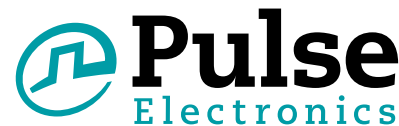


# 10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

Military / Aerospace Grade



- ✔ Compliant with IEEE 802.ab for 1000Base-T
- ✔ 350μH OCL with 8mA bias at extended temperatures
- ✔ Two Operating and Storage Temperature Versions Available:
  - Standard: **-40°C to +85°C**
  - Extended: **-55°C to +125°C**
- ✔ IC grade transfer molded package 235°C peak reflow temperature for non-RoHS versions (MSL 3)
- ✔ 245°C peak reflow temperature for RoHS versions (MSL 4)
- ✔ Lead finish: Sn63/Pb37 (RoHS compliant version available with 100% pure tin)

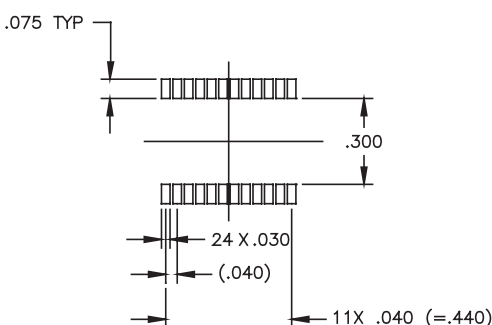
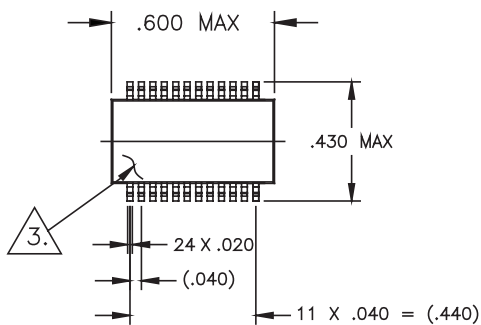
## Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C

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)			Hipot (Vrms)
		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-5009F	-1.2	-18	-12	-12	-10	-43	-37	-31	-30	-25	-18	-40	-35	-30	1500
1000B-5012F	-1	-18	-12	-12	-10	-43	-37	-33	-43	-37	-33	-43	-37	-33	1500
1000B-5014F	-1.4	-16	-12	-12	-10	-43	-37	-33	-45	-40	-35	-43	-37	-33	1500
1000B-5016F	-1.2	-18	-12	-12	-10	-43	-37	-31	-30	-23	-17	-40	-35	-30	1500

Note: 1. Add suffix X for extended temperature version; i.e. 1000B-5009F becomes 1000B-5009FX. 3. For Tape & Reel Packaging, add "T" suffix at the end of the part number; i.e. 1000B-5014FT  
 2. Add suffix NL for RoHS compliant part; i.e. 1000B-5012F becomes 1000B-5012FNL.

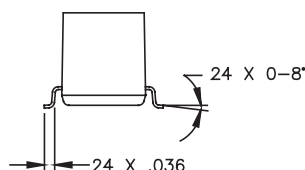
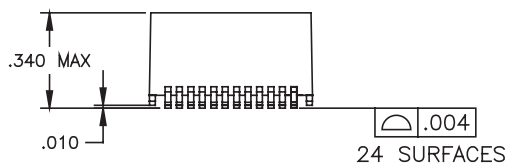
## Mechanicals

### 1000B-5009F/X



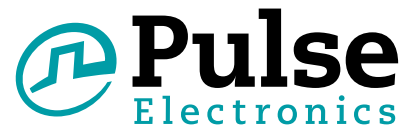
Weight ..... 0.75 grams  
 Tape and Reel ..... 250/reel  
 Tube ..... 15/tube

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

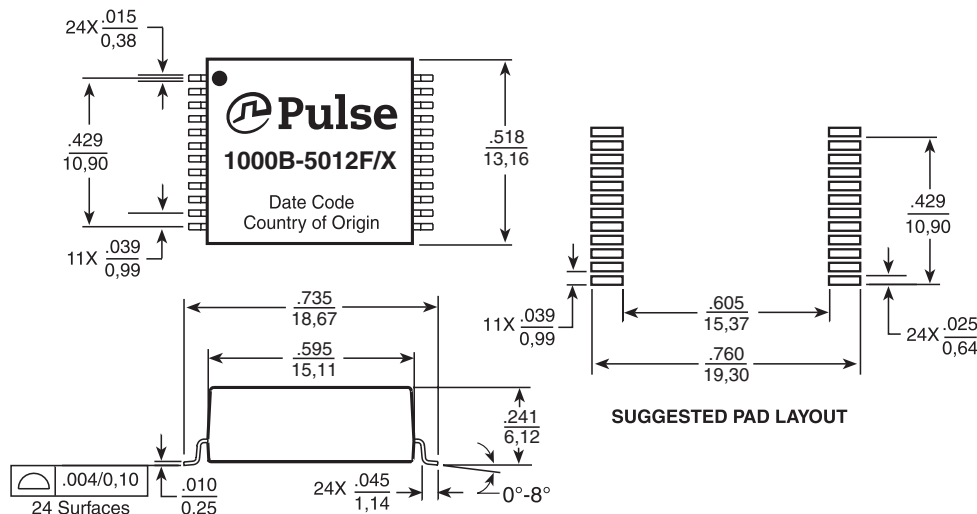


# 10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

Military / Aerospace Grade



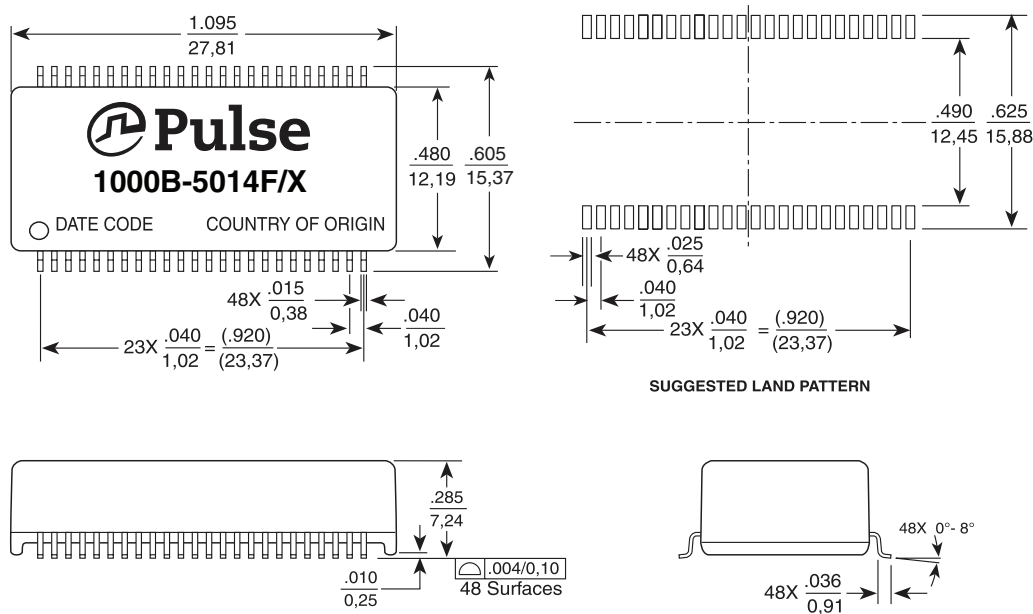
## 1000B-5012F/X



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

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

## 1000B-5014F/X

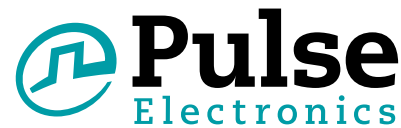


Weight ..... 3.0 grams  
Tape and Reel ..... 300/reel  
Tube ..... .25/tube

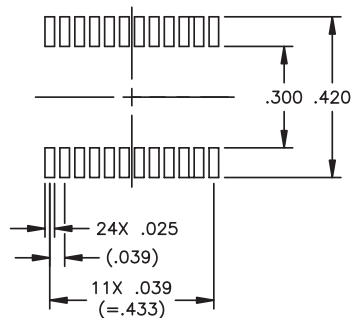
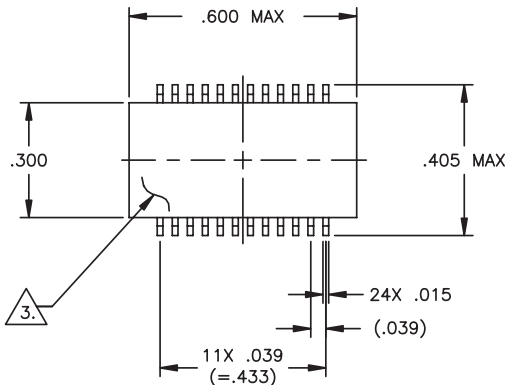
Dimensions:  $\frac{\text{Inches}}{\text{mm}}$   
Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0,25}$

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

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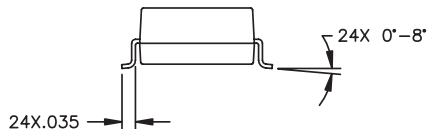
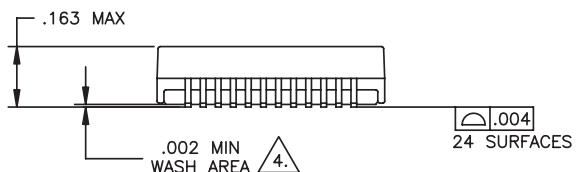
## 1000B-5016F/X



Weight . . . . . 0.75 grams  
 Tape and Reel . . . . . 700/reel  
 Tube . . . . . .30/tube

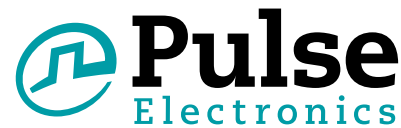
Dimensions: Inches  
 mm  
 Unless otherwise specified,  
 all tolerances are  $\pm \frac{.010}{0.25}$

SUGGESTED LAND PATTERN



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

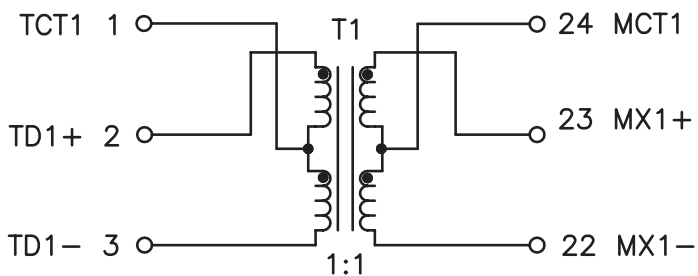
Military / Aerospace Grade



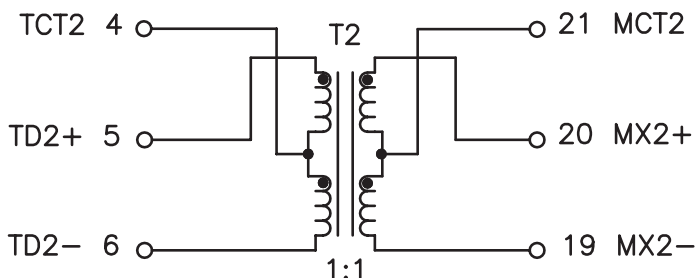
## Electrical Schematics

1000B-5009F/X

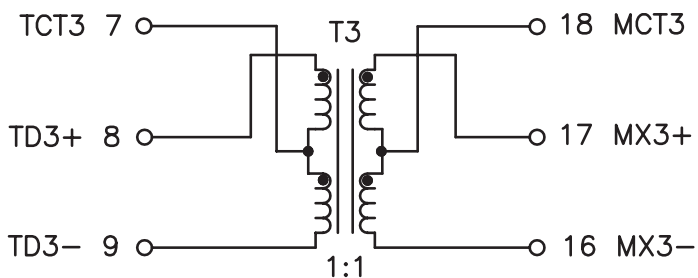
### CHANNEL 1



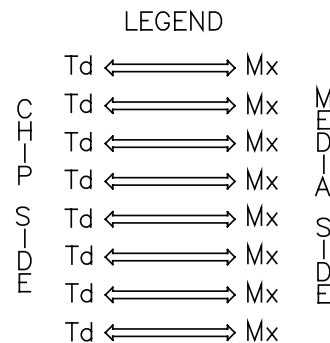
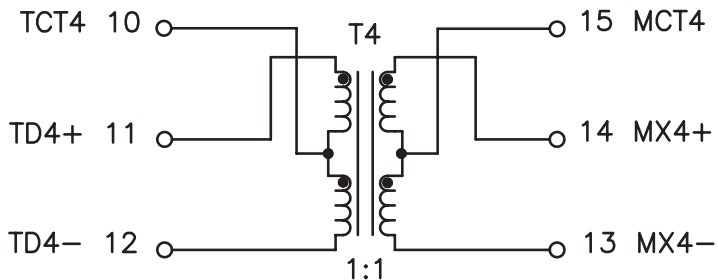
### CHANNEL 2



### CHANNEL 3



### CHANNEL 4



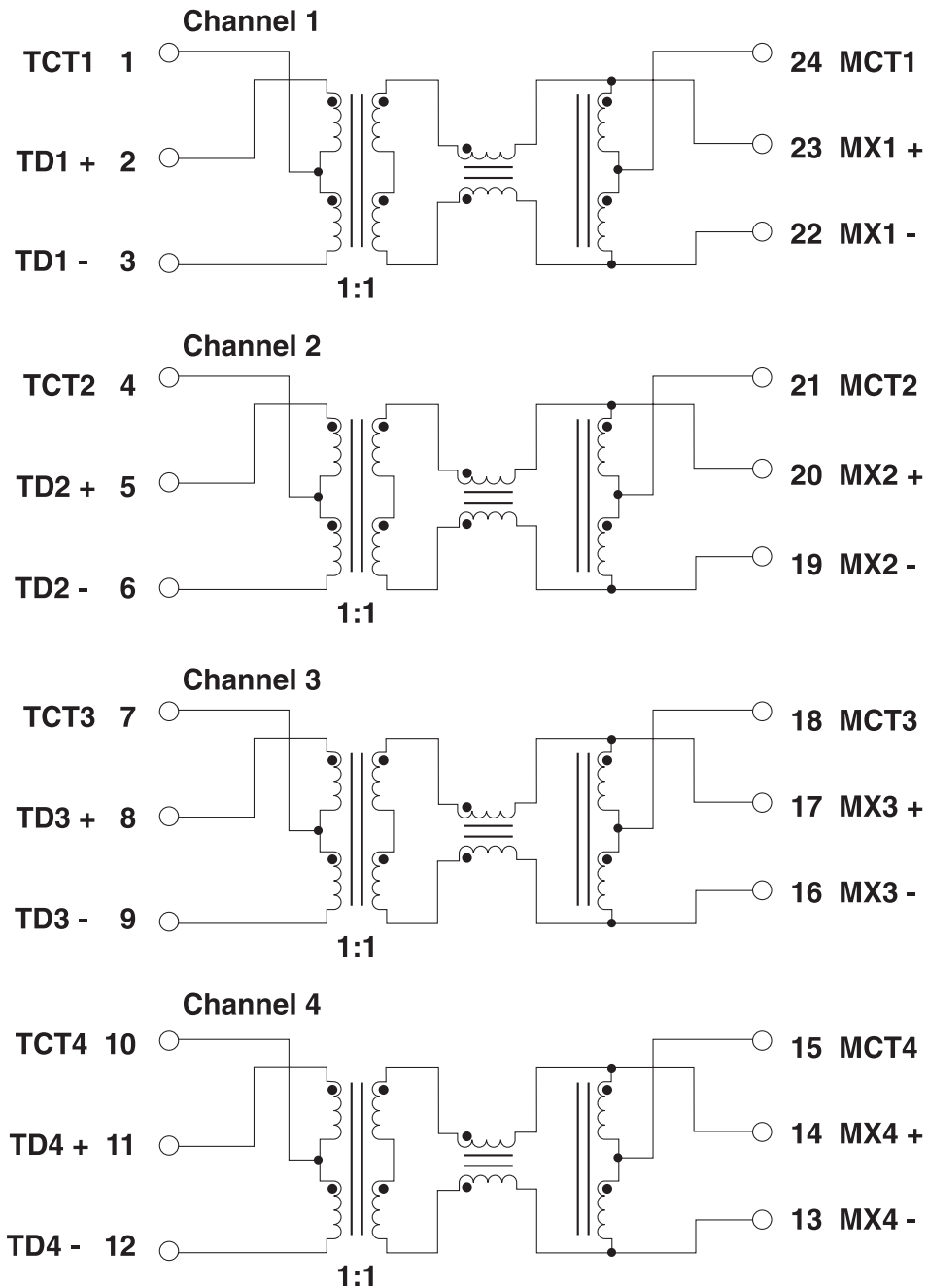
ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT

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

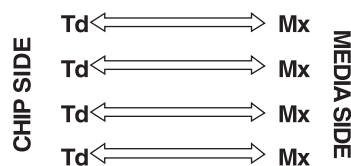
Military / Aerospace Grade



1000B-5012F/X

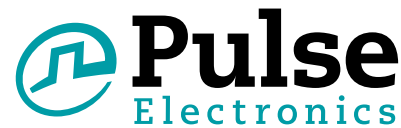


### LEGEND

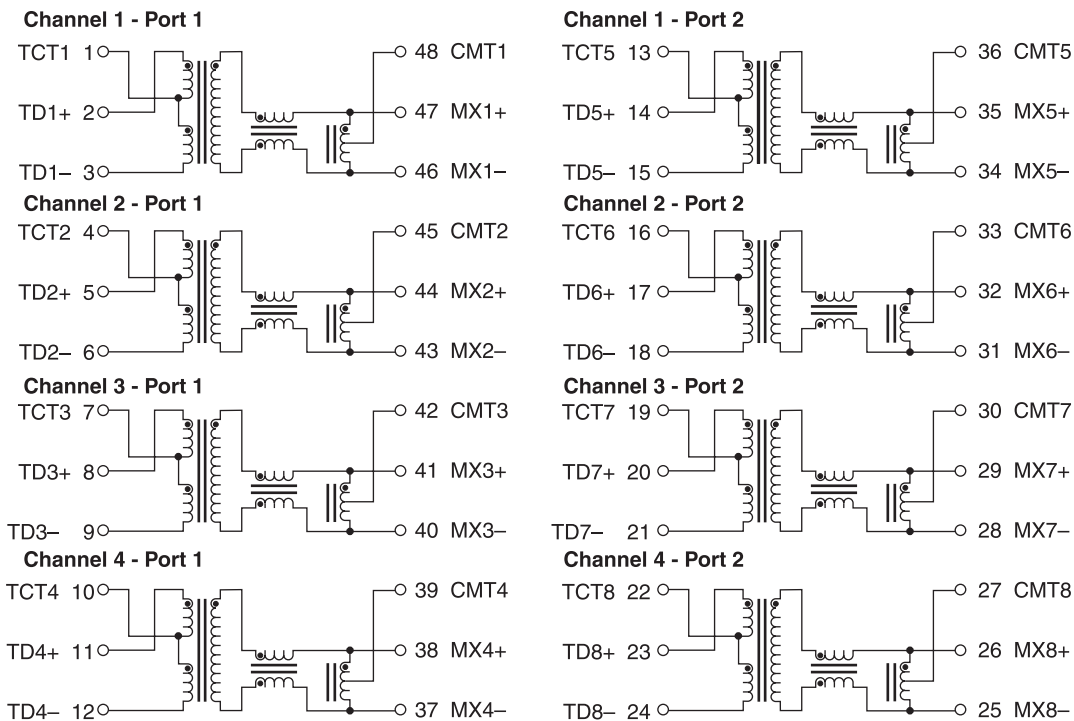


# 10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

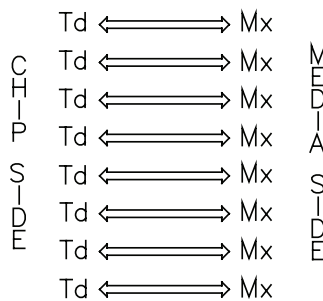
Military / Aerospace Grade



1000B-5014F/X



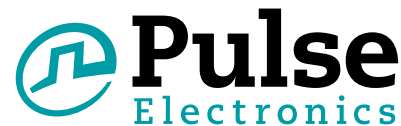
## LEGEND



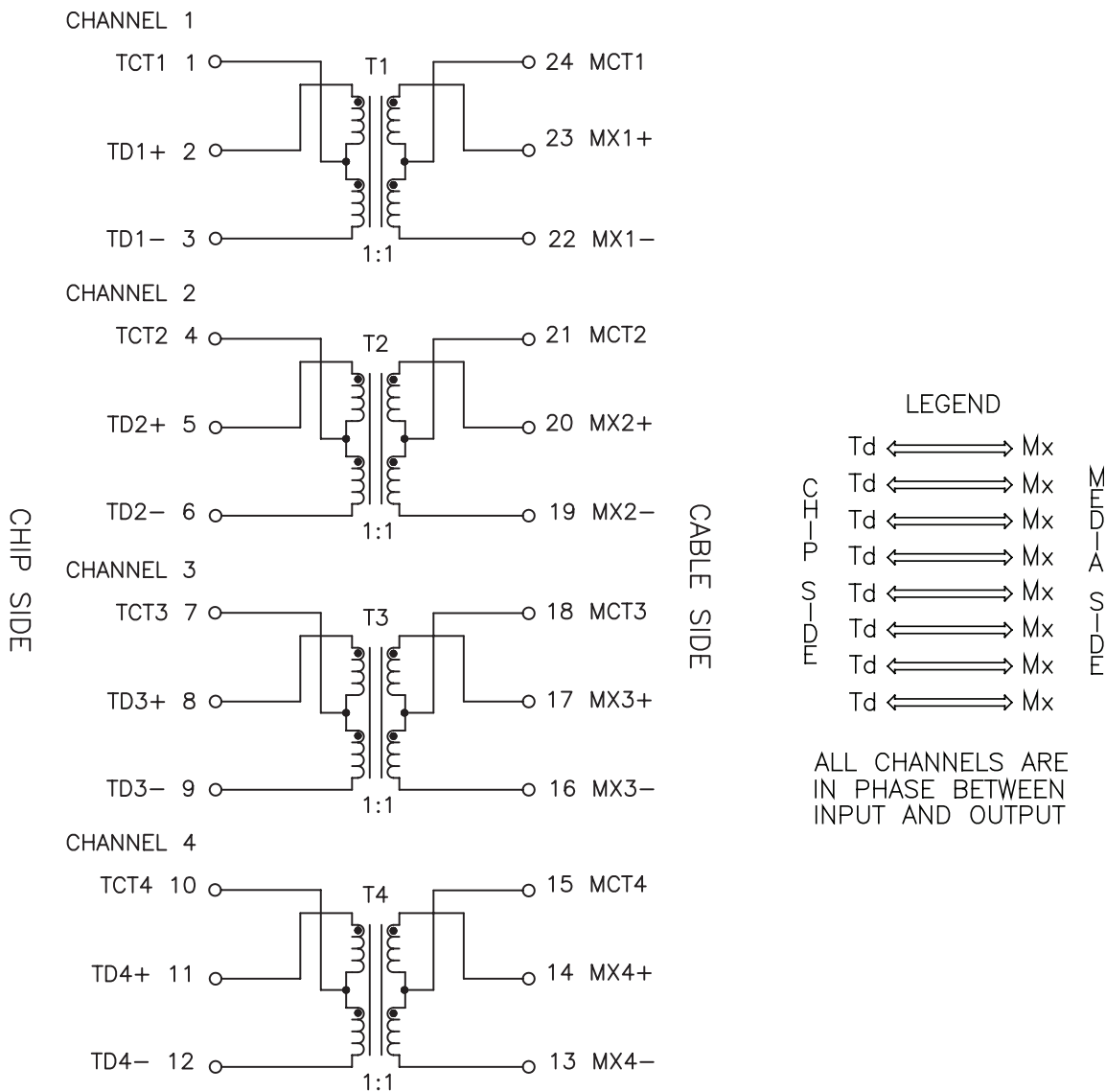
ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT

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

Military / Aerospace Grade



## 1000B-5016F/X



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