

## DESCRIPTION

PMI MODEL P4T-100M52G-100-R-RD IS A REFLECTIVE, SINGLE POLE FOUR THROW PIN DIODE SWITCH THAT OPERATES OVER THE 100 MHz TO 52 GHz FREQUENCY RANGE. IT FEATURES LOW INSERTION LOSS AND HIGH ISOLATION IN A SLIMLINE PACKAGE. THIS MODEL ALSO INCORPORATES A TTL COMPATIBLE DRIVER FOR EASE OF SYSTEM INTEGRATION.

## SPECIFICATIONS

- FREQUENCY:----- 100 MHz TO 52 GHz
- INSERTION LOSS:----- 5.0 dB (100MHz TO 18 GHz) Max.  
7.0 dB (18 TO 40 GHz) Max.  
10.0 dB (40 TO 50 GHz) Max.  
14.0 dB (50 TO 52 GHz) Typ.
- VSWR Input/ Output:----- 2.0:1 (100 MHz TO 10 GHz) Typ.  
2.2:1 (10 TO 18 GHz) Typ.  
2.5:1 (18 TO 30 GHz) Typ.  
3.0:1 (30 TO 50 GHz) Typ.  
3.5:1 (50 TO 52 GHz) Typ.
- ISOLATION:----- 80 dB (100 MHz TO 1 GHz) Min.  
85 dB (1 TO 18 GHz) Min.  
70 dB (18 TO 40 GHz) Min.  
70 dB (40 TO 50 GHz) Min.  
70 dB (50 TO 52 GHz) Typ.
- AMPLITUDE BALANCE:----- ± 1.0 dB (100 MHz 18 GHz) Max.  
± 1.5 dB (18 TO 40 GHz) Max.  
± 1.5 dB (40 TO 50 GHz) Max.  
± 1.5 dB (50 TO 52 GHz) Typ.

## ENVIRONMENTAL RATINGS

- TEMPERATURE:----- -40 °C TO +85 °C (OPERATING)  
-65 °C TO +125 °C (STORAGE)
- HUMIDITY:----- MIL-STD-202, METHOD 103B COND. B
- SHOCK:----- MIL-STD-202, METHOD 213B COND. B
- VIBRATION:----- MIL-STD-202, METHOD 204D COND. B
- ALTITUDE:----- MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE:----- MIL-STD-202, METHOD 107D COND. A

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
X.XX ±0.020  
X.XXX ±0.010

**PMI CONFIDENTIAL AND PROPRIETARY**

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	09/26/16	

## MECHANICAL OUTLINE

## SPECIFICATIONS

- PHASE BALANCE:----- ± 10° (100 MHz 18 GHz) Typ..  
± 15° (18 TO 40 GHz) Typ.  
± 15° (40 TO 50 GHz) Typ.  
± 20° (50 TO 52 GHz) Typ.
- INPUT POWER:----- +20 dBm CW (100 MHz TO 40 GHz) Max.  
"Theoretically it can handle +20 dBm up to 52 GHz"
- SWITCHING SPEED:----- 50 ns Max.
- VIDEO TRANSIENTS:----- 1 V. Peak to Peak Typ.
- CONTROL SIGNAL:----- SEE TTL LOGIC TABLE
- DC VOLTAGE:----- +5 V @ 200 mA MAX  
-5 V @ 200 mA MAX
- RF CONNECTORS:----- 2.4 mm FEMALE
- SIZE:----- 1.25" X 1.25" X 0.40"
- FINISH:----- GOLD PLATED

## TTL LOGIC CONTROL TABLE

CTL 2	CTL 1	FUNCTION
0	0	J1 TO J2
0	1	J1 TO J3
1	0	J1 TO J4
1	1	J1 TO J5

## PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD

FREDERICK, MARYLAND 21704 USA

TEL: (301)-662-5019, FAX: (301)-662-1731

WEB: www.pmi-rf.com, EMAIL: sales@pmi-rf.com

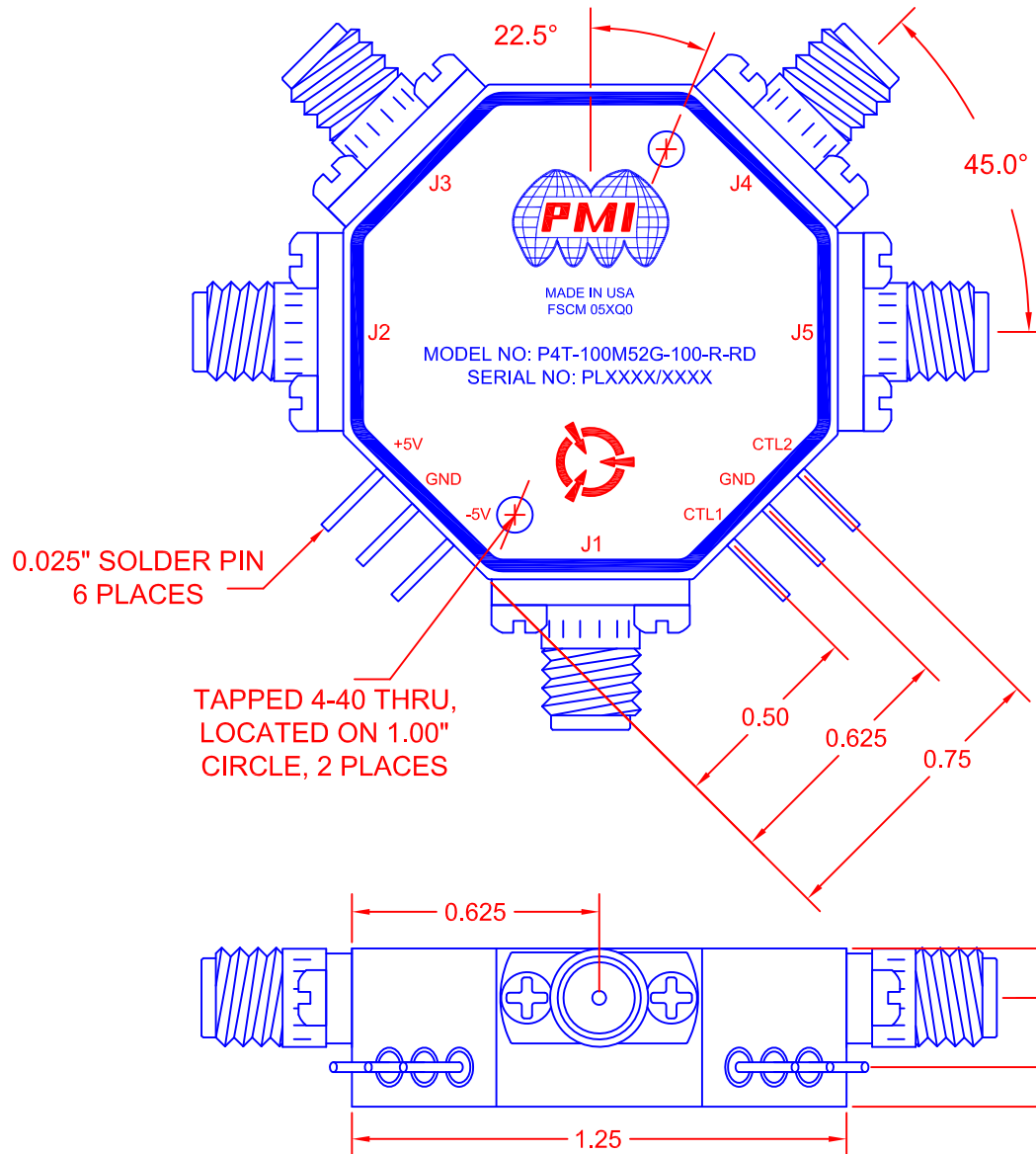
ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE			
DRAWN <i>ASB</i>		11/05/20	PRODUCT FEATURE P4T-100M52G-100-R-RD			
CHECKED			SIZE	FSCM NO.	DWG NO.	REV.
ISSUED			A	05XQ0	PRELIMINARY	A1
			SCALE	N:S		SHEET 1 OF 2

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7311-F GROVE ROAD  
FREDERICK, MARYLAND 21704 USA  
TEL: (301)-662-5019, FAX: (301)-662-1731  
WEB: [www.pmi-rf.com](http://www.pmi-rf.com), EMAIL: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)  
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PRODUCT FEATURE  
P4T-100M52G-100-R-RD

APB	11/05/20	SIZE	05XQ0	PRELIMINARY	REV. A1
		SCALE	N:S	SHEET	2 OF 2

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ZONE	REV.	DESCRIPTION	DATE	APPROVED
	1	ORIGINAL RELEASE	09/26/16	