

MP-2320TX-LF Series Microwave Fiber Optic Transmitter

10 kHz to 2 GHz RF Analog Fiber Optic Transmitter



Designed to provide electrical-to-optical (E/O) conversion of broadband RF signals over the 10 kHz to 2000 MHz frequency range

The MP-2320TX-LF is a comprehensive family of RF/Fiber Optic Transmitters that are designed to provide electrical-to-optical (E/O) conversion of broadband RF signals. The MP-2320TX-LF is optimized for performance over a frequency range of 10 kHz to 2000 MHz.

The utilization of the MP-2320TX-LF, in conjunction with the appropriate MP- 2320RX-LF RF/Fiber Optic Receiver, forms a broadband link capable of supporting the transmission of RF signals over singlemode optical fiber for use in a wide array of communication applications. The link applications include antenna remoting, time and frequency reference distribution, RF delay lines, telemetry tracking, and point-to-point RF transmission.

The transmitter utilizes a low noise, high dynamic range DFB laser. The transmitter operates over link distances up to 30 km. The MP 2323TX-LF unit provides the user with status monitoring through the use of an onboard processor that communicates to a host computer over an RS-232 I/O interface. The I/O parameters include laser bias current, temperature and alarm status.

Information: Call us toll-free at 888-868-8967 or email [info@b2bphotronics.com](mailto:info@b2bphotronics.com)

Applications:

- Wideband RF Transmission
- Microwave Antenna Remoting
- L-Band SATCOM Links
- GPS Antenna Remoting
- Wireless / PCS
- Phased array Antenna Systems
- Satellite Radio: XM

Features:

- 10 kHz to 2.0 GHz Bandwidth
- CWDM Compatible
- Adjustable RF Front End Attenuator
- Low Noise Pre-amplifier
- High Dynamic Range
- Optional Integrated Bias-T
- Small Form Factor Flange Mount
- Hot Swappable, Plug-In Module
- Compatible with MPS-1911, MPS-1914, MPS-1915 Rack Chassis Systems



1914 Plug-In Style Module

## MP-2320TX-LF Series Microwave Fiber Optic Transmitter

## General Specifications

## Optical

Parameter	Min	Typ	Max	Unit	Notes
Operational Wavelength (1310nm)	1308	1310	1312	nm	CWDM Available
Operational Wavelength (1550nm)	1545	1550	1560		CWDM Available
Optical Output Power	5	6	7	dBm	
Optical Connector Type	FC/APC, SC/APC, E2000, PC/APC, AVIM				Others Available
Optical Back Reflection		-55		dB	

## Electrical - RF

Parameter	Min	Typ	Max	Unit	Notes
Frequency Response	0.01		2000	MHz	
Input/Output RF Impedance	50			Ohms	
Input/Output Return Loss	-10	-14		dB	
RF Connector Type	SMA (f) female				Others Available
RF Link Gain	-30	0	+20	dB	Higher Link Gains Available
RF Link Gain Flatness		+/- 1.5		dB	10 kHz to 2.0 GHz Bandwidth
RF Link Noise Figure	+10.0	+20.0	+30.0	dB	
Input 1dB Compression Point	-10.0	-14.0	+25	dBm	IP1dB
Input Third Order Compression Point	- 0.0	-4.0	+18.0	dBm	IIP3
Spur Free Dynamic Range	100	105	118	dB/Hz <sup>2/3</sup>	SFDR
RF Input Power			+16.0	dBm	No Damage

## Mechanical and Environmental

Parameter	Min	Typ	Max	Unit	Notes
Power Supply	+8	+15	+24	VDC	350 ma max.
Operating Temperature	-20		+50	°C	
Storage Temperature	-45		+85	°C	
Operating Humidity			95	%	Non-Condensing
Operating Altitude			50,000	ft	
Dimensions	3.0 x 3.7 x 1.26			in	Flange Mount
Local Alarms	LED: Power and BIT Fault (Plugin Units)				
Remote Alarms	Open Collector, RS-232				
Power & I/O Connector	DB15 Male				Flange Mount

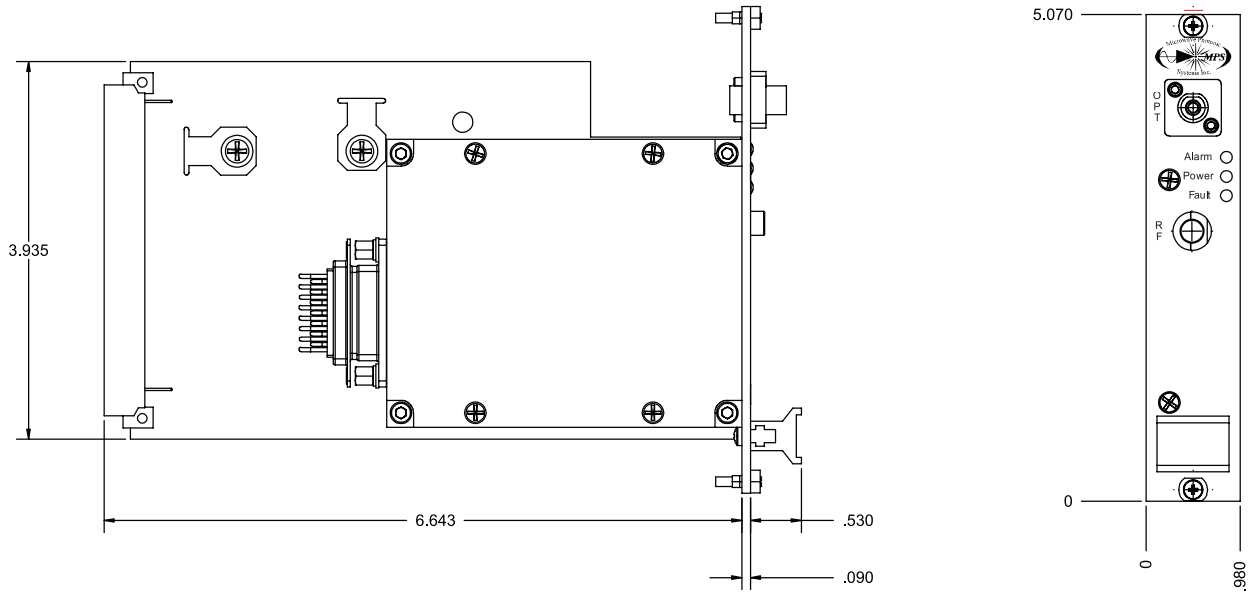
Note (1) : Performance stated with TX output applied to MP-2320RX-LF Receiver Module

Note (2) : Unless specified otherwise, all performance stated specifications are typical at 25C ambient

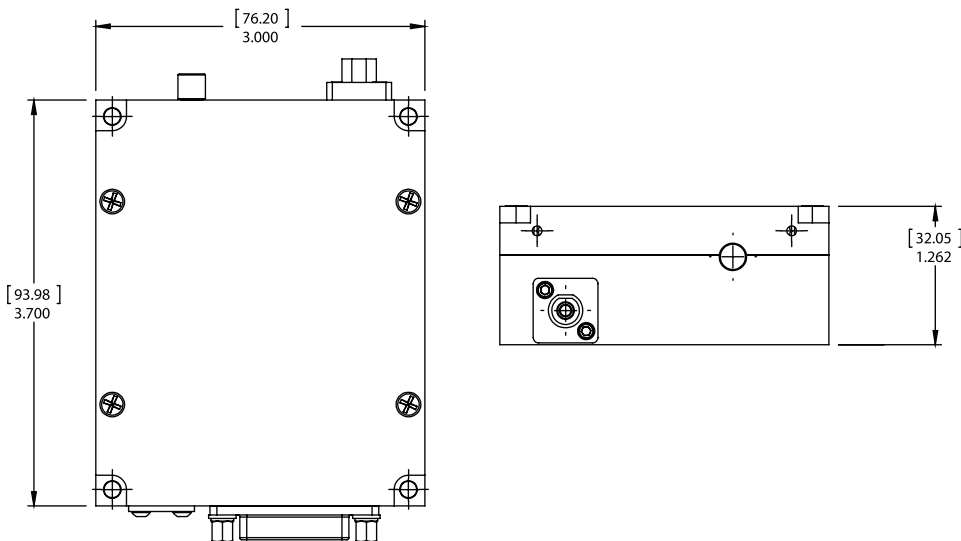
MP-2320TX-LF Series Microwave Fiber Optic Transmitter

## Outline Drawings

### Case Type 1, 1914 Plug-In Module



### Case Type 3, Flange Mount Module

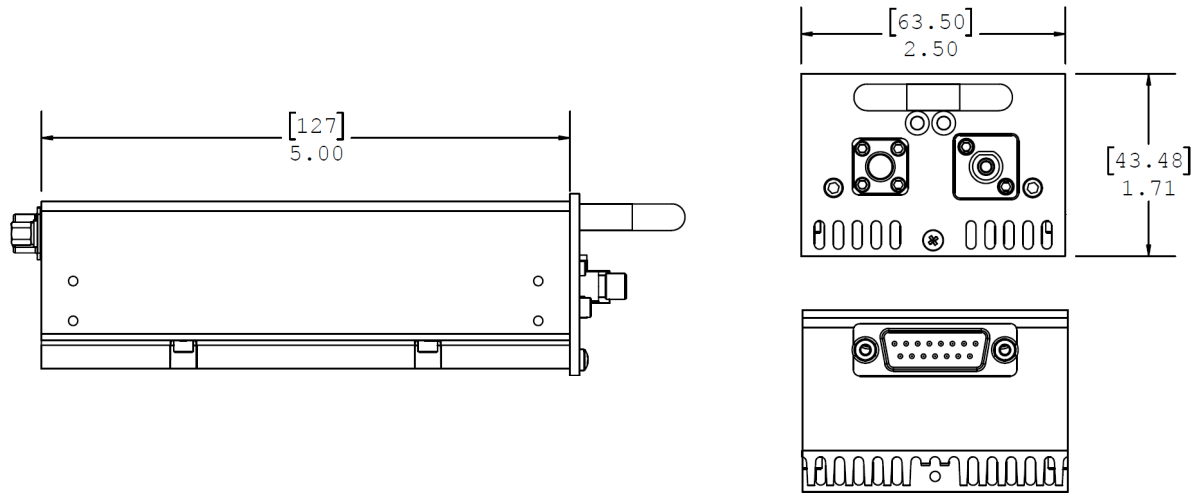


I/O CONNECTOR PINOUT	
PIN	FUNCTION
1	PWR GROUND
2	OPEN COLLECTOR ALARM Low = NO ALARM, 1A Max, Clamped at +20V
3	RS-232 RX DATA (IN )
4	RS-232 TX DATA (OUT )
5	NO CONNECTION
6	NO CONNECTION
7	NO CONNECTION
8	+15 VDC
9	ANALOG MONITOR RTN
10	ANALOG OPTICAL MON
11	RS-232 SIGNAL GROUND
12	NO CONNECTION
13	NO CONNECTION
14	NO CONNECTION
15	NO CONNECTION

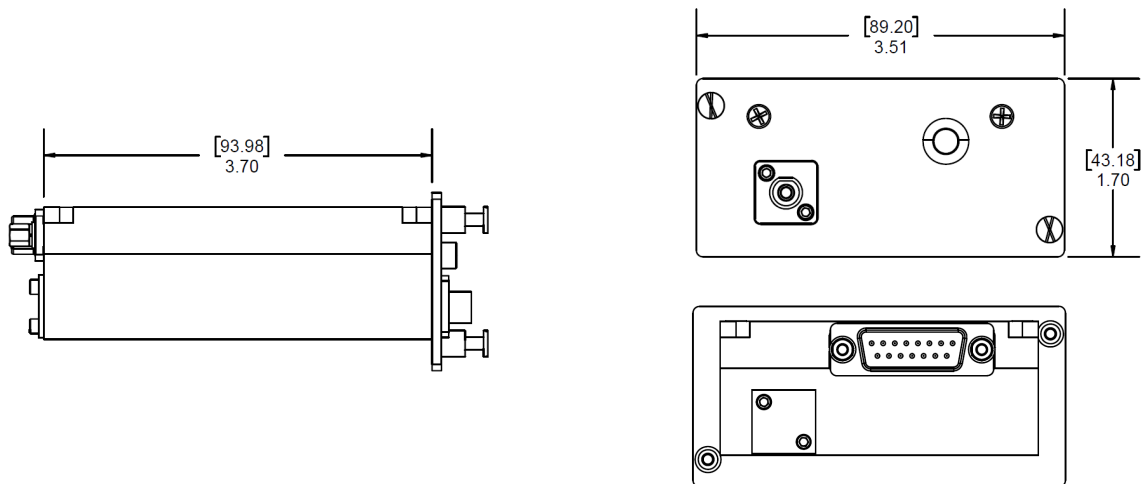
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## Outline Drawings

### Case Type 5, 1911 Plug-In Module



### Case Type 7, 1915 Plug-In Module



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Part Number Generator

MP2320TX-LF	C	W	I	CN	CT
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Example PN: **MP2320TX-LF-00-01-5-2-3**

Standard Configuration  
 1550nm Optical Wavelength  
 50 Ohm Impedance  
 FC/APC Optical Connector  
 Flange Mount unit

**C** Configuration

00 = Standard  
 XX = Custom

**W** Wavelength

01 = 1550 +/- 5 nm  
 02 = 1310 +/- 2nm  
 03 = 1310 nm

**I** Impedance

5 = 50 Ohms  
 7 = 75 Ohms

**CN** Connector

0 = None  
 2 = FC/APC  
 4 = SC/APC  
 6 = Special  
 7 = LC/APC  
 8 = AVIM / APC

**CT** Case Type

1 =MPS-1914 Plug-In  
 3 = 3.0" x 3.7" x 1.26"  
 5 =MPS-1911 Plug-In  
 7 =MPS-1915 Plug-In