

DESCRIPTION

PMI MODEL NO.: PS-360-DC-3 OPTION 618-15D-10BIT-TS IS AN 10-BIT DIGITAL CONTROLLED PHASE SHIFTER OPERATING FROM THE 6 TO 18 GHz FREQUENCY RANGE. THE PHASE SHIFTER HAS A 360° RANGE AND IS HIGH SPEED.

SPECIFICATIONS

- FREQUENCY RANGE: 6 – 18 GHz
- INSERTION LOSS: 12.0 dB MAXIMUM, 10 dB TYPICAL
- VSWR: 2.0:1 MAXIMUM
- ACCURACY: ±15° MAXIMUM (PEAK TO PEAK)
- PM/AM: ±2.5 dB MAXIMUM
- TRANSLATION RATE: 0 TO 500 kHz
- CARRIER SUPPRESSION: 18 dB
- SIDE BAND SUPPRESSION: 15 dB
- PHASE SHIFT:
 - RANGE: 360° IN 256 STEPS
 - CONTROL INPUT: 10 BIT TTL
 - SWITCHING SPEED: 50% TTL TO WITHIN 500ns MAX (10° OF FINAL PHASE VALUE)
- HARMONICS: -25dBc
- POWER HANDLING CAPABILITY:
 - WITHOUT DEGRADATION: +10dBm
 - SURVIVAL POWER: +20dBm
- POWER SUPPLY: +5VDC (±5%) @ 115mA
 -12 TO -15VDC @ 20mA
- TEMP SENSOR: 10mV/Degree C, 3.0V @ 25 Degrees C
- CONNECTORS:
 - INPUT/OUTPUT: SMA FEMALE
 - POWER & CONTROL: 15 PIN MICRO-D
- SIZE: (L) 1.60 X (W) 1.75" X (H) 0.50"
 *EXCLUDING MOUNTING HOLES + CONNECTOR
- FINISH: BLUE EPOXY POLIMIDE COATING IAW MIL-C-22750,
 TYPE I OVER EPOXY POLIMIDE PRIMER
 IAW MIL-P-23377, TYPE I, CLASS 1 OR 3.

ENVIRONMENTAL RATINGS:

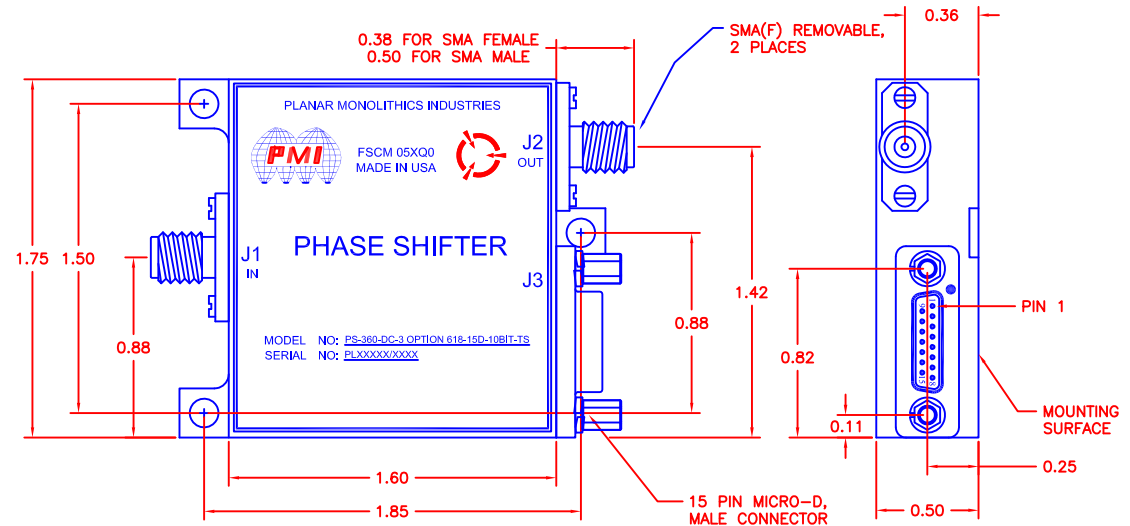
- TEMPERATURE: -55°C TO +85°C (OPERATING)
 -65°C TO +125°C (STORAGE)
- HUMIDITY: MIL-STD-202G, METHOD 103B COND. B (96 HRS AT 95%)
- SHOCK: MIL-STD-202G, METHOD 213B COND. B (75 G, 6 MSEC)
- VIBRATION: MIL-STD-202G, METHOD 204D COND. B (0.06" DOUBLE
 AMPLITUDE OR 15G, WHICHEVER IS LESS)
- ALTITUDE: MIL-STD-202G, METHOD 105C COND. B (50,000 FT.)
- TEMPERATURE CYCLE: MIL-STD-202G, 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

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	-	PRELIMINARY	5/9/22	

MECHANICAL OUTLINE



PIN	FUNCTION	PIN	FUNCTION
1	GROUND	9	90°
2	+5V	10	180° (MSB)
3	-12V TO -15V	11	TEMP SENSOR
4	1.4°	12	45°
5	2.8°	13	TEMP SENSOR RETURN
6	5.6°	14	0.7°
7	22.5°	15	0.35° (LSB)
8	11.3°		

PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
 FREDERICK, MARYLAND 21704 USA
 TEL: 301-662-5019 FAX: 301-662-1731
 WEBSITE: www.pmi-rf.com
 E-MAIL: sales@pmi-rf.com
 ISO 9001 CERTIFIED



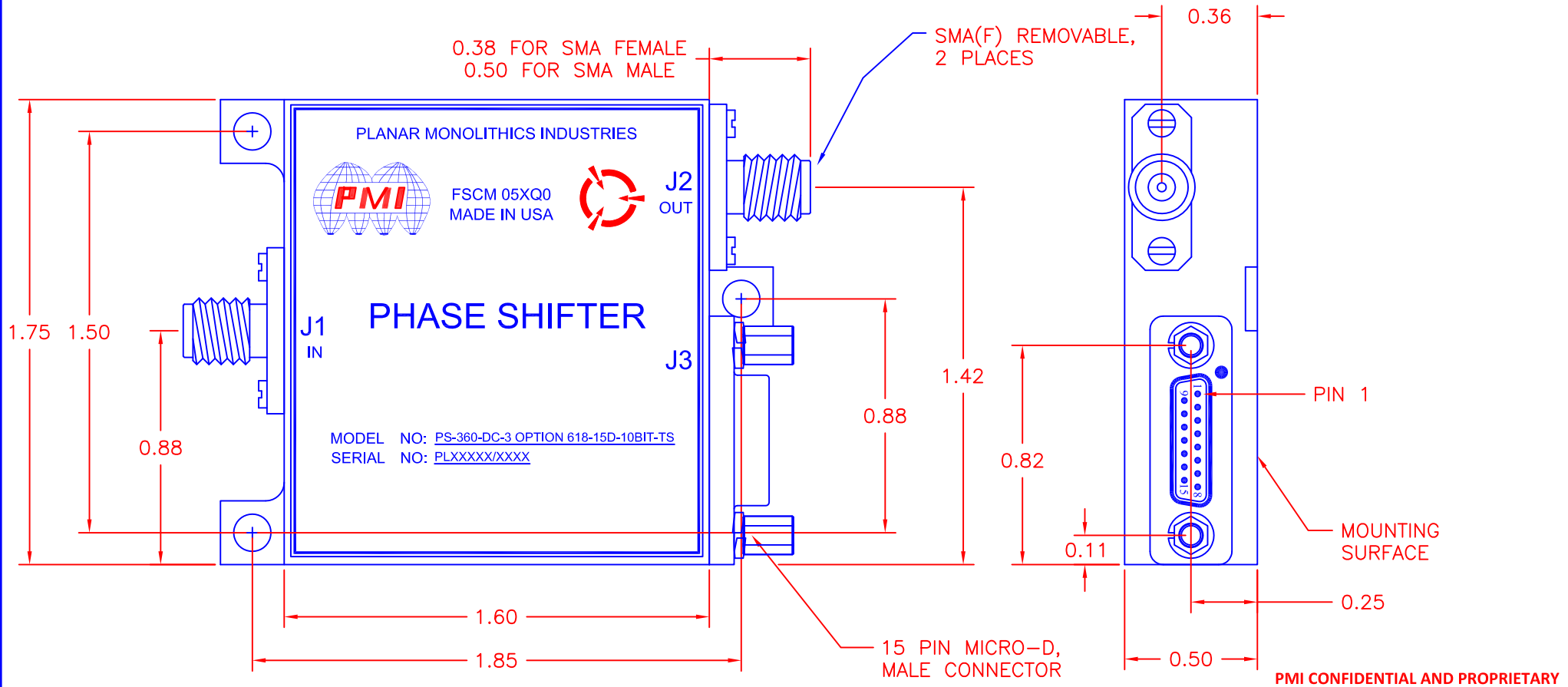
APPROVALS		DATE	TITLE		
DRAWN <i>JPH</i>		5/9/22	PRODUCT FEATURE		
CHECKED			PS-360-DC-3 OPTION 618-15D-10BIT-TS		
ISSUED			6 TO 18 GHz DIGITAL CONTROLLED PHASE SHIFTER		
SIZE	FSCM NO.	DWG NO.	REV.		
A	05XQ0		PRELIMINARY	-	
SCALE	N:S		SHEET	1 OF 3	

DESCRIPTION

PMI MODEL NO.: PS-360-DC-3 OPTION 618-15D-10BIT-TS IS AN 10-BIT DIGITAL CONTROLLED PHASE SHIFTER OPERATING FROM THE 6 TO 18 GHz FREQUENCY RANGE. THE PHASE SHIFTER HAS A 360° RANGE AND IS HIGH SPEED.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	-	PRELIMINARY	5/9/22	

MECHANICAL OUTLINE



PLANAR MONOLITHICS INDUSTRIES, INC.

7311-F GROVE ROAD
 FREDERICK, MARYLAND 21704 USA
 TEL: 301-662-5019 FAX: 301-662-1731
 WEBSITE: www.pmi-rf.com
 E-MAIL: sales@pmi-rf.com
 ISO 9001 CERTIFIED



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

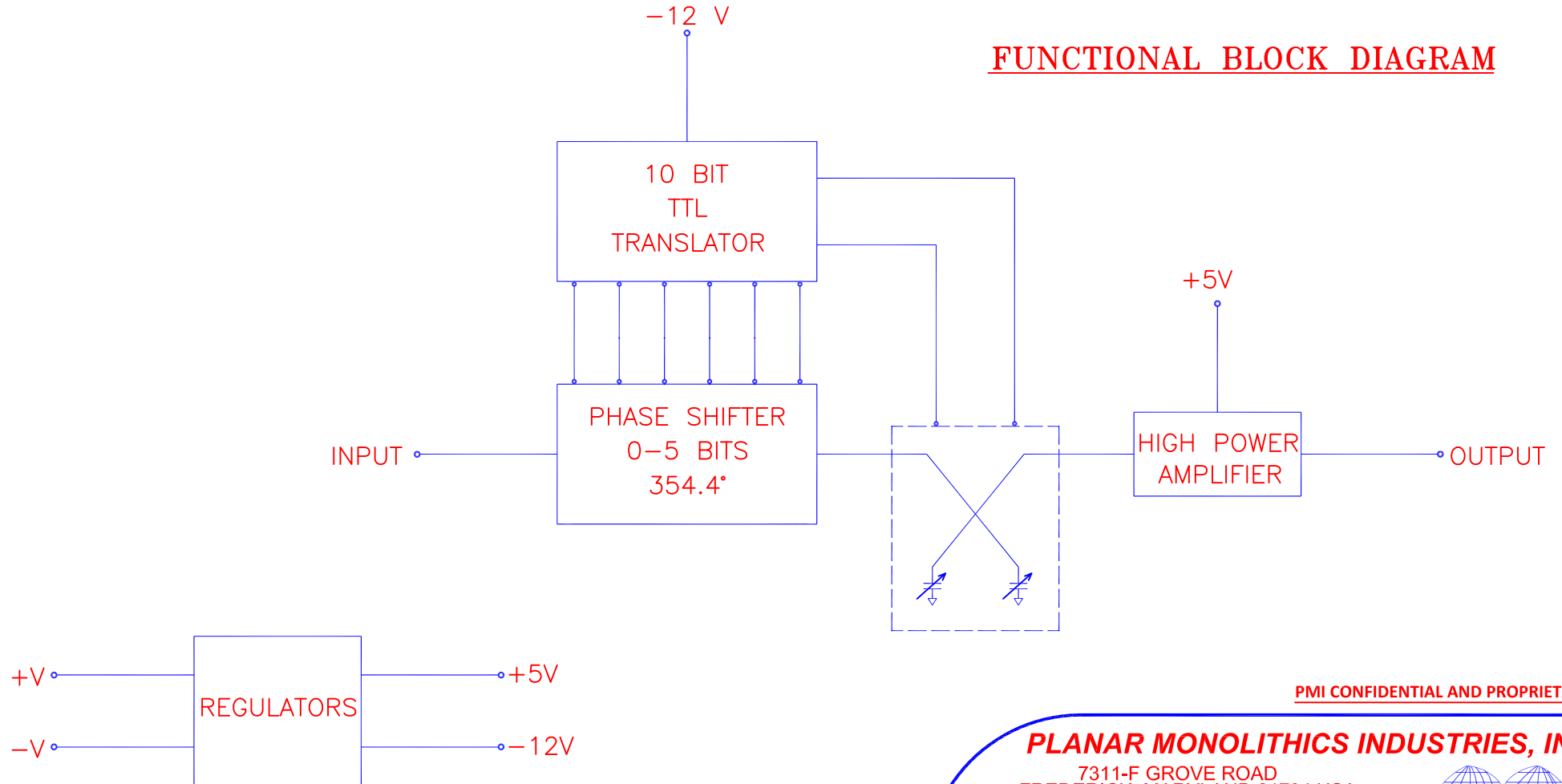
APPROVALS		DATE	TITLE		
DRAWN	<i>JPH</i>	5/9/22	PRODUCT FEATURE		
CHECKED			PS-360-DC-3 OPTION 618-15D-10BIT-TS		
ISSUED			6 TO 18 GHz DIGITAL CONTROLLED PHASE SHIFTER		
SIZE	FSCM NO.	DWG NO.	SCALE	REV.	
A	05XQ0		N:S	PRELIMINARY	-
SHEET				2 OF 3	

DESCRIPTION

PMI MODEL NO.: PS-360-DC-3 OPTION 618-15D-10BIT-TS IS AN 10-BIT DIGITAL CONTROLLED PHASE SHIFTER OPERATING FROM THE 6 TO 18 GHz FREQUENCY RANGE. THE PHASE SHIFTER HAS A 360° RANGE AND IS HIGH SPEED.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	-	PRELIMINARY	5/9/22	

FUNCTIONAL BLOCK DIAGRAM



PMI CONFIDENTIAL AND PROPRIETARY

PLANAR MONOLITHICS INDUSTRIES, INC.
 7311-F GROVE ROAD
 FREDERICK, MARYLAND 21704 USA
 TEL: 301-662-5019 FAX: 301-662-1731
 WEBSITE: www.pmi-rf.com
 E-MAIL: sales@pmi-rf.com
 ISO 9001 CERTIFIED



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

APPROVALS		DATE	TITLE		
DRAWN	<i>JPH</i>	5/9/22	PRODUCT FEATURE		
CHECKED			PS-360-DC-3 OPTION 618-15D-10BIT-TS		
ISSUED			6 TO 18 GHz DIGITAL CONTROLLED PHASE SHIFTER		
SIZE	A	FSCM NO.	DWG NO.	REV.	
	05XQ0		PRELIMINARY	-	
SCALE	N:S		SHEET	3 OF 3	