

## Mini 10MHz~3GHz Analog Wideband Transceiver Module

The ROF Series Small analog wideband transceiver module is a low-cost, high-performance analog wideband transceiver with a very wide dynamic range, designed specifically for fiber optic RF applications. A pair of transceivers will create a two-way RF to optical and optical to RF conversion and transmission link that can provide a high spurious-free dynamic range (SFDR), operating at frequencies from 10MHz to 3GHz. The standard optical connector is FC/APC for low back reflection applications, and the RF interface is via a 50 ohm SMA connector. The receiver uses a high-performance InGaAs photodiode, the transmitter uses a linear optically isolated FP/DFB laser, and the fiber uses a 9/125  $\mu\text{m}$  single-mode fiber with an operating wavelength of 1.3 or 1.5 $\mu\text{m}$ .

### Features

- 10MHz to 1.2GHz or 10MHz to 3GHz bandwidth
- Tight cast metal case
- High SFDR
- flat frequency response
- 1.3 and/or 1.5 $\mu\text{m}$  with isolated FP/DFB

### Applications

- WiMAX / 4G LTE
- 2G/3G repeater
- Shipborne radio frequency distribution
- satellite earth station



### Parameter

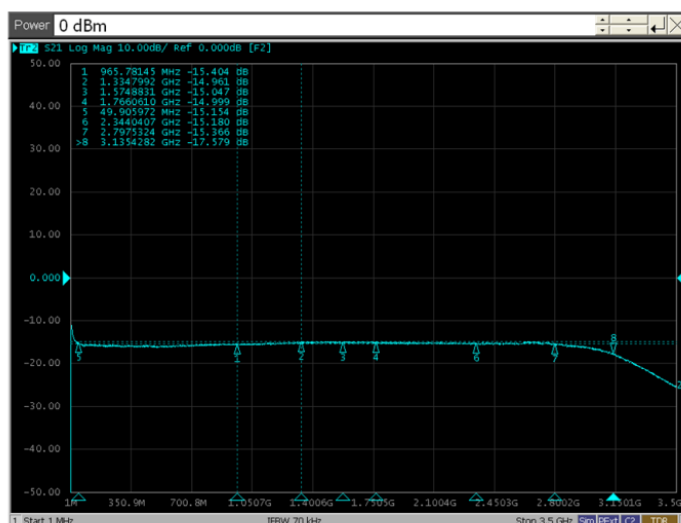
Mini 10MHz~3GHz Analog Wideband Transceiver Module

Parameter	Symbol	Min	Typ	Max	unit
Supply voltage	VCC	4.5	5	5.5	Volts
Supply current (total current)	ICC		100		mA
Laser output power			2	4	mW
Transmitter operating wavelength			1310/1550		nm
Receiver operating wavelength			1310/1550		nm
High frequency cut-off	HFC		3000		MHz
Low frequency cutoff	LFC		10		MHz
Frequency response(10MHz~3GHz)			$\pm 1.5$	$\pm 2$	dB
Input rf power			-15	-5	dBm
input/Output impedance	Z		50		Ohms
Input/Output VSWR(10M - 3000 MHz)			2:1	2.5:1	
Rf link gain		0	2	4	dB
Enter the third-order compression point @ 1 GHz	IIP3	33			dBm
The gain varies with temperature		$\pm 1.5$			dB

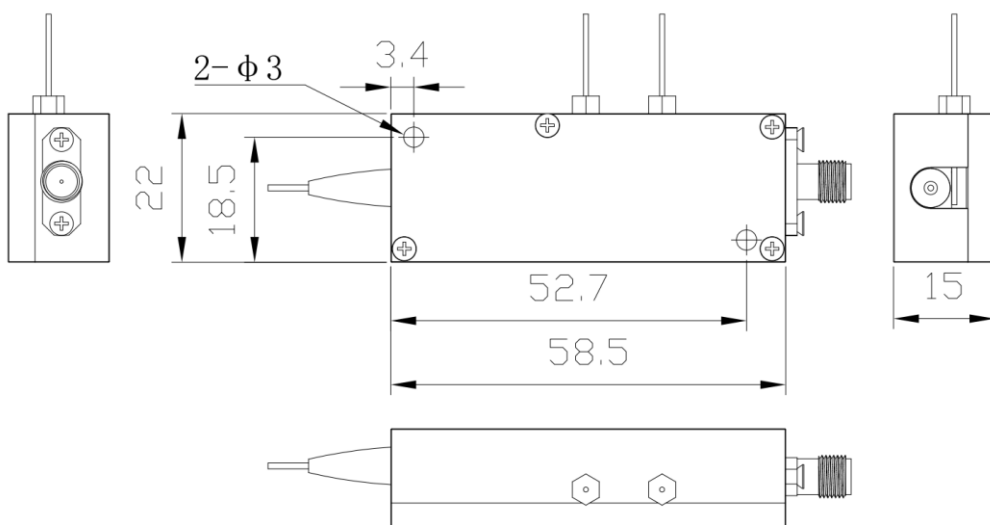
### Limit Conditions

Parameter	Symbol	Min	Max	unit
Storage temperature	TS	-40	85	°C
Operating temperature	TO	-25	65	°C
DC Supply voltage	VDP	4.5	5.5	V
Maximum RF input(Tx)			15	dBm
Maximum optical input (Rx)			4	mW

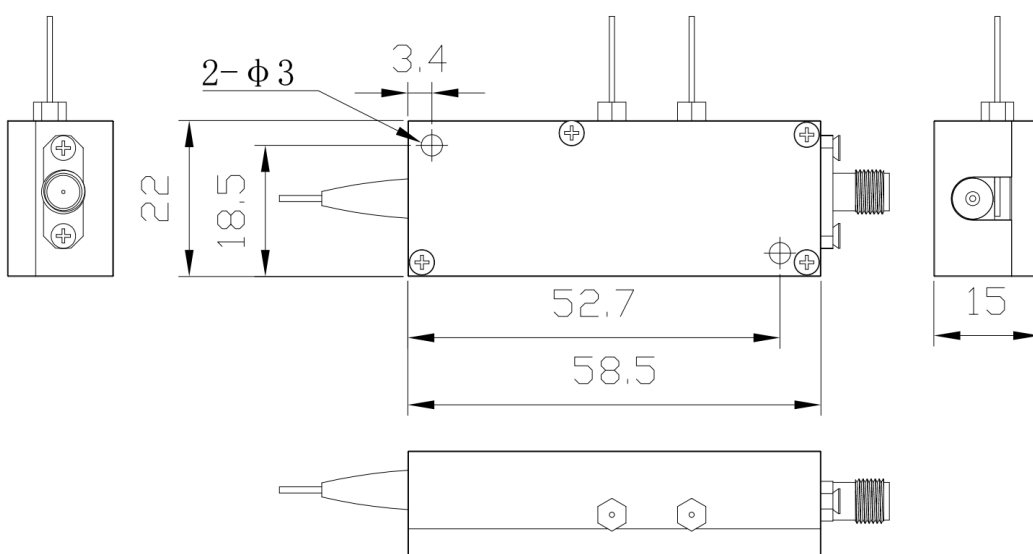
### Response curve



**Mechanical Diagram(mm)**



(a) Transmitting module



(b) Receiving module

**Order information**

ROF- MINI	X	XX	XXX	XXXX	XXXXX
Mini analog broadband optical transceiver module	Laser type: TO-- without temperature control DFB-- with temperature control	Operating wavelength: 13- 1310nm 15- 1550nm	Modulation bandwidth: 01---10~ 1200MHz 02---10-3000MHz	Encapsulation: M---module	Connector: FA--FC/APC SP---User specified