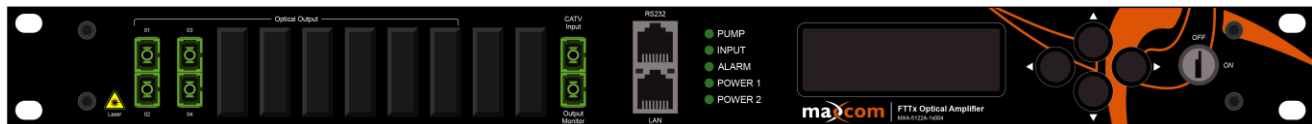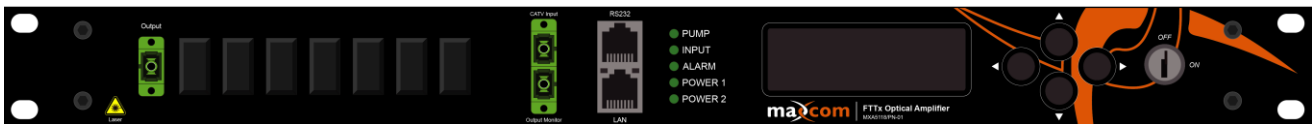www.maxcomcorp.com

1550NM ERBIUM DOPED FIBER

AMPLIFIER · MX-A51 SERIES

TECHNICAL SPECIFICATION

PRODUCT DESCRIPTION

The Maxcom MX-A51 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-A54 platform which can be ordered with 4, 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 200 km are possible when using multiple EDFA's.

The MX-A51 series is a CATV booster EDFA with a gain spectrum band within 1540~1565nm. The EDFA 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 in the 1550nm CATV range. The MX-A51 booster amplifier is featured with low NF and high-saturated output power. It is applicable for Primary Headends, Secondary Headends, Hubs, OTN's, as well as other optical communication networks. The MX-A51 is interchangeable and compatible with other 1550nm EDFA's and Transmitters in a CATV system.

The MX-A51 series EDFA's have excellent performance, single wavelength EDFA's designed for analog and digital CATV QAM signals. Maxcom's 1550nm 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 reliable operation of the pump laser.

The LCD at the front panel offers equipment status and warning alarms. Equipped with Dual power supplies, adjustable output power, SNMP monitoring, and port monitor. The laser will switch off automatically if optical power is lost offering protection for the laser.

Technical index

Performance			Index			Supplement
			Min.	Typ.	Max.	
Optical feature	Wavelength range	(nm)	1540		1563	CATV
	Input power	(dBm)	-10	+3	+10	
	Maximum output	(dBm)	+10		+26	Pin=0dBm
	Output power adjustable	(dBm)	-6		0	
	Number of output ports		Standard 1 port (optional 2, 4, 8, 16 ports)			SC/APC (standard)
	Difference of each	(dBm)	-0.5		+0.5	
	Noise figure (Pin=0dBm)	(dB)			6.3	MX-A5126
	Polarization dependence	(dB)			0.3	
	Polarization dependence	(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	AC standard
			30		72	-48VDC optional
	Power consumption	(W)			50	
	Operating temp.	(°C)	-5		55	Extended Operating range option available
	Storage temp.	(°C)	-40		80	
	Operating relative	(%)	5		95	
	Size (W)×(D)×(H)	(")	19×14.5×1.75			1RU (19")

Remark: User may custom order input and output power parameters

Output Monitor port - Included

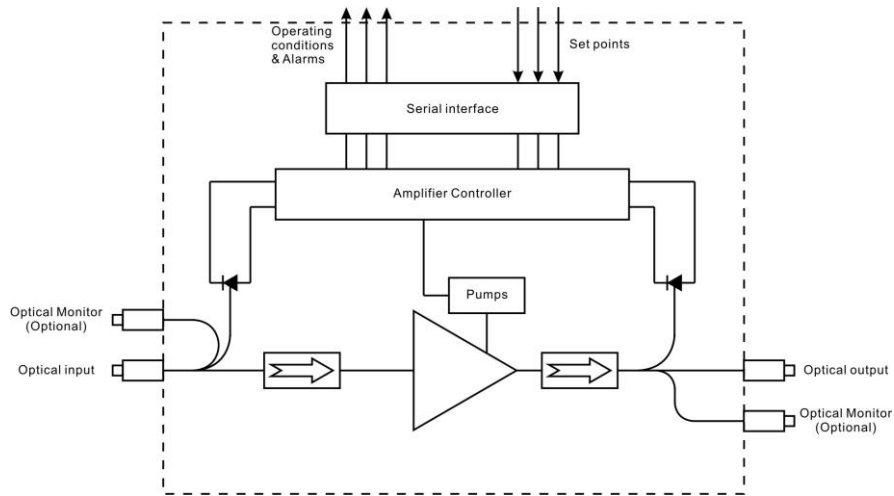Adjustable Output feature (attenuate 0 to -6 dB) - Included

Dual Hot Swappable Power Supplies - Included

SNMP - Web GUI access- Included

Optical/electrical schema

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

PRODUCT SERIES – ORDERING MATRIX

Single output versions shown in samples below:

Model	Output power Max (dBm) Pin=0dBm	Noise figure (dB) Pin=0dBm	Input power range (dBm)		
			Min.	Typ.	Max.
MX-A5113	≥13	4.0			
MX-A5114	≥14	4.1			
MX-A5115	≥15	4.2			
MX-A5116	≥16	4.3			
MX-A5117	≥17	4.5			
MX-A5118	≥18	4.8			
MX-A5119	≥19	5.0	-10	0	+10
MX-A5120	≥20	5.3			
MX-A5121	≥21	5.5			
MX-A5122	≥22	5.8			
MX-A5123	≥23	6.0			
MX-A5124	≥24	6.3			
MX-A5125	≥25	6.5			
MX-A5126	≥26	6.8			

Output Monitor port - Included

Adjustable Output feature (attenuate 0 to -6 dB) - Included

SNMP - Web GUI access- Included

Dual Hot Swappable Power Supplies - Included

*Specify AC or -48 VDC Power Supplies by adding "-AC" or "-DC" to the end of the part number

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