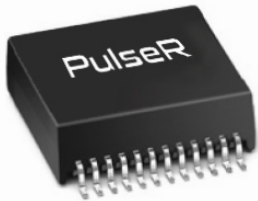


10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

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- R** Compliant with IEEE 802.3ab for 1000Base-T
- R** 350µH OCL with 8mA bias at extended temperatures
- R** Storage temperature: -55°C to +125°C
- R** Operating temperature:
 - 1000B-5001F/5002F/5003F: -40°C to +85°C
 - 1000B-5001FX/5002FX/5003FX: -55°C to +125°C
- R** IC grade transfer-molded package withstands 235°C peak temperature profile RoHS version withstands 245°C
- R** Moisture Sensitivity Level: 3

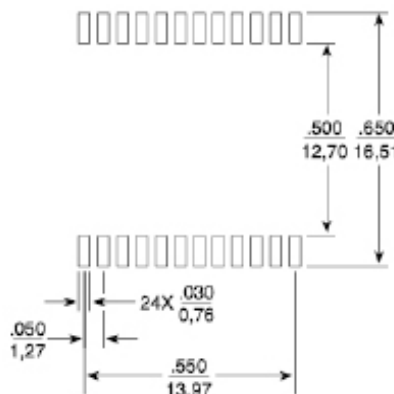
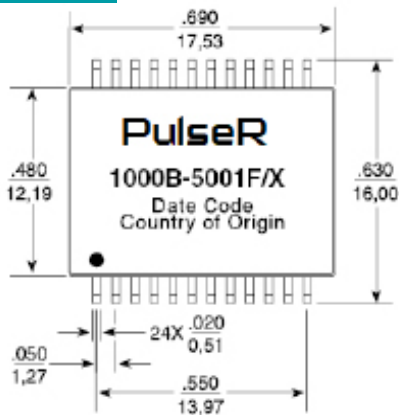
Electrical Specifications @ 25°C

Part Number 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 MIN) @60HZ (1MIN)
		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-5001F	-1.20	-18	-12	-10	-10	-43	-37	-33	-40	-35	-30	-43	-37	-33	1500
1000B-5001FX	-1.40	-18	-12	-10	-8	-43	-37	-33	-40	-35	-30	-43	-37	-33	1500
1000B-5002F	-1.20	-18	-14	-12	-10	-43	-37	-33	-40	-35	-30	-43	-37	-33	1500
1000B-5002FX	-1.20	-18	-14	-12	-10	-43	-37	-33	-40	-35	-30	-43	-37	-33	1500
1000B-5003F	-1.20	-18	-14	-11	-9	-43	-37	-33	-40	-35	-30	-43	-37	-33	1500
1000B-5003FX	-1.20	-18	-14	-11	-9	-43	-37	-33	-40	-35	-30	-43	-37	-33	1500

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. 3. Add suffi X for extended teperature version (i.e. 1000B-5009F) becomes 1000B-5001FX.

Mechanical

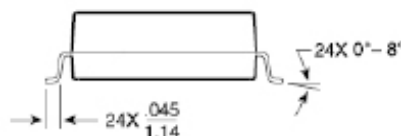
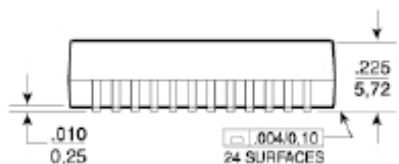
1000B-5001F/X



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

Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are ± .010
0.25

SUGGESTED PAD LAYOUT

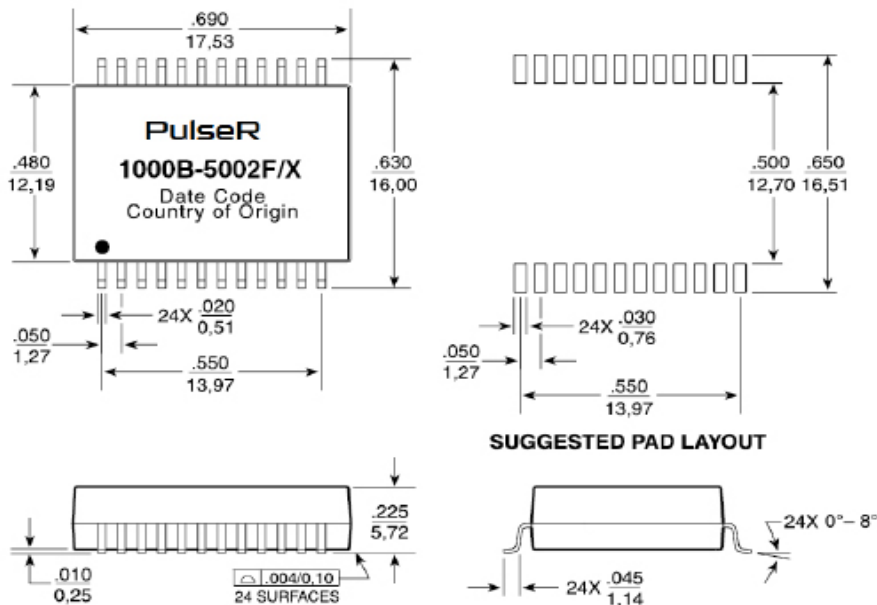


10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

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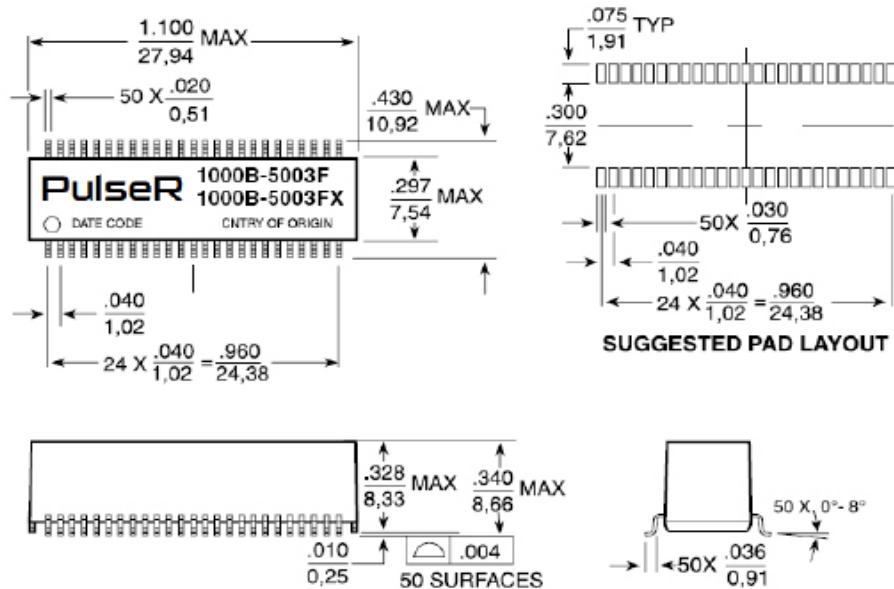
1000B-5002F/X



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

Dimensions: Inches
mm
Unless otherwise specified,
all tolerances are ± .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 ± .010
0.25

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

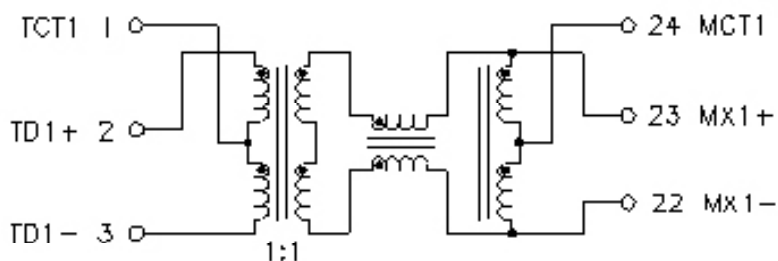
Ruggedized



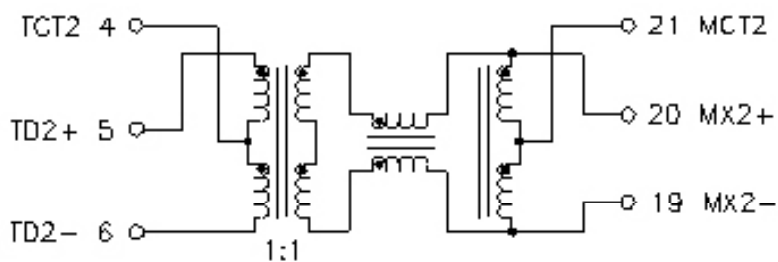
Electrical Schematic

1000B-5001F/X

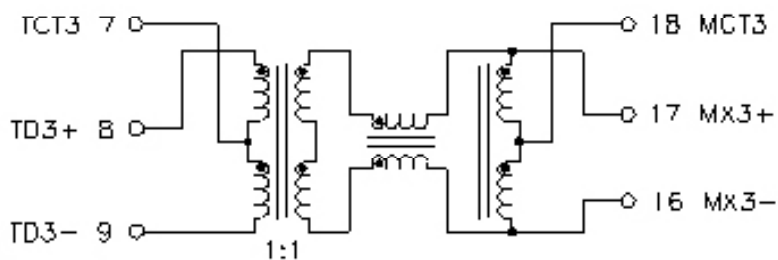
CHANNEL 1



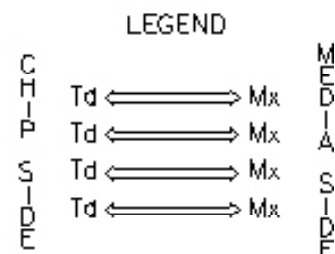
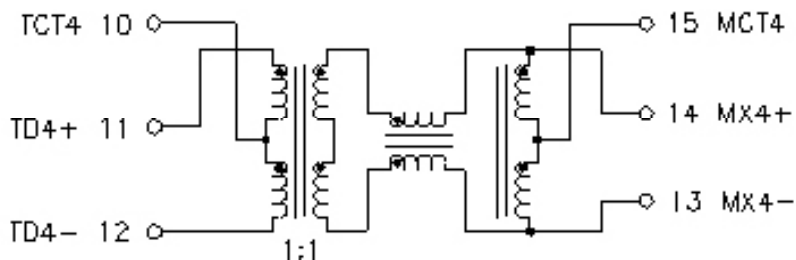
CHANNEL 2



CHANNEL 3



CHANNEL 4



ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT

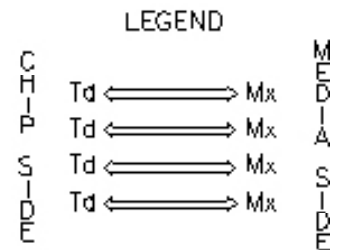
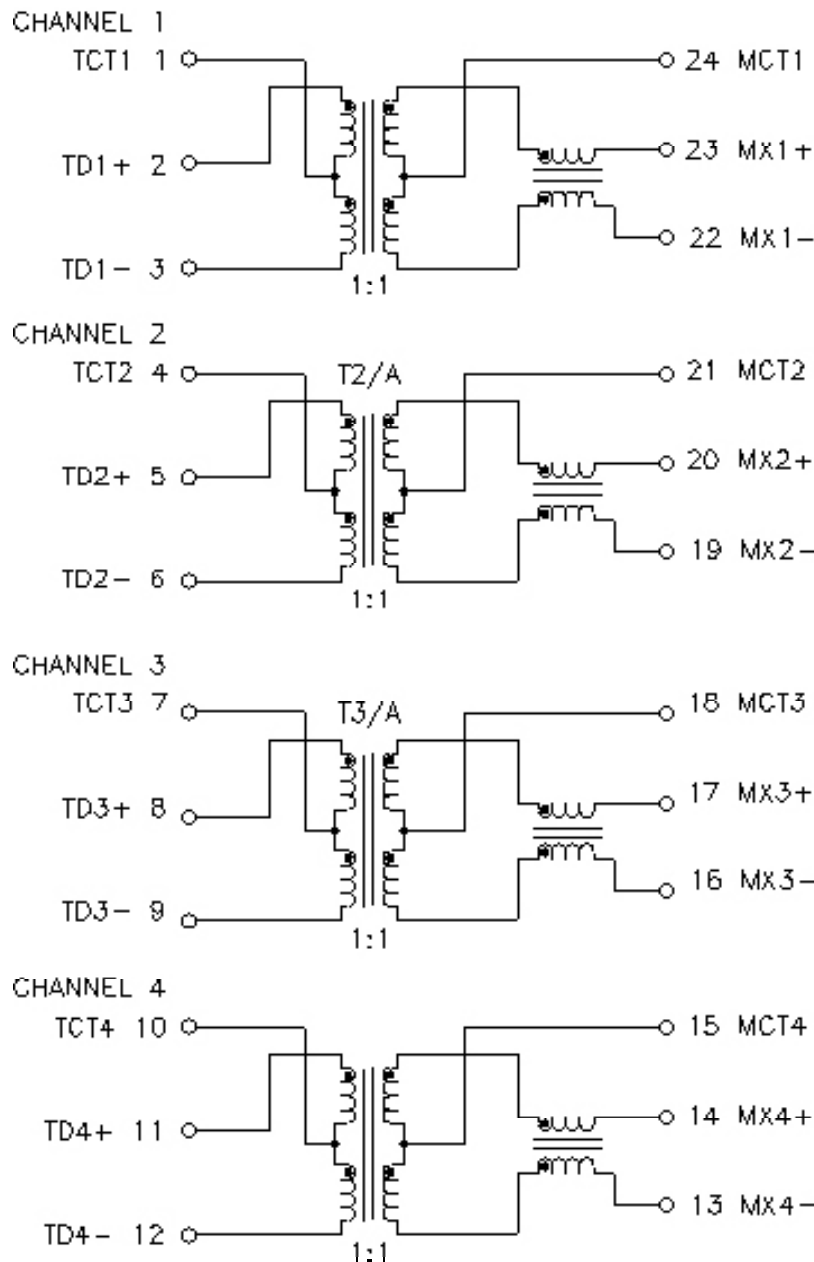
10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

Ruggedized



Electrical Schematic

1000B-5002F/X



ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT

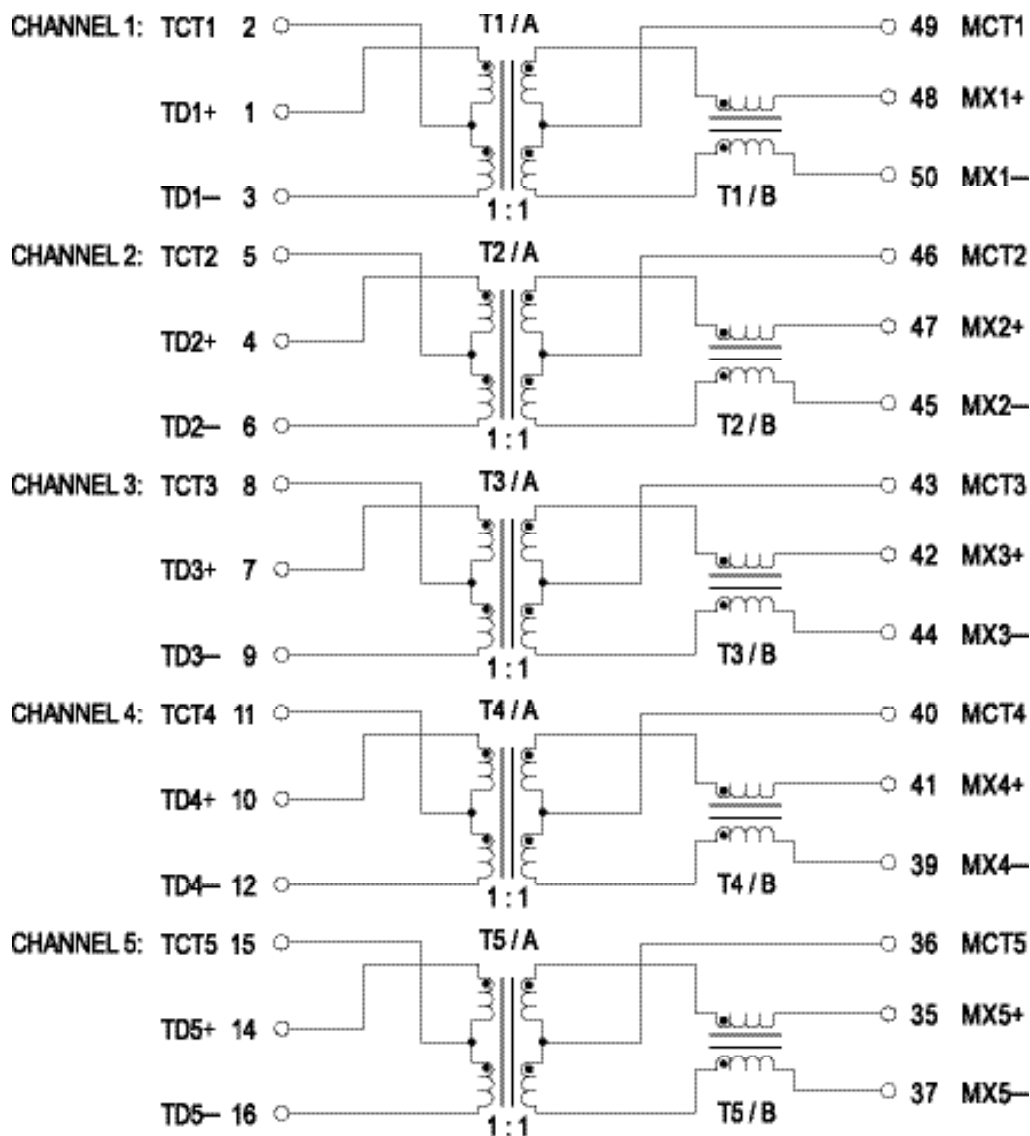
10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

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Electrical Schematic

1000B-5003F/X



LEGEND

CHIP SIDE ← Td ↔ Mx → MEDIA SIDE

ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT

Continued on next page.

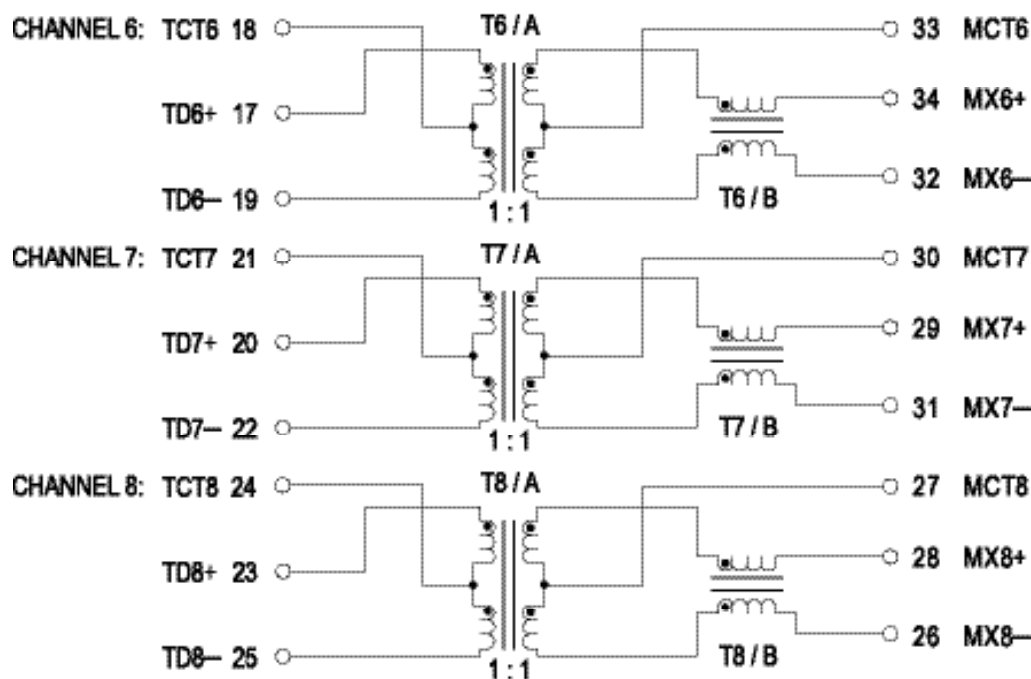
10/100/1000BASE-T SINGLE & DUAL-PORT TRANSFORMER MODULES

Ruggedized



Electrical Schematic

1000B-5003F/X (cont.)



LEGEND

C-I-D-S-I-D-E
T_d ↔ M_x
M-E-D-I-A-S-I-D-E

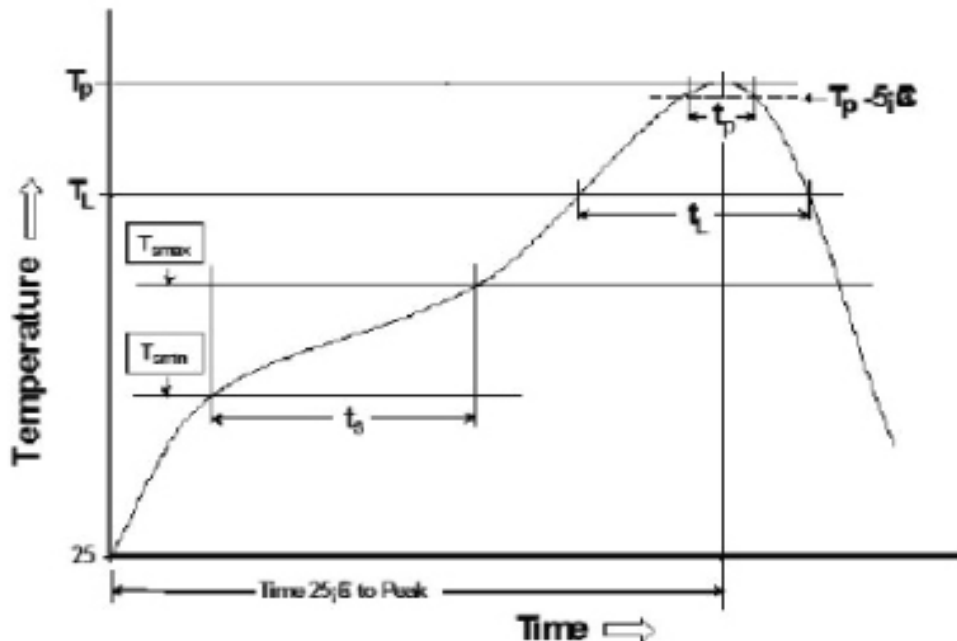
ALL CHANNELS ARE IN PHASE BETWEEN INPUT AND OUTPUT

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

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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°C/s MAX	6°C/s MAX	360

Notes:

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

For More Information

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