

FCC TEST REPORT

FCC ID: 2AXK8-SP110

On Behalf of

Dongguan Baolifeng Electronic Technology Co., Ltd

Wireless Earbuds

Model No.: SP110

Prepared for : Dongguan Baolifeng Electronic Technology Co., Ltd
Address : 4/F, Mingxin science Park, 138 Qiqiao Road, Qishi Town, Dongguan
City, China

Prepared By : Shenzhen PSI Testing Co., Ltd.
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TEST REPORT DECLARATION

Applicant : Dongguan Baolifeng Electronic Technology Co., Ltd
Address : 4/F, Mingxin science Park, 138 Qiqiao Road, Qishi Town, Dongguan City, China
Manufacturer : Dongguan Baolifeng Electronic Technology Co., Ltd
Address : 4/F, Mingxin science Park, 138 Qiqiao Road, Qishi Town, Dongguan City, China
EUT Description : Wireless Earbuds
(A) Model No. : SP110
(B) Trademark : /

Measurement Standard Used:

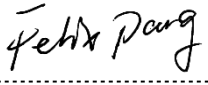
FCC Rules and Regulations Part 15 Subpart C Section 15.247

ANSI C63.10-2020

Test Result: PASS

The device described above is tested by Shenzhen PSI Testing Co., Ltd. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The test results are contained in this test report and Shenzhen PSI Testing Co., Ltd. is assumed full responsibility for the accuracy and completeness of test. Also, this report shows that the EUT is technically compliant with the FCC Part 15C requirements.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen PSI Testing Co., Ltd.

Tested by (name + signature).....: Felix Pang
Test Engineer 

Approved by (name + signature).....: Simple Guan
Project Manager 

Date of issue.....: Oct. 17, 2025

Revision History

Revision	Issue Date	Revisions	Revised By
V0	Oct. 17, 2025	Initial released Issue	Felix Pang



1. Summary Of Standards And Results

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Test Item	Standards Paragraph	Result
Maximum Peak Output Power	FCC Part 15: 15.247(b)(1), RSS-247(5.4 b), ANSI C63.10-2020	P
20 dB Bandwidth	FCC Part 15: 15.215, RSS-247(5.1 a), ANSI C63.10-2020	P
Carrier Frequency Separation	FCC Part 15: 15.247(a)(1), RSS-247(5.1 b), ANSI C63.10-2020	P
Number Of Hopping Channel	FCC Part 15: 15.247(a)(1)(iii), RSS-247(5.1 d), ANSI C63.10-2020	P
Dwell Time	FCC Part 15: 15.247(a)(1)(iii), RSS-247(5.1 d), ANSI C63.10-2020	P
Radiated Spurious Emission	FCC Part 15: 15.209, FCC Part 15: 15.247(d), RSS-Gen(8.9), RSS-247(5.5), ANSI C63.10-2020	P
Out-of-band Emissions	FCC Part 15: 15.247(d), RSS-Gen(8.9), RSS-247(5.5), ANSI C63.10-2020	P
Radiated Band Edge Emission	FCC Part 15: 15.247(d), RSS-Gen(6.13), RSS-247(5.5), ANSI C63.10-2020	P
Power Line Conducted Emissions	FCC Part 15: 15.207, RSS-GEN(8.8), ANSI C63.10-2020	N/A
Frequency stability	RSS-GEN(6.11)	N/A
Antenna requirement	FCC Part 15: 15.203, RSS-GEN(6.8)	P
Note: 1. P is an abbreviation for Pass. 2. F is an abbreviation for Fail. 3. N/A is an abbreviation for Not Applicable. 4. Conclusion determination rules of this report: Unless there are clear provisions on measurement uncertainty in the standard or customer requirements, decision by actual test data without considering measurement uncertainty. 5. Measurement method usage KDB 558074 D01 15.247 Meas Guidance v05r02.		

2. General Information

2.1. Description of Device (EUT)

Product Name : Wireless Earbuds
Model No. : SP110
Diff : The product has different colored shells, and this test used EUT with black shells.
the test data of EUT with black shell can represent the remaining colors.
Power supply : Input: DC 5 V/1 A or DC 3.7 V powered by battery

Radio Technology : Bluetooth BR&EDR
Operation frequency : 2402-2480MHz
Channel No. : 79 channels
Channel Separation : 1MHz
Modulation : GFSK, $\pi/4$ -DQPSK, 8DPSK
Antenna Type : PCB antenna, maximum gain is 2.36dBi

PMN : N/A
HVIN : N/A

Software version : 5E03-Y1020RV2.1/Y1020LV2.1-100
Hardware version/FVIN : Y1020RV2.1/Y1020LV2.1

Note : 1. Antenna information is provided by applicant.
Testing lab is not responsible for the accuracy of the information.
2. The RF chips of the left and right earphones are the same, with differences in circuit layout. Perform all tests on the left and right earphones.

2.2. Model list

/

2.3. Accessories of Device (EUT)

Accessories 1 : N/A

Manufacturer : N/A

Model : N/A

Rating : N/A

2.4. Tested Supporting System Details

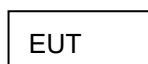
No.	Description	Manufacturer	Model	Serial Number
1	Laptop	Lenovo (Beijing) Co., Ltd	ThinkPad E480	N/A
2	USB serial port board	Shenzhen Ai-Thinker Technology Co., Ltd	/	N/A

2.5. Block Diagram of connection between EUT and simulators

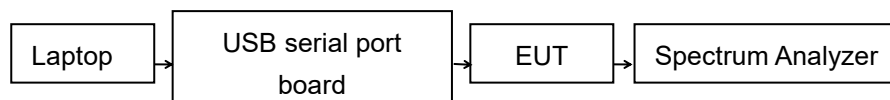
Radiated Emission(30MHz-1GHz)



Radiated Emission(above 1GHz)



RF Conducted Test



2.6. Test Mode Description

The test software used to control EUT work in Continuous TX mode, and select test channel, wireless mode

Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
GFSK / $\pi/4$ -DQPSK / 8DPSK Carrier Tx Mode	CH0	2402
	CH39	2441
	CH78	2480
GFSK / $\pi/4$ -DQPSK / 8DPSK hopping on Tx Mode	CH0 to CH78	2402 to 2480
GFSK / $\pi/4$ -DQPSK / 8DPSK hopping off Tx Mode	CH0	2402
	CH39	2441
	CH78	2480

2.7. Software test version and power setting information

Software testing version	BT_Tool.exe		
Mode	The client 's preset testing software is used to control the operation of EUT in continuous transmission mode and select the testing channel, wireless mode:		
Power level setup by client			
Mode	Channel	Frequency (MHz)	Soft Set
GFSK, $\pi/4$ -DQPSK, 8DPSK	CH0	2402	TX level is set as defaults value.
	CH39	2441	TX level is set as defaults value.
	CH78	2480	TX level is set as defaults value.

2.8. Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	26℃
Humidity range:	25-75%	54%
Pressure range:	86-106kPa	101kPa

2.9. Test Facility

Shenzhen PSI Testing Co., Ltd.

1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

September 13, 2023 File on Federal Communication Commission

Registration Number: 916281

2.10. Measurement Uncertainty

(95% confidence levels, k=2)

Item	Uncertainty
Power Line Conducted Emissions Test	2.13dB
Radiation Emission test in 3m chamber(Below 30MHz)	4.07dB
Radiation Emission test in 3m chamber(30MHz to 1GHz)	4.51dB
Radiation Emission test in 3m chamber(1GHz to 18GHz)	5.07dB
Radiation Emission test in 3m chamber(18GHz to 40GHz)	5.21dB
Radio Frequency	48.24KHz
Conducted RF Power	0.41dB
Power Spectral Density	0.39 dB
Occupied-Bandwidth	968Hz
Duty Cycle	1%
Conducted-Spurious Emission	1.26dB

2.11. Test Equipment List

Item	Equipment	Manufacturer	Model No.	Serial No.	Firmware Version	Last Cal.	Cal. Interval
1.	9*6*6 anechoic chamber	SKET	9*6*6	N/A	/	2022.12.20	3 Year
2.	Test Receiver	Rohde&Schwarz	ESCI 7	101032/003	4.42 SP3	2024.12.18	1 Year
3.	L.I.S.N.#1	Rohde&Schwarz	ENV216	102282	/	2024.12.18	1 Year
4.	L.I.S.N.#2	RFT	NNB111	13835240	/	2024.12.18	1 Year
5.	Loop Antenna	Schwarz beck	FMZB 1519B	00128	/	2025.01.02	2 Year
6.	Bilog Antenna	Schwarz beck	VULB 9168	01448	/	2025.01.02	2 Year
7.	Spectrum Analyzer	Rohde&Schwarz	FSV-40N	101648	3.70	2024.12.18	1 Year
8.	Horn Antenna	Schwarz beck	BBHA 9120 D	02706	/	2025.01.02	2 Year
9.	Amplifier	SKET	LAPA_01G18 G-45dB	SK202203290 1	/	2024.12.18	1 Year
10.	Horn Antenna	Schwarz beck	BBHA 9170	00946	/	2024.12.31	2 Year
11.	Amplifier	SKET	LNPA_0118G -45	SK202001080 1	/	2024.12.18	1 Year
12.	RF Power Probe	Rohde&Schwarz	NRP-Z11	1138.3004.02- 1111533-Fz	/	2024.12.18	1 Year
13.	RF Sensor Unit	Tachoy	TR1029-2	20220428P00 8	/	2024.12.18	1 Year
14.	Spectrum Analyzer	Agilent	N9020A	MY51281067	A.14.03	2024.12.18	1 Year
15.	Temp. & Humid Chamber	Auchno	9606	/	/	2024.12.18	1 Year
16.	Regulated DC Power Supply	Xinouhua	ADC120V10 A	202211251638	/	2024.12.18	1 Year
17.	Cable	SKET	Cable-RE-1	#02/#03	/	2024.12.18	1 Year
18.	Cable	SKET	Cable-RE-2	#01	/	2024.12.18	1 Year
19.	Cable	SKET	Cable-RE-3	#04	/	2024.12.18	1 Year
20.	Cable	SKET	Cable-CE-1	A-E-24	/	2024.12.18	1 Year
21.	6dB Attenuator	Schwarzbeck	DGA 9552N 6dB	CK4186	/	2024.12.18	1 Year
22.	Power meter	Agilent	E4419B	GB40202121	/	2024.12.18	1 Year
For Test Software Information							
Item	Software Name	Manufacturer		Version			
RE	EZ EMC	Farad		PSI-3A1			
CE	EZ EMC	Farad		PSI-3A1			
RF	RTS	TACHOY		V1.0.0			

3. Maximum Peak Output Power

3.1. Limit

Please refer FCC part 15.247 & RSS-247.

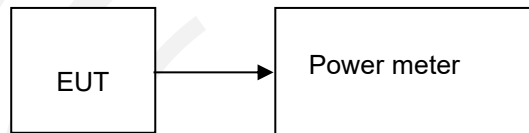
For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts, the e.i.r.p shall not exceed 4W

3.2. Test Procedure

The measurement procedure is based on 11.9.1.3 PKPM1 Peak power meter method.

The transmitter output is connected to the RF Power meter. The Power meter is set to the peak power detection.

3.3. Test Setup



3.4. Test Result

Left earphone				
Mode	Test channel	Peak Output Power (dBm)	Peak Output Power Limit (dBm)	Result
GFSK	Lowest	0.59	21.00	Pass
	Middle	0.74		
	Highest	-0.07		
$\pi/4$ DQPSK	Lowest	1.85	21.00	Pass
	Middle	1.9		
	Highest	1.11		
8DPSK	Lowest	2.68	21.00	Pass
	Middle	2.69		
	Highest	1.90		

Right earphone				
Mode	Test channel	Peak Output Power (dBm)	Peak Output Power Limit (dBm)	Result
GFSK	Lowest	-2.69	21.00	Pass
	Middle	1.35		
	Highest	3.27		
$\pi/4$ DQPSK	Lowest	-1.4	21.00	Pass
	Middle	2.57		
	Highest	4.49		
8DPSK	Lowest	-0.67	21.00	Pass
	Middle	3.26		
	Highest	5.2		

4. Bandwidth

4.1. Limit

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in RSS-GEN, FCC Section 15.247(a)(1), must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

4.2. Test Procedure

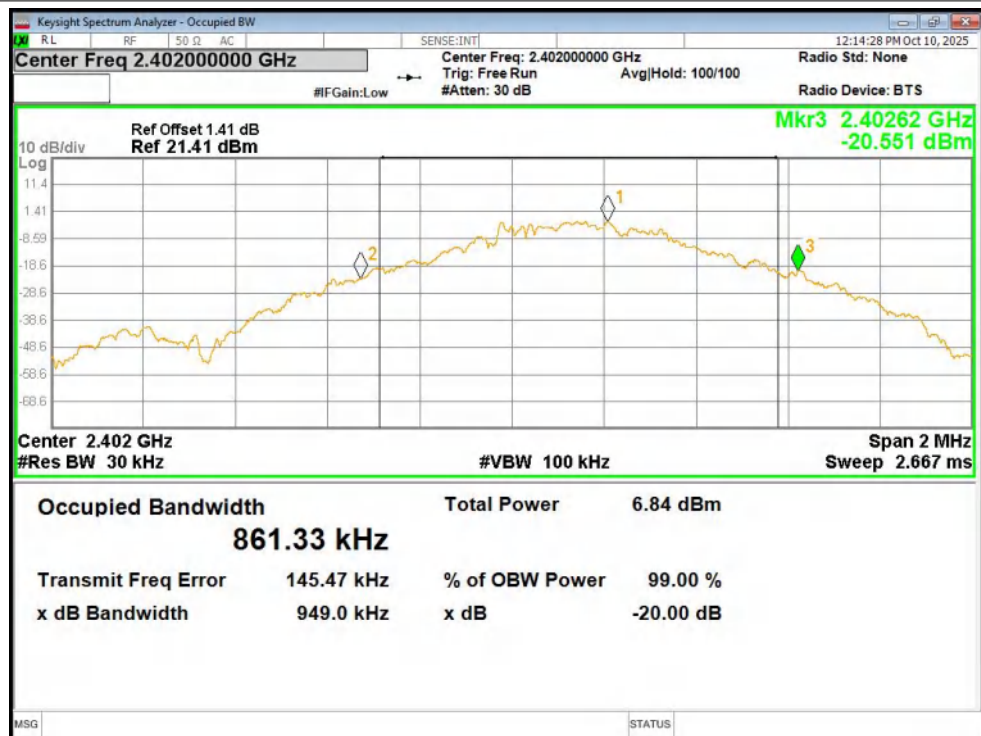
The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

4.3. Test Result

Left earphone				
Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Verdict
1-DH5	2402	Ant1	0.949	Pass
1-DH5	2441	Ant1	0.951	Pass
1-DH5	2480	Ant1	0.954	Pass
2-DH5	2402	Ant1	1.266	Pass
2-DH5	2441	Ant1	1.288	Pass
2-DH5	2480	Ant1	1.265	Pass
3-DH5	2402	Ant1	1.251	Pass
3-DH5	2441	Ant1	1.248	Pass
3-DH5	2480	Ant1	1.271	Pass

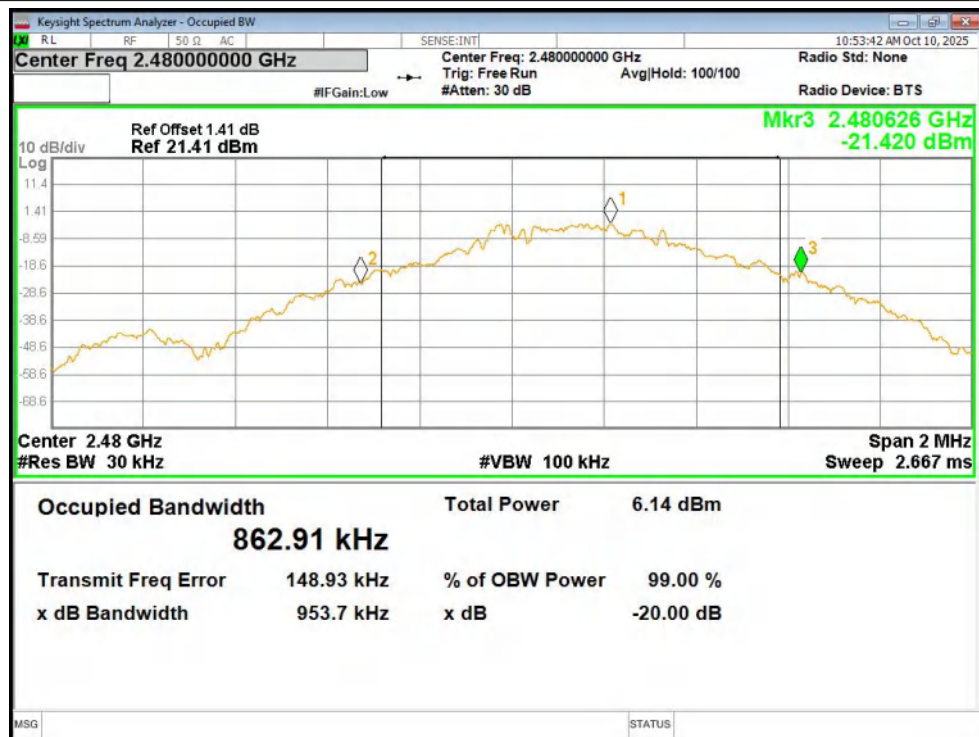
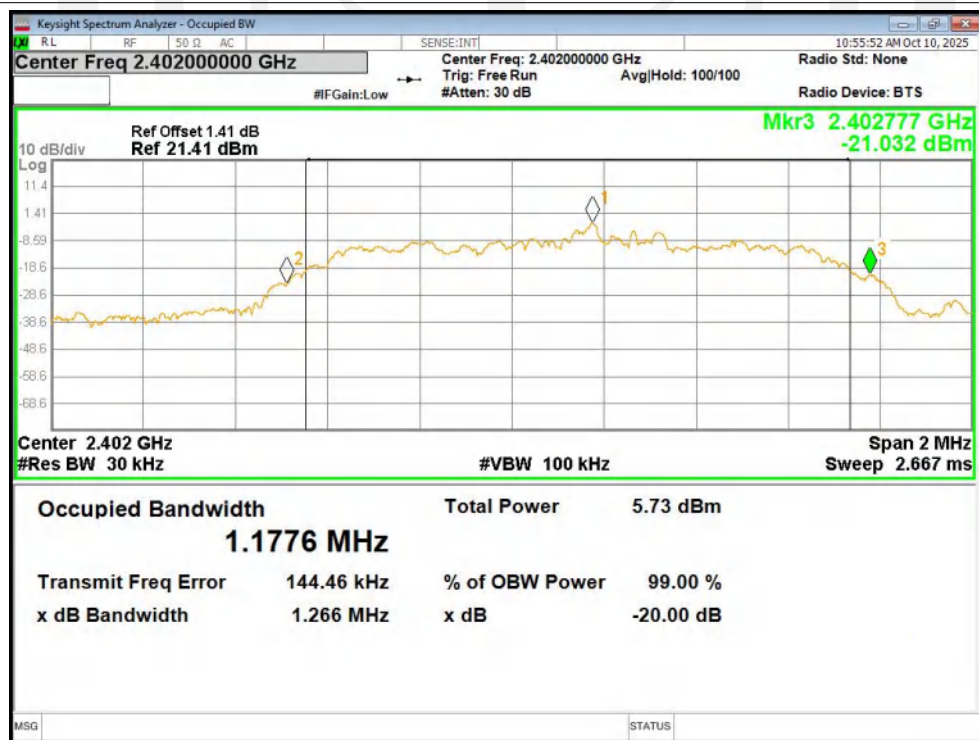
Test Graphs

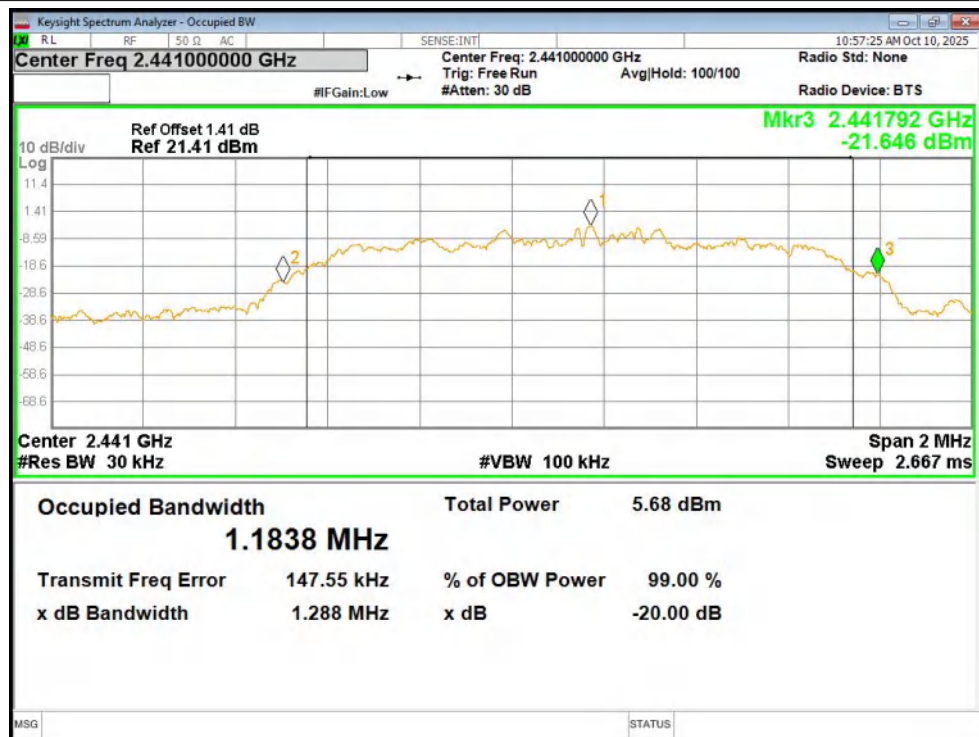
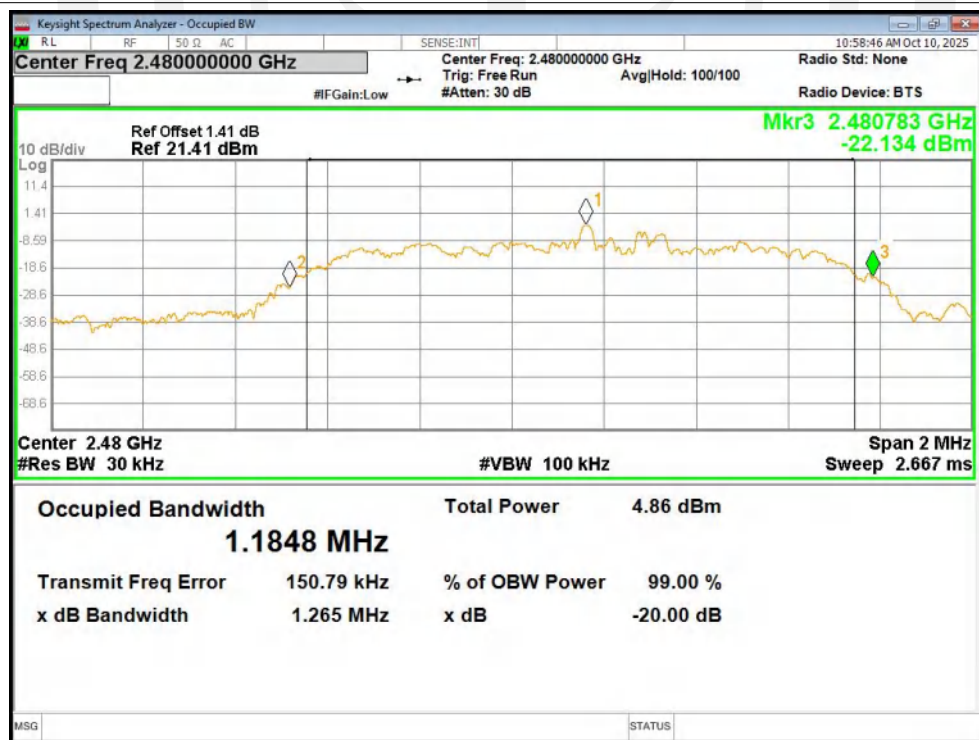
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

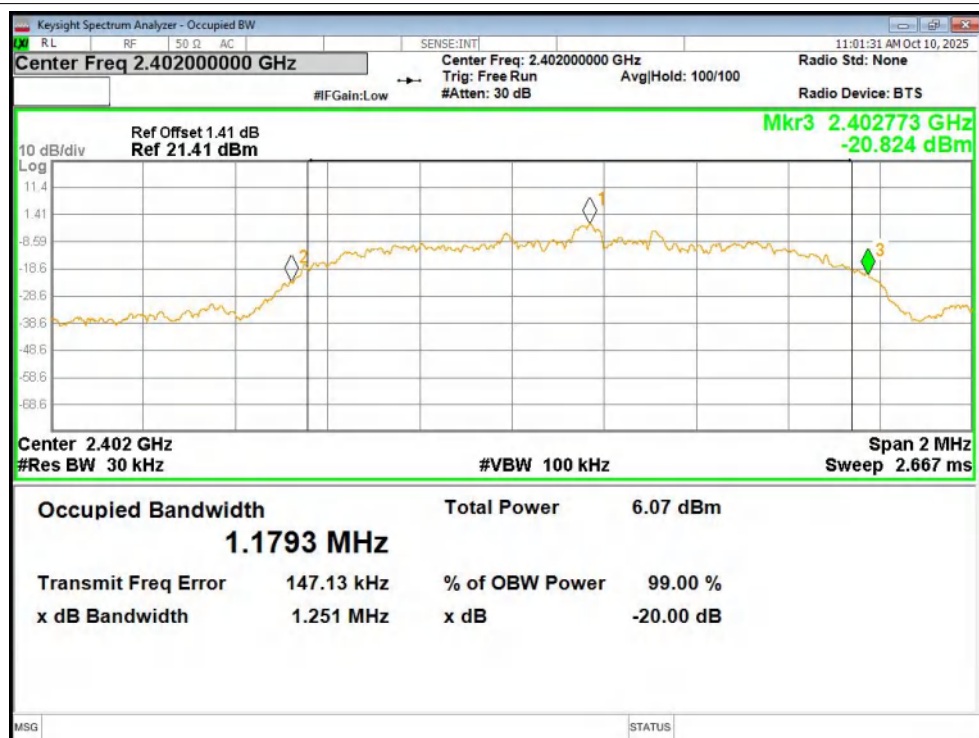
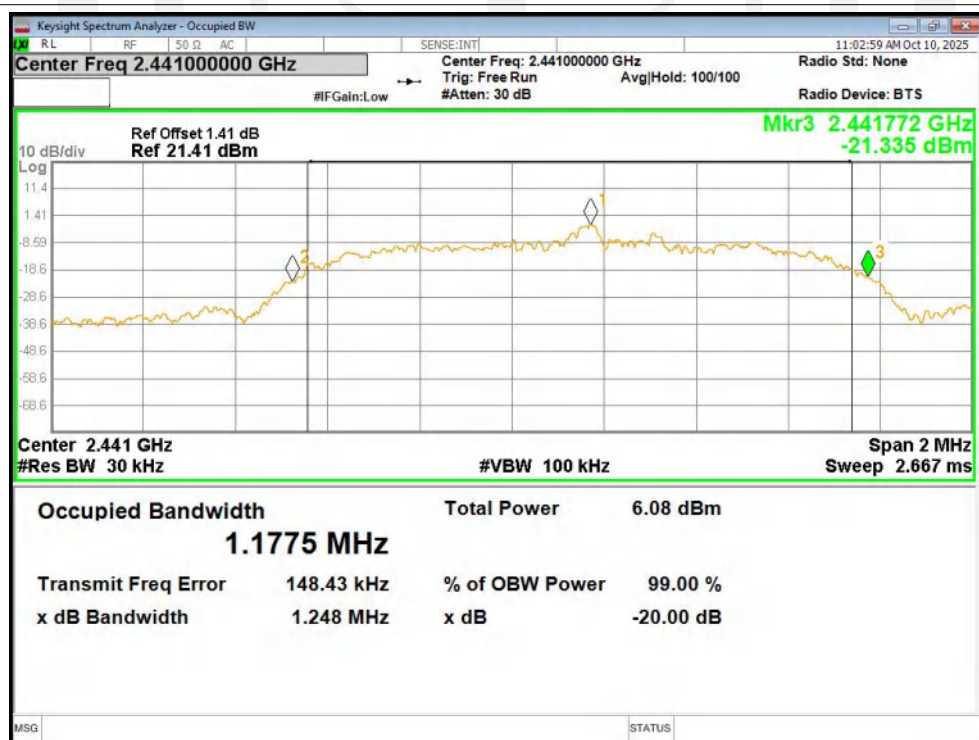


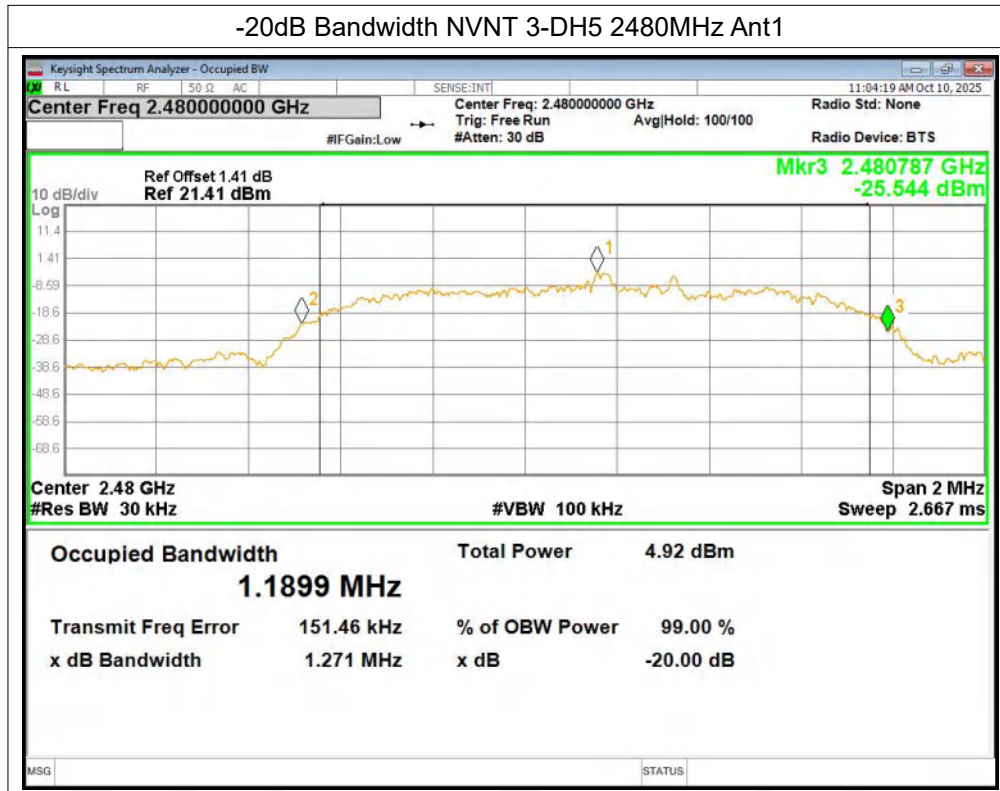
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



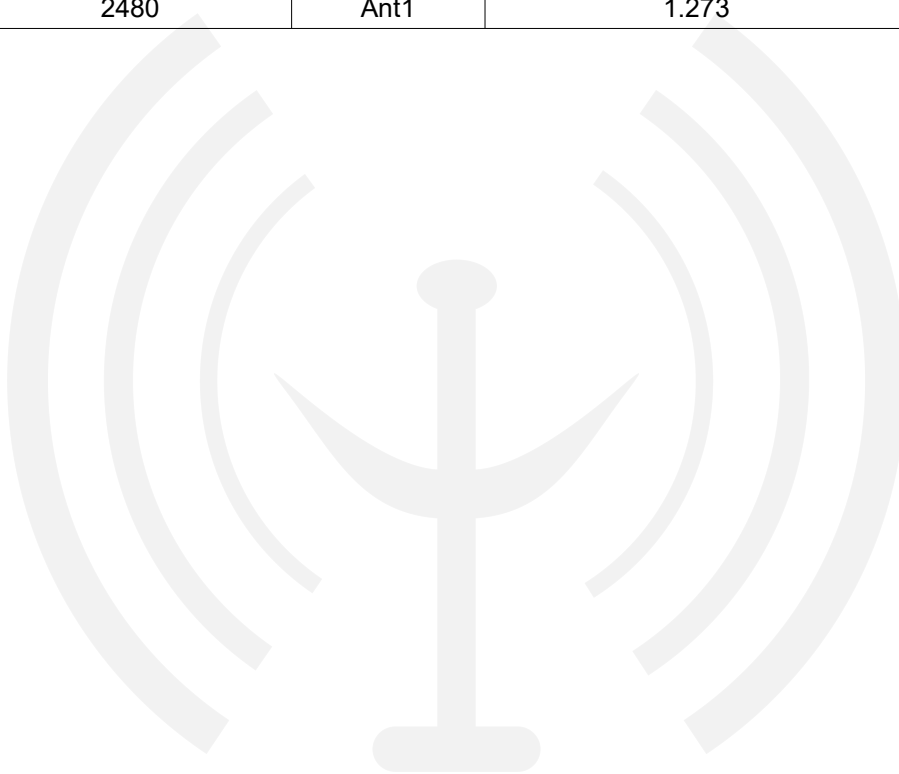
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1**-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1**

-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1**-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1**

-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1**-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1**

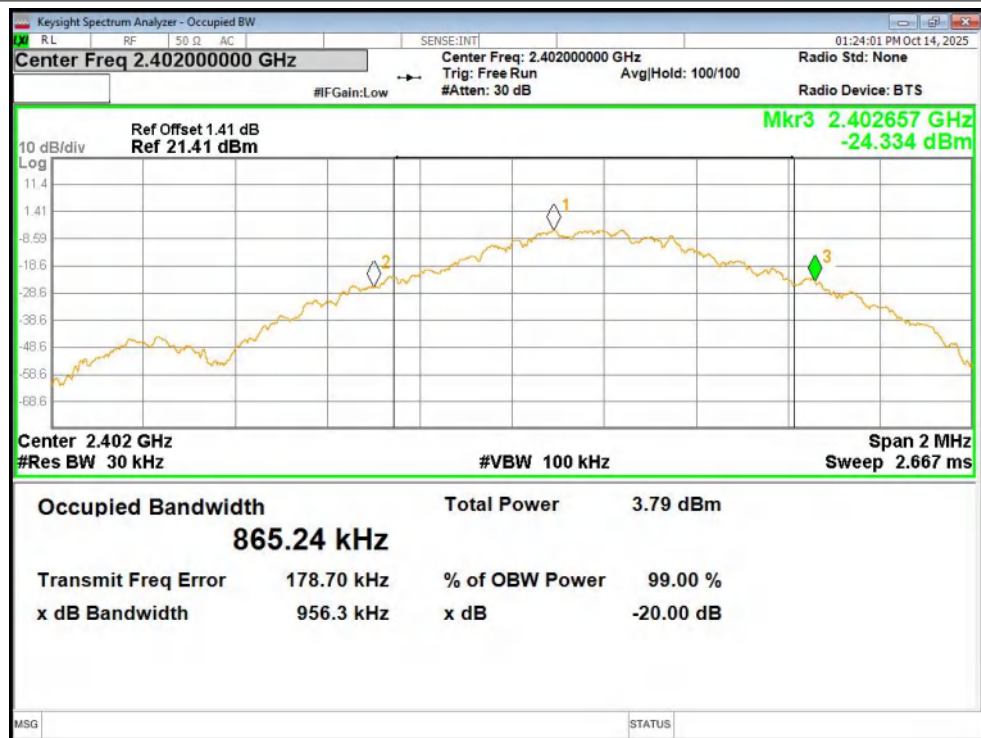


Right earphone				
Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Verdict
1-DH5	2402	Ant1	0.956	Pass
1-DH5	2441	Ant1	0.955	Pass
1-DH5	2480	Ant1	0.948	Pass
2-DH5	2402	Ant1	1.28	Pass
2-DH5	2441	Ant1	1.275	Pass
2-DH5	2480	Ant1	1.278	Pass
3-DH5	2402	Ant1	1.248	Pass
3-DH5	2441	Ant1	1.272	Pass
3-DH5	2480	Ant1	1.273	Pass

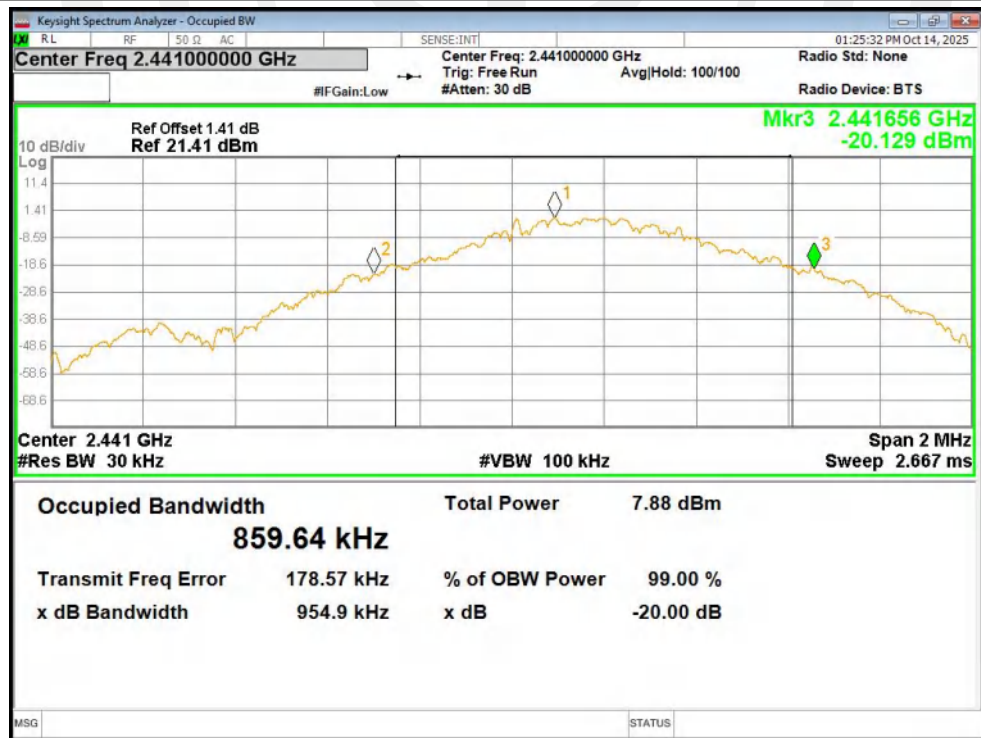


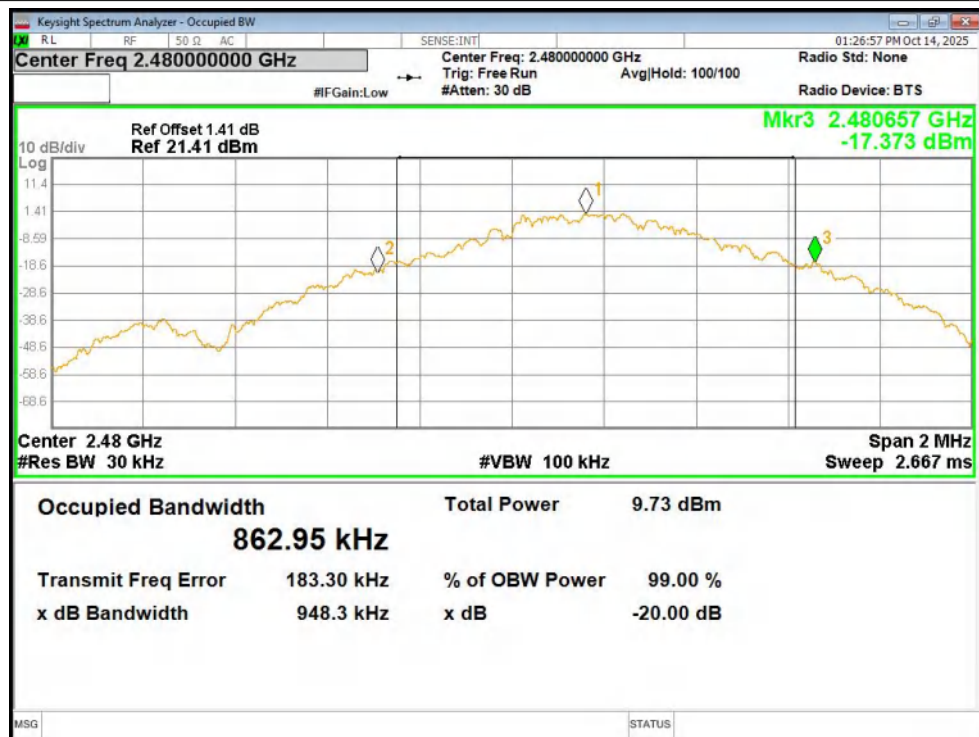
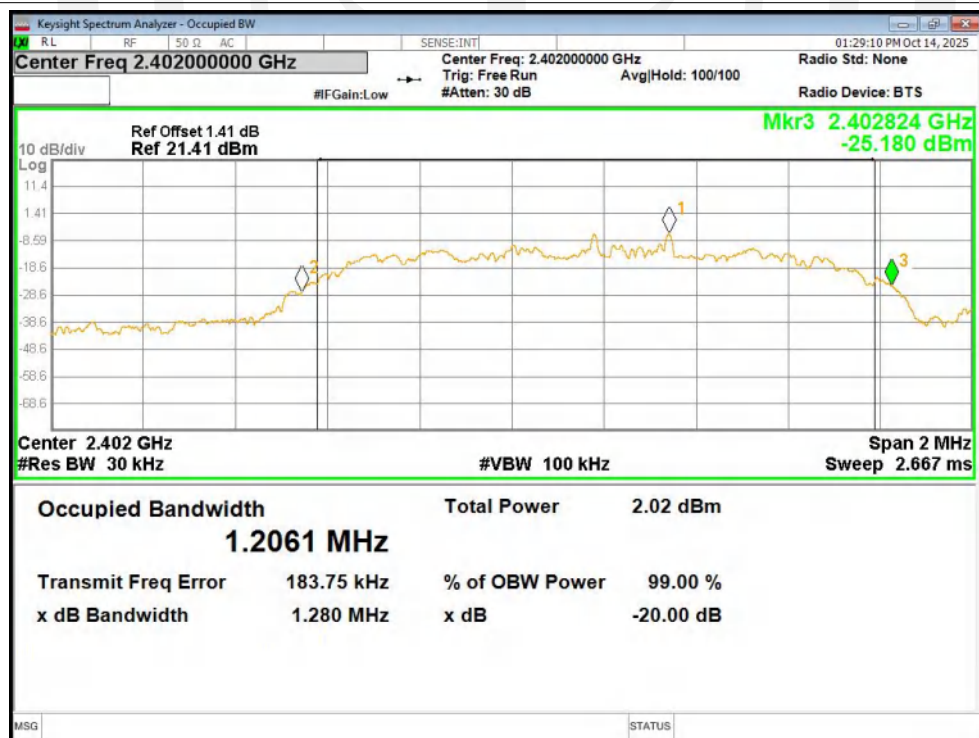
Test Graphs

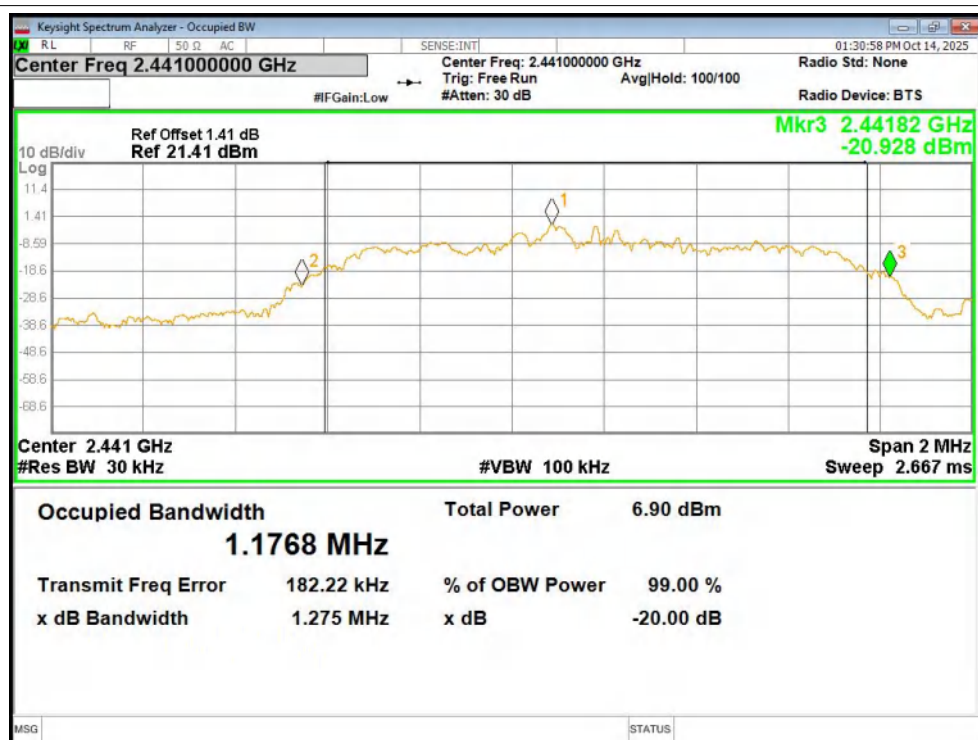
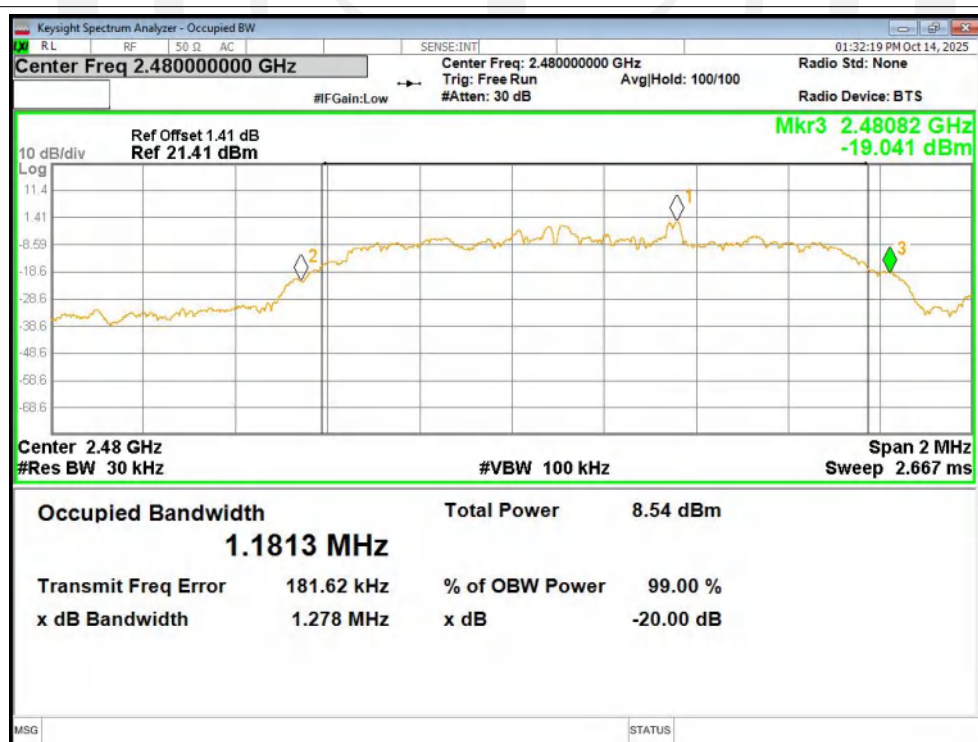
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

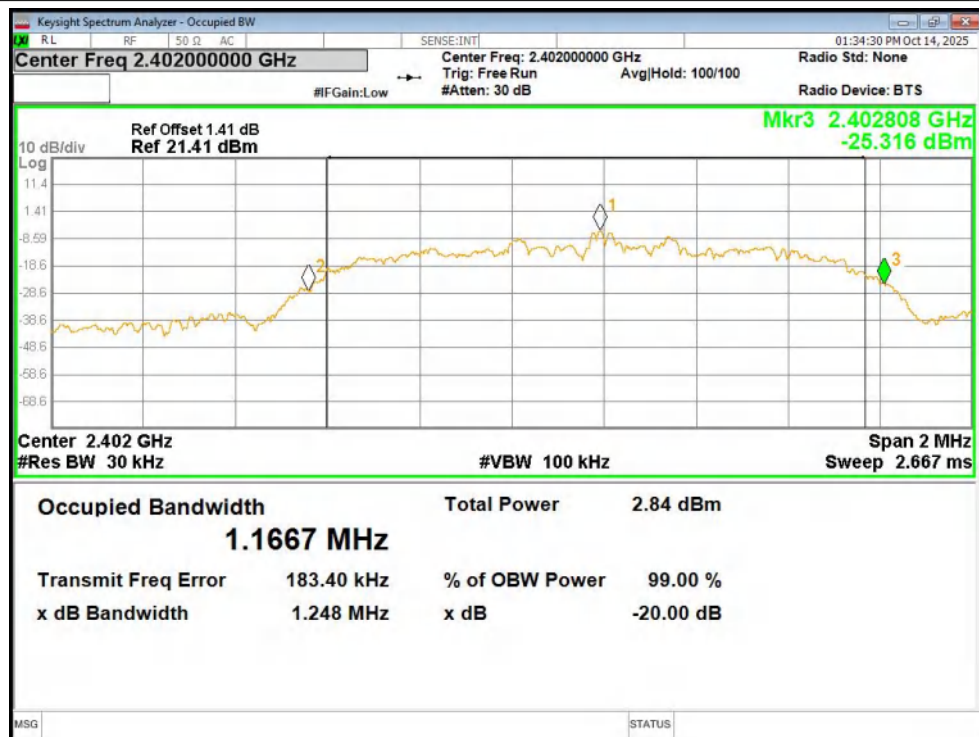
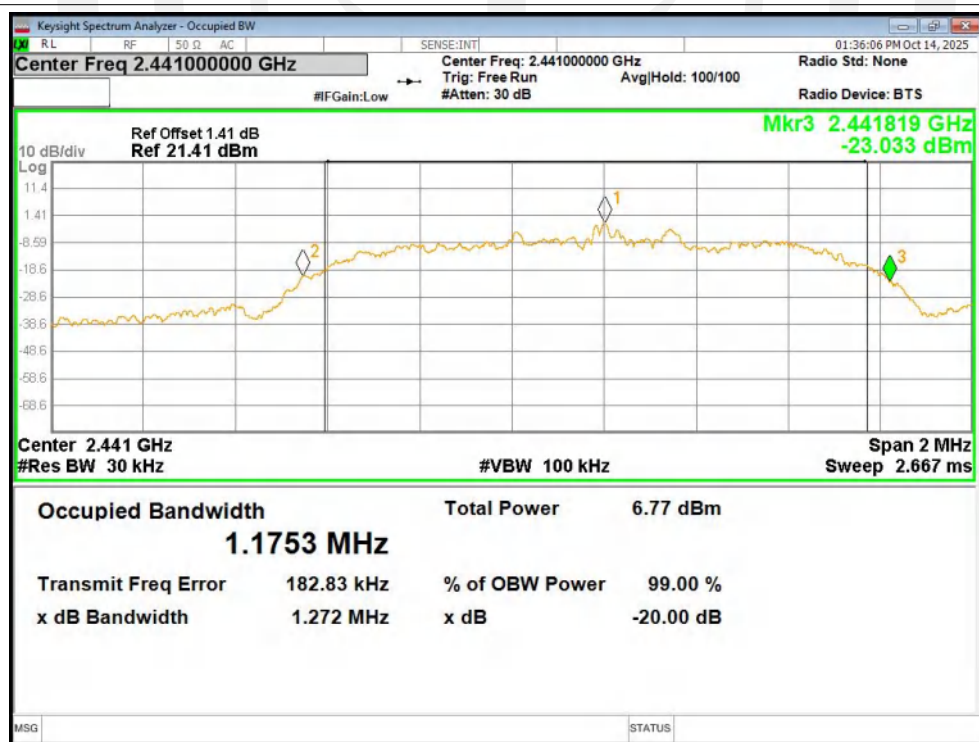


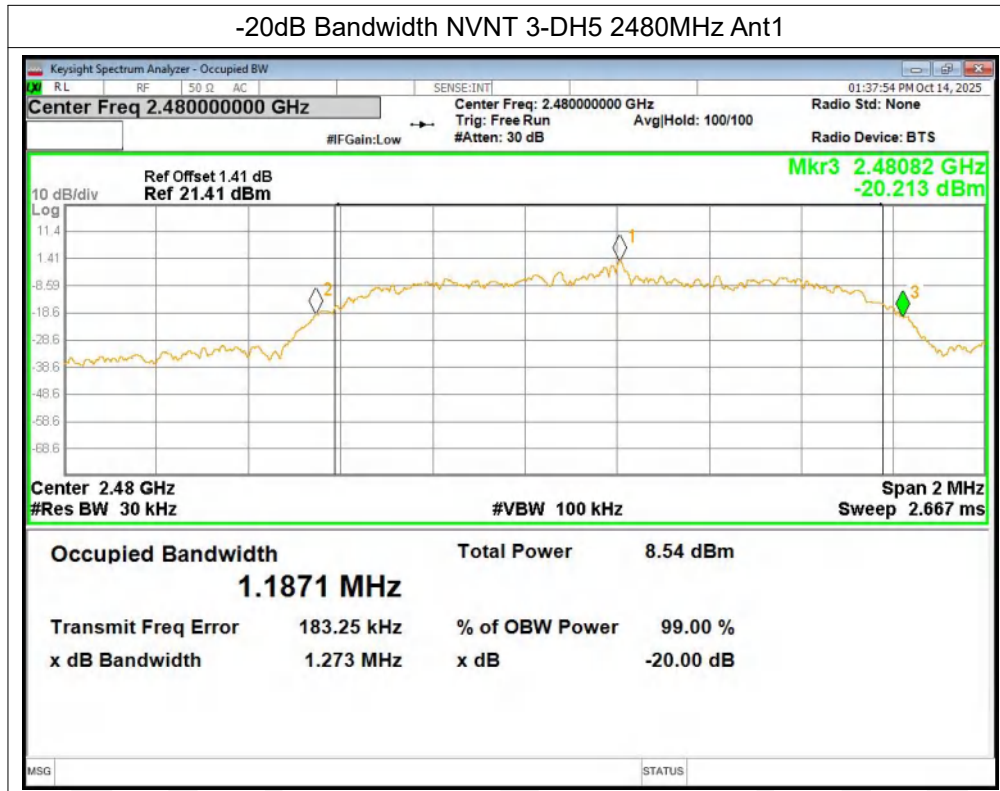
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



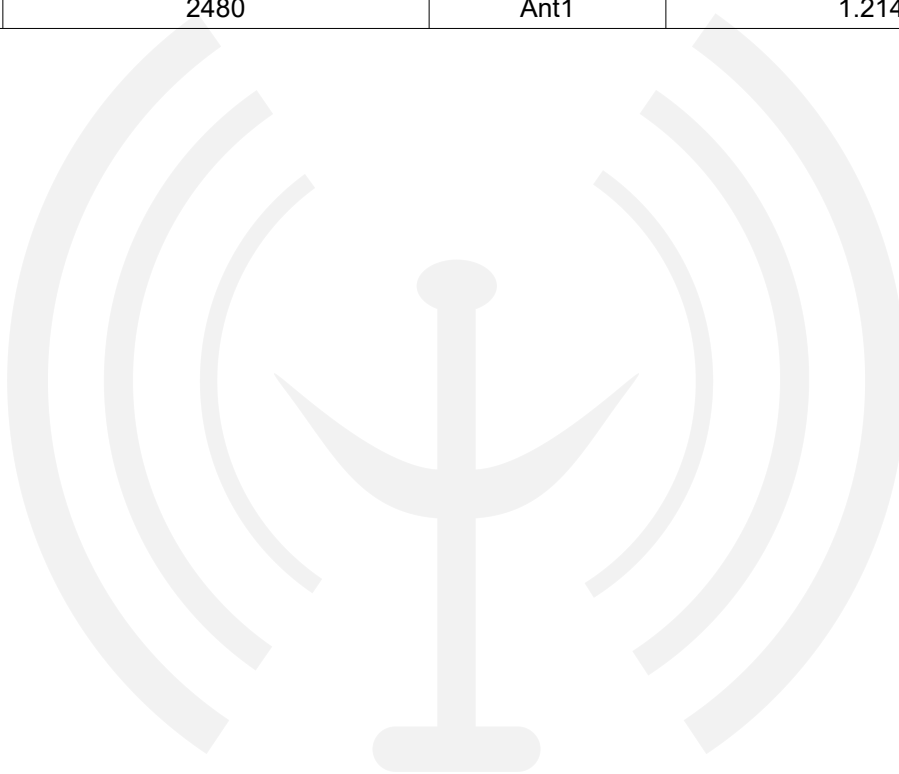
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1**-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1**

-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1**-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1**

-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1**-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1**



Left earphone			
Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
1-DH5	2402	Ant1	0.862
1-DH5	2441	Ant1	0.861
1-DH5	2480	Ant1	0.854
2-DH5	2402	Ant1	1.212
2-DH5	2441	Ant1	1.196
2-DH5	2480	Ant1	1.203
3-DH5	2402	Ant1	1.198
3-DH5	2441	Ant1	1.191
3-DH5	2480	Ant1	1.214

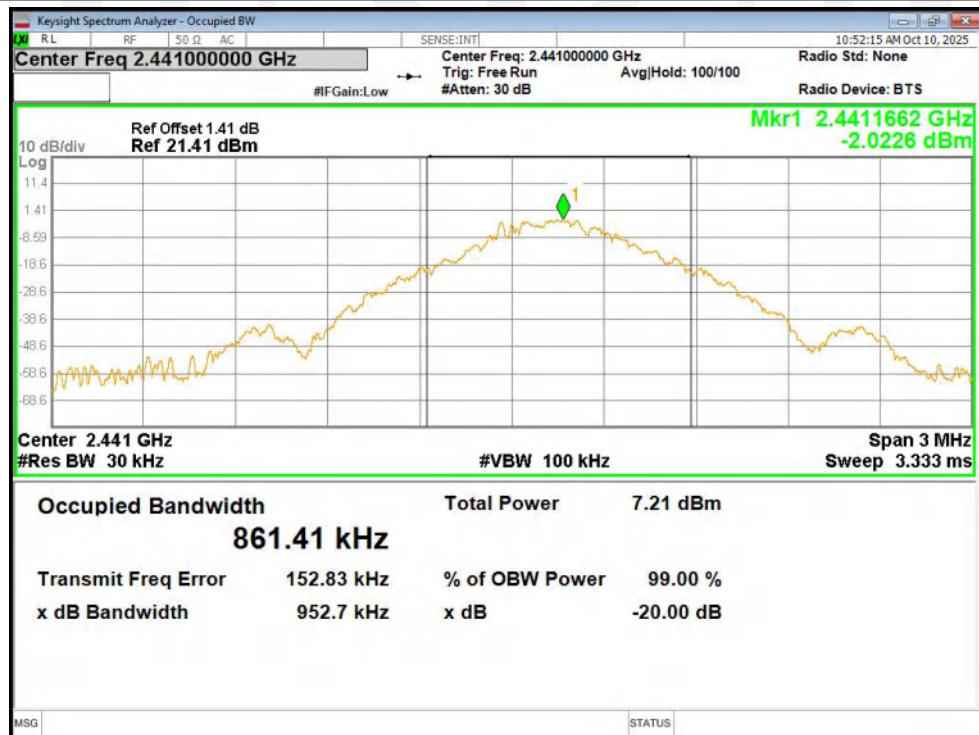


Test Graphs

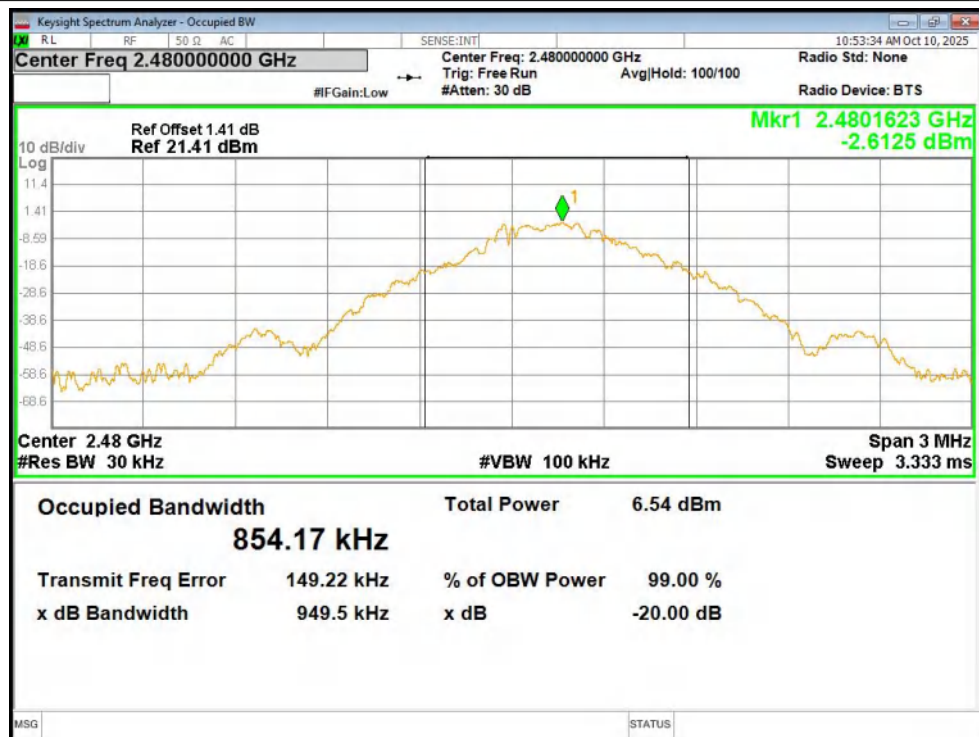
OBW NVNT 1-DH5 2402MHz Ant1



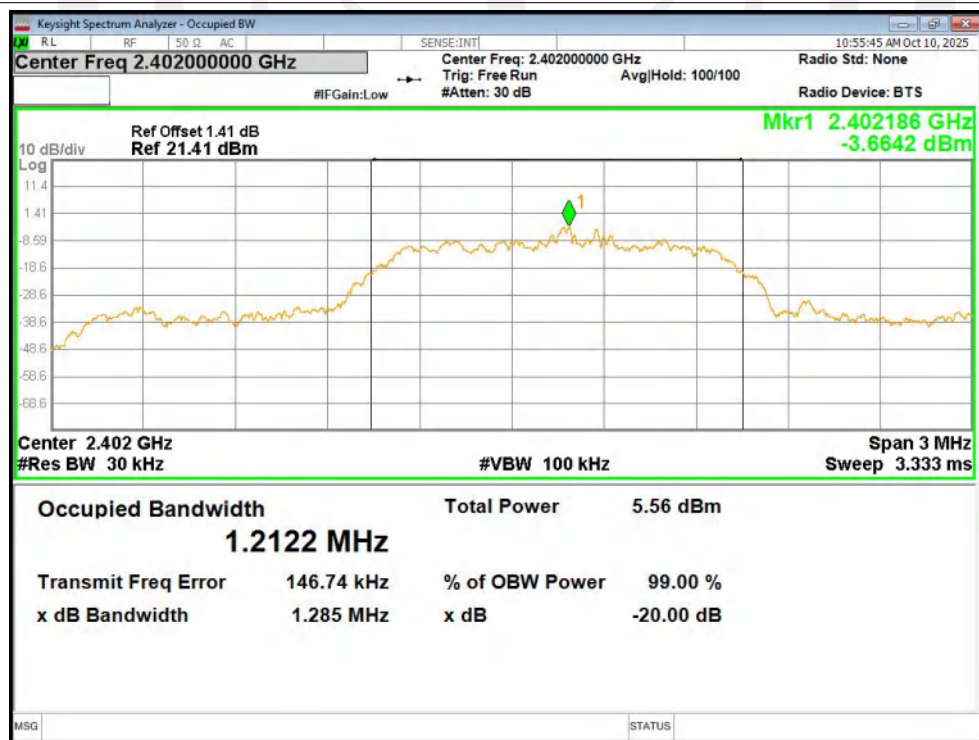
OBW NVNT 1-DH5 2441MHz Ant1



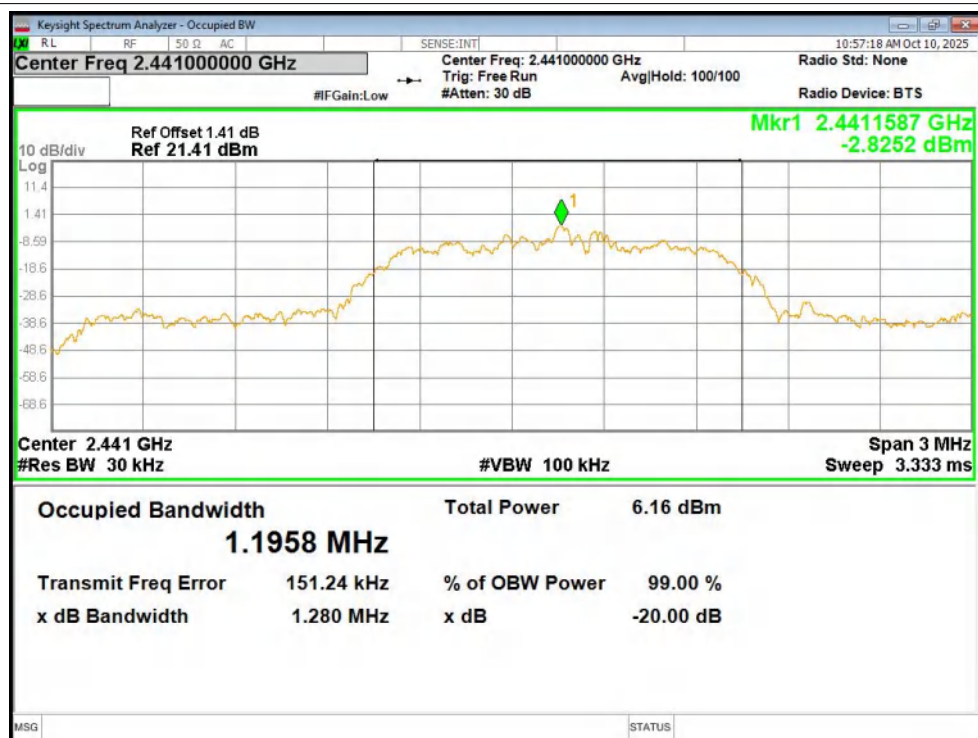
OBW NVNT 1-DH5 2480MHz Ant1



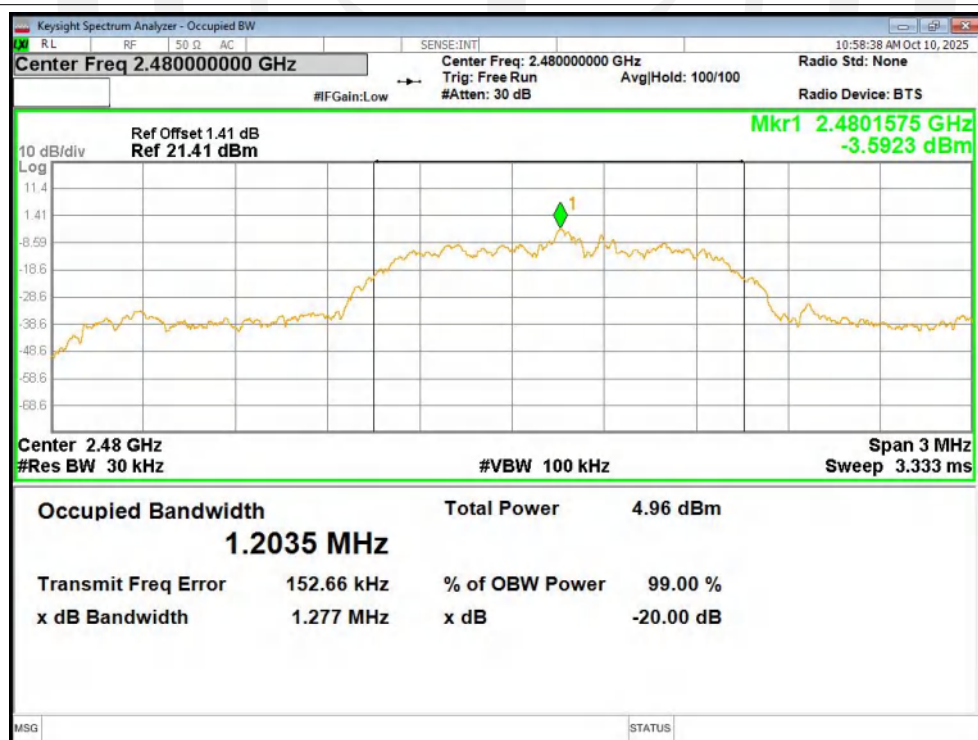
OBW NVNT 2-DH5 2402MHz Ant1



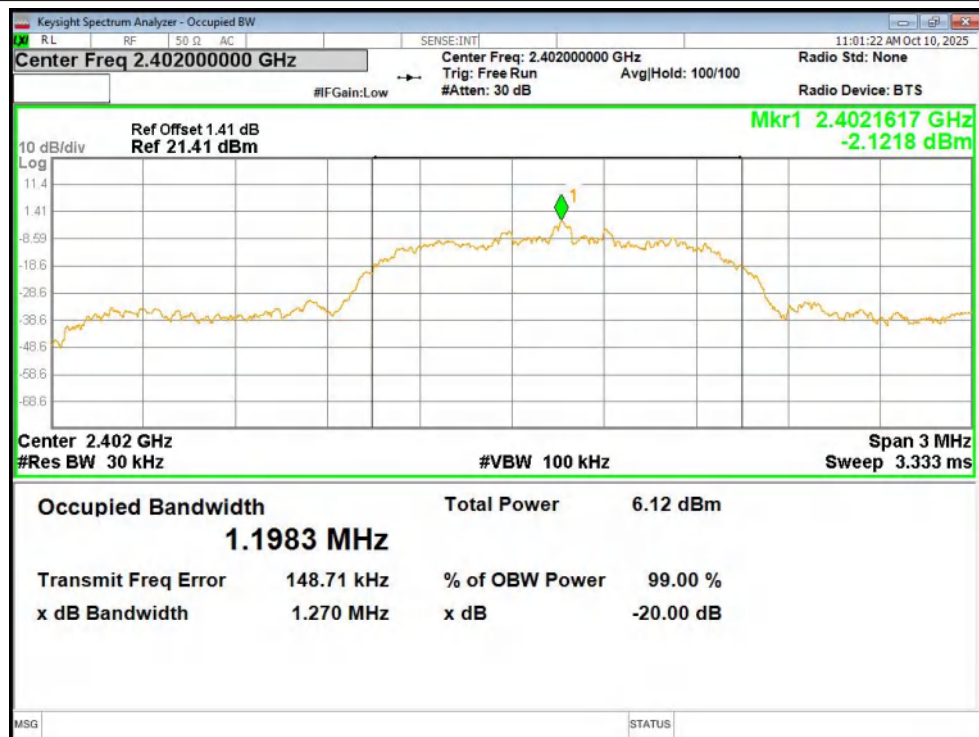
OBW NVNT 2-DH5 2441MHz Ant1



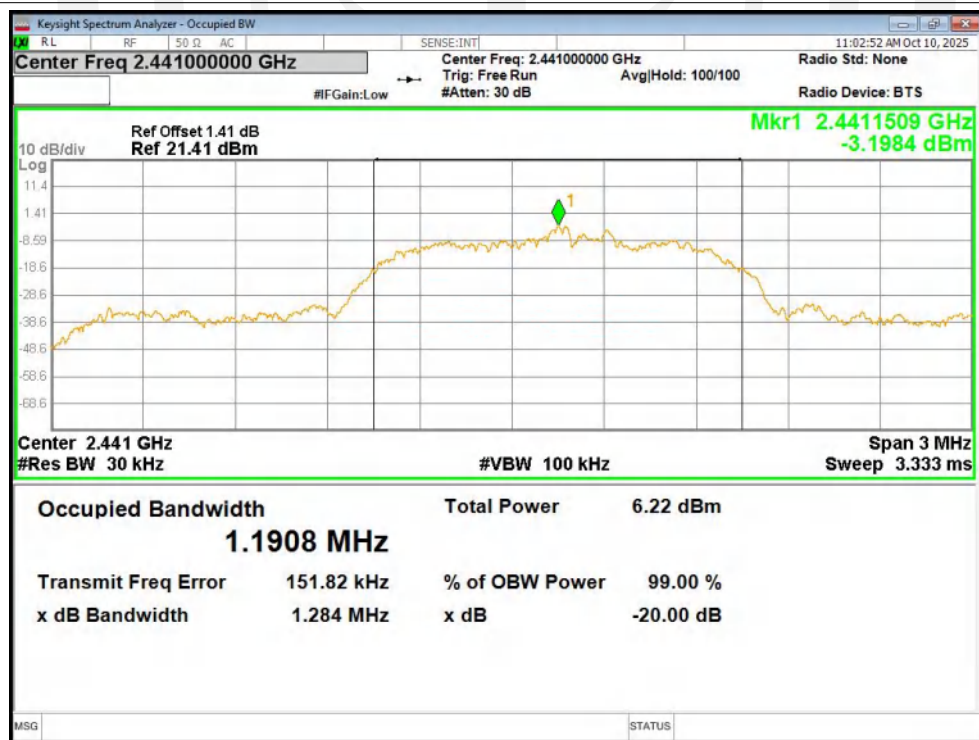
OBW NVNT 2-DH5 2480MHz Ant1

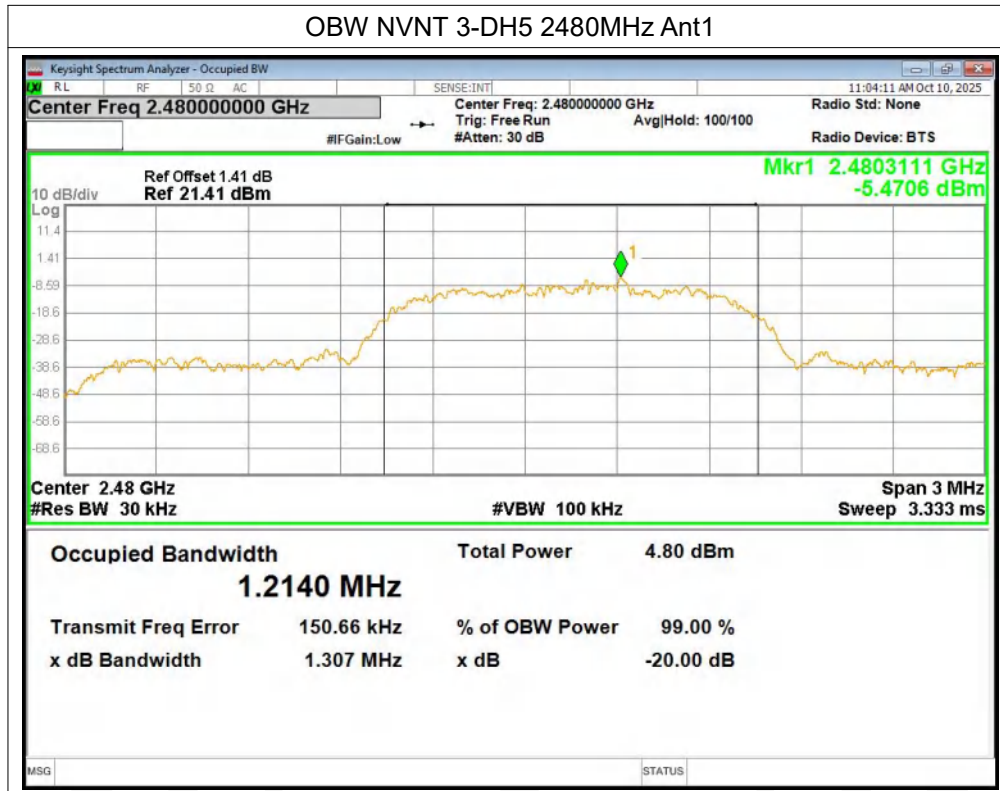


OBW NVNT 3-DH5 2402MHz Ant1

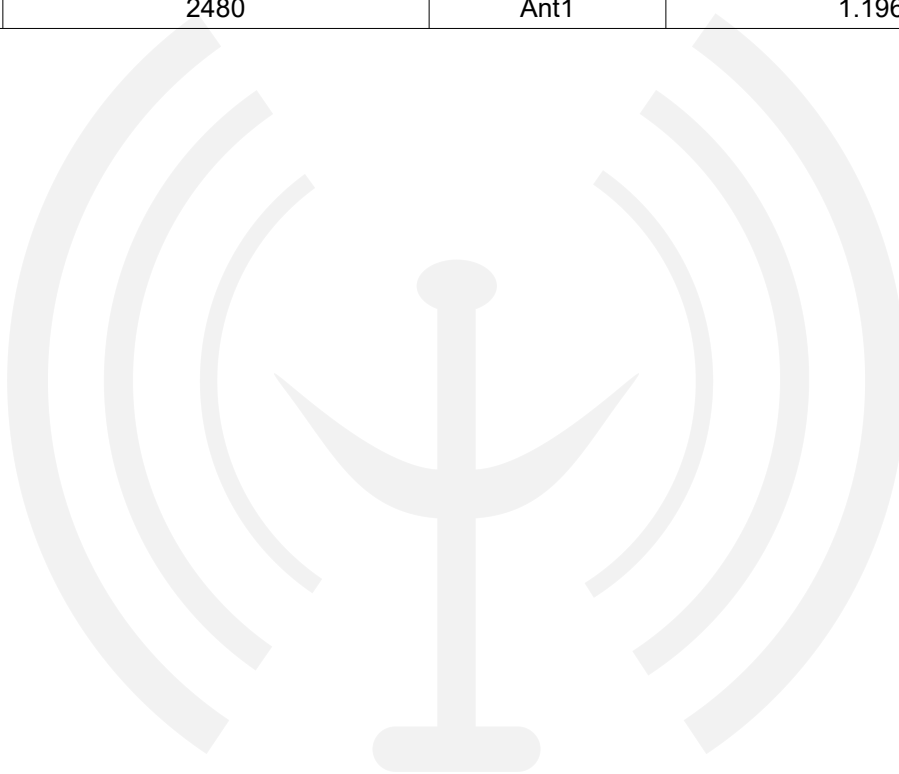


OBW NVNT 3-DH5 2441MHz Ant1



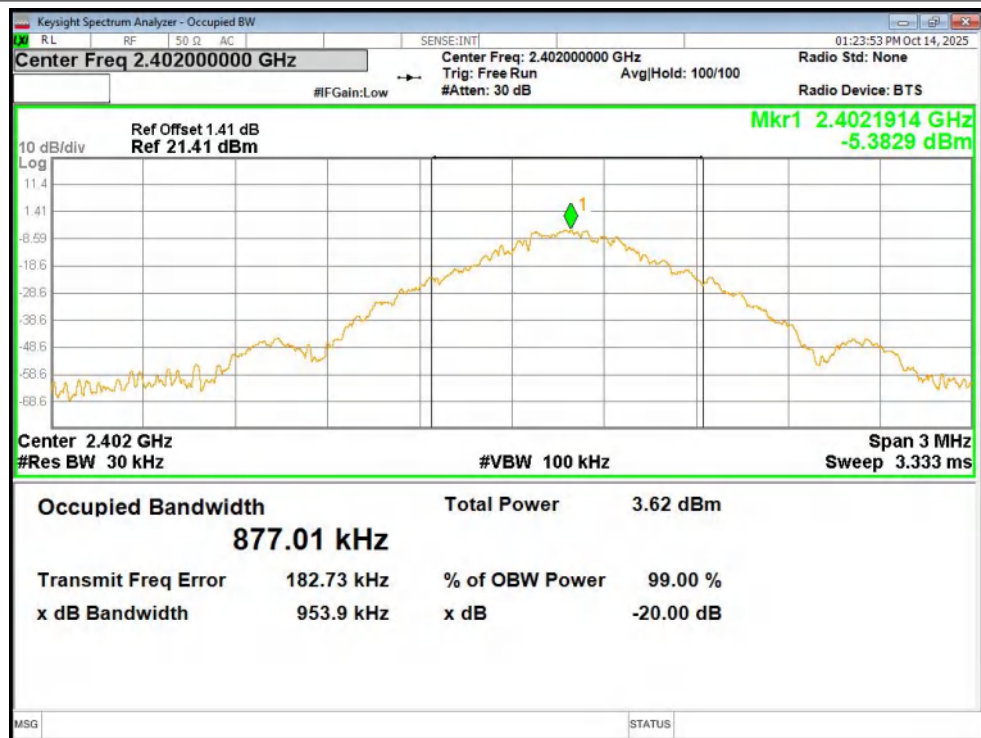


Right earphone			
Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
1-DH5	2402	Ant1	0.877
1-DH5	2441	Ant1	0.862
1-DH5	2480	Ant1	0.866
2-DH5	2402	Ant1	1.191
2-DH5	2441	Ant1	1.176
2-DH5	2480	Ant1	1.191
3-DH5	2402	Ant1	1.191
3-DH5	2441	Ant1	1.195
3-DH5	2480	Ant1	1.196

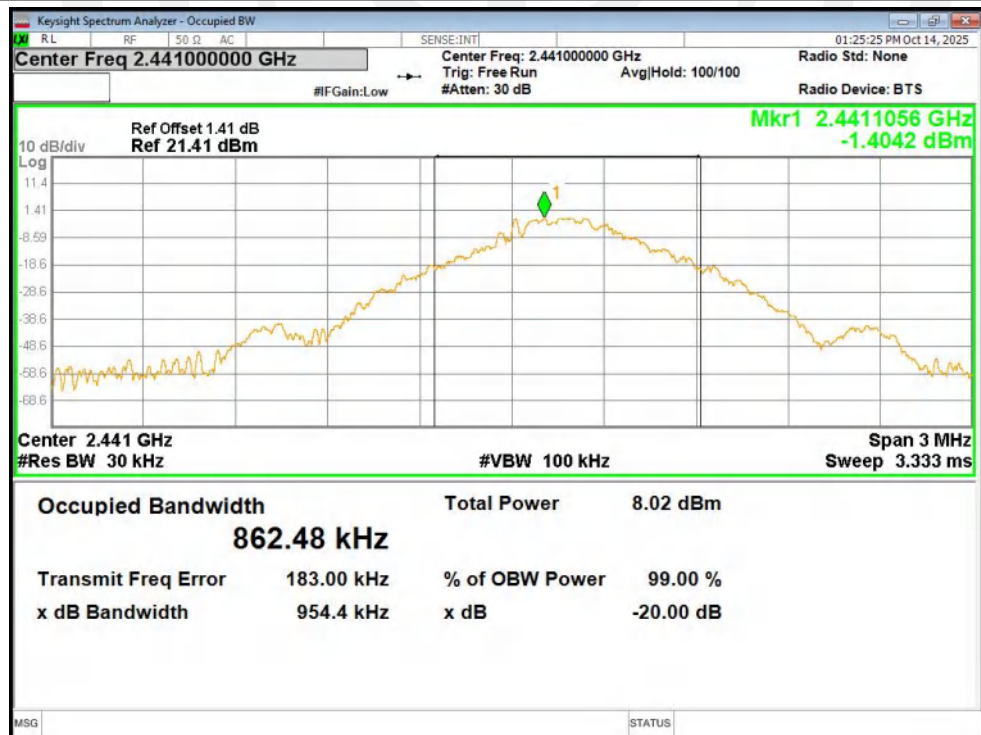


Test Graphs

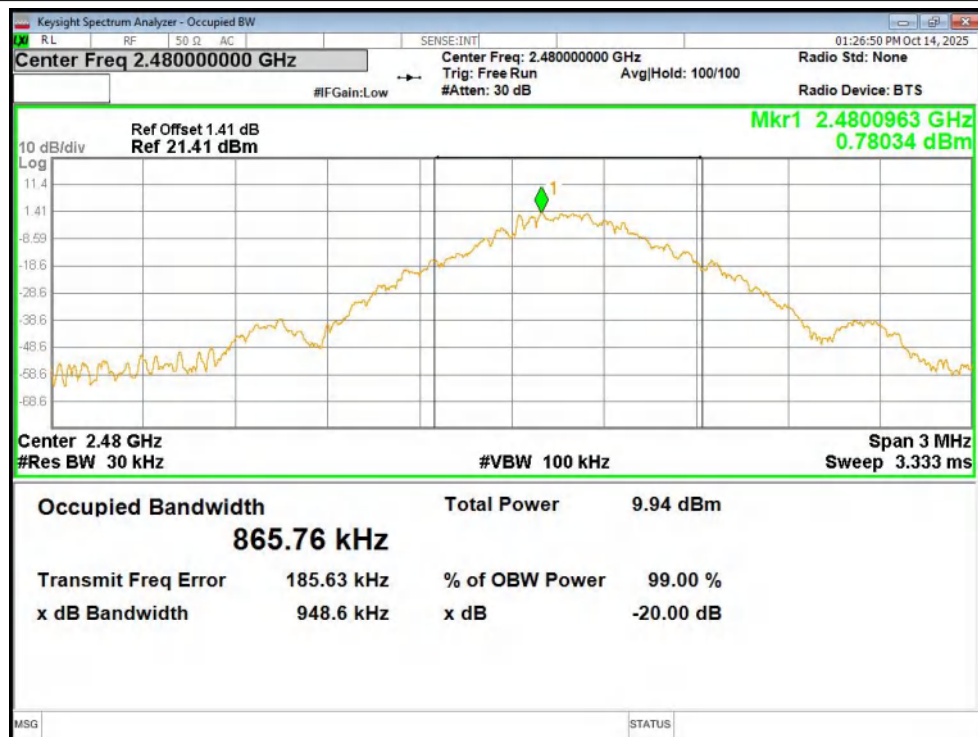
OBW NVNT 1-DH5 2402MHz Ant1



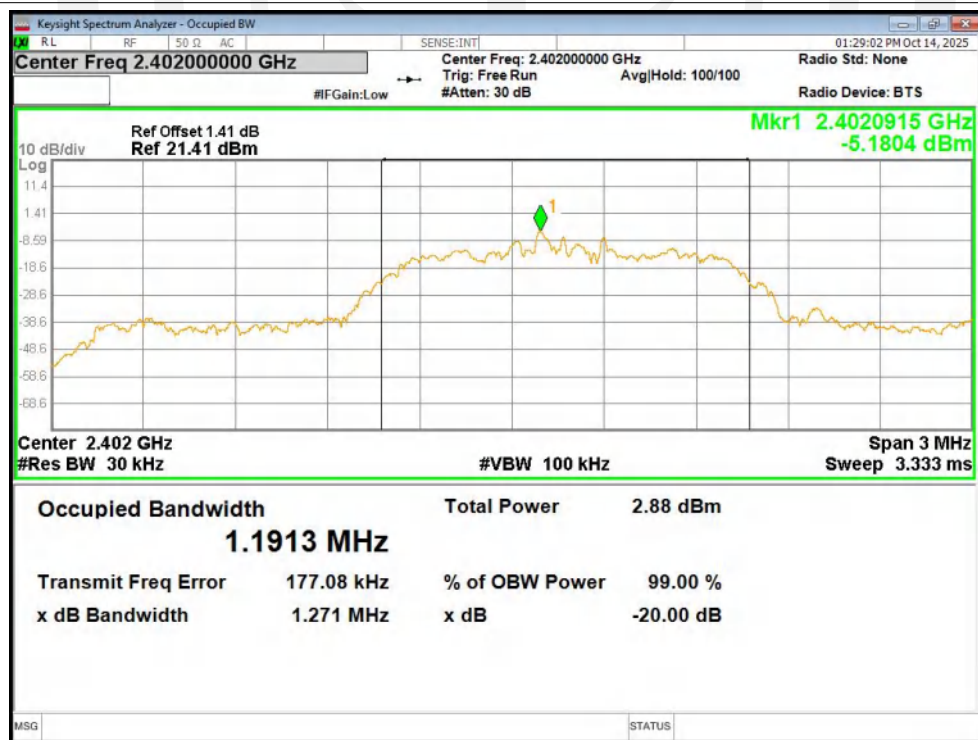
OBW NVNT 1-DH5 2441MHz Ant1



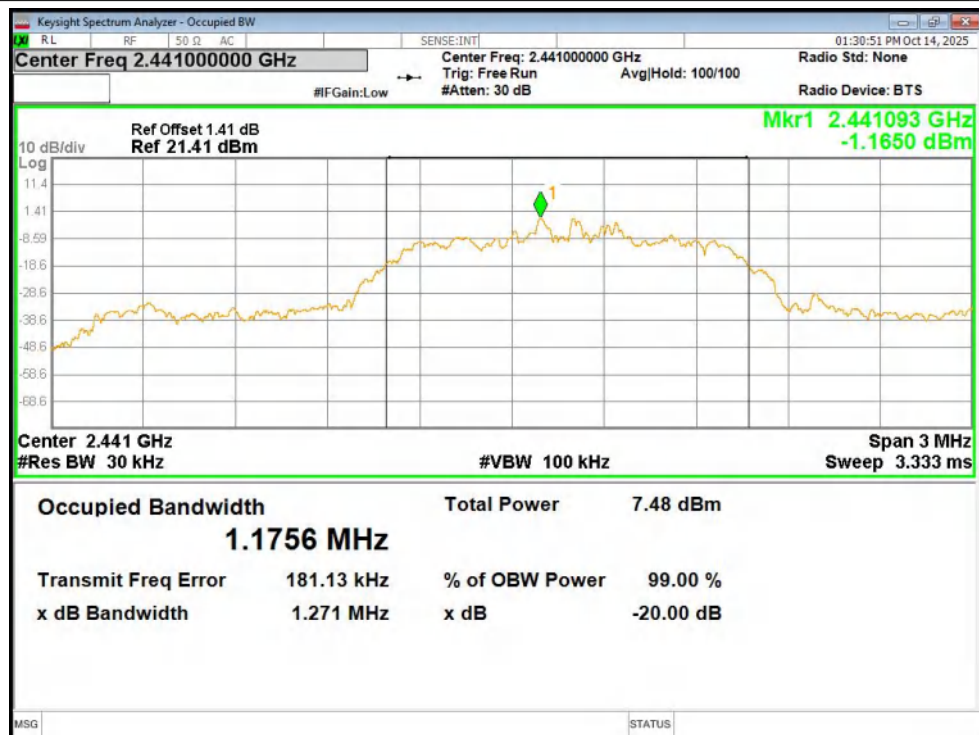
OBW NVNT 1-DH5 2480MHz Ant1



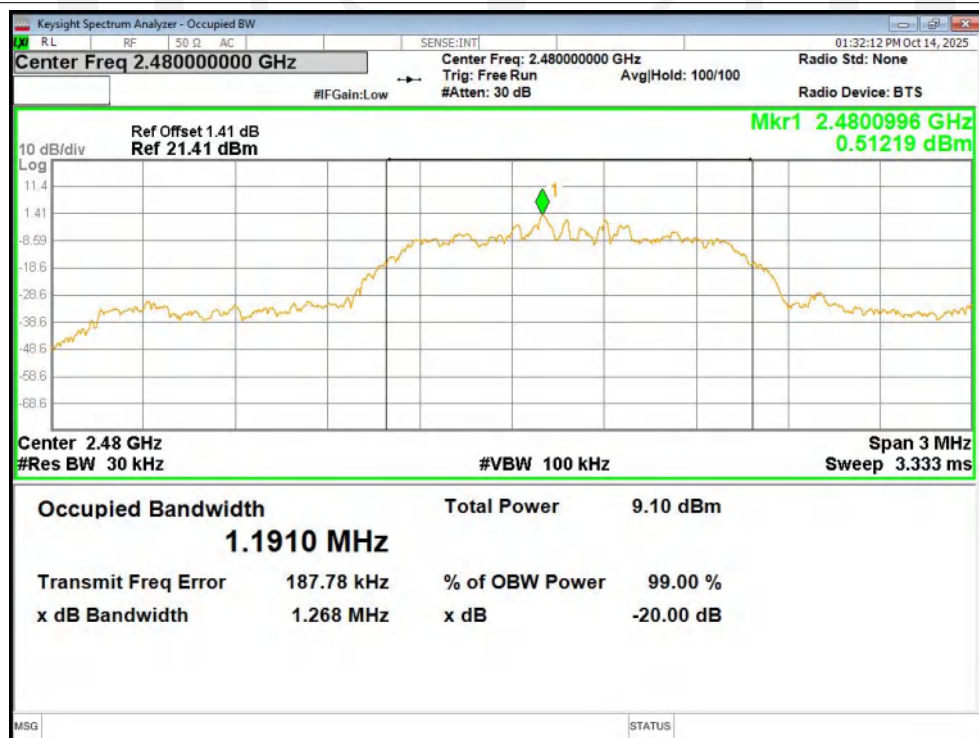
OBW NVNT 2-DH5 2402MHz Ant1



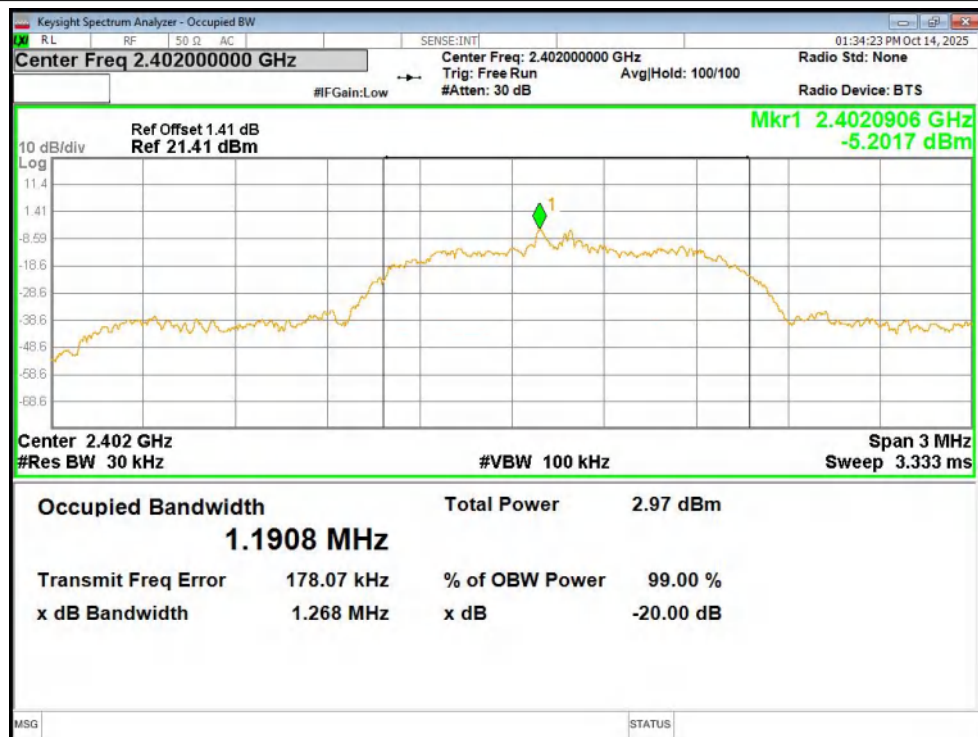
OBW NVNT 2-DH5 2441MHz Ant1



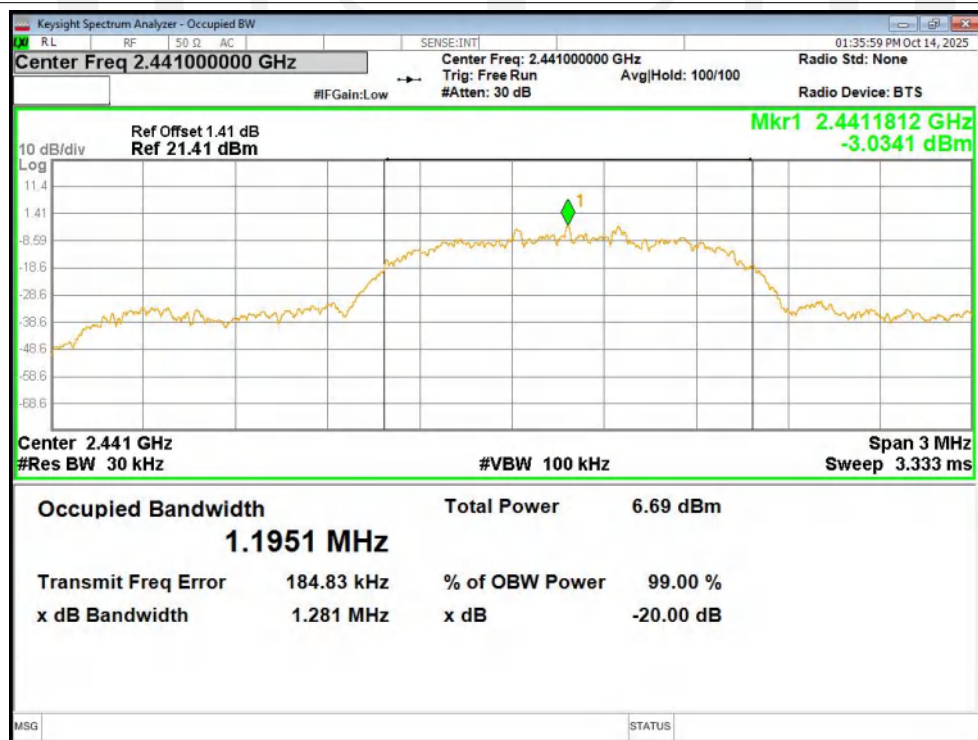
OBW NVNT 2-DH5 2480MHz Ant1

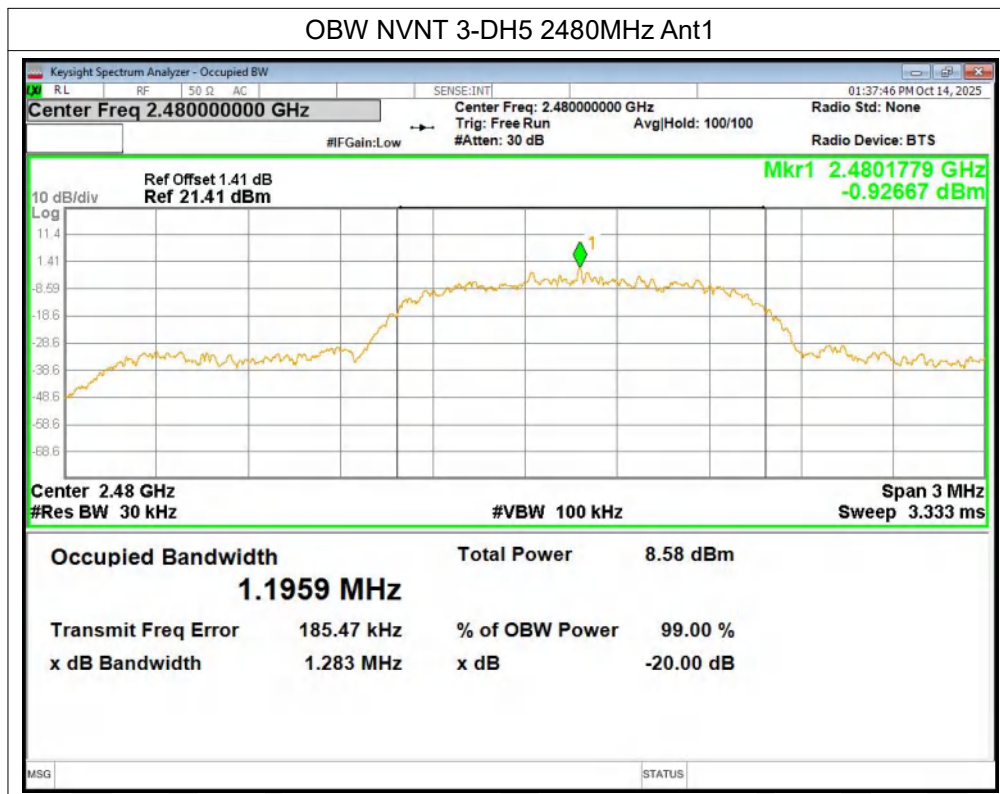


OBW NVNT 3-DH5 2402MHz Ant1



OBW NVNT 3-DH5 2441MHz Ant1





5. Carrier Frequency Separation

5.1. Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW

Please refer FCC part 15.247 & RSS-247.

5.2. Test Procedure

The EUT must have its hopping function enabled. Using the following spectrum analyzer settings:

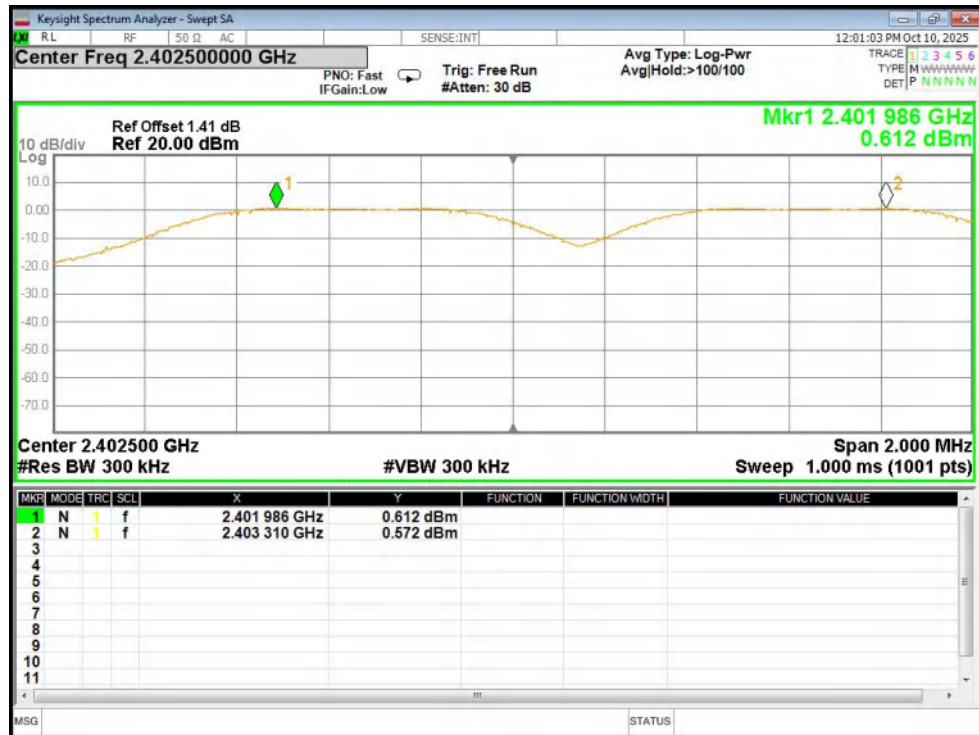
GFSK	Set the RBW = 300 kHz. Set the VBW = 300 kHz.
$\pi/4$ -DQPSK	Set the RBW = 100 kHz. Set the VBW = 100 kHz.
8DPSK	Set the RBW = 100 kHz. Set the VBW = 100 kHz.

5.3. Test Result

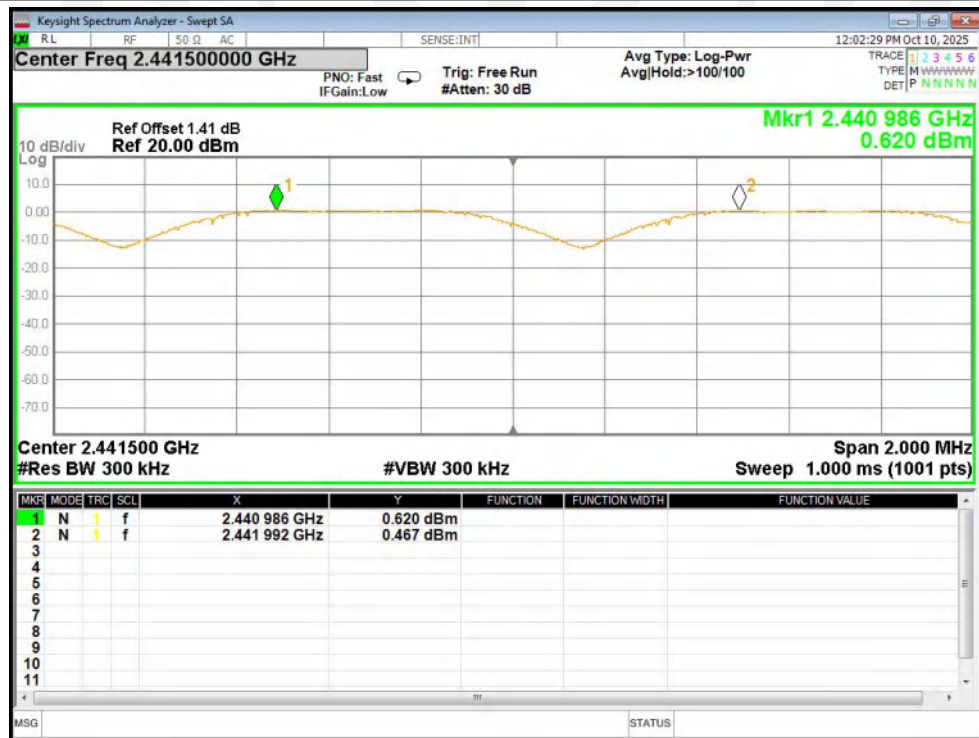
Left earphone						
Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
1-DH5	Ant1	2401.986	2403.31	1.324	0.634	Pass
1-DH5	Ant1	2440.986	2441.992	1.006	0.634	Pass
1-DH5	Ant1	2478.974	2479.984	1.01	0.636	Pass
2-DH5	Ant1	2402.1594	2403.1838	1.0244	0.844	Pass
2-DH5	Ant1	2441.1516	2442.3008	1.1492	0.859	Pass
2-DH5	Ant1	2479.1568	2480.2436	1.0868	0.843	Pass
3-DH5	Ant1	2402.2166	2403.1578	0.9412	0.834	Pass
3-DH5	Ant1	2441.1672	2442.1552	0.988	0.832	Pass
3-DH5	Ant1	2478.967	2479.8224	0.8554	0.847	Pass

Test Graphs

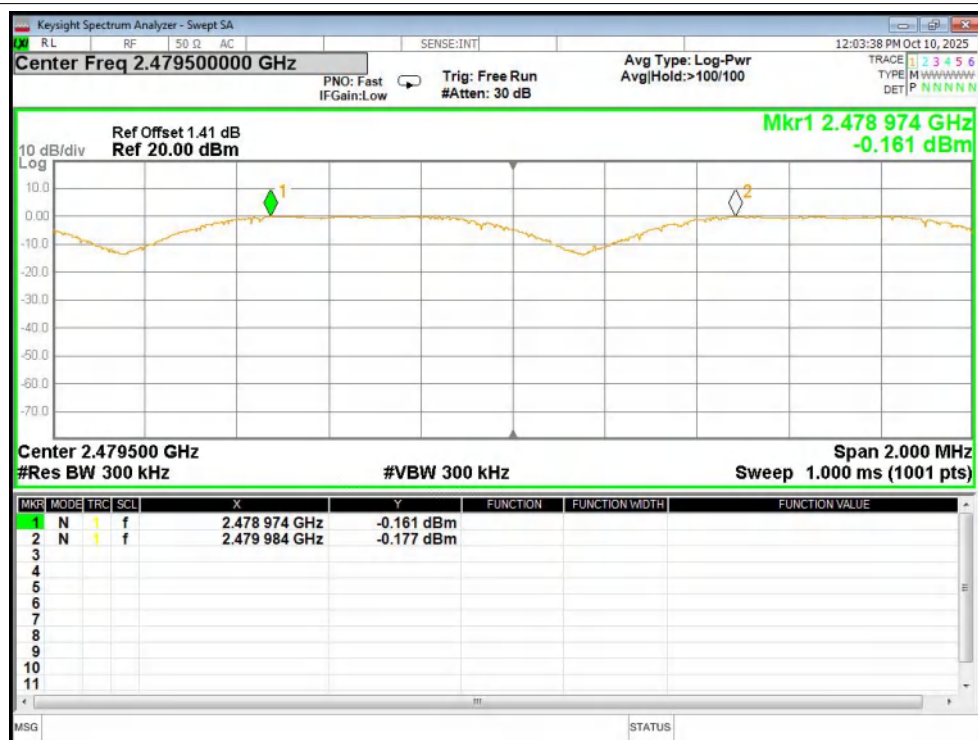
CFS NVNT 1-DH5 2402MHz Ant1



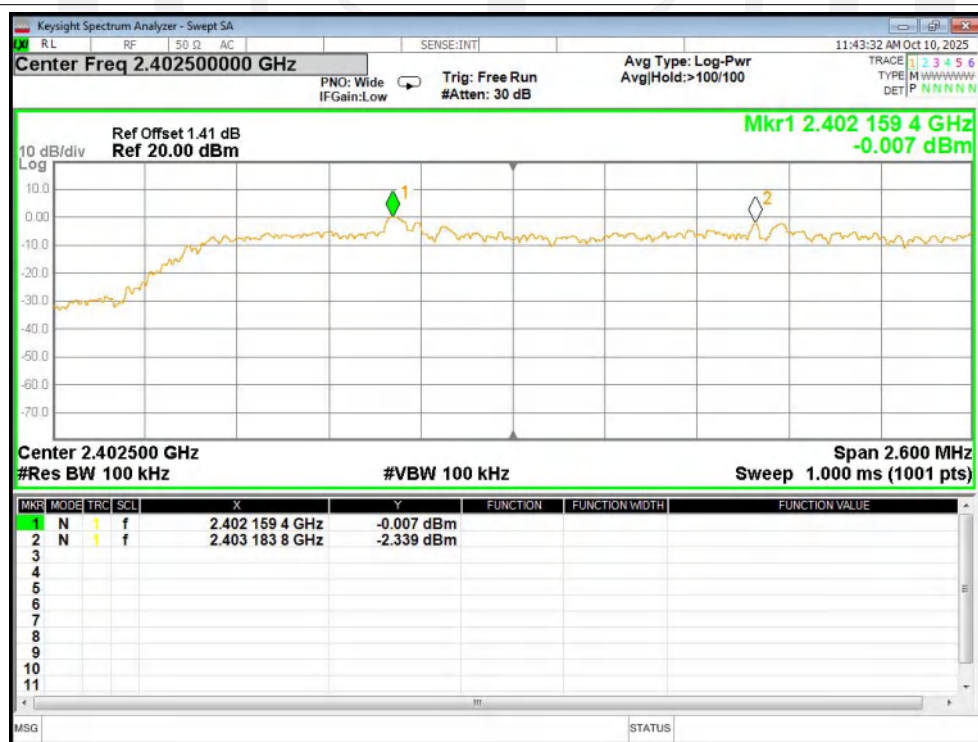
CFS NVNT 1-DH5 2441MHz Ant1



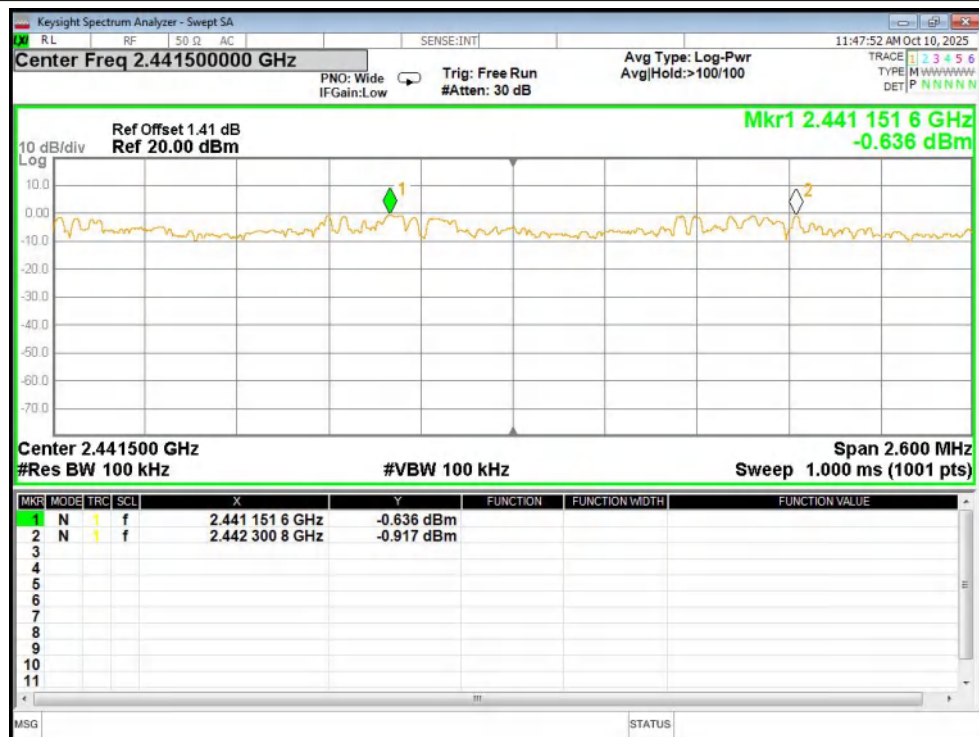
CFS NVNT 1-DH5 2480MHz Ant1



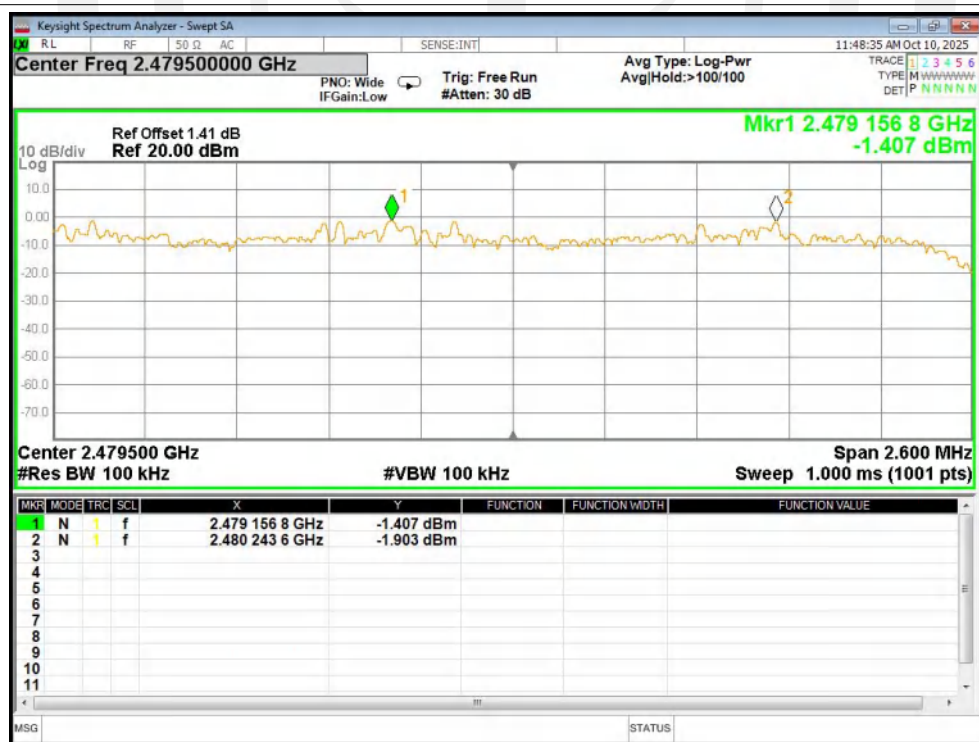
CFS NVNT 2-DH5 2402MHz Ant1



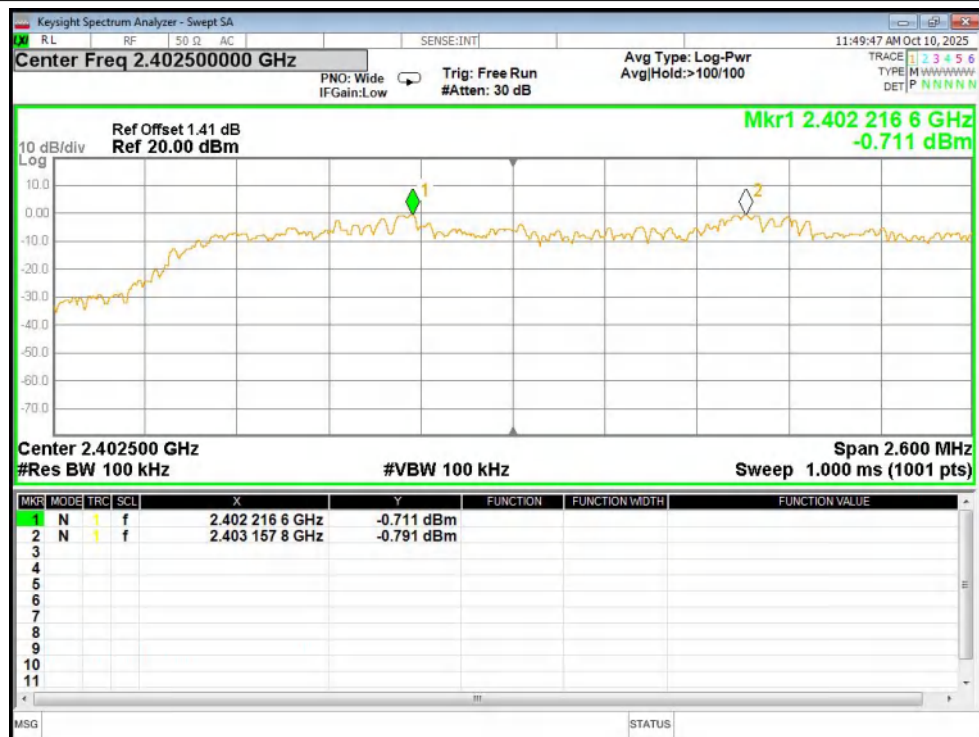
CFS NVNT 2-DH5 2441MHz Ant1



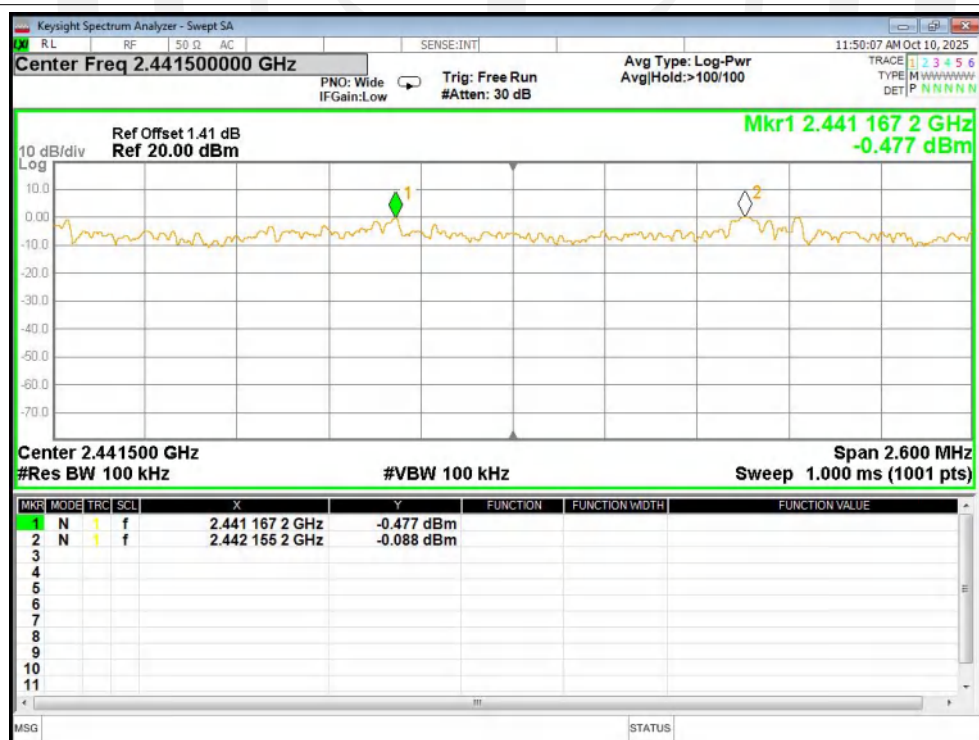
CFS NVNT 2-DH5 2480MHz Ant1

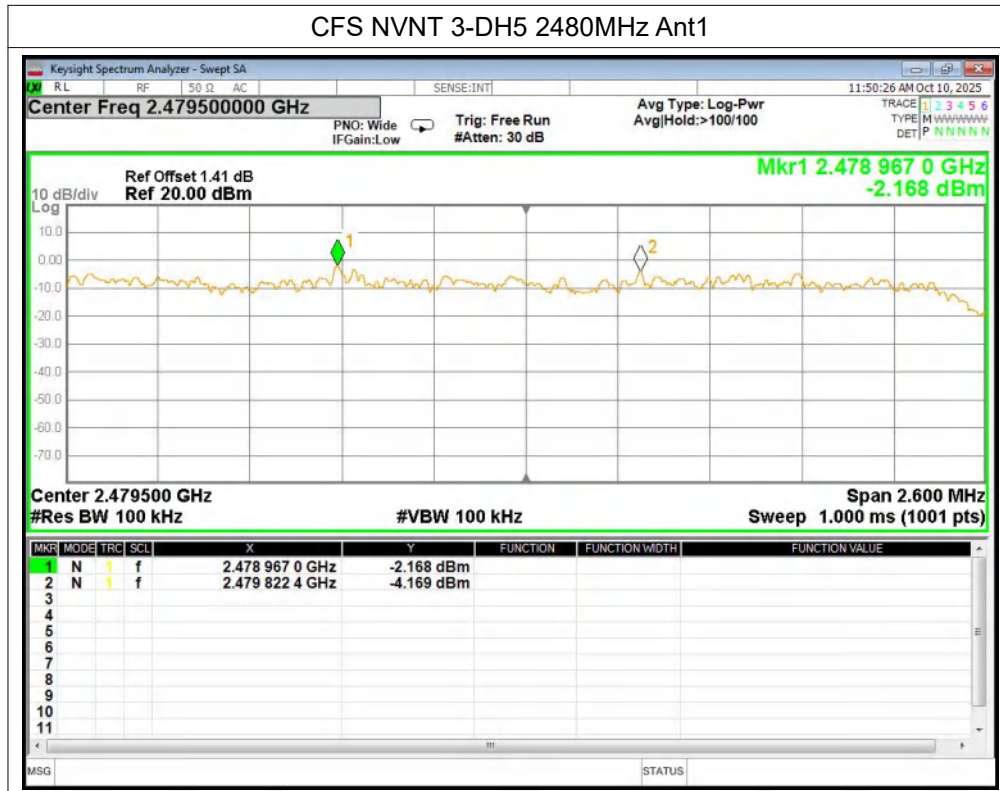


CFS NVNT 3-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2441MHz Ant1



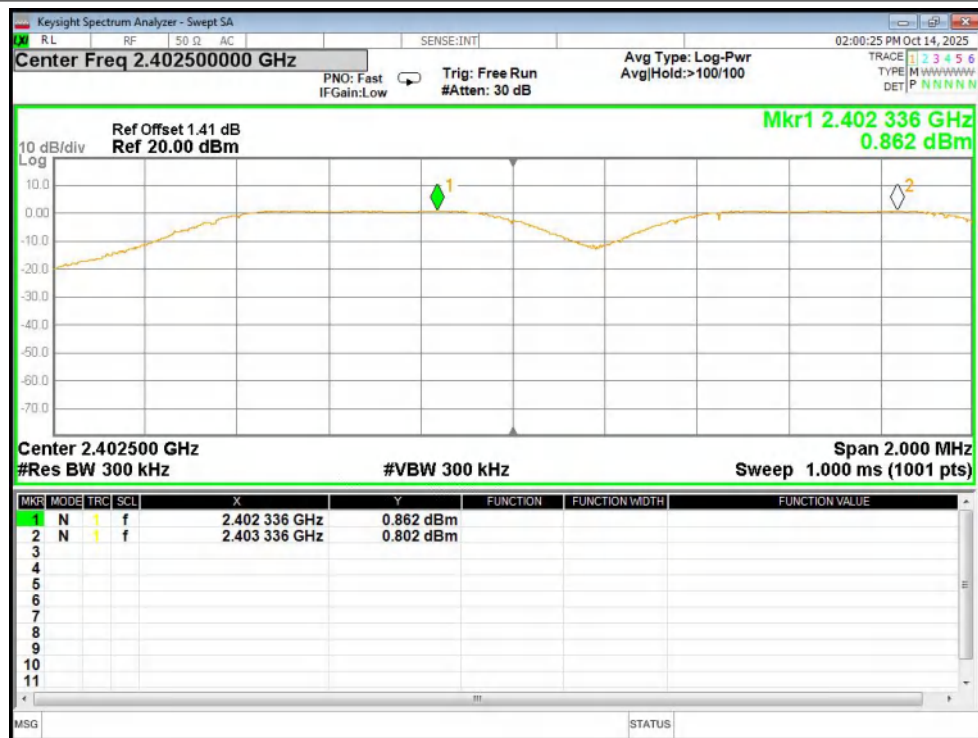


Right earphone						
Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
1-DH5	Ant1	2402.336	2403.336	1	0.637	Pass
1-DH5	Ant1	2441.334	2442.032	0.698	0.637	Pass
1-DH5	Ant1	2479.008	2480.012	1.004	0.632	Pass
2-DH5	Ant1	2402.3388	2403.3606	1.0218	0.853	Pass
2-DH5	Ant1	2441.0242	2442.1968	1.1726	0.85	Pass
2-DH5	Ant1	2479.0242	2480.3372	1.313	0.852	Pass
3-DH5	Ant1	2402.1776	2403.1786	1.001	0.832	Pass
3-DH5	Ant1	2441.1854	2442.332	1.1466	0.848	Pass
3-DH5	Ant1	2479.1958	2480.2228	1.027	0.849	Pass

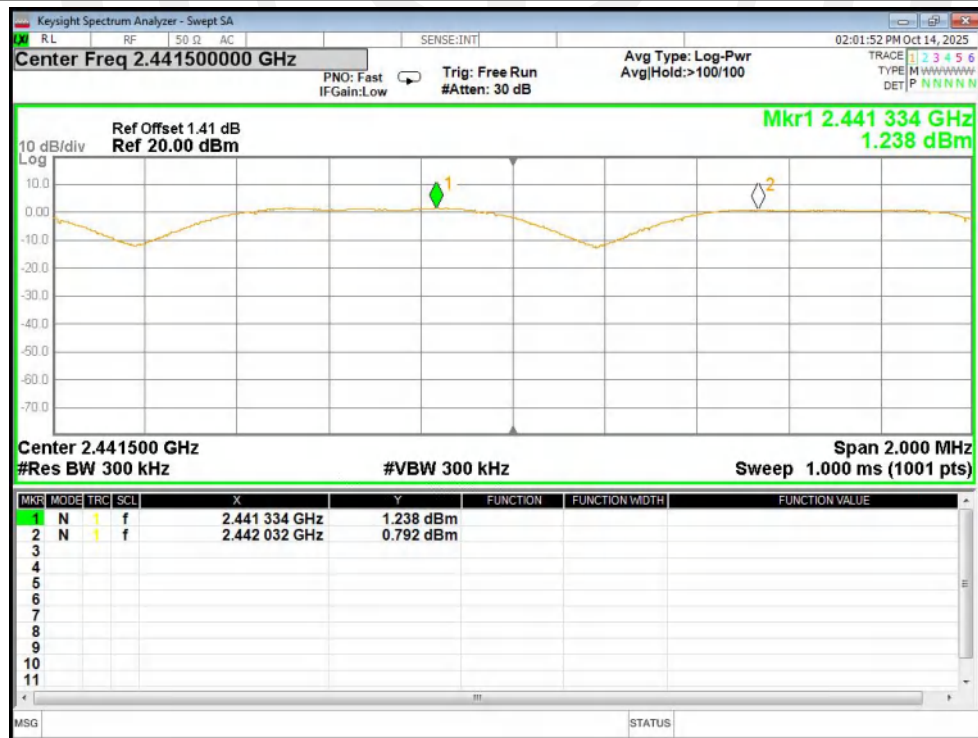


Test Graphs

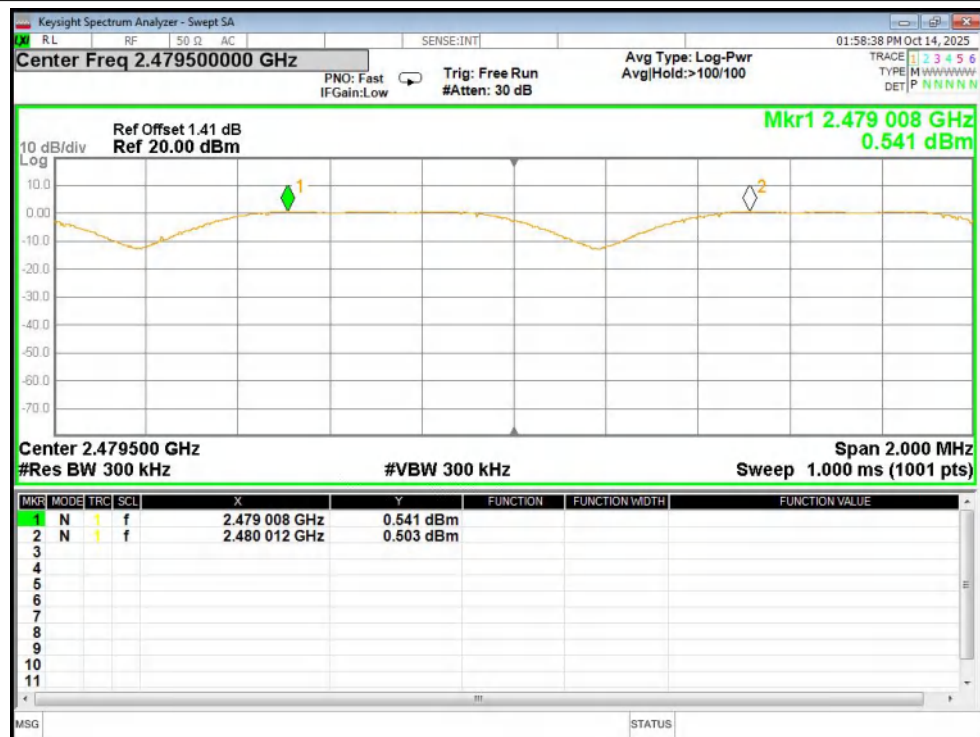
CFS NVNT 1-DH5 2402MHz Ant1



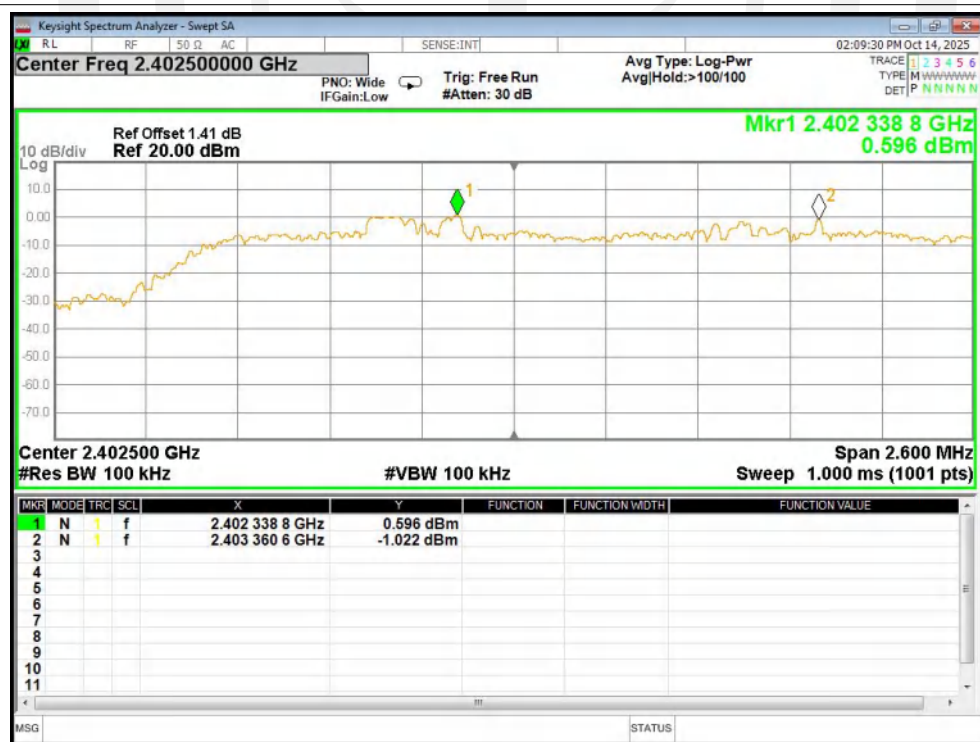
CFS NVNT 1-DH5 2441MHz Ant1



CFS NVNT 1-DH5 2480MHz Ant1



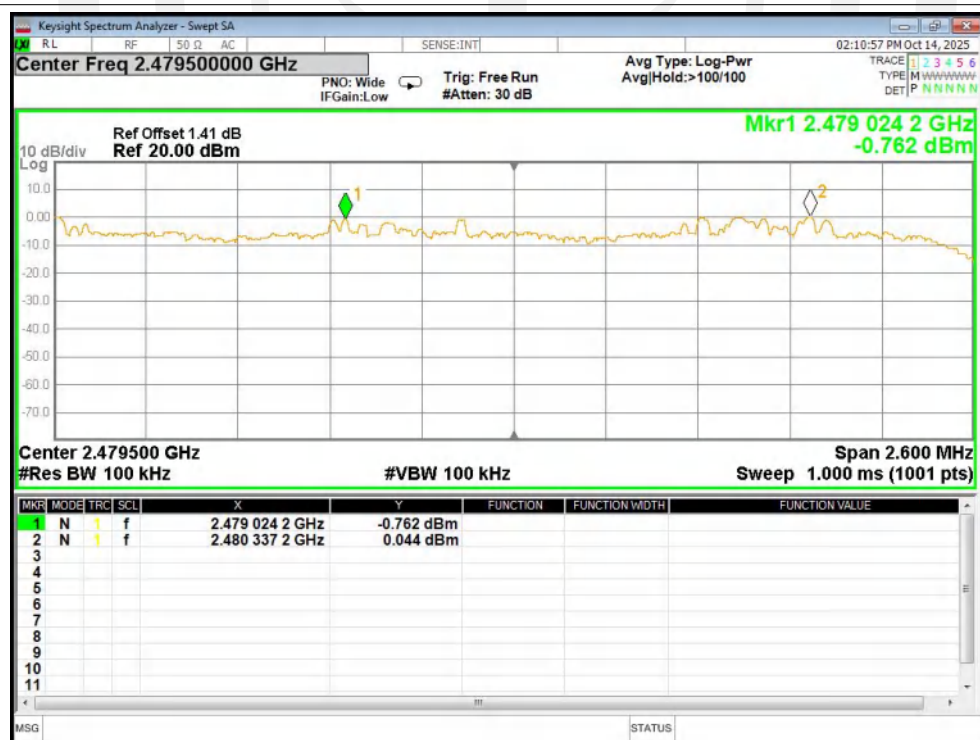
CFS NVNT 2-DH5 2402MHz Ant1



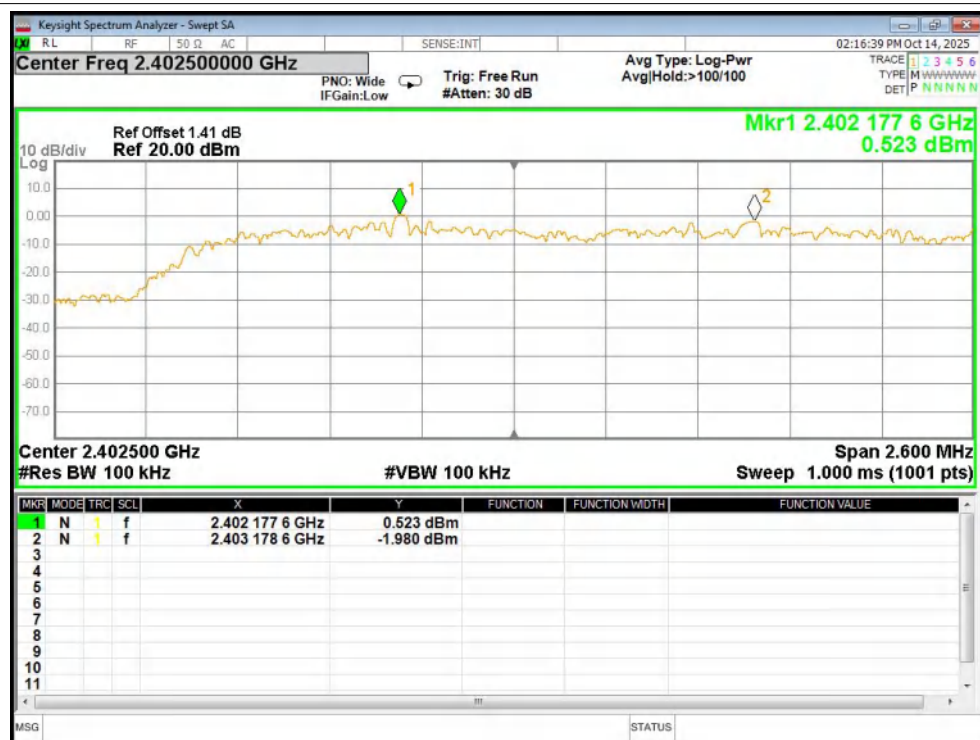
CFS NVNT 2-DH5 2441MHz Ant1



CFS NVNT 2-DH5 2480MHz Ant1

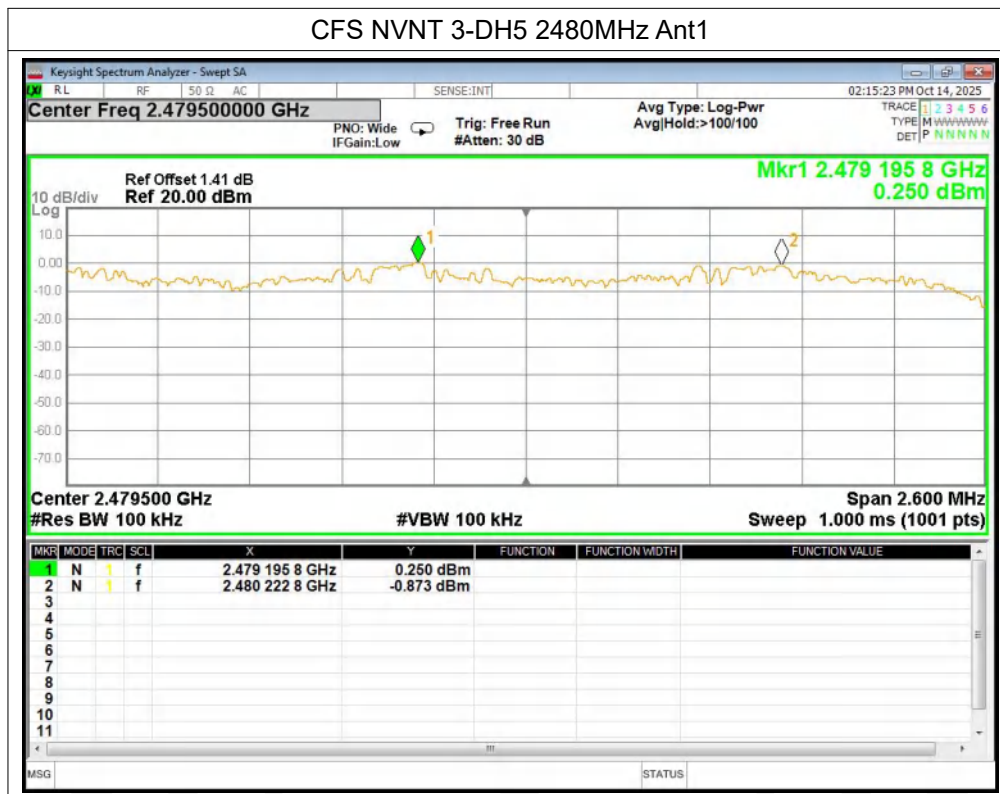


CFS NVNT 3-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2441MHz Ant1





6. Number Of Hopping Channel

6.1. Limit

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

Please refer FCC part 15.247 & RSS-247.

6.2. Test Procedure

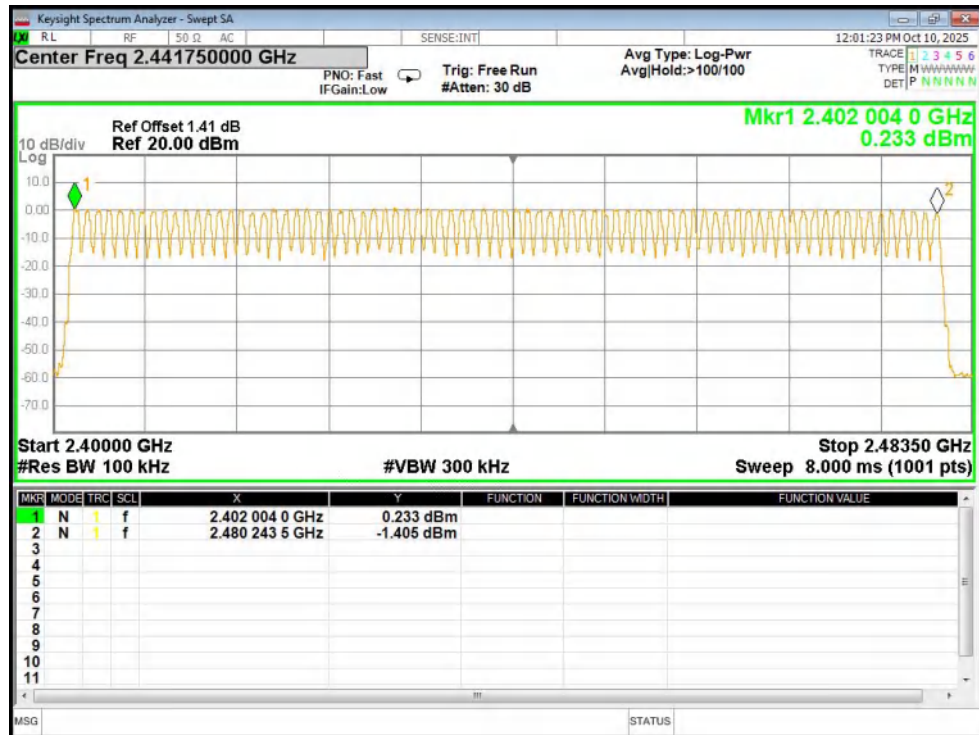
The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The number of hopping channel was measured by spectrum analyzer with 100kHz RBW and 300KHz VBW.

6.3. Test Result

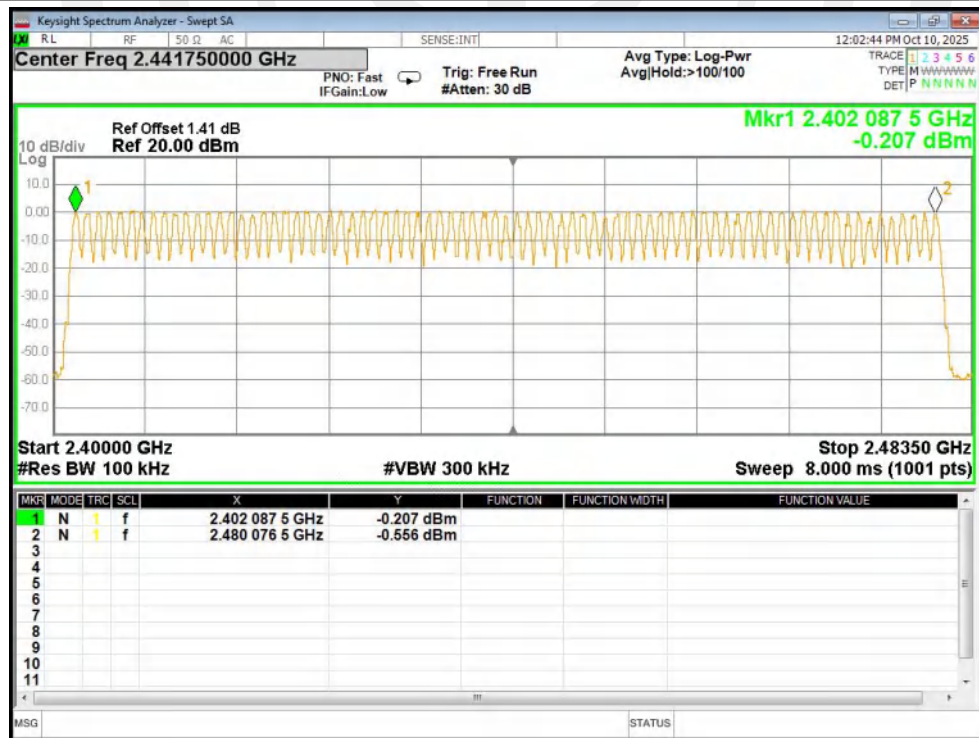
Left earphone				
Mode	Antenna	Hopping Number	Limit	Verdict
1-DH5	Ant1	79	15	Pass
2-DH5	Ant1	79	15	Pass
3-DH5	Ant1	79	15	Pass

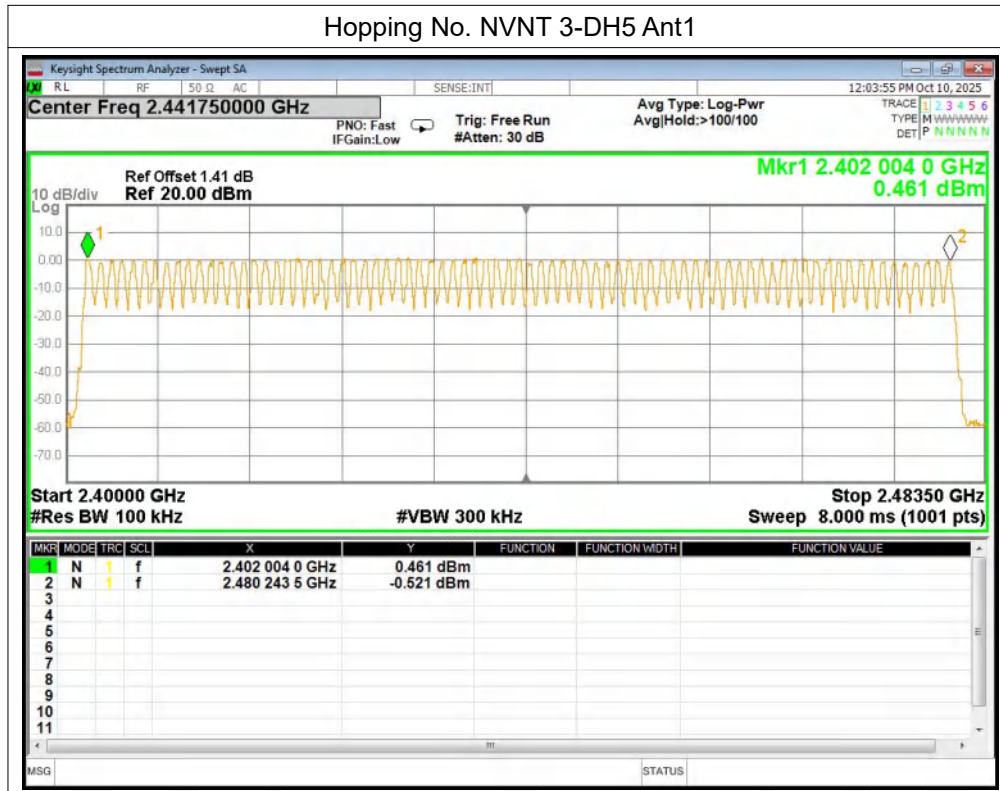
Test Graphs

Hopping No. NVNT 1-DH5 Ant1



Hopping No. NVNT 2-DH5 Ant1



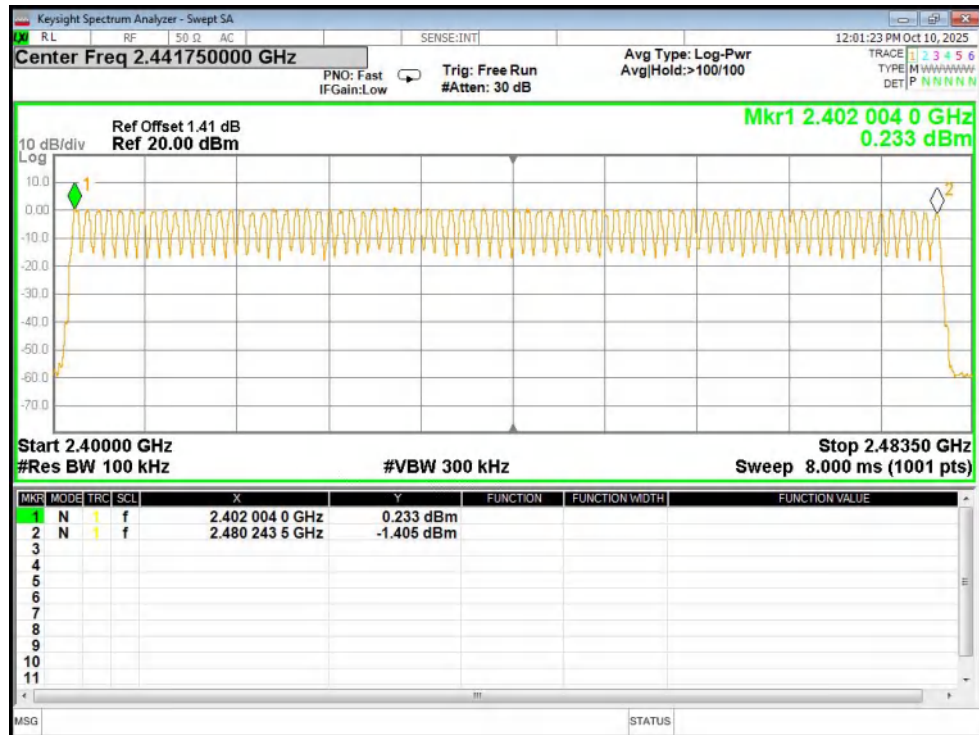


Right earphone				
Mode	Antenna	Hopping Number	Limit	Verdict
1-DH5	Ant1	79	15	Pass
2-DH5	Ant1	79	15	Pass
3-DH5	Ant1	79	15	Pass

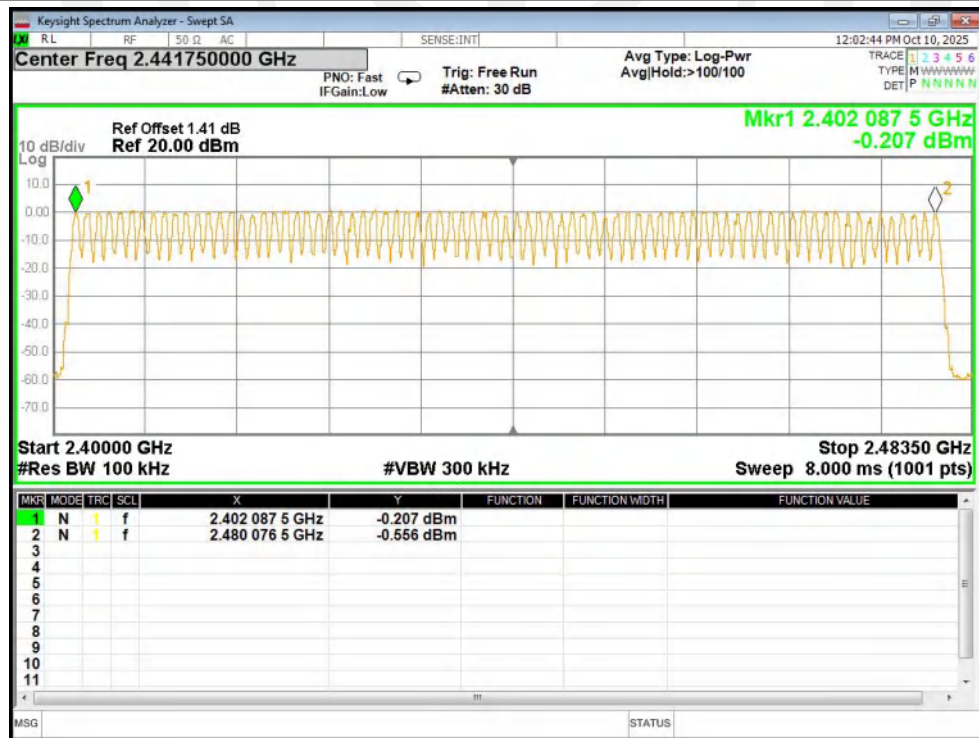


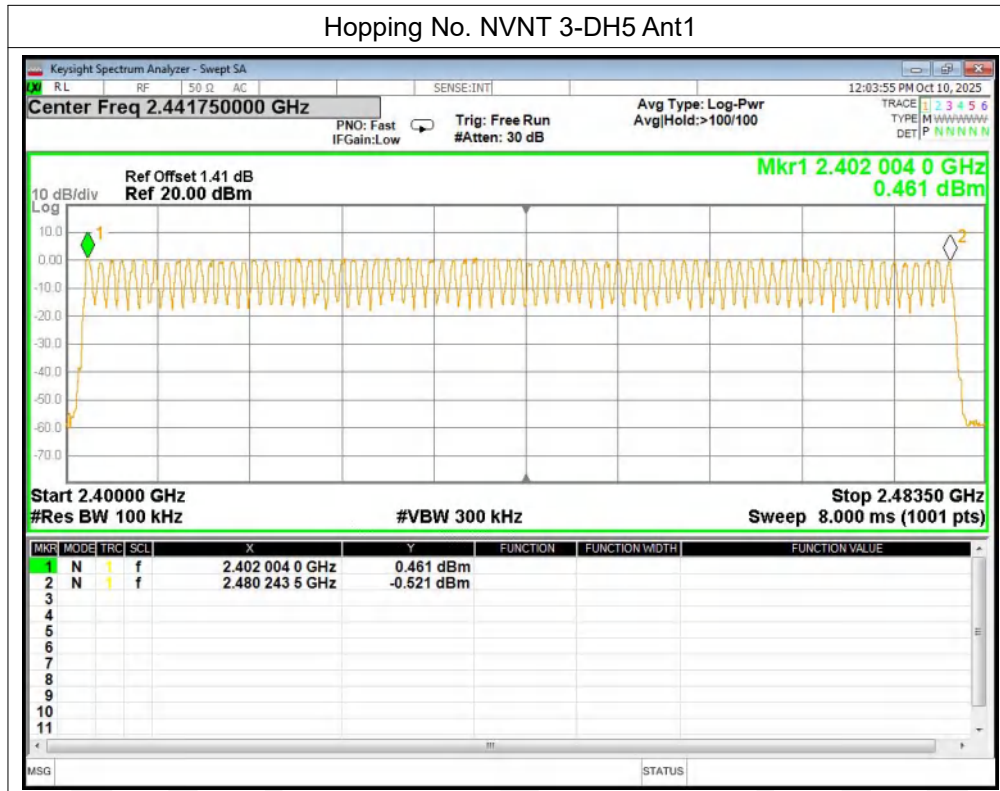
Test Graphs

Hopping No. NVNT 1-DH5 Ant1



Hopping No. NVNT 2-DH5 Ant1





7. Dwell Time

7.1. Test limit

Please refer FCC part 15.247 & RSS-247.

Frequency hopping systems operating in the 2400MHz-2483.5MHz. The average time of occupancy on any frequency shall not greater than 0.4 s within period of 0.4 seconds multiplied by the number of hopping channel employed.

7.2. Test Procedure

7.2.1. Place the EUT on the table and set it in transmitting mode.

7.2.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

7.2.3. Set center frequency of spectrum analyzer = operating frequency.

7.2.4. Set the spectrum analyzer as RBW=1MHz, VBW=3MHz, Span = 0Hz, Sweep = auto.

7.2.5. Repeat above procedures until all frequency measured were complete.

7.2.6. The test period: $T = 0.4 \text{ Second/Channel} \times 79 \text{ Channel} = 31.6 \text{ s}$

7.2.7. Dwell Time=Pulse Time* Hops Number

7.3. Test Result

Left earphone								
Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
1-DH1	2441	Ant1	0.396	126.324	319	31600	400	Pass
1-DH3	2441	Ant1	1.652	251.104	152	31600	400	Pass
1-DH5	2441	Ant1	2.9	298.7	103	31600	400	Pass
2-DH1	2441	Ant1	0.406	203.406	501	31600	400	Pass
2-DH3	2441	Ant1	1.636	263.396	161	31600	400	Pass
2-DH5	2441	Ant1	2.905	290.5	100	31600	400	Pass
3-DH1	2441	Ant1	0.409	130.062	318	31600	400	Pass
3-DH3	2441	Ant1	1.657	261.806	158	31600	400	Pass
3-DH5	2441	Ant1	2.909	311.263	107	31600	400	Pass

Test Graphs

Dwell NVNT 1-DH1 2441MHz Ant1 One Burst



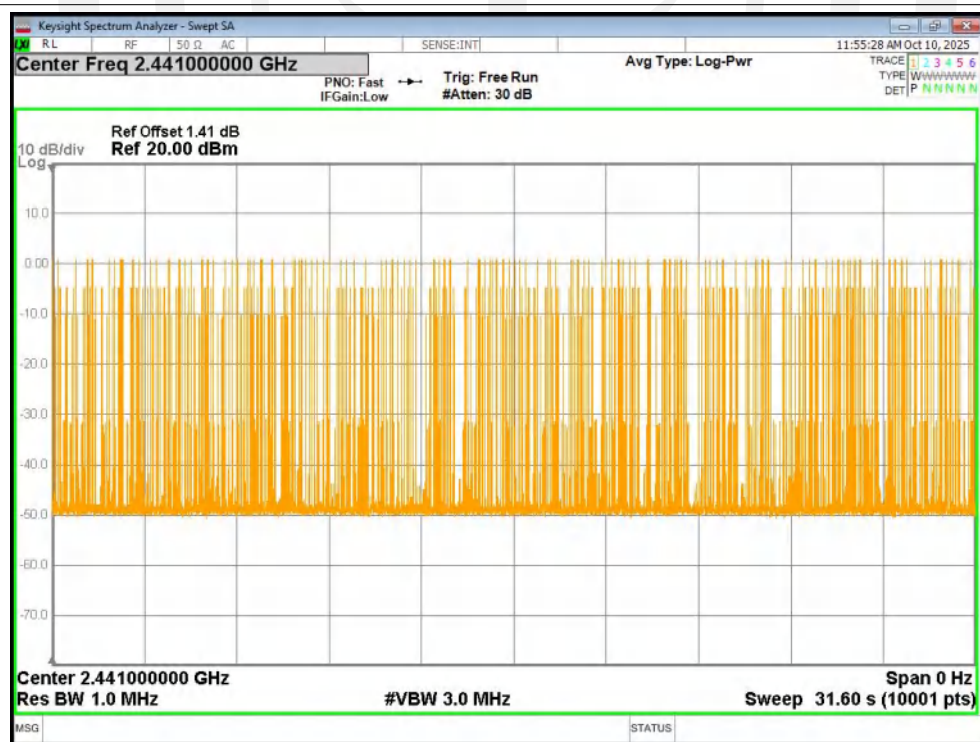
Dwell NVNT 1-DH1 2441MHz Ant1 Accumulated



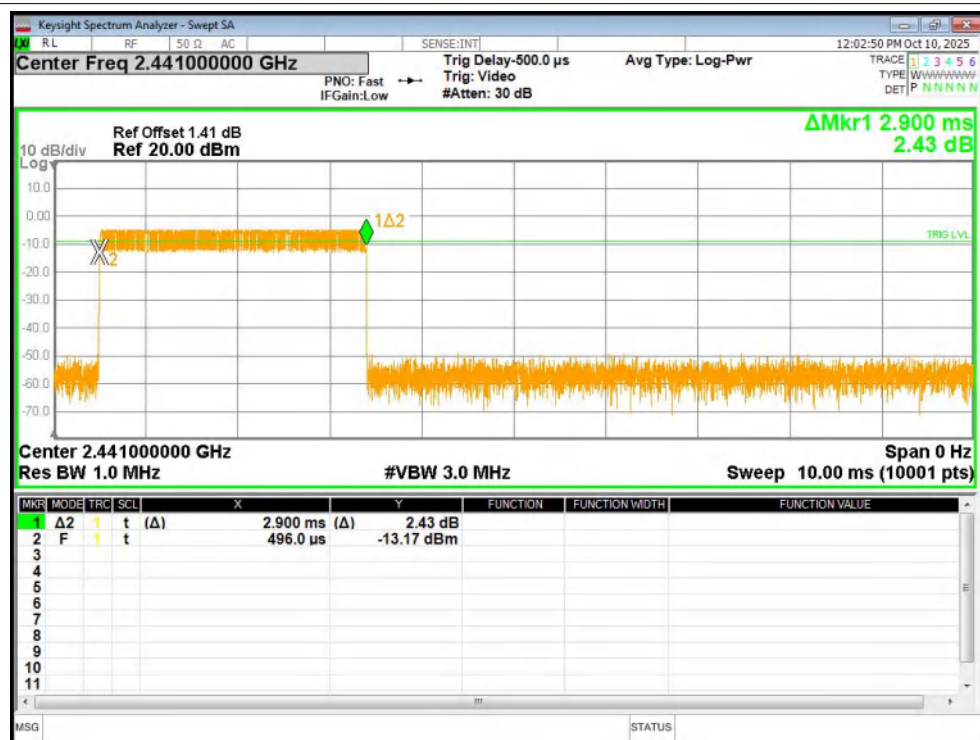
Dwell NVNT 1-DH3 2441MHz Ant1 One Burst



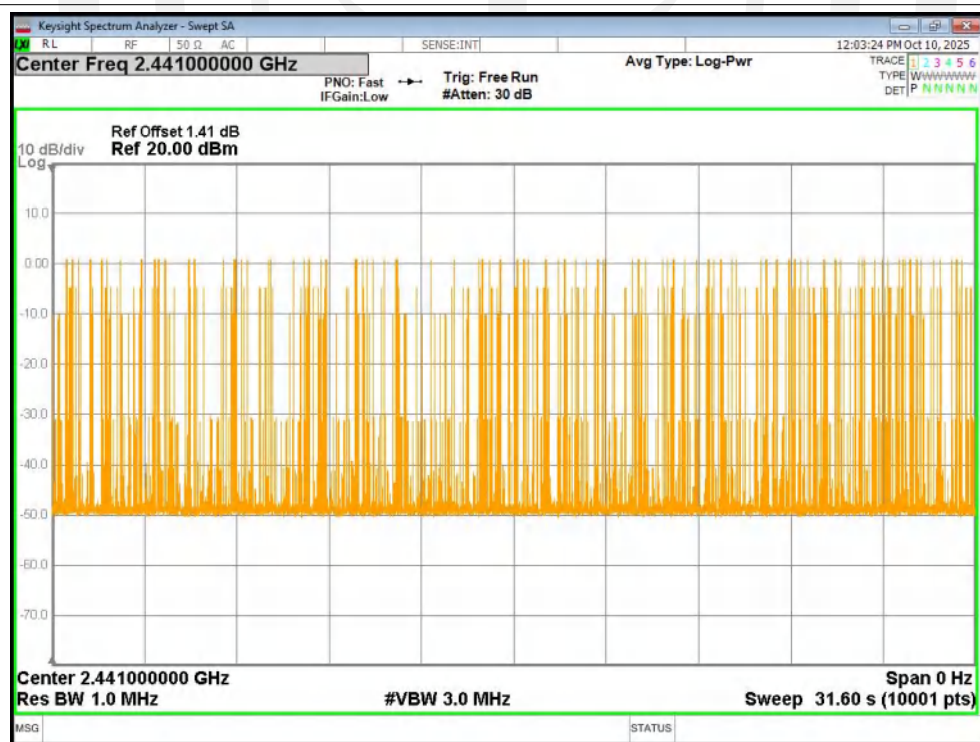
Dwell NVNT 1-DH3 2441MHz Ant1 Accumulated



Dwell NVNT 1-DH5 2441MHz Ant1 One Burst



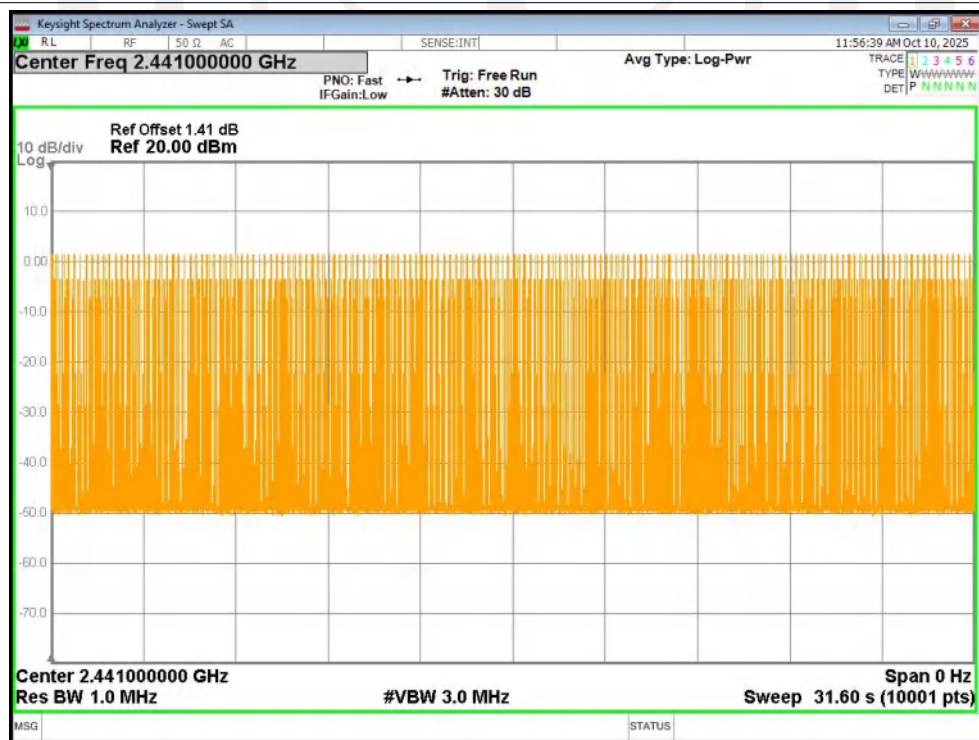
Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated



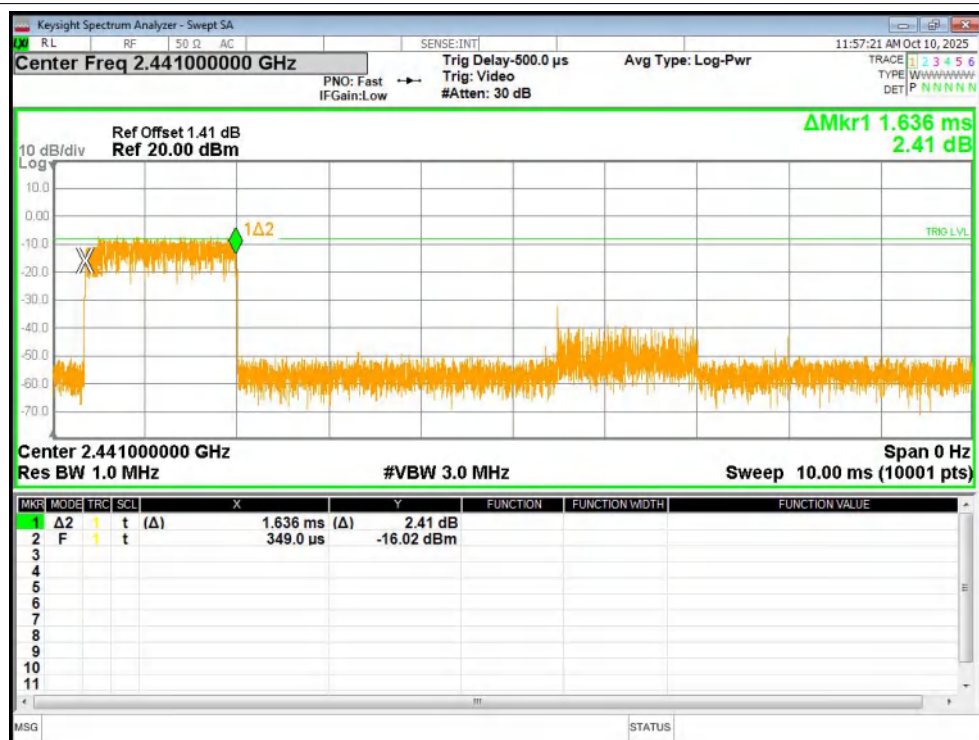
Dwell NVNT 2-DH1 2441MHz Ant1 One Burst



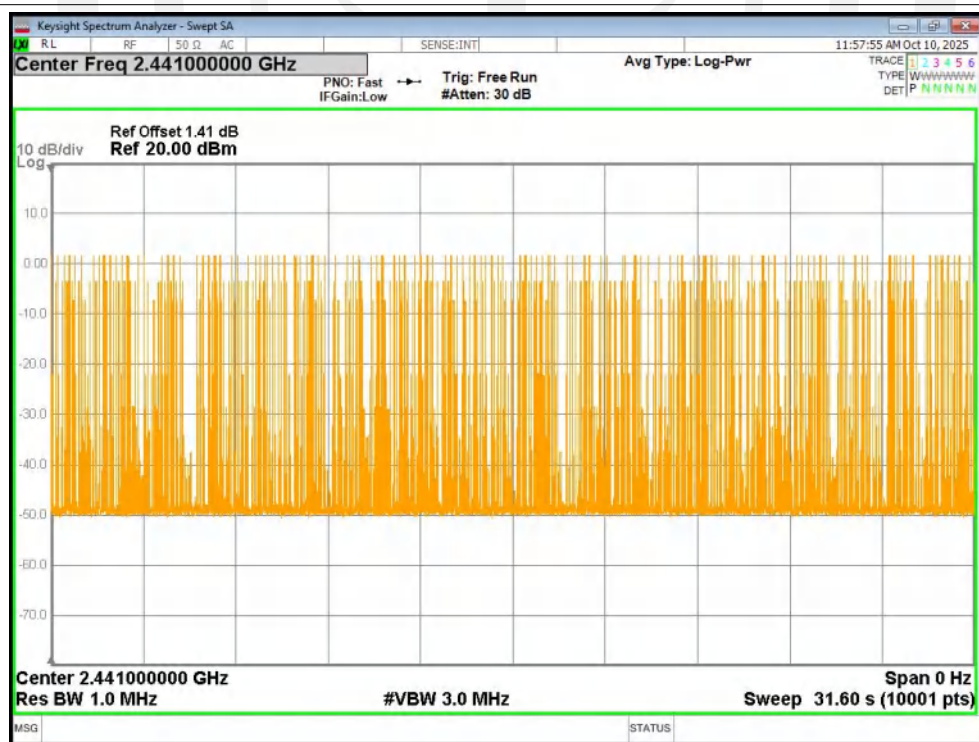
Dwell NVNT 2-DH1 2441MHz Ant1 Accumulated



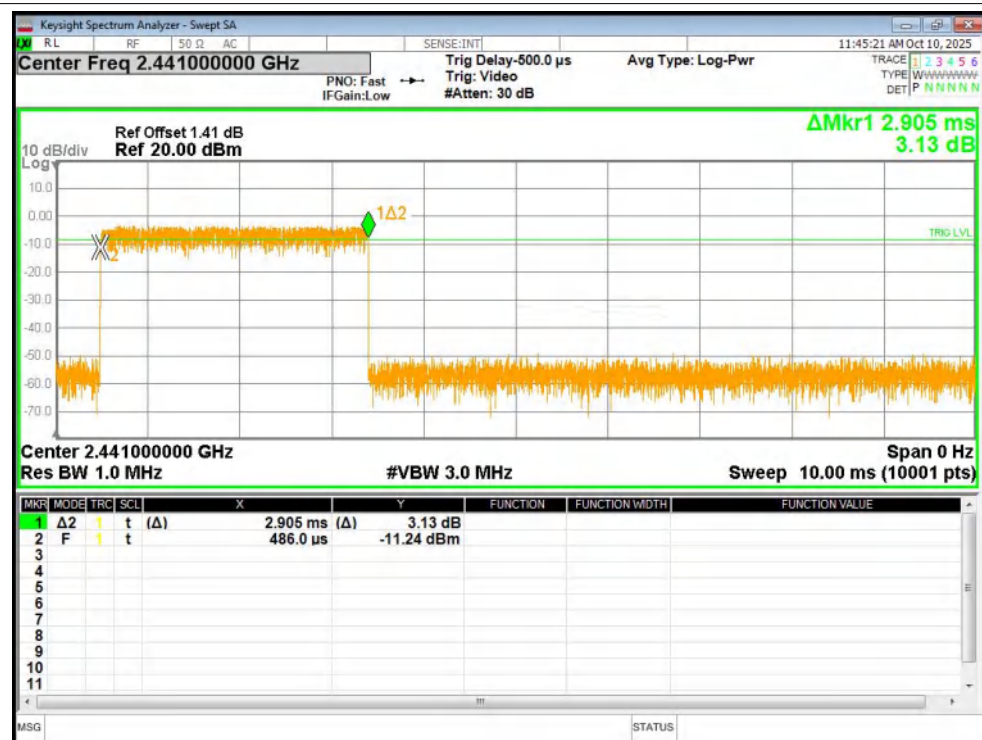
Dwell NVNT 2-DH3 2441MHz Ant1 One Burst



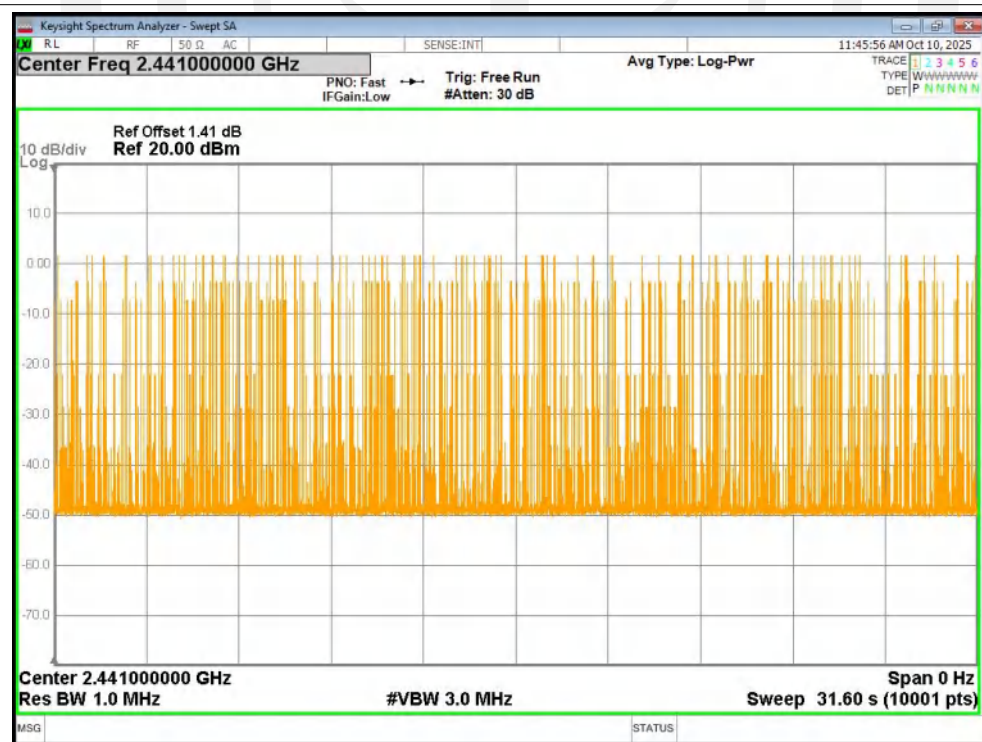
Dwell NVNT 2-DH3 2441MHz Ant1 Accumulated



Dwell NVNT 2-DH5 2441MHz Ant1 One Burst



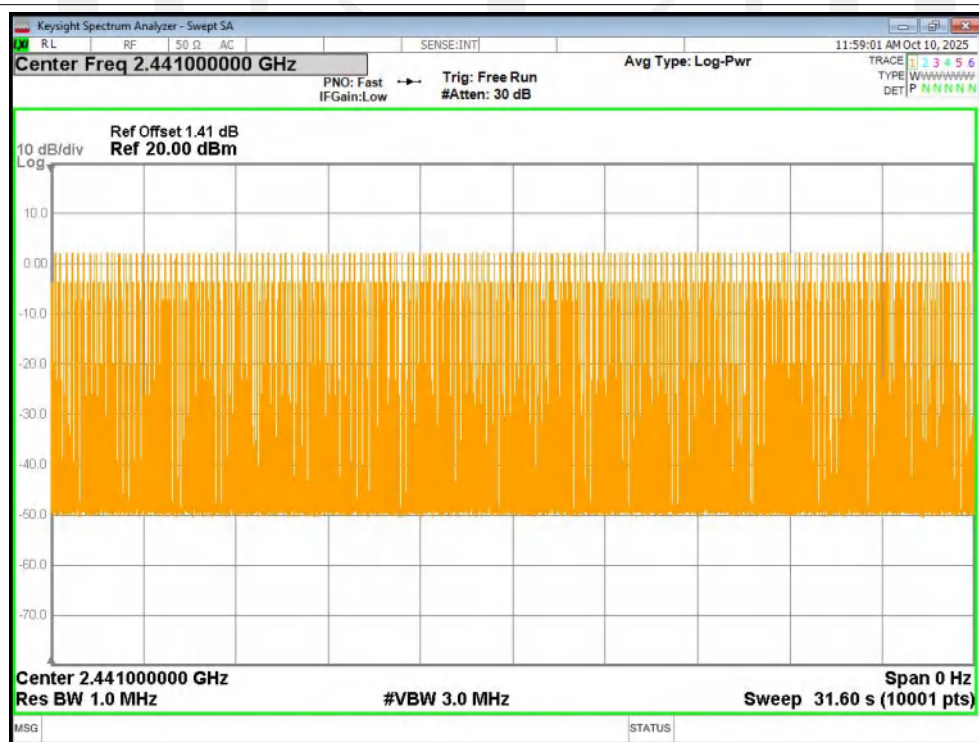
Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated



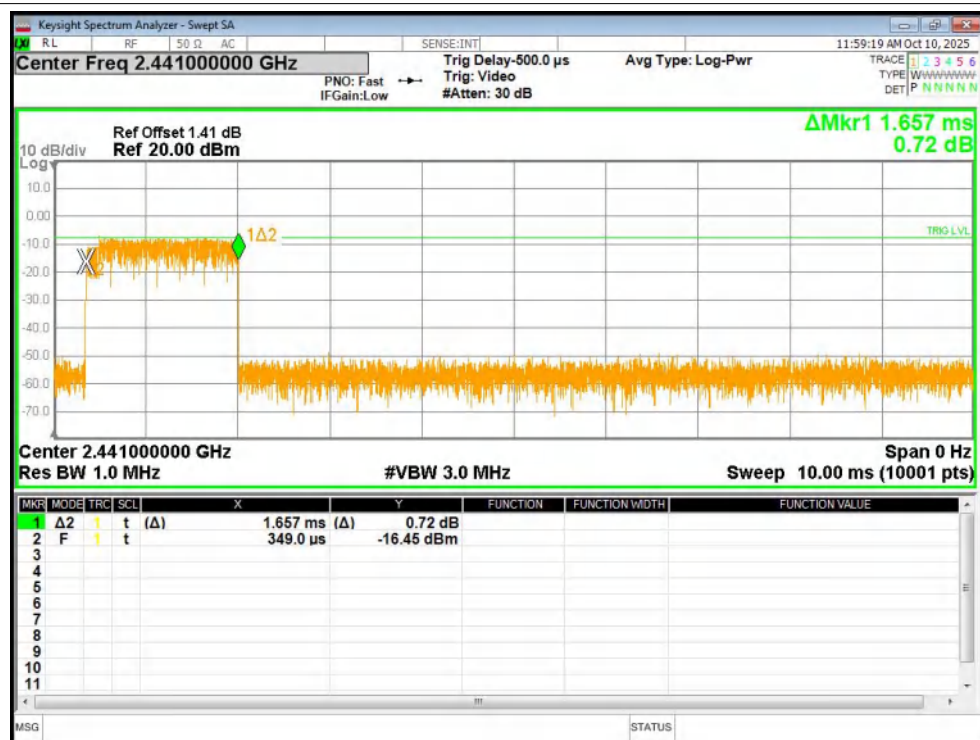
Dwell NVNT 3-DH1 2441MHz Ant1 One Burst



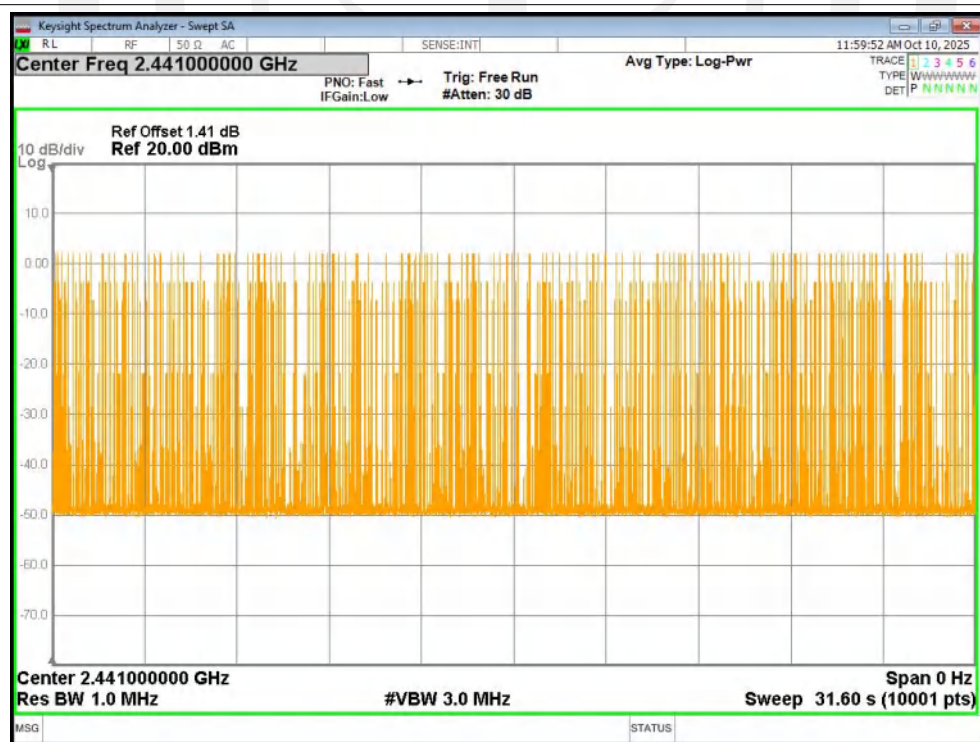
Dwell NVNT 3-DH1 2441MHz Ant1 Accumulated



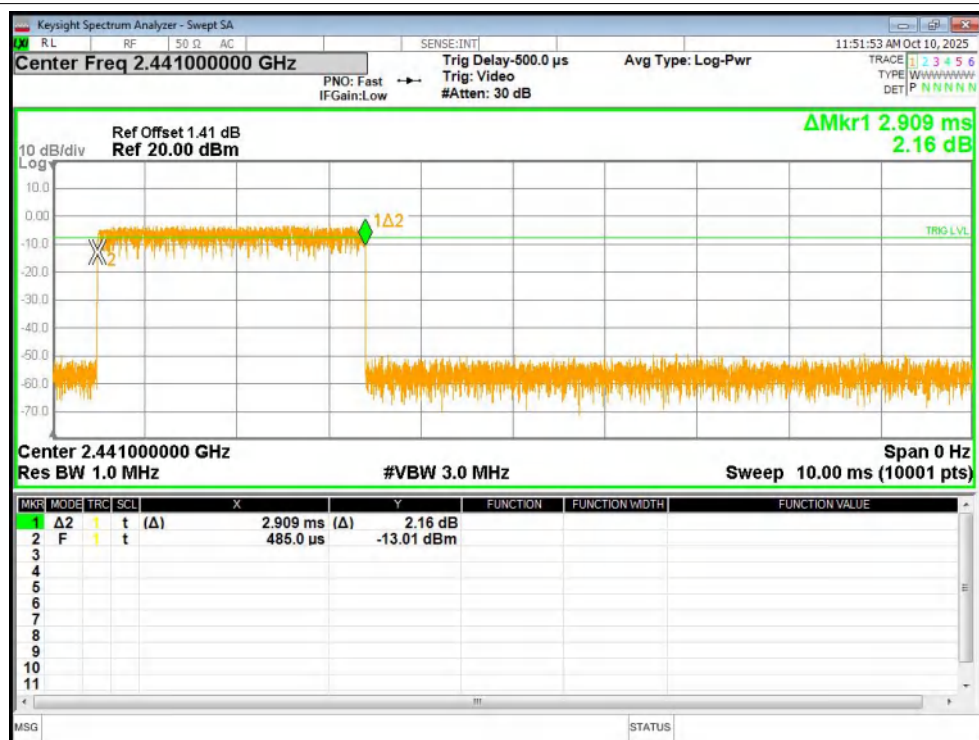
Dwell NVNT 3-DH3 2441MHz Ant1 One Burst



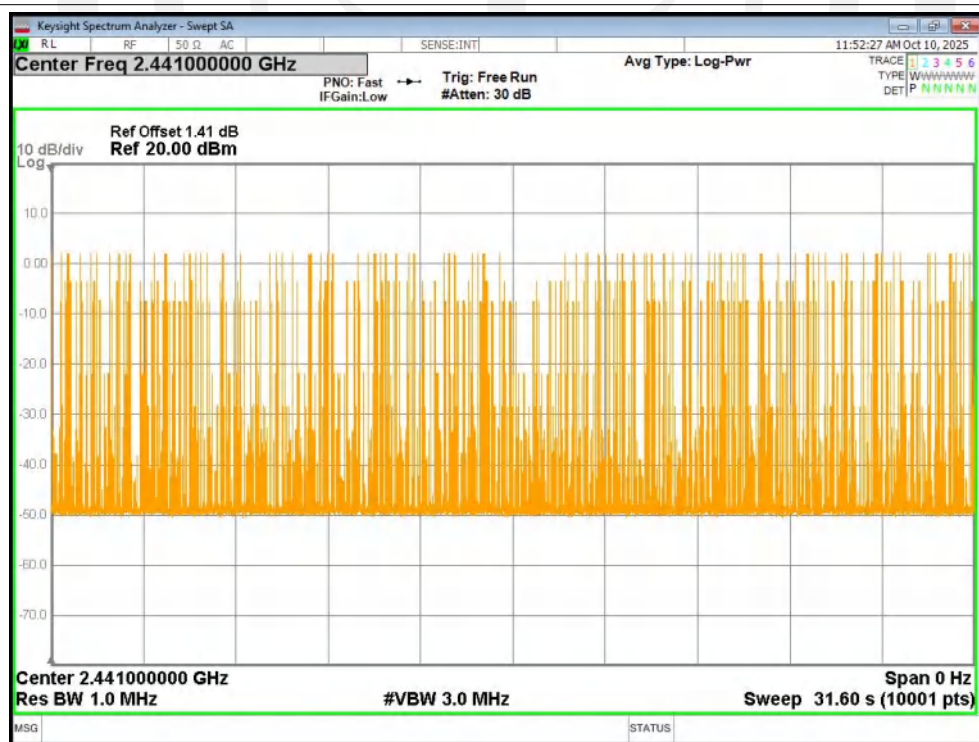
Dwell NVNT 3-DH3 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2441MHz Ant1 One Burst



Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated



Right earphone								
Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
1-DH1	2441	Ant1	0.397	125.849	317	31600	400	Pass
1-DH3	2441	Ant1	1.654	246.446	149	31600	400	Pass
1-DH5	2441	Ant1	2.899	269.607	93	31600	400	Pass
2-DH1	2441	Ant1	0.407	203.907	501	31600	400	Pass
2-DH3	2441	Ant1	1.659	534.198	322	31600	400	Pass
2-DH5	2441	Ant1	2.884	591.22	205	31600	400	Pass
3-DH1	2441	Ant1	0.409	130.471	319	31600	400	Pass
3-DH3	2441	Ant1	1.658	548.798	331	31600	400	Pass
3-DH5	2441	Ant1	2.91	323.01	111	31600	400	Pass

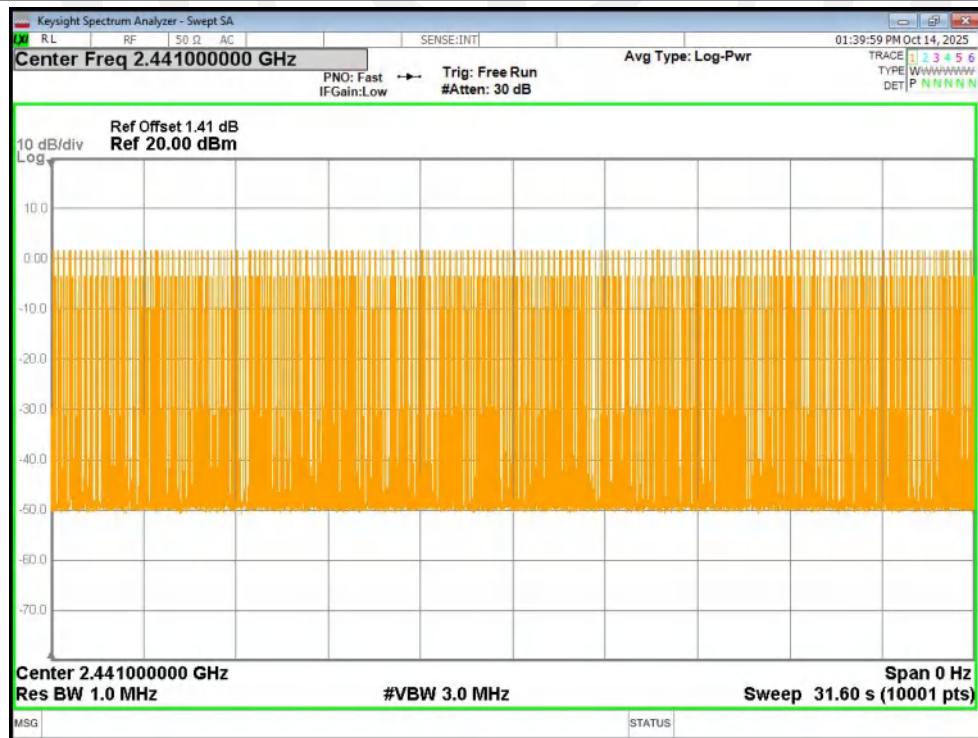


Test Graphs

Dwell NVNT 1-DH1 2441MHz Ant1 One Burst



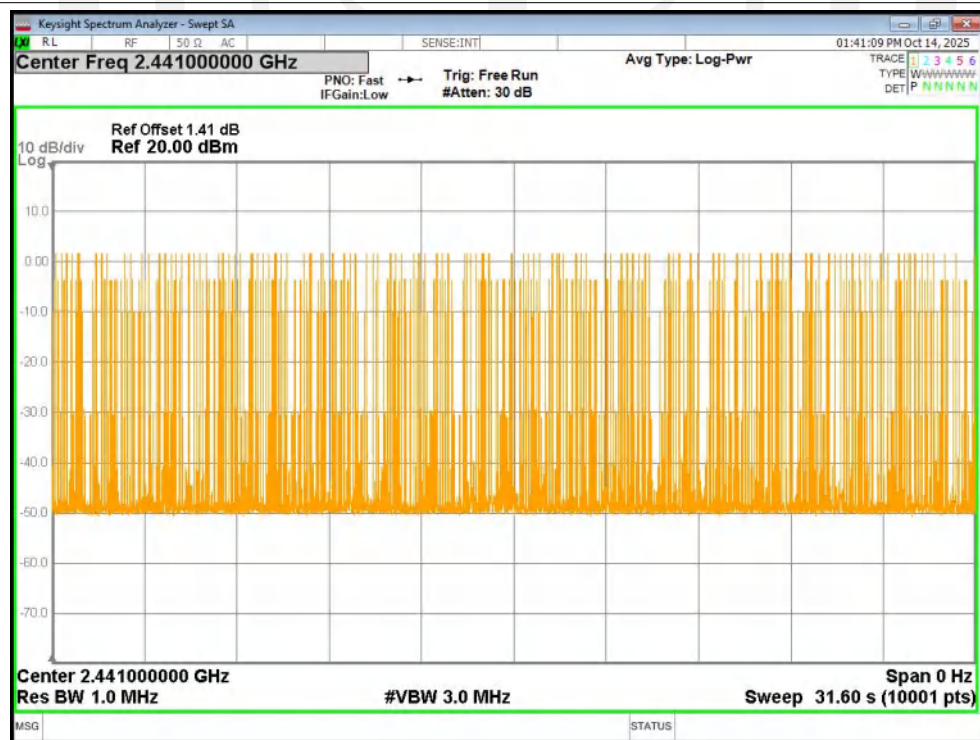
Dwell NVNT 1-DH1 2441MHz Ant1 Accumulated



Dwell NVNT 1-DH3 2441MHz Ant1 One Burst



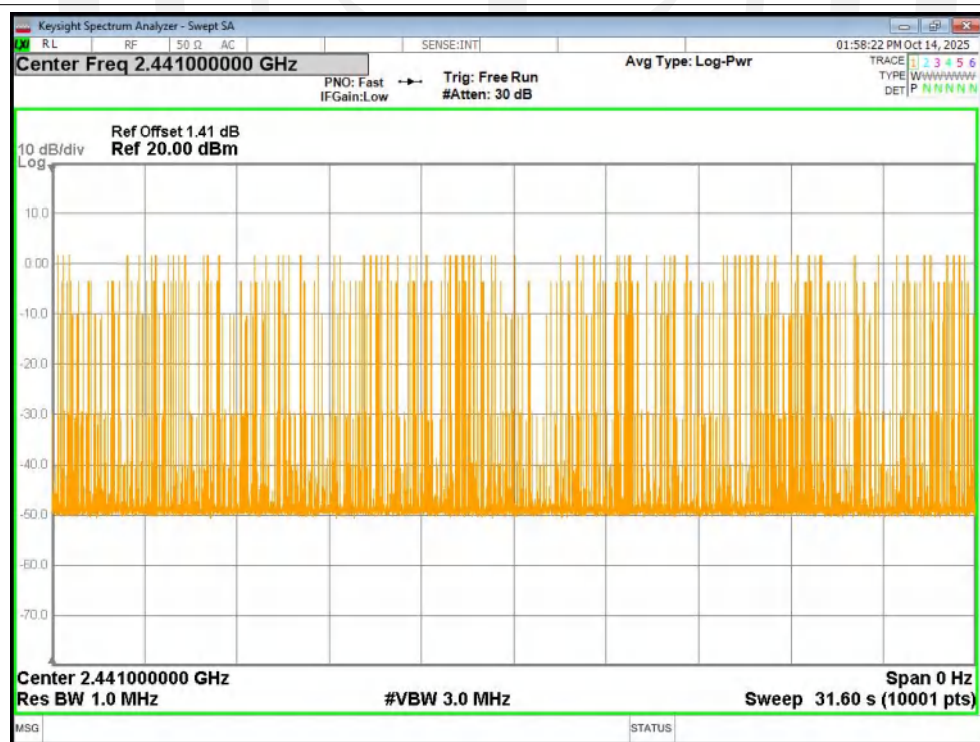
Dwell NVNT 1-DH3 2441MHz Ant1 Accumulated



Dwell NVNT 1-DH5 2441MHz Ant1 One Burst



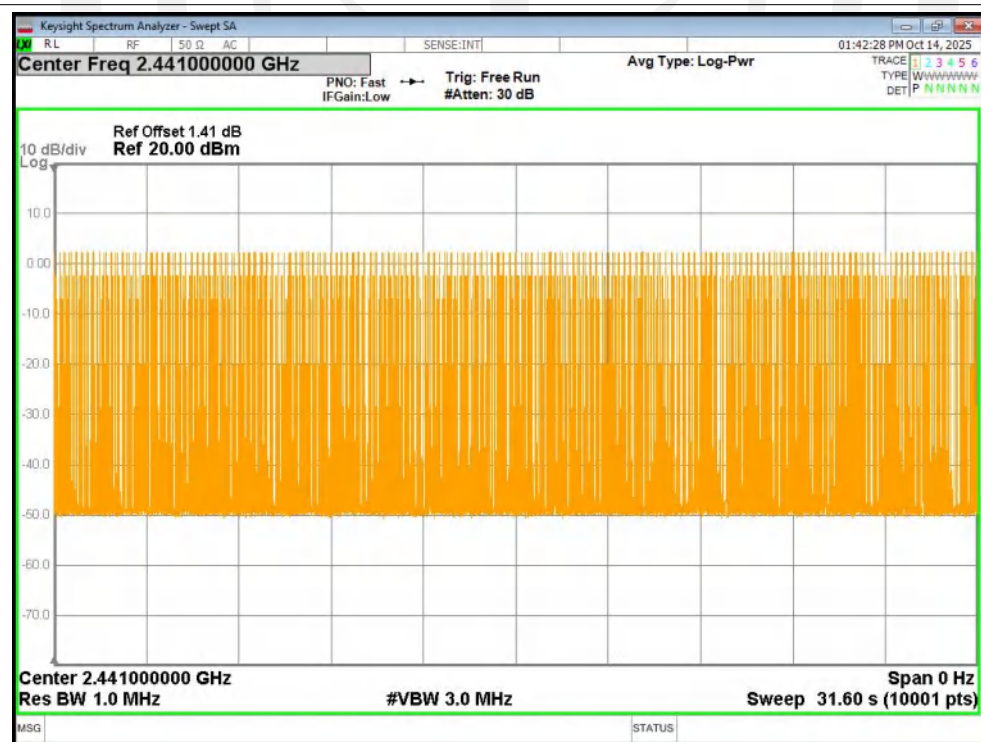
Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated



Dwell NVNT 2-DH1 2441MHz Ant1 One Burst



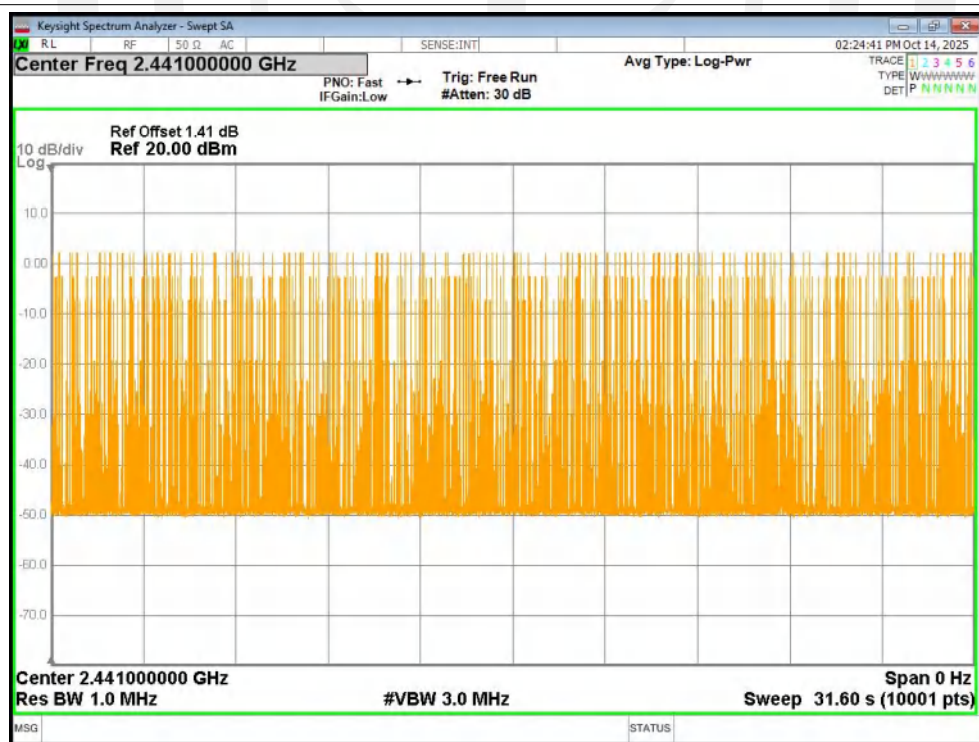
Dwell NVNT 2-DH1 2441MHz Ant1 Accumulated



Dwell NVNT 2-DH3 2441MHz Ant1 One Burst



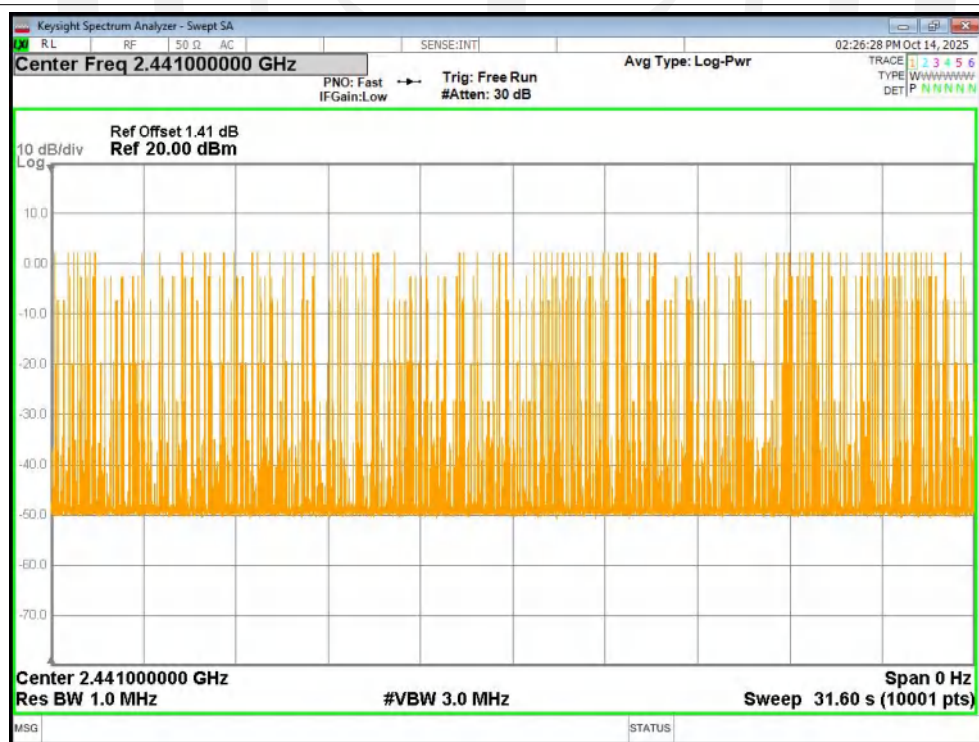
Dwell NVNT 2-DH3 2441MHz Ant1 Accumulated



Dwell NVNT 2-DH5 2441MHz Ant1 One Burst



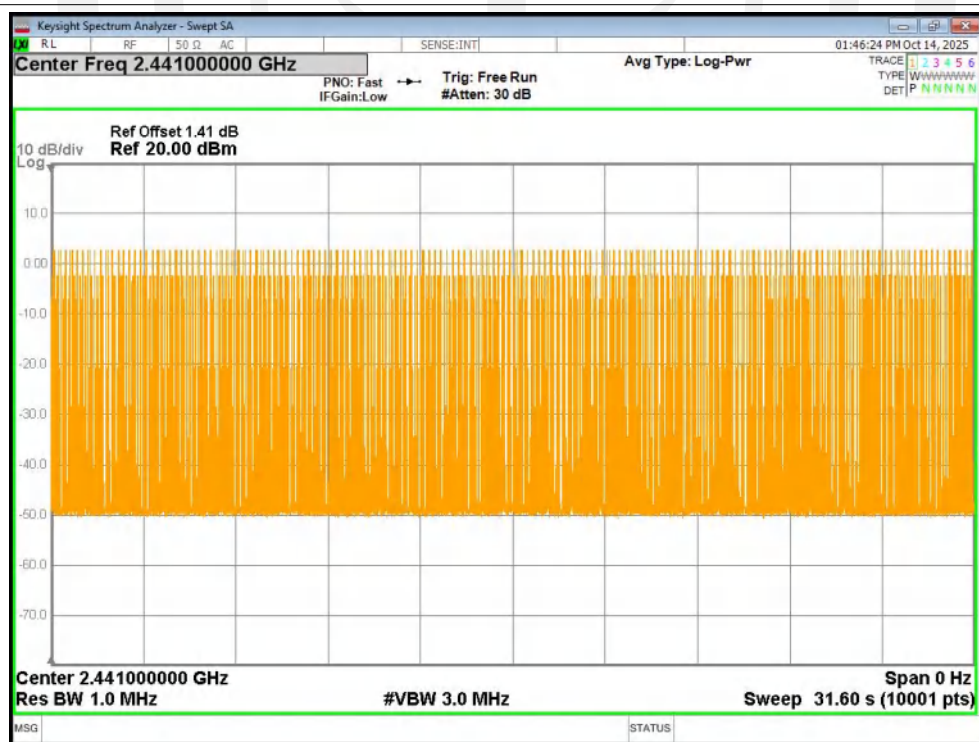
Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated



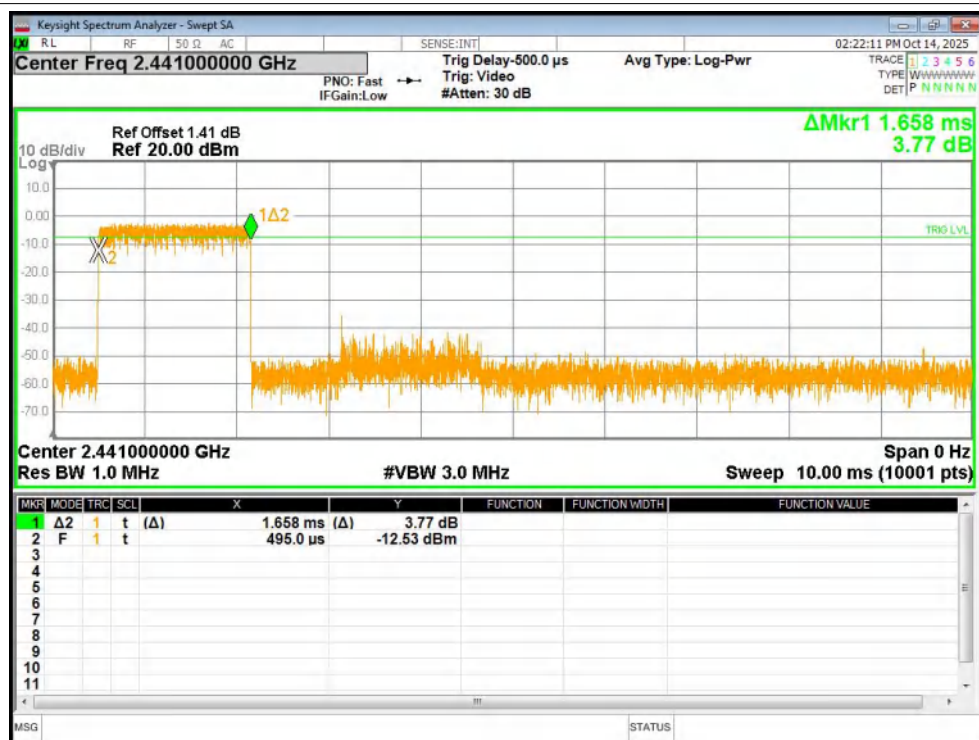
Dwell NVNT 3-DH1 2441MHz Ant1 One Burst



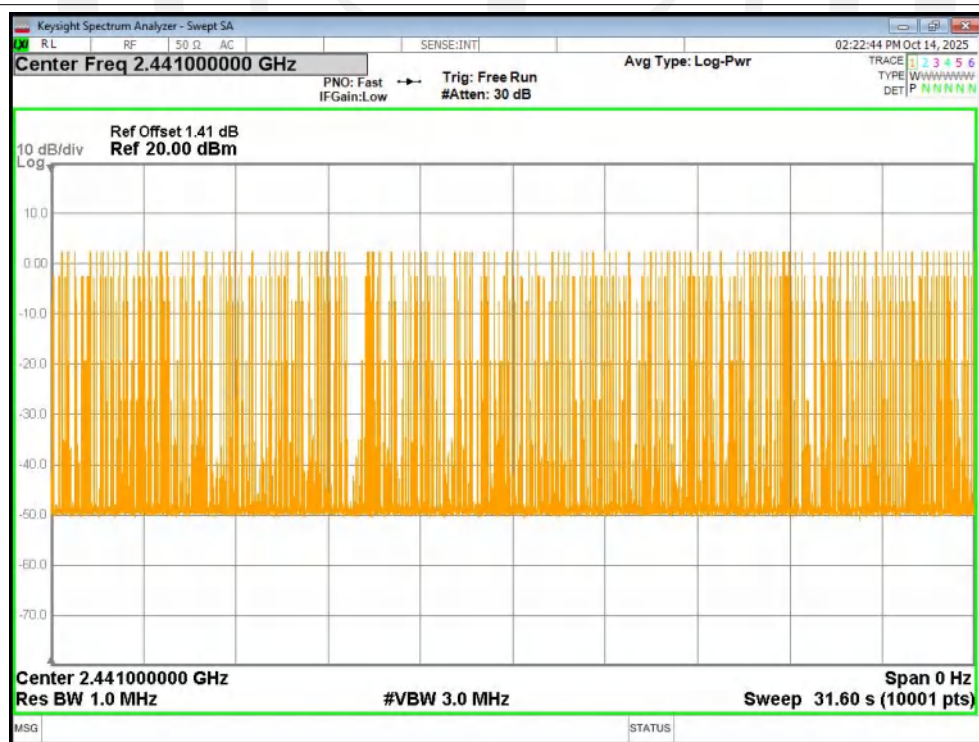
Dwell NVNT 3-DH1 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH3 2441MHz Ant1 One Burst



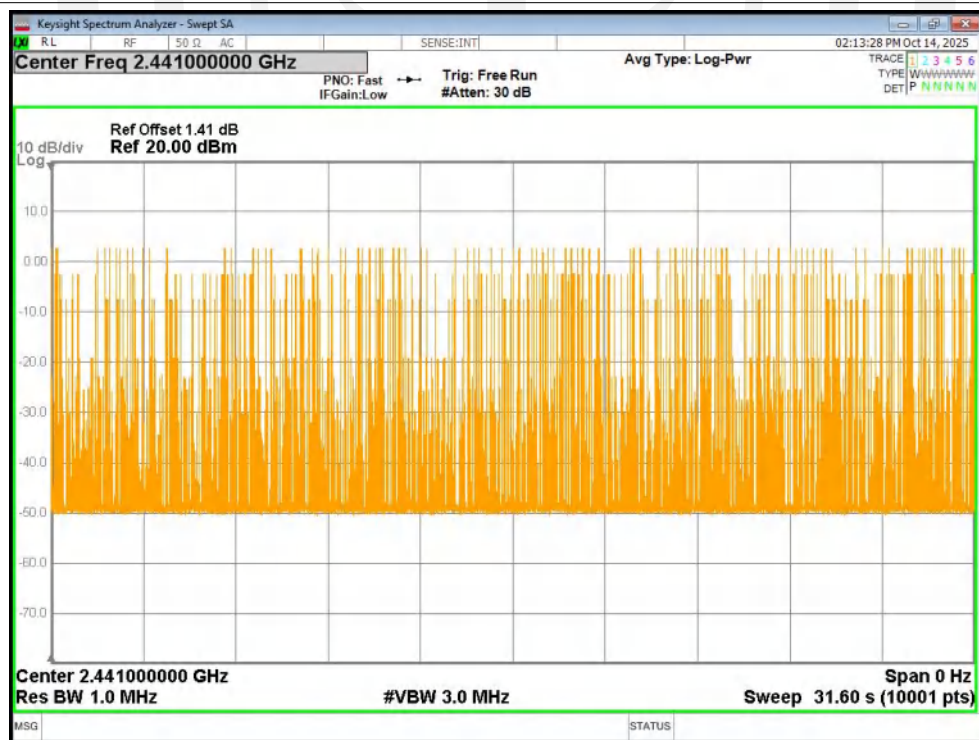
Dwell NVNT 3-DH3 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2441MHz Ant1 One Burst



Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated



8. OUT-OF-BAND EMISSIONS

8.1. Test Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in FCC Part 15.209(a) is not required. Please refer section 15.247.

8.2. Test Procedure

Connect the transmitter output to spectrum analyzer using a low loss RF cable, and set the spectrum analyzer to RBW=100 kHz, VBW= 300 kHz, peak detector, and max hold. Measurements utilizing these settings are made of the in-band reference level, band edge and out-of-band emissions.

8.3. Test Setup



8.4. Test Results

PASS.

The test results are listed in next pages.

Band Edge

Left earphone							
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-53.87	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-55.09	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-48.13	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-52.52	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-48.41	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-56.12	-20	Pass

