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

Full Pulse - 1000ns per Div.

Measurement Menu

Green Trace: TTL Signal
Yellow Trace: RF Signal

Insertion Loss and Return Loss (J1 - J2)

Isolation (J1 - J3)

Insertion Loss and Return Loss (J1 - J2)

Isolation (J1 - J3)

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Rise Time – 200ns per Div.

Switching Speed (Delay On) – 200ns per Div.

Fall Time – 200ns per Div.

Switching Speed (Delay Off) – 200ns per Div.

Green Trace: TTL Signal
Yellow Trace: RF Signal

Green Trace: TTL Signal
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