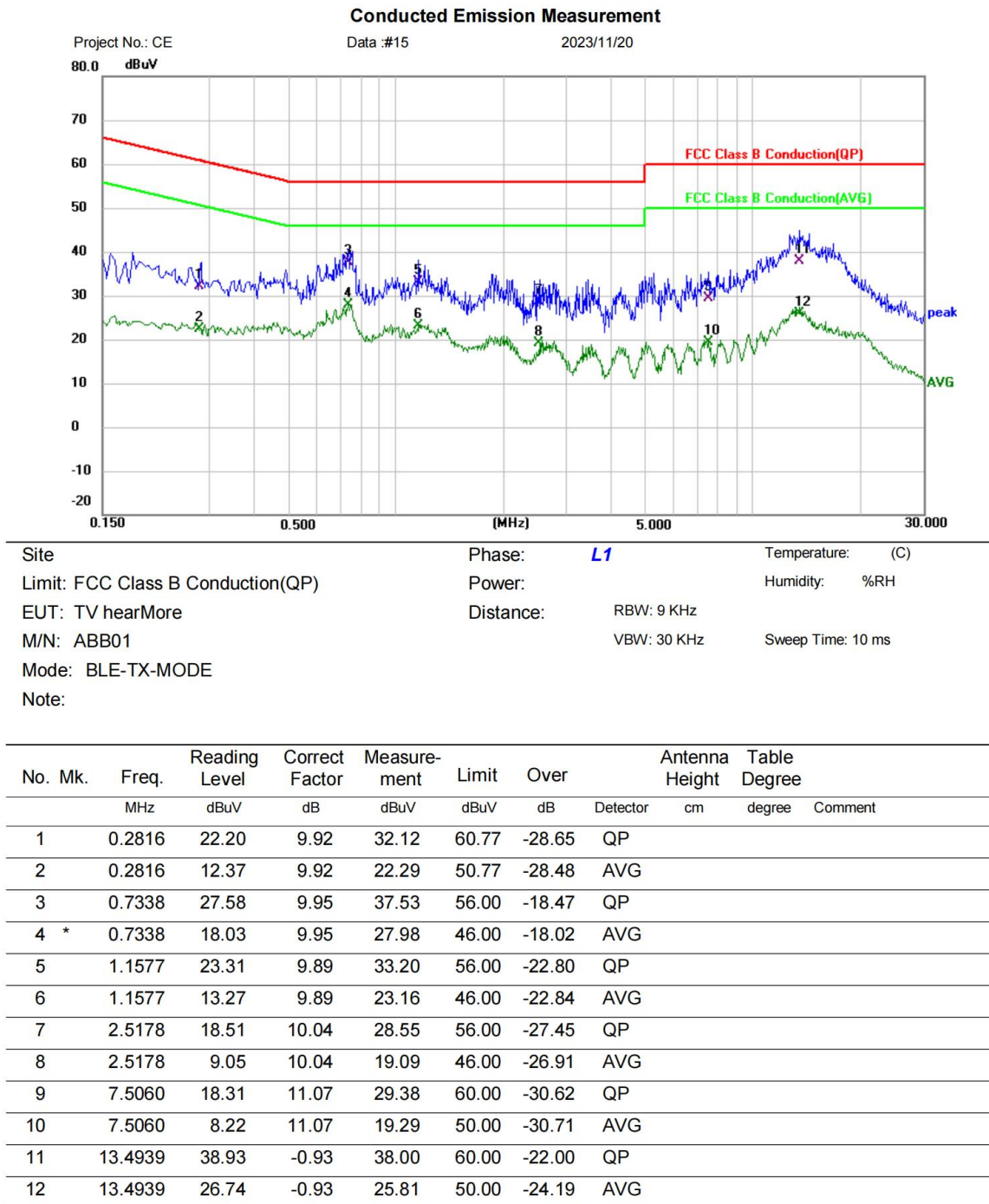


15.4 TEST DATA

[TestMode: TX mode]; [Line: Line];[Power:120V/60Hz]



Test Result: Pass

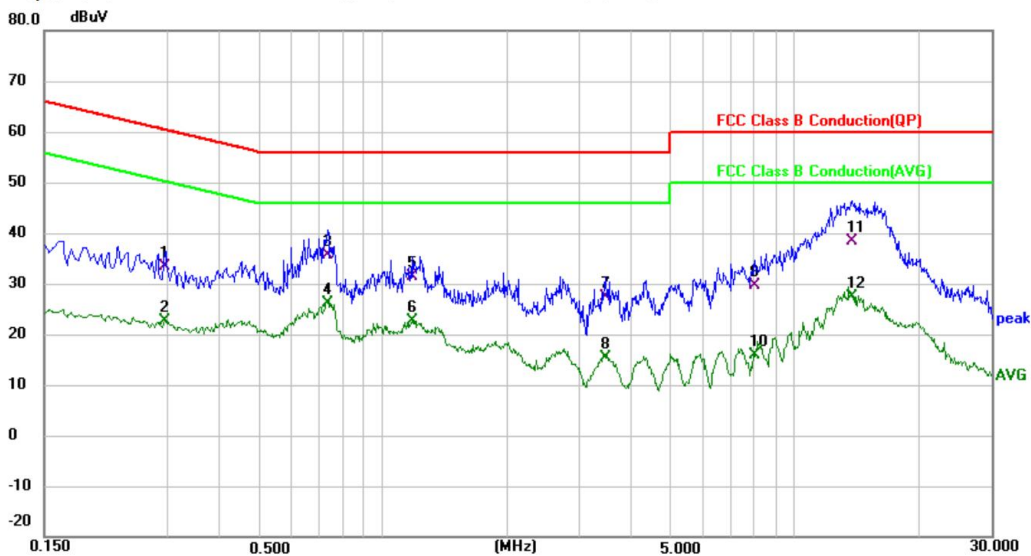
[TestMode: TX mdoe]; [Line: Nutral];[Power:120V/60Hz]

Conducted Emission Measurement

Project No.: CE

Data :#16

2023/11/20



Site	Phase: N	Temperature: (C)
Limit: FCC Class B Conduction(QP)	Power:	Humidity: %RH
EUT: TV hearMore	Distance:	RBW: 9 KHz
M/N: ABB01		VBW: 30 KHz
Mode: BLE-TX-MODE		Sweep Time: 10 ms
Note:		

No. Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
	MHz	dBuV	dB	dBuV	dBuV	dB	cm	degree	Comment
1	0.2938	23.35	9.94	33.29	60.42	-27.13	QP		
2	0.2938	12.66	9.94	22.60	50.42	-27.82	AVG		
3	0.7338	25.80	9.95	35.75	56.00	-20.25	QP		
4 *	0.7338	16.28	9.95	26.23	46.00	-19.77	AVG		
5	1.1737	21.57	9.89	31.46	56.00	-24.54	QP		
6	1.1737	12.69	9.89	22.58	46.00	-23.42	AVG		
7	3.4580	17.27	10.05	27.32	56.00	-28.68	QP		
8	3.4580	5.24	10.05	15.29	46.00	-30.71	AVG		
9	8.0180	18.41	11.15	29.56	60.00	-30.44	QP		
10	8.0180	4.81	11.15	15.96	50.00	-34.04	AVG		
11	13.7660	39.50	-1.11	38.39	60.00	-21.61	QP		
12	13.7660	28.38	-1.11	27.27	50.00	-22.73	AVG		

Test Result: Pass

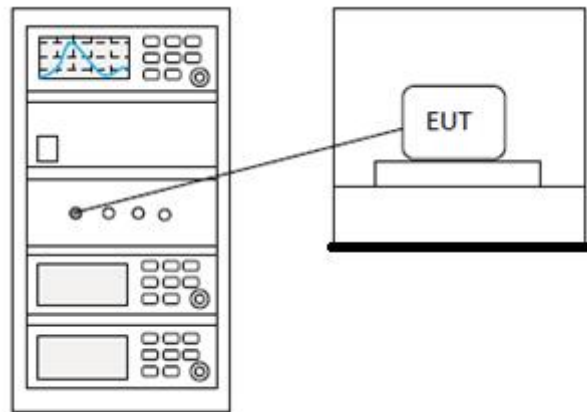
16 CONDUCTED BAND EDGES MEASUREMENT

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.8 & Section 11.13.3.2
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	William
Temperature	25°C
Humidity	60%

16.1 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)).
---------------	---

16.2 BLOCK DIAGRAM OF TEST SETUP



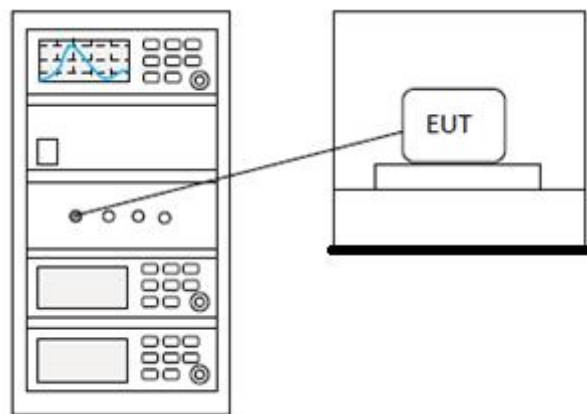
16.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

17 MINIMUM 6DB BANDWIDTH

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.7
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	William
Temperature	25°C
Humidity	60%

17.1 BLOCK DIAGRAM OF TEST SETUP



17.2 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

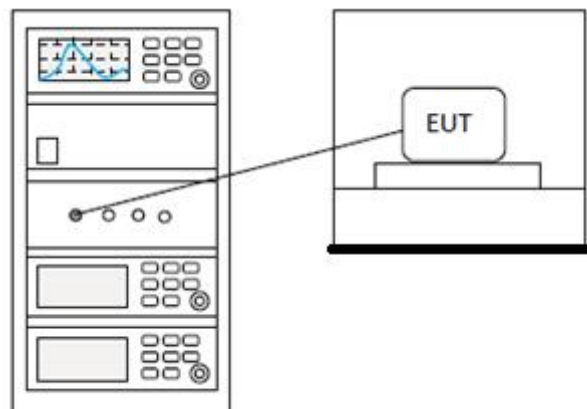
18 CONDUCTED PEAK OUTPUT POWER

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	William
Temperature	25°C
Humidity	60%

18.1 LIMITS

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥ 50 hopping channels
	0.25 for $25 \leq \text{hopping channels} < 50$
	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

18.2 BLOCK DIAGRAM OF TEST SETUP



18.3 EST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

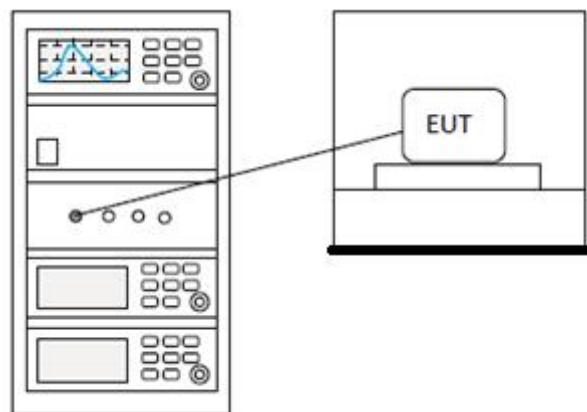
19 POWER SPECTRUM DENSITY

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	William
Temperature	25°C
Humidity	60%

19.1 LIMITS

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

19.2 BLOCK DIAGRAM OF TEST SETUP



19.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

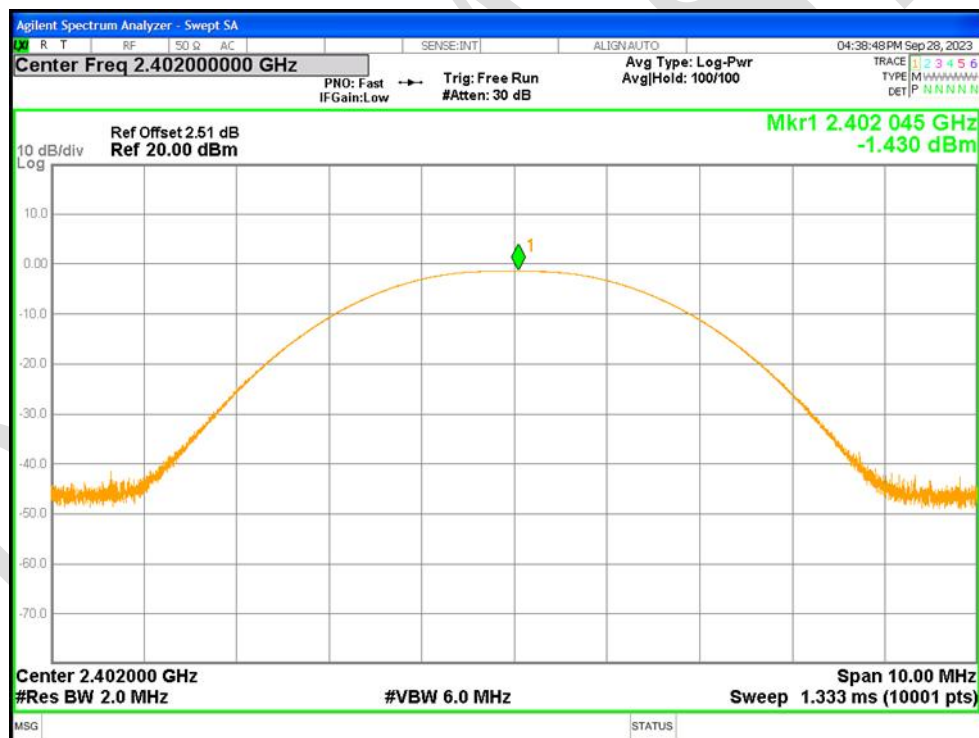
20 APPENDIX

Appendix1

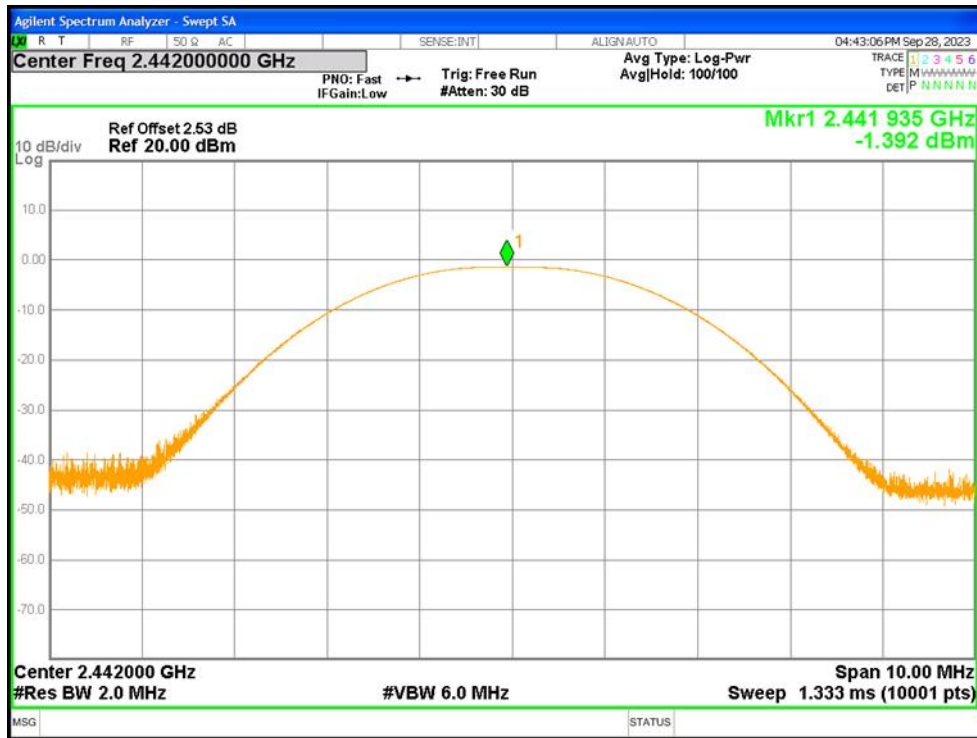
20.1 MAXIMUM CONDUCTED OUTPUT POWER

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-1.43	30	Pass
NVNT	BLE 1M	2442	Ant1	-1.392	30	Pass
NVNT	BLE 1M	2480	Ant1	-0.696	30	Pass
NVNT	BLE 2M	2402	Ant1	-1.485	30	Pass
NVNT	BLE 2M	2442	Ant1	-1.495	30	Pass
NVNT	BLE 2M	2480	Ant1	-0.749	30	Pass

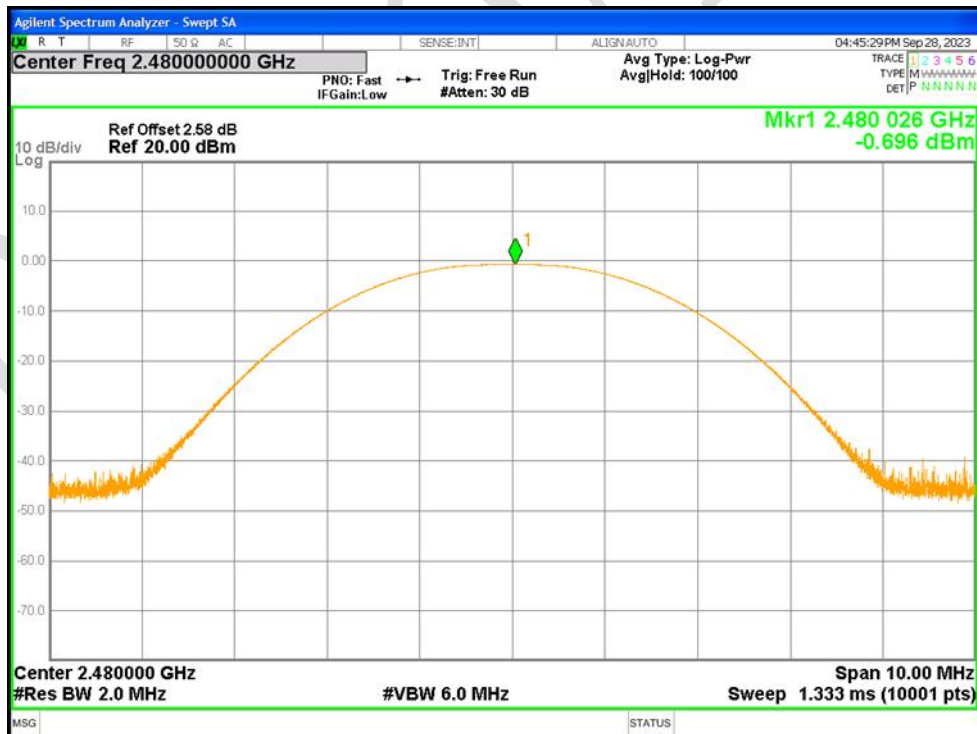
Power NVNT BLE 1M 2402MHz Ant1



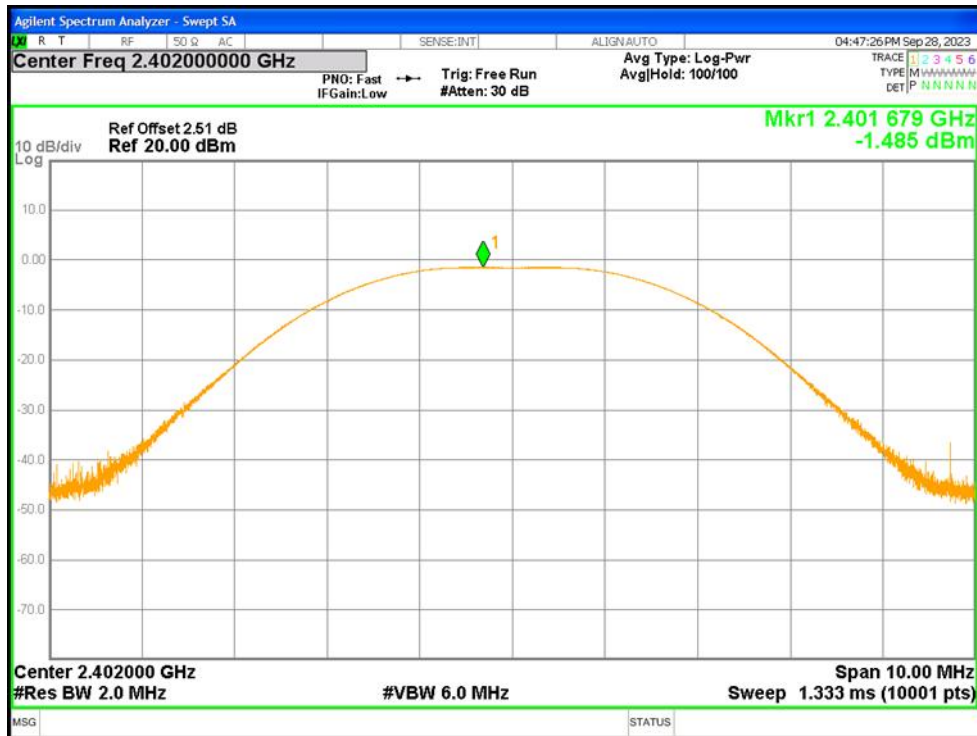
Power NVNT BLE 1M 2442MHz Ant1



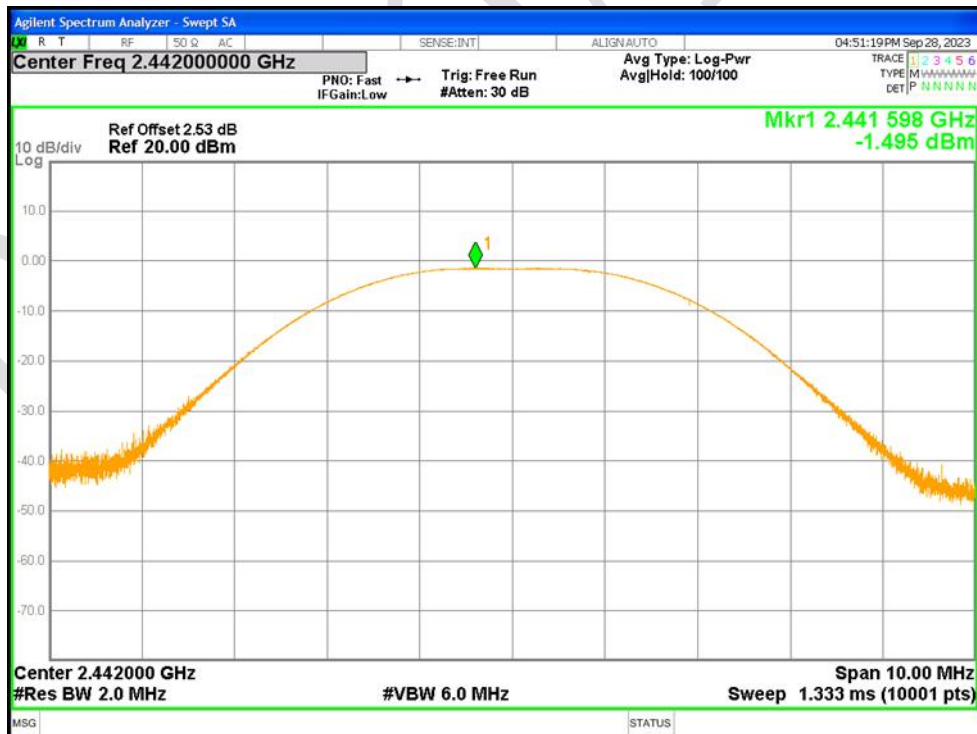
Power NVNT BLE 1M 2480MHz Ant1



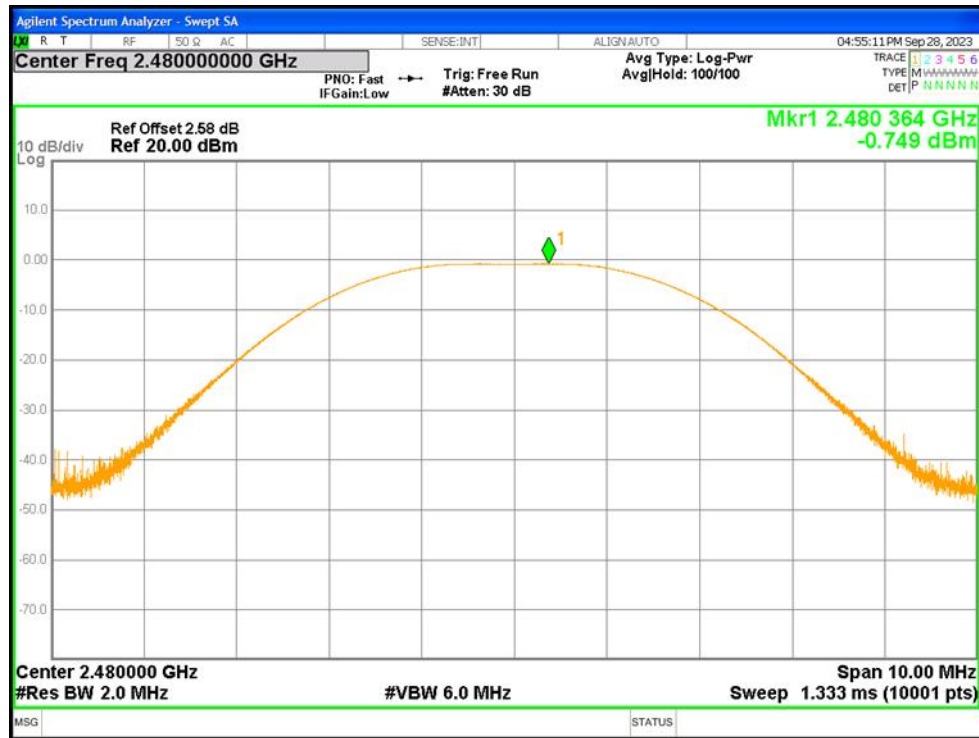
Power NVNT BLE 2M 2402MHz Ant1



Power NVNT BLE 2M 2442MHz Ant1



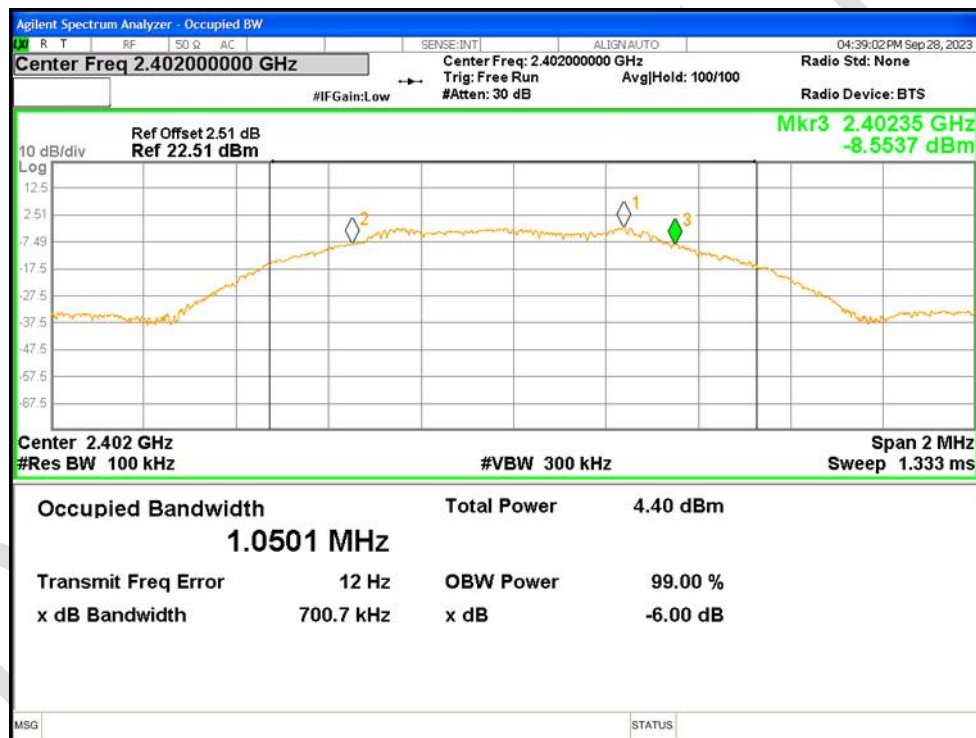
Power NVNT BLE 2M 2480MHz Ant1



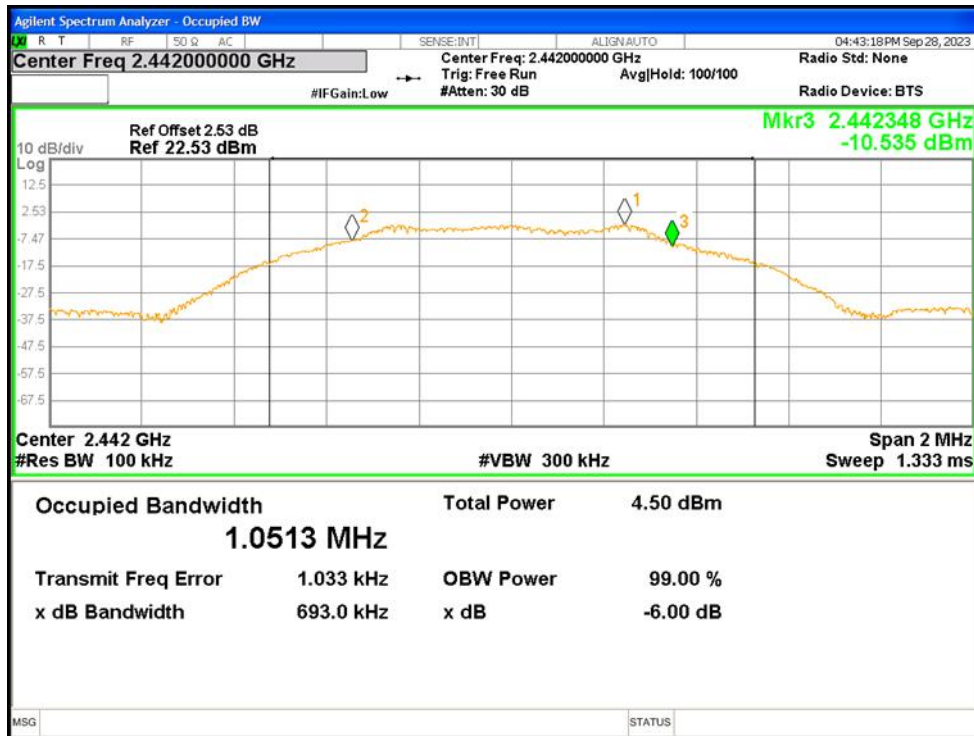
20.2 -6DB BANDWIDTH

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	Ant1	0.7007	0.5	Pass
NVNT	BLE 1M	2442	Ant1	0.693	0.5	Pass
NVNT	BLE 1M	2480	Ant1	0.7085	0.5	Pass
NVNT	BLE 2M	2402	Ant1	1.174	0.5	Pass
NVNT	BLE 2M	2442	Ant1	1.159	0.5	Pass
NVNT	BLE 2M	2480	Ant1	1.18	0.5	Pass

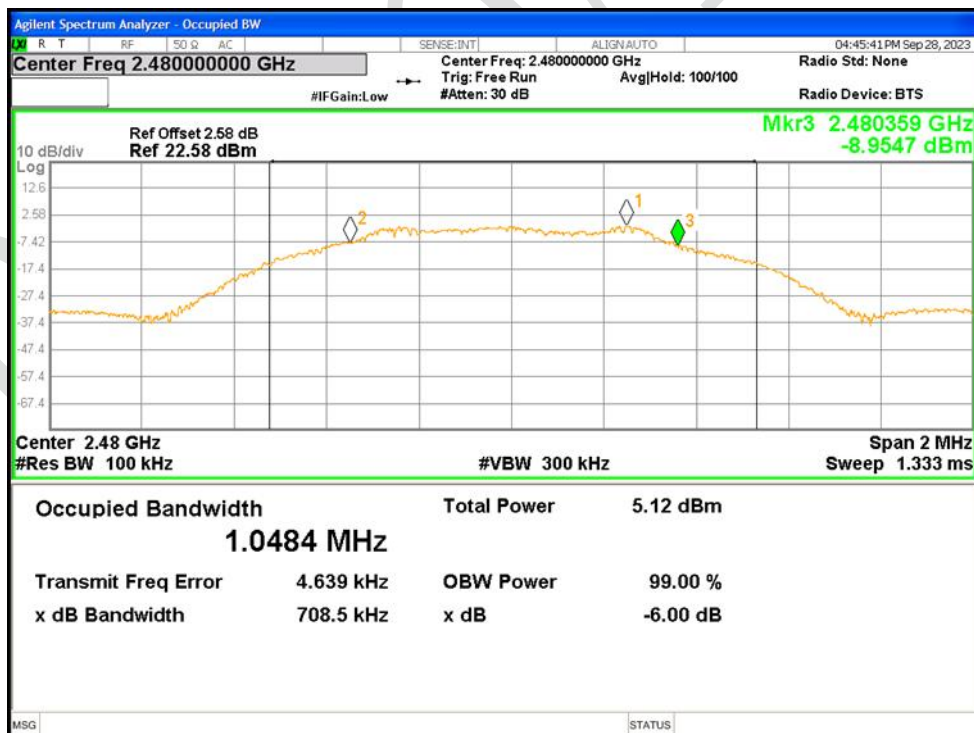
-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



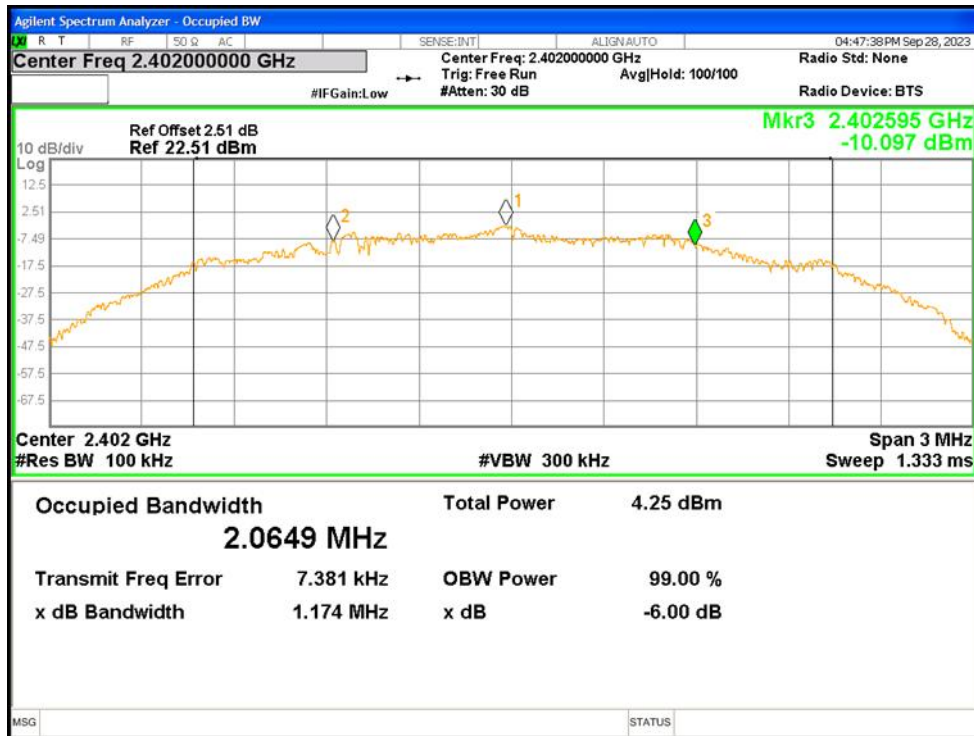
-6dB Bandwidth NVNT BLE 1M 2442MHz Ant1



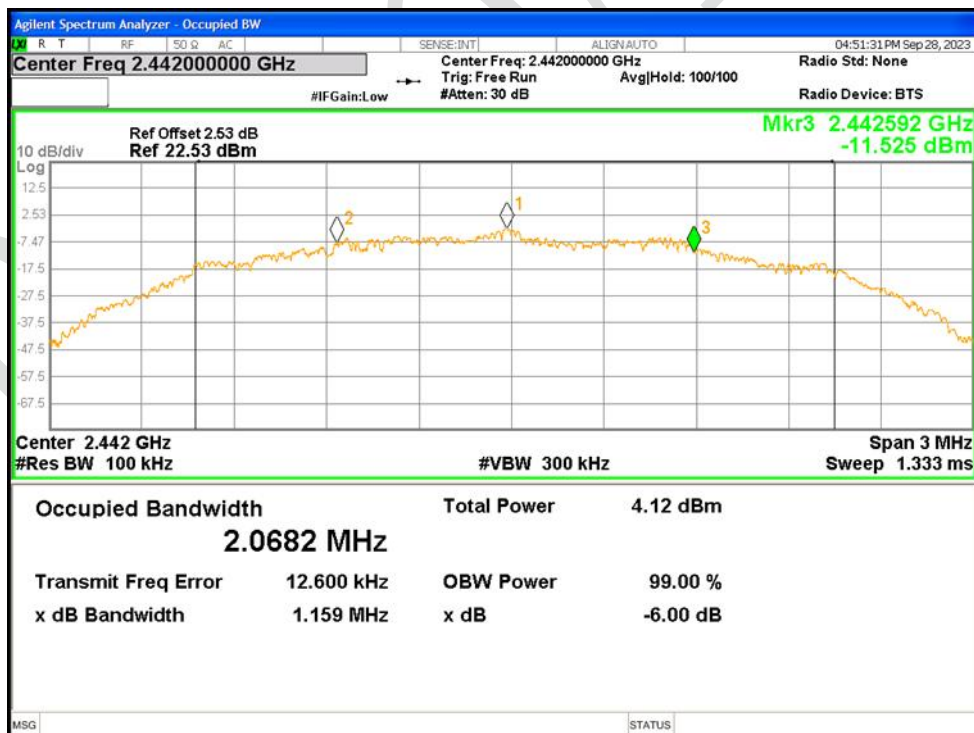
-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1



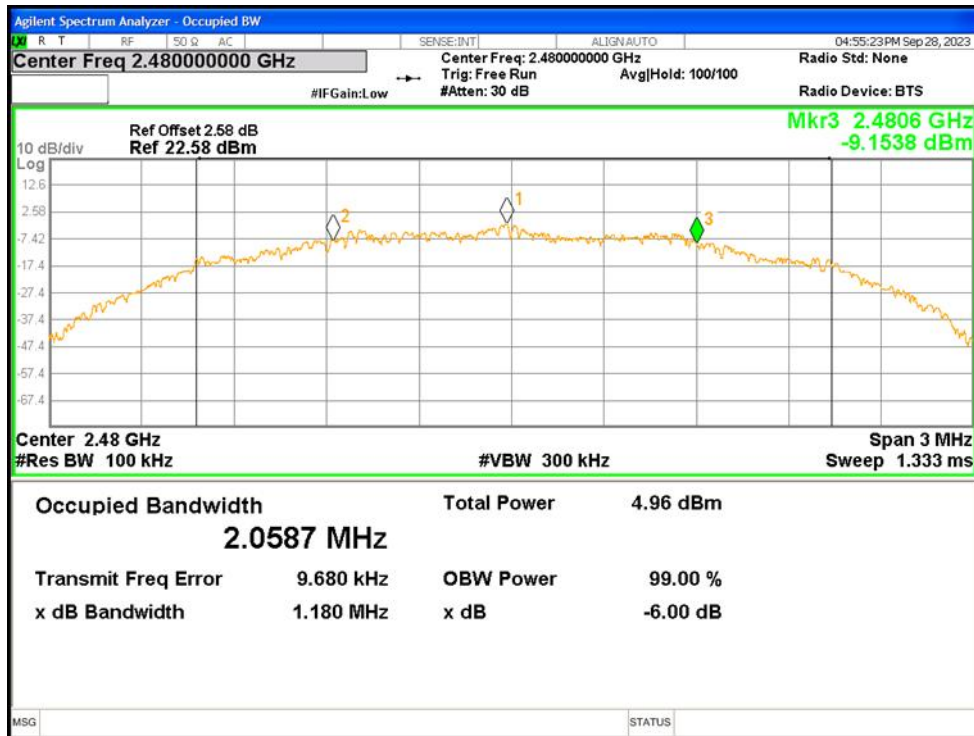
-6dB Bandwidth NVNT BLE 2M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2442MHz Ant1



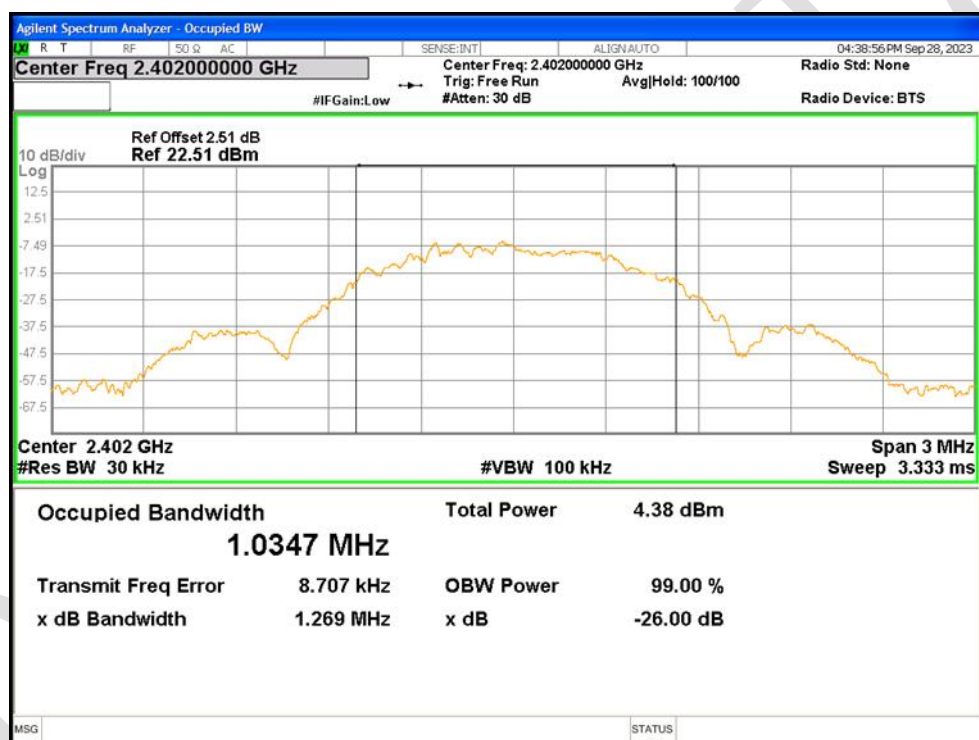
-6dB Bandwidth NVNT BLE 2M 2480MHz Ant1



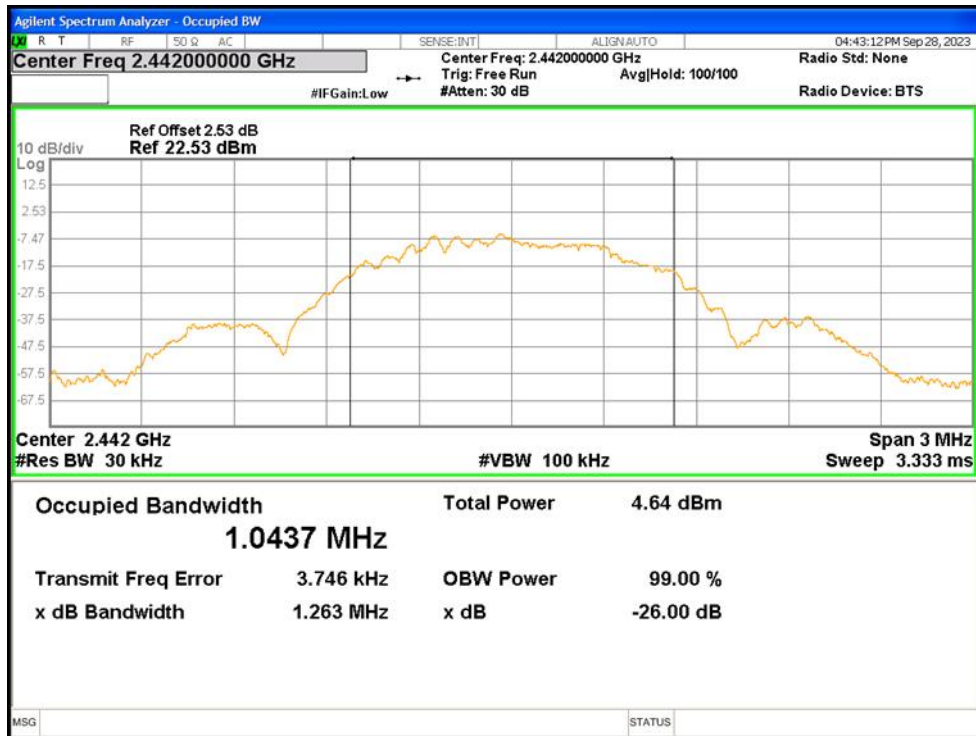
20.3 OCCUPIED CHANNEL BANDWIDTH

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1M	2402	Ant1	1.0347
NVNT	BLE 1M	2442	Ant1	1.0437
NVNT	BLE 1M	2480	Ant1	1.0391
NVNT	BLE 2M	2402	Ant1	2.0550
NVNT	BLE 2M	2442	Ant1	2.0581
NVNT	BLE 2M	2480	Ant1	2.0533

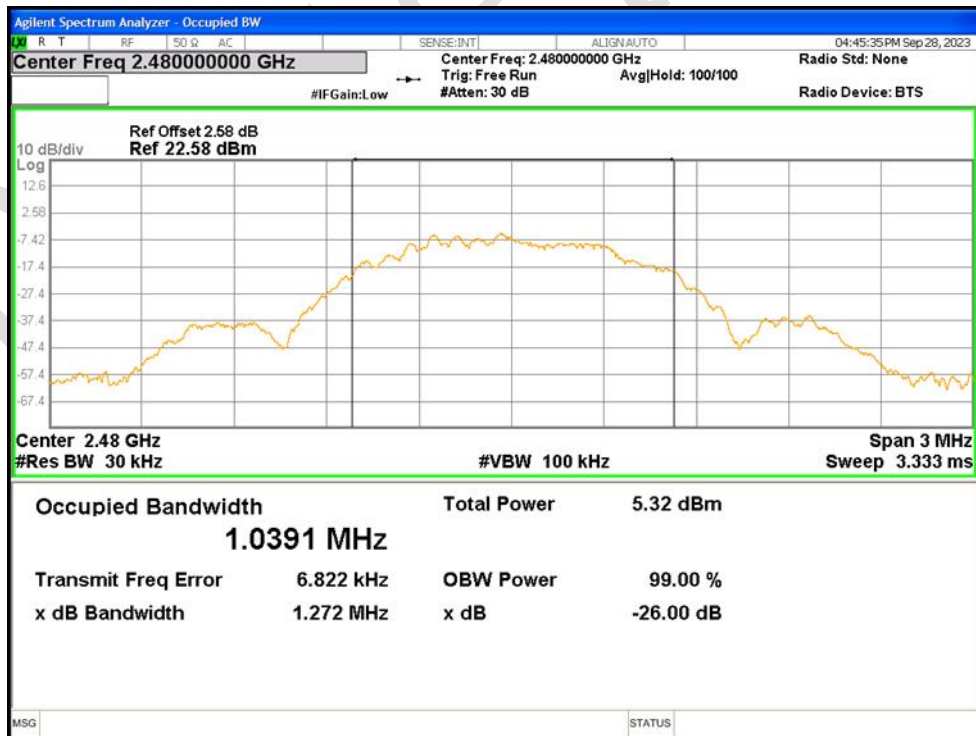
OBW NVNT BLE 1M 2402MHz Ant1



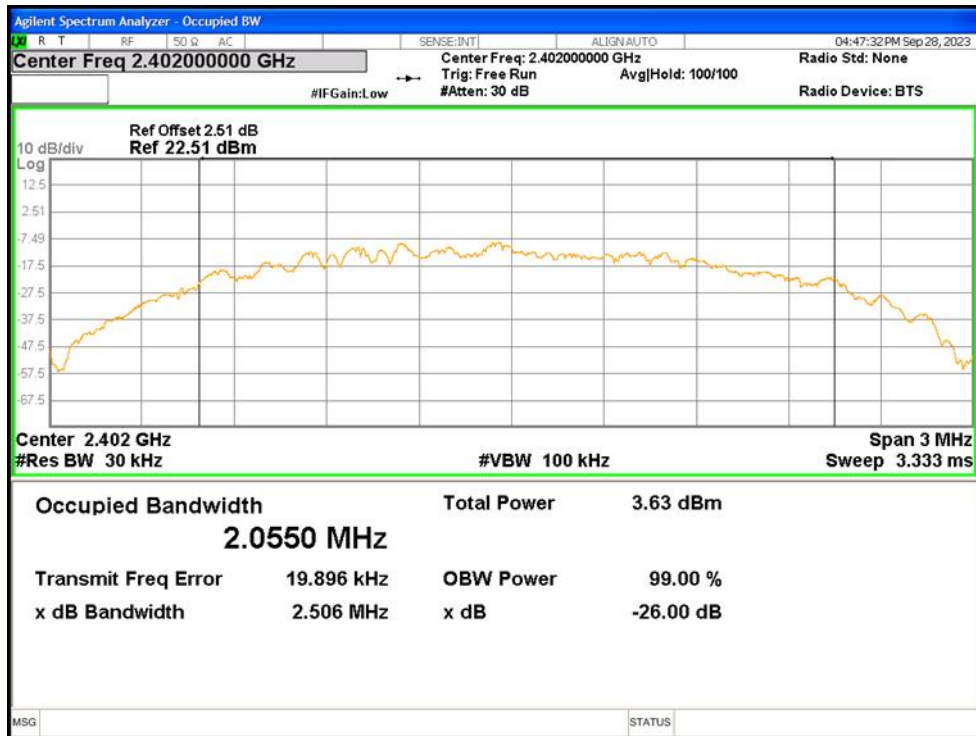
OBW NVNT BLE 1M 2442MHz Ant1



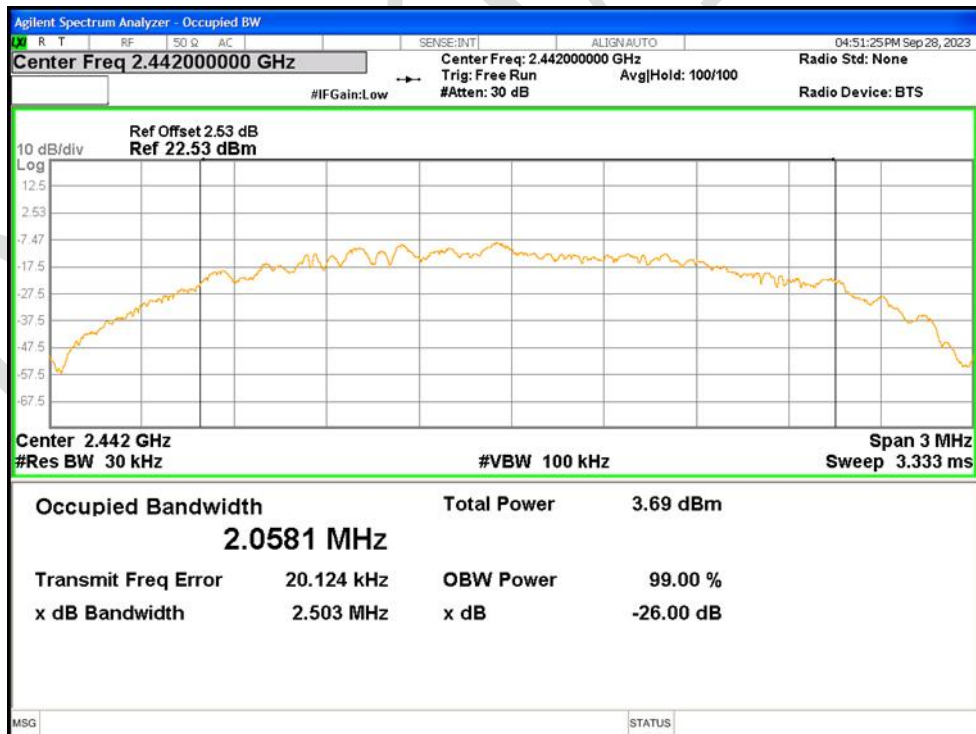
OBW NVNT BLE 1M 2480MHz Ant1



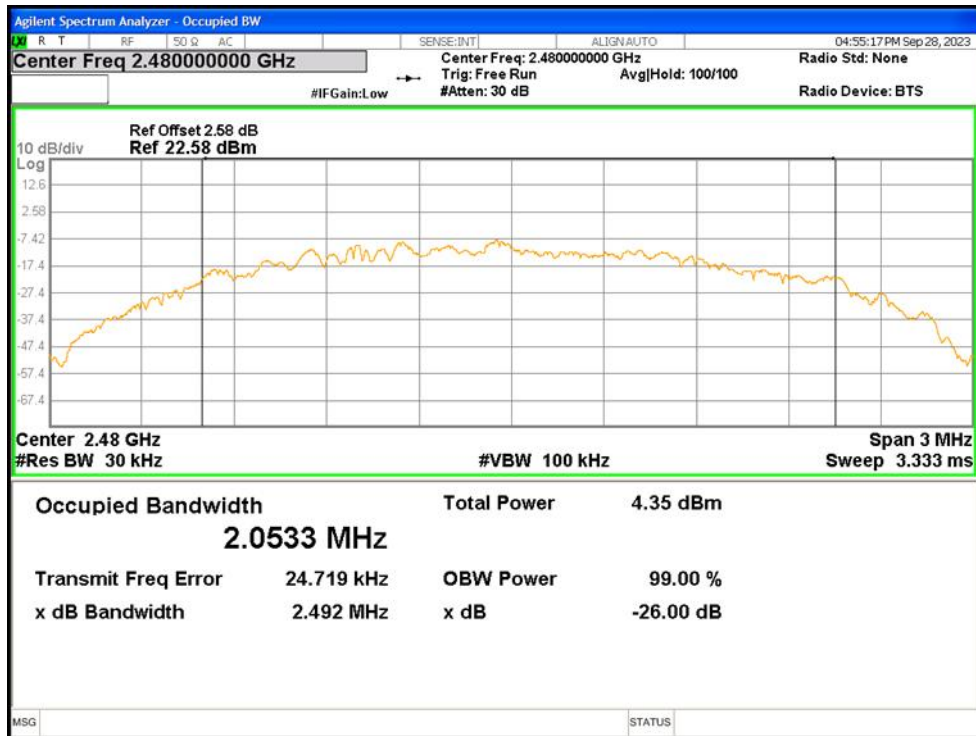
OBW NVNT BLE 2M 2402MHz Ant1



OBW NVNT BLE 2M 2442MHz Ant1



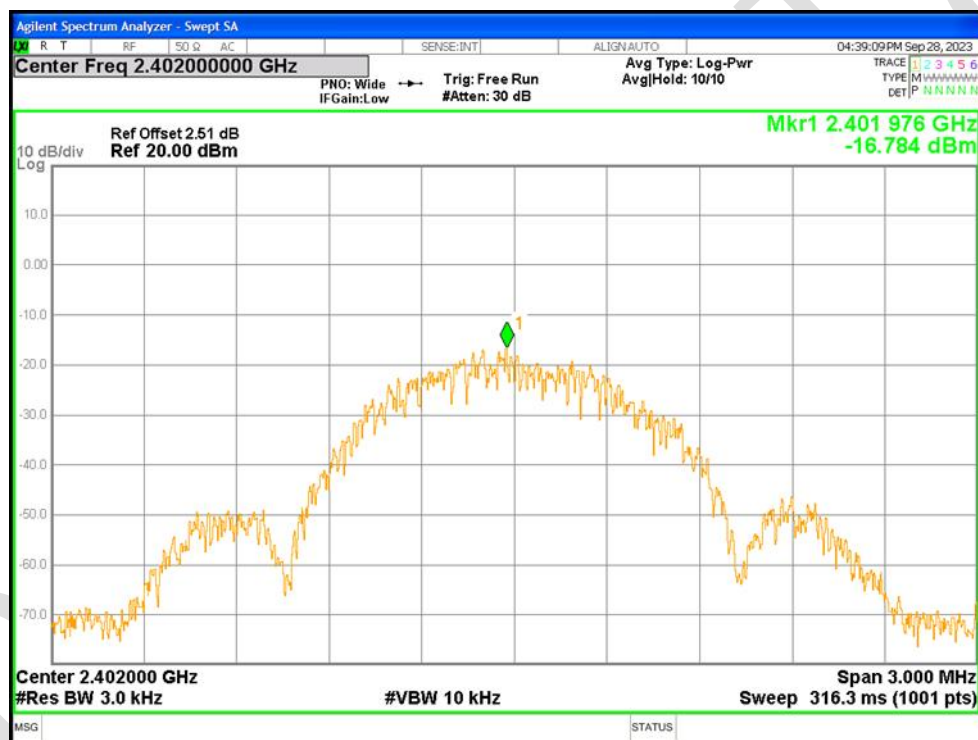
OBW NVNT BLE 2M 2480MHz Ant1



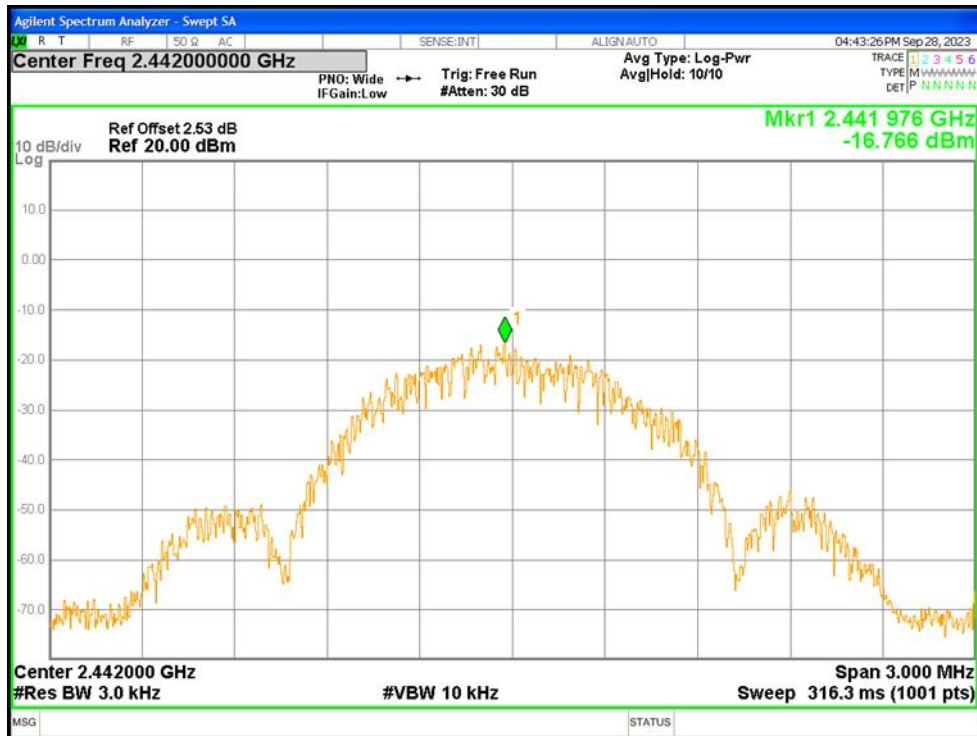
20.4 MAXIMUM POWER SPECTRAL DENSITY LEVEL

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	Ant1	-16.784	8	Pass
NVNT	BLE 1M	2442	Ant1	-16.766	8	Pass
NVNT	BLE 1M	2480	Ant1	-16.111	8	Pass
NVNT	BLE 2M	2402	Ant1	-19.542	8	Pass
NVNT	BLE 2M	2442	Ant1	-18.992	8	Pass
NVNT	BLE 2M	2480	Ant1	-18.549	8	Pass

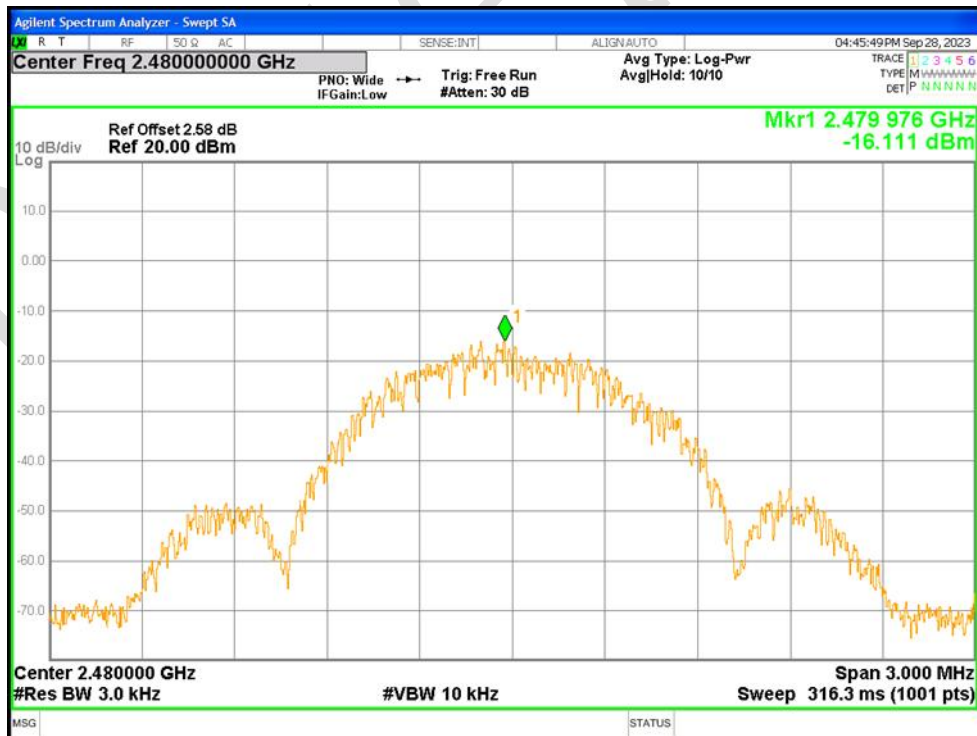
PSD NVNT BLE 1M 2402MHz Ant1



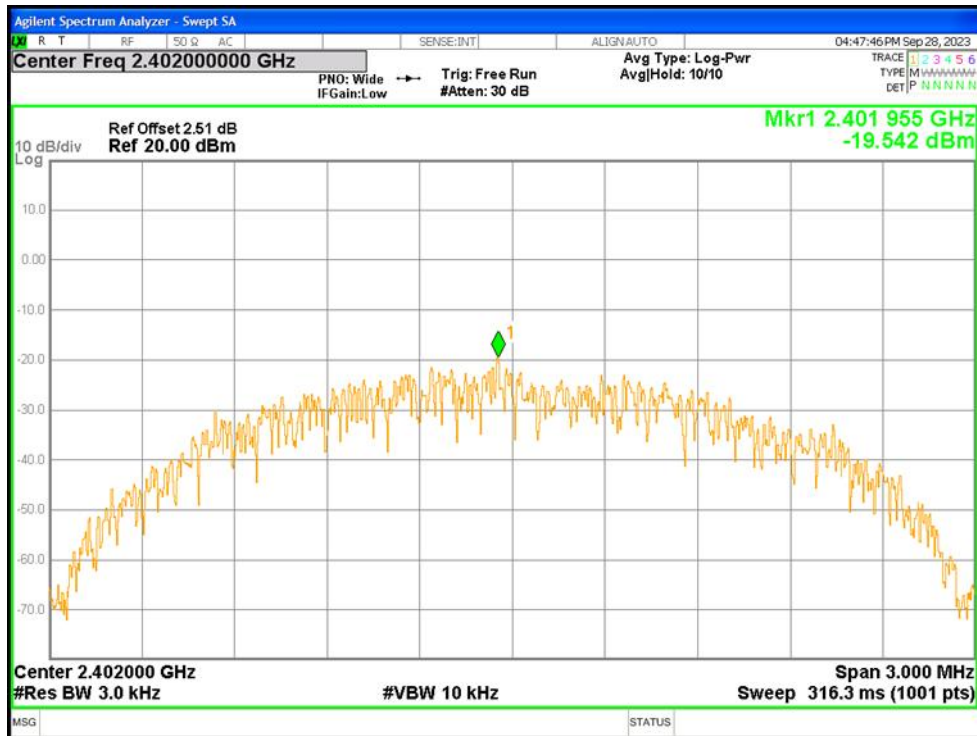
PSD NVNT BLE 1M 2442MHz Ant1



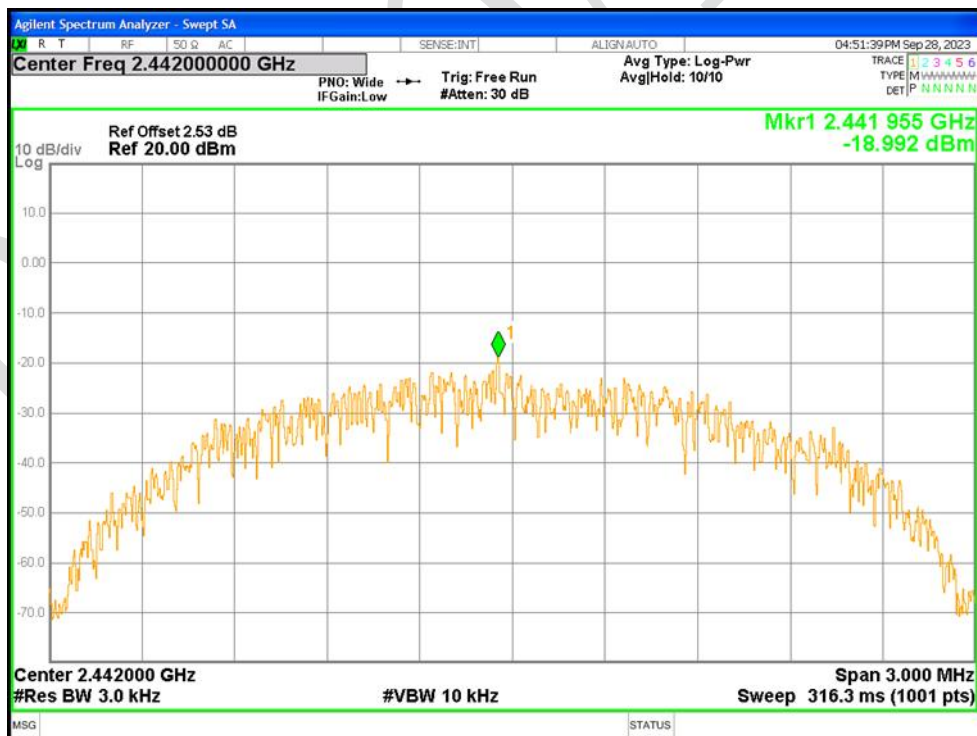
PSD NVNT BLE 1M 2480MHz Ant1



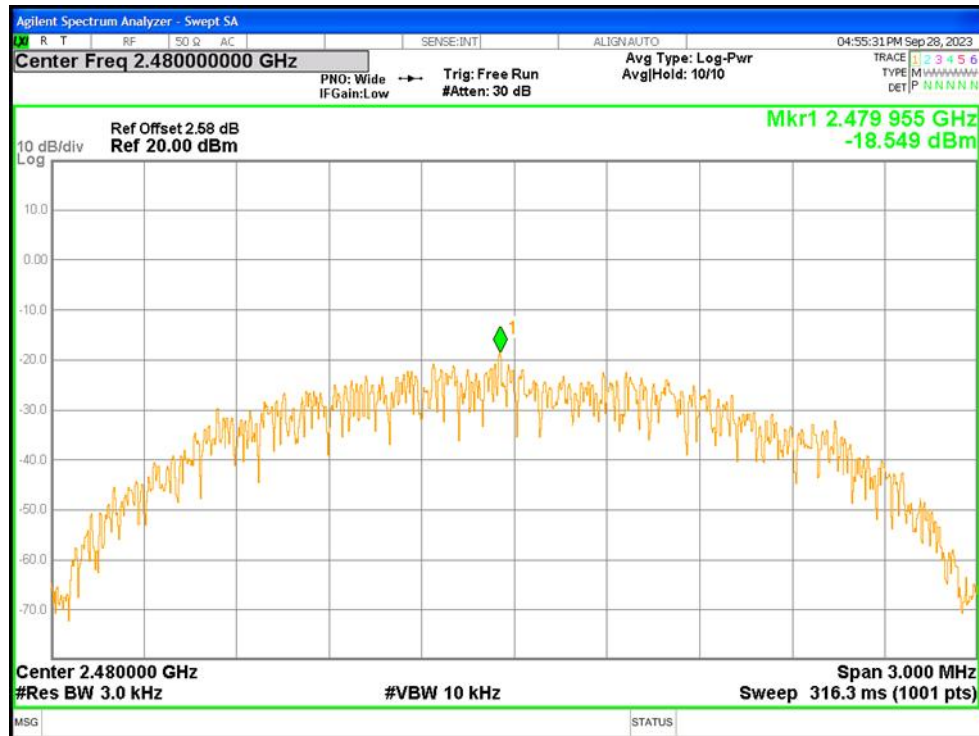
PSD NVNT BLE 2M 2402MHz Ant1



PSD NVNT BLE 2M 2442MHz Ant1



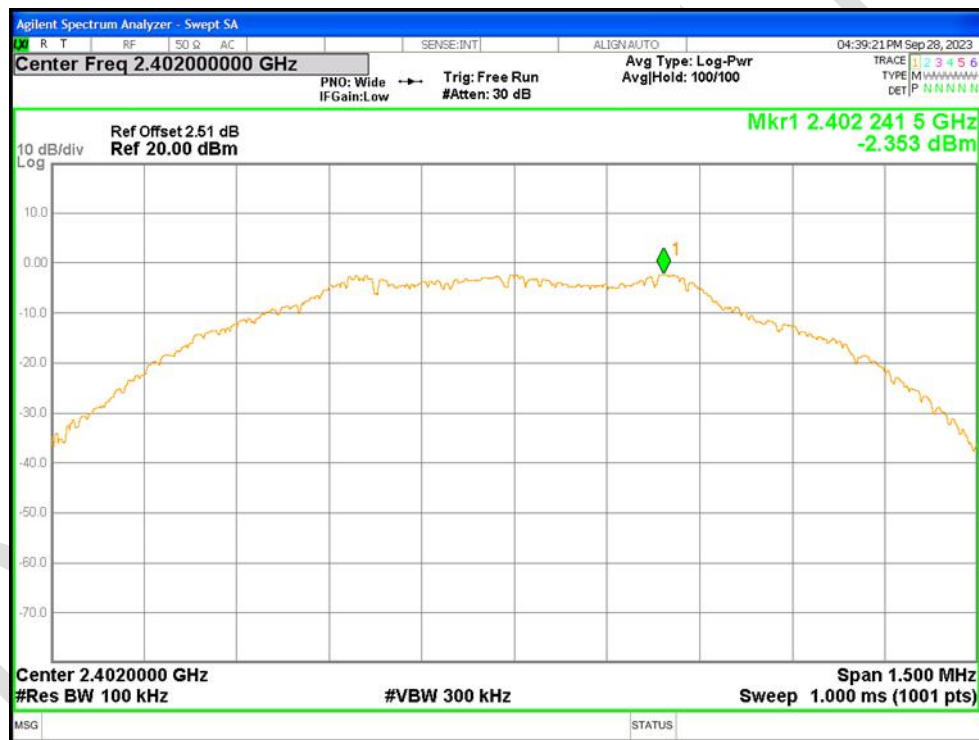
PSD NVNT BLE 2M 2480MHz Ant1



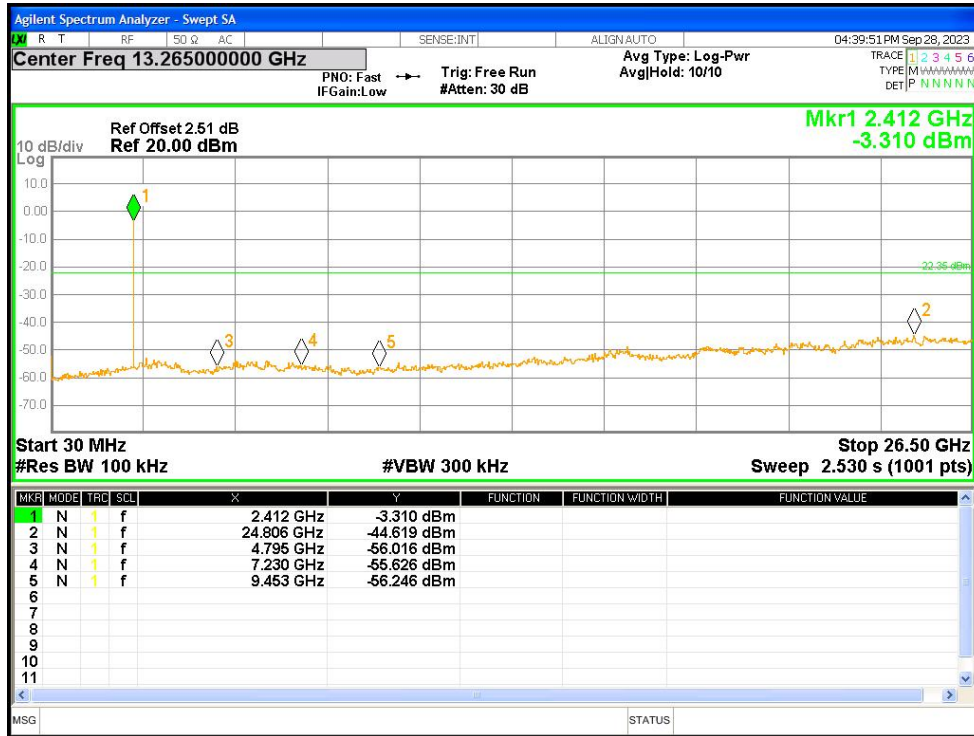
20.5 CONDUCTED RF SPURIOUS EMISSION

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-42.27	-20	Pass
NVNT	BLE 1M	2442	Ant1	-42.40	-20	Pass
NVNT	BLE 1M	2480	Ant1	-43.70	-20	Pass
NVNT	BLE 2M	2402	Ant1	-42.82	-20	Pass
NVNT	BLE 2M	2442	Ant1	-42.32	-20	Pass
NVNT	BLE 2M	2480	Ant1	-43.21	-20	Pass

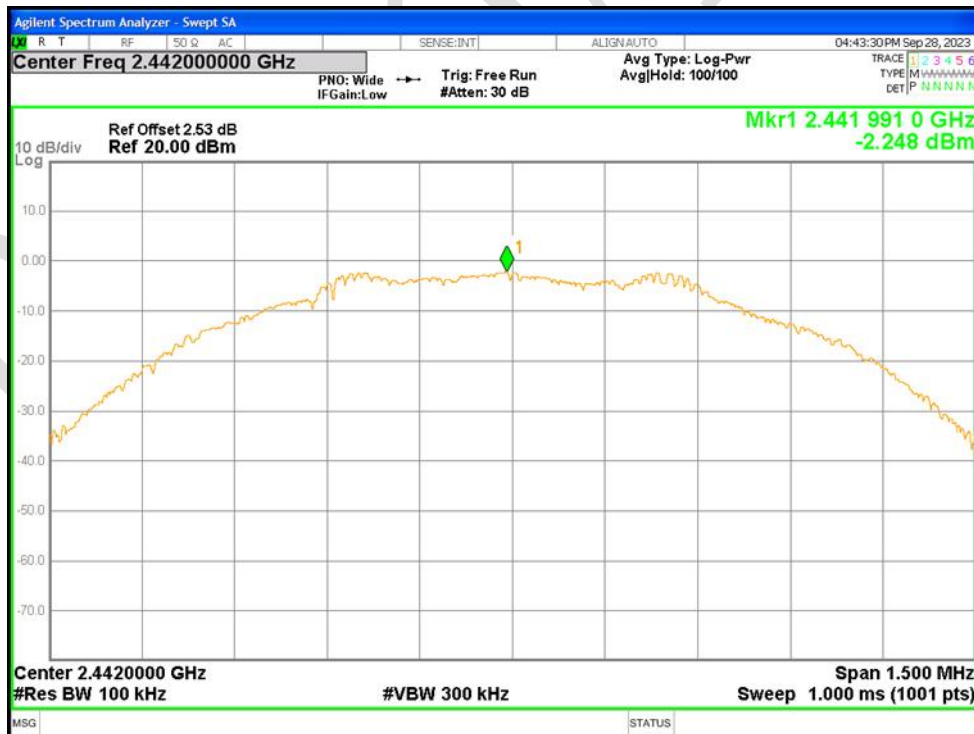
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



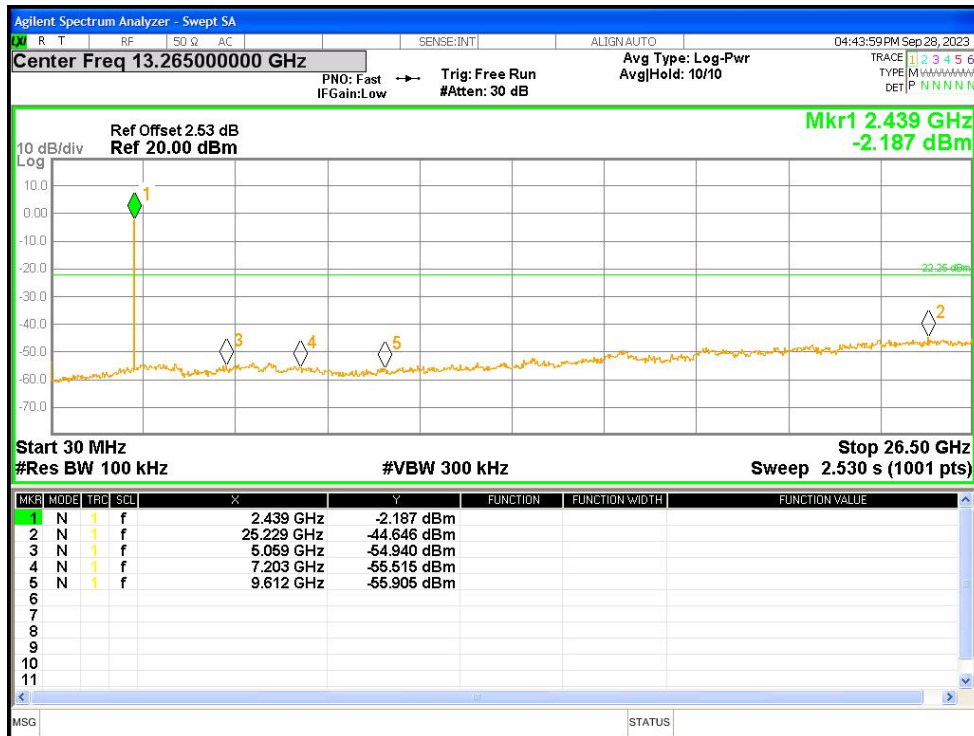
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



Tx. Spurious NVNT BLE 1M 2442MHz Ant1 Ref



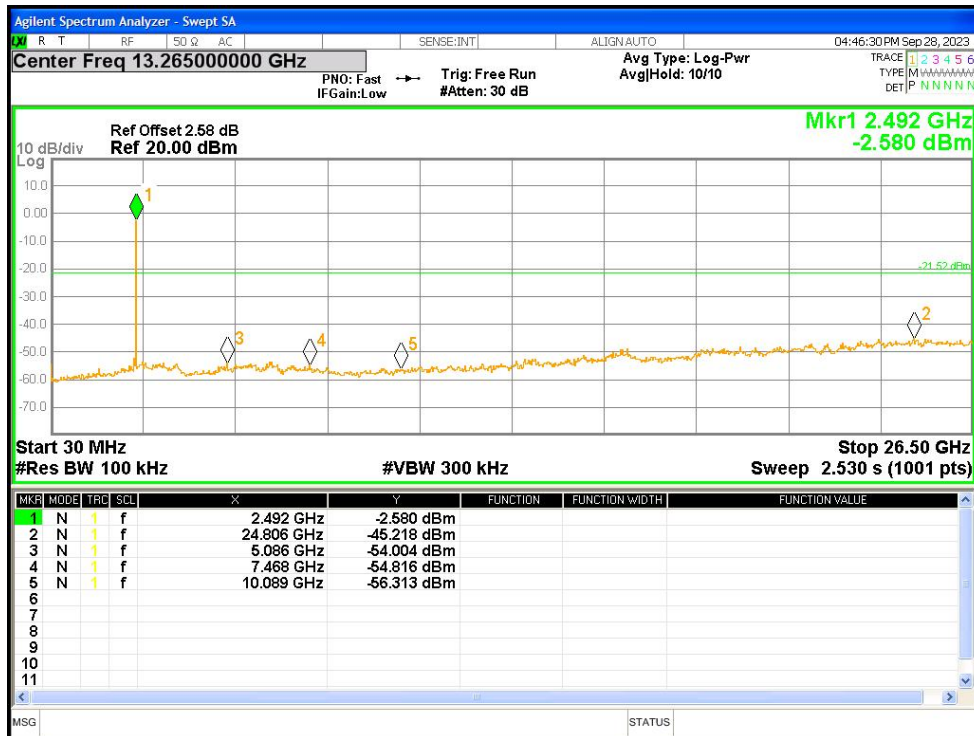
Tx. Spurious NVNT BLE 1M 2442MHz Ant1 Emission



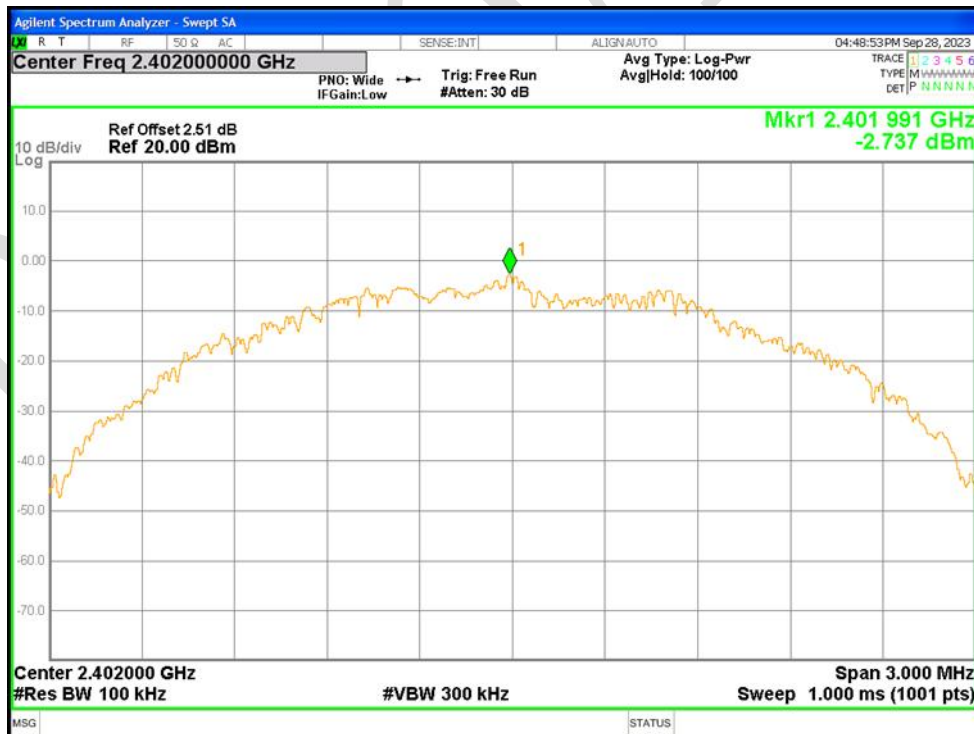
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



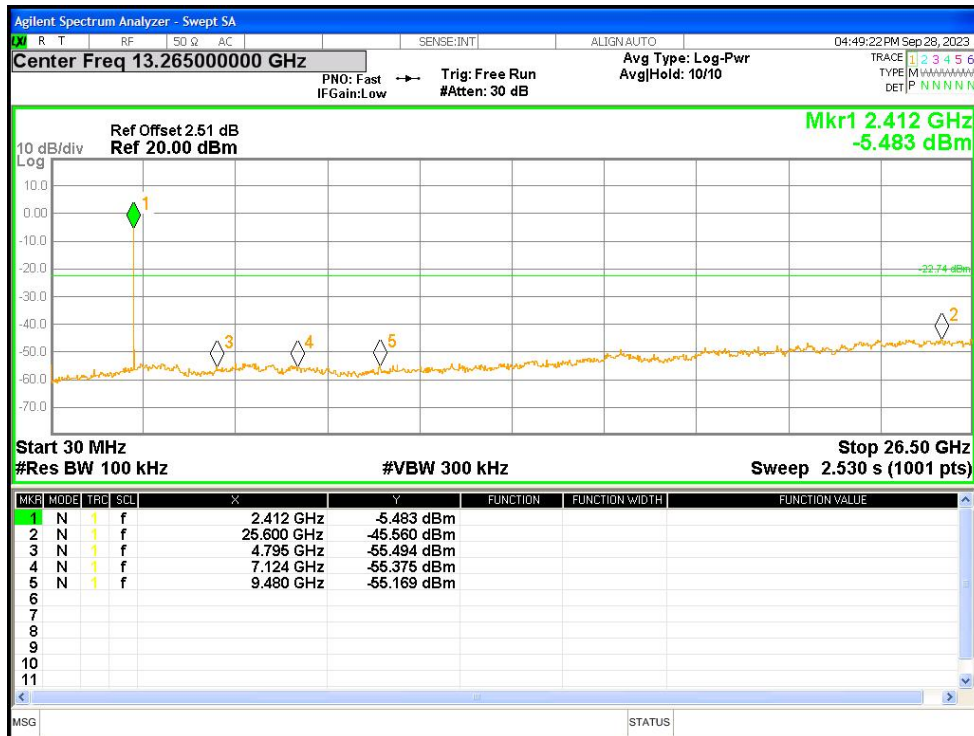
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Ref



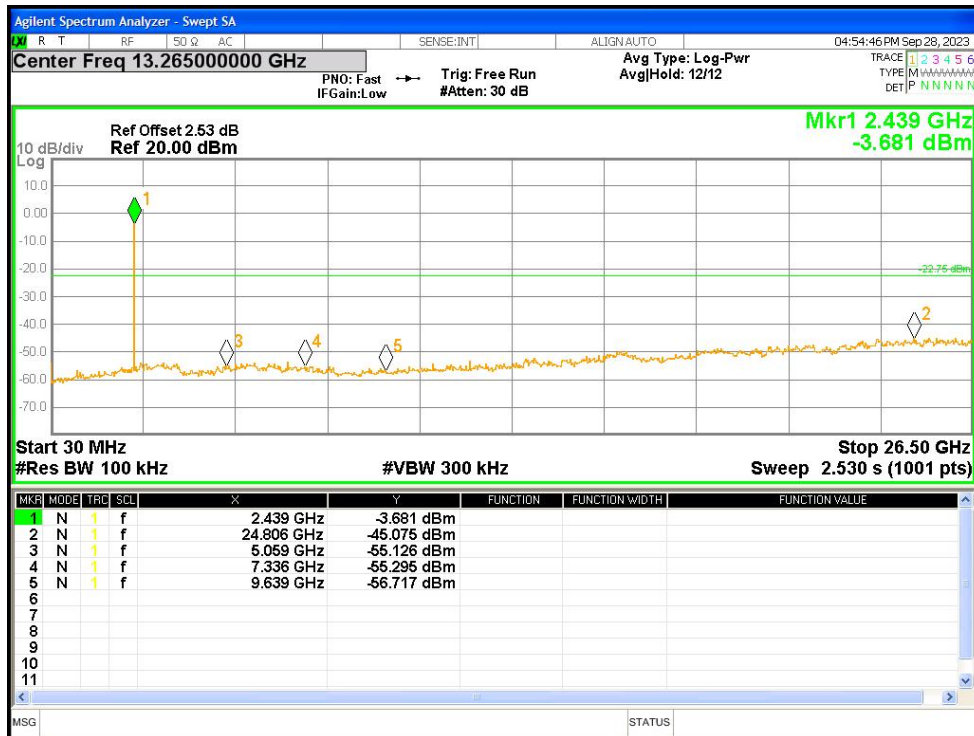
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Emission



Tx. Spurious NVNT BLE 2M 2442MHz Ant1 Ref



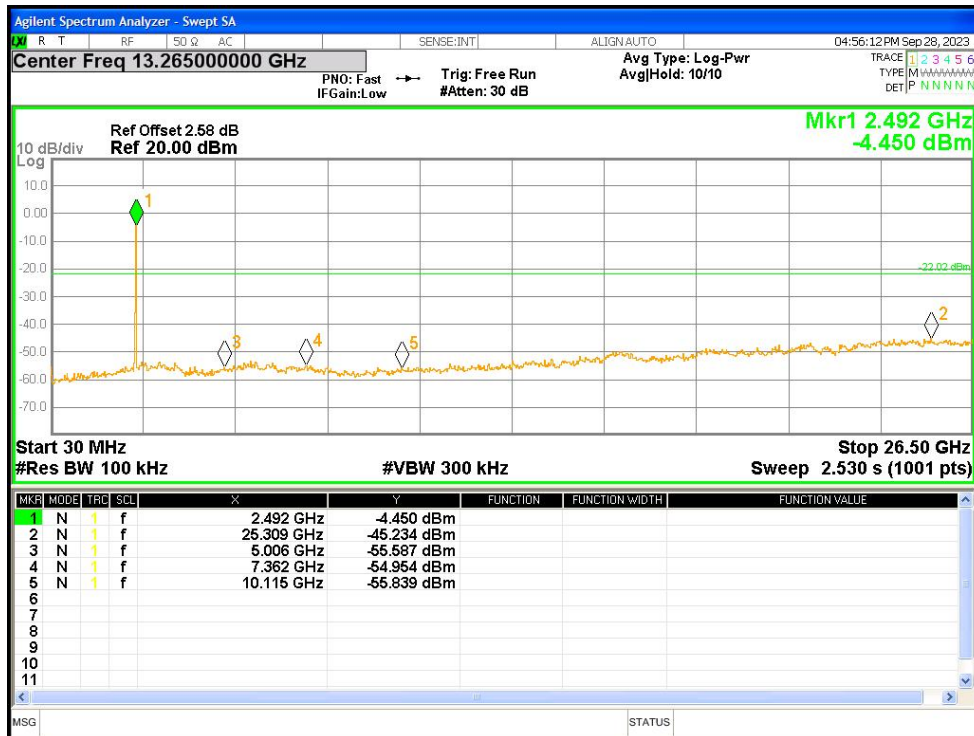
Tx. Spurious NVNT BLE 2M 2442MHz Ant1 Emission



Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Emission



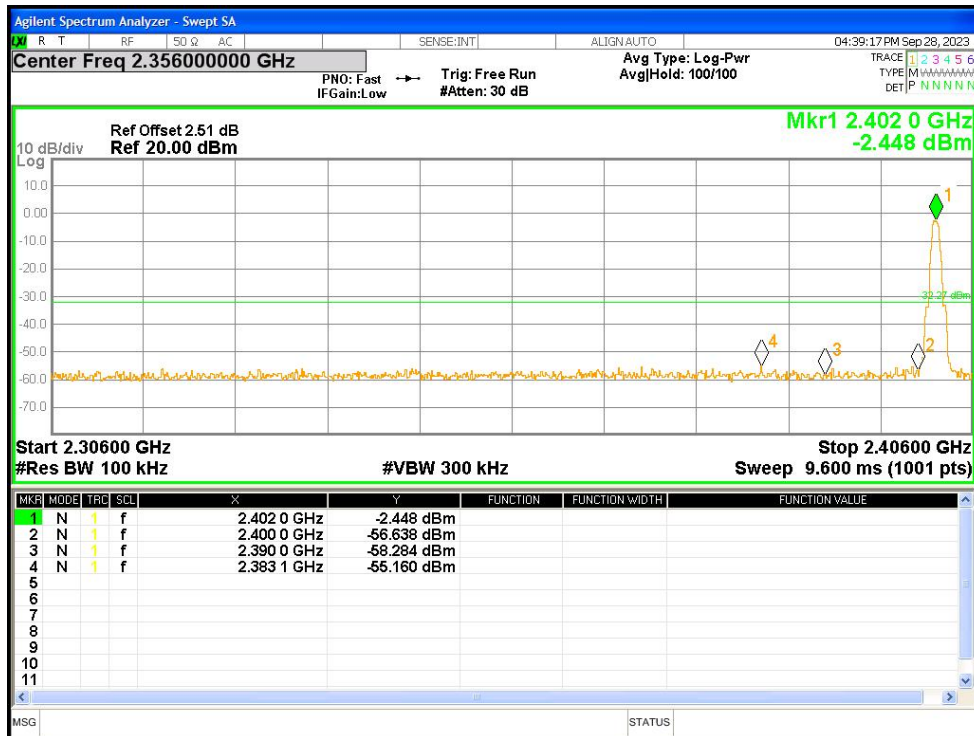
20.6 BAND EDGE

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	Ant1	-52.89	-30	Pass
NVNT	BLE 1M	2480	Ant1	-54.16	-30	Pass
NVNT	BLE 2M	2402	Ant1	-34.98	-30	Pass
NVNT	BLE 2M	2480	Ant1	-53.23	-30	Pass

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



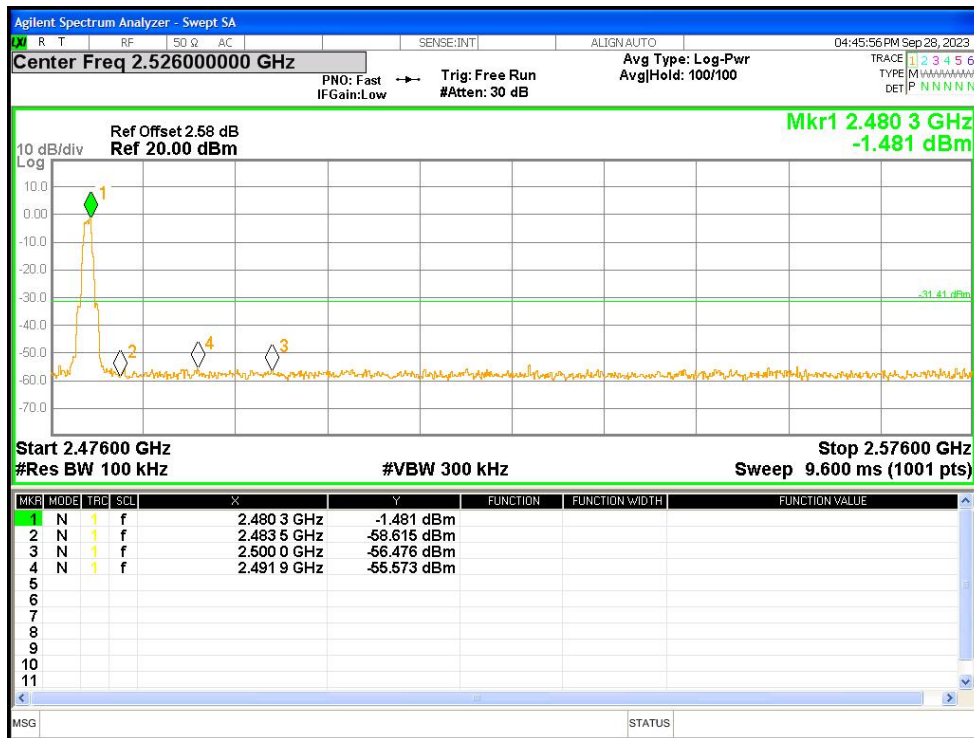
Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



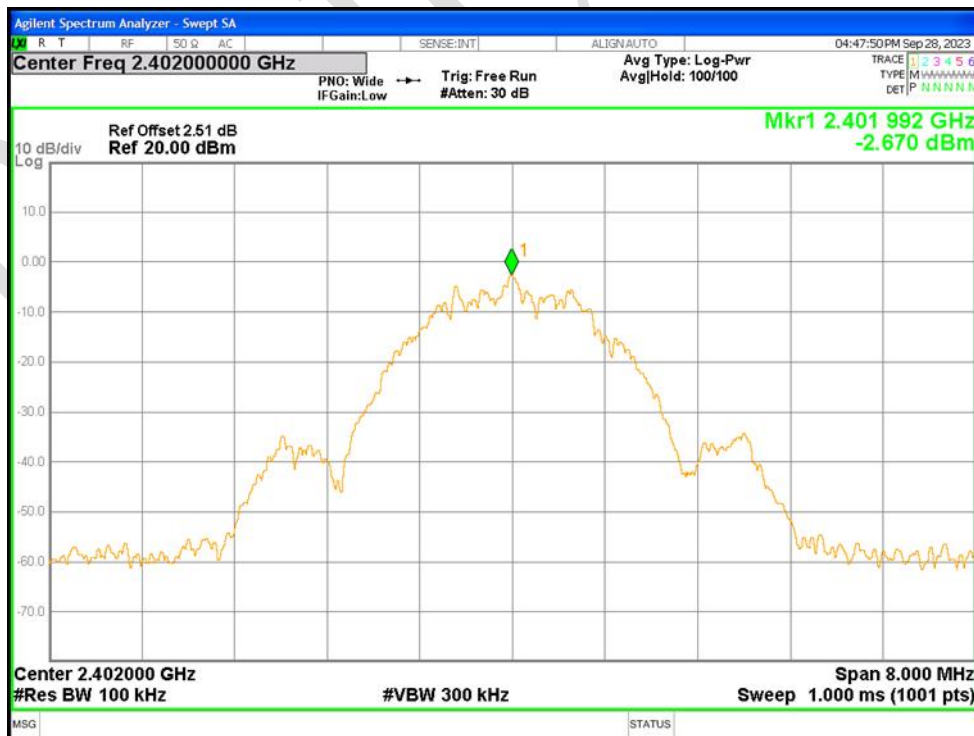
Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



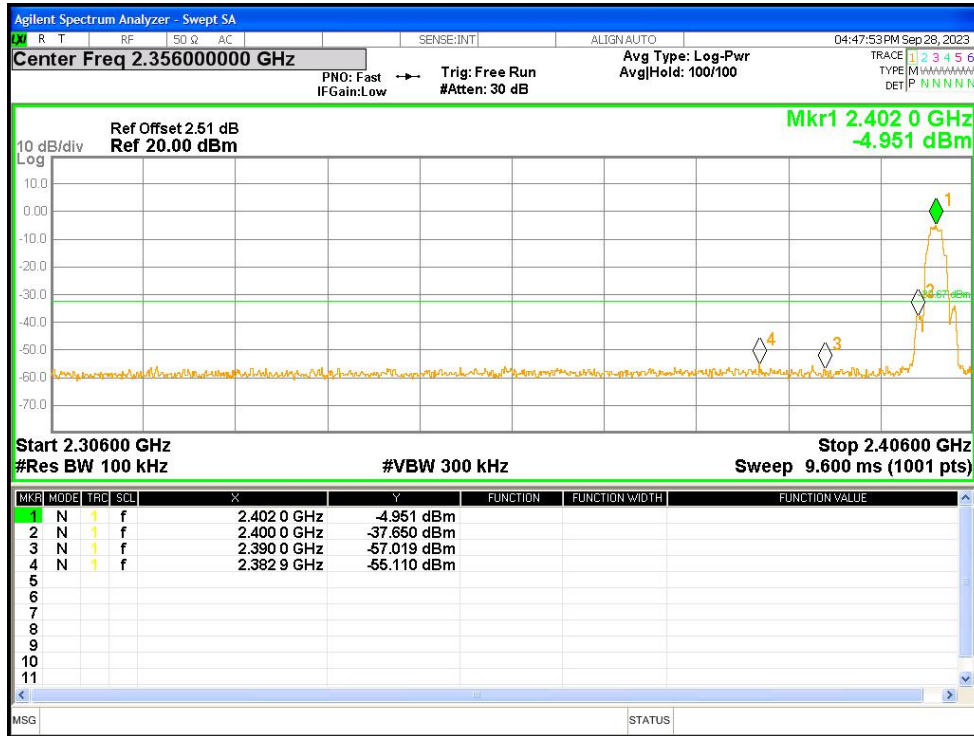
Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



Band Edge NVNT BLE 2M 2402MHz Ant1 Ref



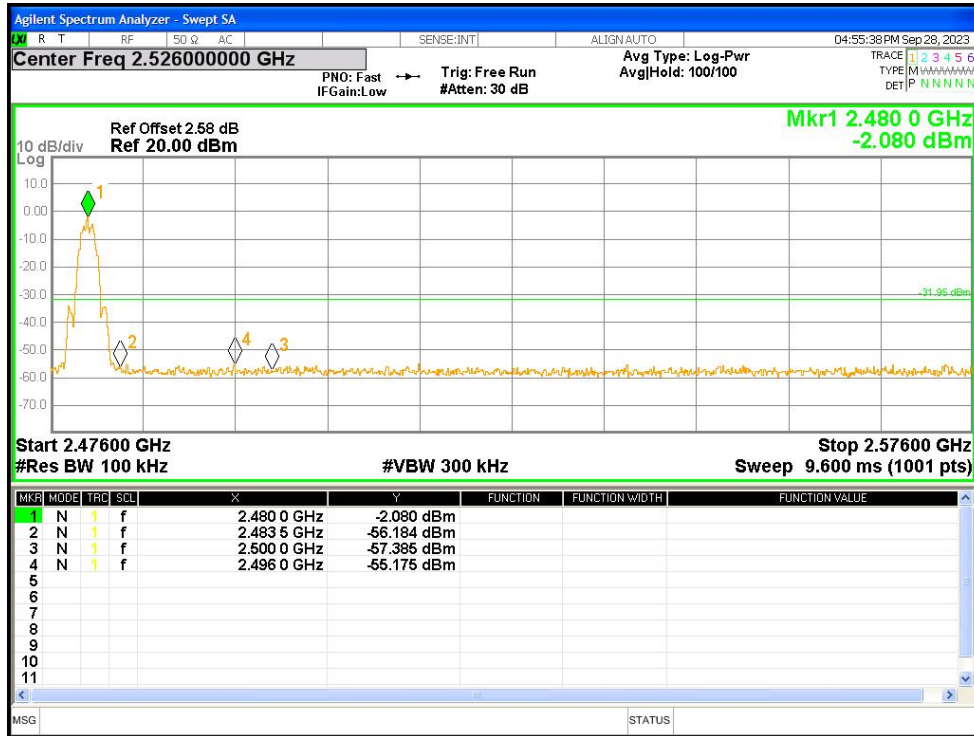
Band Edge NVNT BLE 2M 2402MHz Ant1 Emission



Band Edge NVNT BLE 2M 2480MHz Ant1 Ref

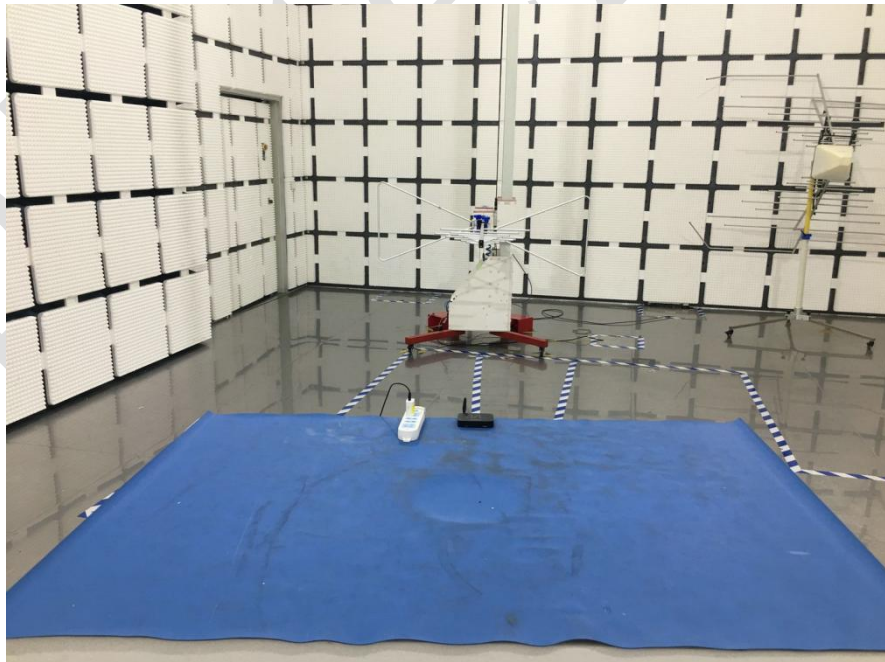


Band Edge NVNT BLE 2M 2480MHz Ant1 Emission



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-202308-A6201

----END OF REPORT----

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