

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

Ruggedized



- ⊗ Compliant with IEEE 802.3ab for 1000Base-T
- ⊗ 350μH OCL with 8mA bias at extended temperatures
- ⊗ Two Operating Temperature Versions Available:
 - Standard: -40°C to +85°C
 - Extended: -55°C to +125°C
- ⊗ 235°C peak reflow temperature (MSL 3)
- ⊗ Lead finish: Sn63/Pb37 (RoHS-compliant version available with 100% pure tin)
- ⊗ 245°C peak reflow temperature for RoHS versions (MSL 4)

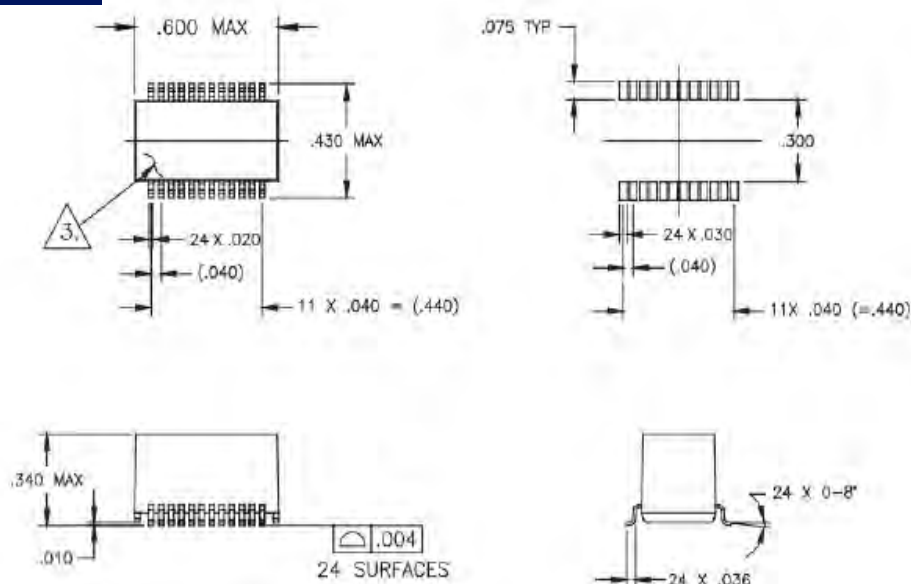
Part Number 1,2	Insertion Loss (dB Min)	Return Loss (dB Max)				Crosstalk (dB Max)			CM to CM Rejection Ratio (dB Max)			DM to CM Rejection Ratio (dB Max)			Hipot (Vrms)
	0.1-100 Mhz	30 Mhz	60 Mhz	80 Mhz	100 Mhz	30 Mhz	60 Mhz	100 Mhz	30 Mhz	60 Mhz	100 Mhz	30 Mhz	60 Mhz	100 Mhz	
1000B-5009	-1.2	-18	-12	-12	-10	-43	-37	-31	-30	-25	-18	-40	-35	-30	1500
1000B-5012	-1	-18	-12	-12	-10	-43	-37	-33	-43	-37	-33	-43	-37	-33	1500
1000B-5014	-1.4	-16	-12	-12	-10	-43	-37	-33	-45	-40	-35	-43	-37	-33	1500
1000B-5016*	-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-5009X. (*1000B-5016 does not offer X-Version)
 2. Add suffix NL for RoHS compliant part; i.e. 1000B-5012 becomes 1000B-5012NL.

3. For Tape & Reel Packaging, add "T" suffix at the end of the part number; i.e. 1000B-5014T
 4. Storage Temperatures: -55°C to +125°C

Mechanicals

1000B-5009/X



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

Dimensions: Inches
 mm
 Unless otherwise specified,
 all tolerances are ± .010
 .025

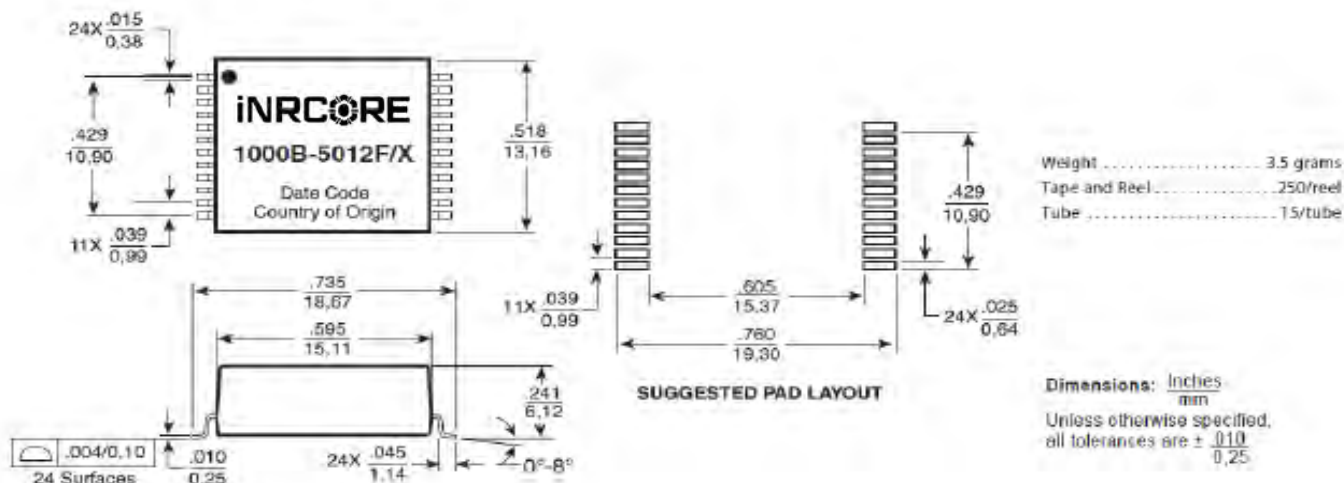


10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

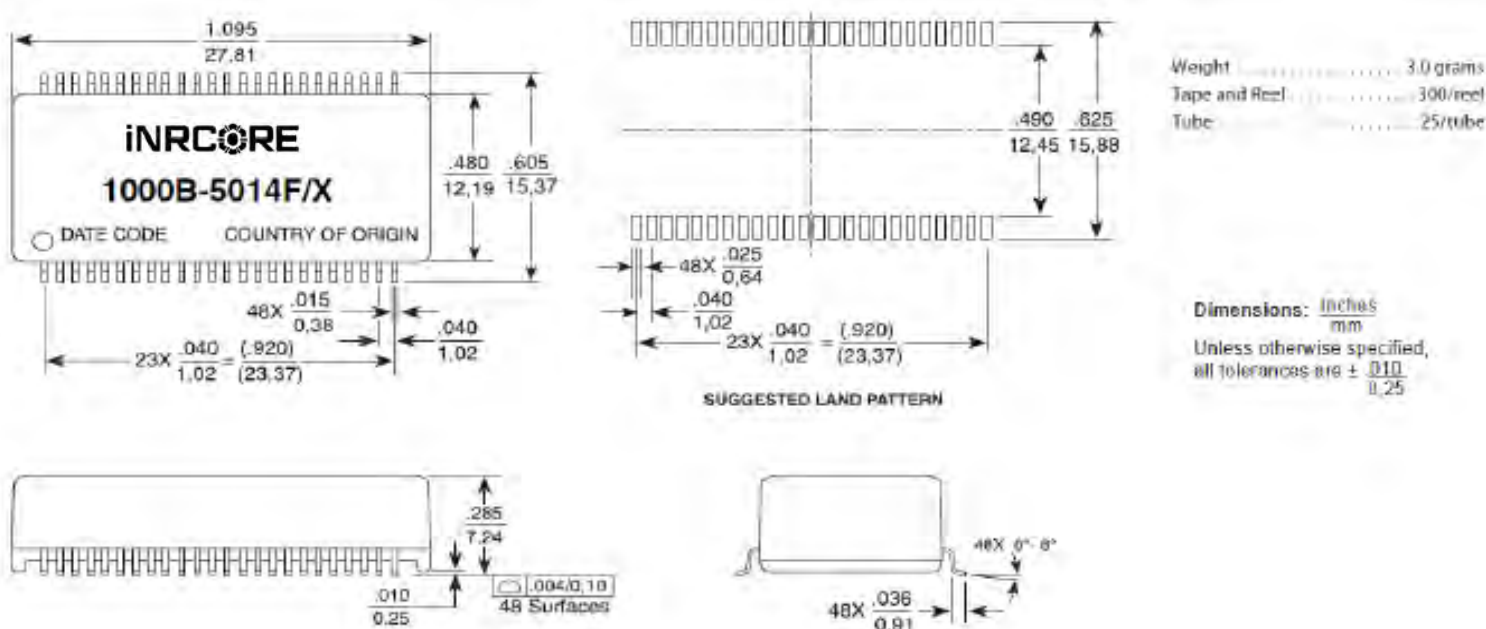
Ruggedized



1000B-5012/X



1000B-5014/X

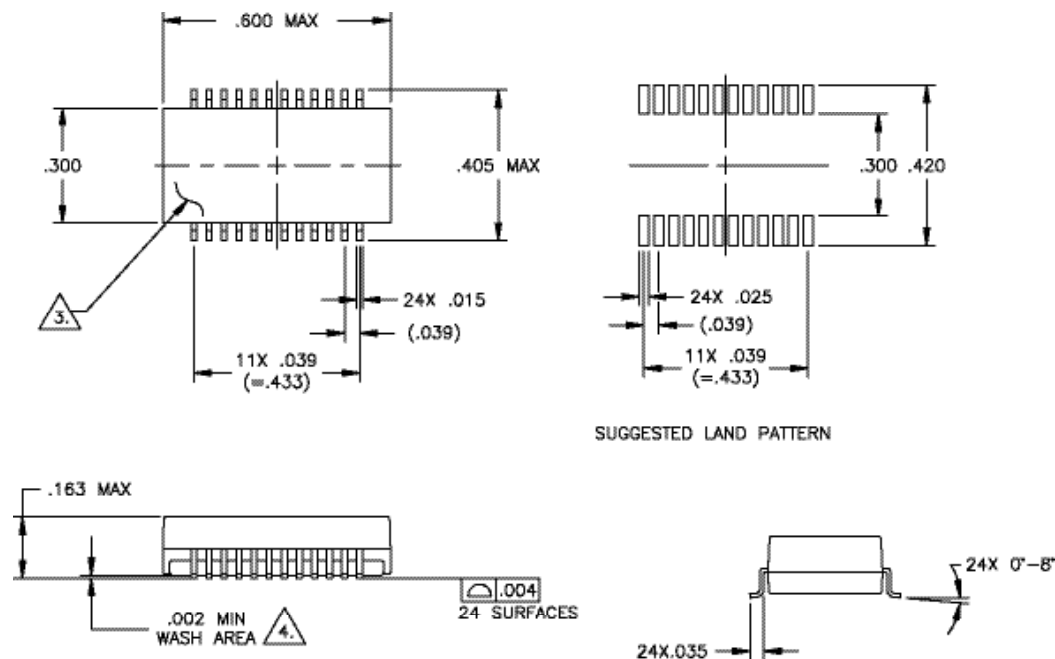


10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

Ruggedized



1000B-5016



Weight 0.75 grams
Tape and Reel700/reel
Tube 30/tube

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



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

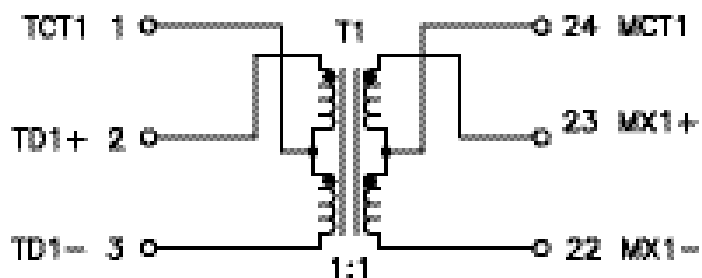
Ruggedized



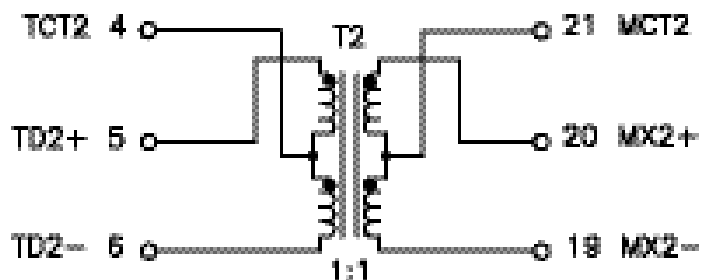
Electrical Schematics

1000B-5009/X

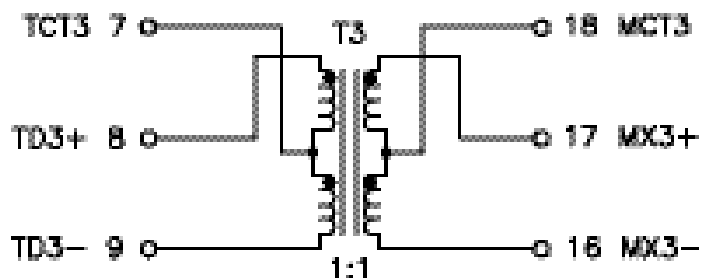
CHANNEL 1



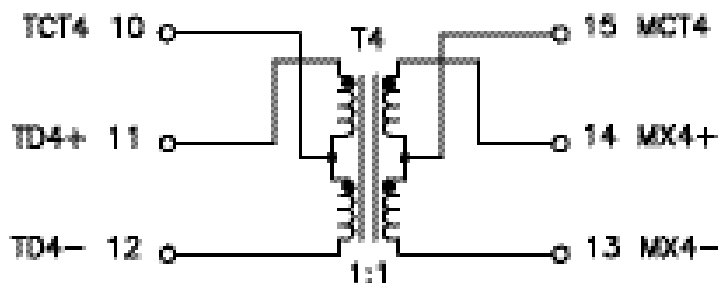
CHANNEL 2



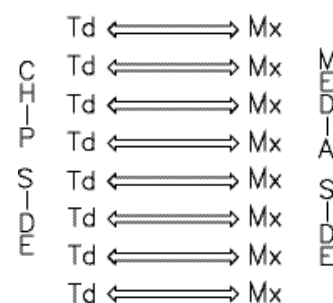
CHANNEL 3



CHANNEL 4



LEGEND



ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT

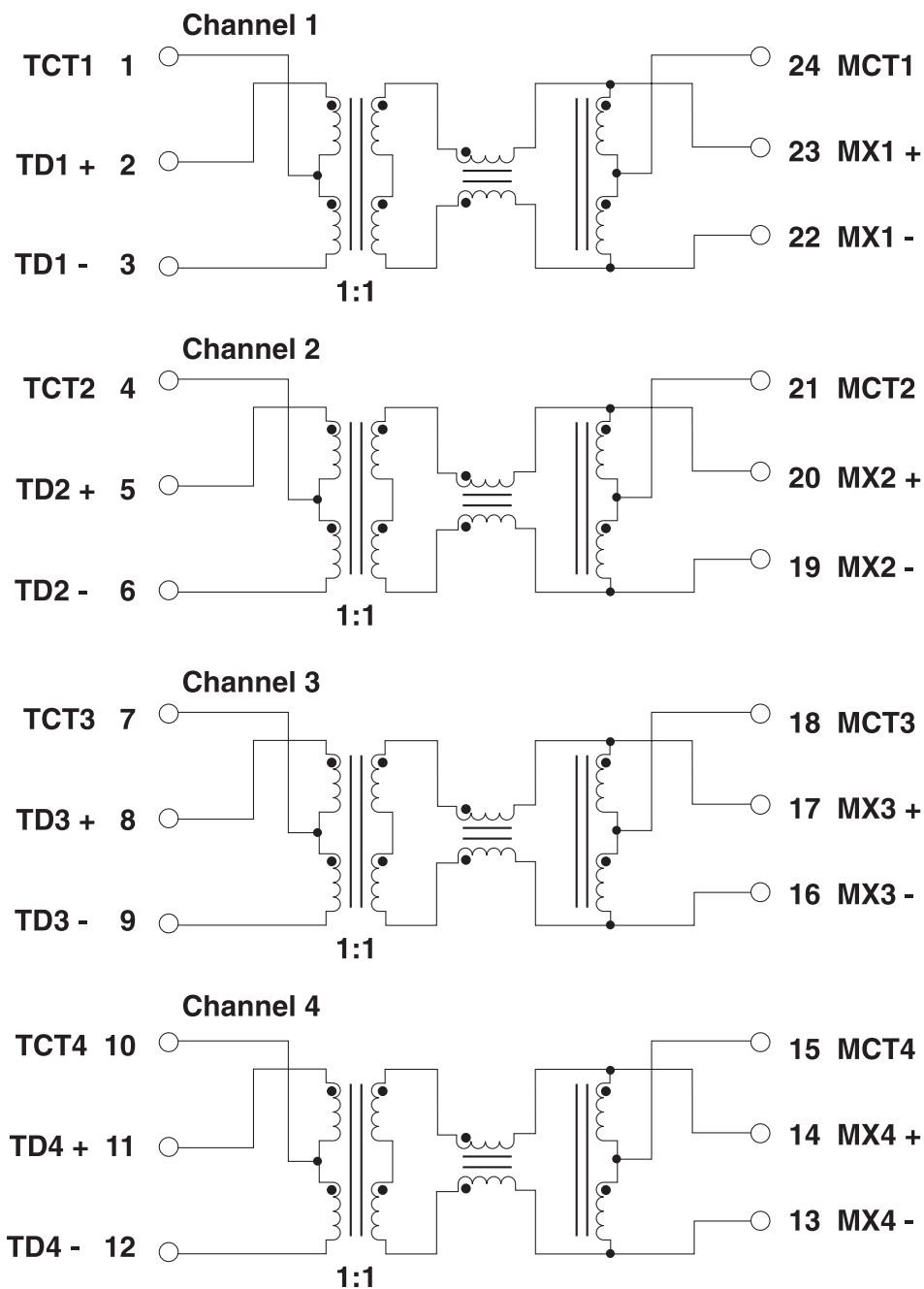


10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

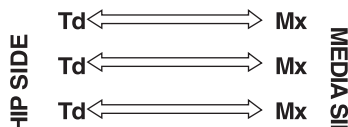
Ruggedized



1000B-5012/X



LEGEND

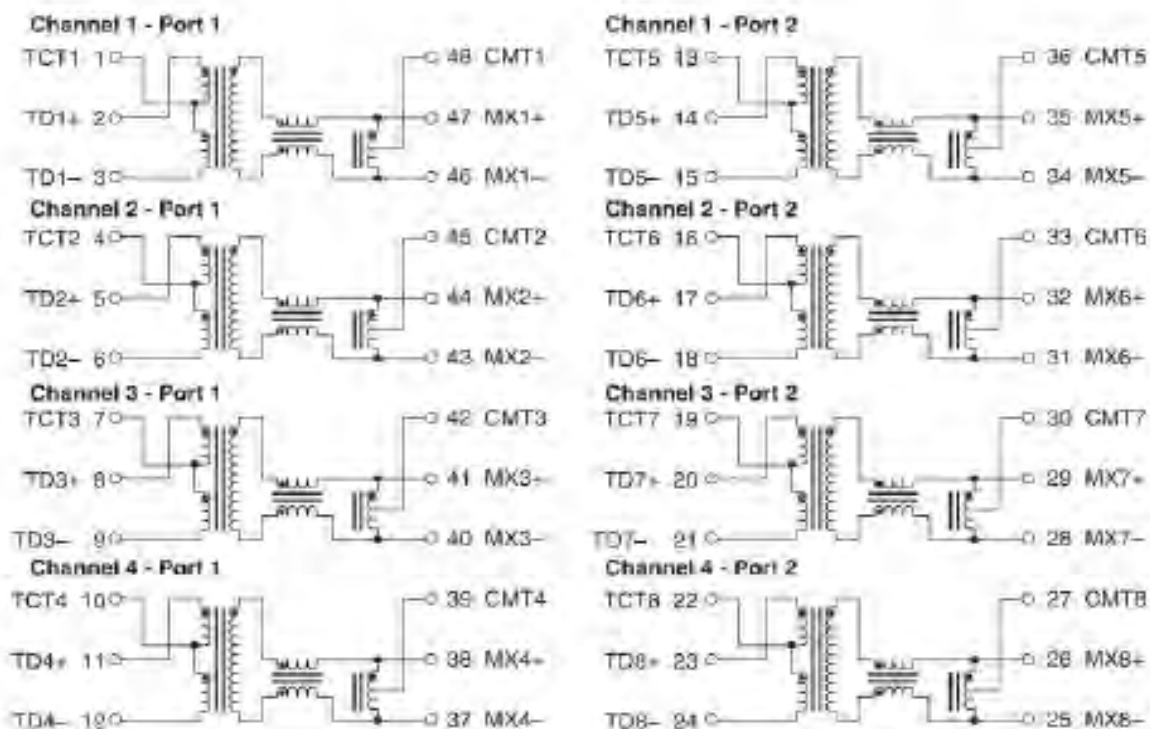


10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

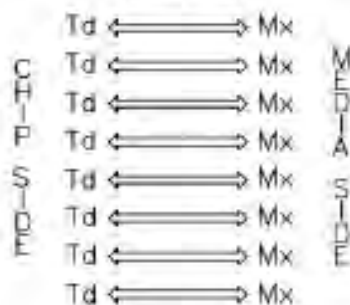
Ruggedized



1000B-5014/X



LEGEND



ALL CHANNELS ARE
IN PHASE BETWEEN
INPUT AND OUTPUT

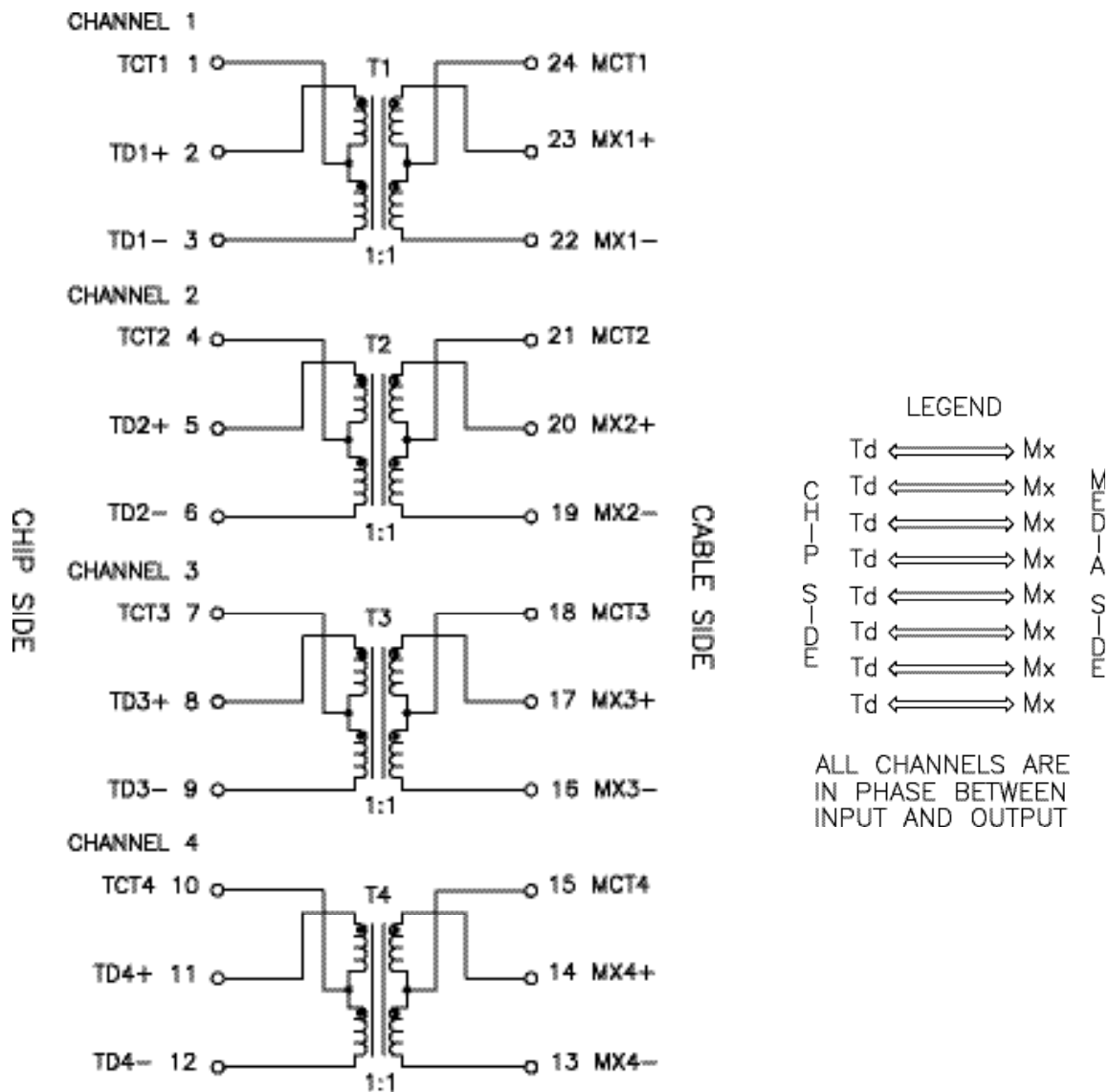


10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

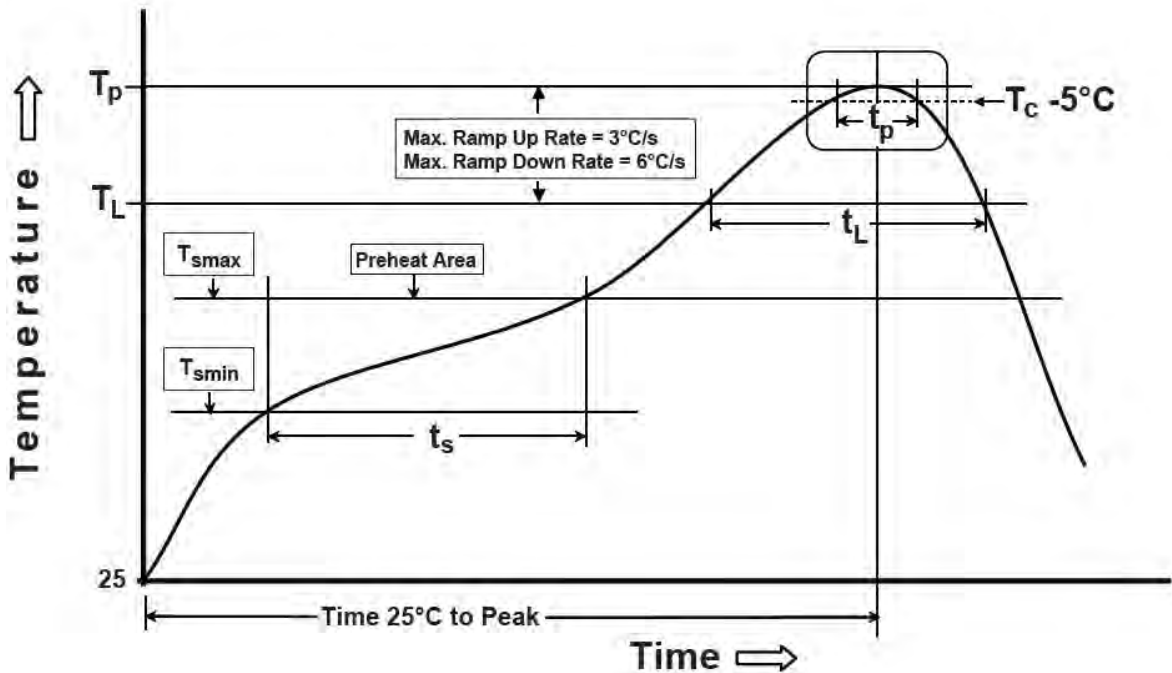
Ruggedized



1000B-5016



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

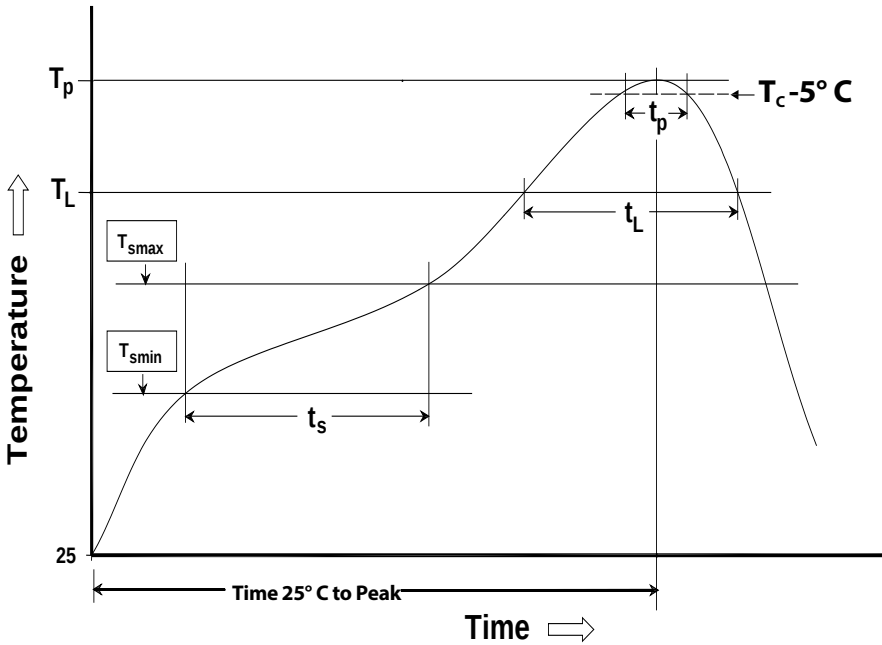


T_{SMIN} (°C)	T_{SMAX} (°C)	T_L (°C)	T_P (°C MAX)	t_s (s)	t_L (s)	t_P (s MAX)	Ramp-up rate (T_L to T_P)	Ramp-down rate (T_P to T_L)	Time 25°C to peak temperature (s MAX)
100	150	183	235	60-120	60-150	20	$3^\circ C/s$ MAX	$6^\circ C/s$ MAX	360

Notes:

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

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



T_{SWN} (°C)	T_{SMAX} (°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)
150	200	217	245	60-120	60-150	30	3°C/s MAX	6°C/s MAX	480

Notes:

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

For More Information

iNRCORE, LLC
311 Sinclair Road Bristol,
PA 19007-6812 U.S.A
Tel: + 1.215.781.6400
Fax: +1.215.7816430

Global Sales Representatives and Locations:
<http://www.inrcore.com>

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2020. iNRCORE, LLC. All rights reserved.

