COPPERHEAD™ HIGH SPEED SINGLE TRANSFORMERS

Ruggedized

iNRCORE FAMILY OF BRANDS

- Compliant with ANSI X3T111, Fiber Channel, FC-PH-3 for quarter/full speed applicaitons, SMPTE, IEEE-1394 FireWire
- Pick and place compatible
- IC grade package withstands 225°C peak temperature profile
- Operating Temperature: -55°C to +125°C
- Lead Finish: Sn63/Pb37
- Moisture Sensitivity Level: 3

Electrical Specifications @ 25°C

Part Number	Turns Ratio (±5%)	Primary Inductance MIN (µH 1Vrms, 100kHz)	Rise Time @ 20% to 80% MAX (pS)	DC Resistance MAX (Ω)	Hi-Pot MIN (Vrms)	Insertion Loss MAX (dB)	Application Nominal Bit Rate (Mbaud)
T-330ACT	1CT:1CT	26	350	0.20	1500	-1.5	265.6 (full speed)
T-531ACT	1CT:1CT	7.5	325	0.20	1500	-2.0	531 (full speed)
T-1062ACT	1CT:1CT	3.75	280	0.20	1500	-2.0	1062.5 (full speed)
T-1250ACT	1CT:1CT	3.75	280	0.20	1500	-2.0	1250 (full speed)
T-1485SCT	1CT:1CT	3.75	280	0.20	1500	-2.0	1485 (full speed)

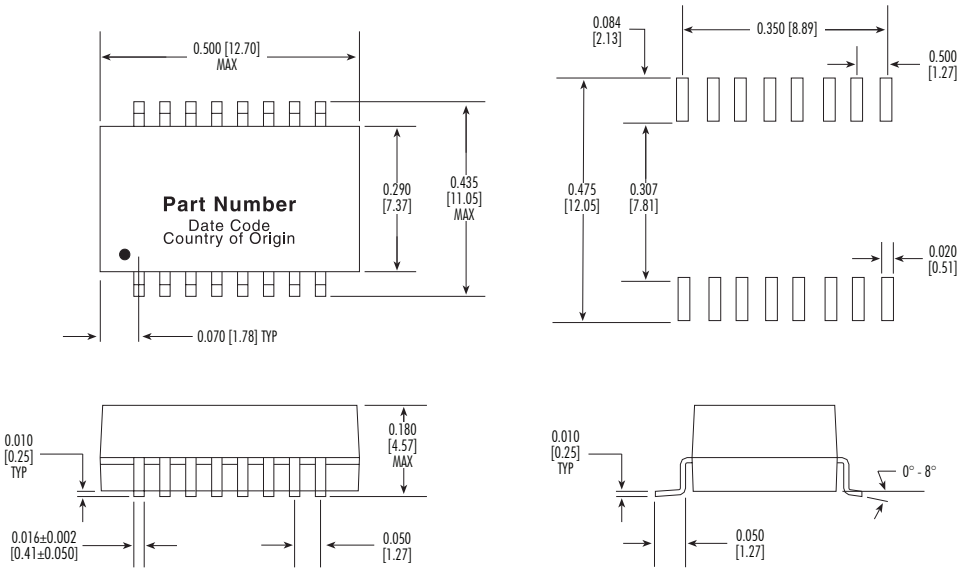
NOTES:

1. Add suffix "**NL**" for RoHS compliant version; i.e. T-330ACT becomes **T-330ACTNL**.
2. For Tape & Reel packaging, add "**T**" suffix at the end of the part number: i.e. **T-330ACTT**

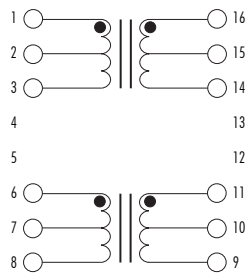
Mechanicals

T-330ACT, T-531ACT, T-1062ACT, T-1250ACT and T-1485ACT

Dimensions: inch [mm]
Tolerance (unless otherwise specified): ±0.010 [0.254]



Electrical Schematics



Weight: 1.0 grams
Tape and Reel: 400/reel

COPPERHEAD™ HIGH SPEED SINGLE TRANSFORMERS

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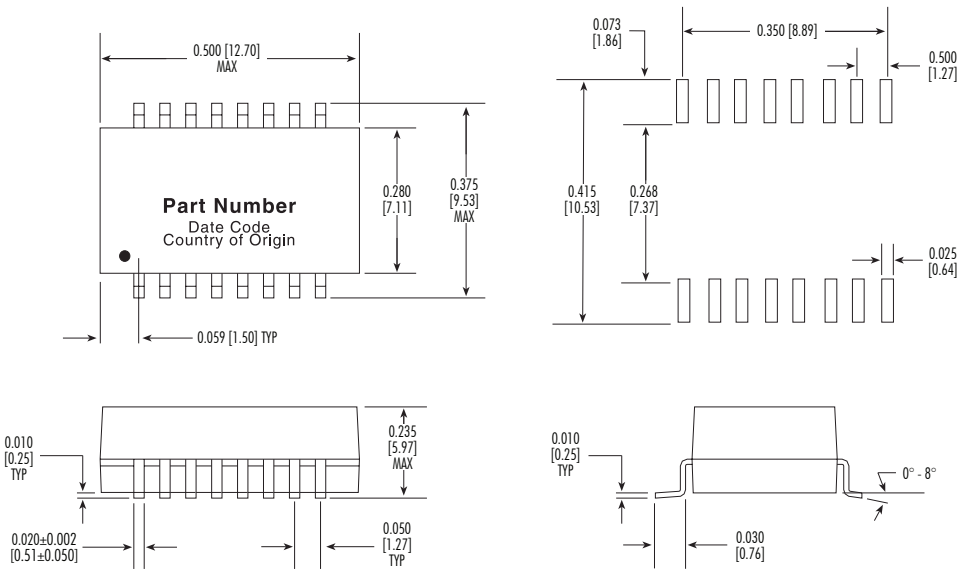
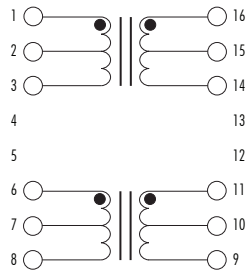
T-3200SCT

Mechanicals

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



Electrical Schematics



Weight: 1.0 grams
Tape and Reel: 600/reel

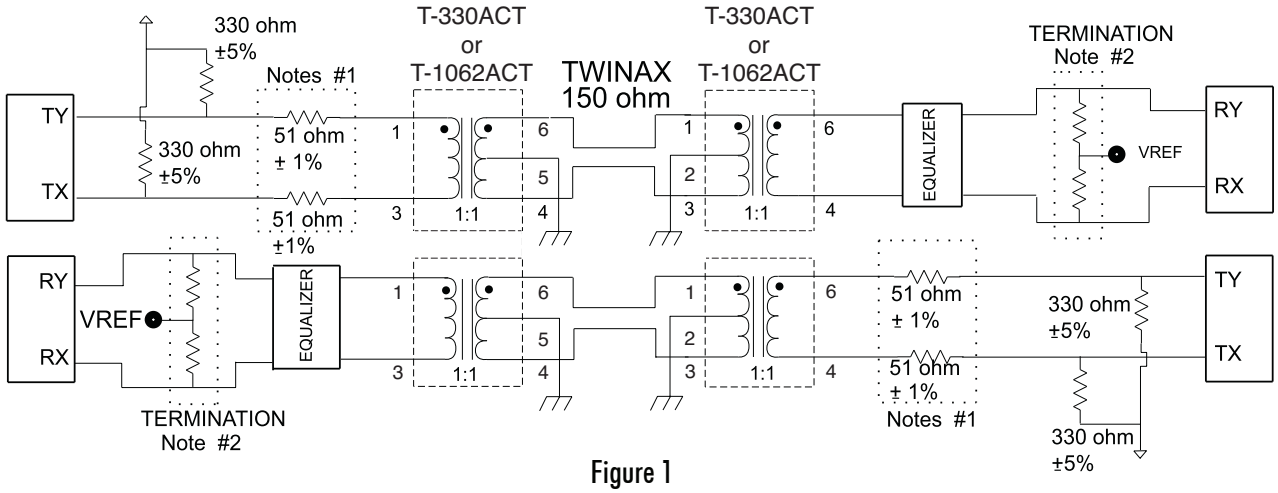


Figure 1
Typical Application Circuit

APPLICATION NOTE:

1. The transformer, 51Ω resistors, and the impedance of the driver are matched to achieve the best return loss (S11) for the transmitter of the 150Ω system.
2. The total impedance of the termination resistor network is 150Ω.
3. When laying out PCB, transmission line methods must be utilized to maintain return loss and signal integrity. Transformer must be located within 0.50" of the DB9 connector.
4. It is recommended that the center tap (CT) of the transformer(s), cable side, be connected to earth/chassis (cable shield) ground either directly or via a transient voltage suppressor (TVS) type compoennt and earth/chassis ground should be "AC-coupled" to signal (digital) ground through a 0.27μF, 500v capacitor.

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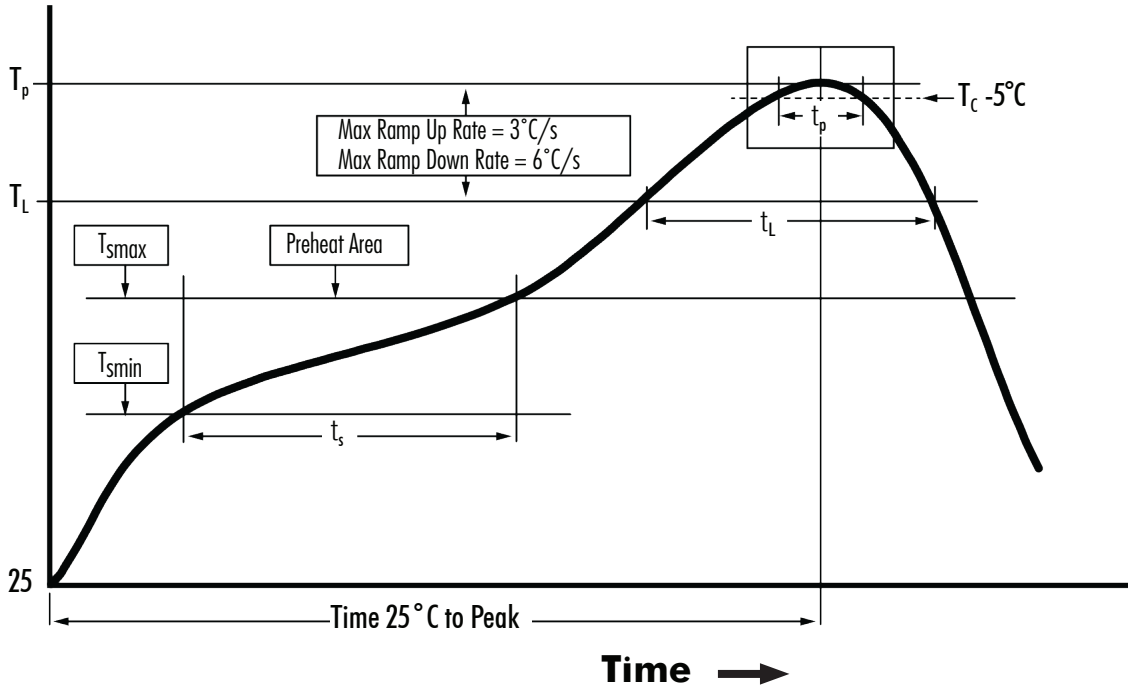
Recommended Reflow Profile (Based on J-STD-020D)



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)
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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