

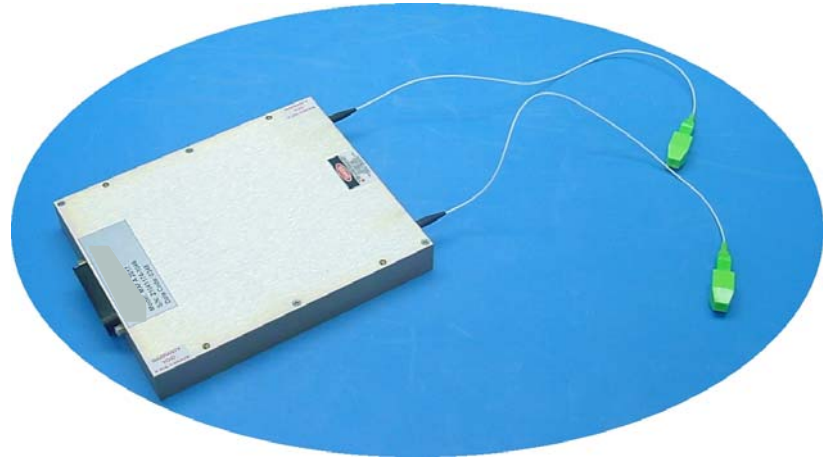
Applications

- High performance supertrunking links
- High power distribution networks
- Redundant ring architectures
- FTTx networks

Features

- Fully Functional EDFA gain block (preamp)
- Low Noise Figure (Typ < 5.0dB)
- Total Input Power Range: -30 dBm to - 15 dBm
- +13 dBm Saturated Output Power (min)
- Standard RS-232)
- Key lock switch
- Low Electrical Power Consumption
- Output Isolation > 40 dB
- Polarization Dependant Gain < 0.1 dB
- Polarization Mode Dispersion < 0.5 ps
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MAFA 2000 Series Erbium Doped Fiber Preamp



The Ortel MAFA 2100 PA Series Erbium Doped Fiber Preamp is an ideal building block for OEM system integrators. The family of MAFA 2100 PA series preamps is designed to meet the most demanding noise performance requirements of any fiber links applications, and performs all the functions required of an optical preamplifier for system integration. MAFA 2100 PA series provide optical isolation on the output of the gain block for stable, low noise operation. The output optical signal power levels are detected for monitoring and control. The MAFA 2100 PA series also provides monitors and associated alarms for all vital characteristics.

Optical / Electrical Characteristics

PROPERTY	SYMBOL (units)	LIMIT	MAFA MODELS	COMMENTS
Product Code			2114 - PA	
Performance				(note 1)
Operating Input Power	Pin (dBm)	Max	-15	
Operating Input Power	Pin (dBm)	Min	-30	
Saturated Output Power	Po (dBm)	Min	13	
Operating Wavelength Range	nm	Min/Max	1530 - 1562	Nominal
Noise Figure	NF (dB)	Typ/Max	5/5.5	(note 2)
Power Consumption	Psys (W)	Max	8	+85° C case
Output RIN	RINout	Max	-170 dB/Hz	Input RIN < -175 dB/Hz

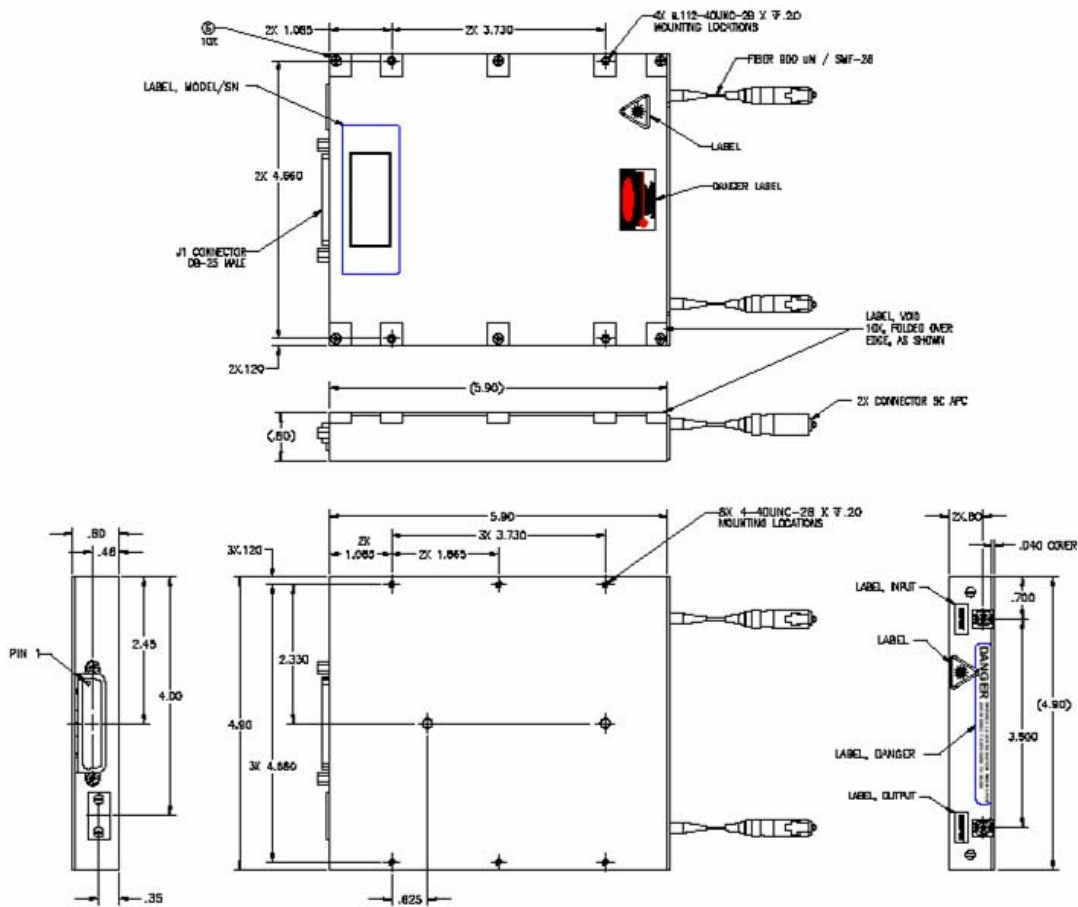
Notes:

1. Unless stated otherwise all specifications apply over the full temperature range and humidity
2. Measured @ 1550 nm, Pin -25 dBm and @ 25°C

General and Mechanical Specifications

PROPERTY	REQUIREMENT	COMMENTS
GENERAL		
Operating Wavelength	1530 ~ 1562nm	Standard
Operating Case Temperature	-40°C to 85°C	Standard
Storage Temperature	-40°C to 85°C	Standard
Operating Humidity	20% to 85%	Non-condensing
Voltage Supply Range	+4.5V to+5.5VDC	Standard
Optical Connectors	SC/APC; SC/UPC; FC/APC; FC/UPC; E2000/APC	User Specified
Dimensions In Inches	4.9"W x 5.9"D x 0.8"H	MAFA 2014 - PA

Outline Drawing



Standard MAFA Electrical Connector pinout

Pin	Description	Pin	Description
1	DC Power Input (+5V)	14	DC Power Input (+5V)
2	GND	15	GND
3	Reserved	16	Reserved
4	Reserved	17	Reserved
5	KEY-SWITCH	18	RS-232 Rx
6	RS-232Tx	19	Reserved
7	Reserved	20	Reserved
8	Reserved	21	Reserved
9	Reserved	22	Reserved
10	Reserved	23	Reserved B
11	Reserved	24	N/A
12	Reserved	25	Reserved
13	Reserved		



Compliance and Reliability Information

- **FCC: Subpart B. Part 15 class “A”:** Unintentional Radiators
- **EN 61000-4-3:** Electromagnetic Compatibility (EMC) Part 4: Testing and Measurement Techniques – Section 3: Radiated Immunity (1996)
- **EN 55013:** Sound and Television Broadcast receivers and associated equipment – Radio disturbance characteristics- limits and methods of measurements – Electric Field Radiation Emissions (2001)

- **Fit Rate:** 60% level of confidence 670 @ 25°C
- **Fit Rate:** 60% level of confidence 962 @ 40°C

Ordering Information

MAFA2014 - - PA

Connector Type	
SC	SC/APC
FC	FC/APC
EC	E2000/APC
TC	SC/UPC
GC	FC/UPC