TYPICAL CHARACTERISTICS
ON
DRO-9-13DBM-SF-SAG

PMI MODEL NUMBER DRO-9-13DBM-SF-SAG IS A DIELECTRIC RESONATOR OSCILLATOR WITH A CENTER FREQUENCY OF 9.0 GHz. IT HAS A POWER OUTPUT OF +10 dBm AND A MECHANICAL TUNING RANGE OF ±20 MHz. THIS MODEL IS OUTFITTED WITH AN SMA FEMALE CONNECTOR.

REPORTED BY: V. PRATAP
TESTED BY: E. KRETZ
DATE: 10/14/2025

7309-A Grove Road Frederick, MD 21704 USA Phone: (301)662-5019 Fax: (301)662-1731
Email: sales@quanticpmi.com

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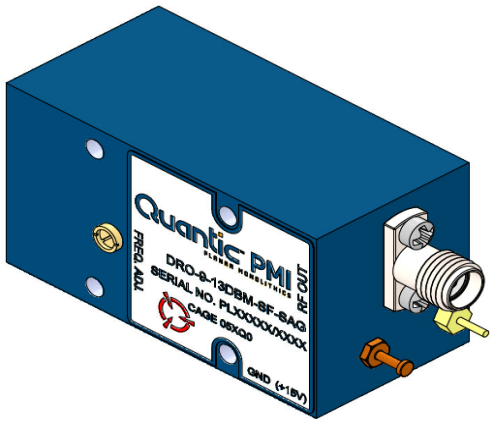
PRODUCT FEATURE

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	5/19/2025	

DESCRIPTION:
PMI MODEL NUMBER DRO-9-13DBM-SF-SAG IS A DIELECTRIC RESONATOR OSCILLATOR WITH A CENTER FREQUENCY OF 9.0 GHz. IT HAS A POWER OUTPUT OF +10 dBm AND A MECHANICAL TUNING RANGE OF ± 20 MHz. THIS MODEL IS OUTFITTED WITH AN SMA FEMALE CONNECTOR.

SPECIFICATIONS @ 25°C:

- CENTER FREQUENCY: ..... 9 GHz NOM.
- POWER OUTPUT: ..... +10 dBm MIN.
- MECHANICAL TUNING RANGE: ..... ±20 MHz MIN.
- FREQUENCY STABILITY: ..... ±10 ppm/°C MAX.
- PHASE NOISE AT 100 kHz OFFSET: ..... -80 dBc/Hz MAX.
- SPURIOUS: ..... -75 dBc MAX.
- HARMONICS: ..... -25 dBc MAX.
- BIAS VOLTAGE: ..... +10 V_{DC} MIN.
  +12 V_{DC} TYP.
  +15 V_{DC} MAX.
- BIAS CURRENT: ..... 85 mA MAX.
- CONNECTORS: ..... SMA FEMALE
- FINISH: ..... PAINTED BLUE,
  MOUNTING SURFACE NICKEL PLATED



ENVIRONMENTAL RATINGS:

- TEMPERATURE: ..... 0°C TO +50°C (OPERATING)
- HUMIDITY: ..... MIL-STD-202, METHOD 103B COND. B
- SHOCK: ..... MIL-STD-202, METHOD 213B COND. B
- VIBRATION: ..... MIL-STD-202, METHOD204D COND. B
- ALTITUDE: ..... MIL-STD-202, METHOD 105C COND. B
- TEMPERATURE CYCLE: ..... MIL-STD-202, METHOD 107D COND. A

NOTE: SPECIFICATIONS WILL VARY OVER TEMPERATURE
NOTE: THE ABOVE SPECIFICATIONS ARE SUBJECT TO CHANGE OR REVISION

PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS	DATE
DRAWN: VP	5/19/2025
RESTRAWN	
ISSUED	

Quantic PMI PLANAR MONOLITHICS
7309-A GROVE ROAD FREDERICK, MARYLAND 21704 USA
TEL: (301)662-5019 FAX: (301)662-1731 EMAIL: SALES@QUANTICPMI.COM
WEB: WWW.QUANTICPMI.COM ISO 9001 CERTIFIED

TITLE: OUTLINE
DRO-9-13DBM-SF-SAG

SIZE	FSCM NO.	DWG NO.	REV.
B	05XQ0	27051800	A1

SCALE 3:1 SHEET 1 OF 2

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TECHNICAL SPECIFICATIONS

TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			0°C	+25°C	+50°C
1	Center Frequency	9 GHz NOM.	**8.9983 GHz**	**9 GHz**	**9.0011 GHz**
2	Power Output	+10 dBm MIN.	**12.26 dBm**	**11.94 dBm**	**11.54 dBm**
3	Mechanical Tuning Range	±20 MHz MIN.	**±20 MHz**	**±20 MHz**	**±20 MHz**
4	Frequency Stability	±10 ppm/°C MAX.	**-7.6 ppm/°C**	**0 ppm/°C**	**4.9 ppm/°C**
5	Phase Noise @ 100kHz Offset	-80 dBc/Hz MAX.	**-113.79 dBc/Hz**		
6	Spurious	-75 dBc MAX.	**<-75 dBc (See Graph)**	**<-75 dBc (See Graph)**	**<-75 dBc (See Graph)**
7	Harmonics	-25 dBc MAX.	**-30.7 dBc (See Graph)**	**-31 dBc (See Graph)**	**-31 dBc (See Graph)**
8	DC Supply Voltage	+10 to +15 V @ 85 mA MAX.	**+10 to +15V @ 60 mA**	**+10 to +15V @ 65 mA**	**+10 to +15V @ 63 mA**

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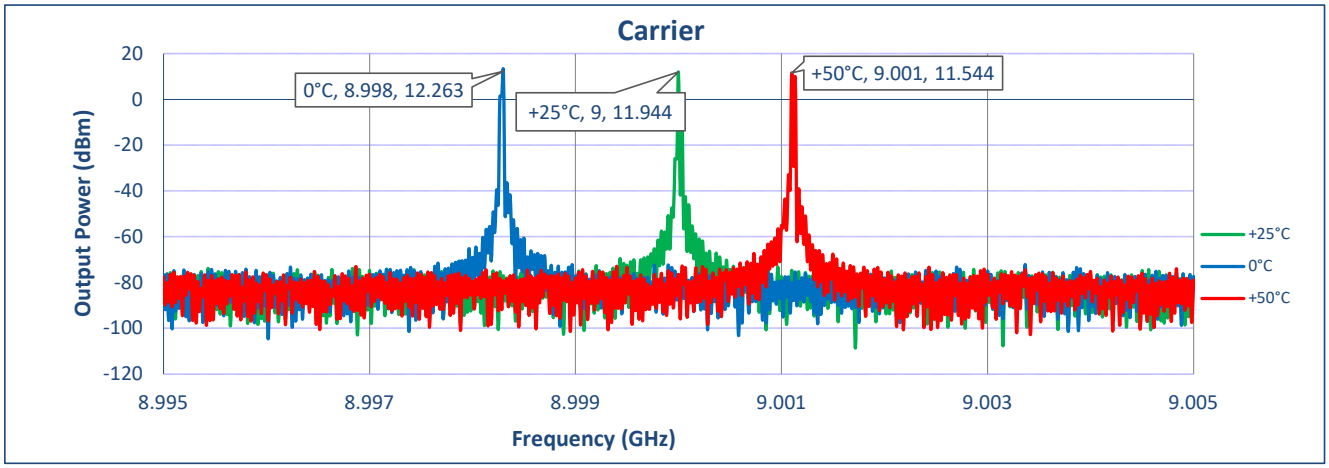

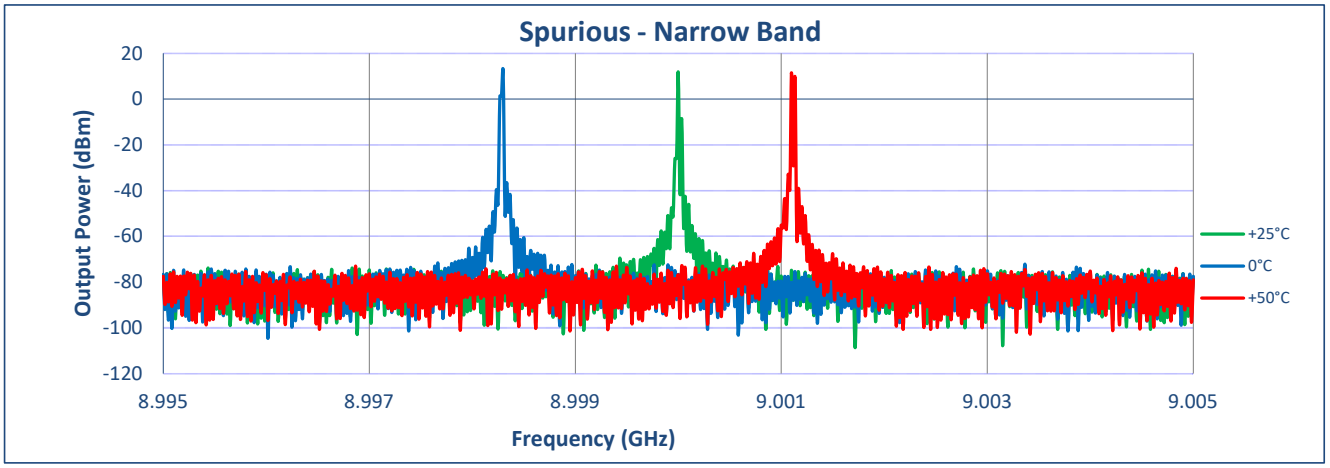

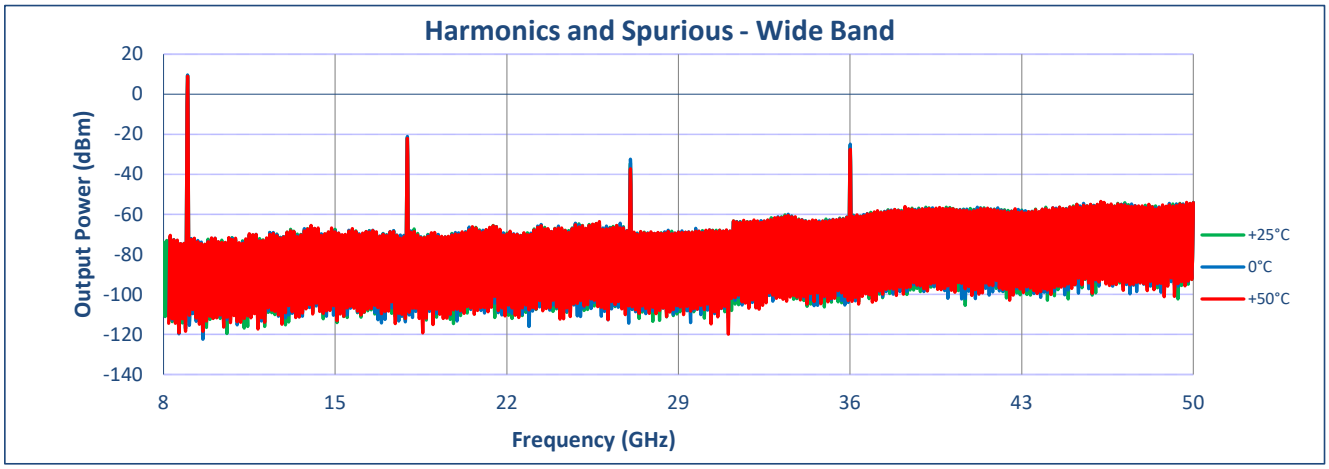

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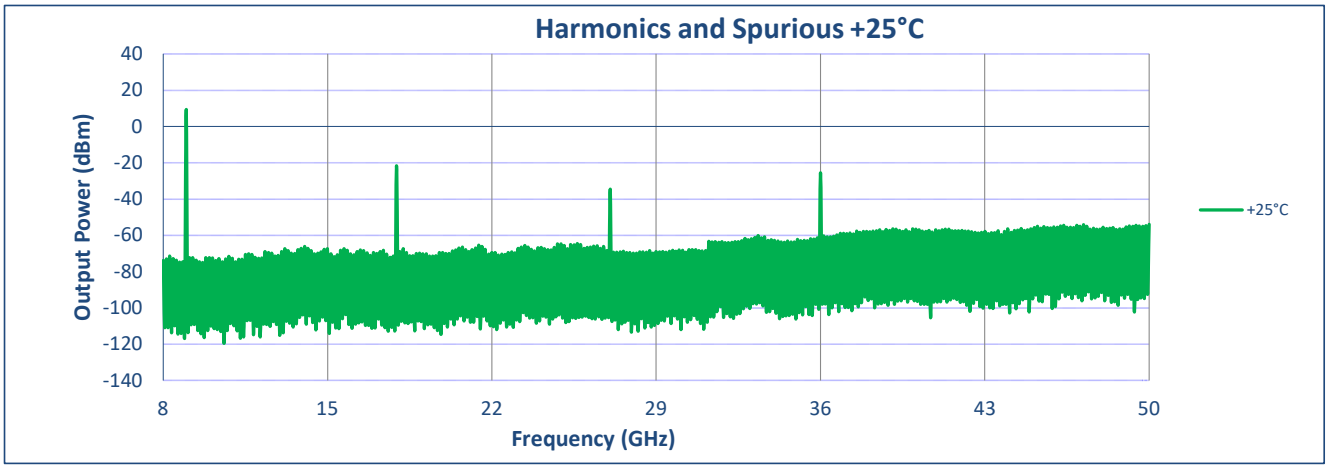

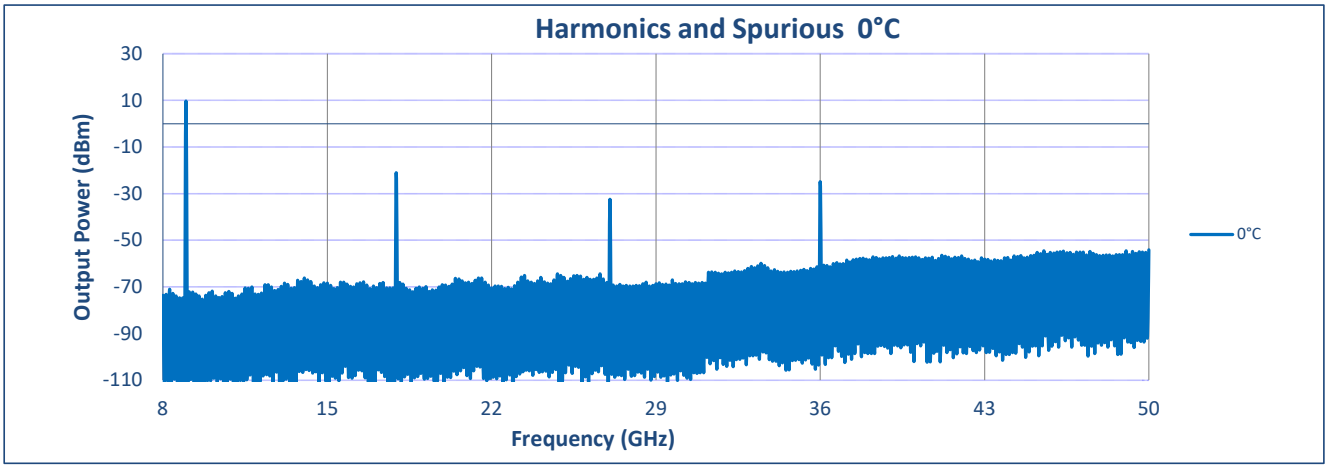

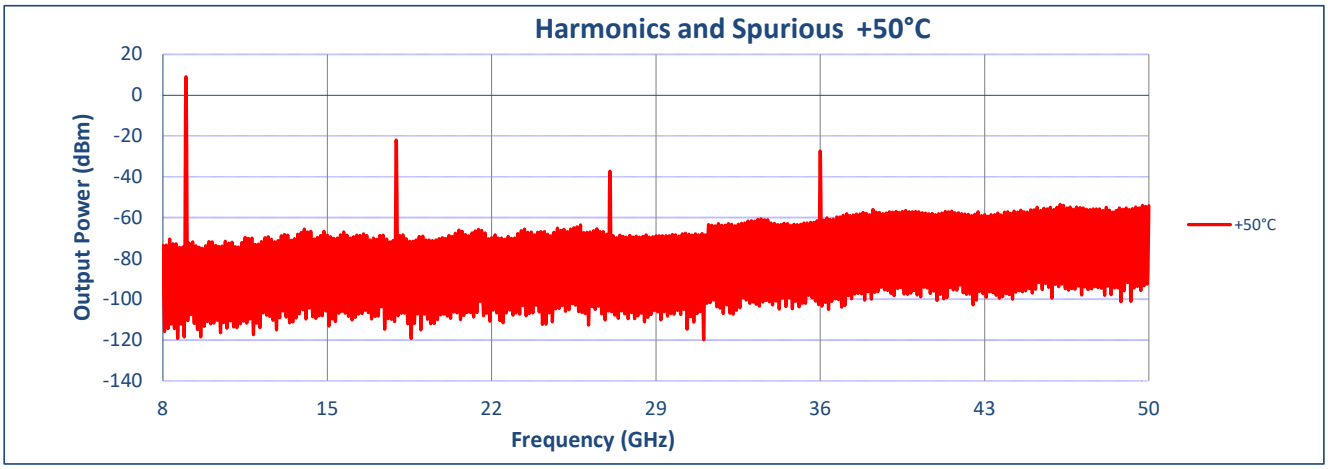

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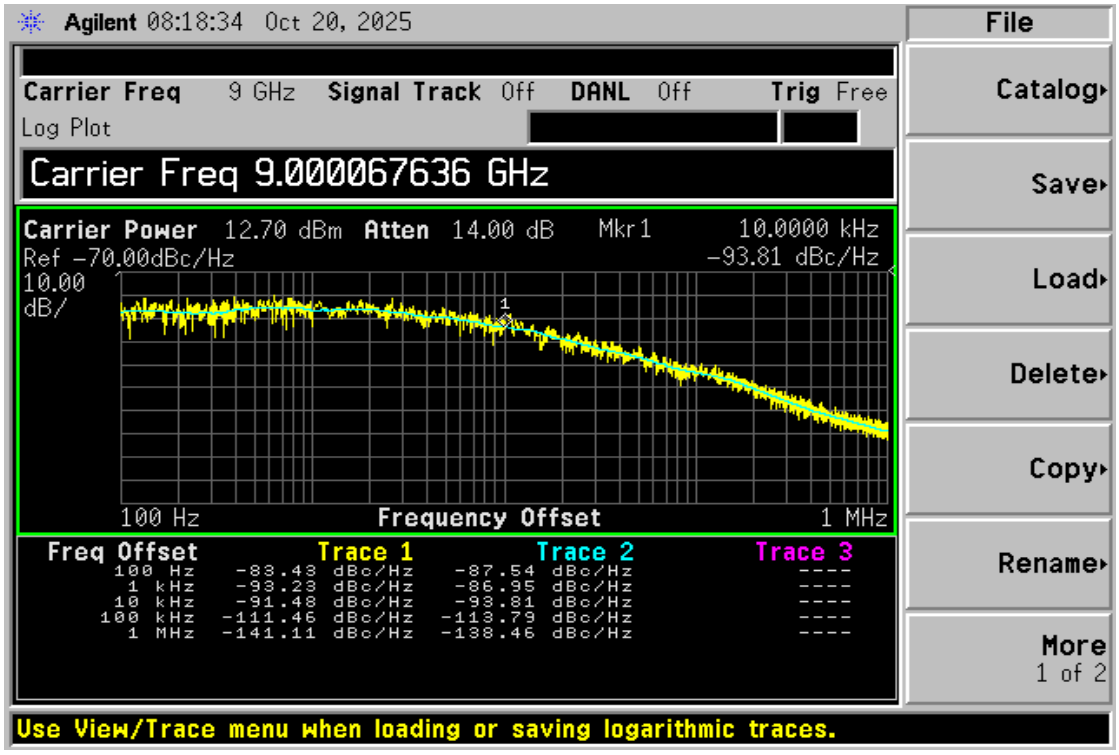
Phase Noise Curve



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