



RF Optical Module For Optical Repeater

RTXM199 Series

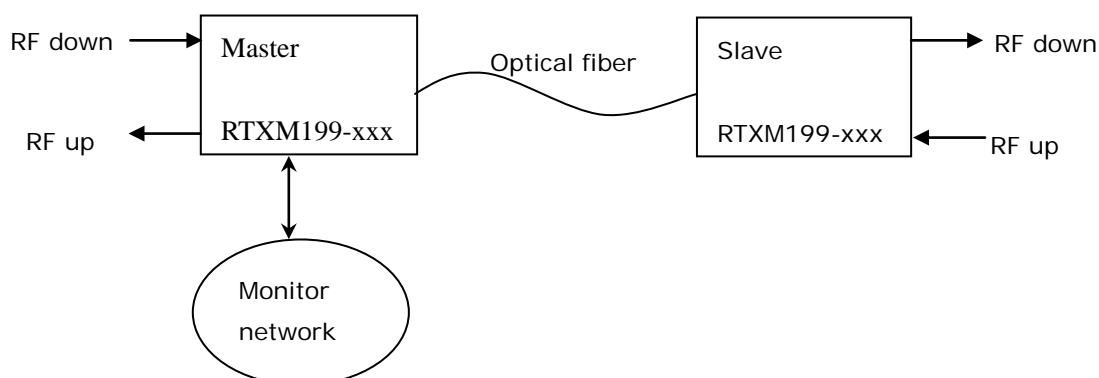
Features

- *High RF isolated*
- *Optical power DET*
- *RF power DET*
- *MGC inside*
- *1310nm/1550nm transmit, compatibly receive*
- *WDM include, Single fiber design, use in couple*
- *FSK module include, RS232 data interface*
- *With PD alarm and LD alarm function*

Application

- *GSM/WCDMA/TD-SCDMA optical repeater*
- *Point to point analog network*

Optical module application



Specifications

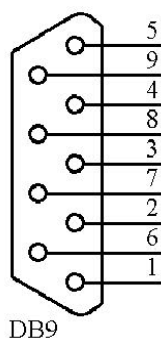
Parameter	Specification	
Optical Wavelength	Up link 1550±10nm	Down link 1310±10nm
Supply Voltage	+12V	+12V
Current consumption	<360 mA	<360 mA
Optical Output Power	+3dBm(±1dBm)	
Optical connection	FC/APC	
WDM	include	
Frequency range	800MHz -1000MHz	(RTXM199-002/RTXM199/004)
	800MHz - 1000MHz	(RTXM199-012/RTXM199/014)
	1700MHz -2200MHz	(RTXM199-006/RTXM199/008)
	1700MHz - 2200MHz	(RTXM199-016/RTXM199/018)
Impedance	50 Ohm	
Downlink gain	10dB±2	
Uplink gain	10dB±2	
Gain adjust range	±10dB	
Band flatness	±0.5dB(800 MHz~1000MHz)	
	±0.5dB(1700MHz ~2200MHz)	
Noise floor	≤-135dBm/Hz9Optical no loss)	
IMD3	≤-60dBc	
RF isolation	≥70dB	

In/Out RF VSWR	≤1.4
RS232 rate	9.6 kbps
Power supply / monitor interface	DB9 female
RF In/Out Connector	SMA female

Absolute Maximum Ratings

Parameter	Unit	Min	Max
Storage Temperature Range	°C	-40	85
Operating Temperature Range	°C	-25	70
Power Supply Voltage	V	+11.5	+12.5
RF Input Power	dBm		10

Interface Definition:



DB9 Female Pin Description

Pin	Name	Description
1	FSK_ENA	Enable FSK when FSK_ENA = 1
2	GND	Ground
3	Vcc	Positive power supply, +12V DC
4	RXD	RS232 data output
5	TXD	RS232 data input
6	LD_MON	LD Monitor(without DET) or RF in DET(without LD Monitor)
7	LD_ALM	LD Alarm (TTL output, High voltage for alarm)
8	PD_MON	PD Monitor(without DET) or RF out DET(without PD Monitor)

The Indicator LED

PWR

Power indicator

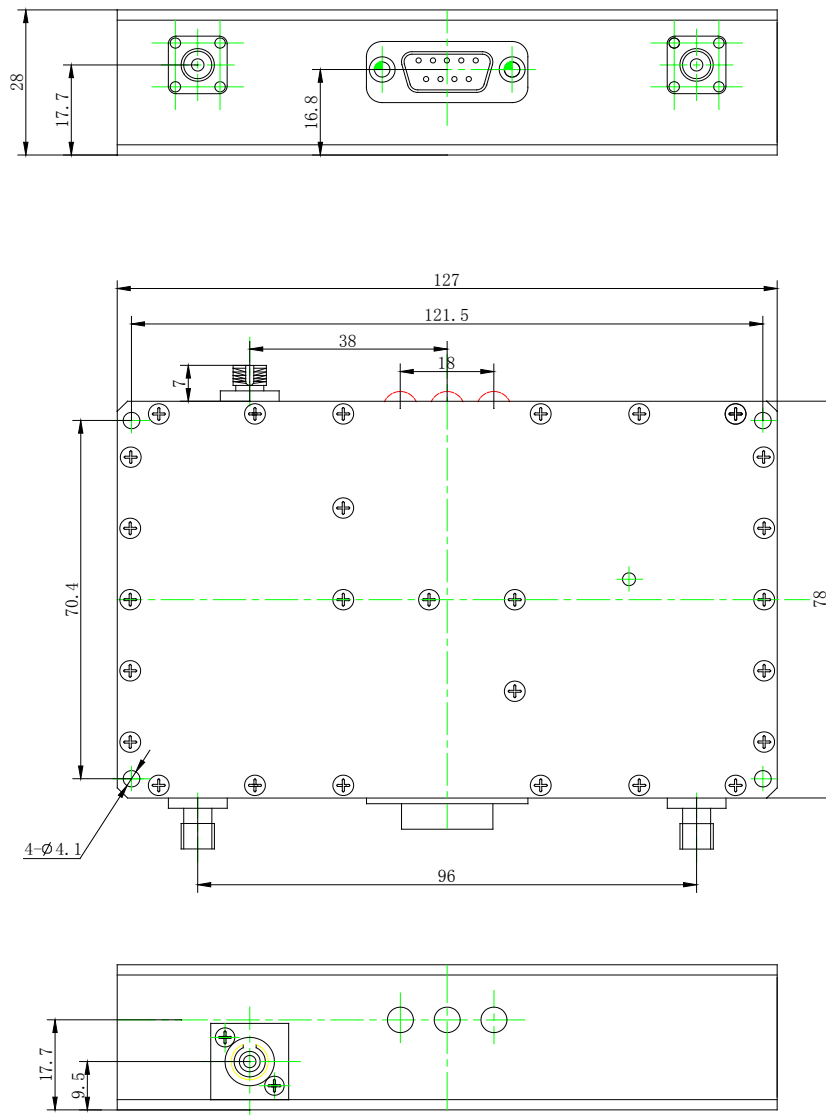
Rx

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 mm * 78 mm * 28mm

Location hole: 121.5 mm * 70.4mm

Ordering Information

Part No.	Specifications					Application
	Frequency	Tx	Pout	Top	Interface	
RTXM199-002	800 MHz ~ 1000 MHz	1310 nm	+3(±1) dBm	-25~+70°C	DB9 female	Analog, repeater
RTXM199-004	800 MHz ~ 1000 MHz	1550 nm	+3(±1) dBm	-25~+70°C	DB9 female	Analog, repeater
RTXM199-006	1700 MHz ~2200 MHz	1310 nm	+3(±1) dBm	-25~+70°C	DB9 female	Analog, repeater
RTXM199-008	1700 MHz ~2200 MHz	1550 nm	+3(±1) dBm	-25~+70°C	DB9 female	Analog, repeater
RTXM199-012	800 MHz ~1000 MHz	1310 nm	+3(±1) dBm	-25~+70°C	DB9 female	Analog, repeater
RTXM199-014	800 MHz ~1000 MHz	1550 nm	+3(±1) dBm	-25~+70°C	DB9 female	Analog, repeater
RTXM199-016	1700 MHz ~2200 MHz	1310 nm	+3(±1) dBm	-25~+70°C	DB9 female	Analog, repeater
RTXM199-018	1700 MHz ~2200 MHz	1550 nm	+3(±1) dBm	-25~+70°C	DB9 female	Analog, repeater

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