



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

- 780nm
- 850nm
- 1064nm
- 1310nm
- 1550nm

Bandwidth

- 300MHz
- 10GHz
- 20GHz
- 40GHz
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Rof-PM Series	Rof-PM-07	Rof-PM-08	Rof-PM-10	Rof-PM-13	Rof-PM-15
Operating wavelength	780nm	850nm	1064nm	1310nm	1550nm
3dB Bandwidth	~10GHz	~10GHz	~10GHz	~10GHz	~10/20/40GHz
Insertion Loss	<3.5dB	<3.5dB	< 3.5dB	< 3.5dB	< 3.5dB
PER	> 20dB	> 20dB	> 20dB	> 20dB	> 20dB
V _π @RF (50KHz)	< 3V	< 3V	< 2.0V / <4.0V	< 3V	< 4V

Ordering Information

Rof	PM	15	10G	XX	XX
	Type: PM---Phase Modulator	Wavelength: 07---780nm 08---850nm 10---1060nm 13---1310nm 15---1550nm	Operating bandwidth: 300M---300MHz 10G---10GHz 20G---20GHz 40G---40GHz	In-Out Fiber type: PP---PM/PM PS---PM/SMF SS---SMF/SMF	Optical connector: FA---FC/APC FP---FC/PC SP---Customization

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

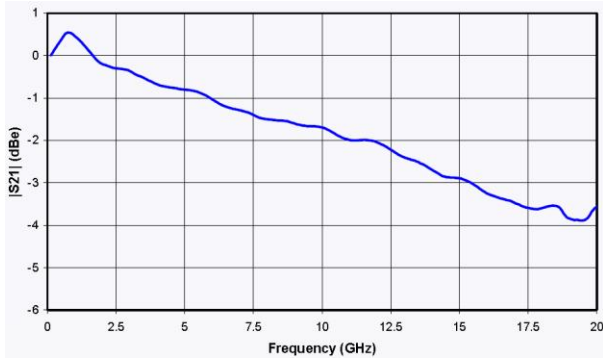
Parameter		Symbol	Min	Typ	Max	Unit
Optical parameters						
Operating wavelength		λ	760	780	800	nm
Insertion loss		IL		2.5	3	dB
Optical return loss		ORL			-45	dB
Polarization extinction ratio		PER	20			dB
Optical fiber	Input port		780nm PM fiber(125/250 μ m)			
	output port		780nm PM fiber(125/250 μ m)			
Optical fiber interface			FC/PC、FC/APC Or Customization			
Electrical parameters						
Operating bandwidth (-3dB)		S_{21}	8	10		GHz
Half-wave voltage @50KHz		V_{Π}		2.5	3	V
Electrical return loss		S_{11}		-12	-10	dB
Input impedance		Z_{RF}	50			Ω
Electrical interface			K(f)			

Limit Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Input optical power@780nm	$P_{in,Max}$	dBm			13
Input RF power		dBm			33
Operating temperature	T_{op}	$^{\circ}$ C	-10		60
Storage temperature	T_{st}	$^{\circ}$ C	-40		85
Humidity	RH	%	5		90

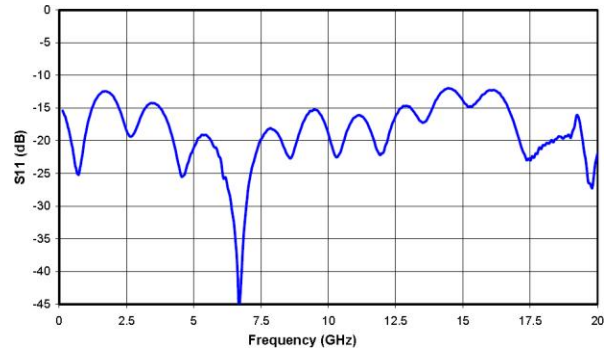


S21 Curve



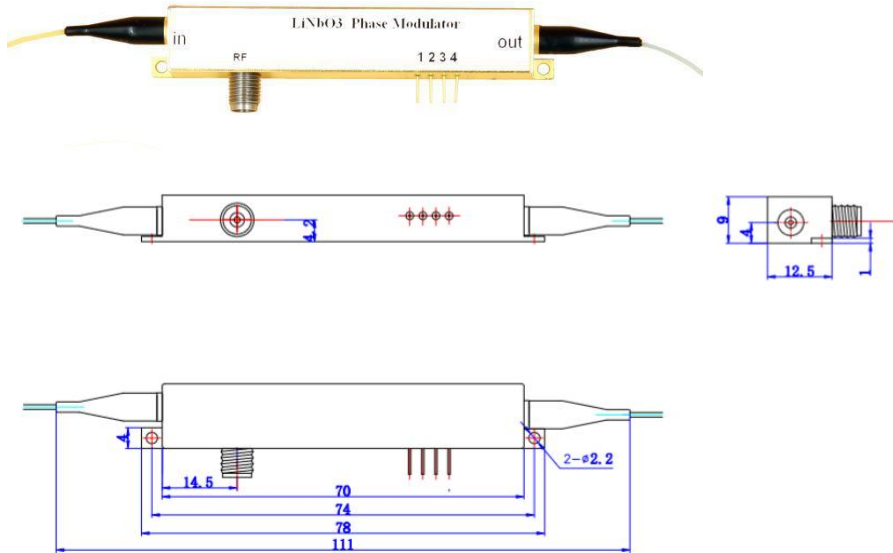
S21 Curve

&S11 Curve



S11 Curve

Mechanical Diagram



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

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