

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

General Description of EUT	
Product Name:	loudspeaker
Test Model:	S1
Sample ID:	202307-0127-6-2#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 3.7V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202307-0127-22 The report only show the worst case data.	

Contents

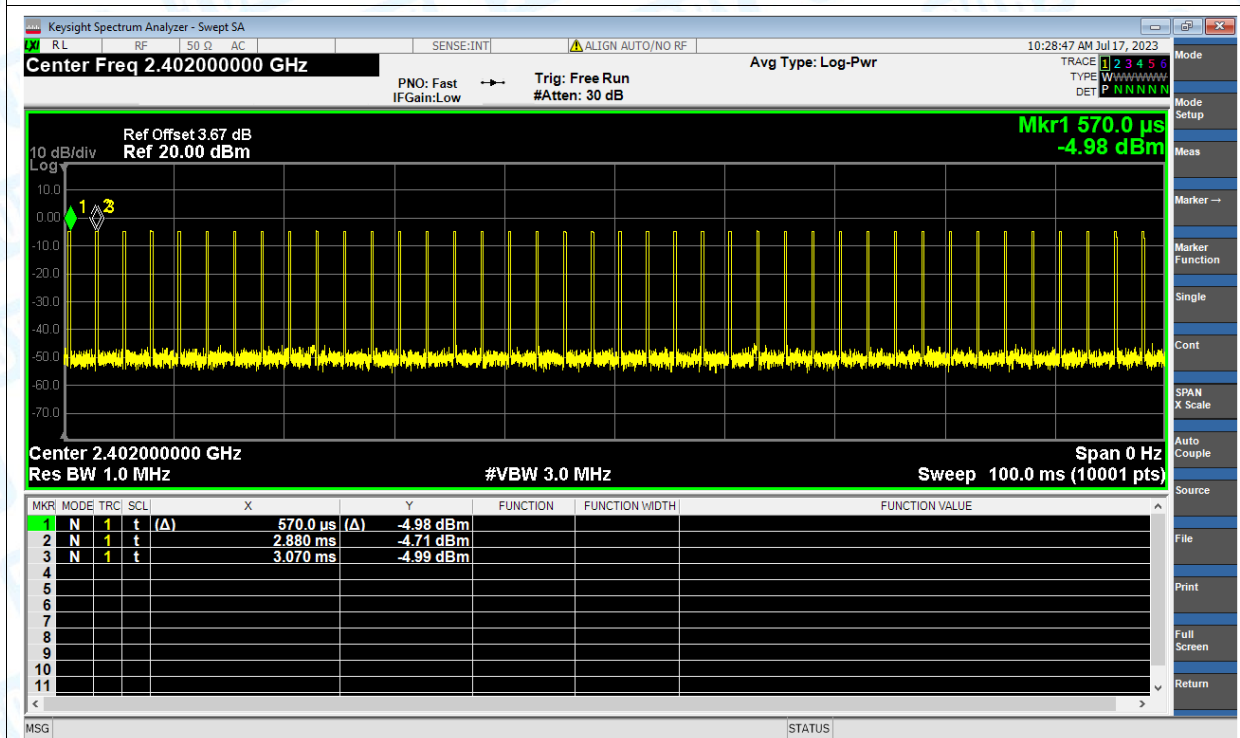
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1. Duty Cycle

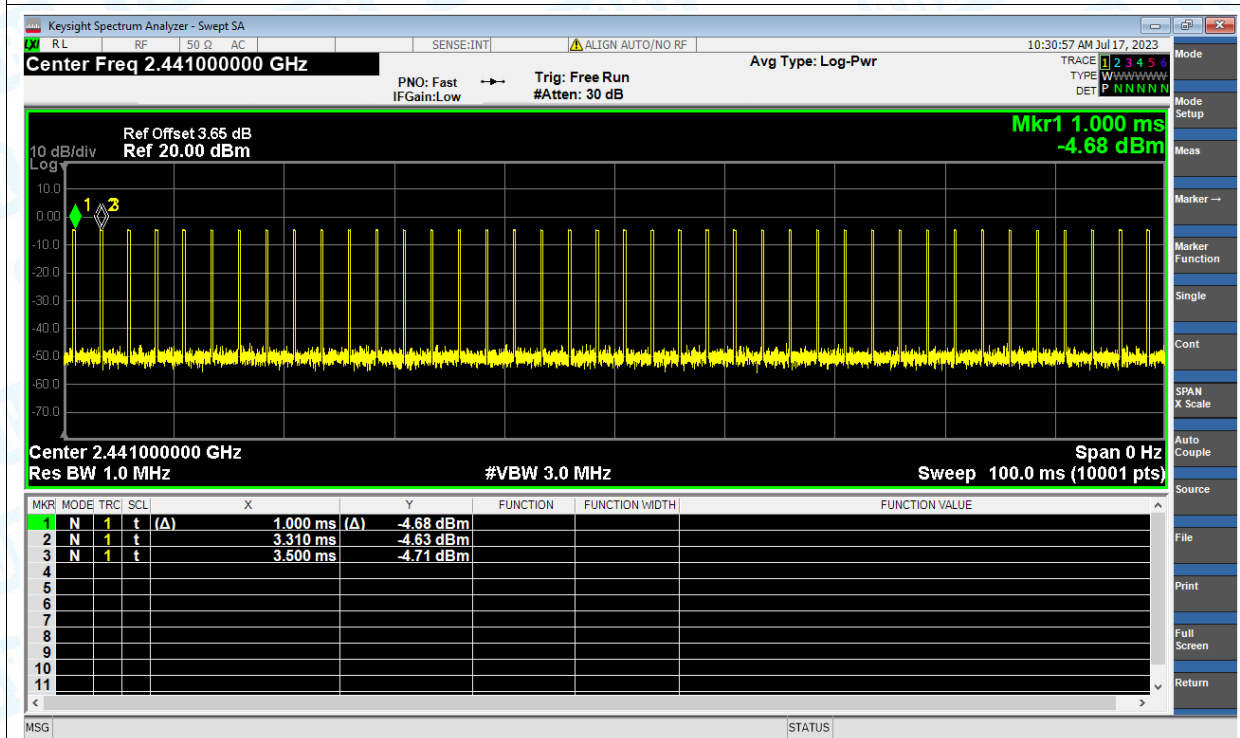
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	7.6	11.19	5.26
NVNT	1-DH1	2441	Ant1	7.6	11.19	5.26
NVNT	1-DH1	2480	Ant1	29.6	5.29	2.7
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	3-DH1	2480	Ant1	30.4	5.17	2.63

Test Graphs

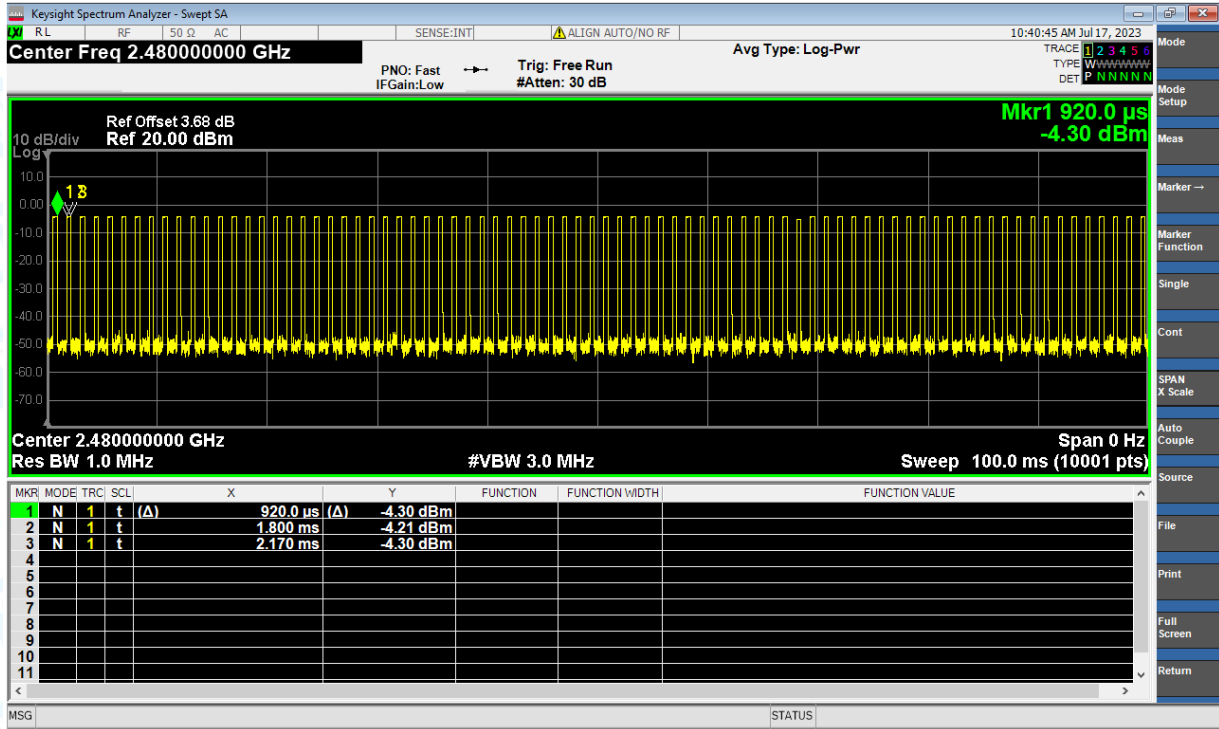
Duty Cycle NVNT 1-DH1 2402MHz Ant1



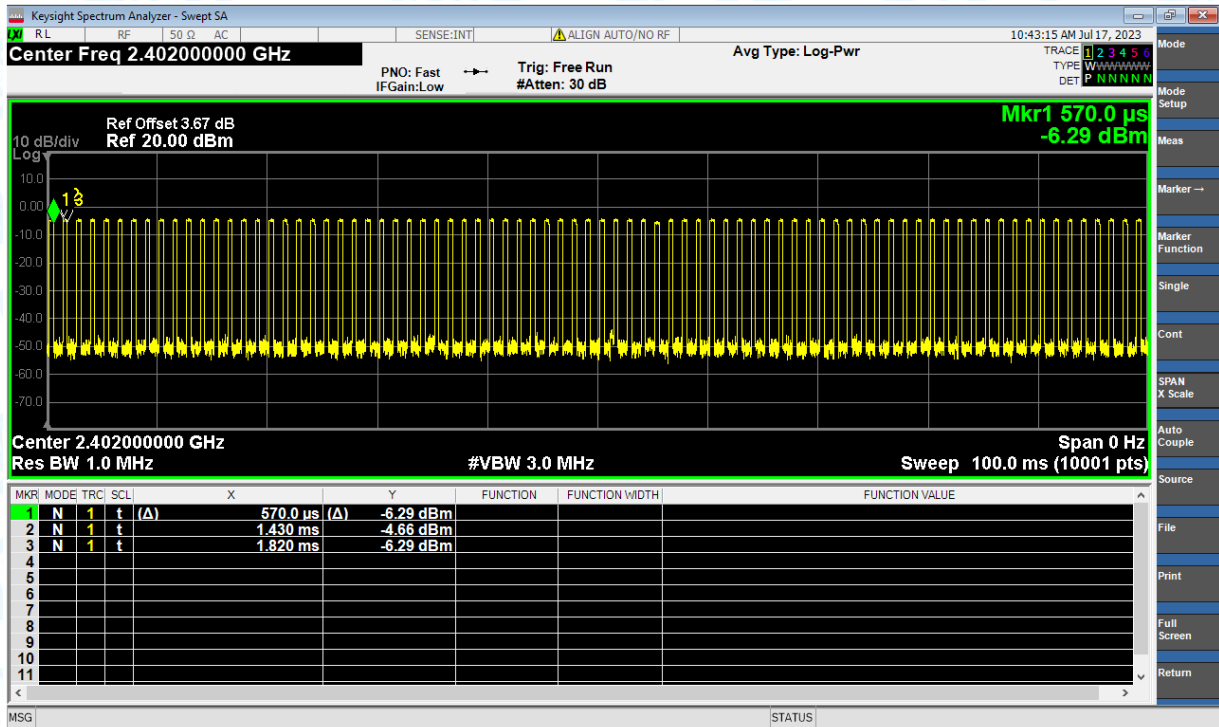
Duty Cycle NVNT 1-DH1 2441MHz Ant1



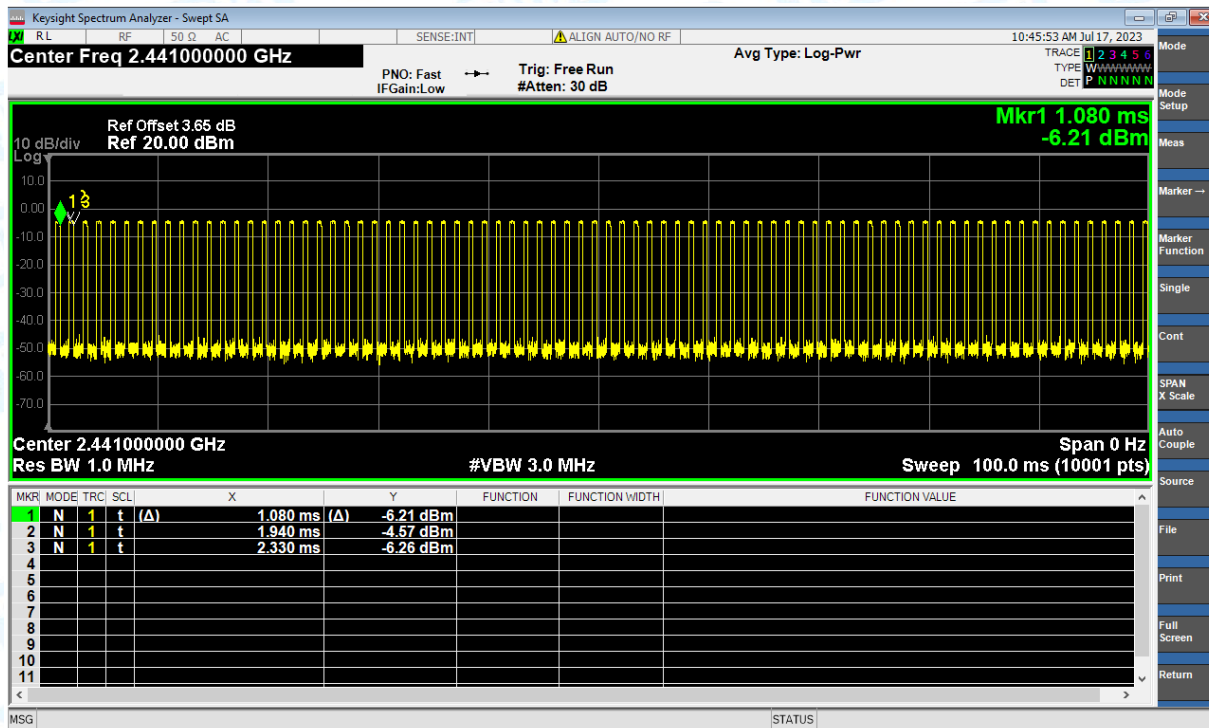
Duty Cycle NVNT 1-DH1 2480MHz Ant1



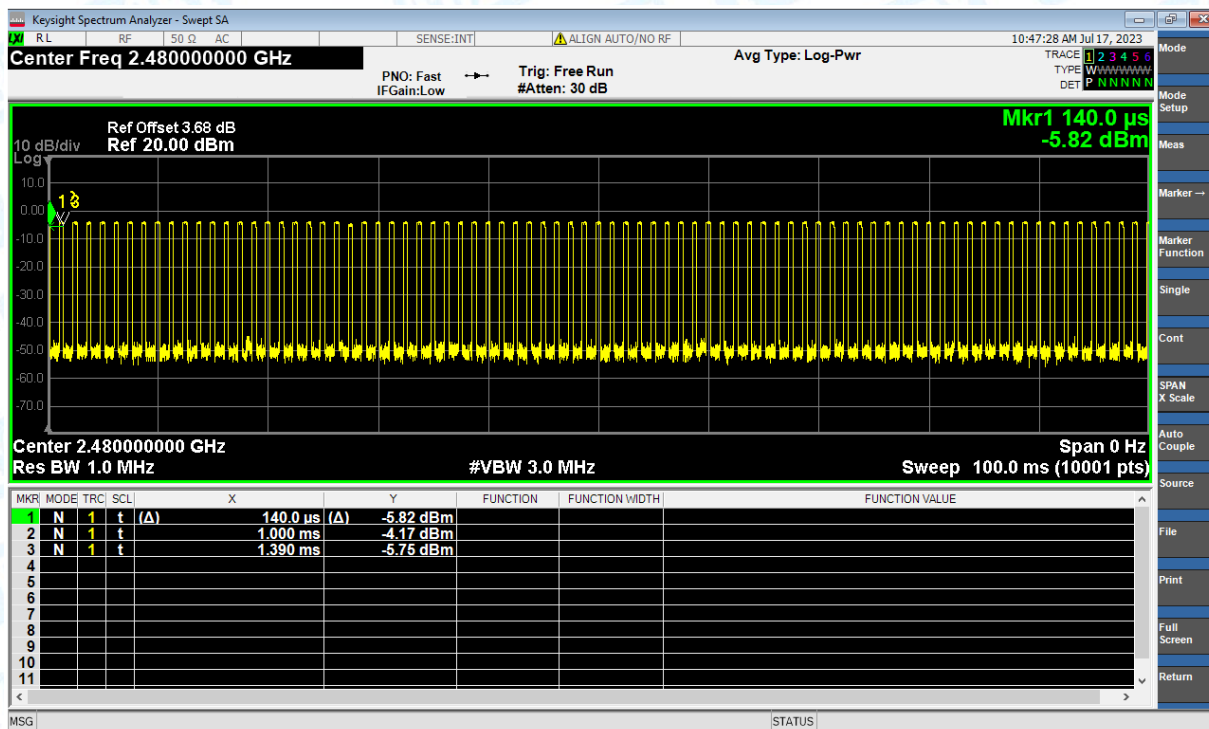
Duty Cycle NVNT 2-DH1 2402MHz Ant1



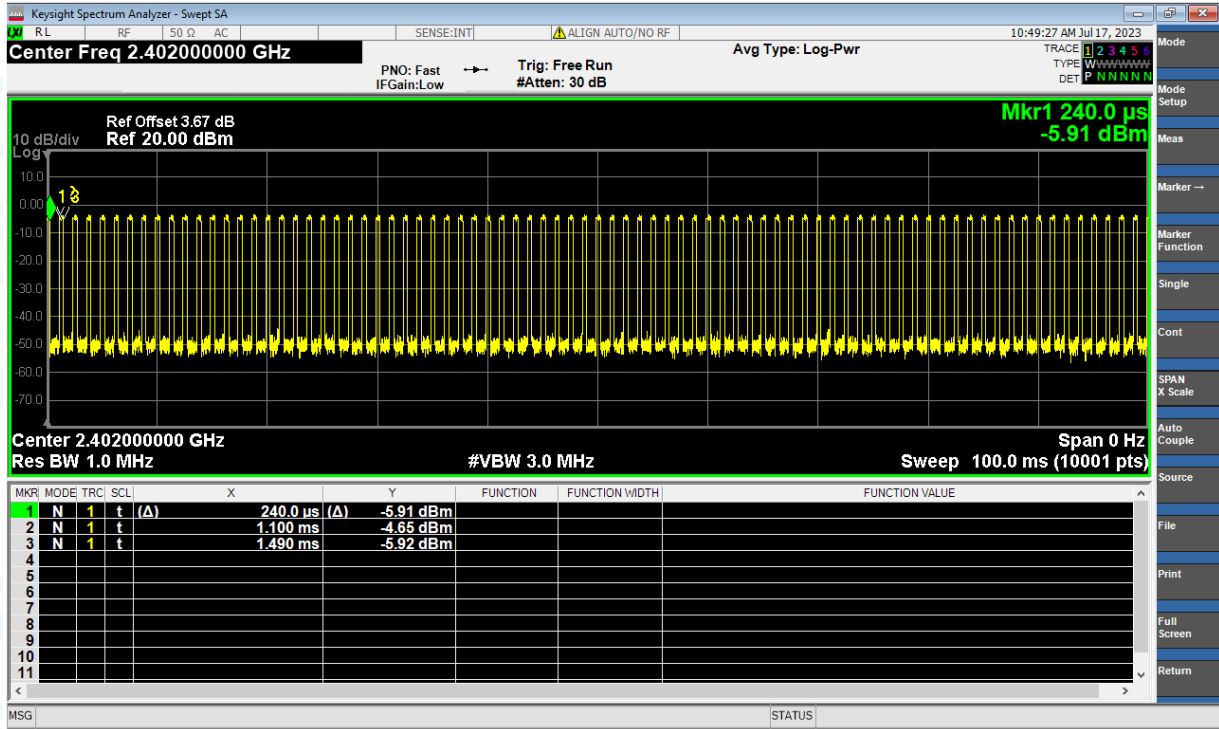
Duty Cycle NVNT 2-DH1 2441MHz Ant1



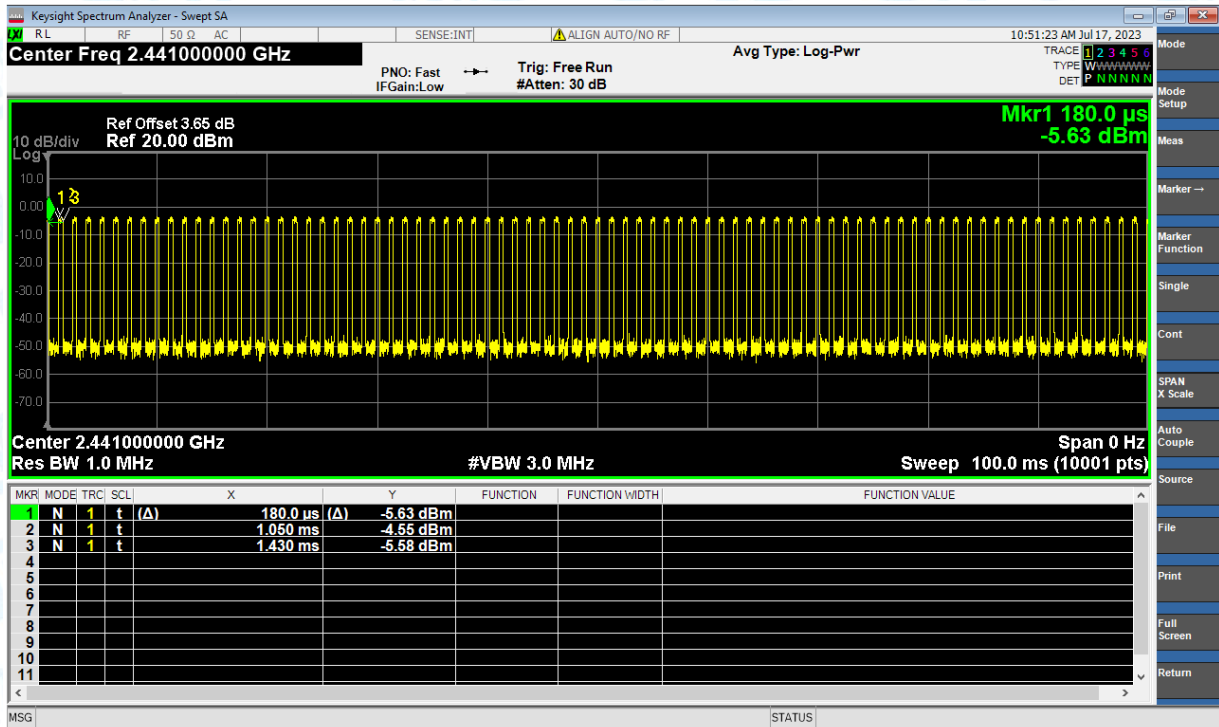
Duty Cycle NVNT 2-DH1 2480MHz Ant1

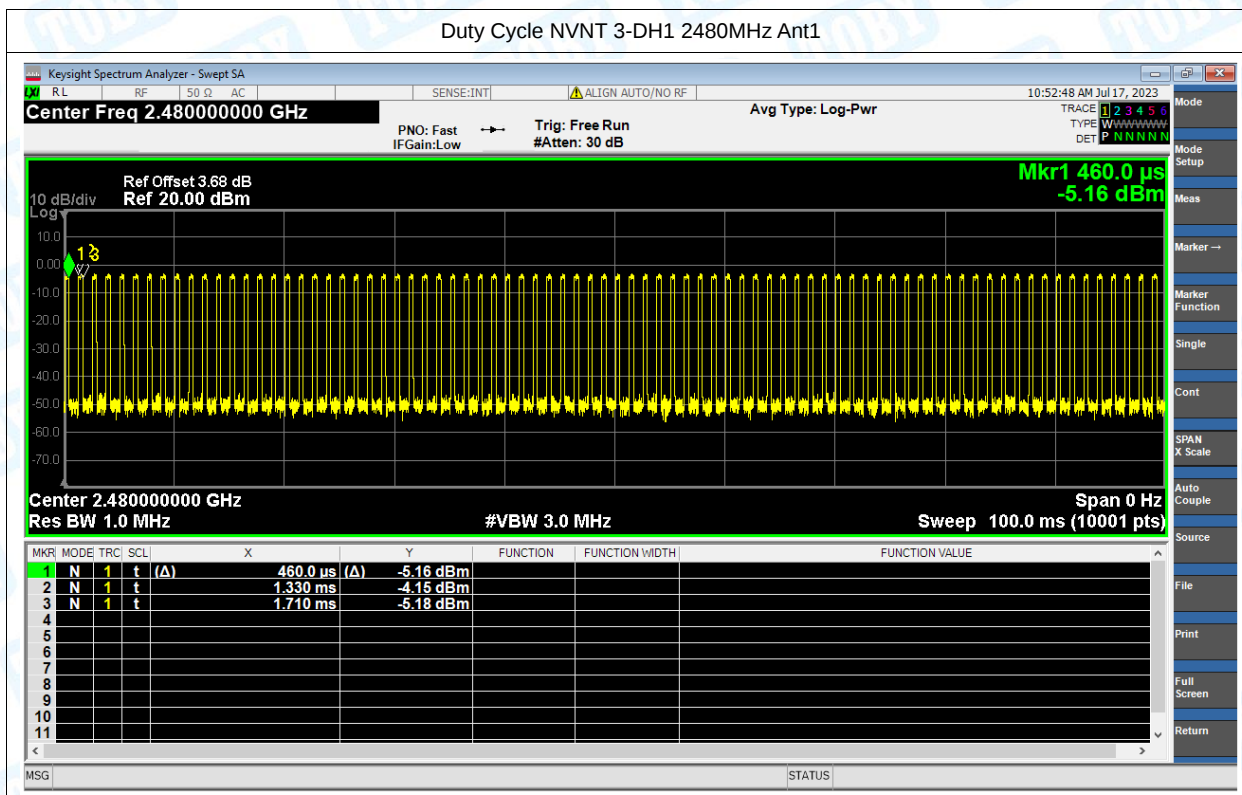


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1





2. Maximum Conducted Output Power

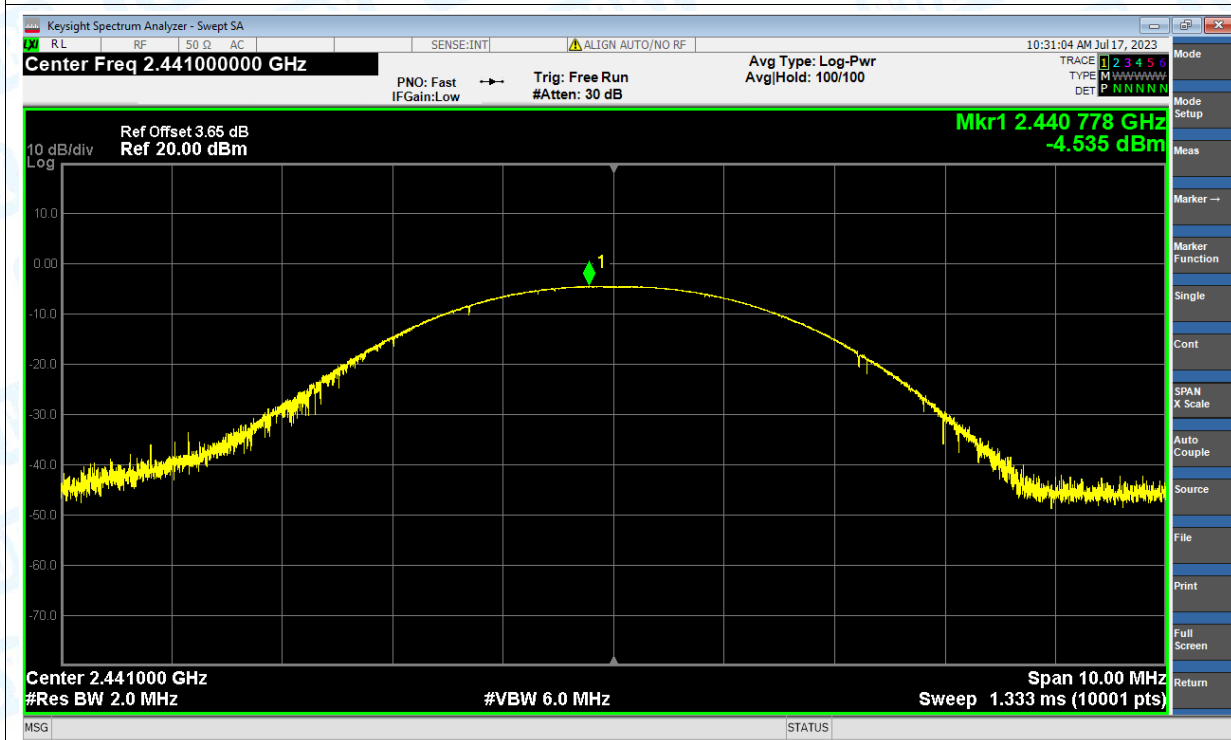
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-4.584	21	Pass
NVNT	1-DH1	2441	Ant1	-4.535	21	Pass
NVNT	1-DH1	2480	Ant1	-4.079	21	Pass
NVNT	2-DH1	2402	Ant1	-3.649	21	Pass
NVNT	2-DH1	2441	Ant1	-3.673	21	Pass
NVNT	2-DH1	2480	Ant1	-3.199	21	Pass
NVNT	3-DH1	2402	Ant1	-3.06	21	Pass
NVNT	3-DH1	2441	Ant1	-2.963	21	Pass
NVNT	3-DH1	2480	Ant1	-2.561	21	Pass

Test Graphs

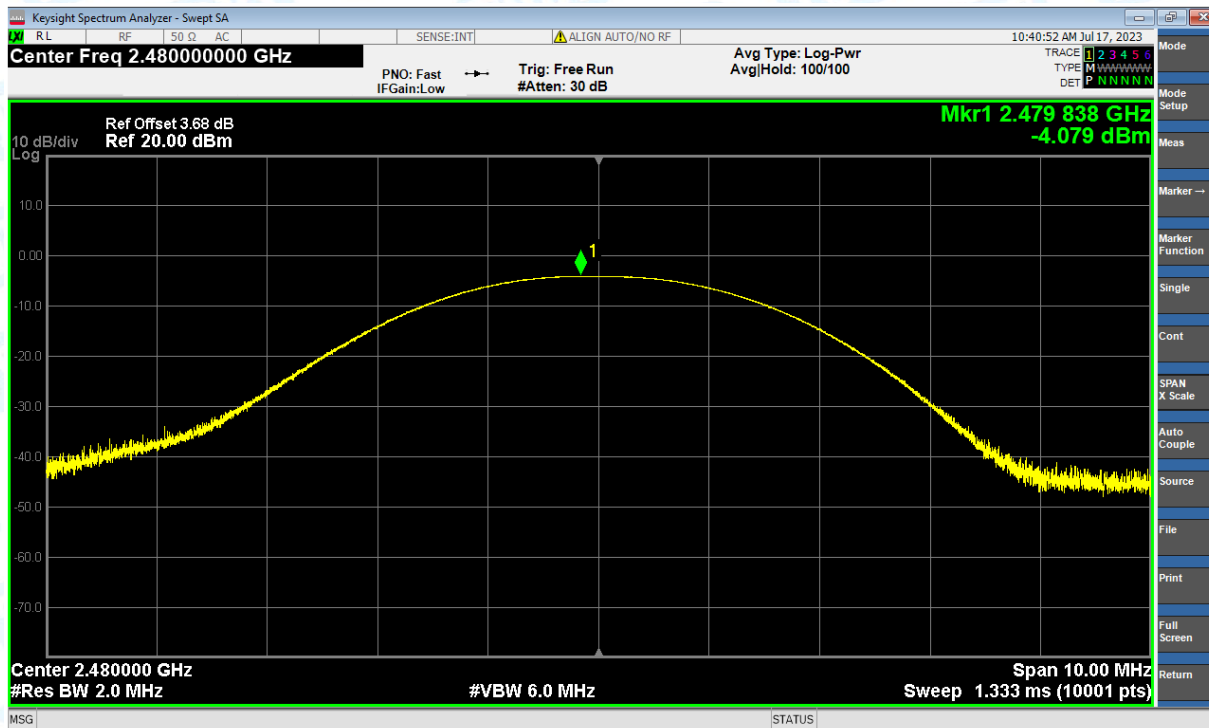
Power NVNT 1-DH1 2402MHz Ant1



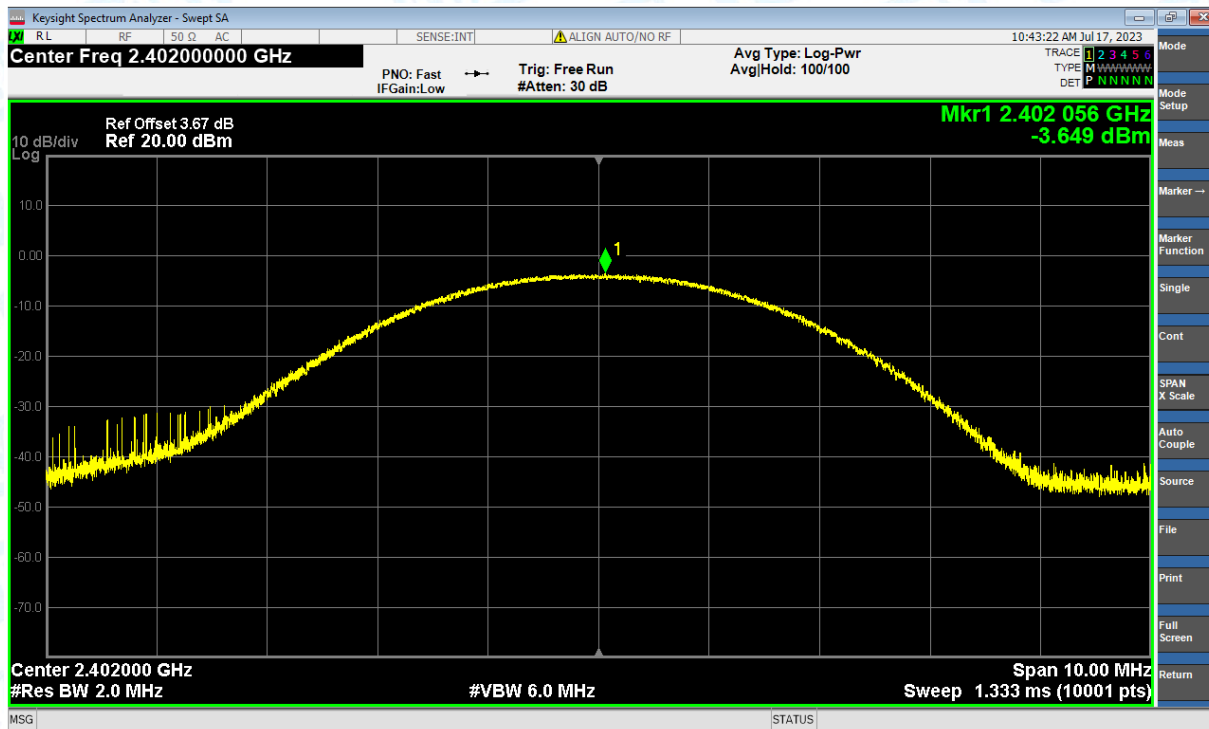
Power NVNT 1-DH1 2441MHz Ant1



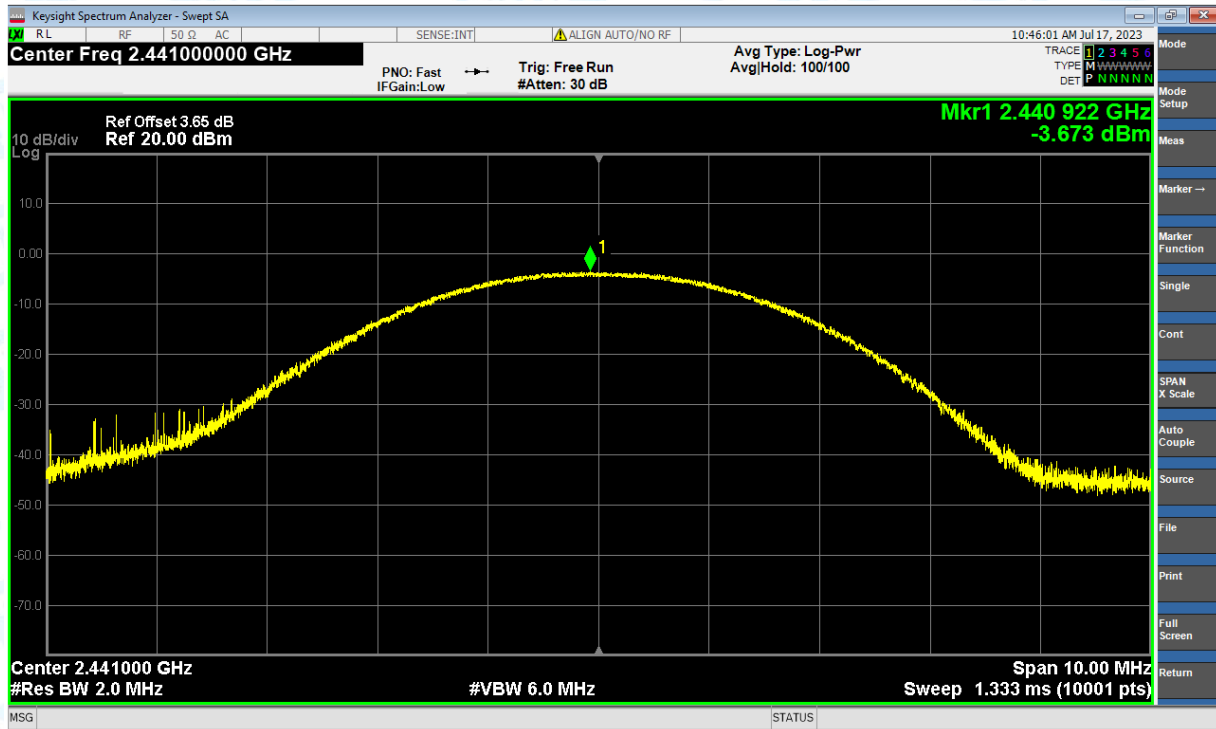
Power NVNT 1-DH1 2480MHz Ant1



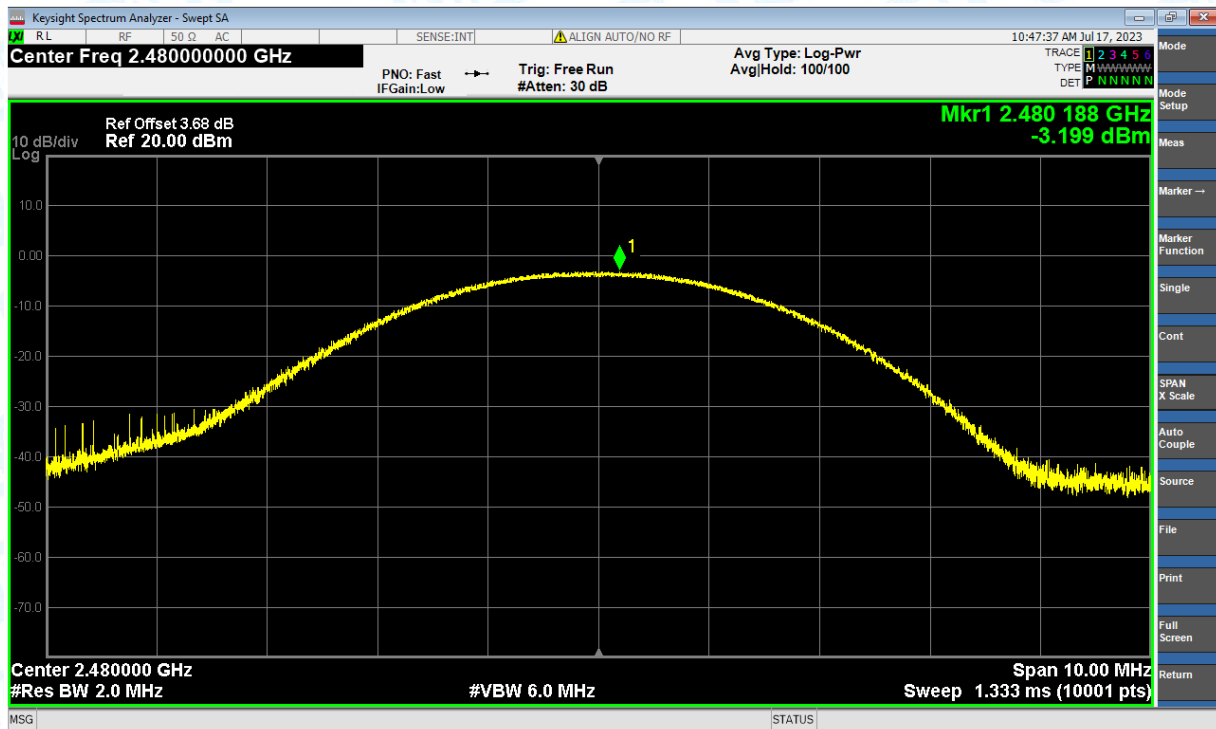
Power NVNT 2-DH1 2402MHz Ant1



Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1



Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1





3. -20dB Bandwidth

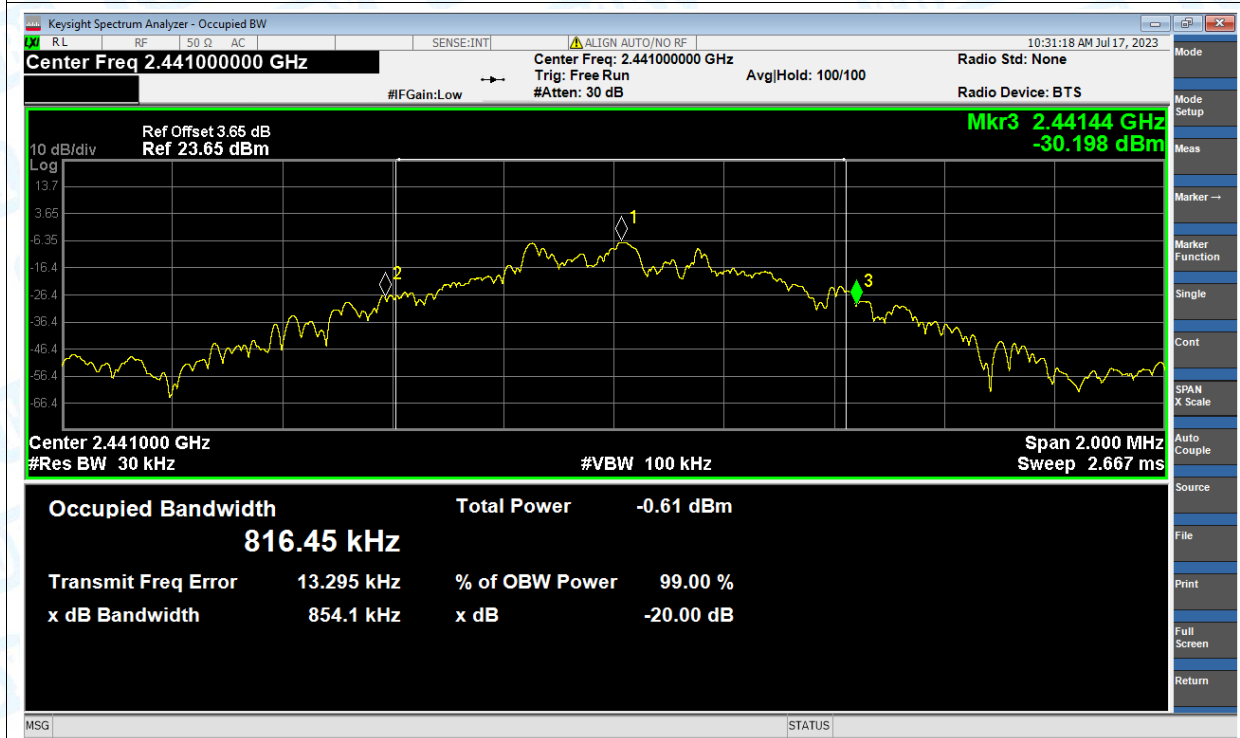
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.84	0	Pass
NVNT	1-DH1	2441	Ant1	0.85	0	Pass
NVNT	1-DH1	2480	Ant1	0.87	0	Pass
NVNT	2-DH1	2402	Ant1	1.24	0	Pass
NVNT	2-DH1	2441	Ant1	1.24	0	Pass
NVNT	2-DH1	2480	Ant1	1.24	0	Pass
NVNT	3-DH1	2402	Ant1	1.2	0	Pass
NVNT	3-DH1	2441	Ant1	1.22	0	Pass
NVNT	3-DH1	2480	Ant1	1.21	0	Pass

Test Graphs

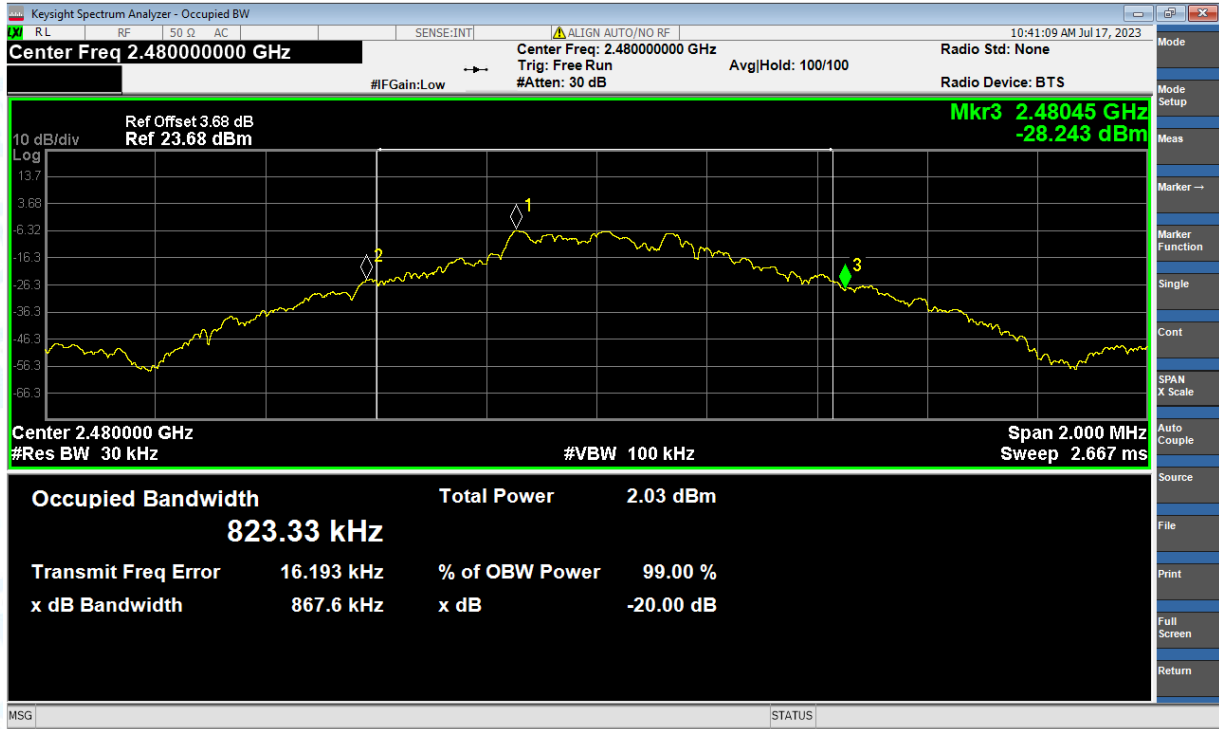
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



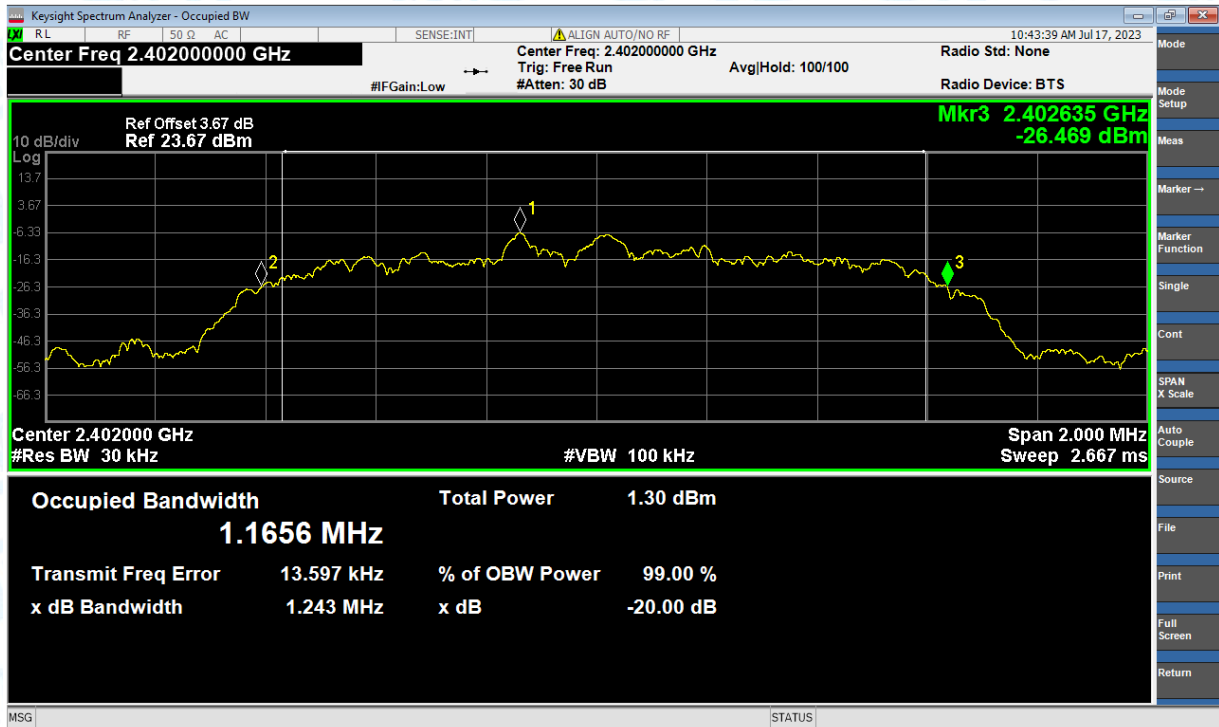
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



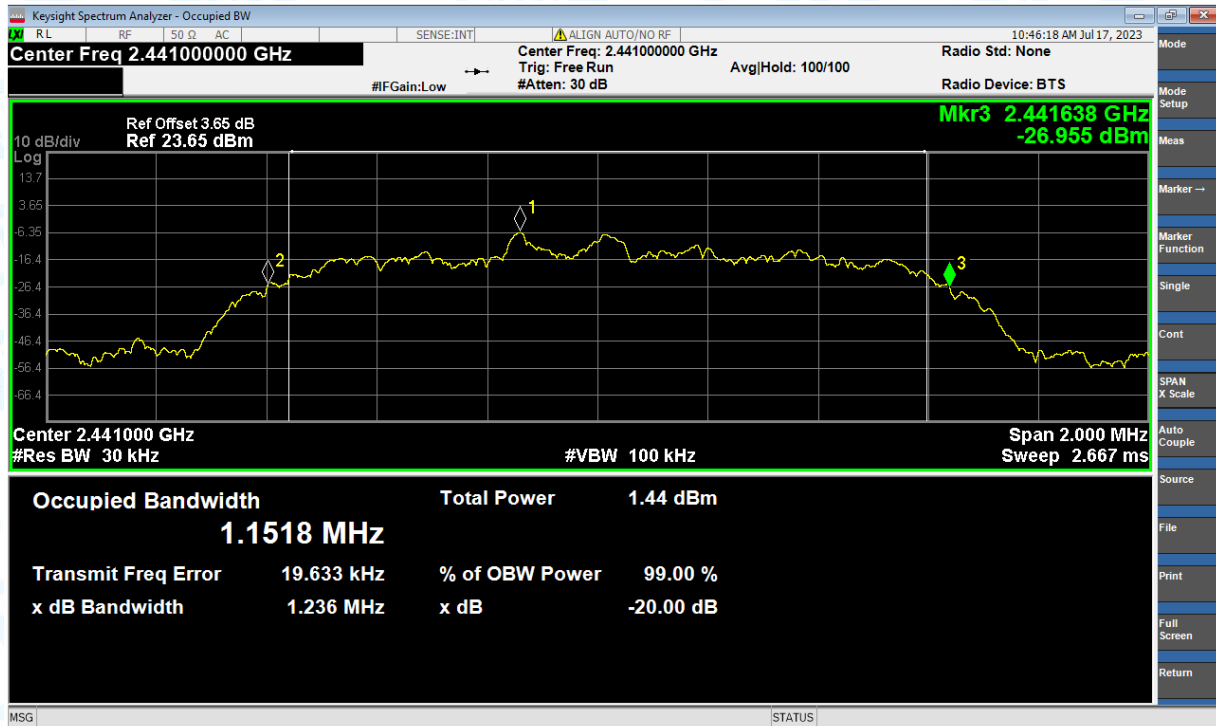
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



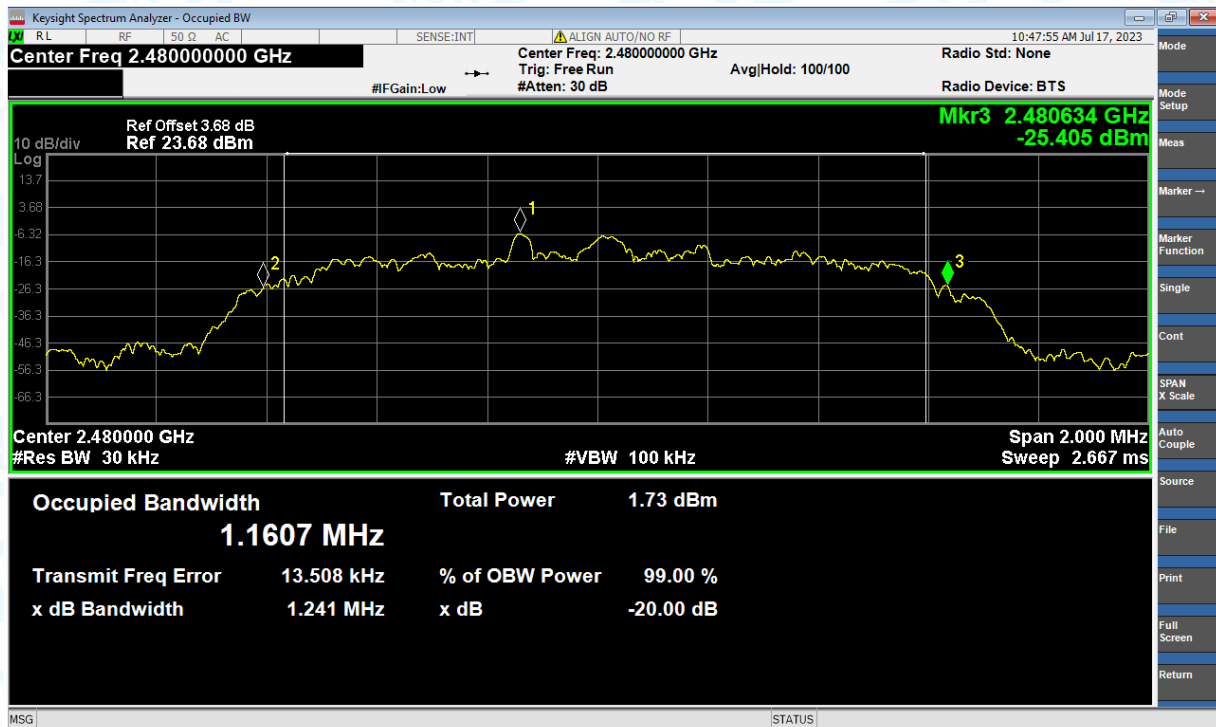
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



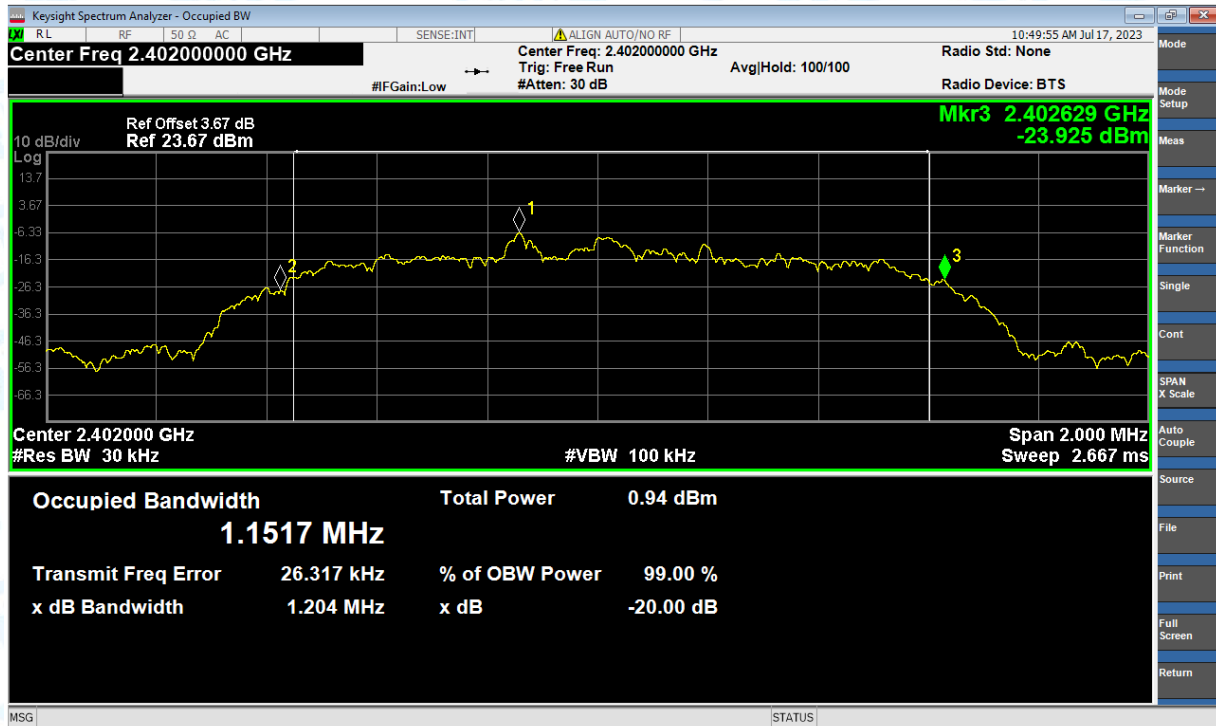
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



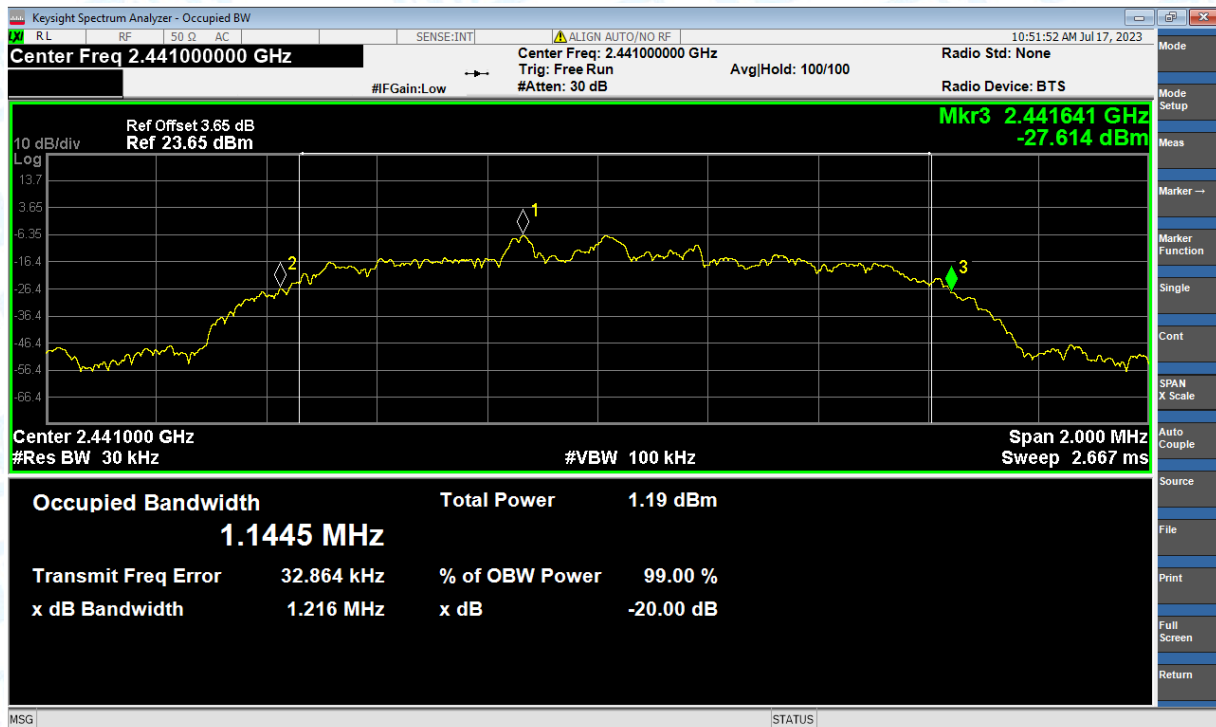
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

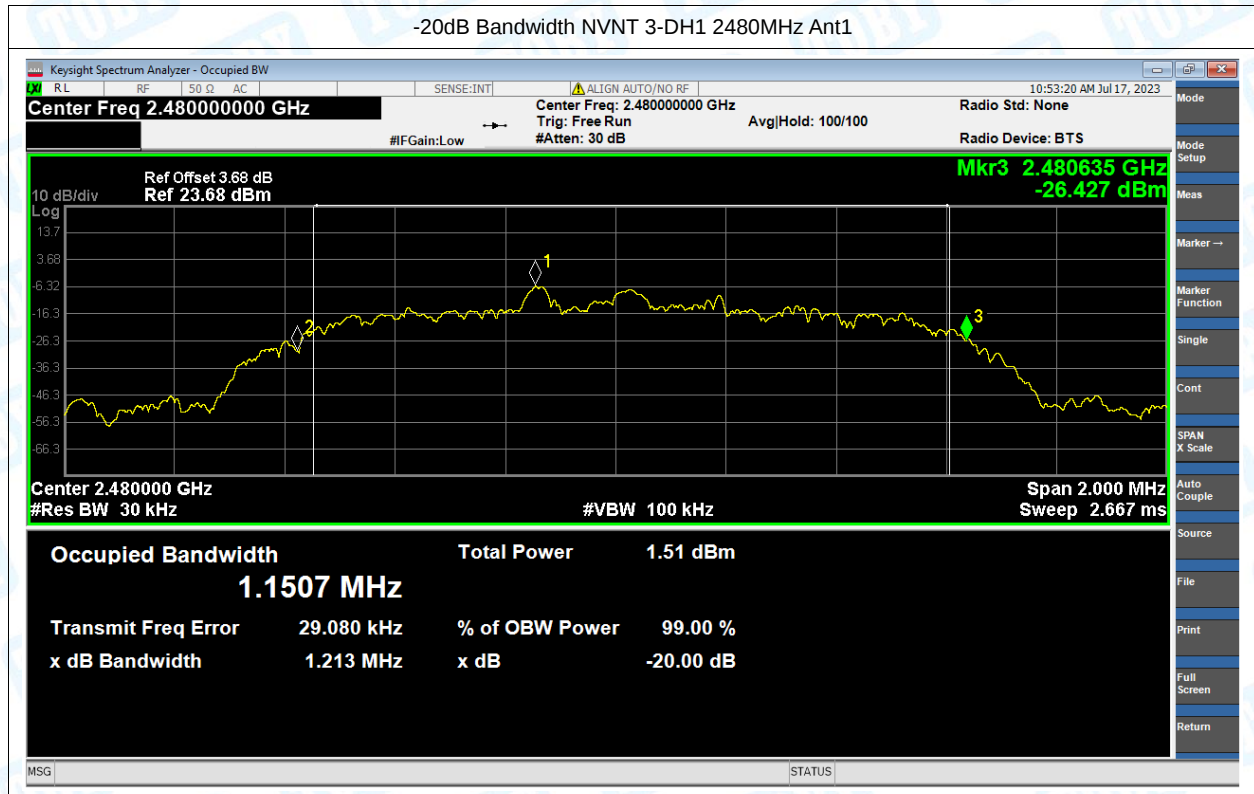


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



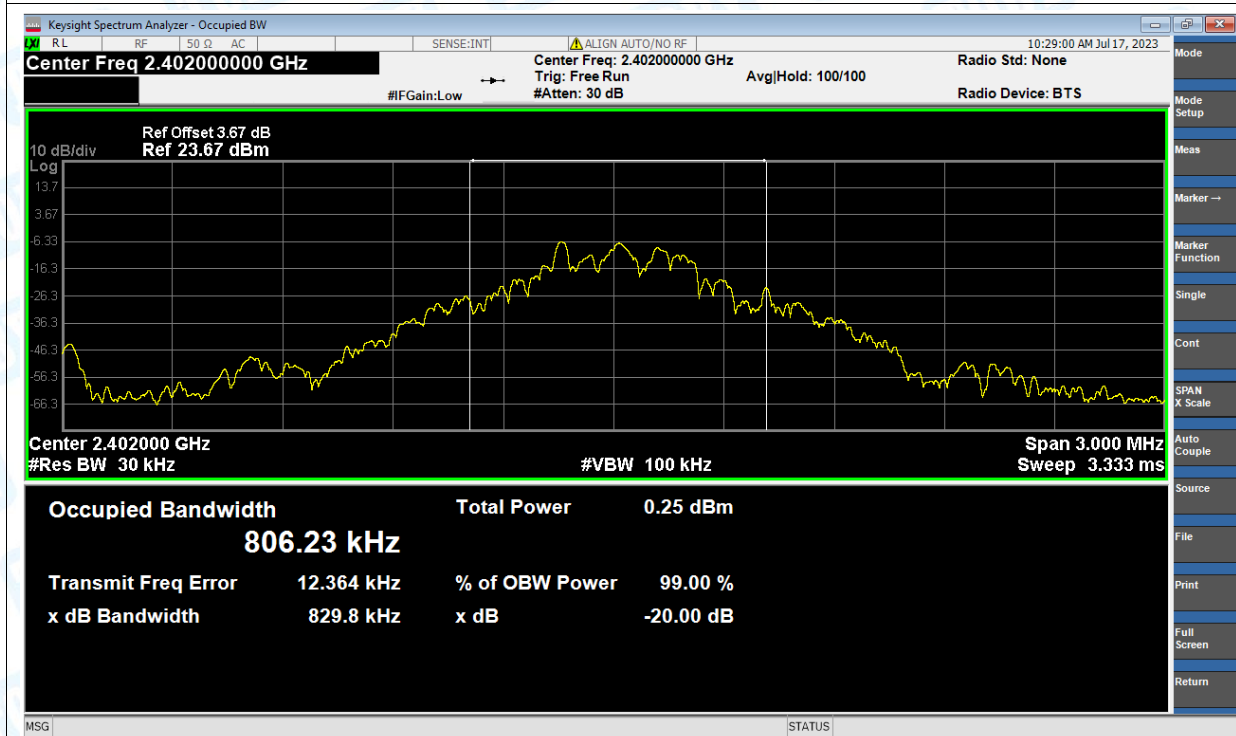


4. Occupied Channel Bandwidth

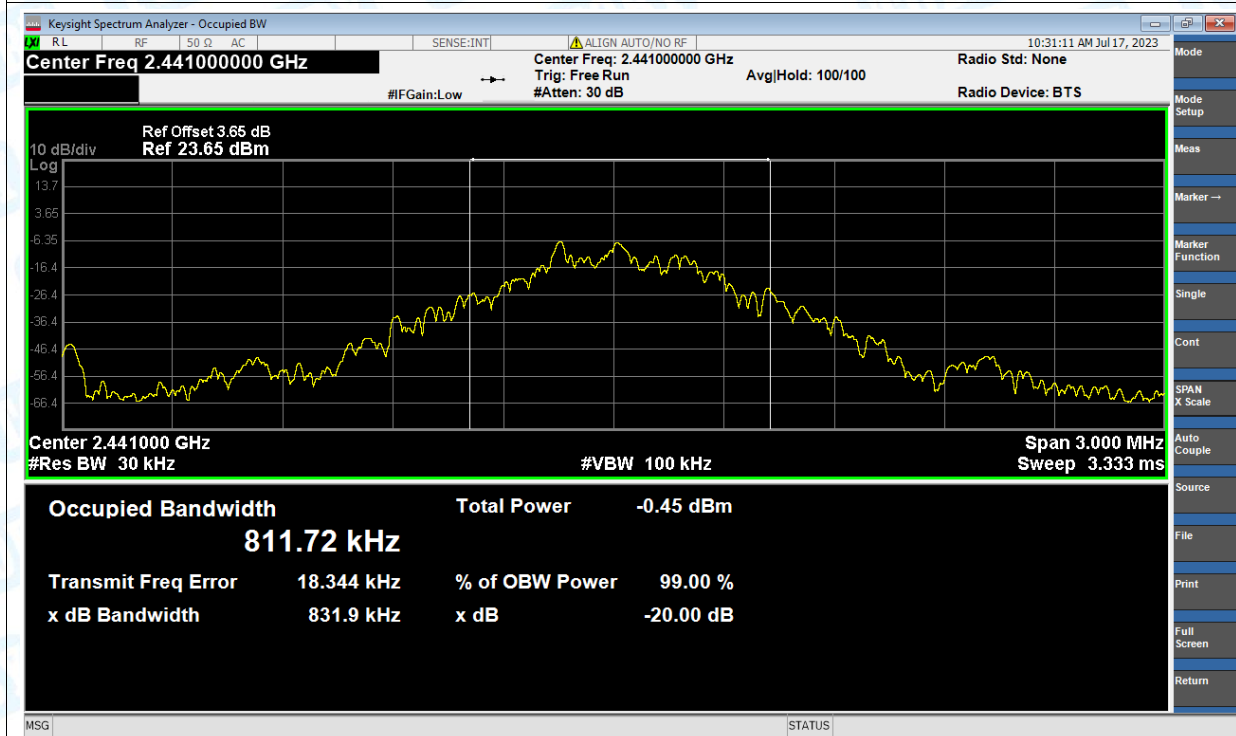
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.806
NVNT	1-DH1	2441	Ant1	0.812
NVNT	1-DH1	2480	Ant1	0.837
NVNT	2-DH1	2402	Ant1	1.178
NVNT	2-DH1	2441	Ant1	1.167
NVNT	2-DH1	2480	Ant1	1.161
NVNT	3-DH1	2402	Ant1	1.15
NVNT	3-DH1	2441	Ant1	1.142
NVNT	3-DH1	2480	Ant1	1.156

Test Graphs

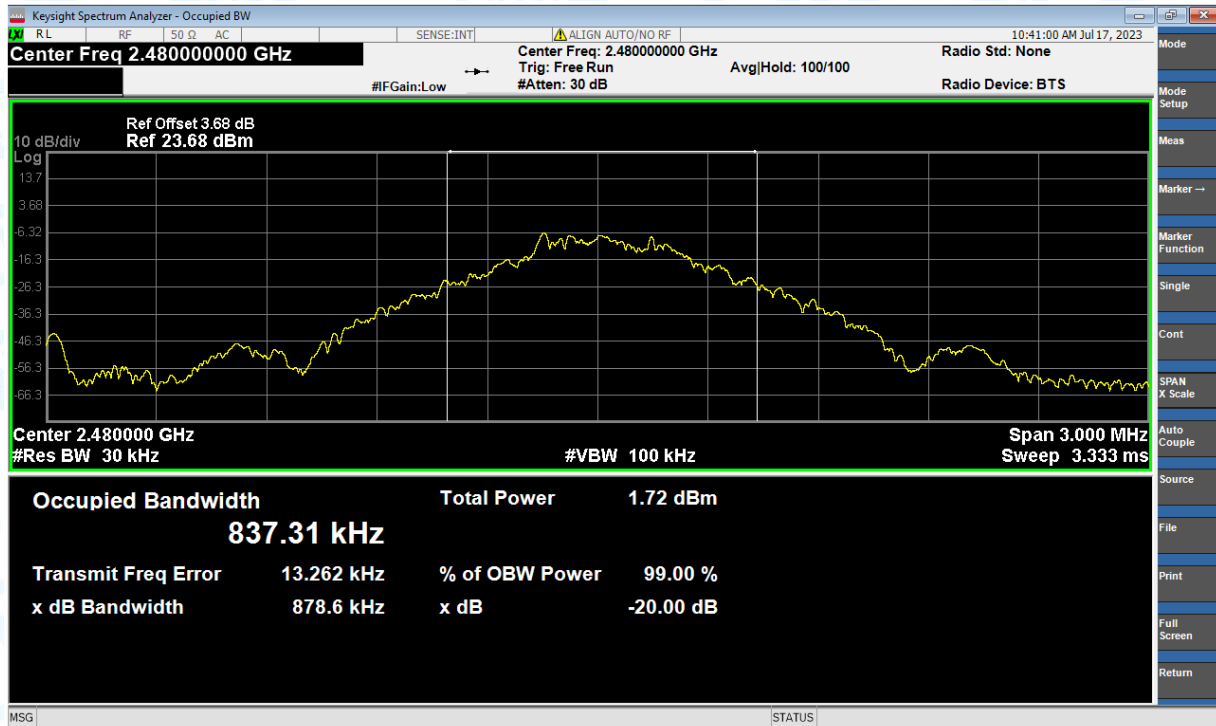
OBW NVNT 1-DH1 2402MHz Ant1



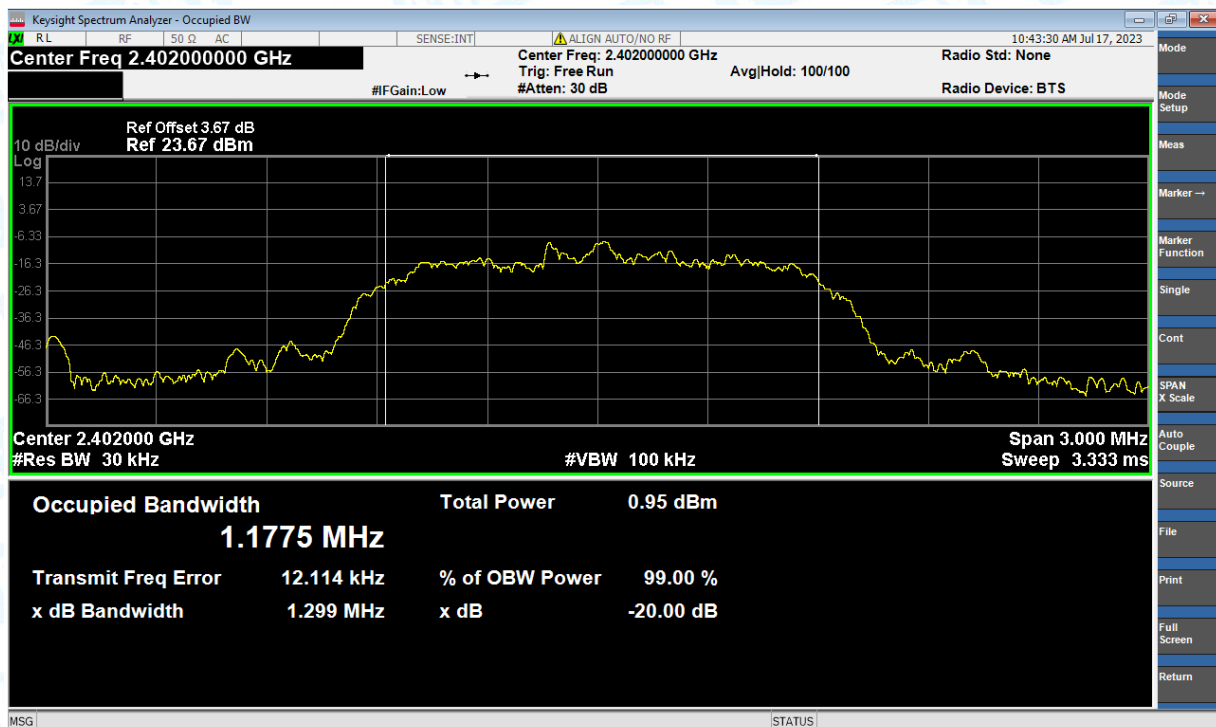
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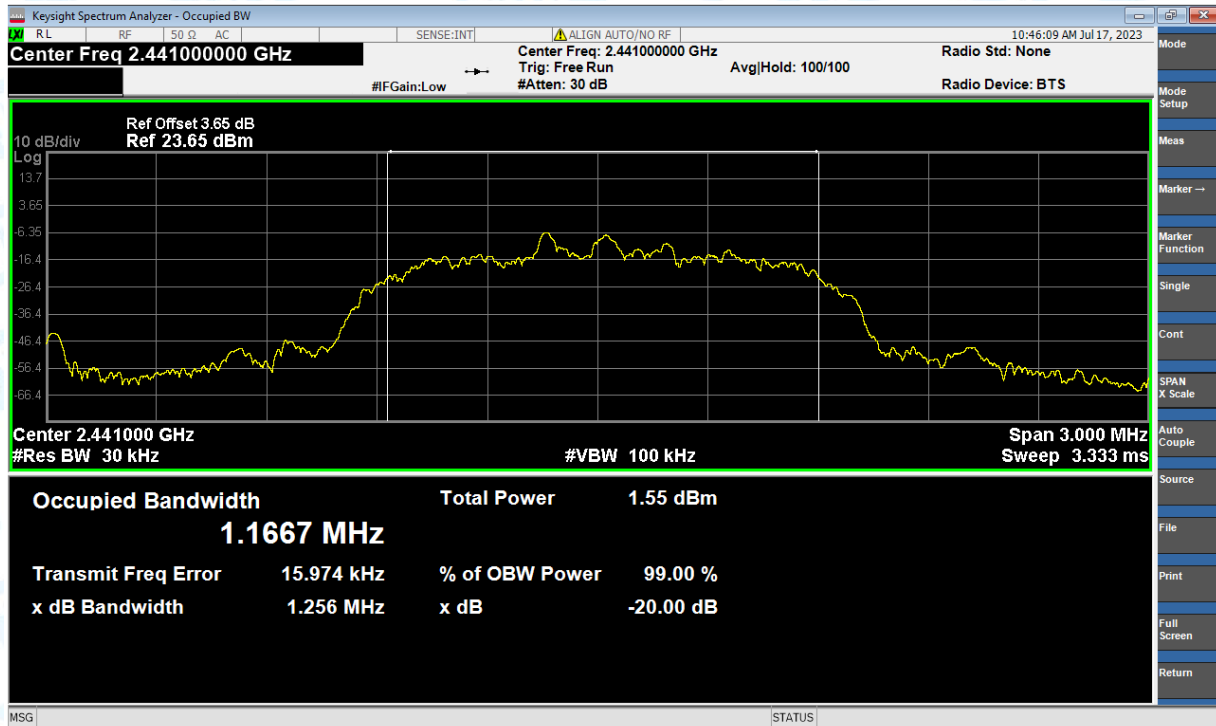
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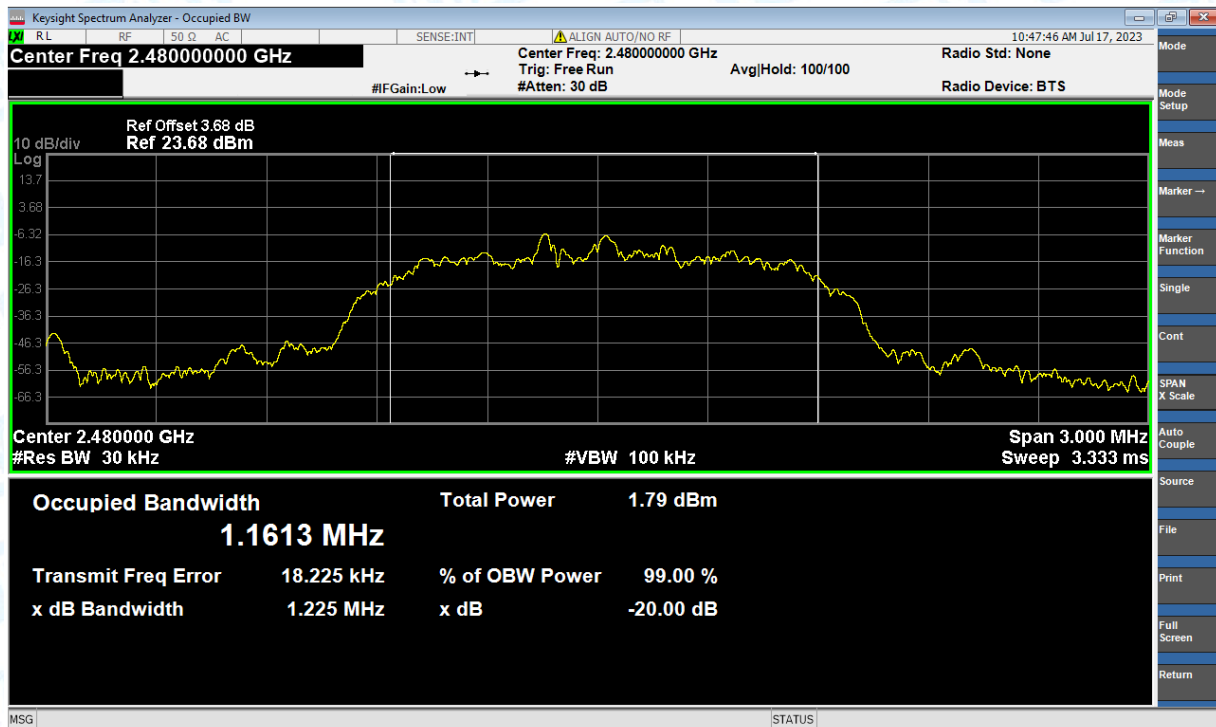
OBW NVNT 2-DH1 2402MHz Ant1



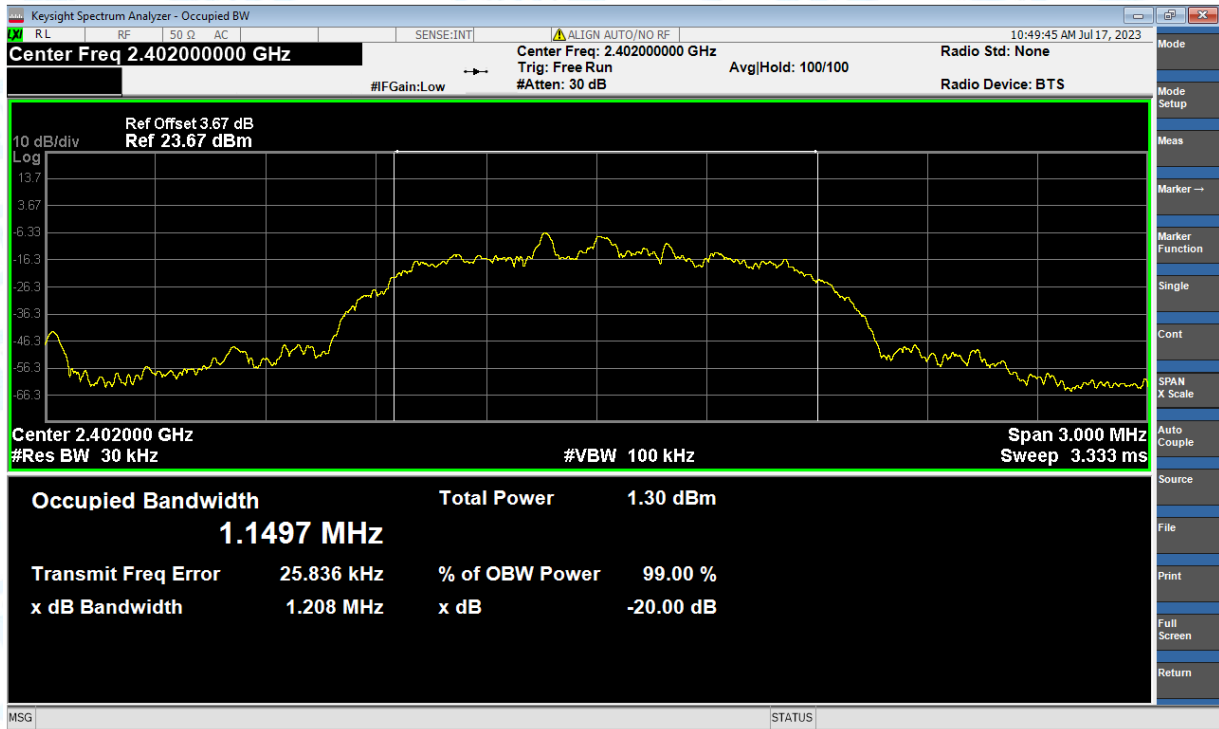
OBW NVNT 2-DH1 2441MHz Ant1



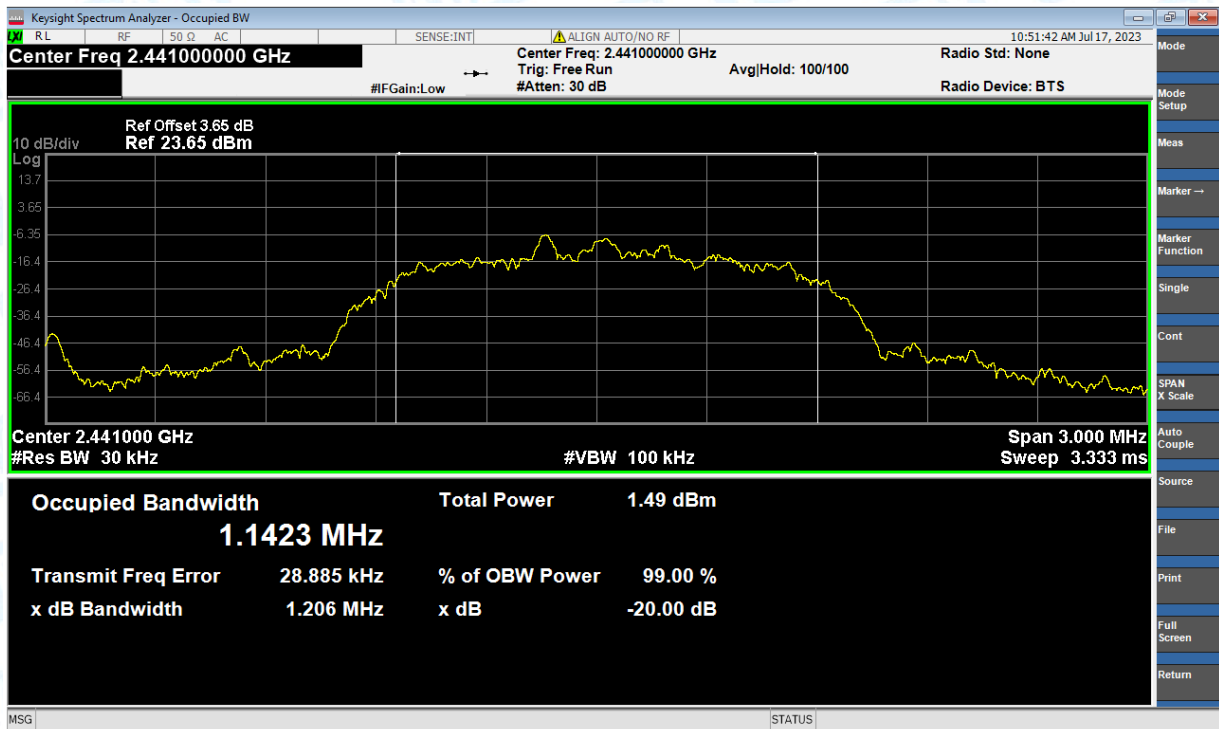
OBW NVNT 2-DH1 2480MHz Ant1

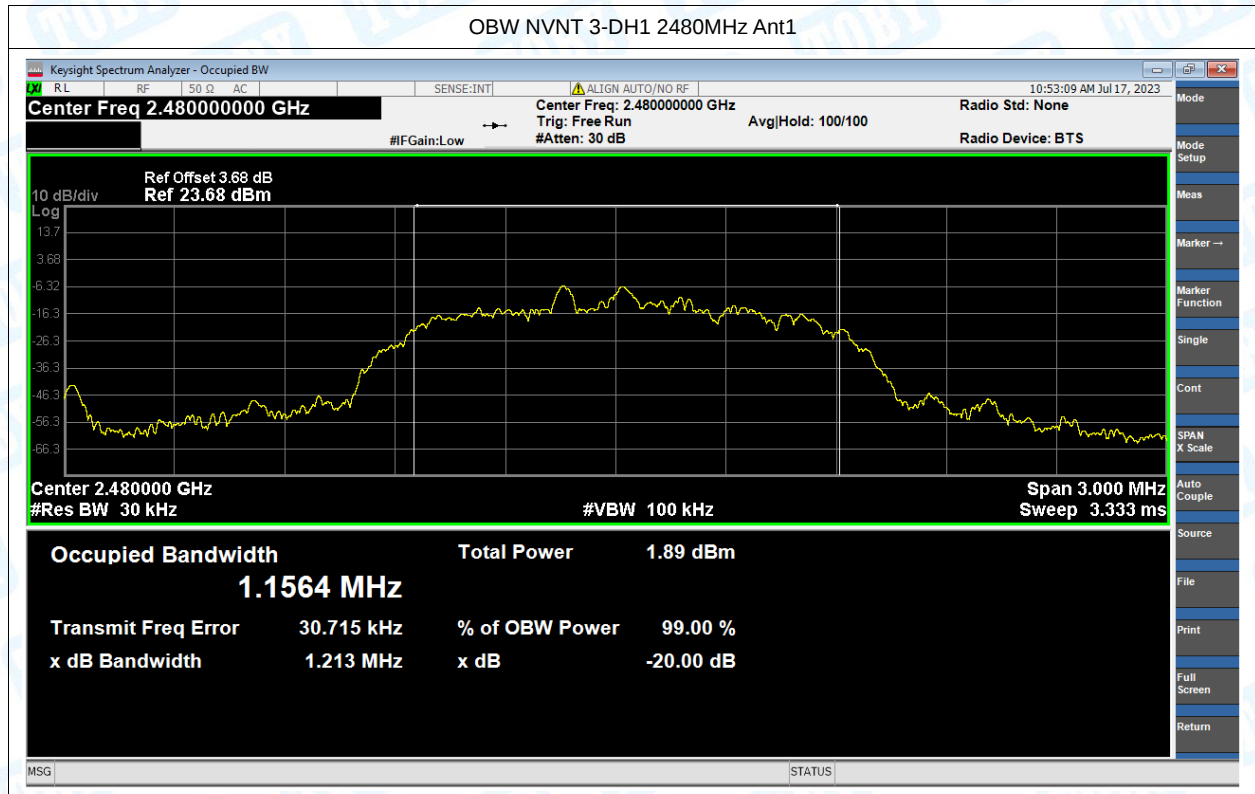


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



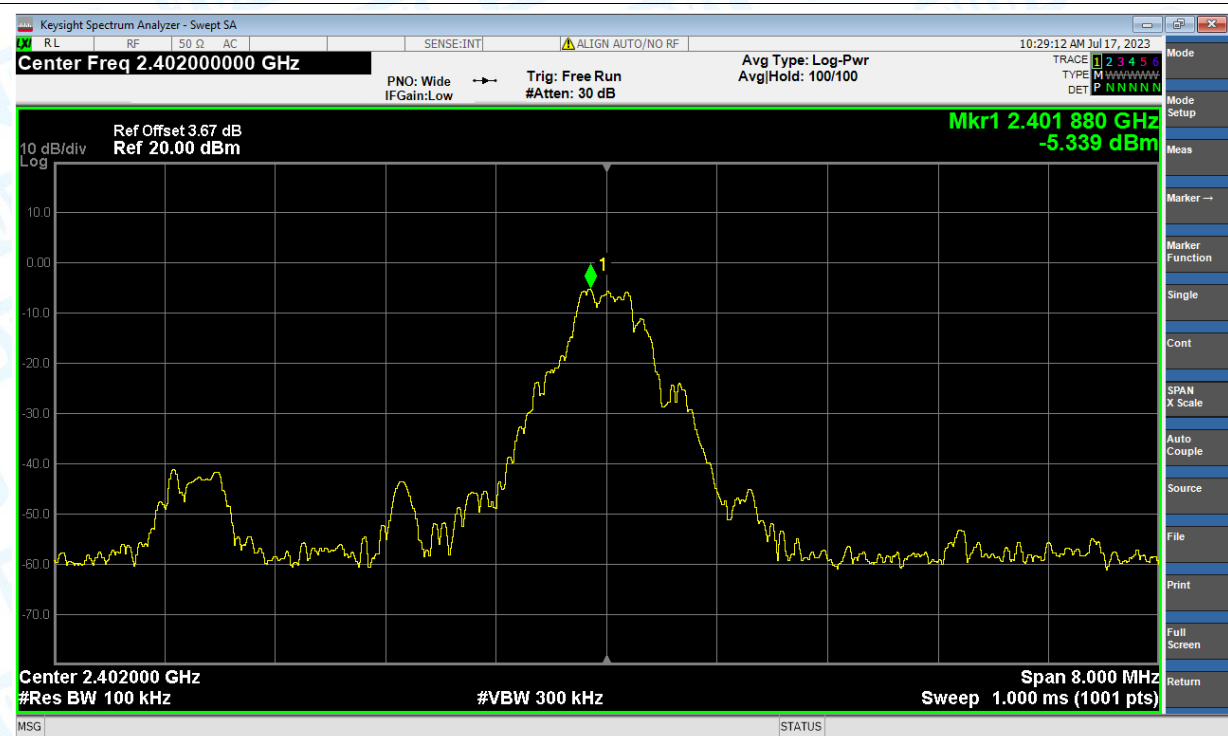


5. Band Edge

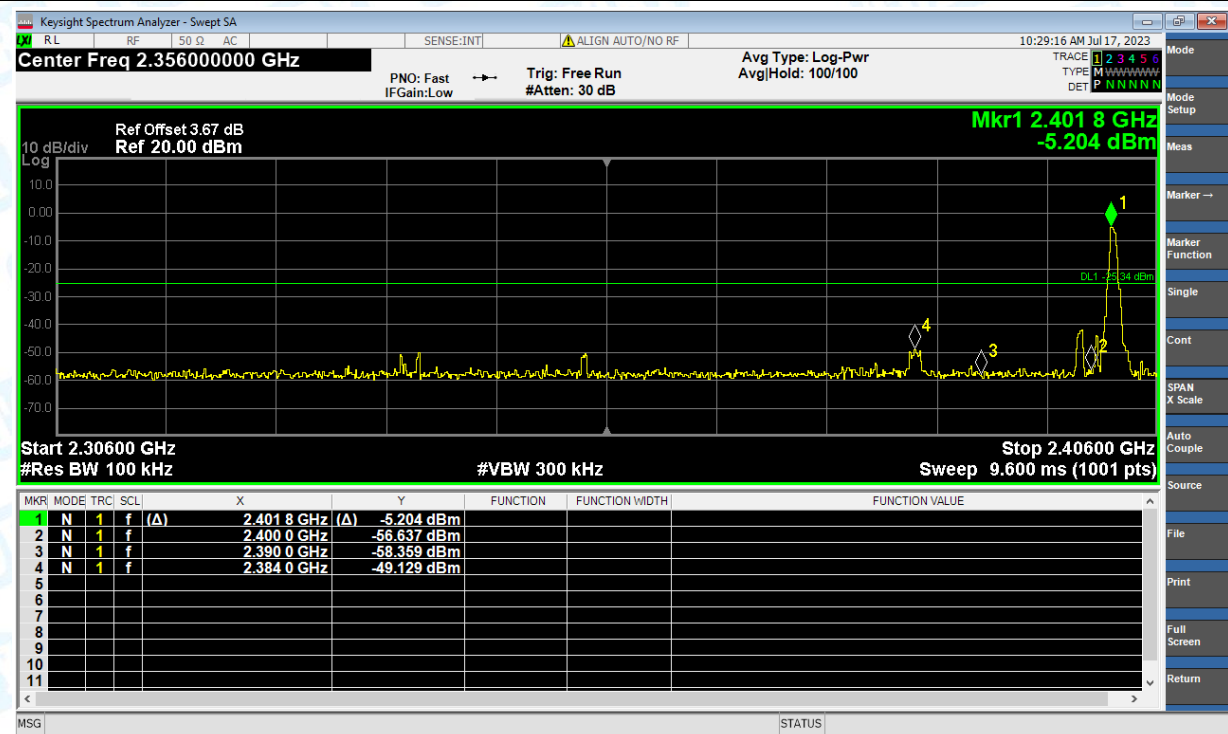
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-43.79	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-47.64	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-46.34	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-48.71	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-43.97	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-48.82	-20	Pass

Test Graphs

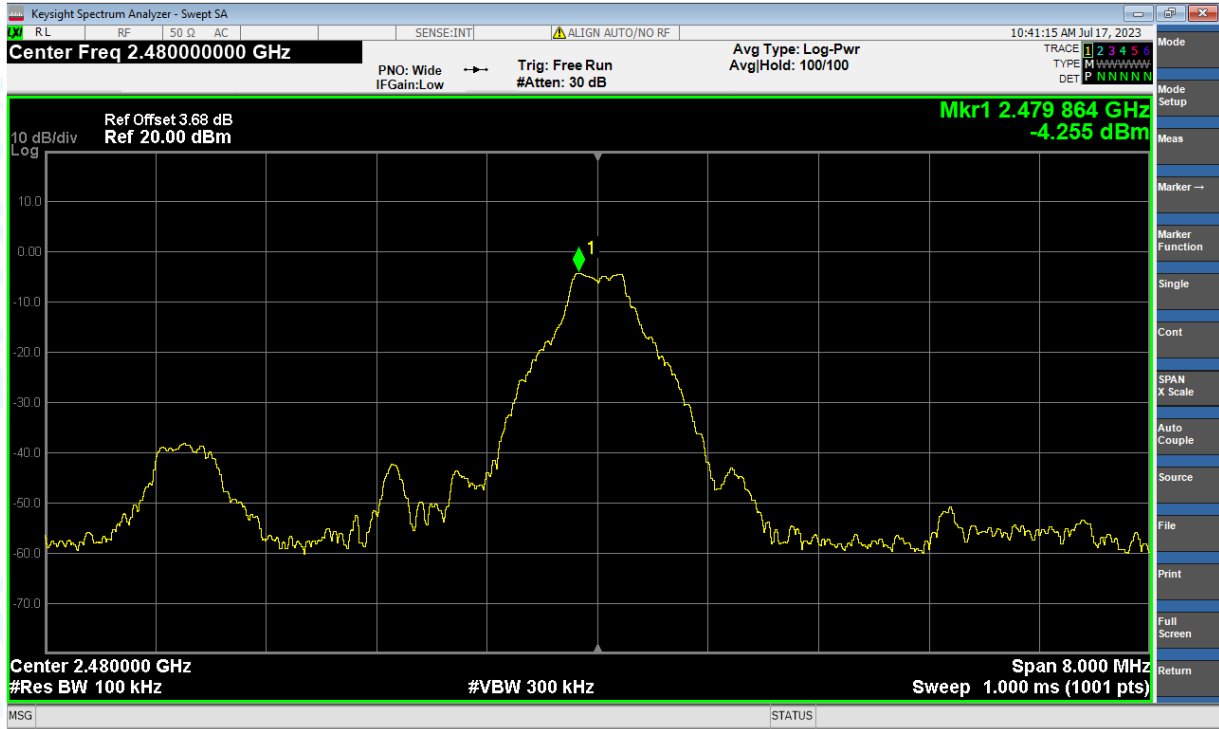
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



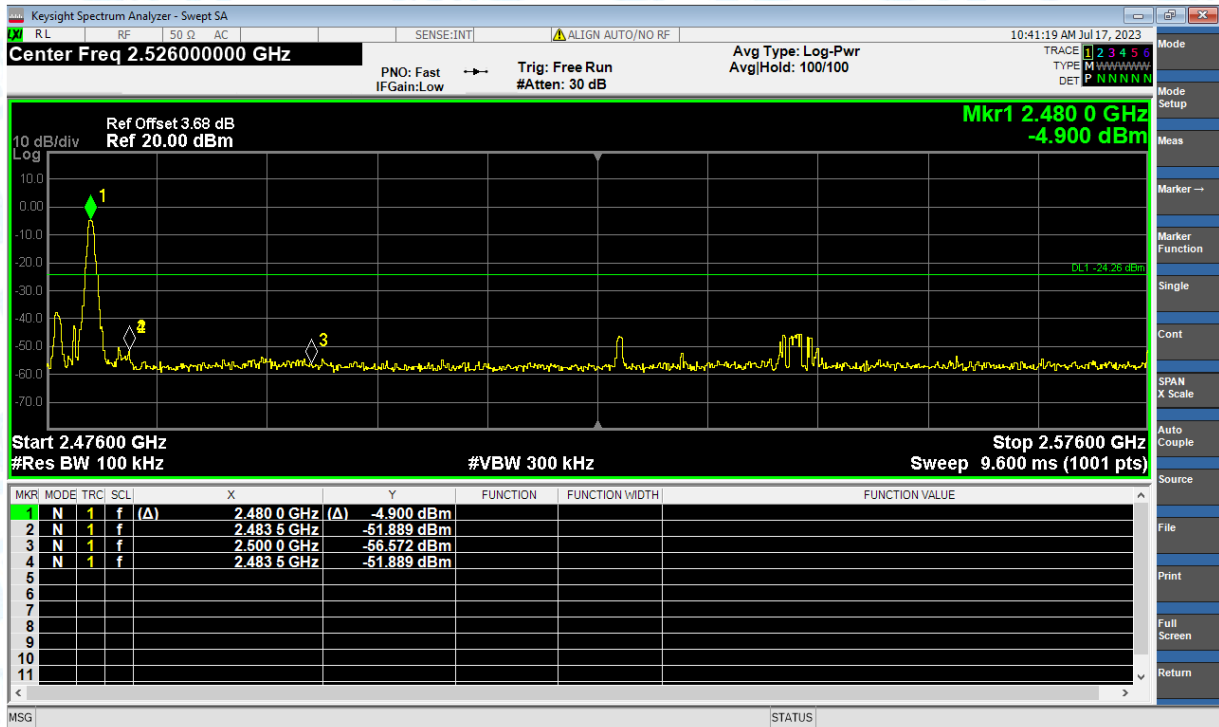
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



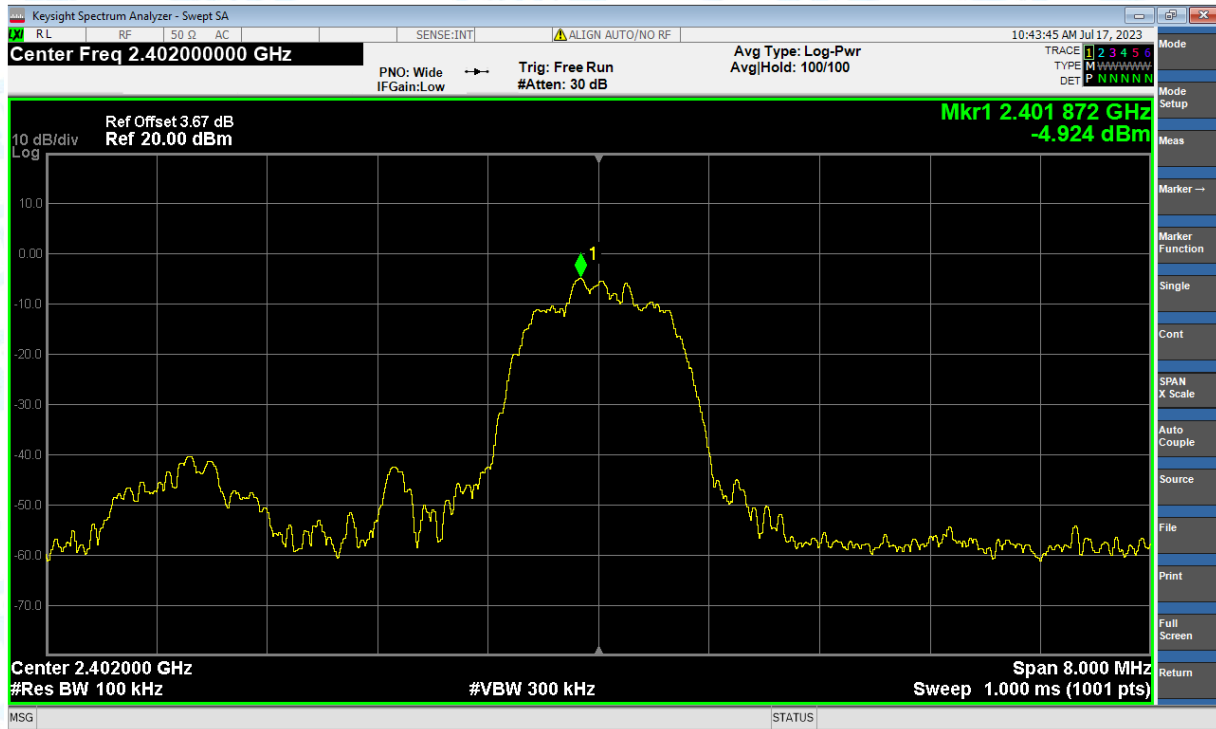
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



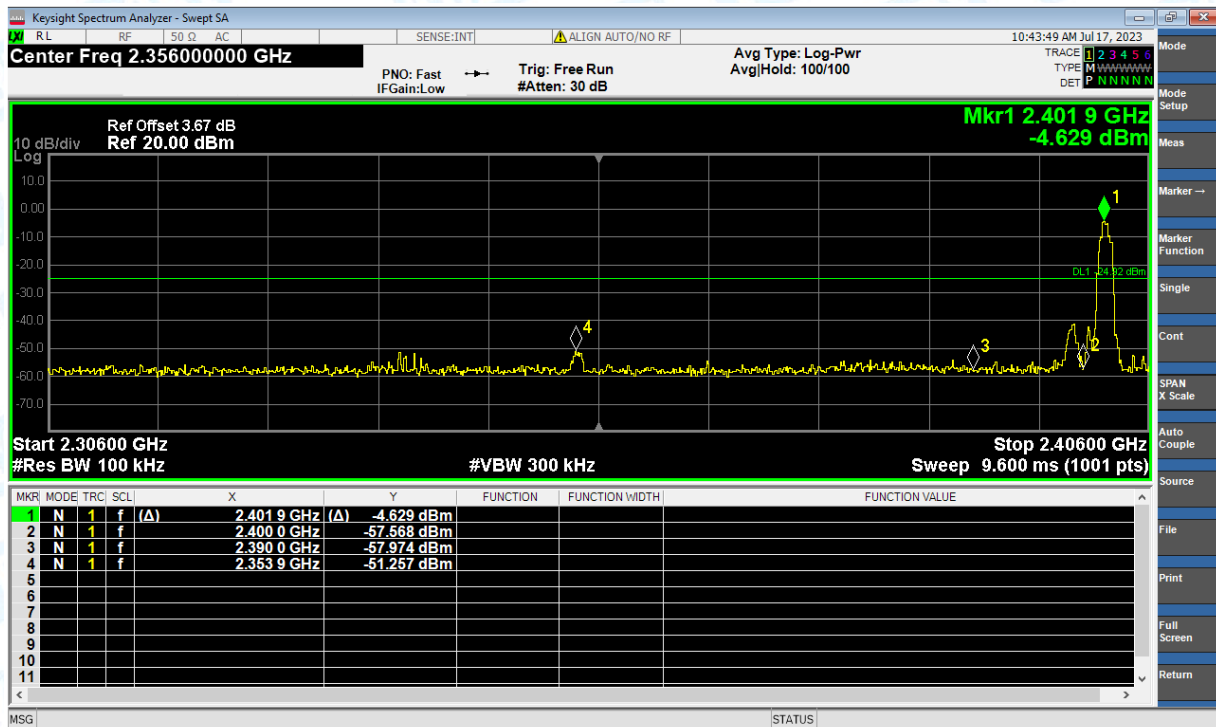
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



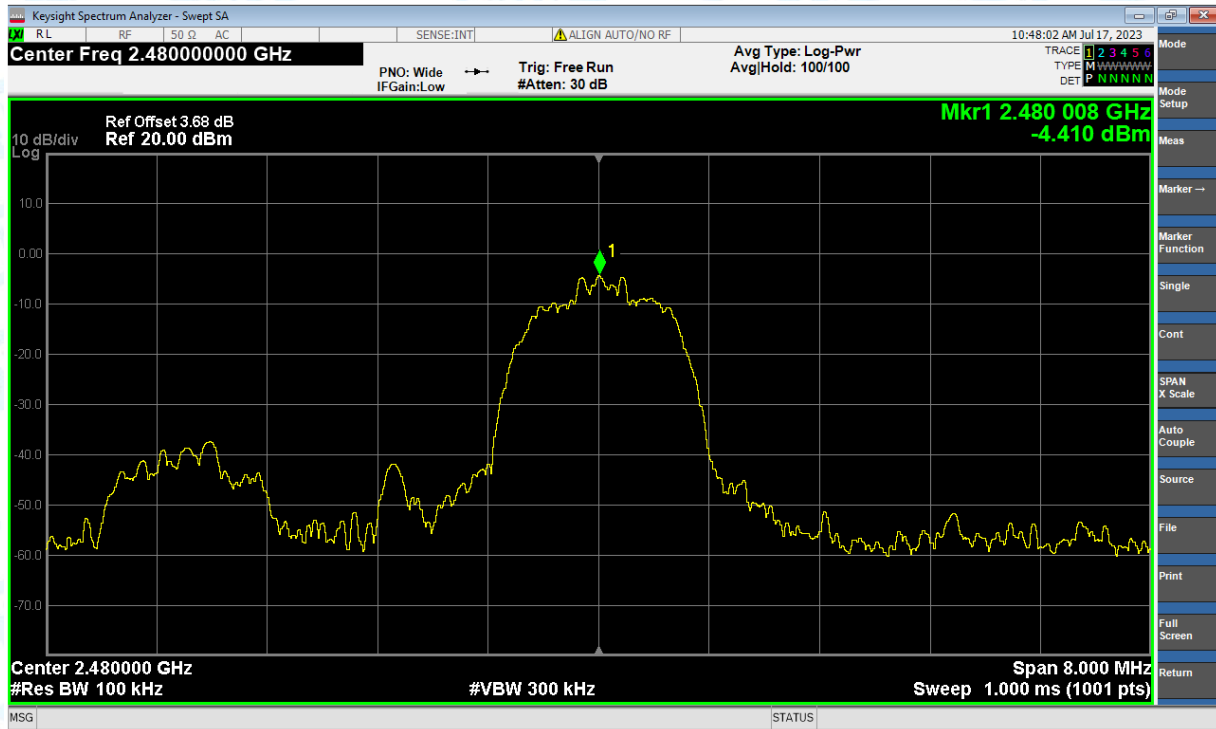
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



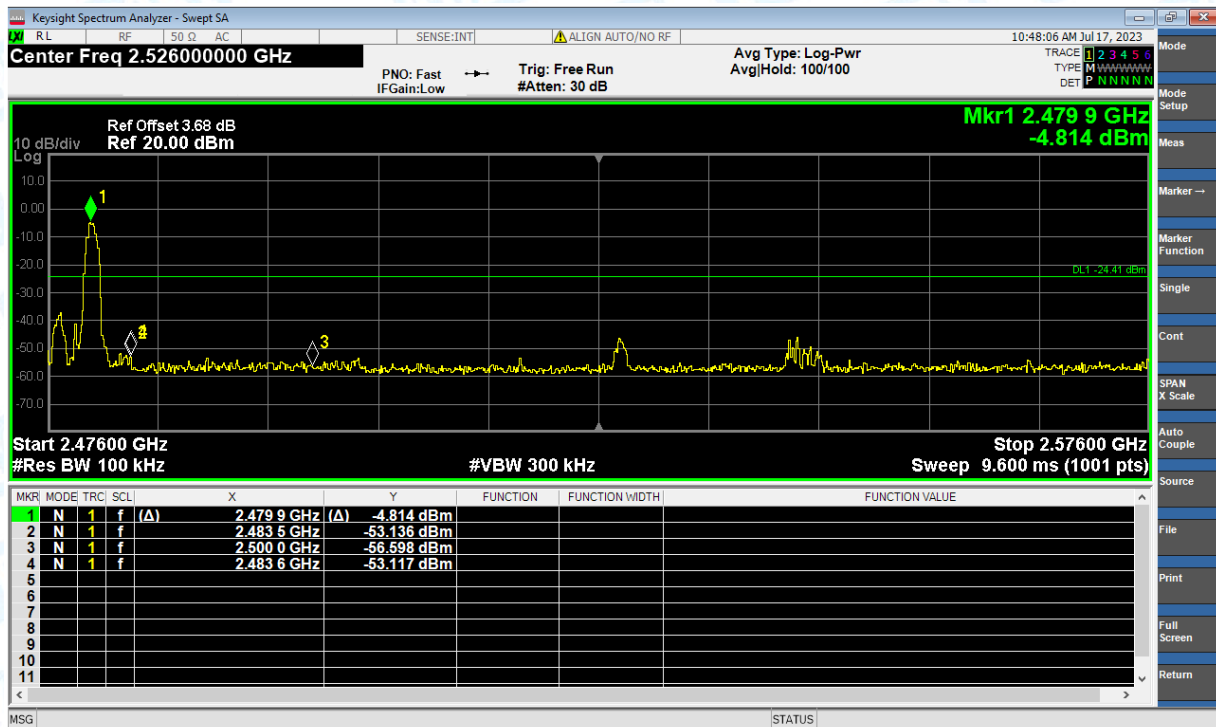
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



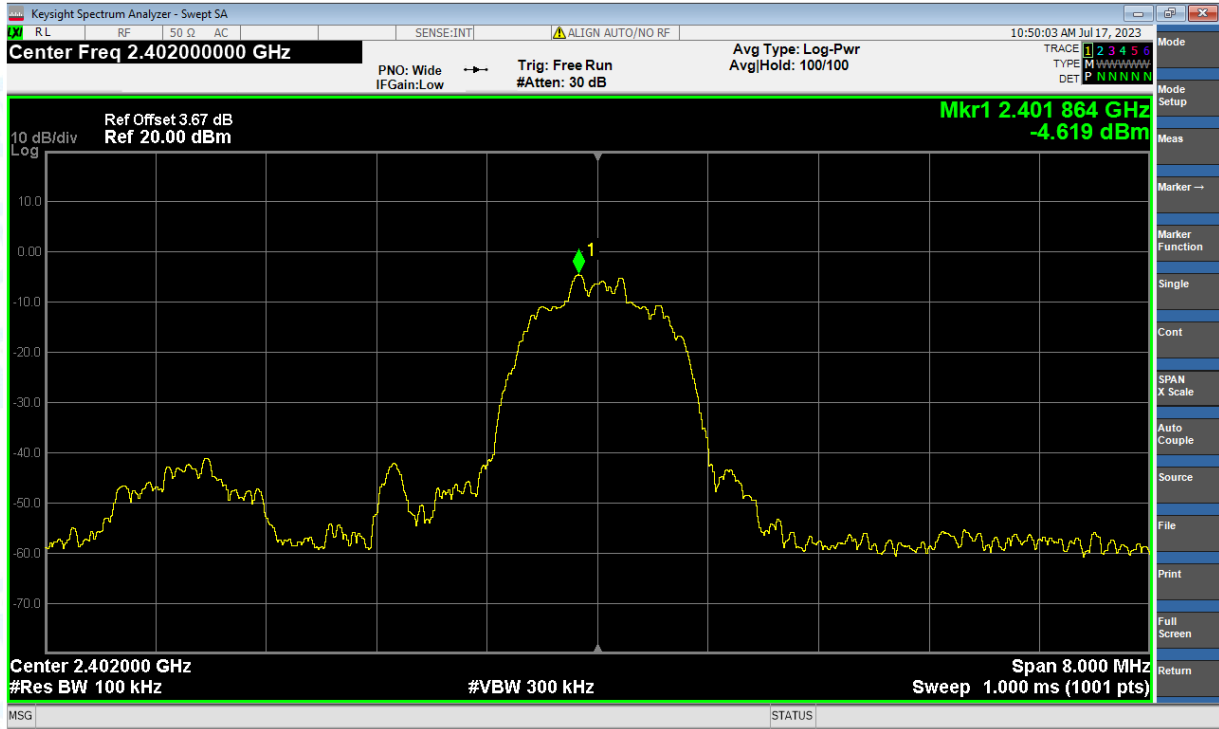
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



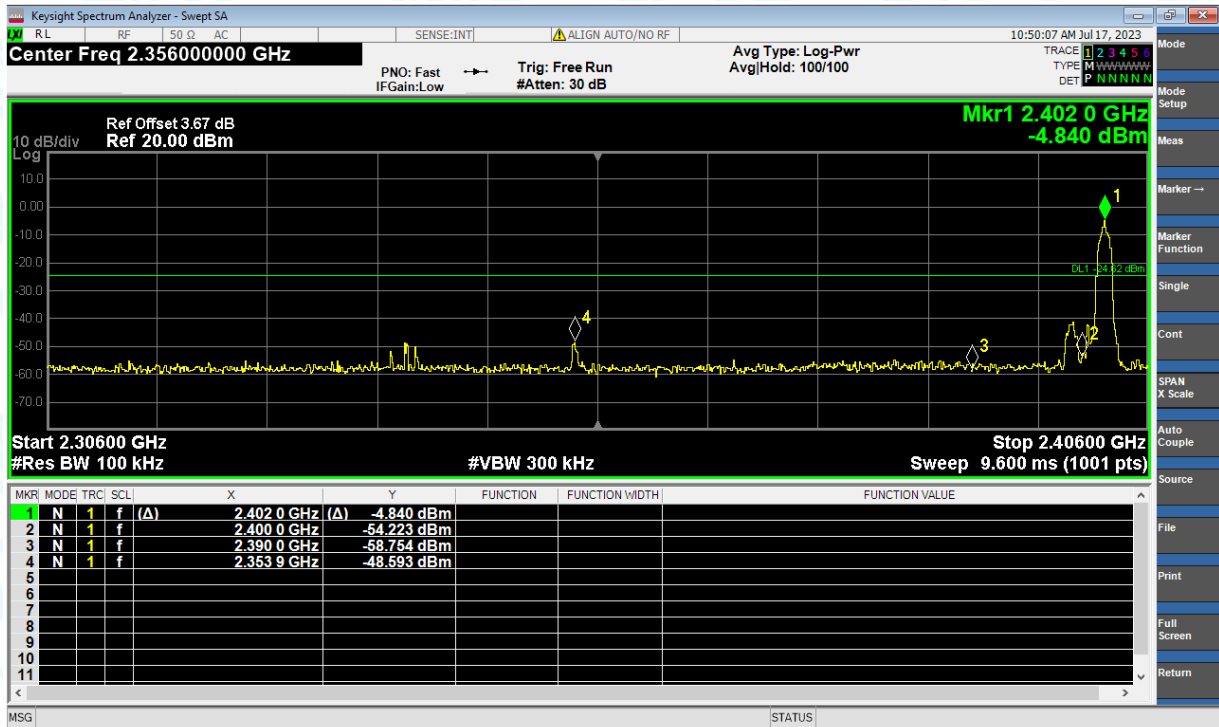
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



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



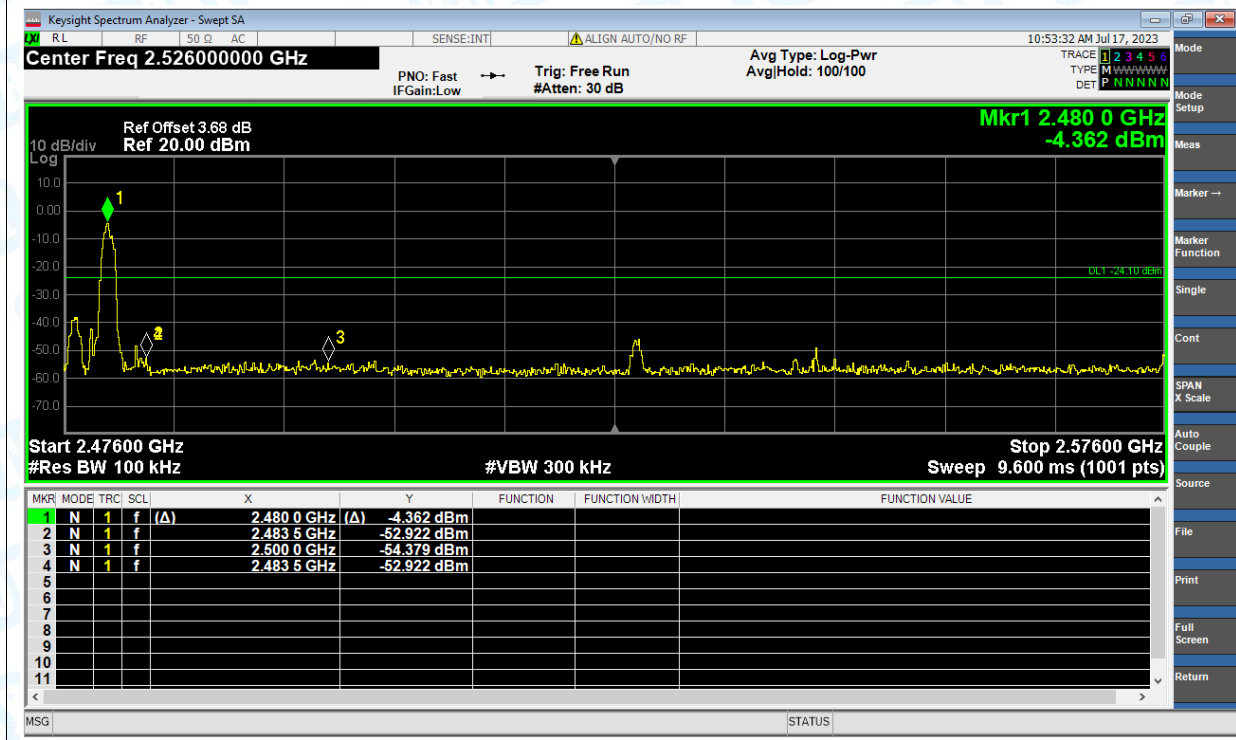
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6. Band Edge(Hopping)

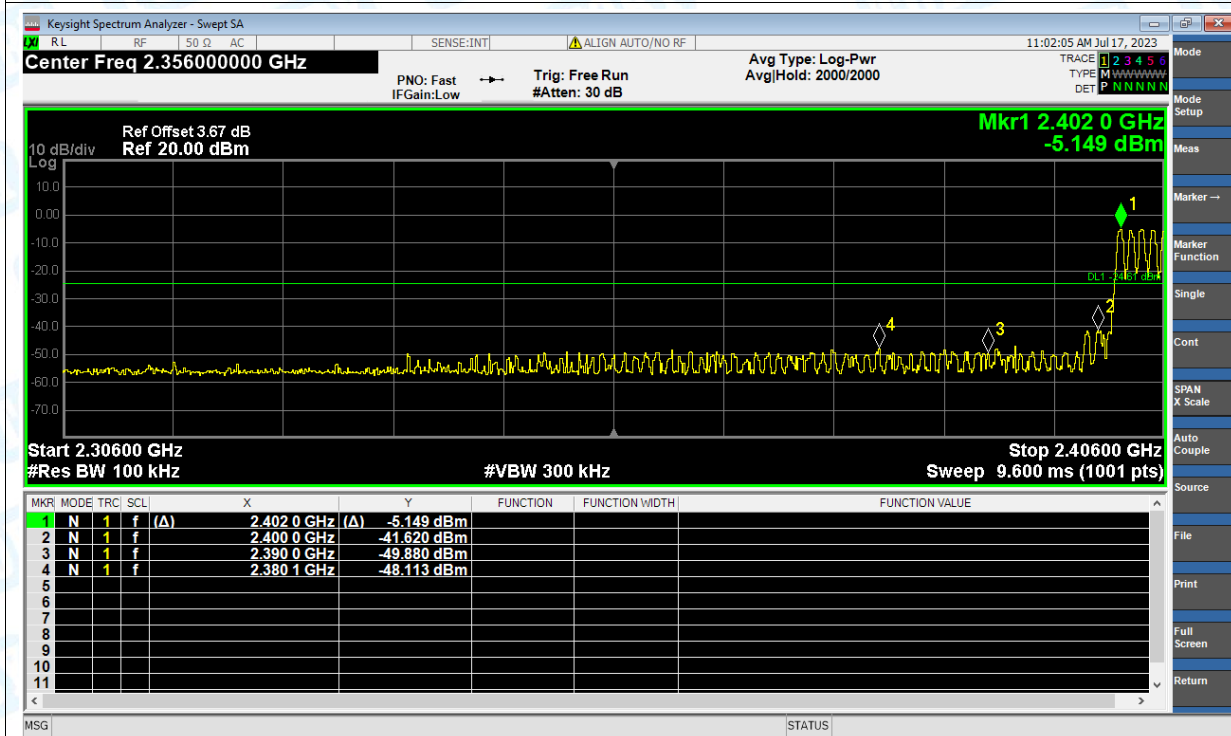
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-43.5	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-41.27	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-43.44	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-42.04	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-42.14	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-41.77	-20	Pass

Test Graphs

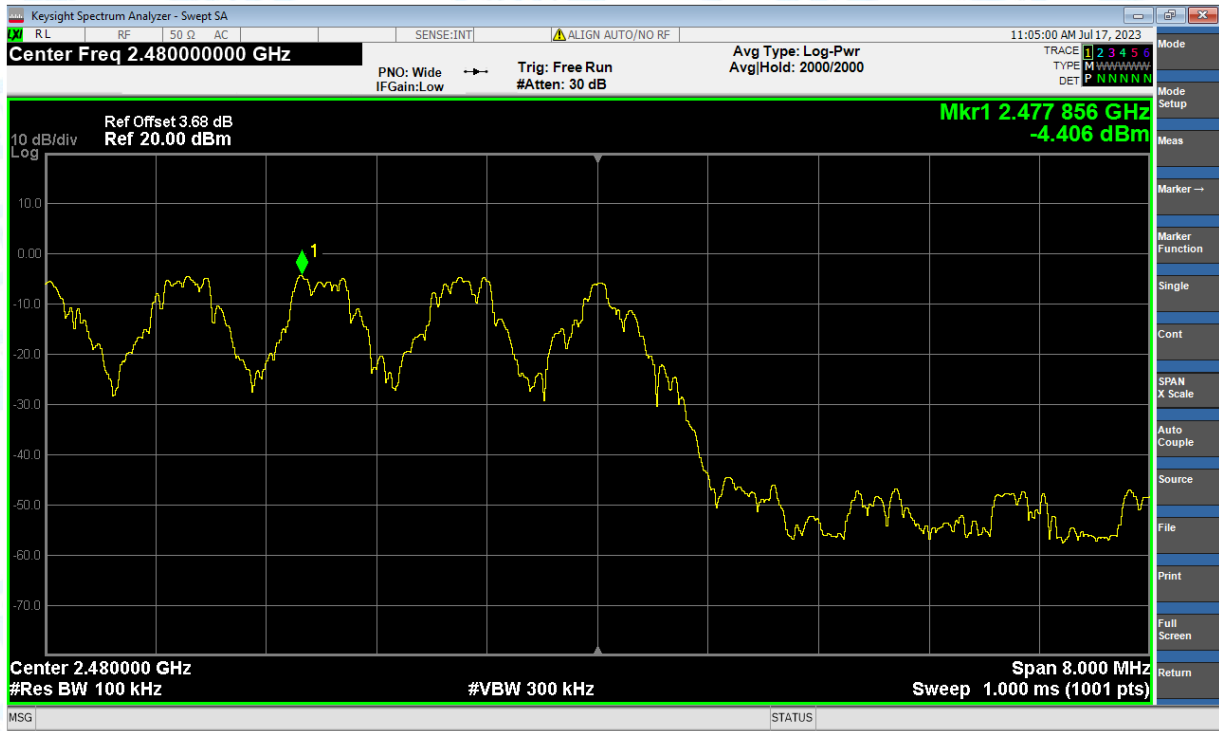
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



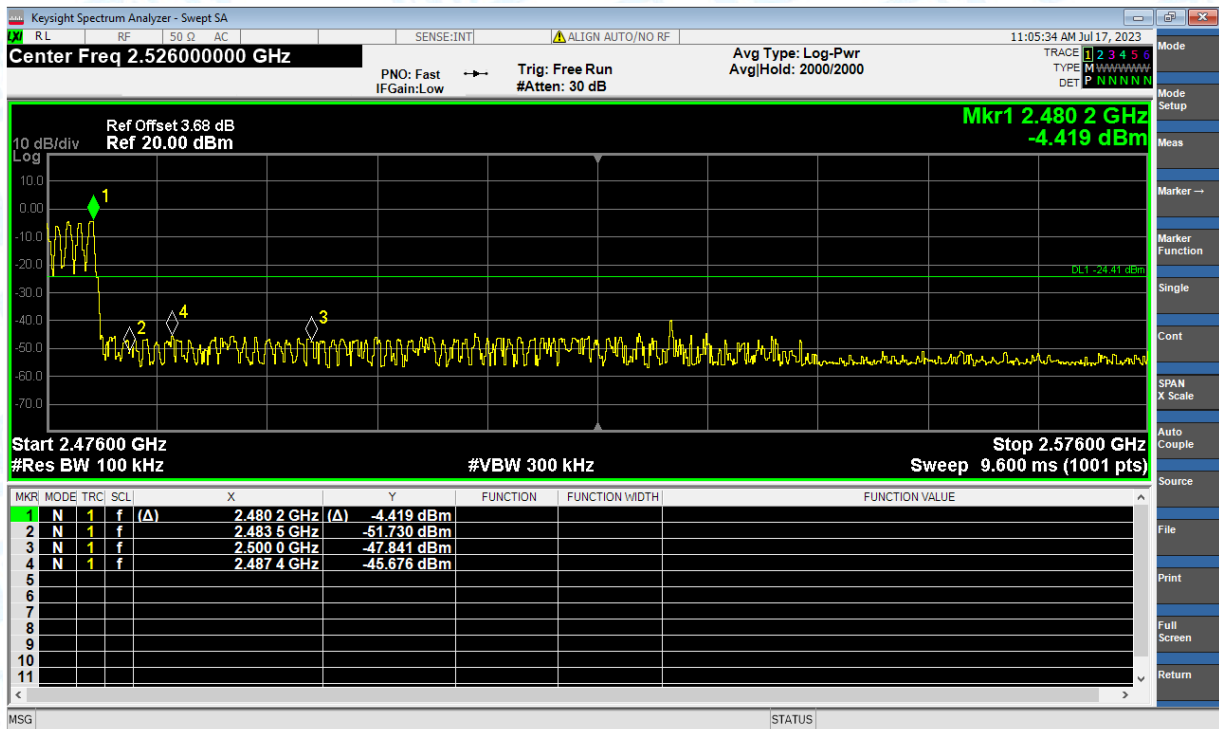
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



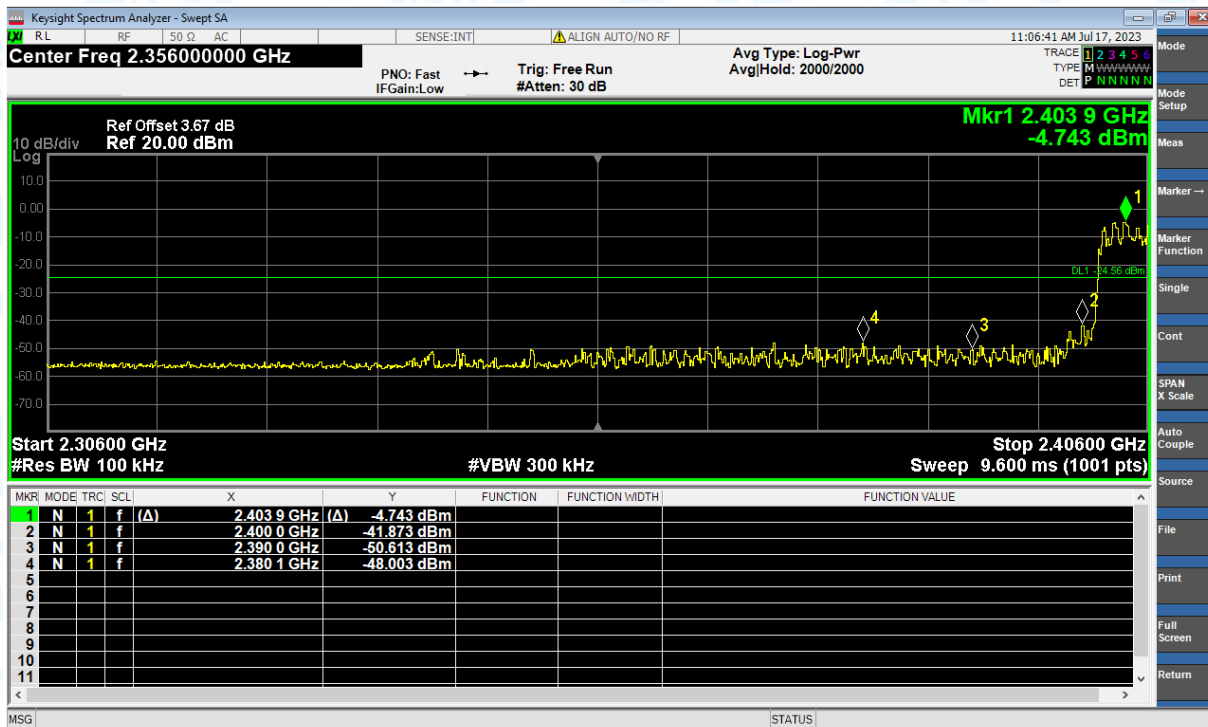
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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



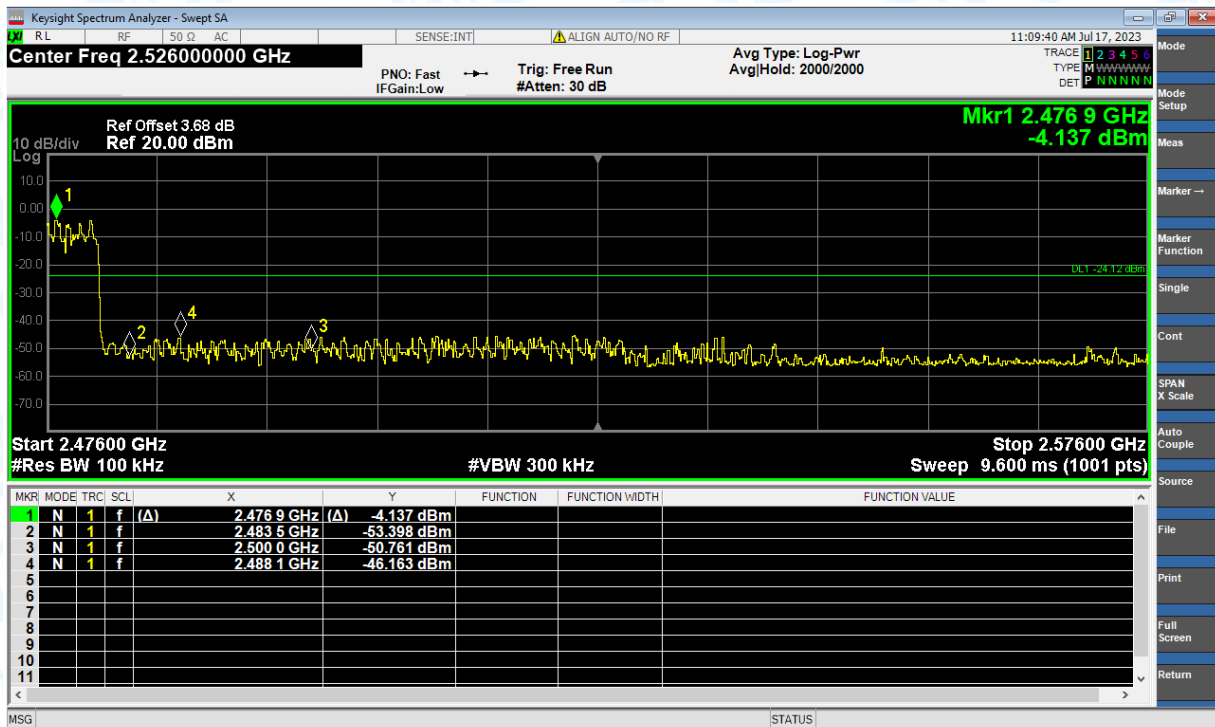
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



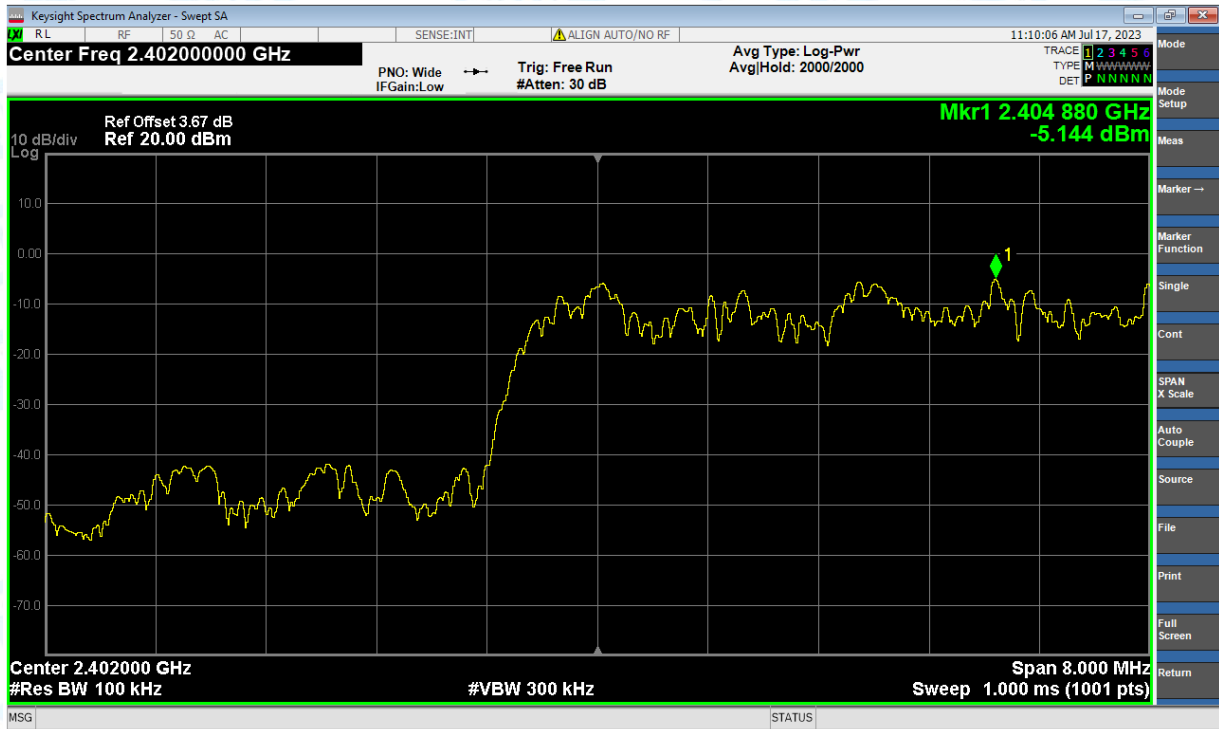
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



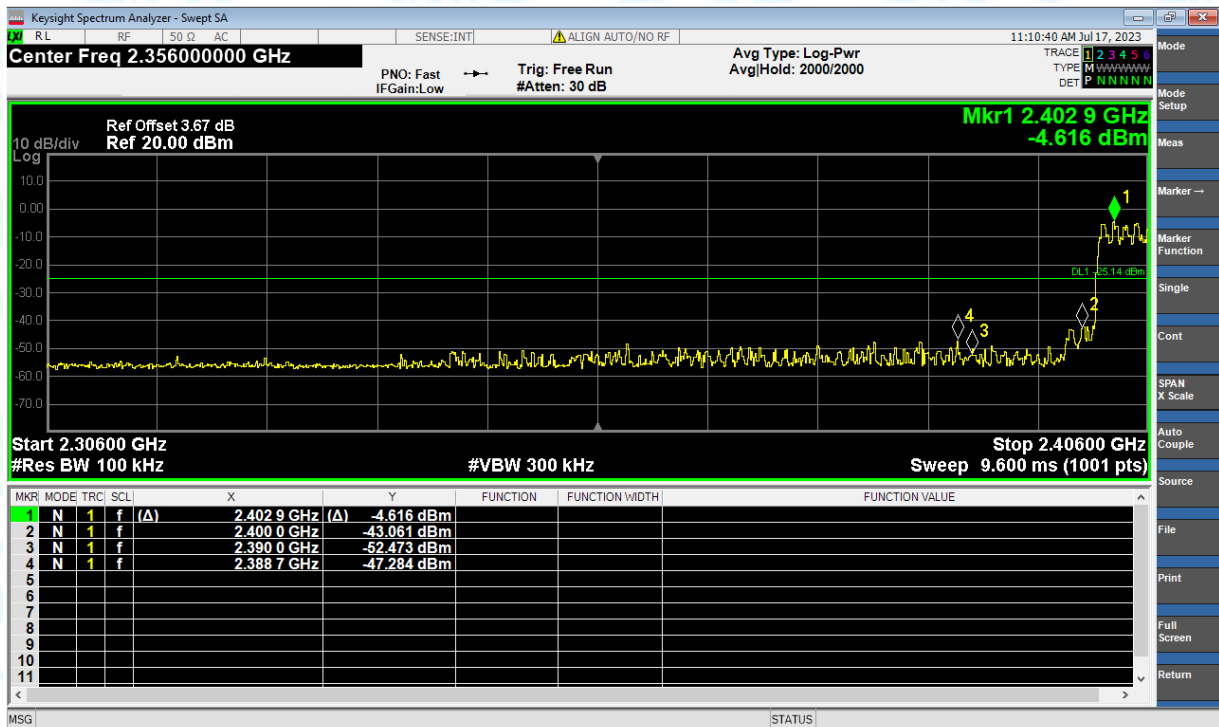
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



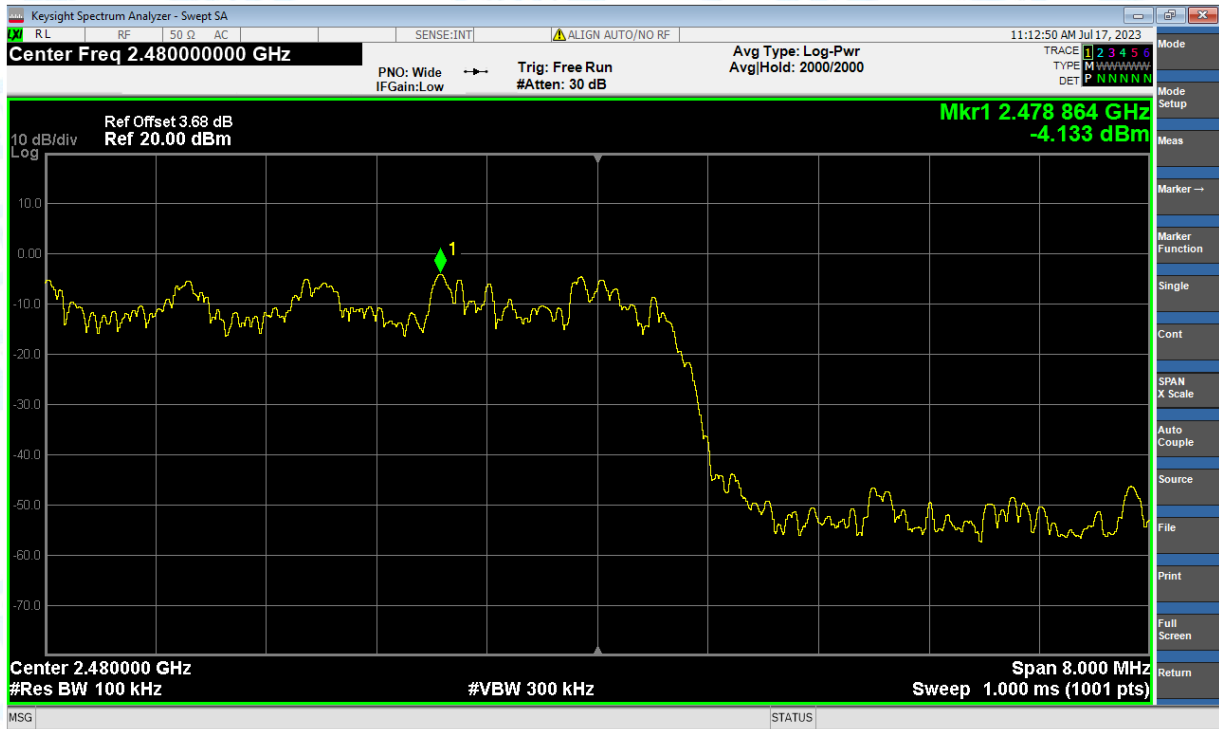
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



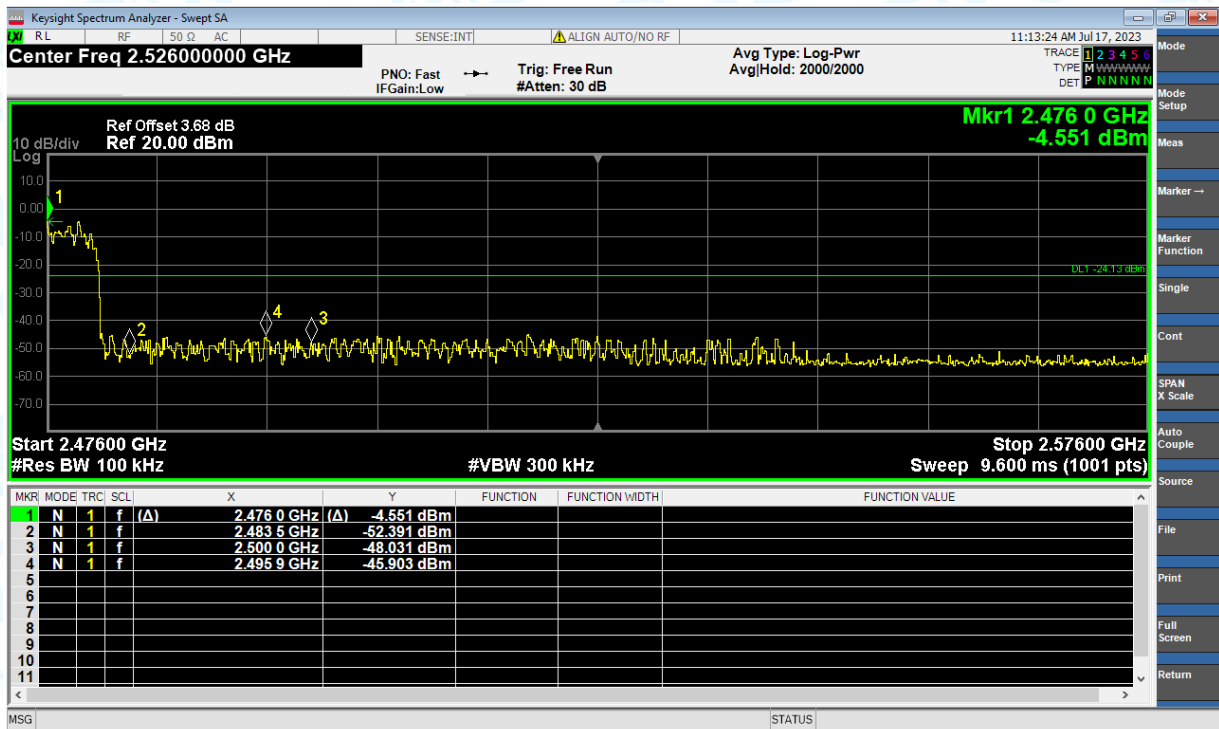
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

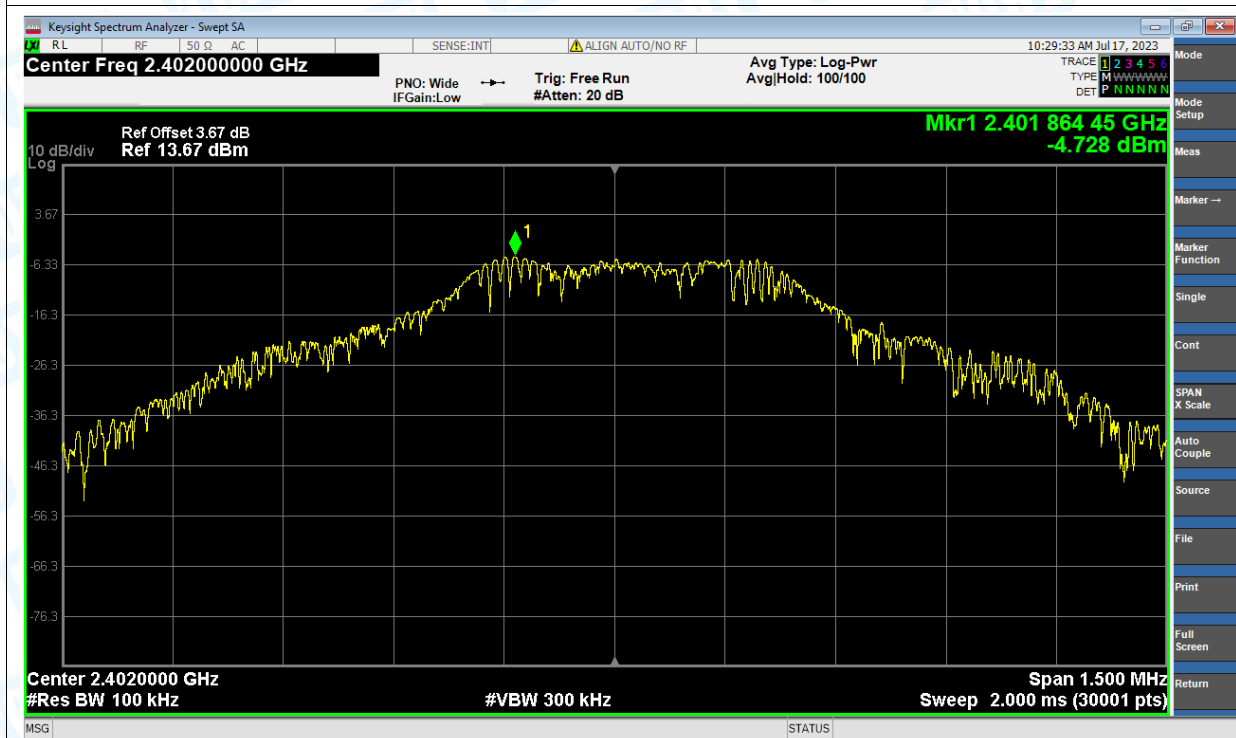


7. Conducted RF Spurious Emission

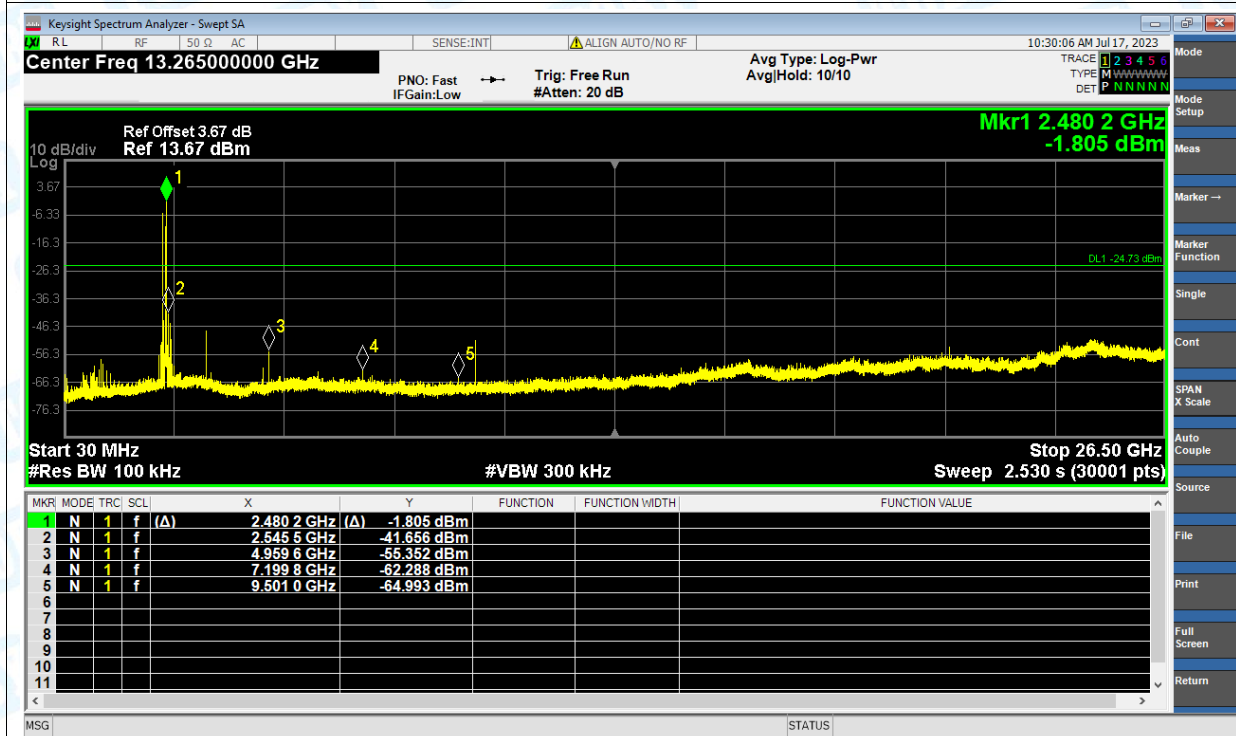
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-36.93	-20	Pass
NVNT	1-DH1	2441	Ant1	-32.38	-20	Pass
NVNT	1-DH1	2480	Ant1	-43.42	-20	Pass
NVNT	2-DH1	2402	Ant1	-45.73	-20	Pass
NVNT	2-DH1	2441	Ant1	-44.61	-20	Pass
NVNT	2-DH1	2480	Ant1	-43.14	-20	Pass
NVNT	3-DH1	2402	Ant1	-46.03	-20	Pass
NVNT	3-DH1	2441	Ant1	-43.27	-20	Pass
NVNT	3-DH1	2480	Ant1	-44.58	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



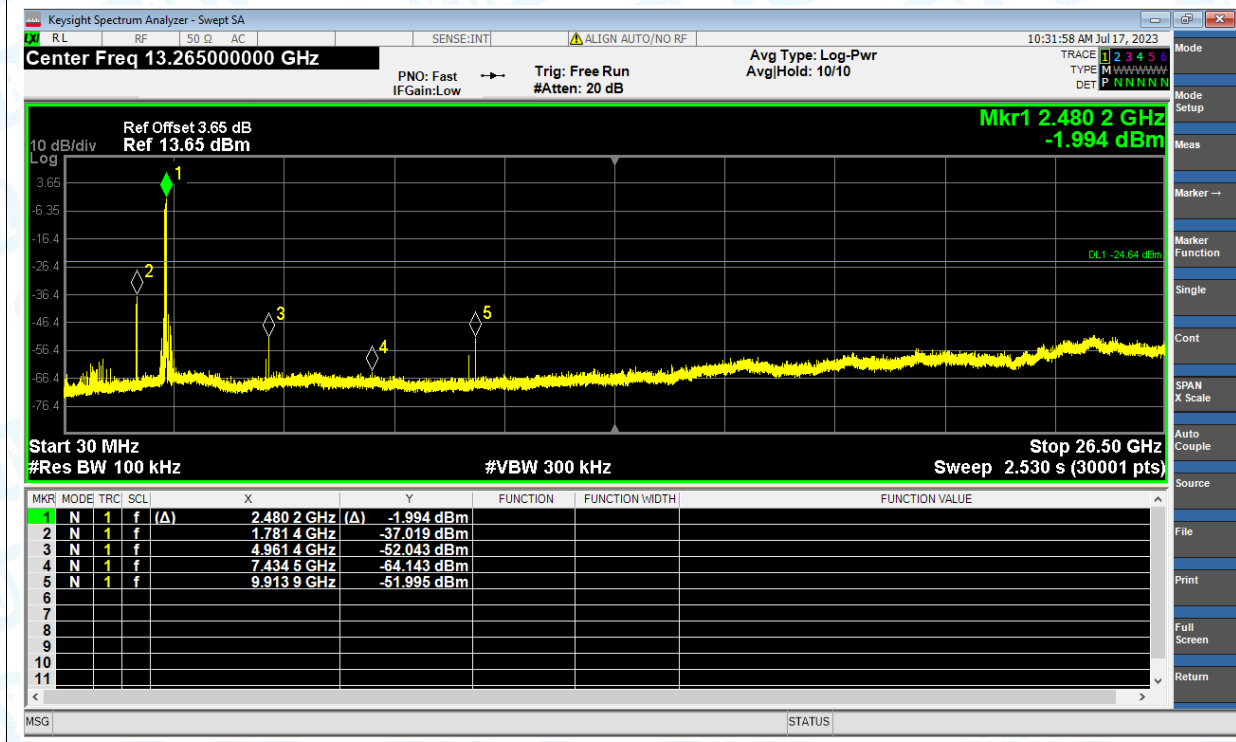
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



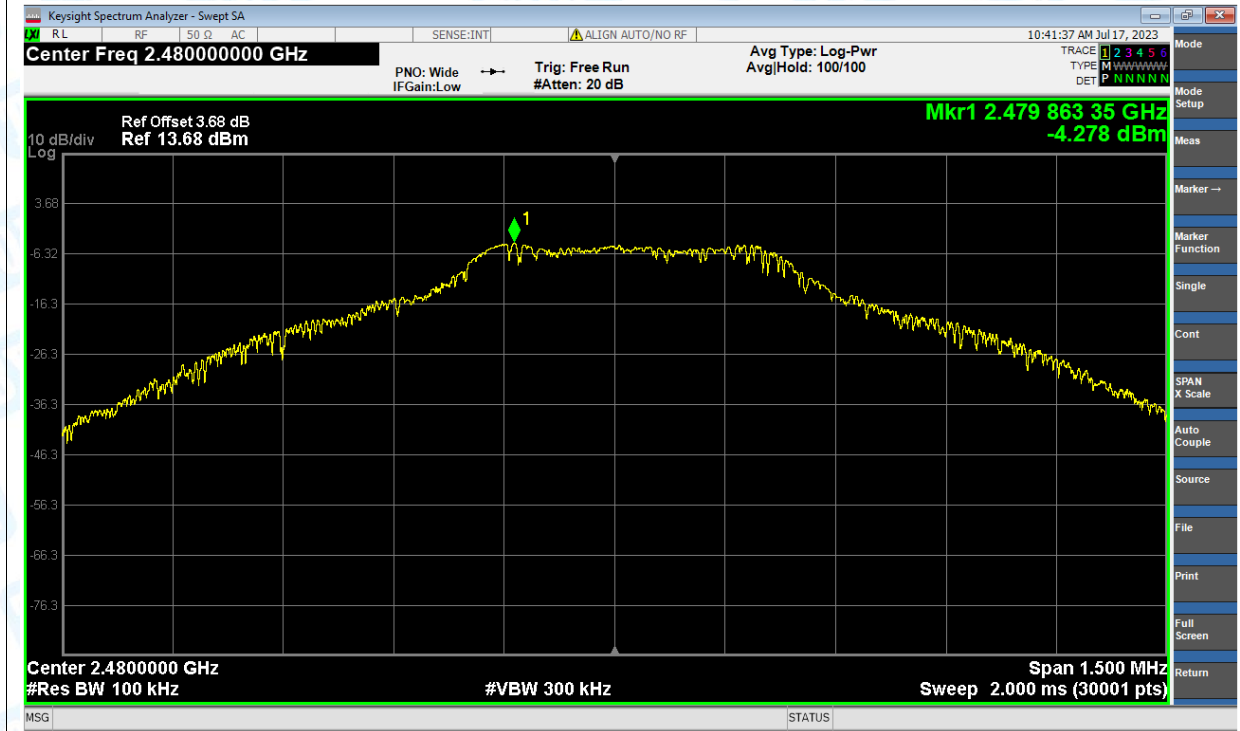
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



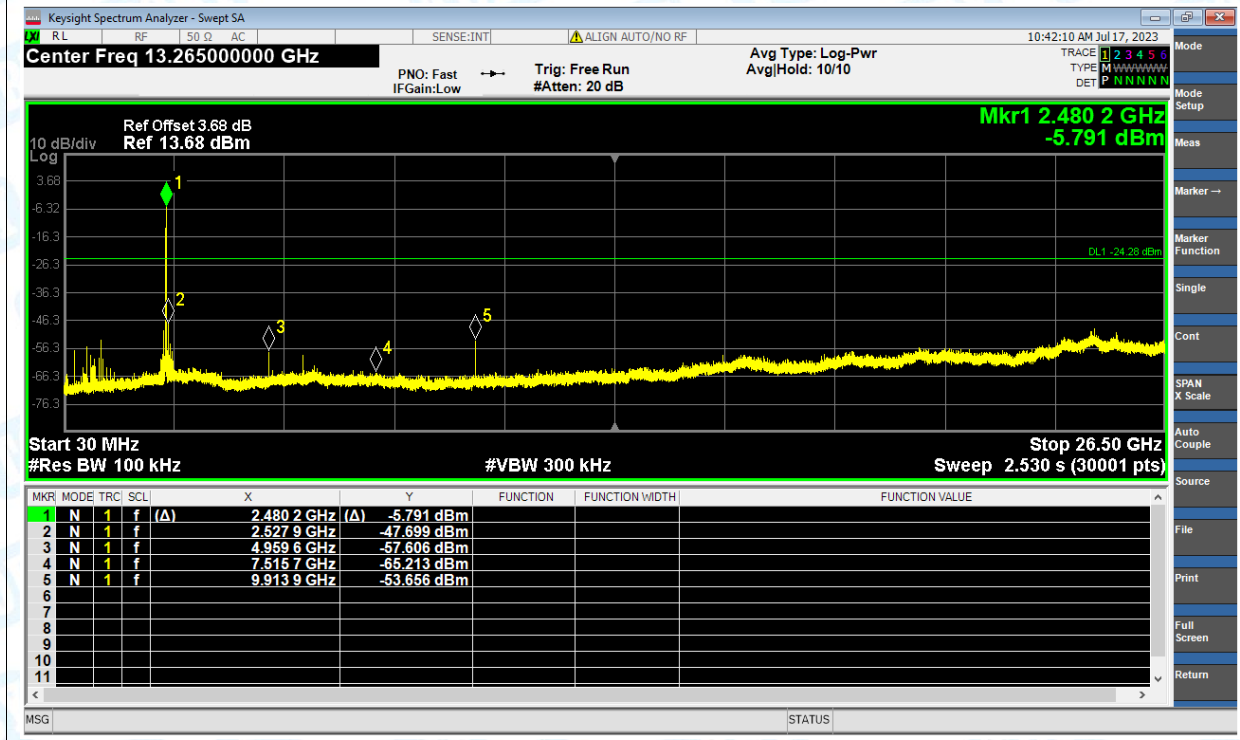
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



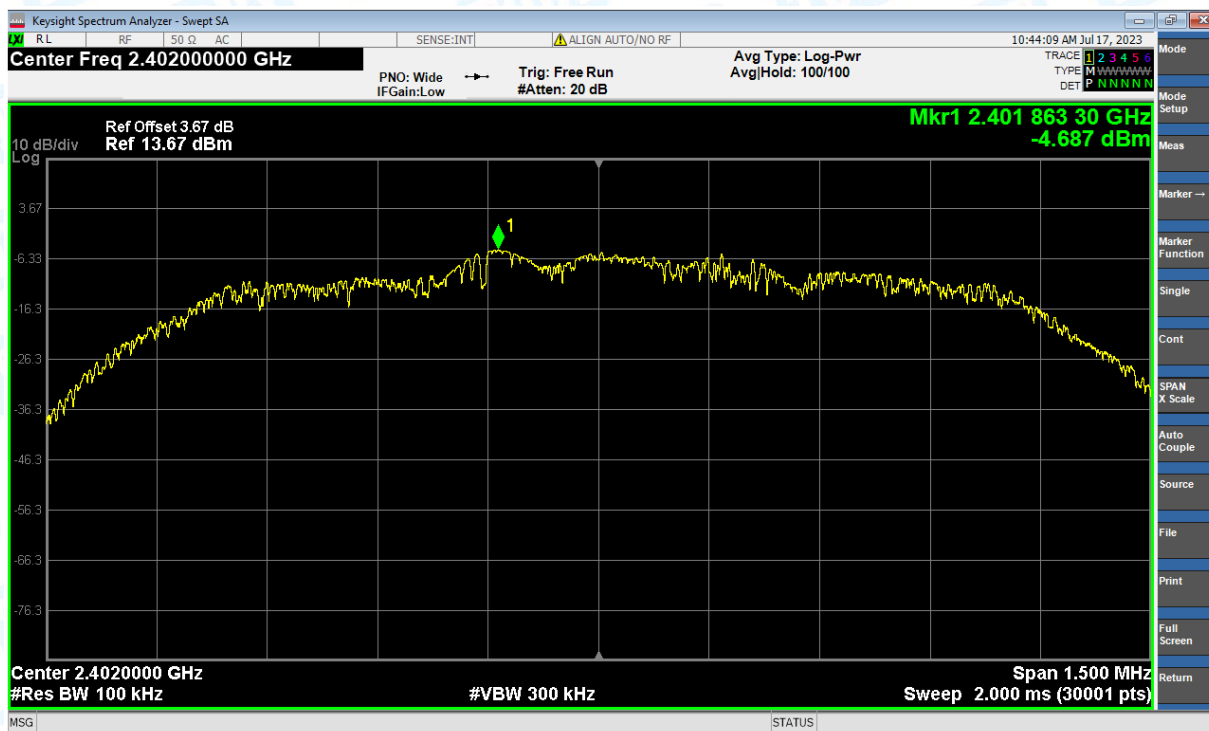
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



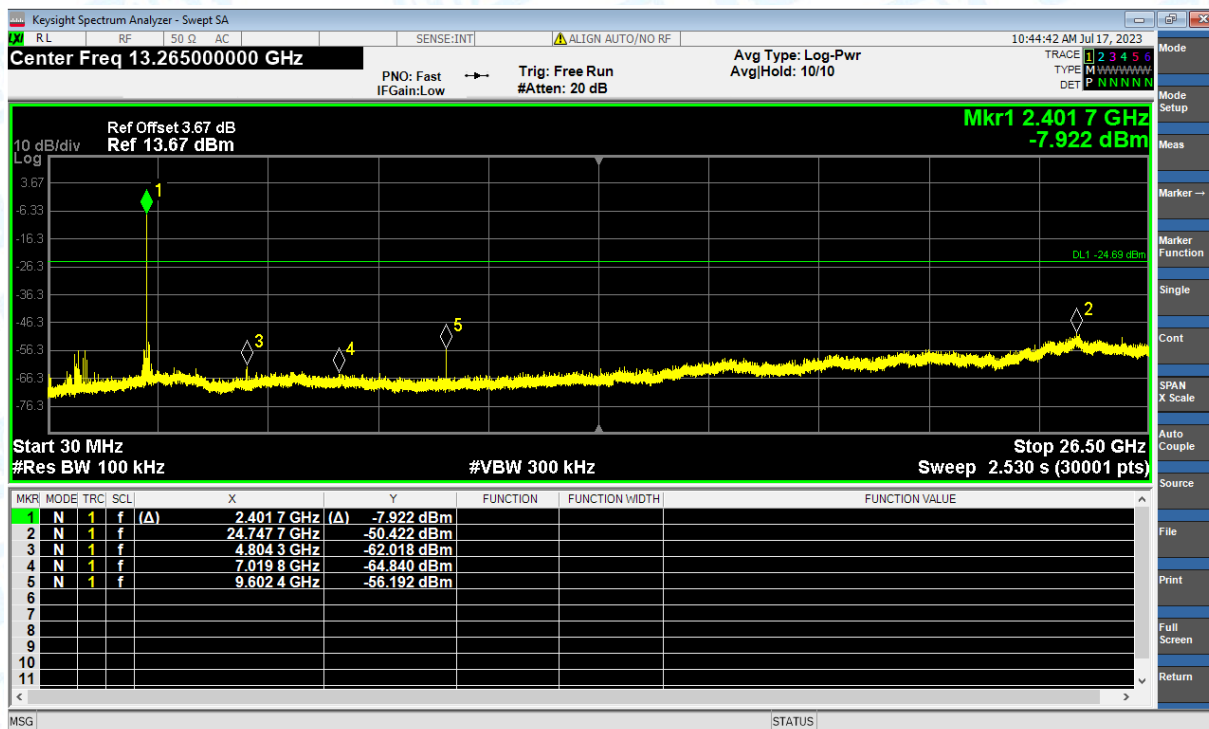
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



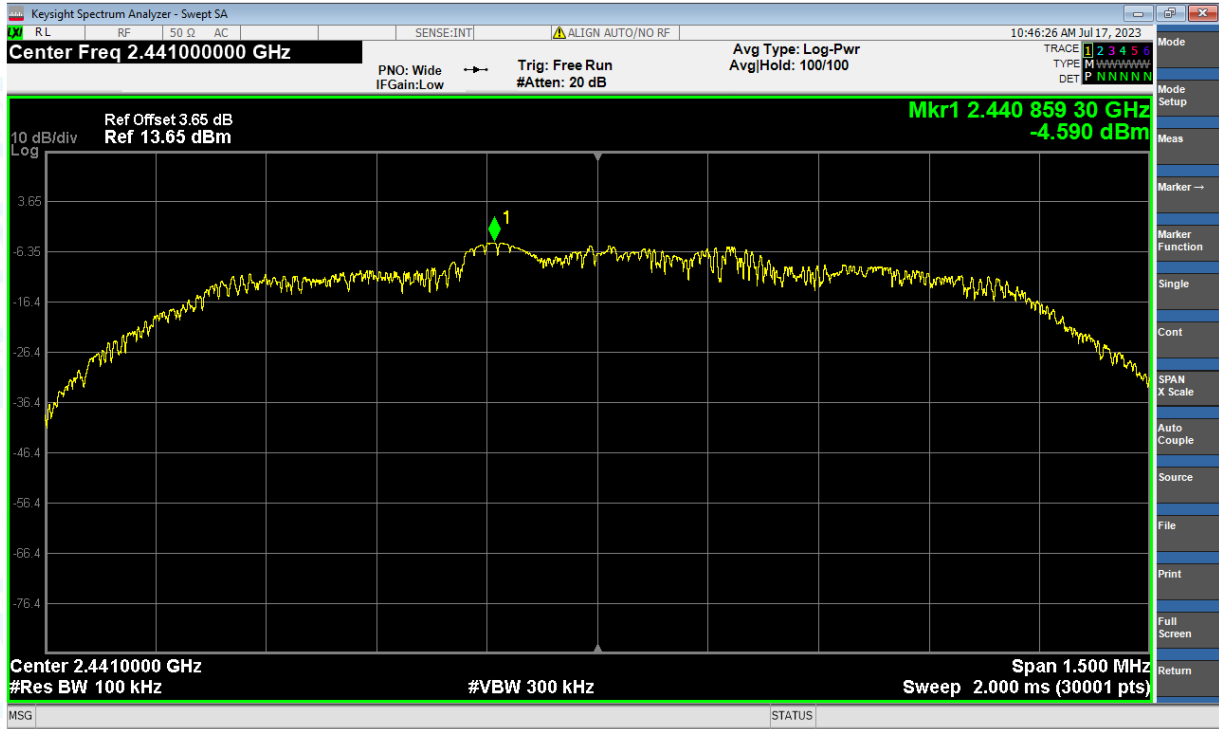
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



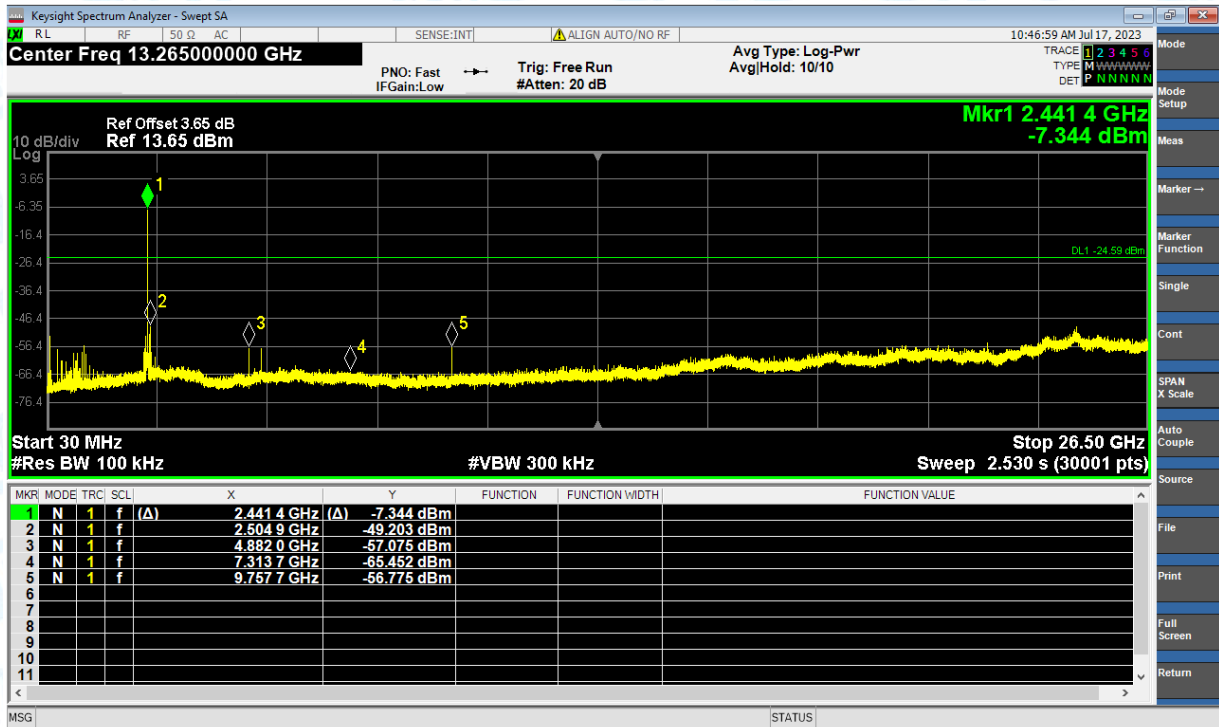
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



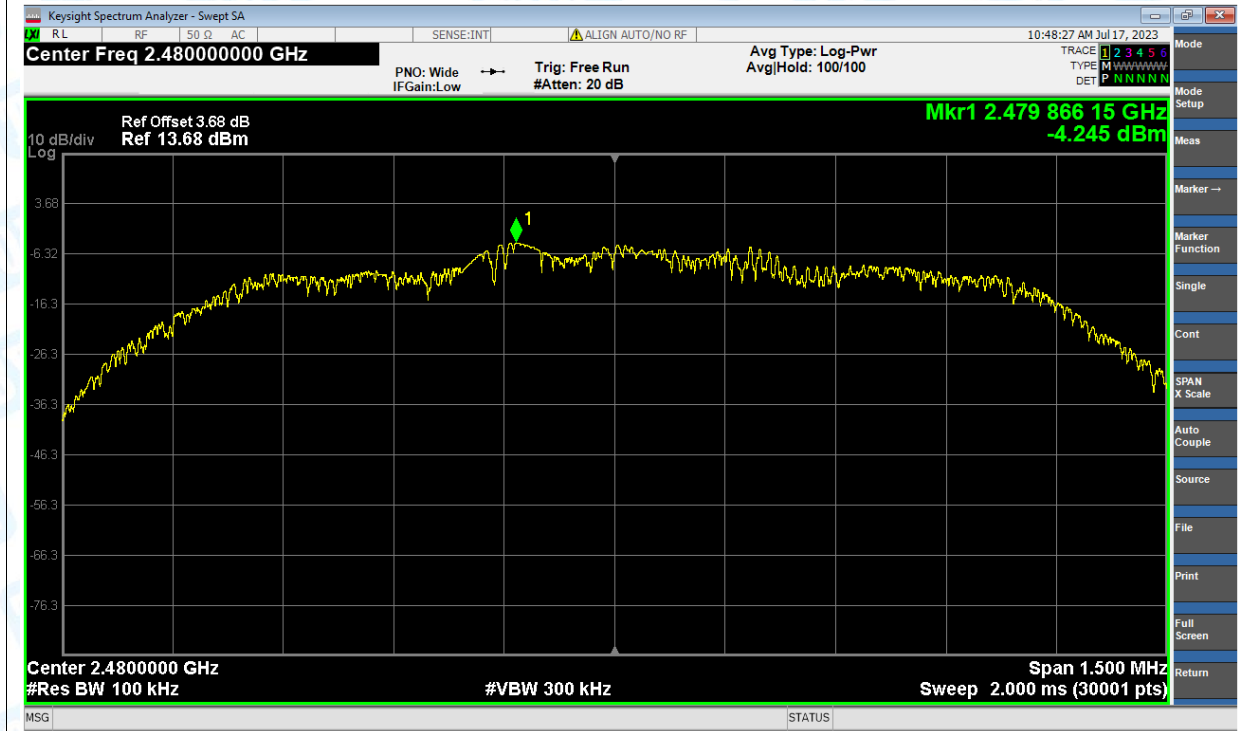
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



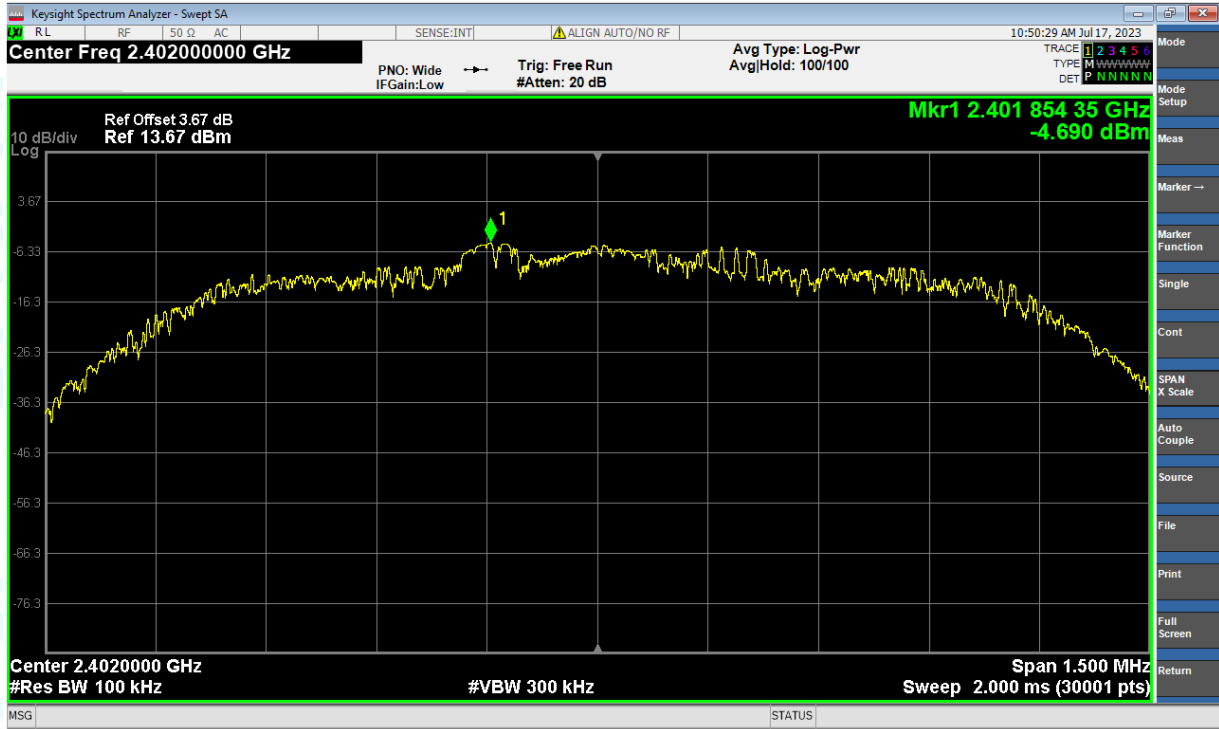
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



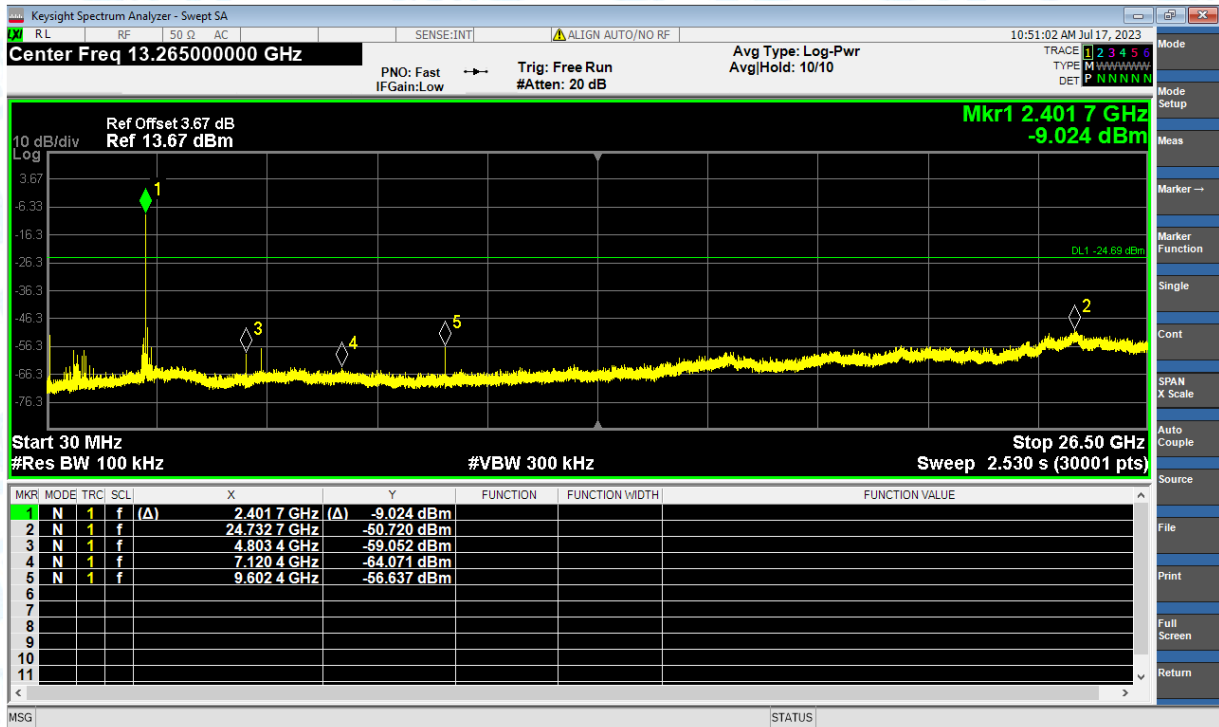
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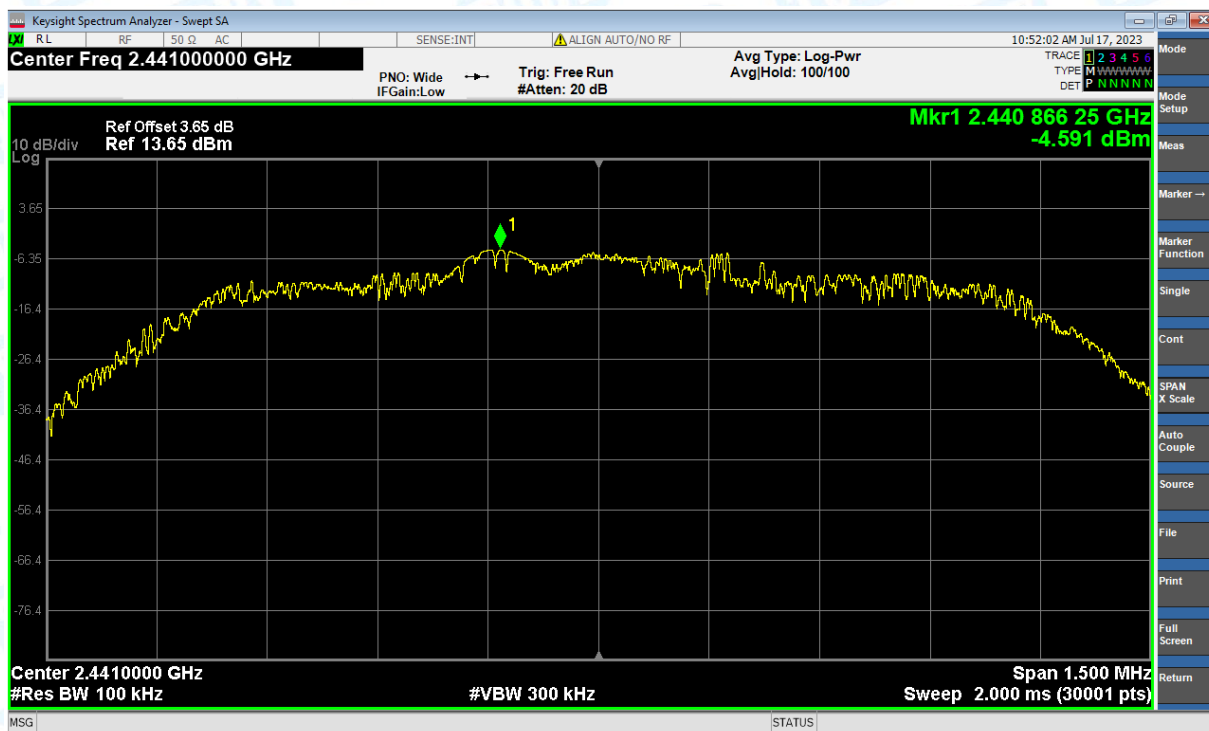
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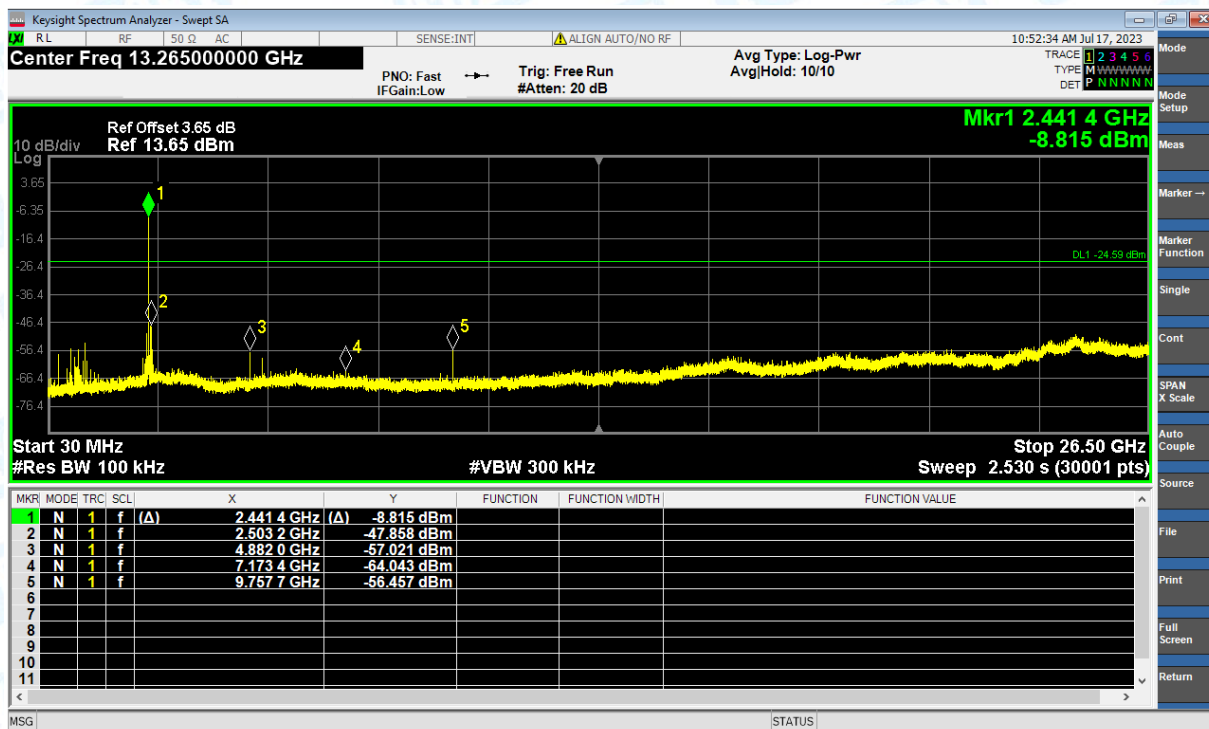
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



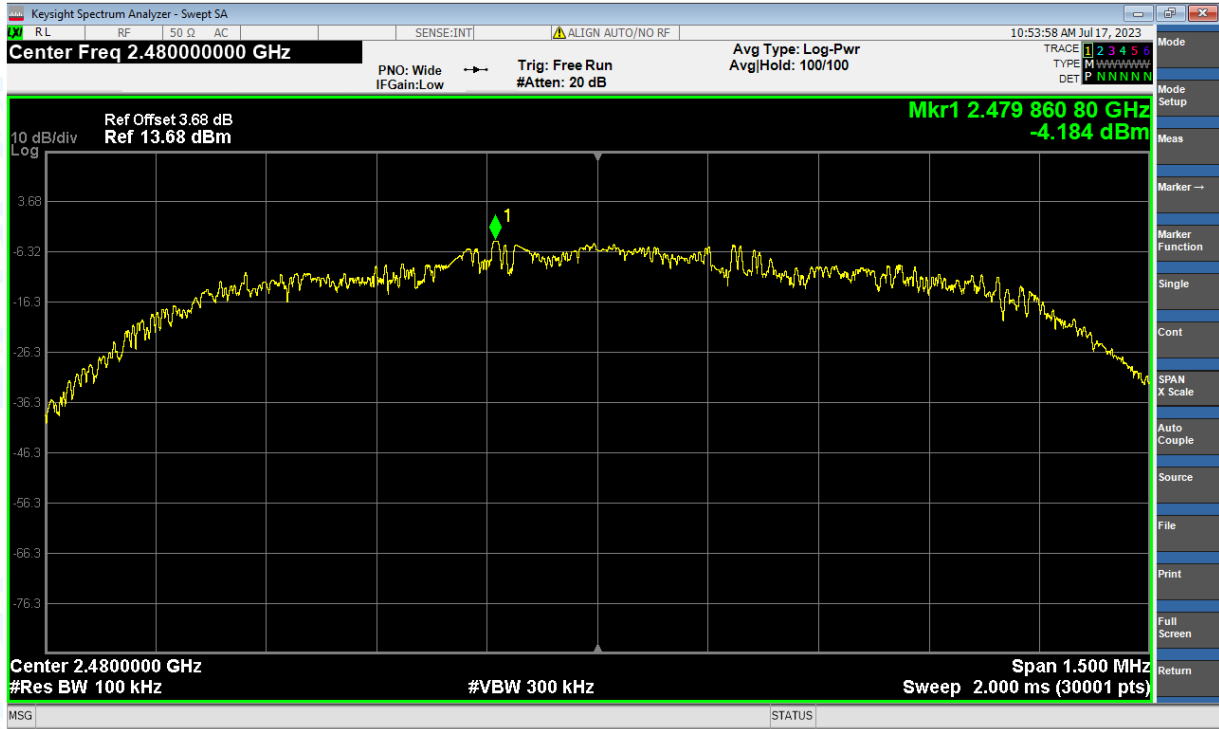
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



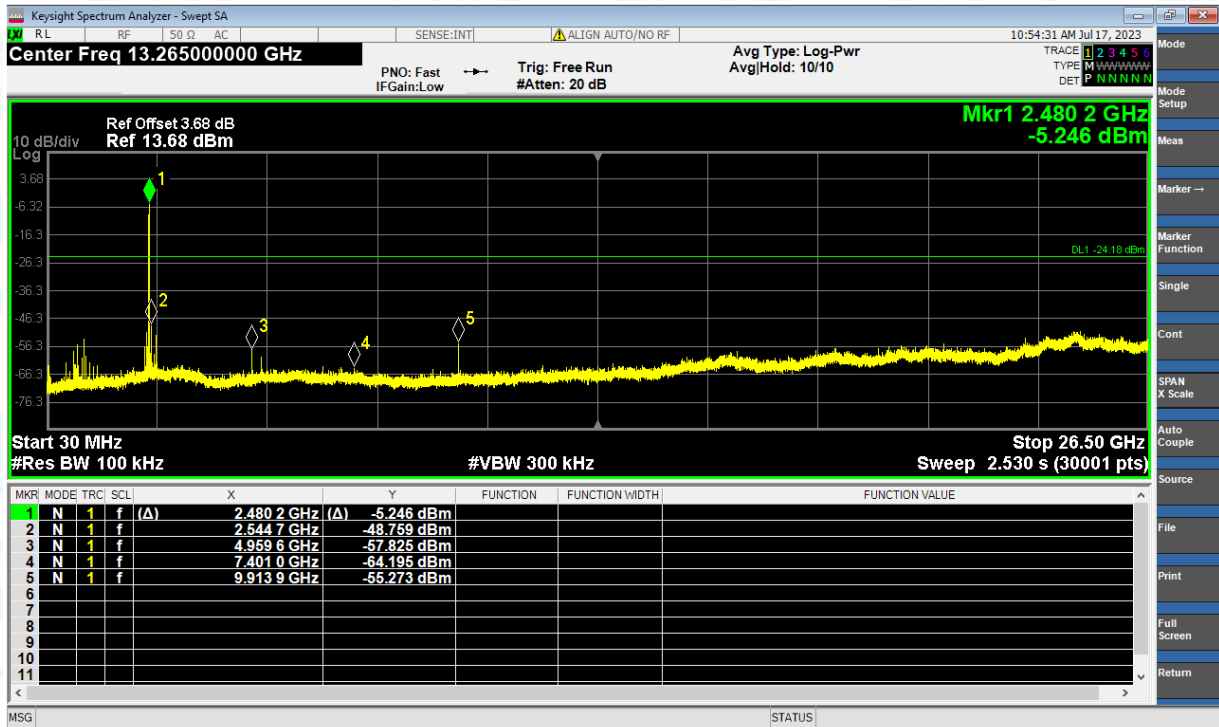
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

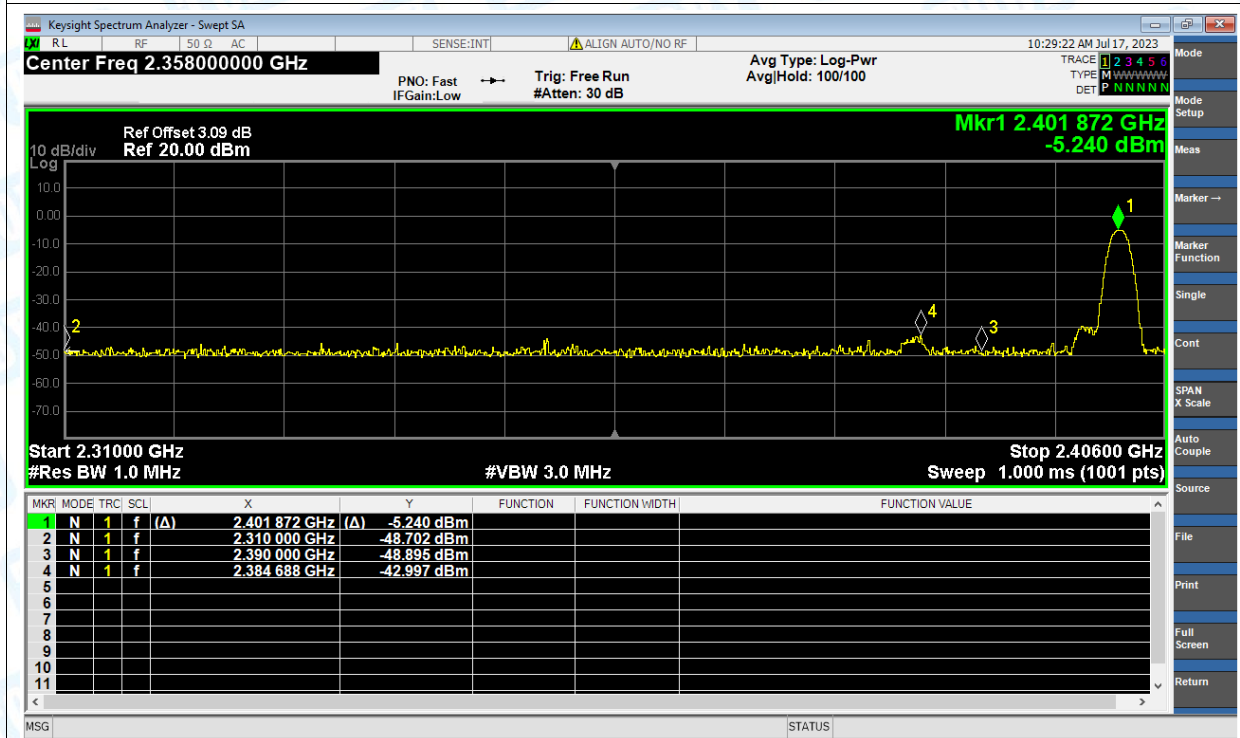


8. Restrict Band

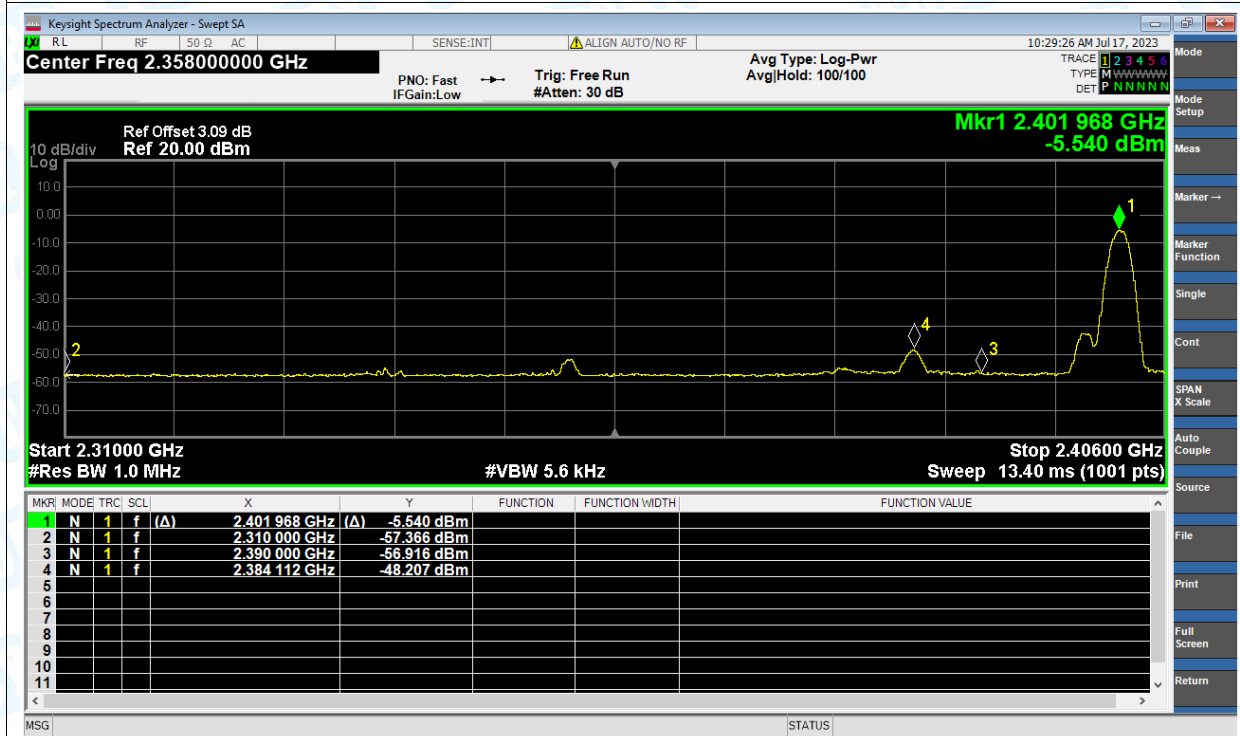
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-48.7	2	48.56	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-57.37	2	39.89	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2384.688	-43	2	54.26	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2384.112	-48.21	2	49.05	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-49.67	2	47.59	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.67	2	40.59	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46.29	2	50.97	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-54.38	2	42.88	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2492.056	-45.12	2	52.14	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-54.38	2	42.88	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-47.83	2	49.43	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.93	2	41.33	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-49.52	2	47.74	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-57.73	2	39.53	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2337.744	-39.08	2	58.18	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2353.872	-52.04	2	45.22	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-46.73	2	50.53	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-57.01	2	40.25	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-45.6	2	51.66	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.46	2	41.8	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2495.464	-43.79	2	53.47	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2499.088	-55.38	2	41.88	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.04	2	50.22	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-56.02	2	41.24	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-49.88	2	47.38	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-57.96	2	39.3	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2338.032	-37.96	2	59.3	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2353.968	-51.99	2	45.27	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-49.04	2	48.22	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-56.83	2	40.43	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-47.87	2	49.39	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.31	2	41.95	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2499.616	-44.76	2	52.5	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.512	-55.31	2	41.95	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-48.09	2	49.17	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.94	2	41.32	Average	54	Pass

Test Graphs

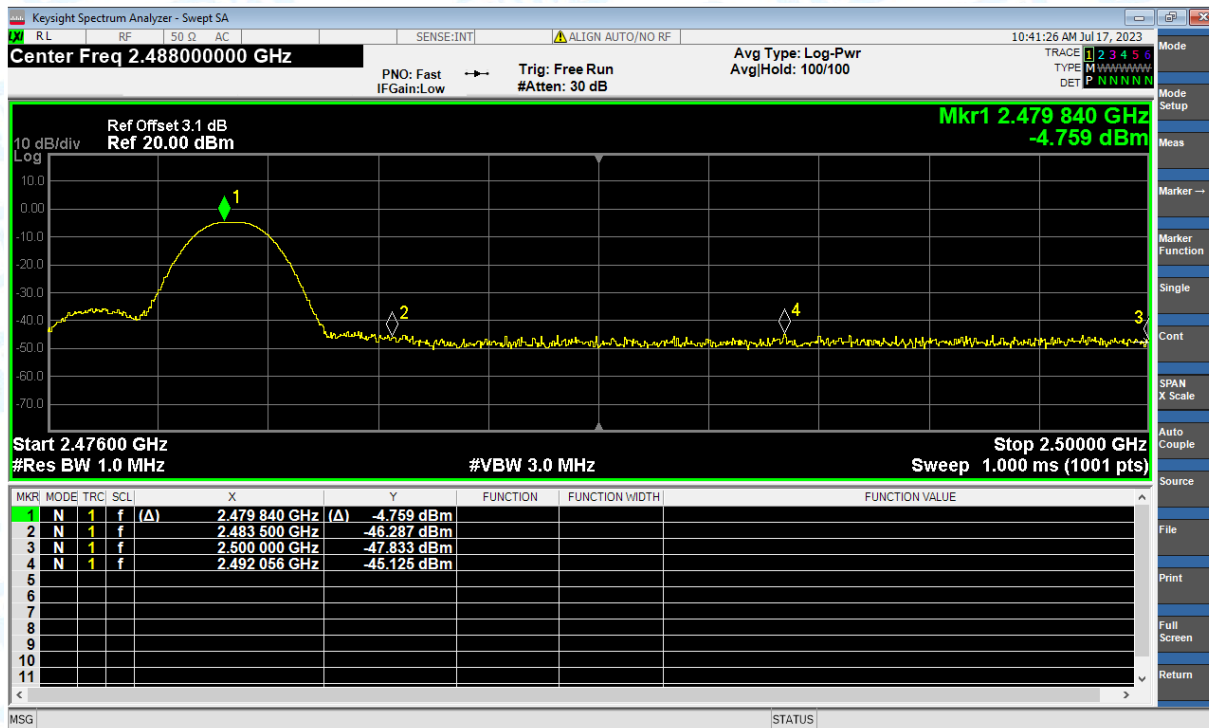
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



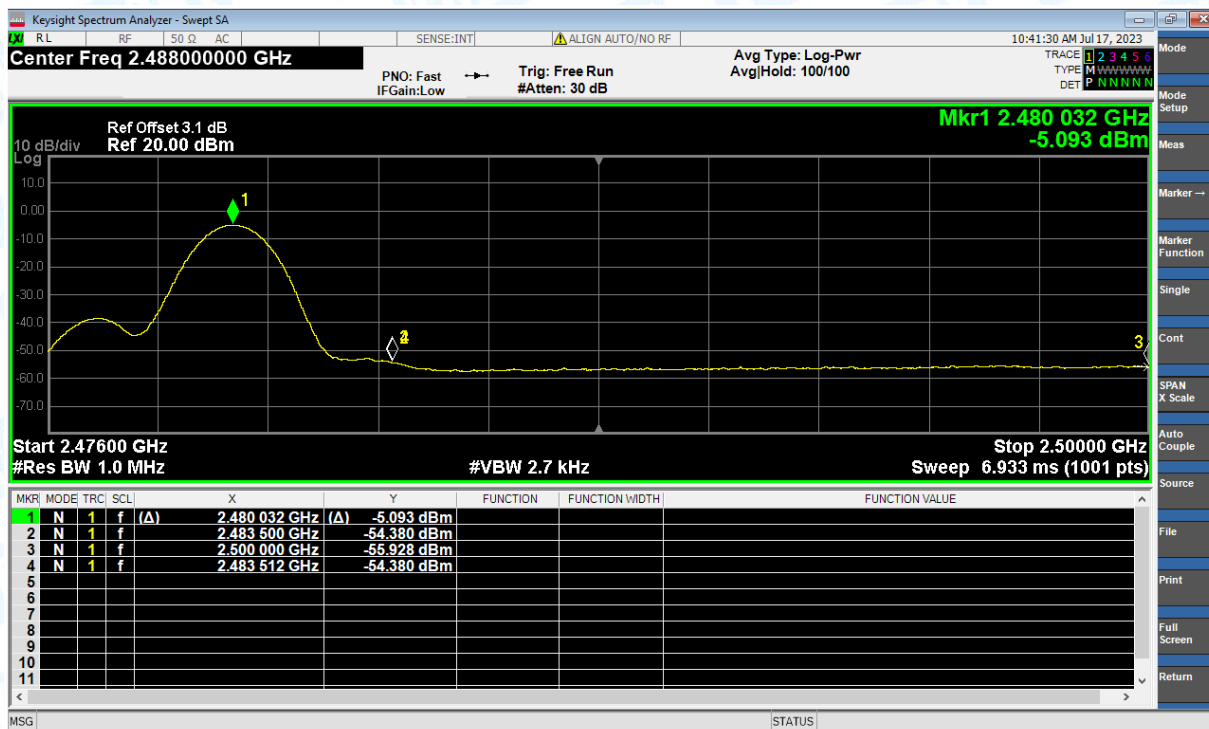
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



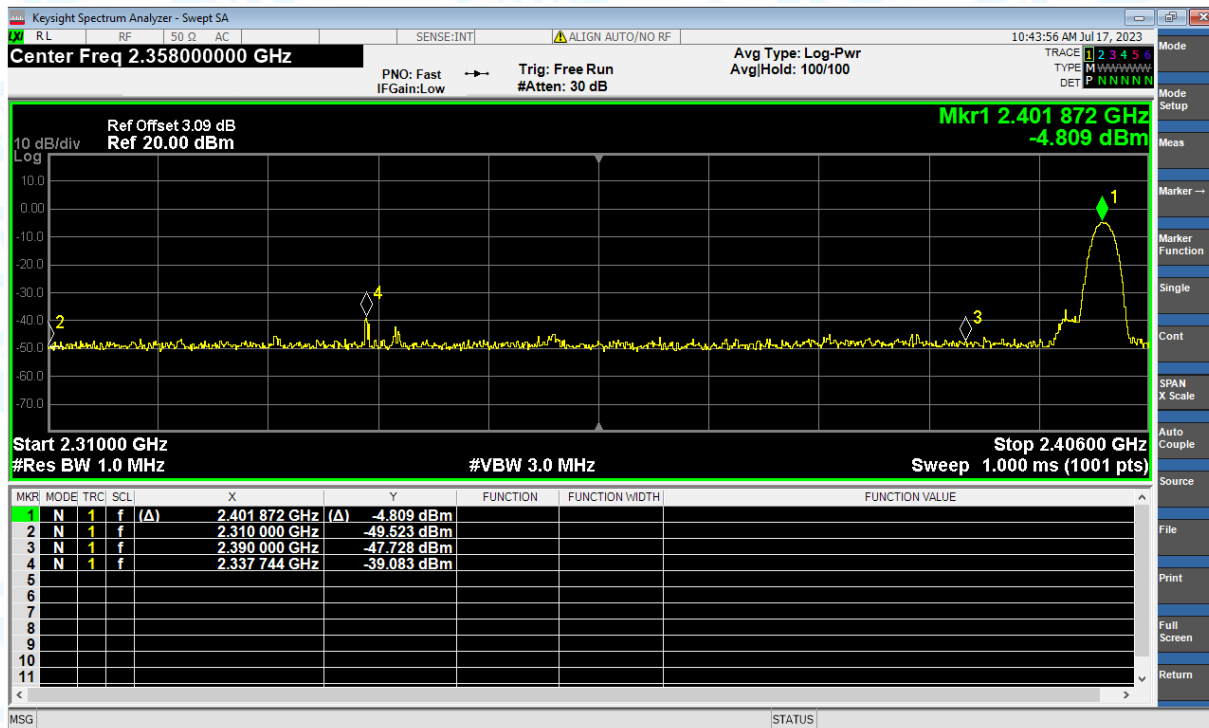
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



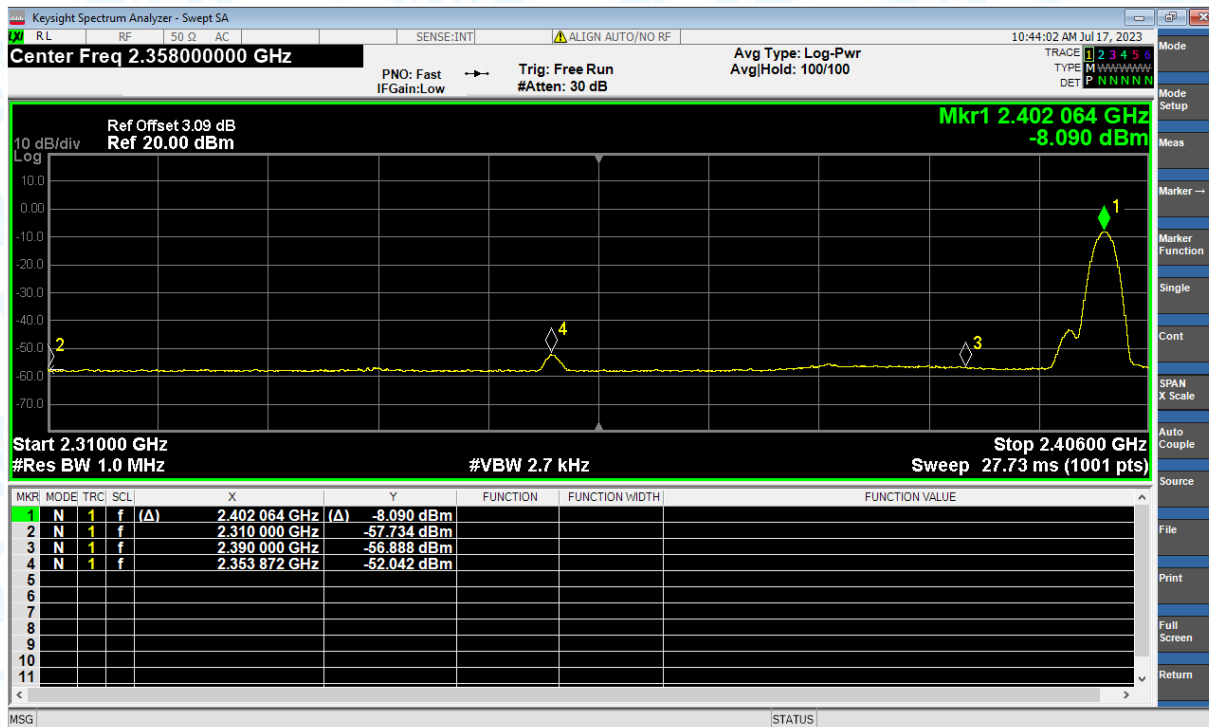
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



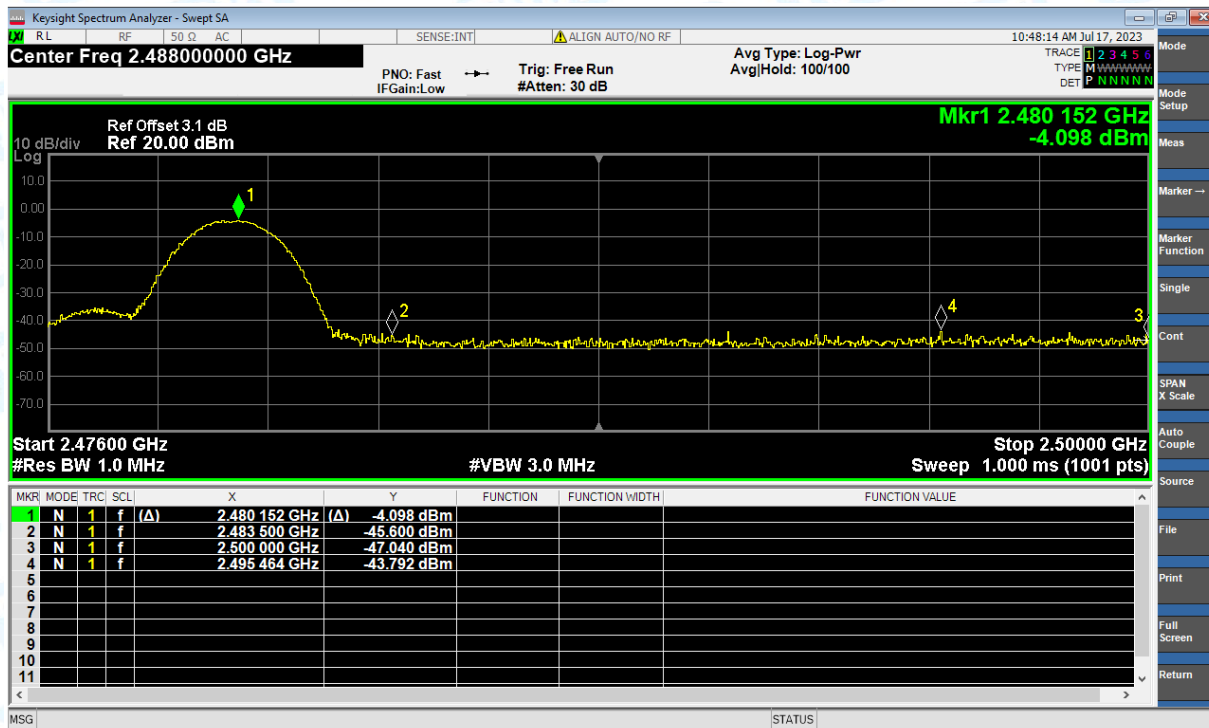
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



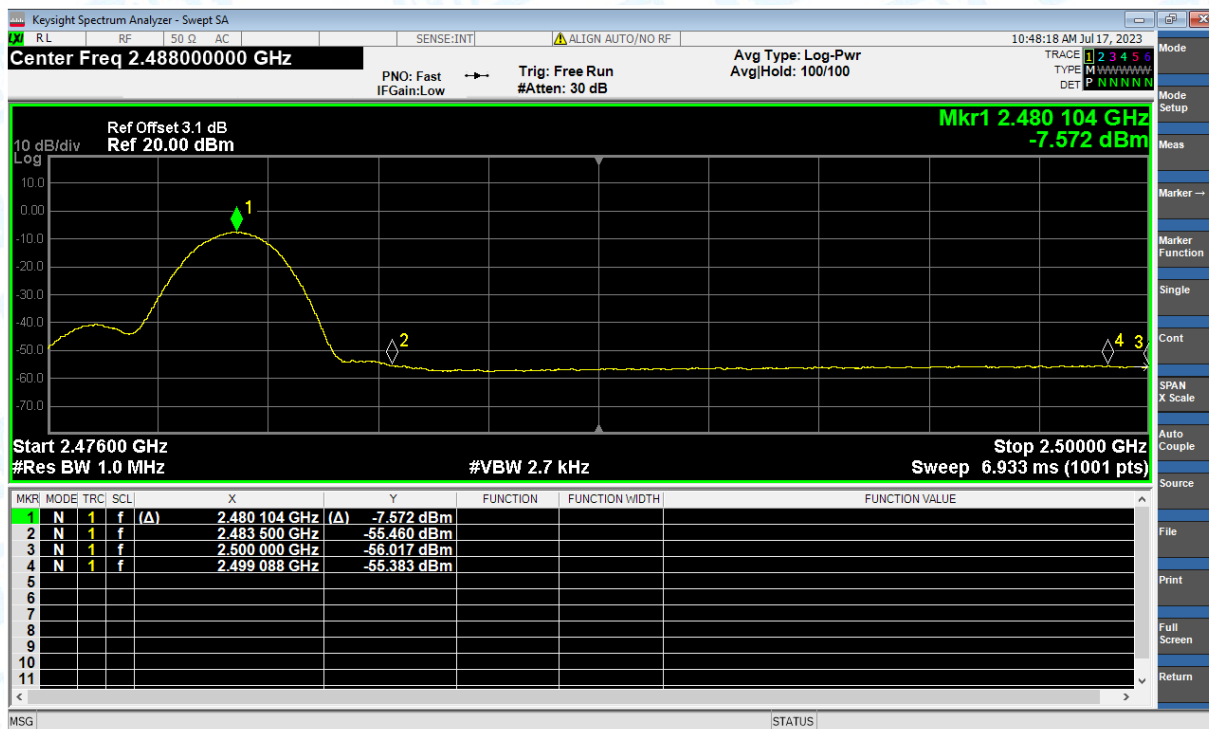
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



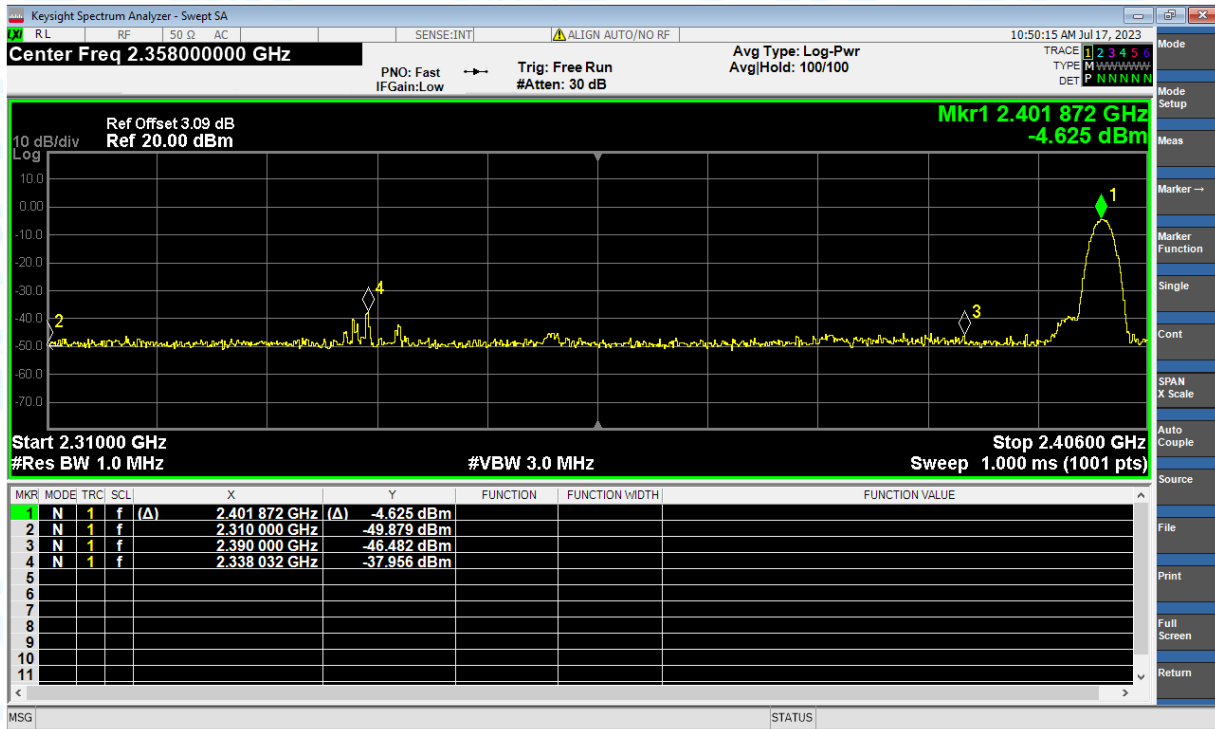
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



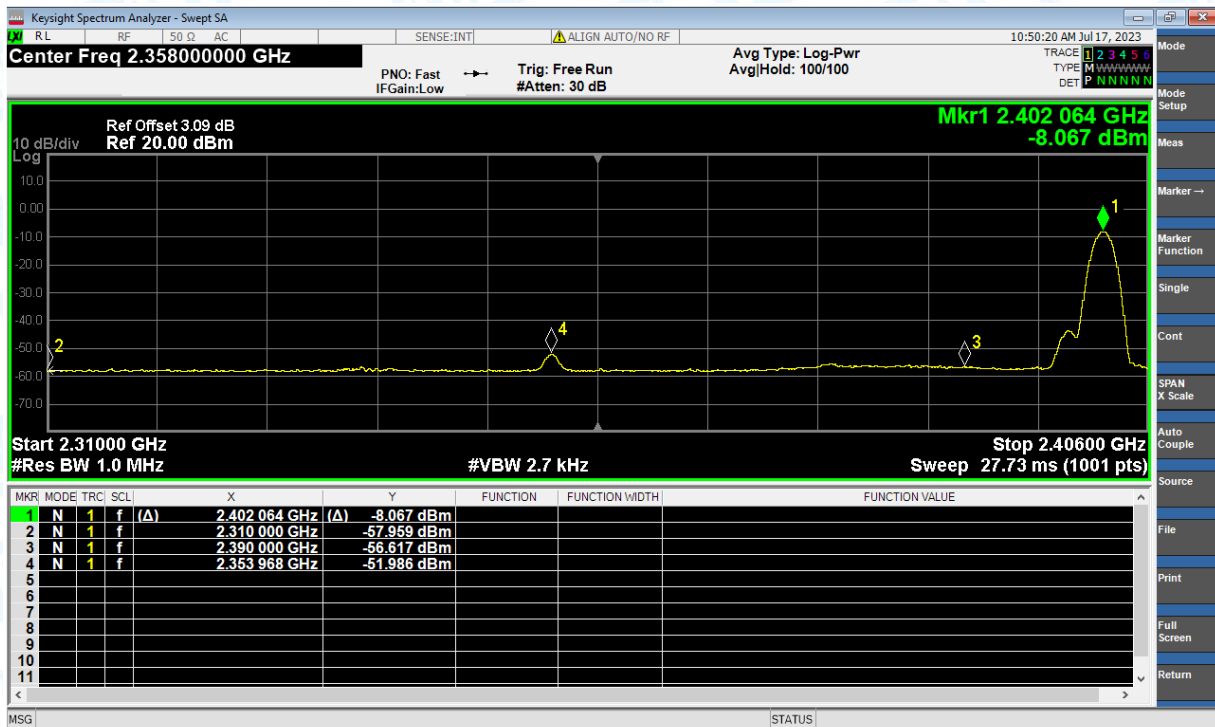
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



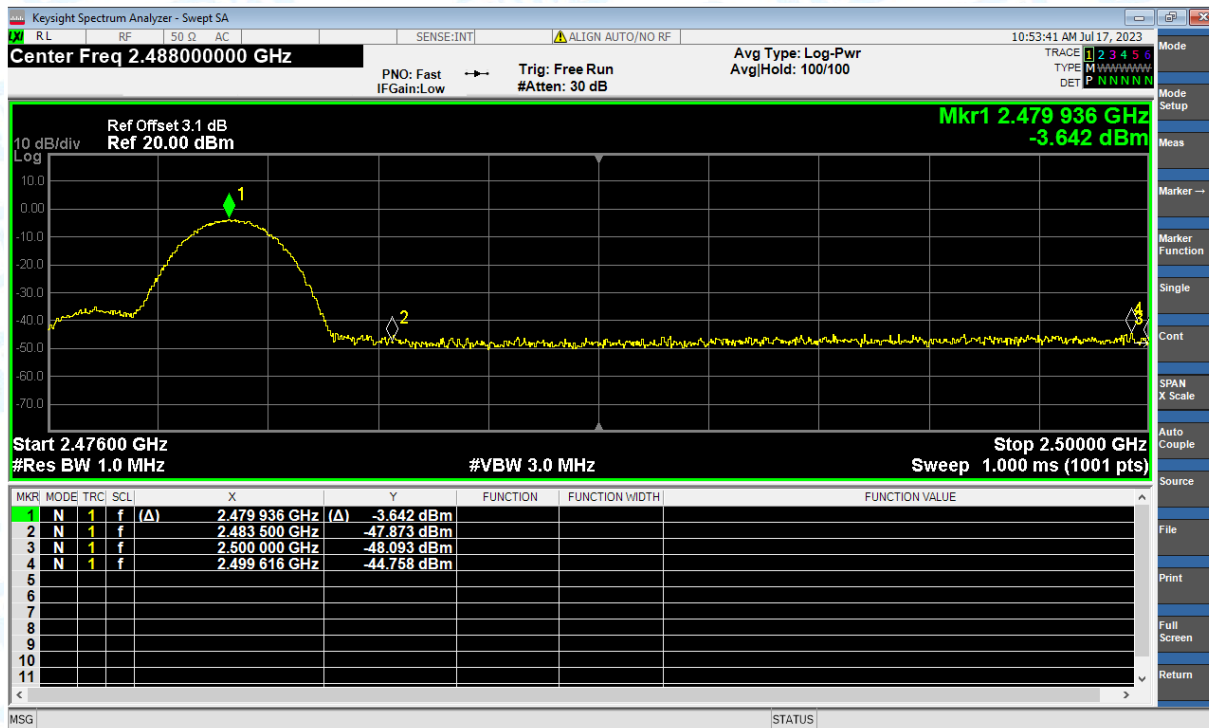
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



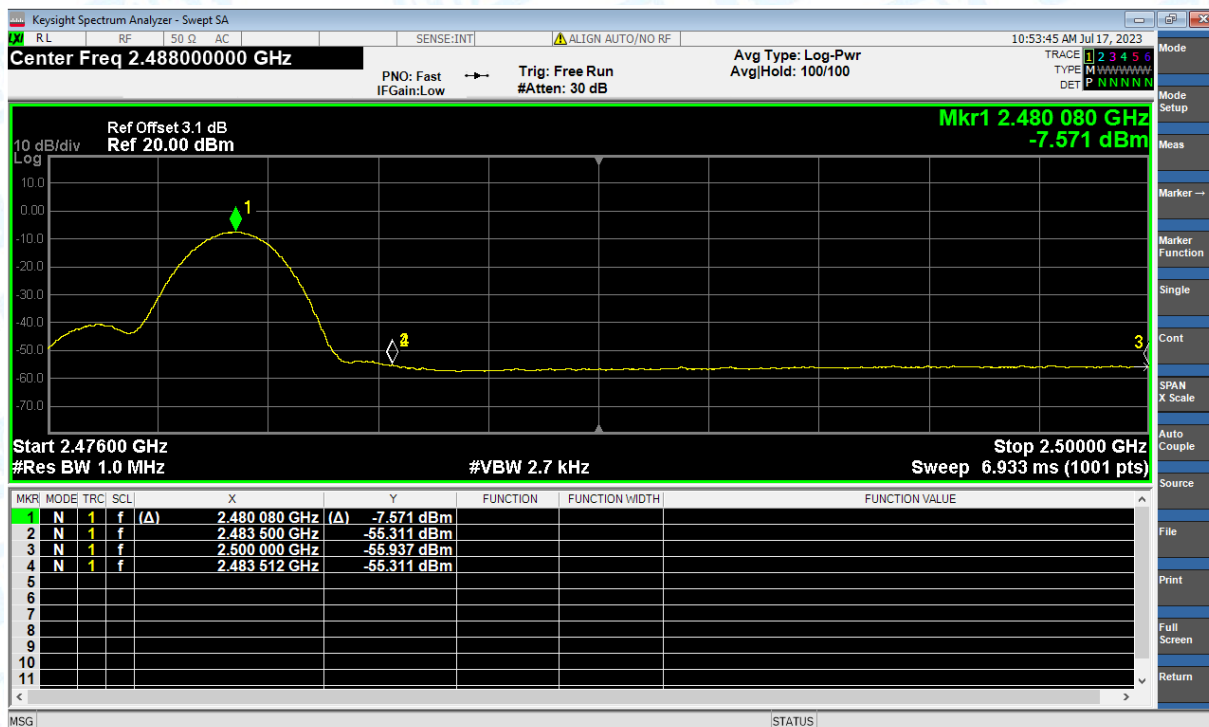
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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



9. Carrier Frequencies Separation

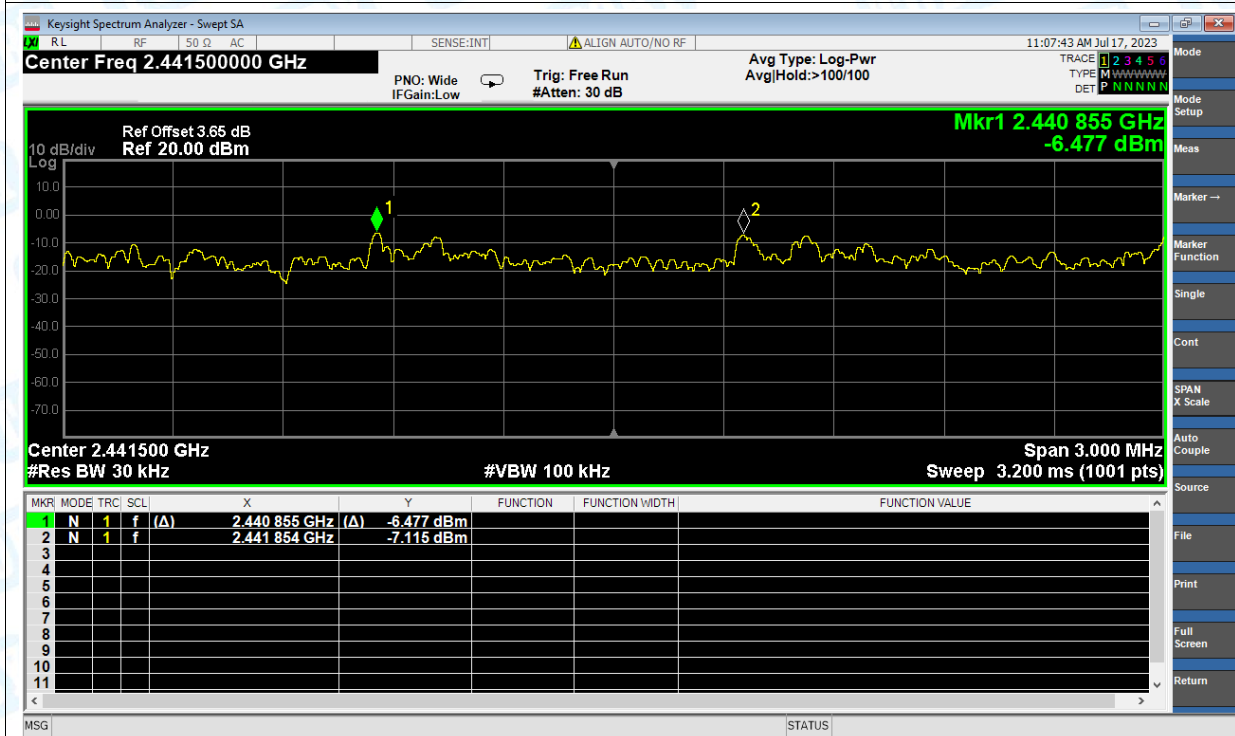
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.858	2441.854	0.996	0.567	Pass
NVNT	2-DH1	Ant1	2440.855	2441.854	0.999	0.827	Pass
NVNT	3-DH1	Ant1	2440.864	2441.86	0.996	0.813	Pass

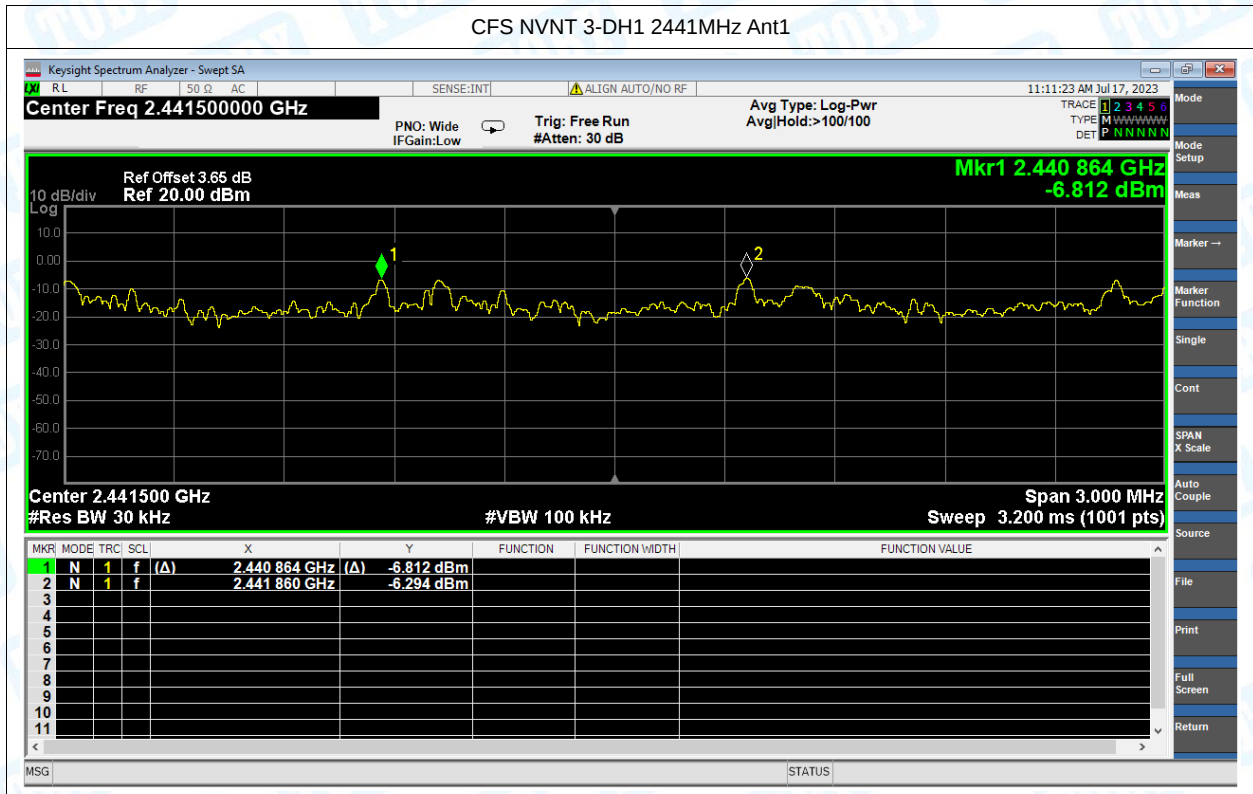
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



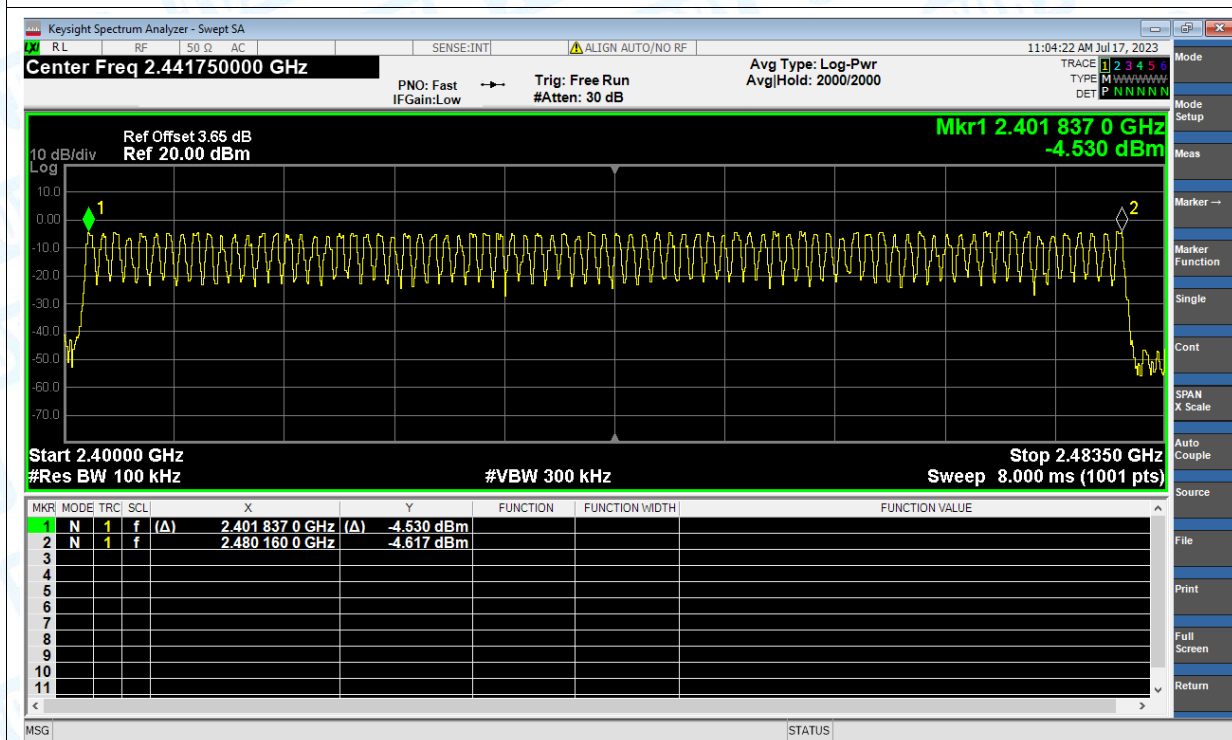


10. Number of Hopping Channel

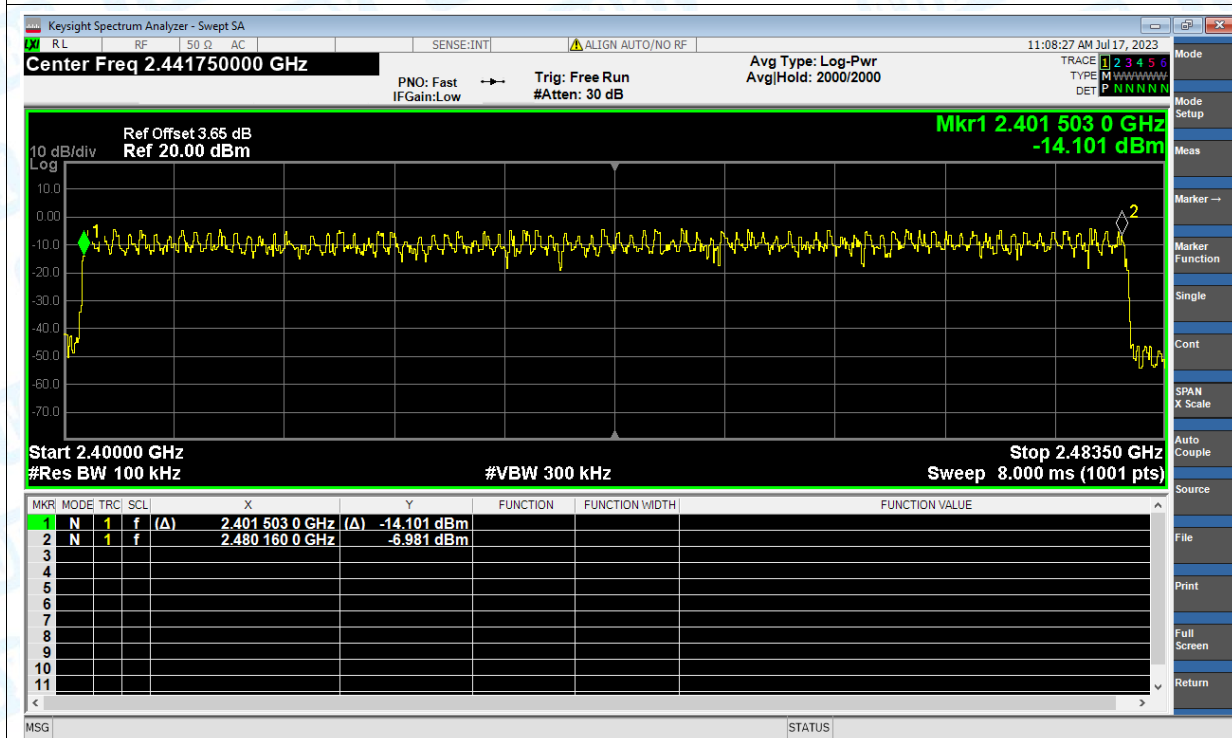
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

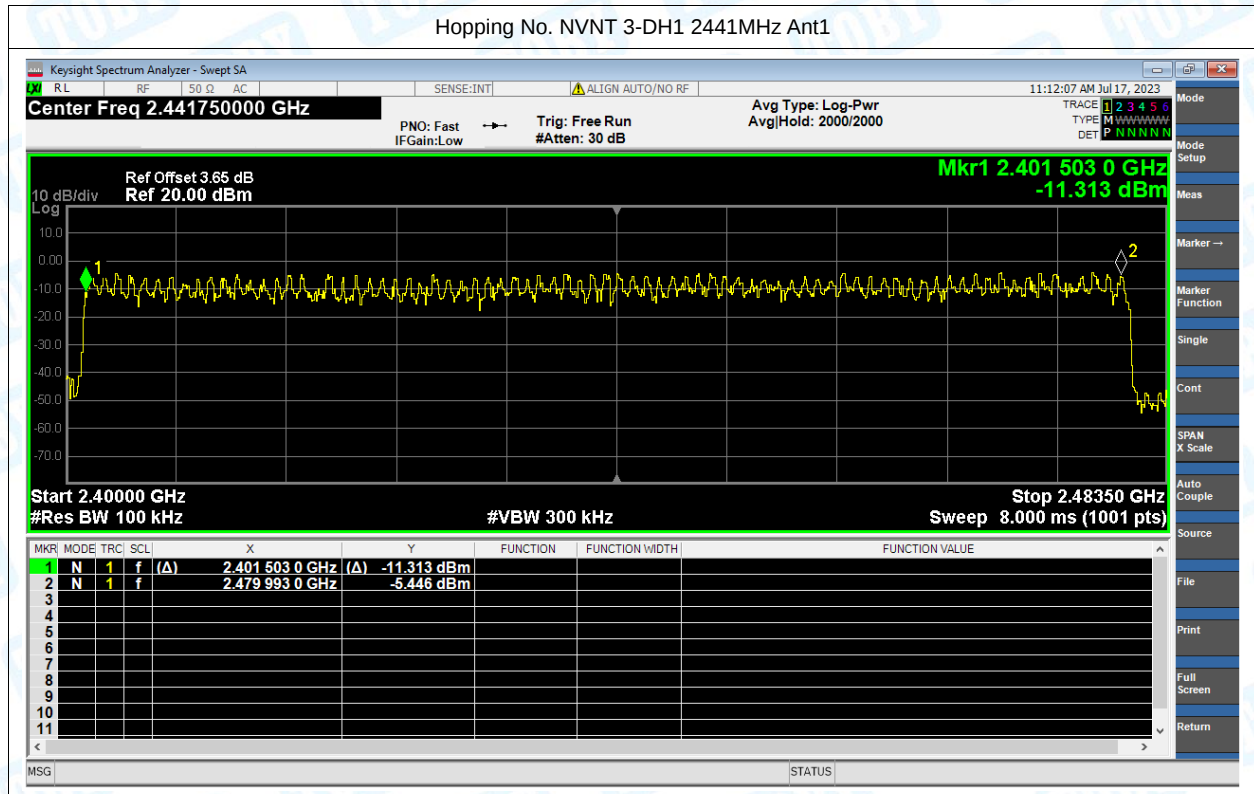
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



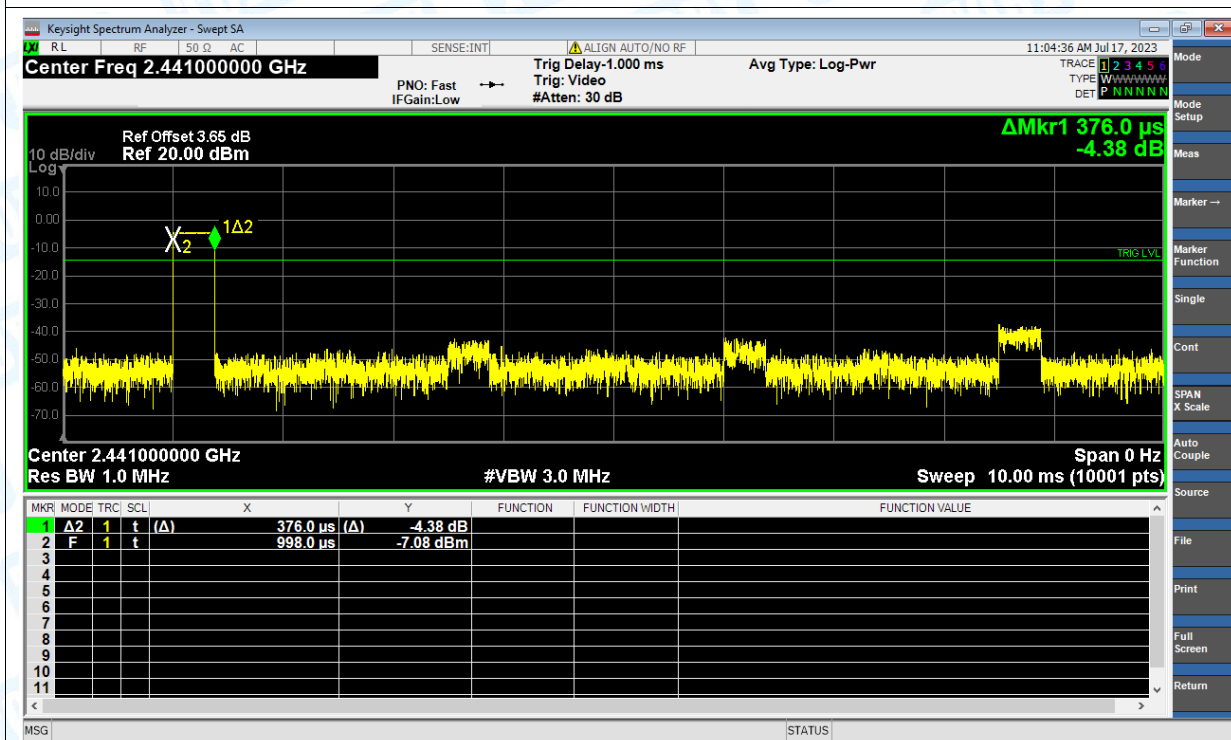


11. Dwell Time

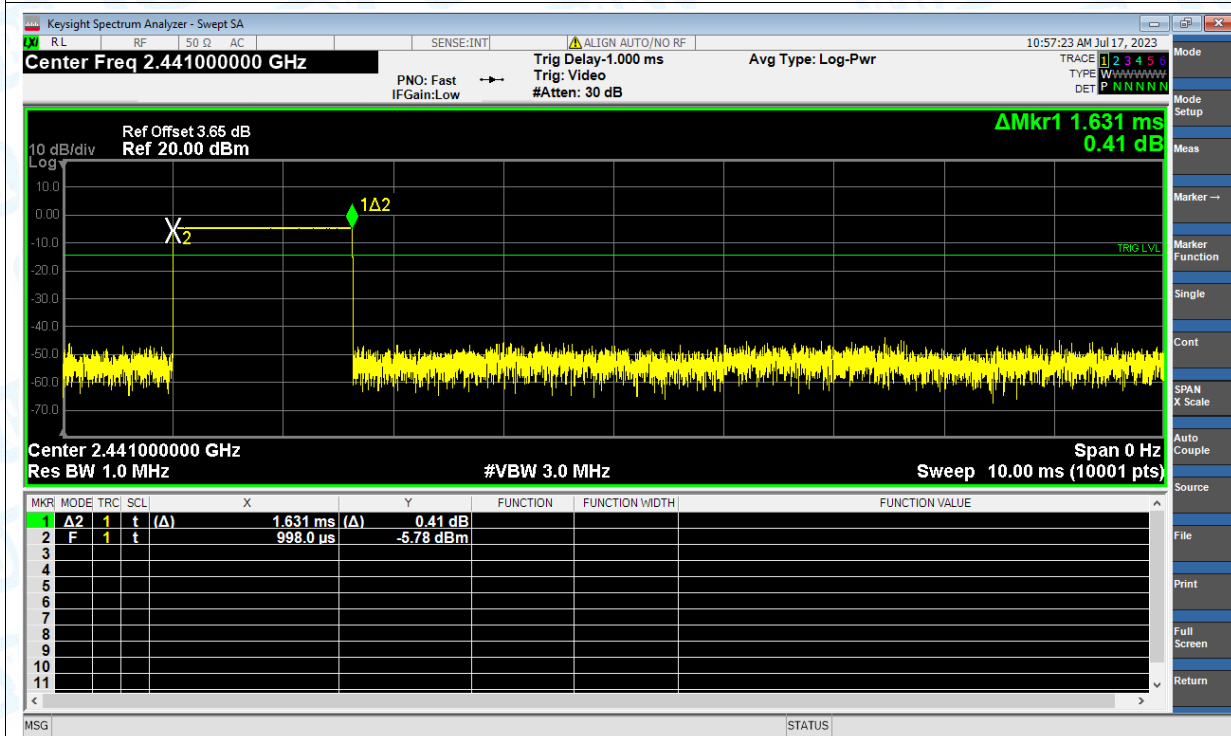
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.376	120.32	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.631	260.96	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.88	307.2	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.378	120.96	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.637	261.92	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.884	307.627	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.386	123.52	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.636	261.76	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.888	308.053	31600	400	Pass

Test Graphs

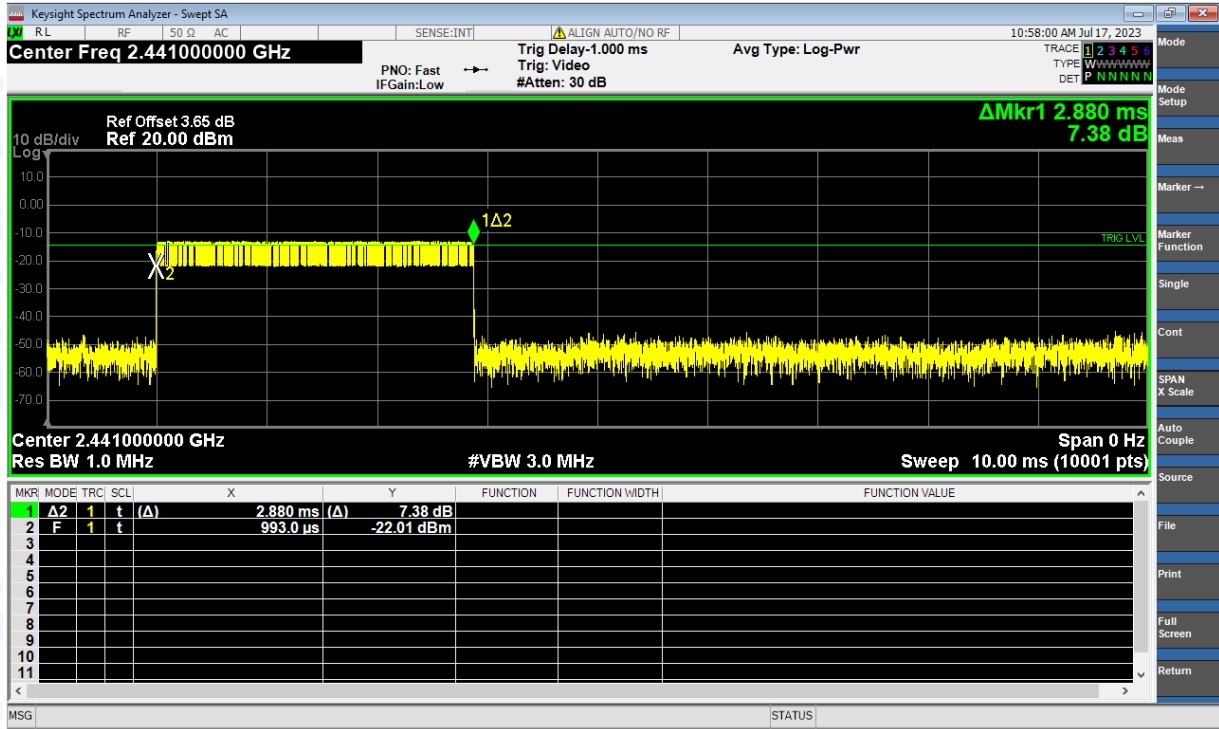
Dwell NVNT 1-DH1 2441MHz Ant1



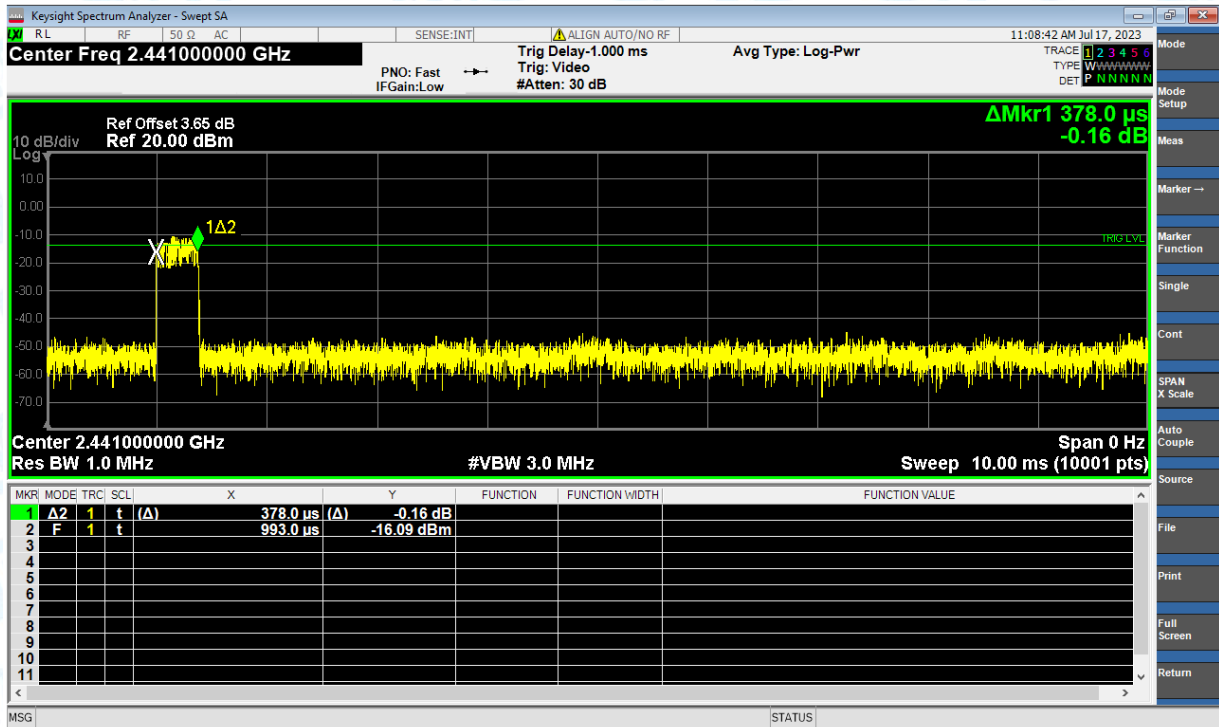
Dwell NVNT 1-DH3 2441MHz Ant1



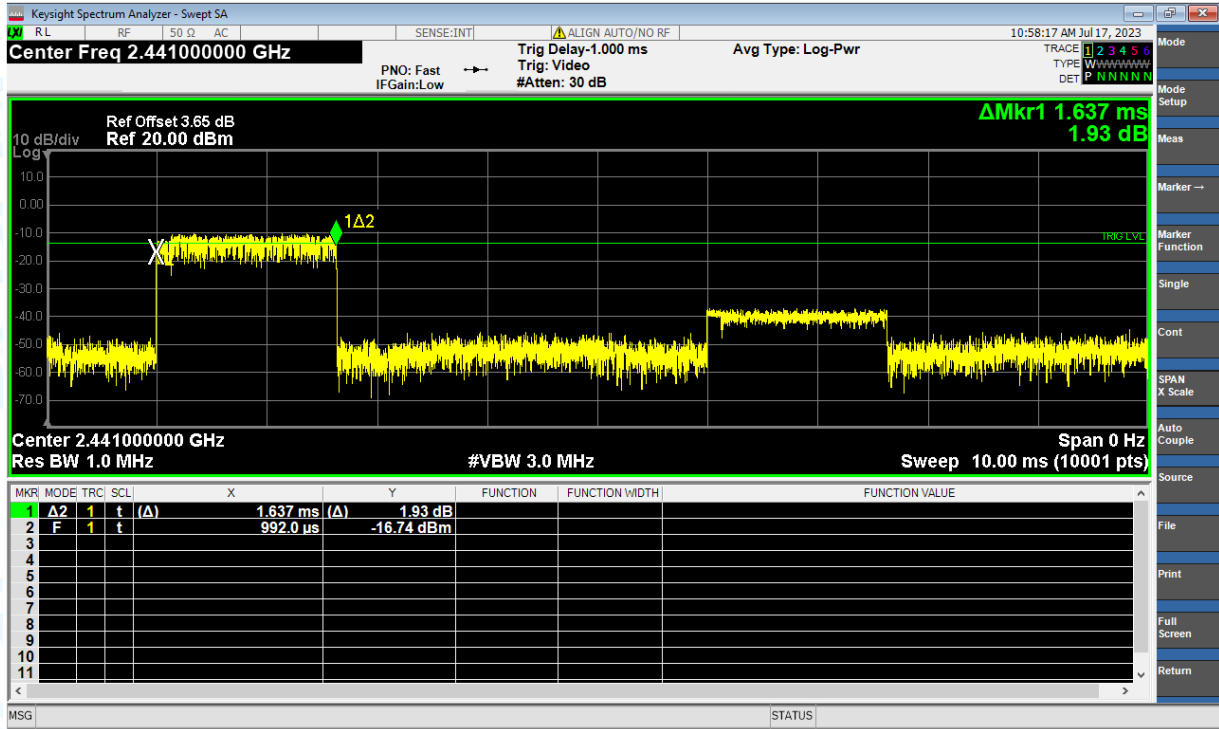
Dwell NVNT 1-DH5 2441MHz Ant1



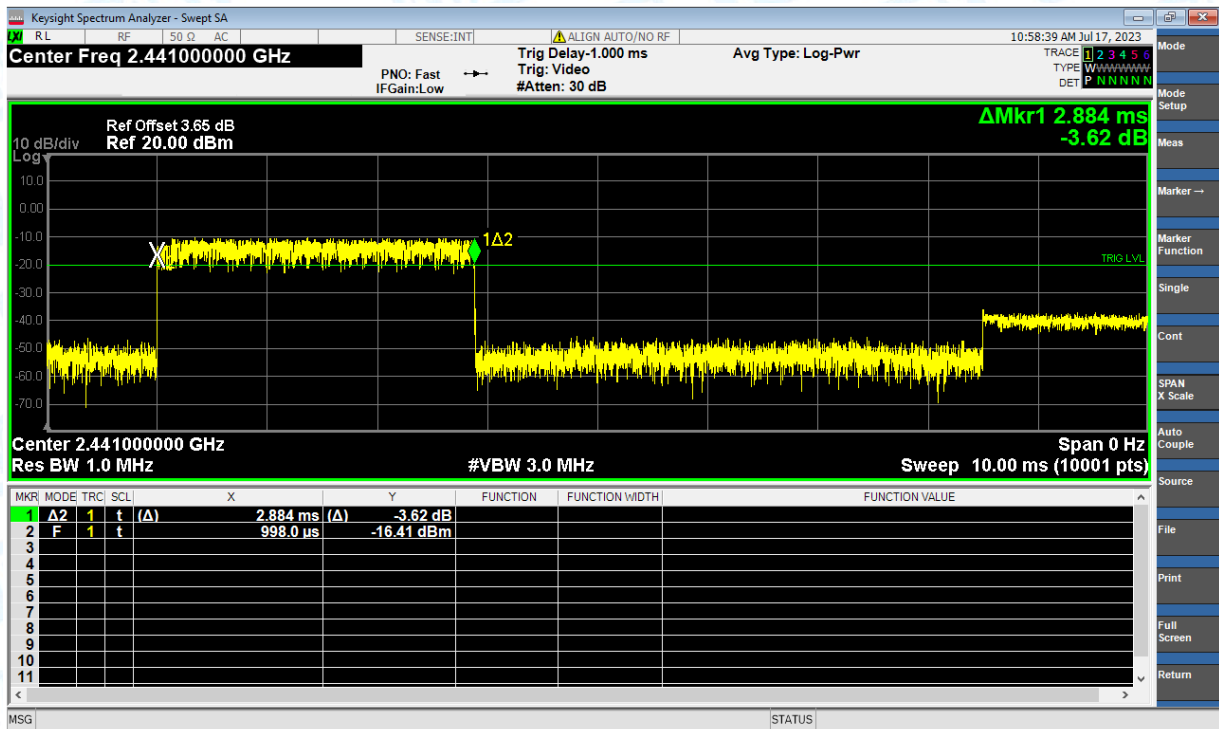
Dwell NVNT 2-DH1 2441MHz Ant1



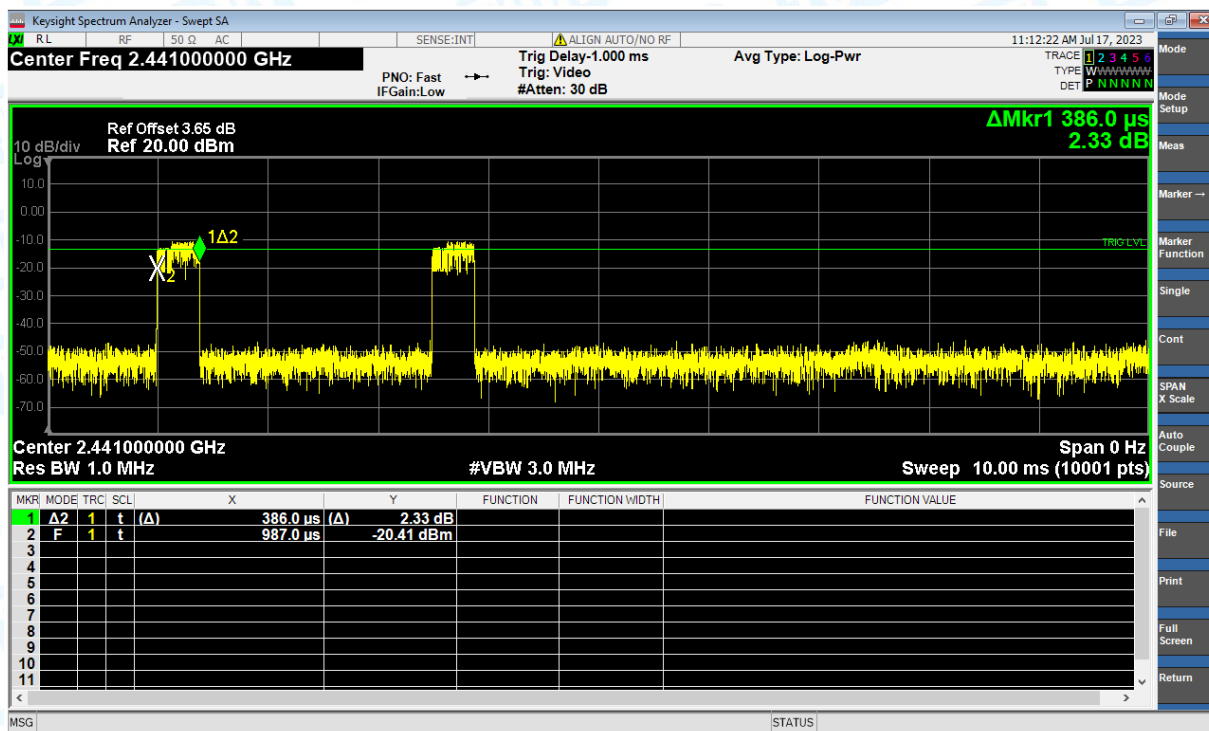
Dwell NVNT 2-DH3 2441MHz Ant1



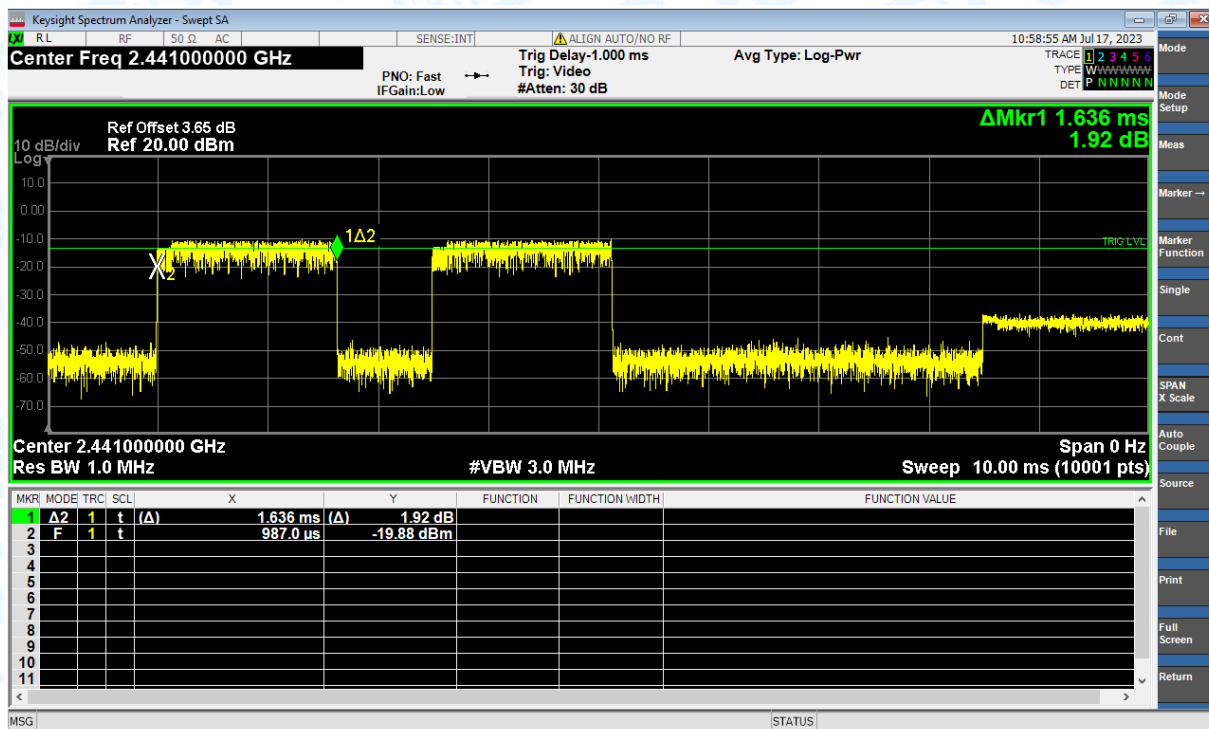
Dwell NVNT 2-DH5 2441MHz Ant1

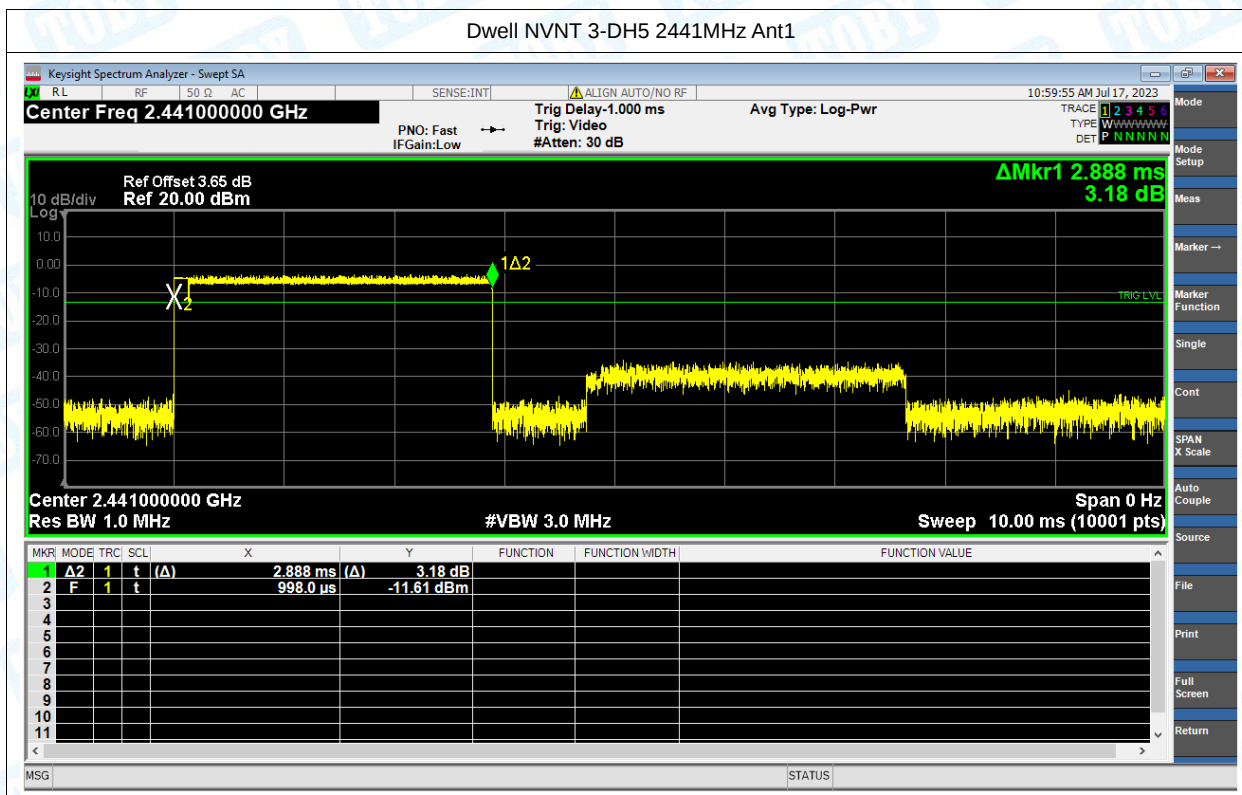


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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