

COPPERHEAD™ HIGH SPEED DUAL TRANSFORMERS

Ruggedized



iNRCORE
iNRCORE FAMILY OF BRANDS

- Compliant with ANSI X3T111, Fiber Channel, FC-PH-3 for quarter/full speed applications, SMPTE, IEEE-1394 FireWire
- Dielectric Withstanding Voltage (DWV): 1500 Vrms
- Operating & Storage 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 @1Vrms, 100kHz (μH MIN)	DCR MAX (Ω)	Application Nominal Bit Rate (Mbaud)
T-330SCT	1CT:1CT	26	0.20	265.6 (1/4 speed)
T-531SCT	1CT:1CT	7.5	0.20	531 (half speed)
T-1062SCT	1CT:1CT	3.75	0.20	1062.5 (full speed)
T-1250SCT	1CT:1CT	3.75	0.20	1250
T-1485SCT	1CT:1CT	3.75	0.20	1485 (SMPTE)

NOTES:

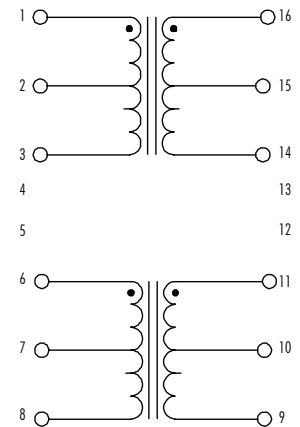
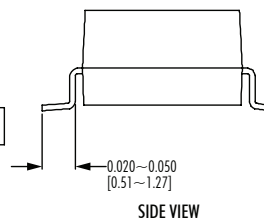
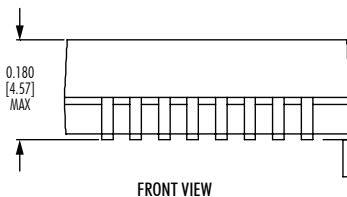
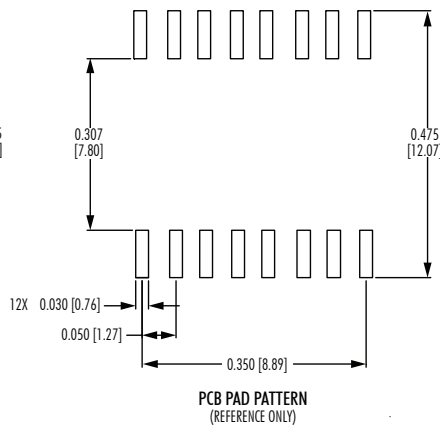
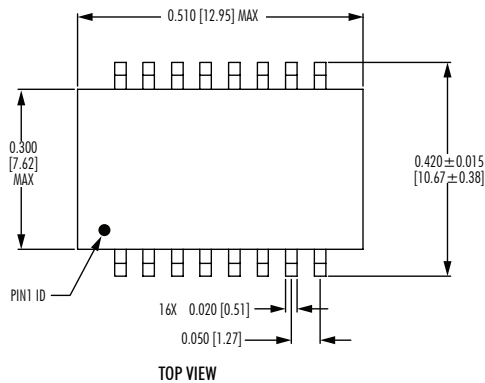
- For Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. **T-330SCTT**

Mechanicals

Electrical Schematics

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

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

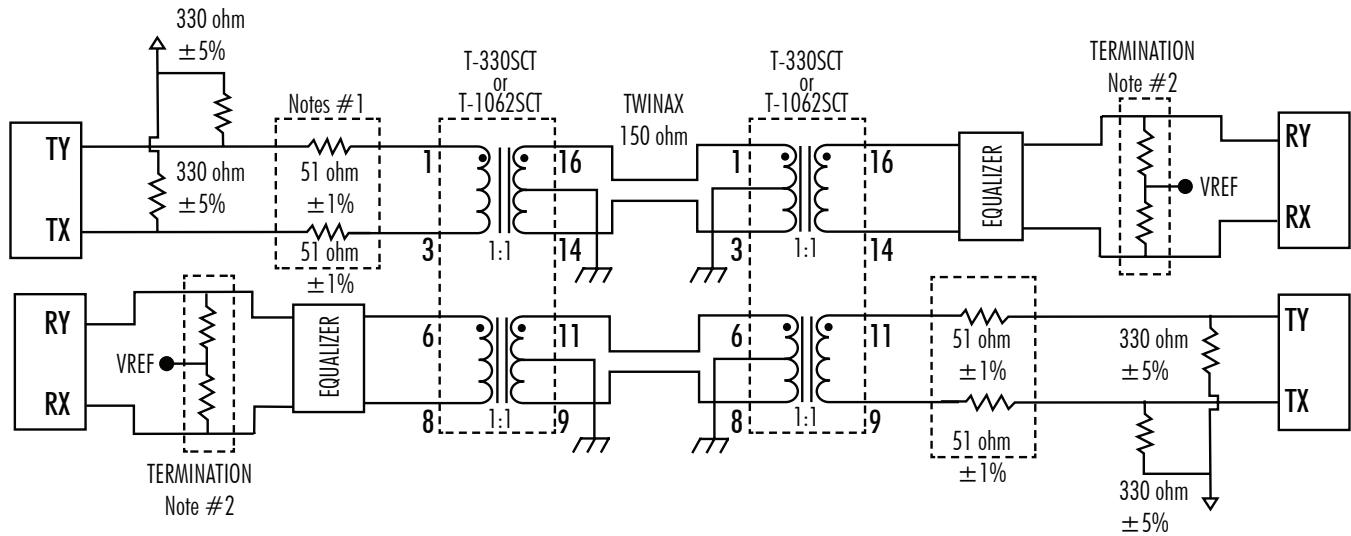


Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright, 2025. iNRCORE, LLC. All rights reserved.

M105.K (31MAR25)

Typical Application Circuit

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

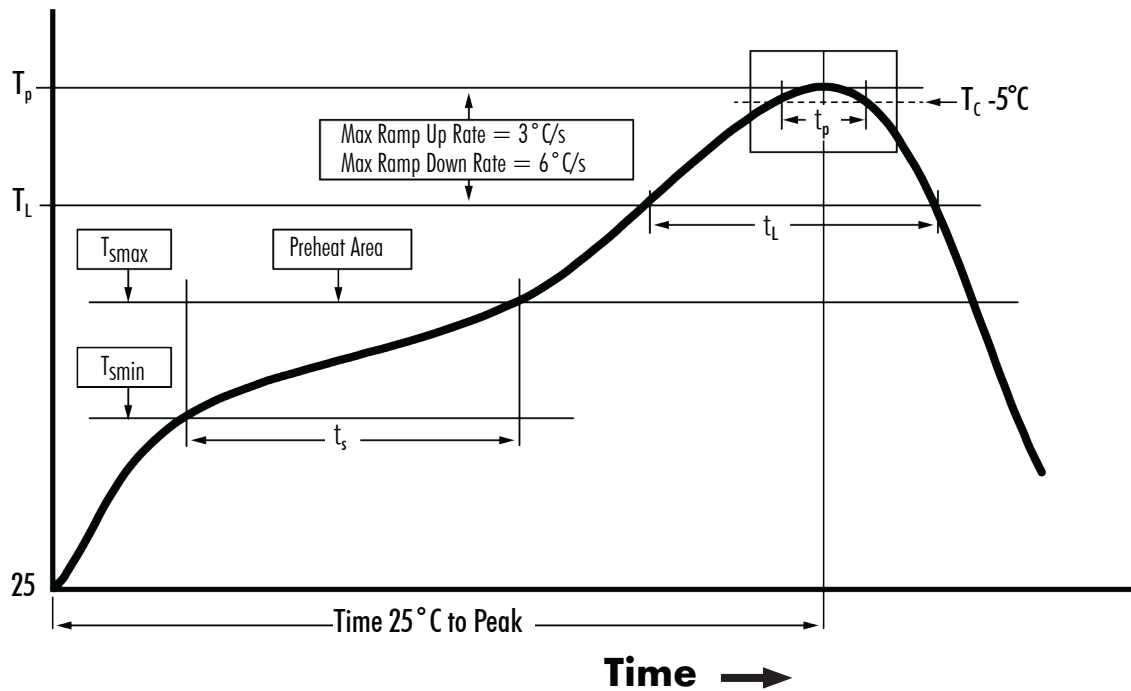


APPLICATION NOTE:

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 150 Ω system.
2. The total impedance of the termination resistor network is 150 Ω .
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 component and earth/chassis ground should be "AC-coupled" to signal (digital) ground through a 0.27 μ F, 500v capacitor.



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



T_{SMIN} ($^\circ\text{C}$)	T_{SMAX} ($^\circ\text{C}$)	T_L ($^\circ\text{C}$)	T_p ($^\circ\text{C}$ 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 $^\circ\text{C}$ to peak temperature (s MAX)
Tin/Lead Profile									
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 number of reflow cycles not to exceed 2.

