

10/100BASE - TX SINGLE PORT TRANSFORMER MODULE

Ruggedized

iNRCORE



- Compliant with IEEE 802.3ab for 1000Base-T
- 350 μ H OCL with 8mA bias at extended temperatures
- Storage Temperature: -55°C to +125°C
- Operating 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
- Moisture Sensitivity Level: 3

Electrical Specifications @ 25°C

Part Number	Insertion Loss (dB MAX)					Return Loss (dB MIN)				Crosstalk (dB MIN)			CM to CM Rejection (dB MIN)			DM to CM Rejection (dB MIN)			HiPot (Vrms)
	0.10 MHz	30 MHz	60 MHz	80 MHz	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	100 MHz	60 Hz
1000B-5001F	1.2	1.2	1.2	1.2	1.2	18	12	10	10	43	37	33	40	35	30	43	37	33	1500
1000B-5001FX	1.4	1.4	1.4	1.4	1.4	18	12	10	8	43	37	33	40	35	30	43	37	33	1500
1000B-5002F	1.2	1.2	1.2	1.2	1.2	18	14	12	10	43	37	33	40	35	30	43	37	33	1500
1000B-5002FX	1.2	1.2	1.2	1.2	1.2	18	14	12	10	43	37	33	40	35	30	43	37	33	1500
1000B-5003F	1.2	1.2	1.2	1.2	1.2	18	14	11	9	43	37	33	40	35	30	43	37	33	1500
1000B-5003FX	1.2	1.2	1.2	1.2	1.2	18	14	11	9	43	37	33	40	35	30	43	37	33	1500

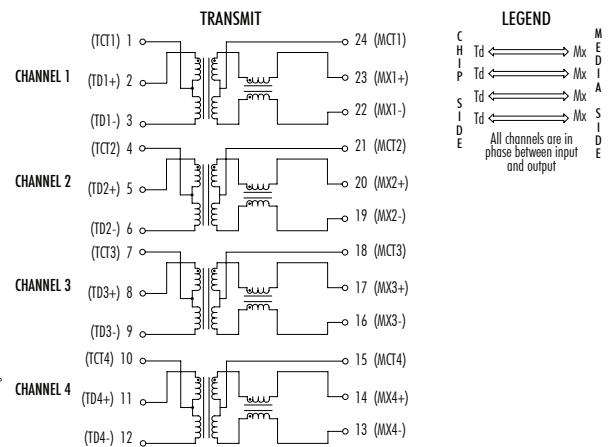
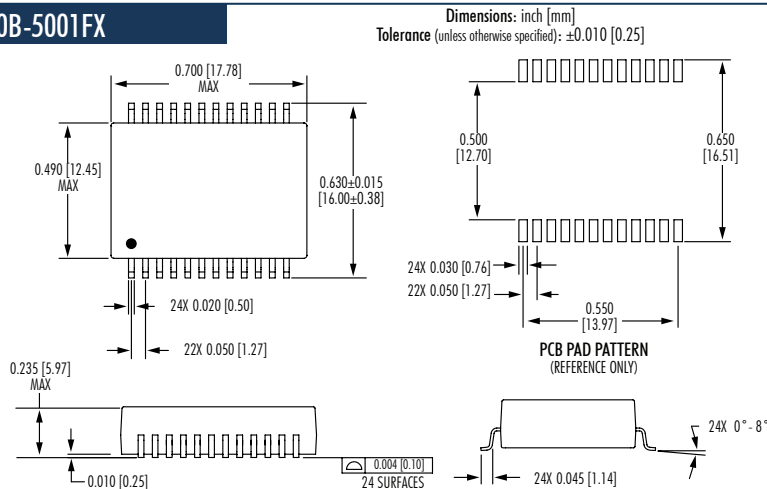
NOTES:

- Add suffix "NL" for RoHS compliant version; i.e. 1000B-5001F becomes 1000B-5001FNL.
- For Tape and Reel Packaging, add "T" suffix at the end of the part number; i.e. 1000B-5001FXT.
- Add suffix "X" for extended temperature version; i.e. 1000B-5001F becomes 1000B-5001FX.

Mechanicals

Electrical Schematics

1000B-5001FX



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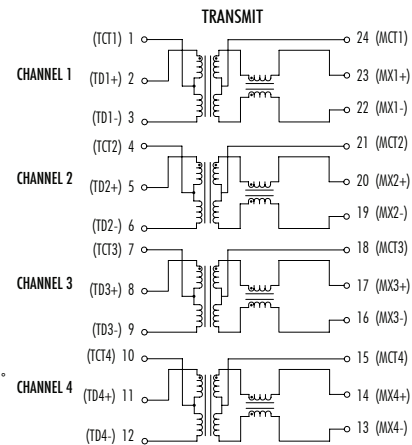
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Mechanicals

Dimensions: inch [mm]
Tolerance (unless otherwise specified): ± 0.010 [0.25]



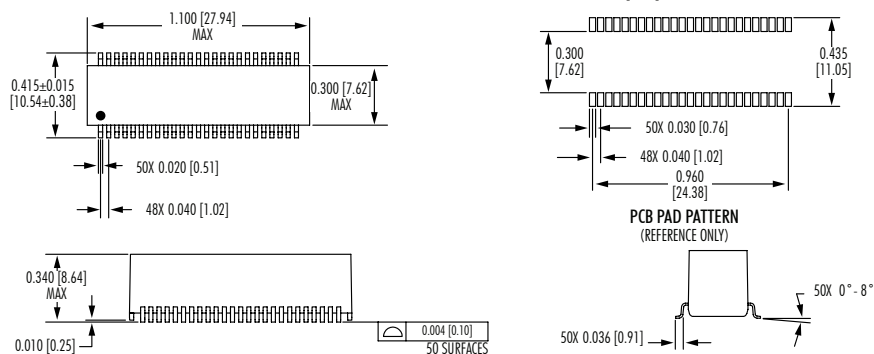
LEGEND

C H I P		M E D I A
Td	↔	Mx
Td	↔	Mx
Td	↔	Mx
Td	↔	Mx

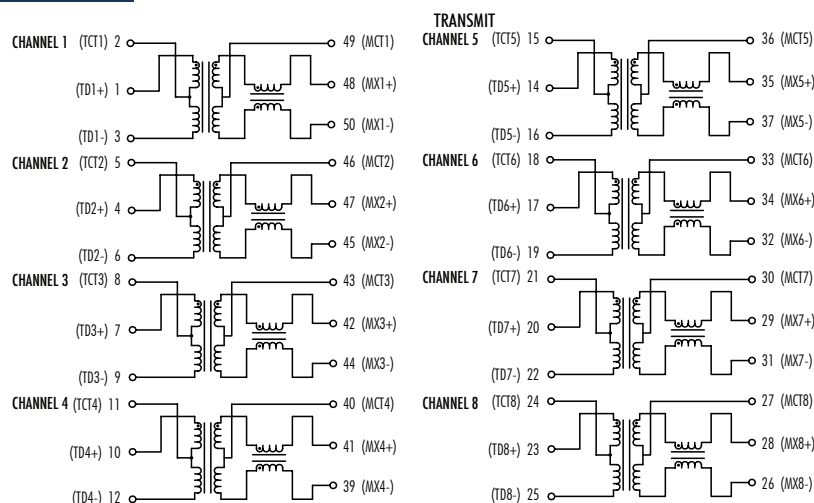
All channels are in phase between input and output

Mechanicals

Dimensions: inch [mm]
Tolerance (unless otherwise specified): ± 0.010 [0.25]



1000B-5003FX



LEGEND

C H I P	Td	↔	Nx	M E D I A
	Td	↔	Nx	
	Td	↔	Nx	
	Td	↔	Nx	
	Td	↔	Nx	
	Td	↔	Nx	
	Td	↔	Nx	
	Td	↔	Nx	
S I D E	Td	↔	Nx	S I D E
	Td	↔	Nx	
	Td	↔	Nx	
	Td	↔	Nx	
	Td	↔	Nx	
	Td	↔	Nx	
	Td	↔	Nx	
	Td	↔	Nx	

All channels are in phase between input and output

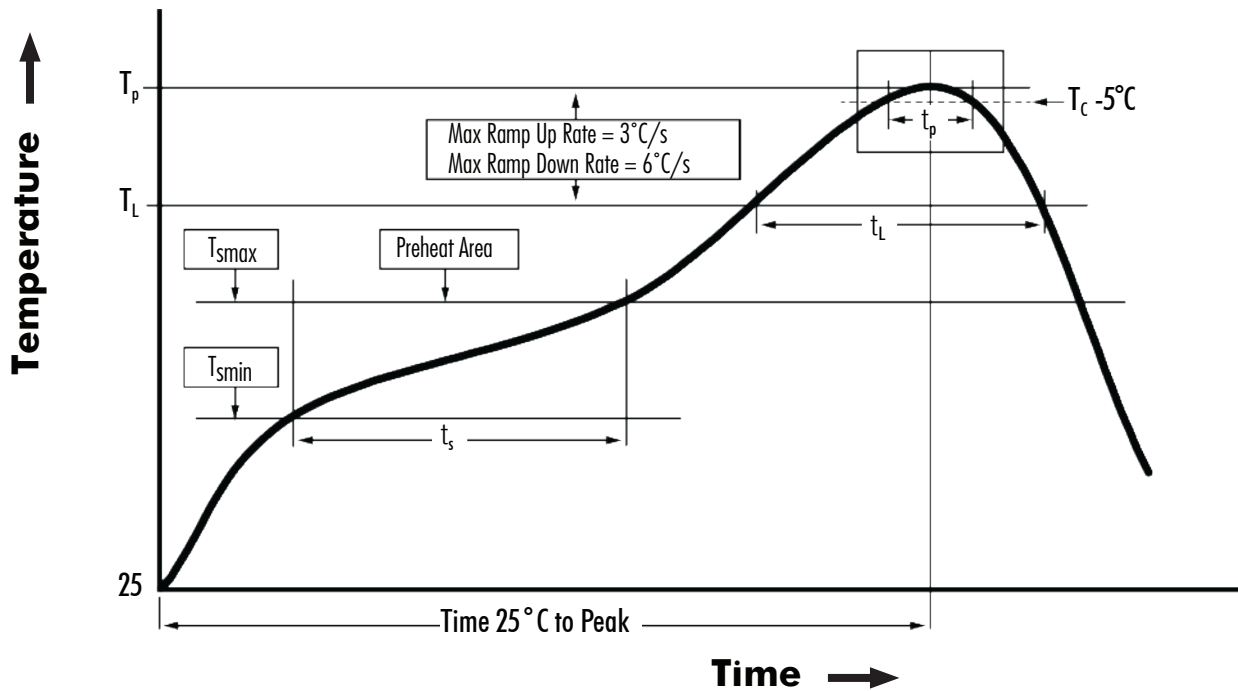


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Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



$T_{S_{MIN}}$ (°C)	$T_{S_{MAX}}$ (°C)	T_L (°C)	T_P (°C MAX)	t_s (s)	t_L (s)	t_p (s MAX)	Ramp-up rate (T_L to T_P)	Ramp-down rate (T_P to T_L)	Time 25°C to peak temperature (s MAX)
100	150	183	235	60 - 120	60 - 150	20	3°C/s MAX	6°C/s MAX	360

- NOTES:
1. All temperatures measured on the package leads.
 2. Maximum times of reflow cycle: 2



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