



# TYPICAL CHARACTERISTICS ON PIA-25-CD-1-EXT

PMI MODEL: PIA-25-CD-1-EXT IS A PHASE LOCKED, DIELECTRIC RESONATOR OSCILLATOR WITH EXTERNAL REFERENCE (PLDRO) COVERING THE FREQUENCY OF 25.0 GHZ



July 12, 2021

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# TYPICAL CHARACTERISTICS ON PIA-25-CD-1-EXT

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# TYPICAL CHARACTERISTICS ON PIA-25-CD-1-EXT

## OUTLINE DRAWING

### Description:

PMI Model No. PIA-25-CD-1-EXT is a Phase Locked, Dielectric Resonator Oscillator with External Reference (PLDRO) covering the frequency of 25.0 GHz.

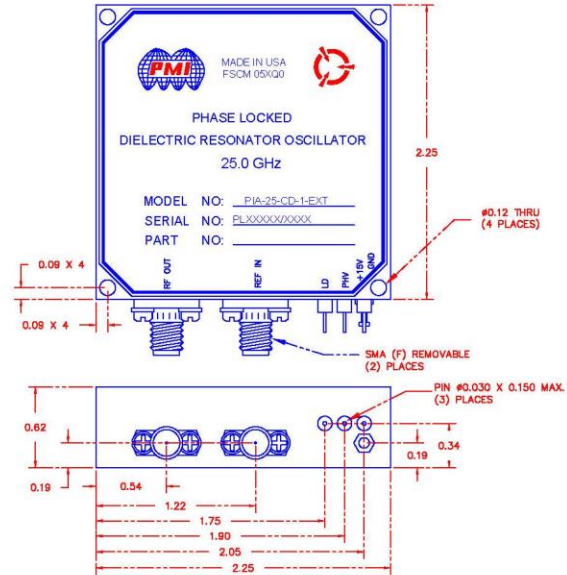
### Specifications:

- Frequency Range: ..... 25.0 GHz
- Power Output: ..... 13 dBm Min
- VSWR: ..... 1.4:1 Typ.
- External Reference: ..... 100 MHz (0 dBm, +/-3 dBm)
- Frequency Stability: ..... ±3 ppm
- Spurious: ..... <-60 dBc
- Harmonics: ..... <-25 dBc
- Phase Noise @ Offset:
  - 1 Hz: ..... <-34 dBc/Hz Typ.
  - 10 Hz: ..... <-55 dBc/Hz Typ.
  - 100 Hz: ..... <-75 dBc/Hz Typ.
  - 1 KHz: ..... <-95 dBc/Hz Typ.
  - 10 KHz: ..... <-100 dBc/Hz Typ.
  - 100 KHz: ..... <-105 dBc/Hz Typ.
  - 1 MHz: ..... <-130 dBc/Hz Typ.
- DC Voltage Supply: ..... +15V
- DC Current Draw: ..... 450mA Max.
- Alarm (LD): ..... TTL Volts
- Connectors: ..... SMA Female
- Finish: ..... Nickel

### Environmental Ratings:

- Temperature: ..... -25°C to +70°C (Operating)  
..... -55°C to +125°C (Storage)
  - Humidity: ..... MIL-STD-202F, METHOD 103B COND B.
  - Shock: ..... MIL-STD-202F, METHOD 213B 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.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	12/19/20	



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ISO 9001:2008 CERTIFIED



ALL DIMENSIONS ARE IN INCHES  
TOLERANCES:  
XXXX: ±0.010  
XXXXX: ±0.005

APPROVALS		DATE		TITLE	
DRAWN	<i>S.M.J.E.</i>		10/19/20	PRODUCT FEATURE PIA-25-CD-1-EXT	
CHECKED				SIZE	FSQM NO.
ISSUED				A	05XQ0
				DWG NO.	27040580
				SCALE	N:S
				SHEET	1 OF 1



# TYPICAL CHARACTERISTICS ON PIA-25-CD-1-EXT

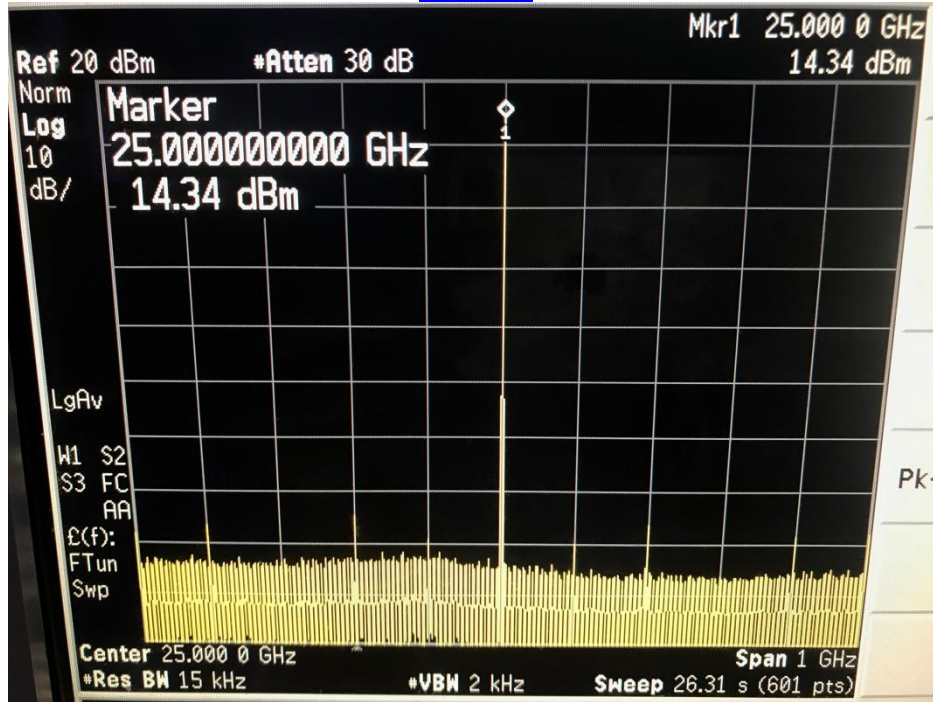
## TEST DATA SUMMARY

TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	TEST RESULTS	QA QC
1	Frequency Range:	25 GHz	<b>25 GHz</b>	
2	Power Output:	13dBm Min	<b>14.34 dBm</b>	
3	VSWR:	1.4:1 Typ	<b>1.18:1</b>	
4	External Reference:	100 MHz (0dBm, ±3dBm)	<b>100 MHz (0dBm, ±3dBm)</b> *Measured at -2dBm*	
5	Spurious:	<-60 dBc	<b>-71.1 dBc</b>	
6	Harmonics:	<-25 dBc	<b>-66.6 dBc</b>	
7	Phase Noise @ Offset :	10 Hz            -55dBc/Hz Typ 100Hz           -75dBc/Hz Typ 1 kHz            -95dBc/Hz Typ 10 kHz           -100dBc/Hz Typ 100 kHz          -105dBc/Hz Typ 1 MHz            -130dBc/Hz Typ	<b>10 Hz            -56.9 dBc/Hz</b> <b>100Hz           -76.3 dBc/Hz</b> <b>1 kHz            -94.0 dBc/Hz</b> <b>10 kHz           -102.2 dBc/Hz</b> <b>100 kHz          -114.4 dBc/Hz</b> <b>1 MHz            -134.9 dBc/Hz</b>	
8	DC Supply:	+15V @ 450mA Max.	<b>414mA</b>	
9	Alarm (LD):	TTL Volts	<b>TTL Volts</b>	

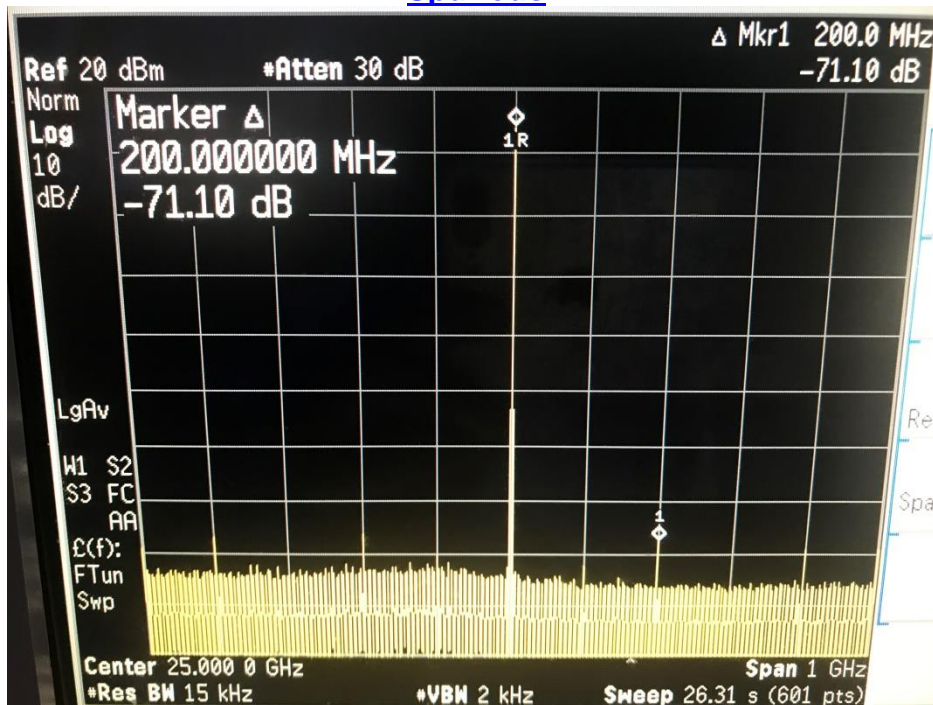


# TYPICAL CHARACTERISTICS ON PIA-25-CD-1-EXT

## Carrier



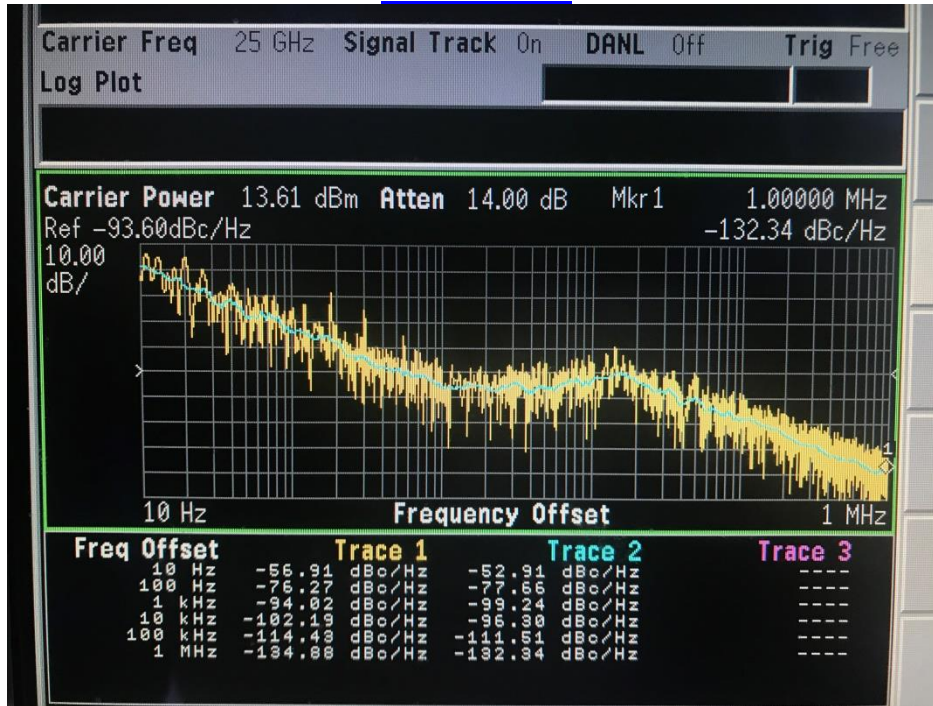
## Spurious



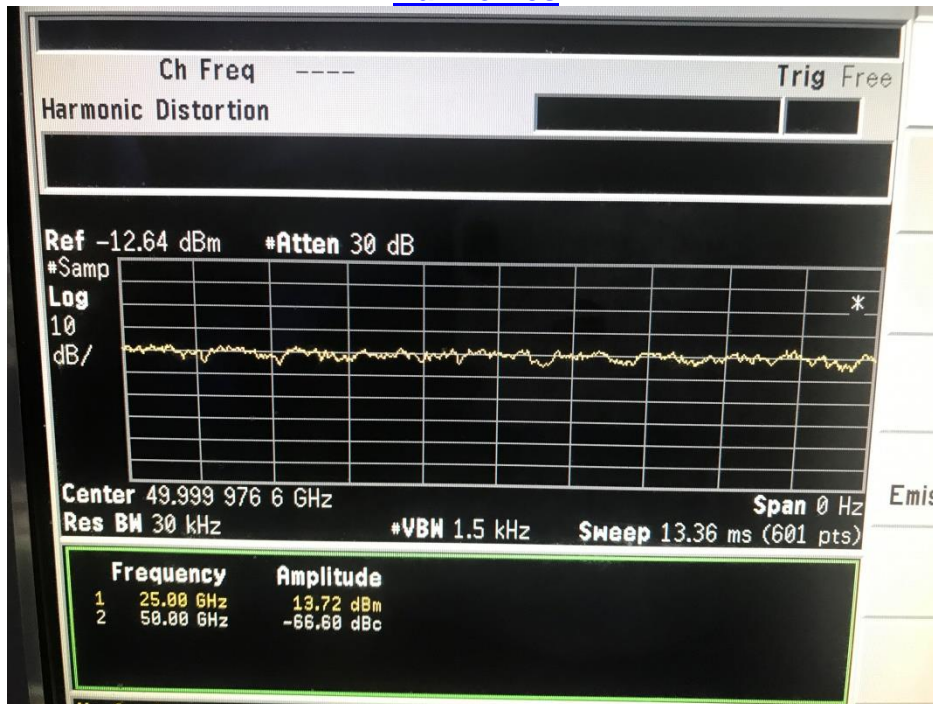


# TYPICAL CHARACTERISTICS ON PIA-25-CD-1-EXT

## Phase Noise



## Harmonics





# TYPICAL CHARACTERISTICS ON PIA-25-CD-1-EXT

## VSWR

