

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

General Description of EUT	
Product Name:	Smart Watch
Test Model:	KE3
Sample ID:	202305-0329_01-02#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 5V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202305-0329-6 The report only show the worst case data.	

Contents

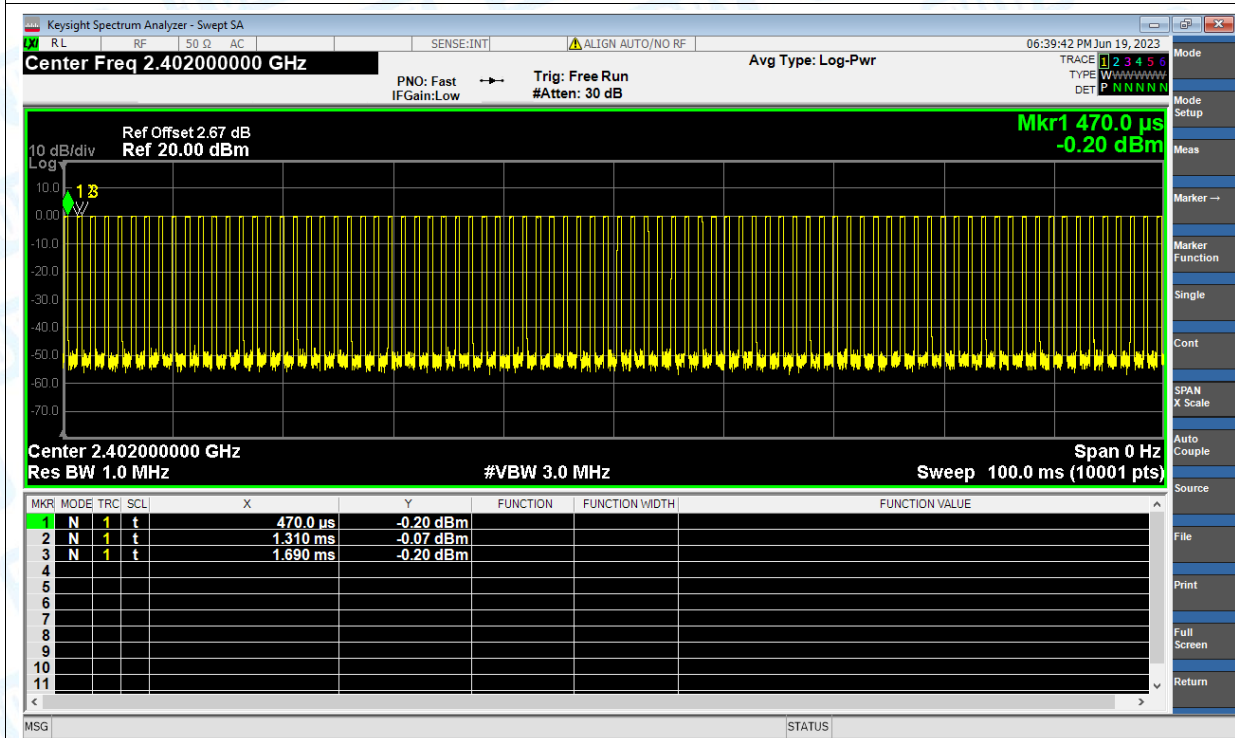
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1. Duty Cycle

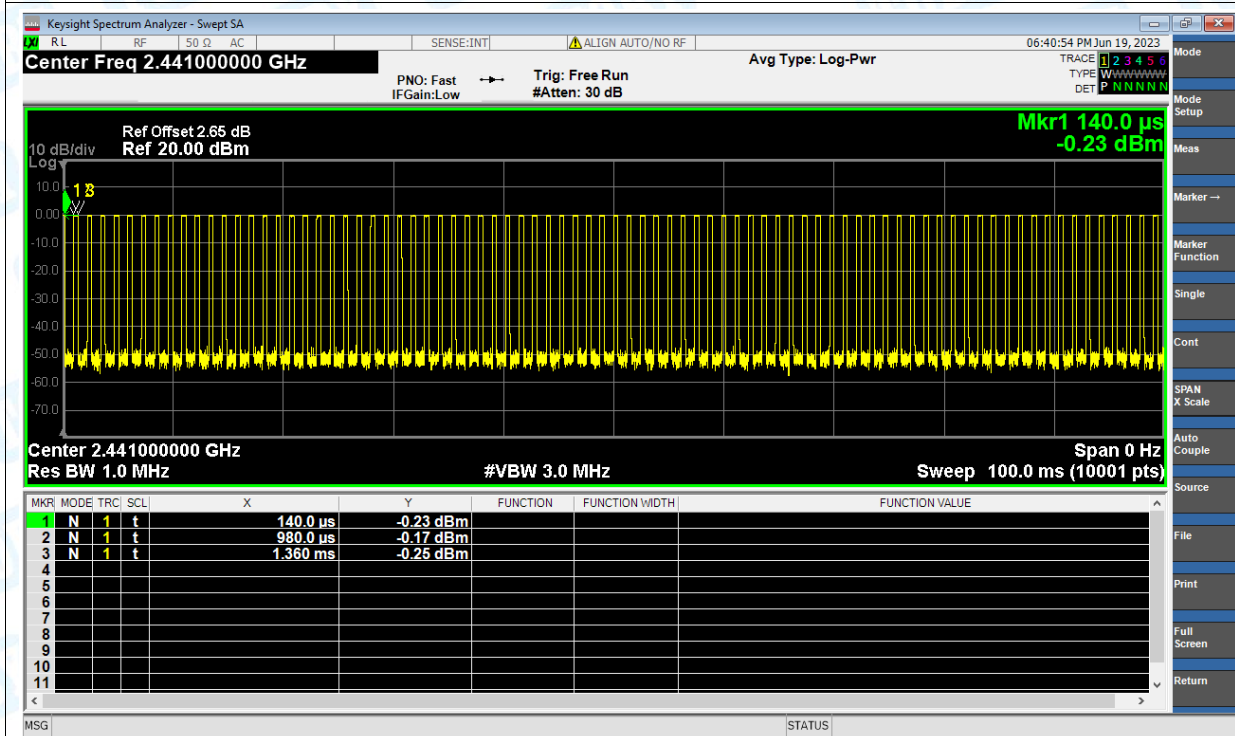
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	31.15	5.07	2.63
NVNT	1-DH1	2441	Ant1	31.15	5.07	2.63
NVNT	1-DH1	2480	Ant1	30.89	5.1	2.63
NVNT	2-DH1	2402	Ant1	31.45	5.02	2.56
NVNT	2-DH1	2441	Ant1	31.45	5.02	2.56
NVNT	2-DH1	2480	Ant1	31.71	4.99	2.56
NVNT	3-DH1	2402	Ant1	31.45	5.02	2.56
NVNT	3-DH1	2441	Ant1	31.45	5.02	2.56
NVNT	3-DH1	2480	Ant1	31.71	4.99	2.56

Test Graphs

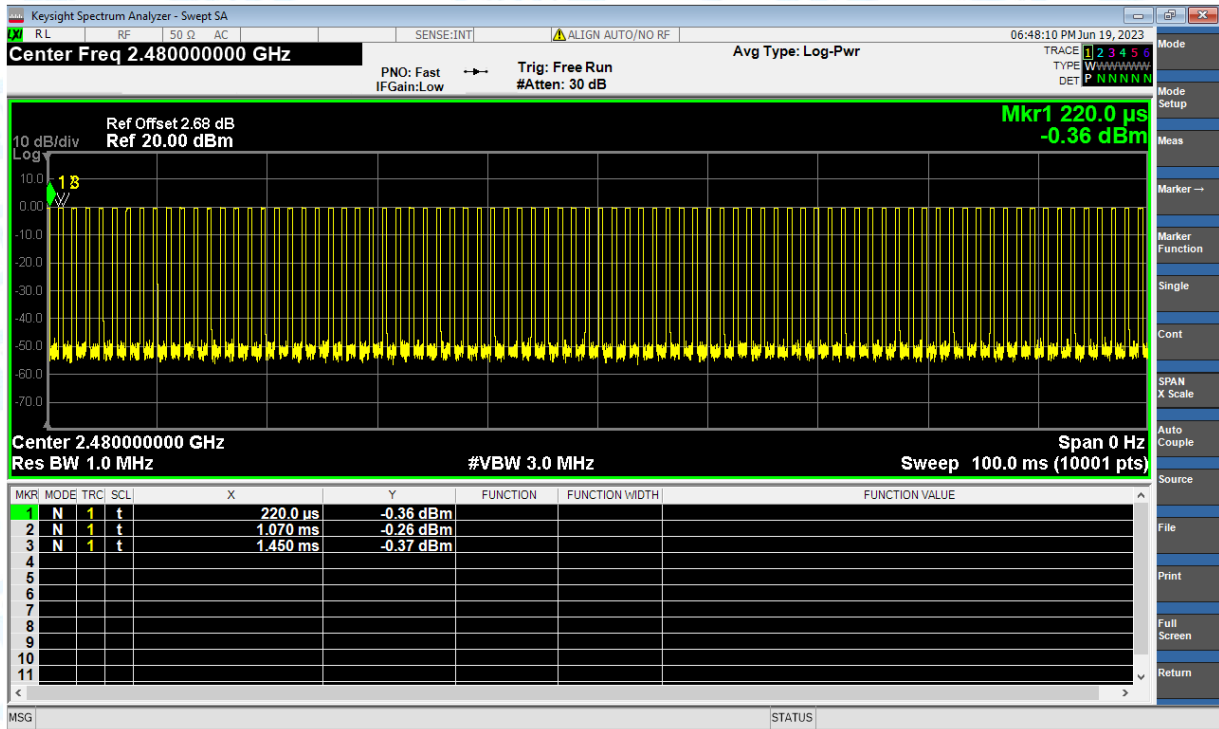
Duty Cycle NVNT 1-DH1 2402MHz Ant1



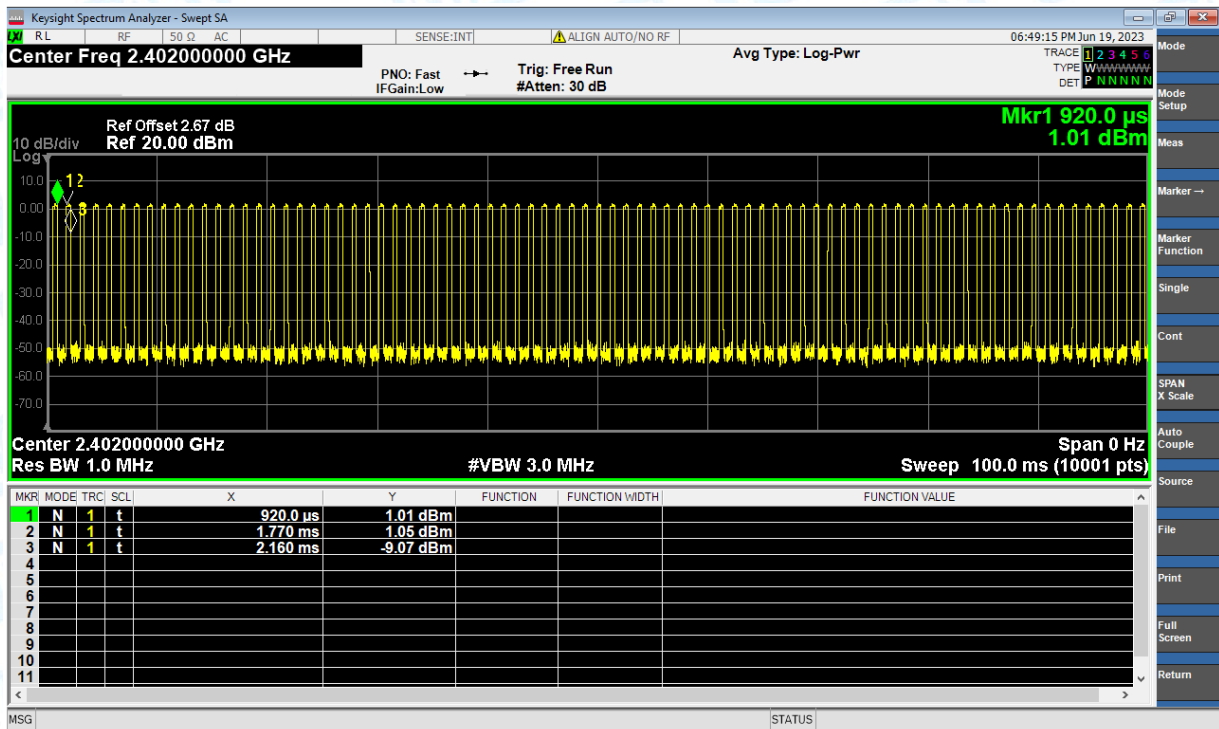
Duty Cycle NVNT 1-DH1 2441MHz Ant1



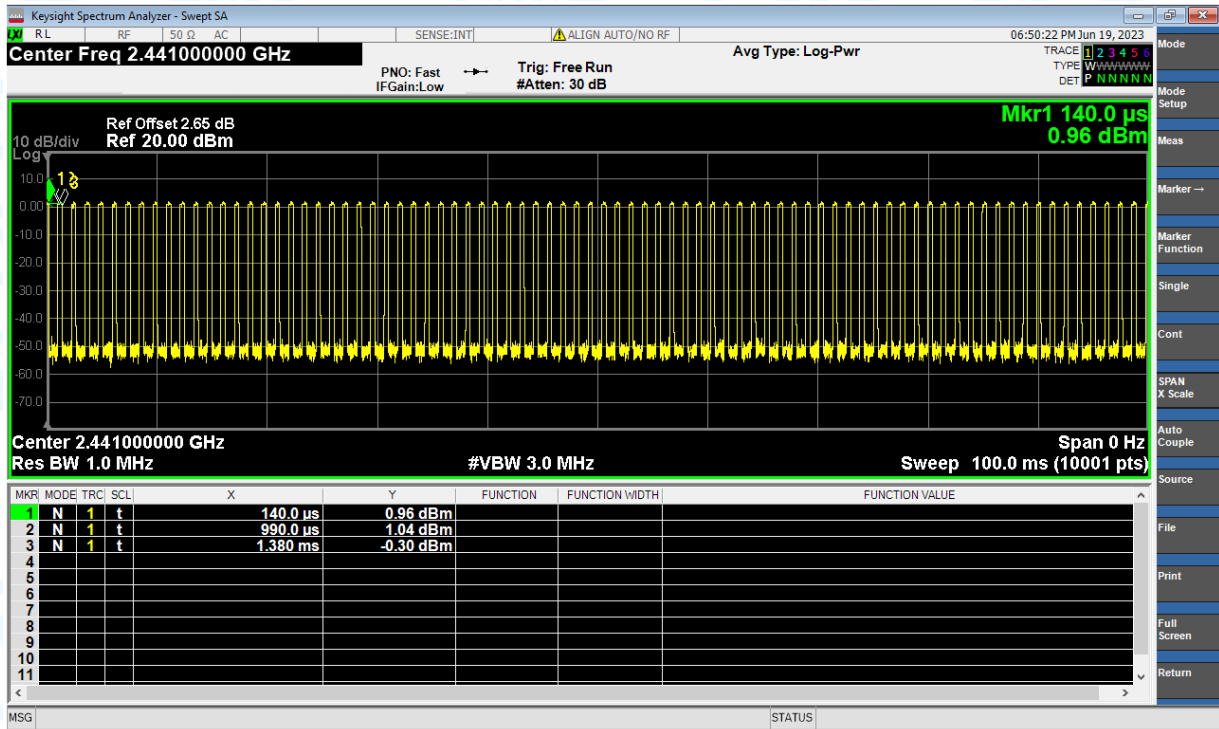
Duty Cycle NVNT 1-DH1 2480MHz Ant1



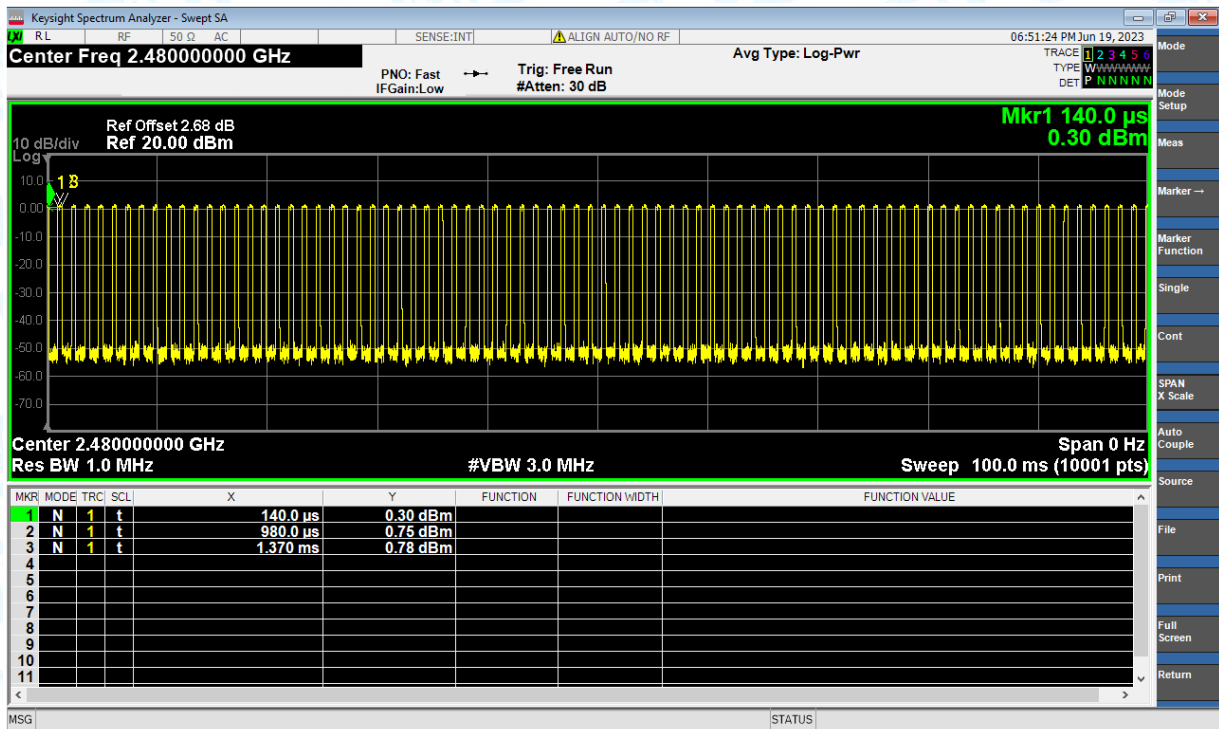
Duty Cycle NVNT 2-DH1 2402MHz Ant1



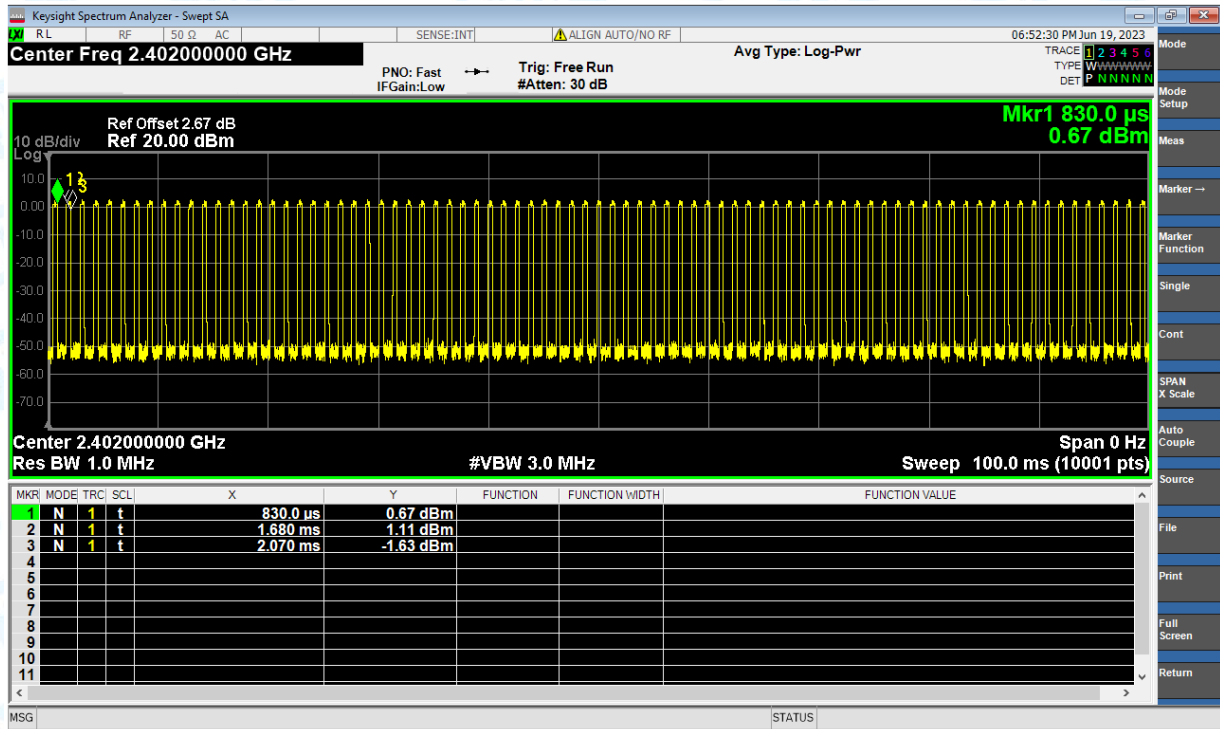
Duty Cycle NVNT 2-DH1 2441MHz Ant1



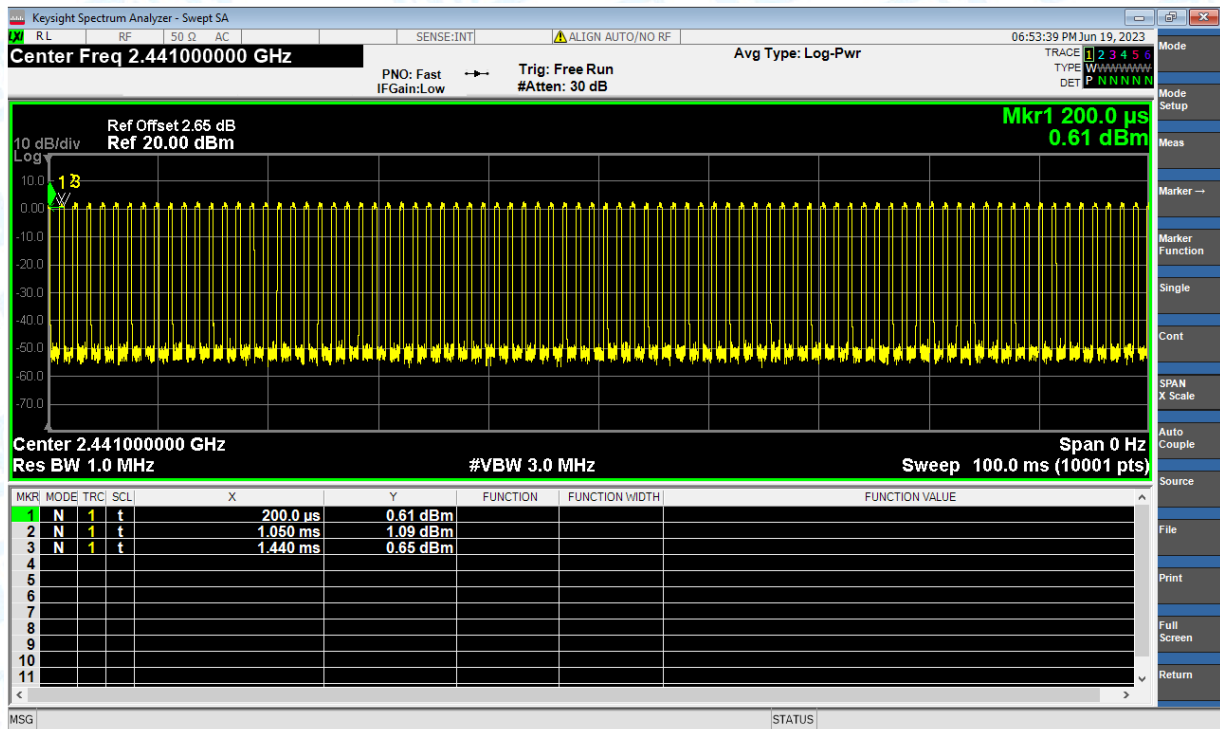
Duty Cycle NVNT 2-DH1 2480MHz Ant1

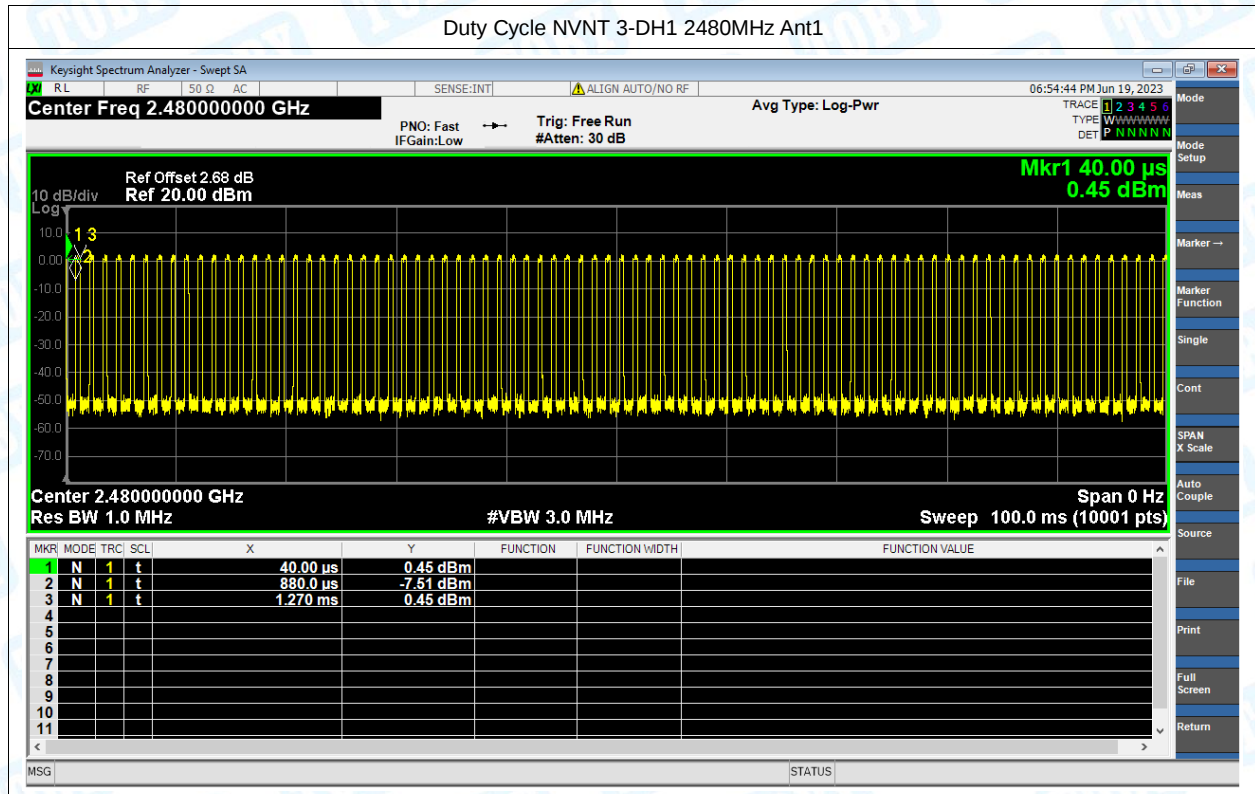


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



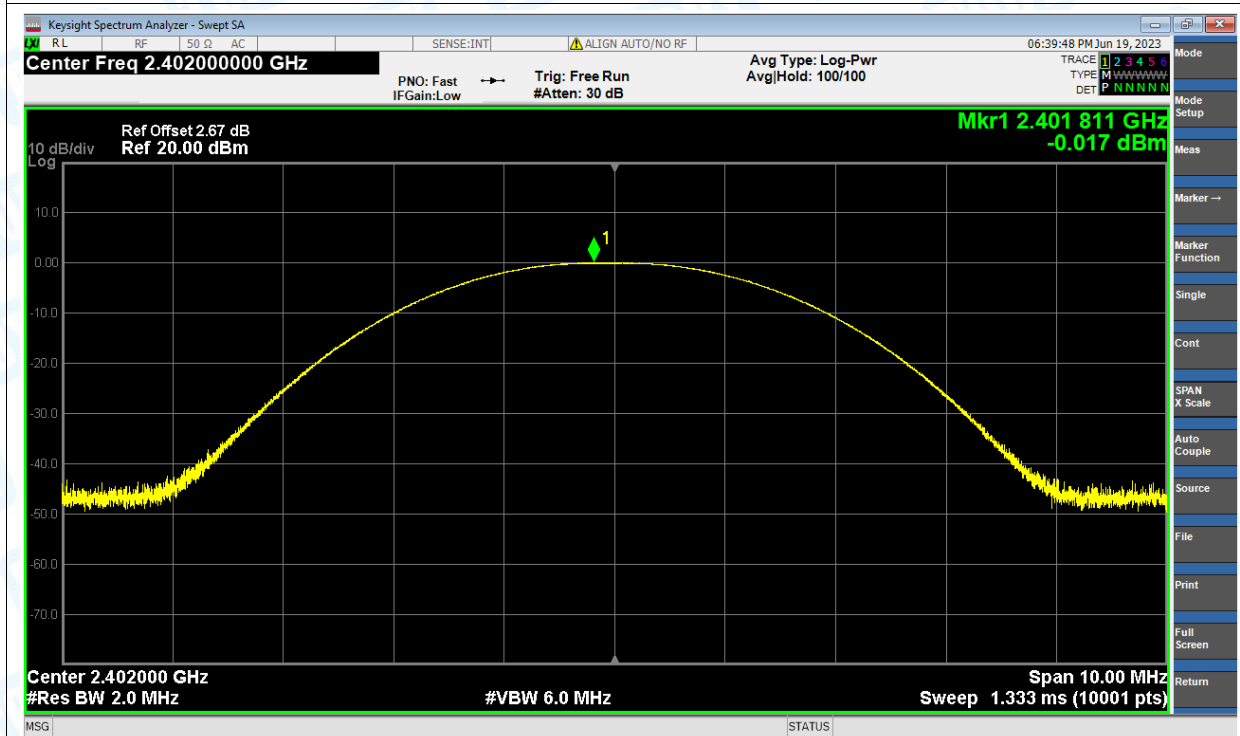


2. Maximum Conducted Output Power

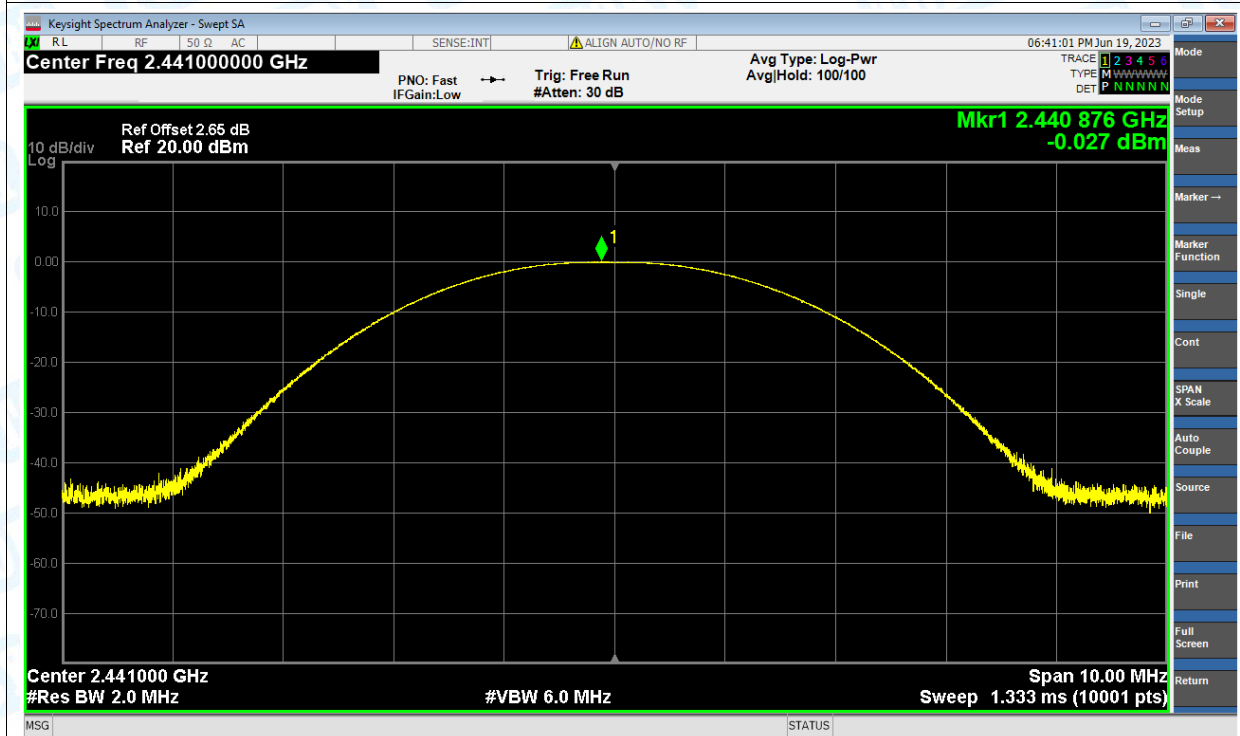
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-0.017	21	Pass
NVNT	1-DH1	2441	Ant1	-0.027	21	Pass
NVNT	1-DH1	2480	Ant1	-0.178	21	Pass
NVNT	2-DH1	2402	Ant1	2.376	21	Pass
NVNT	2-DH1	2441	Ant1	2.338	21	Pass
NVNT	2-DH1	2480	Ant1	2.112	21	Pass
NVNT	3-DH1	2402	Ant1	2.945	21	Pass
NVNT	3-DH1	2441	Ant1	2.96	21	Pass
NVNT	3-DH1	2480	Ant1	2.733	21	Pass

Test Graphs

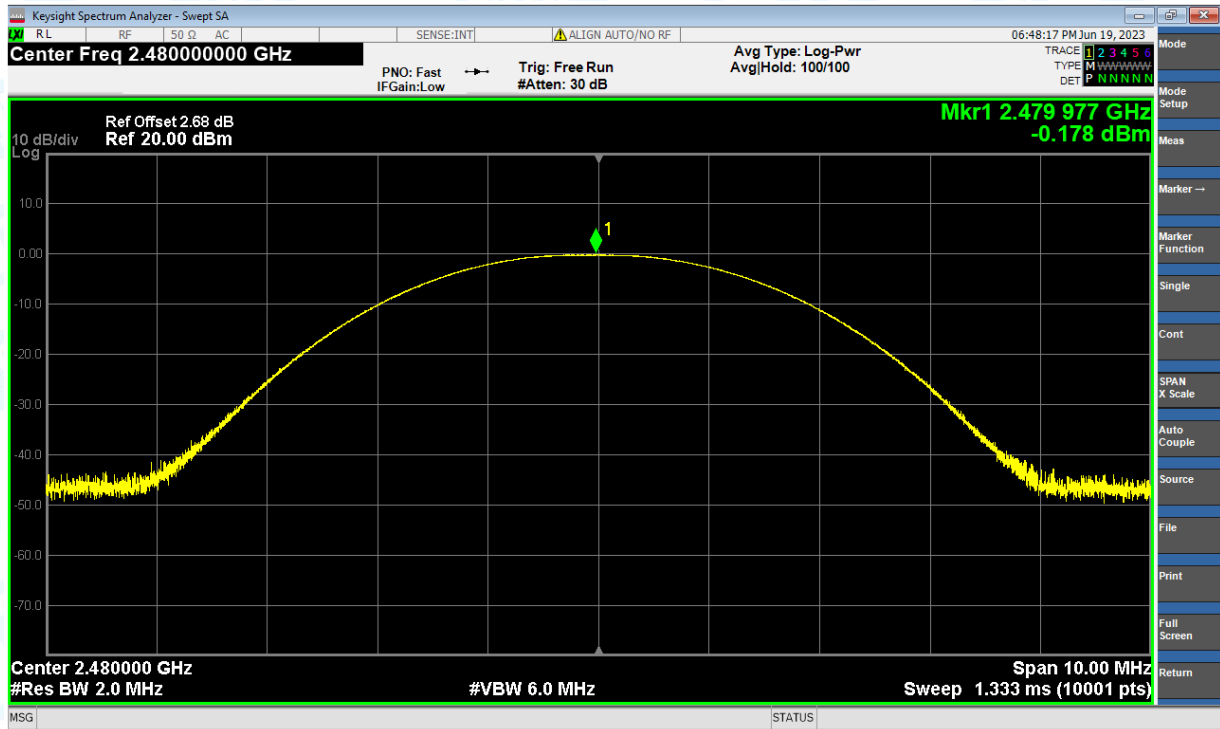
Power NVNT 1-DH1 2402MHz Ant1



Power NVNT 1-DH1 2441MHz Ant1



Power NVNT 1-DH1 2480MHz Ant1



Power NVNT 2-DH1 2402MHz Ant1



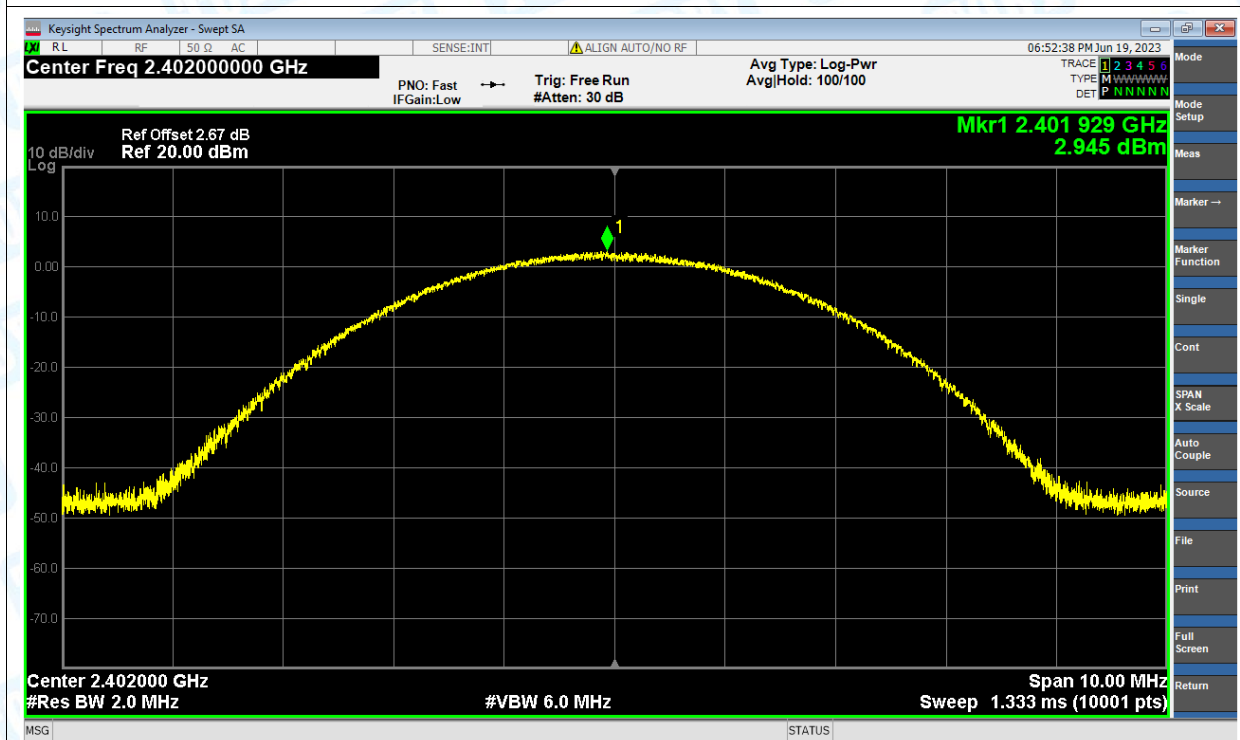
Power NVNT 2-DH1 2441MHz Ant1



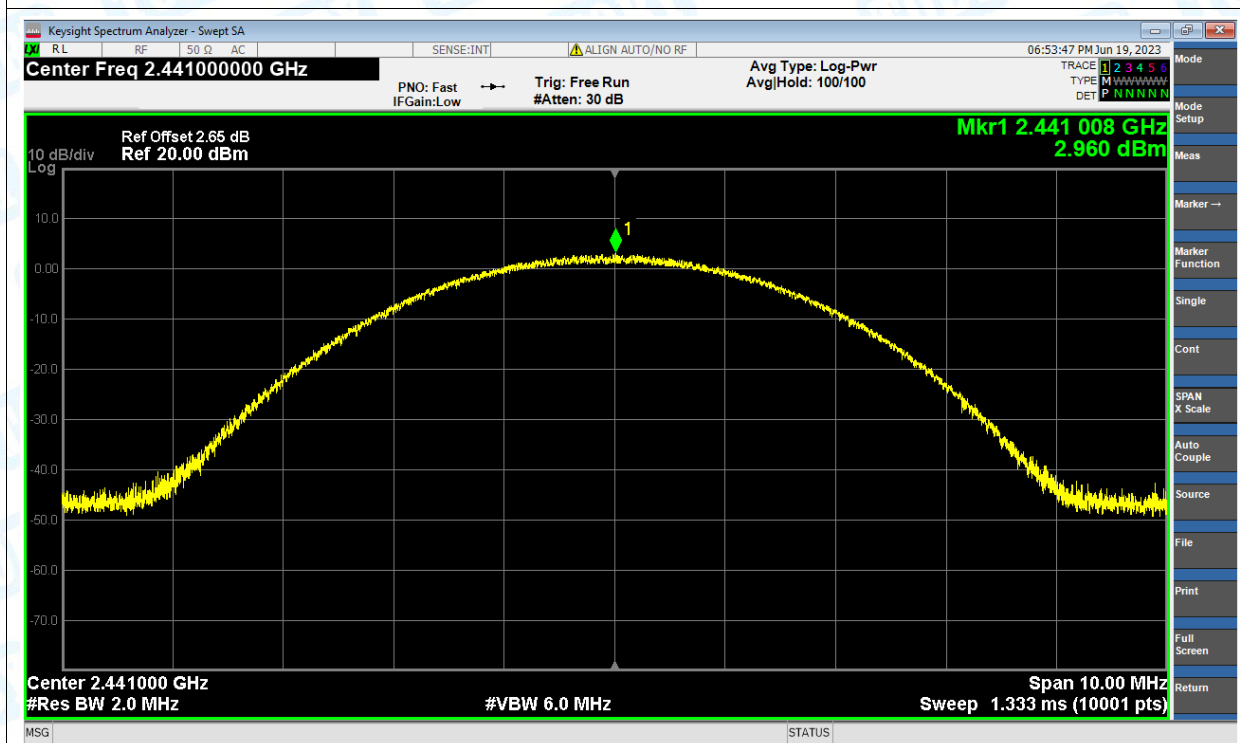
Power NVNT 2-DH1 2480MHz Ant1

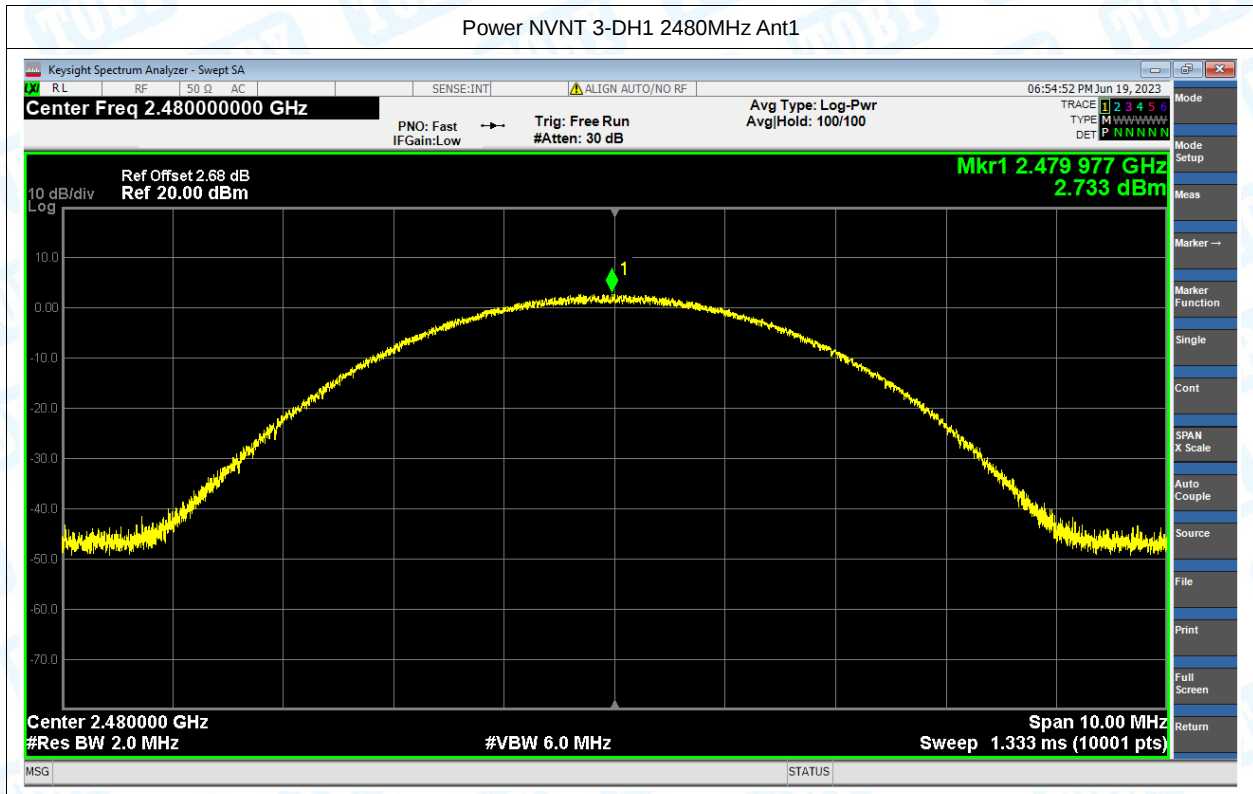


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



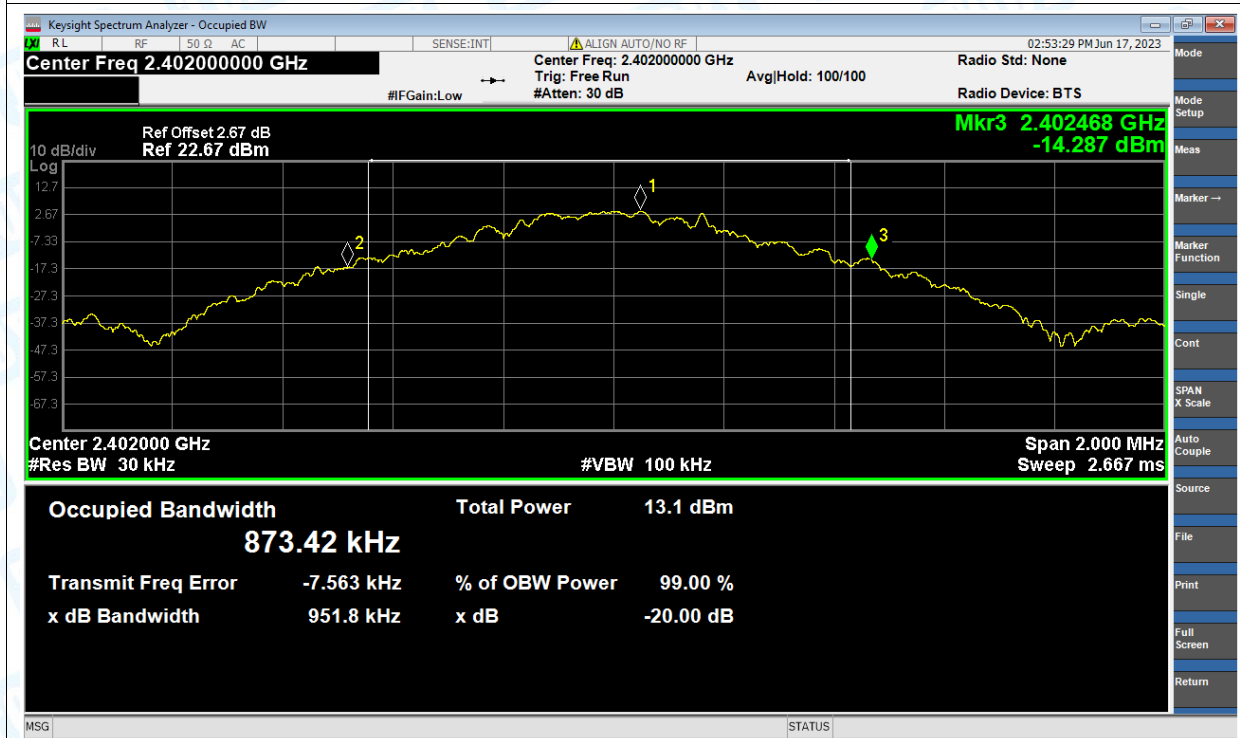


3. -20dB Bandwidth

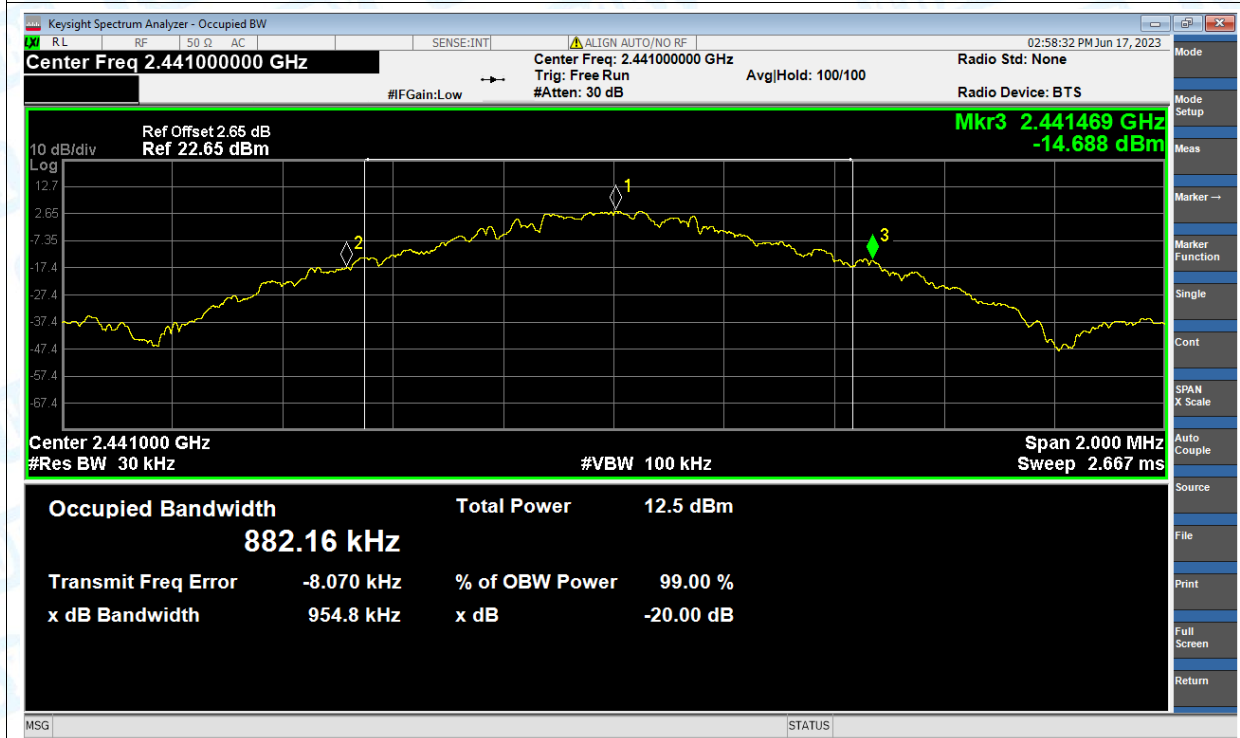
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.95	0	Pass
NVNT	1-DH1	2441	Ant1	0.95	0	Pass
NVNT	1-DH1	2480	Ant1	0.95	0	Pass
NVNT	2-DH1	2402	Ant1	1.25	0	Pass
NVNT	2-DH1	2441	Ant1	1.29	0	Pass
NVNT	2-DH1	2480	Ant1	1.26	0	Pass
NVNT	3-DH1	2402	Ant1	1.21	0	Pass
NVNT	3-DH1	2441	Ant1	1.21	0	Pass
NVNT	3-DH1	2480	Ant1	1.22	0	Pass

Test Graphs

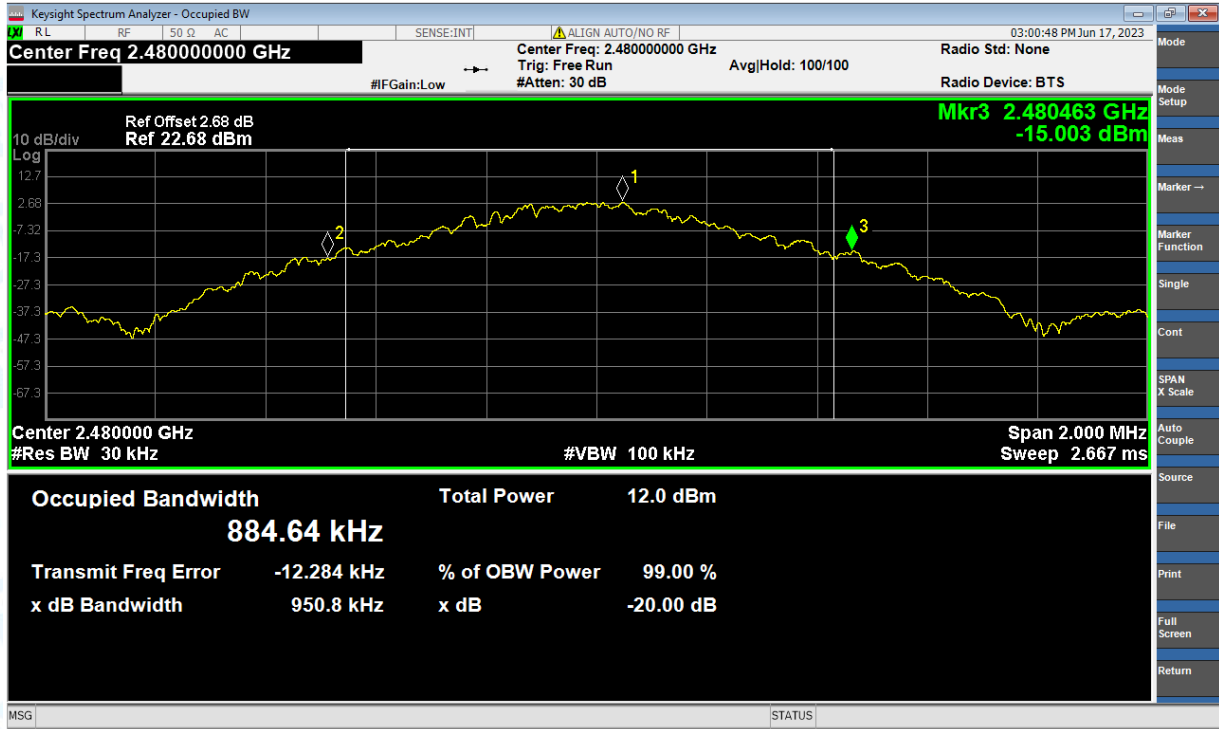
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



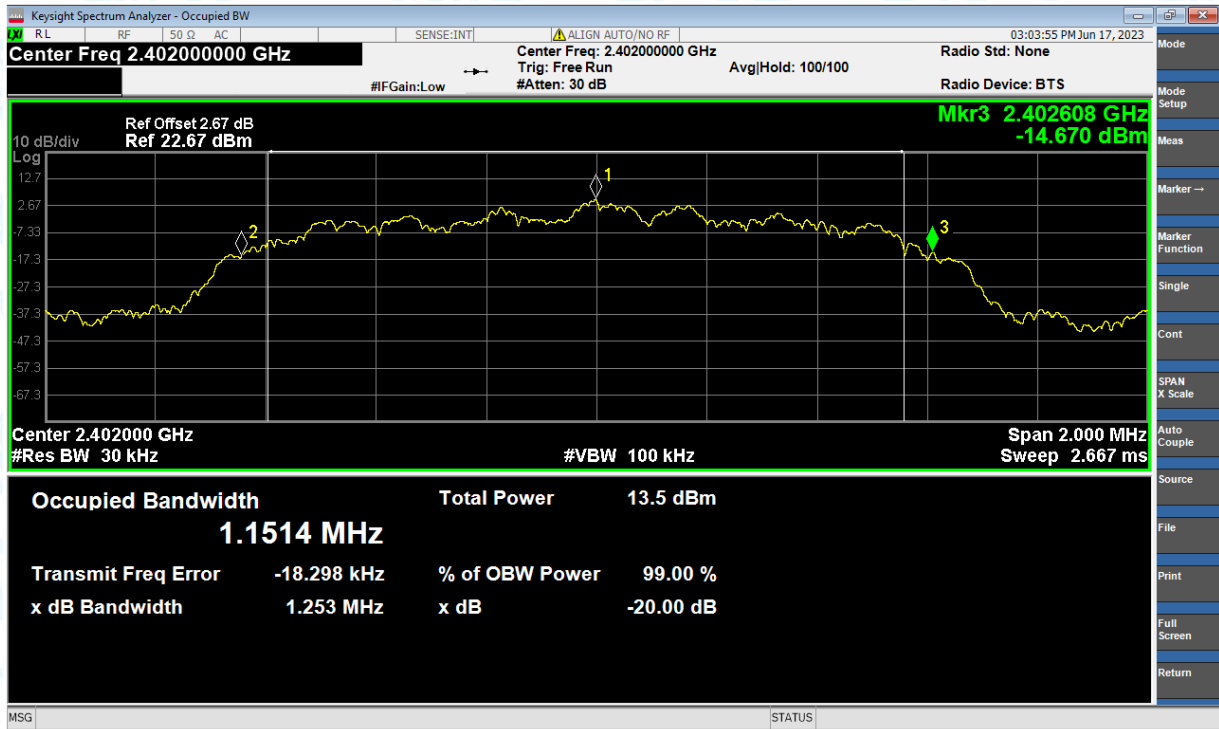
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



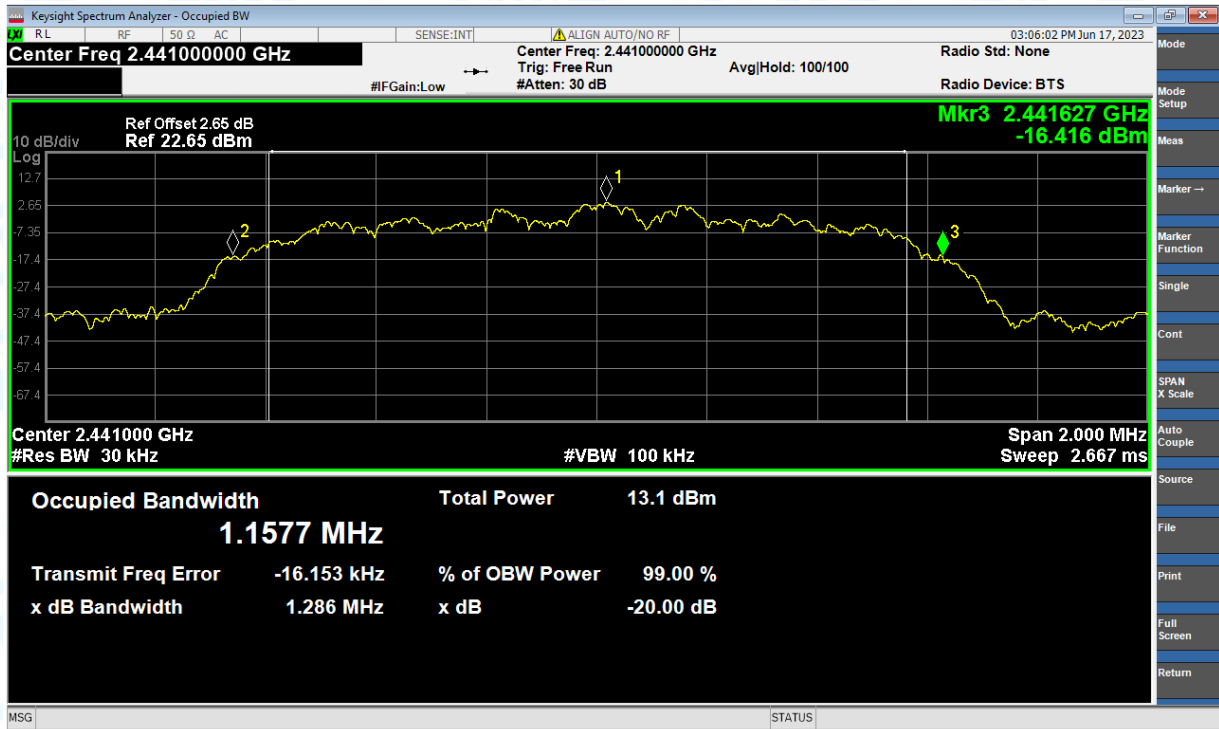
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



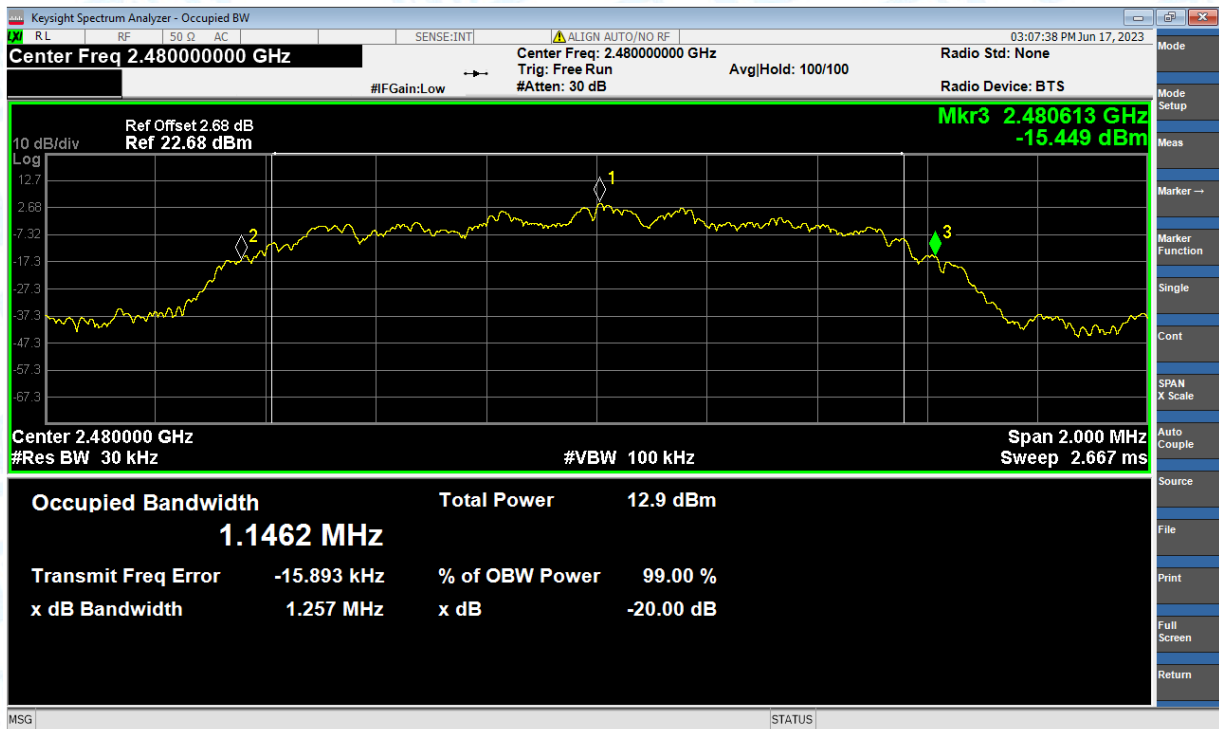
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



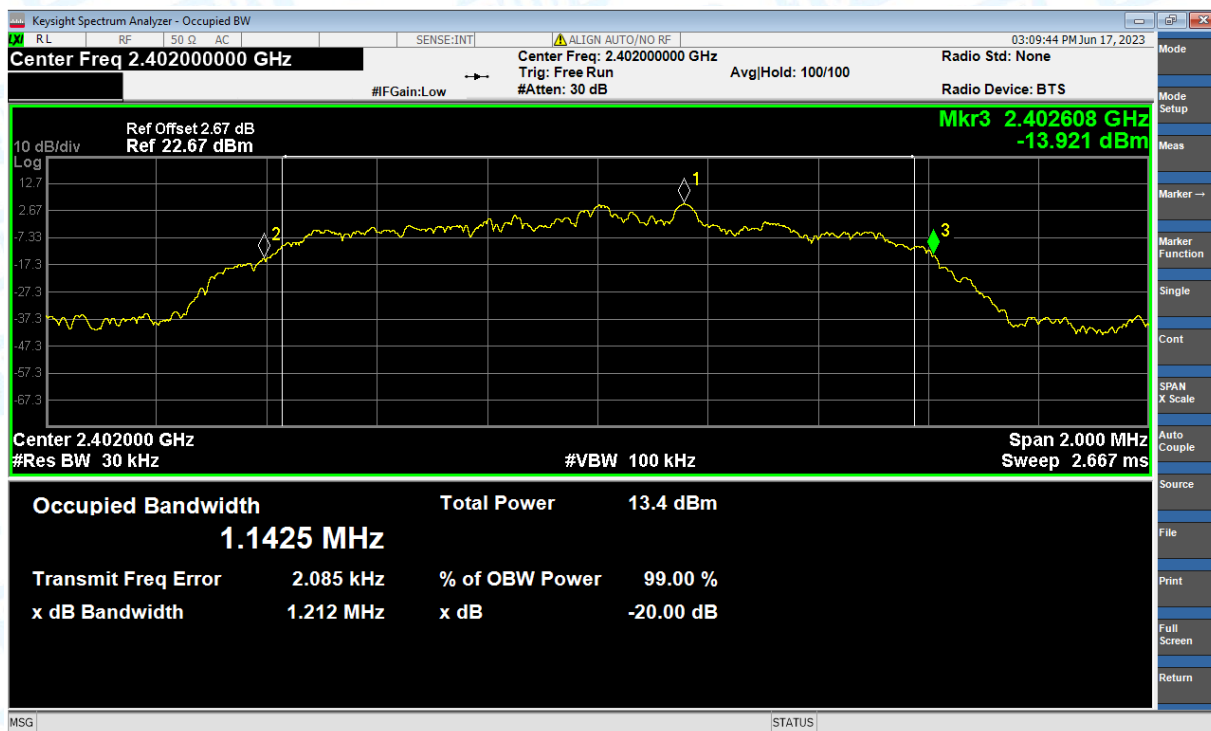
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



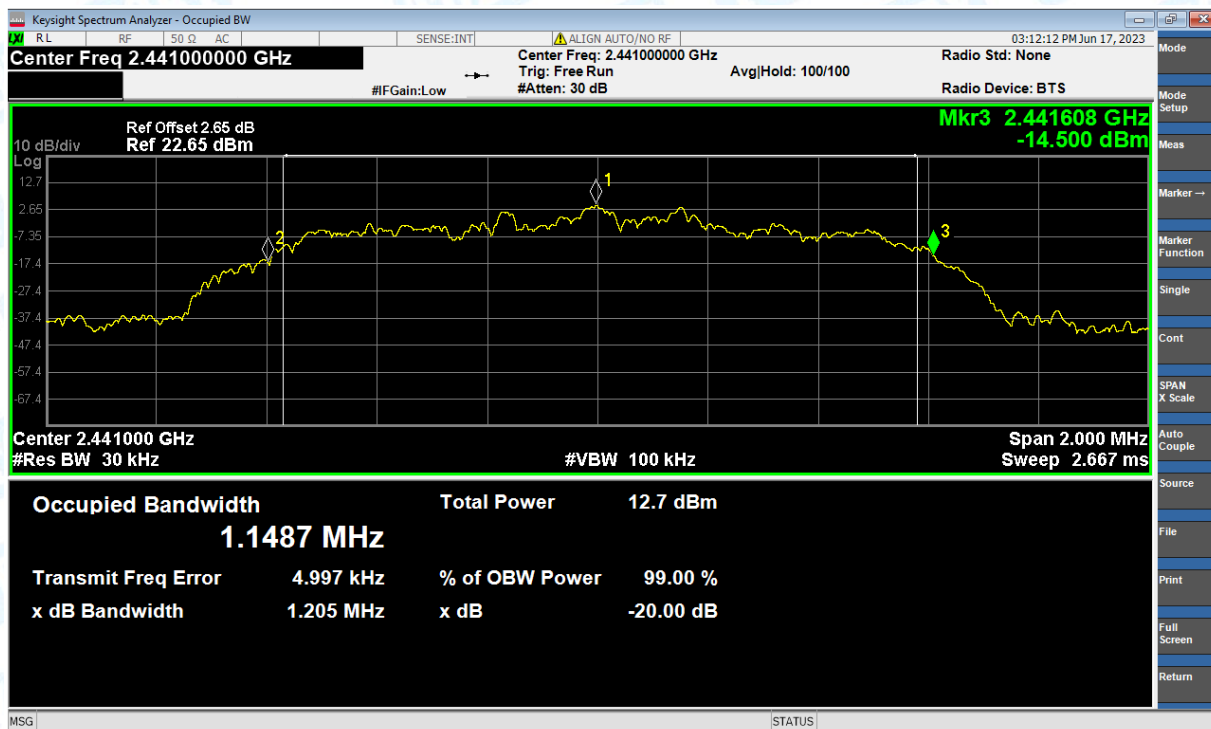
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

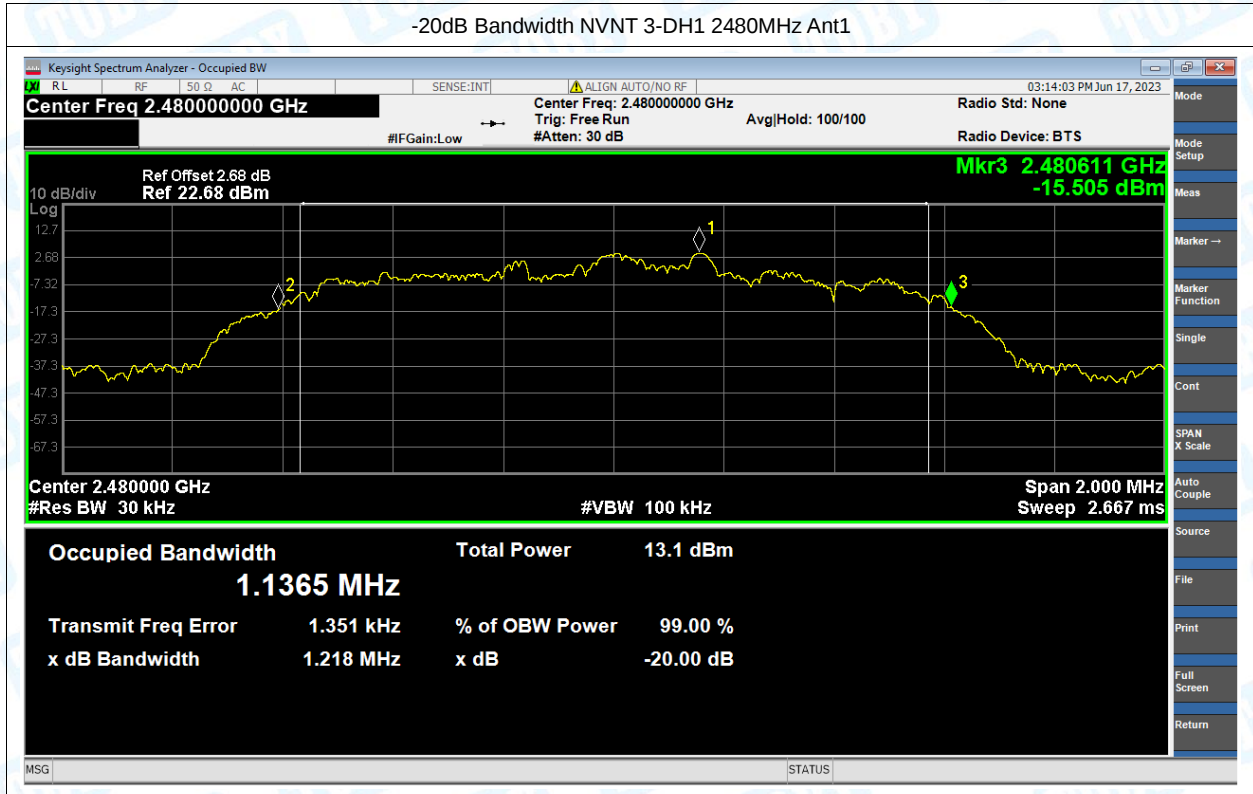


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



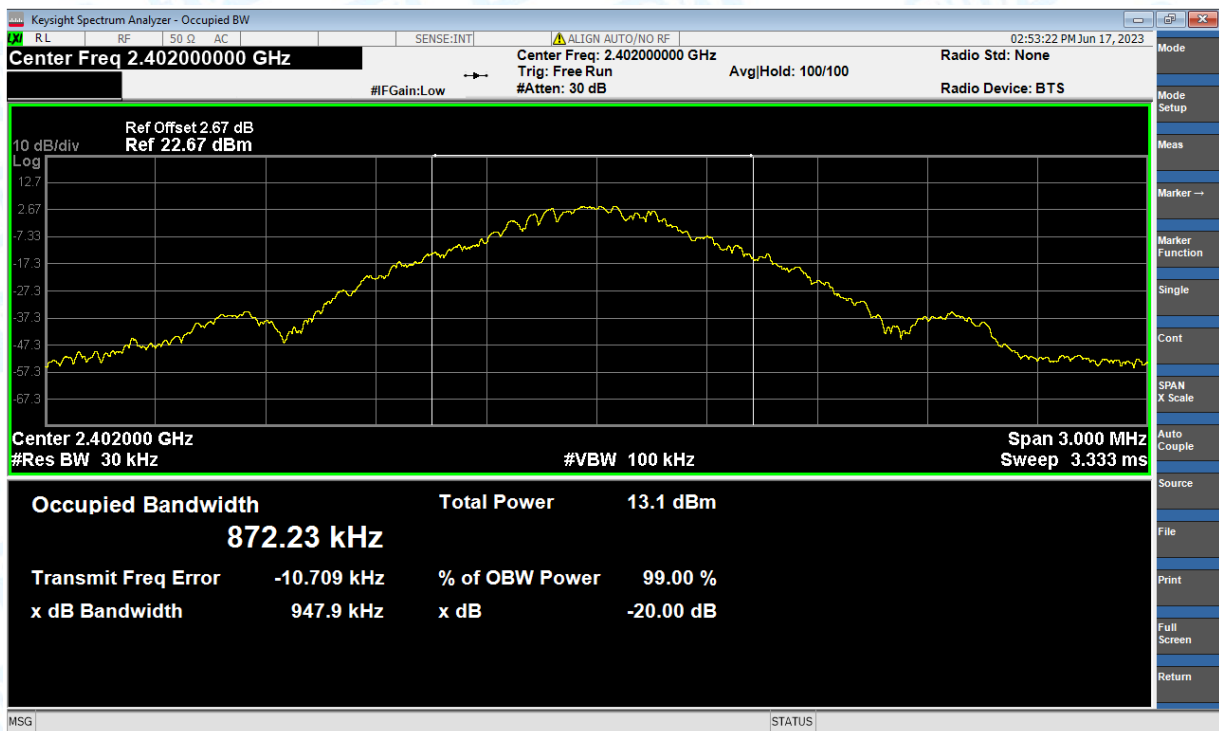


4. Occupied Channel Bandwidth

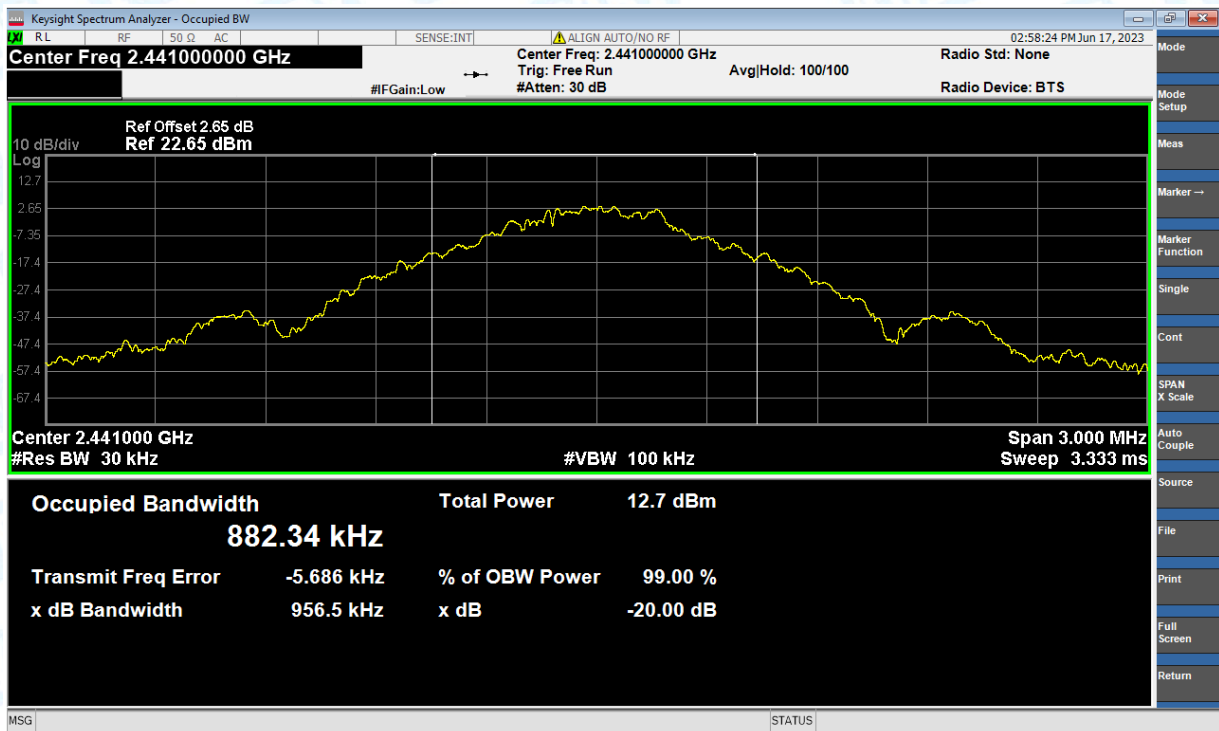
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.872
NVNT	1-DH1	2441	Ant1	0.882
NVNT	1-DH1	2480	Ant1	0.858
NVNT	2-DH1	2402	Ant1	1.153
NVNT	2-DH1	2441	Ant1	1.142
NVNT	2-DH1	2480	Ant1	1.142
NVNT	3-DH1	2402	Ant1	1.138
NVNT	3-DH1	2441	Ant1	1.148
NVNT	3-DH1	2480	Ant1	1.137

Test Graphs

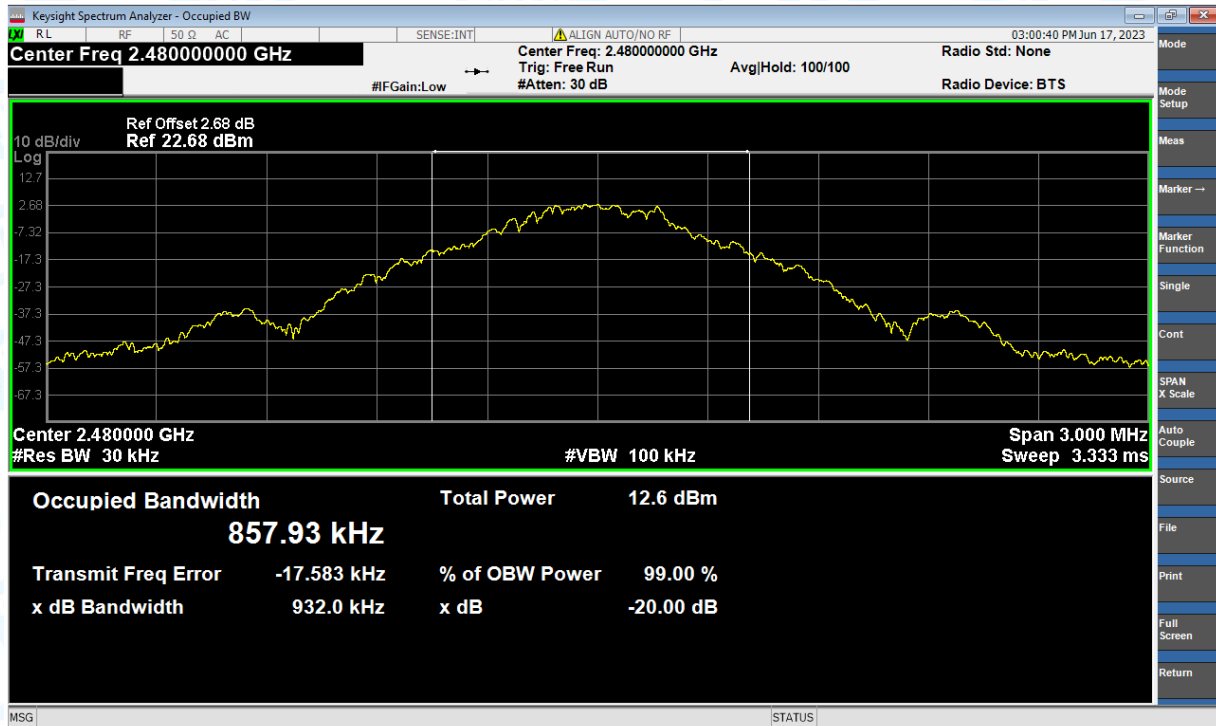
OBW NVNT 1-DH1 2402MHz Ant1



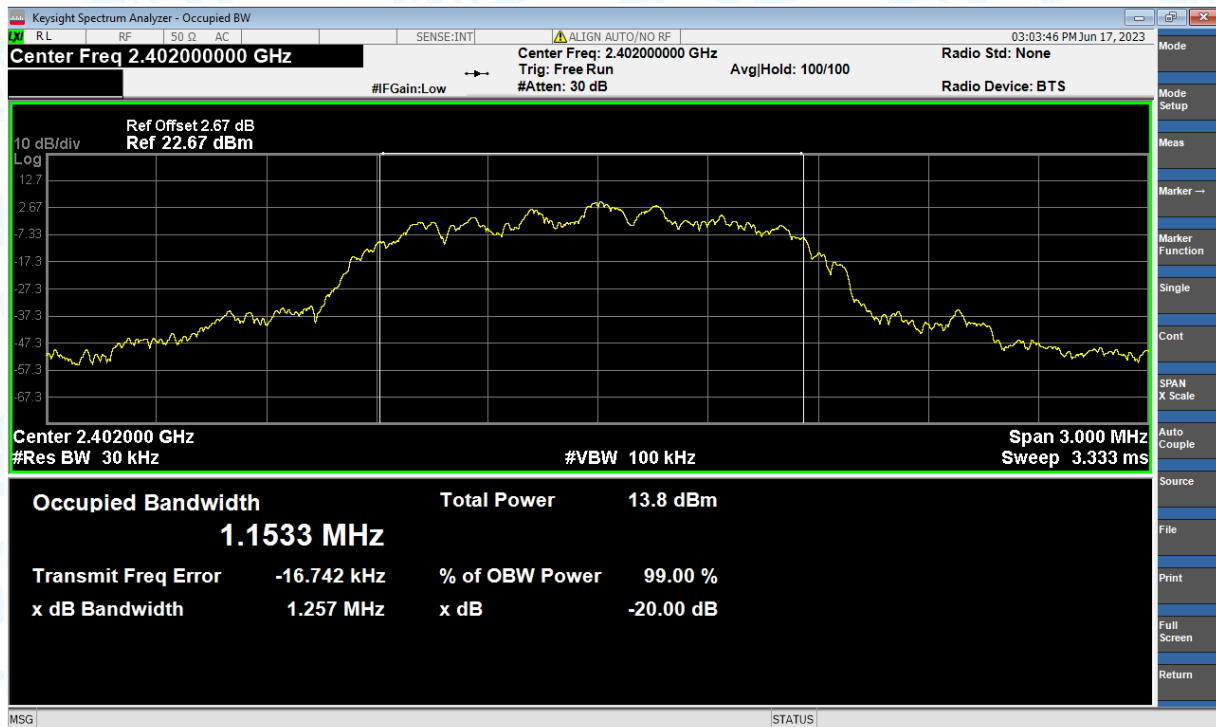
OBW NVNT 1-DH1 2441MHz Ant1



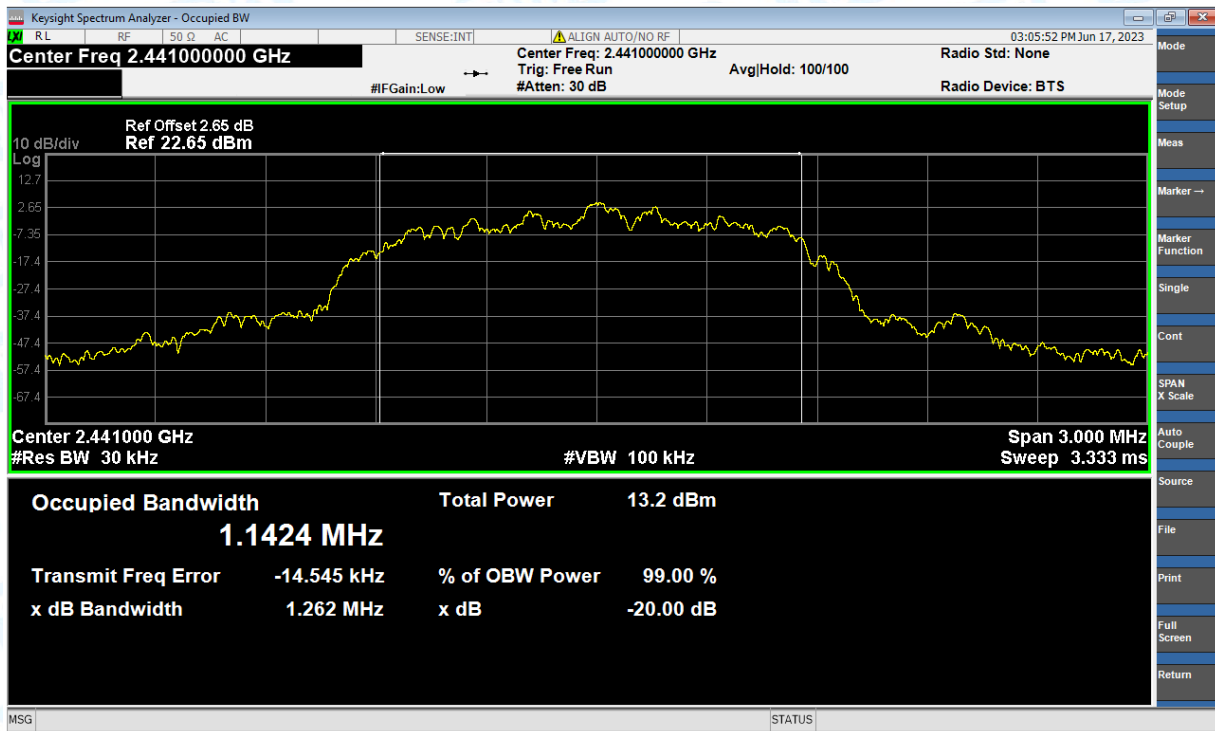
OBW NVNT 1-DH1 2480MHz Ant1



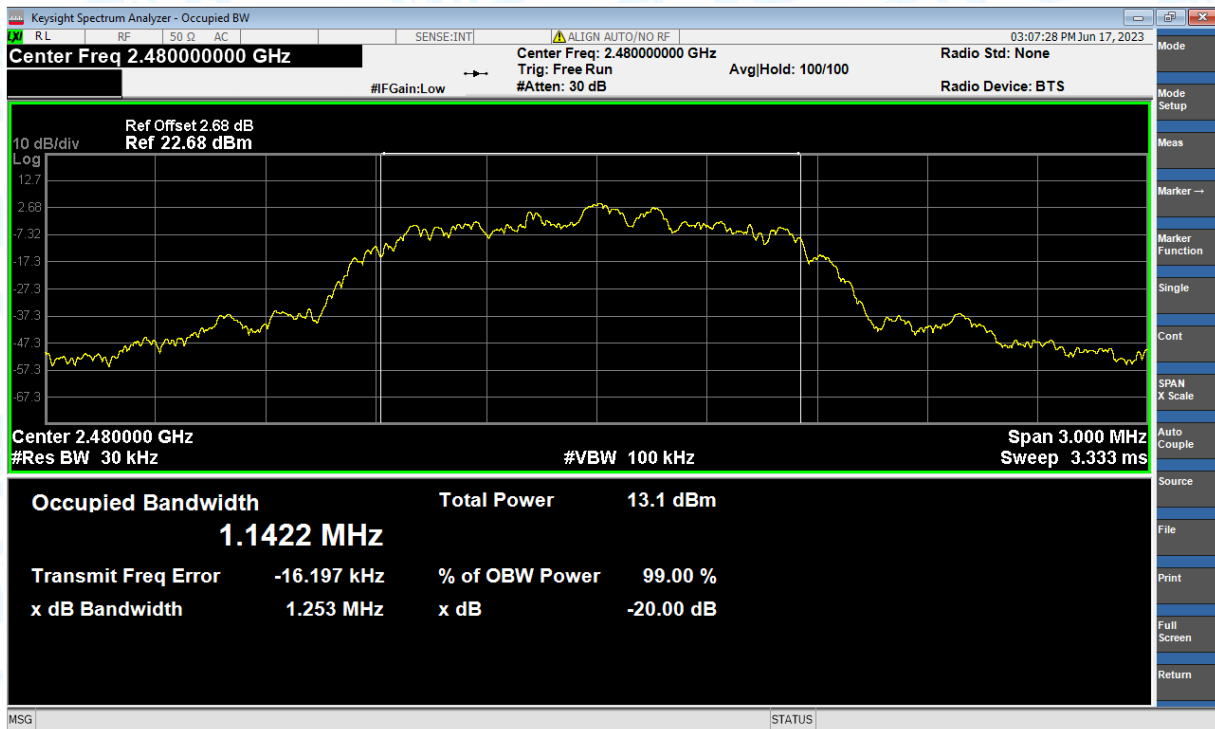
OBW NVNT 2-DH1 2402MHz Ant1



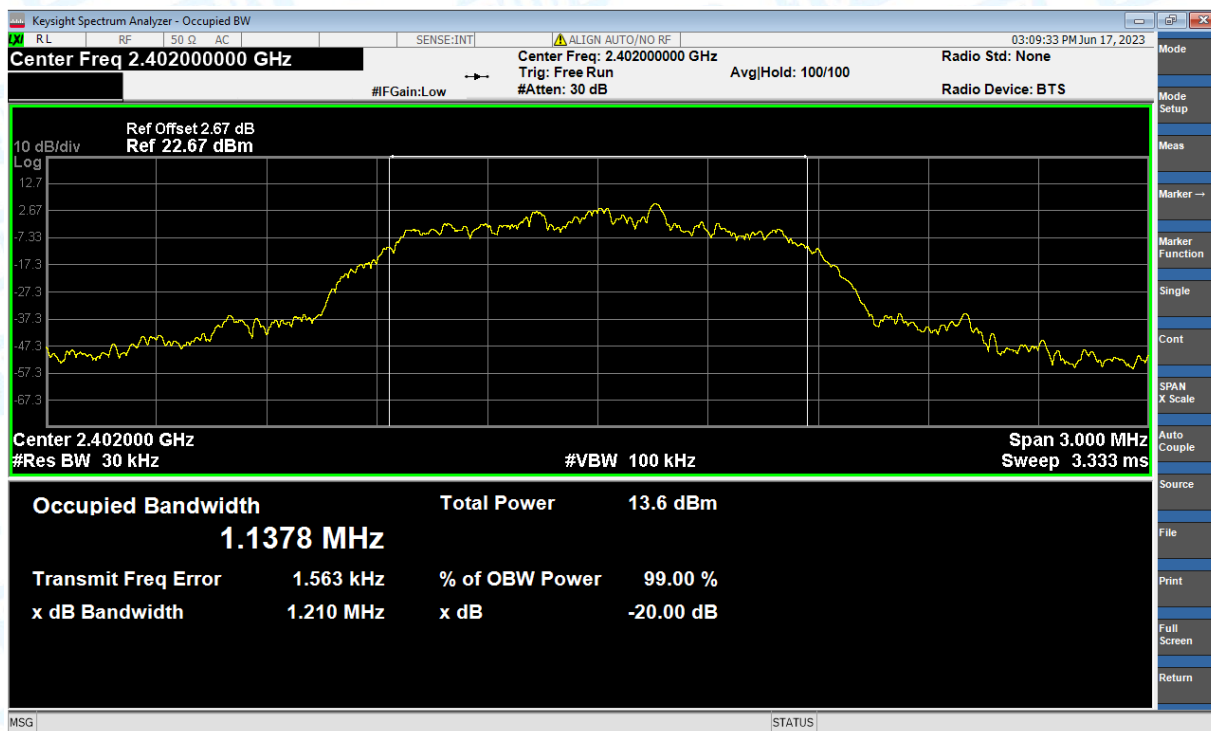
OBW NVNT 2-DH1 2441MHz Ant1



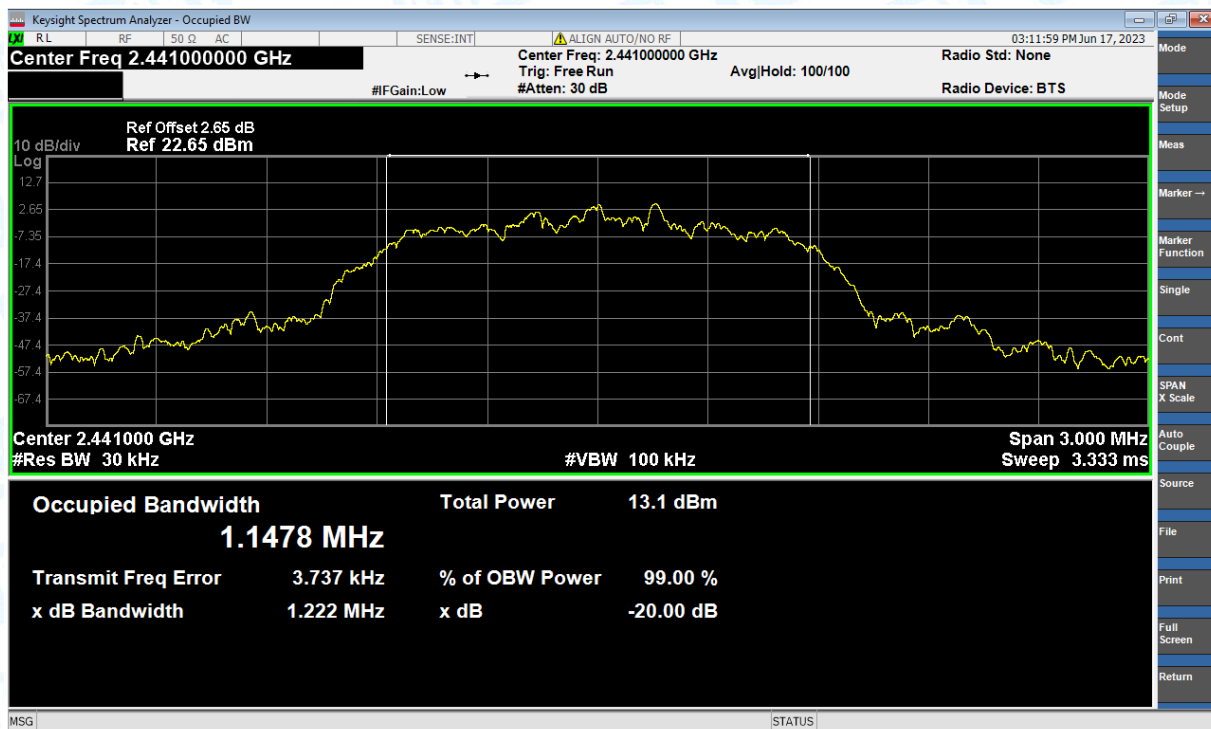
OBW NVNT 2-DH1 2480MHz Ant1

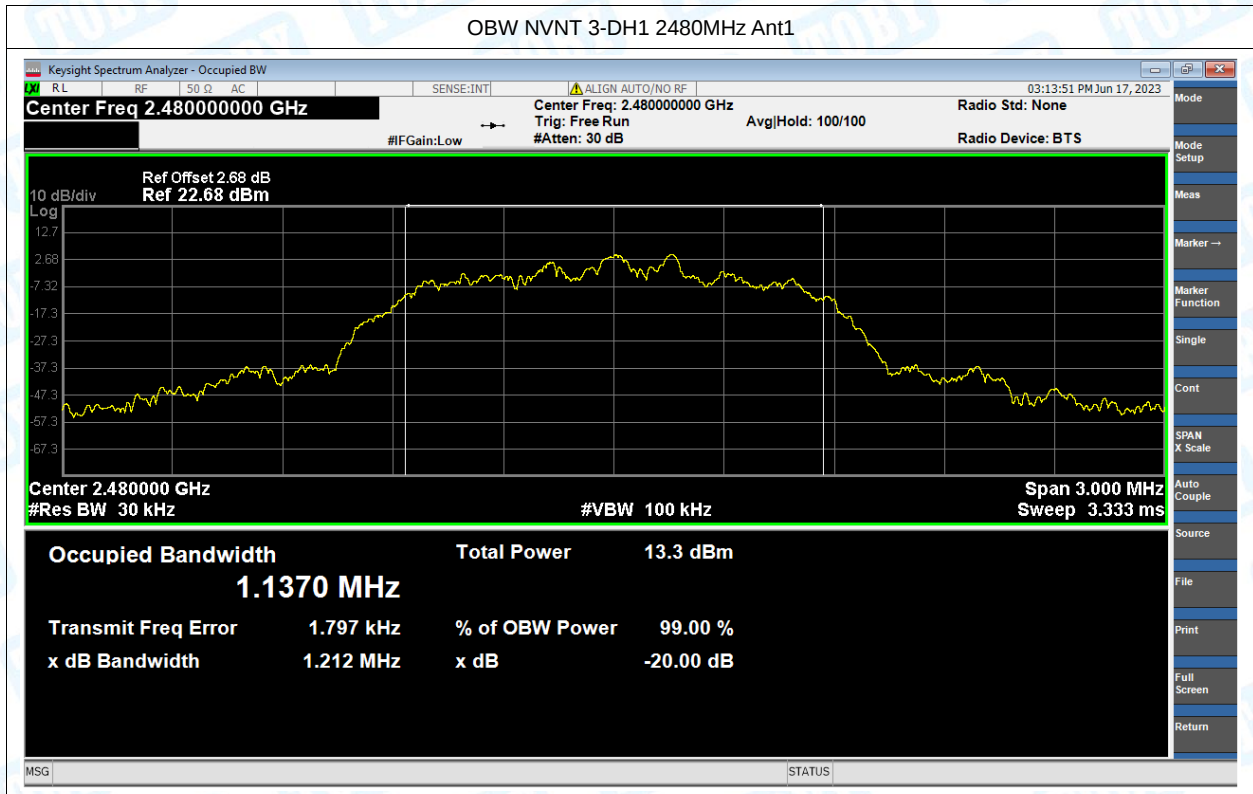


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



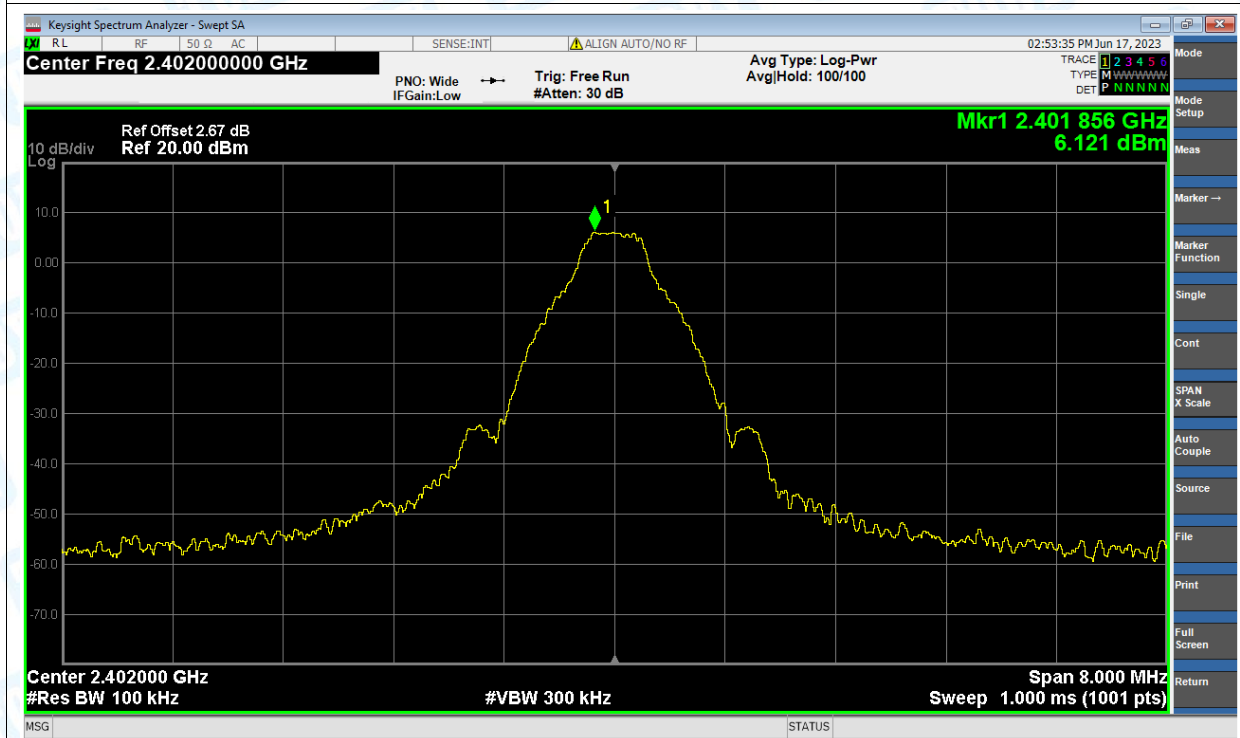


5. Band Edge

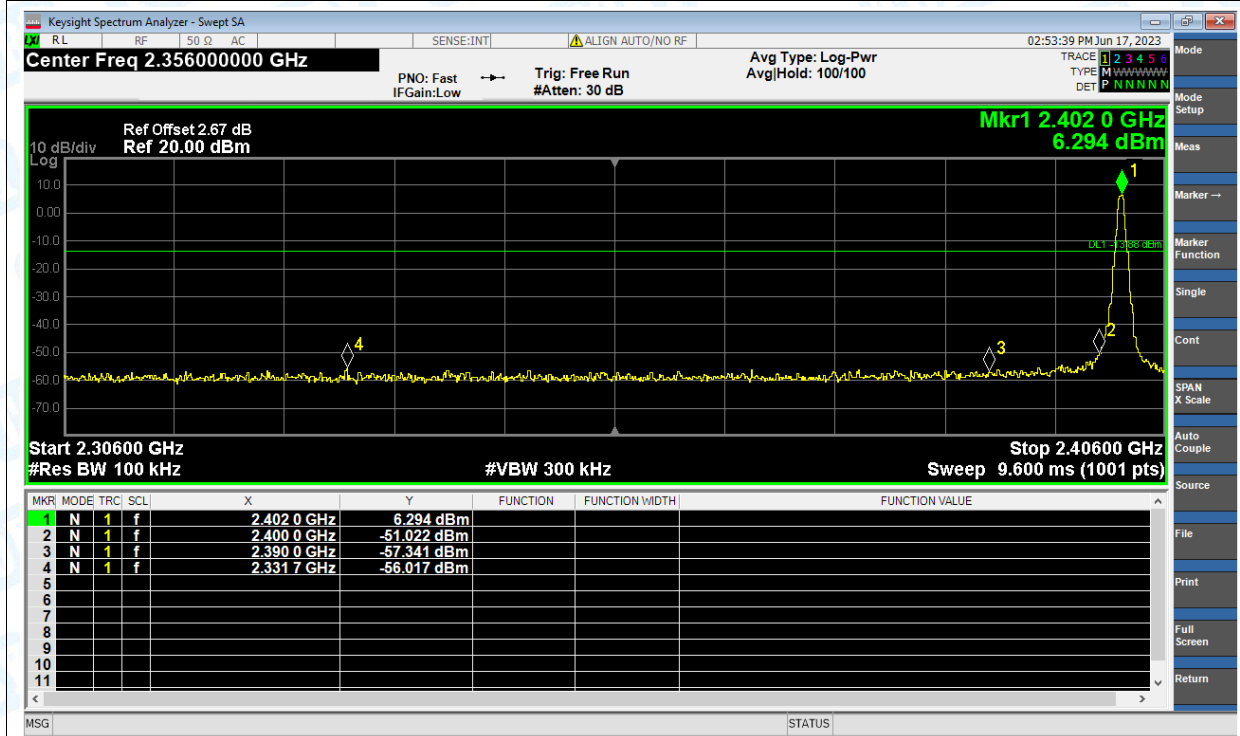
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-62.14	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-60.11	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-62.72	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-61.47	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-63.19	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-62.3	-20	Pass

Test Graphs

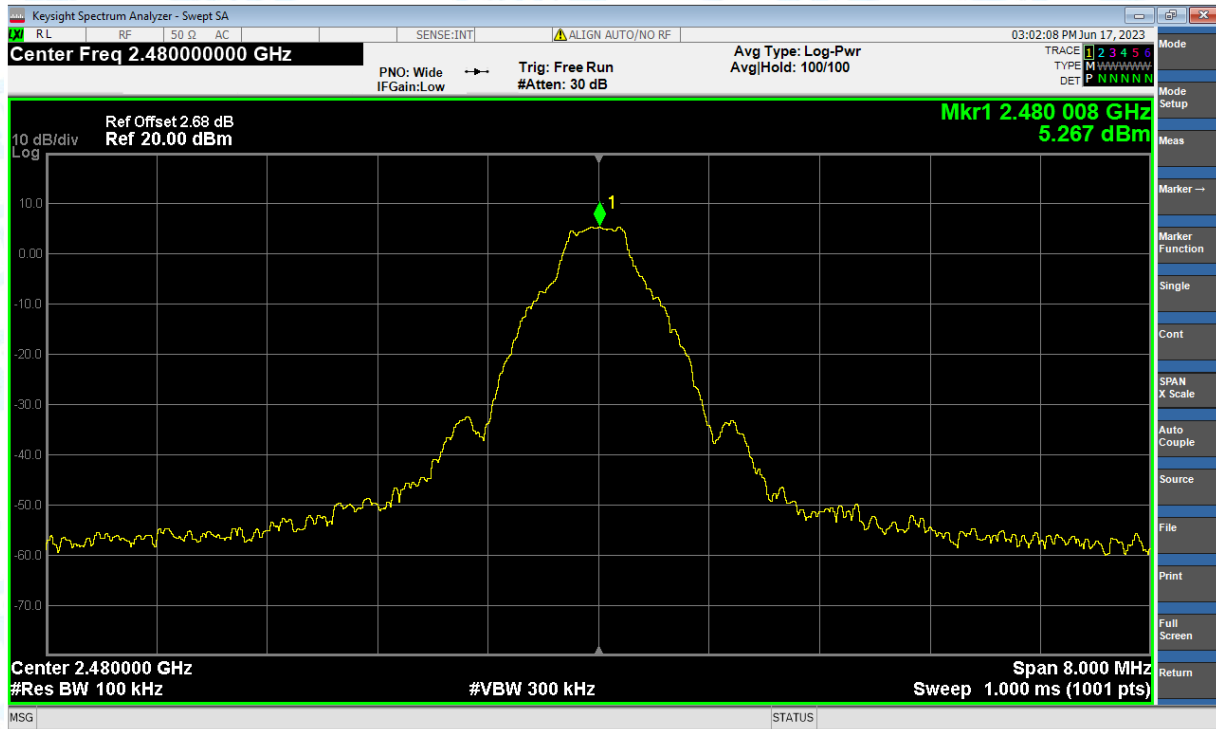
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



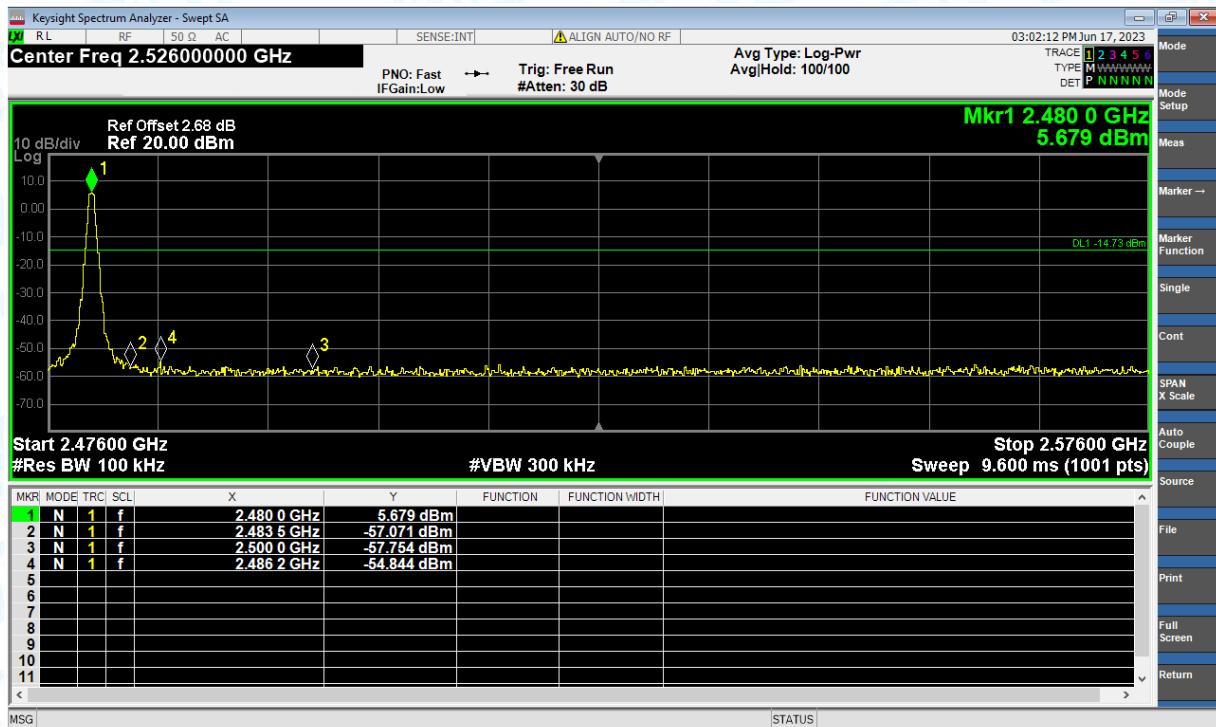
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



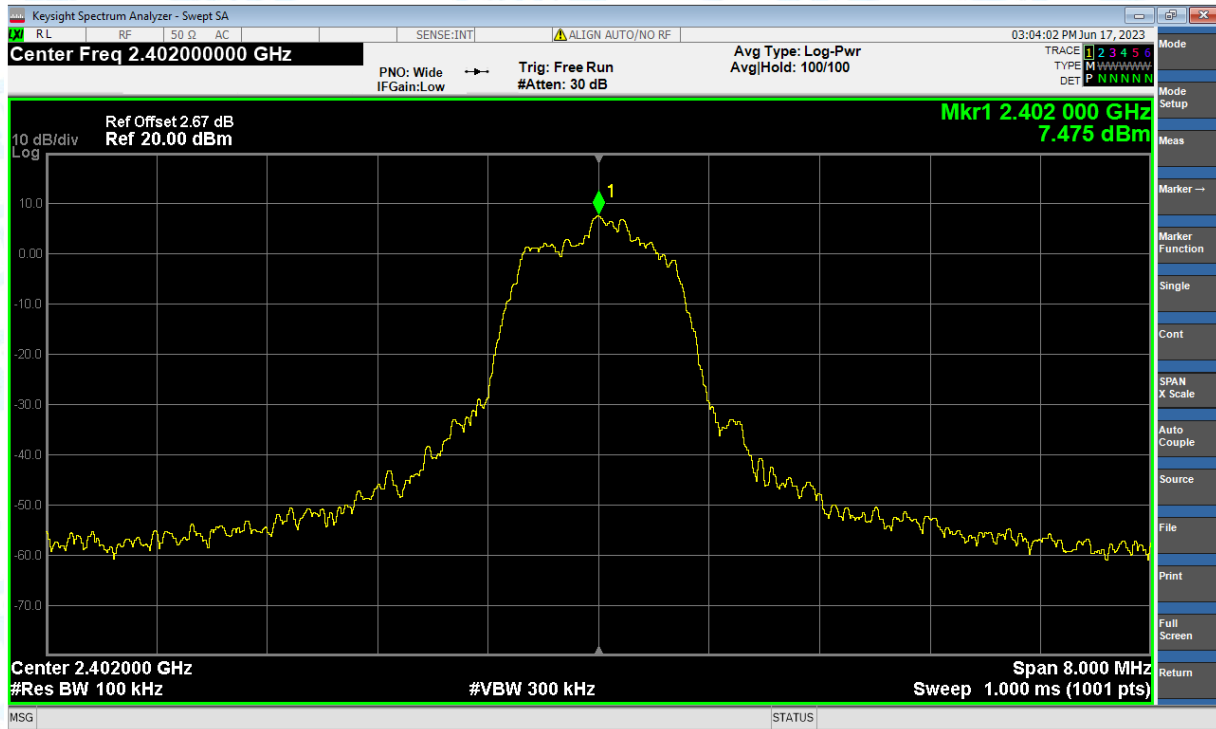
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



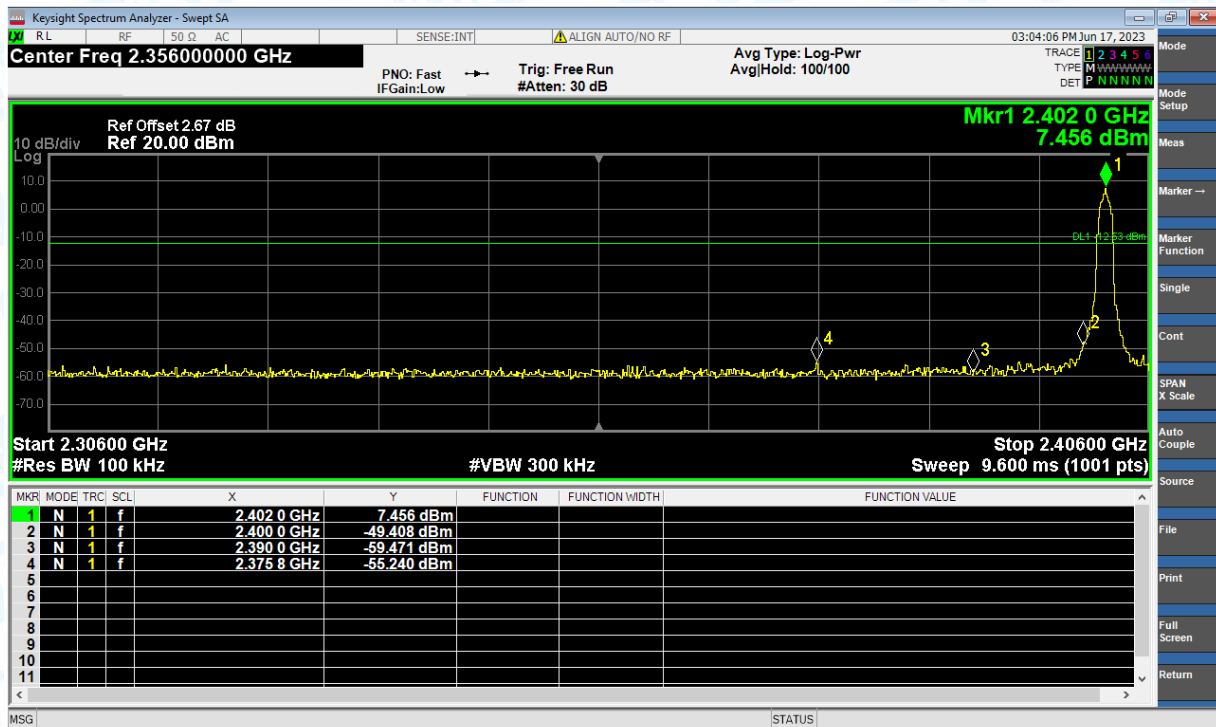
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



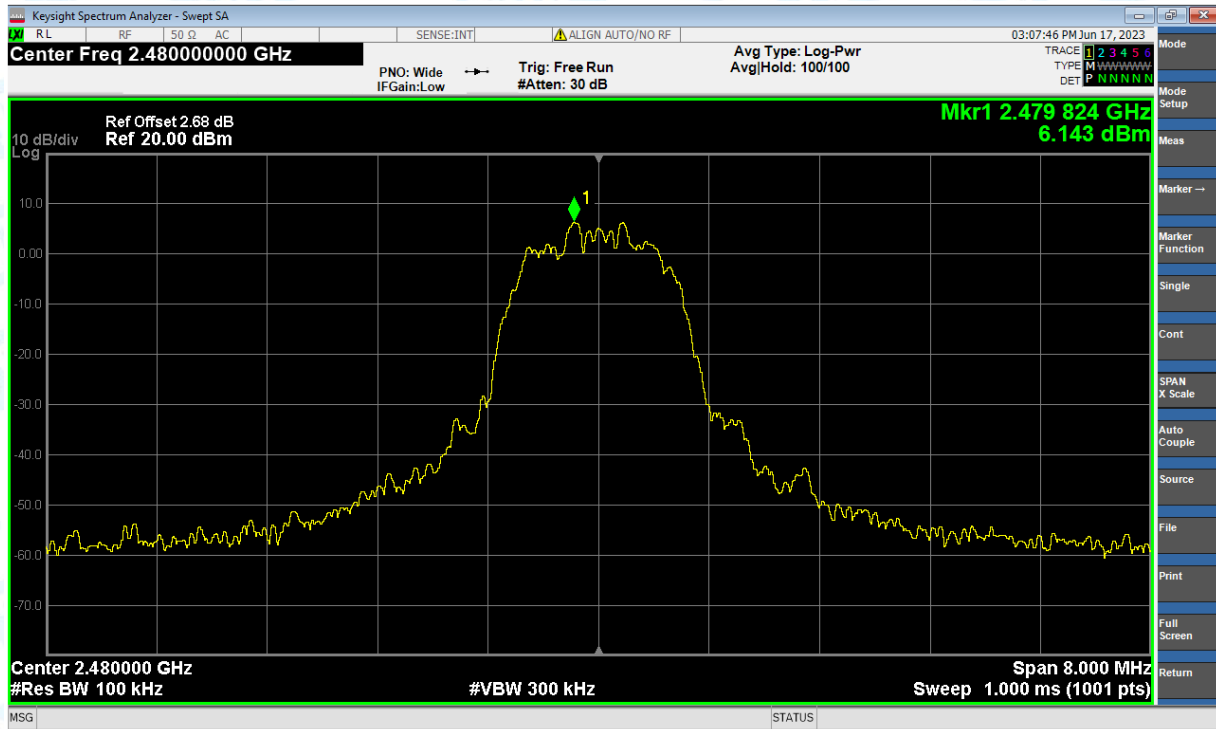
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



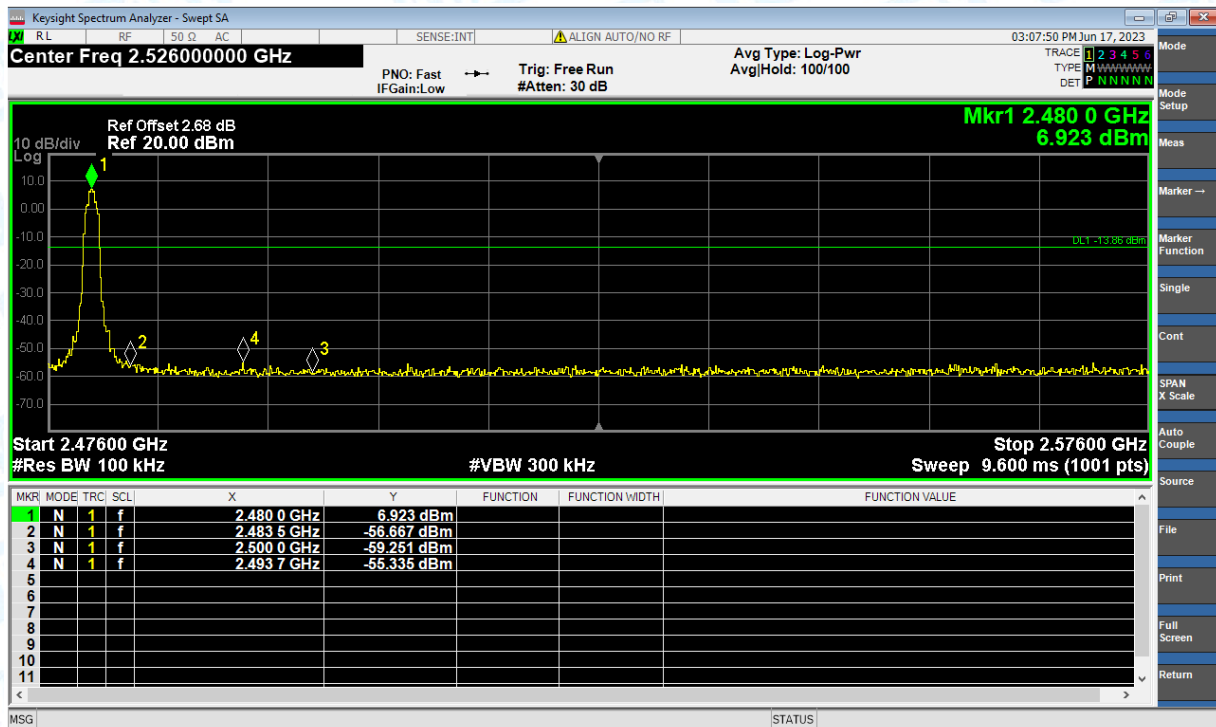
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



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



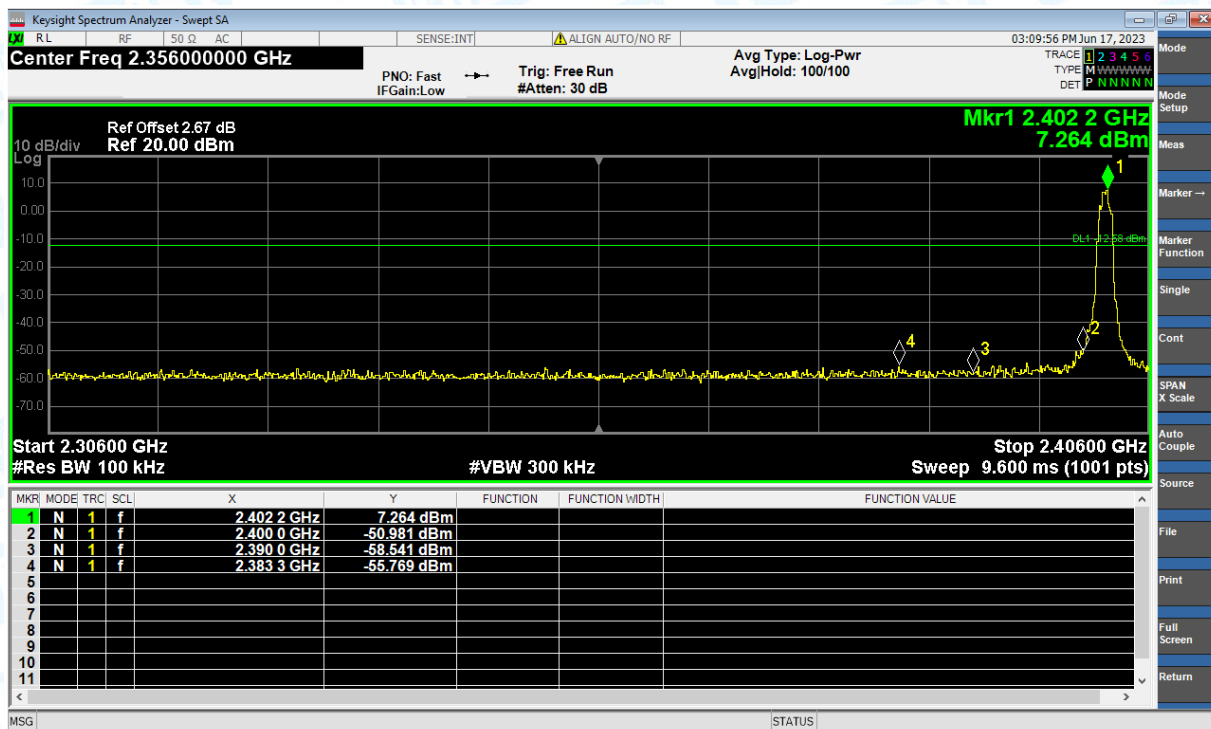
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



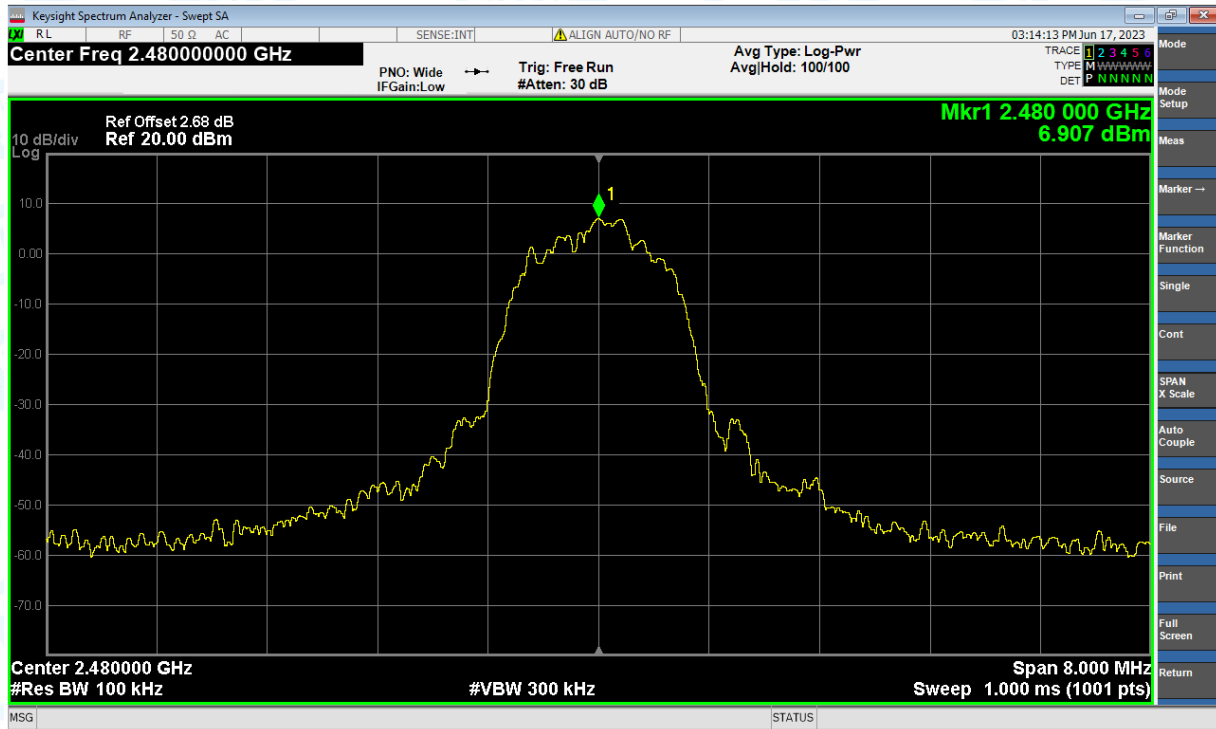
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



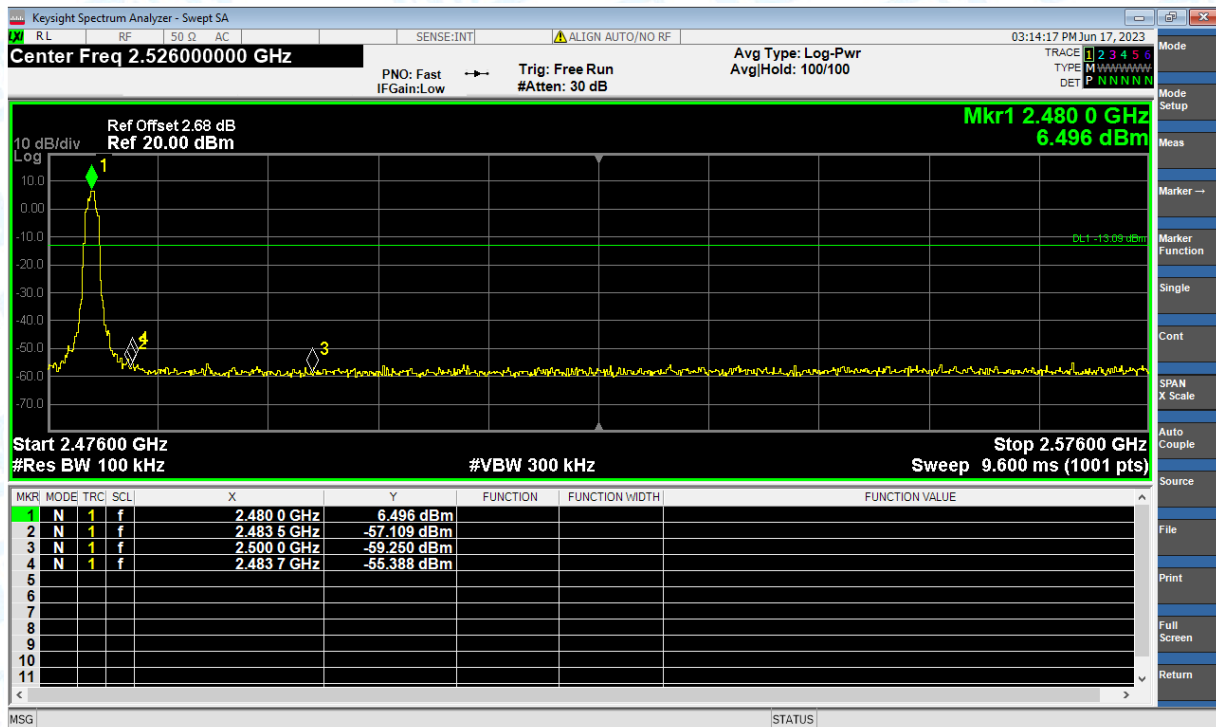
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6. Band Edge(Hopping)

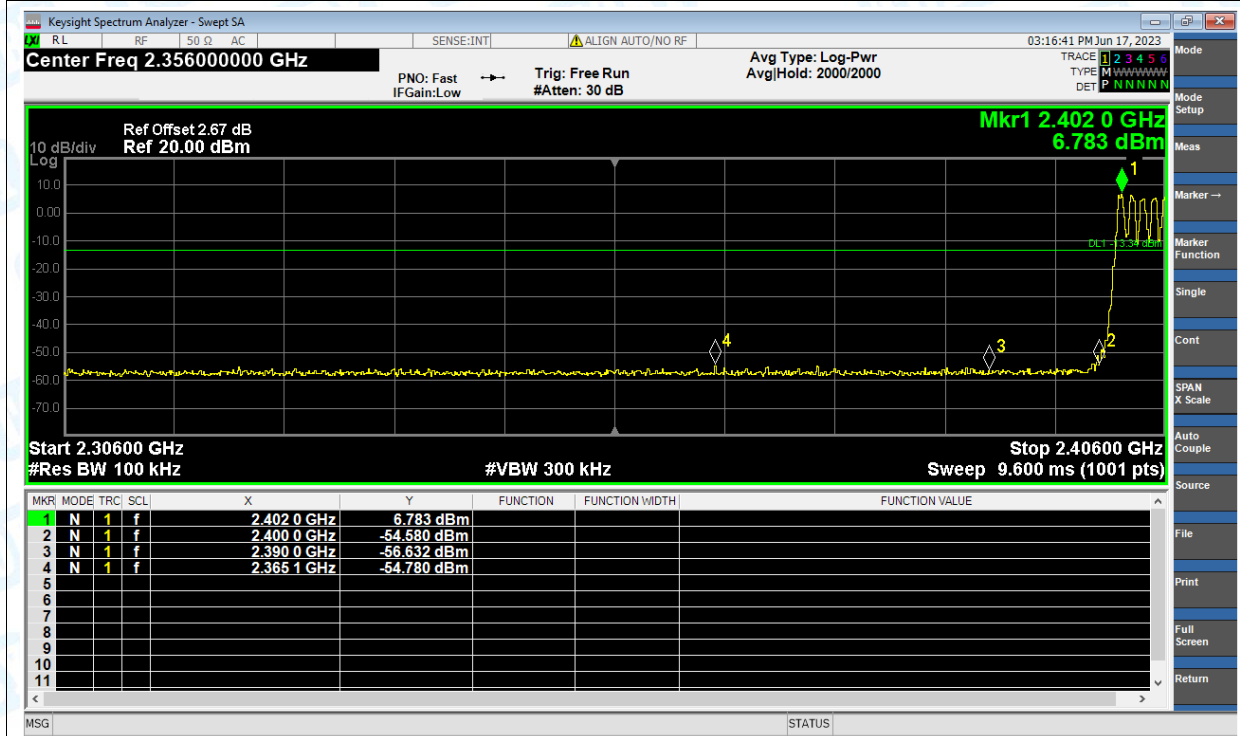
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-61.44	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-61.75	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-62.5	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-62.33	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-62.42	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-61.6	-20	Pass

Test Graphs

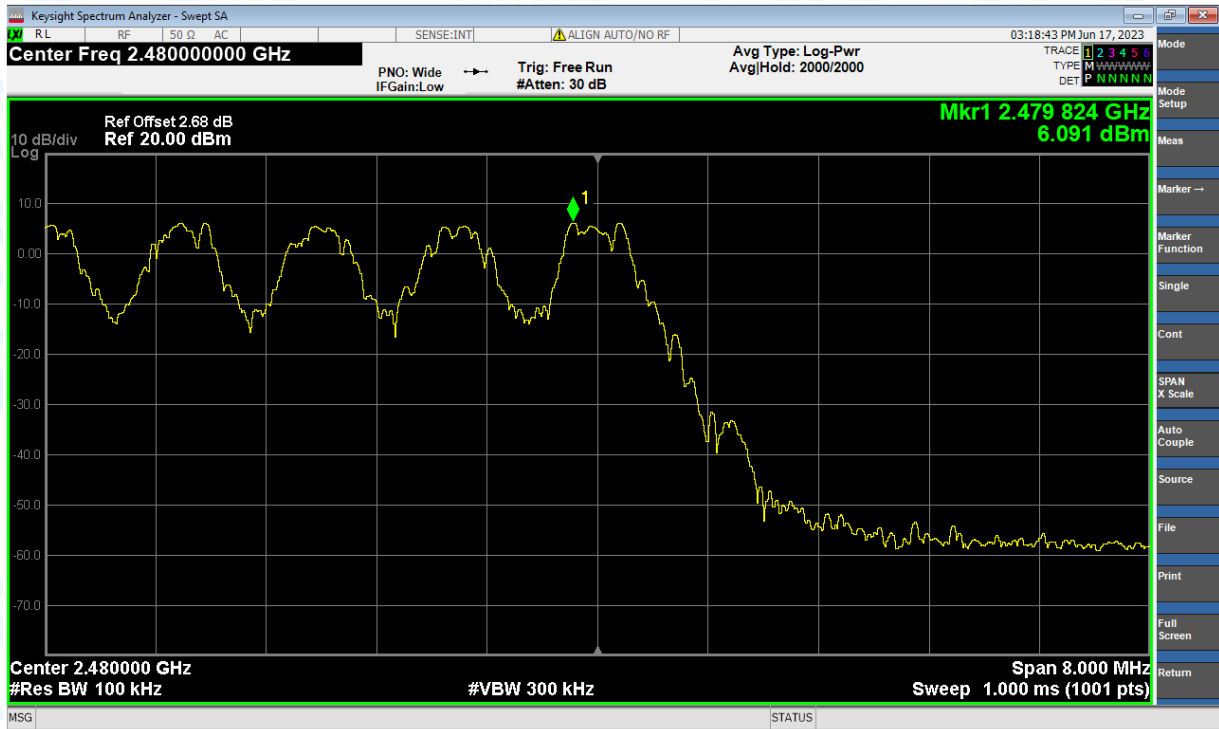
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



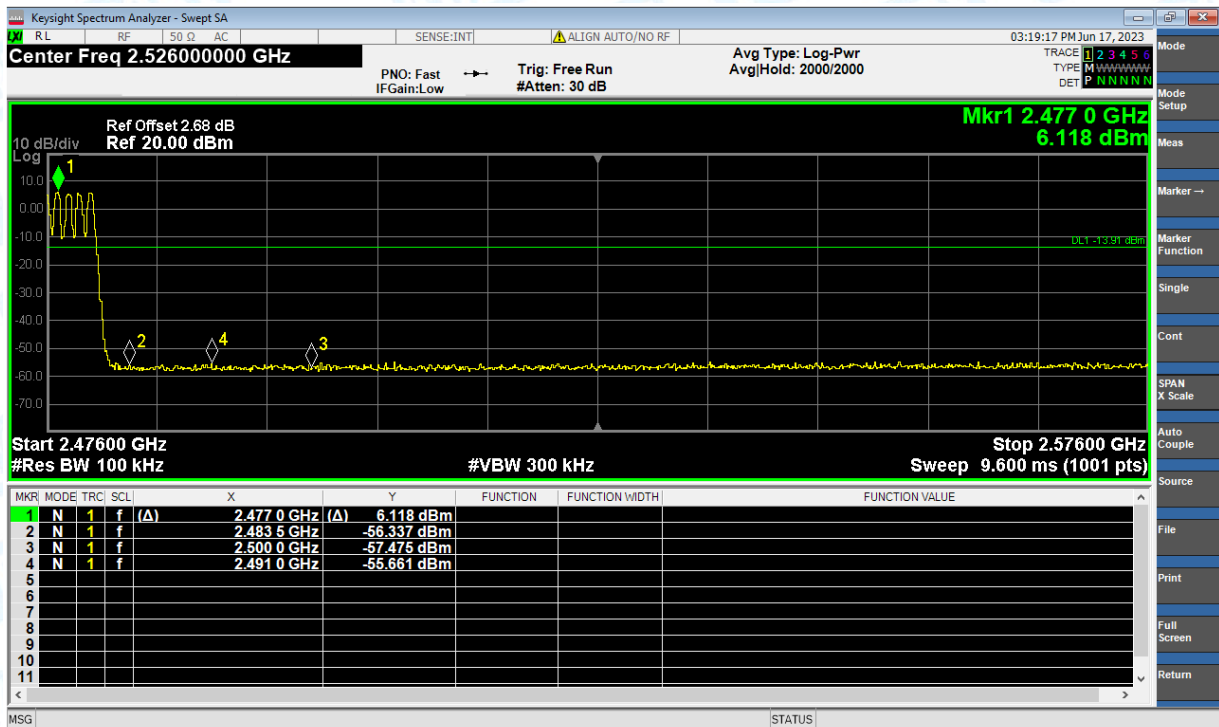
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



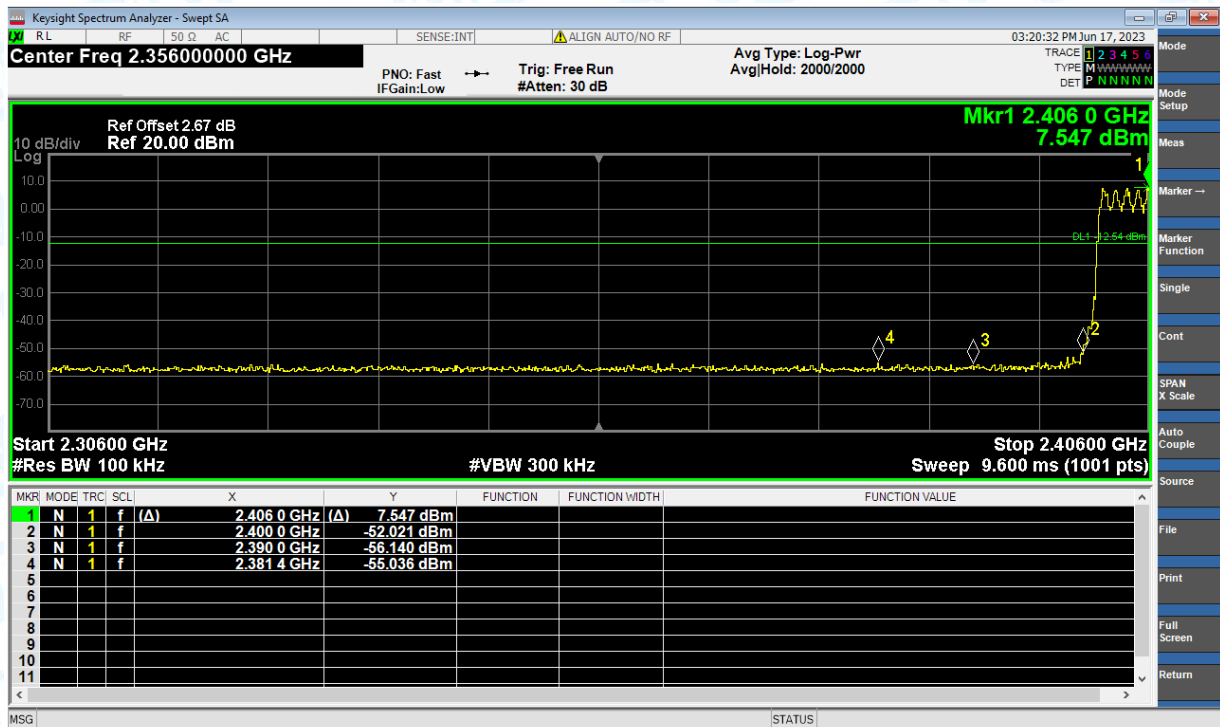
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



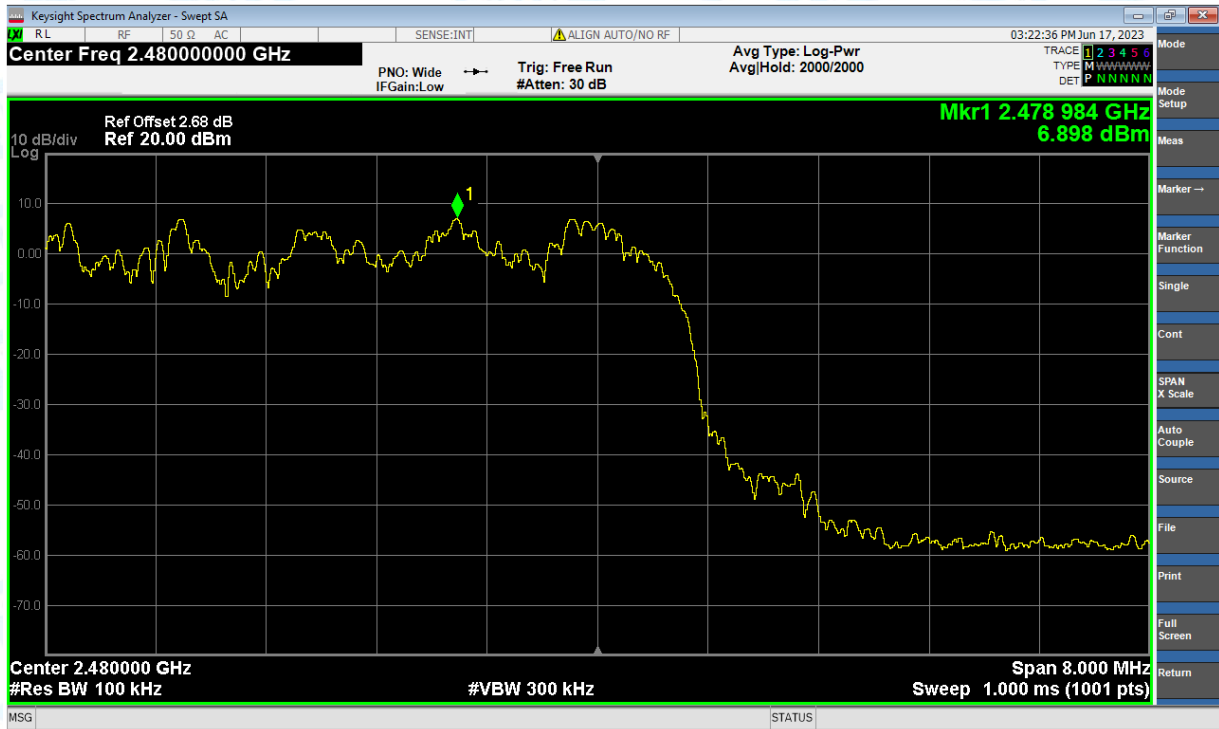
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



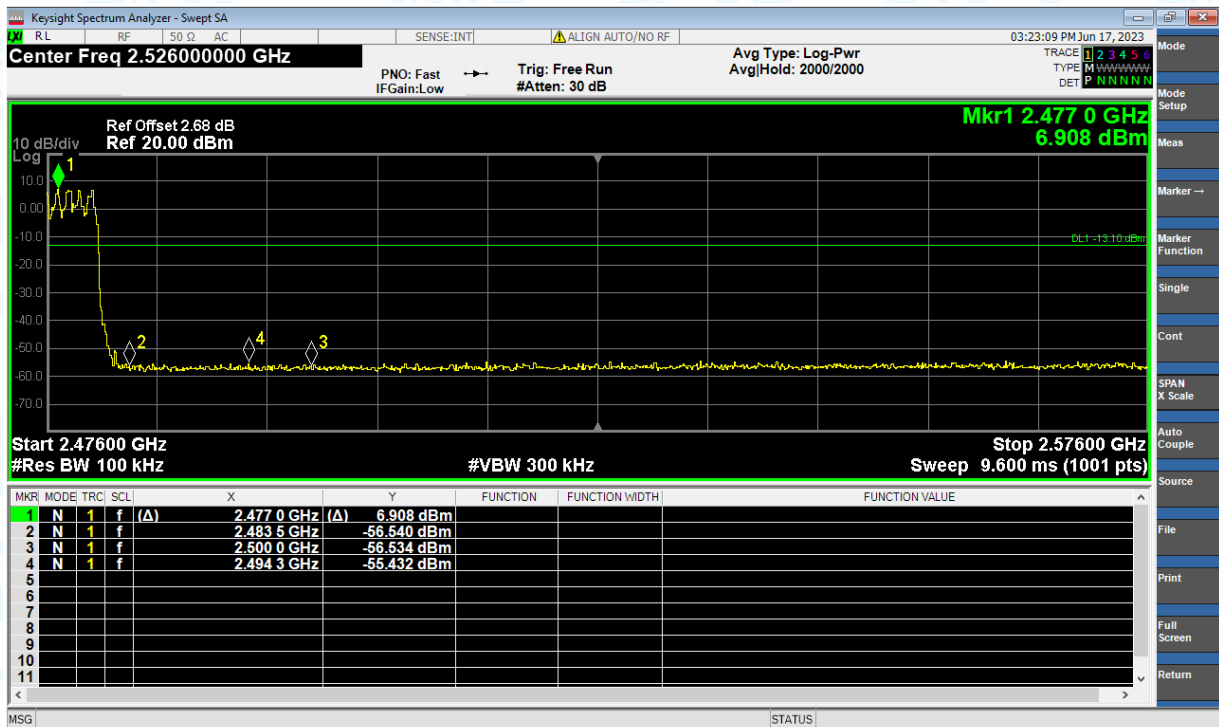
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



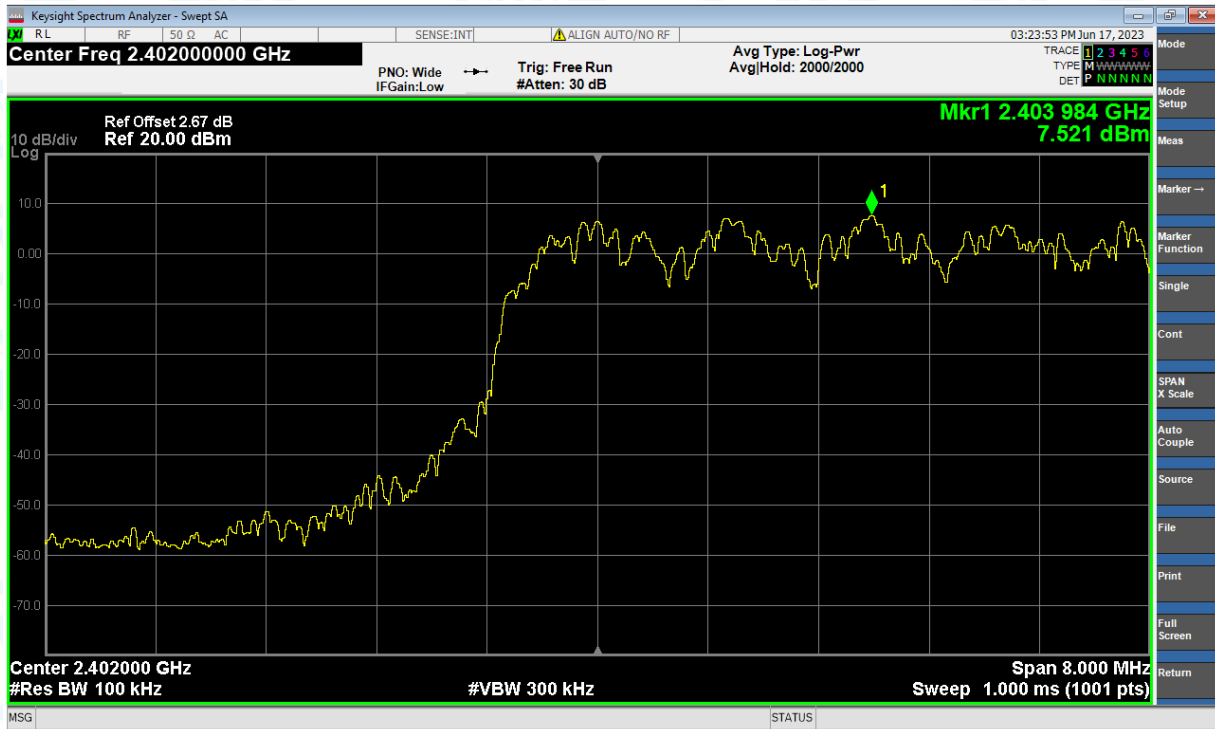
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



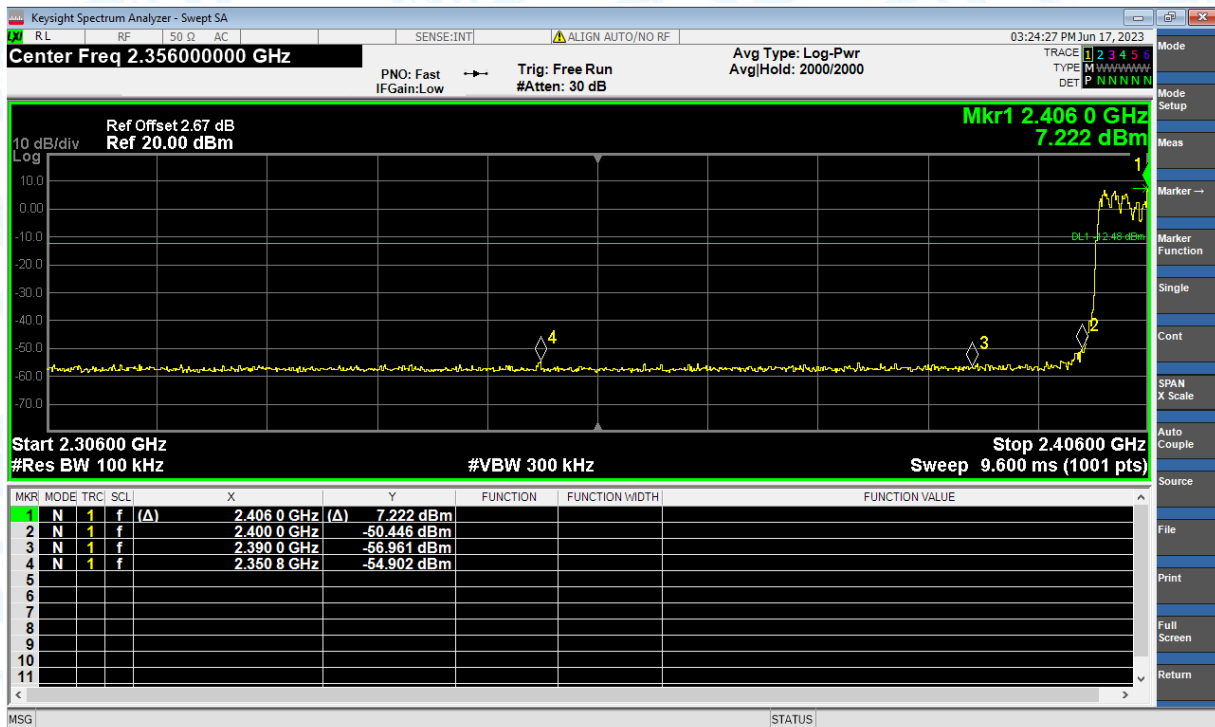
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



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



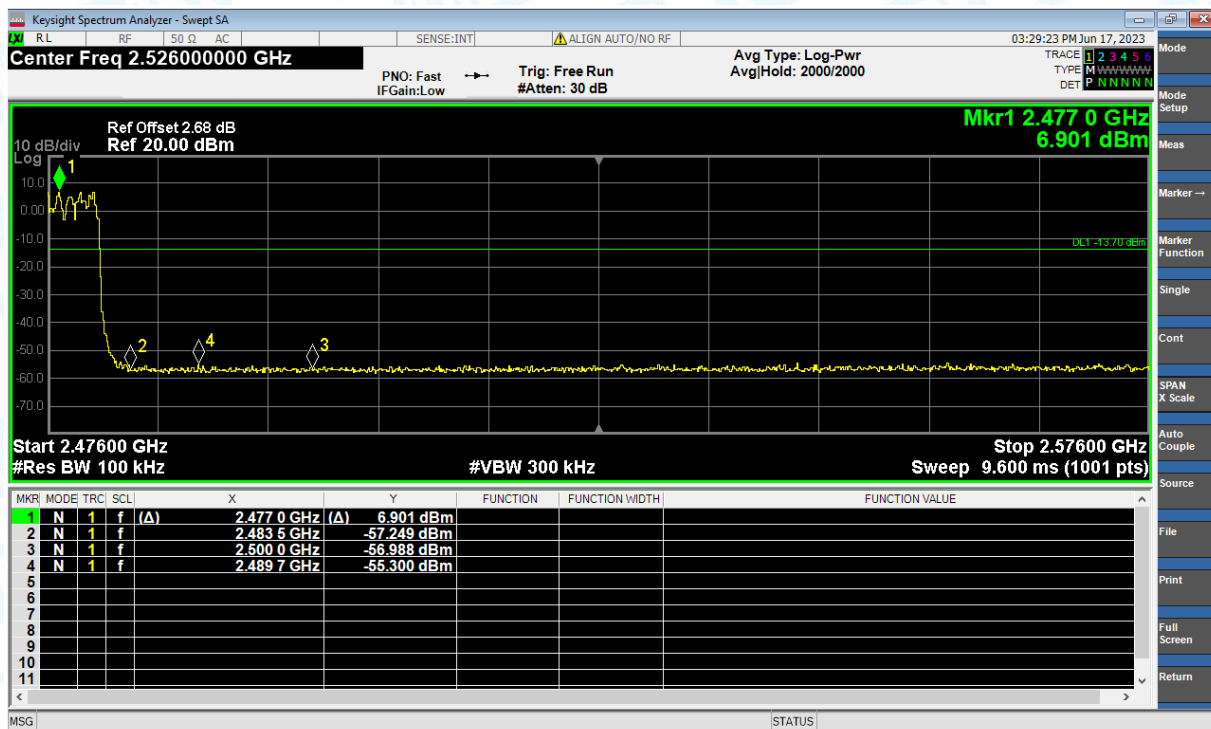
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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

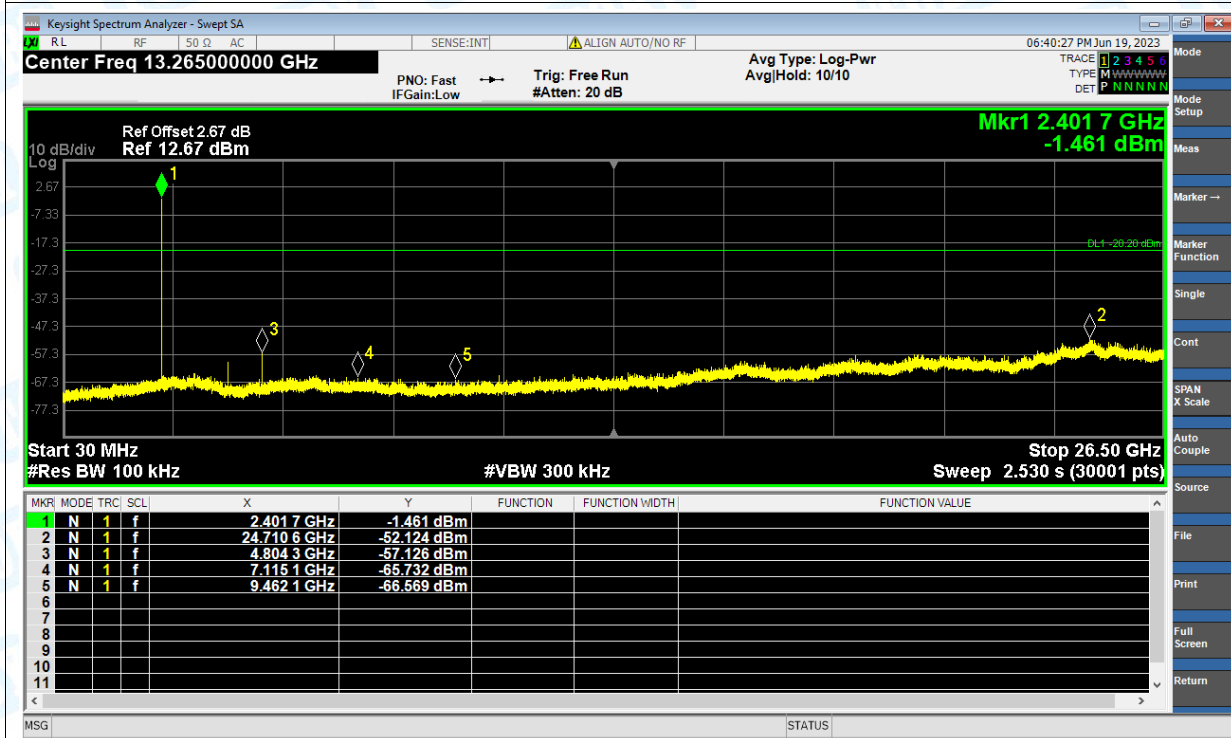
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-51.92	-20	Pass
NVNT	1-DH1	2441	Ant1	-51.51	-20	Pass
NVNT	1-DH1	2480	Ant1	-51.68	-20	Pass
NVNT	2-DH1	2402	Ant1	-52.05	-20	Pass
NVNT	2-DH1	2441	Ant1	-52.32	-20	Pass
NVNT	2-DH1	2480	Ant1	-51.31	-20	Pass
NVNT	3-DH1	2402	Ant1	-52.22	-20	Pass
NVNT	3-DH1	2441	Ant1	-52.77	-20	Pass
NVNT	3-DH1	2480	Ant1	-52.58	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



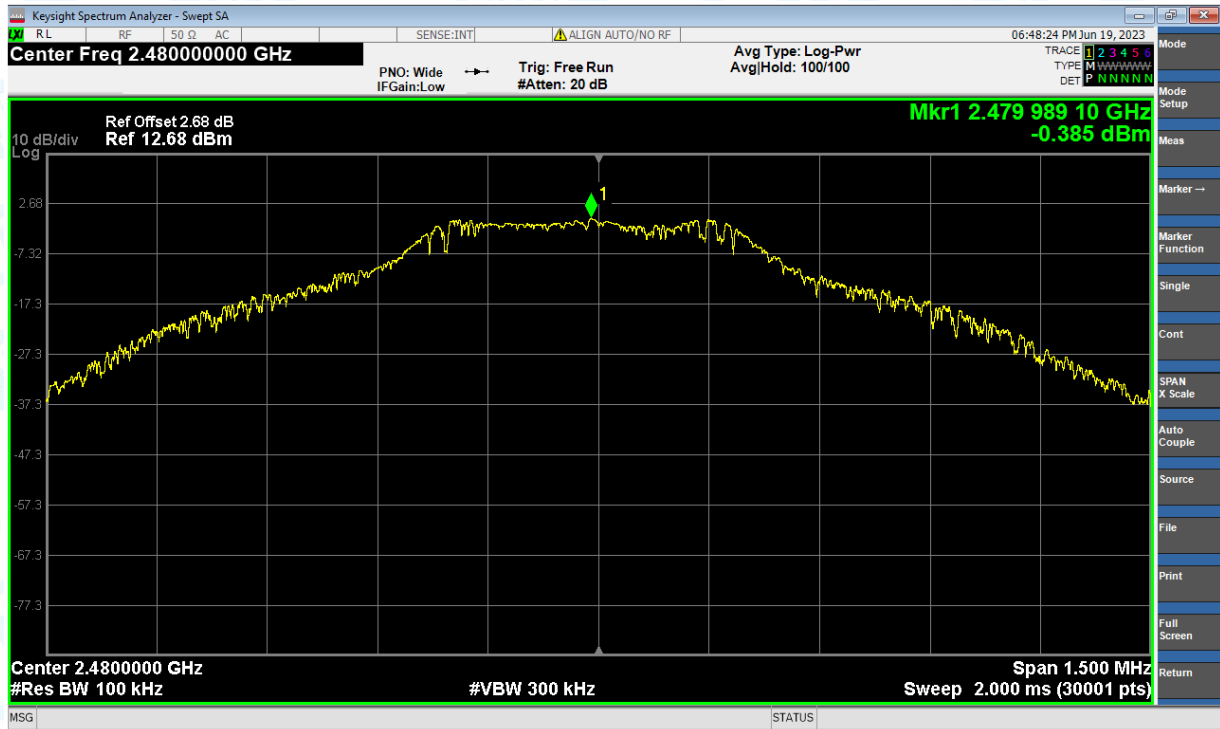
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



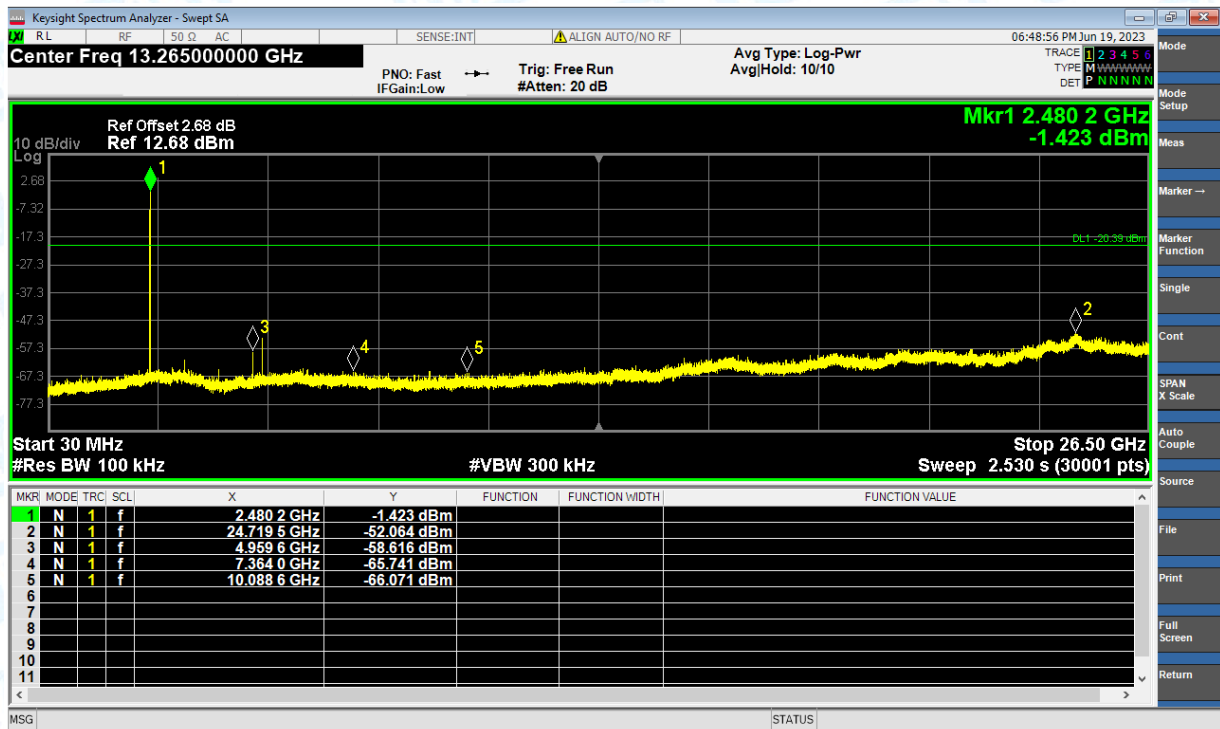
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



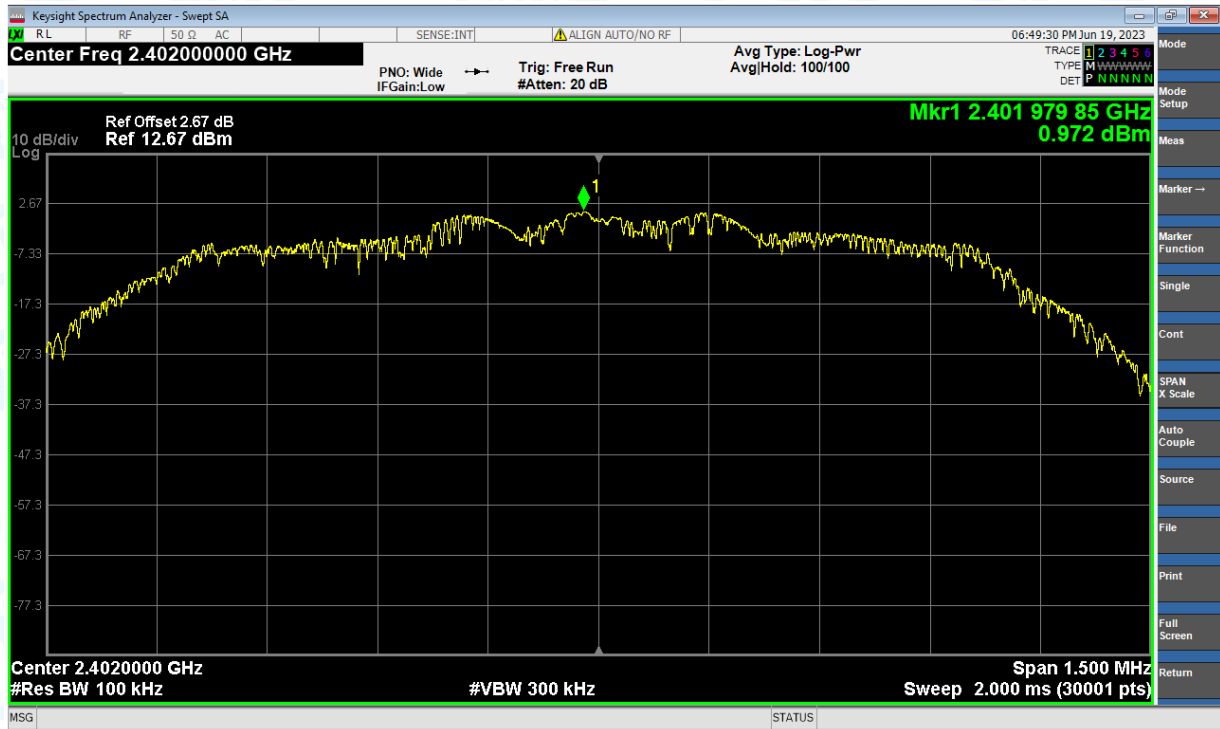
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



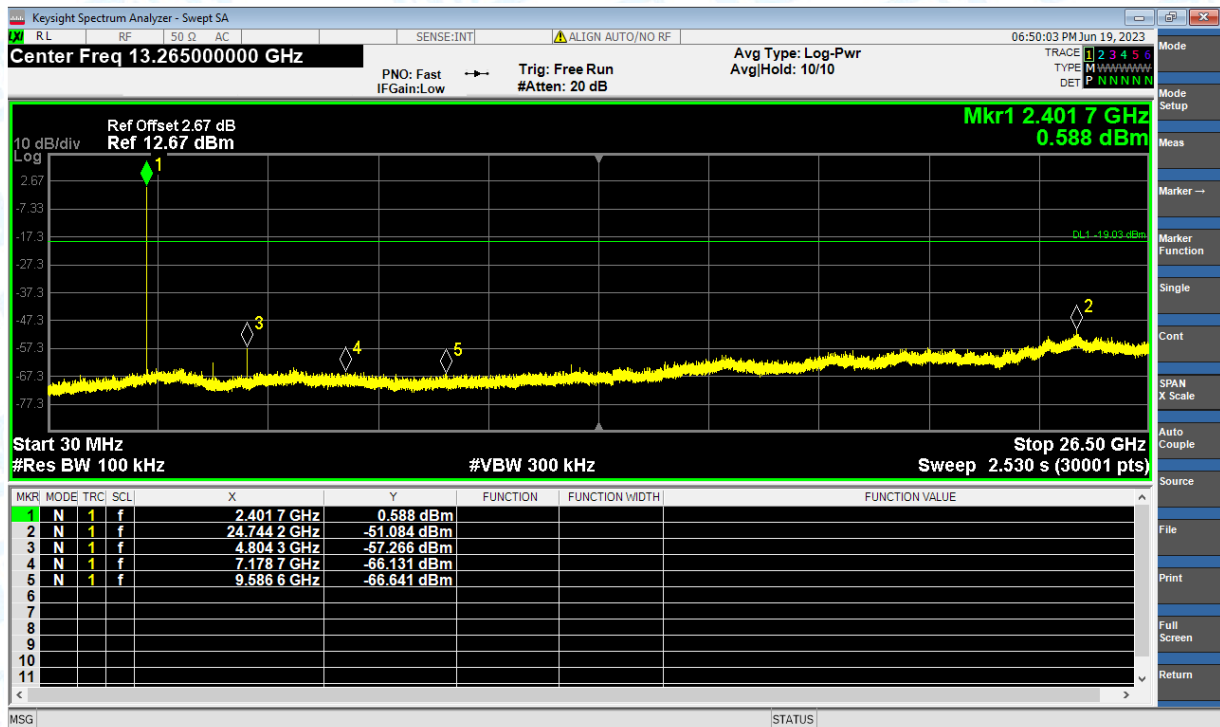
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



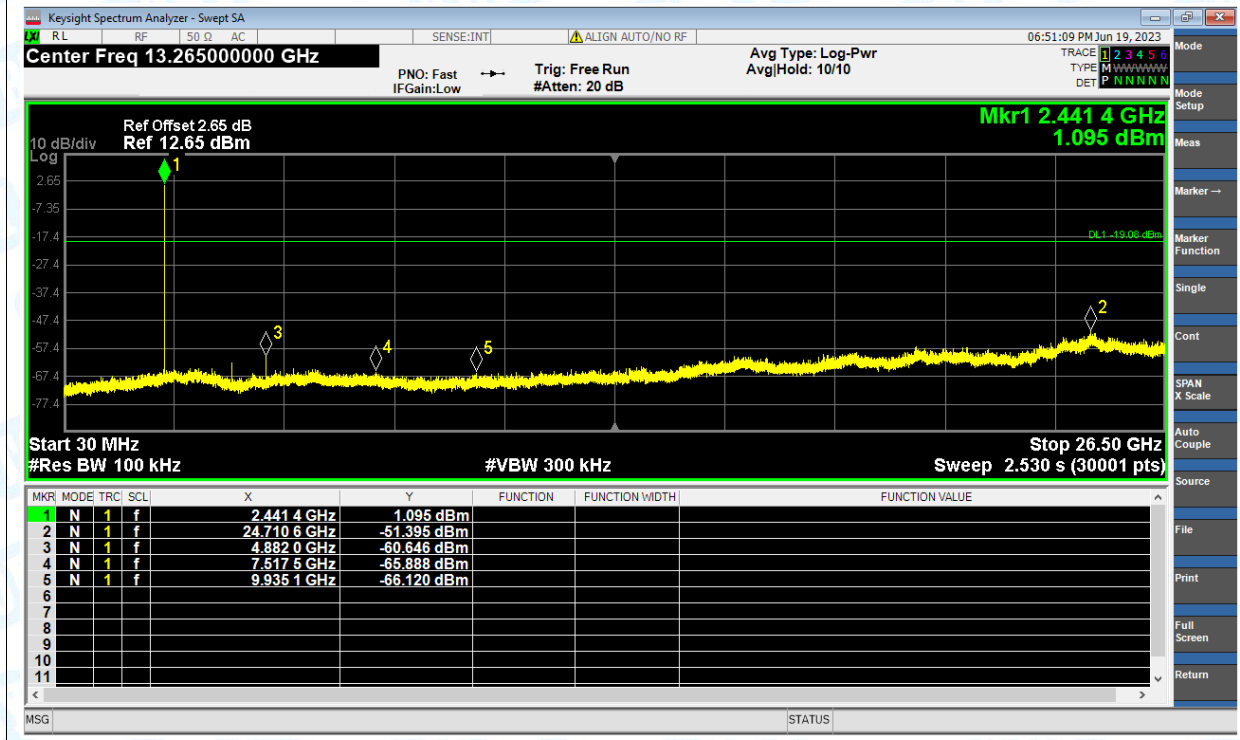
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



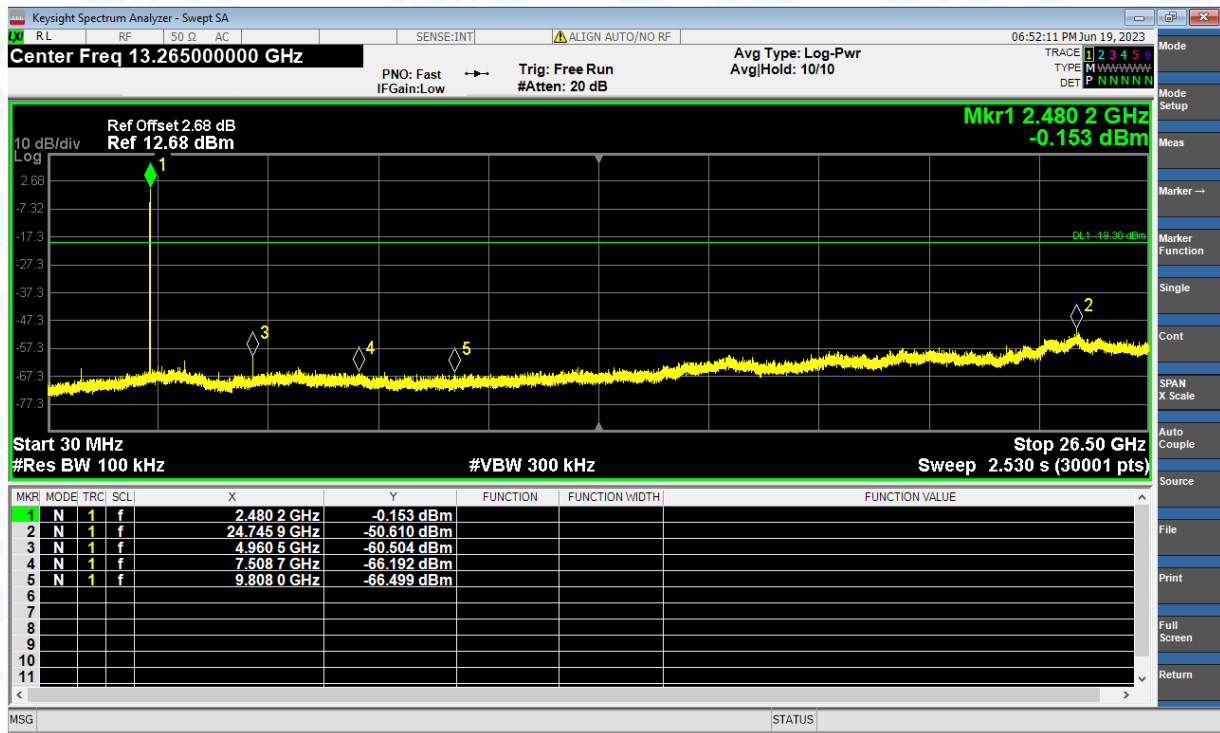
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



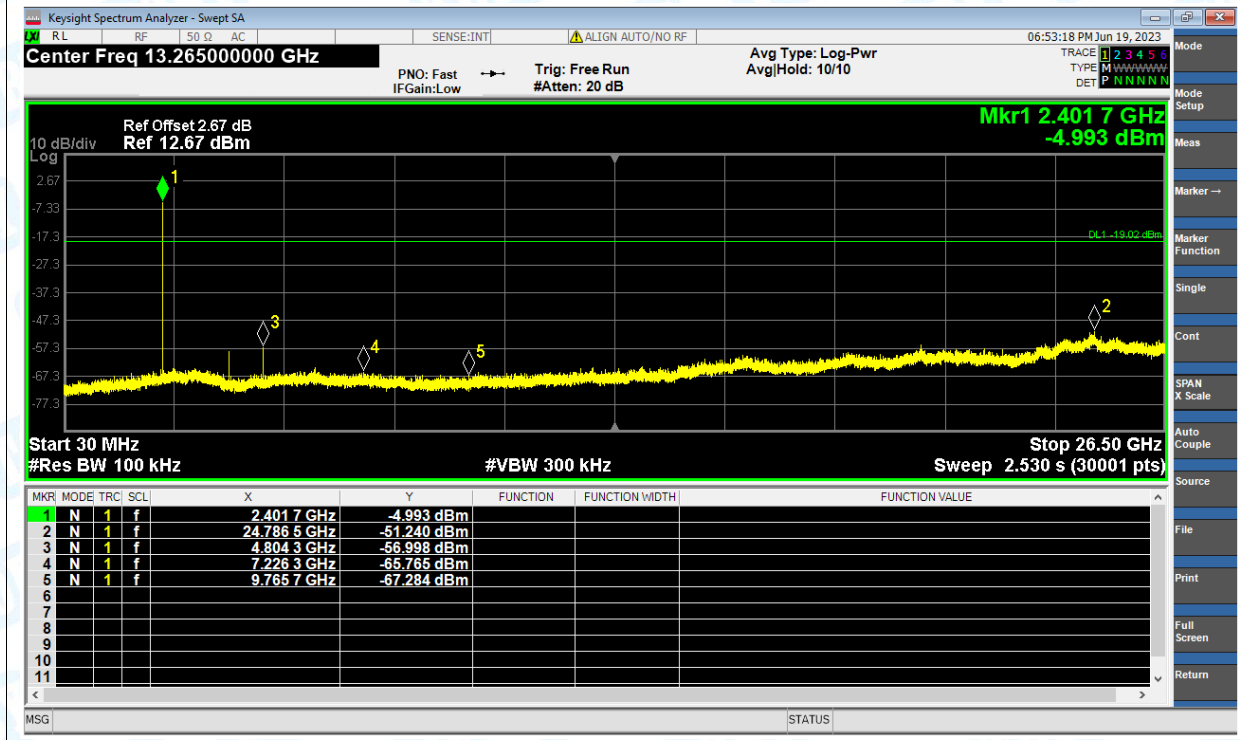
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



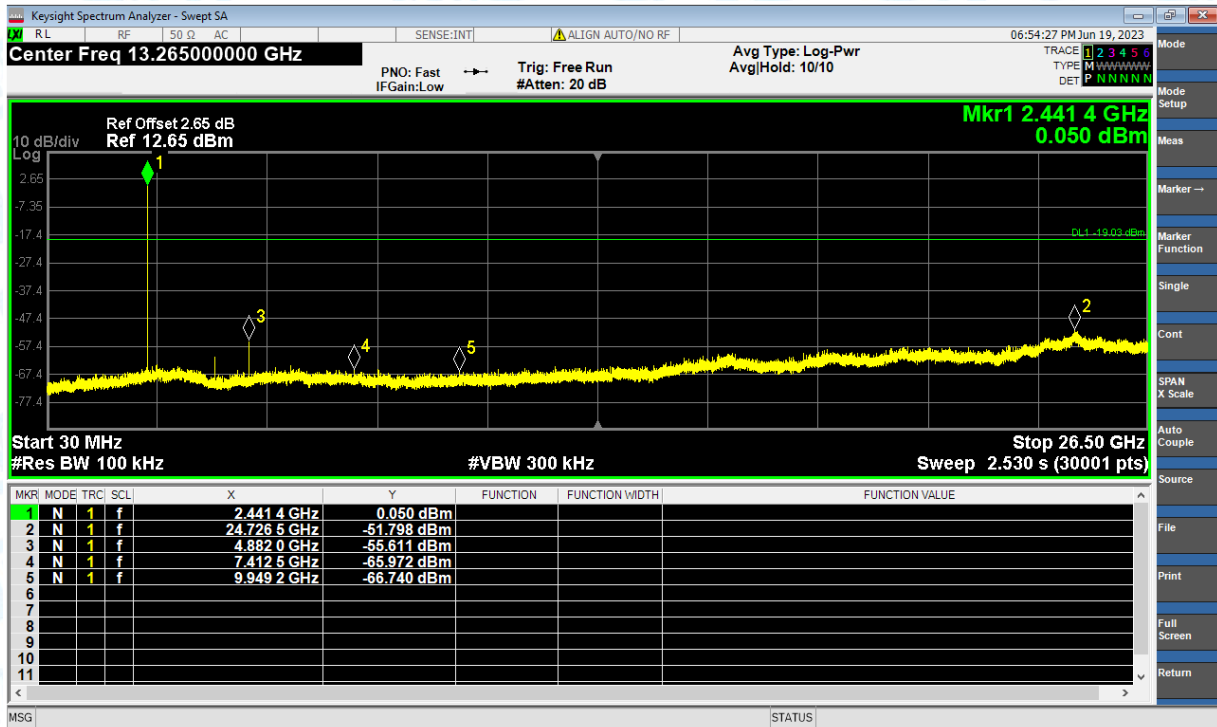
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



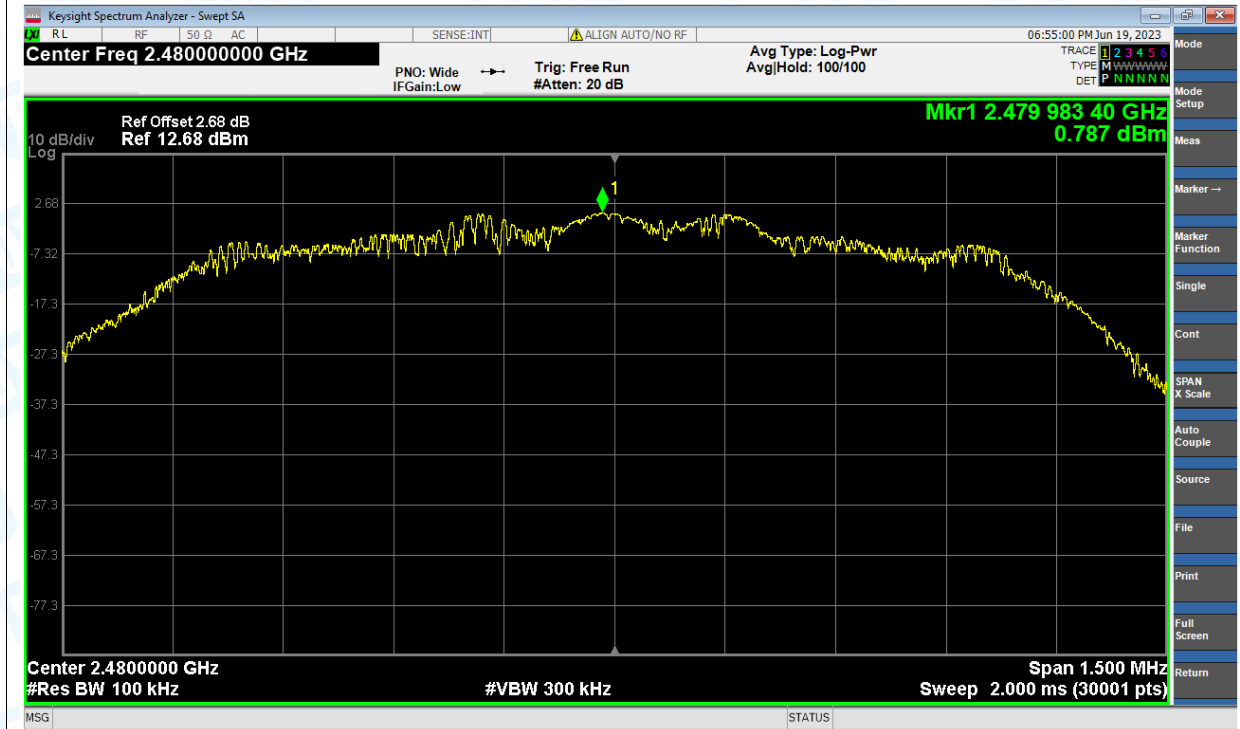
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



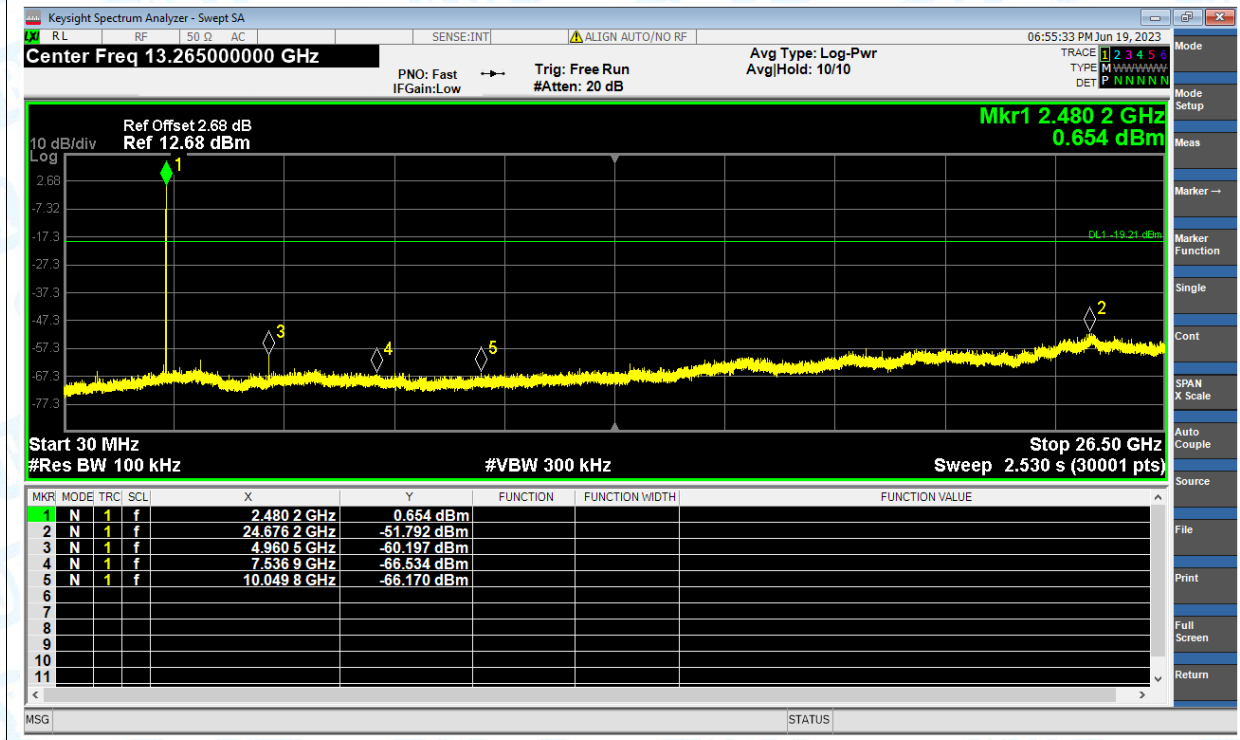
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

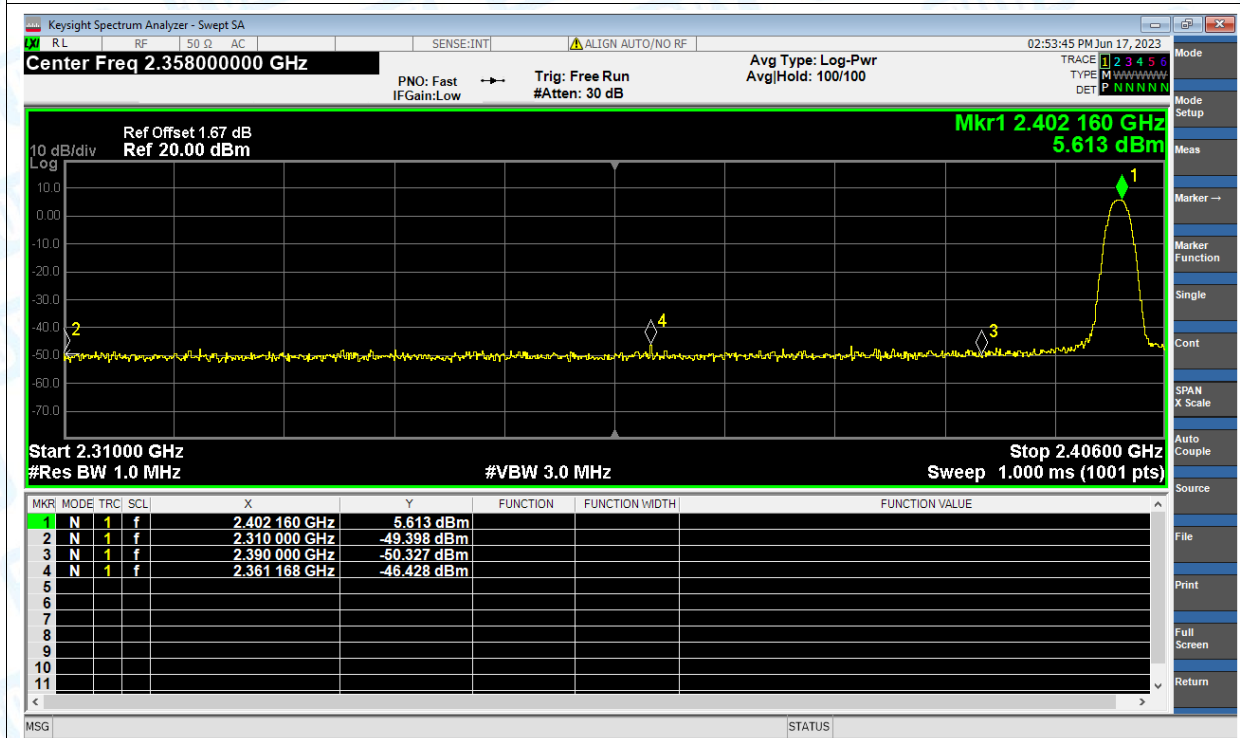


8. Restrict Band

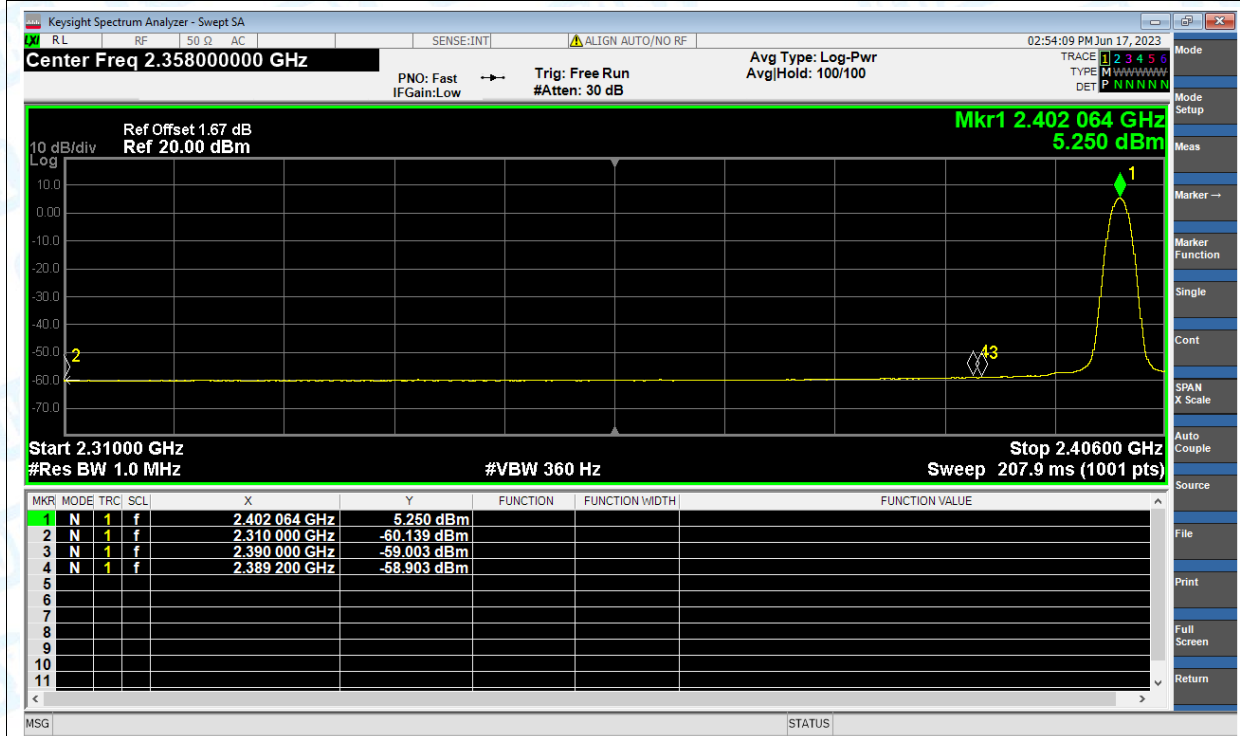
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-49.4	2	47.86	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-60.14	2	37.12	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2361.168	-46.43	2	50.83	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2389.2	-58.9	2	38.36	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-50.7	2	46.56	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-58.96	2	38.3	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-47.21	2	50.05	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-57.15	2	40.11	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.536	-45.23	2	52.03	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-57.15	2	40.11	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-48.69	2	48.57	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-59.39	2	37.87	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-50.02	2	47.24	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-59.67	2	37.59	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2389.584	-47.31	2	49.95	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2389.104	-58.15	2	39.11	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-50.87	2	46.39	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-58.41	2	38.85	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-46.58	2	50.68	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-56.62	2	40.64	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2484.184	-44.6	2	52.66	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.704	-56.37	2	40.89	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-50.17	2	47.09	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-58.97	2	38.29	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-51.45	2	45.81	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-59.67	2	37.59	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2332.08	-47.2	2	50.06	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2385.84	-57.86	2	39.4	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-49.23	2	48.03	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-58.21	2	39.05	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-47.41	2	49.85	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-56.52	2	40.74	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.584	-46.44	2	50.82	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.512	-56.52	2	40.74	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-49.93	2	47.33	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-59.02	2	38.24	Average	54	Pass

Test Graphs

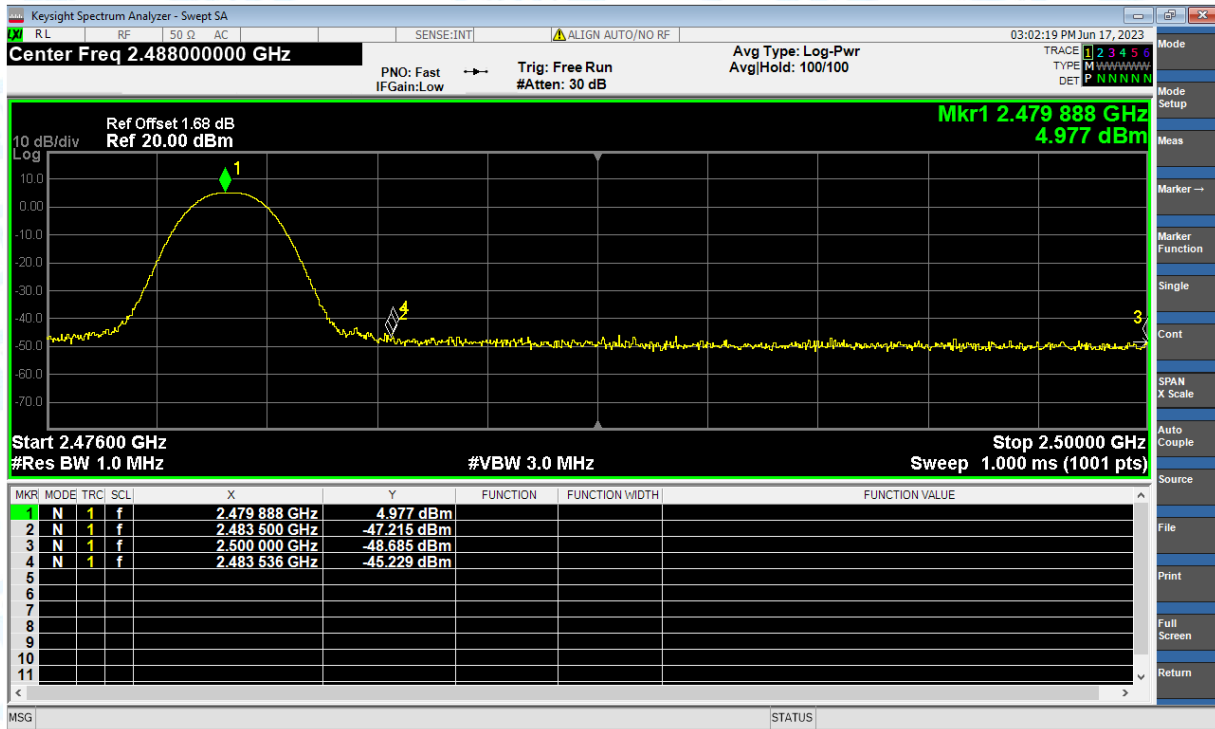
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



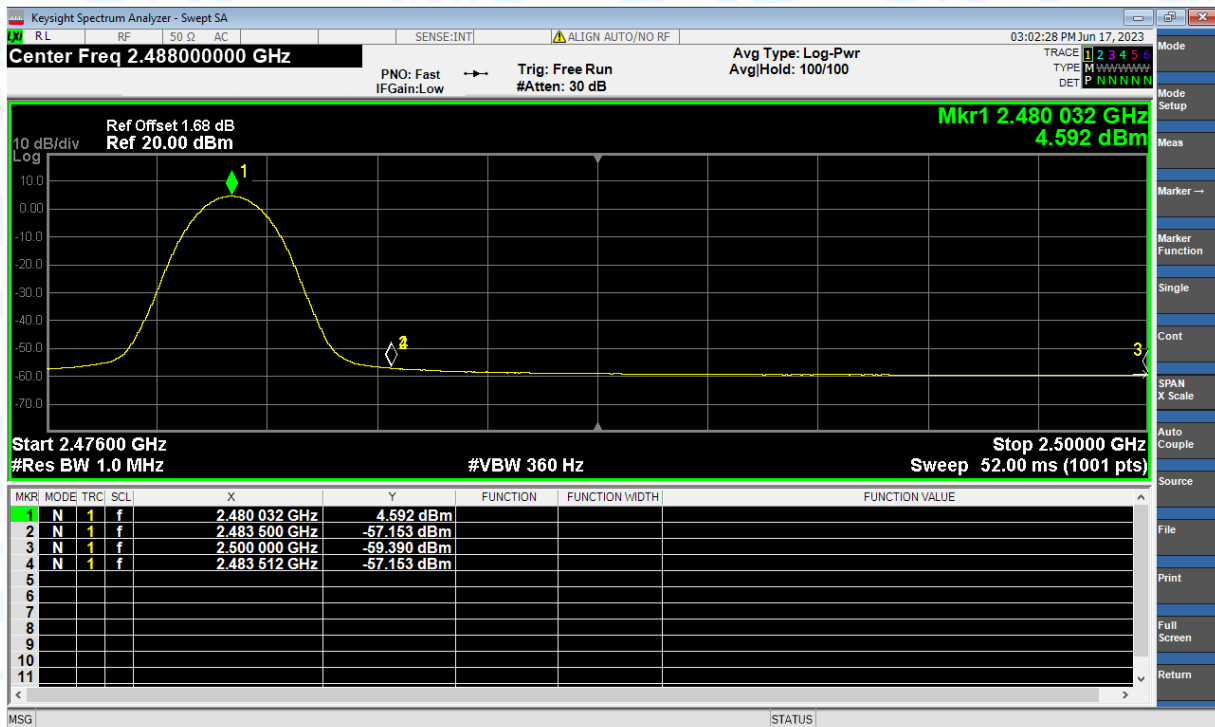
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



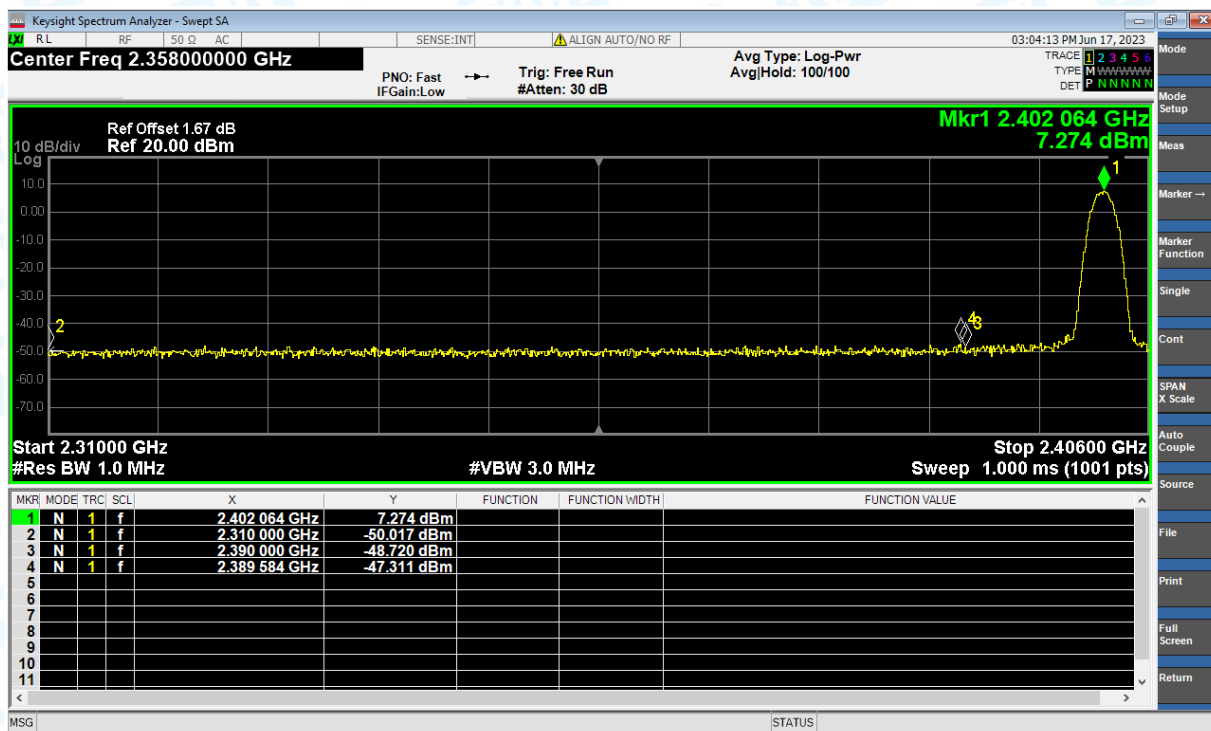
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



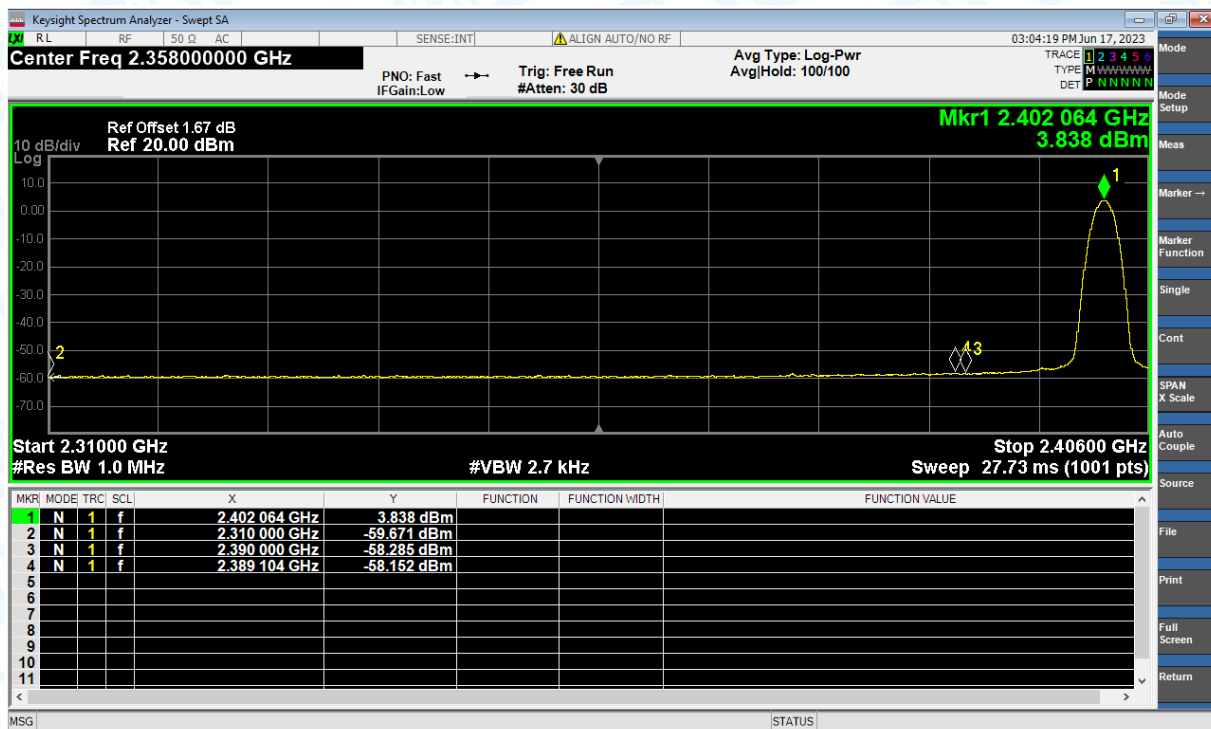
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



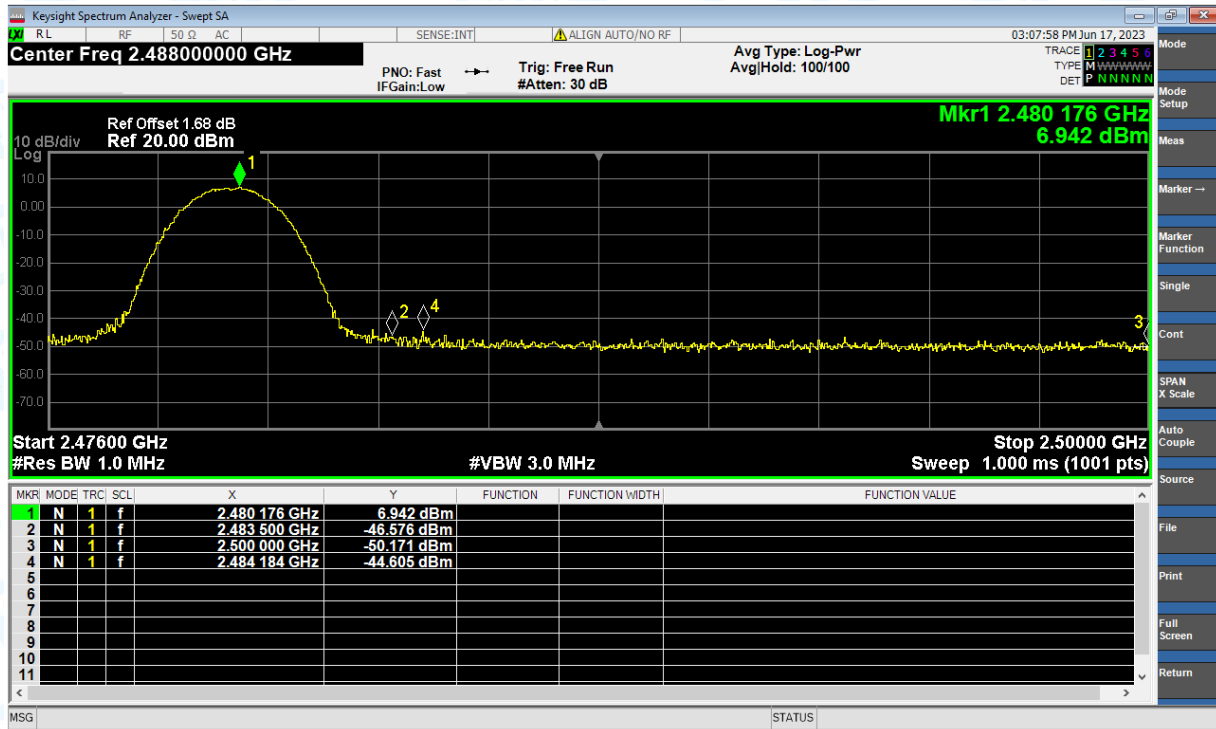
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



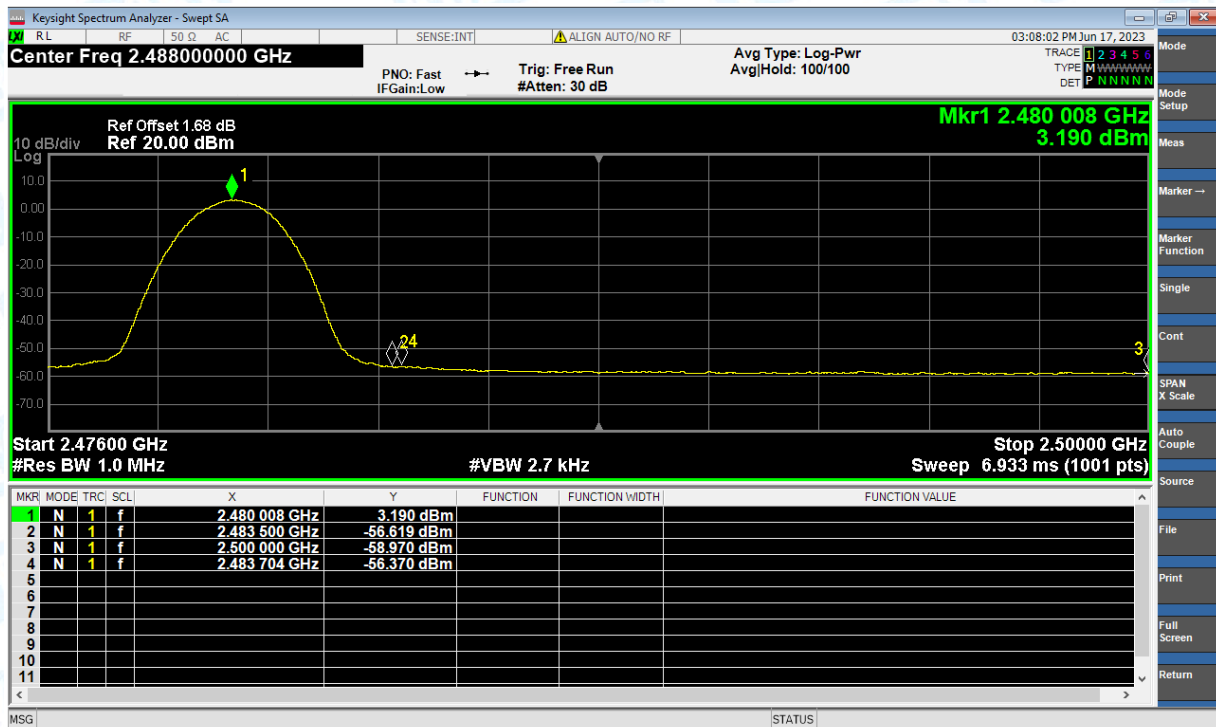
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



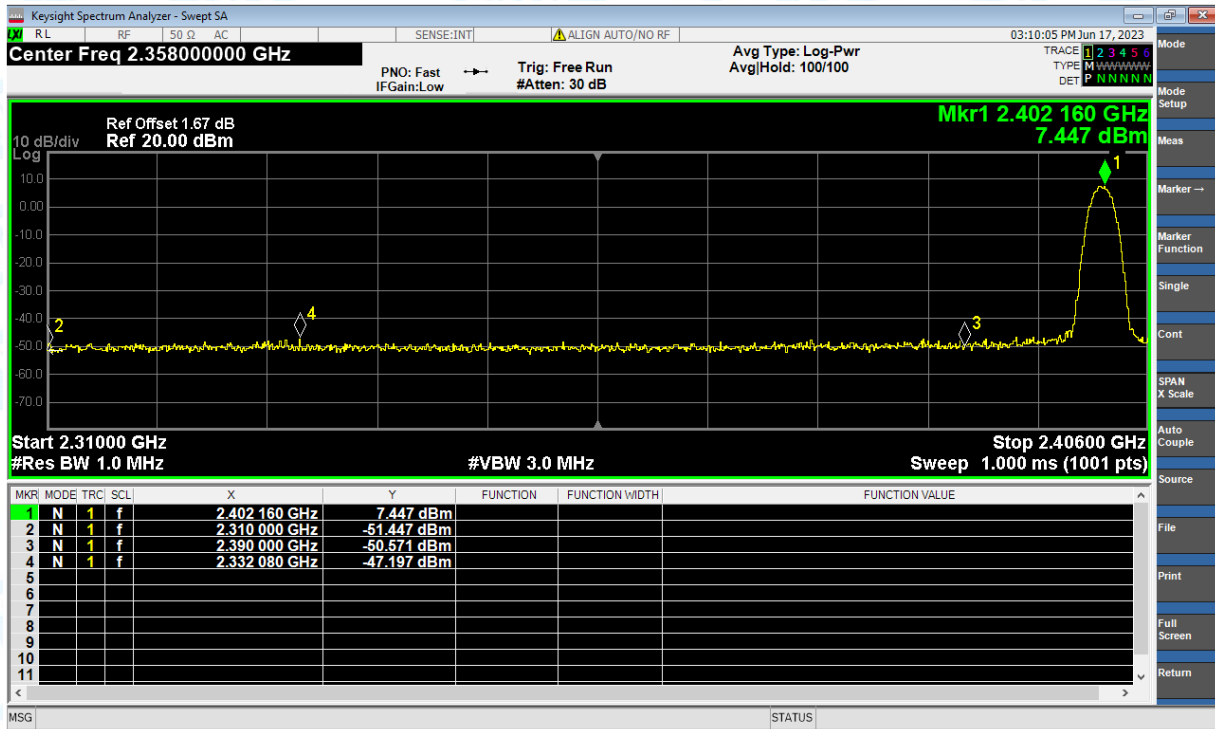
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



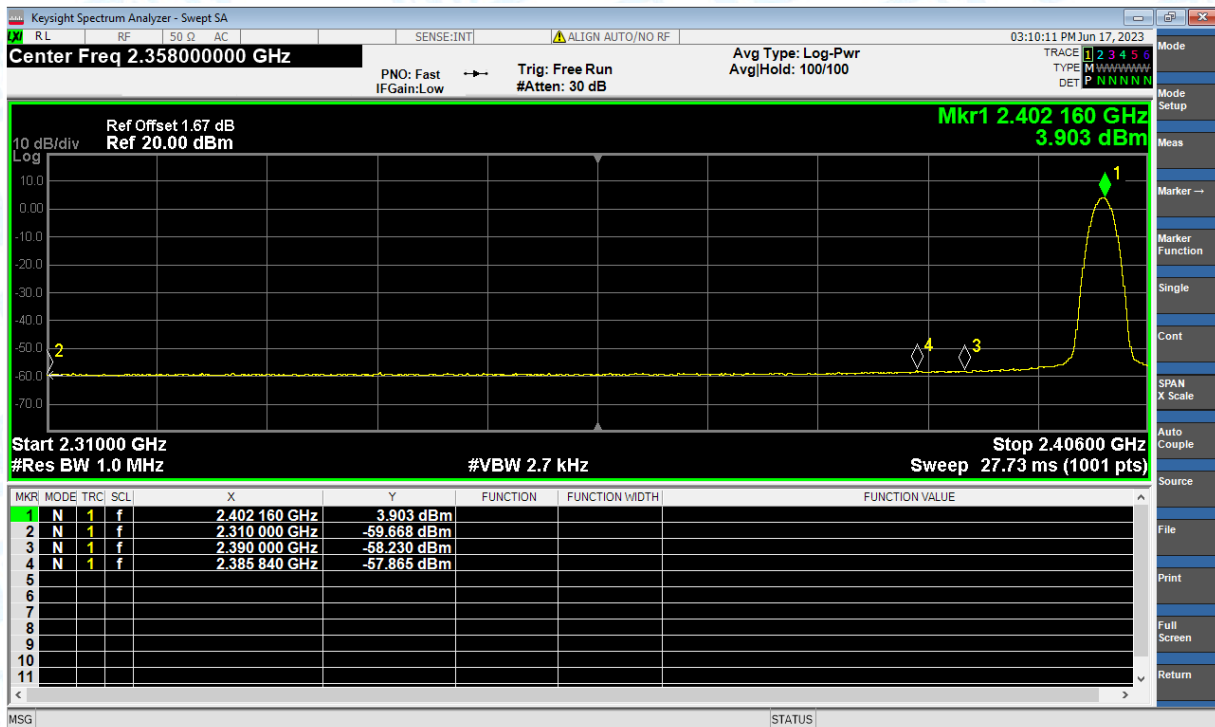
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



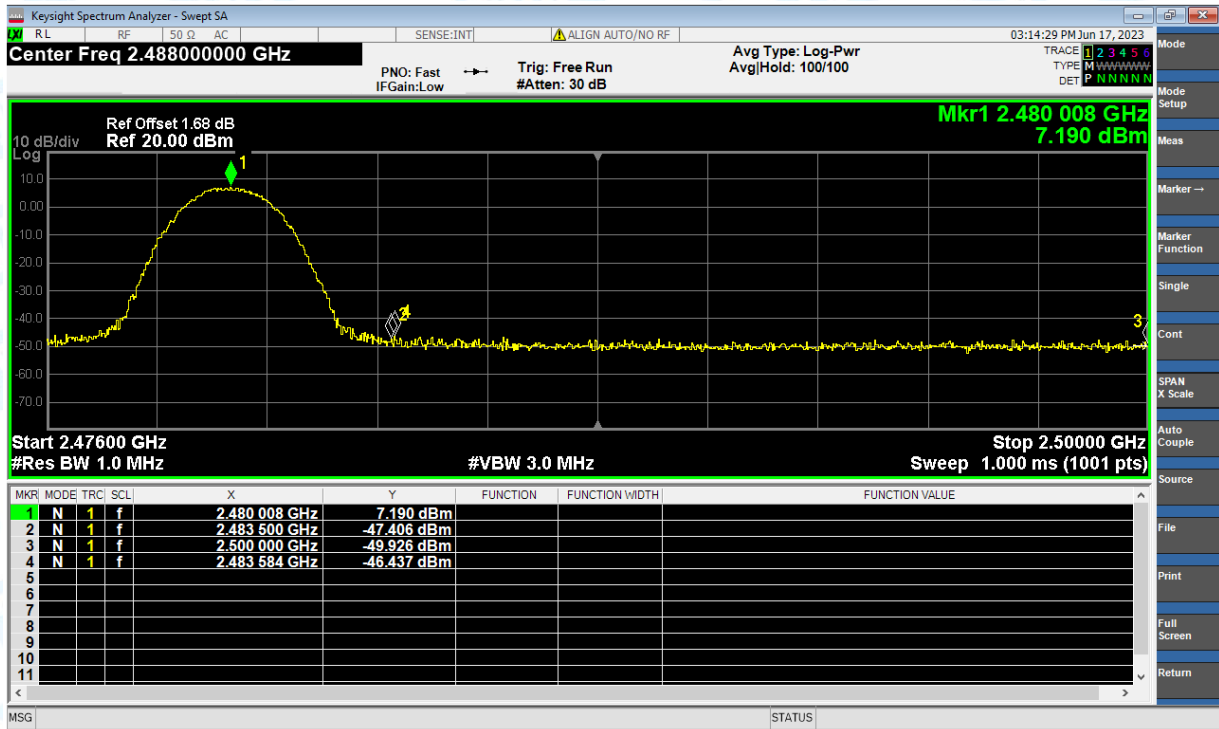
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



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

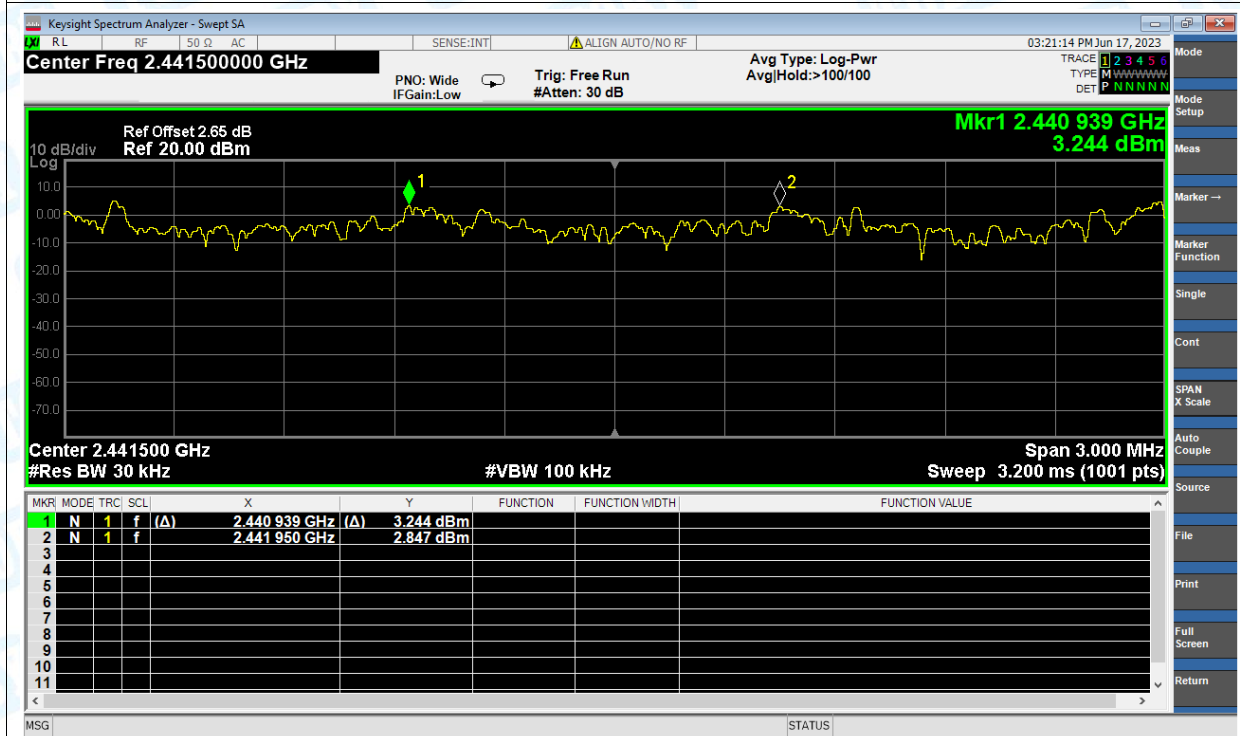
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.987	2441.827	0.84	0.633	Pass
NVNT	2-DH1	Ant1	2440.939	2441.95	1.011	0.86	Pass
NVNT	3-DH1	Ant1	2440.978	2441.974	0.996	0.807	Pass

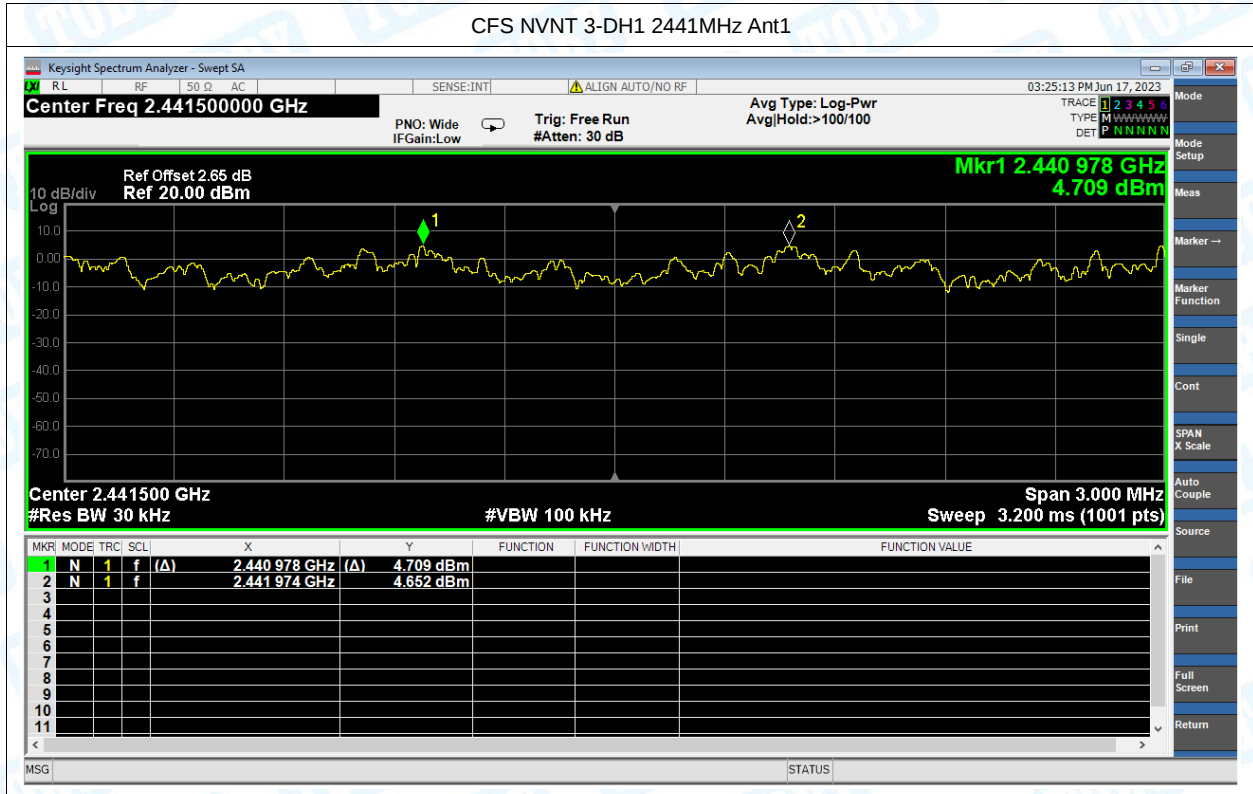
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



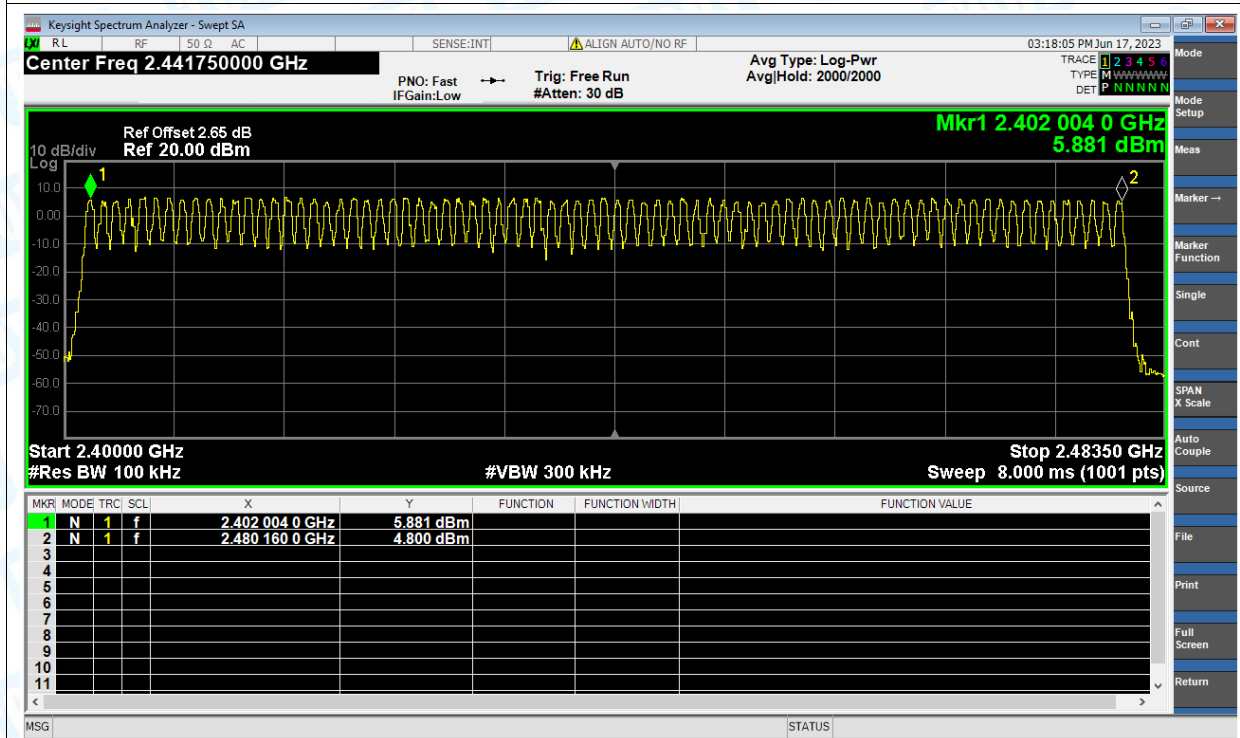


10. Number of Hopping Channel

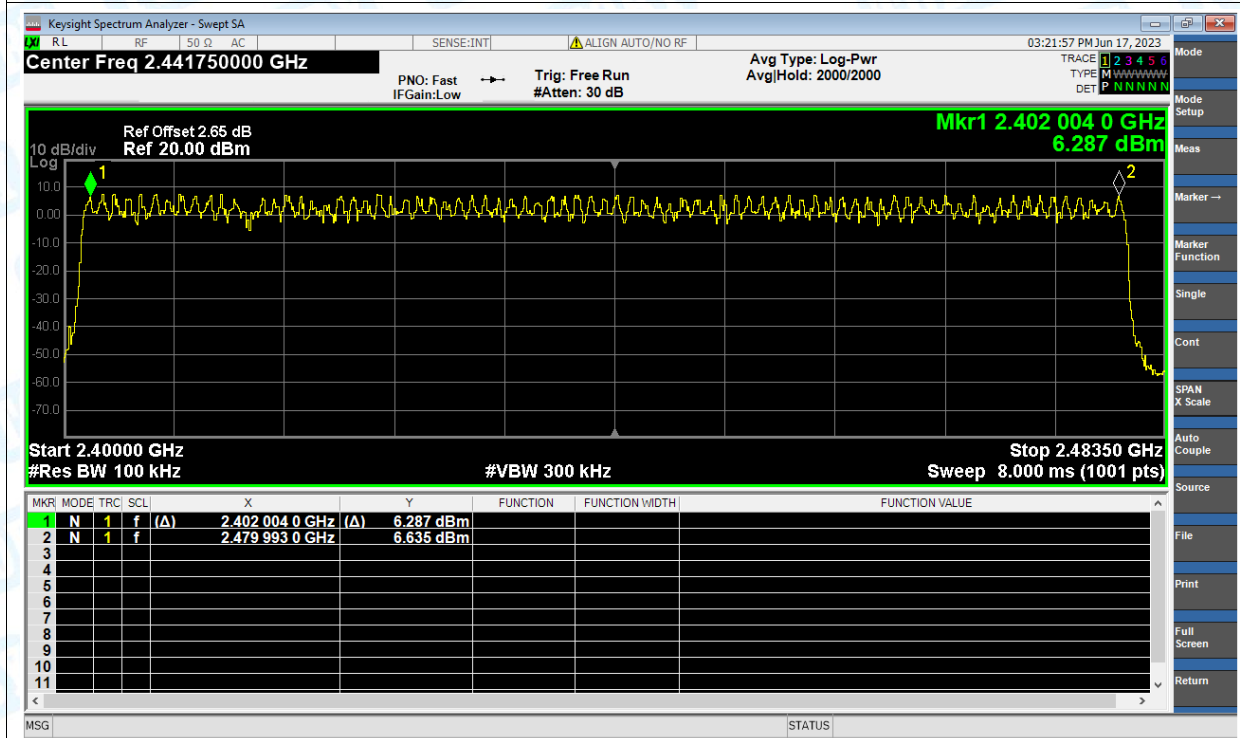
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

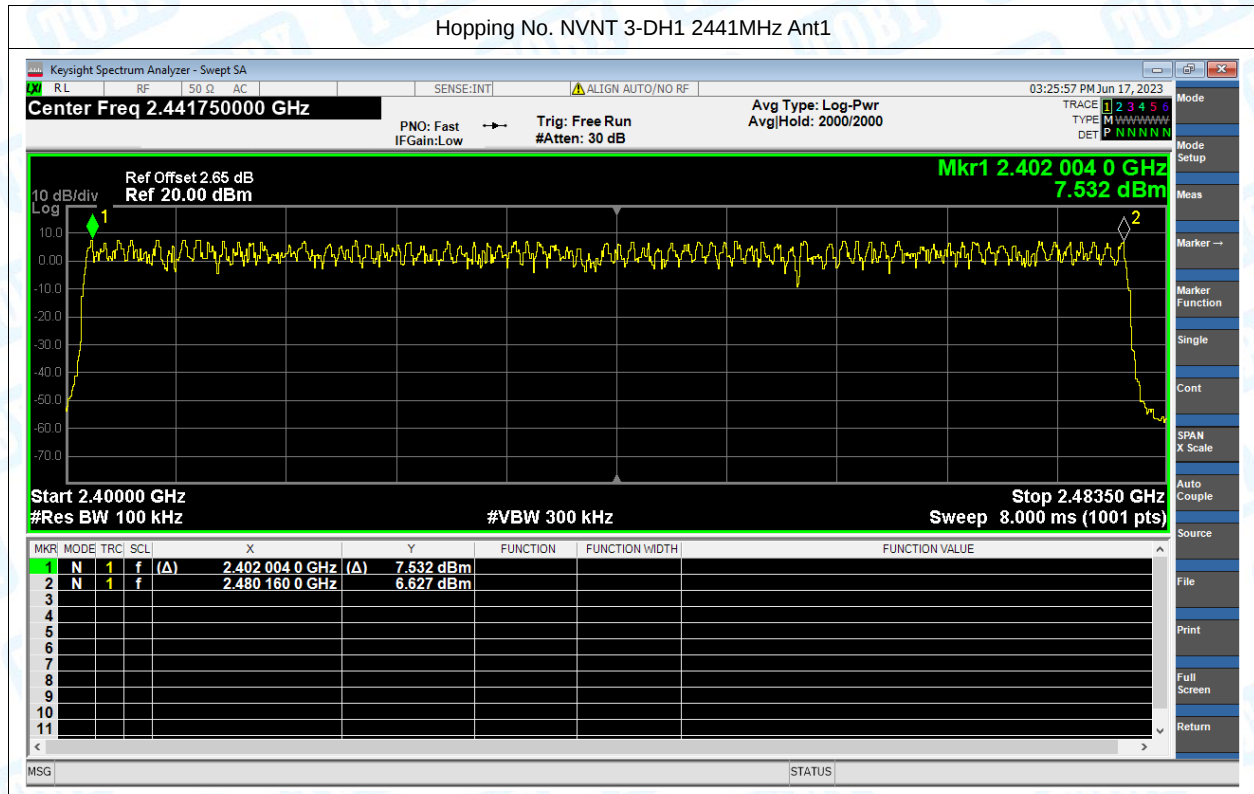
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



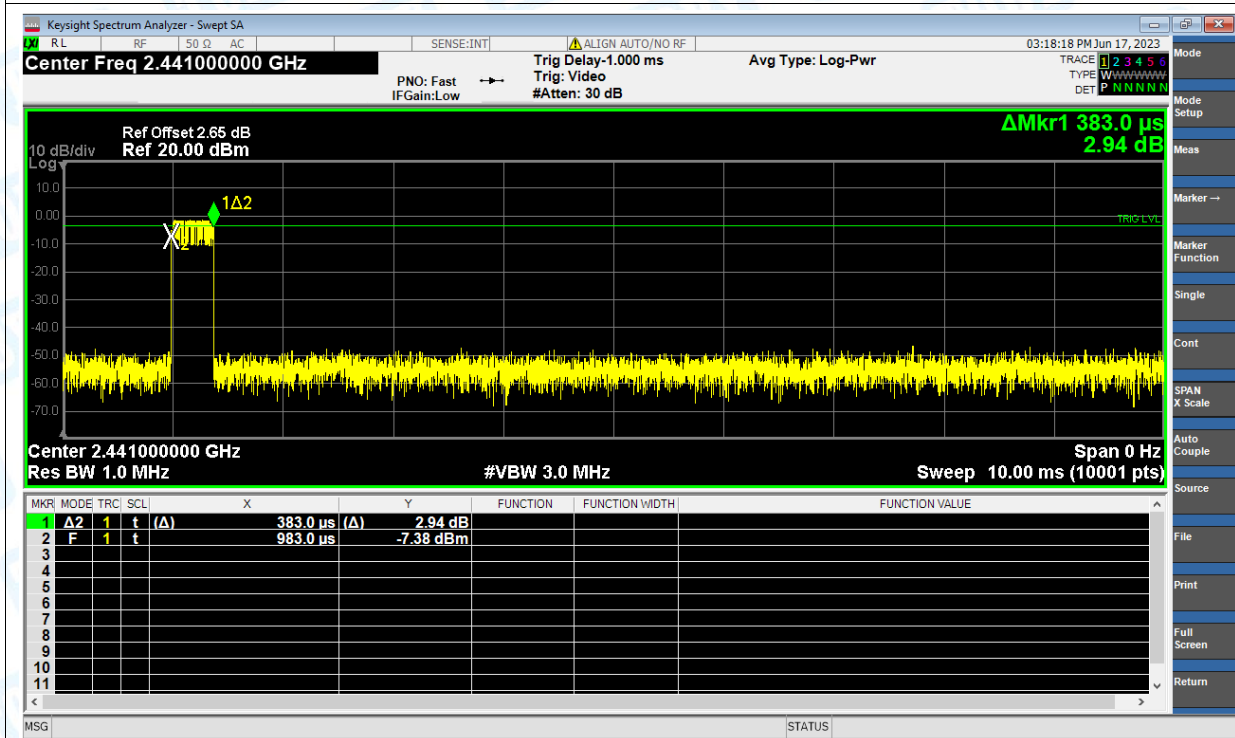


11. Dwell Time

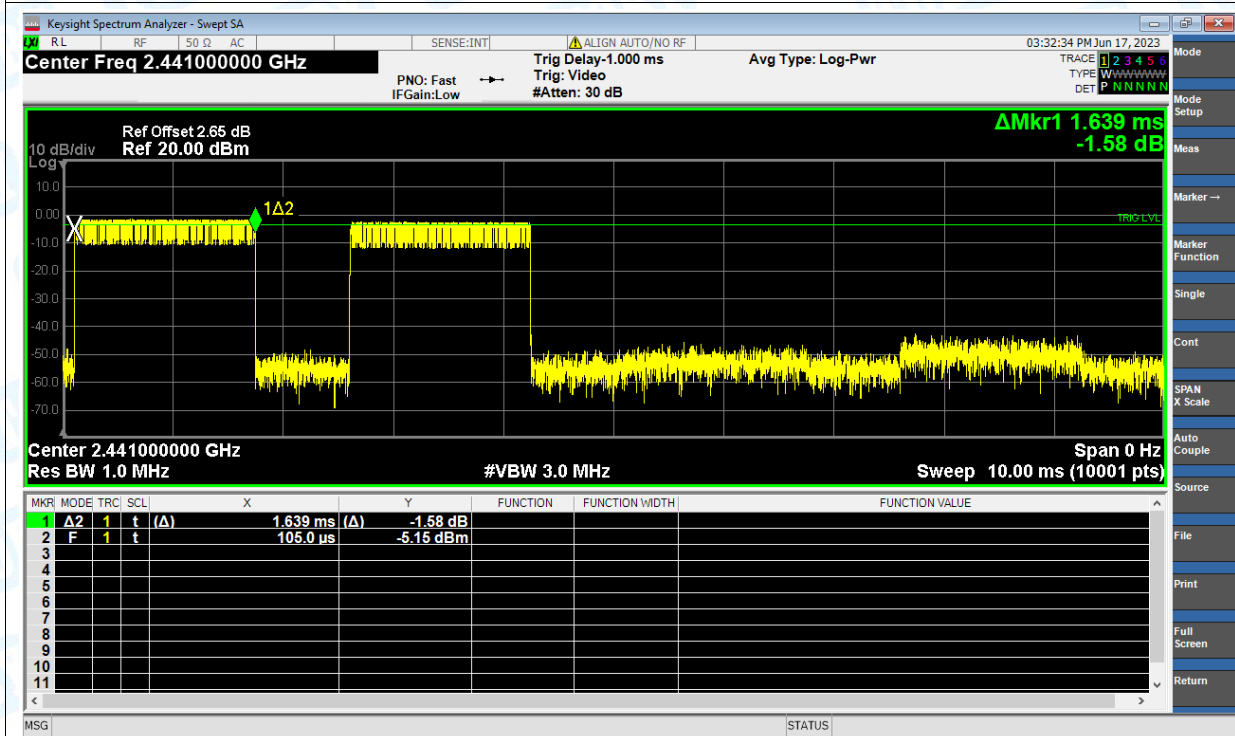
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	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
NVNT	3-DH1	2441	Ant1	0.391	125.12	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.642	262.72	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.893	308.587	31600	400	Pass

Test Graphs

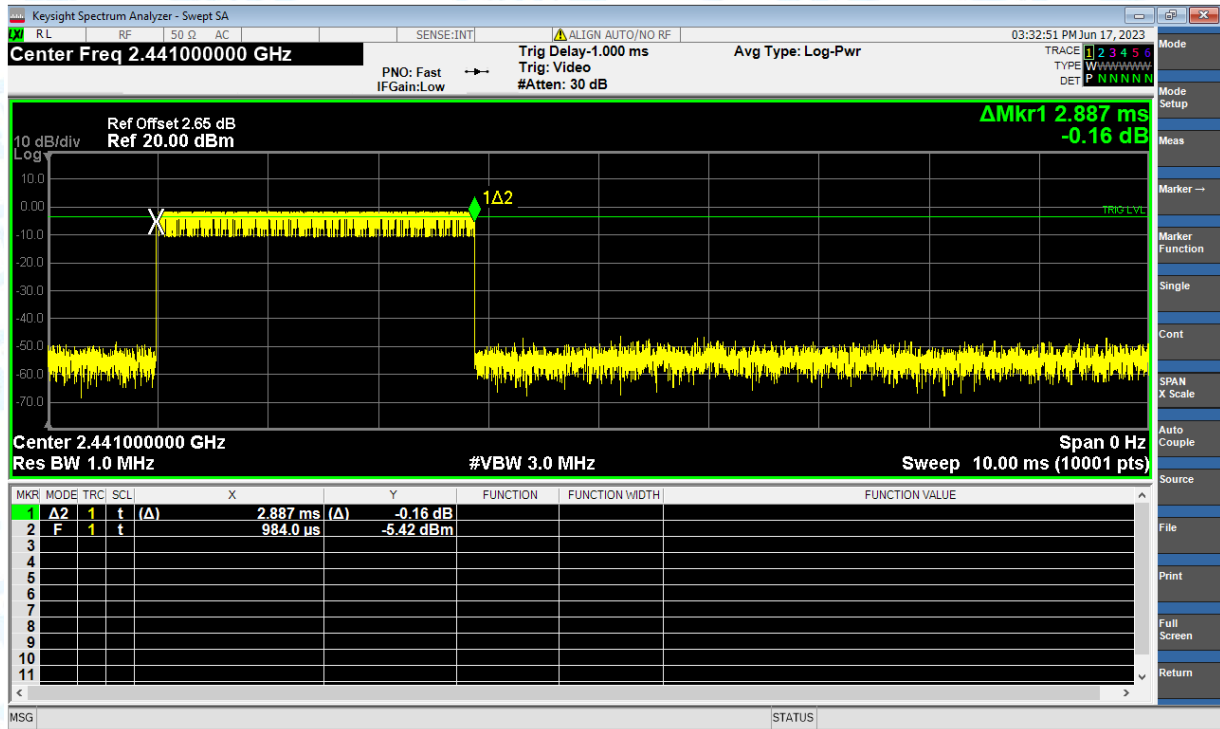
Dwell NVNT 1-DH1 2441MHz Ant1



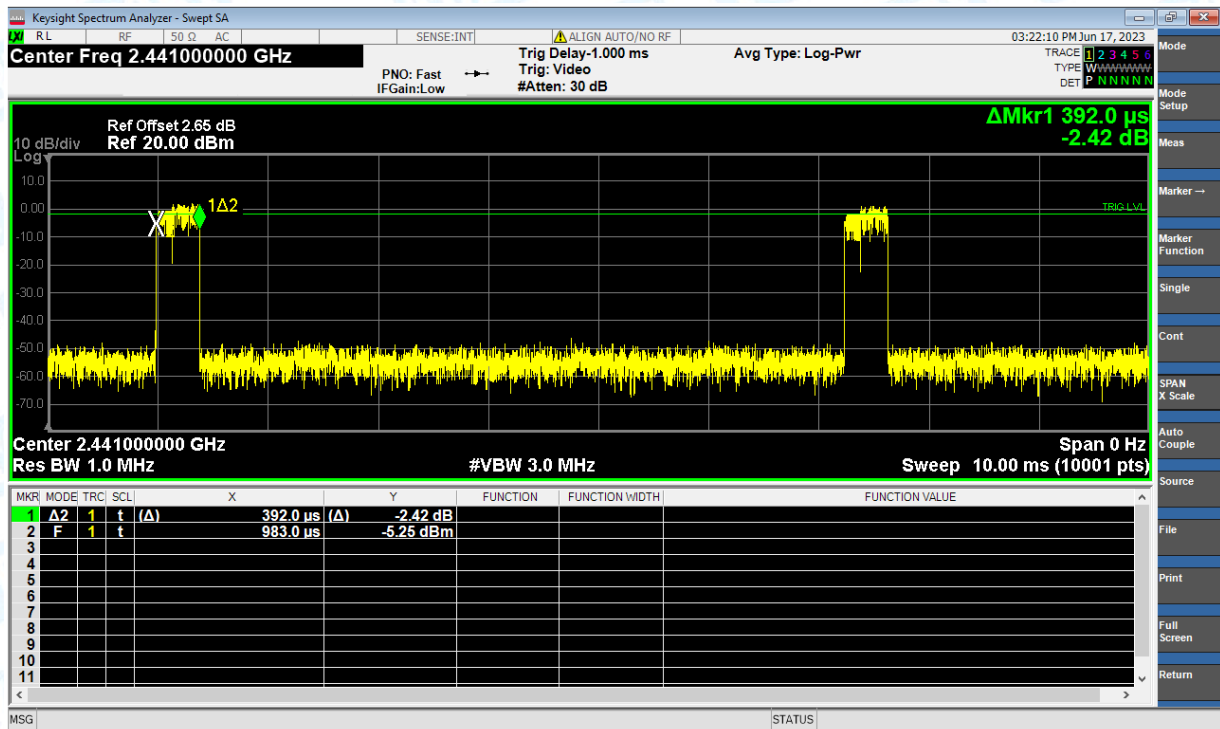
Dwell NVNT 1-DH3 2441MHz Ant1



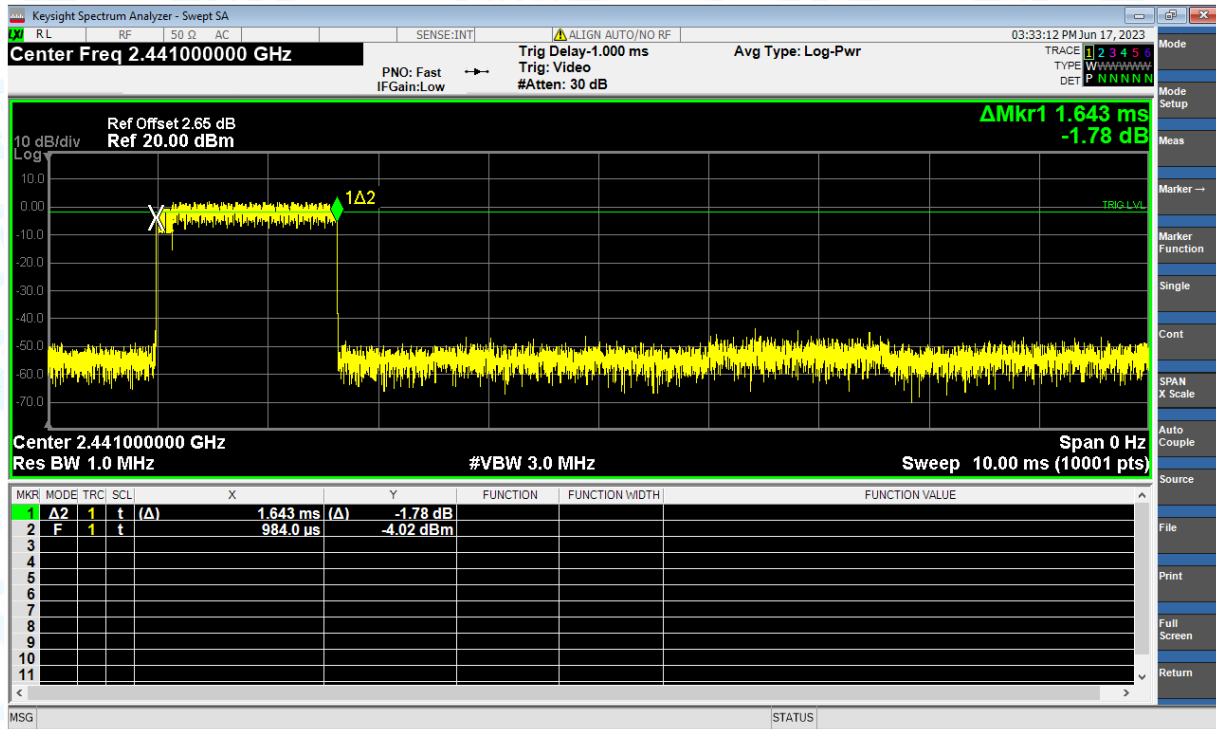
Dwell NVNT 1-DH5 2441MHz Ant1



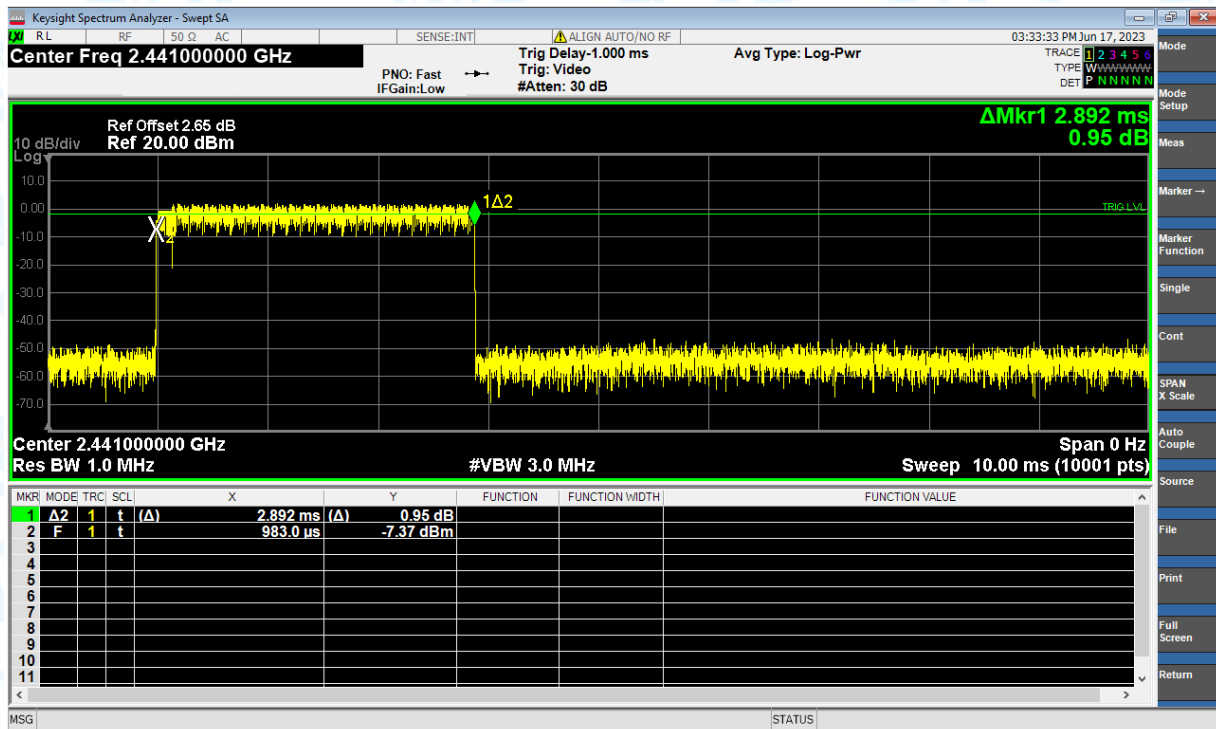
Dwell NVNT 2-DH1 2441MHz Ant1



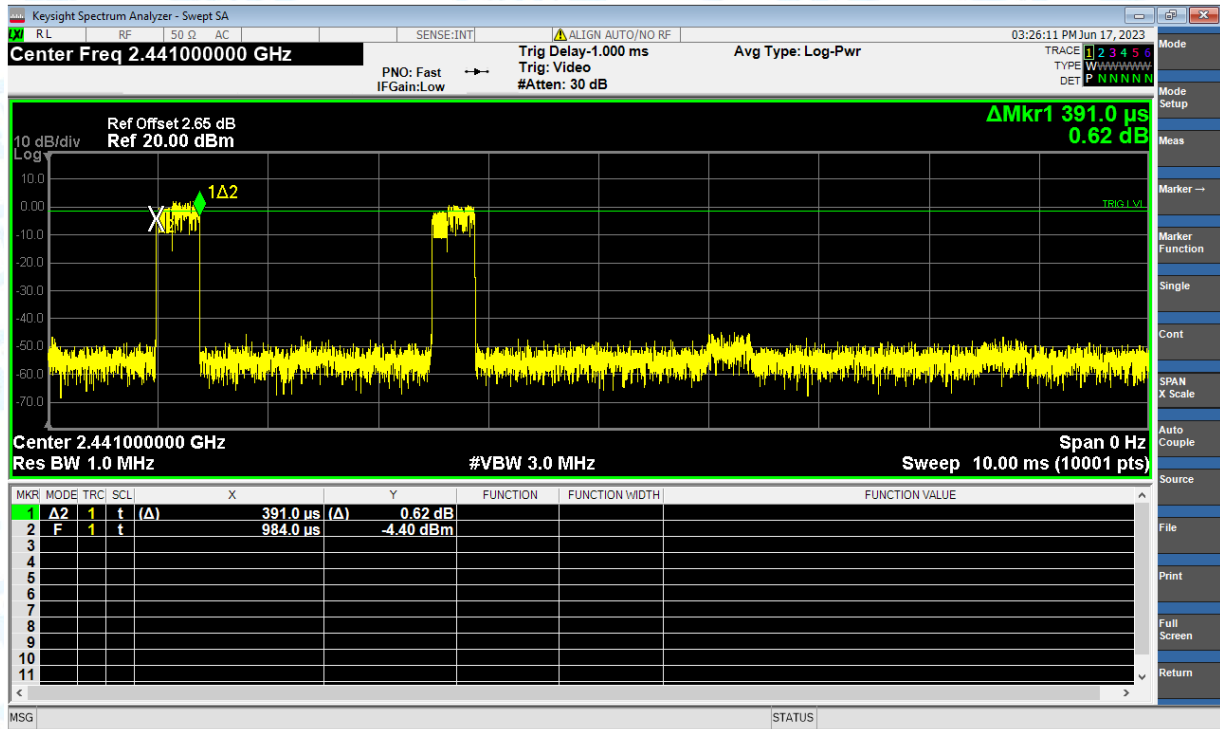
Dwell NVNT 2-DH3 2441MHz Ant1



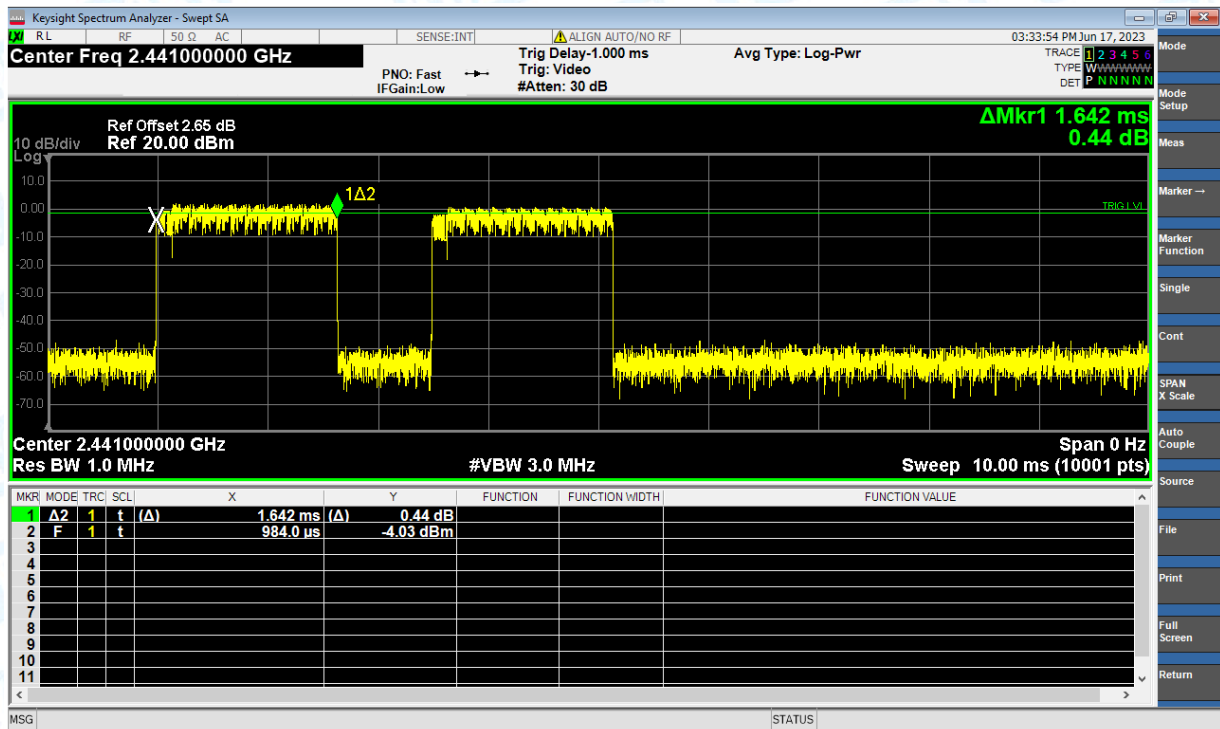
Dwell NVNT 2-DH5 2441MHz Ant1

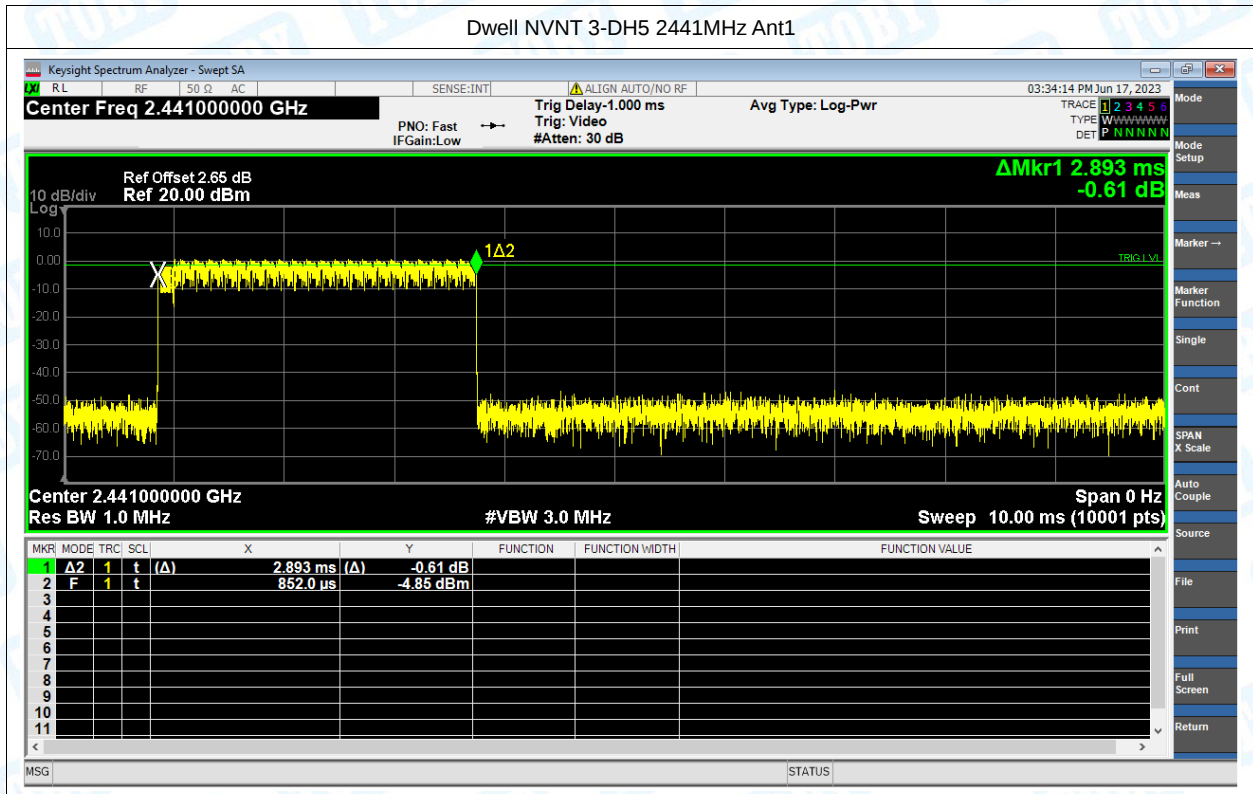


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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