

**DESCRIPTION:**

PMI MODEL PMSN-4DT-561R875-NG-H02 IS A TERMINATED SINGLE POLE FOUR THROW SWITCH MODULE, WHICH INCLUDES HIGH SPEED SP4T, PIN DIODE LIMITER, VIDEO FILTER, GAIN EQUALIZER, ATTENUATOR, AND AMPLIFIER. THE MODULE IS DESIGNED TO OPERATE FROM 0.7 TO 1.3 GHz WITH 4 dB INSERTION LOSS, HIGH SWITCHING SPEED, EXTREMELY LOW VIDEO TRANSIENT, MINIMUM 6 dBm P1dB AND MINIMUM 35 dB REVERSE ISOLATION.

**SPECIFICATIONS:**

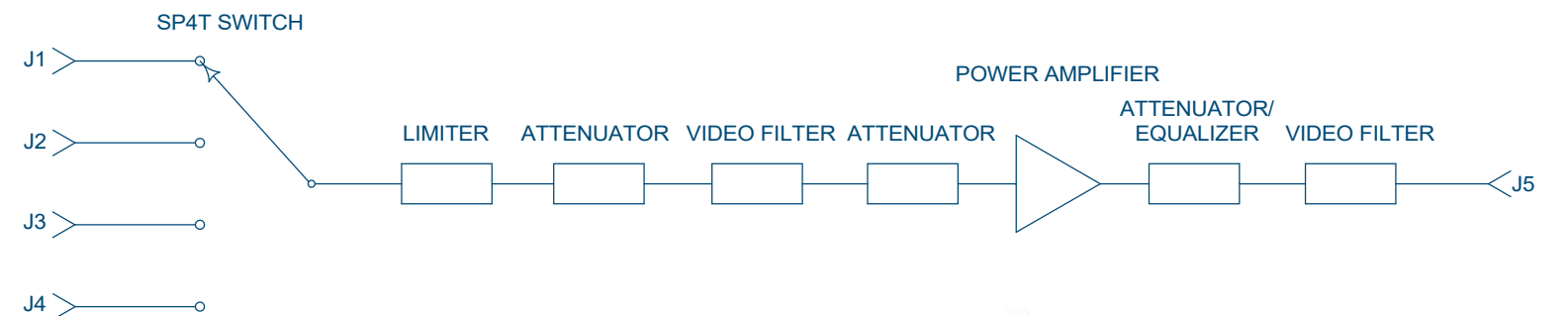
- FREQUENCY RANGE:..... 0.7 TO 1.3 GHz
- PATH GAIN:..... -4.0 dB ± 0.6 dB
- PORT TO PORT GAIN DEVIATION:..... ±0.4 dB MAX (ROOM TEMP)
- INSERTION LOSS GAIN DEVIATION:..... 0.5 dB OR -1 dB MAX FROM ROOM TEMP (OVER OPERATING TEMP)
- RF INPUT POWER:..... +3 dBm CW (OPERATING), +25 dBm CW (SURVIVAL)
- NOISE FIGURE:..... 15 dB MAX (ROOM TEMP)
- INPUT P1dB:..... +6 dBm MIN
- INPUT IP3:..... +15.5 dBm MIN
- HARMONICS:..... -20 dBc MAX WHEN PIN = 3 dBm  
-65 dBc MAX WHEN PIN = -20 dBm
- SPURIOUS:..... -60 dBc MAX WHEN PIN = 3 dBm  
-65 dBc MAX WHEN PIN = -20 dBm
- RF ISOLATION:..... 65 dB MIN FROM UNSELECTED INPUT TO OUTPUT  
35 dB MIN FROM OUTPUT TO SELECTED INPUT  
70 dB MIN FROM ISOLATION INPUT TO INPUT  
-60 dBm MAX SPECTRAL ENERGY LEAKAGE FROM 700 TO 1300 MHz
- INSERTION PHASE VARIATION:..... ± 1.5° MAX FOR ANY 50 MHz SEGMENT
- INSERTION GAIN VARIATION:..... ± 0.3 dB MAX FOR ANY 50 MHz SEGMENT
- VSWR:..... INPUT: 1.4:1 MAX; OUTPUT: 1.6:1 MAX
- SWITCHING TIME:..... 25 ns MAX FROM 50% TTL TO 90% RF OUTPUT
- RECOVERY TIME:..... 1 us MAX TO WITHIN 0.5 dB AND 5° OF STEADY STATE WHEN INPUT POWER DROPS FROM +25 dBm TO 0 dBm AFTER A DURATION OF 30 ns AND 25 ns RESPECTIVELY
- VIDEO FEEDTHROUGH:..... FROM 500 TO 1300 MHz, -70 AND -60 dBm MAX
- SWITCH CONTROL:..... "0" ON, "1" OFF
- DC POWER REQUIREMENT:..... +5 VDC ±3.8% @ 320 mA MAX  
-12 VDC ±3.8% @ 50 mA MAX
- SEALING:..... HERMETIC
- WEIGHT:..... 4 oz MAX
- FINISH:..... PAINTED BLUE,  
MOUNTING SURFACE CHEMICAL CONVERSION COAT PER MIL-C-5541, CLASS 3

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	6/12/2023	

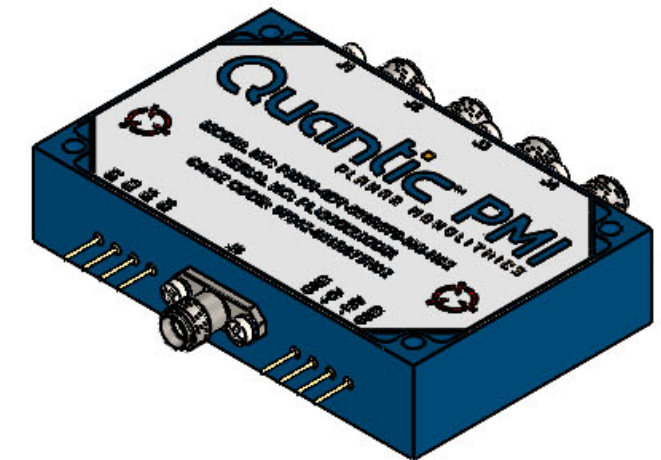
**ENVIRONMENTAL RATINGS:**

- TEMPERATURE:..... -40°C TO +85°C (OPERATING)  
-54°C TO +95°C (STORAGE)
- THERMAL CYCLING:..... MIL-STD-202, METHOD 107, CONDITION A, MAX TEMP +95°C
- ALTITUDE:..... MIL-STD-202, METHOD 105, 60,000 FT
- VIBRATION:..... MIL-STD-883, METHOD 2026, CONDITION I-D, 5 MIN MAX
- SHOCK:..... MIL-STD-883, METHOD 2002, CONDITION B
- RESISTANCE TO SOLVENTS:..... MIL-STD-883, METHOD 2015
- SALT FOG:..... MIL-STD-202, METHOD 101E, 40 HOURS
- HUMIDITY:..... MIL-STD-202, METHOD 103 CONDITION B,  
UP TO 100% CONDENSING
- ACOUSTIC NOISE:..... MIL-STD-810, METHOD 515, LEVELS PER SCD FIG. 4

**FUNCTIONAL BLOCK DIAGRAM:**



CONTROL LINES				SWITCH PATH
E1	E2	E3	E4	SELECTED
0	1	1	1	J1 TO J5
1	0	1	1	J2 TO J5
1	1	0	1	J3 TO J5
1	1	1	0	J4 TO J5

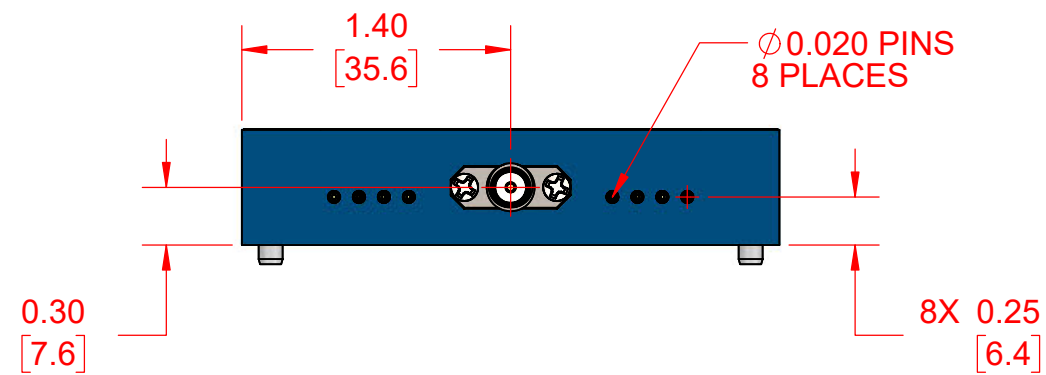
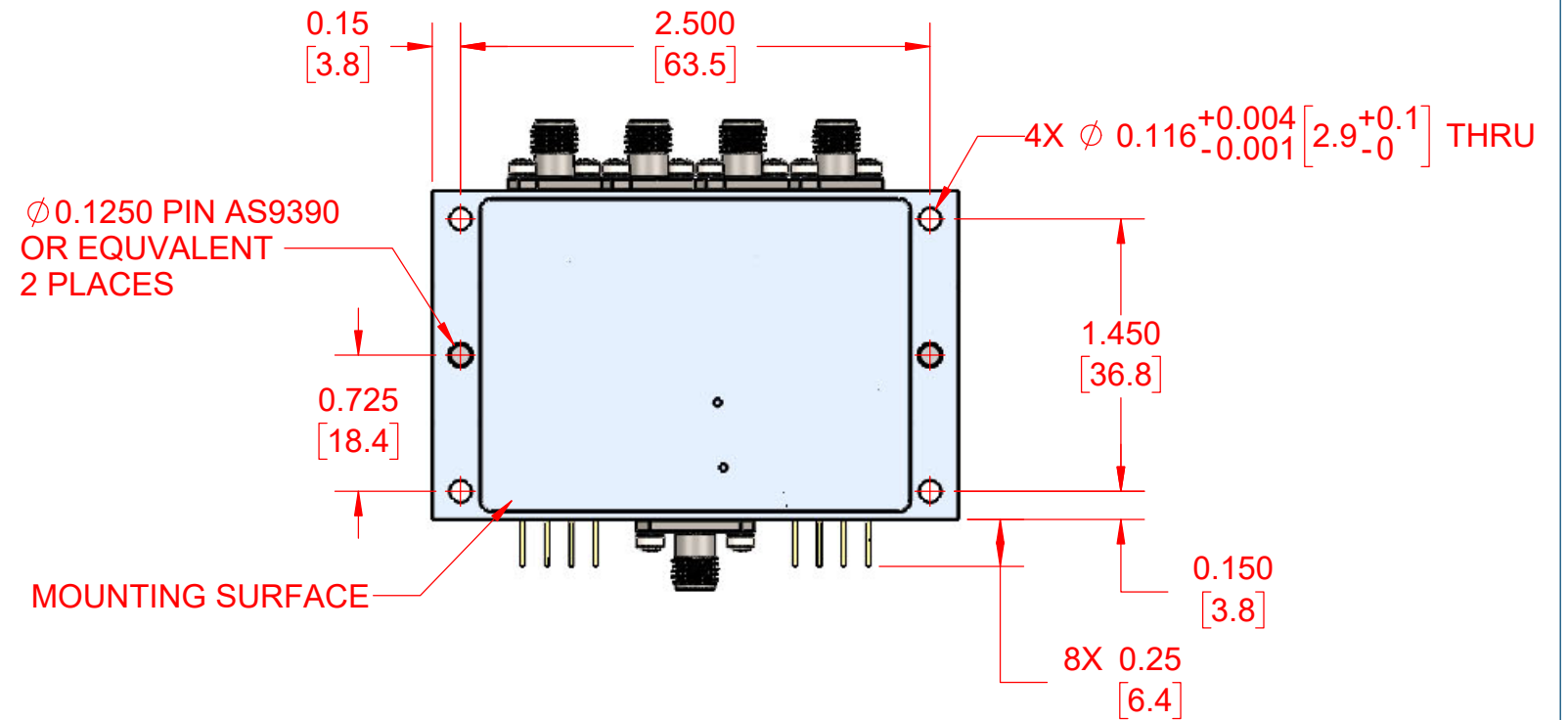
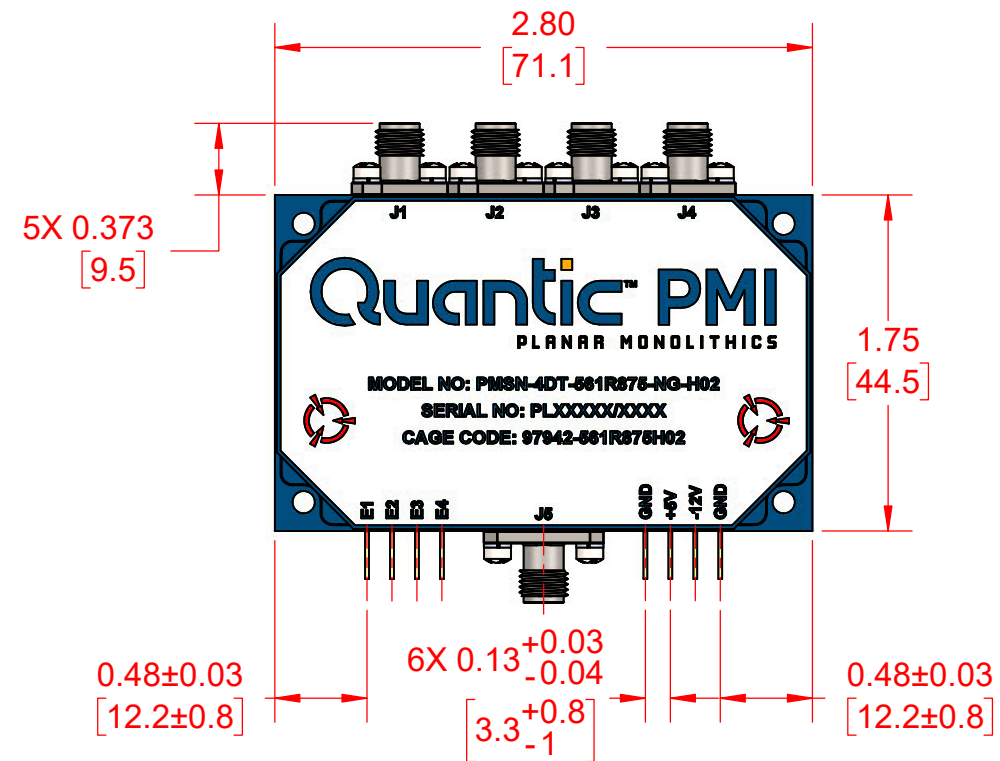
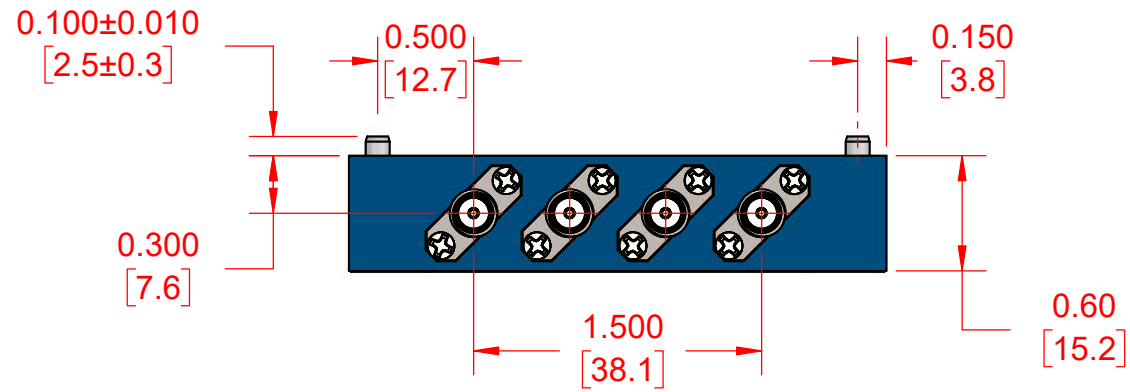


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NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE  
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± .XX ± 0.02 ± .XXX ± 0.01		APPROVALS	DATE	<b>Quantic PMI</b> PLANAR MONOLITHICS 7309-A GROVE ROAD FREDERICK MARYLAND 21704 USA TEL: (301) 662-5019, FAX: (301) 662-1731 WEB: WWW.QUANTICPMI.COM, EMAIL: SALES@QUANTICPMI.COM ISO 9001 CERTIFIED	
		DRAWN <b>J ESCANO</b> REDRAWN	6/12/2023		
ISSUED		SIZE B	FSCM NO. 05XQ0	DWG NO. 27046280	REV. A1
		SCALE 1:1			SHEET 1 OF 2

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS    DECIMALS    ANGLES ±            .XX ± 0.02    ° ± 0.5 .XXX ± 0.005		APPROVALS    DATE DRAWN            6/12/2023 <b>J ESCANO</b> REDRAWN ISSUED		TITLE <b>OUTLINE</b> PMSN-4DT-561R875-NG-H02	
		SIZE B	FSCM NO. 05XQ0	DWG NO. 27046280	REV. A1

**Quantic PMI**  
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