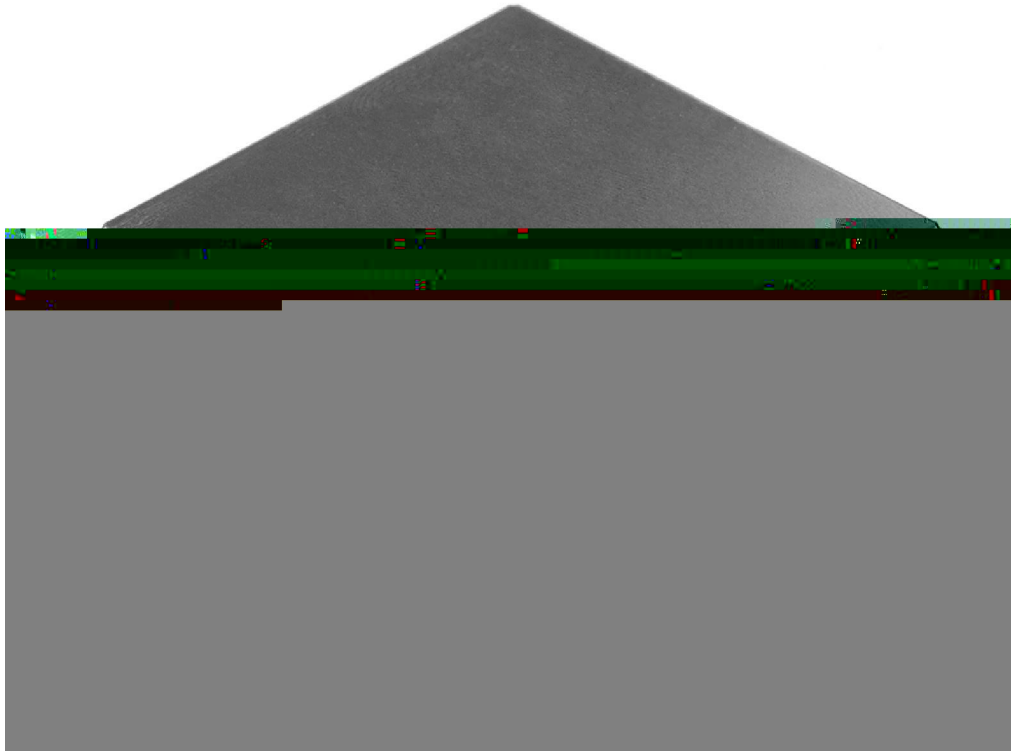




EPON ONU Triplexer Transceiver

RTXM170-501

Features

- *Single Fiber Triplexer*
- *1.25Gbps data upstream and downstream / 45~1000MHz CATV analog signal downstream*
- *Burst mode transmission with 1310nm FP laser*
- *Continuous mode digital receiver with 1490nm PIN-TIA*
- *Analog CATV receiver with 1550nm InGaAs PIN detector*
- *+3.3V / +12V power supply*
- *LVPECL compatible data input*
- *CML compatible data output*
- *LVPECL transmitter burst-mode control*
- *LVTTTL I2C DDM interface*
- *LVTTTL TX_SD/RX_SD/Video_SD*
- *Soft Enable / Disable TX and Video*
- *Fully RoHS Compliant*
- *All metal housing for superior EMI performance*
- *Excellent ESD / TVS protection*
- *0℃ to 70℃ operating ambient temperature*
- *1×20 Pin and 2"×2" Package*
- *3PIN RF output connector*
- *Real time monitoring of:*
 - *Temperature*
 - *Supply voltage*
 - *Laser bias current*
 - *Transmitted optical power*
 - *Received optical power*
 - *Video Received optical power*
 - *RF Output level*

RTXM170-501

Applications

- *GEAPON ONU Side*
- *Voice / Data / Video FTTx*

Standards

- *IEEE Std 802.3 ahTM -2004*
1000 BASE-PX20-U
- *SFF-8472 Rev 9.5*
- *RoHS 6*

Descriptions

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Block diagram

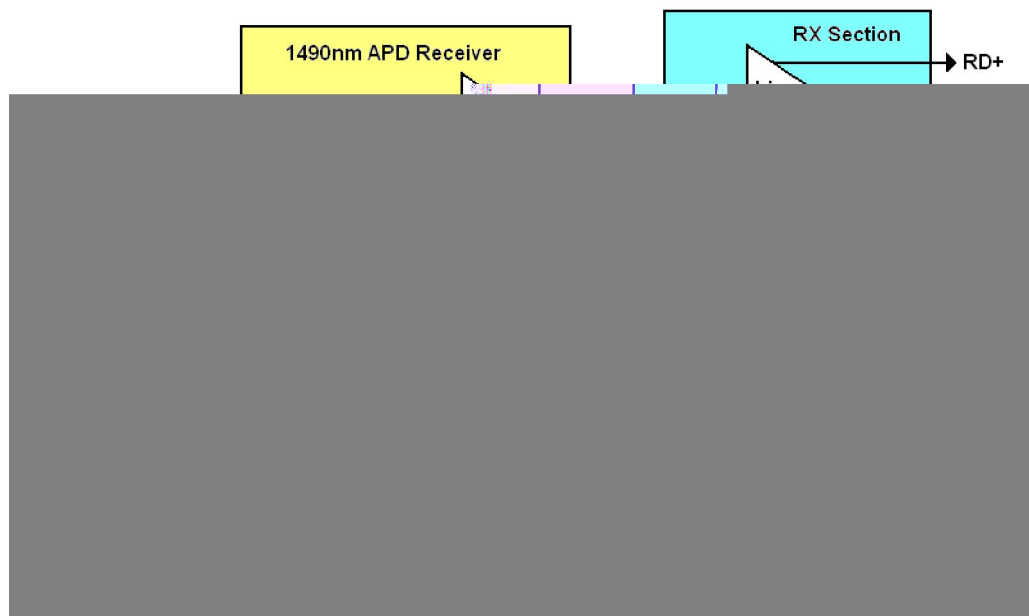


Figure 1

RTXM170-501

Optical and Electrical Characteristics ($T_0 = 0^\circ\text{C}$ to 70°C)

[illegible]

Note 1: Coupled into 9/125um.

Note 2: Measured with PRBS 2⁷-1 test pattern @ 1.25Gbps.

Note 3: Refer to Timing Parameter Definition in Burst Mode Sequence, See Figure 4.

Note 4: Measured with the Bessel-Thompson filter ON.

Note 5: DC coupled internally and terminated internally (see the recommended circuit below).

Note 6: See Figure 5.

Note 7: Measured with PRBS 2⁷-1 test pattern @ 1.25Gbps with TX on, ER=10dB, BER=10E-12.

Note 8: An increase in optical power above the level will cause the Signal Detect output to switch from a low state to a high state, Refer to Timing Parameter Definition of RX ALM Assert/Dessert time, see Figure 6.

Note 9: A decrease in optical power below the level will cause the Signal Detect output to switch from a high state to a low state, Refer to Timing Parameter Definition of RX ALM Assert/Dessert time, see Figure 7.

Note 10: AC coupled internally (see the recommended circuit below).

Note 11: Test from 45MHz to 1000MHz.

Note 12: Test at _____, _____ (_____ %),
(_____ %).

Note 13: Test at -6dBm Optical Input Power, _____ (_____ %).

Note 14: Test at +2dBm Optical Input Power, _____ (_____ %).

Note 15: Test from 45MHz to 1000MHz.

**Within 15% of optical
steady state**



Figure 4

Regulatory Compliance

Feature	Test Method	Performance

Ordering Information

Specifications		
Part No.		Application

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Note : The length of pigtail is normal 255mm ±20mm (the length of connector is included).