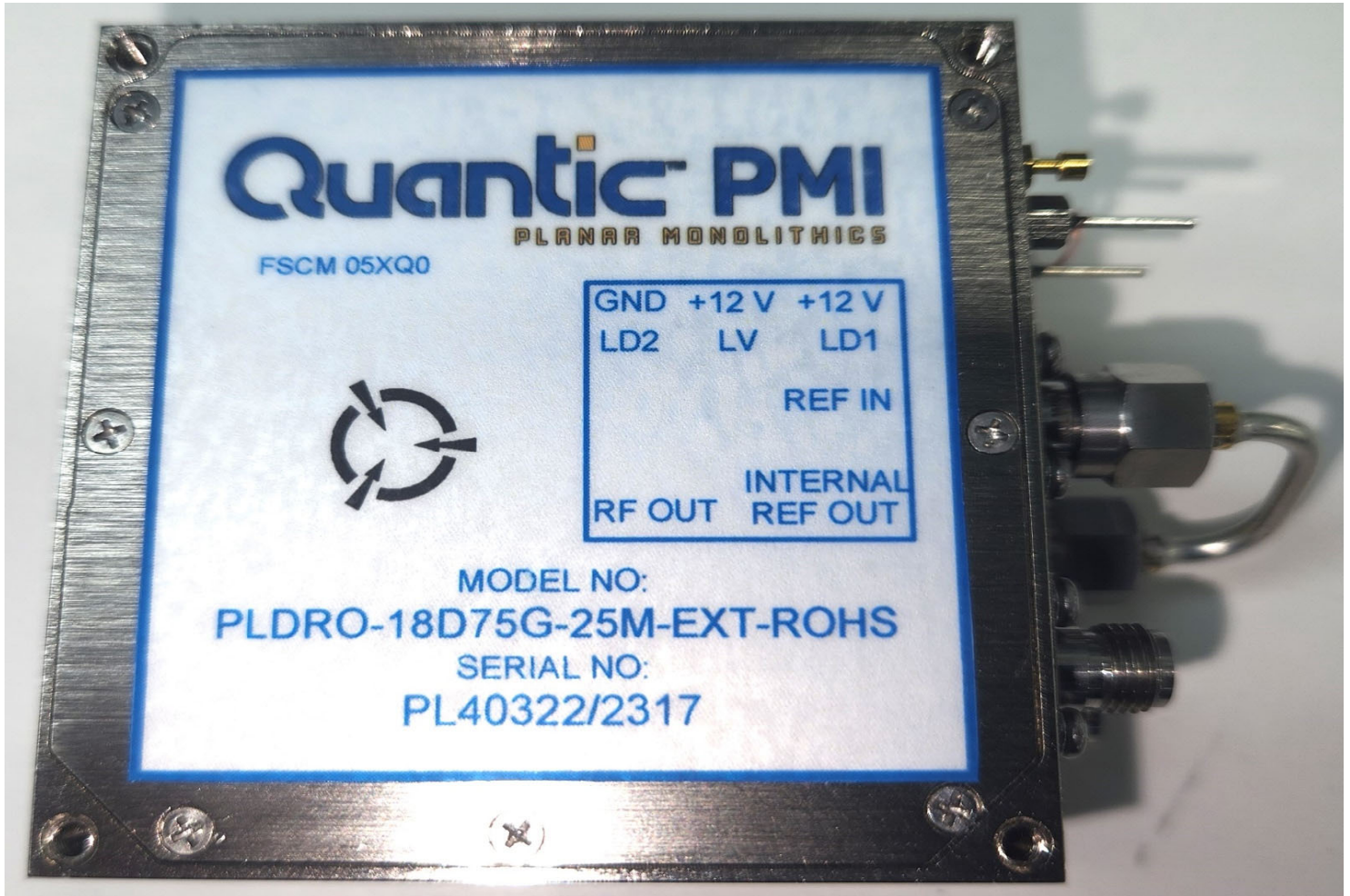


**TYPICAL CHARACTERISTICS
ON
PLDRO-18D75G-25M-EXT-ROHS**

PMI MODEL NO. PLDRO-18D75G-25M-EXT-ROHS IS A PLDRO WITH AN OUTPUT FREQUENCY OF 18.75 GHZ. THIS MODEL IS OUTFITTED WITH SMA CONNECTORS.



Reported By: Kevin Simms

Tested By: Kevin Craven

Date: May 4th, 2023

TYPICAL CHARACTERISTICS ON PLDRO-18D75G-25M-EXT-ROHS

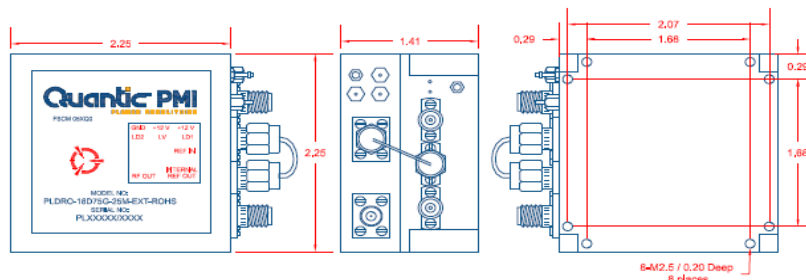
OUTLINE DRAWING

DESCRIPTION

PMI MODEL NO. PLDRO-18D75G-25M-EXT-ROHS IS A PLDRO WITH AN OUTPUT FREQUENCY OF 18.750 GHz. THIS MODEL IS OUTFITTED WITH SMA CONNECTORS.

SPECIFICATIONS

- OUTPUT FREQUENCY: 18.750 GHz
- REFERENCE FREQUENCY: 25 MHz (EXTERNAL)
- OUTPUT POWER INTO 50 OHMS OVER THE OPERATIONAL TEMPERATURE: +13 to +15 dBm
- NO LOCK BREAK PULLING VSWR: 3.0:1 MIN
- OUTPUT DISCRETE SPURIOUS (10 MHz to 50 GHz): -75 dBc MAX
- OUTPUT HARMONICS: -25 dBc MAX
- SUB-HARMONICS: -60 dBc MAX (0.5 Fo, 1.5 Fo, 2.5 Fo, etc)
- OUTPUT SSB PHASE NOISE:
 - 50 dBc/Hz @ 10 Hz OFFSET
 - 75 dBc/Hz @ 100 Hz OFFSET
 - 87 dBc/Hz @ 1 kHz OFFSET
 - 95 dBc/Hz @ 10 kHz OFFSET
 - 105 dBc/Hz @ 100 kHz OFFSET
 - 125 dBc/Hz @ 1 MHz OFFSET
 - 128 dBc/Hz @ 10 MHz OFFSET
 - 143 dBc/Hz @ 100 MHz OFFSET
- REFERENCE INPUT POWER: +10 to 3 dBc
- REFERENCE INPUT SPURIOUS @ GREATER THAN 1 MHz AWAY FROM THE CARRIER: -80 dBm MAX
- EXTERNAL REFERENCE SSB PHASE NOISE @ 25 MHz:
 - 118 dBc/Hz @ 10 Hz OFFSET
 - 137 dBc/Hz @ 100 Hz OFFSET
 - 150 dBc/Hz @ 1 kHz OFFSET
 - 165 dBc/Hz @ 10 kHz OFFSET
 - 165 dBc/Hz @ 100 kHz OFFSET
 Wenzel P/N: 500-13837 or equivalent
- DC POWER SUPPLY INPUT: +12 +/- 0.5 VDC, 500 mA MAX
- 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 MOUNTING PLATE: -40° to 75°C
- COLD START TEMPERATURE: -45°C MAX
- RF CONNECTORS: SMA FEMALE
- PINS: SOLDERABLE
- FINISH: NICKEL PLATED



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	2/25/23	

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

PMI CONFIDENTIAL AND PROPRIETARY

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ISO 9001 CERTIFIED

Quantic[™] PMI
PLANAR MONOLITHICS

APPROVALS		DATE		TITLE	
DRAWN: <i>MDL</i>		2/25/23		OUTLINE PLDRO-18D75G-25M-EXT-ROHS	
REDESIGNED		SER:	PSCM NO.	DWG NO.	REV.
		A	05XQ0	27045980	A1
ISSUED		SCALE	NzS	SHEET	1 OF 1

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

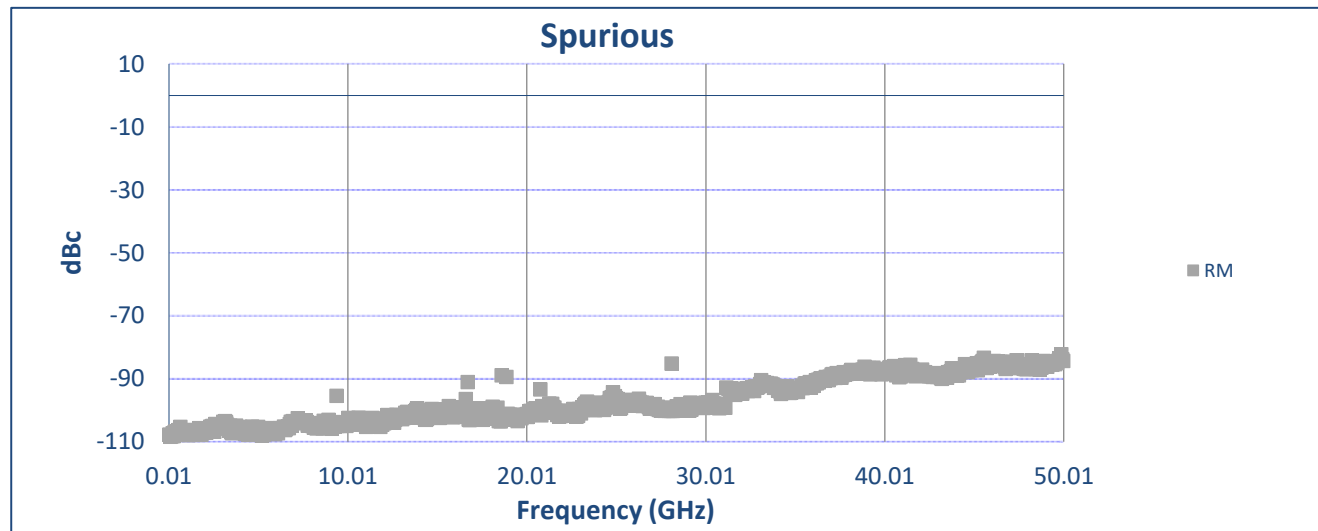
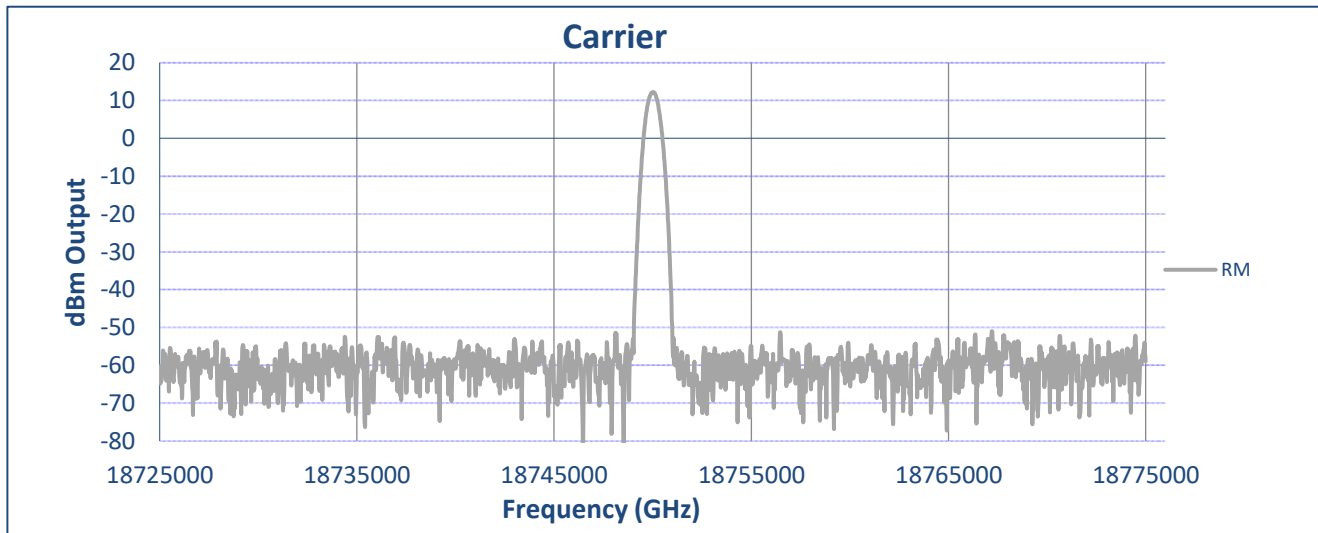
TYPICAL CHARACTERISTICS ON PLDRO-18D75G-25M-EXT-ROHS

+25°C

TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS
1	Output Frequency	18.75 GHz	18.75 GHz
2	Reference Frequency	25 MHz External	25 MHz External
3	Output Power	13 to 15 dBm	14.7dBm
4	No Lock Break VSWR	3:1 Min	Pass See Typical Characteristics
5	Output Spurious (10MHz to 50GHz)	-75 dBc Max	82.1dBc
6	Output Harmonics	-25 dBc Max	-56.1dBc
7	Sub Harmonics	-60 dBc Max (0.5*n Fo)	Pass See Typical Characteristics
8	Output Ssb Phase Noise	See Outline	Pass See Typical Charactersitics
9	Reference Input Power	3 to 10 dBm	10 dBm
10	Frequency Stability	Same As Reference	Not Tested
11	Reference Input Spurious	-80 dBc Max	Pass By Test Setup
12	Reference Phase Noise	See Outline	Pass By Test Setup
13	DC Supply	12 +/- 0.5 V, 500 mA	12V @ 360 mA
14	Lock Detector	TTL HIGH In Lock, TTL Low Out Lock	Pass
15	Phase Voltage Monitor Output	0 to 12 V	0 to 12 V
16	Cold Start Temperature	-45 Degrees C Max	Pass By Design

**TYPICAL CHARACTERISTICS
ON
PLDRO-18D75G-25M-EXT-ROHS**

+25°C





+25°C

The screenshot displays the Agilent Spectrum Analyzer interface. The main display area shows a spectrum plot with a grid. The top status bar indicates "Ch Freq ----" and "Trig Free". Below the plot, the following parameters are visible:

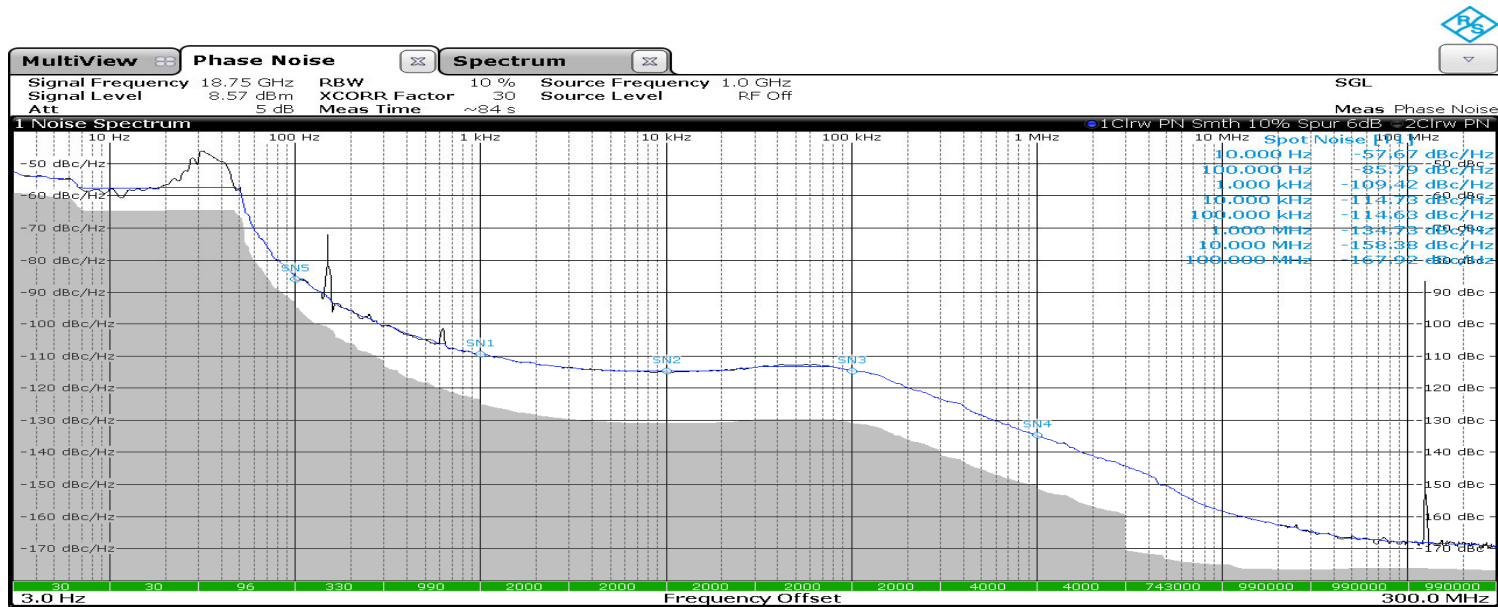
- Ref -4.021 dBm
- #Atten 30 dB
- #Samp Log
- Log
- 10
- dB/
- Center 37.500 004 GHz
- Span 0 Hz
- Res BW 1 MHz
- #VBW 2 kHz
- Sweep 10.08 ms (1801 pts)

A table at the bottom summarizes the measured components:

	Frequency	Amplitude
1	18.75 GHz	12.24 dBm
2	37.50 GHz	-56.09 dBc

On the right side, a vertical menu lists various measurement functions: Measure, Harmonic Distortion, Burst Power, Intermod (TOI), Spurious Emissions, Spectrum Emission Mask, and More (2 of 2).

25°C Phase noise curve



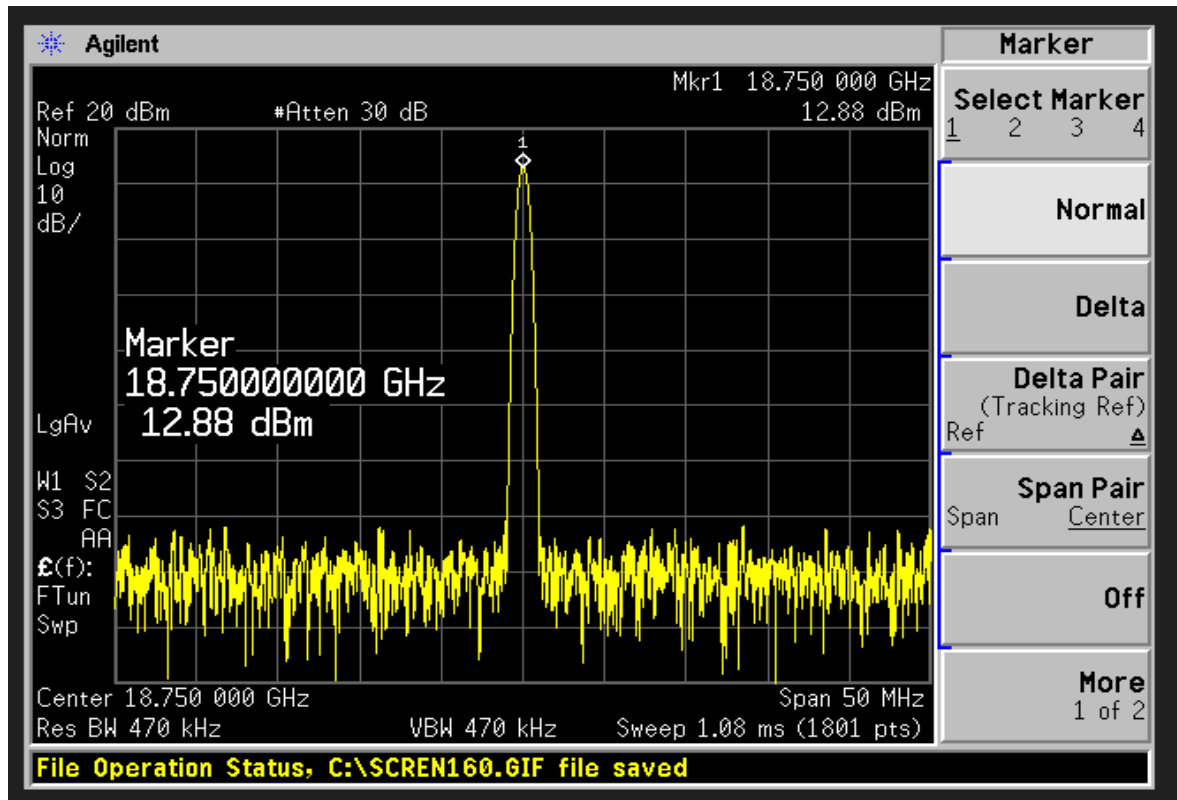
**TYPICAL CHARACTERISTICS
ON
PLDRO-18D75G-25M-EXT-ROHS**

-40°C

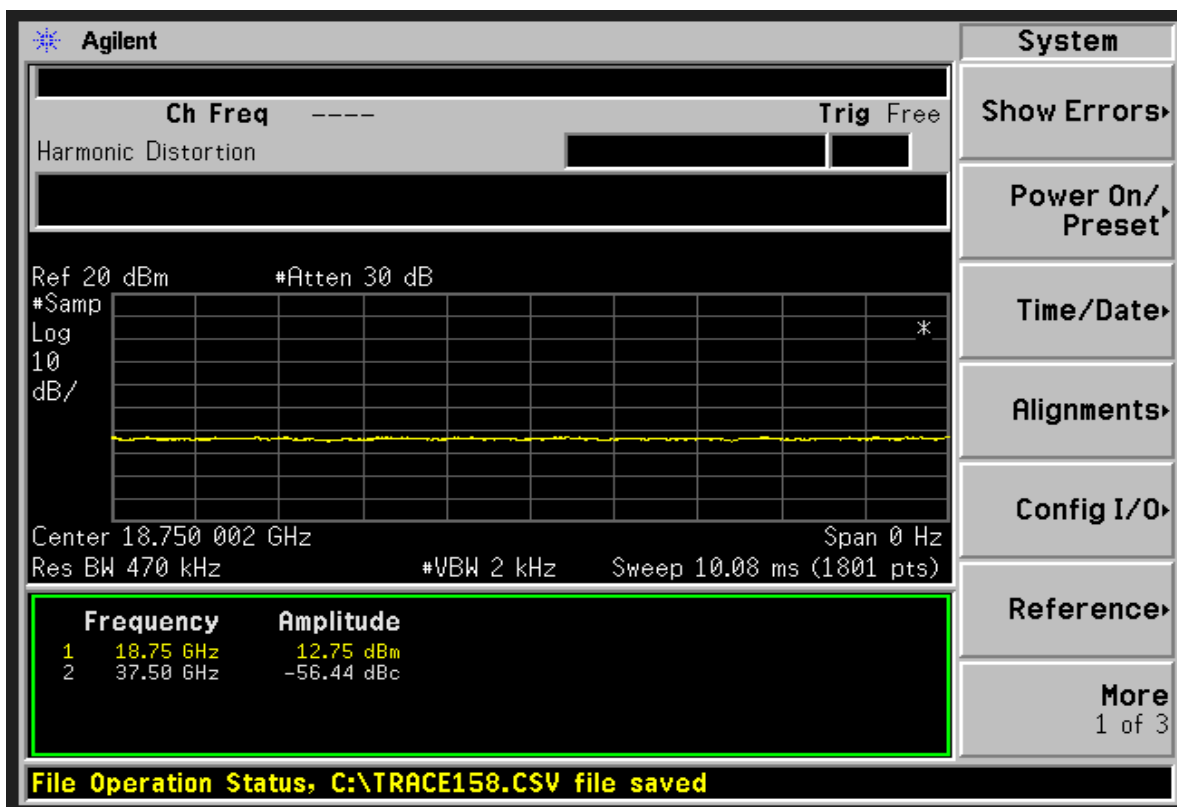
TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS
1	Output Frequency	18.75 GHz	18.75 GHz
2	Reference Frequency	25 MHz External	25 MHz External
3	Output Power	13 to 15 dBm	15.33dBm
4	No Lock Break VSWR	3:1 Min	Not tested at this temperature
5	Output Spurious (10MHz to 50GHz)	-75 dBc Max	Not tested at this temperature
6	Output Harmonics	-25 dBc Max	-56.4dBc
7	Sub Harmonics	-60 dBc Max (0.5*n Fo)	Not tested at this temperature
8	Output Ssb Phase Noise	See Outline	Not tested at this temperature
9	Reference Input Power	3 to 10 dBm	10 dBm
10	Frequency Stability	Same As Reference	Not tested at this temperature
11	Reference Input Spurious	-80 dBc Max	Pass By Test Setup
12	Reference Phase Noise	See Outline	Pass By Test Setup
13	DC Supply	12 +/- 0.5 V, 500 mA	12V @ 430 mA
14	Lock Detector	TTL HIGH In Lock, TTL Low Out Lock	Pass
15	Phase Voltage Monitor Output	0 to 12 V	0 to 12 V
16	Cold Start Temperature	-45 Degrees C Max	Pass By Design

**TYPICAL CHARACTERISTICS
ON
PLDRO-18D75G-25M-EXT-ROHS**

-40°C



carrier plot does not include cable loss



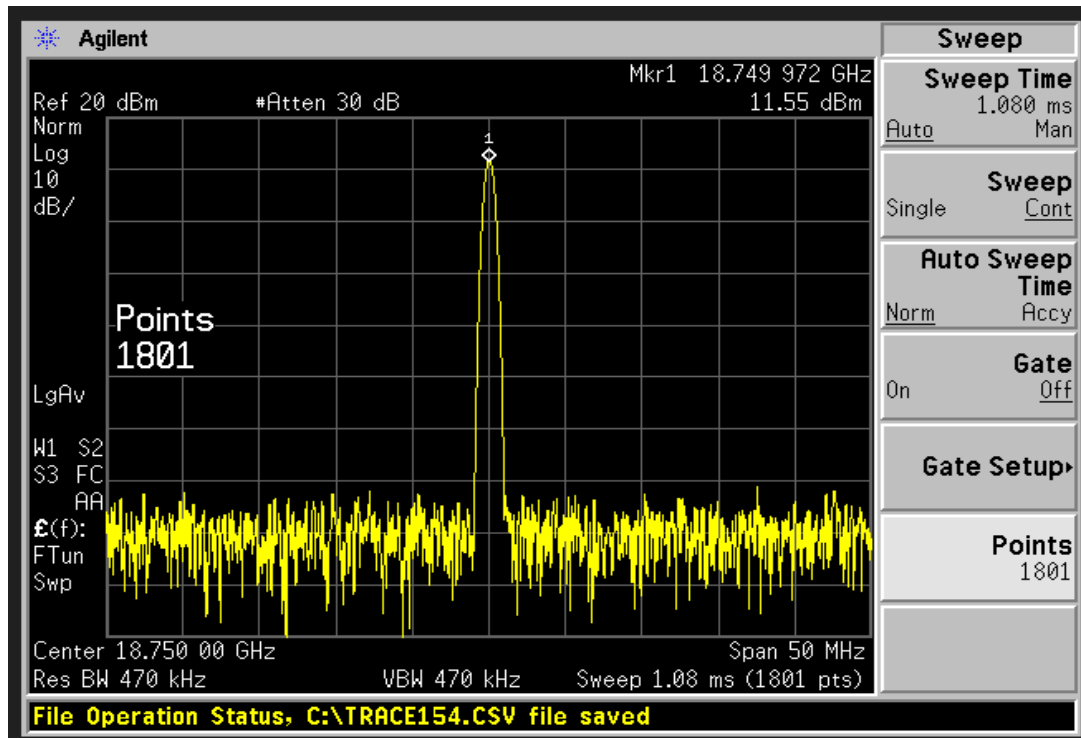
**TYPICAL CHARACTERISTICS
ON
PLDRO-18D75G-25M-EXT-ROHS**

+75°C

TEST ITEM	PARAMETERS	SPECIFIED VALUE	TEST RESULTS
1	Output Frequency	18.75 GHz	18.75 GHz
2	Reference Frequency	25 MHz External	25 MHz External
3	Output Power	13 to 15 dBm	14.0dBm
4	No Lock Break VSWR	3:1 Min	Not tested at this temperature
5	Output Spurious (10MHz to 50GHz)	-75 dBc Max	Not tested at this temperature
6	Output Harmonics	-25 dBc Max	-56.5dBc
7	Sub Harmonics	-60 dBc Max (0.5*n Fo)	Not tested at this temperature
8	Output Ssb Phase Noise	See Outline	Not tested at this temperature
9	Reference Input Power	3 to 10 dBm	10 dBm
10	Frequency Stability	Same As Reference	Not tested at this temperature
11	Reference Input Spurious	-80 dBc Max	Pass By Test Setup
12	Reference Phase Noise	See Outline	Pass By Test Setup
13	DC Supply	12 +- 0.5 V, 500 mA	12V @ 300 mA
14	Lock Detector	TTL HIGH In Lock, TTL Low Out Lock	Pass
15	Phase Voltage Monitor Output	0 to 12 V	0 to 12 V
16	Cold Start Temperature	-45 Degrees C Max	Pass By Design

**TYPICAL CHARACTERISTICS
ON
PLDRO-18D75G-25M-EXT-ROHS**

+75°C



carrier plot does not include cable loss

