IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

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
- IC grade transfer-molded package withstands 225°C peak temperature profile.

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

Part Number	Input Data Voltage - V IL (V)			Input Data Voltage - V (mV)			Input Voltage Differential - VIN (mV)			Input Current - IIL (µA)	Input Current - IIH (µA)	Differential Rate - DR (mV)		
	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	1350	1400	1500
TM1062TXHUA	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	500	750	1350	1400	1500
TM1062TX3DUA	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 — Operating Temperature -55°C to +125°C

Part Number	Power Dissipation (mW)	θja (°C/W)		Input Voltage (Vcc ±10%)	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	TYP	MAX	MIN
TM1062TXDUA	232	41	39	3.3V	246	1062	62	94	275	400	-12
TM1062TXHUA	232	41	39	3.3V	246	1062	62	94	275	400	-12
TM1062TX3DUA	700	34	30	3.3V	246	1062	62	94	275	400	-12

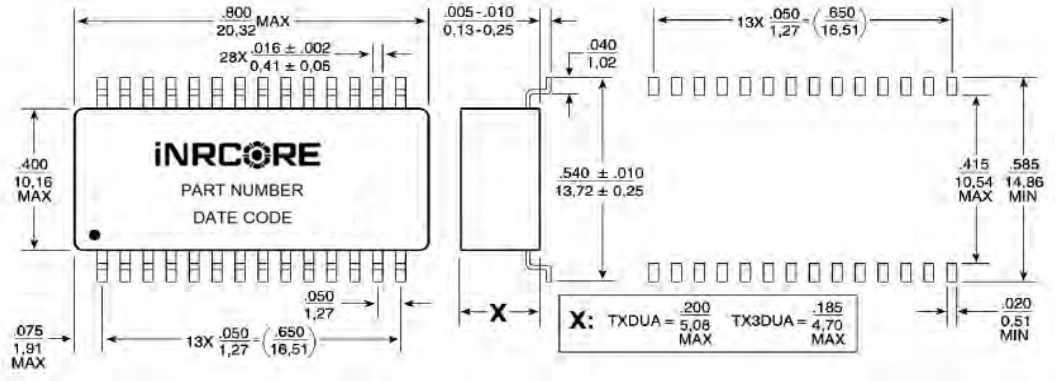
TRANSFORMER COUPLED RECEIVER — Electrical Specifications @ 25°C — Operating Temp. -55°C to +125°C

Part Number	Turns Ratio	Primary Inductance - LM (µH)	Rise Time (20%-80%) (pS)	Data Rate -DR (Mb/s)		Winding Resistance - DCR (W)	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

Note: 1. From Date Code 1921 (YYww) on: minimum differential signal level 100% tested to 1350mV . 2. Add suffix "T" to part number for Tape and Reel

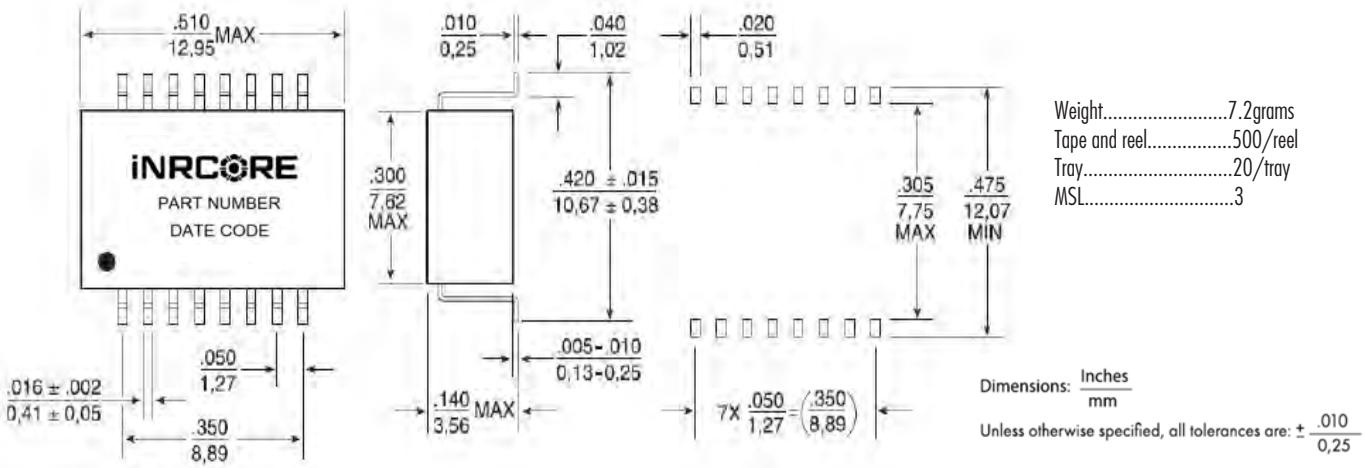
Mechanical

TM1062TXDUA / TM1062TX3DUA



Mechanical

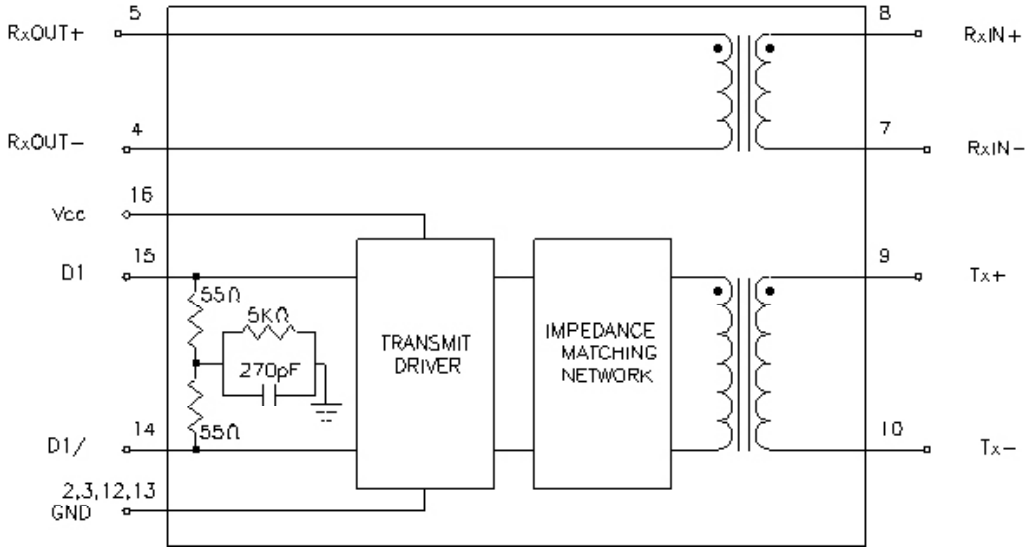
TM1062TXHUA



Weight.....7.2grams
Tape and reel.....500/reel
Tray.....20/tray
MSL.....3

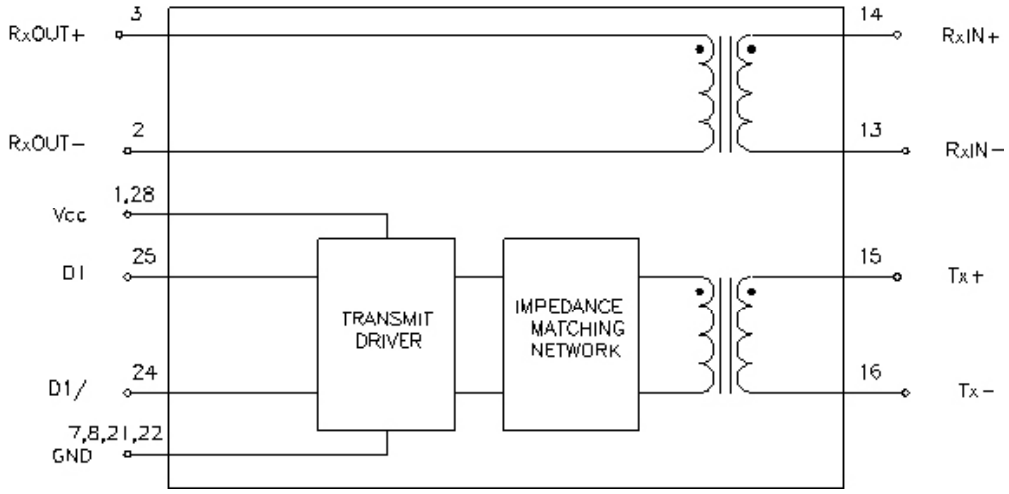
Electrical Schematic

TM1062TXHUA



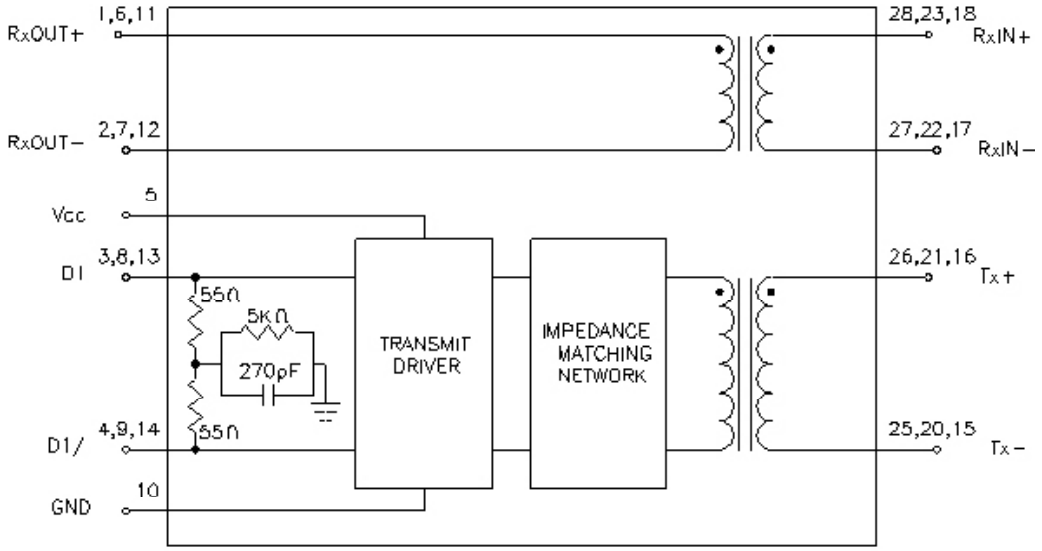
Electrical Schematic

TM1062TXDUA



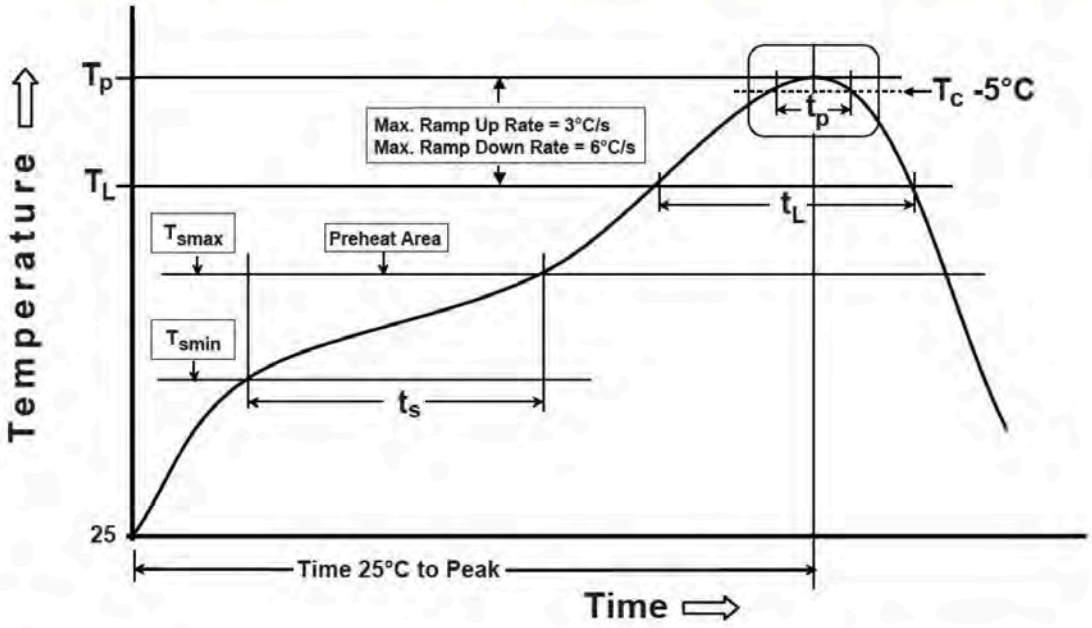
Electrical Schematic

TM1062TX3DUA



24,19 – DO NOT CONNECT

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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