



RFoG Mini return path optical receiver

MX RR-Li Series - Technical Specification

## 1.0 PRODUCT DESCRIPTION

The MX RR-Li series Return Path Receivers are an integral part of a two-way RF network, converting upstream optical signals into RF signals at the head-end or remote hub. A single receiver is packaged into a small form factor stand-alone mini unit, providing service for up to 256 RFoG optical network terminals (ONU's or Mini Nodes). The low-noise design of the receiver improves noise performance, in accord with DOCSIS 3.1. -23dBm receive sensitivity, allow upstream bounding PON design, typically supporting 32 node combining in 20km designs, 64 combining in 10km designs.

## 2.0 Features and Benefits

- Single low noise optical receiver, up to -23dBm receive sensitivity.
- Supports up to RFoG mini node ONU's
- Compatible with any technology of FTTx PON, GPON, XGPON, RFoG
- Support DOCSIS 3.1, upstream bounded with PON design
- Optical link pre-budget: typically supporting 32 splitting ways in 20km, 64 splitting ways in 10km.
- Supports CW or burst mode operation
- 1200~1620nm band wavelength
- RF output level can be adjusted by attenuator
- Excellent P/P ratio



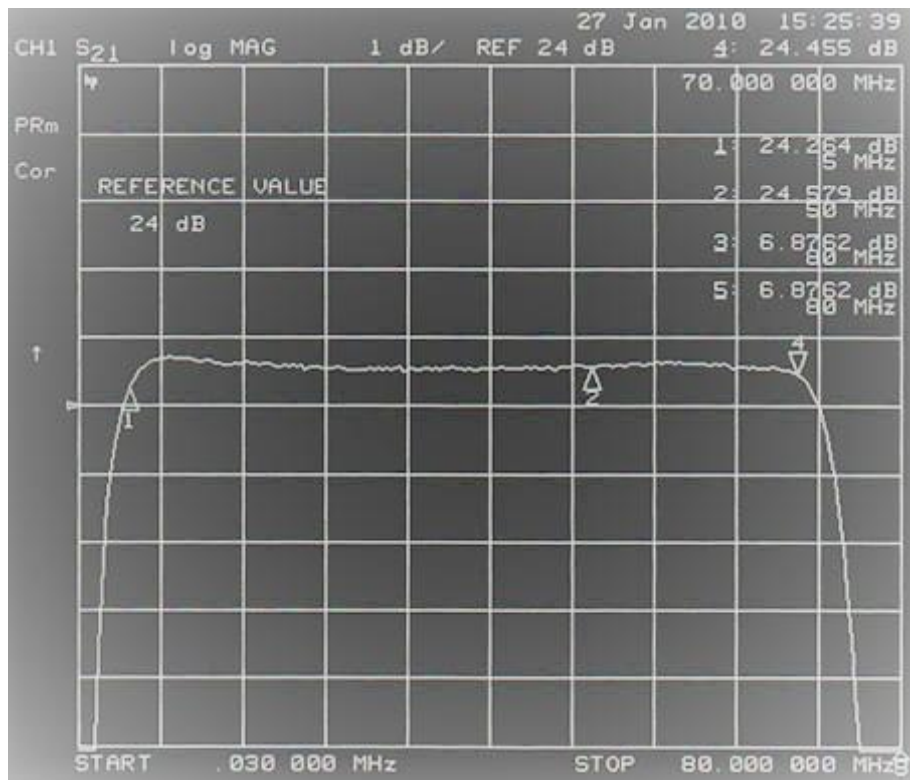
RFoG Mini return path optical receiver

Return Path  
RF output  
5~100 MHz

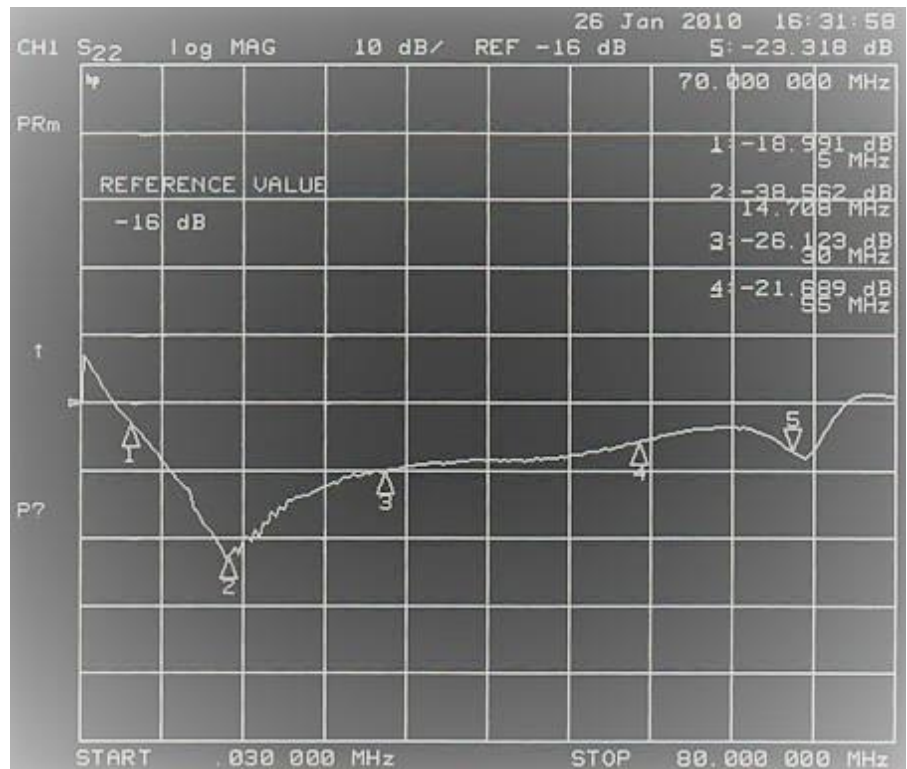


### 3.0 Test results

#### 3.1 Flatness (Test equipment: HP8783D)



#### 3.2 Return loss (Test equipment: HP8753D)



## 4.0 TECHNICAL INDEX

Performance			Index			Supplement	
			Min.	Typ.	Max.		
Optic feature	Operating wavelength ( $\lambda$ )		(nm)	1200		1620	
	Responsivity	R13	(A/W)	0.85	0.95		1310nm
		R15		0.85	1.0		1550nm
		R16			0.85		1610nm
	Optical link budget loss		(dB)	17			
	Receiving power	Typical	(dBm)	-17		-7	
		Sensitivity			-23	-22	Pr
		Overload		0	+1		Po
	Return loss		(dB)	50			
Optical connector			SC/APC		LC/APC option		
RF feature	Operating bandwidth		(MHz)	5		100	
	RF output level		(dBmV)	30		60	
	RF gain adjustable		(dB)	-18		0	
	Flatness		(dB)	-0.75		+0.75	
	Return loss		(dB)	-20.5	-20		
	NPR/Dynamic Range		(dB)	37/41			15 dB link loss
General feature	Power Supply	120VAC plug	DC		5		External PS
	Power consumption		W			48	
	Operating temp.		( $^{\circ}$ C)	5		+65	
	Relative humidity		(%)	5		95	
	Size		(mm & "	58 x 98 x 23mm			2.3" x 3.9" x .9"



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