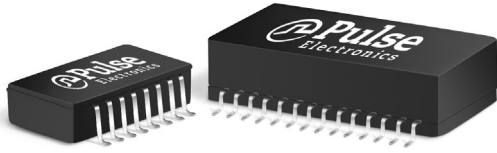


# IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

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 <sub>IL</sub> (V) |      |      | Input Data Voltage - V <sub>IH</sub> (V) |      |      | Input Voltage Differential - V <sub>IN</sub> (mV) |     |      | Input Current - I <sub>IL</sub> (μA) | Input Current - I <sub>IH</sub> (μA) | Differential Signal Level - V <sub>OUT</sub> (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 <sub>ja</sub> (°C/W) |        | Input Voltage (V <sub>CC</sub> ±10%) | 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              |
| 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              |

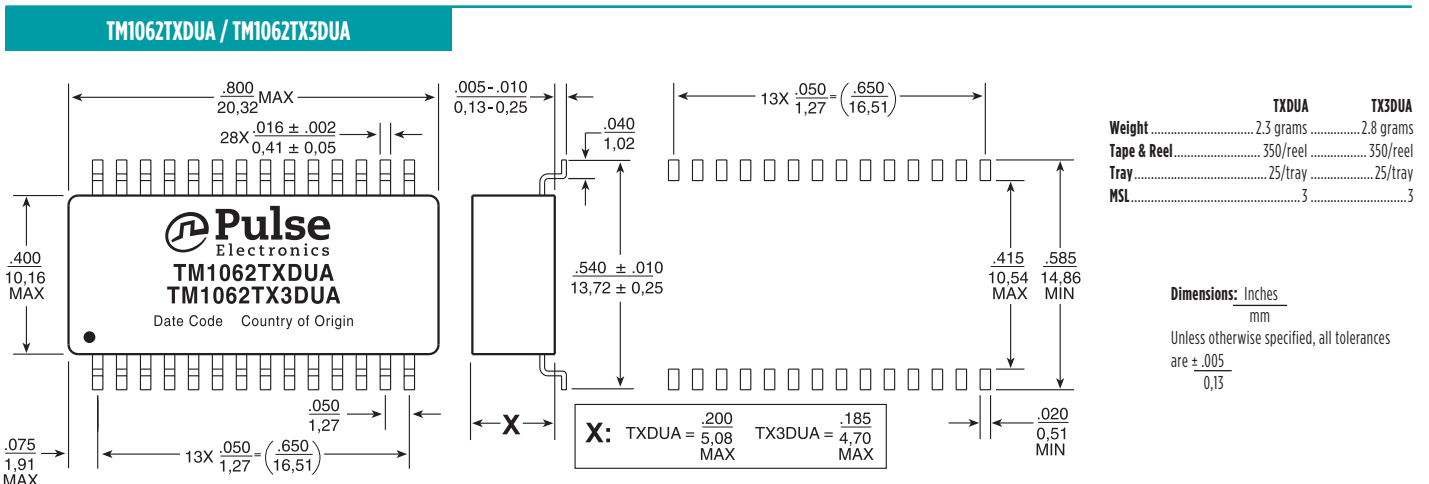
### TRANSFORMER COUPLED RECEIVER — Electrical Specifications @ 25°C — Operating Temp. -55°C to +125°C

| Part Number  | Turns Ratio | Primary Inductance - L <sub>p</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                          |                     |                  |
| 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

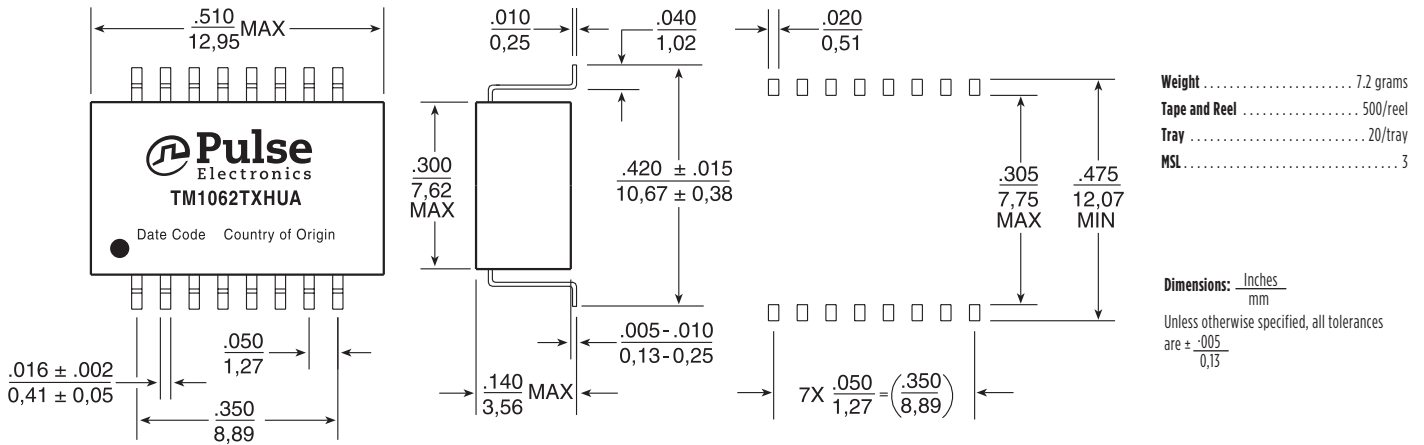


# IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

Copperhead Series

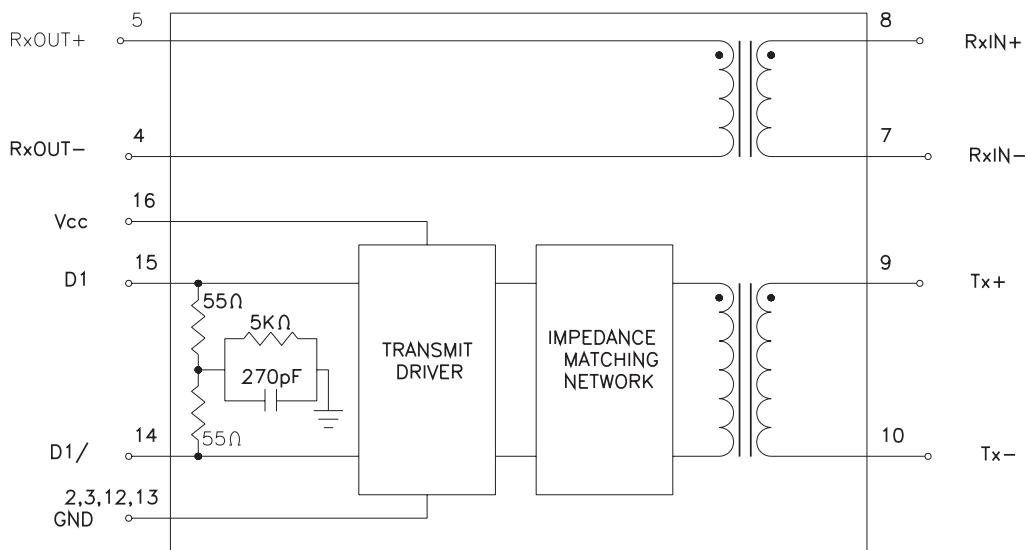
## Mechanical

TM1062TXHUA



## Schematic

TM1062TXHUA

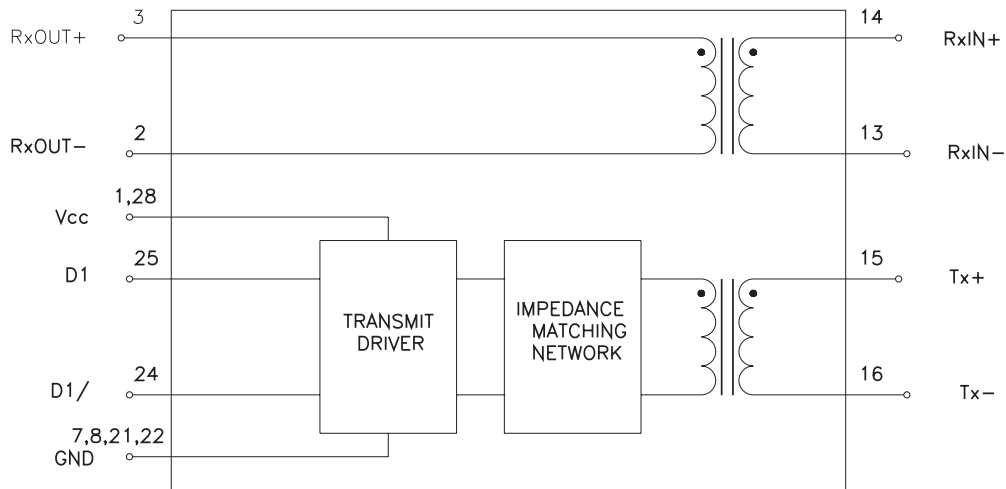


# IEEE 1394B Firewire 1.062Gb Transceiver Line Interface Module

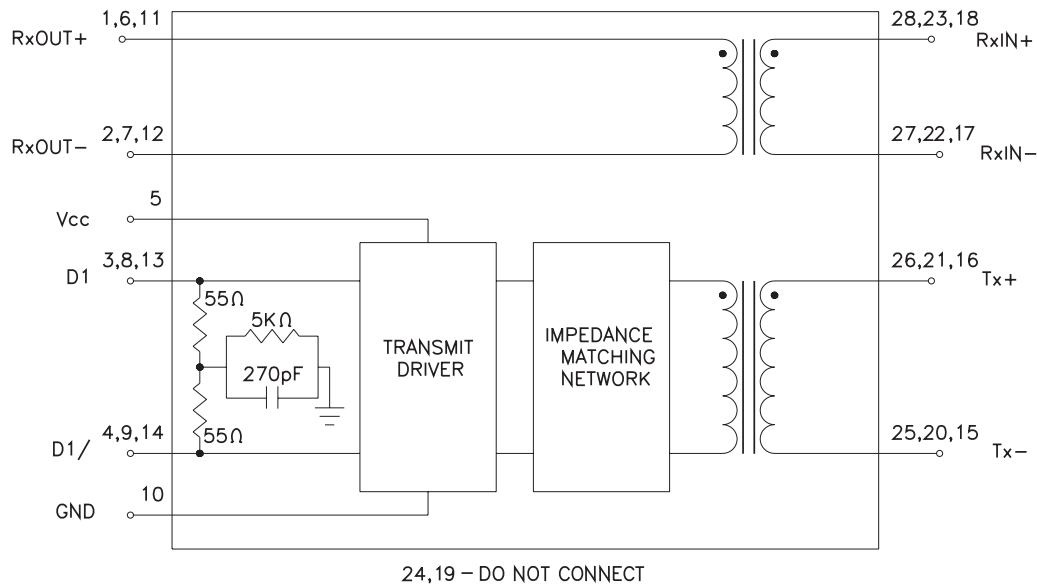
Copperhead Series

## Schematics

### TM1062TXDUA



### TM1062TX3DUA



## For More Information

**Pulse North America Headquarters**  
Two Pearl Buck Court  
Bristol, PA 19007  
U.S.A.

Tel: 215 781 6400  
Fax: 215 781 6403

**Pulse Europe**  
Einsteinstrasse 1  
D-71083 Herrenberg  
Germany

Tel: 49 7032 7806 0  
Fax: 49 7032 7806 135

**Pulse China Headquarters**  
B402, Shenzhen Academy of  
Aerospace Technology Bldg.  
10th Kejinan Road  
High-Tech Zone  
Nanshan District  
Shenzhen, PR China 518057  
Tel: 86 755 33966678  
Fax: 86 755 33966700

**Pulse North China**  
Room 2704/2705  
Super Ocean Finance Ctr.  
2067 Yan An Road West  
Shanghai 200336  
China

Tel: 86 21 62787060  
Fax: 86 21 62786973

**Pulse South Asia**  
135 Joo Seng Road  
#03-02  
PM Industrial Bldg.  
Singapore 368363

Tel: 65 6287 8998  
Fax: 65 6287 8998

**Pulse North Asia**  
3F, No. 198  
Zhongyuan Road  
Zhongli City  
Taoyuan County 320  
Taiwan R. O. C.  
Tel: 886 3 4356768  
Fax: 886 3 4356823 (Pulse)  
Fax: 886 3 4356820 (FRE)

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