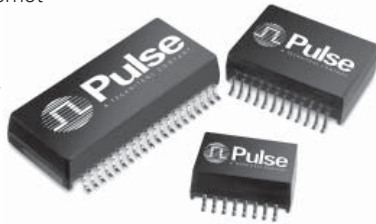


# Star Magnetics™

## 10/100BASE-T Transformer Modules

### with PoE\* Option and 1:1 Turns Ratios

\*Power over Ethernet



- RoHS-5 peak reflow temperature rating 235°C
- RoHS-6 peak reflow temperature rating 245°C
- Meets IEEE 802.3 specification
- Compact footprint

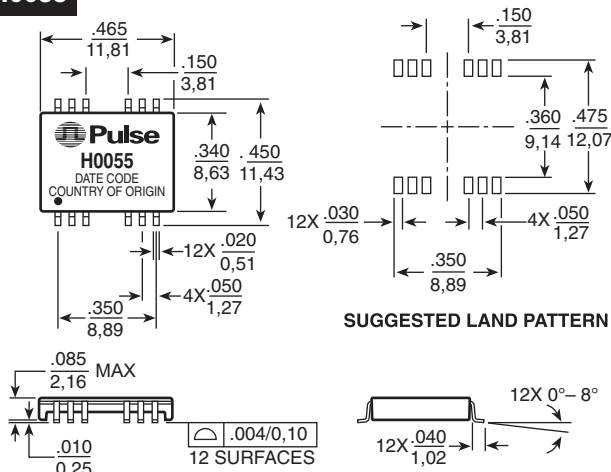
### Electrical Specifications @ 25°C — Operating Temperature 0°C to 70°C

| RoHS-6 <sup>7</sup><br>Compliant<br>Part<br>Number | RoHS-5 <sup>6</sup><br>Compliant<br>Part<br>Number | PoE              | Number<br>of<br>Ports | Insertion Loss<br>(dB MAX) |       |         | Return Loss<br>(Z out = 100 Ω ±15%) |        |        | Crosstalk<br>(adjacent channels,<br>dB MIN) |        |         | Hipot<br>(V <sub>RMS</sub> MIN) |
|--|--|------------------|-----------------------|----------------------------|-------|---------|-------------------------------------|--------|--------|---|--------|---------|---------------------------------|
|  |  |                  |                       | 0.1 MHz                    | 1 MHz | 100 MHz | 30 MHz                              | 60 MHz | 80 MHz | 30 MHz                                      | 60 MHz | 100 MHz |                                 |
| H0055NL <sup>1, 8a</sup>                           | H0055 <sup>1</sup>                                 | No               | 1                     | -2.5                       | —     | -1.0    | -16                                 | -10    | -10    | -45   | -40    | -33     | 1500                            |
| H0056NL <sup>2, 8a</sup>                           | —  | No               | 1                     | —                          | -0.8  | -0.9    | -16                                 | -10    | -10    | -45   | -40    | -33     | 1500                            |
| H1259NL <sup>8a</sup>                              | —  | No               | 4                     | -1.2                       | —     | -1.4    | -16                                 | -10    | -10    | -45   | -40    | -33     | 1500                            |
| HX1259NL <sup>3, 8a</sup>                          | HX1259 <sup>3</sup>                                | No               | 4                     | -1.2                       | —     | -1.4    | -16                                 | -10    | -10    | -45   | -40    | -33     | 1500                            |
| H1260NL <sup>8a</sup>                              | H1260  | No               | 1                     | -1.1                       | —     | -1.1    | -16                                 | -10    | -10    | -35   | -30    | -30     | 1500                            |
| HX1260NL <sup>3, 8a</sup>                          | —  | No               | 1                     | -1.1                       | —     | -1.1    | -16                                 | -10    | -10    | -35   | -30    | -30     | 1500                            |
| H1265NL <sup>7, 8a</sup>                           | —  | No               | 1                     | -1.3                       | —     | -1.0    | -16                                 | -10    | -10    | -40   | -38    | -33     | 1500                            |
| H1266NL <sup>7, 8a</sup>                           | H1266  | No               | 4                     | -1.2                       | —     | -1.0    | -16                                 | -10    | -10    | -45   | -40    | -30     | 1500                            |
| H1278NL <sup>7, 8a</sup>                           | H1278  | No               | 1                     | -1.1                       | —     | -1.0    | -16                                 | -10    | -10    | -45   | -40    | -33     | 1500                            |
| H1305NL <sup>8a</sup>                              | —  | No               | 2                     | -1.2                       | —     | -1.4    | -16                                 | -10    | -10    | -45   | -40    | -33     | 1500                            |
| HX1305NL <sup>3, 8a</sup>                          | —  | No               | 2                     | -1.2                       | —     | -1.4    | -16                                 | -10    | -10    | -45   | -40    | -33     | 1500                            |
| H2260NL <sup>8a</sup>                              | H2260  | Yes <sup>4</sup> | 1                     | -1.1                       | —     | -1.1    | -16                                 | -10    | -10    | -35   | -30    | -30     | 1500                            |
| HX2260NL <sup>3, 7, 8a</sup>                       | —  | Yes <sup>4</sup> | 1                     | -1.1                       | —     | -1.1    | -16                                 | -10    | -10    | -35   | -30    | -30     | 1500                            |
| H2305NL <sup>8a</sup>                              | —  | Yes <sup>4</sup> | 2                     | -1.2                       | —     | -1.4    | -16                                 | -10    | -10    | -45   | -40    | -33     | 1500                            |
| HX2305NL <sup>3, 8a</sup>                          | HX2305 <sup>3</sup>                                | Yes <sup>4</sup> | 2                     | -1.2                       | —     | -1.4    | -16                                 | -10    | -10    | -45   | -40    | -33     | 1500                            |

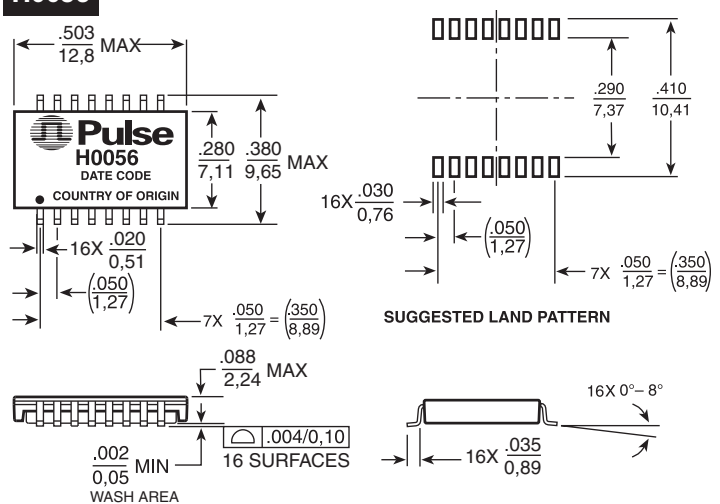
- H0055** is designed to meet 200 μH nom.
- H0056NL** is designed to meet 300 μH nom.
- Parts** offer extended operating temperature of -40 to +85°C
- These parts** are compliant to IEEE802.3af Power over Ethernet (PoE) standard.
- For Tape & Reel packaging**, add a "T" suffix to the end of the part number when ordering, e.g. H0056NLT
- 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).
- 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).
- MSL = Moisture Sensitivity Level:** a=1, b=2, c=3, d=4, e=5

## Mechanicals

### H0055



### H0056



Weight . . . . .355 grams  
Tape & Reel . . . 1000/reel  
Tube . . . . . 40/tube

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{.025}$

Weight . . . . .3 grams  
Tape & Reel . . . 2000/reel  
Tube . . . . . 40/tube

USA 858 674 8100 • Germany 49 7032 7806 0 • Singapore 65 6287 8998 • Shanghai 86 21 32181071 • China 86 755 33966678 • Taiwan 886 3 4643715

# Star Magnetics™

## 10/100BASE-T Transformer Modules

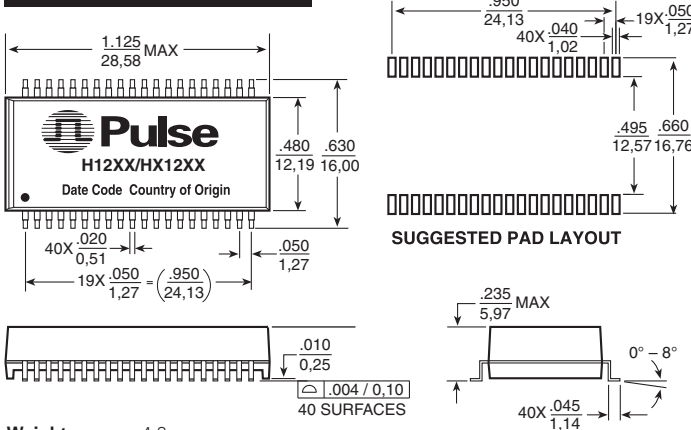
### with PoE\* Option and 1:1 Turns Ratios



\*Power over Ethernet

### Mechanicals (continued)

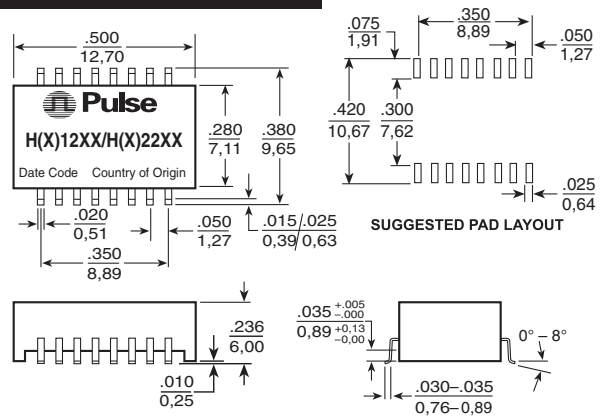
#### H1259, HX1259, H1266



Weight . . . . . 4.8 grams  
Tape & Reel . . . . . 250/reel  
Tube . . . . . 15/tube

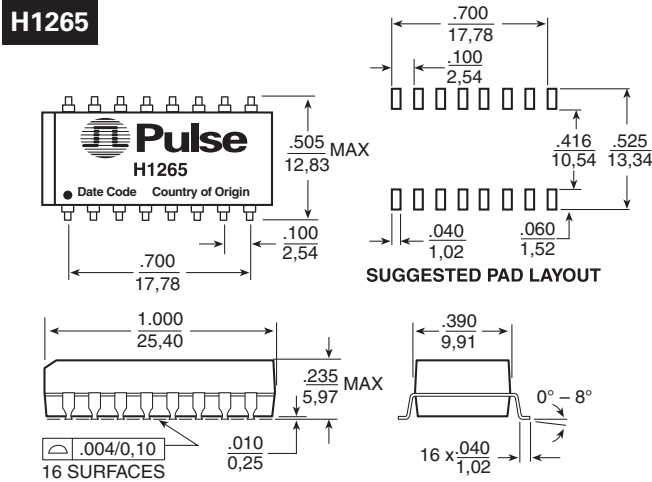
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

#### H1260, HX1260, H2260, HX2260



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

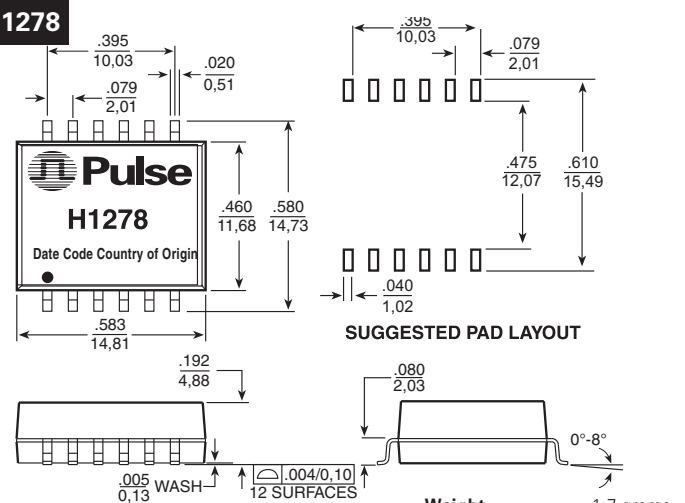
#### H1265



Weight . . . . . 3.0 grams  
Tube . . . . . 20/tube  
Tape & Reel . . . . . 300/reel

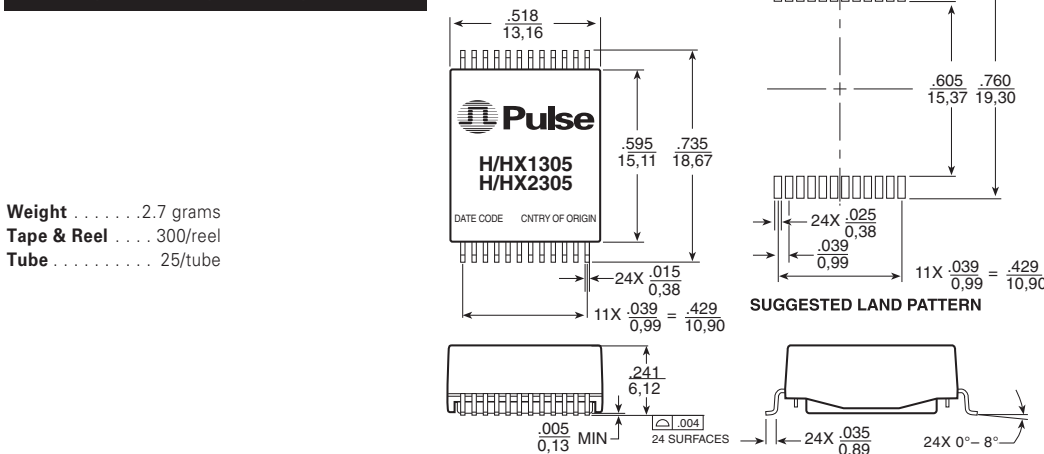
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$  Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0,25}$

#### H1278



Weight . . . . . 1.7 grams  
Tape & Reel . . . . . 350/reel  
Tube . . . . . 30/tube

#### H1305, HX1305, H2305, HX2305



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

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

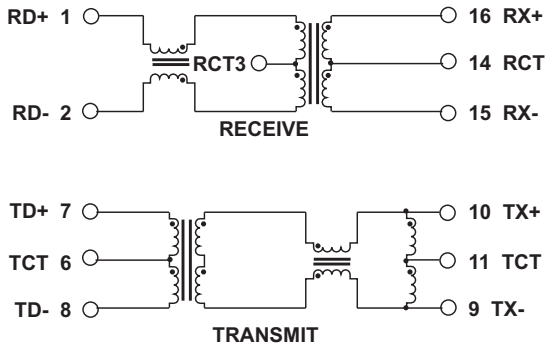
# Star Magnetics™ 10/100BASE-T Transformer Modules with PoE\* Option and 1:1 Turns Ratios

\*Power over Ethernet

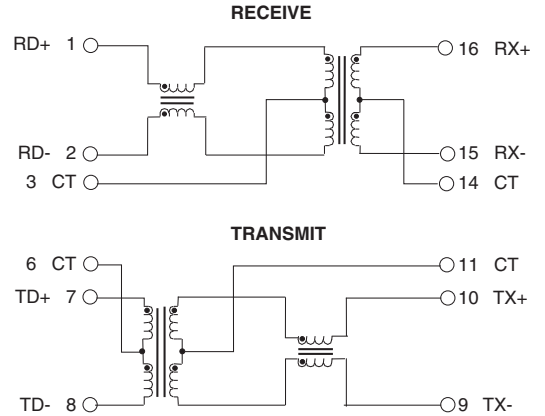


## Schematics

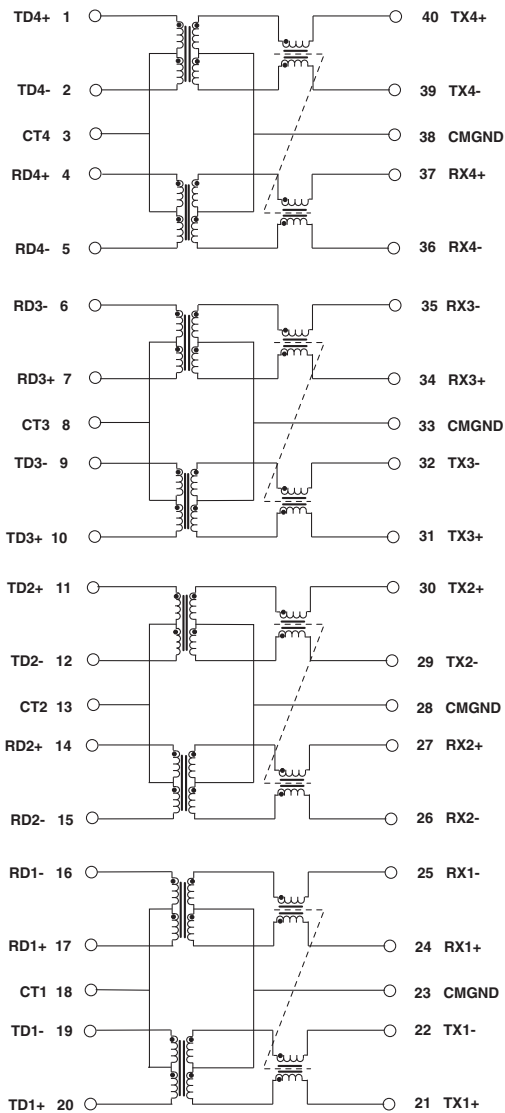
### H0055



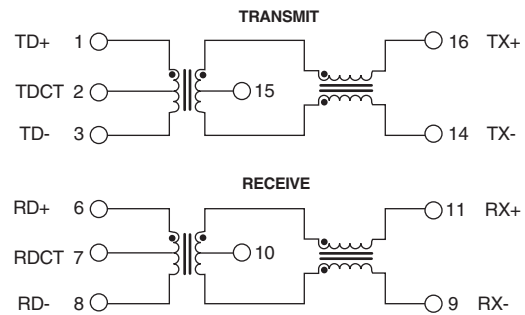
### H0056



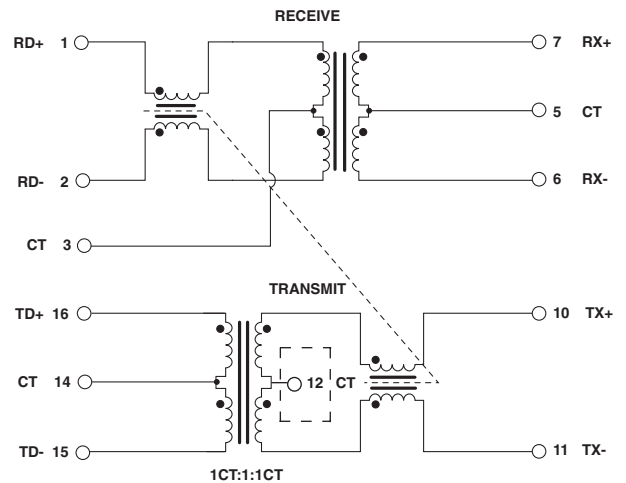
### H1259, HX1259



### H1260, HX1260



### H1265



H1265: 3-core design (T3 same toroid core)

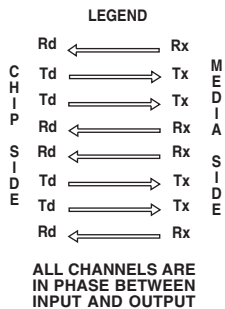
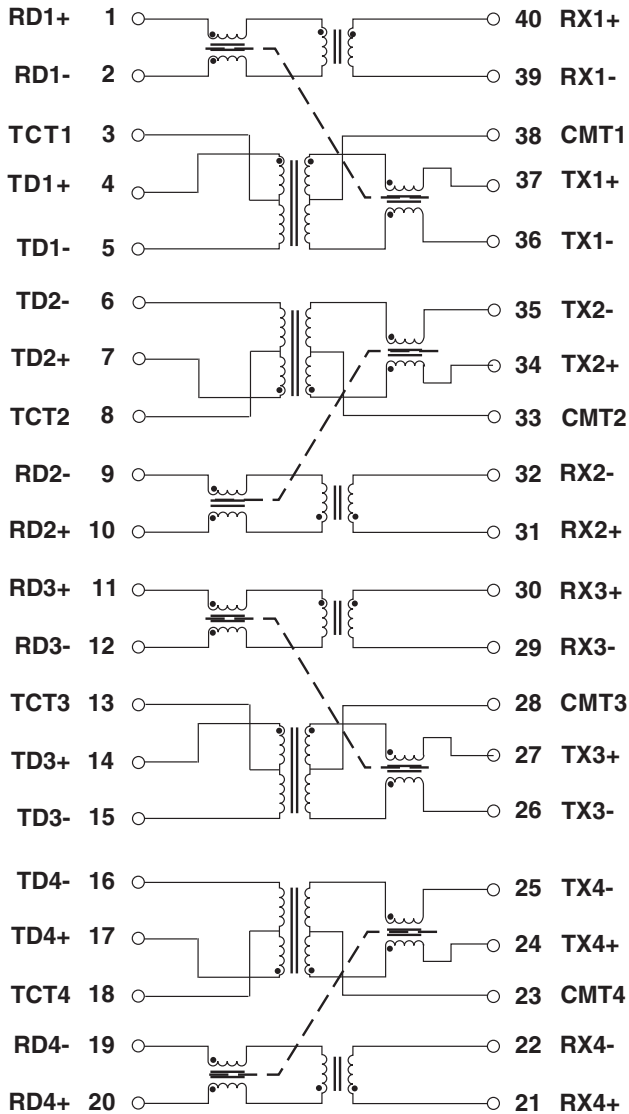
# Star Magnetics™ 10/100BASE-T Transformer Modules with PoE\* Option and 1:1 Turns Ratios



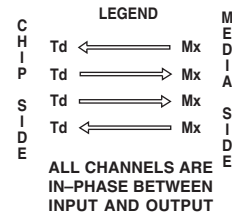
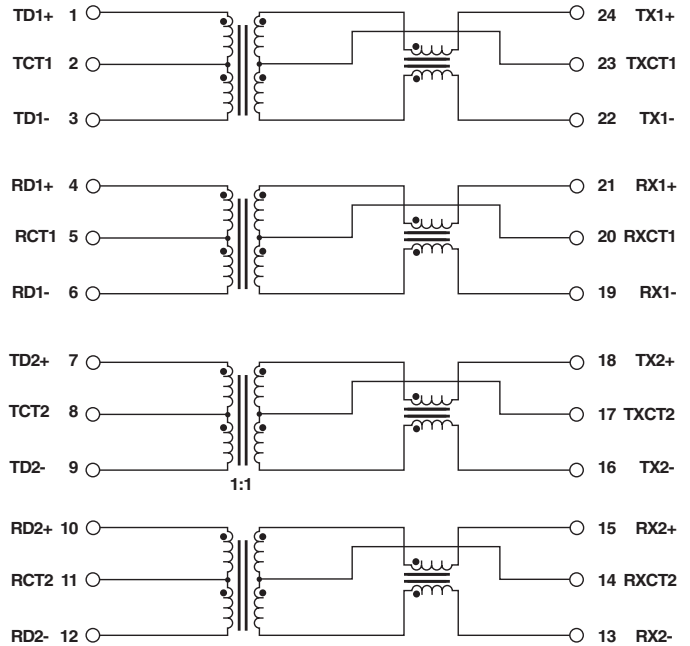
\*Power over Ethernet

## Schematics (continued)

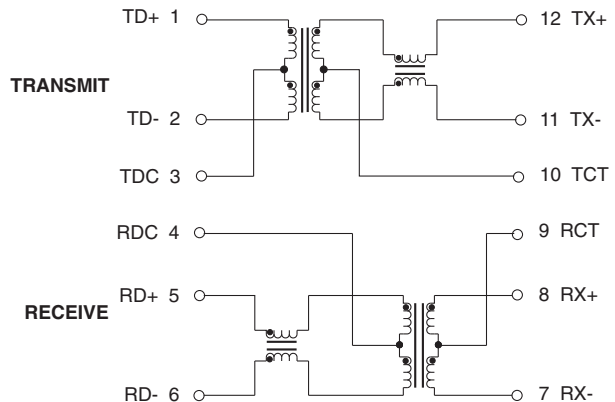
### H1266



### H1305, HX1305



### H1278



# Star Magnetics™

## 10/100BASE-T Transformer Modules

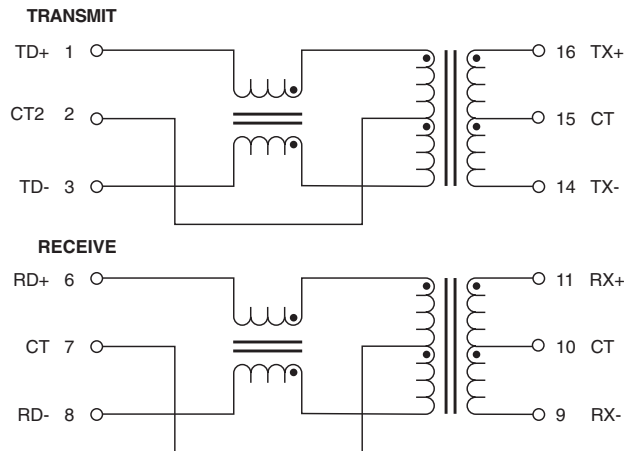
### with PoE\* Option and 1:1 Turns Ratios

\*Power over Ethernet

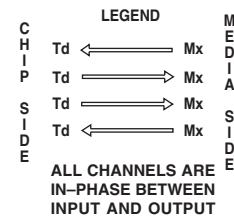
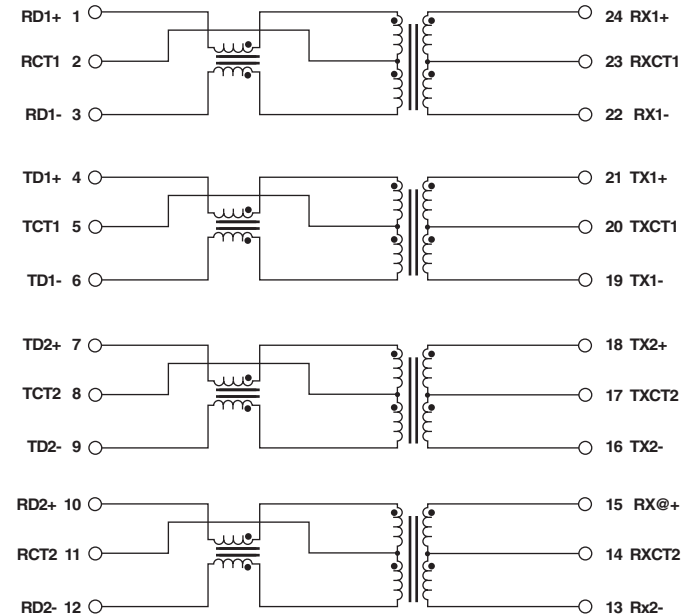


### Schematics (continued)

#### H2260, HX2260



#### H2305, HX2305



### For More Information:

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