



RFOG 4 way return path optical receiver

MX4RR-Li Series - Technical Specification

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1.0 PRODUCT DESCRIPTION

The MX4RR-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. 4 independent receivers are packaged in a 1RU 19-inch rack-mounted unit, providing service for up to 64 RFoG optical network terminals (ONTs). The low-noise design of the receiver improves noise performance by 4dB, in accord with DOCSIS 3.0. -32dBm receive sensitivity, allow upstream bounding PON design, typically supporting 32 node combining in 20km designs, 64 combining in 10km designs.

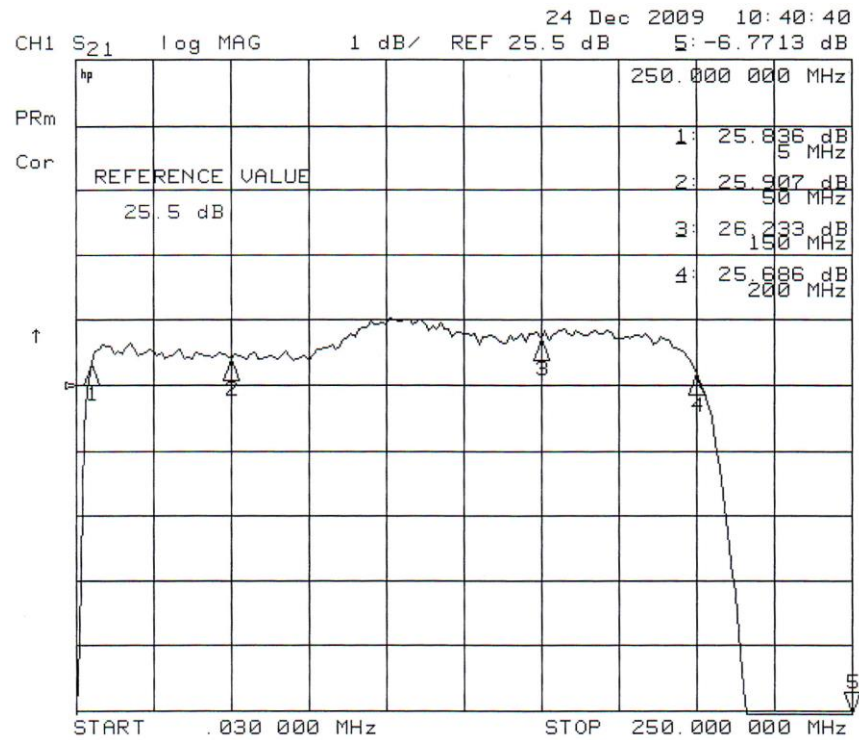
All receivers are temperature-hardened, allowing installation in any network environment including outdoor cabinets. SNMP network management functionality may optimize monitoring for remote installations. Full front panel controls are convenient for set up.

2.0 Features and benefits

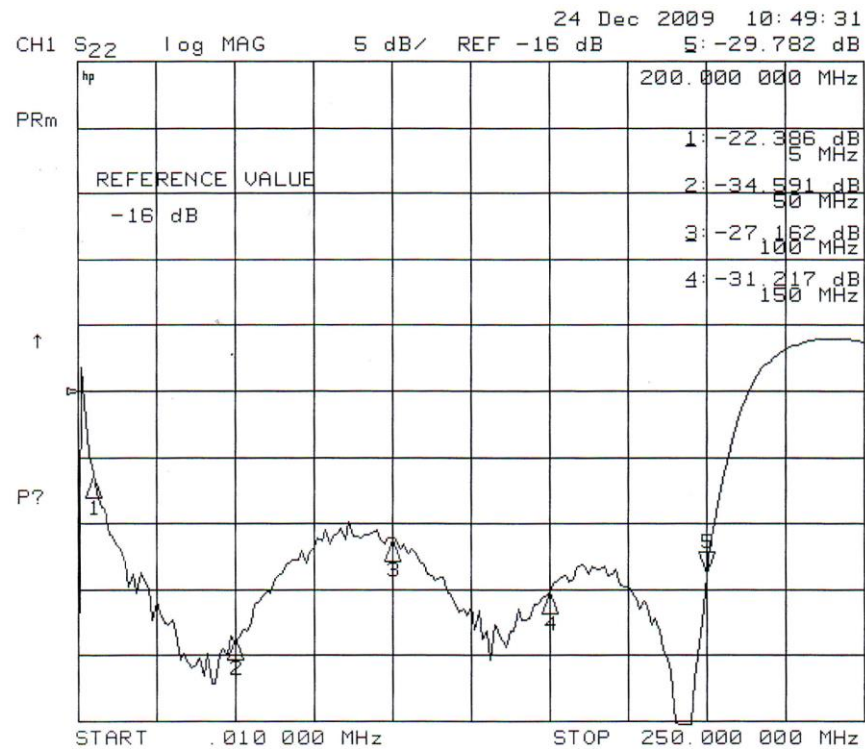
- 4 low noise optical receivers, up to -32dBm receive sensitivity.
- Supports up to 64 RFoG micro-node transceivers
- Compatible with any technology of FTTx PON: EPON/GEPON, GPON, BPON, DPON
- Support DOCSIS 3.0, upstream bounded with PON design
- Optical link pre-budget: typically supporting 32 splitting way in 20km, 64 splitting way in 10km.
- Supports CW or burst mode operation
- 1200~1620nm band wavelength
- SNMP network management function
- RF output level can be adjusted by network
- Built-in 1+1 backup power, optional redundant A/B inputs
- Stable performance of resistance to temperature, allow -40~+150°F operating temperature
- Simple mode, 19" 1RU mount, with 4 independent optical receivers
- Excellent P/P ratio

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 (λ)		(nm)	1200		1620	
	Responsivity	R13	(A/W)	0.85	0.95		1310nm
		R15		0.9	1.0		1550nm
		R16		0.8	0.9		1610nm
	Optical link budget loss		(dB)	29			
	Receiving power	Typical	(dBm)	-29		-13	
		Sensitivity			-34	-32	Pr
		Overload		-7	-5		Po
	Number of optical receiver		(pcs)	4 or 8			
	Return loss		(dB)	50			
RF feature	Optical connector			SC/APC			LC/APC option
	Operating bandwidth		(MHz)	5		100	Option 1
				5		200	Option 2
	RF output level		(dBmV)	30		60	
	RF gain adjustable		(dB)	-30		0	Settable=1dB
	Flatness		(dB)	-0.75		+0.75	
	Return loss		(dB)	16			
	RF test point/monitor		(dB)	-20.5	-20	-19.5	
	NPR/Dynamic Range		(dB)	30/10			Pin=-20dBm
	Equivalent input noise current		$pA/\sqrt{Hz}$			4	5~200MH
General feature	Power supply	AC	(V)	90	220	265	
		DC		-30	-48	-72	
	Power consume		(W)		12		
	Operating temp.		(°C)	-40		+65	
	Relative humidity		(%)	5		95	
	Size		(")	19×12×1.75			(W)×(D)×(H)

