



AM Series Intensity Modulator

Description



The LiNbO₃ intensity modulator is widely used in high-speed optical communication system, laser sensing and ROF systems because of well electro-optic performance. The R-AM series based on MZ push-pull structure and X-cut design, has stable physical and chemical characteristics, which can be applied both in laboratory experiments and industrial systems.

Features

- Low insertion loss
- High Bandwidth
- Low half-wave voltage
- Customization option

Applications

- ROF systems
- Quantum key distribution
- Laser sensing systems
- Side-band modulation

Wavelength

- 750nm
- 850nm
- 1064nm
- 1310nm
- 1550nm

Bandwidth

- 10GHz
- 20GHz
- 40GHz
- 50GHz

Rof-AM Series	Rof-AM-07	Rof-AM-08	Rof-AM-10	Rof-AM-13	Rof-AM-15			
Operating wavelength	780nm	850nm	1064nm	1310nm	1550nm			
Bandwidth	10GHz	10GHz	10/20GHz	2.5GHz	50GHz	10GHz	20GHz	40GHz
Insertion Loss	< 5dB	< 5dB	< 5dB	< 5dB	< 4dB			
Extinction ratio @DC	> 20dB	> 20dB	> 20dB	> 20dB	> 20dB			
V _π @RF (1KHz)	< 3V	< 3V	< 4V	< 3.5V	< 6V	< 5V		
V _π @Bias	< 3.5V	< 3.5V	< 5V	< 5V	< 8V	< 7V		

**R-AM-08-10G****Wavelength 850nm 10GHz Intensity modulator**

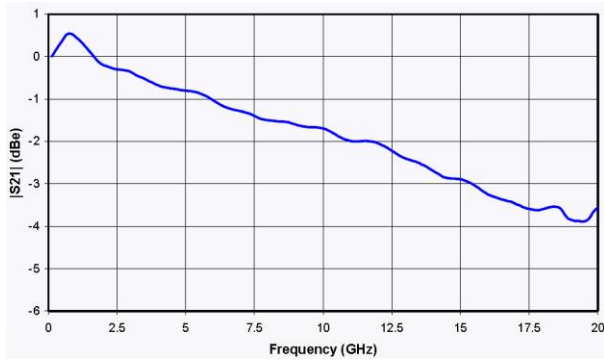
Parameter		Symbol	Min	Typ	Max	Unit
Optical parameters						
Operating wavelength		λ	830	850	870	nm
Insertion loss		IL		4.5	5	dB
Optical return loss		ORL			-45	dB
Switch extinction ratio @DC		ER@DC	20	23		dB
Dynamic extinction ratio		DER		13		dB
Optical fiber	Input port		PM780 fiber(125/250 μ m)			
	output port		PM780 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 V _{pi}	RF	@1KHz		2.5	3	V
	Bias	@1KHz		3	4	V
Electrical return loss		S ₁₁		-12	-10	dB
Input impedance	RF	Z _{RF}	50			Ω
	Bias	Z _{BIAS}	1M			Ω
Electrical interface			SMA(f)			

Limit Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Input optical power@850nm	P _{in,Max}	dBm			10
Input RF power		dBm			28
bias voltage	V _{bias}	V	-15		15
Operating temperature	T _{op}	°C	-10		60
Storage temperature	T _{st}	°C	-40		85
Humidity	RH	%	5		90

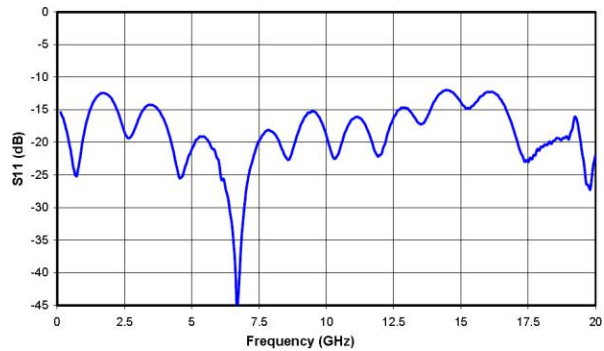


S21 Curve



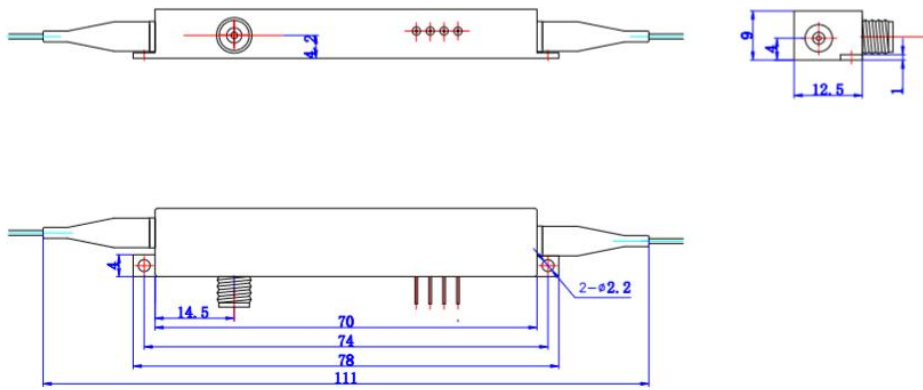
S21 Curve

&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 Bias, 34-N/C

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