



3G Optical Repeater Transceiver

RTXM199 3G Series

Features

- Receiver module and DFB laser optimized for GSM/ CDMA communication, high sensitivity and high optical power output, Low noise and high linearity
- With APC and protect circuit for laser
- RF amplifier inside
- With PD alarm and LD alarm function
- Standard SMA connector and FC/APC optical interface
- 1310nm/1550nm transmit, compatibly receive

Application

- 3G optical fiber repeater, 1.7GHz~2.2GHz

Specifications (T=25°C)

Parameter	Min	Type	Max	Test condition
Center Wavelength Range (nm)	1540	1550	1560	
	1300	1310	1320	
Mean Launch Optical Power (dBm)	4			
CTB (dBc)	-60			*
Noise power (dBm/Hz)	-135			
RF isolation (dB)	60	70		1.7G Hz-2.2 GHz
Pass band flatness (dB)	±0.5			1.7G Hz-2.2 GHz
VSWR	1.5			1.7G Hz-2.2 GHz
MGC range (dB)	20			1.7G Hz-2.2 GHz
RF Input Power (dBm)	10			
RS232 rate (Kbps)	9.6			**
Supply voltage (V)	11.5	12	12.5	
Operating Temp (oC)	-25	+25	70	
Storage Temperature Range (oC)	-40	85		

* **Test condition:** 2.14GHz and 2.141GHz double frequency, 0dBm input, 1310 and 1550 module connected directly by optical fiber, 0dBm output, tested by spectrum analyzer.

** **Test condition:** RS232 data, rate 9.6Kbps, 1310 and 1550 module connected with 15 dB optical loss, no error bits.

DB9 (Male) Pin Description

Pin	Name	Description
1	FSK_ENA	Enable FSK when FSK_ENA = 1
2	GND	
3	Vcc	Positive power supply, +12V DC
4	DIN	RS232 data input
5	DOUT	RS232 data output
7	LD_ALM	LD Alarm (TTL output, Low voltage for alarm)
9	PD_ALM	PD Alarm (TTL output, Low voltage for alarm)
6, 8	NC	

DB9 (Female) Pin Description

Pin	Name	Description
1	FSK_ENA	Enable FSK when FSK_ENA = 1
2	GND	
3	Vcc	Positive power supply, +12V DC
4	DOUT	RS232 data output
5	DIN	RS232 data input

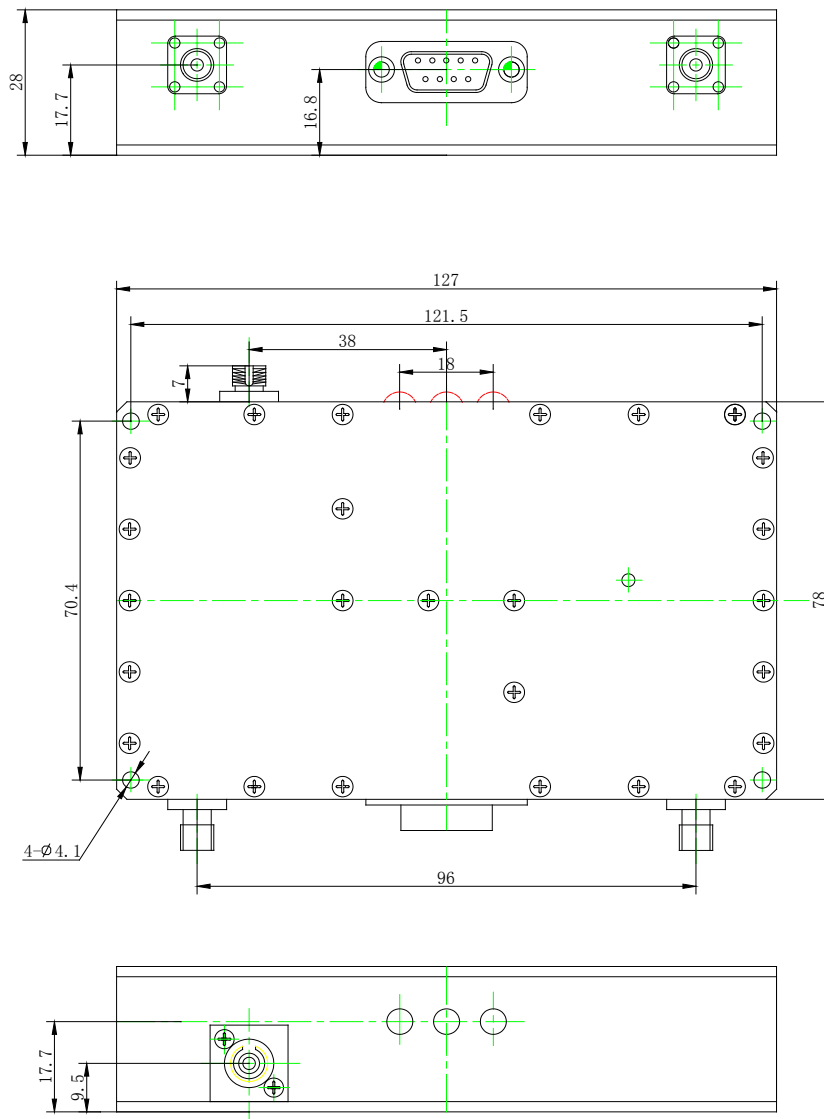
7	LD_ALM	LD Alarm (TTL output, High voltage for alarm)
9	PD_ALM	PD Alarm (TTL output, Low voltage for alarm)
6, 8	NC	

The Indicator LED

PWR	Power indicator
Rx	PD Alarm indicator, Shined for normal, Dull for alarm
Tx	LD Alarm indicator, Shined for normal, Dull for alarm

Package Outline

(Unit: mm)



Dimension: 127*78*28mm

Location hole: 121.5*70.4mm

Ordering Information

Part No.	Power supply and monitor interface	LD Wavelength
RTXM199-006	DB9 female	1310 nm
RTXM199-007	DB9 male	1310 nm
RTXM199-008	DB9 female	1550 nm
RTXM199-009	DB9 male	1550 nm

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