

# IEEE 1394B Fire wire 1.062Gb Transceiver Line Interface Module



## Copperhead Series

- ⚙ 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.
- ⚙ Small package incorporating active transmit and passive receive circuits with integrated isolation transformers

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

Part Number	Input Data Voltage - VIL (V)			Input Data Voltage - VIH (V)			Input Voltage Differential - VIN (mV)			Input Current - IIL (μA)	Input Current - IIH (μA)	Differential Signal Level - VOUT (mV)		
	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MAX	MIN	TYP	MAX
TM1062DUXB	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	40	150	1200	1300	1500
TM1062HUXB	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	500	750	1200	1300	1500
TM1062DU3XB	1.35	1.63	1.88	2.07	2.33	2.58	150	800	1200	500	750	1200	1300	1500
TM125TXHUA	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)	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	TYP	MAX	MIN
TM1062DUXB	232	41	39	3.3V	246	1062	62	94	275	400	-12
TM1062HUXB	232	41	39	3.3V	246	1062	62	94	275	400	-12
TM1062DU3XB	700	34	30	3.3V	246	1062	62	94	275	400	-12
TM125TXHUA	232	41	39	3.3V	98	246	62	94	275	400	-12
TM125TX3DUA	700	41	39	3.3V	98	246	62	94	275	400	-12

### TRANSMITTER – Additional Electrical Specifications @ 25 °C – Operating Temperature –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 (Ω)	Insertion Loss (dB)	Return Loss (dB)
	TYP	MIN	MAX	MIN	MAX	TYP	MAX	MAX
TM1062DUXB	1:1	4.5	300	246	1062	0.2	-2 MAX	-12 MIN
TM1062HUXB	1:1	4.5	300	246	1062	0.2	-2 MAX	-12 MIN
TM1062DU3XB	1:1	4.5	300	246	1062	0.2	-2 MAX	-12 MIN
TM125TXHUA	1:1	44	300	98	246	0.2	-2 MAX	-12 MIN
TM125TX3DUA	1:1	44	300	98	246	0.2	-2 MAX	-12 MIN

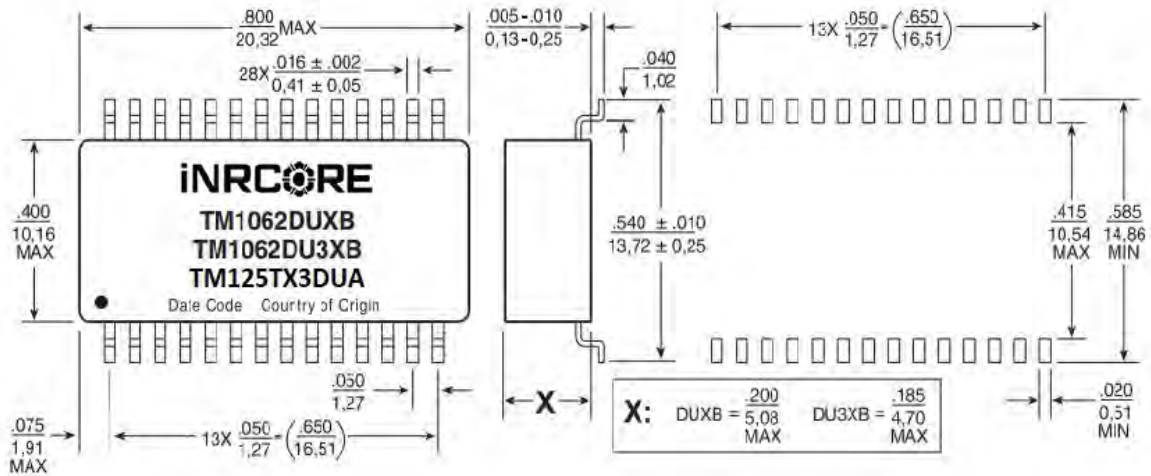
Notes: To order RoHS compliant part, add the suffix "Z" to the part number (i.e. **TM1062DUXBZ**). Part Limited to 225°C Max Reflow Temperature.

\* At 1062 Mb/s Data Rate

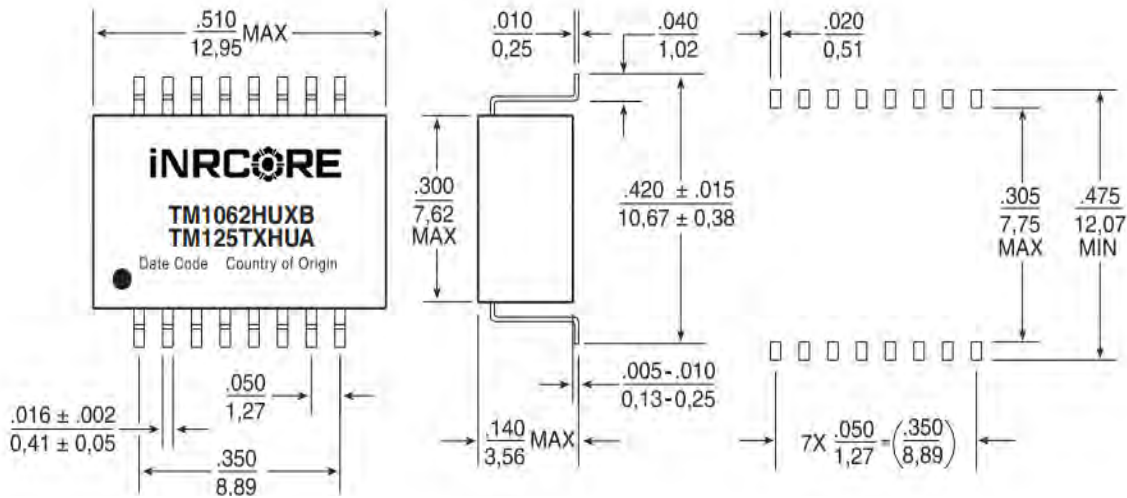


Mechanicals

TM1062DUXB/TM1062DU3XB/TM125TX3DUA



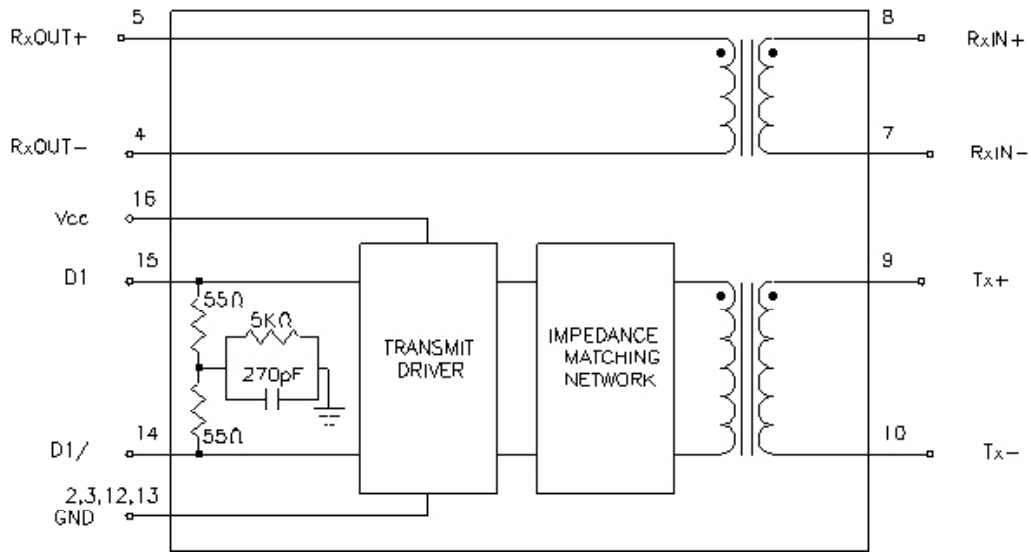
TM1062HUXB/TM125TXHUA



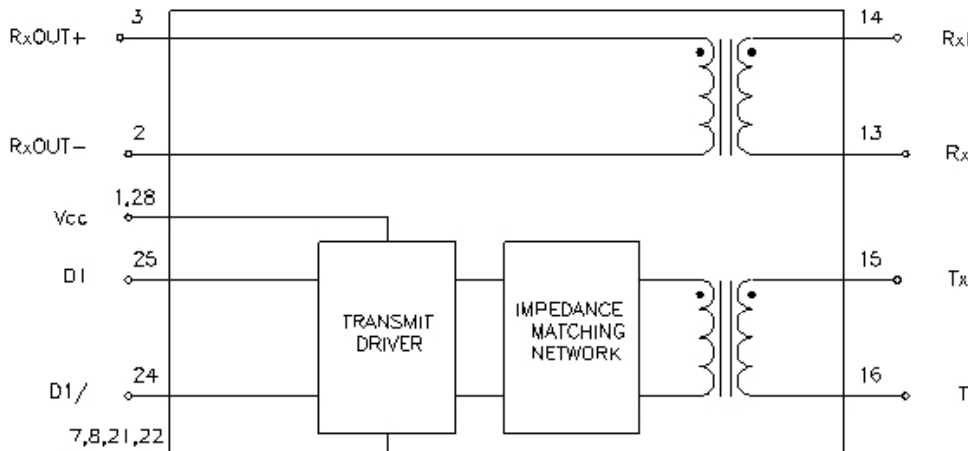
**Dimensions:**  $\frac{\text{Inches}}{\text{mm}}$   
 Unless otherwise specified, all tolerances are  
 $\pm \frac{.005}{0,13}$

Electrical Schematics

TM1062HUXB/TM125TXHUA

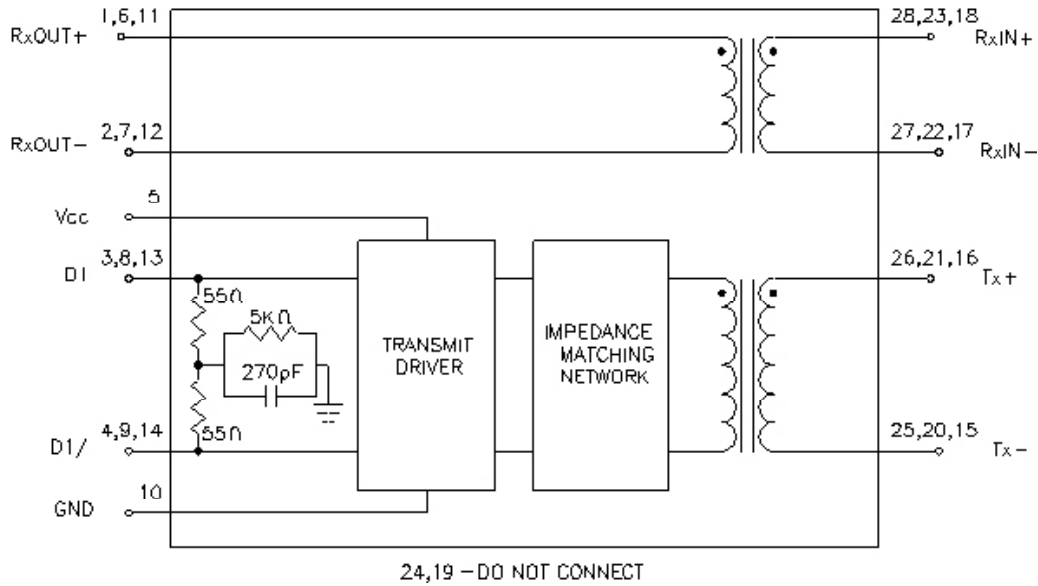


TM1062DUXB



Electrical Schematics

TM1062DU3XB/TM125TX3DUA



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