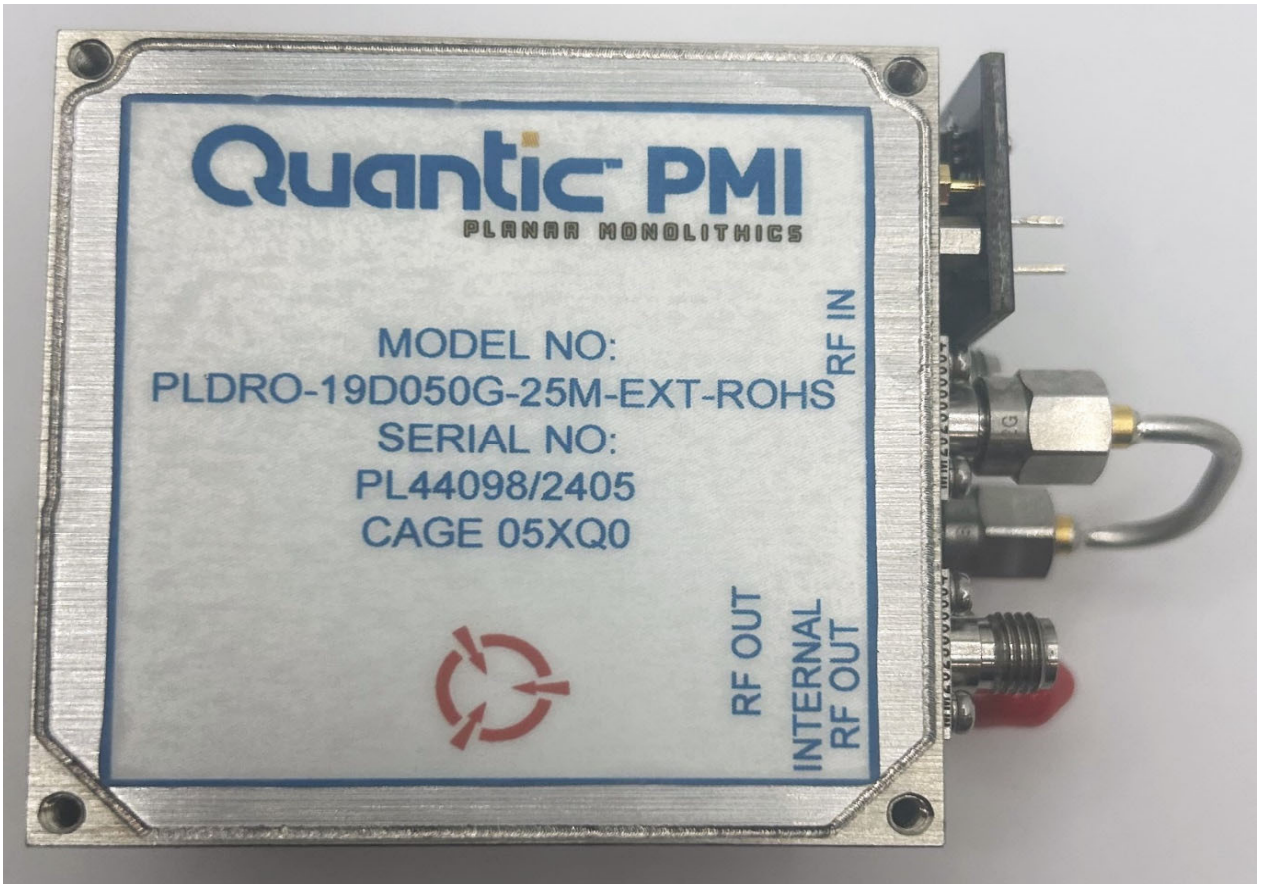
TYPICAL CHARACTERISTICS
ON
PLDRO-19D050G-25M-EXT-ROHS

PMI MODEL PLDRO-19D050G-25M-EXT-ROHS IS A PLDRO WITH AN OUTPUT FREQUENCY OF 19.050 GHz. THIS MODEL IS OUTFITTED WITH SMA CONNECTORS.



Tested By
Rony C.

Reported By
Robert S.

Date
Thursday, February 1, 2024

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TYPICAL CHARACTERISTICS ON PLDRO-19D050G-25M-EXT-ROHS

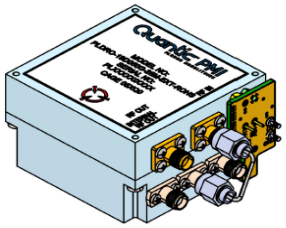
PRODUCT FEATURE

DESCRIPTION:
PMI MODEL PLDRO-19D050G-25M-EXT-ROHS IS A PLDRO WITH AN OUTPUT FREQUENCY OF 19.050 GHz. THIS MODEL IS OUTFITTED WITH SMA CONNECTORS. (RoHS/REACH COMPLIANT)

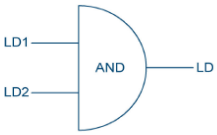
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	11/28/2023	

SPECIFICATIONS:

- OUTPUT FREQUENCY:..... 19.050 GHz
- REFERENCE FREQUENCY:..... 25 MHz (EXTERNAL)
- OUTPUT POWER INTO 50 OHMS OVER:..... +13 TO +15 dBm
  THE OPERATIONAL TEMPERATURE
- NO LOCK BREAK PULLING VSWR:..... 3.0:1 MAX
- OUTPUT DISCRETE SPURIOUS:..... -76 dBc MAX
  @ ± (10 MHz TO 2 GHz) AWAY FROM CARRIER
- OUTPUT HARMONICS:..... -20 dBc MAX
- OUTPUT SSB PHASE NOISE:..... -42 dBc/Hz MAX @ 10 Hz OFFSET
  PHASE NOISE BETWEEN TWO SPECIFIED POINTS -67 dBc/Hz MAX @ 100 Hz OFFSET
  SHALL BE LOWER THAN THE STRAIGHT LINE -98 dBc/Hz MAX @ 1 kHz OFFSET
  DRAWN BETWEEN THE TWO POINTS ON A dB vs LOG -106 dBc/Hz MAX @ 10 kHz OFFSET
  FREQUENCY PLOT. -109 dBc/Hz MAX @ 100 kHz OFFSET
  -126 dBc/Hz MAX @ ≥1 MHz OFFSET
- REFERENCE INPUT POWER:..... +10 ±3 dBm
- REFERENCE INPUT SPURIOUS @ > 1MHz :..... -80 dBc MAX
  AWAY FROM THE CARRIER
- EXTERNAL REFERENCE SSB PHASE :..... -110 dBc/Hz MAX @ 10 Hz OFFSET
  NOISE @ 25 MHz -137 dBc/Hz MAX @ 100 Hz OFFSET
  -156 dBc/Hz MAX @ 1 kHz OFFSET
  -165 dBc/Hz MAX @ 10 kHz OFFSET
  -168 dBc/Hz MAX @ 100 kHz OFFSET
- DC POWER SUPPLY INPUT :..... +12 ± 0.5 VDC, 500 mA MAX (@ +25°C)
- LOCK INDICATOR OUTPUT :..... TTL HIGH FOR IN-LOCK
  TTL LOW FOR OUT-OF-LOCK
- PHASE VOLTAGE MONITOR OUTPUT :..... 0 TO +12 VDC
- OPERATIONAL TEMPERATURE AT :..... -40°C TO +75°C
  MOUNTING PLATE
- COLD START TEMPERATURE :..... -45°C MAX
- RF CONNECTORS :..... SMA FEMALE
- PINS :..... SOLDERABLE
- FINISH :..... NICKEL PLATED



INPUT		OUTPUT
LD1	LD2	LD
TTL LOW	TTL LOW	TTL LOW
TTL LOW	TTL HIGH	TTL LOW
TTL HIGH	TTL LOW	TTL LOW
TTL HIGH	TTL HIGH	TTL HIGH

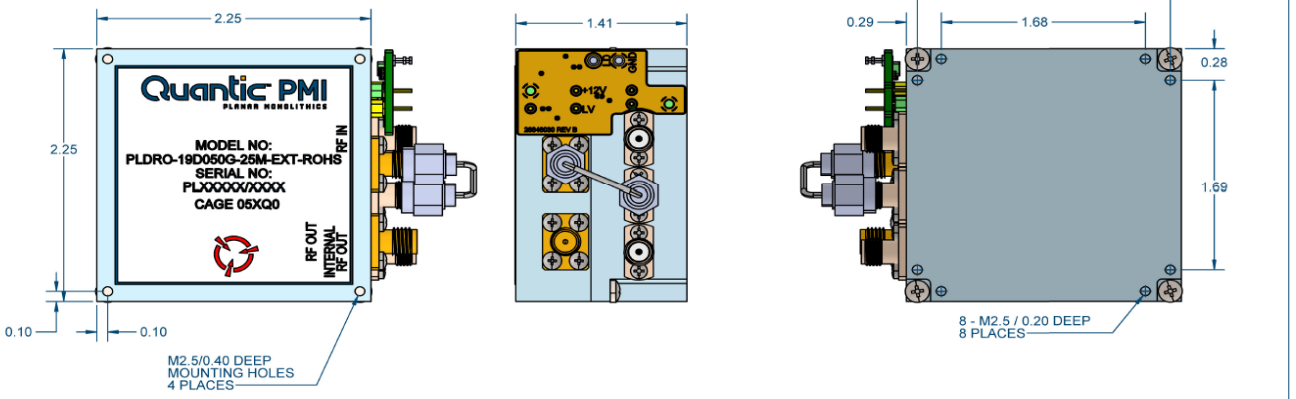


PMI CONFIDENTIAL AND PROPRIETARY

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

APPROVALS	DATE
DRAWN R. SIRK	11/28/2023
RECHECKED	
ISSUED	

TITLE: OUTLINE
PLDRO-19D050G-25M-EXT-ROHS
SIZE B | FSCM NO. 05XQ0 | DWG NO. 27047740 | REV. A1
SCALE 1:1 | SHEET 1 OF 2



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APPROVALS	DATE
DRAWN R. SIRK	11/28/2023
RECHECKED	
ISSUED	

TITLE: OUTLINE
PLDRO-19D050G-25M-EXT-ROHS
SIZE B | FSCM NO. 05XQ0 | DWG NO. 27047740 | REV. A1
SCALE 1:1 | SHEET 2 OF 2

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Quantic PMI
PLANAR MONOLITHICS

TYPICAL CHARACTERISTICS ON PLDRO-19D050G-25M-EXT-ROHS

Test Data

TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			+25°C	-40°C	+75°C
1	Output Frequency	19.050 GHz	**19.050 GHz**	**19.050 GHz**	**19.050 GHz**
2	Reference Frequency	25 MHz	**25 MHz**	**25 MHz**	**25 MHz**
3	Input Power Level	+10 ±3 dBm	**+10 ±3 dBm**	**+10 ±3 dBm**	**+10 ±3 dBm**
4	No Lock Break VSWR	3:1 Max	**Pass**		
5	Output Power Level	+13 to +15 dBm Min	**14.9 dBm**	**15 dBm**	**14 dBm**
6	Output Spurious (10 MHz to 2 GHz)	-76 dBc Max	**-79.3 dBc**	**-79.3 dBc**	**-79.3 dBc**
7	Output Harmonics	-20 dBc Max	**-57.59 dBc**	**-57.85 dBc**	**-57.05 dBc**
8	Output SSB Phase Noise	-42 dBc/Hz @ 10 Hz Max -67 dBc/Hz @ 100 Hz Max -98 dBc/Hz @ 1 kHz Max -106 dBc/Hz @ 10 kHz Max -109 dBc/Hz @ 100 kHz Max -126 dBc/Hz @ ≥1 MHz Max	**-53.43 dBc/Hz @ 10 Hz** **-92.61 dBc/Hz @ 100 Hz** **-113.69 dBc/Hz @ 1 kHz** **-113.53 dBc/Hz @ 10 kHz** **-116.12 dBc/Hz @ 100 kHz** **-137.9 dBc/Hz @ 1 MHz**		
9	Reference Input Spurious	-80 dBc Max	**-80 dBc Max**		
10	External Reference Phase Noise	-110 dBc/Hz @ 10 Hz Max -137 dBc/Hz @ 100 Hz Max -156 dBc/Hz @ 1 kHz Max -165 dBc/Hz @ 10 kHz Max -168 dBc/Hz @ 100 kHz Max	**-110 dBc/Hz @ 10 Hz Max** **-137 dBc/Hz @ 100 Hz Max** **-156 dBc/Hz @ 1 kHz Max** **-165 dBc/Hz @ 10 kHz Max** **-168 dBc/Hz @ 100 kHz Max**		

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

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TYPICAL CHARACTERISTICS ON PLDRO-19D050G-25M-EXT-ROHS

TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS		
			+25°C	-40°C	+75°C
11	Lock Detector	TTL High - In Lock; TTL Low - Out of Lock	TTL High - In Lock; TTL Low - Out of Lock	TTL High - In Lock; TTL Low - Out of Lock	TTL High - In Lock; TTL Low - Out of Lock
12	Supply Voltage	+12±0.5V @ 500mA Max (@ 25°C)	**+12 ± 0.5V @ 388 mA**	**+12±0.5V @ 420 mA**	**+12±0.5V @ 312 mA**
13	Phase Voltage Monitor Output	0V to +12V	**0V to +12V**	**0V to +12V**	**0V to +12V**
14	Cold Start Temperature:	-45°C Max	**-45°C Max**		

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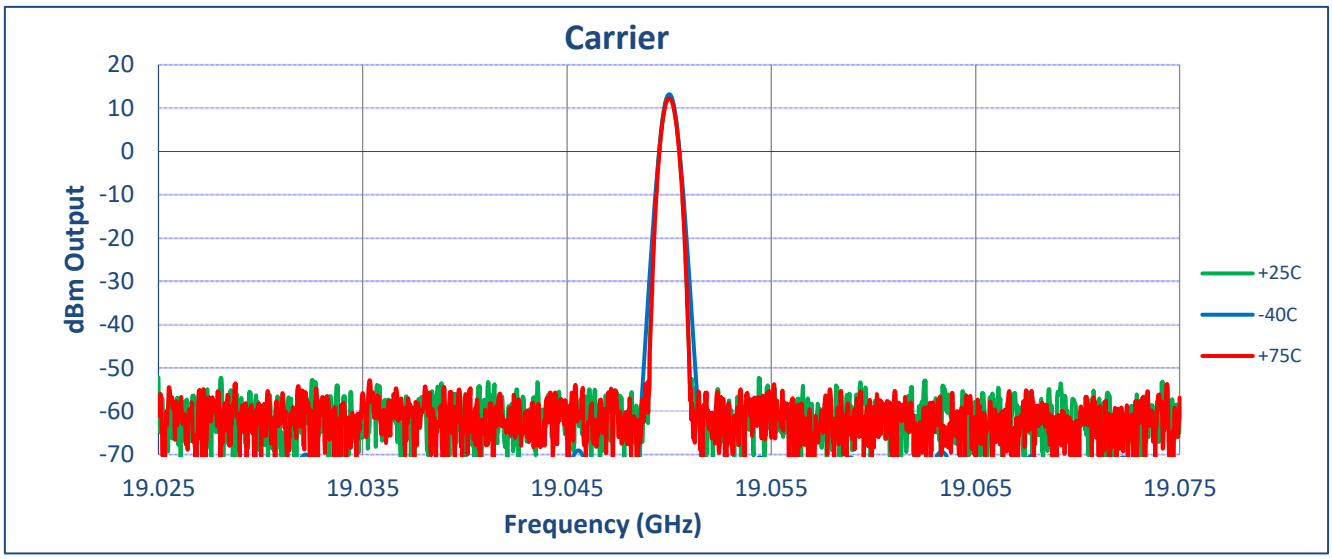

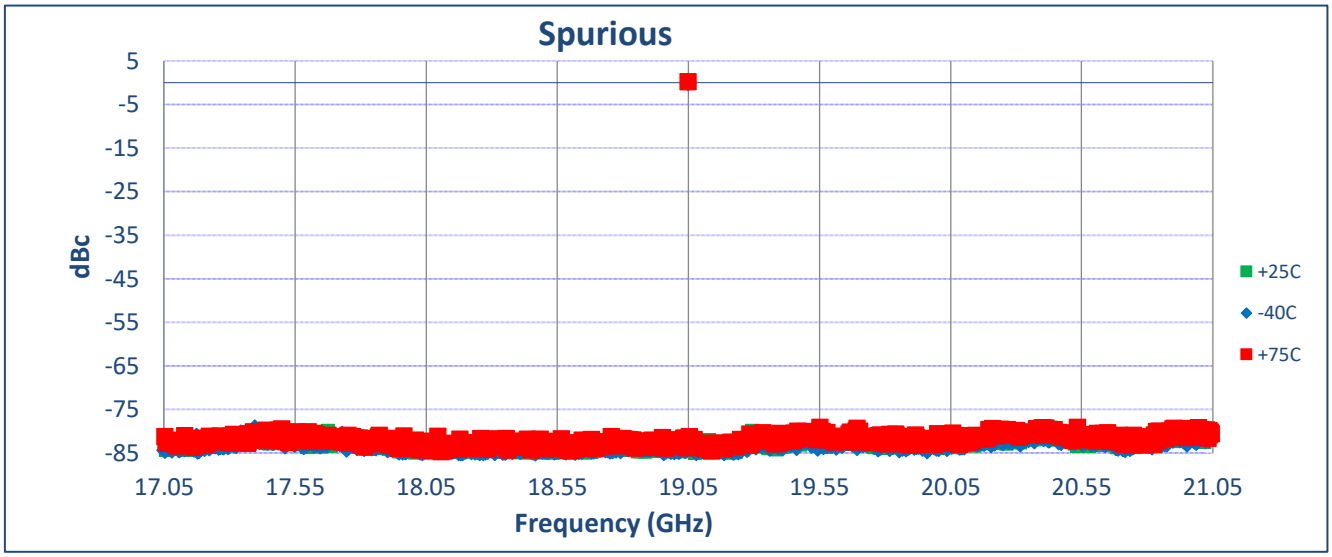

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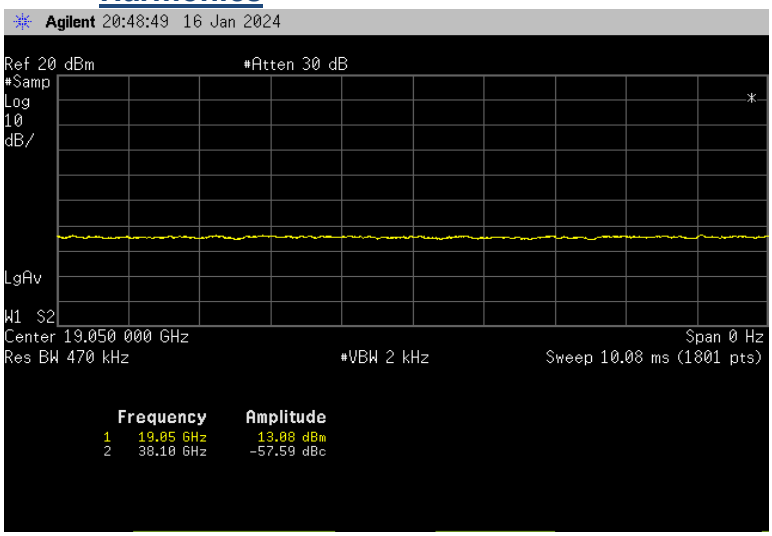
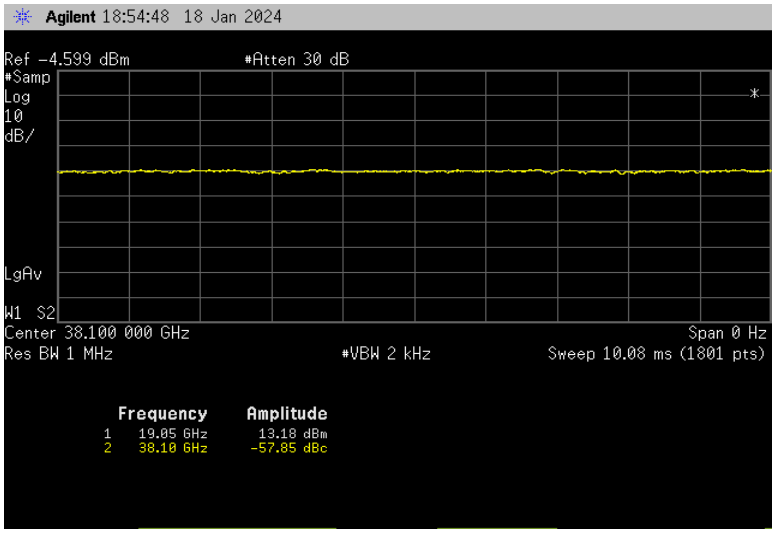
Harmonics

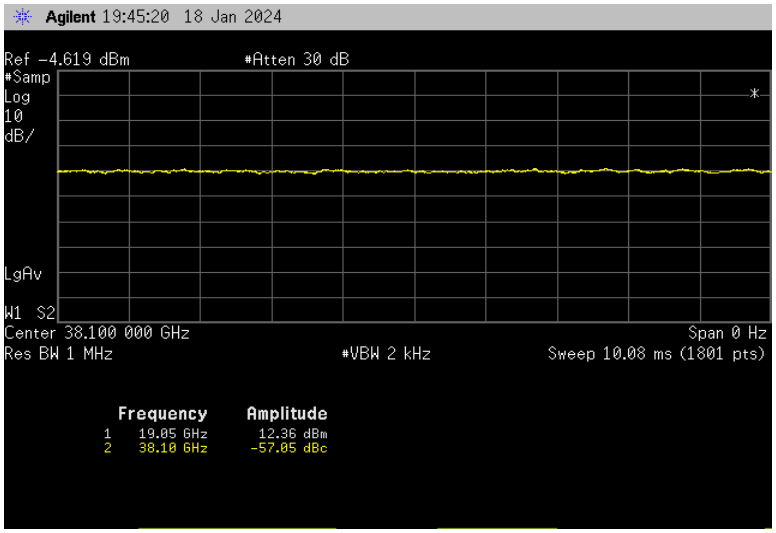
+25°C
-57.59 dBc



-40°C
-57.85 dBc



+75°C
-57.05 dBc



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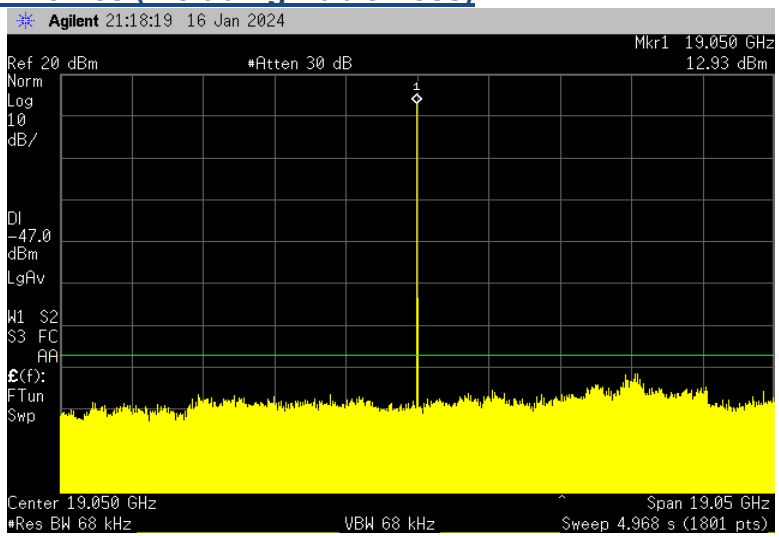
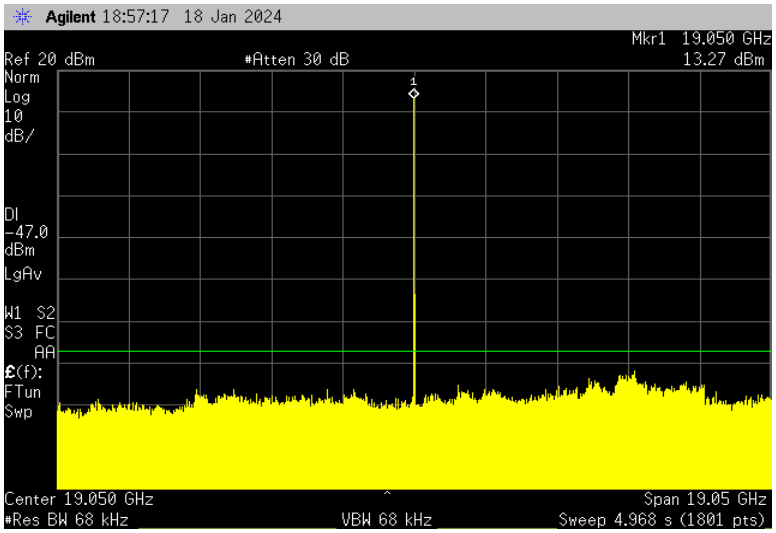
Sub Harmonics (Including Cable Loss)

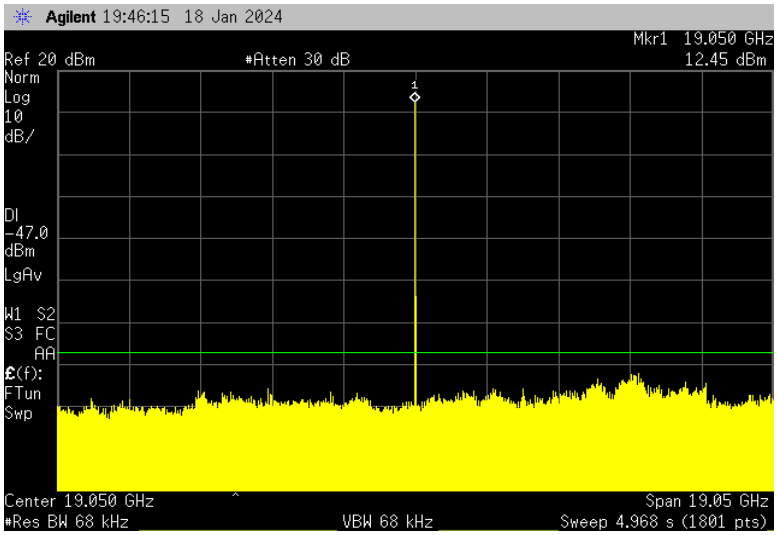
+25°C



-40°C



+75°C



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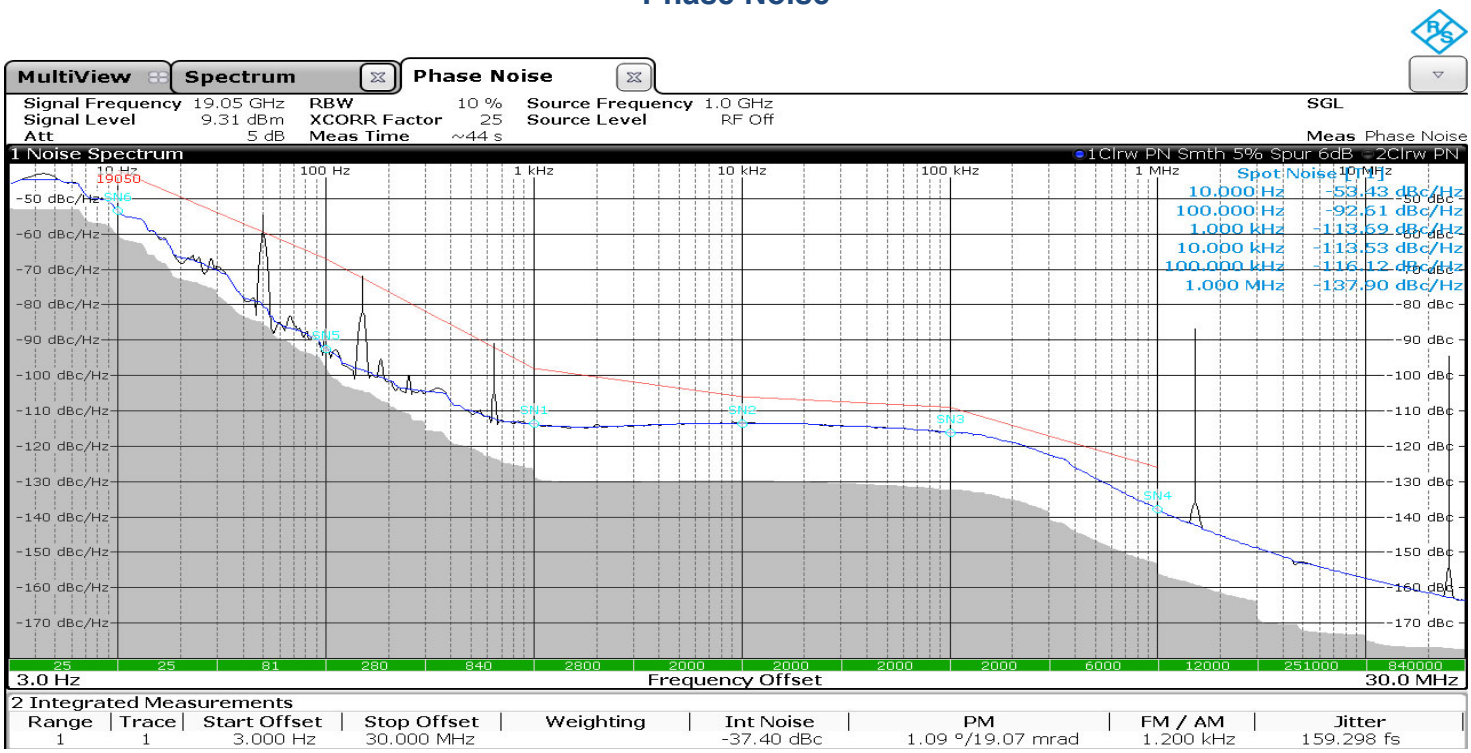
Phase Noise



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