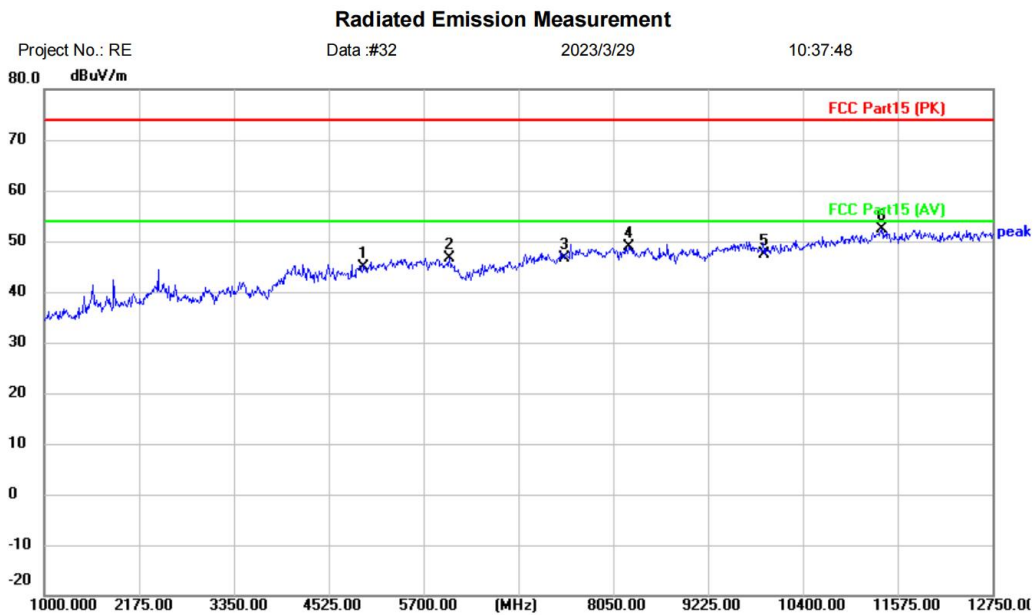


[TestMode: TX high channel]; [Polarity: Vertical]



Site:      Polarization: **Vertical**      Temperature: (C)  
 Limit: FCC Part15 (PK)      Power:      Humidity: %RH  
 EUT: Nooie Air Puifier  
 M/N: NCA01  
 Mode: BLE TX-H  
 Note:

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		4960.000	39.39	5.42	44.81	74.00	-29.19	peak	
2		6017.250	42.63	3.97	46.60	74.00	-27.40	peak	
3		7440.000	38.04	8.48	46.52	74.00	-27.48	peak	
4		8238.000	39.87	9.00	48.87	74.00	-25.13	peak	
5		9920.000	35.74	11.69	47.43	74.00	-26.57	peak	
6	*	11375.250	38.71	13.62	52.33	74.00	-21.67	peak	

\*:Maximum data    x:Over limit    !:over margin

(Reference Only)

**Test Result: Pass**

## 16 RADIATED EMISSIONS WHICH FALL IN THE RESTRICTED BANDS

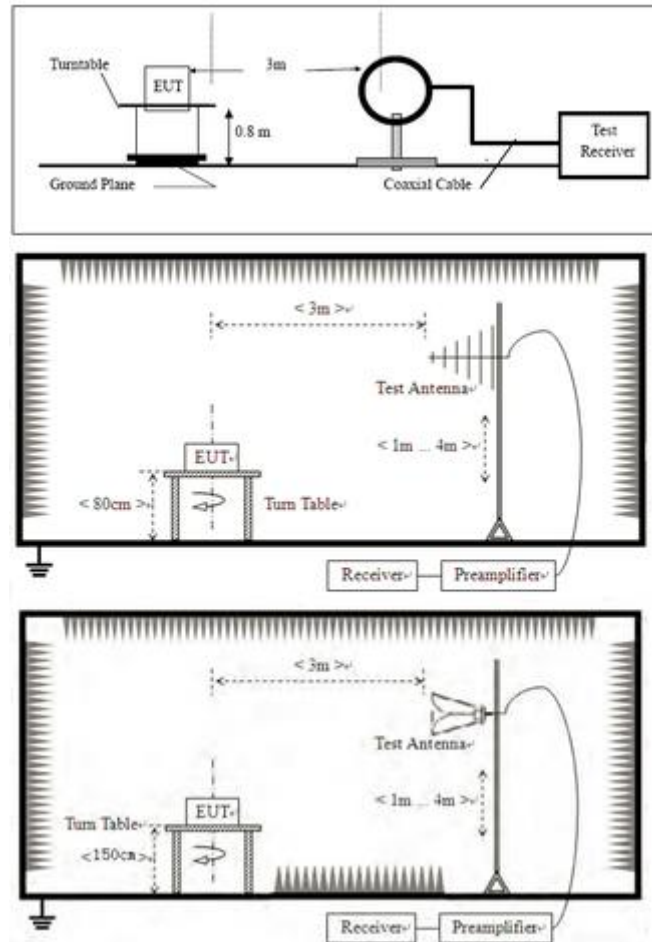
<b>Test Standard</b>	47 CFR Part 15, Subpart C 15.247
<b>Test Method</b>	ANSI C63.10 (2013) Section 6.10.5
<b>Test Mode (Pre-Scan)</b>	TX
<b>Test Mode (Final Test)</b>	TX
<b>Tester</b>	Jozu
<b>Temperature</b>	25°C
<b>Humidity</b>	60%

### 16.1 LIMITS

<b>Frequency(MHz)</b>	<b>Field strength(microvolts/meter)</b>	<b>Measurement distance(meters)</b>
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

## 16.2 BLOCK DIAGRAM OF TEST SETUP



## 16.3 PROCEDURE

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

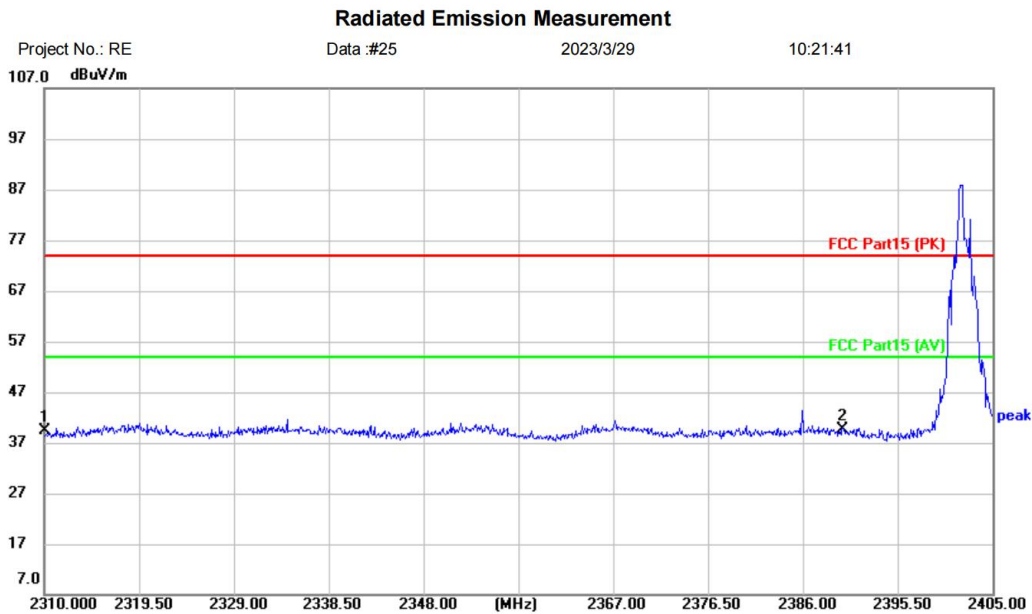
Remark 1:  $Level = Read\ Level + Cable\ Loss + Antenna\ Factor - Preamp\ Factor$

Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

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### 16.4 TEST DATA

[TestMode: TX low channel]; [Polarity: Horizontal]



Site	Polarization: <b>Horizontal</b>	Temperature: (C)
Limit: FCC Part15 (PK)	Power:	Humidity: %RH
EUT: Nooie Air Puifier		
M/N: NCA01		
Mode: BLE TX-L		
Note:		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2310.000	43.57	-4.27	39.30	74.00	-34.70	peak	
2	*	2390.000	43.53	-3.82	39.71	74.00	-34.29	peak	

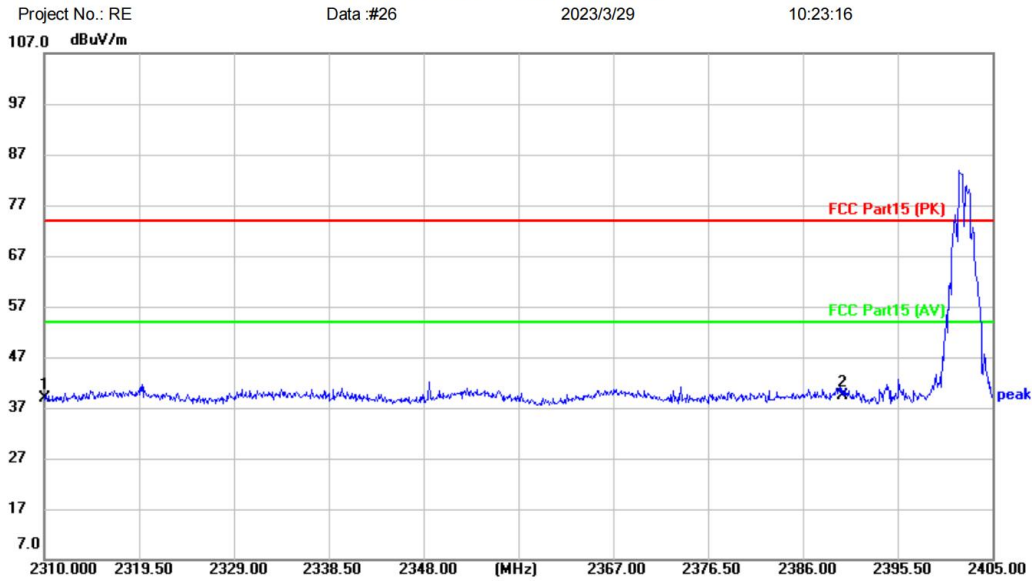
\*:Maximum data    x:Over limit    !:over margin

⟨Reference Only

**Test Result: Pass**

[TestMode: TX low channel]; [Polarity: Vertical]

**Radiated Emission Measurement**



Site	Polarization: <b>Vertical</b>	Temperature: (C)
Limit: FCC Part15 (PK)	Power:	Humidity: %RH
EUT: Nooie Air Puifier		
M/N: NCA01		
Mode: BLE TX-L		
Note:		

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Comment
1		2310.000	43.20	-4.27	38.93	74.00	-35.07	peak	
2	*	2390.000	43.30	-3.82	39.48	74.00	-34.52	peak	

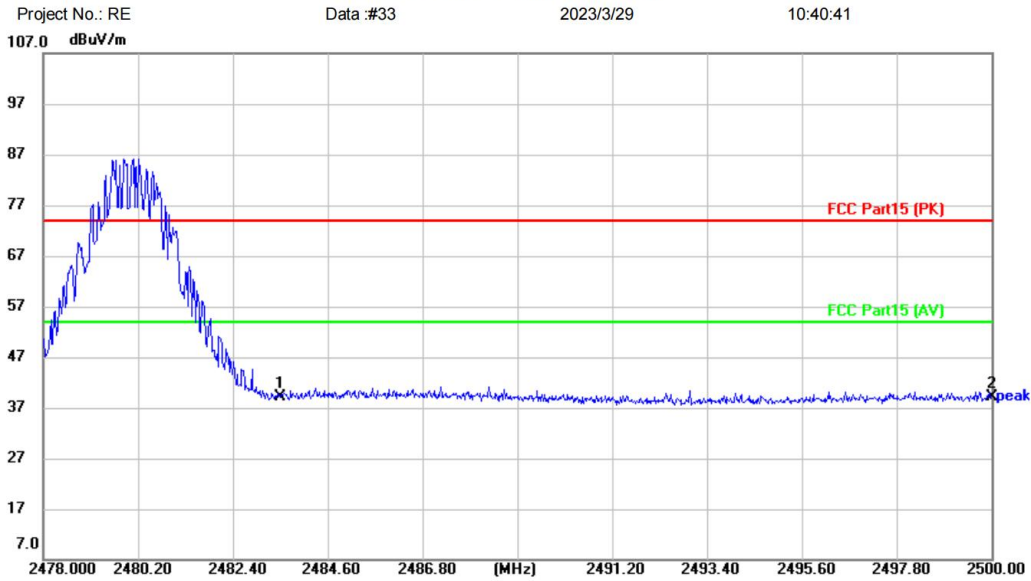
\*:Maximum data    x:Over limit    !:over margin

(Reference Only)

**Test Result: Pass**

[TestMode: TX high channel]; [Polarity: Horizontal]

**Radiated Emission Measurement**



Site	Polarization: <b>Horizontal</b>	Temperature: (C)
Limit: FCC Part15 (PK)	Power:	Humidity: %RH
EUT: Nooie Air Puifier		
M/N: NCA01		
Mode: BLE TX-H		
Note:		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1		2483.500	43.10	-3.96	39.14	74.00	-34.86	peak	
2	*	2500.000	43.22	-4.00	39.22	74.00	-34.78	peak	

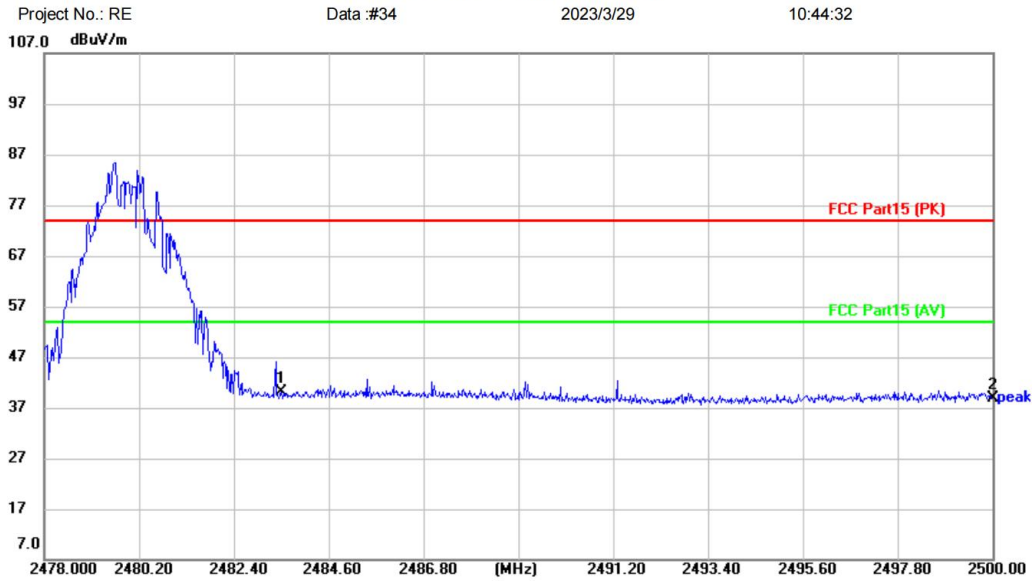
\*:Maximum data    x:Over limit    !:over margin

(Reference Only)

**Test Result: Pass**

[TestMode: TX high channel]; [Polarity: Vertical]

**Radiated Emission Measurement**



Site	Polarization: <b>Vertical</b>	Temperature: (C)
Limit: FCC Part15 (PK)	Power:	Humidity: %RH
EUT: Nooie Air Puifier		
M/N: NCA01		
Mode: BLE TX-H		
Note:		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1	*	2483.500	44.10	-3.96	40.14	74.00	-33.86	peak	
2		2500.000	42.94	-4.00	38.94	74.00	-35.06	peak	

\*:Maximum data    x:Over limit    !:over margin

(Reference Only)

**Test Result: Pass**



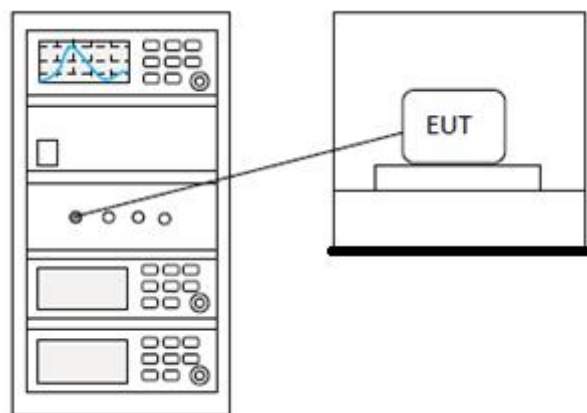
## 17 CONDUCTED SPURIOUS EMISSIONS

<b>Test Standard</b>	47 CFR Part 15, Subpart C 15.247
<b>Test Method</b>	ANSI C63.10 (2013) Section 7.8.6 & Section 11.11
<b>Test Mode (Pre-Scan)</b>	TX
<b>Test Mode (Final Test)</b>	TX
<b>Tester</b>	Jozu
<b>Temperature</b>	25°C
<b>Humidity</b>	60%

### 17.1 LIMITS

<b>Limit:</b>	<p>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 §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).</p>
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### 17.2 BLOCK DIAGRAM OF TEST SETUP



### 17.3 TEST DATA

**Pass: Please Refer To Appendix: Appendix1 For Details**

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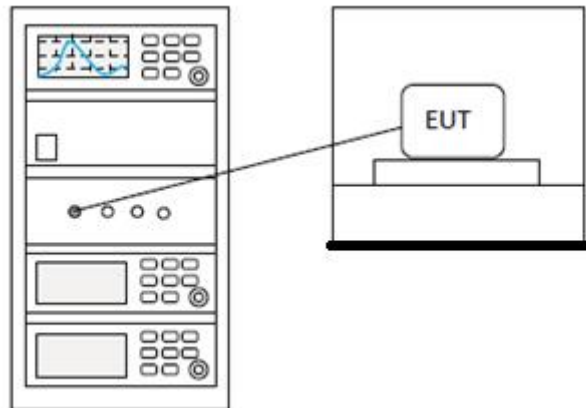
## 18 POWER SPECTRUM DENSITY

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.10.2
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25°C
Humidity	60%

### 18.1 LIMITS

**Limit:**  $\leq 8\text{dBm}$  in any 3 kHz band during any time interval of continuous transmission

### 18.2 BLOCK DIAGRAM OF TEST SETUP



### 18.3 TEST DATA

**Pass: Please Refer To Appendix: Appendix1 For Details**

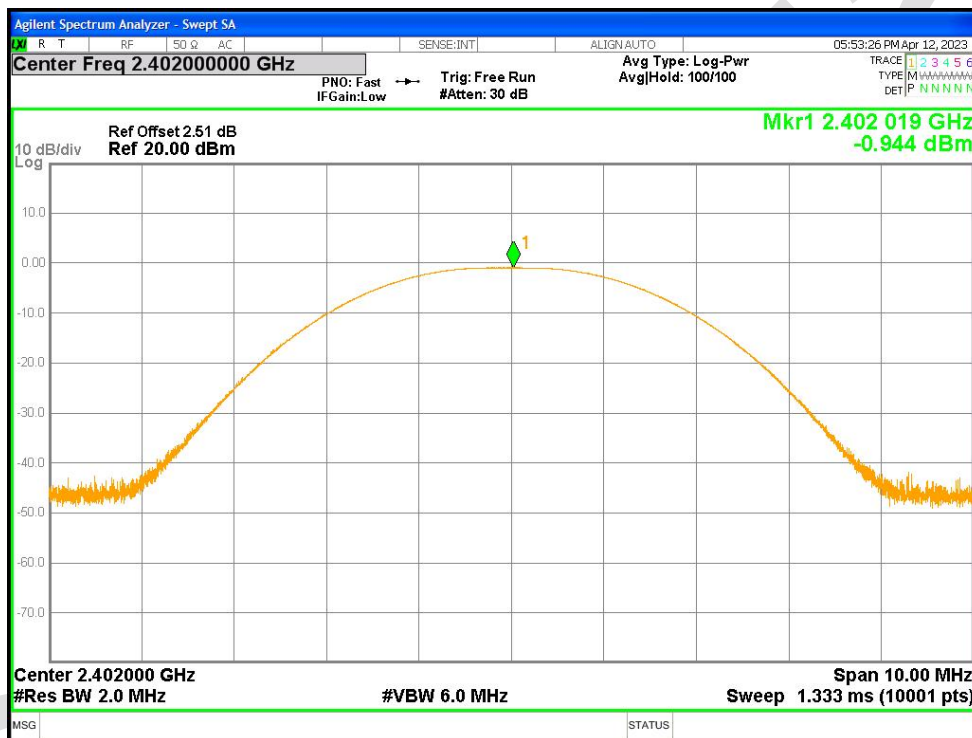
## 19 APPENDIX

### Appendix1

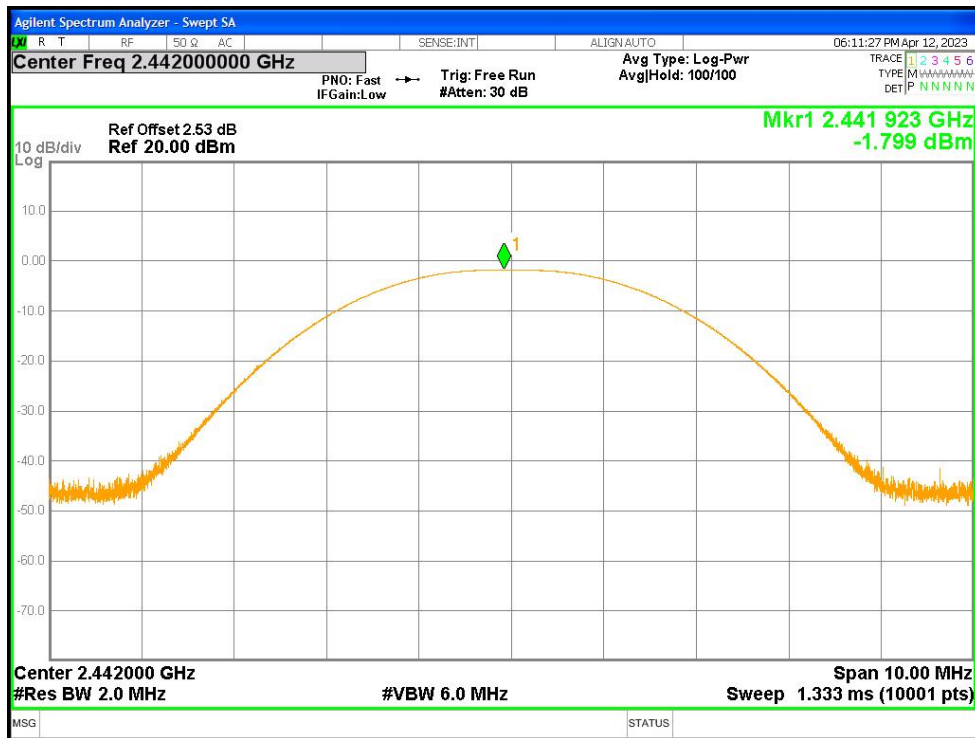
#### Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	-0.944	30	Pass
NVNT	BLE	2442	Ant1	-1.799	30	Pass
NVNT	BLE	2480	Ant1	-1.453	30	Pass

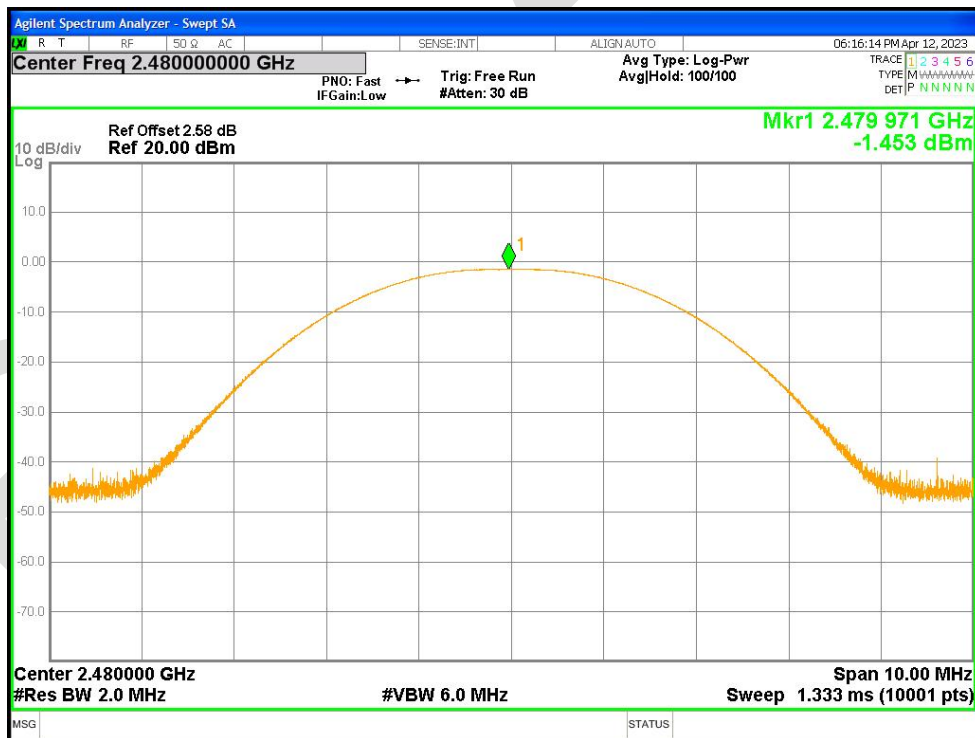
Power NVNT BLE 2402MHz Ant1



Power NVNT BLE 2442MHz Ant1

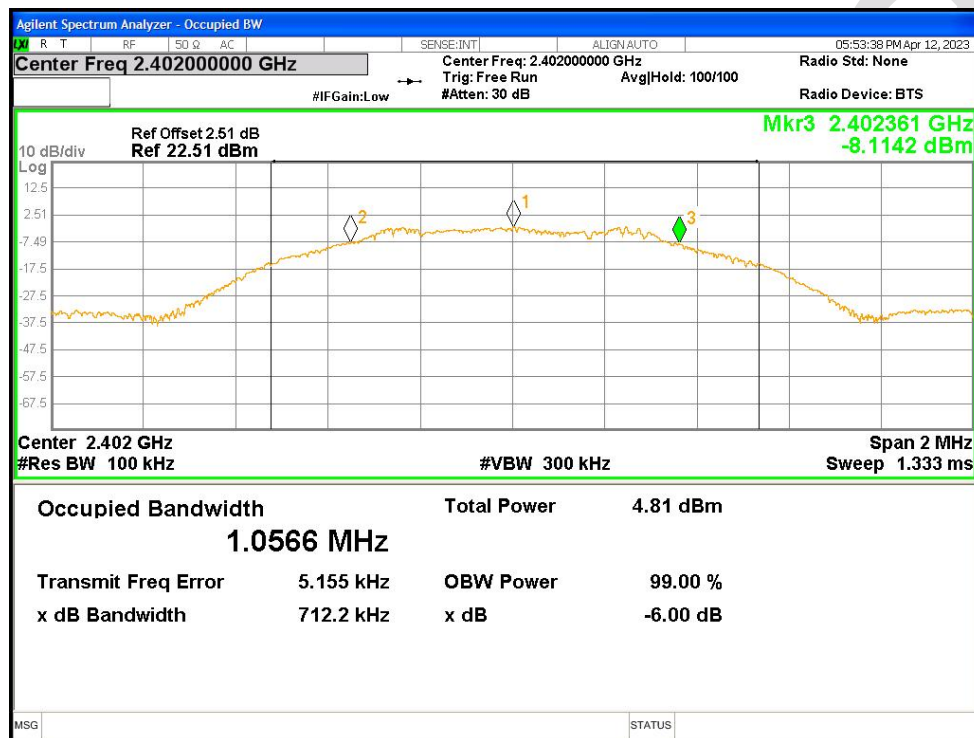


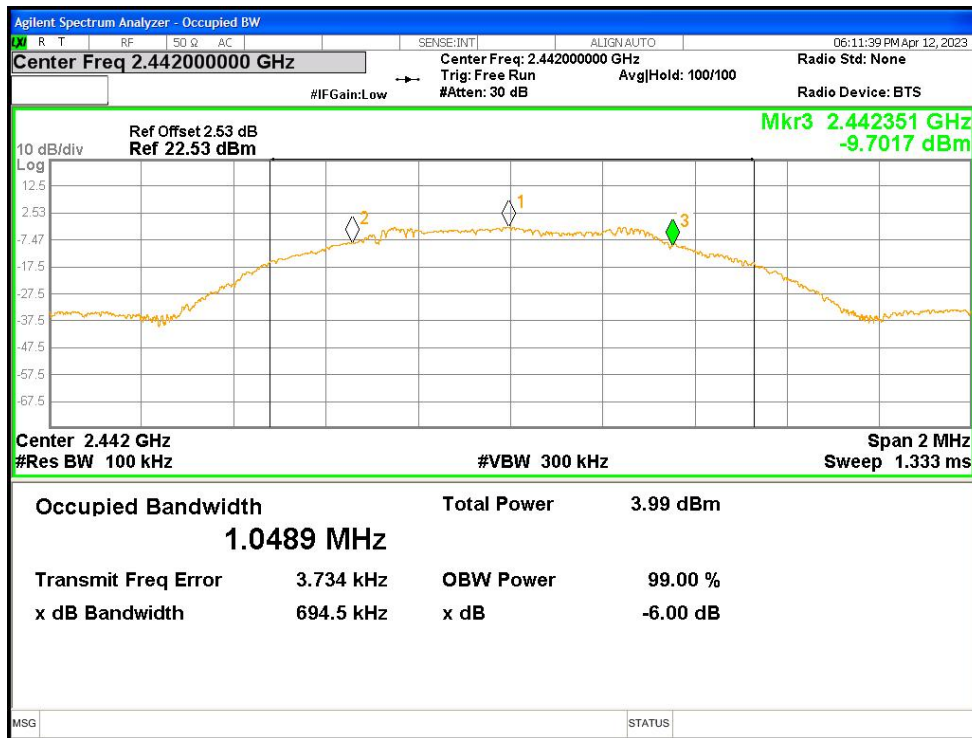
Power NVNT BLE 2480MHz Ant1



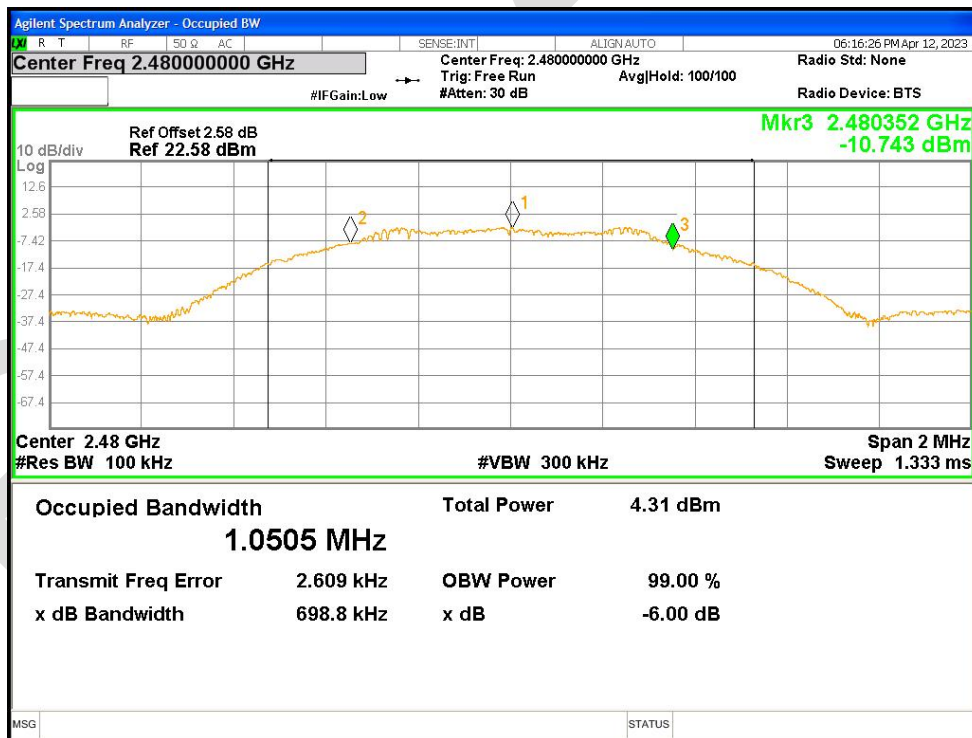
**-6dB Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE	2402	Ant1	0.712	0.5	Pass
NVNT	BLE	2442	Ant1	0.694	0.5	Pass
NVNT	BLE	2480	Ant1	0.699	0.5	Pass

**-6dB Bandwidth NVNT BLE 2402MHz Ant1**

**-6dB Bandwidth NVNT BLE 2442MHz Ant1**



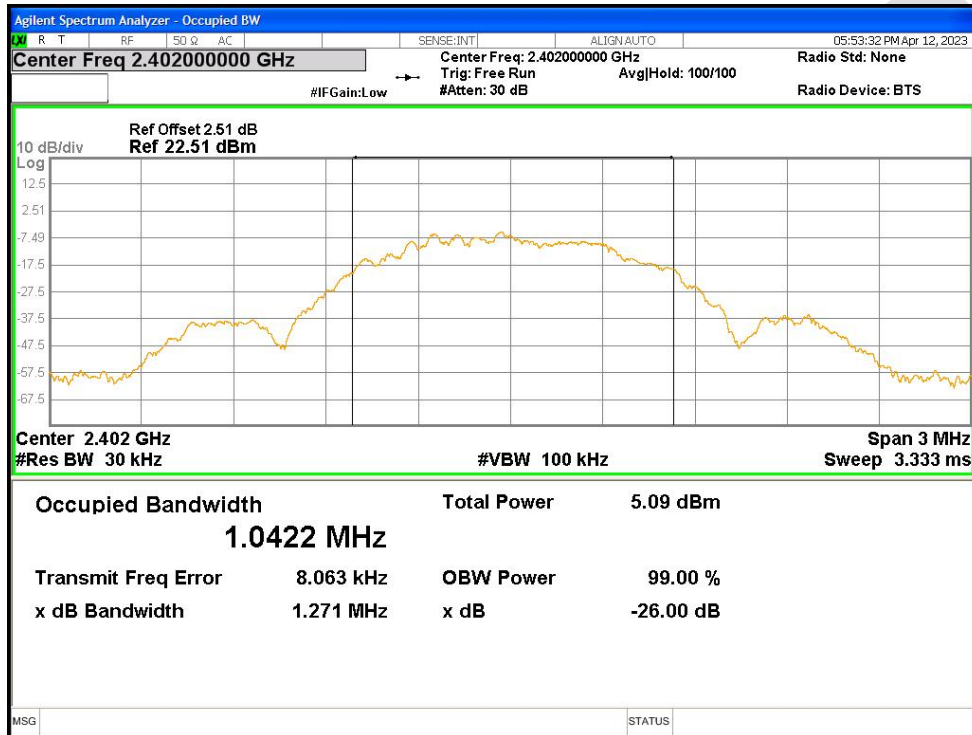
-6dB Bandwidth NVNT BLE 2480MHz Ant1



**Occupied Channel Bandwidth**

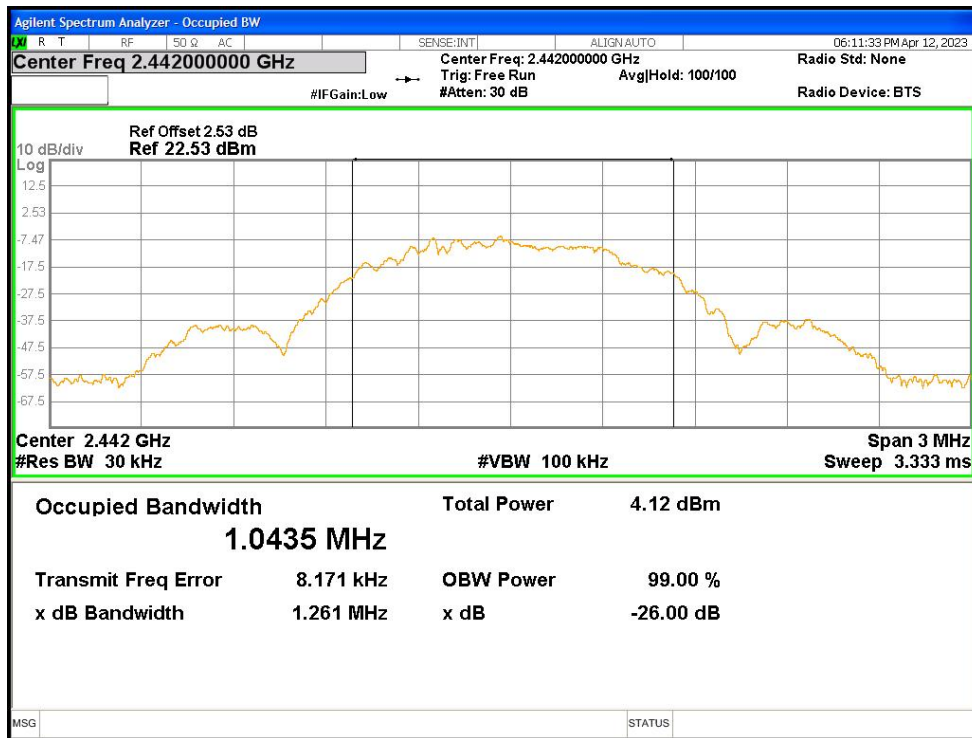
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE	2402	Ant1	1.0422
NVNT	BLE	2442	Ant1	1.0435
NVNT	BLE	2480	Ant1	1.0463

OBW NVNT BLE 2402MHz Ant1

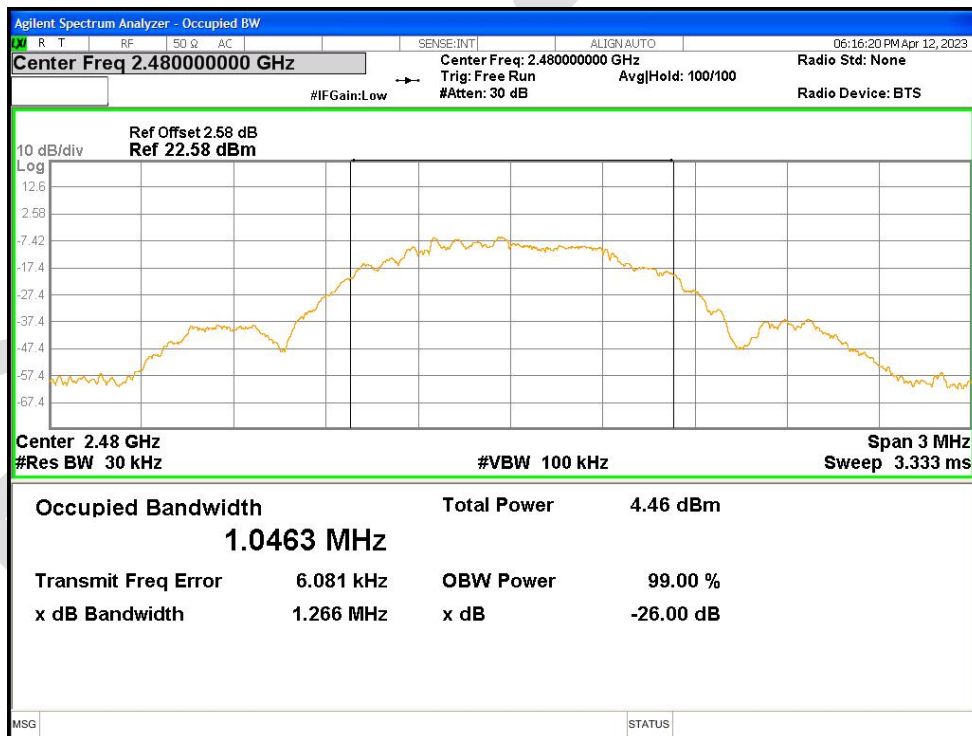


OBW NVNT BLE 2442MHz Ant1





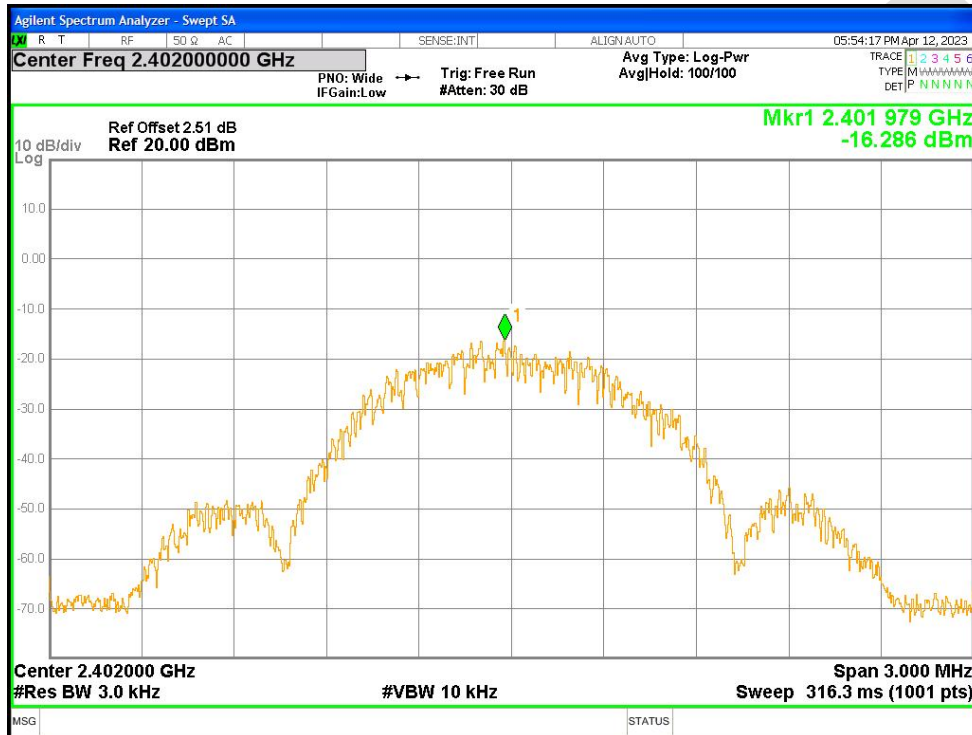
OBW NVNT BLE 2480MHz Ant1



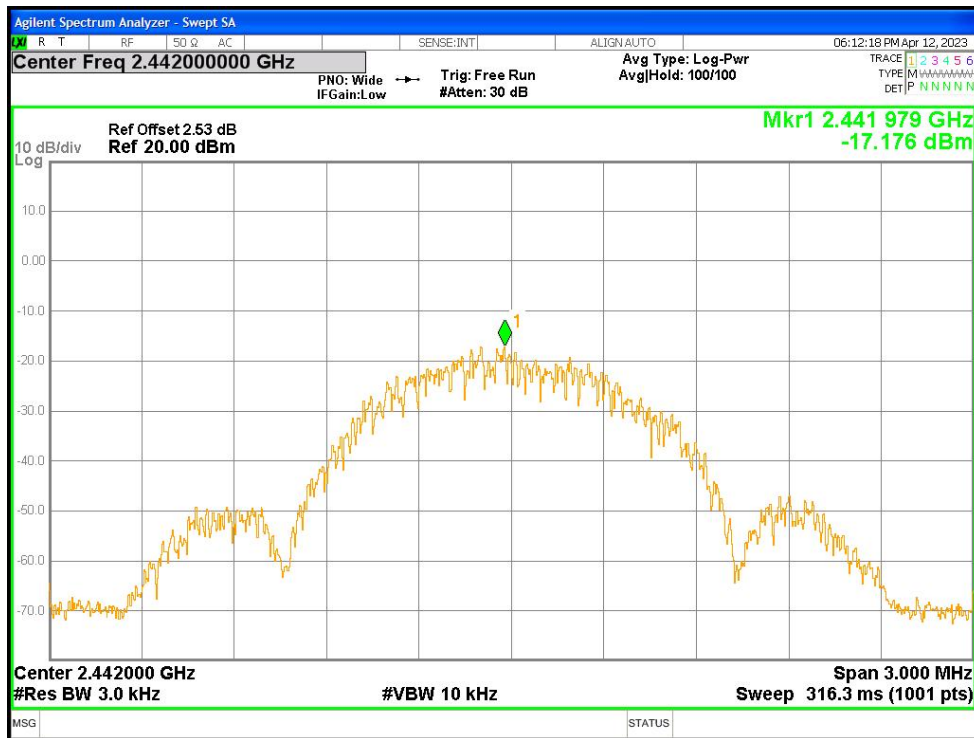
**Maximum Power Spectral Density Level**

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	Ant1	-16.286	8	Pass
NVNT	BLE	2442	Ant1	-17.176	8	Pass
NVNT	BLE	2480	Ant1	-16.801	8	Pass

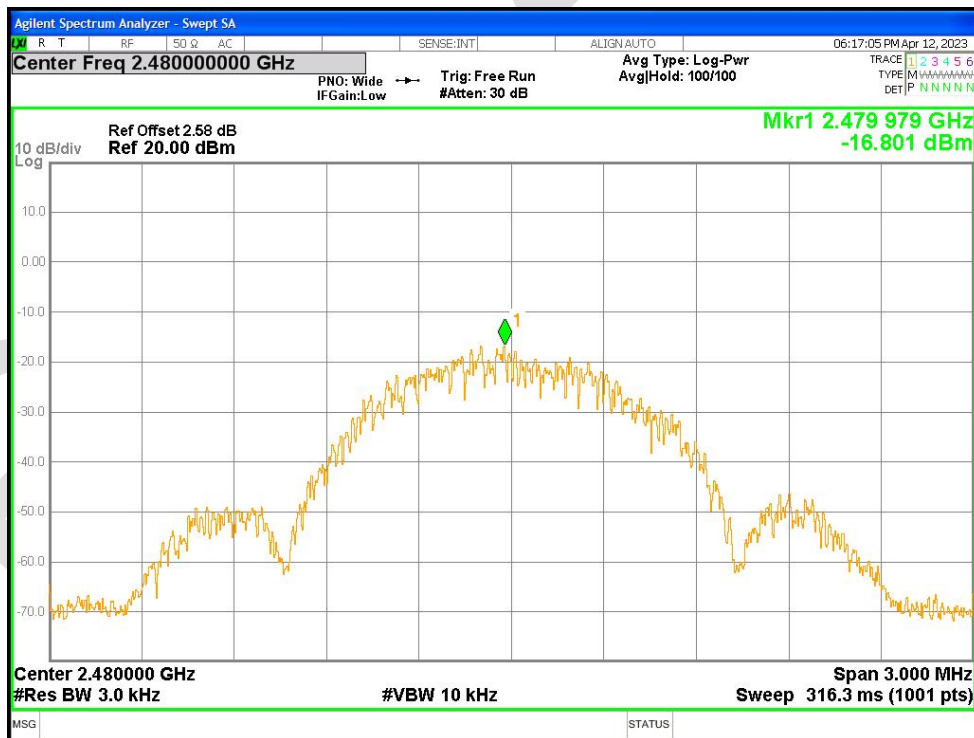
PSD NVNT BLE 2402MHz Ant1



PSD NVNT BLE 2442MHz Ant1



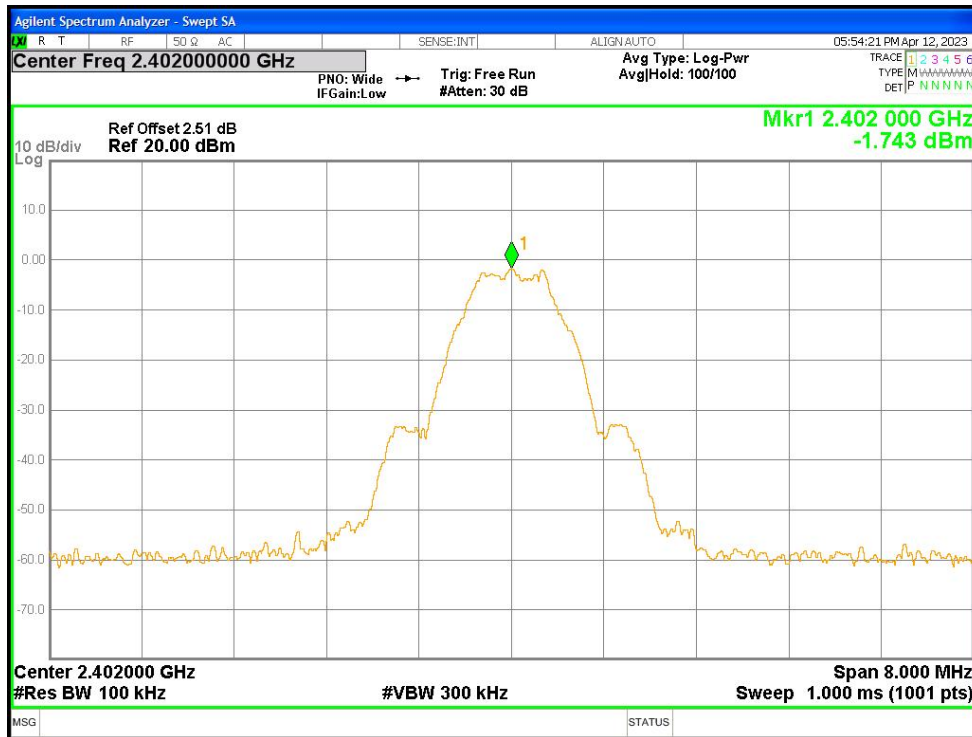
PSD NVNT BLE 2480MHz Ant1



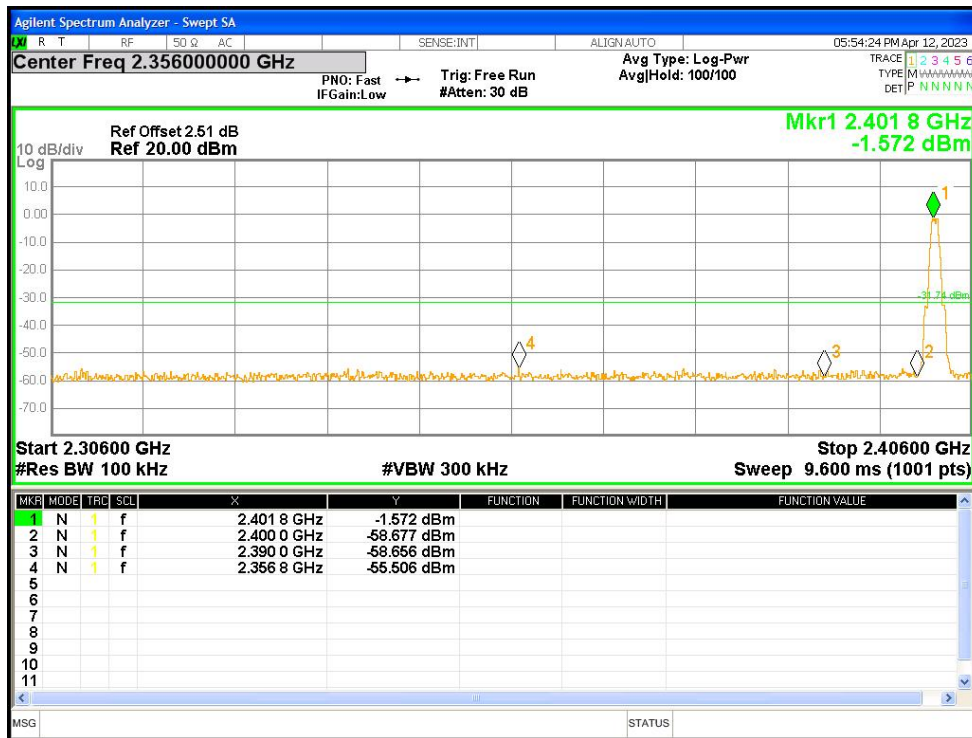
**Band Edge**

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-53.76	-30	Pass
NVNT	BLE	2480	Ant1	-53.6	-30	Pass

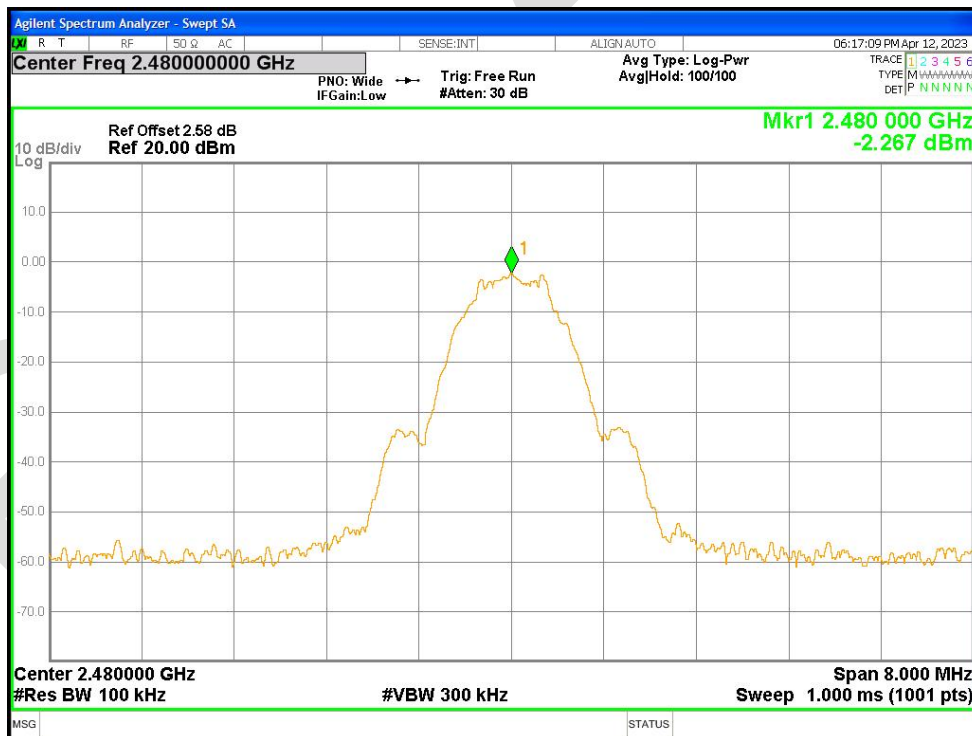
Band Edge NVNT BLE 2402MHz Ant1 Ref



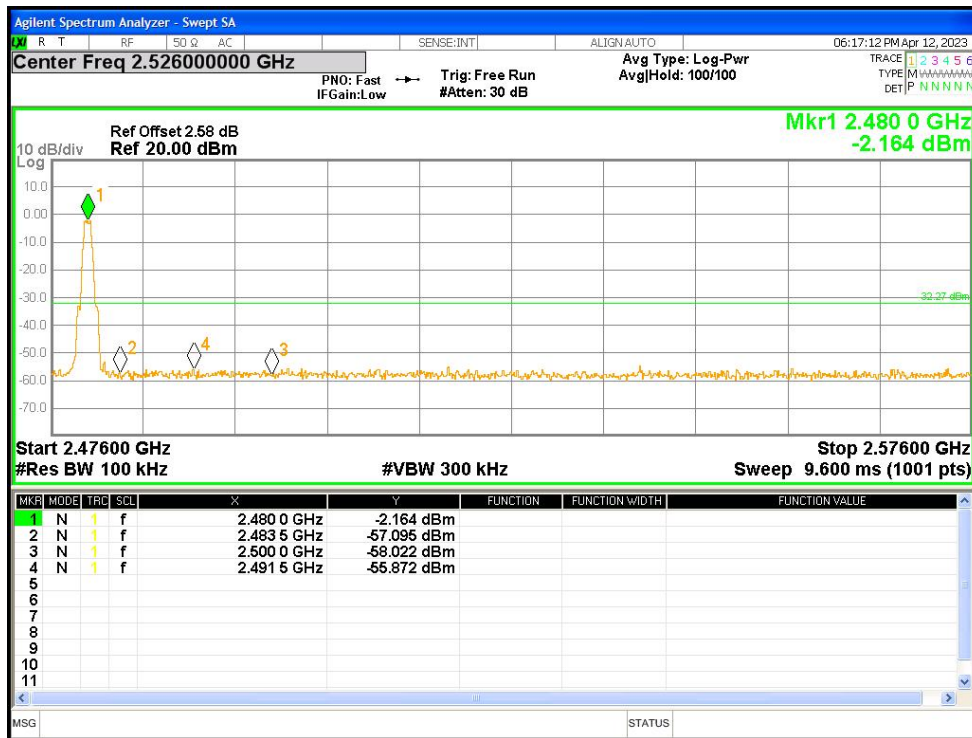
Band Edge NVNT BLE 2402MHz Ant1 Emission



Band Edge NVNT BLE 2480MHz Ant1 Ref



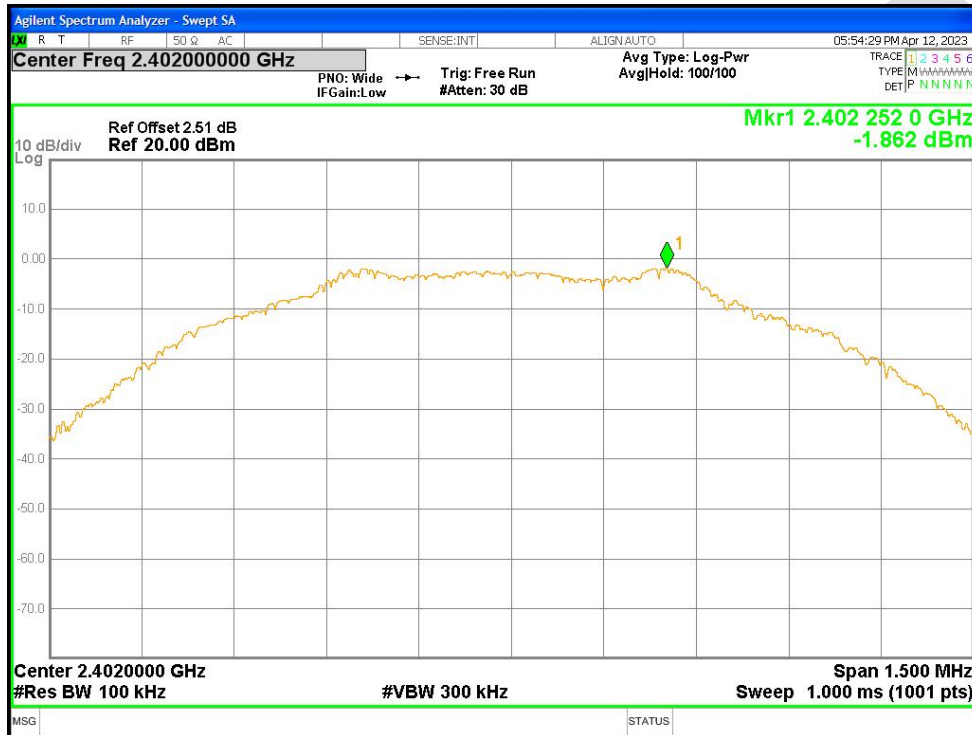
Band Edge NVNT BLE 2480MHz Ant1 Emission



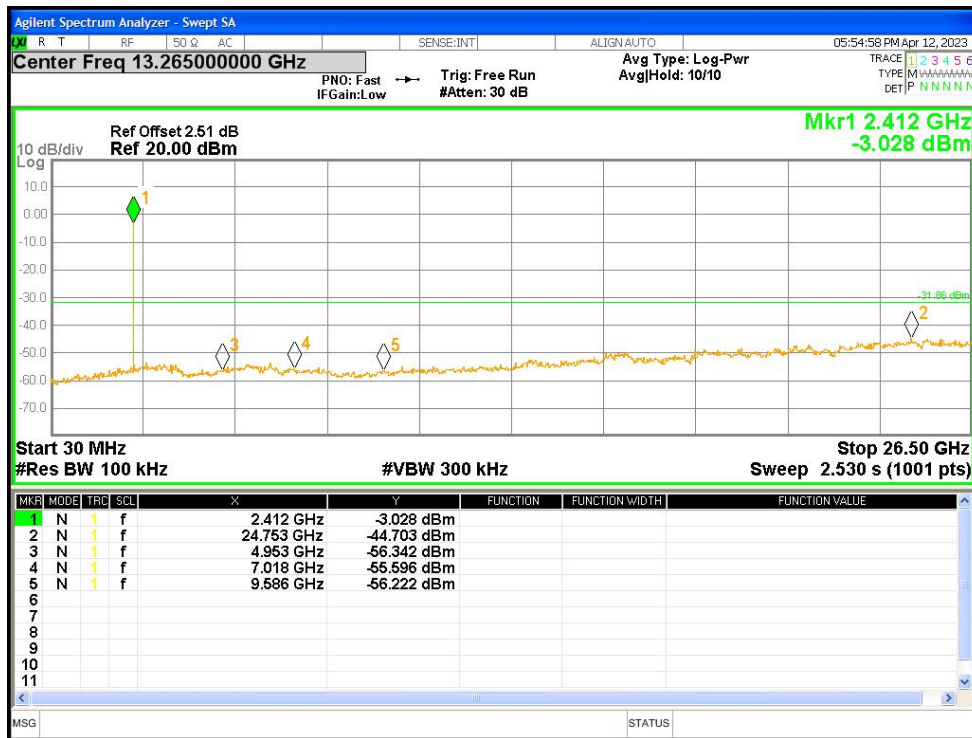
**Conducted RF Spurious Emission**

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE	2402	Ant1	-42.84	-30	Pass
NVNT	BLE	2442	Ant1	-42.21	-30	Pass
NVNT	BLE	2480	Ant1	-42.34	-30	Pass

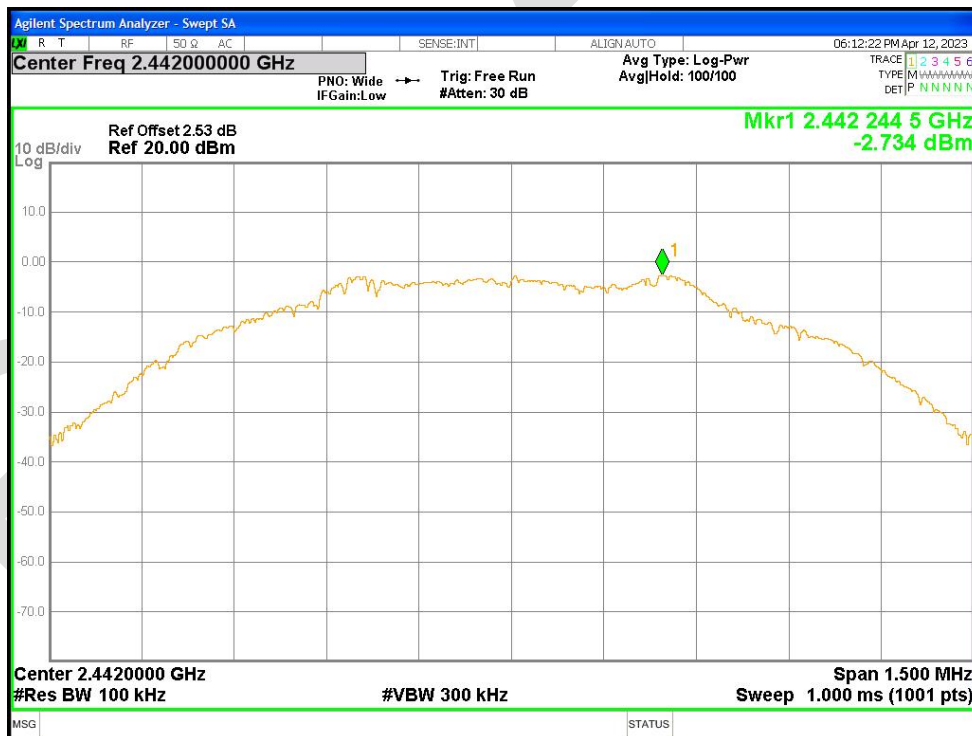
Tx. Spurious NVNT BLE 2402MHz Ant1 Ref



Tx. Spurious NVNT BLE 2402MHz Ant1 Emission

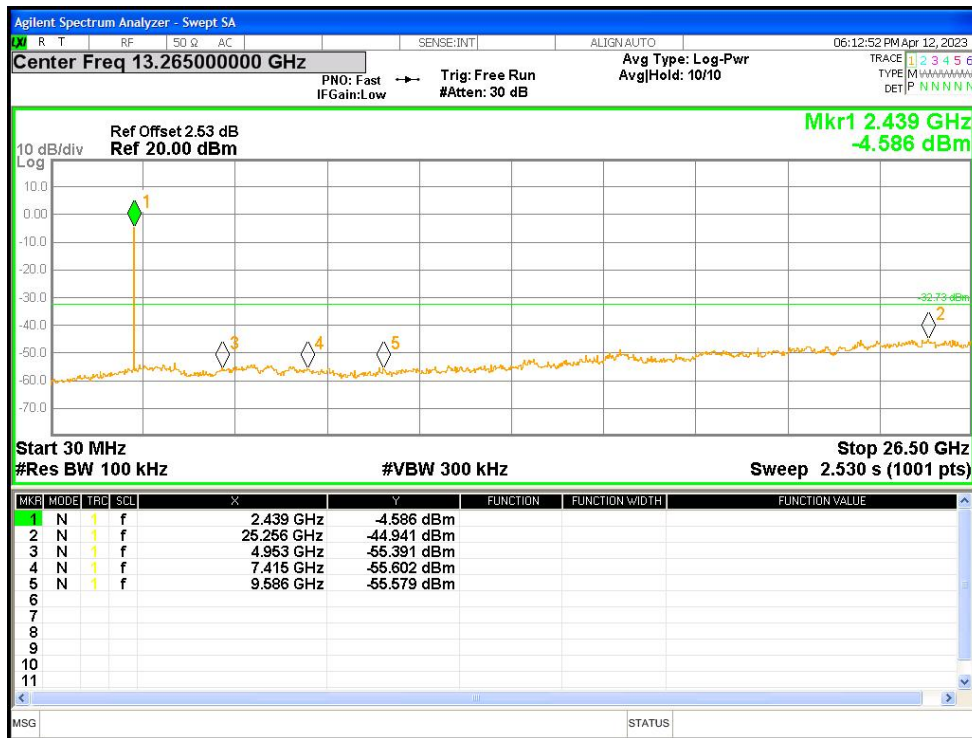


Tx. Spurious NVNT BLE 2442MHz Ant1 Ref

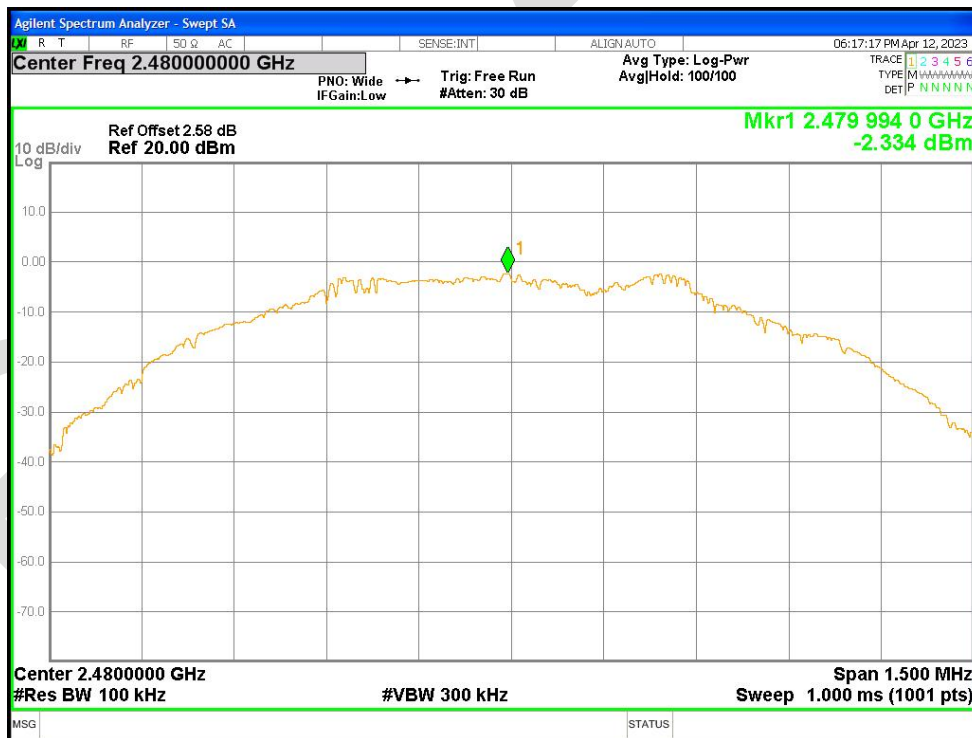


Tx. Spurious NVNT BLE 2442MHz Ant1 Emission

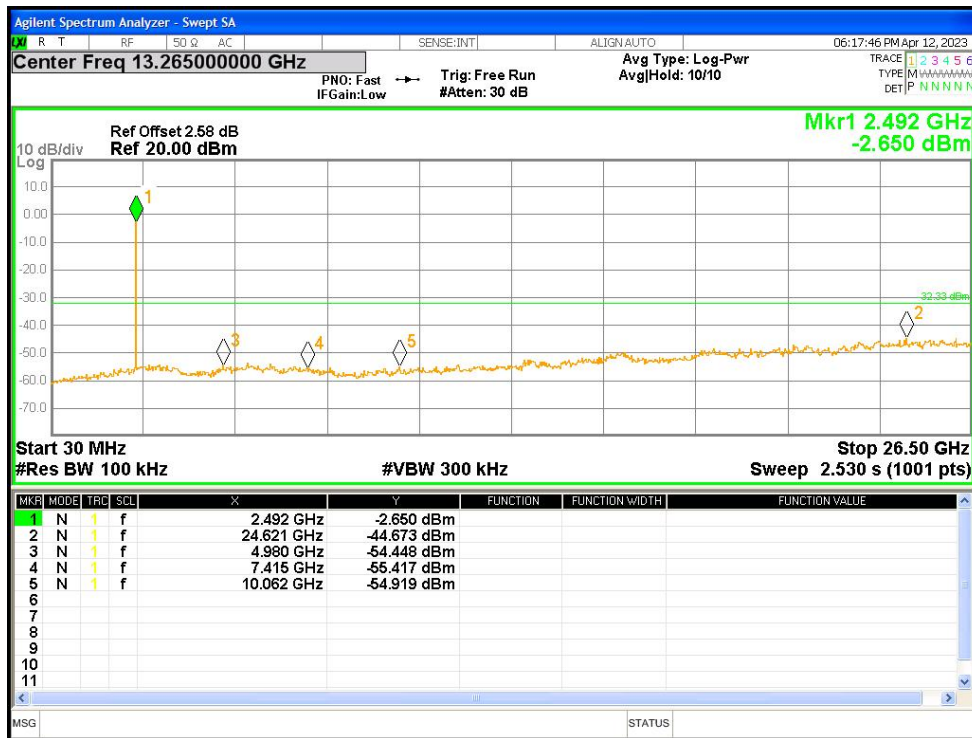




Tx. Spurious NVNT BLE 2480MHz Ant1 Ref

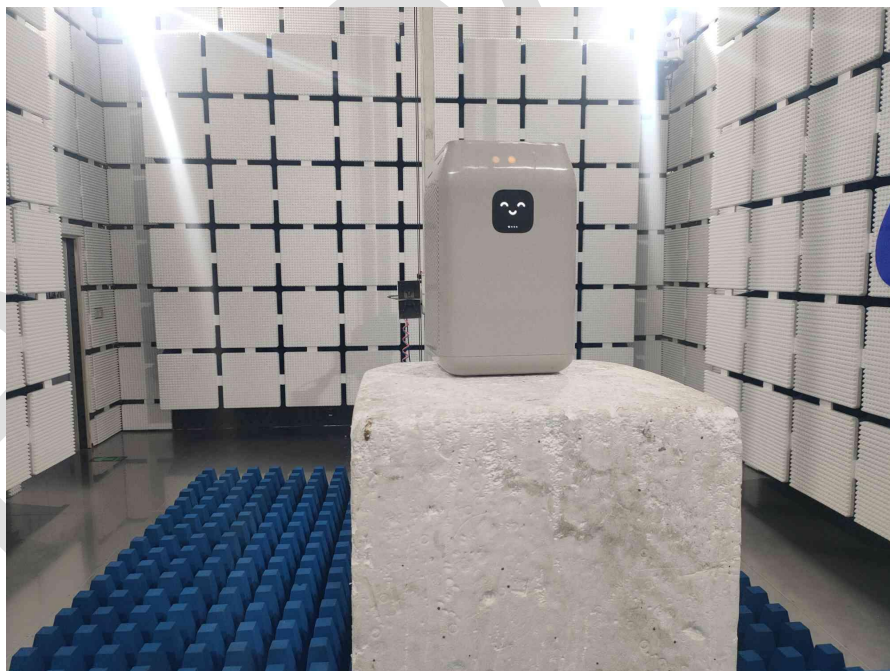


Tx. Spurious NVNT BLE 2480MHz Ant1 Emission



## APPENDIX A: PHOTOGRAPHS OF TEST SETUP

### Radiated Spurious Emissions



**Conducted Emissions at AC Power Line (150kHz-30MHz)**



**APPENDIX B: PHOTOGRAPHS OF EUT**

Reference to the test report No. BLA-EMC-202303-A3301

**----END OF REPORT----**

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