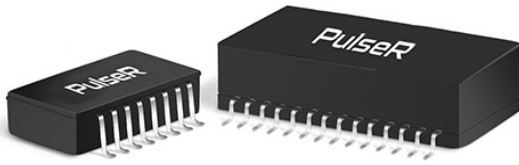


IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

Copperhead™ Series



- R** Small package incorporating active transmit and passive receive circuits with integrated isolation transformers
- R** Low power dissipation
- R** Low transmit/receive jitter
- R** Recommended for distances up to 23 meters
- R** AS9100 Certified (Based on, including ISO 9001:2000)
- R** IC grade transfer-molded package withstands 225°C peak temperature profile.
- R** Made in the U.S.A



TRANSMITTER — Electrical Specifications @ 25°C — Operating Temperature -55°C to +125°C

Part (V)	Input Data Voltage - V _{IL} (V)			Input Data Voltage - V _{IH} (mV)			Input Voltage Differential - V _{IN} (μA)			Input Current - I _{IL}	Input Current - I _{IH}	Differential Signal Level - V _{OUT} Number		
	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MAX	MIN	TYP	MAX
TM1062TXDUA	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	40	150	1200	1300	1500
TM1062TXHUA	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	500	750	1200	1300	1500
TM1062TX3DUA	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	500	750	1200	1300	1500

TRANSMITTER — Additional Electrical Specifications @ 25°C — Operating Temperature -55°C to +125°C

Part Number	Power Dissipation (mW)	θ _{JA} (°C/W)	Voltage	Input (V _{CC} 310%)	Data Rate - D _R (Mb/s)		Total P-P Transmit Jitter (pS)	Time (20-80%)	Output Rise-Fall Loss (pS)	Return Loss (dB)
	TYP	@85°C	@125°C	TYP	MIN	MAX	TYP	MAX	TYP	MAX
TM1062TXDUA	232	41	39	3.3V	246	1062	62	94	275	400
TM1062TXHUA	232	41	39	3.3V	246	1062	62	94	275	400
TM1062TX3DUA	700	34	30	3.3V	246	1062	62	94	275	400

TRANSFORMER COUPLED RECEIVER — Electrical Specifications @ 25°C — Operating Temp. -55°C to +125°C

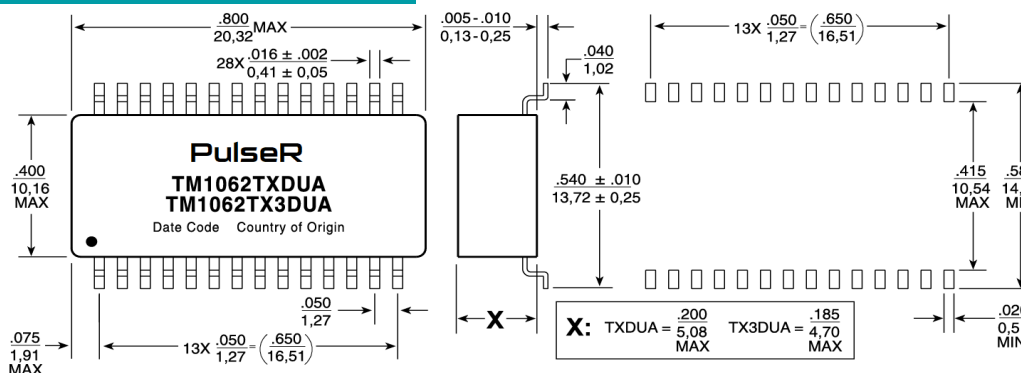
Part Number	Turns Ratio	Primary Inductance - L _M (μH)	Rise Time (20%-80%) (pS)	Data Rate - D _R (Mb/s)		Winding Resistance - DCR (Ω)	Insertion Loss (dB)	Return Loss (dB)
	TYP	MIN	MAX	MIN	MAX	MAX		
TM1062TXDUA	1:1	4.5	300	246	1062	0.2	-2 MAX	-12 MIN
TM1062TXHUA	1:1	4.5	300	246	1062	0.2	-2 MAX	-12 MIN
TM1062TX3DUA	1:1	4.5	300	246	1062	0.2	-2 MAX	-12 MIN

* At 1062 Mb/s data

1. Notes: Add suffix "T" to part number for Tape and Reel package 2. To order RoHS compliant part, add the suffix "NL" to the part number (i.e. TM1062TXHUANL). 3. Part is limited to 225°C Max Reflow Temperature.

Mechanical

TM1062TXDUA / TM1062TX3DUA



	TXDUA	TX3DUA
Weight	2.3 grams	2.8 grams
Tape & Reel	350/reel	350/reel
Tray	25/tray	25/tray
MSL	3	3

Dimensions: Inches / mm
Unless otherwise specified, all tolerances are 3.005 / 0.13

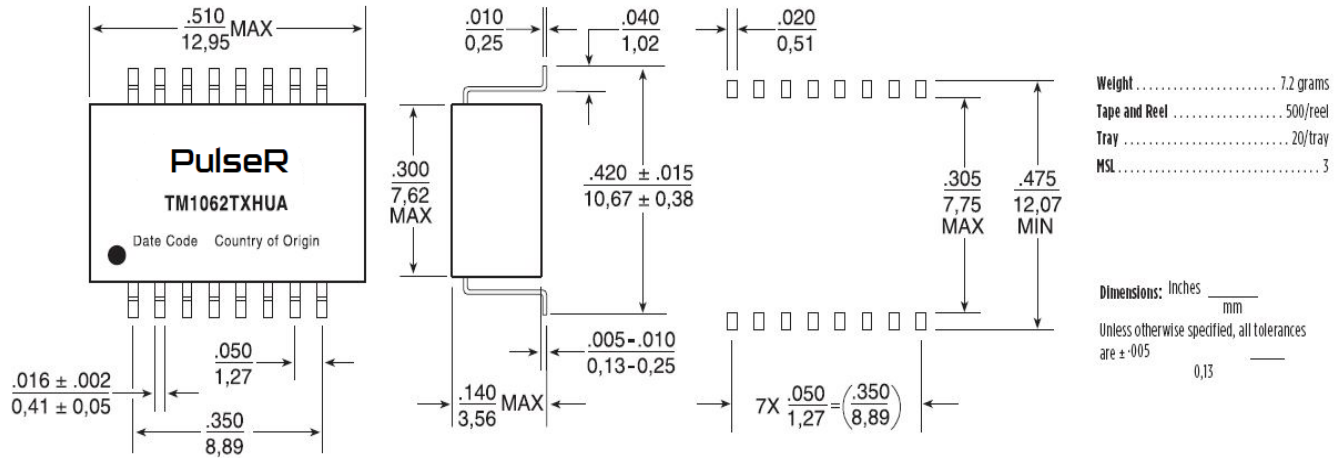
IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

Copperhead™ Series



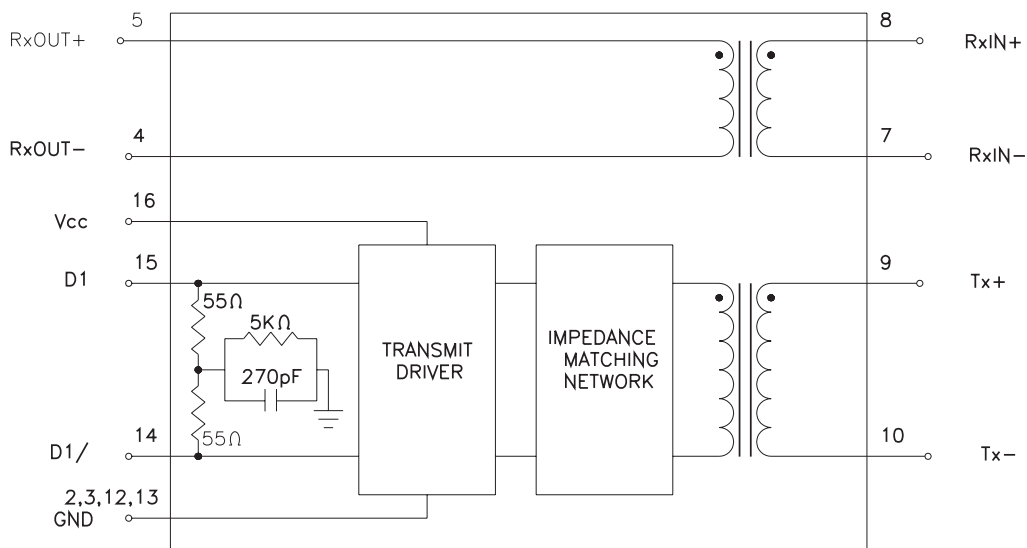
Mechanical

TM1062TXHUA



Schematic

TM1062TXHUA



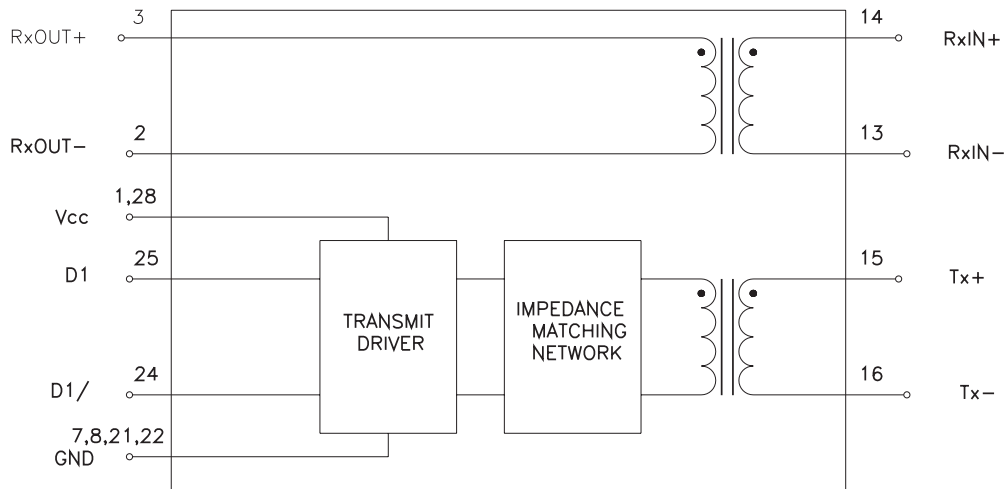
IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

Copperhead™ Series

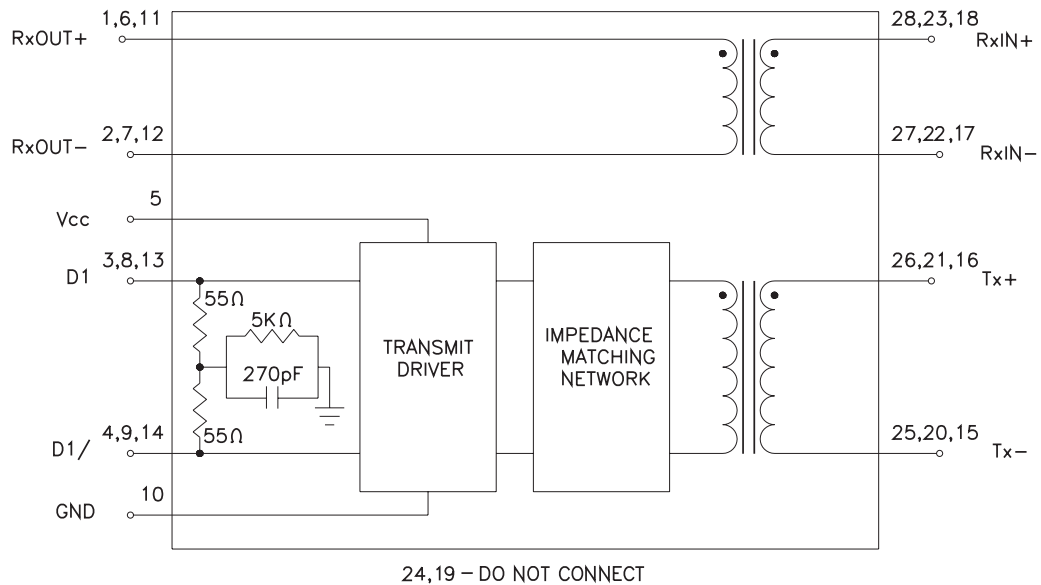


Schematics

TM1062TXDUA



TM1062TX3DUA

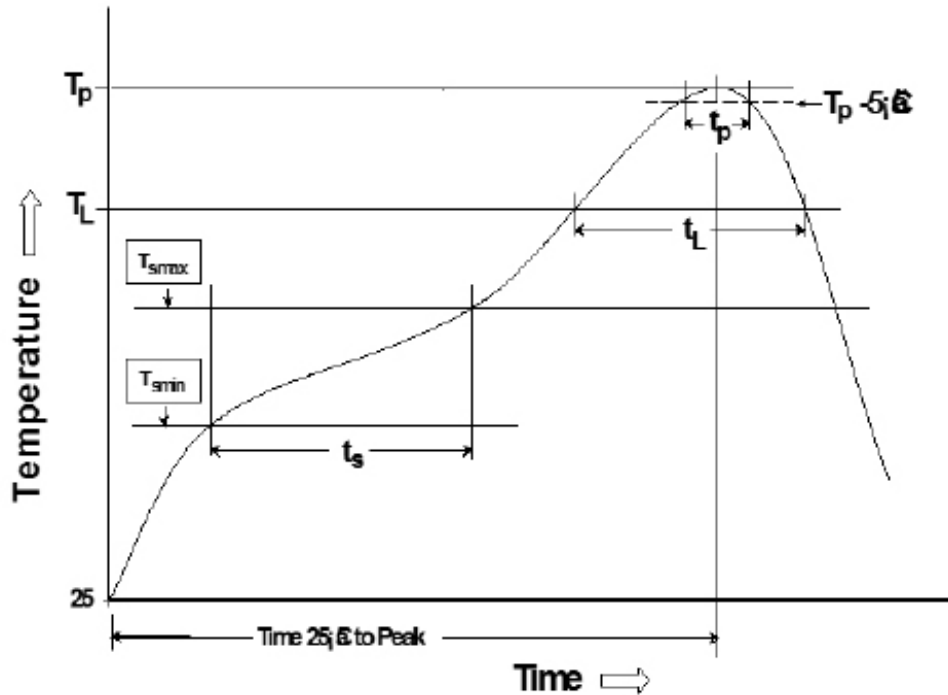


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Transceiver Tin/Lead or 100% Tin Recommended Reflow Profile (Based on J-STD-020D)



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	225	60-120	60-150	20	3°C/s MAX	6°C/s MAX	360

Notes:

1. All temperatures measured on the package leads.
2. Maximum times of reflow cycle: 2.

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