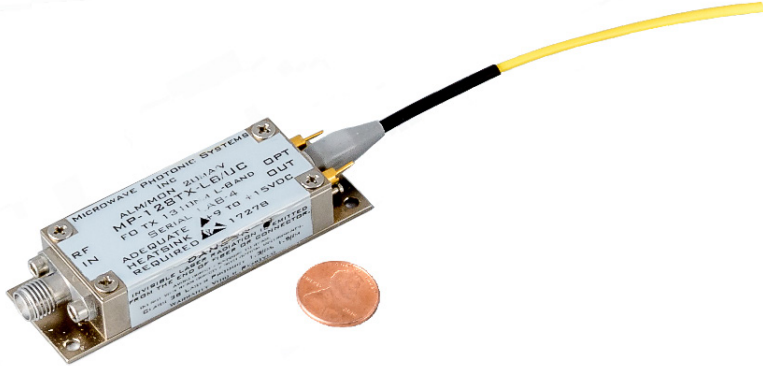


MP-128RX Series Microwave Fiber Optic Receiver

3.5 GHz RF Analog Fiber Optic Receiver



Ultra-Compact electrical-to-optical (O/E) conversion of broadband RF signals over the 1 MHz to 3500 MHz frequency range.

The MP-128RX is a comprehensive family of RF/Fiber Optic Receivers that are designed to provide optical-to-electrical (O/E) conversion of broadband RF signals over a frequency range of 1.0 MHz to 3500 MHz.

This industry leading mechanical package is ideal for OEM fiber optic integration into legacy RF platforms and products.

The receiver family can be optimized over a unique frequency range, as indicated in the part number generator tool on page two. Further system optimization can be achieved by using the integrated RF attenuators to satisfy almost any application.

The utilization of the MP-128RX, in conjunction with the appropriate MP-128TX RF/Fiber Optic Transmitter, 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 Receiver utilizes a high speed, low distortion PIN photodiode detector that is integrated with a broadband RF post amplifier. The unit provides the user with an open collector summary status pin.

Information: Call us toll-free at 888-868-8967 or email info@b2bphotonics.com

Applications:

- Wideband RF Transmission
- Microwave Antenna Remoting
- L-Band SATCOM Links
- GPS Antenna Remoting
- Wireless / PCS
- Phased array Antenna Systems
- OEM Integration

Features:

- 1.0 MHz to 3.5 GHz Bandwidth
- CWDM Compatible
- Low Noise Post-amplifier
- High Dynamic Range
- Ultra Compact Form Factors
- Configurable Design
- Multiple Powering and Mounting Options



MP-128RX Series Microwave Fiber Optic Receiver

General Specifications

Optical

Parameter	Min	Typ	Max	Unit	Notes
Operational Wavelength	1200		1600	nm	
Responsivity		0.85 0.90		A/W A/W	@ 1310 nm @ 1550 nm
Optical Input Power			5	mW	
Optical Connector Type	FC/APC, SC/APC, PC/APC, LC/APC, AVIM				Others Available
Optical Back Reflection		-40		dB	

Electrical - RF

Parameter	Min	Typ	Max	Unit	Notes
Frequency Response	1		3500	MHz	
Input/Output RF Impedance	50			Ohms	
Input/Output Return Loss	-16	-20		dB	
RF Connector Type	SMA (f) female				Others Available
RF Link Gain	-30	0	+20	dB	Higher Link Gains Available
RF Link Gain Flatness		+/- 2		dB	1 MHz to 3.5 GHz Bandwidth
RF Link Noise Figure	16	+30		dB	
Input 1dB Compression Point		+10		dBm	IP1dB
Input Third Order Compression Point	+23			dBm	IIP3
Spur Free Dynamic Range	108	110		dB*Hz ^{2/3}	SFDR

Mechanical and Environmental

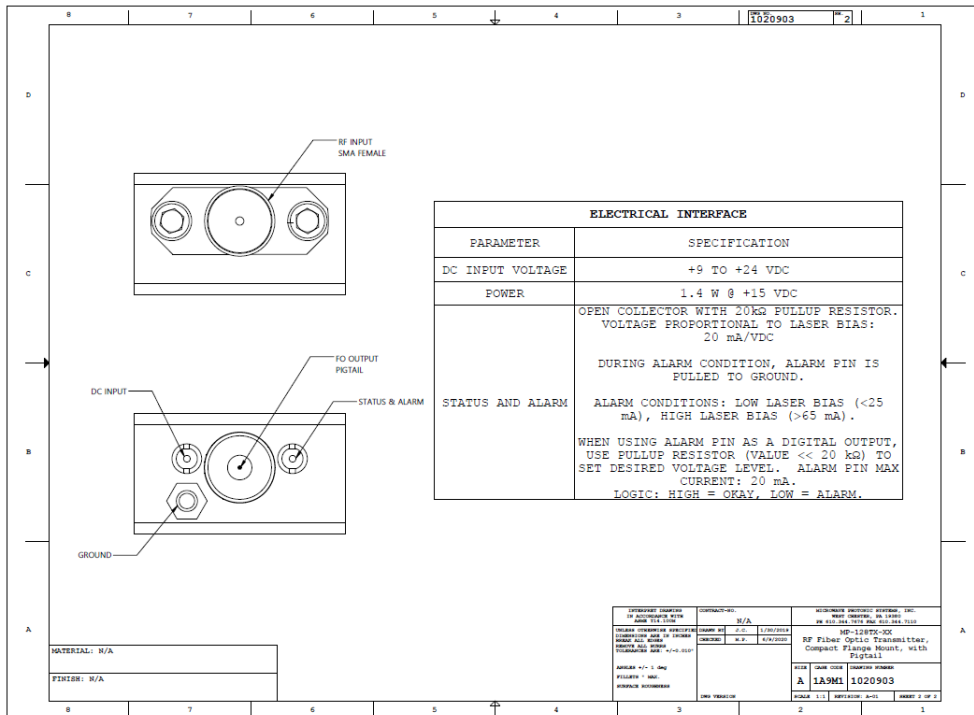
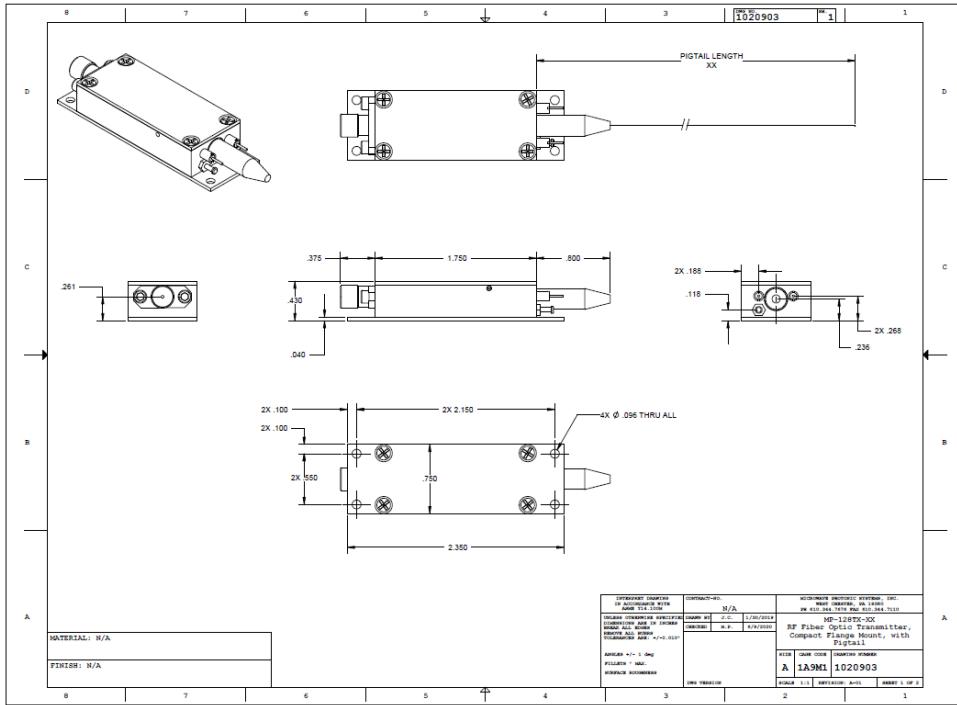
Parameter	Min	Typ	Max	Unit	Notes
Power Supply	+8	+15	+24	VDC	1.4 Watts max.
Operating Temperature	-20		+60	°C	
Storage Temperature	-45		+85	°C	
Operating Humidity			95	%	Non-Condensing
Operating Altitude			50,000	ft	
Dimensions	2.35 x 0.75 x 0.43 65 x 19 x 12			in mm	Varies with Case Style
Local Alarms	Open Collector				
Power & I/O Connector	Solder Pin				

Note (1) : Performance stated with RX Output applied to MP-128TX Receiver Module

MP-128RX Series Microwave Fiber Optic Receiver

Outline Drawings

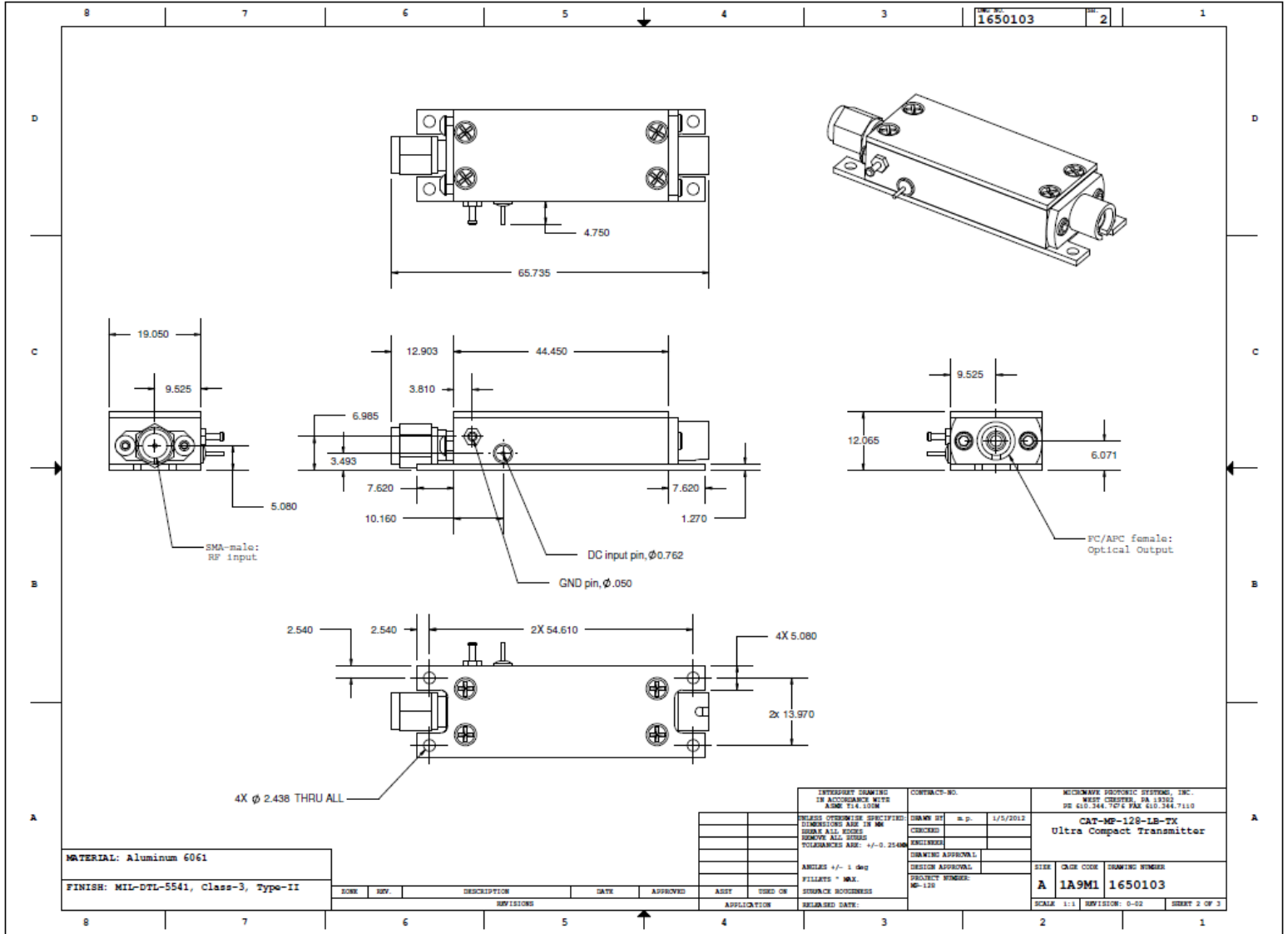
Case Type 1



MP-128RX Series Microwave Fiber Optic Receiver

Outline Drawings

Case Type 2



MP-128RX Series Microwave Fiber Optic Receiver

Part Number Generator

MP128RX	F	W	G	PT	CN	CT
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Example PN: **MP128RX-E-1-P00-3-2-1**

100 to 3000 MHz Frequency Range
 1200 to 1600 nm Optical Wavelength
 0 dB Gain
 10" long 1.8mm kevlar reinforced pigtail
 FC/APC Optical Connector
 Case Style 1

F <u>Frequency Range</u>	W <u>Wavelength</u>	G <u>Gain</u>
A = 1.0 MHz to 300 MHz	1 = 1200 -1600 nm	N20 = -20 dB
B = 50 MHz to 1000 MHz		N10 = -10 dB
D = 100 MHz to 2500 MHz		P00 = 0dB
E = 100 MHz to 3000 MHz		P10 = 10 dB
F = 500 MHz to 3500 MHz		P20 = 20 dB
G = 50 MHz to 3500 MHz		XXX = Custom
H = 50 MHz to 3000 MHz		

PT <u>Fiber Pigtail</u>	CN <u>Connector</u>
1 = 0.5m long 900u loose-tube pigtail	0 = None
2 = 18" long 1.8mm kevlar reinforced pigtail	2 = FC/APC
3 = 10" long 1.8mm kevlar reinforced pigtail	4 = SC/APC
4 = 24" long 1.8mm kevlar reinforced pigtail	6 = Special
5 = 24" long 900u loose-tube pigtail	7 = LC/APC
NF = None, Case 2 only	8 = AVIM / APC
XX = Custom	

CT Case Type
 1 =Case Style 1
 2 = Case Style 2