

DESCRIPTION

PMI MODEL NUMBER PSAT-2500-11B-CD-1 IS A 2.5 GHz 11 BIT DIGITALLY CONTROLLED PHASE SHIFTER WITH CAPABILITY FOR PHASE SHIFTING FROM 0° TO 360°, WITH MINIMUM ATTENUATION OF 60dB AND ATTENUATION STEP SIZE DOWN TO 0.03125 dB.

REVISIONS			
ZONE	REV.	DESCRIPTION	DATE
	A	ORIGINAL RELEASE	3/28/12
			PK

SPECIFICATIONS

- CENTER FREQUENCY: 2500 MHz
- BANDWIDTH: (3dB) 220 MHz
- (0.5dB) 55 MHz
- (0.1dB) 10 MHz
- PHASE SHIFT: 360 DEGREES Min. (-4V to -9V)
- ATTENUATION RANGE: 60 dB Min.
- INPUT LEVEL: -100 TO 0 dBm
- RF IMPEDANCE: 50 OHMS
- VSWR: (IN/OUT) 1.5:1 Max.
- INSERTION LOSS: < 10 dB
- SPURIOUS: 60 dBc HARMONIC & NON HARMONIC
- PHASE CONTROL SPEED: < 50 ns (MEASURED FROM 50% TTL TO WITHIN 10° OF FINAL VALUE)
- CONTROL: MONOTONIC, ANALOG, -3 TO -15 VOLTS
- REPEATABILITY: DEVIATION FROM VENDOR Vs SUPPLY VOLTAGE CHARACTERISTIC SHALL BE < 2°
- MAX/MIN SLOPE RATIO: 4
- MIN VOLTAGE CHANGE FOR 360°: 5 VOLTS
- ATTENUATION CONTROL SPEED: <1 μ s (50% TTL TO WITHIN 0.1 dB FINAL ATTENUATION OVER THE 0 TO 45 dB RANGE)
- ATTENUATION CONTROL: MONOTONIC, 11 BIT PARALLEL TTL
- ATTENUATION STEP SIZE: 0.0625 dB (60 dB = 960 DIGITAL)
- ATTENUATION ACCURACY AT CENTER FREQ.: < $\pm$ 0.5dB TO 30dB; < $\pm$ 1.0dB FROM 30dB TO 50dB
- RELATIVE ATTENUATION ACCURACY UP TO 1dB: ACCURATE TO WITHIN 0.1dB
- PM/AM: <0.8dB PEAK-TO-PEAK OVER FULL 360°
- AM/PM: PEAK-TO-PEAK PHASE SHIFT AT CONSTANT PHASE SETTING @ CENTER FREQUENCY (2500 MHz) SHALL BE LESS THAN 4.0°, ATTENUATION 0-40dB
- PHASE VS FREQUENCY VARIATION OVER 0.88% BANDWIDTH: (22 MHz) < $\pm$ 1°
- PHASE VS FREQUENCY VARIATION OVER 2.2% BANDWIDTH: (55 MHz) < $\pm$ 3°
- PHASE VS FREQUENCY VARIATION OVER 8.8% BANDWIDTH: (220 MHz) < $\pm$ 7°
- DEVIATION FROM LINEAR OVER 2.2% BANDWIDTH: (55MHz) < $\pm$ 1°
- DEVIATION FROM LINEAR OVER 8.8% BANDWIDTH: (220MHz) < $\pm$ 5°
- ABSOLUTE ATTENUATION TEMPERATURE STABILITY: VARIATION AT ANY SETTING <1.25 dB WITH RESPECT TO THE VALUE AT 25°C
- RELATIVE ATTENUATION TEMPERATURE STABILITY: VARIATION BETWEEN ANY 2 DEVICES (OVER ALL RELATIVE ATTENUATION & PHASE SETTINGS) SHALL BE LESS THAN 1.4 dB WITH RESPECT TO THE VALUE AT 25°C, & LESS THAN 0.5dB OVER ANY 20°C TEMPERATURE RANGE
- ABSOLUTE PHASE TEMPERATURE STABILITY: VARIATION AT ANY SETTING <8° WITH RESPECT TO THE VALUE AT 25°C
- RELATIVE PHASE TEMPERATURE STABILITY: VARIATION BETWEEN ANY 2 DEVICES (OVER ALL RELATIVE ATTENUATION & PHASE SETTINGS) SHALL BE < 4° WITH RESPECT TO THE VALUE AT 25°C, & < 2° OVER ANY 20°C CHANGE
- SIZE: 3.00" X 2.50" X 0.85"
- CONNECTORS: (RF) SMA FEMALE (INPUT), MALE (OUTPUT)
- CONNECTOR: (CONTROL) 15 PIN SUBMINIATURE D (MALE)
- CONTROL LOGIC: TTL
- LOGIC BITS: 11 (SEE PIN FUNCTION TABLE)
- LSB: 0.03125 dB
- POWER SUPPLY: +V +15V @ 150 mA Max.
- -V -15V @ 60 mA Max.
- FINISH: PAINTED GRAY

ENVIRONMENTAL RATINGS

- TEMPERATURE: 0°C TO +70°C (OPERATING)
- HUMIDITY: MIL-STD-202F, METHOD 103B COND. B
- SHOCK: MIL-STD-202F, METHOD 213B COND. B
- VIBRATION: MIL-STD-202F, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202F, METHOD 105C COND. B
- TEMPERATURE CYCLE: MIL-STD-202F, METHOD 107D COND. A

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

CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

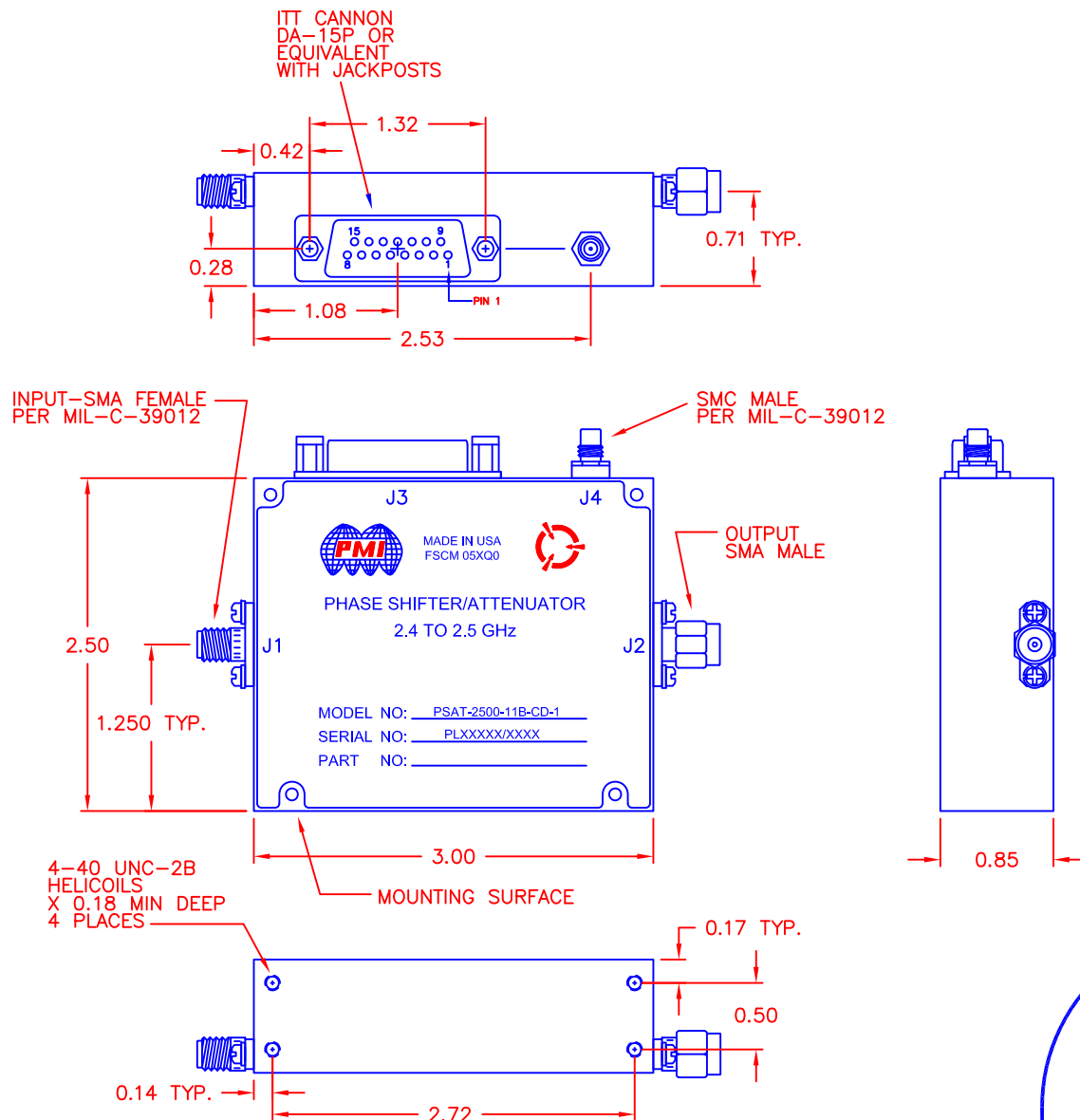
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ISO 9001:2000 CERTIFIED



APPROVALS		DATE		TITLE		PRODUCT FEATURE	
DRAWN	NJA	3/28/12		PSAT-2500-11B-CD-1		2.5 GHz PHASE SHIFTER/ATTENUATOR	
MODIFIED				SIZE	FSCM NO.	DWG NO.	REV.
ISSUED				A	05XQ0	27015441	A
SCALE		N:S		SHEET		1 OF 2	

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			APPROVED
			PX

PIN NO:	J3 PIN FUNCTIONS
1	0.06 dB
2	0.13 dB
3	NOT USED
4	GND
5	0.25 dB
6	0.5 dB
7	1 dB
8	2 dB
9	4 dB
10	8 dB
11	16 dB
12	32 dB
13	+15V
14	-15V
15	0.03 dB



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A		05XQ0		27015441	
SCALE		N:S		SHEET	
				2 OF 2	

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