

# 10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES



- ☉ Compliant with IEEE 802.ab for 1000Base-T
  - ☉ 350μH OCL with 8mA bias at extended temperatures
  - ☉ Operating and storage temperature:
    - 1000B-5001F/5002F/5003F: -40°C to +85°C**
    - 1000B-5001FX/5002FX/5003FX: -55°C to +125°C**
  - ☉ IC grade transfer-molded package withstands 235°C peak
  - ☉ temperature profile RoHS version withstands 245°C
- MSL: 3**

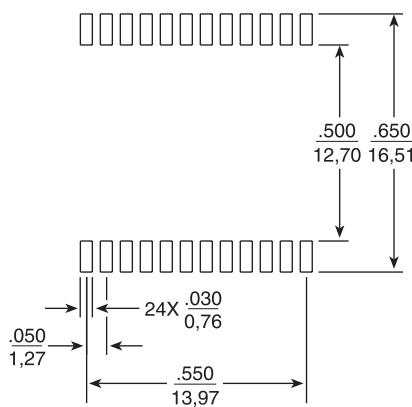
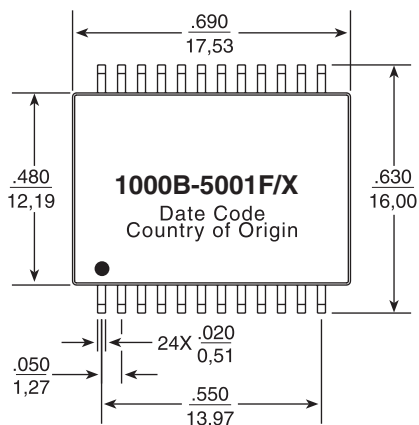
**Electrical Specifications @ 25°C**

Part Number <sup>2</sup>	Insertion Loss (dB Min)	Return Loss (dB Max)				Crosstalk (dB Max)			CM to CM Rejection Ratio (dB Max)			DM to CM Rejection Ratio (dB Max)		
		0.1-100 Mhz	30 Mhz	60 Mhz	80 Mhz	100 Mhz	30 Mhz	60 Mhz	100 Mhz	30 Mhz	60 Mhz	100 Mhz	30 Mhz	60 Mhz
1000B-5001F	-1.20	-18	-12	-10	-10	-43	-37	-33	-40	-35	-30	-43	-37	-33
1000B-5001FX	-1.40	-18	-12	-10	-8	-43	-37	-33	-40	-35	-30	-43	-37	-33
1000B-5002F	-1.20	-18	-14	-12	-10	-43	-37	-33	-40	-35	-30	-43	-37	-33
1000B-5002FX	-1.20	-18	-14	-12	-10	-43	-37	-33	-40	-35	-30	-43	-37	-33
1000B-5003F	-1.20	-18	-14	-11	-9	-43	-37	-33	-40	-35	-30	-43	-37	-33
1000B-5003FX	-1.20	-18	-14	-11	-9	-43	-37	-33	-40	-35	-30	-43	-37	-33

**Note: 1.** Add suffix NL for RoHS compliant part; i.e. 1000B-5001F becomes 1000B-5001FNL. **2.** For Tape and Reel Packaging, add "T" suffix at the end of the part number; i.e. 1000B-5001FXT.

## Mechanical

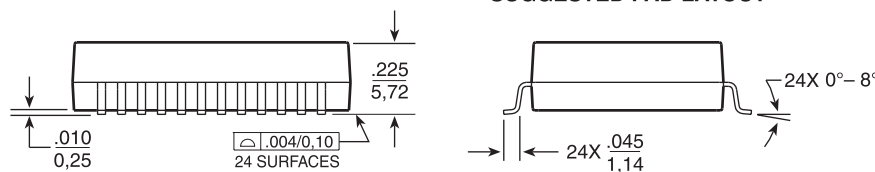
**1000B-5001F/X**



Weight ..... 3.0 grams  
Tape and Reel ..... 300/reel  
Tube ..... .25/tube

**Dimensions:**  $\frac{\text{Inches}}{\text{mm}}$   
Unless otherwise specified, all tolerances are  $\pm \frac{.010}{0.25}$

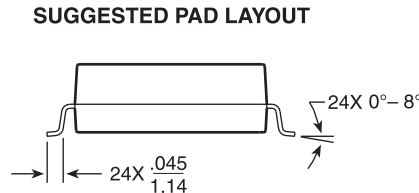
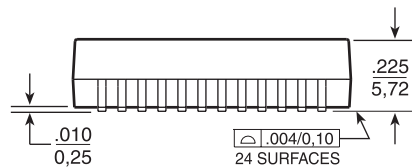
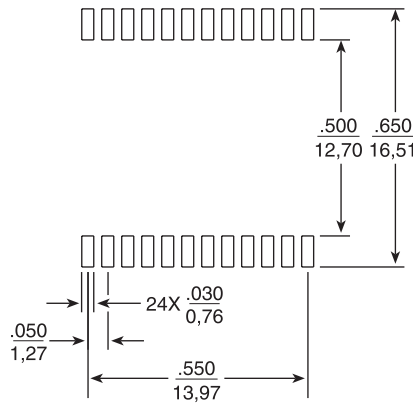
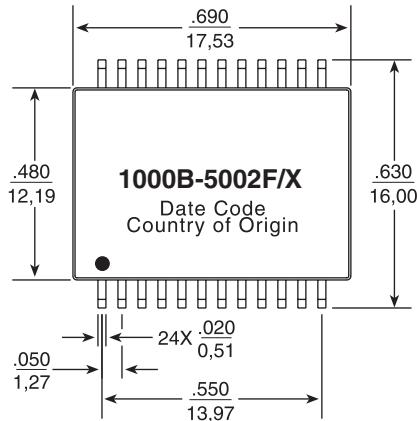
**SUGGESTED PAD LAYOUT**



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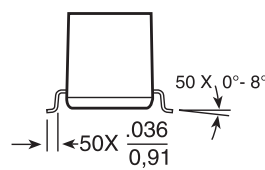
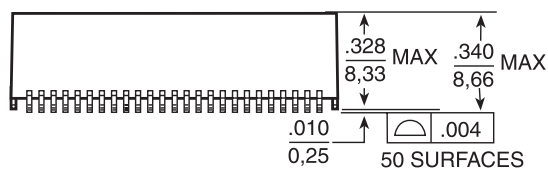
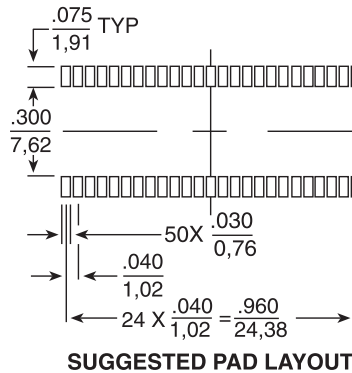
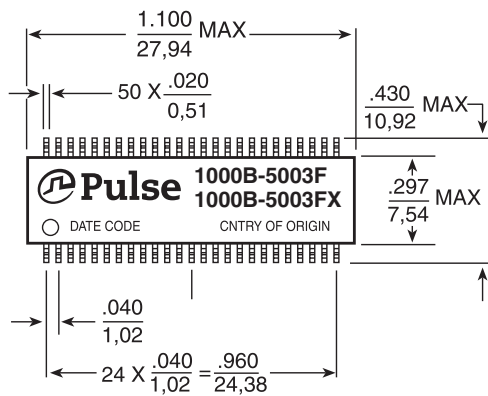
## 1000B-5002F/X



Weight . . . . . 2.6 grams  
Tape and Reel . . . . . 300/reel  
Tube . . . . . 25/tube

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

## 1000B-5003F/X



Weight . . . . . 3.5 grams  
Tape and Reel . . . . . 250/reel  
Tube . . . . . 15/tube

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

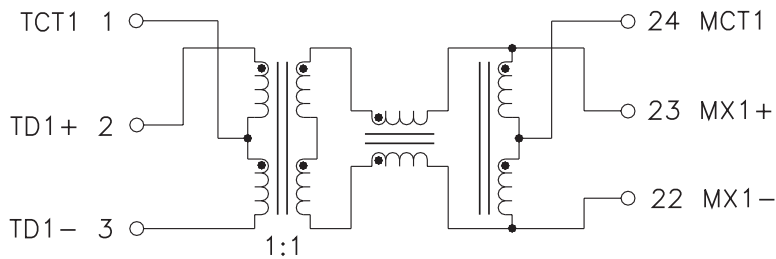
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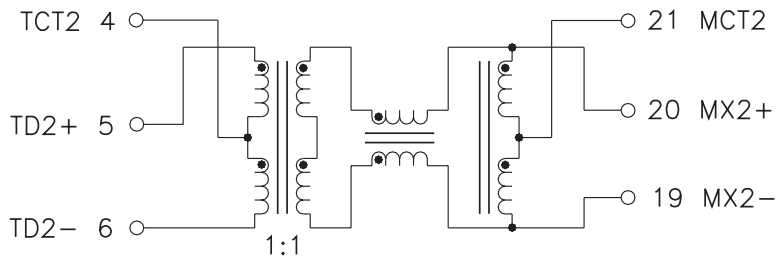
## Electrical Schematic

1000B-5001F/X

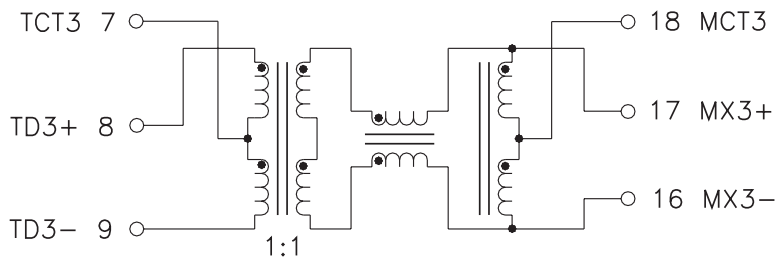
CHANNEL 1



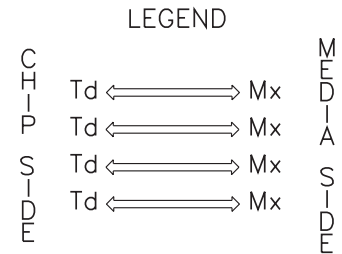
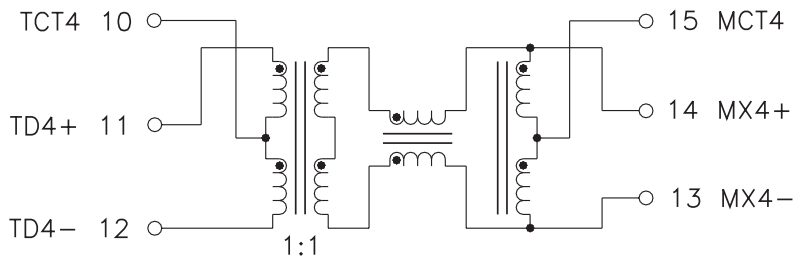
CHANNEL 2



CHANNEL 3



CHANNEL 4



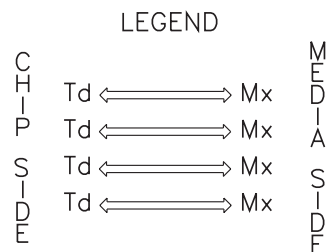
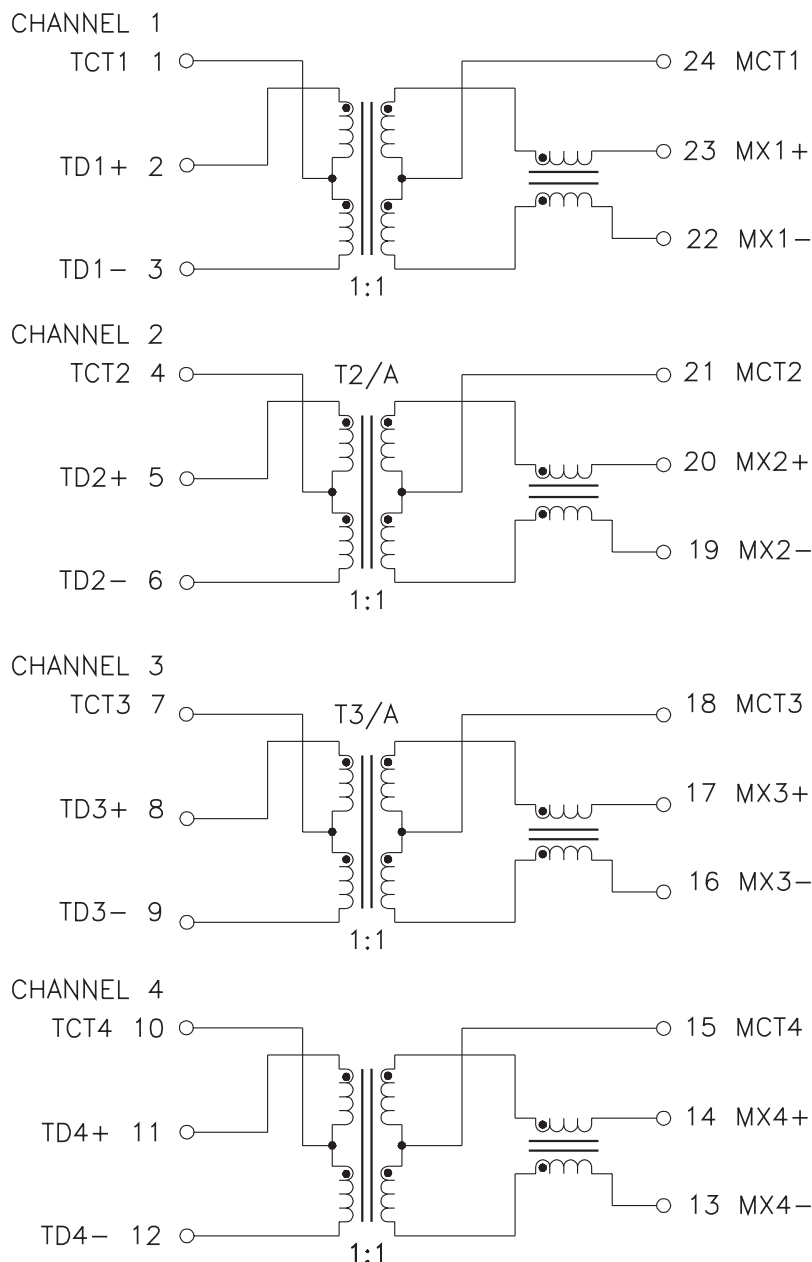
ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT

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## Electrical Schematic

1000B-5002F/X



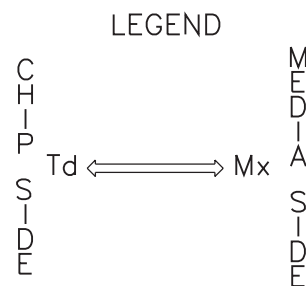
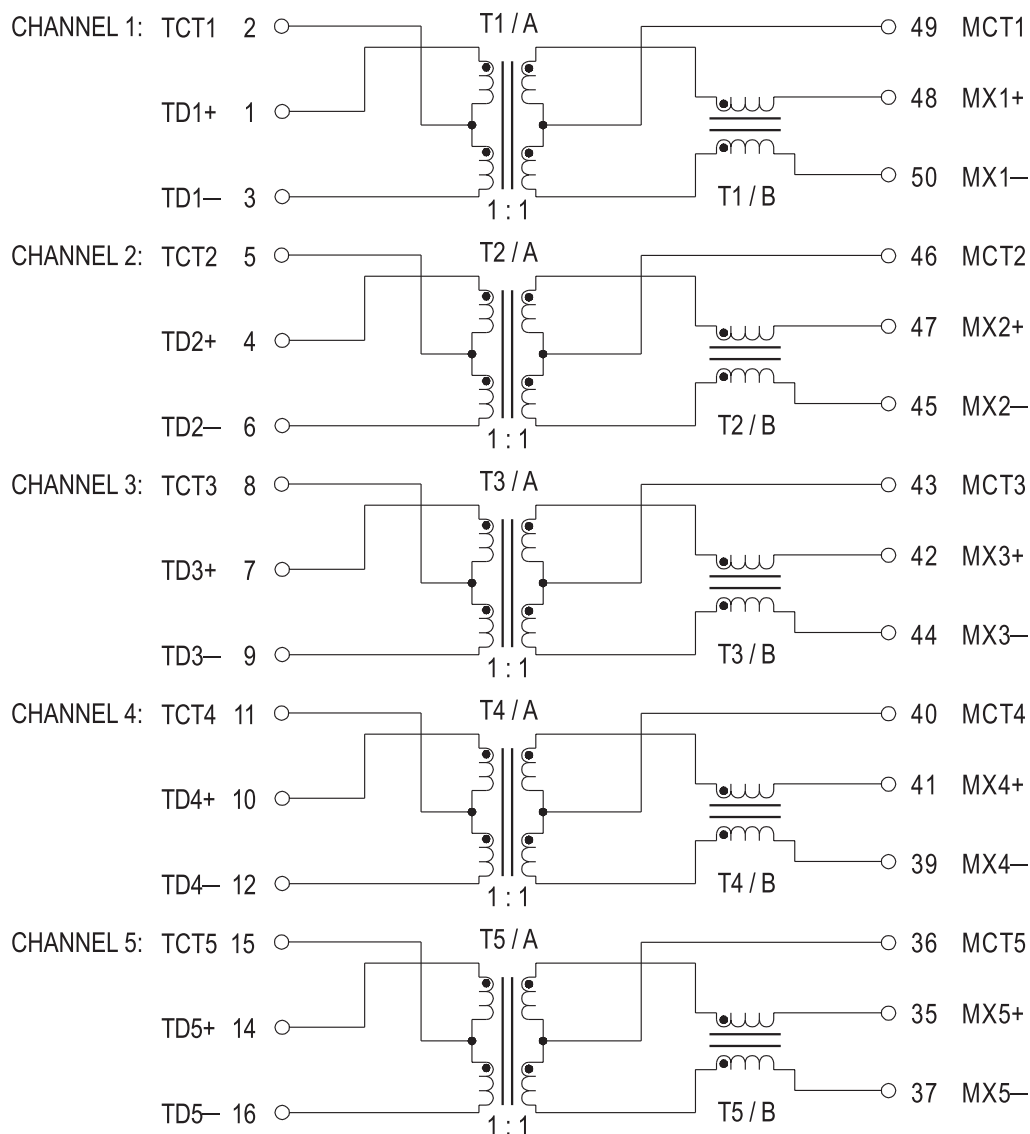
ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT

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## Electrical Schematic

1000B-5003F/X



ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT

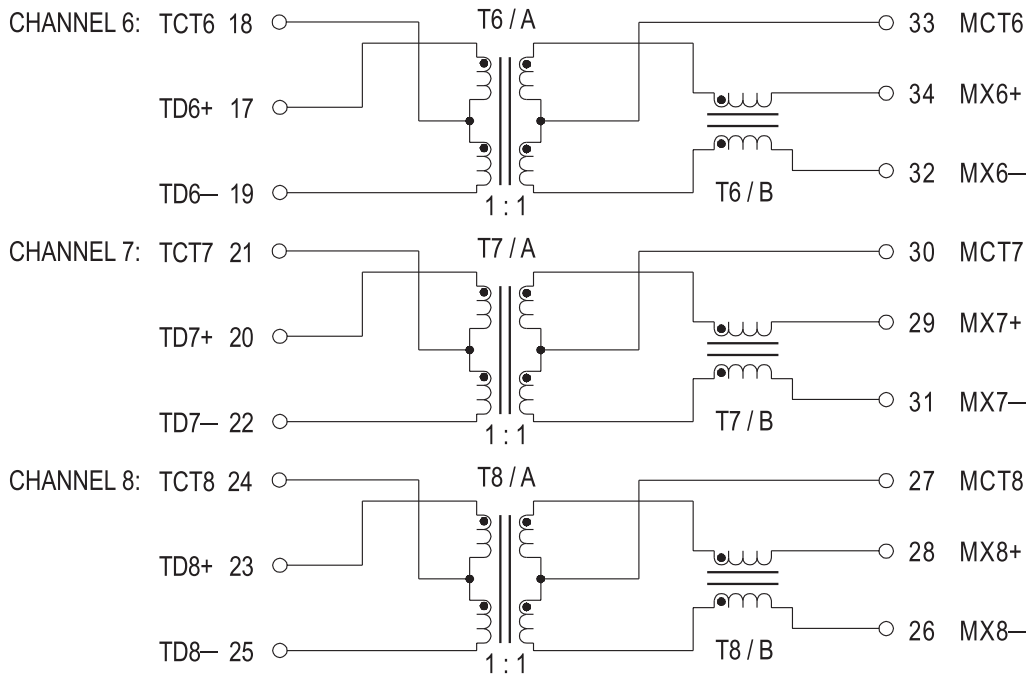
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## Electrical Schematic

**1000B-5003F/X (cont.)**



LEGEND

C  
H  
I  
P  
S  
I  
D  
E

Td ↔ Mx

M  
E  
D  
I  
A  
S  
I  
D  
E

ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT