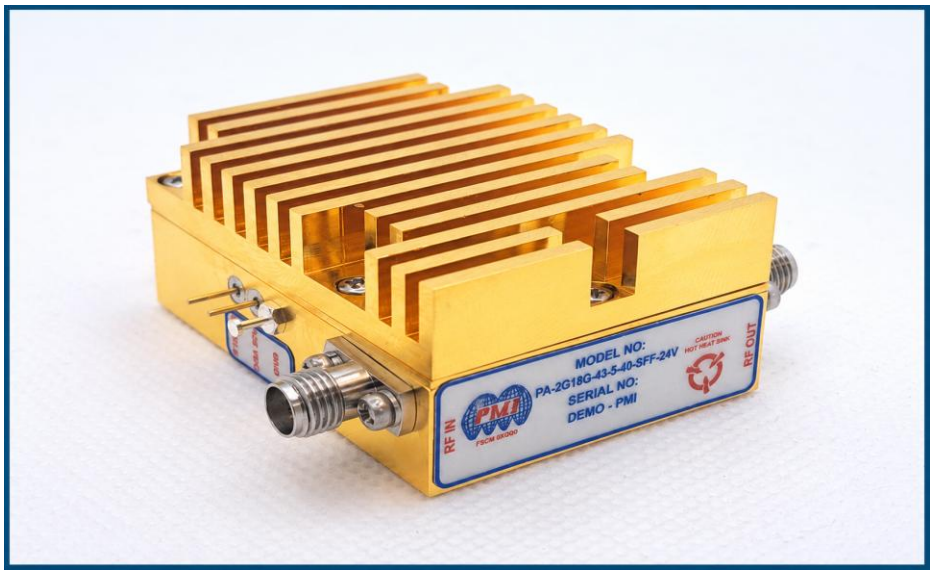
Typical Characteristics
ON
PA-2G18G-43-5-40-SFF-24V

PMI MODEL NUMBER PA-2G18G-43-5-40-SFF-24V IS A HIGH POWER AMPLIFIER WITH AN OPERATING FREQUENCY OF 2 TO 18 GHz, 43 dB GAIN AND SATURATED OUTPUT POWER OF 40 dBm.



November 3, 2026

Designed By:

Engineering PMI

Tested and Reported By:

Alfredo Lopez

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

Typical Characteristics
ON
PA-2G18G-43-5-40-SFF-24V

Product Feature

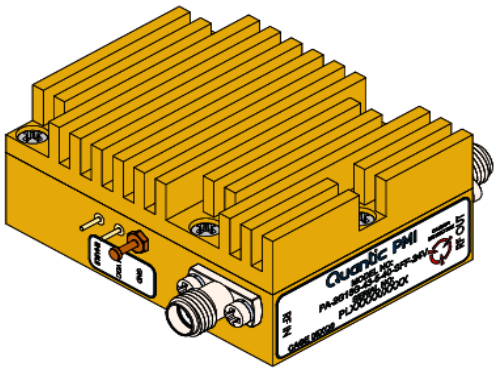
DESCRIPTION:

PMI MODEL NUMBER PA-2G18G-43-5-40-SFF-24V IS A HIGH POWER AMPLIFIER WITH AN OPERATING FREQUENCY OF 2 TO 18 GHz, 43 dB GAIN AND SATURATED OUTPUT POWER OF 40 dBm.

ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A1	ORIGINAL RELEASE	1/17/2024	

SPECIFICATIONS:

- FREQUENCY RANGE:..... 2.0 TO 18.0 GHz
- GAIN:..... 43 dB TYP
  39 dB MIN
- VSWR (INPUT):..... 2.0 : 1 MAX
- VSWR (OUTPUT):..... 2.4 : 1 MAX
- NOISE FIGURE:..... 5.0 dB MAX
- PSAT:..... 40 dBm (10W) TYP
  36 dBm MIN
- INPUT POWER:..... 20 dBm MAX
- SUPPLY*:..... +24 VDC MAX
- POWER AMP CONTROL (ENABLE):..... "1" = +3V ON
  "0" = 0V OFF
- WEIGHT:.....2.0 oz MAX (WITHOUT HEATSINK)
- CONNECTORS:..... SMA FEMALE REMOVEABLE
- FINISH:..... GOLD PLATED
- OPTION:.....HEATSINK WITH 120VAC FAN:
  PA-2G18G-43-5-40-SFF-HS-24V



Typical Current	
Quiescent current and maximum current	
-40°C	
-30 dBm Input Power	1,860 mA
+20 dBm Input Power	2,550 mA
+25°C	
-30 dBm Input Power	2,150 mA
+20 dBm Input Power	3,200 mA
+85°C	
-30 dBm Input Power	2,400 mA
+20 dBm Input Power	3,300 mA

*LOWER VOLTAGE WILL RESULT IN LOWER PSAT. GAIN WILL STAY CONSTANT DOWN TO +20 VDC.

ENVIRONMENTAL RATINGS:

- TEMPERATURE:..... -40°C TO +85°C (OPERATING)
  -55°C TO +125°C (STORAGE)
- HUMIDITY:.....MIL-STD-202, METHOD 103B COND. B
- SHOCK:.....MIL-STD-202, METHOD 213B COND. B
- VIBRATION:.....MIL-STD-202, METHOD 204D 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 R. SIRK	1/17/2024
REDRAWN	
ISSUED	

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

TITLE: OUTLINE
PA-2G18G-43-5-40-SFF-24V

SIZE	FSCM NO.	DWG NO.	REV.
B	05XQ0	27050740	A1

SCALE 1:1 SHEET 1 OF 2

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± DECIMALS .XX ± 0.02 .XXX ± 0.01 ANGLES ±

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Typical Characteristics
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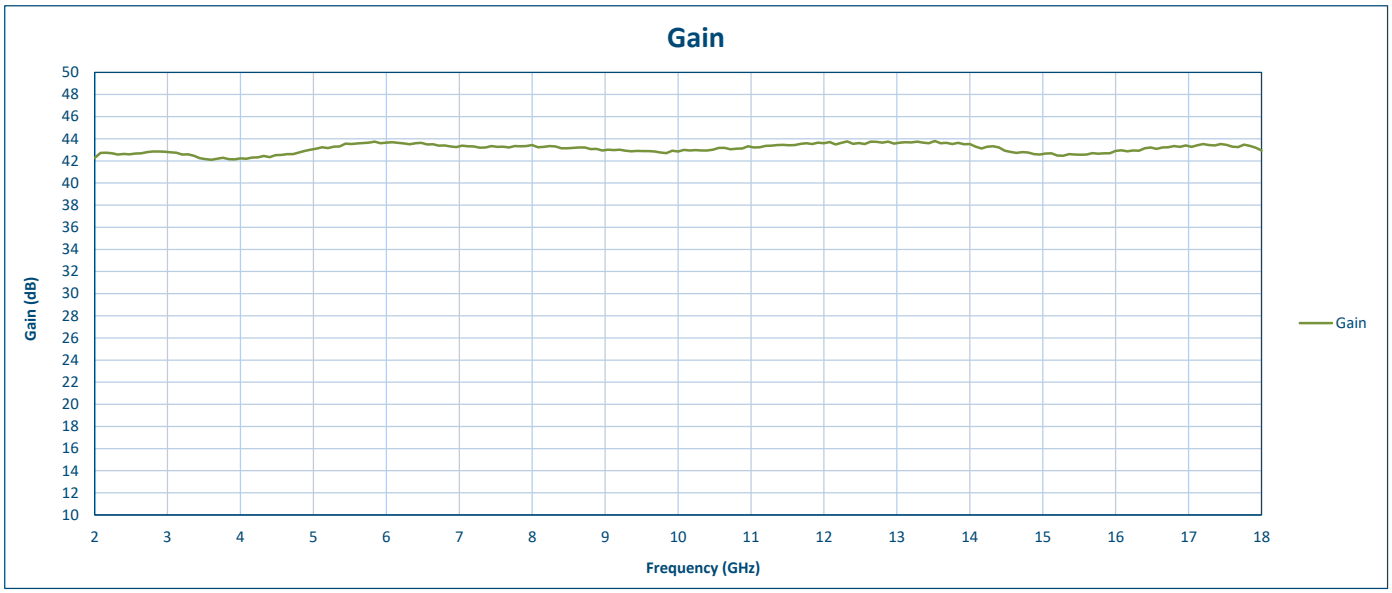
Technical Specifications

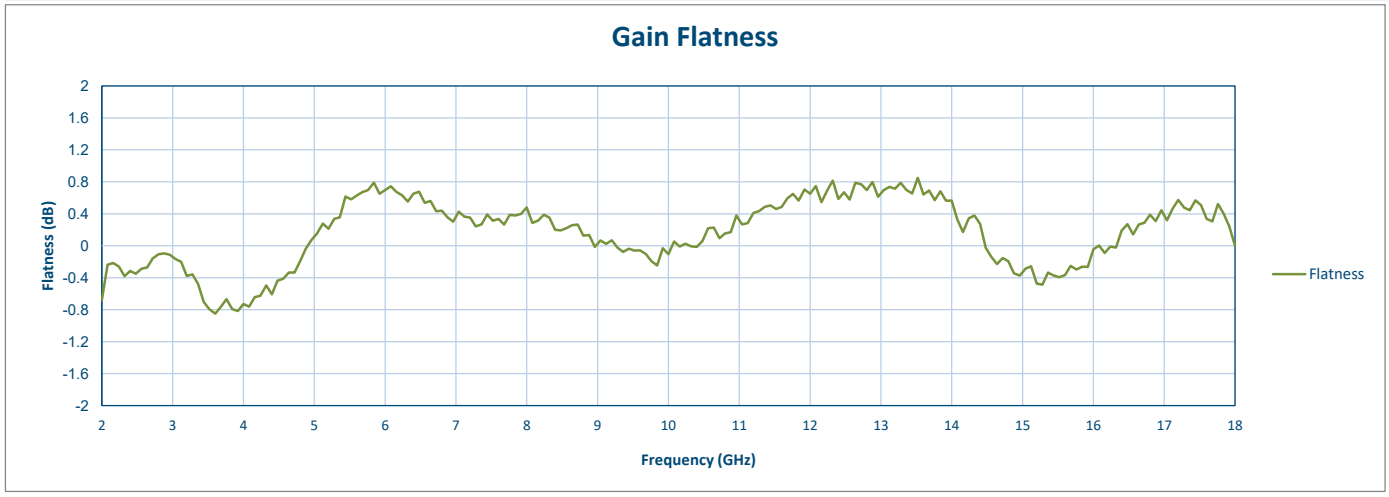
TEST. ITEM NO	PARAMETERS	SPECIFIED VALUE	Test Results +25°C	QA QC
1	Frequency Range:	2.0 - 18.0 GHz	**2.0 - 18.0 GHz**	
2	Gain:	43 dB Typ. 39 dB Min.	**42.1 dB** **See Graph**	
3	VSWR: (Input)	2.0:1 Max.	**1.87 :1** **See Graph**	
	VSWR: (Output)	2.4:1 Max.	**2.03 :1** **See Graph**	
4	Noise Figure:	5.0 dB Max	**2.79 dB** **See Graph**	
5	PSAT:	40 dBm (10W) Typ. 36 dBm Min	**43.97 dBm Max.** **39.68 dBm Min.** **See Graph**	
6	Input Power:	20 dBm Max.	**Pass** **See Graph**	
7	DC Supply:	+24 VDC	**+24 VDC** **& 3.4 A** **@Psat**	
8	Control (Enable)	"1" = +3V ON "0" = 0 V OFF	**Pass**	

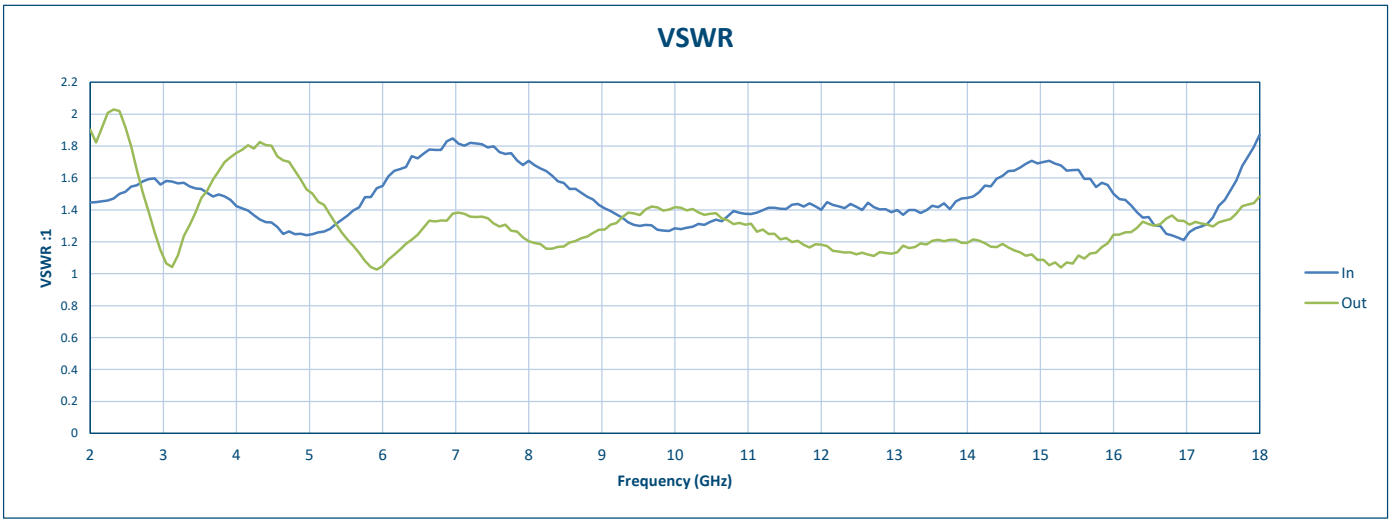
Typical Current	
+25°C	
-30 dBm Input Power	2.3 A
+20 dBm Input Power	3.4 A

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Typical Characteristics
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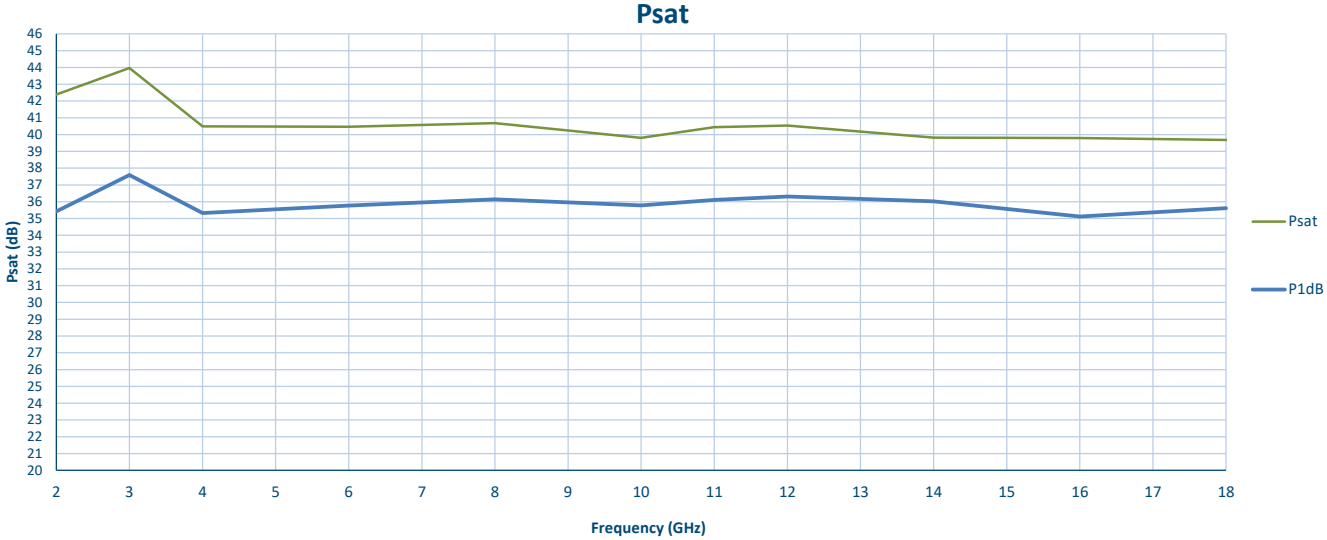


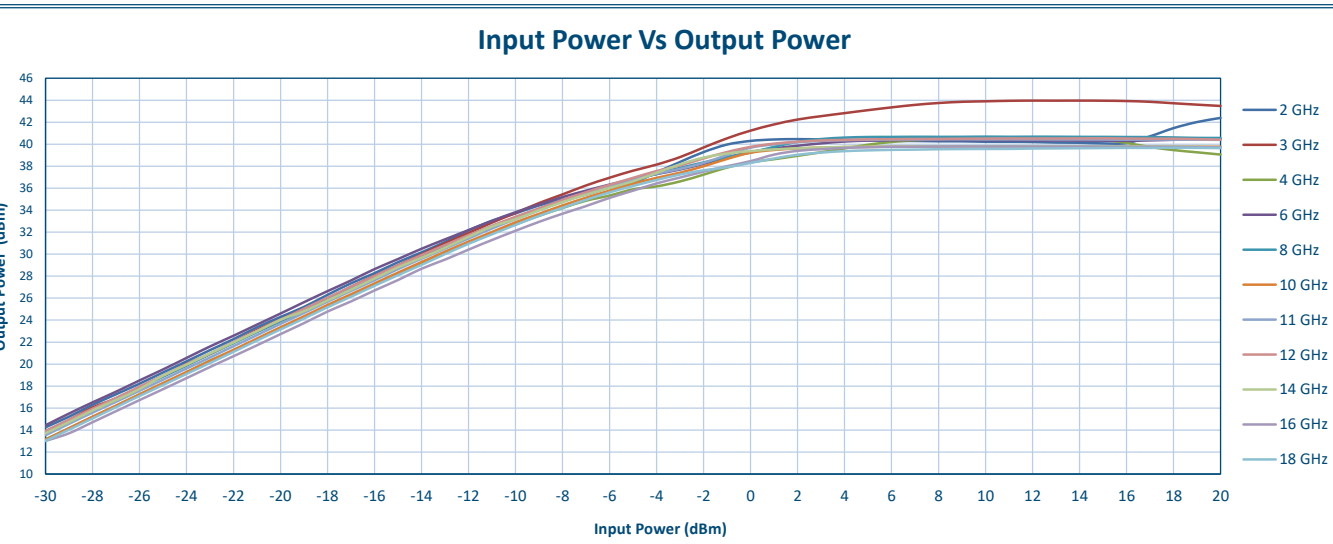


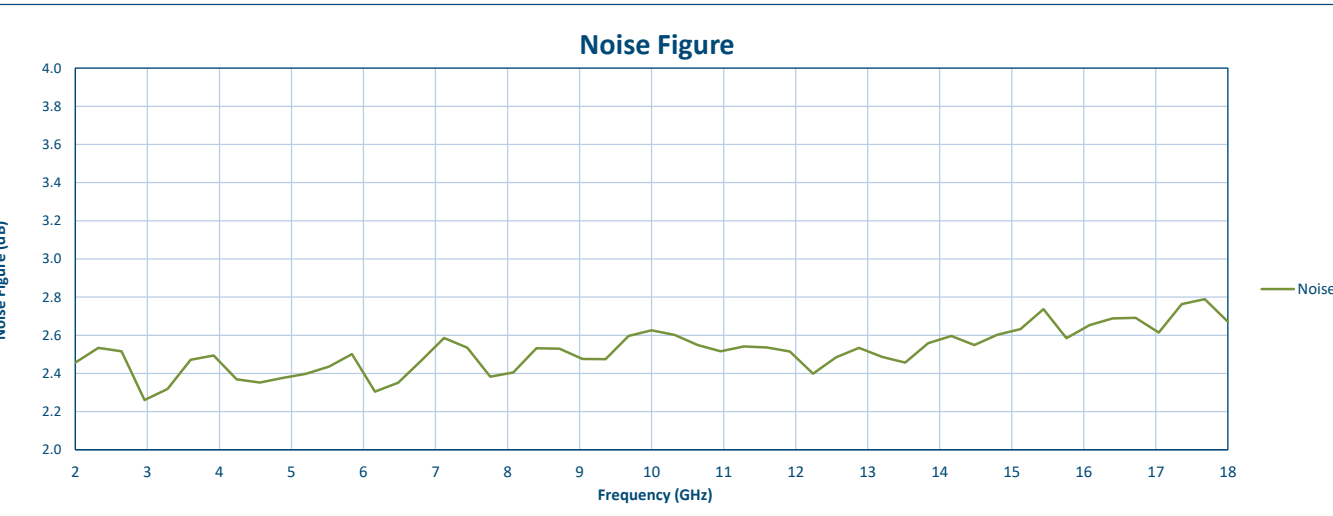


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Typical Characteristics
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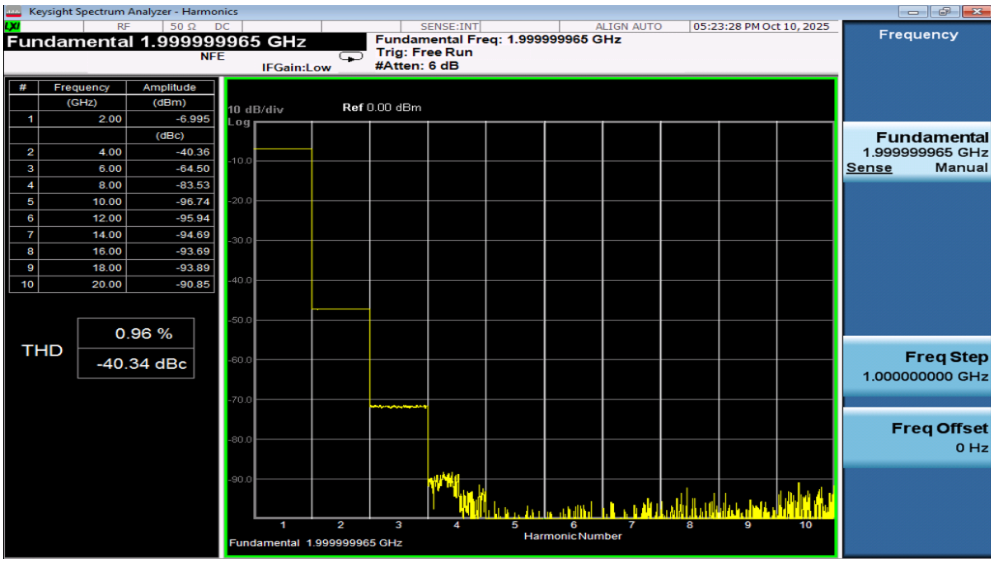
Typical Characteristics
ON
PA-2G18G-43-5-40-SFF-24V

Harmonics

Fundamental Frequency - 2GHz

-30 dBm Input Power

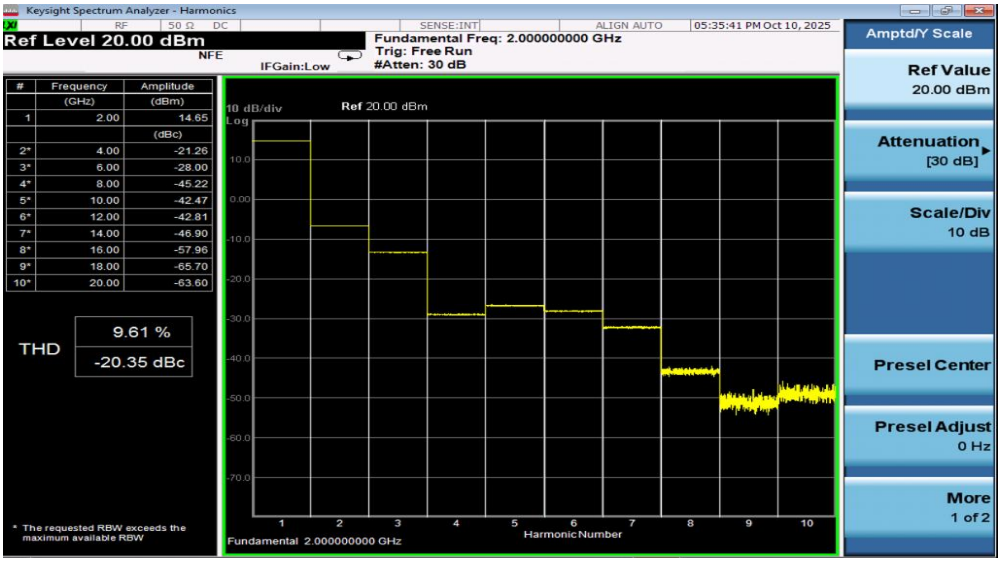
Second harmonic measured value 40.36 dBc



Fundamental Frequency - 2GHz

-5 dBm Input Power (@ P1dB)

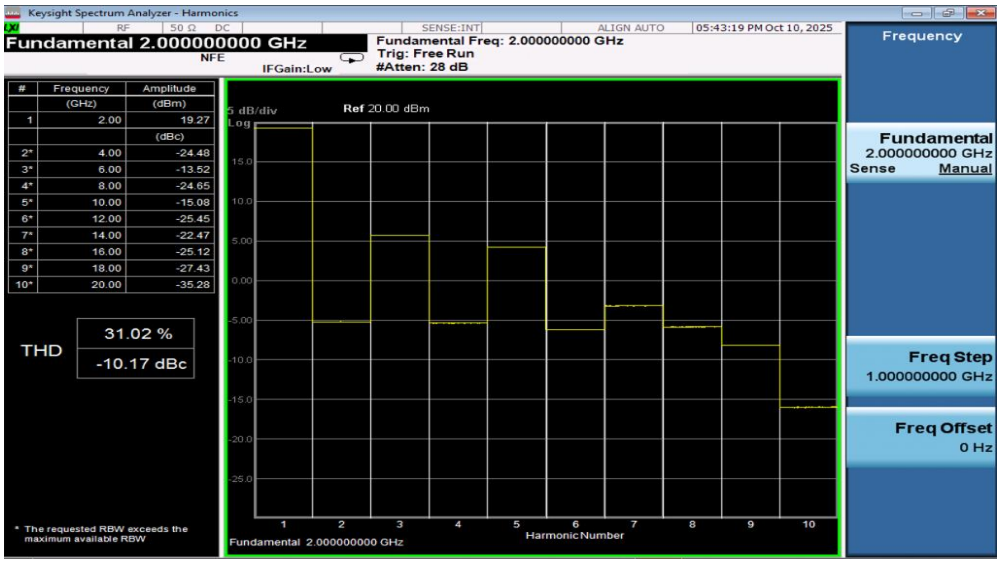
Second harmonic measured value 21.26 dBc



Fundamental Frequency - 2GHz

+15 dBm Input Power (@ PSat)

Second harmonic measured value 13.52 dBc



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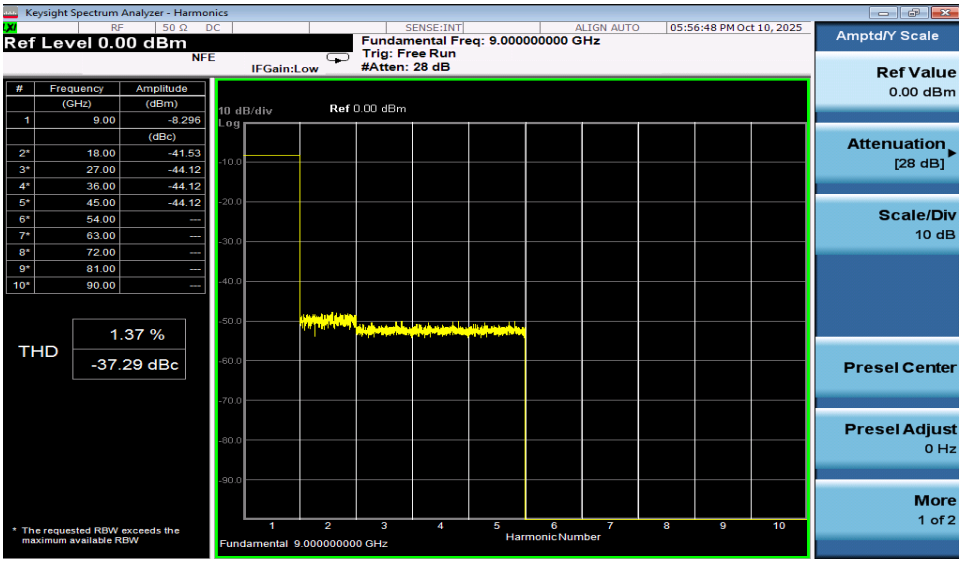
Typical Characteristics
ON
PA-2G18G-43-5-40-SFF-24V

Harmonics

Fundamental Frequency - 9 GHz

-30 dBm Input Power

Second harmonic measured value
40.36 dBc

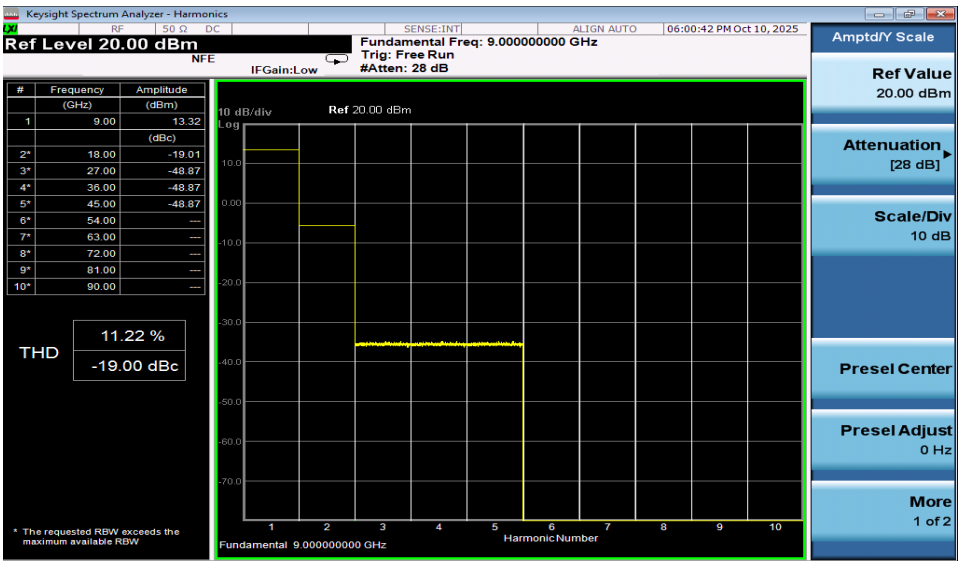


#	Frequency (GHz)	Amplitude (dBm)
1	9.00	-8.296
		(dBc)
2*	18.00	-41.53
3*	27.00	-44.12
4*	36.00	-44.12
5*	45.00	-44.12
6*	54.00	---
7*	63.00	---
8*	72.00	---
9*	81.00	---
10*	90.00	---

Fundamental Frequency - 9 GHz

-5 dBm Input Power (@ P1dB)

Second harmonic measured value
21.26 dBc

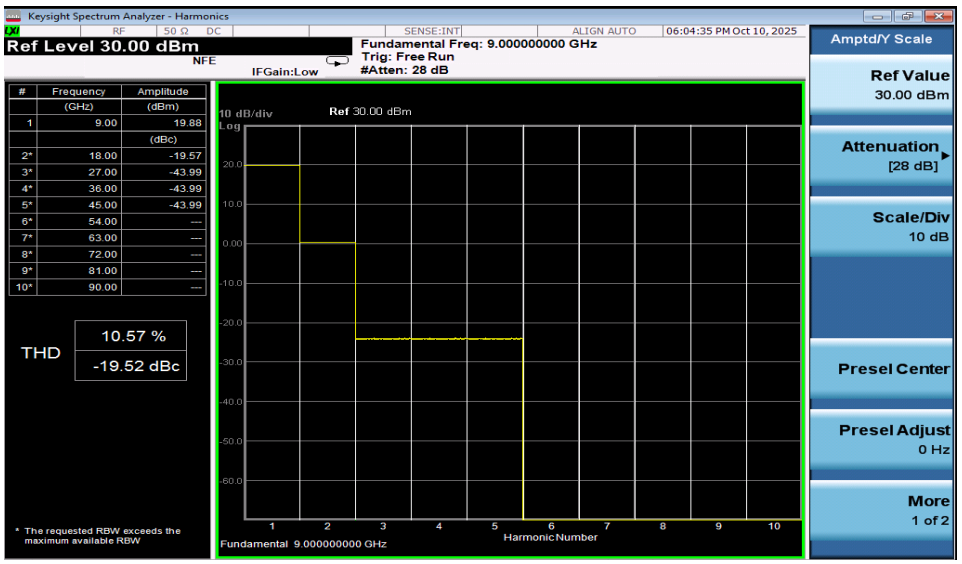


#	Frequency (GHz)	Amplitude (dBm)
1	9.00	13.32
		(dBc)
2*	18.00	-19.01
3*	27.00	-48.87
4*	36.00	-48.87
5*	45.00	-48.87
6*	54.00	---
7*	63.00	---
8*	72.00	---
9*	81.00	---
10*	90.00	---

Fundamental Frequency - 2 GHz

+15 dBm Input Power (@ PSat)

Second harmonic measured value
13.52 dBc



#	Frequency (GHz)	Amplitude (dBm)
1	9.00	19.88
		(dBc)
2*	18.00	-19.57
3*	27.00	-43.99
4*	36.00	-43.99
5*	45.00	-43.99
6*	54.00	---
7*	63.00	---
8*	72.00	---
9*	81.00	---
10*	90.00	---

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Typical Characteristics

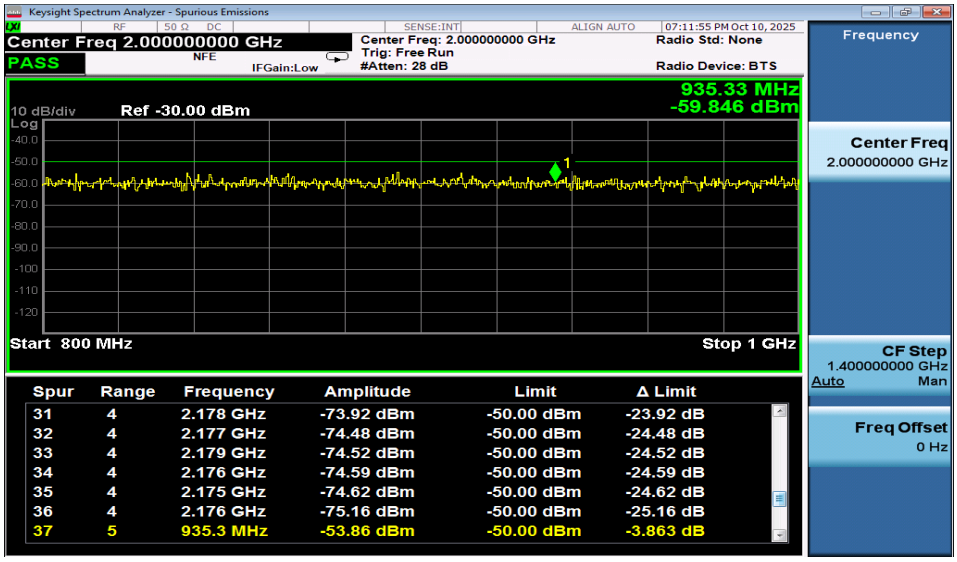
ON
PA-2G18G-43-5-40-SFF-24V

Spurious

Fundamental Frequency - 2 GHz

-30 dBm Input Power

Spurious measured value
53.86 dBm

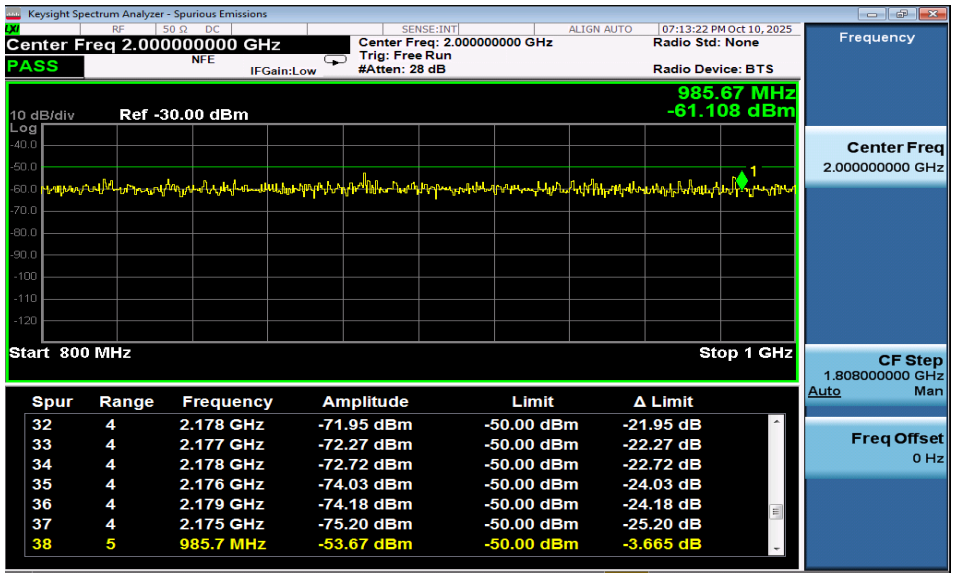


Spur	Range	Frequency	Amplitude	Limit	Δ Limit
31	4	2.178 GHz	-73.92 dBm	-50.00 dBm	-23.92 dB
32	4	2.177 GHz	-74.48 dBm	-50.00 dBm	-24.48 dB
33	4	2.179 GHz	-74.52 dBm	-50.00 dBm	-24.52 dB
34	4	2.176 GHz	-74.59 dBm	-50.00 dBm	-24.59 dB
35	4	2.175 GHz	-74.62 dBm	-50.00 dBm	-24.62 dB
36	4	2.176 GHz	-75.16 dBm	-50.00 dBm	-25.16 dB
37	5	935.3 MHz	-53.86 dBm	-50.00 dBm	-3.863 dB

Fundamental Frequency - 2 GHz

-5 dBm Input Power (@ P1dB)

Spurious measured value
53.67 dBm

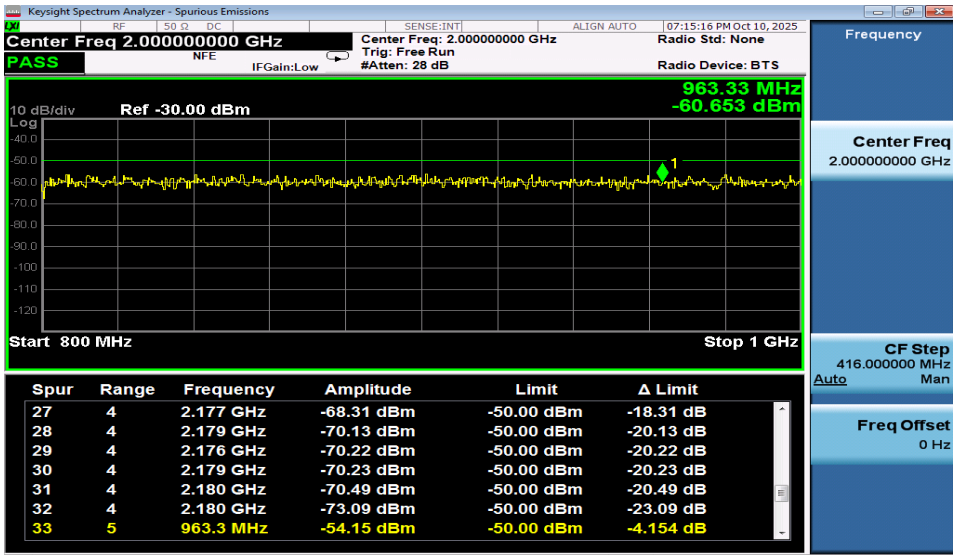


Spur	Range	Frequency	Amplitude	Limit	Δ Limit
32	4	2.178 GHz	-71.95 dBm	-50.00 dBm	-21.95 dB
33	4	2.177 GHz	-72.27 dBm	-50.00 dBm	-22.27 dB
34	4	2.178 GHz	-72.72 dBm	-50.00 dBm	-22.72 dB
35	4	2.176 GHz	-74.03 dBm	-50.00 dBm	-24.03 dB
36	4	2.179 GHz	-74.18 dBm	-50.00 dBm	-24.18 dB
37	4	2.175 GHz	-75.20 dBm	-50.00 dBm	-25.20 dB
38	5	985.7 MHz	-53.67 dBm	-50.00 dBm	-3.665 dB

Fundamental Frequency - 2 GHz

+15 dBm Input Power (@ PSat)

Spurious measured value
54.15 dBm



Spur	Range	Frequency	Amplitude	Limit	Δ Limit
27	4	2.177 GHz	-68.31 dBm	-50.00 dBm	-18.31 dB
28	4	2.179 GHz	-70.13 dBm	-50.00 dBm	-20.13 dB
29	4	2.176 GHz	-70.22 dBm	-50.00 dBm	-20.22 dB
30	4	2.179 GHz	-70.23 dBm	-50.00 dBm	-20.23 dB
31	4	2.180 GHz	-70.49 dBm	-50.00 dBm	-20.49 dB
32	4	2.180 GHz	-73.09 dBm	-50.00 dBm	-23.09 dB
33	5	963.3 MHz	-54.15 dBm	-50.00 dBm	-4.154 dB

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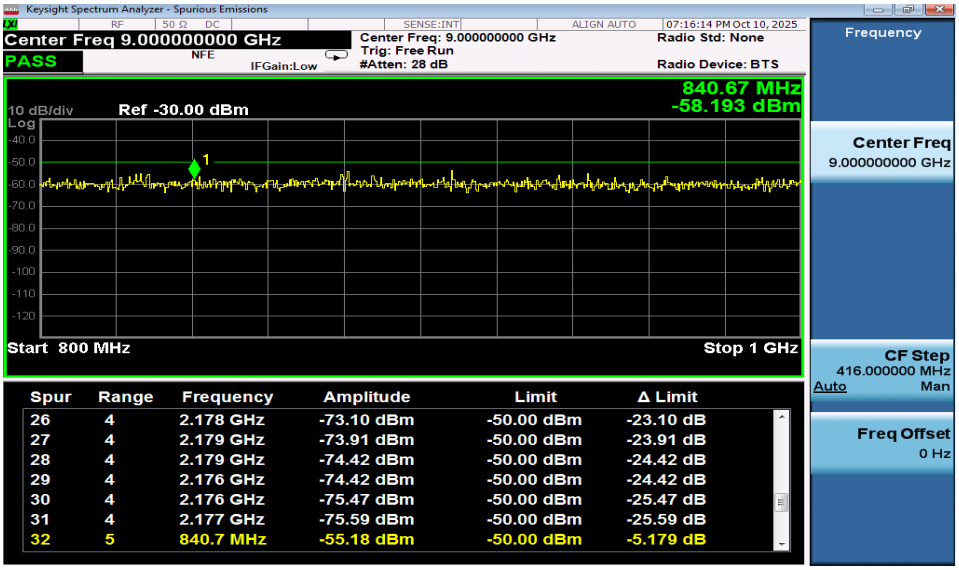
Typical Characteristics ON PA-2G18G-43-5-40-SFF-24V

Spurious

Fundamental Frequency - 9 GHz

-30 dBm Input Power

Spurious measured value 55.18 dBm

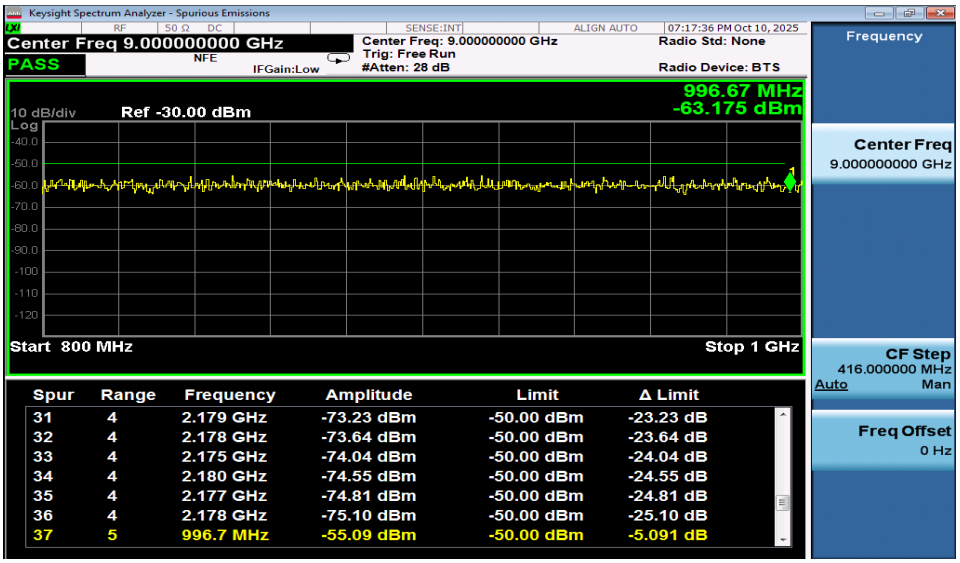


Spur	Range	Frequency	Amplitude	Limit	Δ Limit
26	4	2.178 GHz	-73.10 dBm	-50.00 dBm	-23.10 dB
27	4	2.179 GHz	-73.91 dBm	-50.00 dBm	-23.91 dB
28	4	2.179 GHz	-74.42 dBm	-50.00 dBm	-24.42 dB
29	4	2.176 GHz	-74.42 dBm	-50.00 dBm	-24.42 dB
30	4	2.176 GHz	-75.47 dBm	-50.00 dBm	-25.47 dB
31	4	2.177 GHz	-75.59 dBm	-50.00 dBm	-25.59 dB
32	5	840.7 MHz	-55.18 dBm	-50.00 dBm	-5.179 dB

Fundamental Frequency - 9 GHz

-5 dBm Input Power (@ P1dB)

Spurious measured value 55.09 dBm

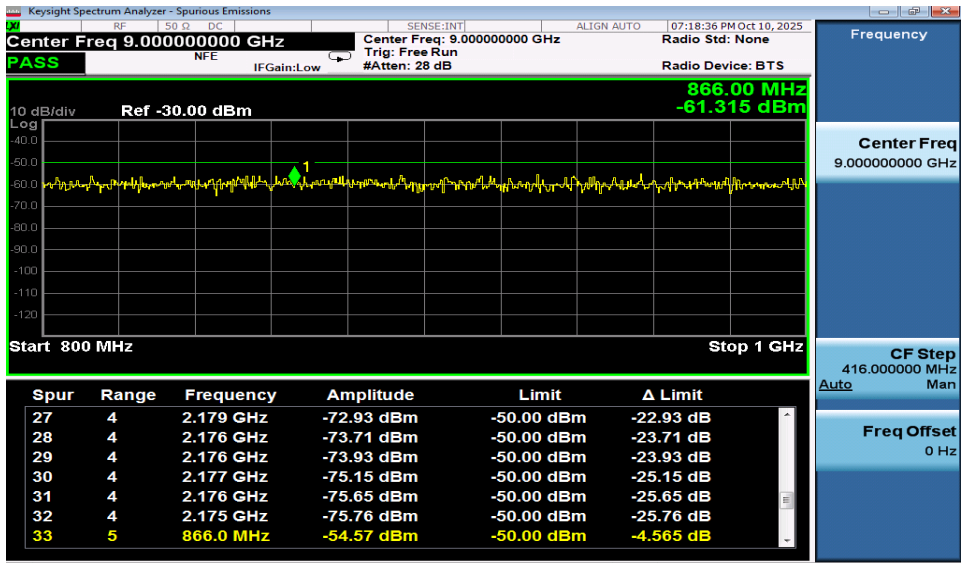


Spur	Range	Frequency	Amplitude	Limit	Δ Limit
31	4	2.179 GHz	-73.23 dBm	-50.00 dBm	-23.23 dB
32	4	2.178 GHz	-73.64 dBm	-50.00 dBm	-23.64 dB
33	4	2.175 GHz	-74.04 dBm	-50.00 dBm	-24.04 dB
34	4	2.180 GHz	-74.55 dBm	-50.00 dBm	-24.55 dB
35	4	2.177 GHz	-74.81 dBm	-50.00 dBm	-24.81 dB
36	4	2.178 GHz	-75.10 dBm	-50.00 dBm	-25.10 dB
37	5	996.7 MHz	-55.09 dBm	-50.00 dBm	-5.091 dB

Fundamental Frequency - 9 GHz

+15 dBm Input Power (@ PSat)

Spurious measured value 54.57 dBm



Spur	Range	Frequency	Amplitude	Limit	Δ Limit
27	4	2.179 GHz	-72.93 dBm	-50.00 dBm	-22.93 dB
28	4	2.176 GHz	-73.71 dBm	-50.00 dBm	-23.71 dB
29	4	2.176 GHz	-73.93 dBm	-50.00 dBm	-23.93 dB
30	4	2.177 GHz	-75.15 dBm	-50.00 dBm	-25.15 dB
31	4	2.176 GHz	-75.65 dBm	-50.00 dBm	-25.65 dB
32	4	2.175 GHz	-75.76 dBm	-50.00 dBm	-25.76 dB
33	5	866.0 MHz	-54.57 dBm	-50.00 dBm	-4.565 dB

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