

10/100BASE - TX SINGLE PORT  
TRANSFORMER MODULE

Ruggedized



- ⦿ 10KVAC isolation between input and output
- ⦿ 350μH OCL with 8mA DC
- ⦿ Operating Temperature: -40°C to +85°C
- ⦿ Storage Temperature: -55°C to +125°C
- ⦿ Lead Finish: Sn100
- ⦿ Moisture Sensitivity Level: 3

Electrical Specifications @ 25°C																			
Part Number	Insertion Loss (dB MAX)					Return Loss (dB MIN)						Crosstalk (dB MIN)				DM to CM Rejection Ratio (dB MIN)			
	0.10 MHz	30 MHz	60 MHz	80 MHz	100 MHz	5 MHz	30 MHz	50 MHz	60 MHz	80 MHz	100 MHz	1 MHz	30 MHz	60 MHz	100 MHz	30 MHz	60 MHz	100 MHz	200 MHz
X-1644FNL	1.0	1.0	2.0	3.0	4.0	18	9	6	5	3	2	45	30	27	25	36	32	30	25

NOTES:

1. For Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. X-1644FNLT

Mechanicals

Electrical Schematics

**X-1644FNL**

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

0.610 [15.49] MAX

0.510 [12.95] MAX

0.600 ± 0.015 [15.24 ± 0.380]

20X 0.020 [0.51]

18X 0.050 [1.27]

0.510 [12.95]

0.625 [15.88]

20X 0.030 [0.76]

18X 0.050 [1.27]

0.450 [11.43]

PCB PAD PATTERN (REFERENCE ONLY)

0.310 [7.87] MAX

0.010 [0.25]

0.004 [0.10]

20 SURFACES

20X 0° - 8°

20X 0.035 [0.89]

**CHANNEL 1**

RECEIVE

(RD+) 1

(RDCT) 2

(RD-) 3

1:1

20 (RX+)

19 (RXCT)

18 (RX-)

**CHANNEL 2**

TRANSMIT

(TD+) 8

(TDCT) 9

(TD-) 10

1:1

13 (TX+)

12 (TXCT)

11 (TX-)

**LEGEND**

C H I P

Rd

S I D E

M E D I A

Rx

Tx

S I D E

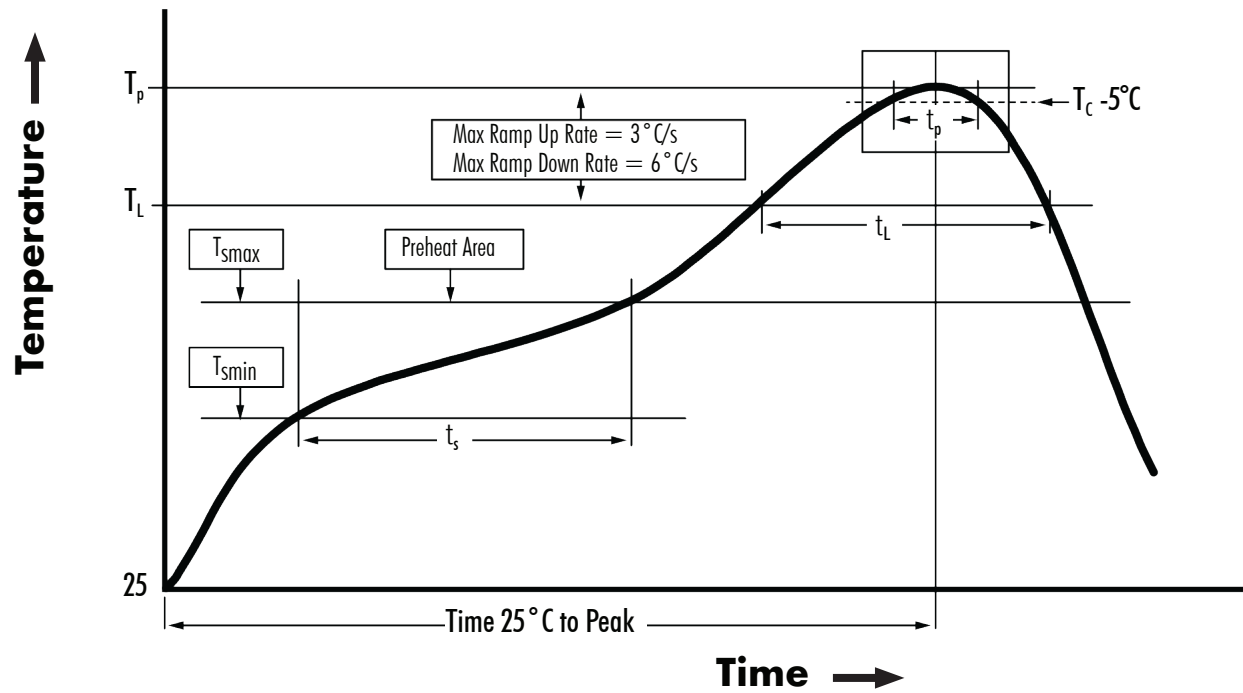
All channels are in phase between input and output



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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)
Non-Lead Profile									
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 number of reflow cycles not to exceed 2.



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