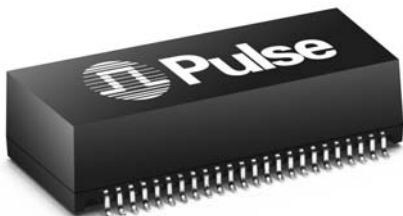


# 1000BASE-T DUAL PORT MAGNETIC MODULES

## Designed to Support 1:1 Turns Ratio Transceivers



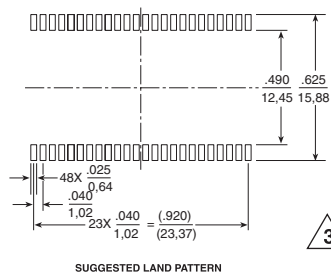
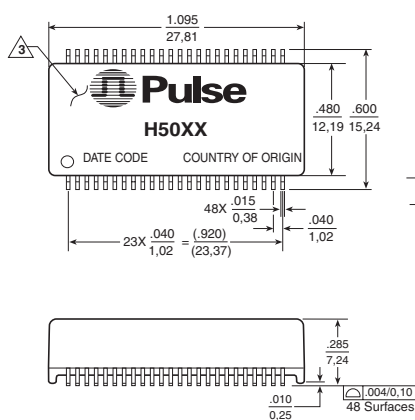
-  Designed for Ethernet 100/1000Base-T full duplex applications
-  Supports 4 pairs of category 5 UTP cable
-  Cable interface for isolation and low common mode emissions
-  Compliant with IEEE 802.3ab standard for 1000Base-T

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

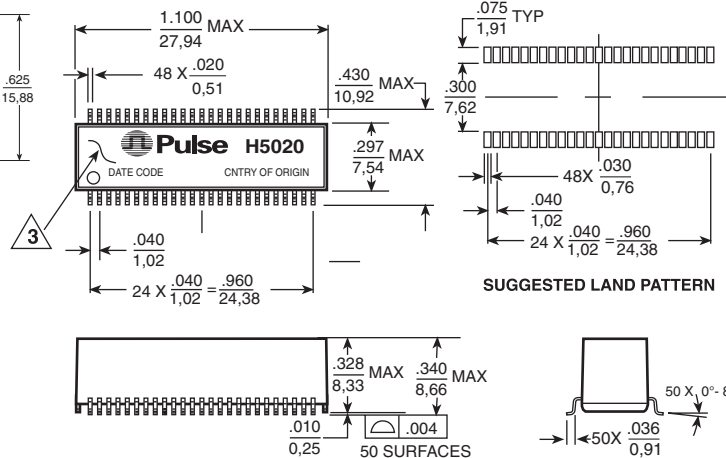
| Part Number | Insertion Loss<br>(dB MAX) | Return Loss<br>(dB MIN @ 100 Ω) |        |        |           |         | Differential to Common<br>Mode Rejection<br>(dB MIN) |        |         | Crosstalk<br>(dB MIN) |        |         | Hipot<br>(Vrms MIN) |
|-------------|----------------------------|---------------------------------|--------|--------|-----------|---------|------------------------------------------------------|--------|---------|-----------------------|--------|---------|---------------------|
|             | 1-100 MHz                  | 1-30 MHz                        | 40 MHz | 50 MHz | 60-80 MHz | 100 MHz | 30 MHz                                               | 60 MHz | 100 MHz | 30 MHz                | 60 MHz | 100 MHz |                     |
| H5012       | -1.4                       | -16                             | -14.4  | -13.1  | -12       | -10     | -45                                                  | -40    | -35     | -43.5                 | -37.5  | -33     | 1500                |
| H5014       | -1.4                       | -16                             | -14.4  | -13.1  | -12       | -10     | -45                                                  | -40    | -35     | -43.5                 | -37.5  | -33     | 1500                |
| H5020       | 1.0                        | -18                             | -14.4  | -13.1  | -12       | -10     | -40                                                  | -35    | -30     | -40                   | -35    | -30     | 1500                |

### Mechanicals

#### H5012, H5014



#### H5020



SUGGESTED LAND PATTERN

Weight ..... 4.0 grams  
Tape & Reel ..... .250/reel  
Tube ..... .15/tube

Weight ..... 1.6 grams  
Tape & Reel ..... .250/reel  
Tube ..... .15/tube

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

# 1000BASE-T DUAL PORT MAGNETIC MODULES

Designed to Support 1:1 Turns  
Ratio Transceivers



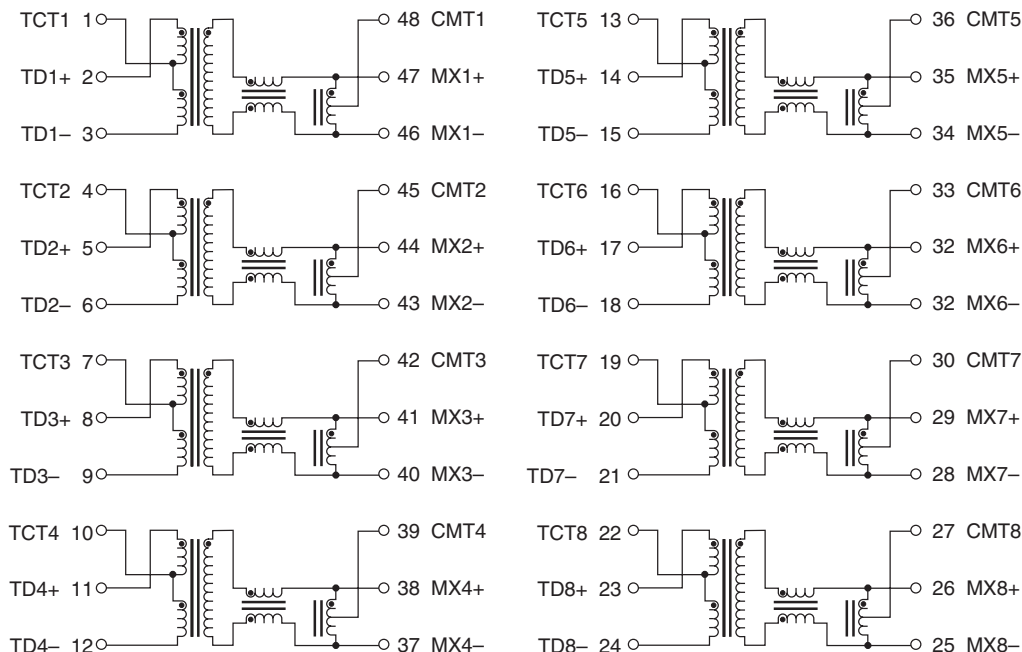
## Schematics

### H5012

LEGEND  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx

CHIP SIDE  
MEDIA SIDE

ALL CHANNELS ARE  
IN PHASE BETWEEN  
INPUT AND OUTPUT

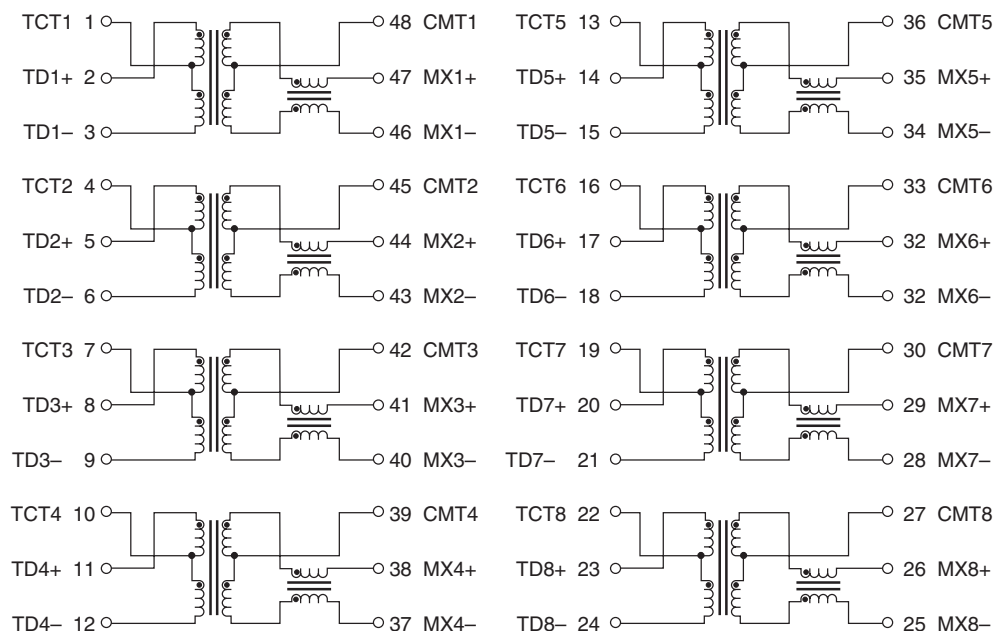


### H5014

LEGEND  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx  
Td  $\longleftrightarrow$  Mx

CHIP SIDE  
MEDIA SIDE

ALL CHANNELS ARE  
IN PHASE BETWEEN  
INPUT AND OUTPUT



# 1000BASE-T DUAL PORT MAGNETIC MODULES

Designed to Support 1:1 Turns  
Ratio Transceivers



## Schematics (continued)

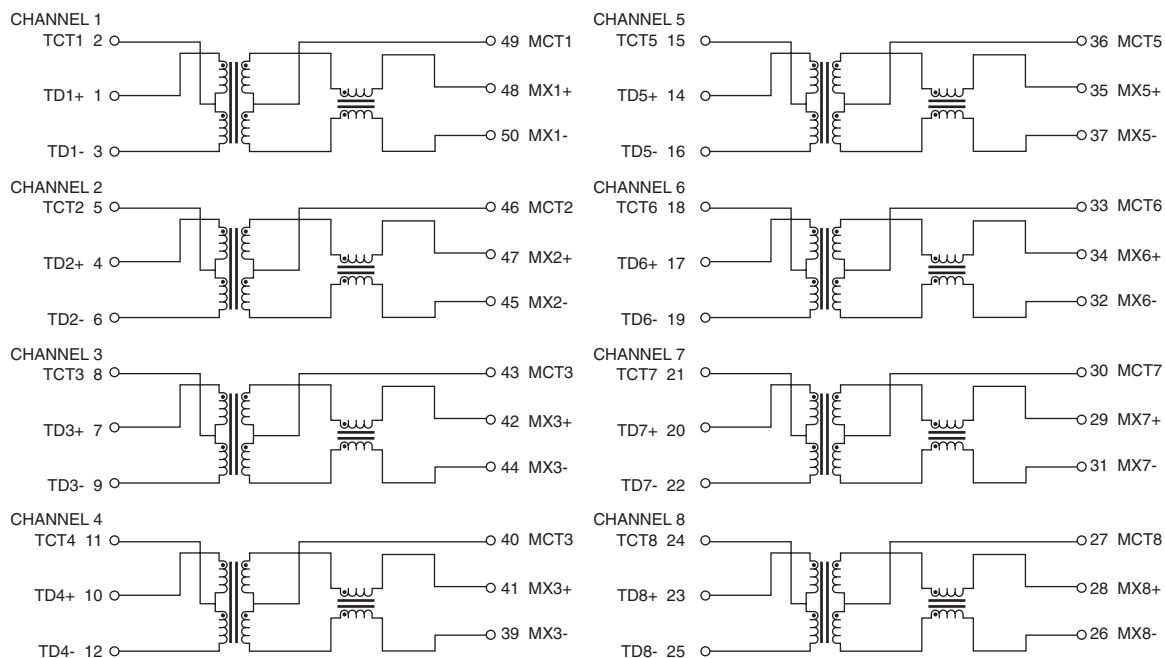
**H5020**

**LEGEND**

Td  $\longleftrightarrow$  Mx  
 Td  $\longleftrightarrow$  Mx  
 Td  $\longleftrightarrow$  Mx  
 Td  $\longleftrightarrow$  Mx  
 Td  $\longleftrightarrow$  Mx  
 Td  $\longleftrightarrow$  Mx  
 Td  $\longleftrightarrow$  Mx

**CHIP SIDE**      **MEDIA SIDE**

ALL CHANNELS ARE  
IN PHASE BETWEEN  
INPUT AND OUTPUT



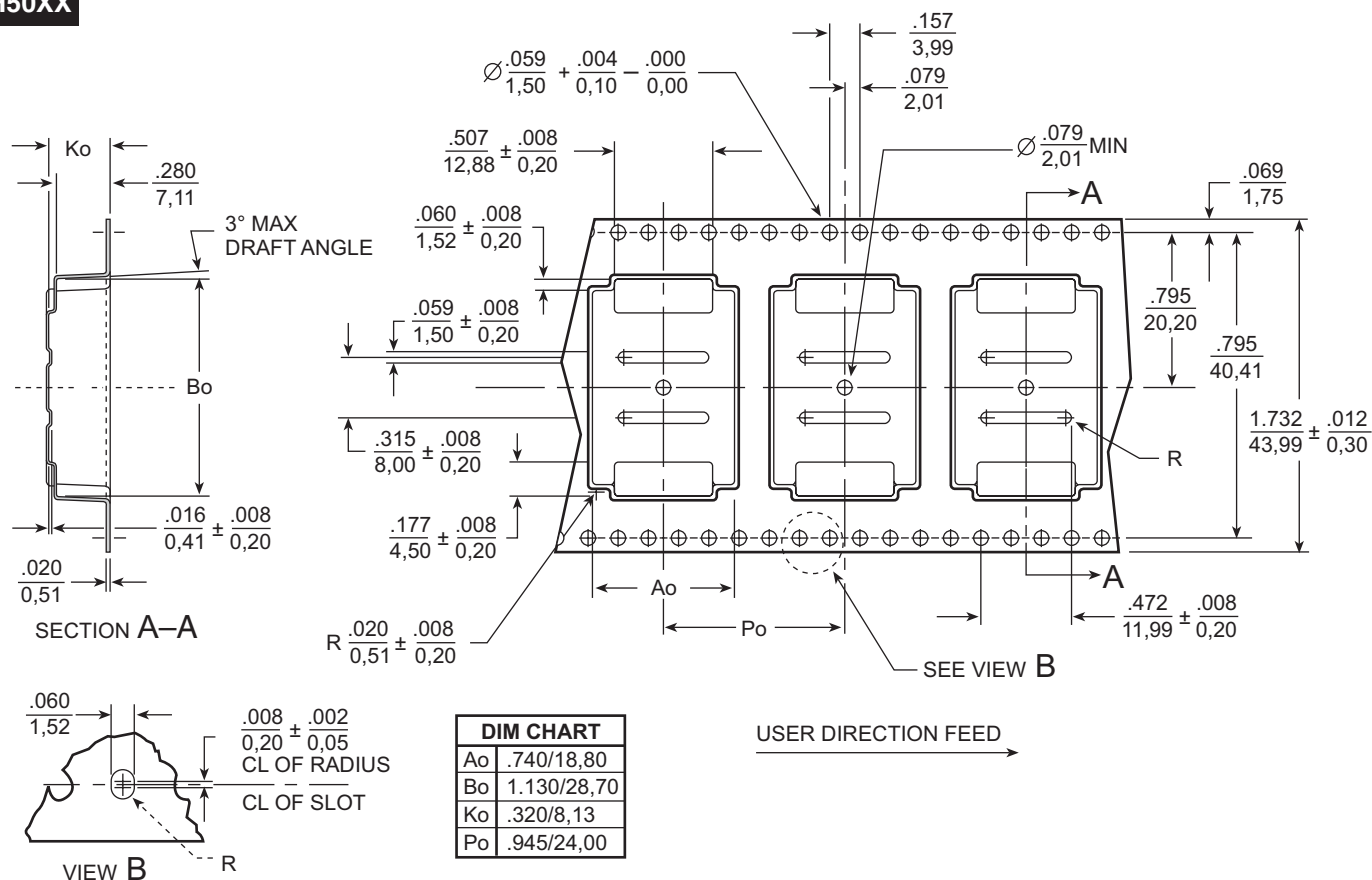
# 1000BASE-T DUAL PORT MAGNETIC MODULES

Designed to Support 1:1 Turns  
Ratio Transceivers



## Tape & Reel Specifications

**H50XX**



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**H503.B (7/02)**