

# 10/100BASE - TX SINGLE PORT TRANSFORMER MODULE



Ruggedized



- ⊗ Compliant with IEEE 802.3u & ANSI X3.263 standards
- ⊗ 350μH OCL with 8mA bias at extended temperatures
- ⊗ Operating and storage temperature:  
100B-2002F: -40°C to +85°C  
100B-2002FX: -55°C to +125°C
- ⊗ Moisture Sensitivity Level: 3
- ⊗ Epoxy encapsulated package withstands 235°C peak temperature
- ⊗ Terminal Finish: matte tin allow solder over nickel layer
- ⊗ Lead Finish: Sn63 Pb37 finish for non-RoHS products
- ⊗ Sn100 Finish: for RoHS products using NL suffix

## Electrical Specifications @ 25°C

Part Number	Insertion Loss (dB MAX)				Return Loss (dB MIN)						Crosstalk (dB MIN)				DM to CM Rejection Ratio (dB MIN)			DWW (Vrms)
	0.10 MHz	30 MHz	60 MHz	100 MHz	2 MHz	30 MHz	40 MHz	50 MHz	60 MHz	80 MHz	1 MHz	30 MHz	60 MHz	100 MHz	1 MHz	60 MHz	100 MHz	
100B-2002F	1.2	1.2	1.2	1.2	18	18	16	15	12	12	50	43	37	33	43	37	33	1500
100B-2002FX	1.2	1.2	1.2	1.2	18	18	16	15	12	12	50	43	37	33	43	37	33	1500

### NOTES:

1. Add suffix "NL" for RoHS (Sn100 Lead Finish) compliant version; i.e. 100B-2002F becomes 100B-2002FNL
2. For Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. 100B-2002FXLT
3. IC Grade transfer-molded package withstands 235°C peak temperature profile; RoHS version withstands 245°C.

### Mechanicals

### Electrical Schematics

#### 100B-2002FX

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

**PCB PAD PATTERN (REFERENCE ONLY)**

**LEGEND**

CHIP SIDE	Td	←	Mx	M E D I A S I D E
CHIP SIDE	Td	→	Mx	M E D I A S I D E
CHIP SIDE	Td	←	Mx	M E D I A S I D E
CHIP SIDE	Td	→	Mx	M E D I A S I D E

All channels are in phase between input and output

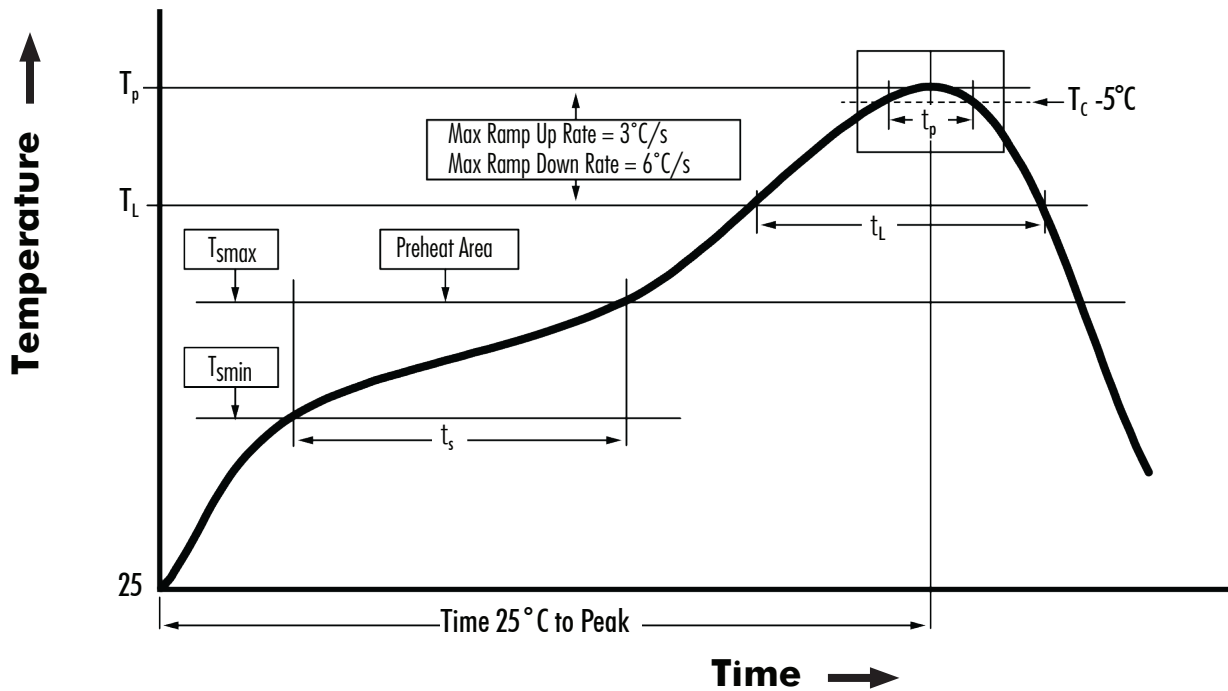


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## Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



$T_{S_{MIN}}$ (°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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