

DESCRIPTION

PMI MODEL PIQ-2G18G-360-16-CD-1-OPT510 IS A 5.0 TO 10.0 GHz HIGH PERFORMANCE I/Q VECTOR MODULATOR WITH 2 X 12 BIT MONOTONIC TTL COMPATIBLE CHANNELS (I AND Q). THIS MODEL OFFERS A FULL 360 DEGREES OF PHASE SHIFT WITH A MINIMUM OF 16 dB OF AMPLITUDE CONTROL.

SPECIFICATIONS

- FREQUENCY RANGE: 5.0-10.0 GHz
- DYNAMIC RANGE: 16 dB & 360 DEGREES
- RF INPUT POWER: +10 dBm CW, 1.0 Watt MAX
- INSERTION LOSS: 16.0 dB MAX
- VSWR: 2.2:1 MAX (50 OHM SYSTEM)
- ATTENUATION VS FREQUENCY: ± 3.5 dB TYP.
- PHASE VS FREQUENCY: ± 20.0 DEGREES TYP.
- CONTROL LOGIC: 2X12 BITS (I & Q), TTL COMPATIBLE
- CONTROL SLOPES: LINEAR
- SWITCHING SPEED: 500 nSec MAX
- TEMPERATURE COEFFICIENT: ± 0.035 dB/ $^{\circ}$ C & ± 0.17 Deg/ $^{\circ}$ C
- POWER SUPPLY: ± 12 V TO ± 15 V @ ± 100 mA MAX
- RF CONNECTORS: SMA FEMALE INPUT AND OUTPUT
- POWER/LOGIC CONNECTIONS: DC-37P, SUB MINIATURE D MULTI-PIN
- SIZE: 4.250" X 3.500" X 1.000"
- FINISH: NICKEL PLATED

ENVIRONMENTAL RATINGS

- TEMPERATURE RANGE: -10 $^{\circ}$ C TO +60 $^{\circ}$ C (OPERATING)
-65 $^{\circ}$ C TO +125 $^{\circ}$ C (STORAGE)
- HUMIDITY: MIL-STD-202G, METHOD 103B COND. B
- SHOCK: MIL-STD-202G, METHOD 213B COND. B
- VIBRATION: MIL-STD-202G, METHOD 204D COND. B
- ALTITUDE: MIL-STD-202G, METHOD 105C COND. B
- 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
	—	PRELIMINARY	10/8/14

37-PIN CONNECTOR PIN-OUT			
PIN	FUNCTION	PIN	FUNCTION
1	I-5	20	I-4
2	I-6	21	I-7
3	I-8	22	I-3
4	I-9	23	I-2
5	I-10	24	I-1 (LSB)
6	I-11	25	I-12 (MSB)
7	NC	26	NC
8	+12 TO +15V	27	NC
9	GND	28	GND
10	GND	29	NC
11	-12 TO -15V	30	NC
12	Q-3	31	NC
13	Q-2	32	Q-4
14	Q-1 (LSB)	33	NC
15	Q-5	34	NC
16	Q-6	35	Q-12 (MSB)
17	Q-7	36	Q-11
18	Q-8	37	Q-10
19	Q-9		

PMI CONFIDENTIAL AND PROPRIETARY

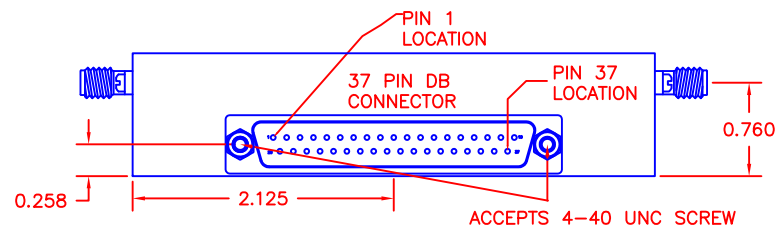
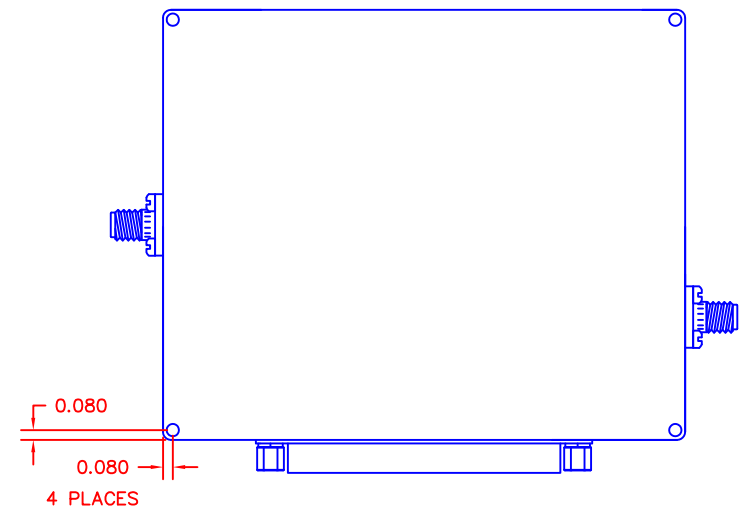
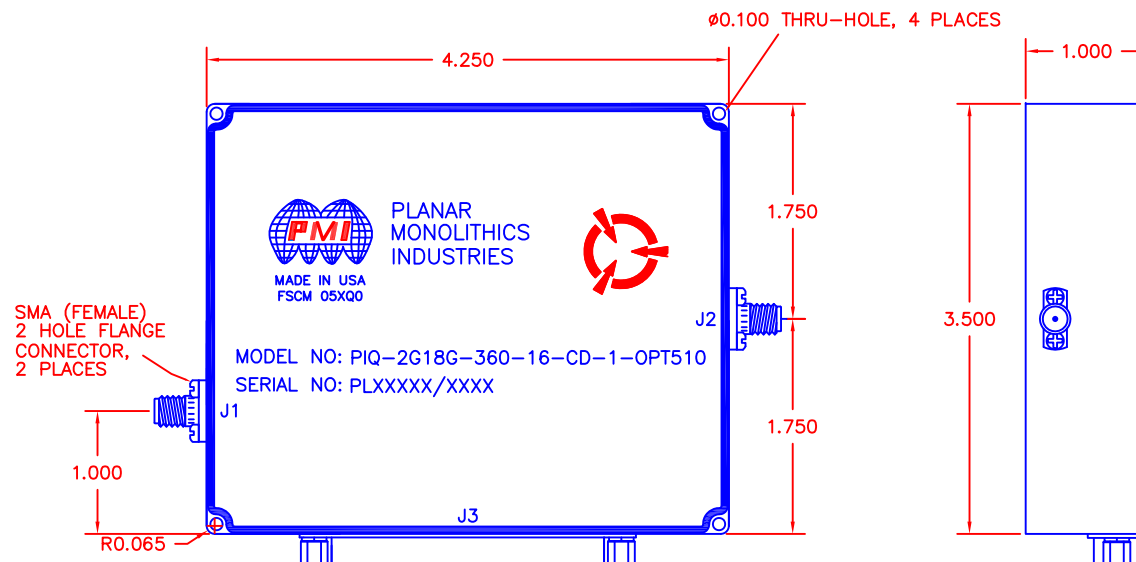
PLANAR MONOLITHICS INDUSTRIES, INC.

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 9001:2008 CERTIFIED



APPROVALS		DATE		TITLE			
DRAWN		K. MASON		10/8/14		PRODUCT FEATURE	
MODIFIED						PIQ-2G18G-360-16-CD-1-OPT510	
ISSUED						5.0 to 10.0GHz IQ Modulator	
SIZE		FSCM NO.		DWG NO.		REV.	
A		05XQ0		PRELIMINARY		—	
SCALE		N:S				SHEET	
						1 OF 2	

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	—	PRELIMINARY	10/8/14	



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 9001:2008 CERTIFIED



APPROVALS		DATE		TITLE	
DRAWN K. MASON		10/8/14		PRODUCT FEATURE	
MODIFIED				PIQ-2G18G-360-16-CD-1-OPT510	
ISSUED				5.0 to 10.0GHz IQ Modulator	
SIZE A		FSCM NO. 05XQ0		DWG NO. PRELIMINARY	
SCALE N:S				REV. —	
				SHEET 2 OF 2	

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