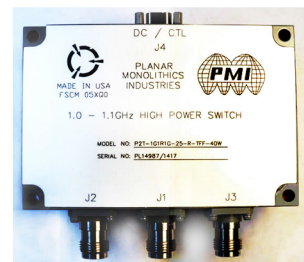




**Planar Monolithics
Industries, Inc.**

**1.0 to 1.1GHz, 40W, SPDT
PIN Diode Solid State Switch**



TECHNICAL DATASHEET

P2T-1G1R1G-25-R-TFF-40W

PMI Model No. P2T-1G1R1G-25-R-TFF-40W is a single pole, two throw, hermetically sealed, reflective switch designed to operate over the 1.0 to 1.1GHz frequency range. This model is designed to handle 40 watts average input power and 4KW peak having a 3usec pulse width and 1% duty cycle. The switch offers fast switching speeds of 300nsec maximum, low insertion loss of 0.4dB typically and high isolation of 37dB typically. The DC supplies are +50VDC, 18mA typical and +5VDC, 128mA typical. The housing measures 3.92" x 2.68" x 0.70" and is supplied with TNC Female connectors.

Features

- 1.0 to 1.1 GHz
- 0.8dB Insertion Loss
- 275ns Rise Time
- 4KW peak/40W Average
- VSWR 2.0:1 Max.
- 25dB Isolation

Applications

- EW Systems • Radars • UAVs & UGVs • Communications • Test Equipment • Laboratories

Electrical Specifications

- | | |
|-------------------|--|
| • Frequency | 1.0 to 1.1GHz |
| • Power | 4kW Peak |
| • Average Power | 40W |
| • Insertion Loss | 0.8dB max – Measured 0.4dB |
| • Isolation | 25dB min. – Measured 37dB |
| • VSWR | 1.5:1 – Measured 1.2:1 |
| • Rise Time | 275ns typ. (10% to 90% RF) |
| • Duty Cycle | 1% |
| • Pulse Width | 3us |
| • PRF | 600Hz |
| • Switching Speed | 300ns max |
| • Switching Rate | 2kHz Max. |
| • Cold Switching | Yes |
| • Control | TTL |
| • Power Supply | +50V @ 50mA – 20mA typ.
+5V @ 200mA – 128mA typ. |
| • Connectors | TNC Female (J1, J2, J3), 9-Pin Micro D
(DC/Control) |
| • Size | 3.92" x 2.68" x 0.70" |

Environmental Ratings

- | | |
|------------------|---|
| • Temperature: | -40°C to +55 °C Operating
-54°C to +125 °C Non-Operating |
| • Environmental: | MIL-STD-810E |
| • EMI/EMC: | MIL-STD-461 |

West Coast Operation:

4921 Robert J. Mathews Pkwy, Suite 1
El Dorado Hills, CA 95762 USA
Tel: 916-542-1401 Fax: 916-265-2597

ISO9001 REGISTERED

Web: www.pmi-rf.com
Email: sales@pmi-rf.com

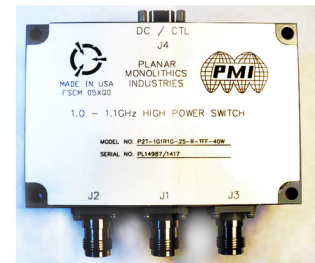
East Coast Operation:

7311-F Grove Road
Frederick, MD 21704 USA
Tel: 301-662-5019 Fax: 301-662-1731



**Planar Monolithics
Industries, Inc.**

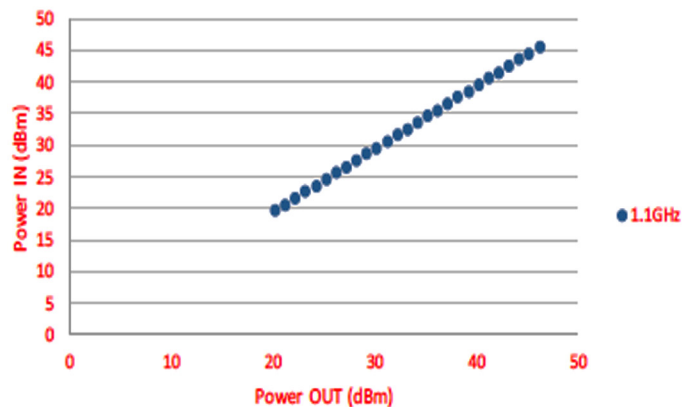
**1.0 to 1.1GHz, 40W, SPDT
PIN Diode Solid State Switch**



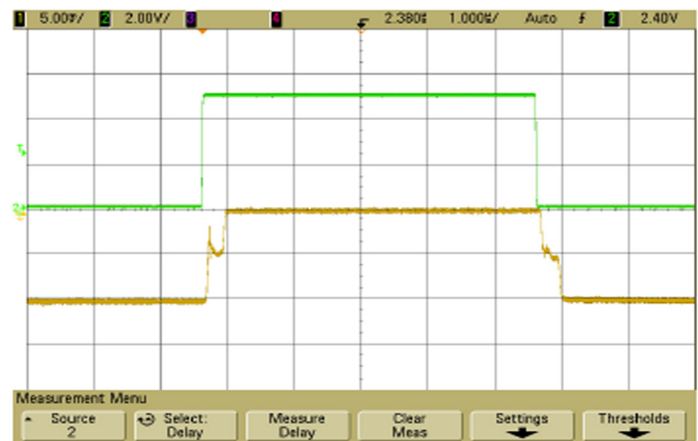
TECHNICAL DATASHEET

P2T-1G1R1G-25-R-TFF-40W

**Power IN vs. Power OUT (dBm) at 1.1GHz
(Normalized Insertion Loss)**

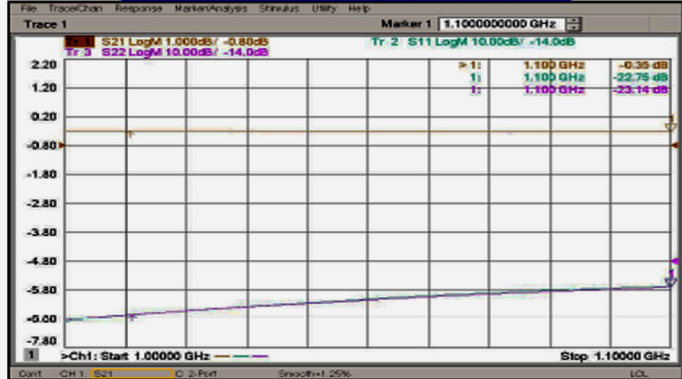


Full Pulse – 1000ns per Div.

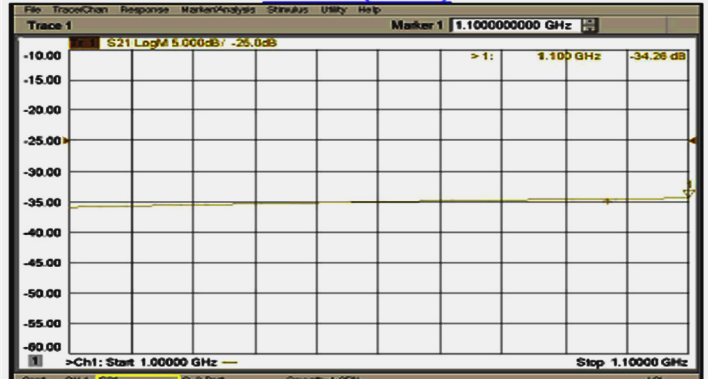


Green Trace: TTL Signal
Yellow Trace: RF Signal

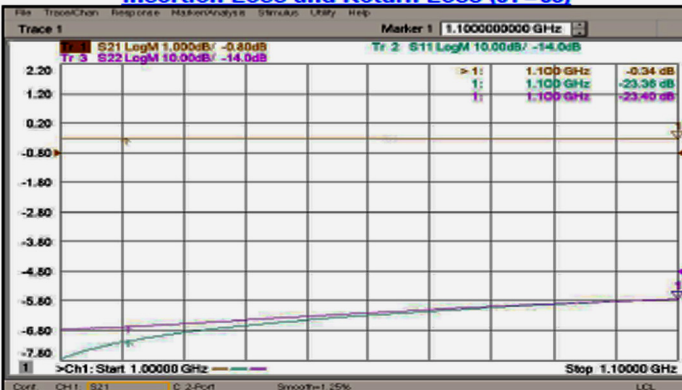
Insertion Loss and Return Loss (J1 – J2)



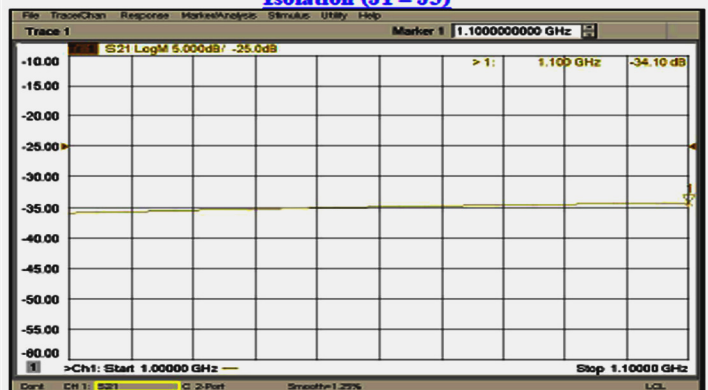
Isolation (J1 – J2)



Insertion Loss and Return Loss (J1 – J3)



Isolation (J1 – J3)



West Coast Operation:

4921 Robert J. Mathews Pkwy, Suite 1
El Dorado Hills, CA 95762 USA
Tel: 916-542-1401 Fax: 916-265-2597

ISO9001 REGISTERED

Web: www.pmi-rf.com
Email: sales@pmi-rf.com

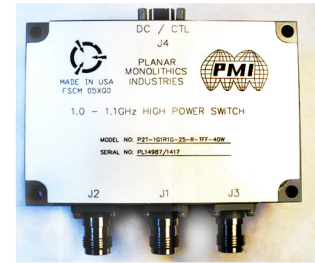
East Coast Operation:

7311-F Grove Road
Frederick, MD 21704 USA
Tel: 301-662-5019 Fax: 301-662-1731



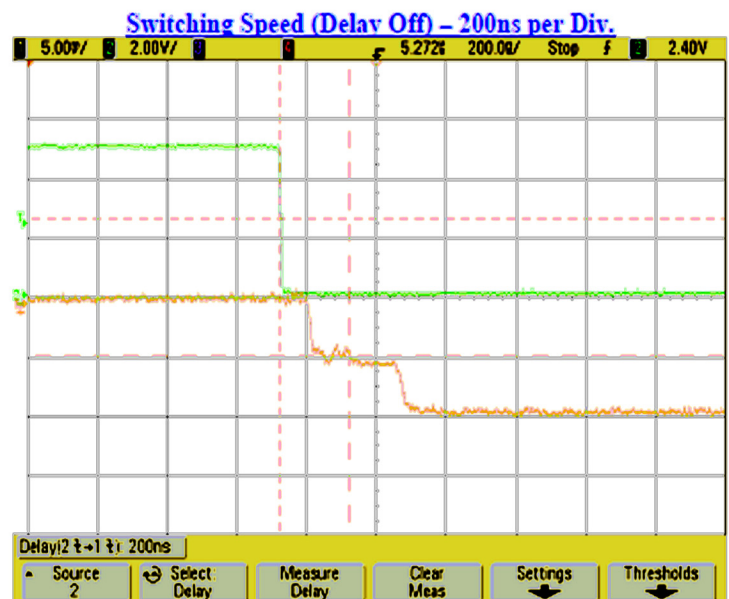
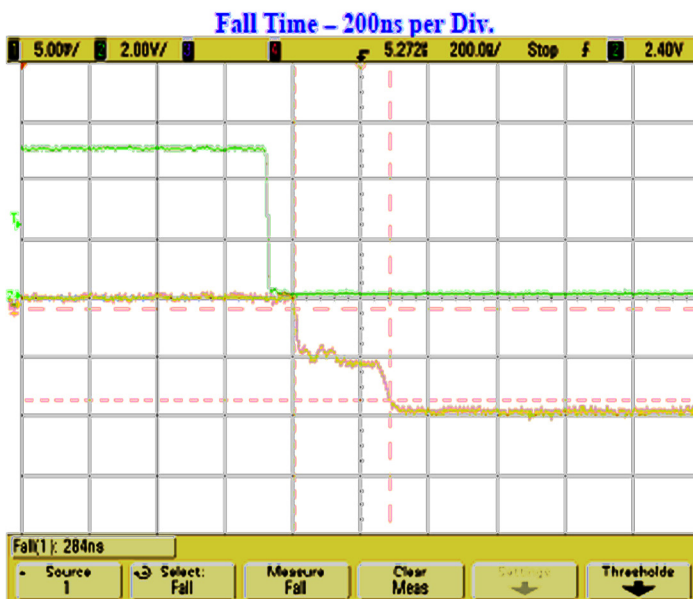
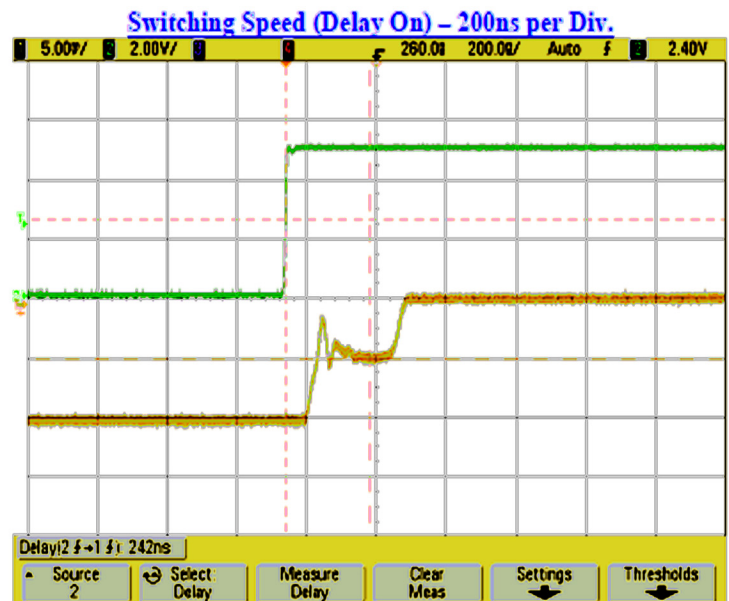
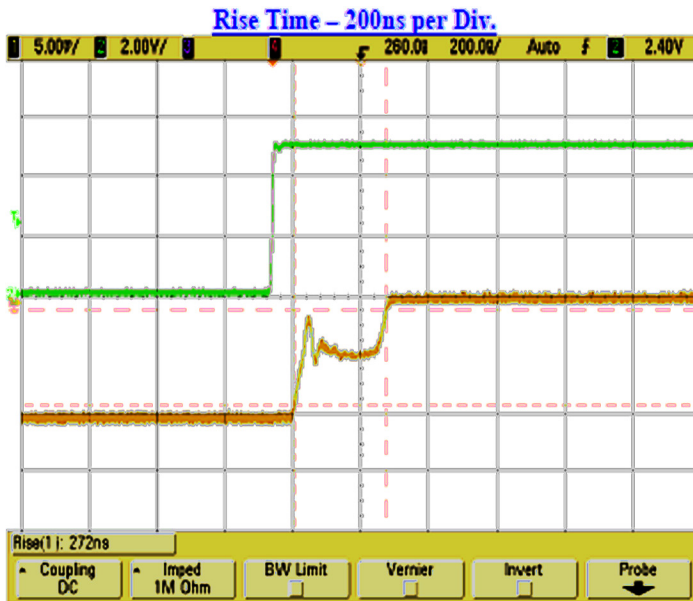
**Planar Monolithics
Industries, Inc.**

1.0 to 1.1GHz, 40W, SPDT
PIN Diode Solid State Switch



TECHNICAL DATASHEET

P2T-1G1R1G-25-R-TFF-40W



Green Trace: TTL Signal
Yellow Trace: RF Signal

Green Trace: TTL Signal
Yellow Trace: RF Signal

West Coast Operation:

4921 Robert J. Mathews Pkwy, Suite 1
El Dorado Hills, CA 95762 USA
Tel: 916-542-1401 Fax: 916-265-2597

ISO9001 REGISTERED

Web: www.pmi-rf.com
Email: sales@pmi-rf.com

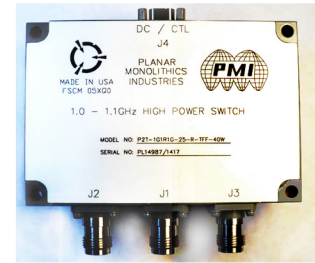
East Coast Operation:

7311-F Grove Road
Frederick, MD 21704 USA
Tel: 301-662-5019 Fax: 301-662-1731



**Planar Monolithics
Industries, Inc.**

1.0 to 1.1GHz, 40W, SPDT
PIN Diode Solid State Switch



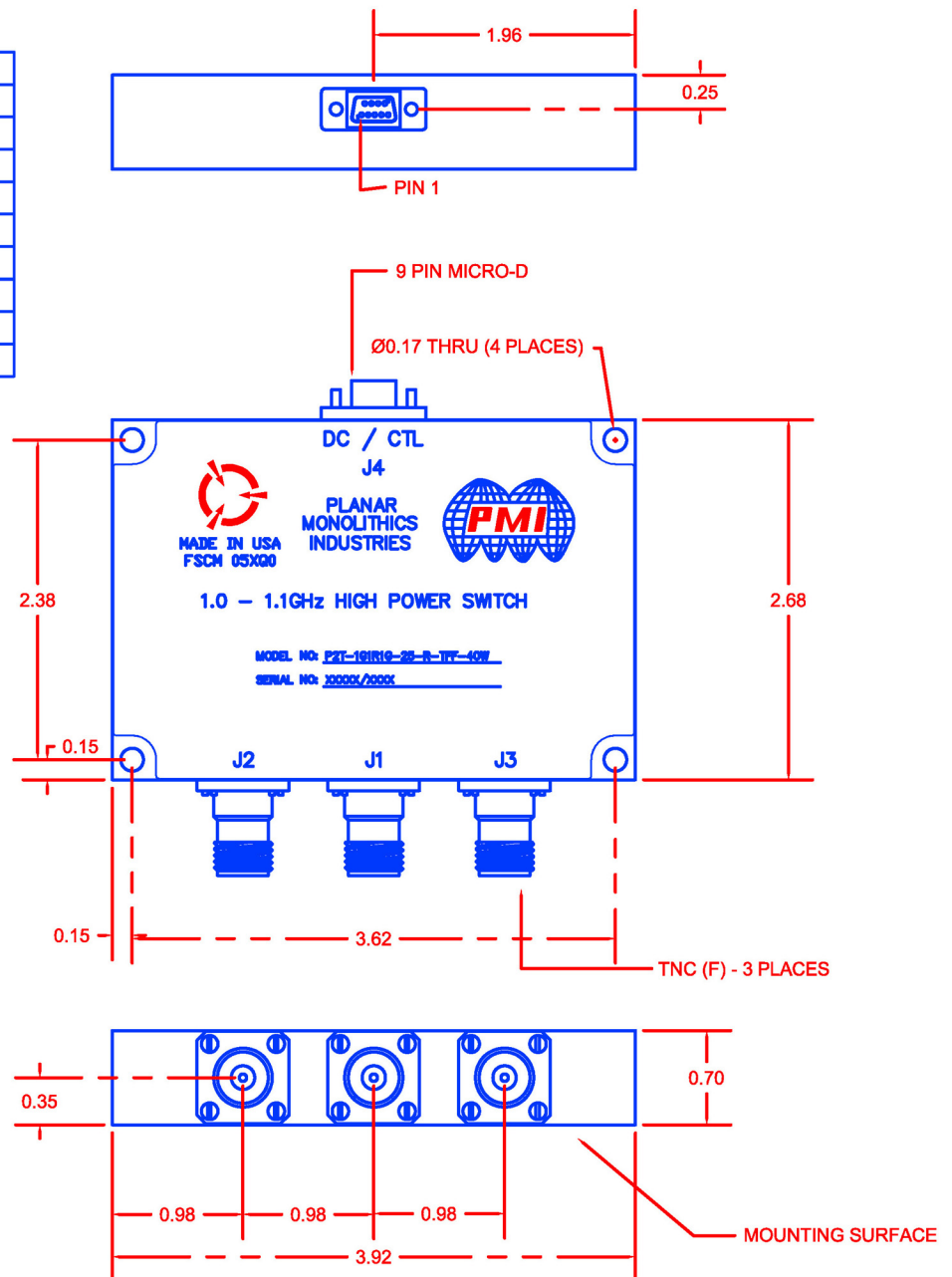
TECHNICAL DATASHEET

P2T-1G1R1G-25-R-TFF-40W

MECHANICAL OUTLINE

J4 CONNECTIONS

J4 PIN	CONNECT TO
1	U1 +50V
2	GROUND
3	NOT USED
4	U1 +5V
5	U1 IN1, (CONTROL)
6	U1 GROUND
7	U1 GROUND
8	U1 GROUND
9	U1 GROUND



West Coast Operation:

4921 Robert J. Mathews Pkwy, Suite 1
El Dorado Hills, CA 95762 USA
Tel: 916-542-1401 Fax: 916-265-2597

ISO9001 REGISTERED

Web: www.pmi-rf.com
Email: sales@pmi-rf.com

East Coast Operation:

7311-F Grove Road
Frederick, MD 21704 USA
Tel: 301-662-5019 Fax: 301-662-1731