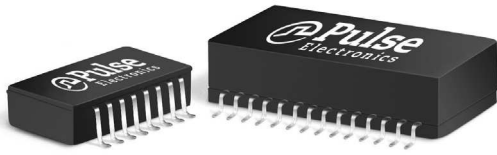


IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

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
- AS9100 Certified (Based on, including ISO 9001:2000)
- IC grade transfer-molded package withstands 225 degree C peak temperature profile.
- Made in the USA

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

| Part Number | Input Data Voltage - V _{IL} (V) | | | Input Data Voltage - V _{IH} (V) | | | Input Voltage Differential - V _{IN} (mV) | | | Input Current - I _{IL} (μA) | Input Current - I _{IH} (μA) | Differential Signal Level - V _{OUT} (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 | 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) | | Input Voltage (V _{CC} ±10%) | Data Rate - D _R (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

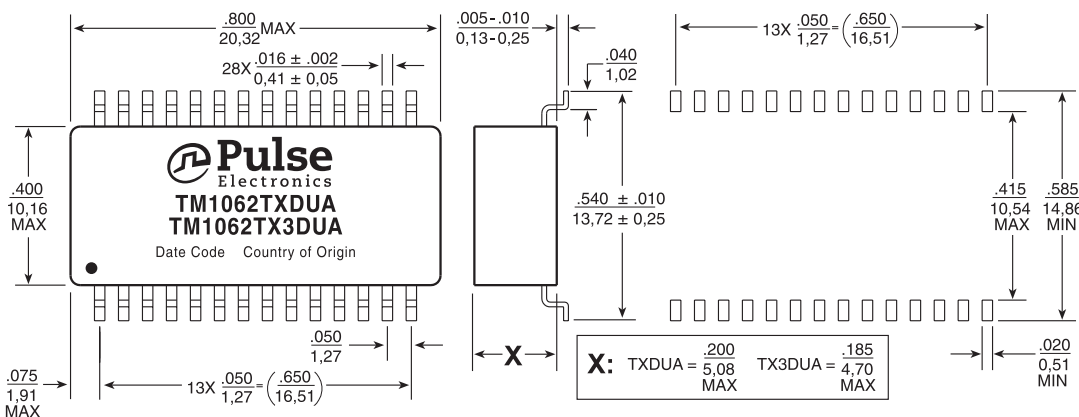
| Part Number | Turns Ratio | Primary Inductance - L _H (μH) | Rise Time (20%-80%) (pS) | Data Rate - D _R (Mb/s) | | Winding Resistance - DCR (Ω) | Insertion Loss (dB) | Return Loss (dB) |
|--------------|-------------|--|--------------------------|-----------------------------------|------|------------------------------|---------------------|------------------|
| | 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 rate

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

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 |

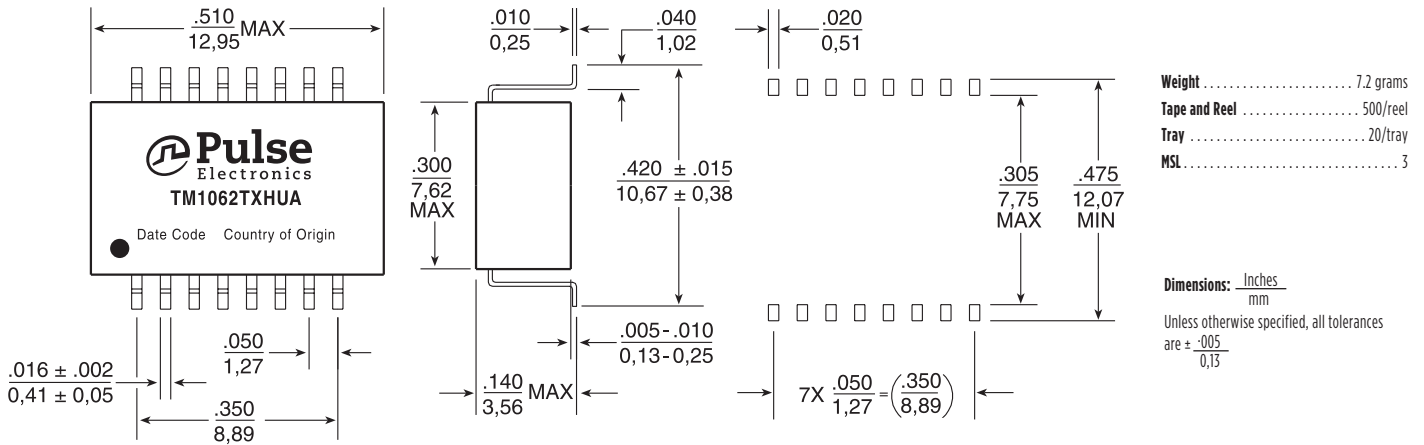
Dimensions: Inches
mm
Unless otherwise specified, all tolerances are ±.005
0,13

IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

Copperhead Series

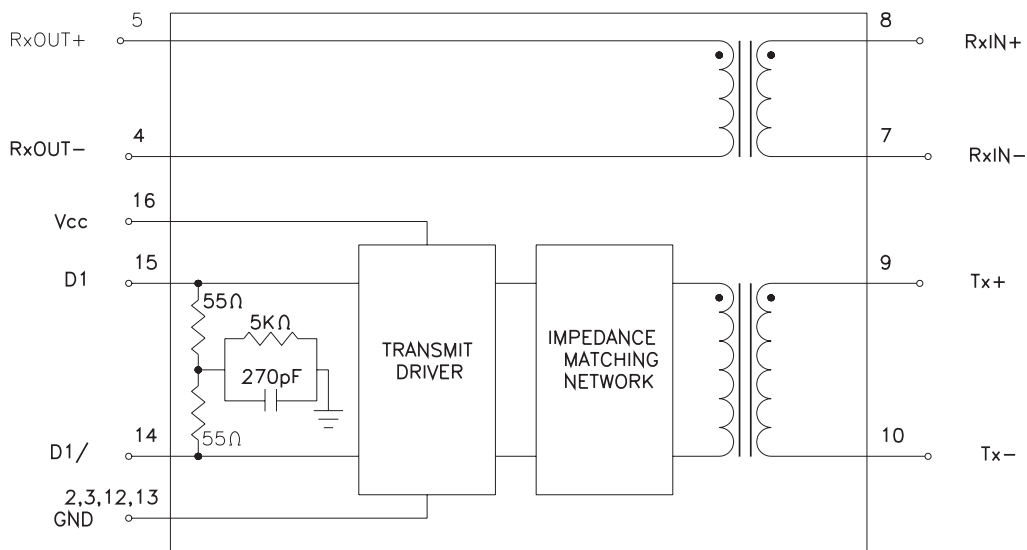
Mechanical

TM1062TXHUA



Schematic

TM1062TXHUA

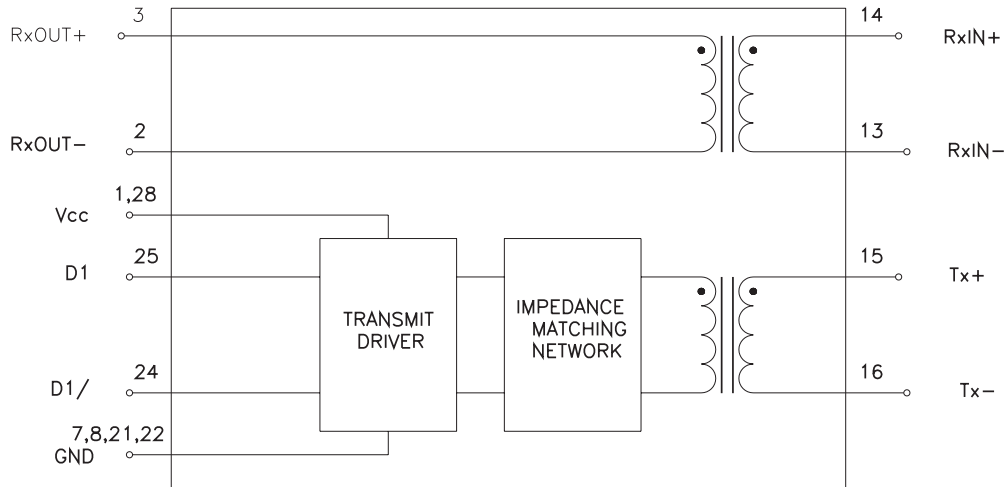


IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

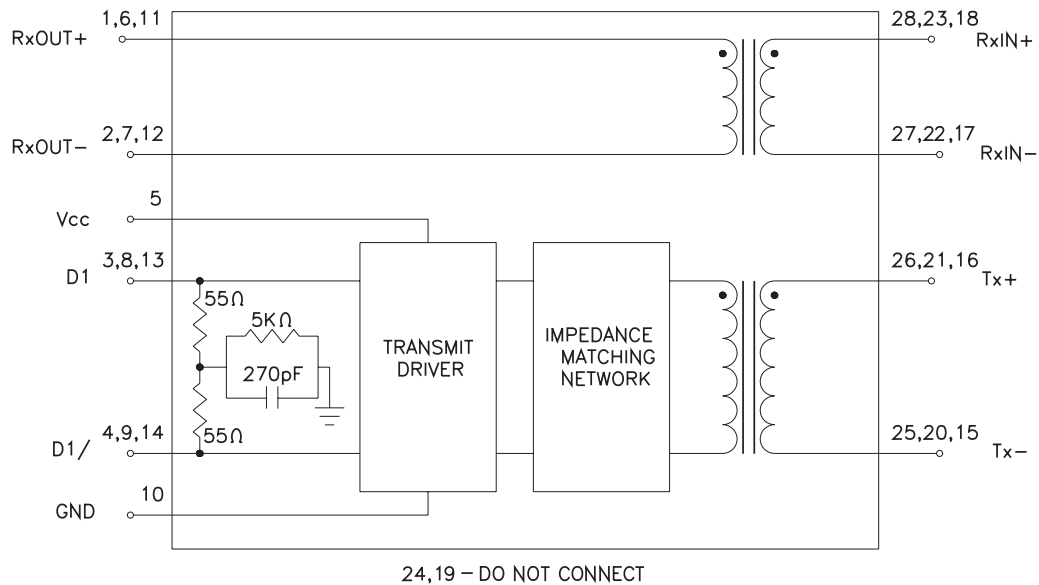
Copperhead Series

Schematics

TM1062TXDUA



TM1062TX3DUA



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