

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

General Description of EUT	
Product Name:	Flashing LED Wireless Headphones
Test Model:	WM-422
Sample ID:	RW-C-202306-0063-1-2#
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-202306-0063-1 The report only show the worst case data.	

Contents

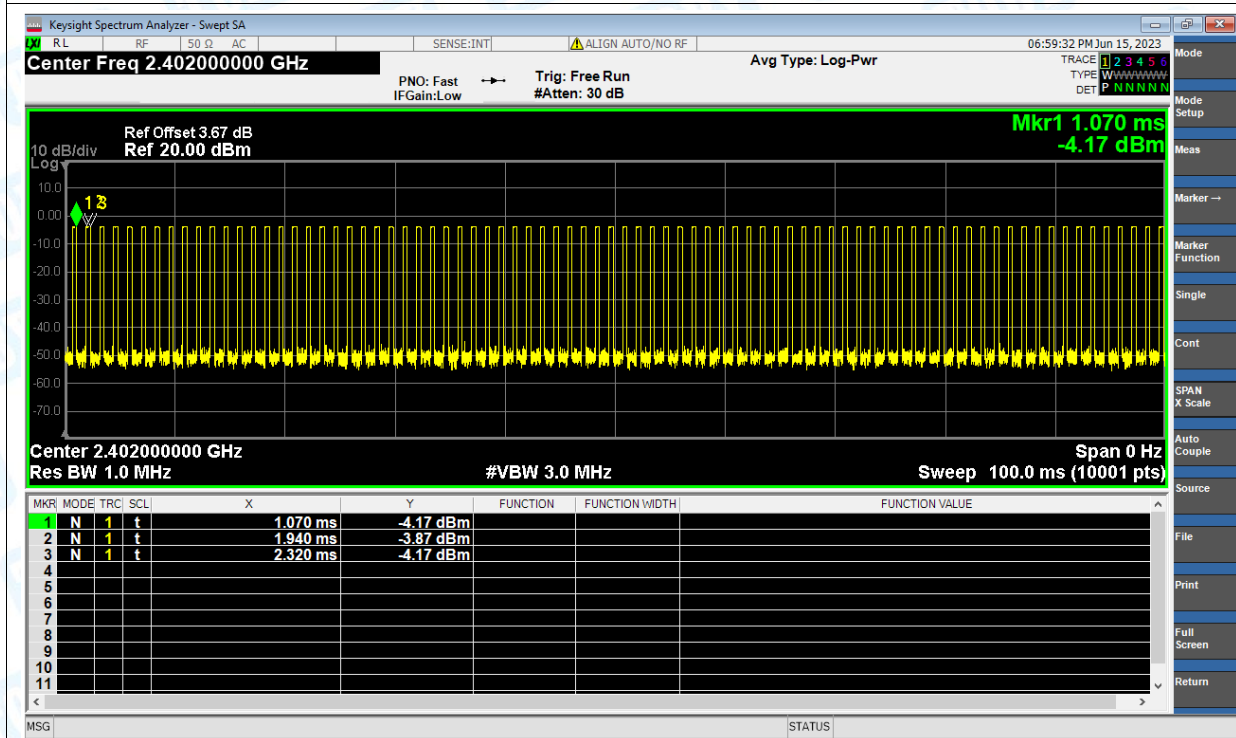
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1. Duty Cycle

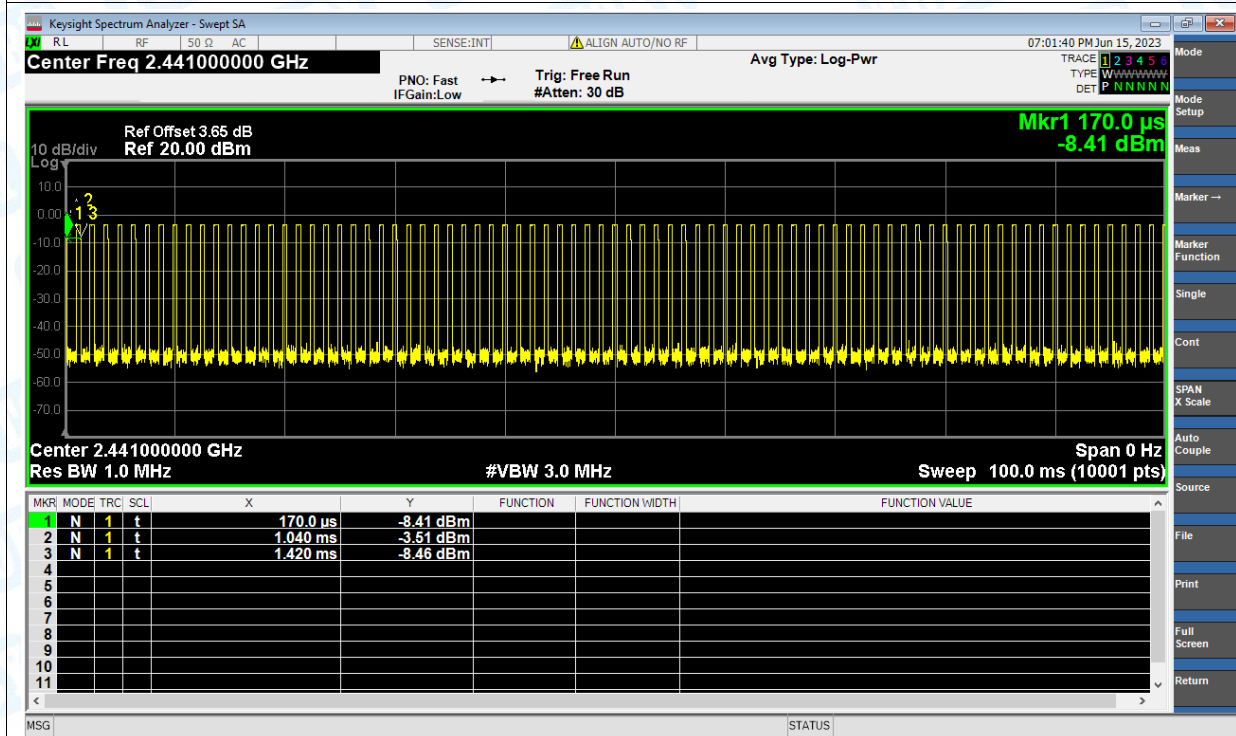
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2480	Ant1	30.4	5.17	2.63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

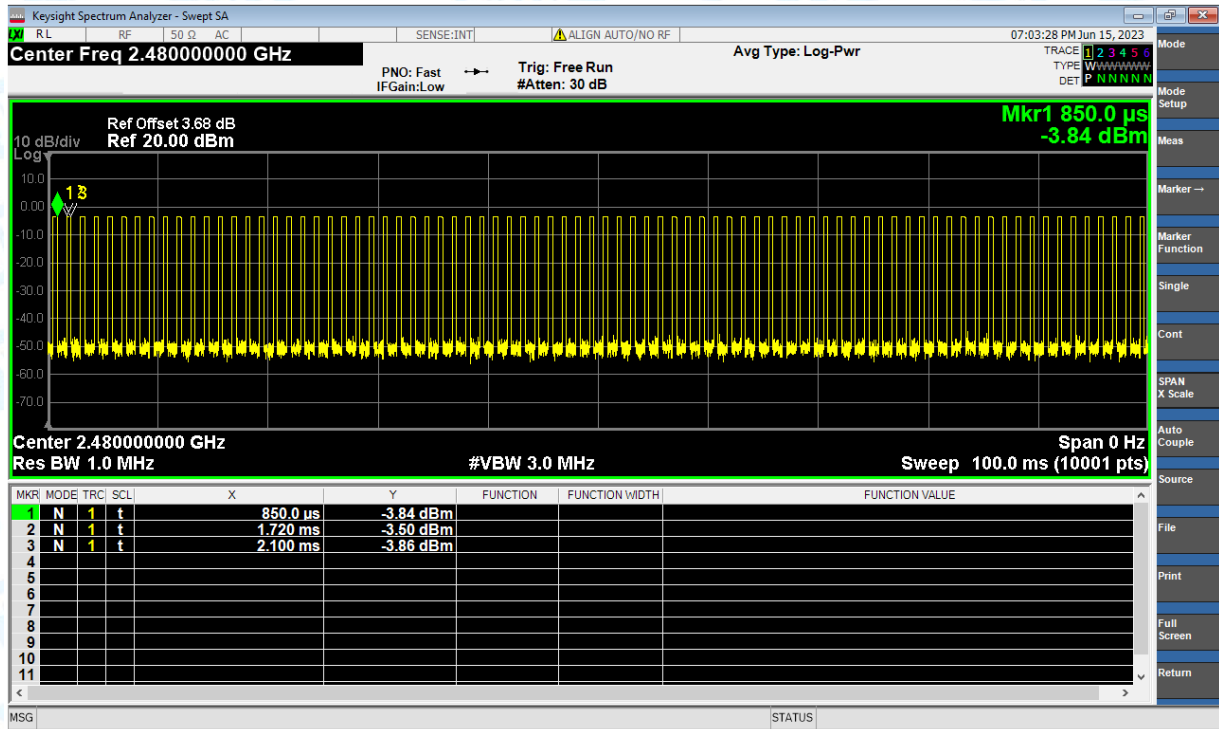
Duty Cycle NVNT 1-DH1 2402MHz Ant1



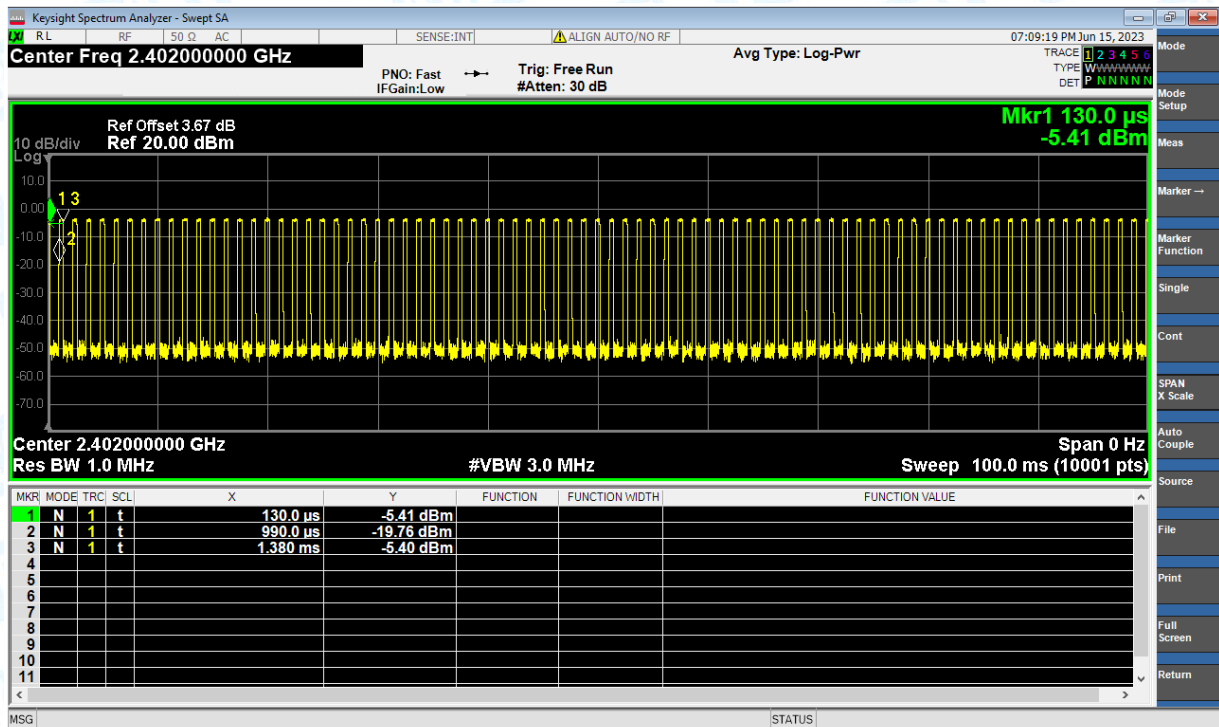
Duty Cycle NVNT 1-DH1 2441MHz Ant1



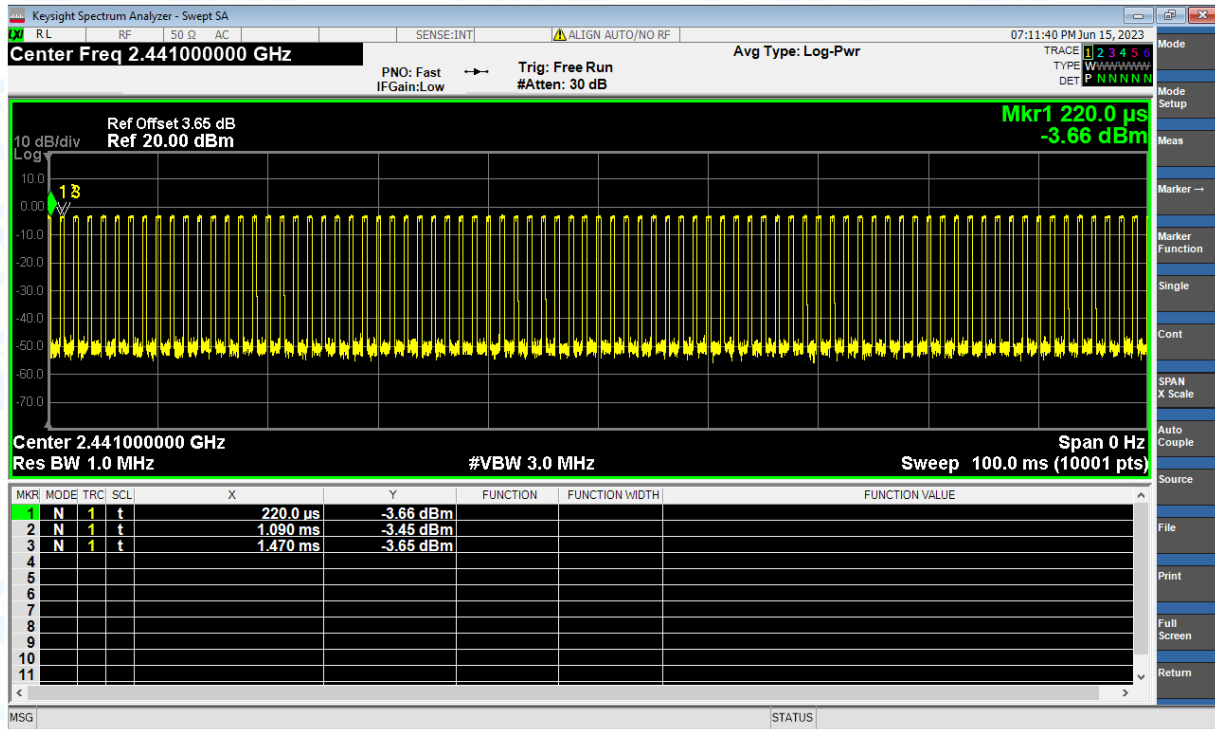
Duty Cycle NVNT 1-DH1 2480MHz Ant1



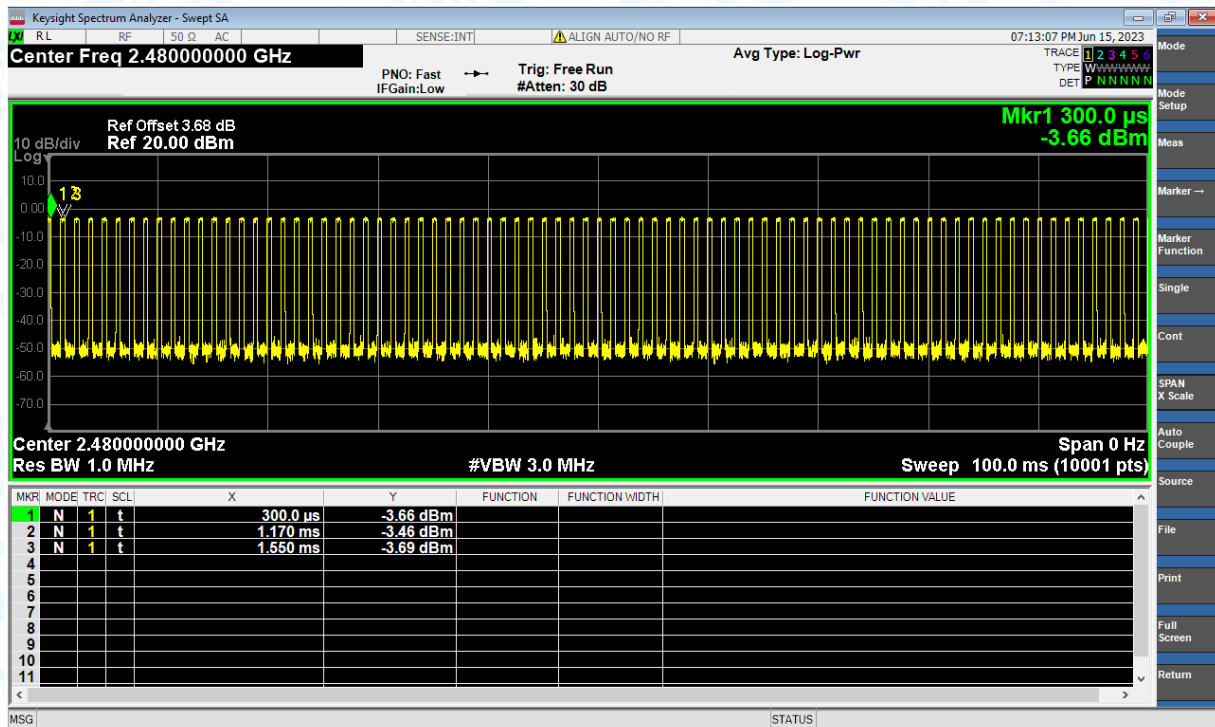
Duty Cycle NVNT 2-DH1 2402MHz Ant1



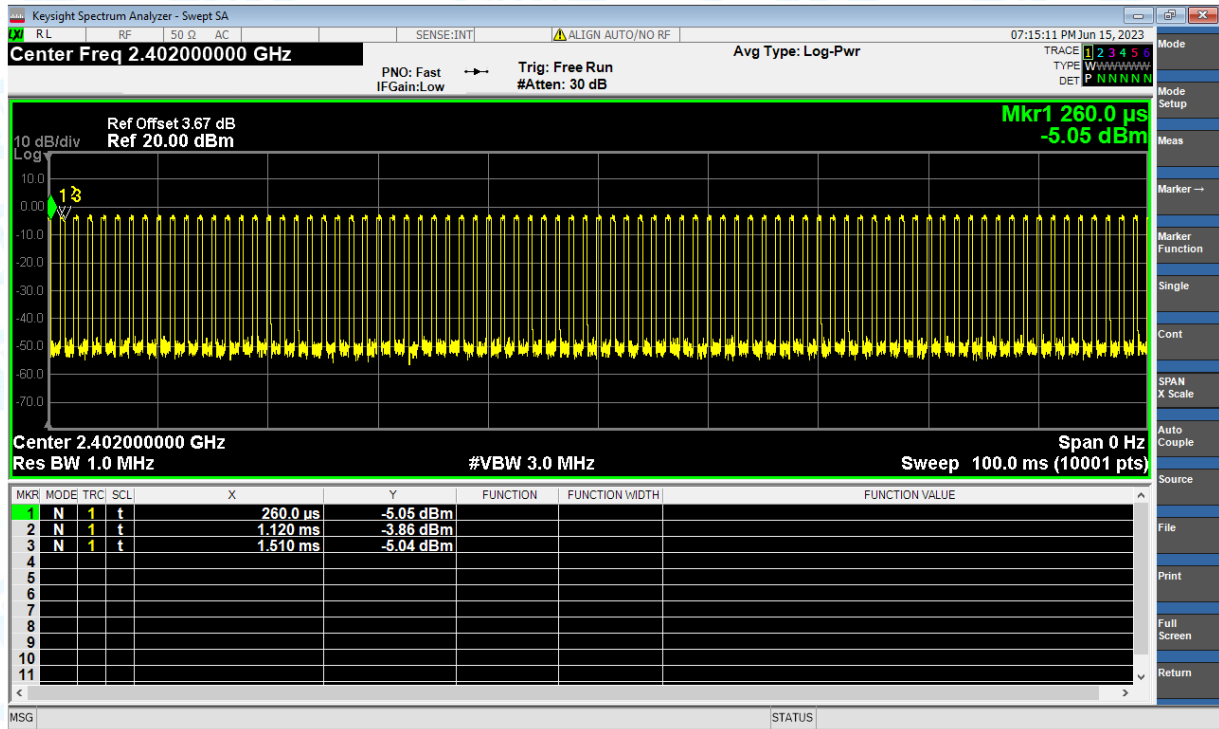
Duty Cycle NVNT 2-DH1 2441MHz Ant1



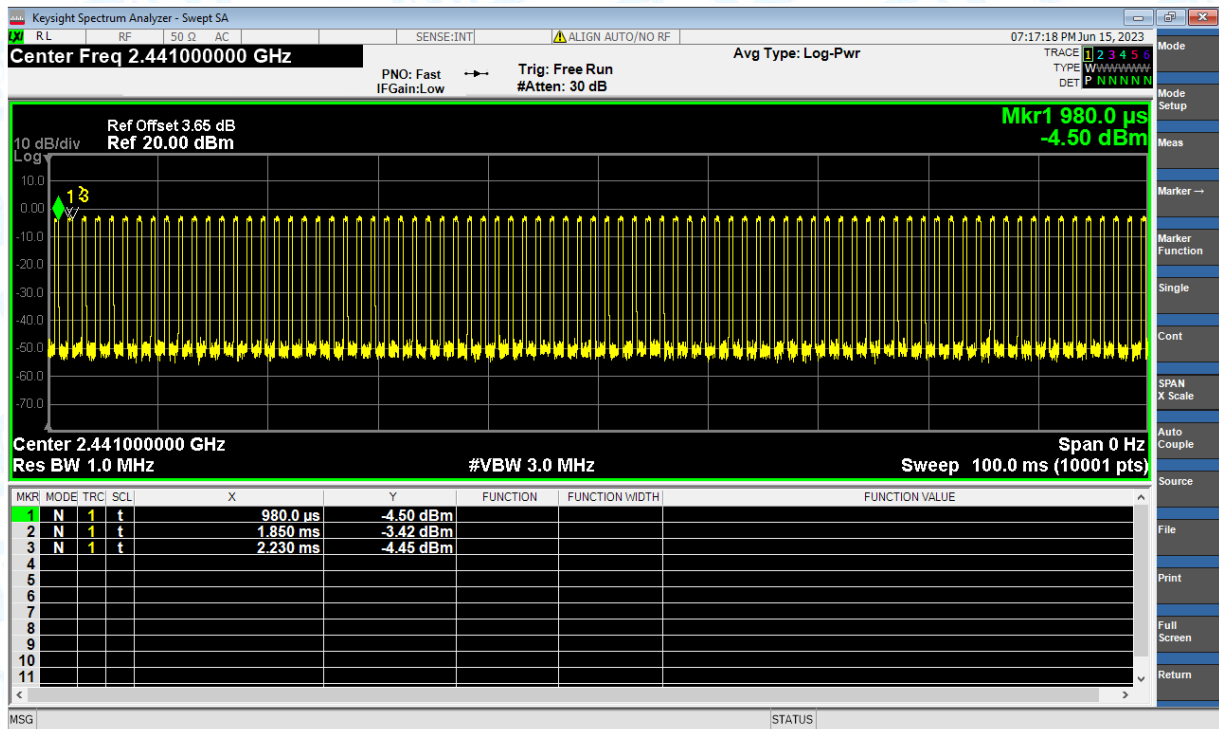
Duty Cycle NVNT 2-DH1 2480MHz Ant1

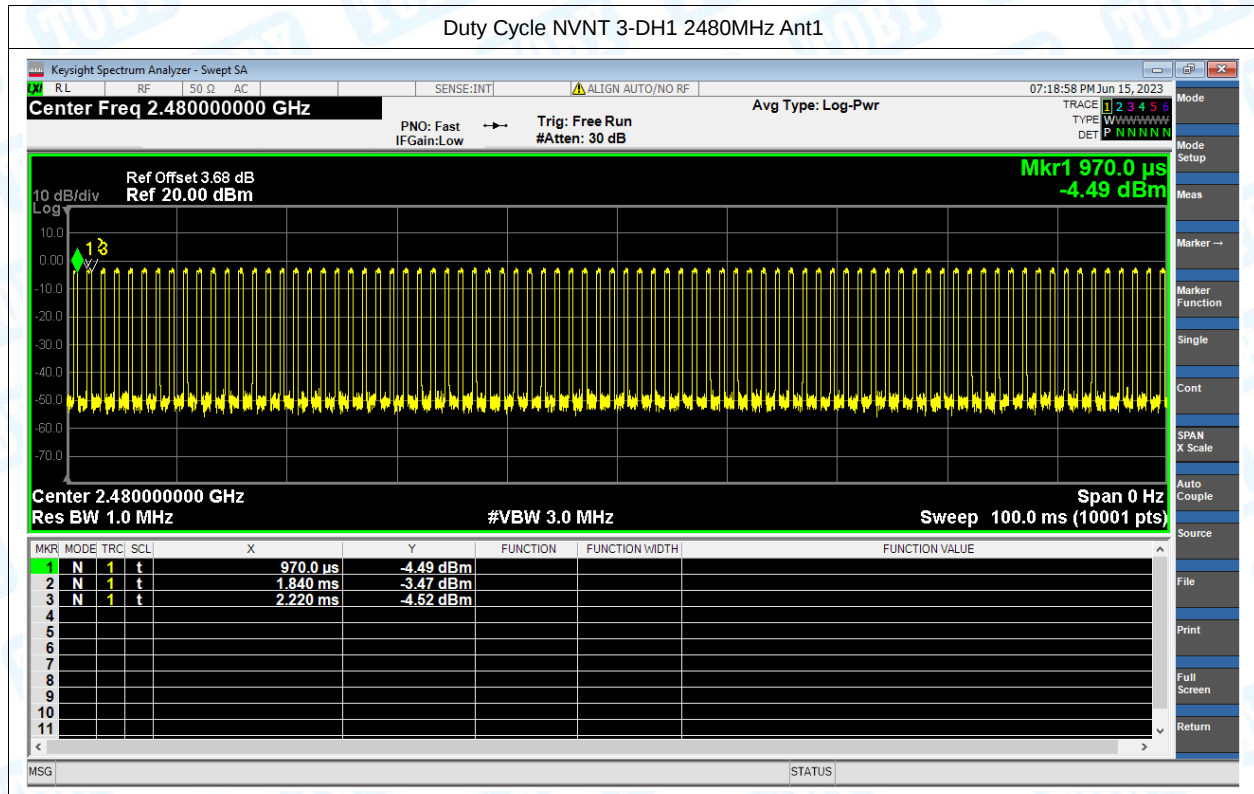


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



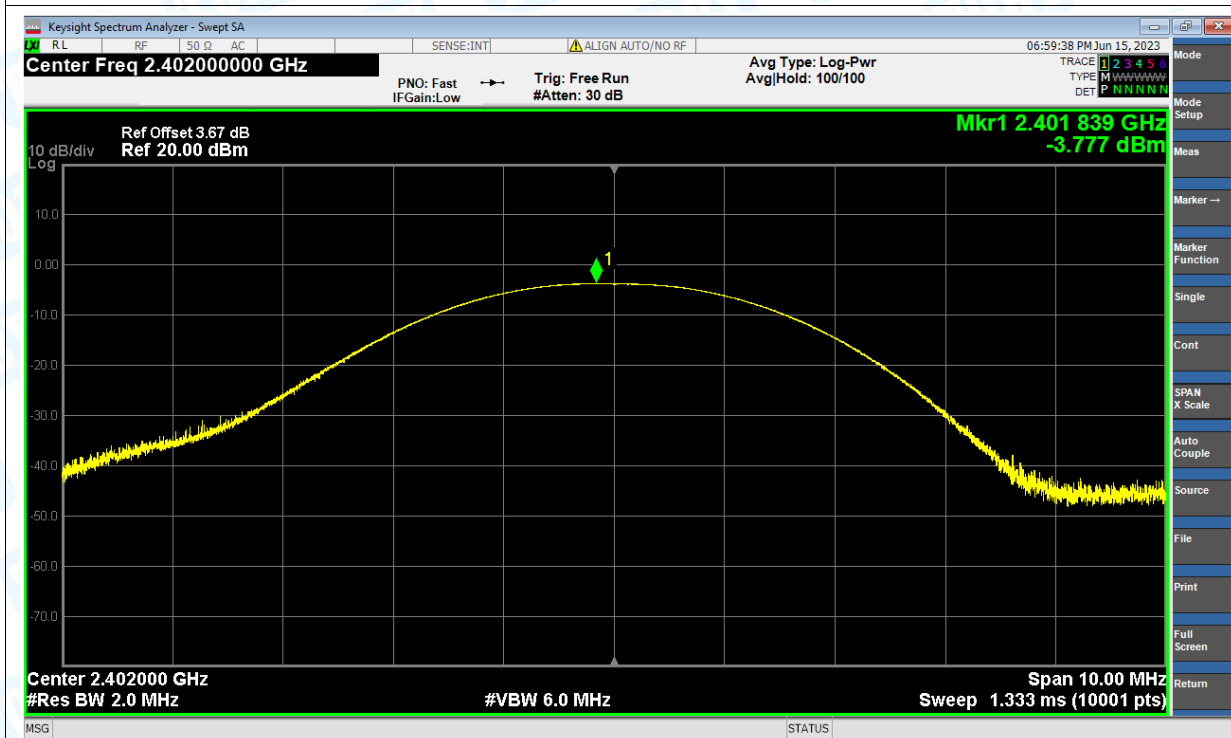


2. Maximum Conducted Output Power

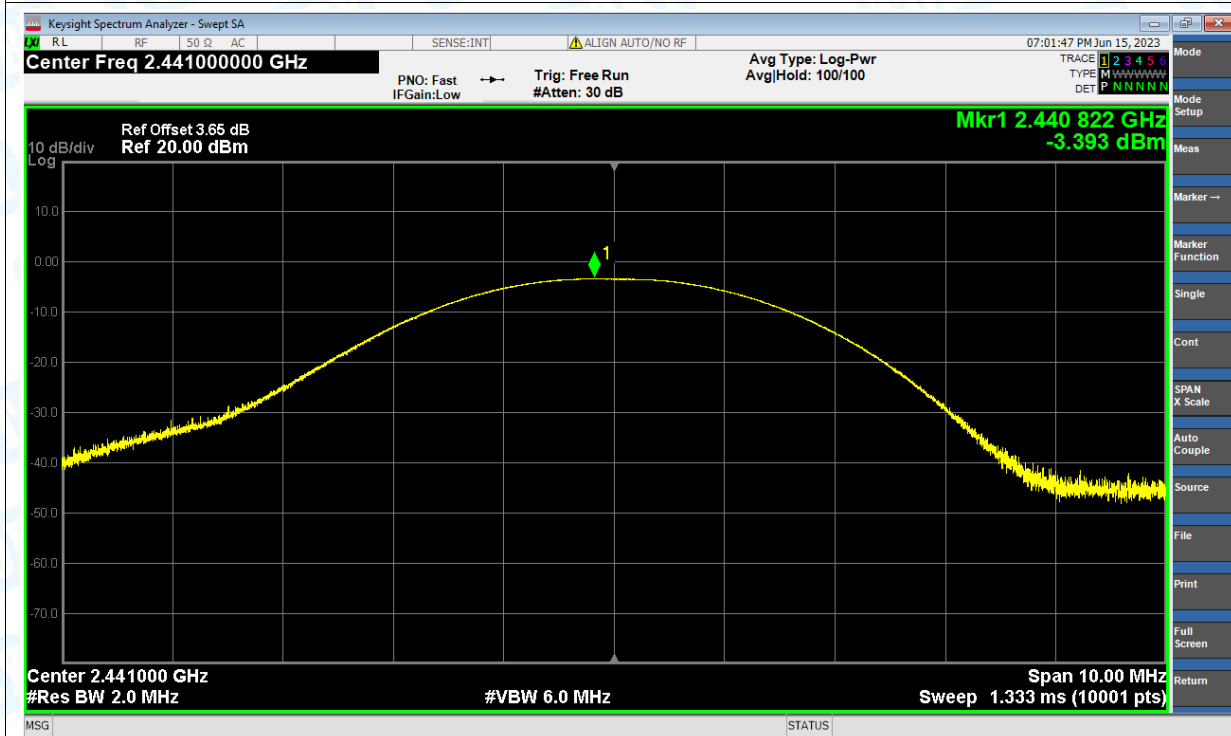
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-3.777	21	Pass
NVNT	1-DH1	2441	Ant1	-3.393	21	Pass
NVNT	1-DH1	2480	Ant1	-3.423	21	Pass
NVNT	2-DH1	2402	Ant1	-2.837	21	Pass
NVNT	2-DH1	2441	Ant1	-2.502	21	Pass
NVNT	2-DH1	2480	Ant1	-2.518	21	Pass
NVNT	3-DH1	2402	Ant1	-2.208	21	Pass
NVNT	3-DH1	2441	Ant1	-1.923	21	Pass
NVNT	3-DH1	2480	Ant1	-1.947	21	Pass

Test Graphs

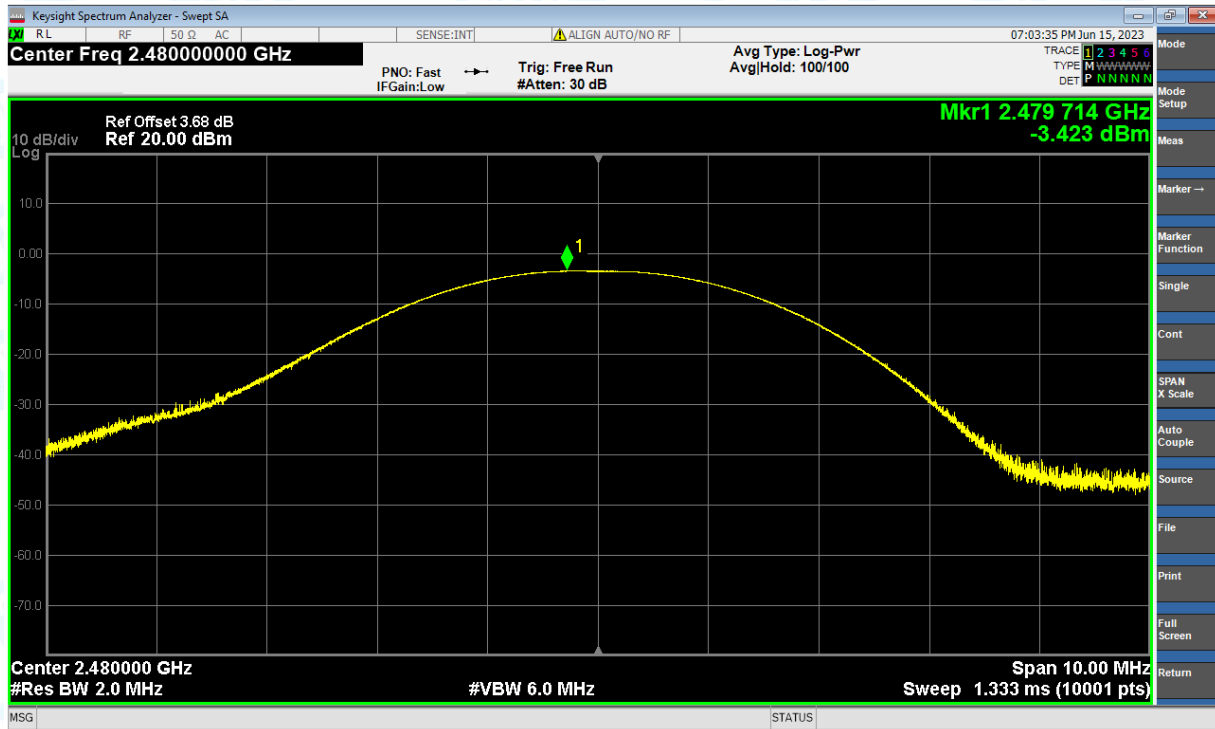
Power NVNT 1-DH1 2402MHz Ant1



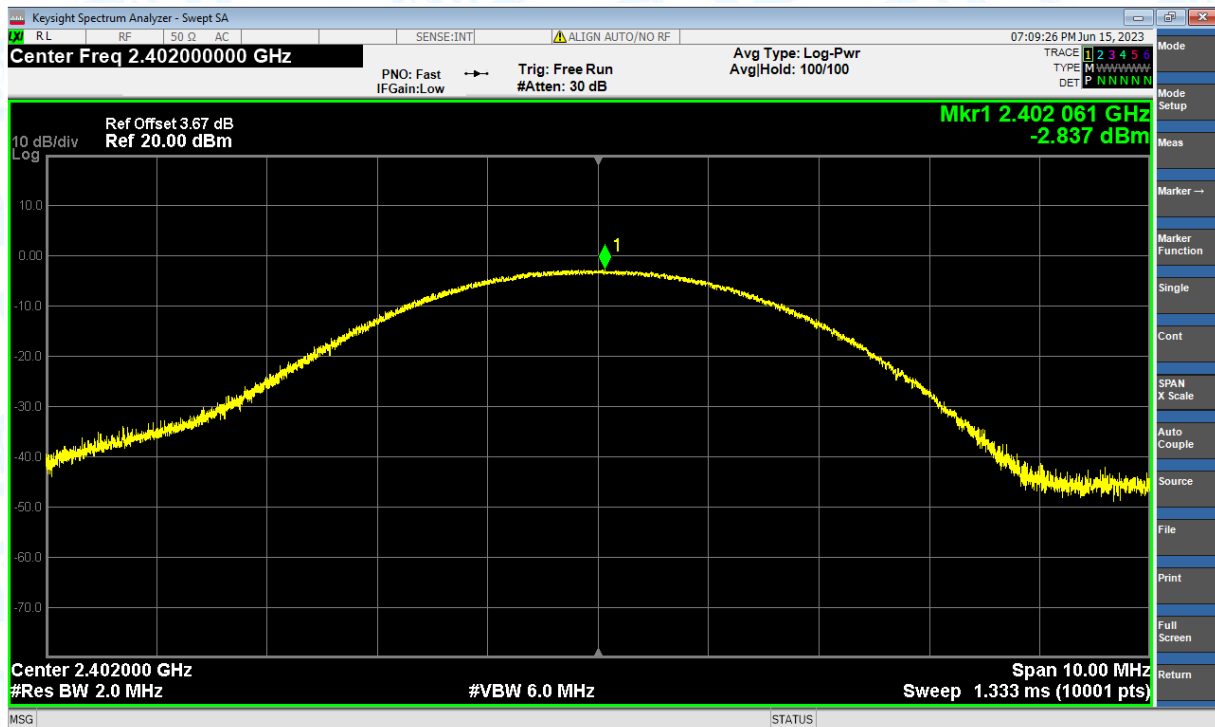
Power NVNT 1-DH1 2441MHz Ant1



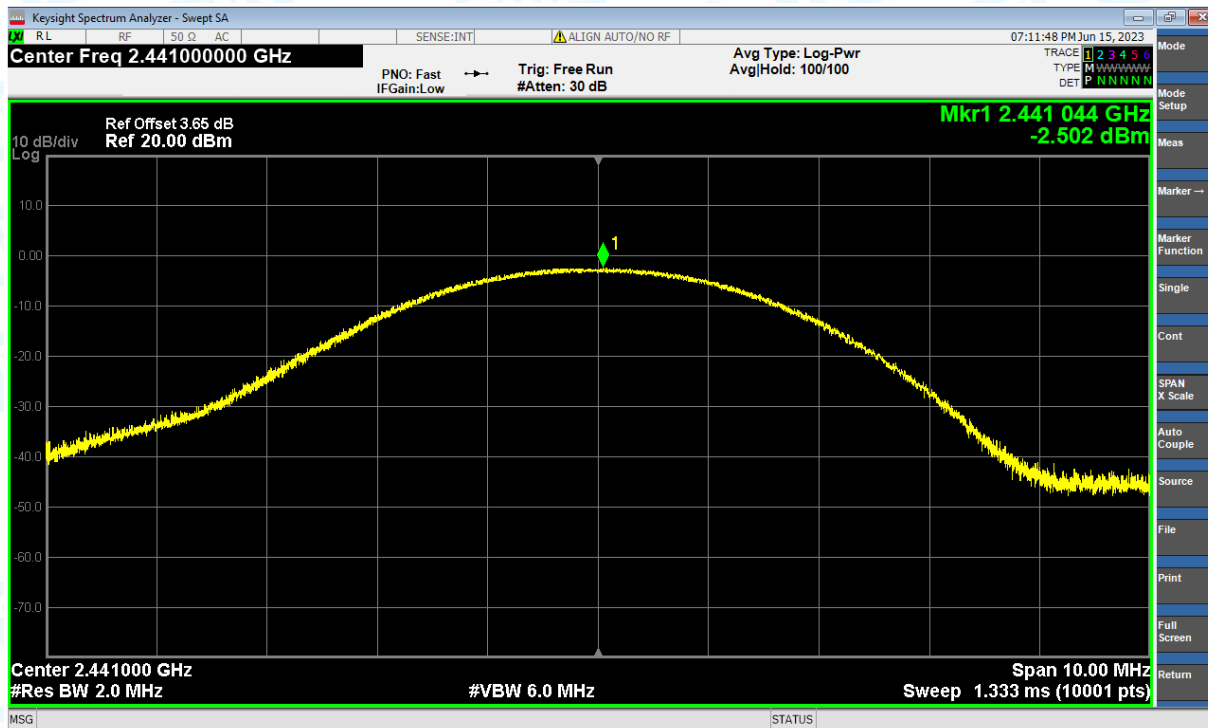
Power NVNT 1-DH1 2480MHz Ant1



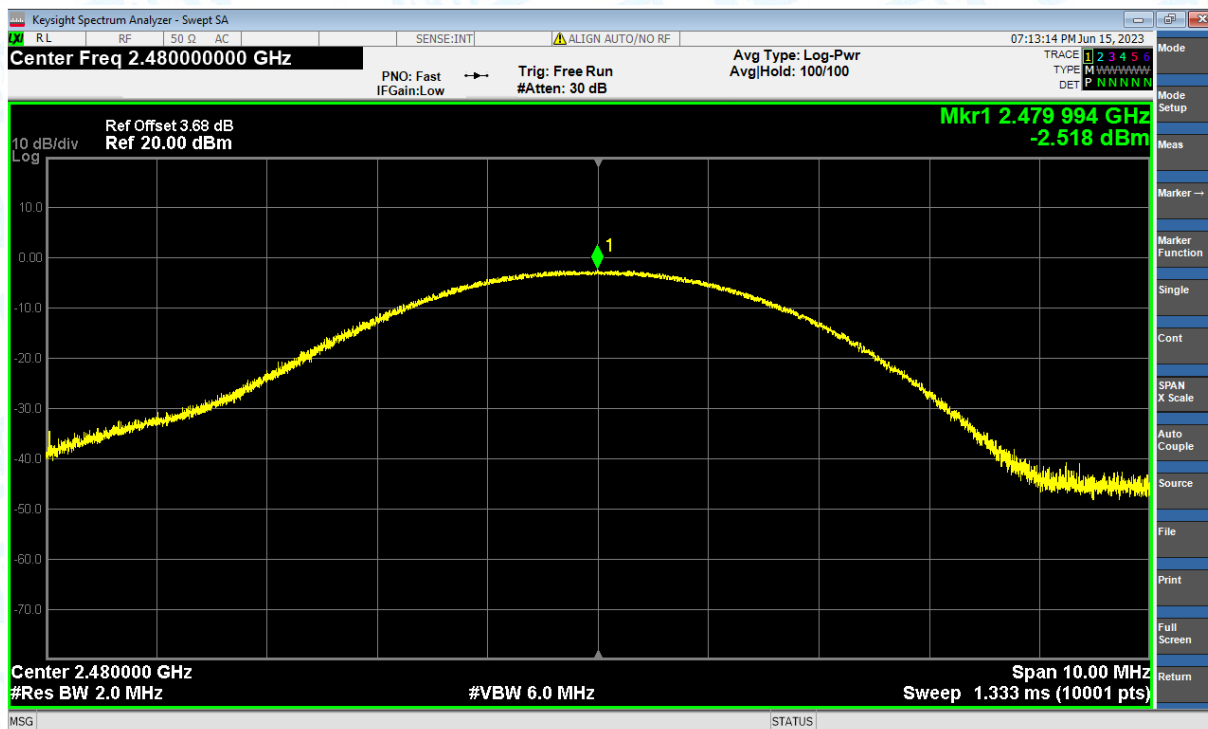
Power NVNT 2-DH1 2402MHz Ant1



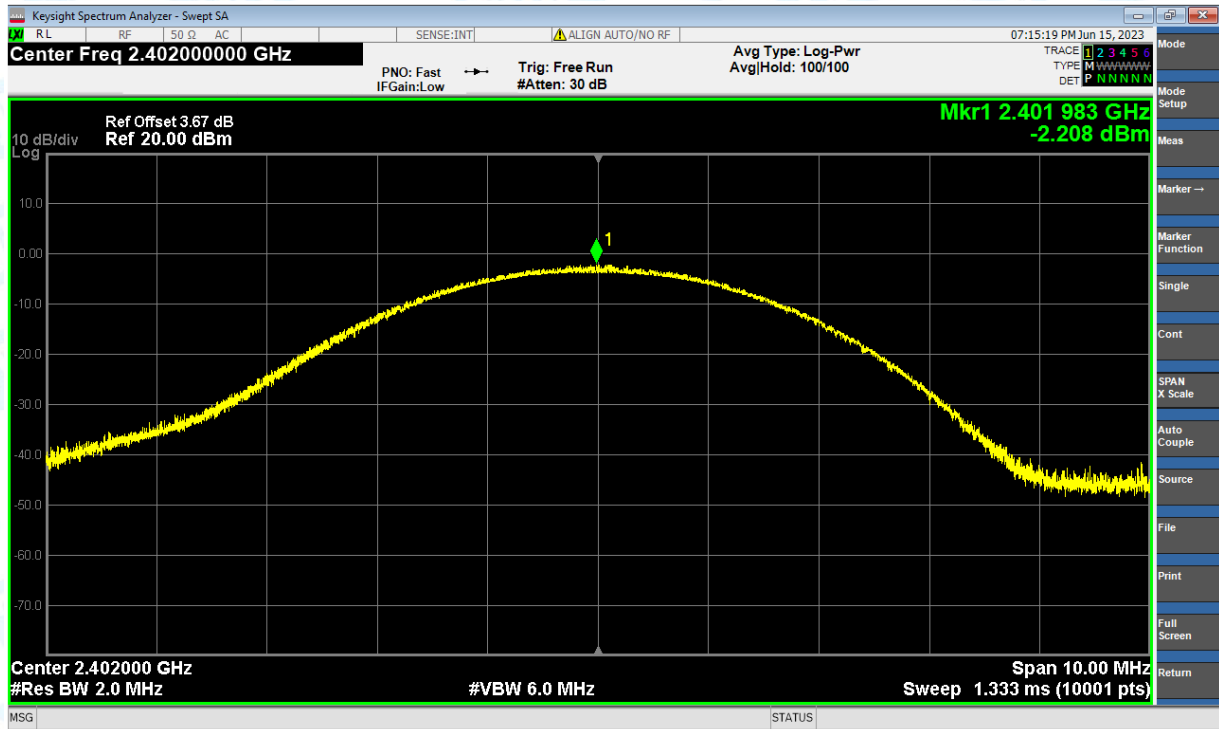
Power NVNT 2-DH1 2441MHz Ant1



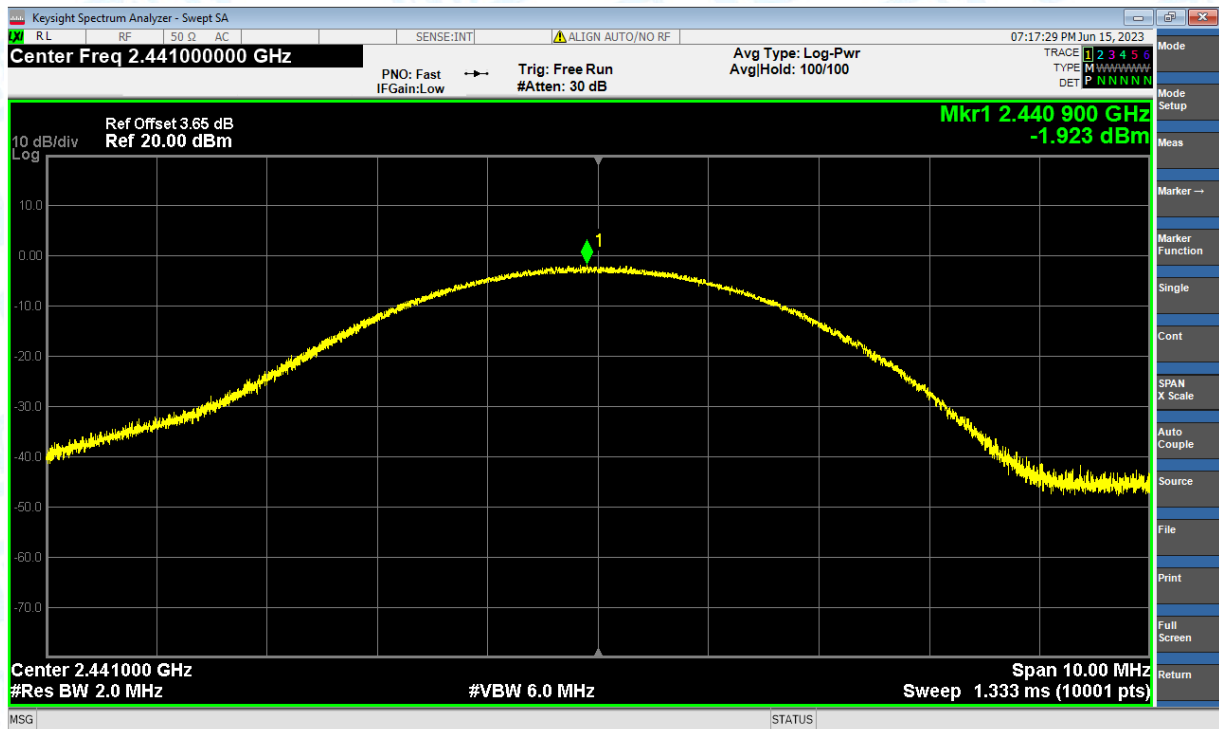
Power NVNT 2-DH1 2480MHz Ant1



Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



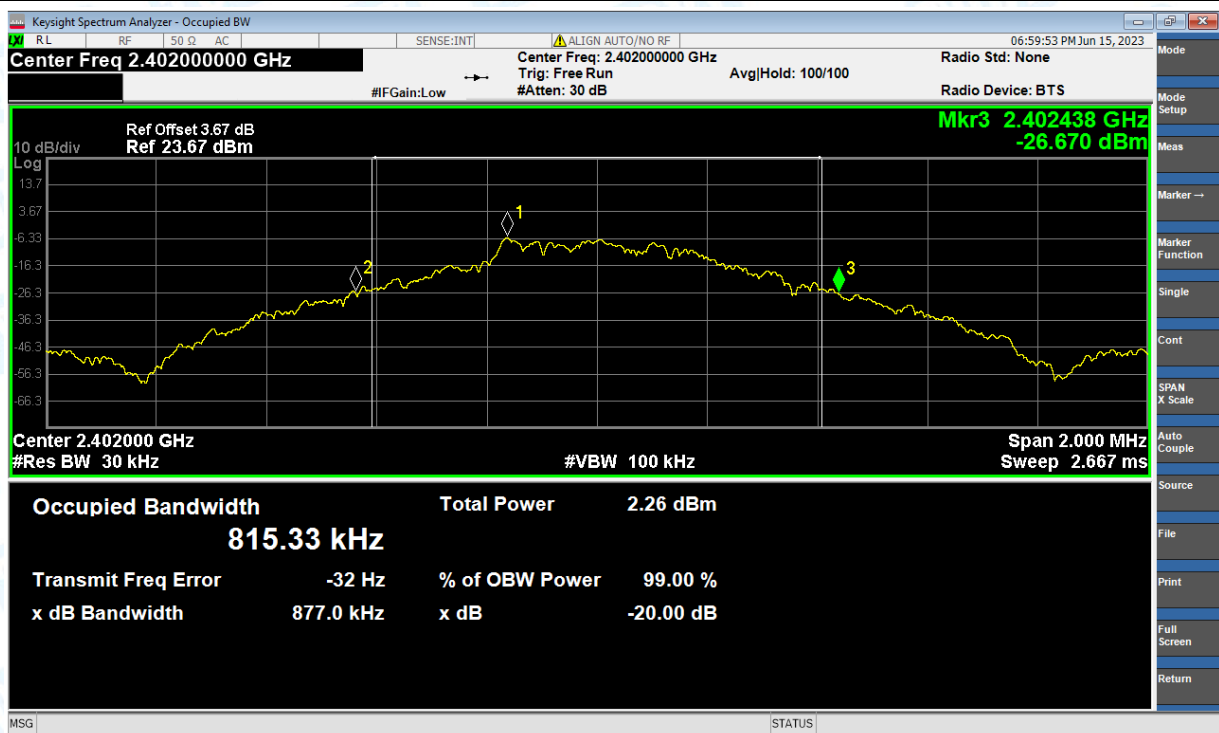


3. -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.88	----	Pass
NVNT	1-DH1	2441	Ant1	0.86	----	Pass
NVNT	1-DH1	2480	Ant1	0.88	----	Pass
NVNT	2-DH1	2402	Ant1	1.25	----	Pass
NVNT	2-DH1	2441	Ant1	1.25	----	Pass
NVNT	2-DH1	2480	Ant1	1.25	----	Pass
NVNT	3-DH1	2402	Ant1	1.21	----	Pass
NVNT	3-DH1	2441	Ant1	1.21	----	Pass
NVNT	3-DH1	2480	Ant1	1.22	----	Pass

Test Graphs

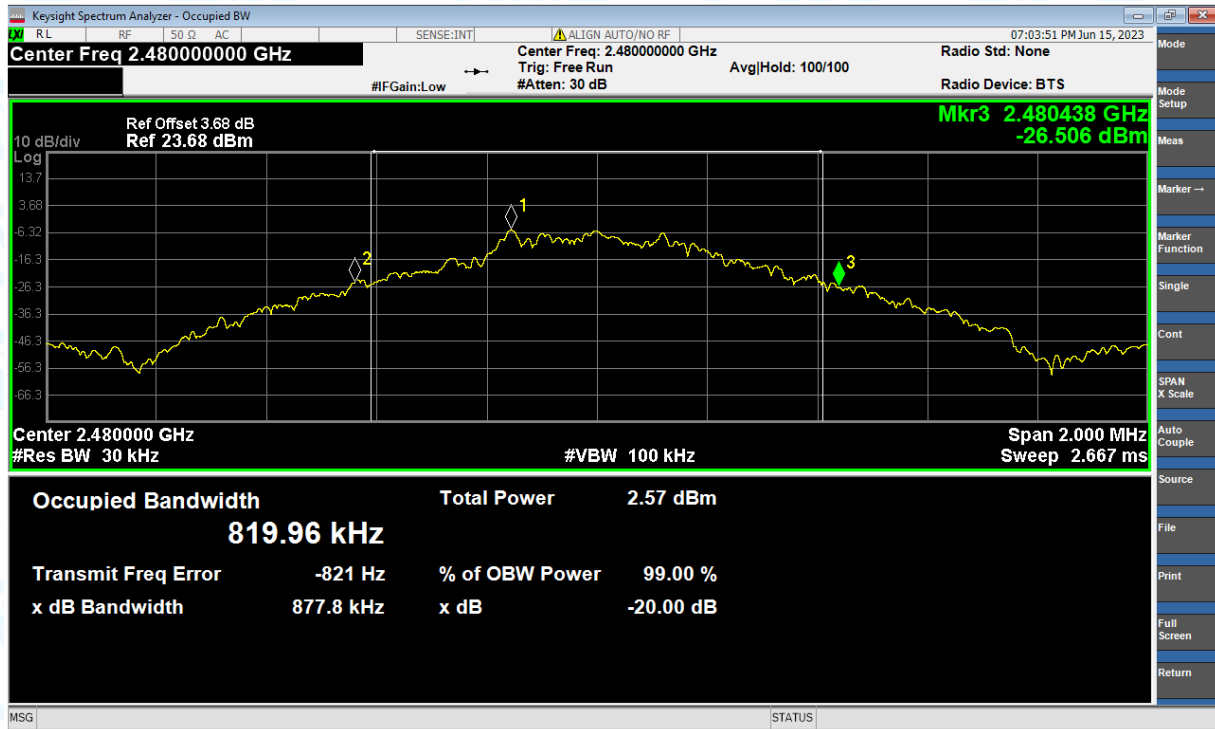
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



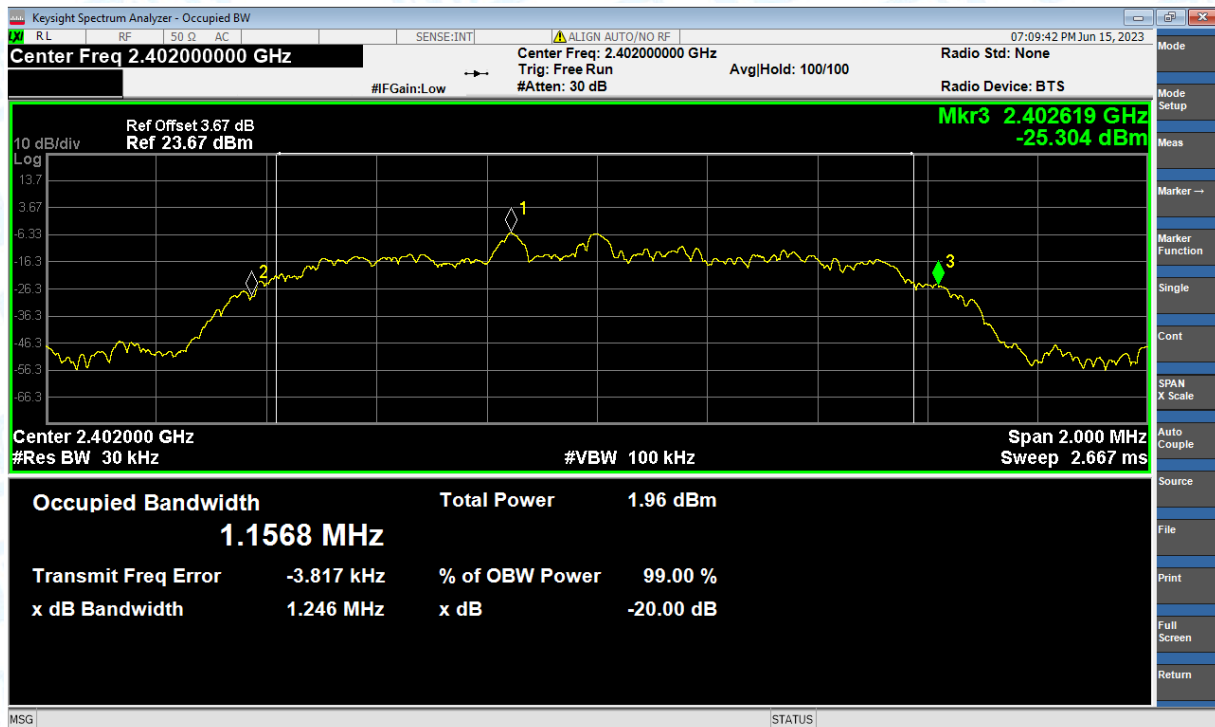
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



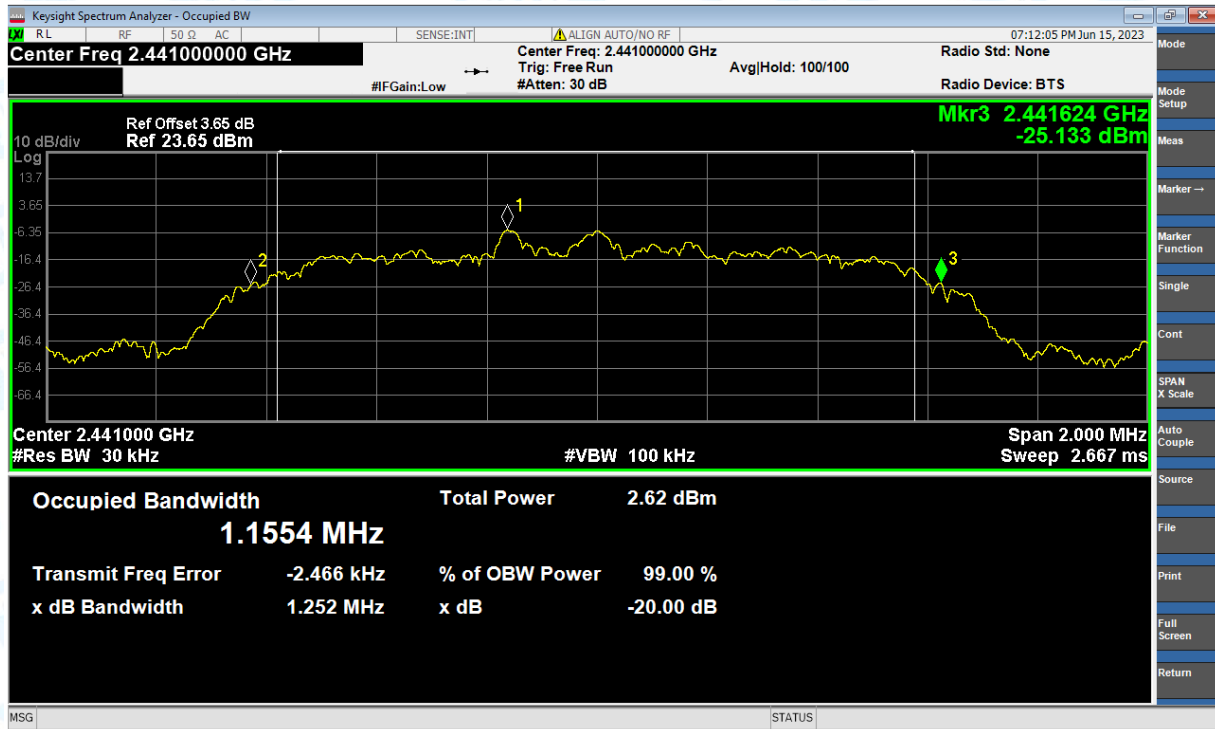
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



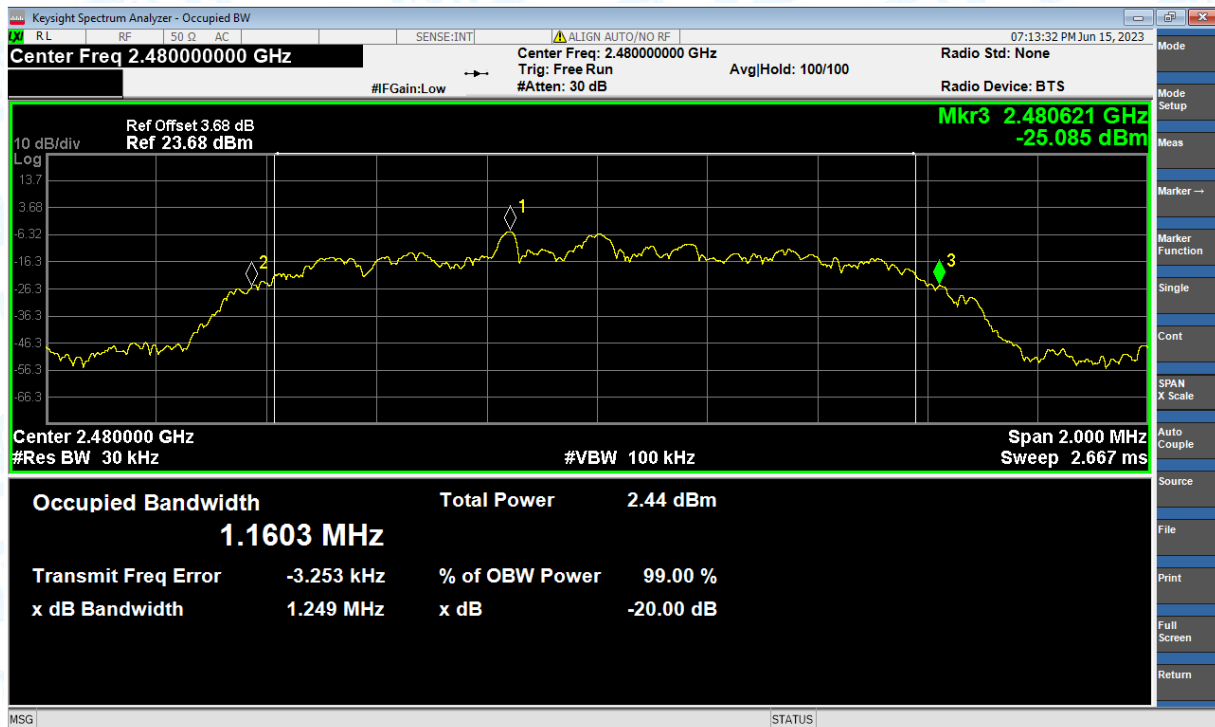
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



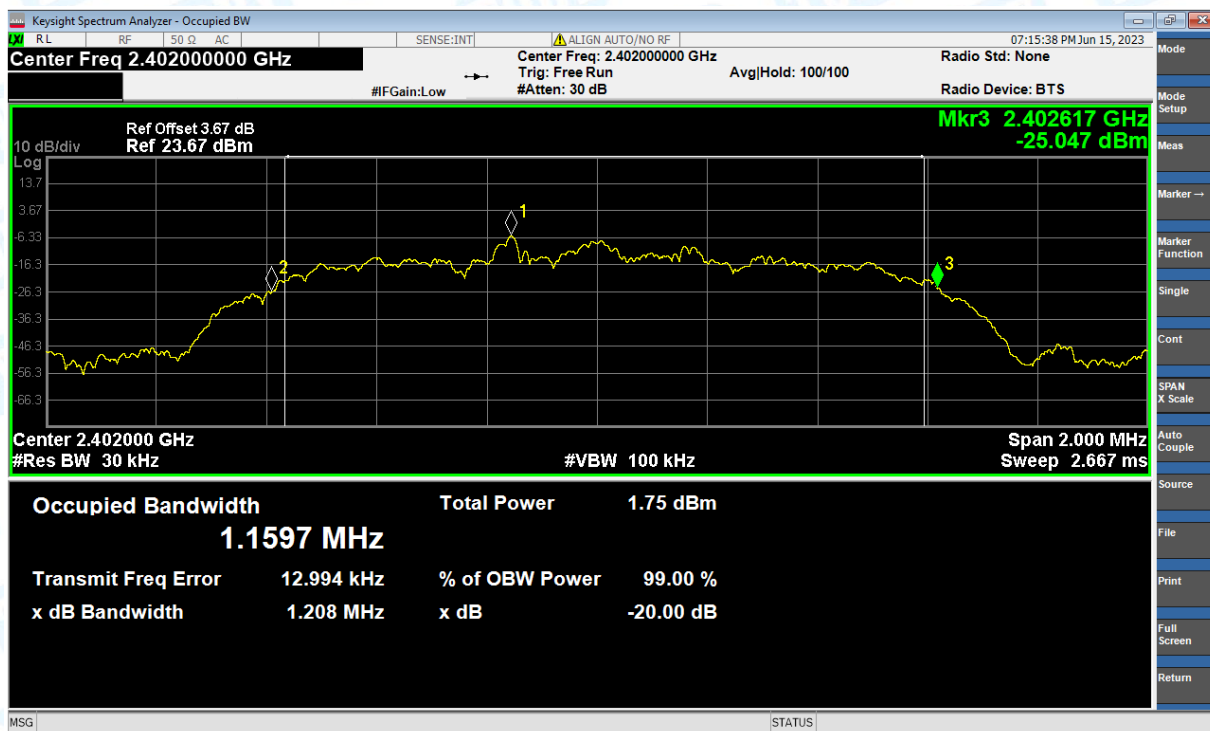
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



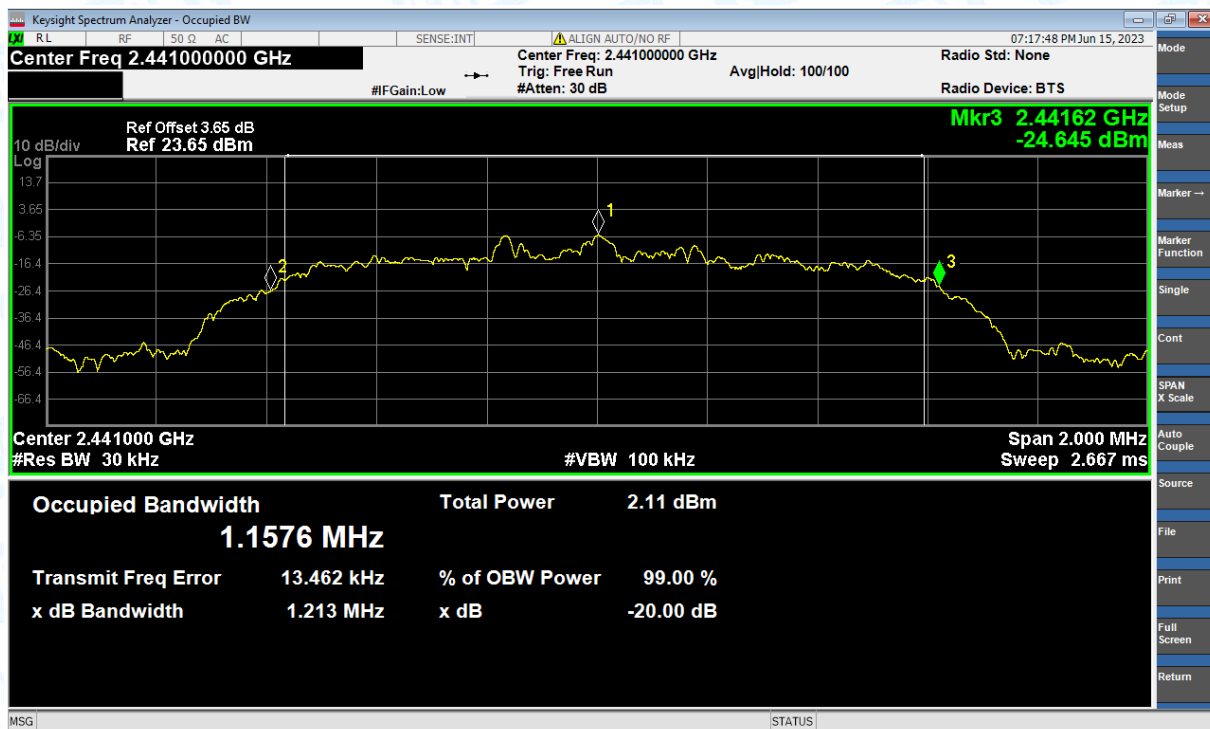
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

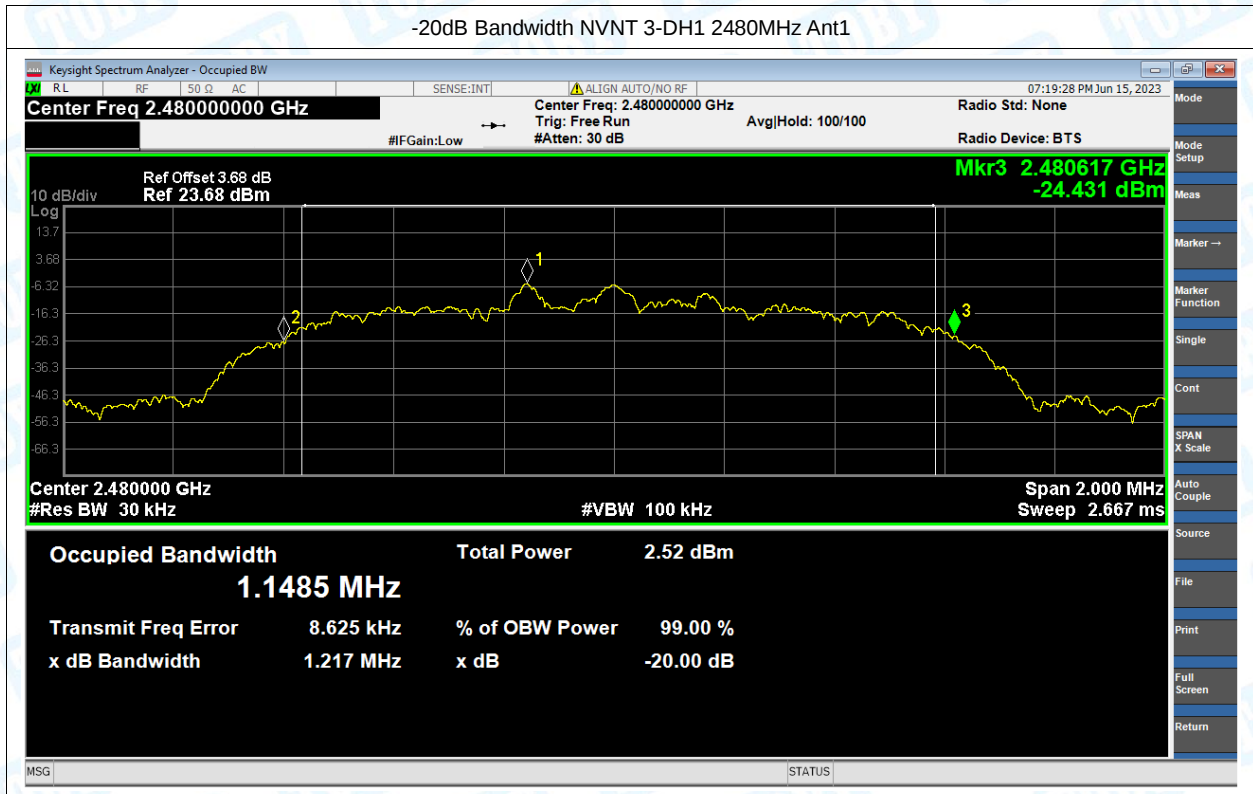


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



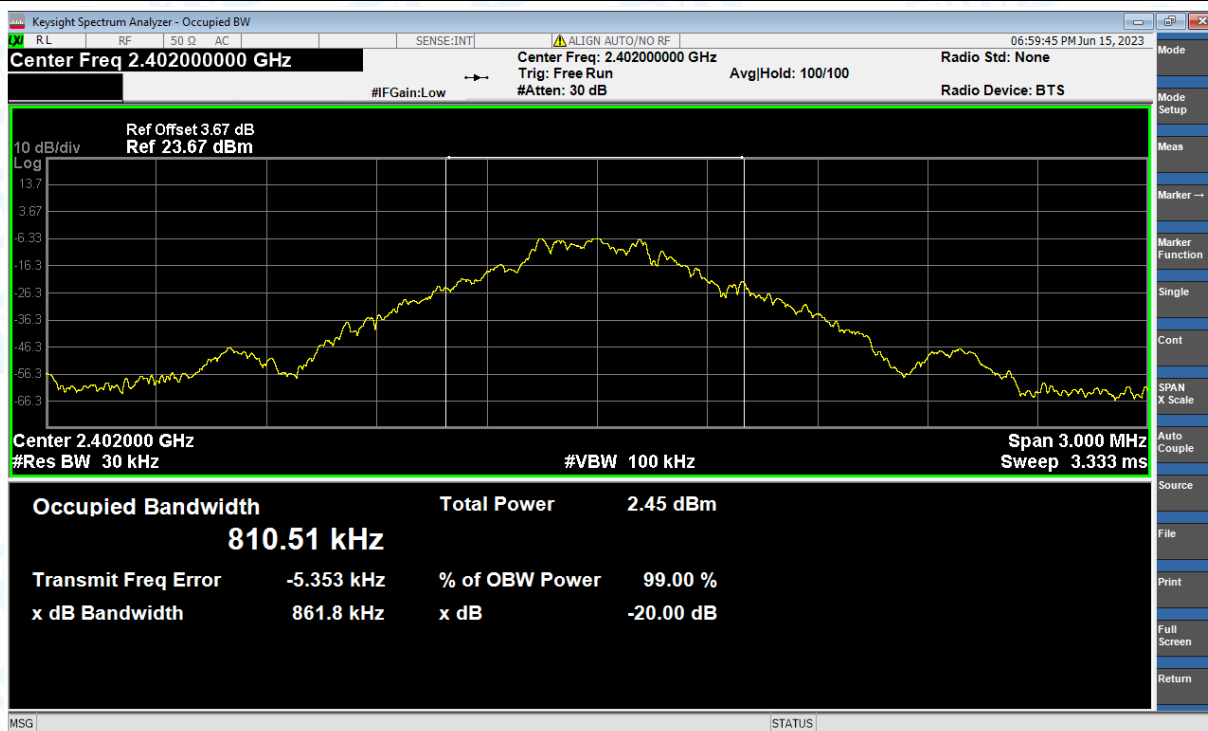


4. Occupied Channel Bandwidth

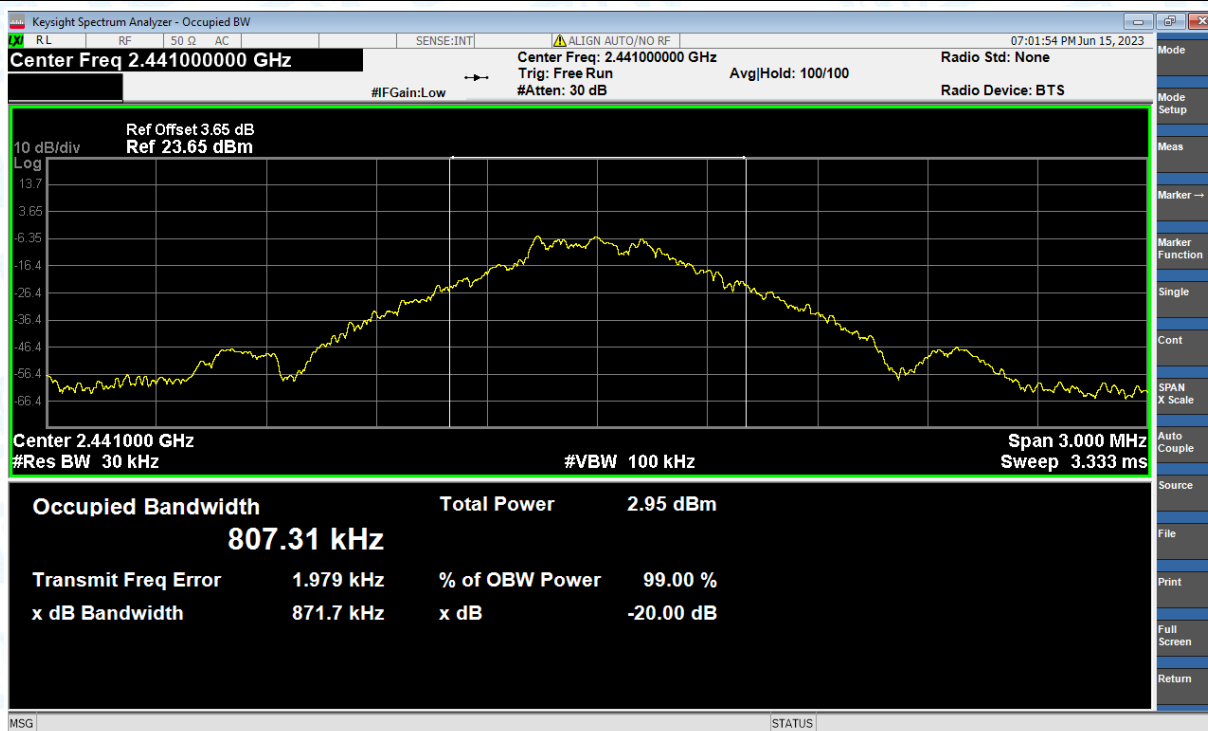
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.811
NVNT	1-DH1	2441	Ant1	0.807
NVNT	1-DH1	2480	Ant1	0.816
NVNT	2-DH1	2402	Ant1	1.164
NVNT	2-DH1	2441	Ant1	1.167
NVNT	2-DH1	2480	Ant1	1.169
NVNT	3-DH1	2402	Ant1	1.154
NVNT	3-DH1	2441	Ant1	1.161
NVNT	3-DH1	2480	Ant1	1.159

Test Graphs

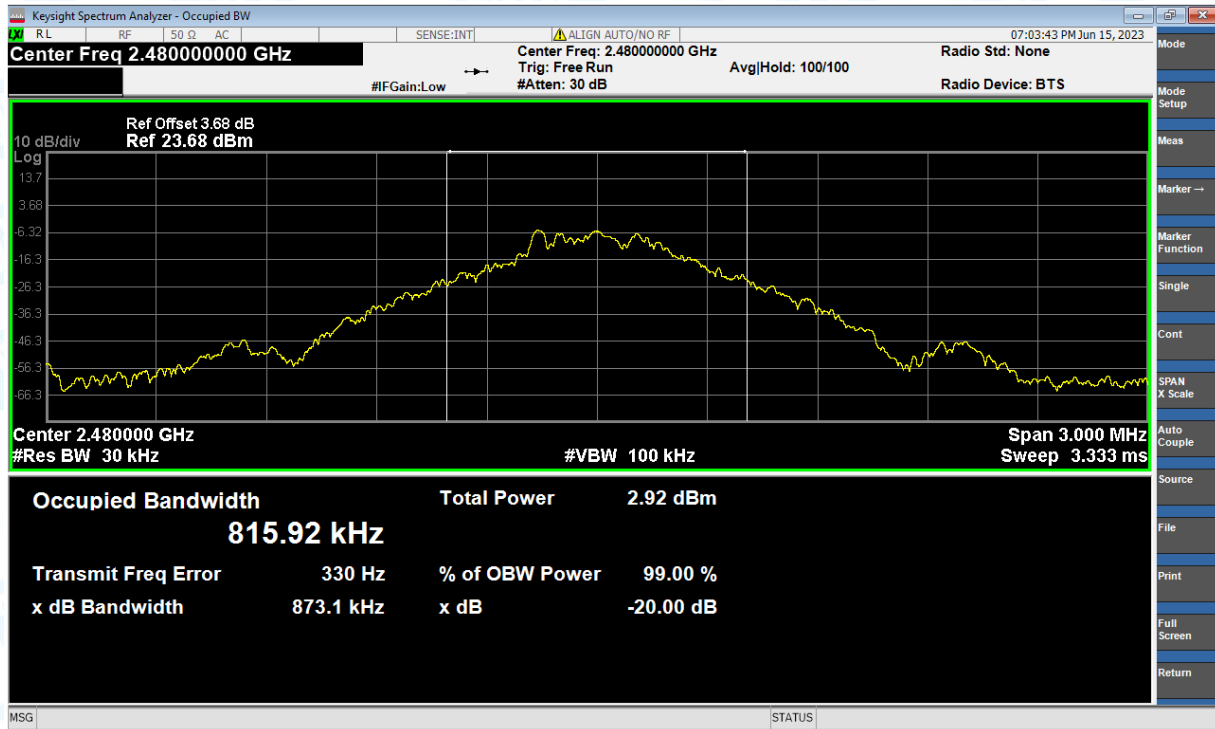
OBW NVNT 1-DH1 2402MHz Ant1



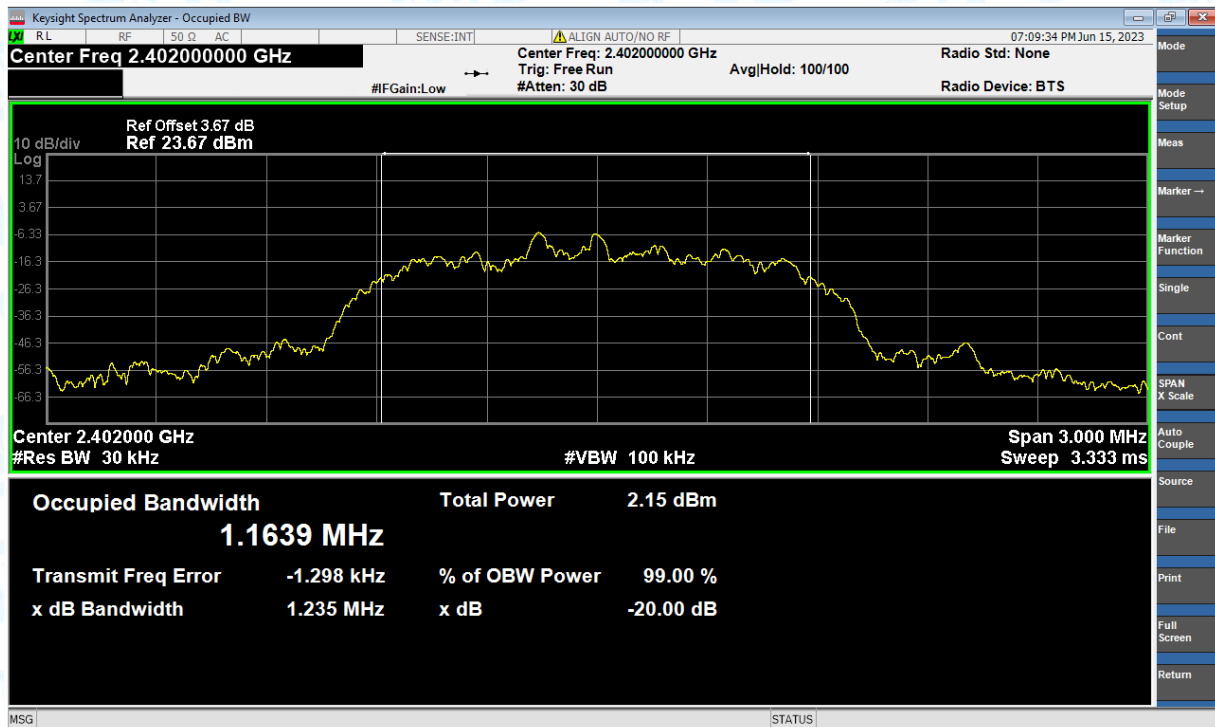
OBW NVNT 1-DH1 2441MHz Ant1



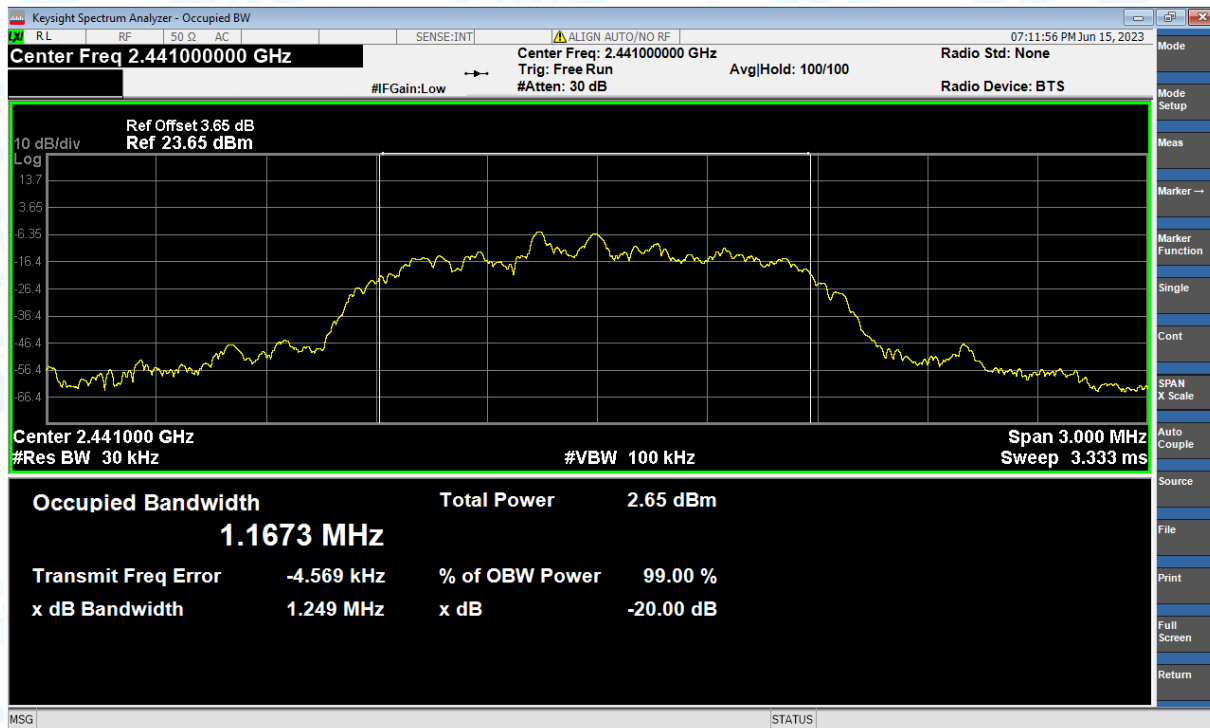
OBW NVNT 1-DH1 2480MHz Ant1



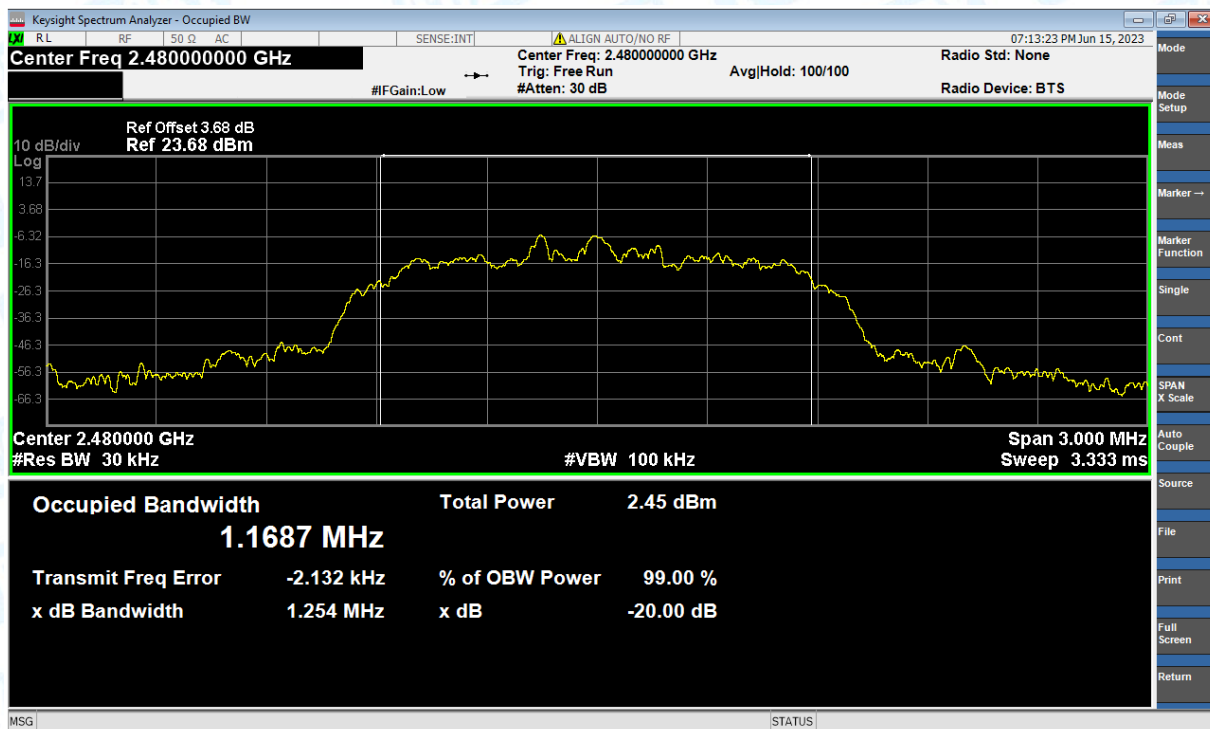
OBW NVNT 2-DH1 2402MHz Ant1



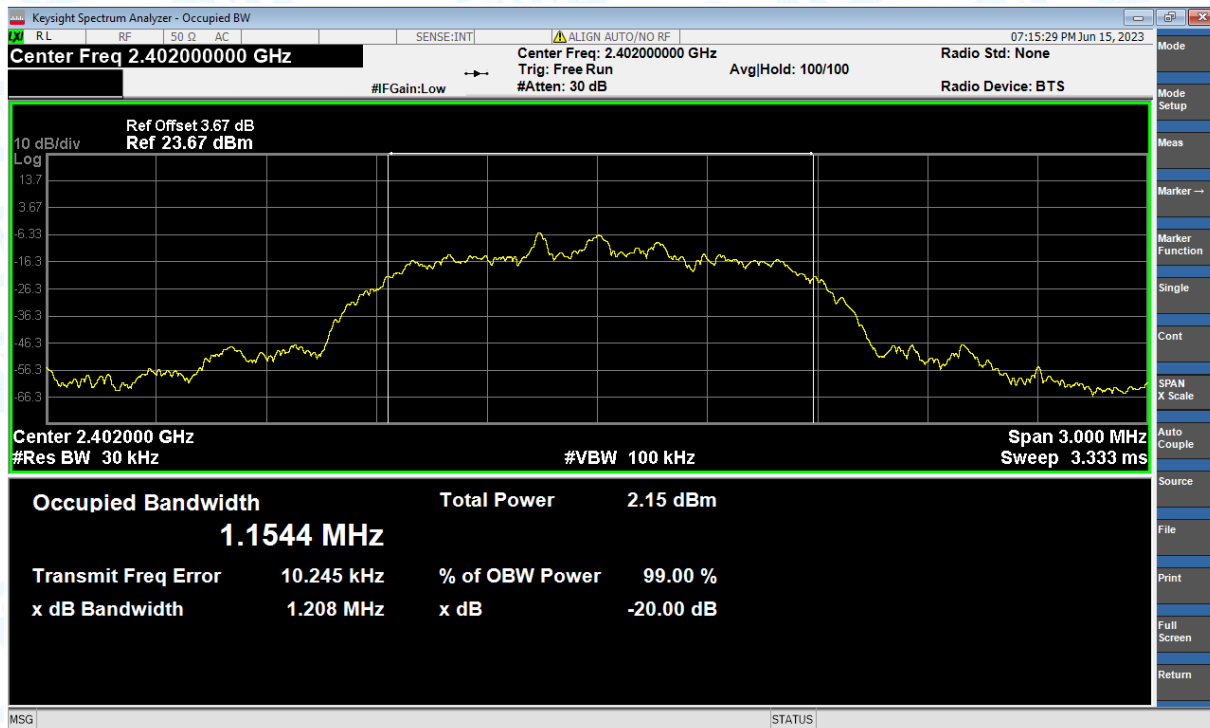
OBW NVNT 2-DH1 2441MHz Ant1



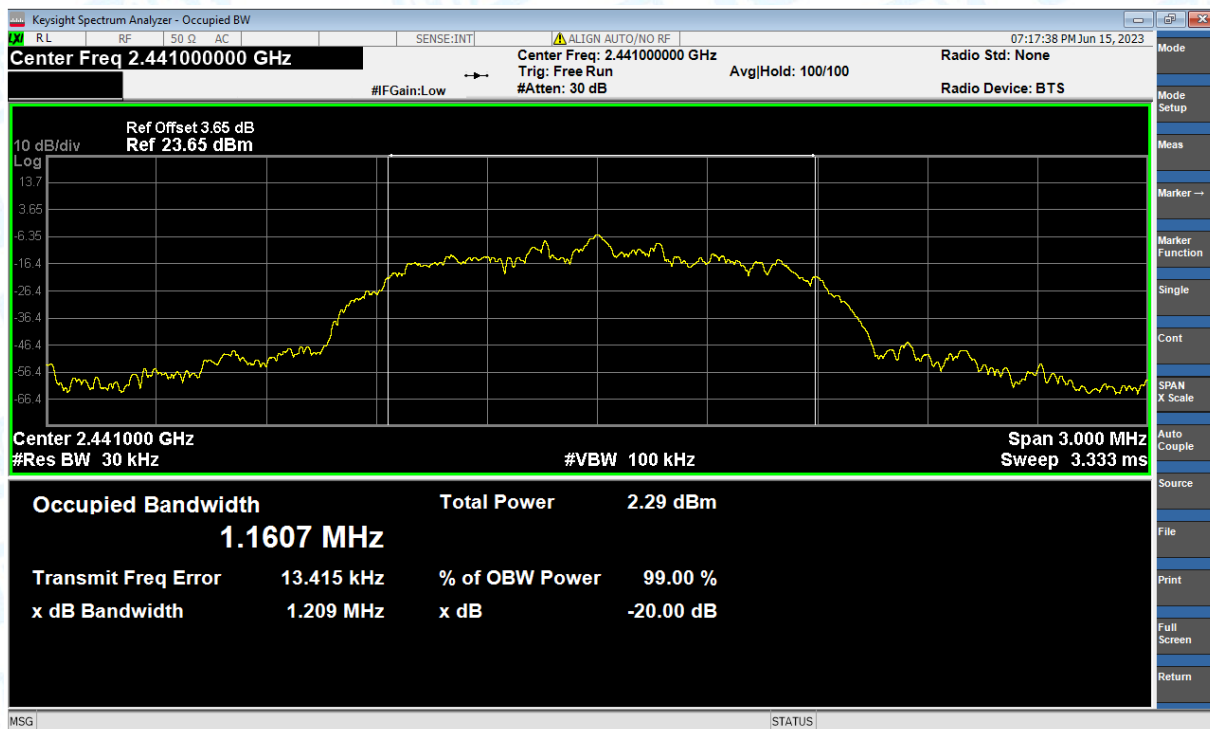
OBW NVNT 2-DH1 2480MHz Ant1

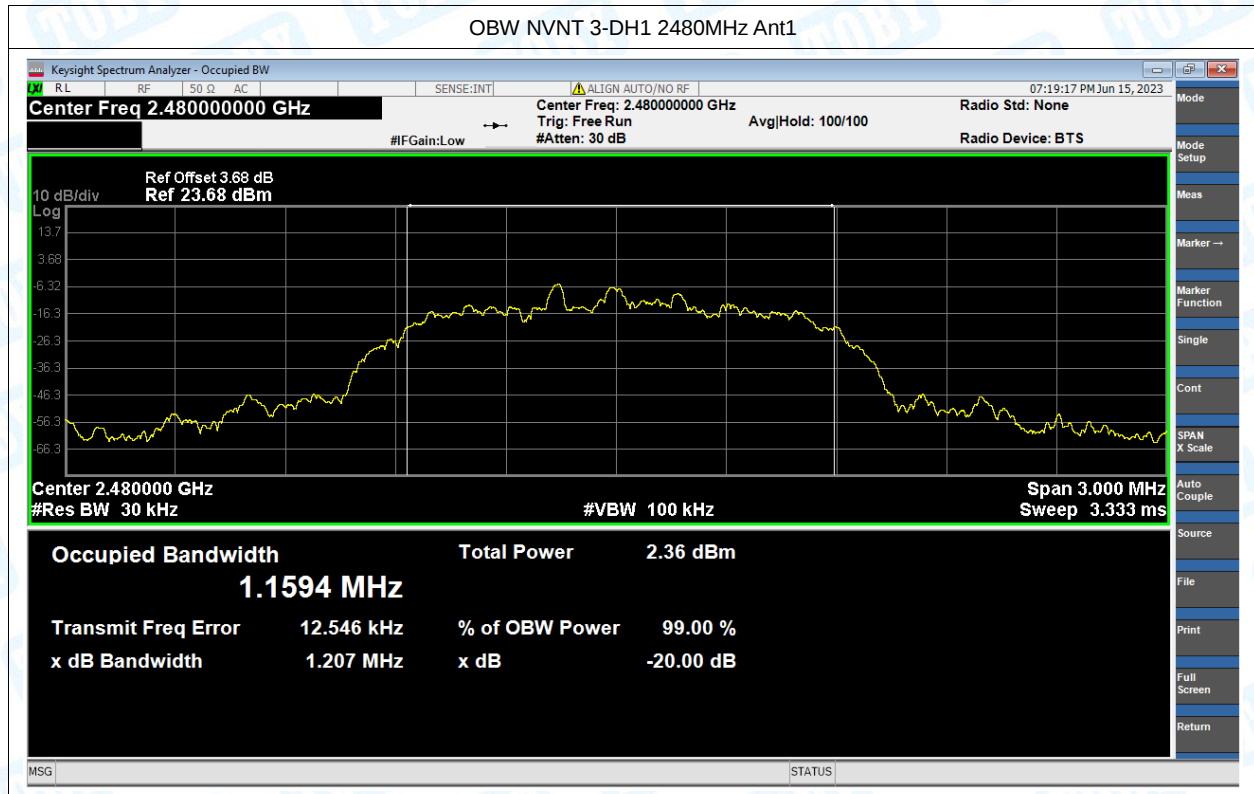


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



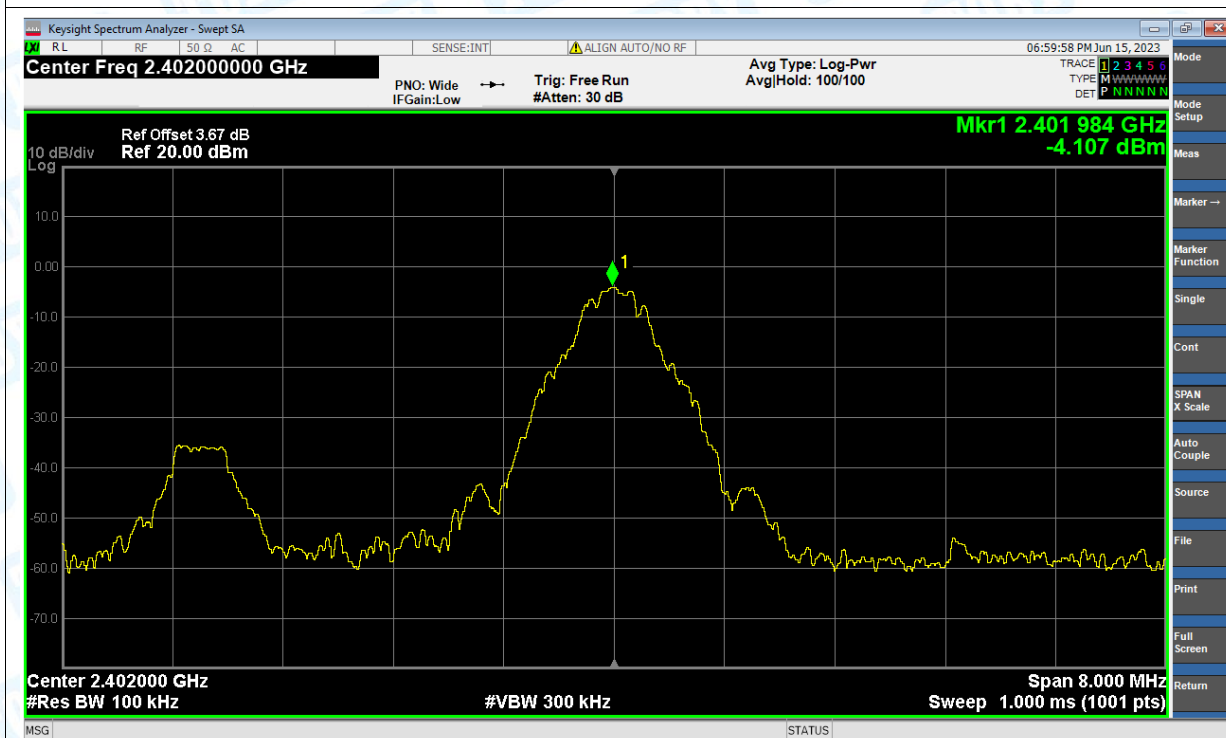


5. Band Edge

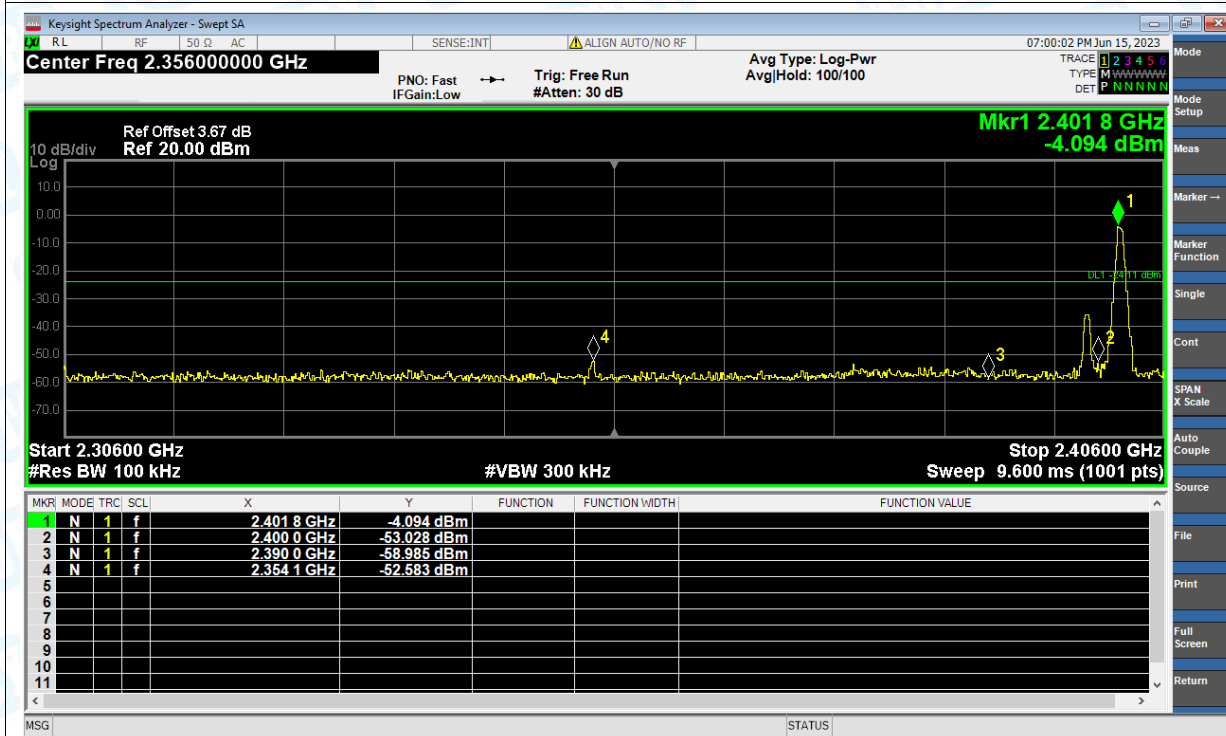
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-48.47	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-49.22	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-49.69	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-50.31	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-49.83	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-48.90	-20	Pass

Test Graphs

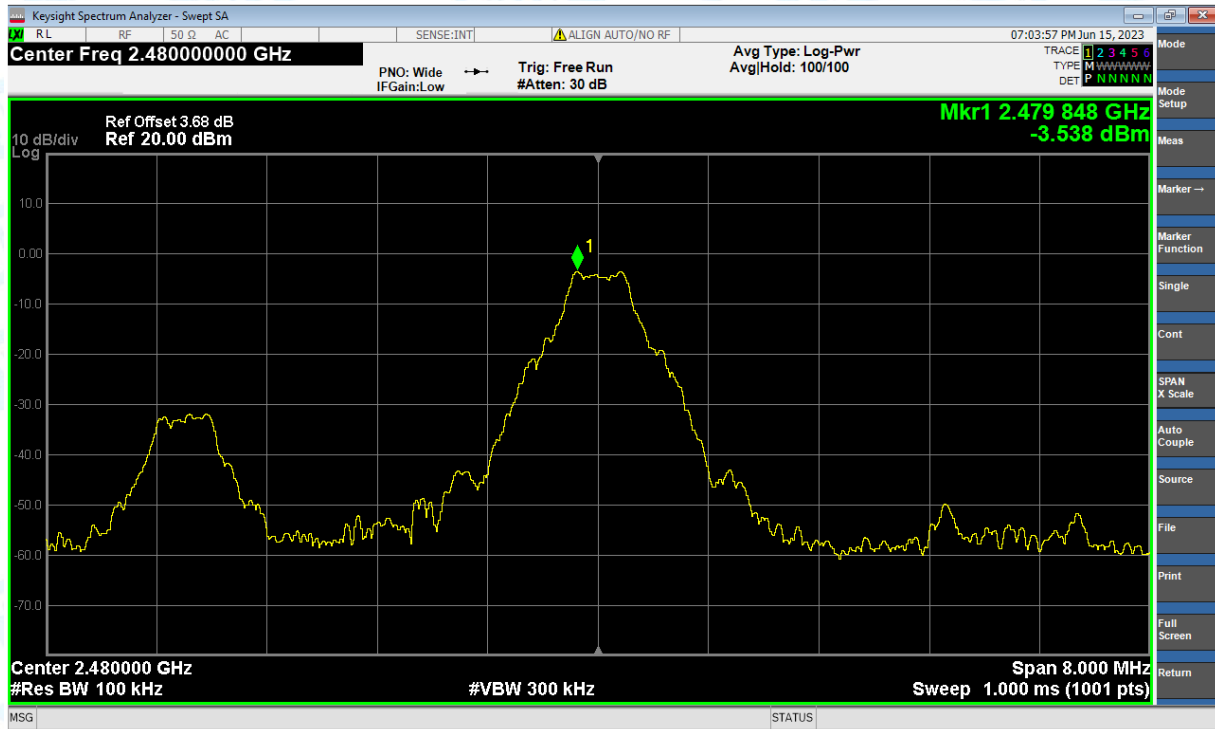
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



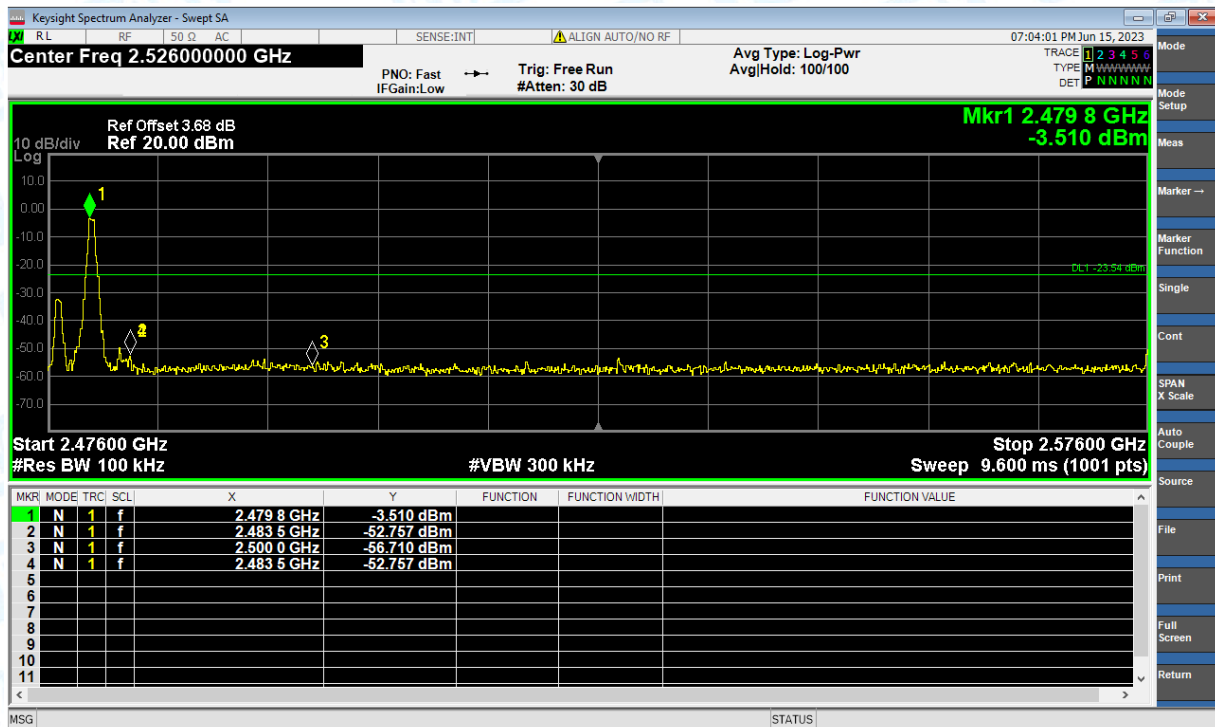
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



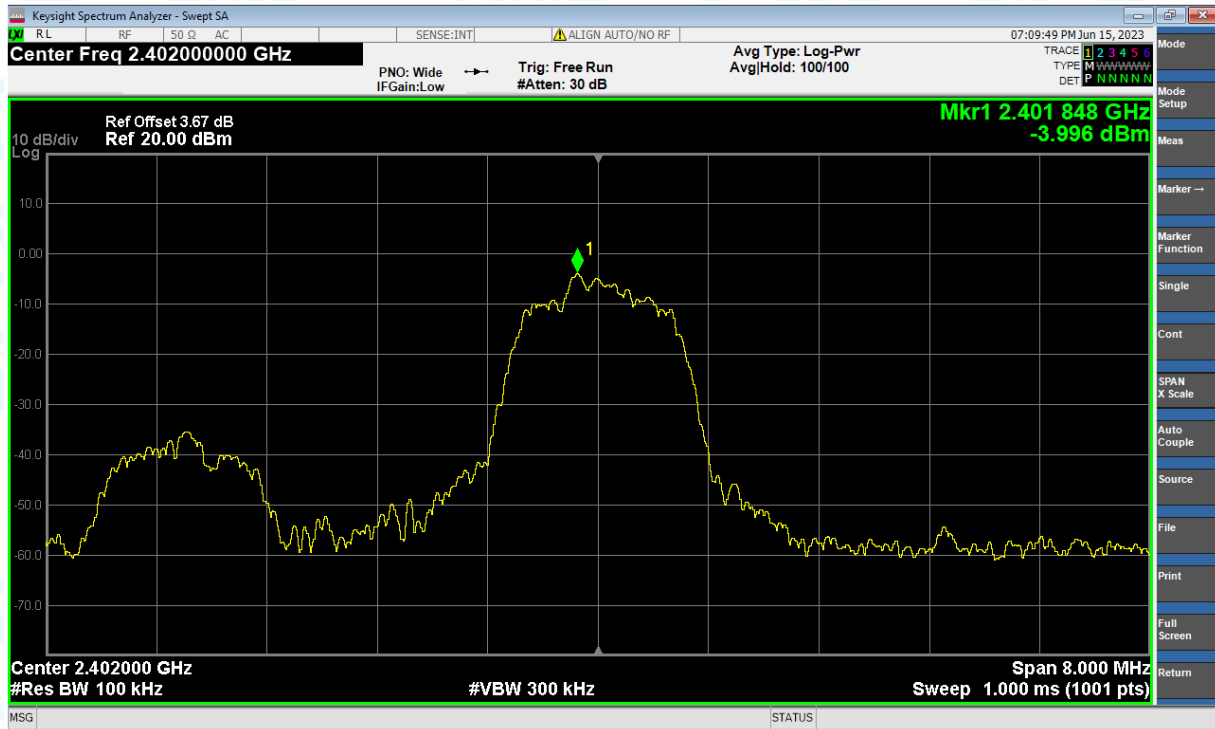
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



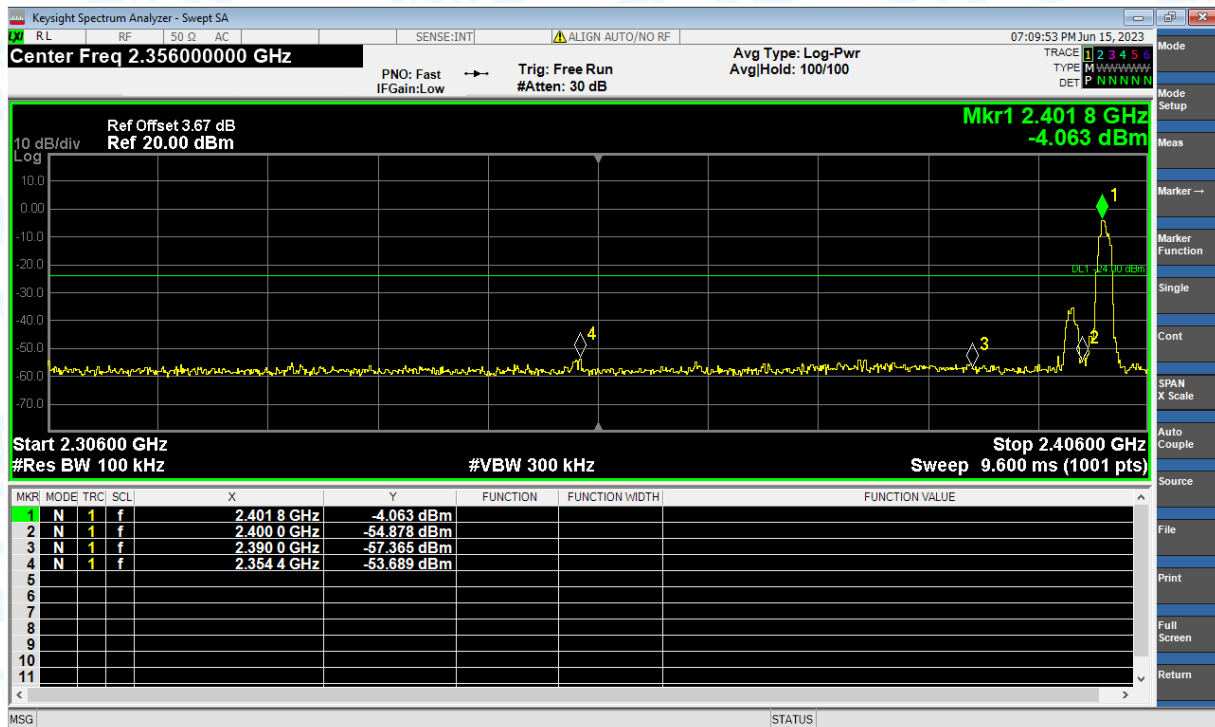
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



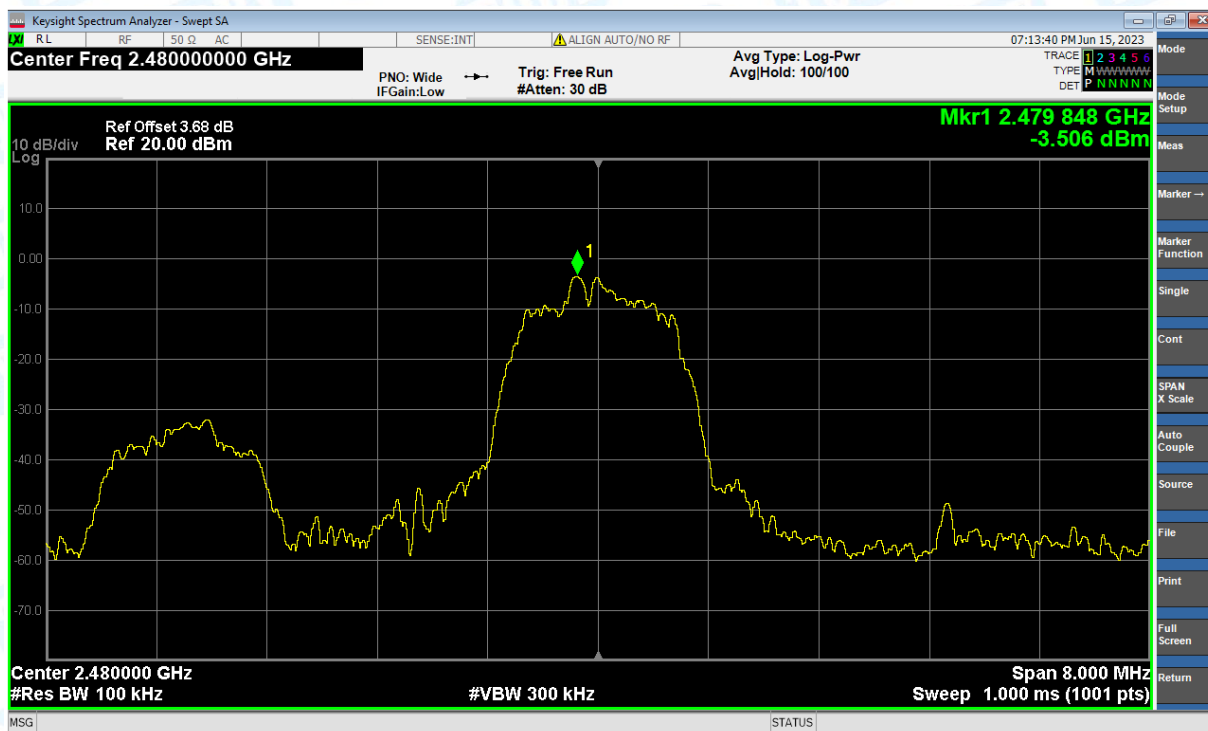
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



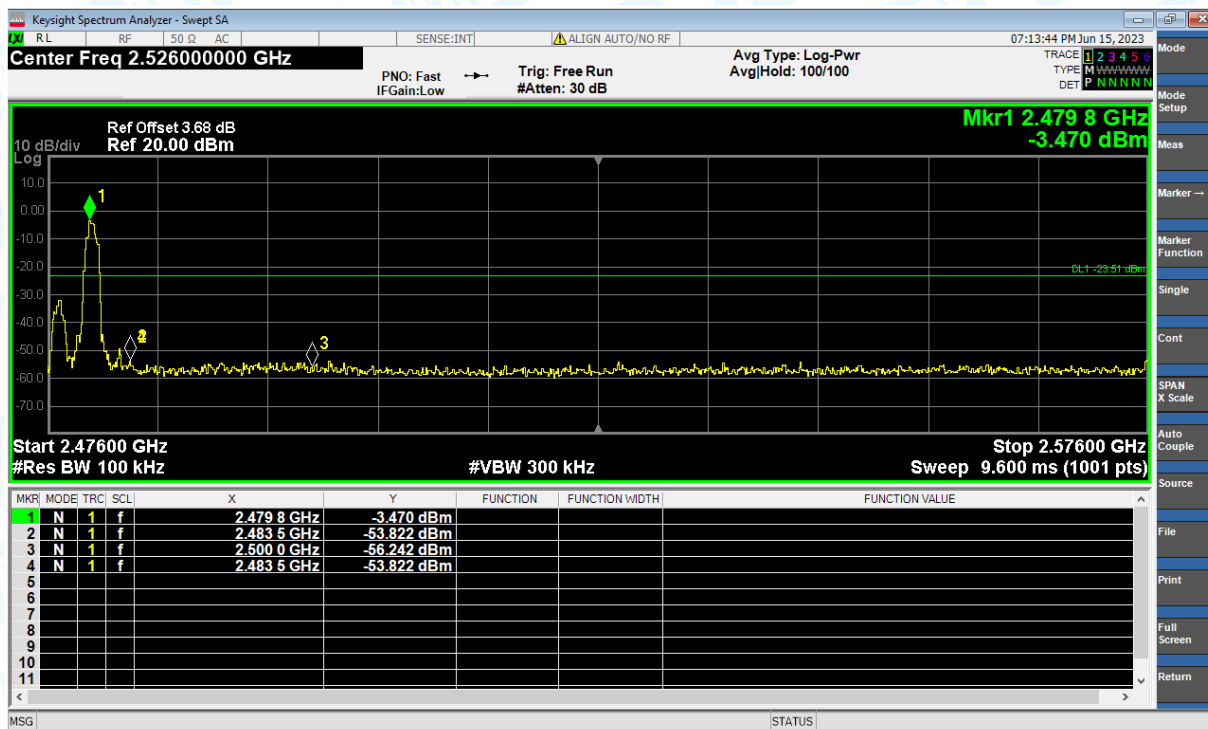
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



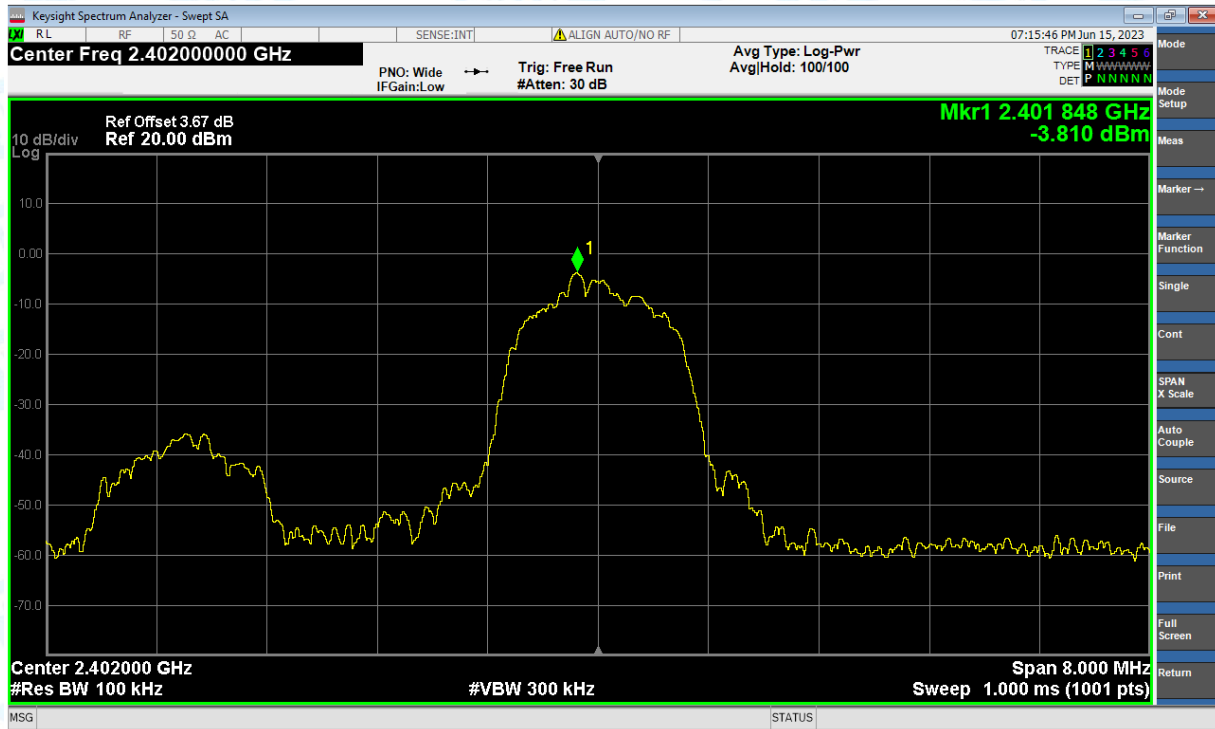
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



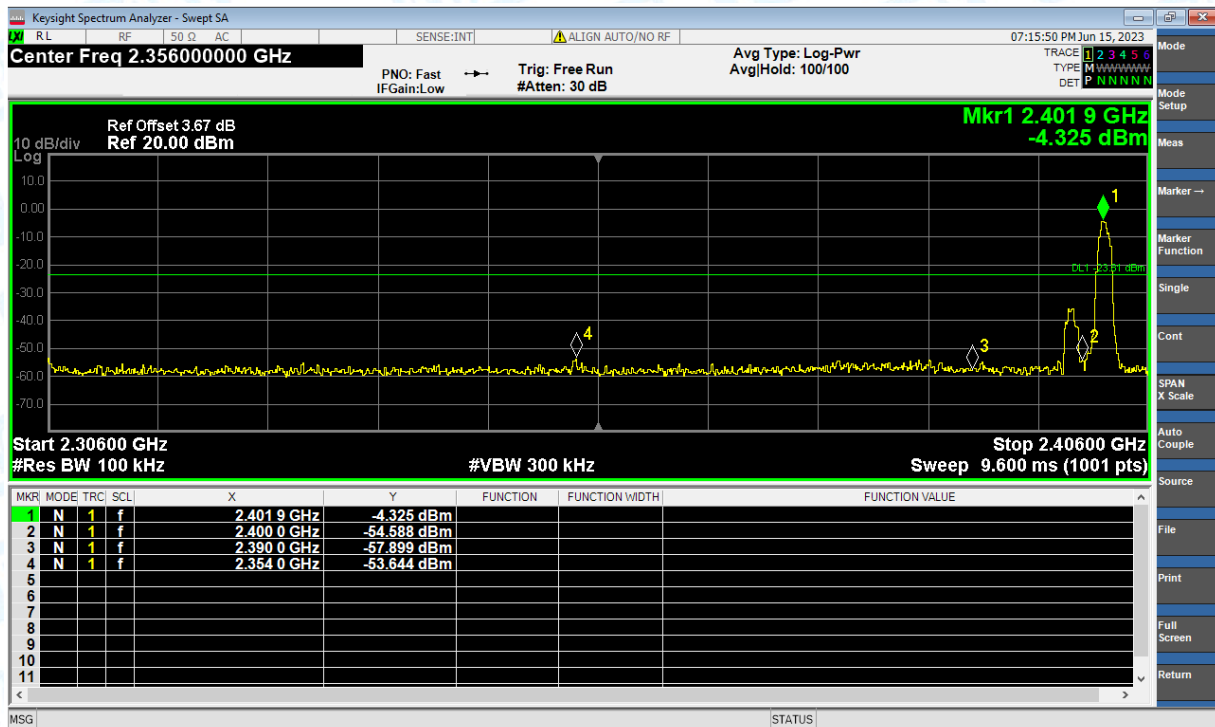
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



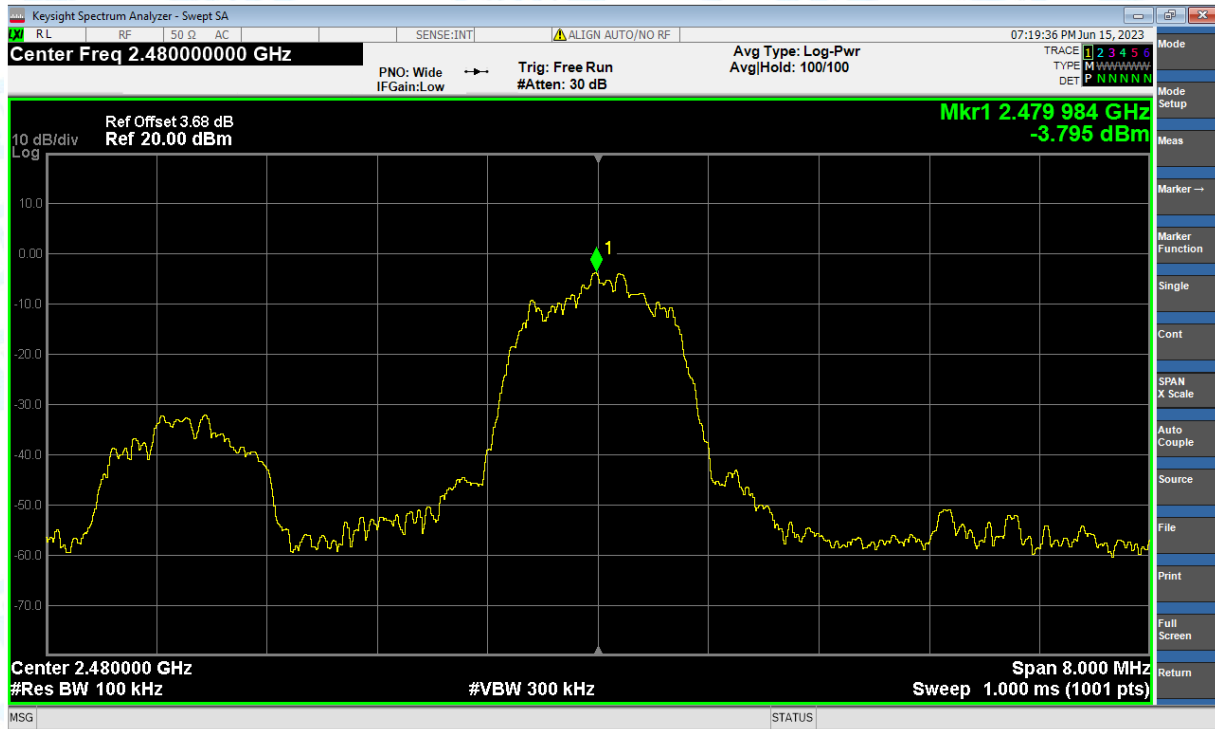
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



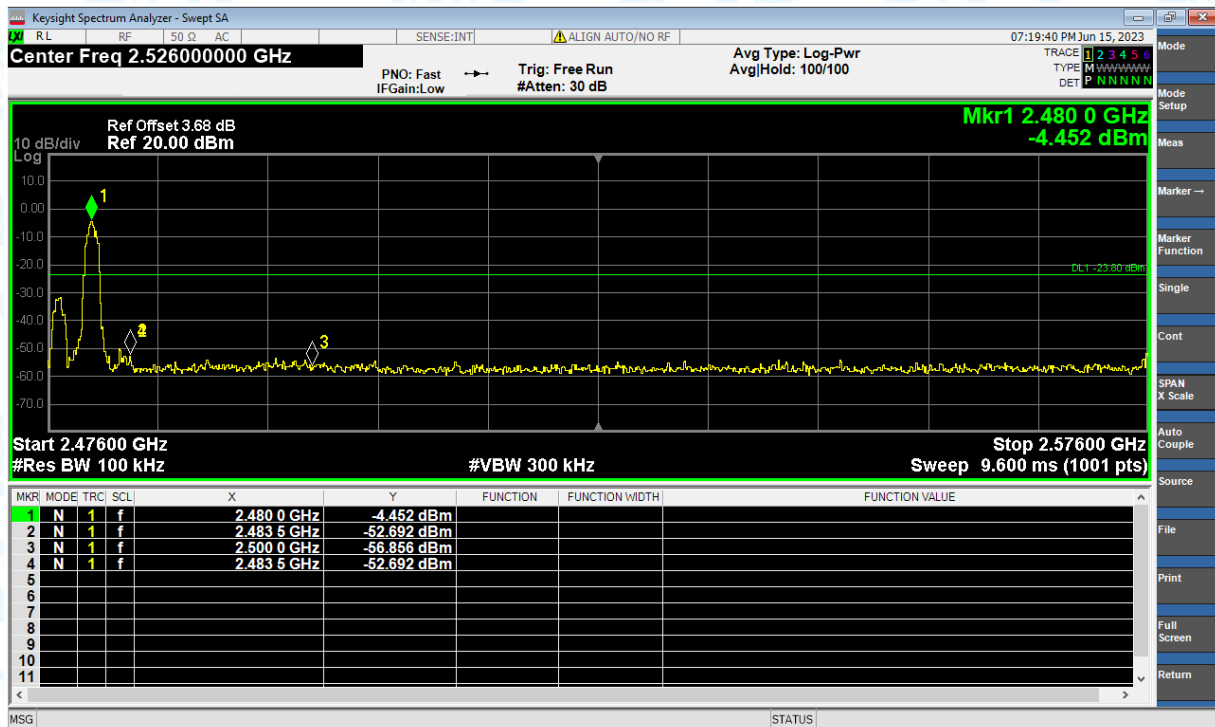
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6. Band Edge(Hopping)

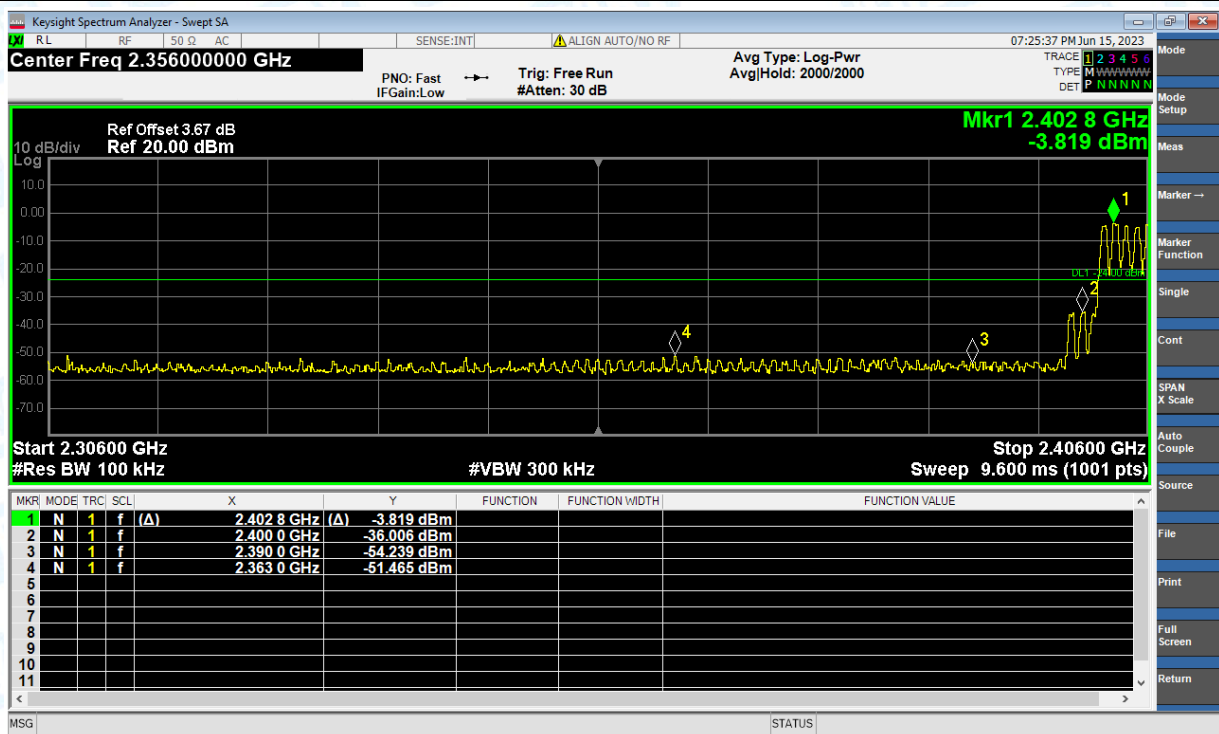
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-47.47	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-45.62	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-46.78	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-47.75	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-47.18	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-47.36	-20	Pass

Test Graphs

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



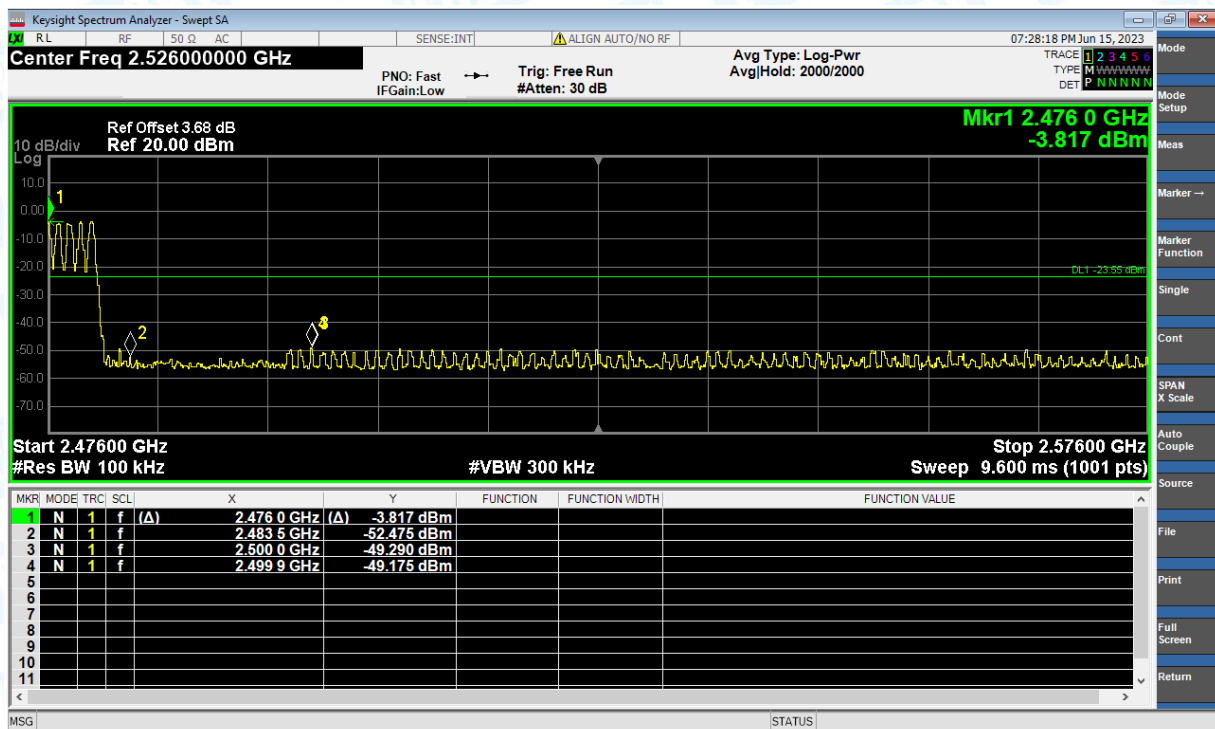
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



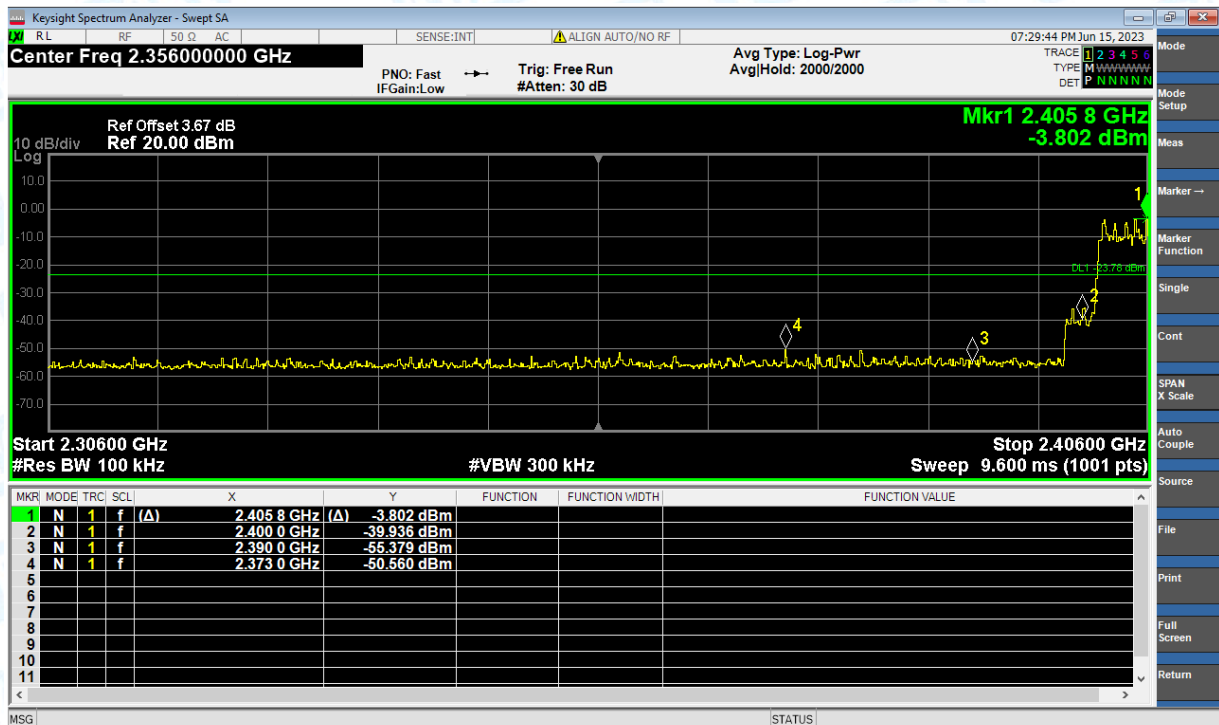
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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



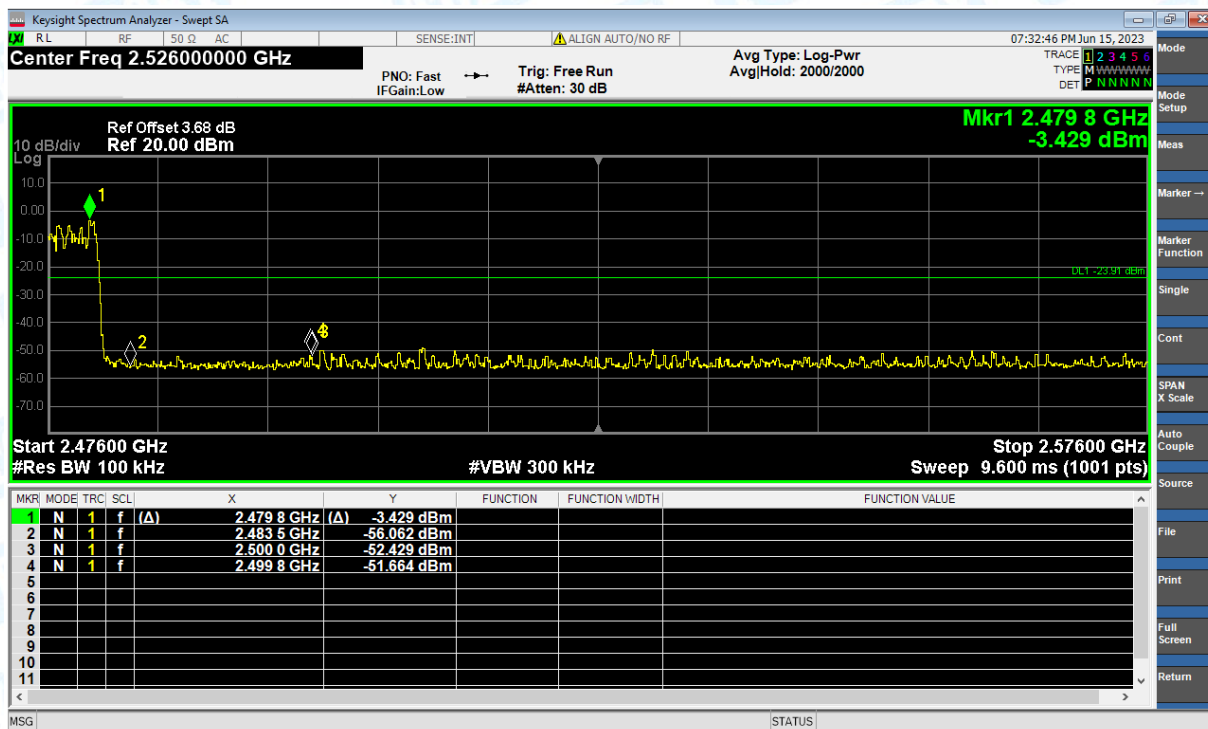
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



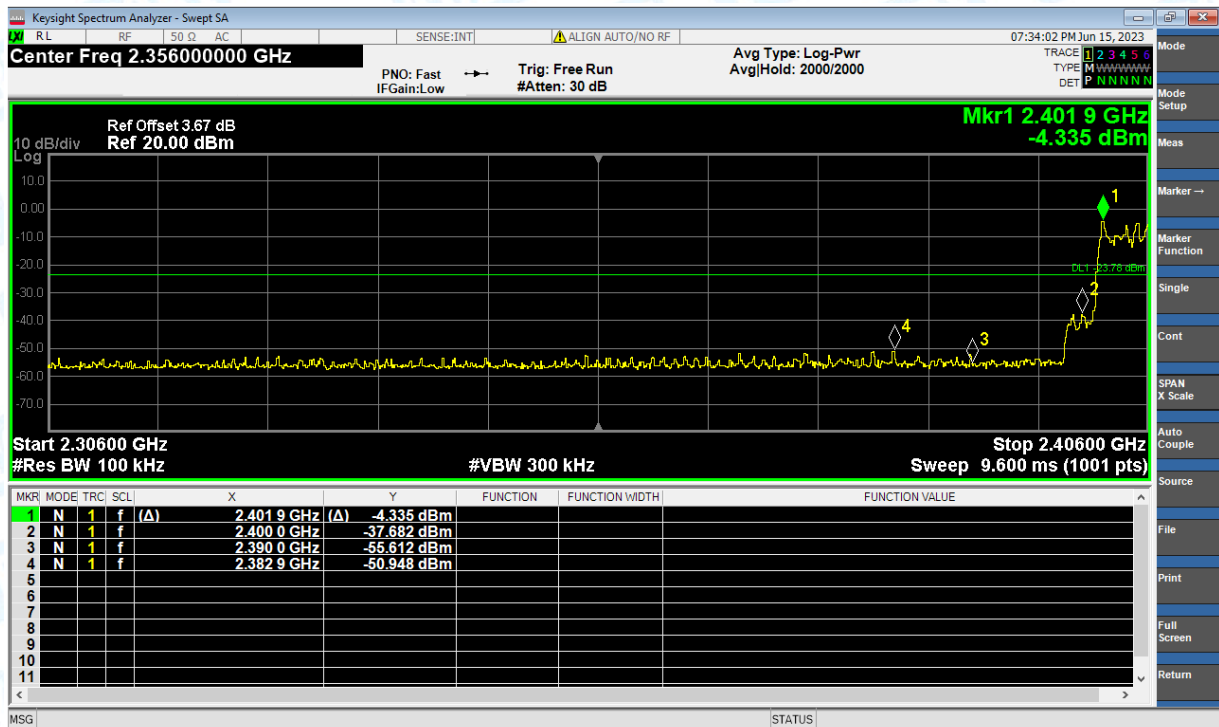
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



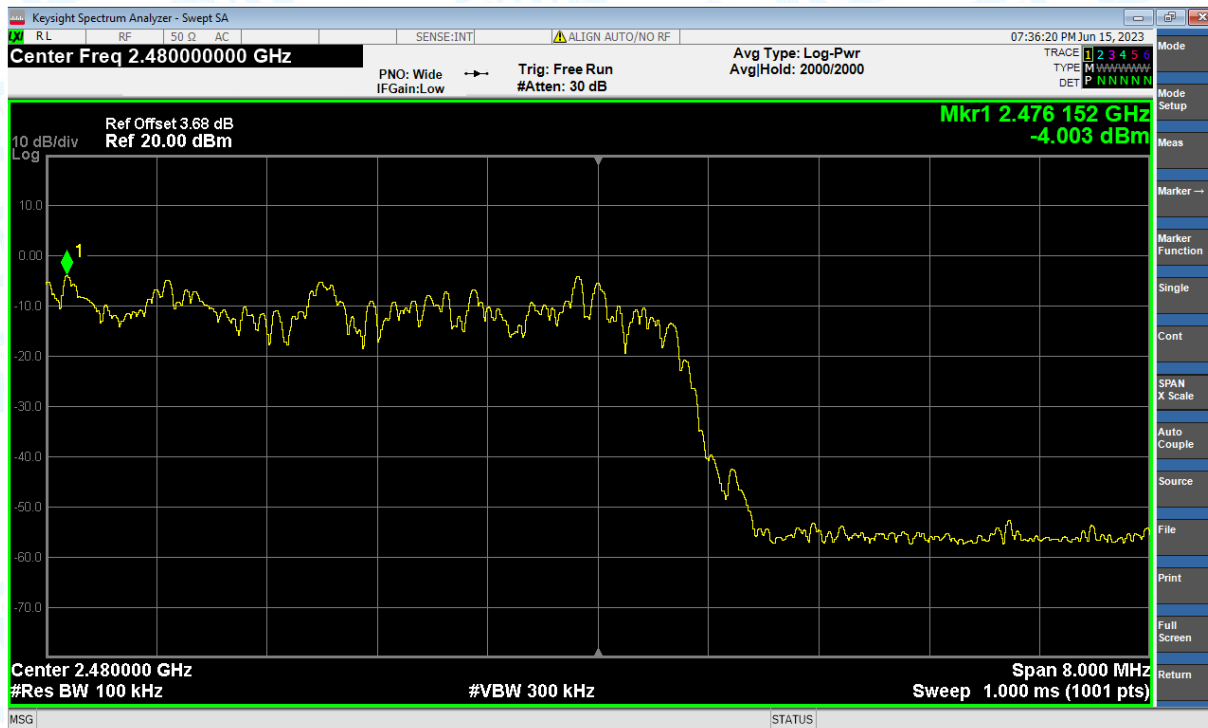
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



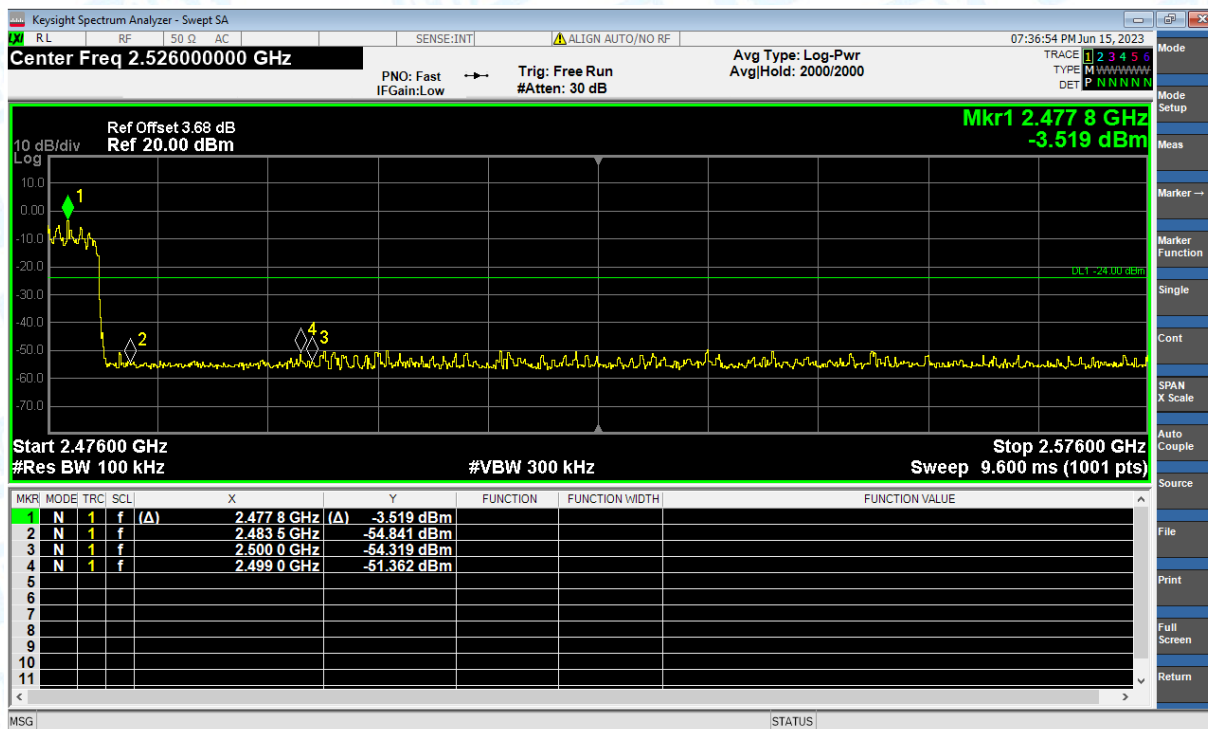
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

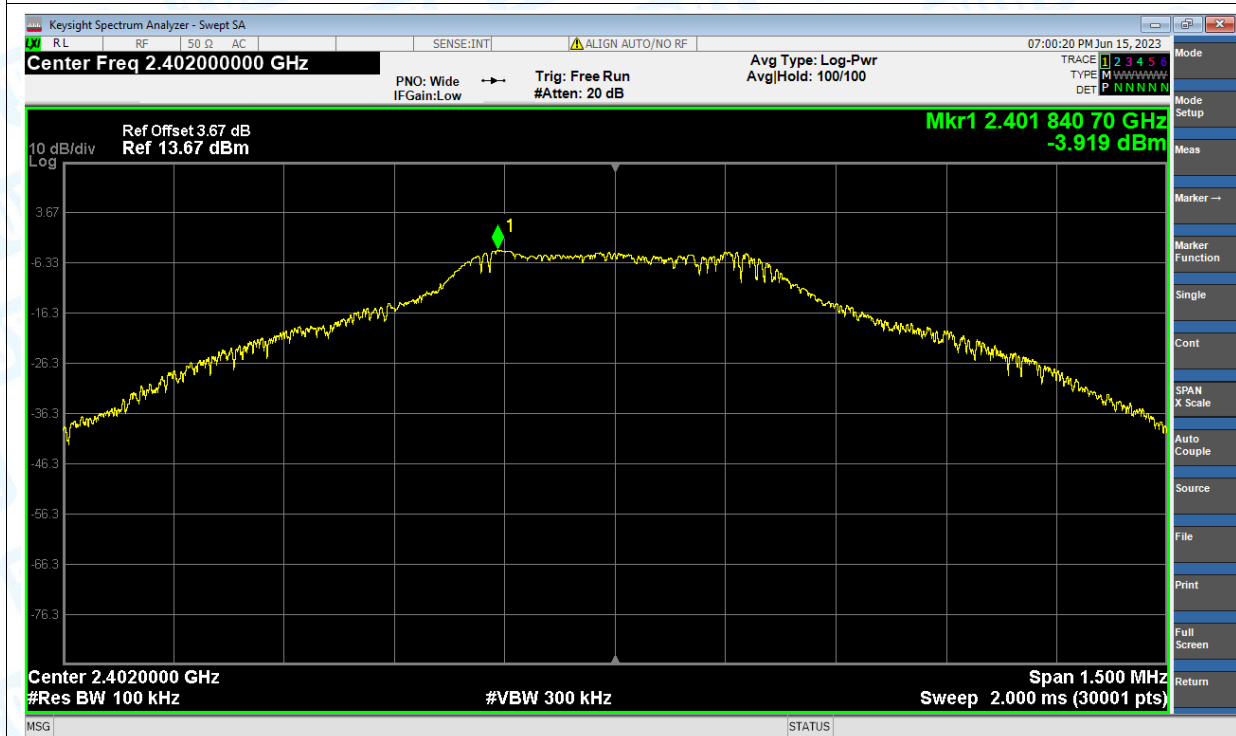


7. Conducted RF Spurious Emission

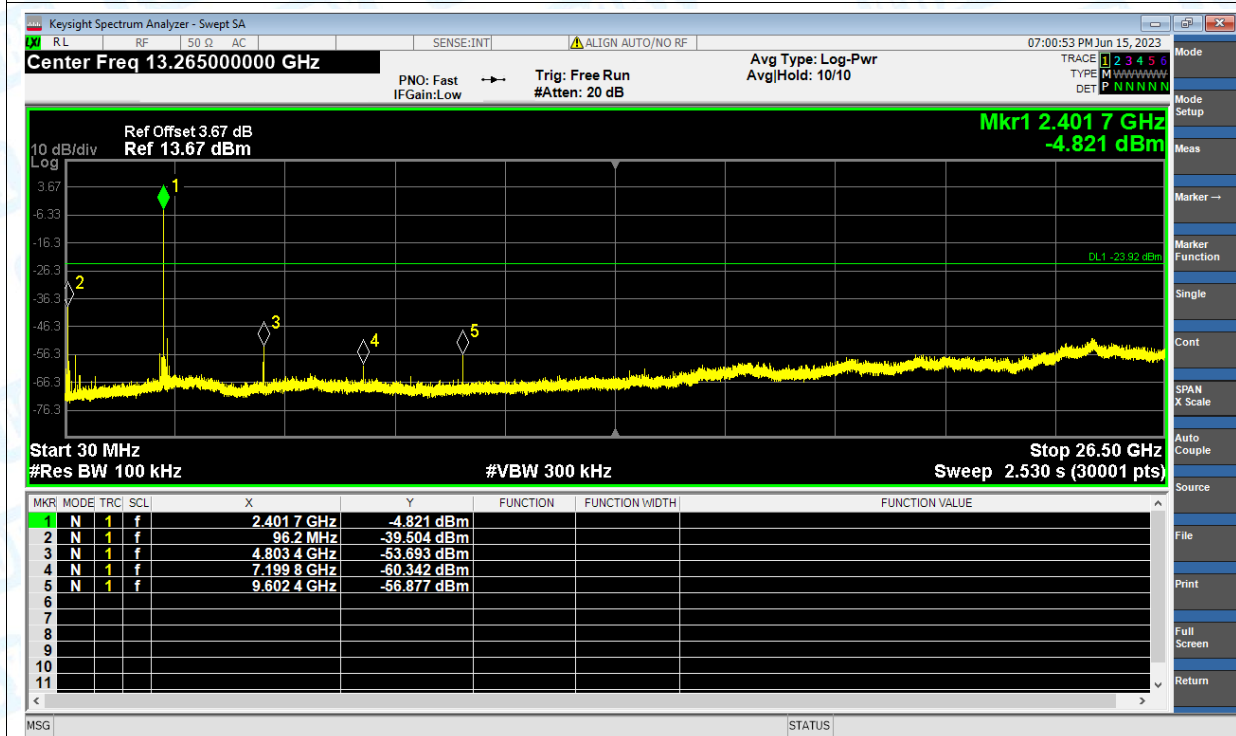
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-35.58	-20	Pass
NVNT	1-DH1	2441	Ant1	-47.23	-20	Pass
NVNT	1-DH1	2480	Ant1	-34.78	-20	Pass
NVNT	2-DH1	2402	Ant1	-46.32	-20	Pass
NVNT	2-DH1	2441	Ant1	-36.35	-20	Pass
NVNT	2-DH1	2480	Ant1	-39.27	-20	Pass
NVNT	3-DH1	2402	Ant1	-46.22	-20	Pass
NVNT	3-DH1	2441	Ant1	-35.56	-20	Pass
NVNT	3-DH1	2480	Ant1	-47.50	-20	Pass

Test Graphs

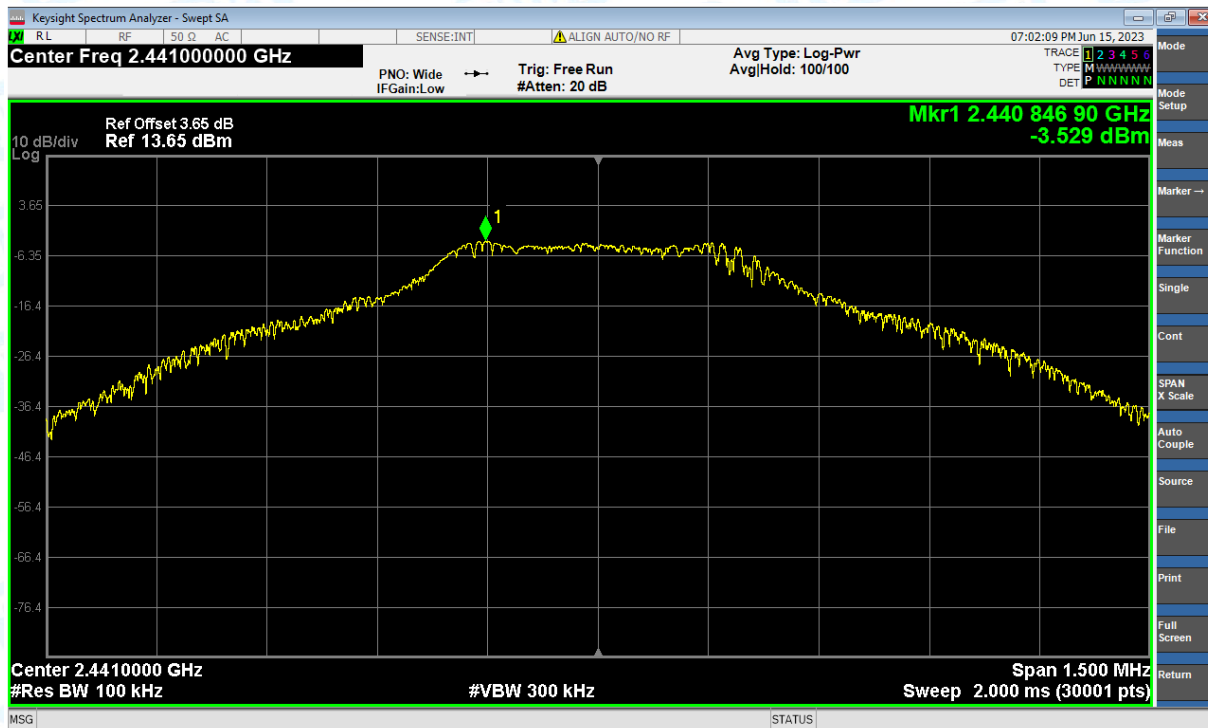
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



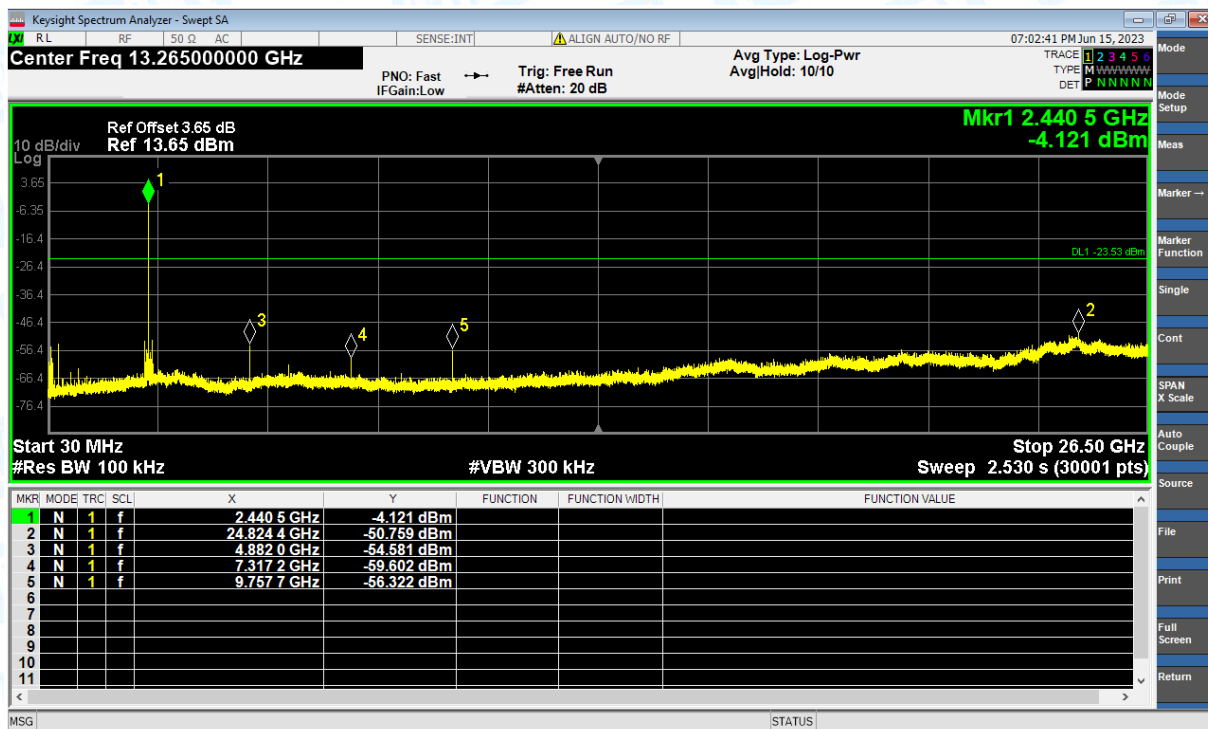
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



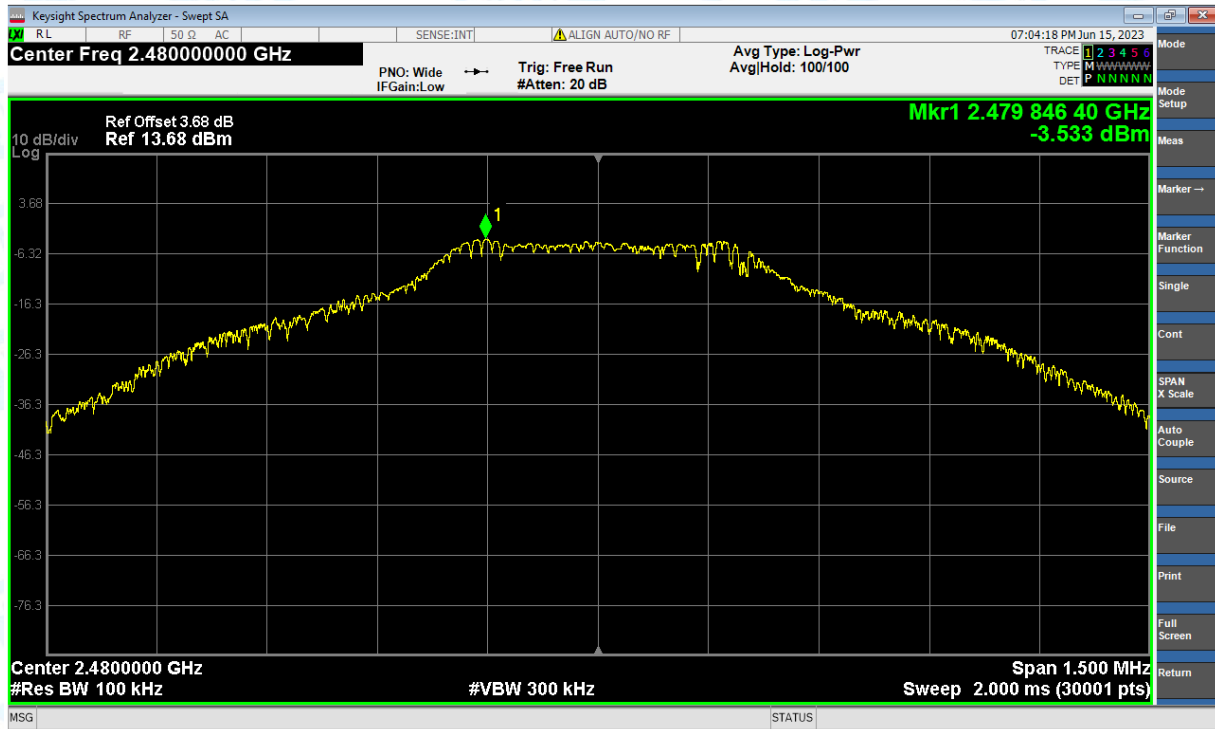
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



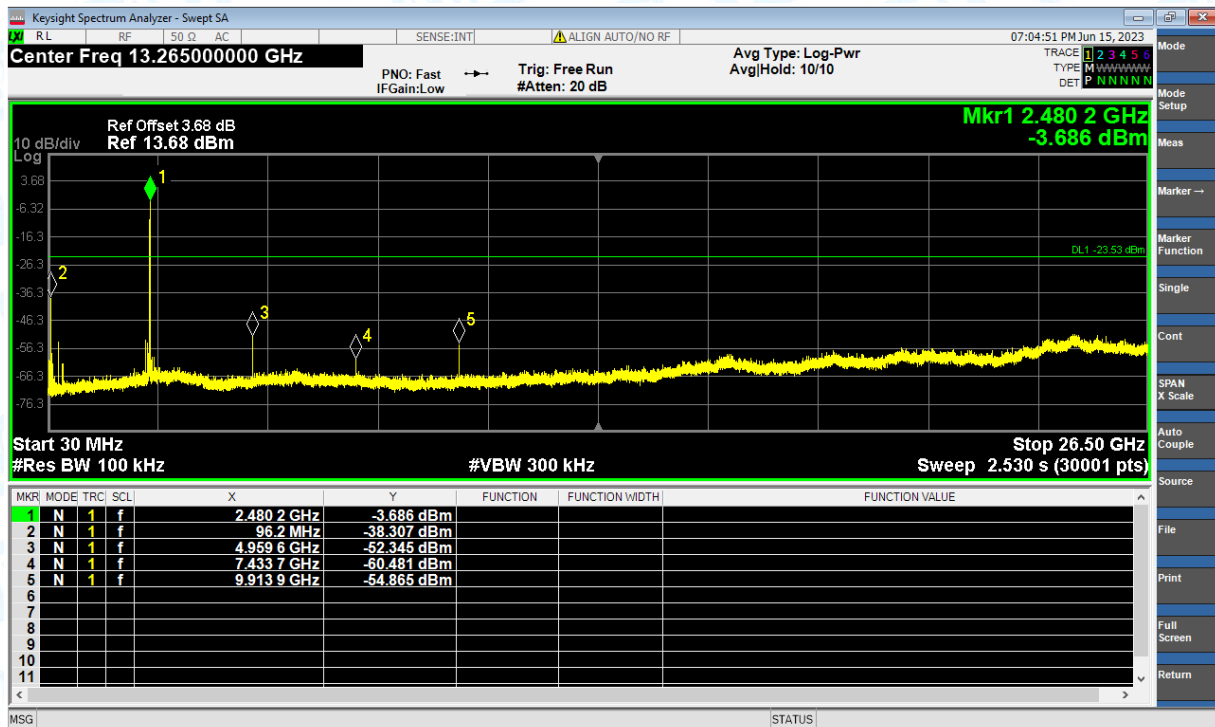
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



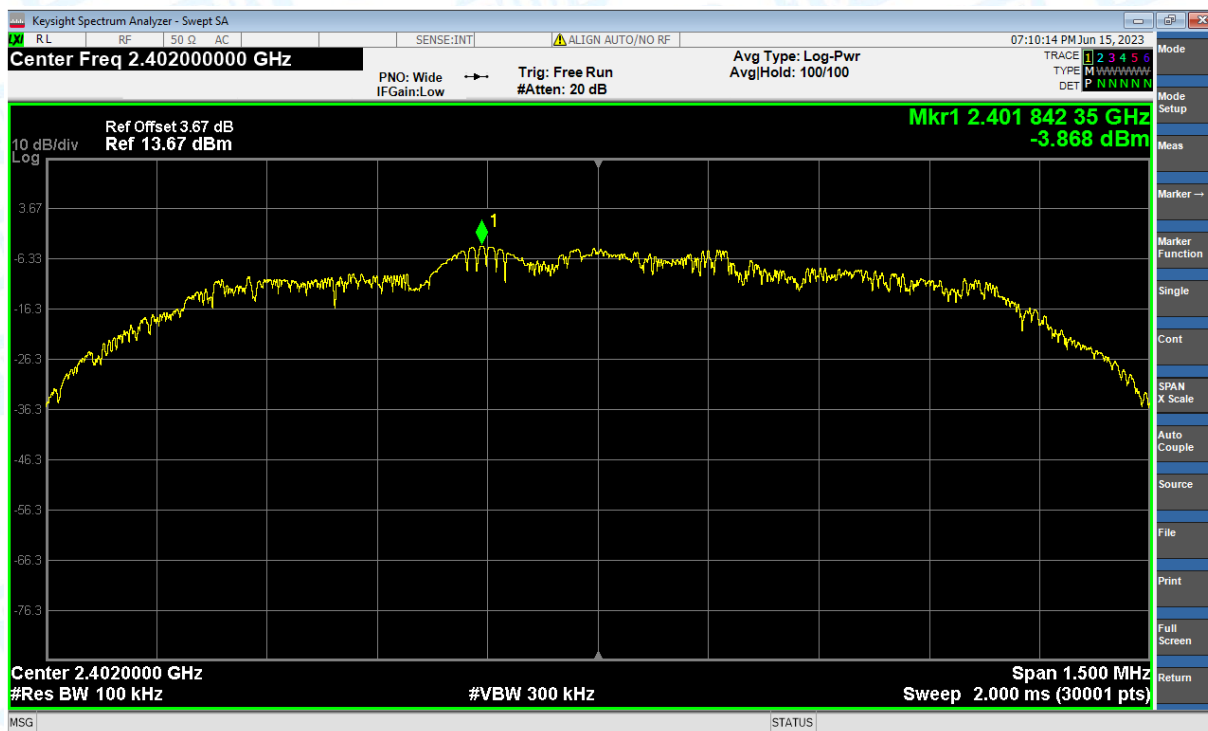
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



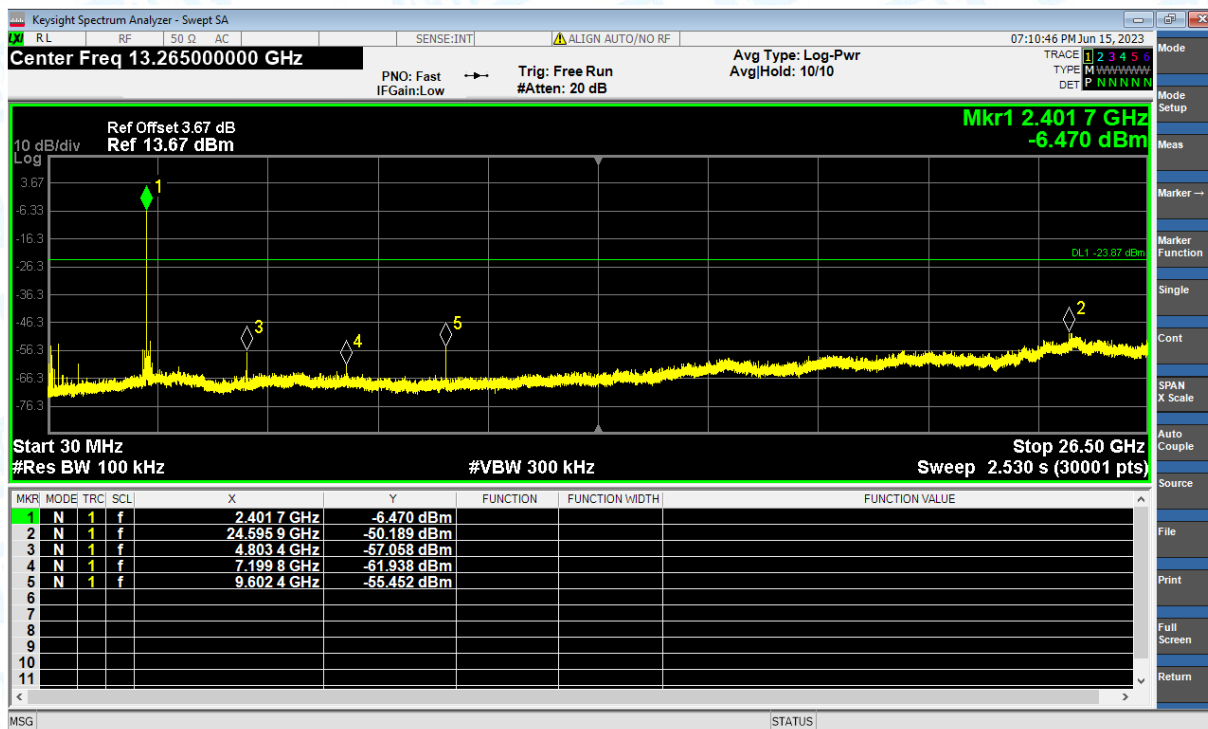
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



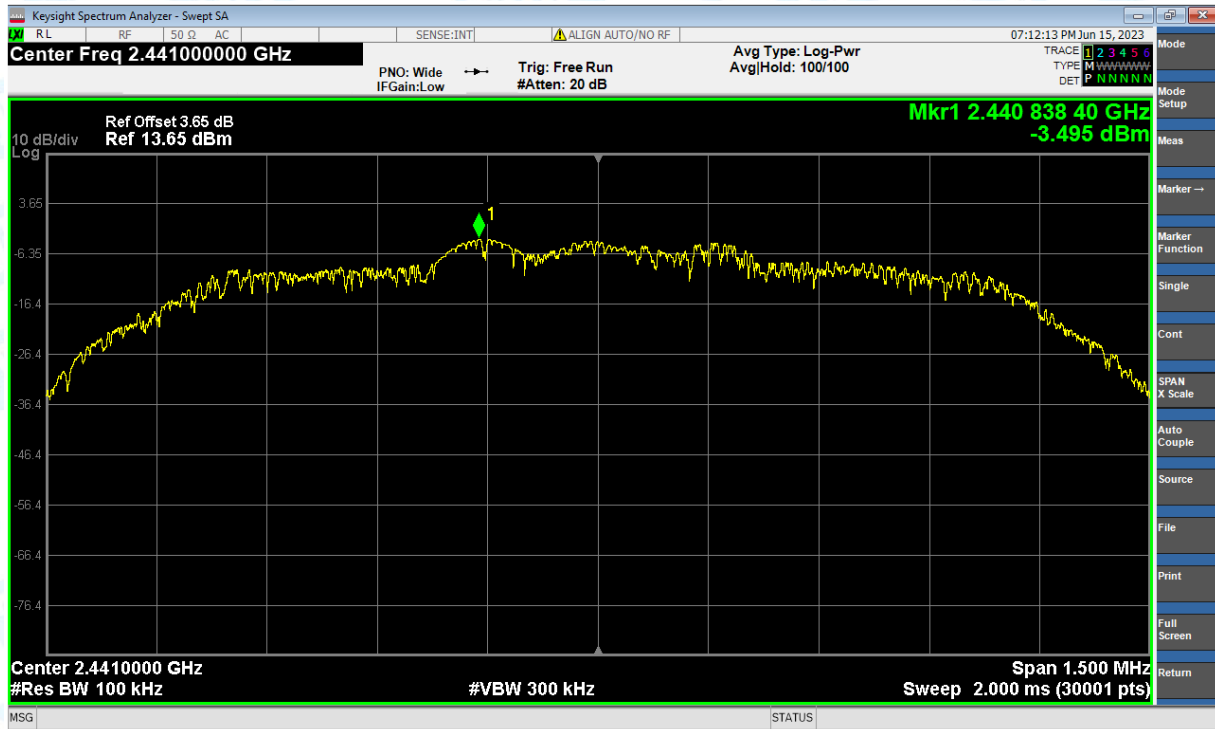
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



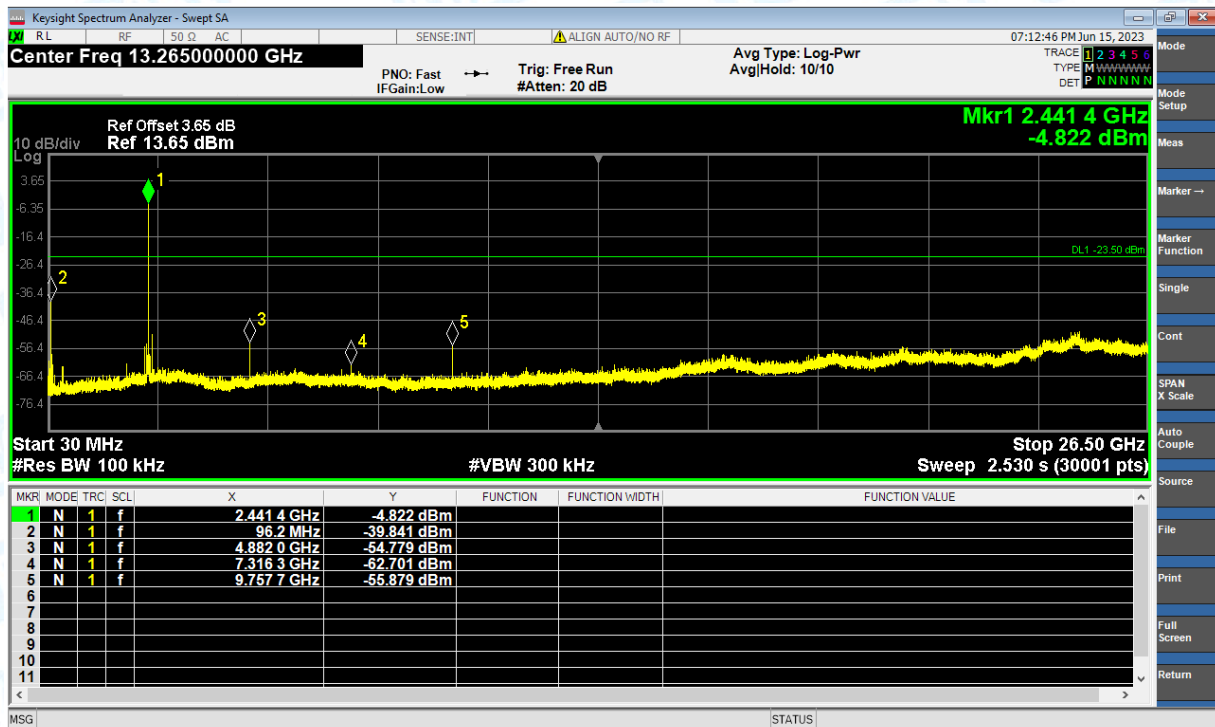
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



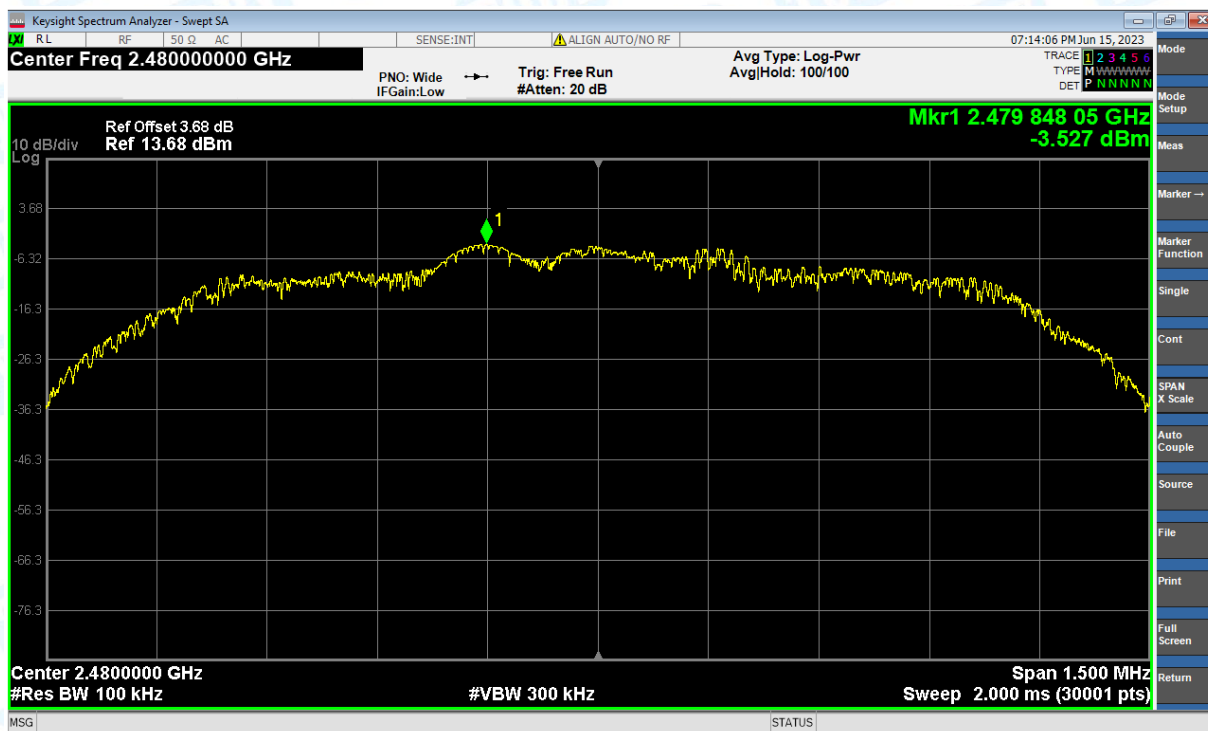
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



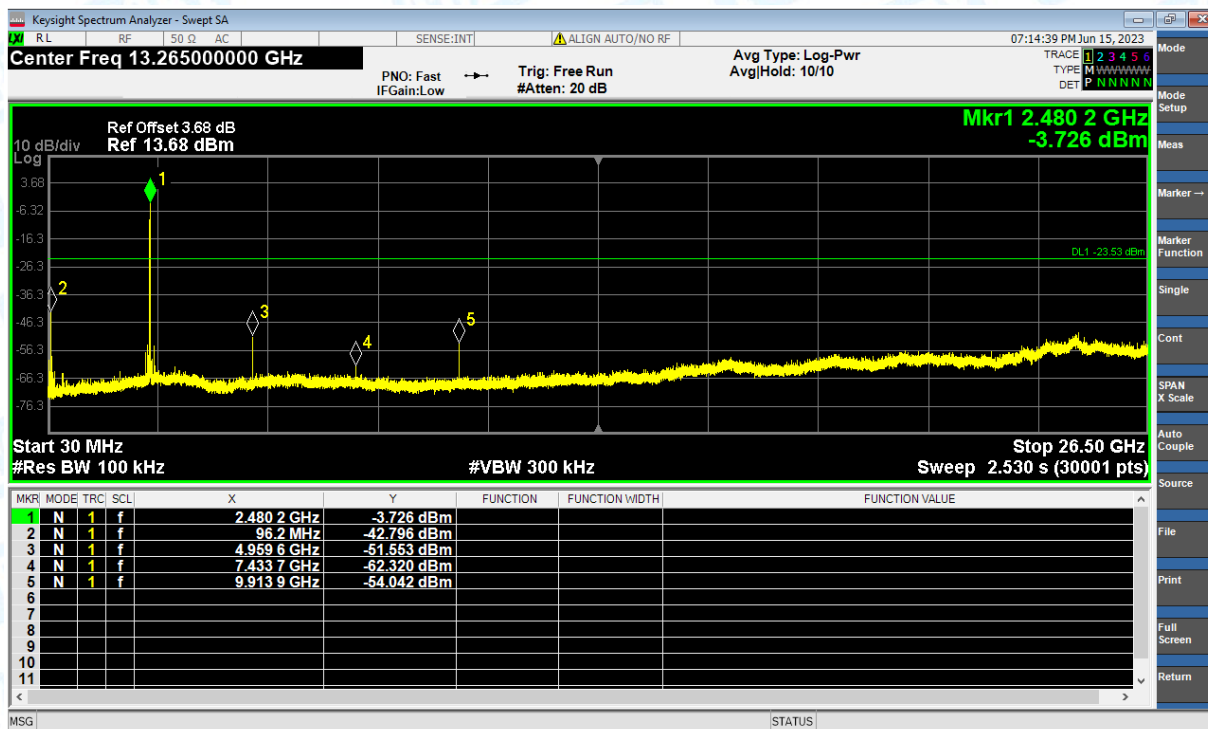
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



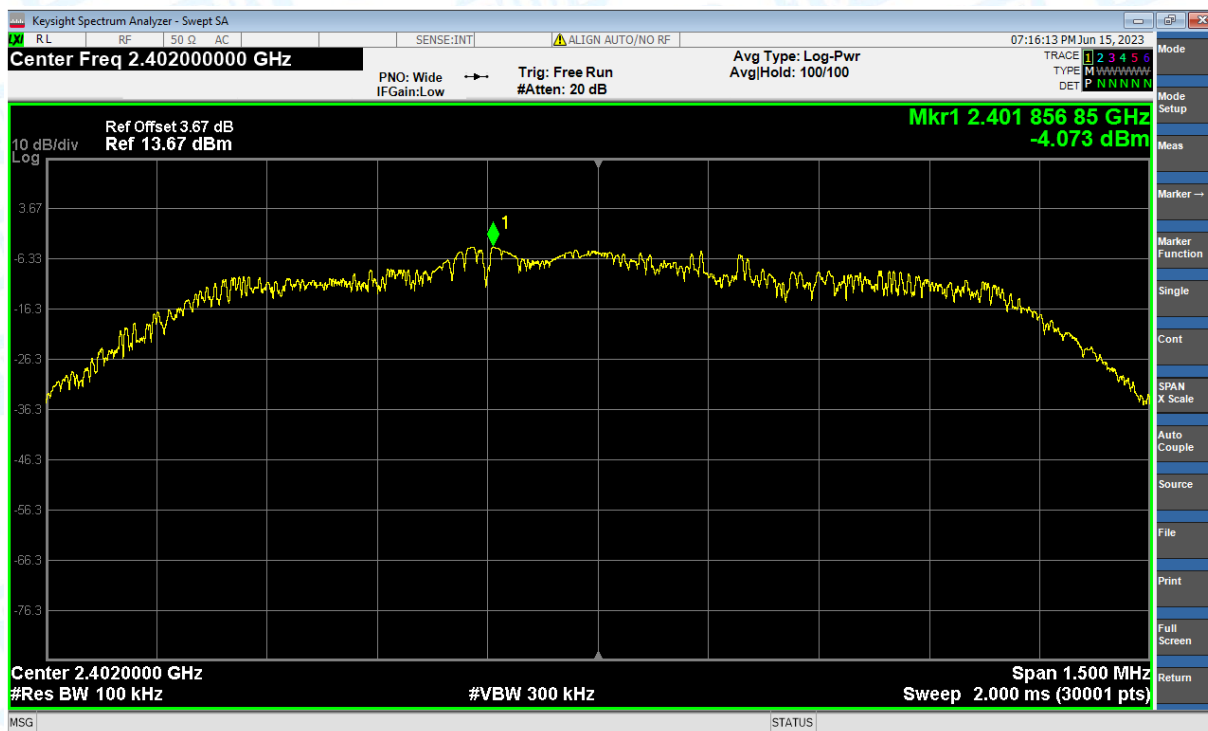
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



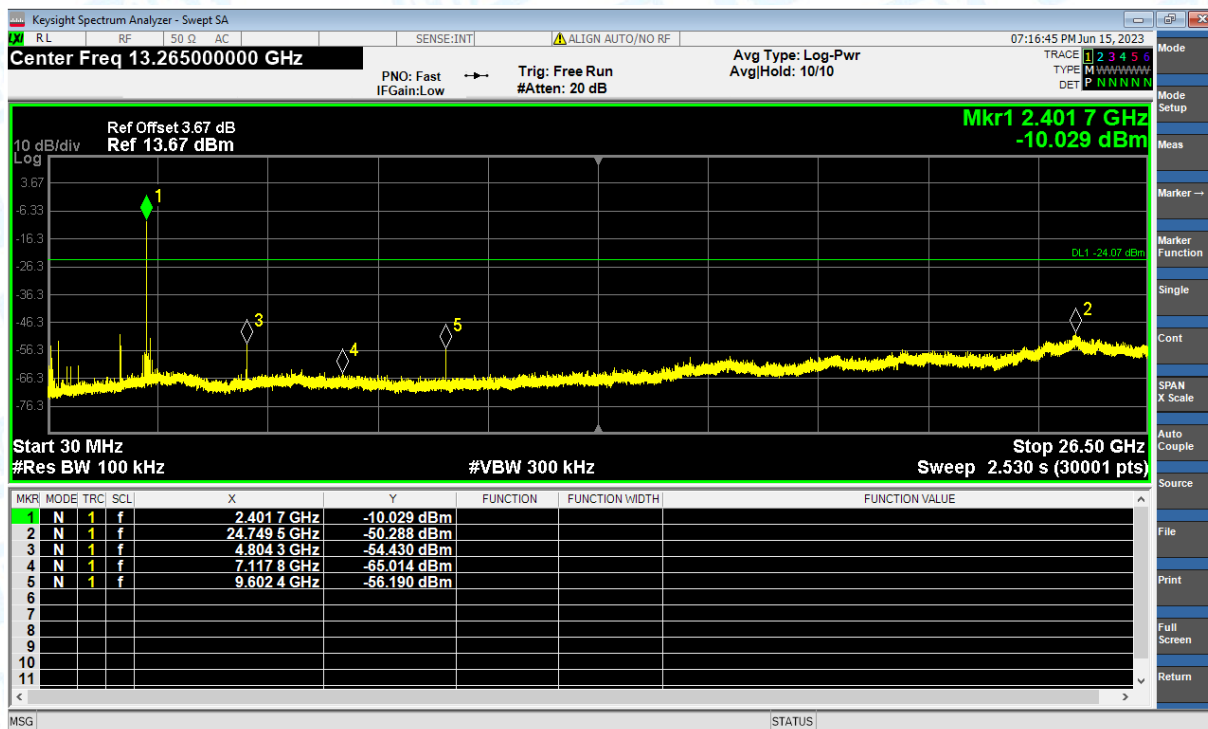
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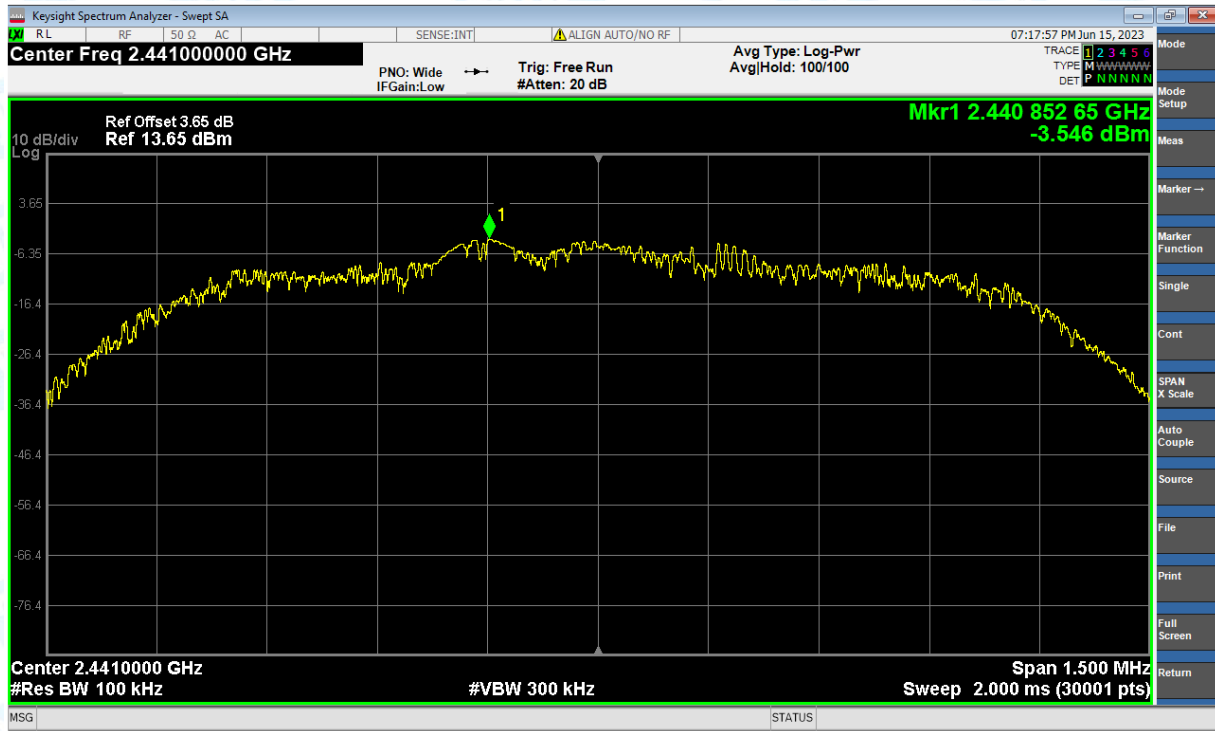
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



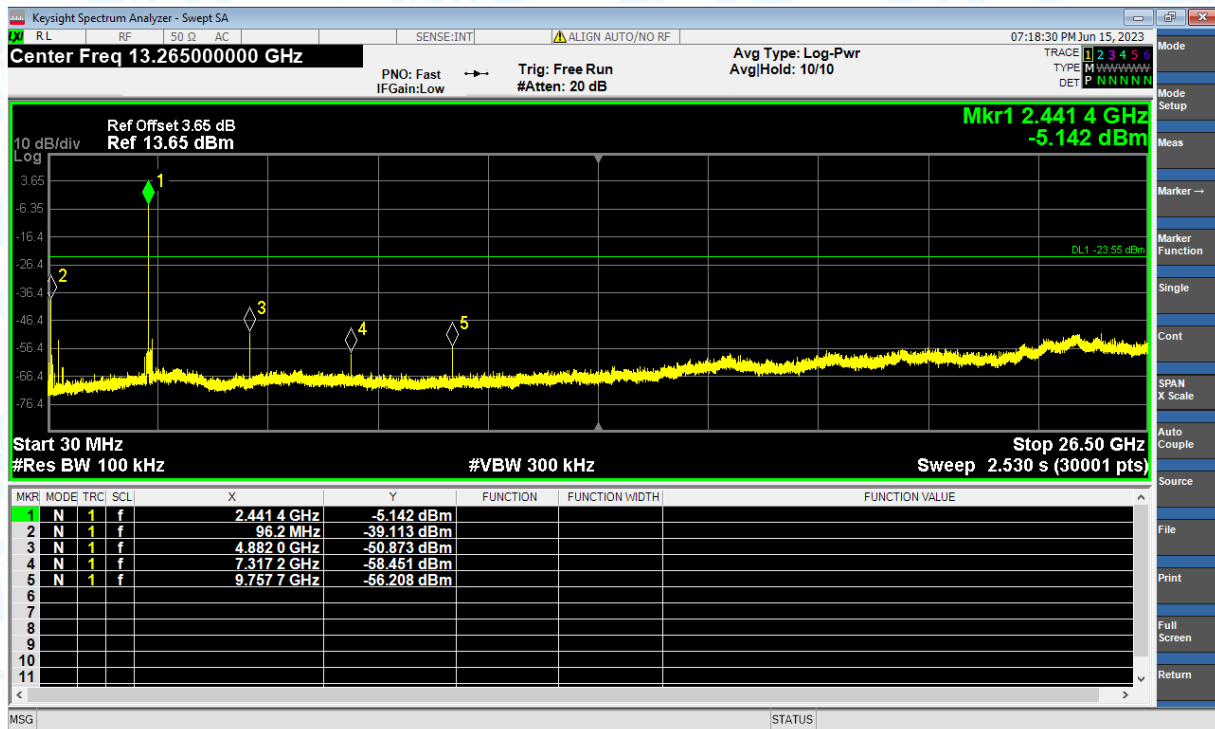
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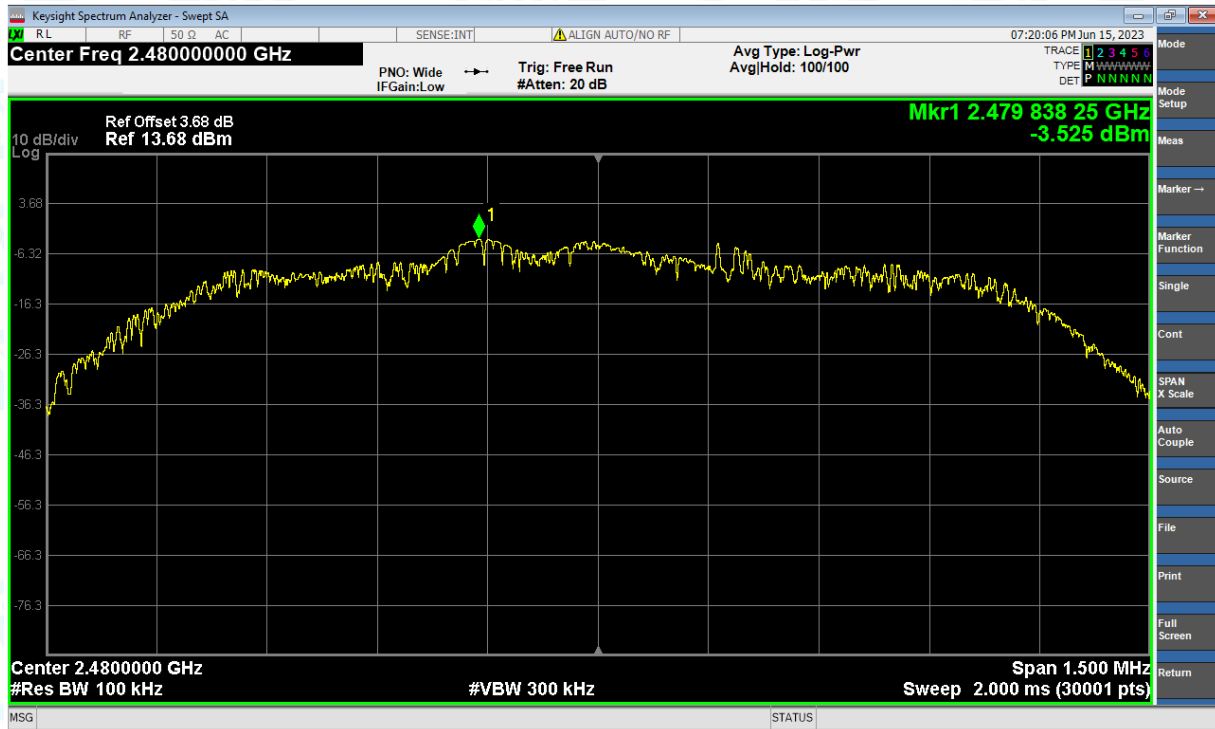
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



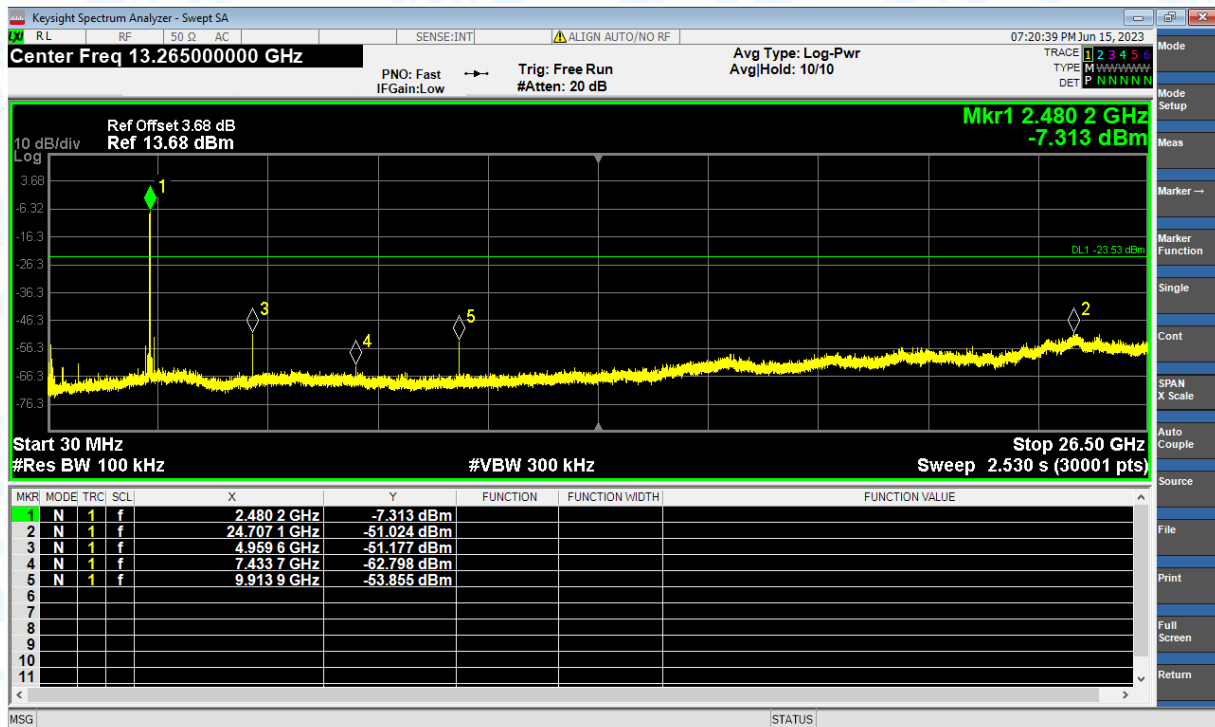
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

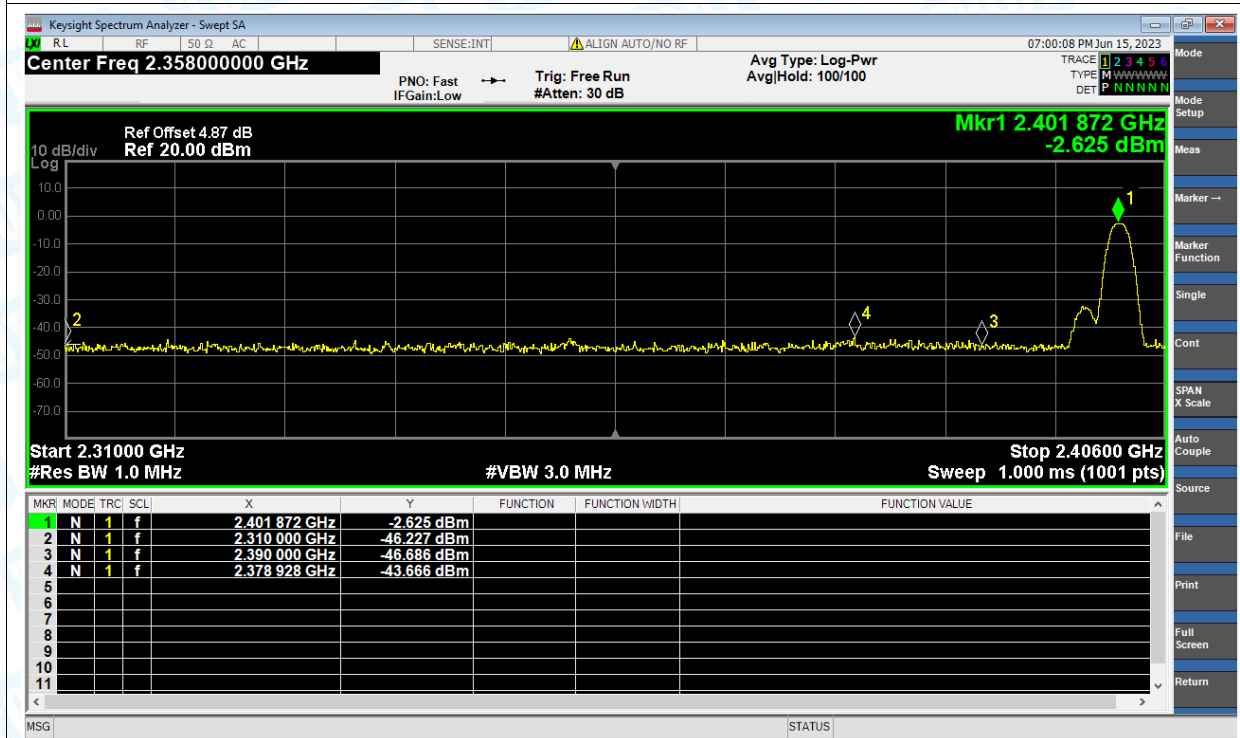


8. Restrict Band

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	-46.23	2	51.03	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.13	2	41.13	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2378.928	-43.67	2	53.59	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2353.776	-52.9	2	44.36	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-46.9	2	50.36	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55	2	42.26	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-44.43	2	52.83	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-52.73	2	44.53	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2498.2	-41.35	2	55.91	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-52.73	2	44.53	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-46.11	2	51.15	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.16	2	43.1	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-46.41	2	50.85	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.15	2	41.11	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2382.768	-42.54	2	54.72	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2378.16	-53.51	2	43.75	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-46.72	2	50.54	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-54.38	2	42.88	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-45.59	2	51.67	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-53.61	2	43.65	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2498.872	-42.42	2	54.84	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2495.848	-53.38	2	43.88	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-44.02	2	53.24	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-53.76	2	43.5	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-47.34	2	49.92	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.3	2	40.96	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2387.952	-43.35	2	53.91	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2353.872	-53.5	2	43.76	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.51	2	49.75	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	-45.57	2	51.69	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-53.52	2	43.74	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2495.104	-42.02	2	55.24	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2496.04	-53.36	2	43.9	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-46.94	2	50.32	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-53.95	2	43.31	Average	54	Pass

Test Graphs

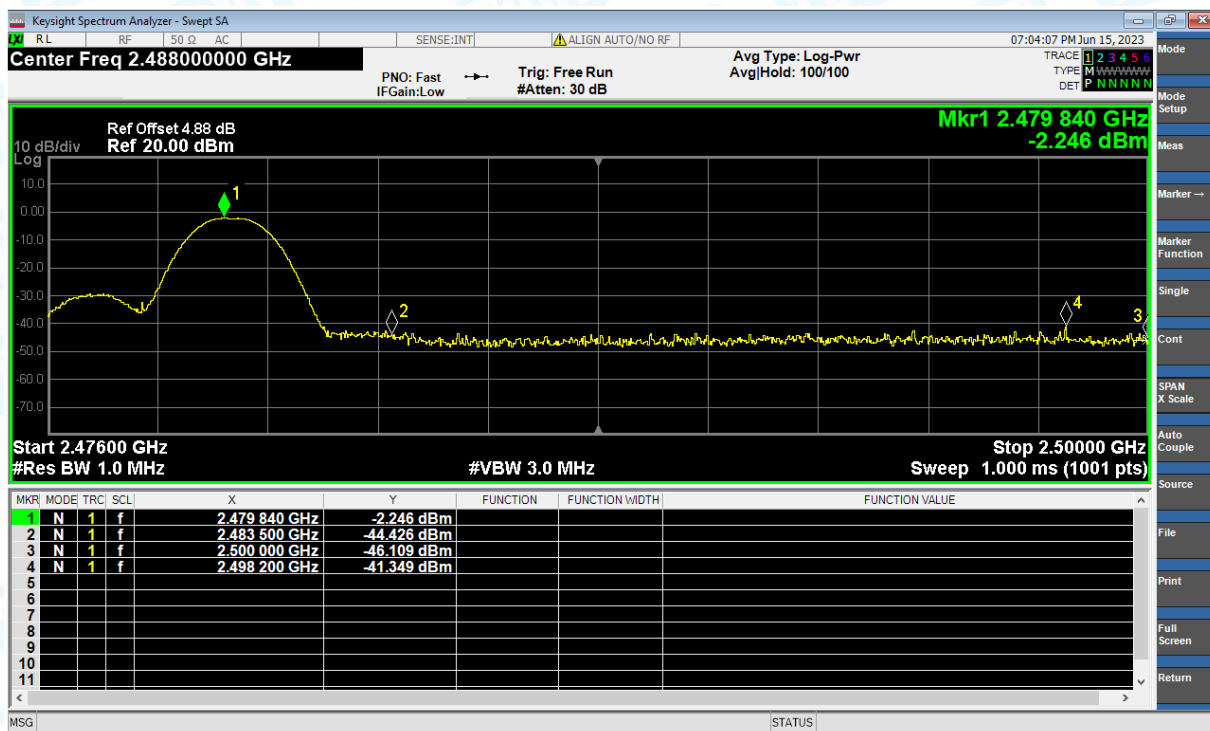
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



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



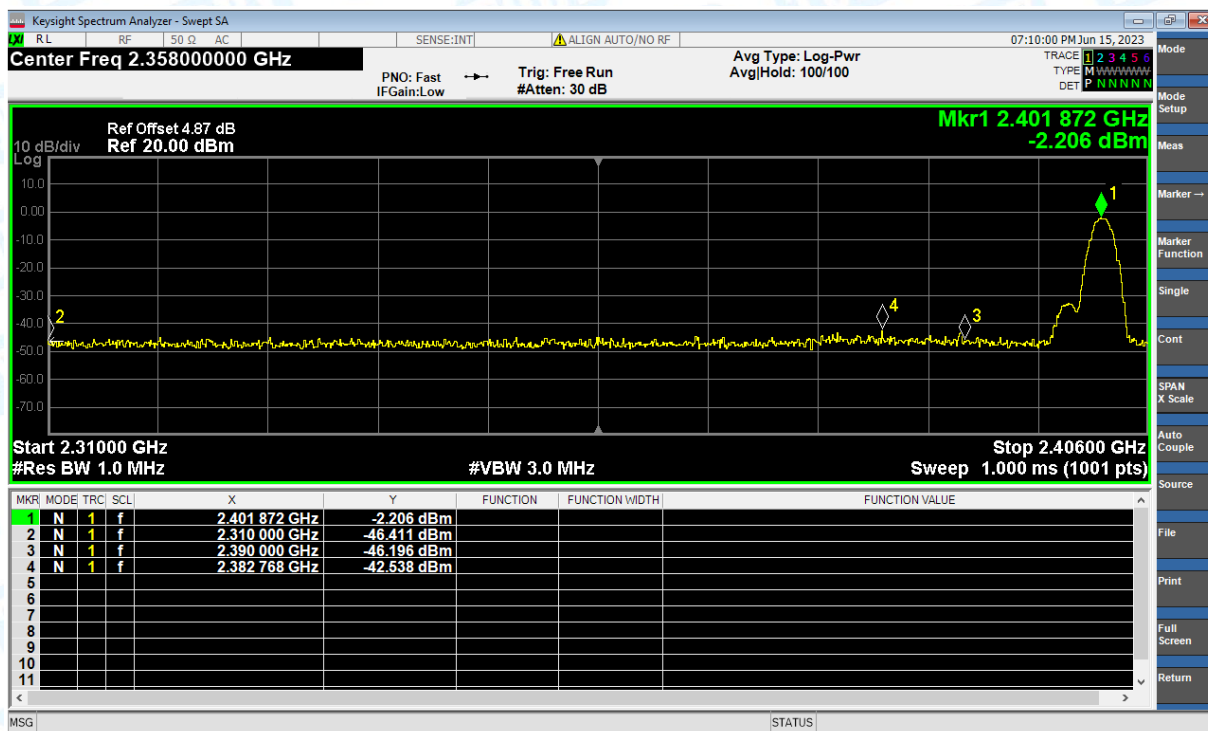
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



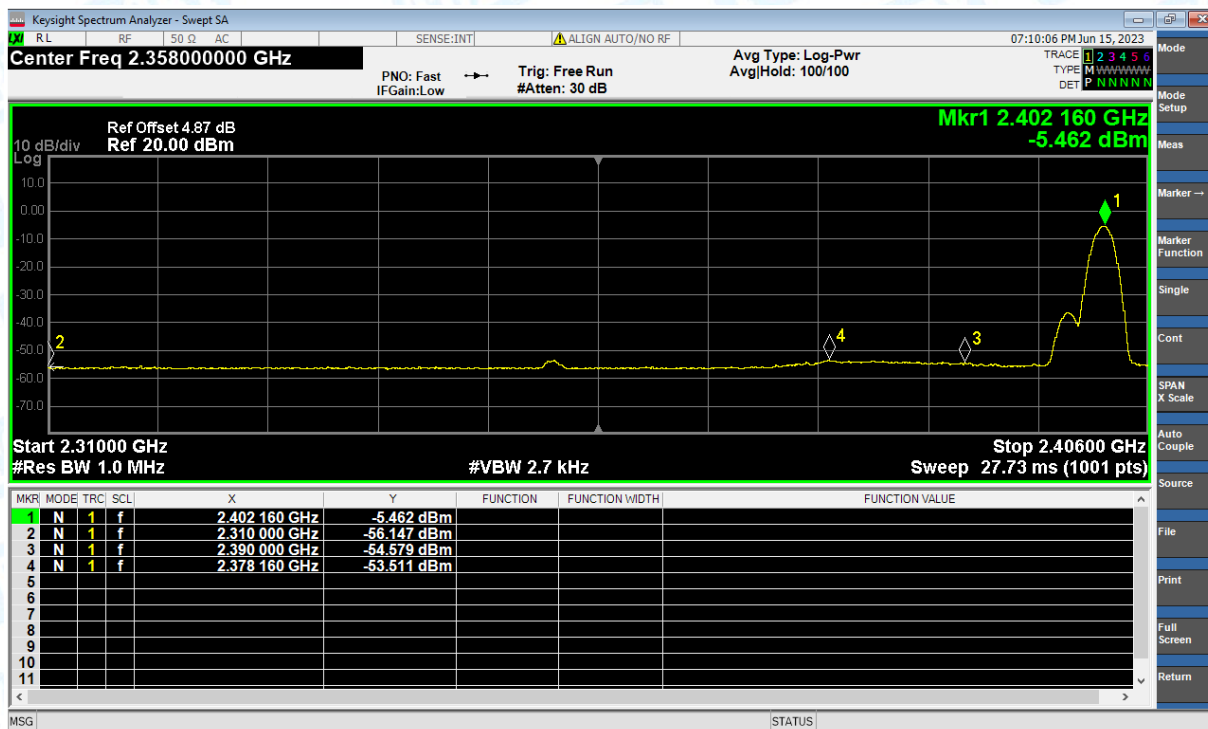
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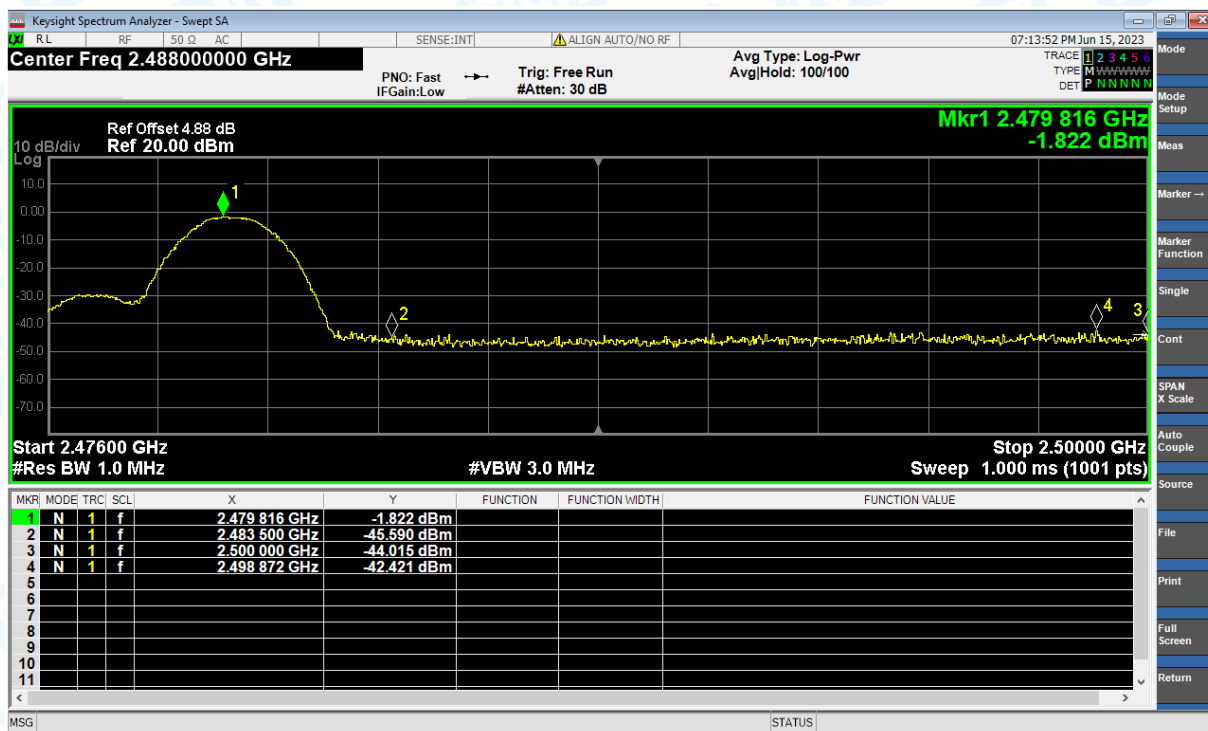
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



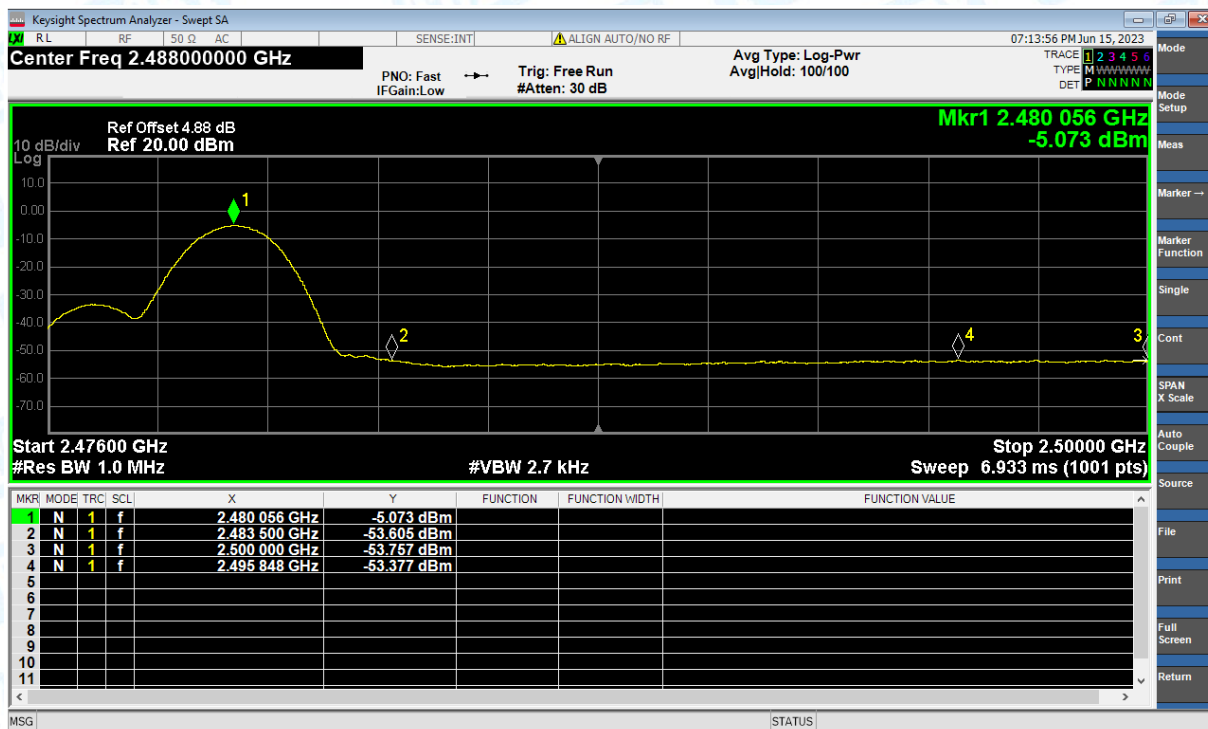
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



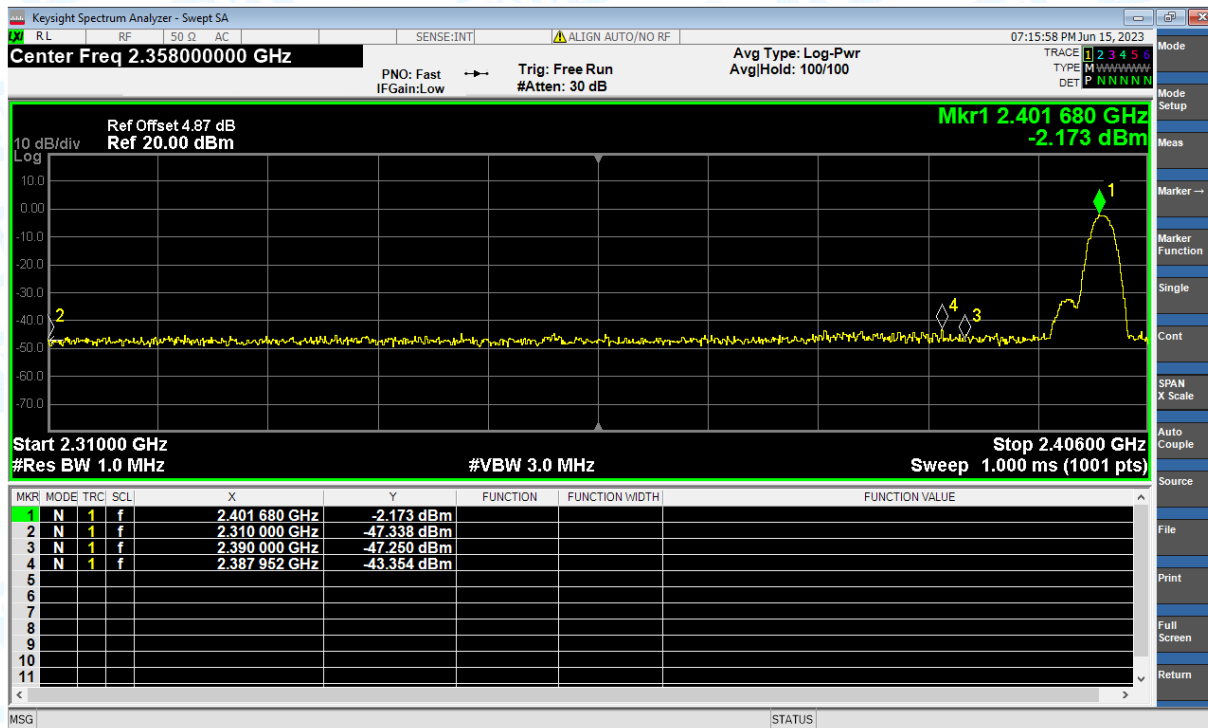
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



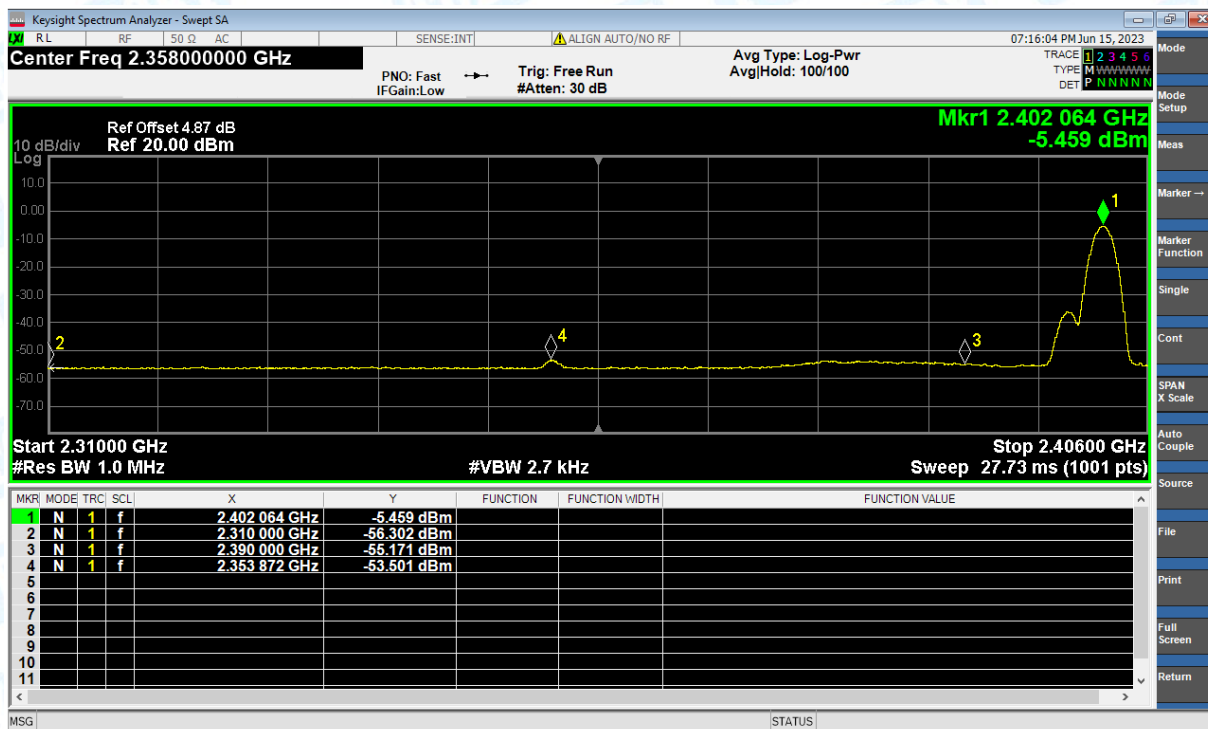
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



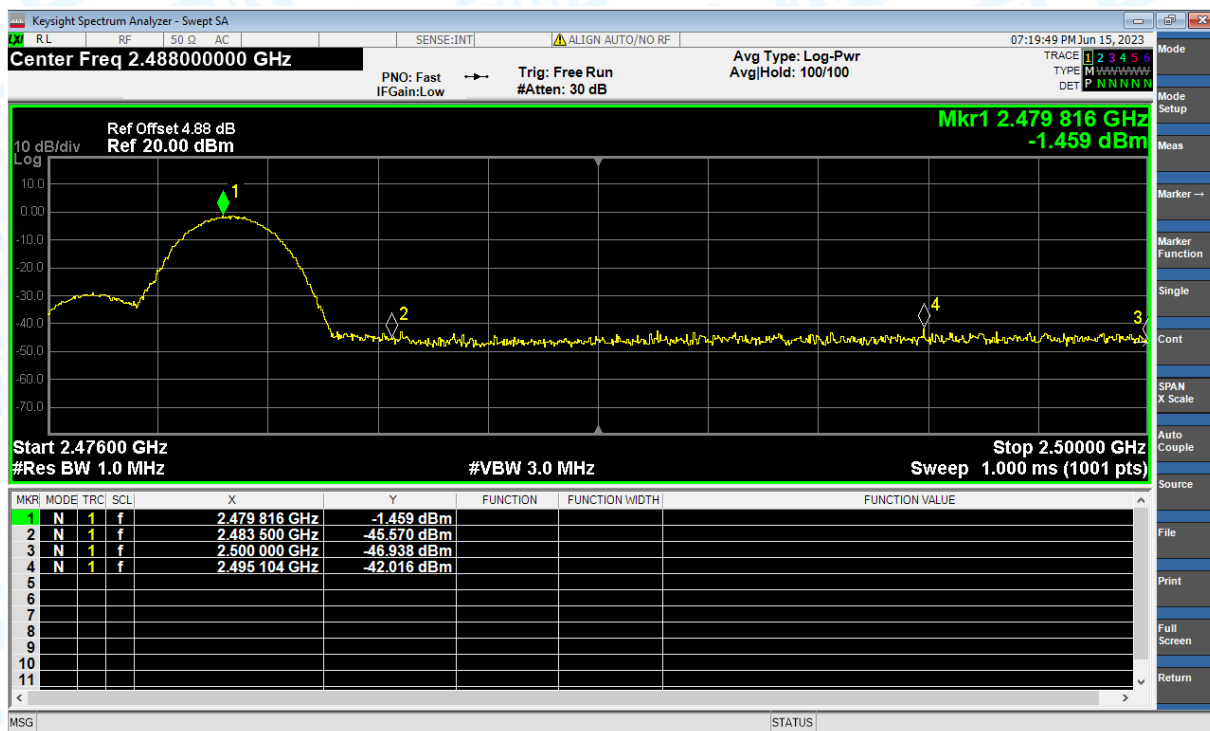
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



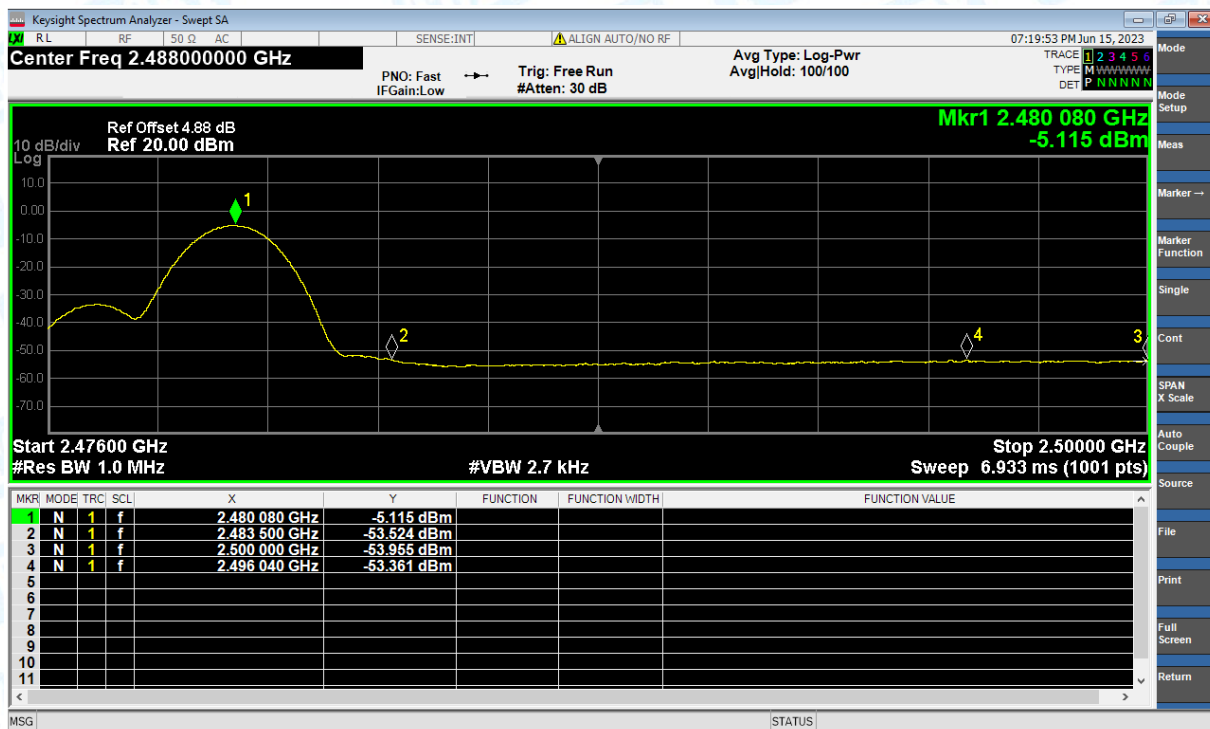
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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



9. Carrier Frequencies Separation

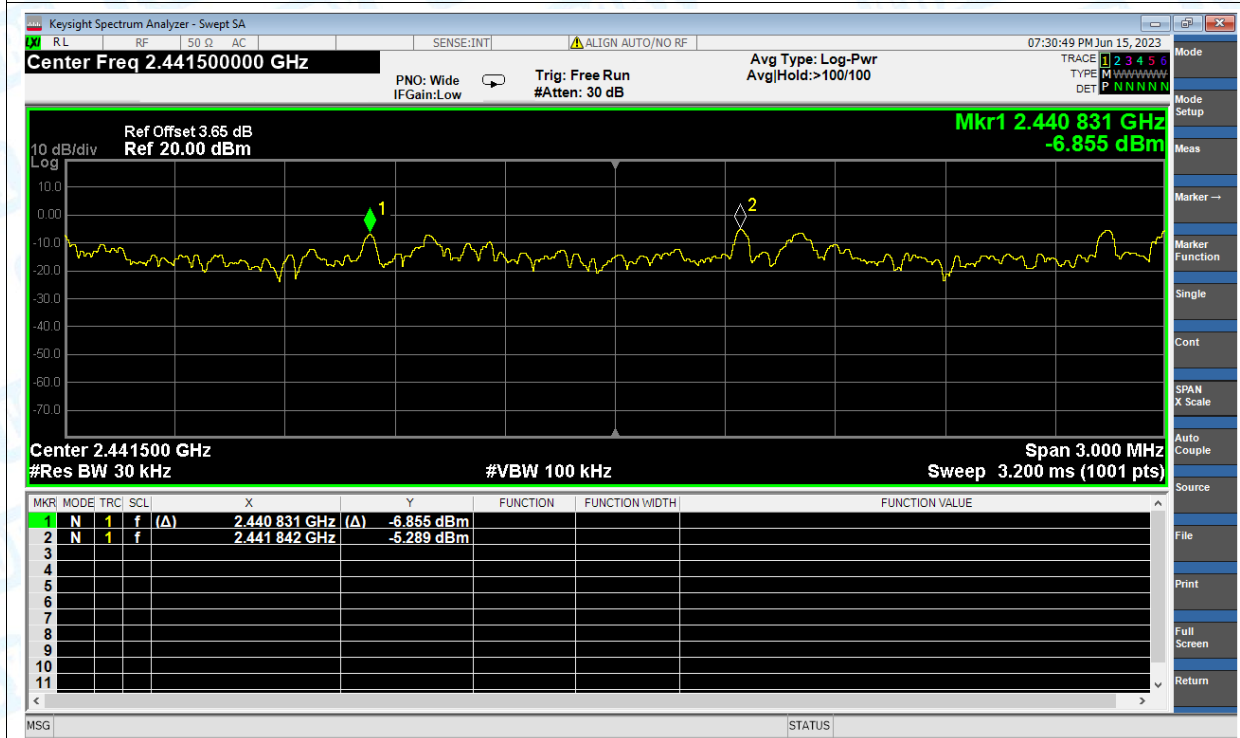
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.834	2441.833	0.999	0.587	Pass
NVNT	2-DH1	Ant1	2440.831	2441.842	1.011	0.833	Pass
NVNT	3-DH1	Ant1	2440.996	2442.007	1.011	0.813	Pass

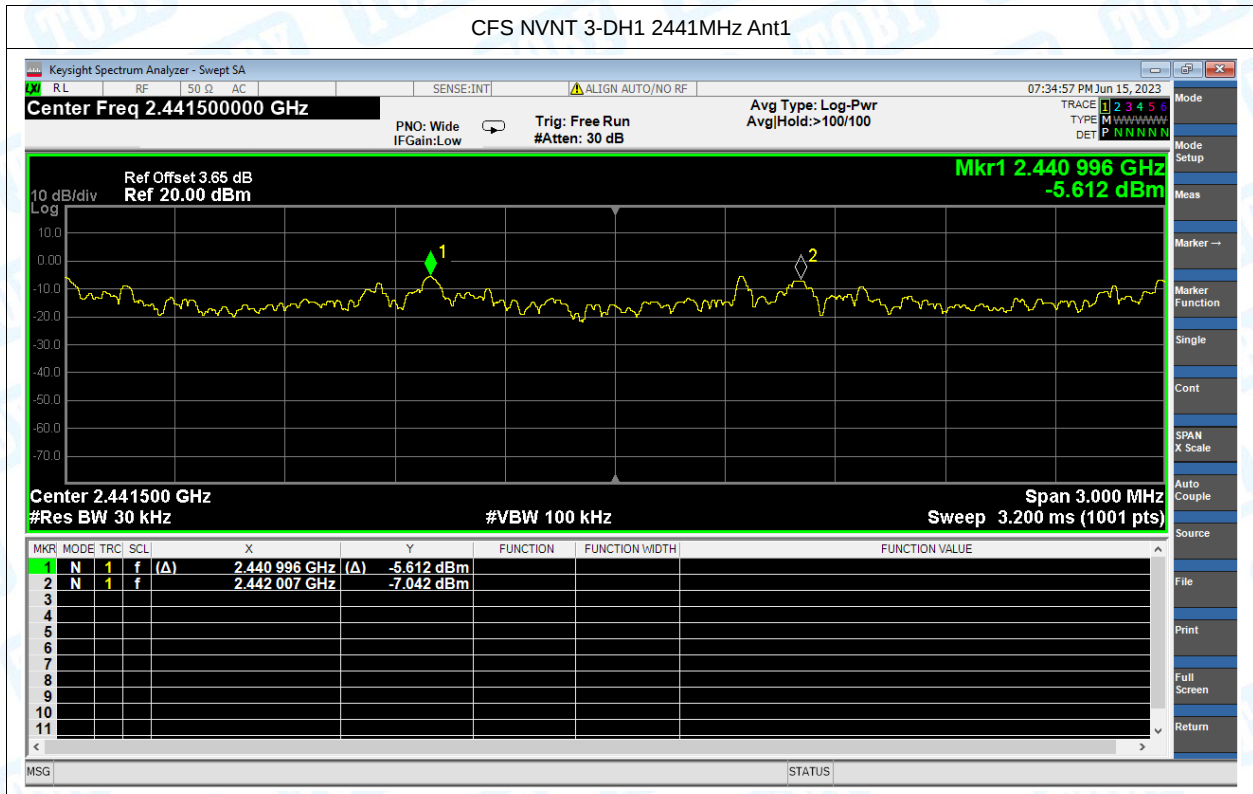
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



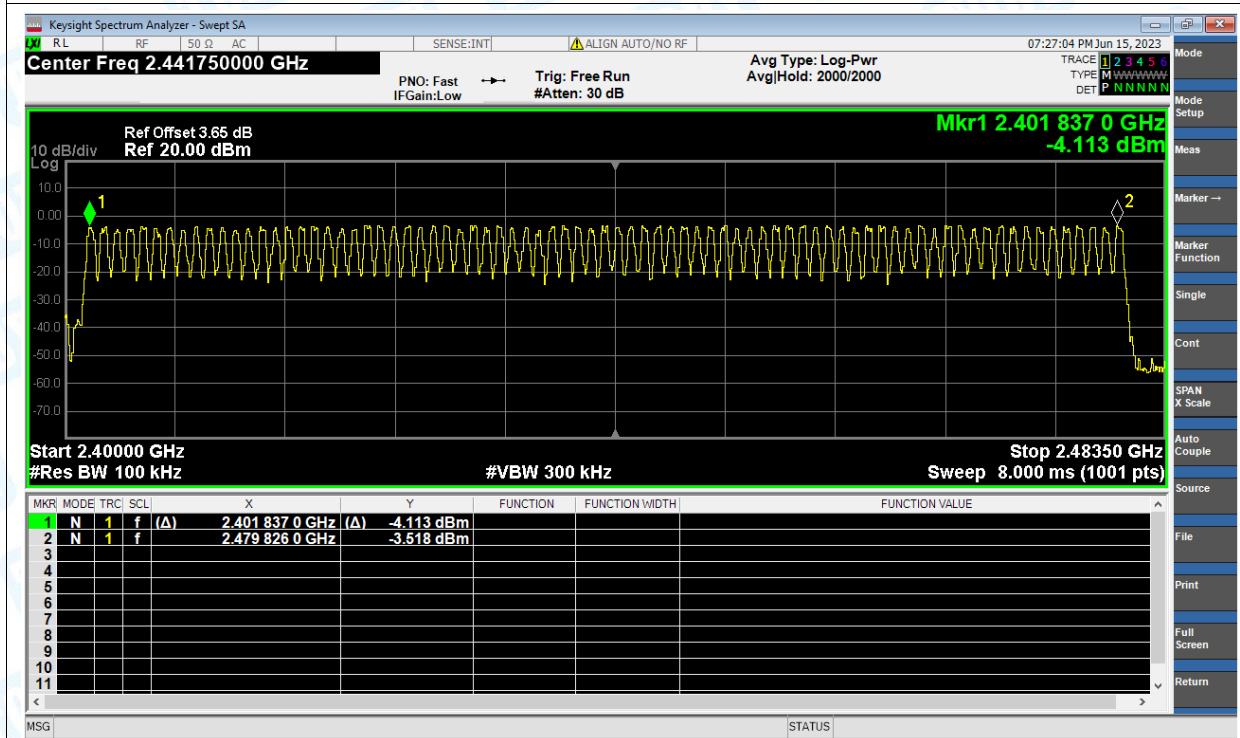


10. Number of Hopping Channel

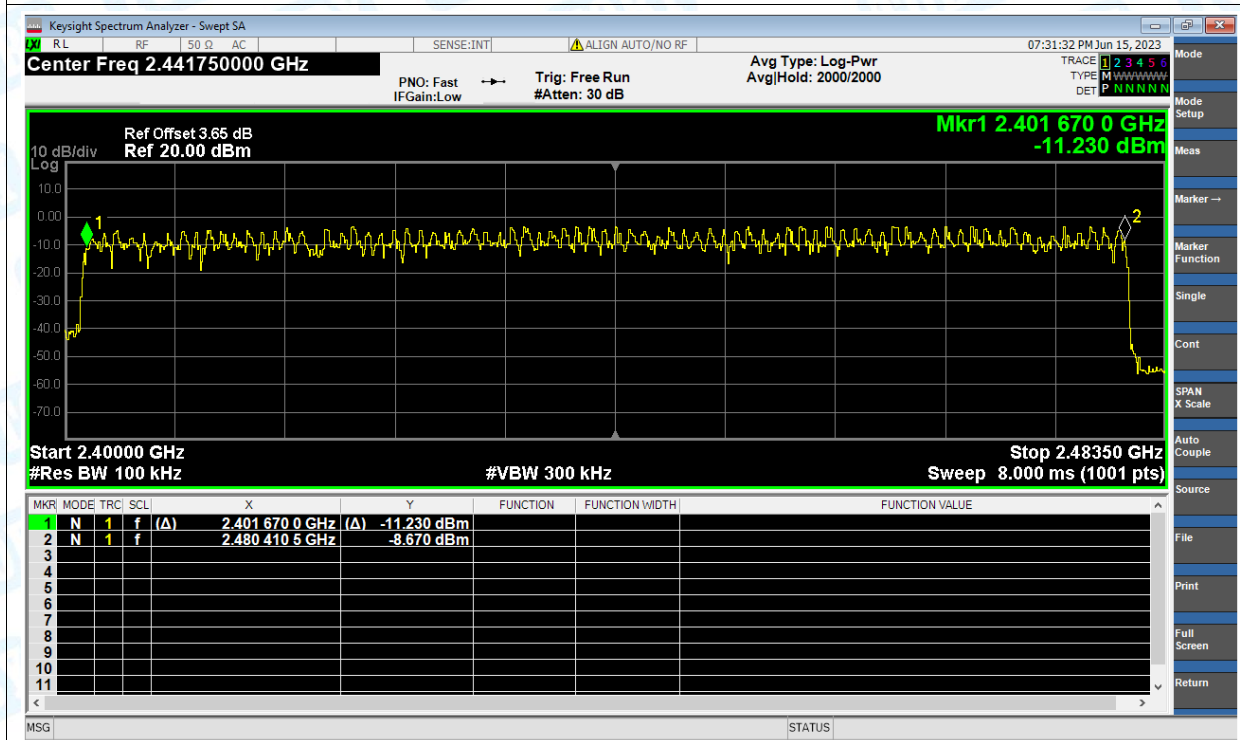
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

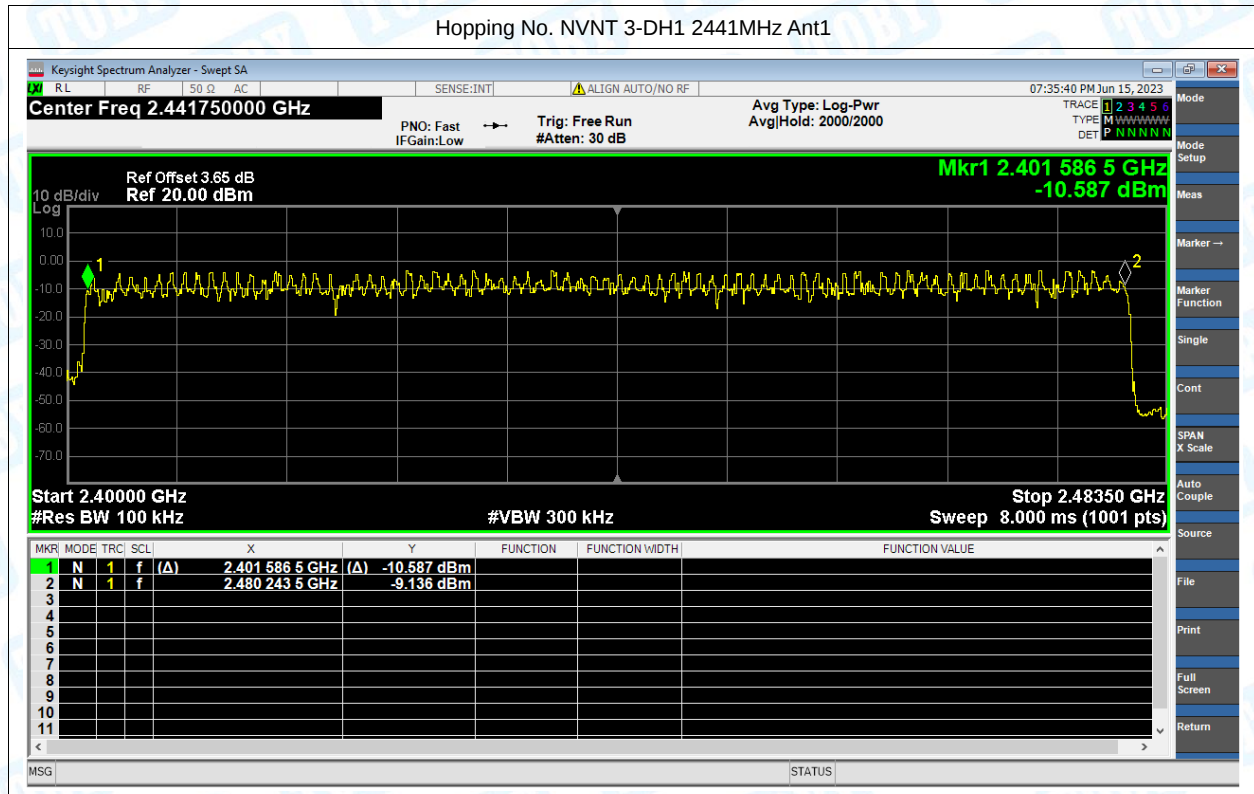
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



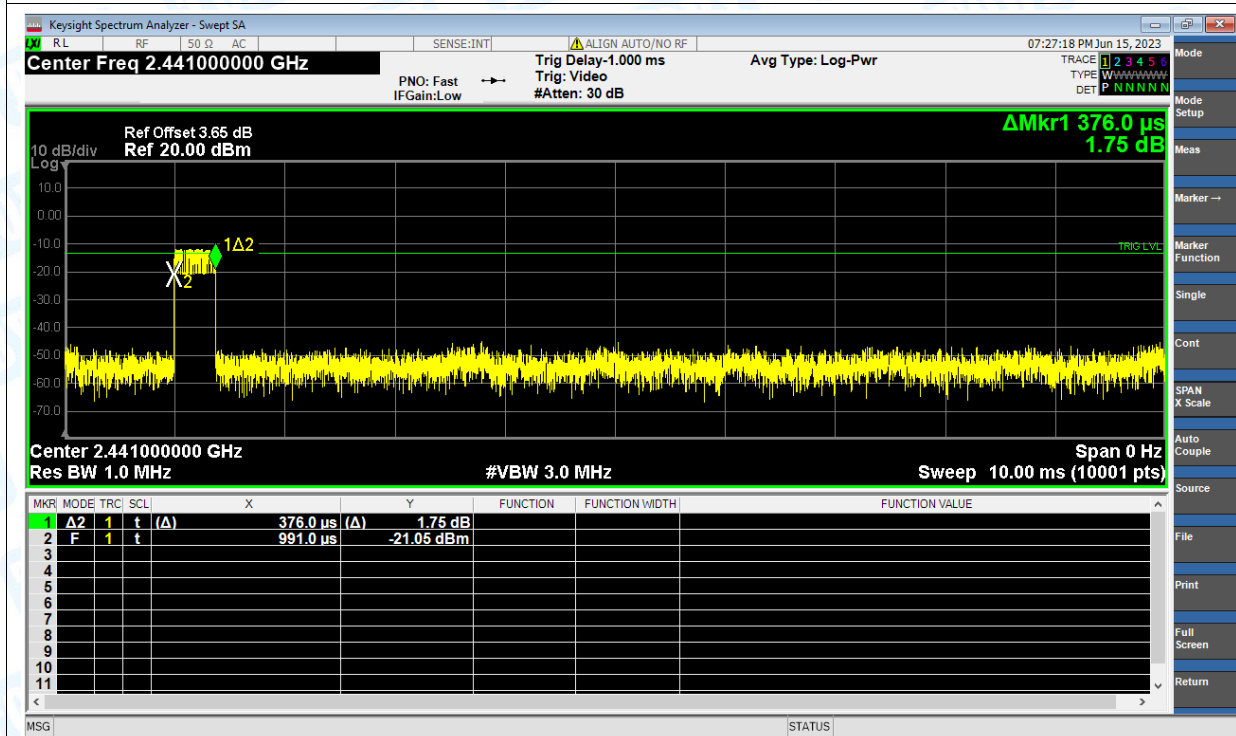


11. Dwell Time

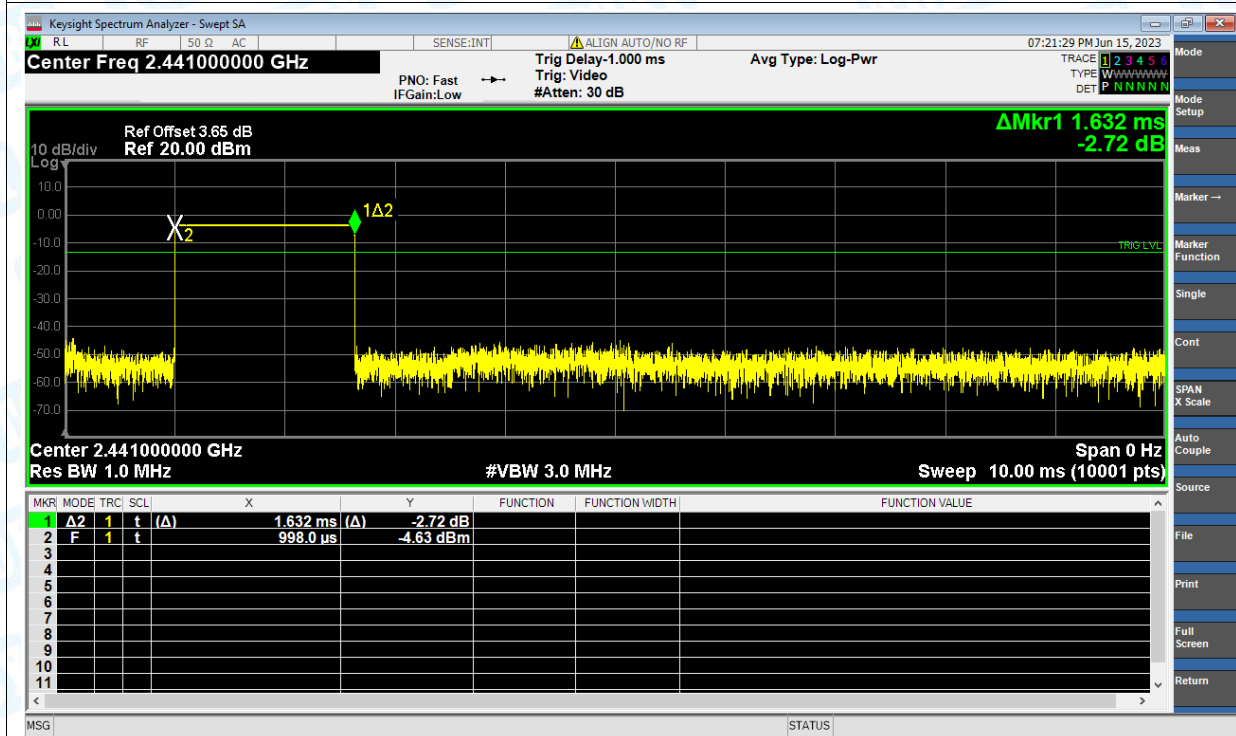
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.376	120.32	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.632	261.12	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.88	307.2	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.385	123.2	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.638	262.08	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.885	307.733	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.387	123.84	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.637	261.92	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.888	308.053	31600	400	Pass

Test Graphs

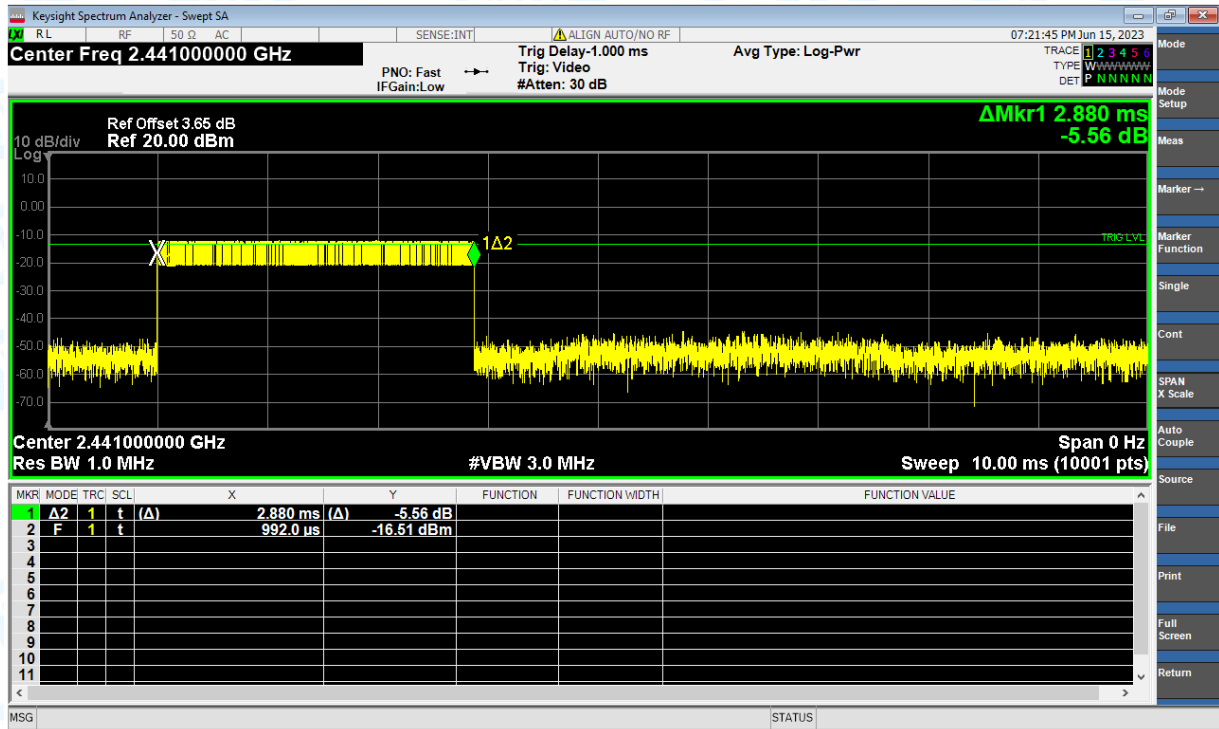
Dwell NVNT 1-DH1 2441MHz Ant1



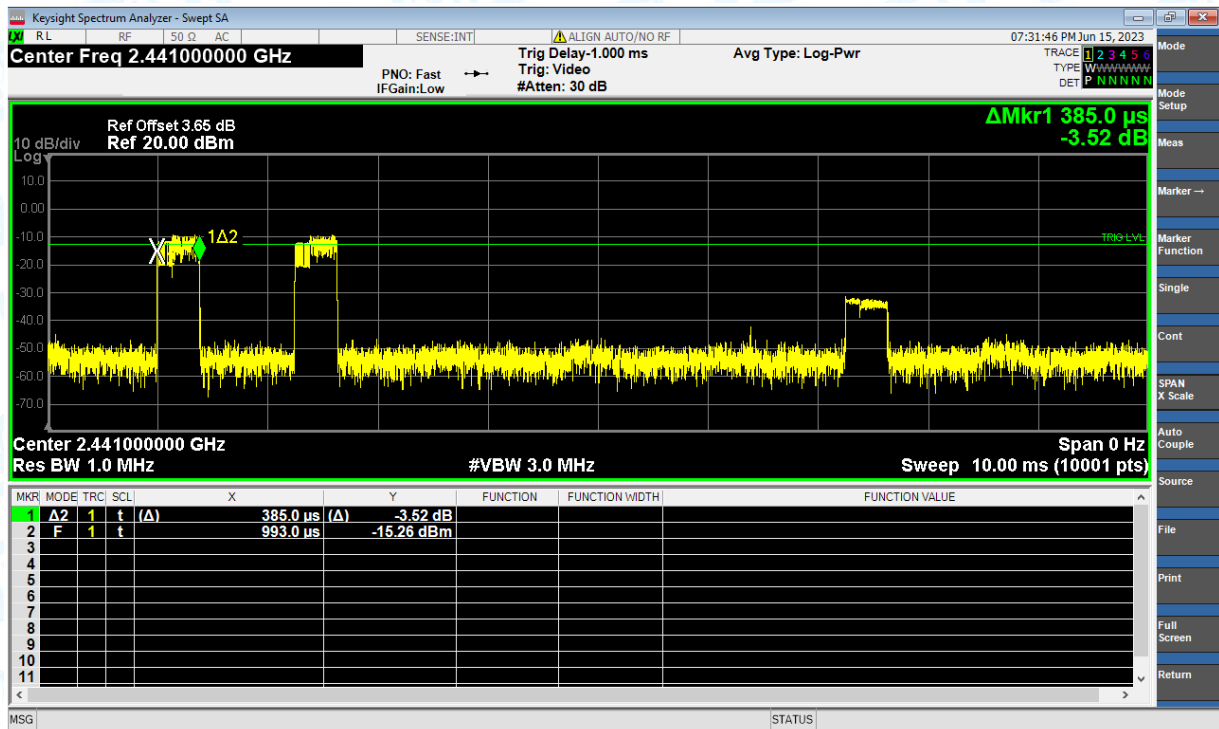
Dwell NVNT 1-DH3 2441MHz Ant1



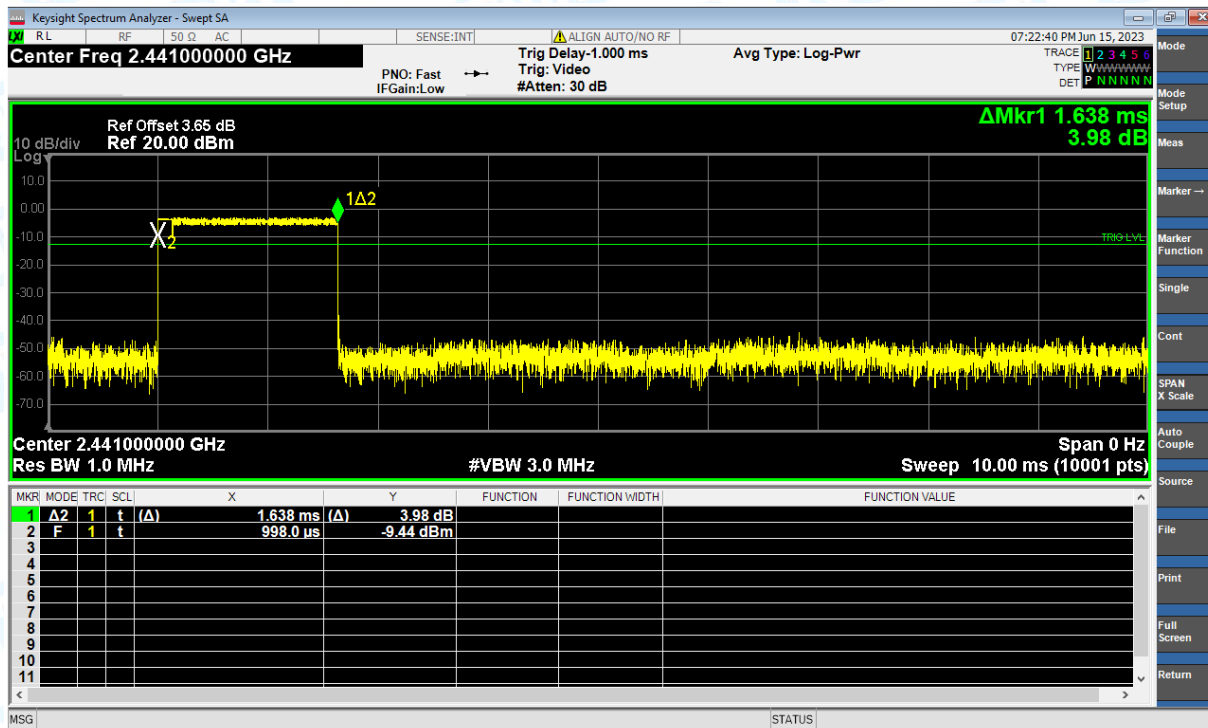
Dwell NVNT 1-DH5 2441MHz Ant1



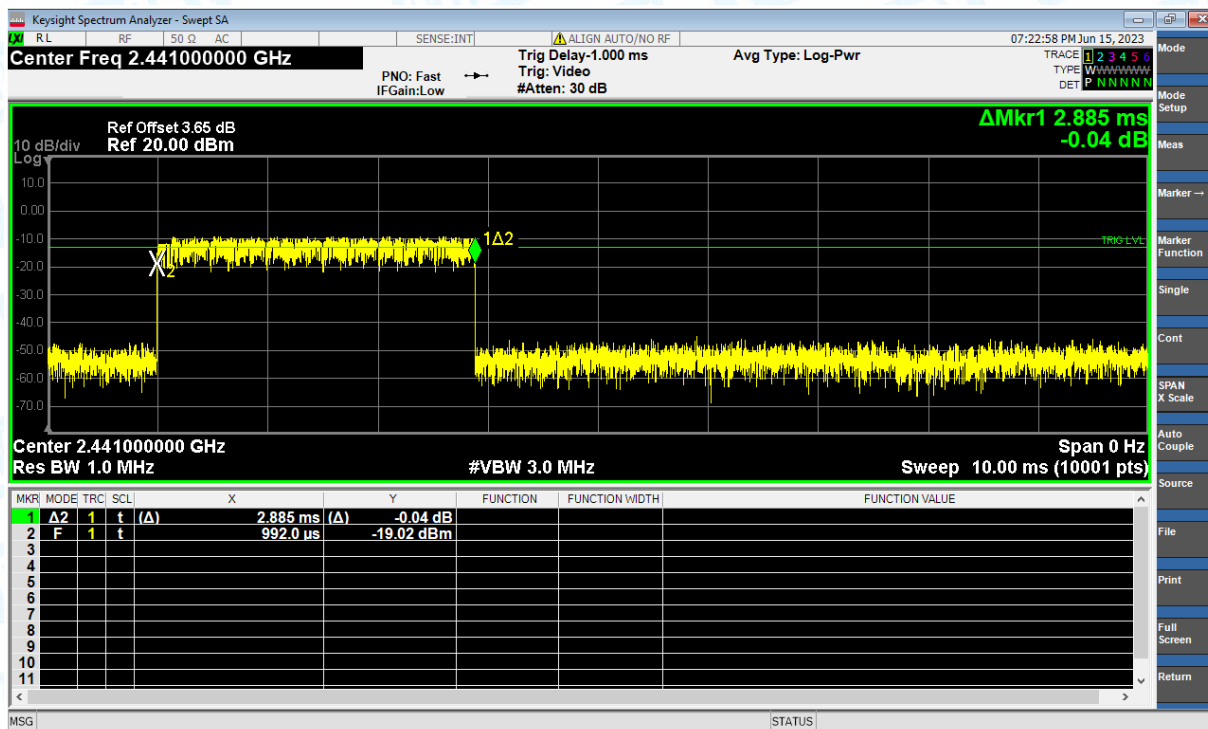
Dwell NVNT 2-DH1 2441MHz Ant1



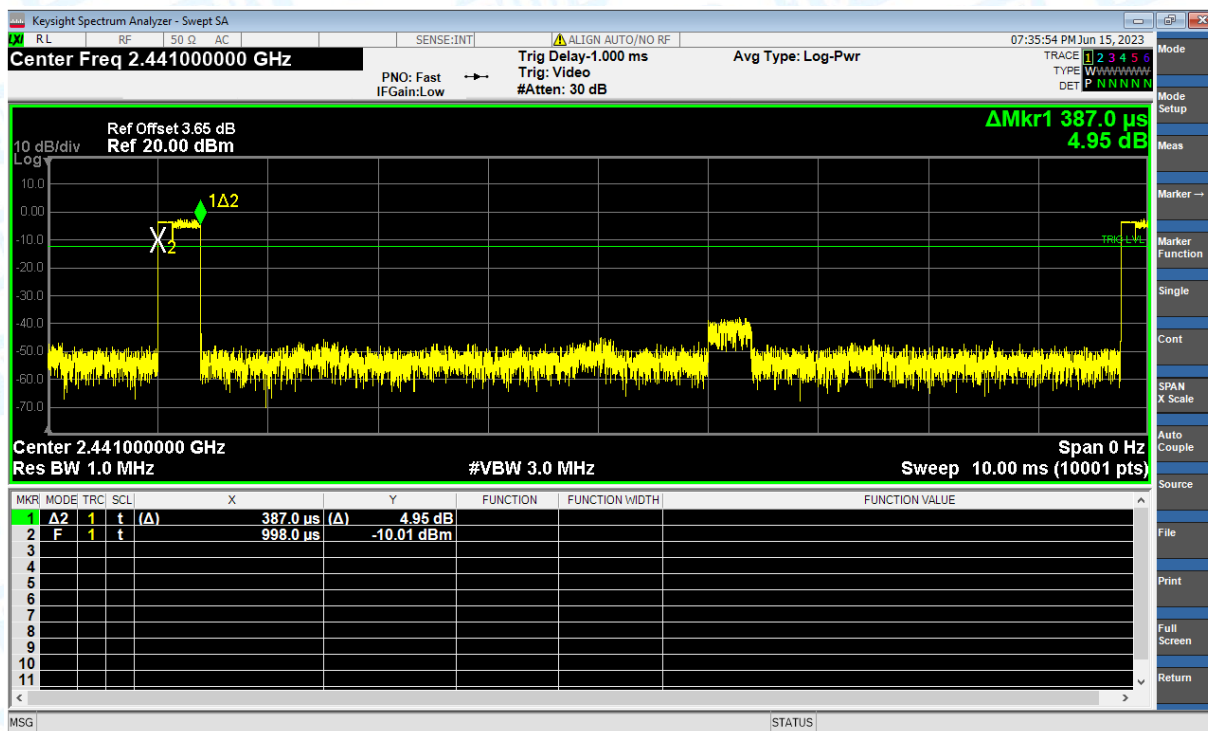
Dwell NVNT 2-DH3 2441MHz Ant1



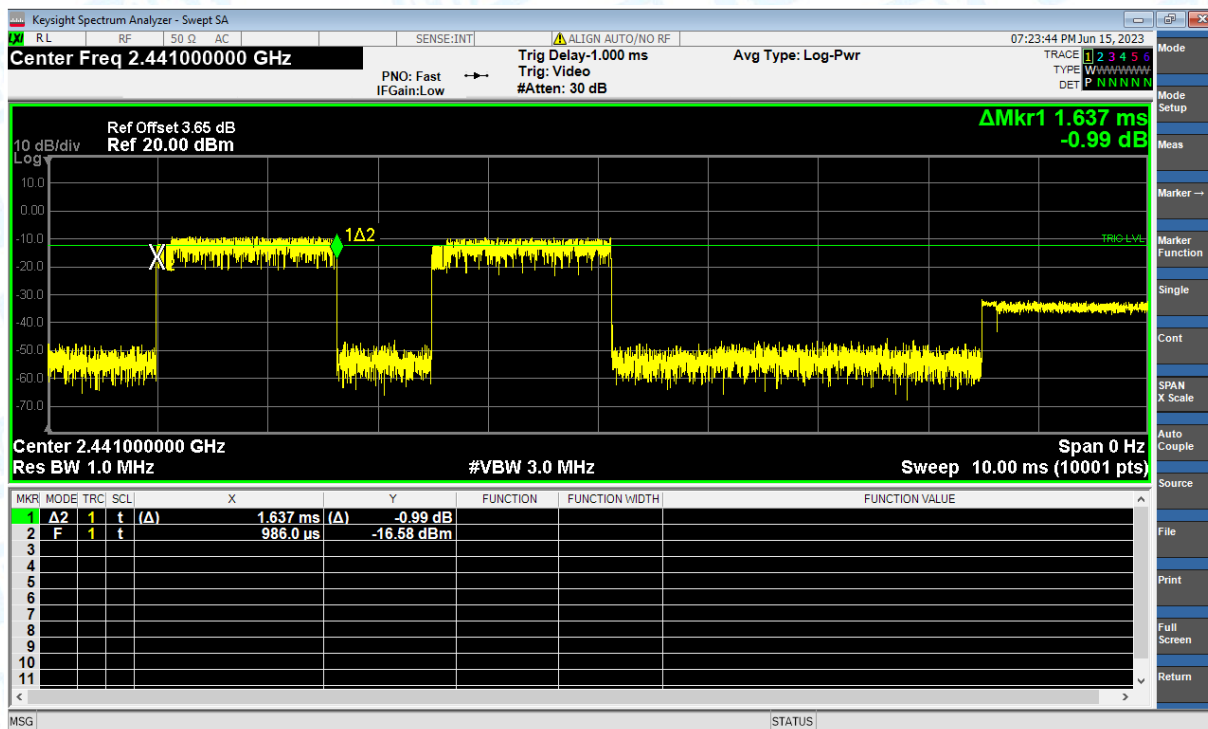
Dwell NVNT 2-DH5 2441MHz Ant1

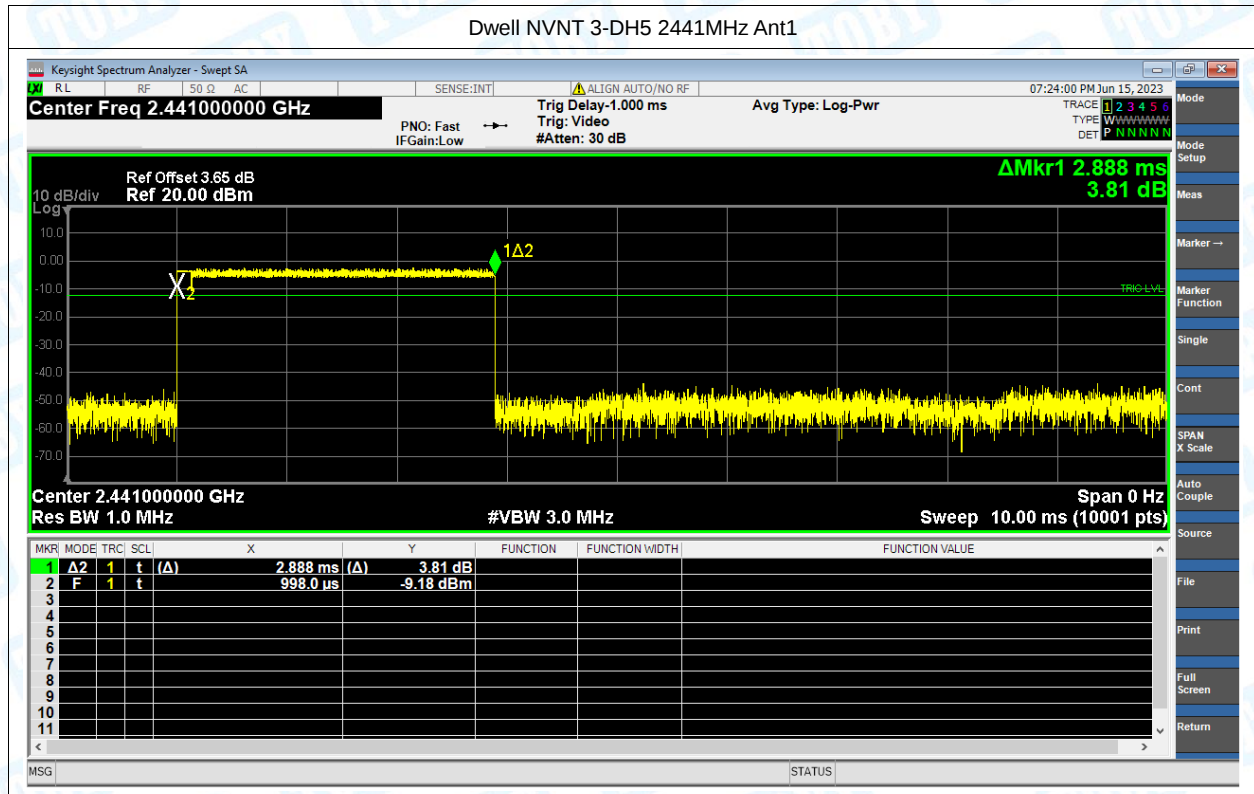


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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