

## DESCRIPTION

PMI MODEL: P4T-6G18G-27-T-SFF IS A SINGLE POLE FOUR THROW ABSORPTIVE SWITCH OPERATING OVER THE 6.0 TO 18.0 GHz FREQUENCY RANGE. THIS MODEL OFFERS A MINIMUM OF 27 dB ISOLATION WHILE MAINTAINING A MAXIMUM INSERTION LOSS OF 4.5 dB AND A MAXIMUM VSWR OF 2.3:1. THIS COMPACT HOUSING IS OUTFITTED WITH SMA FEMALE CONNECTORS.

## SPECIFICATIONS

- FREQUENCY RANGE: ----- 6.0 TO 18.0 GHz
- INSERTION LOSS: ----- 2.5 dB MAX @ 6.0 GHz TO 8.0 GHz  
3.7 dB MAX @ 8.0 GHz TO 12.4 GHz  
4.8 dB MAX @ 12.4 GHz TO 18.0 GHz
- ISOLATION (ON/ALL PORTS OFF): - 45 dB MIN @ 6.0 GHz TO 8.0 GHz  
27 dB MIN @ 8.0 GHz TO 18.0 GHz
- VSWR: ----- 2.3:1 MAX @ 6.0 GHz TO 12.4 GHz  
2.0:1 MAX @ 12.4 GHz TO 18.0 GHz
- RF IMPEDANCE: ----- 50 Ω
- SWITCHING SPEED (ON/OFF): ----- 500 ns MAX (FROM 50% TTL TO 90%/10% RF VOLTAGE)
- POWER HANDLING: ----- 500 mW MAX CW
- POWER SUPPLY: ----- +5.0 VDC ±5% @ 100 mA MAX  
-15.0 VDC ±5% @ 60 mA MAX
- SURVIVAL POWER: ----- OFF PORT: 1 W AVERAGE, 10 W PEAK\*  
ON PORT: 1 W AVERAGE, 75 W PEAK\*  
COMMON PORT: 1 W AVERAGE, 75 W PEAK\*
- CONTROL INPUT: ----- SCHOTTKY TTL, ONE UNIT LOAD<sup>‡</sup>
- CONTROL LOGIC: ----- LOGIC "0" = -0.3 V TO +0.8 V FOR PORT ON (LOW LOSS STATE)  
LOGIC "1" = +2.0 V TO +5.0 V FOR PORT OFF (ISOLATION STATE)
- SIZE: ----- 24.54 mm x 24.54 mm x 9.30 mm  
0.996" x 0.996" x 0.366"  
(EXCLUDING CONNECTORS)
- WEIGHT: ----- 45 g [1.59 oz] MAX
- CONNECTORS: ----- RF: SMA FEMALE IAW MIL-PRF-39012  
CONTROL/POWER: SOLDER TERMINALS
- FINISH: ----- PAINTED BLACK (MOUNTING SURFACE FREE OF PAINT/GOLD PLATED)

\*: 1 μs MAXIMUM PULSE WIDTH

‡: A UNIT LOAD IS 2.0 mA SINK CURRENT AND 50 μA SOURCE CURRENT

## ENVIRONMENTAL RATINGS

- TEMPERATURE: ----- -25 °C TO +85 °C (OPERATING)  
-30 °C TO +125 °C (NON-OPERATING)
- ALTITUDE: ----- 50,000 FEET
- VIBRATION: ----- DOUBLE AMPLITUDE: 10 mm @ 2 TO 5 Hz  
DOUBLE AMPLITUDE: 5 mm @ 5 TO 10 Hz
- SHOCK: ----- 15G, 11 ms
- HUMIDITY: ----- 0~100% RELATIVE HUMIDITY
- SALT DAMAGE: ----- SHALL WITHSTAND SALT DAMAGE

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

**PMI CONFIDENTIAL AND PROPRIETARY**

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	10/29/17	

LOGIC TABLE (J1: COMMON PORT)

PORT	TTL INPUT LEVEL				J1-J2	J1-J3	J1-J5	J1-J6
	E2	E3	E5	E6				
J2	0	1	1	1	INSERTION LOSS	ISOLATION	ISOLATION	ISOLATION
J3	1	0	1	1	ISOLATION	INSERTION LOSS	ISOLATION	ISOLATION
J5	1	1	0	1	ISOLATION	ISOLATION	INSERTION LOSS	ISOLATION
J6	1	1	1	0	ISOLATION	ISOLATION	ISOLATION	INSERTION LOSS
ALL OFF	1	1	1	1	ISOLATION			

## PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD

FREDERICK, MARYLAND 21704 USA

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

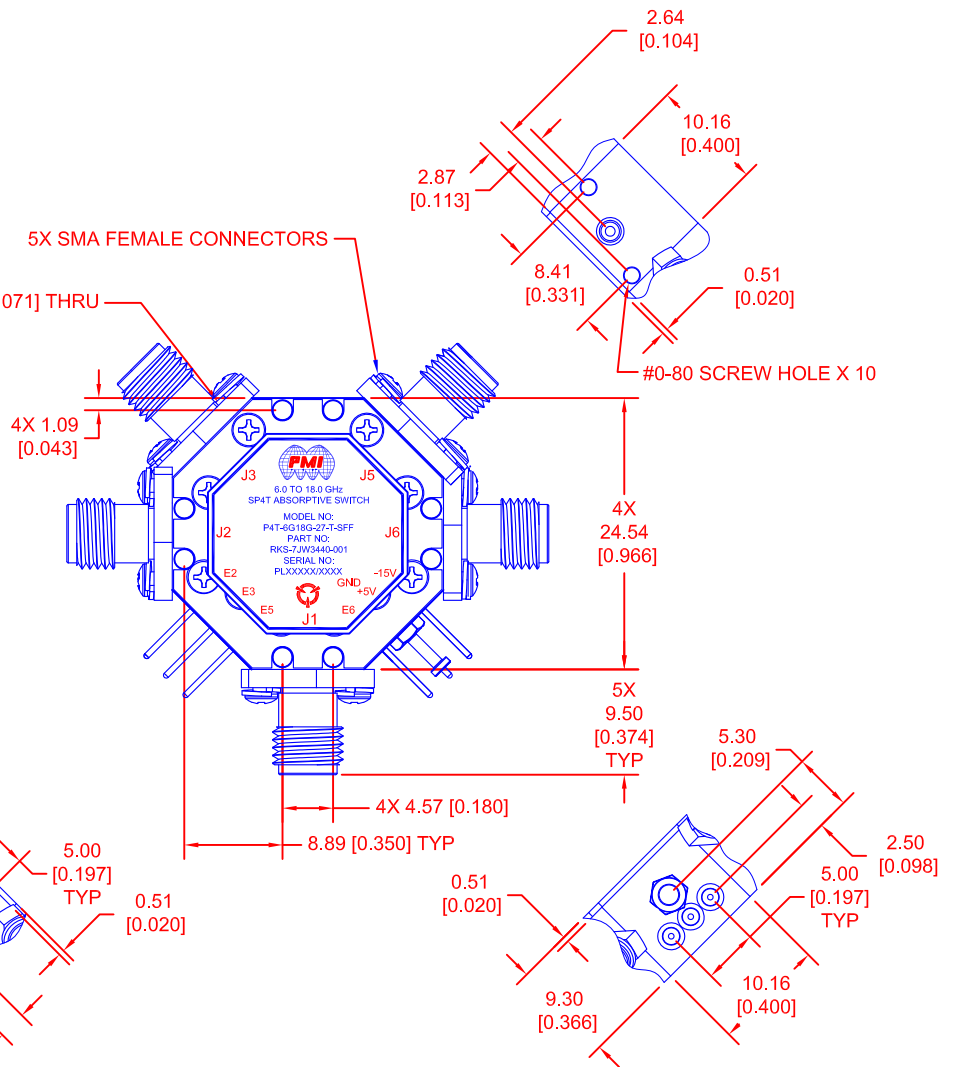
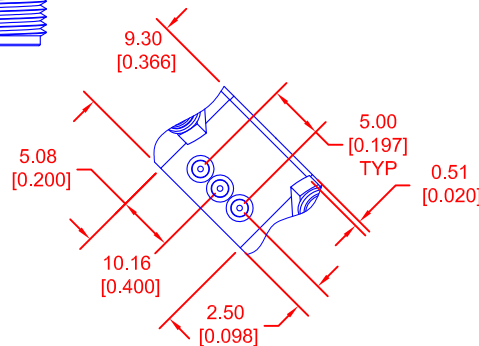
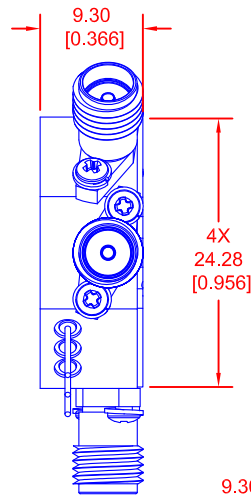
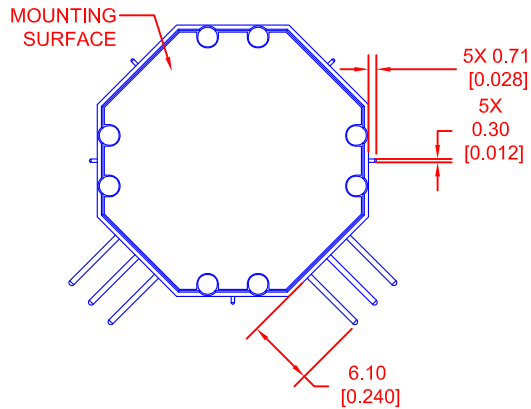
WEB: www.pmi-rf.com, EMAIL: sales@pmi-rf.com

ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE			
DRAWN <i>M. Berry</i>		09/05/17	PRODUCT FEATURE P4T-6G18G-27-T-SFF			
CHECKED			6.0 to 18.0 GHz Single-Pole Four-Throw Absorptive Switch			
ISSUED			SIZE	FSCM NO.	DWG NO.	REV.
			A	05XQ0	PRELIMINARY	-
			SCALE	N:S	SHEET	1 OF 2

# MECHANICAL OUTLINE



- NOTES:
1. MARKING TO BE DONE WITH A LABEL.
  2. SMA CONNECTORS TO BE IAW MIL-PRF-39012.
  3. MOUNTING SURFACE TO BE FREE OF PAINT.

NOTE: SPECIFICATIONS WILL VARY OVER OPERATING TEMPERATURE  
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

ALL DIMENSIONS ARE IN mm [INCH]

TOLERANCES:  
BELOW 4 mm [0.16"] ± 0.3 mm [0.010"]  
4 mm TO 16 mm [0.16" TO 0.63"] ± 0.5 mm [0.020"]  
ABOVE 16 mm [0.63"] ± 0.7 mm [0.030"]

**PMI CONFIDENTIAL AND PROPRIETARY**

**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](http://www.pmi-rf.com), EMAIL: [sales@pmi-rf.com](mailto:sales@pmi-rf.com)  
ISO 9001 CERTIFIED



APPROVALS		DATE	TITLE		
DRAWN <i>M. Berry</i>		09/05/17	PRODUCT FEATURE P4T-6G18G-27-T-SFF 6.0 to 18.0 GHz Single-Pole Four-Throw Absorptive Switch		
CHECKED			SIZE A	FSCM NO. 05XQ0	DWG NO. 27033410
ISSUED			SCALE N:S	SHEET 2 OF 2	REV. A1