



TYPICAL CHARACTERISTICS
ON
PDRO-20G-13DBM-EXT

PMI MODEL NUMBER PDRO-20G-13DBM-EXT IS A PDRO WITH AN OUTPUT FREQUENCY OF 20 GHz AND A MINIMUM OUTPUT LEVEL OF +13 dBm.



TESTED BY: A. KAROLY
REPORTED BY: V. PRATAP
DATE: 02/17/2026



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PRODUCT FEATURE

DESCRIPTION:

PMI MODEL NUMBER PDRO-20G-13DBM-EXT IS A PDRO WITH AN OUTPUT FREQUENCY OF 20 GHz AND A MINIMUM OUTPUT LEVEL OF +13 dBm.

SPECIFICATIONS:

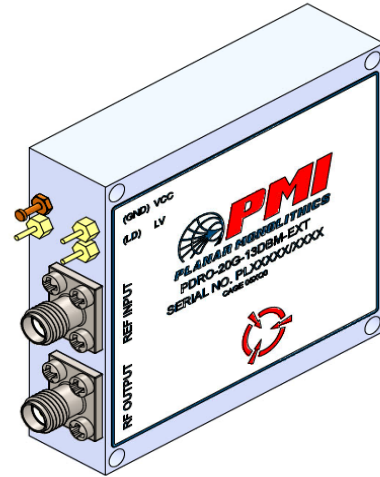
- OUTPUT FREQUENCY:..... 20 GHz
- REFERENCE FREQUENCY:..... 100 MHz (SINEWAVE) EXTERNAL
- INPUT LEVEL:..... +3 TO +13 dBm
- OUTPUT LEVEL:..... +13 dBm MIN.
- SPURIOUS:..... -70 dBc MAX
- HARMONICS:..... -20 dBc MAX
- SUB-HARMONICS:..... -60 dBc MAX
- LOAD VSWR:..... 1:1.5 MAX
- PHASE NOISE:..... -80 dBc/Hz MAX @ 100Hz
(REF INPUT ≥ 8 dBm @ 25°C)
-104 dBc/Hz MAX @ 1 kHz
-113 dBc/Hz MAX @ 10 kHz
-113 dBc/Hz MAX @ 100 kHz
-130 dBc/Hz MAX @ 1 MHz
- REFERENCE PHASE NOISE:..... -135 dBc/Hz MIN. @ 100 Hz
-155 dBc/Hz MIN. @ 1 kHz
-165 dBc/Hz MIN. @ 10 kHz
-165 dBc/Hz MIN. @ 100 kHz
- FREQUENCY STABILITY:..... SAME AS REFERENCE
- SUPPLY VOLTAGE:..... + 12 TO +15V
- CURRENT:..... 300 mA MAX
- LOCK DETECTOR:..... TTL HIGH - LOCK
- CONNECTORS:..... RF CONNECTOR: 2.92 mm FEMALE
REF CONNECTOR: SMA FEMALE
- FINISH:..... NICKEL PLATED

ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -40°C TO +70°C (OPERATING)
-55°C TO +125°C (STORAGE)
- HUMIDITY:..... MIL-STD-202, METHOD 103B COND. B
- SHOCK:..... MIL-STD-202, METHOD 213B 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

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	12/11/2025	



PMI CONFIDENTIAL AND PROPRIETARY

APPROVALS: _____ DATE: _____ DRAWN: VP 12/11/2025 REVISIONS: _____ DESIGNED: _____ CHECKED: _____ DATE: 12/11/2025 BY: J.S.		Quantic PMI <small>PLANAR MONOLITHICS</small> 7309-A GROVE ROAD, FREDERICK, MD 21704 USA WWW.QUANTICPMI.COM
TITLE: OUTLINE PART NO: PDRO-20G-13DBM-EXT		REV: A1 QTY: 27053880 SCALE: 2:1 SHEET 1 OF 2



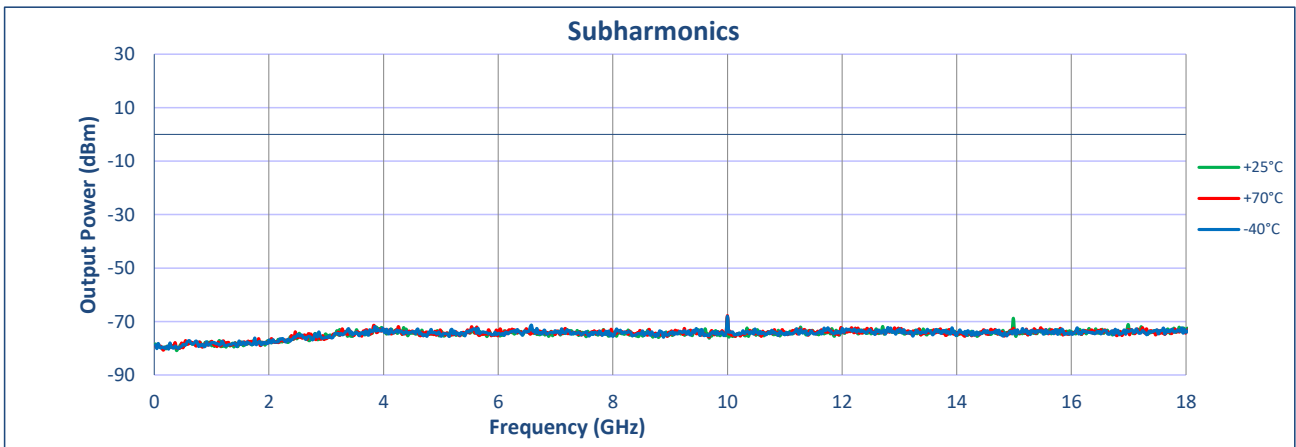
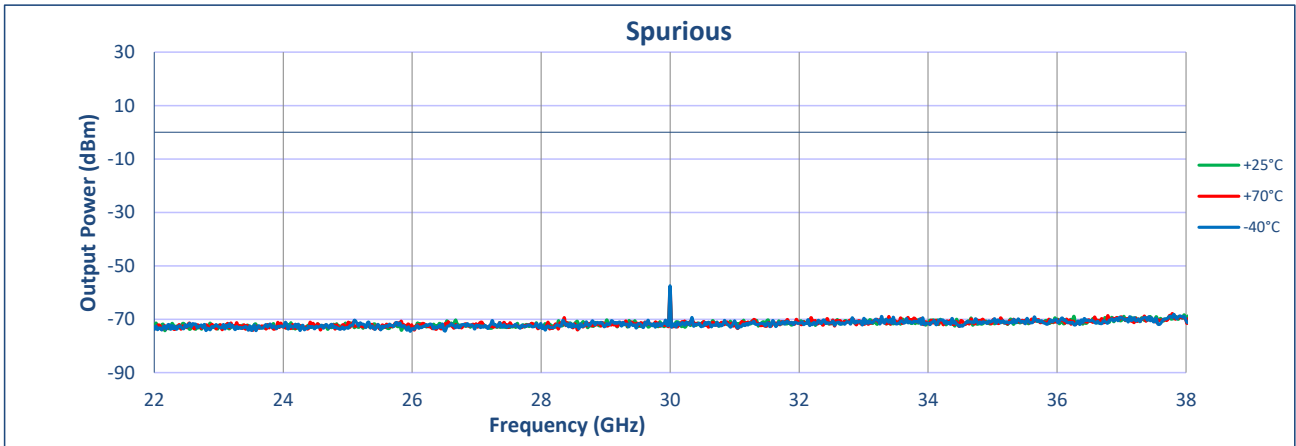
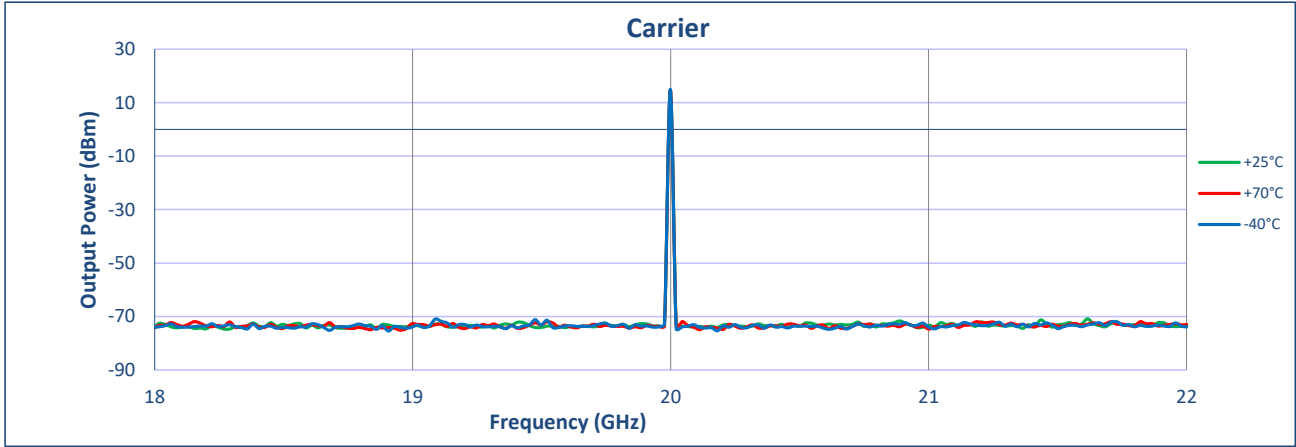
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TECHNICAL SPECIFICATIONS

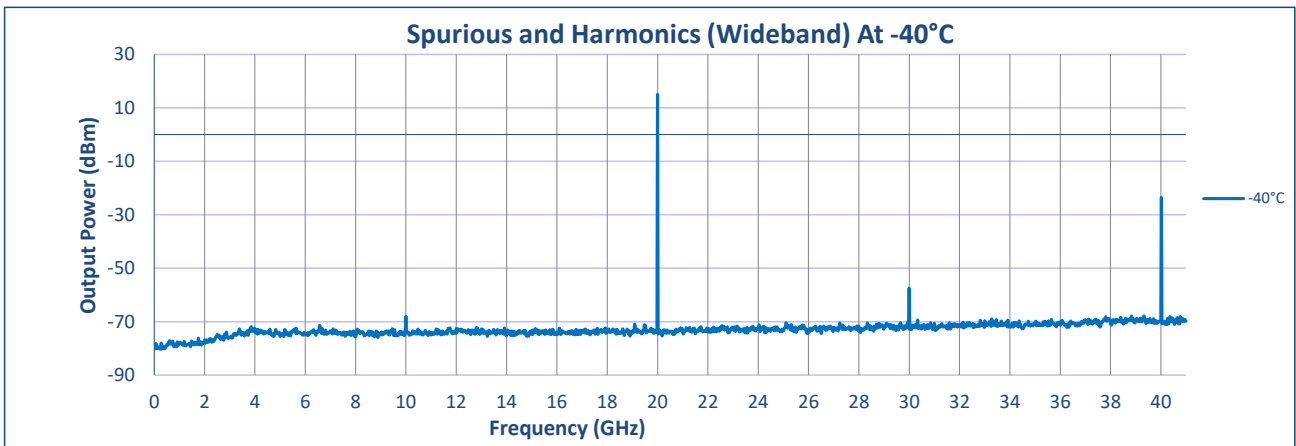
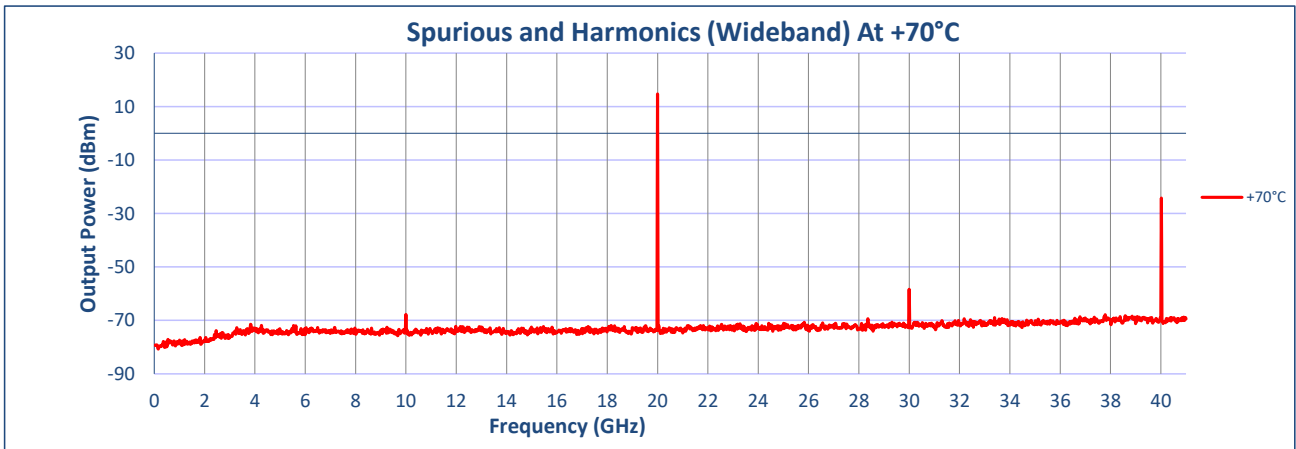
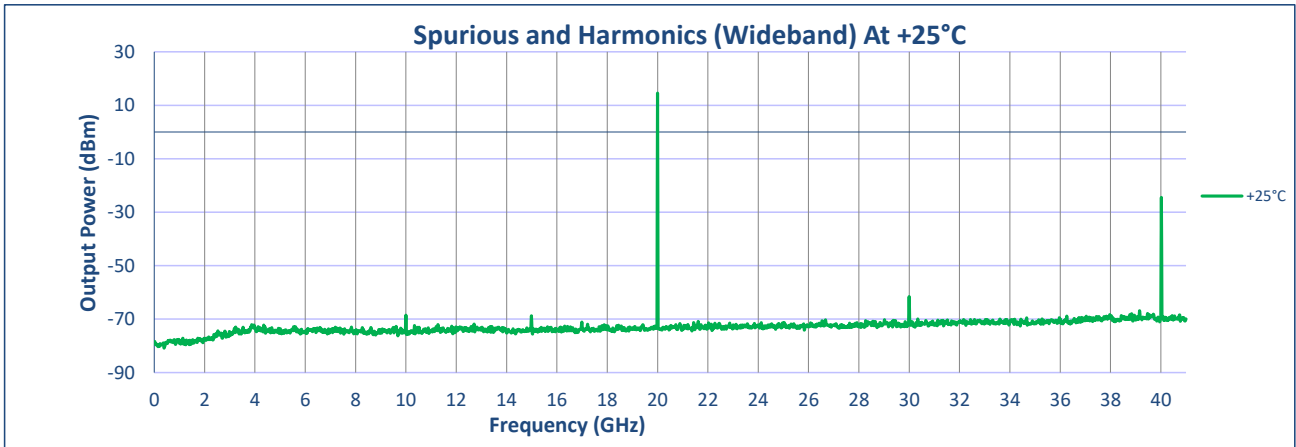
TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			-40°C	+25°C	+70°C
1	Output Frequency	20 GHz	19.998889 GHz	19.998889 GHz	19.998889 GHz
2	Output Level	+13 dBm MIN.	15.02 dBm	14.55 dBm	14.71 dBm
3	Spurious	-70 dBc MAX.	-72.51 dBc (See Graph)	-76.14 dBc (See Graph)	-73.08 dBc (See Graph)
4	Harmonics	-20 dBc MAX.	-38.6 dBc (See Graph)	-39 dBc (See Graph)	-38.9 dBc (See Graph)
5	Sub-Harmonics	-60 dBc MAX.	-83 dBc (See Graph)	-83.1 dBc (See Graph)	-82.5 dBc (See Graph)
6	Phase Noise (REF Input ≥ 8 dBm @ 25°C)	-80 dBc/Hz MAX. @ 100Hz -104 dBc/Hz MAX. @ 1 kHz -113 dBc/Hz MAX. @ 10 kHz -113 dBc/Hz MAX. @ 100 kHz -130 dBc/Hz MAX. @ 1 MHz	25°C		
			-89.82 dBc/Hz @ 100Hz -108.14 dBc/Hz @ 1 kHz -116.17 dBc/Hz @ 10 kHz -118.91 dBc/Hz @ 100 kHz -140.27 dBc/Hz @ 1 MHz		
7	DC Supply Voltage	+12 to +15 V @ 300 mA MAX.	+12 to +15V @ 230mA	+12 to +15V @ 230mA	+12 to +15V@ 220mA
8	Lock Detector	TTL High In Lock	TTL High in Lock		



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Phase Noise Curve

R&S FSUP 50 Signal Source Analyzer				LOCKED			
Settings		Residual Noise [T1 w/o spurs]		Phase Detector or +20 dB			
Signal Frequency:	20.000003 GHz	Int PHN (30.0 .. 30.0 M)	-59.2 dBc				
Signal Level:	-9.25 dBm	Residual PM	88.478 m°				
Cross Corr Mode	Harmonic 1	Residual FM	1.793 kHz				
Internal Ref Tuned	Internal Phase Det	RMS Jitter	0.0123 ps				

