RF Test Data for Bluetooth(BR+EDR) (Conducted Measurements)

General Description of EUT	
Product Name:	Hanging Neck Anion Oxygen Bar
Test Model:	BLS-GB1
Sample ID:	202305-0046-3-2#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 3.7V
Test Engineer:	Yan zhen ming
Note: For a more detailed features description, please refer to the report TBR-C-202305-0046-31 The report only show the worst case data.	

Contents

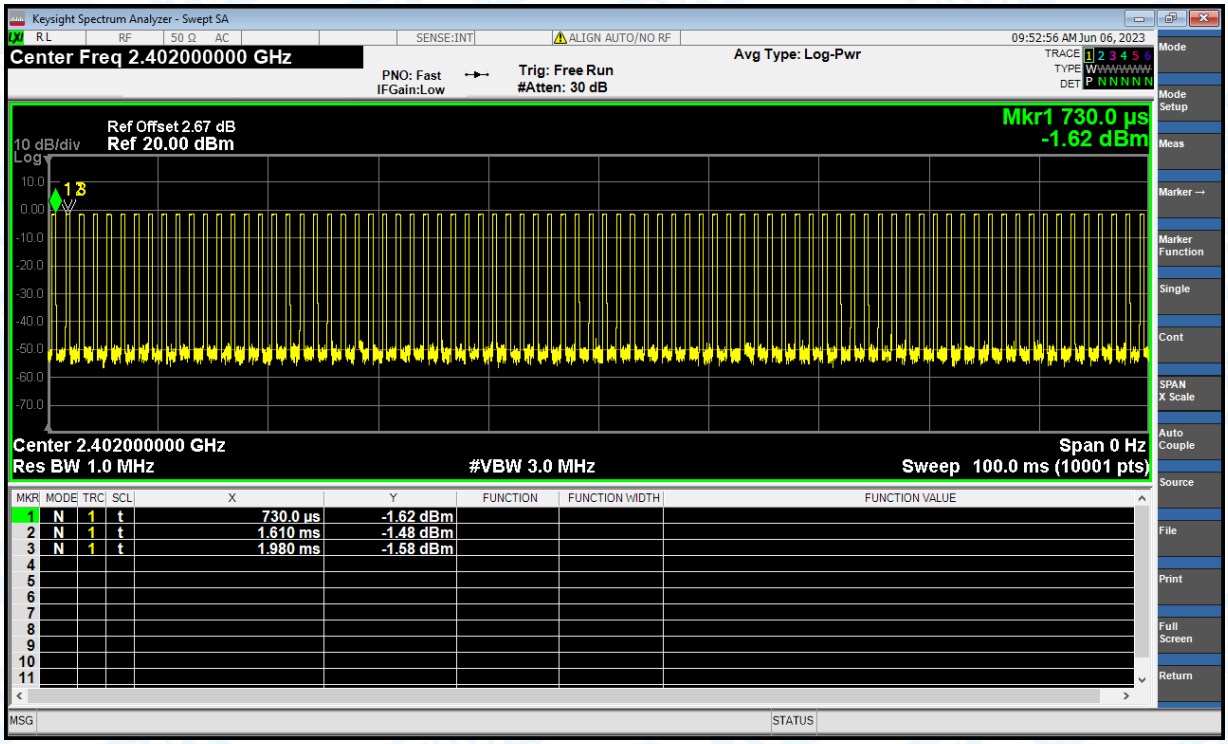
1. Duty Cycle....3
2. Maximum Conducted Output Power....9
3. -20dB Bandwidth....15
4. Occupied Channel Bandwidth....21
5. Band Edge....27
6. Band Edge(Hopping)....34
7. Conducted RF Spurious Emission....41
8. Restrict Band....51
9. Carrier Frequencies Separation....58
10. Number of Hopping Channel....61
11. Dwell Time....64

1. Duty Cycle

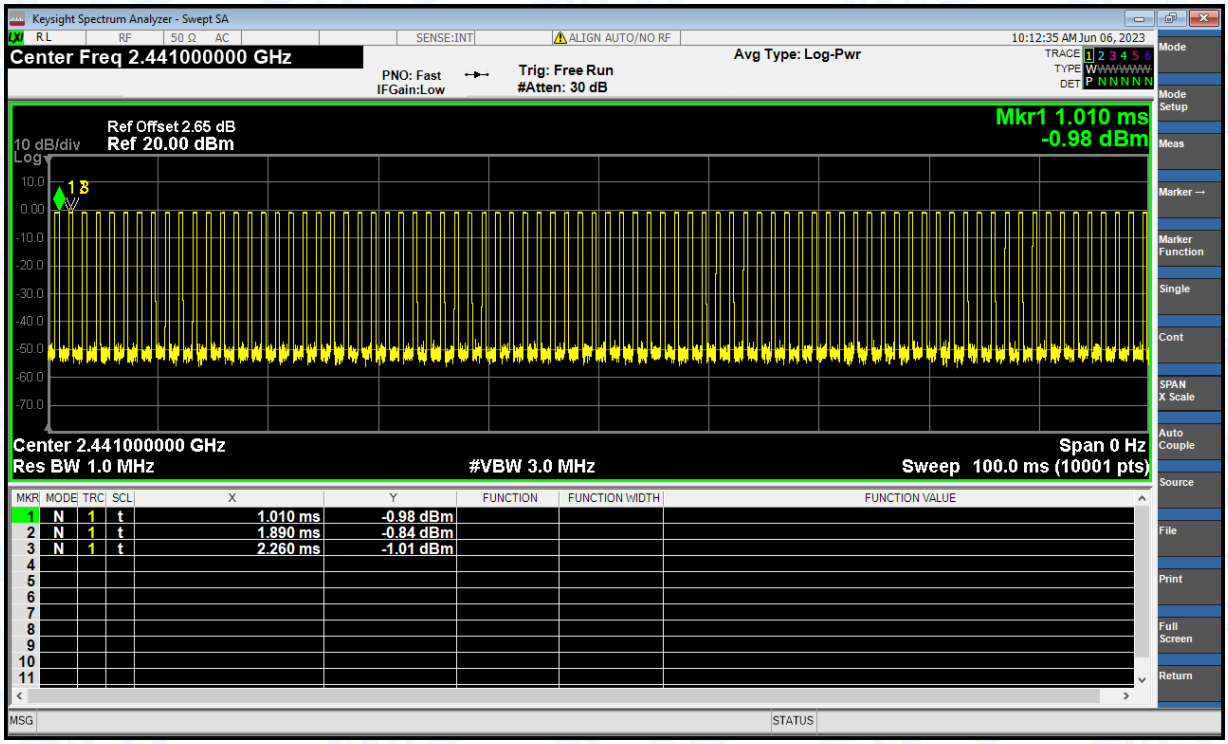
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	29.6	5.29	2.7
NVNT	1-DH1	2441	Ant1	29.6	5.29	2.7
NVNT	1-DH1	2480	Ant1	29.6	5.29	2.7
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2480	Ant1	31.2	5.06	2.56

Test Graphs

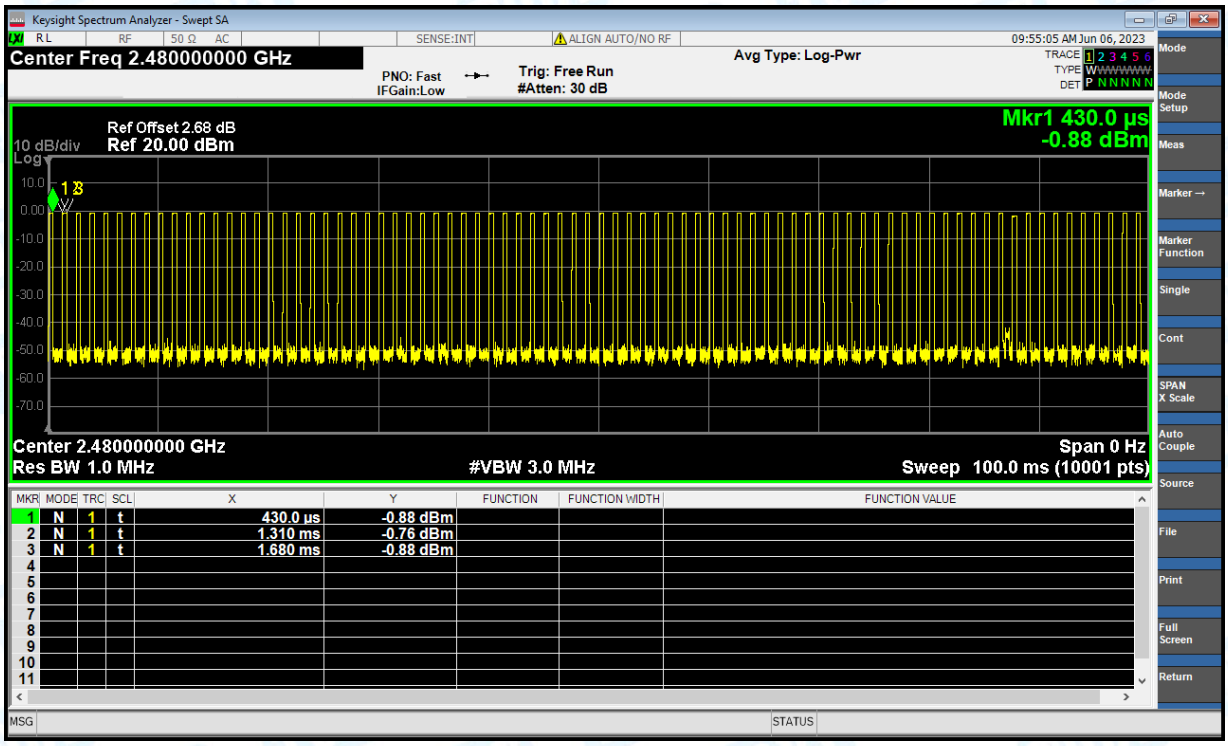
Duty Cycle NVNT 1-DH1 2402MHz Ant1



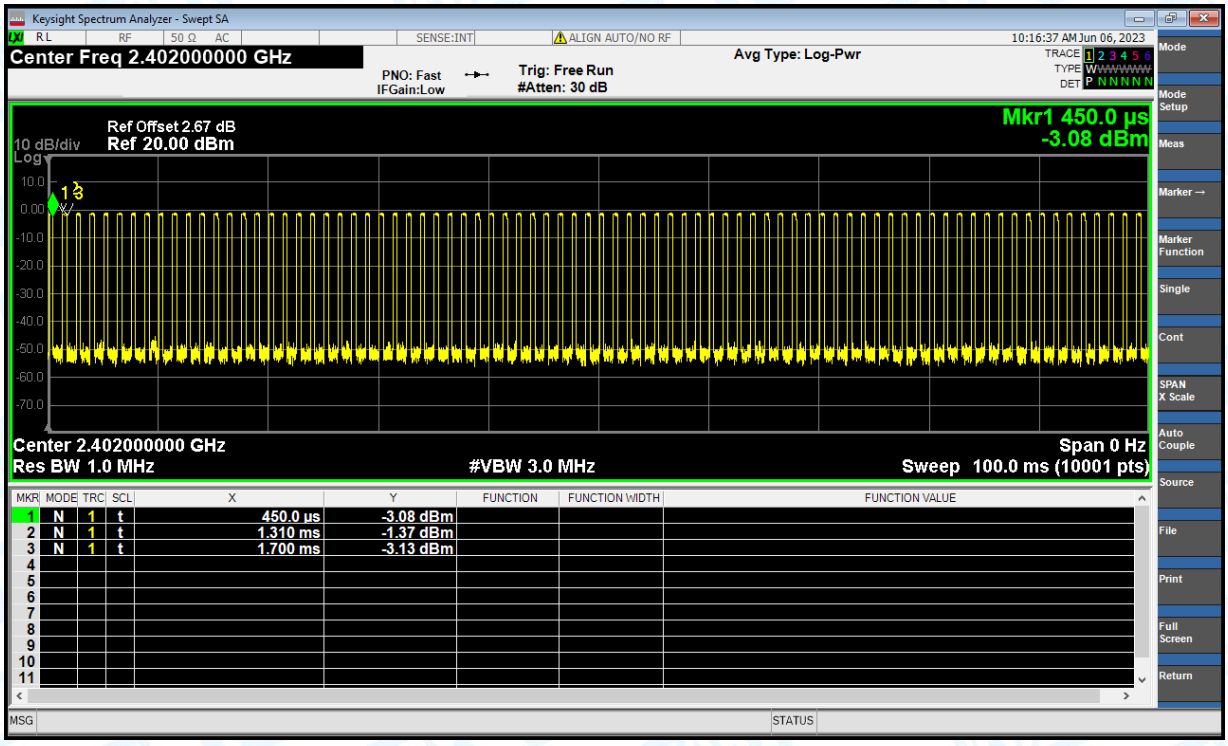
Duty Cycle NVNT 1-DH1 2441MHz Ant1



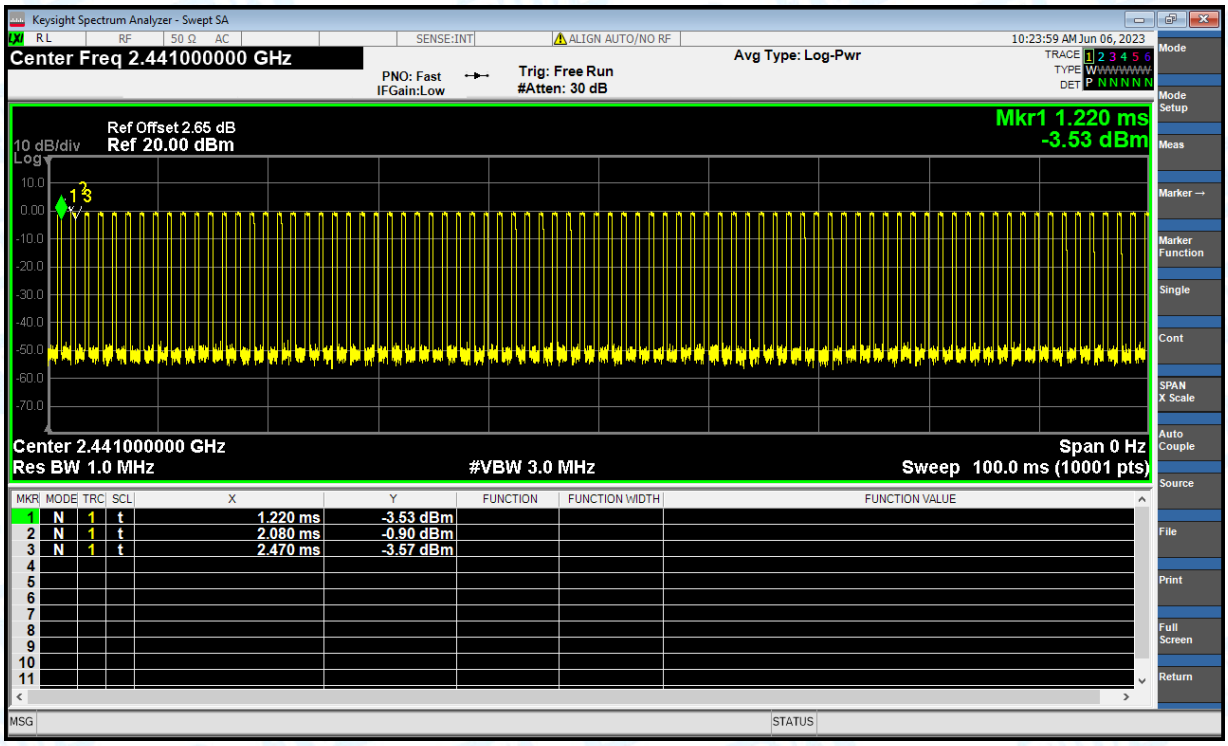
Duty Cycle NVNT 1-DH1 2480MHz Ant1



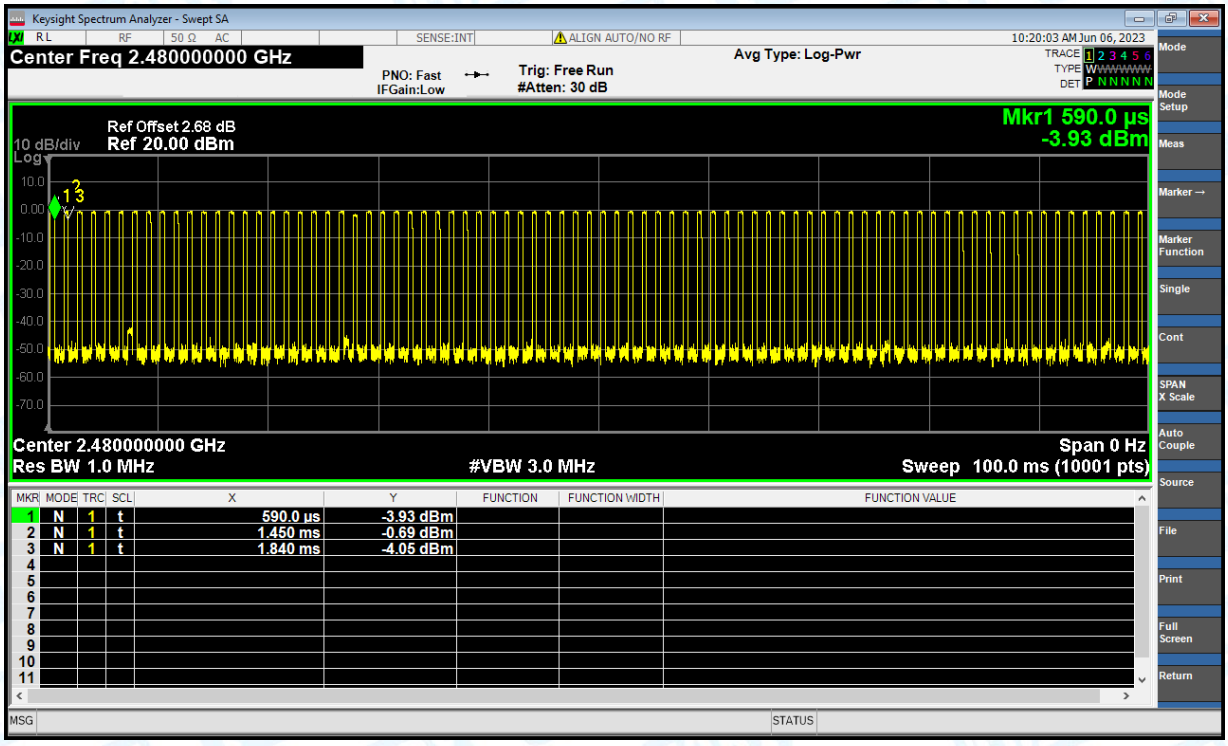
Duty Cycle NVNT 2-DH1 2402MHz Ant1



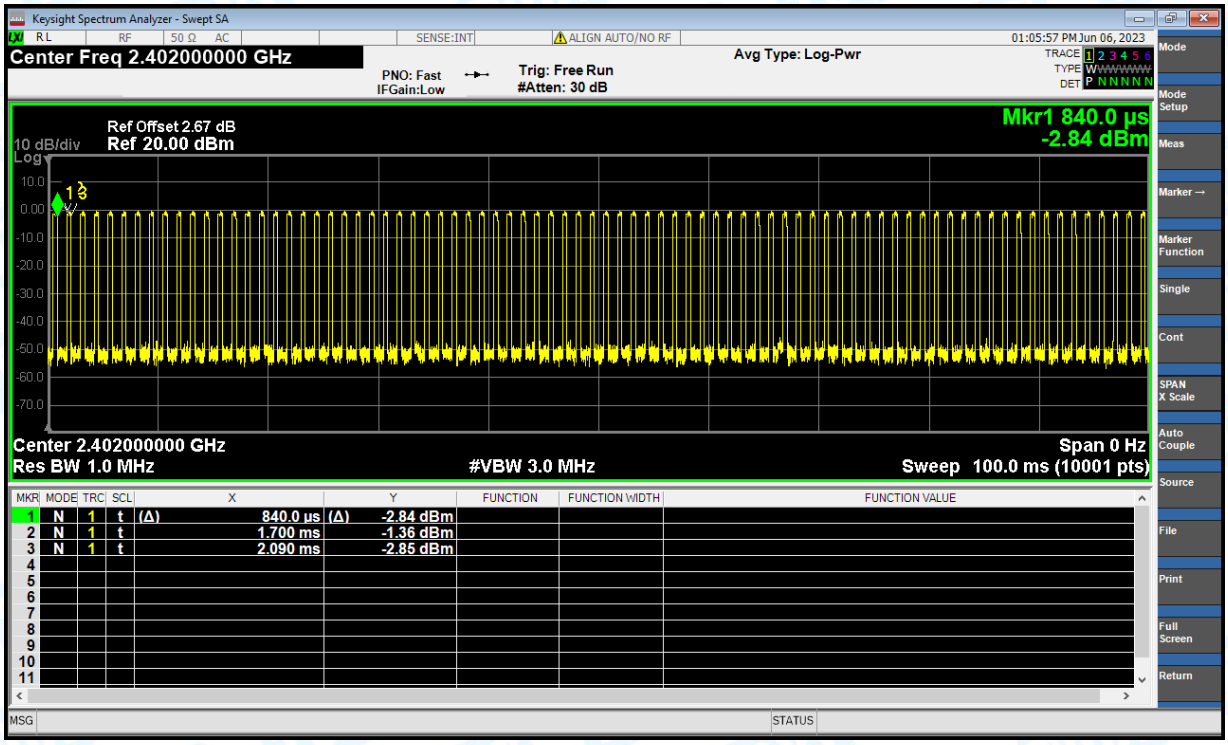
Duty Cycle NVNT 2-DH1 2441MHz Ant1



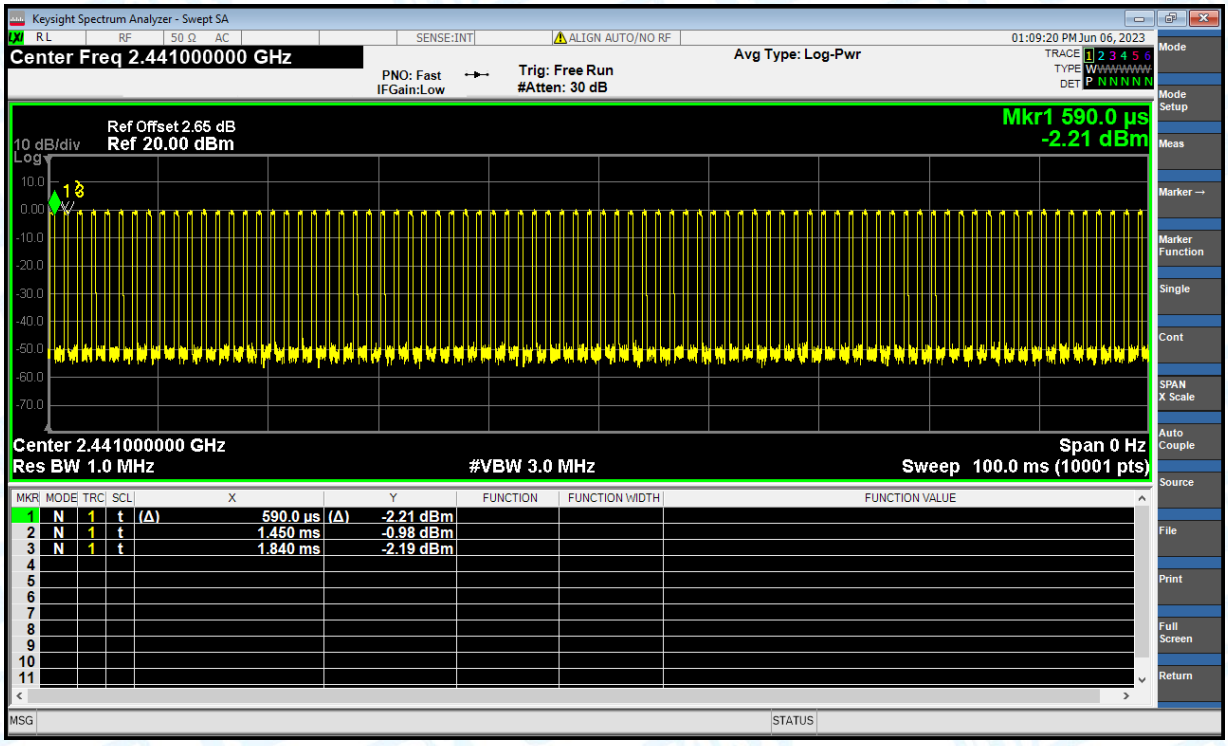
Duty Cycle NVNT 2-DH1 2480MHz Ant1



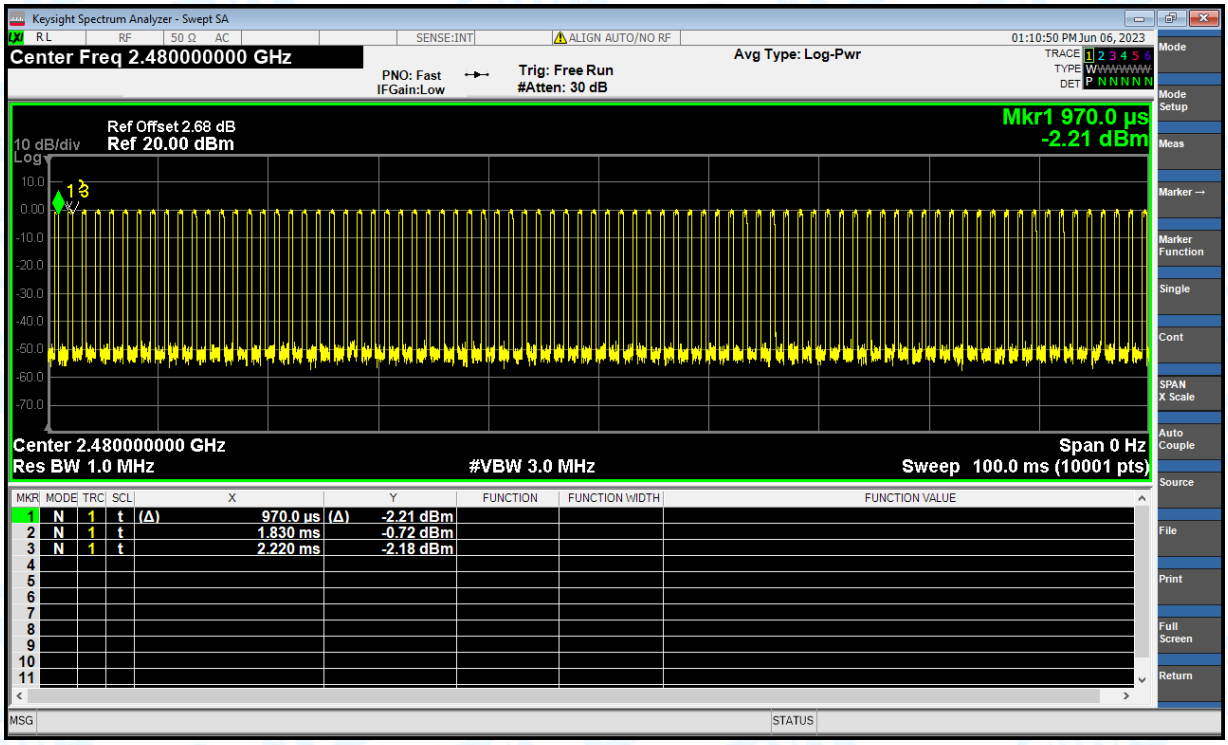
Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



Duty Cycle NVNT 3-DH1 2480MHz Ant1

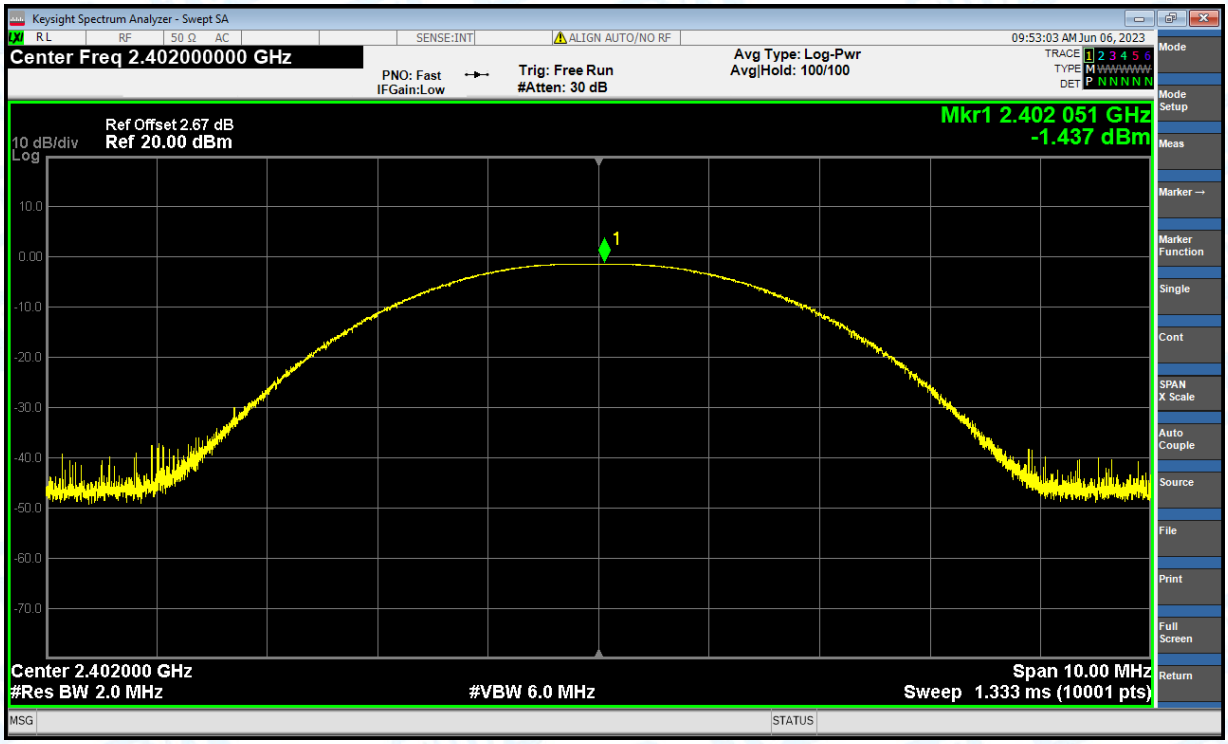


2. Maximum Conducted Output Power

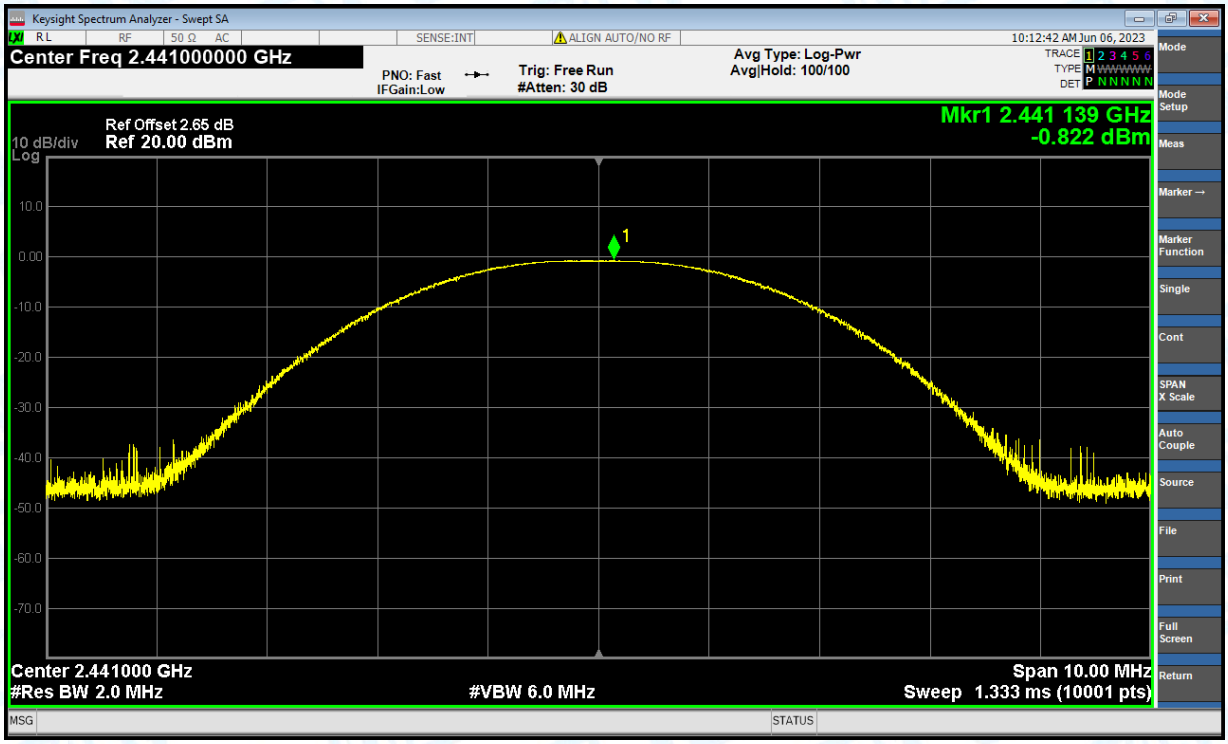
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-1.437	21	Pass
NVNT	1-DH1	2441	Ant1	-0.822	21	Pass
NVNT	1-DH1	2480	Ant1	-0.68	21	Pass
NVNT	2-DH1	2402	Ant1	-0.619	21	Pass
NVNT	2-DH1	2441	Ant1	-0.033	21	Pass
NVNT	2-DH1	2480	Ant1	0.125	21	Pass
NVNT	3-DH1	2402	Ant1	-0.011	21	Pass
NVNT	3-DH1	2441	Ant1	0.537	21	Pass
NVNT	3-DH1	2480	Ant1	0.708	21	Pass

Test Graphs

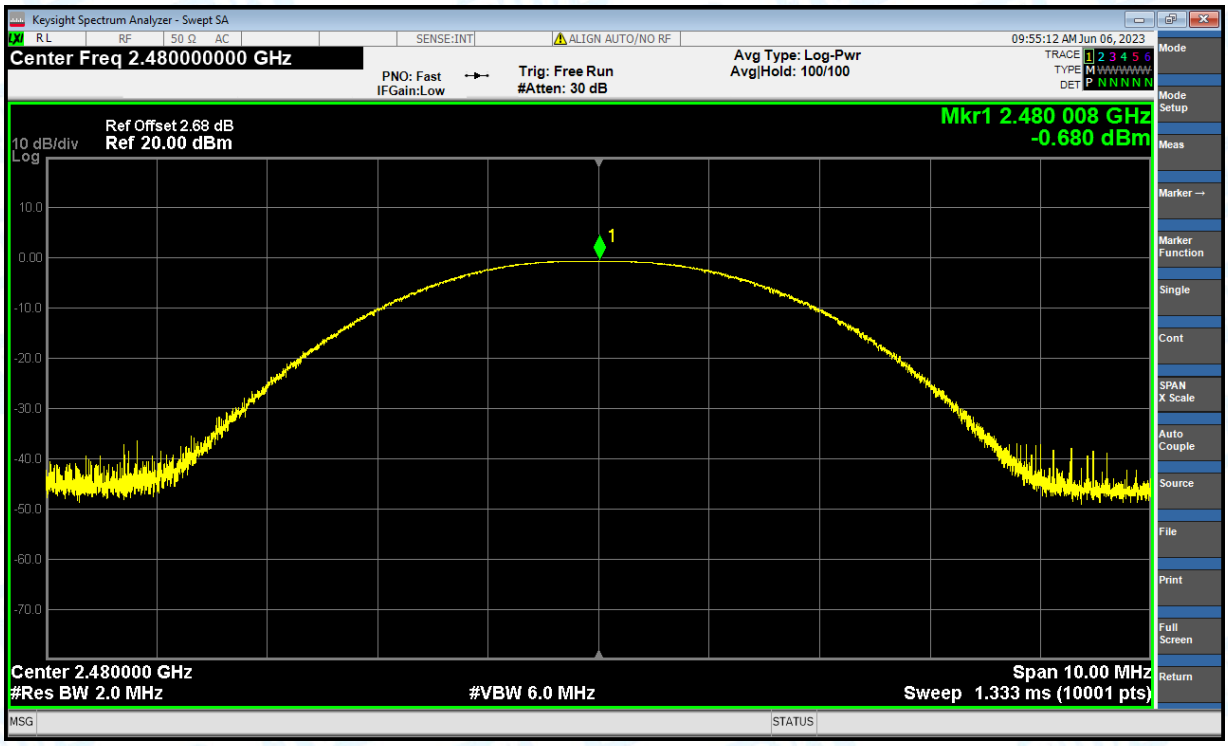
Power NVNT 1-DH1 2402MHz Ant1



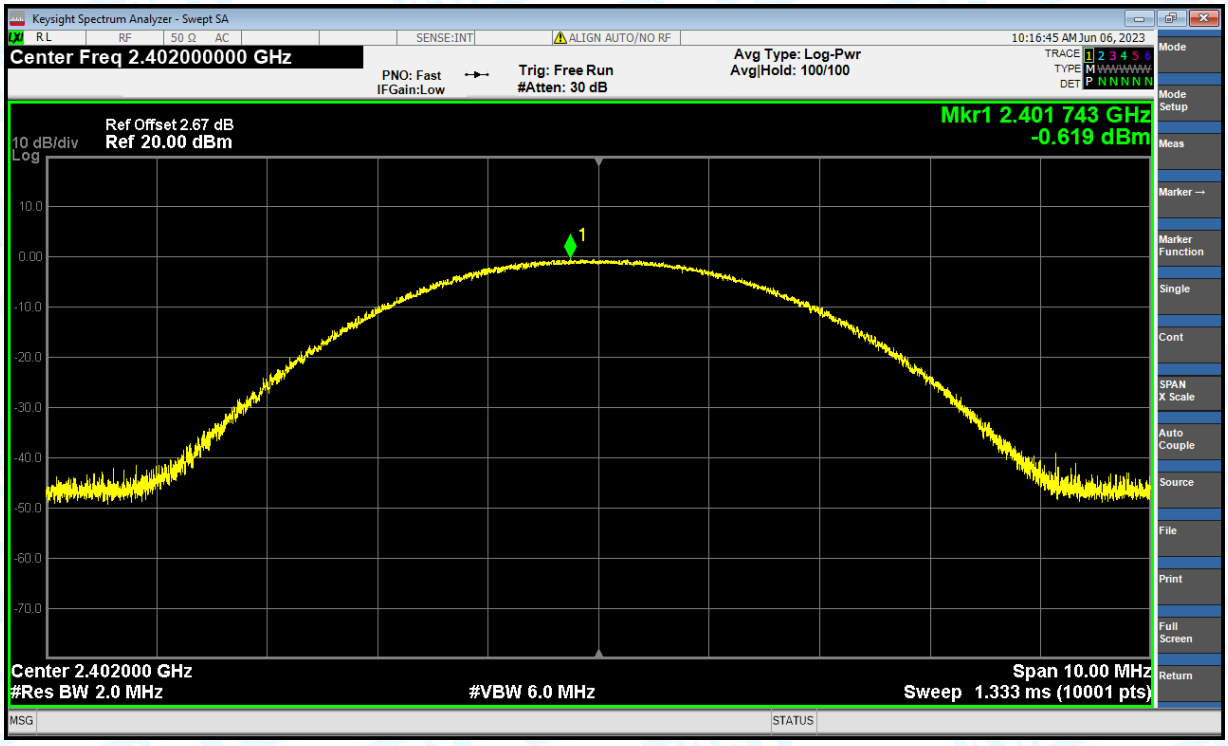
Power NVNT 1-DH1 2441MHz Ant1



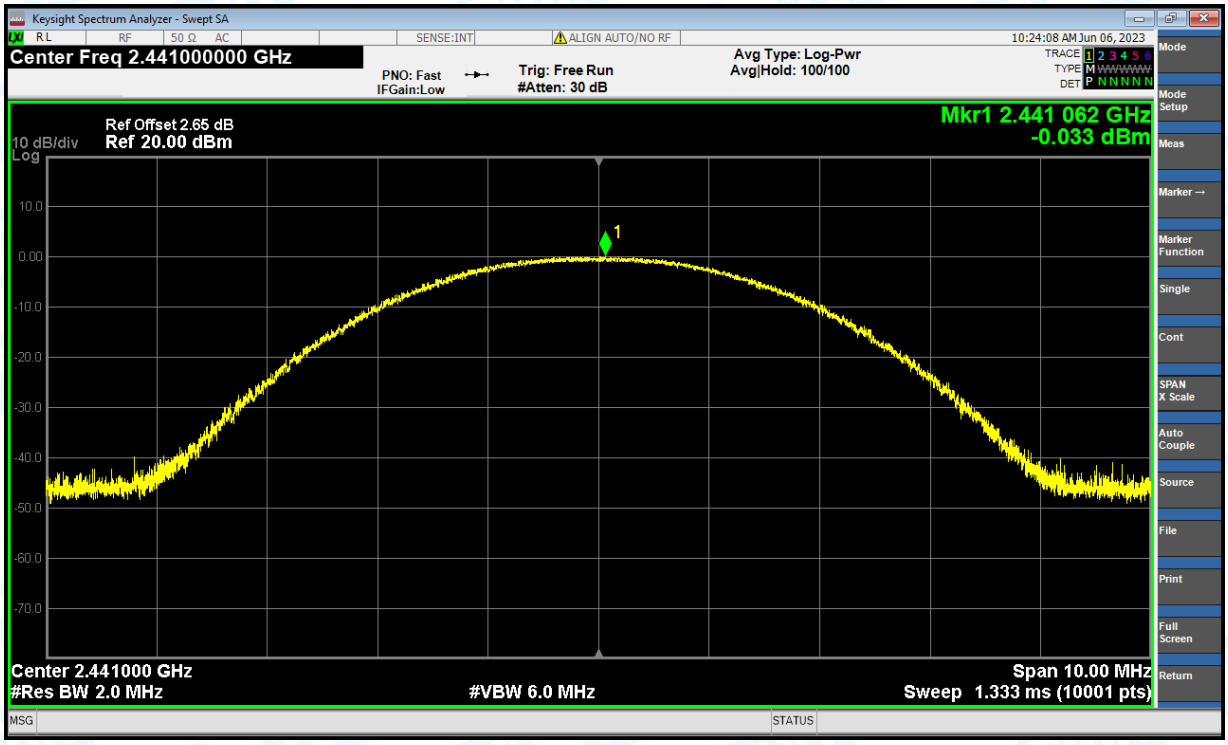
Power NVNT 1-DH1 2480MHz Ant1



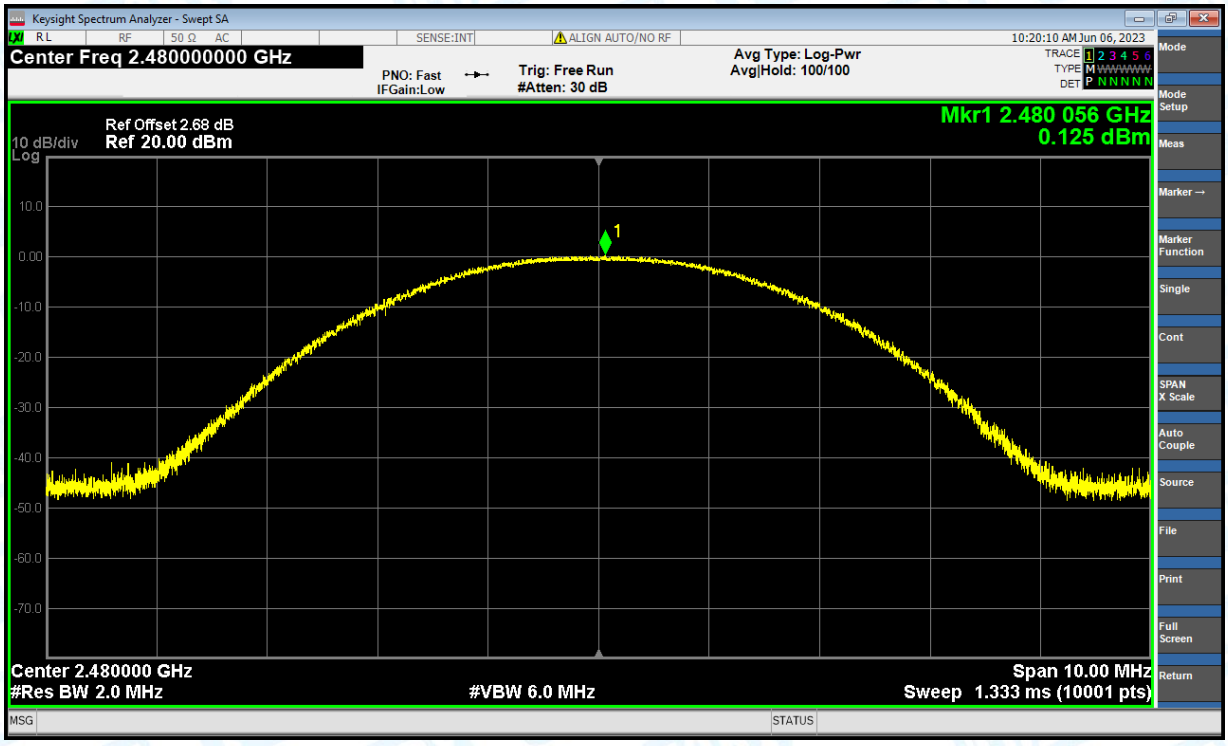
Power NVNT 2-DH1 2402MHz Ant1



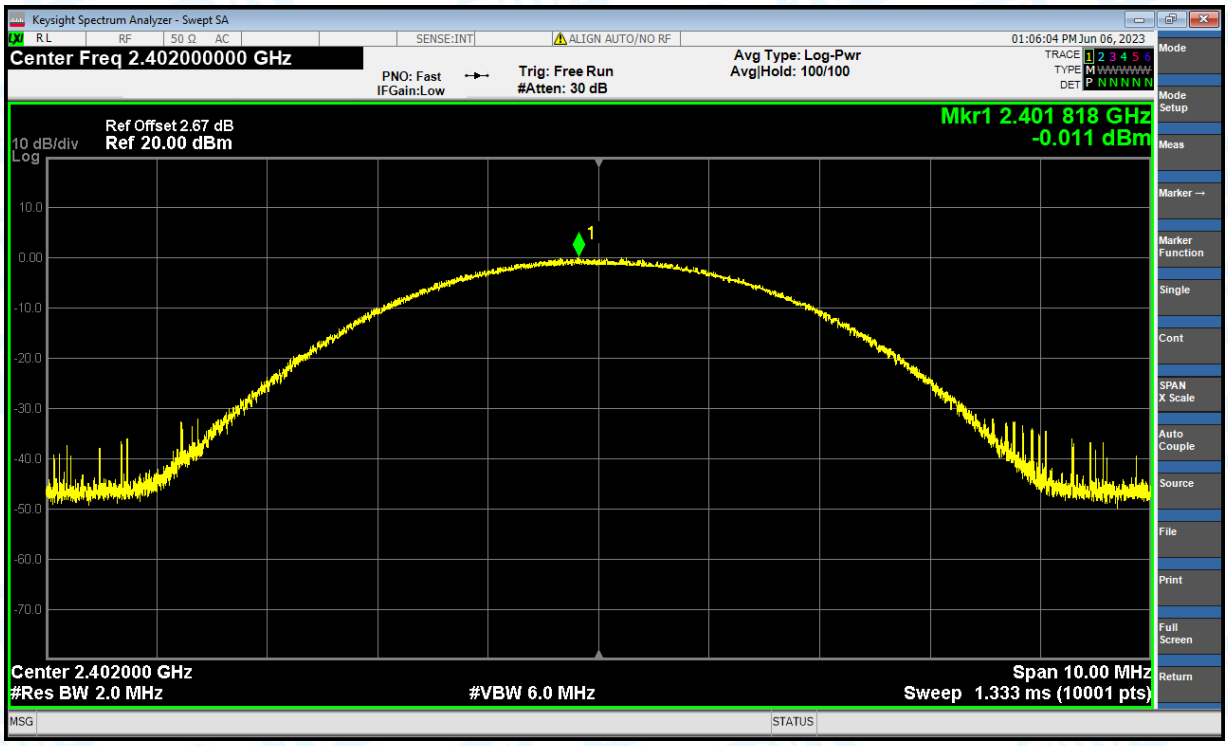
Power NVNT 2-DH1 2441MHz Ant1



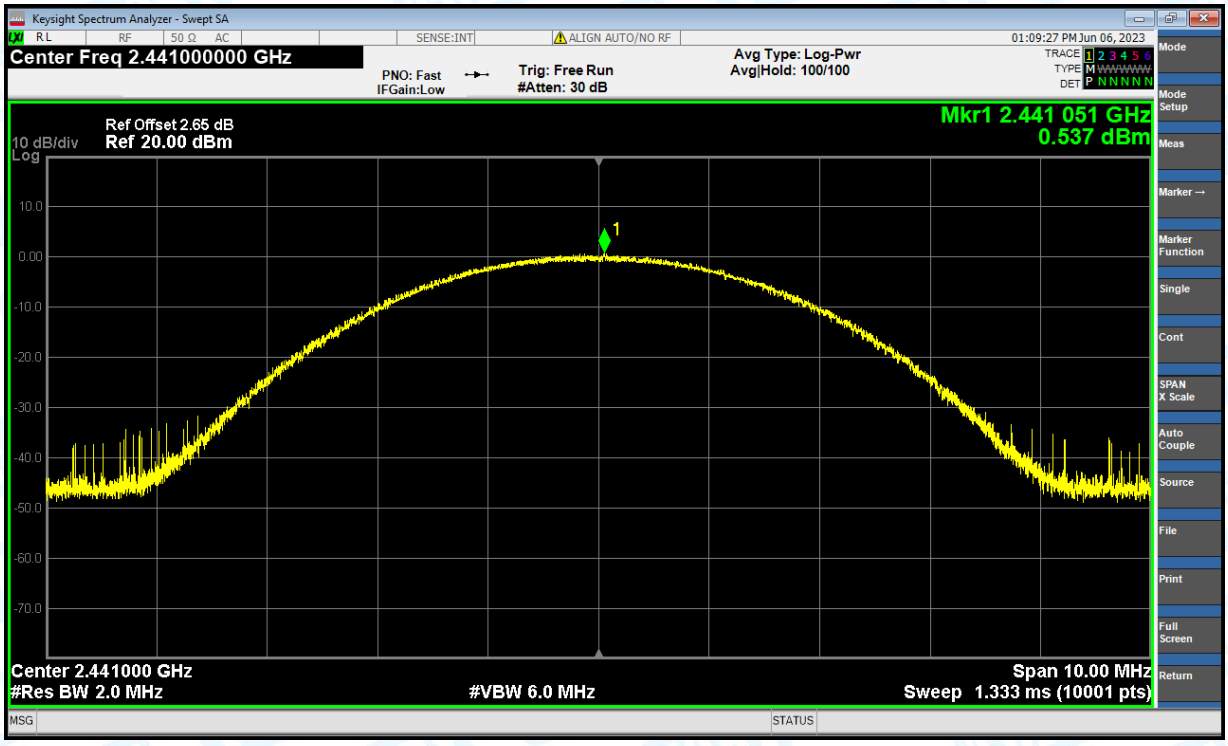
Power NVNT 2-DH1 2480MHz Ant1



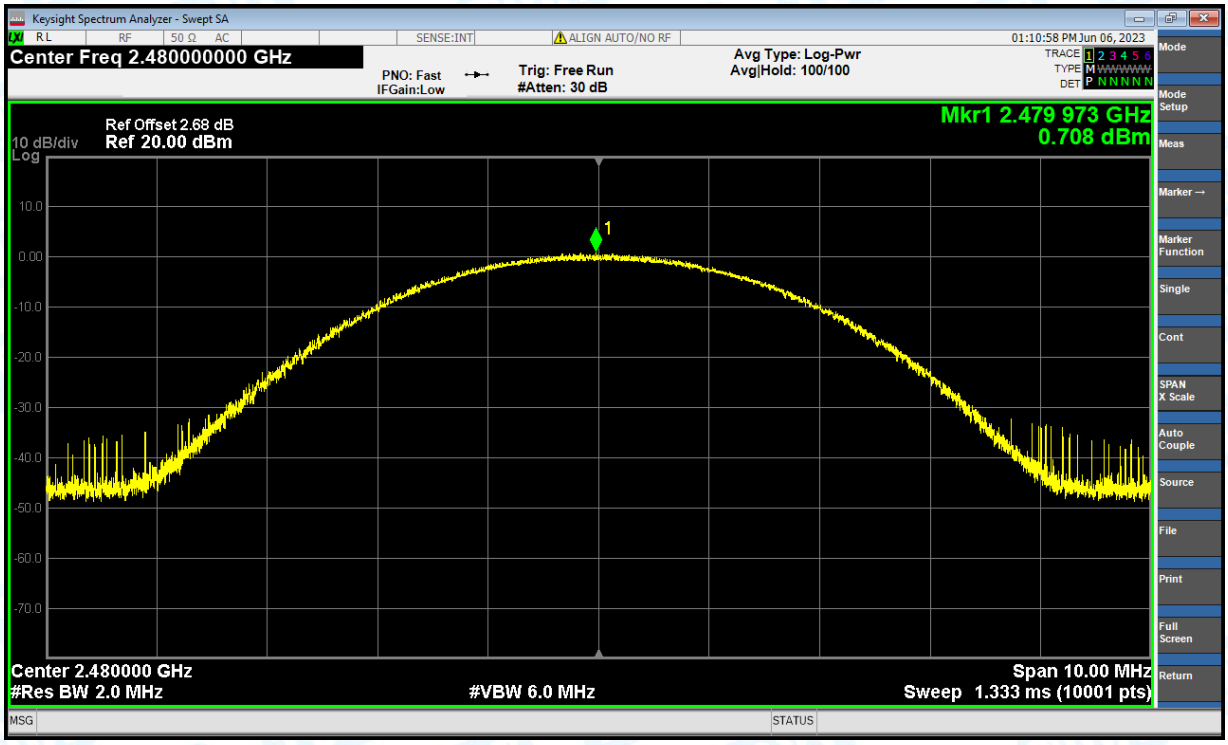
Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



Power NVNT 3-DH1 2480MHz Ant1

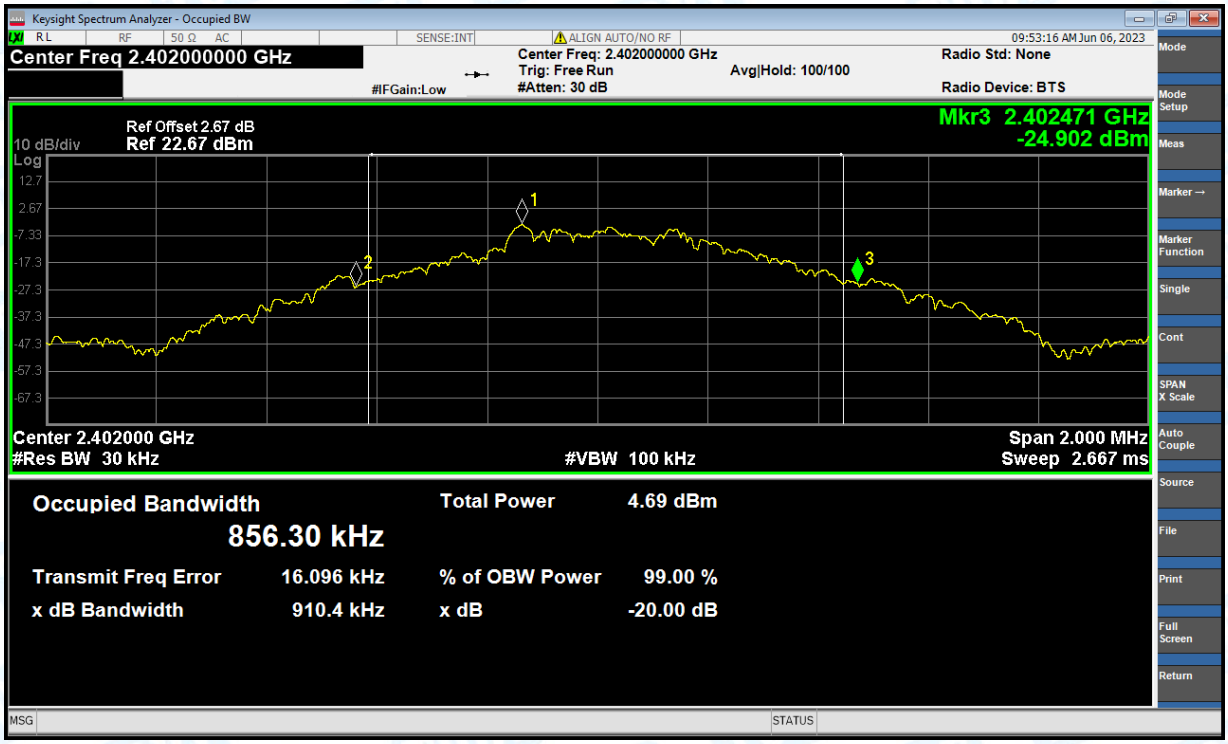


3. -20dB Bandwidth

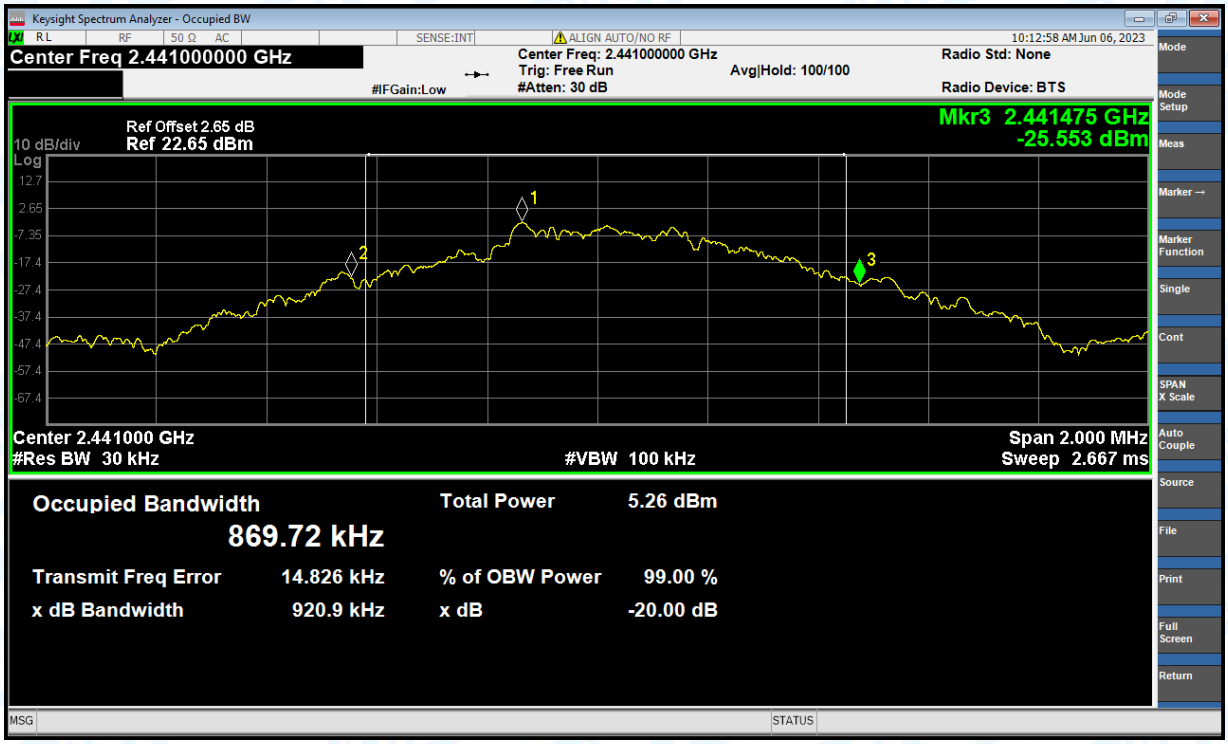
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.91	0	Pass
NVNT	1-DH1	2441	Ant1	0.92	0	Pass
NVNT	1-DH1	2480	Ant1	1	0	Pass
NVNT	2-DH1	2402	Ant1	1.28	0	Pass
NVNT	2-DH1	2441	Ant1	1.27	0	Pass
NVNT	2-DH1	2480	Ant1	1.27	0	Pass
NVNT	3-DH1	2402	Ant1	1.22	0	Pass
NVNT	3-DH1	2441	Ant1	1.24	0	Pass
NVNT	3-DH1	2480	Ant1	1.22	0	Pass

Test Graphs

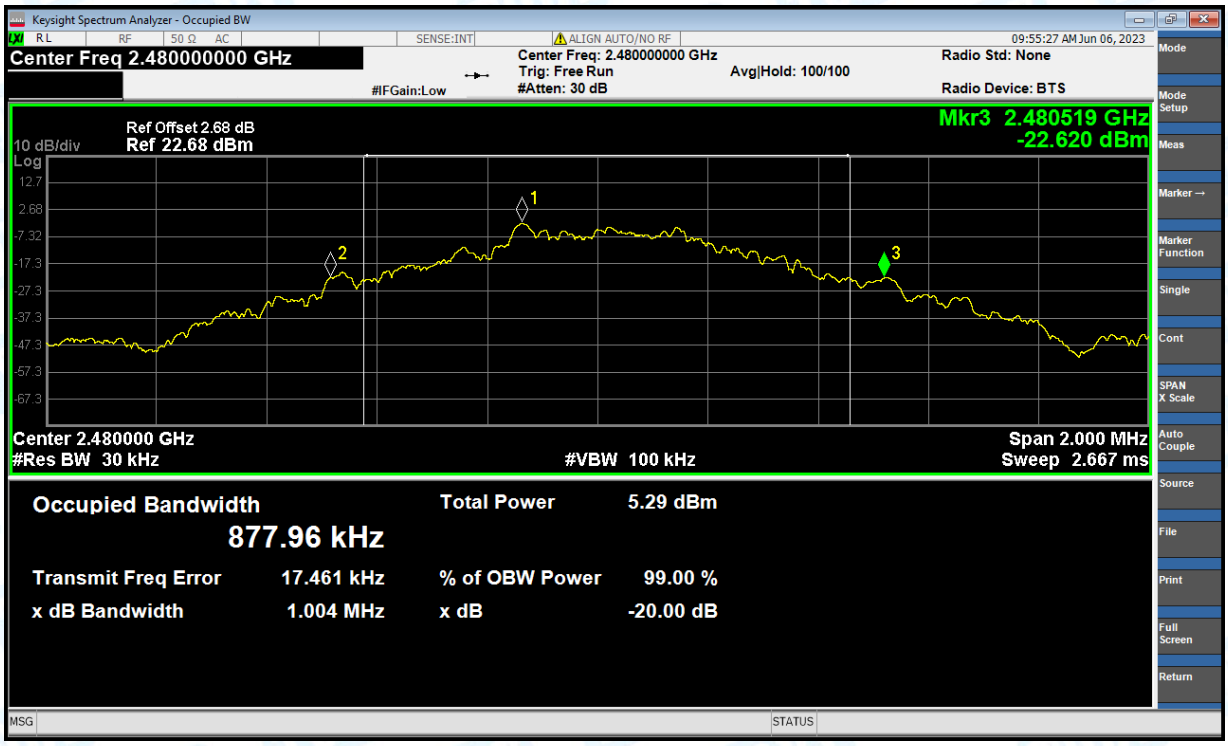
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



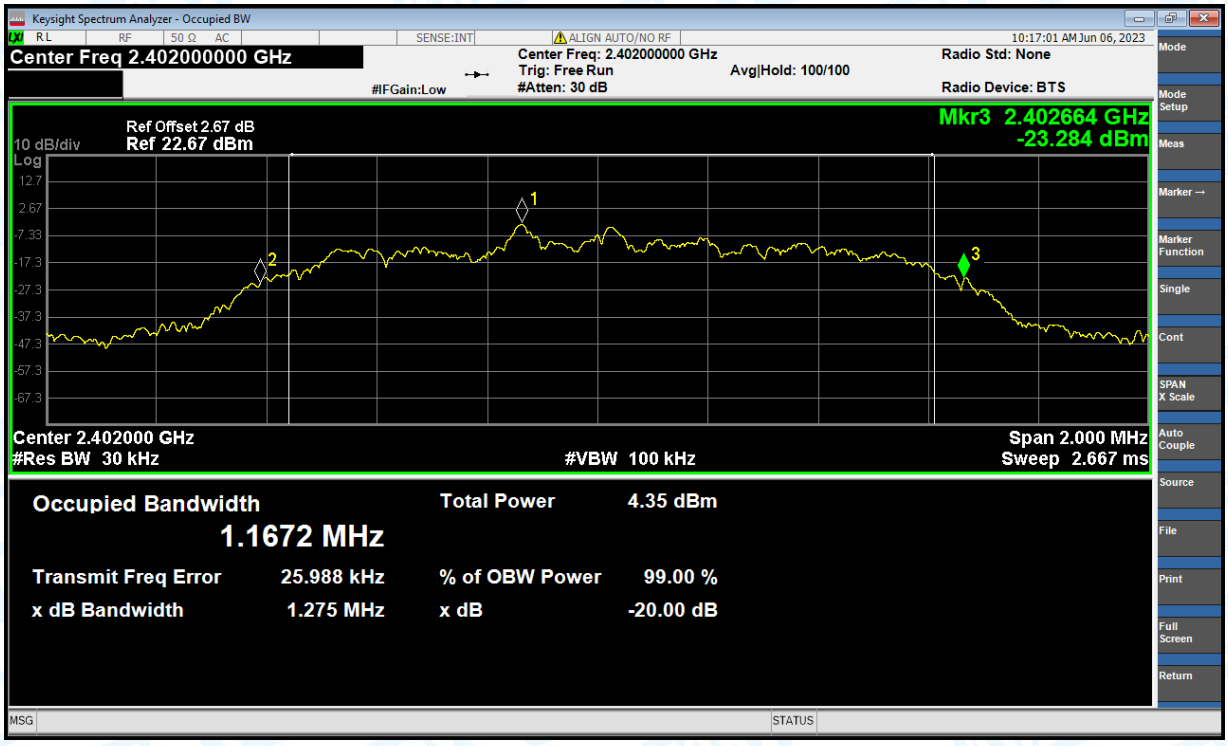
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



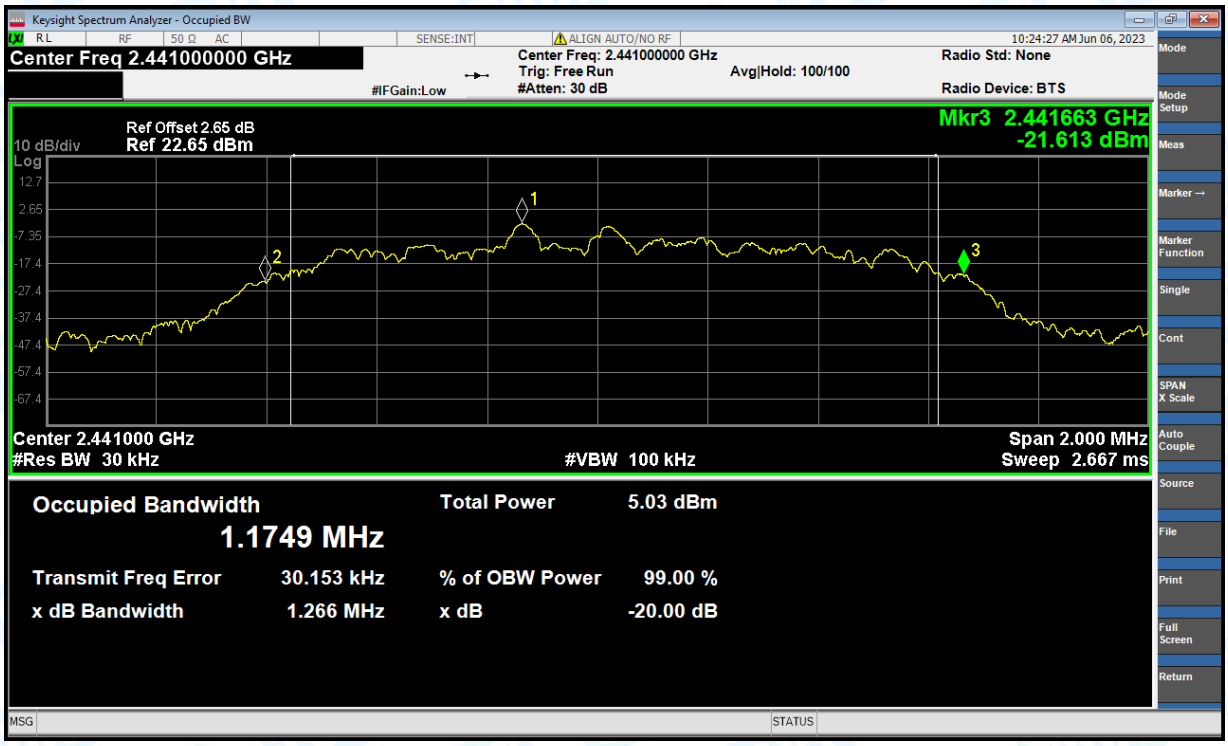
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



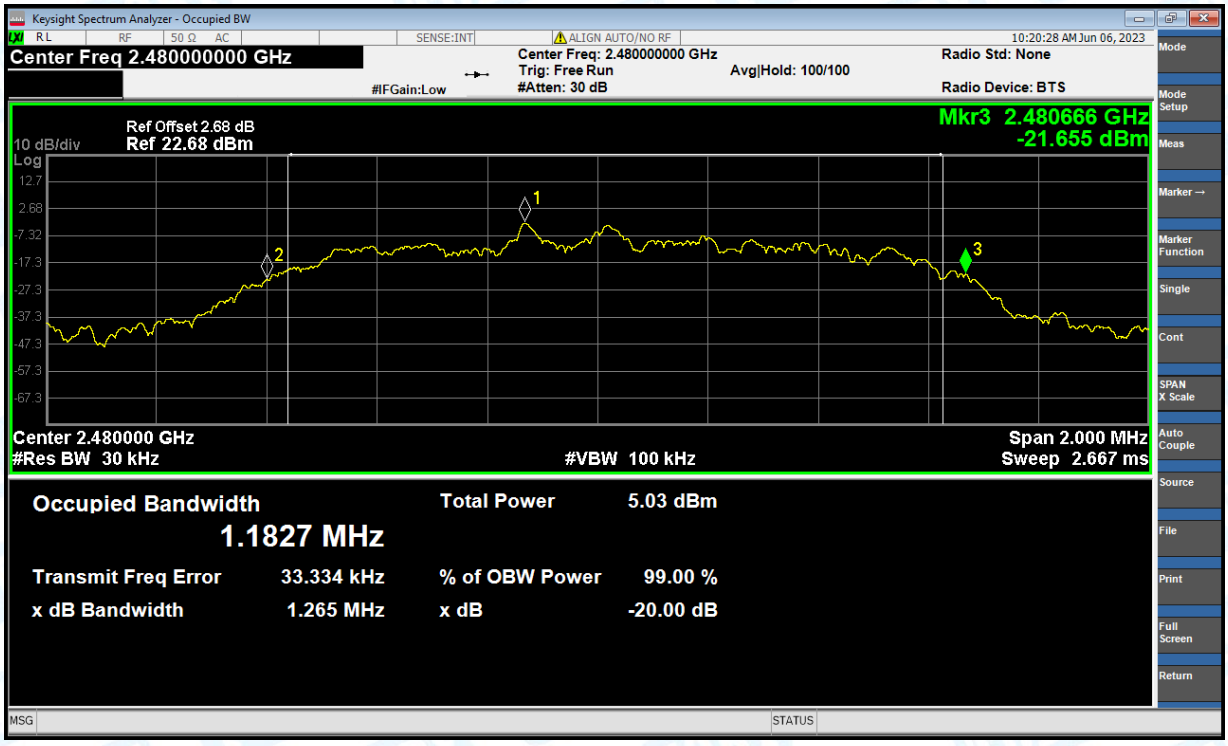
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



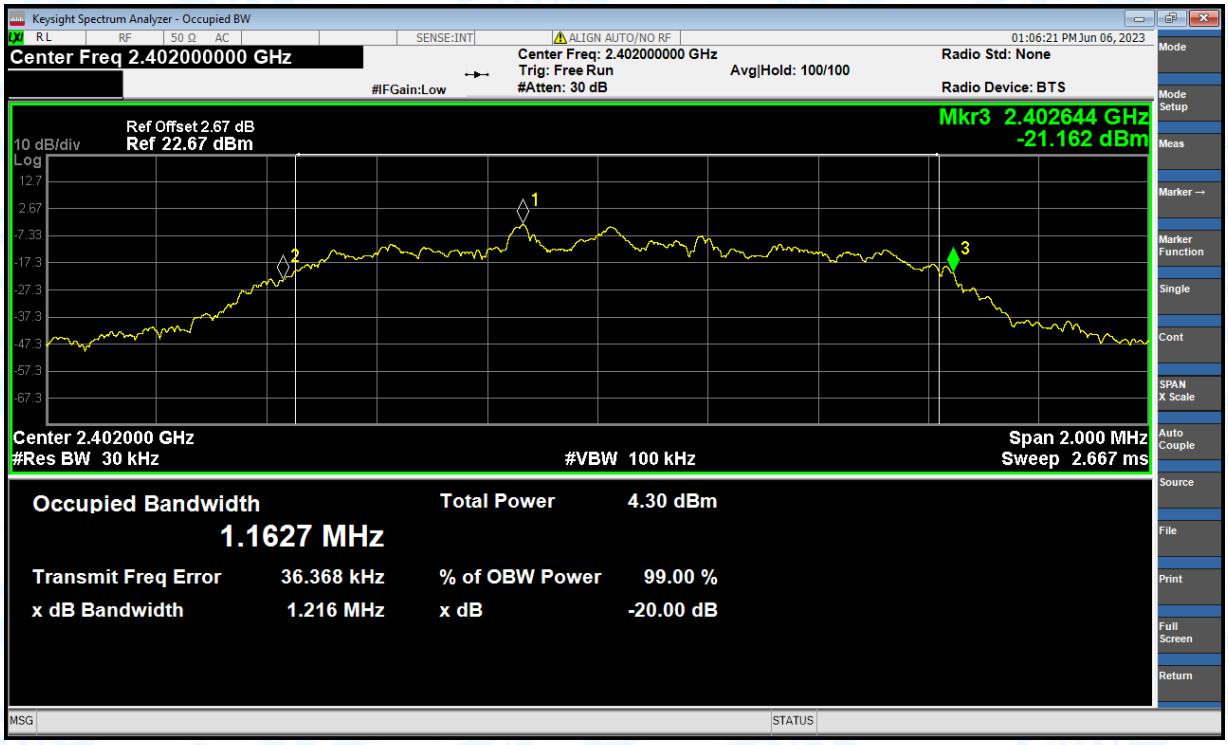
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



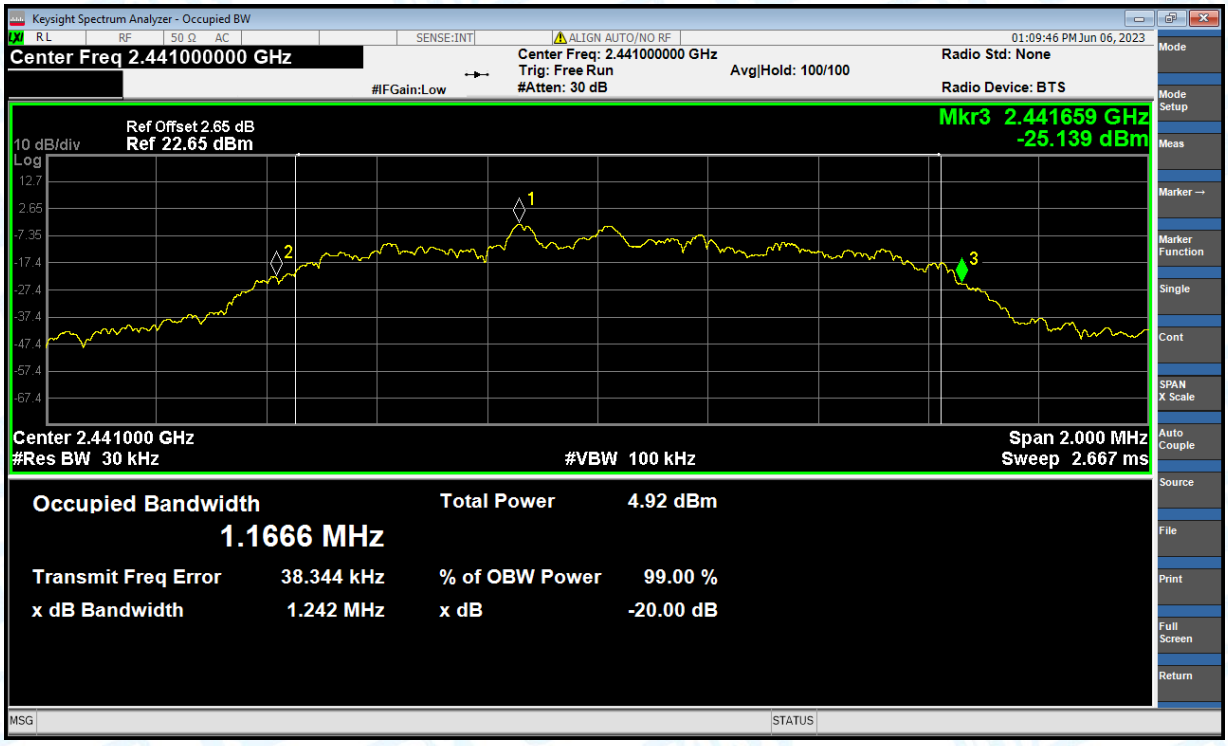
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1



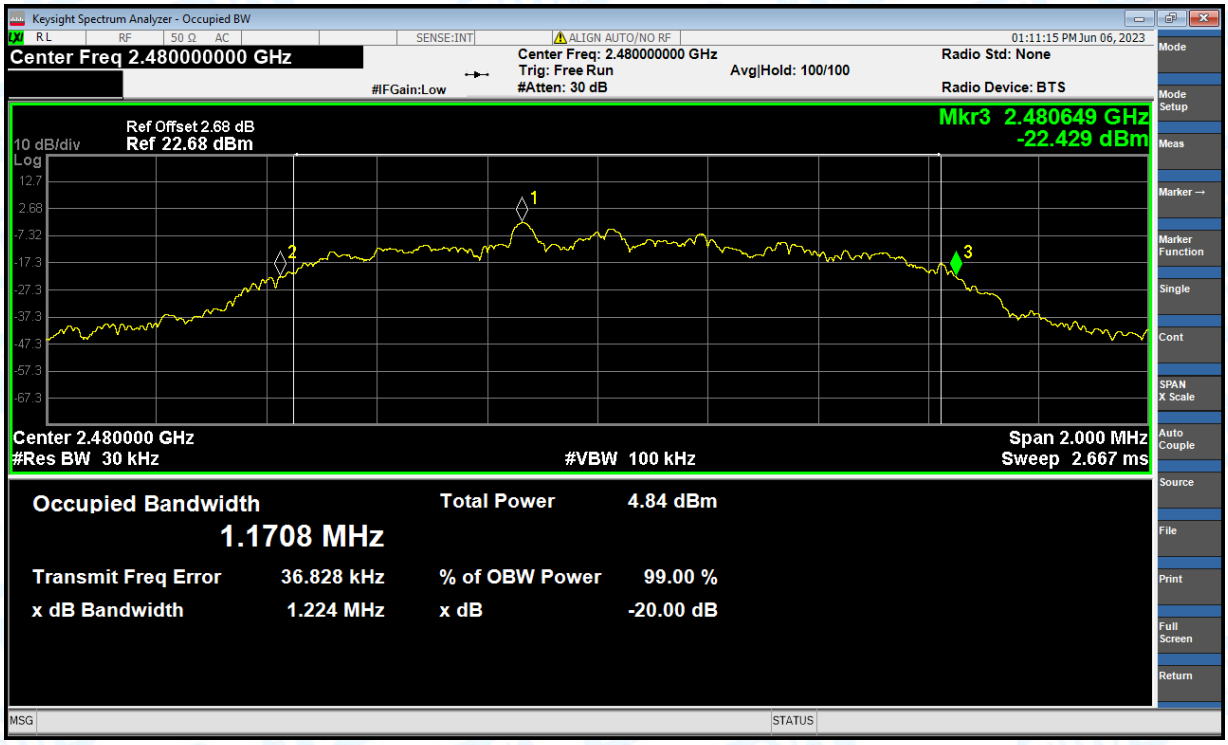
-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2480MHz Ant1

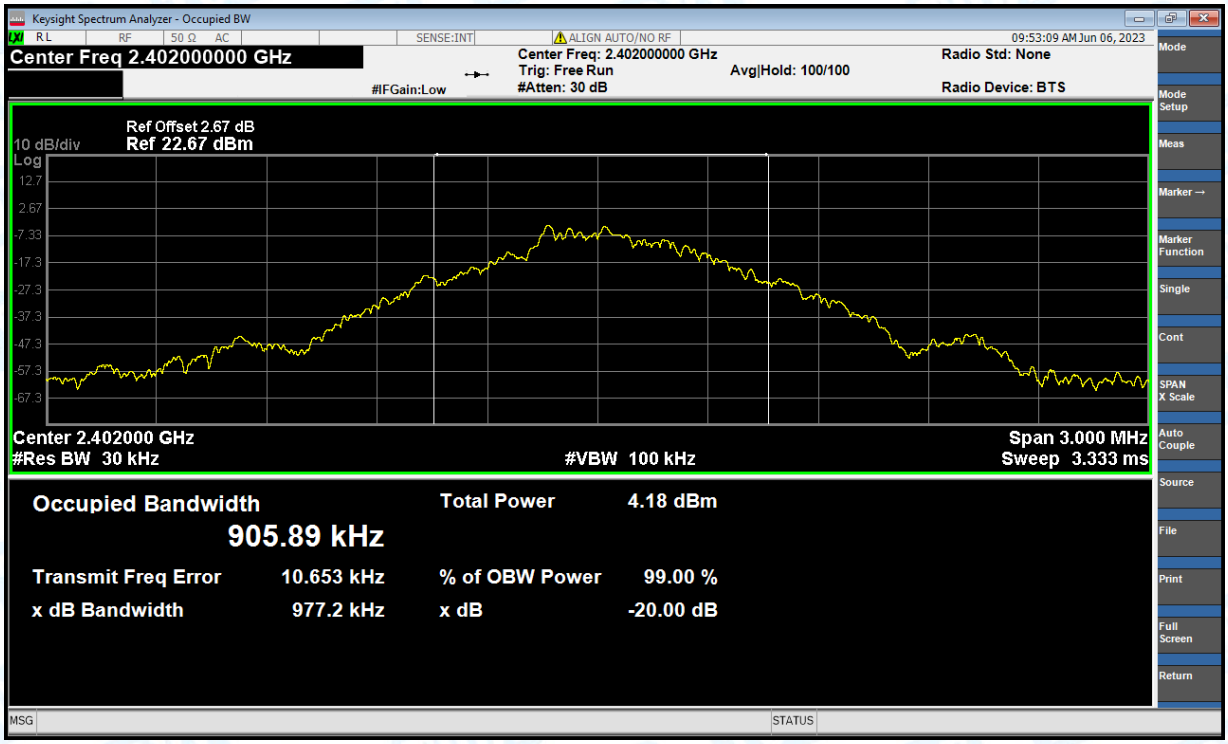


4. Occupied Channel Bandwidth

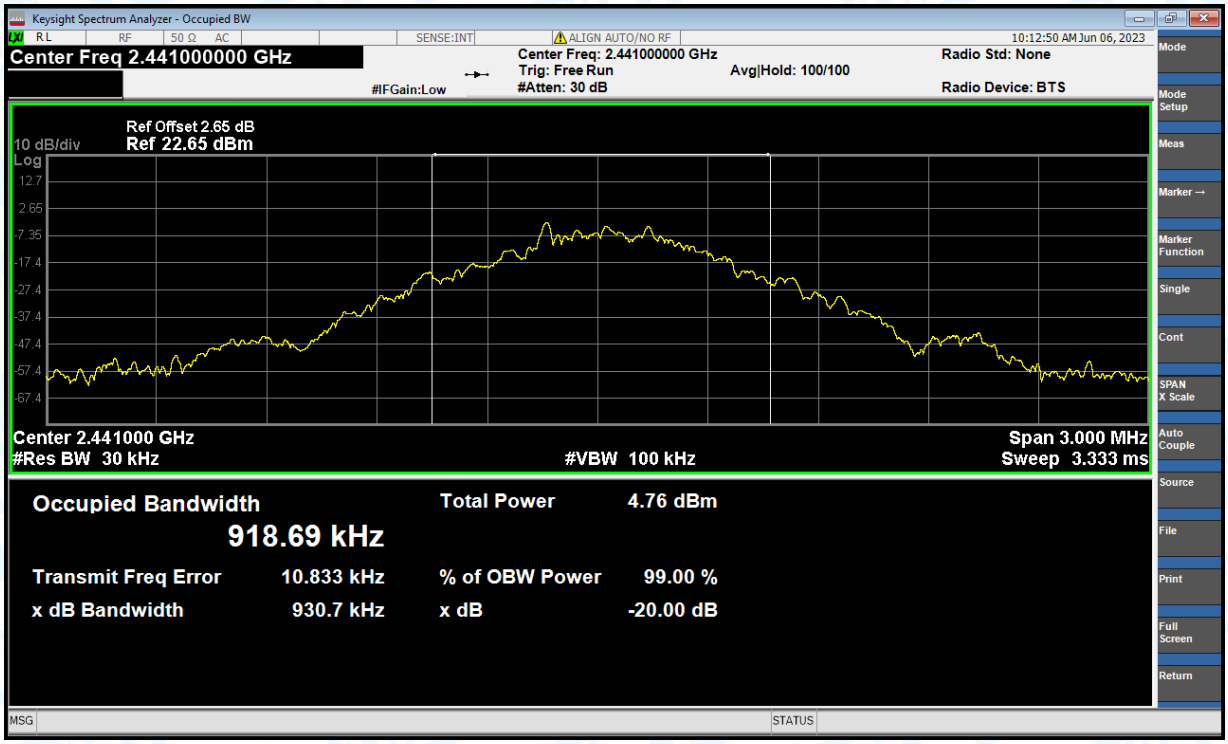
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.906
NVNT	1-DH1	2441	Ant1	0.919
NVNT	1-DH1	2480	Ant1	0.888
NVNT	2-DH1	2402	Ant1	1.166
NVNT	2-DH1	2441	Ant1	1.194
NVNT	2-DH1	2480	Ant1	1.192
NVNT	3-DH1	2402	Ant1	1.174
NVNT	3-DH1	2441	Ant1	1.162
NVNT	3-DH1	2480	Ant1	1.17

Test Graphs

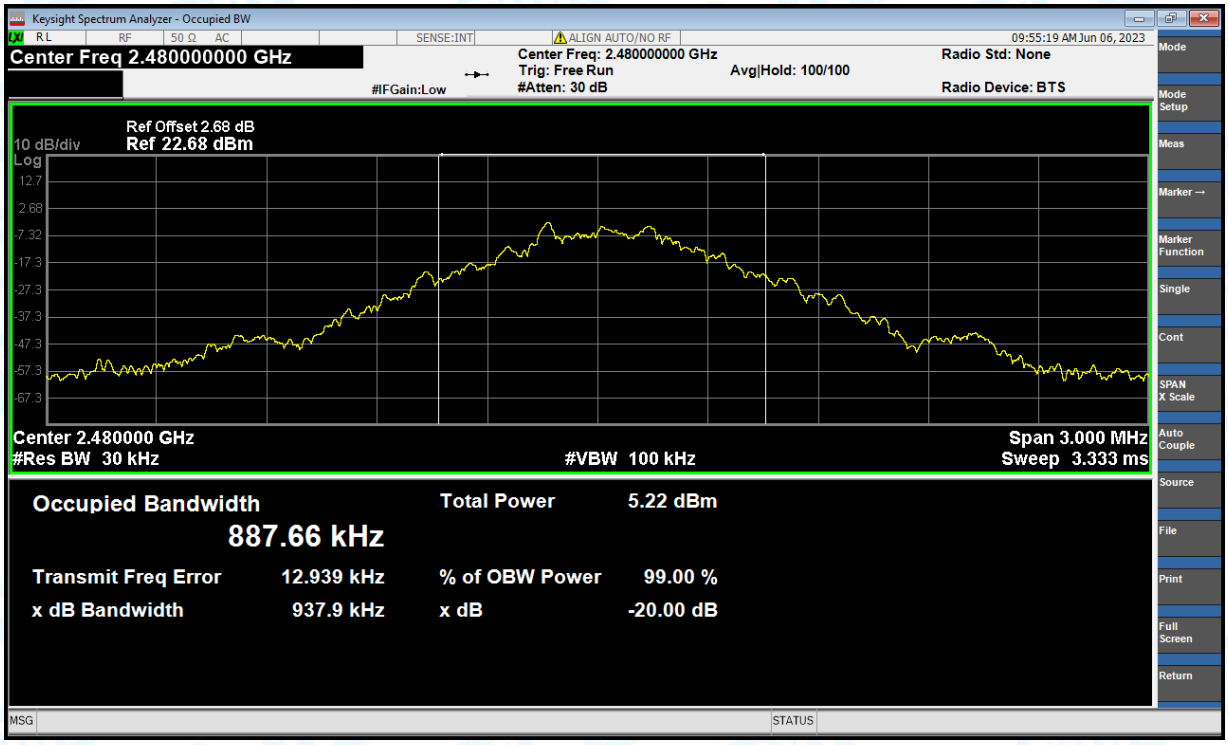
OBW NVNT 1-DH1 2402MHz Ant1



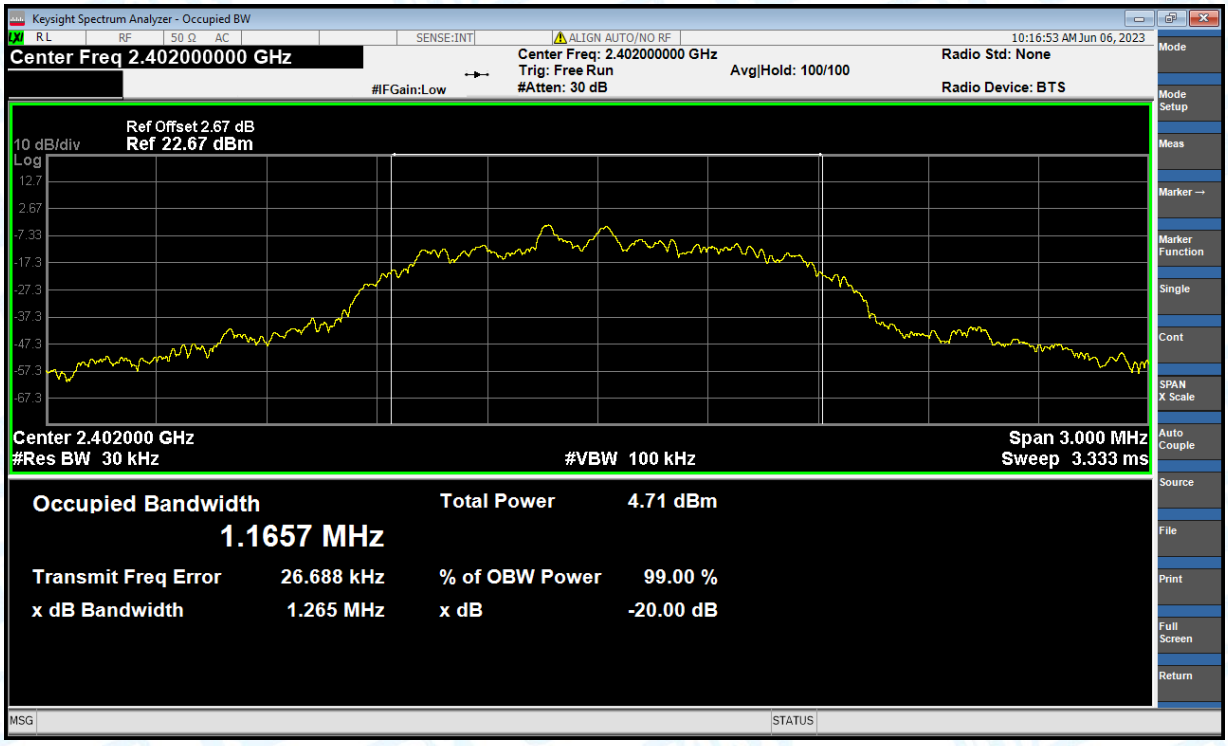
OBW NVNT 1-DH1 2441MHz Ant1



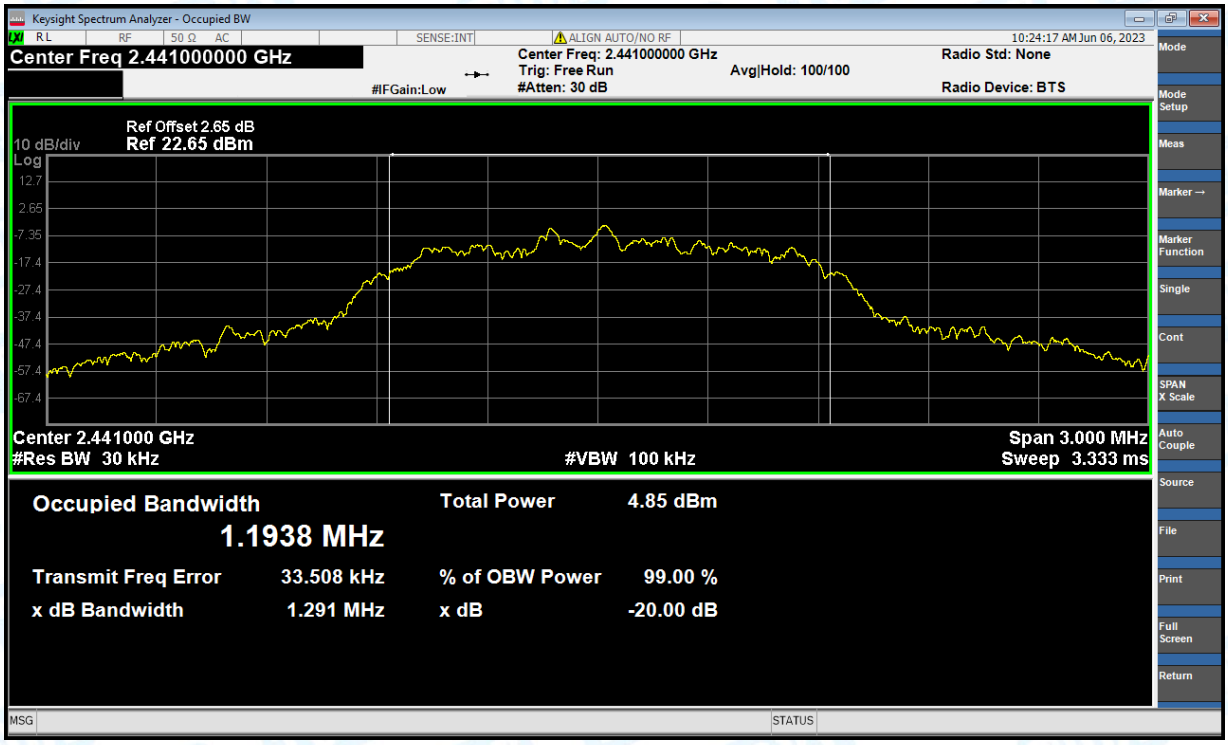
OBW NVNT 1-DH1 2480MHz Ant1



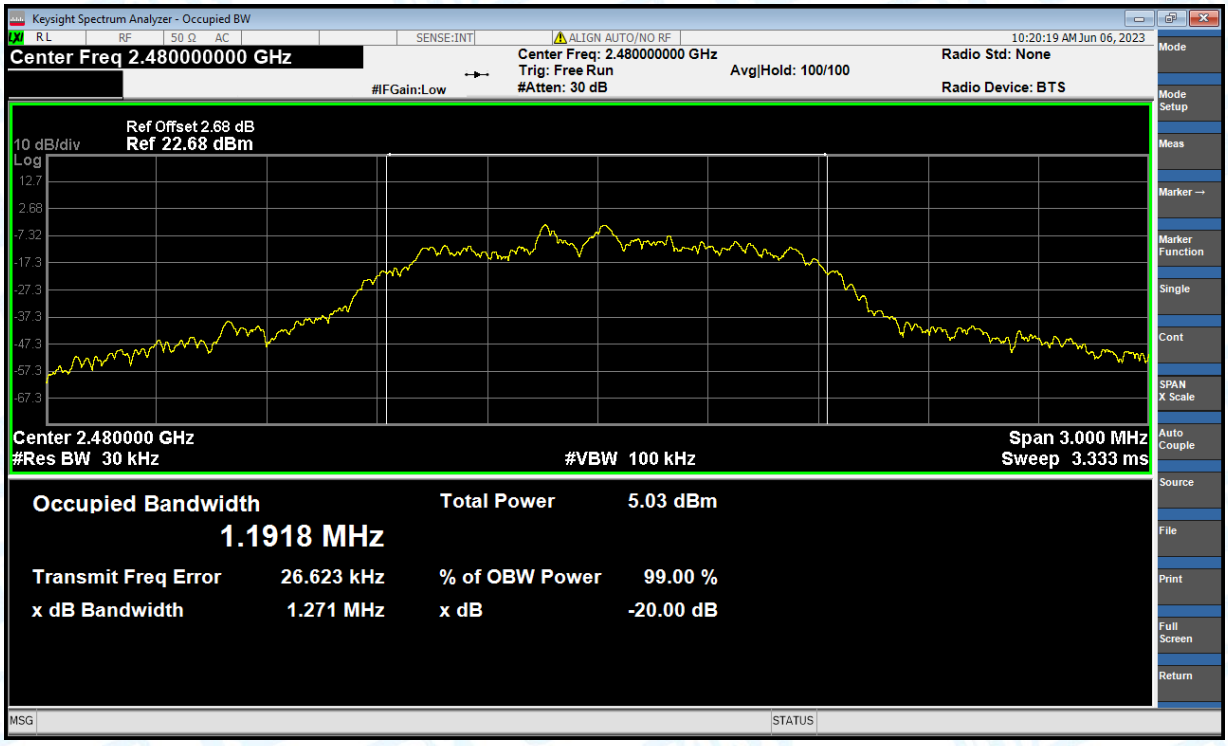
OBW NVNT 2-DH1 2402MHz Ant1



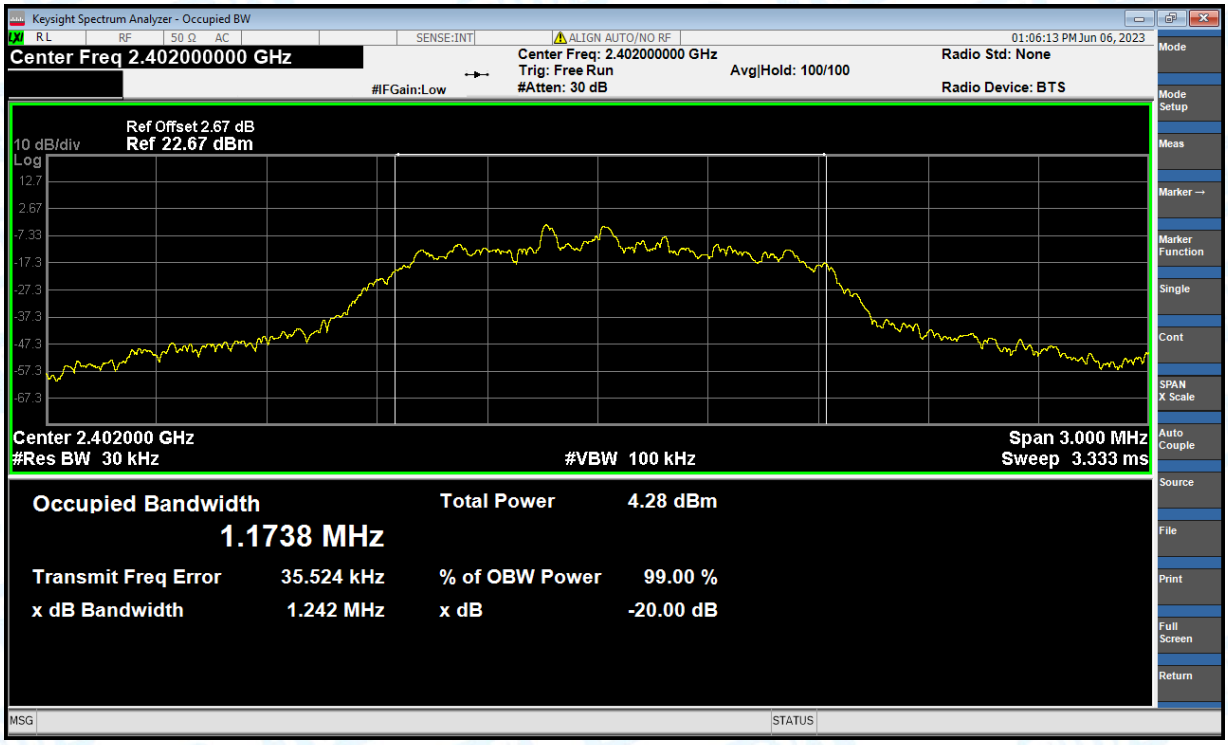
OBW NVNT 2-DH1 2441MHz Ant1



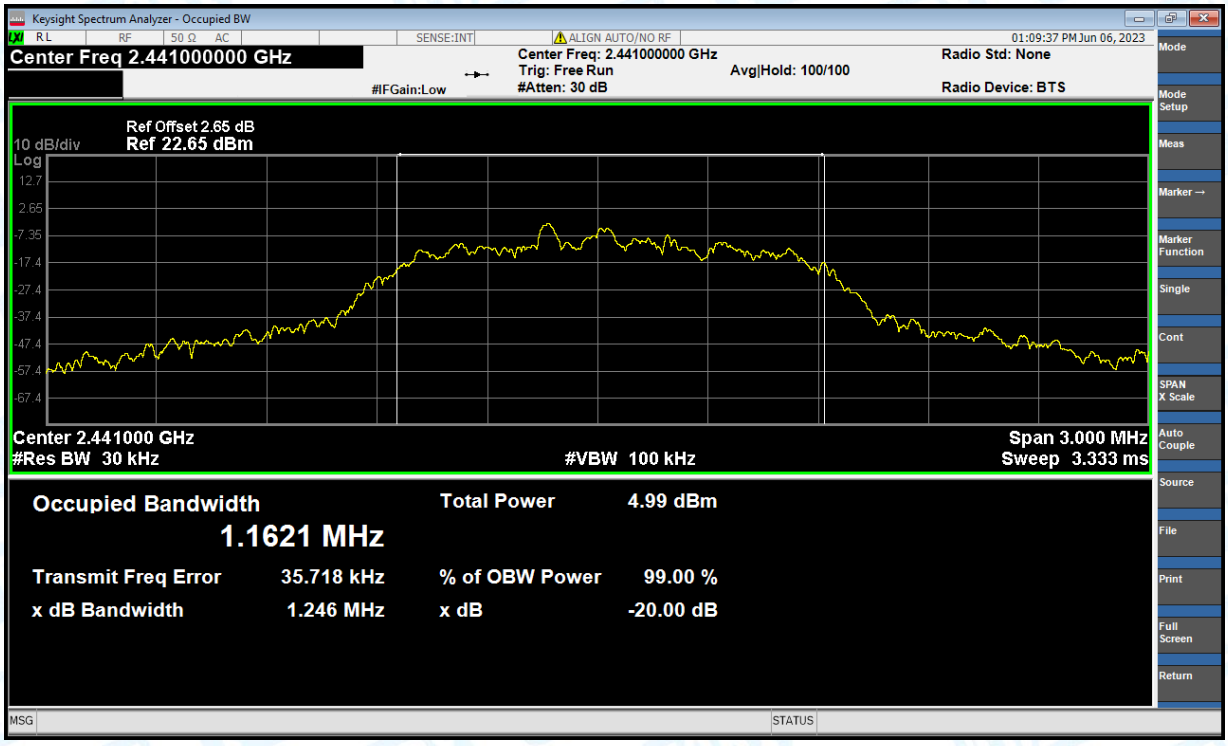
OBW NVNT 2-DH1 2480MHz Ant1



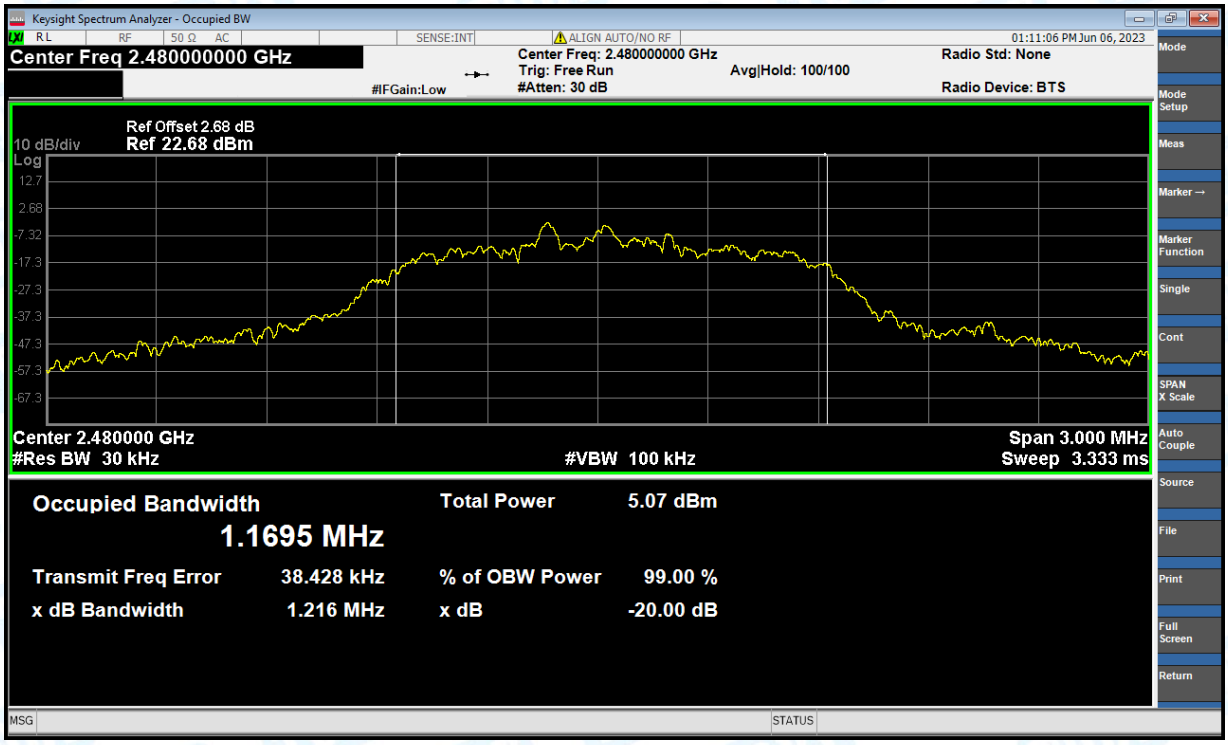
OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



OBW NVNT 3-DH1 2480MHz Ant1

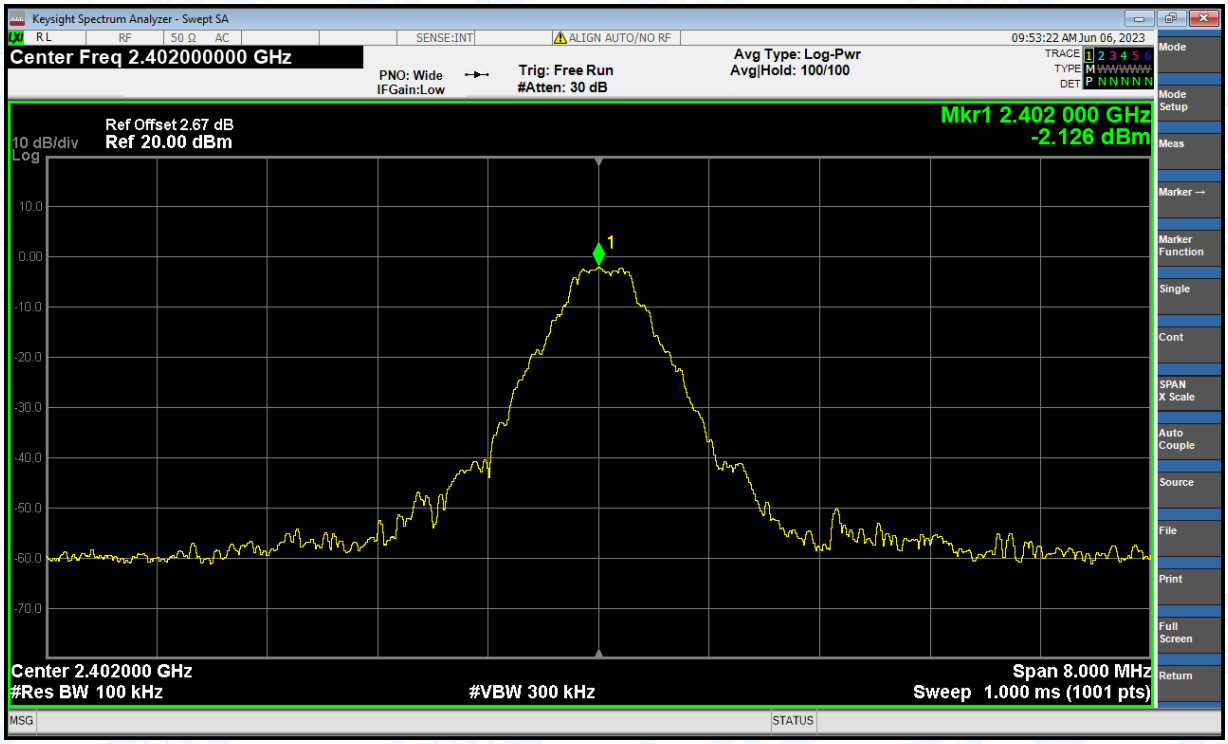


5. Band Edge

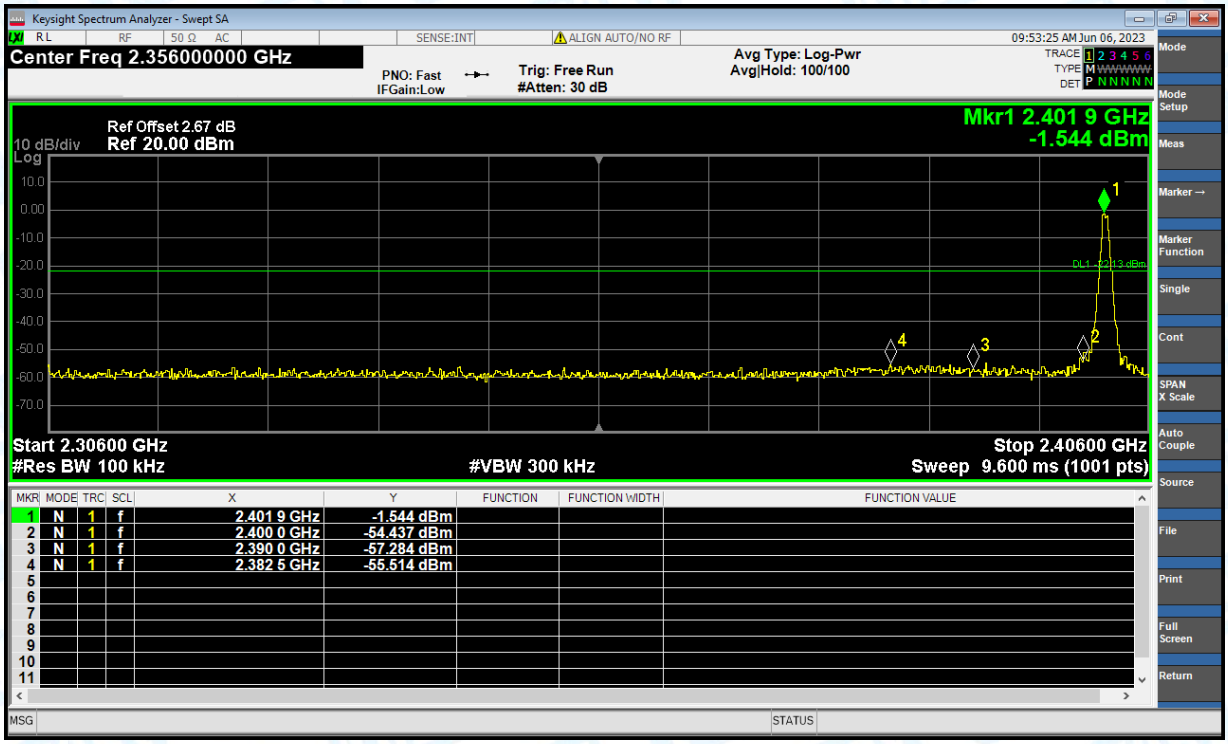
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-53.38	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-51.9	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-52.38	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-53.35	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-51.92	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-53.3	-20	Pass

Test Graphs

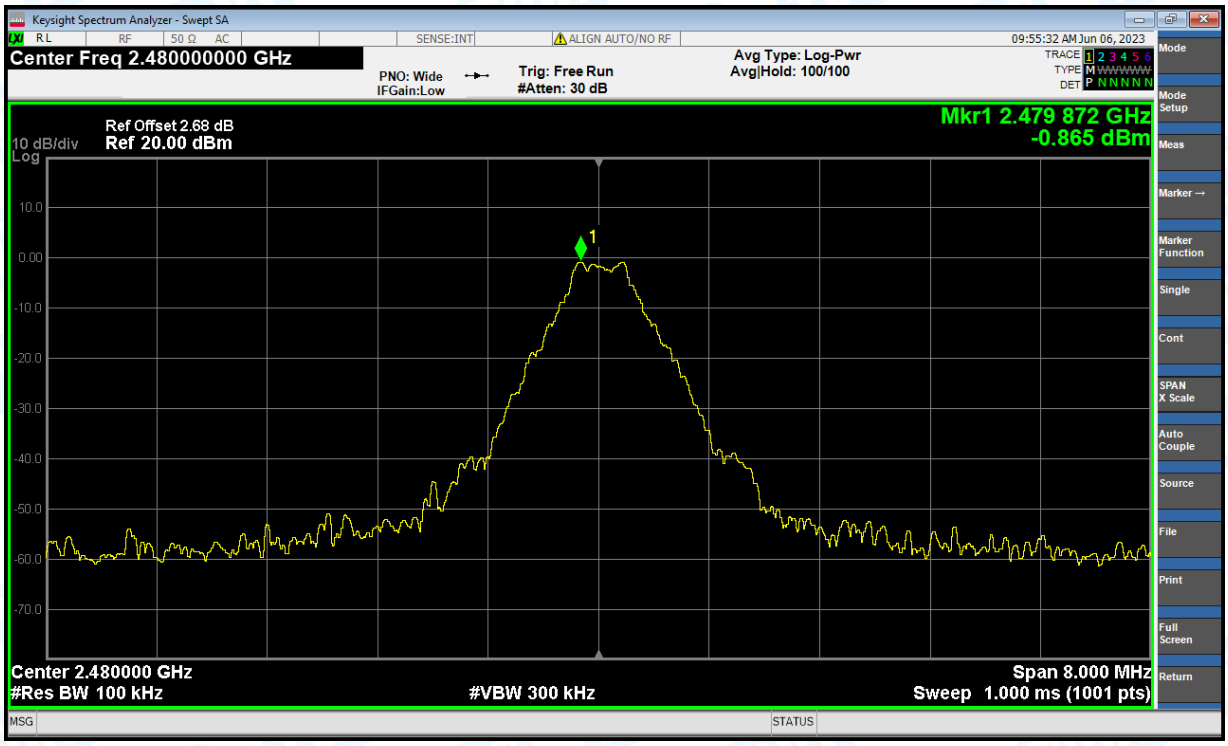
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



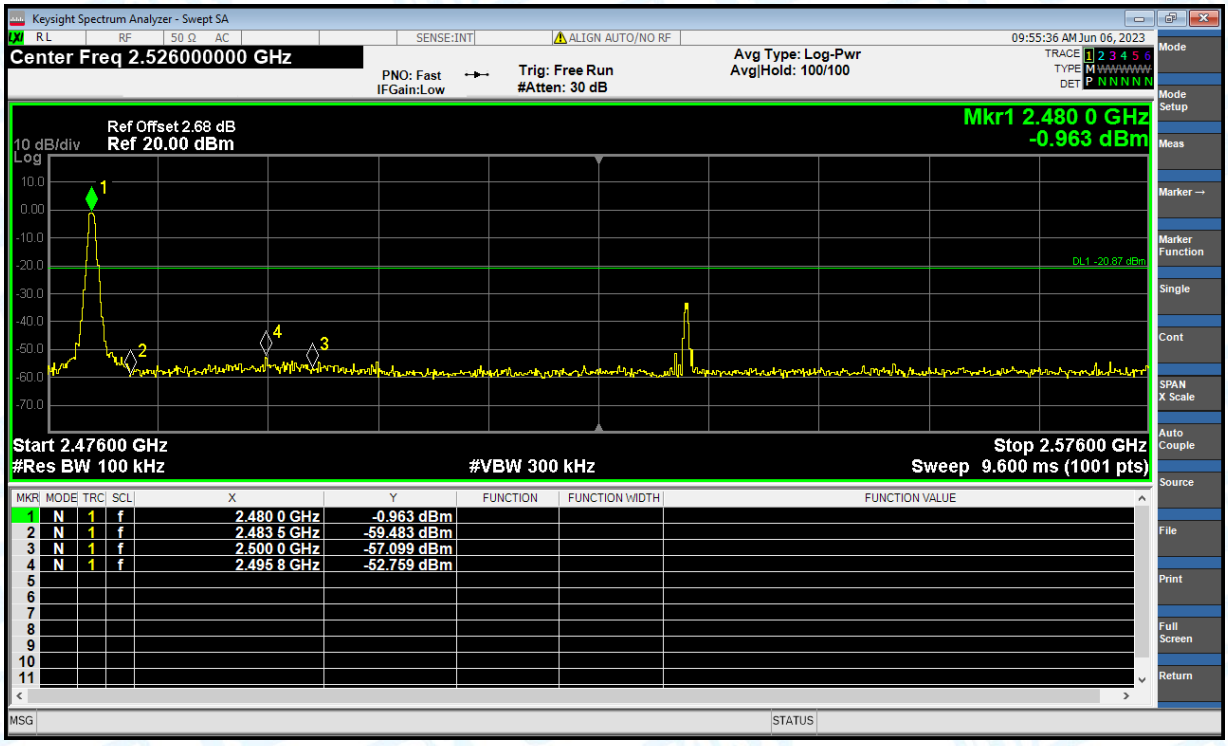
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



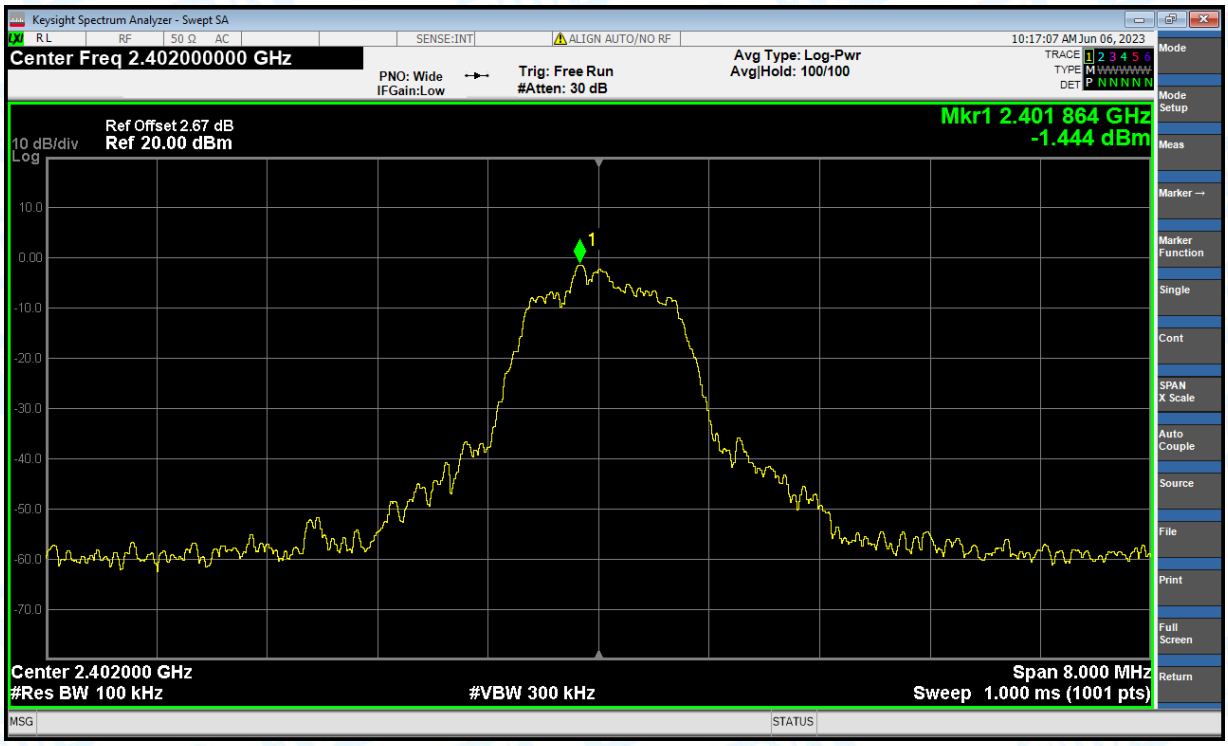
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



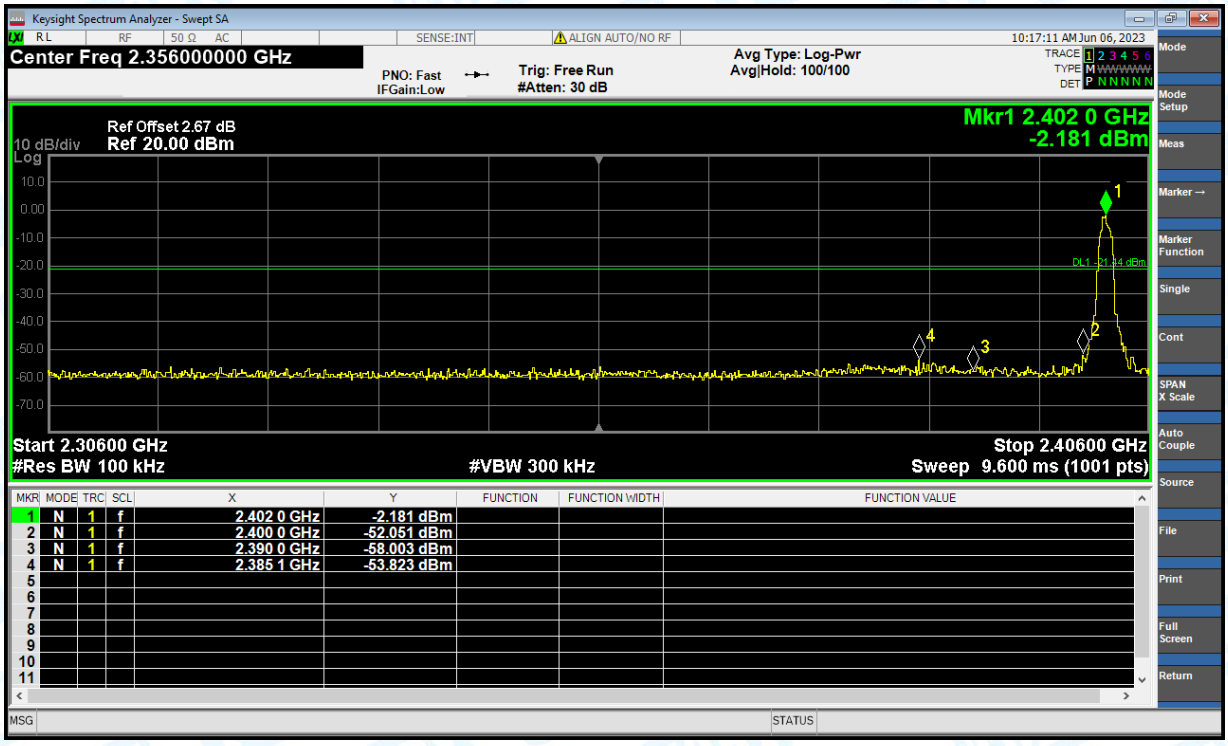
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



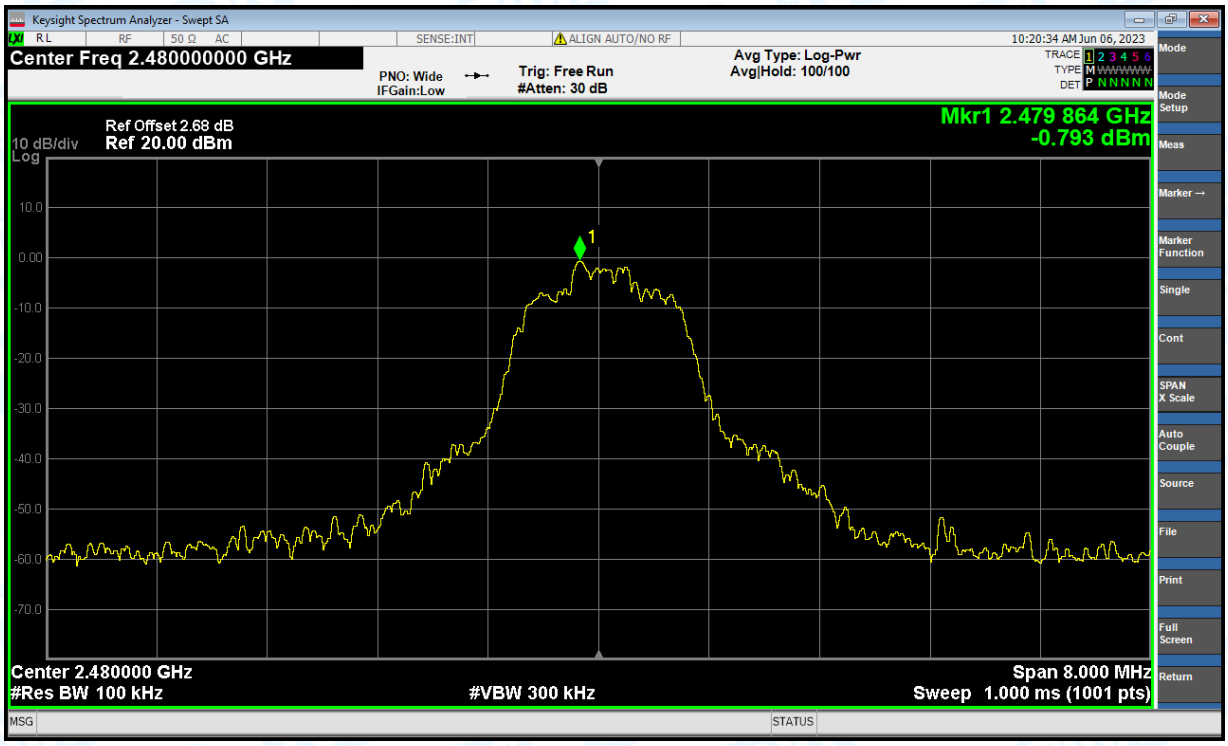
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



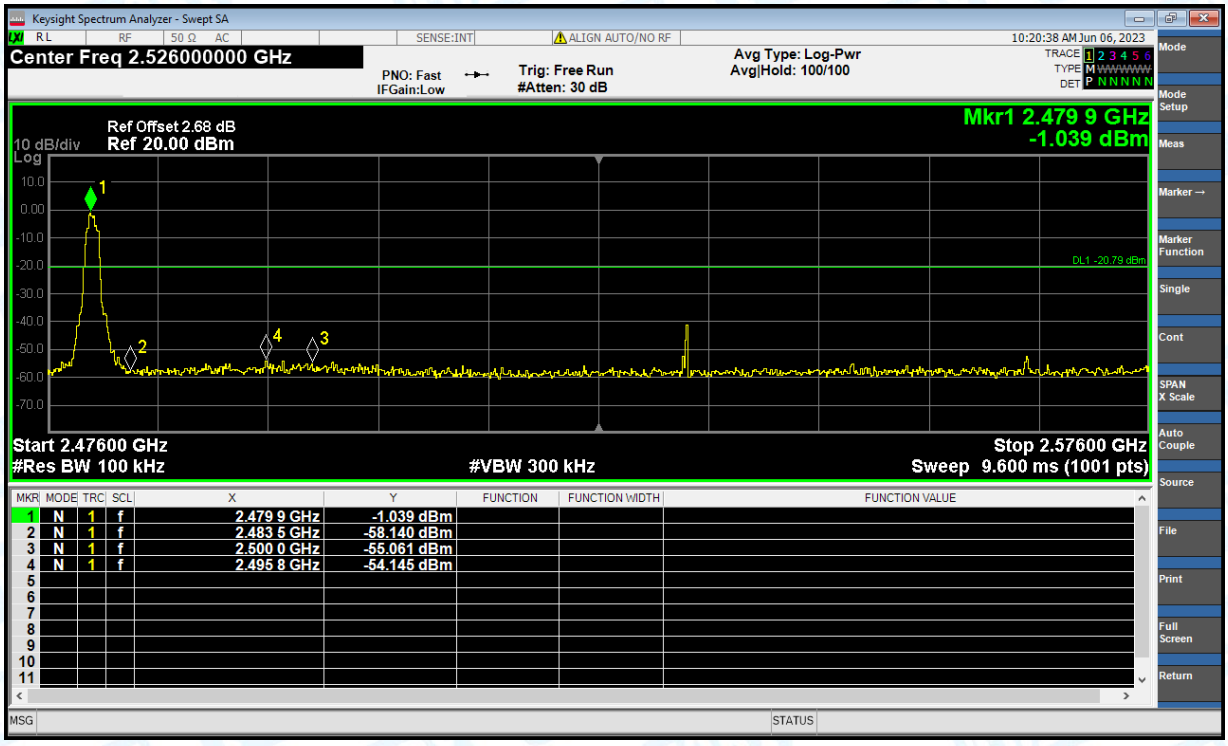
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



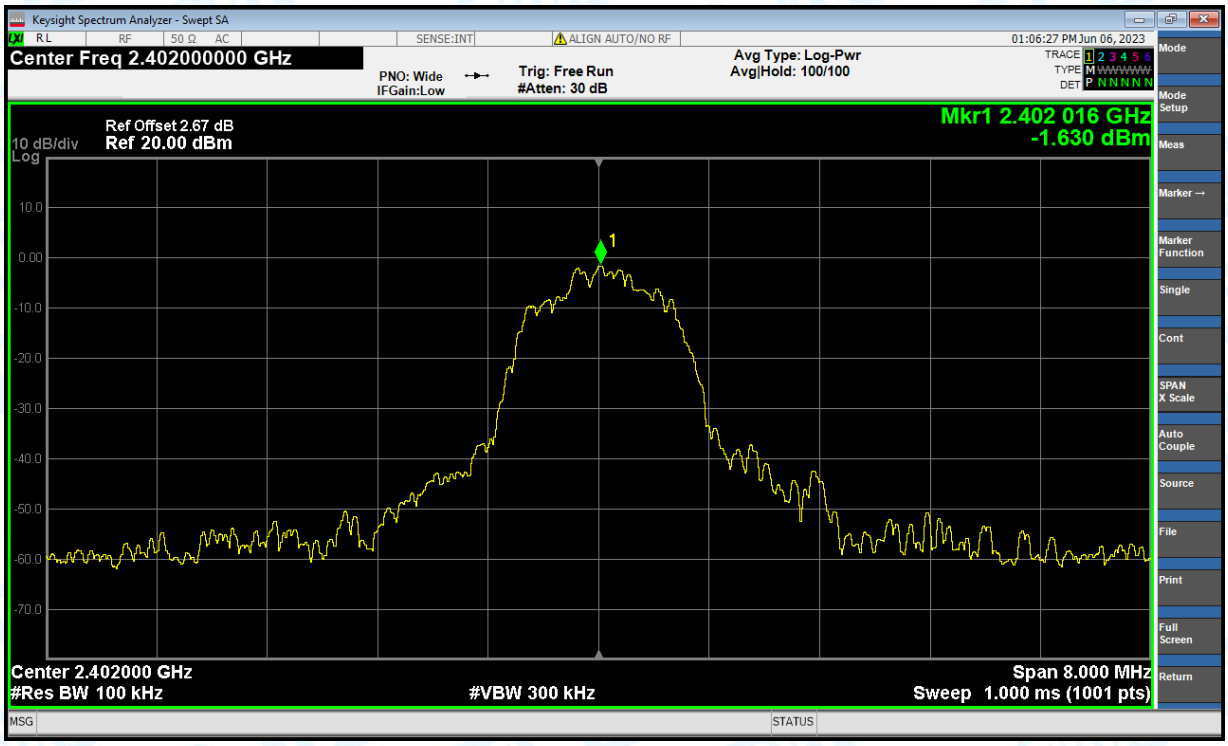
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



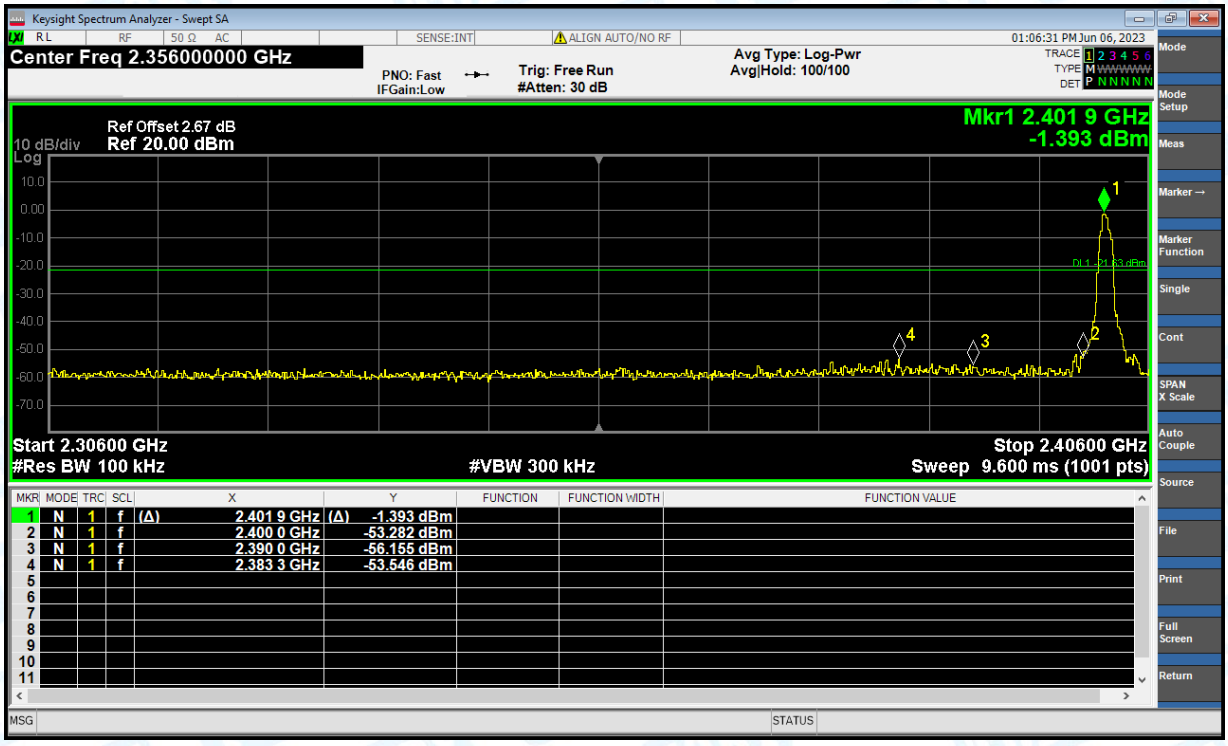
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



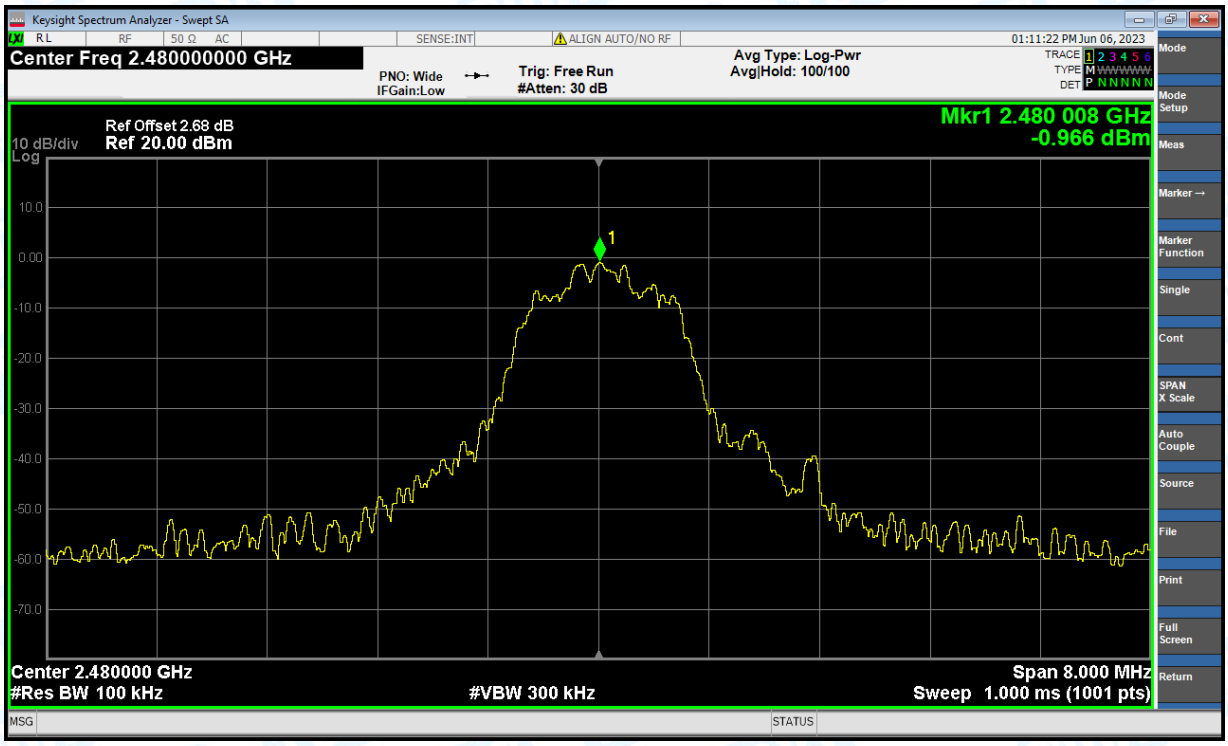
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



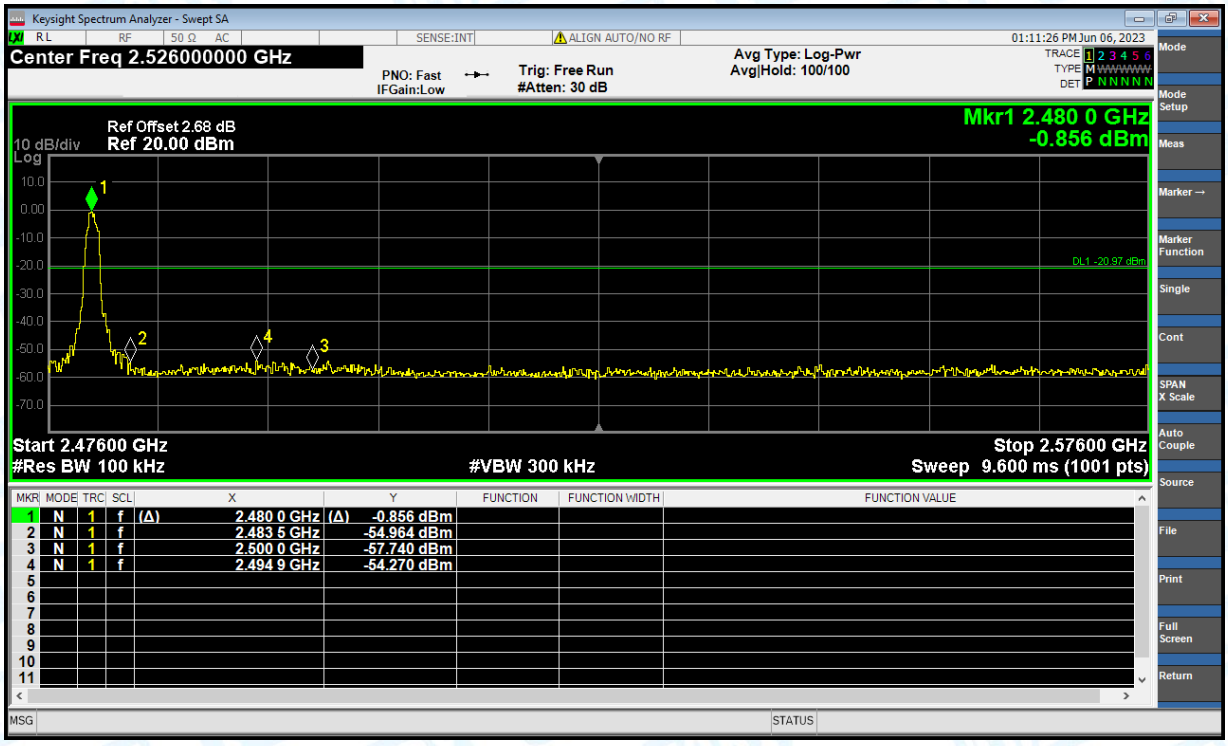
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Emission

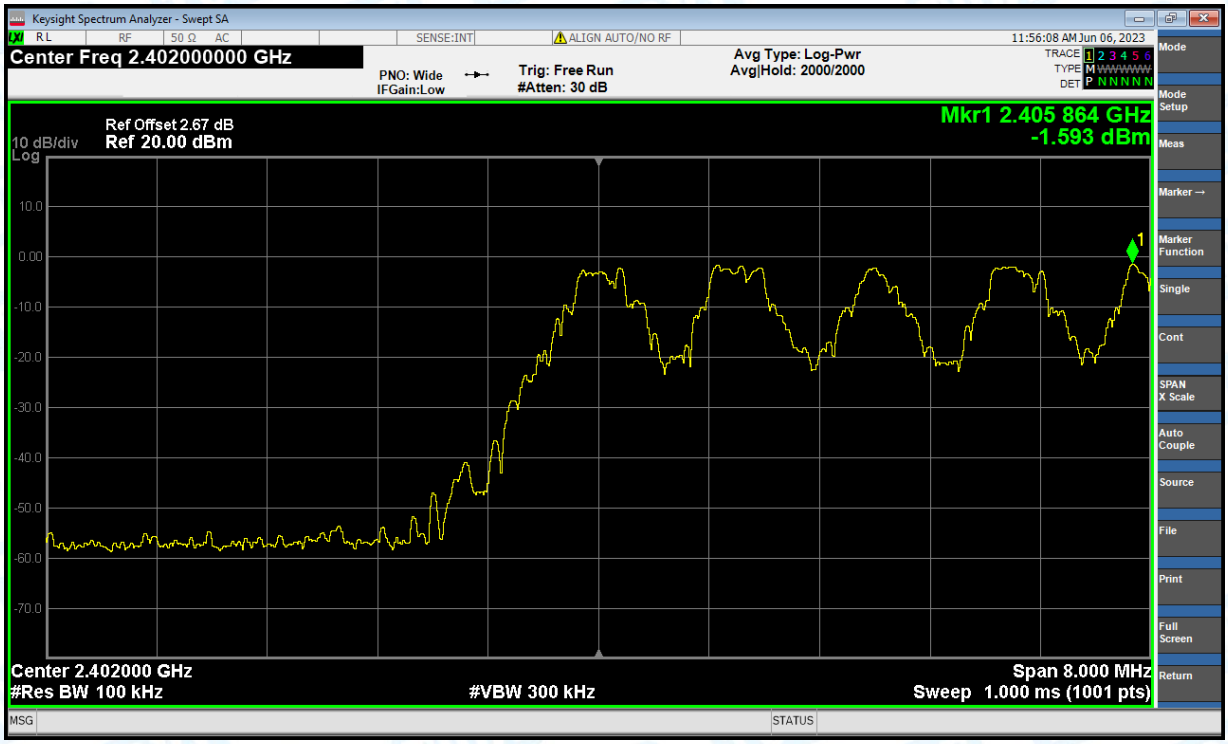


6. Band Edge(Hopping)

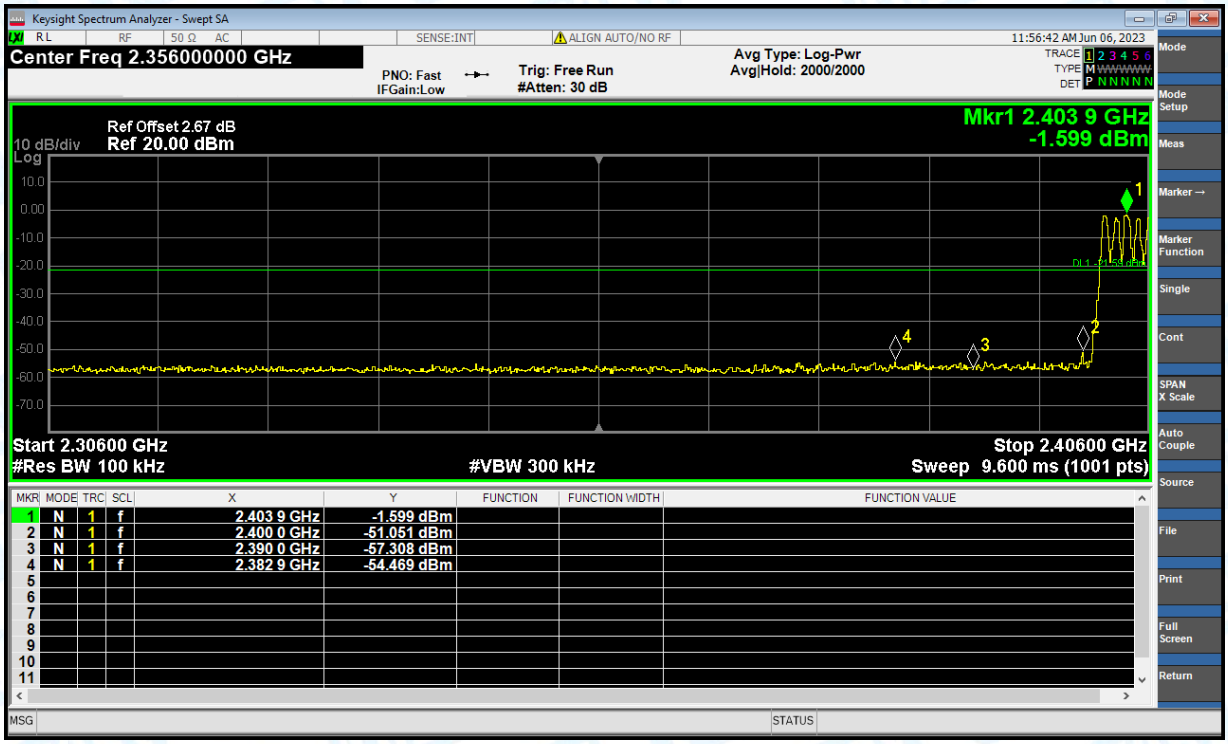
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-52.88	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-52.01	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-50.82	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-52.41	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-50.95	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-52.37	-20	Pass

Test Graphs

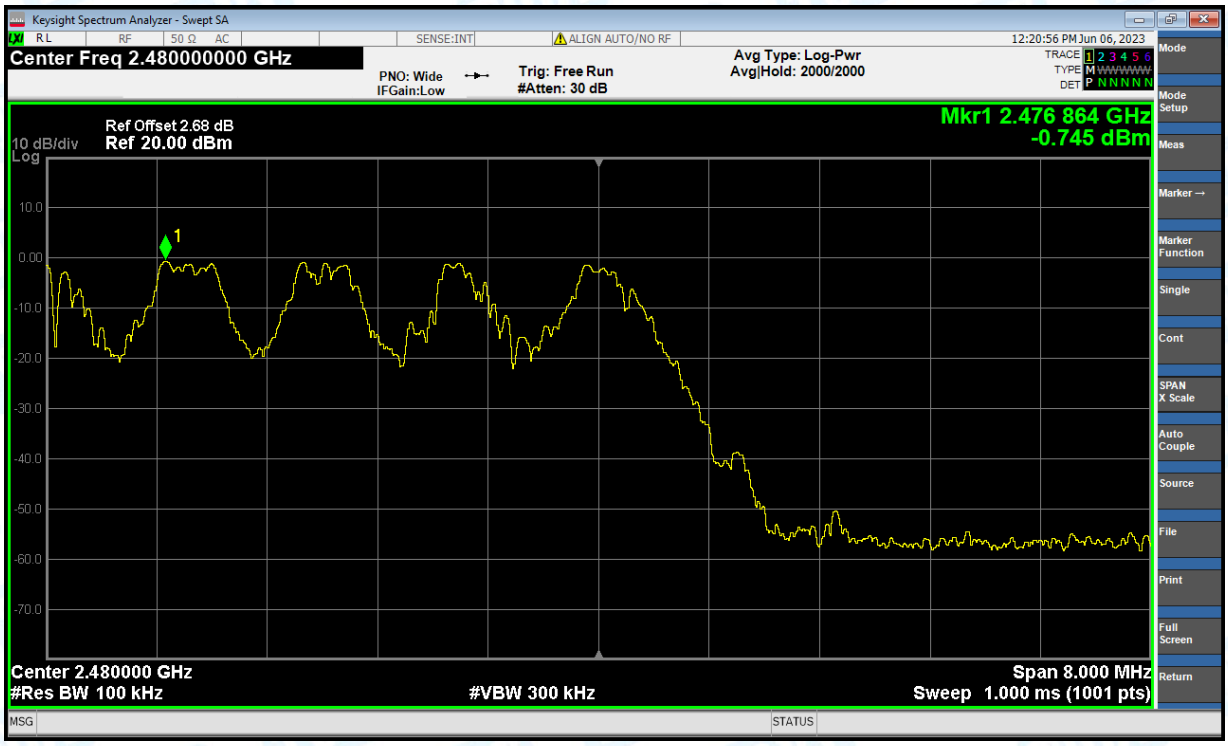
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



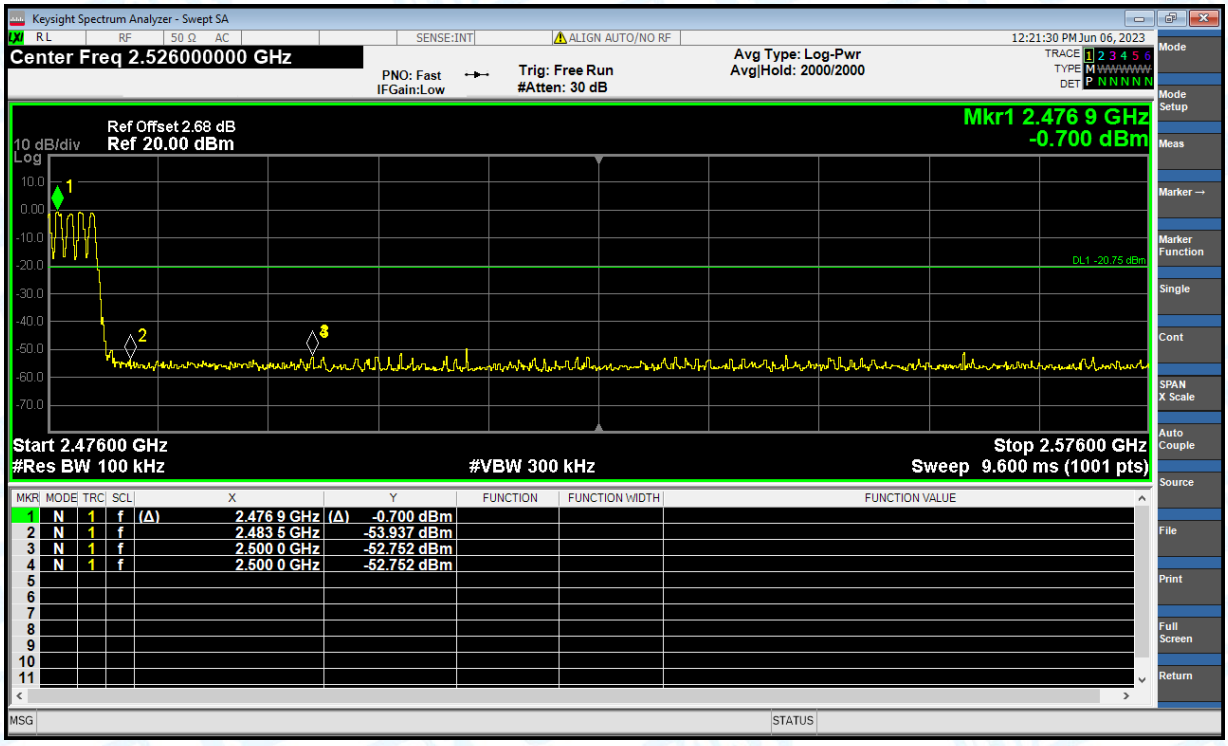
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



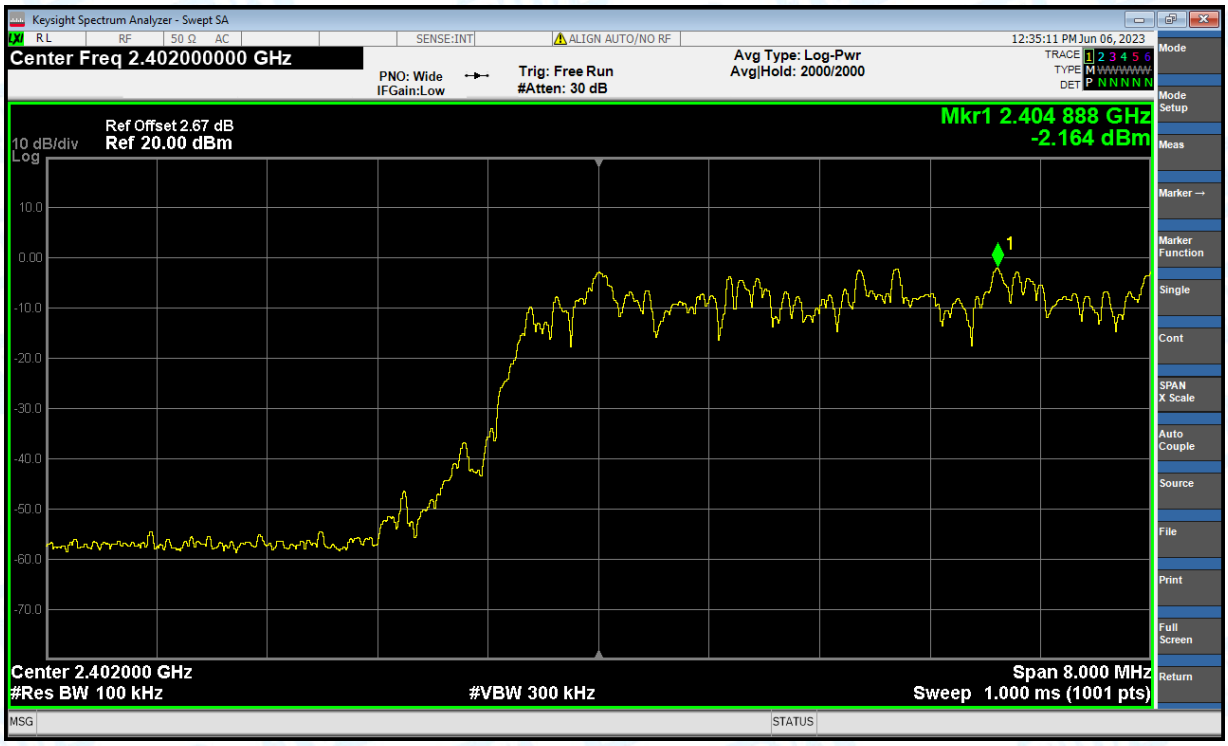
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



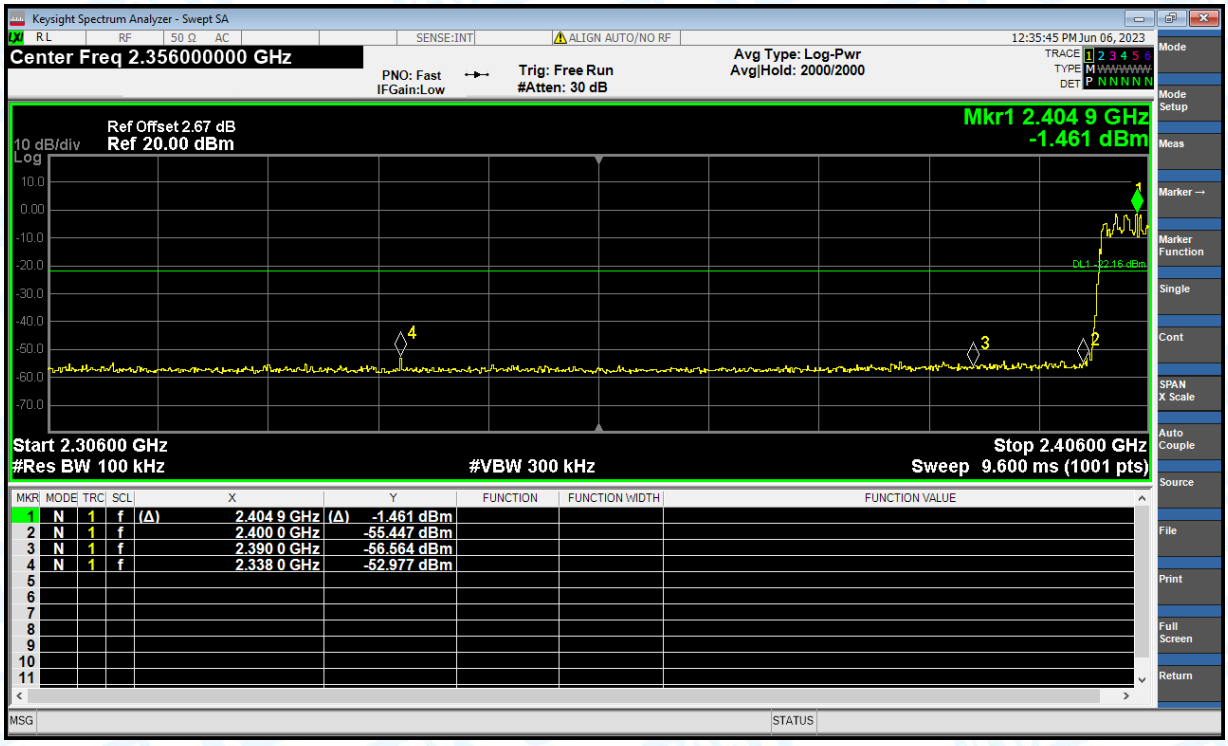
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



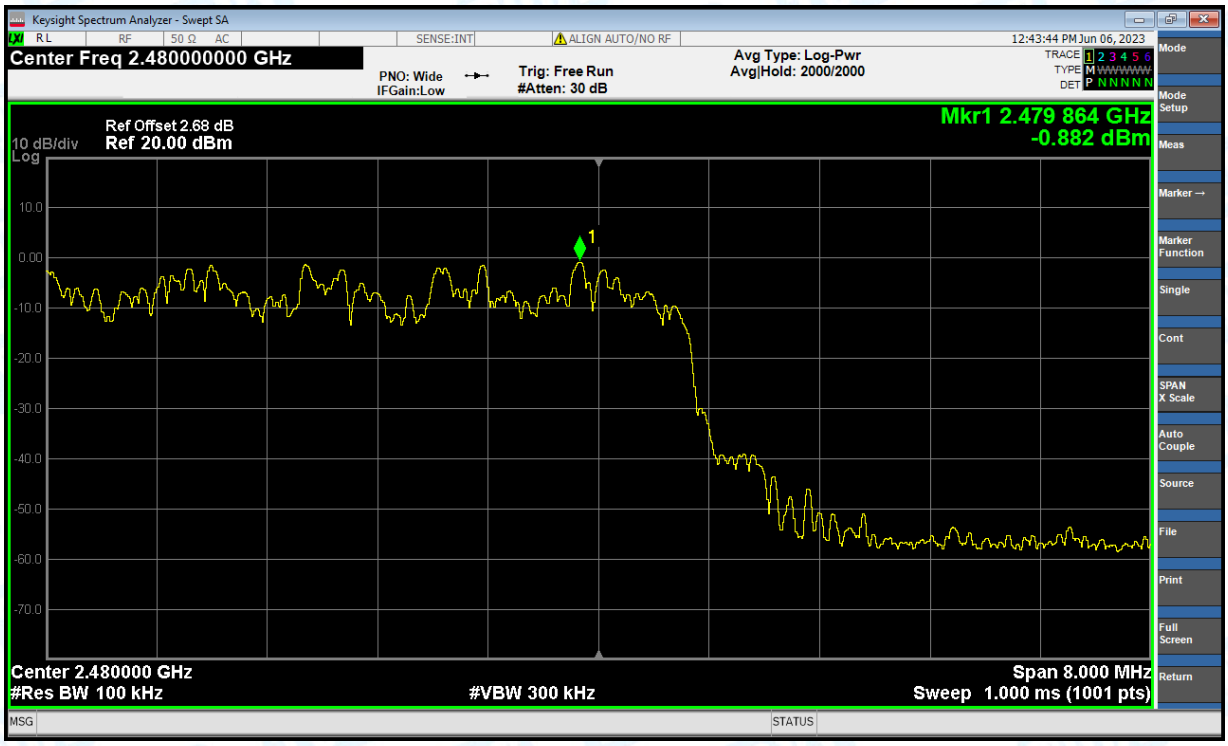
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



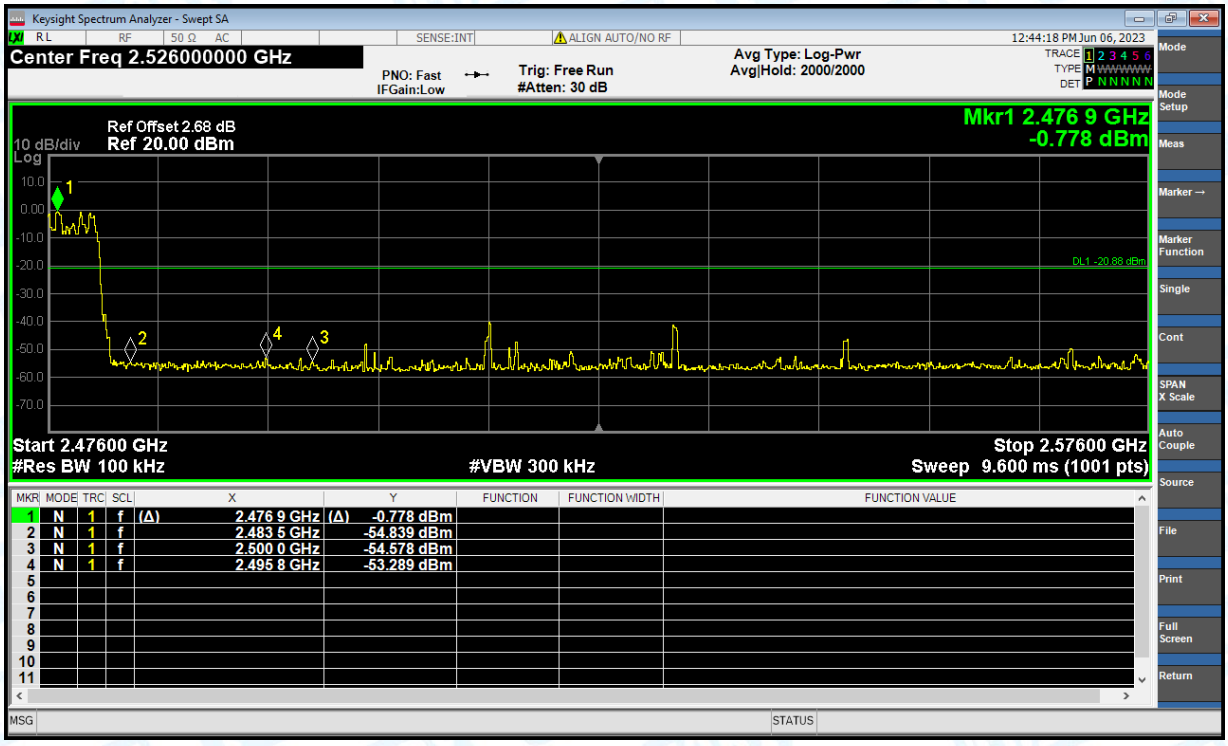
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



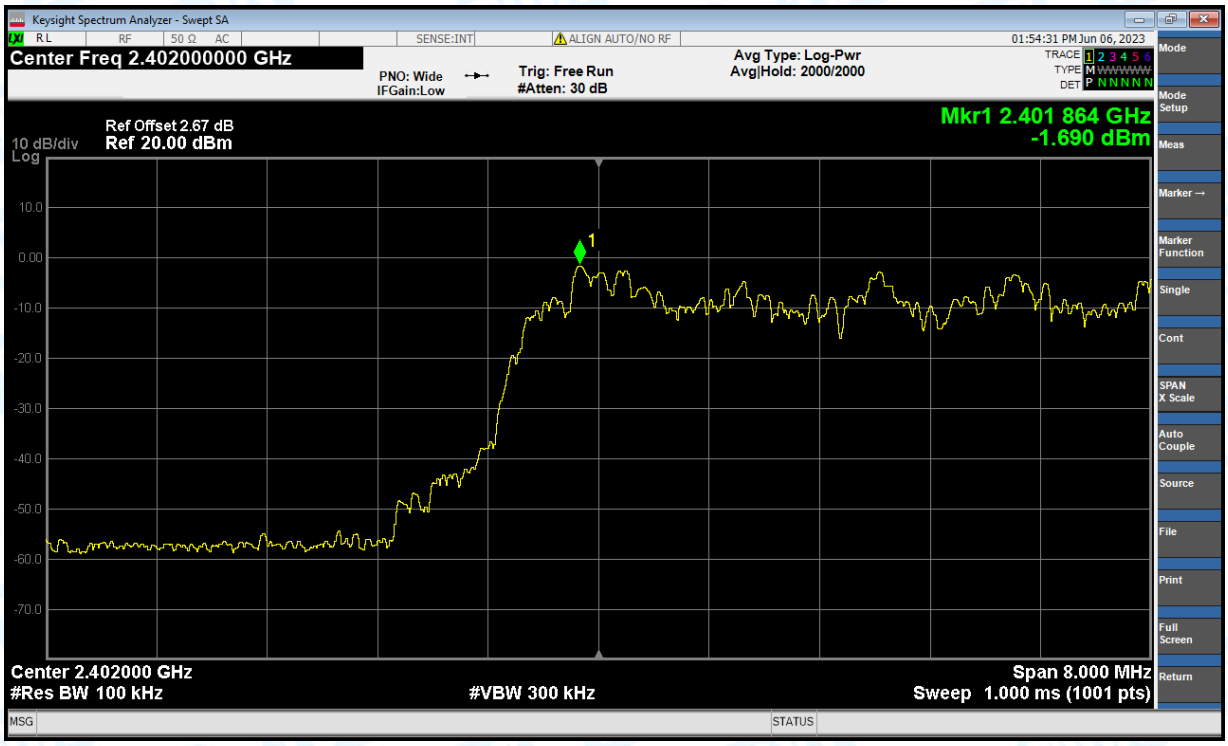
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



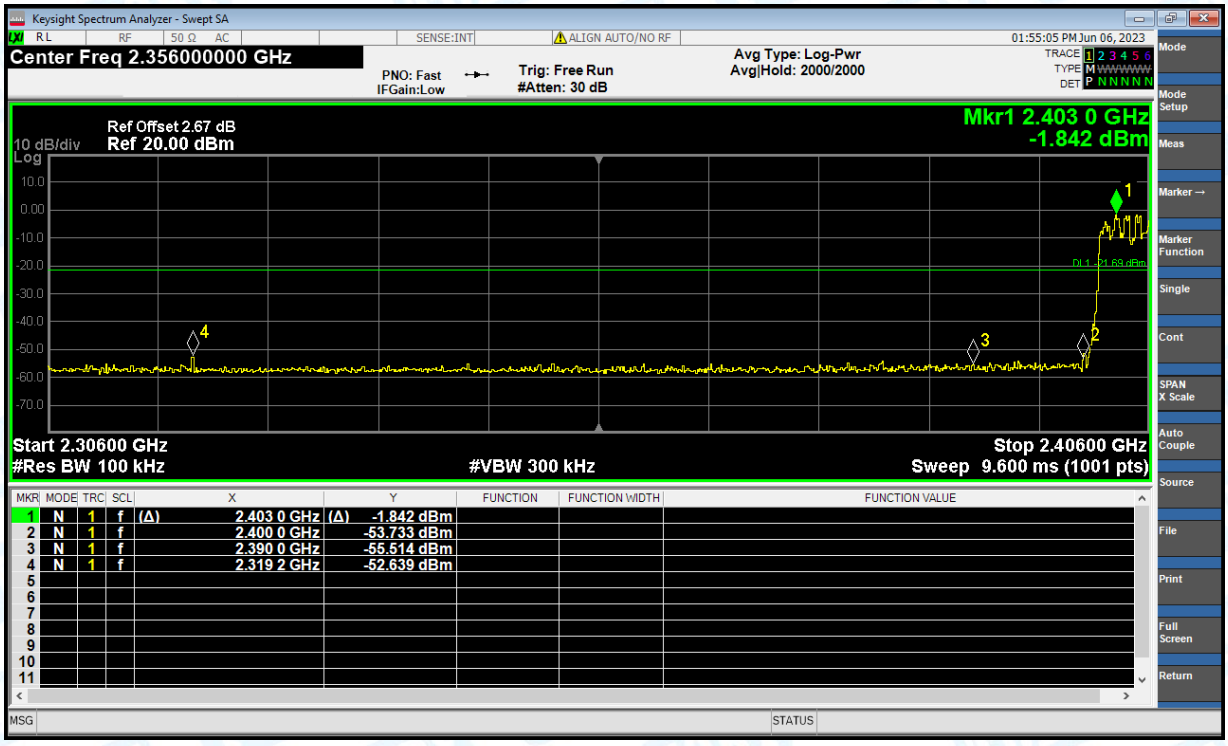
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



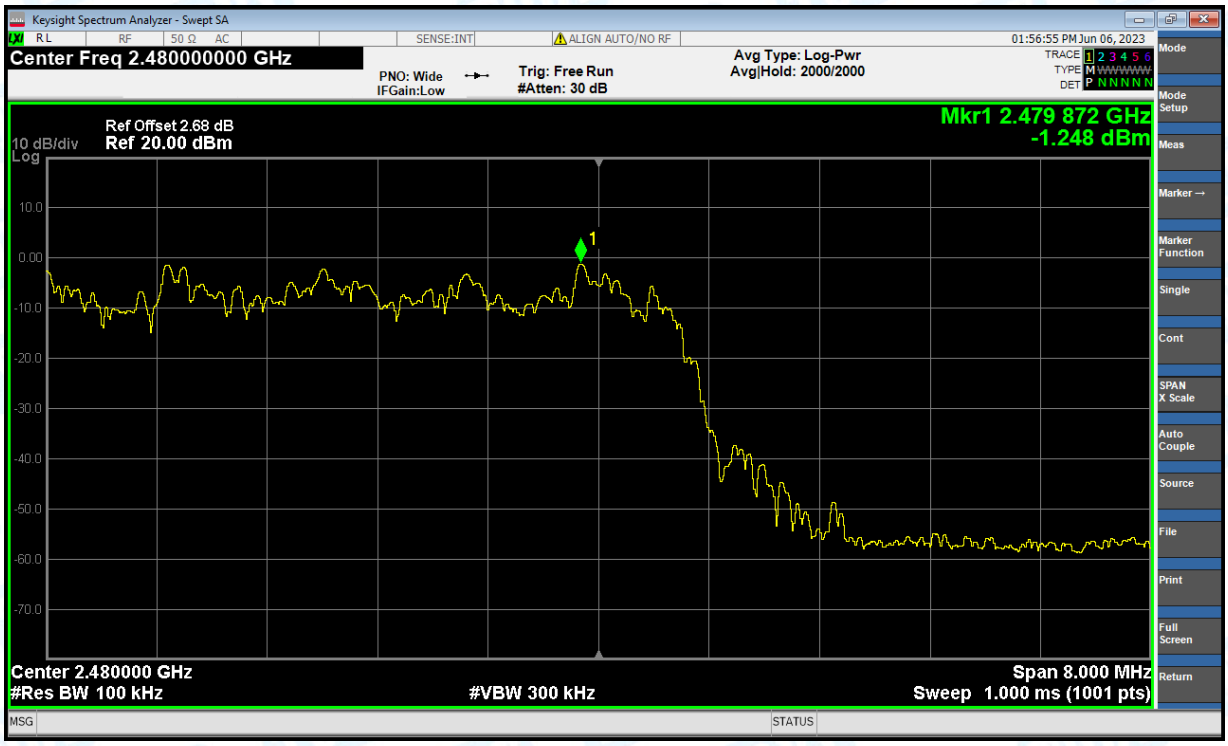
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



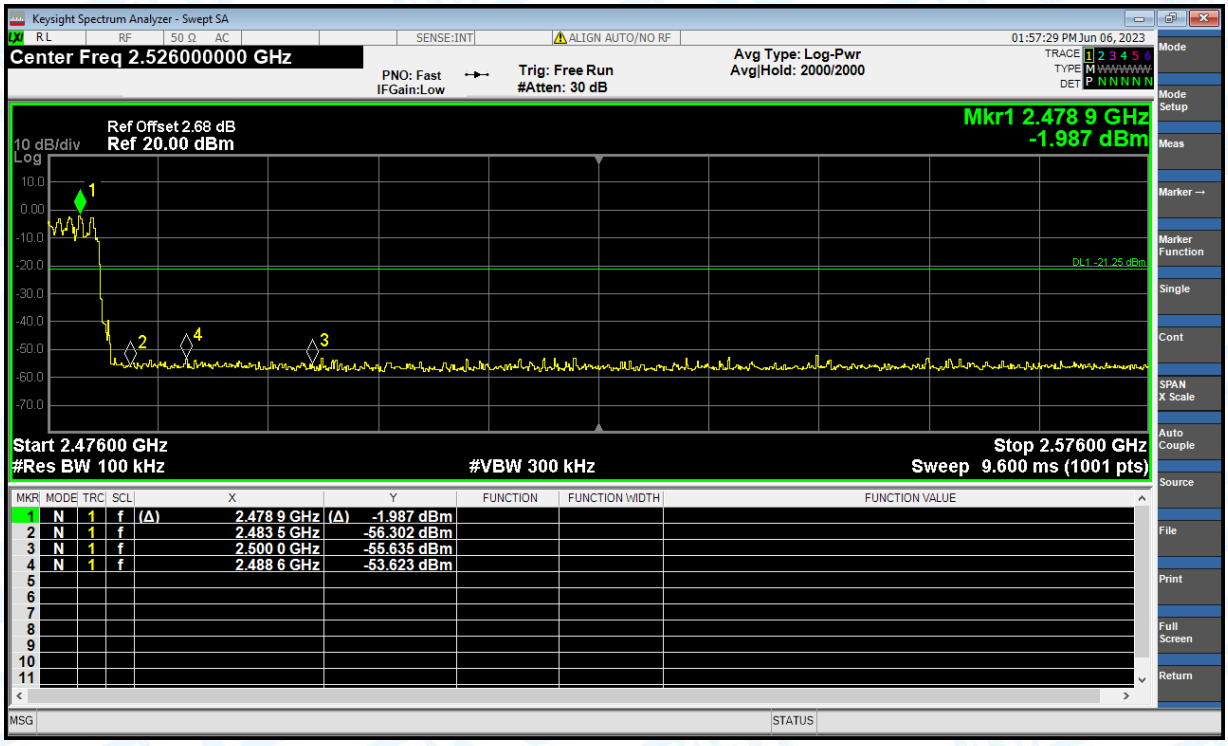
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Emission

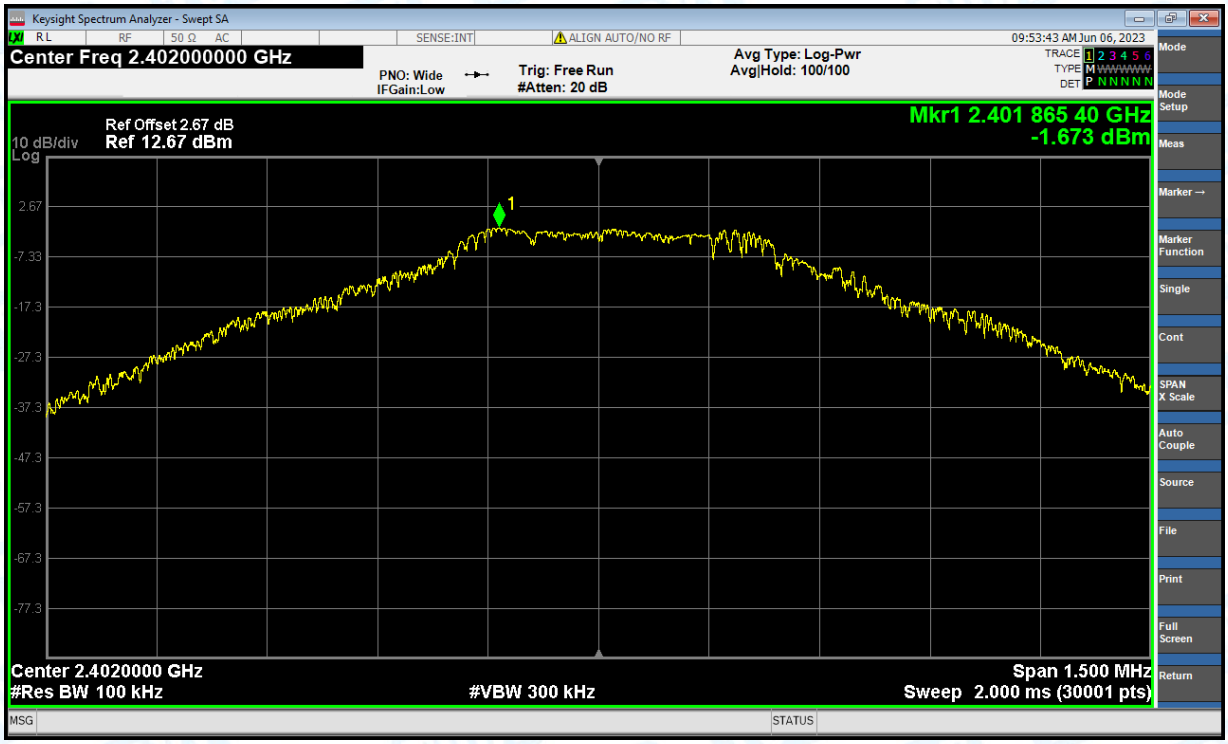


7. Conducted RF Spurious Emission

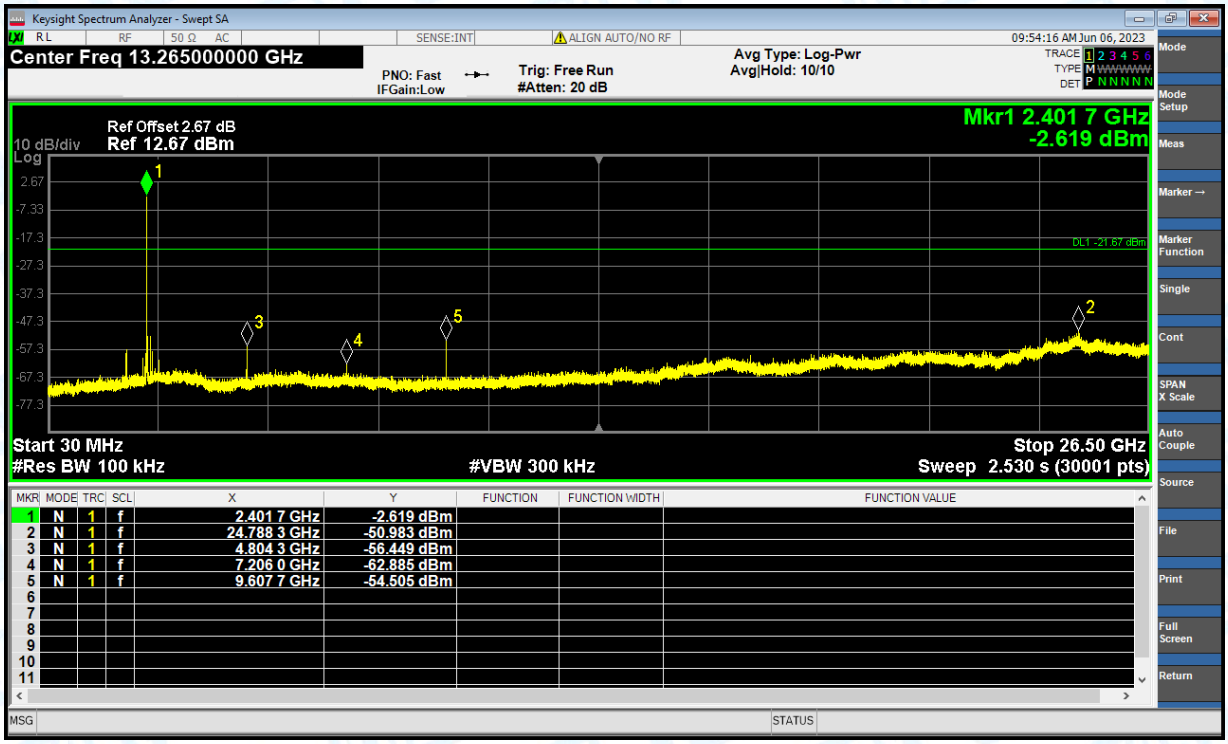
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-49.31	-20	Pass
NVNT	1-DH1	2441	Ant1	-50.69	-20	Pass
NVNT	1-DH1	2480	Ant1	-50.37	-20	Pass
NVNT	2-DH1	2402	Ant1	-49.66	-20	Pass
NVNT	2-DH1	2441	Ant1	-50.54	-20	Pass
NVNT	2-DH1	2480	Ant1	-50.34	-20	Pass
NVNT	3-DH1	2402	Ant1	-50.19	-20	Pass
NVNT	3-DH1	2441	Ant1	-50.59	-20	Pass
NVNT	3-DH1	2480	Ant1	-50.64	-20	Pass

Test Graphs

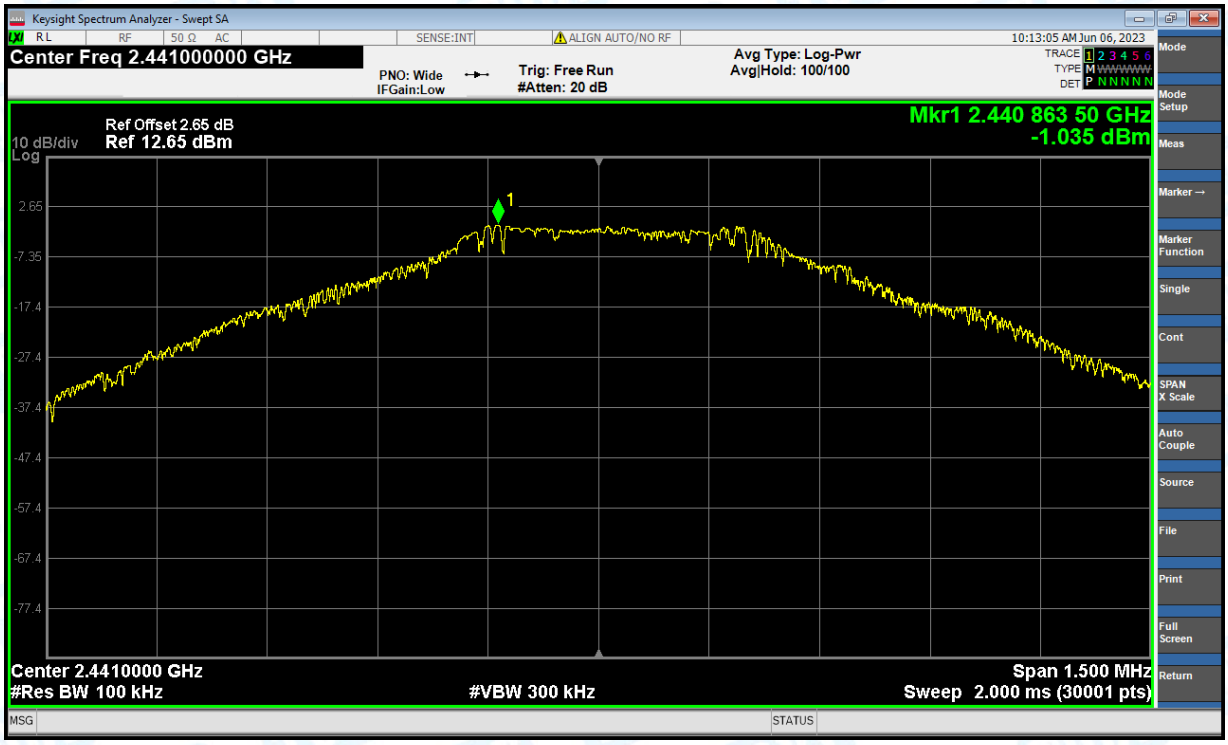
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



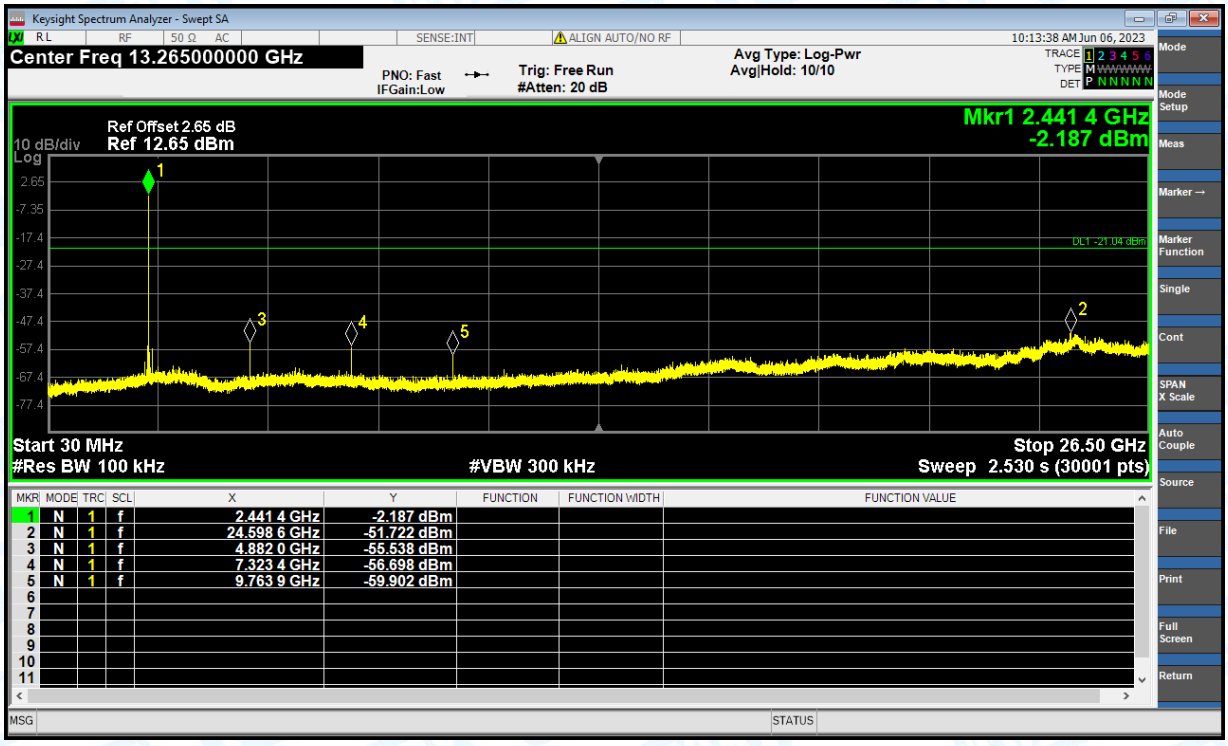
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



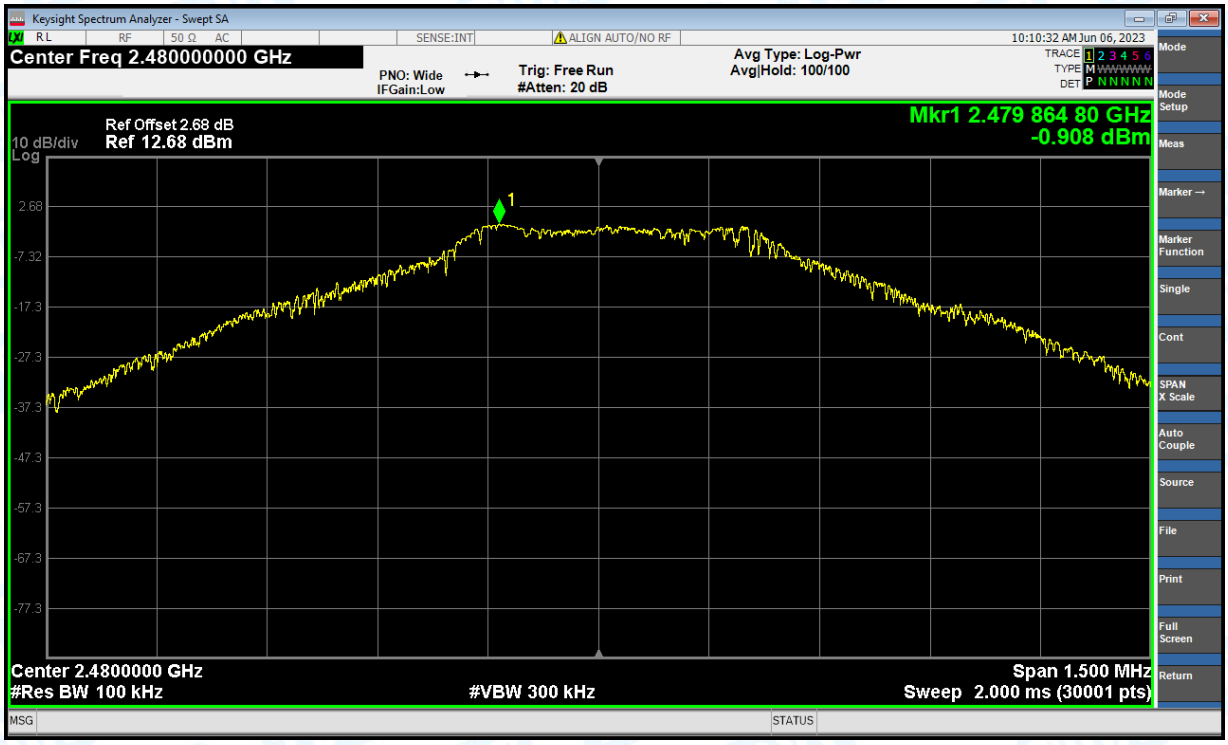
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



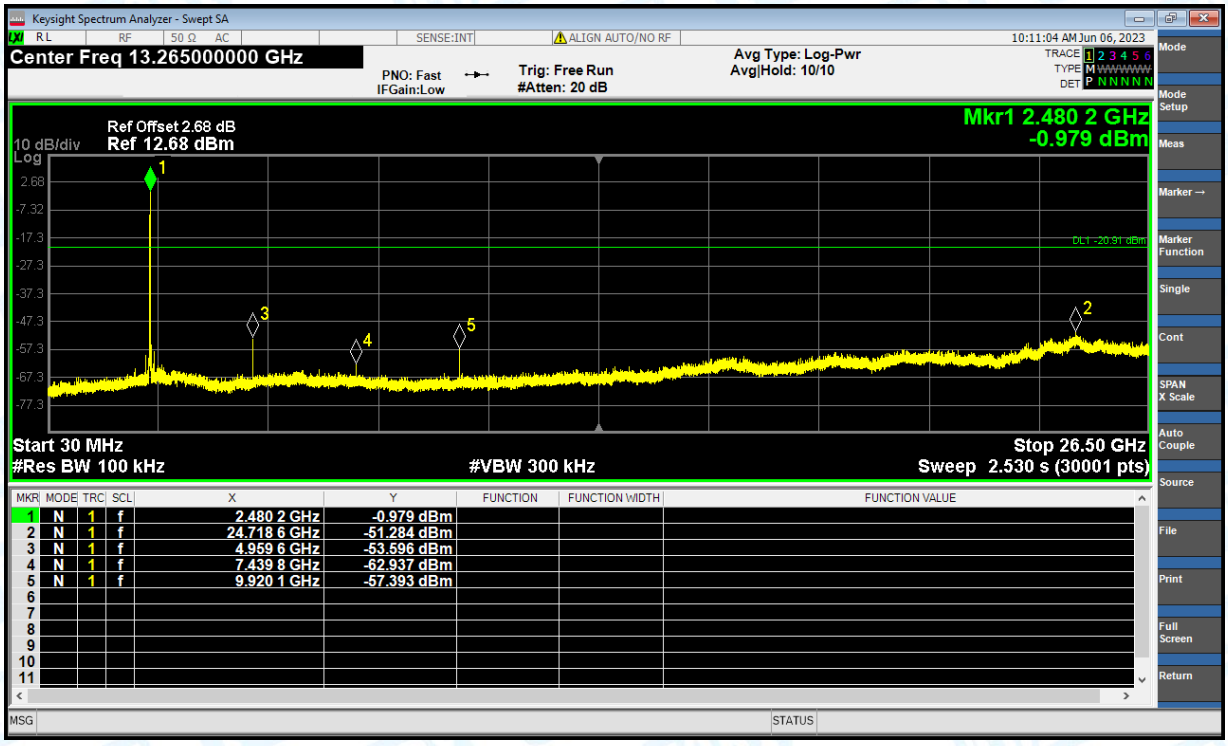
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



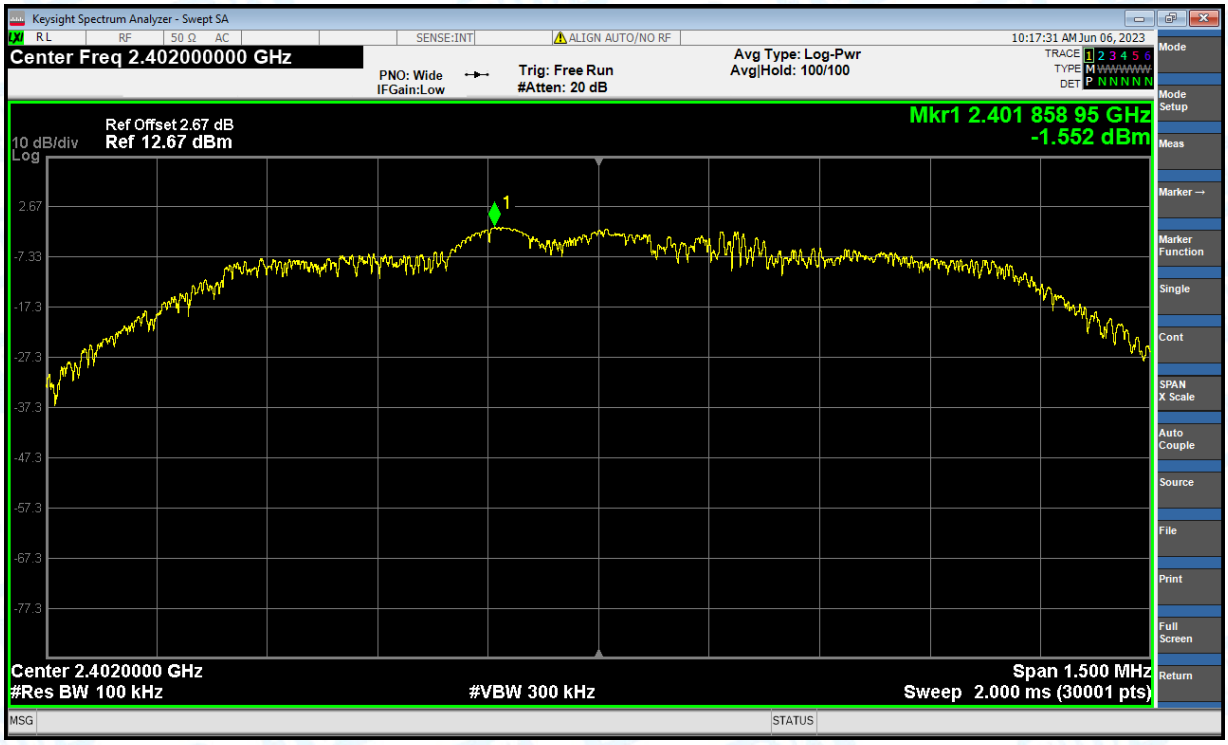
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



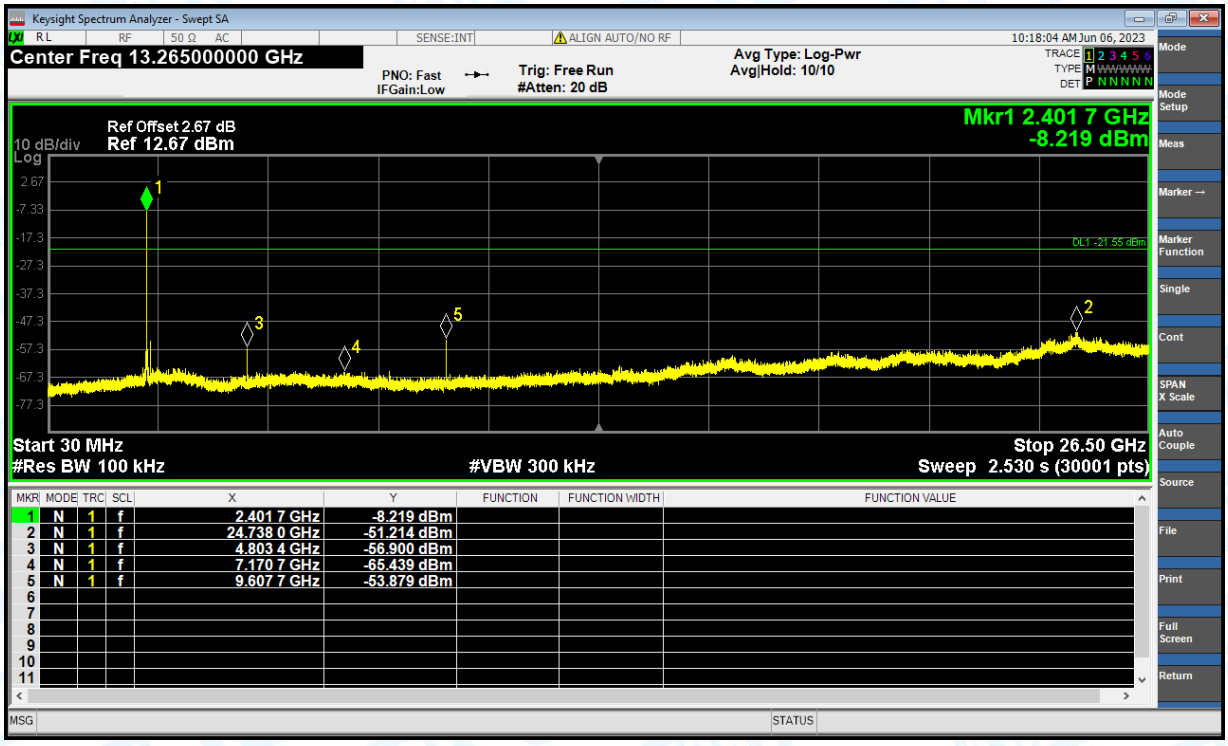
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



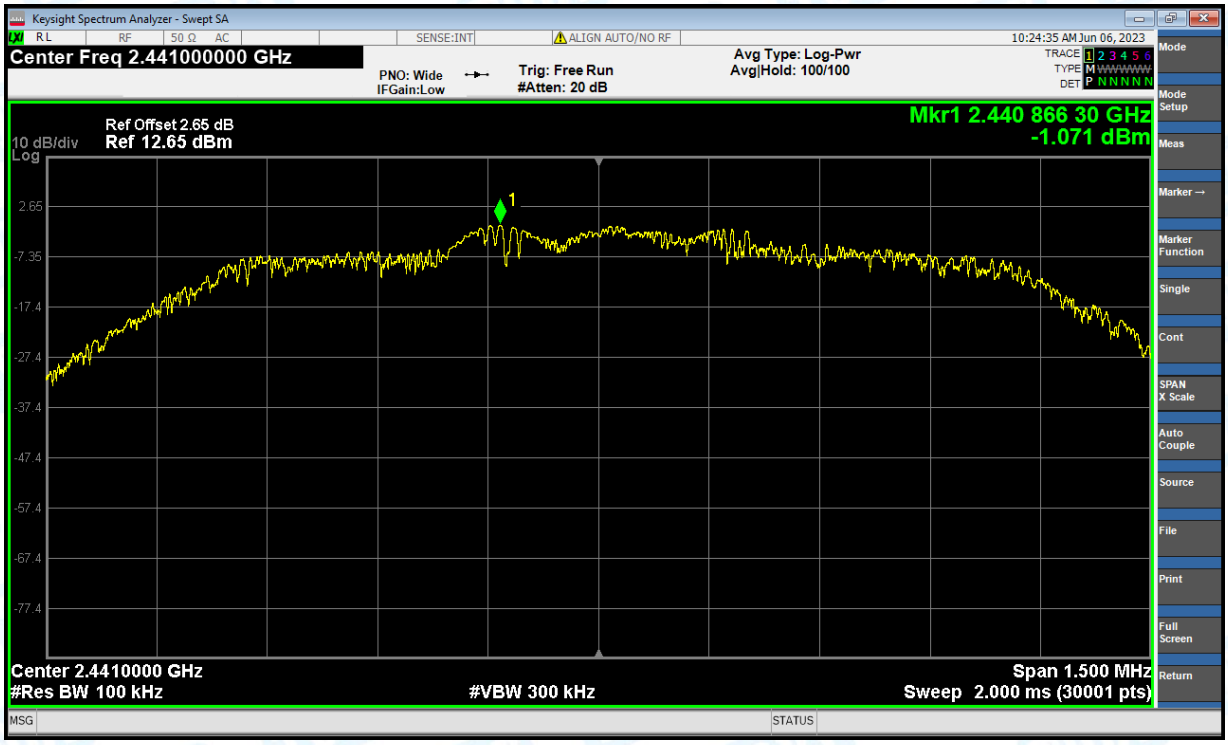
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



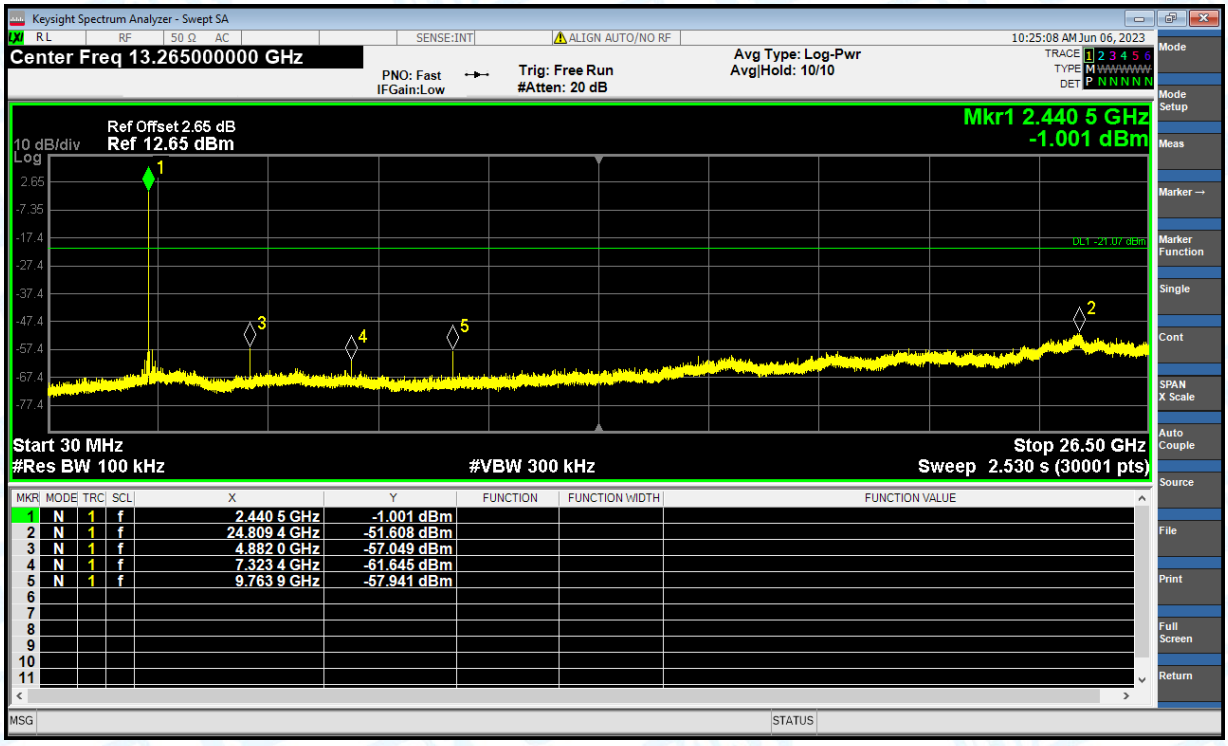
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



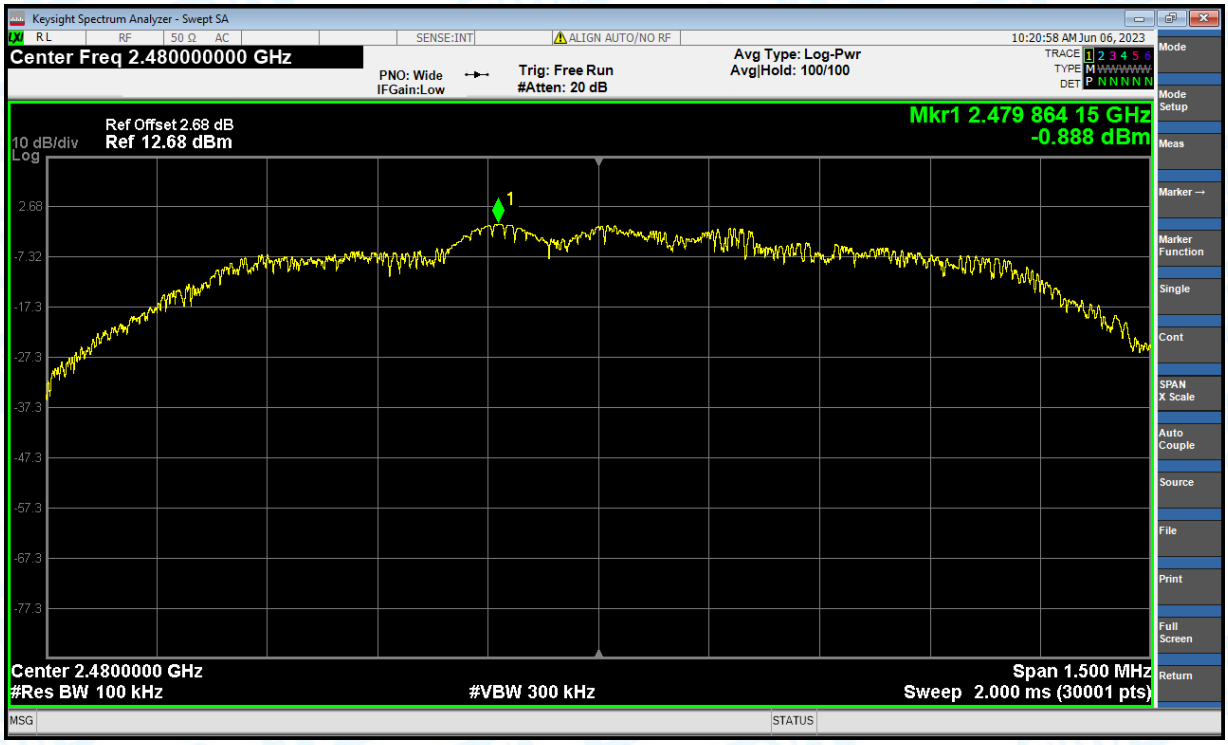
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



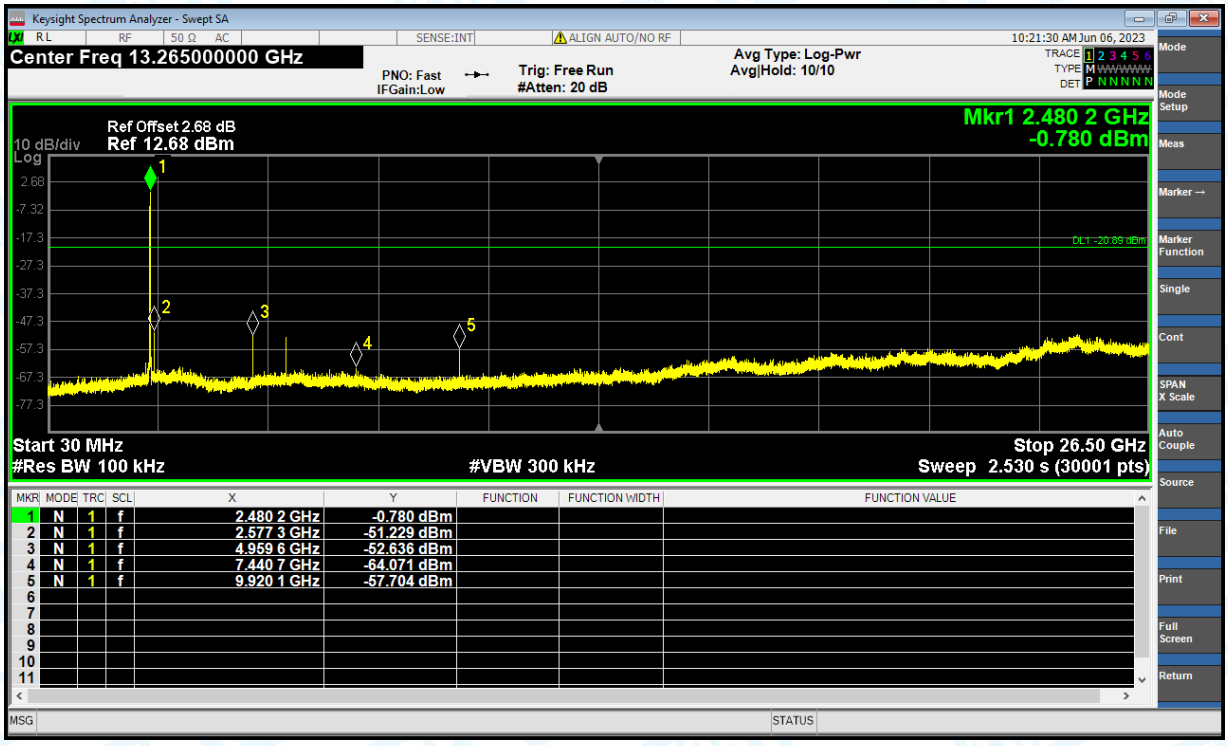
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



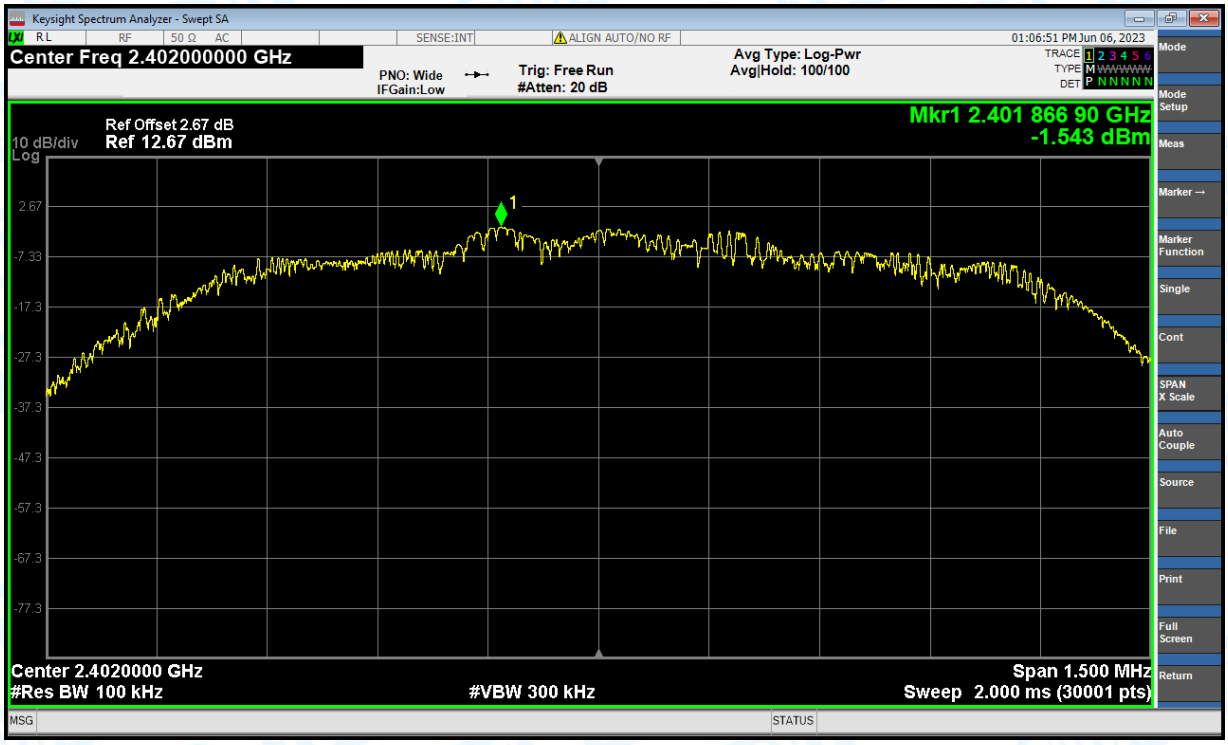
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



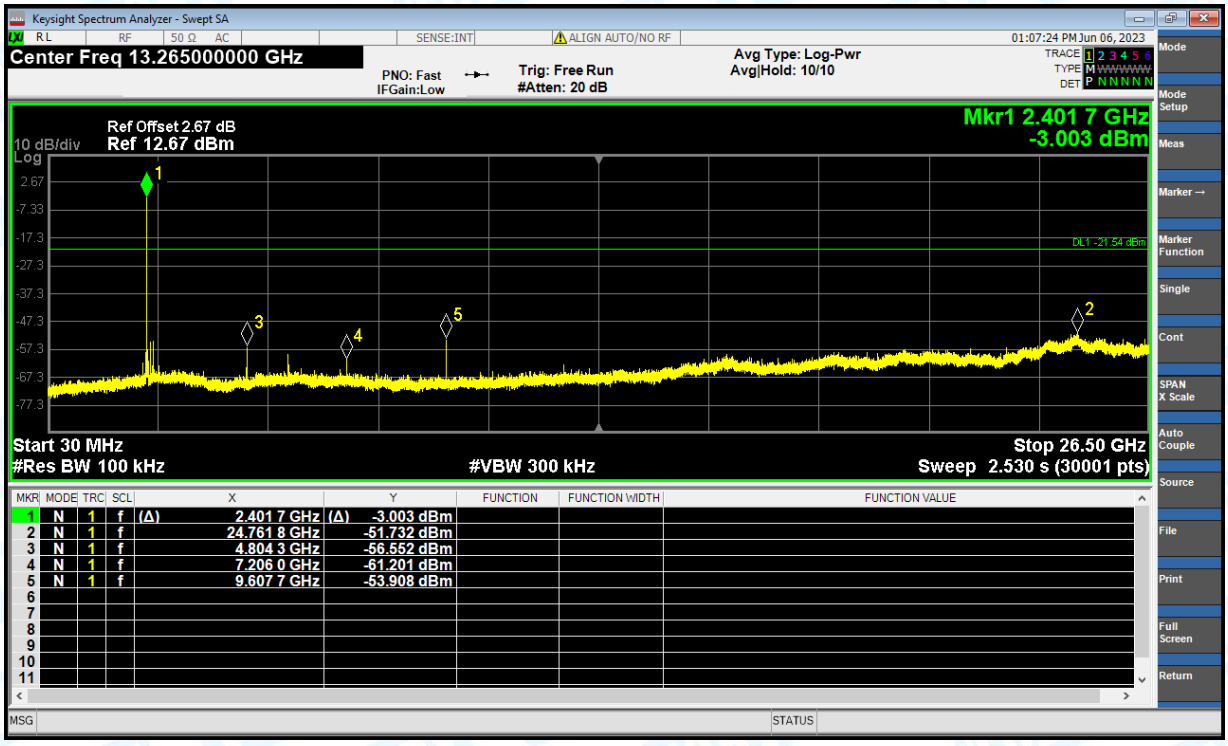
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



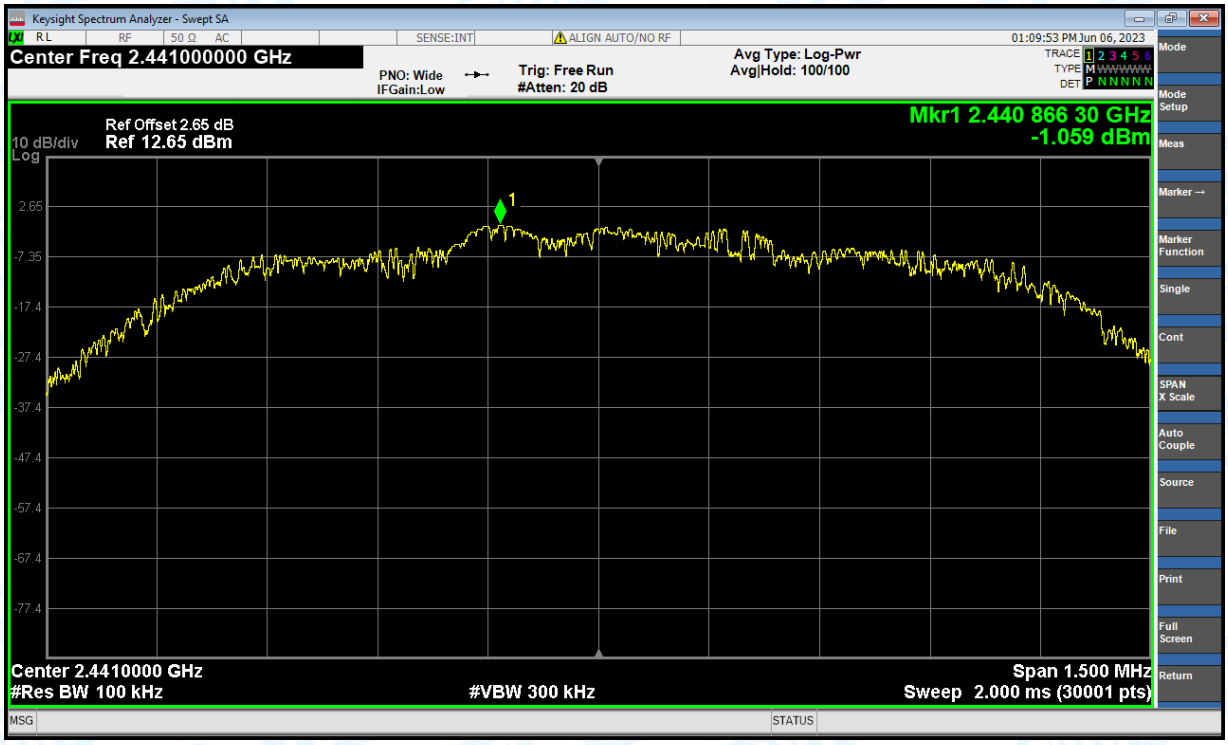
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



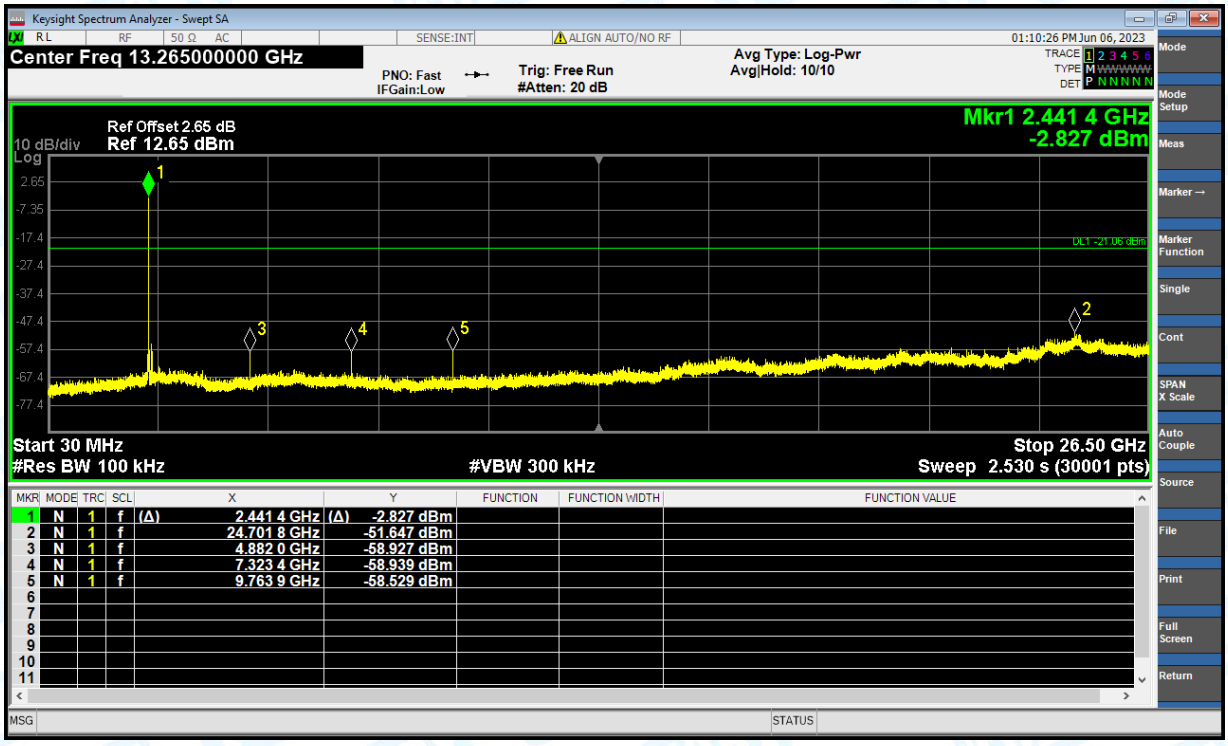
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



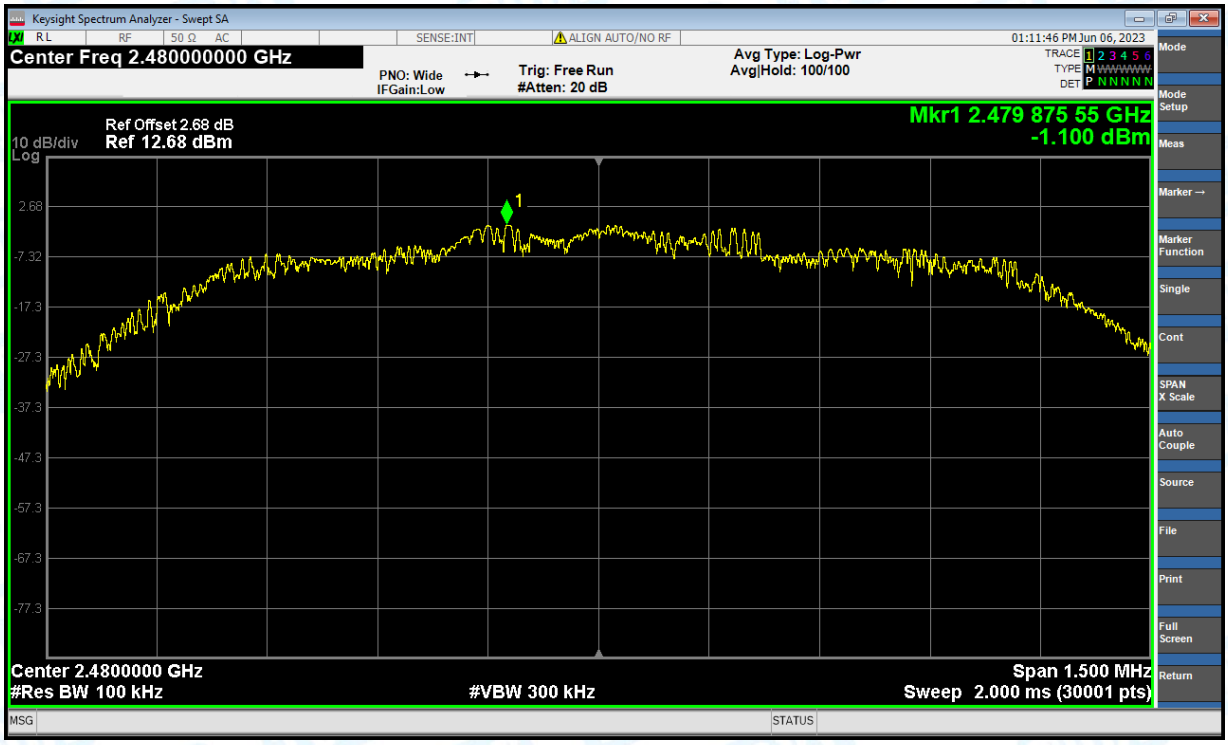
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



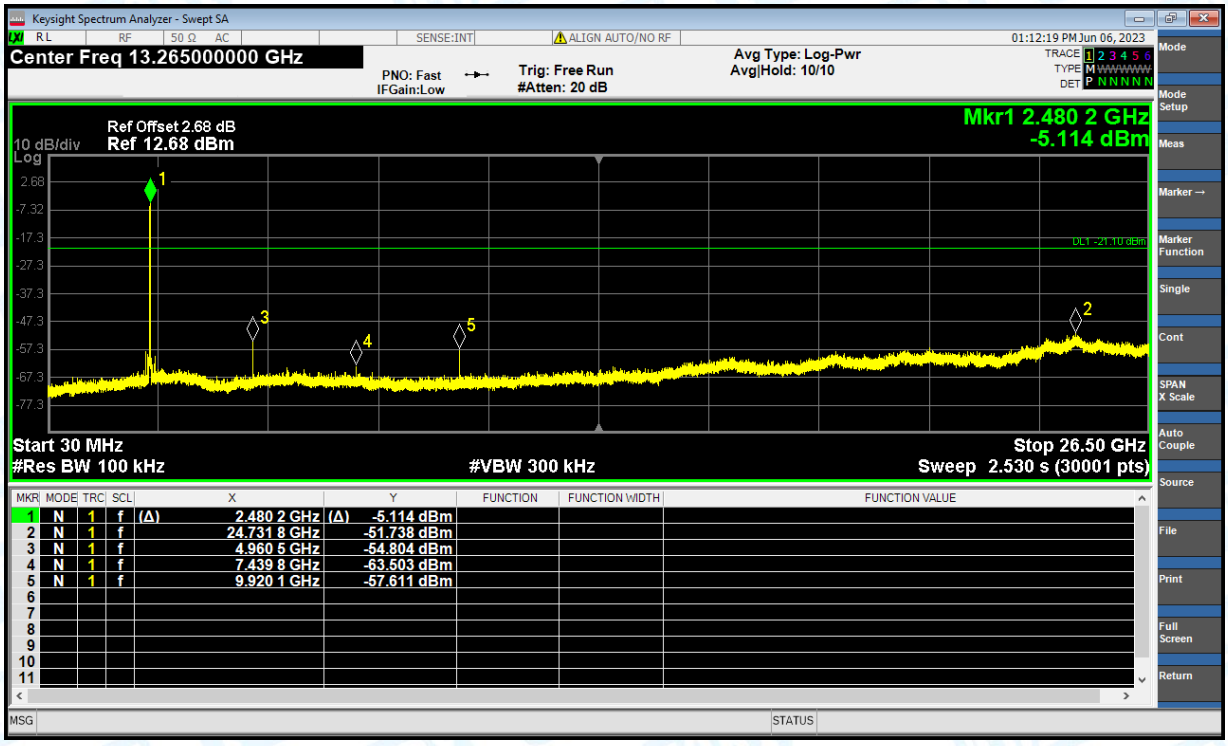
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

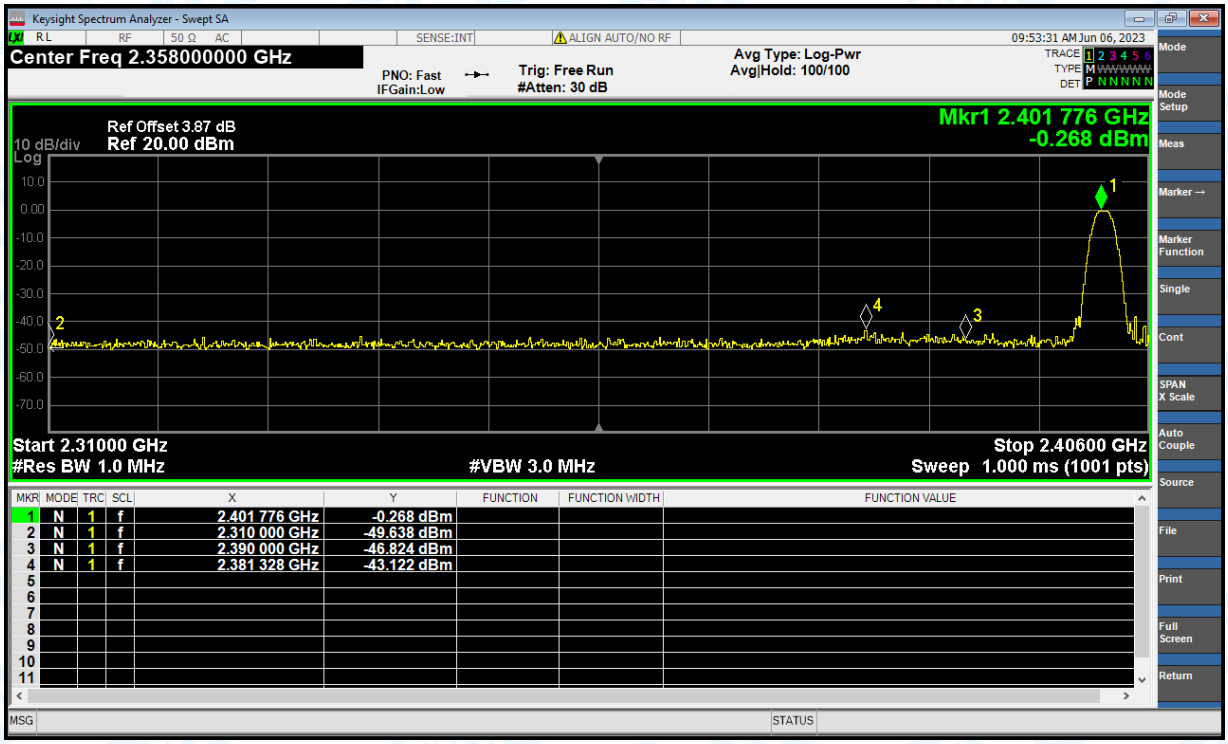


8. Restrict Band

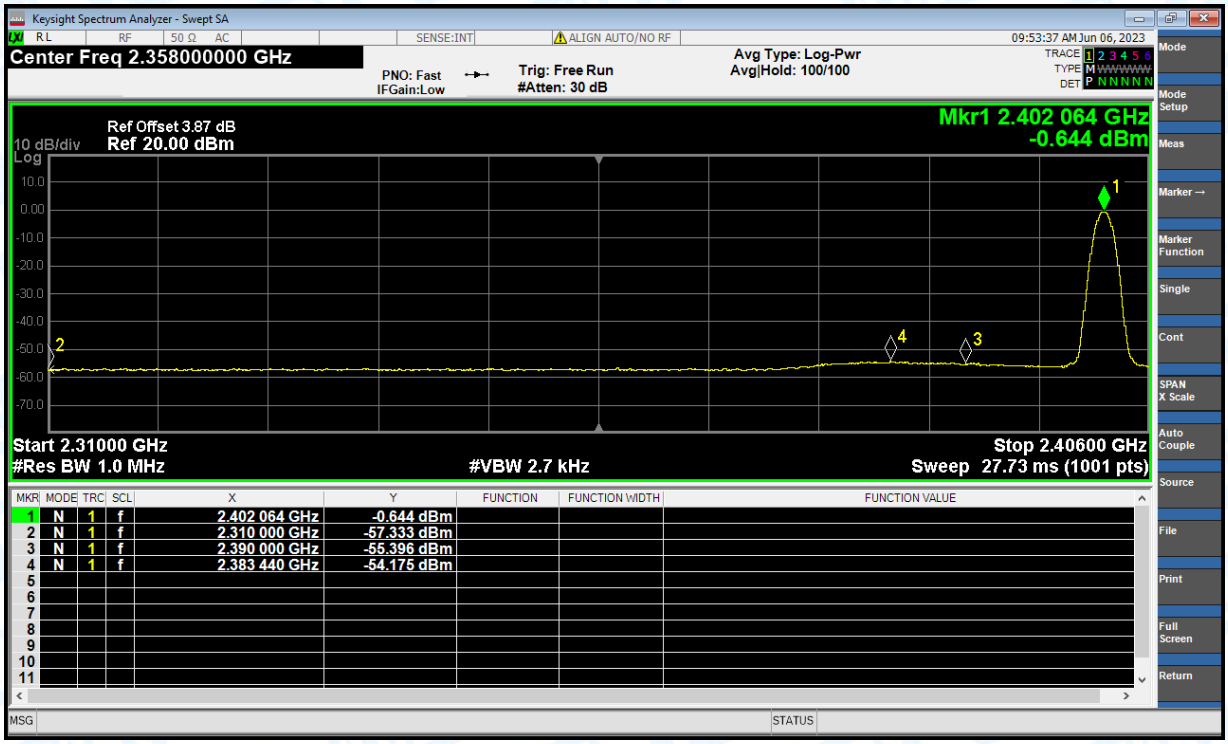
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-49.64	2	47.62	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-57.33	2	39.93	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2381.328	-43.12	2	54.14	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2383.44	-54.18	2	43.08	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-46.96	2	50.3	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.3	2	41.96	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-39.46	2	57.8	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.09	2	42.17	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-39.46	2	57.8	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2499.856	-53.82	2	43.44	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-46.01	2	51.25	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.35	2	42.91	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.5	2	49.76	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-57.02	2	40.24	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2388.432	-44.07	2	53.19	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2380.56	-54.14	2	43.12	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.11	2	50.15	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.07	2	42.19	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-47.56	2	49.7	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.38	2	41.88	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2493.808	-42.27	2	54.99	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2498.632	-53.65	2	43.61	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-46.56	2	50.7	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-54.12	2	43.14	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.31	2	48.95	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-57.28	2	39.98	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2386.512	-43.79	2	53.47	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2382.576	-54.16	2	43.1	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-46.28	2	50.98	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.09	2	42.17	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-47.35	2	49.91	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.59	2	41.67	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.608	-37.3	2	59.96	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2499.448	-53.97	2	43.29	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-45.26	2	52	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-54.08	2	43.18	Average	54	Pass

Test Graphs

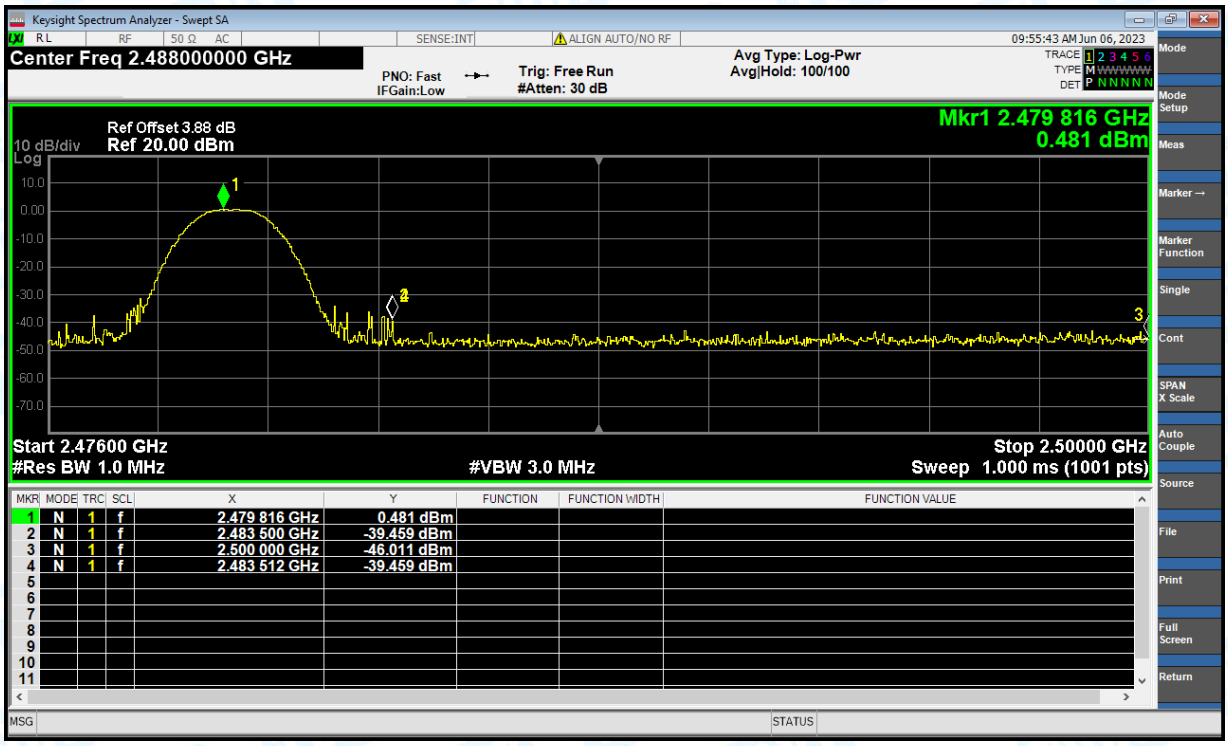
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



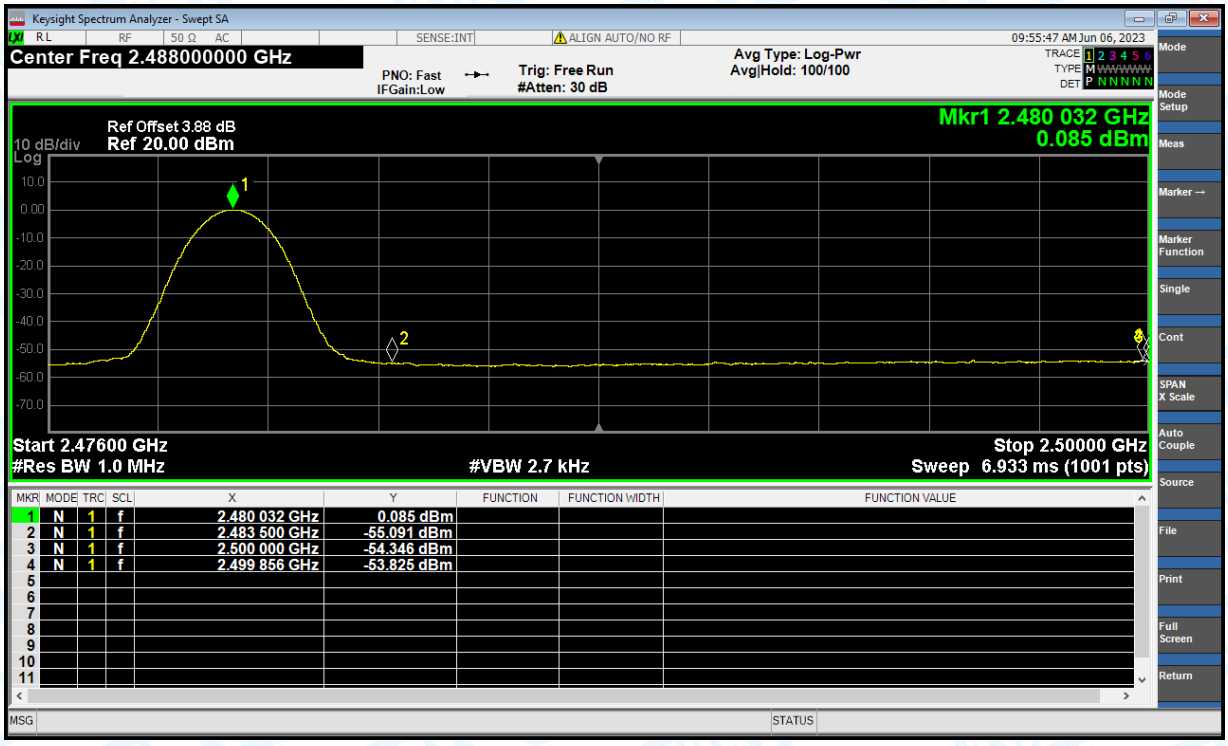
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



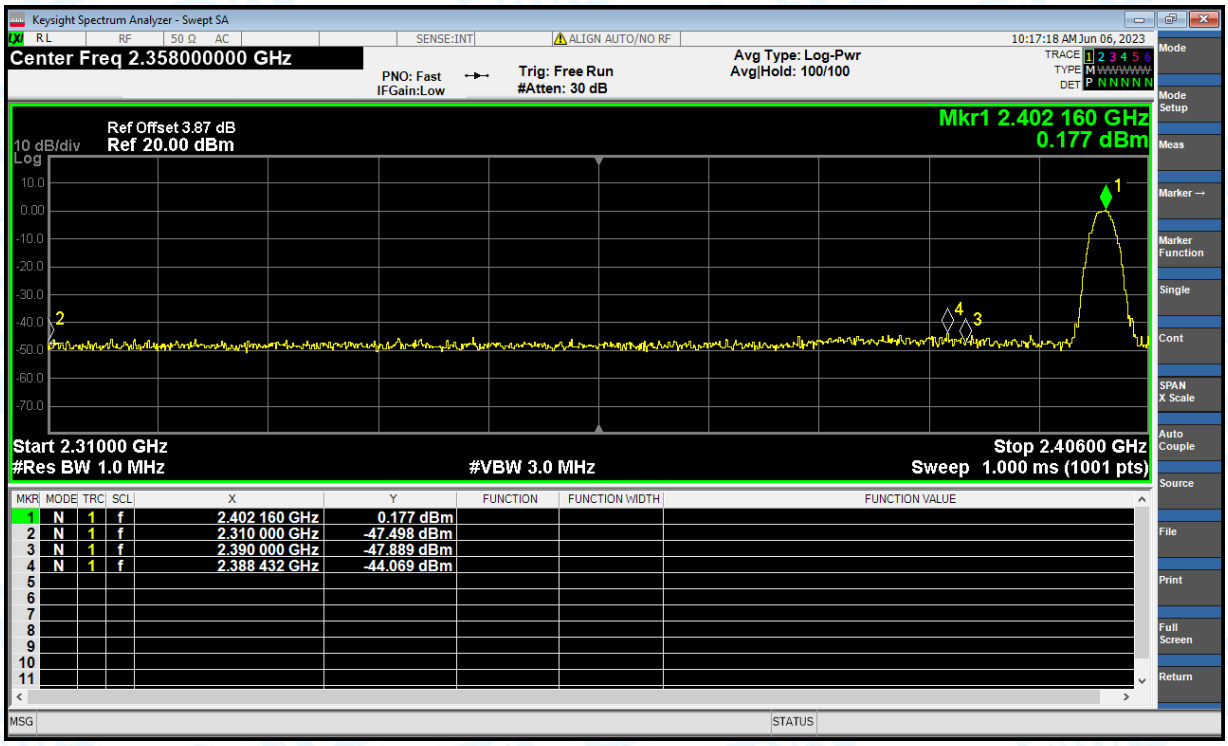
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



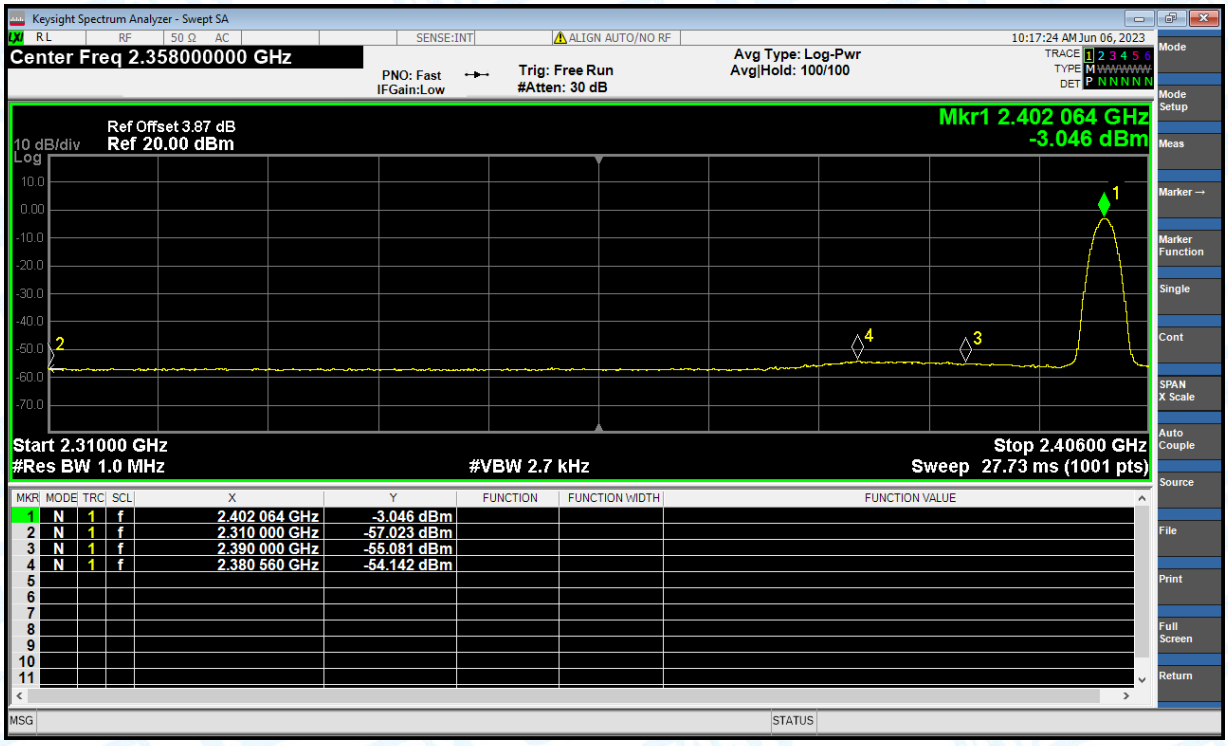
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



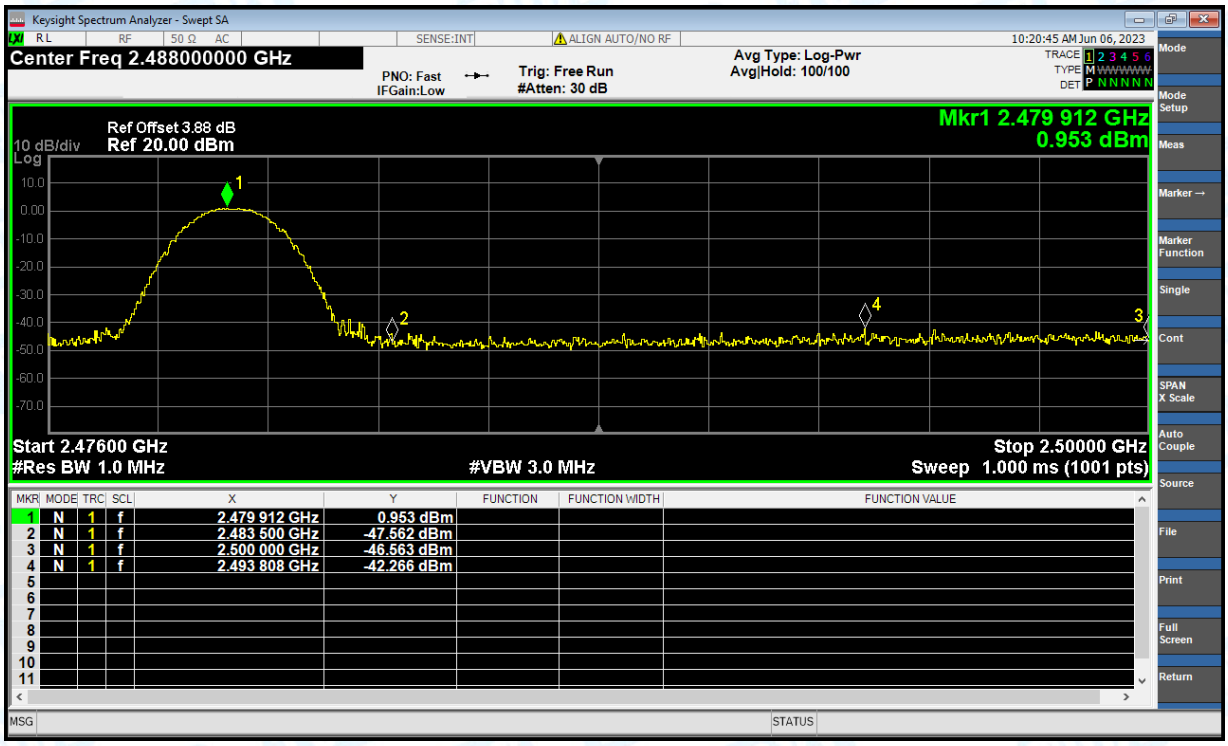
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



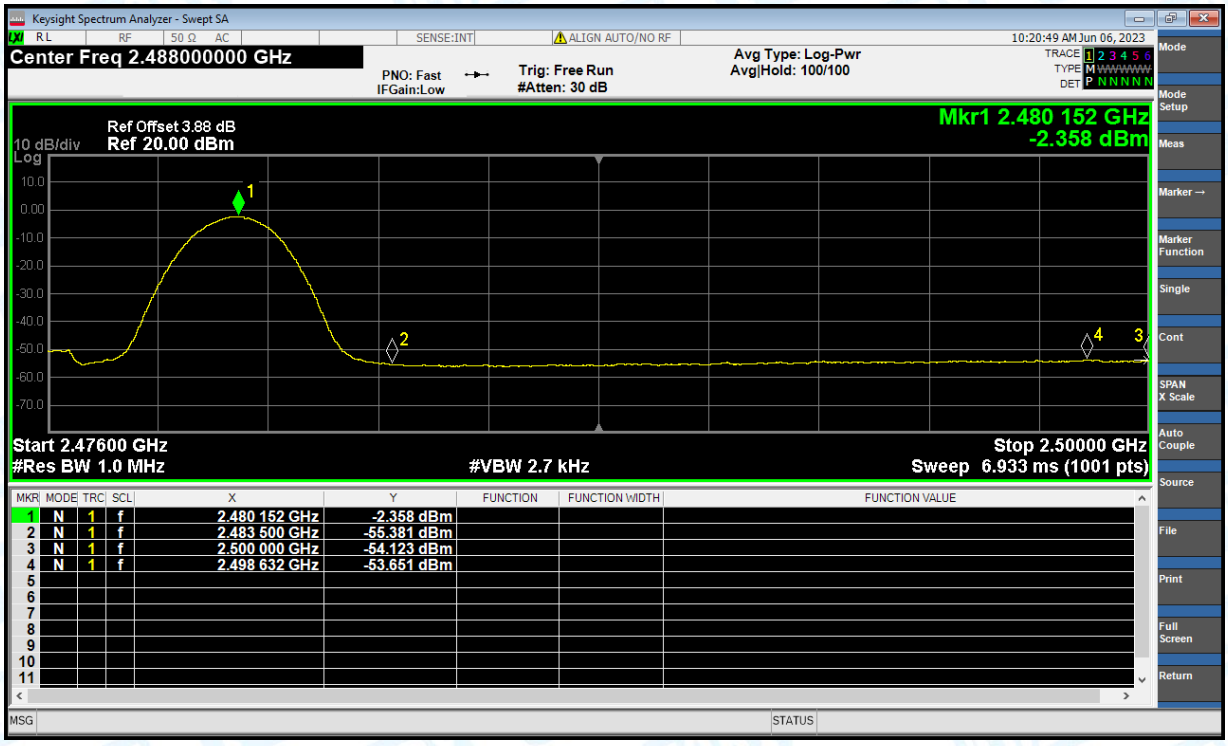
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



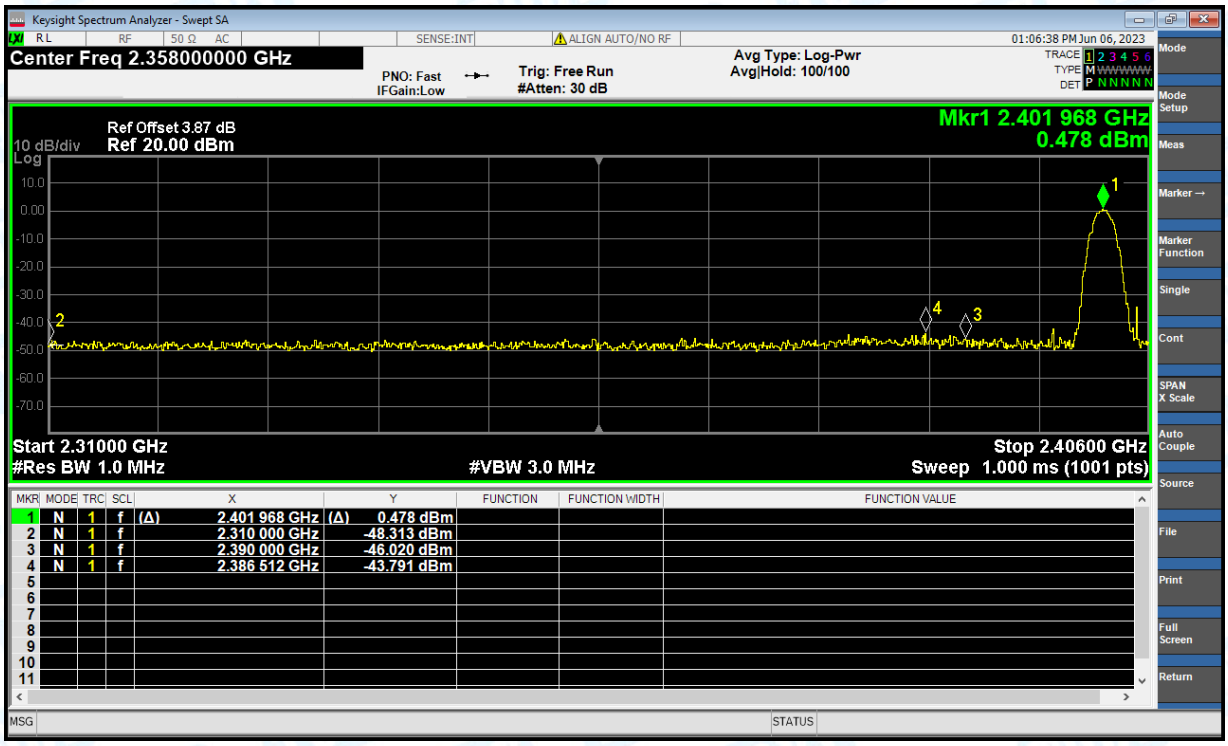
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



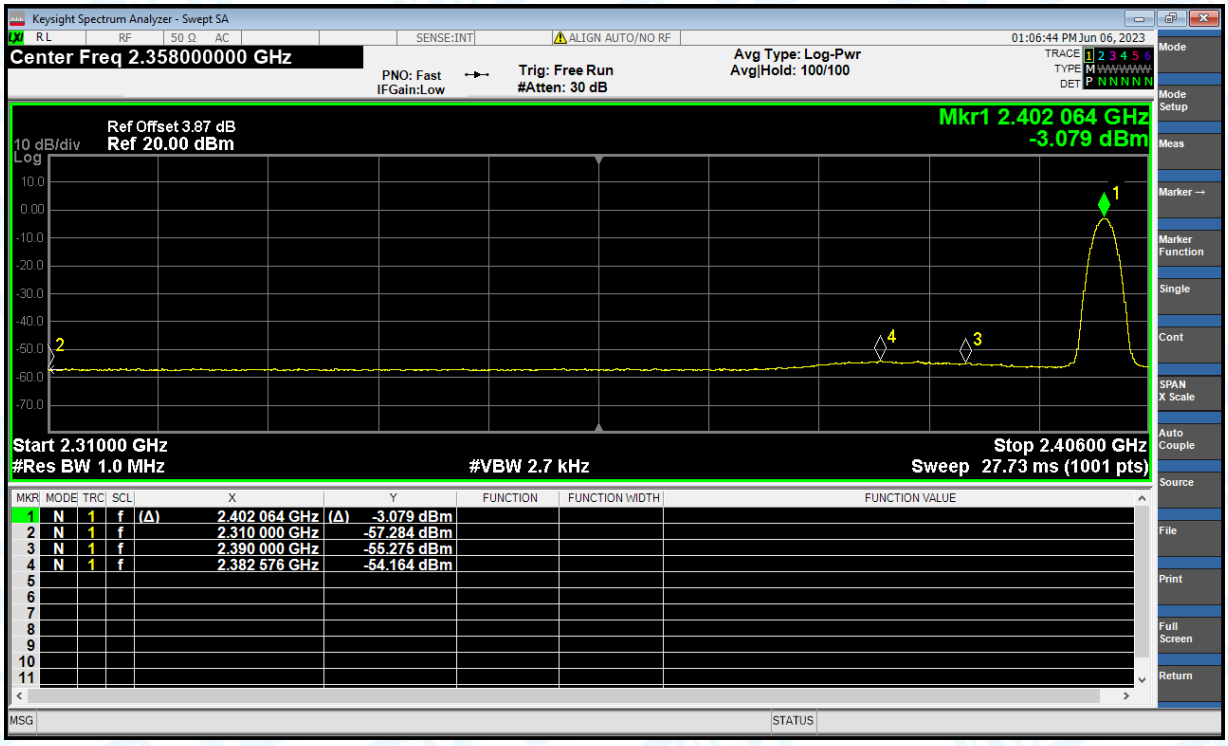
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



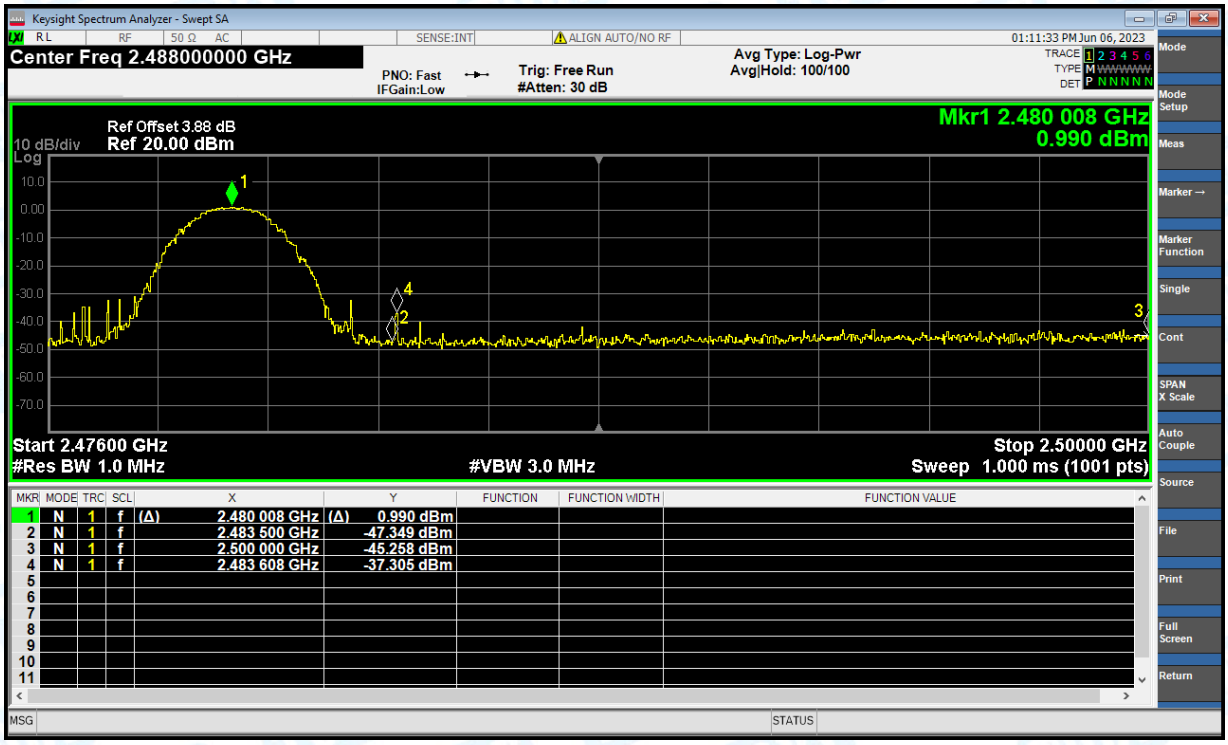
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



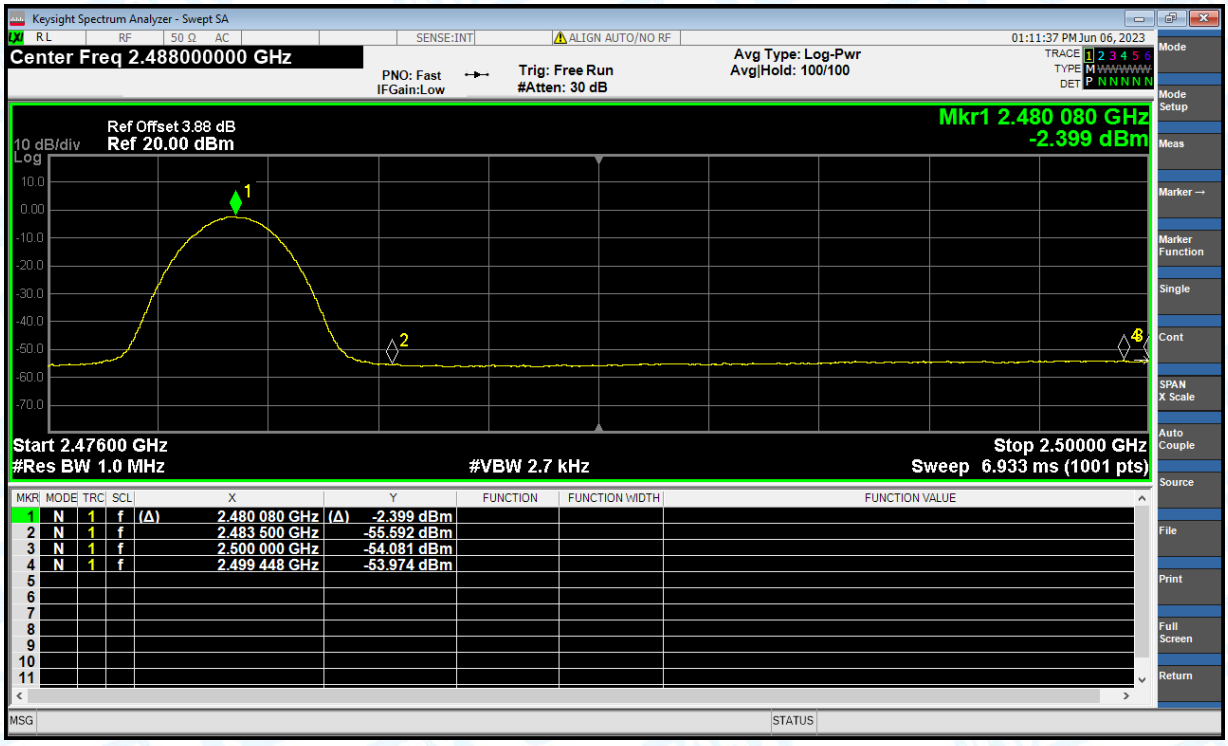
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



Restrict Band NVNT 3-DH1 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-DH1 2480MHz Ant1 No-Hopping Average

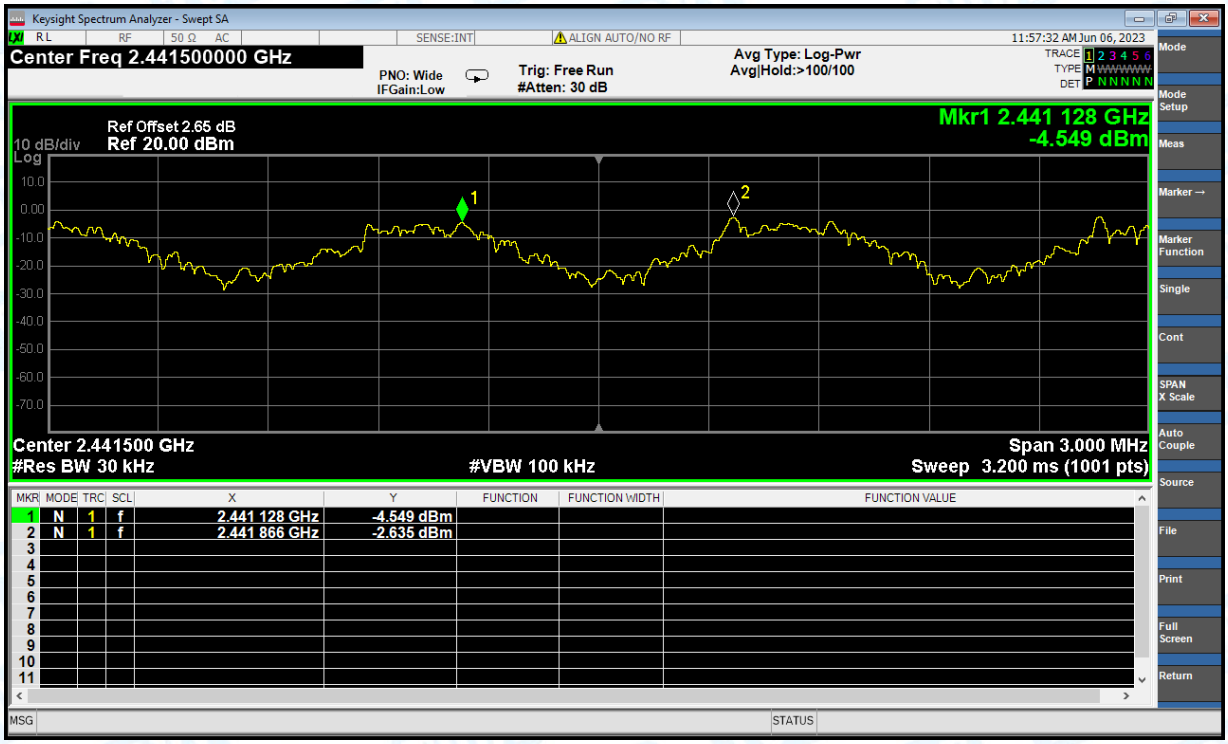


9. Carrier Frequencies Separation

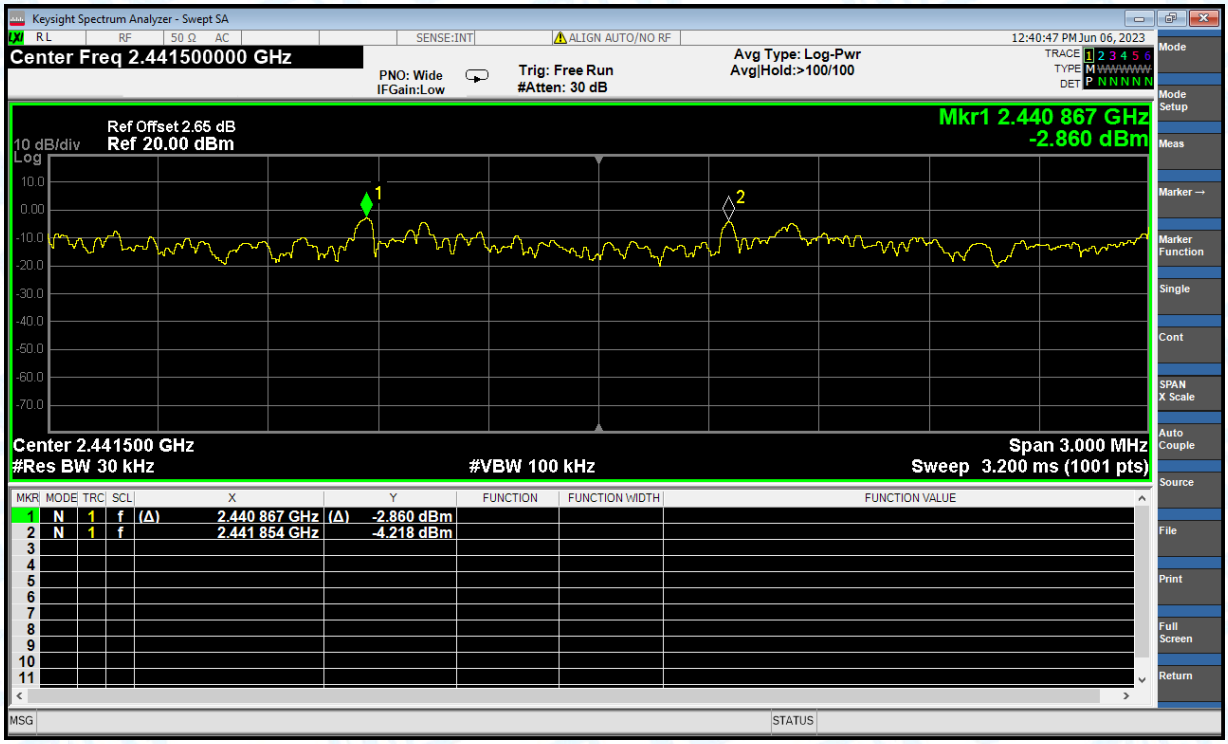
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.128	2441.866	0.738	0.025	Pass
NVNT	2-DH1	Ant1	2440.867	2441.854	0.987	0.025	Pass
NVNT	3-DH1	Ant1	2440.858	2441.866	1.008	0.827	Pass

Test Graphs

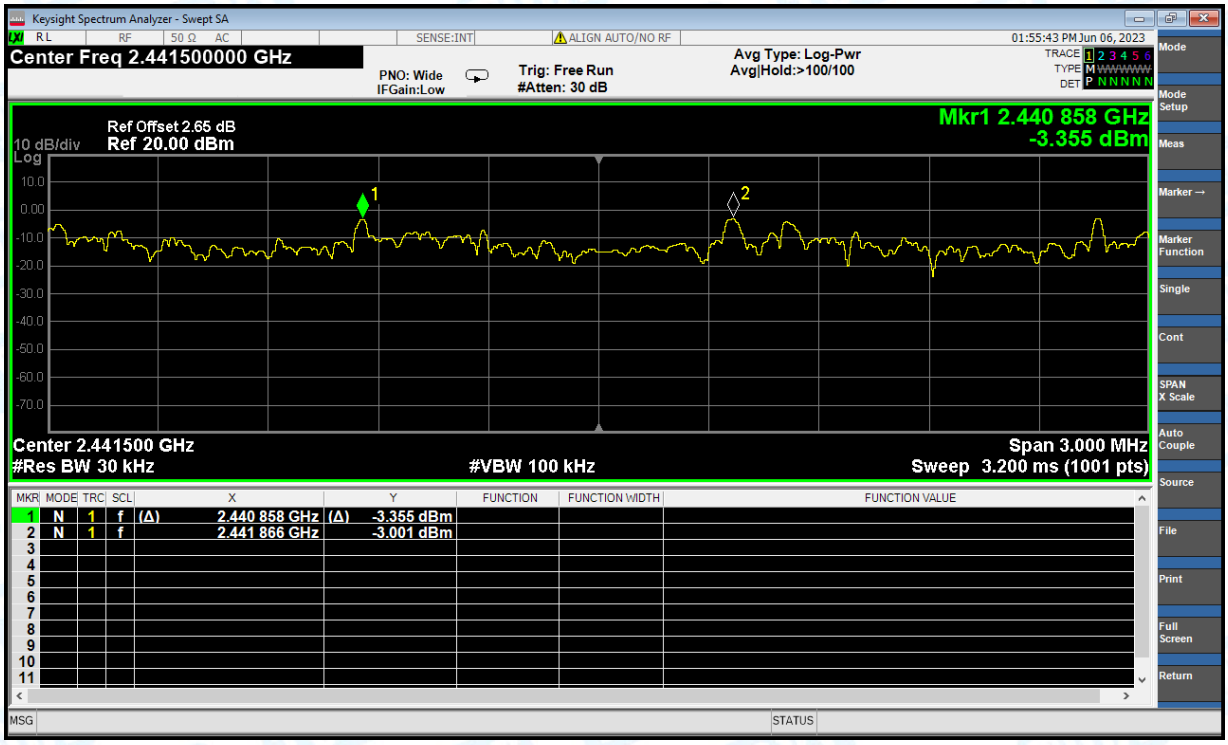
CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



CFS NVNT 3-DH1 2441MHz Ant1

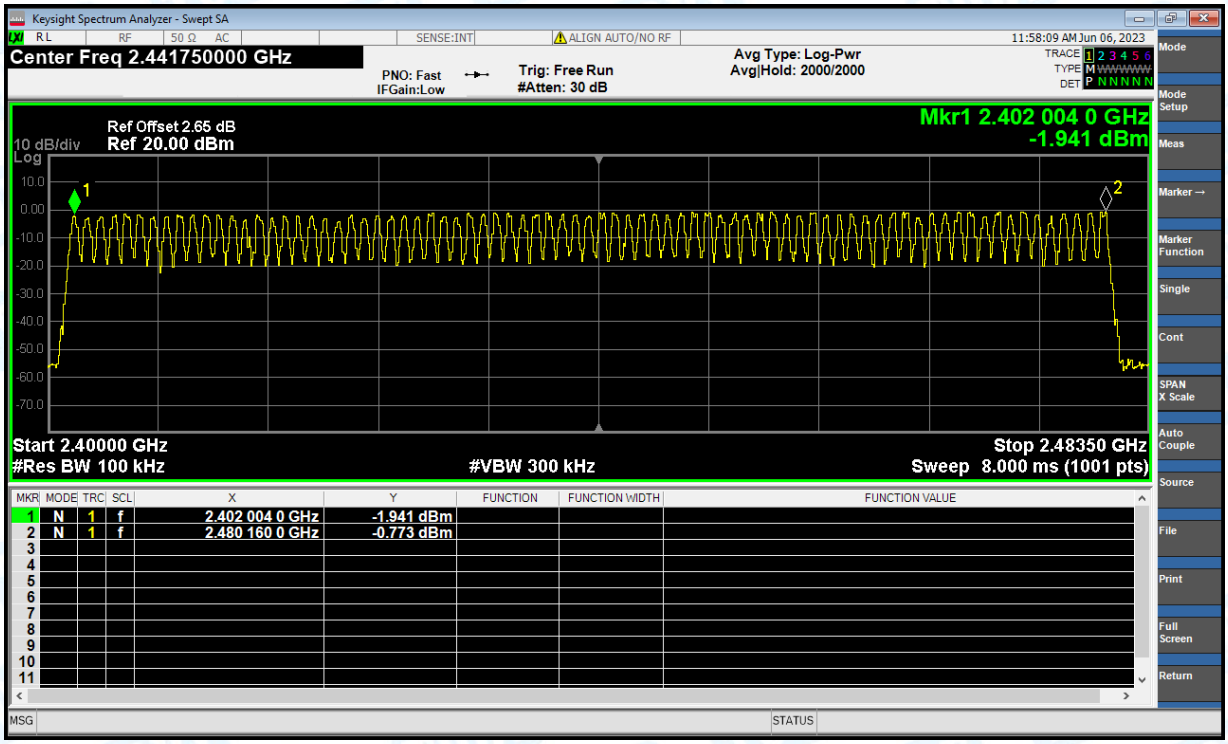


10. Number of Hopping Channel

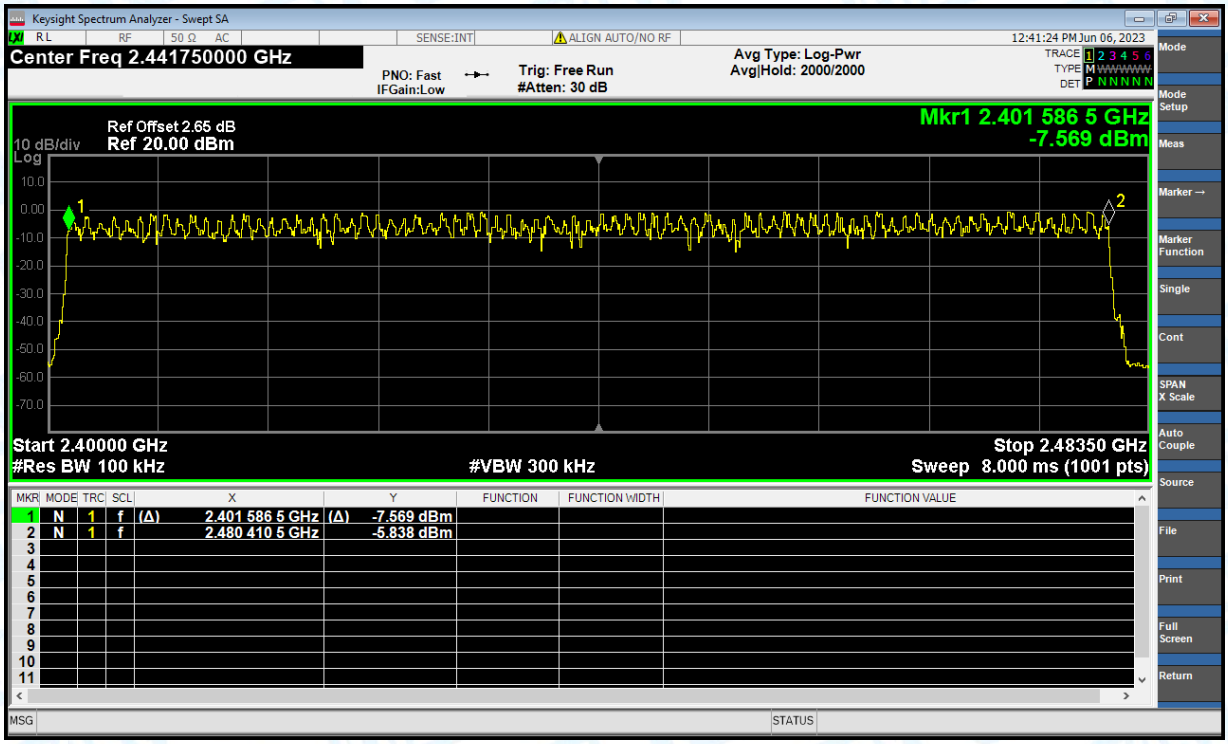
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

Test Graphs

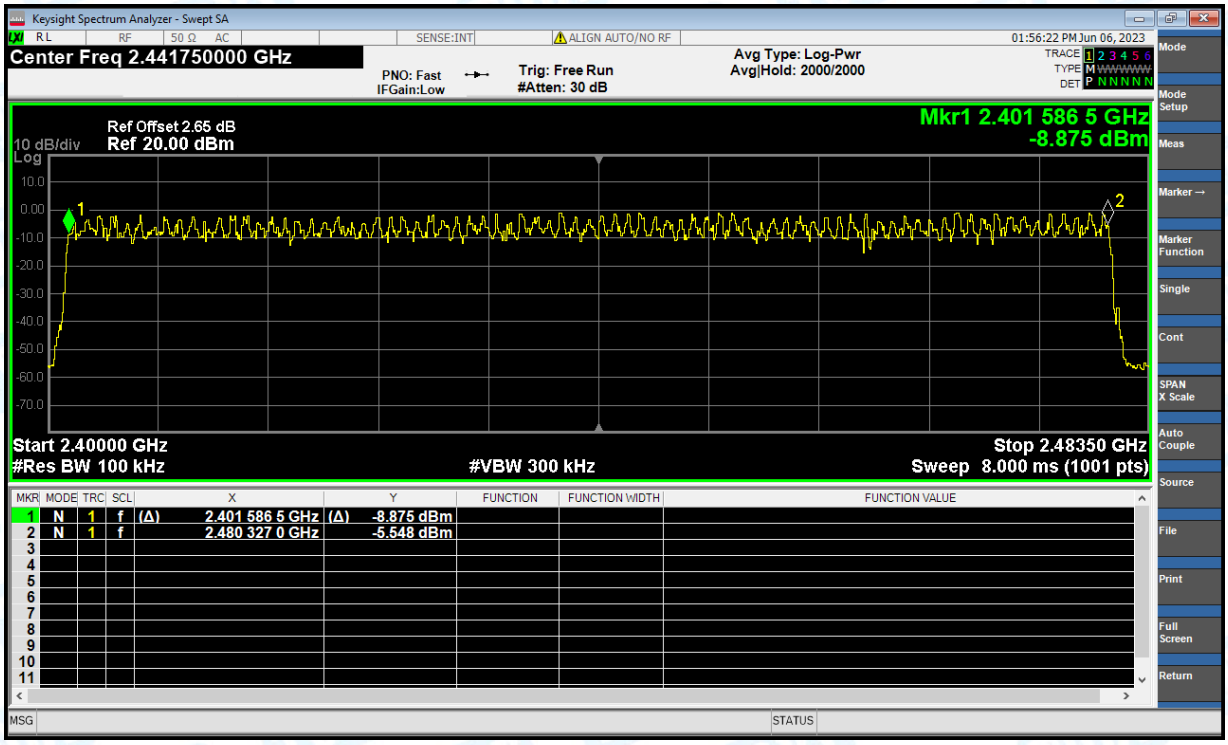
Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



Hopping No. NVNT 3-DH1 2441MHz Ant1

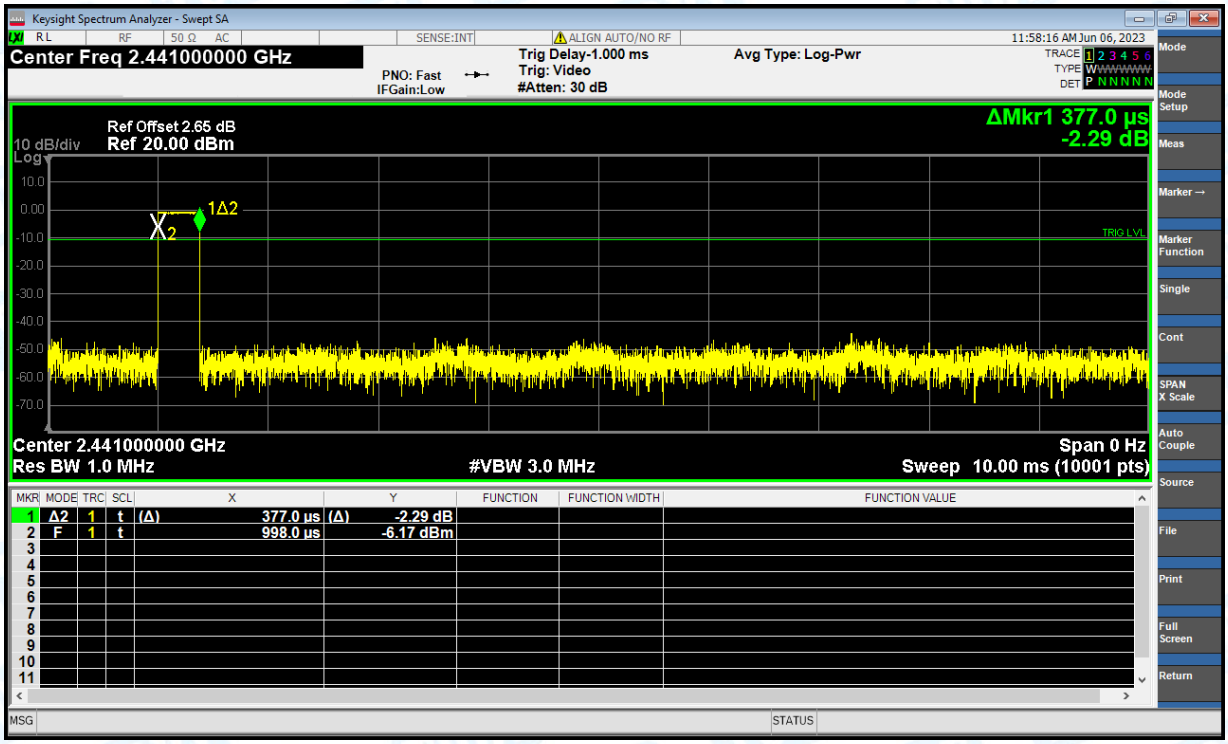


11. Dwell Time

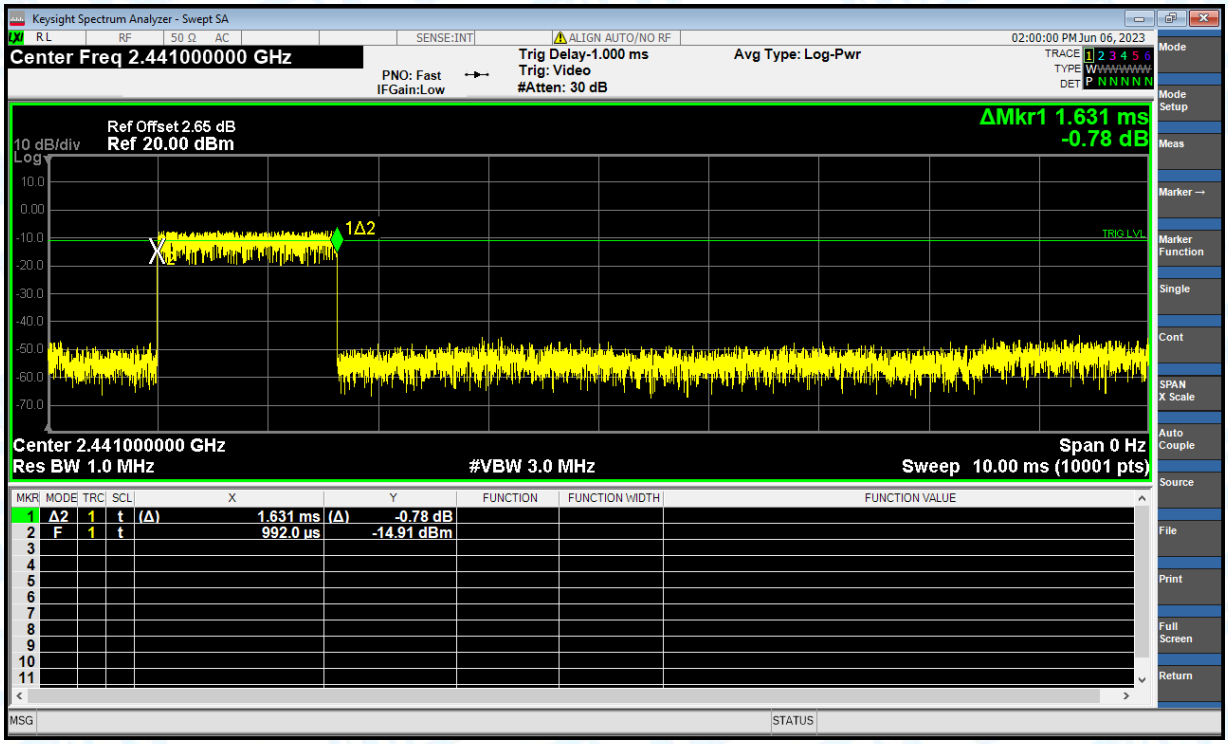
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.377	120.64	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.631	260.96	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.88	307.2	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.386	123.52	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.637	261.92	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.886	307.84	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.386	123.52	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.637	261.92	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.887	307.947	31600	400	Pass

Test Graphs

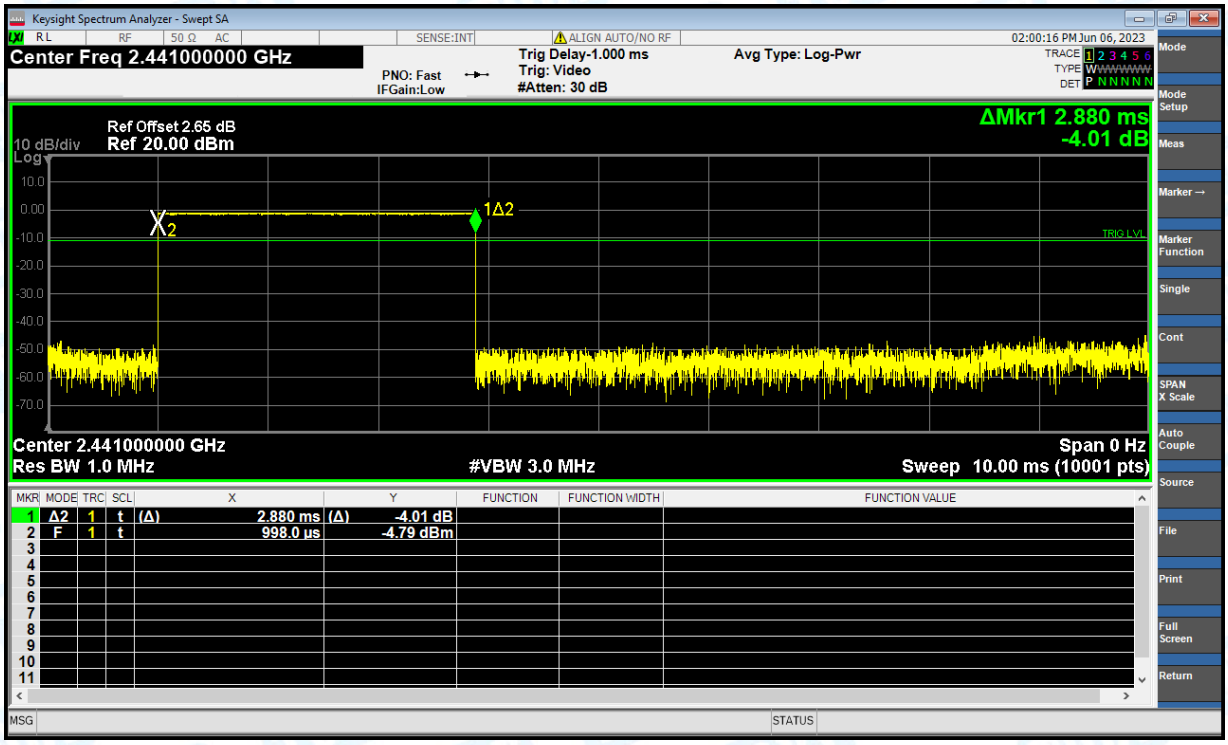
Dwell NVNT 1-DH1 2441MHz Ant1



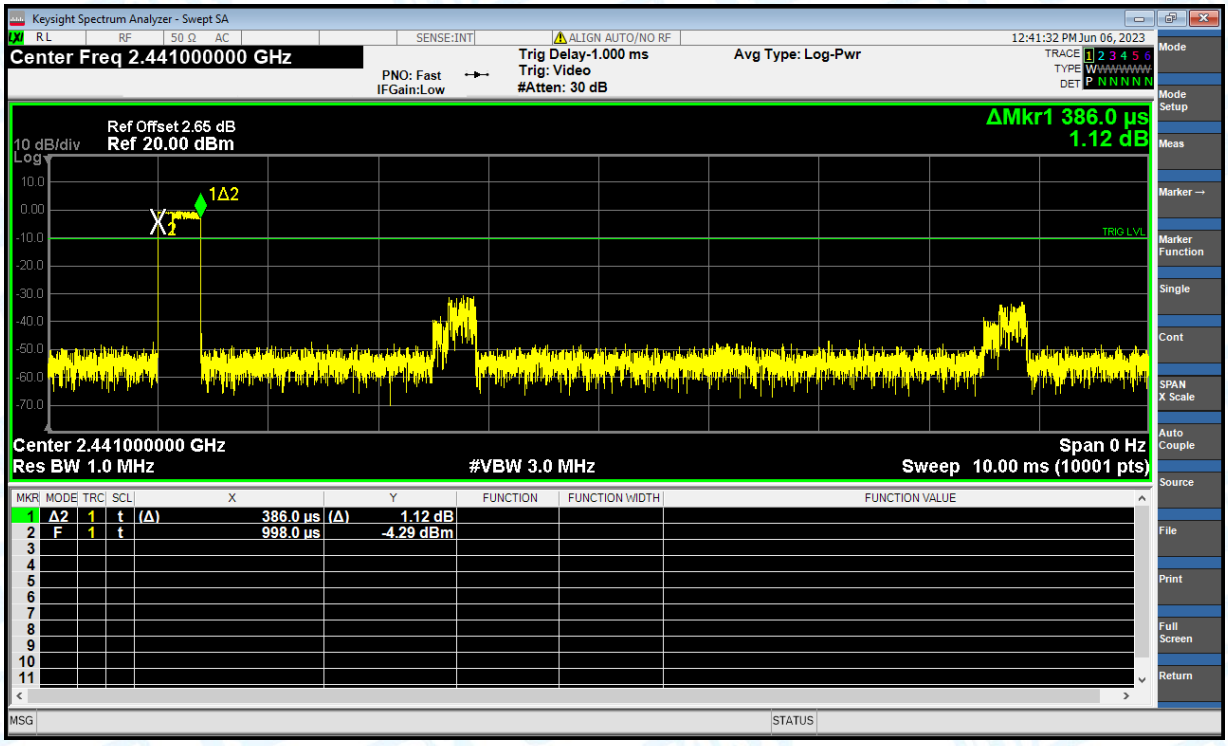
Dwell NVNT 1-DH3 2441MHz Ant1



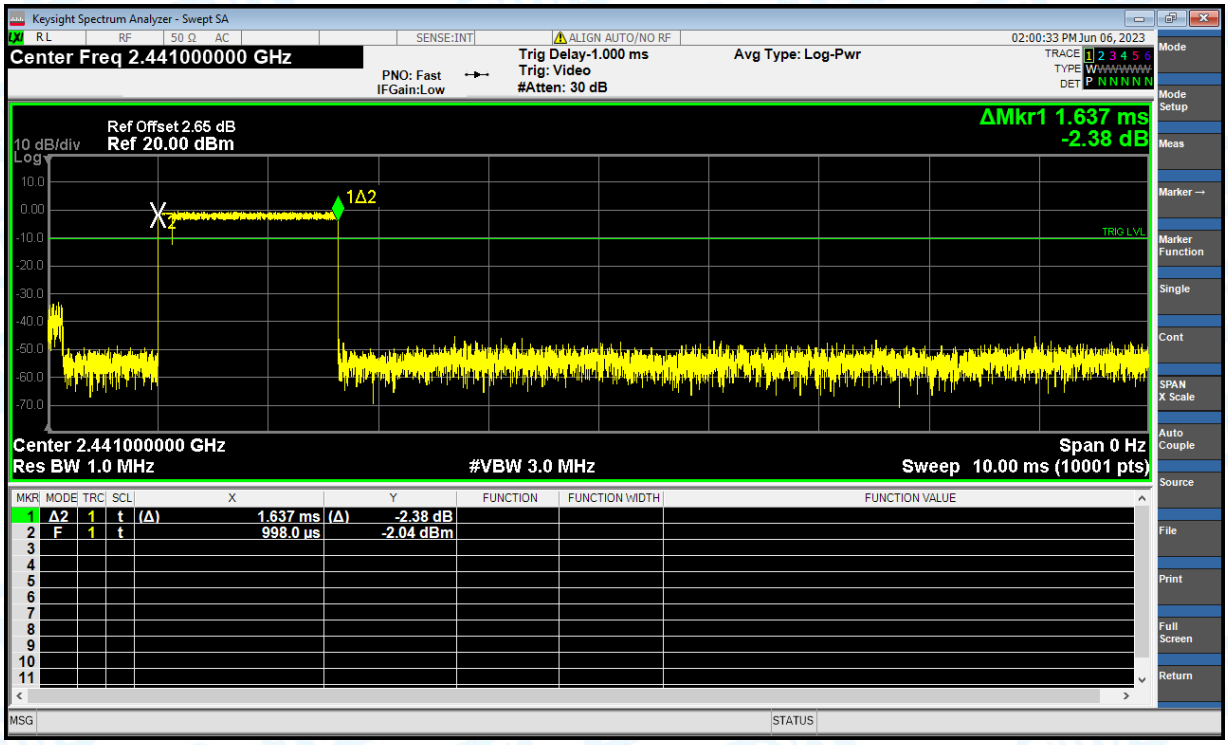
Dwell NVNT 1-DH5 2441MHz Ant1



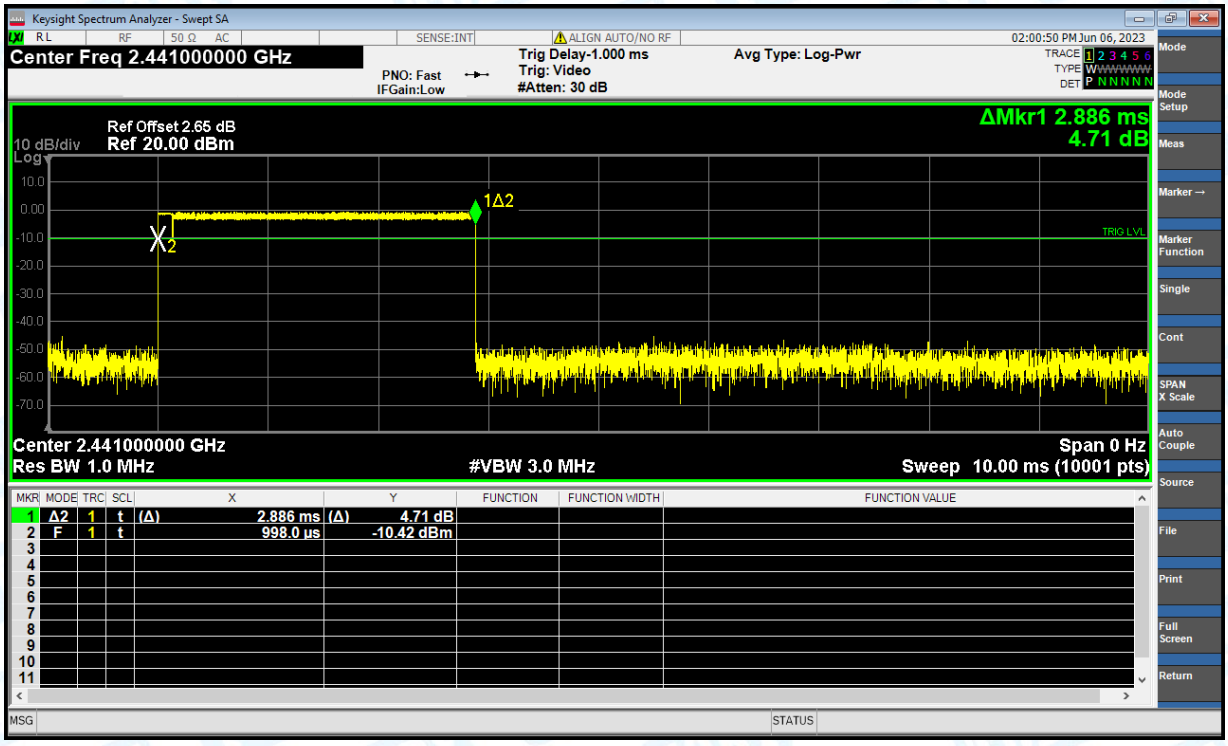
Dwell NVNT 2-DH1 2441MHz Ant1



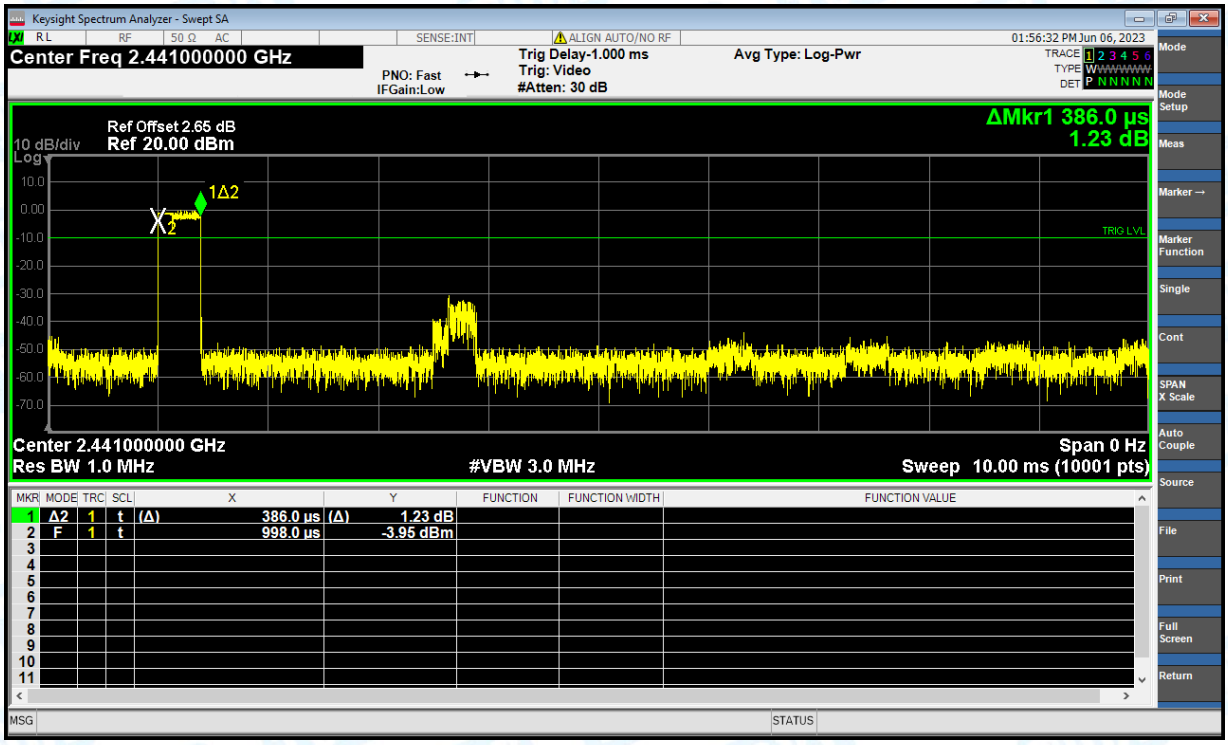
Dwell NVNT 2-DH3 2441MHz Ant1



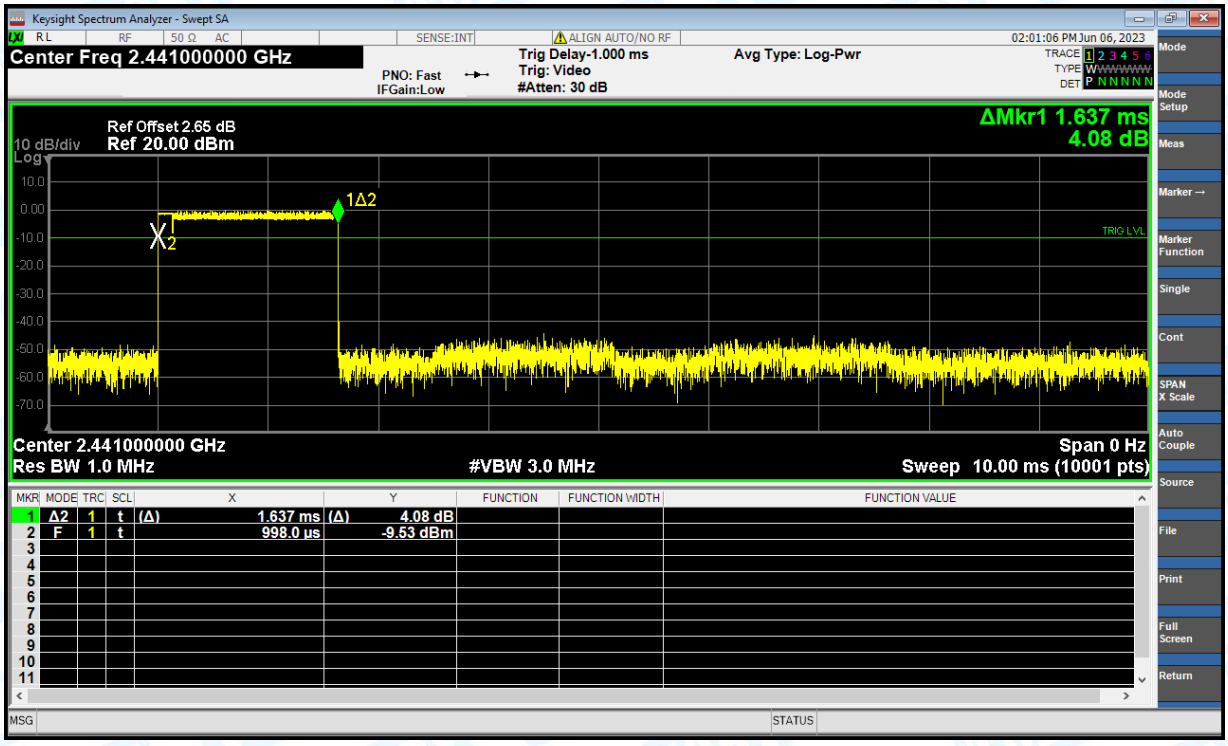
Dwell NVNT 2-DH5 2441MHz Ant1



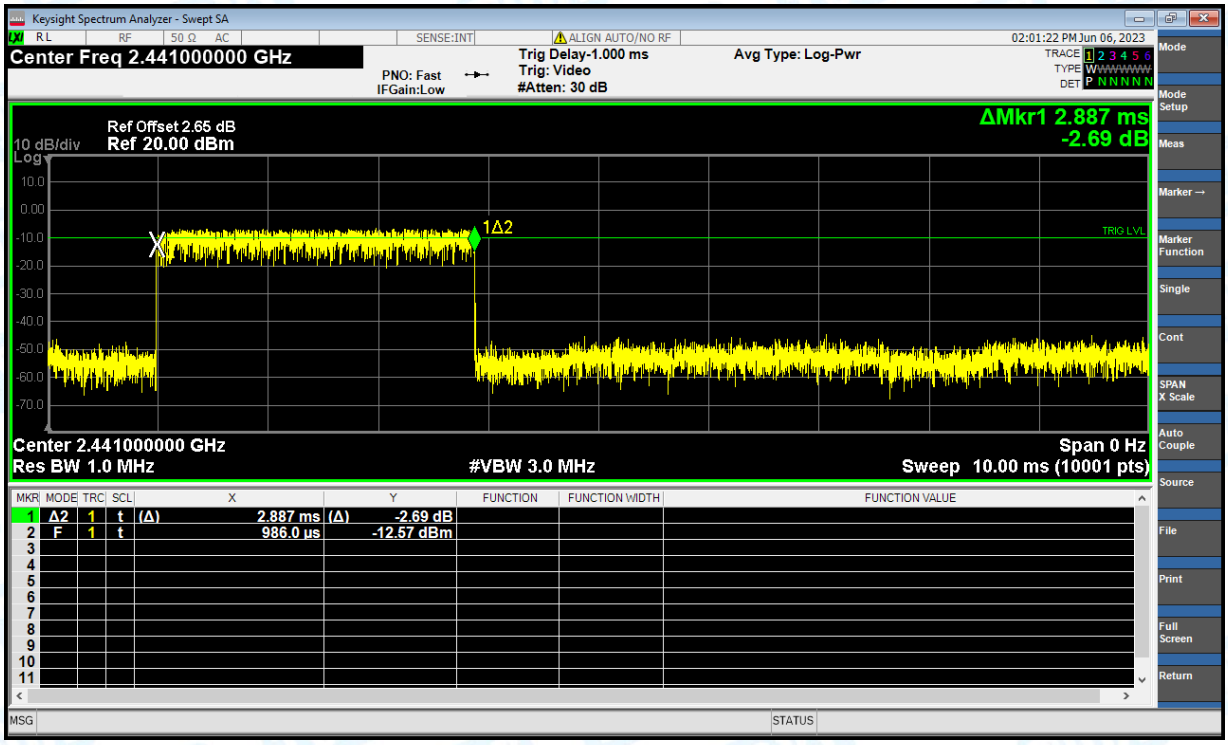
Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1



Dwell NVNT 3-DH5 2441MHz Ant1



-----END OF THE REPORT-----