

**TYPICAL CHARACTERISTICS
ON
PLO-48D8G-EXT**

**QUANTIC PMI MODEL PLO-48D8G-EXT IS AN EXTERNALLY REFERENCED PHASE
LOCKED DIELECTRIC RESONATOR OSCILLATOR(PLDRO) WITH AN OUTPUT
FREQUENCY OF 48.8 GHz.**



**Reported By: S. Lange
Tested By: S.Lange
Date: 05/07/2025**

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PRODUCT FEATURE

DESCRIPTION:

QUANTIC PMI MODEL PLO-48D8G-EXT IS AN EXTERNALLY REFERENCED PHASE LOCKED DIELECTRIC RESONATOR OSCILLATOR (PLDRO) WITH AN OUTPUT FREQUENCY OF 48.8 GHz.

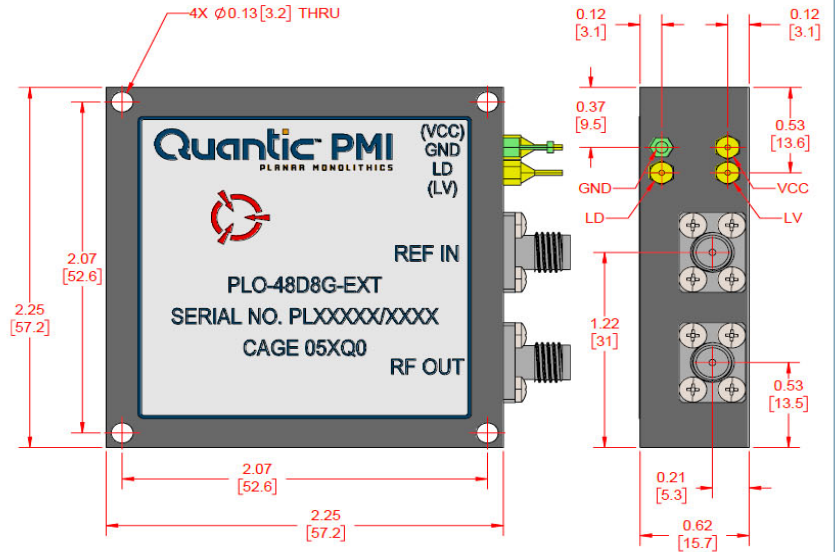
SPECIFICATIONS:

- OUTPUT FREQUENCY:..... 48.8 GHz
- REFERENCE FREQUENCY:..... 100 MHz (SINE WAVE)
- INPUT LEVEL:..... +3 TO +10 dBm
- OUTPUT LEVEL:..... +10 dBm MIN
- SPURIOUS:..... -60 dBc MAX
- HARMONICS:..... -20 dBc MAX
- LOAD VSWR:..... 1.5:1 MAX
- PHASE NOISE:.....
 - 80 dBc MAX @ 100 Hz
 - 93 dBc MAX @ 1 kHz
 - 94 dBc MAX @ 10 kHz
 - 102 dBc MAX @ 100 kHz
 - 128 dBc MAX @ 1 MHz
- FREQUENCY STABILITY:..... SAME AS REFERENCE
- SUPPLY VOLTAGE:..... +12 V @ 500 mA TYP
- LOCK DETECTOR:..... TTL HIGH = LOCK
- REFERENCE PHASE NOISE:.....
 - 137 dBc MAX @ 100 Hz
 - 155 dBc MAX @ 1 kHz
 - 160 dBc MAX @ 10 kHz
- CONNECTORS (IN/OUT):..... 2.4mm (RF OUT)
- FINISH:..... NICKEL PLATED

ENVIRONMENTAL RATINGS:

- TEMPERATURE:.....
 - 40°C TO +70°C (OPERATING)
 - 50°C TO +80°C (STORAGE)

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



PMI CONFIDENTIAL AND PROPRIETARY

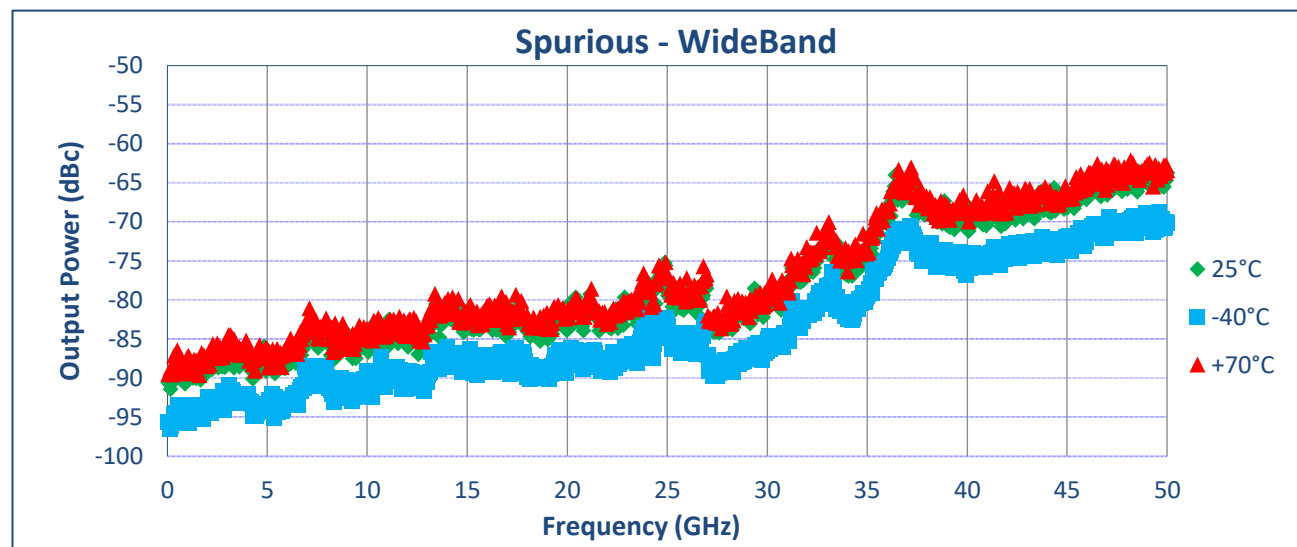
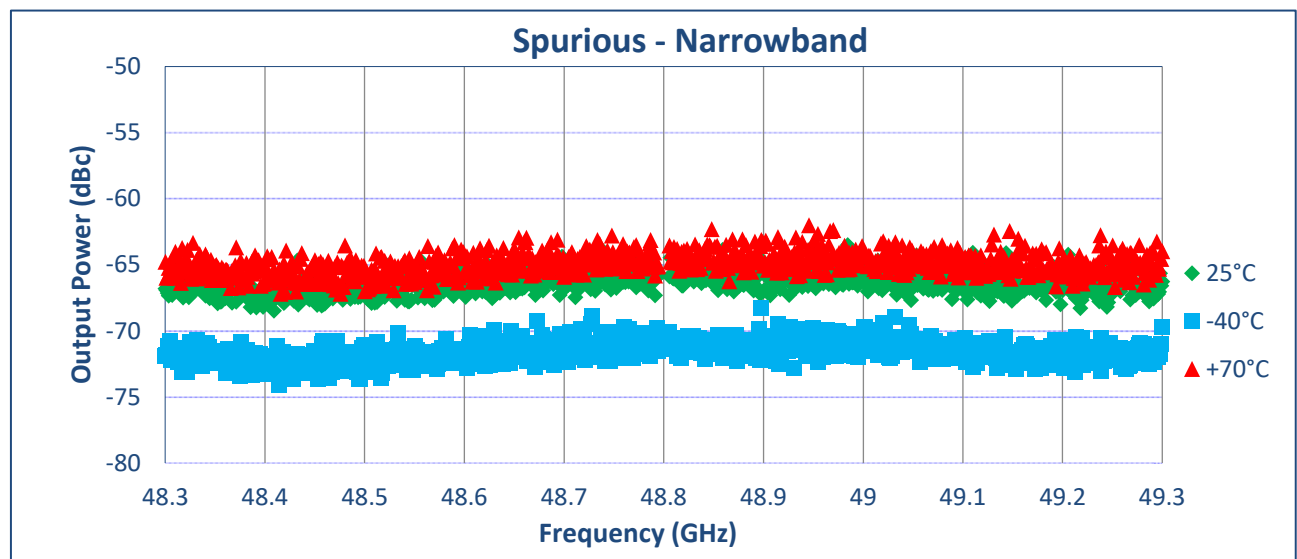
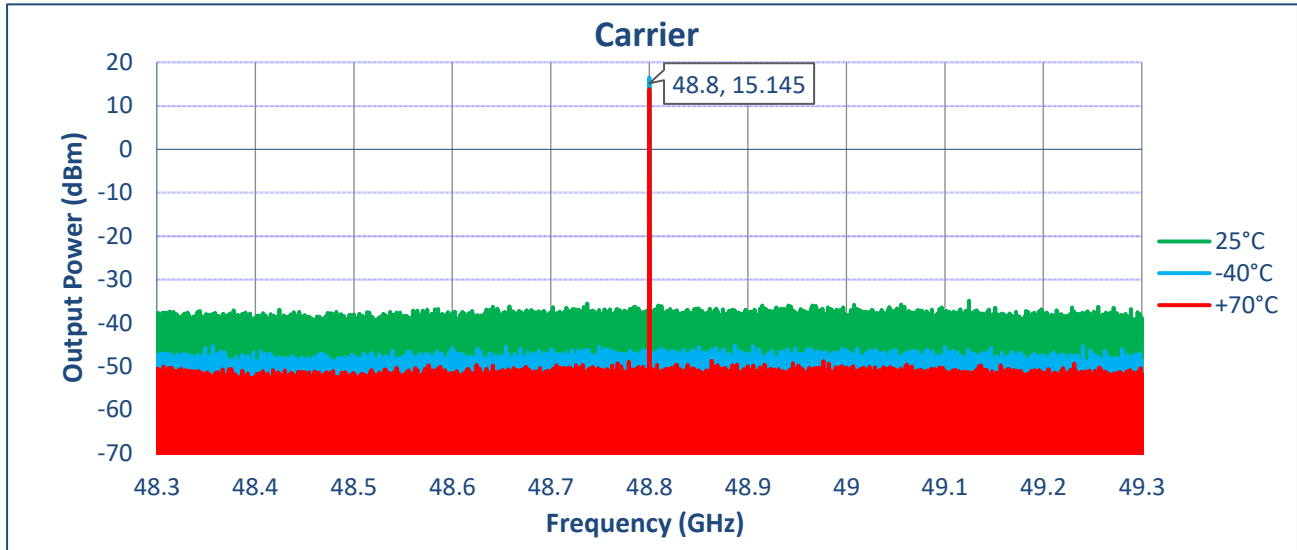
APPROVALS		DATE	TITLE	
DESIGN	S. LANGE		PLO-48D8G-EXT	
REVISION			OUTLINE	
REVISED			PLOT NO. 27051200	
SCALE 2:1			SHEET 1 OF 1	

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TEST DATA

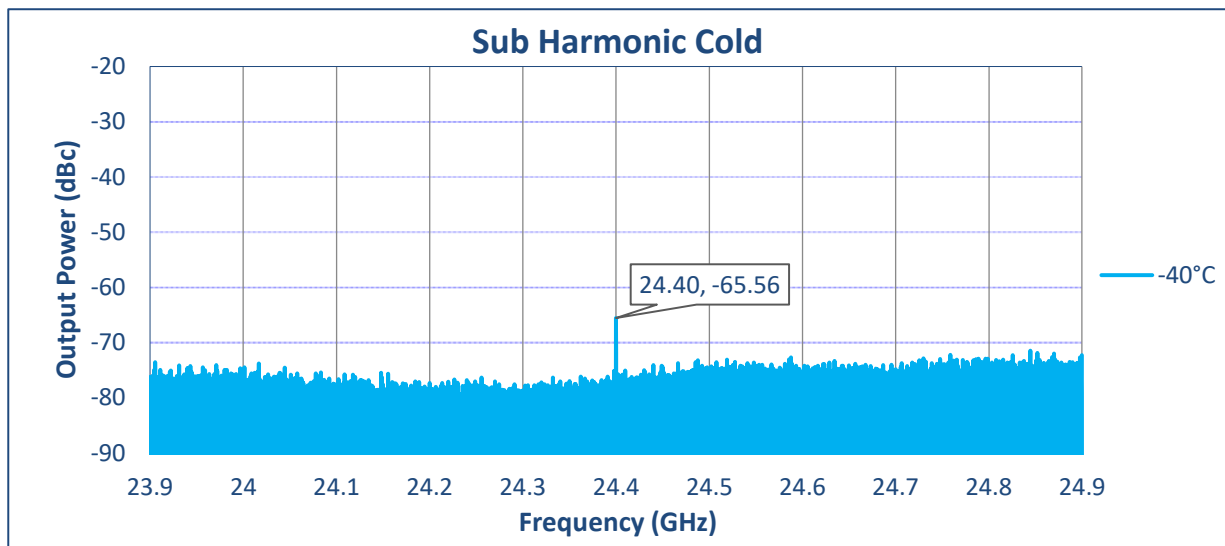
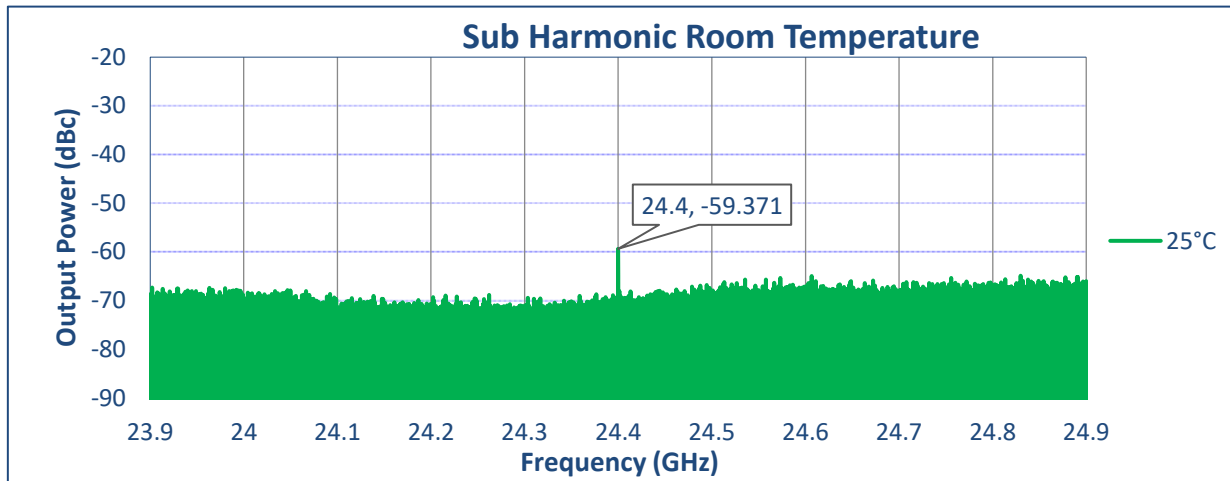
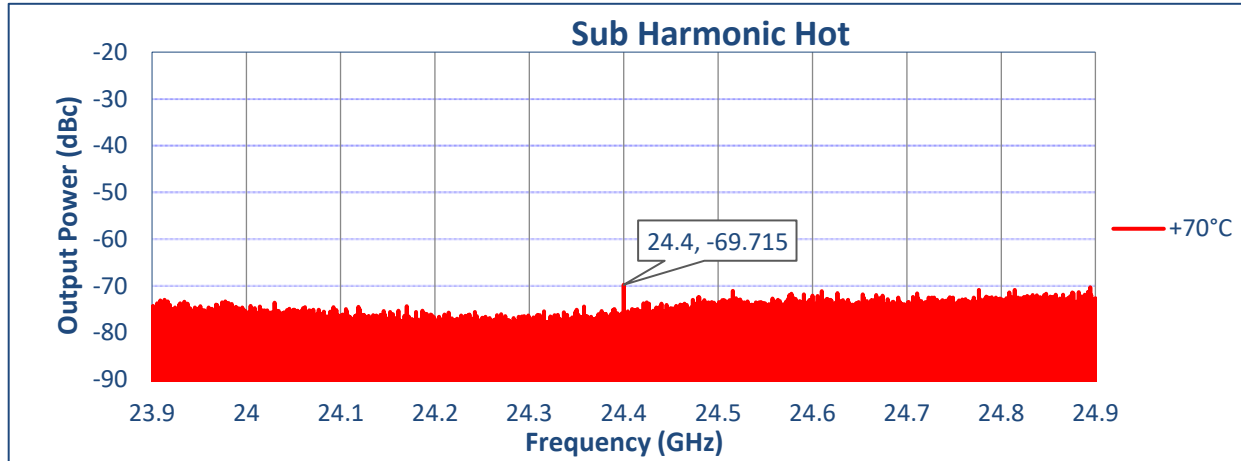
TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			25°C	-40°C	+70°C
1	Output Frequency	48.8 GHz	48.8 GHz	48.8 GHz	48.8 GHz
2	Reference Frequency	100 MHz (Sine Wave)	100 MHz (Sine Wave)		
3	Reference Input Level	+3 to +10 dBm	+3 to +10 dBm	+3 to +10 dBm	+3 to +10 dBm
4	Output Level	+10 dBm Min.	15.1dBm	16.5dBm	13.9dBm
5	Spurious	-60 dBc Max.	-63.2dBc	-68.3dBc	-62.1dBc
6	Load VSWR	1.5:1 Max.	1.5:1 Max.		
7	Output Phase Noise	-80 dBc Max. @ 100 Hz	-82.3 dBc @ 100 Hz		
		-93 dBc Max. @ 1 kHz	-104.4 dBc @ 1 kHz		
		-94 dBc Max. @ 10 kHz	-109.7 dBc @ 10 kHz		
		-102 dBc Max. @ 100 kHz	-109.8 dBc @ 100 kHz		
		-128 dBc Max. @ 1 MHz	-130.9 dBc @ 1 MHz		
8	Reference Phase Noise	-137 dBc Max. @ 100 Hz	-137 dBc @ 100 Hz		
		-155 dBc Max. @ 1 kHz	-155 dBc @ 1 kHz		
		-160 dBc Max. @ 10 kHz	-160 dBc @ 10 kHz		
9	Supply Voltage	+12 V @ 500 mA Typ.	+12 V @ 349 mA		
10	Lock Detector	TTL High = Lock	TTL High = Lock		

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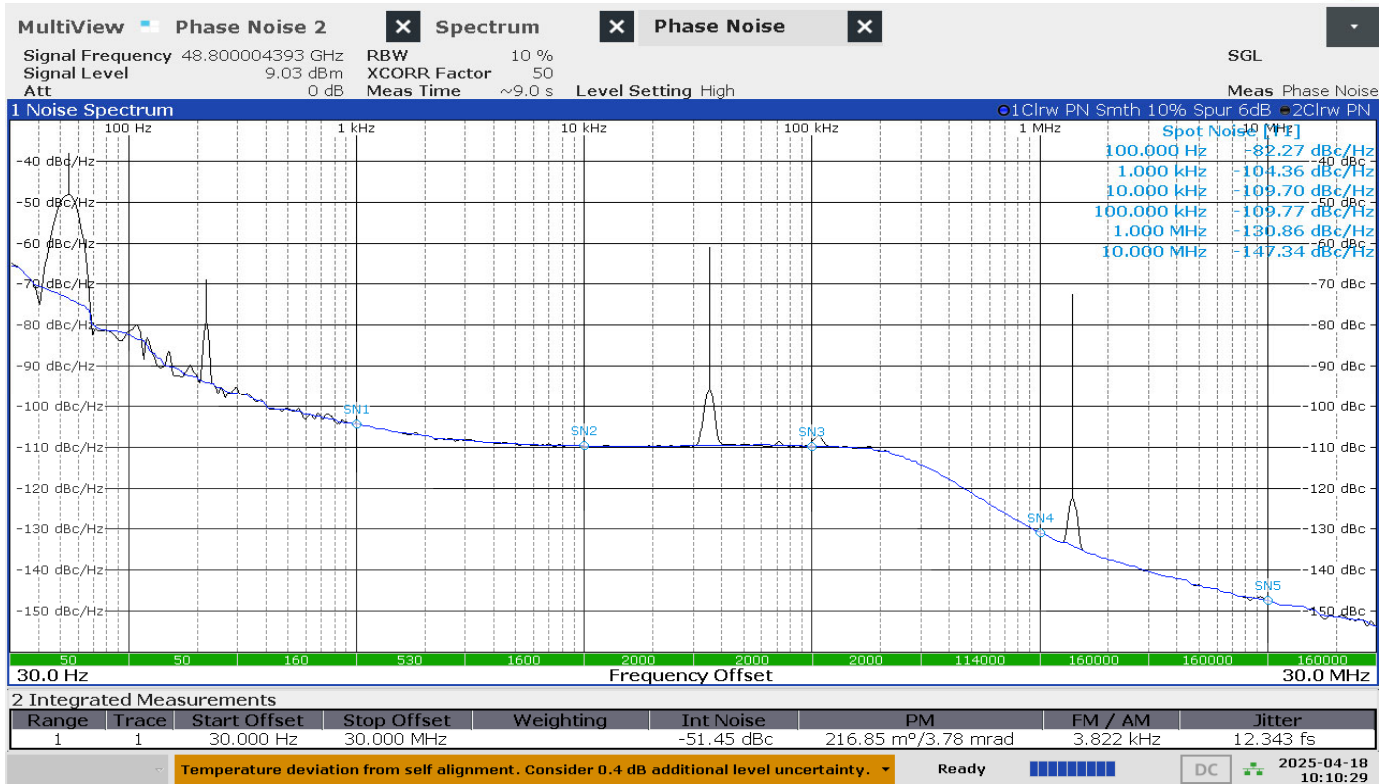
**TYPICAL CHARACTERISTICS
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Sub Harmonics



TYPICAL CHARACTERISTICS ON PLO-48D8G-EXT

Phase Noise



10:10:30 AM 04/18/2025