

microwave photonic systems

MP-5000-TRX-DL: RF Photonic Delay Line Product Series

MP-5000-TRX-DL: Flange Mounted Fixed RF Photonic Delay Line



Supports Fixed Delays From 100 MHz to 12.0 GHz

The MP-5000-TRX-DL is a “Best in Class” integrated subsystem that leverages MPS’s field proven optical packaging methodologies, proprietary monitor and control software, and RF / Photonic integration techniques.

The MP-5000-TRX-DL provides time delay capability for Radio Frequency (RF) input signals from 100 MHz to 12.0 GHz, is packaged in a small form factor, self contained flange mount package. Front panel LEDs provide a visual indication of the DC and Optical Power alarm status. The RF input and RF output ports are both SMA-Female 50 Ohm connectors and are positioned on opposite ends of the front panel.

The MP-5000-TRX-DL input power requirements are +15VC and is supplied via a front panel DB-9 connector. The DB-9 connector also provides serial communications and an open collector alarm pin. The MP-5000-TRX-DL compact form factor can provide up to 12 micro second delays within 1% accuracy of the customer specified fixed delay.

For advanced delay applications, refer to the Optical Photonic Delay Line (OPDL) product series which can be configured with multiple time delay segment value up to 500 us. The delay values of the segments can either be configured as discrete time delay values, or can be configured as a binary 2^n series. The binary 2^n series configuration provides the ability to select delay values over a broader range with smaller time increments. Delay values are visible on a front panel display and can be incremented through the use either a front panel key pad or remotely using an Ethernet based communications interface.

Contact MPS for additional details and available options.

Market Applications

- Test & Calibration Labs
- Radar Target Simulation
- Signal Processing
- Phase Noise Testing

Features & Options

- 1% Delay Accuracy
- High Optical Pathway Isolation
- Remote Status Monitor and Control
- Unity Gain Options
- 2 Year Warranty

Expand Your RF Horizon ©

Microwave Photonic Systems, Inc.
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Specifications

MP-5000-TRX-DL/3G:

Operational Frequency	3.5 to 3.6 GHz
Flatness:	+/- 0.50 dB
Delay	10 usec
Delay Accuracy	+/- 1%
Maximum RF Input Power	+20 dB (max)
Input Third Order Intercept (IIP3)	+24 dB
Insertion Loss / RF Gain (S21)	-30 dB
VSWR	2.0:1
Noise Figure (NF)	48 dB (max)

MP-5000-TRX-DL/5G:

Operational Frequency	5.3 to 5.8 GHz
Flatness:	+/- 0.75 dB
Delay	10 usec
Delay Accuracy	+/- 1%
Maximum RF Input Power	+20 dB (max)
Input Third Order Intercept (IIP3)	+24 dB
Insertion Loss / RF Gain (S21)	-30 dB
VSWR	2.0:1
Noise Figure (NF)	48 dB (max)

MP-5000-TRX-DL/9G:

Operational Frequency	9.1 to 9.6 GHz
Flatness:	+/- 0.75 dB
Delay	10 usec
Delay Accuracy	+/- 1%
Maximum RF Input Power	+20 dB (max)
Input Third Order Intercept (IIP3)	+24 dB
Insertion Loss / RF Gain (S21)	-30 dB
VSWR	2.0:1
Noise Figure (NF)	48 dB (max)

General Specifications:

Optical Wavelength	1310 nm
Optical Fiber Type	Single Mode (SMF-28e)
Remote Communication	RS-232 via DB-9 and Remote Computer (PC)
Local Communication	Panel Mounted LED
RF Input & Output Connectors	SMA, 50 Ohm
Power Supply	+15 VDC, 10W (max)
Dimensions	Flange Mount, 6.75" x 6.00" x 2.38"
Operating Temperature	-40°C to +60°C
Storage Temperature	-40°C to +85°C

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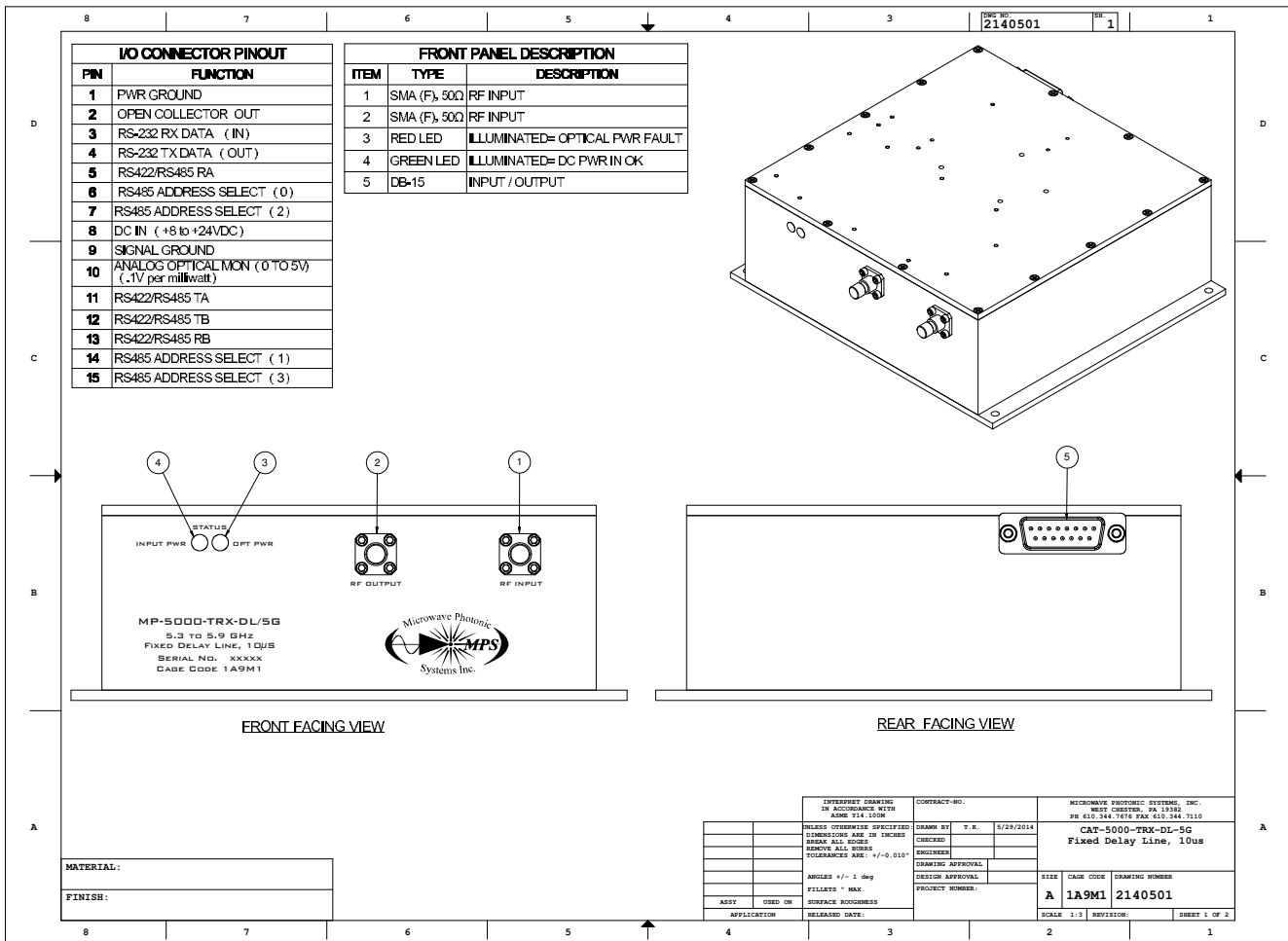
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Panel Description and Pin-Out



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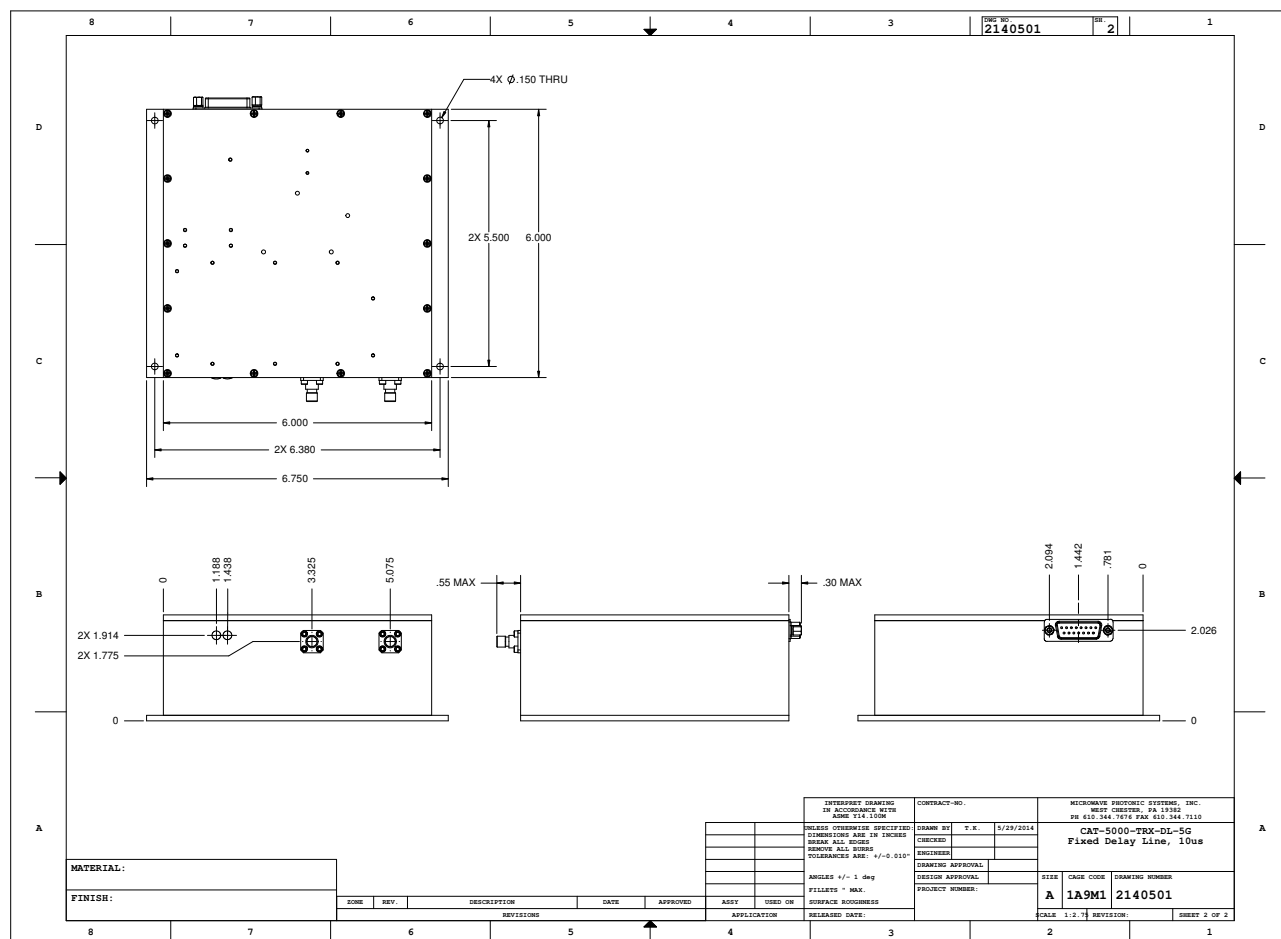


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Mechanical Drawing



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