

14.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

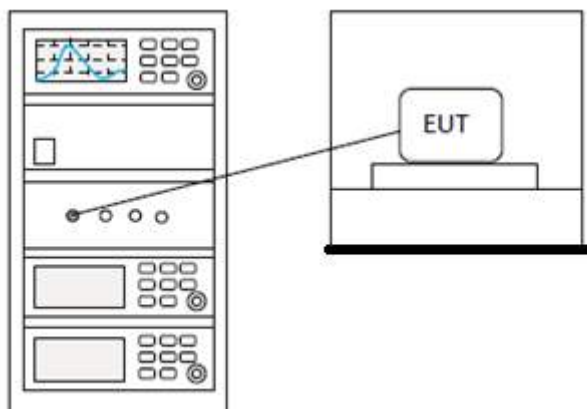
15 MINIMUM 6DB BANDWIDTH

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%

15.1 LIMITS

Limit:	≥ 500 kHz
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15.2 BLOCK DIAGRAM OF TEST SETUP



15.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

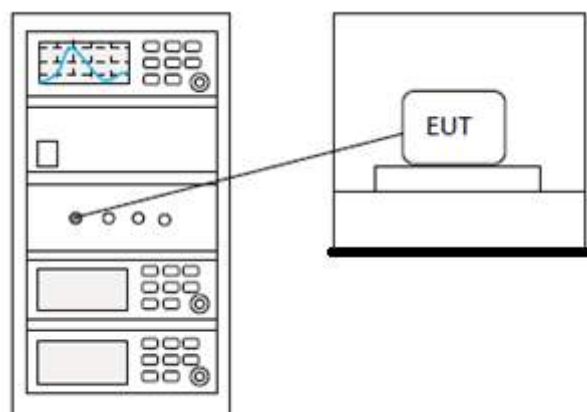
16 CONDUCTED PEAK OUTPUT POWER

Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 7.8.5 & Section 11.9.1
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 $25 \leq \text{hopping channels} < 50$
	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

16.2 BLOCK DIAGRAM OF TEST SETUP



16.3 TEST DATA

Pass: Please Refer To Appendix: Appendix1 For Details

BlueAsia

17 CONDUCTED EMISSIONS AT AC POWER LINE (150KHZ-30MHZ)

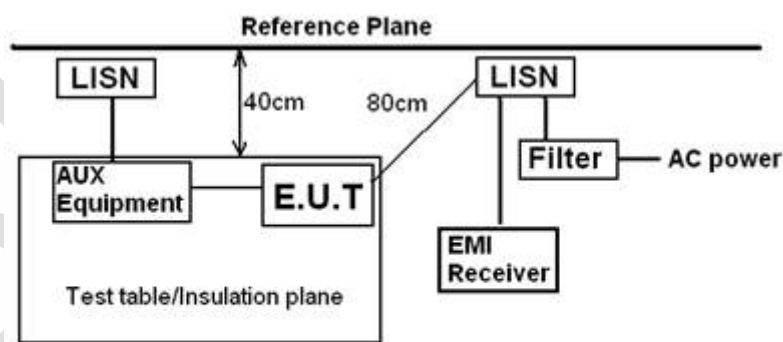
Test Standard	47 CFR Part 15, Subpart C 15.247
Test Method	ANSI C63.10 (2013) Section 6.2
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX
Tester	Jozu
Temperature	25°C
Humidity	60%

17.1 LIMITS

Frequency of emission(MHz)	Conducted limit(dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

17.2 BLOCK DIAGRAM OF TEST SETUP



Remark:
E.U.T: Equipment Under Test
LISN: Line Impedance Stabilization Network
Test table height=0.8m

17.3 PROCEDURE

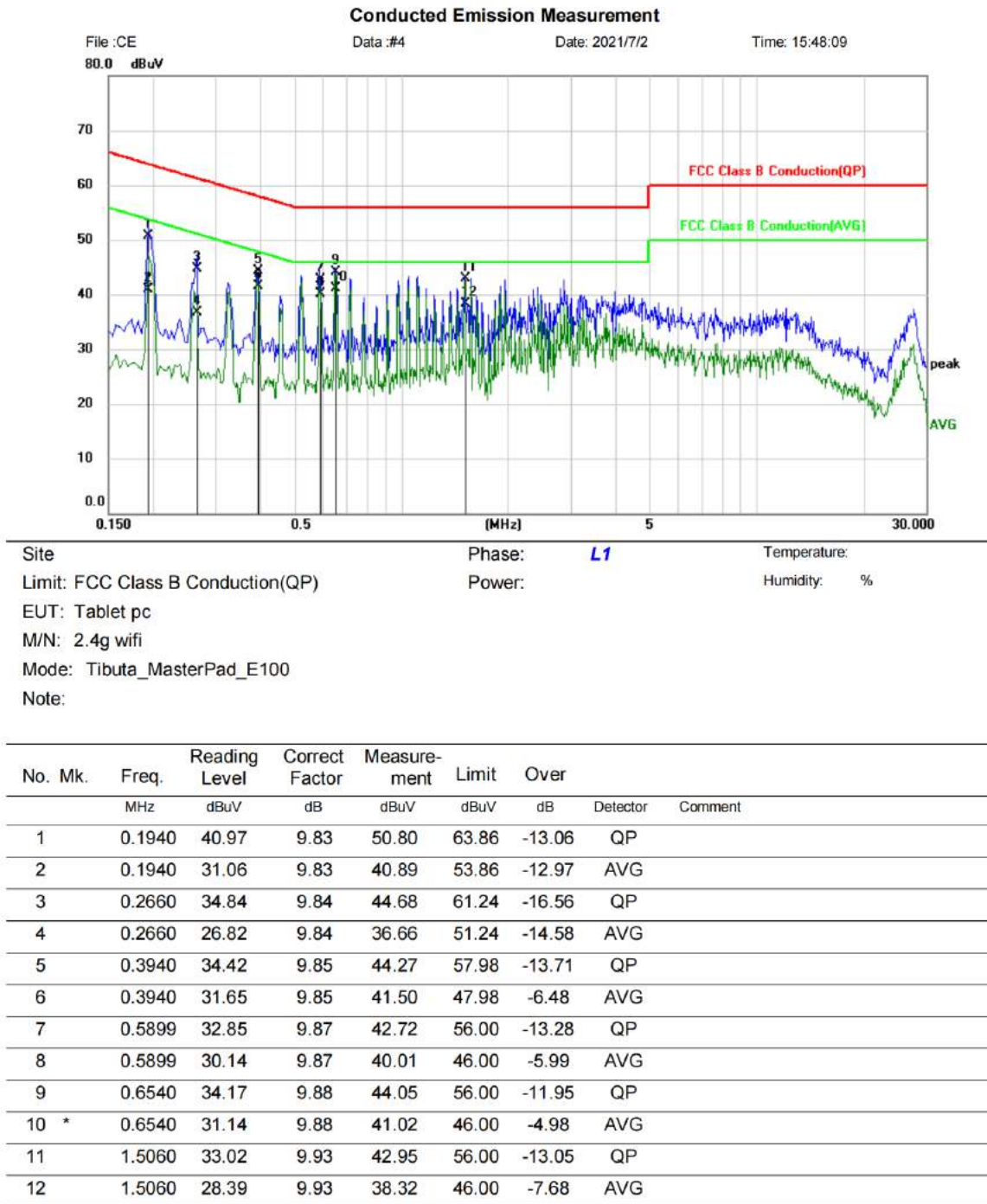
- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50H + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: $LISN = Read\ Level + Cable\ Loss + LISN\ Factor$

17.4 TEST DATA

[TestMode: 2.4G wifi TX]; [Line: Line]

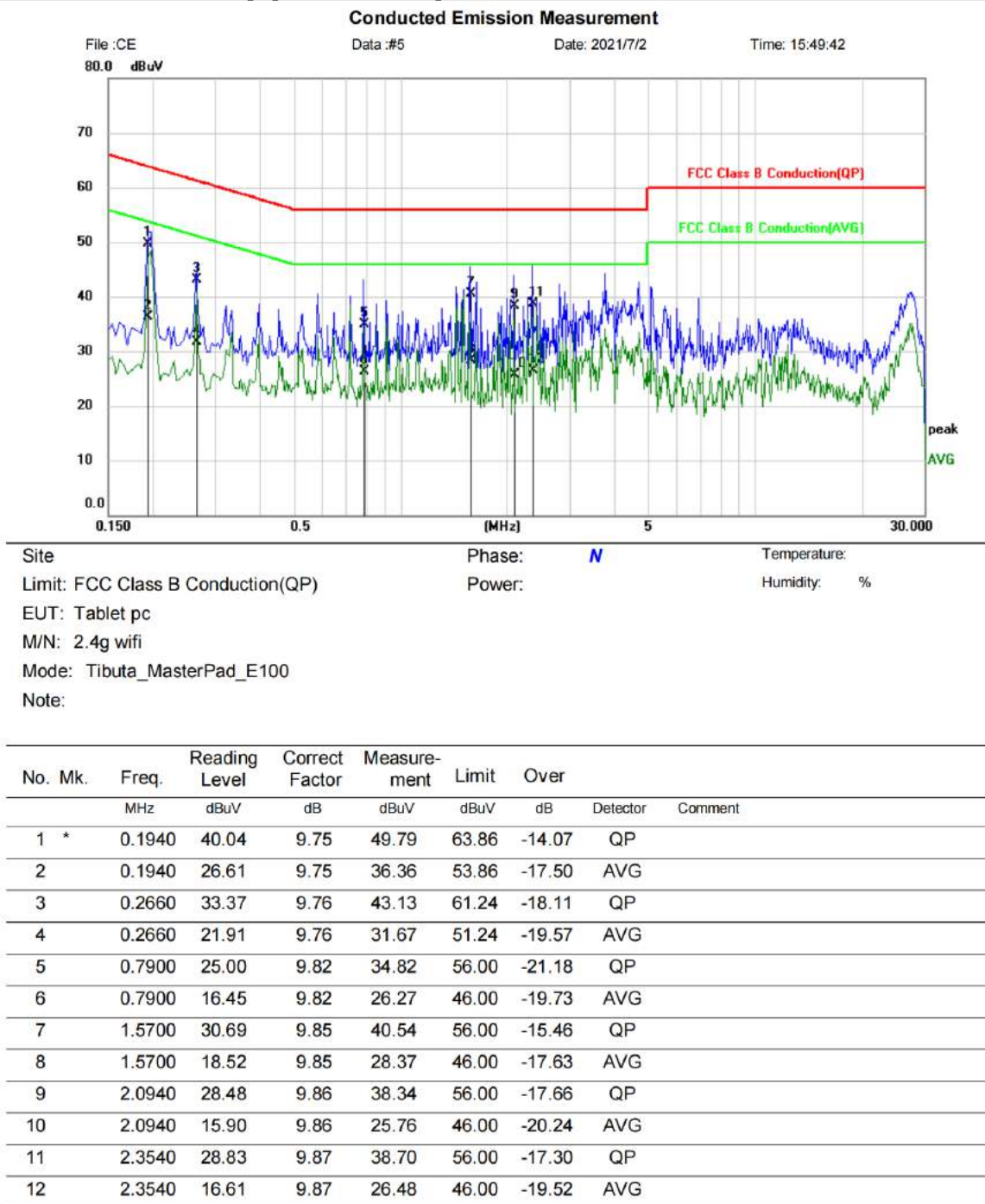


*:Maximum data x:Over limit !:over margin

⟨Reference Only⟩

Test Result: Pass

[TestMode: 2.4G wifi TX]; [Line: Neutral]



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

(Reference Only)

Test Result: Pass

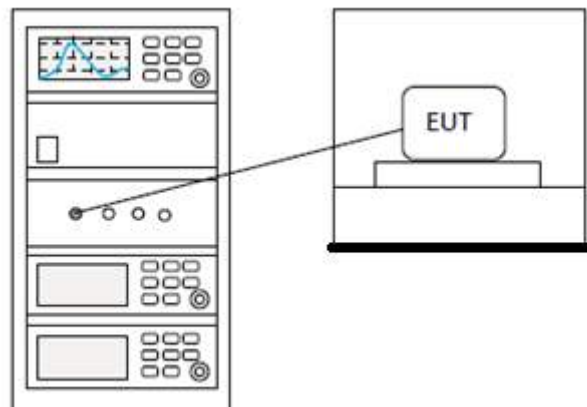
18 POWER SPECTRUM DENSITY

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
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18.2 BLOCK DIAGRAM OF TEST SETUP



18.3 TEST DATA

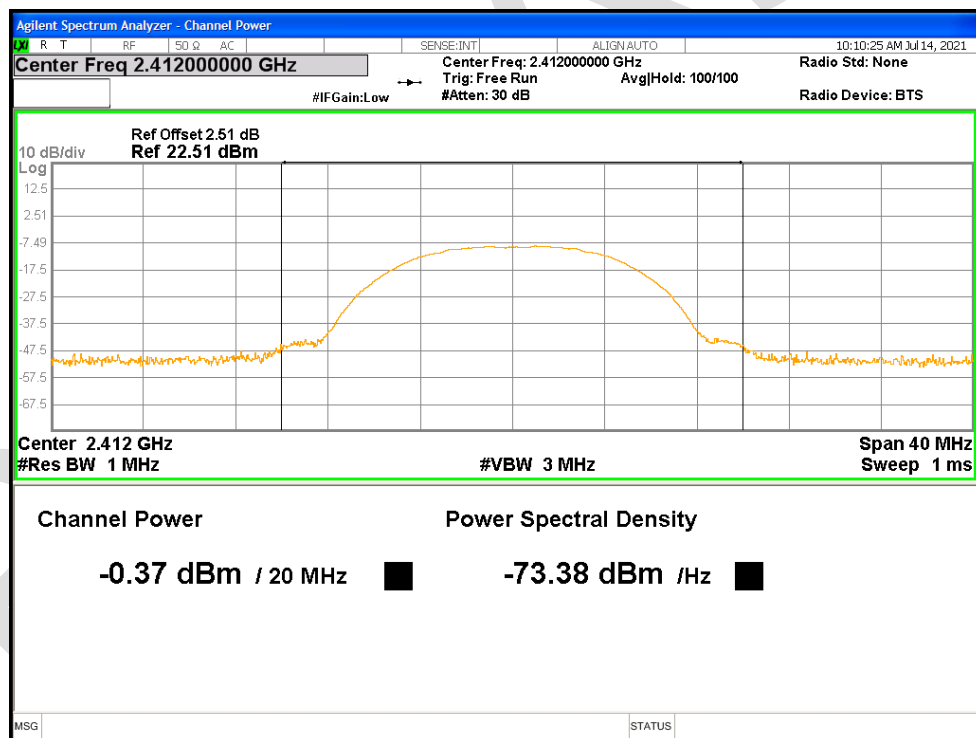
Pass: Please Refer To Appendix: Appendix1 For Details

19 APPENDIX

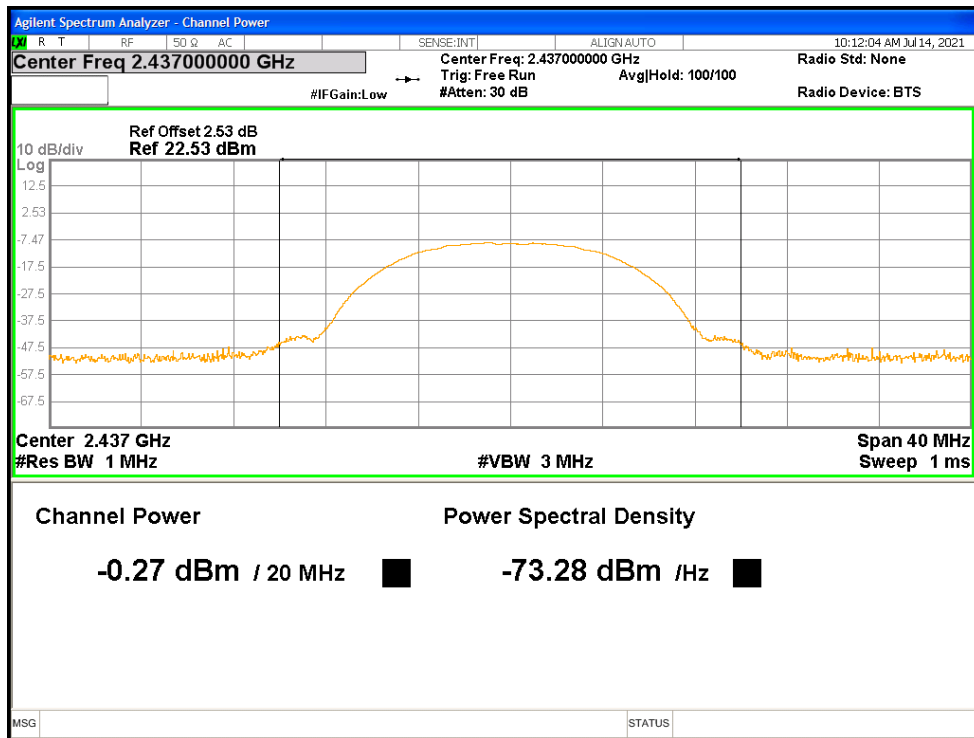
19.1 MAXIMUM CONDUCTED OUTPUT POWER

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-0.368	30	Pass
NVNT	b	2437	Ant1	-0.27	30	Pass
NVNT	b	2462	Ant1	0.859	30	Pass
NVNT	g	2412	Ant1	1.998	30	Pass
NVNT	g	2437	Ant1	1.974	30	Pass
NVNT	g	2462	Ant1	3.123	30	Pass
NVNT	n20	2412	Ant1	2.569	30	Pass
NVNT	n20	2437	Ant1	2.454	30	Pass
NVNT	n20	2462	Ant1	3.583	30	Pass
NVNT	n40	2422	Ant1	3.186	30	Pass
NVNT	n40	2437	Ant1	2.633	30	Pass
NVNT	n40	2452	Ant1	3.01	30	Pass

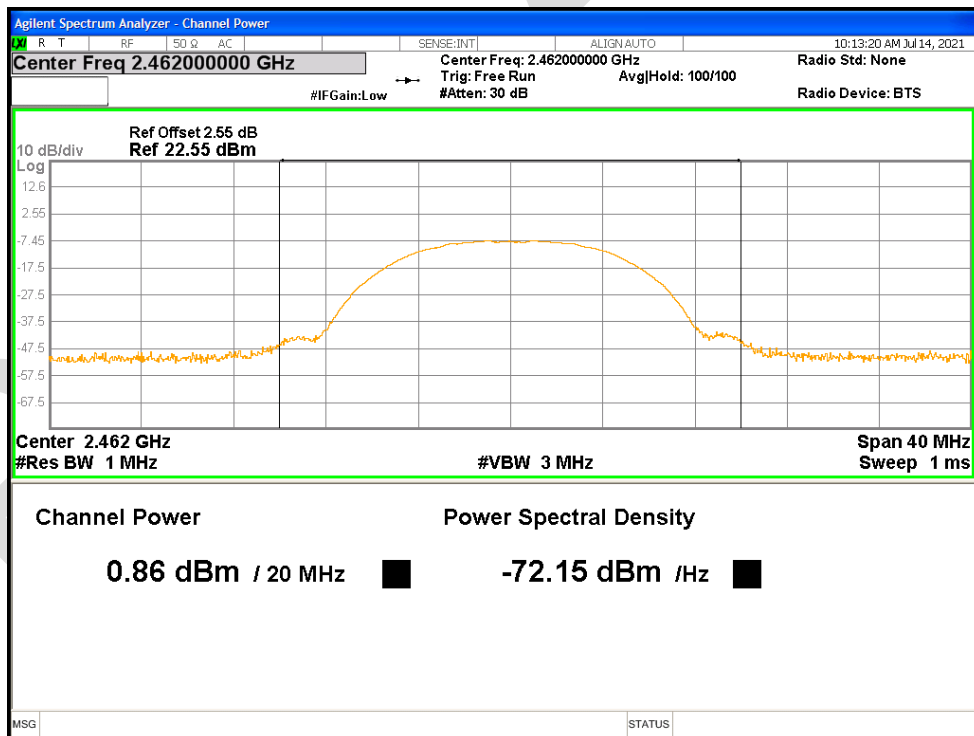
Power NVNT b 2412MHz Ant1



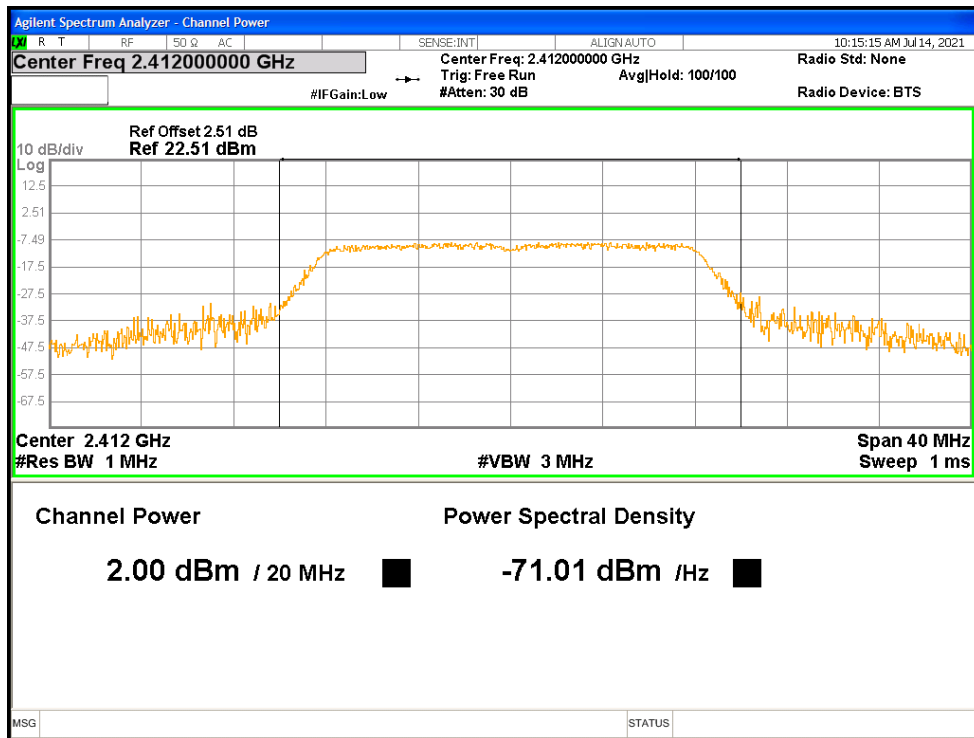
Power NVNT b 2437MHz Ant1



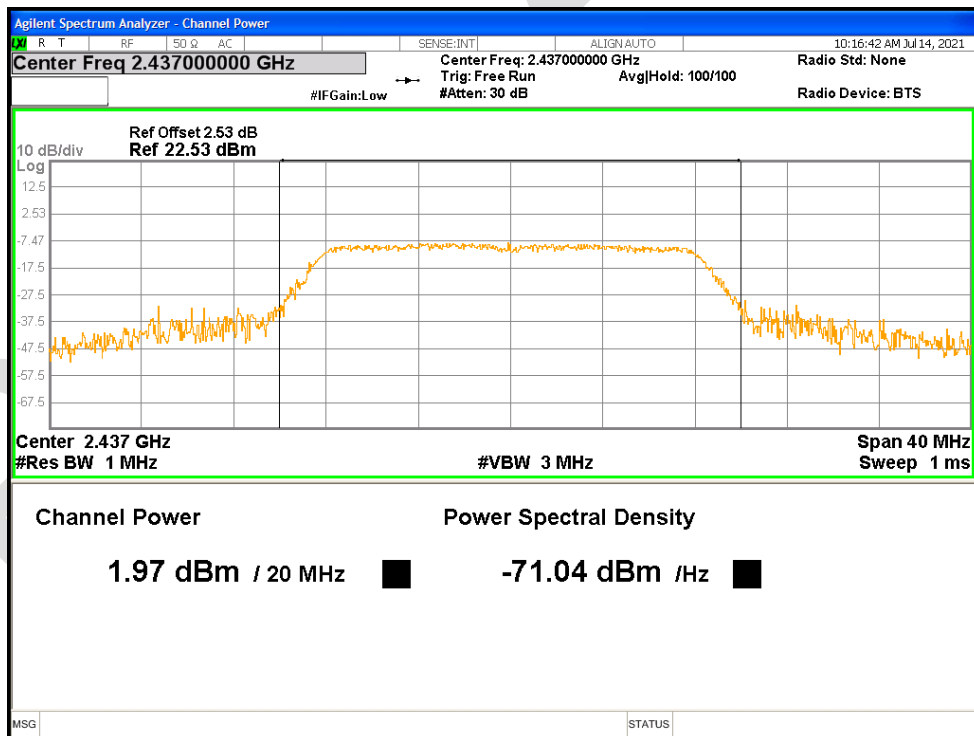
Power NVNT b 2462MHz Ant1



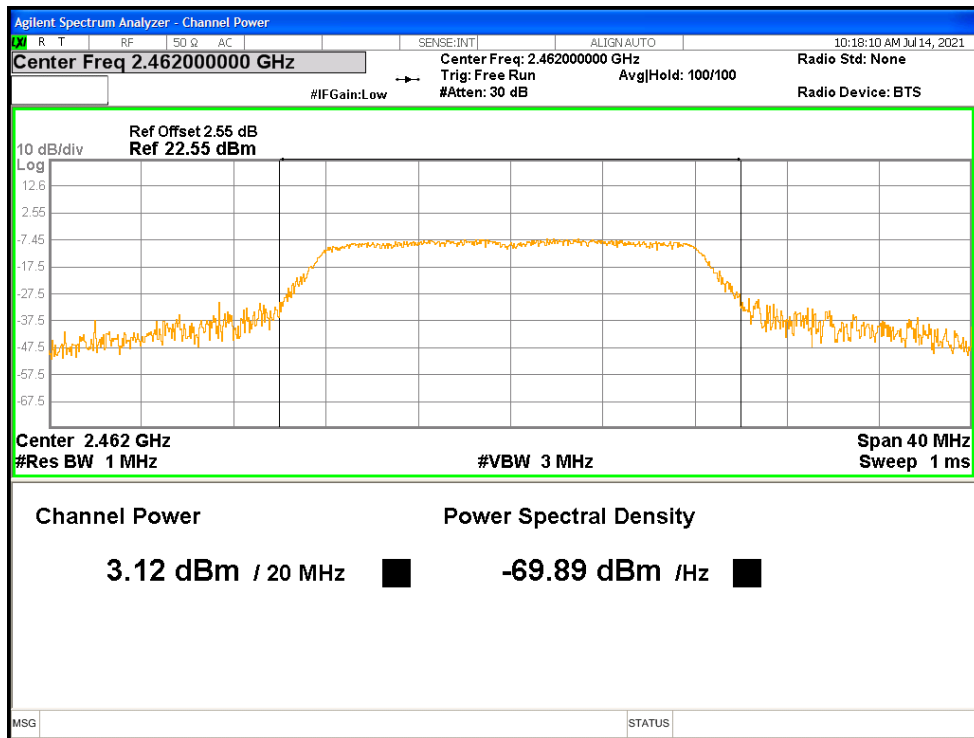
Power NVNT g 2412MHz Ant1



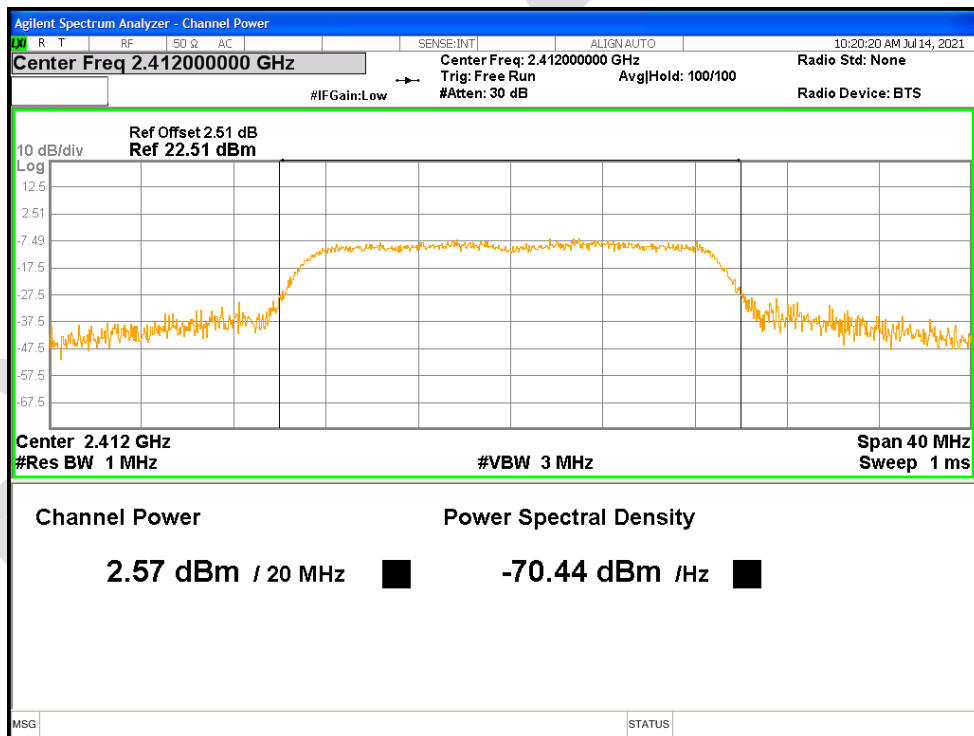
Power NVNT g 2437MHz Ant1



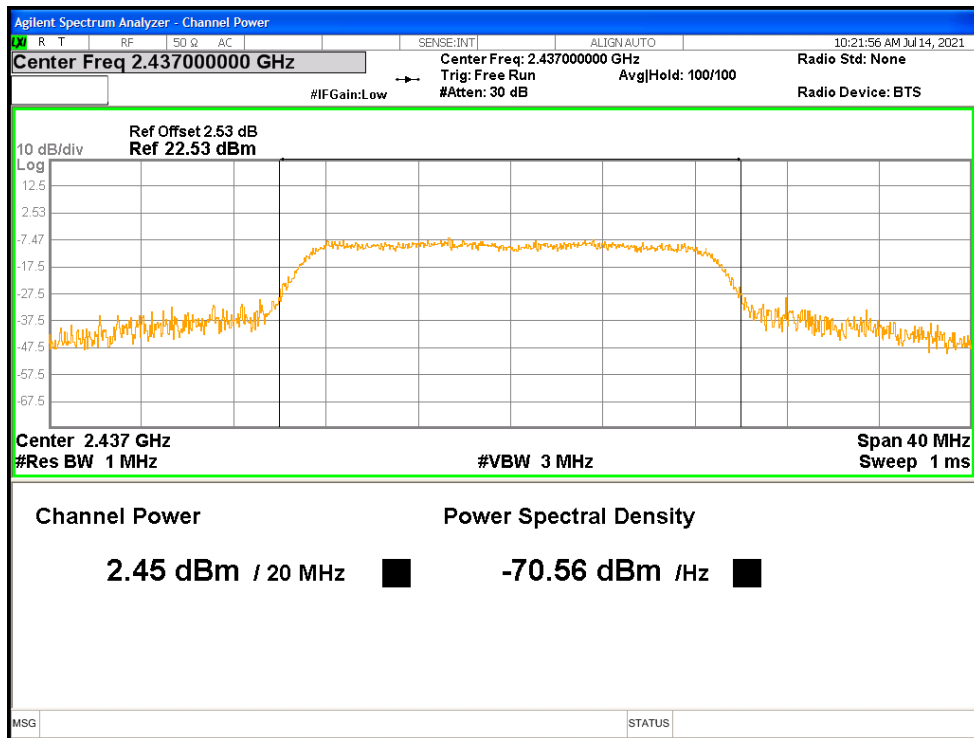
Power NVNT g 2462MHz Ant1



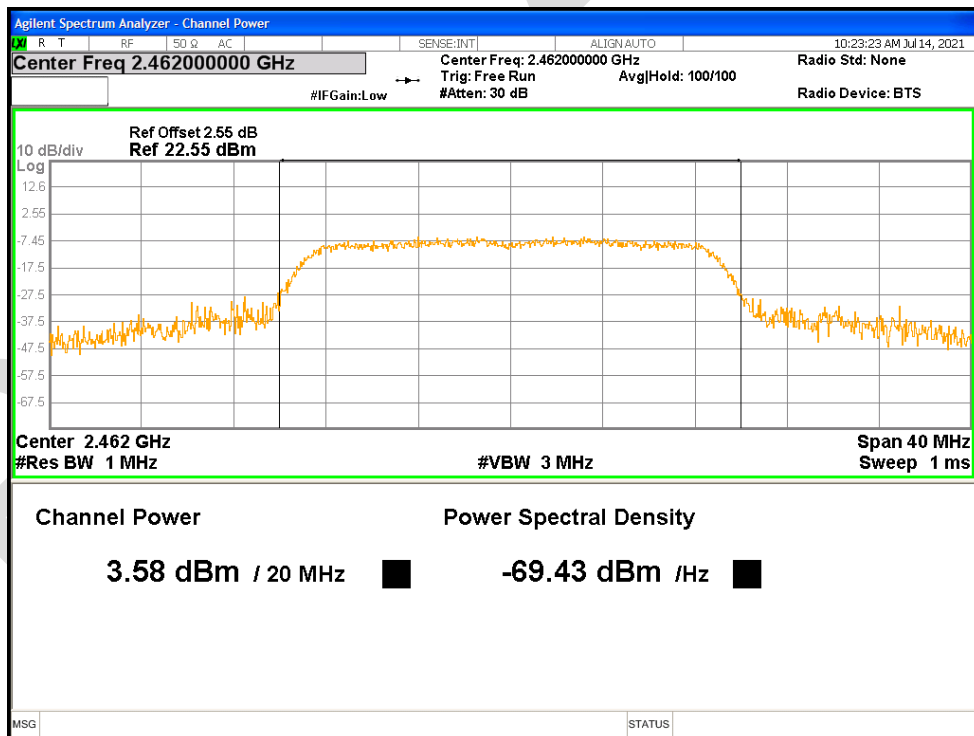
Power NVNT n20 2412MHz Ant1



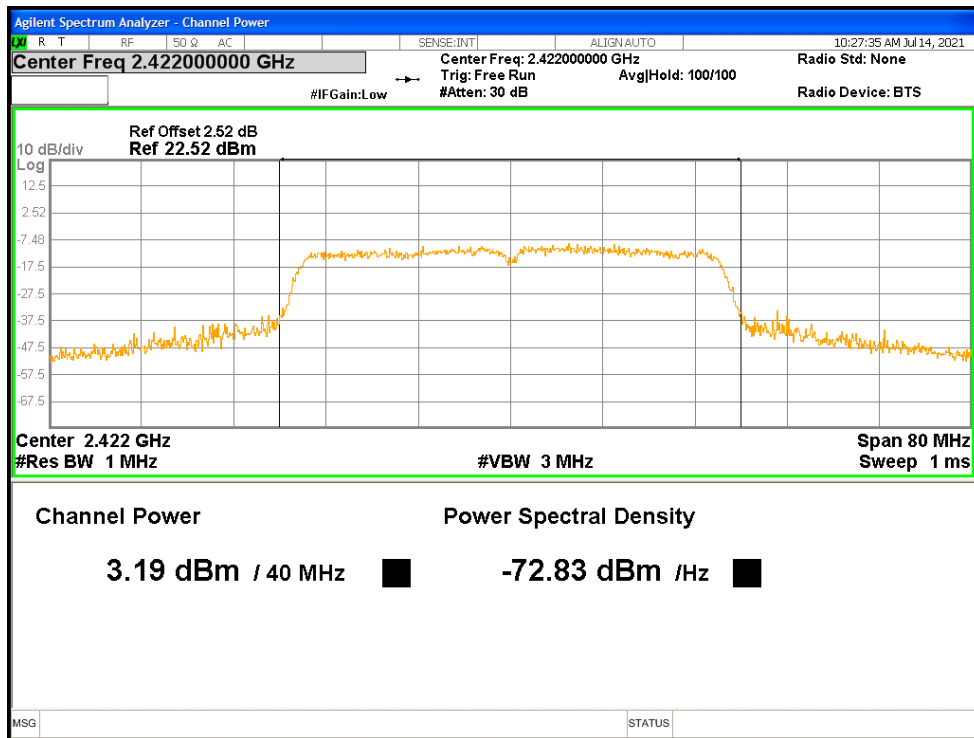
Power NVNT n20 2437MHz Ant1



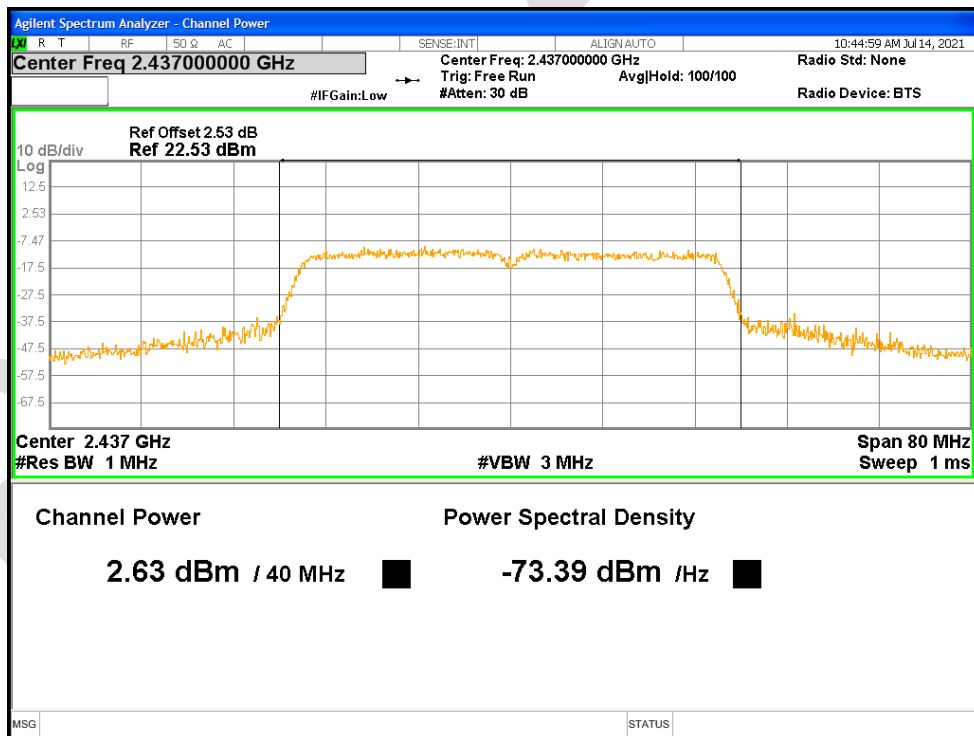
Power NVNT n20 2462MHz Ant1



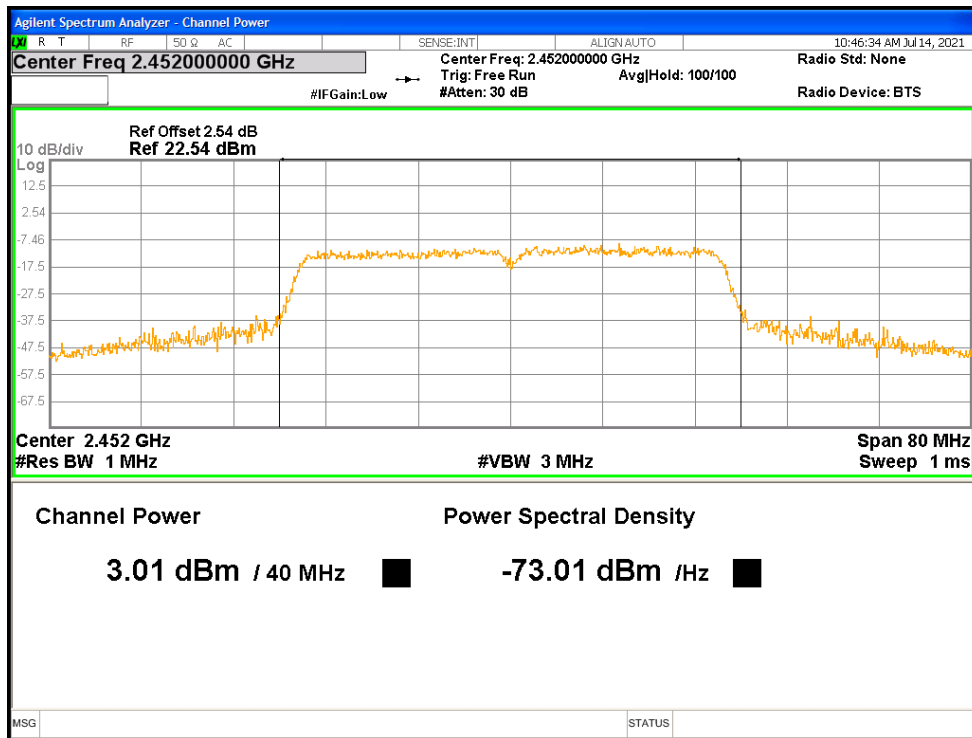
Power NVNT n40 2422MHz Ant1



Power NVNT n40 2437MHz Ant1



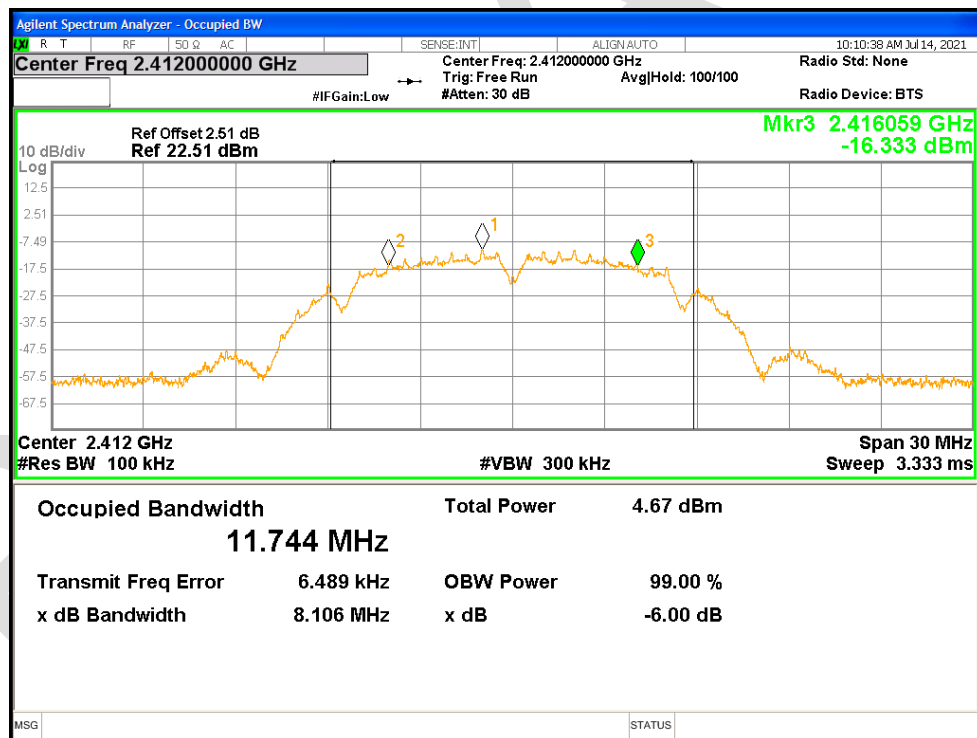
Power NVNT n40 2452MHz Ant1



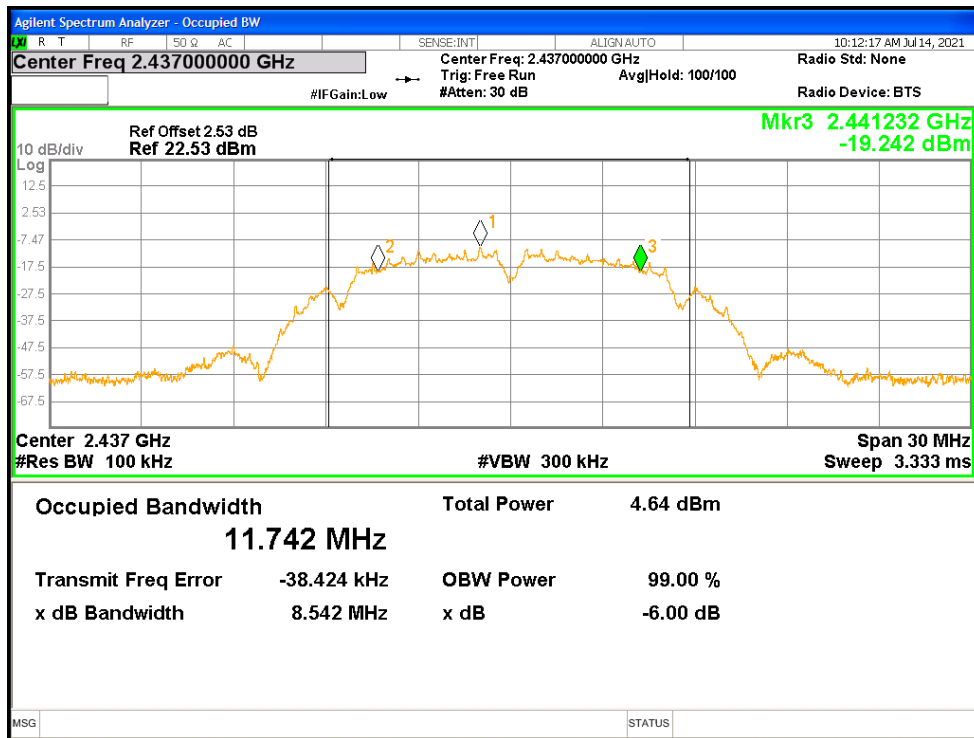
19.2 -6DB BANDWIDTH

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	8.106	0.5	Pass
NVNT	b	2437	Ant1	8.542	0.5	Pass
NVNT	b	2462	Ant1	8.036	0.5	Pass
NVNT	g	2412	Ant1	16.316	0.5	Pass
NVNT	g	2437	Ant1	16.299	0.5	Pass
NVNT	g	2462	Ant1	16.325	0.5	Pass
NVNT	n20	2412	Ant1	17.35	0.5	Pass
NVNT	n20	2437	Ant1	16.887	0.5	Pass
NVNT	n20	2462	Ant1	16.348	0.5	Pass
NVNT	n40	2422	Ant1	35.227	0.5	Pass
NVNT	n40	2437	Ant1	35.761	0.5	Pass
NVNT	n40	2452	Ant1	35.451	0.5	Pass

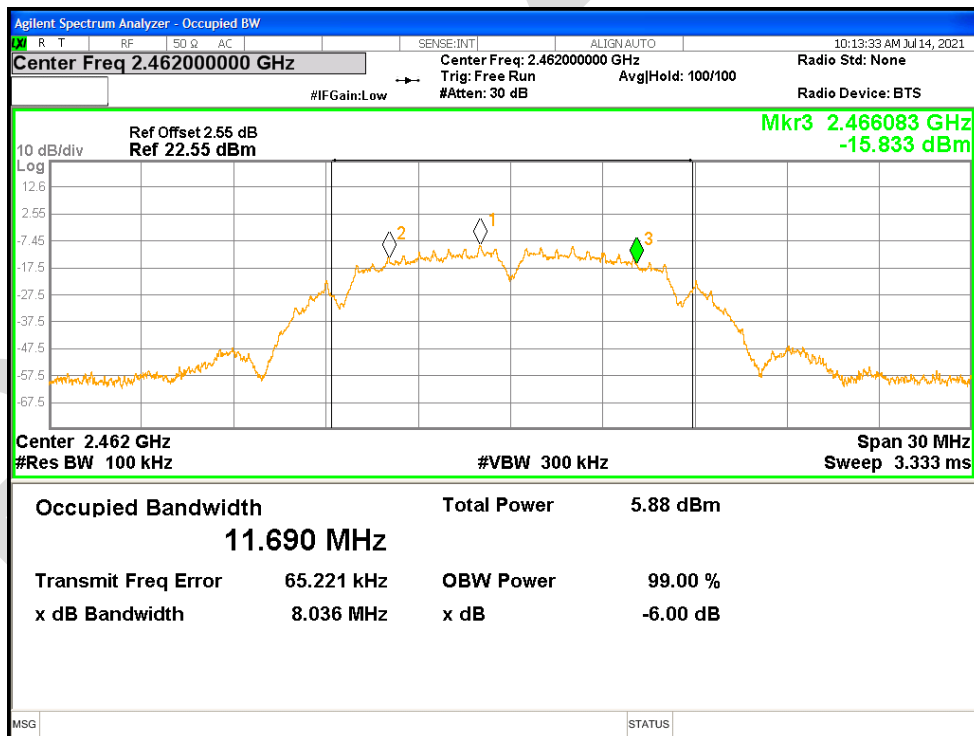
-6dB Bandwidth NVNT b 2412MHz Ant1



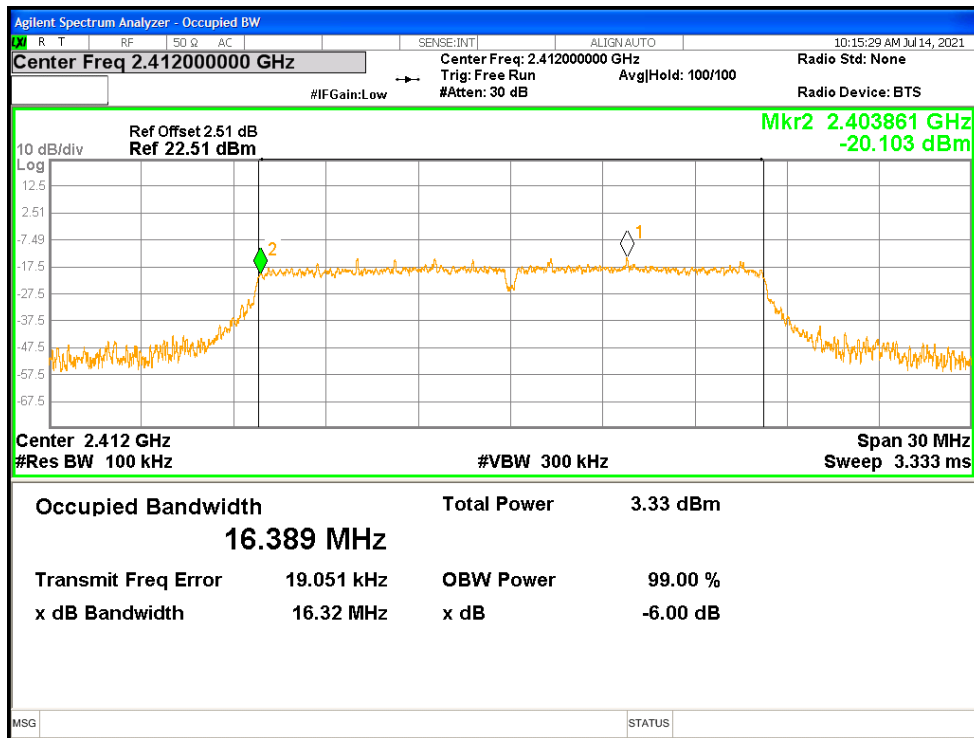
-6dB Bandwidth NVNT b 2437MHz Ant1



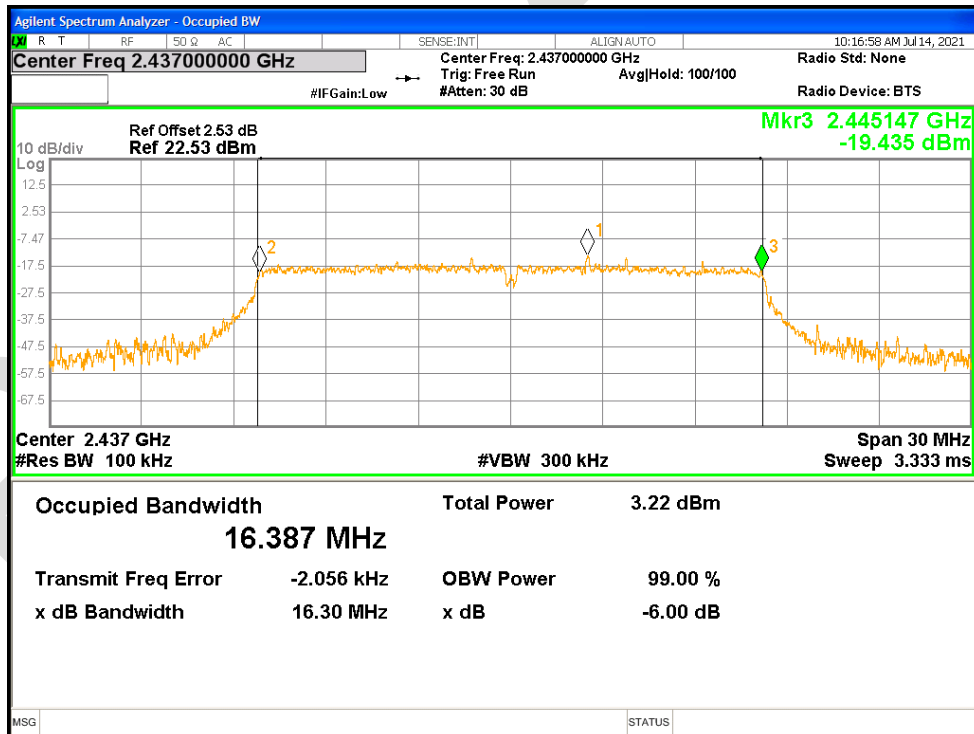
-6dB Bandwidth NVNT b 2462MHz Ant1



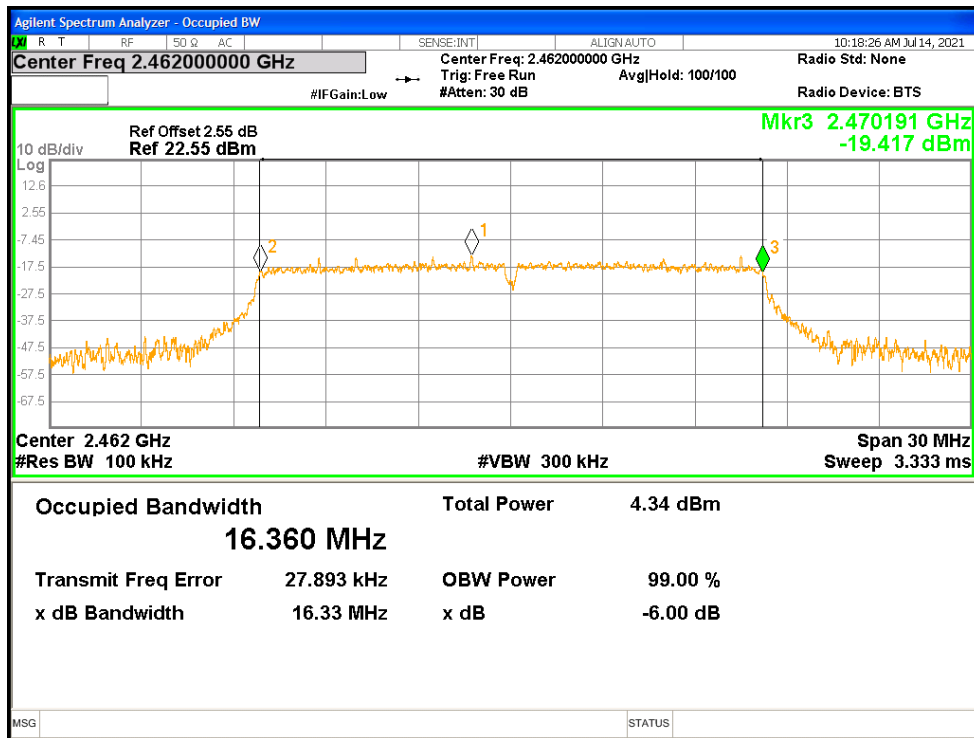
-6dB Bandwidth NVNT g 2412MHz Ant1



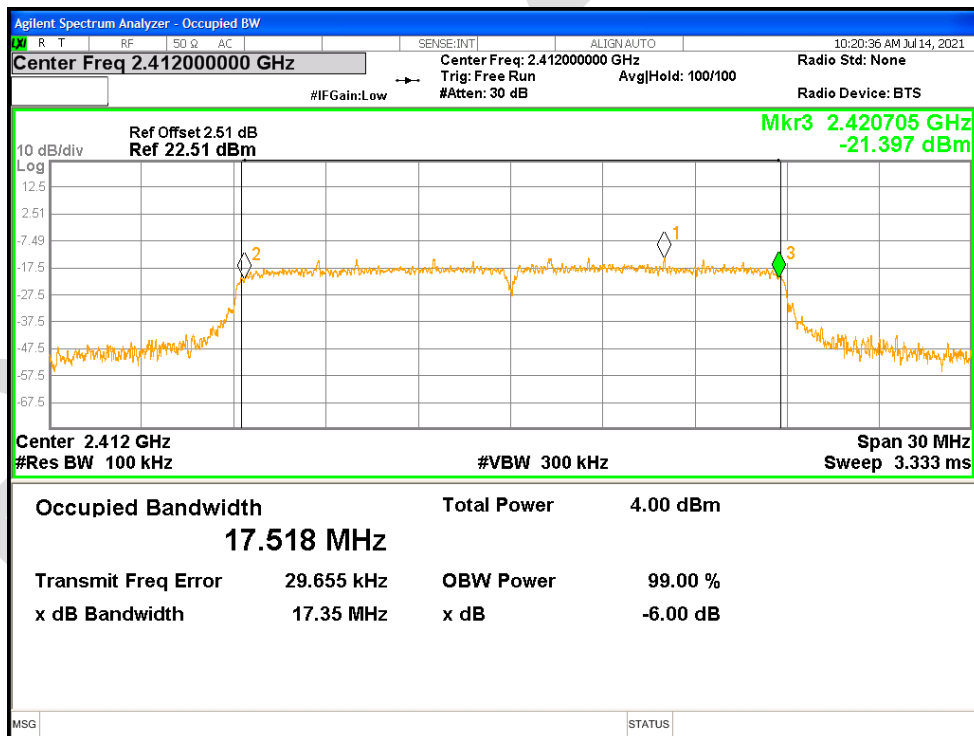
-6dB Bandwidth NVNT g 2437MHz Ant1



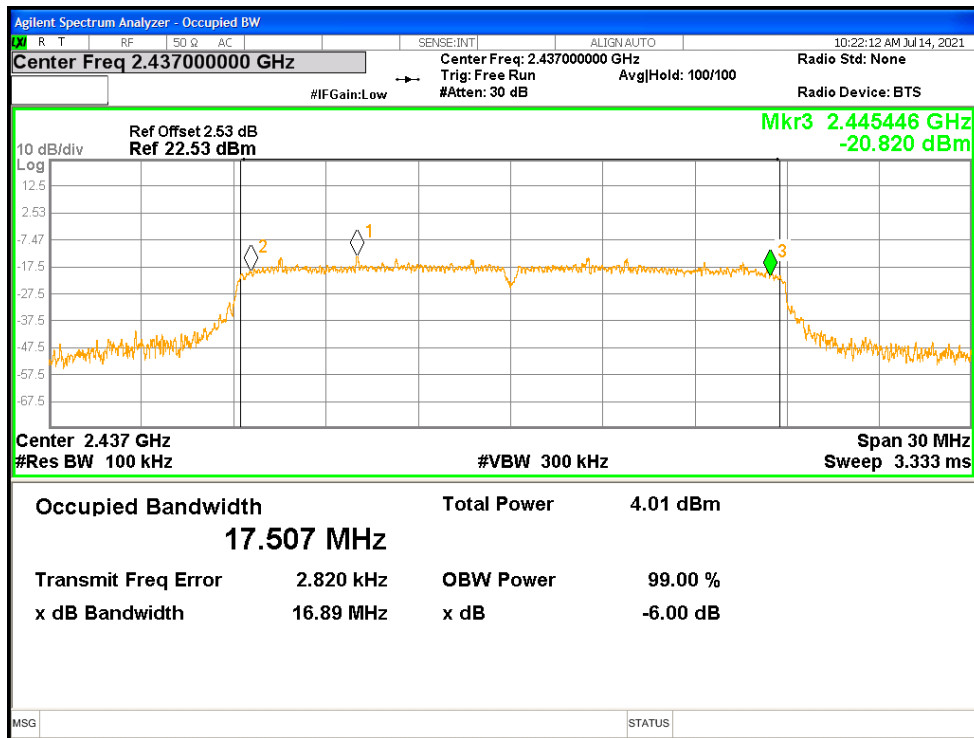
-6dB Bandwidth NVNT g 2462MHz Ant1



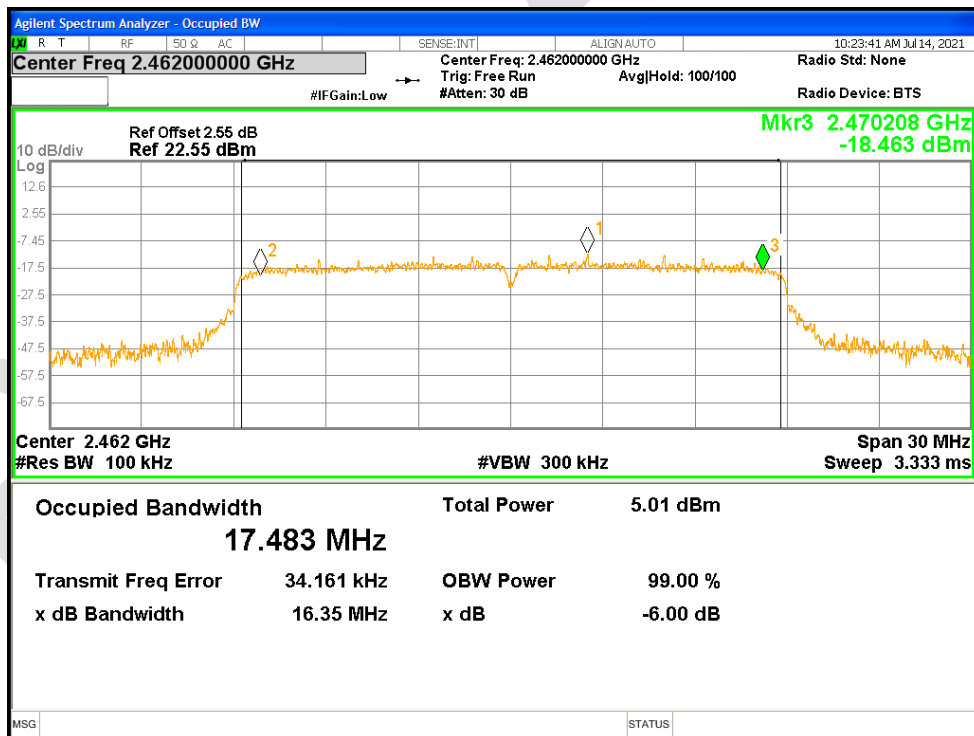
-6dB Bandwidth NVNT n20 2412MHz Ant1



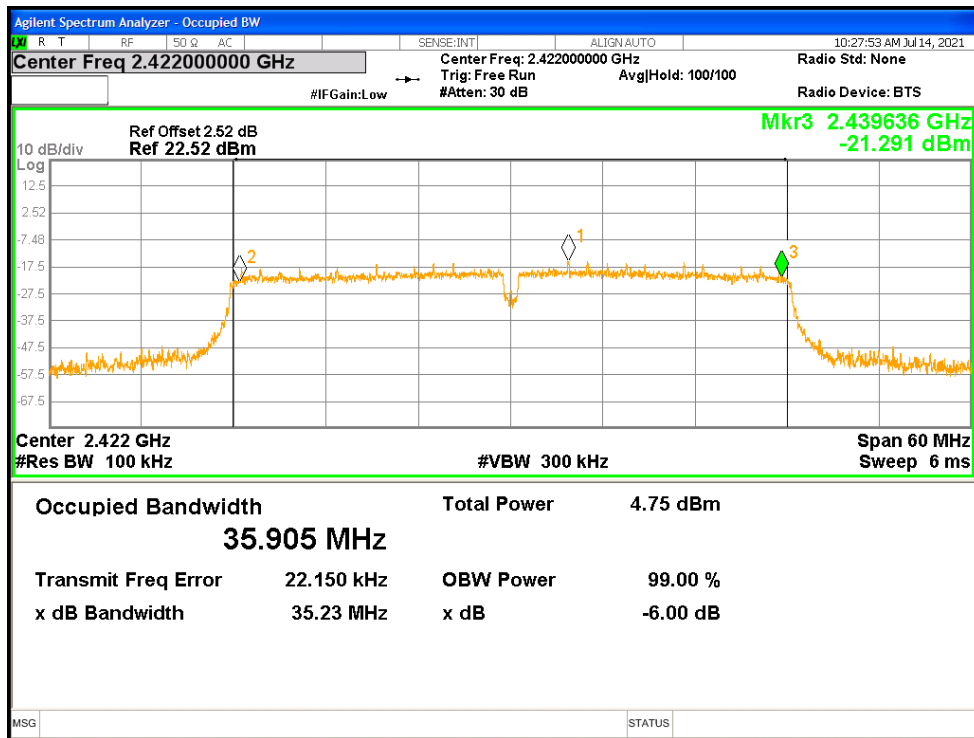
-6dB Bandwidth NVNT n20 2437MHz Ant1



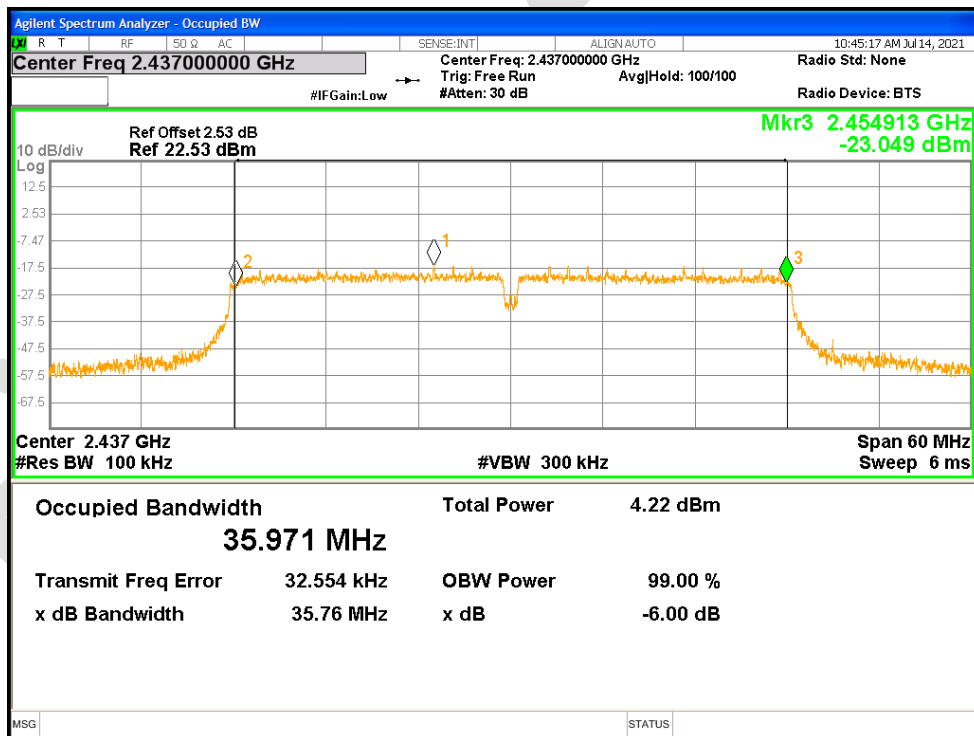
-6dB Bandwidth NVNT n20 2462MHz Ant1



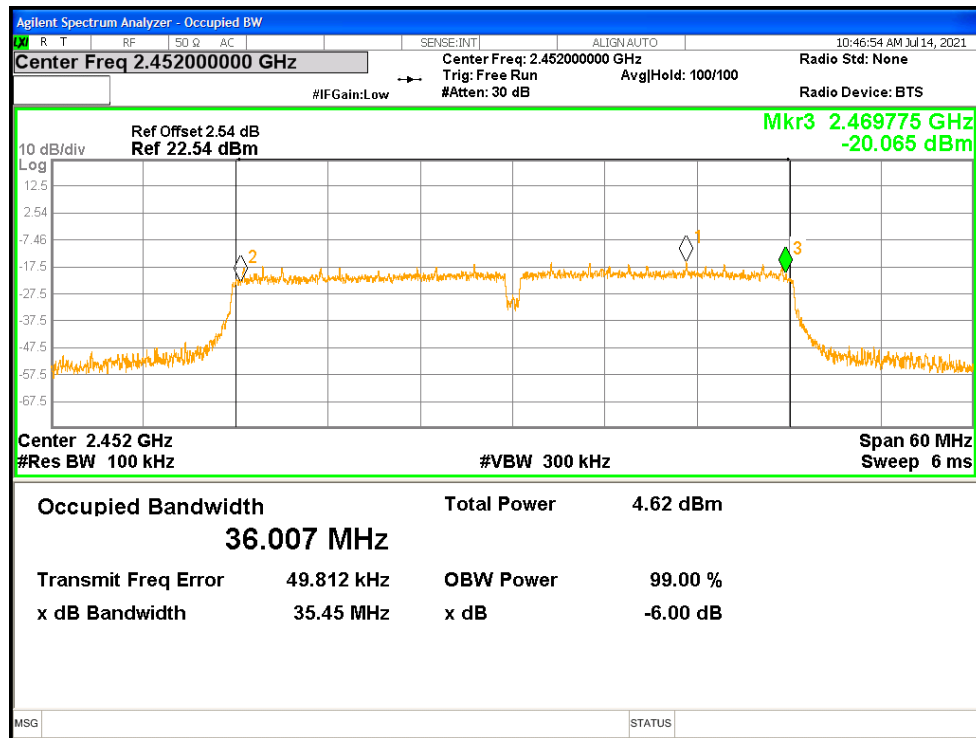
-6dB Bandwidth NVNT n40 2422MHz Ant1



-6dB Bandwidth NVNT n40 2437MHz Ant1



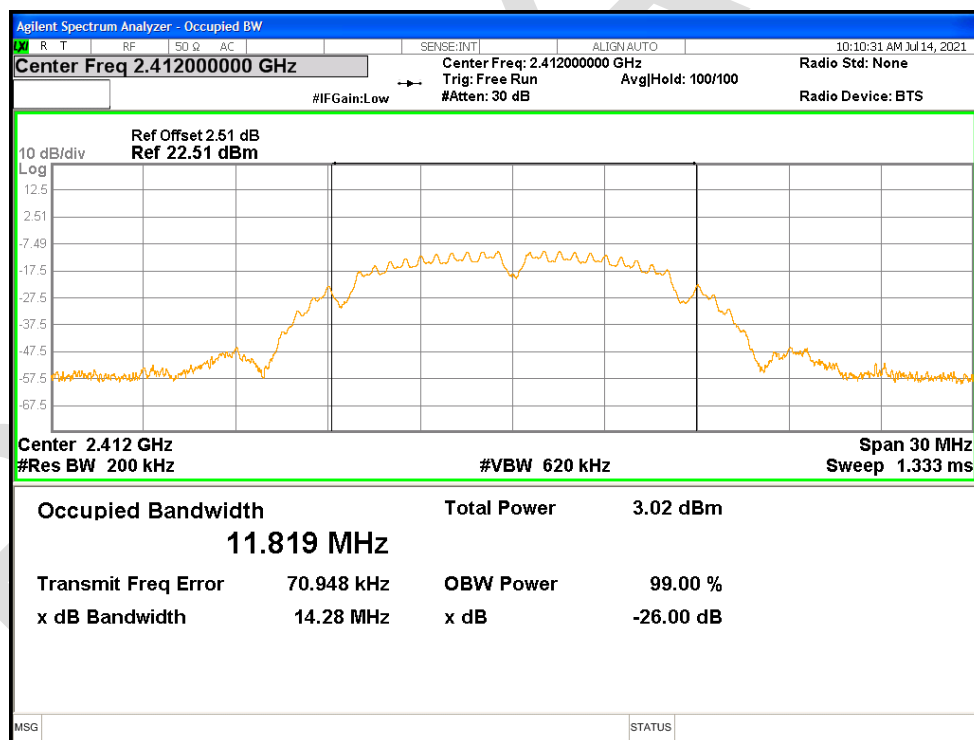
-6dB Bandwidth NVNT n40 2452MHz Ant1



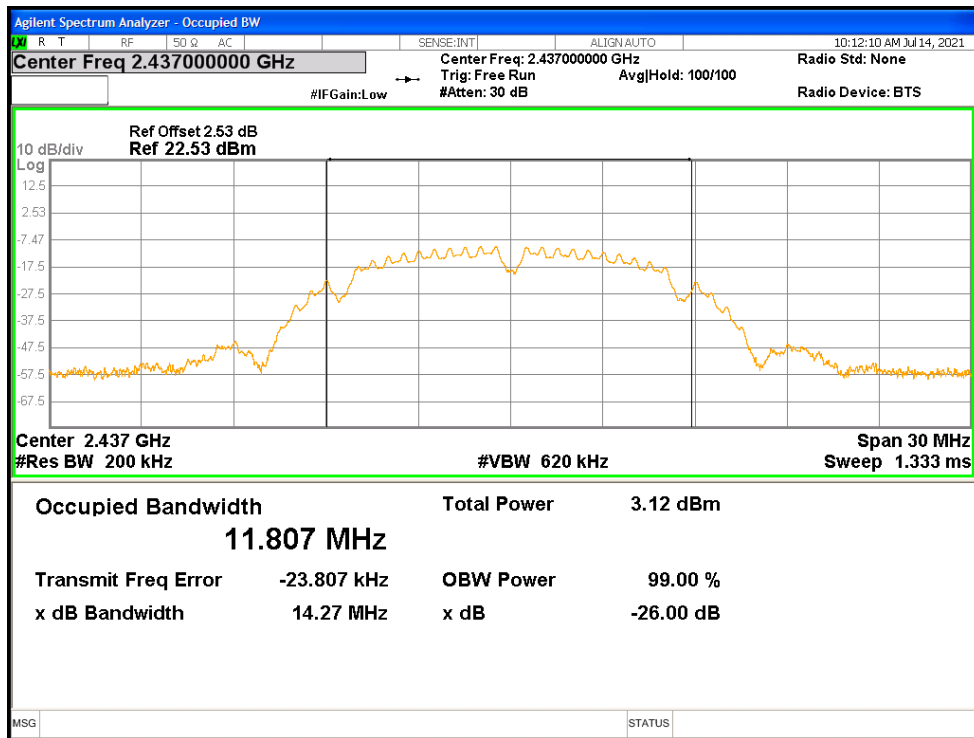
19.3 OCCUPIED CHANNEL BANDWIDTH

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	11.81862518
NVNT	b	2437	Ant1	11.80684163
NVNT	b	2462	Ant1	11.69778125
NVNT	g	2412	Ant1	16.50594443
NVNT	g	2437	Ant1	16.43822978
NVNT	g	2462	Ant1	16.42351747
NVNT	n20	2412	Ant1	17.54717388
NVNT	n20	2437	Ant1	17.53807364
NVNT	n20	2462	Ant1	17.49889981
NVNT	n40	2422	Ant1	36.01789805
NVNT	n40	2437	Ant1	36.09736029
NVNT	n40	2452	Ant1	36.11685705

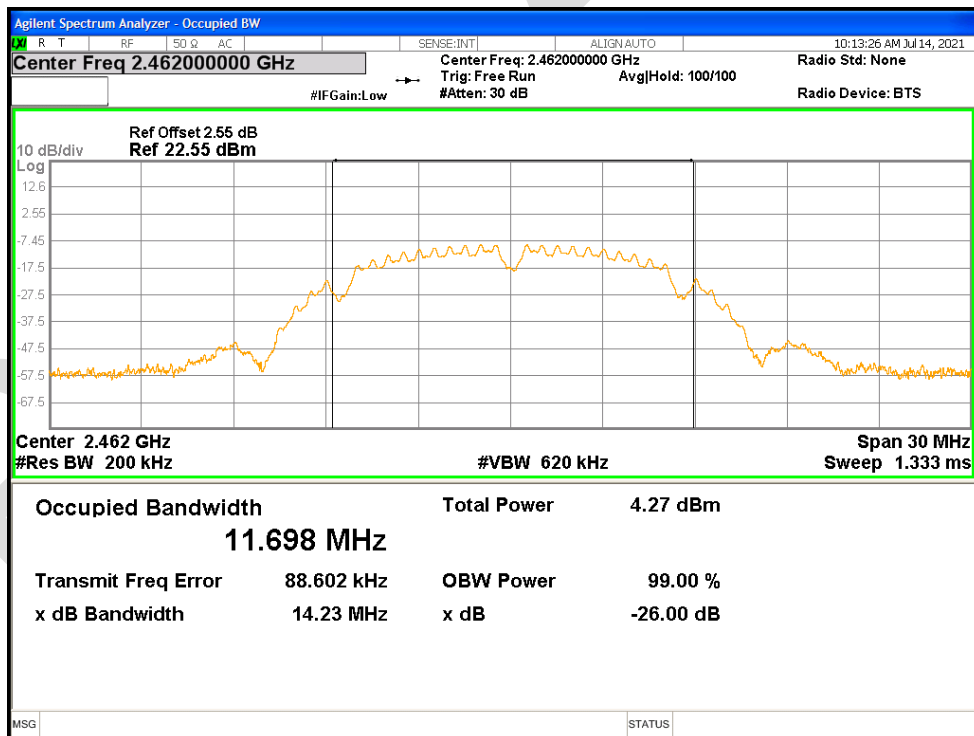
OBW NVNT b 2412MHz Ant1



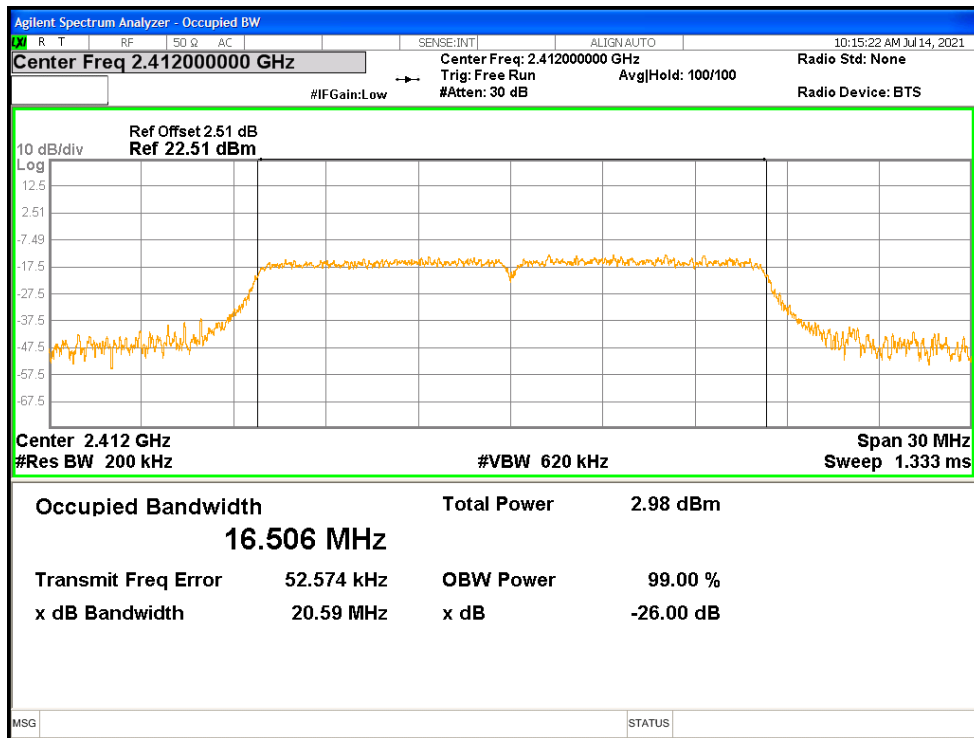
OBW NVNT b 2437MHz Ant1



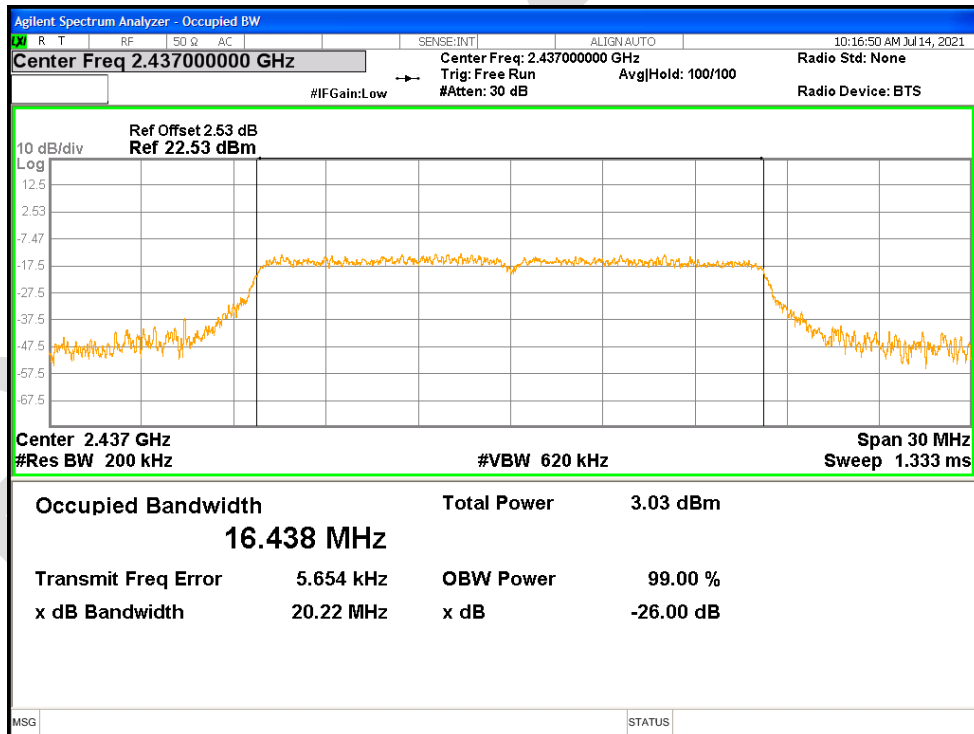
OBW NVNT b 2462MHz Ant1



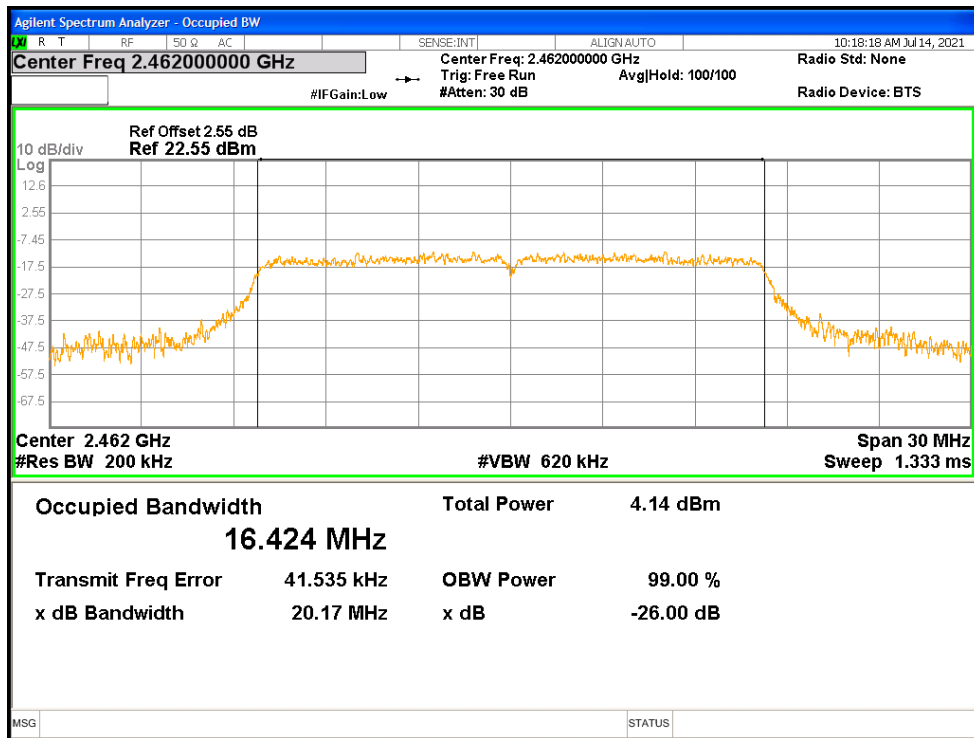
OBW NVNT g 2412MHz Ant1



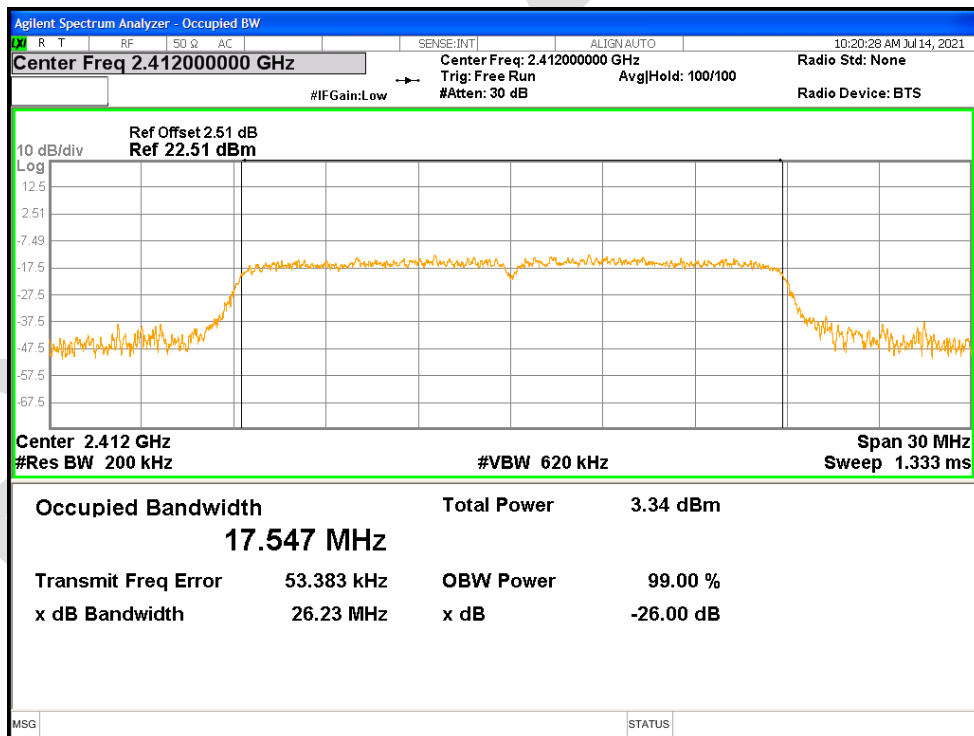
OBW NVNT g 2437MHz Ant1



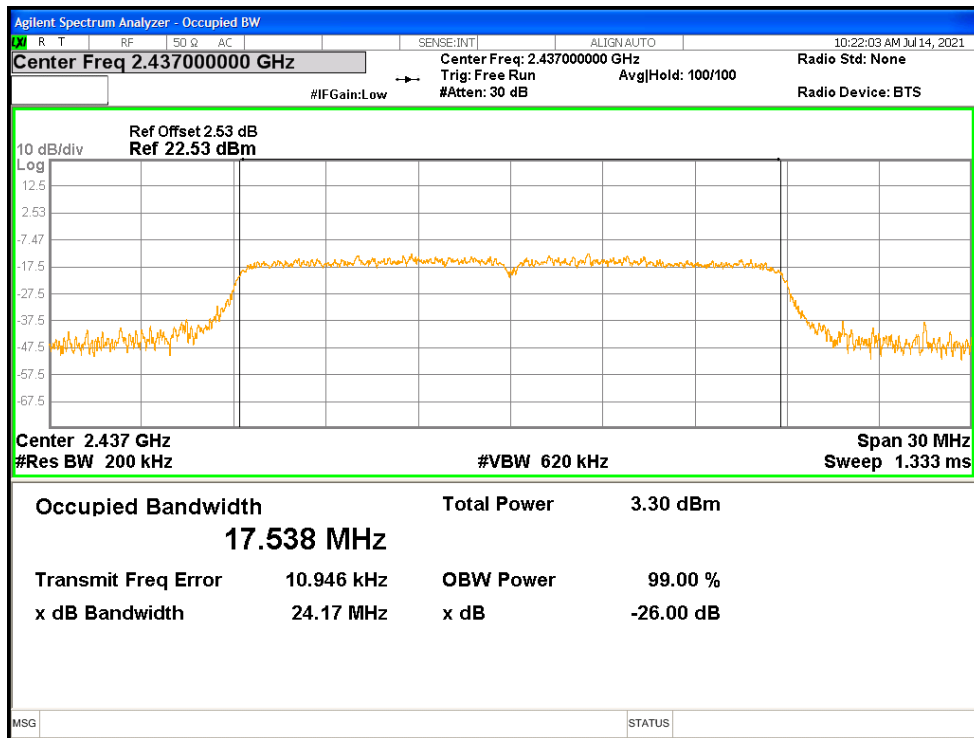
OBW NVNT g 2462MHz Ant1



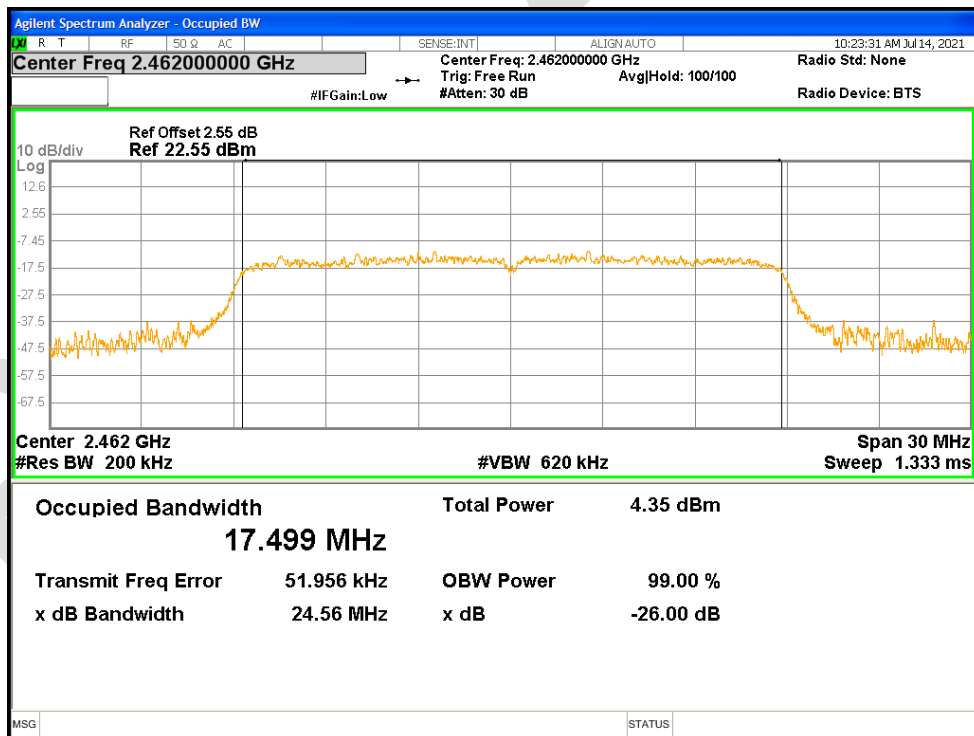
OBW NVNT n20 2412MHz Ant1



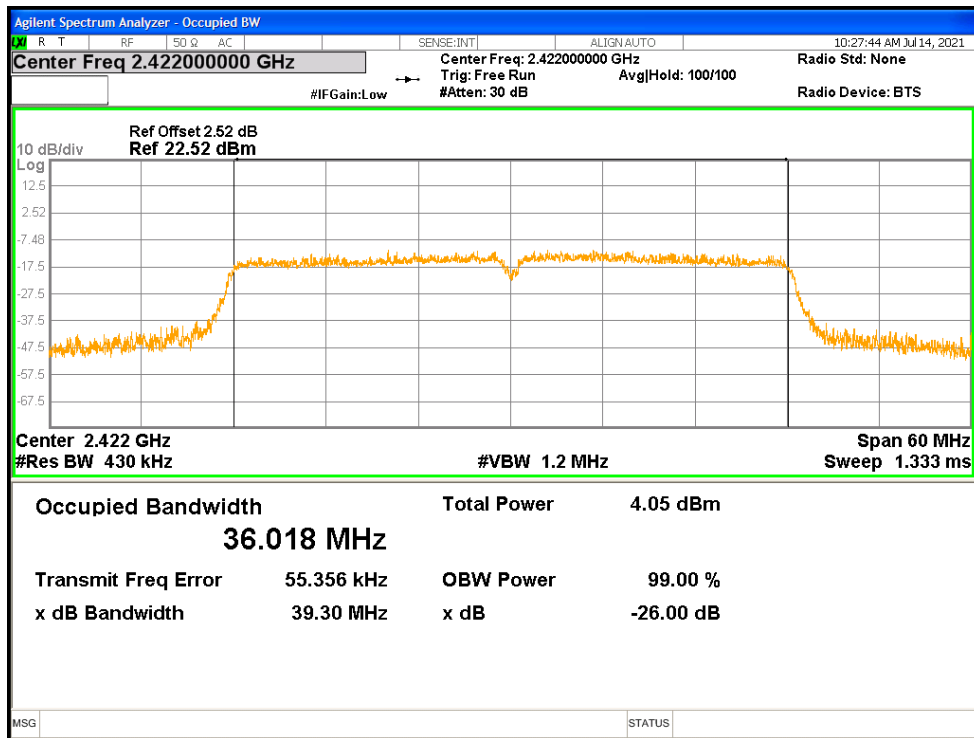
OBW NVNT n20 2437MHz Ant1



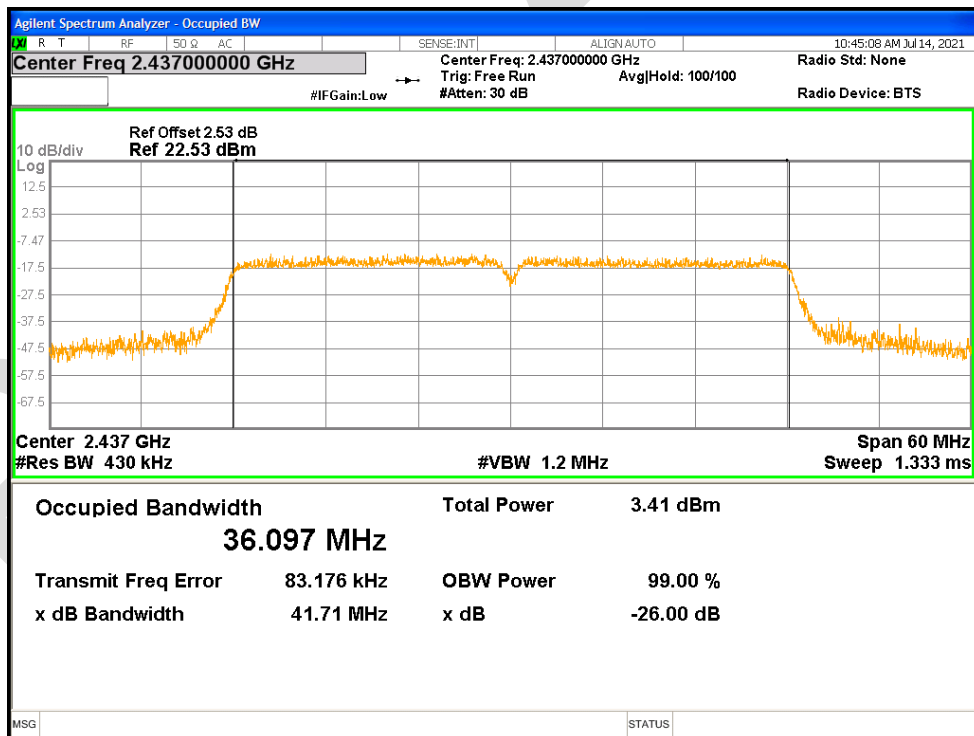
OBW NVNT n20 2462MHz Ant1



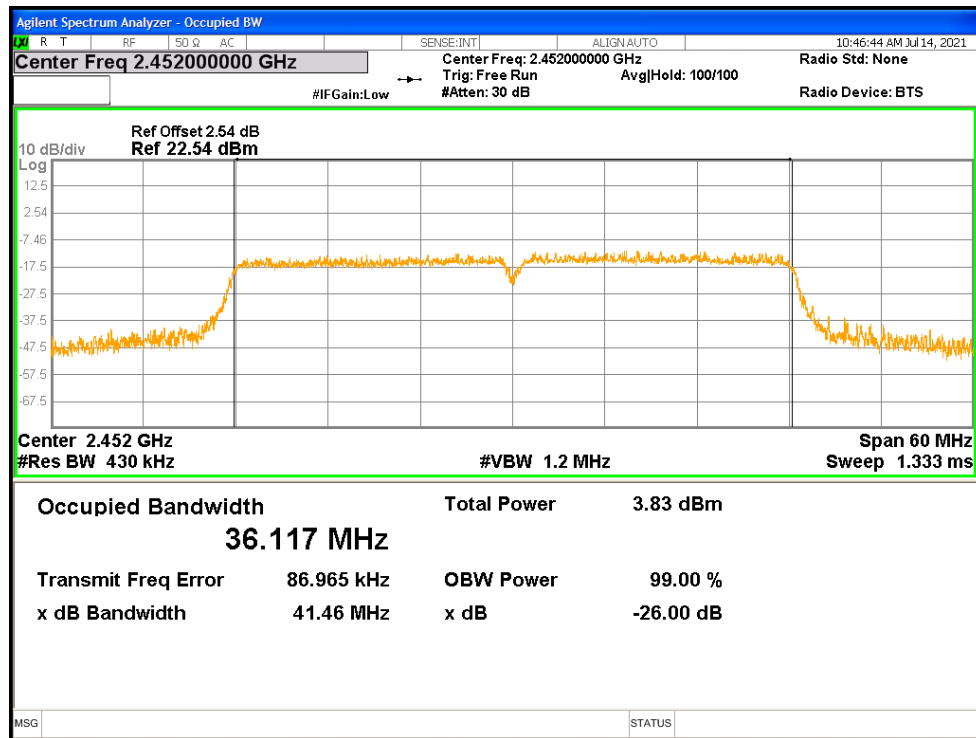
OBW NVNT n40 2422MHz Ant1



OBW NVNT n40 2437MHz Ant1



OBW NVNT n40 2452MHz Ant1



19.4 MAXIMUM POWER SPECTRAL DENSITY LEVEL

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-10.633	8	Pass
NVNT	b	2437	Ant1	-10.298	8	Pass
NVNT	b	2462	Ant1	-8.899	8	Pass
NVNT	g	2412	Ant1	-13.324	8	Pass
NVNT	g	2437	Ant1	-13.776	8	Pass
NVNT	g	2462	Ant1	-12.526	8	Pass
NVNT	n20	2412	Ant1	-13.614	8	Pass
NVNT	n20	2437	Ant1	-13.869	8	Pass
NVNT	n20	2462	Ant1	-12.95	8	Pass
NVNT	n40	2422	Ant1	-15.866	8	Pass
NVNT	n40	2437	Ant1	-16.507	8	Pass
NVNT	n40	2452	Ant1	-16.409	8	Pass

PSD NVNT b 2412MHz Ant1



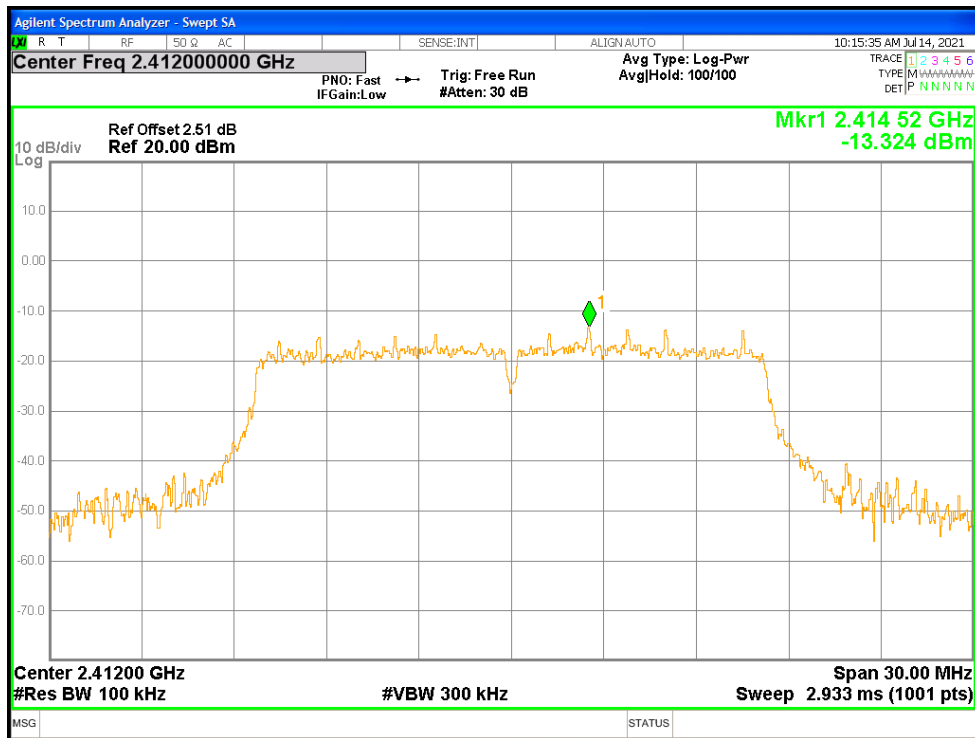
PSD NVNT b 2437MHz Ant1



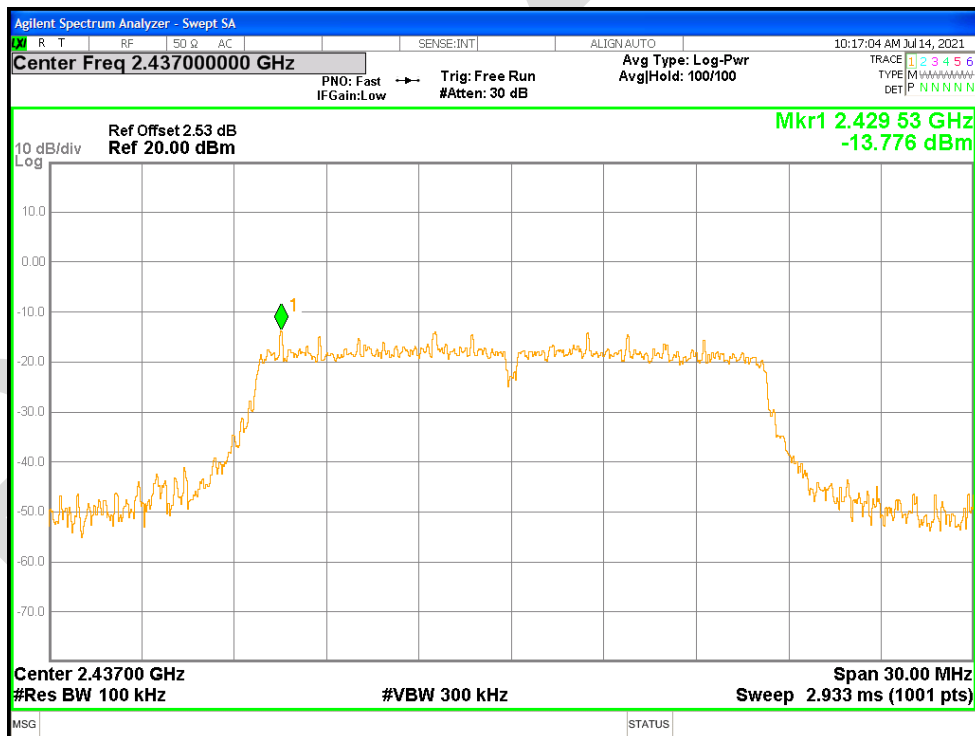
PSD NVNT b 2462MHz Ant1



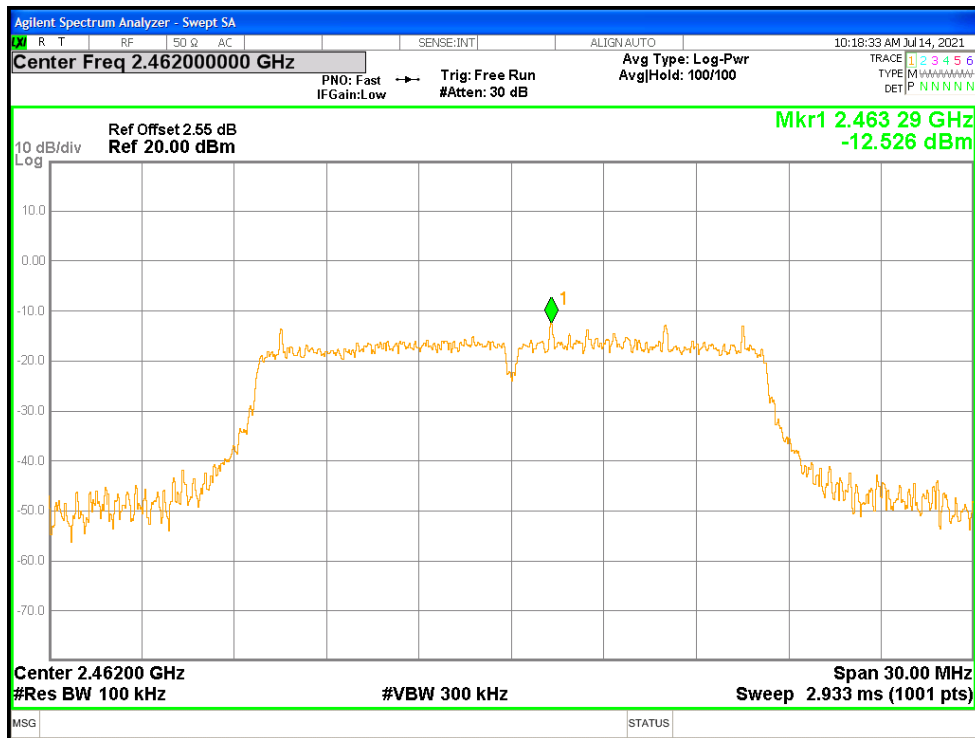
PSD NVNT g 2412MHz Ant1



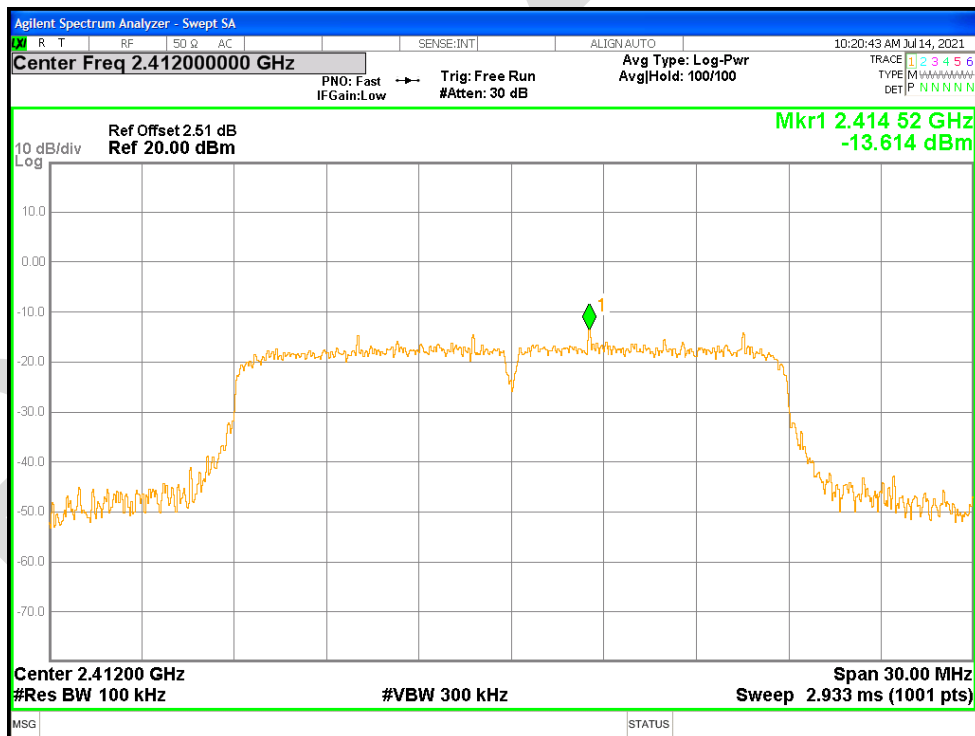
PSD NVNT g 2437MHz Ant1



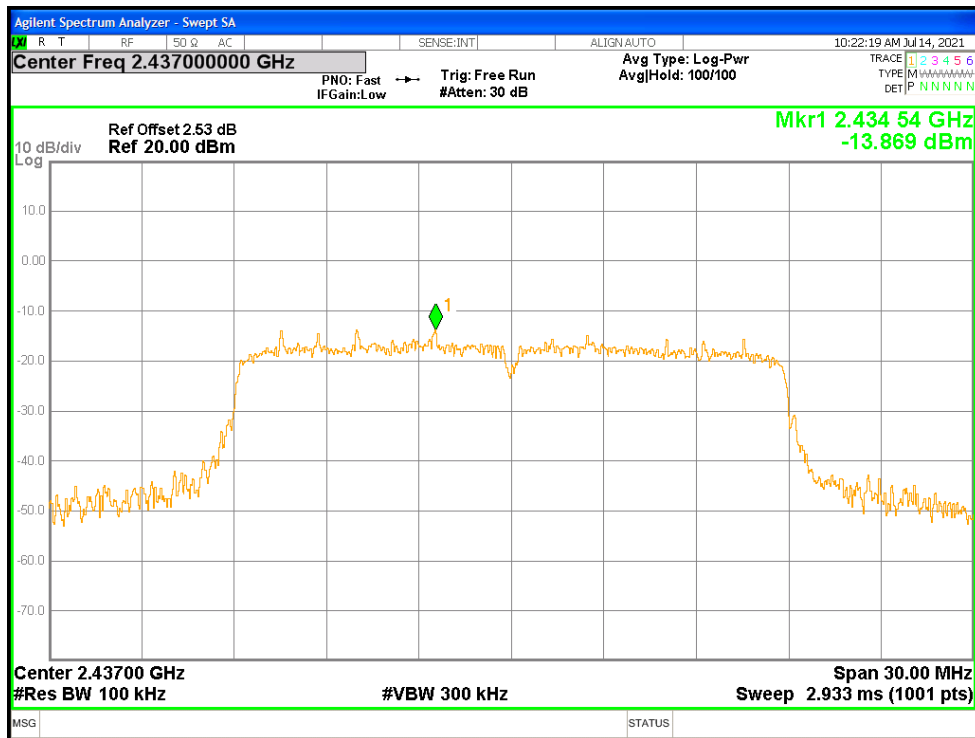
PSD NVNT g 2462MHz Ant1



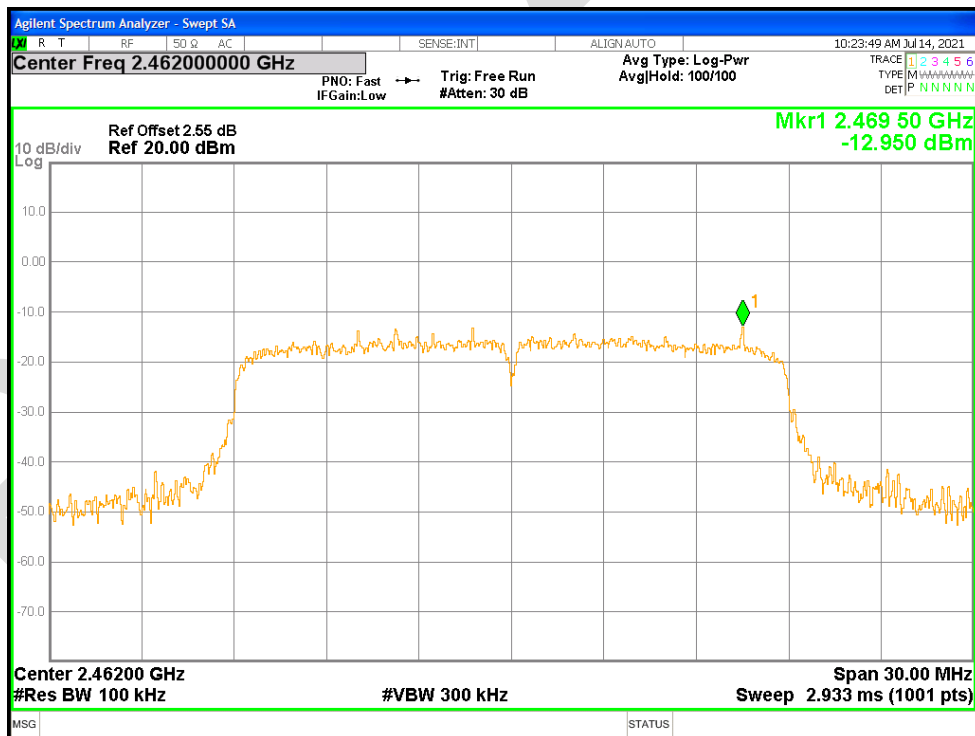
PSD NVNT n20 2412MHz Ant1



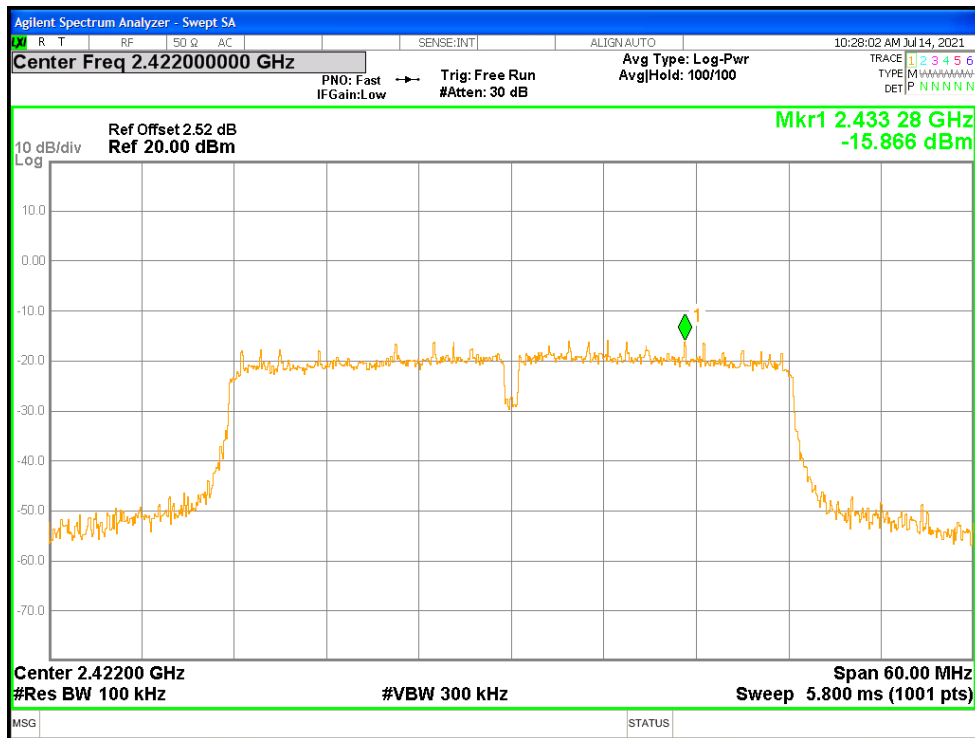
PSD NVNT n20 2437MHz Ant1



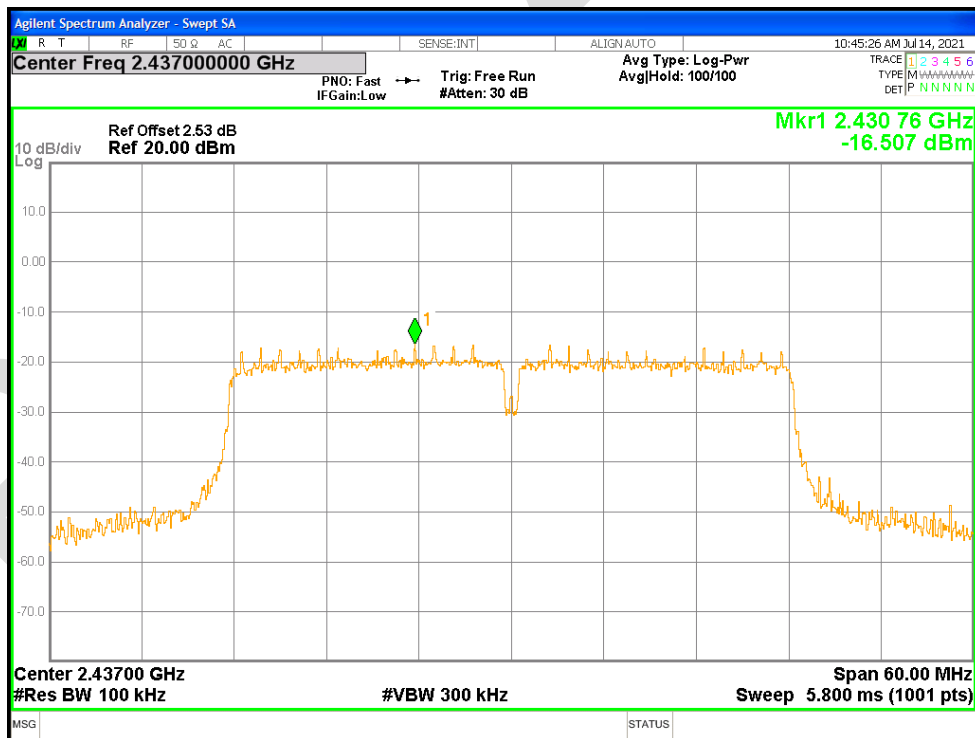
PSD NVNT n20 2462MHz Ant1



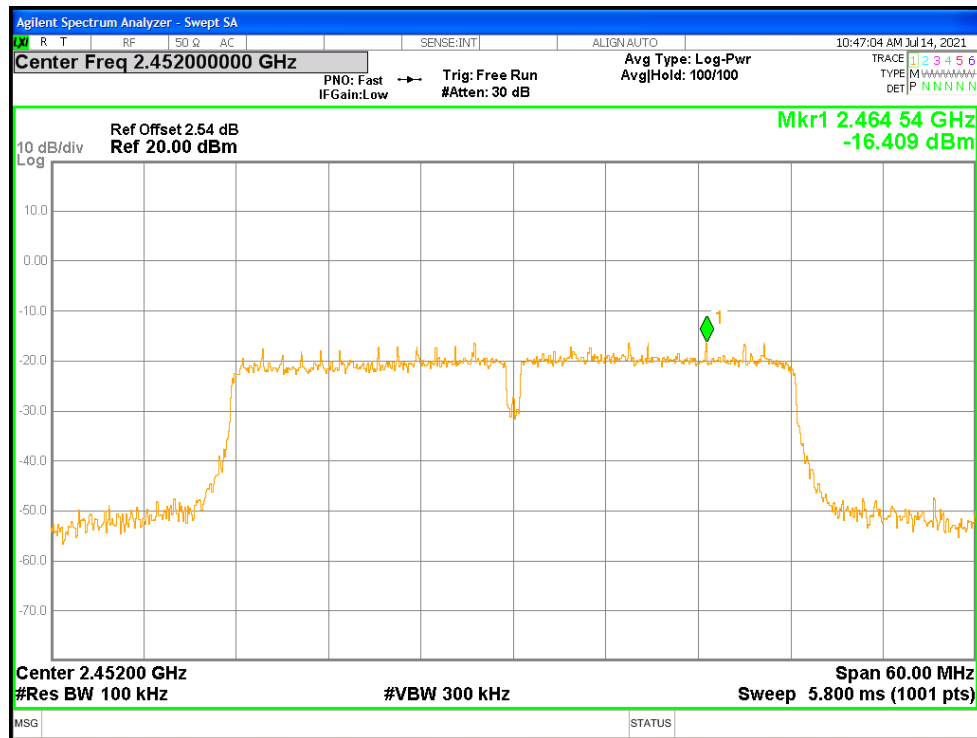
PSD NVNT n40 2422MHz Ant1



PSD NVNT n40 2437MHz Ant1



PSD NVNT n40 2452MHz Ant1



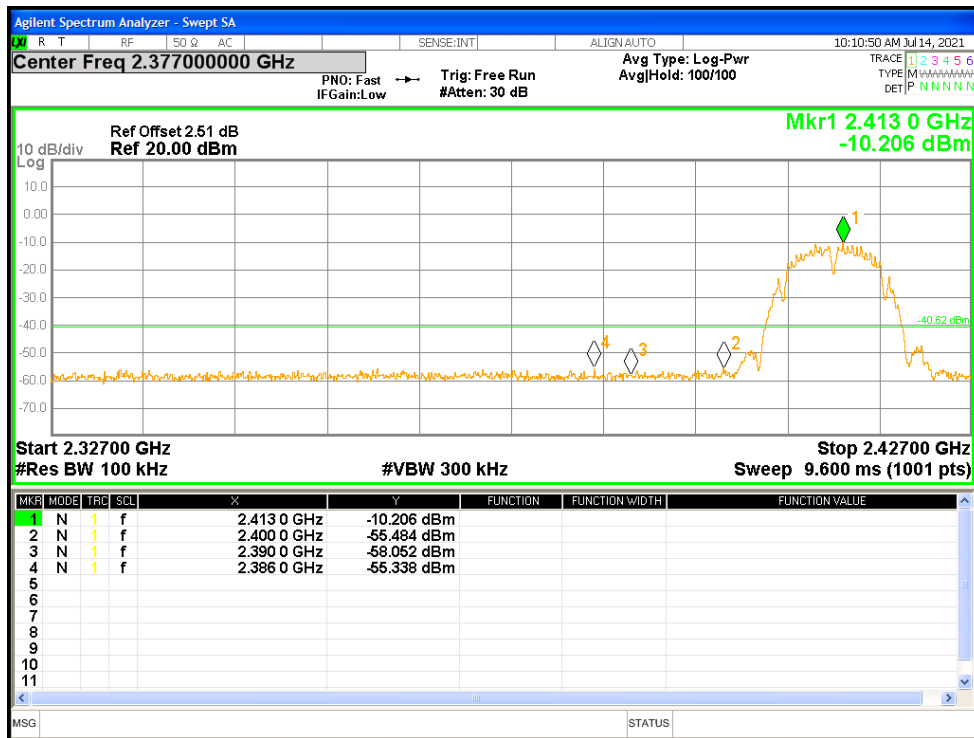
19.5 BAND EDGE

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-44.71	-30	Pass
NVNT	b	2462	Ant1	-46.69	-30	Pass
NVNT	g	2412	Ant1	-40.75	-30	Pass
NVNT	g	2462	Ant1	-40.66	-30	Pass
NVNT	n20	2412	Ant1	-39.5	-30	Pass
NVNT	n20	2462	Ant1	-39.32	-30	Pass
NVNT	n40	2422	Ant1	-37.48	-30	Pass
NVNT	n40	2452	Ant1	-35.27	-30	Pass

Band Edge NVNT b 2412MHz Ant1 Ref



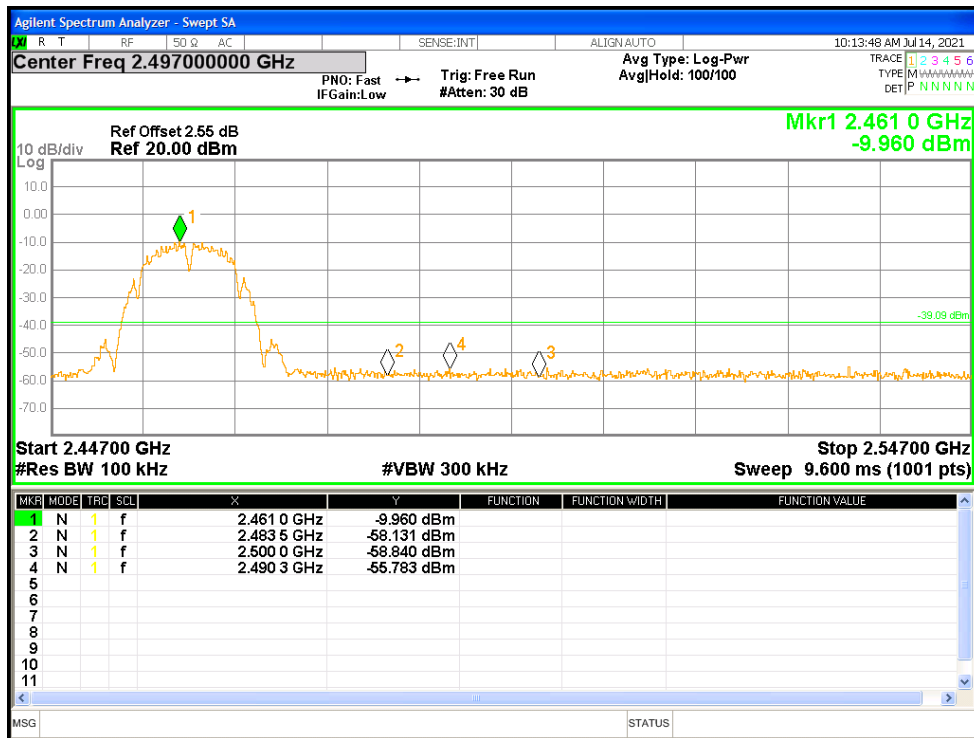
Band Edge NVNT b 2412MHz Ant1 Emission



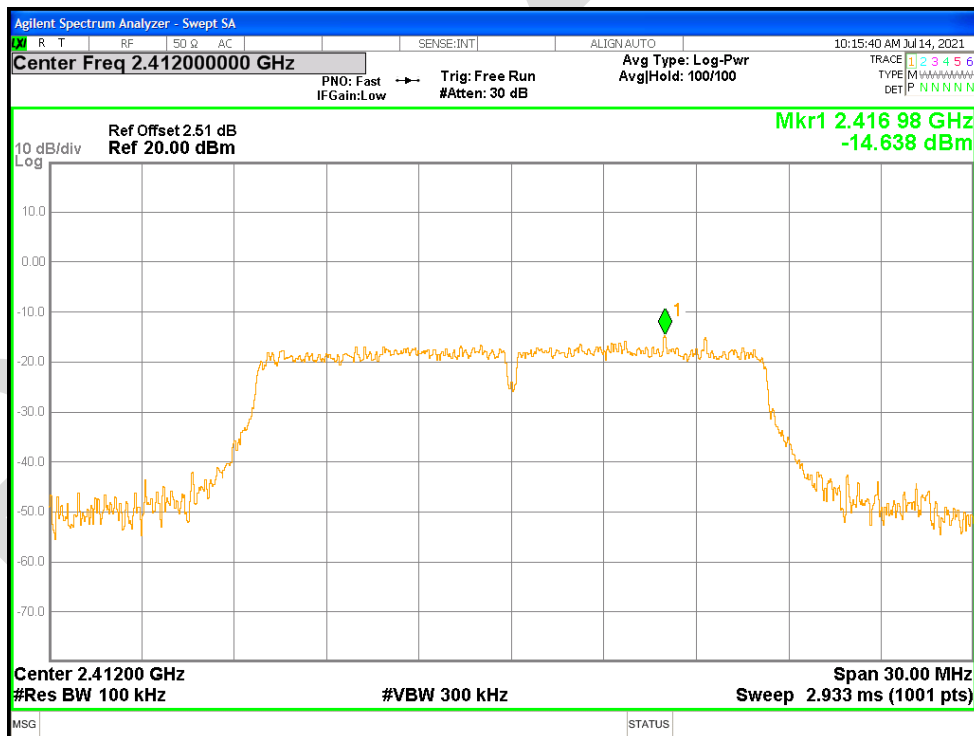
Band Edge NVNT b 2462MHz Ant1 Ref



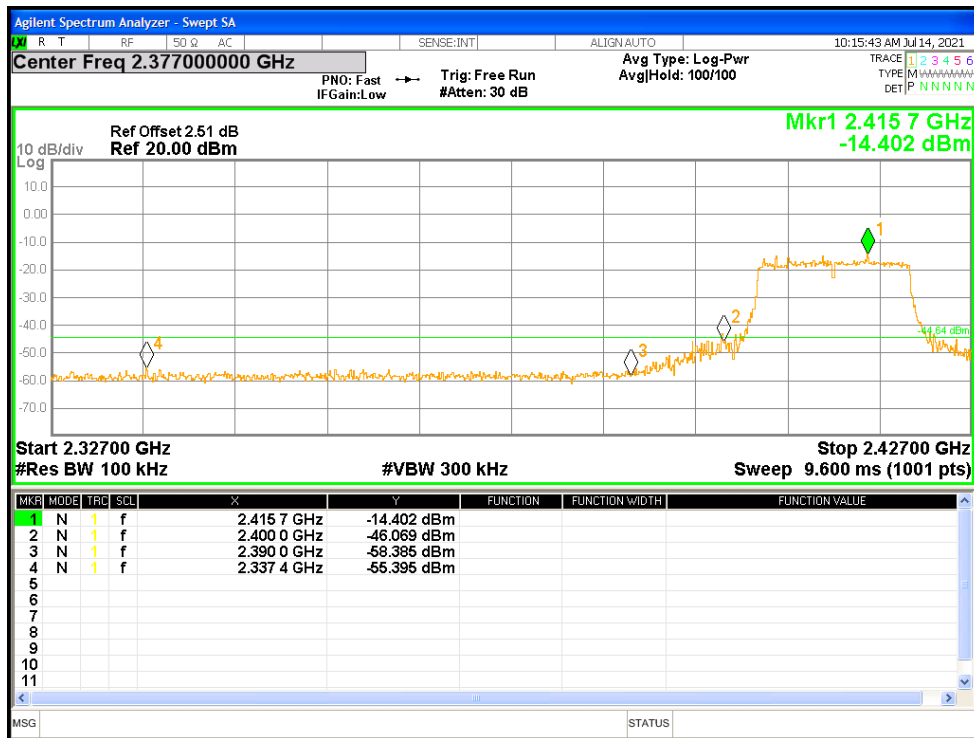
Band Edge NVNT b 2462MHz Ant1 Emission



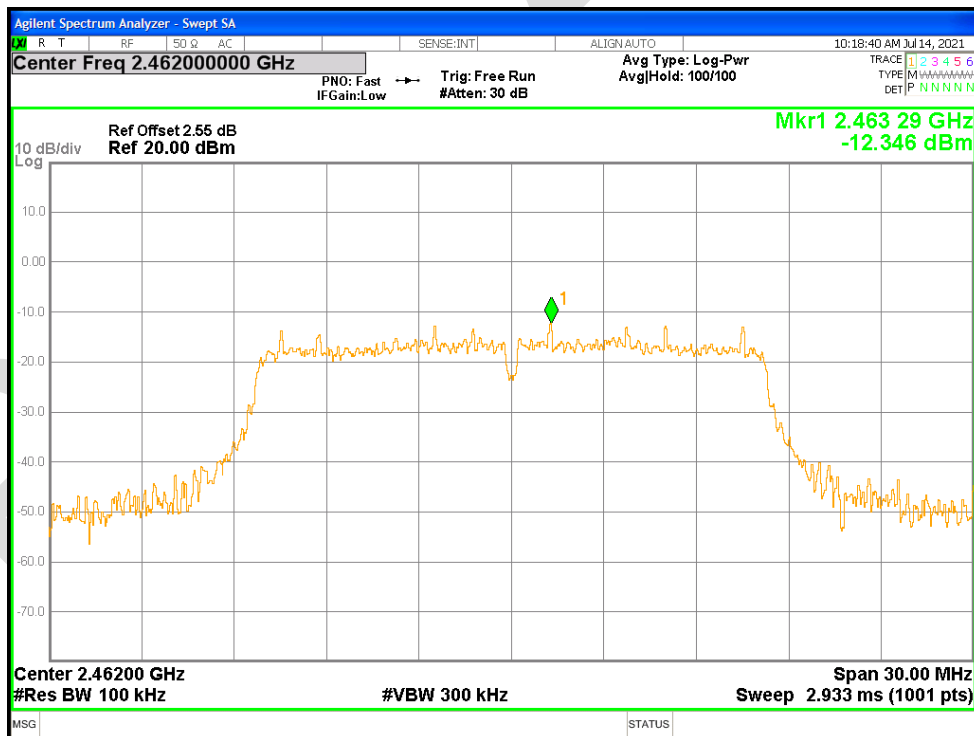
Band Edge NVNT g 2412MHz Ant1 Ref



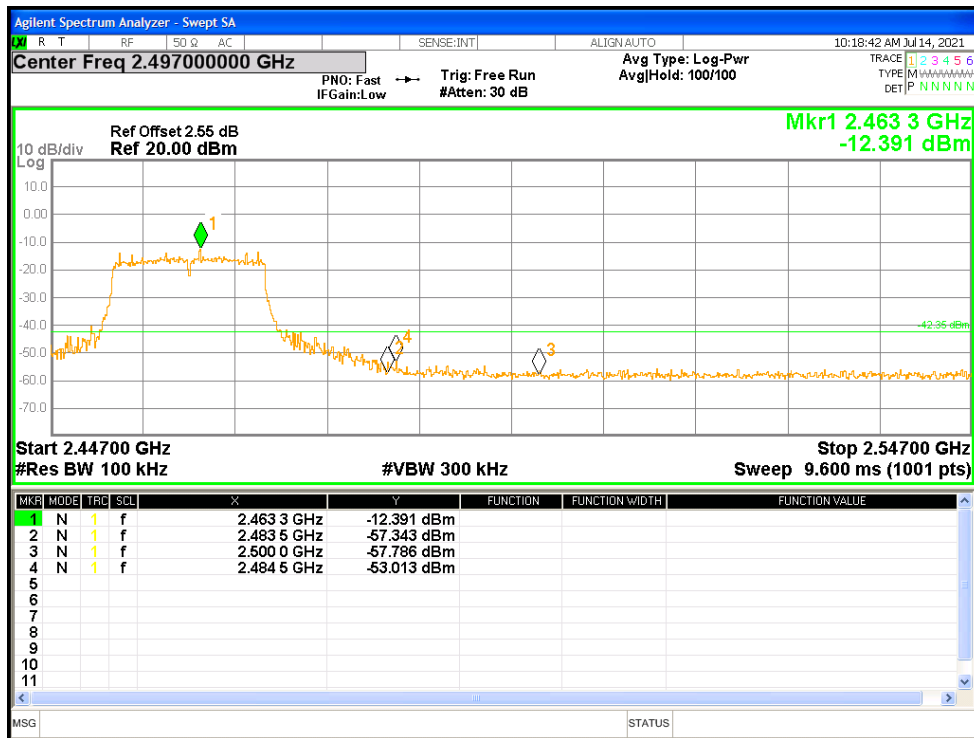
Band Edge NVNT g 2412MHz Ant1 Emission



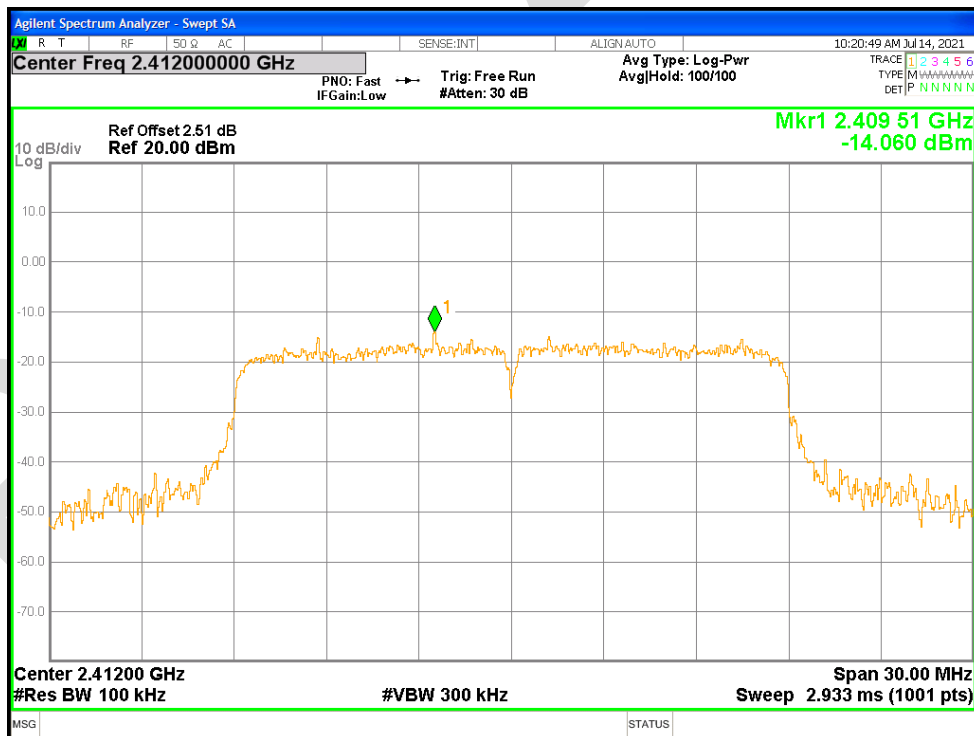
Band Edge NVNT g 2462MHz Ant1 Ref



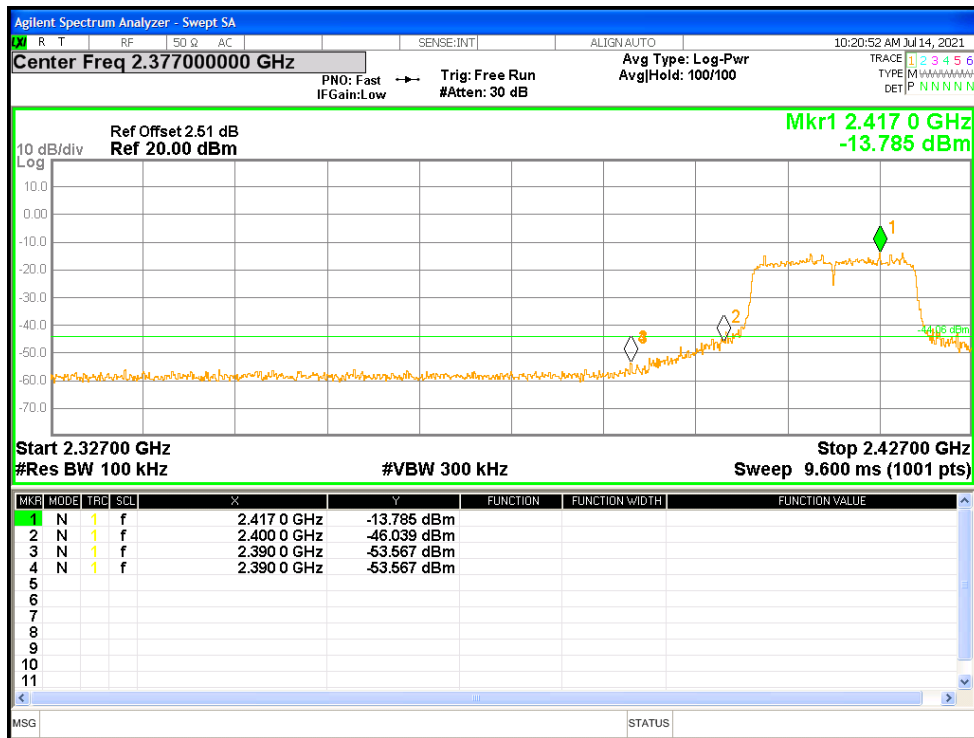
Band Edge NVNT g 2462MHz Ant1 Emission



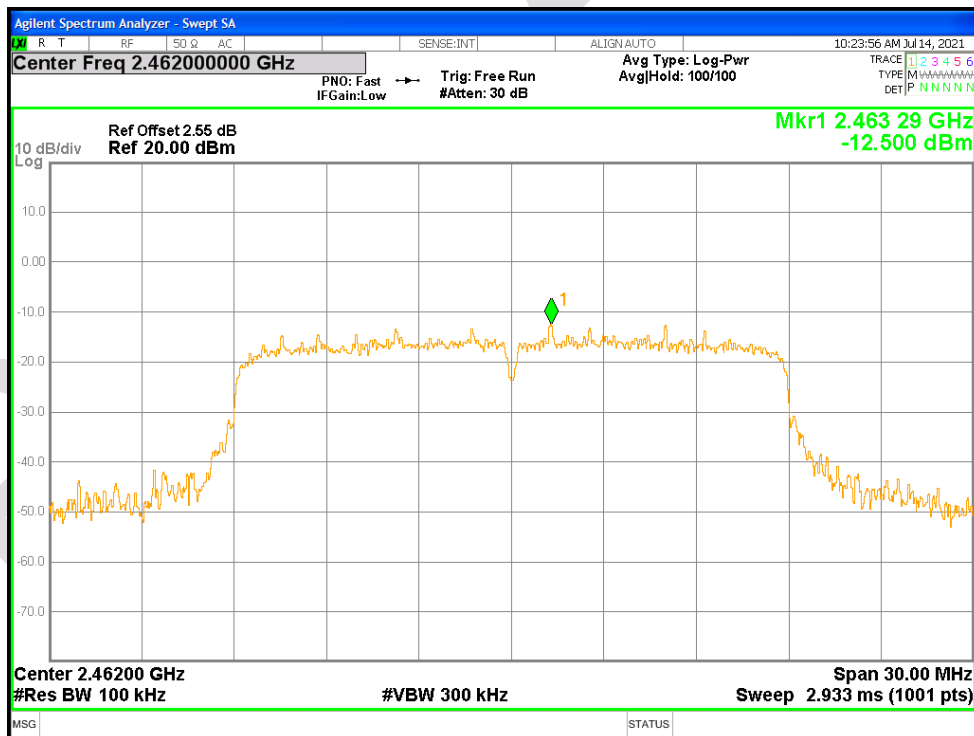
Band Edge NVNT n20 2412MHz Ant1 Ref



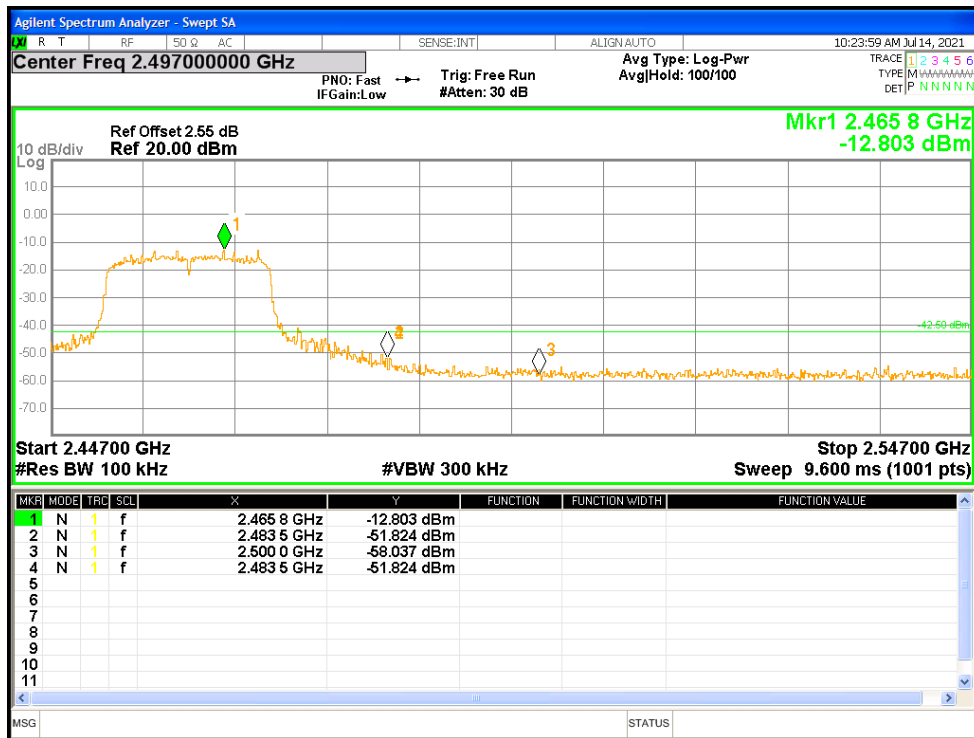
Band Edge NVNT n20 2412MHz Ant1 Emission



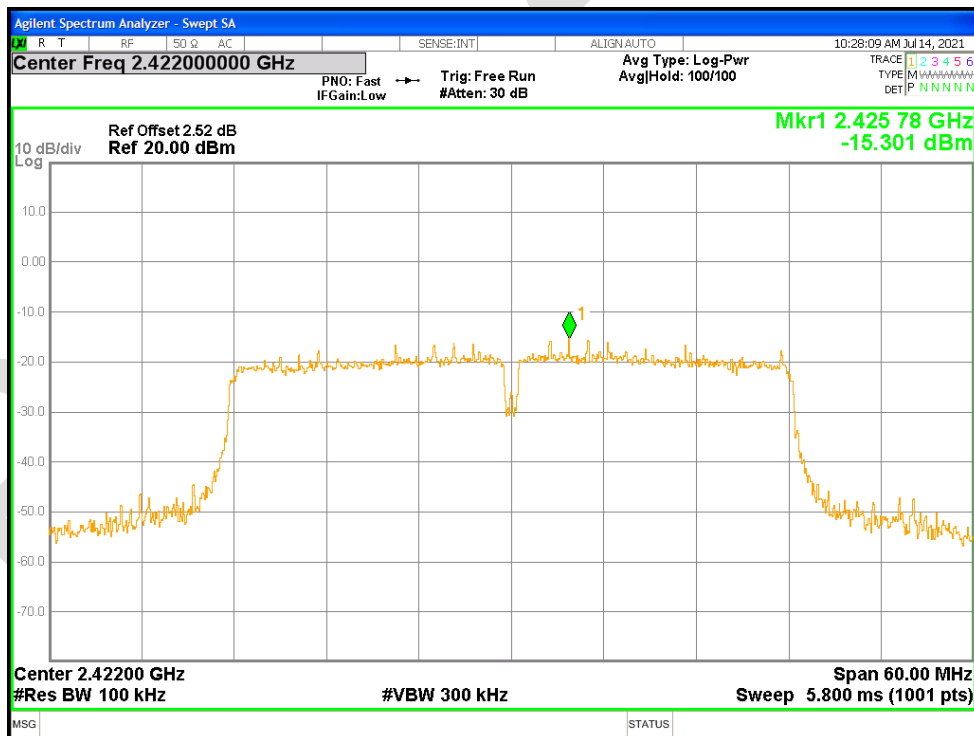
Band Edge NVNT n20 2462MHz Ant1 Ref



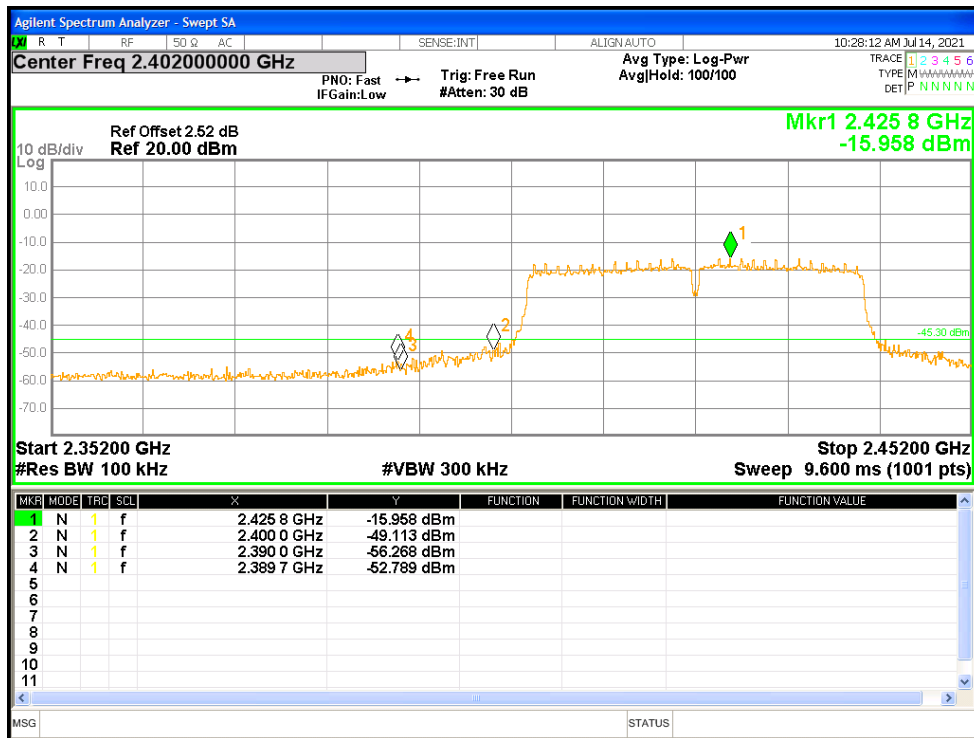
Band Edge NVNT n20 2462MHz Ant1 Emission



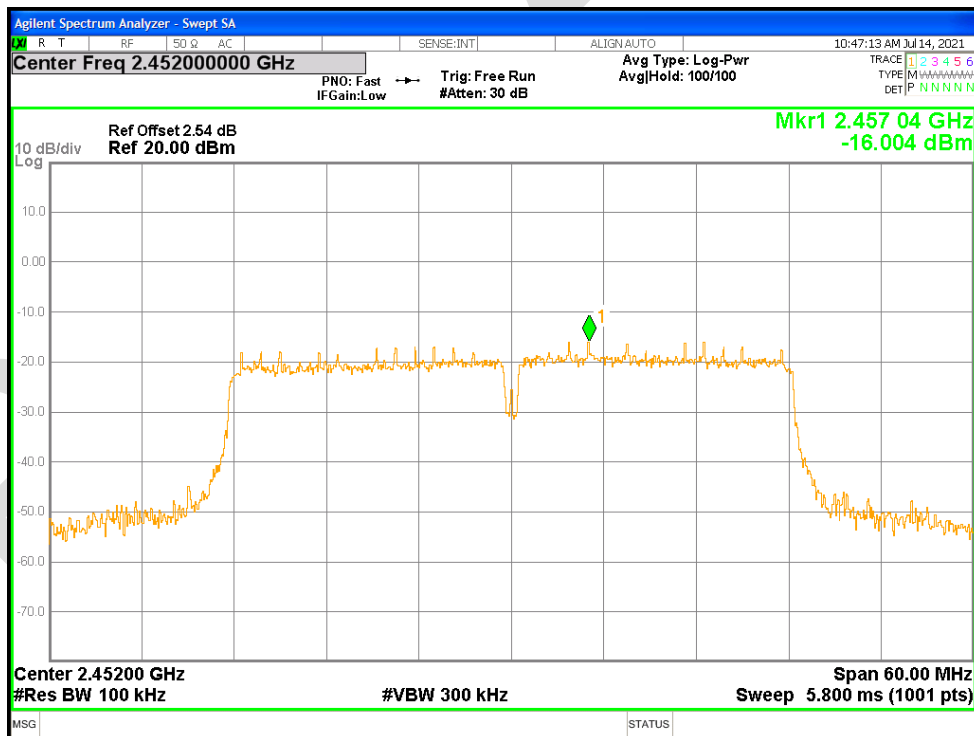
Band Edge NVNT n40 2422MHz Ant1 Ref



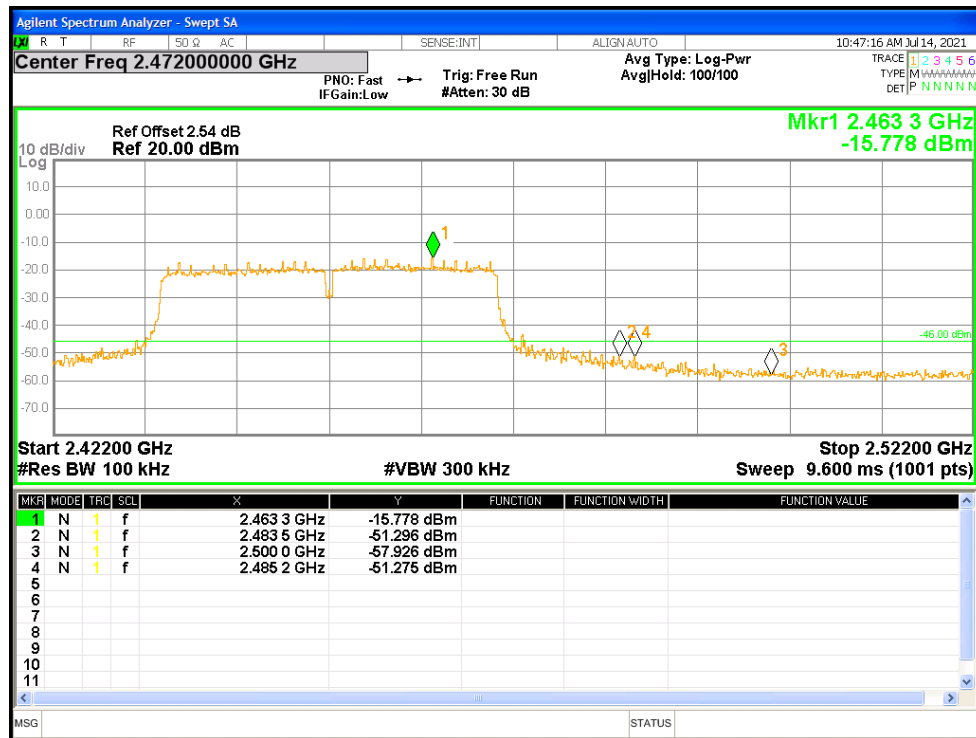
Band Edge NVNT n40 2422MHz Ant1 Emission



Band Edge NVNT n40 2452MHz Ant1 Ref



Band Edge NVNT n40 2452MHz Ant1 Emission



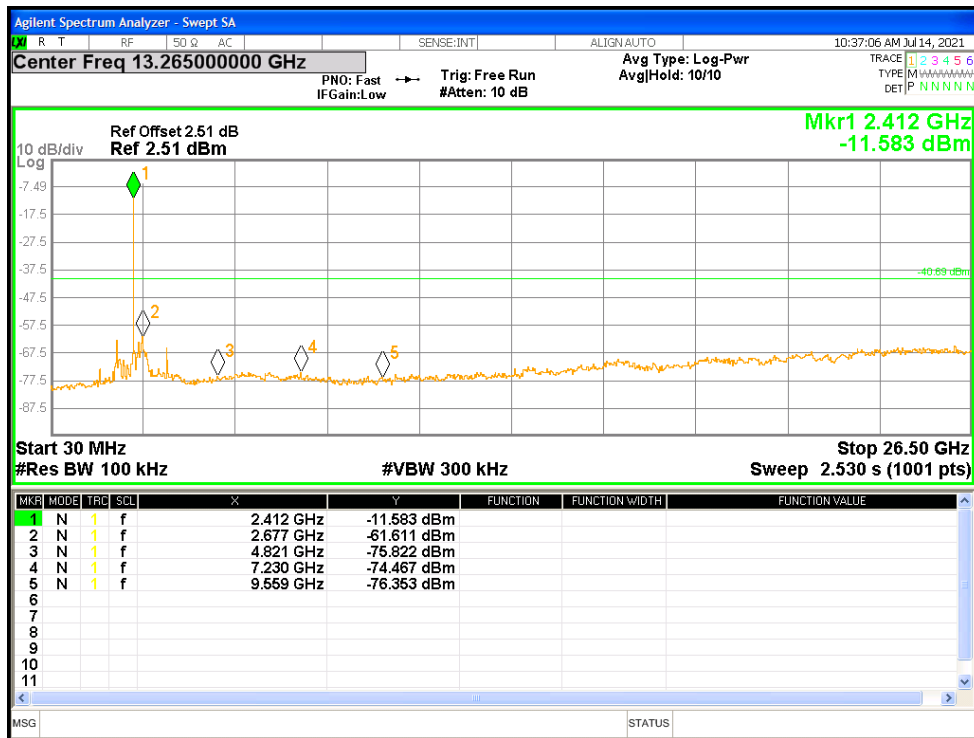
19.6 CONDUCTED RF SPURIOUS EMISSION

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-50.92	-30	Pass
NVNT	b	2437	Ant1	-52.15	-30	Pass
NVNT	b	2462	Ant1	-53.03	-30	Pass
NVNT	g	2412	Ant1	-47.79	-30	Pass
NVNT	g	2437	Ant1	-47.57	-30	Pass
NVNT	g	2462	Ant1	-47.94	-30	Pass
NVNT	n20	2412	Ant1	-48.1	-30	Pass
NVNT	n20	2437	Ant1	-48.18	-30	Pass
NVNT	n20	2462	Ant1	-48.87	-30	Pass
NVNT	n40	2422	Ant1	-46.21	-30	Pass
NVNT	n40	2437	Ant1	-45.53	-30	Pass
NVNT	n40	2452	Ant1	-45.54	-30	Pass

Tx. Spurious NVNT b 2412MHz Ant1 Ref



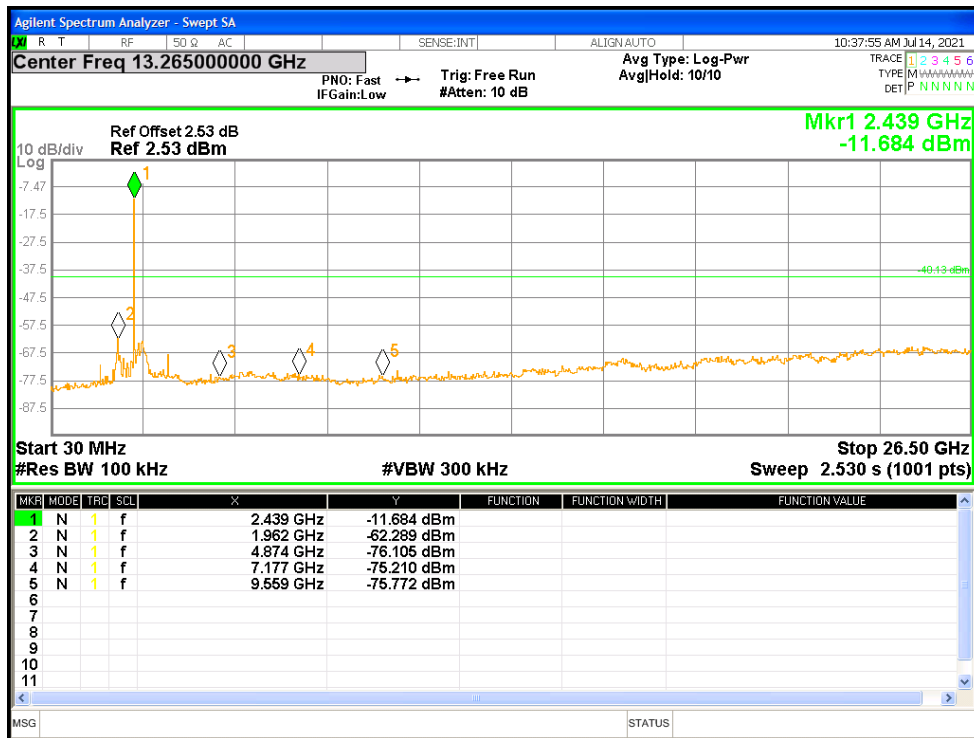
Tx. Spurious NVNT b 2412MHz Ant1 Emission



Tx. Spurious NVNT b 2437MHz Ant1 Ref



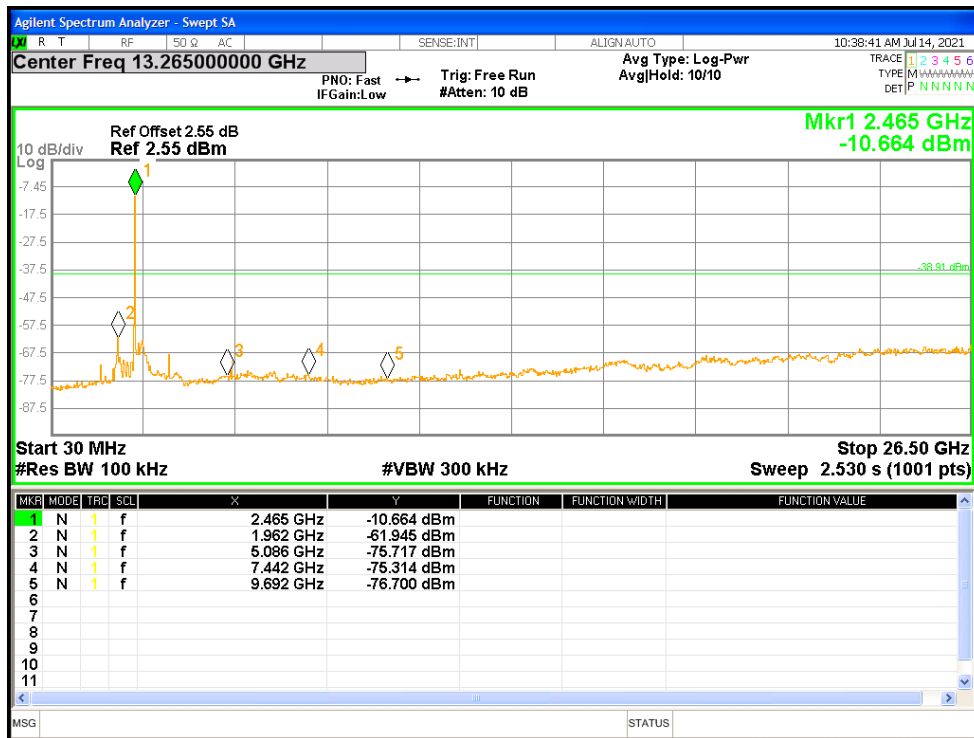
Tx. Spurious NVNT b 2437MHz Ant1 Emission



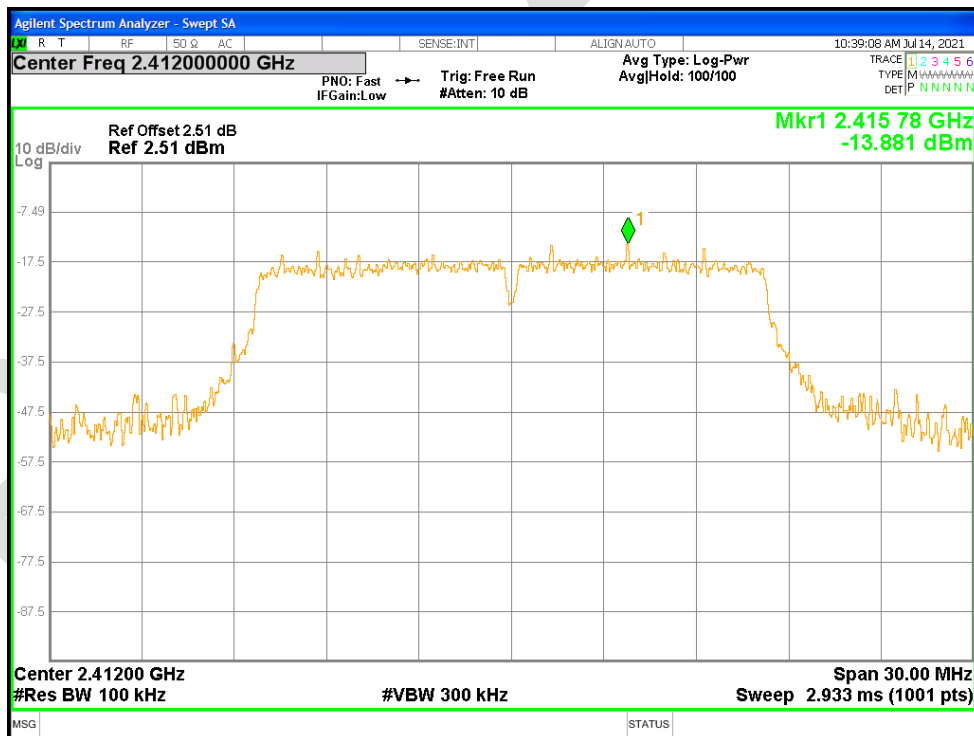
Tx. Spurious NVNT b 2462MHz Ant1 Ref



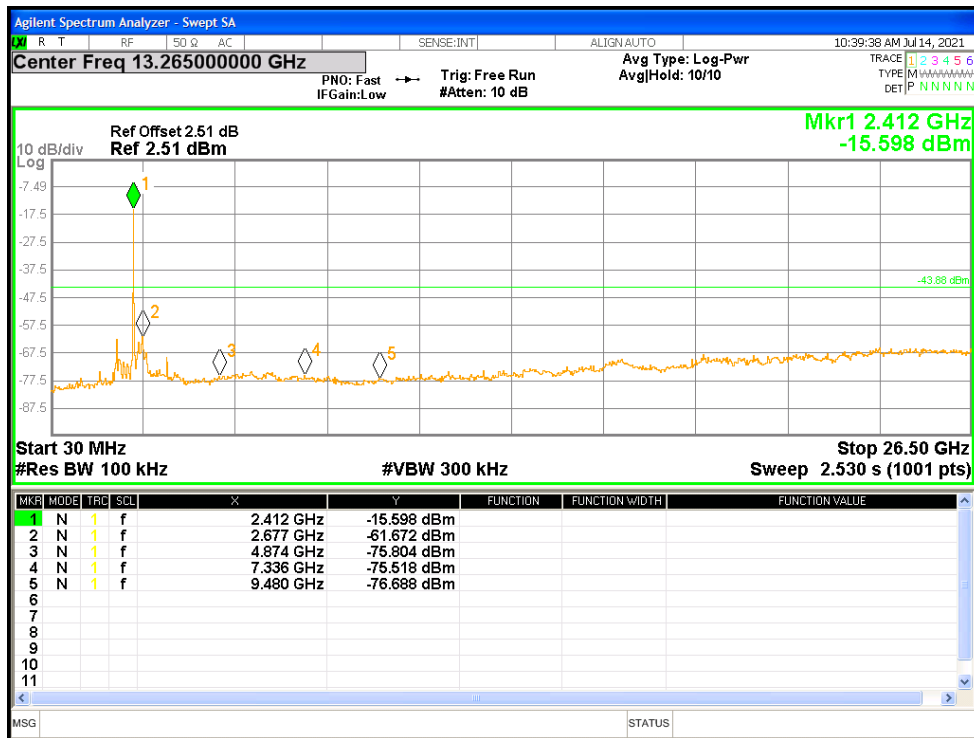
Tx. Spurious NVNT b 2462MHz Ant1 Emission



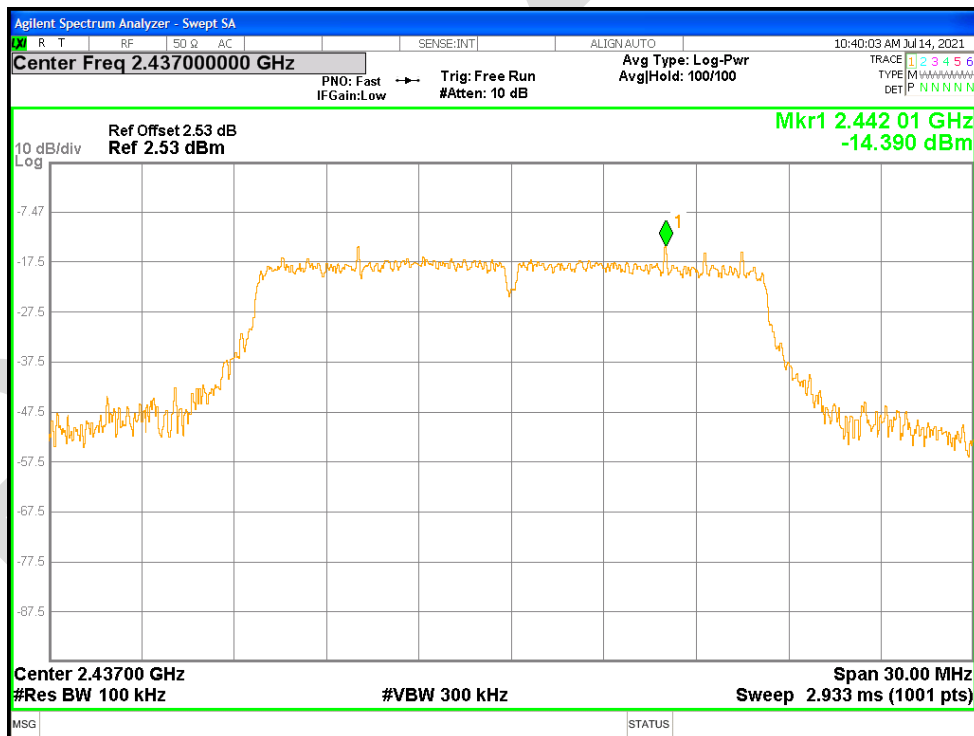
Tx. Spurious NVNT g 2412MHz Ant1 Ref



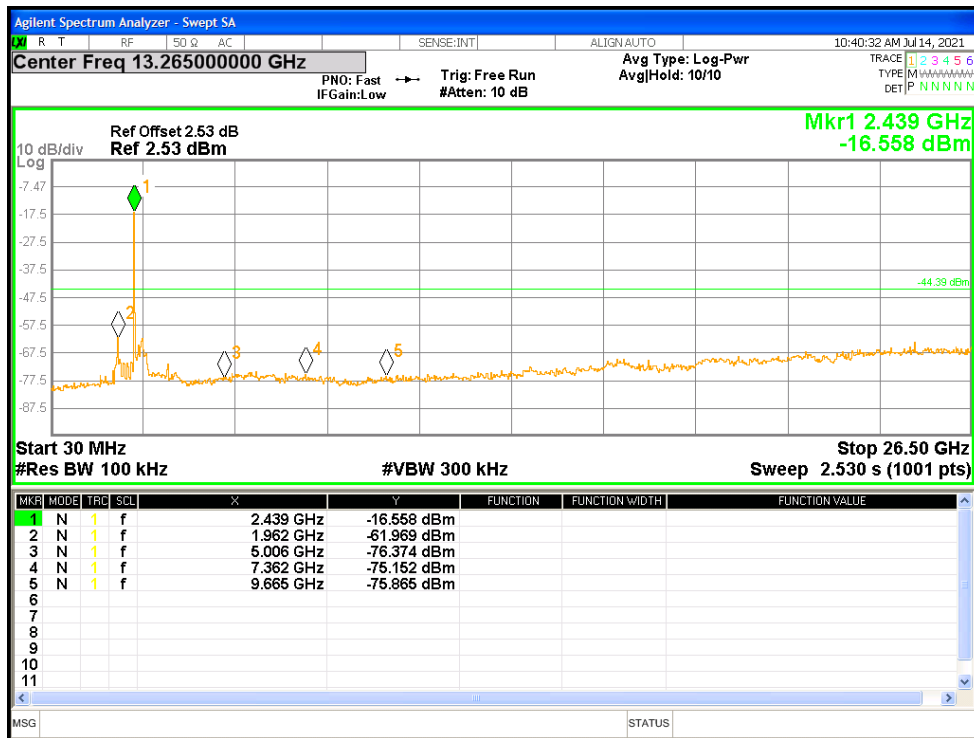
Tx. Spurious NVNT g 2412MHz Ant1 Emission



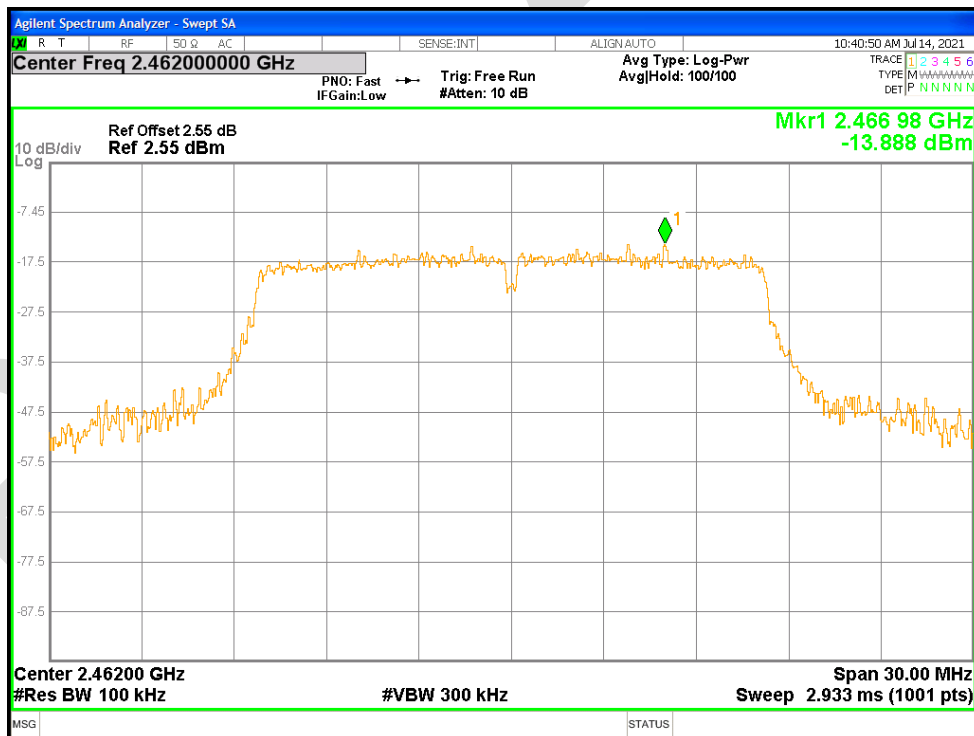
Tx. Spurious NVNT g 2437MHz Ant1 Ref



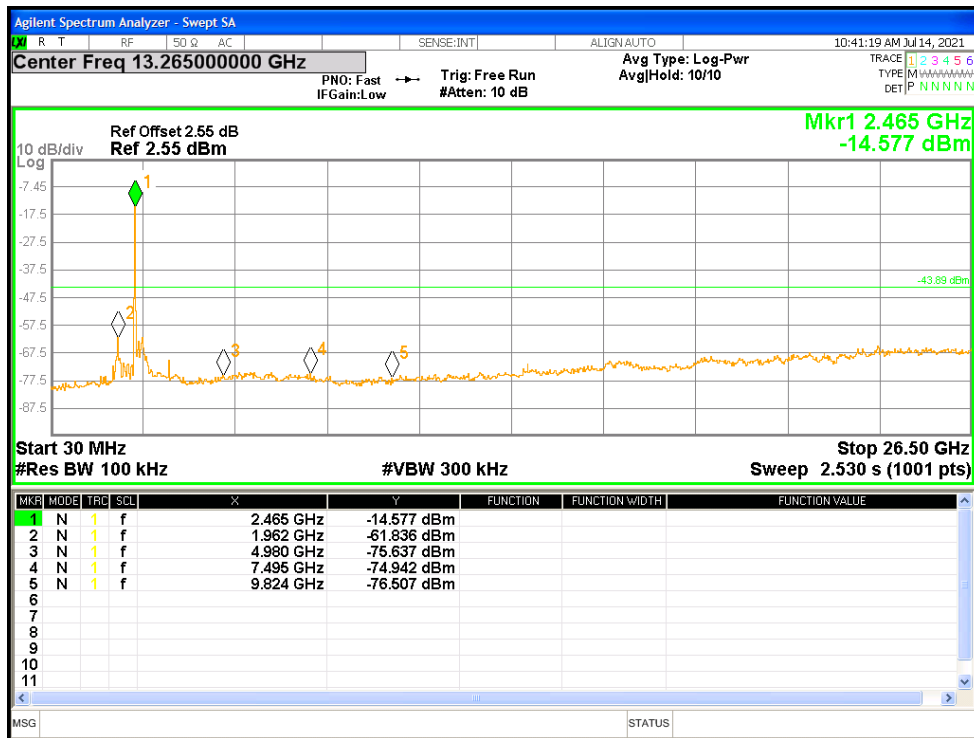
Tx. Spurious NVNT g 2437MHz Ant1 Emission



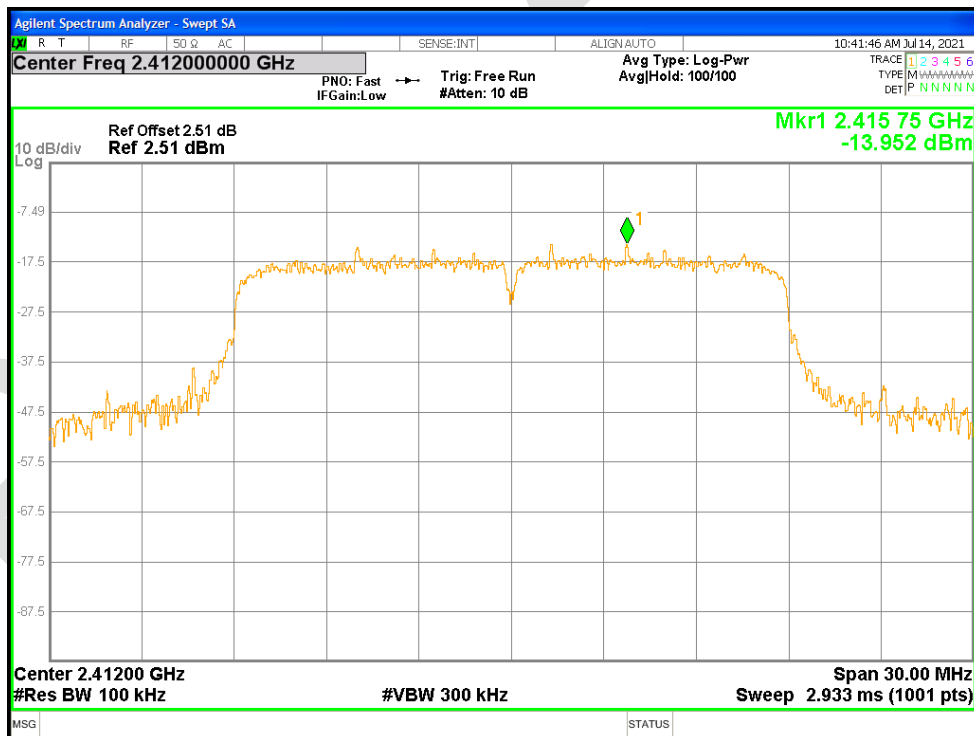
Tx. Spurious NVNT g 2462MHz Ant1 Ref



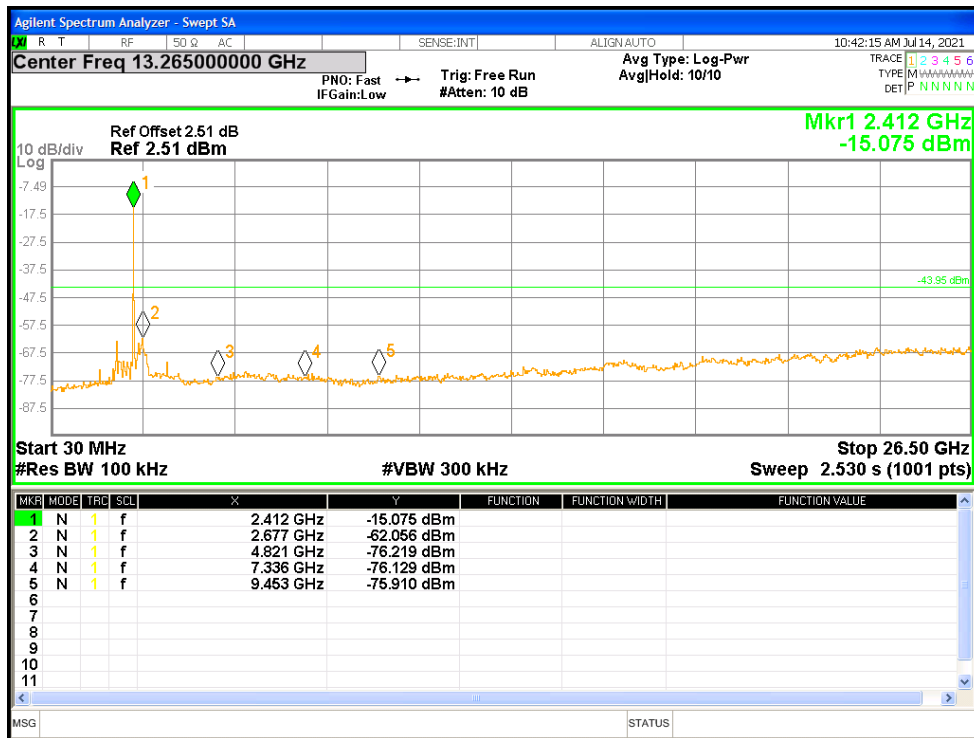
Tx. Spurious NVNT g 2462MHz Ant1 Emission



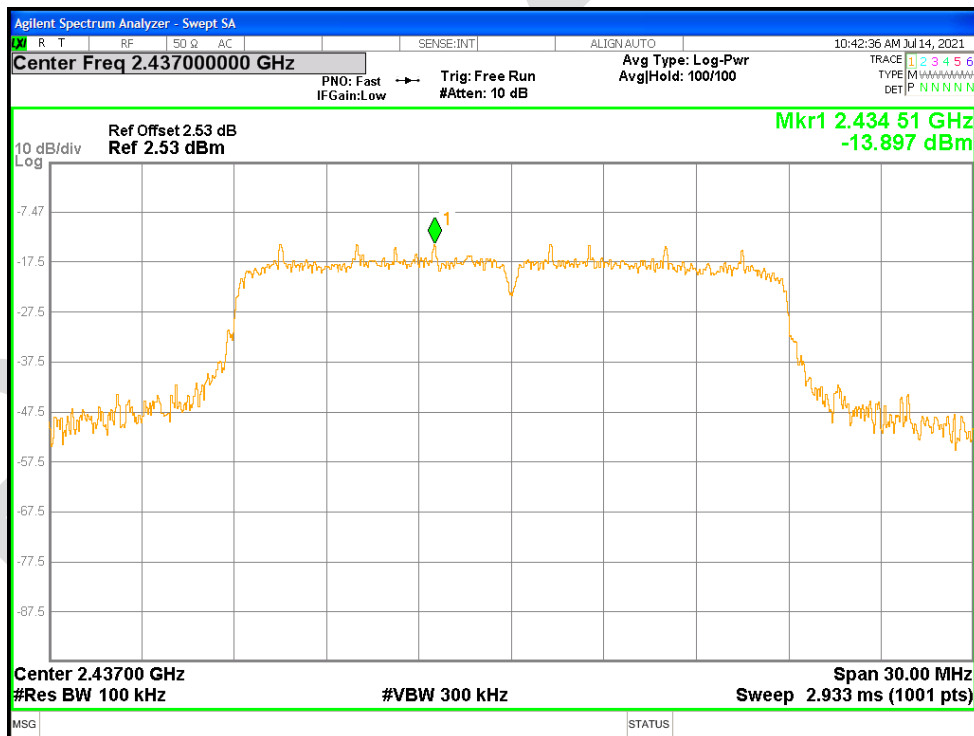
Tx. Spurious NVNT n20 2412MHz Ant1 Ref



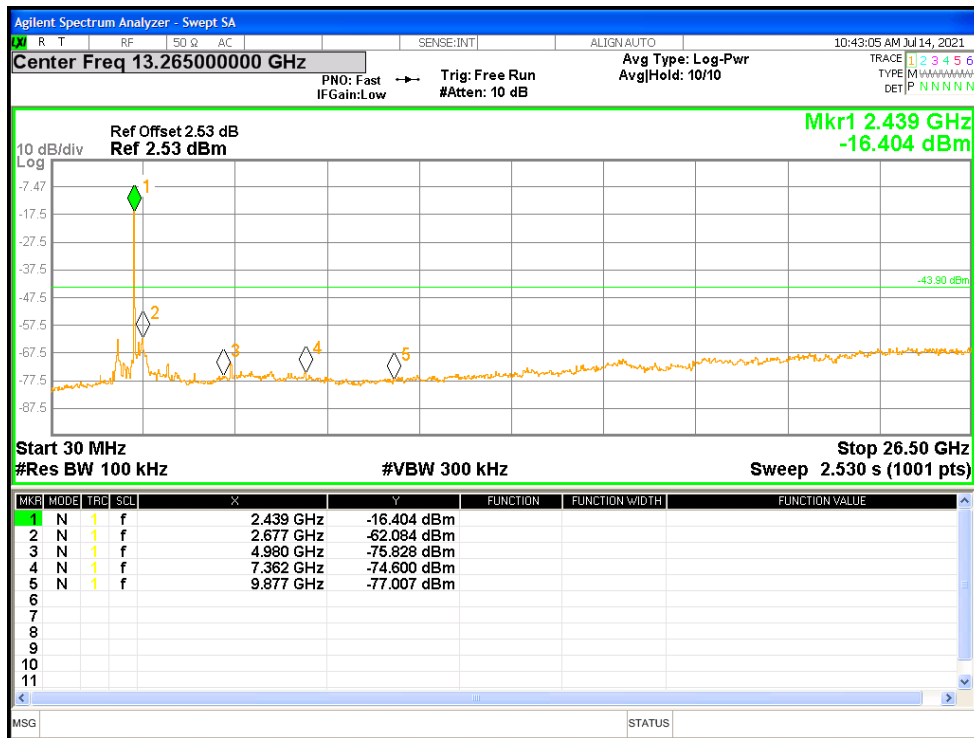
Tx. Spurious NVNT n20 2412MHz Ant1 Emission



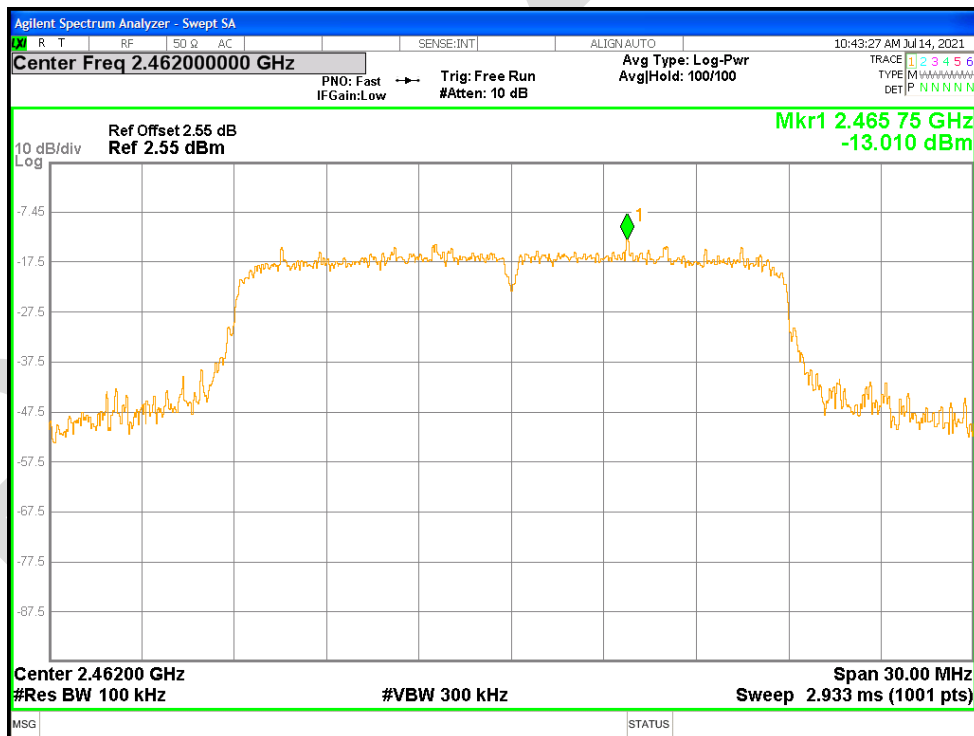
Tx. Spurious NVNT n20 2437MHz Ant1 Ref



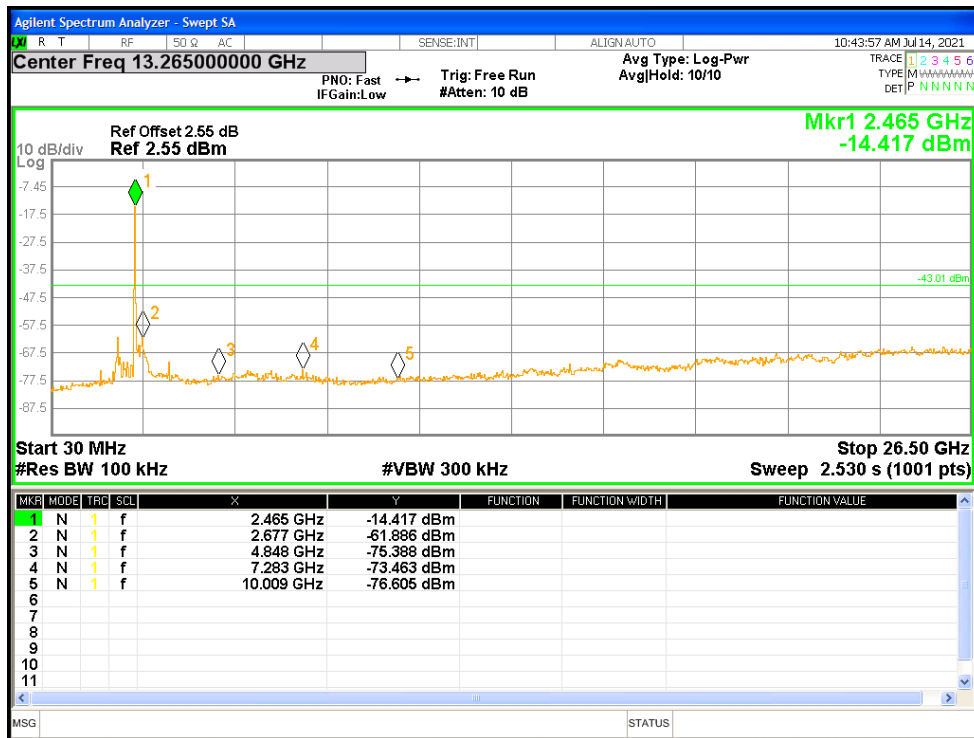
Tx. Spurious NVNT n20 2437MHz Ant1 Emission



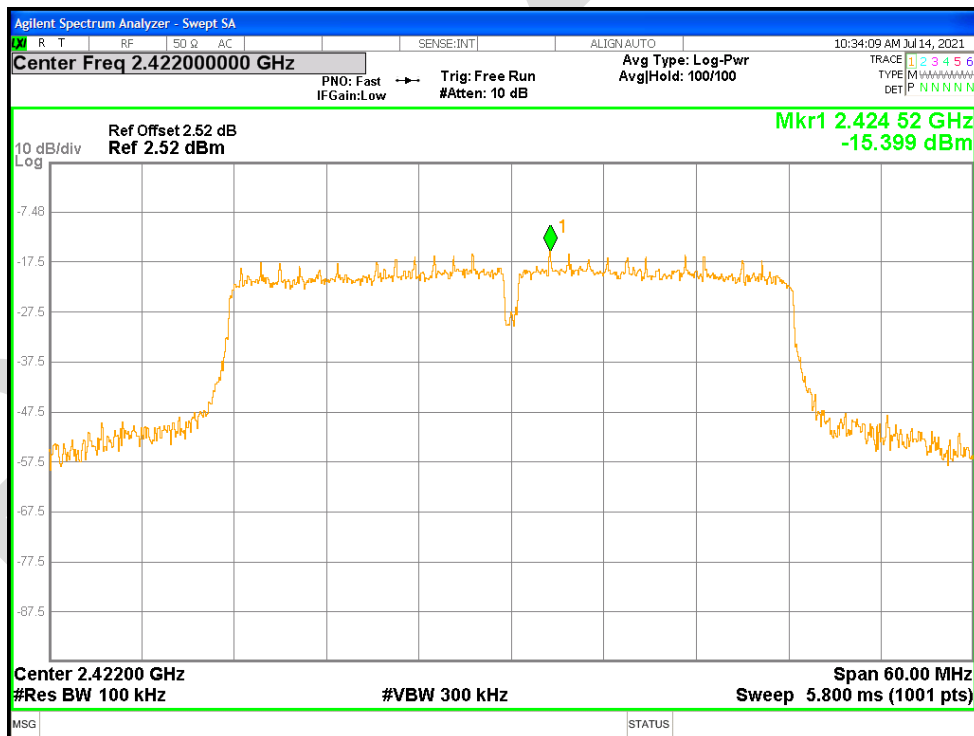
Tx. Spurious NVNT n20 2462MHz Ant1 Ref



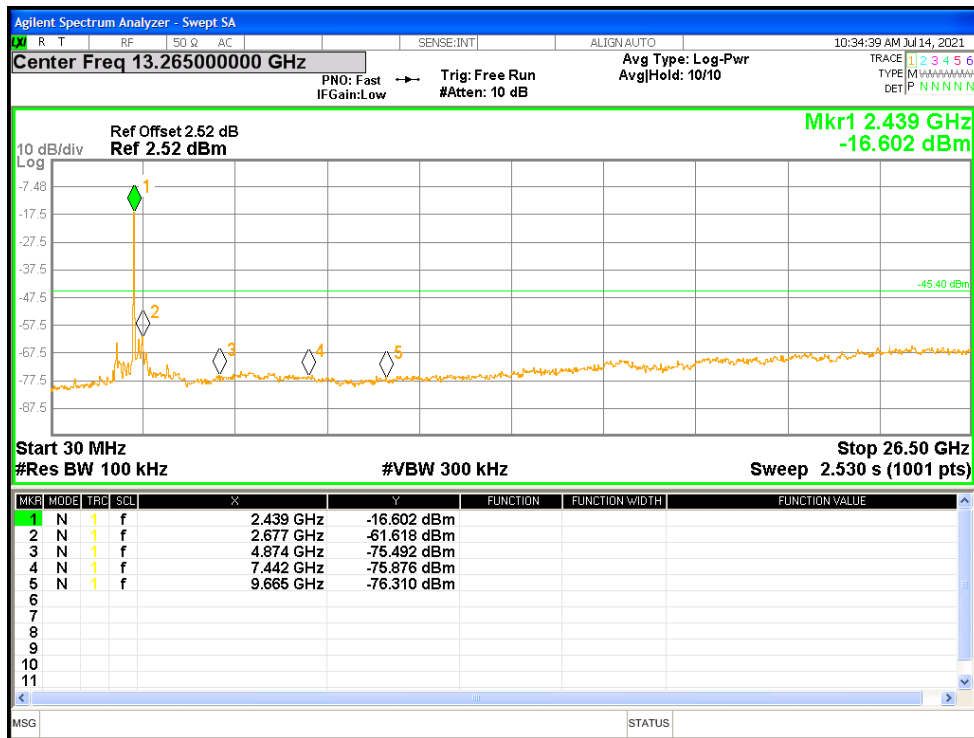
Tx. Spurious NVNT n20 2462MHz Ant1 Emission



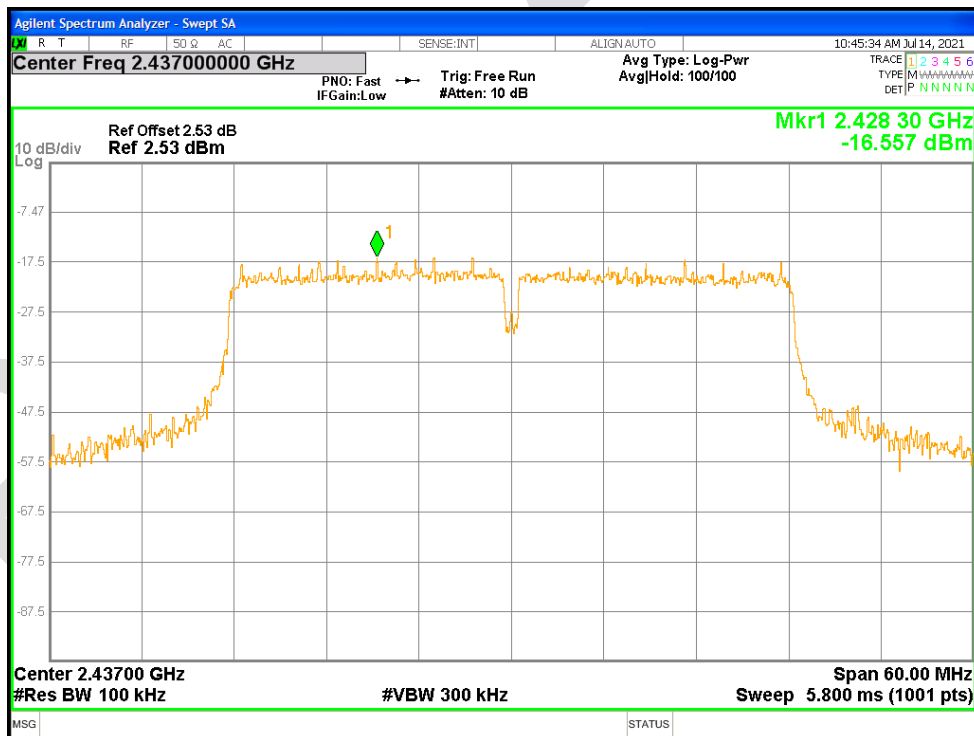
Tx. Spurious NVNT n40 2422MHz Ant1 Ref



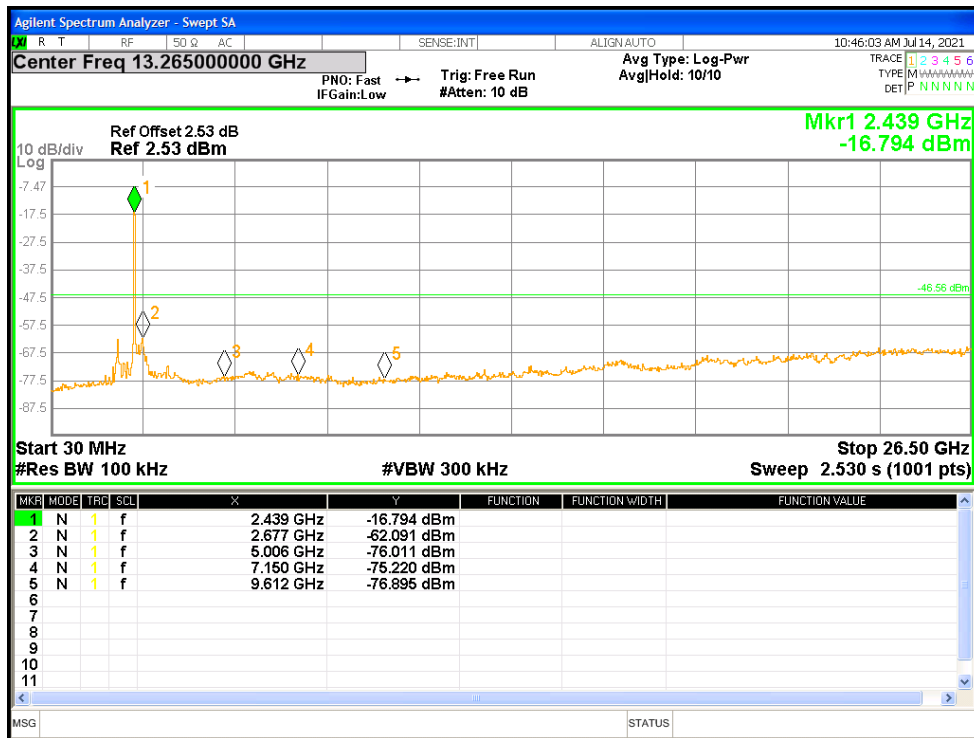
Tx. Spurious NVNT n40 2422MHz Ant1 Emission



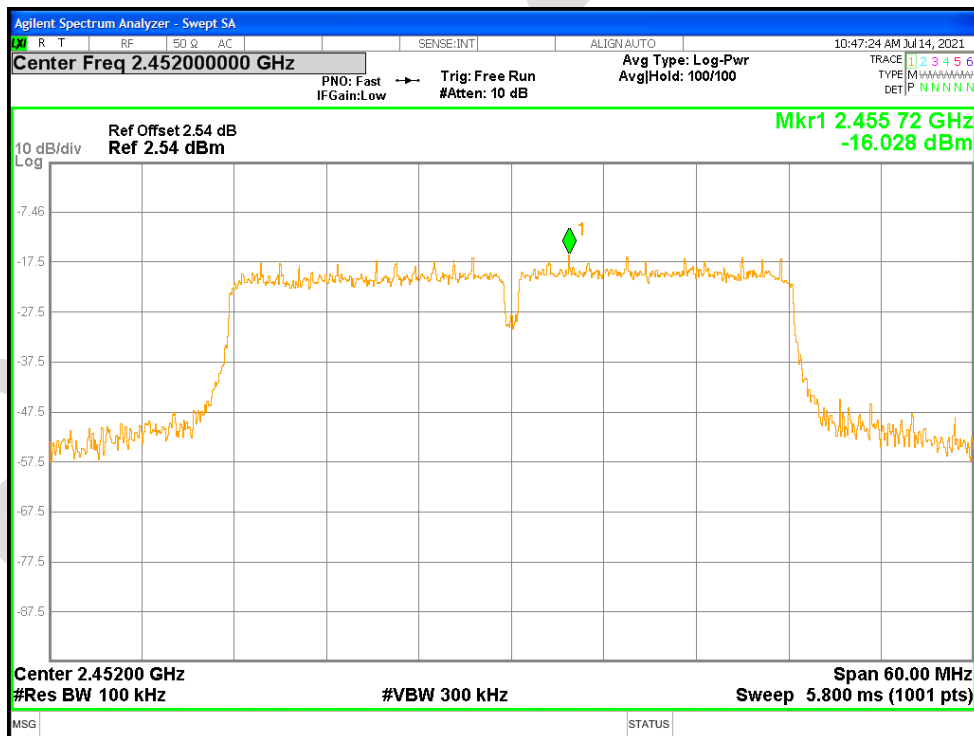
Tx. Spurious NVNT n40 2437MHz Ant1 Ref



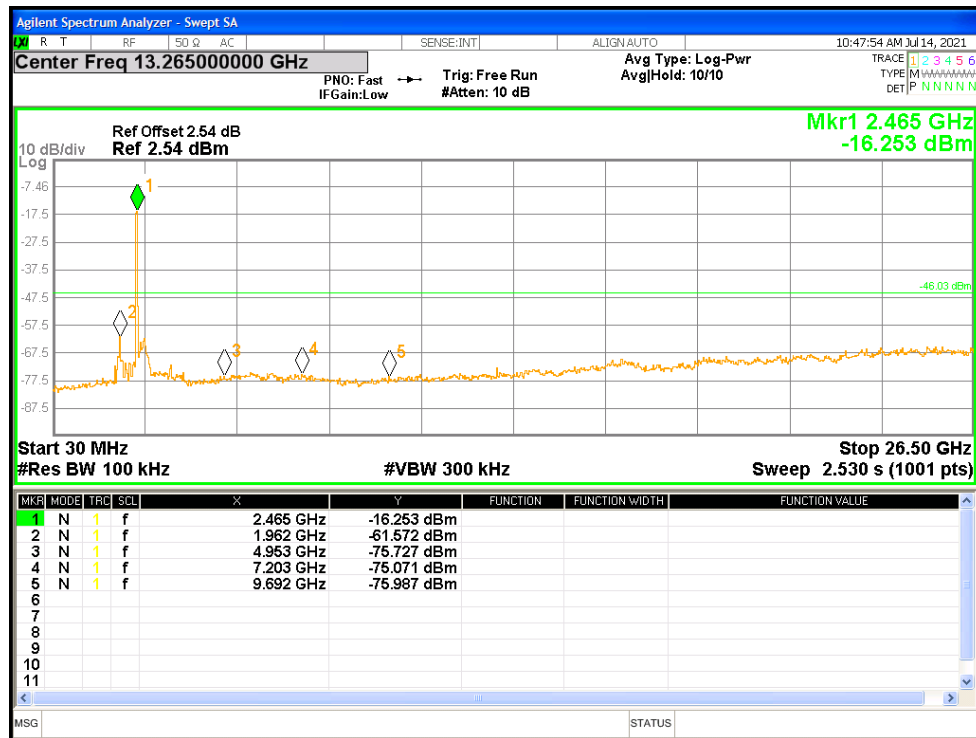
Tx. Spurious NVNT n40 2437MHz Ant1 Emission



Tx. Spurious NVNT n40 2452MHz Ant1 Ref



Tx. Spurious NVNT n40 2452MHz 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-202106-A2601

----END OF REPORT----

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