

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Life 10
Test Model:	Life 10
Sample ID:	HC-C-202406-0236-01-02#
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 3.7V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202406-0236-2 The report only show the worst case data.	

Contents

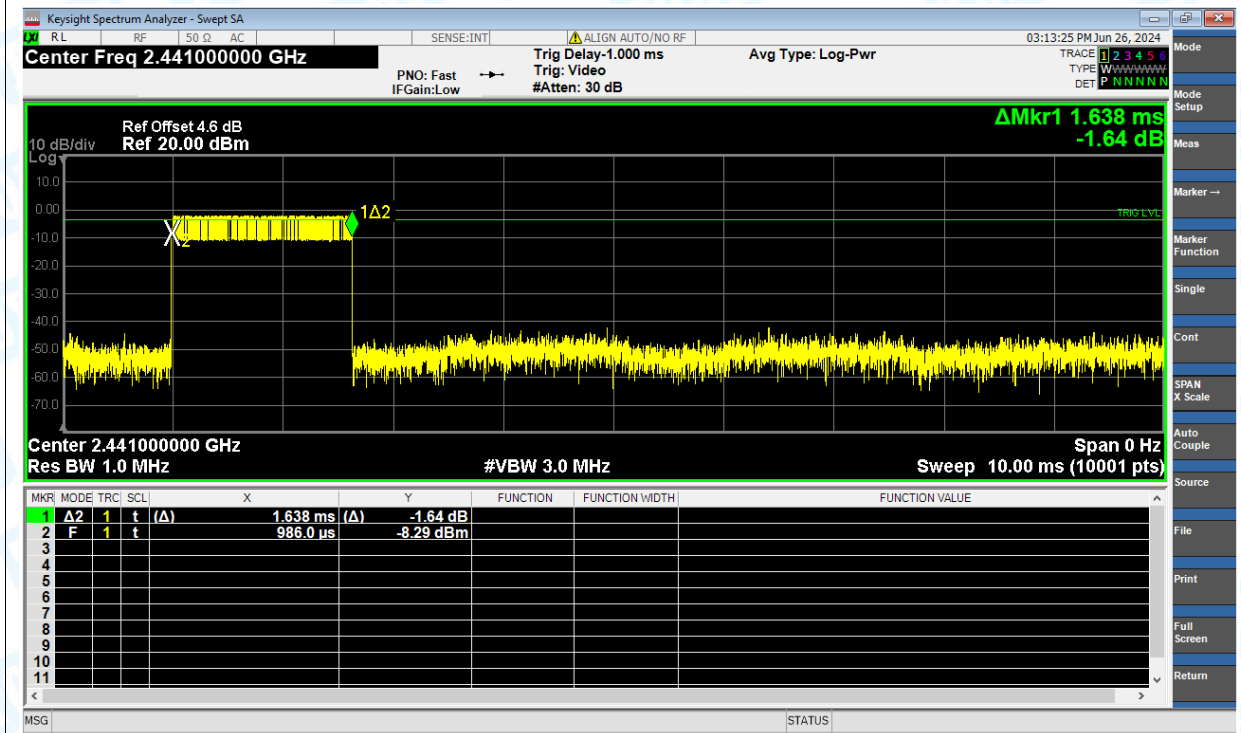
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1.Dwell Time

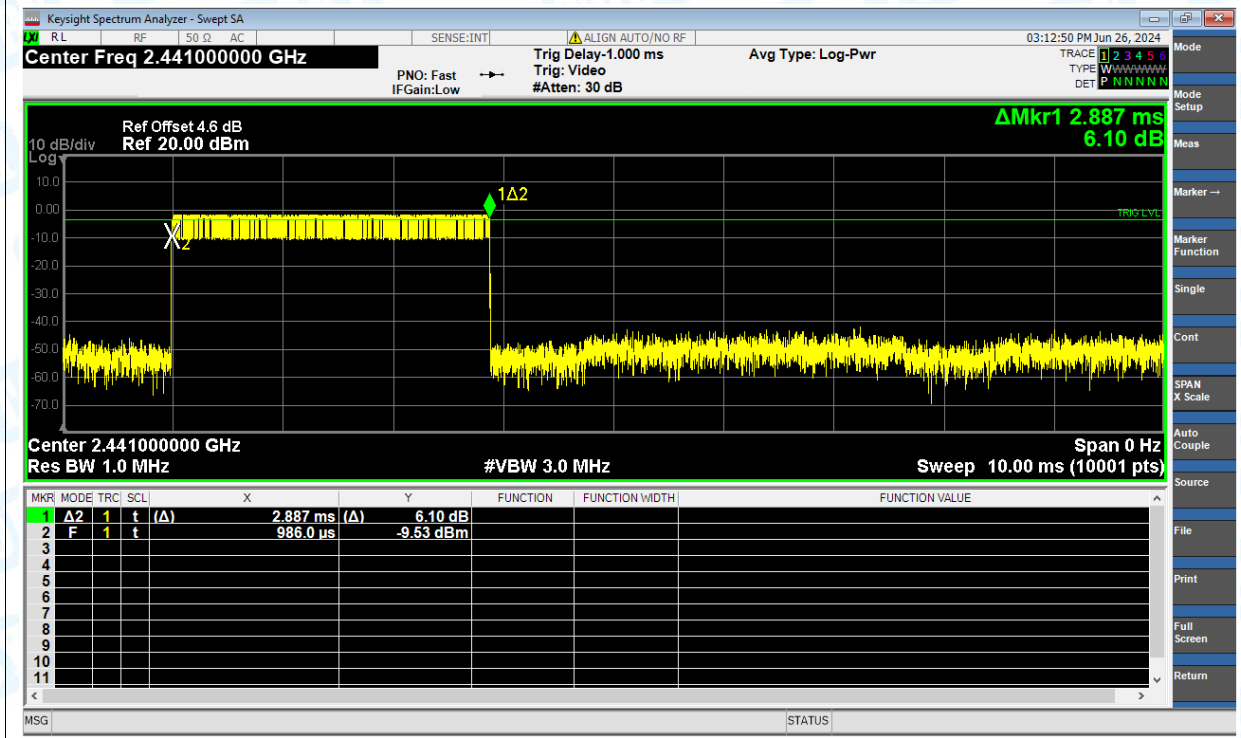
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVHT	1-DH3	2441	Ant1	1.638	262.08	31600	400	Pass
NVHT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVHT	2-DH3	2441	Ant1	1.644	263.04	31600	400	Pass
NVHT	2-DH5	2441	Ant1	2.891	308.373	31600	400	Pass
NVHT	3-DH3	2441	Ant1	1.641	262.56	31600	400	Pass
NVHT	3-DH5	2441	Ant1	2.893	308.587	31600	400	Pass
NVNT	1-DH1	2441	Ant1	0.382	122.24	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.391	125.12	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.391	125.12	31600	400	Pass

Test Graphs

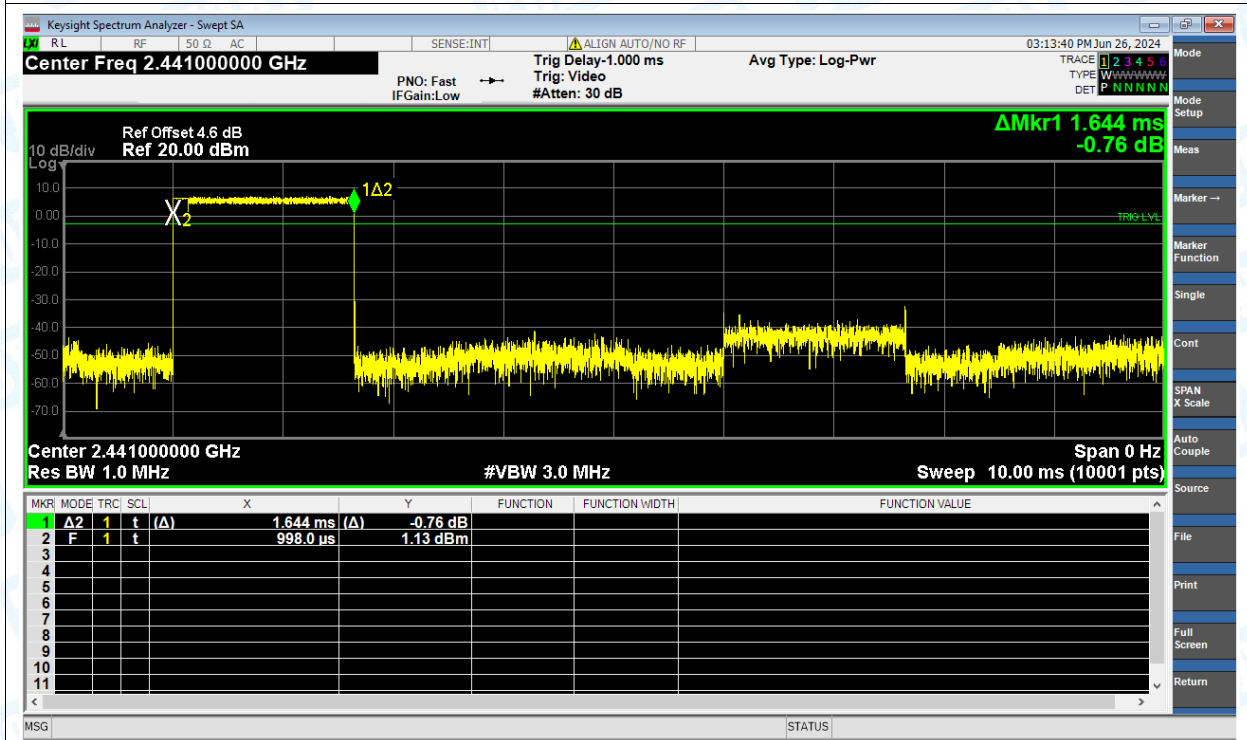
Dwell NVHT 1-DH3 2441MHz Ant1



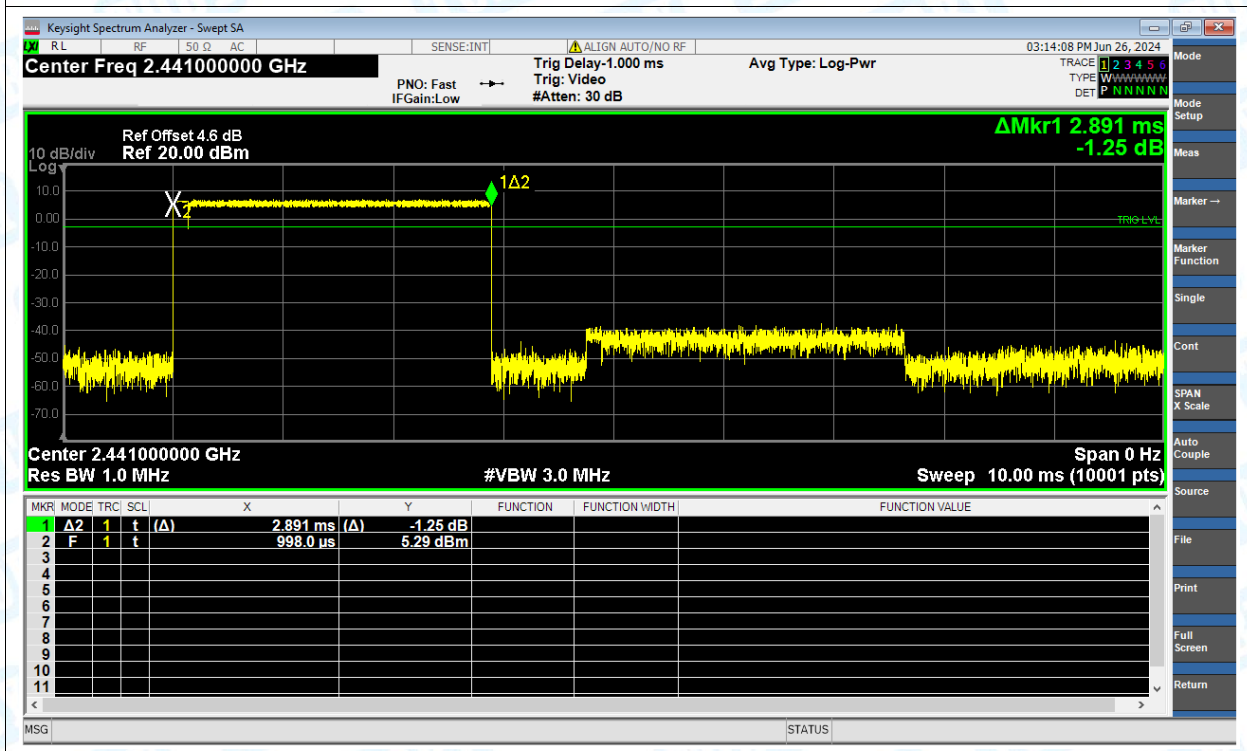
Dwell NVHT 1-DH5 2441MHz Ant1



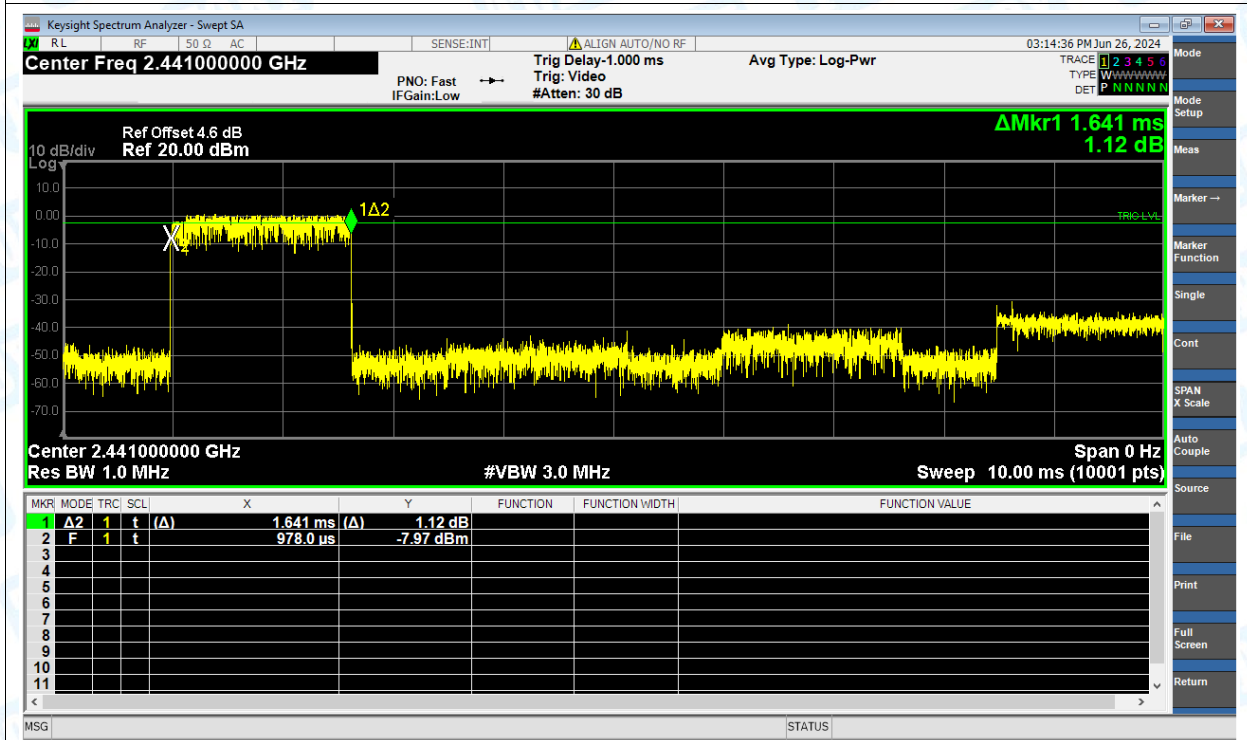
Dwell NVHT 2-DH3 2441MHz Ant1



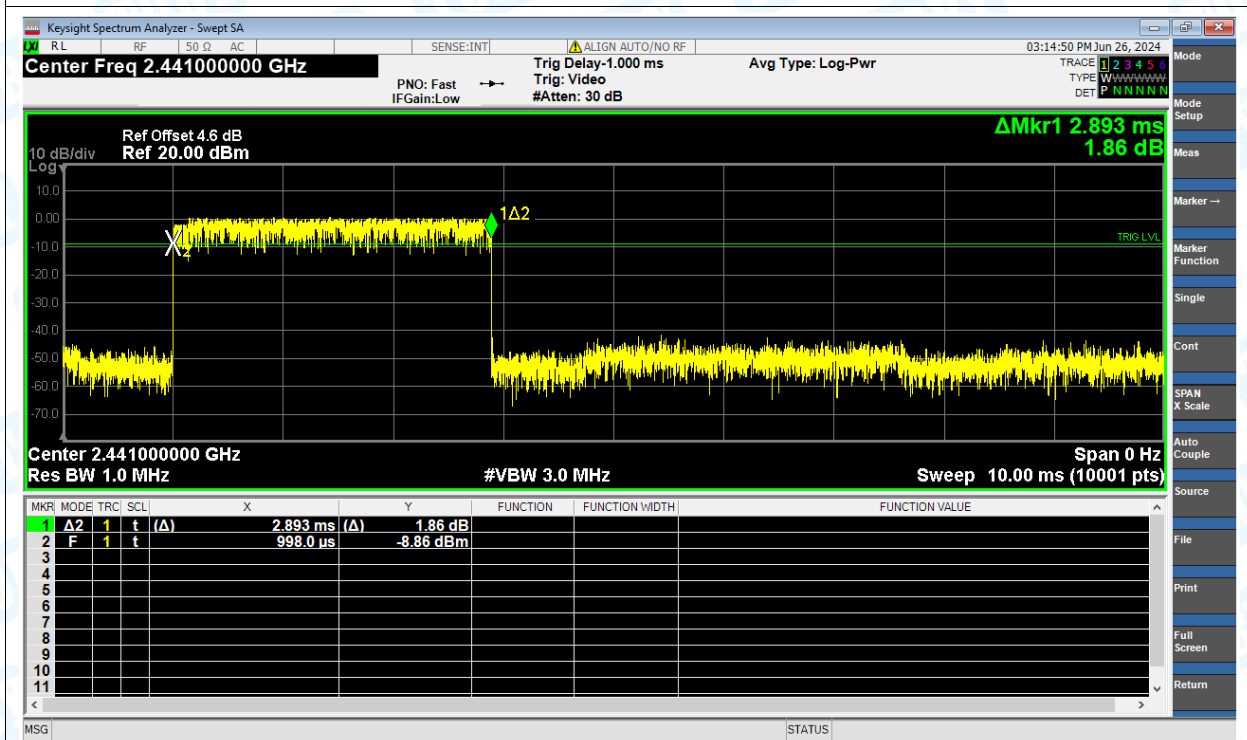
Dwell NVHT 2-DH5 2441MHz Ant1



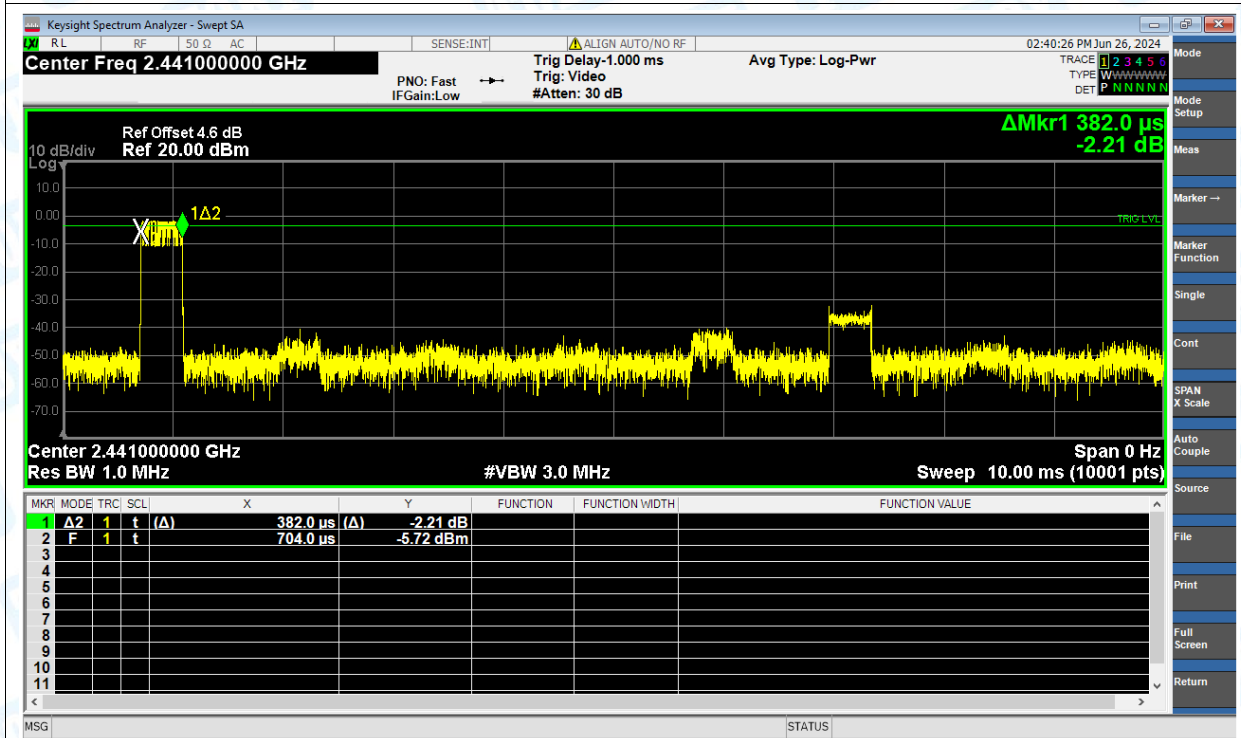
Dwell NVHT 3-DH3 2441MHz Ant1



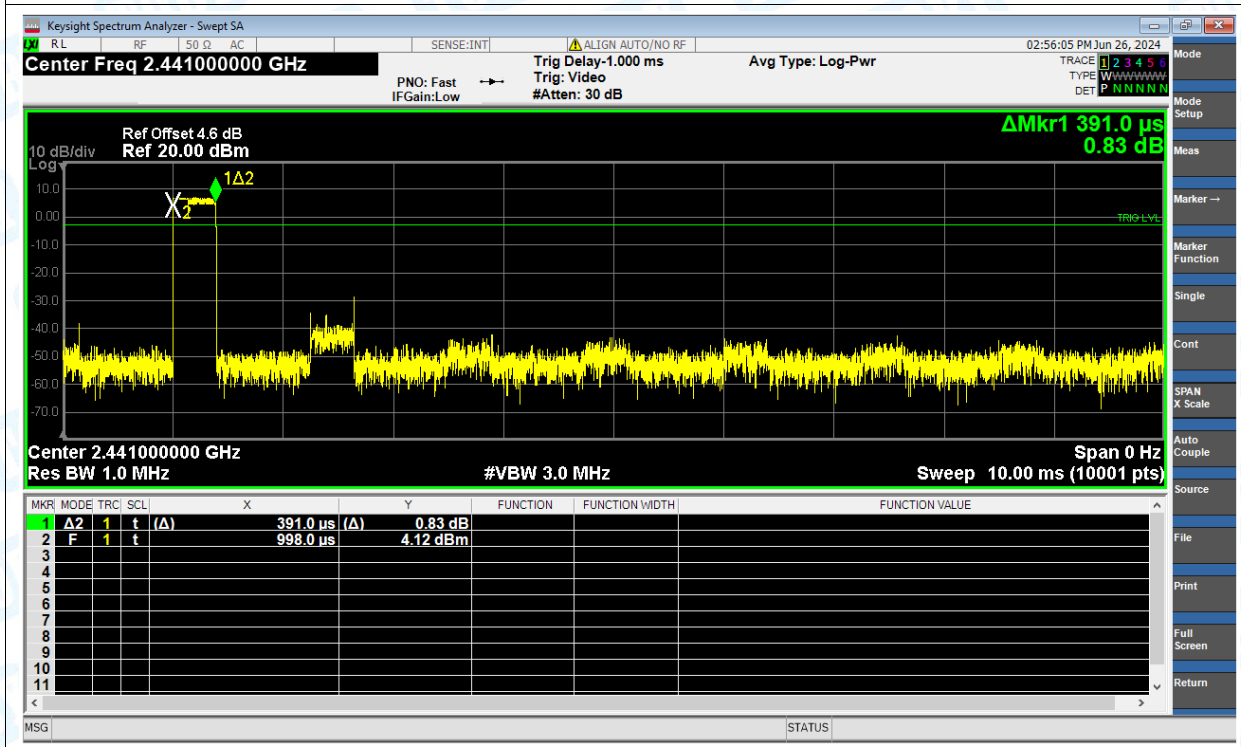
Dwell NVHT 3-DH5 2441MHz Ant1

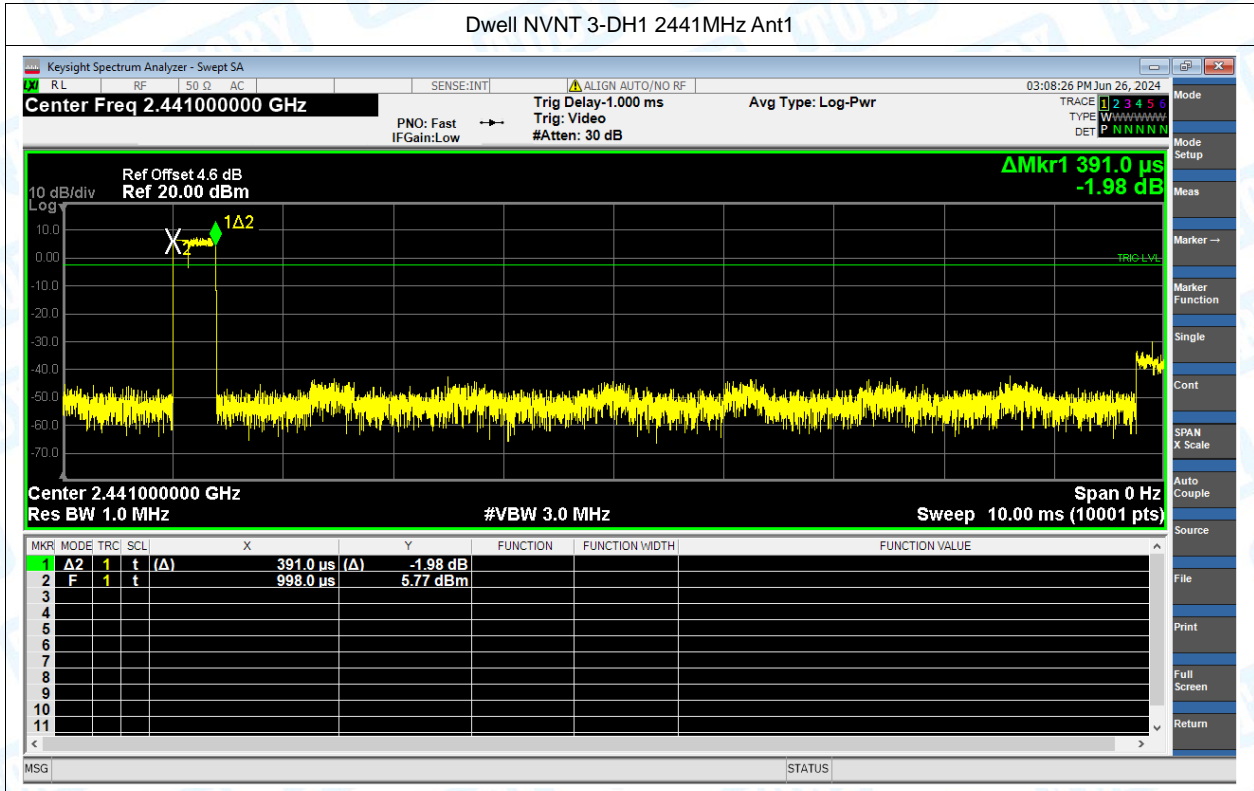


Dwell NVNT 1-DH1 2441MHz Ant1



Dwell NVNT 2-DH1 2441MHz Ant1

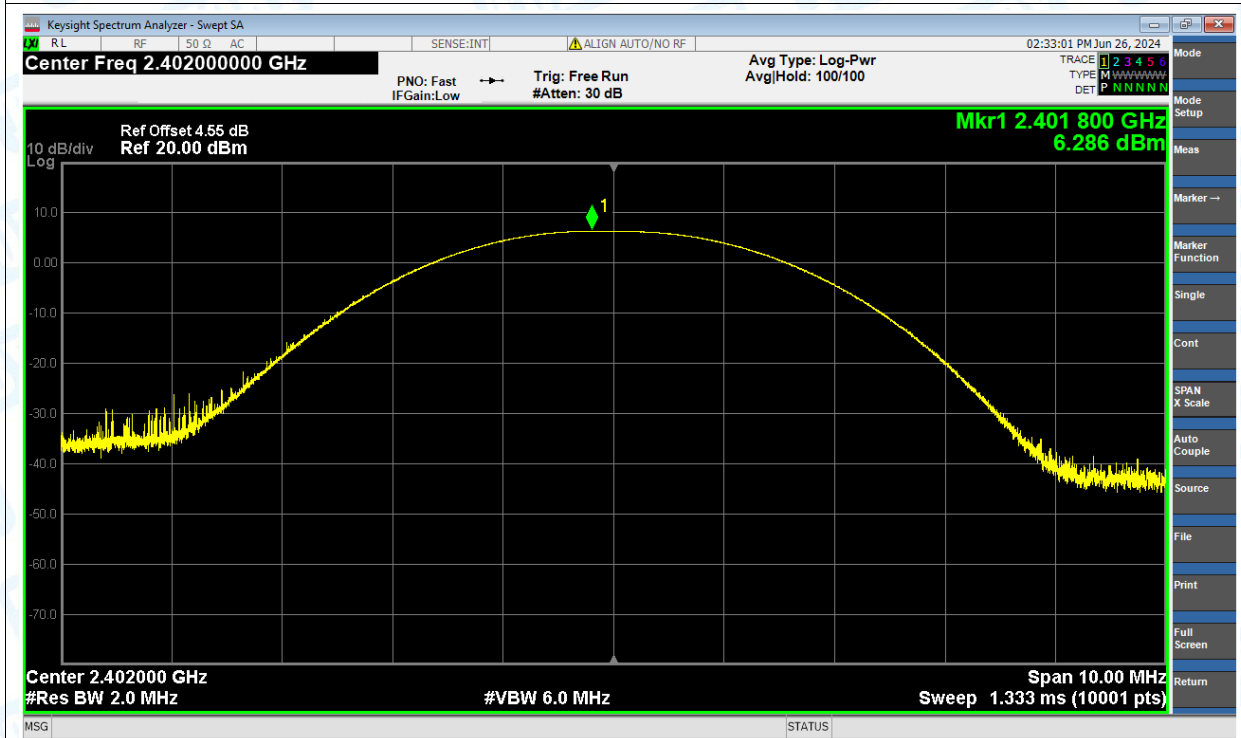




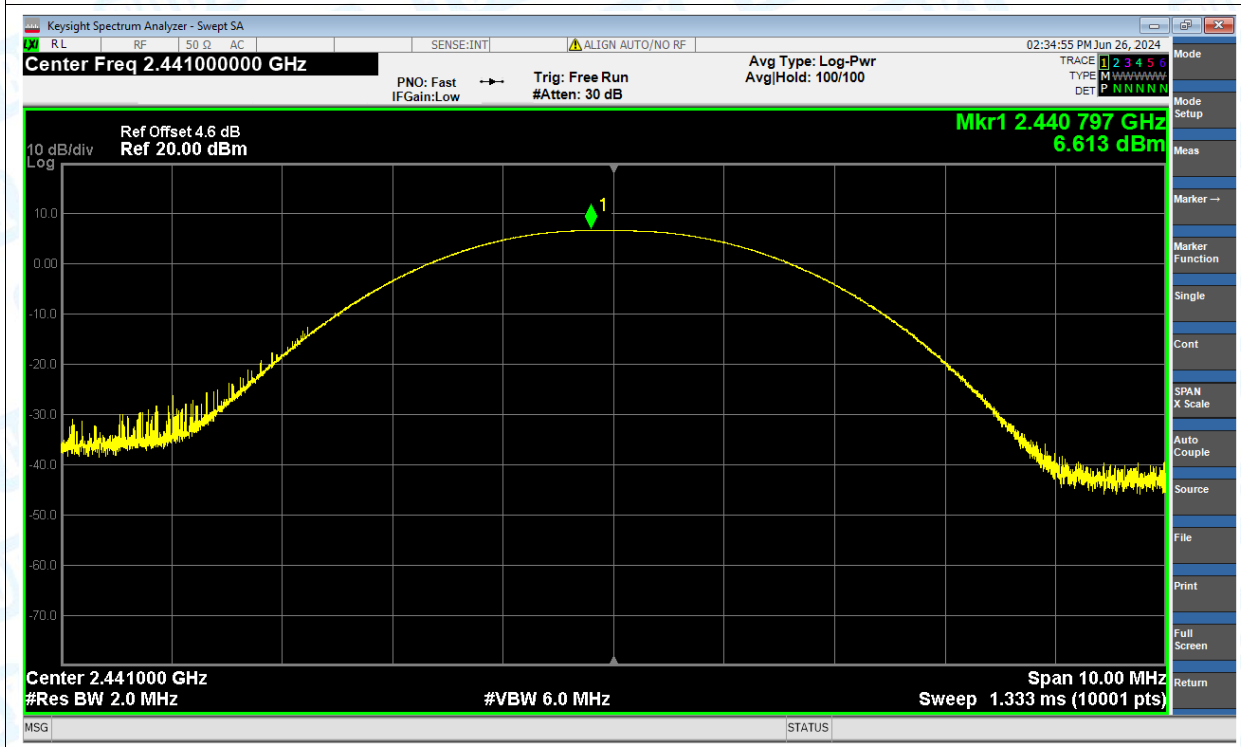
2. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	6.286	21	Pass
NVNT	1-DH1	2441	Ant1	6.613	21	Pass
NVNT	1-DH1	2480	Ant1	6.412	21	Pass
NVNT	2-DH1	2402	Ant1	7.078	21	Pass
NVNT	2-DH1	2441	Ant1	7.376	21	Pass
NVNT	2-DH1	2480	Ant1	7.127	21	Pass
NVNT	3-DH1	2402	Ant1	7.793	21	Pass
NVNT	3-DH1	2441	Ant1	8.037	21	Pass
NVNT	3-DH1	2480	Ant1	7.85	21	Pass

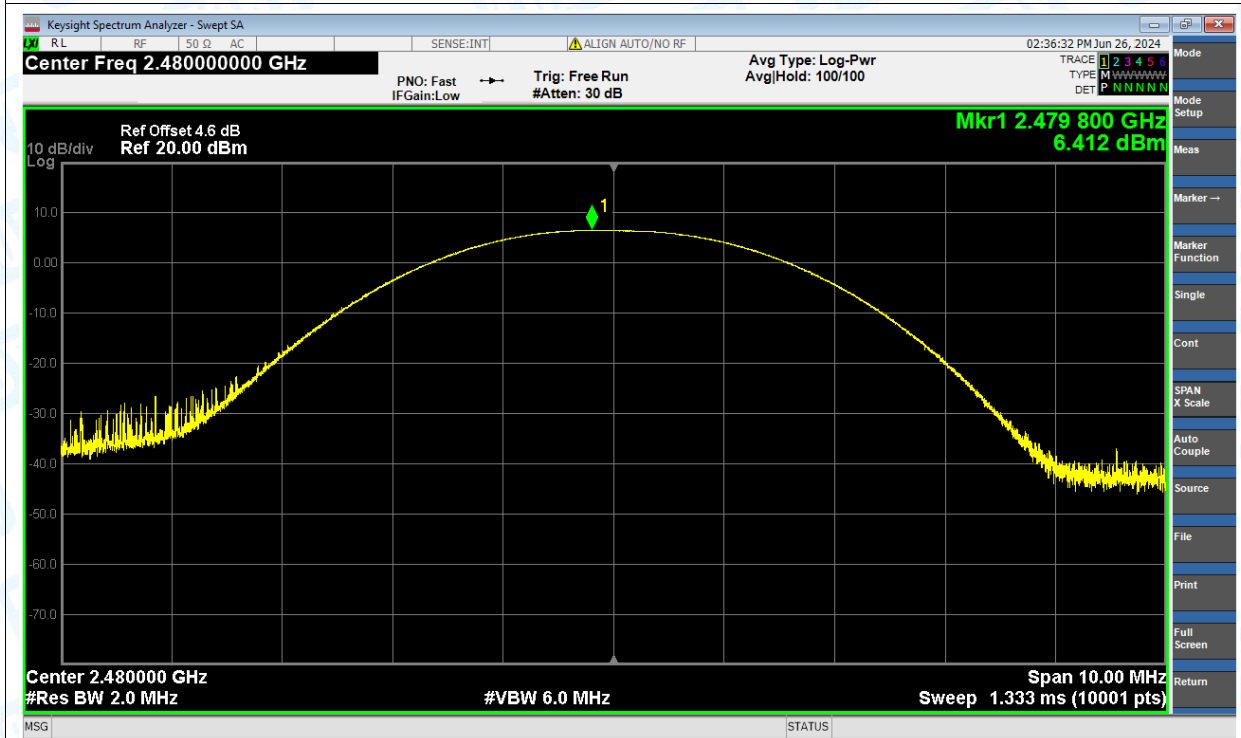
Power NVNT 1-DH1 2402MHz Ant1



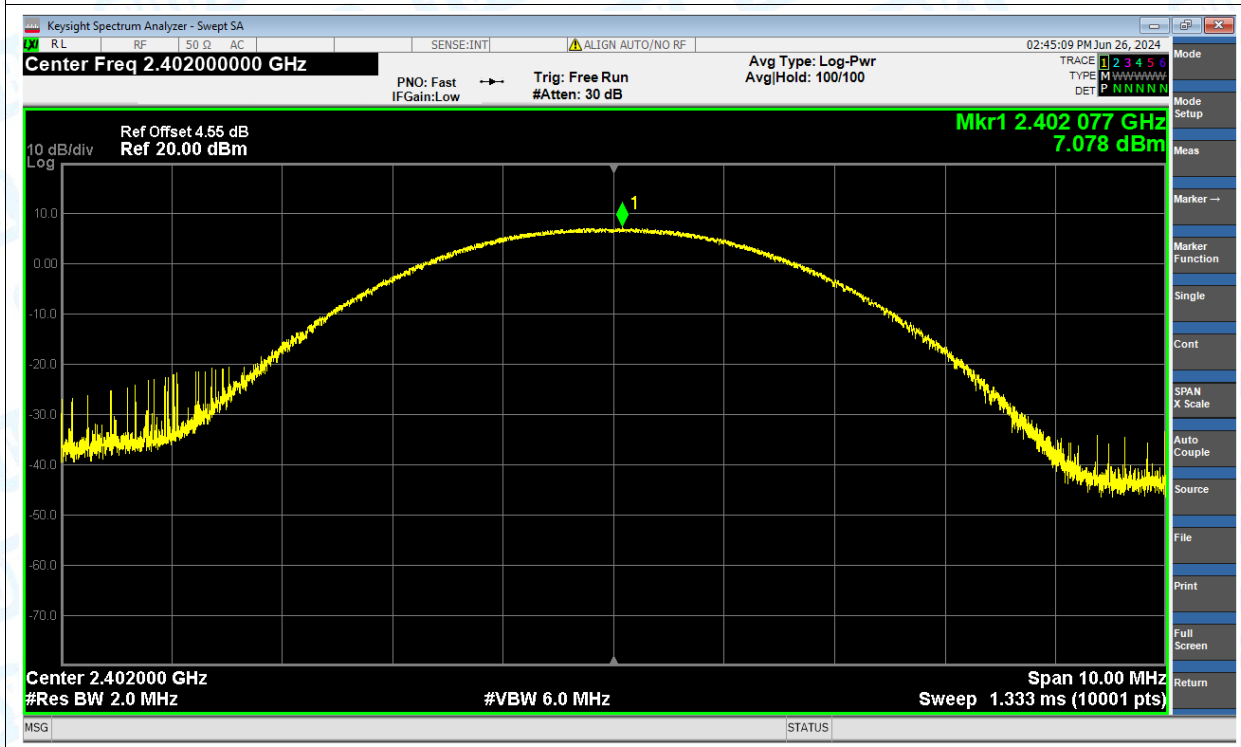
Power NVNT 1-DH1 2441MHz Ant1

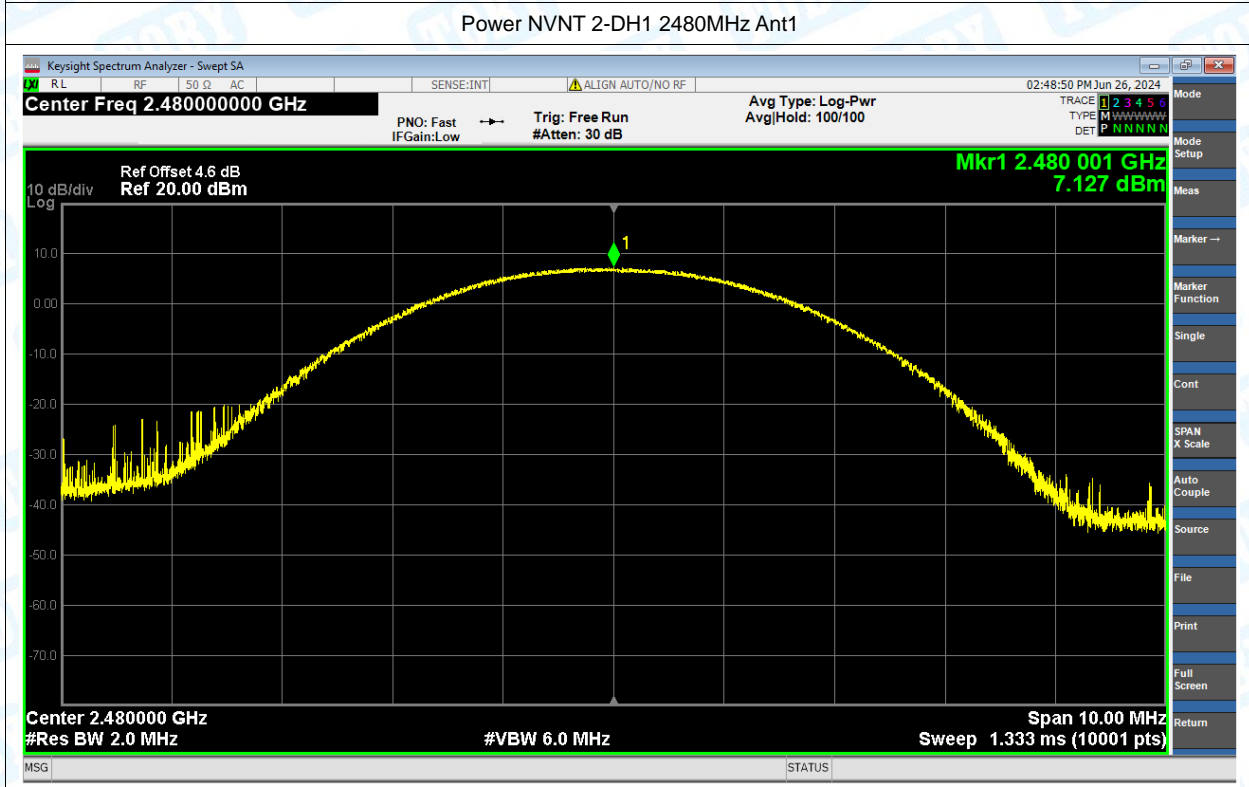
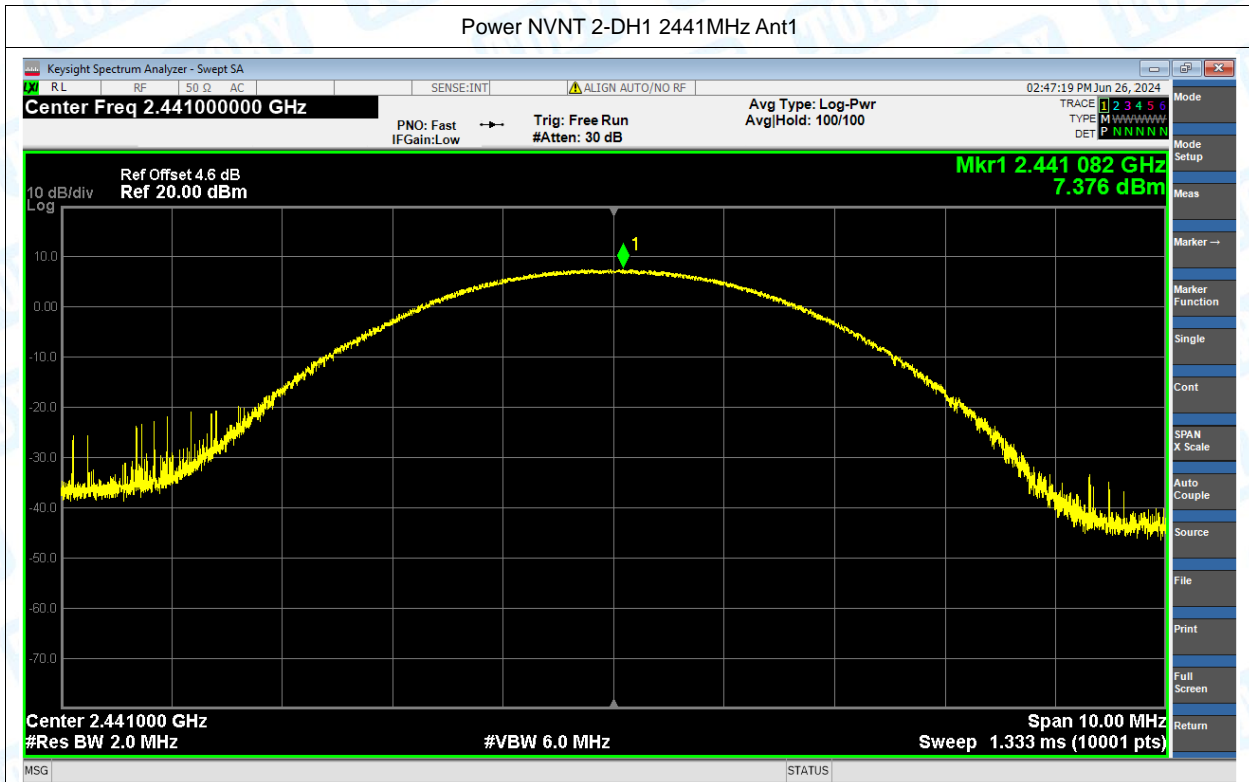


Power NVNT 1-DH1 2480MHz Ant1



Power NVNT 2-DH1 2402MHz Ant1







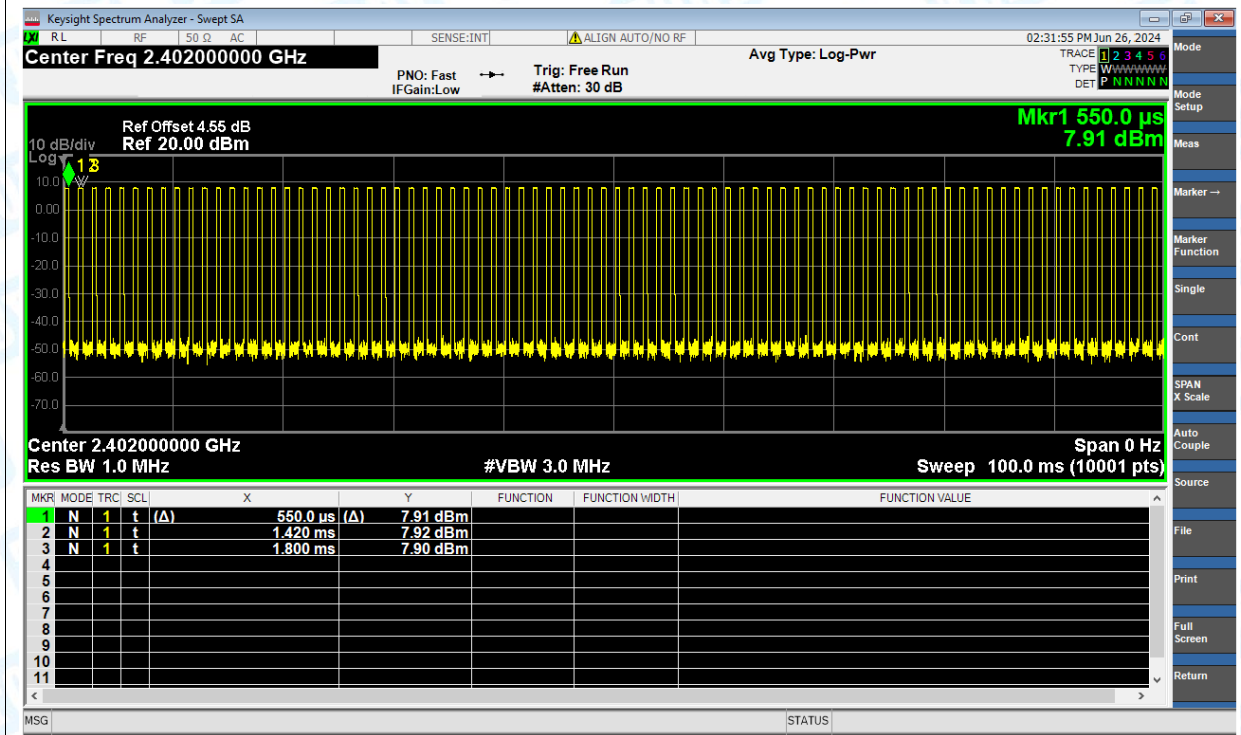


3. Duty Cycle

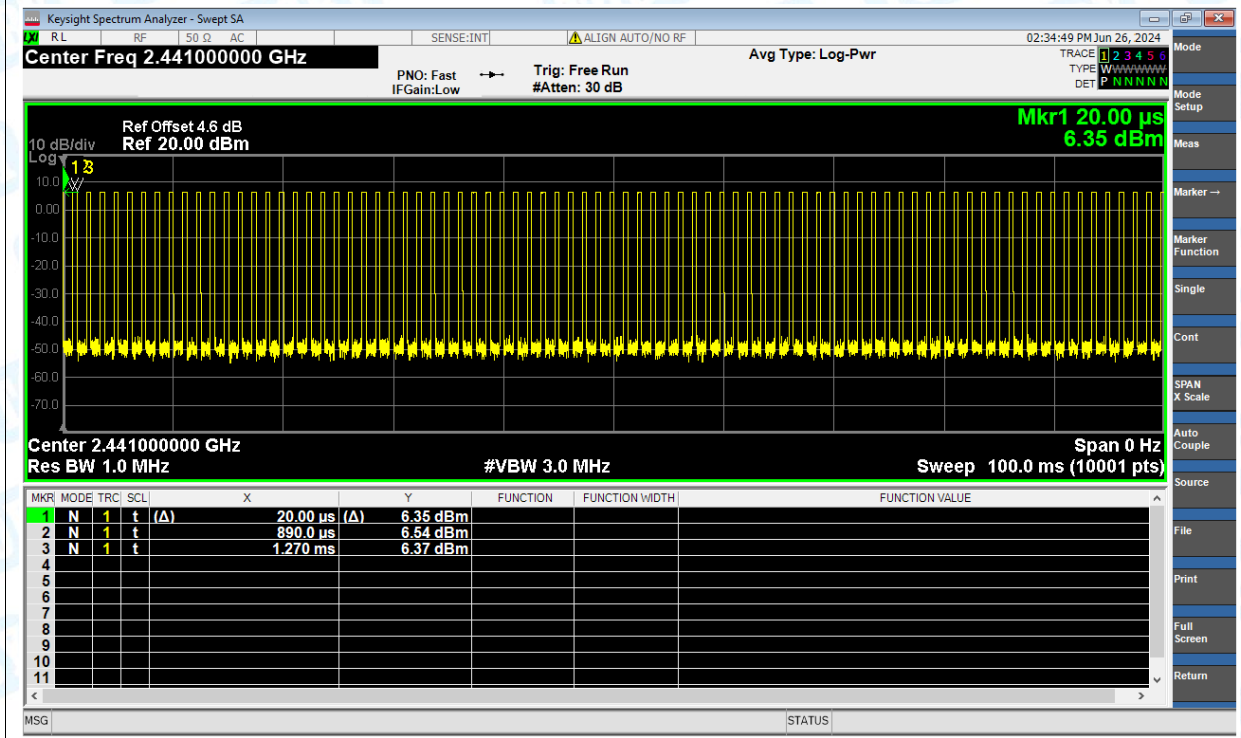
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	32	4.95	2.5
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2480	Ant1	31.2	5.06	2.56

Test Graphs

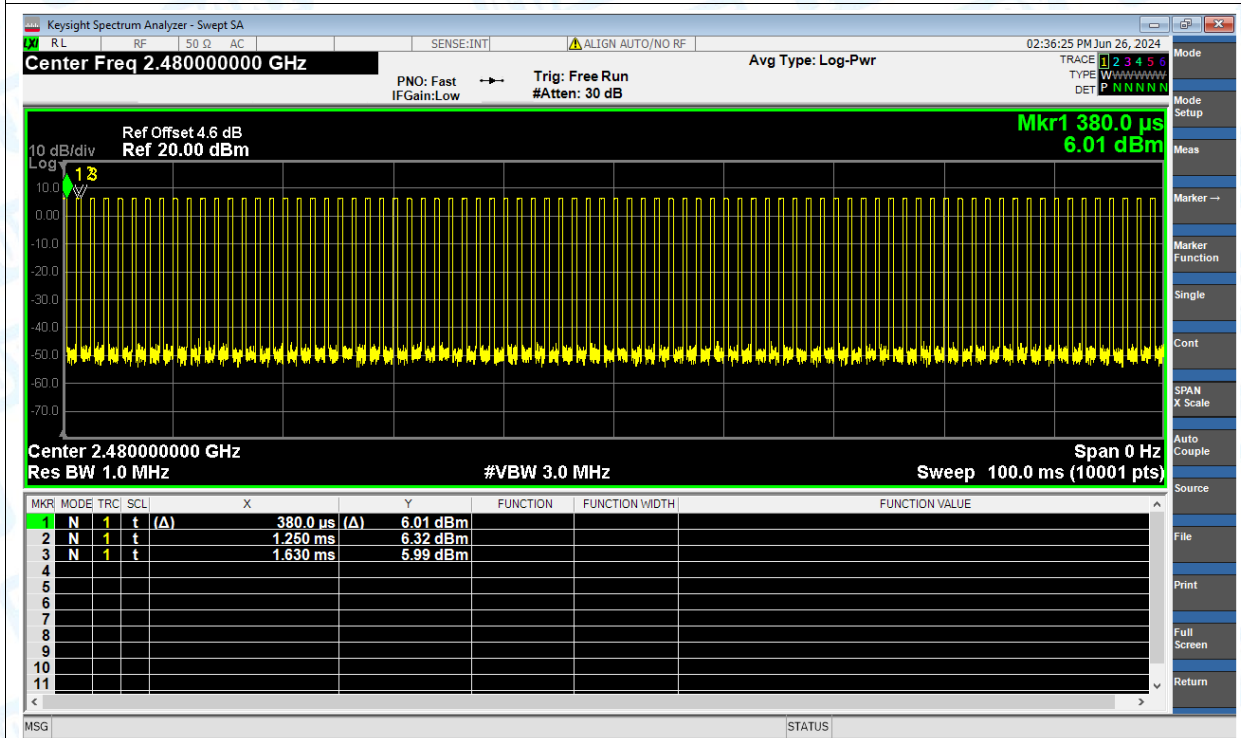
Duty Cycle NVNT 1-DH1 2402MHz Ant1



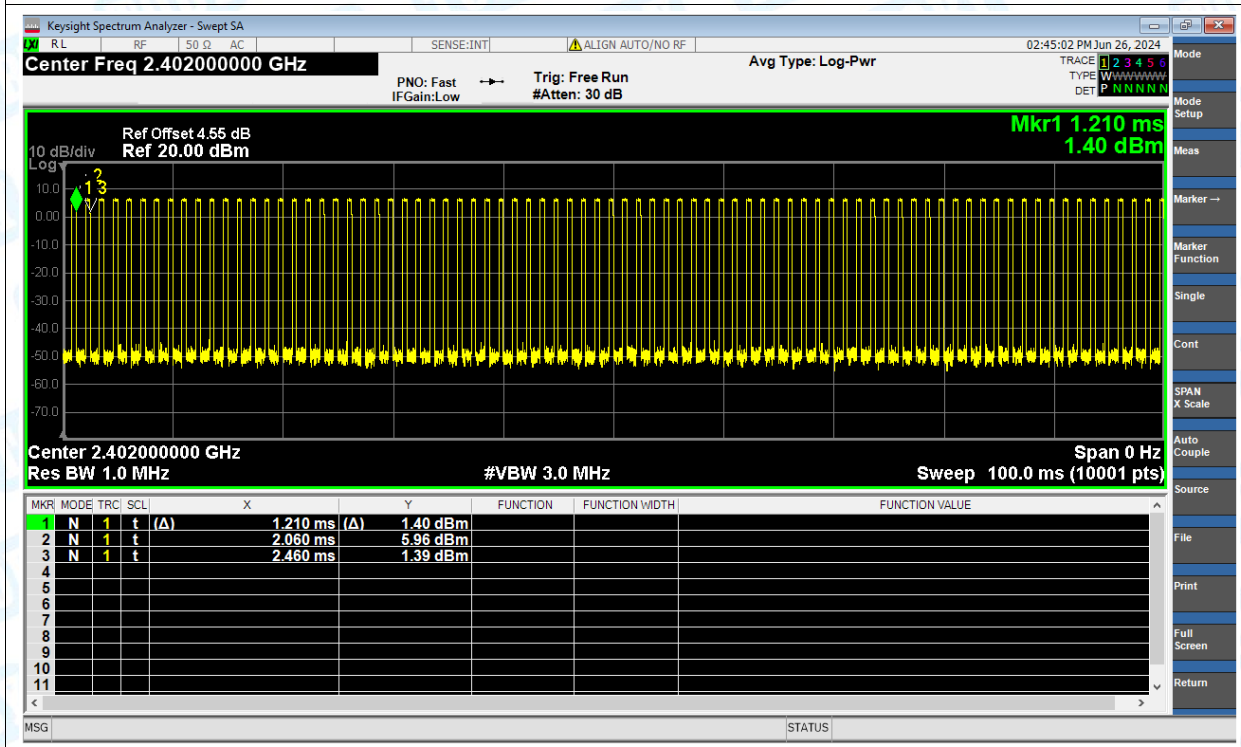
Duty Cycle NVNT 1-DH1 2441MHz Ant1



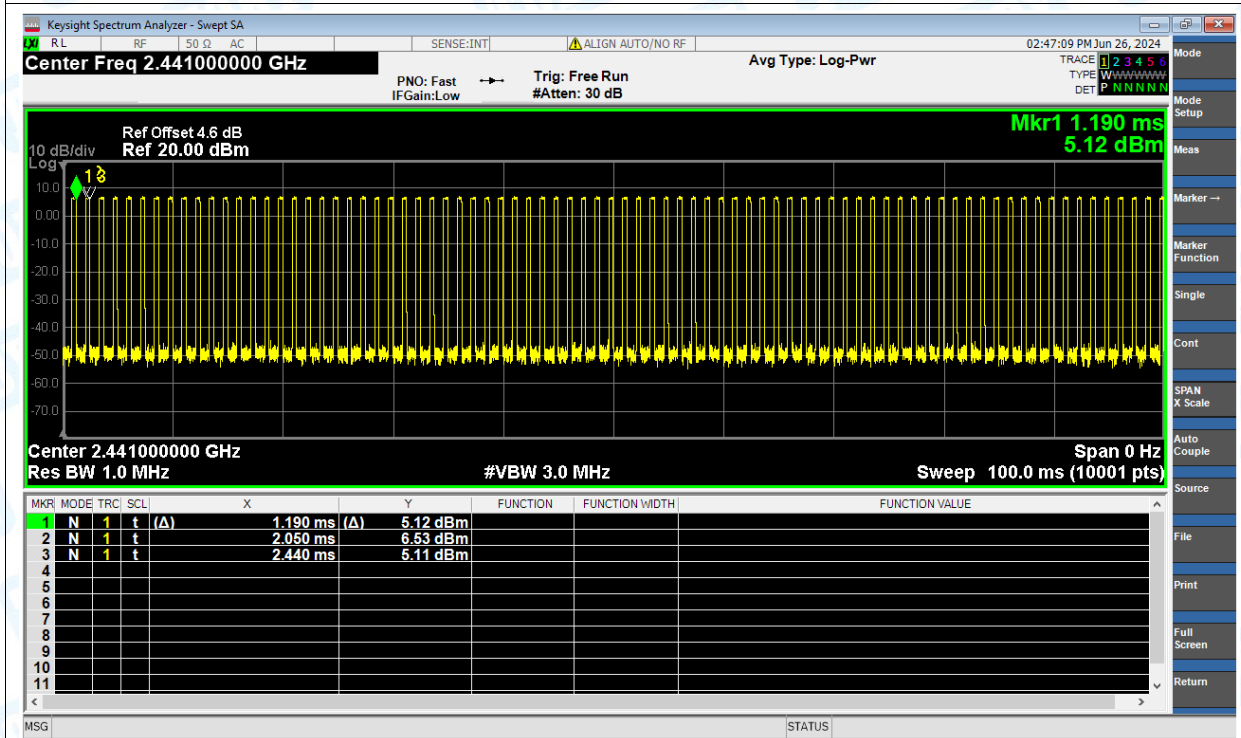
Duty Cycle NVNT 1-DH1 2480MHz Ant1



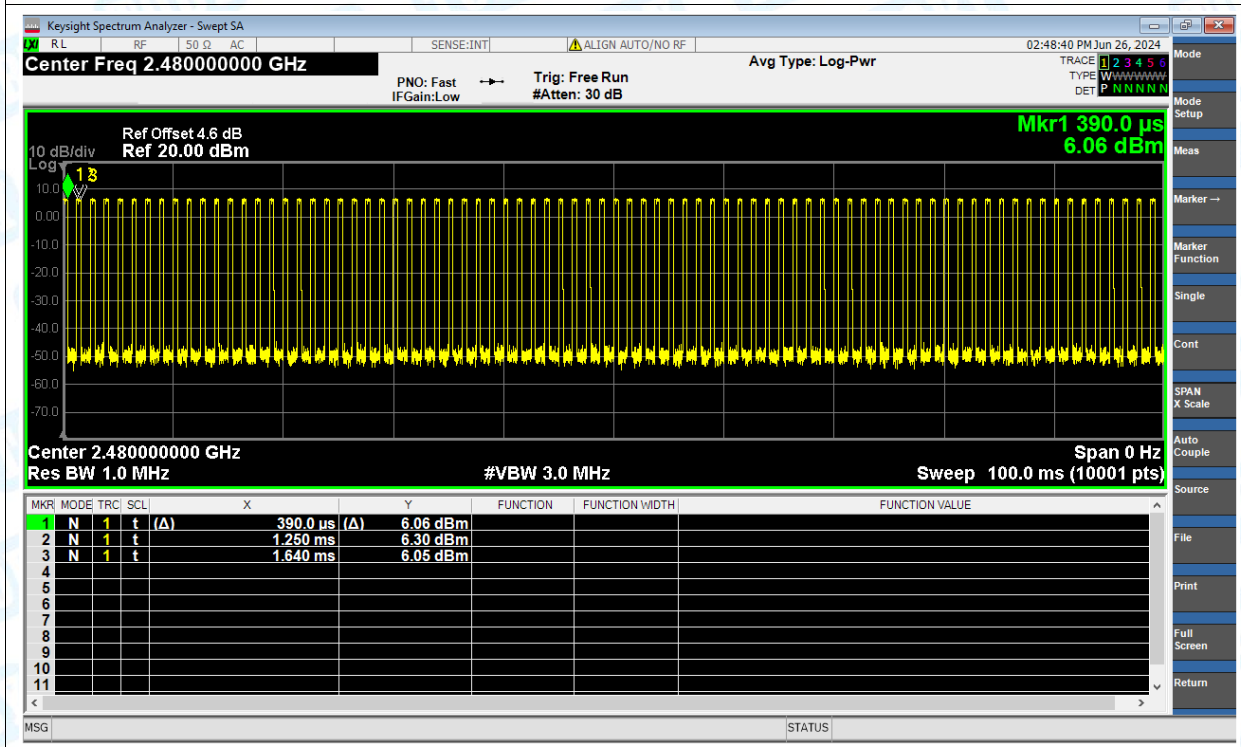
Duty Cycle NVNT 2-DH1 2402MHz Ant1



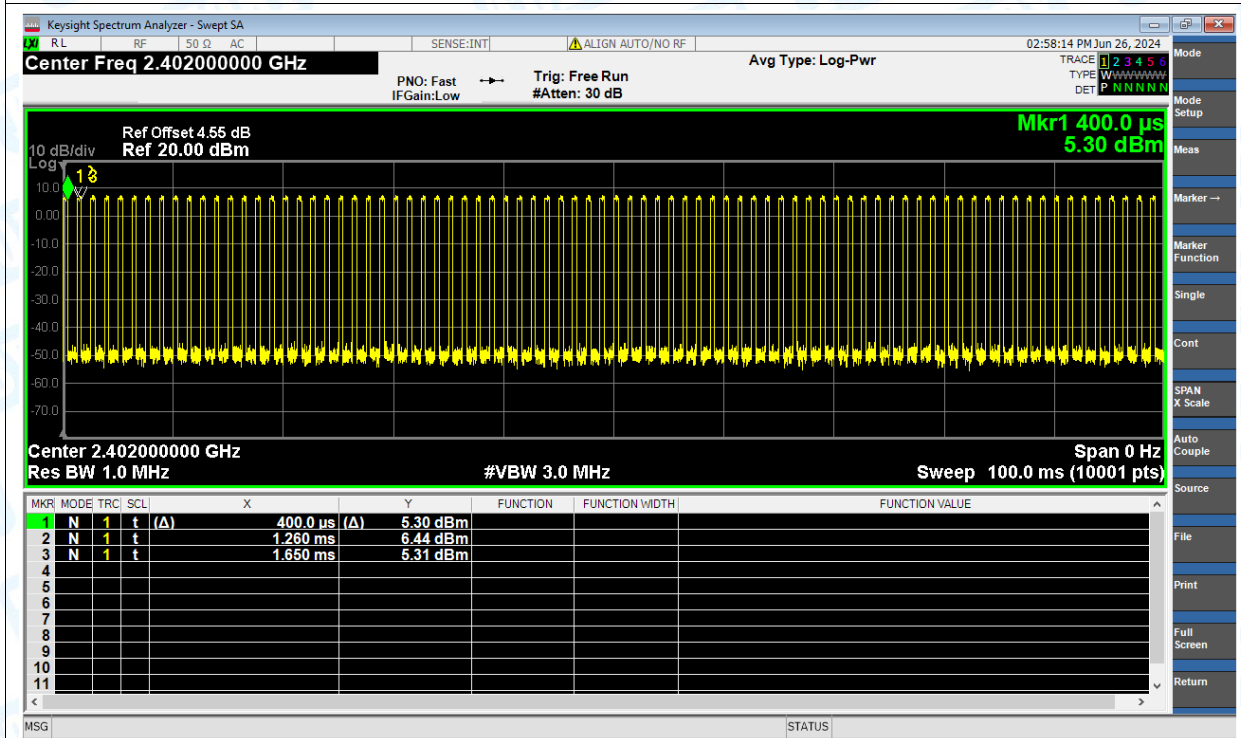
Duty Cycle NVNT 2-DH1 2441MHz Ant1



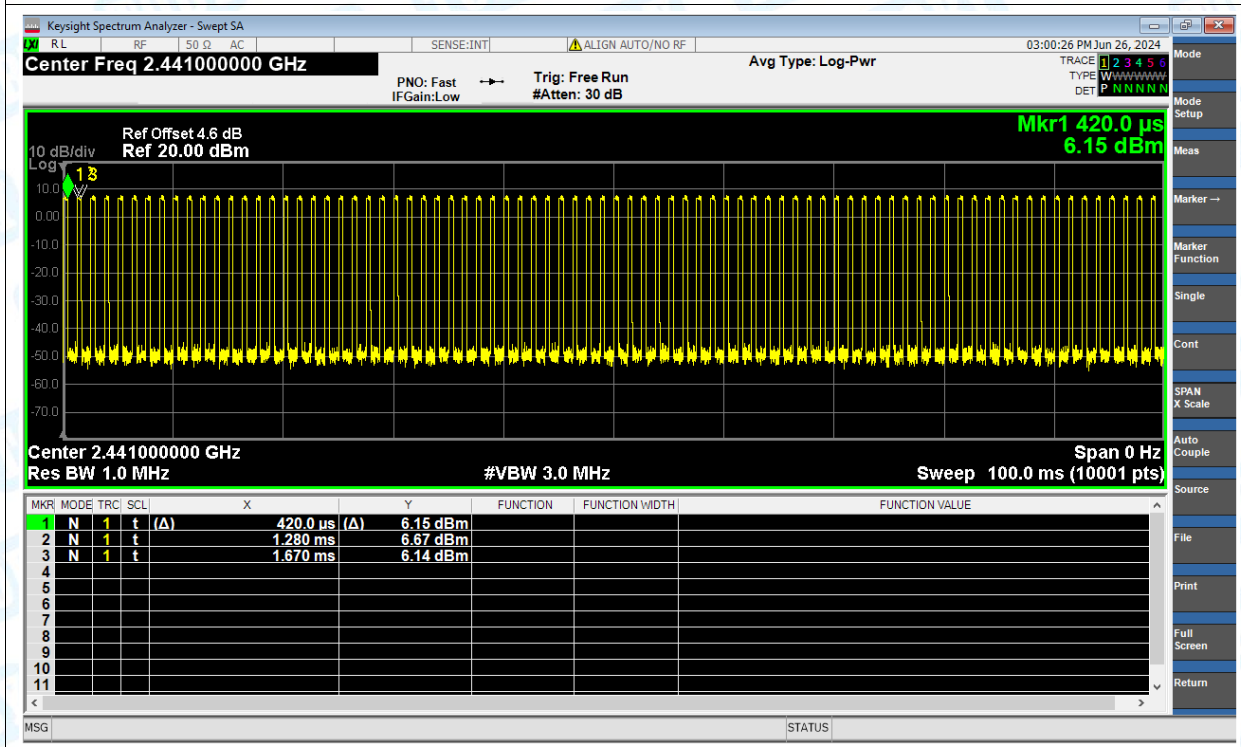
Duty Cycle NVNT 2-DH1 2480MHz Ant1

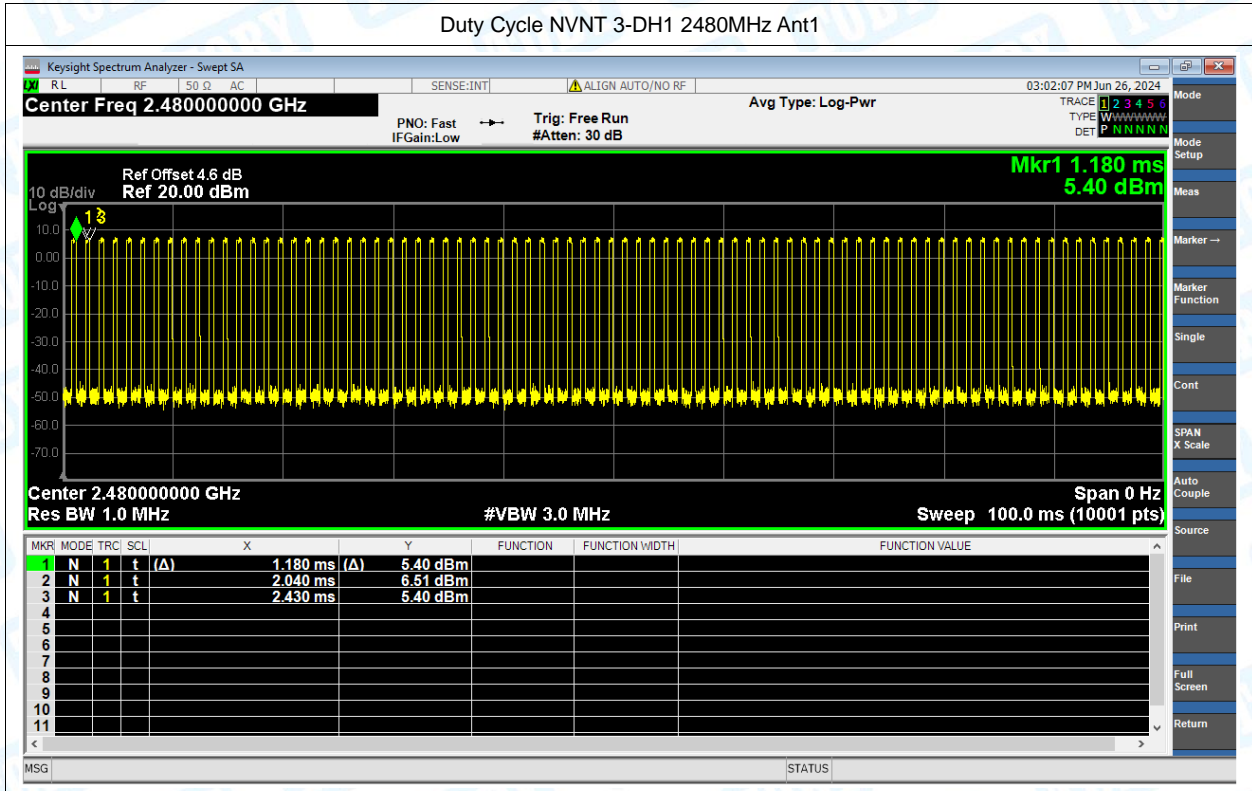


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



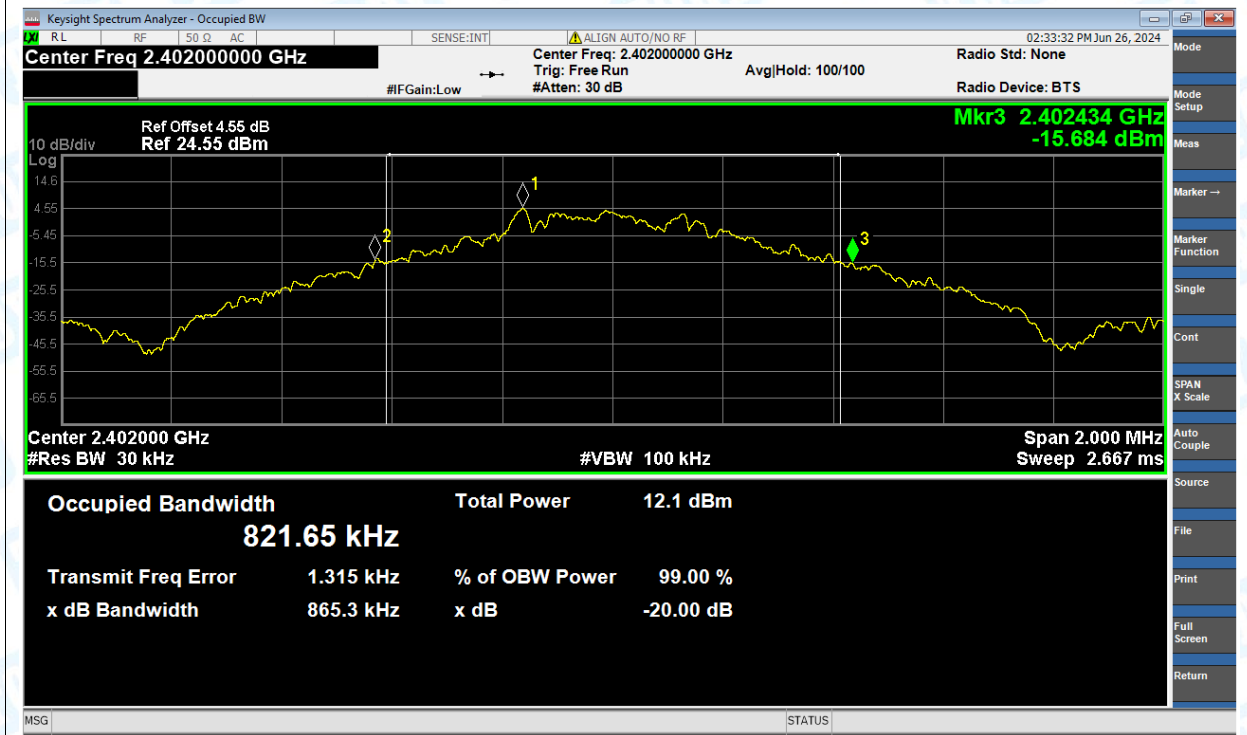


4.-20dB Bandwidth

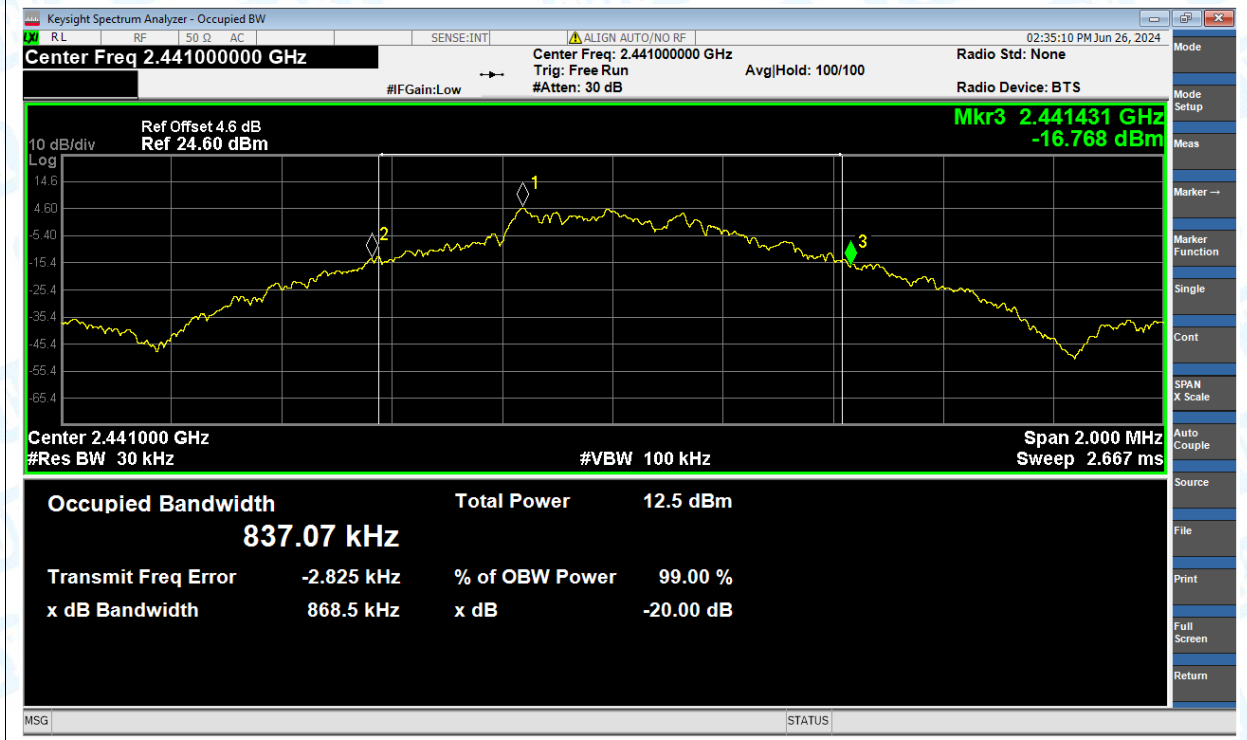
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.87	0	Pass
NVNT	1-DH1	2441	Ant1	0.87	0	Pass
NVNT	1-DH1	2480	Ant1	0.86	0	Pass
NVNT	2-DH1	2402	Ant1	1.25	0	Pass
NVNT	2-DH1	2441	Ant1	1.27	0	Pass
NVNT	2-DH1	2480	Ant1	1.24	0	Pass
NVNT	3-DH1	2402	Ant1	1.22	0	Pass
NVNT	3-DH1	2441	Ant1	1.21	0	Pass
NVNT	3-DH1	2480	Ant1	1.21	0	Pass

Test Graphs

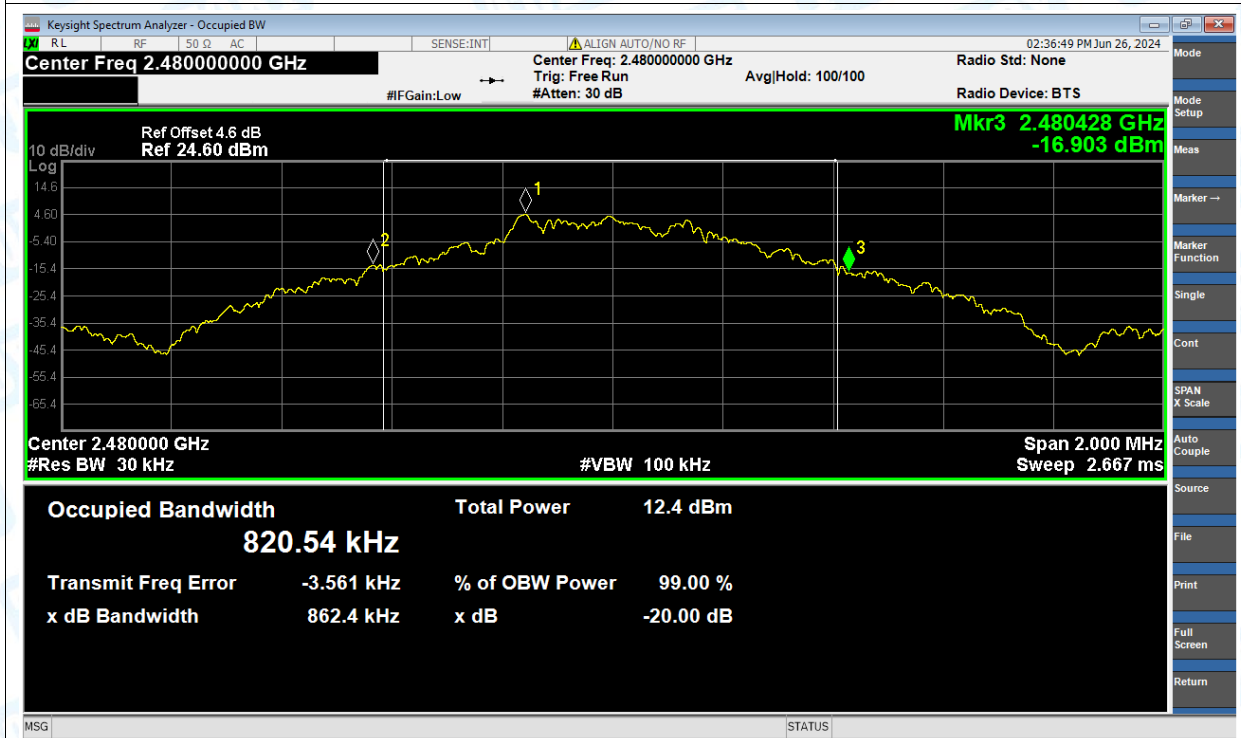
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



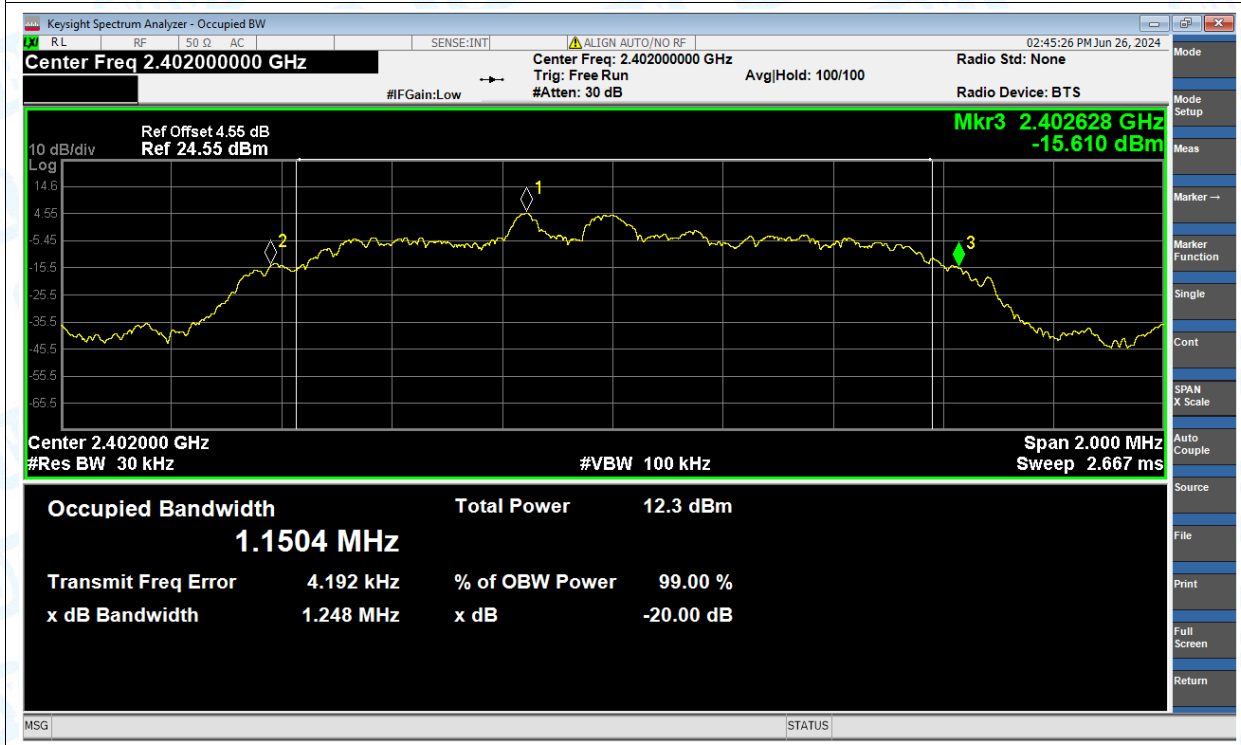
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



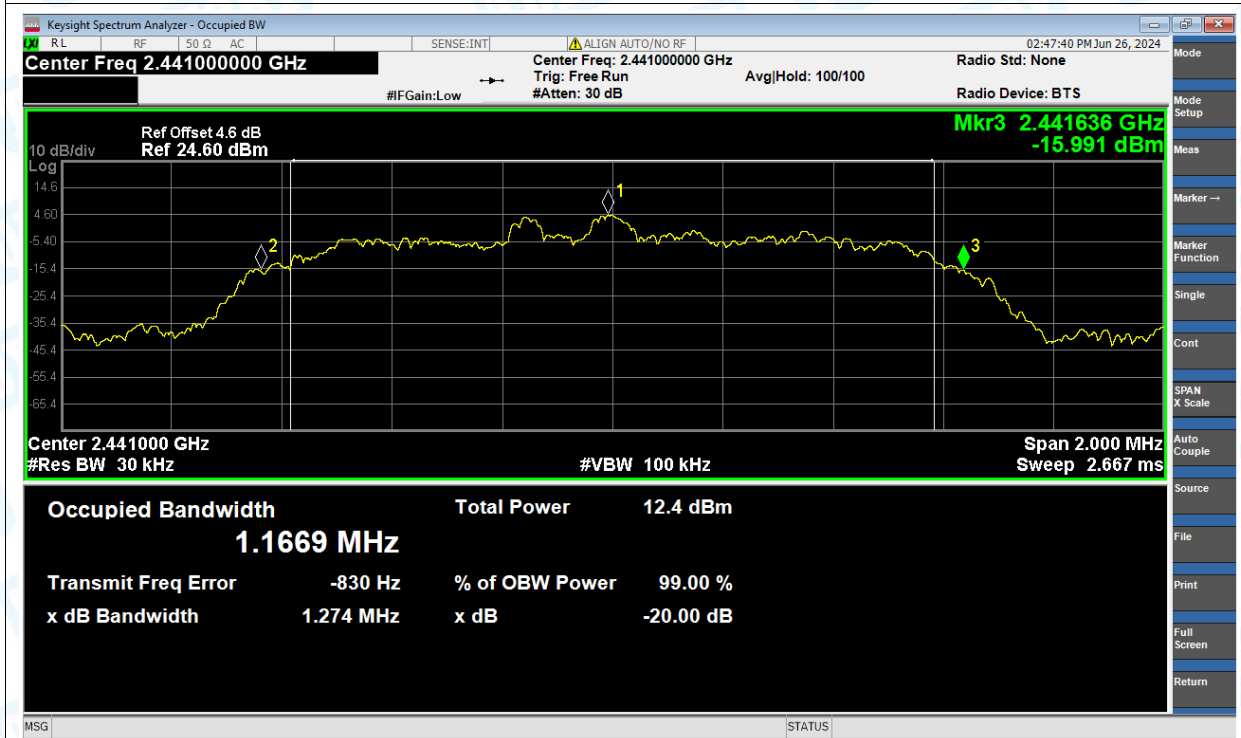
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



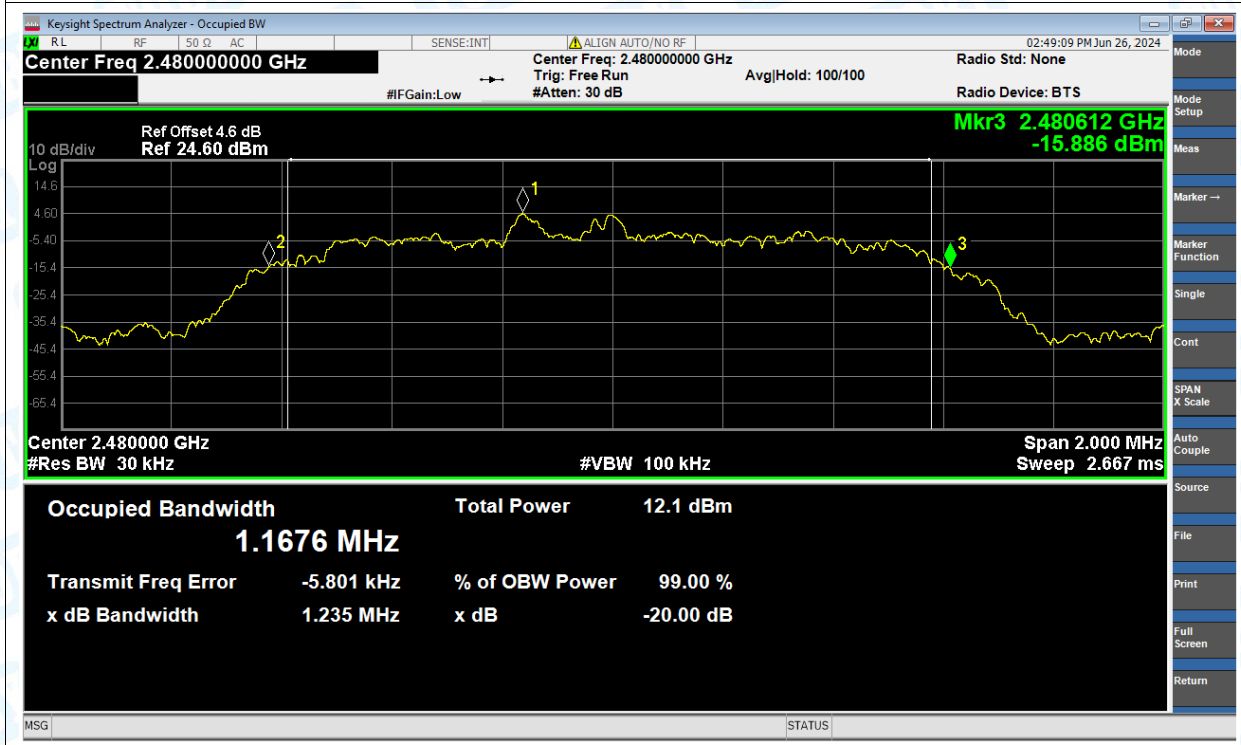
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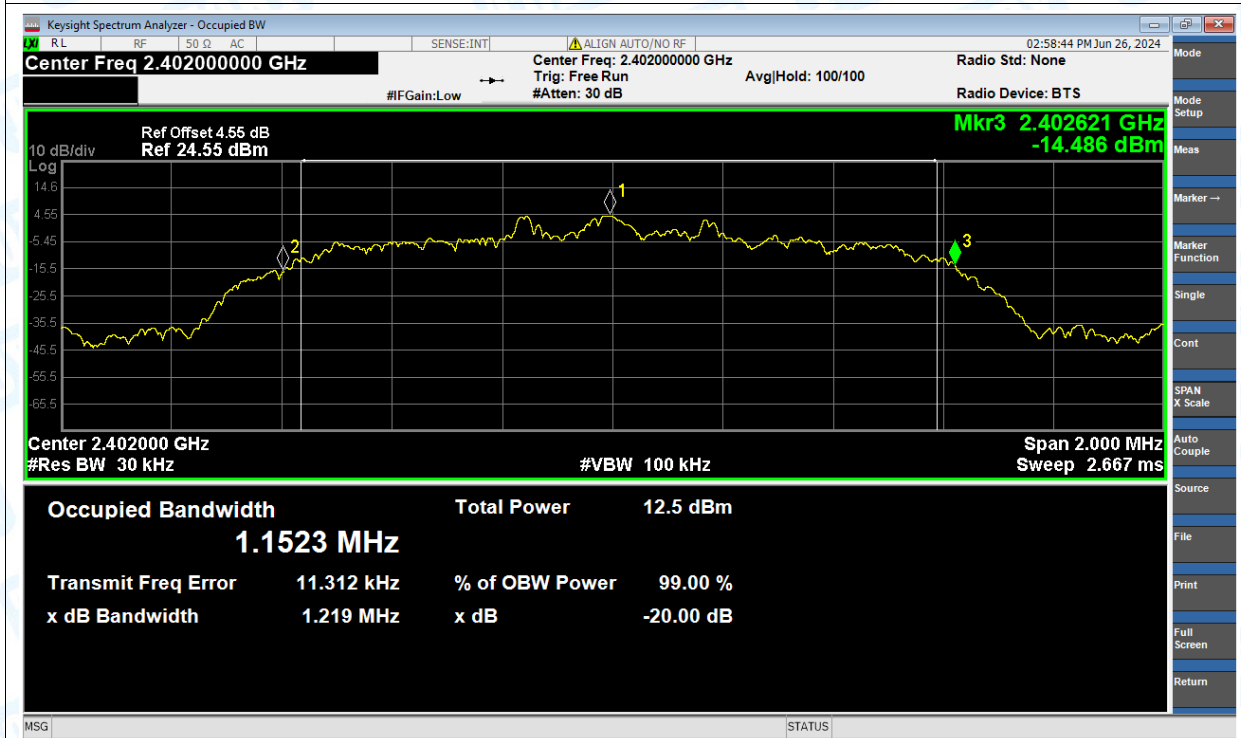
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



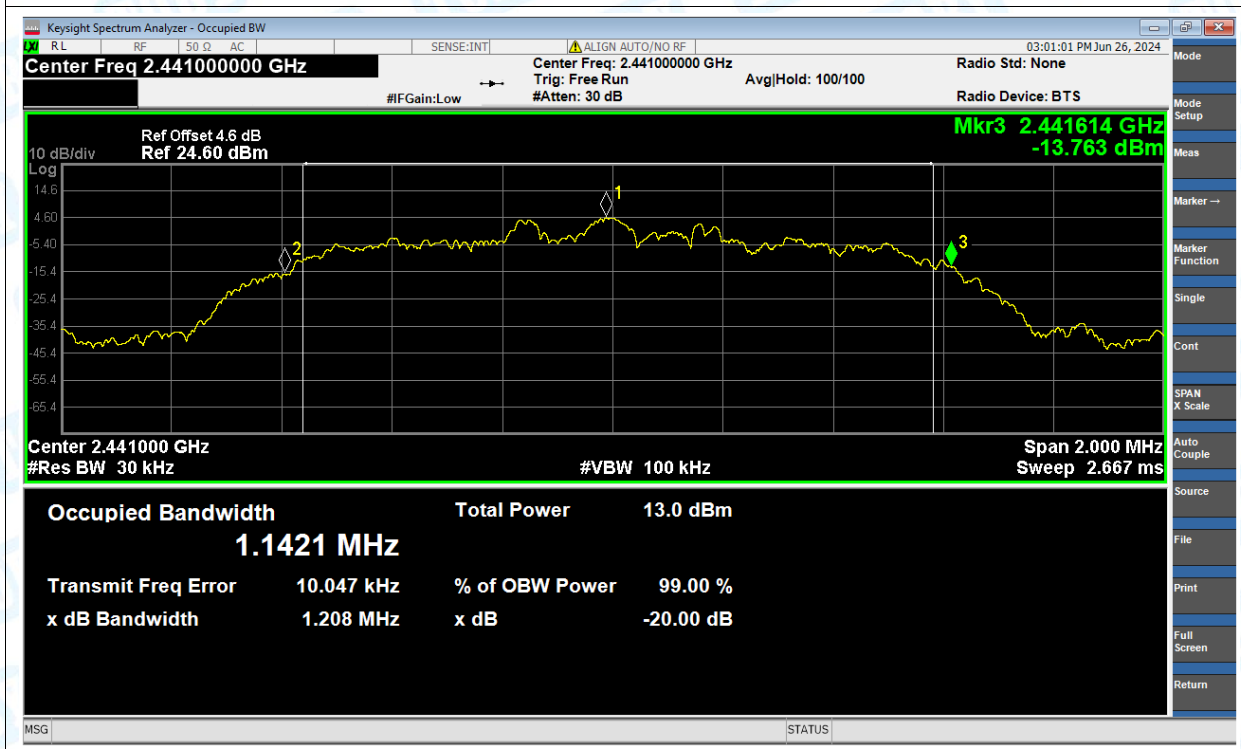
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

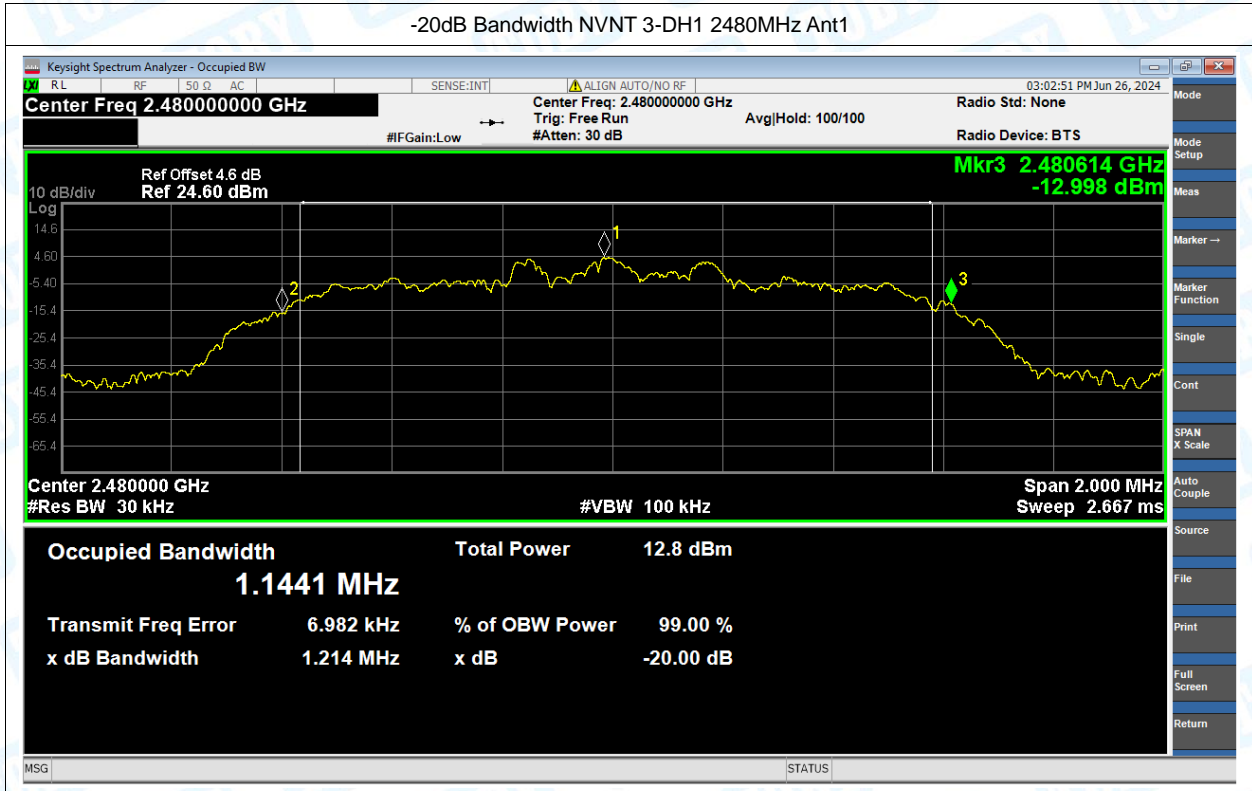


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



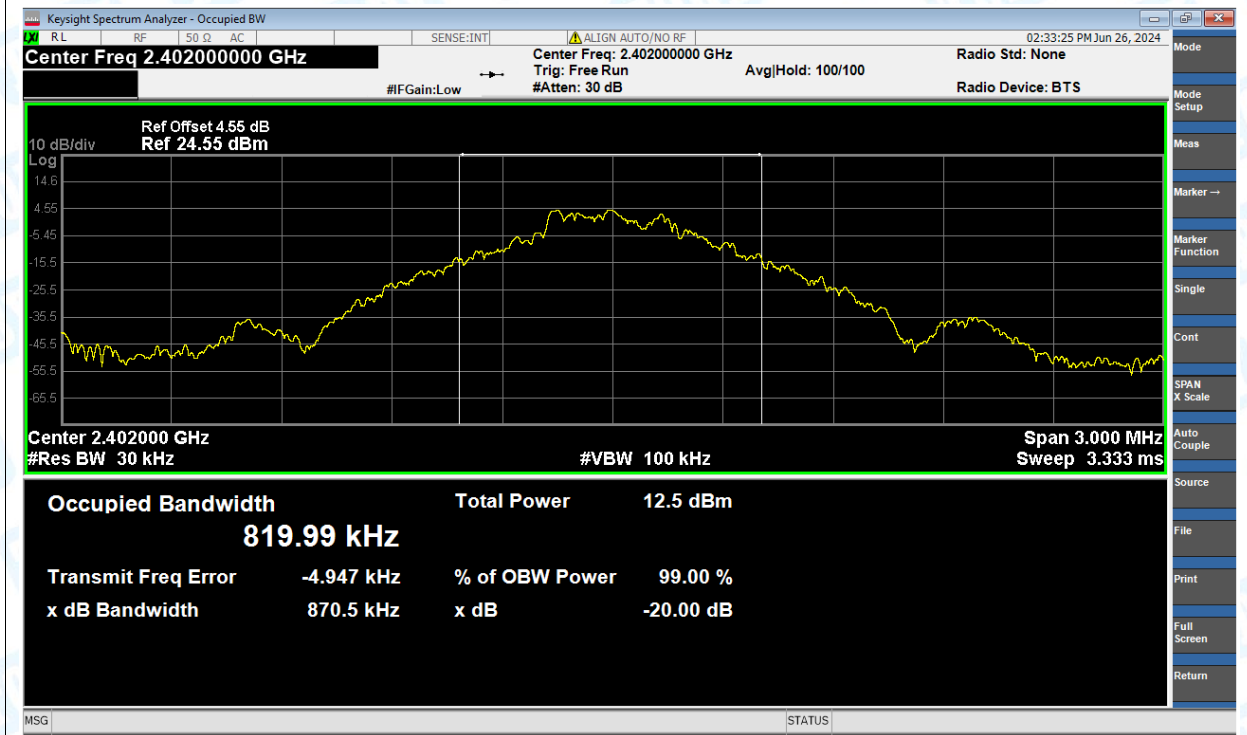


5.Occupied Channel Bandwidth

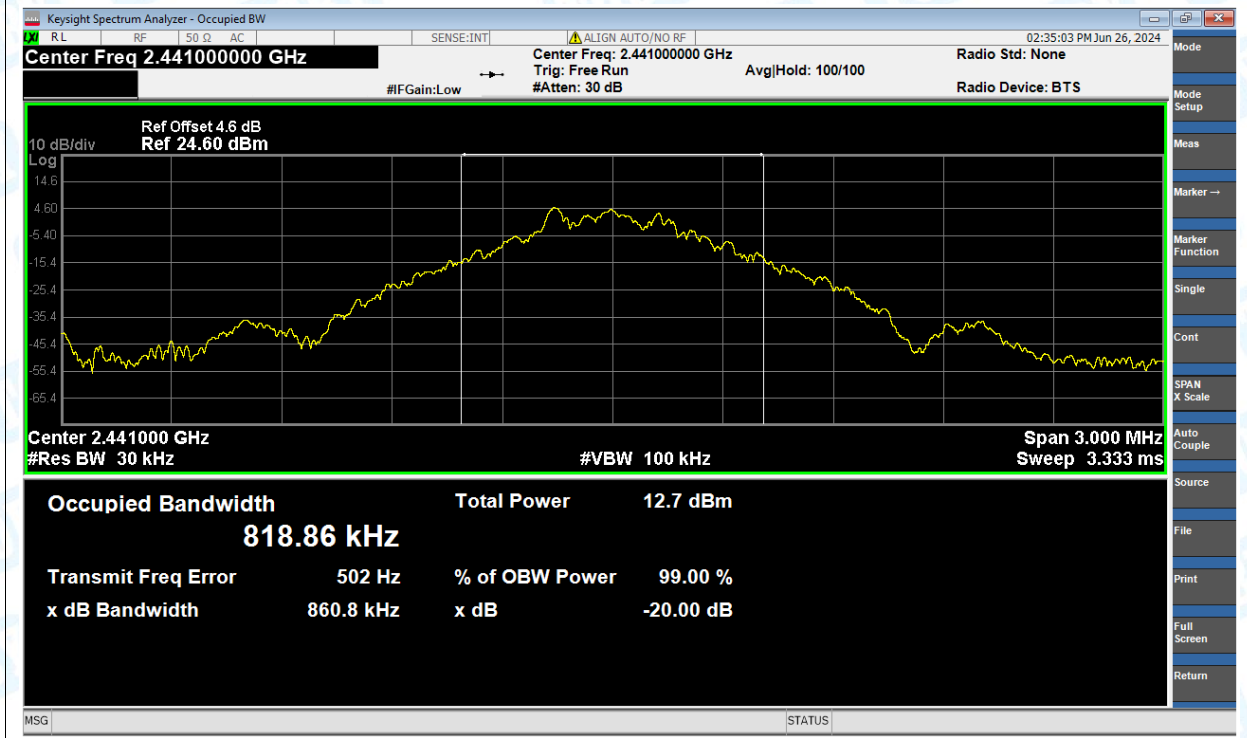
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.82
NVNT	1-DH1	2441	Ant1	0.819
NVNT	1-DH1	2480	Ant1	0.842
NVNT	2-DH1	2402	Ant1	1.188
NVNT	2-DH1	2441	Ant1	1.177
NVNT	2-DH1	2480	Ant1	1.159
NVNT	3-DH1	2402	Ant1	1.155
NVNT	3-DH1	2441	Ant1	1.14
NVNT	3-DH1	2480	Ant1	1.146

Test Graphs

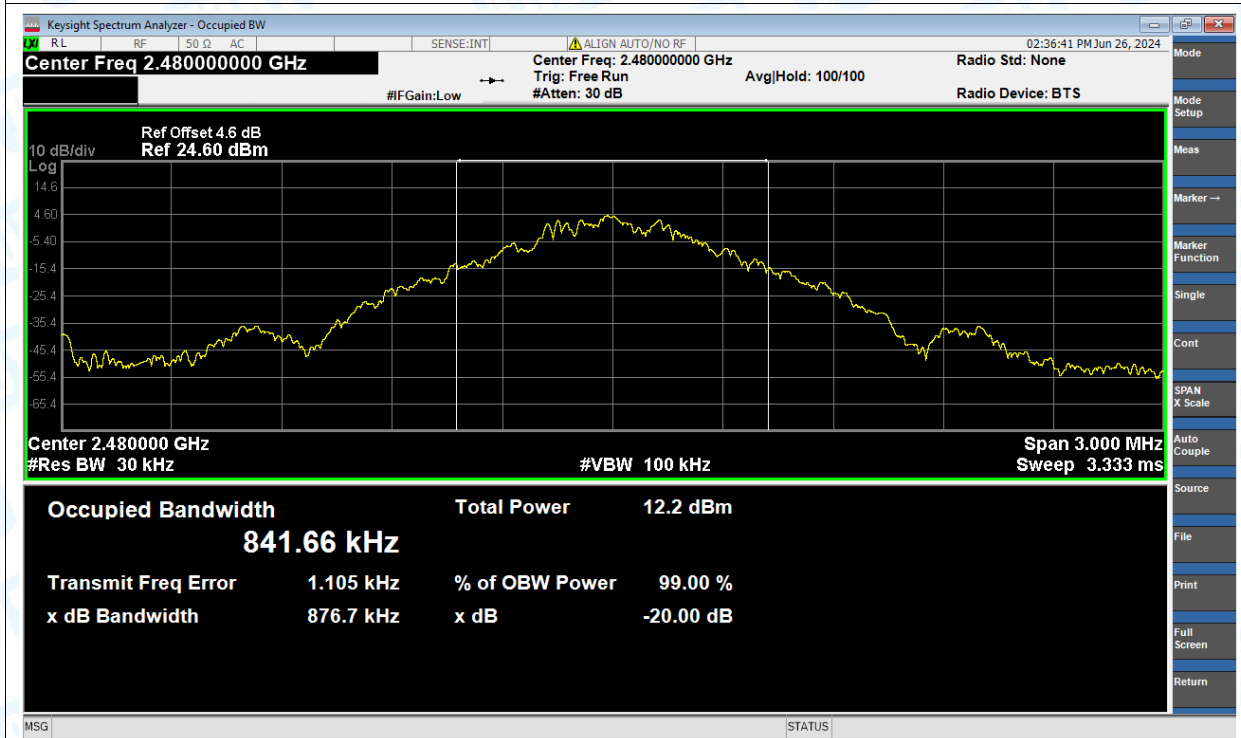
OBW NVNT 1-DH1 2402MHz Ant1



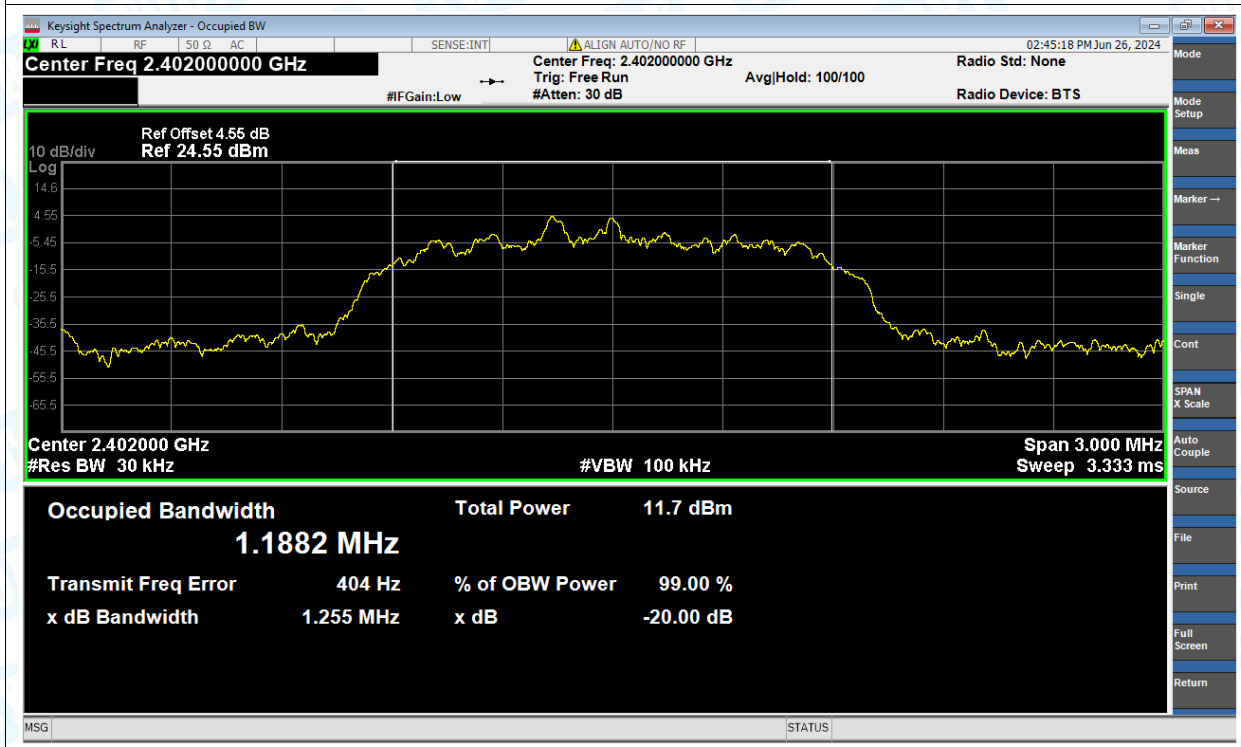
OBW NVNT 1-DH1 2441MHz Ant1



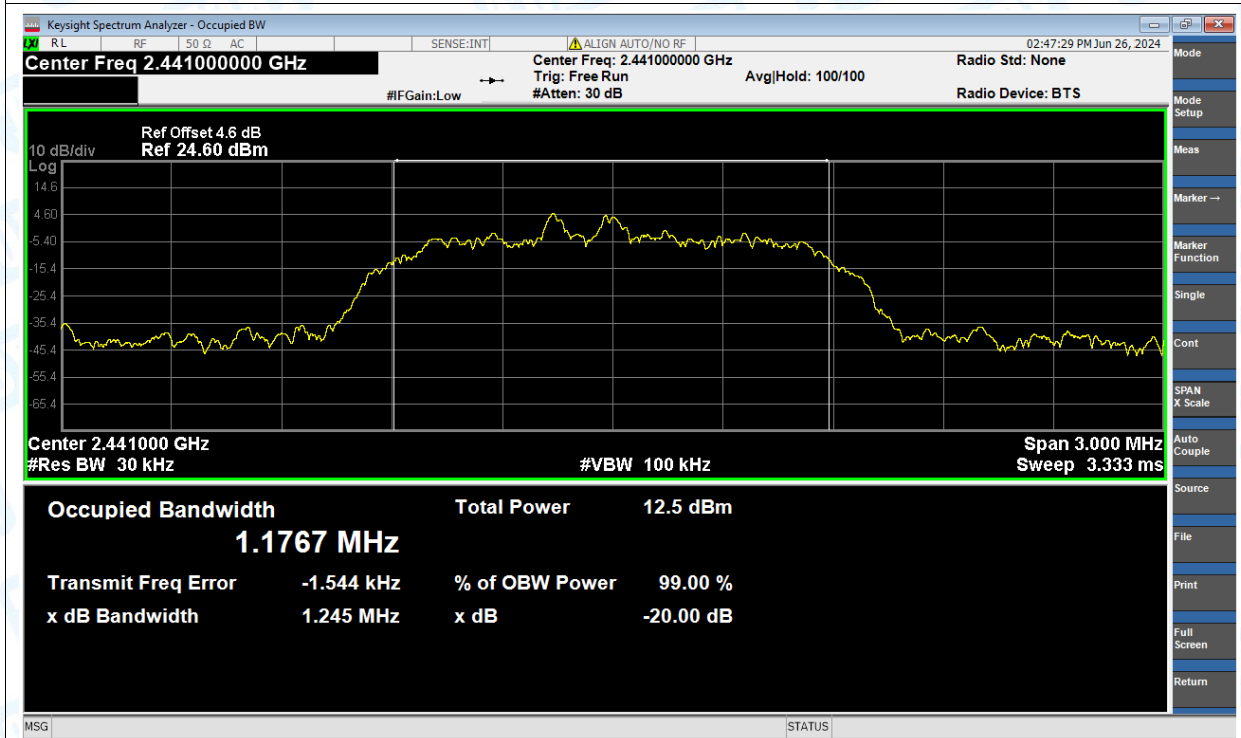
OBW NVNT 1-DH1 2480MHz Ant1



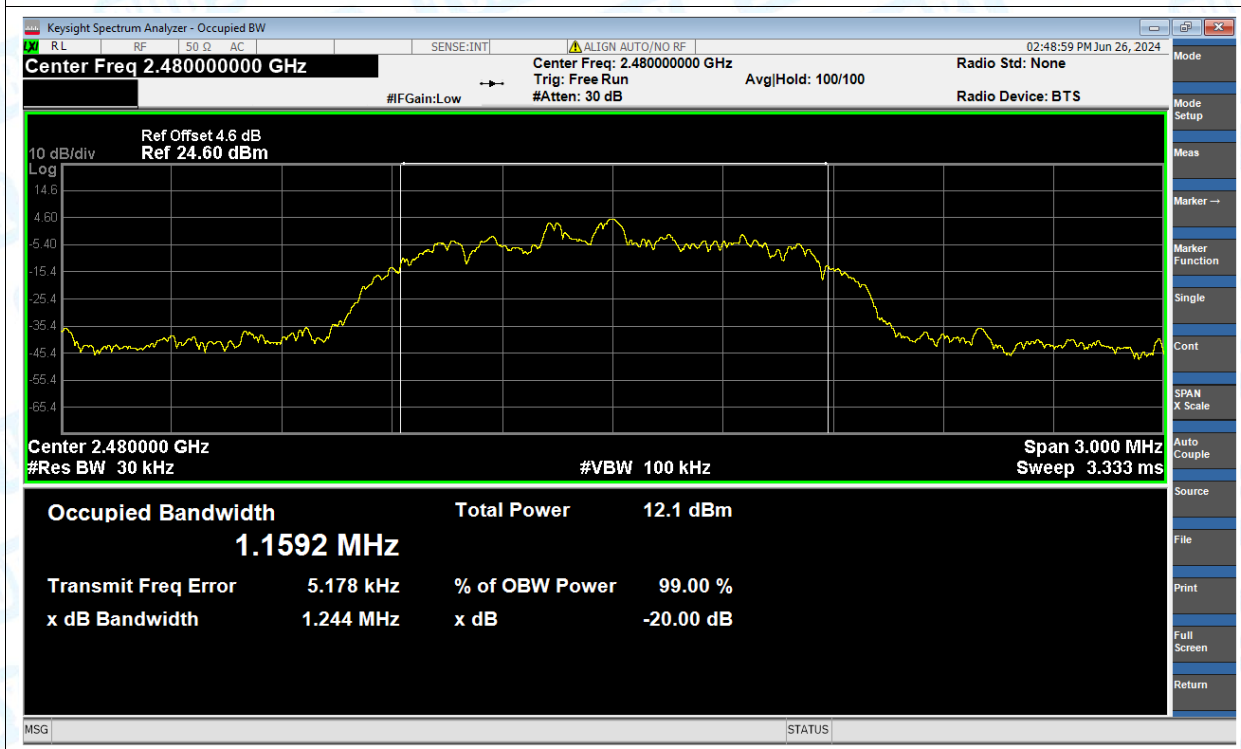
OBW NVNT 2-DH1 2402MHz Ant1



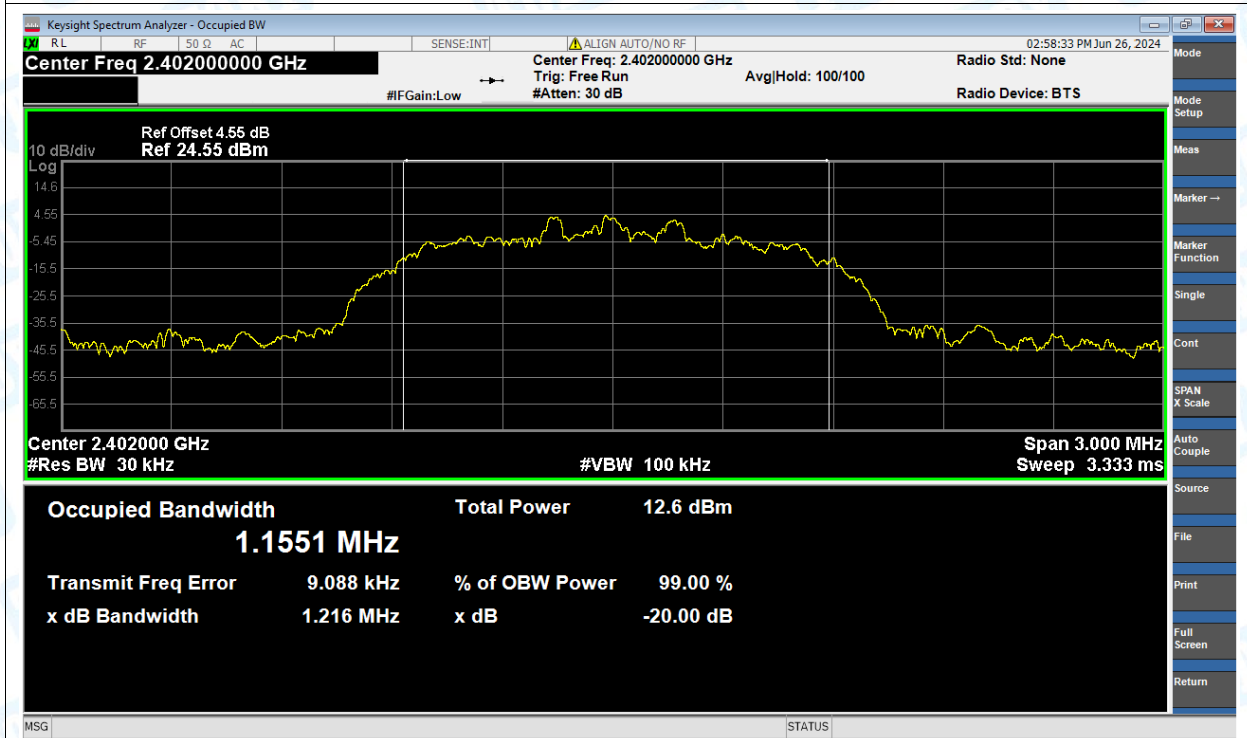
OBW NVNT 2-DH1 2441MHz Ant1



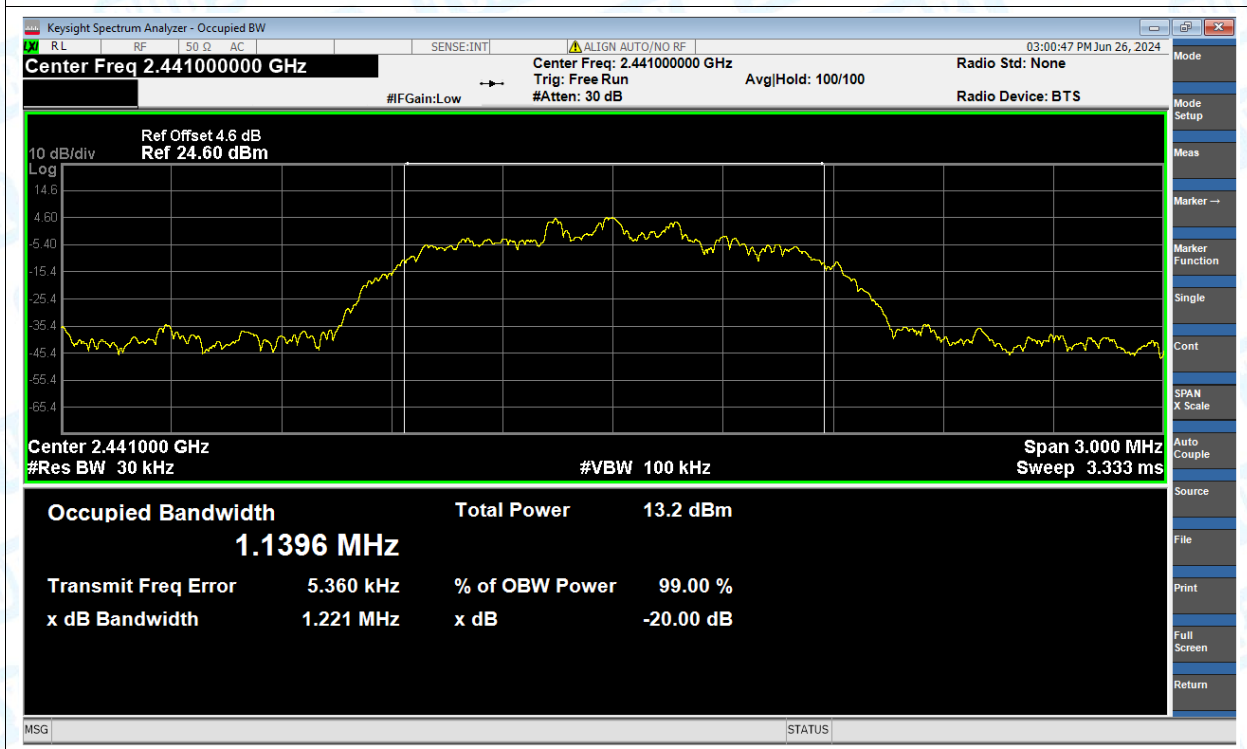
OBW NVNT 2-DH1 2480MHz Ant1

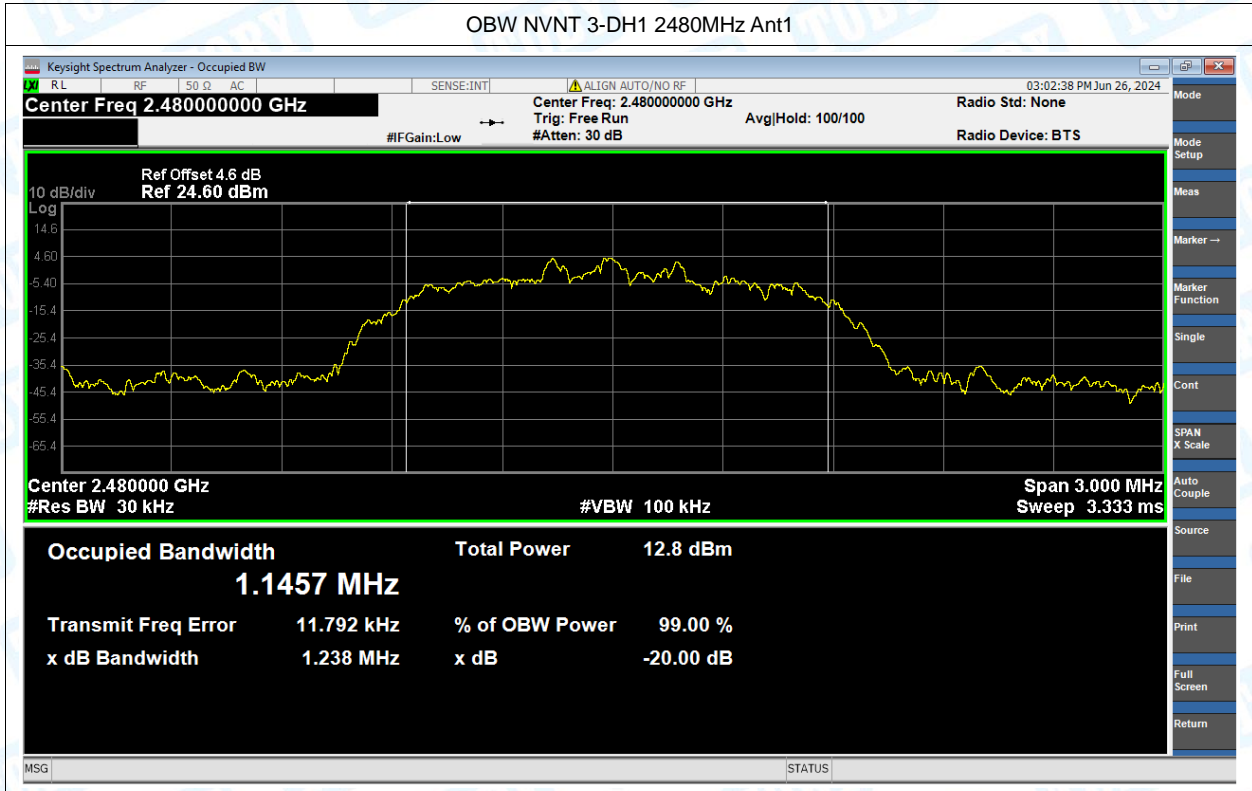


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



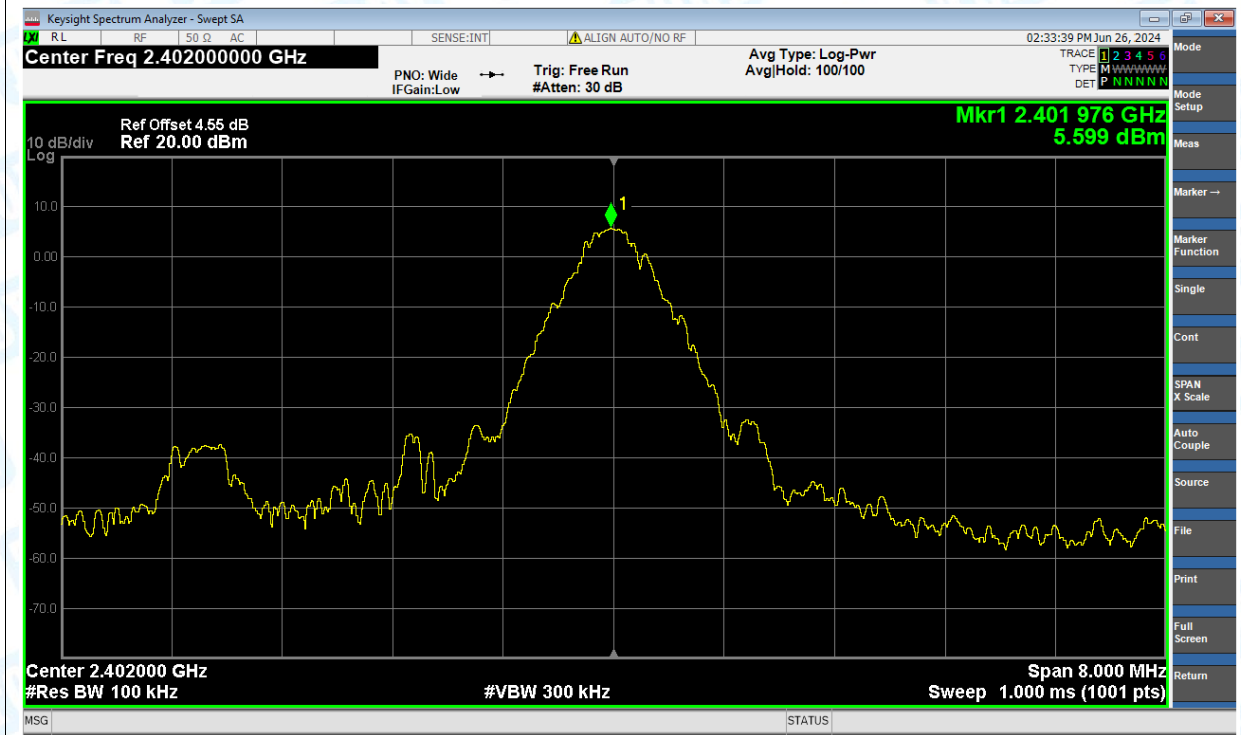


6.Band Edge

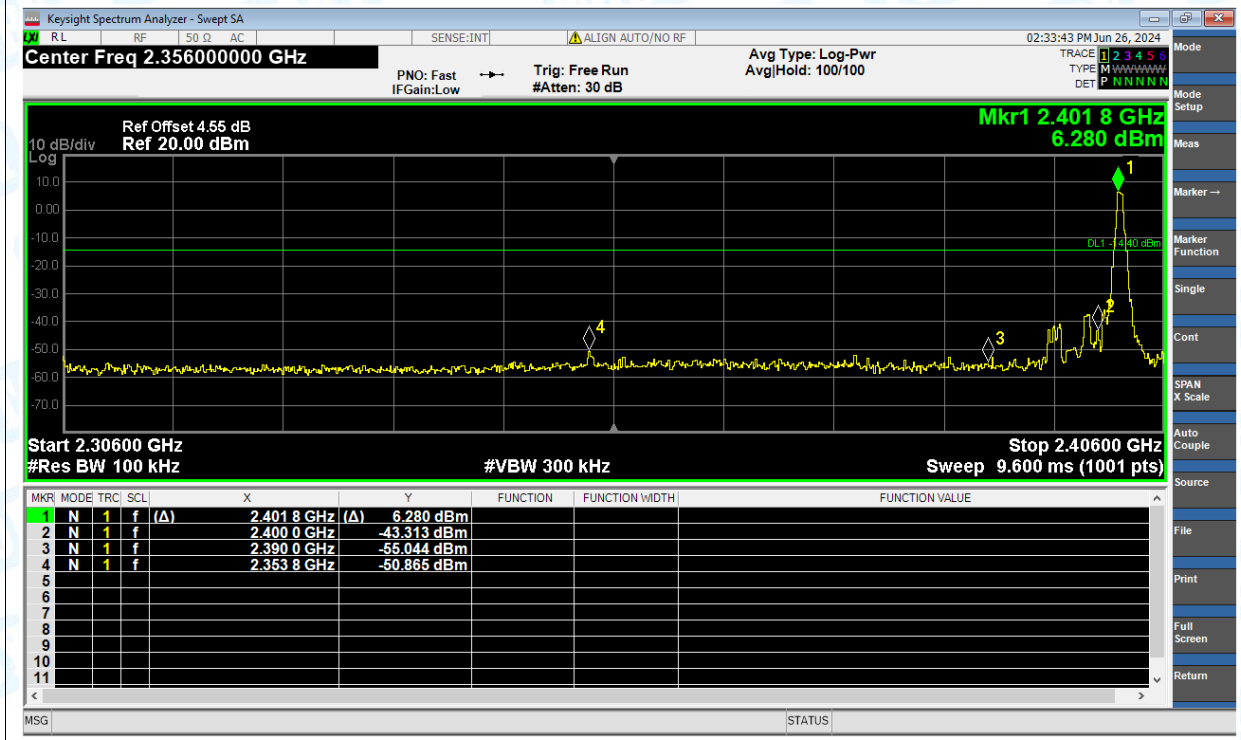
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-56.47	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-58.65	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-58.72	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-57.99	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-55.19	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-58	-20	Pass

Test Graphs

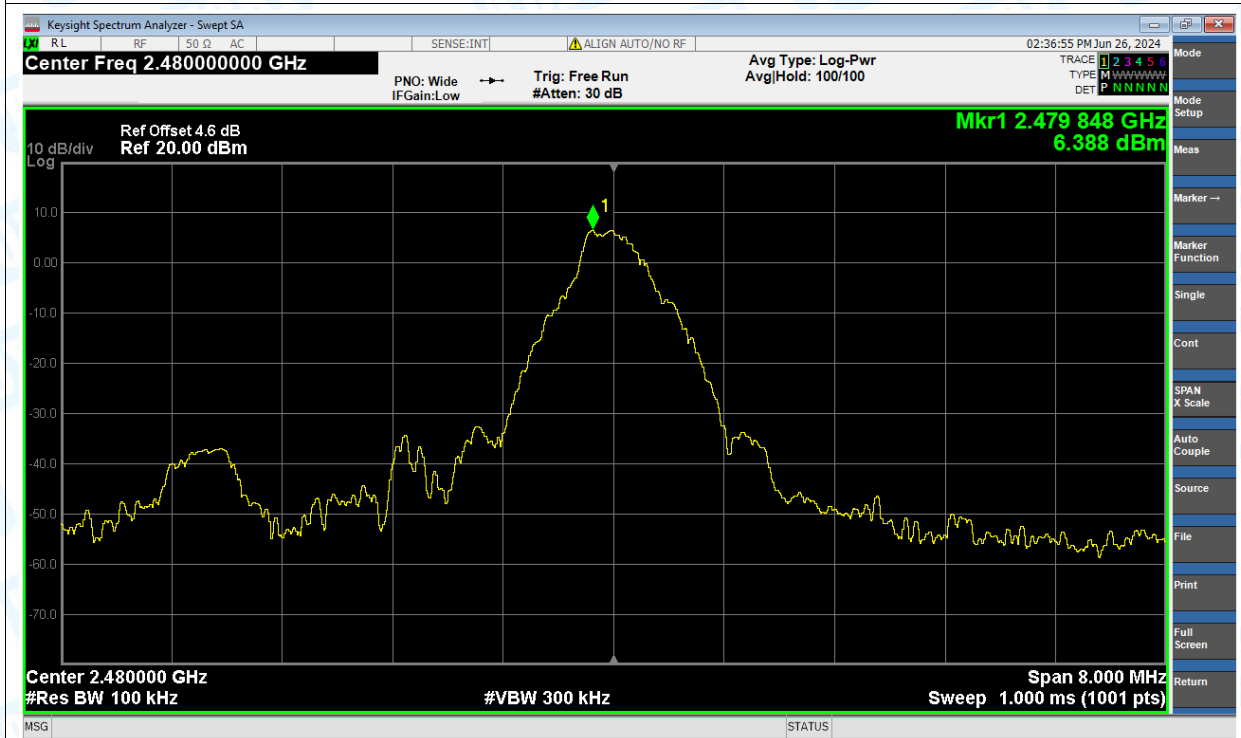
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



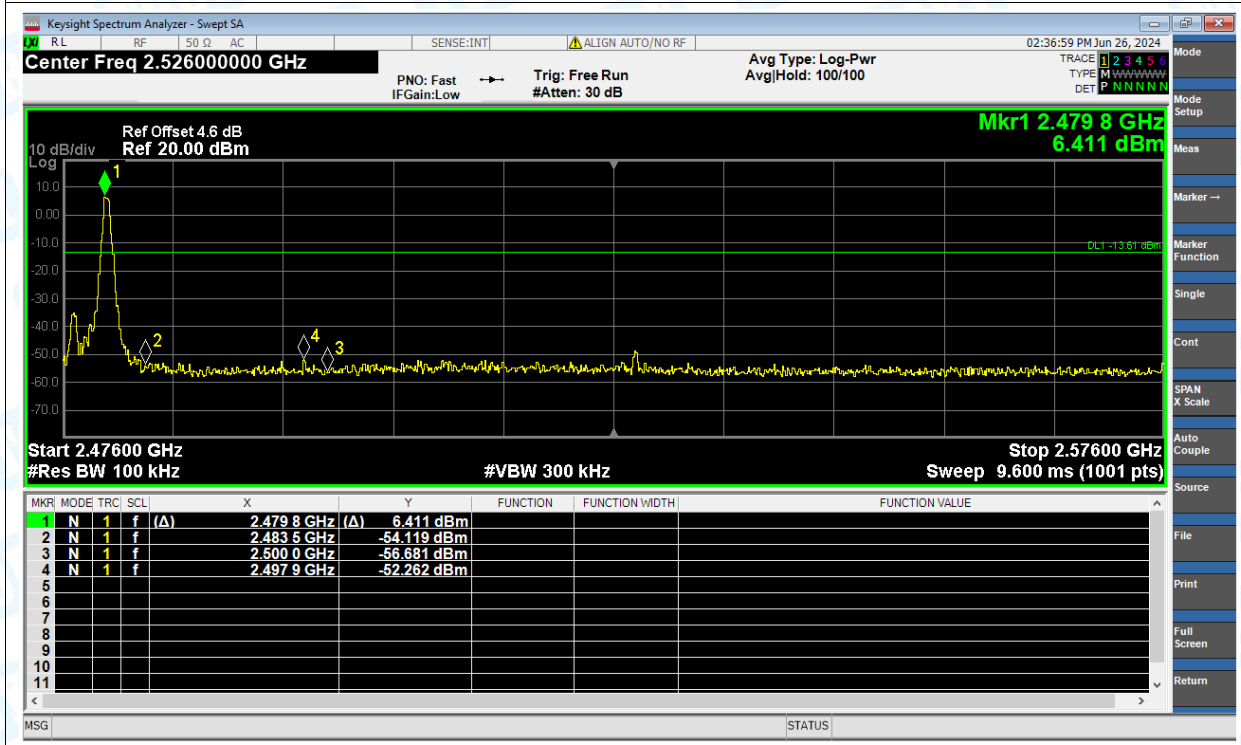
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

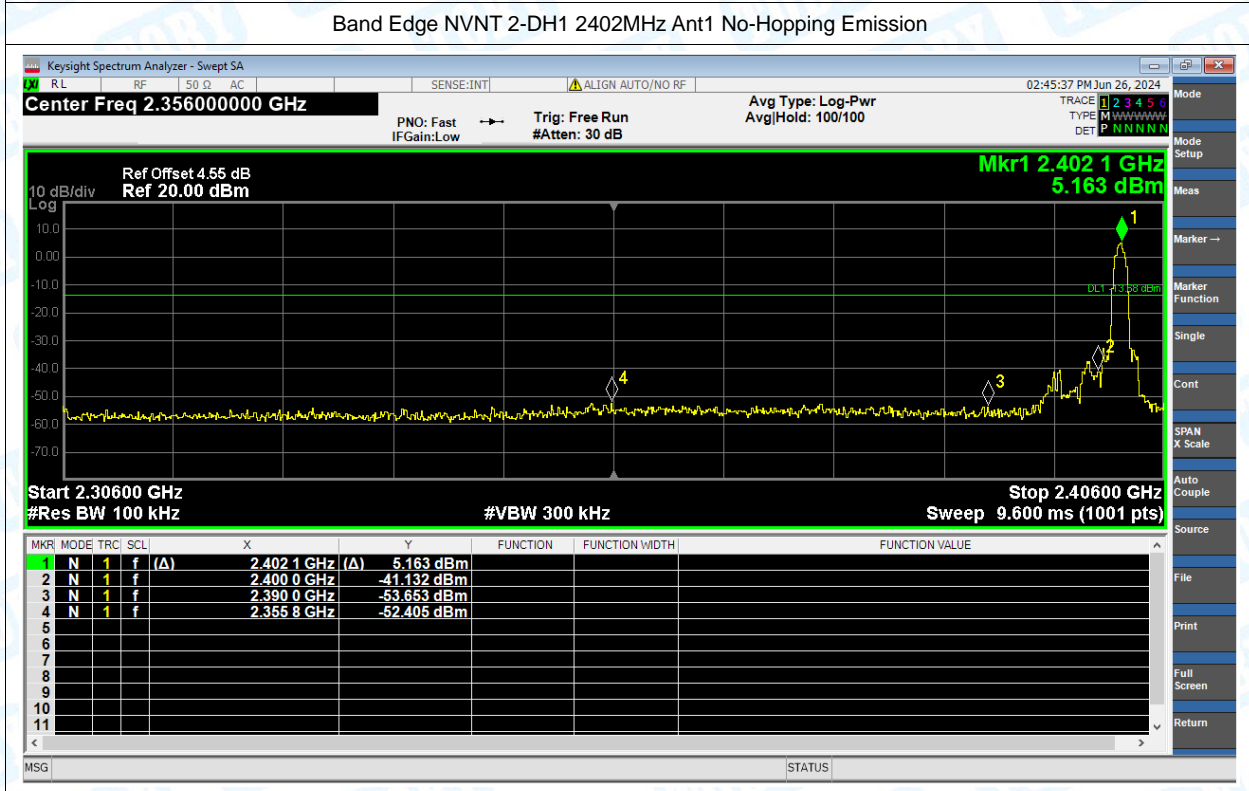
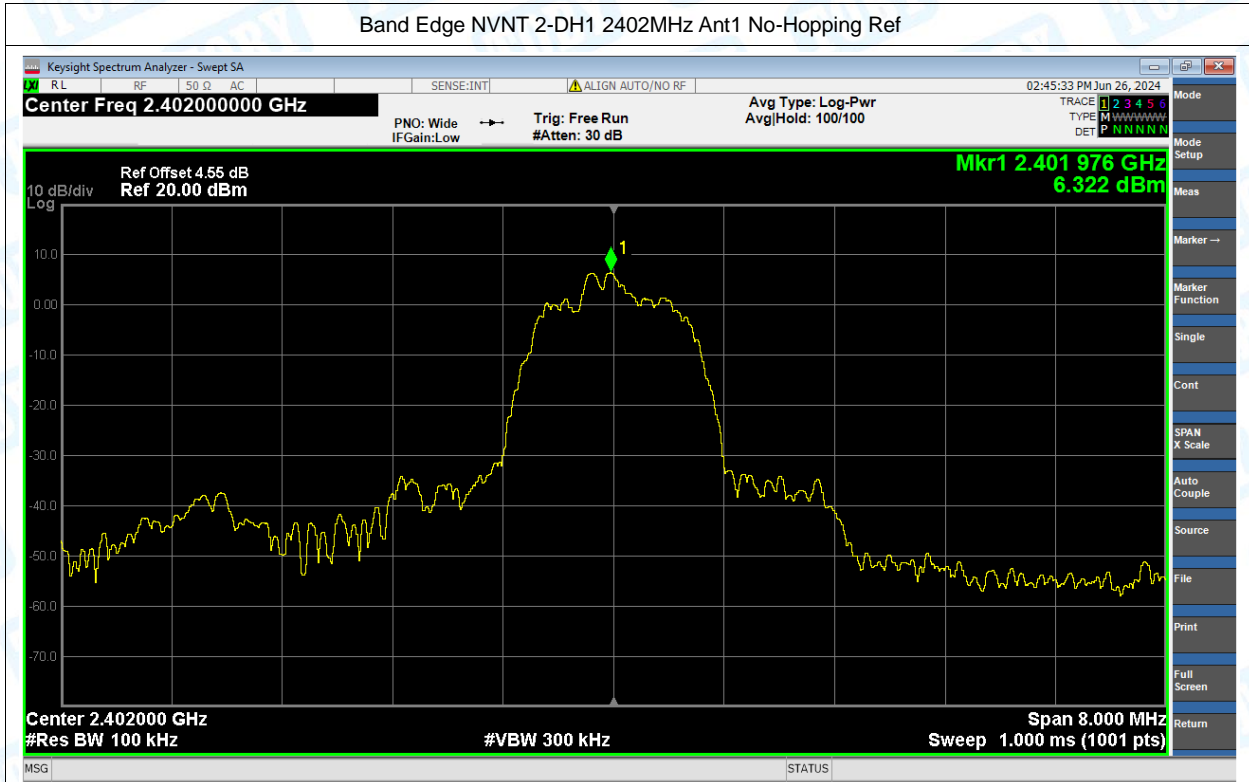


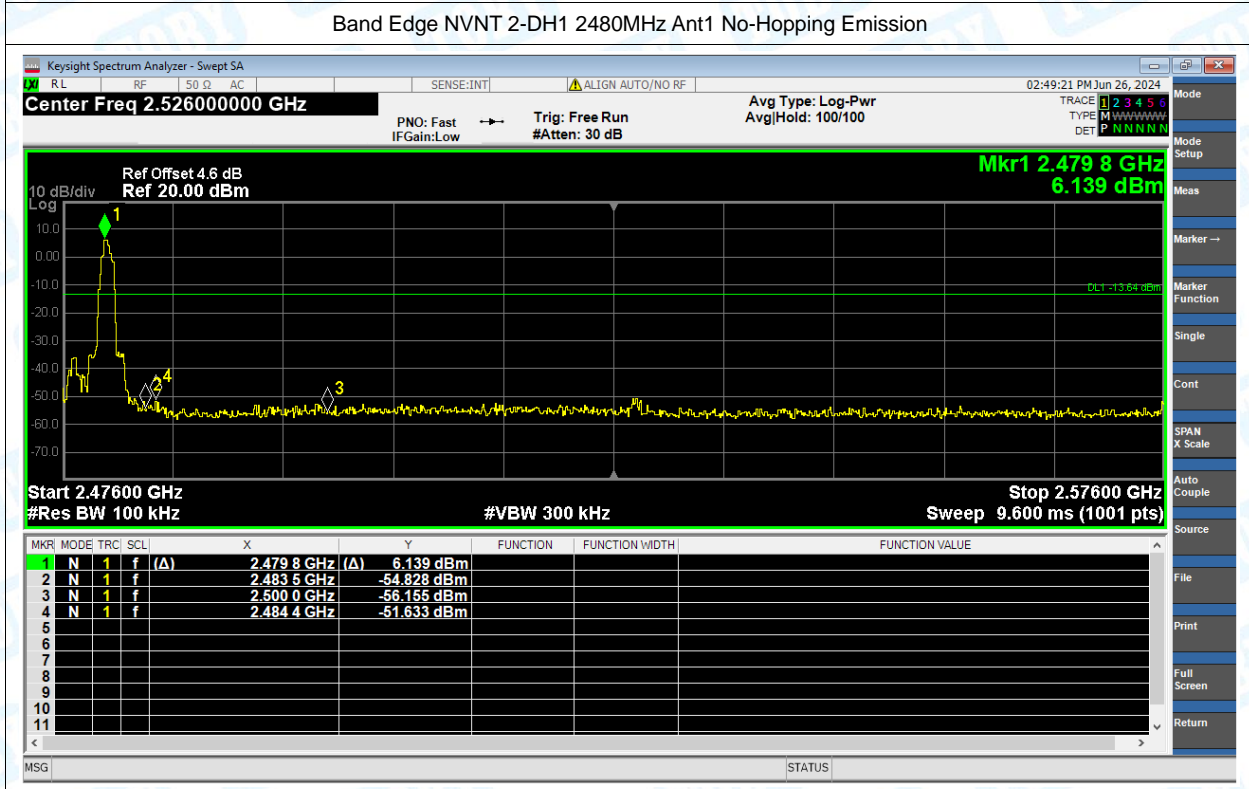
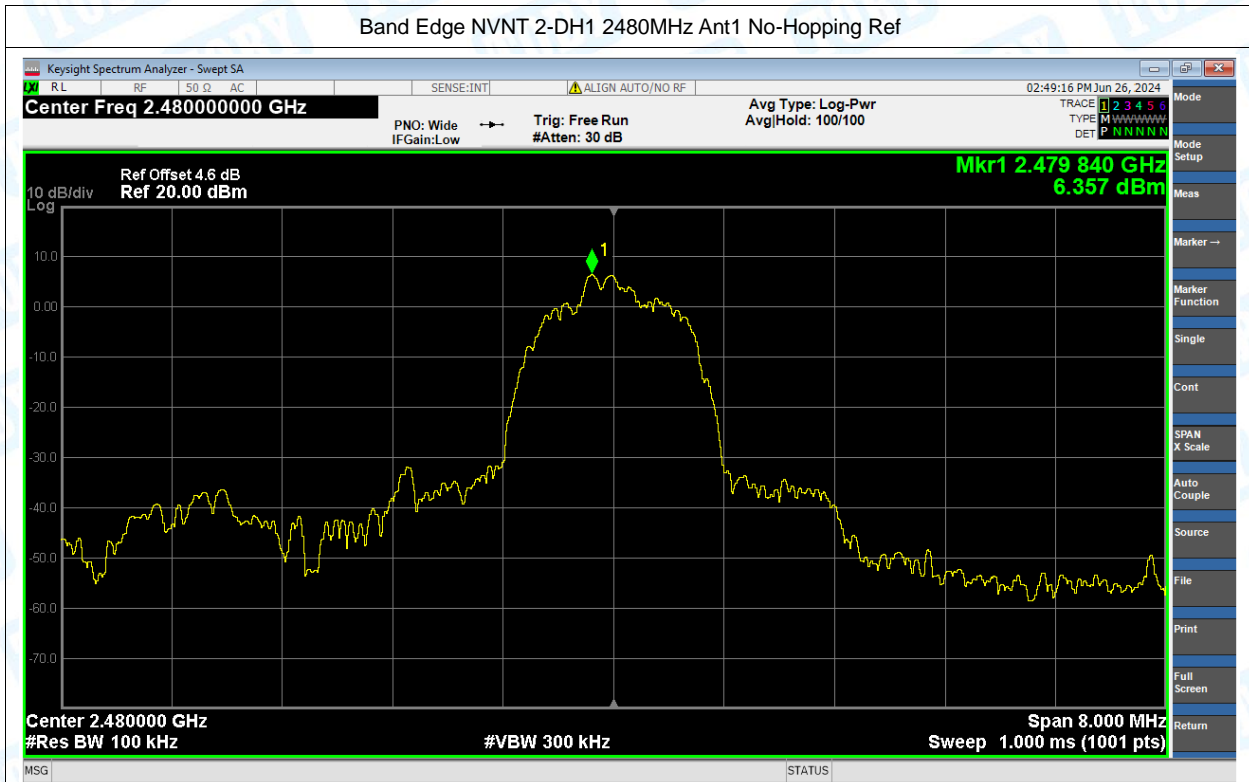
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



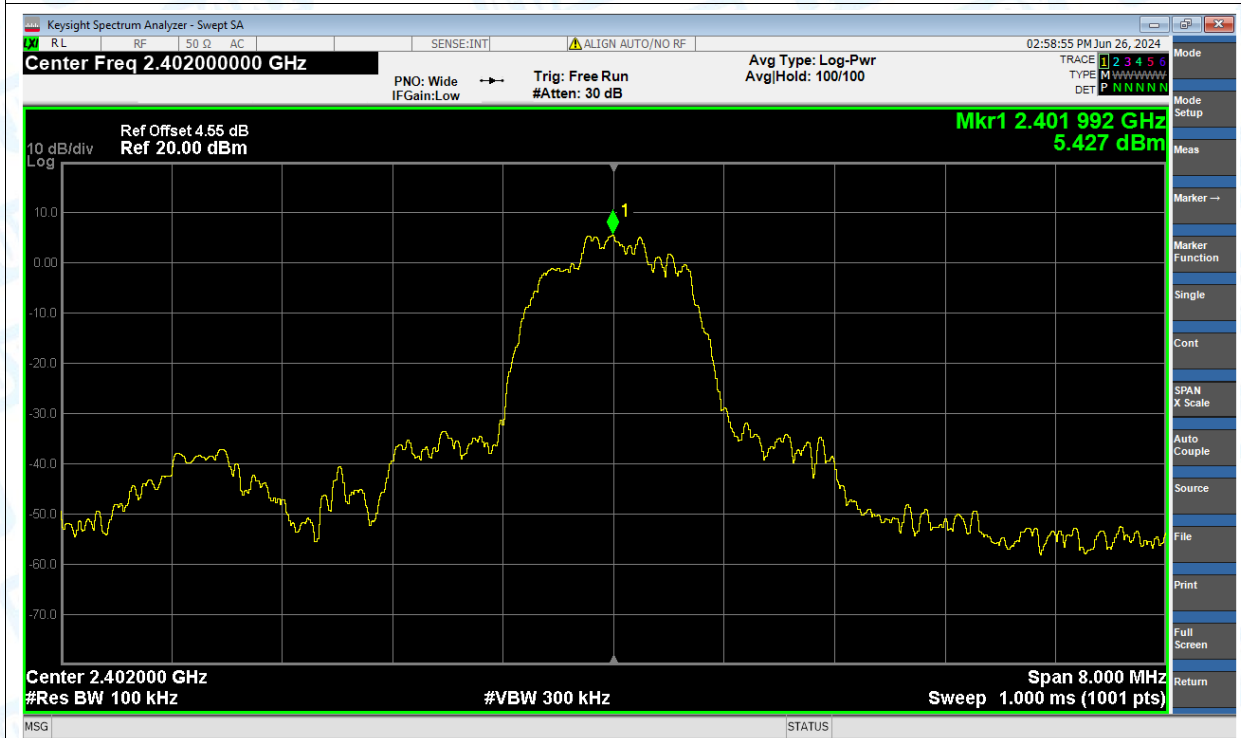
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



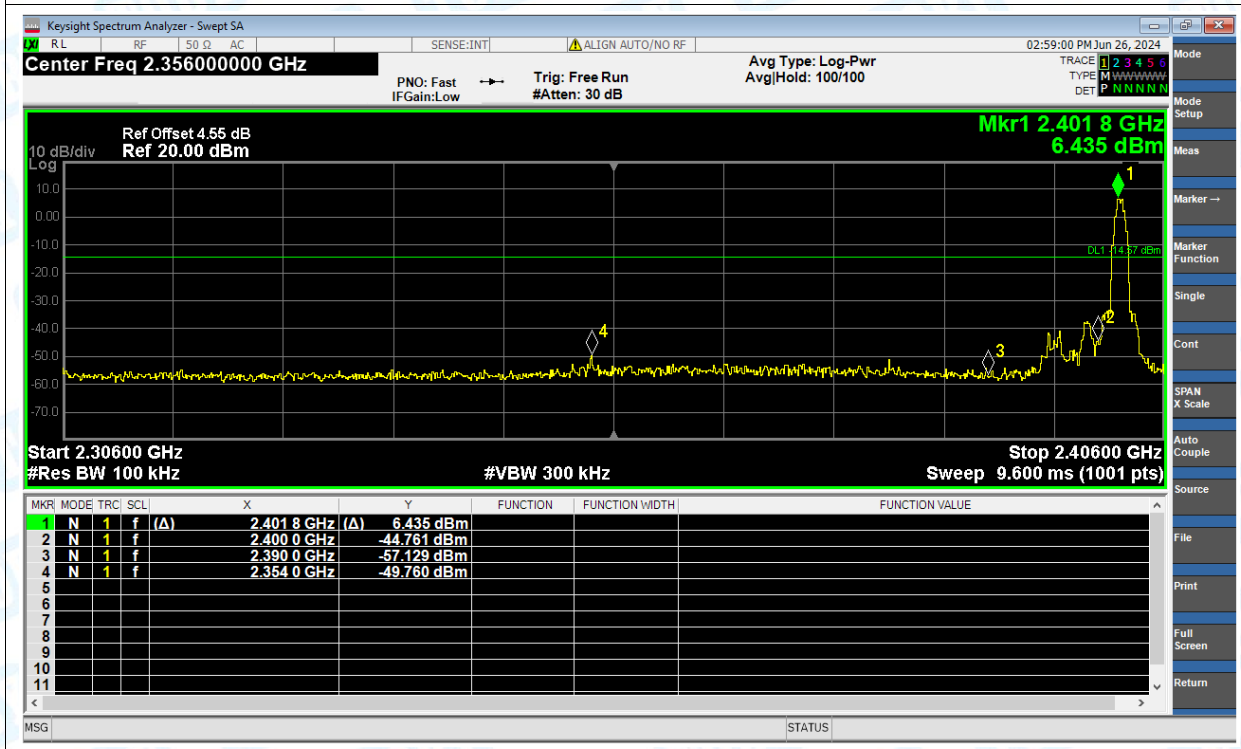




Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



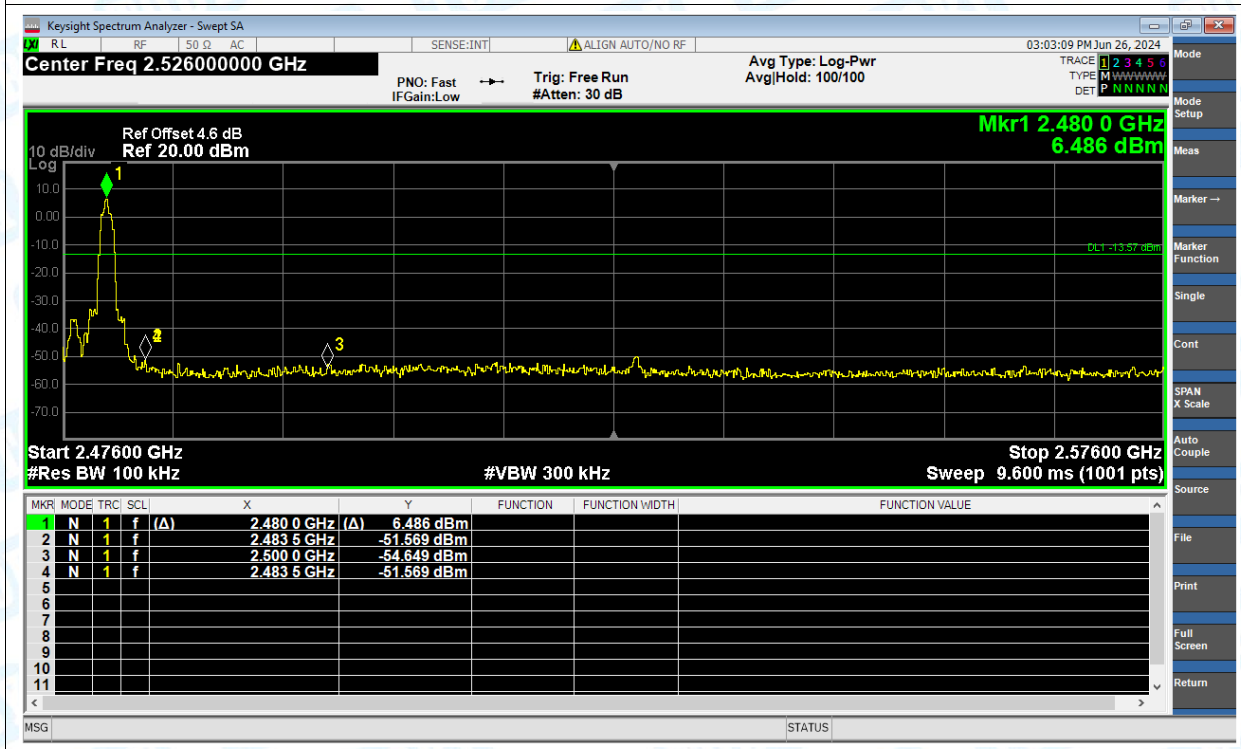
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



7. Band Edge(Hopping)

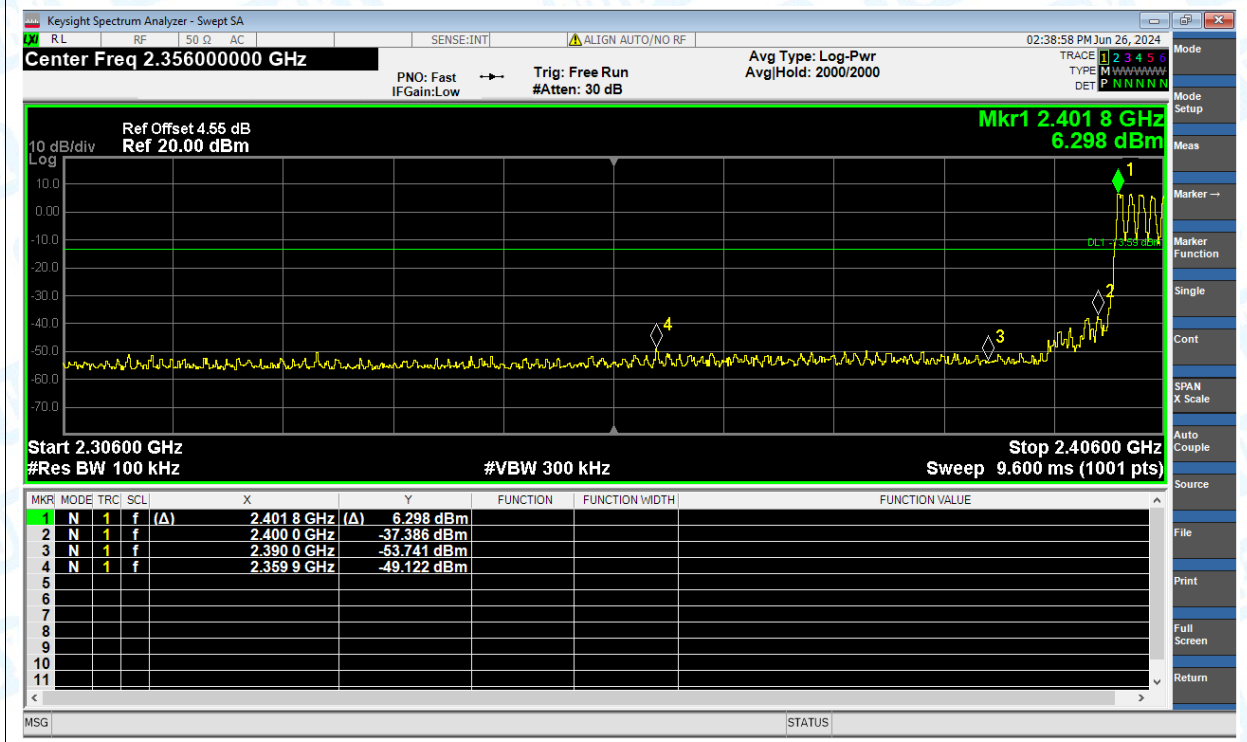
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-55.53	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-54.63	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-55.63	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-53.36	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-54.71	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-55.12	-20	Pass

Test Graphs

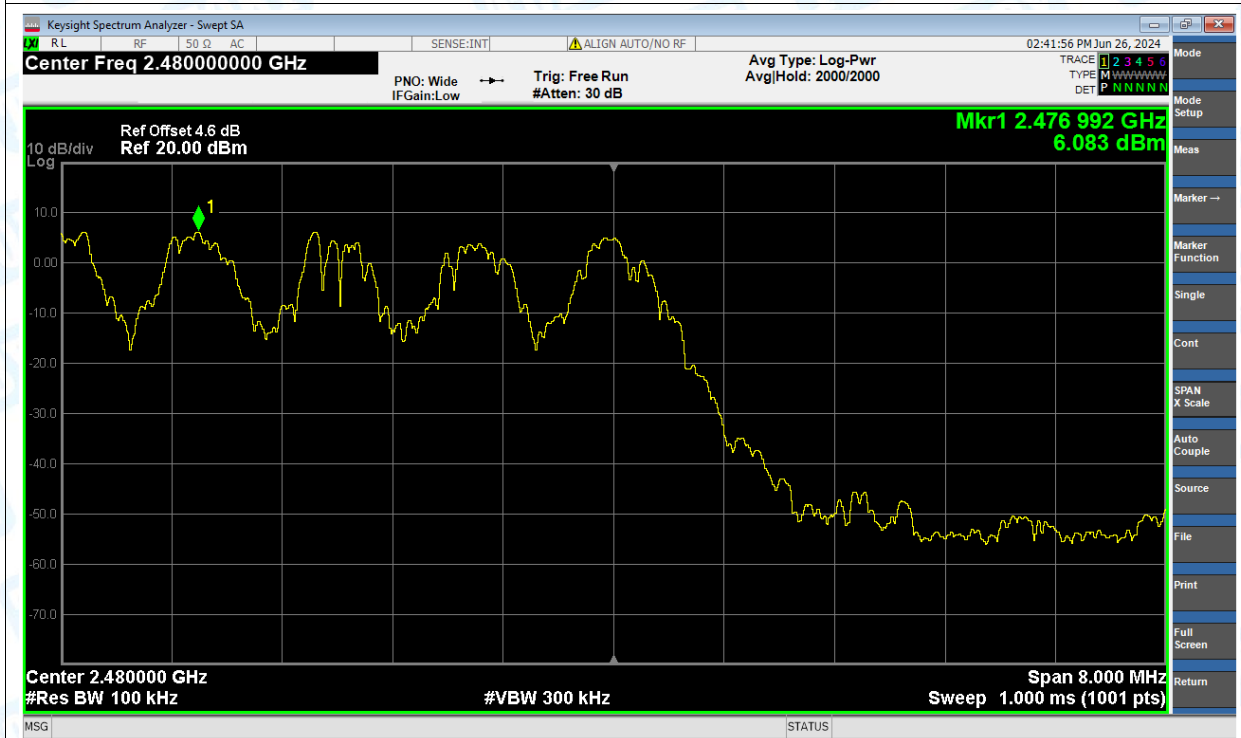
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



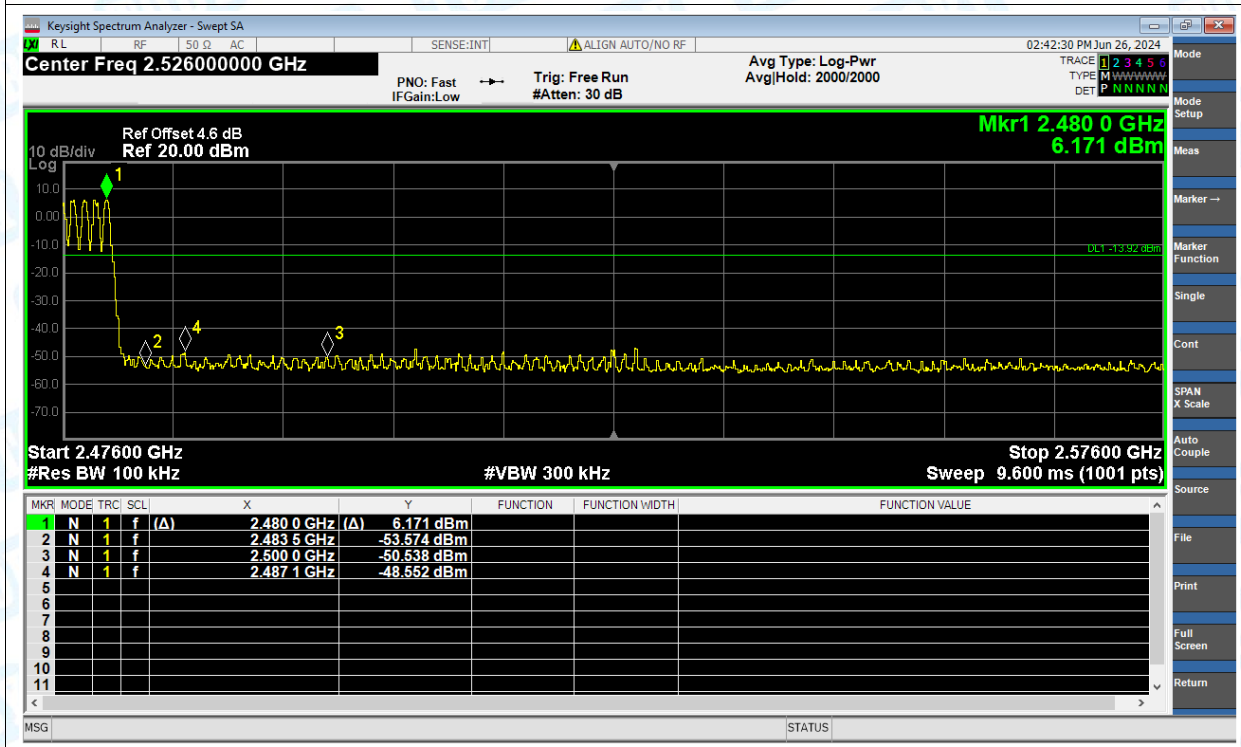
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



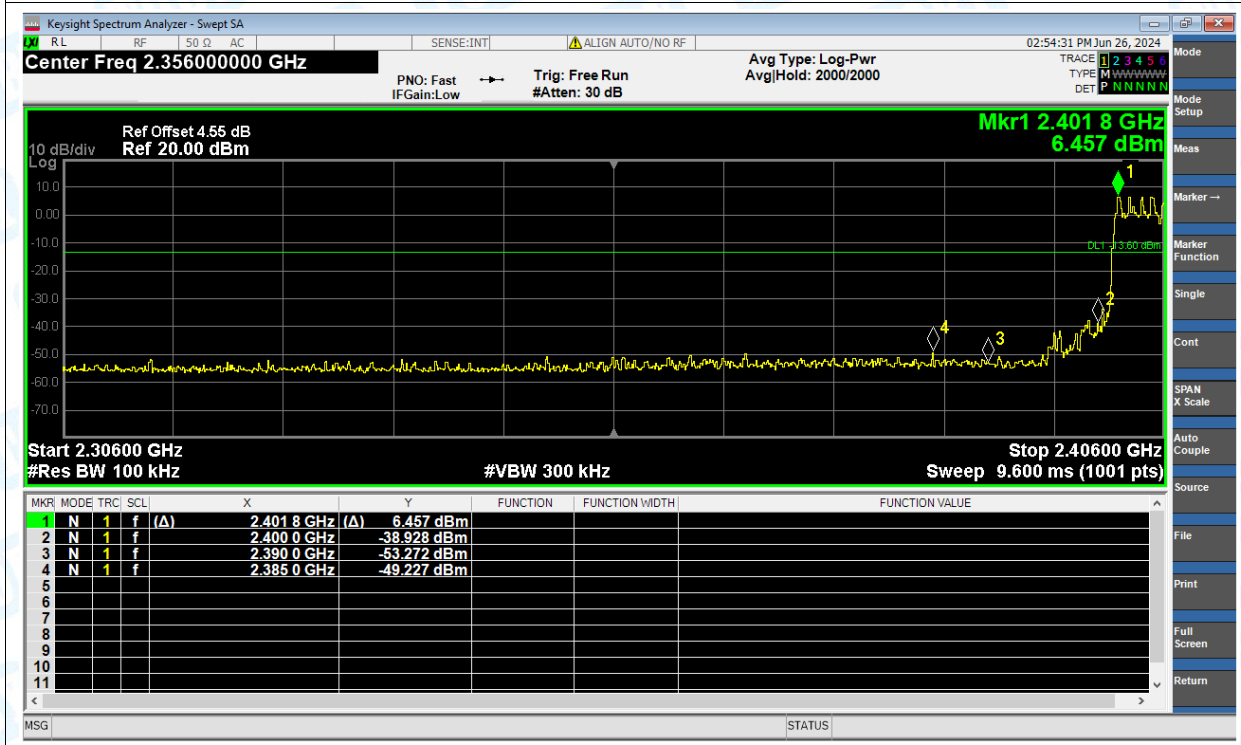
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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



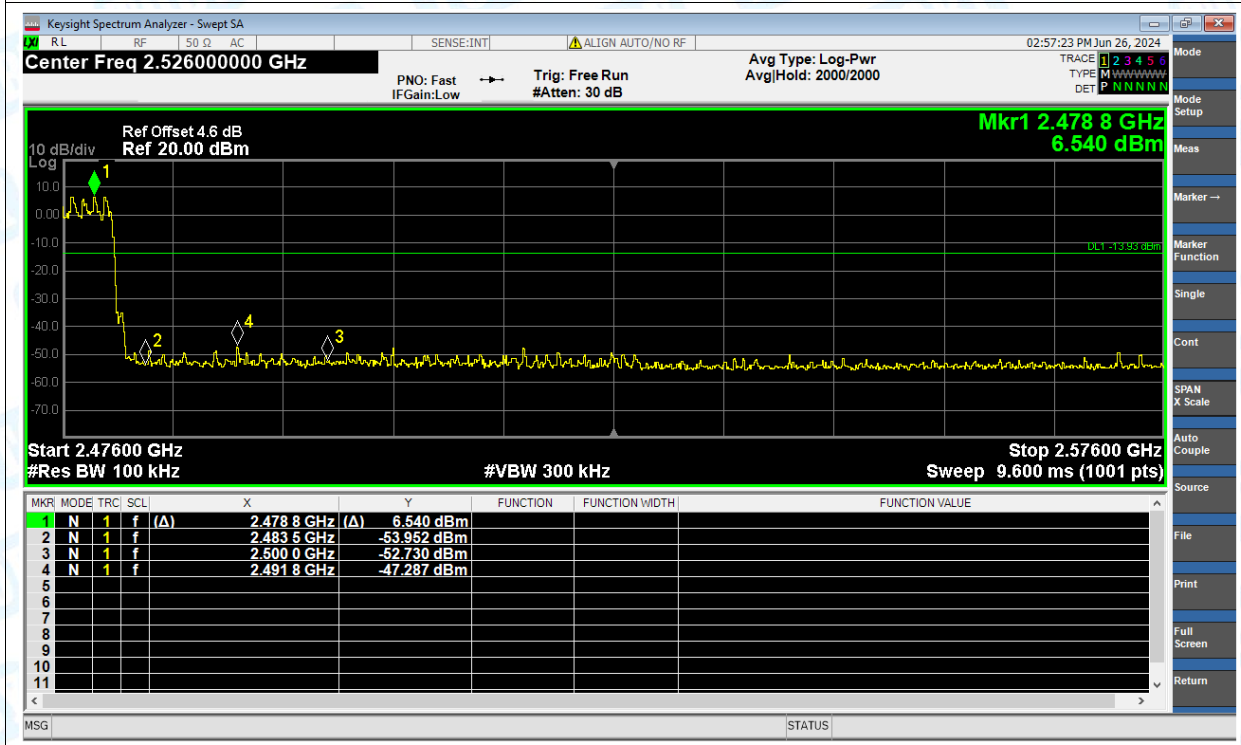
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



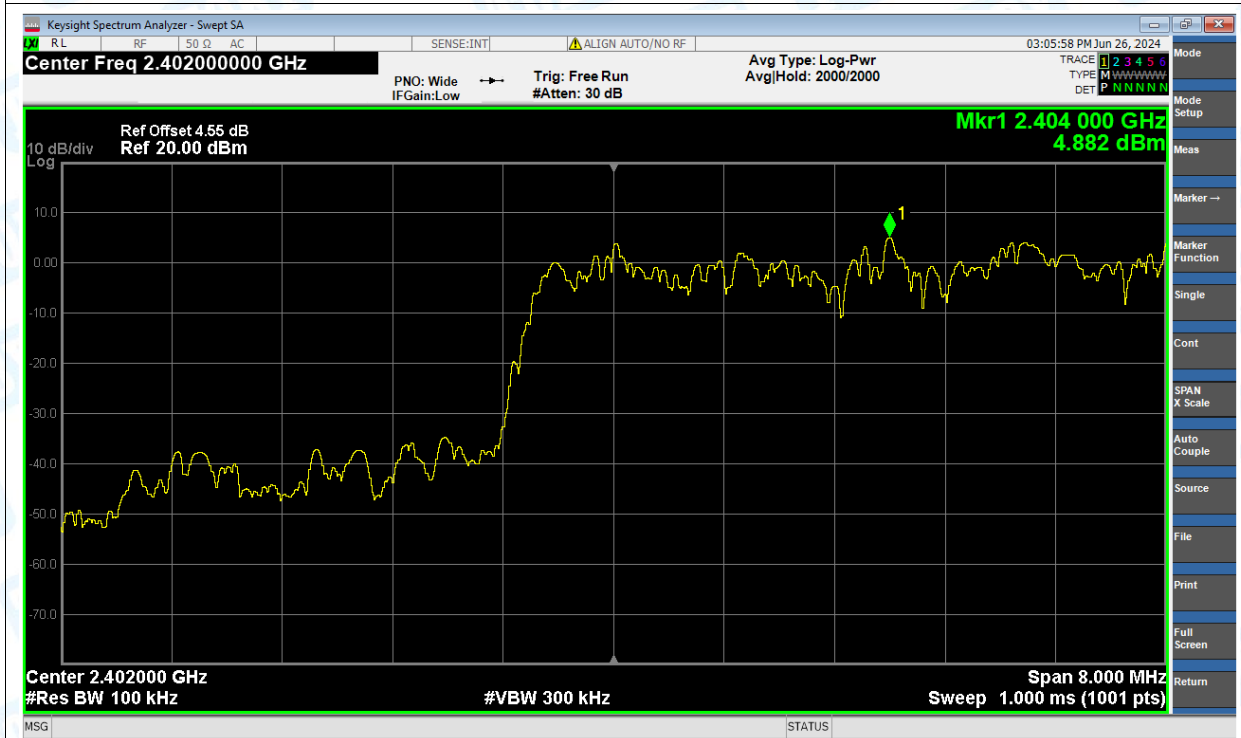
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



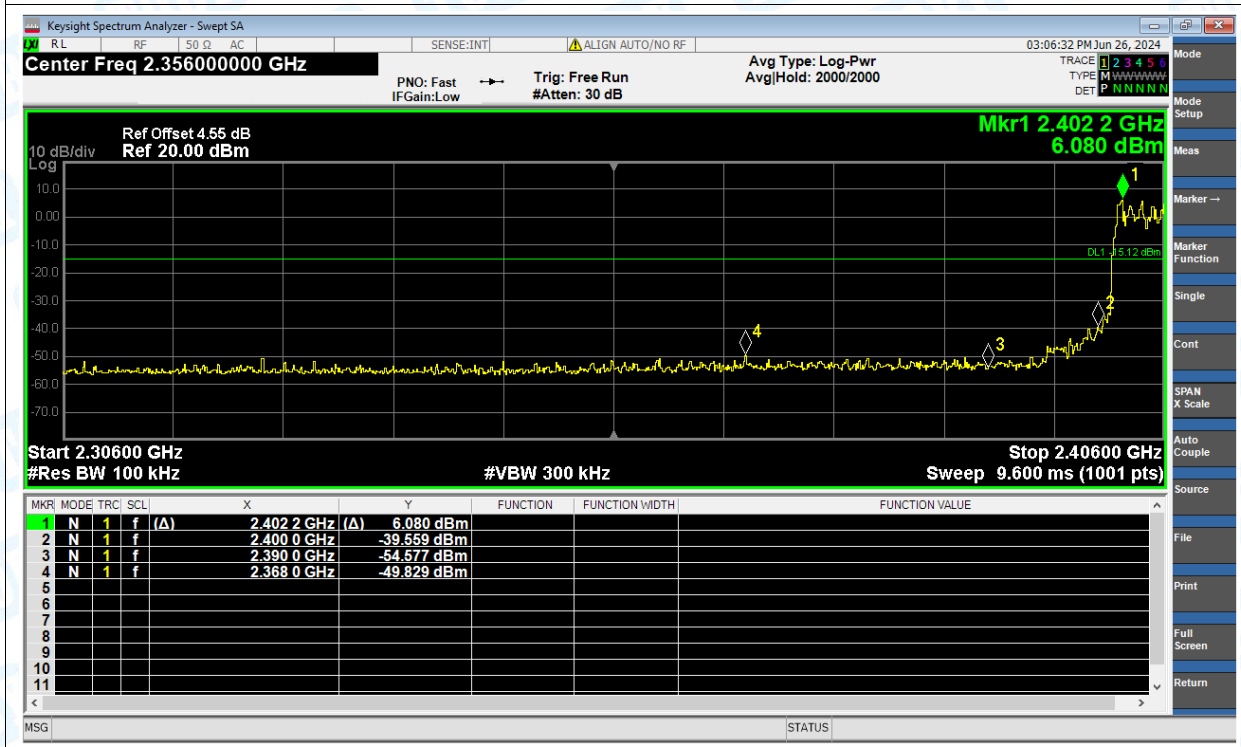
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



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



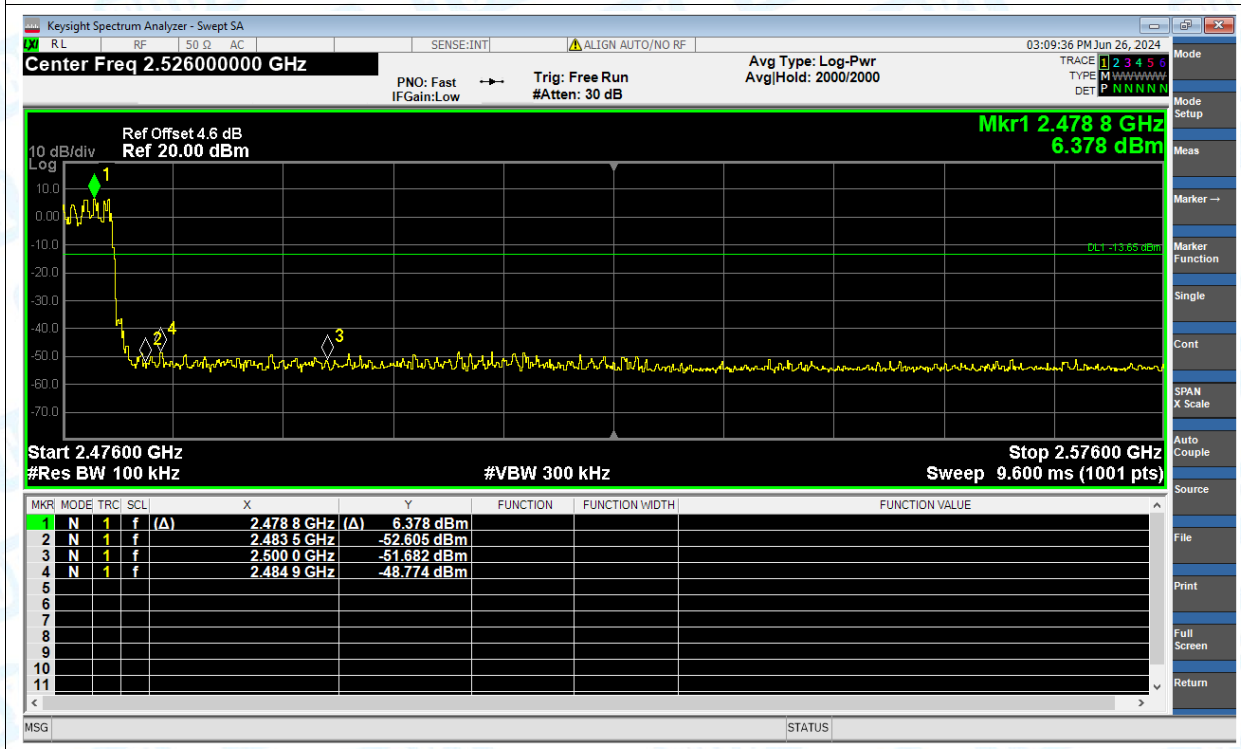
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

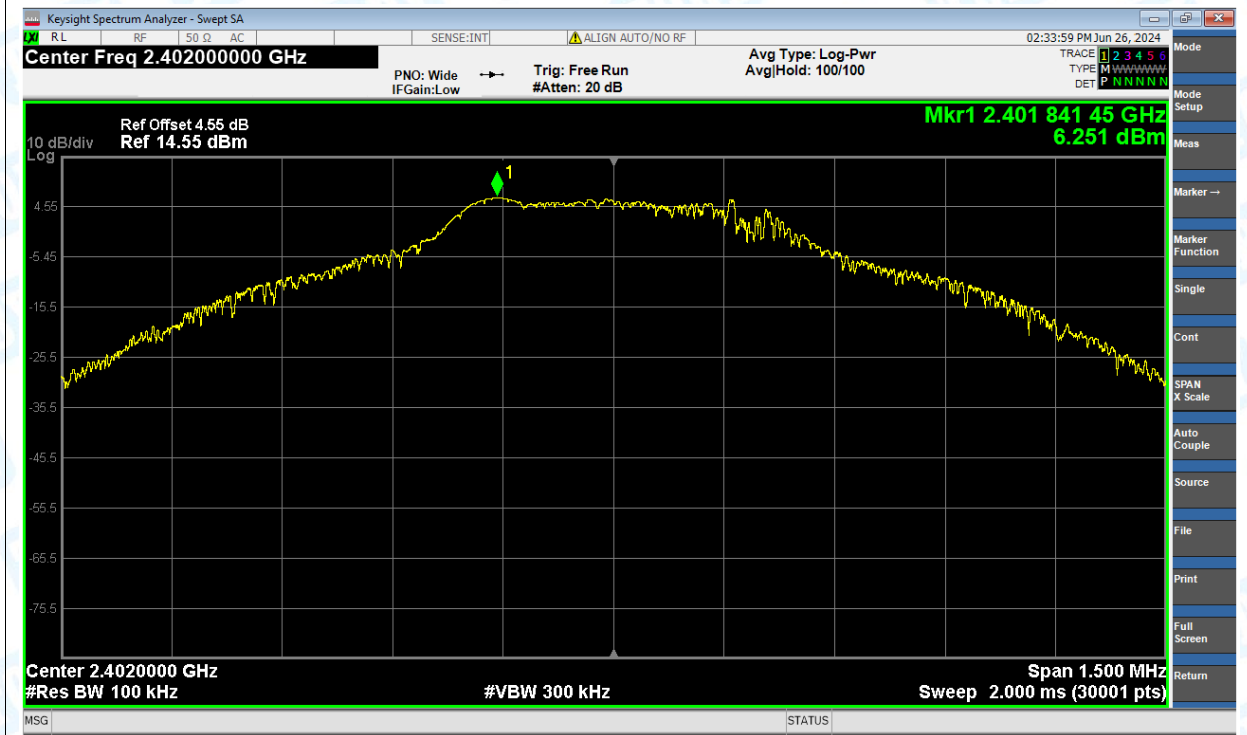


8. Conducted RF Spurious Emission

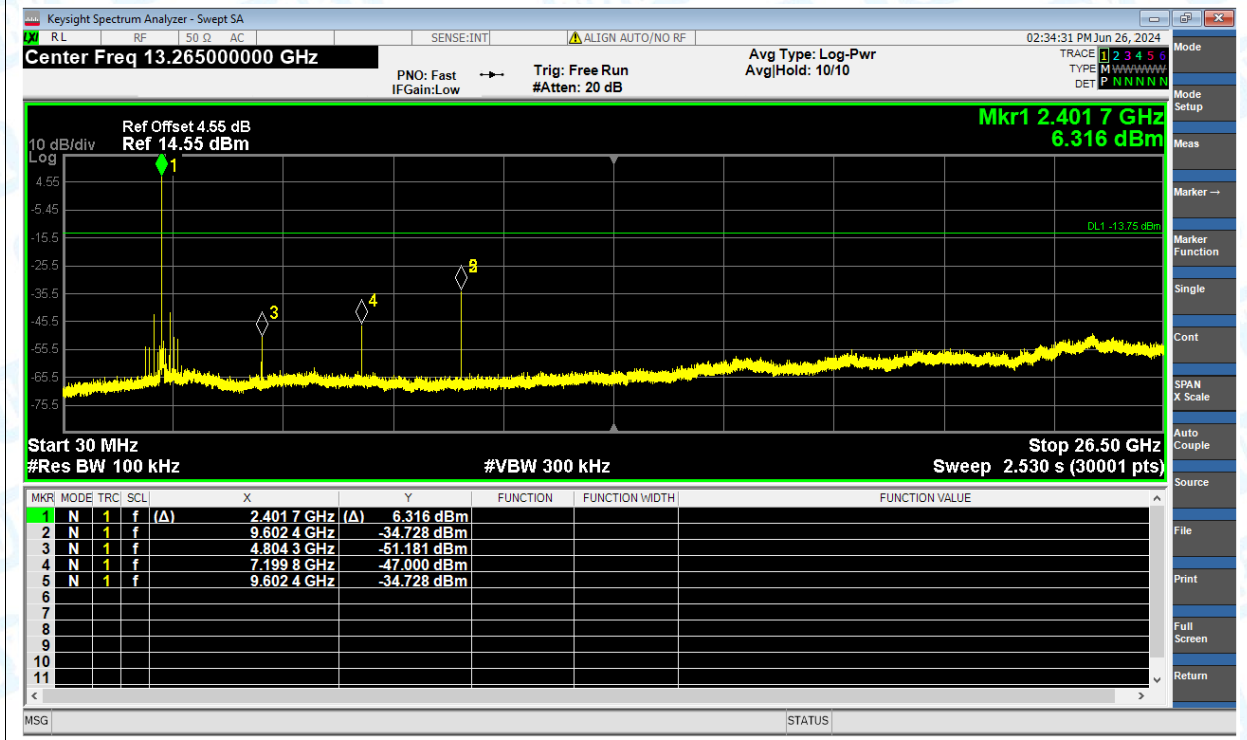
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-40.98	-20	Pass
NVNT	1-DH1	2441	Ant1	-40.77	-20	Pass
NVNT	1-DH1	2480	Ant1	-40.33	-20	Pass
NVNT	2-DH1	2402	Ant1	-40.6	-20	Pass
NVNT	2-DH1	2441	Ant1	-46.73	-20	Pass
NVNT	2-DH1	2480	Ant1	-39.9	-20	Pass
NVNT	3-DH1	2402	Ant1	-40.19	-20	Pass
NVNT	3-DH1	2441	Ant1	-40.12	-20	Pass
NVNT	3-DH1	2480	Ant1	-39.41	-20	Pass

Test Graphs

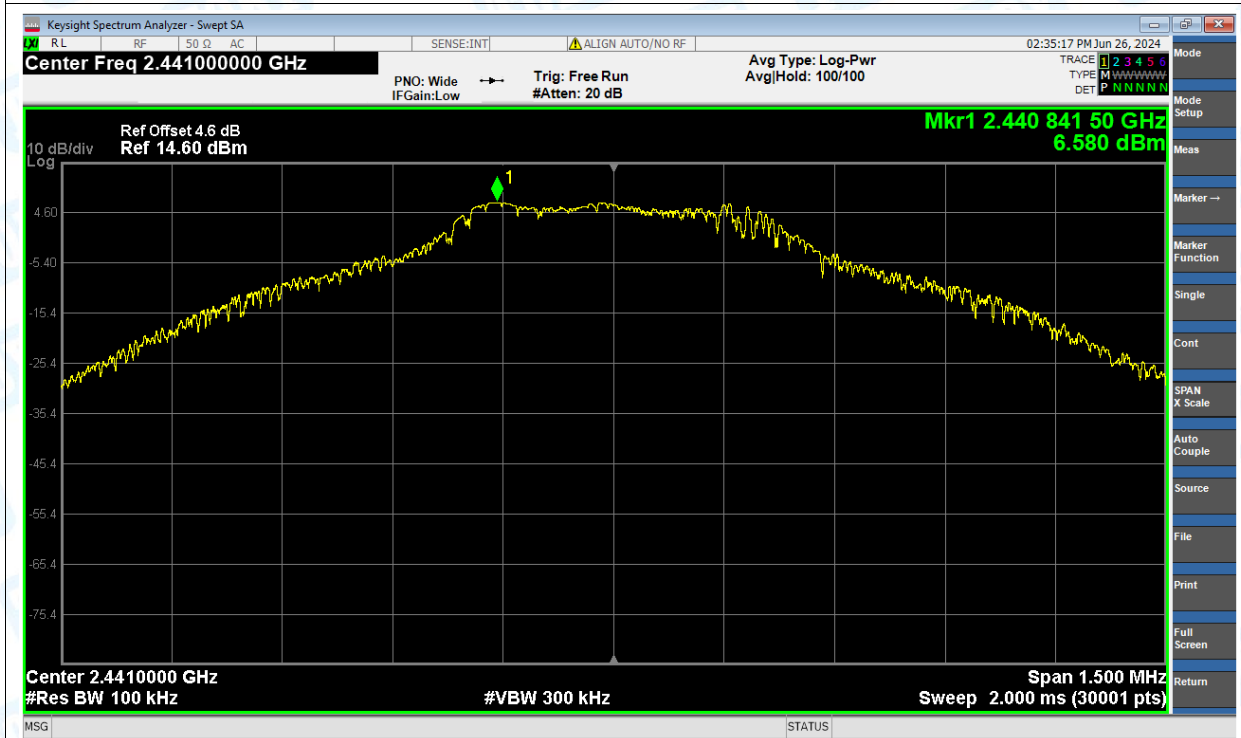
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



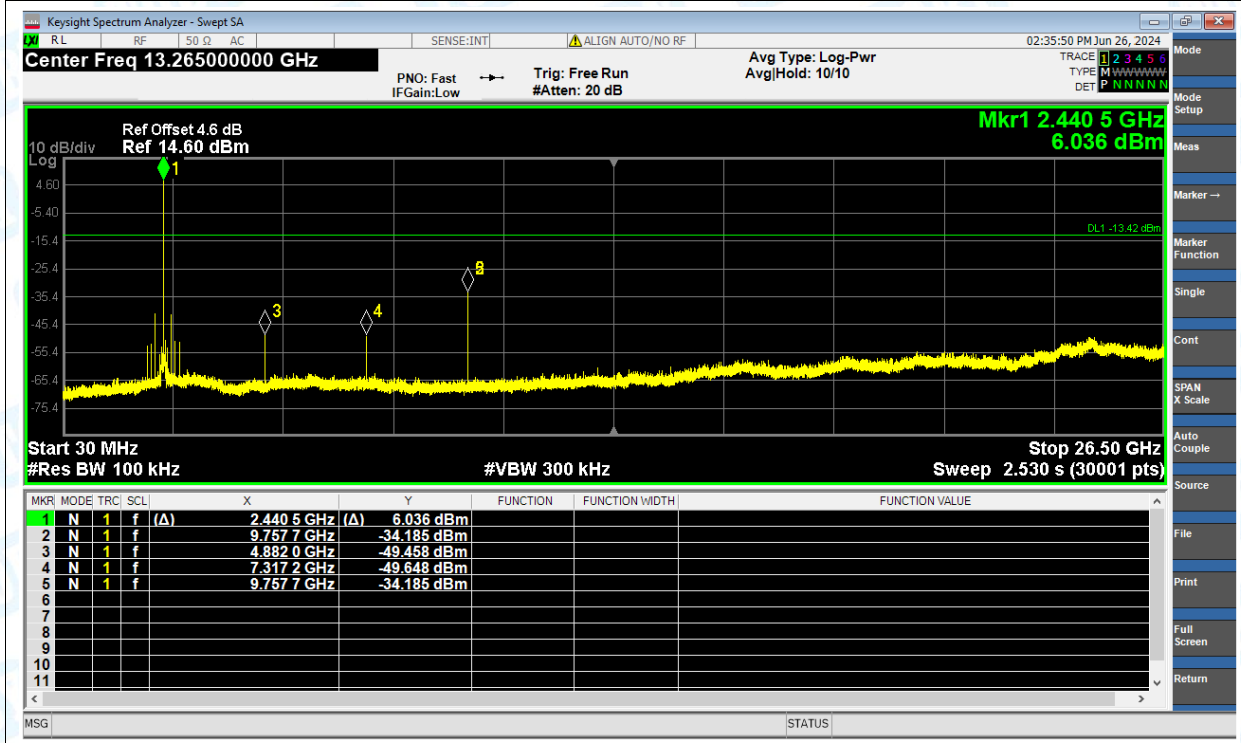
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



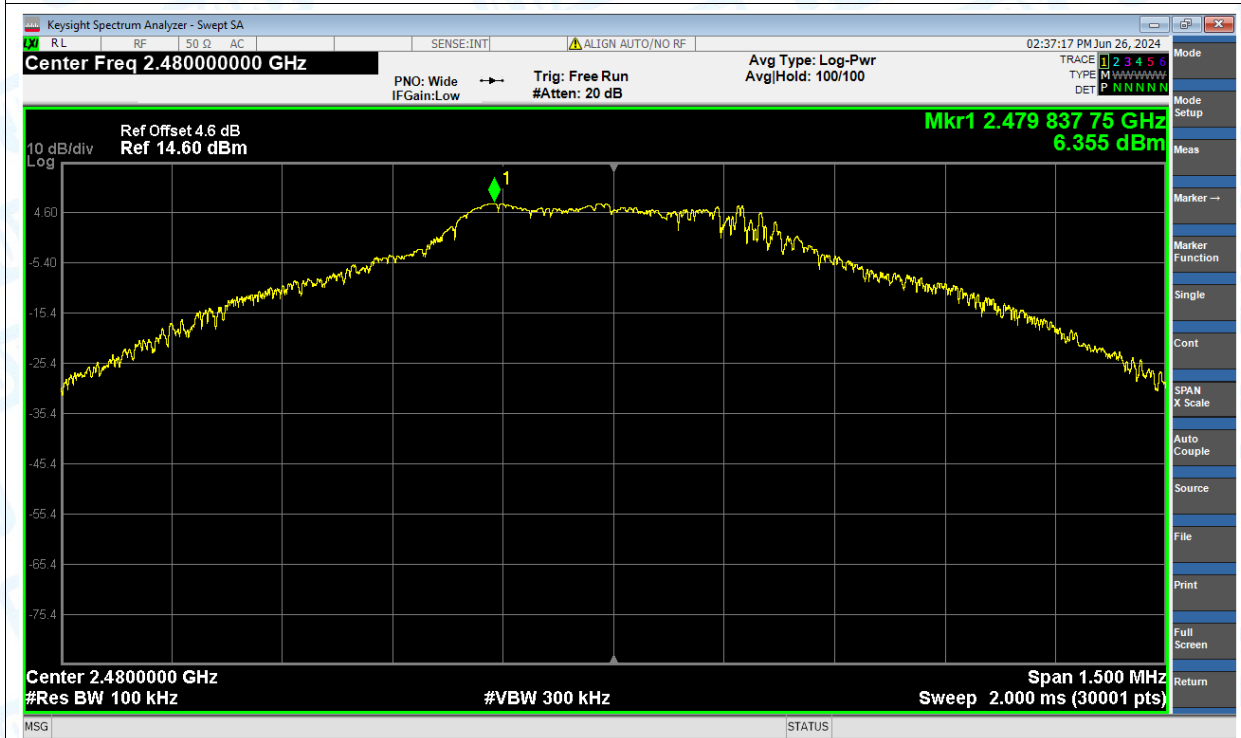
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



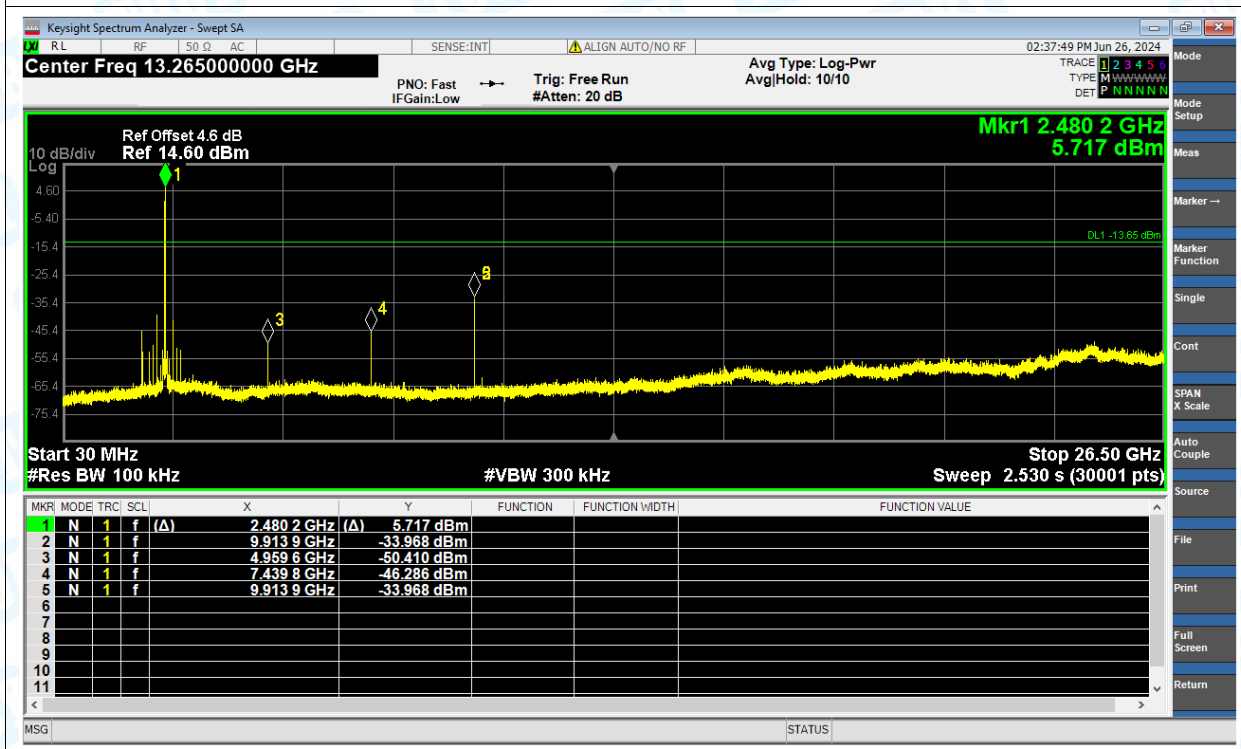
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



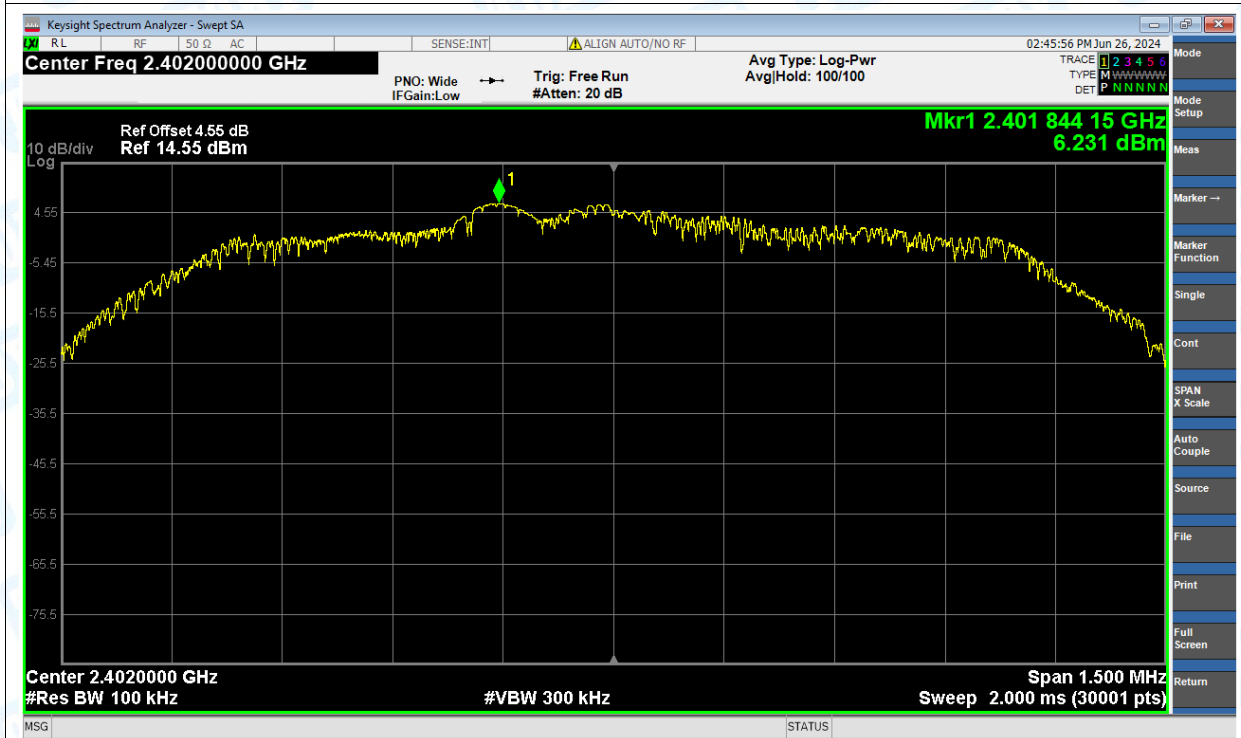
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



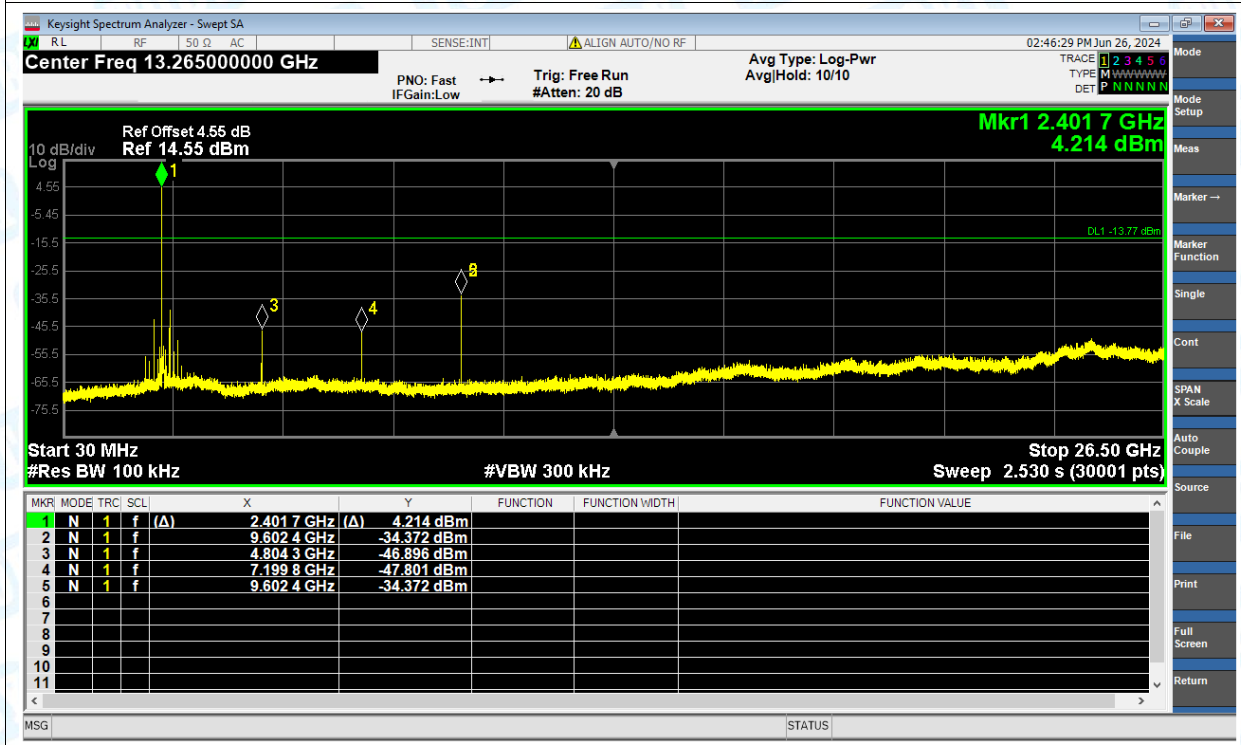
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



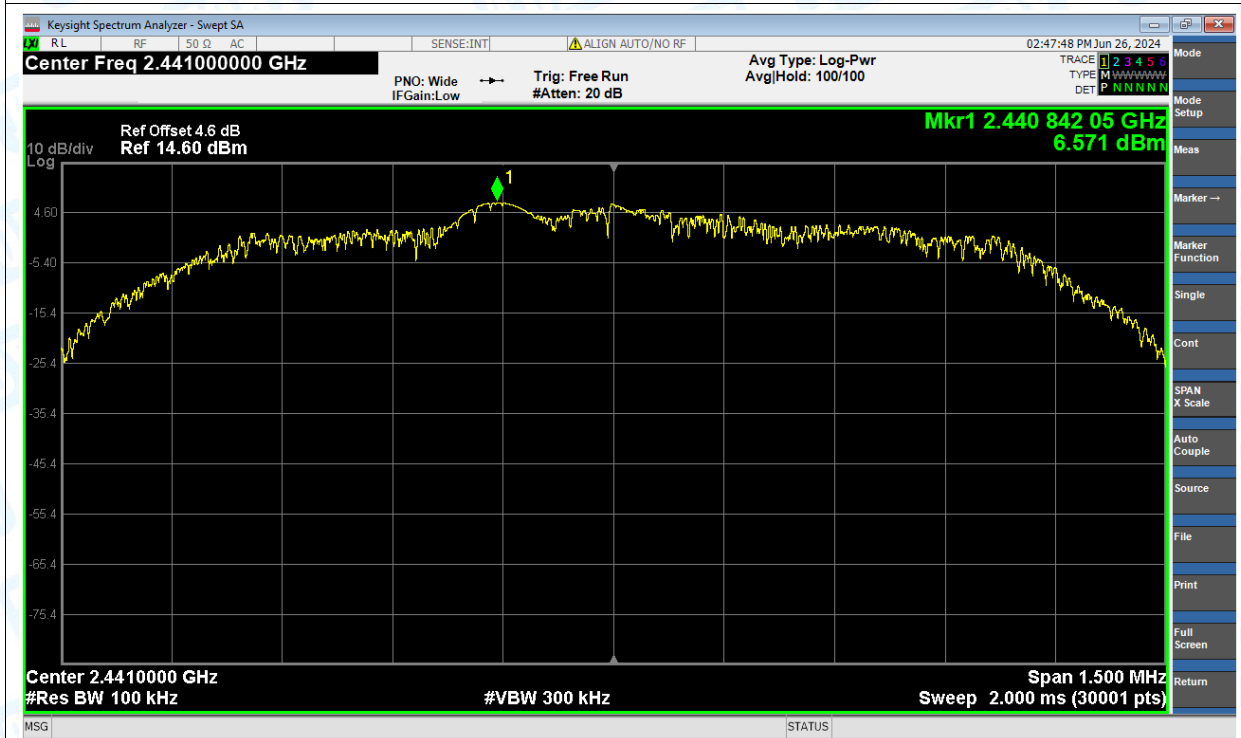
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



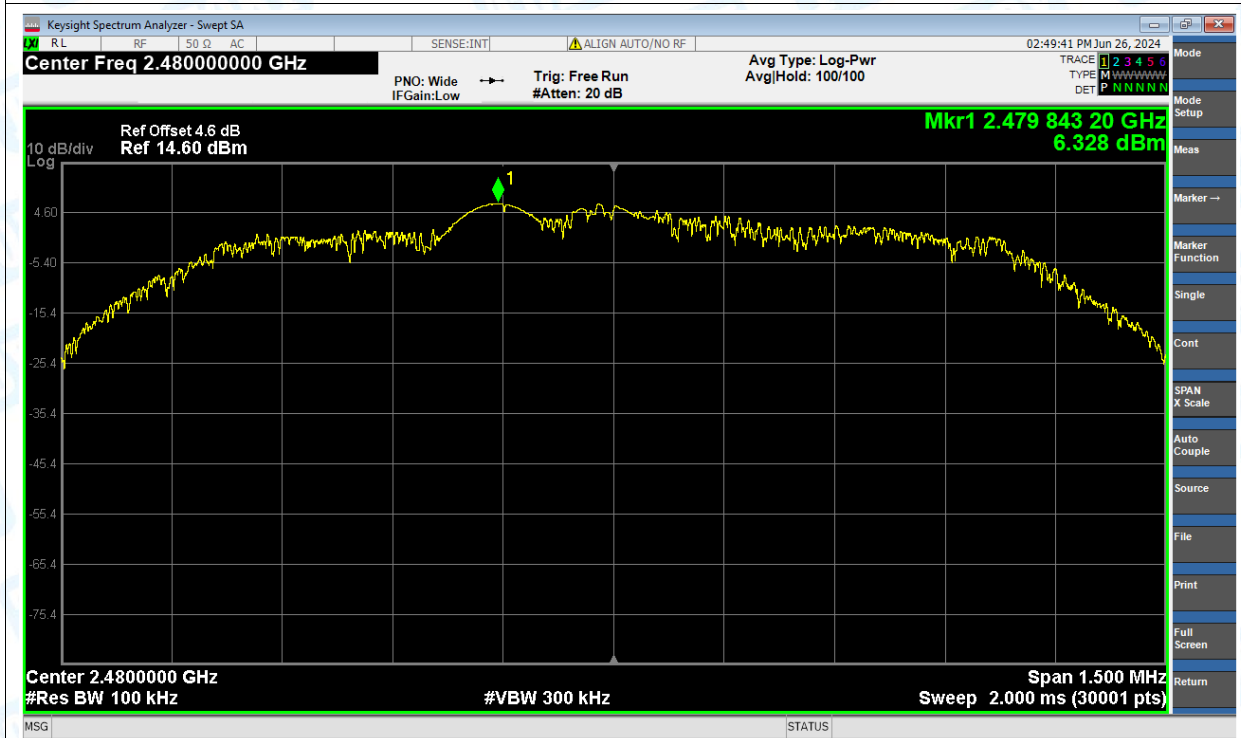
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



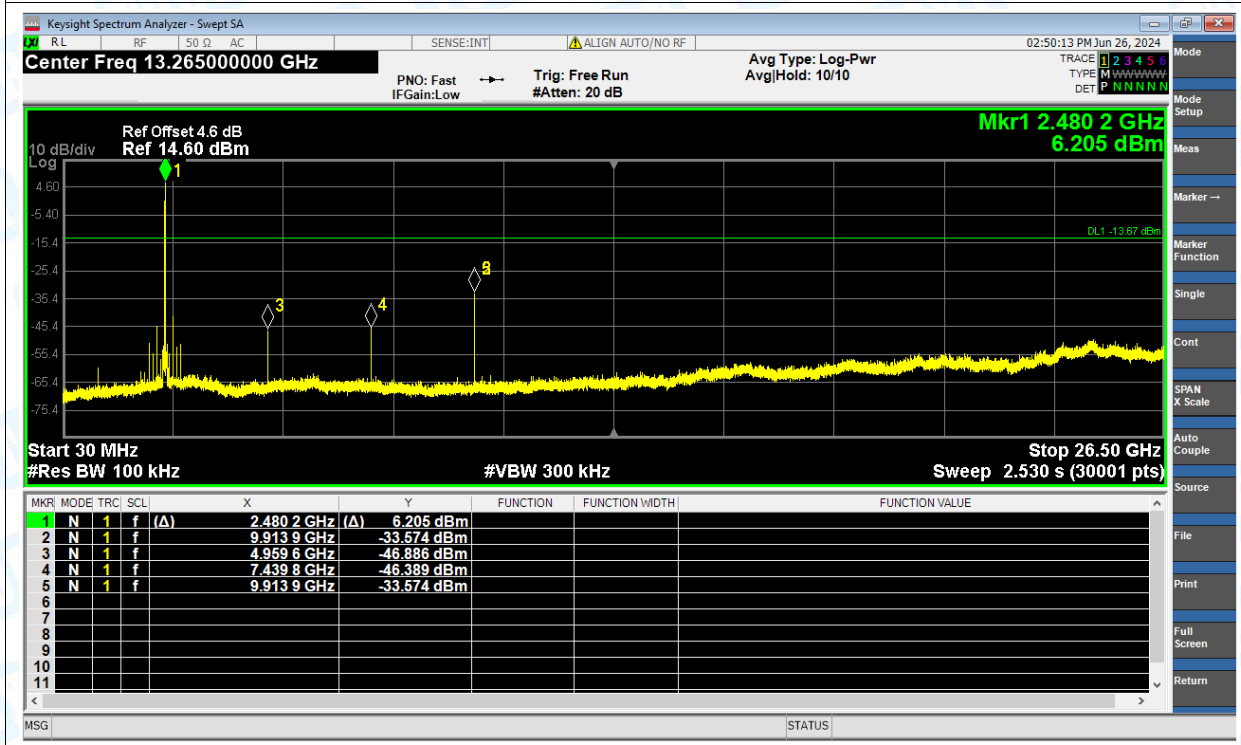
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



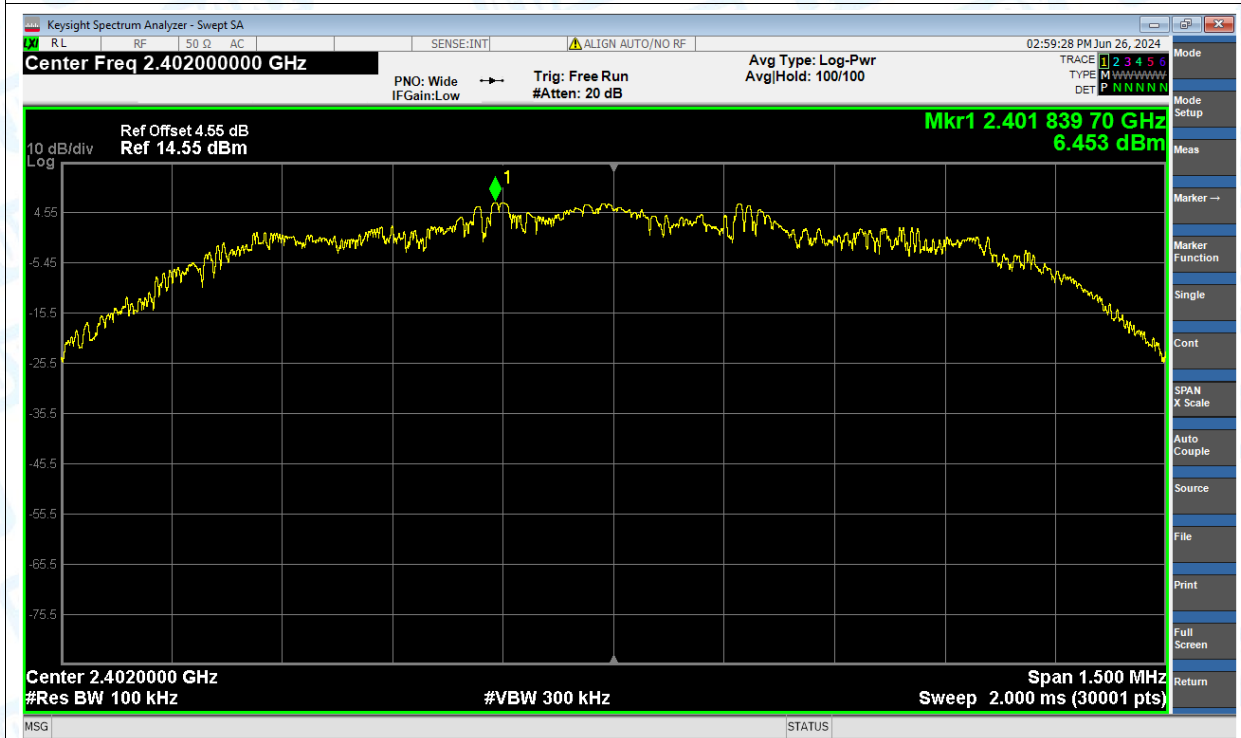
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



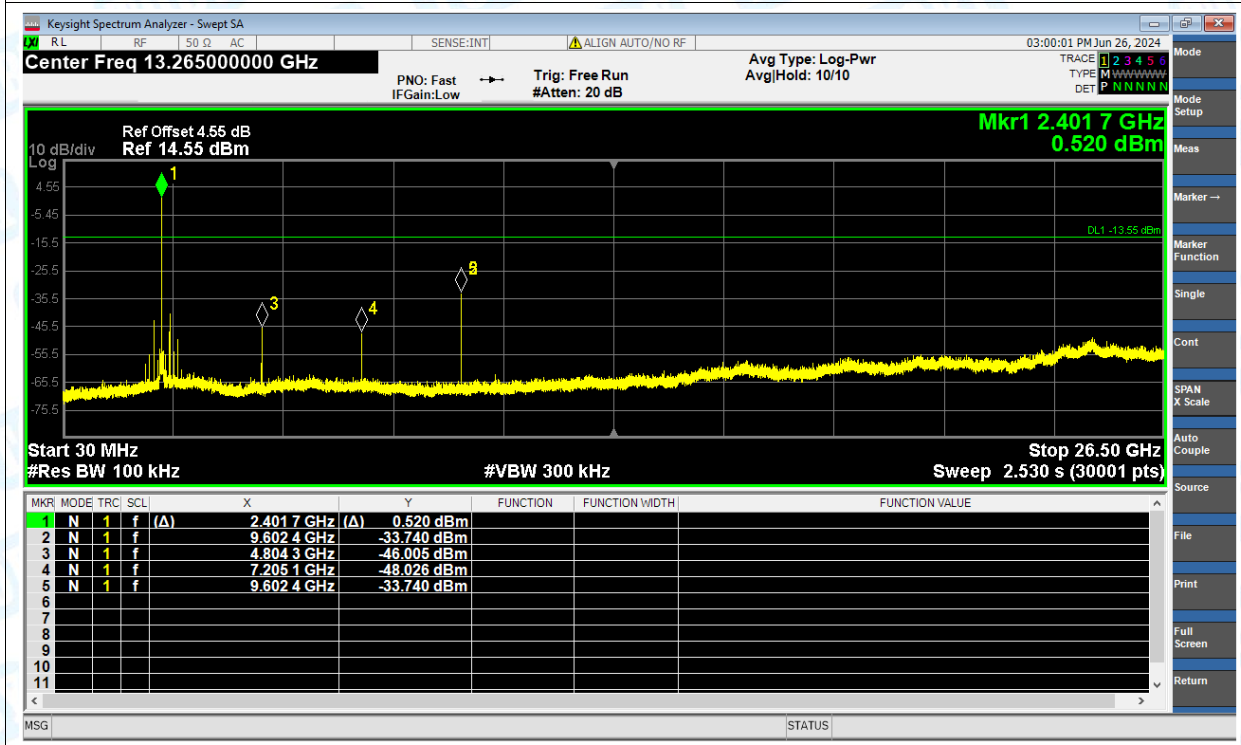
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



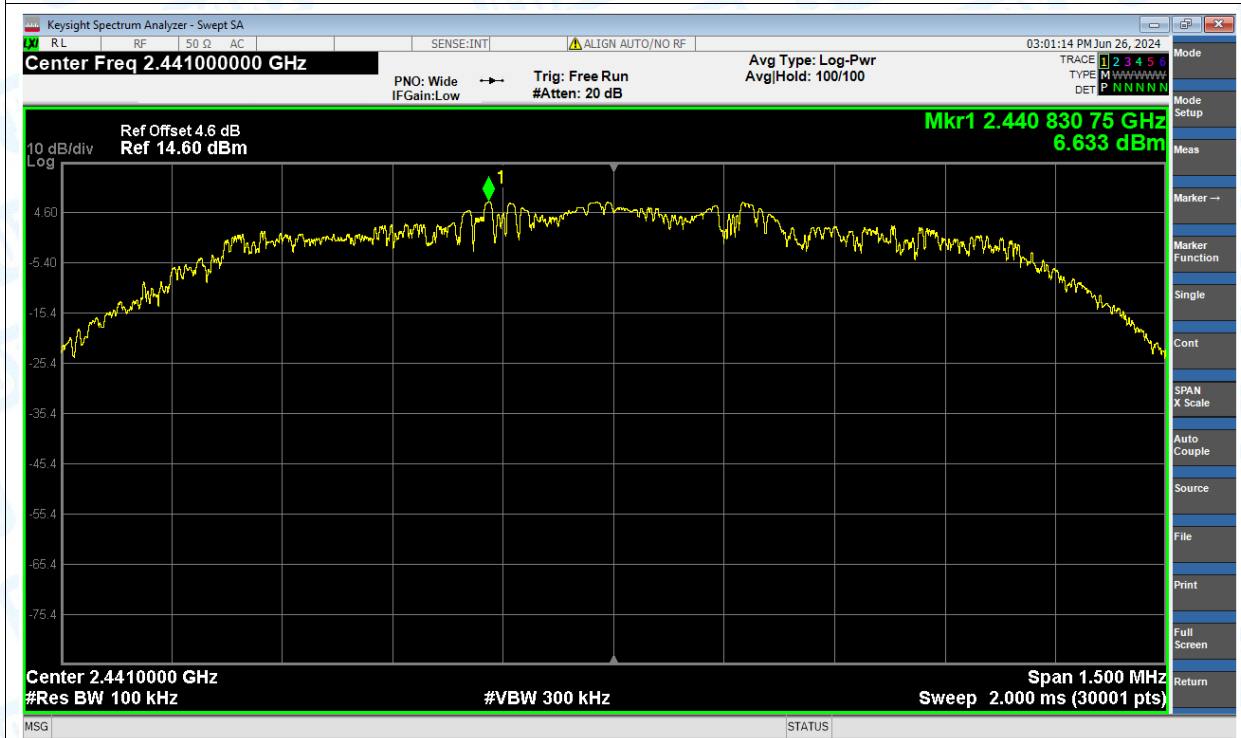
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



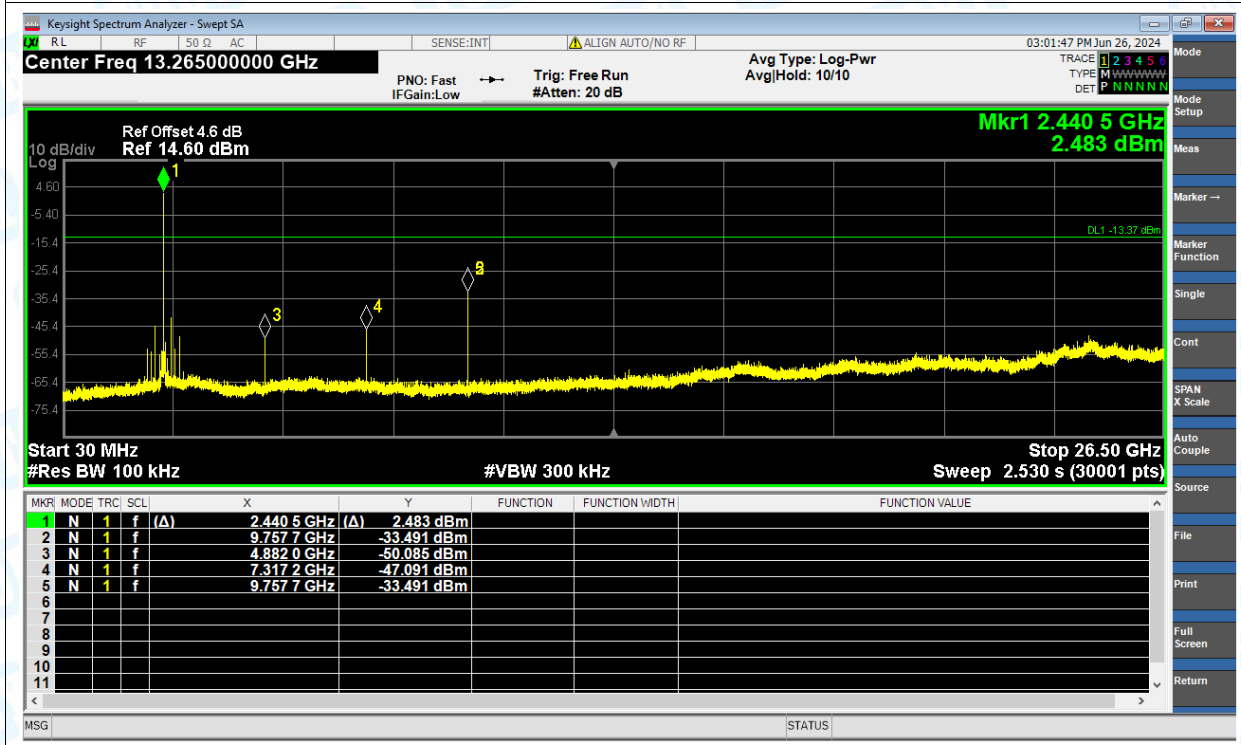
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



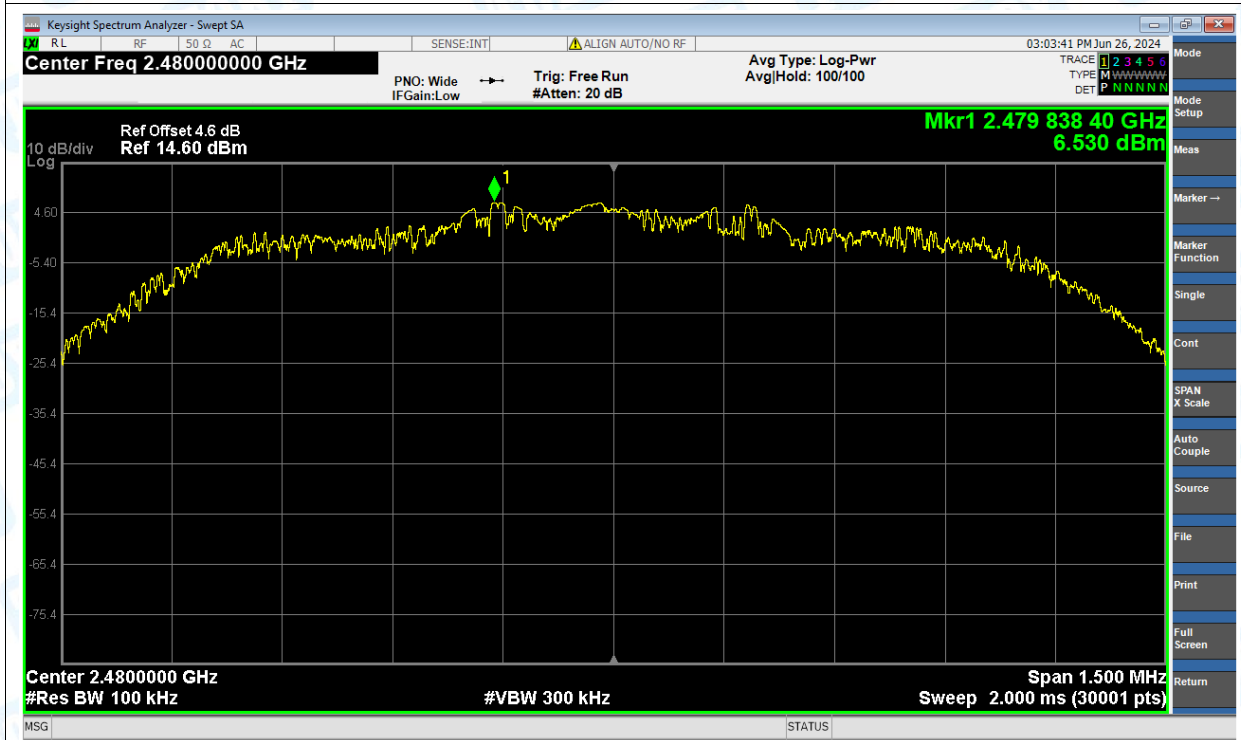
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



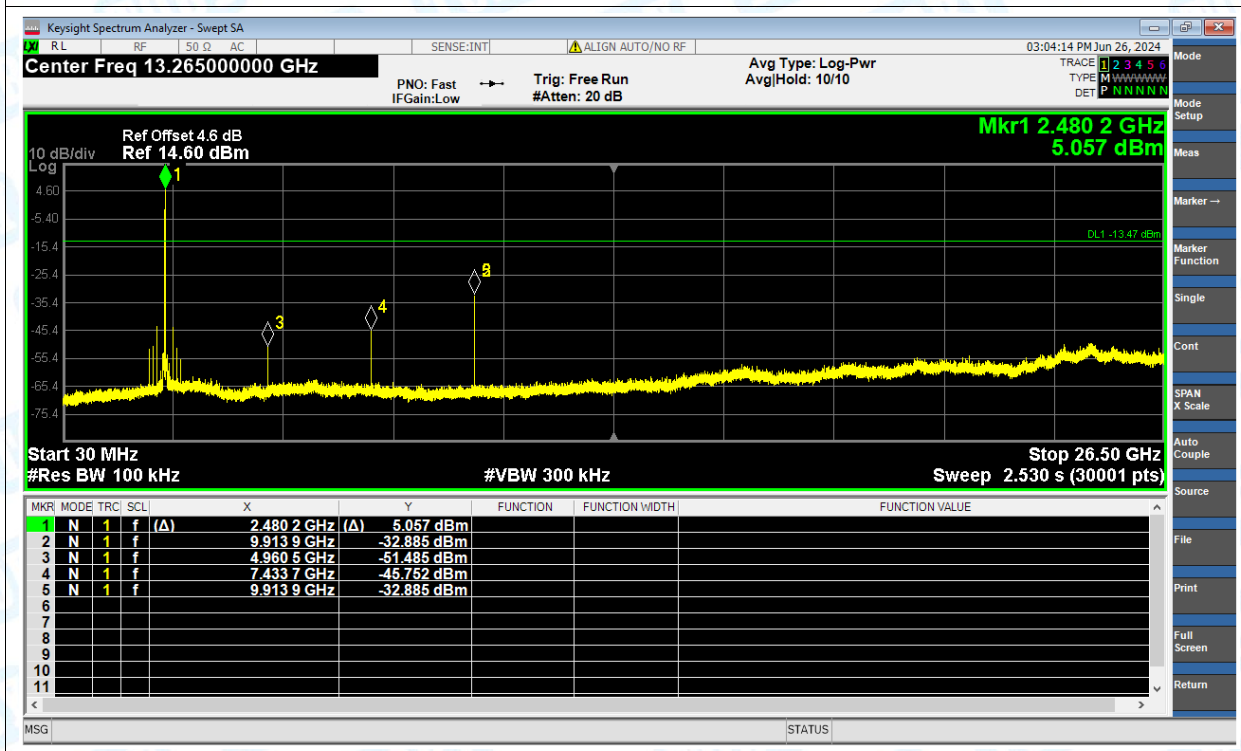
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

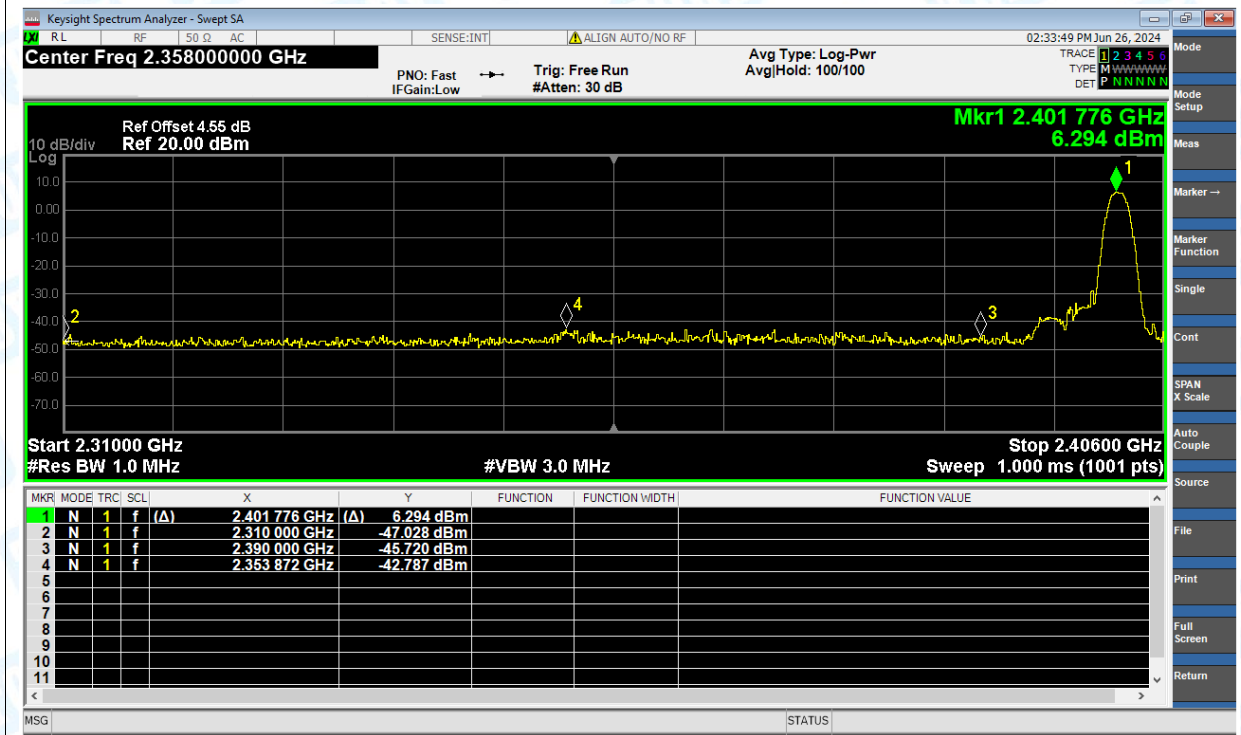


9.Restrict Band

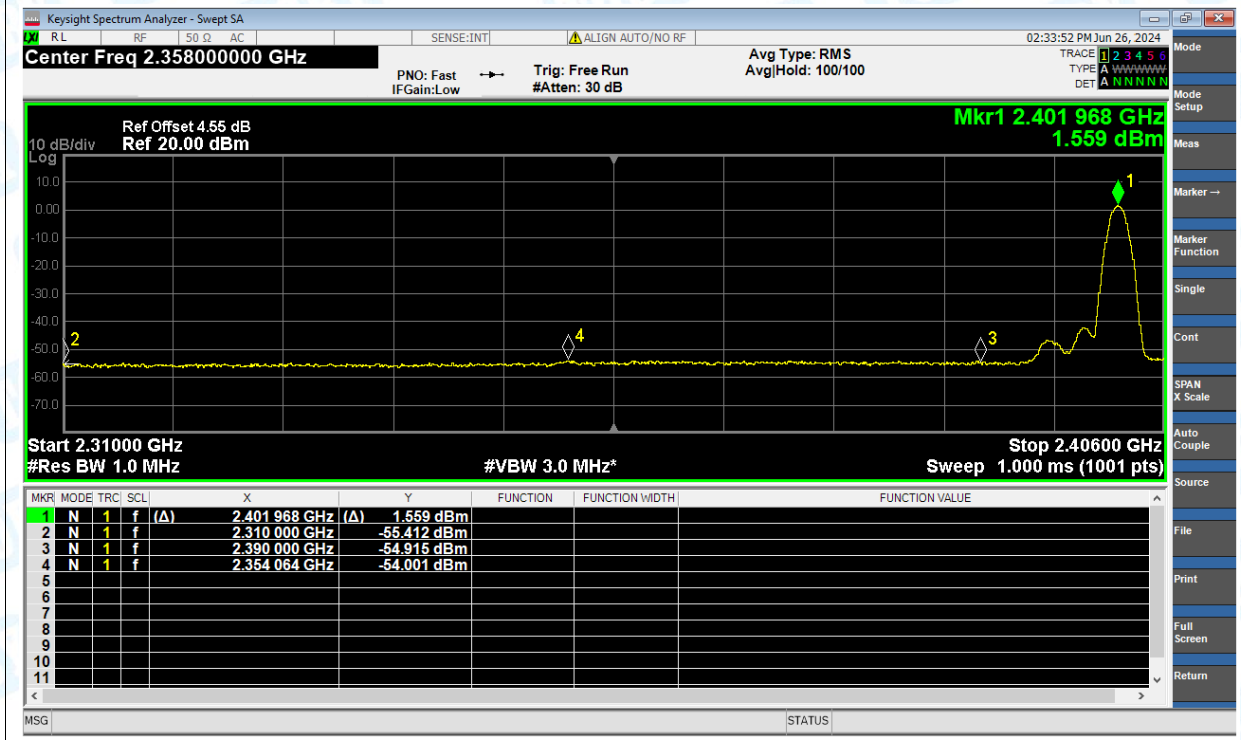
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-47.03	2	-	50.23	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-55.41	2	5.17	47.02	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2353.872	-42.79	2	-	54.47	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2354.064	-54	2	5.17	48.43	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-45.72	2	-	51.54	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-54.92	2	5.17	47.51	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-44.86	2	-	52.4	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-54.69	2	5.17	47.74	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2495.536	-42.26	2	-	55	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.328	-53.73	2	5.17	48.7	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-46.97	2	-	50.29	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.63	2	5.17	47.8	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.09	2	-	50.17	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.01	2	4.95	46.2	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2354.256	-42.05	2	-	55.21	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2353.872	-53.75	2	4.95	48.46	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-45.99	2	-	51.27	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-54.44	2	4.95	47.77	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-44.72	2	-	52.54	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-53.63	2	5.06	48.69	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2484.76	-37.39	2	-	59.87	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.656	-52.69	2	5.06	49.63	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-45.29	2	-	51.97	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-54.8	2	5.06	47.52	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-47.57	2	-	49.69	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-55.51	2	5.06	46.81	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2365.2	-42.28	2	-	54.98	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2354.16	-52.31	2	5.06	50.01	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.02	2	-	50.24	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-54.54	2	5.06	47.78	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-45.73	2	-	51.53	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-53.86	2	5.06	48.46	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2485.816	-40.53	2	-	56.73	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2499.88	-53.32	2	5.06	49	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-45.85	2	-	51.41	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-54.7	2	5.06	47.62	Average	54	Pass

Test Graphs

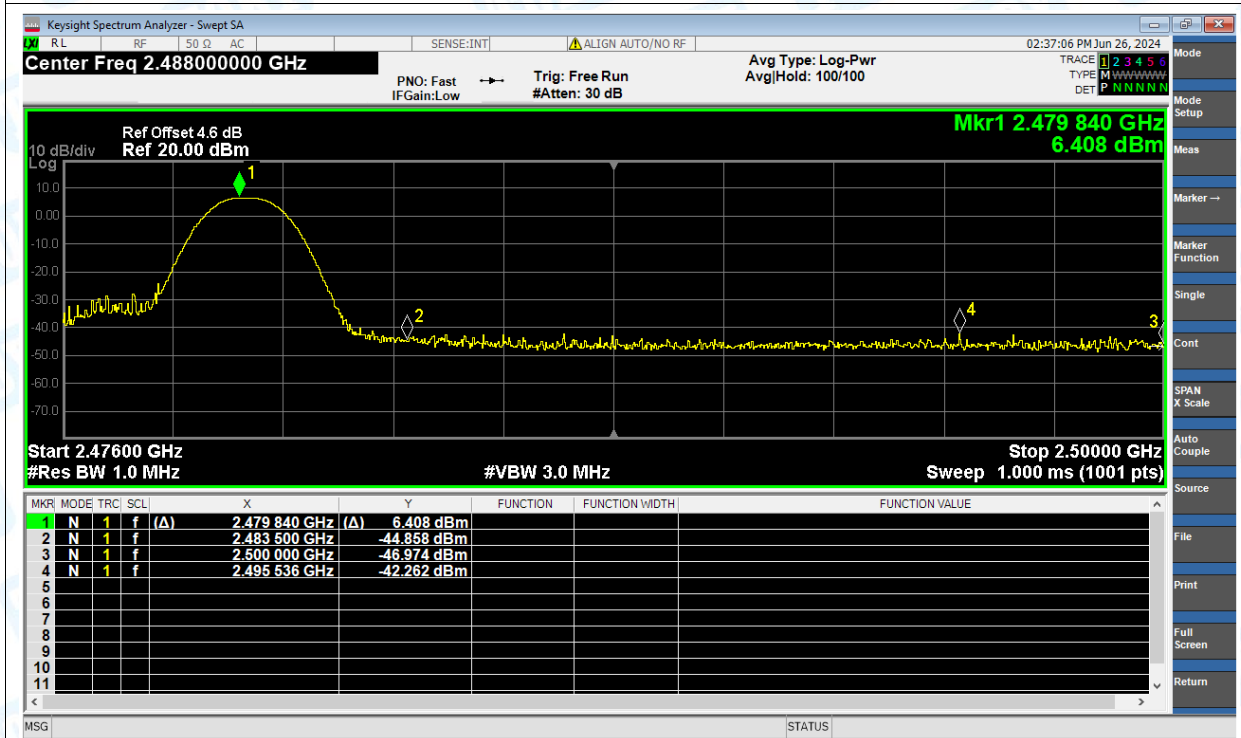
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



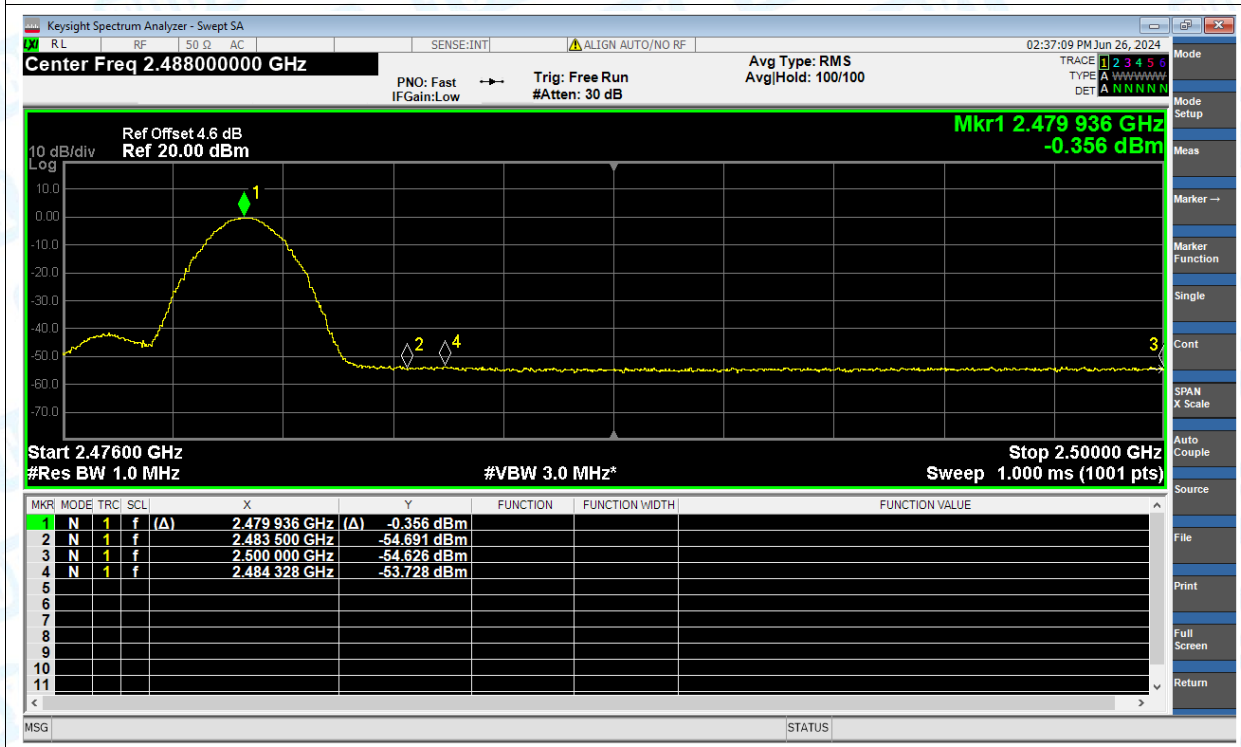
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



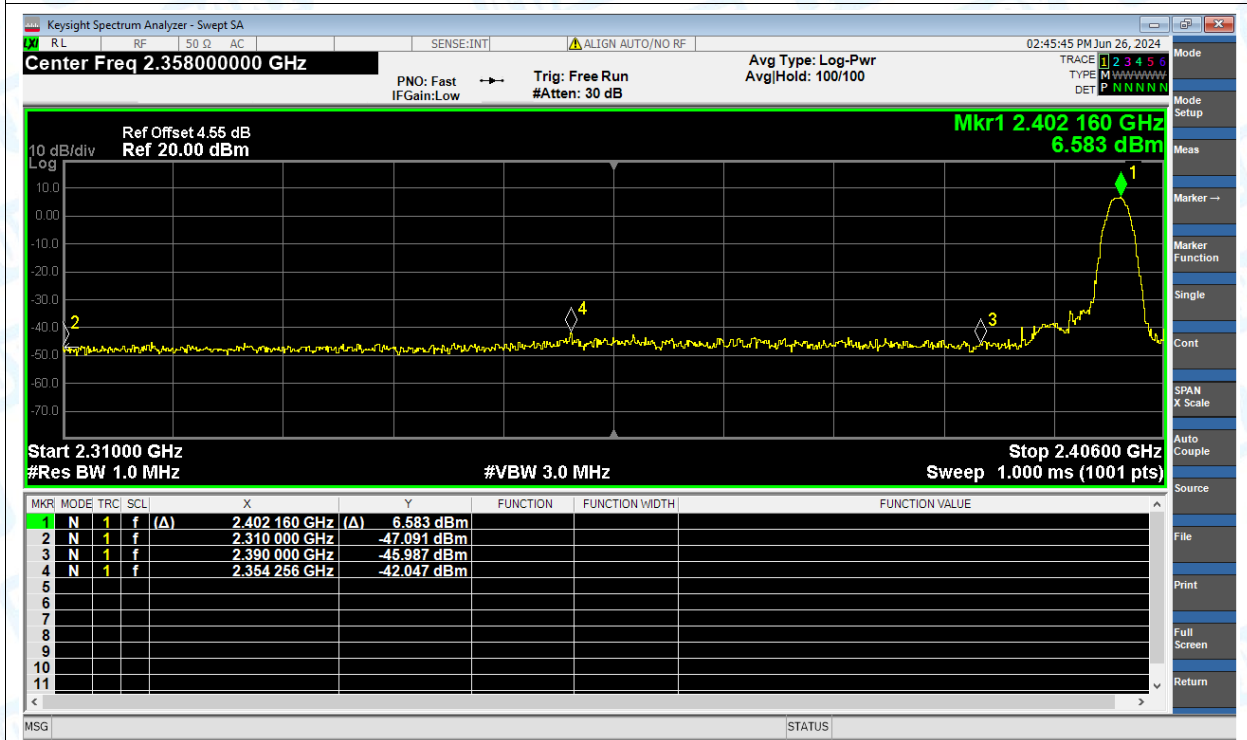
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



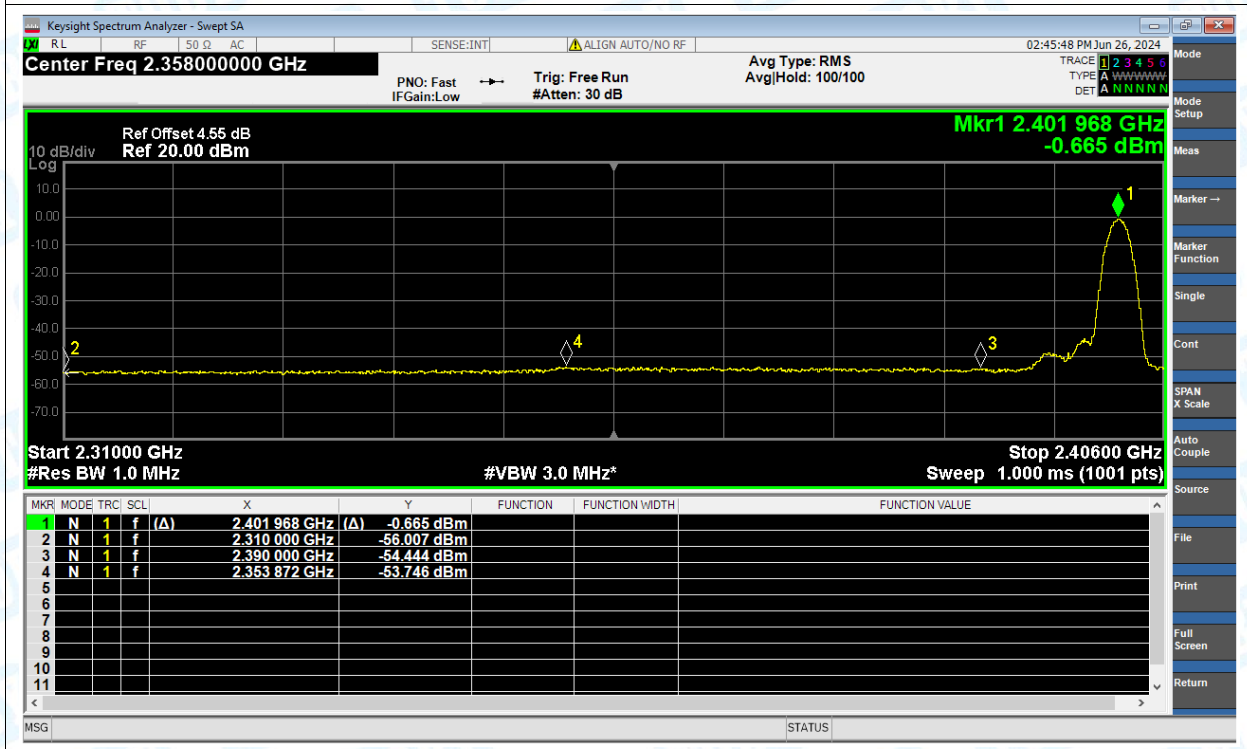
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



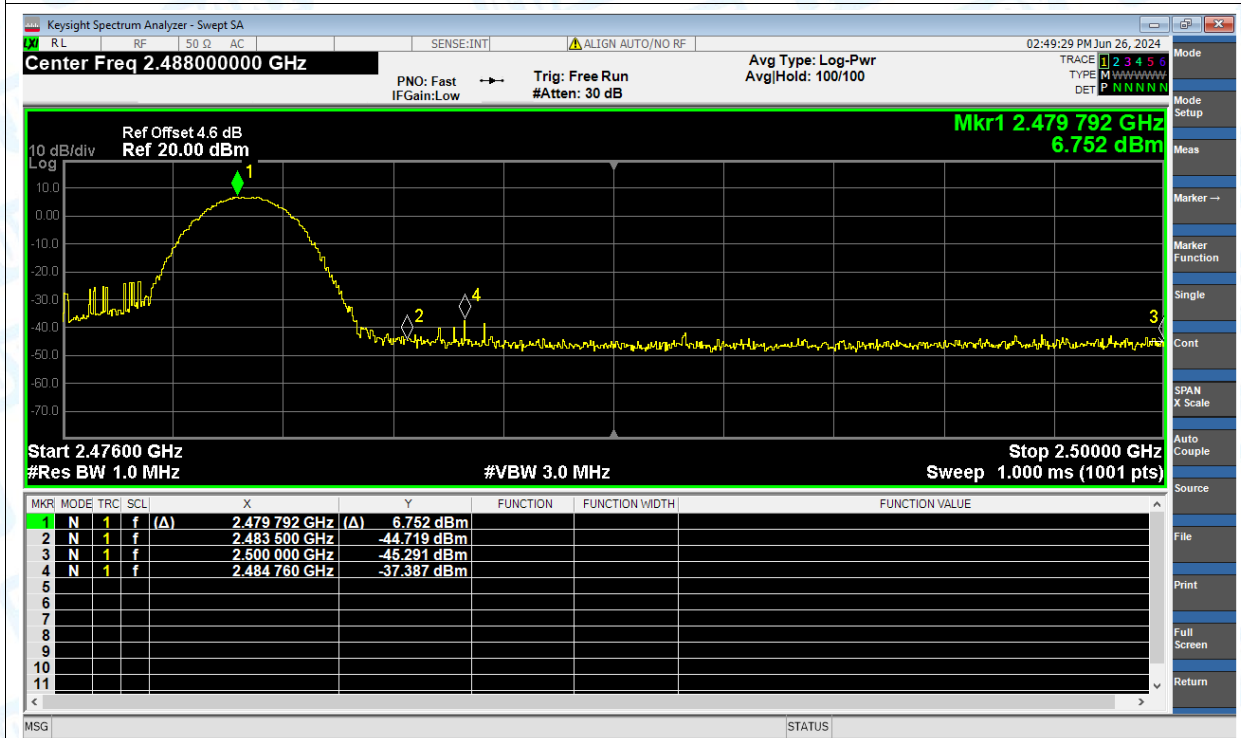
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



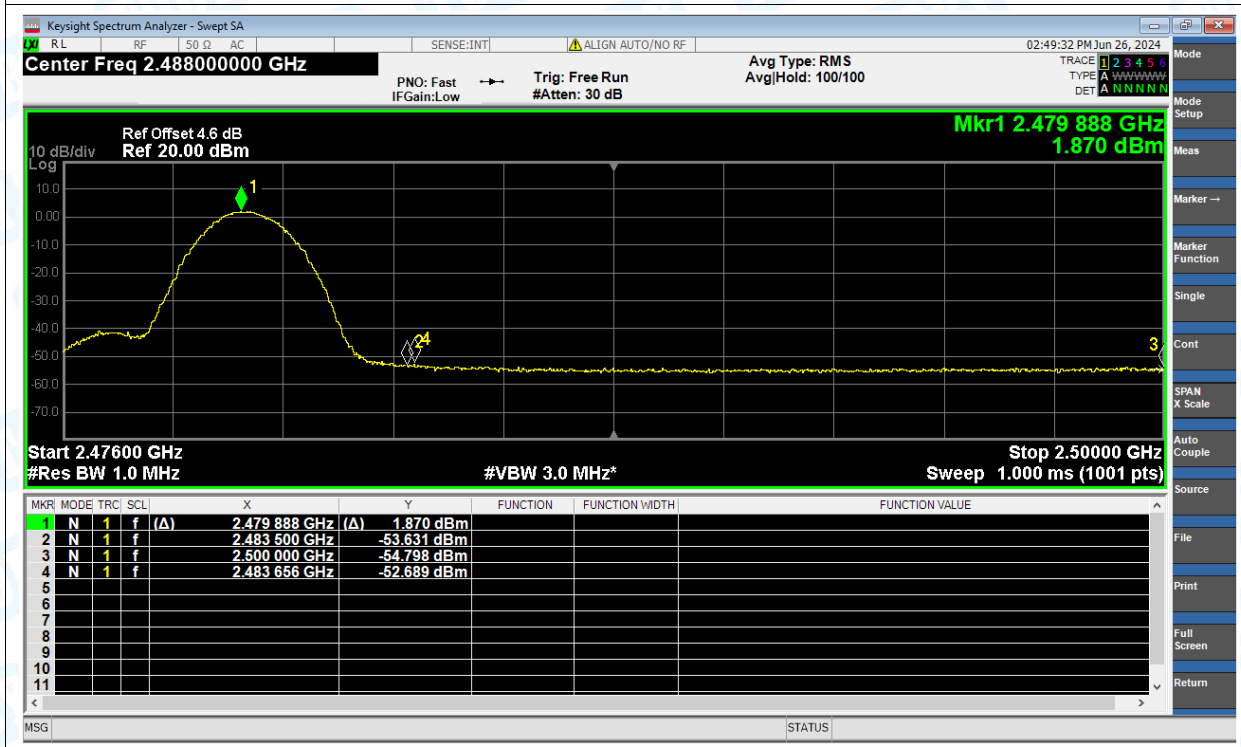
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



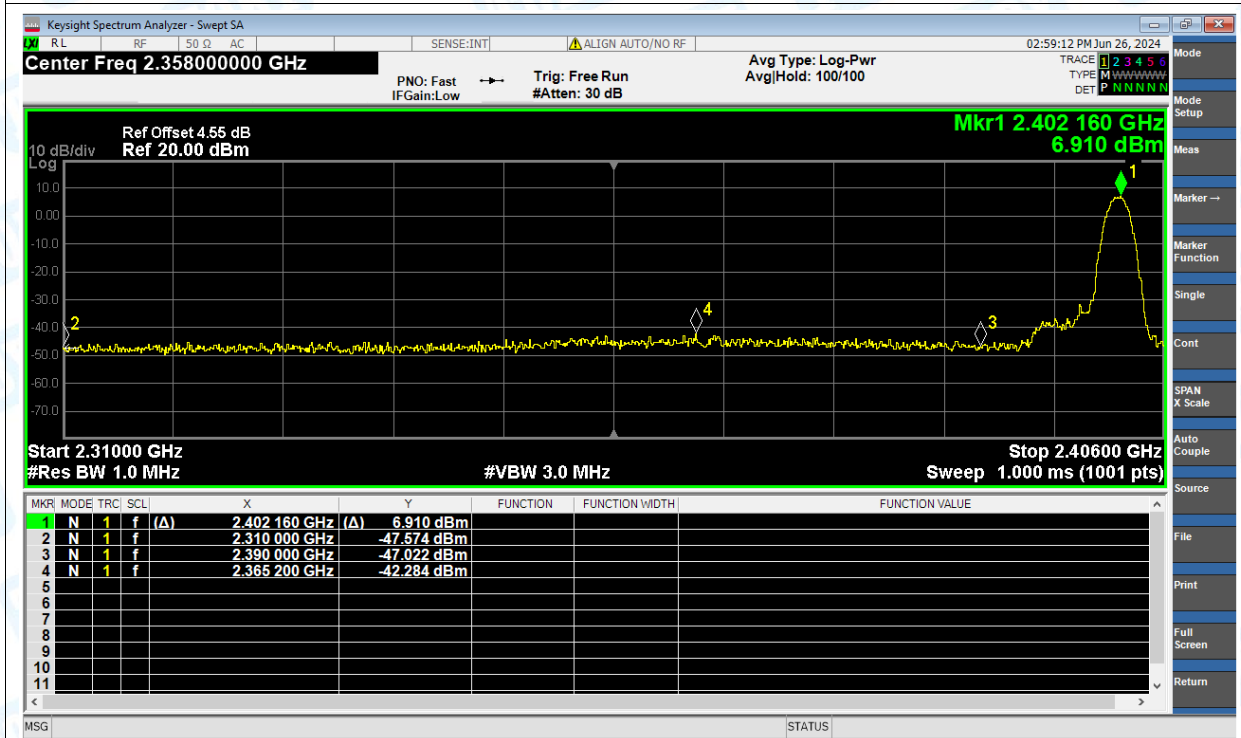
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



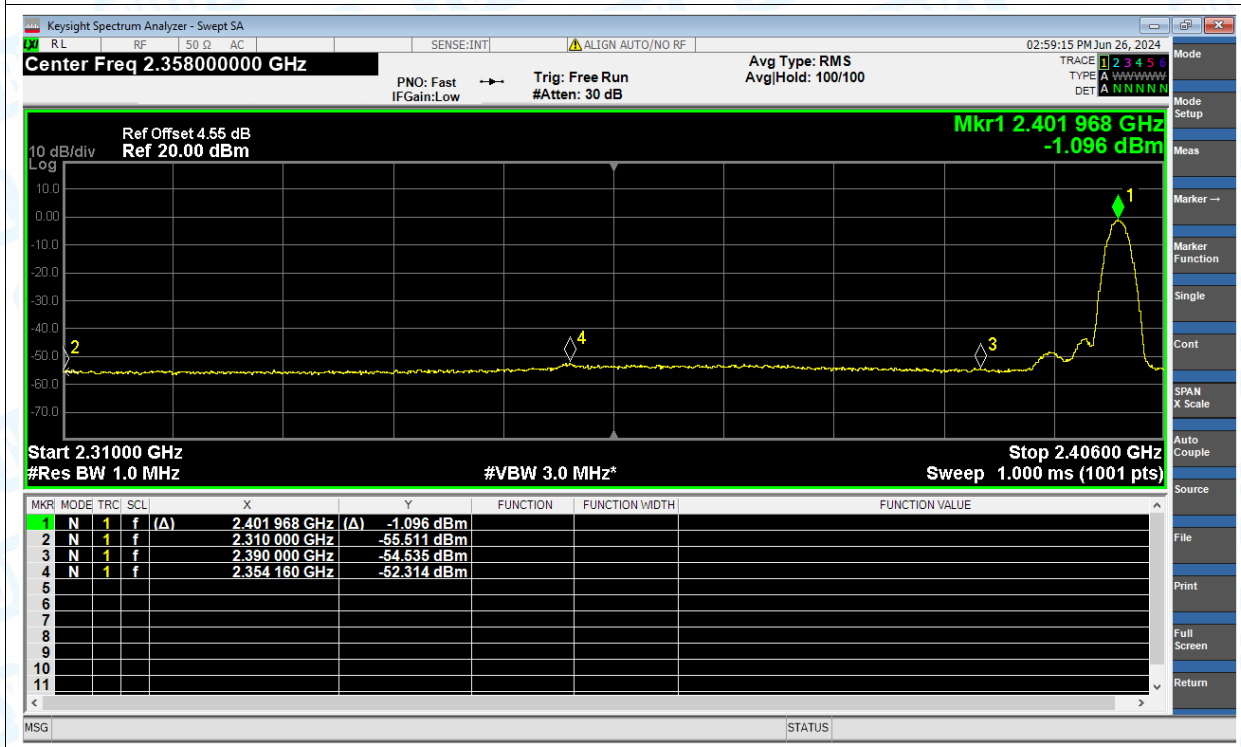
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



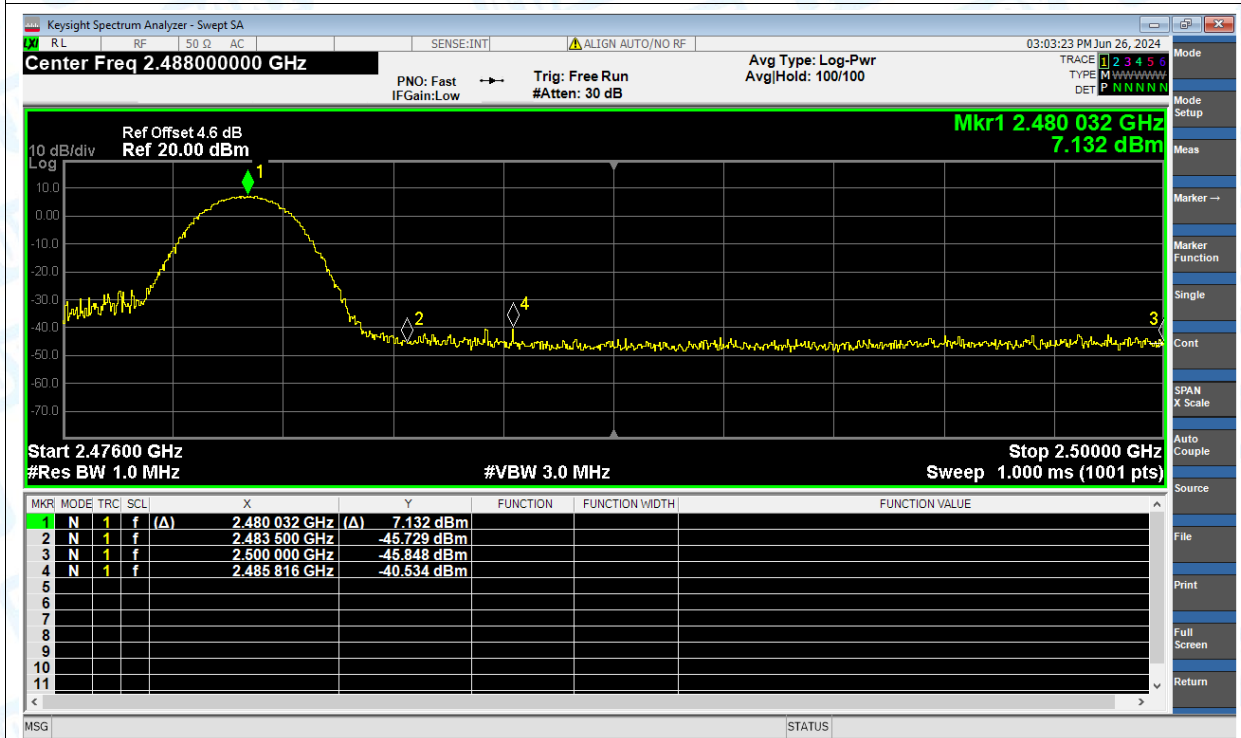
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



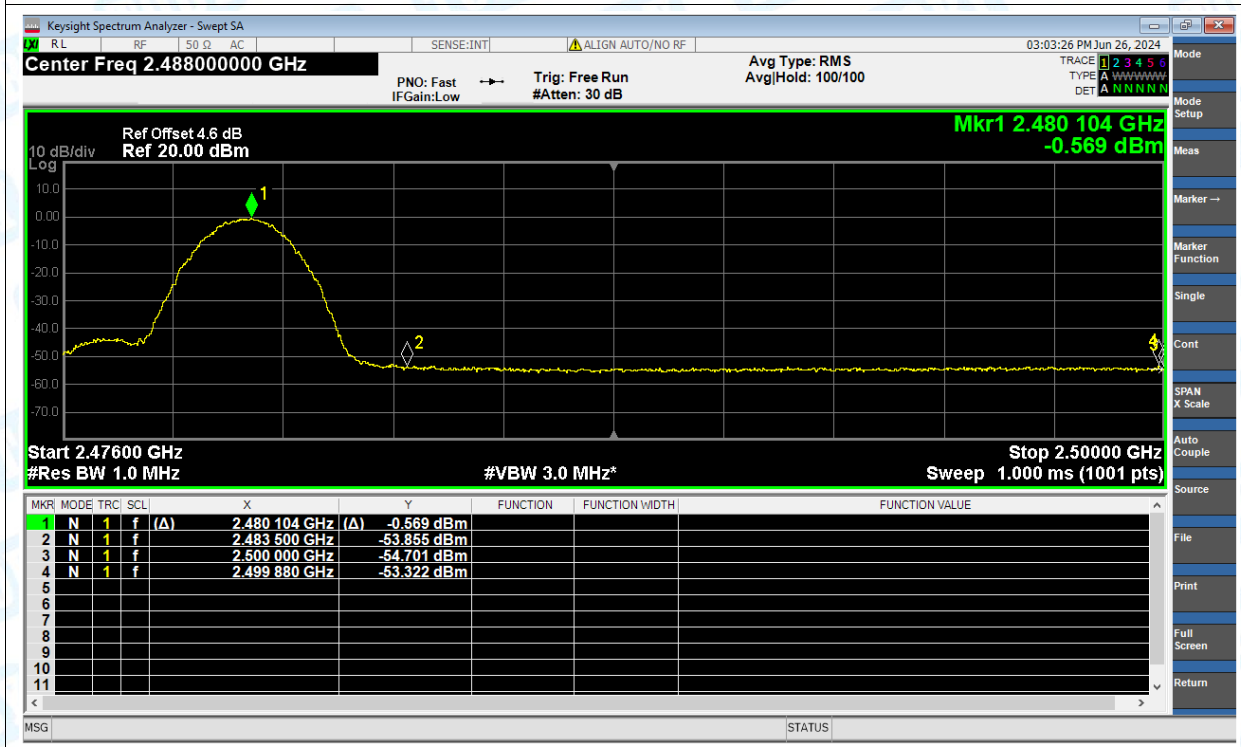
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

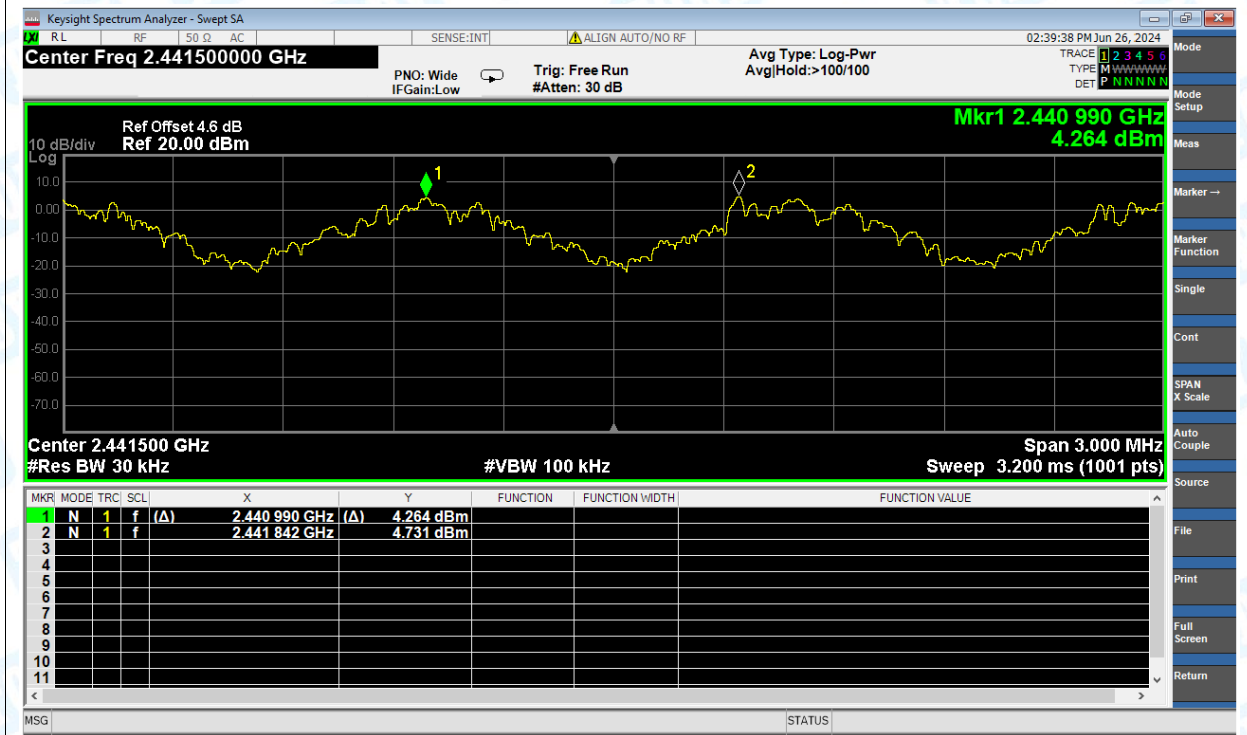


10. Carrier Frequencies Separation

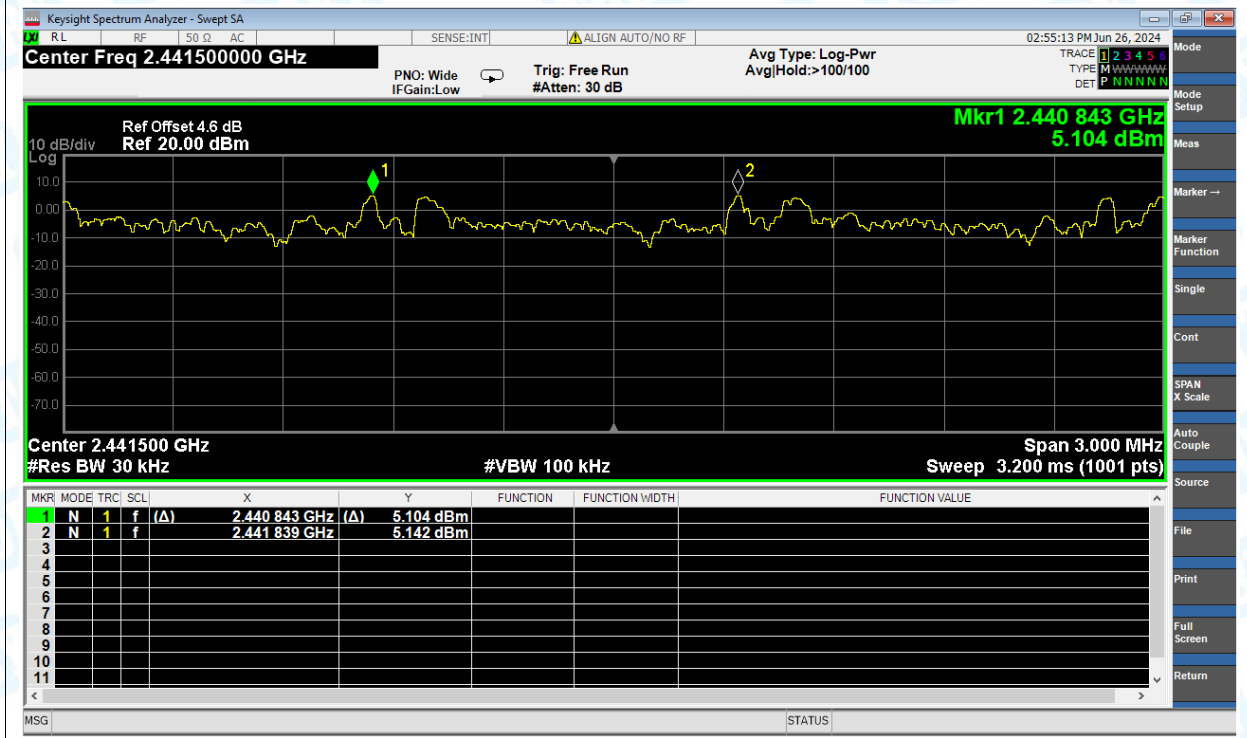
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.99	2441.842	0.852	0.58	Pass
NVNT	2-DH1	Ant1	2440.843	2441.839	0.996	0.847	Pass
NVNT	3-DH1	Ant1	2440.837	2441.833	0.996	0.807	Pass

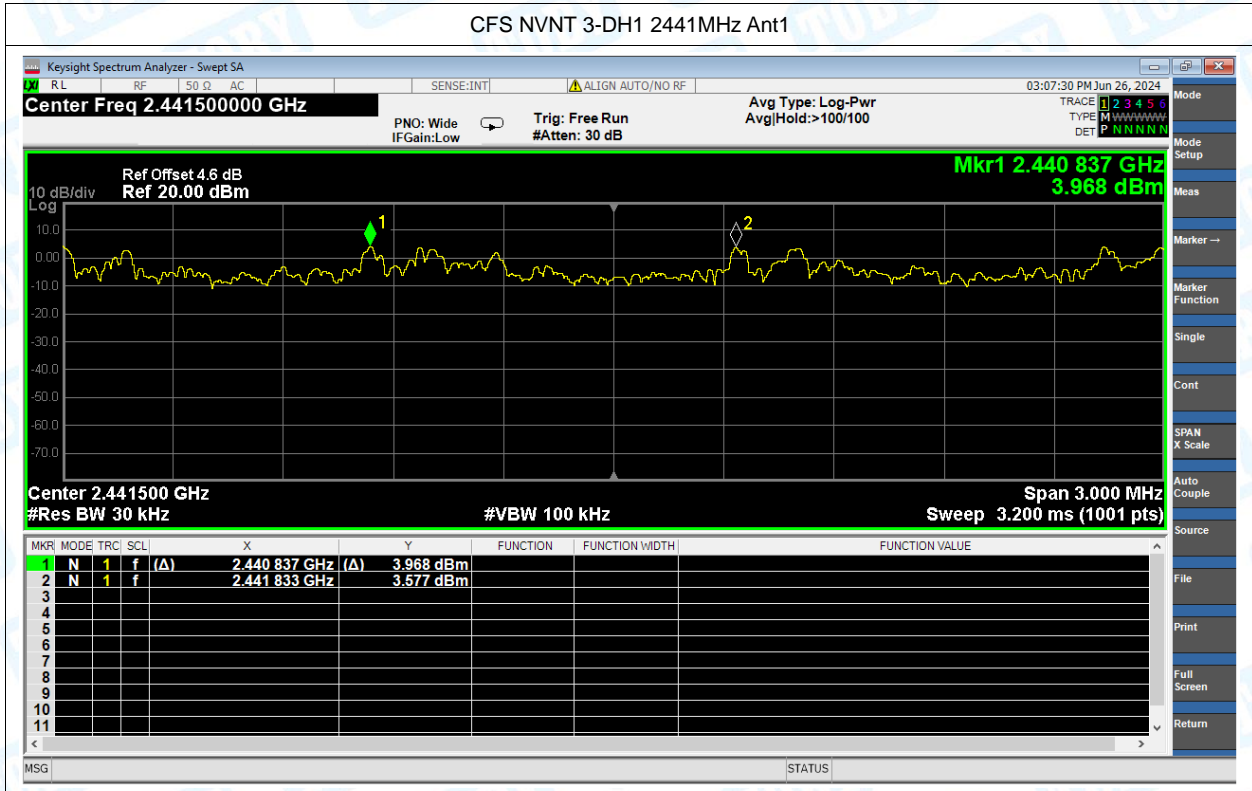
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



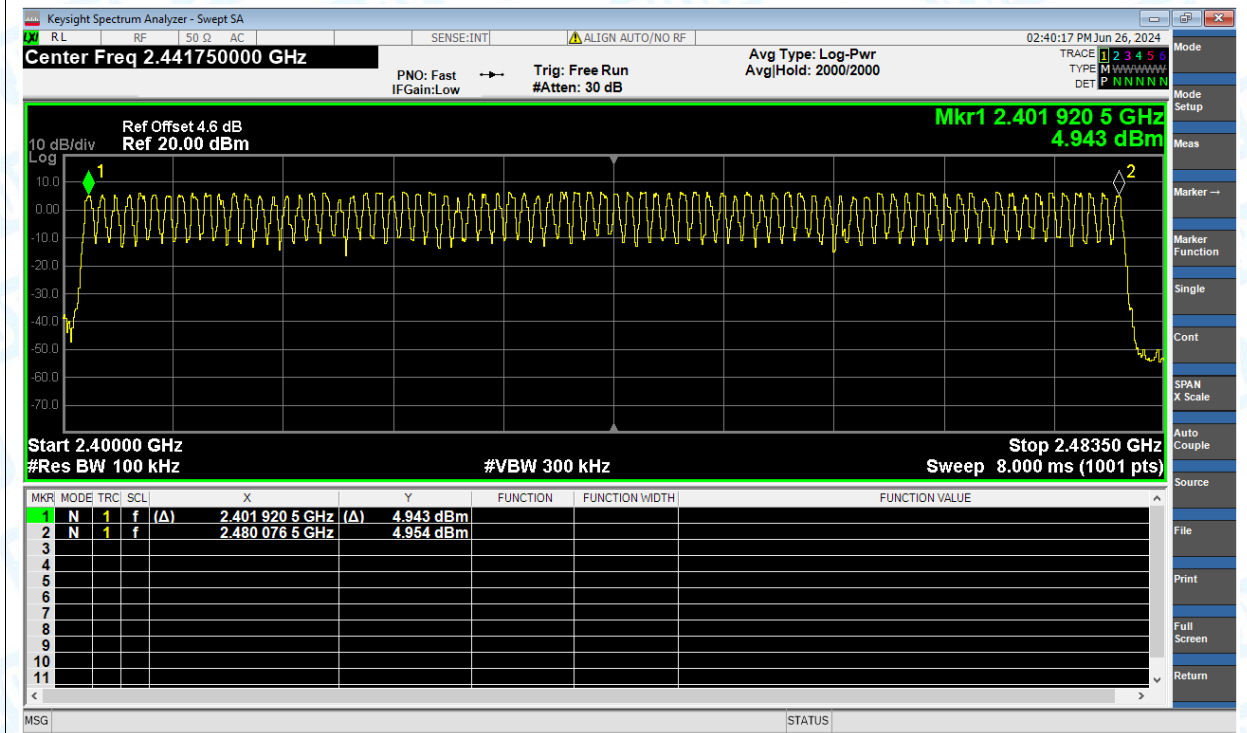


11.Number of Hopping Channel

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

