TYPICAL CHARACTERISTICS
ON
PDRO-29D8G-13DBM-EXT

PMI MODEL NO. PDRO-29D8G-13DBM-EXT IS A DRO WITH AN OUTPUT FREQUENCY OF 29800 MHz AND A MINIMUM OUTPUT LEVEL OF +13 dBm.

Reported By
Y Li
6/27/2023

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Email: sales@quanticpmi.com

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PRODUCT FEATURE

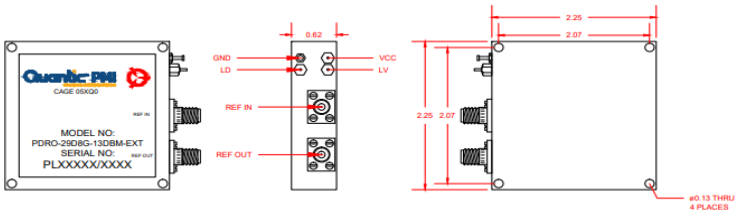
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	05/25/23	
	A2	ECN 23-0121	06/28/23	

DESCRIPTION

PMI MODEL NO. PDRO-29D8G-13DBM-EXT IS A DRO WITH AN OUTPUT FREQUENCY OF 29800 MHz AND A MINIMUM OUTPUT LEVEL OF +13 dBm.

SPECIFICATIONS

- OUTPUT FREQUENCY: ---------- 29800 MHz
- REFERENCE FREQUENCY: ---------- 100 MHz (SINEWAVE) - EXTERNAL
- INPUT LEVEL: ---------- +3 TO +13 dBm
- OUTPUT LEVEL: ---------- +13 dBm MIN
- SPURIOUS: ---------- -60 dBc MAX
- HARMONICS: ---------- -20 dBc MAX
- LOAD VSWR: ---------- 1.5:1
- PHASE NOISE (REF INPUT 8 dBm MIN @ 25°C): ----------
  -65 dBc/Hz @ 100 Hz MAX
  -81 dBc/Hz @ 1 kHz MAX
  -95 dBc/Hz @ 10 kHz MAX
  -107 dBc/Hz @ 100 kHz MAX
  -123 dBc/Hz @ 1 MHz MAX
- FREQUENCY STABILITY: ---------- SAME AS REFERENCE
- SUPPLY VOLTAGE: ---------- +12 V TO 15V
- CURRENT: ---------- 300 mA MAX
- LOCK DETECTOR: ---------- TTL HIGH - LOCK
- CONNECTOR: ----------
  RF CONNECTOR: 2.92mm FEMALE
  REF CONNECTOR: SMA (F)
  POWER: THROUGH CAP
- DIMENSIONS: ---------- 2.25" x 2.25" x 0.62"
- REFERENCE PHASE NOISE: ----------
  -135 dBc/Hz @ 100 Hz MAX
  -155 dBc/Hz @ 1 kHz MAX
  -165 dBc/Hz @ 10 kHz MAX
  -165 dBc/Hz @ 100 kHz MAX
- FINISH:---------- NICKEL PLATED



ENVIRONMENTAL RATINGS

- TEMPERATURE: ---------- -20°C TO +85°C (OPERATING)
  -55°C TO +125°C (STORAGE)
- HUMIDITY: ---------- MIL-STD-202, METHOD 103B COND. B
- SHOCK: ---------- MIL-STD-202, METHOD 213B COND. B
- VIBRATION: ---------- MIL-STD-202, METHOD 204D COND. B
- ALTITUDE: ---------- MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE: ---------- MIL-STD-202, METHOD 107D COND. A

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

PMI CONFIDENTIAL AND PROPRIETARY

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ISO 9001 CERTIFIED

APPROVALS	DATE
DRAWN MDL	05/25/23
REDRAWN	
ISSUED	

TITLE: PRODUCT FEATURE
PDRO-29D8G-13DBM-EXT

SIZE	FSCM NO.	DWG NO.	REV.
A	05XQ0	27046640	A2

SCALE N:S SHEET 1 OF 1

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Test Data

TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			25°C	-20°C	85°C
1	Output Frequency	29800 MHz	**29799983799 Hz**	**29799985728 Hz**	**29799986217 Hz**
2	Ref Frequency	100 MHz	**100 MHz**	**100 MHz**	**100 MHz**
3	Input Level	3 to 13 dBm	**3 to 13 dBm**	**3 to 13 dBm**	**3 to 13 dBm**
4	Output level	13 dBm Min	**15.7 dBm**	**16 dBm**	**13.3 dBm**
5	Spurious	-60 dBc Min	**-61.8 dBc**	**-61.4 dBc**	**-61.8 dBc**
6	Harmonics	-20 dBc Min	**Pass By Design**		
7	Phase Noise (Ref in 8dBm MIN @ 25C)	-65 dBc/Hz @ 100 Hz Max -81 dBc/Hz @ 1 kHz Max -95 dBc/Hz @ 10 kHz Max -107 dBc/Hz @ 100 kHz Max -123 dBc/Hz @ 1 MHz Max	**100 Hz: -84 dBc/Hz 1 kHz: -107 dBc/Hz 10 kHz: -109 dBc/Hz 100 kHz: -109 dBc/Hz 1 MHz: -126 dBc/Hz**		
8	Supply Voltage	12 to 15 V	**12 to 15 V**	**12 to 15 V**	**12 to 15 V**
9	Current	300 mA Max	**12 V: 256 mA 15: 216 mA**	**12 V: 257 mA 15: 217 mA**	**12 V: 255 mA 15: 215 mA**
10	Lock Detector	TTL High Lock	**TTL High Lock**	**TTL High Lock**	**TTL High Lock**

*Spurious maximum measured value includes both wideband sweep spurs and sidebands close to carrier.

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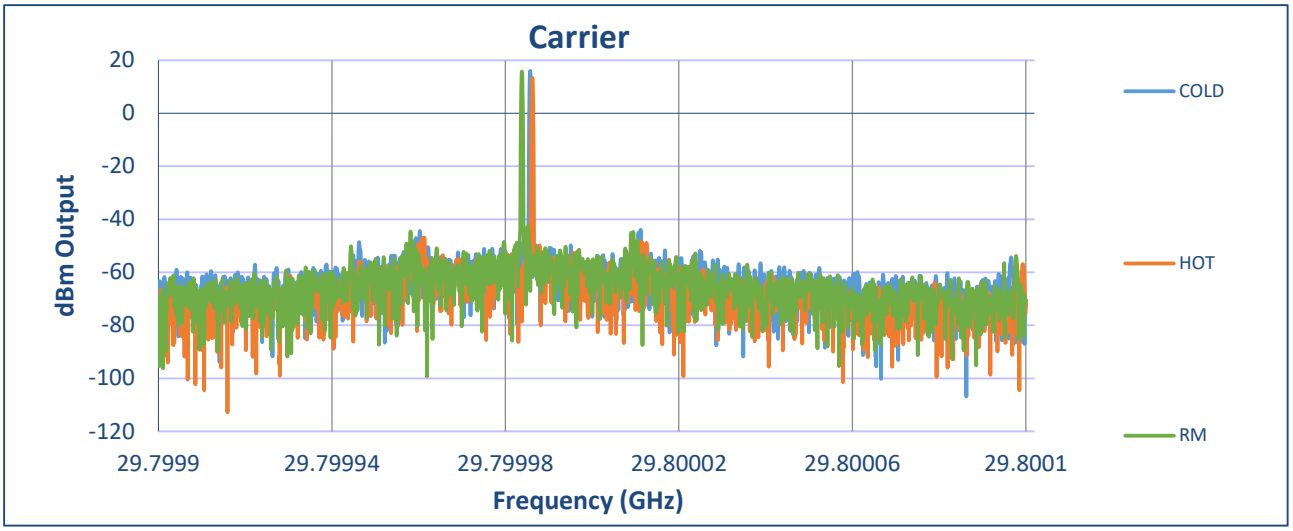

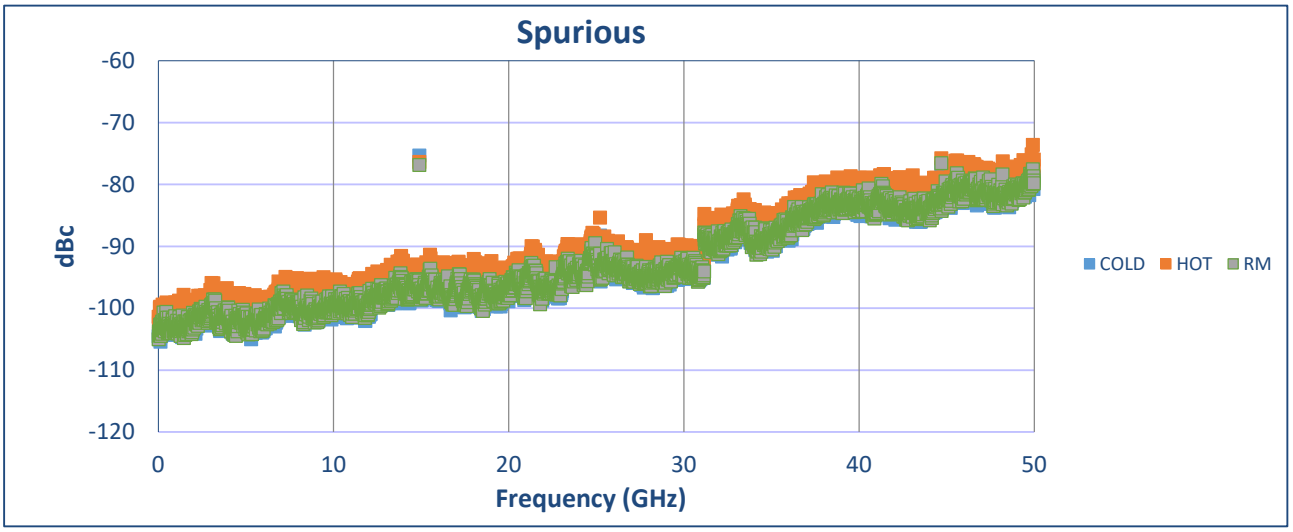

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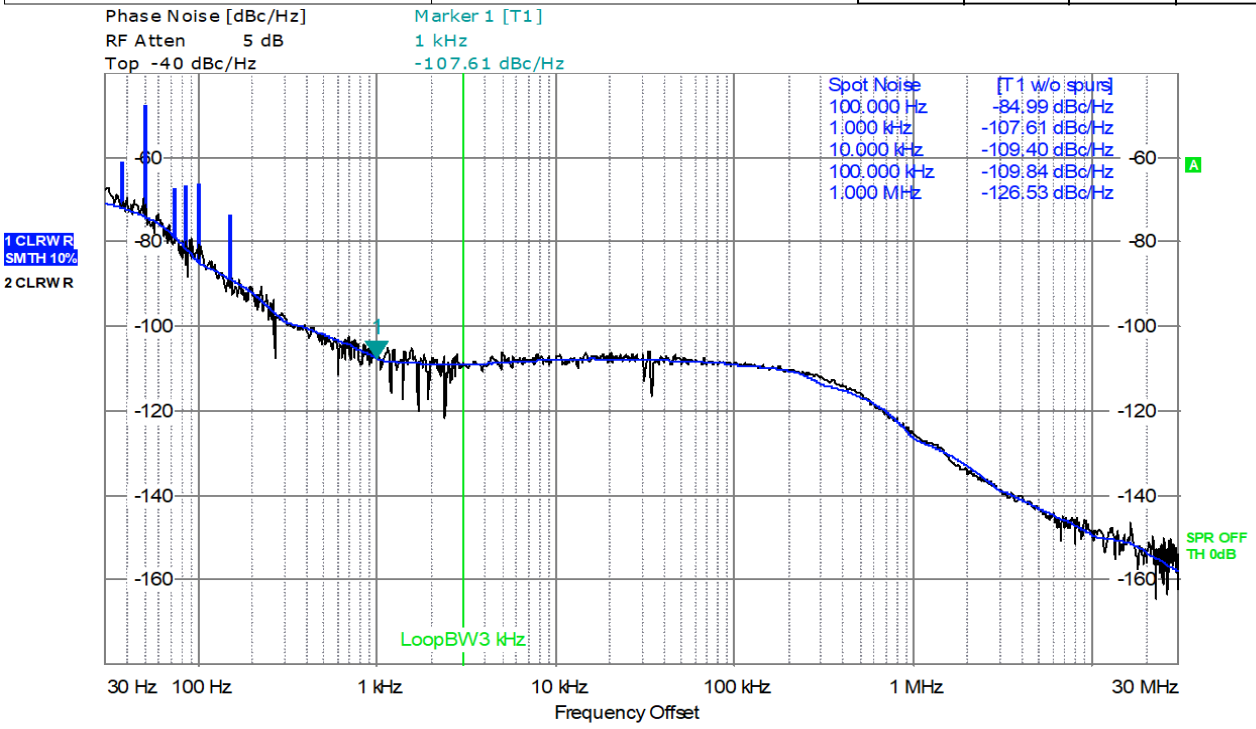
Phase Noise

R&S FSUP 50 Signal Source Analyzer				LOCKED
Settings		**Residual Noise [T1 w/o spurs]**		**Phase Detector +0 dB**
Signal Frequency:	29.799982 GHz	Int PHN (30.0 .. 30.0 M)	-52.0 dBc	
Signal Level:	5.57 dBm	Residual PM	0.204 °	
Cross Corr Mode	Harmonic 1	Residual FM	3.812 kHz	
Internal Ref Tuned	Internal Phase Det	RMS Jitter	0.0190 ps	



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