



1550nm Erbium Doped Fiber Amplifier • MX-A5100 Series

Technical Specification



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1.0 PRODUCT DESCRIPTION

The Maxcom MX-A5100 Erbium Doped Fiber Amplifier (EDFA) has been designed for CATV, FTTH and HFC applications. The EDFA is suitable for long haul transmission networks or FTTH distribution networks. This optical amplifier is packaged in a 19", 1 RU rack mount housing, and can be optionally ordered with an outdoor casing to provide a complete optical communications solution. Maxcom also offers our MX-A5400 platform which can be ordered with 8, 16 and 32 output ports.

The output power available is from 13 dBm to 26 dBm.

The EDFA is designed to extend a 1550 nm CATV system fiber without the need to convert back to RF. Combined with our MX-T8500 series externally-modulated laser transmitter, system ranges of over to 200 km are possible when using multiple EDFA's.

The MX-A5100 series is a CATV booster EDFA with a gain spectrum band within 1540~1565nm. It is designed for the application of single channel, or 1~8 continuous ribbon channels (ITU wavelength). Typically, a fiber CATV system operates in single wavelength that has no strict requirement on gain flatness. The MX-A5100 booster amplifier is featured with low NF and high-saturated output power. It is applicable for Primary Headends, Secondary Headends, Hubs, OTN's and line relay, as well as other optical communication networks. The MX-A5100 is applied commonly and widely compatible with other EDFA's and Transmitters in a CATV system.

The MX-A5100 series EDFA's are a high performance, single optical output EDFA's designed for analog and digital CATV QAM signals. Maxcom's 1550 optical amplifiers and EDFA's adopt world class pump lasers and American OFS erbium-doped optical fiber components. Excellent APC, ACC and ATC control, superb design in the ventilation and heat-dissipation ensure long life and a highly reliable operation of the pump laser.

The LCD at the front panel offers equipment status and warning alarms. The laser will switch off automatically if optical power is lost, which offers security protection for the laser.

2.0 PRODUCT FEATURES

- 1540~1563nm operating bandwidth
- Low noise, high output, high reliability
- APC、ACC
- Powerful RS232 supervisory instruction
- Single Rack unit size 1U (19"rack mount)
- Status and diagnostic fault indicators with LCD, standard RS232 communications interface, SNMP network management option
- Excellent P/P ratio

3.0 MAIN APPLICATIONS

- AM CATV
- Digital CATV
- FTTP
- FTTx PON

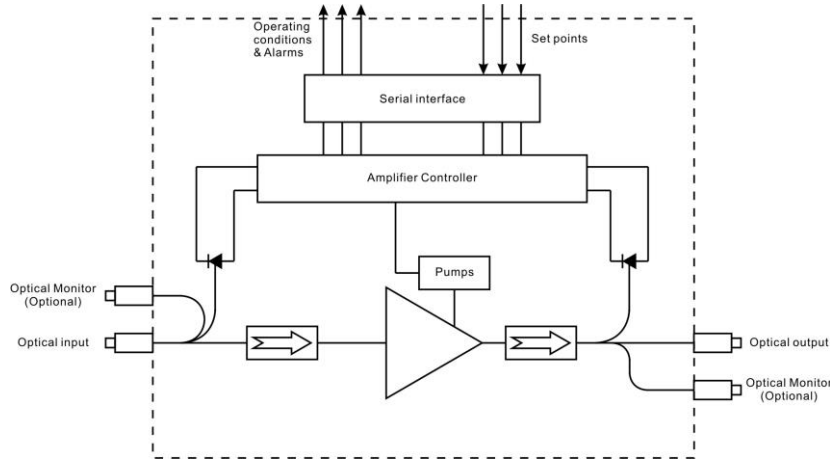
4.0 Technique index

Performance			Index			Supplement
			Min.	Typ.	Max.	
Optical feature	Operating wavelength	(nm)	1540		1563	CATV
	Input power	(dBm)	-10	+3	+10	
	Maximum output	(dBm)	+10		+26	Pin=0dBm
	Output power	(dBm)	-6		0	HA5100/P
	Number of output ports		1			SC/APC (standard)
	Difference of each	(dBm)	-0.5		+0.5	
	Noise figure	(dB)			6.3	MX-A5100-26
	Polarization	(dB)			0.3	
	Polarization	(dB)			0.4	
	Polarization mode	(ps)			0.5	
	Input/output isolation	(dB)	30			
Pump power leakage	(dBm)			-30		
Echo loss	(dB)	55			APC	
General feature	SNMP network		RJ45			
	Serial interface		RS232			
	Power supply	(V)	90		265	120VAC standard
			30		72	-48VDC optional
	Power consume	(W)			50	
	Operating temp.	(°C)	-5		65	
	Storage temp.	(°C)	-40		80	
	Operating relative	(%)	5		95	
Size (W)×(D)×(H)	(")	19×14.5×1.75			1RU (19")	

Remark: Output power can be customized by user

5.0 Optical/electrical schema

1. Optical port mode M4 (With optional input & output monitor port)



6.0 PRODUCT SERIES

Model MX-	Output power Max (dBm) Pin=0dBm	Noise figure (dB) Pin=0dBm	Input power range (dBm)			Function
			Min.	Typ.	Max.	
A5113/ON	≥13	4.0	-10	0	+10	With SNMP network management, output power is not adjustable
A5114/ON	≥14	4.1				
A5115/ON	≥15	4.2				
A5116/ON	≥16	4.3				
A5117/ON	≥17	4.5				
A5118/ON	≥18	4.8				
A5119/ON	≥19	5.0				
A5120/ON	≥20	5.3				
A5121/ON	≥21	5.5				
A5122/ON	≥22	5.8				
A5123/ON	≥23	6.0				
A5124/ON	≥24	6.3				
A5125/ON	≥25	6.5				
A5126/ON	≥26	6.8				

