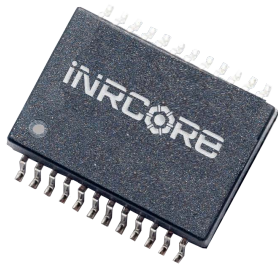


# 10GBASE-T PoE(++) TRANSFORMER MODULES



Ruggedized

10GB-6012(X)



- Compliant with IEEE 802.3 standards
- 120µH OCL with 18mA DC bias, at 100KHz 100mV
- Current Rating: 600mA Max per pair
- Operating temperature:
  - 10GB-6012: -40°C to +85°C
  - 10GB-6012X: -55°C to +125°C
- Storage temperature: -55°C to +125°C
- Terminal finish: Sn/Pb, (Pure tin for RoHS version)
- MSL: 3

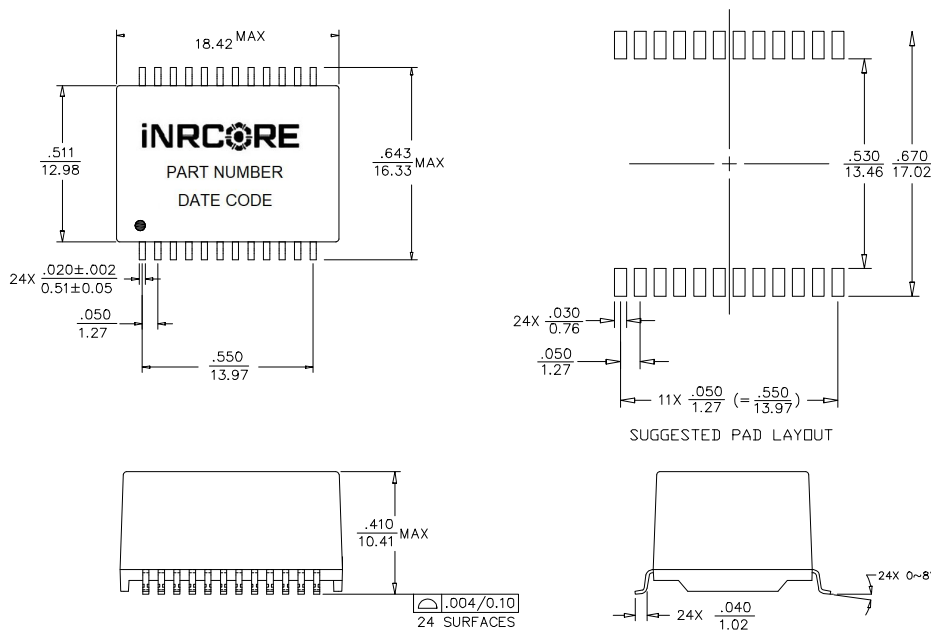
## Electrical Specifications @ 25°C

Part Number	Insertion Loss (dB Max)			Return Loss (dB Min)					Crosstalk (dB Min)				DM to CM Rejection Ratio (dB Min)			Dielectric Withstanding Voltage @5s (Vrms MIN)
	100 KHz	1-300 MHz	400-500 MHz	1 MHz	100 MHz	300 MHz	400 MHz	500 MHz	1 MHz	100 MHz	400 MHz	500 MHz	1 MHz	250 MHz	500 MHz	
10GB-6012	-3.0	-1.2	-3.0	-22	-20	-12	-10	-8	-40	-37	-30	-25	-40	-30	-22	1500
10GB-6012X	-3.0	-1.2	-3.0	-22	-20	-12	-10	-8	-40	-37	-30	-25	-40	-30	-22	1500

Notes: 1. Add suffix "T" to part number for Tape & Reel package (i.e.: **10GB-6012XT**). 2. Add suffix NL for RoHS compliant part; i.e. (**10GB-6012XNL**).

## Mechanical

### 10GB-6012(X)



Weight.....Approx. 4.4grams

Tape & Reel.....250pcs/reel

Tube.....25pcs/tube

Dimensions: Inches  
[mm]

Unless otherwise specified,

all tolerances are  $\pm \frac{.010}{0.25}$



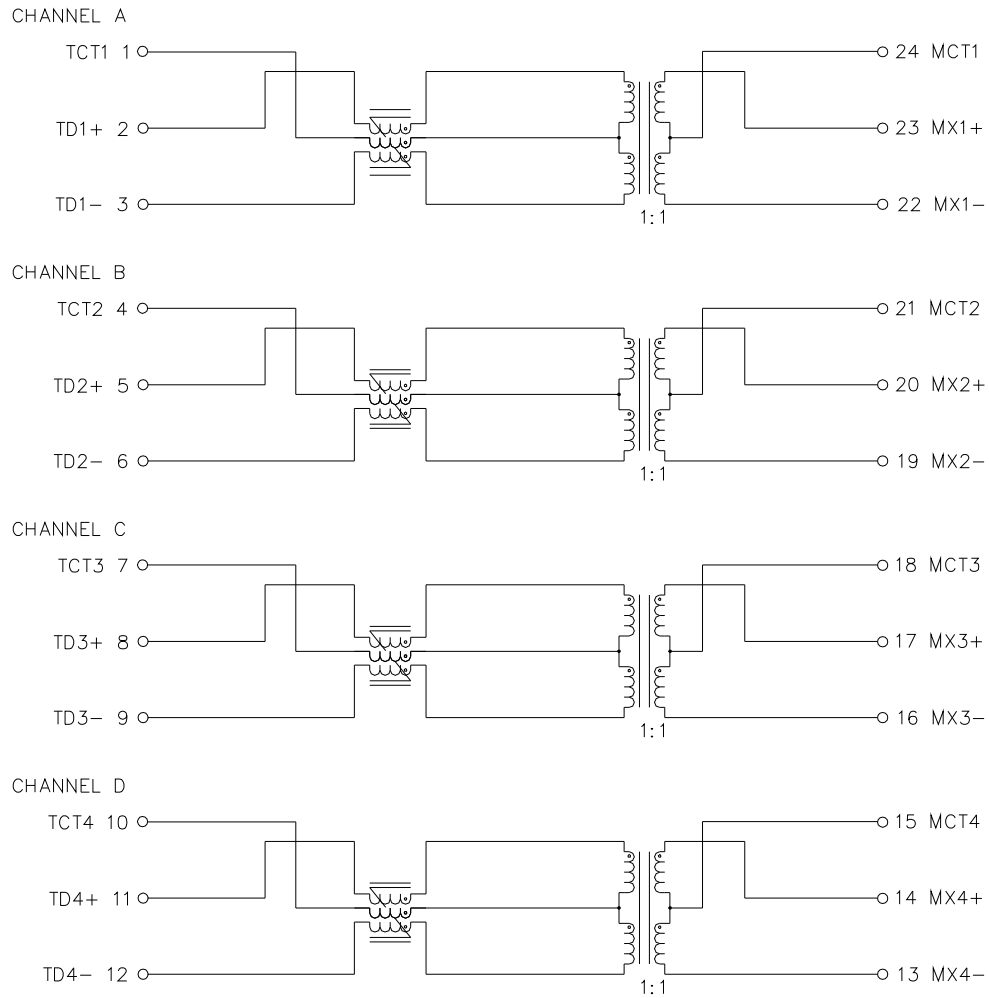
# 10GBASE-T PoE(++) TRANSFORMER MODULES

Ruggedized

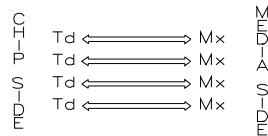


## Schematic

10GB-6012(X)



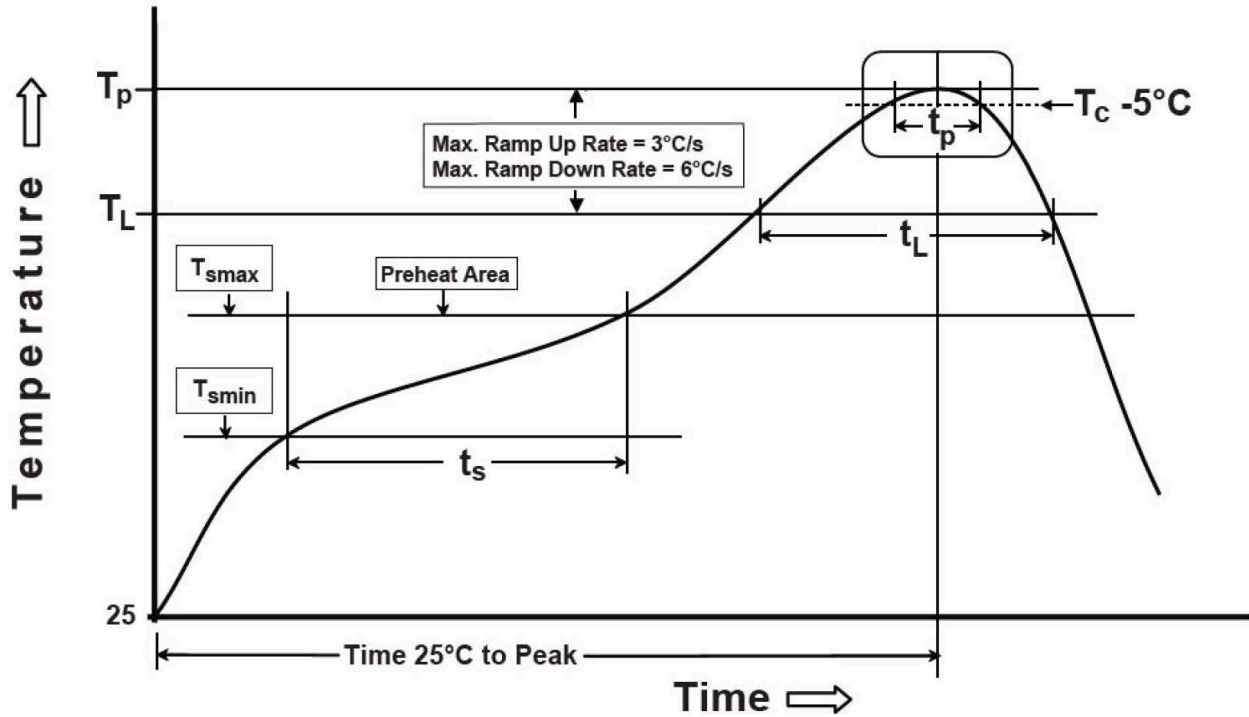
### LEGEND



ALL CHANNELS ARE  
IN PHASE BETWEEN  
INPUT AND OUTPUT



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

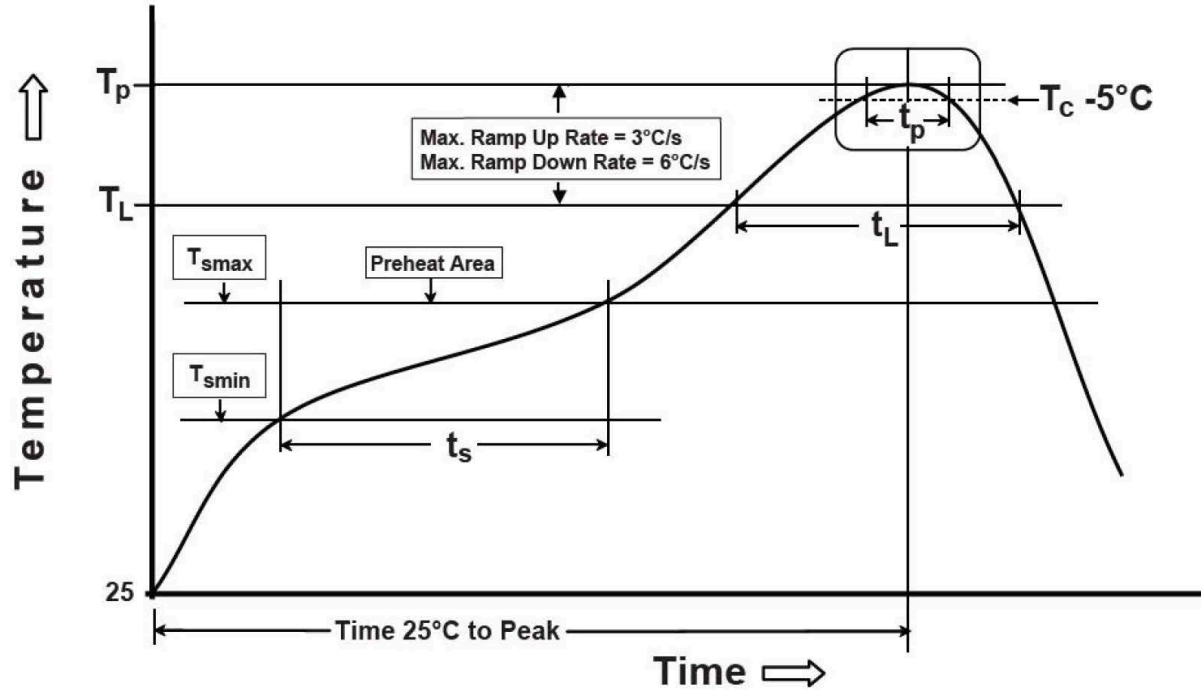


$T_{SMIN}$ (°C)	$T_{SMAX}$ (°C)	$T_L$ (°C)	$T_P$ (°C MAX)	$t_s$ (s)	$t_L$ (s)	$t_p$ (s MAX)	Ramp-up rate ( $T_L$ to $T_P$ )	Ramp-down rate ( $T_P$ to $T_L$ )	Time 25°C to peak temperature (s MAX)
100	150	183	235	60-120	60-150	20	$3^\circ\text{C/s}$ MAX	$6^\circ\text{C/s}$ MAX	360

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)**



$T_{SMIN}$ (°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)
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**

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