

PMI MODEL NUMBER PS-504509-360-QQ1470 IS A 5.4 GHZ TO 5.9 GHZ DIGITALLY CONTROLLED ANALOG PHASE SHIFTER WITH CAPABILITY FOR PHASE SHIFTING FROM 0 TO 360°. THE UNIT CONSISTS OF AN ANALOG PHASE SHIFTER AND A DIGITAL-TO-ANALOG CONVERTER. EIGHT LOGIC INPUT LINES ALLOW 256 DISCRETE VALUES OF PHASE.

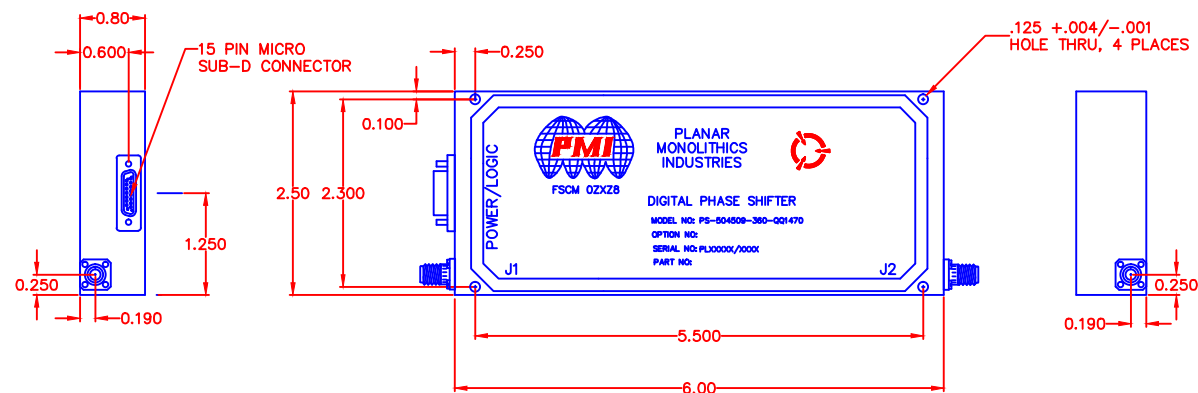
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	12/12/08	
	A2	ECN # 14-0008	01/22/14	

- FREQUENCY RANGE..... 5.4 TO 5.9 GHz
- RF IMPEDANCE —(NOMINAL)..... 50 OHMS
- VOLTAGE..... +15V @ 90 mA
 -15V @ 60 mA
- LOGIC INPUTTTL CONTROL
- PHASE SHIFT (MIN)..... 360°
- STEP SIZE (LSB)..... 1.41° LSB
- INSERTION LOSS (MAX)..... 6.0 dB MAX @ 0° PHASE SHIFT
- AMPLITUDE RIPPLE MAX..... ±1.50 DB
- VSWR MAX..... 2.0 TO 1 MAX INPUT AND OUTPUT
- SWITCHING SPEED..... 200 NS
- TEMPERATURE COMPENSATION : MAXIMUM PHASE DRIFT SHALL BE NO MORE THAN ±5° OR ±5%, WHICHEVER IS GREATER,
OVER THE SPECIFIED TEMPERATURE RANGE

- MONOTONICITY: GUARANTEED
- RF POWER (OPERATING)

PEAK OR CONTINUOUS WAVE . . . 10 mW

- CONNECTORS
- RF INPUT/OUTPUT SMA FEMALE
- POWER AND CONTROLS MALE 15 PIN SUBMINIATURE
"MICRO D" CONNECTOR
- SIZE 6.00" x 2.50" x 0.80"



ELECTRICAL CONNECTOR PIN ASSIGNMENTS	
PIN LETTER	FUNCTION
1	LOGIC INPUTS (LSB)
2	LOGIC INPUTS
3	LOGIC INPUTS
4	LOGIC INPUTS
5	LOGIC INPUTS
6	LOGIC INPUTS
7	LOGIC INPUTS
8	LOGIC INPUTS (MSB)
9	NC
10	NC
11	NC
12	NC
13	+ 15 VDC
14	- 15 VDC
15	GROUND

- **TEMPERATURE** -40° C TO +85° C (OPERATING)
-40° C TO +100° C (STORAGE)
- **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: 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

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-G GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-631-1579 FAX: 301-662-2029
WEBSITE: www.planarmonolithicsindustries.com
E-MAIL: sales@planarmonolithics.com
ISO 9001 CERTIFIED



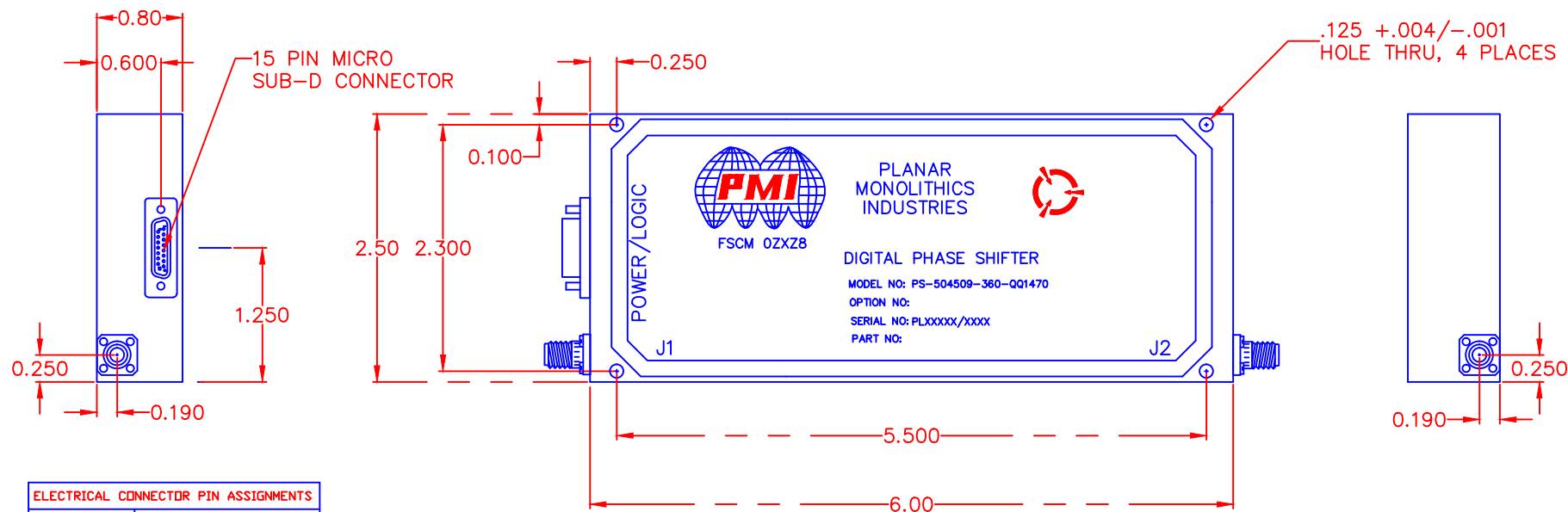
		TITLE PRODUCT FEATURE PS-504509-360-QQ1470			
APPROVALS	DATE				
DRAWN <i>DPD</i>	12/12/08	5.4-5.9GHz, 0-360° PHASE SHIFTER			
CHECKED		SIZE A	FSCM NO. 05XQ0	DWG NO. 27008564	REV. A2
ISSUED		SCALE N:S		SHEET 1 of 3	

DESCRIPTION

PMI MODEL NUMBER PS-504509-360-QQ1470 IS A 5.4 GHz TO 5.9 GHz DIGITALLY CONTROLLED ANALOG PHASE SHIFTER WITH CAPABILITY FOR PHASE SHIFTING FROM 0 TO 360°. THE UNIT CONSISTS OF AN ANALOG PHASE SHIFTER AND A DIGITAL-TO-ANALOG CONVERTER. EIGHT LOGIC INPUT LINES ALLOW 256 DISCRETE VALUES OF PHASE.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	12/12/08	
	A2	ECN # 14-0008	01/22/14	

MECHANICAL OUTLINE



ELECTRICAL CONNECTOR PIN ASSIGNMENTS	
PIN LETTER	FUNCTION
1	LOGIC INPUTS <LSB>
2	LOGIC INPUTS
3	LOGIC INPUTS
4	LOGIC INPUTS
5	LOGIC INPUTS
6	LOGIC INPUTS
7	LOGIC INPUTS
8	LOGIC INPUTS <MSB>
9	NC
10	NC
11	NC
12	NC
13	+ 15 VDC
14	- 15 VDC
15	GROUND

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

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-G GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-631-1579 FAX: 301-662-2029
WEBSITE: www.planarmonolithicsindustries.com
E-MAIL: sales@planarmonolithics.com
ISO 9001 CERTIFIED



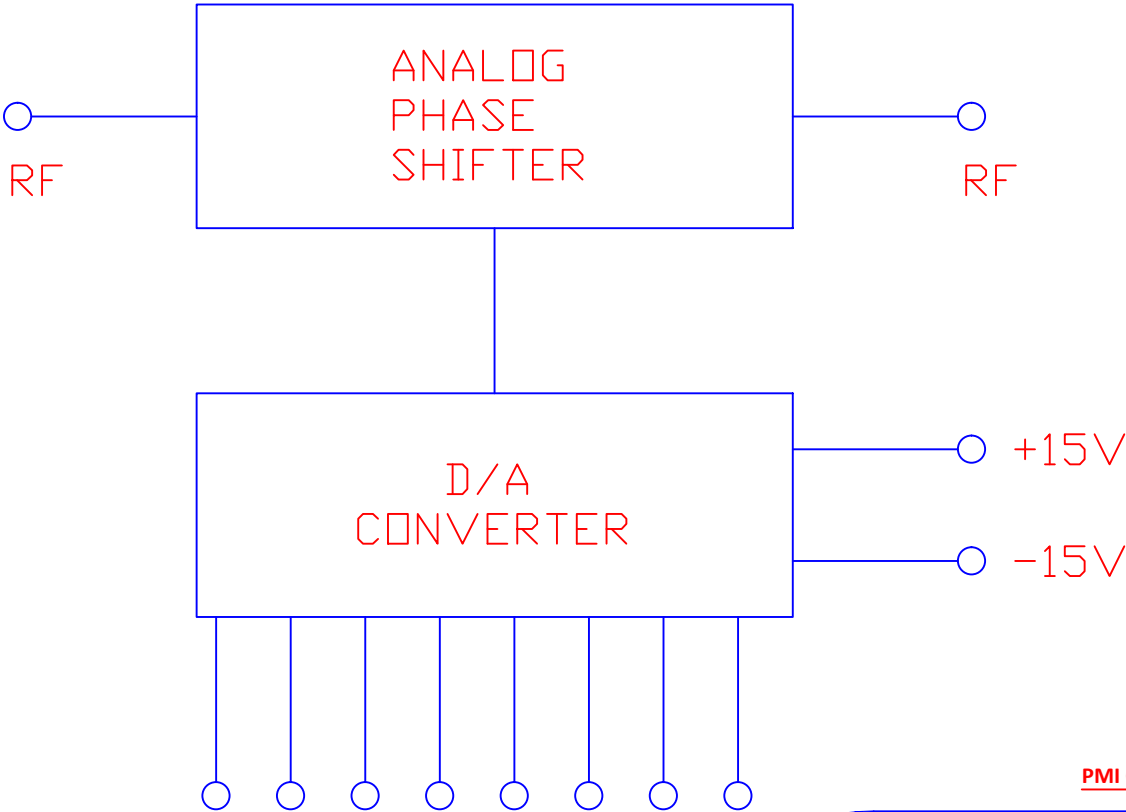
APPROVALS		DATE		TITLE	
DRAWN		12/12/08		MECHANICAL OUTLINE	
CHECKED				PS-504509-360-QQ1470	
ISSUED				5.4-5.9GHz, 0-360° PHASE SHIFTER	
SIZE		FSCM NO.		DWG NO.	
A		05XQ0		27008564	
SCALE		N: S		SHEET	
				2 OF 3	

DESCRIPTION

PMI MODEL NUMBER PS-12-360 IS A 5.4 GHz TO 5.9 GHz DIGITALLY CONTROLLED ANALOG PHASE SHIFTER WITH CAPABILITY FOR PHASE SHIFTING FROM 0 TO 360°. THE UNIT CONSISTS OF AN ANALOG PHASE SHIFTER AND A DIGITAL-TO-ANALOG CONVERTER. EIGHT LOGIC INPUT LINES ALLOW 256 DISCRETE VALUES OF PHASE.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	12/12/08	
	A2	ECN # 14-0008	01/22/14	

FUNCTIONAL BLOCK DIAGRAM



PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-G GROVE ROAD
FREDERICK, MARYLAND 21704 USA
TEL: 301-631-1579 FAX: 301-662-2029
WEBSITE: www.planarmonolithicsindustries.com
E-MAIL: sales@planarmonolithics.com
ISO 9001 CERTIFIED

APPROVALS		DATE	TITLE			
DRAWN		12/12/08	FUNCTIONAL BLOCK DIAGRAM			
CHECKED			PS-504509-360-QQ1470			
ISSUED			5.4-5.9GHz, 0-360° PHASE SHIFTER			
			SIZE	FSCM NO.	DWG NO.	REV.
			A	05XQ0	27008564	A2
			SCALE N: S			SHEET 3 OF 3