



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

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

Bandwidth

- 300MHz
- 2.5GHz
- 10GHz
- 20GHz

Operating wavelength	850nm	1064nm	1310nm	1550nm	
3dB Bandwidth	~10GHz	~10GHz	~10GHz	~10GHz	~20GHz
Insertion Loss	<5dB	< 5dB	< 5dB	< 5dB	
Extinction ratio @DC	> 23dB	> 23dB	> 23dB	> 23dB	
V _π @RF (1KHz)	< 3V	< 4V	<4.5V	<5.5V	<6V
V _π @Bias	< 3.5V	<5V	<6V	<7V	

Ordering Information

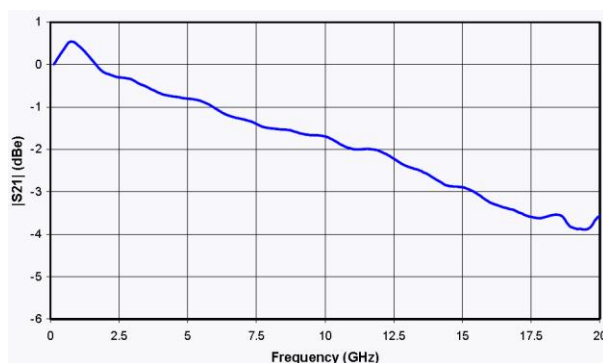
R	AM	15	10G	XX	XX
	Type: AM---Intensity Modulator	Wavelength: 08---850nm 10---1060nm 13---1310nm 15---1550nm	3dB bandwidth: 2.5G---10GHz 10G---10GHz 20G---20GHz 40G---28GHz	In-Out Fiber type: PP---PM/PM PS---PM/SMF	Optical connector: FA --- FC/APC FP --- FC/PC SP --- Customization

**R-AM-10-10G****Wavelength 1064nm 10GHz Intensity modulator**

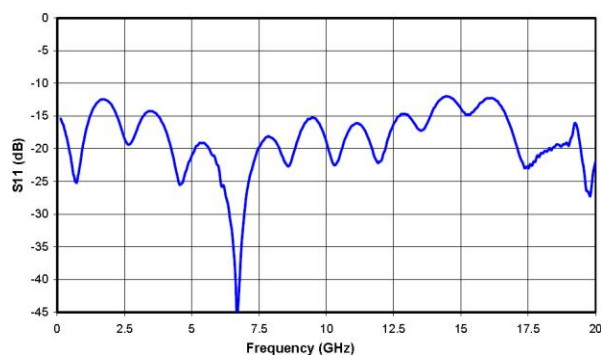
Parameter		Symbol	Min	Typ	Max	Unit
Optical parameters						
Operating wavelength		λ	980	1060	1150	nm
Insertion loss		IL		4	5	dB
Optical return loss		ORL			-45	dB
Switch extinction ratio @DC		ER@DC	20	25		dB
Dynamic extinction ratio		DER		13		dB
Optical fiber	Input port		980nm PM fiber (125/250μm)			
	output port		980nm PM fiber (125/250μm)			
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	@50KHz		3.5	4	V
	Bias	@Bias		4	5	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	P _{in,Max}	dBm			20
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

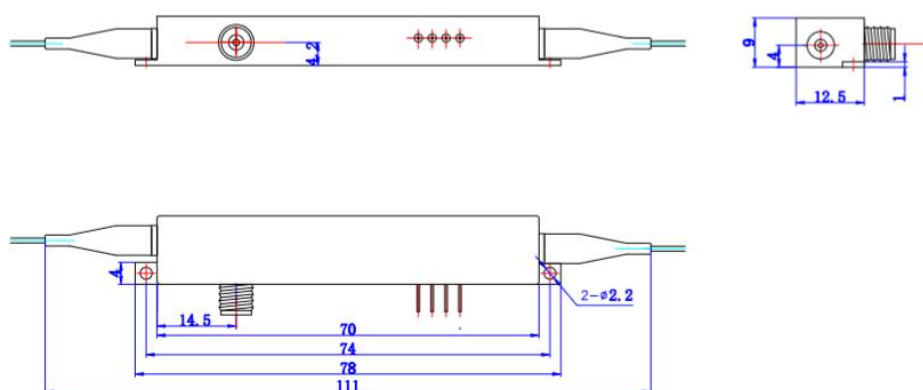


S21 Curve



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.bjrofof.com), you can also contact us for more information by email (bjrofof@rof-oc.com) or WhatsApp (+86-18978968297)