

IEEE 1394B FIRE WIRE 200Mbps TRANSCIVER LINE INTERFACE MODULE

Copperhead™ Series



- ⦿ Low power dissipation
- ⦿ Low transmit/receive jitter
- ⦿ Recommended for distances up to 20 meters
- ⦿ Small package incorporating active transmit and passive receive circuits with integrated isolation transformers.
- ⦿ Electrostatic-Sensitive Device (ESD)
- ⦿ Operating & Storage Temperature: -55°C to +125°C
- ⦿ Lead Finish: Sn63Pb37
- ⦿ Moisture Sensitivity Level: 3

Electrical Specifications @ 25°C

Part Number	Transmitter			Receiver		
	Differential Signal Level ¹	Total P-P Transmit Jitter ¹ (pS)	Output Rise-Fall Time (20-80%) ¹ (pS)	Primary Inductance LM (μH)	Winding Resistance DCR	Turns Ratio (±5%)
	VOUT (mV)					
	MIN					
TM200TXHUA	1300	200	600	32	0.25	1:1
TM200TX3DUA	1300	200	600	32	0.25	1:1

TRANSMITTER DESIGN INFORMATION (For Reference Only)

Part Number	Input Data Voltage				Input Voltage Differential		Input Current		ICC (mA)	Θja (°C/W)		Data Rate DR (Mb/s)	
	VIL (V)		VIH (V)		VIN (mV)		IIL (μA)	IIH (μA)		@85°C	@125°C	MIN	MAX
	MIN	MAX	MIN	MAX	MIN	MAX	MAX	MAX	MAX				
TM200TXHUA	1.35	1.85	2.07	2.58	150	1200	500	750	70	41	39	98	246
TM200TX3DUA	1.35	1.85	2.07	2.58	150	1200	500	750	212	34	30	98	246

NOTES:

- Tests are done at 3.3 Vdc at 246Mb/s data rate, PN7 Data Pattern.
- Add suffix "NL" for RoHS compliant version; i.e. TM200TXHUA becomes TM200TXHUANL.
- Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. TM200TXHUAT



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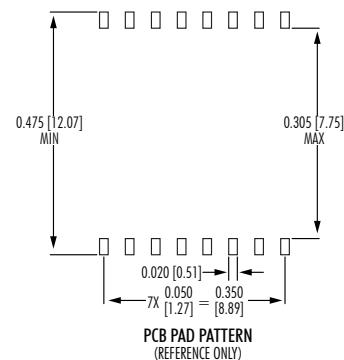
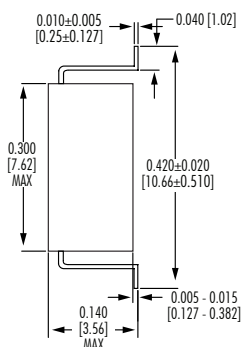
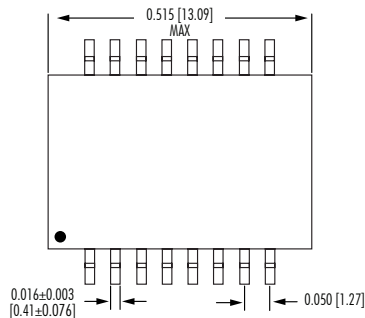


Mechanicals

TM200TXHUA

Dimensions: inch [mm]

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

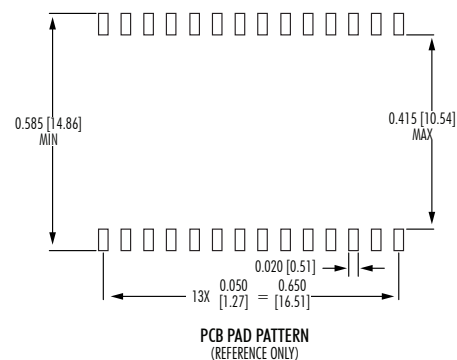
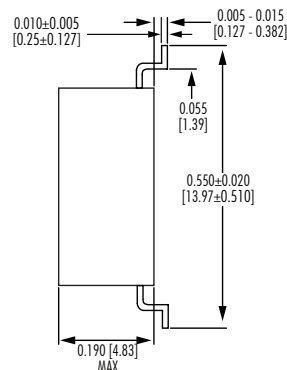
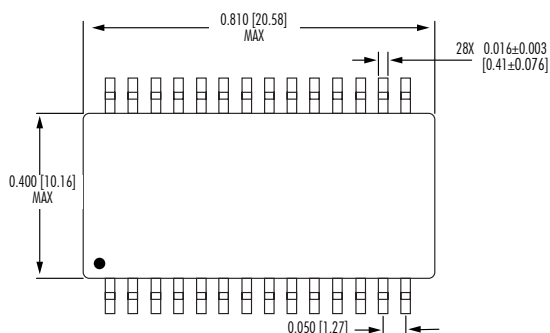


Mechanicals

TM200TX3DUA

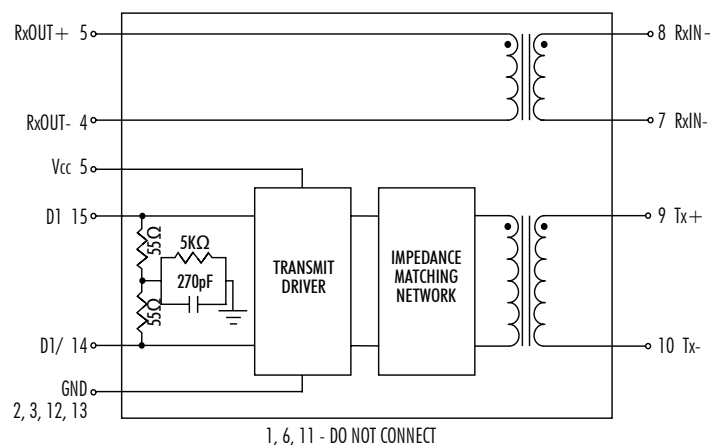
Dimensions: inch [mm]

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



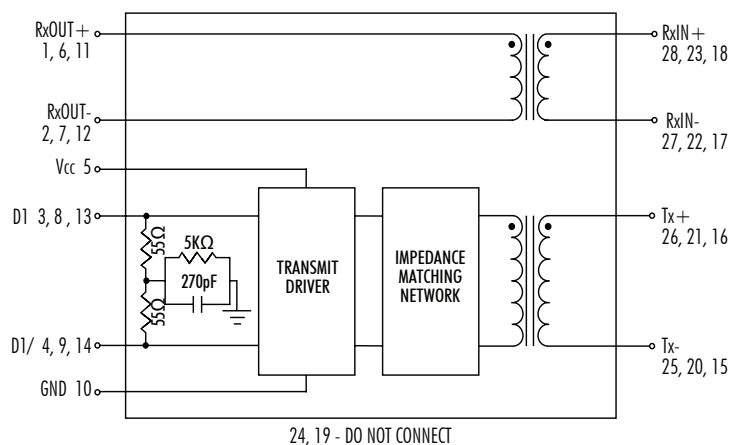
TM200TXHUA

Electrical Schematics



TM200TX3DUA

Electrical Schematics



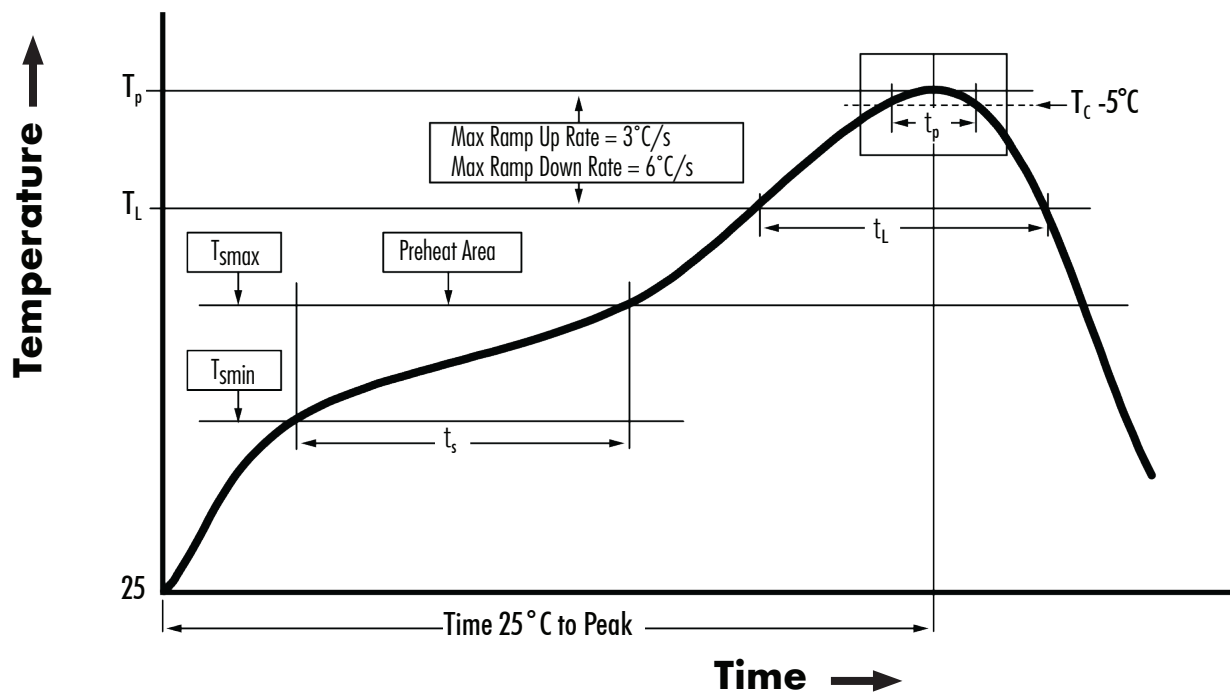
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TRANSCIVER Recommended Reflow Profile (Based on J-STD-020D)



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)
Tin/Lead Profile									
100	150	183	220	60 - 120	60 - 150	20	3°C/s MAX	6°C/s MAX	360
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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