

# IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

Non-Lead Copperhead Series



- ⚙ Small package incorporating active transmit and passive receive circuits with integrated isolation transformers
- ⚙ Low power dissipation
- ⚙ Low transmit/receive jitter
- ⚙ Recommended for distances up to 20 meters
- ⚙ Made in the U.S.A

## TRANSMITTER – Electrical Specifications @ 25 °C – Operating Temperature –55 °C to +125 °C

Part Number	Input Data Voltage - V <sub>IL</sub> (V)			Input Data Voltage - V <sub>IH</sub> (mV)			Input Voltage Differential - V <sub>IN</sub> (μA)			Input Current - I <sub>IL</sub>	Input Current - I <sub>IH</sub> (mV)	Differential Signal Level - V <sub>OUT</sub>		
	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MAX	MIN	TYP	MAX
TM1062TXDUANL	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	40	150	1200	1300	1500
TM1062TXHUANL	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	500	750	1200	1300	1500
TM1062TX3DUANL	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 <sub>JA</sub> (°C/W)		Input Voltage (V <sub>CC ±10%</sub> )	Data Rate - D <sub>R</sub> (Mb/s)		Total P-P Transmit Jitter (pS)		Output Rise-Fall Time (20-80%) (pS)		Return Loss (dB)
	TYP	@85°C	@125°C	TYP	MIN	MAX	TYP	MAX	TYP	MAX	MIN
TM1062TXDUANL	232	41	39	3.3V	246	1062	62	94	275	400	-12
TM1062TXHUANL	232	41	39	3.3V	246	1062	62	94	275	400	-12
TM1062TX3DUANL	700	34	30	3.3V	246	1062	62	94	275	400	-12

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

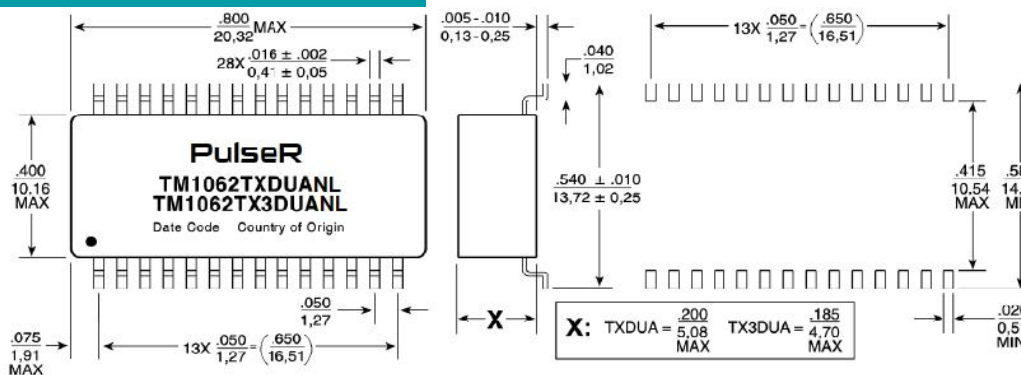
Part Number	Turns Ratio	Primary Inductance - L <sub>M</sub> (μH)	Rise Time (20%-80%) (pS)	Data Rate - D <sub>R</sub> (Mb/s)		Winding Resistance - DCR (Ω)	Insertion Loss (dB)	Return Loss (dB)
	TYP	MIN	MAX	MIN	MAX	MAX		
TM1062TXDUANL	1:1	4.5	300	246	1062	0.2	-2 MAX	-12 MIN
TM1062TXHUANL	1:1	4.5	300	246	1062	0.2	-2 MAX	-12 MIN
TM1062TX3DUANL	1:1	4.5	300	246	1062	0.2	-2 MAX	-12 MIN

\* At 1062 Mb/s data

Note: Add suffix "T" to part number for Tape and Reel

## Mechanical

### TM1062TXDUANL / TM1062TX3DUANL



	TXDUANL	TX3DUANL
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 ±.005  
0,13



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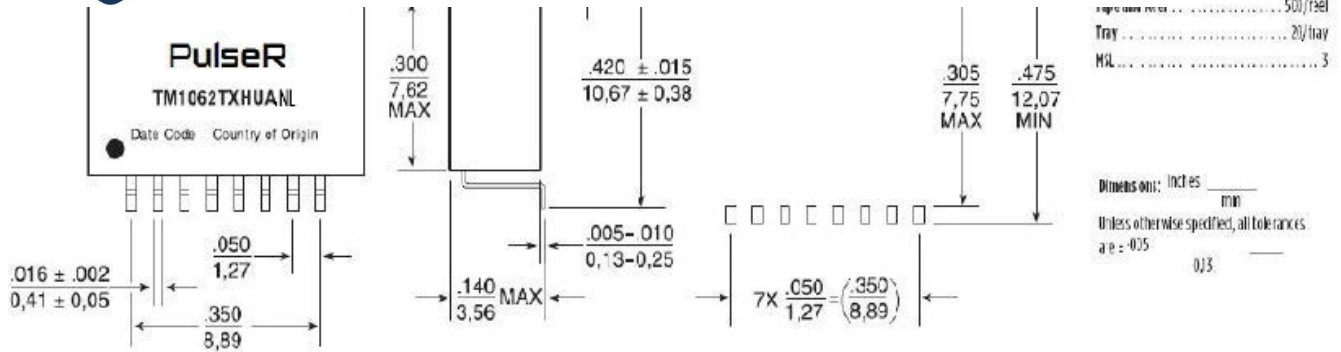
## Mechanical

TM1062TXHUANL



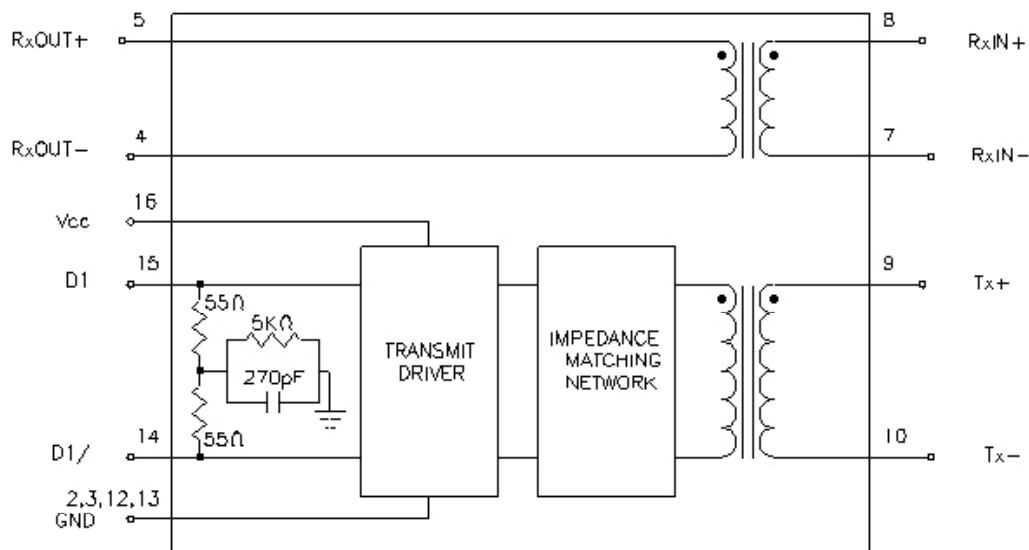
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## Schematic

TM1062TXHUANL



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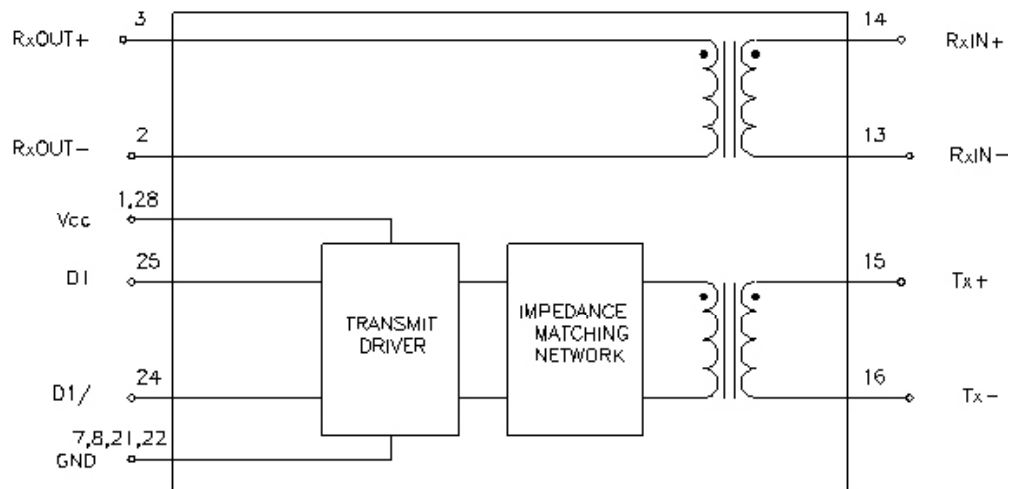
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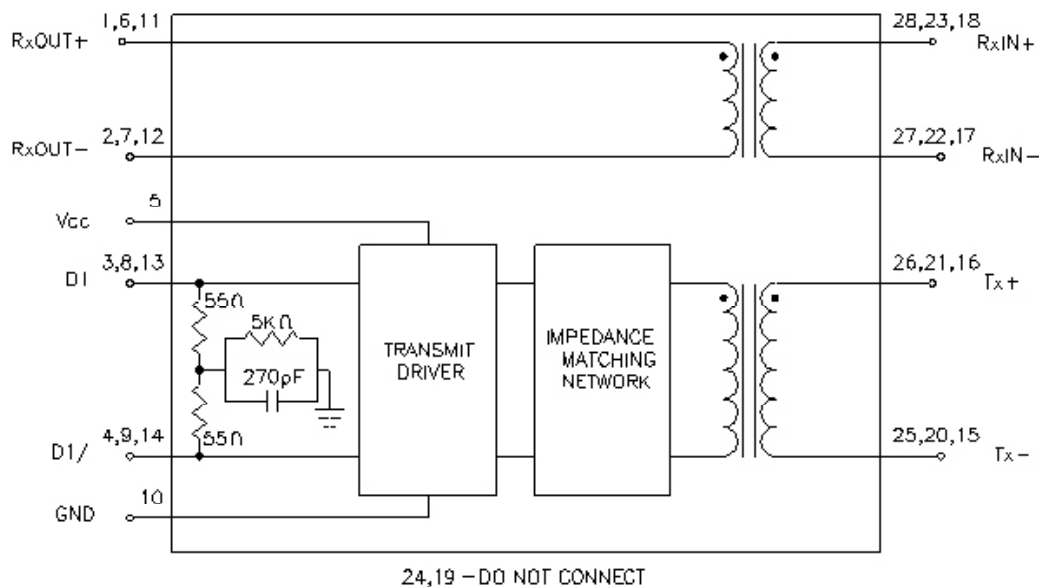
Non-Lead Copperhead Series

## Schematics

TM1062TXDUANL



TM1062TX3DUANL

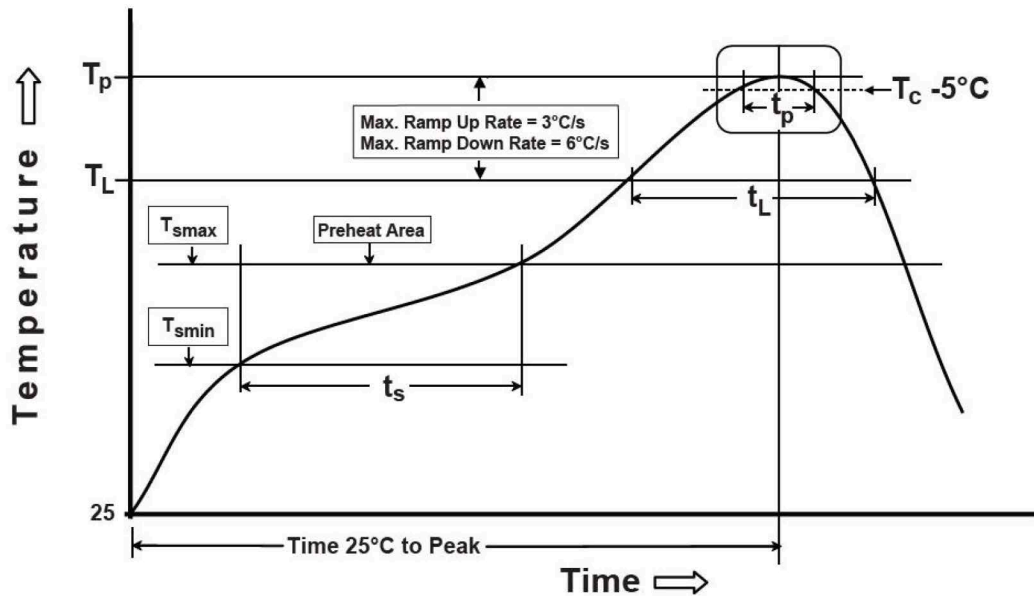


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## Transceiver Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



$T_{SMIN}$ (°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	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.

### For More Information

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