



R-PM Series Phase Modulator



Description

The LiNbO₃ phase modulator is widely used in high-speed optical communication system, laser sensing and ROF systems because of well electro-optic effect. The R-PM series based on Ti-diffused and APE technology, has stable physical and chemical characteristics, which can meet requirement of the most applications in laboratory experiments and industrial systems.

Features

- Low insertion loss
- Polarization-maintaining
- Low half-wave voltage
- Dual-polarization option

Applications

- Optical communication
- Quantum key distribution
- Laser sensing systems
- Frequency shifting

Wavelength

- 850nm
- 1064nm
- 1310nm
- 1550nm

Bandwidth

- 300MHz
- 2.5GHz
- 10GHz

Operating wavelength	780nm	850nm	1064nm	1310nm	1550nm		
3dB Bandwidth	~10GHz	~10GHz	~10GHz	~10GHz	~300MHz	~10GHz	~18GHz
Insertion Loss	<3dB	<3.5dB	<3.5dB	<3.5dB	<3.5dB	<3.5dB	<3.5dB
Polarization extinction ratio	>20dB	>20dB	>20dB	>20dB	>20dB		
V _π @RF (50KHz)	<3V	<3V	<4.0V	<3V	<4V	<3.5V	<4.5V

Ordering Information

R	AM	15	10G	XX	XX
	Type: PM---Phase Modulator	Wavelength: 07---780nm 08---850nm 10---1060nm 13---1310nm 15---1550nm	工作带宽: 300M---300MHz 10G---10GHz 20G---10GHz	In-Out Fiber type: PP---PM/PM PS---PM/SMF	Optical connector: FA---FC/APC FP---FC/PC SP---Customization

**R-PM-07-10G****Wavelength 780nm 10GHz Phase modulator**

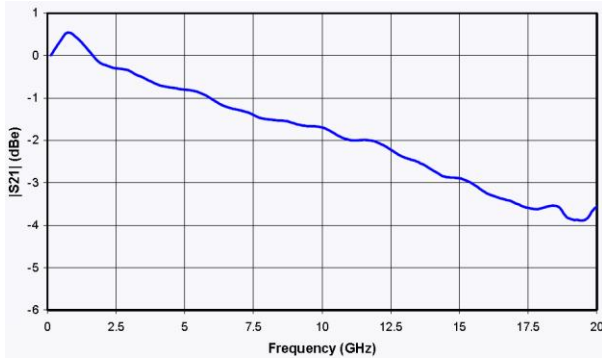
Parameter		Symbol	Min	Typ	Max	Unit
Optical parameters						
Operating wavelength		λ	760	780	800	nm
Insertion loss		IL		2.5	3	dB
Optical return loss		ORL			-45	dB
Polarization extinction ratio		PER	20			dB
Optical fiber	Input port		780nm PM fiber(125/250 μ m)			
	output port		780nm PM fiber(125/250 μ m)			
Optical fiber interface			FC/PC、FC/APC Or Customization			
Electrical parameters						
Operating bandwidth (-3dB)		S ₂₁	10	12		GHz
Half-wave voltage @50KHz		V _{II}		2.5	3	V
Electrical return loss		S ₁₁		-12	-10	dB
Input impedance		Z _{RF}	50			Ω
Electrical interface			SMA(f)			

Limit Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Input optical power@850nm	P _{in,Max}	dBm			13
Input RF power		dBm			28
Operating temperature	T _{op}	°C	-10		60
Storage temperature	T _{st}	°C	-40		85
Humidity	RH	%	5		90

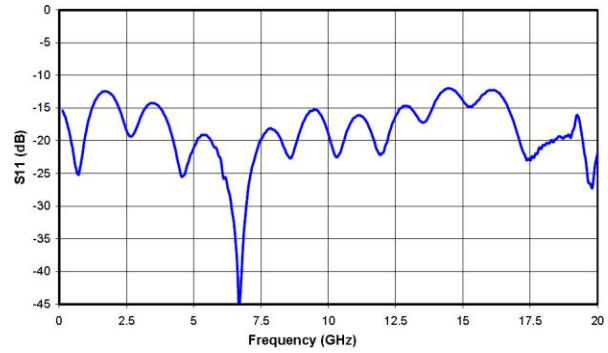


S21 Curve



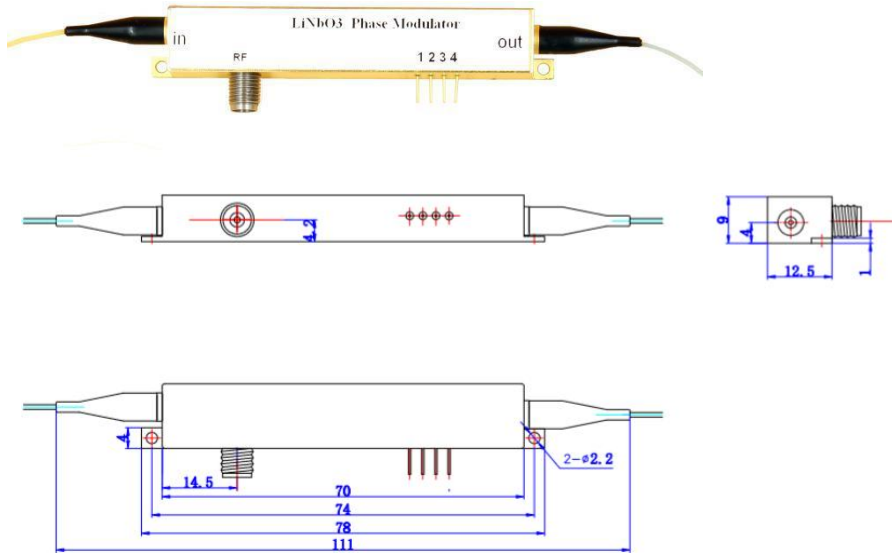
S21 Curve

&S11 Curve



S11 Curve

Mechanical Diagram



PORT	Symbol	Note
In	Optical input port	PM Fiber (125μm/250μm)
Out	Optical output port	PM and SMF option
RF	RF input port	SMA(f)
Bias	Bias control port	1,2,3,4-N/C

RF Driver and Bias control circuit board information are provided on website (www.bjrofof.com), you can also contact us for more information by email (bjrofof@rof-oc.com) or WhatsApp (+86-18978968297)