

IEEE 1394B FIRE WIRE 1.062Gb TRANSCIVER LINE INTERFACE MODULE

Non-Lead 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.
- Operating Temperature: -55°C to +125°C

TRANSMITTER - Electrical Specifications @ 25°C

Part Number	Input Data Voltage						Input Voltage Differential			Input Current		Differential Signal Level		
	VIL (V)			VIH (V)			VIN (mV)			IIL (μA)	IIH (μA)	VOUT (mV)		
	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	1350	1400	1500
TM1062TXHUANL	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	500	750	1350	1400	1500
TM1062TX3DUANL	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	500	750	1350	1400	1500

TRANSMITTER - Additional Electrical Specifications @ 25°C

Part Number	Power Dissipation (mW)	Θja (°C/W)		Input Voltage (V)	Data Rate DR (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	MIN	MAX	MIN
TM1062TXDUANL	232	41	39	3.30	246	1062	62	94	275	400	-12
TM1062TXHUANL	232	41	39	3.30	246	1062	62	94	275	400	-12
TM1062TX3DUANL	700	34	30	3.30	246	1062	62	94	275	400	-12

TRANSFORMER COUPLED RECEIVER - Electrical Specifications @ 25°C

Part Number	Turns Ratio	Primary Inductance LM (μH)	Rise Time (20-80%) (pS)	Data Rate DR (Mb/s)		Winding Resistance DCR	Insertion Loss (dB)	Return Loss (dB)
	TYP	MIN	MAX	MIN	MAX	TYP	MAX	MIN
TM1062TXDUANL	1:1	4.5	300	246	1062	0.20	-2	-12
TM1062TXHUANL	1:1	4.5	300	246	1062	0.20	-2	-12
TM1062TX3DUANL	1:1	4.5	300	246	1062	0.20	-2	-12

NOTES:

* At 1062 Mb/s Data Rate

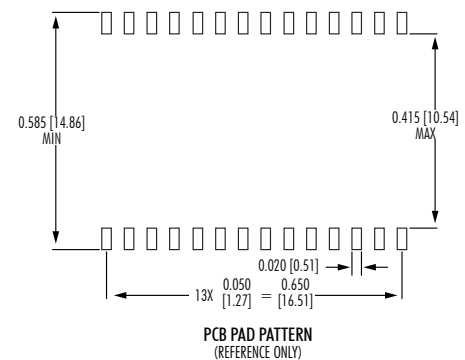
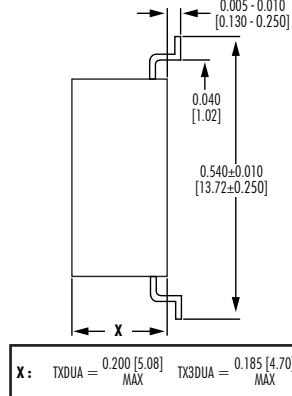
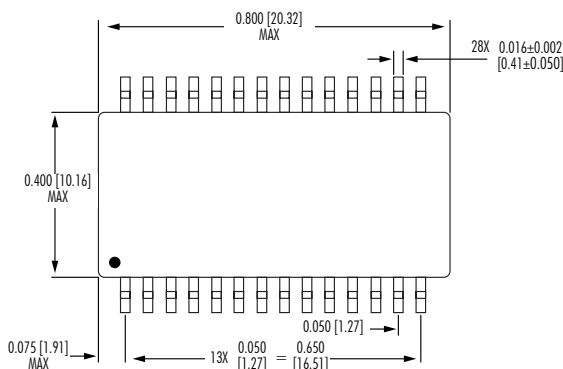
1. For Tape & Reel packaging, add "T" suffix at the end of the part number: i.e. TM1062TXDUANLT

Mechanicals

Dimensions: inch [mm]

Tolerance (unless otherwise specified): ±0.005 [0.13]

TM1062TXDUANL / TM1062TX3DUANL



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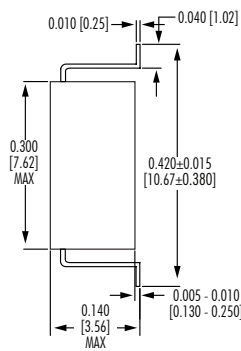
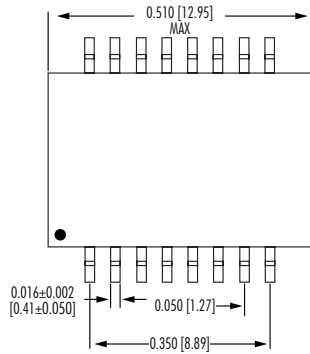
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Non-Lead Copperhead™ Series

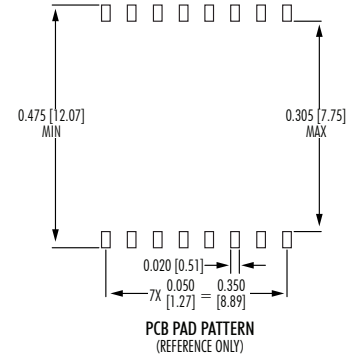


Mechanicals

TM1062TXHUANL

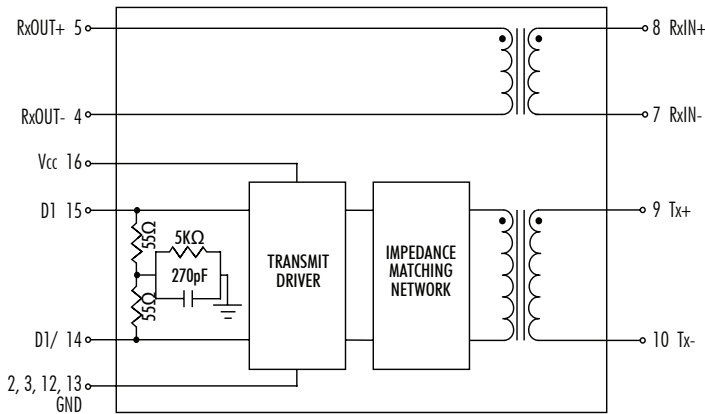


Dimensions: inch [mm]
Tolerance (unless otherwise specified): ±0.005 [0.13]



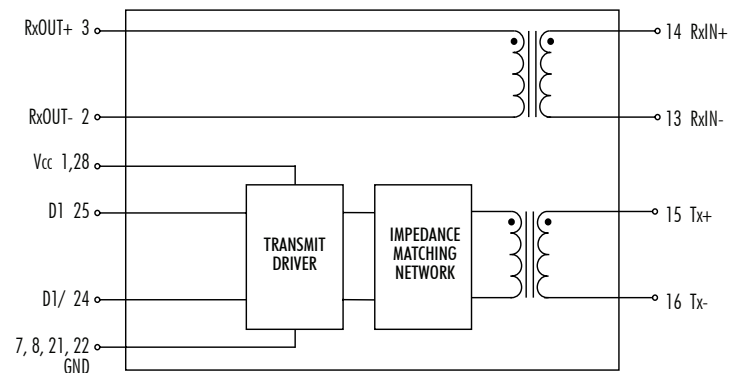
TM1062TXHUANL

Electrical Schematics



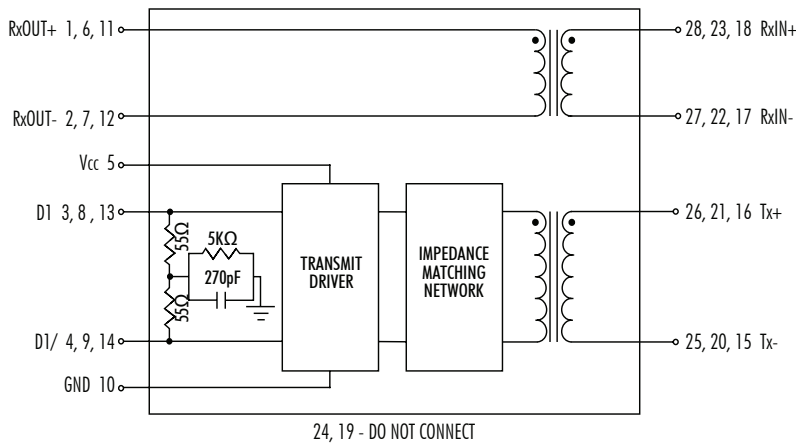
TM1062TXDUANL

Electrical Schematics



TM1062TX3DUANL

Electrical Schematics



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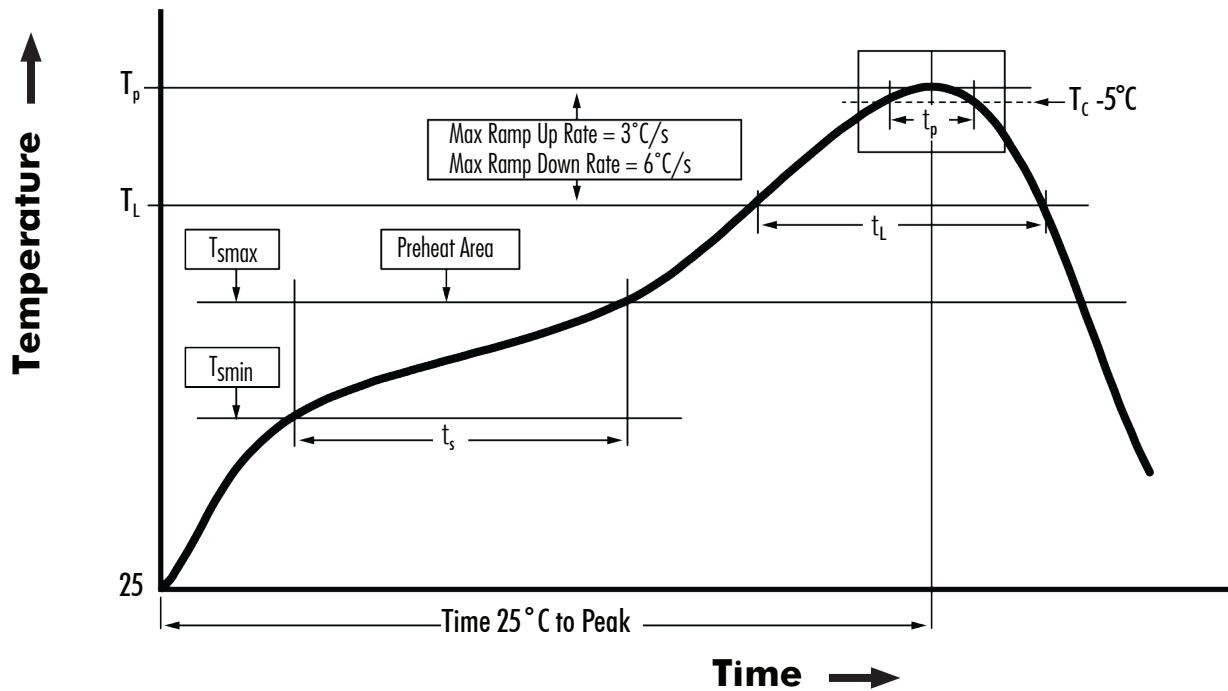
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TRANSCEIVER - Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



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



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