

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

General Description of EUT	
Product Name:	Smart watch
Test Model:	P1
Sample ID:	202305-0171-4-2#
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 3.7V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the TBR-C-202305-0171-6 The report only show the worst case data.	

Contents

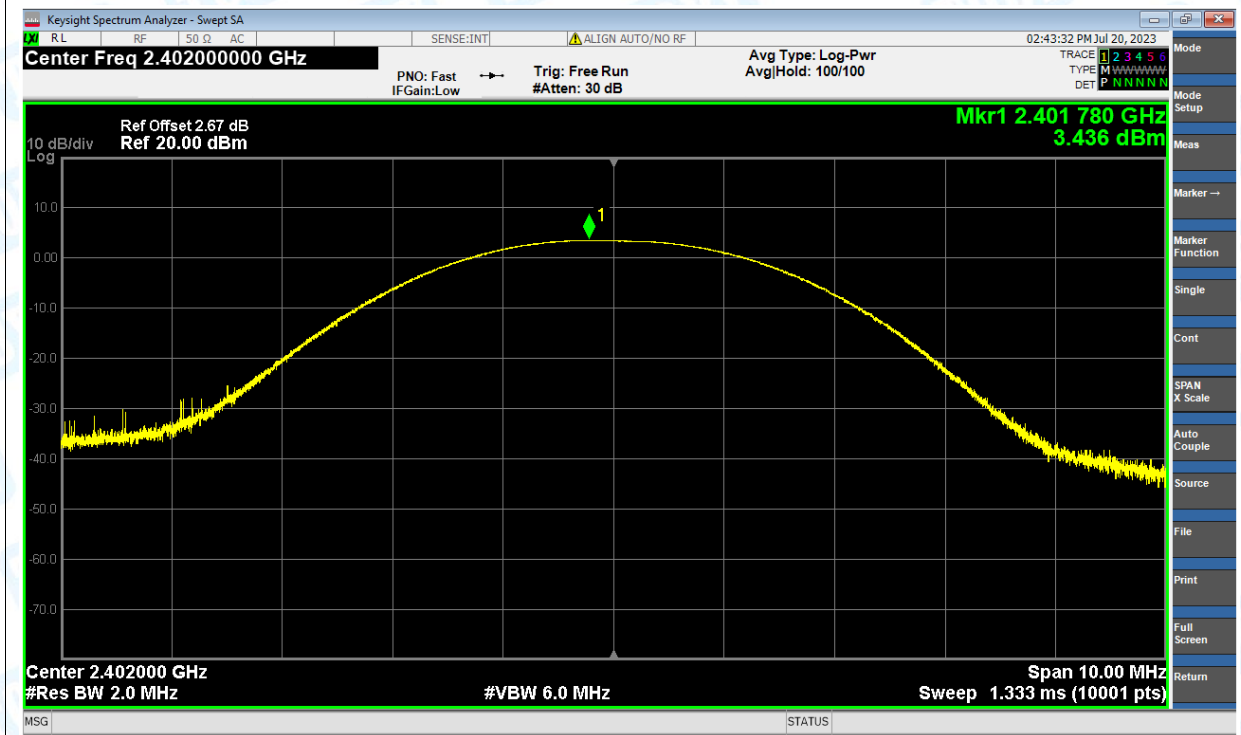
1. Maximum Conducted Output Power.....	3
2. -20dB Bandwidth.....	7
3. Occupied Channel Bandwidth.....	11
4. Band Edge.....	15
5. Band Edge(Hopping).....	20
6. Conducted RF Spurious Emission.....	25
7. Restrict Band.....	30
8. Carrier Frequencies Separation.....	35
9. Number of Hopping Channel.....	37
10. Dwell Time.....	39

1. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	3.436	21	Pass
NVNT	1-DH1	2441	Ant1	2.515	21	Pass
NVNT	1-DH1	2480	Ant1	2.053	21	Pass
NVNT	2-DH1	2402	Ant1	4.2	21	Pass
NVNT	2-DH1	2441	Ant1	3.245	21	Pass
NVNT	2-DH1	2480	Ant1	2.77	21	Pass

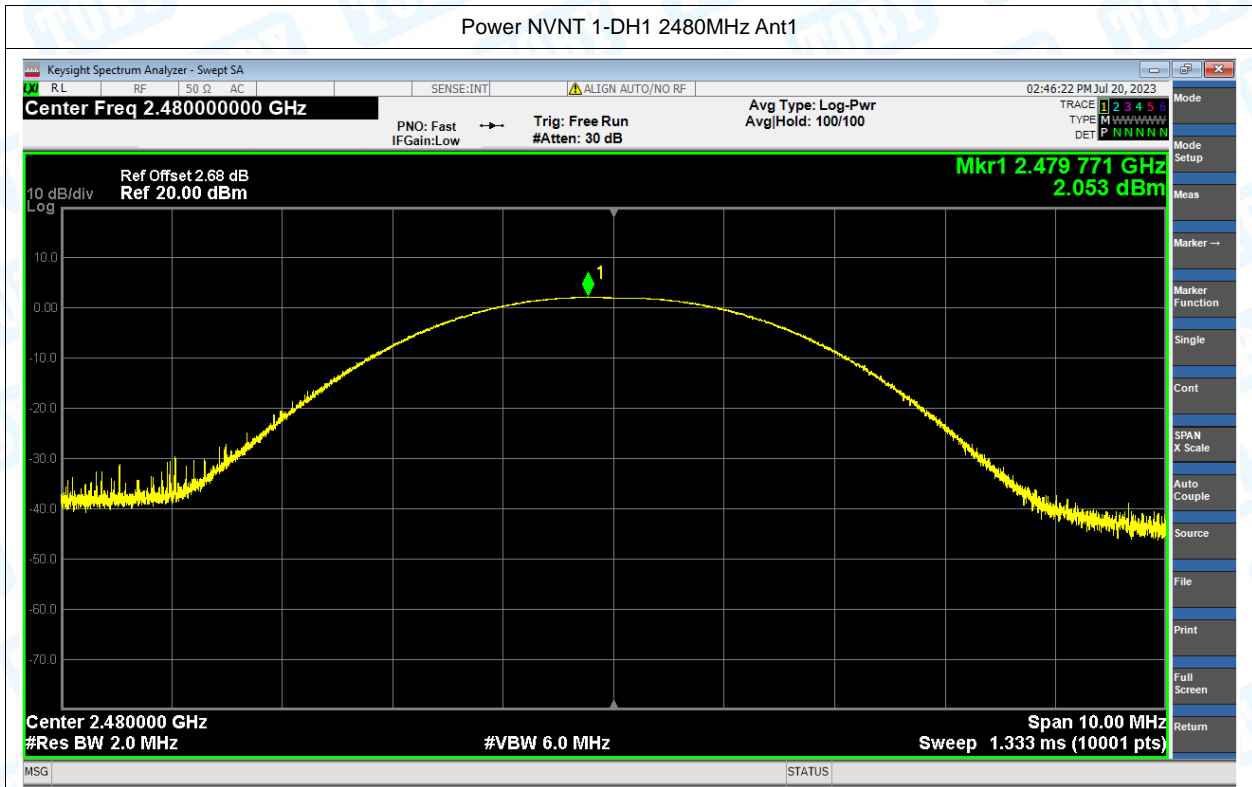
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1

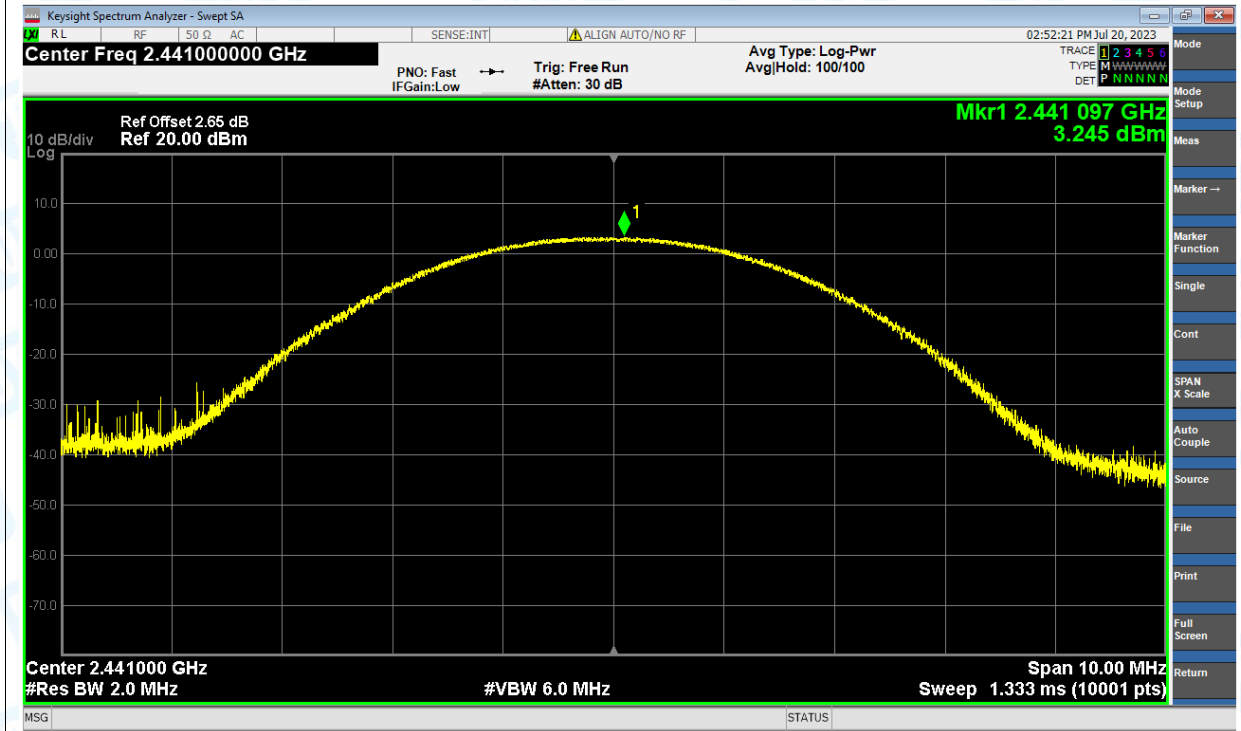


Power NVNT 1-DH1 2441MHz Ant1

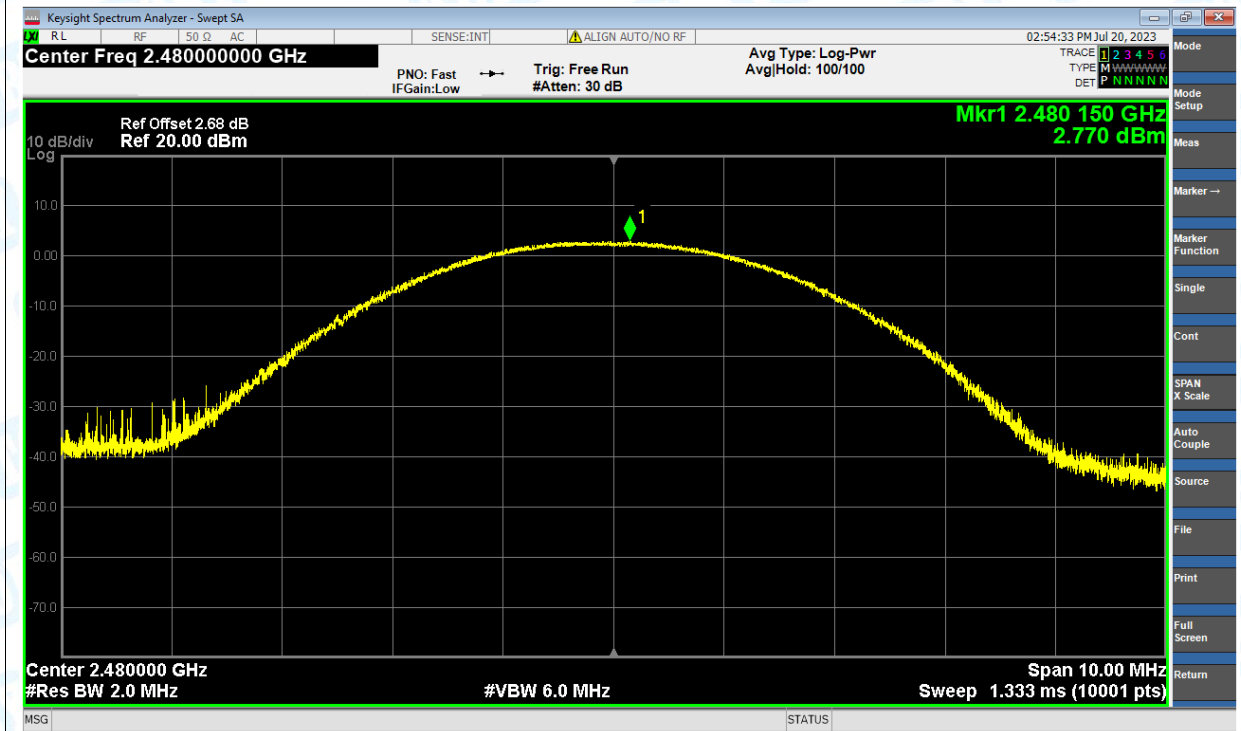




Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1



2. -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.88	0	Pass
NVNT	1-DH1	2441	Ant1	0.85	0	Pass
NVNT	1-DH1	2480	Ant1	0.86	0	Pass
NVNT	2-DH1	2402	Ant1	1.25	0	Pass
NVNT	2-DH1	2441	Ant1	1.24	0	Pass
NVNT	2-DH1	2480	Ant1	1.26	0	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



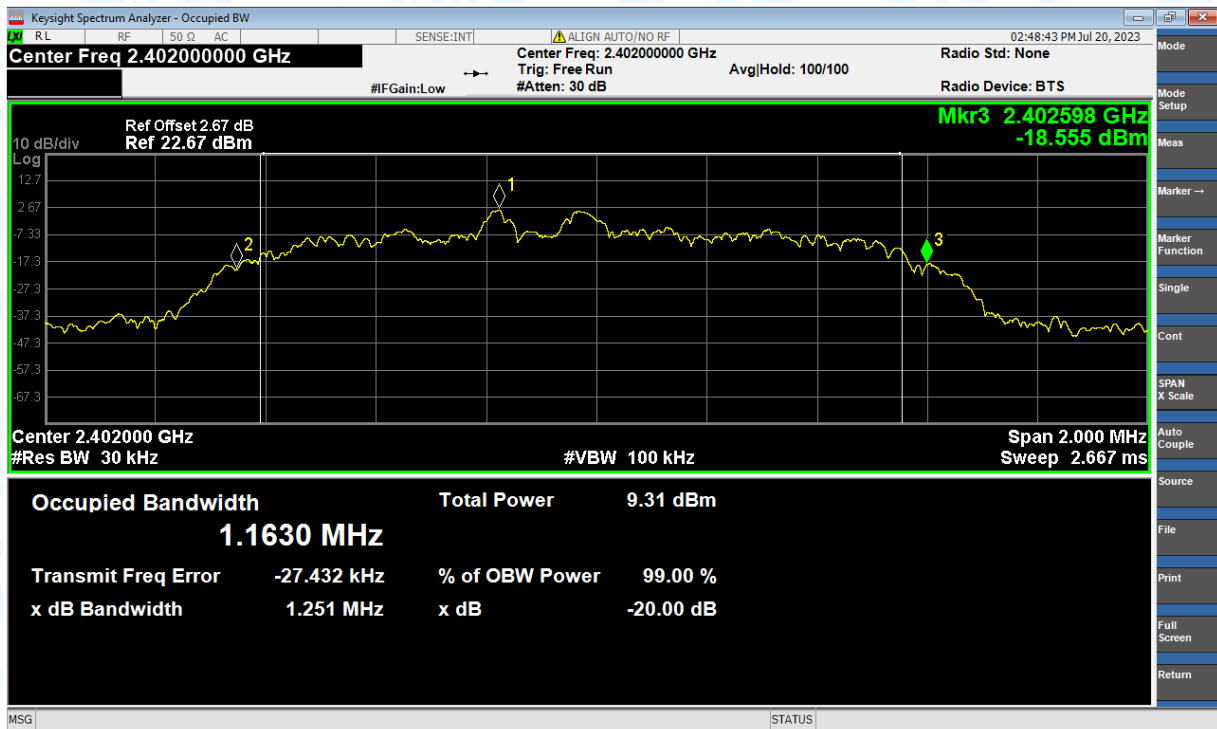
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



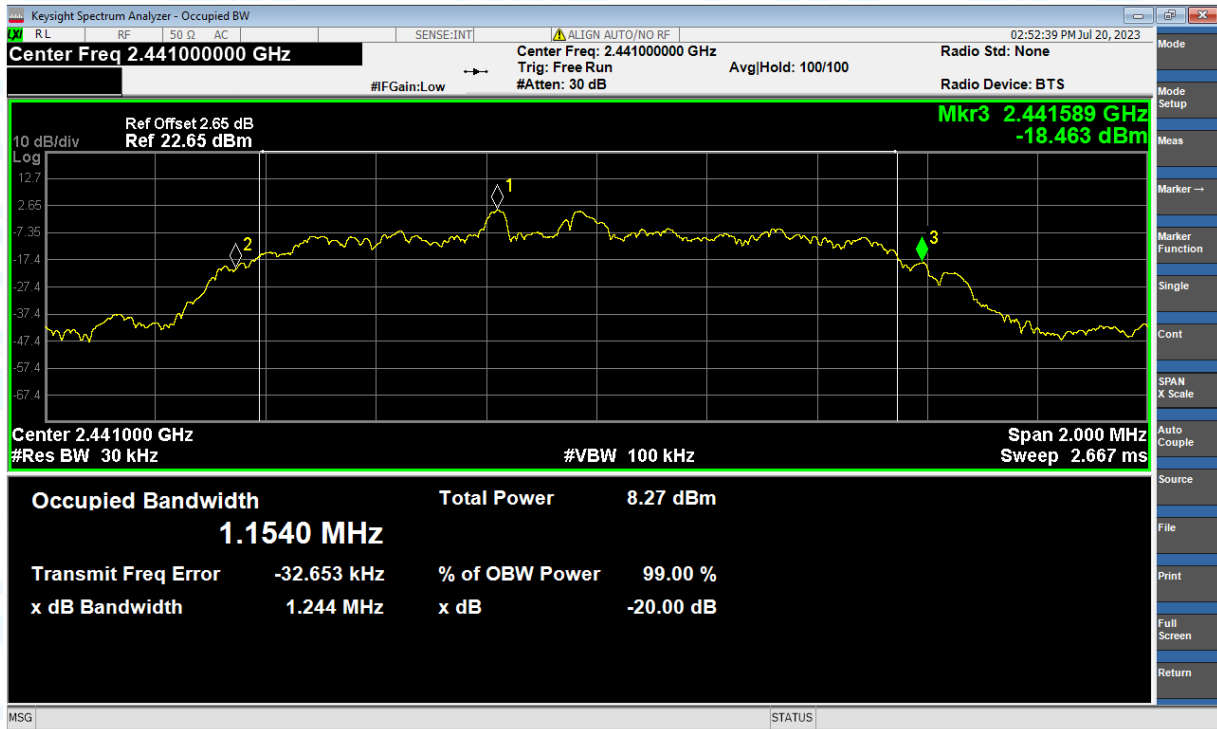
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



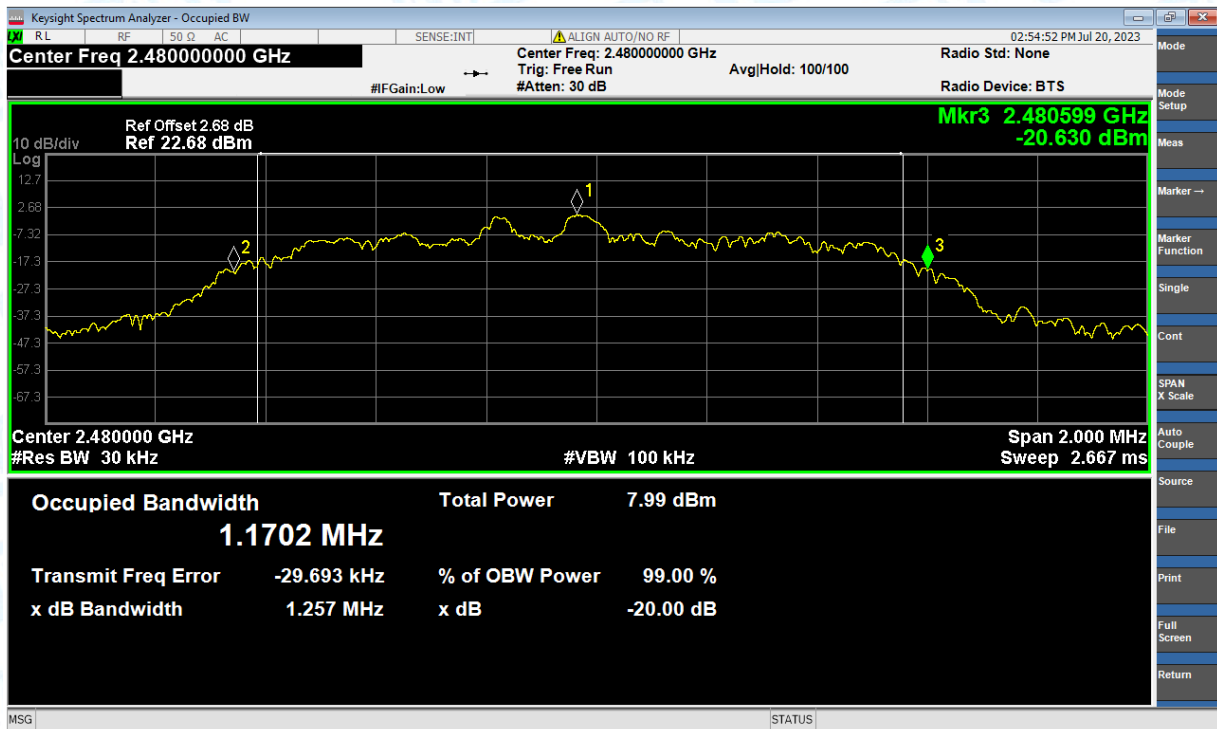
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

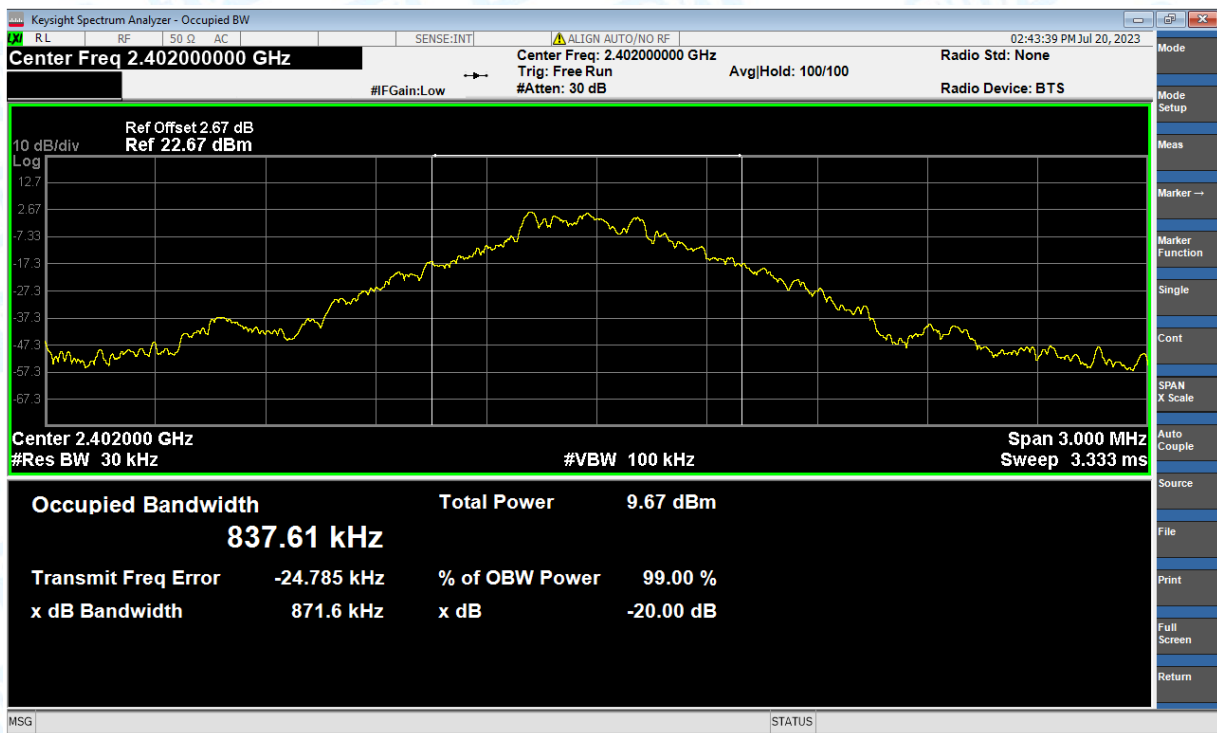


3. Occupied Channel Bandwidth

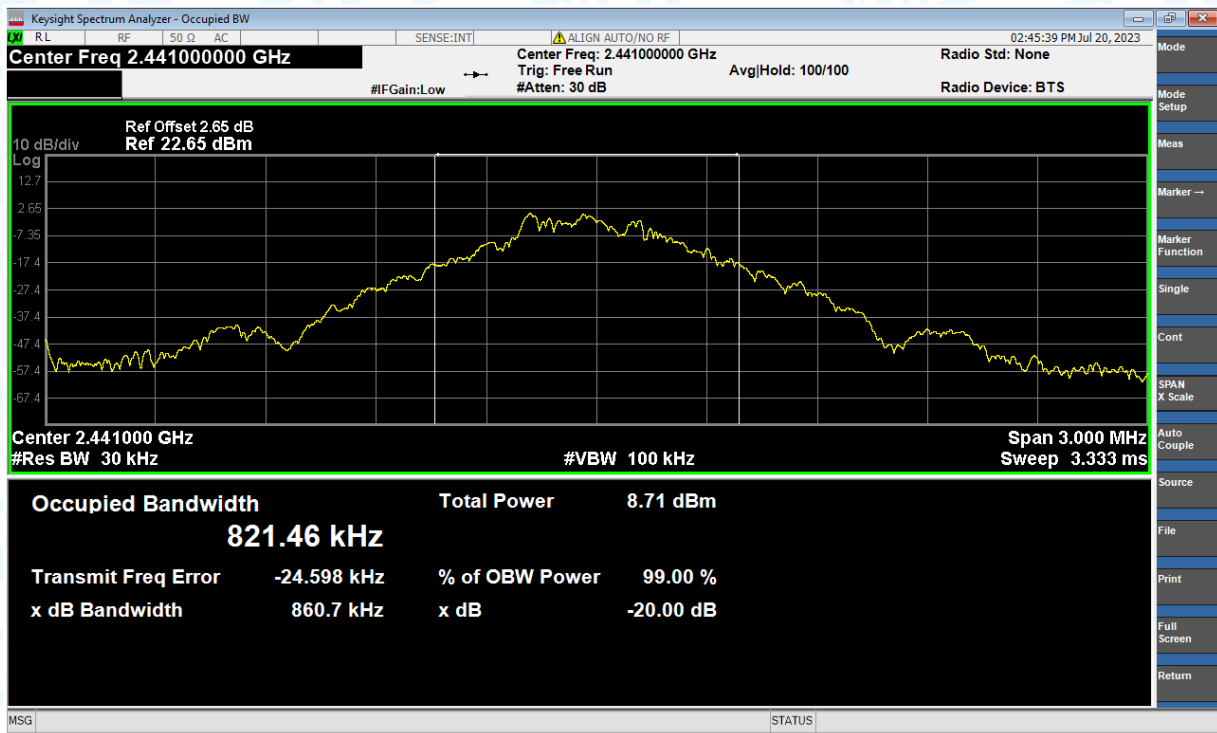
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.838
NVNT	1-DH1	2441	Ant1	0.821
NVNT	1-DH1	2480	Ant1	0.834
NVNT	2-DH1	2402	Ant1	1.166
NVNT	2-DH1	2441	Ant1	1.18
NVNT	2-DH1	2480	Ant1	1.144

Test Graphs

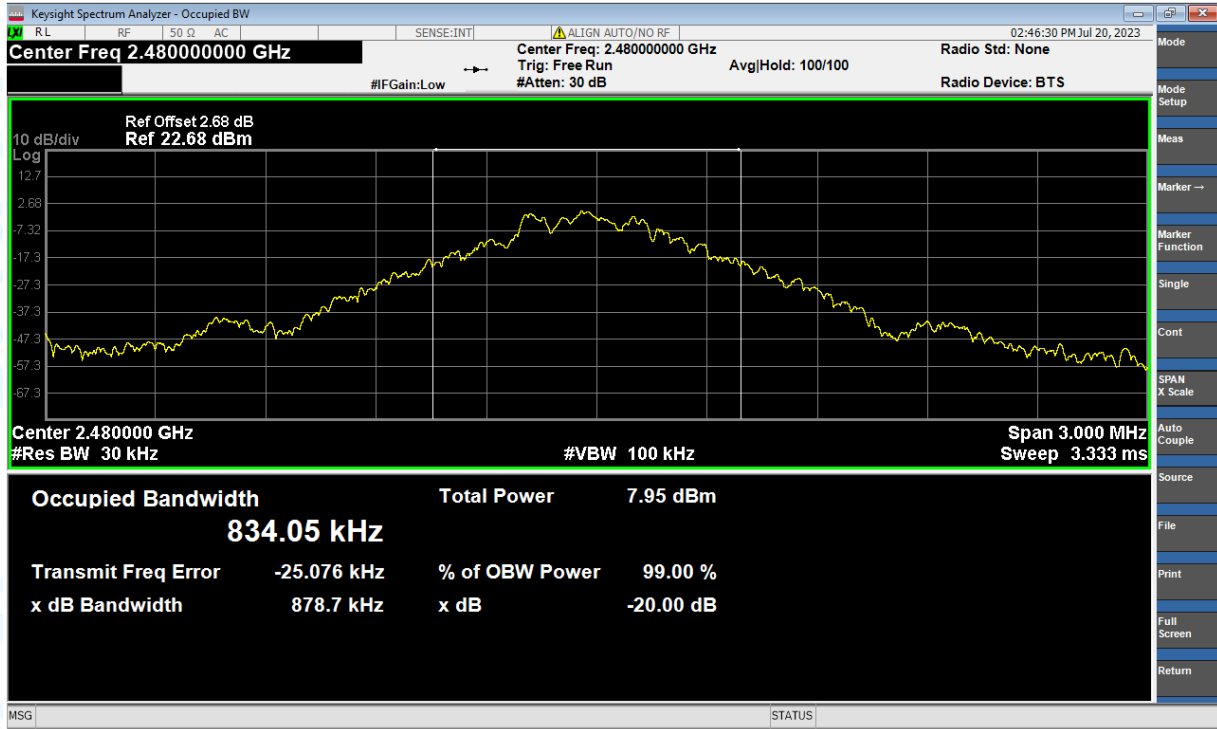
OBW NVNT 1-DH1 2402MHz Ant1



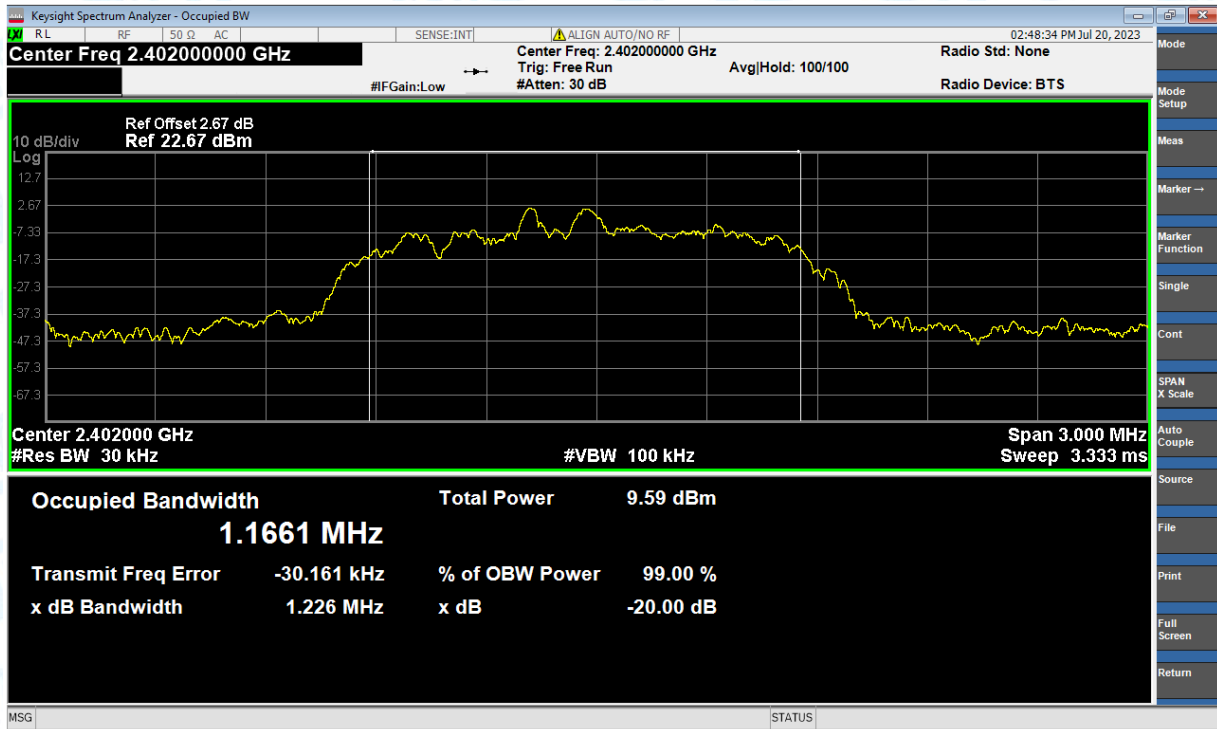
OBW NVNT 1-DH1 2441MHz Ant1



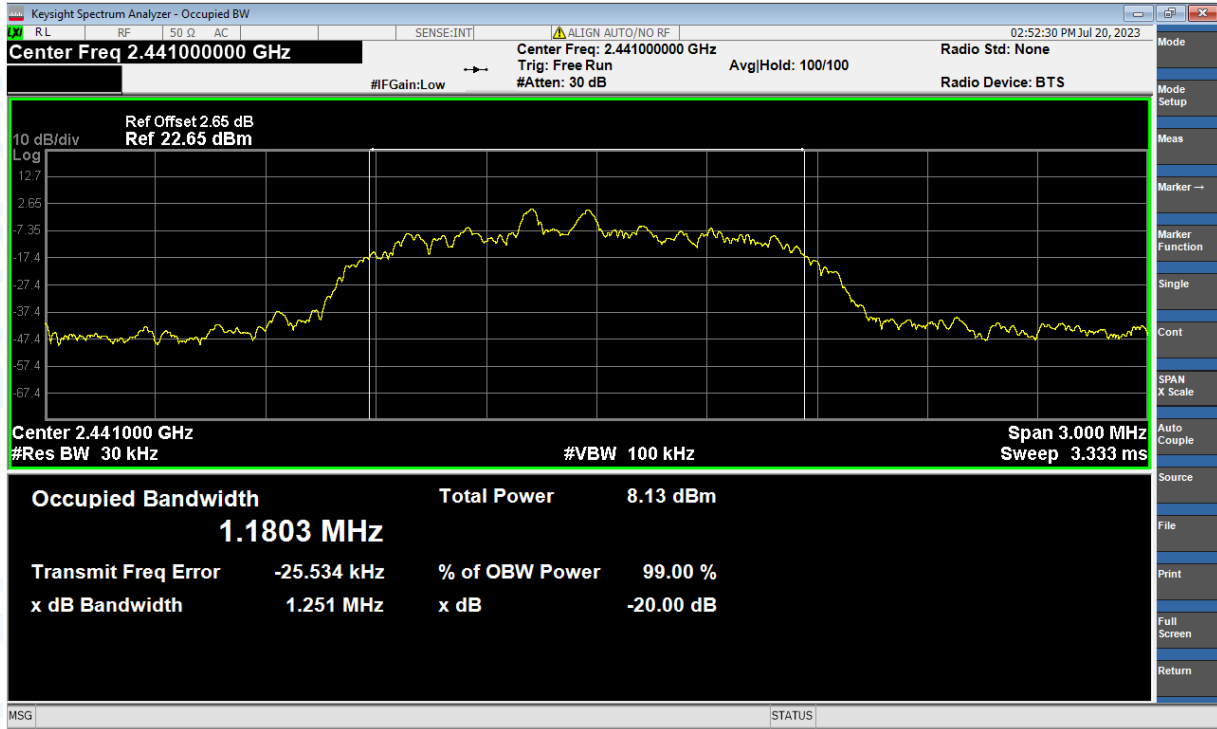
OBW NVNT 1-DH1 2480MHz Ant1



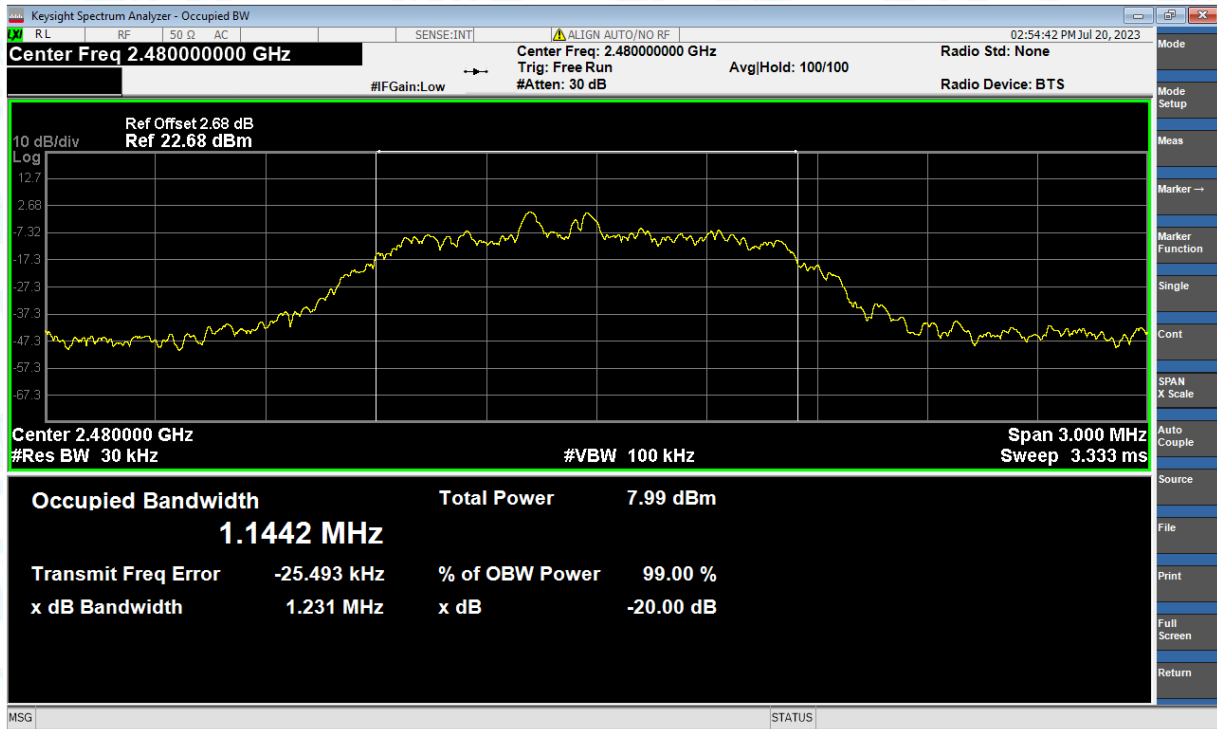
OBW NVNT 2-DH1 2402MHz Ant1



OBW NVNT 2-DH1 2441MHz Ant1



OBW NVNT 2-DH1 2480MHz Ant1



4. Band Edge

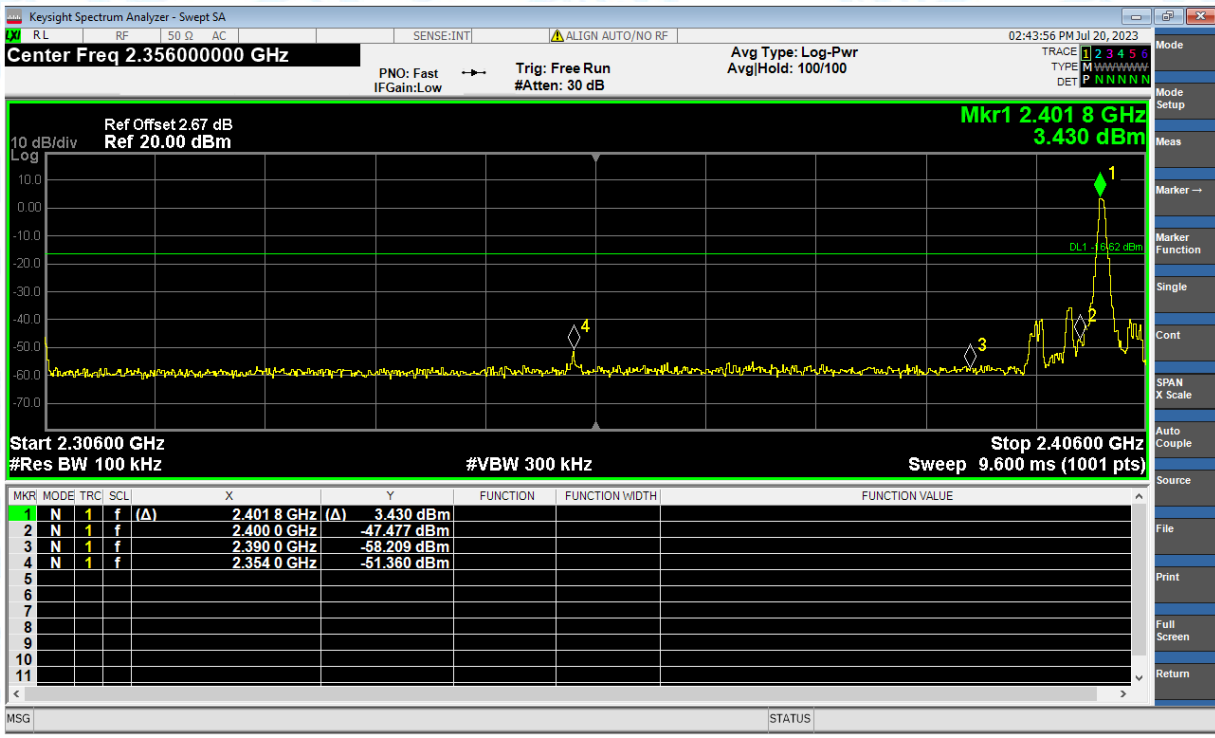
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-54.74	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-49.3	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-56.54	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-49.3	-20	Pass

Test Graphs

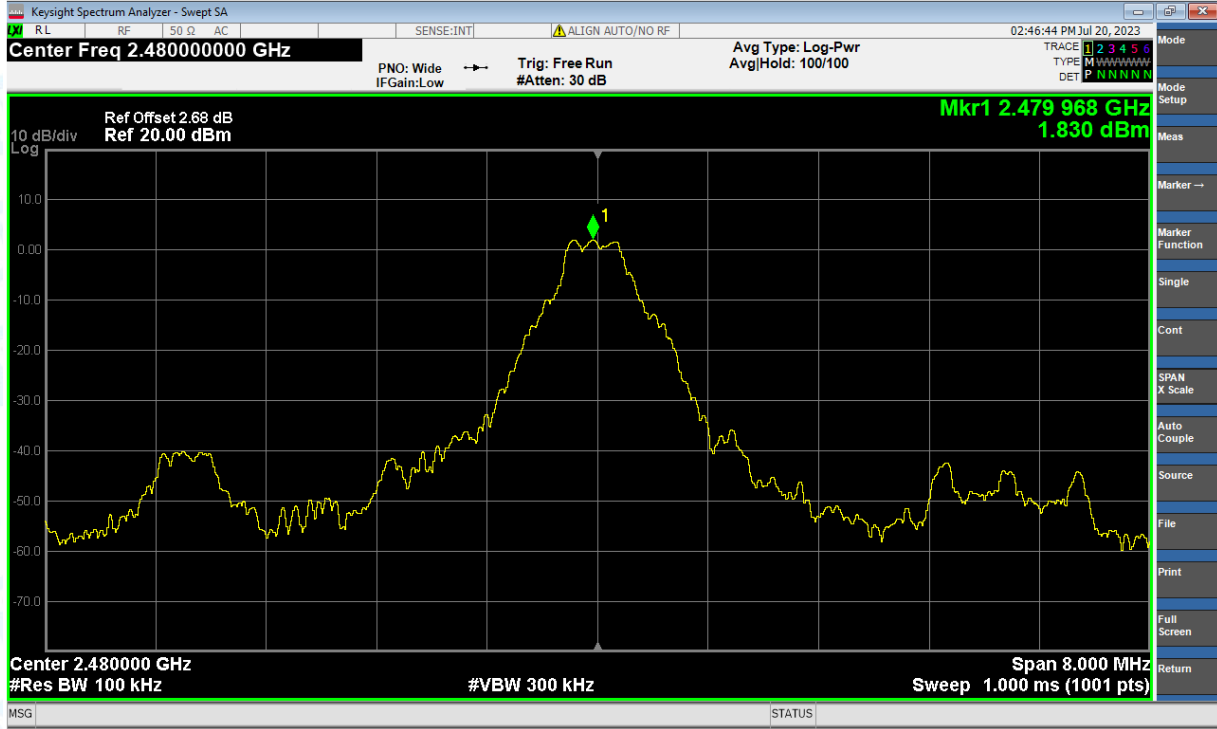
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



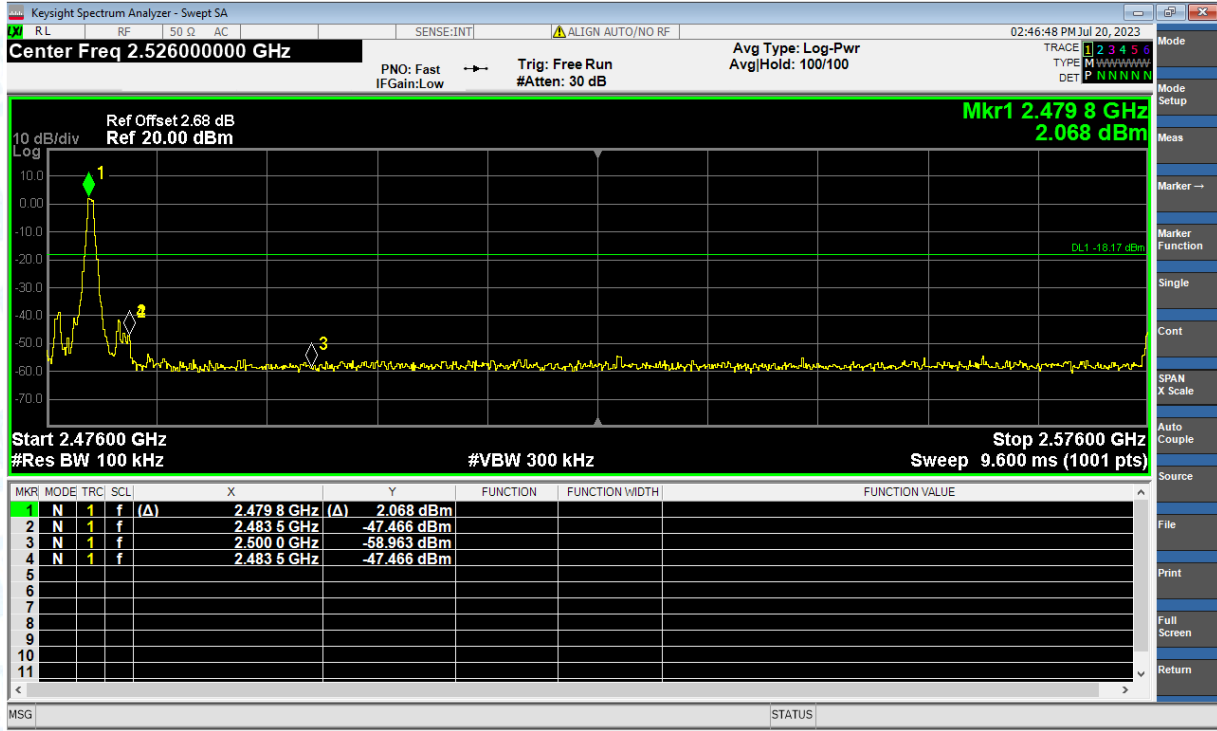
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



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



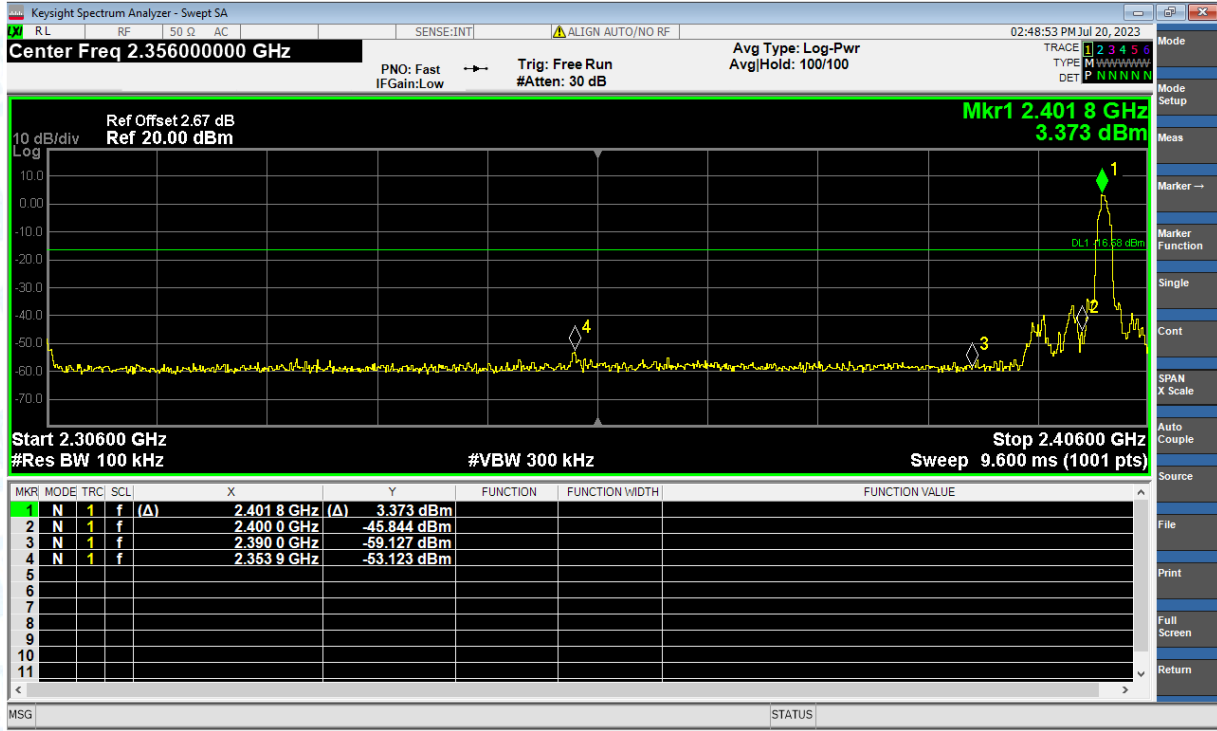
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



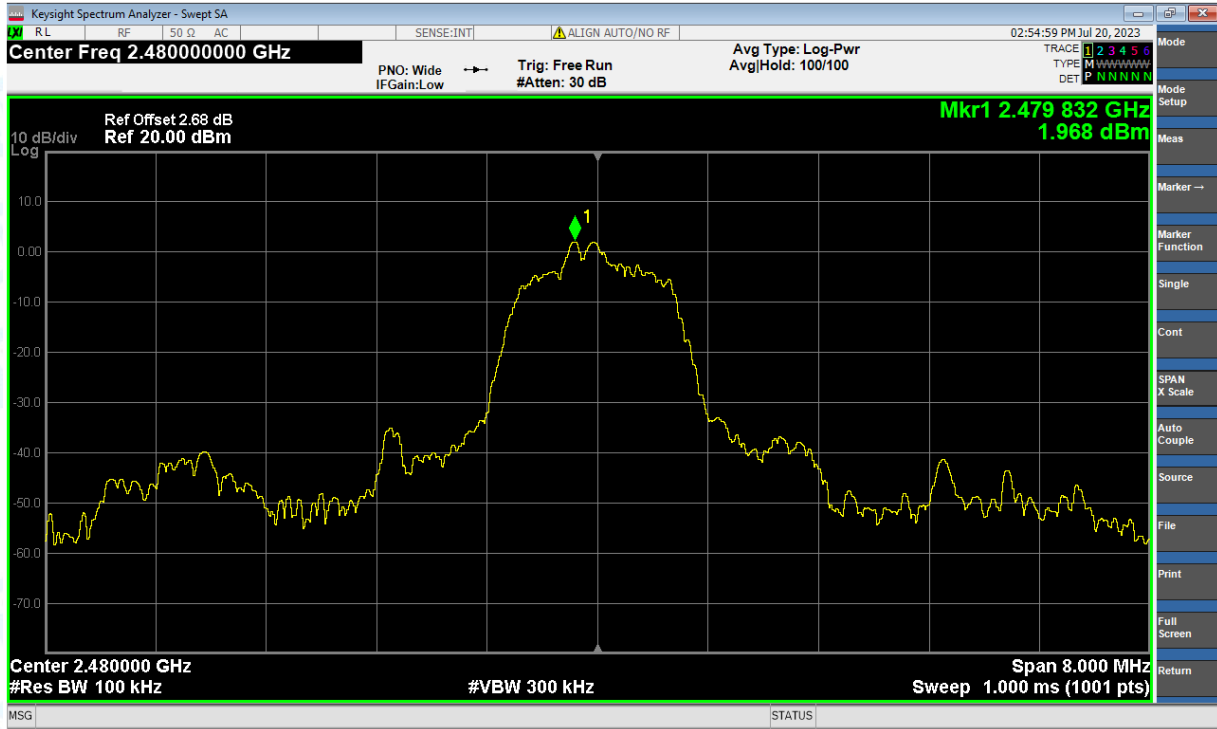
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



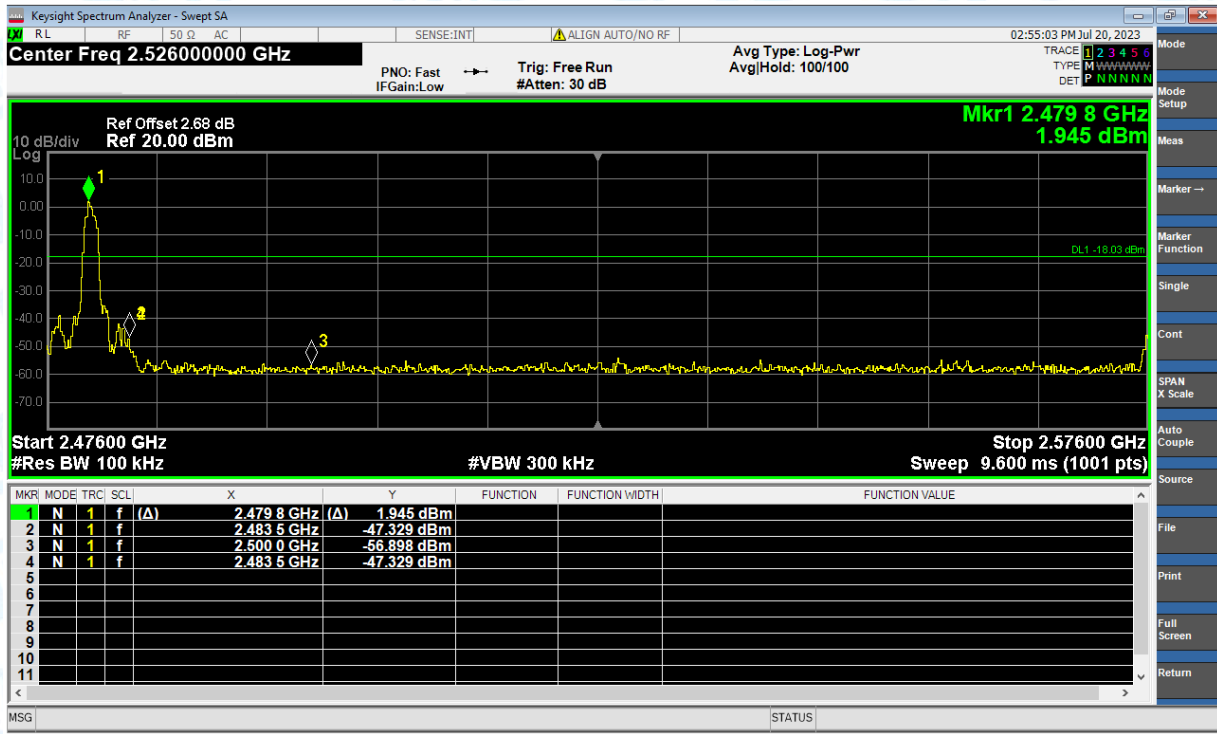
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



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



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



5. Band Edge(Hopping)

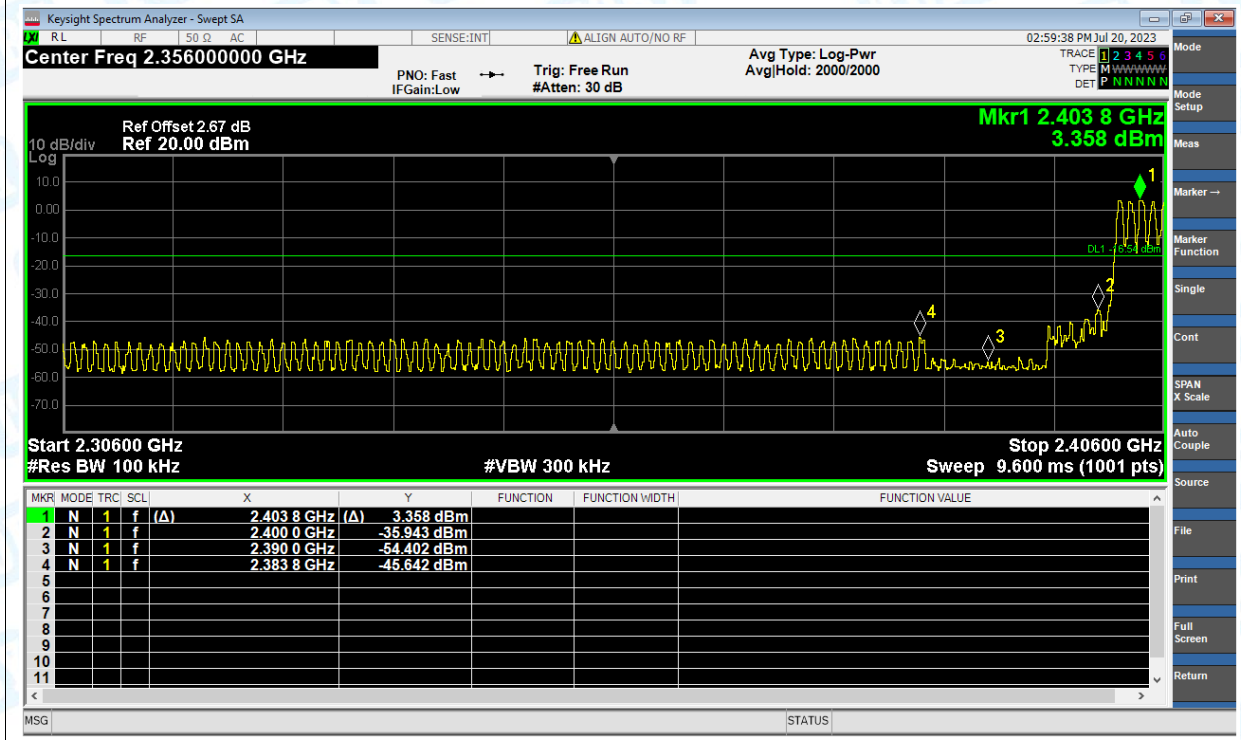
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-49.1	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-49.95	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-48.69	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-49.88	-20	Pass

Test Graphs

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



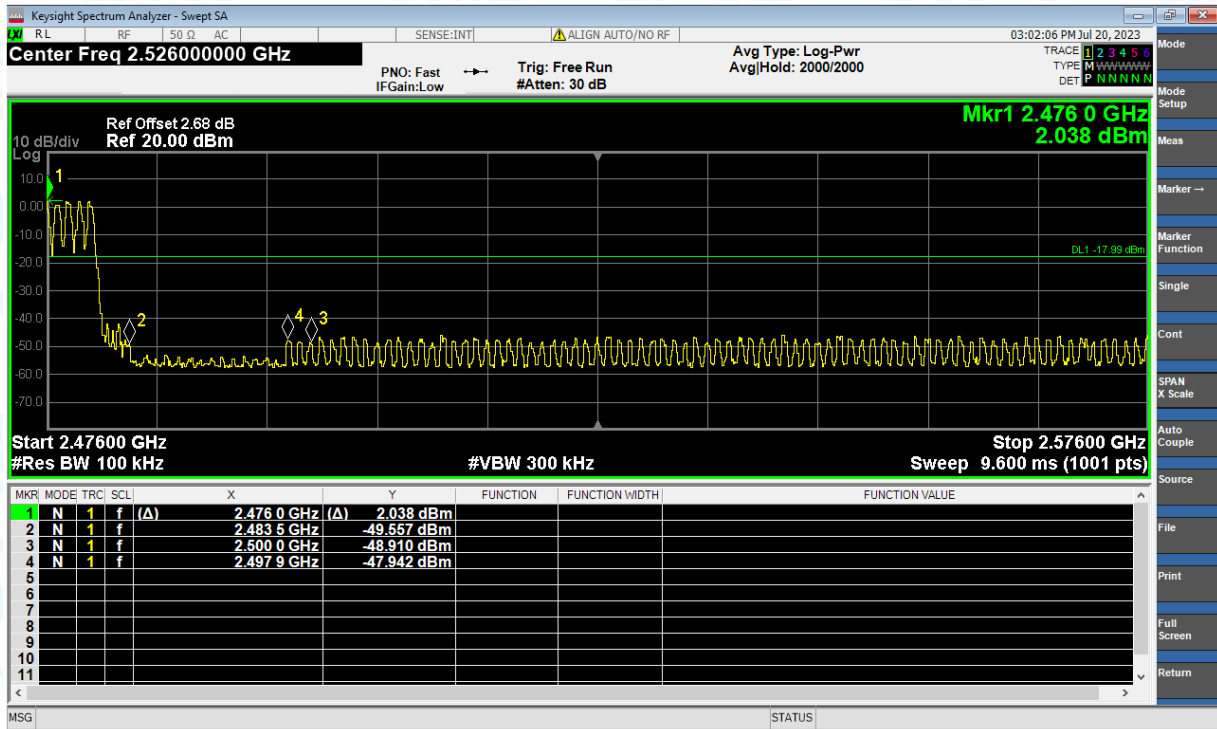
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



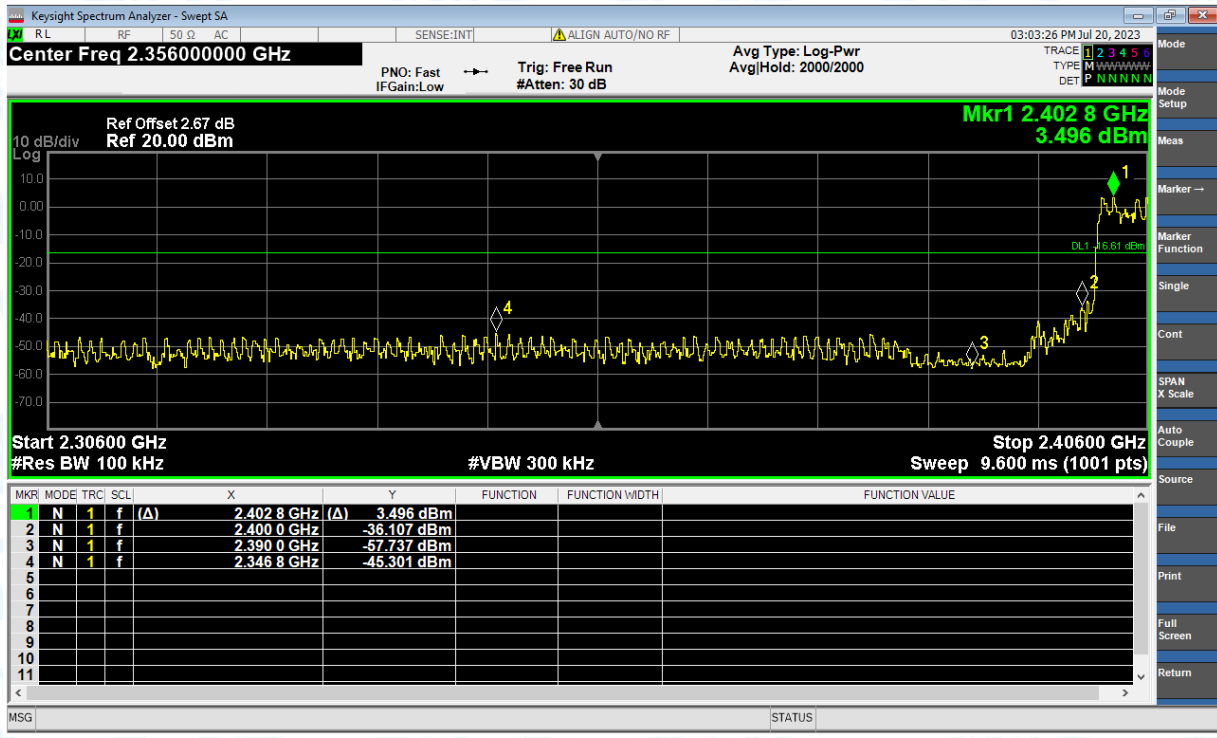
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



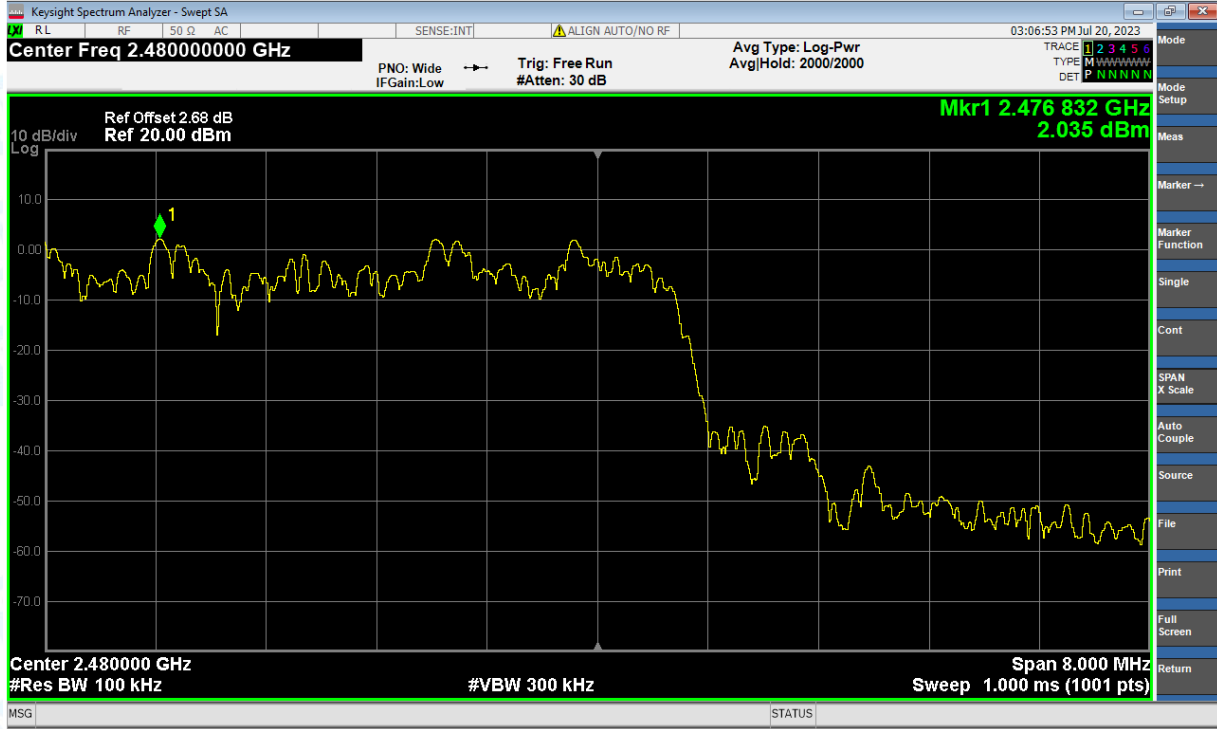
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



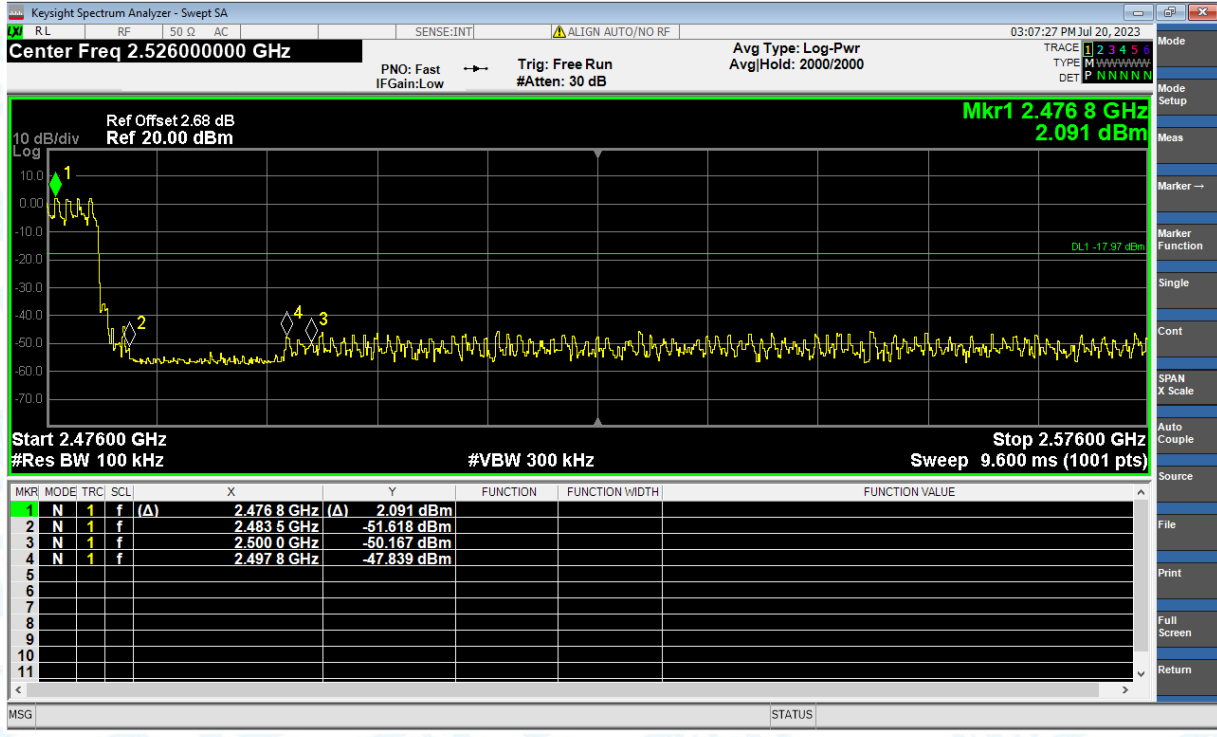
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



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

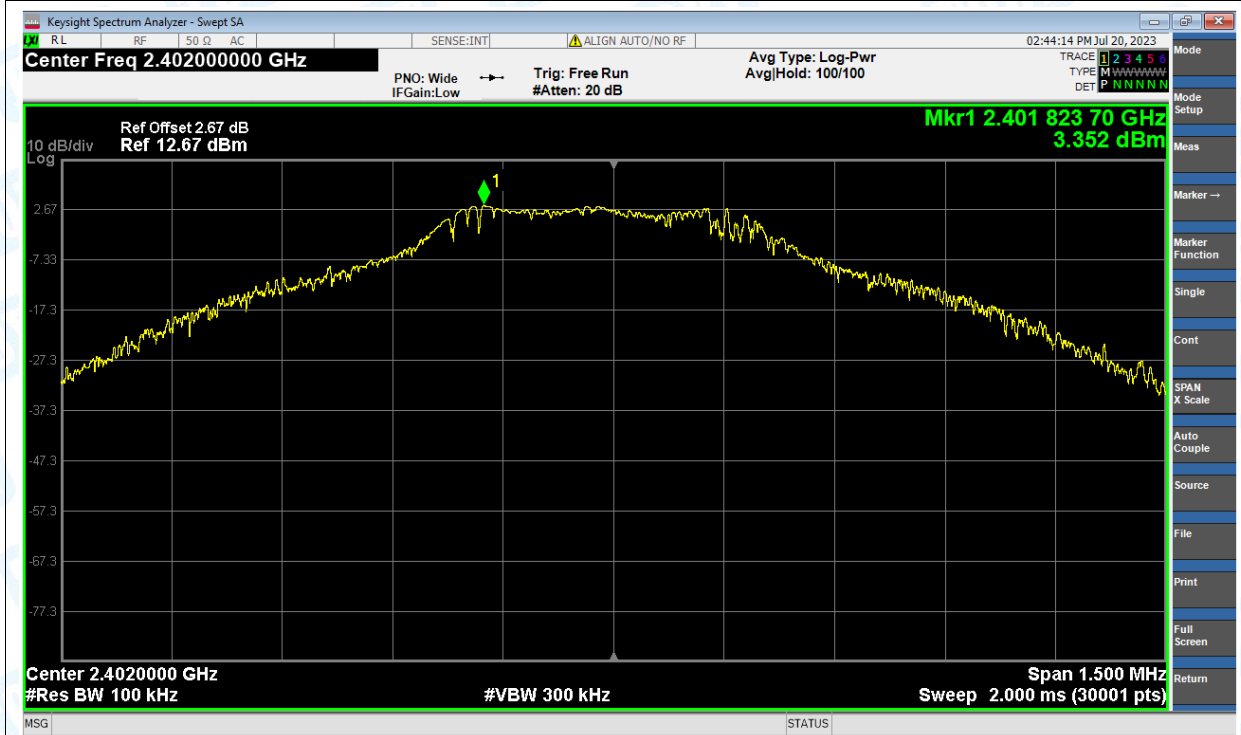


6. Conducted RF Spurious Emission

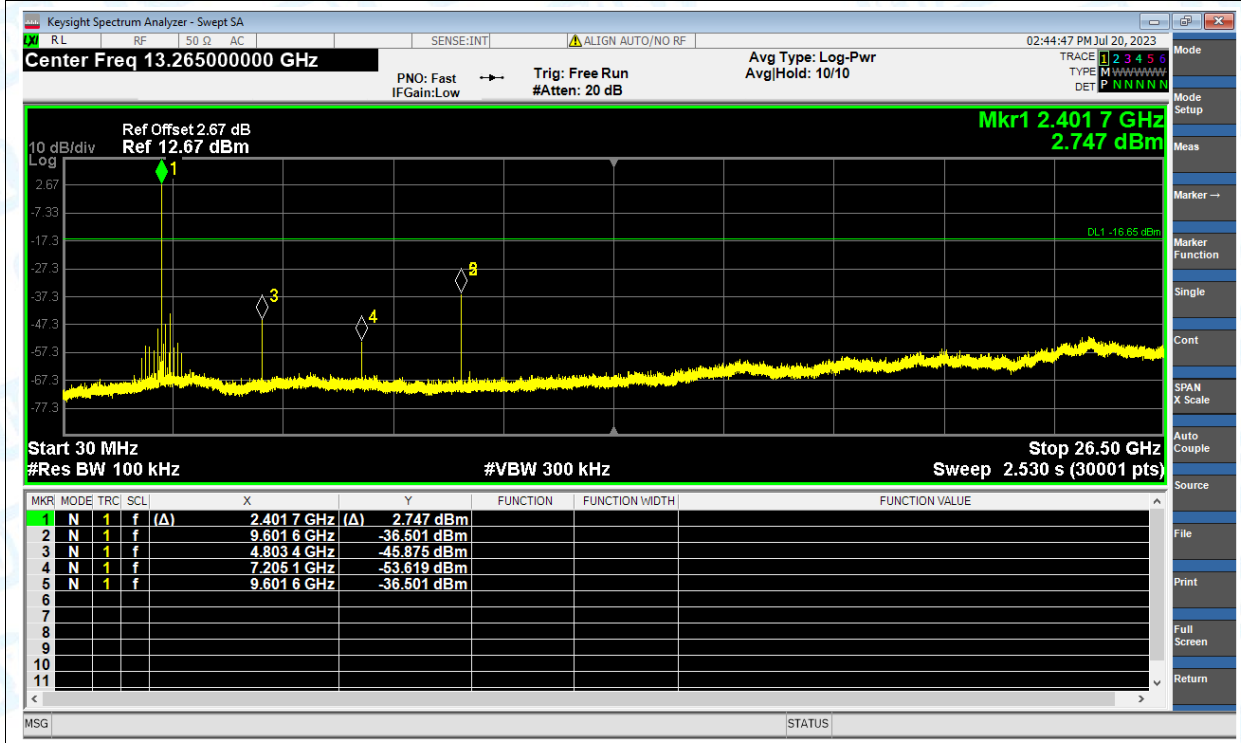
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-39.85	-20	Pass
NVNT	1-DH1	2480	Ant1	-37.69	-20	Pass
NVNT	2-DH1	2402	Ant1	-39.44	-20	Pass
NVNT	2-DH1	2480	Ant1	-37.71	-20	Pass

Test Graphs

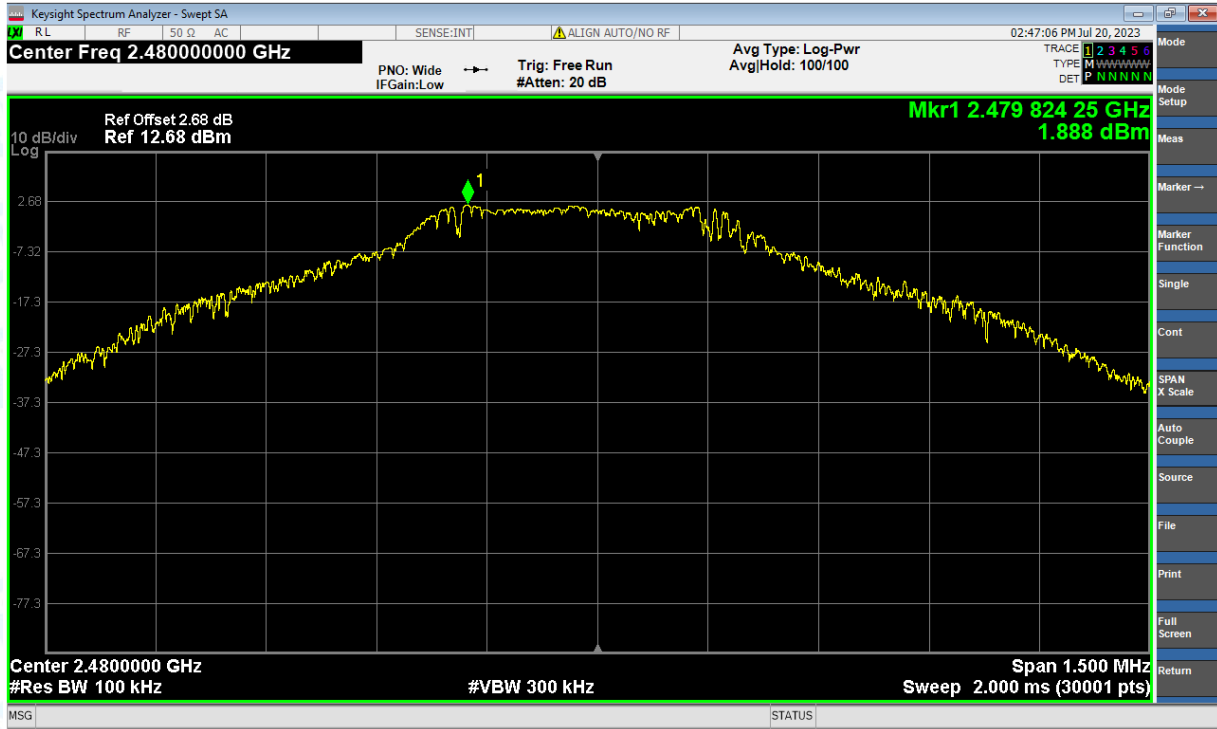
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



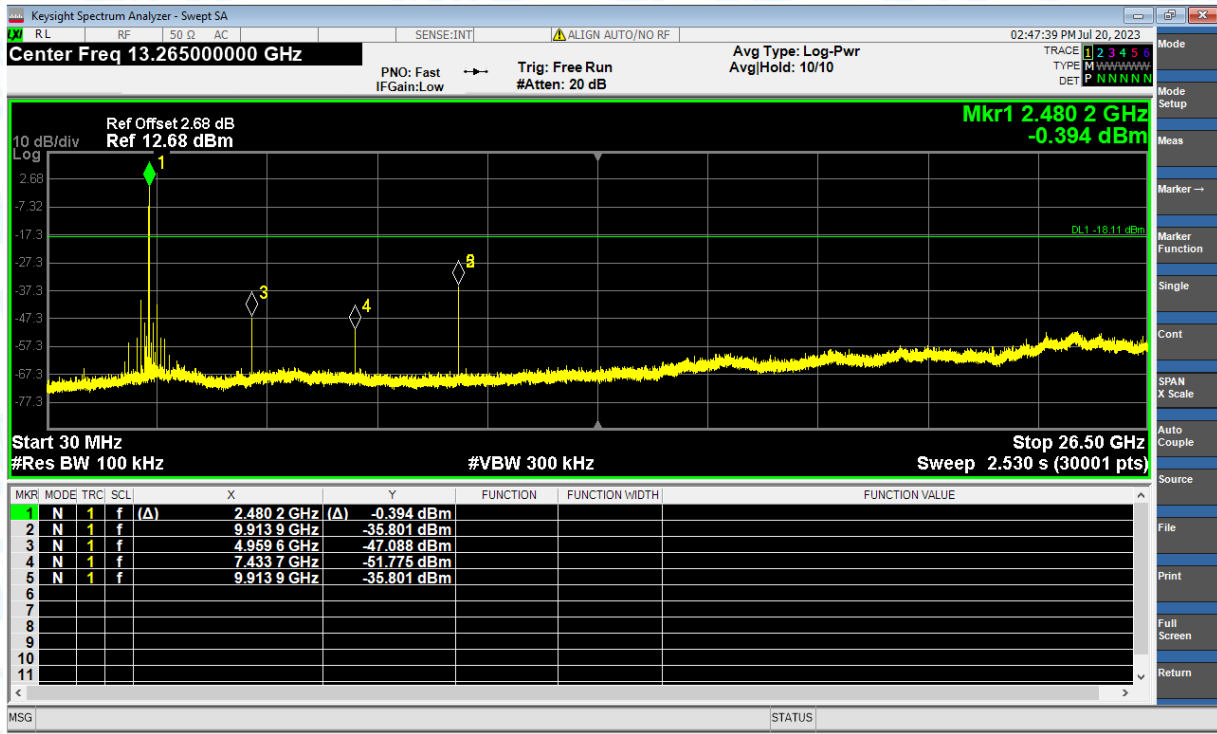
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



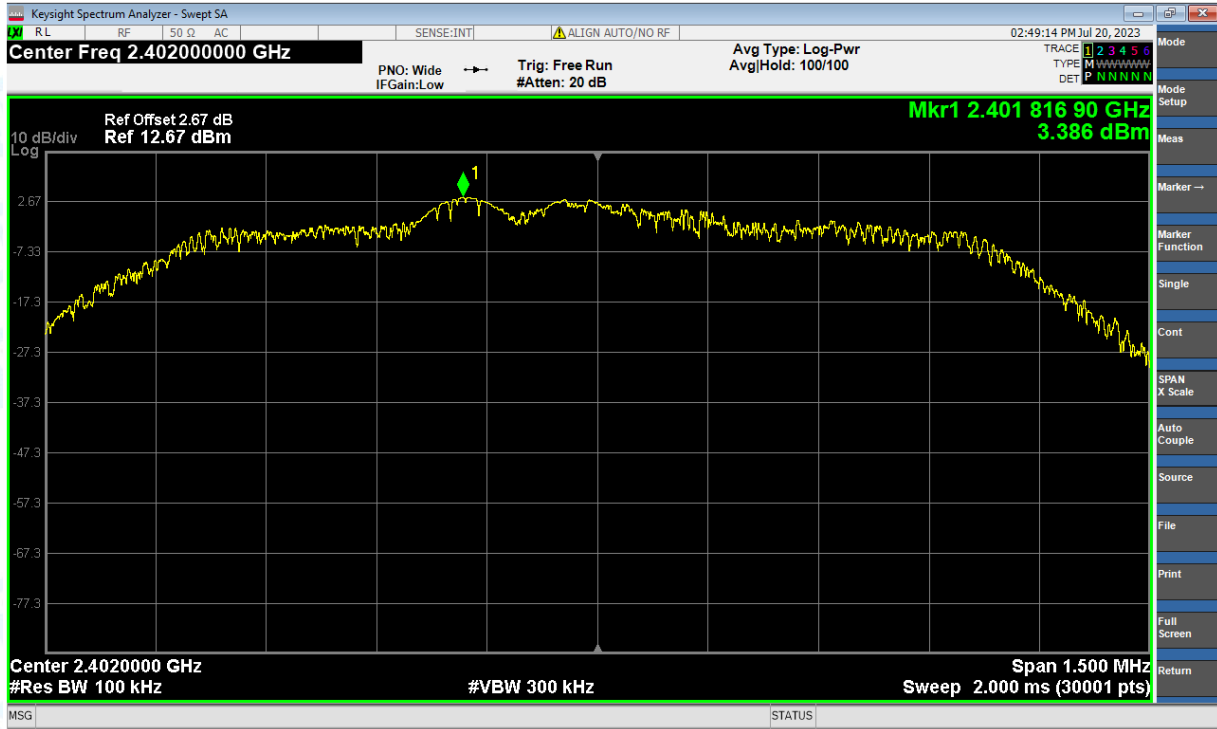
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



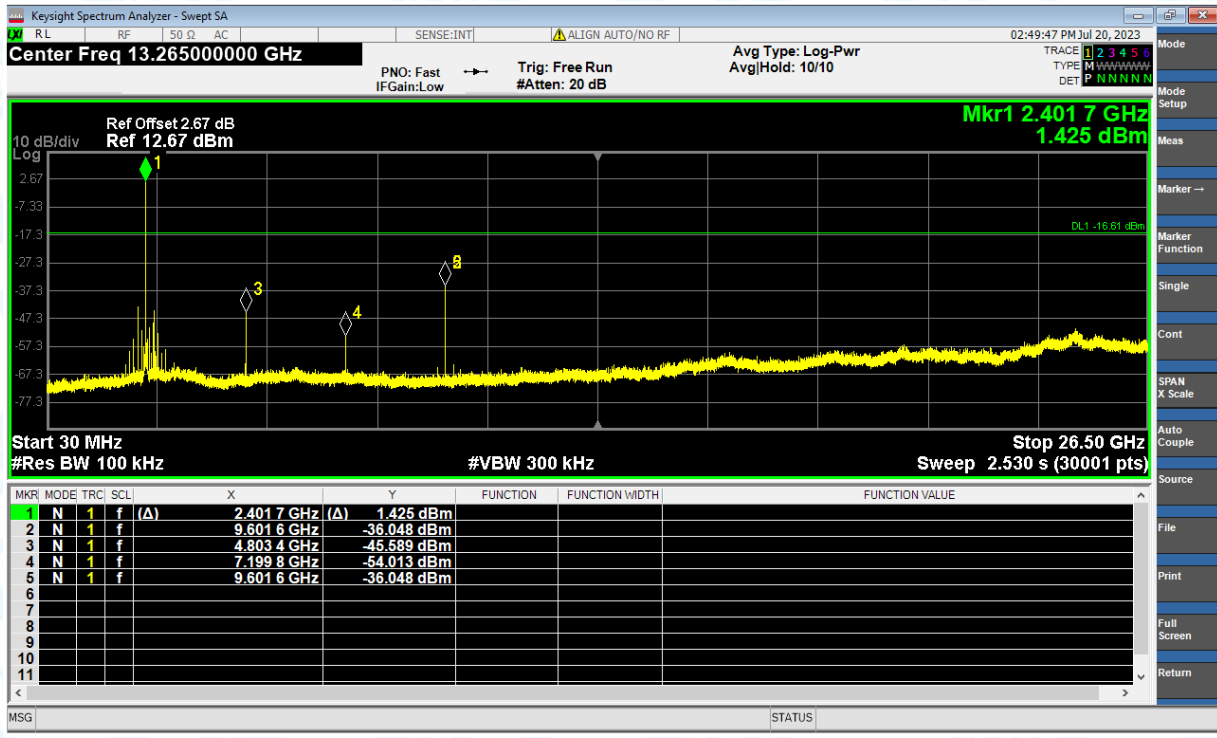
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



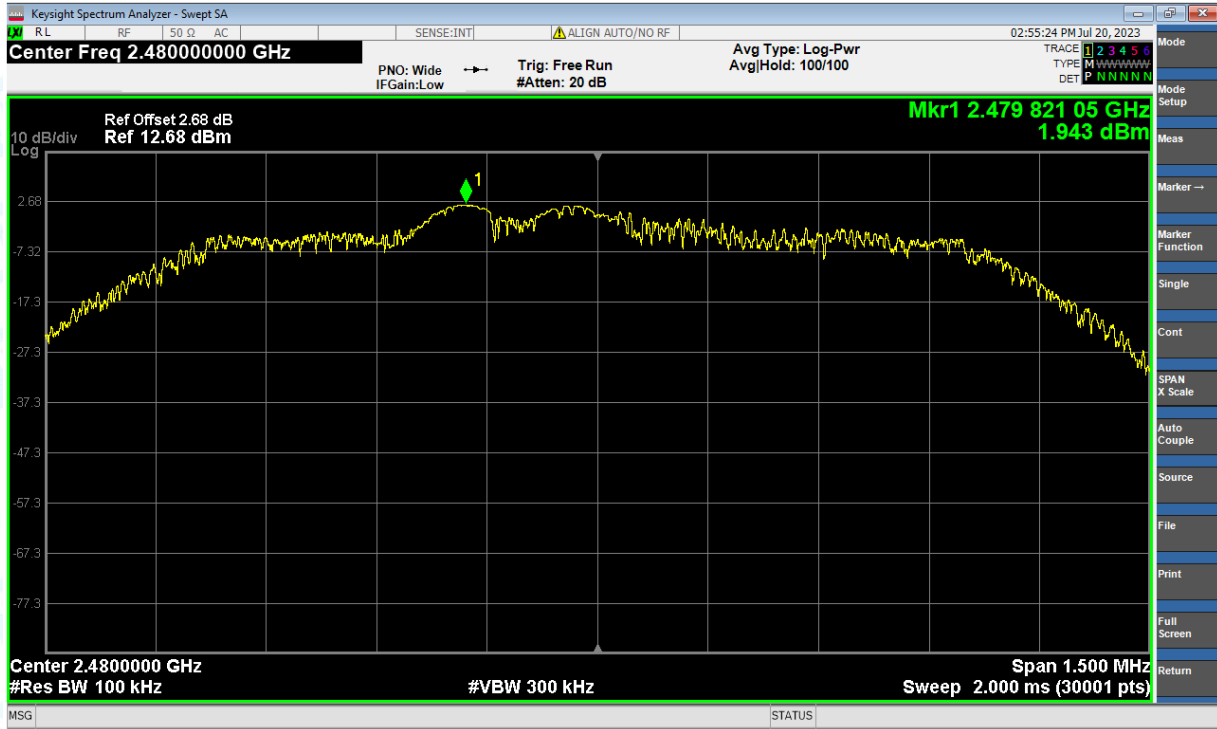
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



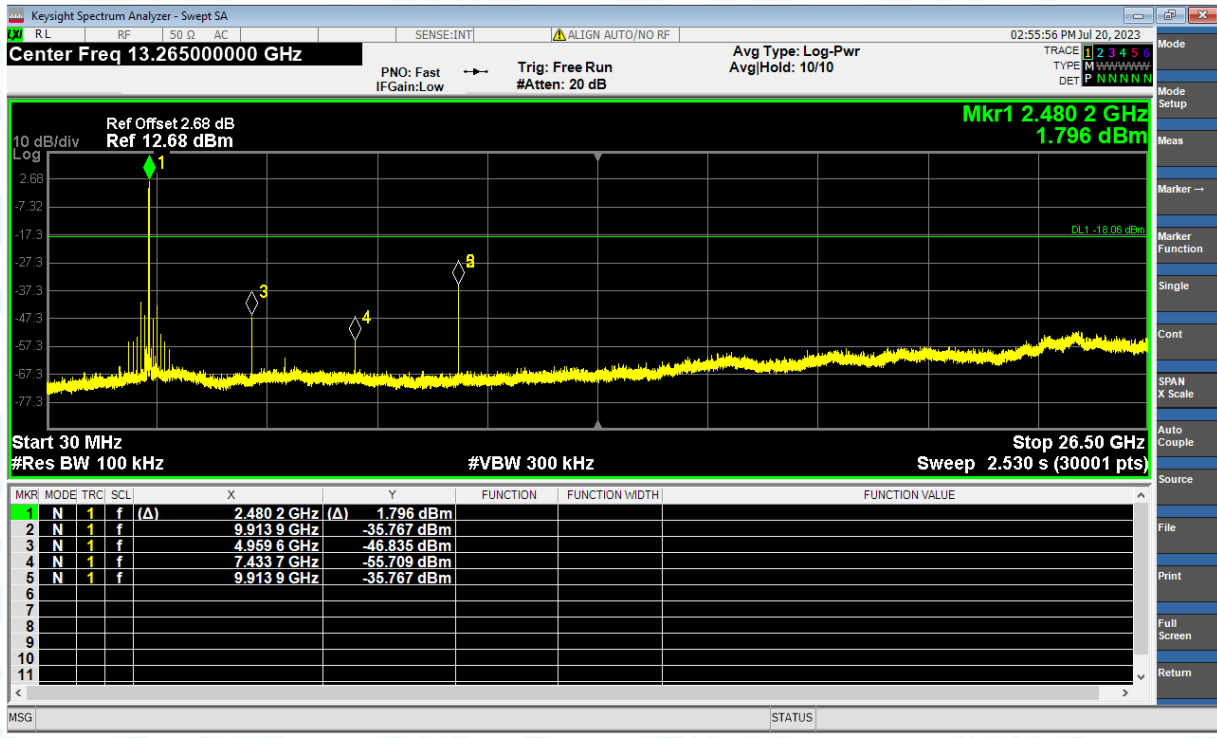
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission

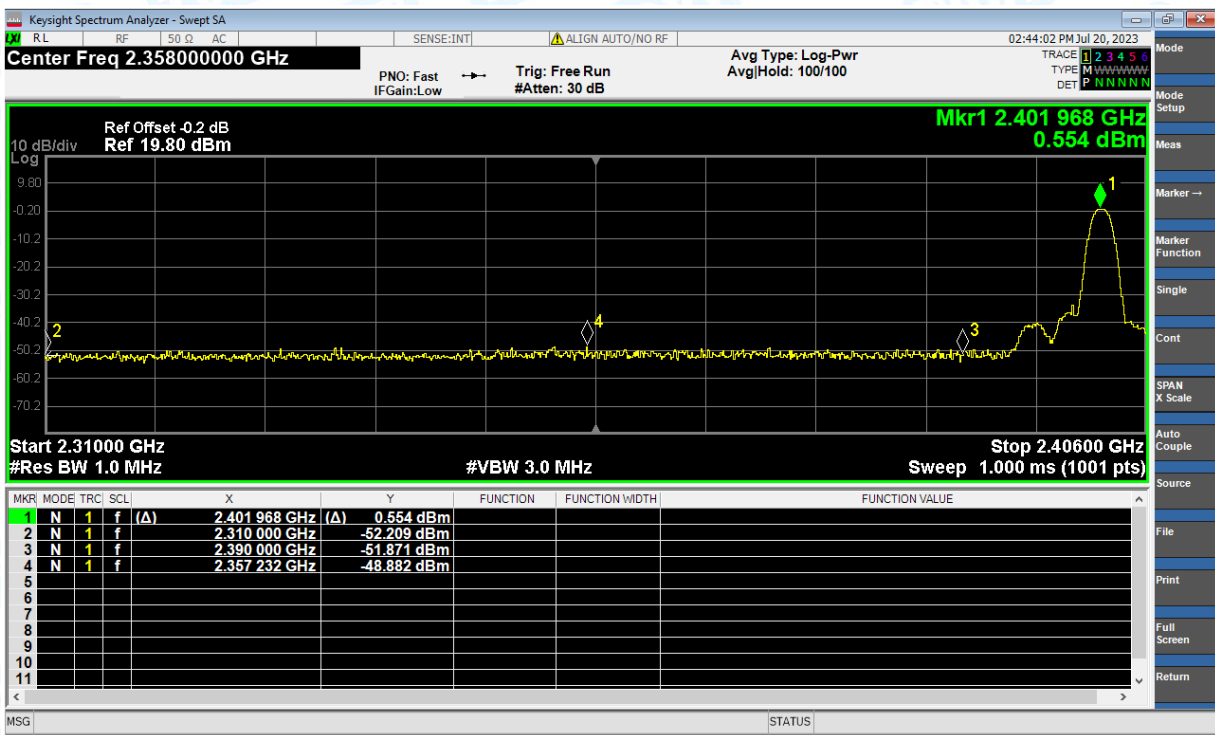


7. Restrict Band

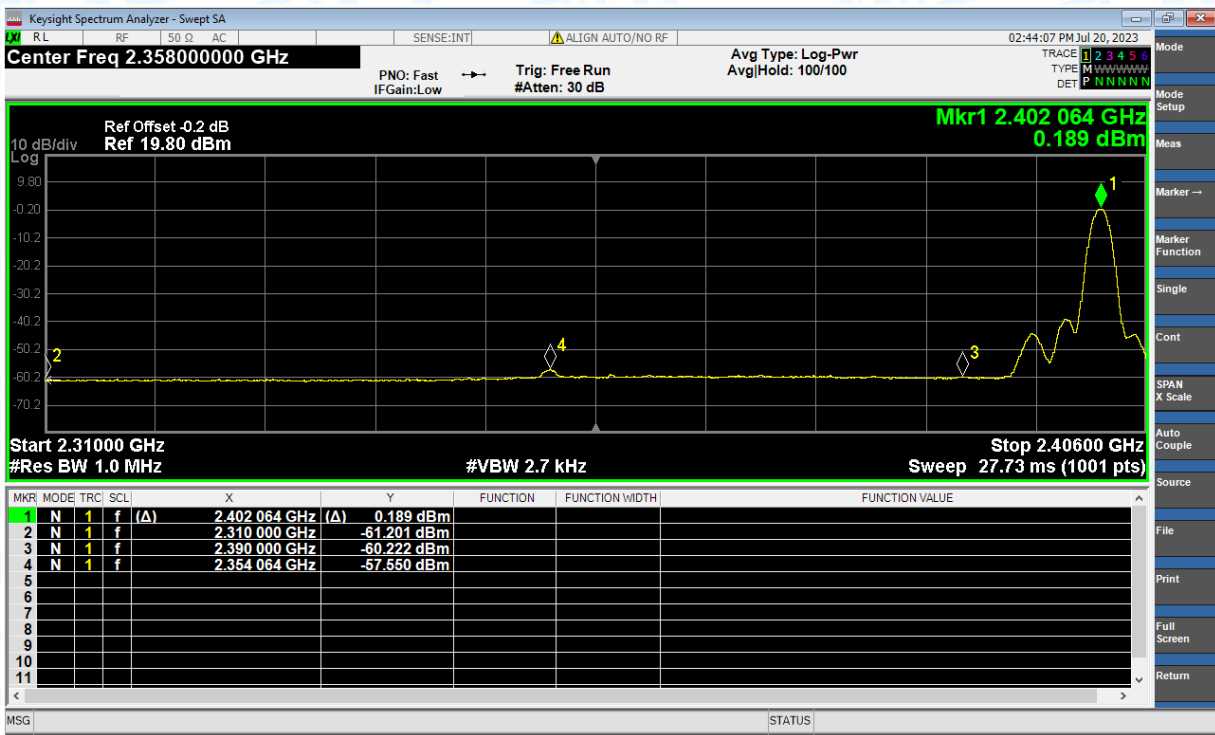
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-52.21	2	45.05	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-61.2	2	36.06	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2357.232	-48.88	2	48.38	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2354.064	-57.55	2	39.71	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-51.98	2	45.28	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-60.19	2	37.07	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-42.98	2	54.28	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-50.41	2	46.85	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.536	-42.91	2	54.35	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-50.41	2	46.85	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-52.95	2	44.31	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-59.81	2	37.45	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-53.09	2	44.17	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-61.59	2	35.67	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2373.168	-48.24	2	49.02	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2353.776	-57.78	2	39.48	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-52.65	2	44.61	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-60.29	2	36.97	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-45.69	2	51.57	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-52.45	2	44.81	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.824	-43.75	2	53.51	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-52.45	2	44.81	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-52.91	2	44.35	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-60.19	2	37.07	Average	54	Pass

Test Graphs

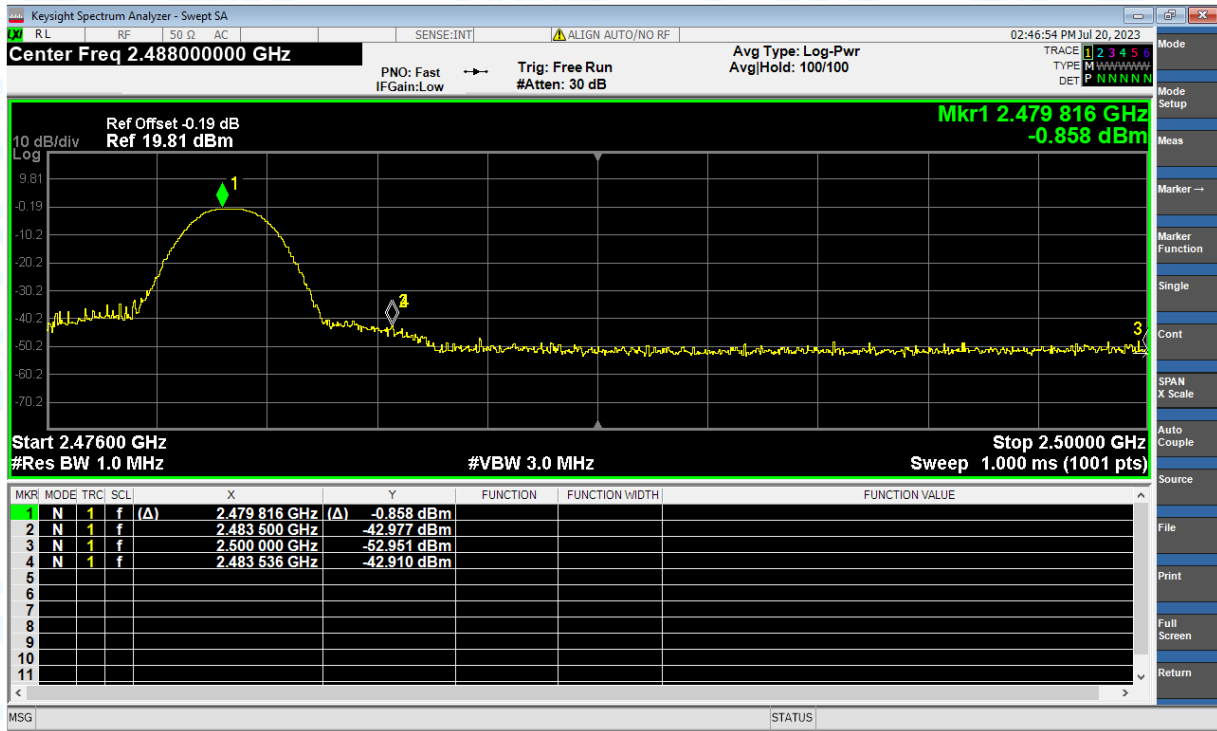
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



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



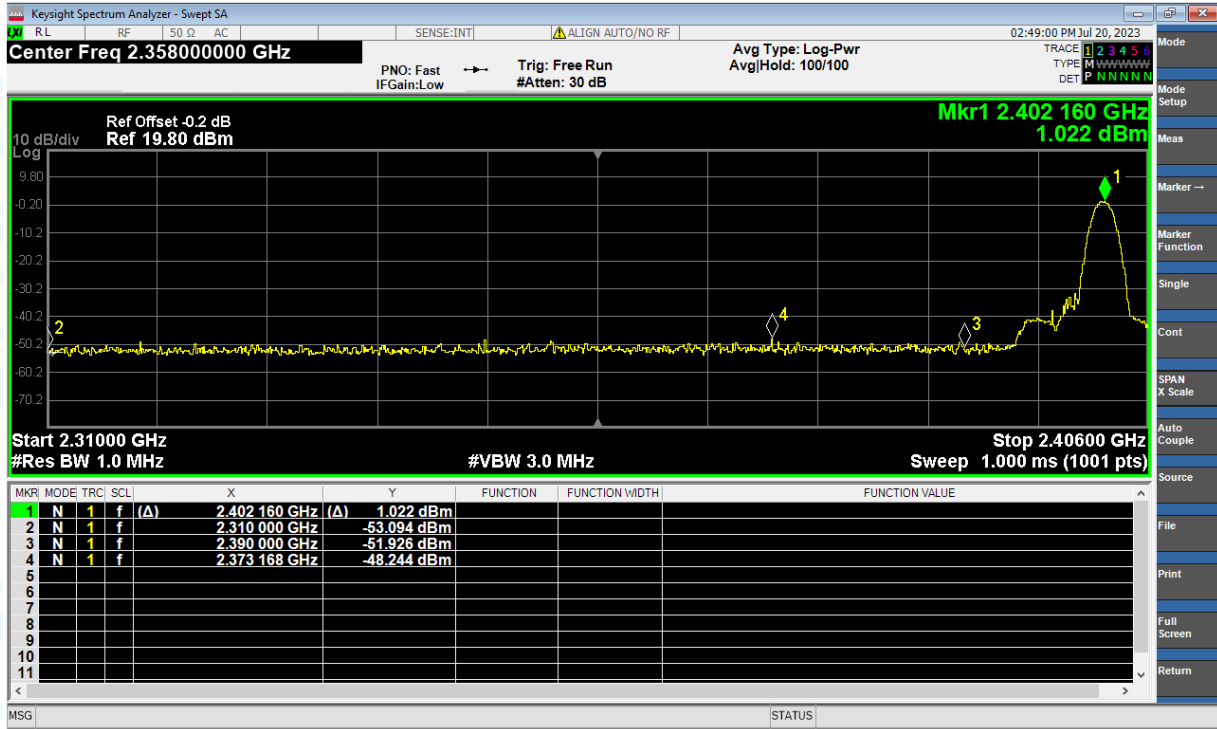
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



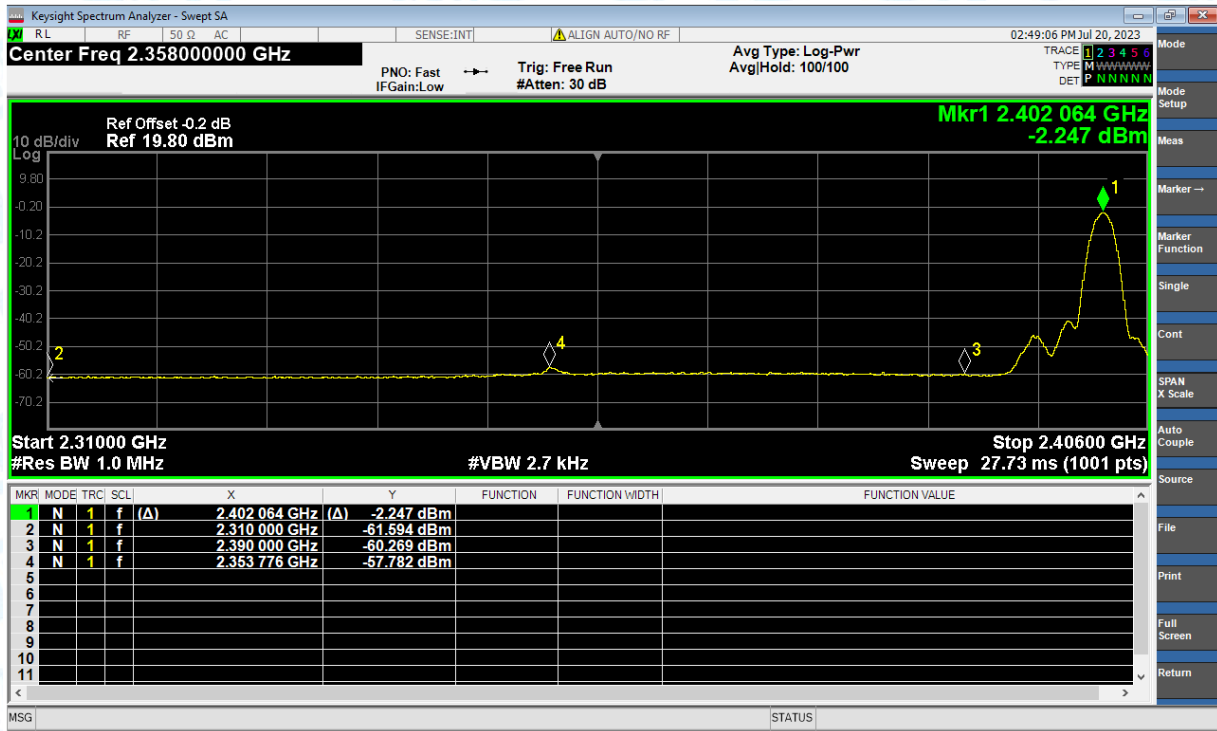
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



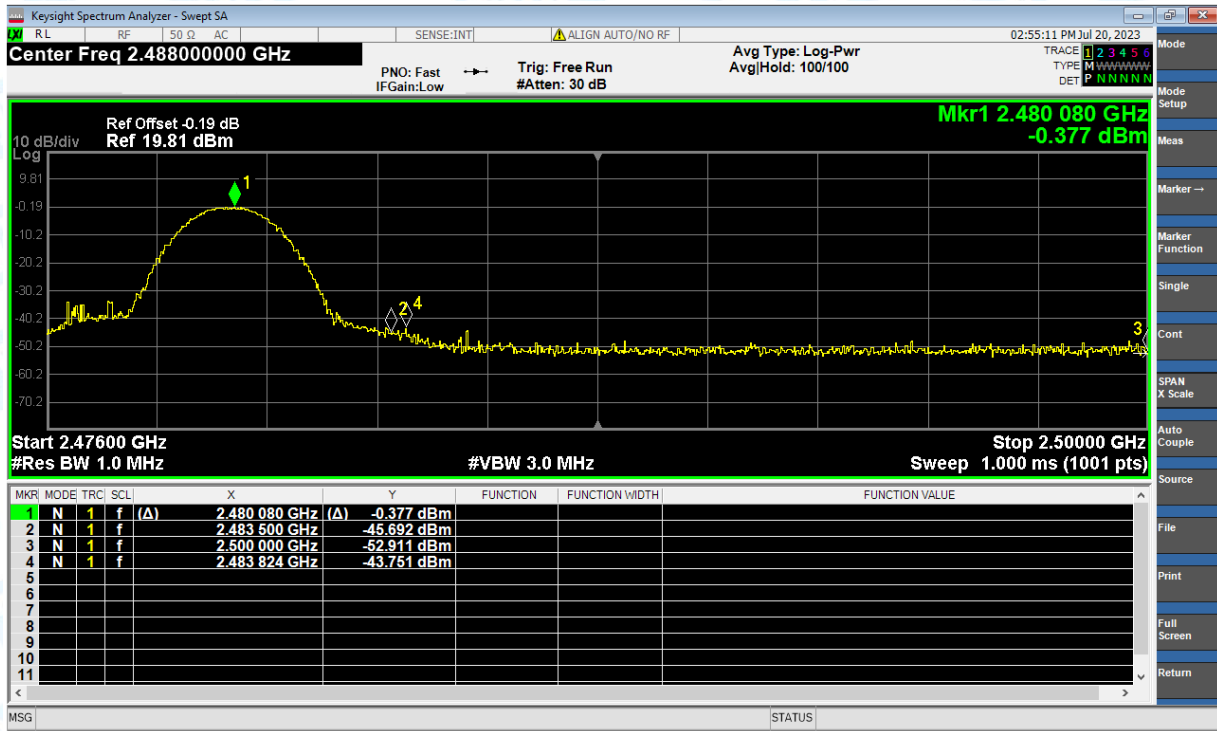
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



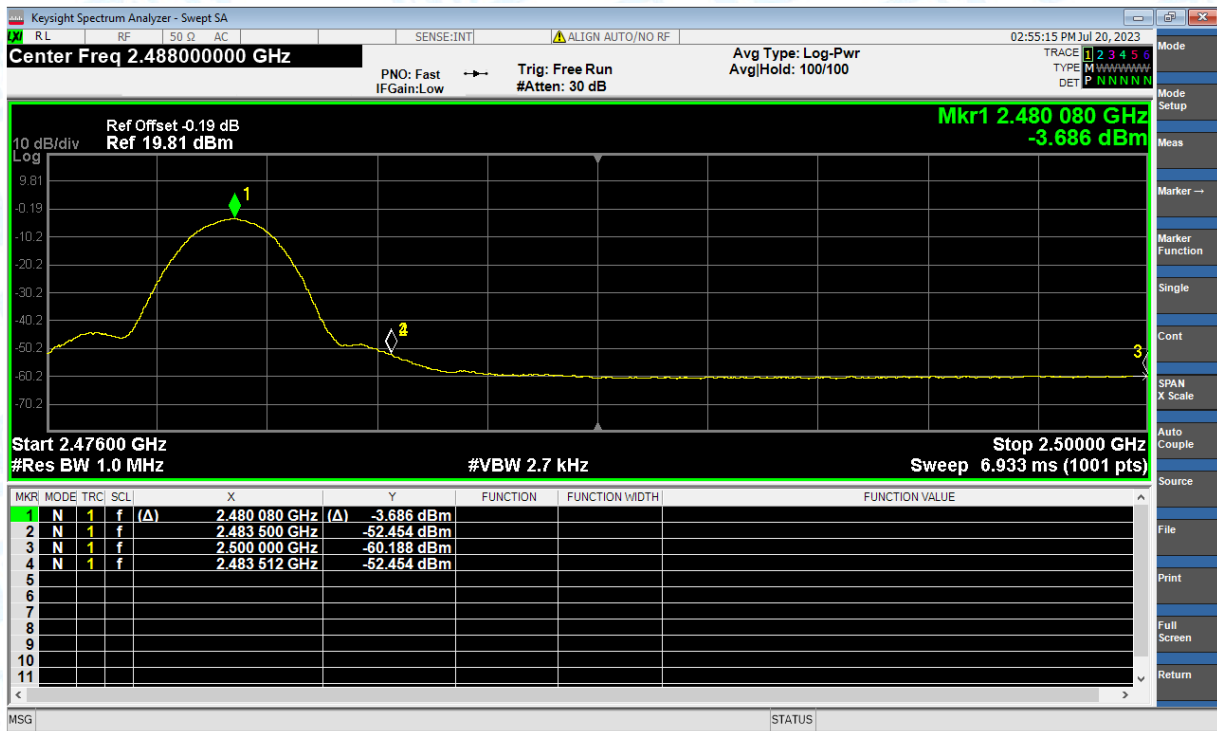
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



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



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

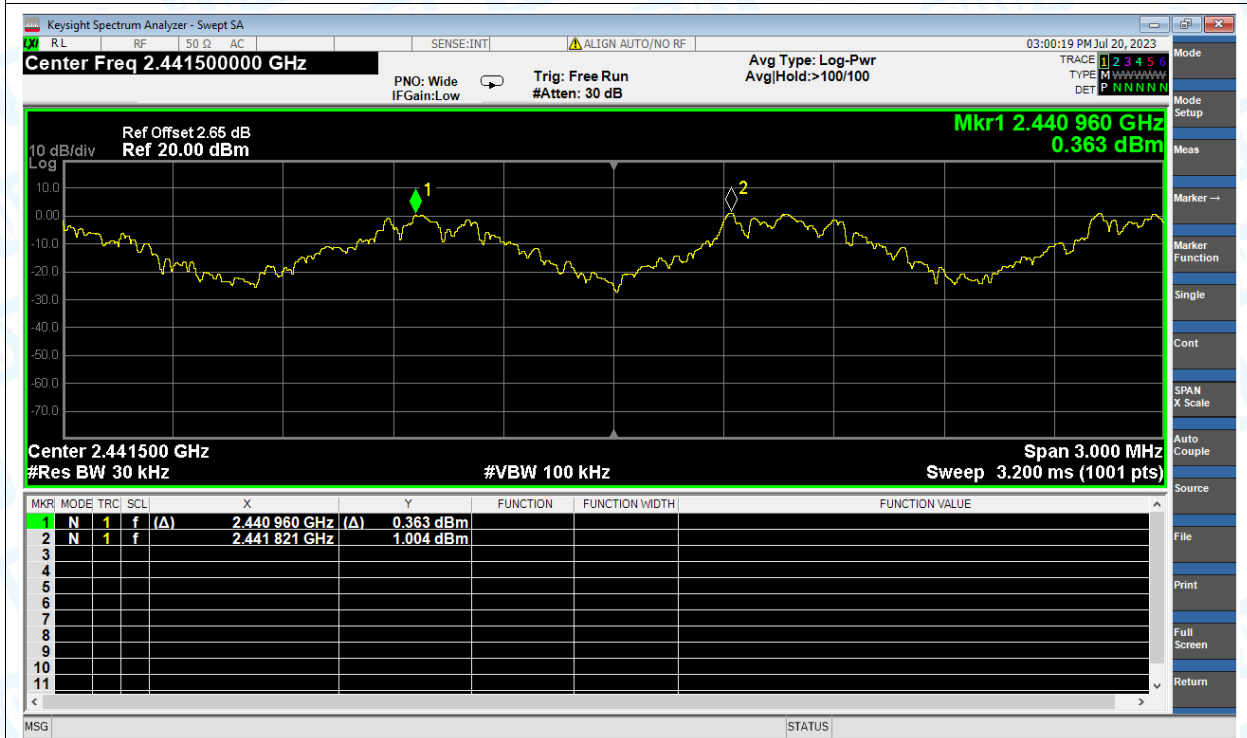


8. Carrier Frequencies Separation

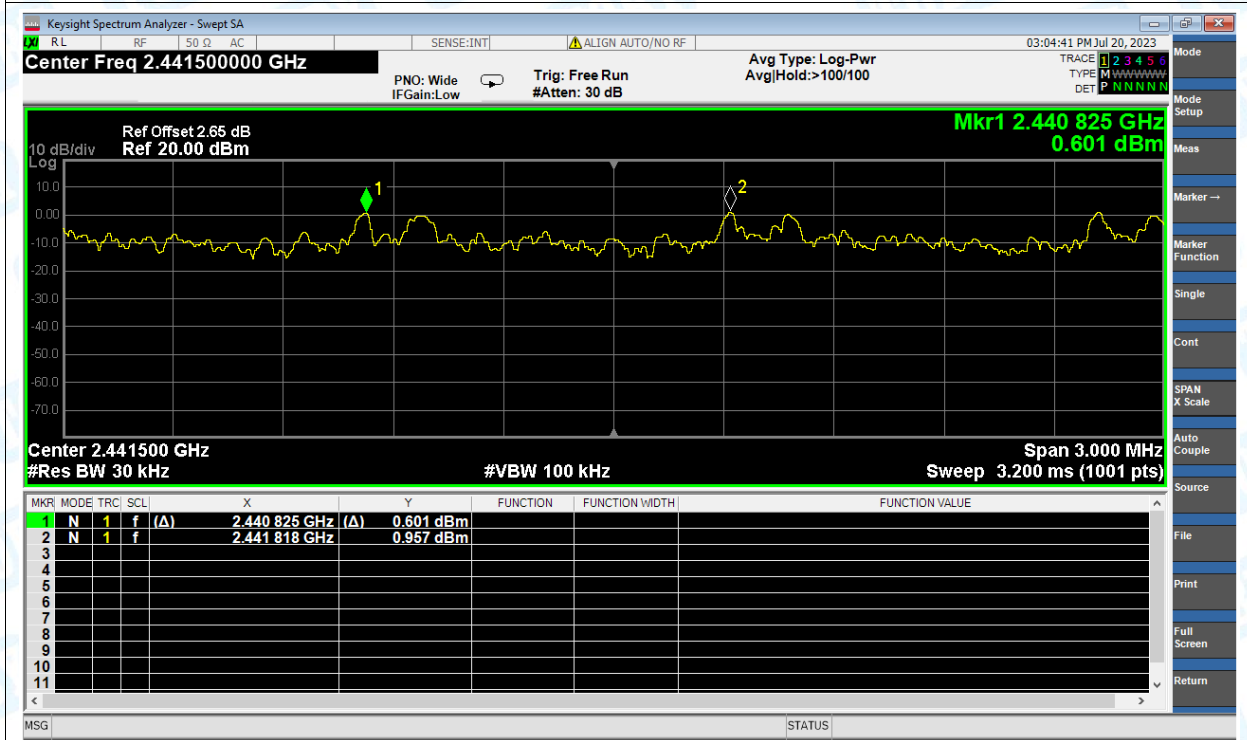
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.96	2441.821	0.861	0.025	Pass
NVNT	2-DH1	Ant1	2440.825	2441.818	0.993	0.827	Pass

Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1

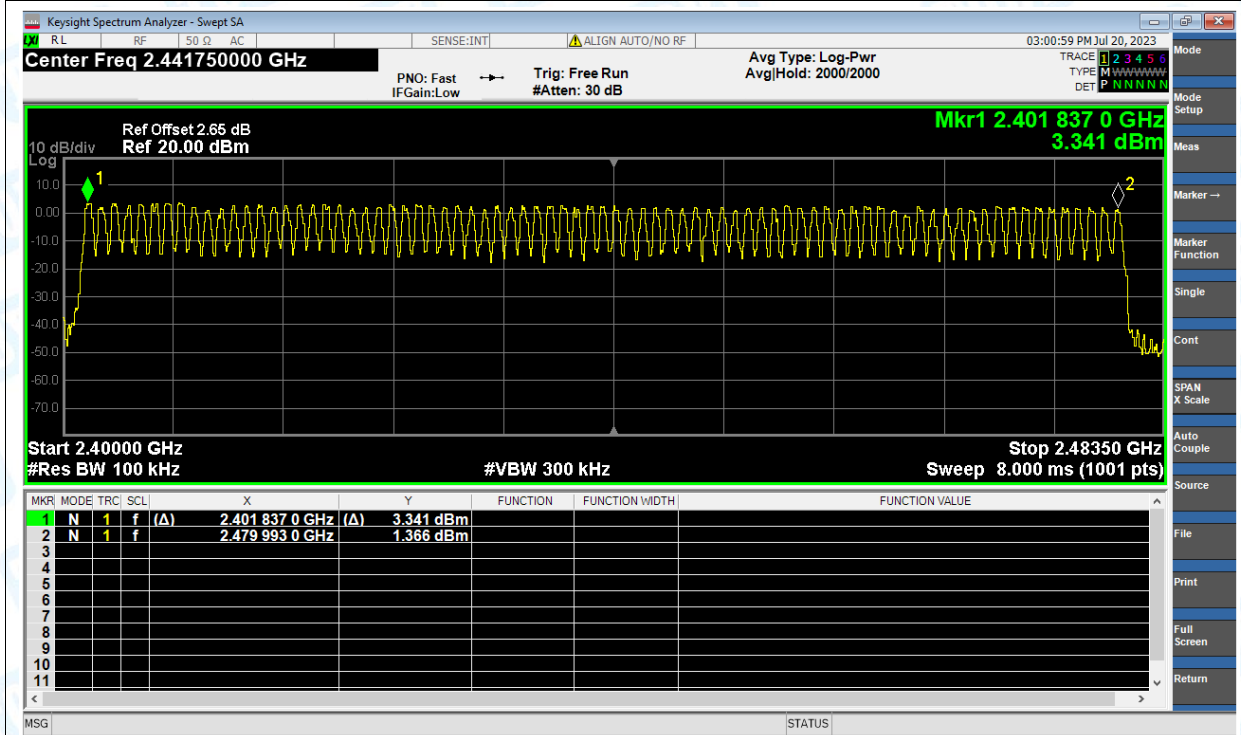


9. Number of Hopping Channel

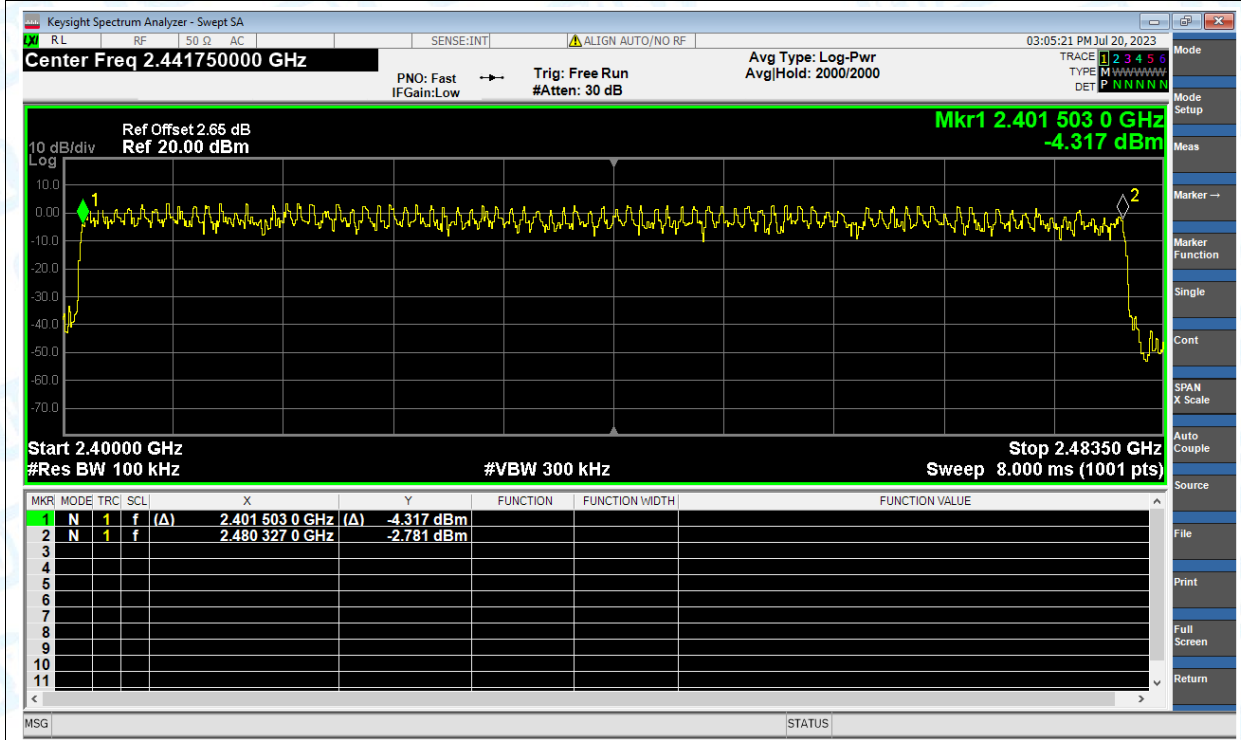
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass

Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1

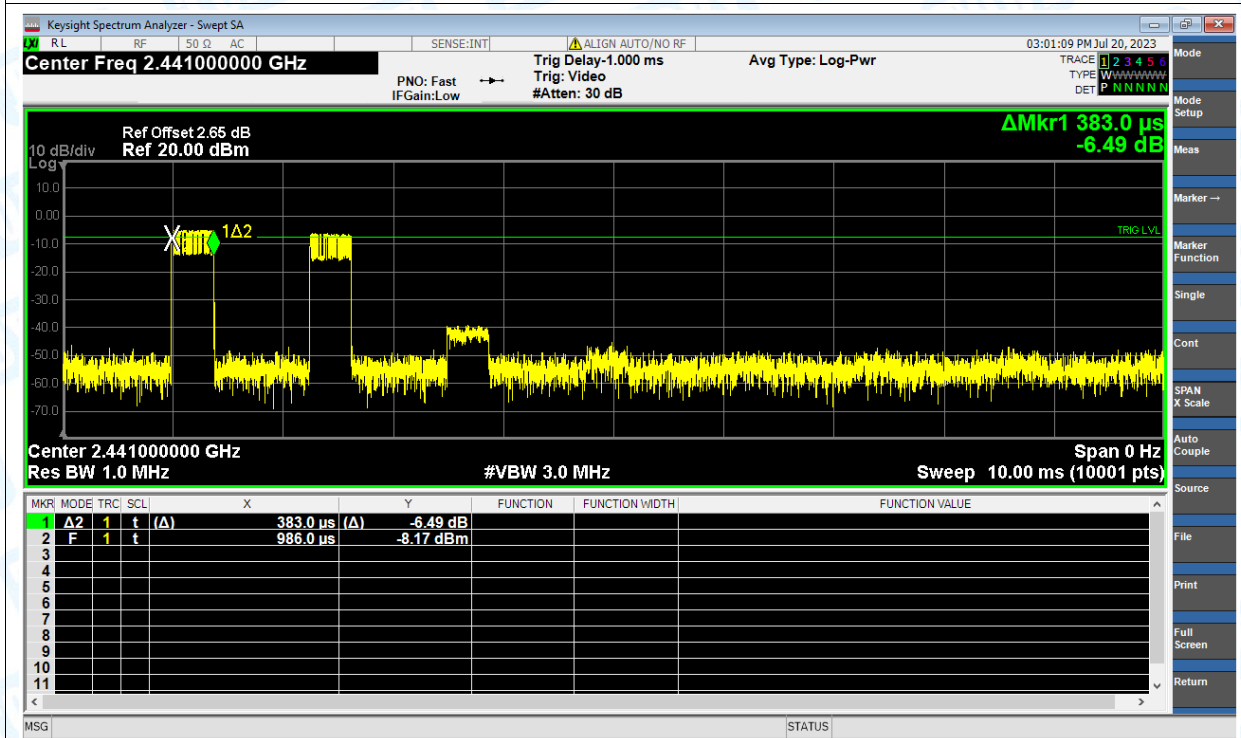


10. Dwell Time

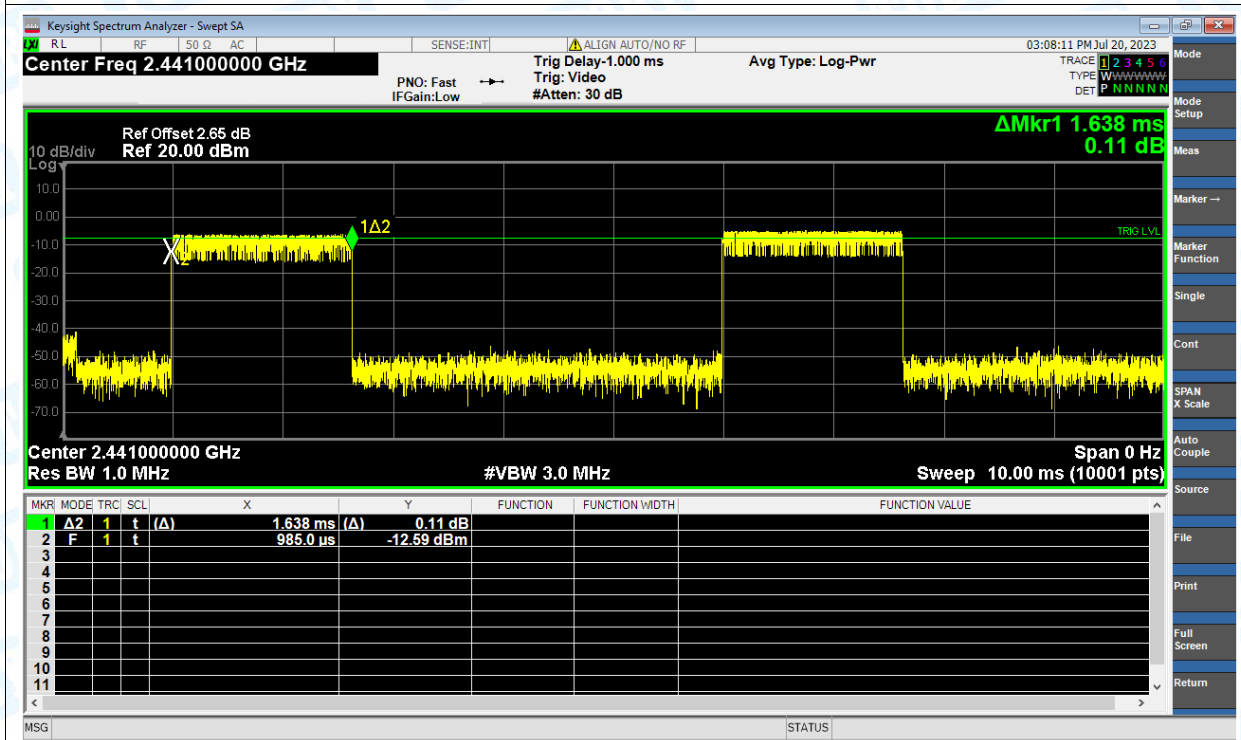
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.638	262.08	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.888	308.053	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.892	308.48	31600	400	Pass

Test Graphs

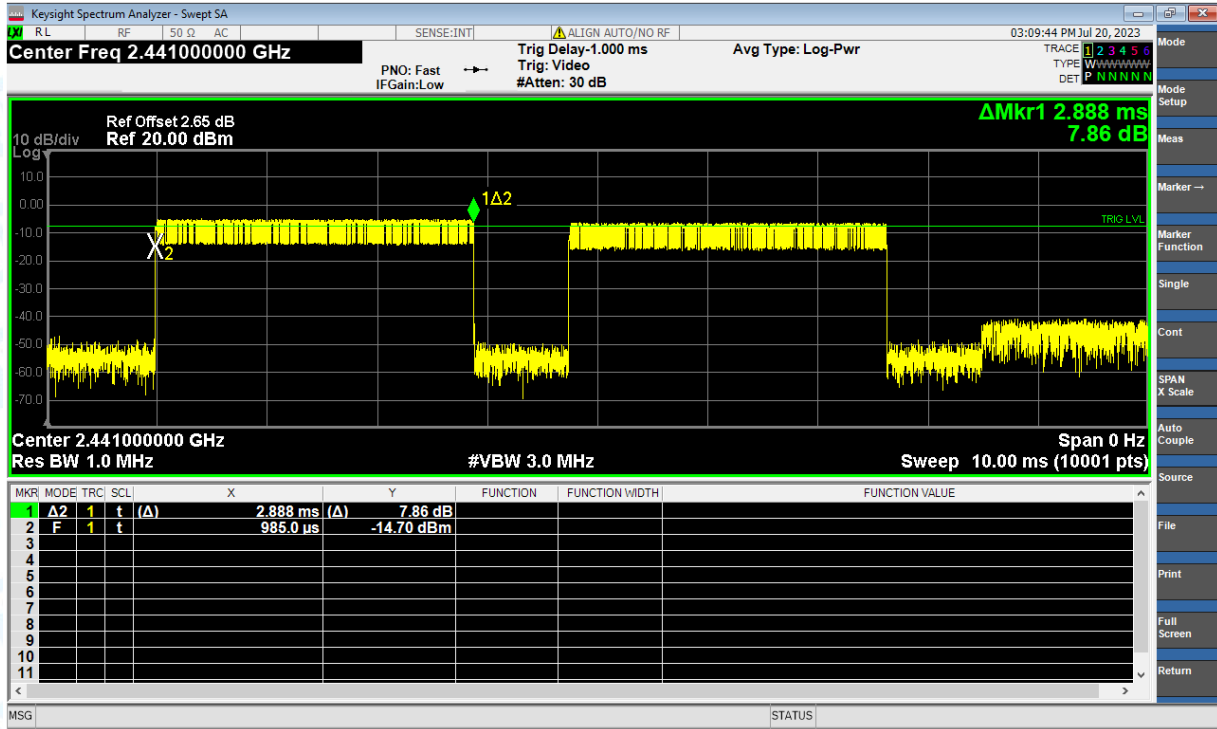
Dwell NVNT 1-DH1 2441MHz Ant1



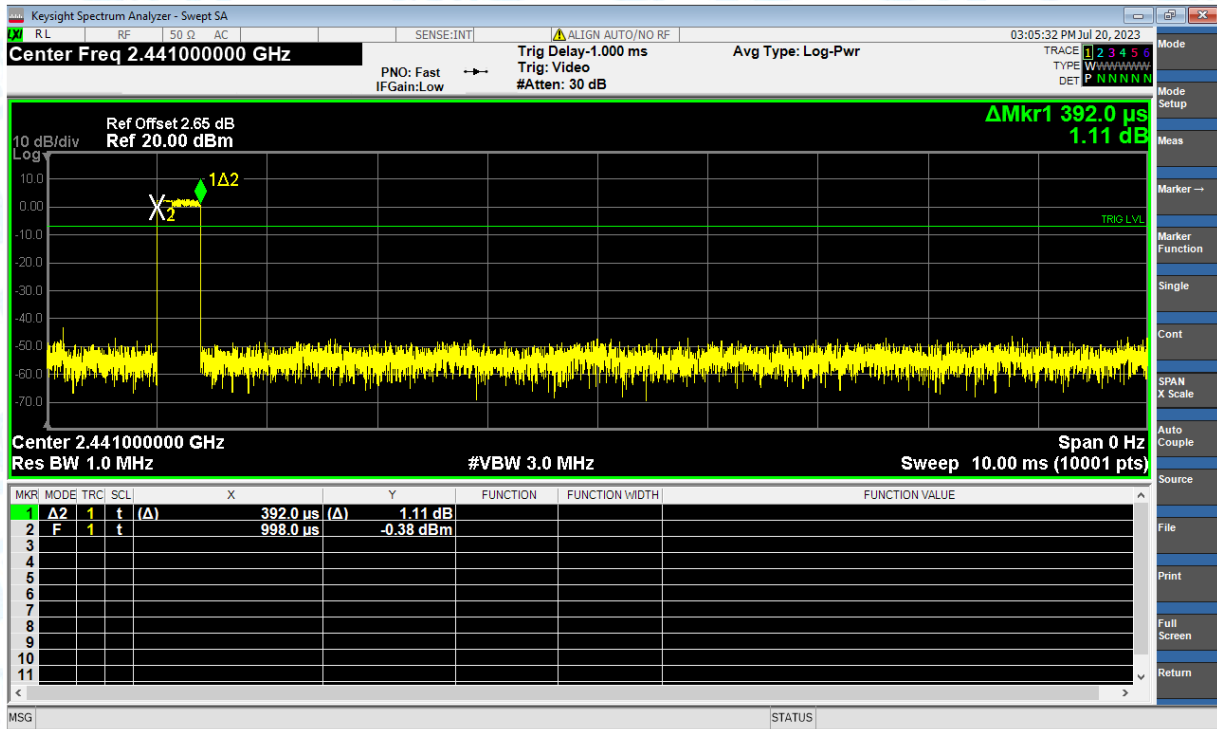
Dwell NVNT 1-DH3 2441MHz Ant1



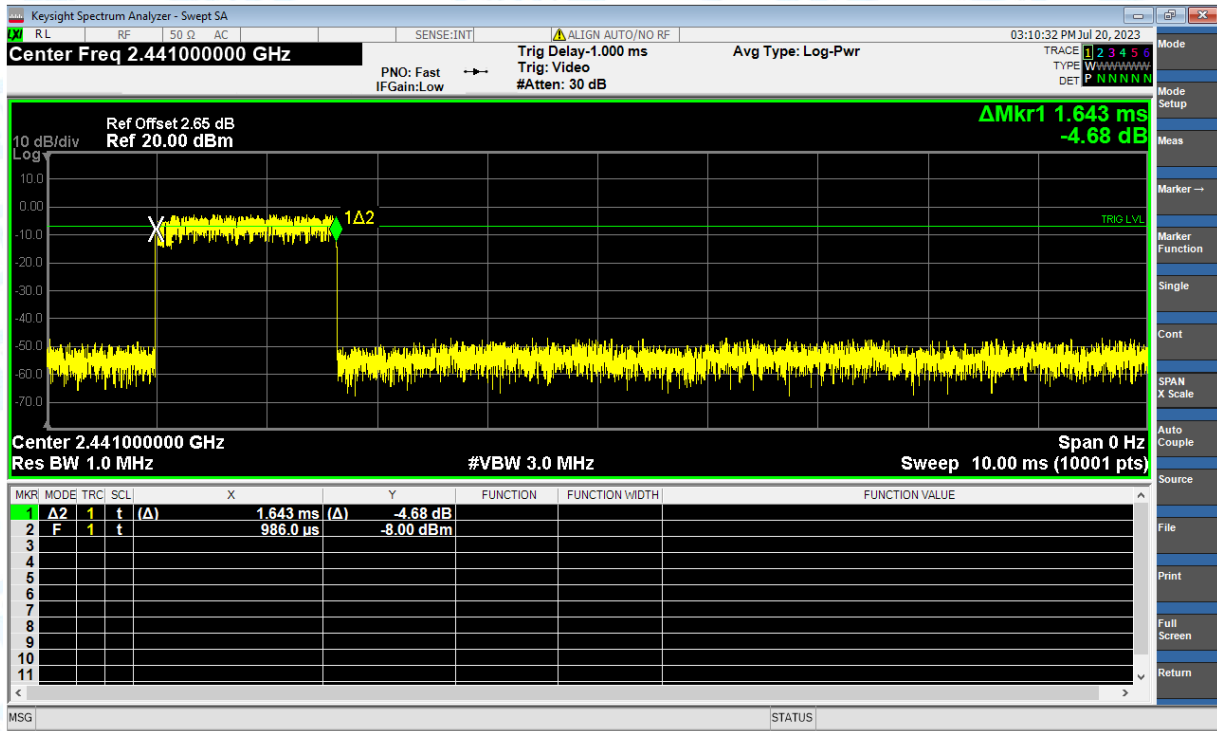
Dwell NVNT 1-DH5 2441MHz Ant1



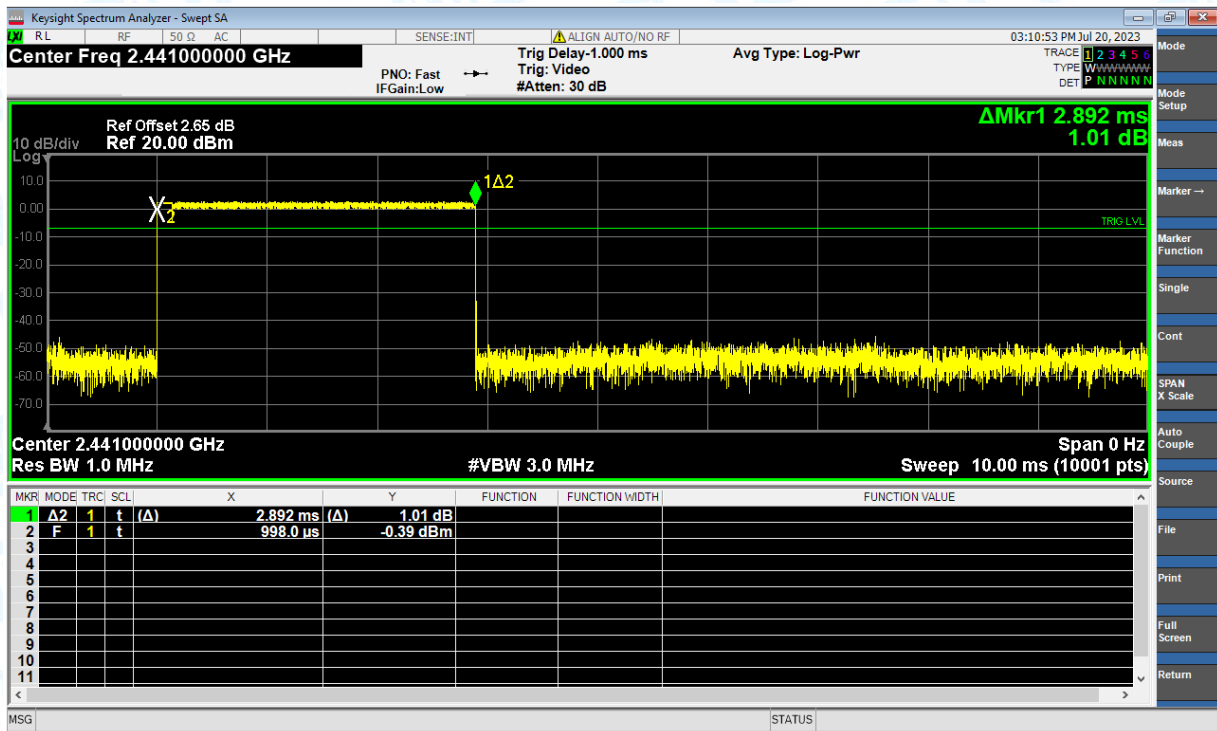
Dwell NVNT 2-DH1 2441MHz Ant1



Dwell NVNT 2-DH3 2441MHz Ant1



Dwell NVNT 2-DH5 2441MHz Ant1



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