

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	2.1 SOUND BAR
Test Model:	4001949
Sample ID:	HC-C-202408-0115-01-02#
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 5V
Test Engineer:	Zkn Zhou
Note: For a more detailed features description, please refer to the report TBR-C-202408-0115-5 The report only show the worst case data.	

Contents

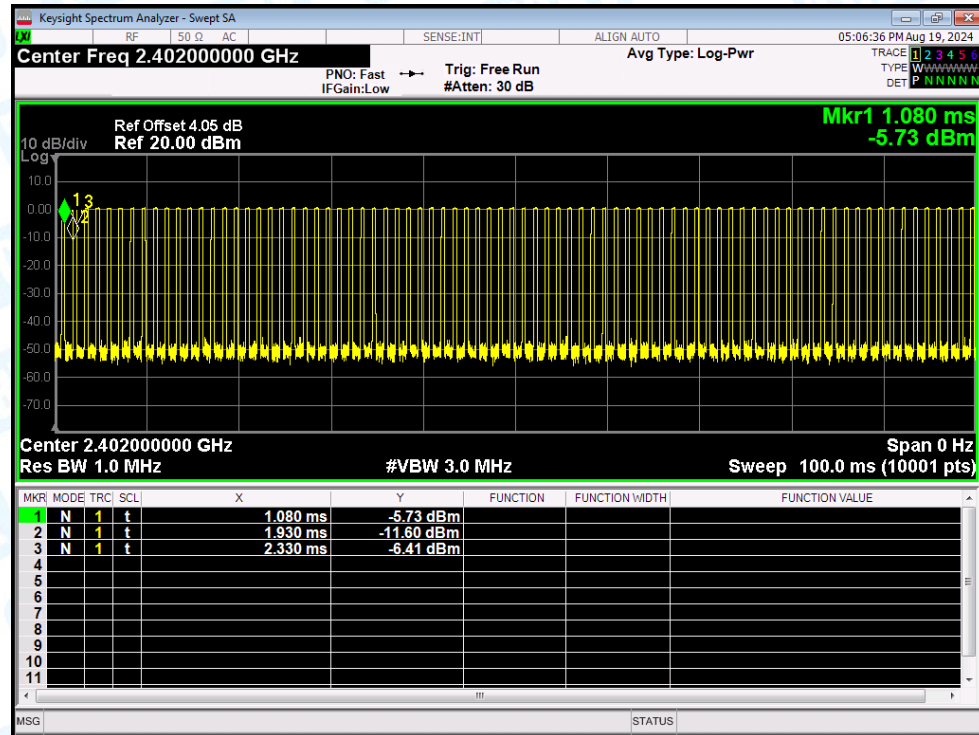
1.Duty Cycle.....	3
2.Maximum Conducted Output Power	9
3.-20dB Bandwidth	15
4.Occupied Channel Bandwidth	21
5.Band Edge	27
6.Band Edge(Hopping).....	34
7.Conducted RF Spurious Emission	41
8.Restrict Band	51
9.Carrier Frequencies Separation	58
10.Number of Hopping Channel	61
11.Dwell Time.....	64

1.Duty Cycle

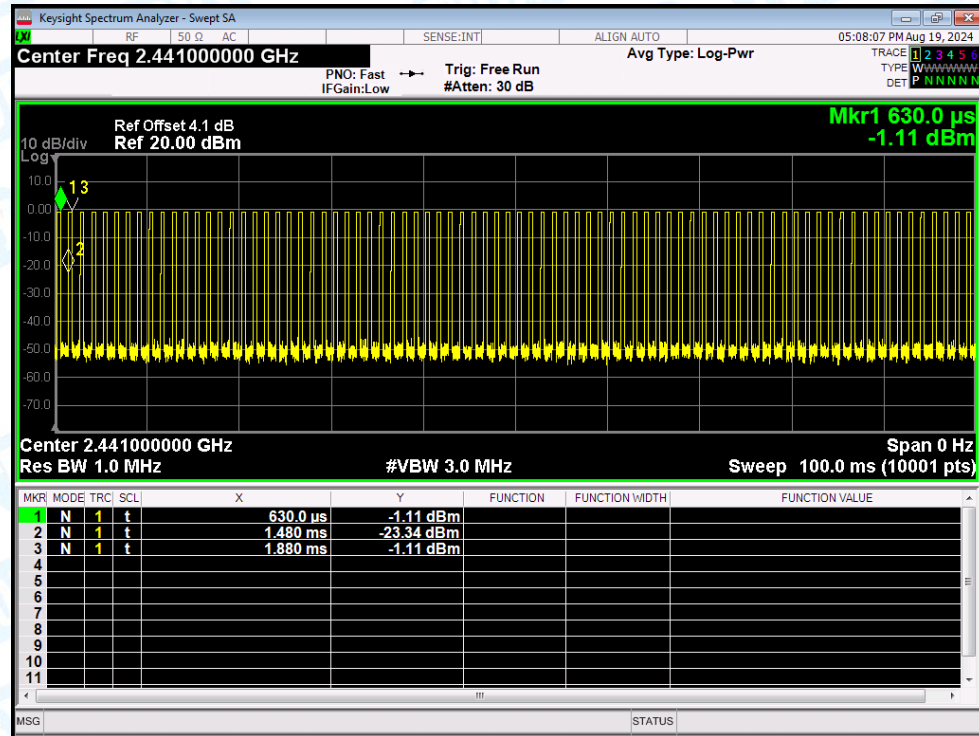
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	32	4.95	2.5
NVNT	1-DH1	2441	Ant1	32	4.95	2.5
NVNT	1-DH1	2480	Ant1	32	4.95	2.5
NVNT	2-DH1	2402	Ant1	32.8	4.84	2.44
NVNT	2-DH1	2441	Ant1	32.8	4.84	2.44
NVNT	2-DH1	2480	Ant1	32	4.95	2.5
NVNT	3-DH1	2402	Ant1	32.8	4.84	2.44
NVNT	3-DH1	2441	Ant1	32.8	4.84	2.44
NVNT	3-DH1	2480	Ant1	32.8	4.84	2.44

Test Graphs

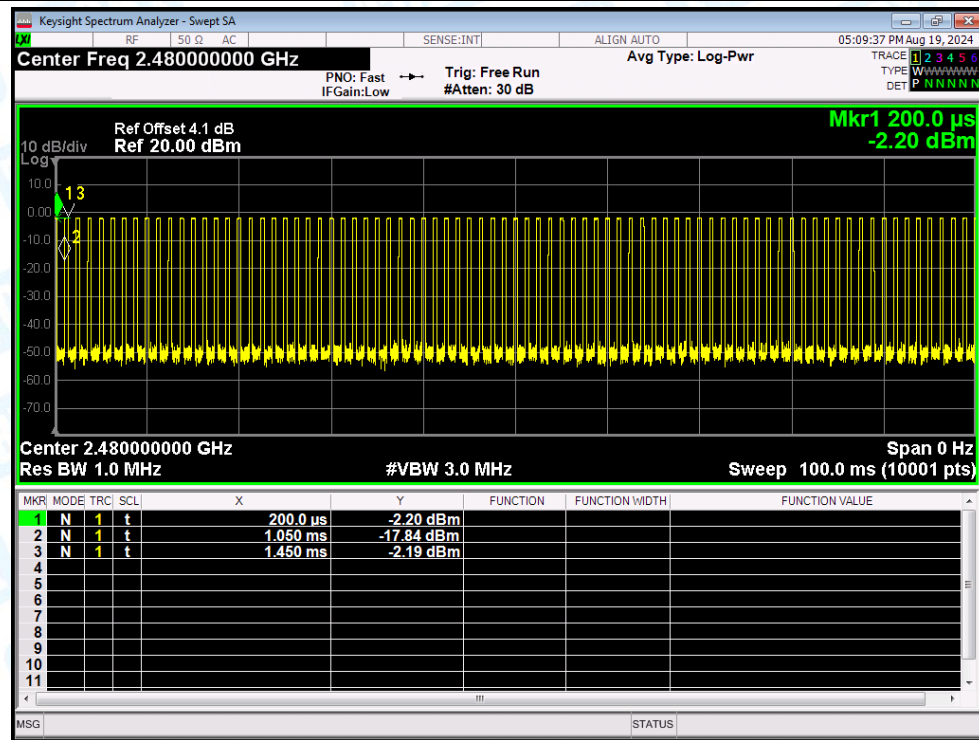
Duty Cycle NVNT 1-DH1 2402MHz Ant1



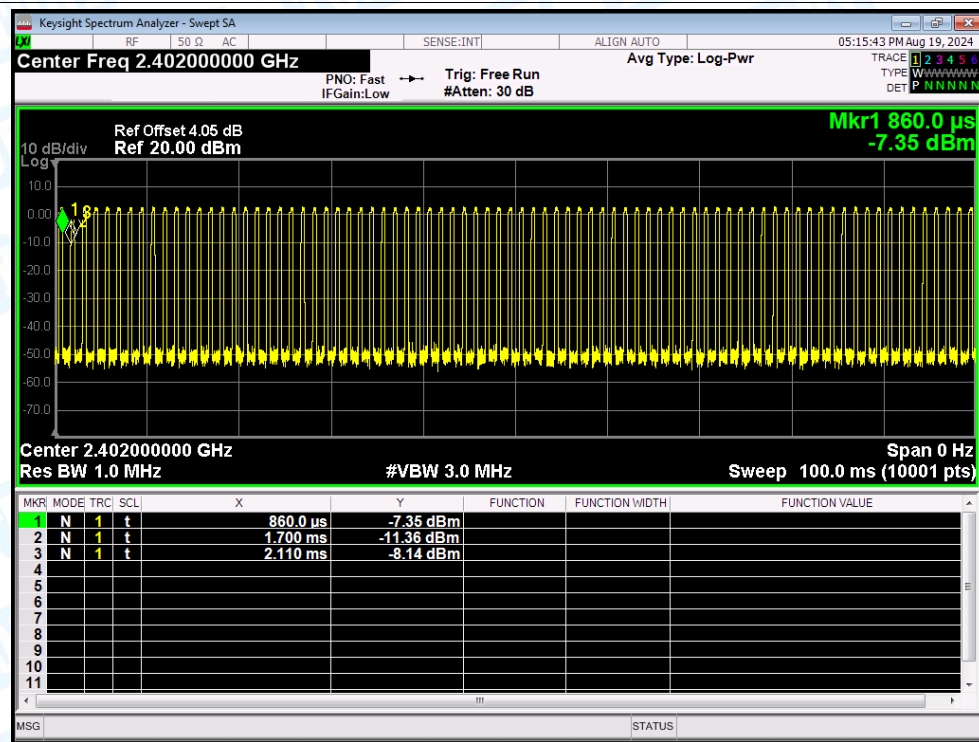
Duty Cycle NVNT 1-DH1 2441MHz Ant1



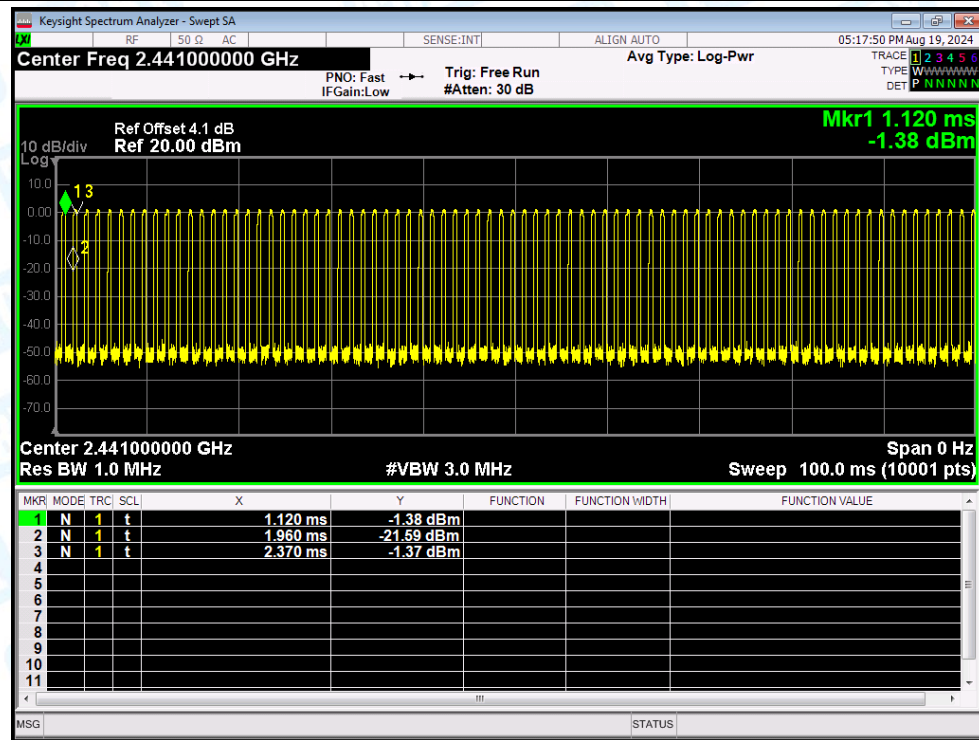
Duty Cycle NVNT 1-DH1 2480MHz Ant1



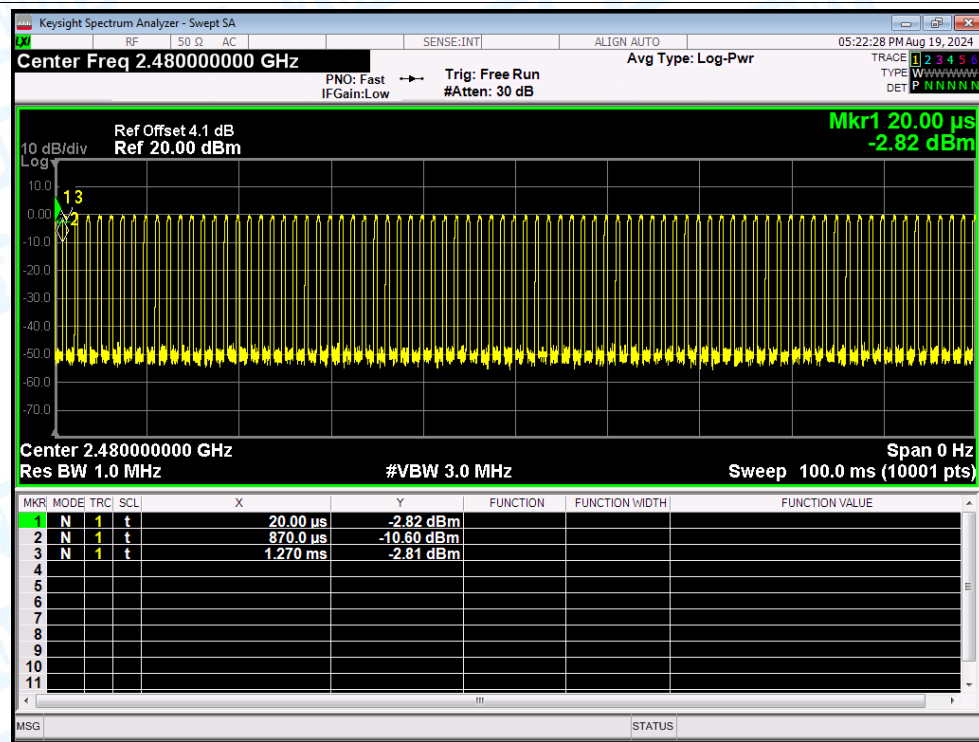
Duty Cycle NVNT 2-DH1 2402MHz Ant1



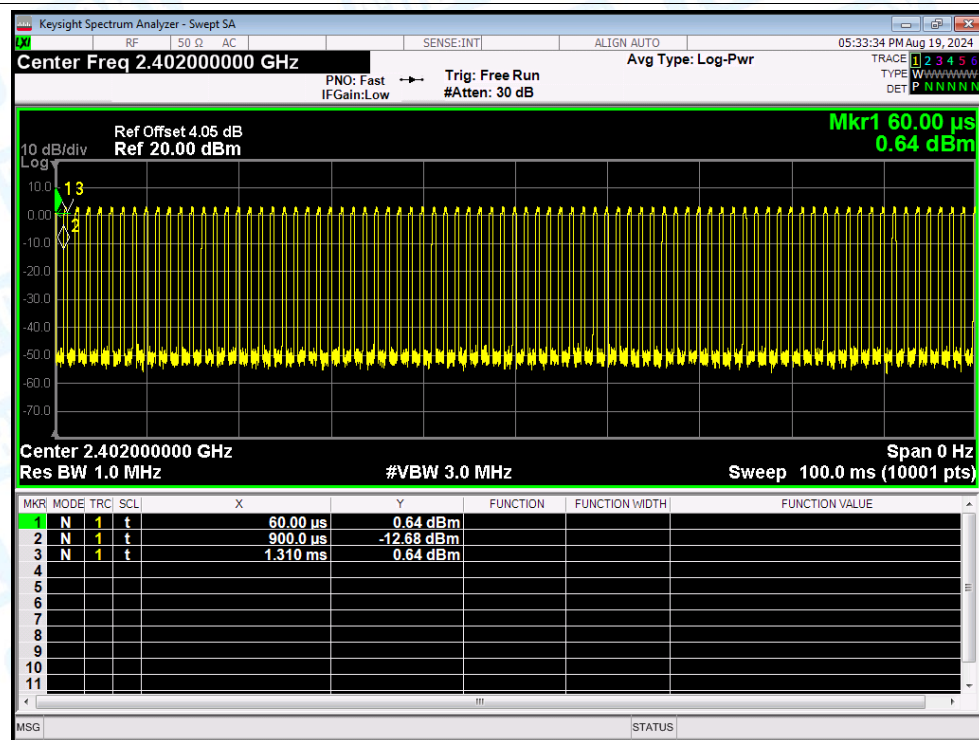
Duty Cycle NVNT 2-DH1 2441MHz Ant1



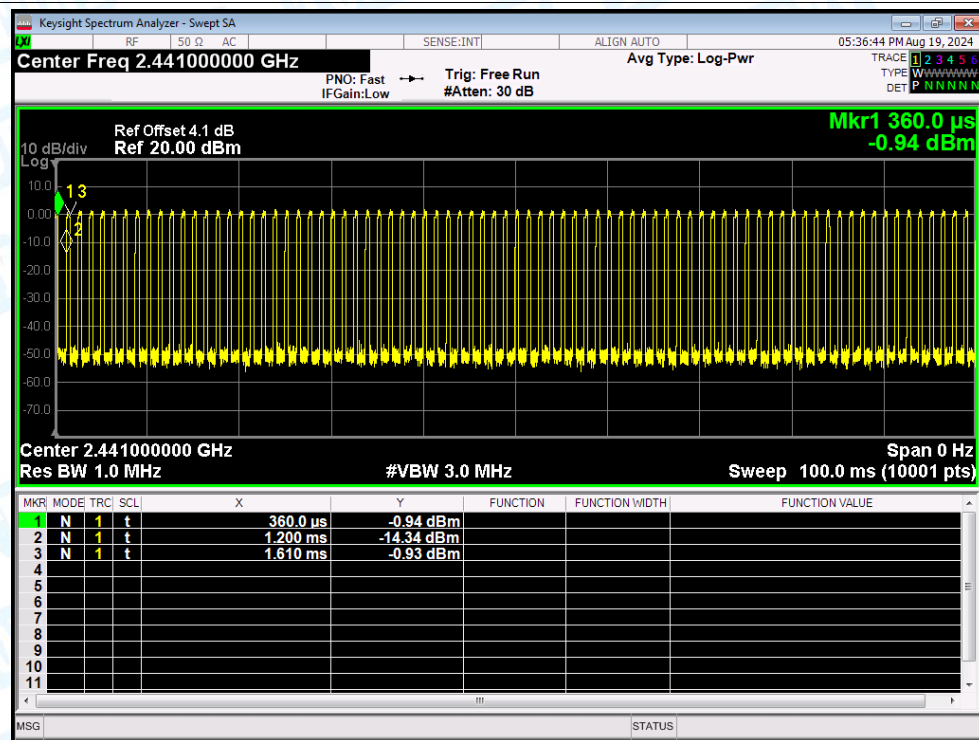
Duty Cycle NVNT 2-DH1 2480MHz Ant1

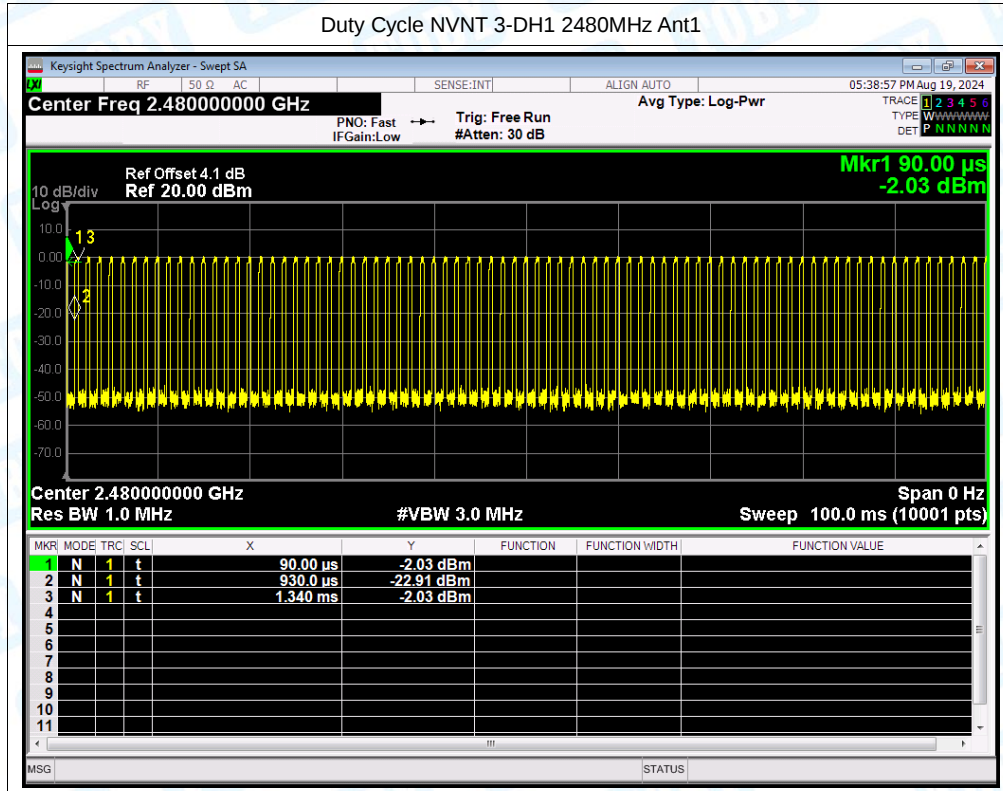


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



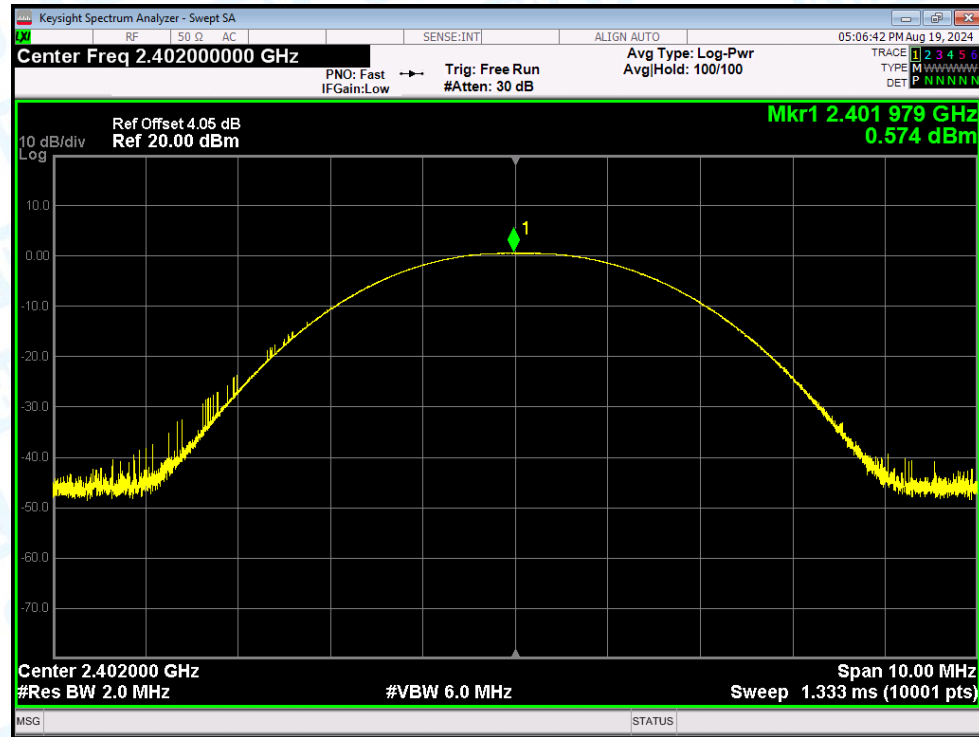


2. Maximum Conducted Output Power

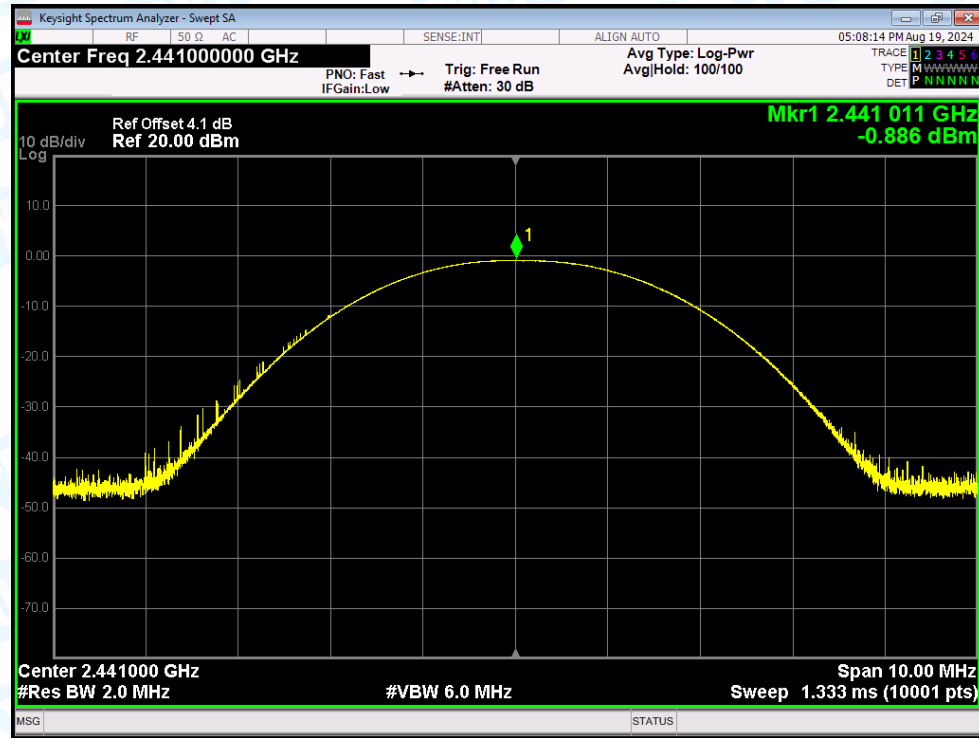
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	0.574	21	Pass
NVNT	1-DH1	2441	Ant1	-0.886	21	Pass
NVNT	1-DH1	2480	Ant1	-2.006	21	Pass
NVNT	2-DH1	2402	Ant1	3.072	21	Pass
NVNT	2-DH1	2441	Ant1	1.569	21	Pass
NVNT	2-DH1	2480	Ant1	0.231	21	Pass
NVNT	3-DH1	2402	Ant1	3.63	21	Pass
NVNT	3-DH1	2441	Ant1	2.114	21	Pass
NVNT	3-DH1	2480	Ant1	1.017	21	Pass

Test Graphs

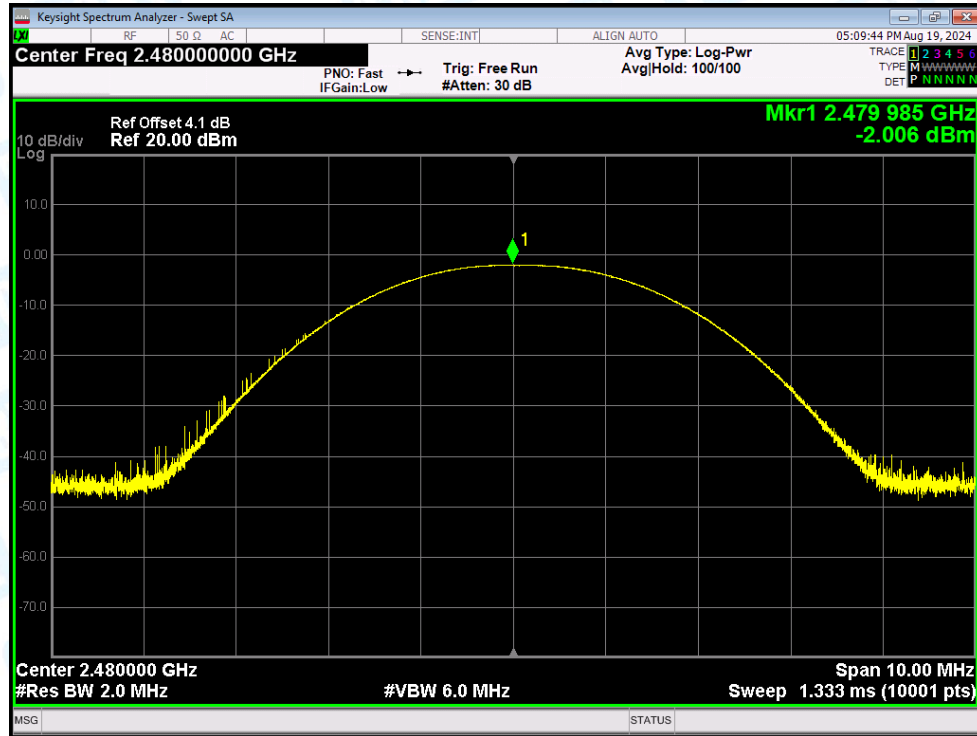
Power NVNT 1-DH1 2402MHz Ant1



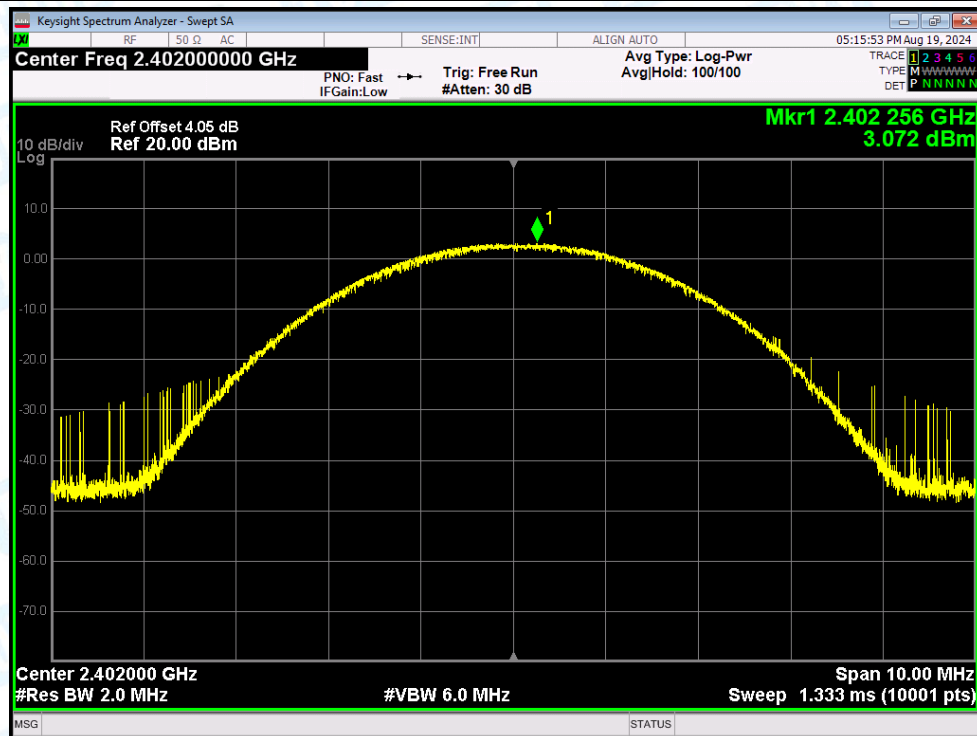
Power NVNT 1-DH1 2441MHz Ant1



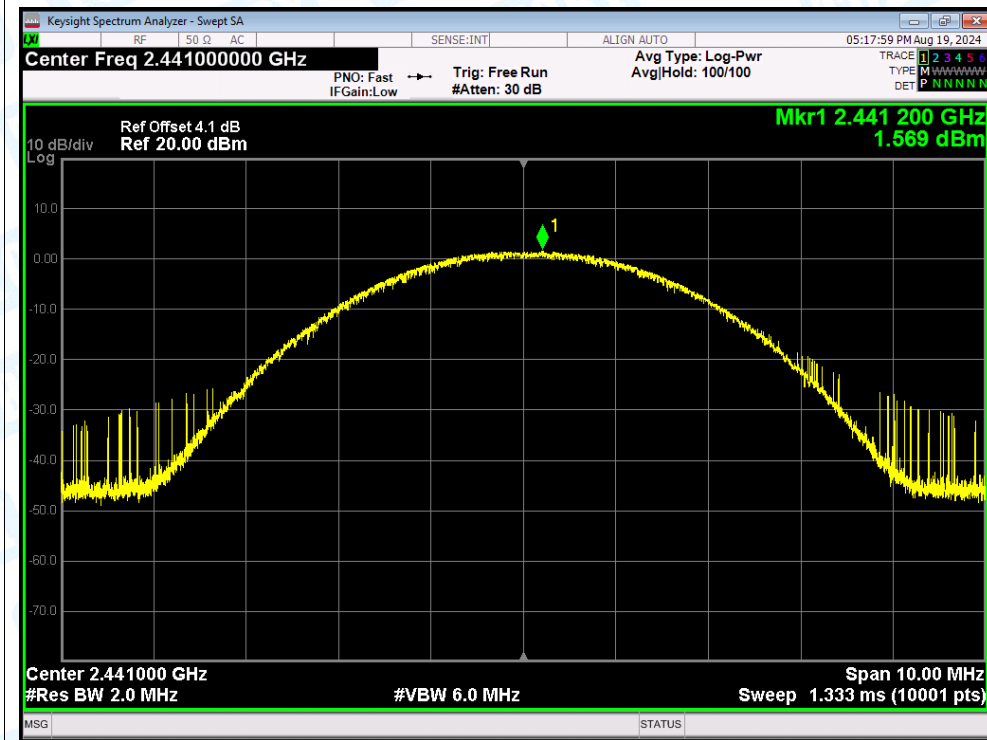
Power NVNT 1-DH1 2480MHz Ant1



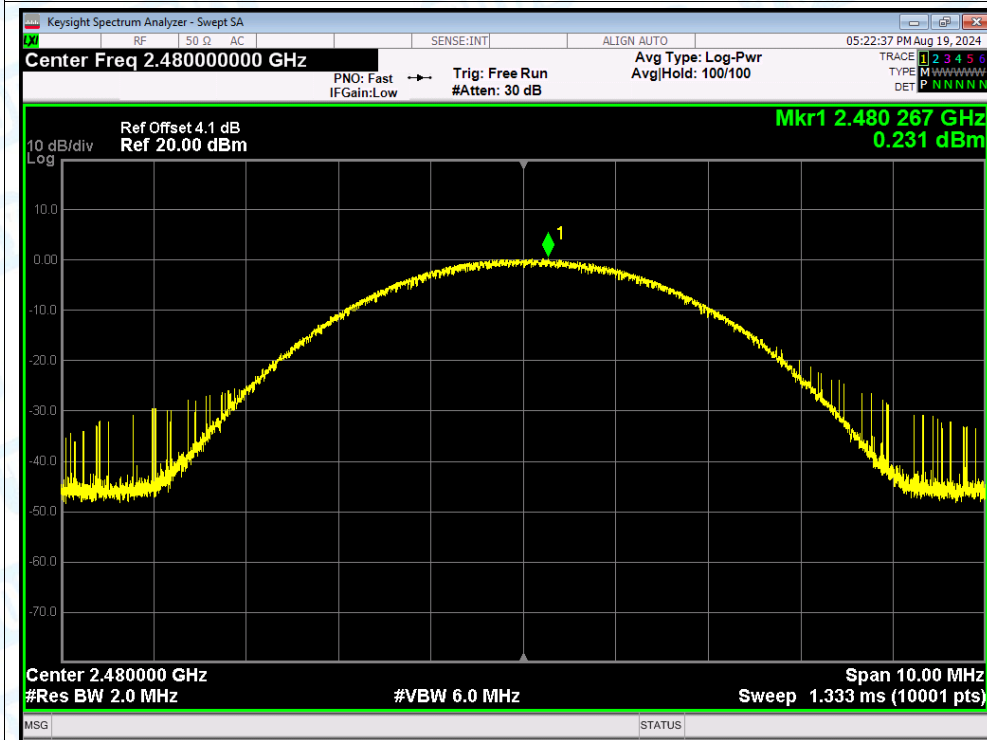
Power NVNT 2-DH1 2402MHz Ant1



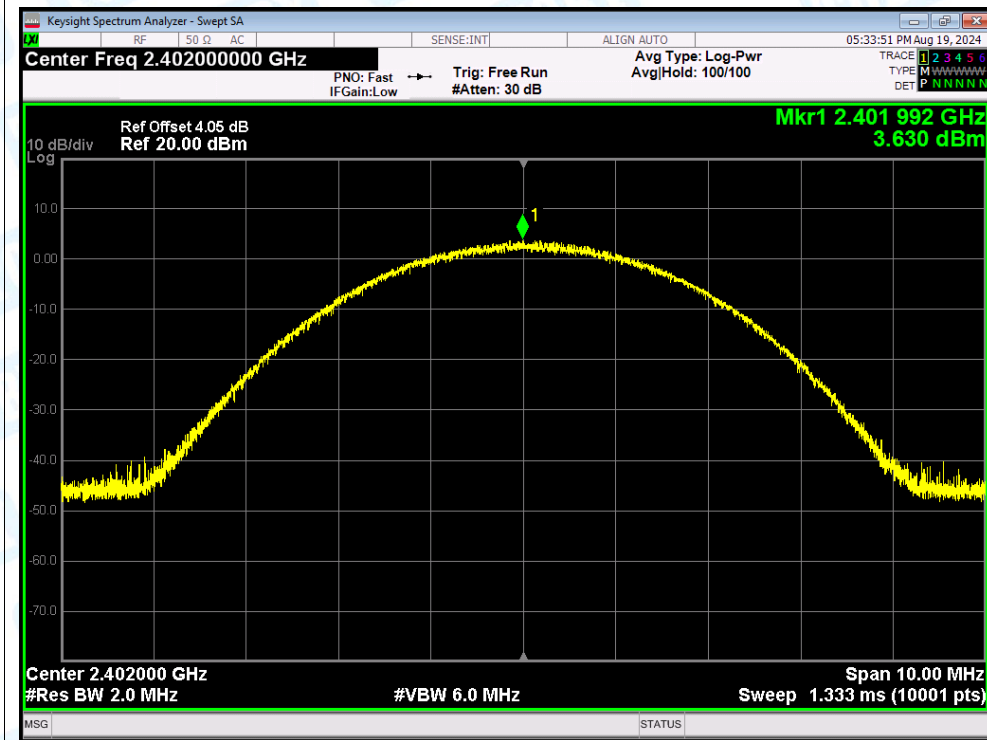
Power NVNT 2-DH1 2441MHz Ant1



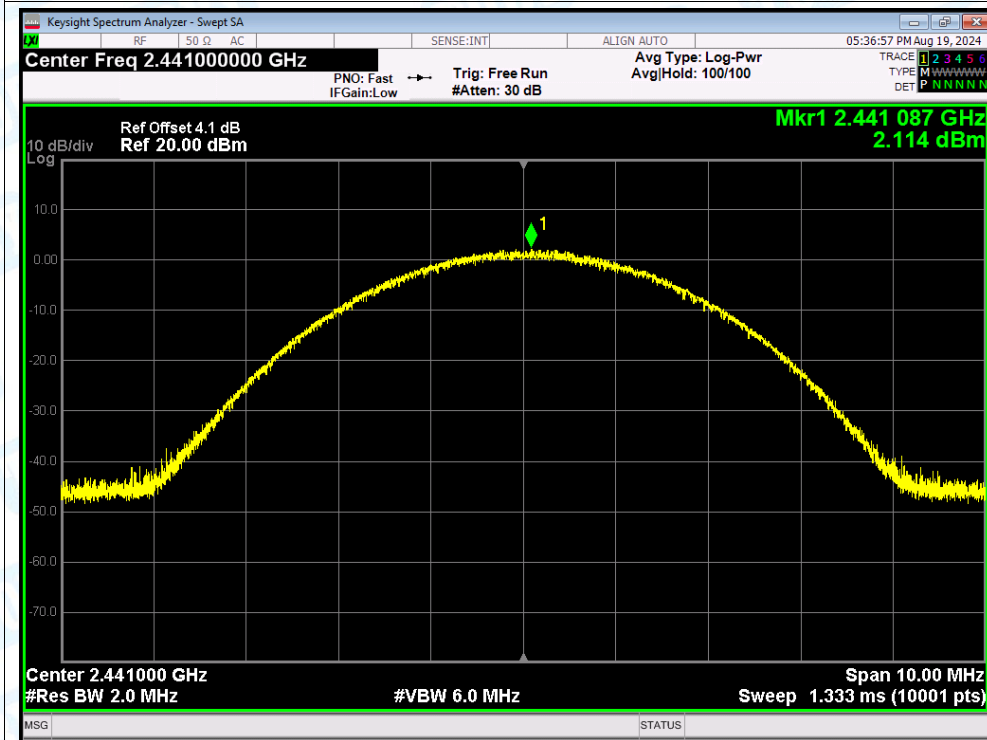
Power NVNT 2-DH1 2480MHz Ant1

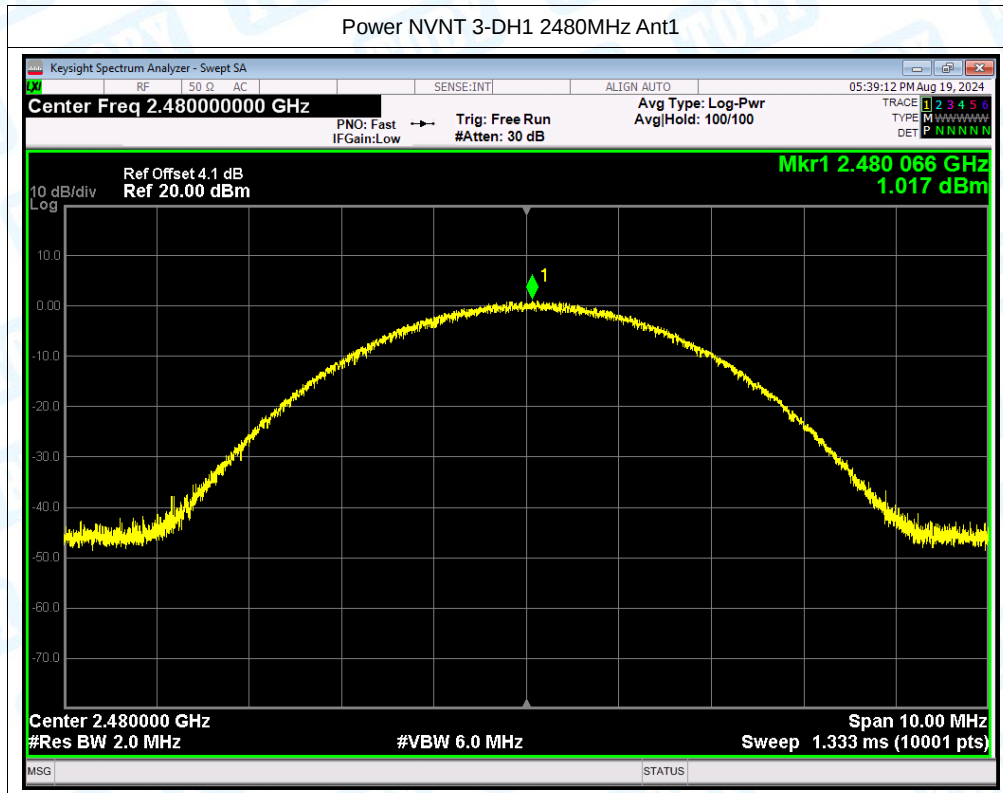


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



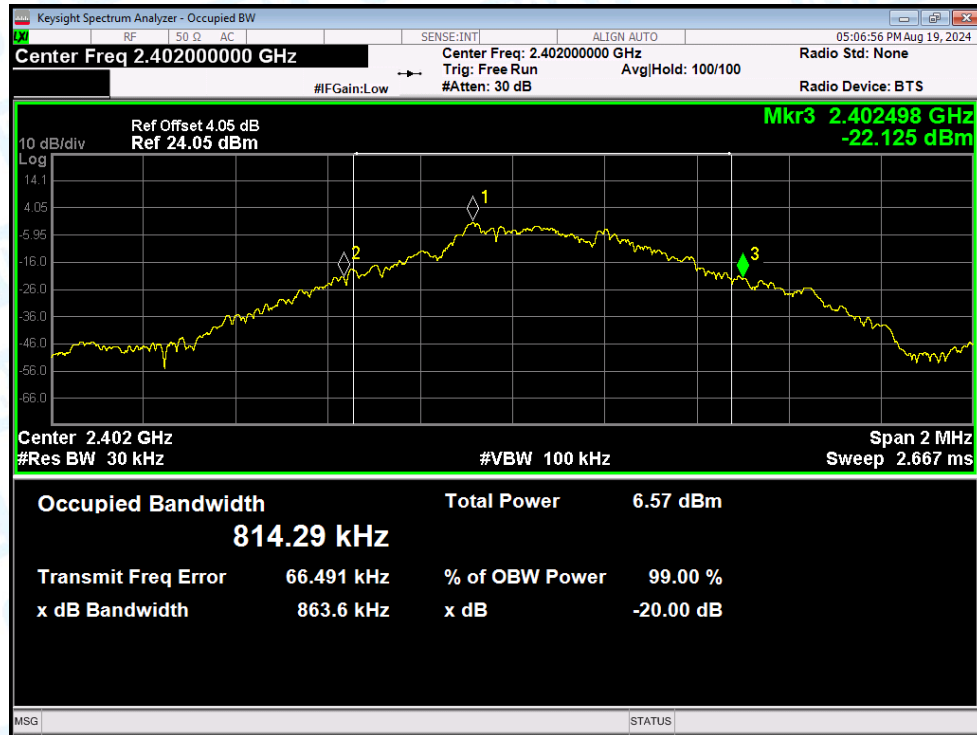


3.-20dB Bandwidth

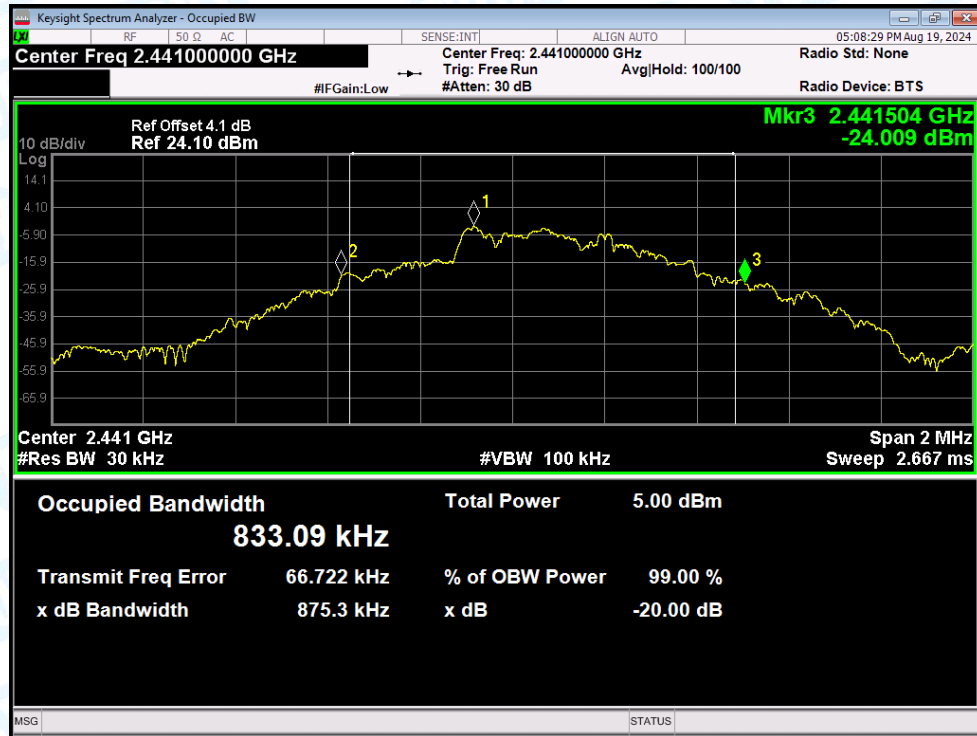
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.86	0	Pass
NVNT	1-DH1	2441	Ant1	0.88	0	Pass
NVNT	1-DH1	2480	Ant1	0.88	0	Pass
NVNT	2-DH1	2402	Ant1	1.25	0	Pass
NVNT	2-DH1	2441	Ant1	1.26	0	Pass
NVNT	2-DH1	2480	Ant1	1.29	0	Pass
NVNT	3-DH1	2402	Ant1	1.24	0	Pass
NVNT	3-DH1	2441	Ant1	1.25	0	Pass
NVNT	3-DH1	2480	Ant1	1.22	0	Pass

Test Graphs

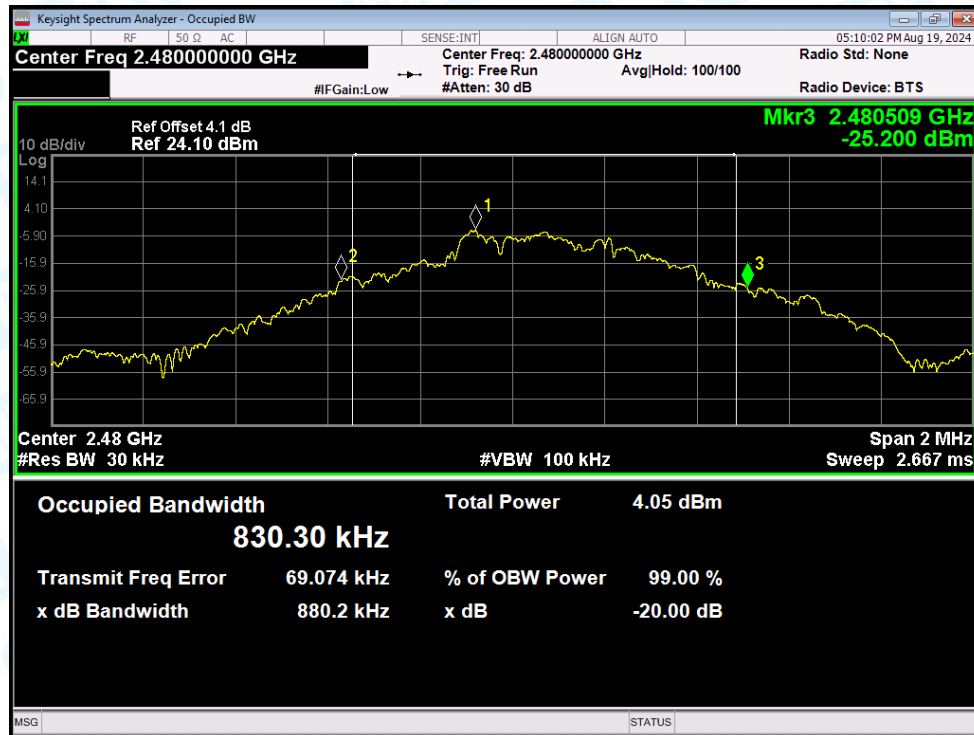
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



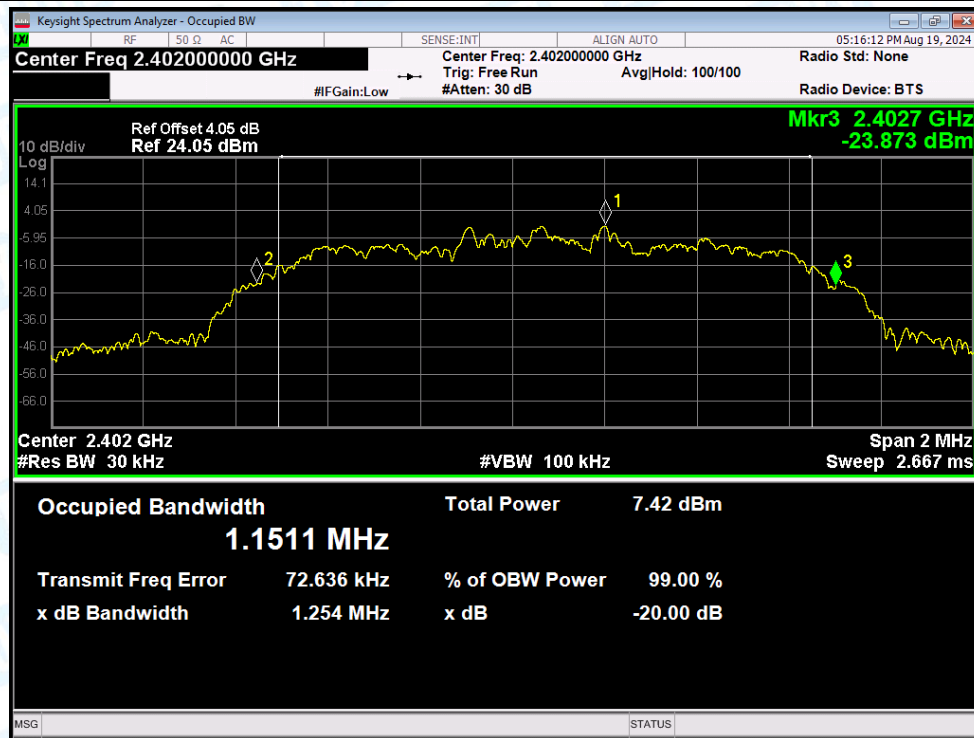
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



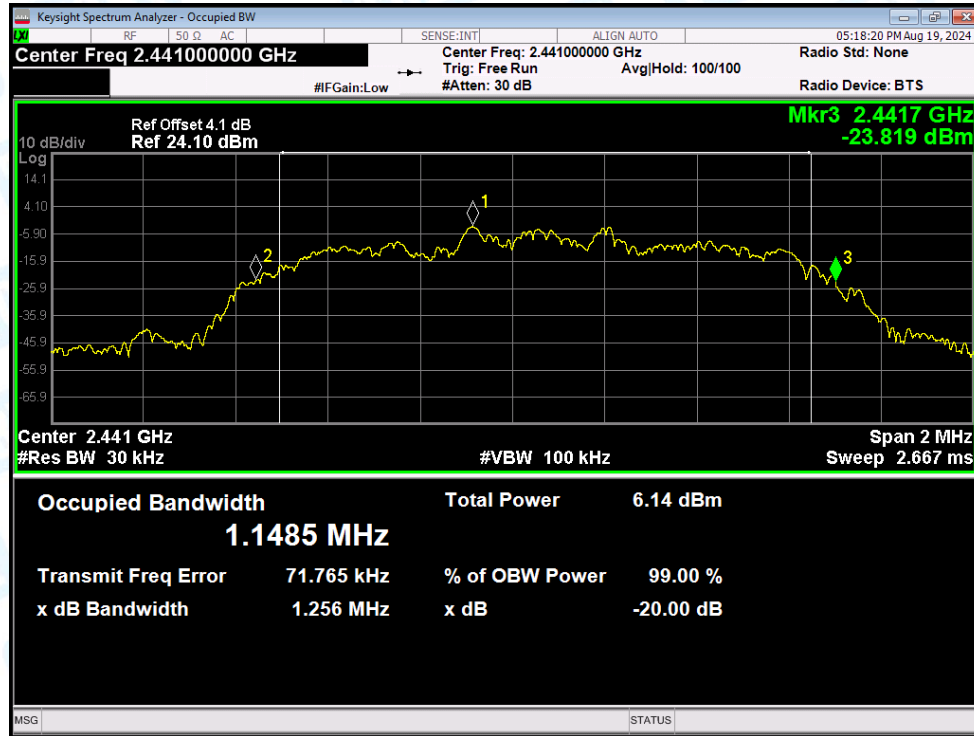
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



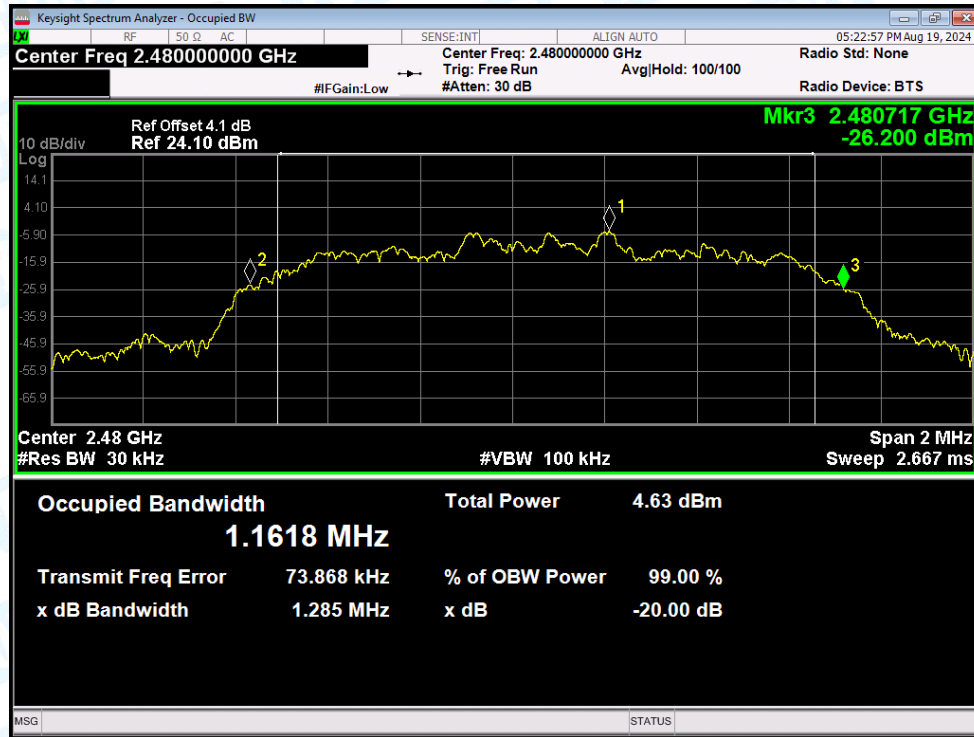
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



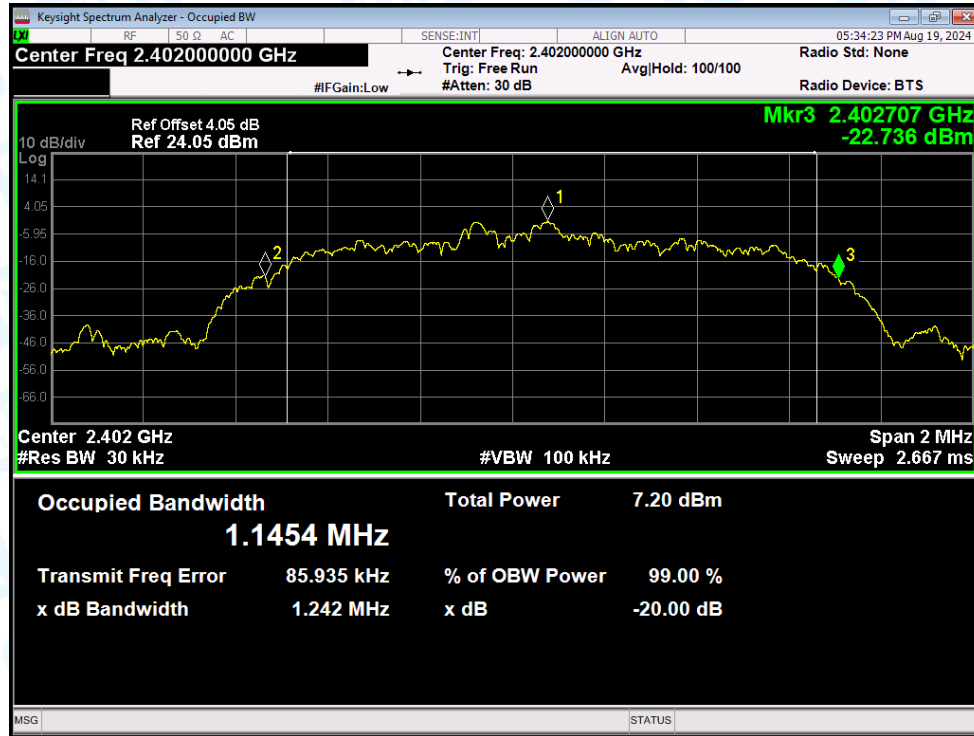
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



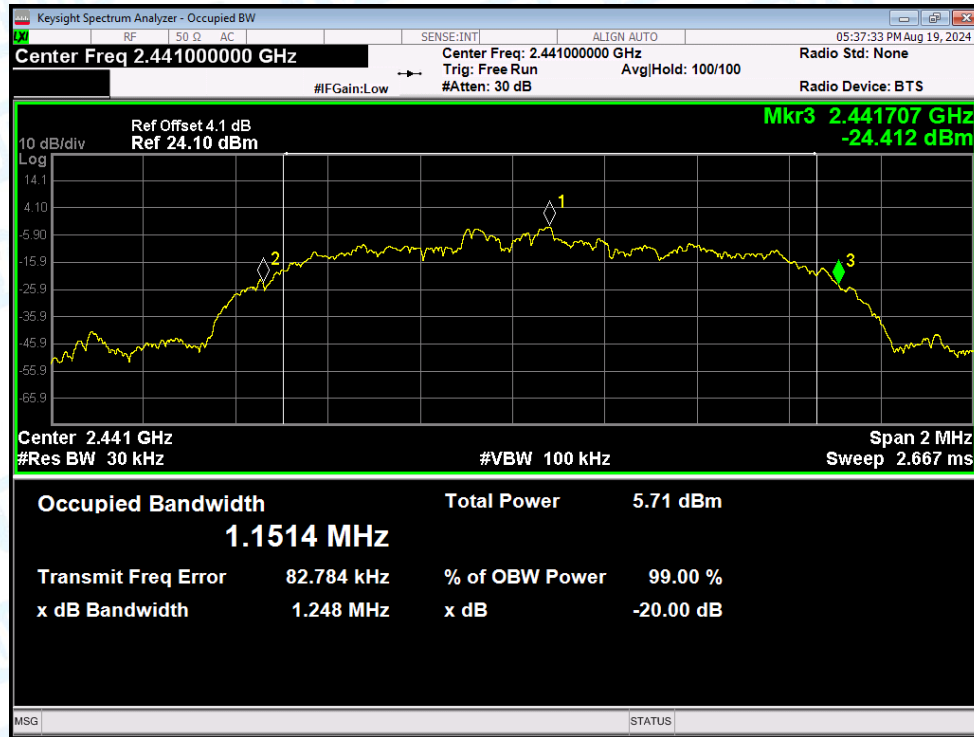
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

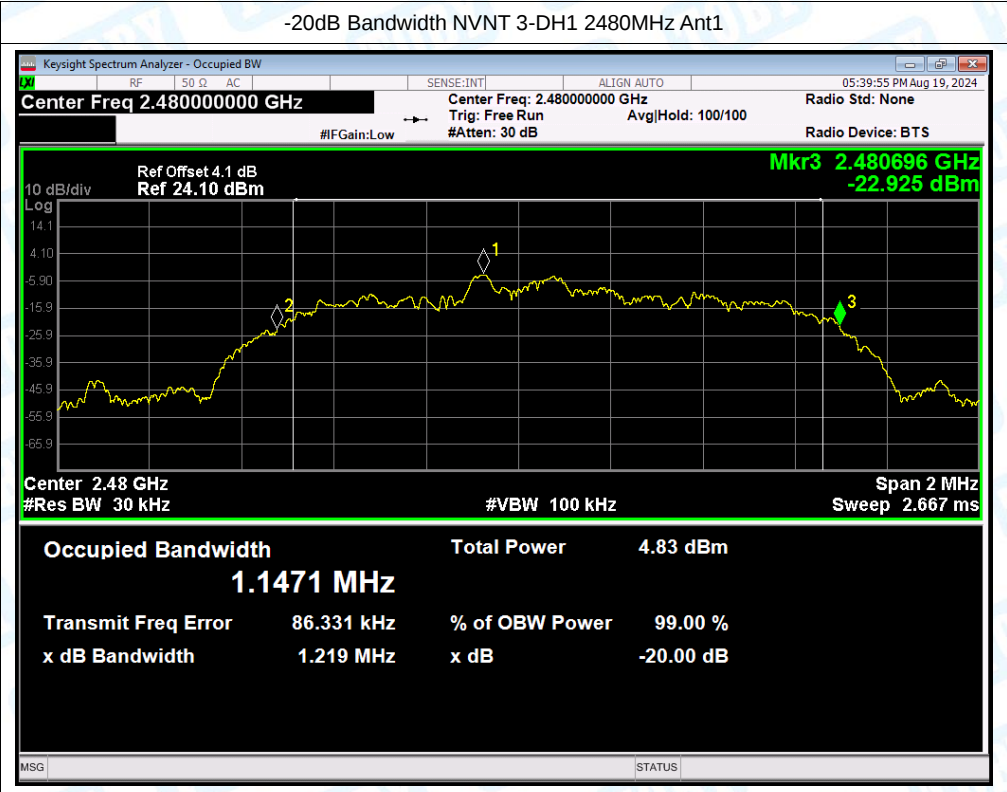


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



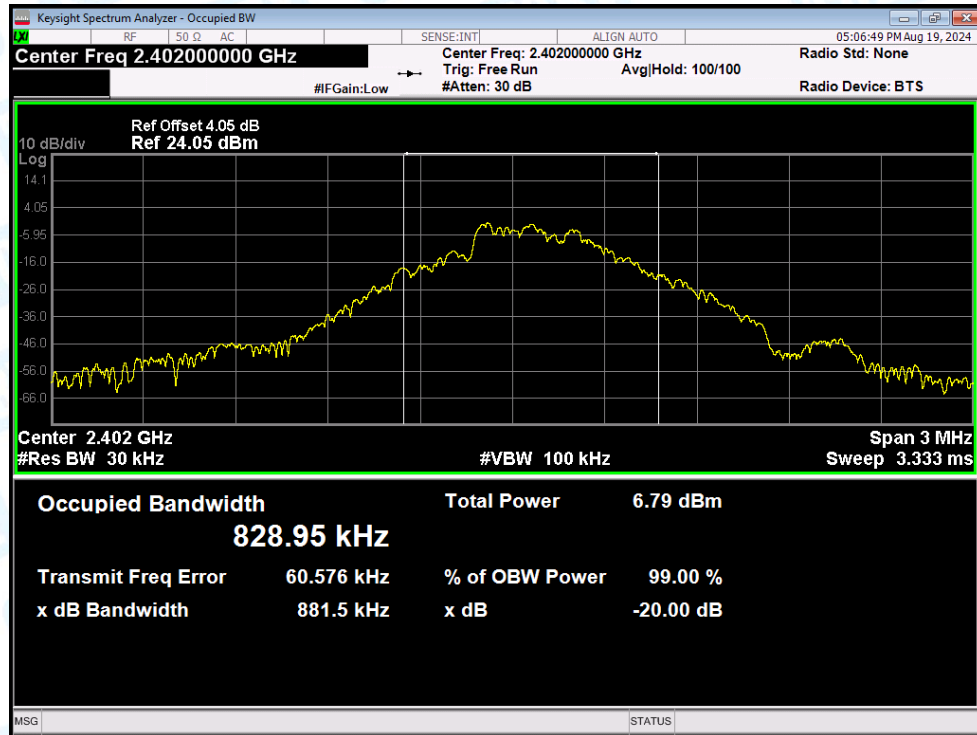


4.Occupied Channel Bandwidth

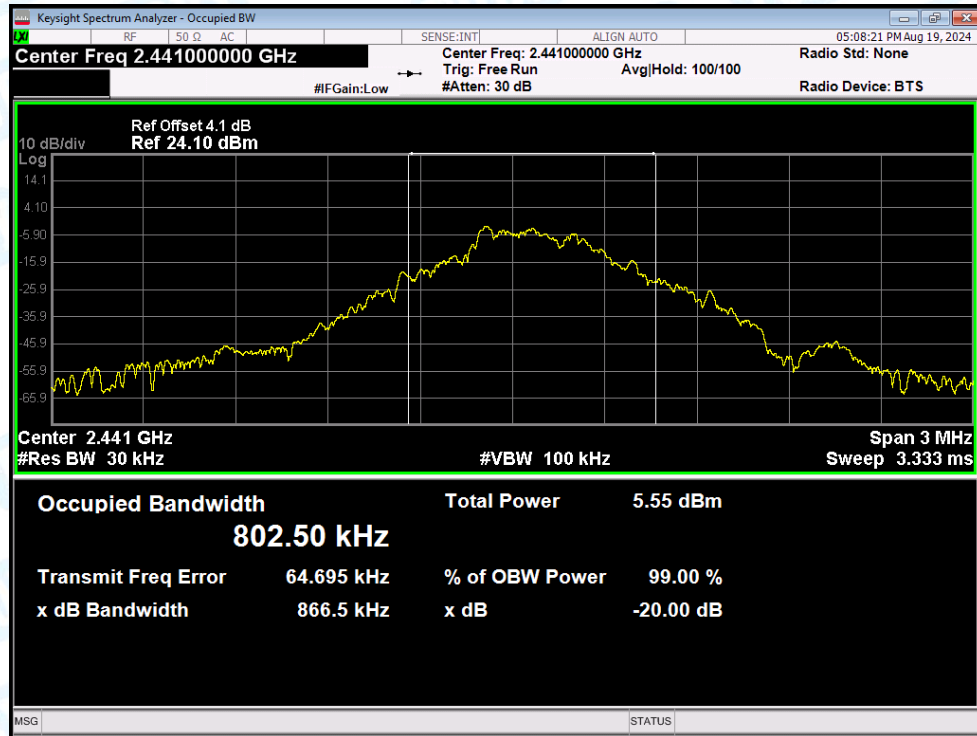
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.829
NVNT	1-DH1	2441	Ant1	0.802
NVNT	1-DH1	2480	Ant1	0.843
NVNT	2-DH1	2402	Ant1	1.144
NVNT	2-DH1	2441	Ant1	1.155
NVNT	2-DH1	2480	Ant1	1.157
NVNT	3-DH1	2402	Ant1	1.143
NVNT	3-DH1	2441	Ant1	1.143
NVNT	3-DH1	2480	Ant1	1.142

Test Graphs

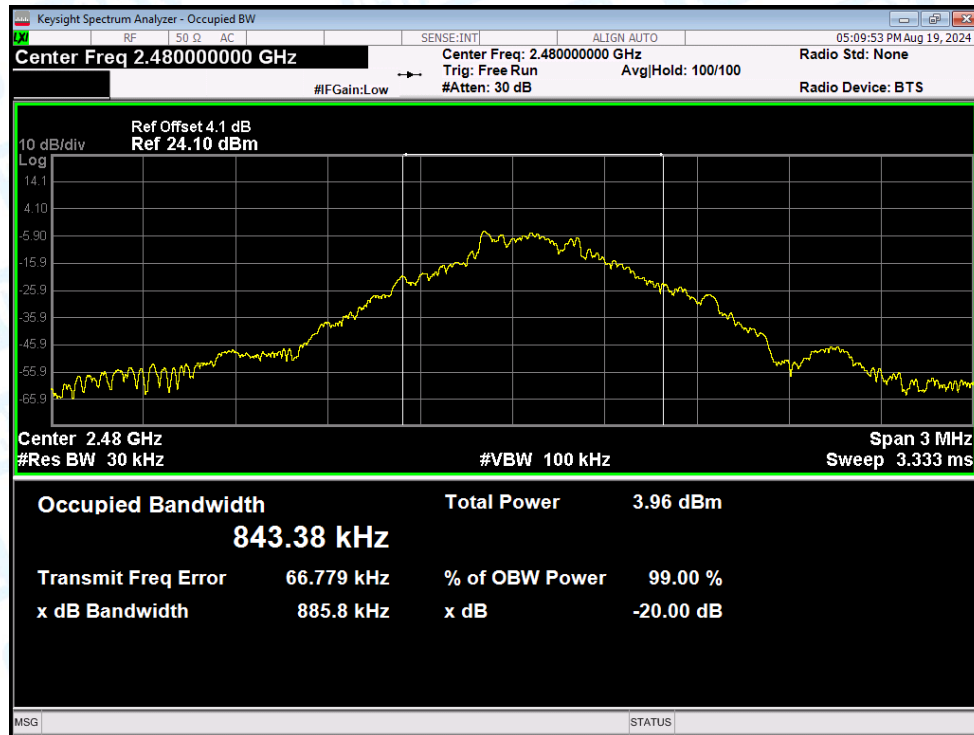
OBW NVNT 1-DH1 2402MHz Ant1



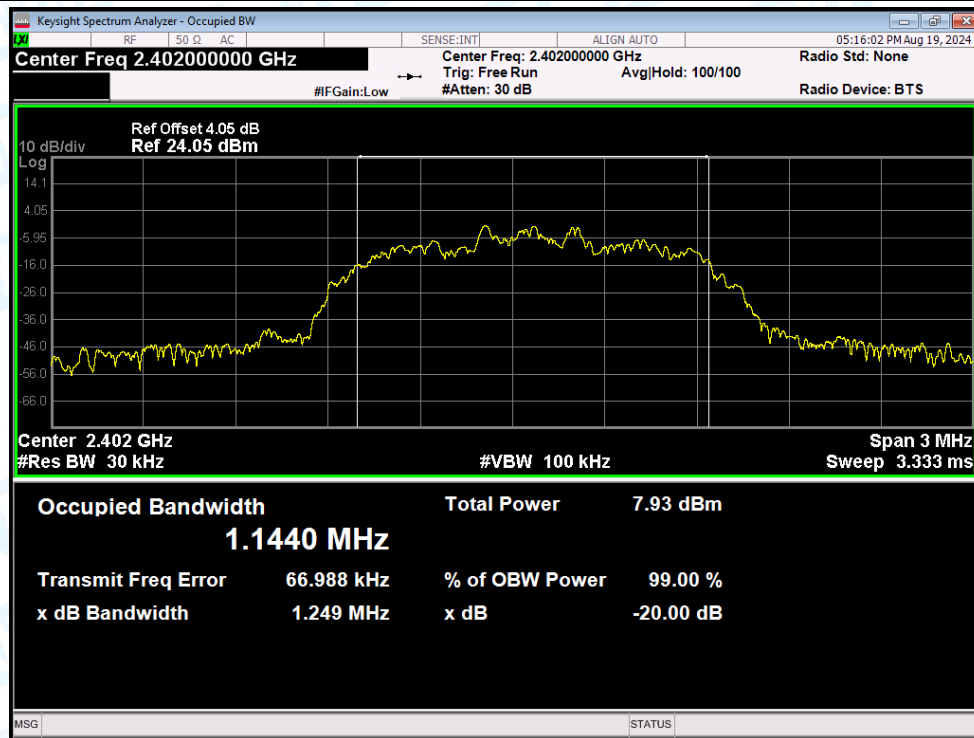
OBW NVNT 1-DH1 2441MHz Ant1



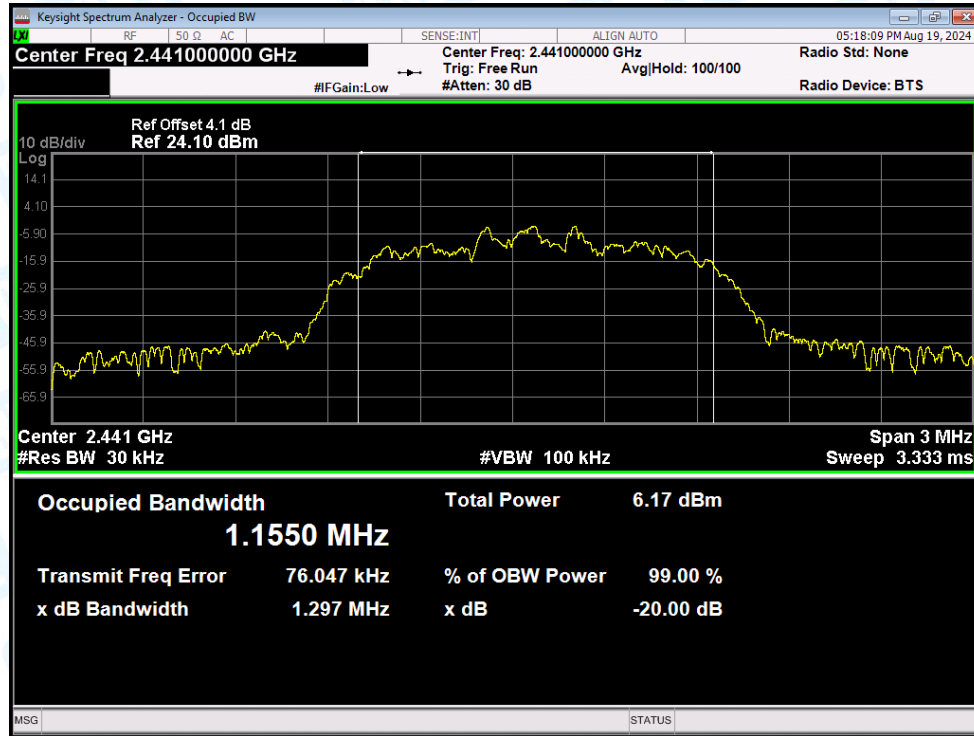
OBW NVNT 1-DH1 2480MHz Ant1



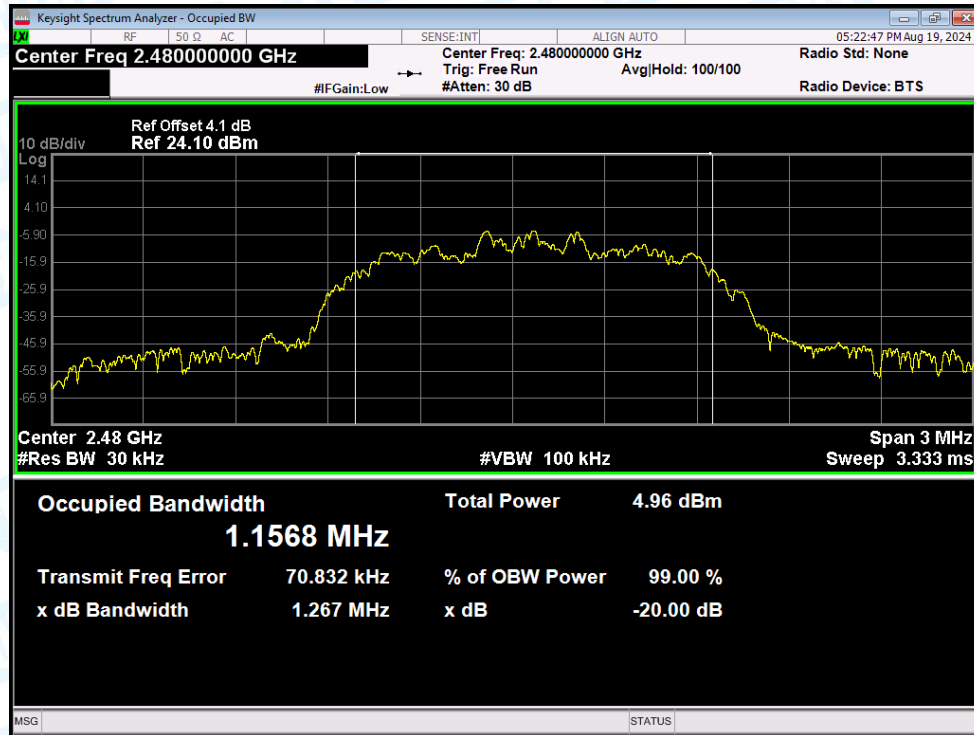
OBW NVNT 2-DH1 2402MHz Ant1



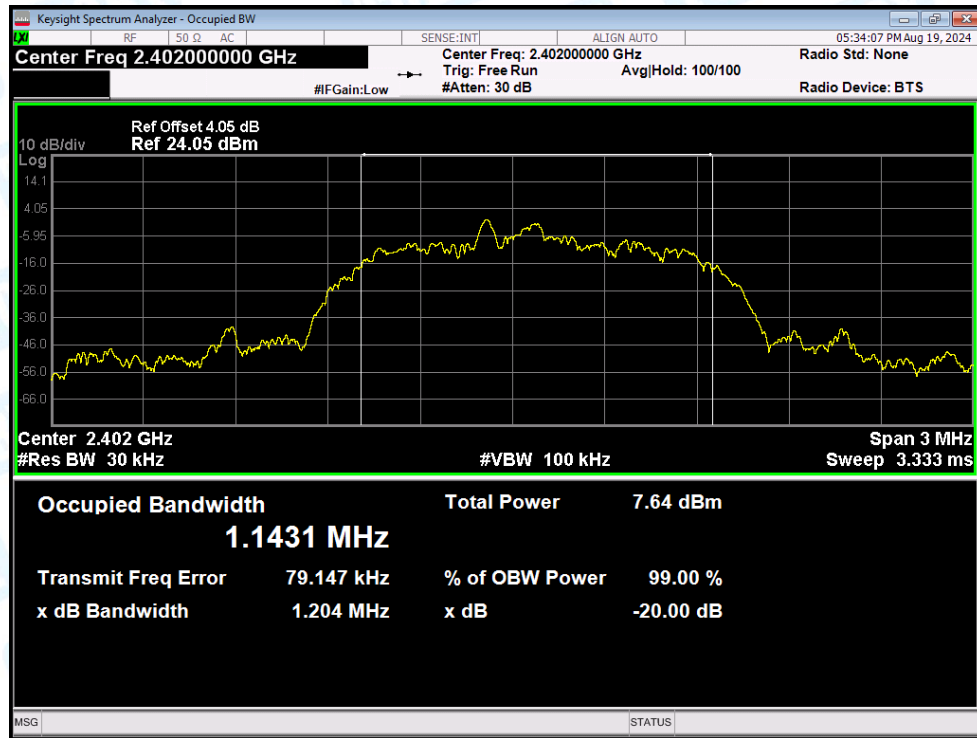
OBW NVNT 2-DH1 2441MHz Ant1



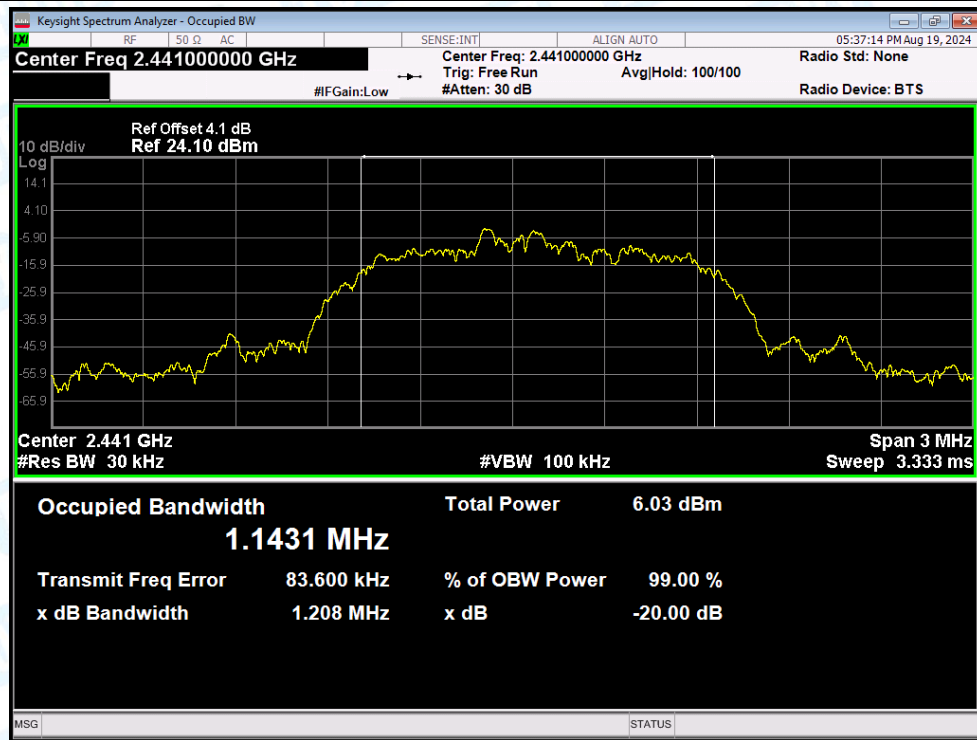
OBW NVNT 2-DH1 2480MHz Ant1

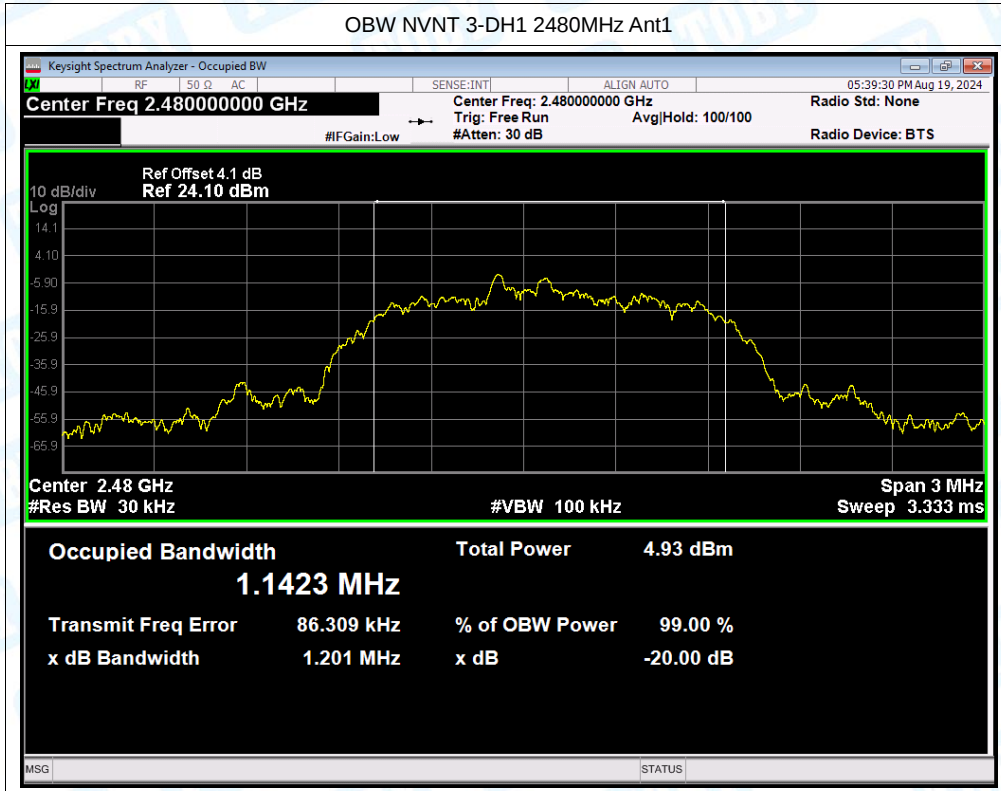


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



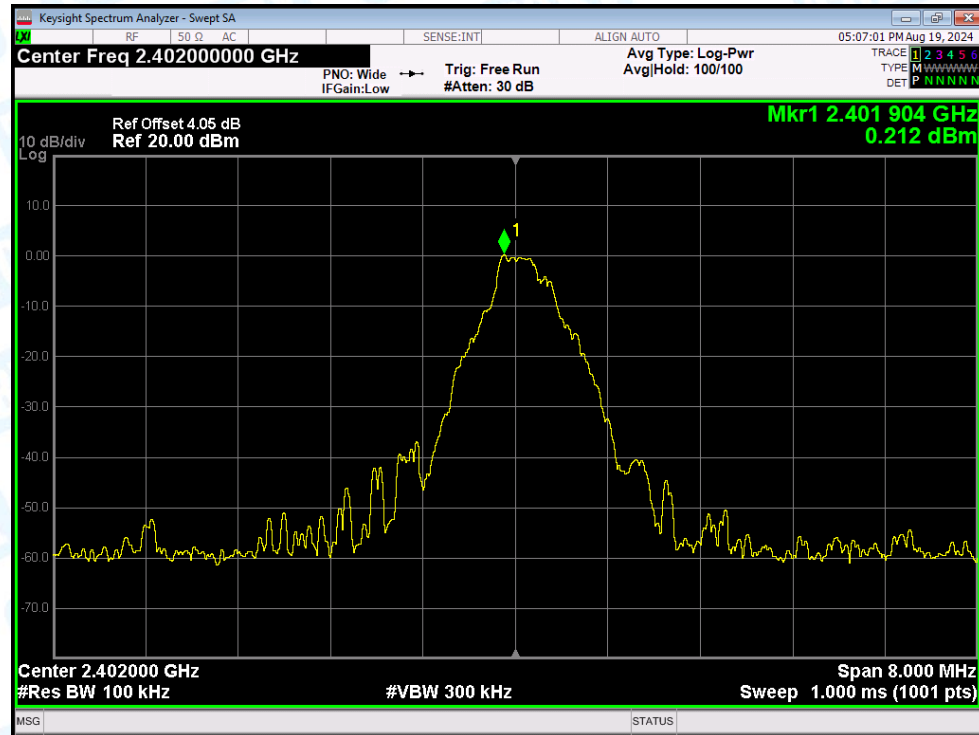


5.Band Edge

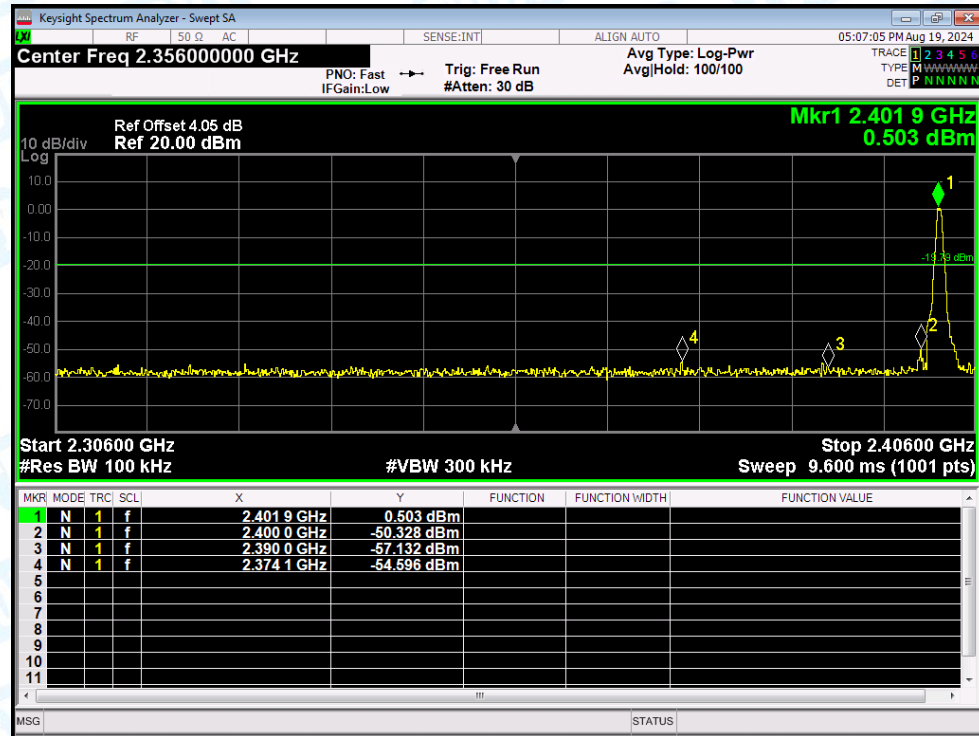
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-54.81	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-52.87	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-55.57	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-51.18	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-55.58	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-53.19	-20	Pass

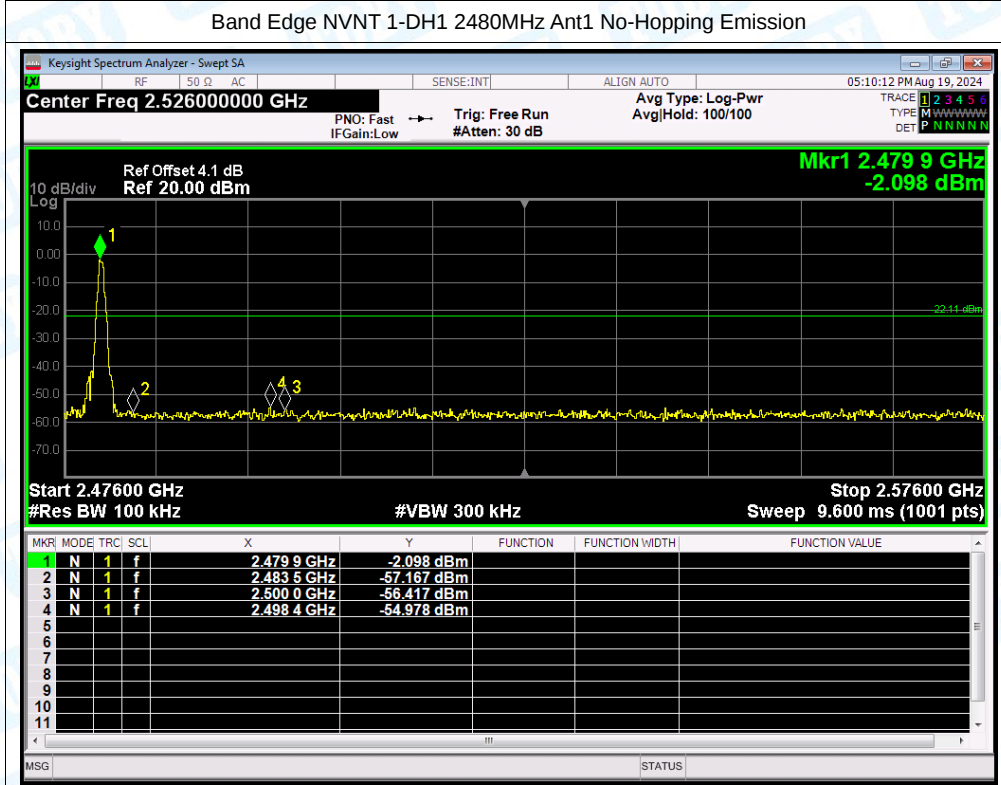
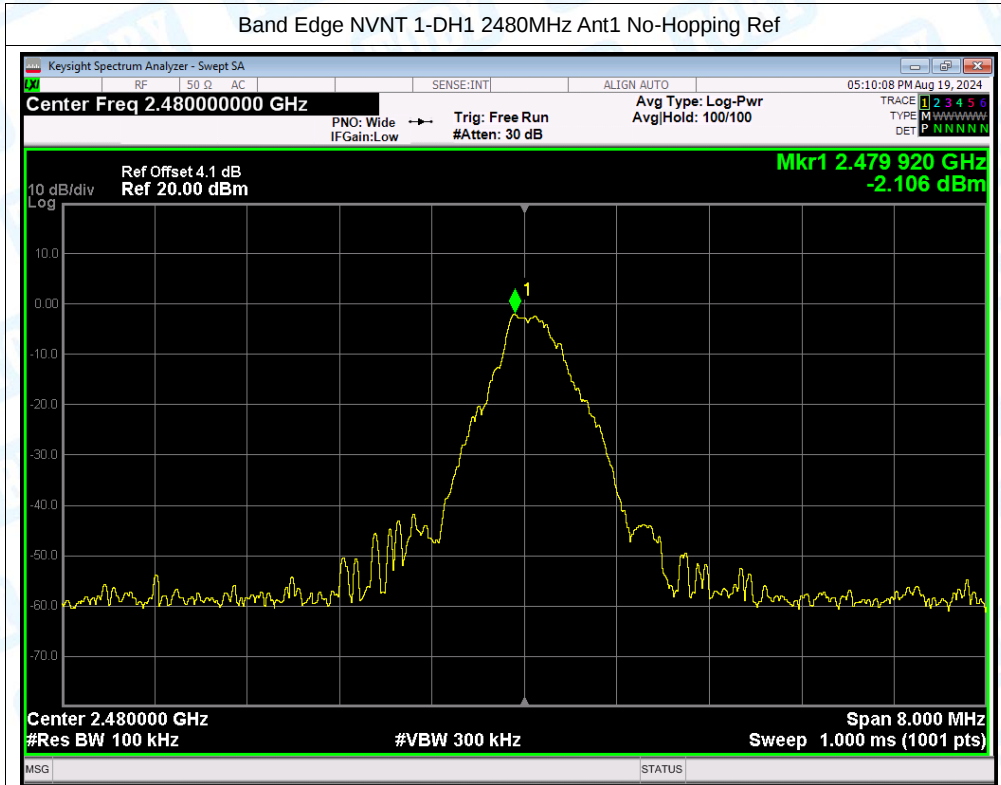
Test Graphs

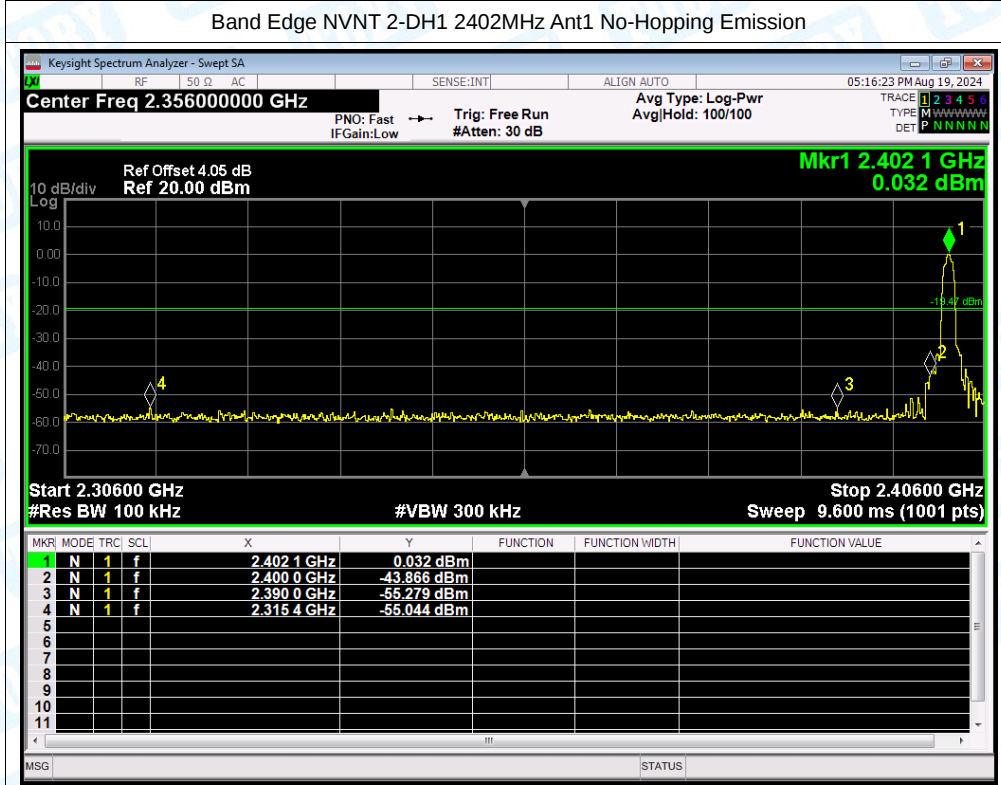
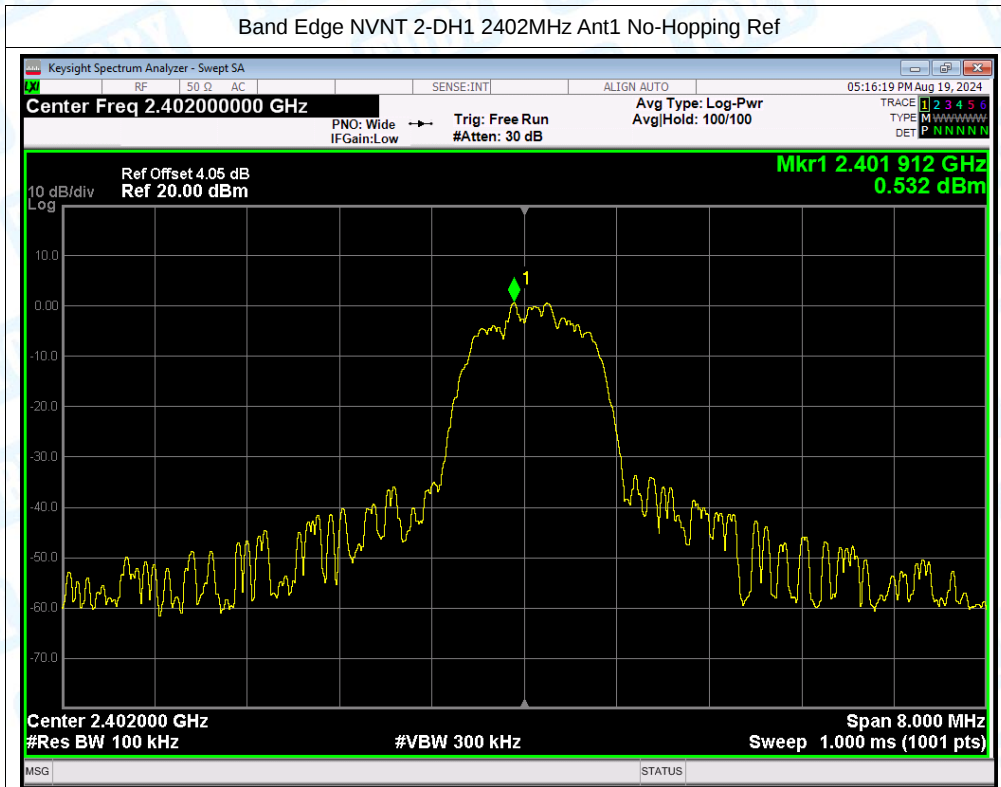
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref

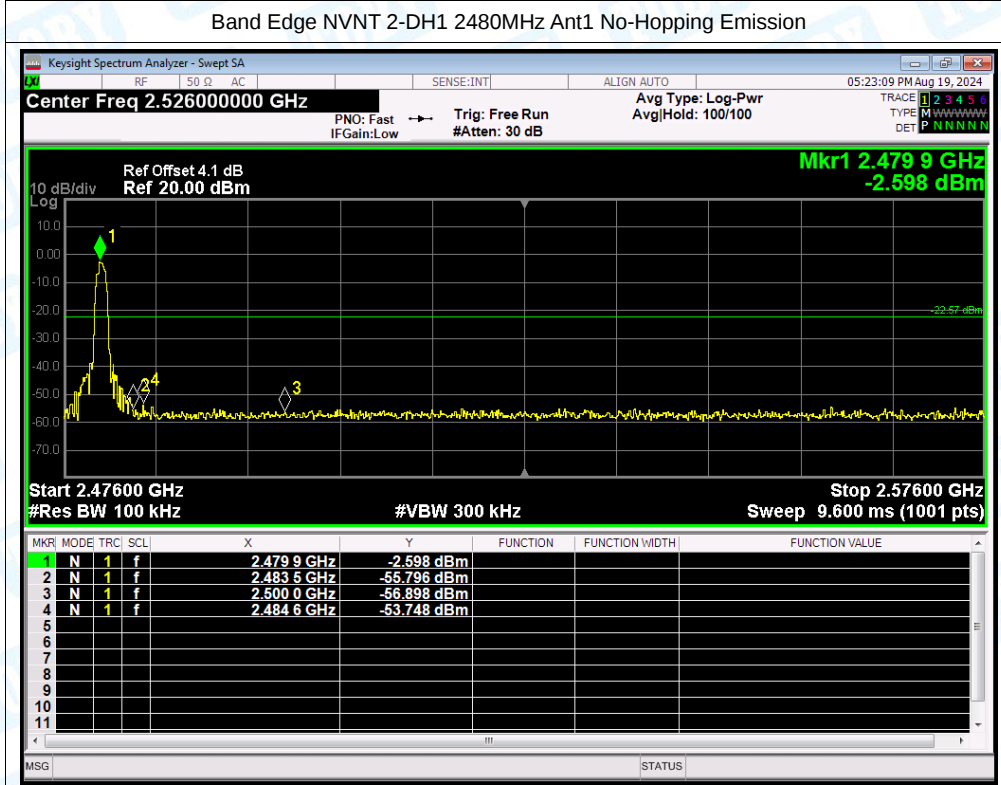
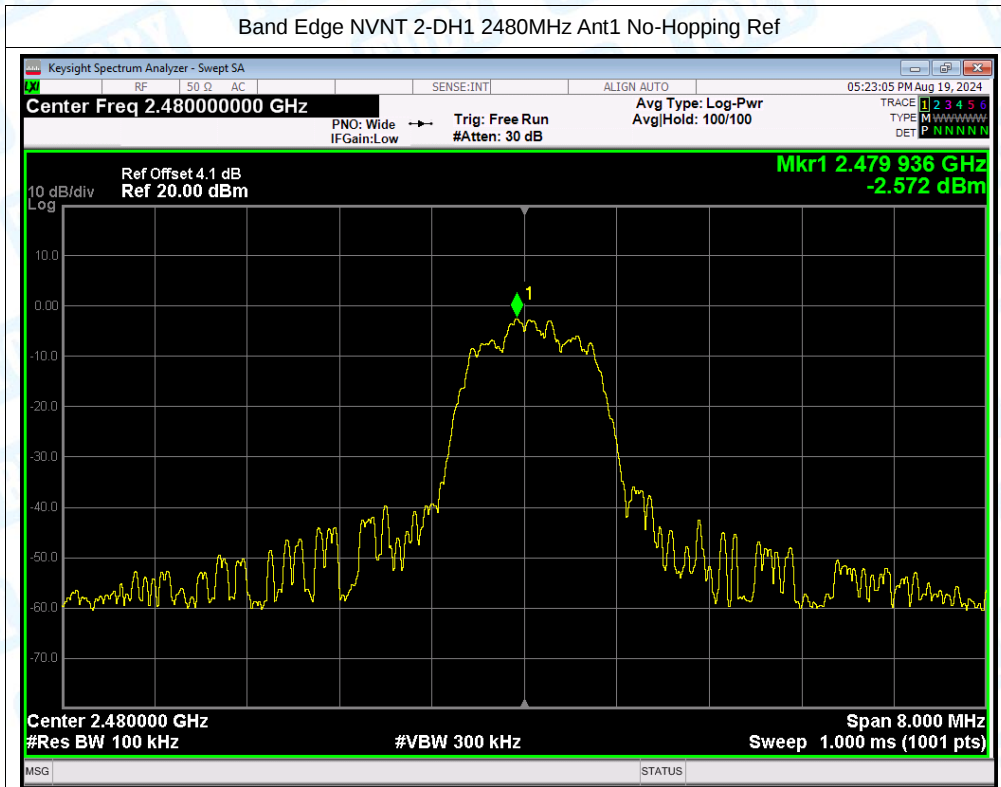


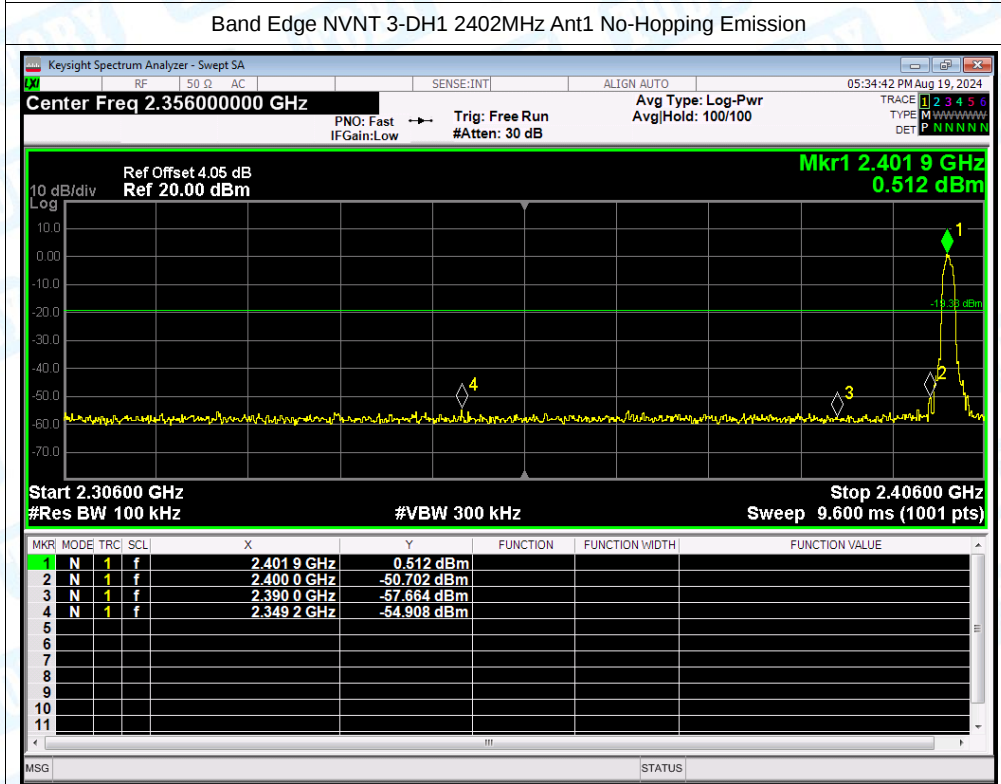
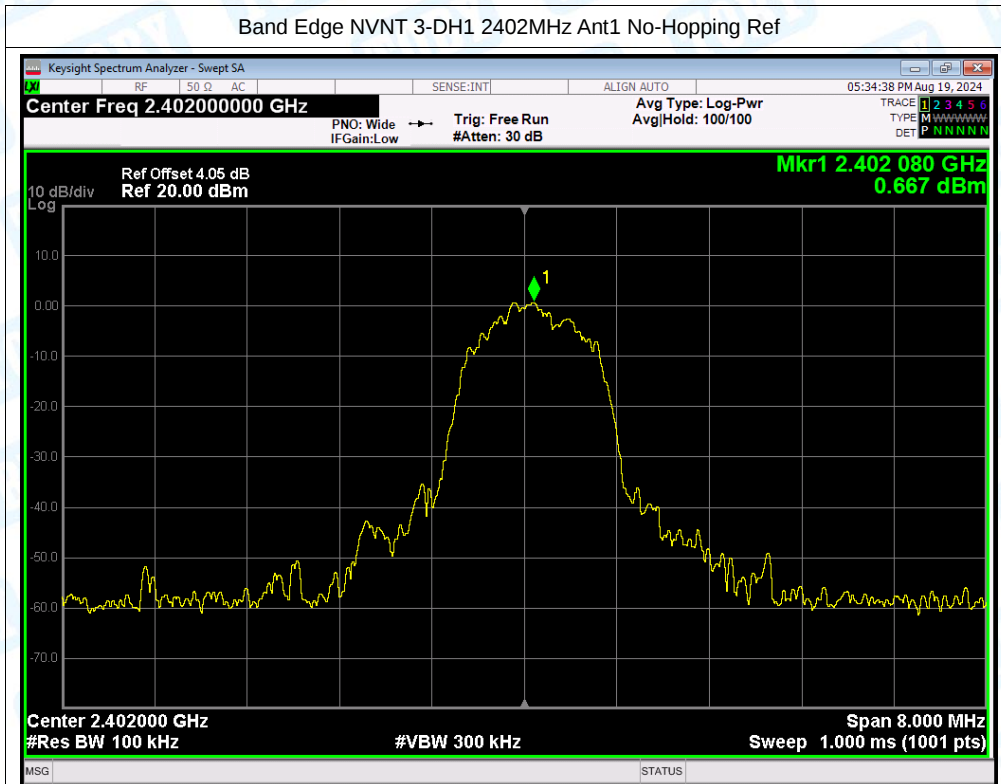
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

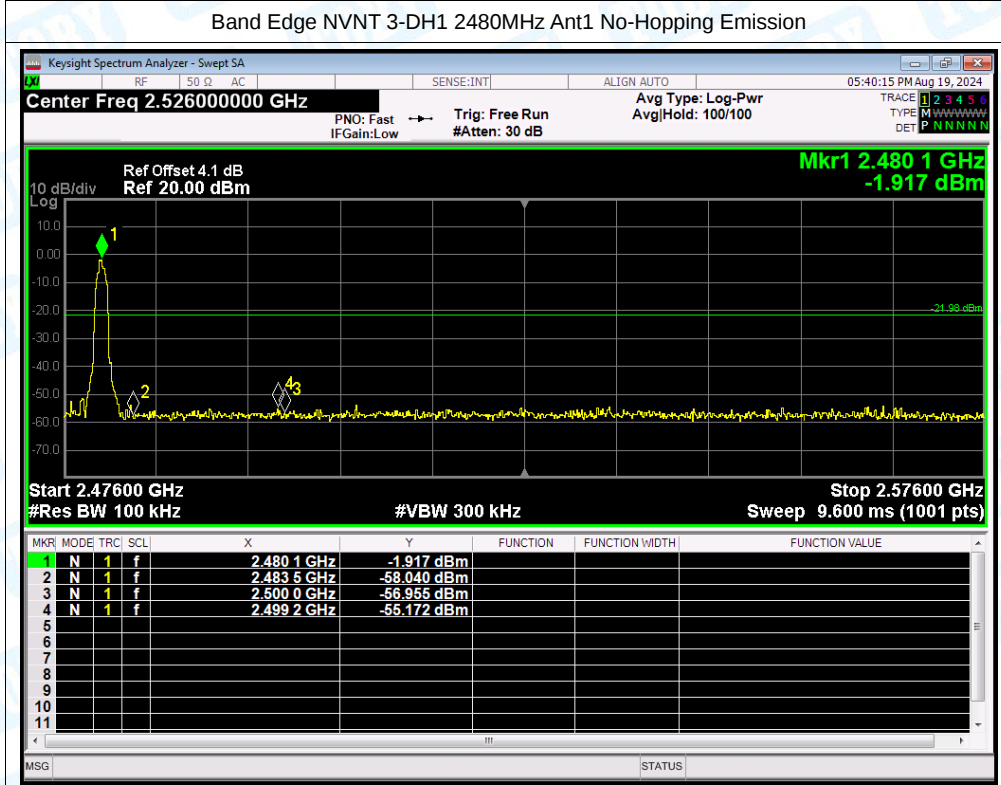
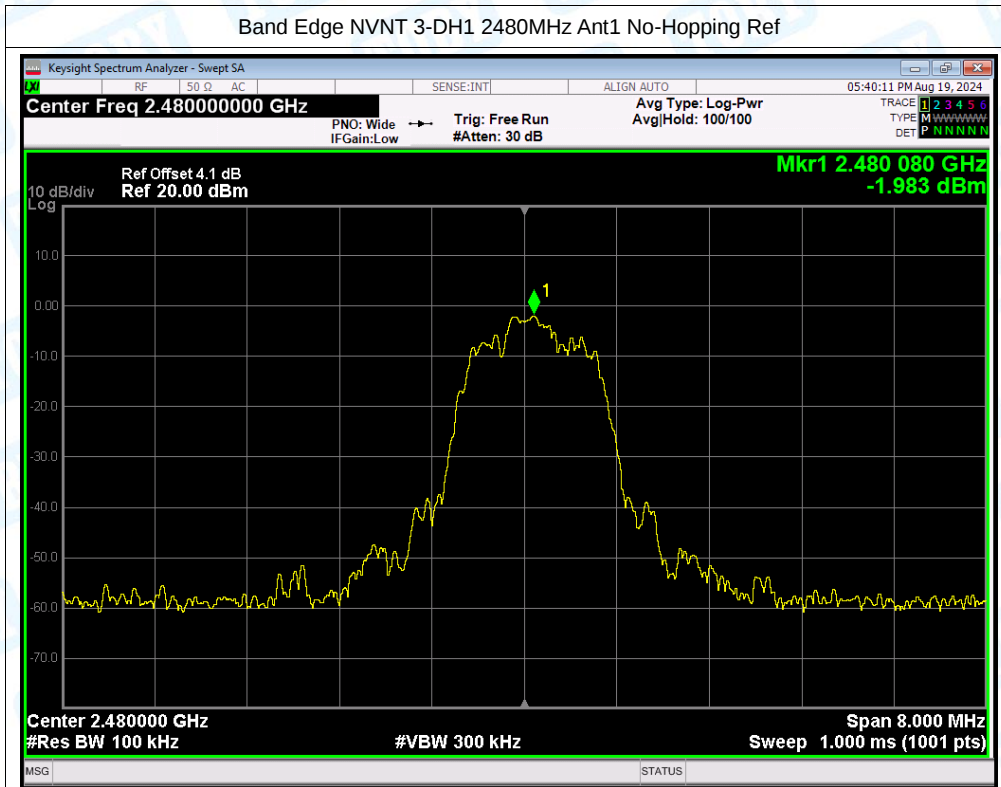










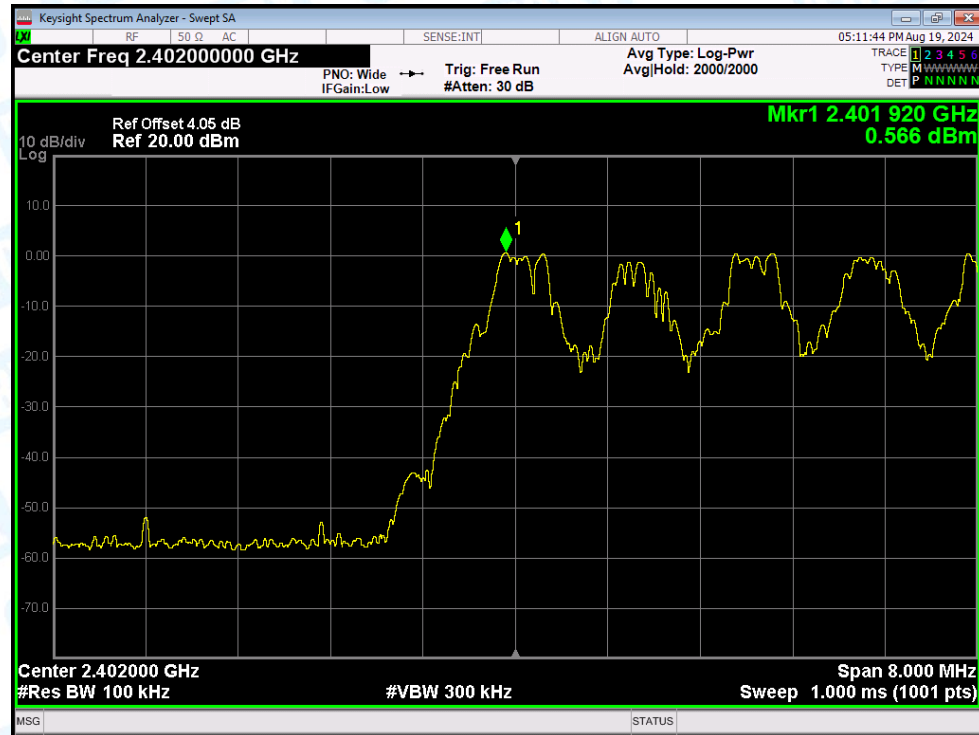


6.Band Edge(Hopping)

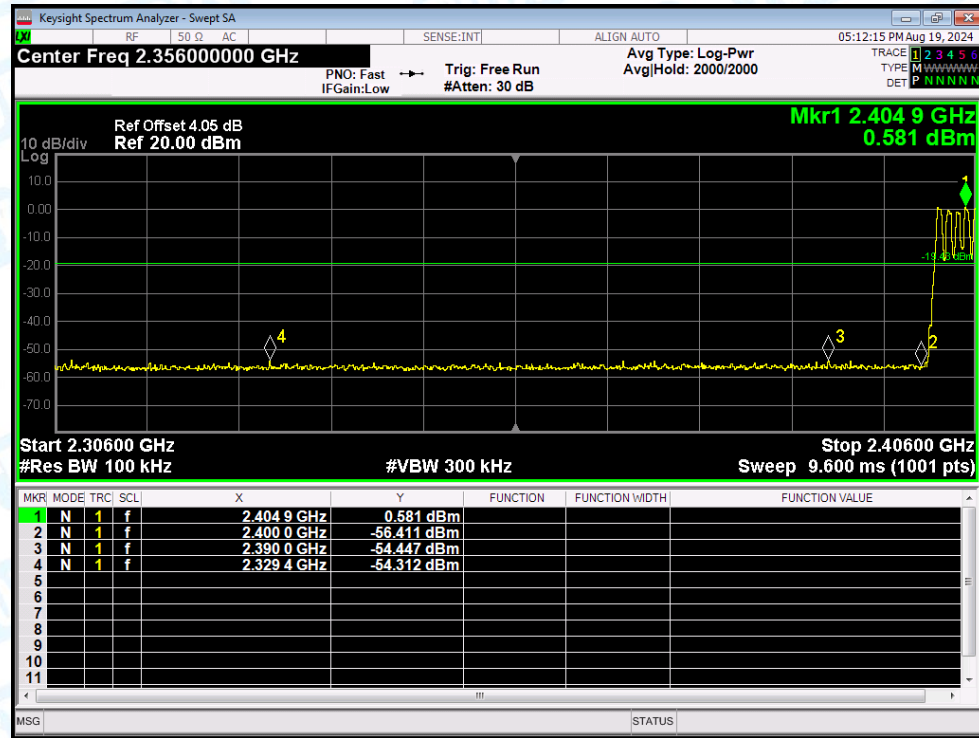
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-54.88	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-51.52	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-54.36	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-51.25	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-55.01	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-52.08	-20	Pass

Test Graphs

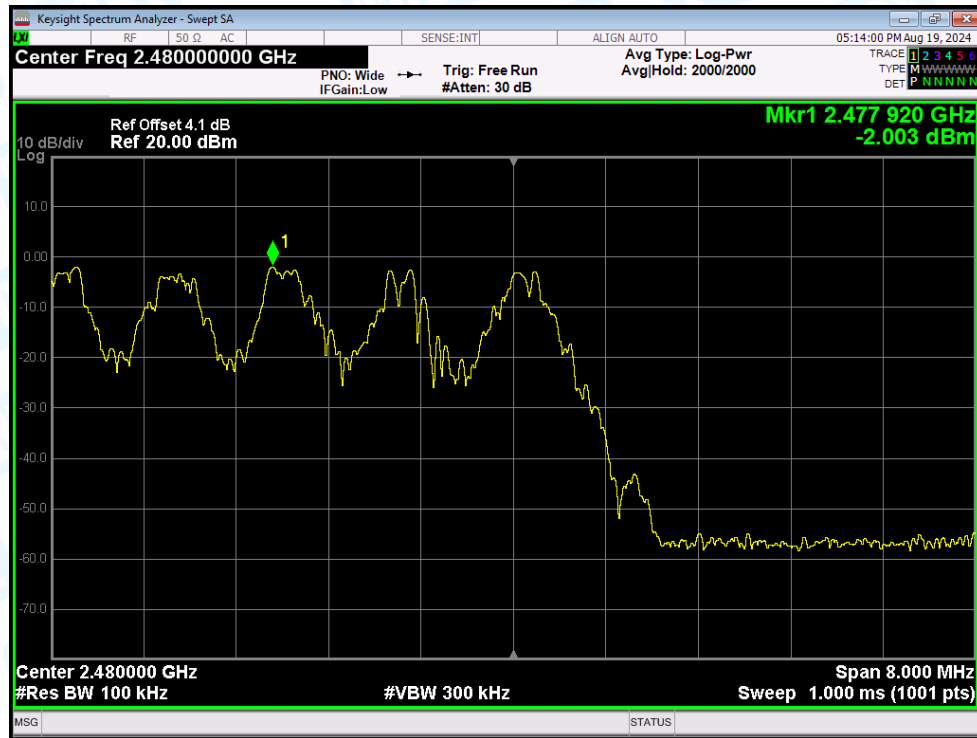
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



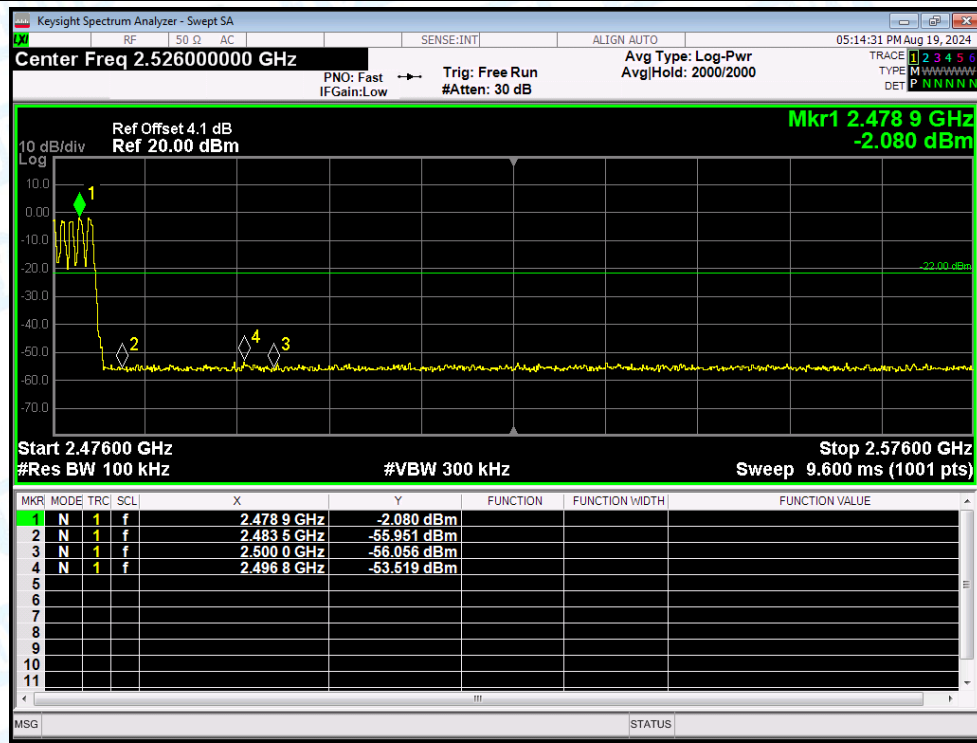
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

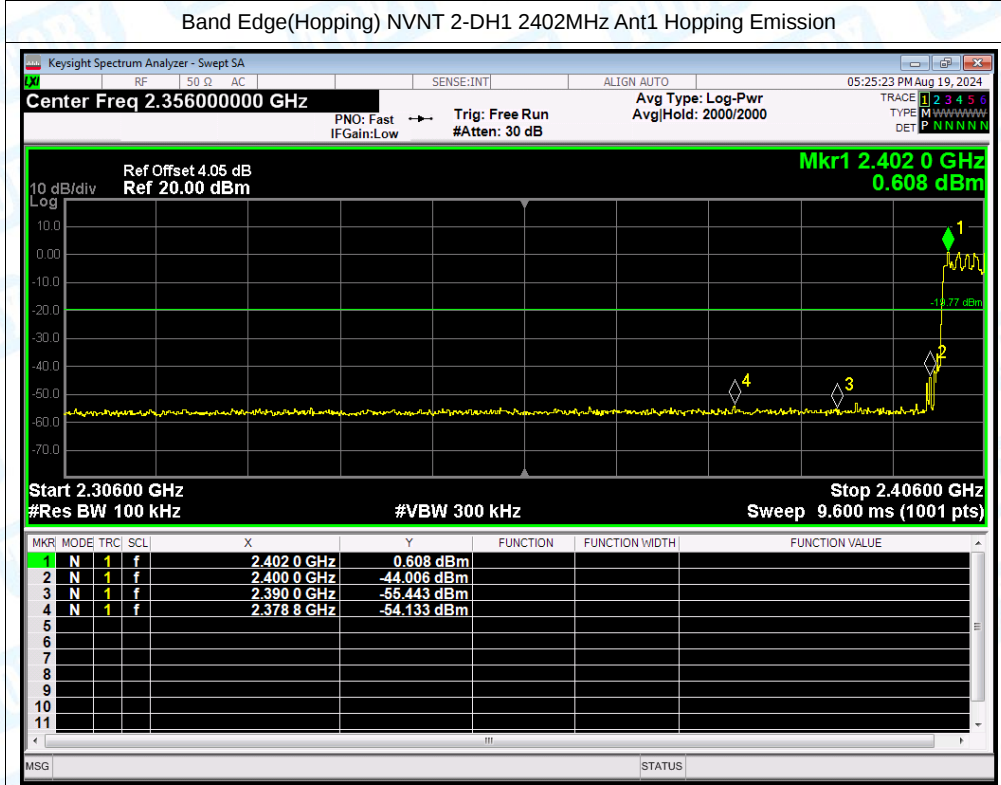
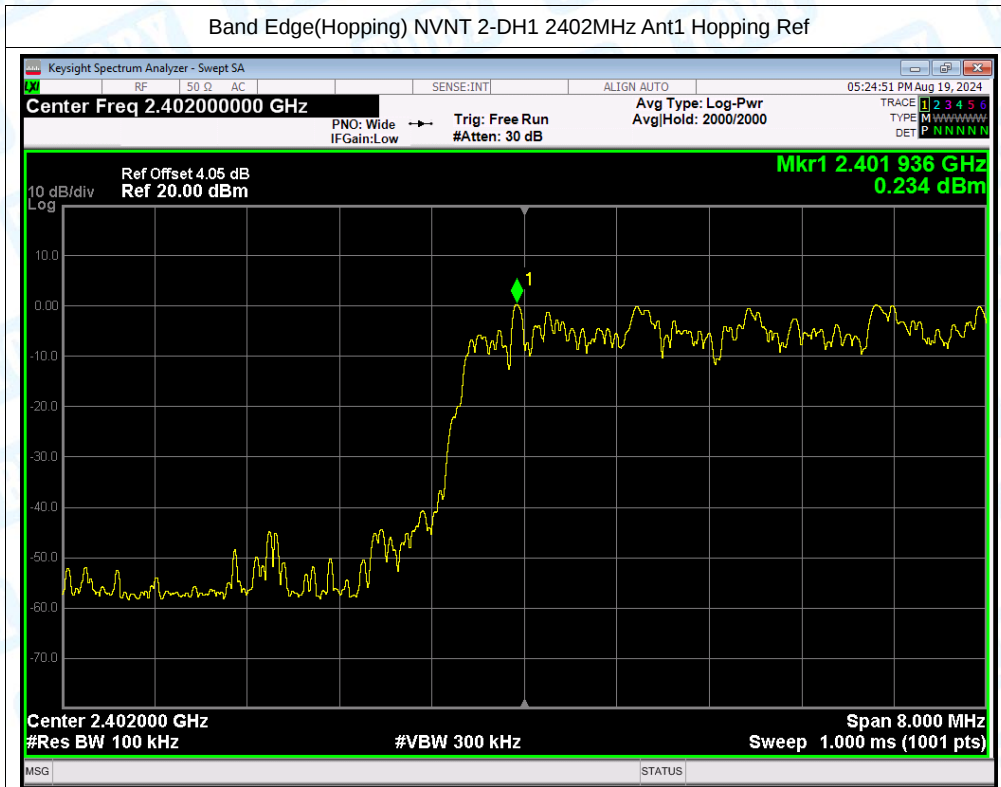


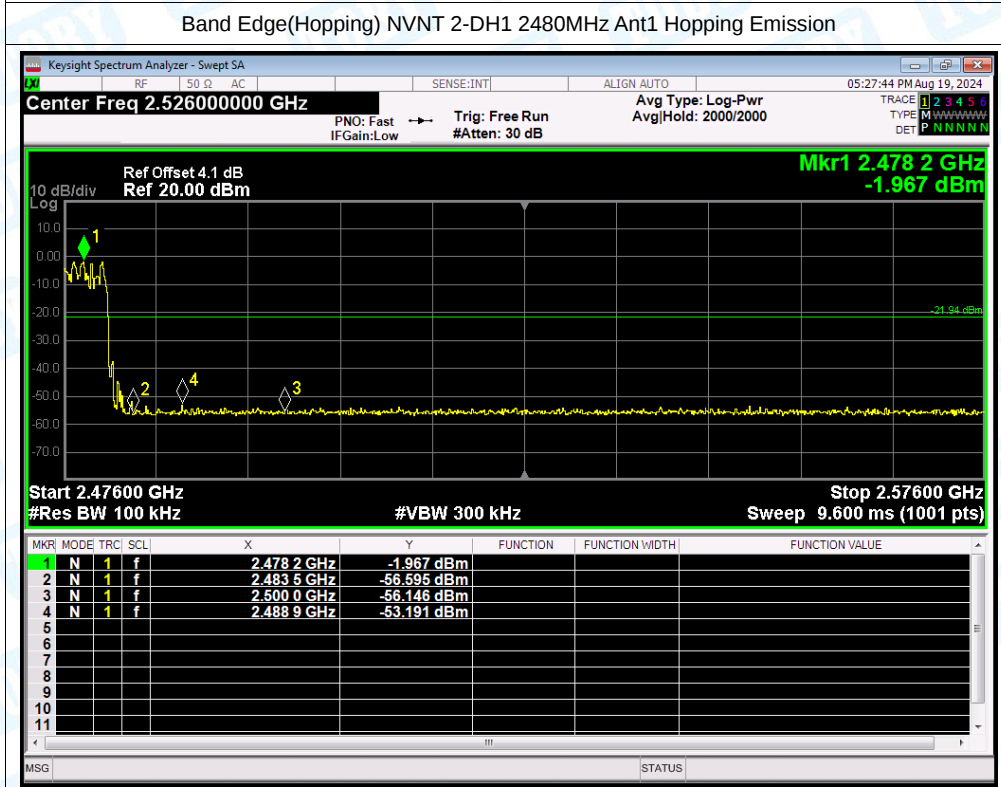
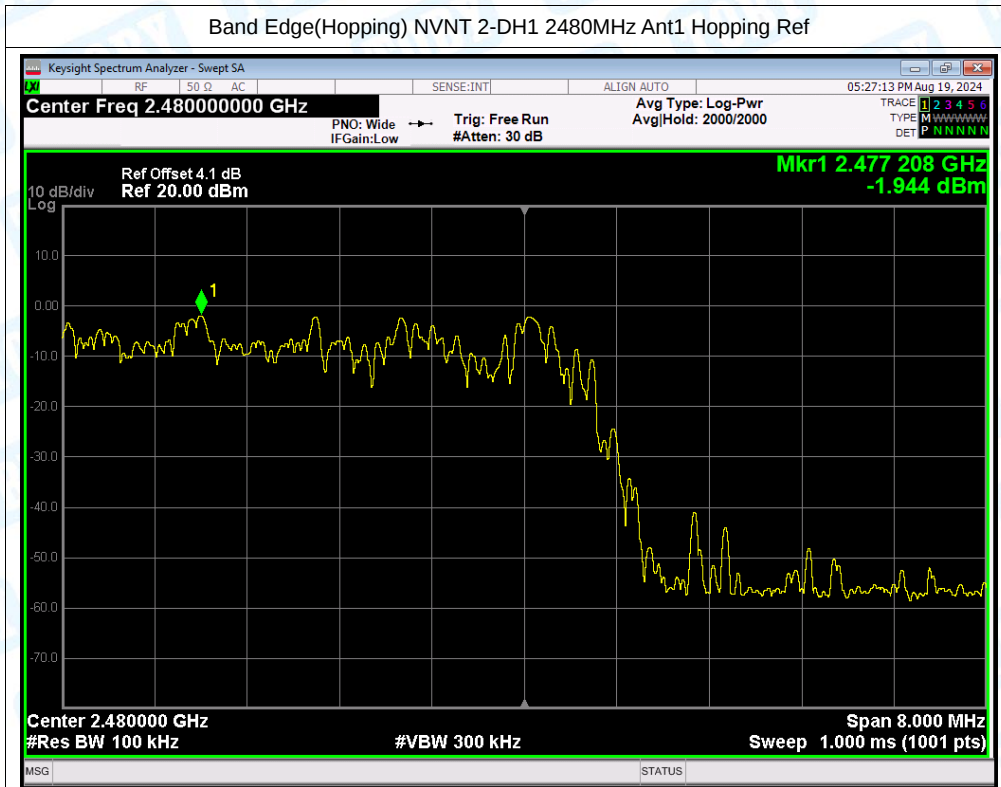
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref

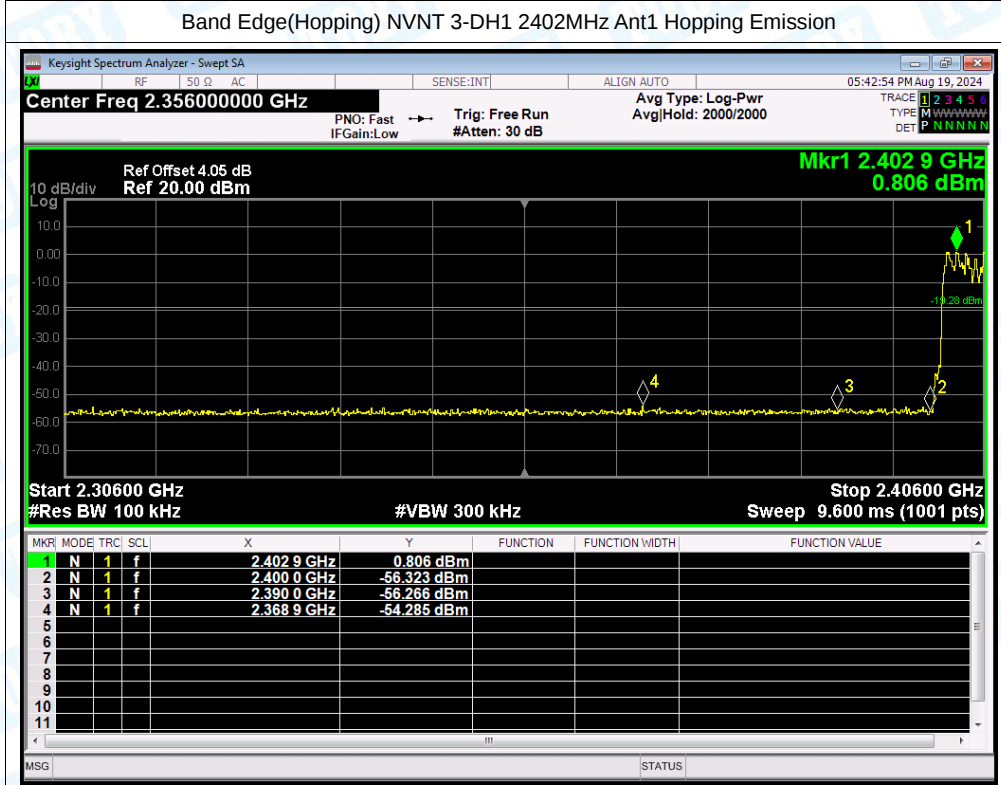
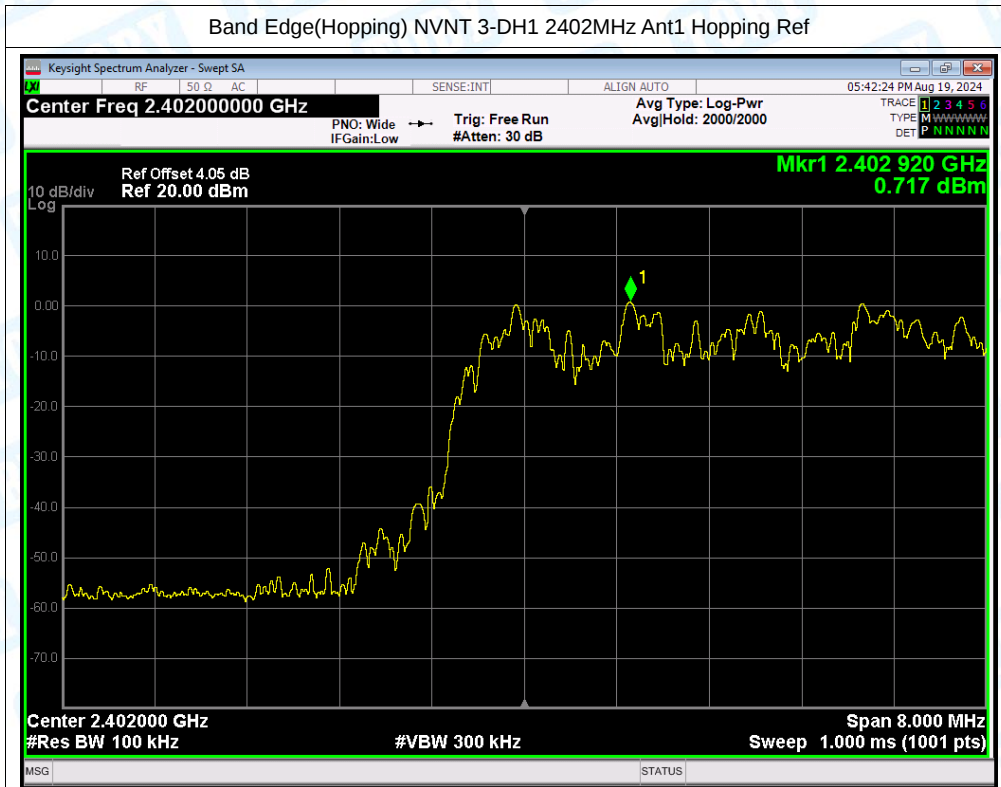


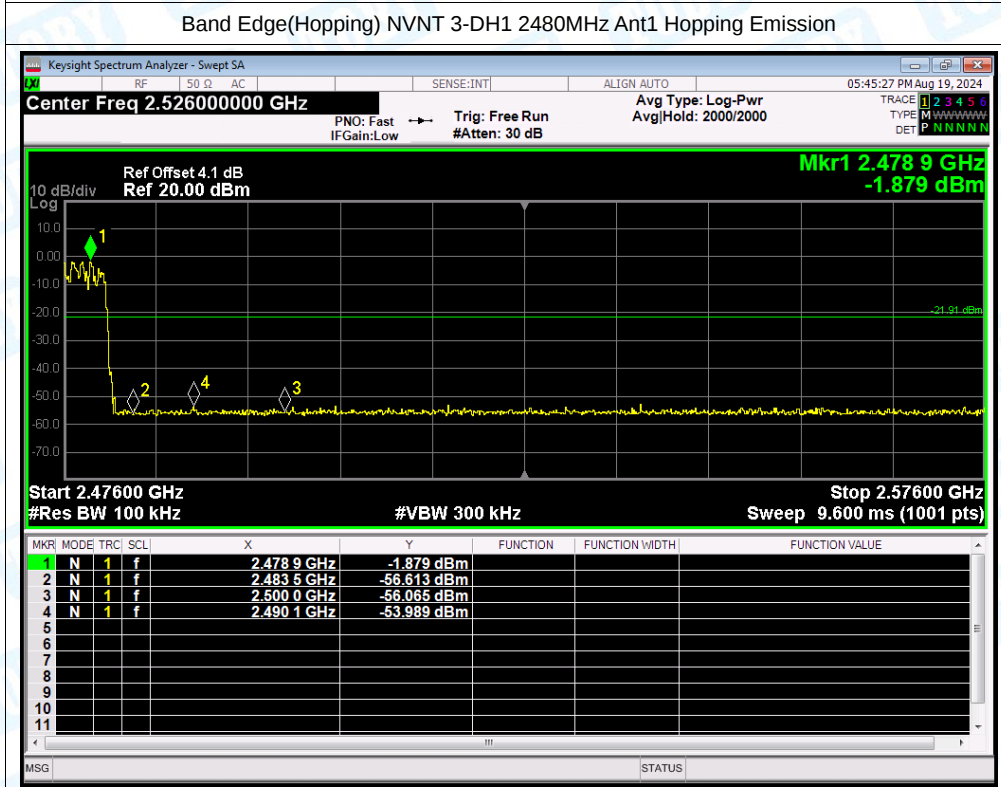
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission









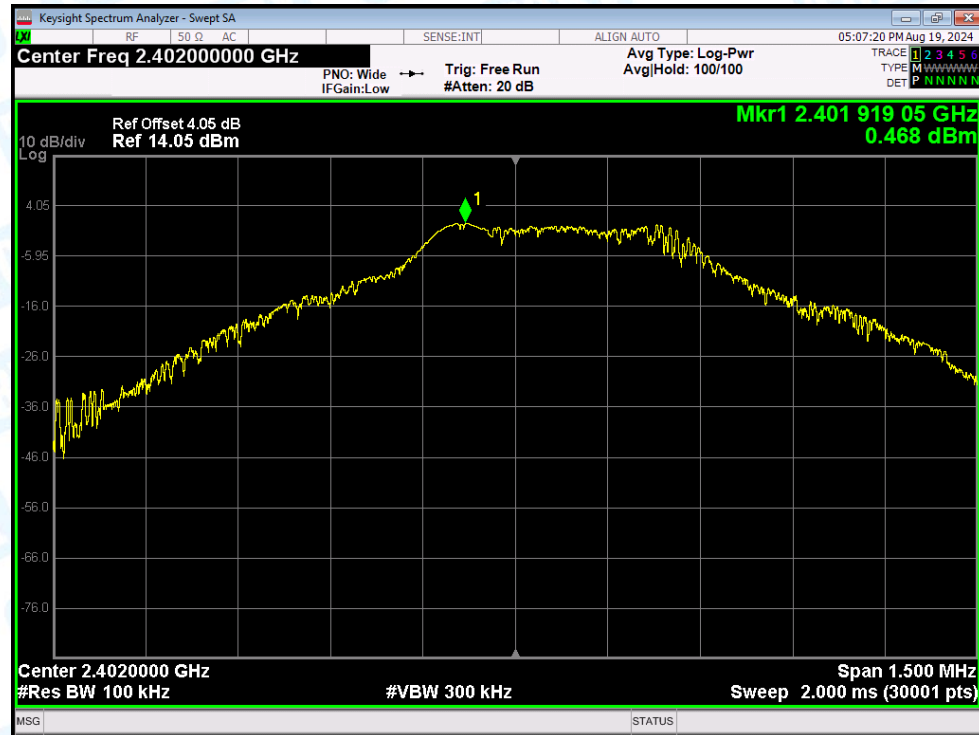


7. Conducted RF Spurious Emission

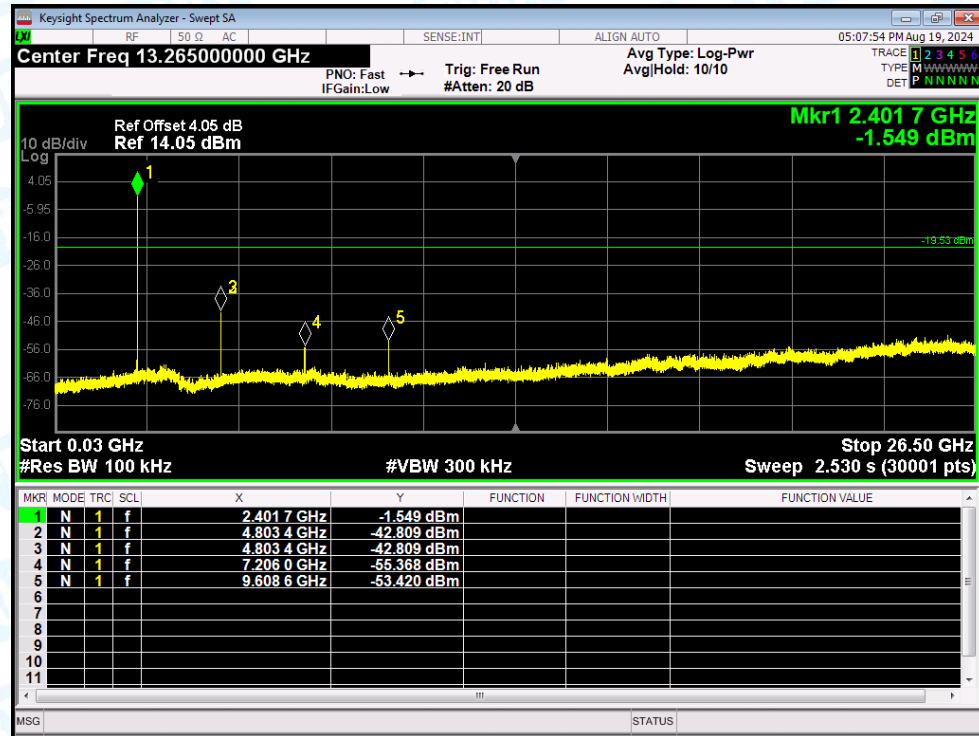
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-43.28	-20	Pass
NVNT	1-DH1	2441	Ant1	-50.24	-20	Pass
NVNT	1-DH1	2480	Ant1	-50.04	-20	Pass
NVNT	2-DH1	2402	Ant1	-44.02	-20	Pass
NVNT	2-DH1	2441	Ant1	-49.41	-20	Pass
NVNT	2-DH1	2480	Ant1	-48.44	-20	Pass
NVNT	3-DH1	2402	Ant1	-43.37	-20	Pass
NVNT	3-DH1	2441	Ant1	-47.86	-20	Pass
NVNT	3-DH1	2480	Ant1	-48.2	-20	Pass

Test Graphs

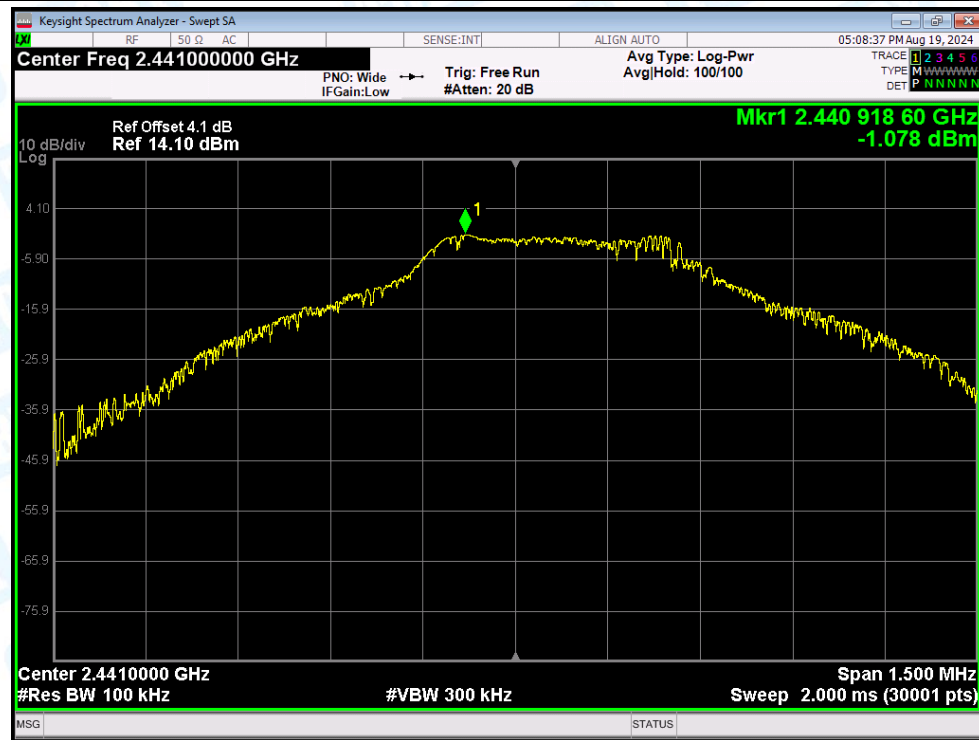
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



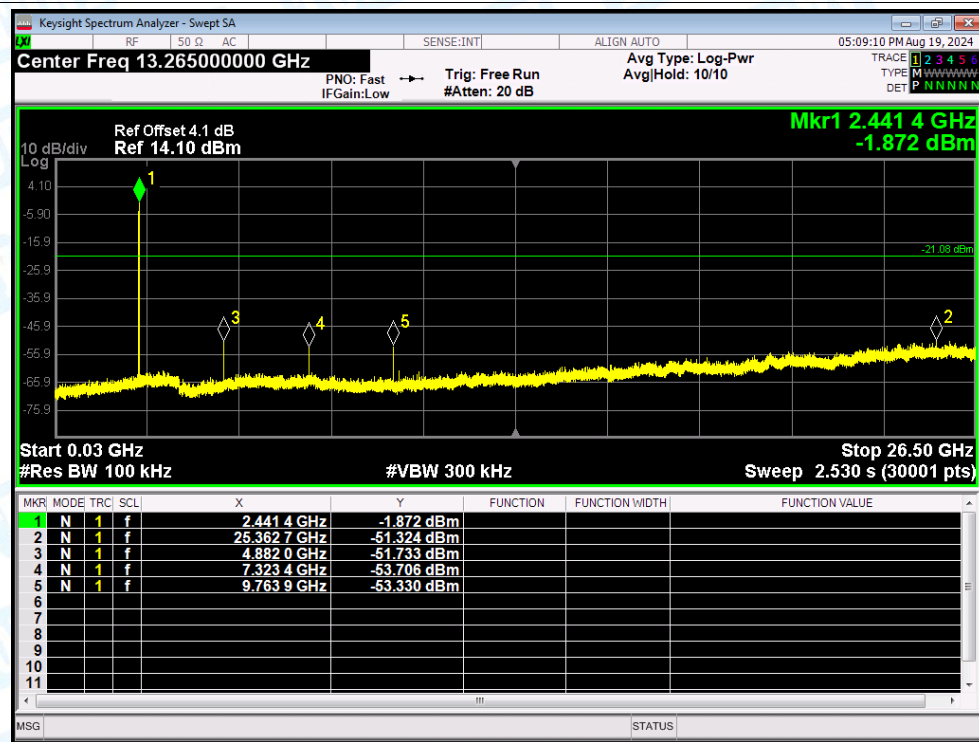
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



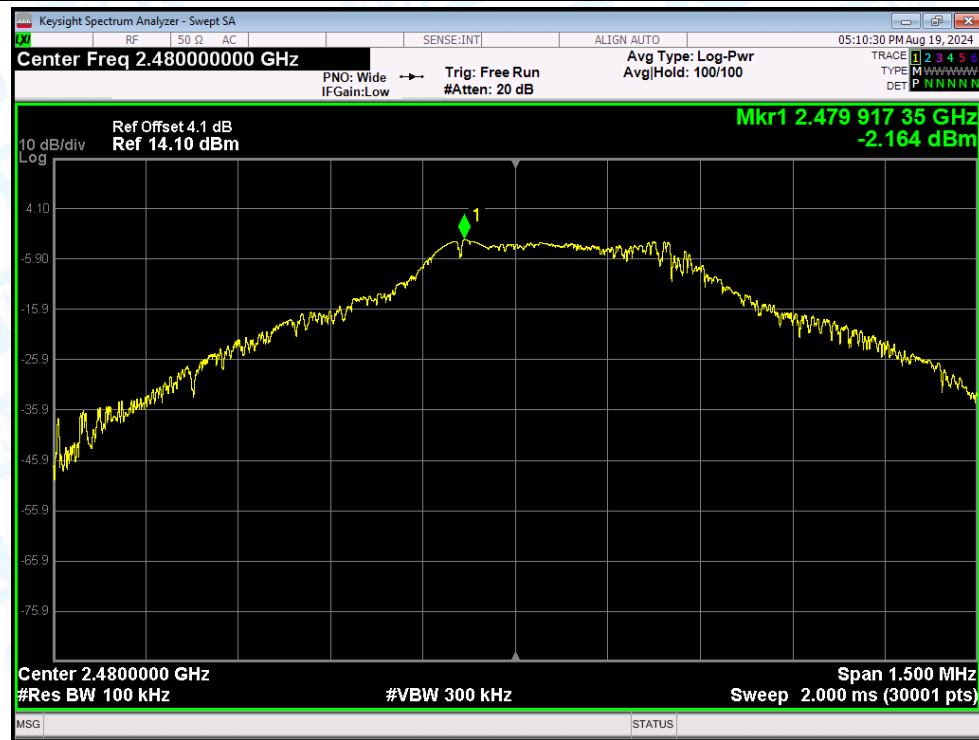
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



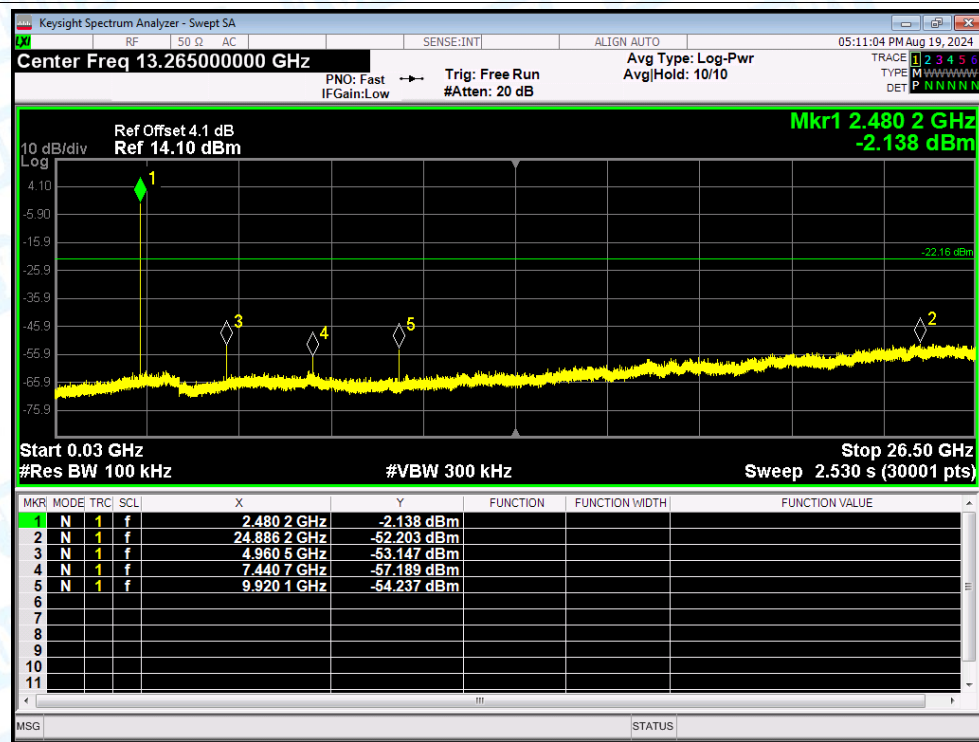
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



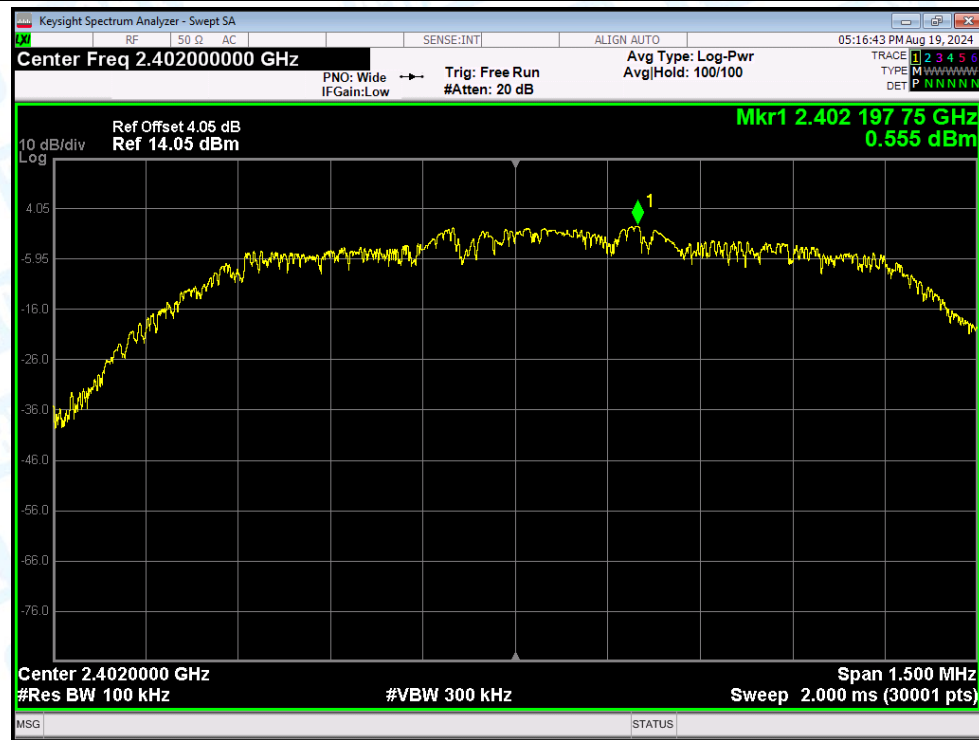
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



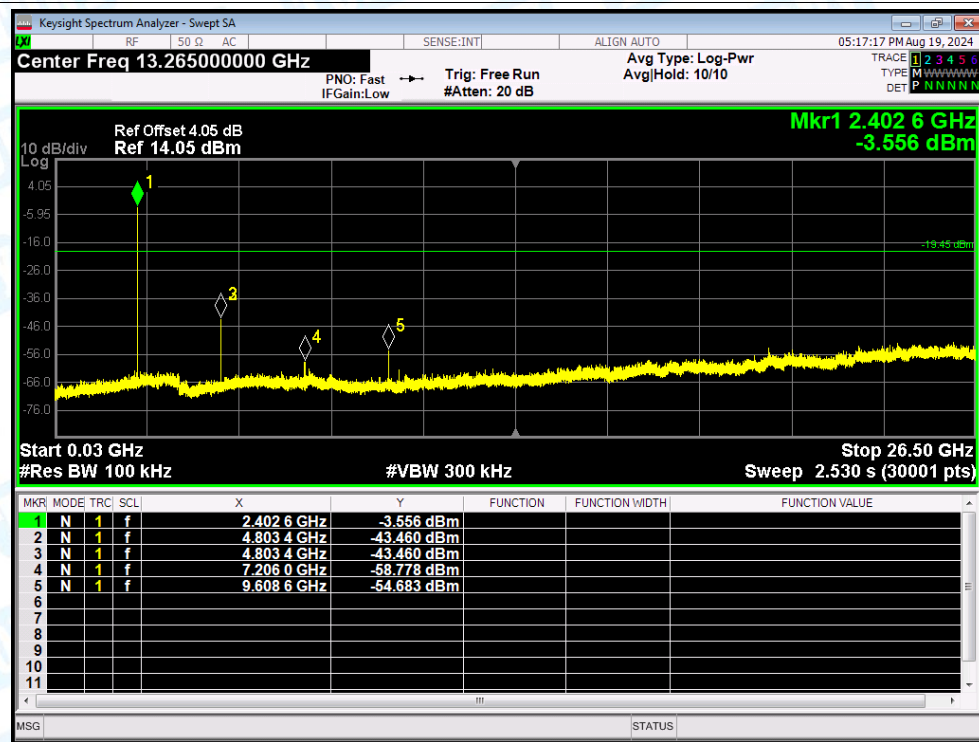
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



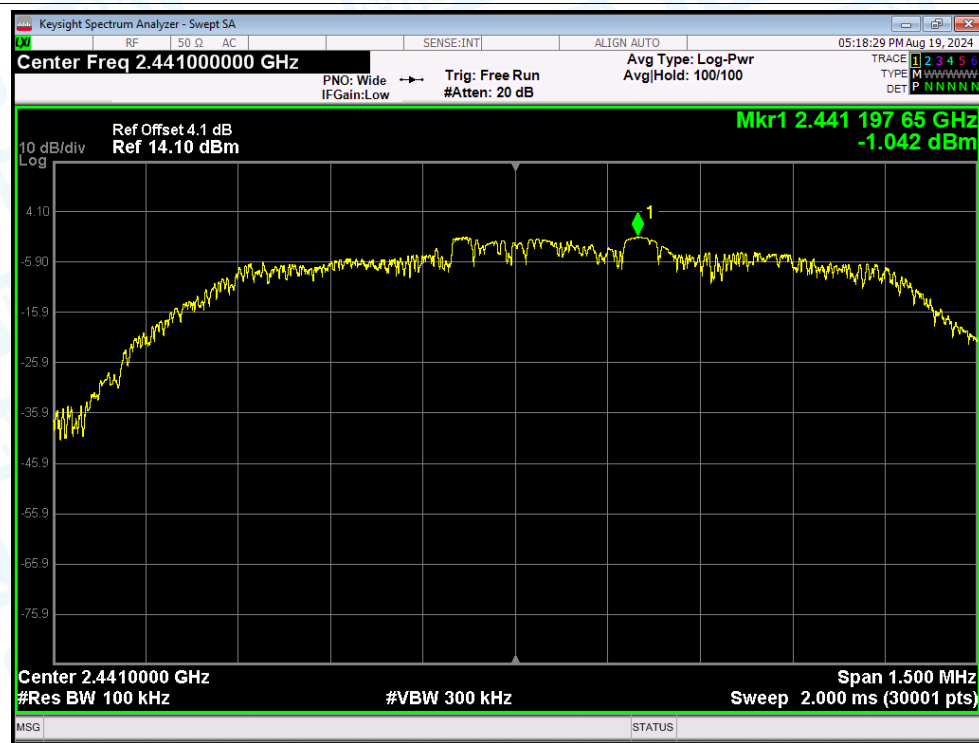
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



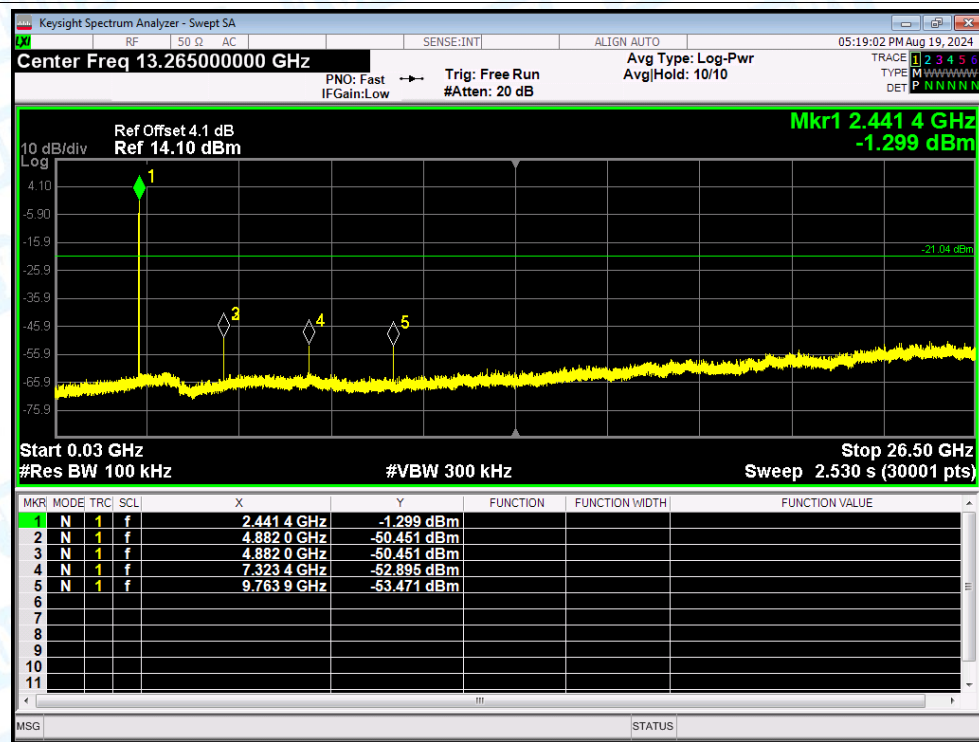
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



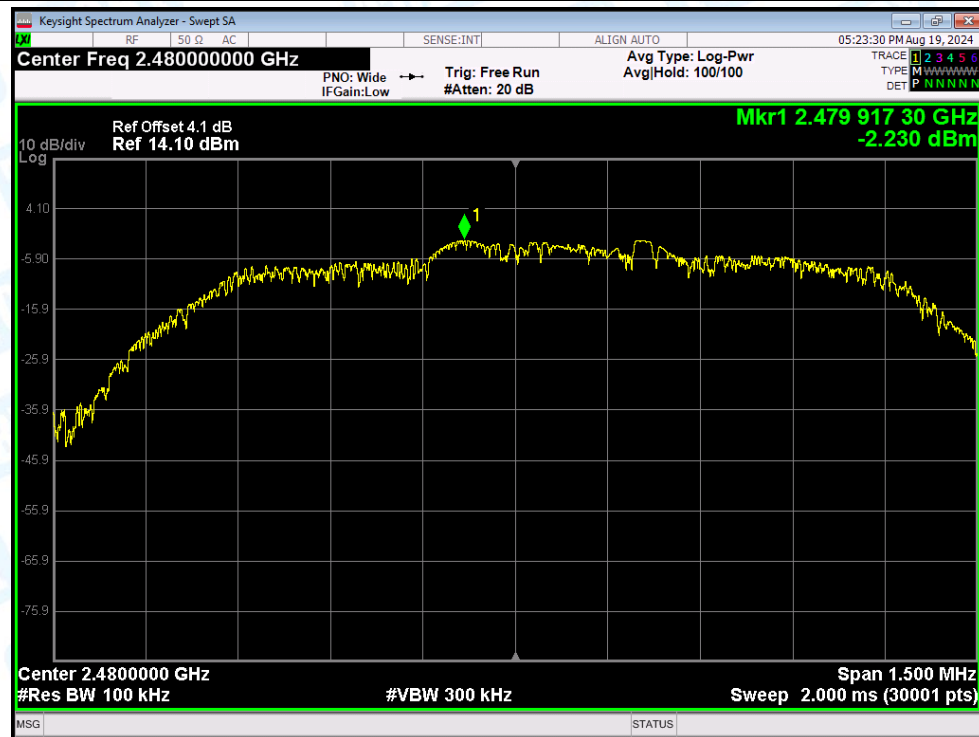
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



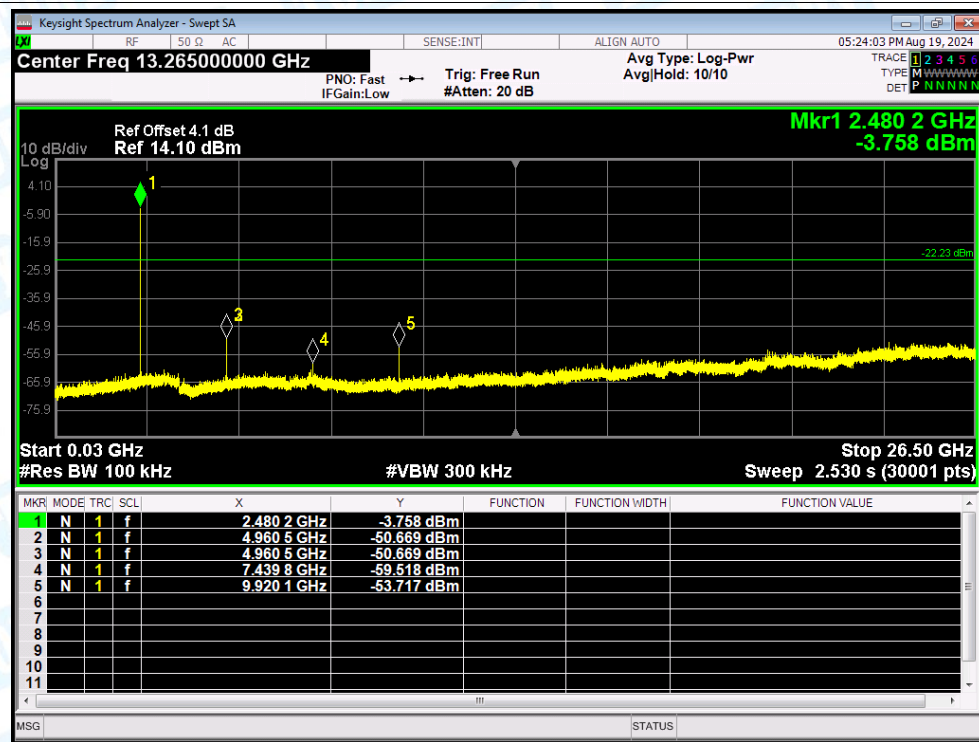
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



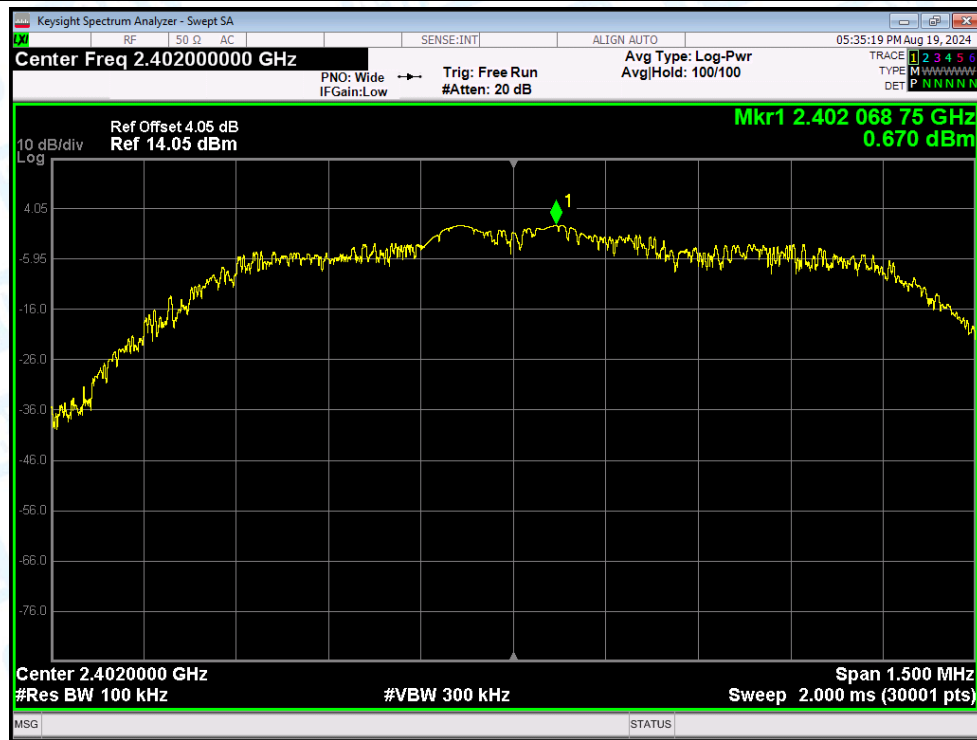
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



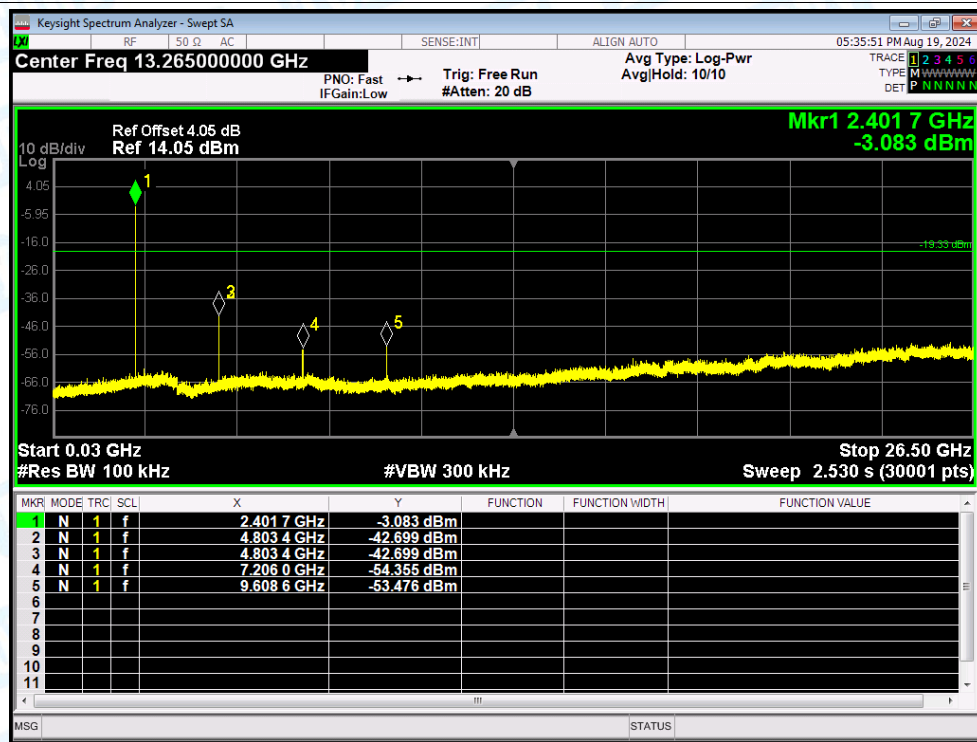
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



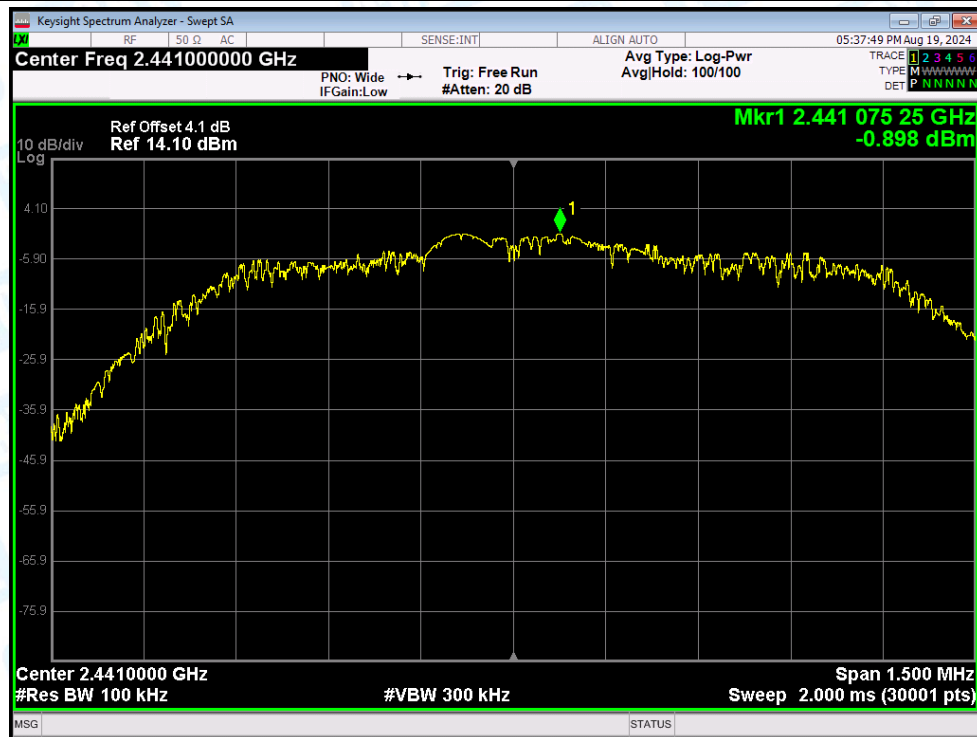
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



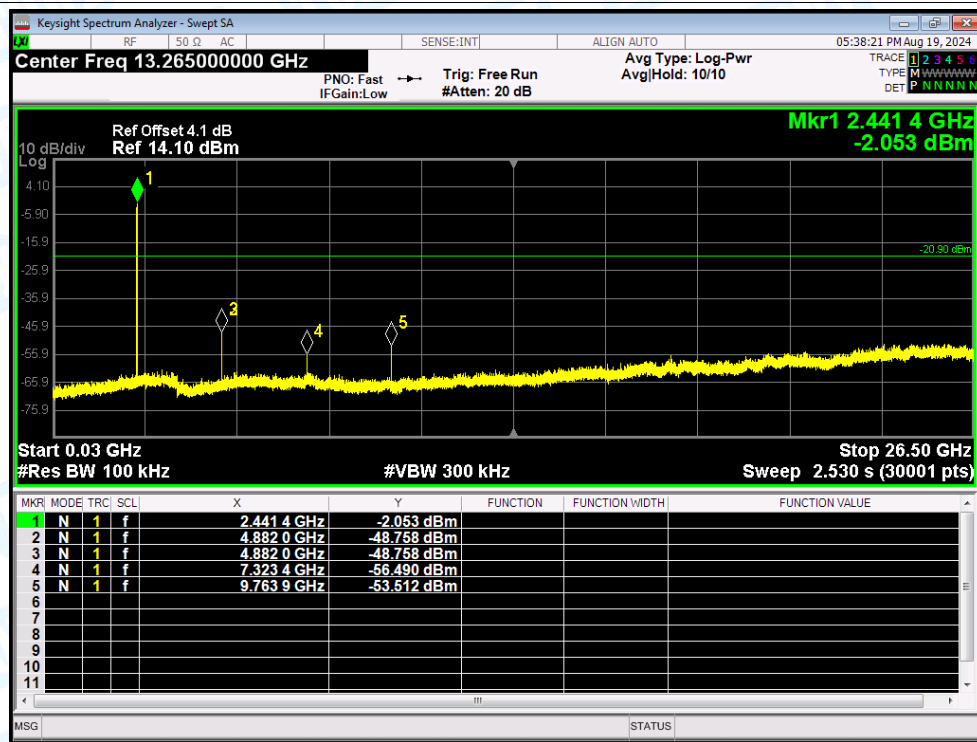
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



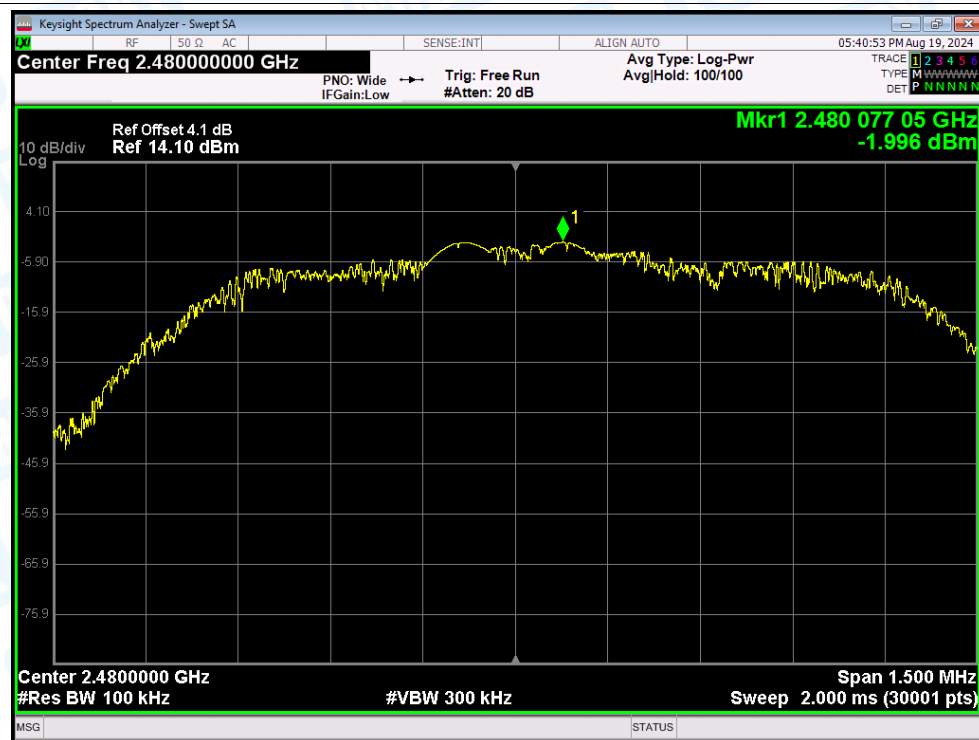
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



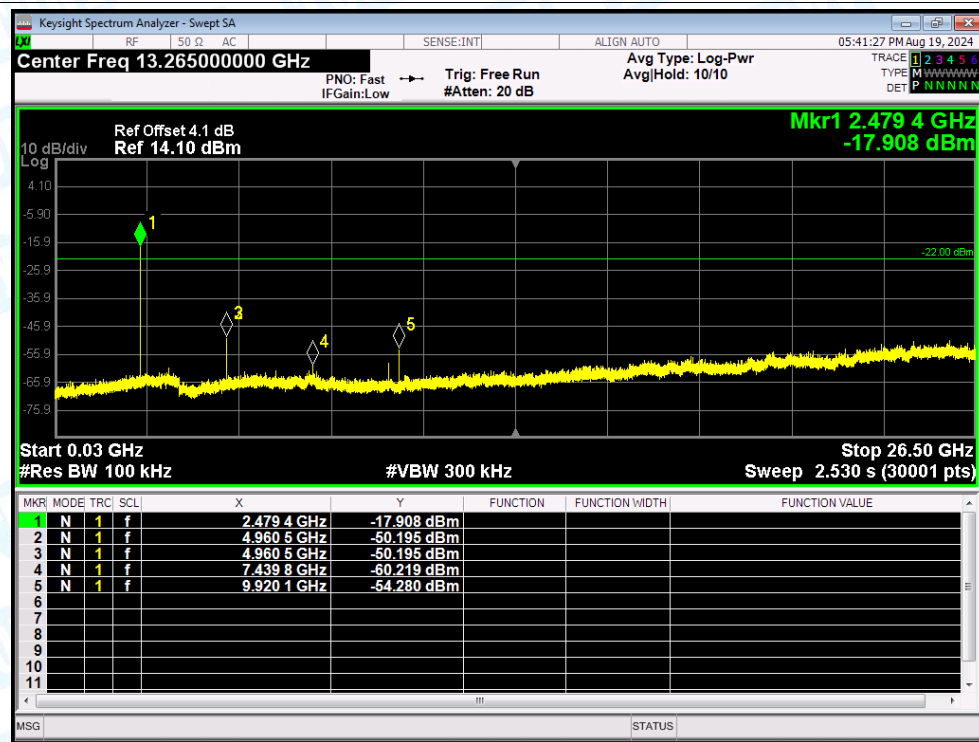
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

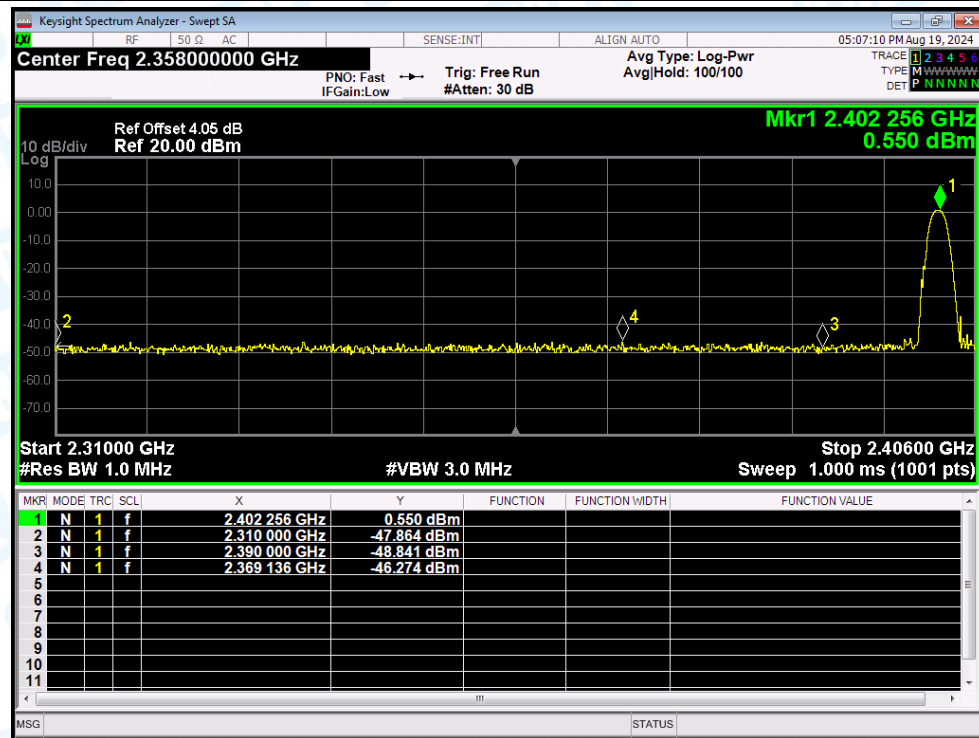


8.Restrict Band

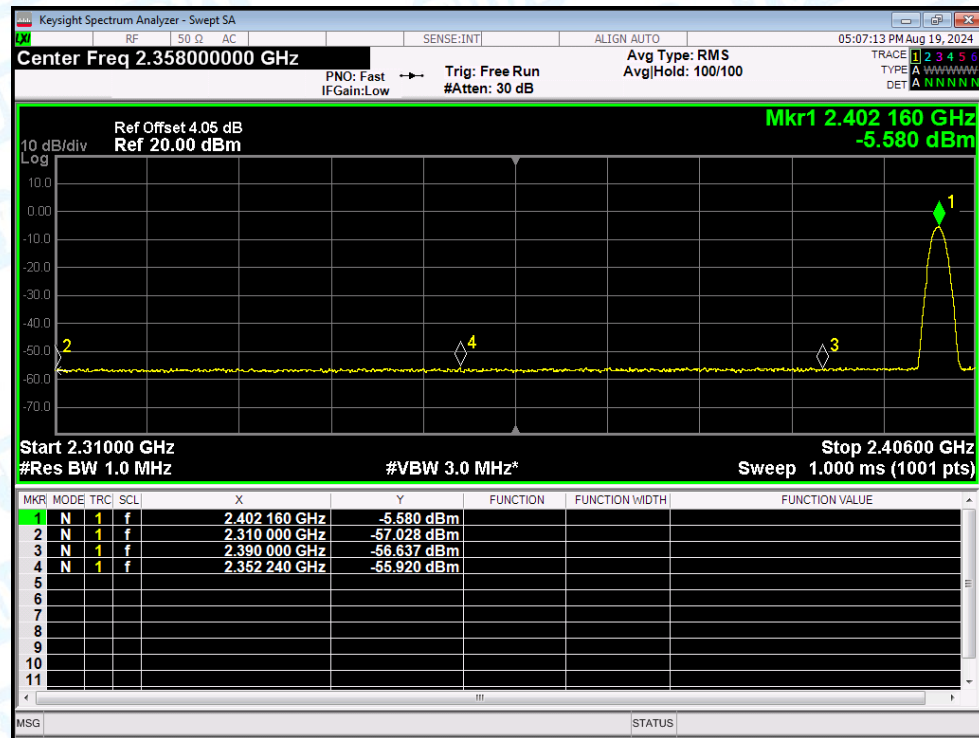
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-47.86	2	-	49.4	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-57.03	2	4.95	45.18	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2369.136	-46.27	2	-	50.99	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2352.24	-55.92	2	4.95	46.29	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-48.84	2	-	48.42	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.64	2	4.95	45.57	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-48.35	2	-	48.91	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-56.25	2	4.95	45.96	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2497.528	-45.2	2	-	52.06	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2490.376	-55.17	2	4.95	47.04	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-48.16	2	-	49.1	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-56.2	2	4.95	46.01	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-49.69	2	-	47.57	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.94	2	4.84	45.16	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2356.656	-45.96	2	-	51.3	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2380.08	-55.84	2	4.84	46.26	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.09	2	-	50.17	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-56.2	2	4.84	45.9	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-48.5	2	-	48.76	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.9	2	4.95	46.31	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.872	-36.55	2	-	60.71	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.992	-54.57	2	4.95	47.64	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-48.59	2	-	48.67	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-56.79	2	4.95	45.42	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-47.2	2	-	50.06	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.95	2	4.84	45.15	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2346.384	-46.1	2	-	51.16	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2375.856	-55.93	2	4.84	46.17	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-48.56	2	-	48.7	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-56.68	2	4.84	45.42	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-47.33	2	-	49.93	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.61	2	4.84	46.49	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2485.576	-45.14	2	-	52.12	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2495.92	-55.04	2	4.84	47.06	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-47.01	2	-	50.25	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.78	2	4.84	46.32	Average	54	Pass

Test Graphs

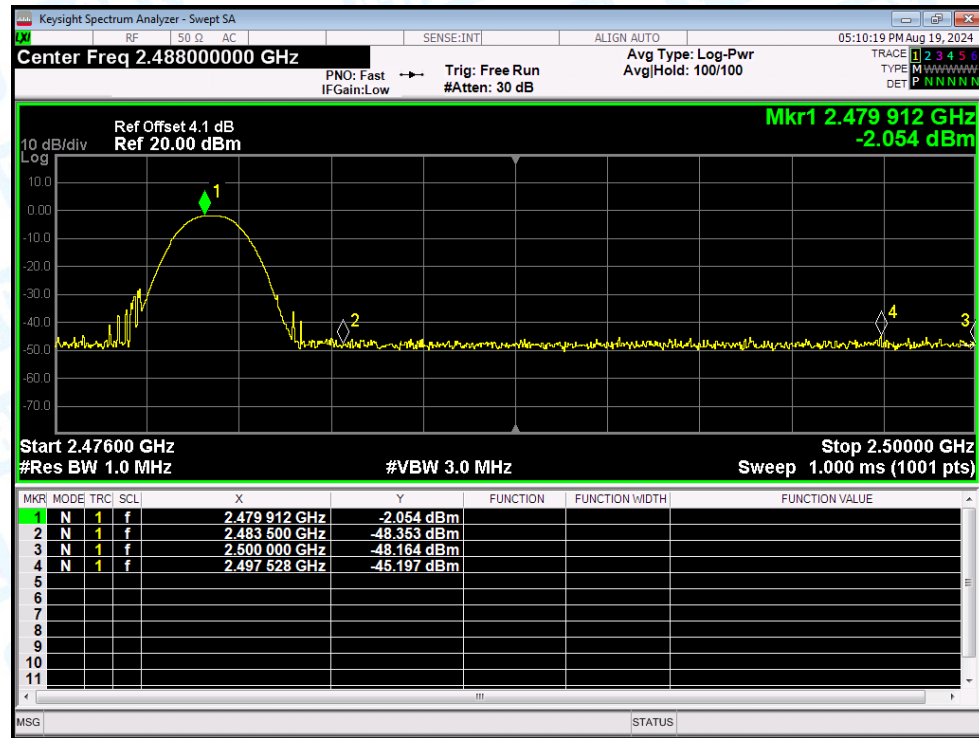
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



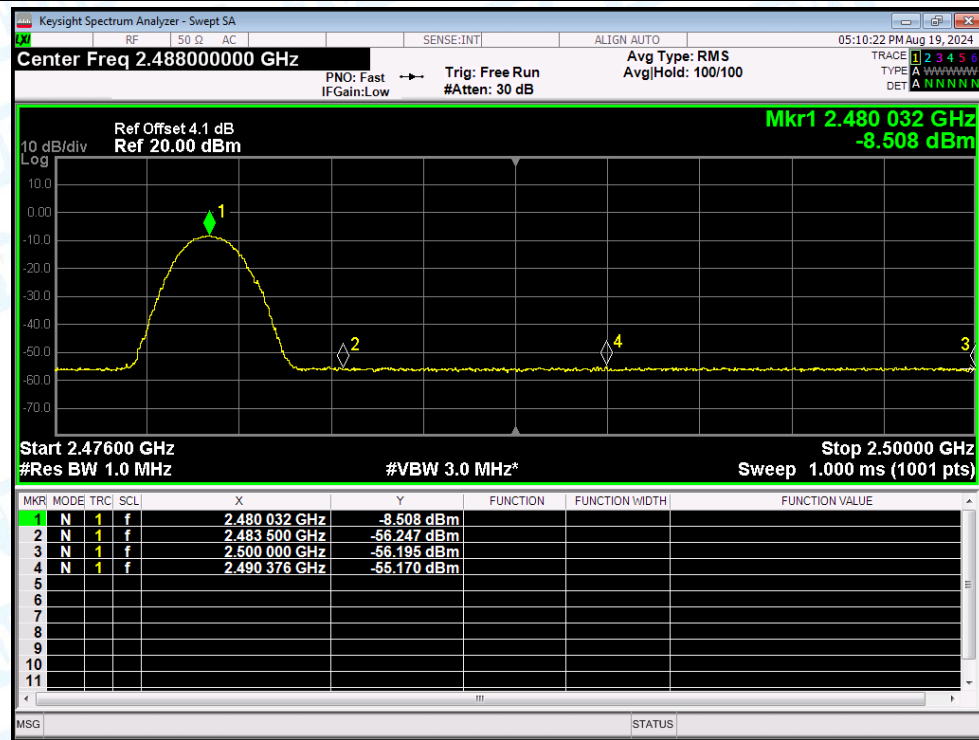
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



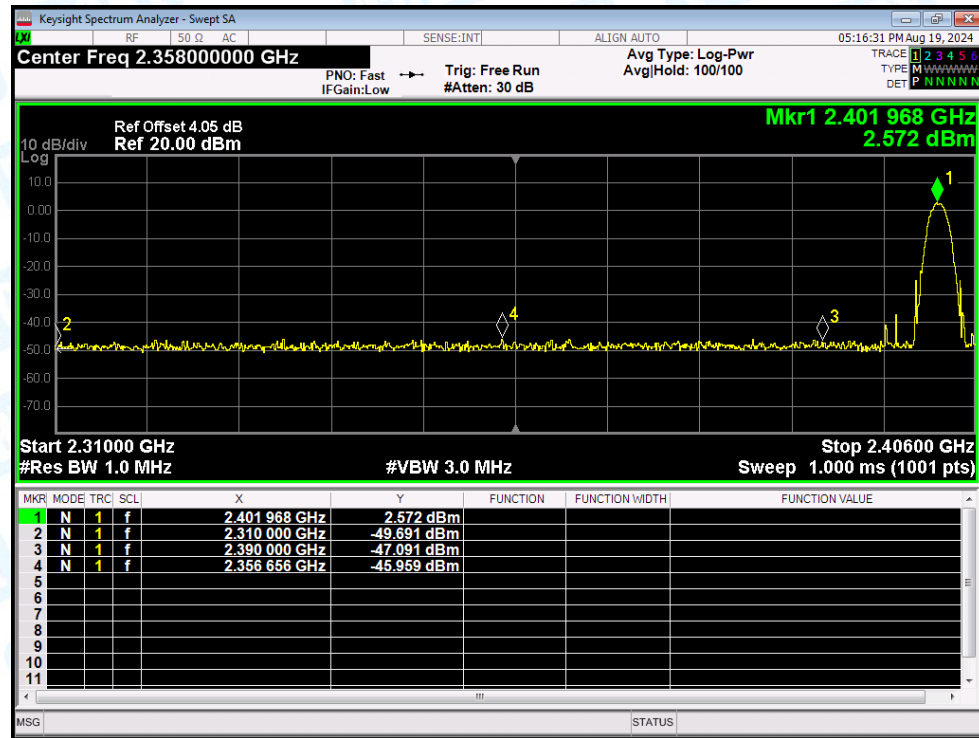
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



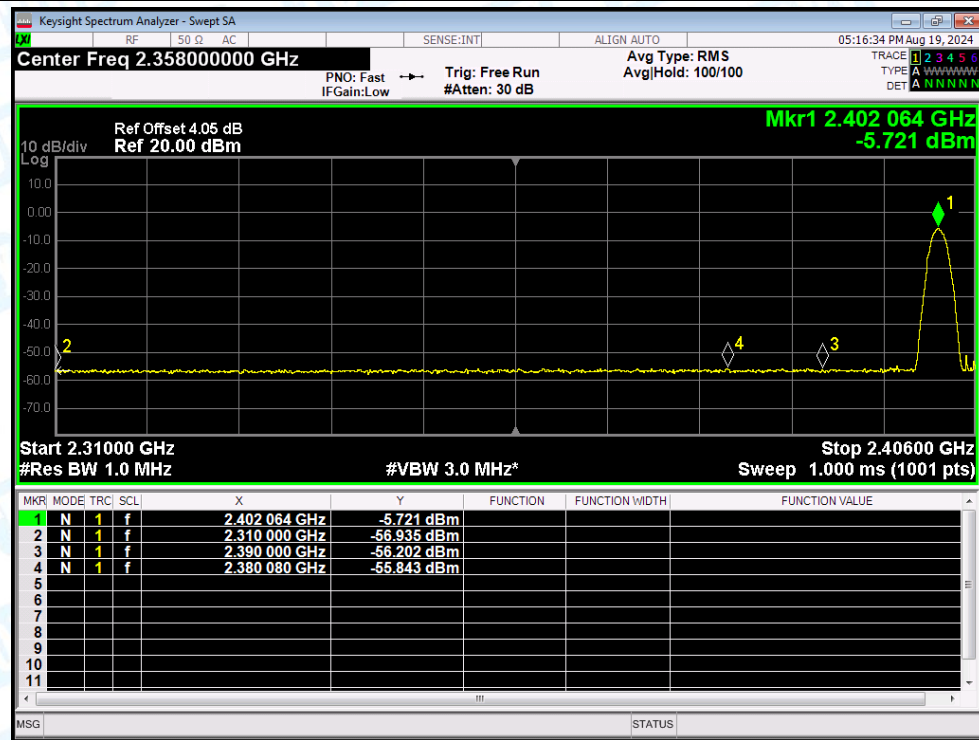
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



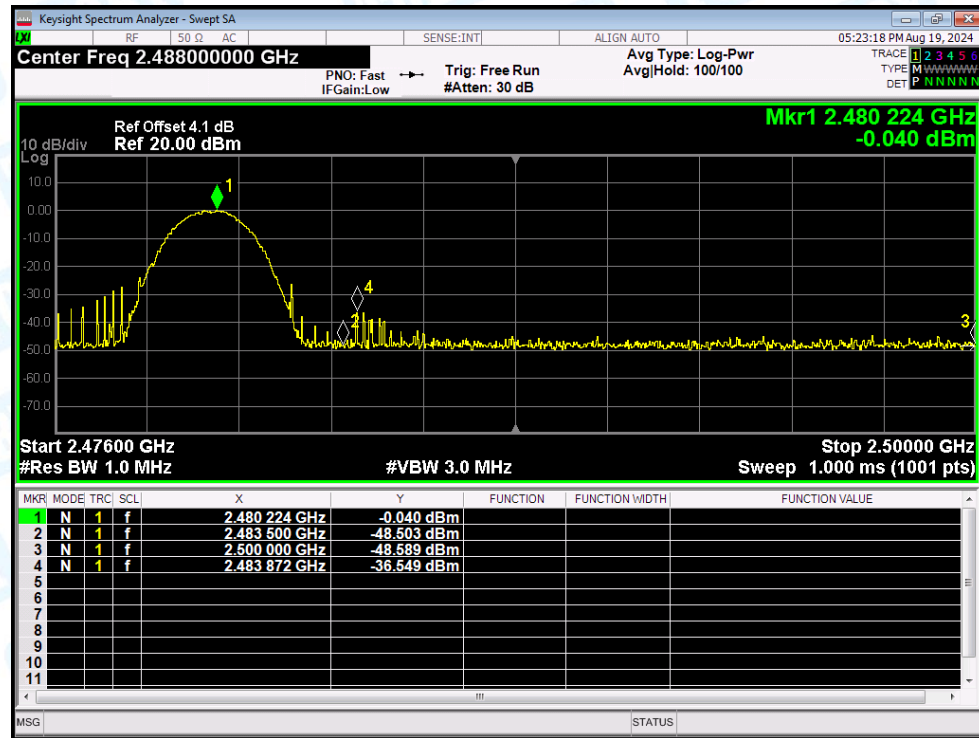
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



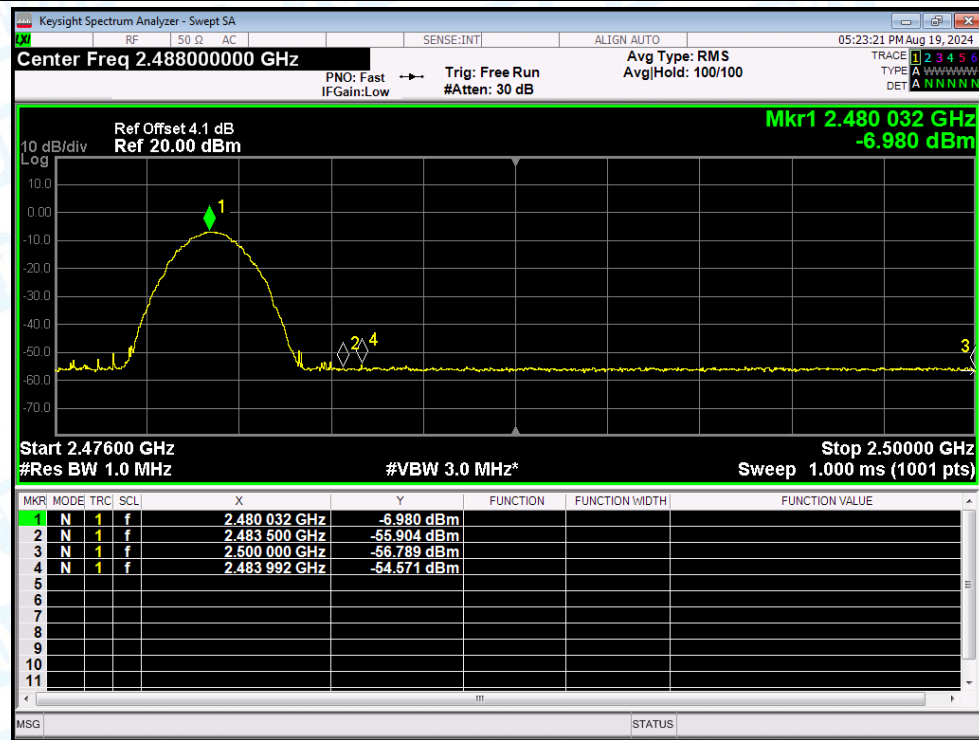
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



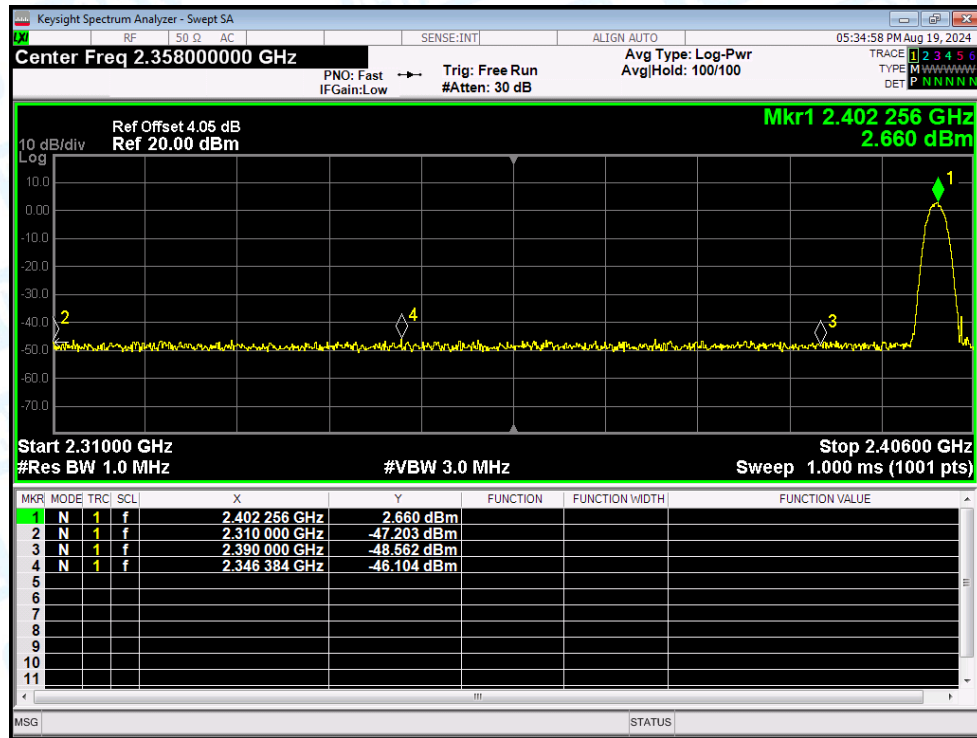
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



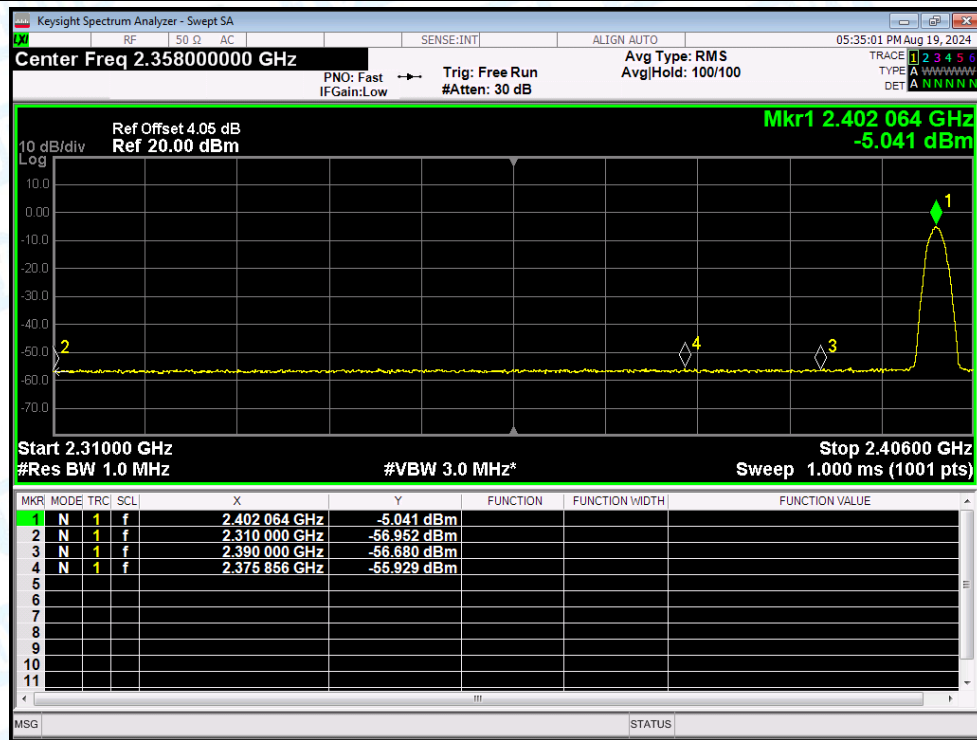
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



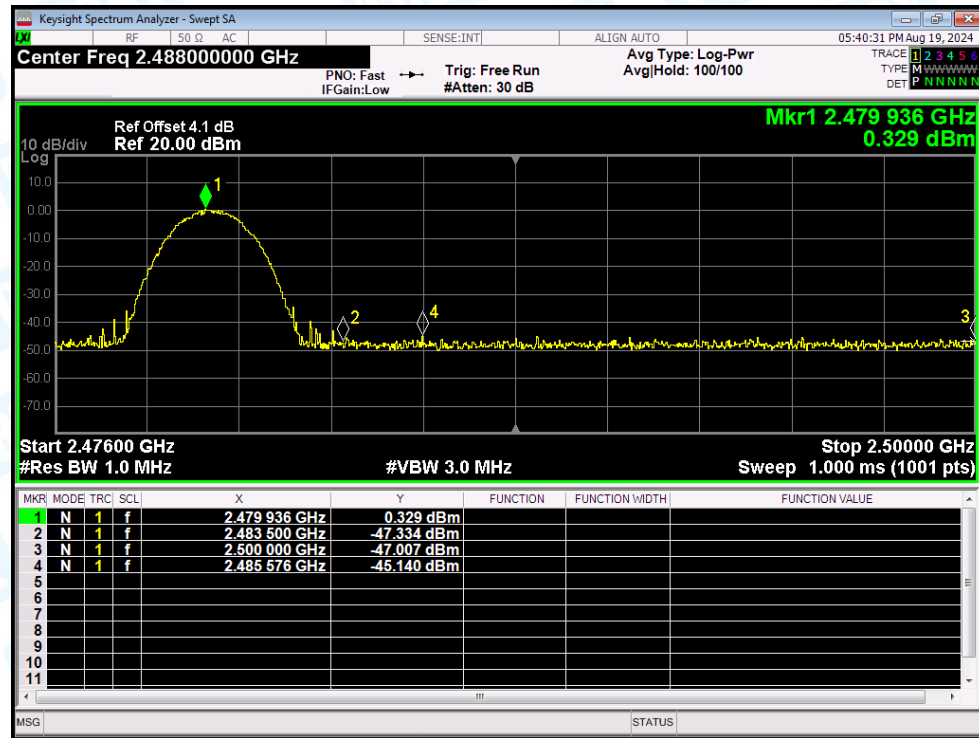
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



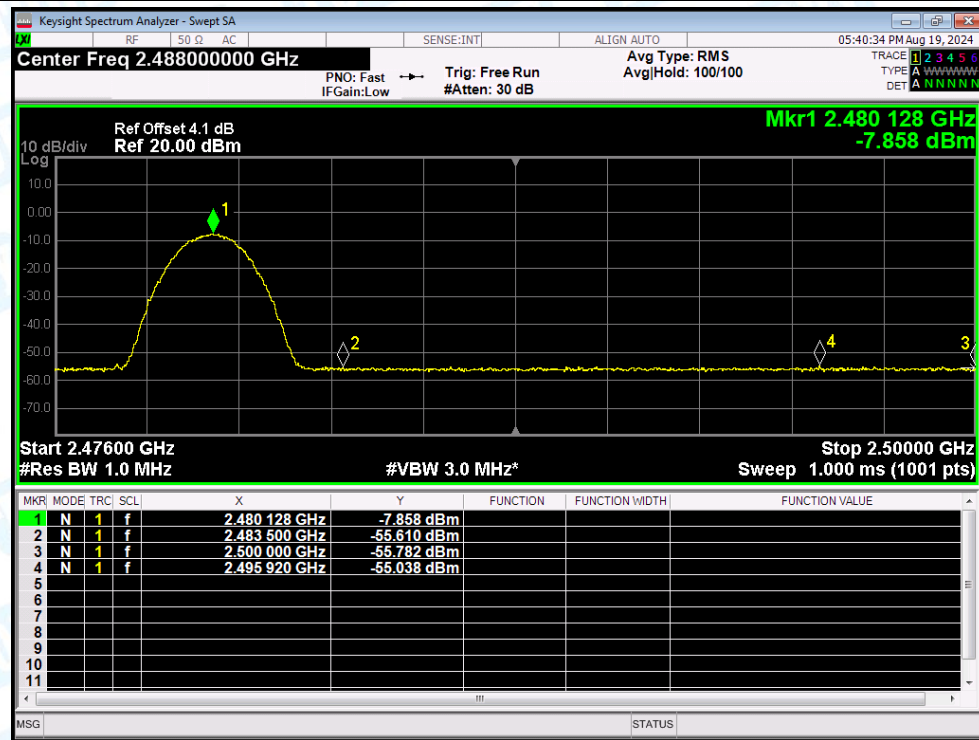
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

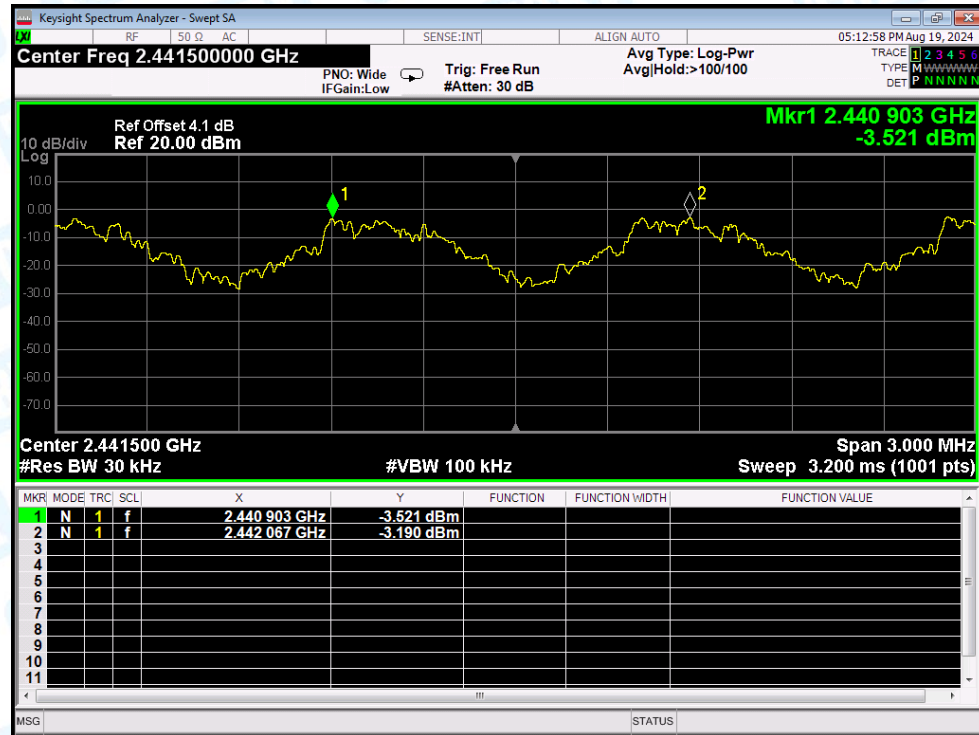


9. Carrier Frequencies Separation

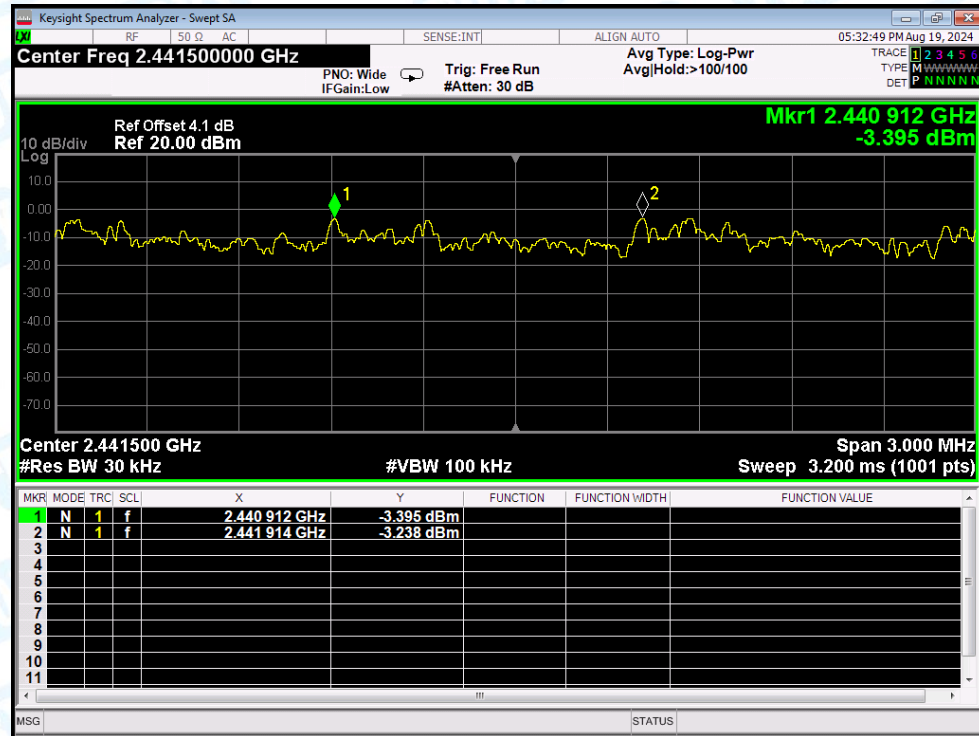
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.903	2442.067	1.164	0.587	Pass
NVNT	2-DH1	Ant1	2440.912	2441.914	1.002	0.84	Pass
NVNT	3-DH1	Ant1	2440.921	2441.92	0.999	0.833	Pass

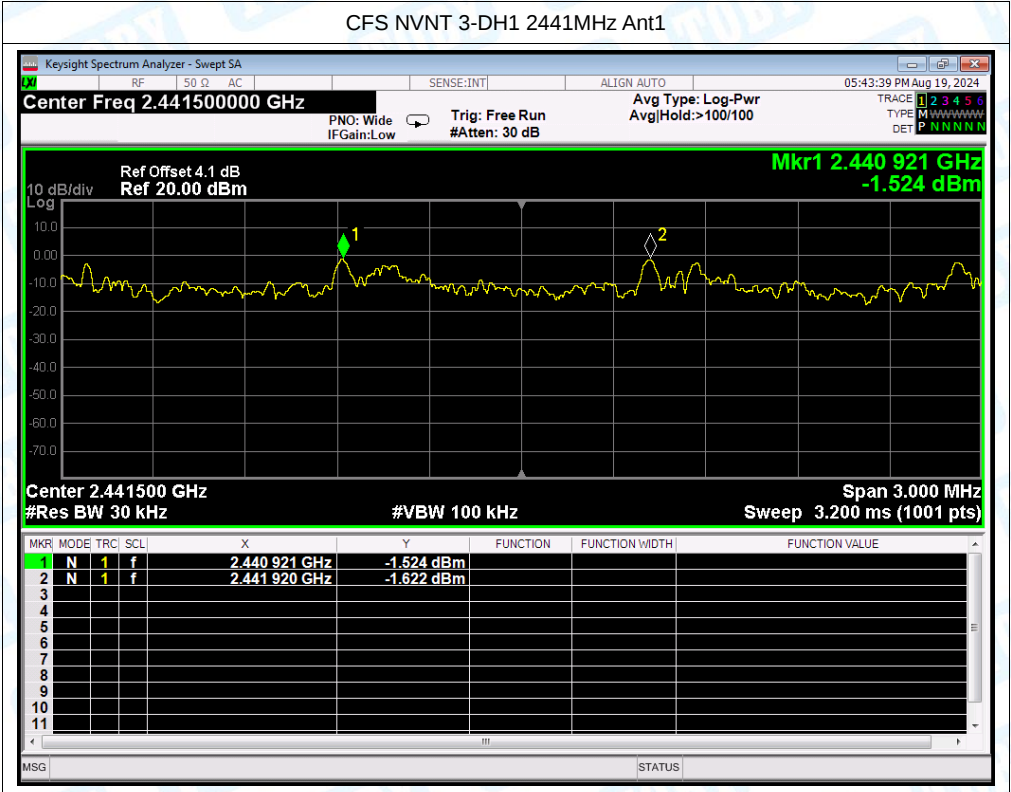
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



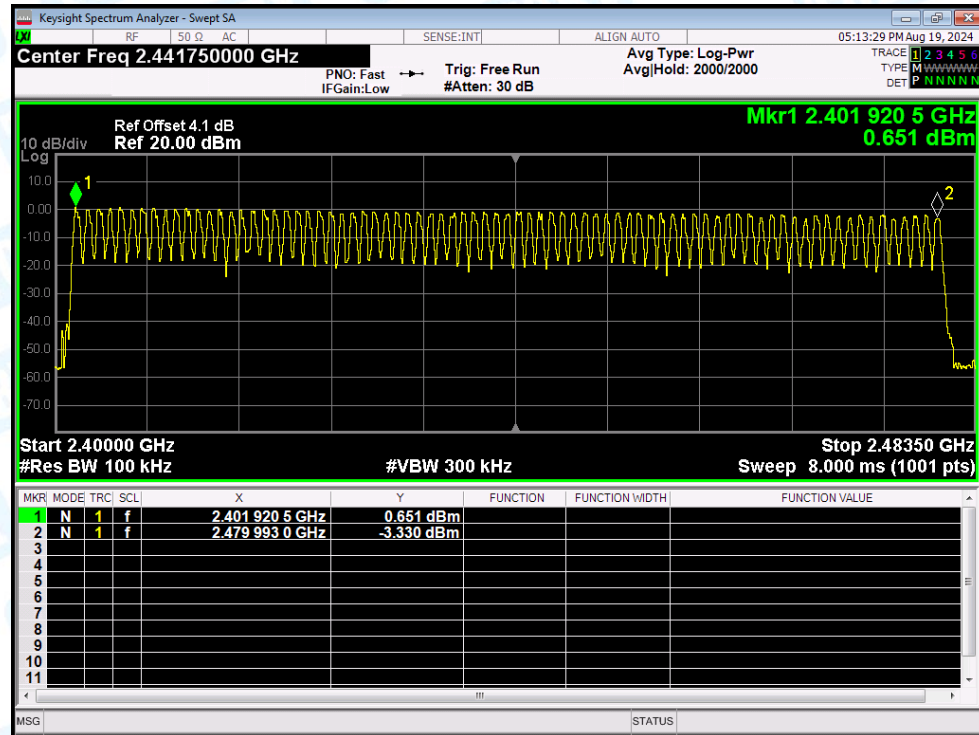


10.Number of Hopping Channel

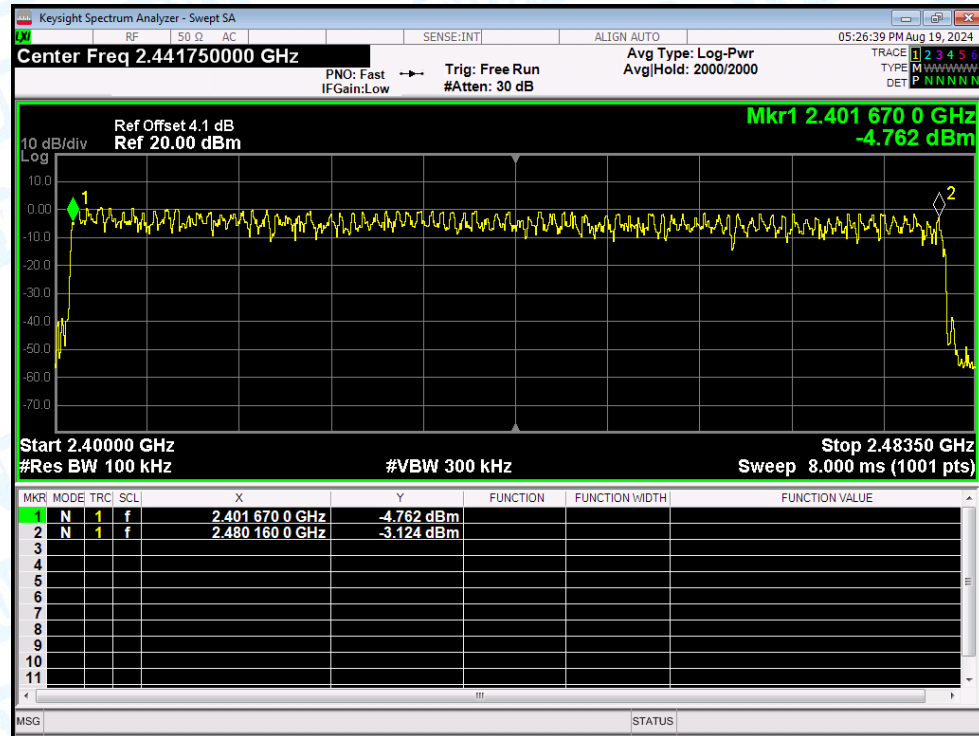
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

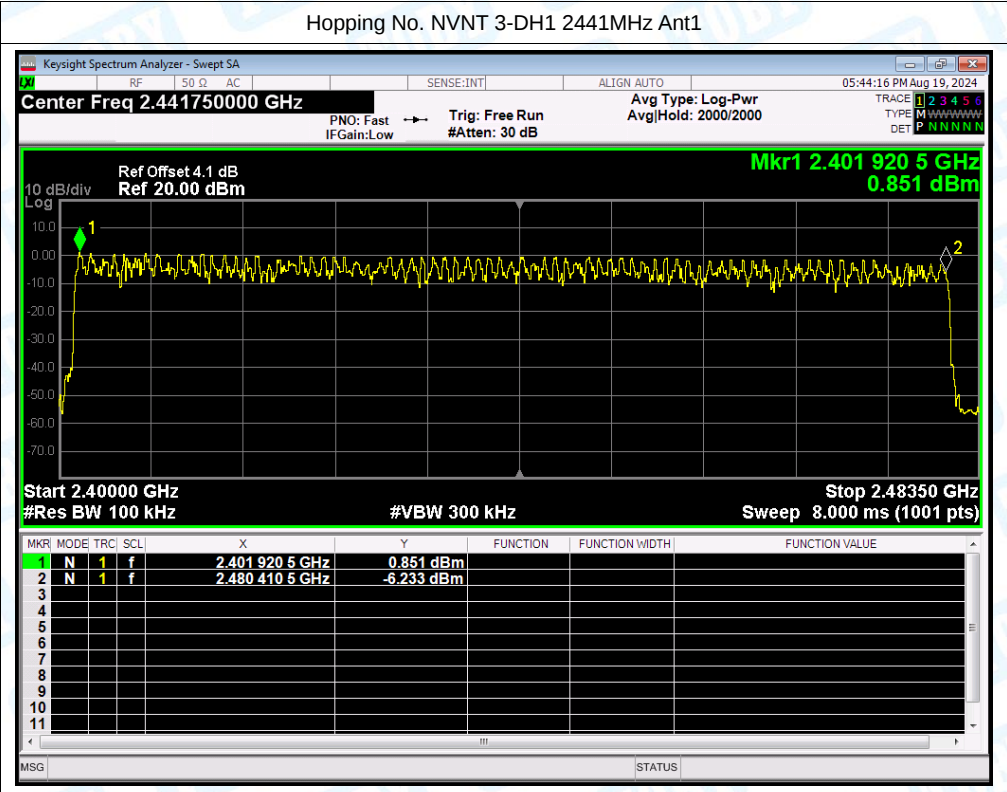
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



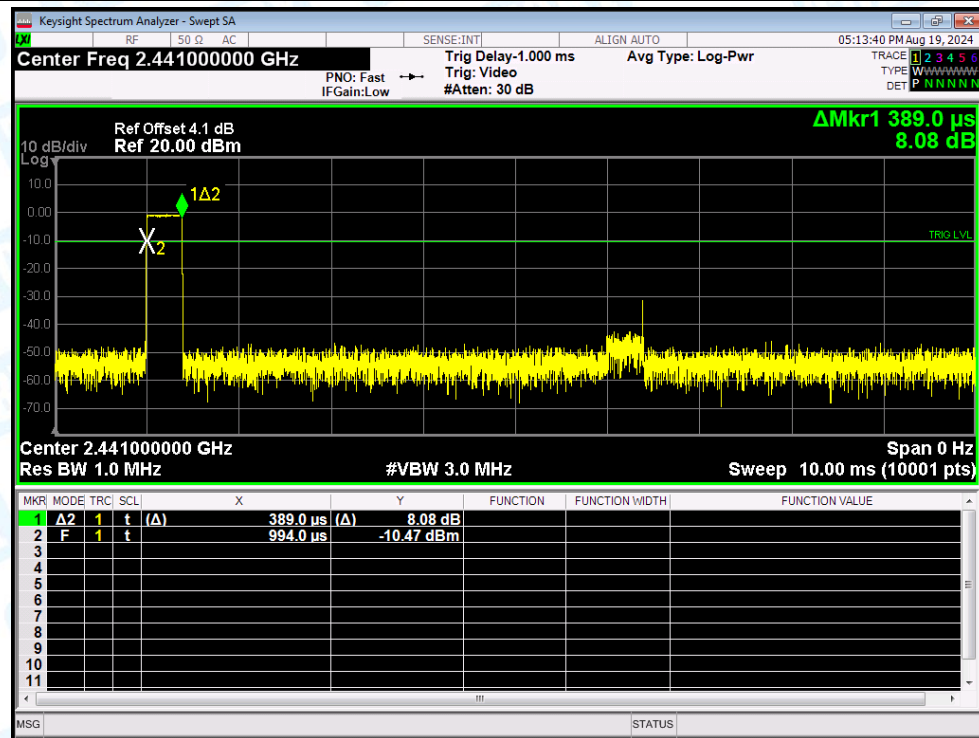


11.Dwell Time

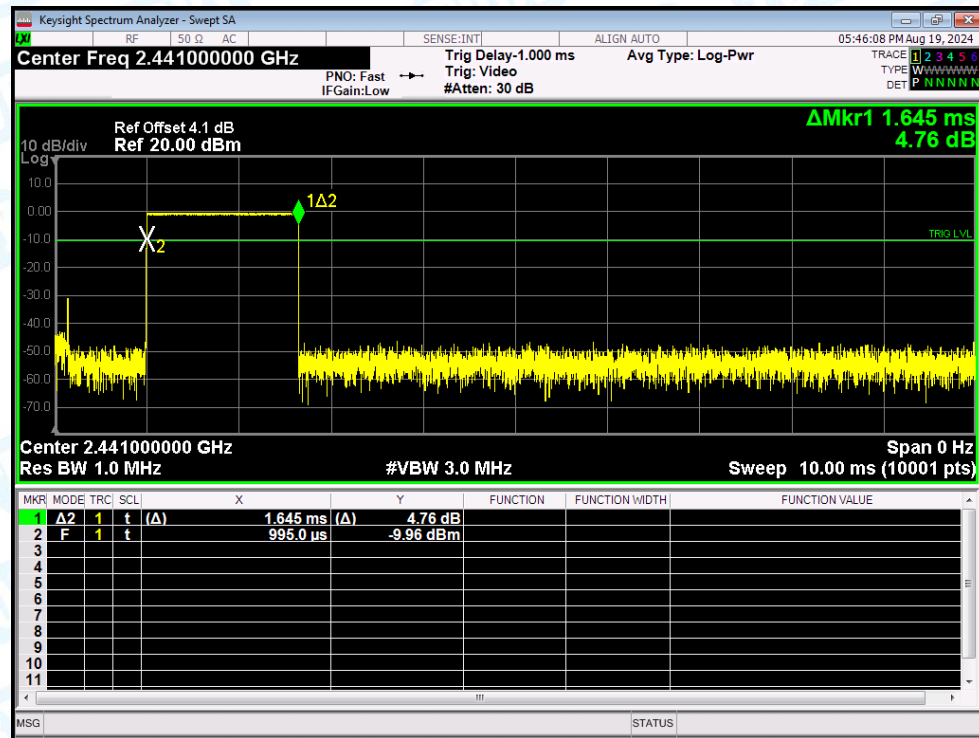
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.389	124.48	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.645	263.2	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.893	308.587	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.397	127.04	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.649	263.84	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.894	308.693	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.399	127.68	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.649	263.84	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.901	309.44	31600	400	Pass

Test Graphs

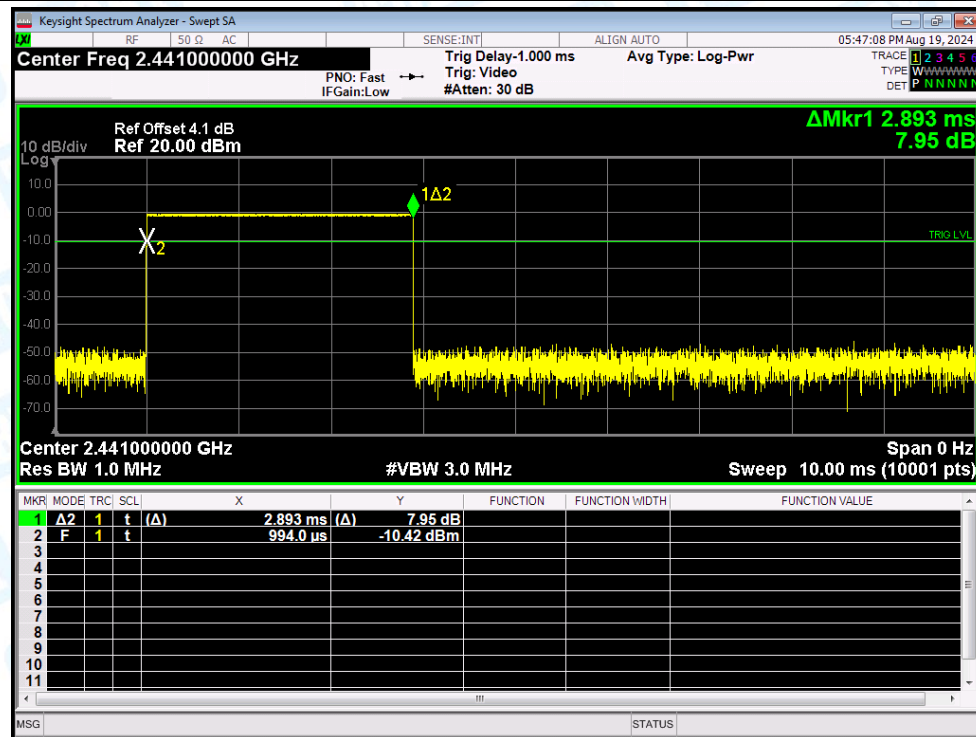
Dwell NVNT 1-DH1 2441MHz Ant1



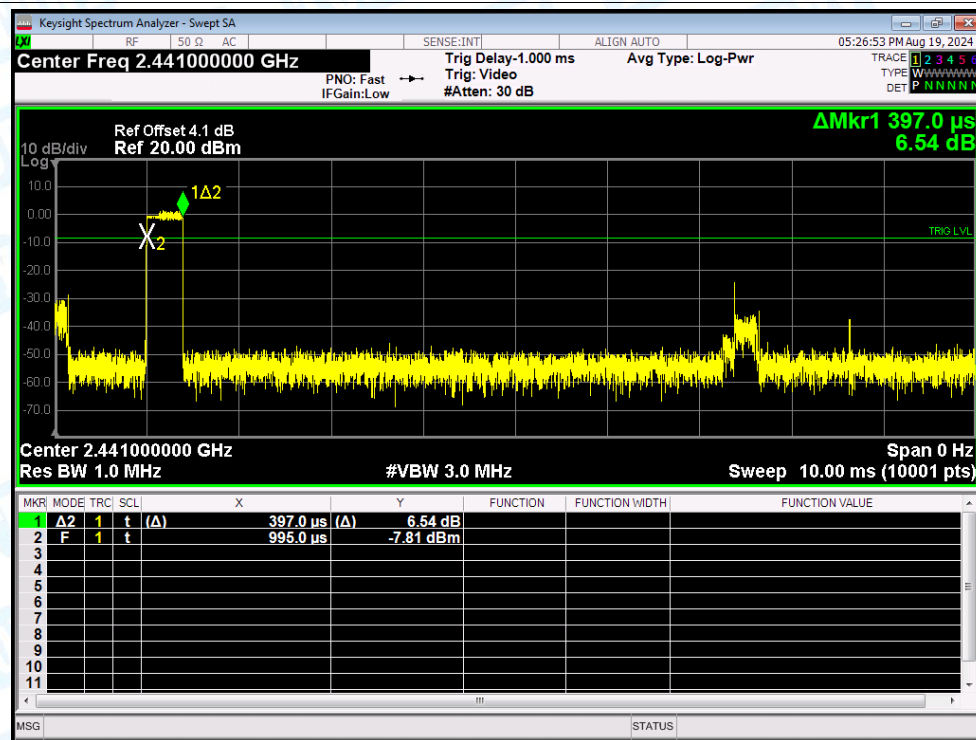
Dwell NVNT 1-DH3 2441MHz Ant1



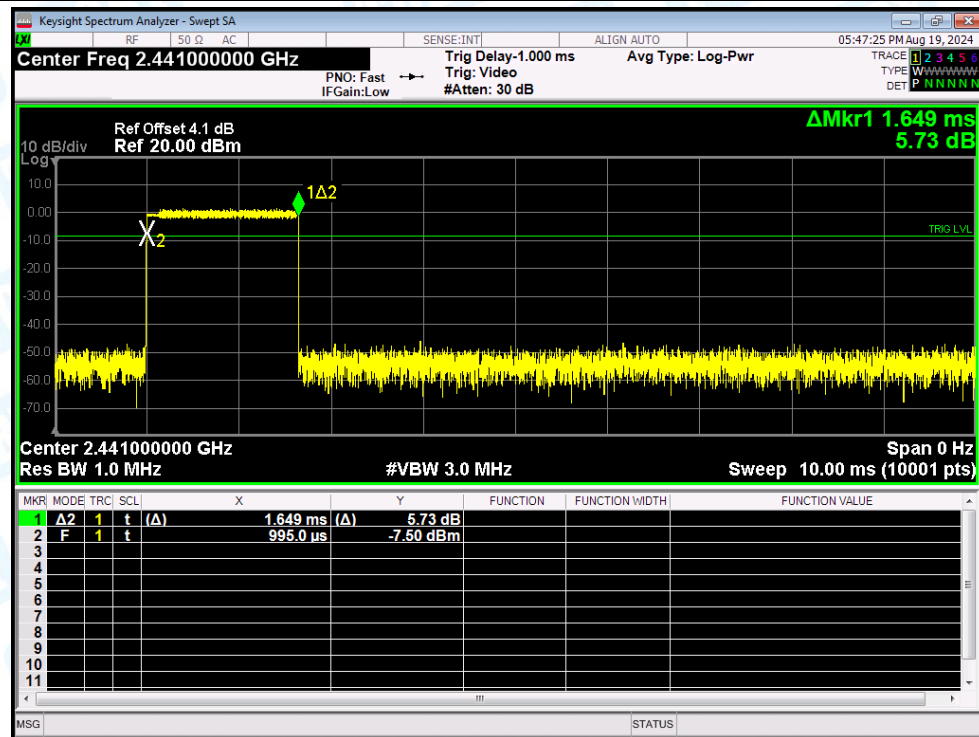
Dwell NVNT 1-DH5 2441MHz Ant1



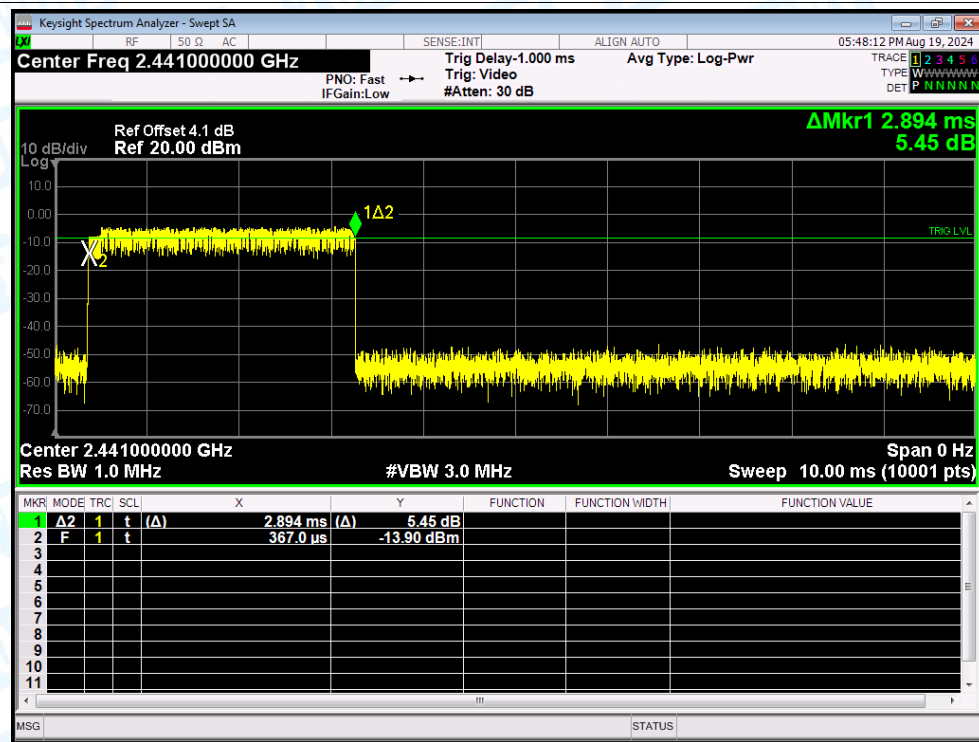
Dwell NVNT 2-DH1 2441MHz Ant1



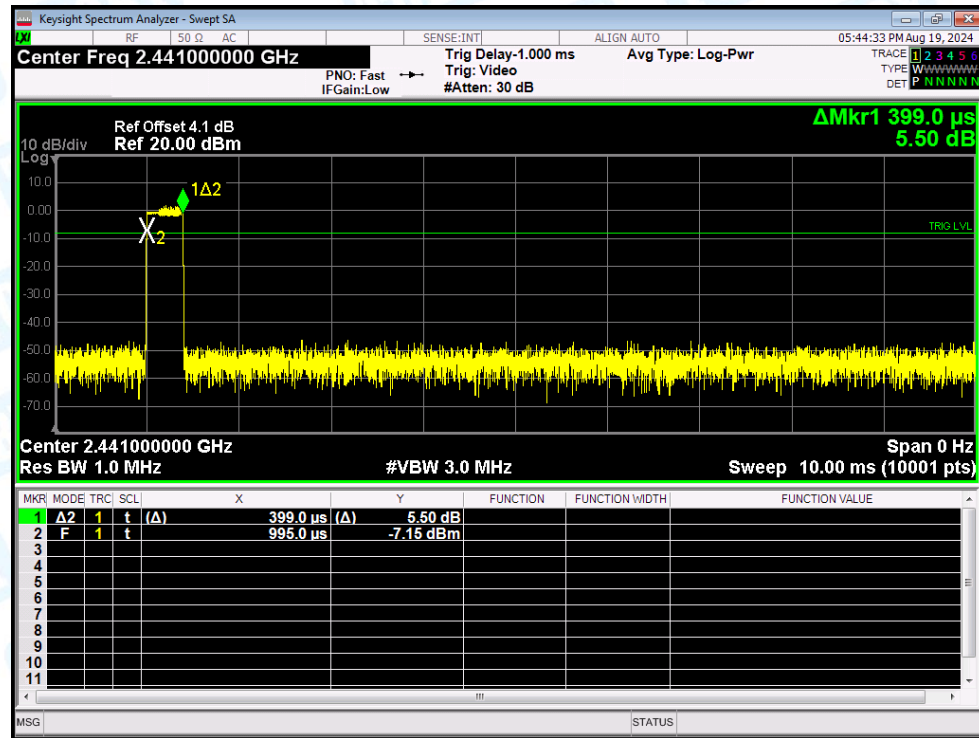
Dwell NVNT 2-DH3 2441MHz Ant1



Dwell NVNT 2-DH5 2441MHz Ant1



Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1

