

- 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

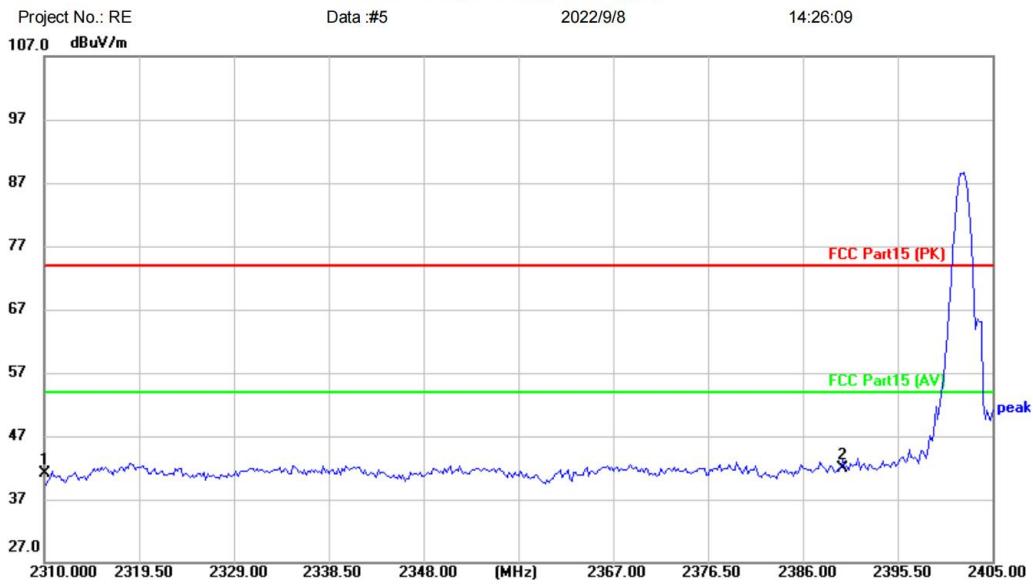
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level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

BlueAsia

13.4 TEST DATA

[TestMode: TX BLE1M low channel]; [Polarity: Horizontal]

Radiated Emission Measurement



Site

Polarization: **Horizontal**

Temperature: (C)

Limit: FCC Part15 (PK)

Power:

Humidity: %RH

EUT: MoerLink

M/N: AAD02

Mode: BLE1M TX-L

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector	Comment
			Level	Factor	ment				
		MHz	dBuV	dB/m	dBuV/m	dB			
1		2310.000	44.19	-3.02	41.17	74.00	-32.83	peak	
2	*	2390.000	44.36	-2.50	41.86	74.00	-32.14	peak	

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

⟨Reference Only

Test Result: Pass

[TestMode: TX BLE1M low channel]; [Polarity: Vertical]

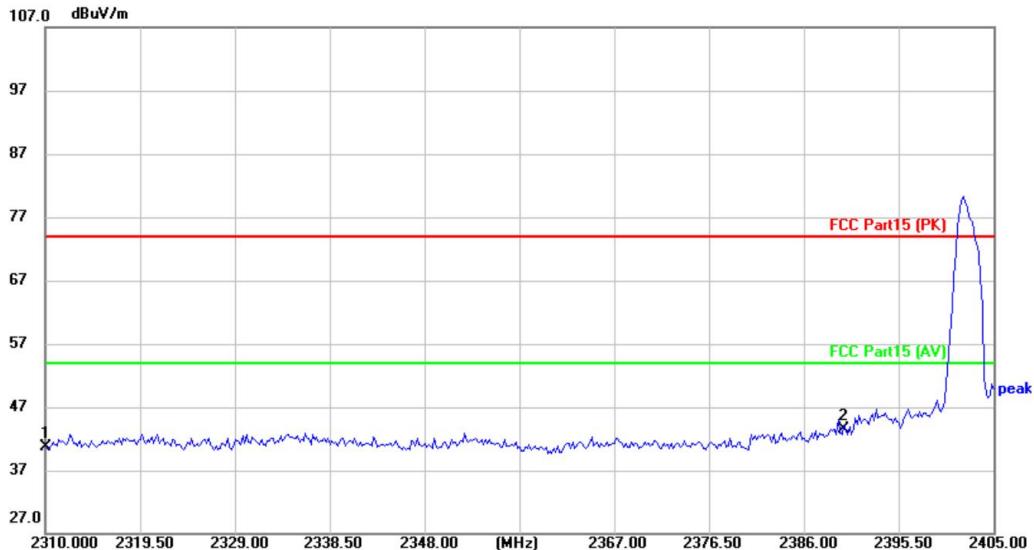
Radiated Emission Measurement

Project No.: RE

Data :#6

2022/9/8

14:29:44



Site

Polarization: **Vertical**

Temperature: (C)

Limit: FCC Part15 (PK)

Power:

Humidity: %RH

EUT: MoerLink

M/N: AAD02

Mode: BLE1M TX-L

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
			Level	Factor	ment			
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2310.000	43.71	-3.02	40.69	74.00	-33.31	peak
2	*	2390.000	45.93	-2.50	43.43	74.00	-30.57	peak

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

⟨Reference Only

Test Result: Pass

[TestMode: TX BLE1M high channel]; [Polarity: Horizontal]

Radiated Emission Measurement

Project No.: RE

Data :#13

2022/9/8

14:45:57



Site

Polarization: *Horizontal*

Temperature: (C)

Limit: FCC Part15 (PK)

Power:

Humidity: %RH

EUT: MoerLink

M/N: AAD02

Mode: BLE 1M TX-H

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
			Level	Factor	ment			
		MHz	dBuV	dB/m	dBuV/m	dB	Detector	Comment
1	*	2483.500	46.05	-2.52	43.53	74.00	-30.47	peak
2		2500.000	44.73	-2.55	42.18	74.00	-31.82	peak

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

⟨Reference Only

Test Result: Pass

[TestMode: TX BLE1M high channel]; [Polarity: Vertical]

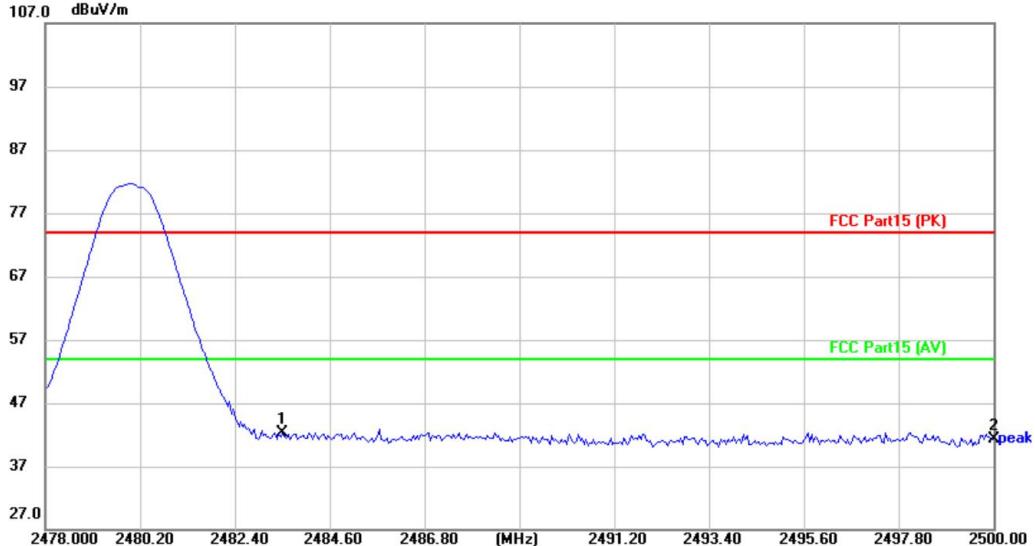
Radiated Emission Measurement

Project No.: RE

Data :#14

2022/9/8

14:48:47



Site

Polarization: **Vertical**

Temperature: (C)

Limit: FCC Part15 (PK)

Power:

Humidity: %RH

EUT: MoerLink

M/N: AAD02

Mode: BLE 1M TX-H

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
			Level	Factor	ment			
1	*	2483.500	44.76	-2.52	42.24	74.00	-31.76	peak
2		2500.000	43.95	-2.55	41.40	74.00	-32.60	peak

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

⟨Reference Only

Test Result: Pass

[TestMode: TX BLE2M low channel]; [Polarity: Horizontal]

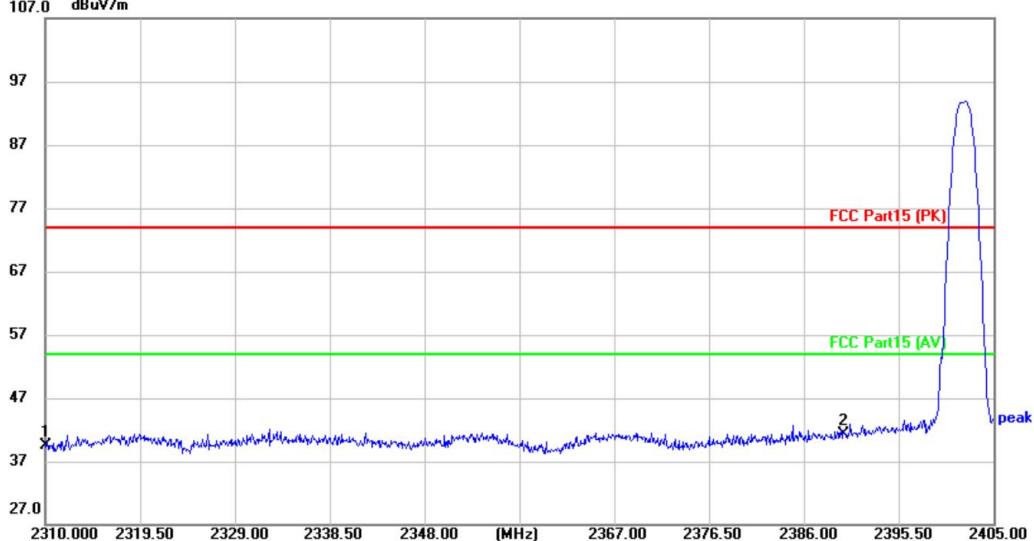
Radiated Emission Measurement

Project No.: RE

Data :#25

2022/9/18

10:52:12



Site

Polarization: *Horizontal*

Temperature: (C)

Limit: FCC Part15 (PK)

Power:

Humidity: %RH

EUT: MoerLink

M/N: AAD02

Mode: BLE 2M TX-L

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
			Level	Factor	ment			
1		2310.000	53.85	-14.27	39.58	74.00	-34.42	peak
2	*	2390.000	55.06	-13.82	41.24	74.00	-32.76	peak

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

⟨Reference Only

Test Result: Pass

[TestMode: TX BLE2M low channel]; [Polarity: Vertical]

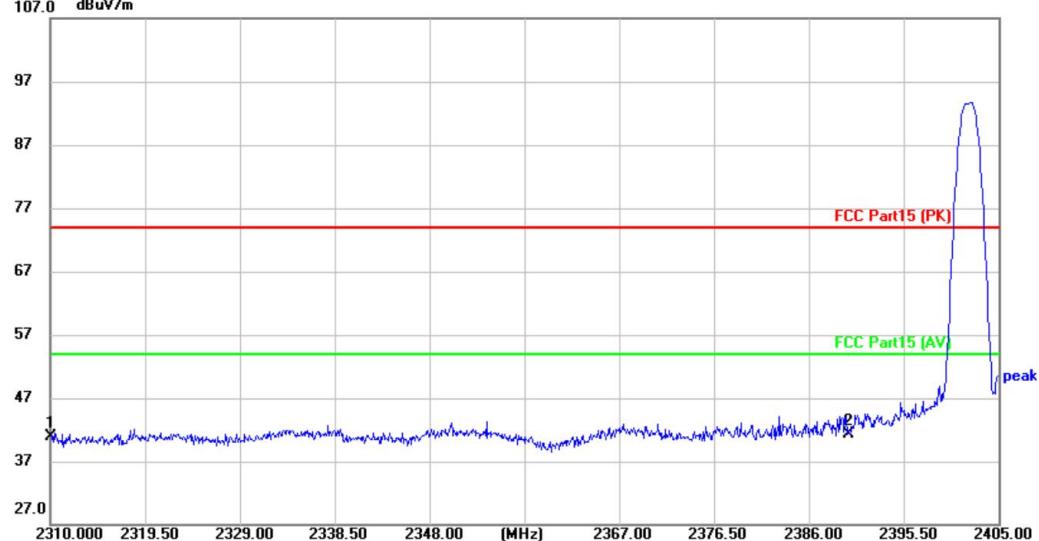
Radiated Emission Measurement

Project No.: RE

Data :#26

2022/9/18

10:53:43



Site

Polarization: **Vertical**

Temperature: (C)

Limit: FCC Part15 (PK)

Power:

Humidity: %RH

EUT: MoerLink

M/N: AAD02

Mode: BLE 2M TX-L

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
			Level	Factor	ment			
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2310.000	55.24	-14.27	40.97	74.00	-33.03	peak
2	*	2390.000	55.13	-13.82	41.31	74.00	-32.69	peak

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

⟨Reference Only

Test Result: Pass

[TestMode: TX BLE2M high channel]; [Polarity: Horizontal]

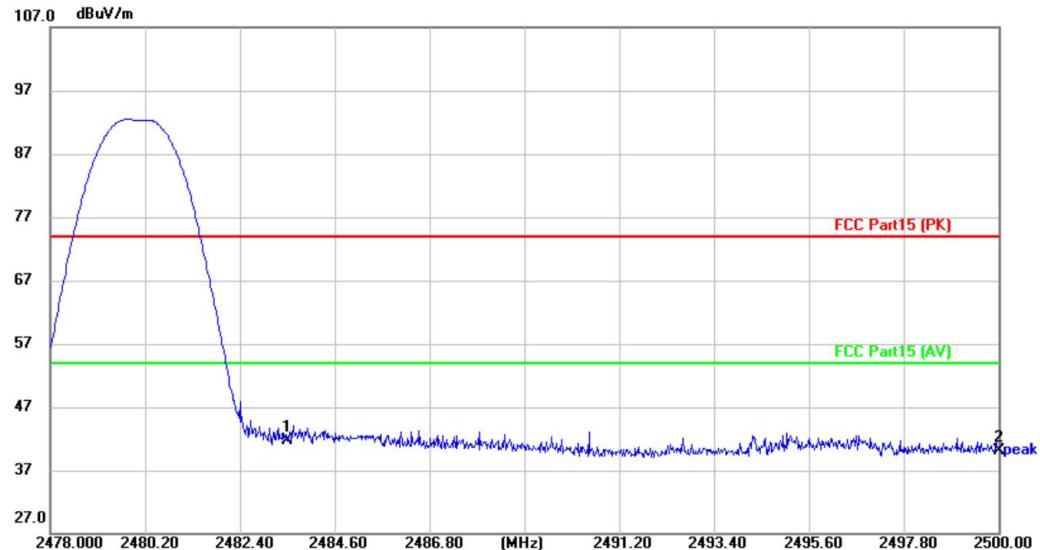
Radiated Emission Measurement

Project No.: RE

Data :#27

2022/9/18

10:58:12



Site

Polarization: *Horizontal*

Temperature: (C)

Limit: FCC Part15 (PK)

Power:

Humidity: %RH

EUT: MoerLink

M/N: AAD02

Mode: BLE 2M TX-H

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
			Level	Factor	ment			
1	*	2483.500	55.67	-13.96	41.71	74.00	-32.29	peak
2		2500.000	54.10	-14.00	40.10	74.00	-33.90	peak

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

⟨Reference Only

Test Result: Pass

[TestMode: TX BLE2M high channel]; [Polarity: Vertical]

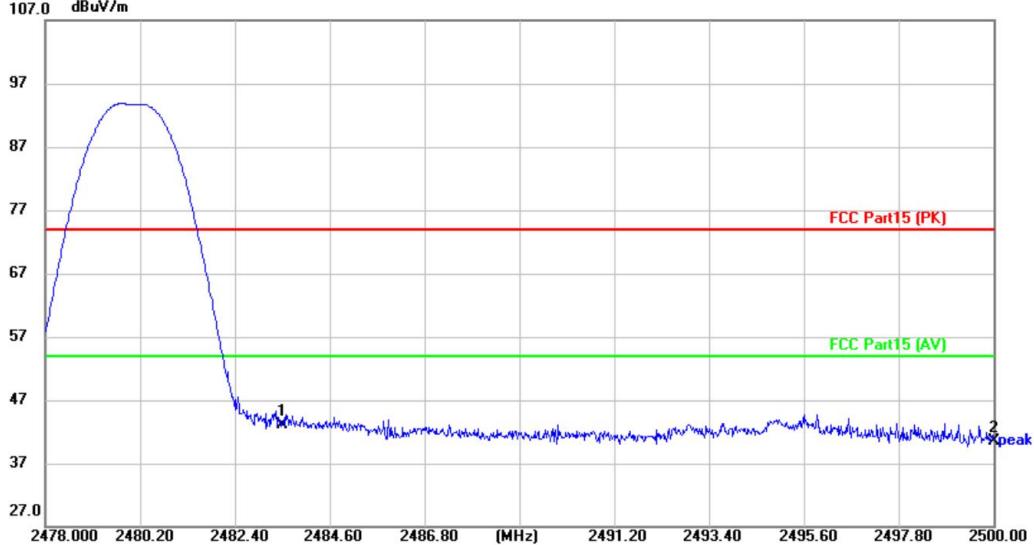
Radiated Emission Measurement

Project No.: RE

Data :#28

2022/9/18

10:59:42



Site

Polarization: **Vertical**

Temperature: (C)

Limit: FCC Part15 (PK)

Power:

Humidity: %RH

EUT: MoerLink

M/N: AAD02

Mode: BLE 2M TX-H

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
			Level	Factor	ment		Detector	Comment
1	*	2483.500	56.98	-13.96	43.02	74.00	-30.98	peak
2		2500.000	54.42	-14.00	40.42	74.00	-33.58	peak

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

⟨Reference Only

Test Result: Pass

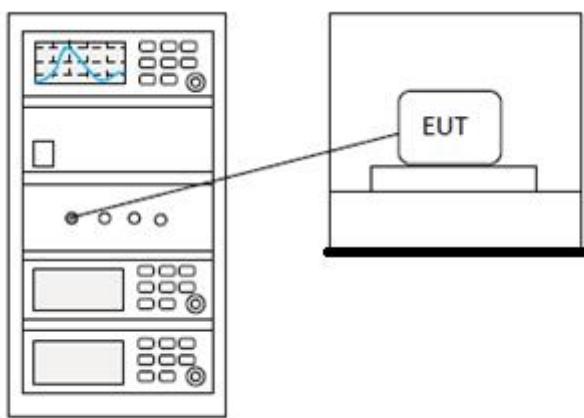
14 CONDUCTED SPURIOUS EMISSIONS

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

14.1 LIMITS

Limit:	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)).
---------------	--

14.2 BLOCK DIAGRAM OF TEST SETUP



14.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

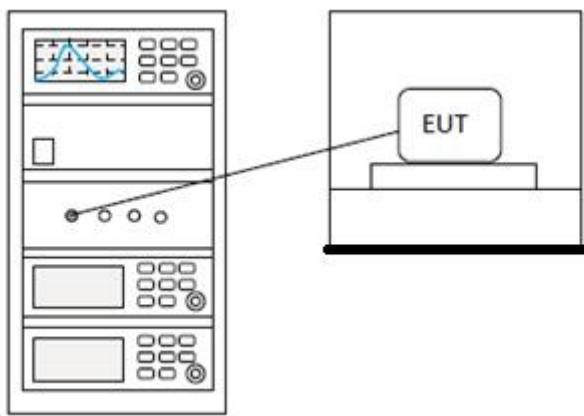
15 POWER SPECTRUM DENSITY

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%

15.1 LIMITS

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

15.2 BLOCK DIAGRAM OF TEST SETUP



15.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

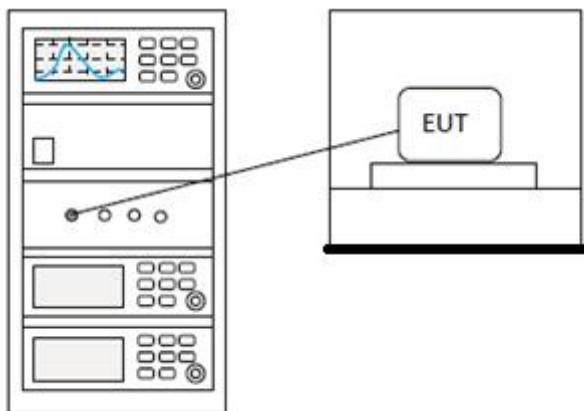
16 CONDUCTED PEAK OUTPUT POWER

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.5
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25 °C
Humidity	60%

16.1 LIMITS

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq$ hopping channels < 50
	1 for digital modulation
2400-2483.5	1 for ≥ 75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

16.2 BLOCK DIAGRAM OF TEST SETUP



16.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

17 ANTENNA REQUIREMENT

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	N/A

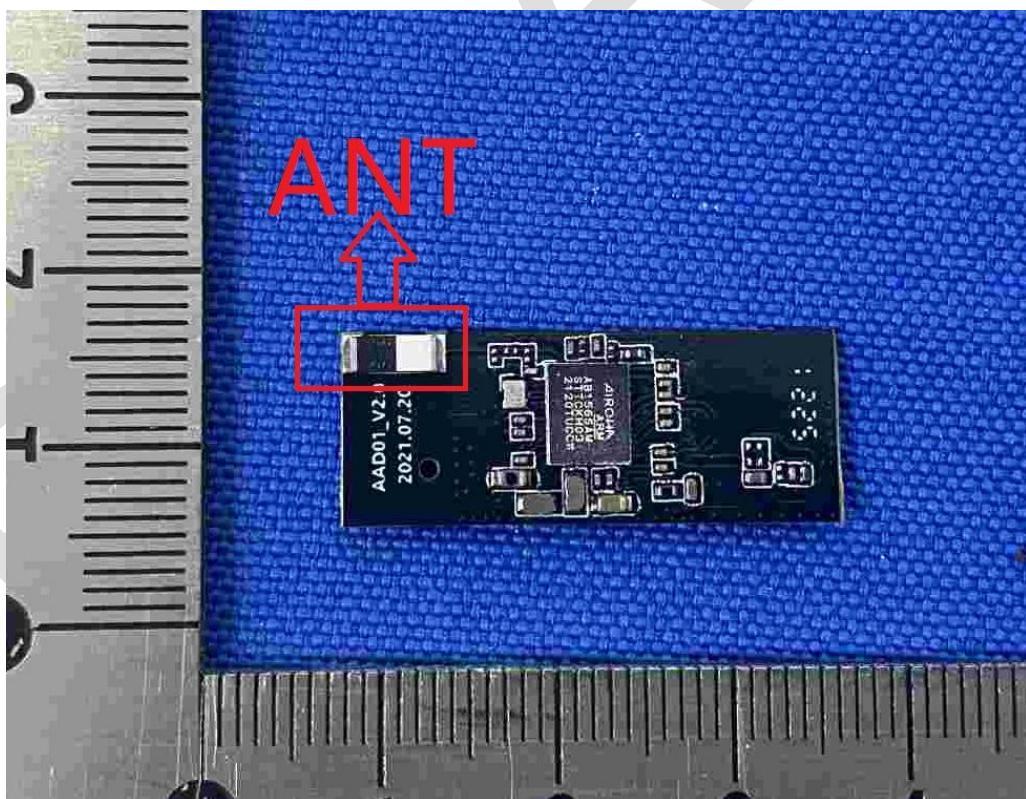
17.1 CONCLUSION

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 1.01dBi.



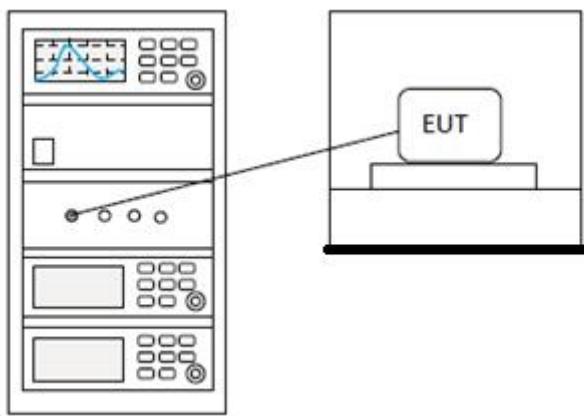
18 MINIMUM 6DB BANDWIDTH

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 11.8.1
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25 °C
Humidity	60%

18.1 LIMITS

Limit: ≥ 500 kHz

18.2 BLOCK DIAGRAM OF TEST SETUP



18.3 TEST DATA

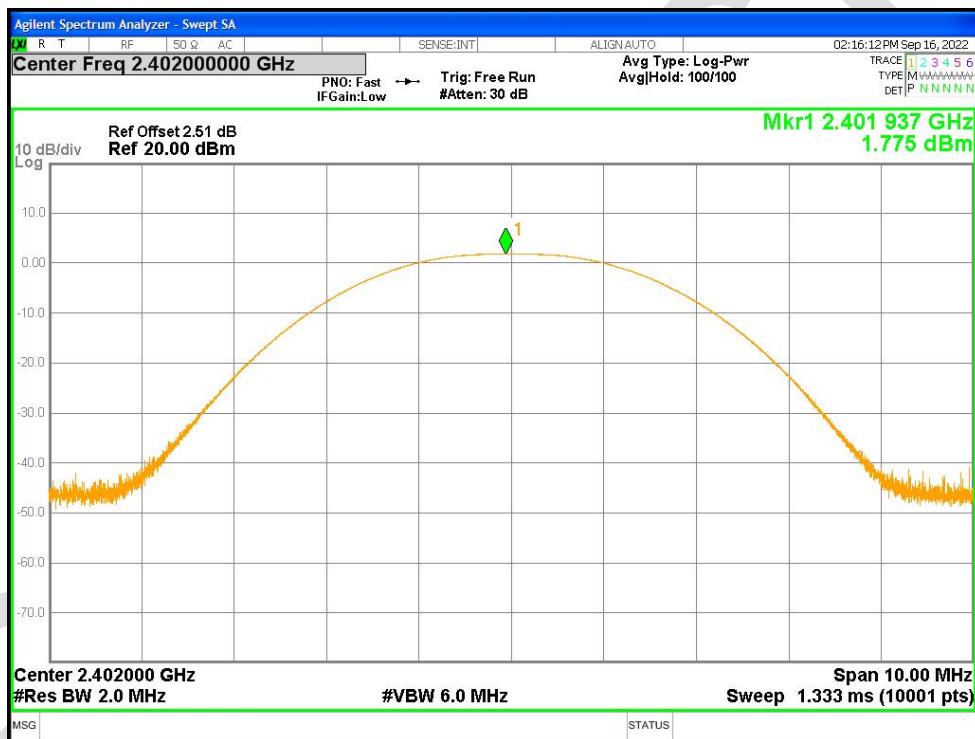
Pass: Please Refer To Appendix: Appendix1 For Details

19 APPENDIX

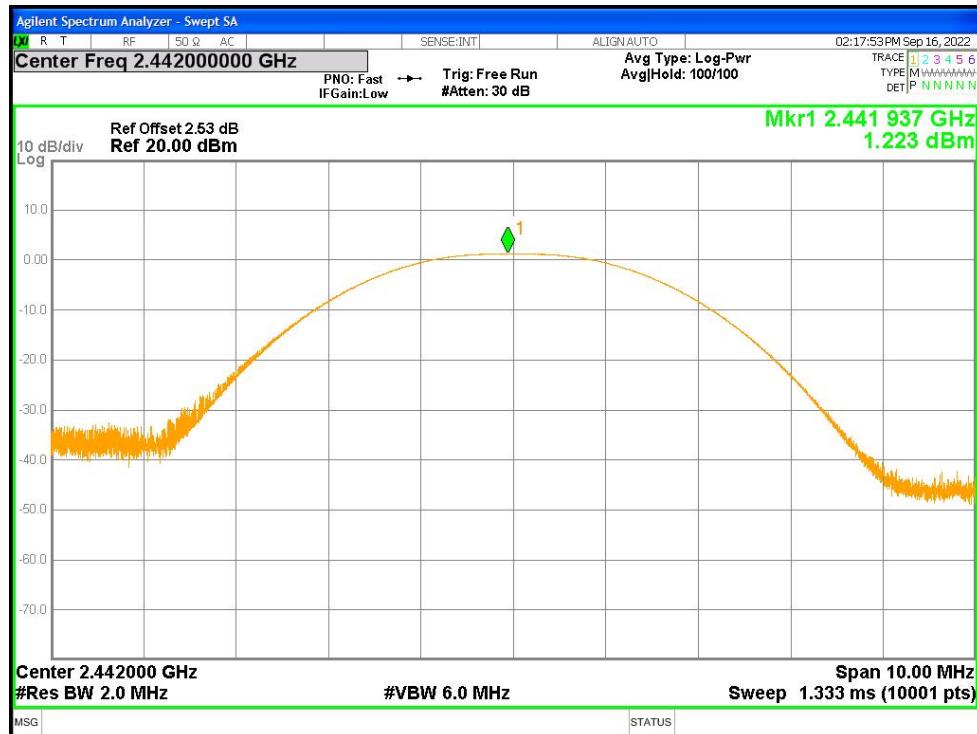
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	1.775	30	Pass
NVNT	BLE 1M	2442	Ant1	1.223	30	Pass
NVNT	BLE 1M	2480	Ant1	0.395	30	Pass
NVNT	BLE 2M	2402	Ant1	1.692	30	Pass
NVNT	BLE 2M	2442	Ant1	1.404	30	Pass
NVNT	BLE 2M	2480	Ant1	0.734	30	Pass

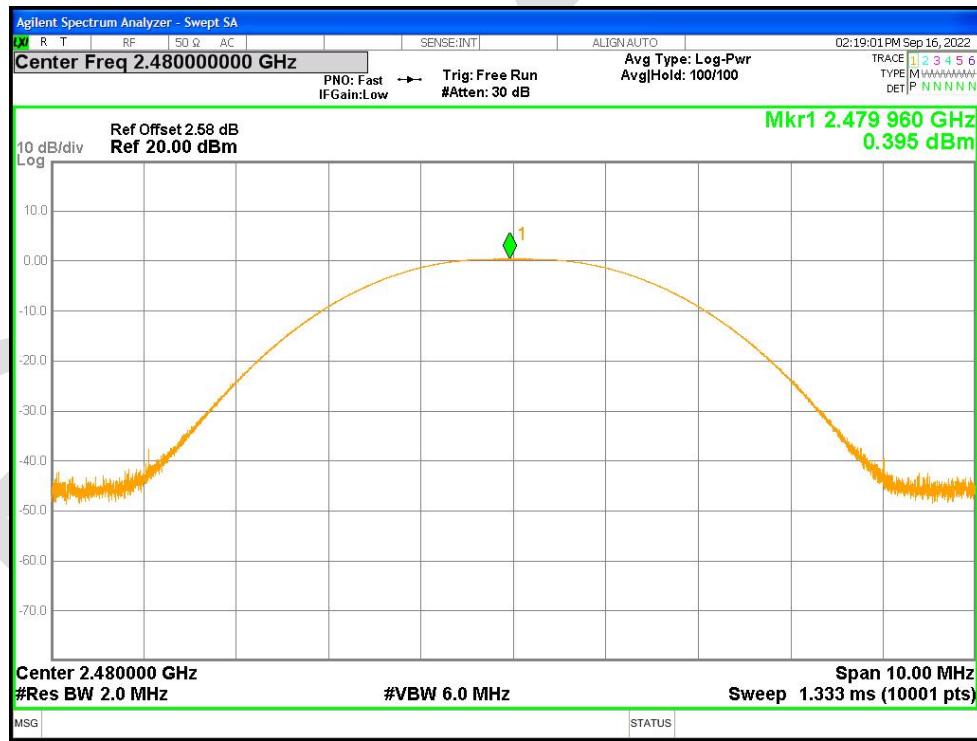
Power NVNT BLE 1M 2402MHz Ant1



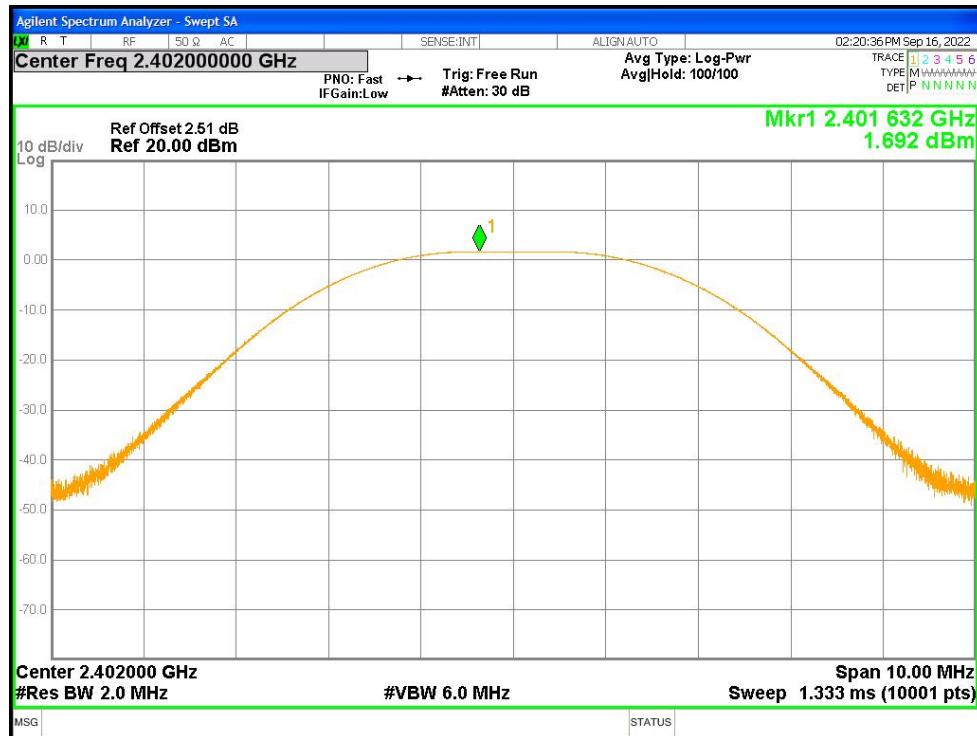
Power NVNT BLE 1M 2442MHz Ant1



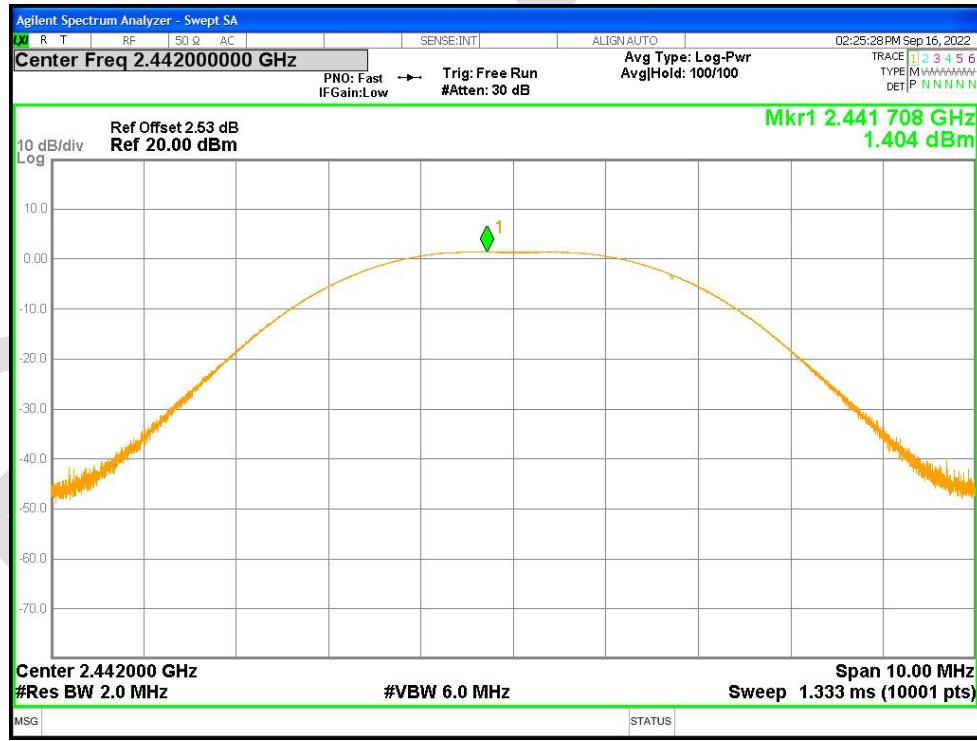
Power NVNT BLE 1M 2480MHz Ant1



Power NVNT BLE 2M 2402MHz Ant1



Power NVNT BLE 2M 2442MHz Ant1

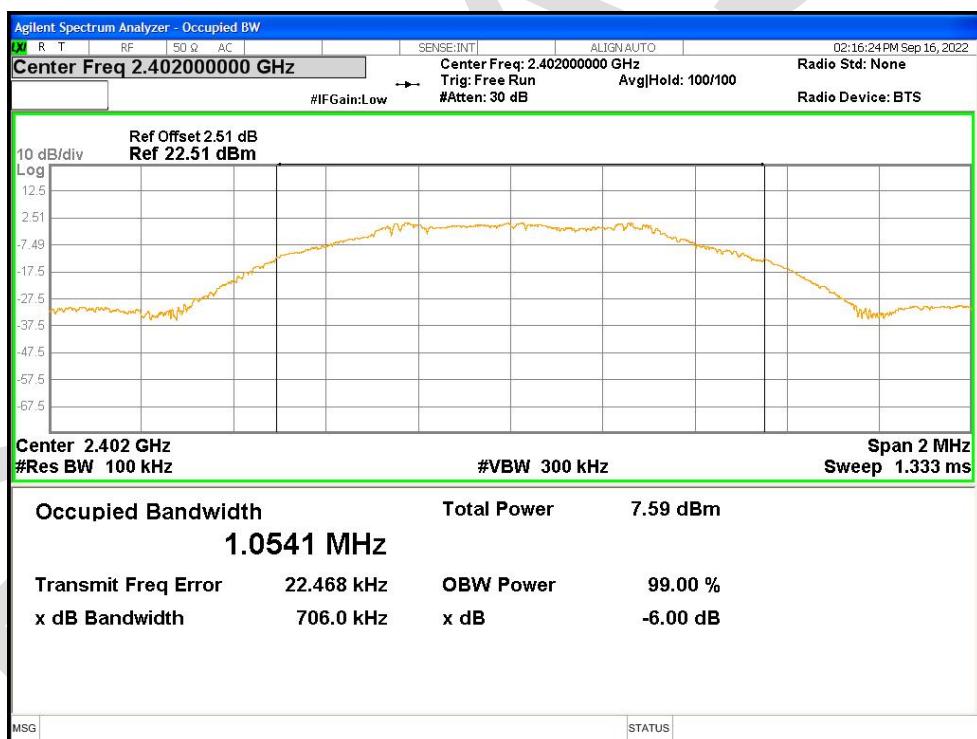


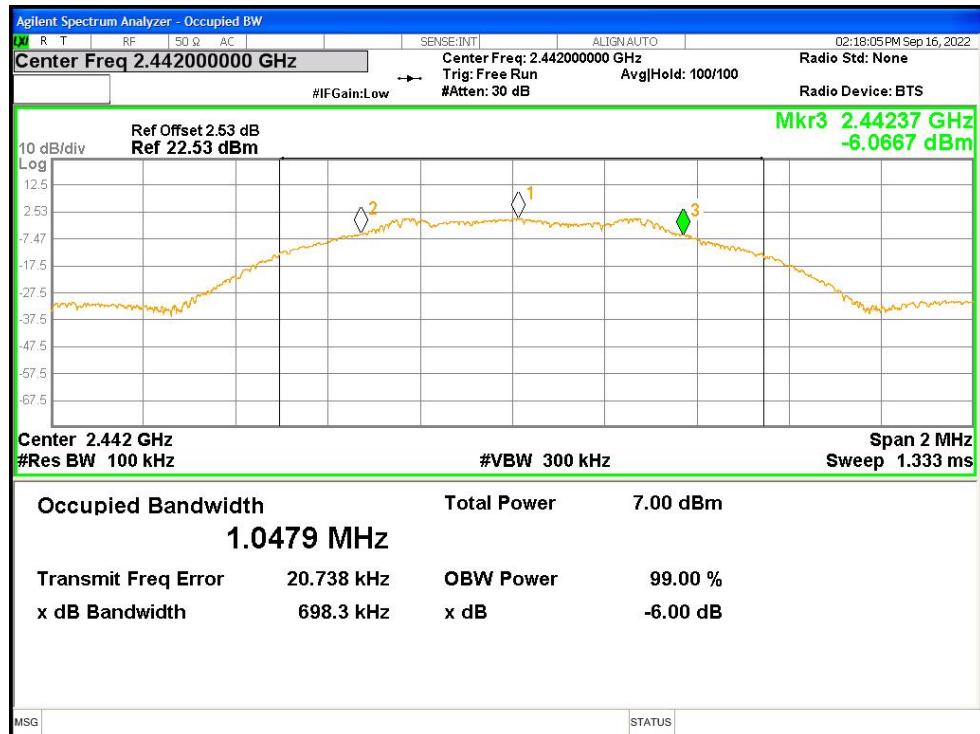
Power NVNT BLE 2M 2480MHz Ant1



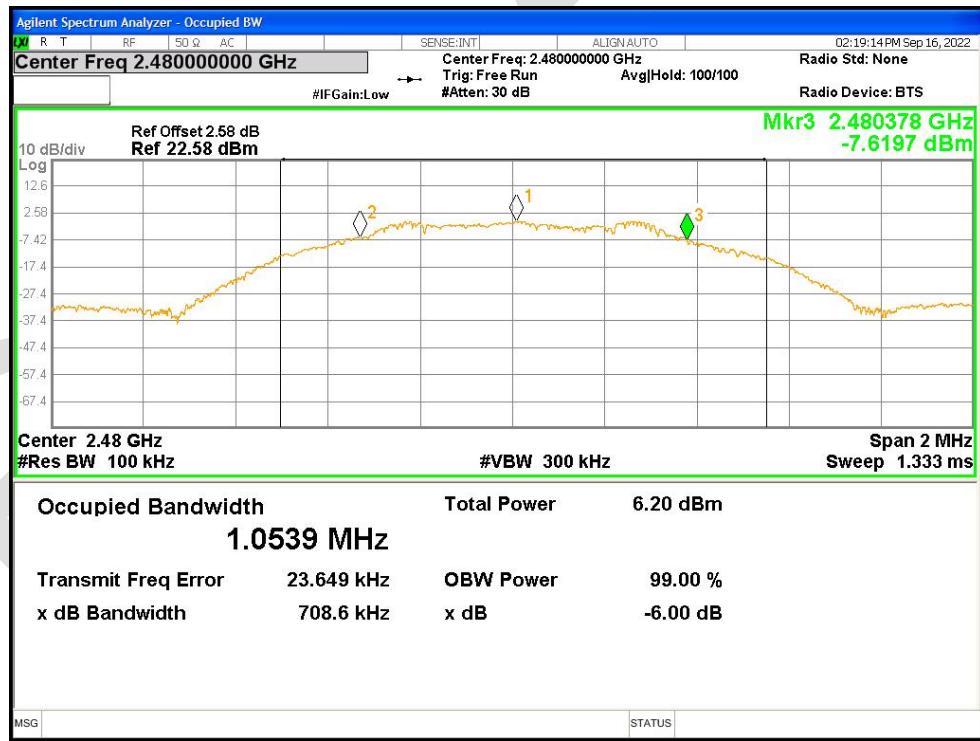
-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.706	0.5	Pass
NVNT	BLE 1M	2442	Ant1	0.698	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.709	0.5	Pass
NVNT	BLE 2M	2402	Ant1	1.244	0.5	Pass
NVNT	BLE 2M	2442	Ant1	1.221	0.5	Pass
NVNT	BLE 2M	2480	Ant1	1.232	0.5	Pass

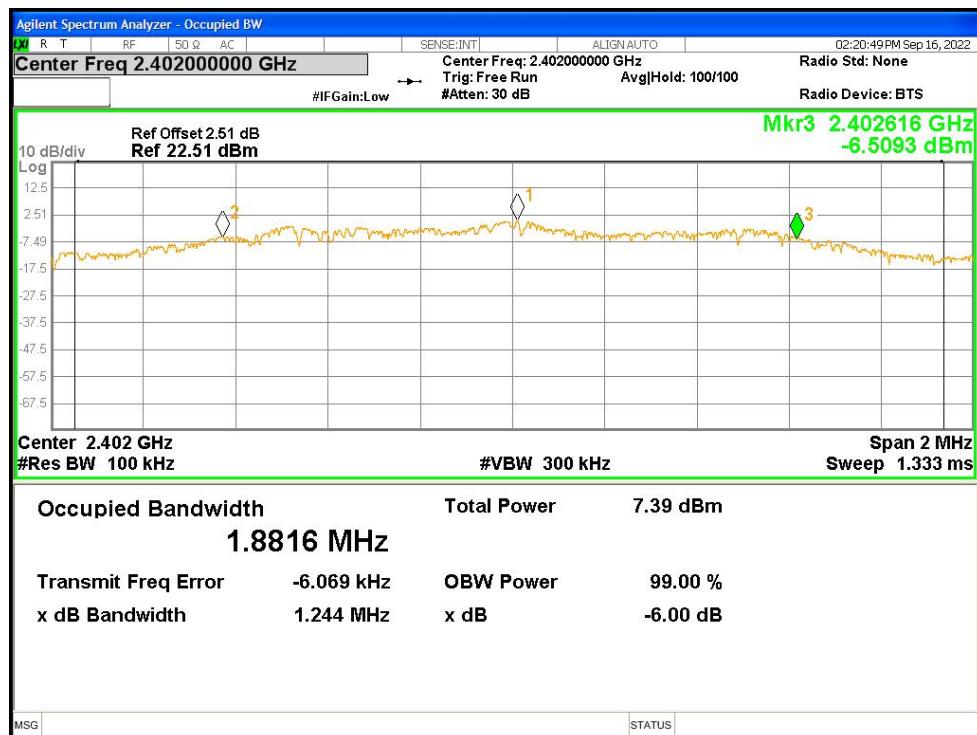
-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1

-6dB Bandwidth NVNT BLE 1M 2442MHz Ant1



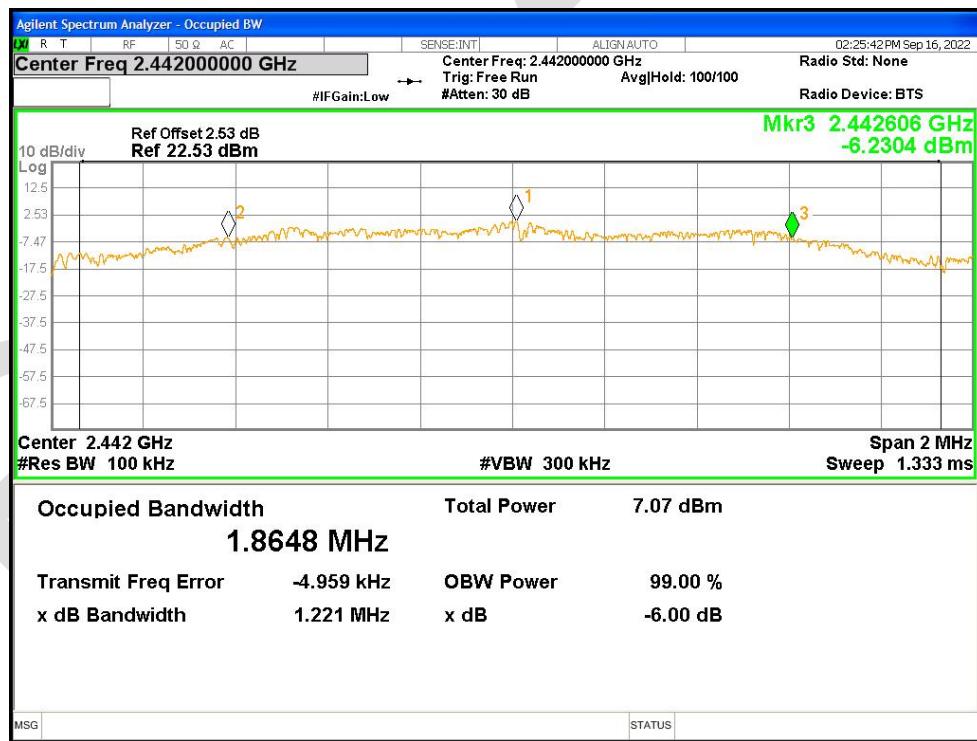
-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1



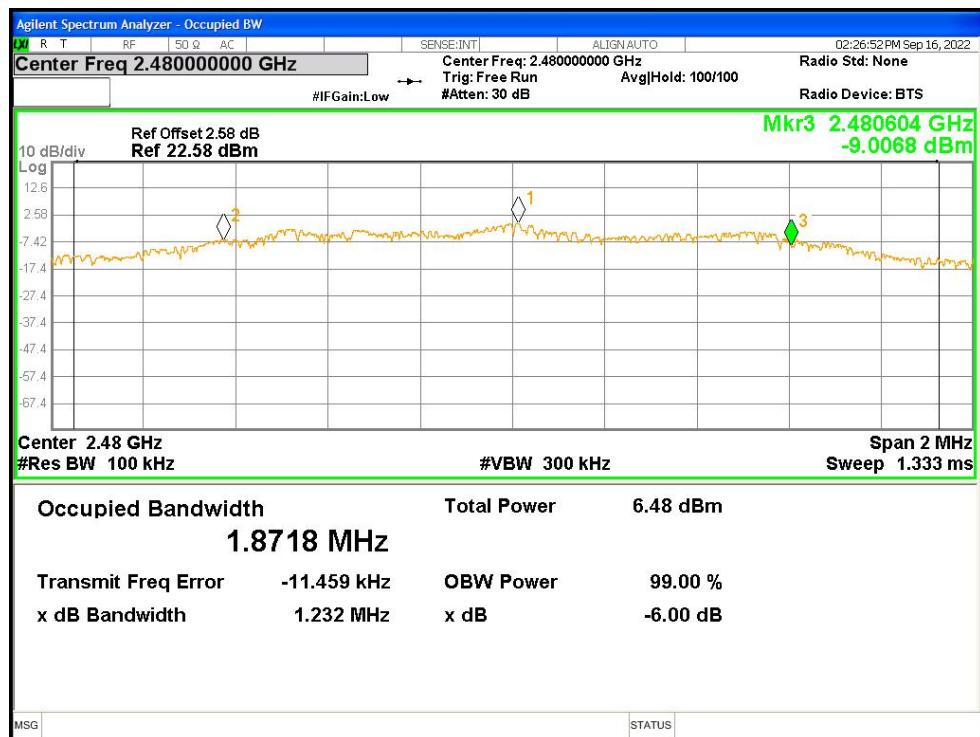
-6dB Bandwidth NVNT BLE 2M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2442MHz Ant1

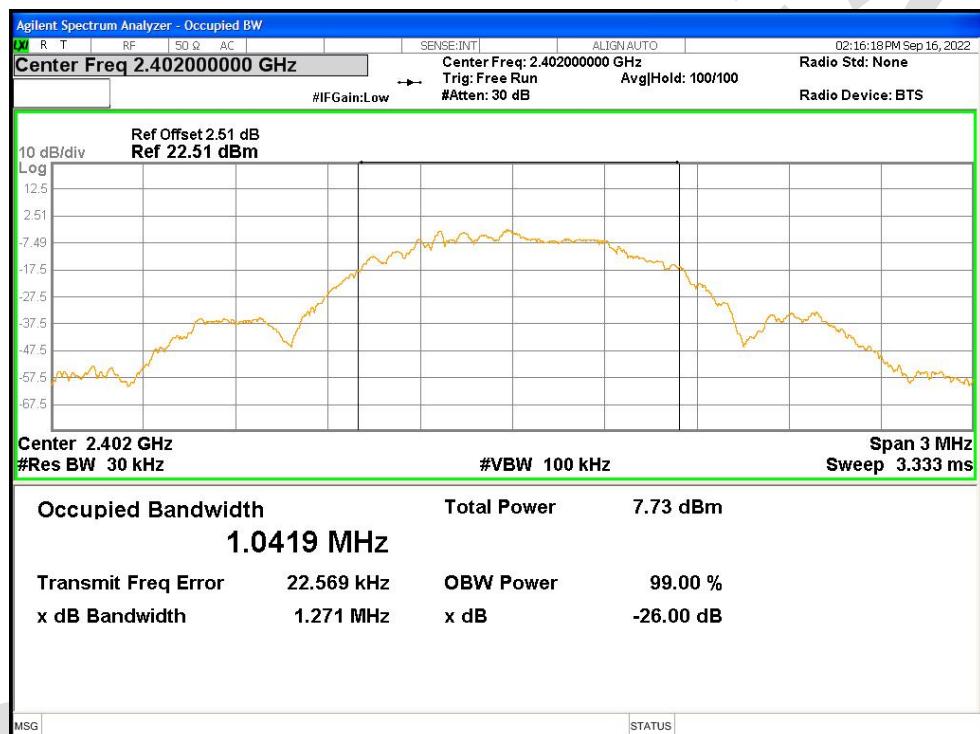


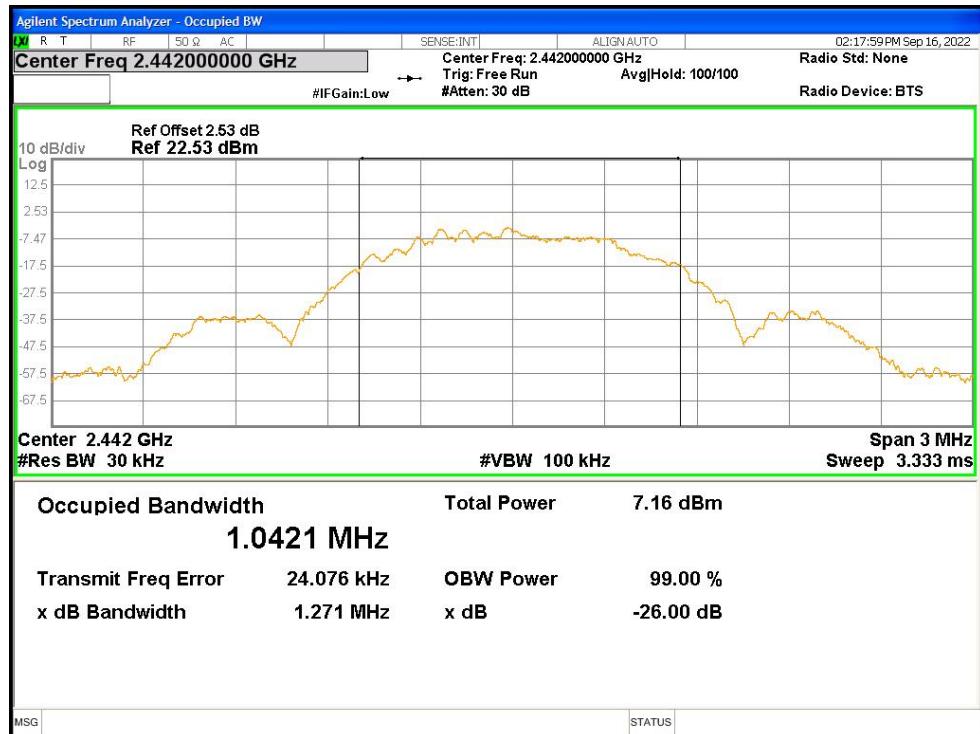
-6dB Bandwidth NVNT BLE 2M 2480MHz Ant1



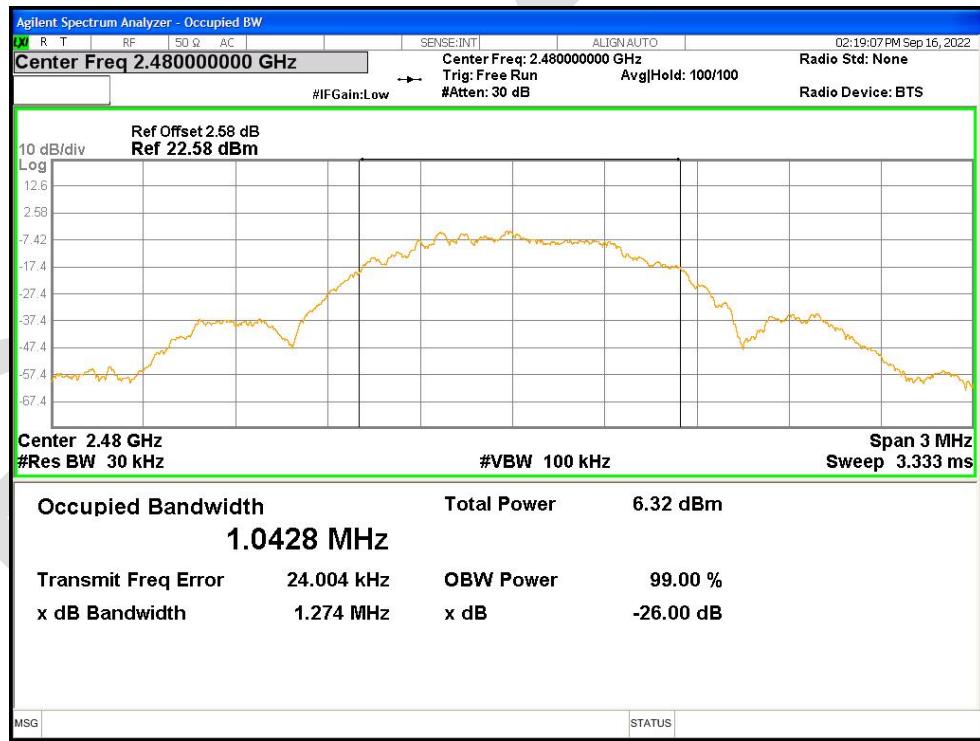
Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1M	2402	Ant1	1.0419
NVNT	BLE 1M	2442	Ant1	1.0421
NVNT	BLE 1M	2480	Ant1	1.0428
NVNT	BLE 2M	2402	Ant1	2.0541
NVNT	BLE 2M	2442	Ant1	2.0519
NVNT	BLE 2M	2480	Ant1	2.0551

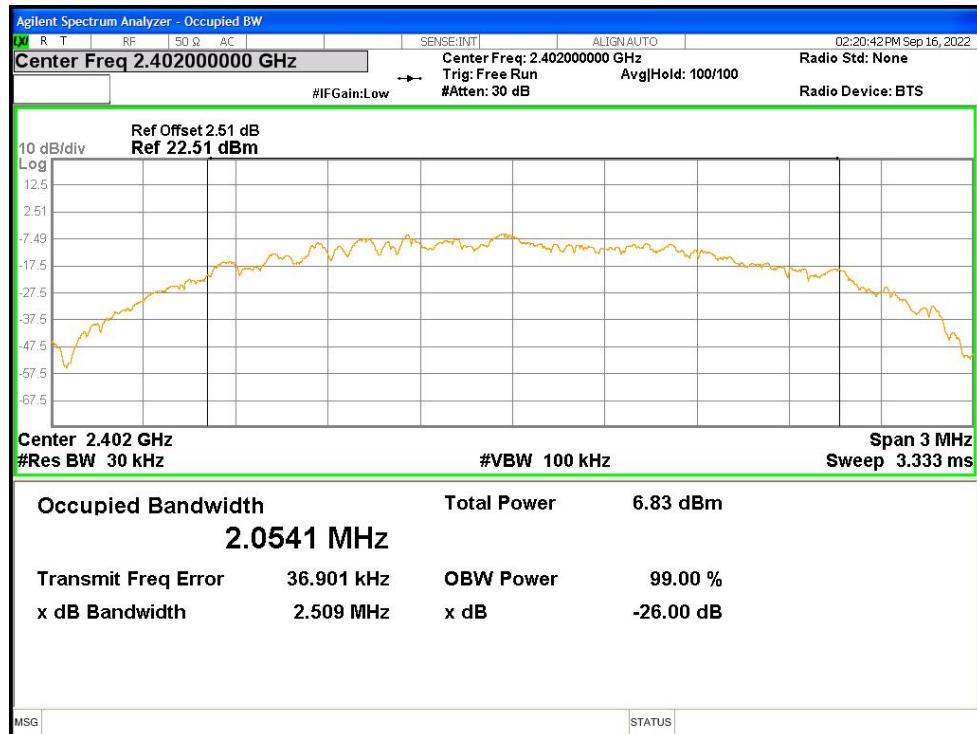
OBW NVNT BLE 1M 2402MHz Ant1

OBW NVNT BLE 1M 2442MHz Ant1



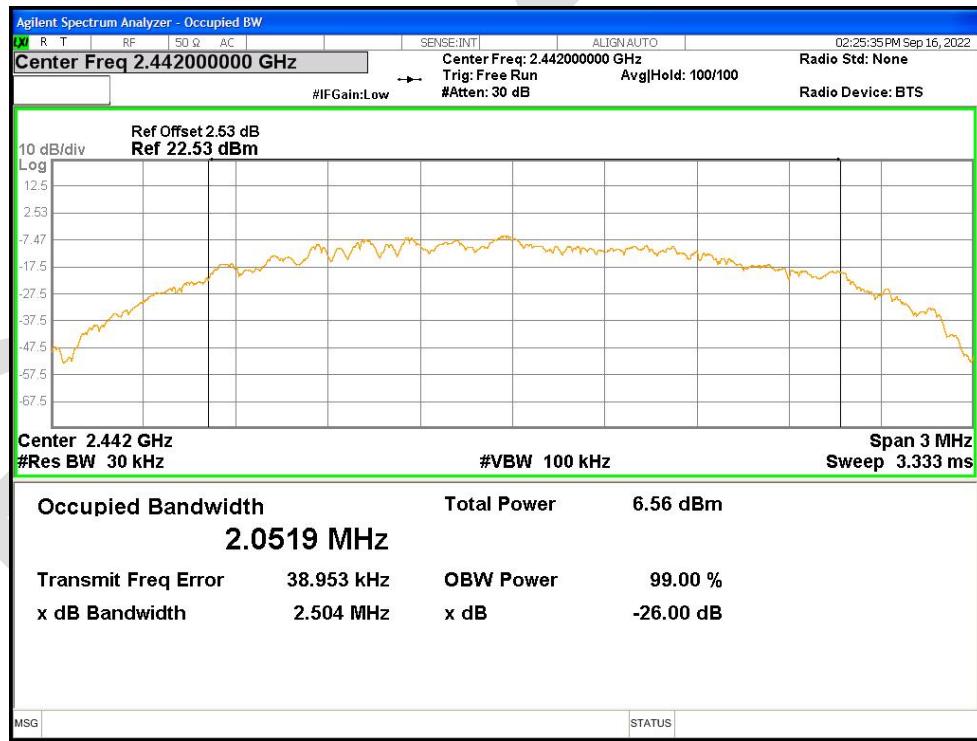
OBW NVNT BLE 1M 2480MHz Ant1



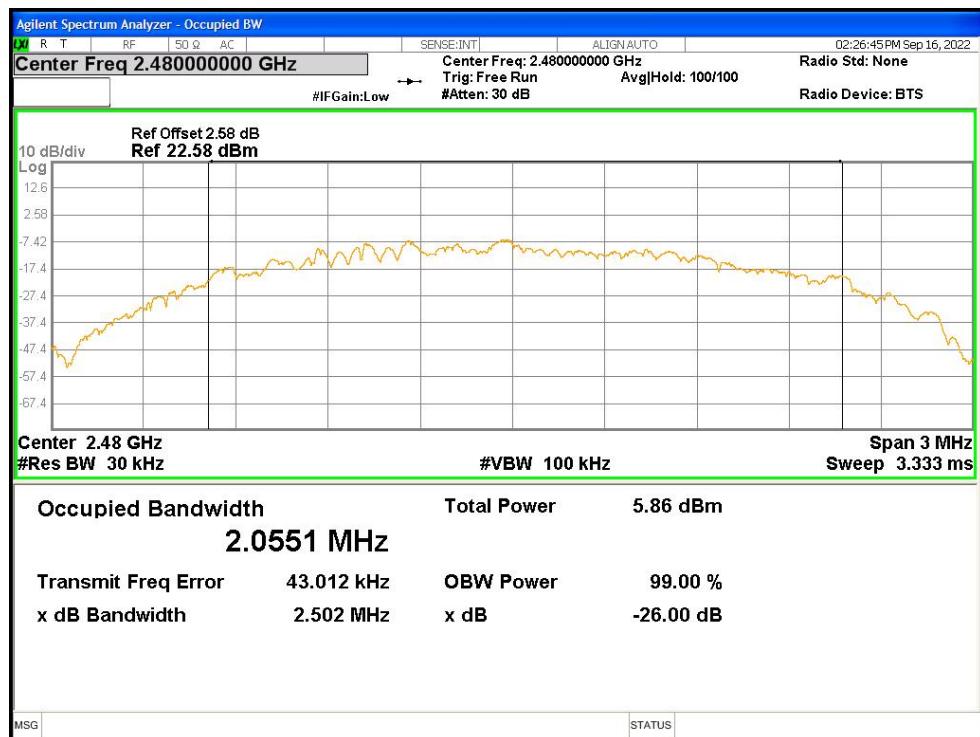
OBW NVNT BLE 2M 2402MHz Ant1



OBW NVNT BLE 2M 2442MHz Ant1

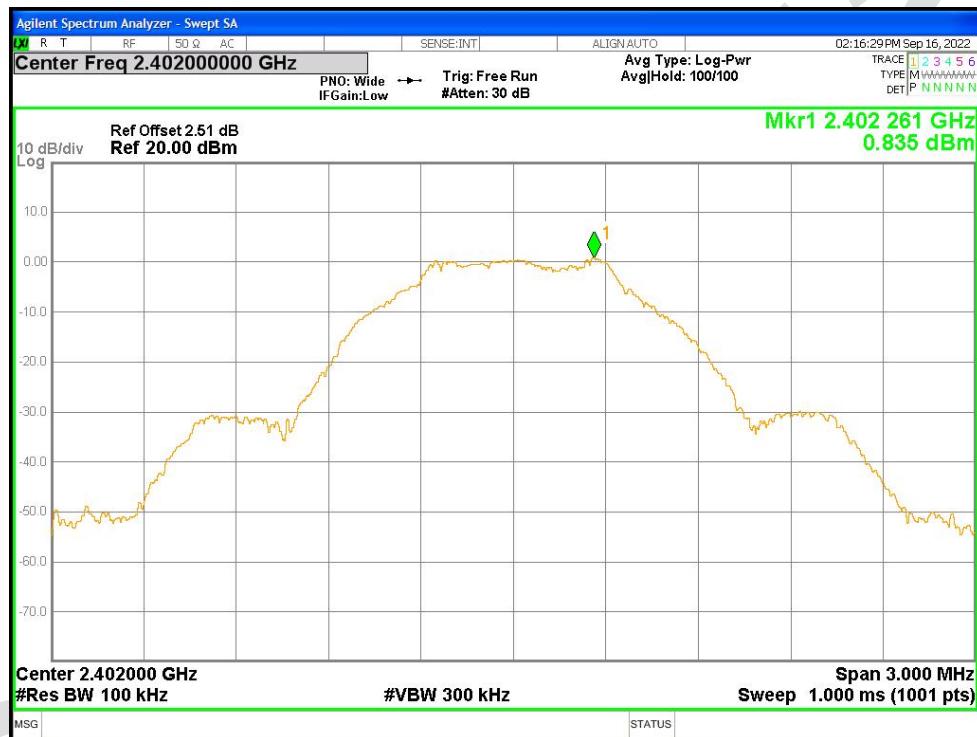


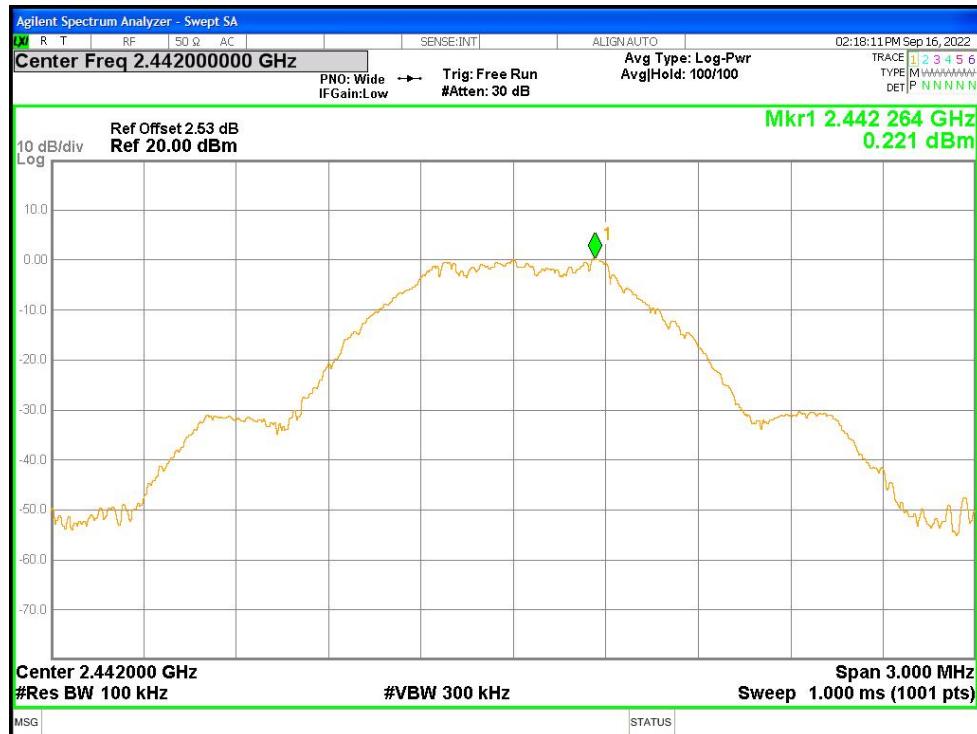
OBW NVNT BLE 2M 2480MHz Ant1



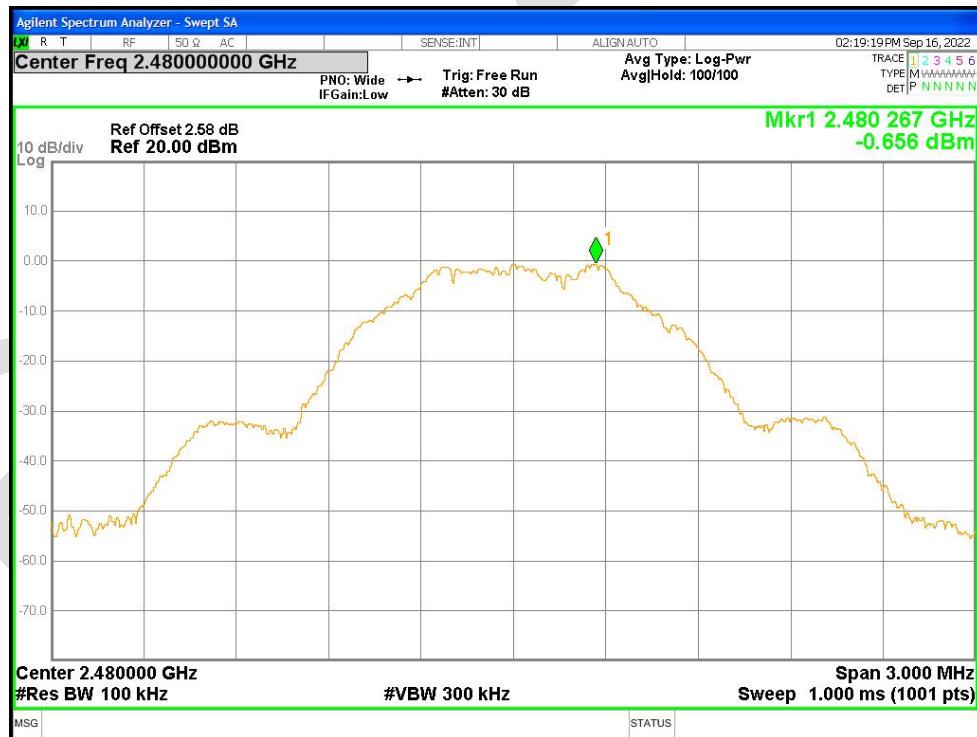
Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	0.835	8	Pass
NVNT	BLE 1M	2442	Ant1	0.221	8	Pass
NVNT	BLE 1M	2480	Ant1	-0.656	8	Pass
NVNT	BLE 2M	2402	Ant1	0.078	8	Pass
NVNT	BLE 2M	2442	Ant1	0.079	8	Pass
NVNT	BLE 2M	2480	Ant1	-0.494	8	Pass

PSD NVNT BLE 1M 2402MHz Ant1

PSD NVNT BLE 1M 2442MHz Ant1



PSD NVNT BLE 1M 2480MHz Ant1



PSD NVNT BLE 2M 2402MHz Ant1