FCC TEST REPORT

FCC ID: 2BDLV-RSKUSU016

On Behalf of

Valor Communication, Inc.

Salsa Portable Bluetooth Speaker

Model No.: RSKUSU016

Prepared for	:	Valor Communication, Inc.
Address	:	Valor Communication 18071 Arenth Ave., City of Industry, CA 91748

Prepared By	:	Shenzhen PSI Testing Co., Ltd.
Address	:	1-2/F., Building 5, Yudafu Industrial Park, No.10, Xingye West Road, Shajing Subdistrict, Bao'an District, Shenzhen, Guangdong, China

Report Number	:	psi2404137-C01-R01
Date of Receipt	:	May 8, 2024
Date of Test	:	May 8, 2024-May 15, 2024
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TEST REPORT DECLARATION

Applicant	:	Valor Communication, Inc.
Address	:	Valor Communication 18071 Arenth Ave., City of Industry, CA 91748
Manufacturer	:	Shen Zhen Mopoint Technology Co., LTD
Address	:	8202, Jiangzao Digital Industrial Park, NO.1195 Liuxian Boulevard, Pingshan Community, Taoyuan St., Nanshan District Shenzhen, Guangdong
EUT Description	:	Salsa Portable Bluetooth Speaker
		(A) Model No. : RSKUSU016
		(B) Trademark : MYBAT PRO

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247,

ANSI C63.10-2013

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 Part15 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	Felix Pang
Approved by (name + signature)…....:	Simple Guan Project Manager	Simple Guan
Date of issue……..:	May 16, 2024	

Revision History

Revision	Issue Date	Revisions	Revised By
V0	May 16, 2024	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)	P
Bandwidth	FCC Part 15:15.247(a)(1)	P
Carrier Frequency Separation	FCC Part 15: 15.247(a)(1)	P
Number Of Hopping Channel	FCC Part 15: 15.247(a)(1)	P
Dwell Time	FCC Part 15: 15.247(a)(1)	P
Radiated Spurious Emission	FCC Part 15: 15.209 FCC Part 15: 15.205	P
Out-of-band Emissions	FCC Part 15: 15.247(d)	P
Radiated Band Edge Emission	FCC Part 15: 15.247(d)	P
Power Line Conducted Emissions	FCC Part 15: 15.207	P
Antenna requirement	FCC Part 15: 15.203	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)

Description/PMN	:	Salsa Portable Bluetooth Speaker
Model Number/HVIN(s)	:	RSKUSU016
Diff.	:	N/A
Test Voltage	:	DC 3.7V from battery, DC 5V from USB
Radio Technology	:	Bluetooth V5.3 EDR
Operation frequency	:	2402MHz-2480MHz
Modulation	:	GFSK, π/4-DQPSK, 8DPSK
Channel No.	:	79 Channels
Channel Separation	:	1MHz
Antenna Type	:	Internal antenna, Maximum Gain is -0.68dBi.
Software version	:	V1.0
Hardware version	:	V1.0
Intend use environment	:	Residential, commercial and light industrial environment
Note	:	Antenna information is provided by applicant. Testing lab is not responsible for the accuracy of the information.

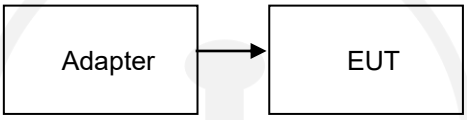
2.2. Accessories of Device (EUT)

Accessories	:	N/A
Manufacturer	:	N/A
Model	:	N/A
Input	:	N/A
Output	:	N/A

2.3. Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number
1	Adapter	Keyulong	KE020A-PCD	/

2.4. Block Diagram of connection between EUT and simulators



2.5. 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

2.6. Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	25℃
Humidity range:	25-75%	56%
Pressure range:	86-106kPa	98kPa

2.7. 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

2.8. Measurement Uncertainty

(95% confidence levels, k=2)

Item	**Uncertainty**
Uncertainty for Power point Conducted Emissions Test	2.17dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	3.5dB
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	2.74dB(Polarize: V)
	2.76dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 18GHz)	4.29dB(Polarize: V)
	4.82dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (18GHz to 40GHz)	4.31 dB(Polarize: V)
	4.30 dB(Polarize: H)
Uncertainty for radio frequency	48.24KHz
Uncertainty for conducted RF Power	0.41dB

2.9. 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	2023.12.19	1 Year
3.	L.I.S.N.#1	Rohde&Schwarz	ENV216	102282	/	2023.12.19	1 Year
4.	L.I.S.N.#2	RFT	NNB111	13835240	/	2023.12.19	1 Year
5.	Loop Antenna	Schwarz beck	FMZB 1519B	00128	/	2023.04.03	2 Year
6.	Bilog Antenna	Schwarz beck	VULB 9168	01448	/	2022.12.26	2 Year
7.	Spectrum Analyzer	Rohde&Schwarz	FSV-40N	101648	3.70	2023.12.19	1 Year
8.	Horn Antenna	Schwarz beck	BBHA 9120 D	02706	/	2022.12.26	2 Year
9.	Amplifier	SKET	LAPA_01G18G-45dB	SK2022032901	/	2023.12.19	1 Year
10.	Horn Antenna	Schwarz beck	BBHA 9170	00946	/	2022.12.25	2 Year
11.	Amplifier	SKET	LNPA_0118G-45	SK2020010801	/	2023.12.19	1 Year
12	RF Power Probe	Rohde&Schwarz	NRP-Z11	1138.3004.02-1111533-Fz	/	2023.12.19	1 Year
13	RF Sensor Unit	Tachoy	TR1029-2	20220428P008	/	2023.12.19	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

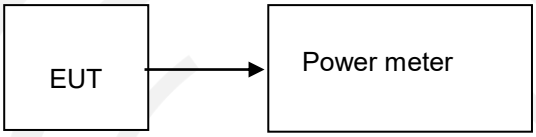
Please refer FCC part 15.247 & RSS-247.

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 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

Condition	Antenna	Modulation	Frequency (MHz)	Max. Conducted Power(dBm)	Max. Conducted Power(mW)	Limit(mW)	Result
NVNT	ANT1	1-DH1	2402.00	4.75	2.99	1000	Pass
NVNT	ANT1	1-DH1	2441.00	3.73	2.36	1000	Pass
NVNT	ANT1	1-DH1	2480.00	3.23	2.10	1000	Pass
NVNT	ANT1	2-DH1	2402.00	3.59	2.29	125	Pass
NVNT	ANT1	2-DH1	2441.00	2.69	1.86	125	Pass
NVNT	ANT1	2-DH1	2480.00	**5.73**	**3.74**	125	Pass
NVNT	ANT1	3-DH1	2402.00	3.43	2.20	125	Pass
NVNT	ANT1	3-DH1	2441.00	5.63	3.66	125	Pass
NVNT	ANT1	3-DH1	2480.00	5.67	3.69	125	Pass

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.

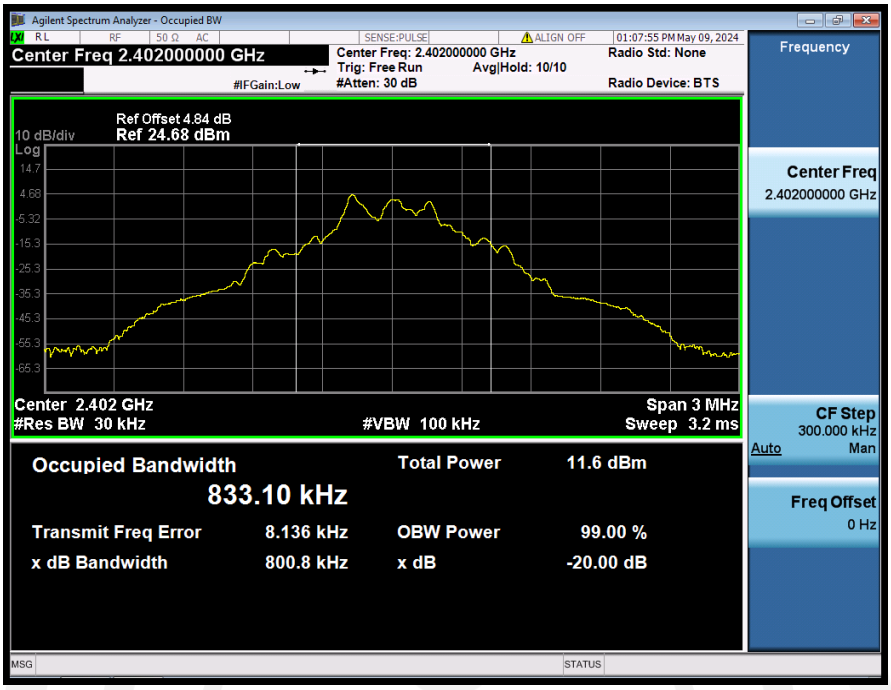
4.2. Test Procedure

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.

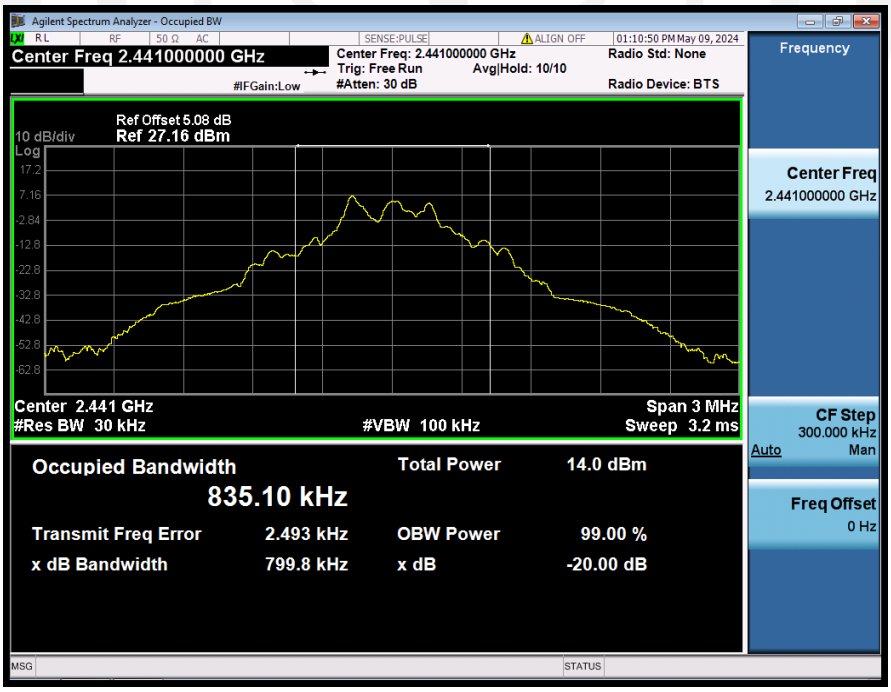
4.3. Test Result

Condition	Antenna	Modulation	Frequency (MHz)	-20dB BW(MHz)	if larger than CFS
NVNT	ANT1	1-DH1	2402.00	0.801	No
NVNT	ANT1	1-DH1	2441.00	0.800	No
NVNT	ANT1	1-DH1	2480.00	0.801	No
NVNT	ANT1	2-DH1	2402.00	1.113	Yes
NVNT	ANT1	2-DH1	2441.00	1.112	Yes
NVNT	ANT1	2-DH1	2480.00	1.115	Yes
NVNT	ANT1	3-DH1	2402.00	1.170	Yes
NVNT	ANT1	3-DH1	2441.00	1.170	Yes
NVNT	ANT1	3-DH1	2480.00	1.168	Yes

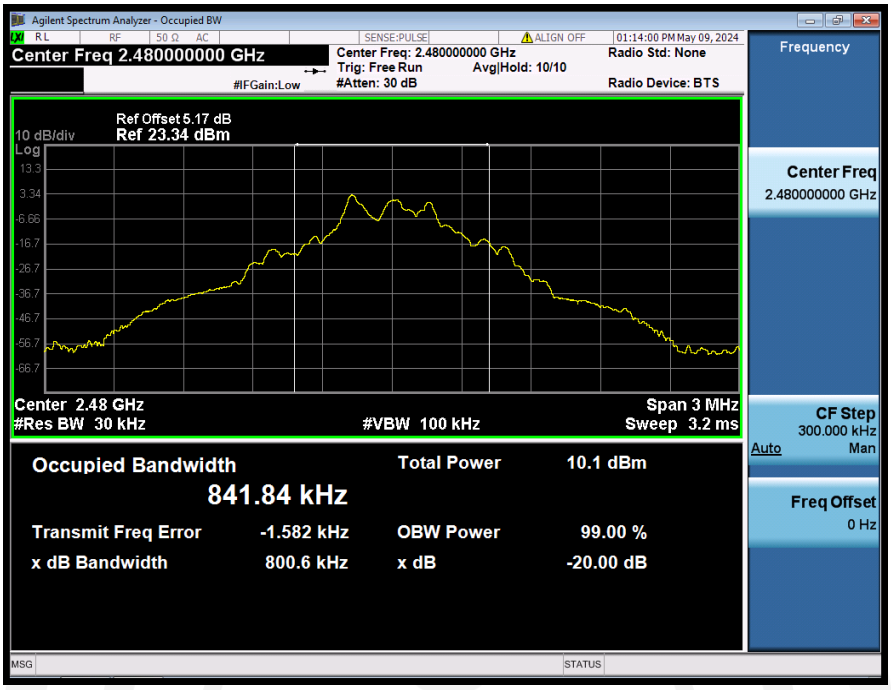
-20dB_Bandwidth_NVNT_ANT1_1-DH1_2402



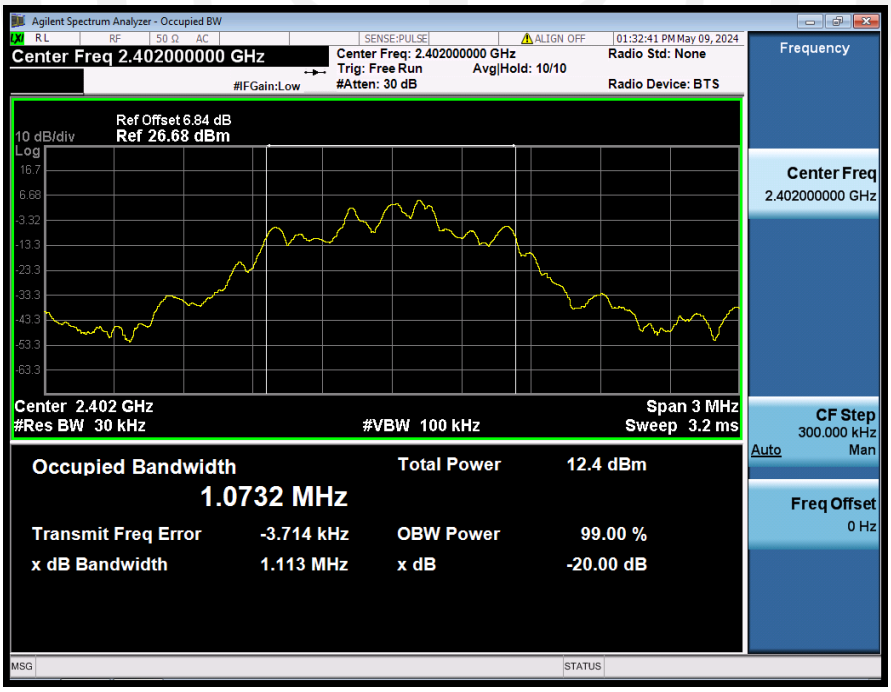
-20dB_Bandwidth_NVNT_ANT1_1-DH1_2441



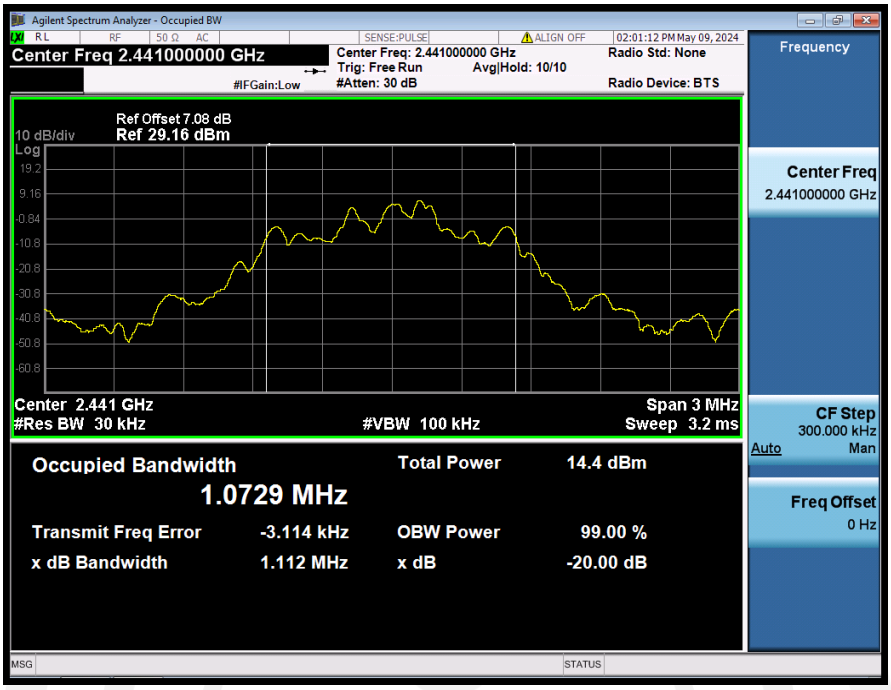
-20dB_Bandwidth_NVNT_ANT1_1-DH1_2480



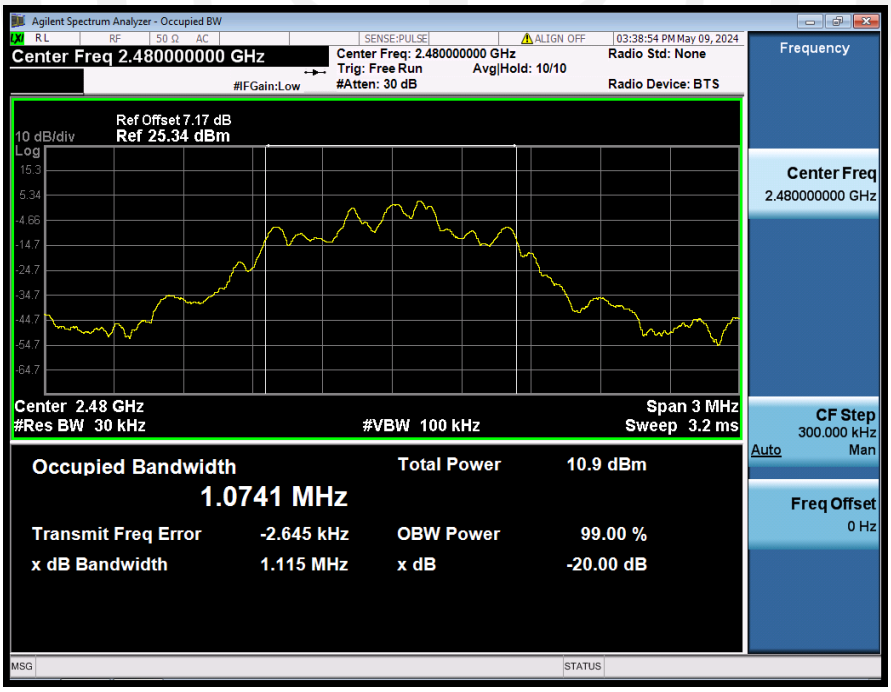
-20dB_Bandwidth_NVNT_ANT1_2-DH1_2402



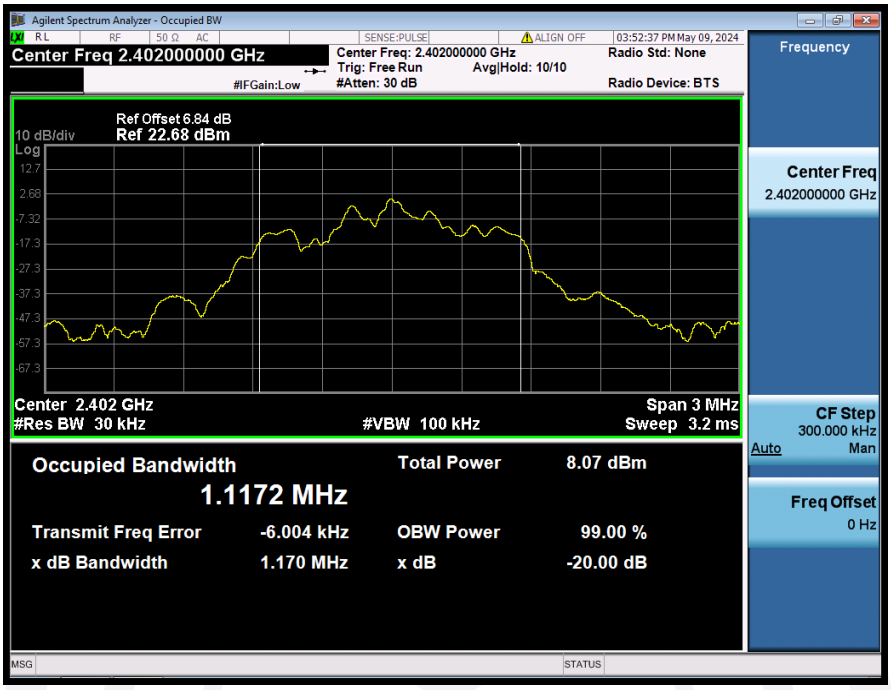
-20dB_Bandwidth_NVNT_ANT1_2-DH1_2441



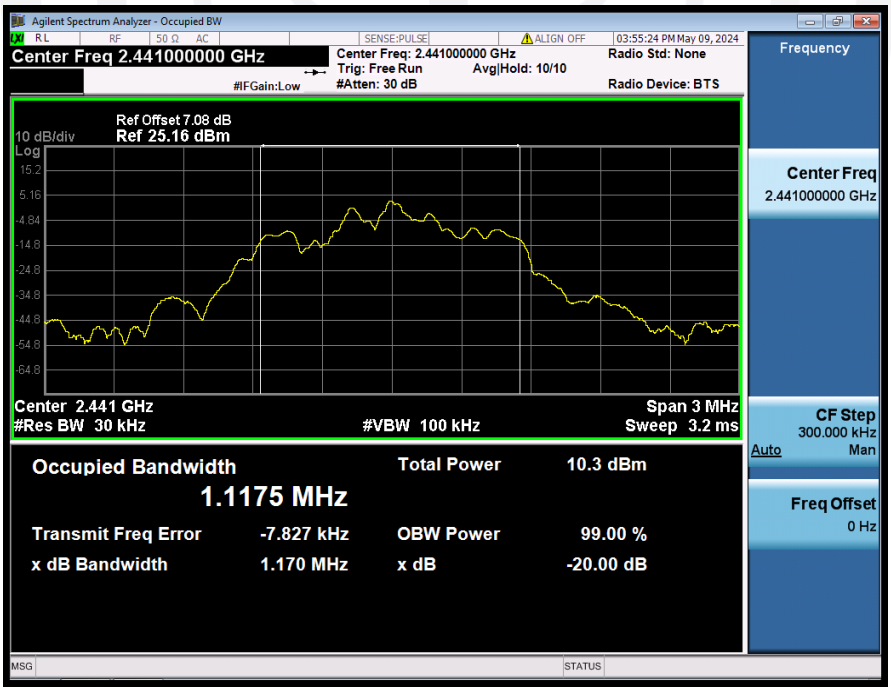
-20dB_Bandwidth_NVNT_ANT1_2-DH1_2480



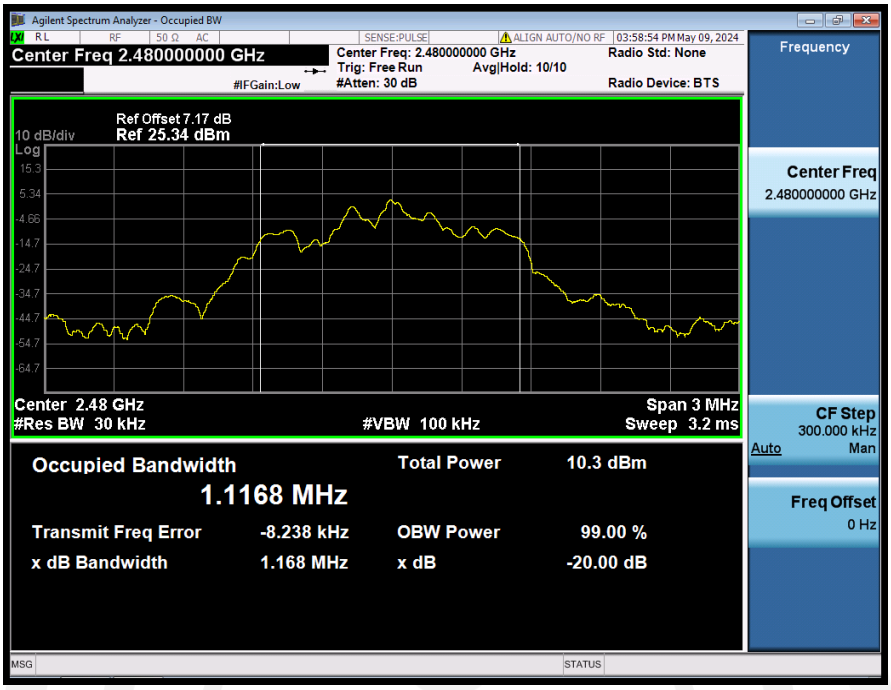
-20dB_Bandwidth_NVNT_ANT1_3-DH1_2402



-20dB_Bandwidth_NVNT_ANT1_3-DH1_2441

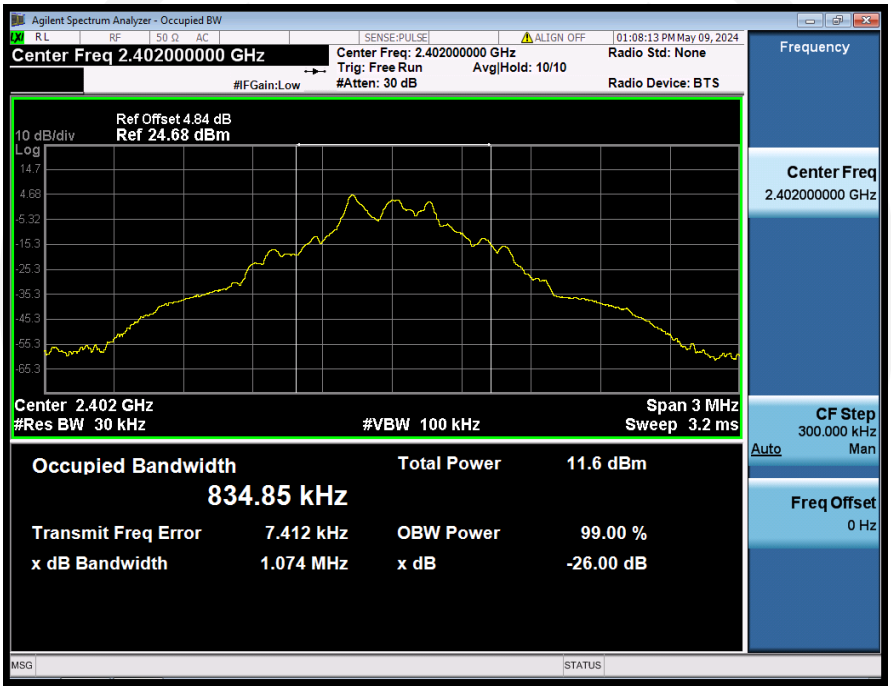


-20dB_Bandwidth_NVNT_ANT1_3-DH1_2480

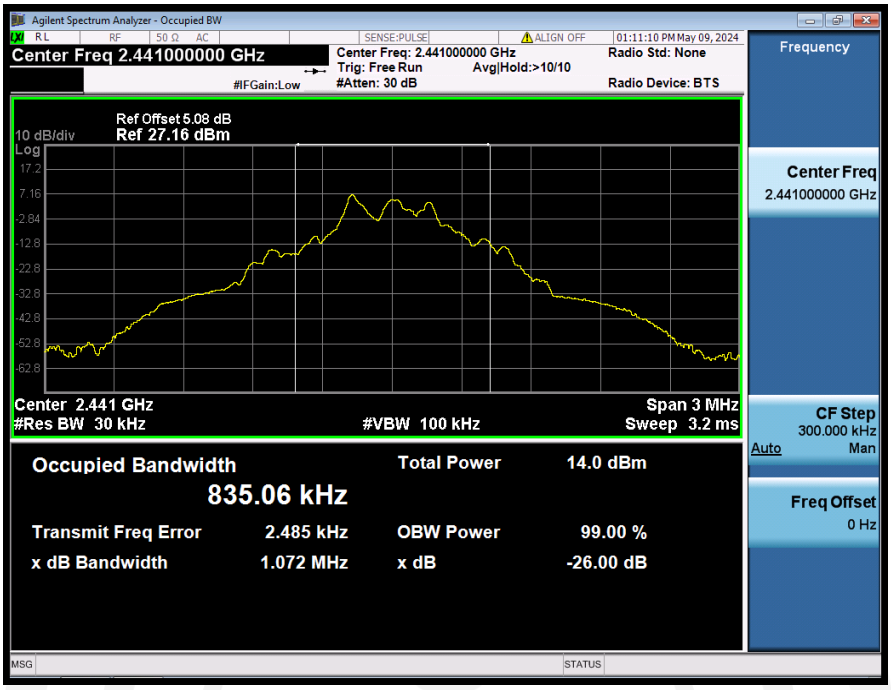


Condition	Antenna	Modulation	Frequency (MHz)	99%%BW(MHz)
NVNT	ANT1	1-DH1	2402.00	0.835
NVNT	ANT1	1-DH1	2441.00	0.835
NVNT	ANT1	1-DH1	2480.00	0.843
NVNT	ANT1	2-DH1	2402.00	1.072
NVNT	ANT1	2-DH1	2441.00	1.074
NVNT	ANT1	2-DH1	2480.00	1.074
NVNT	ANT1	3-DH1	2402.00	1.118
NVNT	ANT1	3-DH1	2441.00	1.117
NVNT	ANT1	3-DH1	2480.00	1.117

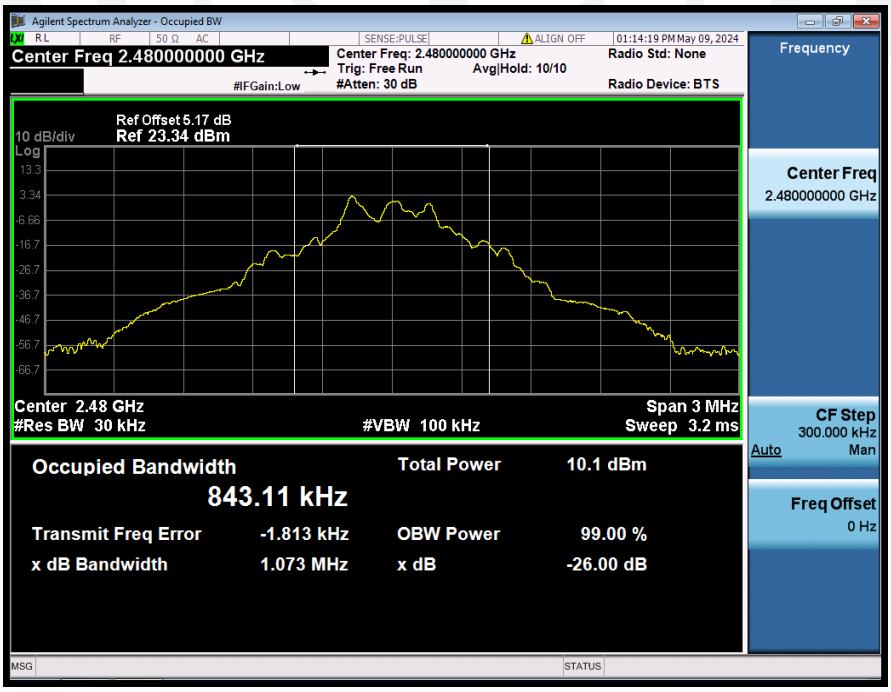
99%_Occupied_Bandwidth_NVNT_ANT1_1-DH1_2402



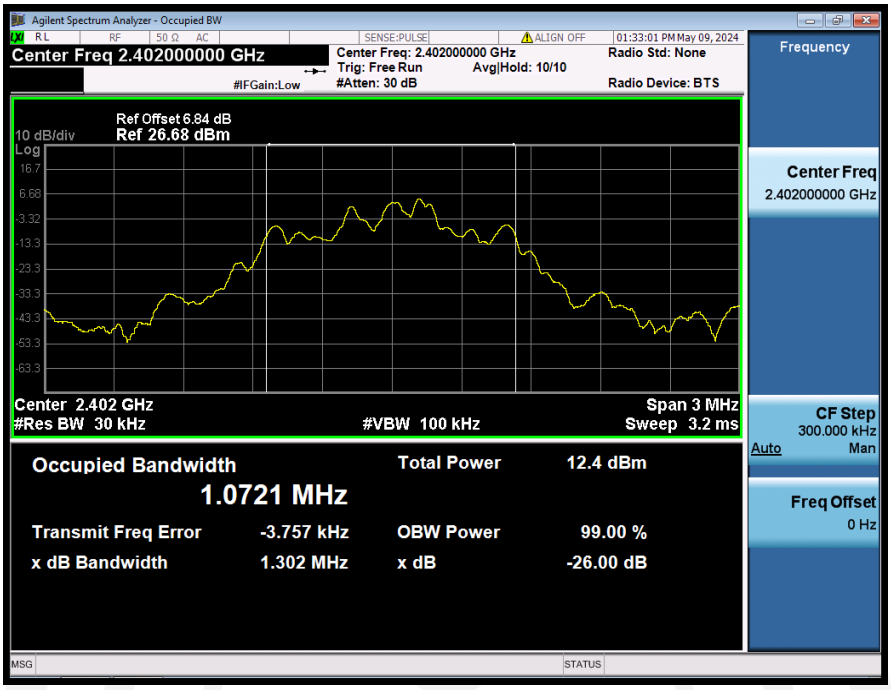
99%_Occupied_Bandwidth_NVNT_ANT1_1-DH1_2441



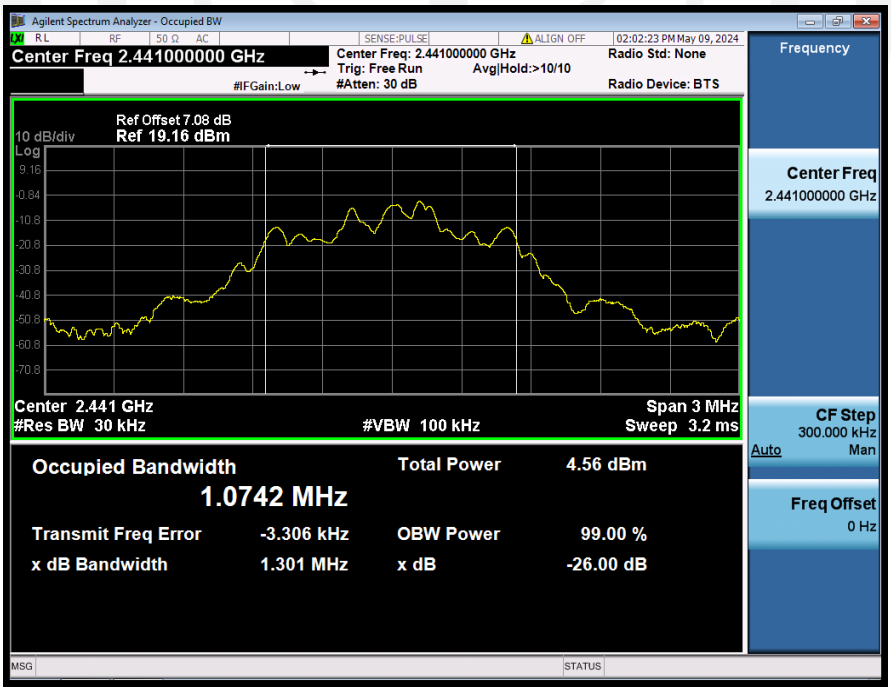
99%_Occupied_Bandwidth_NVNT_ANT1_1-DH1_2480



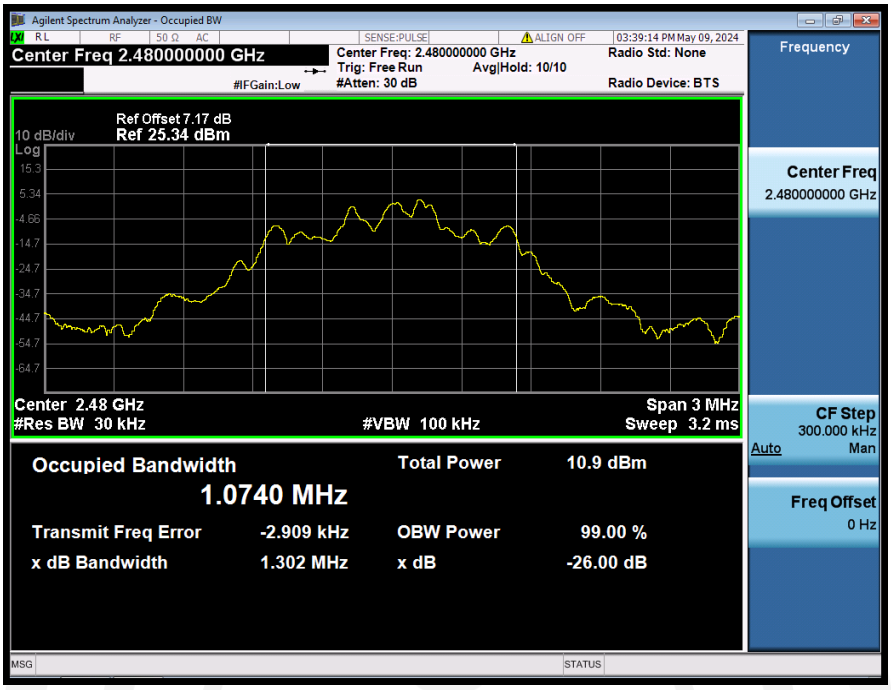
99%_Occupied_Bandwidth_NVNT_ANT1_2-DH1_2402



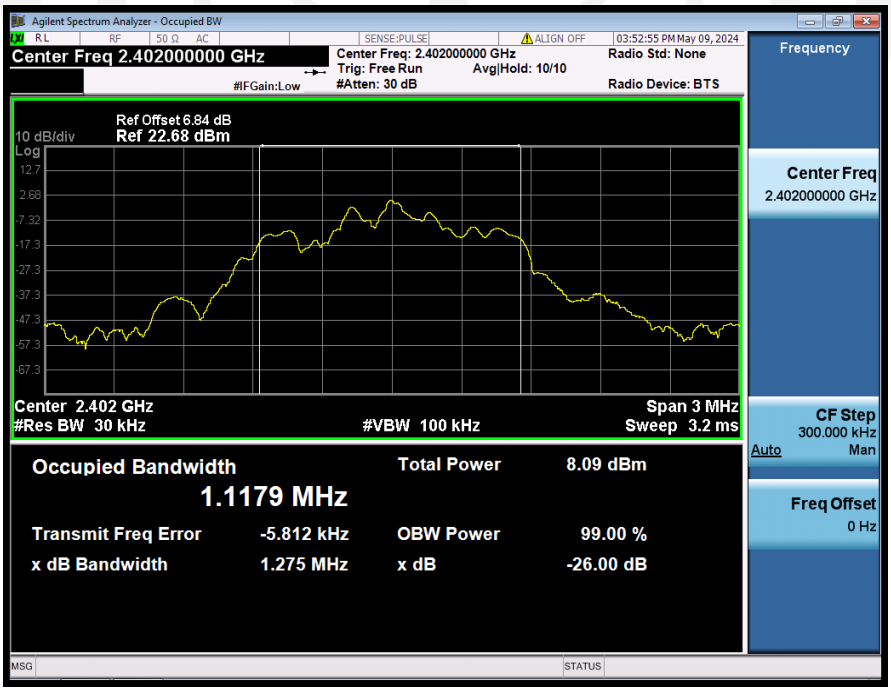
99%_Occupied_Bandwidth_NVNT_ANT1_2-DH1_2441



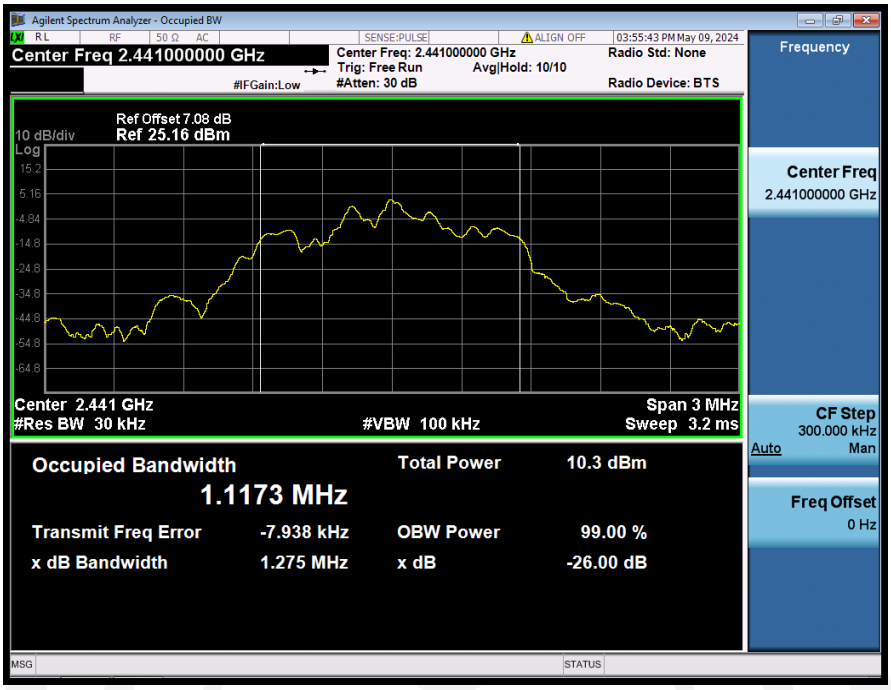
99%_Occupied_Bandwidth_NVNT_ANT1_2-DH1_2480



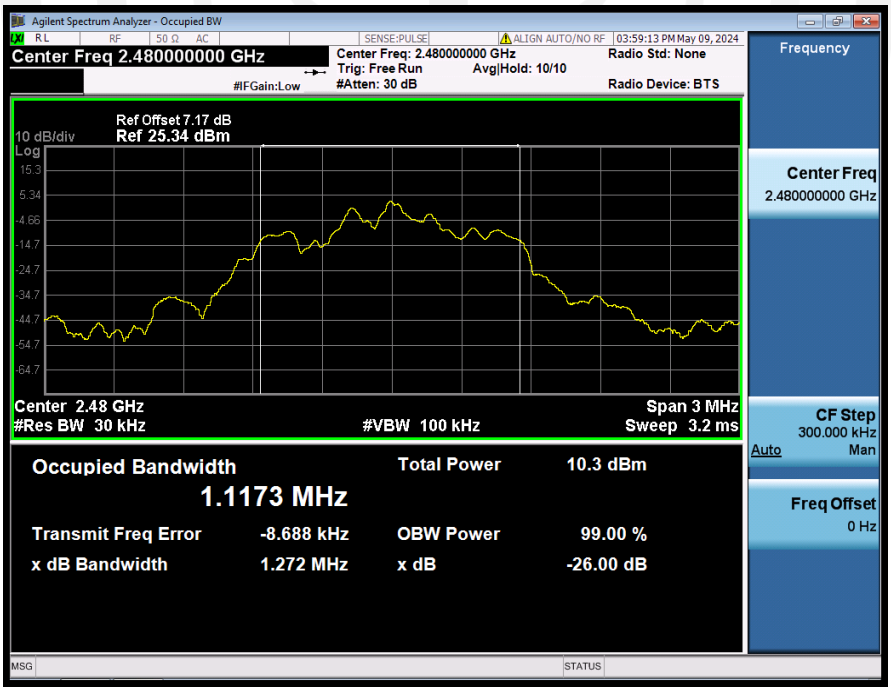
99%_Occupied_Bandwidth_NVNT_ANT1_3-DH1_2402



99%_Occupied_Bandwidth_NVNT_ANT1_3-DH1_2441



99%_Occupied_Bandwidth_NVNT_ANT1_3-DH1_2480



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

5.2. Test Procedure

The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The carrier frequency was measured by spectrum analyzer with 100kHz RBW and 300kHz VBW.

5.3. Test Result

Condition	Antenna	Modulation	Frequency(MHz)	Hopping NO.0 (MHz)	Hopping NO.1 (MHz)	Carrier Frequencies Separation(MHz)	Limit(MHz)	Result
NVNT	ANT1	1-DH1	2441.00	2440.831	2441.830	1.00	0.800	Pass
NVNT	ANT1	2-DH1	2441.00	2441.170	2442.163	0.99	0.741	Pass
NVNT	ANT1	3-DH1	2441.00	2440.834	2441.830	1.00	0.780	Pass

Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_1-DH1_Hopping

Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_2-DH1_Hopping

Carrier_Frequencies_Separation_(Hopping)_NVNT_ANT1_3-DH1_Hopping

6. Number Of Hopping Channel

6.1. Limit

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

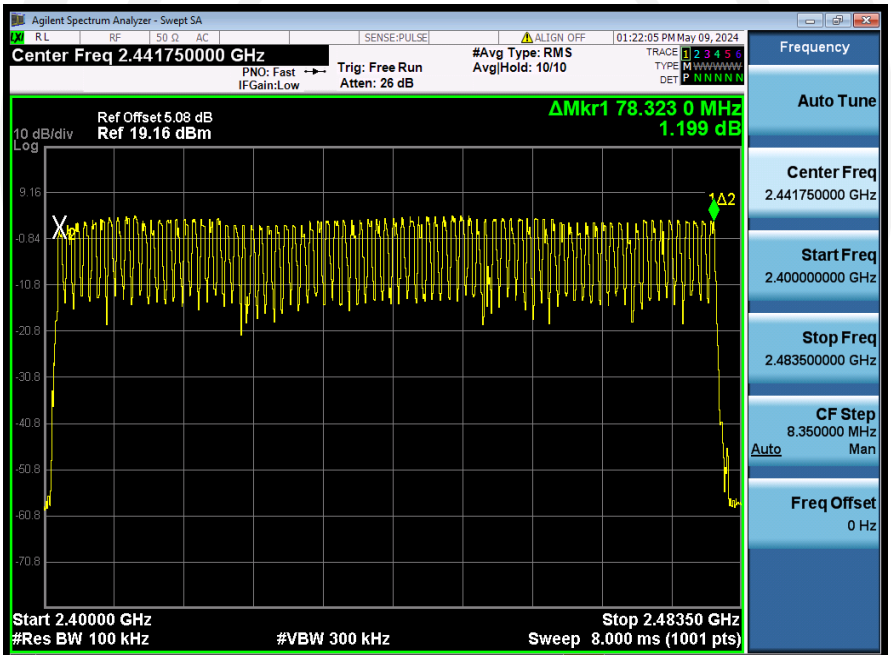
6.2. Test Procedure

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.

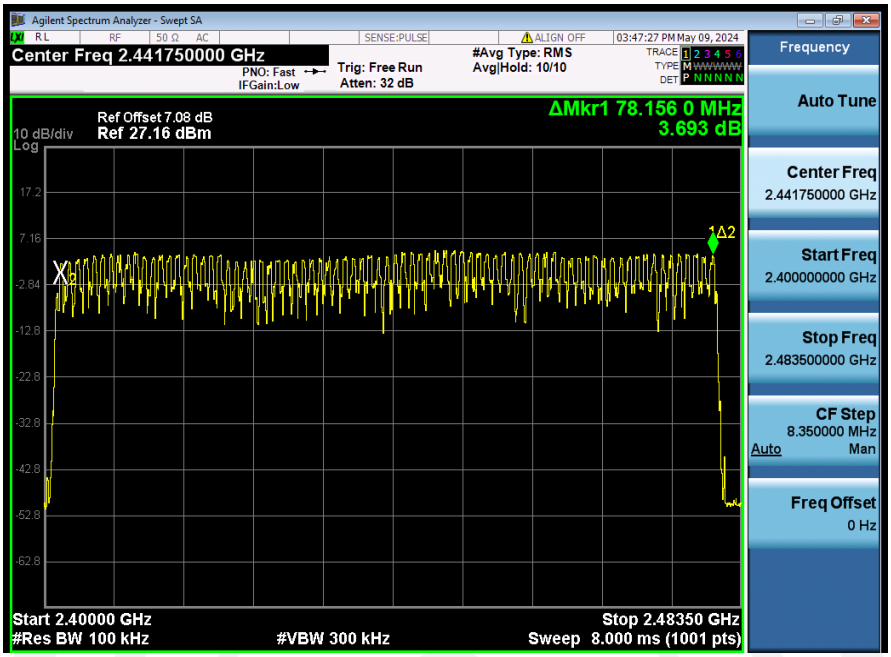
6.3. Test Result

Condition	Antenna	Modulation	Hopping Num	Limit	Result
NVNT	ANT1	1-DH1	79	15	Pass
NVNT	ANT1	2-DH1	79	15	Pass
NVNT	ANT1	3-DH1	79	15	Pass

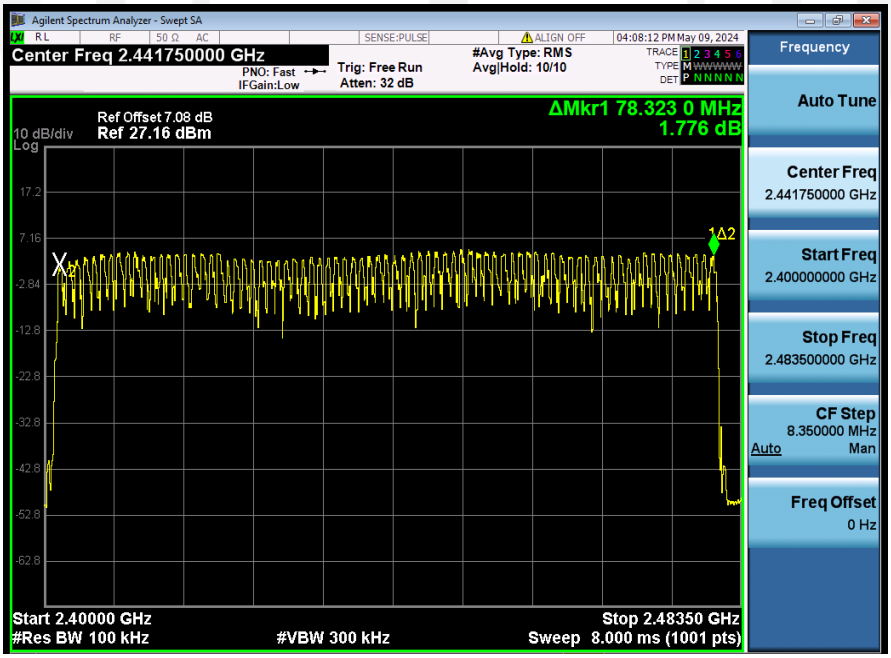
Number_of_Hopping_Channel_(Hopping)_NVNT_ANT1_1-DH1_Hopping



Number_of_Hopping_Channel_(Hopping)_NVNT_ANT1_2-DH1_Hopping



Number_of_Hopping_Channel_(Hopping)_NVNT_ANT1_3-DH1_Hopping



7. Dwell Time

7.1. Test limit

Please refer FCC part 15.247 & RSS-247.

Frequency hopping systems operating in the 2400MHz-2483.5 MHz. The average time of occupancy on any frequency shall not greater than 0.4 s within period of 0.4 sec- onds 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, VBW=1MHz, Span = 0Hz, Sweep = auto.

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

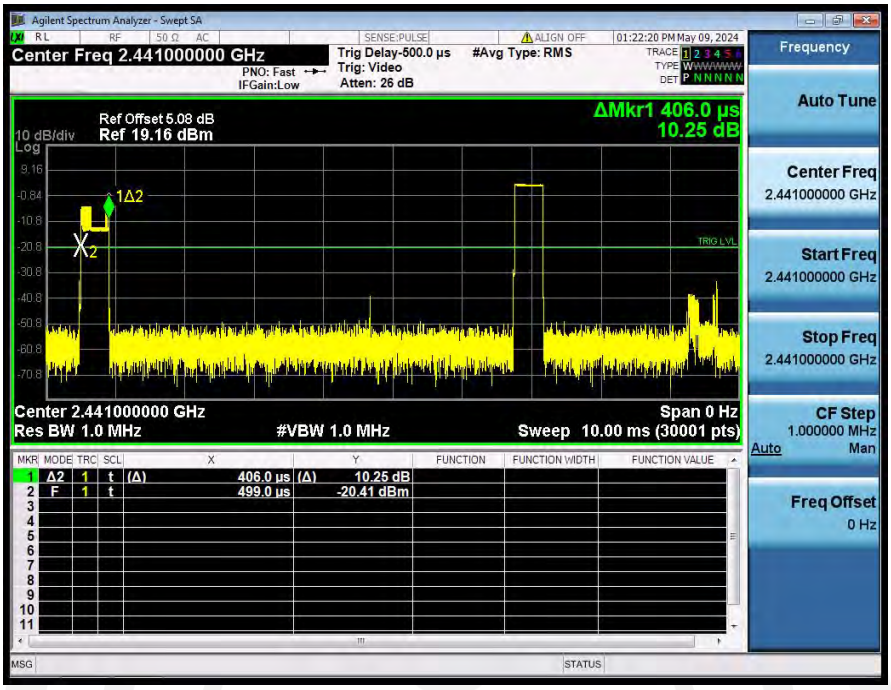
7.3. Test Result

Note:

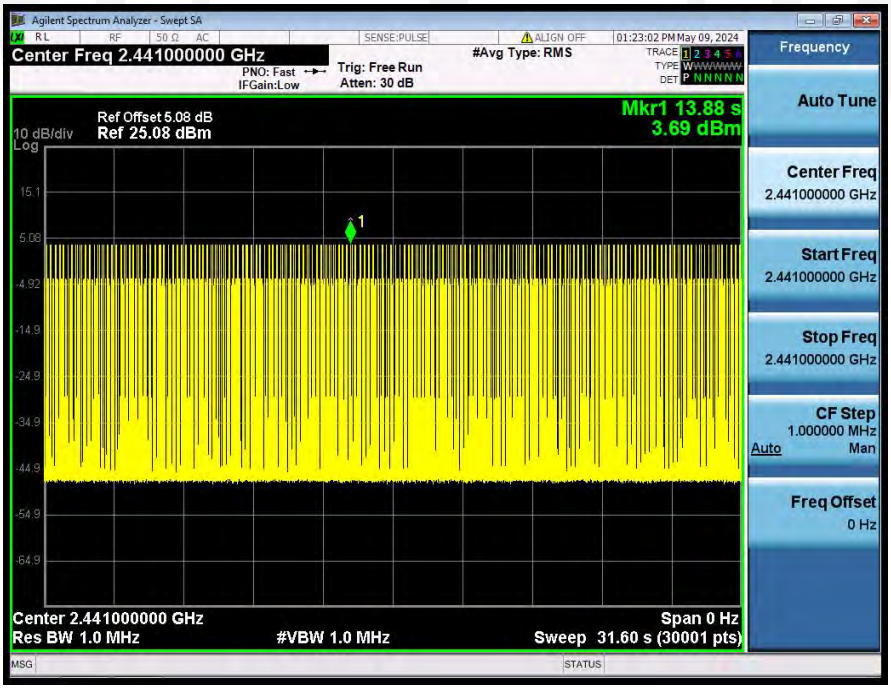
1. The test period: T= 0.4 Second/Channel x 79 Channel = 31.6 s
2. Dwell Time=Pulse Time* Hops Number

Condition	Antenna	Packet Type	Pulse Time(ms)	Hops	Dwell Time(ms)	Limit(s)	Result
NVNT	ANT1	1-DH1	0.406	320.00	129.920	0.40	Pass
NVNT	ANT1	2-DH1	0.407	320.00	130.240	0.40	Pass
NVNT	ANT1	3-DH1	0.407	318.00	129.426	0.40	Pass
NVNT	ANT1	1-DH3	1.663	155.00	257.765	0.40	Pass
NVNT	ANT1	1-DH5	2.911	97.00	282.367	0.40	Pass
NVNT	ANT1	2-DH3	1.663	161.00	267.743	0.40	Pass
NVNT	ANT1	2-DH5	2.911	128.00	372.608	0.40	Pass
NVNT	ANT1	3-DH3	1.663	168.00	279.384	0.40	Pass
NVNT	ANT1	3-DH5	2.911	105.00	305.655	0.40	Pass

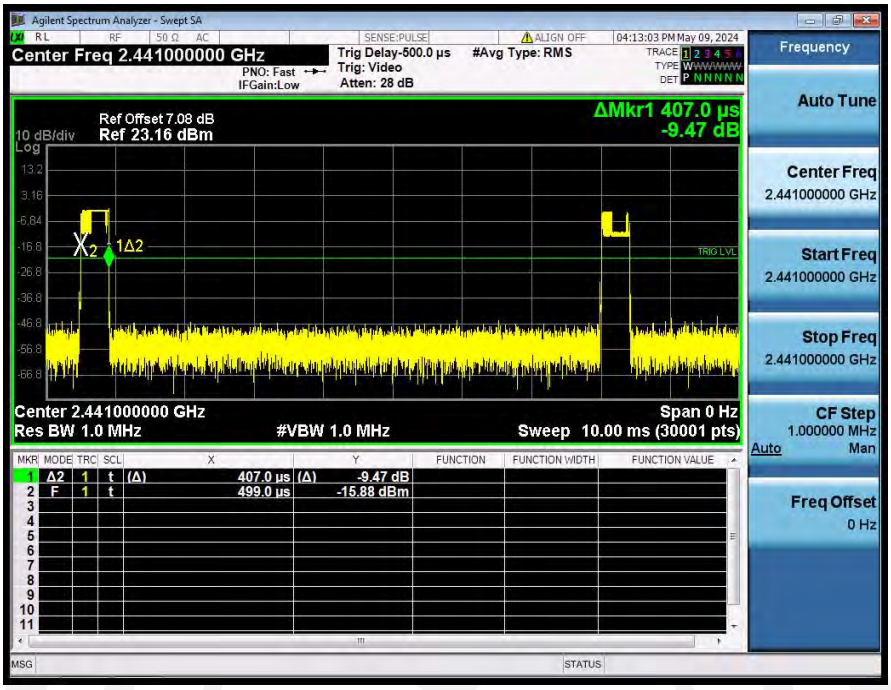
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH1_2441_One_Burst_Time



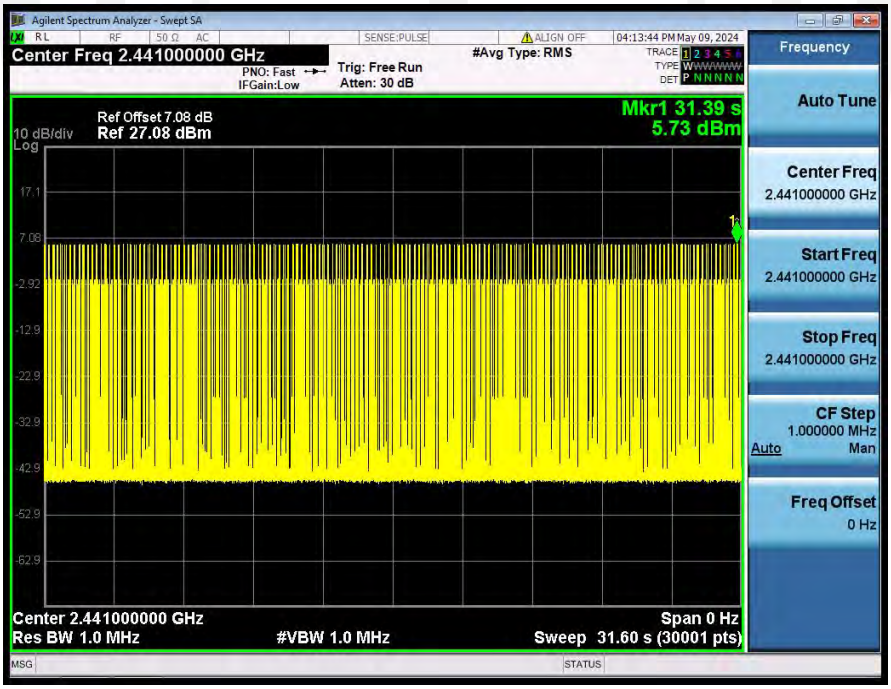
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH1_2441_Accumulated



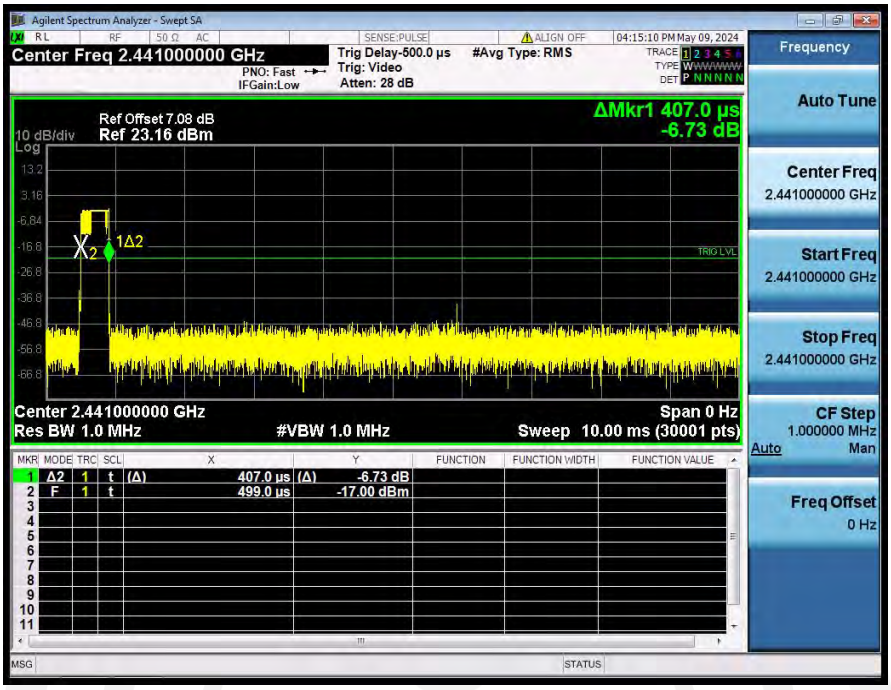
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH1_2441_One_Burst_Time



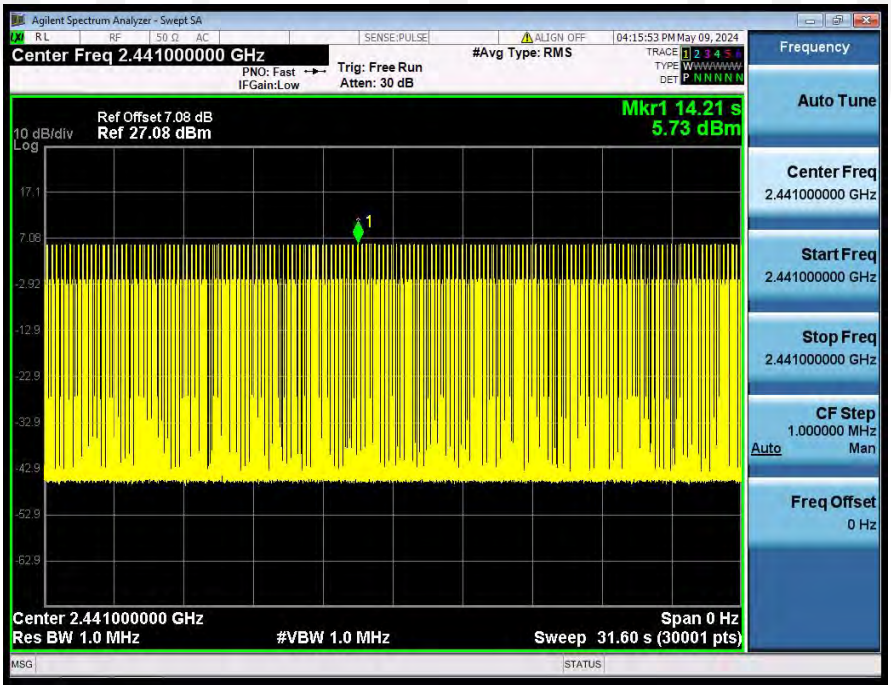
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH1_2441_Accumulated



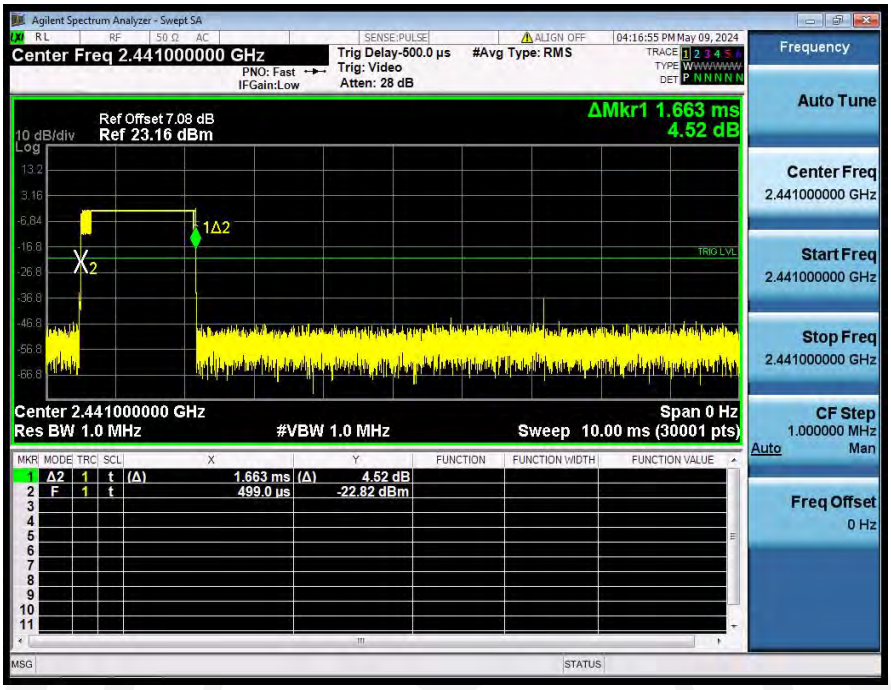
Dwell_Time_(Hopping)_NVNT_ANT1_3-DH1_2441_One_Burst_Time



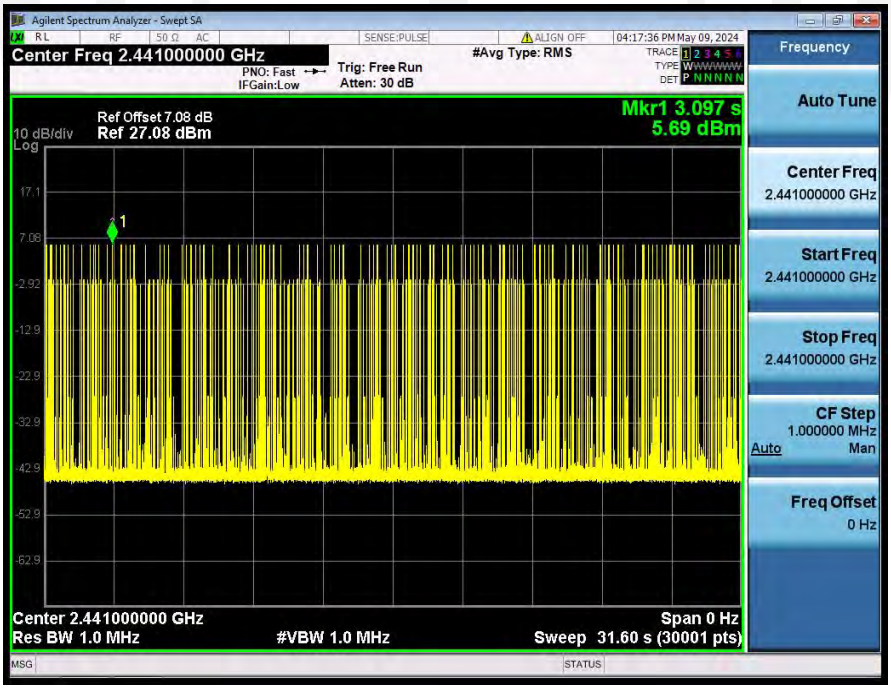
Dwell_Time_(Hopping)_NVNT_ANT1_3-DH1_2441_Accumulated



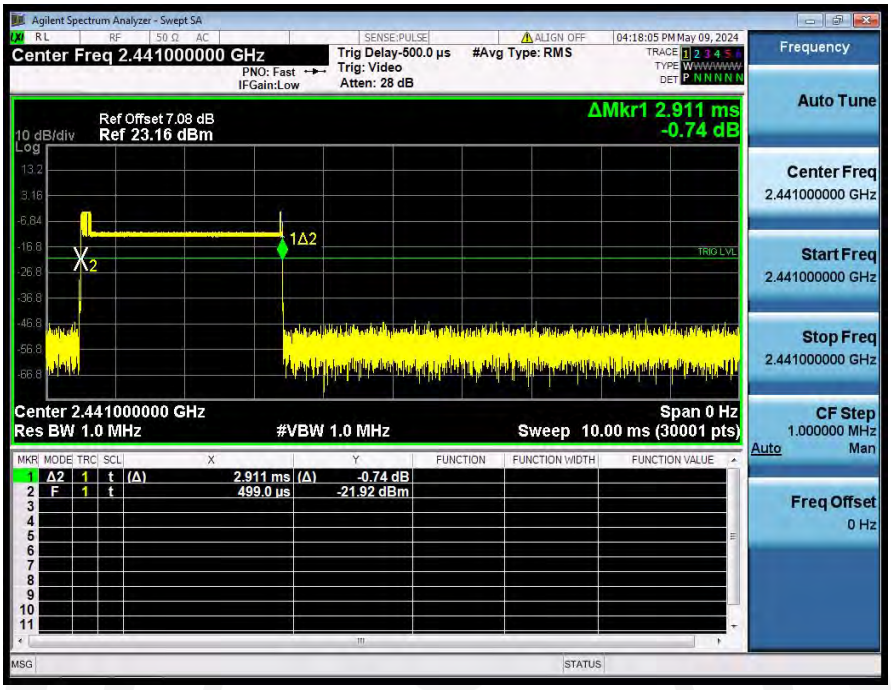
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH3_2441_One_Burst_Time



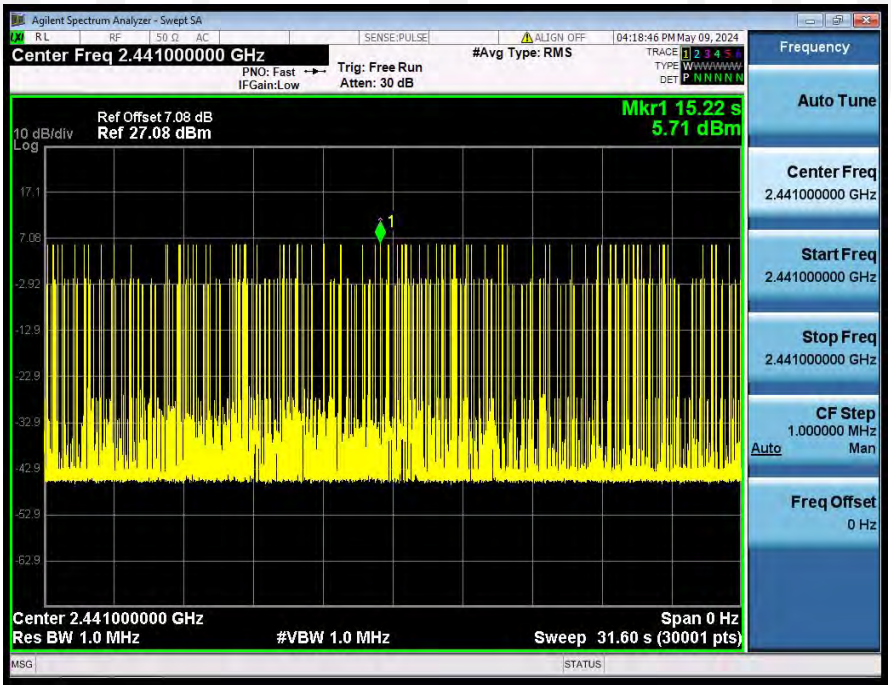
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH3_2441_Accumulated



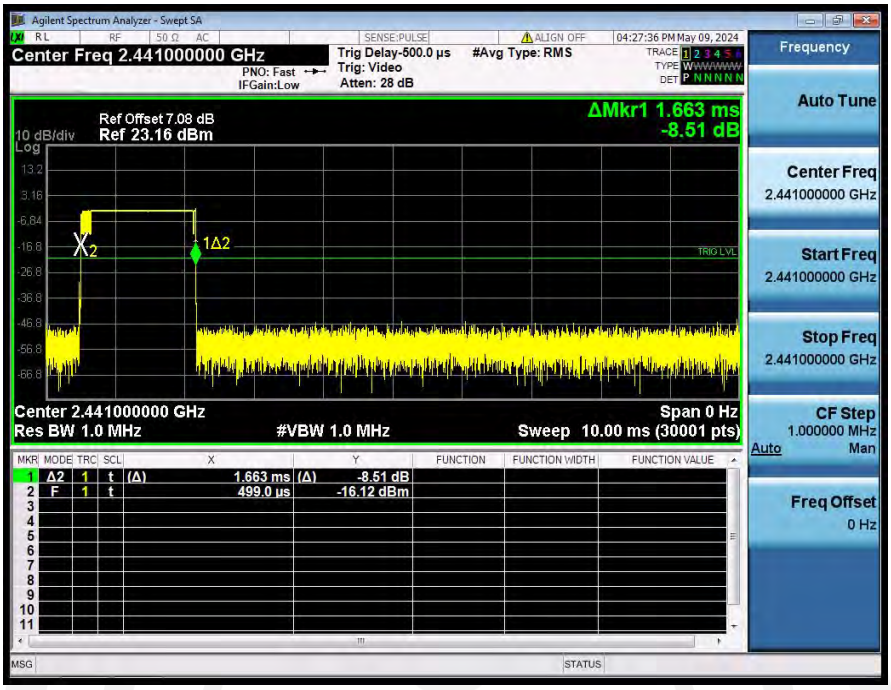
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH5_2441_One_Burst_Time



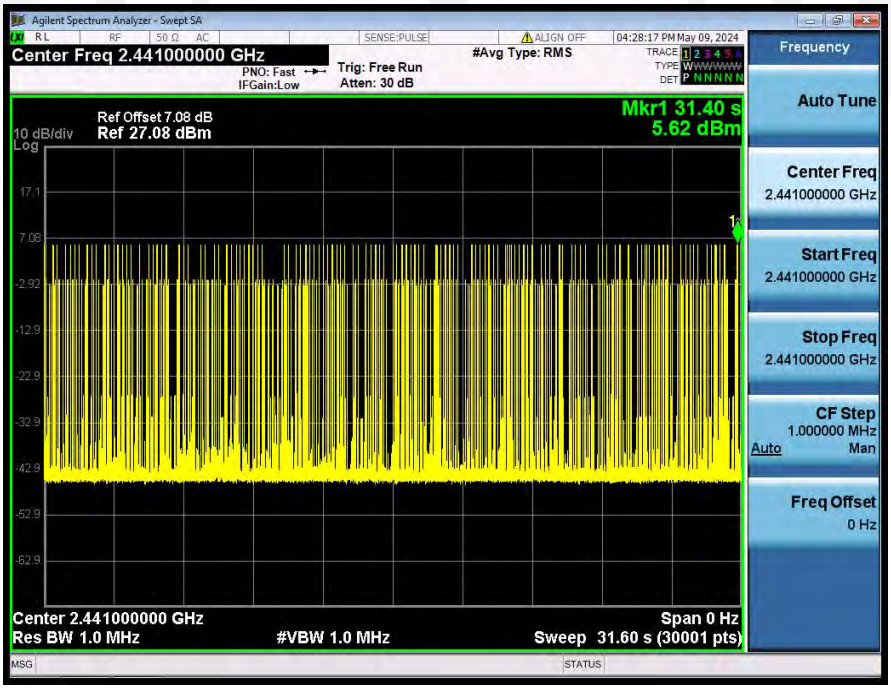
Dwell_Time_(Hopping)_NVNT_ANT1_1-DH5_2441_Accumulated



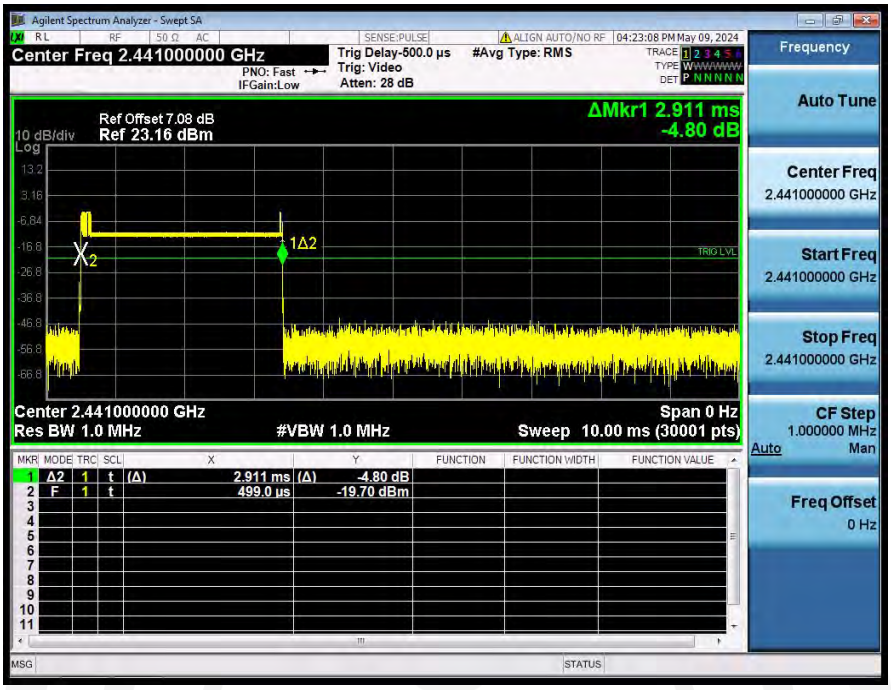
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH3_2441_One_Burst_Time



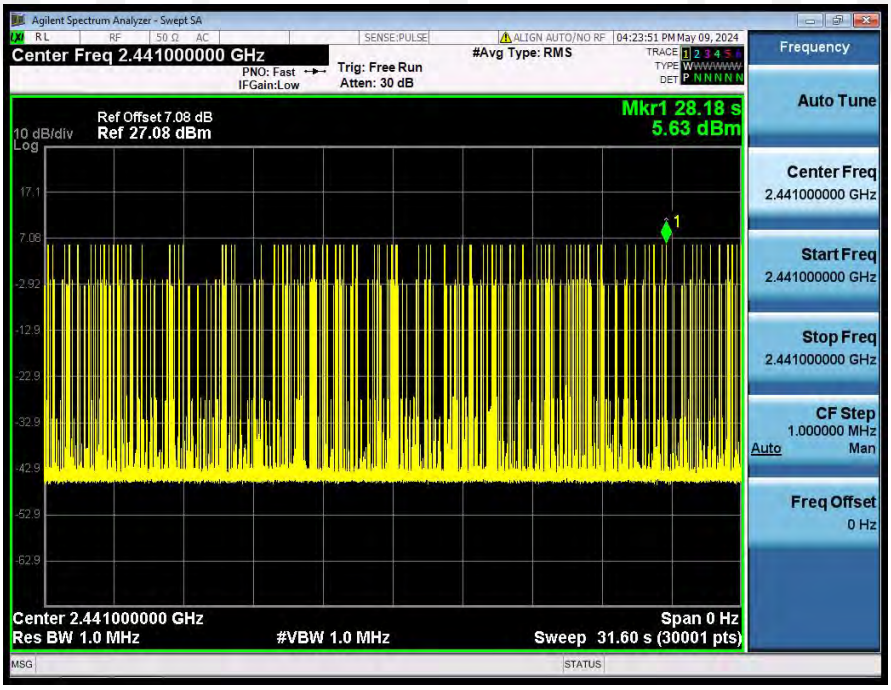
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH3_2441_Accumulated



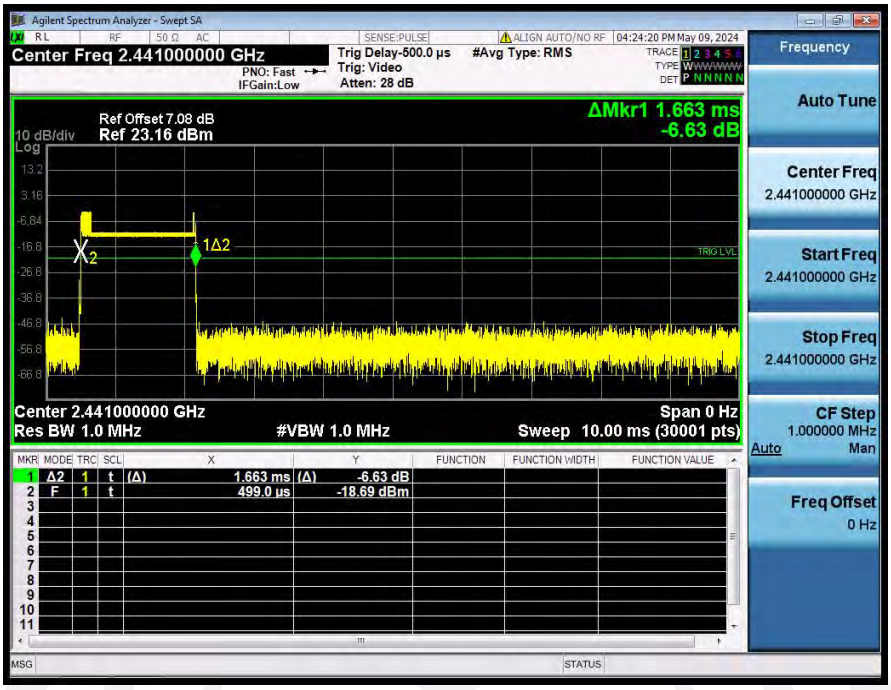
Dwell_Time_(Hopping)_NVNT_ANT1_2-DH5_2441_One_Burst_Time



Dwell_Time_(Hopping)_NVNT_ANT1_2-DH5_2441_Accumulated



Dwell_Time_(Hopping)_NVNT_ANT1_3-DH3_2441_One_Burst_Time



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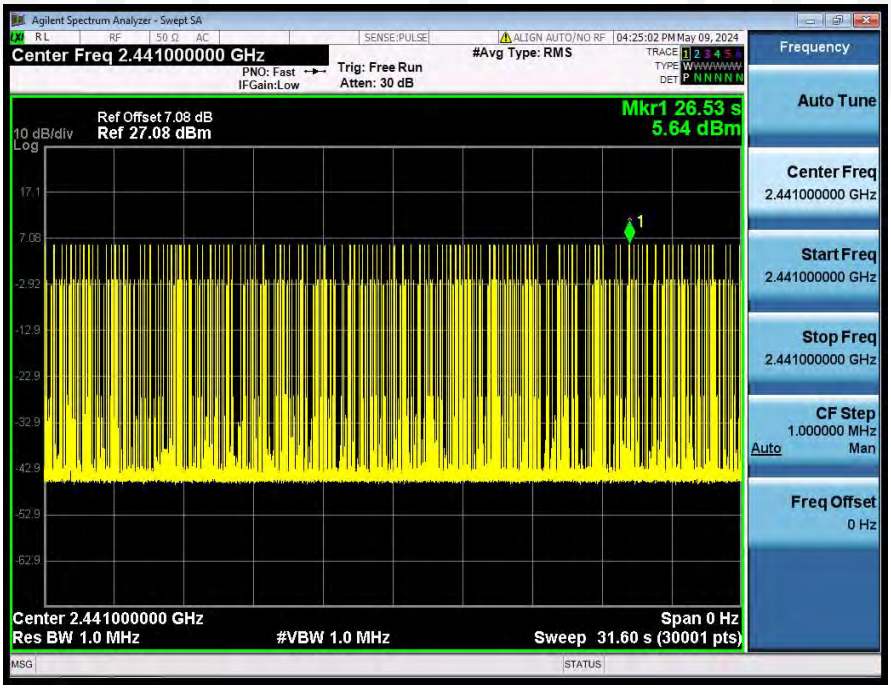
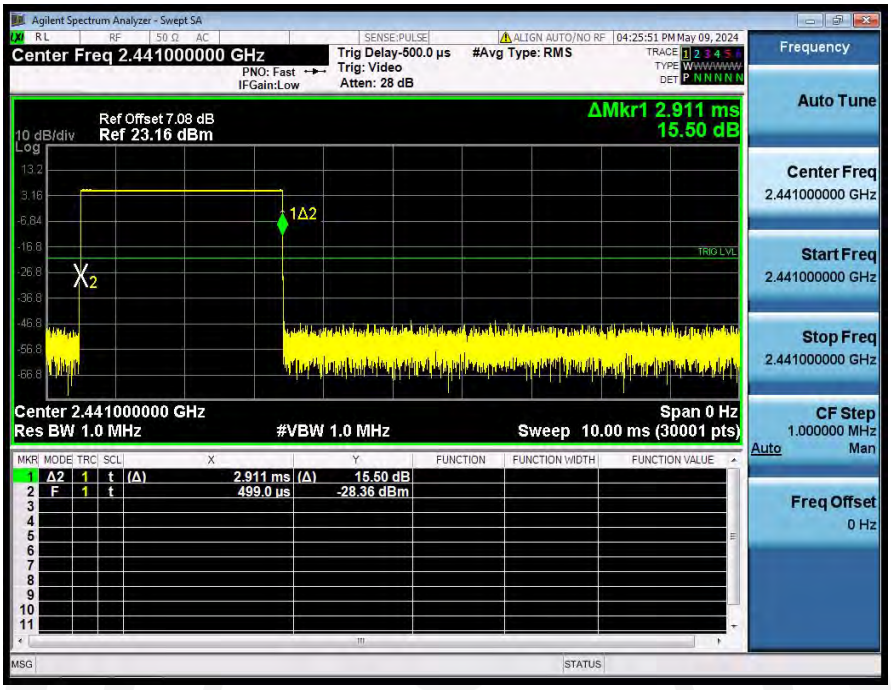
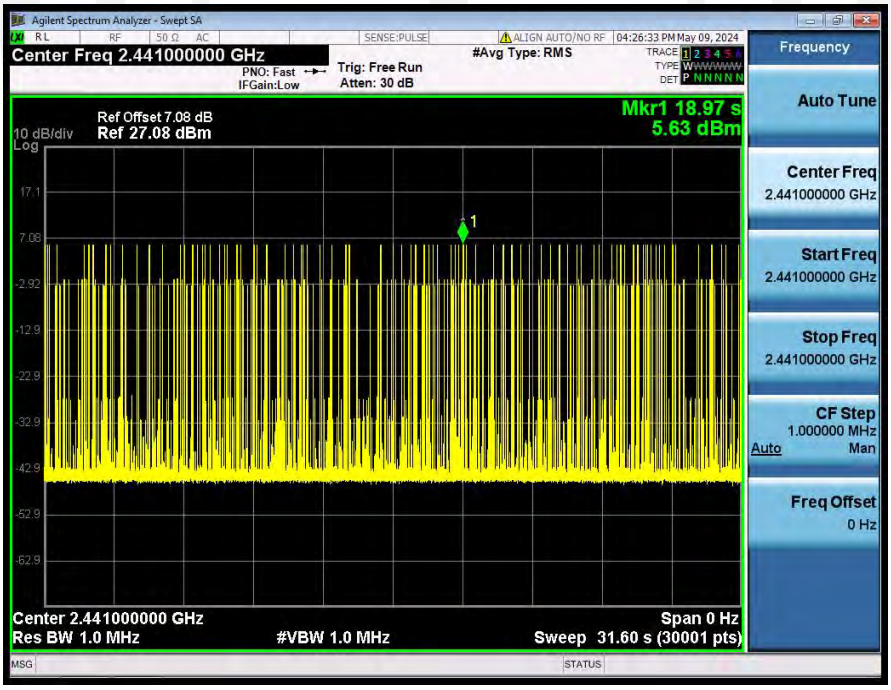


Dwell_Time_(Hopping)_NVNT_ANT1_3-DH5_2441_One_Burst_Time



Dwell_Time_(Hopping)_NVNT_ANT1_3-DH5_2441_Accumulated



8. Out-of-band Emissions

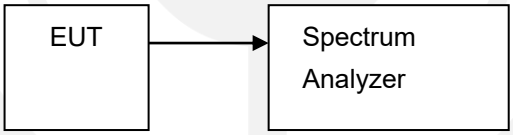
8.1. Test Limits

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.

8.2. Test Procedure

Connect the transmitter ouput to spectrum analvzer using a low loss RF cable, and set the spectrum analvzerto RBW=100 kHz, VBW= 300 kHz, peak detector, and max hold. Measurements utilizing these setting aremade of the in-band reference level, bandedge and out-of-band emissions.

8.3. Test Setup



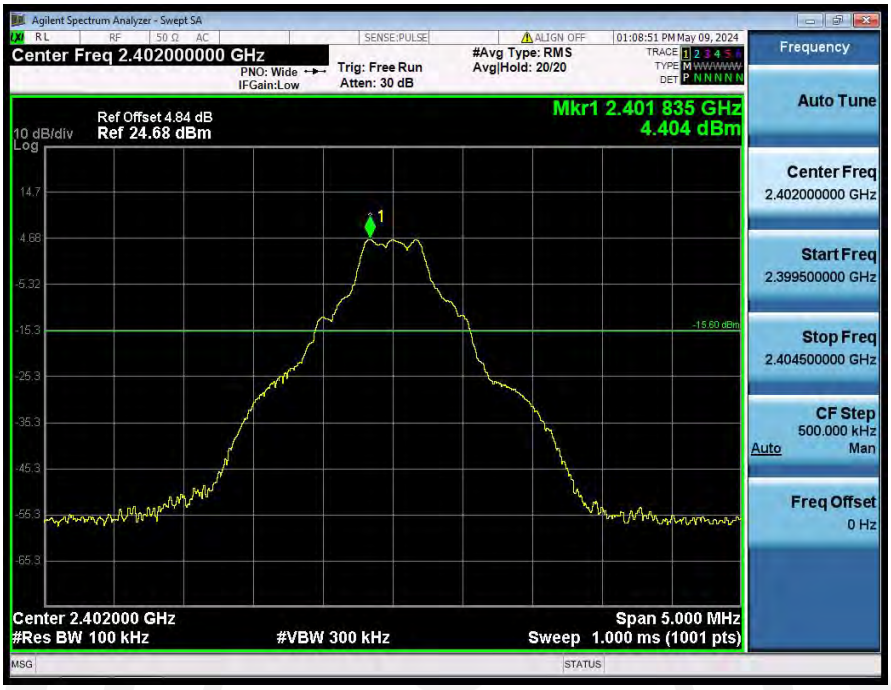
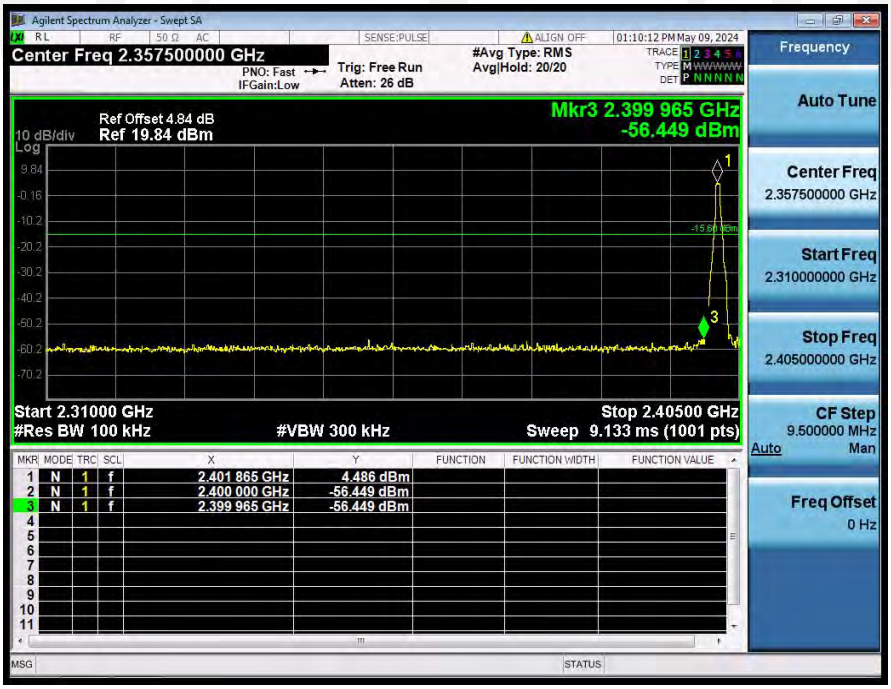
8.4. Test Results

PASS.

The test results are listed in next pages.

For Band Edge:

1_Reference_Level_NVNT_ANT1_1-DH1_2402



2_Bandedge_NVNT_ANT1_1-DH1_2402