



MX555AGC-R Series
FTTH CATV AGC Optical Receiver
(47~862MHz)
Technical Specification



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PRODUCT DESCRIPTION

The Maxcom MX-555-AGC-R FTTH CATV optical receiver, with a bandwidth of 47~862MHz, and an AGC function, will provide a typical output level 28 dBmV ± 1.0 dB when the input optical receive power is +2~-7dBm, Receiver is generally used in FTTH applications, for residential and business applications. Works well for Schools, Hospitality and Government applications. As an RF/ Cable TV optical receiver unit, it provides a high index, and low power consumption and good performance at a very low cost.

The Maxcom MX-555-AGC adopts high sensitivity receiving tube and special low noise matching circuit. 3.8% modulate, full channel transmit, -8dBm optical power receiving, and the CNR can continue to reach a high index 45dB. The MX-555-AGC-R adopts optical AGC circuitry, realizing high performance automatic level control (ALC).

The MX555 optical receiver operates with a wide optical input range in the 1210~1600nm wavelength.

1.0 PRODUCT FEATURE

1. Extra low noise (3.8% modulate,-8dBm receiving, $CNR \geq 45$ dB)
2. Receiving optical power within +2dBm~-10dBm, with excellent linearity
3. High performance ALC ($\Delta V_o \leq 1.0$ dB , $P_{in} = +2 \sim -7$ dBm)
4. Within 47~862MHz bandwidth, all with excellent flatness feature ($FL \leq \pm 1.0$ dB)
5. Metal case, offers protection for optoelectronic sensitive devices
6. Low power consumption, high performance, high cost performance

2.0 MAIN APPLICATION

- FTTH
- FTTP, FTTO

3.0 STATUS INDICATOR

Input optical power status indicator: LED bar illuminates to display optical input power

4.0 PRINCIPLE



5.0 TECHNICAL INDEX

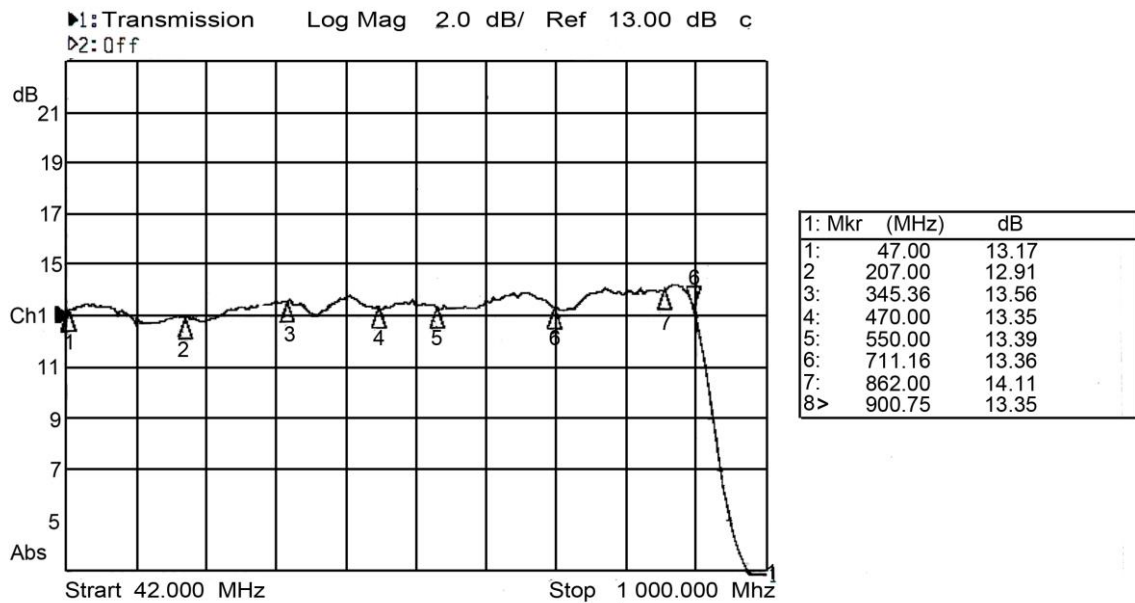
Performance		Index	Supplement	
Optic feature	CATV work wavelength	(nm)	1260~1620	MX555AGC-R/NC
	Channel Isolation	(dB)	≥ 40	1550 & 1490nm
	Responsibility	(A/W)	≥ 0.85	1310nm
			≥ 0.9	1550nm
	Receiving power	(dB)	+2 ~ -10	Analog TV
			+2~-16	Digital TV
	Optical return loss	(dB)	≥ 55	
Optical fiber connector		SC/APC	MX555AGC-R	
RF feature	Work bandwidth	(MHz)	47 ~ 1200	
	Flatness	(dB)	$\leq \pm 1.0$	
	Output level	dBmV	28	Pin:-7.0~+2.0dBm
	ALC(AGC) character (ΔV_o)	(dB)	$\leq \pm 1.0$	Pin:-7.0~+2.0dBm
	Output level adjust	(dB)	0 ~ 18	MGC
	Return loss	(dB)	≥ 16	47 ~ 862MHz
	Output impedance	(Ω)	75	
	Output port number		1	

	RF tie-in		F-Female	
Analog TV Link feature	Test channel	CH	59CH (PAL-D)	NTSC/80CH
	OMI	(%)	3.8	
	CNR1	(dB)	53.5	Pin=-2dBm
	CNR2	(dB)	47.4	Pin=-7dBm
	CTB	(dB)	≤-67	Pin:0~-10dBm
	CSO	(dB)	≤-65	Pin:0~-10dBm
	HUM	(dB)	≤-60	
Digital TV Link feature	Test channel		<10 CH	Analog
			Digital QAM	47-862MHz
	MER	(dB)	38 (Remark1)	Pin : -7.0~+2.0dBm
			35.0	Pin = -15.0dBm
BER	(dB)	<1.0E-9	Pin : -20.0~+2.0dBm	
General feature	Power supply	(V)	110VDC	±1.0V
	Power Consume	(W)	≤2	+12VDC, 210mA
	Work temp	(°C)	-20 ~ +50	
	Storage temp	(°C)	-40 ~ 85	
	Work relative temp	(%)	5 ~ 59	
	Size	(mm)	483*44*135	(W)×(D)×(H)

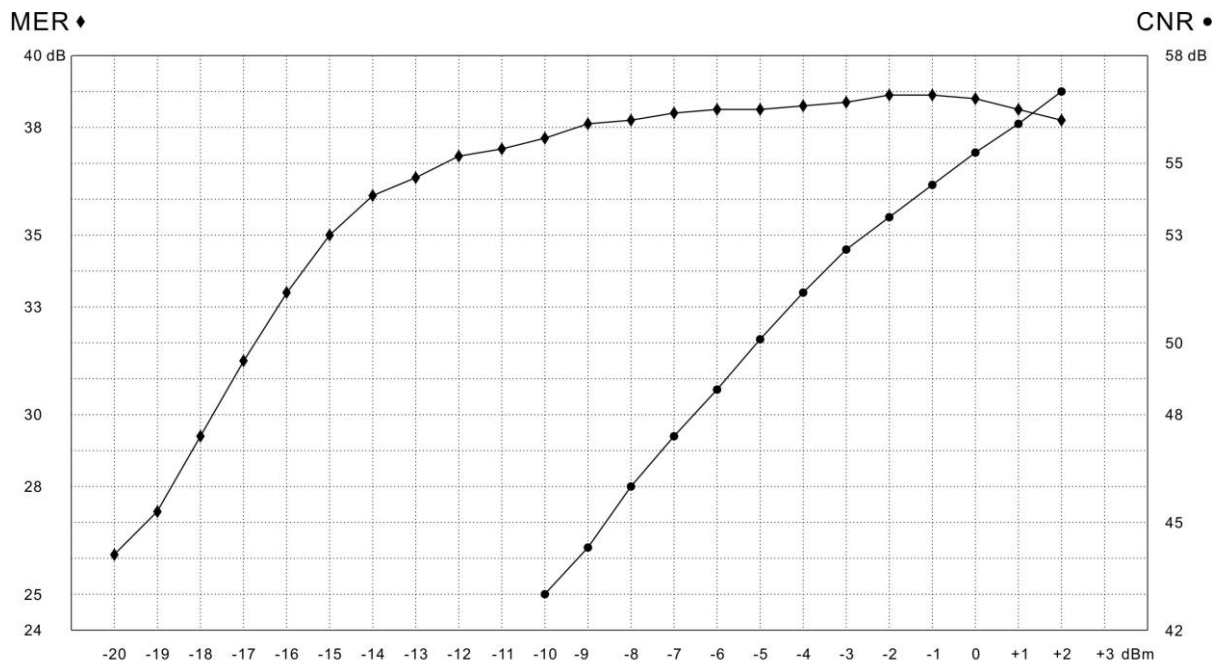
Remark: 1. CATV test signal: MER: 38.0dB, BER: <1.0E-9

6.0 TEST DATA

6.1 FLATNESS



6.2 CNR, MER DEGRADATION TABLE



Remark: 1. CNR Original signal:59CH PAL-D, OMI=3.8%
 2. Digital TV test signal: MER=38.0dB, BER<1.0E-9

