

**DESCRIPTION:**

PLANAR MONOLITHICS INDUSTRIES MODEL NUMBER: DTO-0R5G2D5G-CD-1 IS A DIGITALLY CONTROLLED OSCILLATOR THAT OPERATES OVER THE 500MHz TO 2.5GHz FREQUENCY RANGE. THIS UNIT FEATURES HIGH SPEED, HIGH ACCURAY AND LOW PHASE NOISE

**SPECIFICATIONS:**

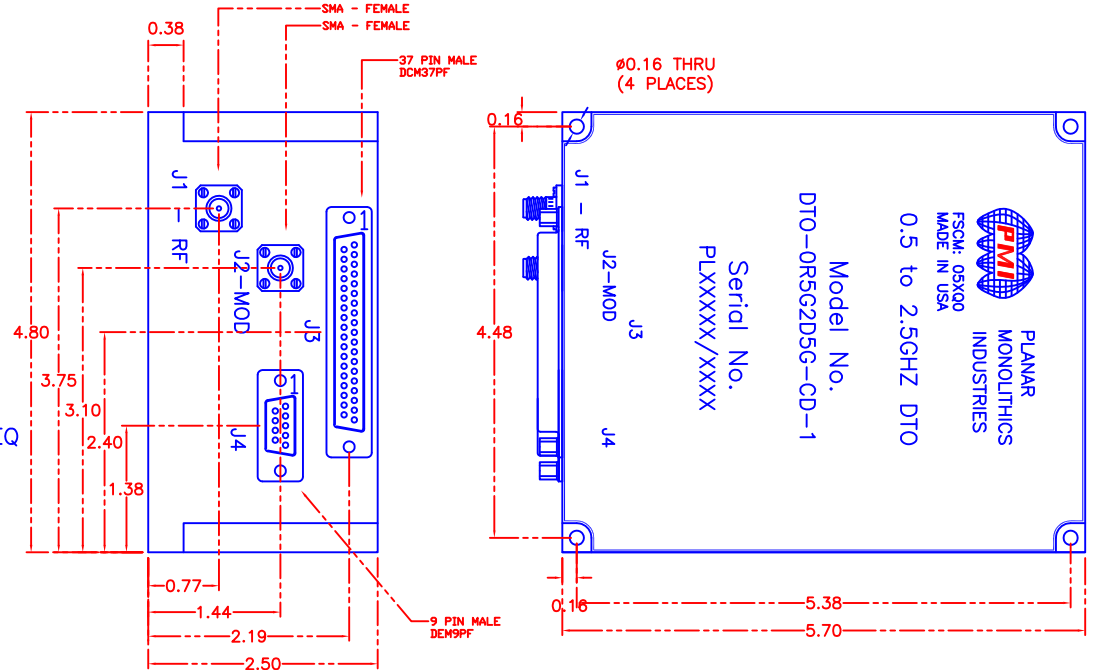
- FREQUENCY: ..... 500MHz TO 2.5 GHz
- FREQUENCY ACCURACY: ..... ±2.5MHz MAX @ +25°C
- FREQUENCY DRIFT: ..... ±0.1MHz/°C MAX
- FREQUENCY SETTLING: ..... ±2.0MHz MAX WITHIN 1us
- MODULATION:
  - BANDWIDTH (3dB): ..... DC TO 9MHz MIN
  - SENSITIVITY VARIATION: ..... 1.1:1 MAX
  - FREQUENCY DEVIATION BW: ..... 100MHz MIN @ 2V P-P
- RF POWER:
  - OUTPUT: ..... +10dBm MIN
  - VARIATION: ..... +/-3.0dB MAX INC. TEMP AND FREQ
- PHASE NOISE: ..... -60dBc/Hz TYP @ 100kHz OFFSET
- HARMONICS: ..... -20dBc MAX
- SPURIOUS: ..... -55dBc MAX
- PULLING: ..... 1MHz MAX @ VSWR 2:1
- PUSHING: ..... +/-150kHz/V MAX
- LINEARIZED FREQUENCY TUNING
  - STEP SIZE: ..... LSB 0.5MHz NOMINAL FOR FULL-BAND
- DC POWER: .....
  - +15V ±0.5V
  - 15V ±0.5V
  - + 5V ±0.5V
  - +28V ±2.0V

**ENVIRONMENTAL RATINGS**

- TEMPERATURE: ..... -40°C TO +70°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 CYCLING ..... MIL-STD-202G, METHOD 107G COND. A

NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	09/02/11	
	A2	ECN # 13-0088	07/26/13	



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

**PLANAR MONOLITHICS INDUSTRIES, INC.**

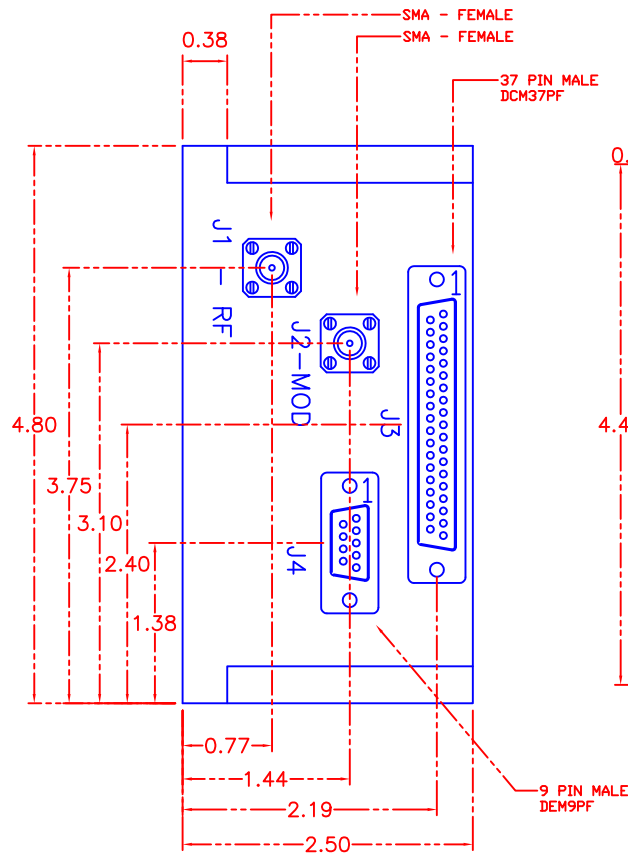
FREDERICK, MARYLAND 21704 USA  
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WEBSITE: www.pmi-rf.com  
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ISO 9001:2000 CERTIFIED



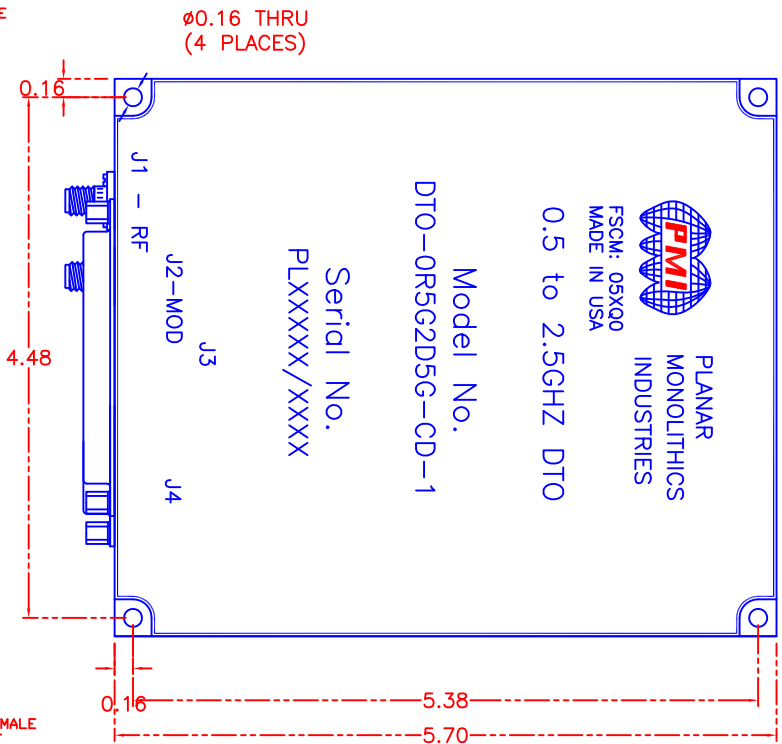
APPROVALS		DATE	TITLE			
DRAWN <i>afk</i>		09/02/11	PRODUCT FEATURE			
CHECKED			DTO-0R5G2D5G-CD-1			
ISSUED			0.5 to 2.5GHz High Performance DTO			
SIZE	FSCM NO.	DWG NO.	REV.			
A	05XQ0	27013901	A2			
SCALE N:S			SHEET 1 OF 2			

CONTROL CONNECTOR J3	
1	A13 TUNING WORD (MSB)
2	A11 TUNING WORD
3	A9 TUNING WORD
4	A7 TUNING WORD
5	A5 TUNING WORD
6	A3 TUNING WORD
7	A1 TUNING WORD
8	V1 VCO CONTROL
9	L1 LATCH (STROBE)
10	L3 LATCH 3
11	OE MEMORY OUTPUT ENABLE
12	D1 DATA BUS
13	D3 DATA BUS
14	D5 DATA BUS
15	D7 DATA BUS
16	W2 WRITE 2
17	OET2 OUTPUT ENABLE TRANSCEIVER 2
18	G GROUND
19	WE WRITE ENABLE
20	A12 TUNING WORD
21	A10 TUNING WORD
22	A8 TUNING WORD
23	A6 TUNING WORD
24	A4 TUNING WORD
25	A2 TUNING WORD
26	A0 TUNING WORD
27	V0 VCO CONTROL
28	L2 LATCH 2
29	G GROUND
30	D0 DATA BUS
31	D2 DATA BUS
32	D4 DATA BUS
33	D6 DATA BUS
34	W1 WRITE 1
35	OET1 OUTPUT ENABLE TRANSCEIVER 1
36	OET3 OUTPUT ENABLE TRANSCEIVER 3
37	G GROUND

POWER CONNECTOR J4	
PIN NO	FUNCTION
1	+5V
2	-15V
3	+15V
4	+28V RETURN
5	+28V
6	RETURN FOR +5, +15, -15
7	RETURN FOR +5, +15, -15
8	+28V RETURN
9	+28V



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	A1	ORIGINAL RELEASE	09/02/11	
	A2	ECN # 13-0088	07/26/13	



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APPROVALS		DATE	TITLE		
DRAWN <i>sfk</i>		09/02/11	PRODUCT FEATURE		
CHECKED			DTO-0R5G2D5G-CD-1		
ISSUED			0.5 to 2.5GHz High Performance DTO		
SIZE	FSCM NO.	DWG NO.	REV.		
A	05XQ0	27013901	A2		
SCALE	N:S	SHEET		2 OF 2	

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