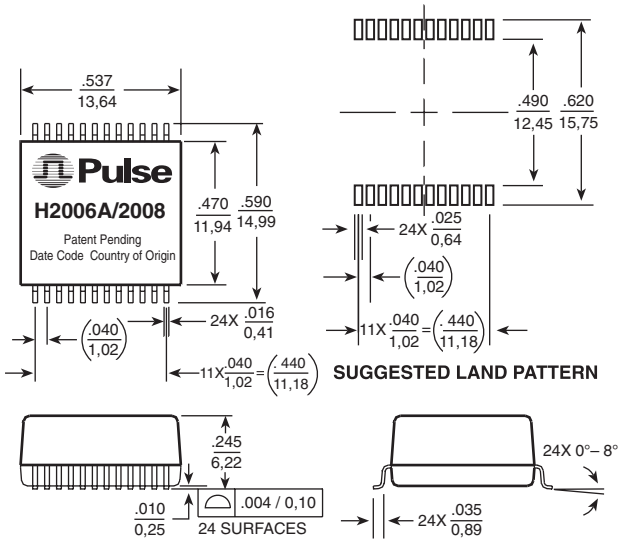
**Weight** . . . . . 1.0 grams
**Tape & Reel** . . . . . 600/reel
**Tube** . . . . . 45/tube

### H2005A




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

### H2006A, H2008




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

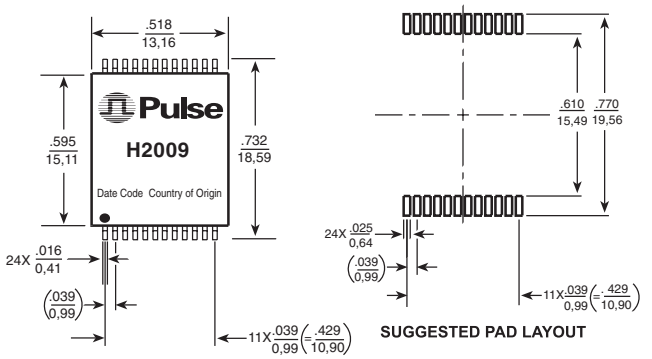
**Weight** . . . . . 2.4 grams
**Tape & Reel** . . . . . 350/reel
**Tube** . . . . . 35/tube

# POWER OVER ETHERNET (PoE) MAGNETICS

## 10/100BASE-TX VoIP Magnetics Modules

## Mechanicals *(continued)*

### H2009

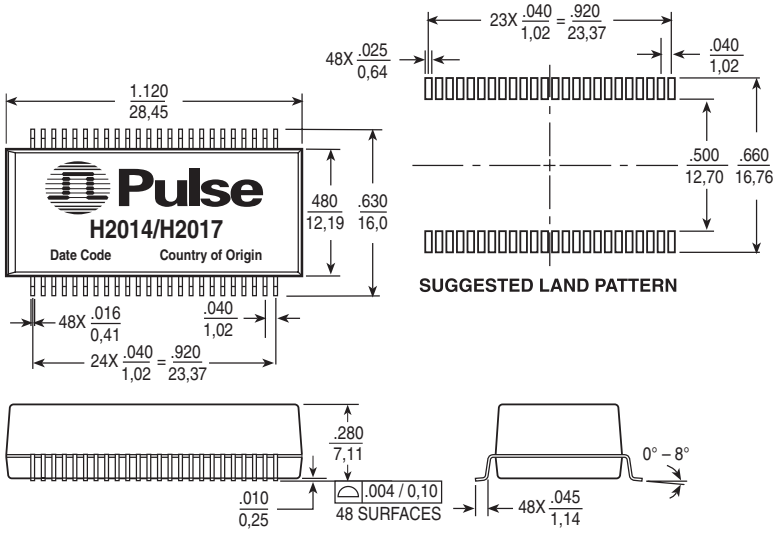



**Dimensions:** Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

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

### H2014, H2017



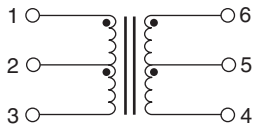

**Dimensions:** Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

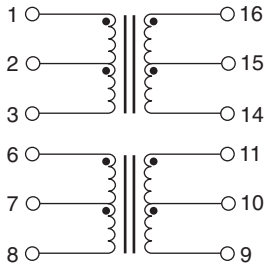
**Weight** . . . . . 5.0 grams
**Tape & Reel** . . . . . 250 /reel
**Tube** . . . . . 15/tube

## Schematics

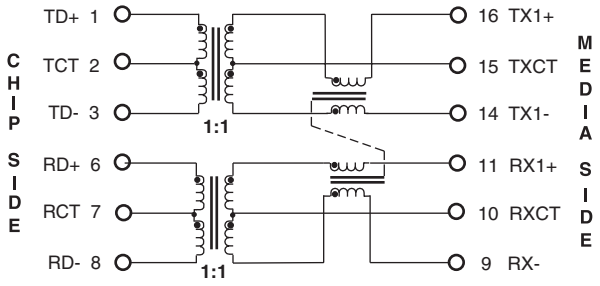
### H1180, H1187




### H1197




### H2019, HX2019

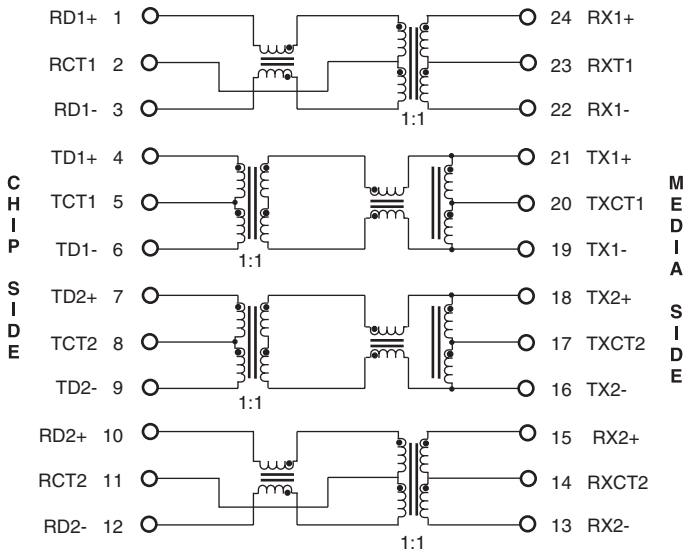


# POWER OVER ETHERNET (PoE) MAGNETICS

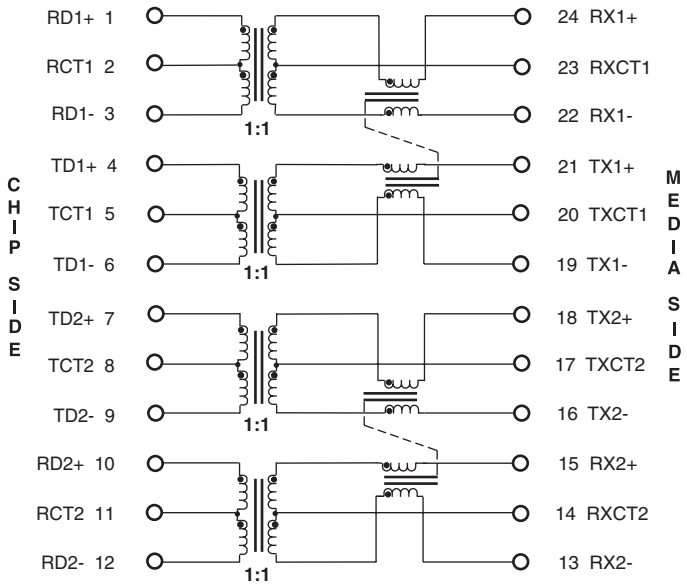
## 10/100BASE-TX VoIP Magnetics Modules

### Schematics *(continued)*

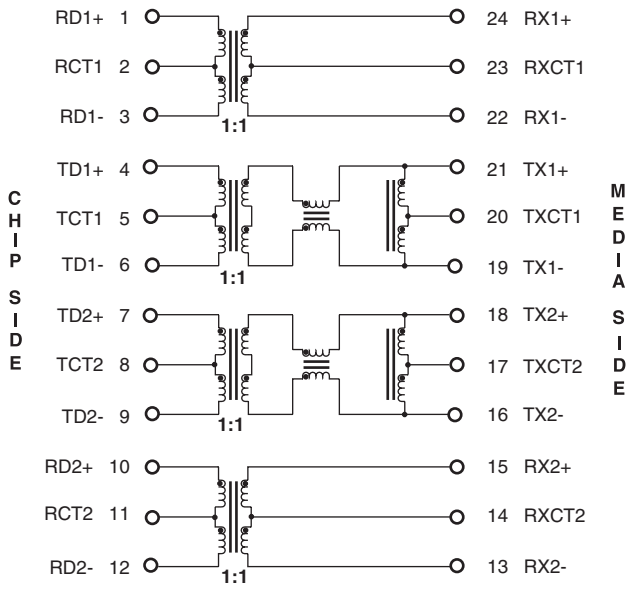
**H2005A**



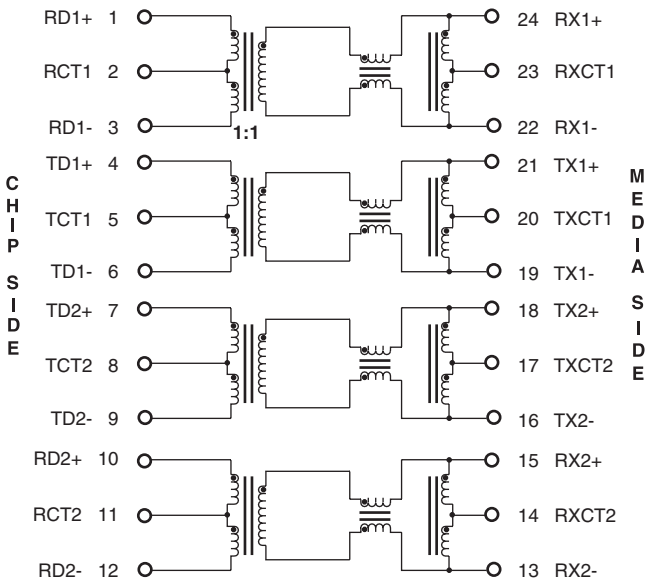

**H2006A**




**H2008**

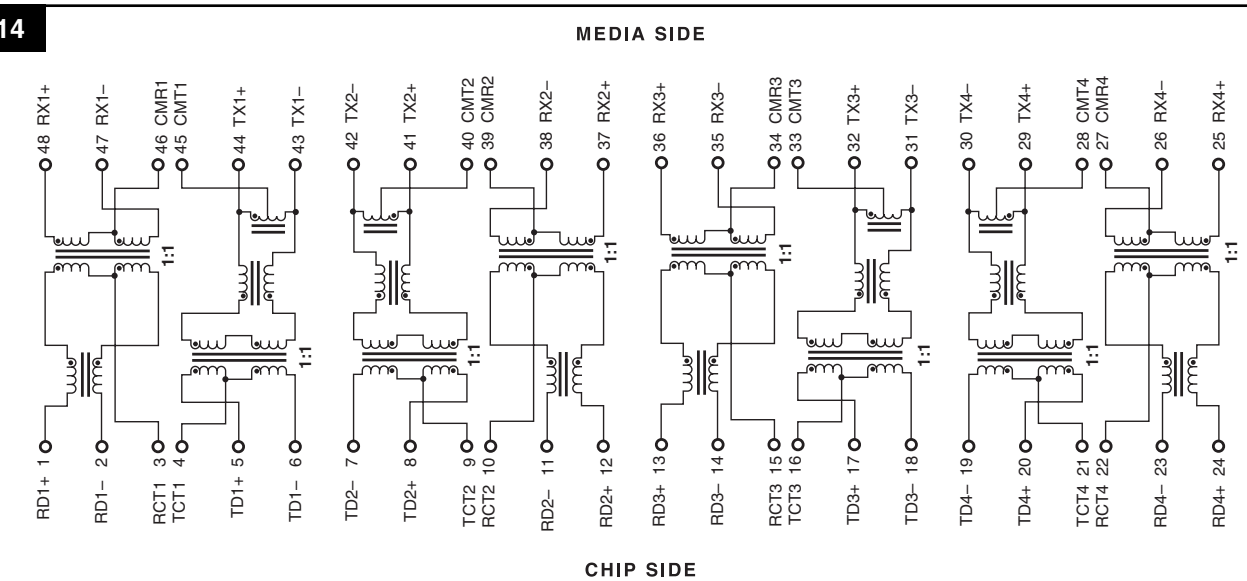



**H2009**

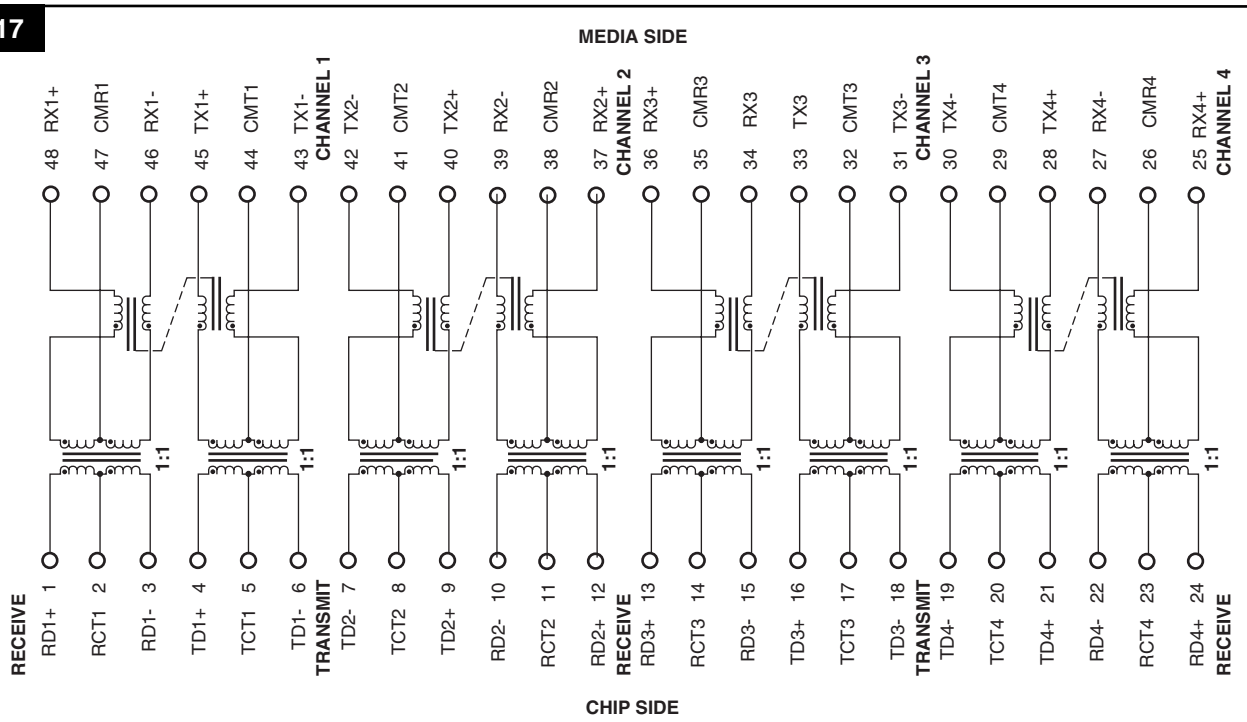


## Schematics *(continued)*

### H2014




### H2017




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