RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	**Towel warmer**
Test Model:	**HSTW-17**
Sample ID:	**HC-C-202504-0255-01-03#**
Environmental Conditions	
Temperature:	**25℃**
Relative Humidity:	**55%**
Test Voltage:	**AC 120V/60Hz**
Test Engineer:	**Gold Zhang**
Note: For a more detailed features description, please refer to the report TBR-C-202504-0255-1 The report only show the worst case data.	

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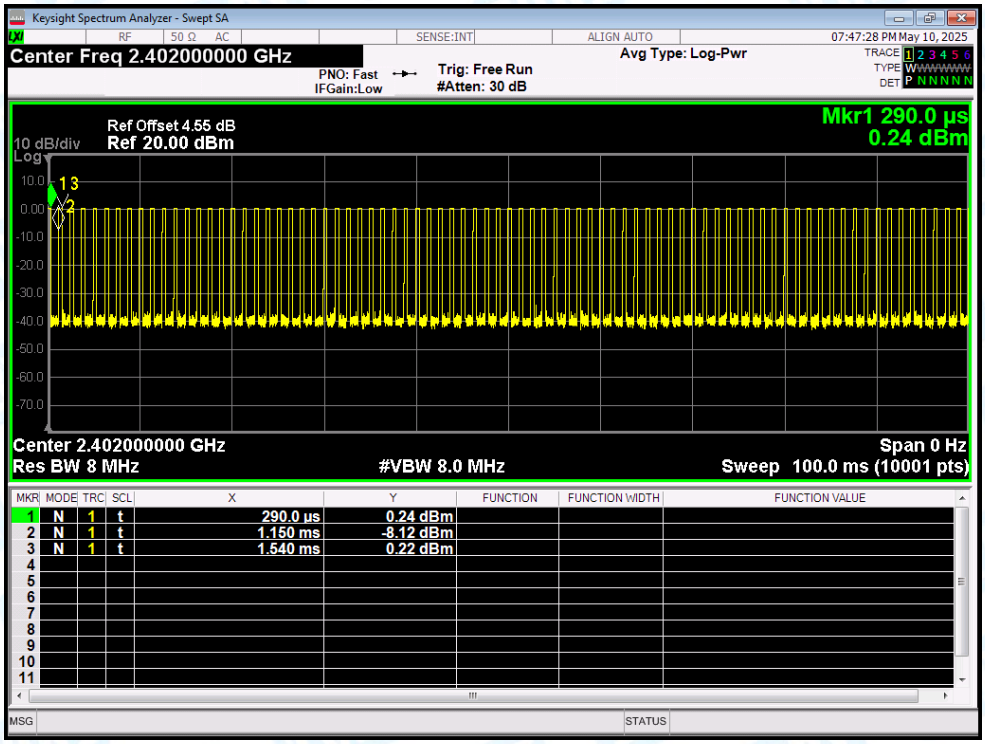
1.Duty Cycle

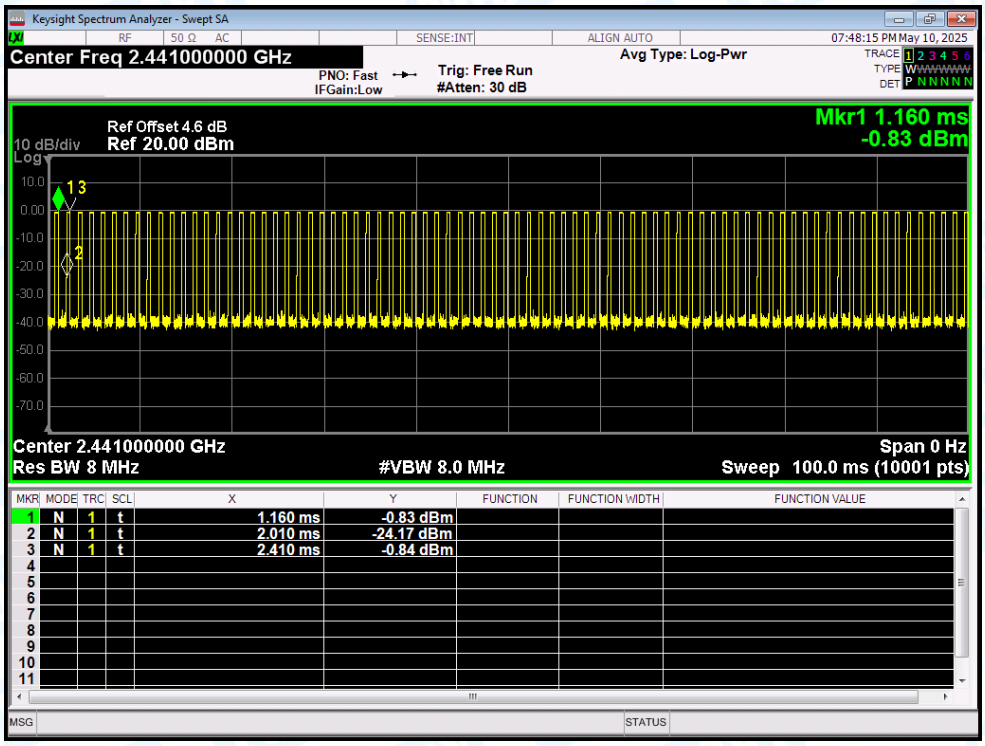
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	1-DH1	2441	Ant1	32	4.95	2.5
NVNT	1-DH1	2480	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2402	Ant1	32.8	4.84	2.44
NVNT	2-DH1	2441	Ant1	32.8	4.84	2.44
NVNT	2-DH1	2480	Ant1	32.8	4.84	2.44
NVNT	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

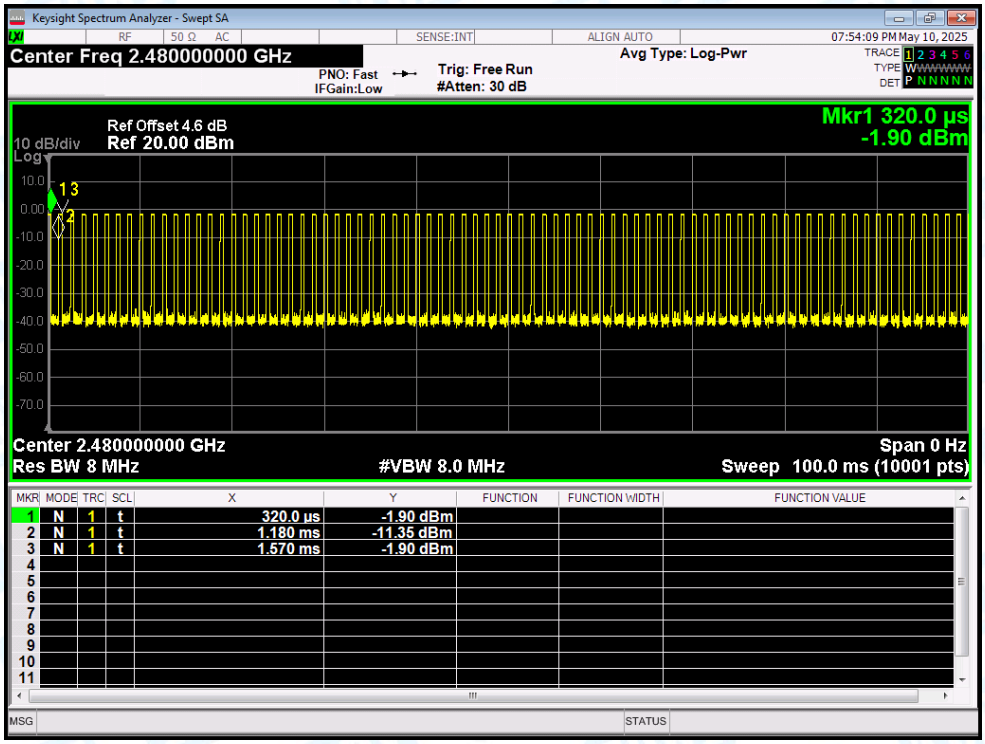
Duty Cycle NVNT 1-DH1 2402MHz Ant1



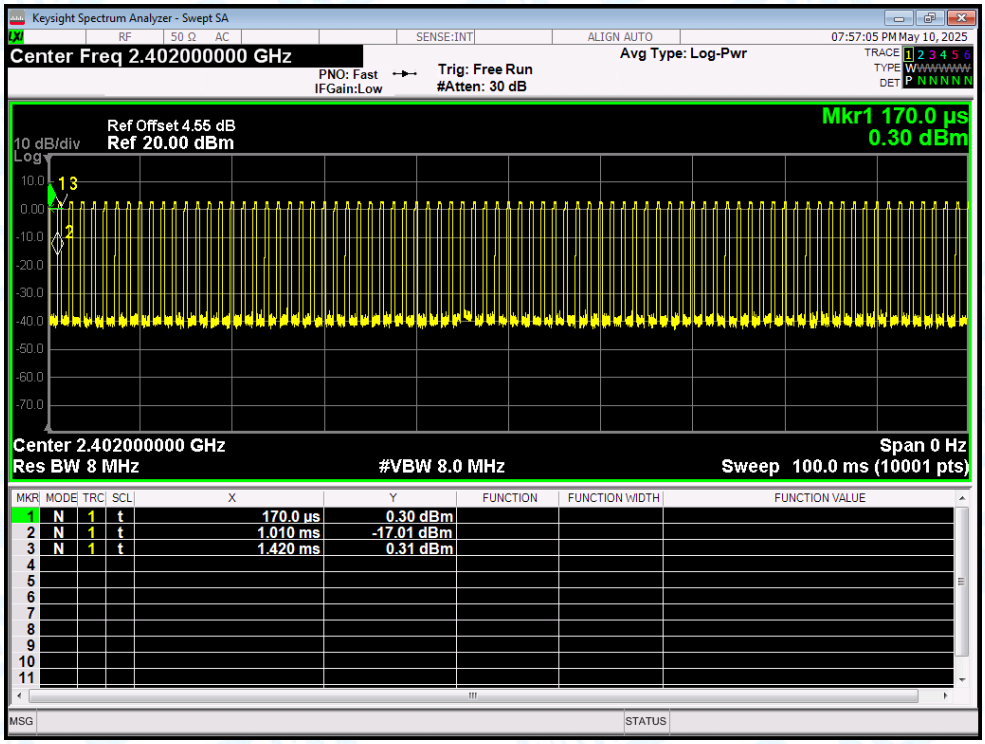
Duty Cycle NVNT 1-DH1 2441MHz Ant1



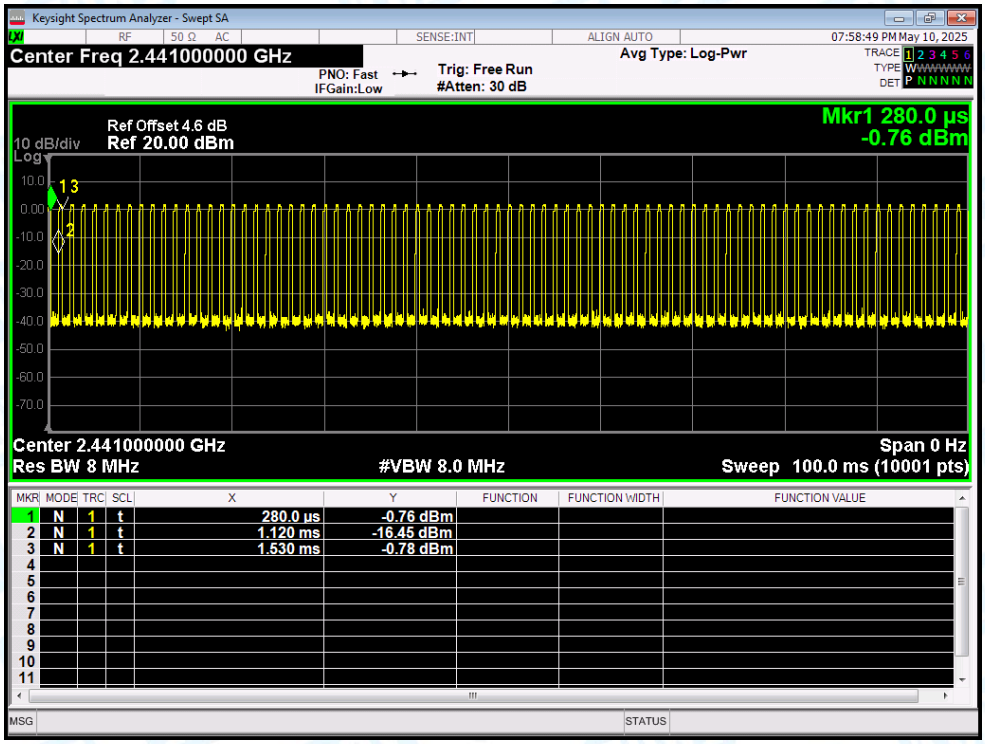
Duty Cycle NVNT 1-DH1 2480MHz Ant1



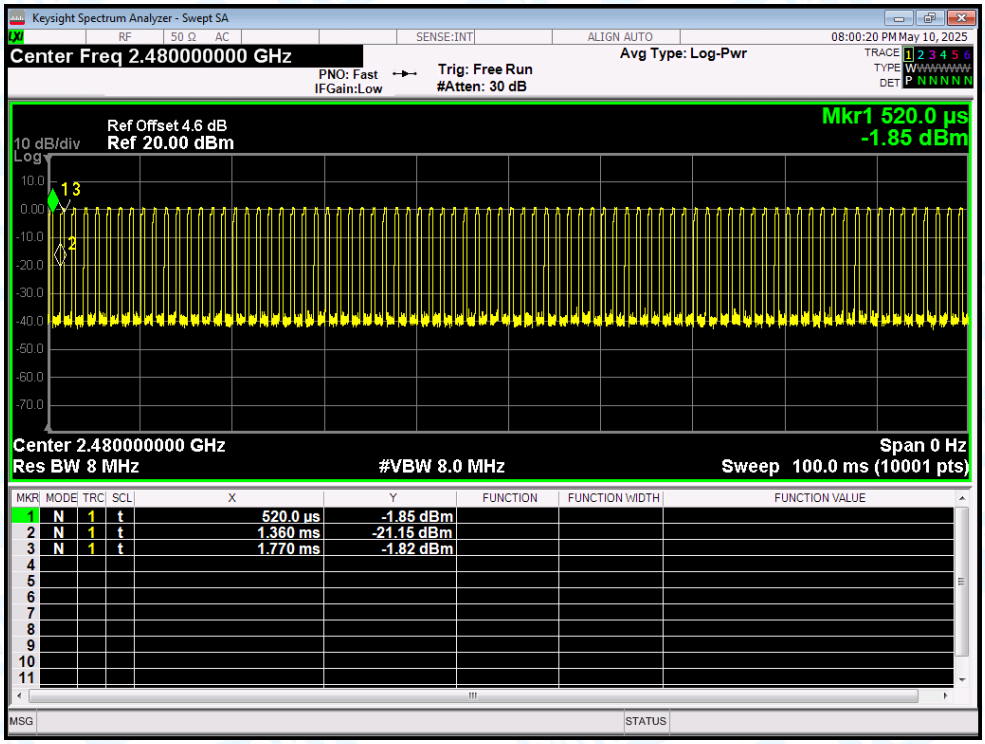
Duty Cycle NVNT 2-DH1 2402MHz Ant1



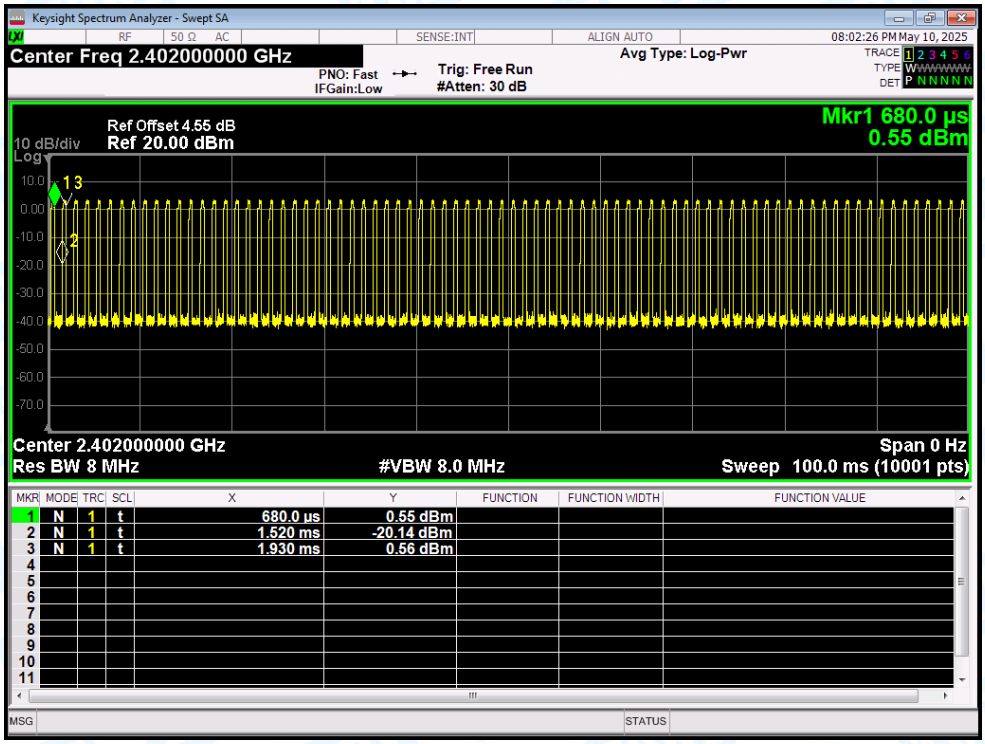
Duty Cycle NVNT 2-DH1 2441MHz Ant1



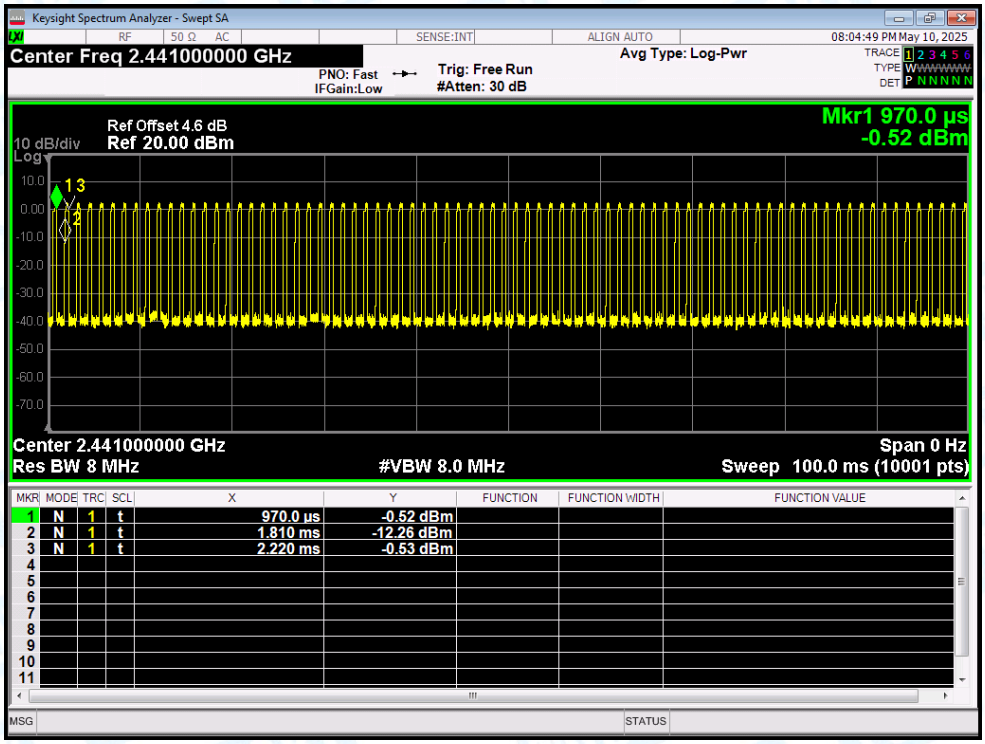
Duty Cycle NVNT 2-DH1 2480MHz Ant1



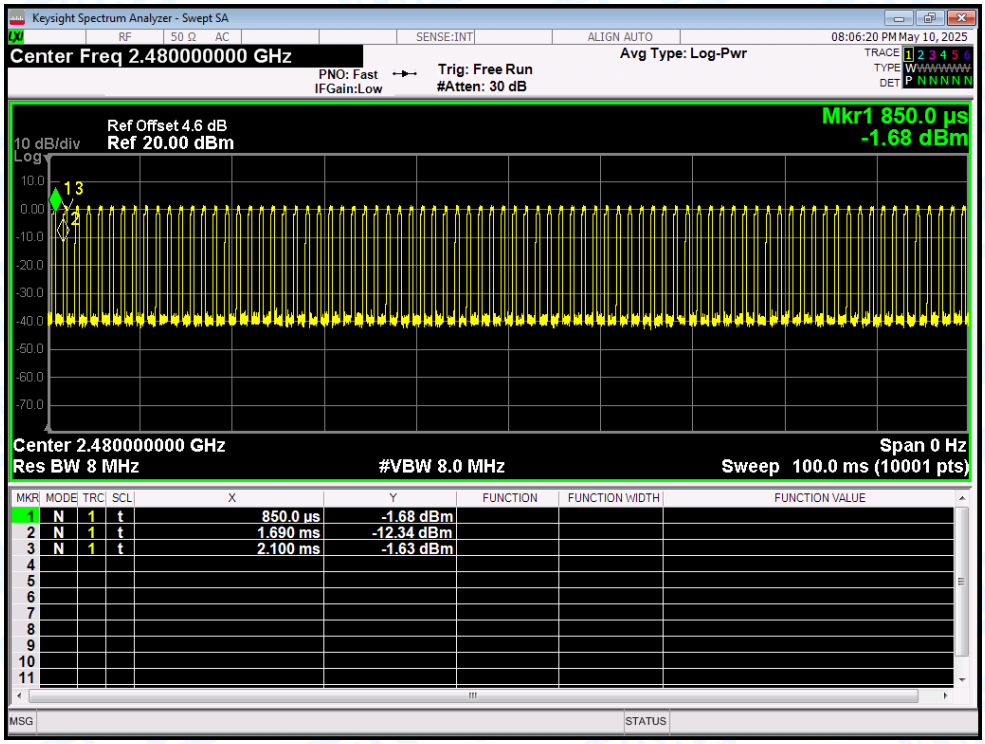
Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



Duty Cycle NVNT 3-DH1 2480MHz Ant1

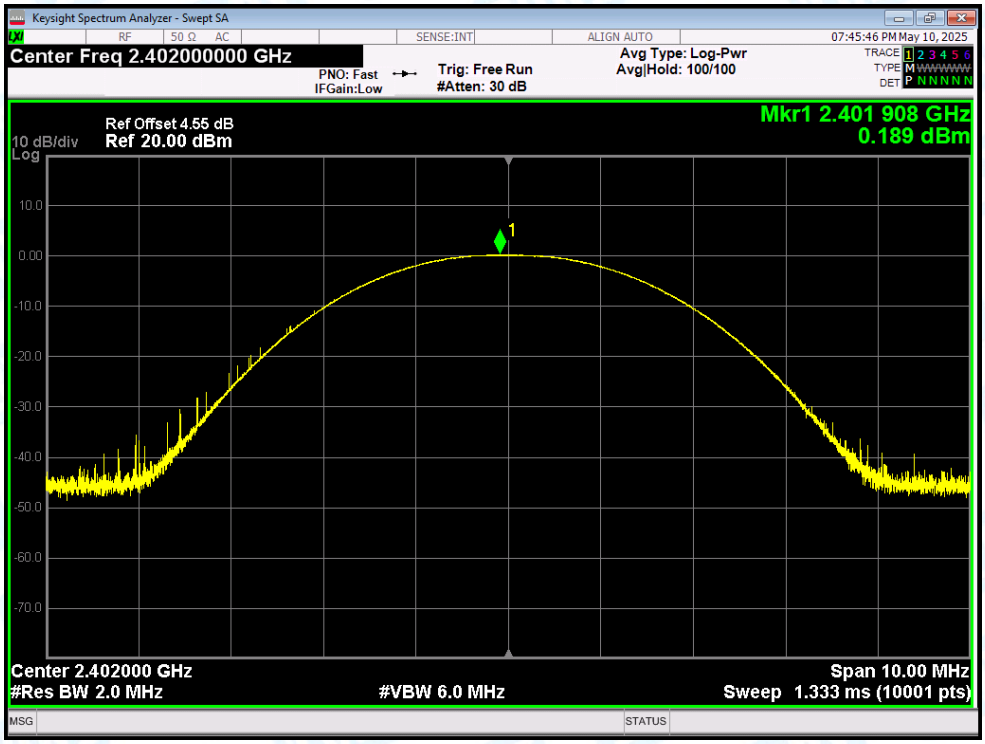


2.Maximum Conducted Output Power

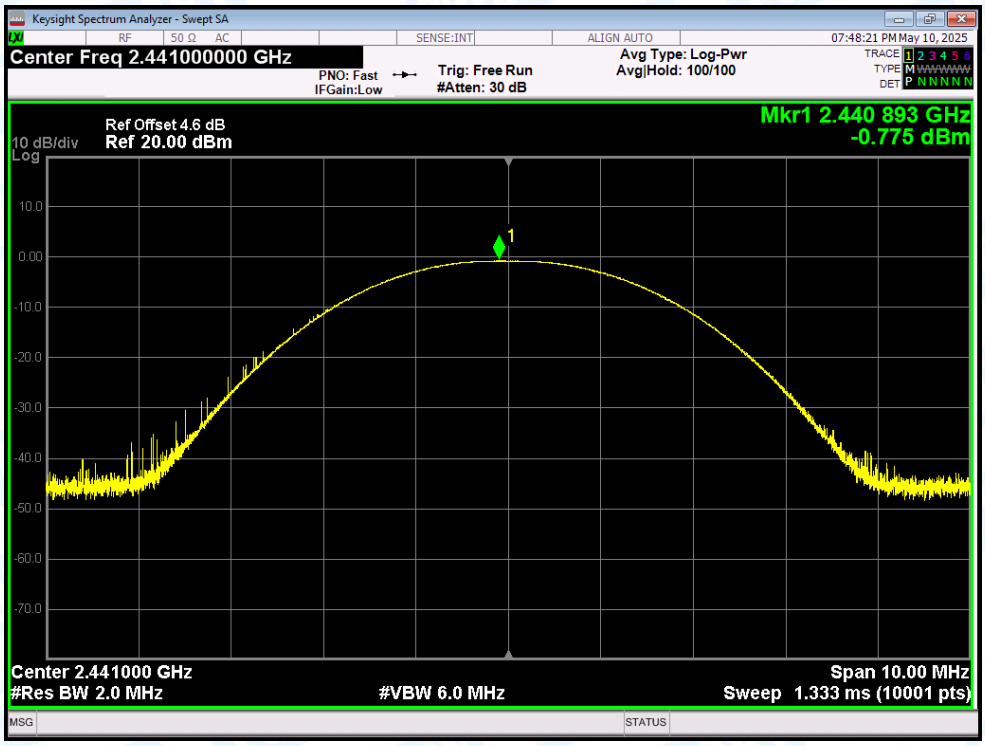
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	0.189	21	Pass
NVNT	1-DH1	2441	Ant1	-0.775	21	Pass
NVNT	1-DH1	2480	Ant1	-1.828	21	Pass
NVNT	2-DH1	2402	Ant1	2.694	21	Pass
NVNT	2-DH1	2441	Ant1	1.637	21	Pass
NVNT	2-DH1	2480	Ant1	0.529	21	Pass
NVNT	3-DH1	2402	Ant1	3.286	21	Pass
NVNT	3-DH1	2441	Ant1	2.231	21	Pass
NVNT	3-DH1	2480	Ant1	1.11	21	Pass

Test Graphs

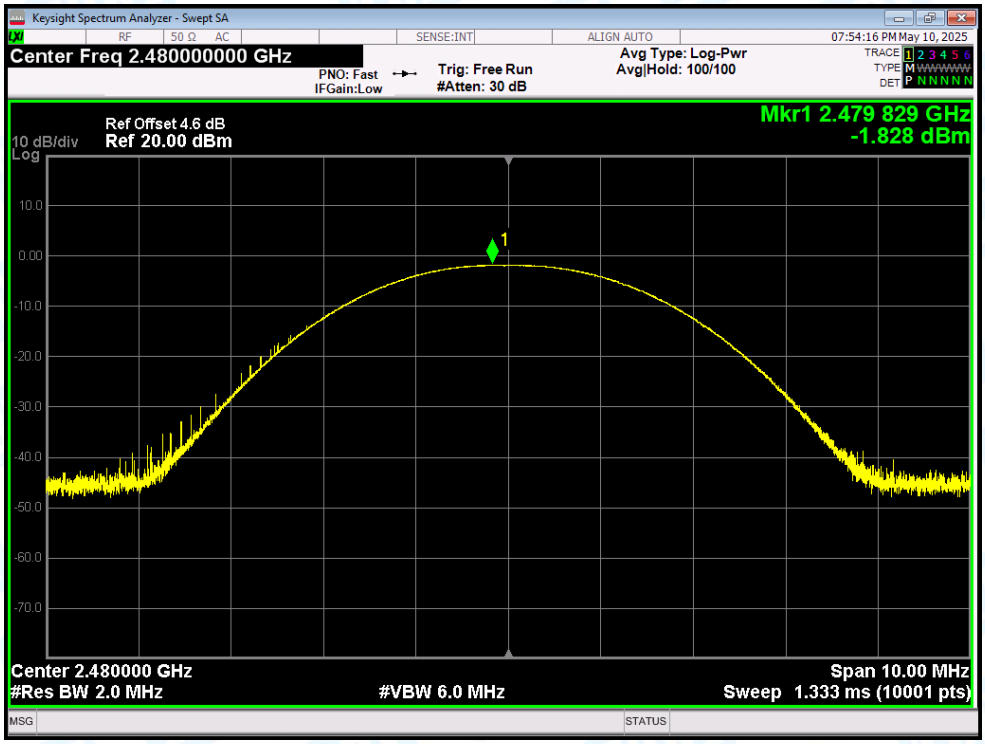
Power NVNT 1-DH1 2402MHz Ant1



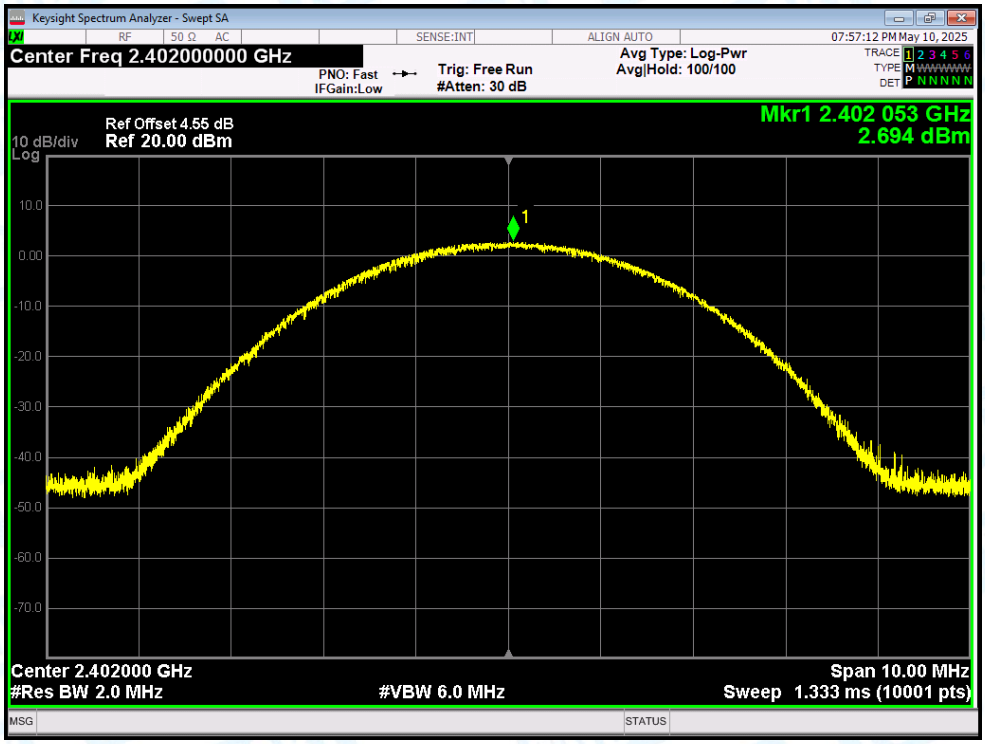
Power NVNT 1-DH1 2441MHz Ant1



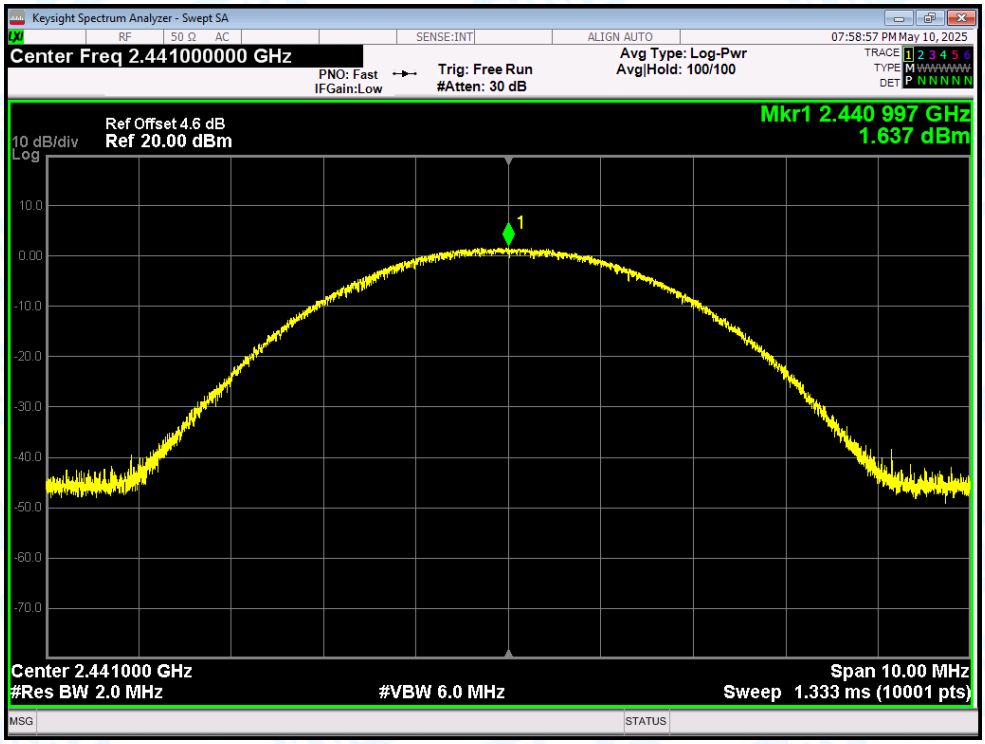
Power NVNT 1-DH1 2480MHz Ant1



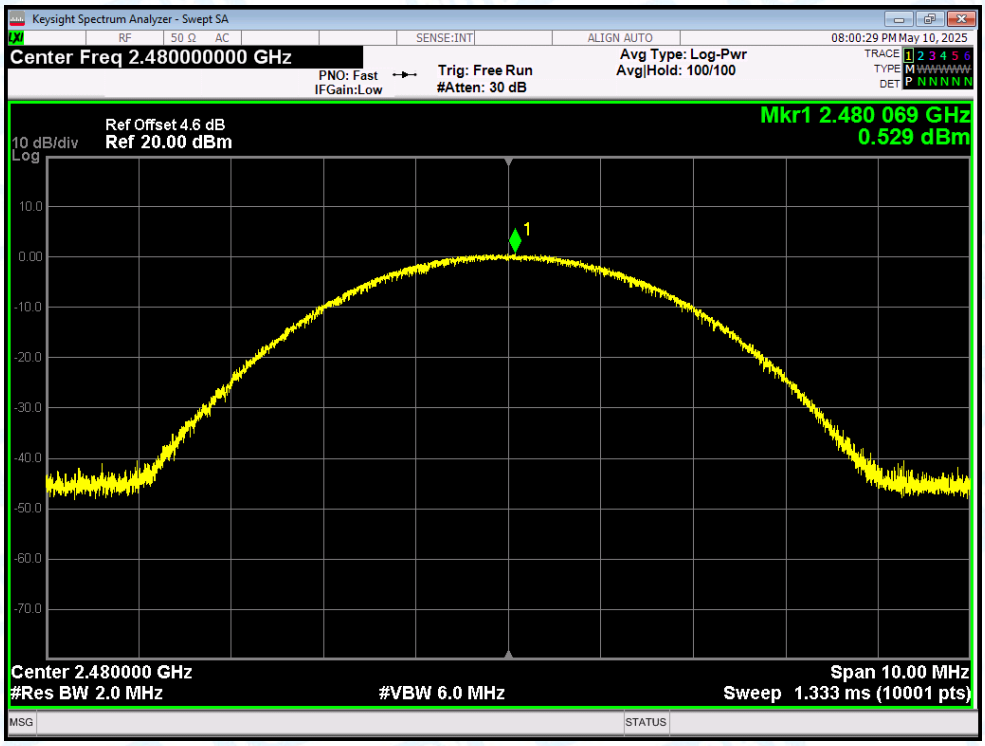
Power NVNT 2-DH1 2402MHz Ant1



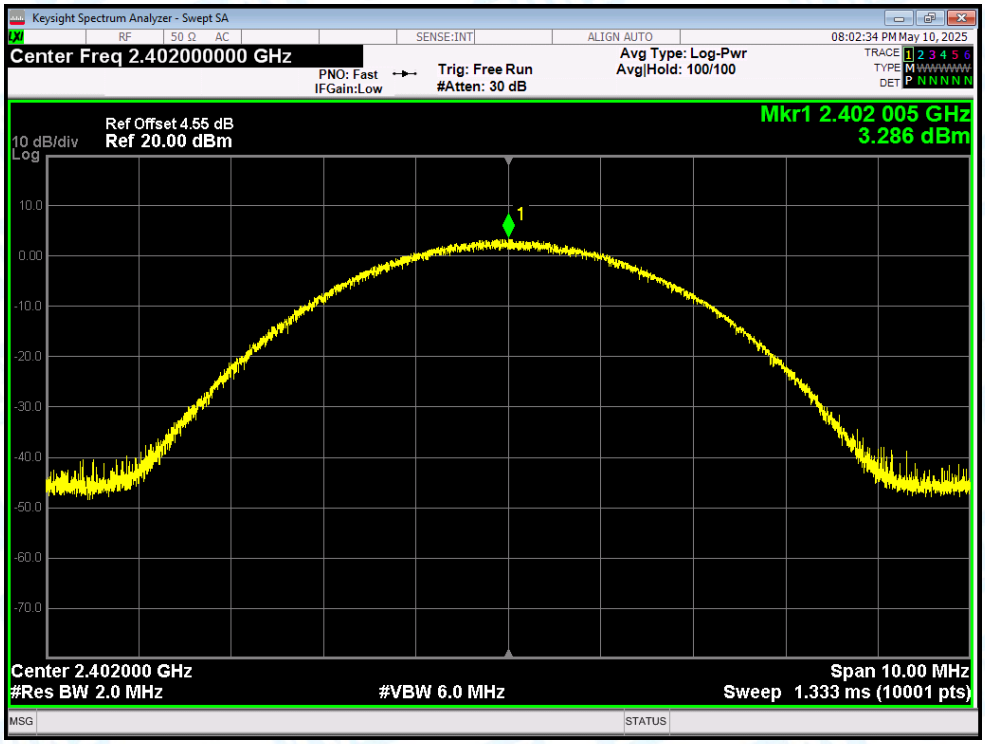
Power NVNT 2-DH1 2441MHz Ant1



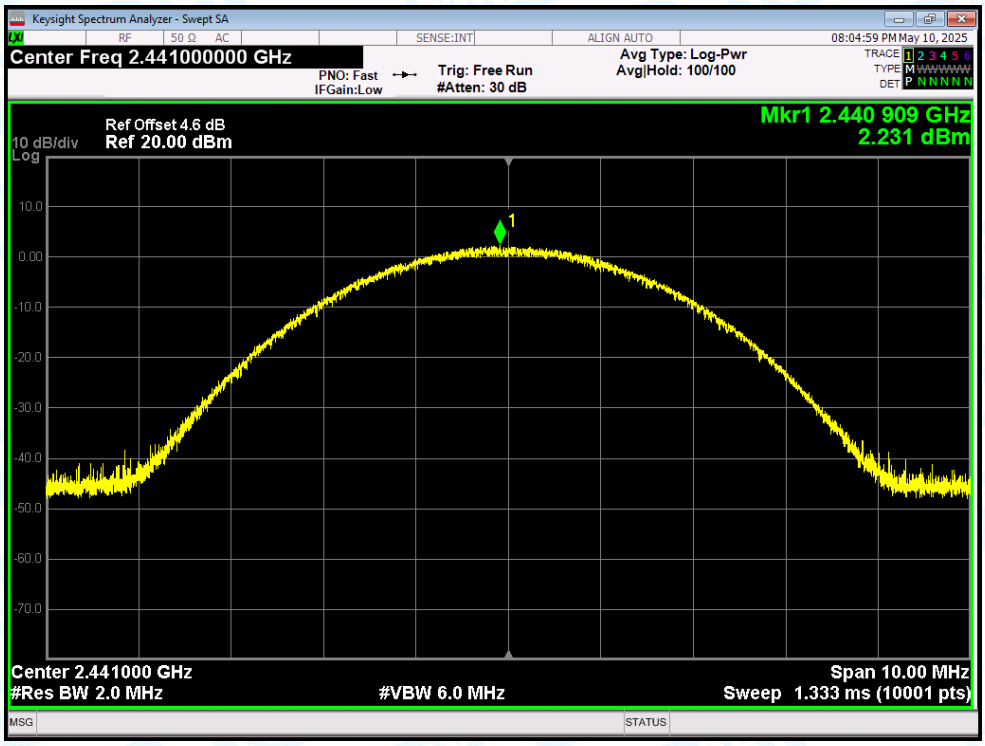
Power NVNT 2-DH1 2480MHz Ant1



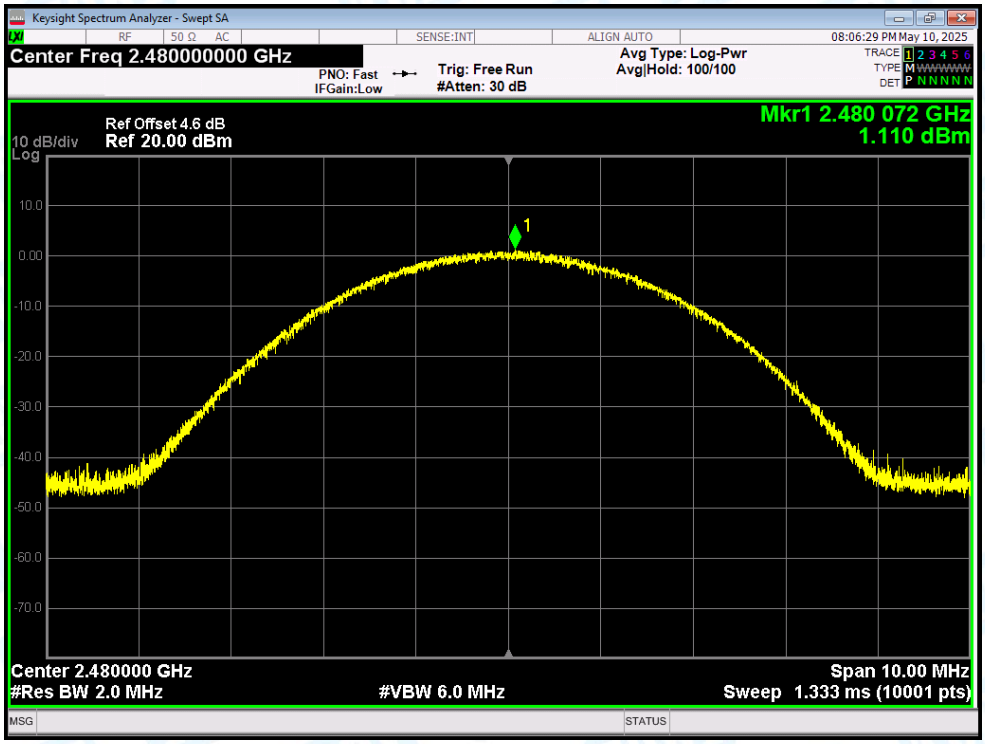
Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



Power NVNT 3-DH1 2480MHz Ant1

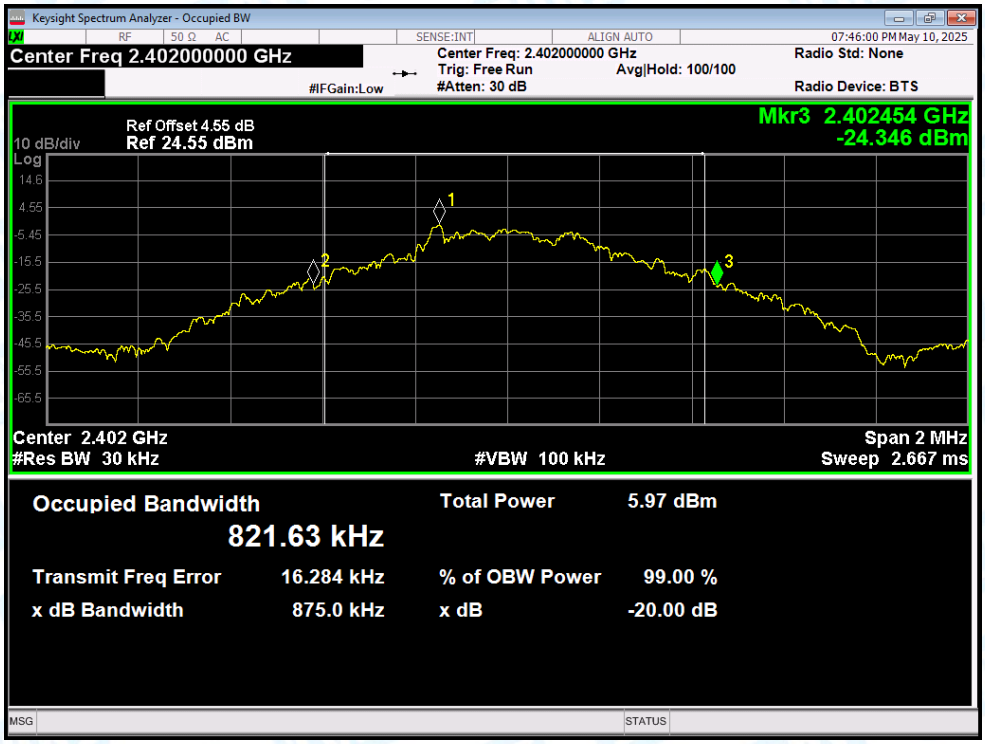


3.-20dB Bandwidth

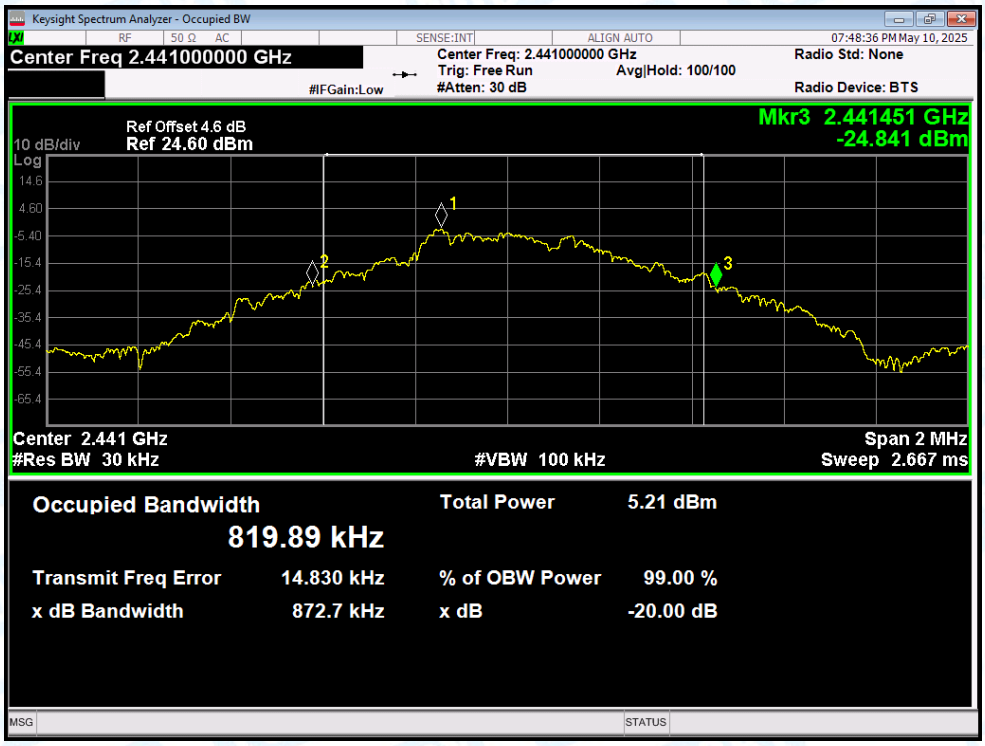
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.88	0	Pass
NVNT	1-DH1	2441	Ant1	0.87	0	Pass
NVNT	1-DH1	2480	Ant1	0.87	0	Pass
NVNT	2-DH1	2402	Ant1	1.29	0	Pass
NVNT	2-DH1	2441	Ant1	1.26	0	Pass
NVNT	2-DH1	2480	Ant1	1.3	0	Pass
NVNT	3-DH1	2402	Ant1	1.21	0	Pass
NVNT	3-DH1	2441	Ant1	1.23	0	Pass
NVNT	3-DH1	2480	Ant1	1.21	0	Pass

Test Graphs

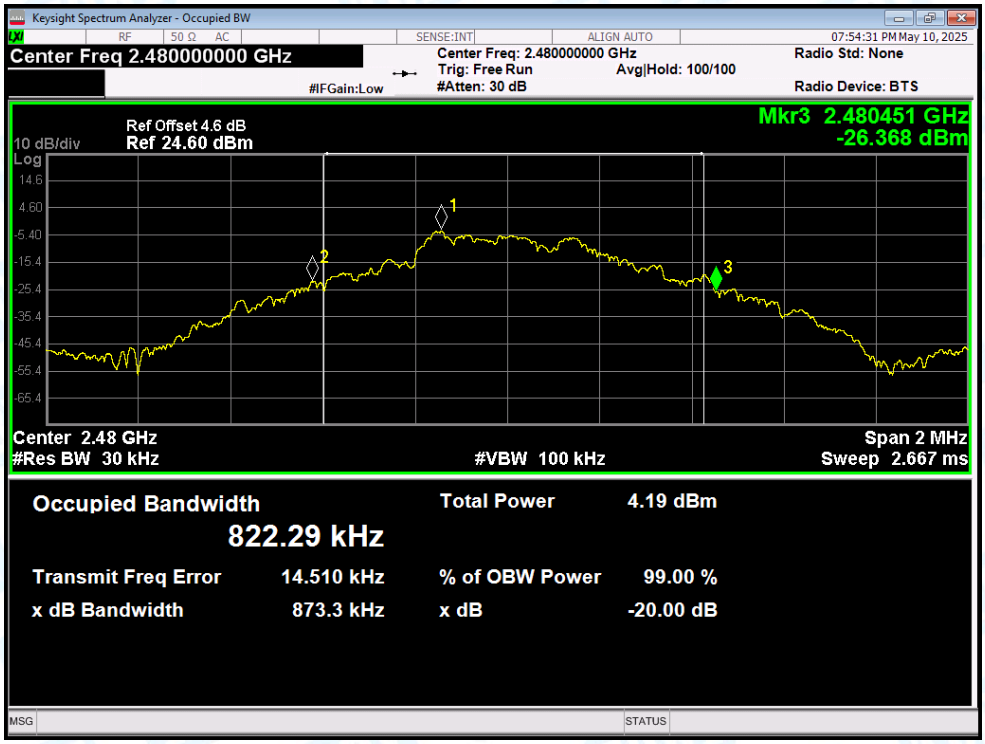
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



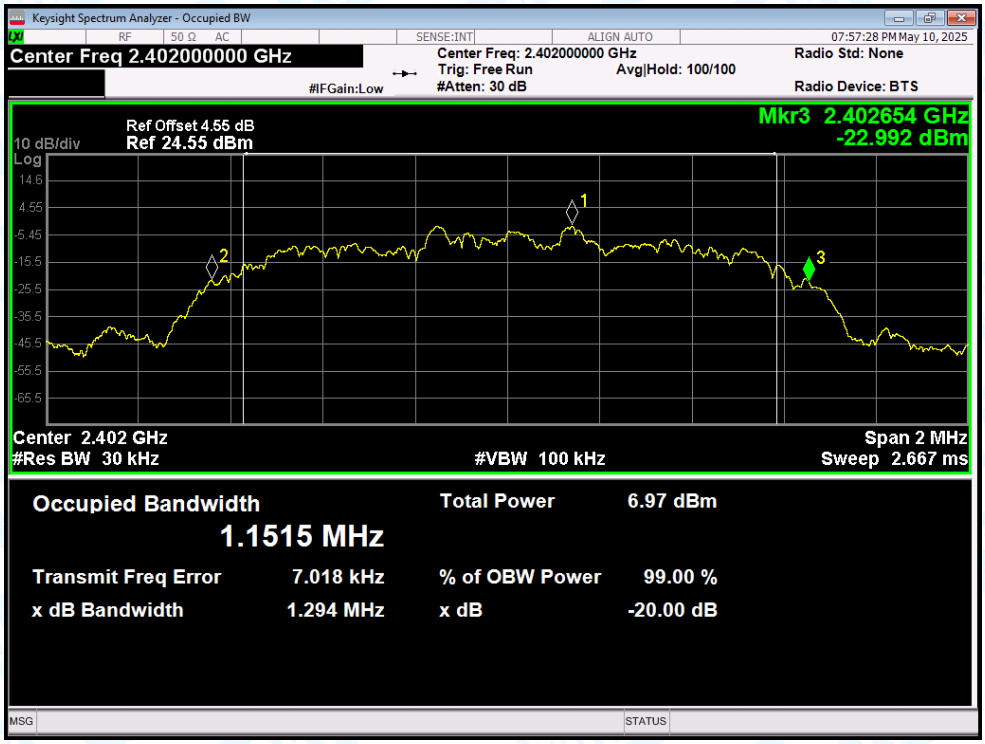
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



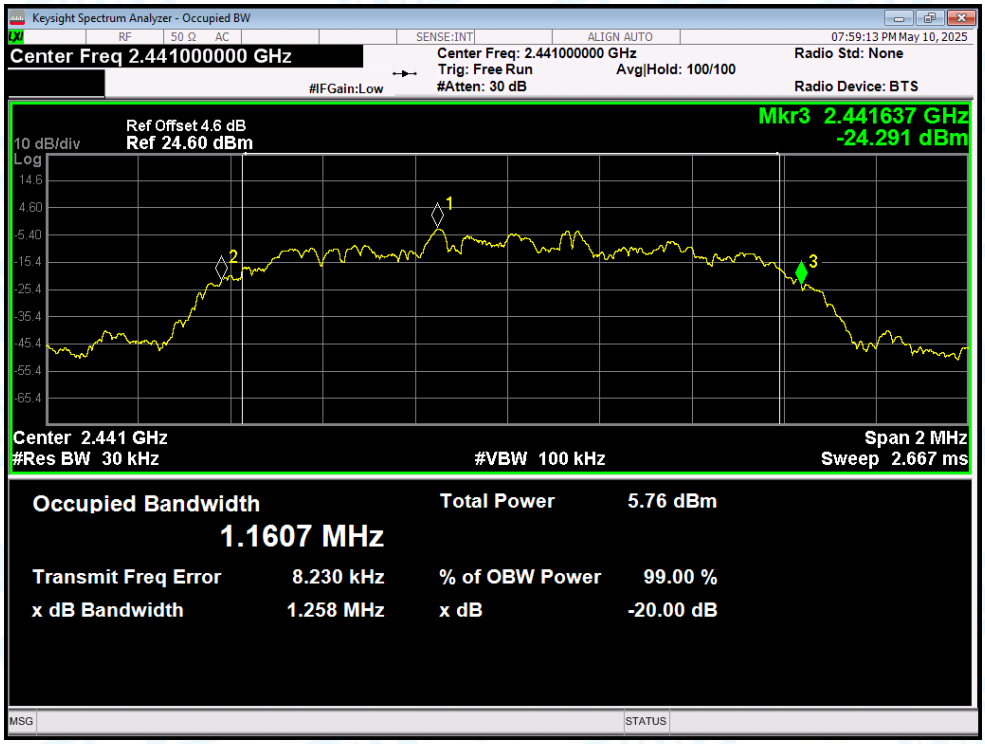
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



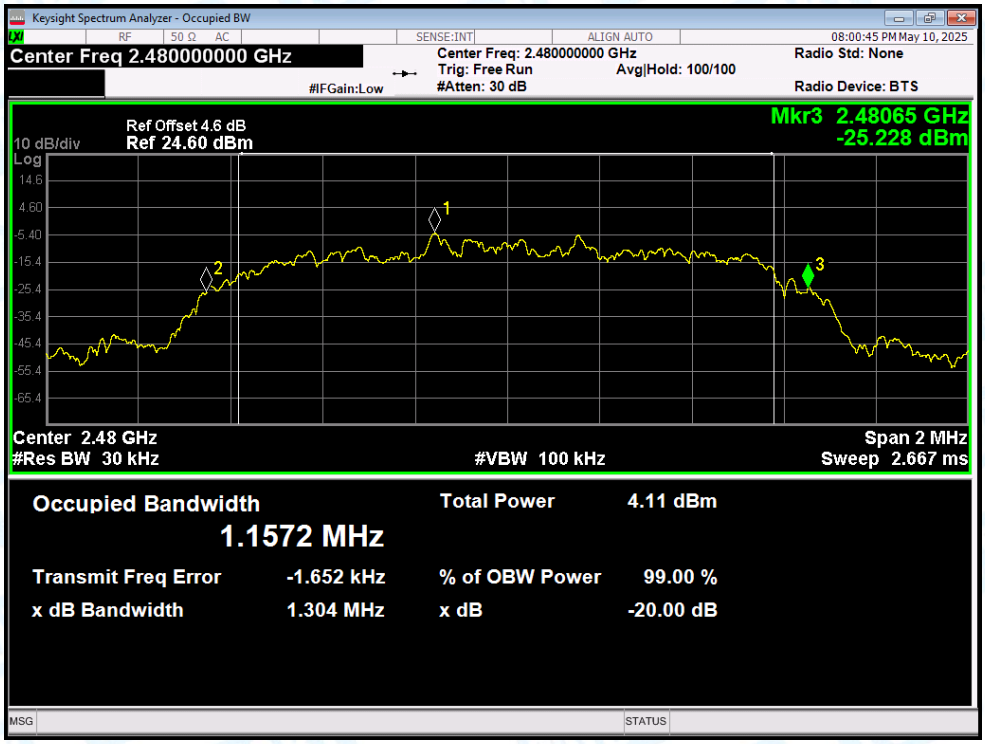
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



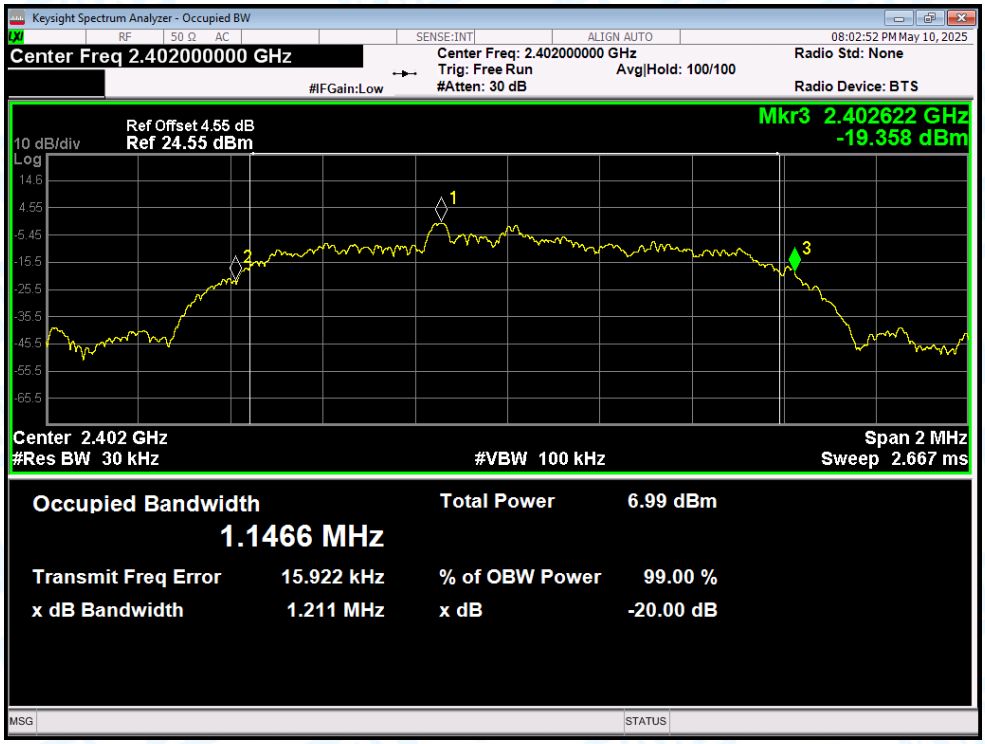
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



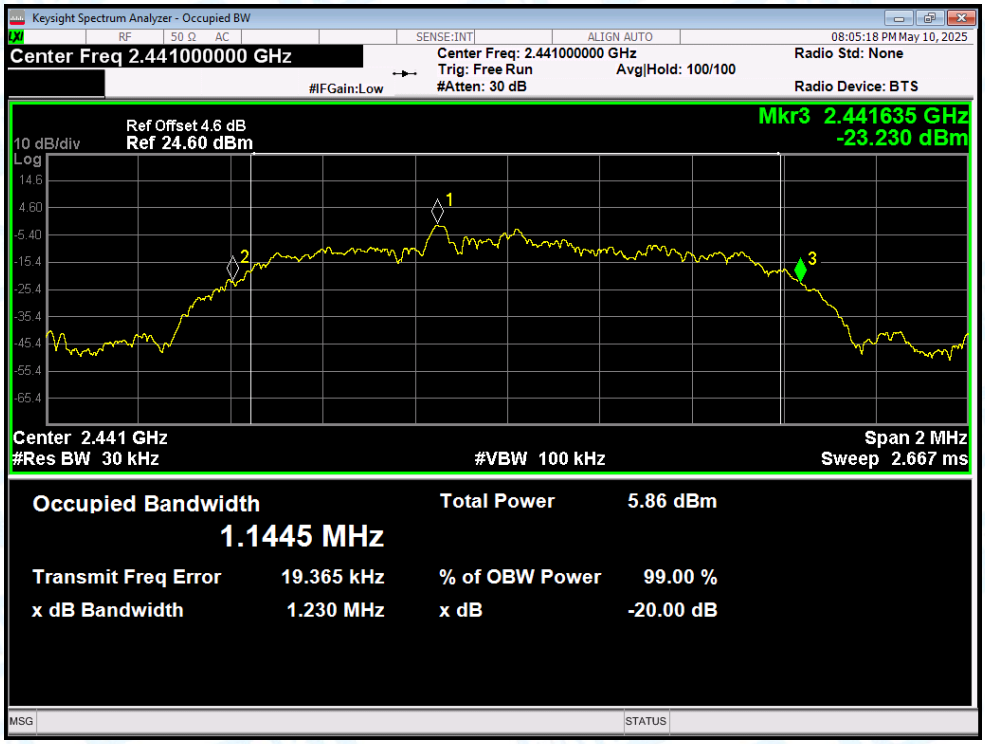
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1



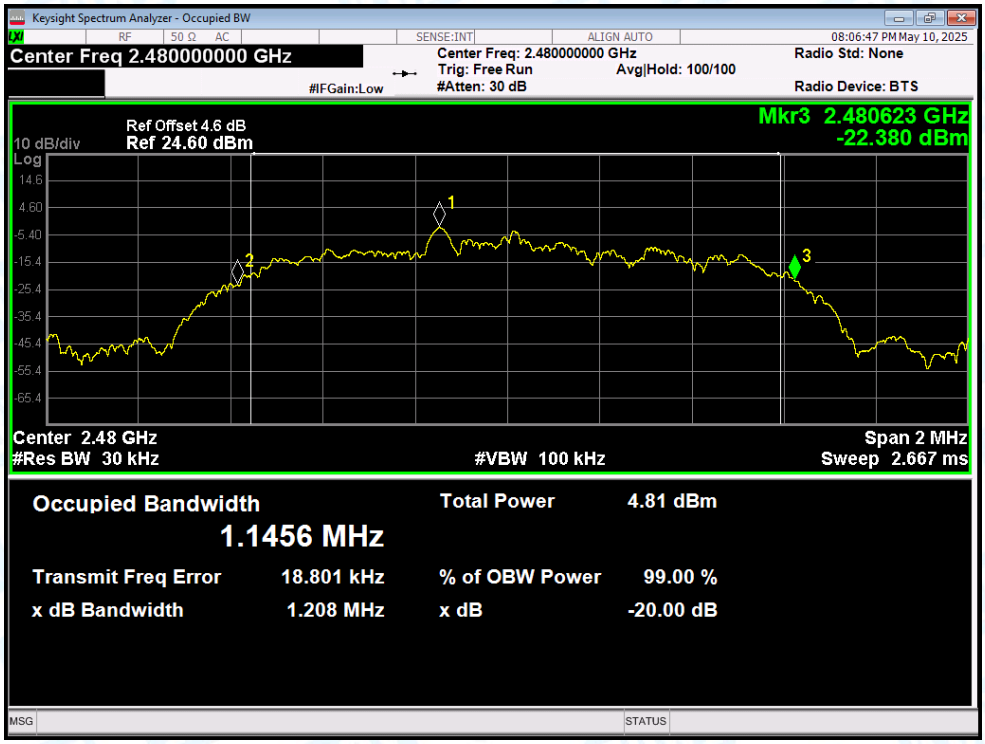
-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2480MHz Ant1

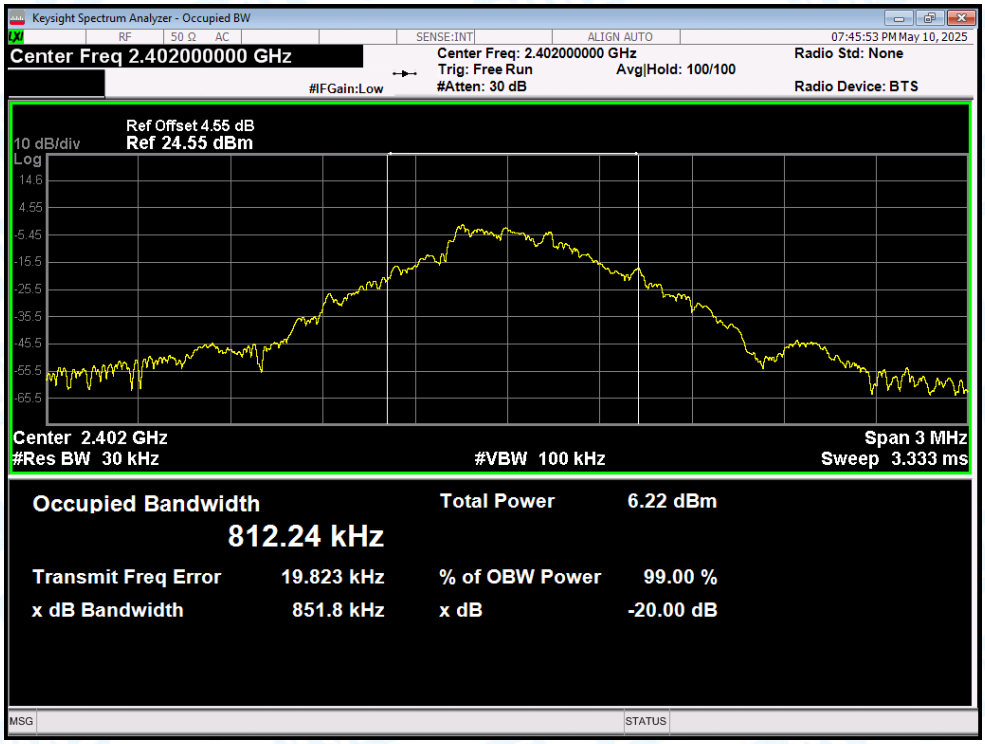


4.Occupied Channel Bandwidth

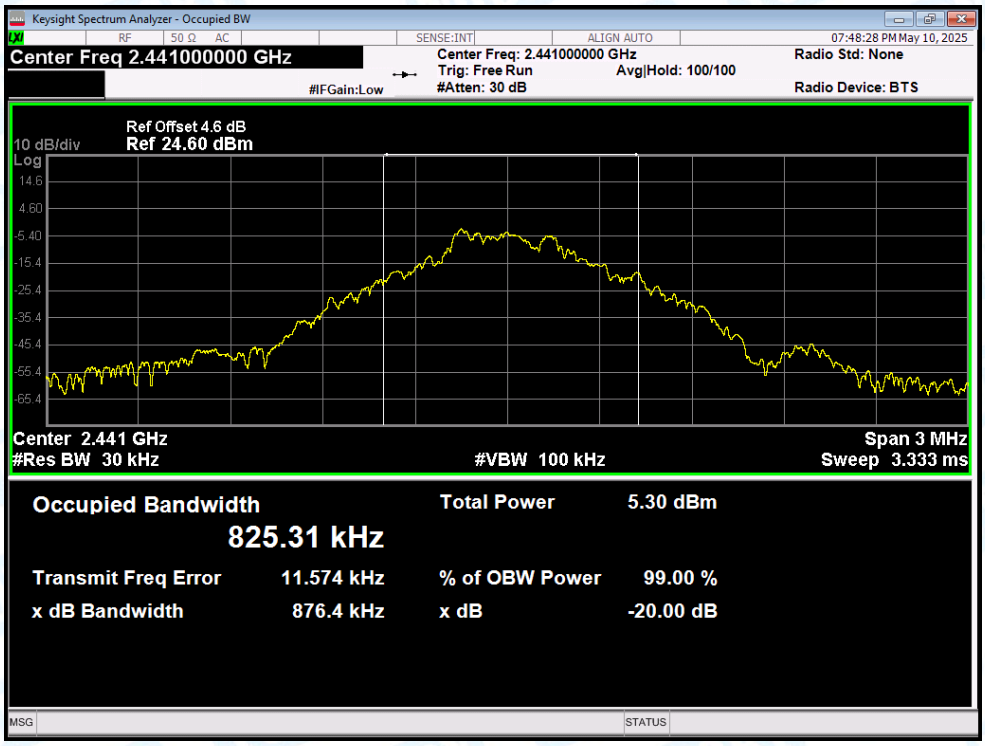
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.812
NVNT	1-DH1	2441	Ant1	0.825
NVNT	1-DH1	2480	Ant1	0.834
NVNT	2-DH1	2402	Ant1	1.162
NVNT	2-DH1	2441	Ant1	1.157
NVNT	2-DH1	2480	Ant1	1.168
NVNT	3-DH1	2402	Ant1	1.141
NVNT	3-DH1	2441	Ant1	1.15
NVNT	3-DH1	2480	Ant1	1.151

Test Graphs

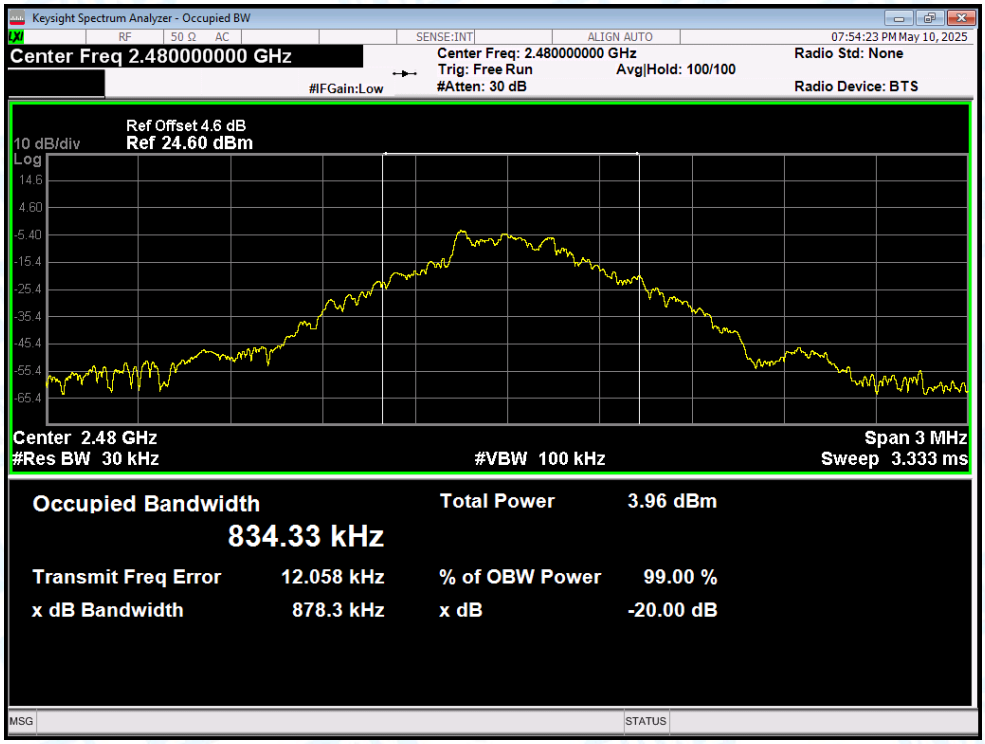
OBW NVNT 1-DH1 2402MHz Ant1



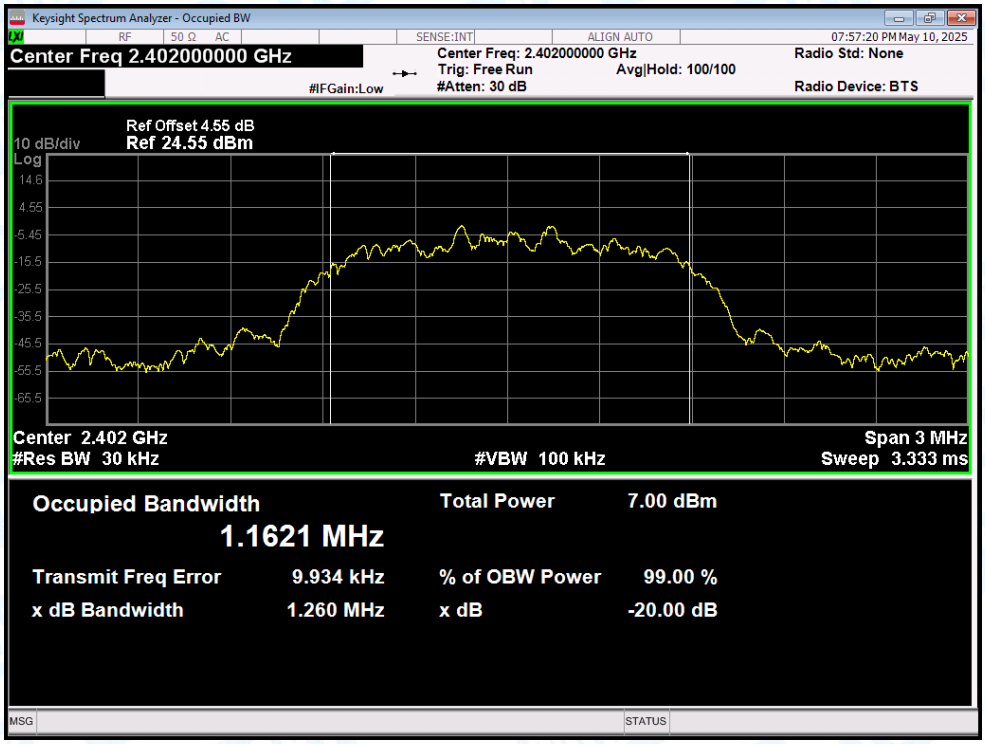
OBW NVNT 1-DH1 2441MHz Ant1



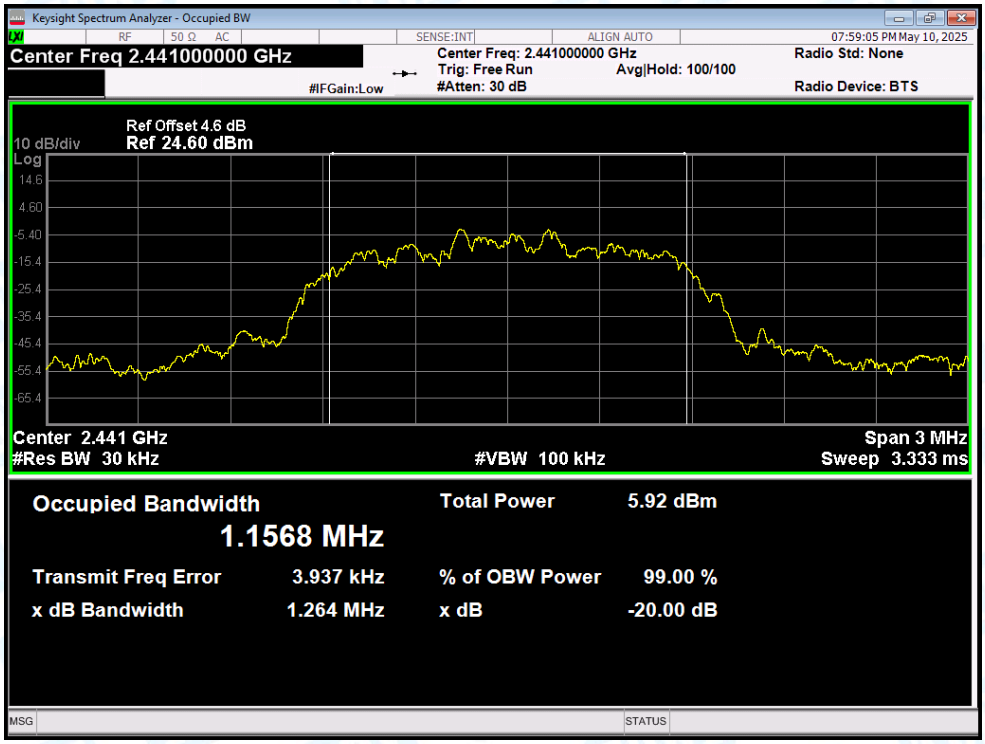
OBW NVNT 1-DH1 2480MHz Ant1



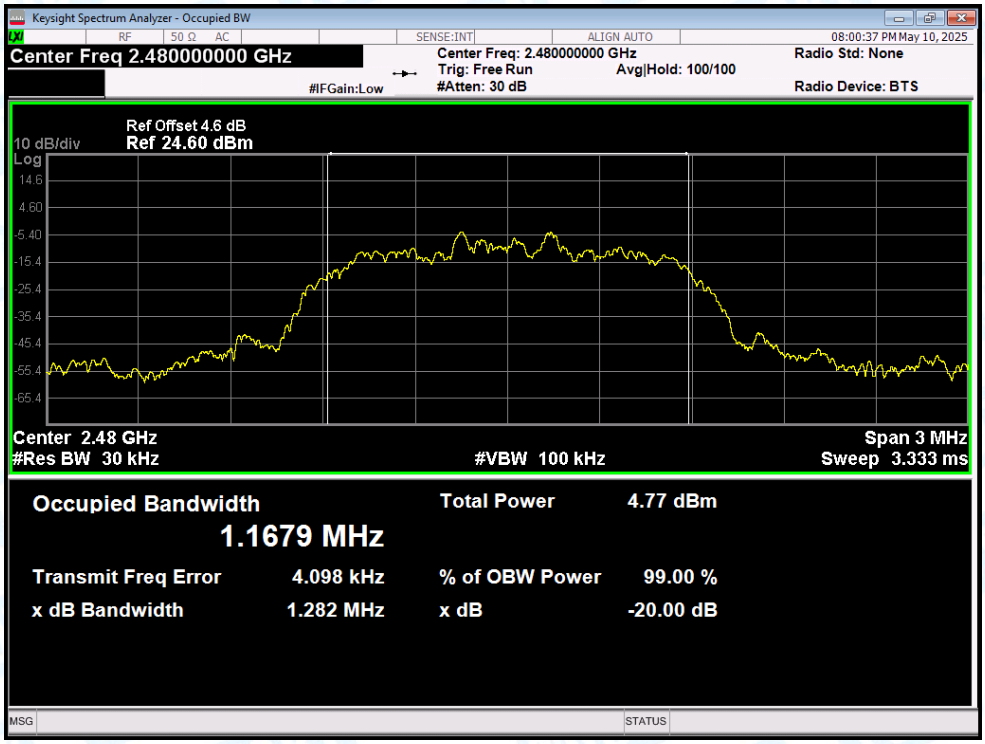
OBW NVNT 2-DH1 2402MHz Ant1



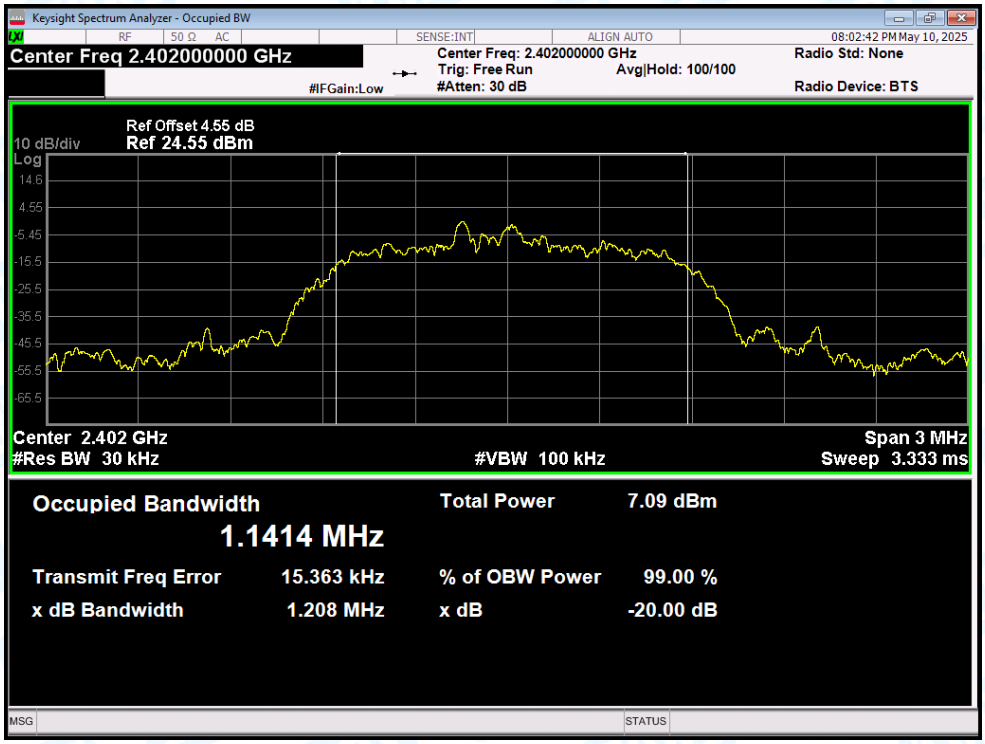
OBW NVNT 2-DH1 2441MHz Ant1



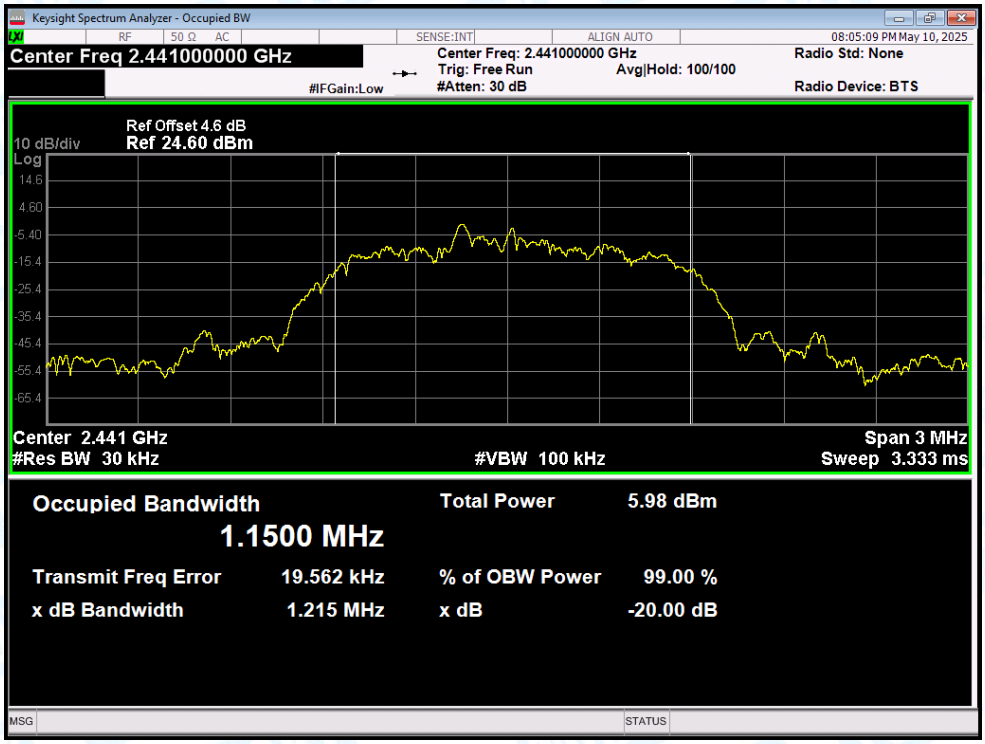
OBW NVNT 2-DH1 2480MHz Ant1



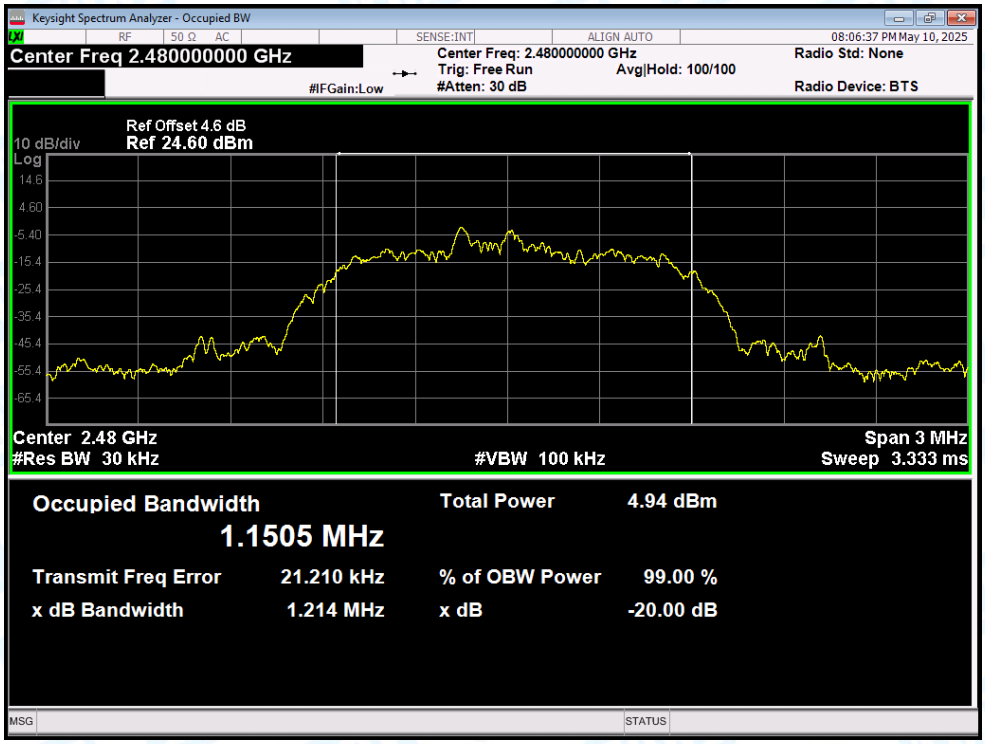
OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



OBW NVNT 3-DH1 2480MHz Ant1

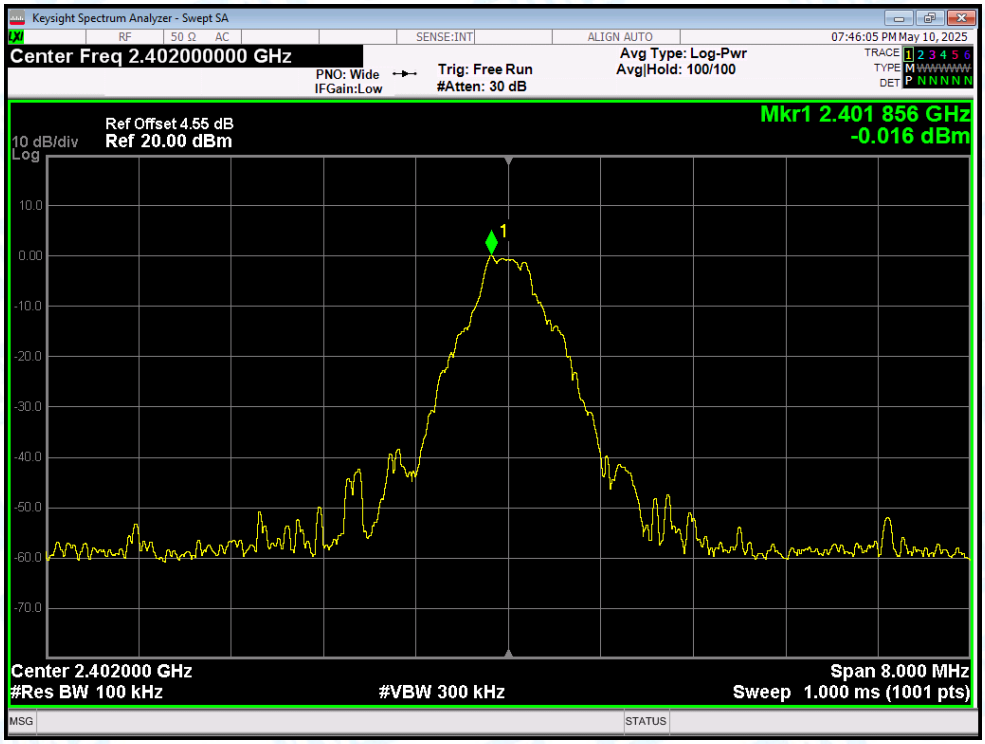


5.Band Edge

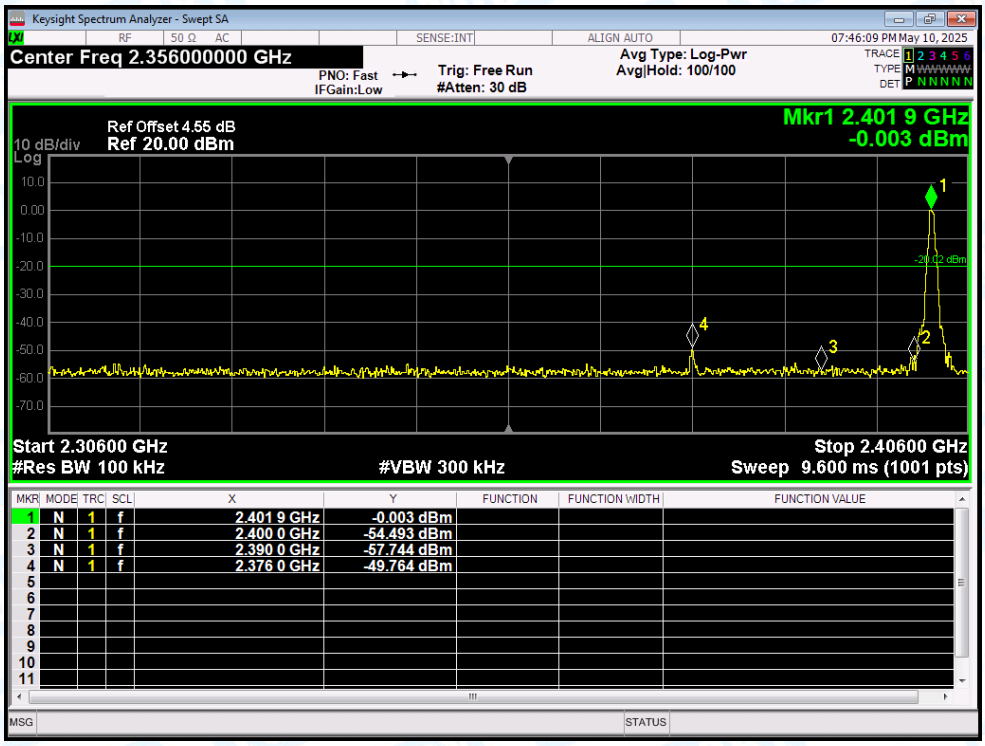
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-49.74	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-53.28	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-50.26	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-52.39	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-48.54	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-53.15	-20	Pass

Test Graphs

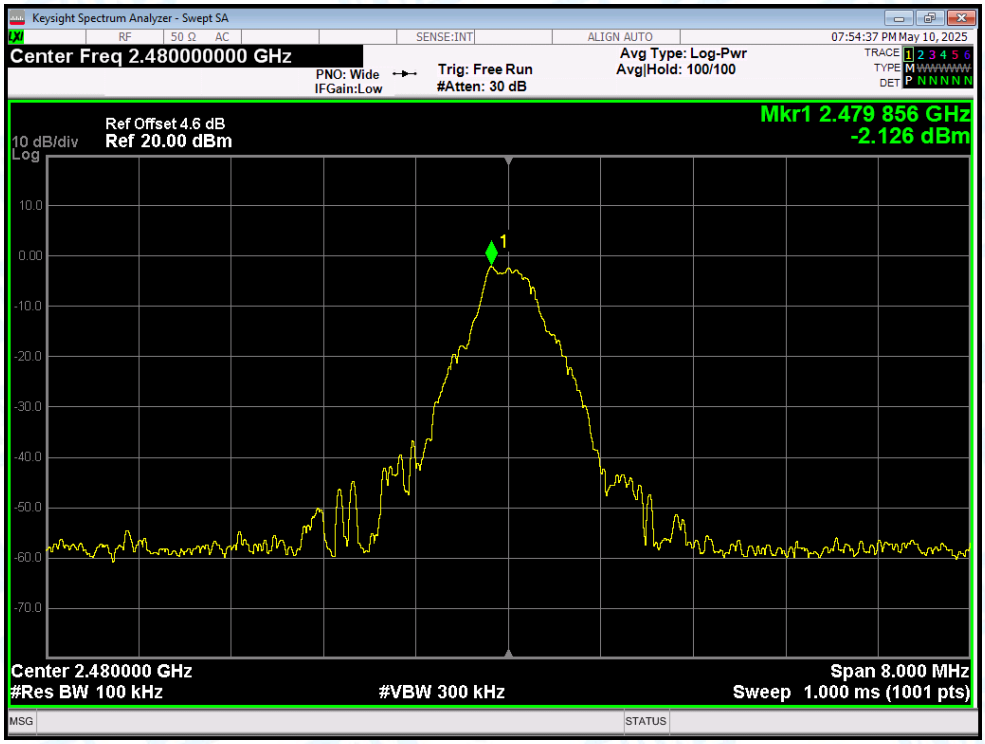
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



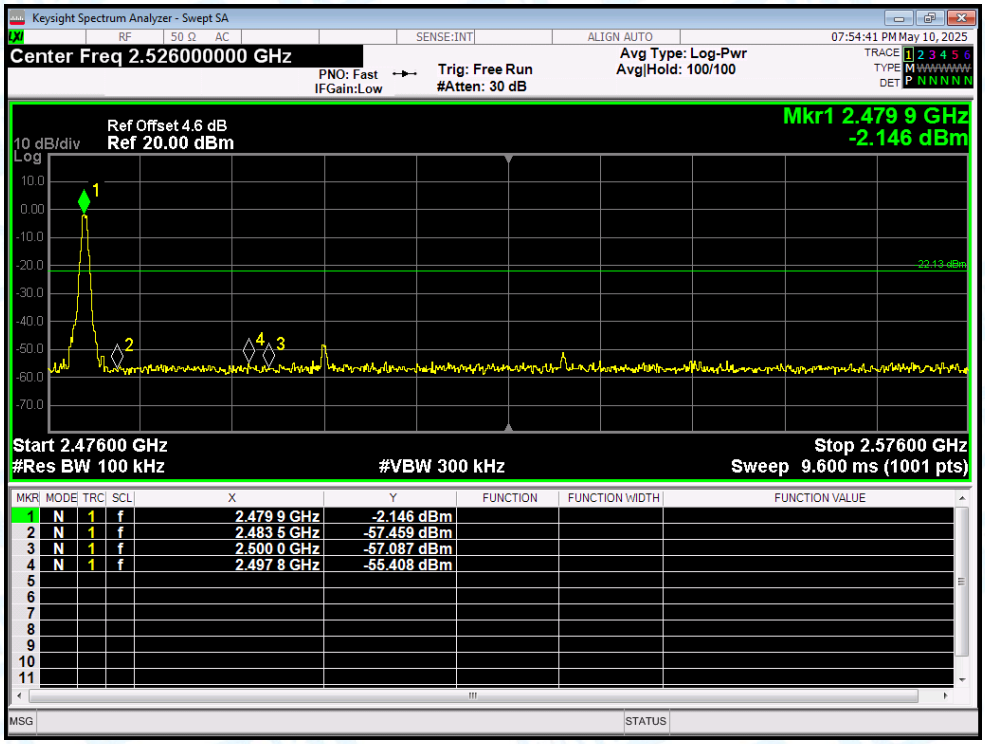
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



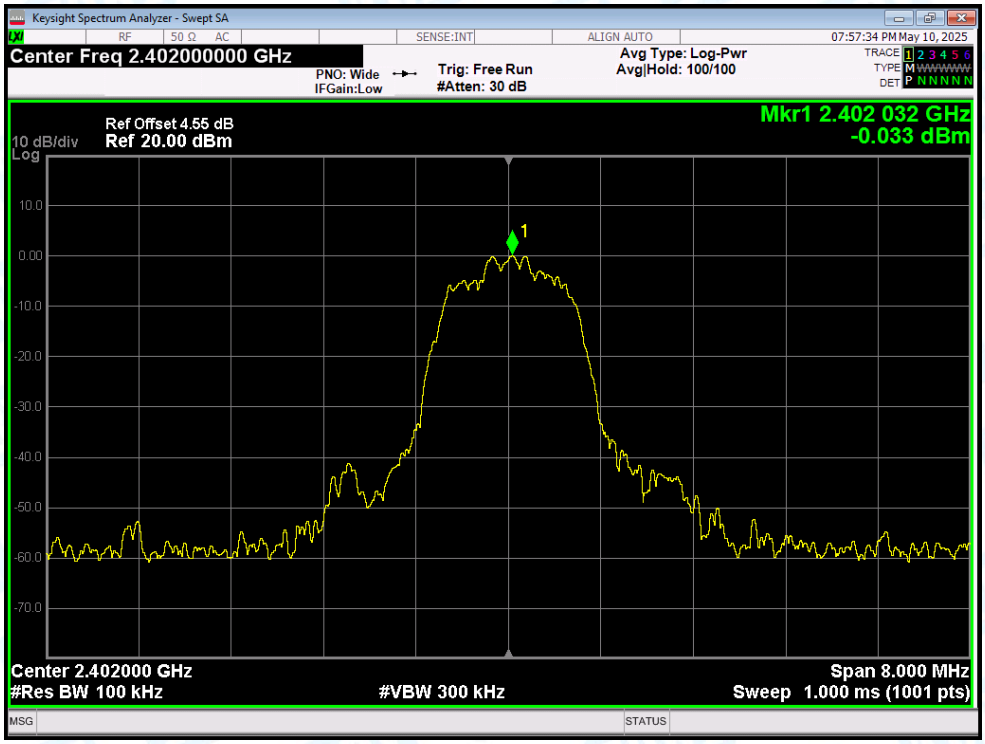
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



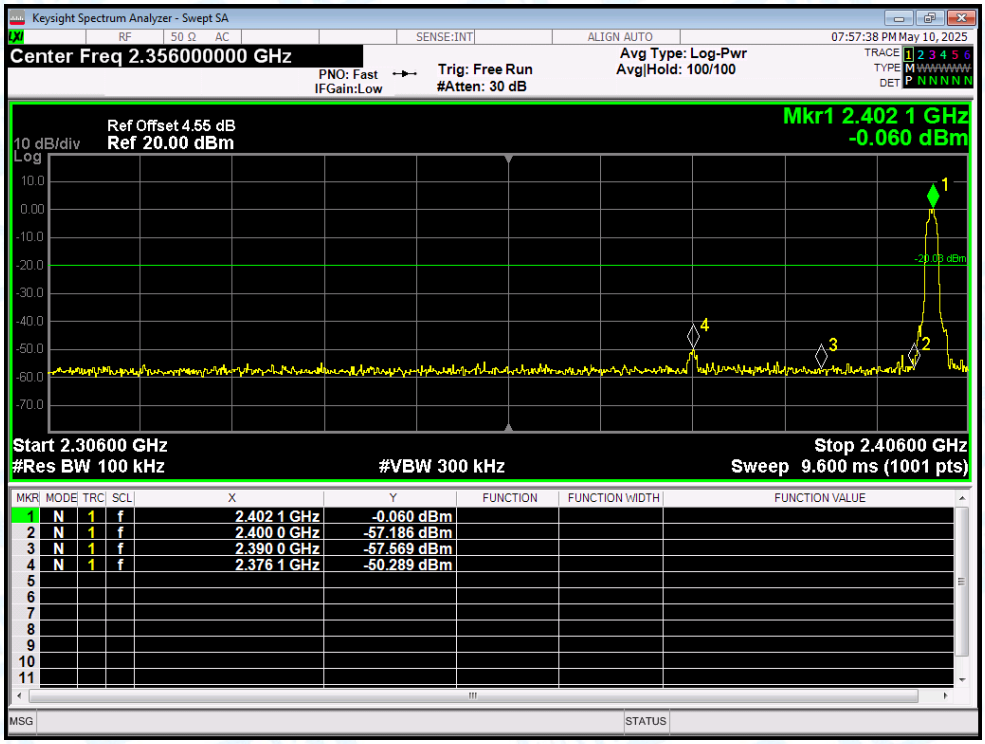
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



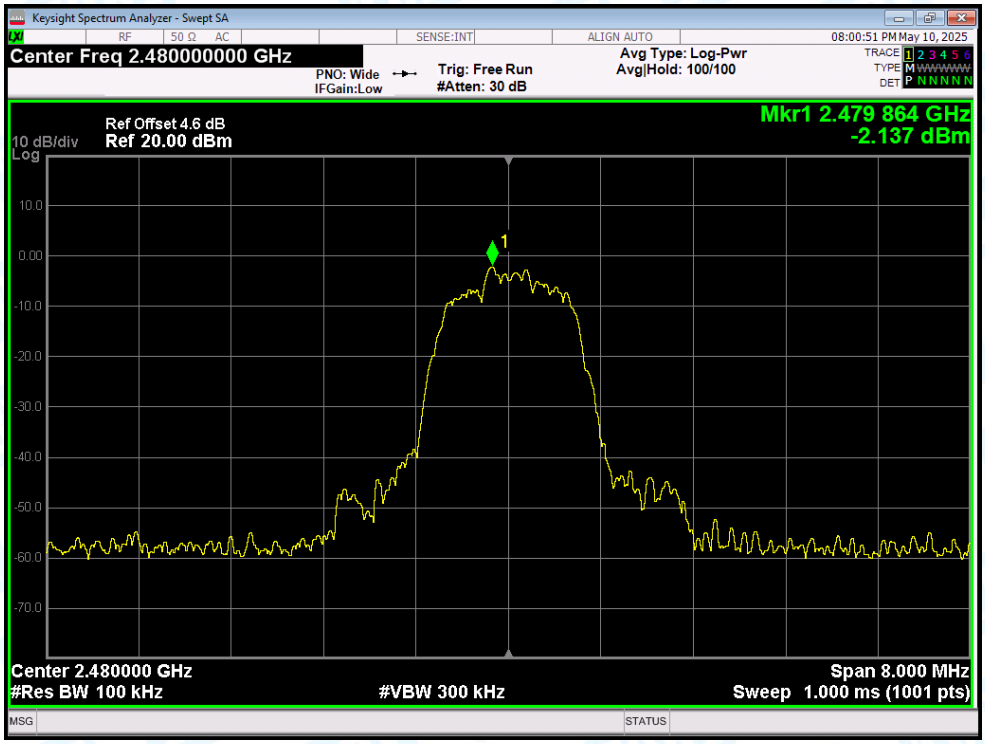
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



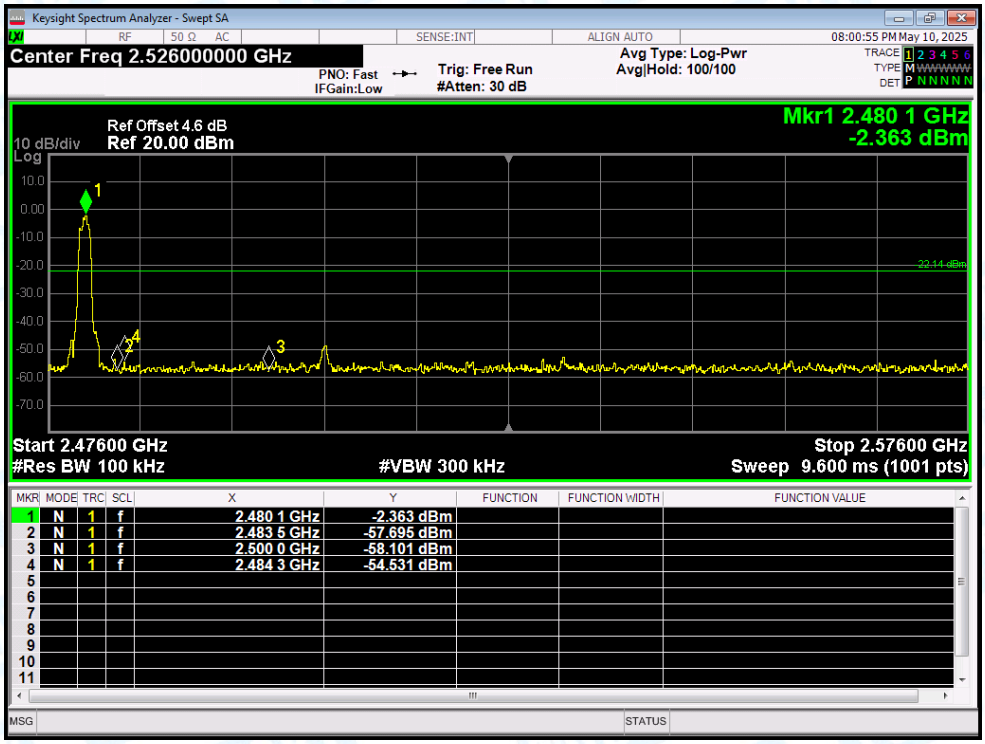
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



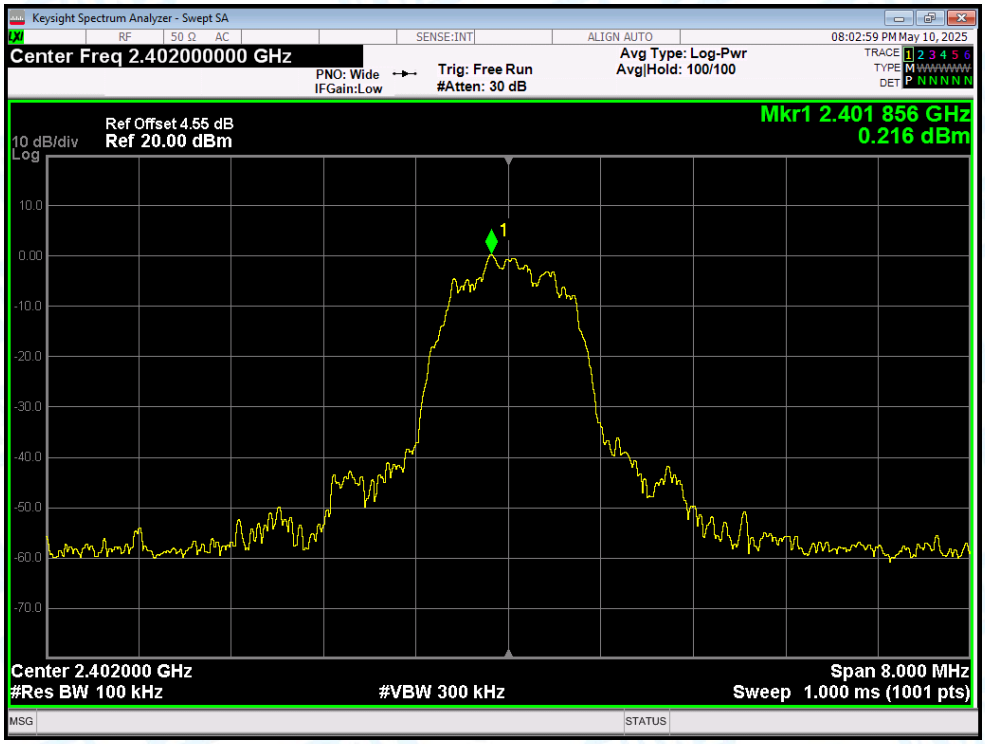
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



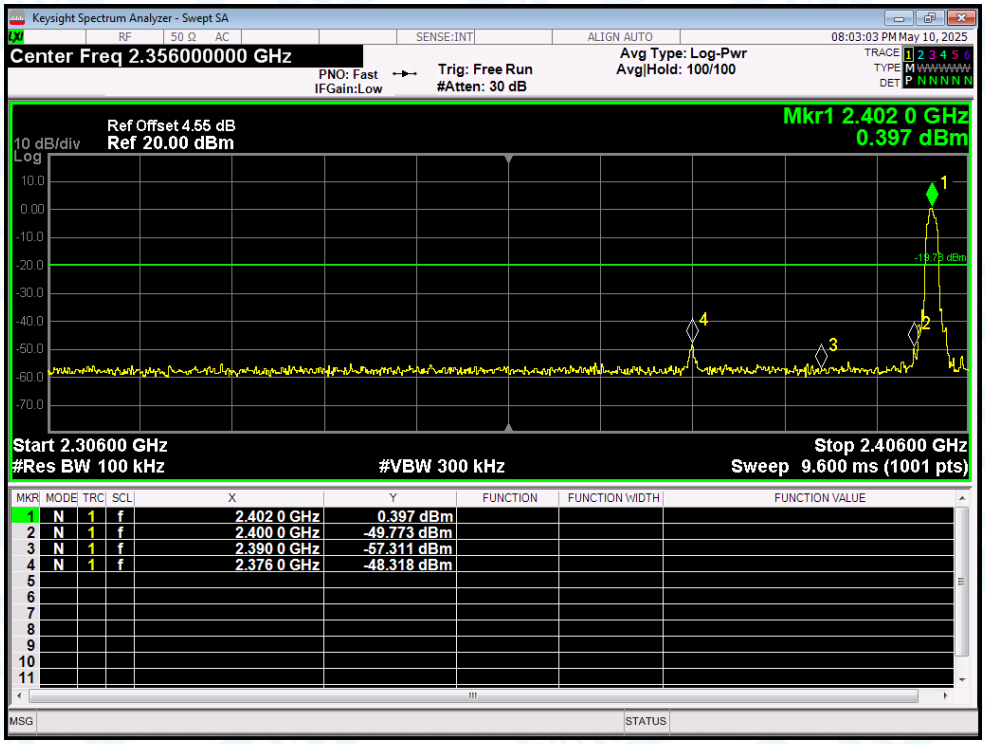
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



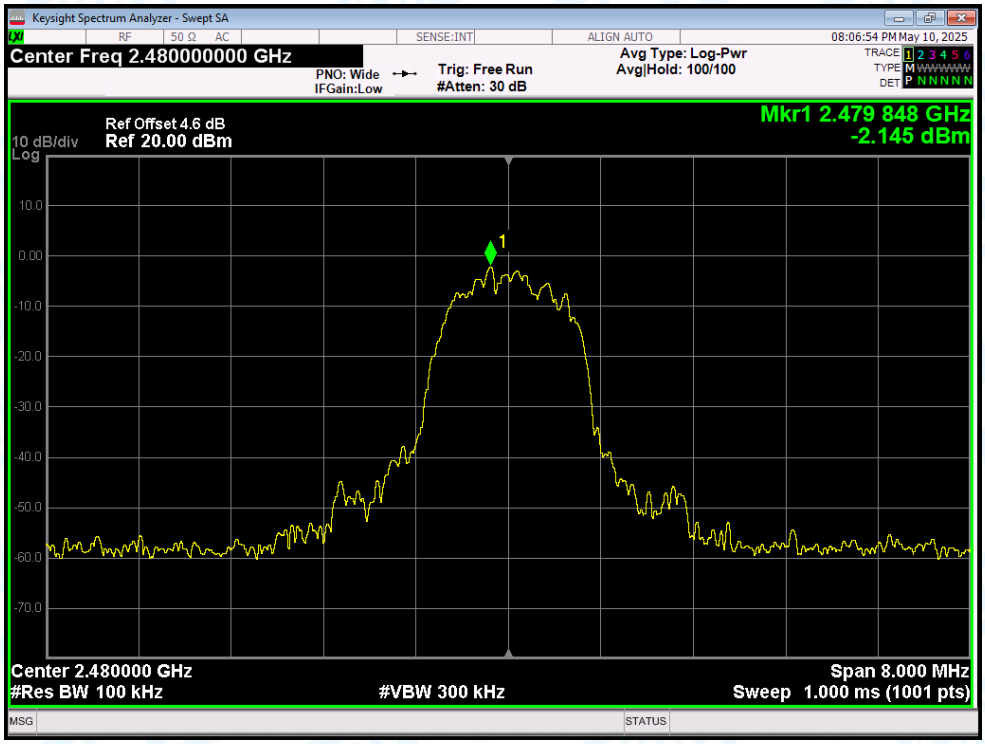
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



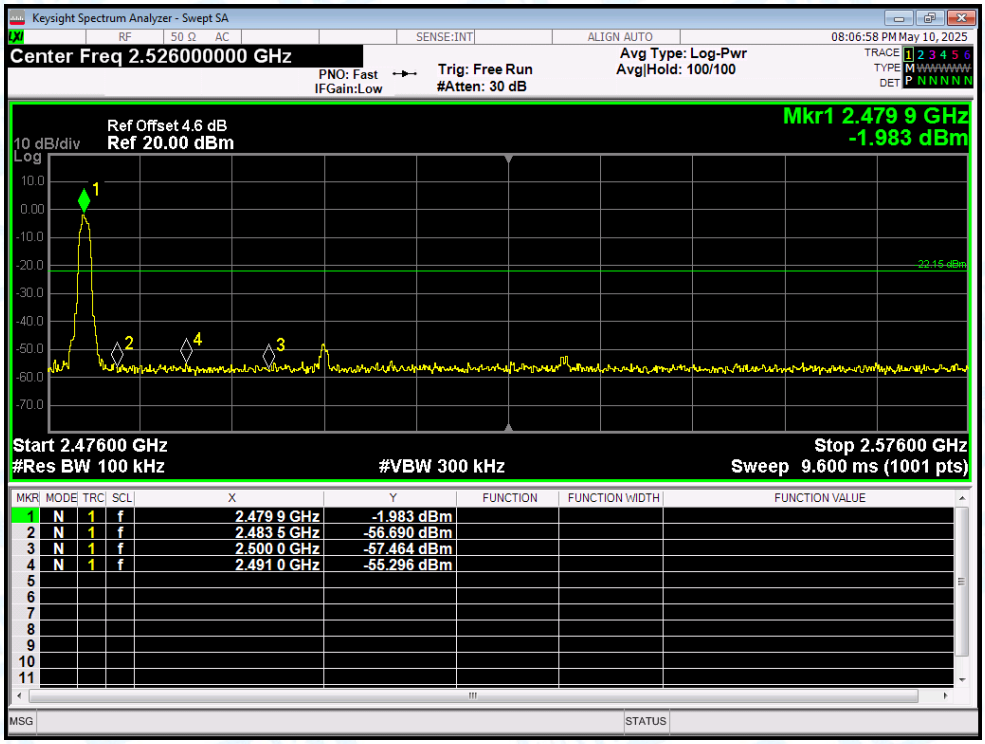
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



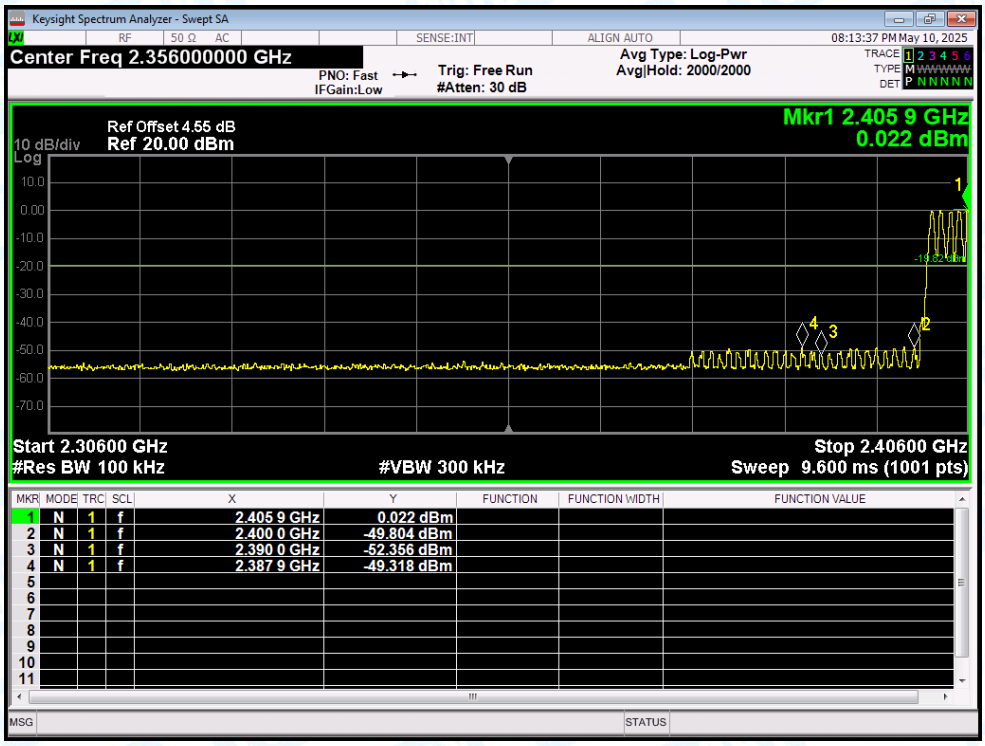
6.Band Edge(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-49.5	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-45.21	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-48.79	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-46.74	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-49.09	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-46.43	-20	Pass

Test Graphs

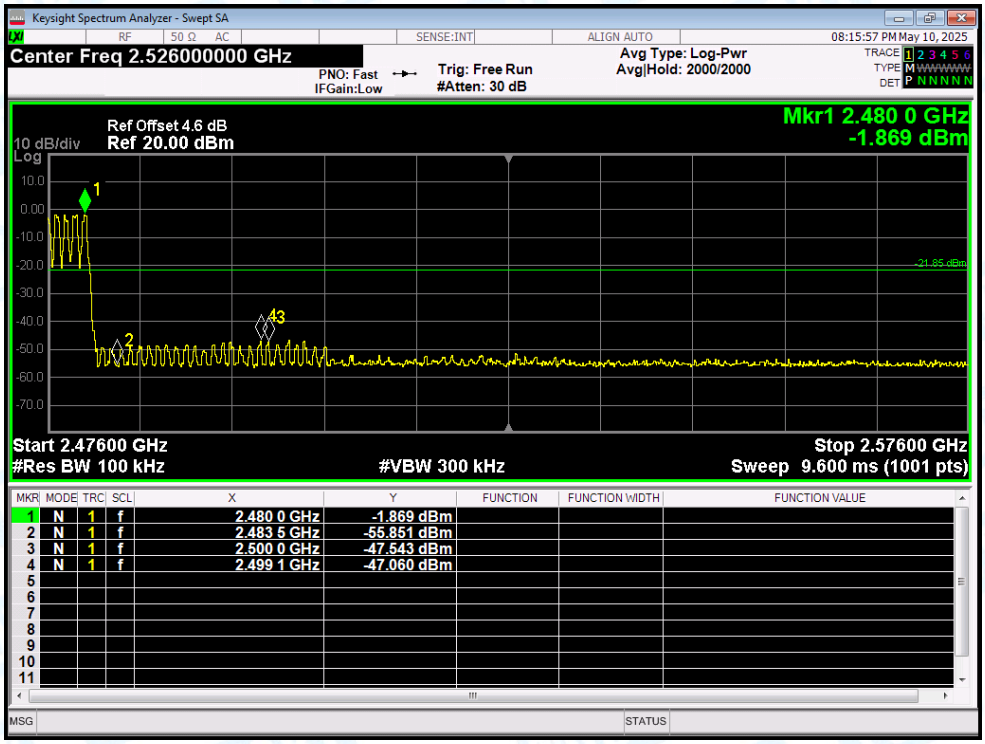
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref

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

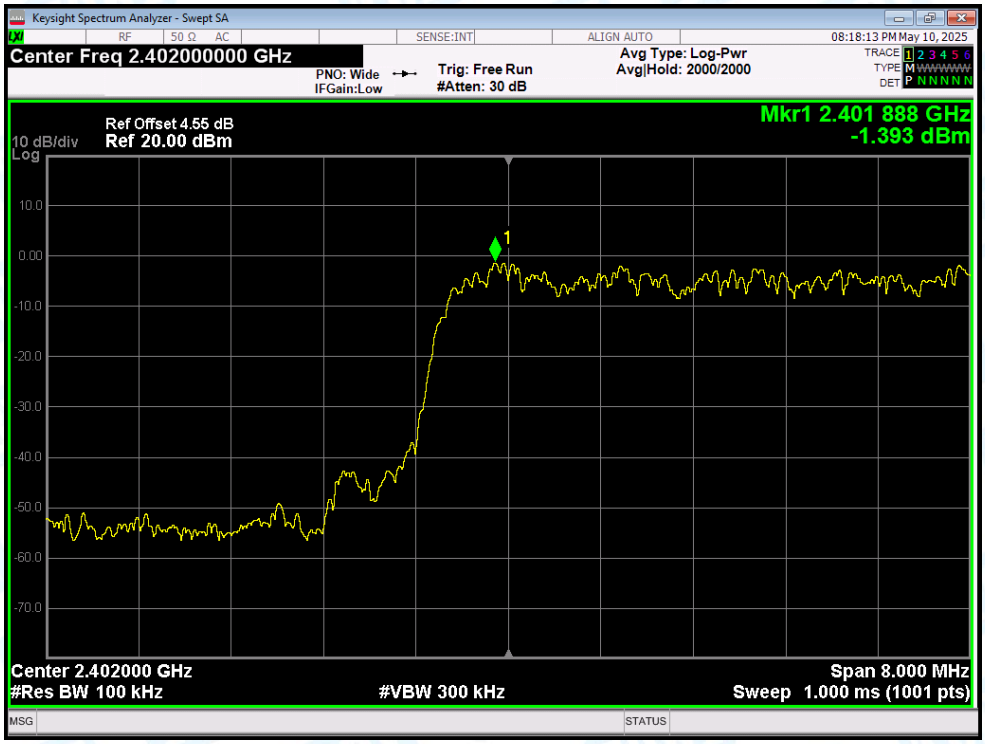


Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref

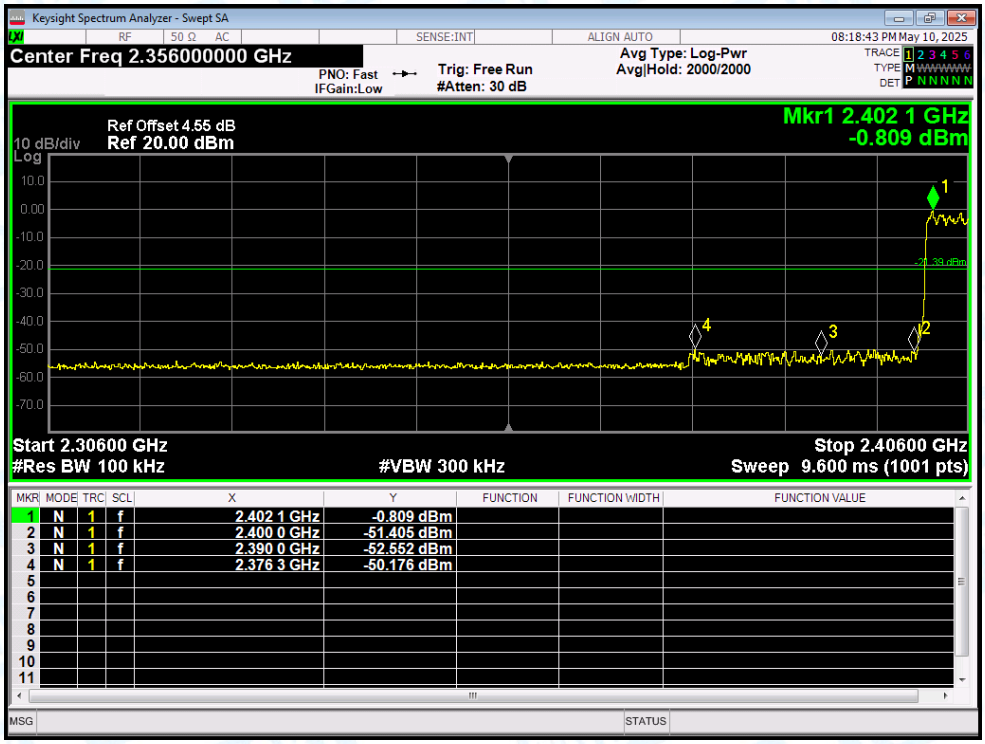
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



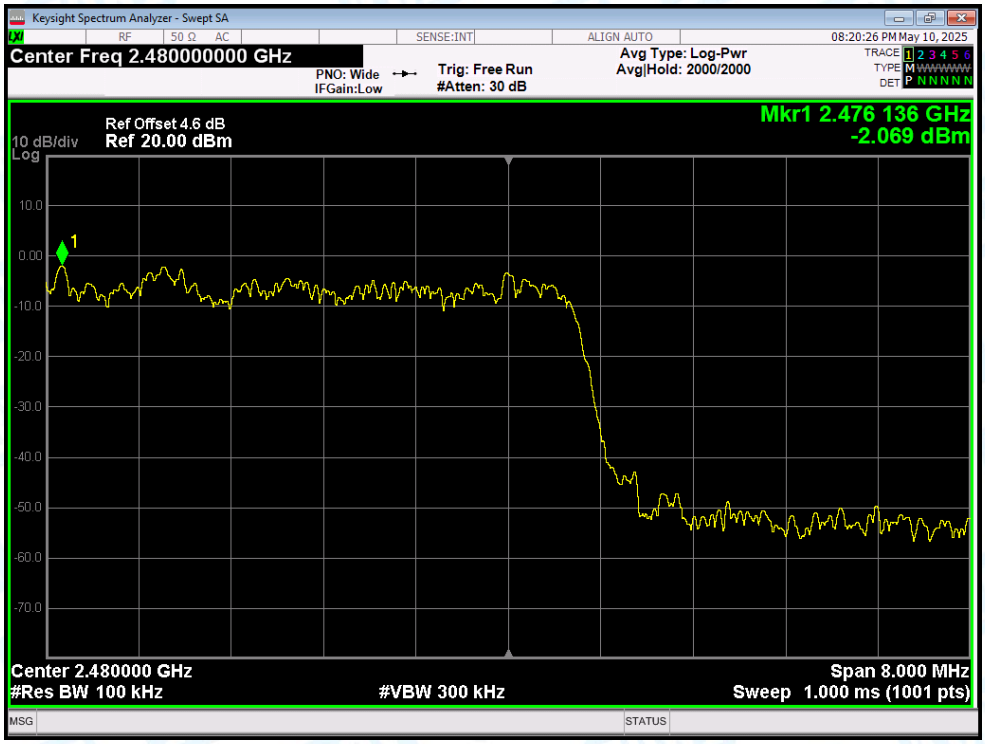
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



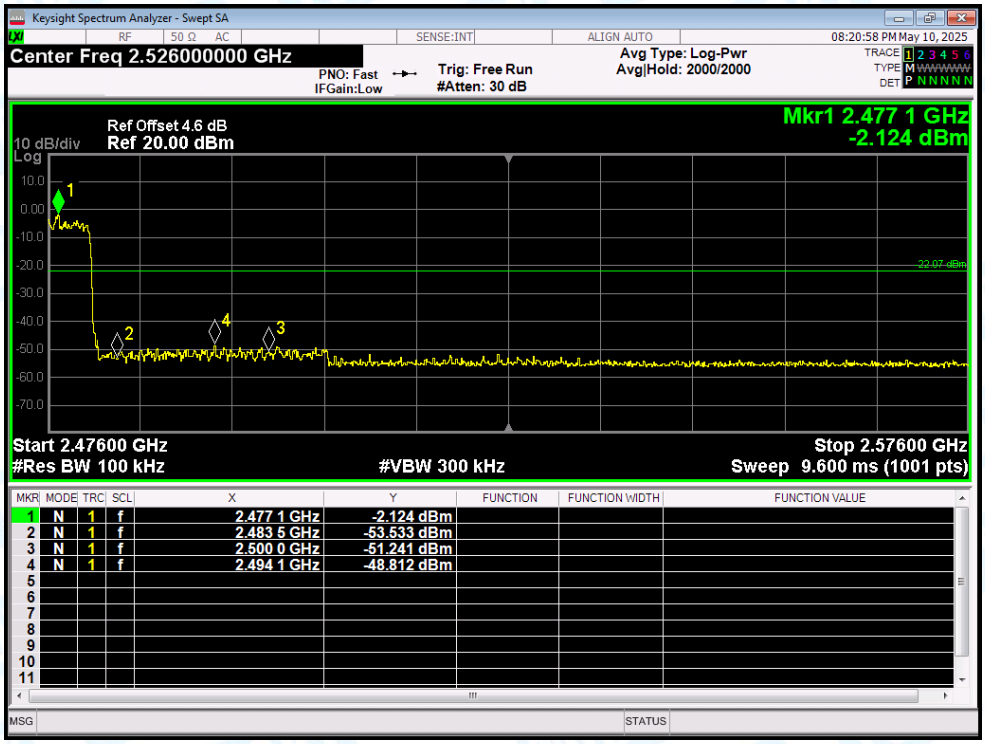
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



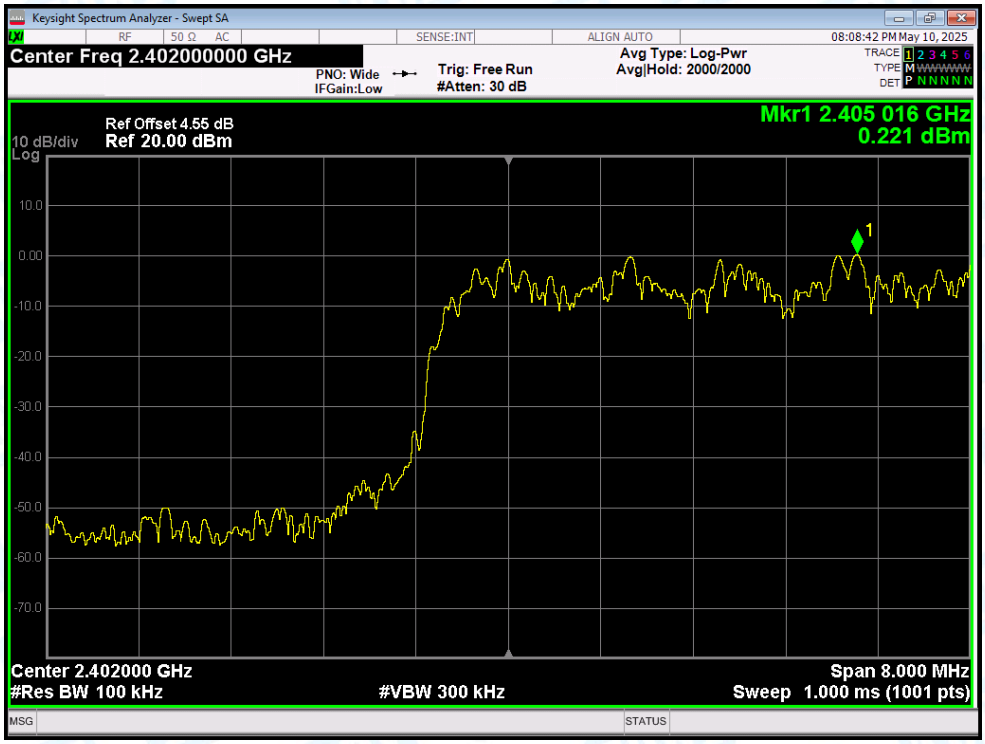
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



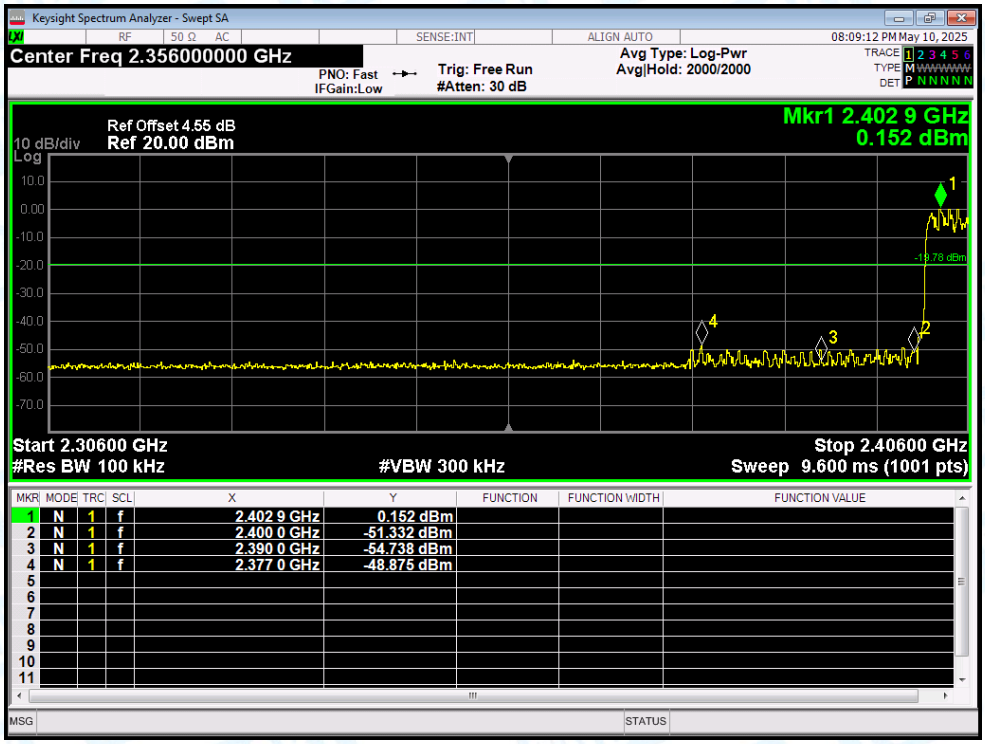
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



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

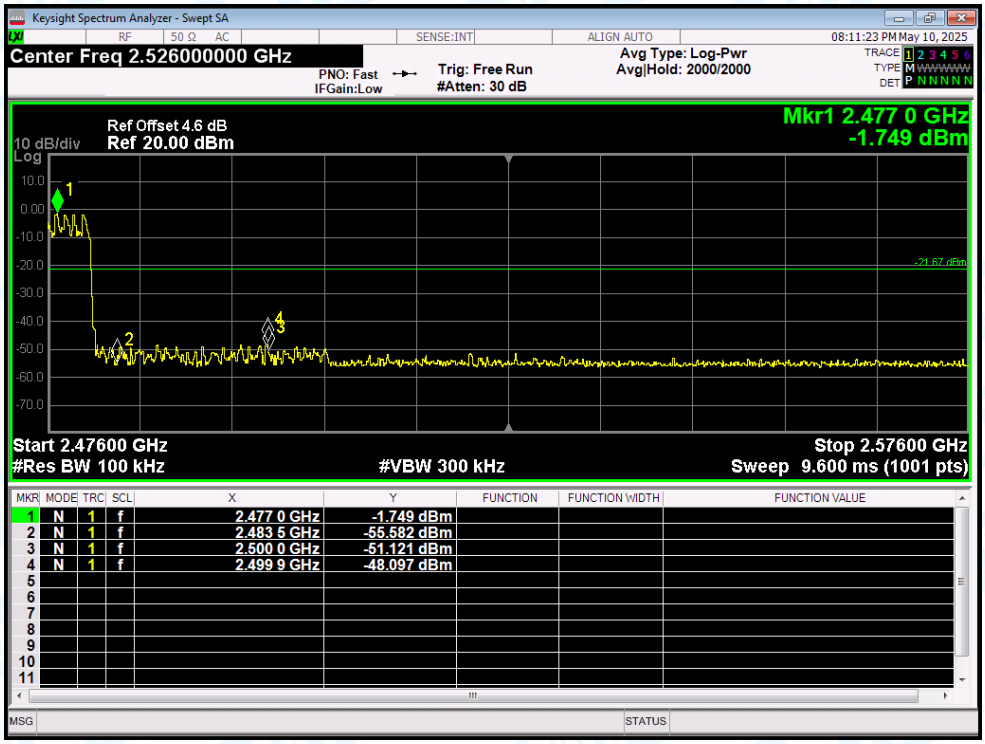


Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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

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

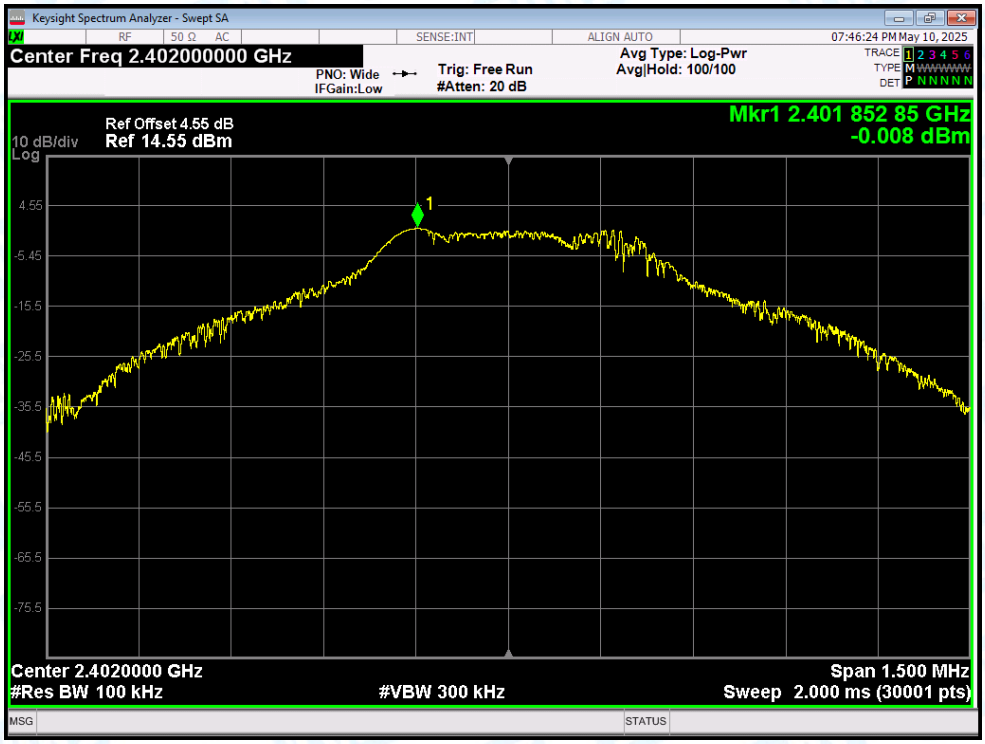


7.Conducted RF Spurious Emission

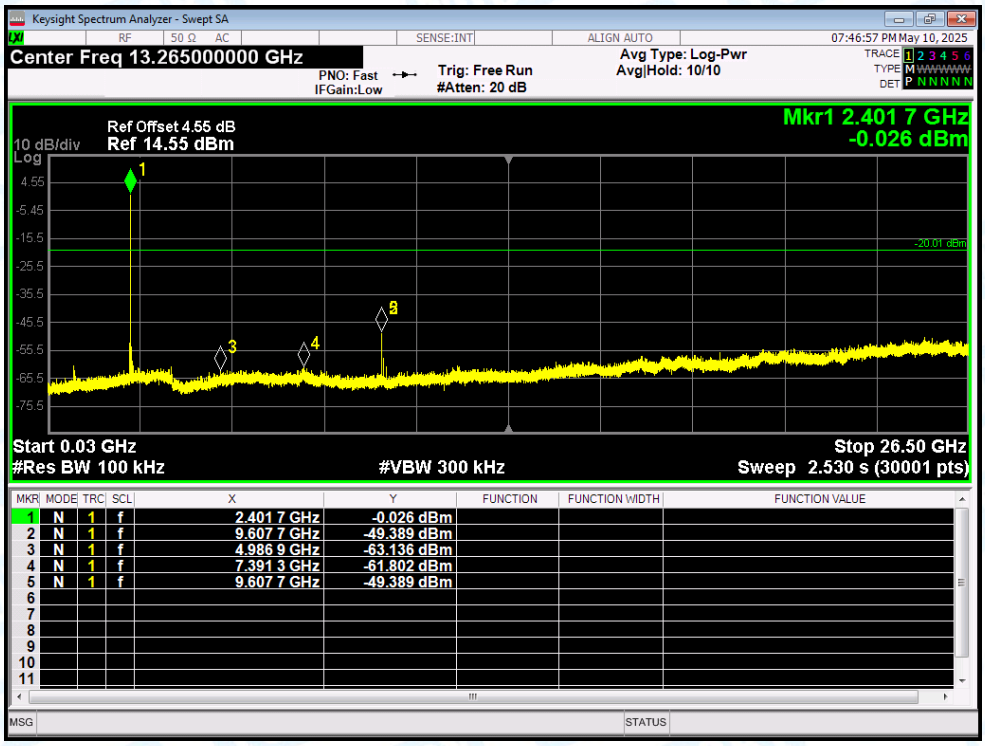
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-49.38	-20	Pass
NVNT	1-DH1	2441	Ant1	-49.02	-20	Pass
NVNT	1-DH1	2480	Ant1	-46.8	-20	Pass
NVNT	2-DH1	2402	Ant1	-49.07	-20	Pass
NVNT	2-DH1	2441	Ant1	-49.32	-20	Pass
NVNT	2-DH1	2480	Ant1	-48.81	-20	Pass
NVNT	3-DH1	2402	Ant1	-49.86	-20	Pass
NVNT	3-DH1	2441	Ant1	-50.06	-20	Pass
NVNT	3-DH1	2480	Ant1	-47.5	-20	Pass

Test Graphs

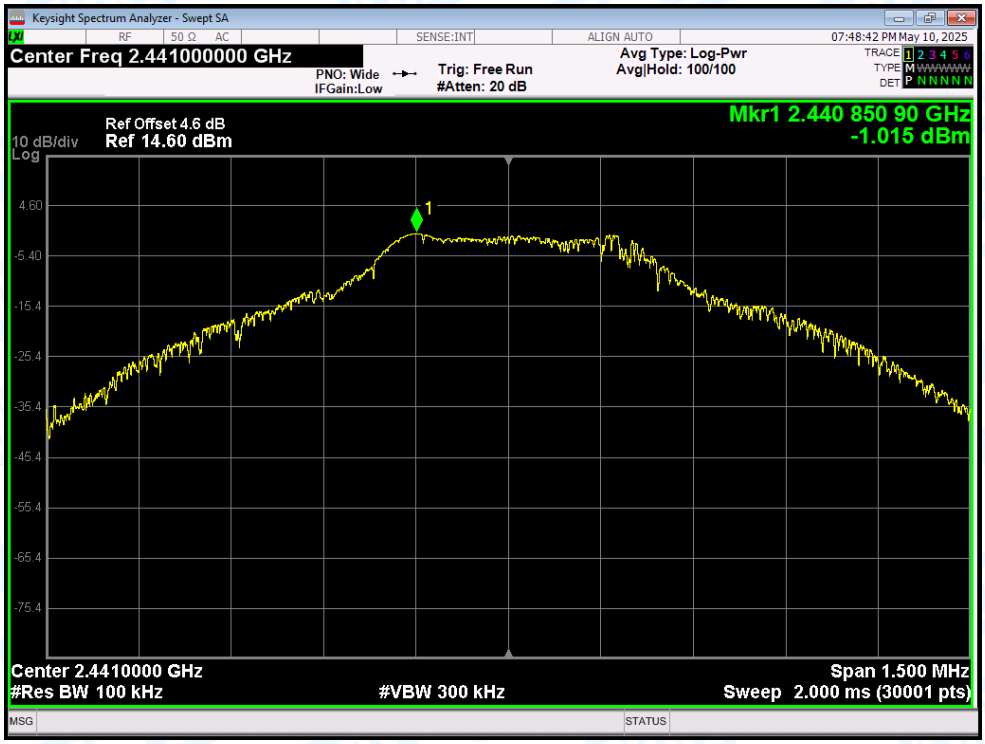
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



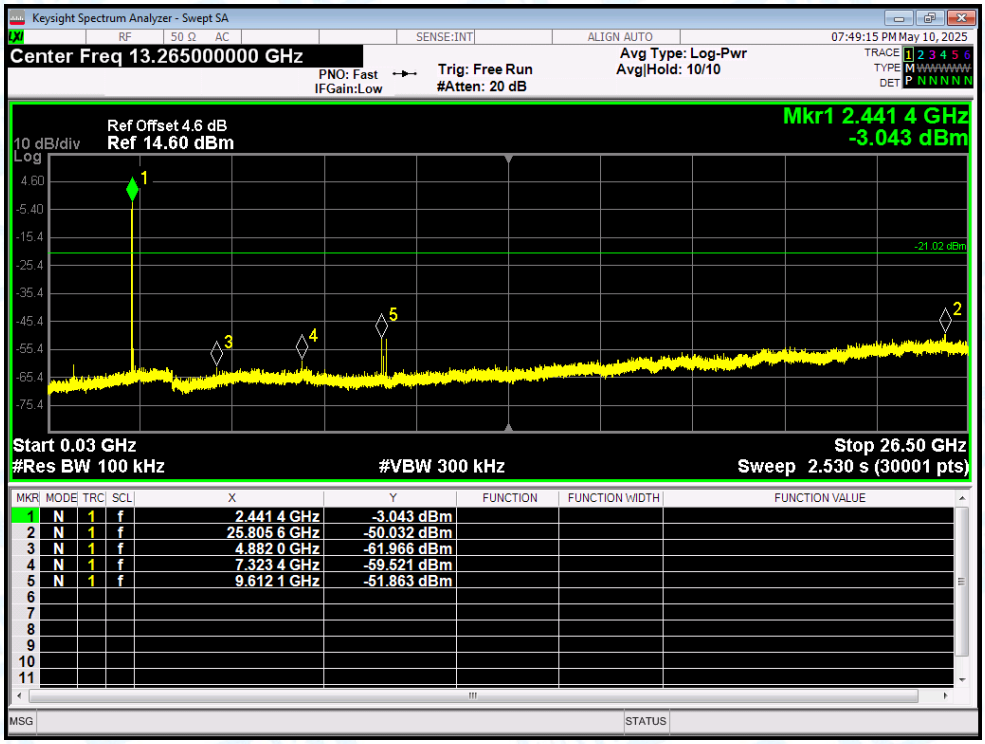
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



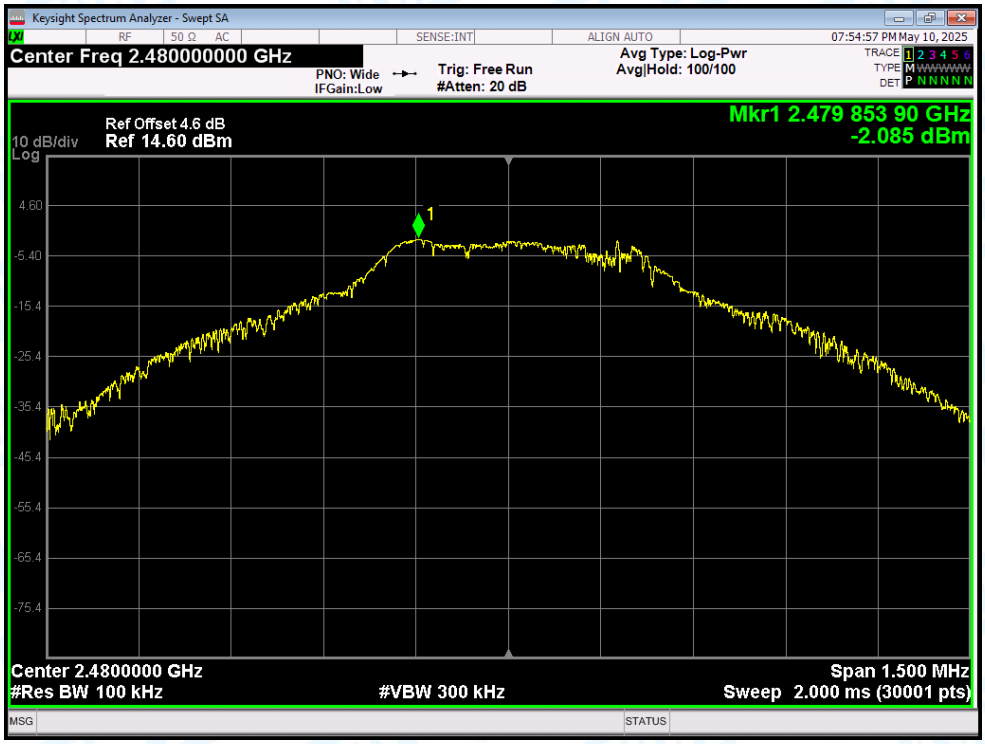
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



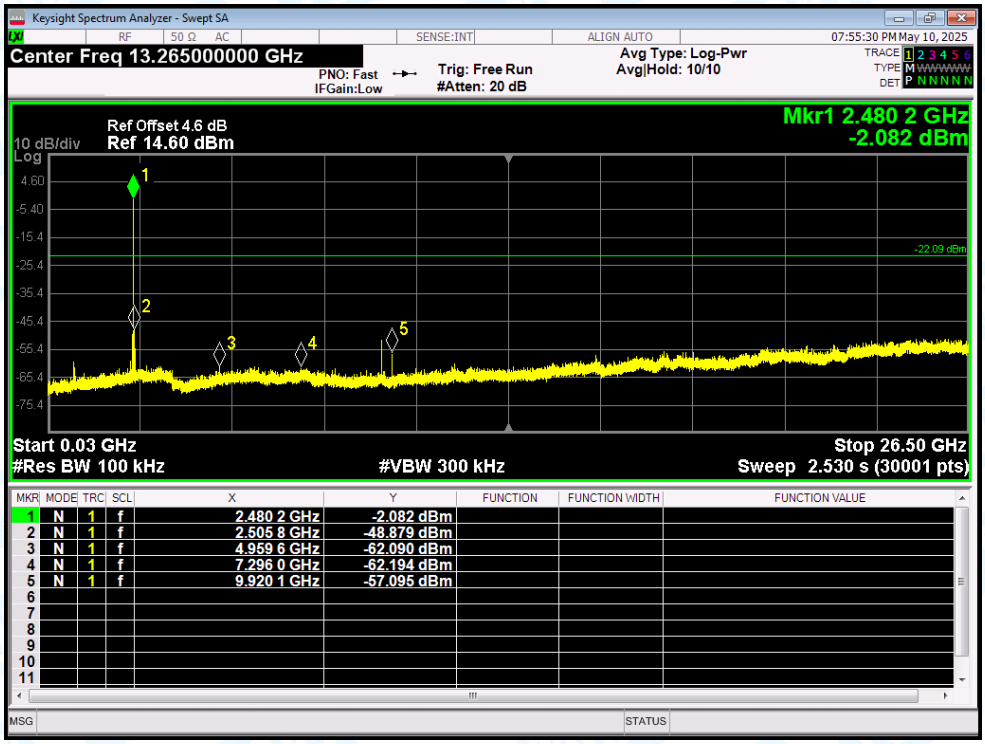
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



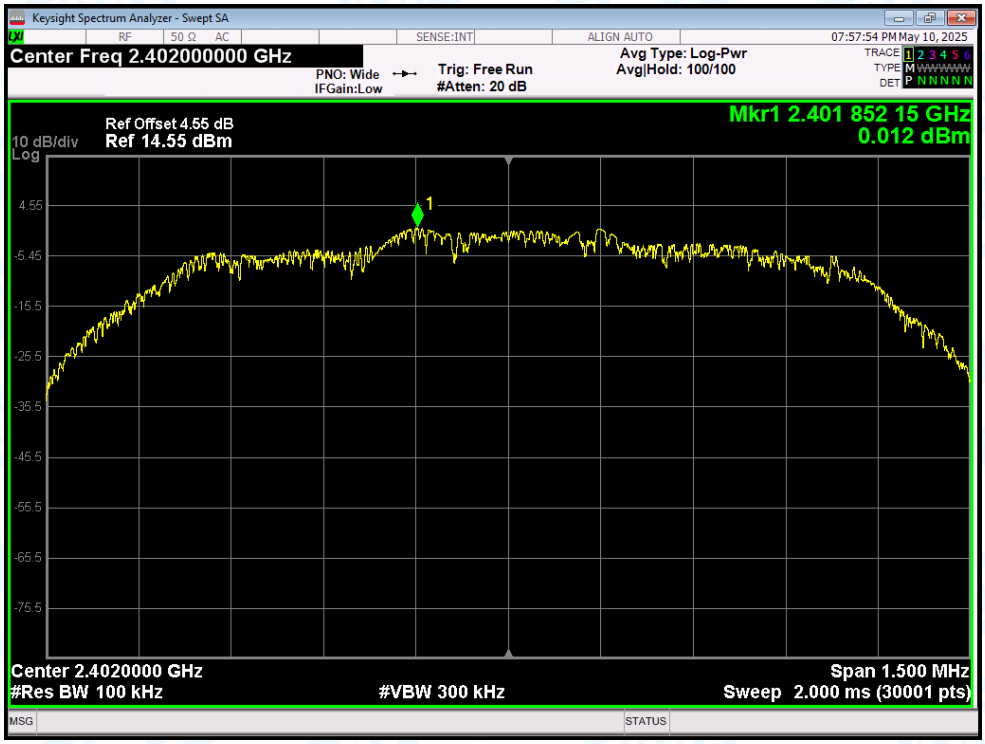
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



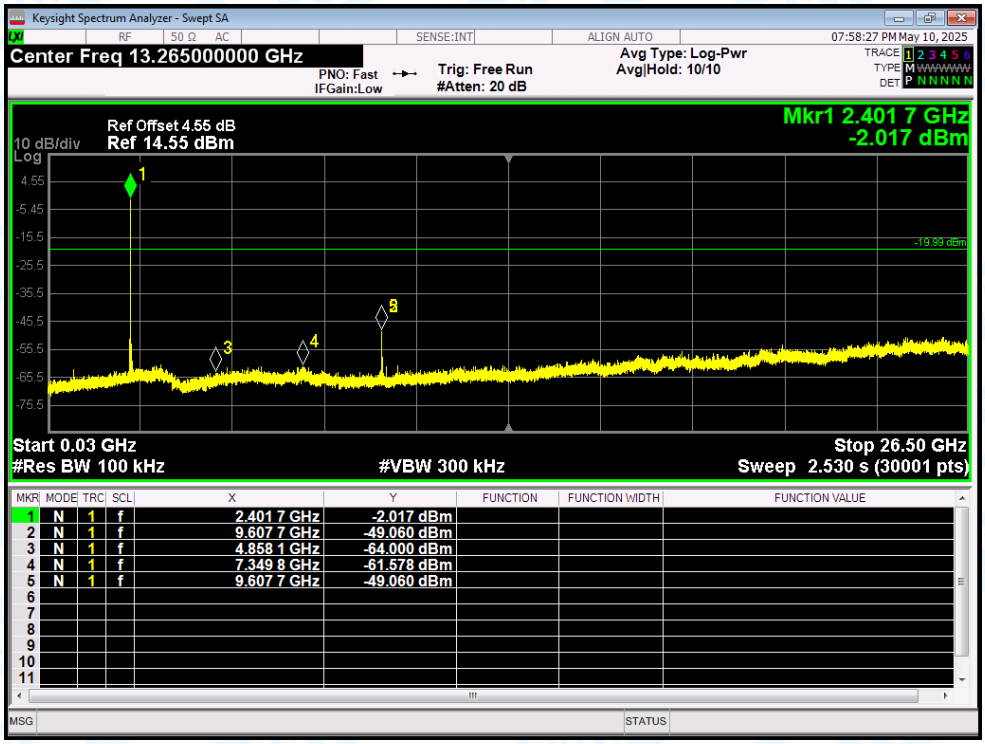
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



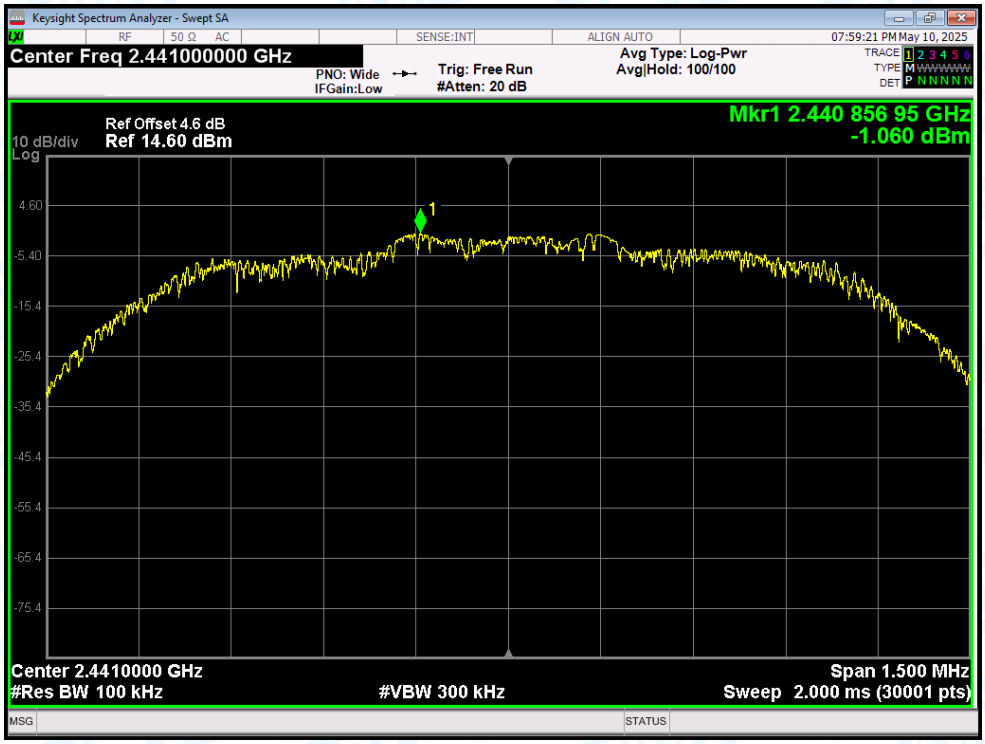
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



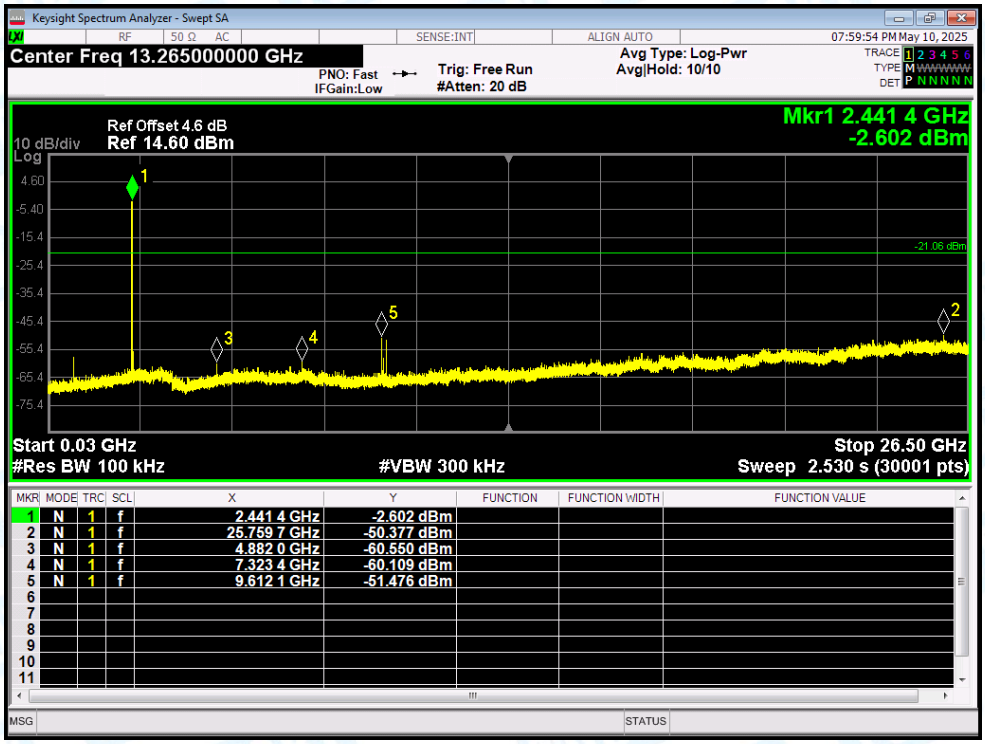
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



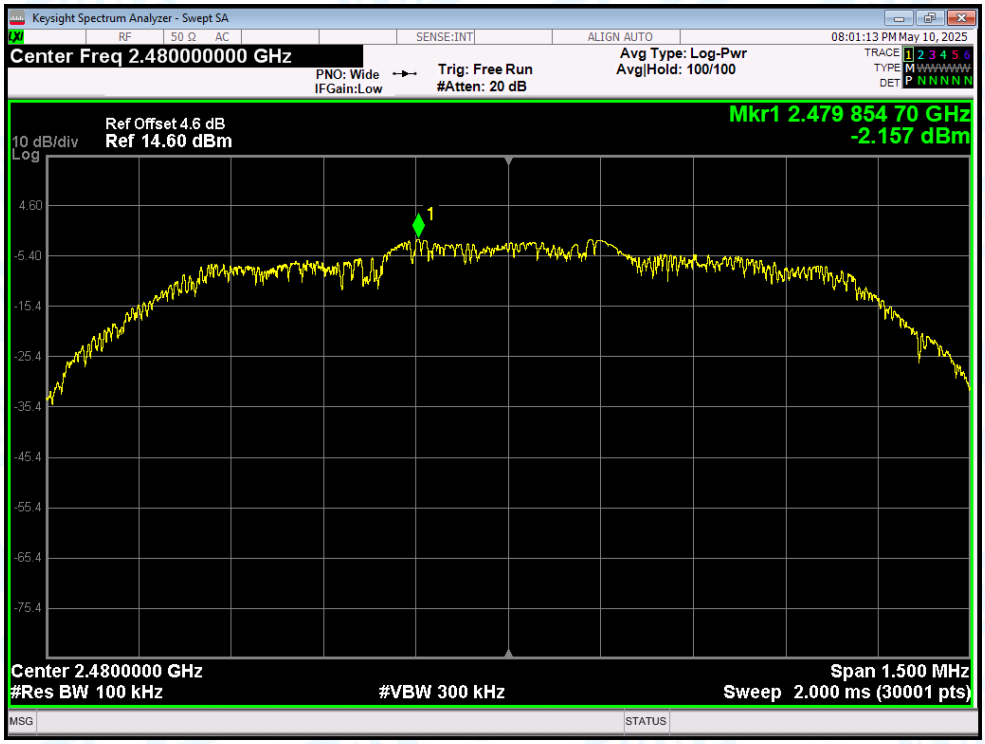
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



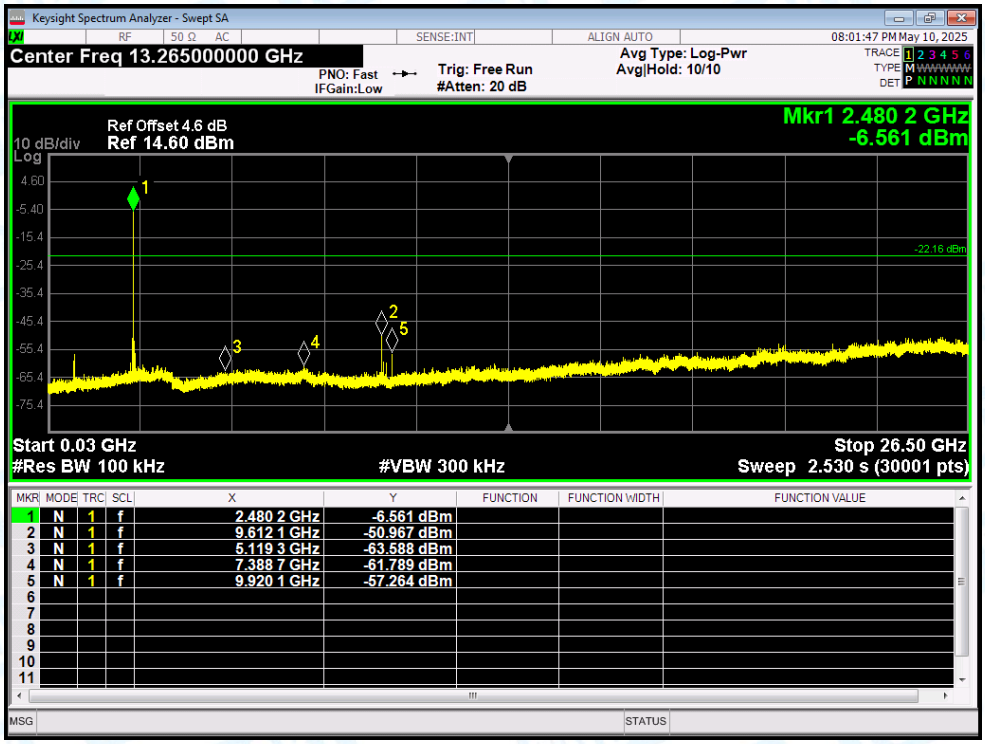
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



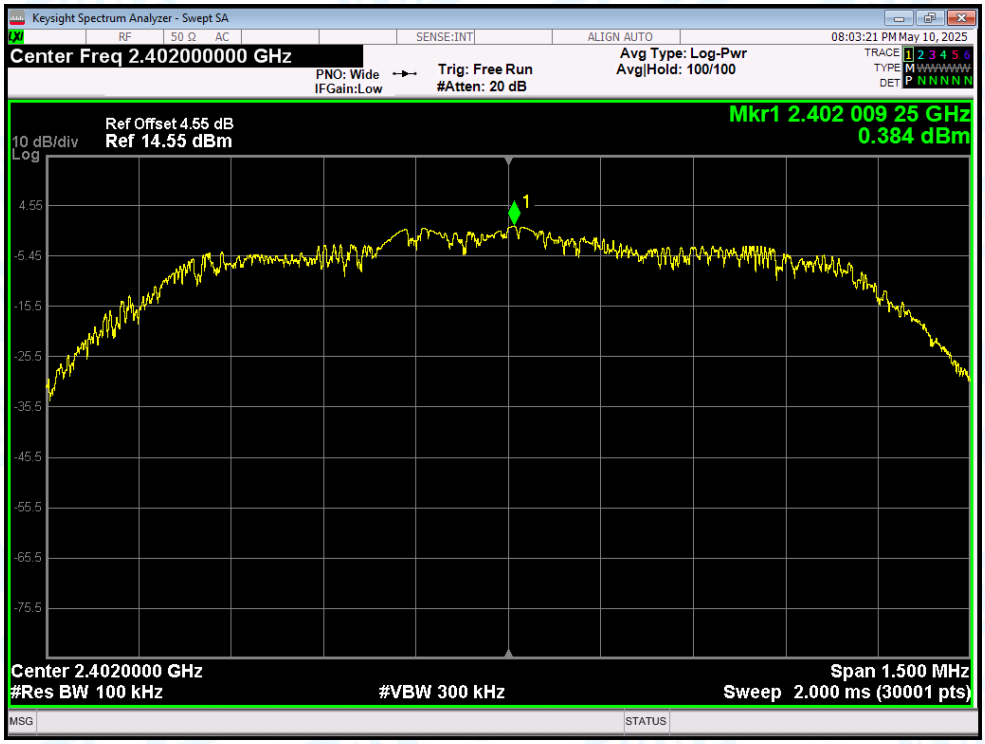
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



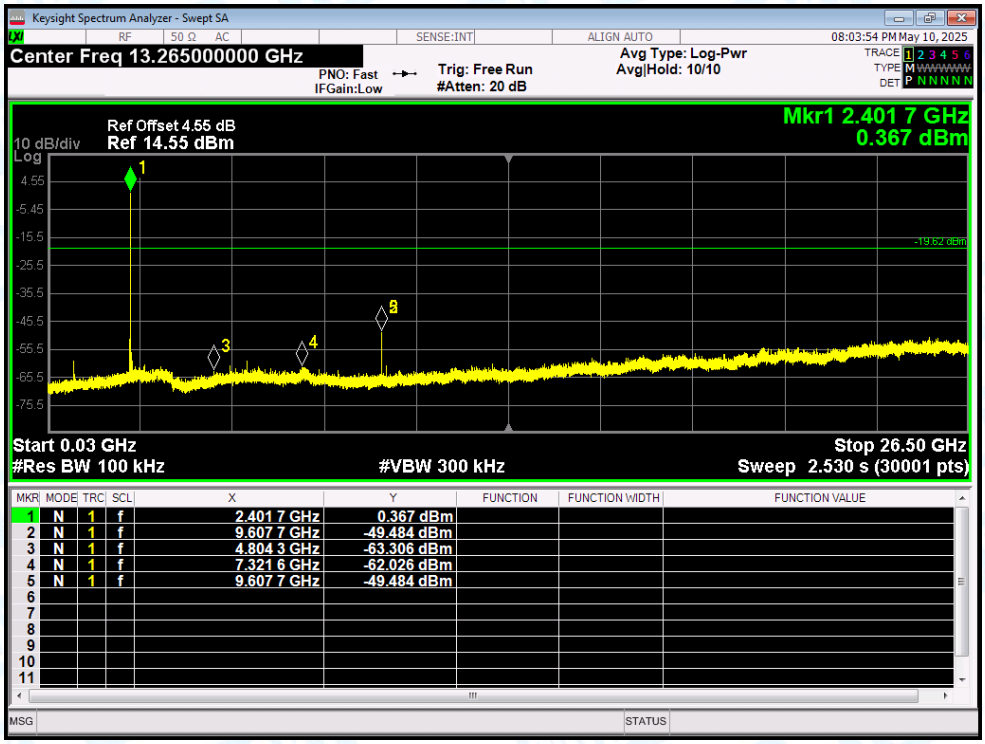
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



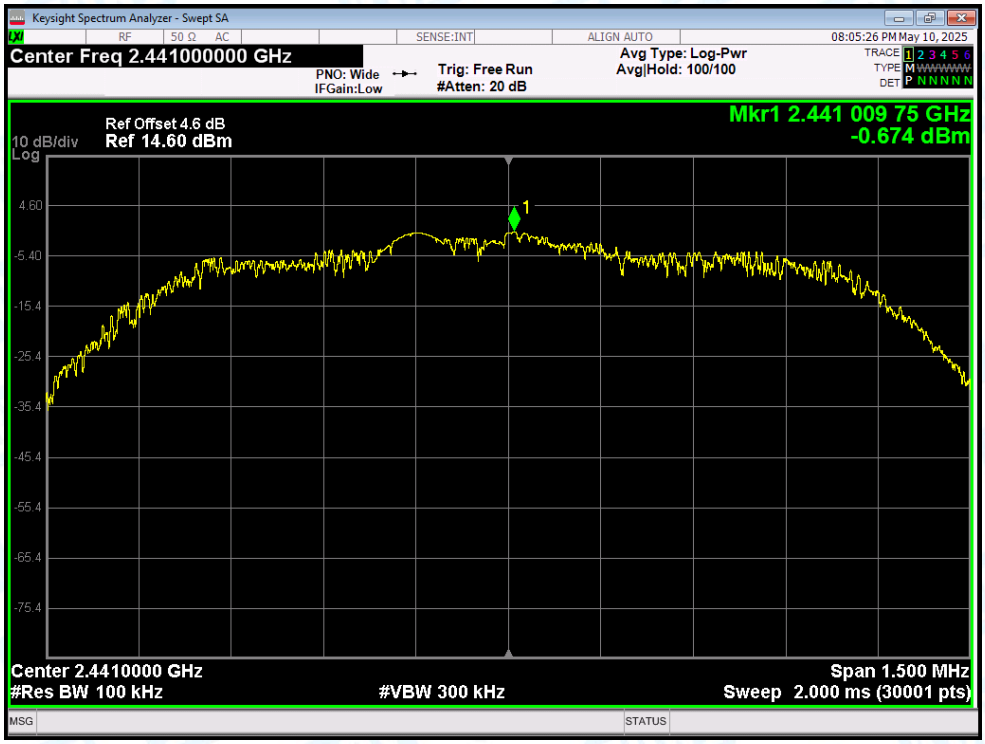
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



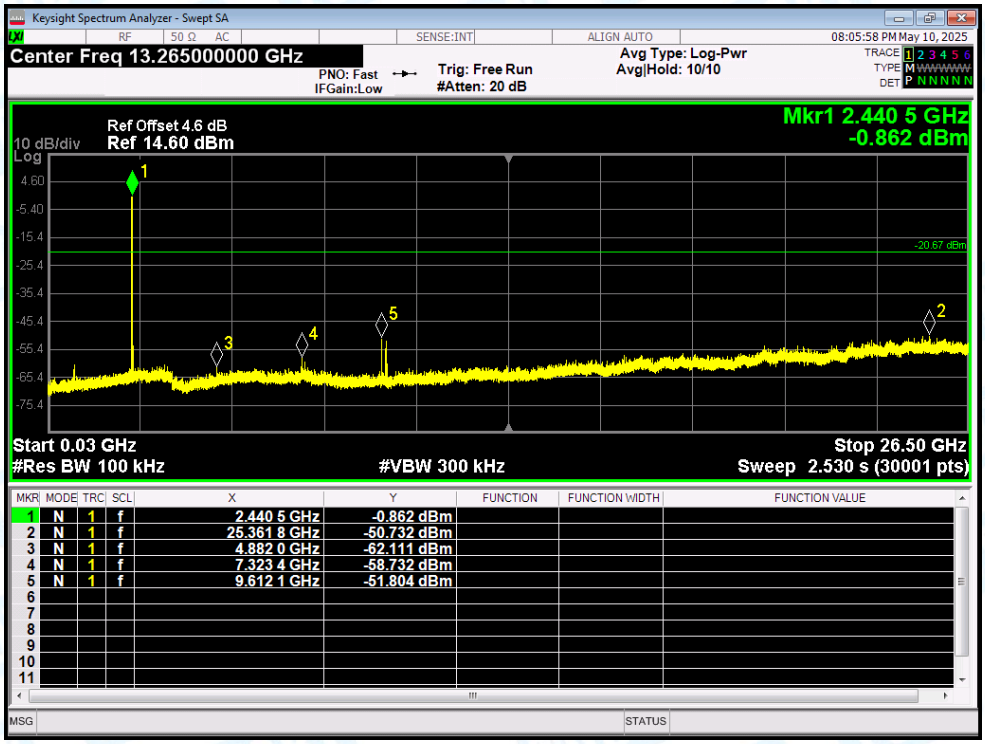
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



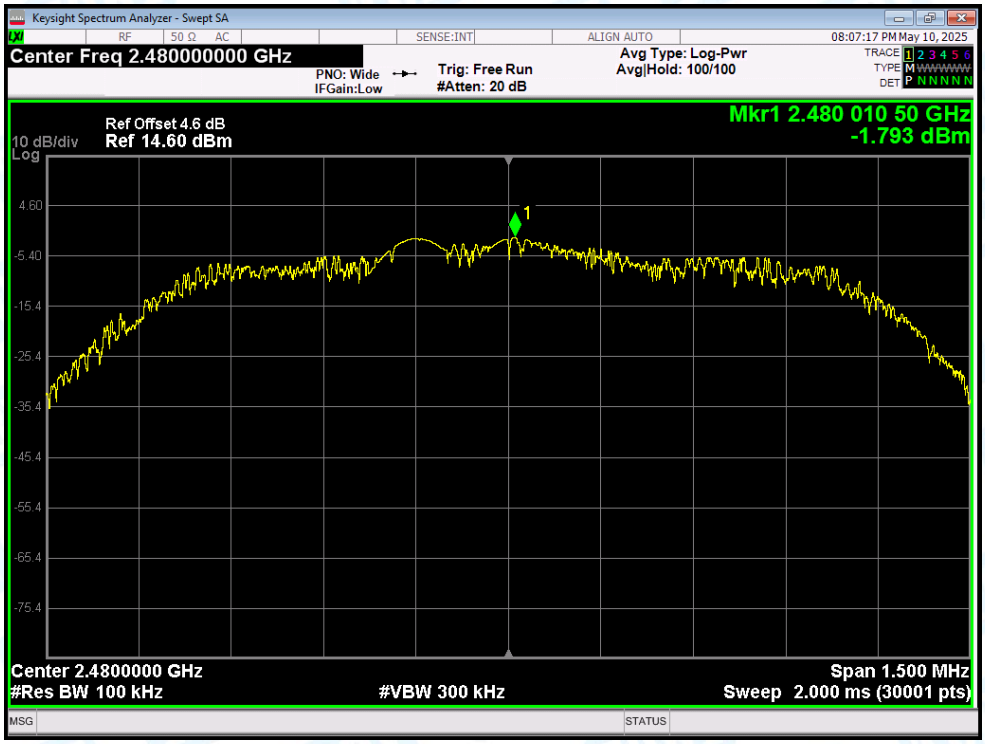
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



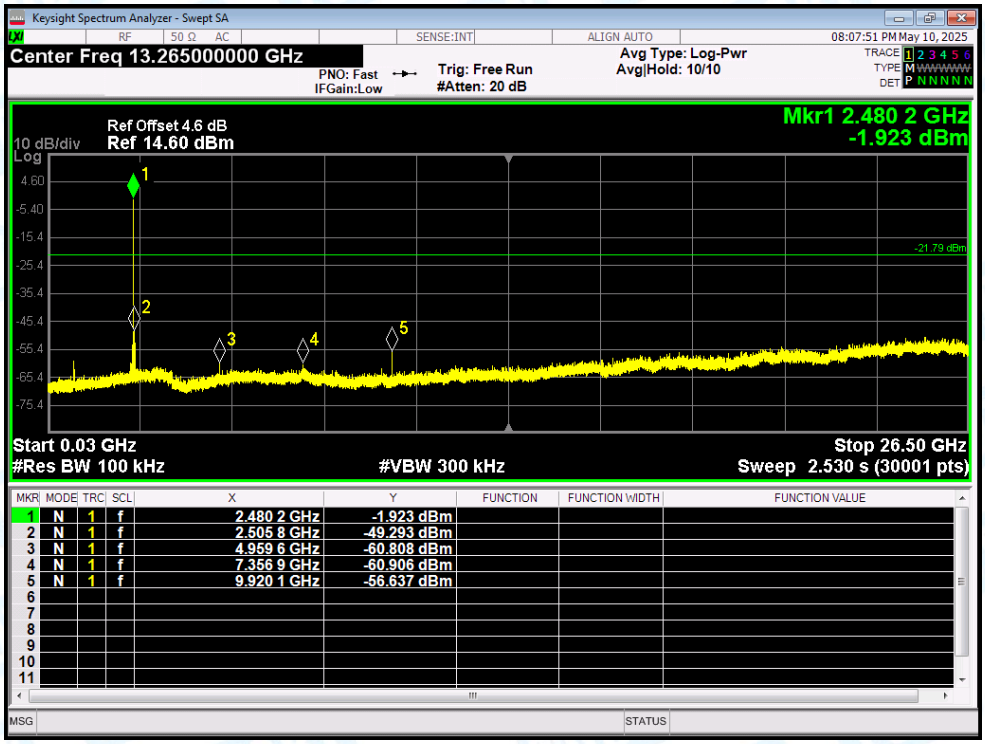
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

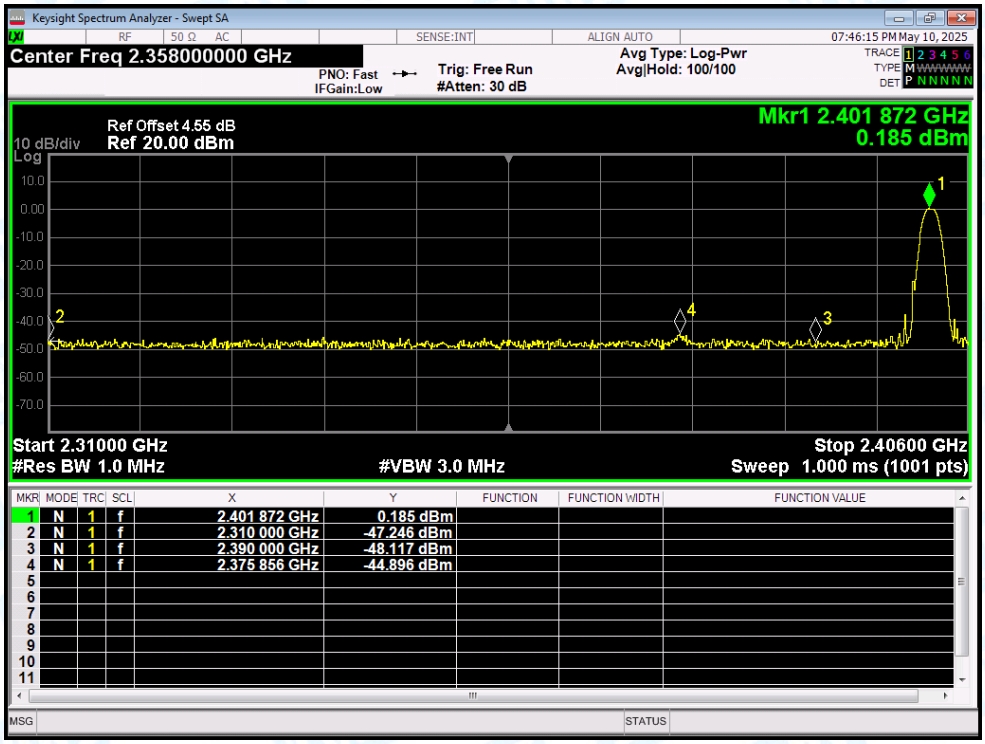


8.Restrict Band

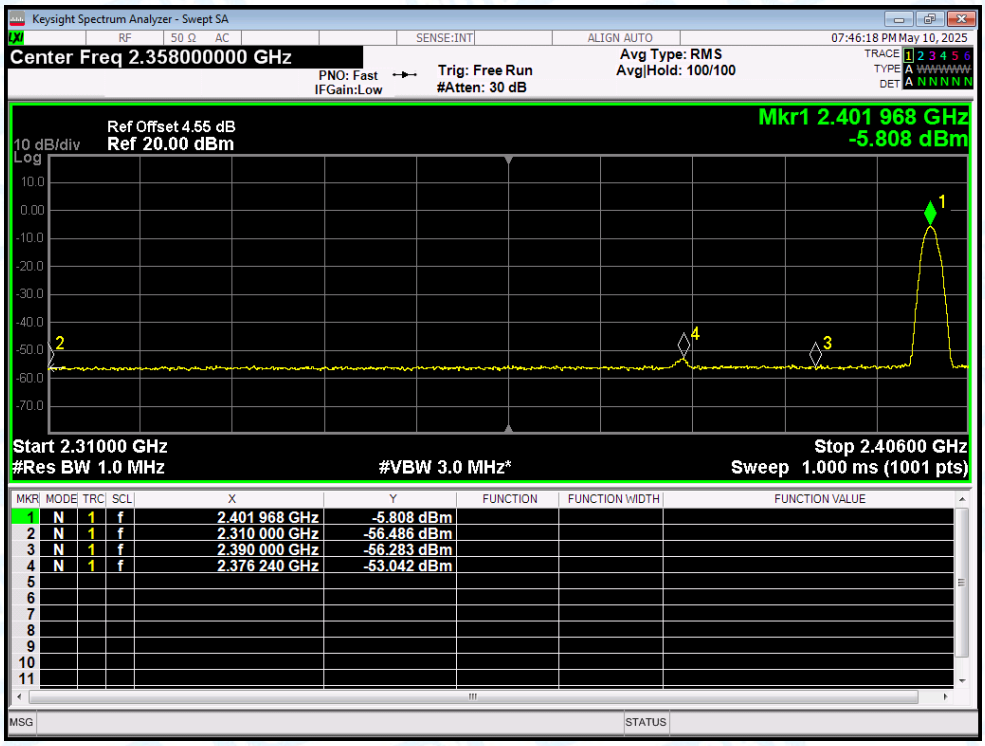
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-47.25	2	-	50.01	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.49	2	1.12	41.89	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2375.856	-44.9	2	-	52.36	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2376.24	-53.04	2	1.12	45.34	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-48.12	2	-	49.14	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.28	2	1.12	42.1	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-47.17	2	-	50.09	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.23	2	5.06	47.09	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2487.112	-44.86	2	-	52.4	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2487.352	-54.93	2	5.06	47.39	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-47.73	2	-	49.53	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-56.05	2	5.06	46.27	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.97	2	-	49.29	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.5	2	4.84	45.6	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2375.76	-43.88	2	-	53.38	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2375.952	-53.82	2	4.84	48.28	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.6	2	-	49.66	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-56.21	2	4.84	45.89	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-47.56	2	-	49.7	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-56.21	2	4.84	45.89	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2494.456	-44.79	2	-	52.47	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2490.352	-54.95	2	4.84	47.15	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47	2	-	50.26	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.28	2	4.84	46.82	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.79	2	-	48.47	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.52	2	4.84	45.58	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2376.144	-43.74	2	-	53.52	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2375.856	-53.14	2	4.84	48.96	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.9	2	-	49.36	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-56.1	2	4.84	46	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-47.57	2	-	49.69	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.91	2	4.84	46.19	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2496.976	-44.27	2	-	52.99	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2487.016	-54.9	2	4.84	47.2	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-47.59	2	-	49.67	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.84	2	4.84	46.26	Average	54	Pass

Test Graphs

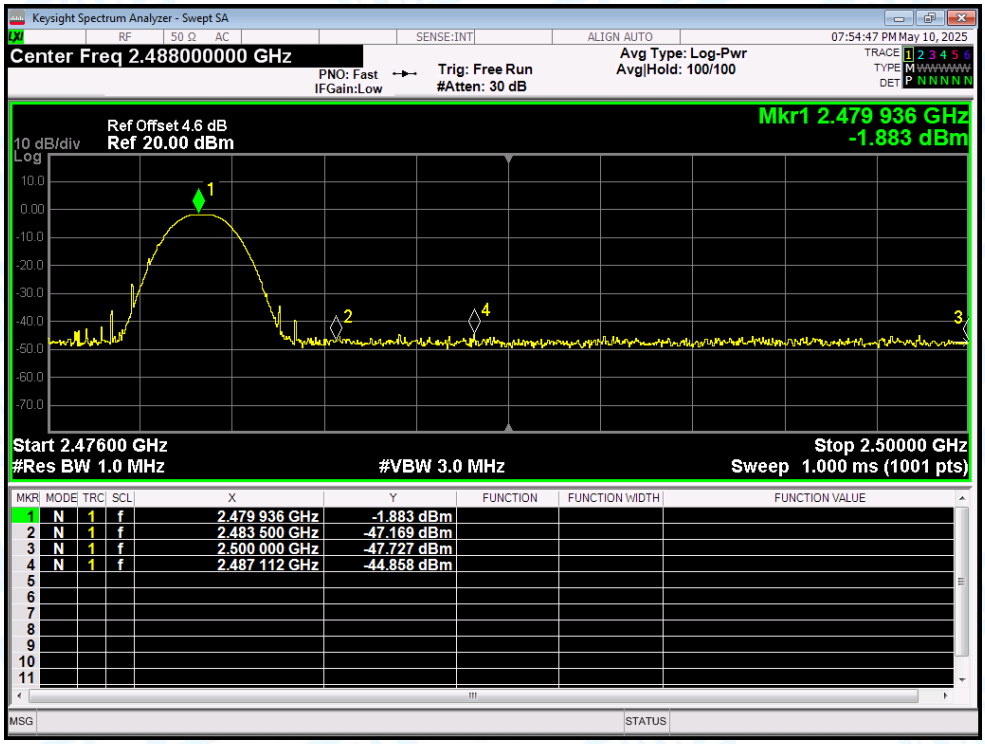
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



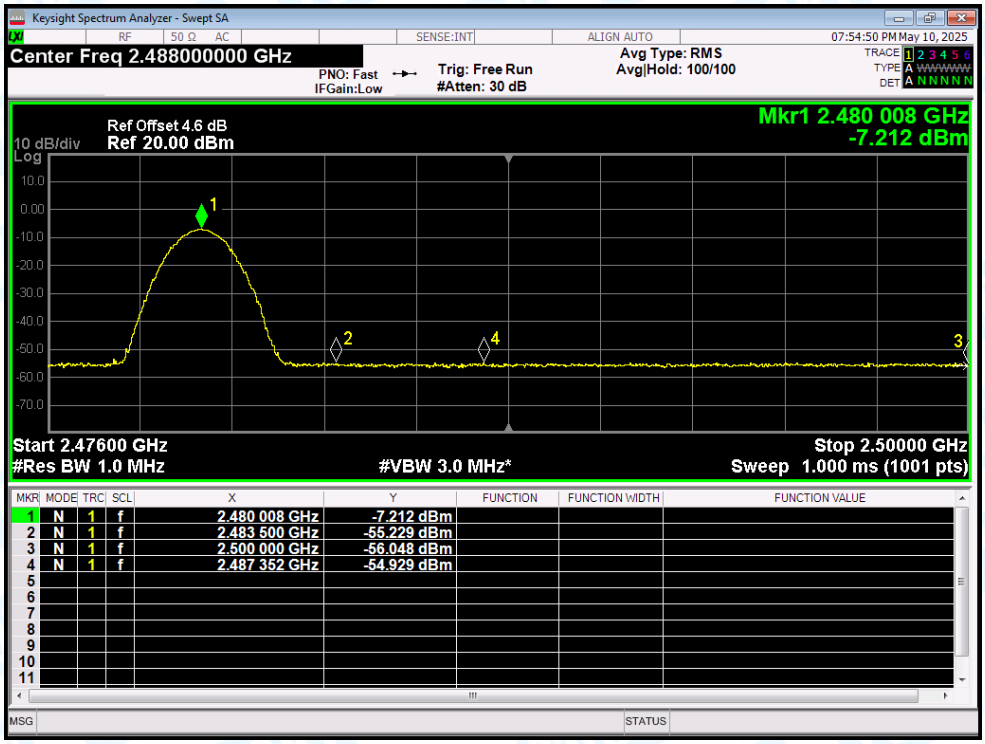
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



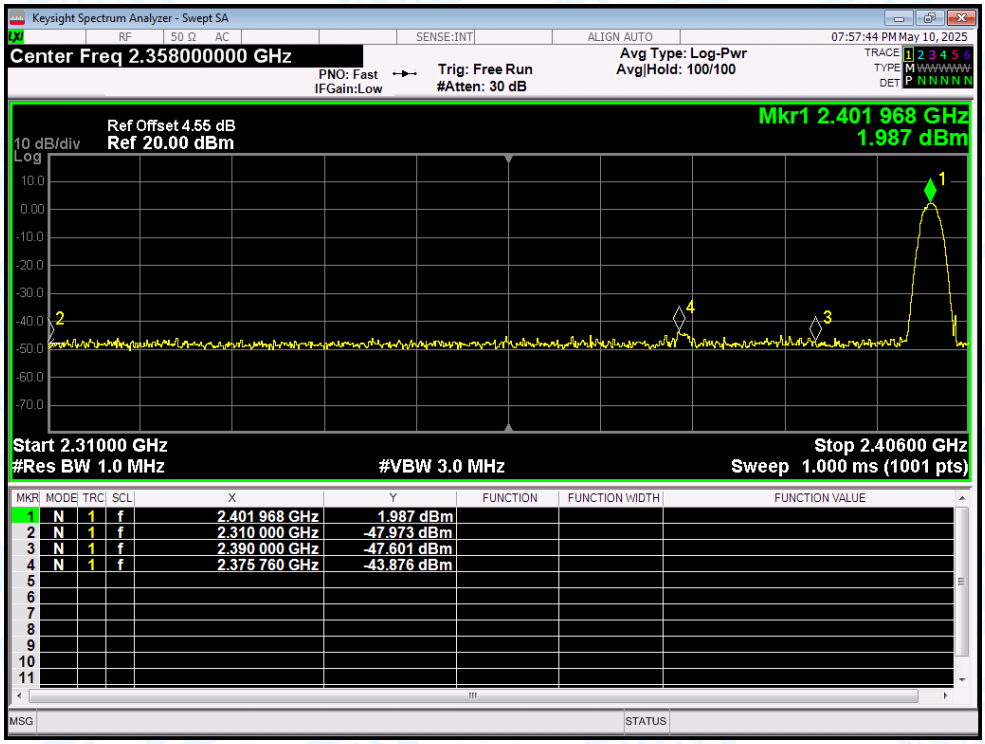
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



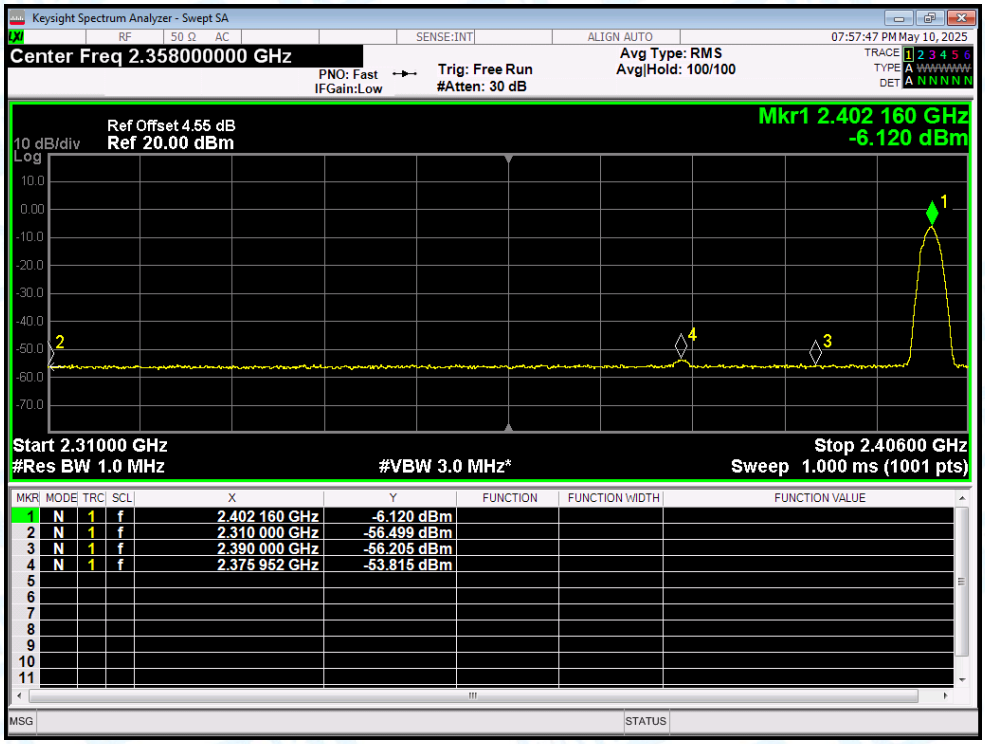
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



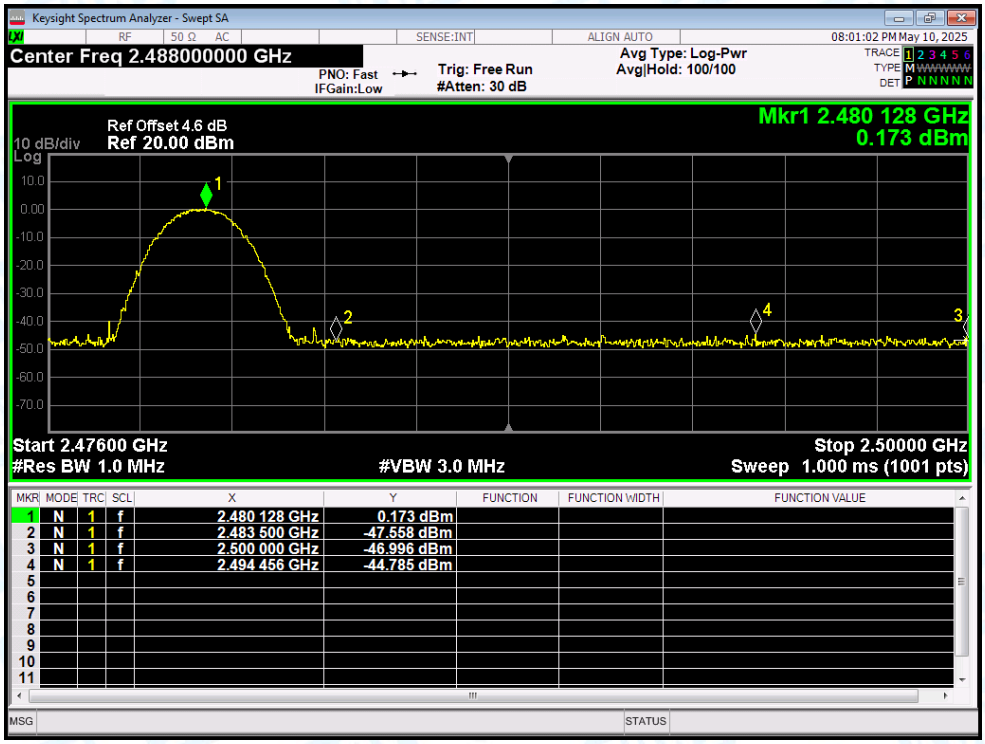
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



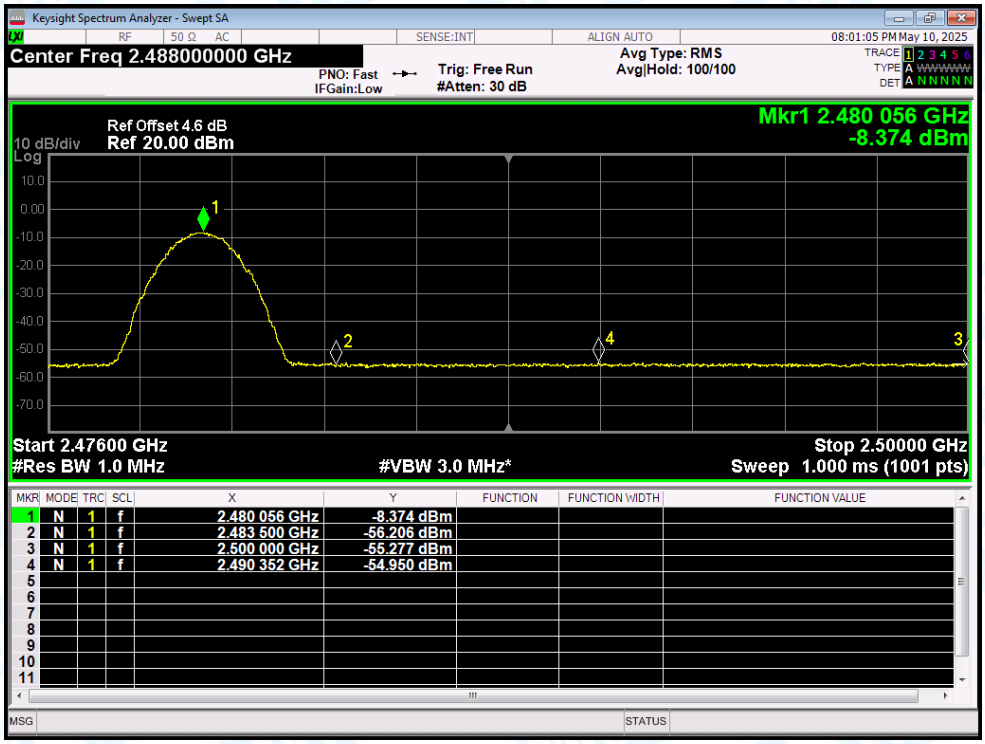
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



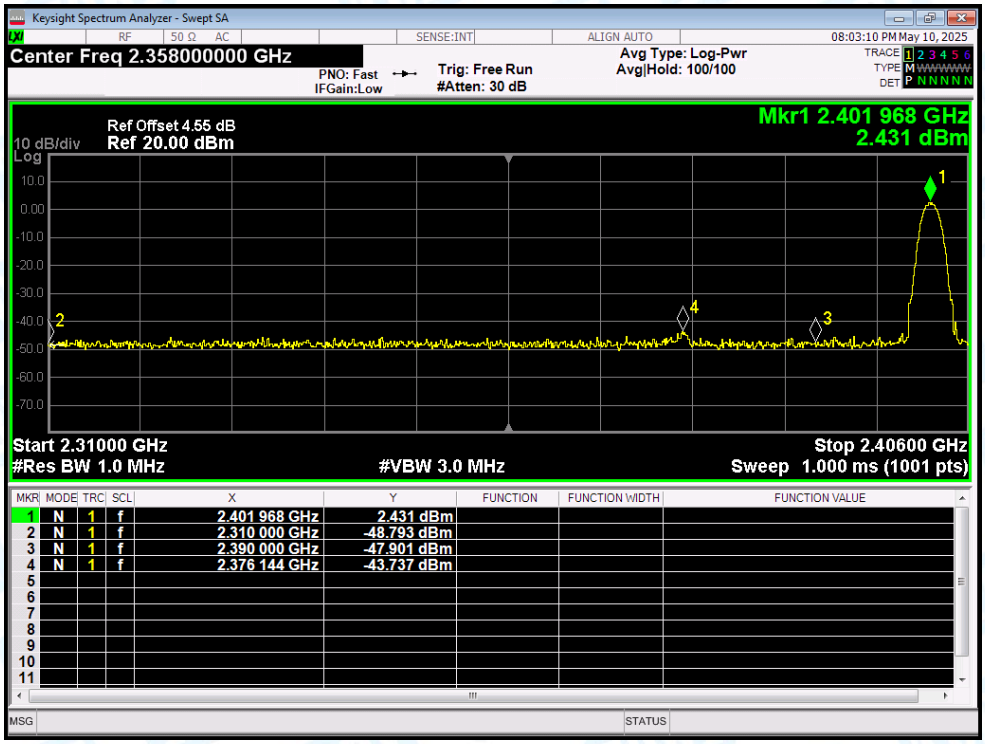
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



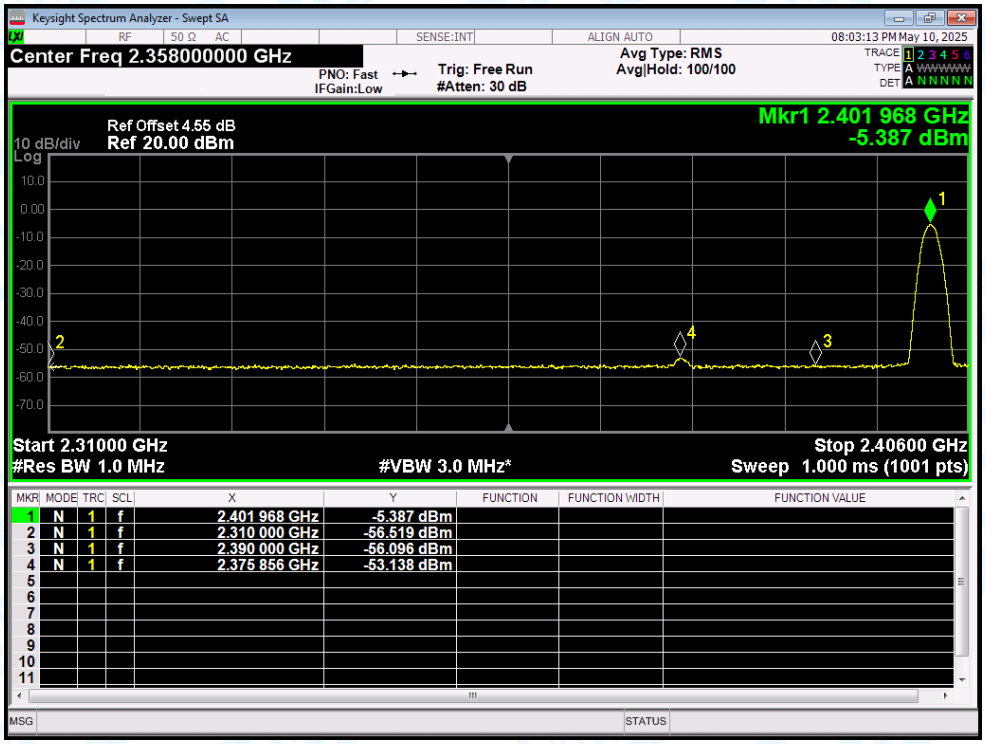
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



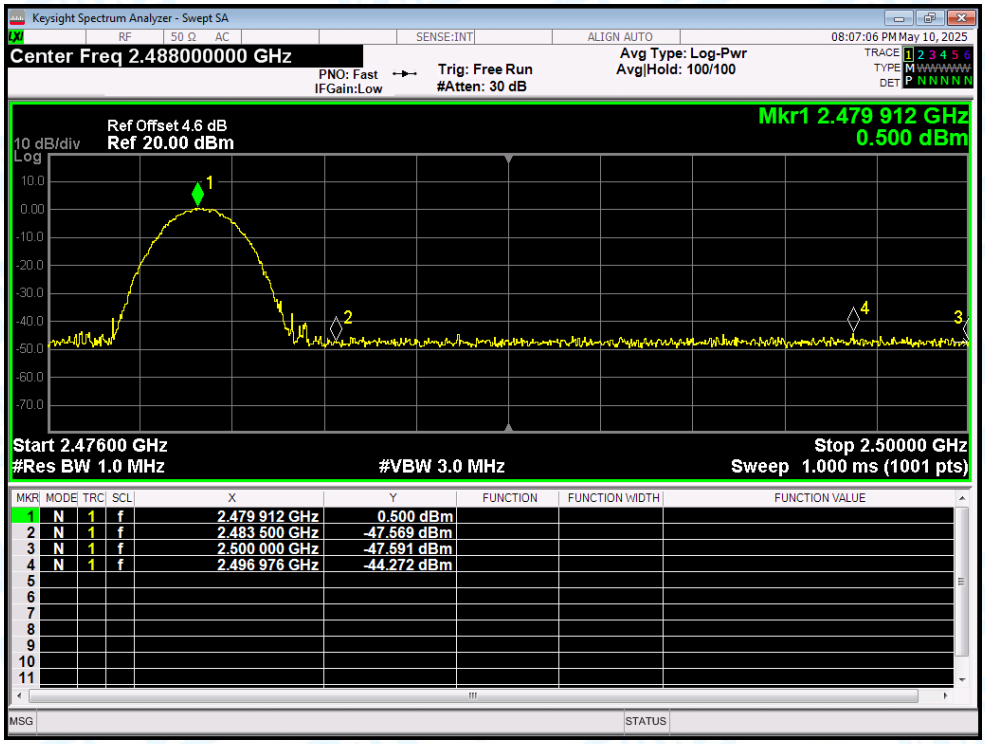
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



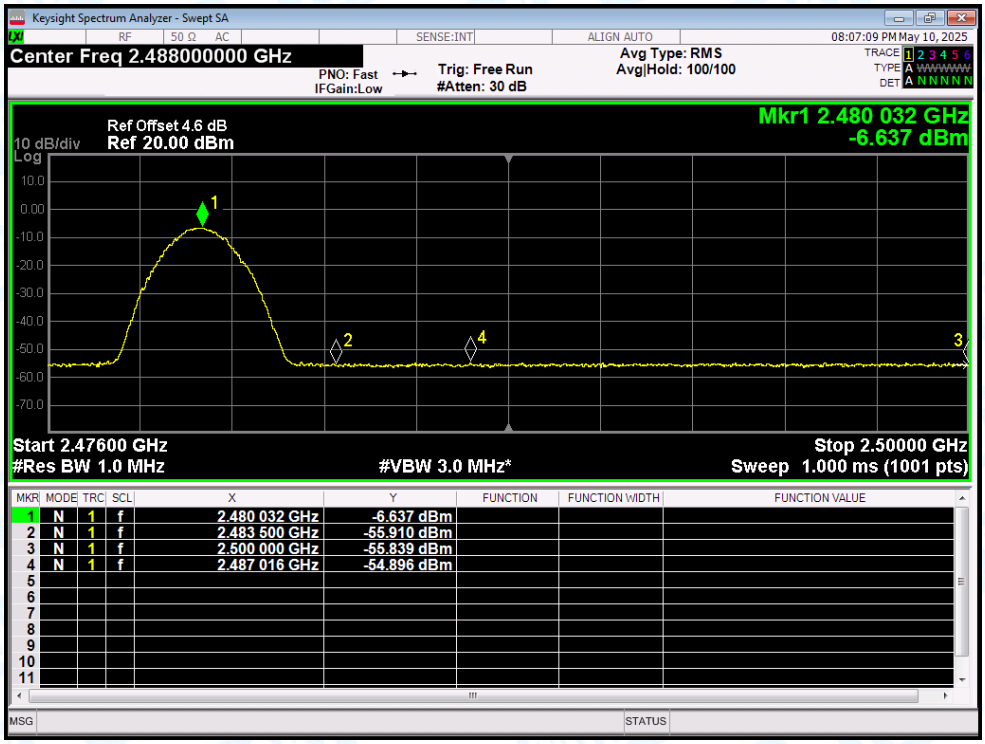
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

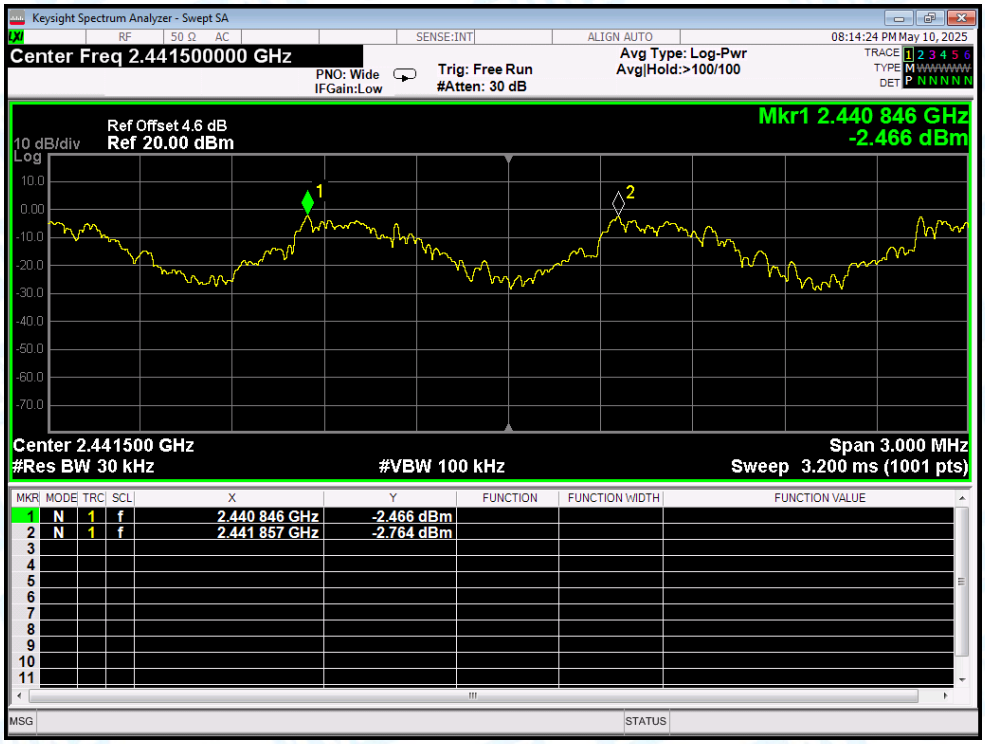


9.Carrier Frequencies Separation

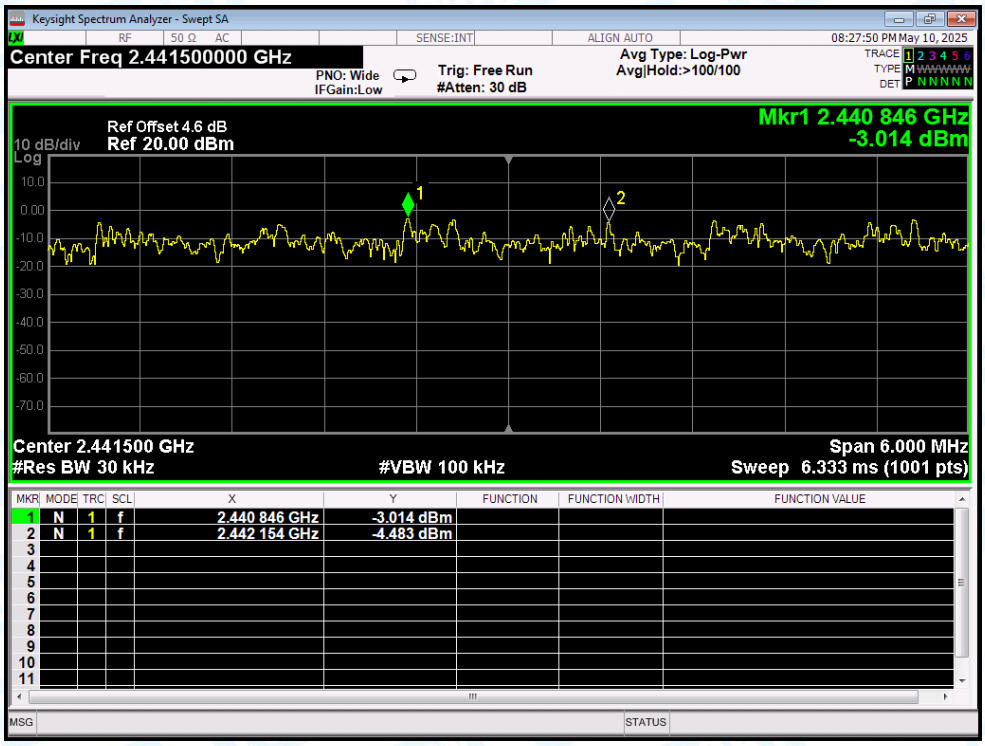
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.846	2441.857	1.011	0.58	Pass
NVNT	2-DH1	Ant1	2440.846	2442.154	1.308	0.84	Pass
NVNT	3-DH1	Ant1	2440.852	2441.842	0.99	0.82	Pass

Test Graphs

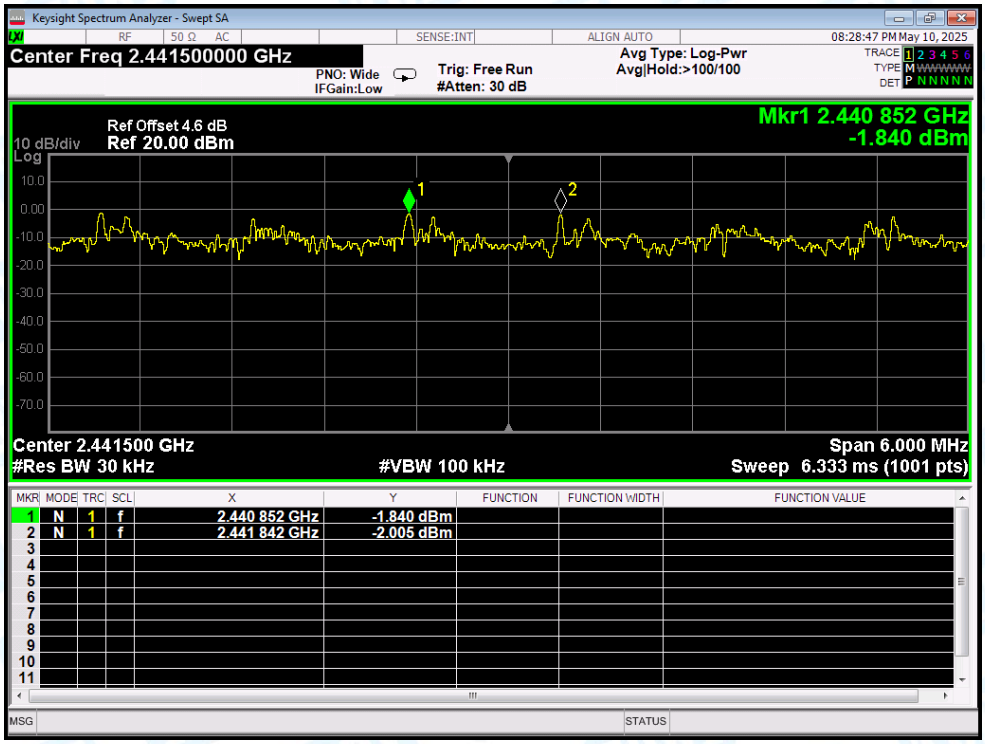
CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



CFS NVNT 3-DH1 2441MHz Ant1

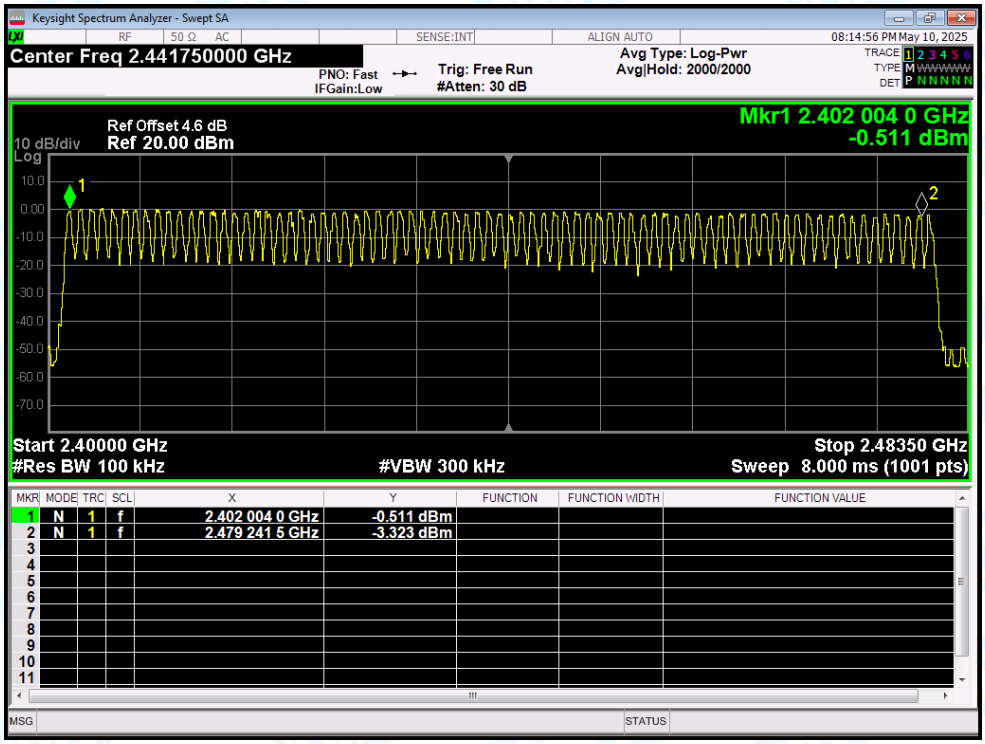


10.Number of Hopping Channel

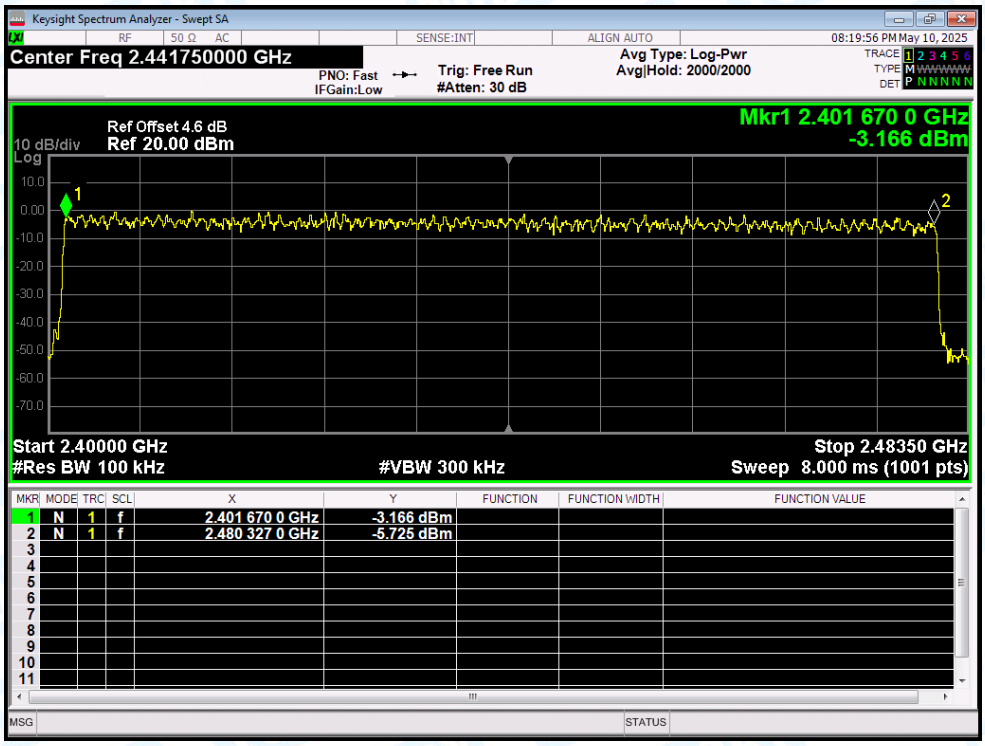
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

Test Graphs

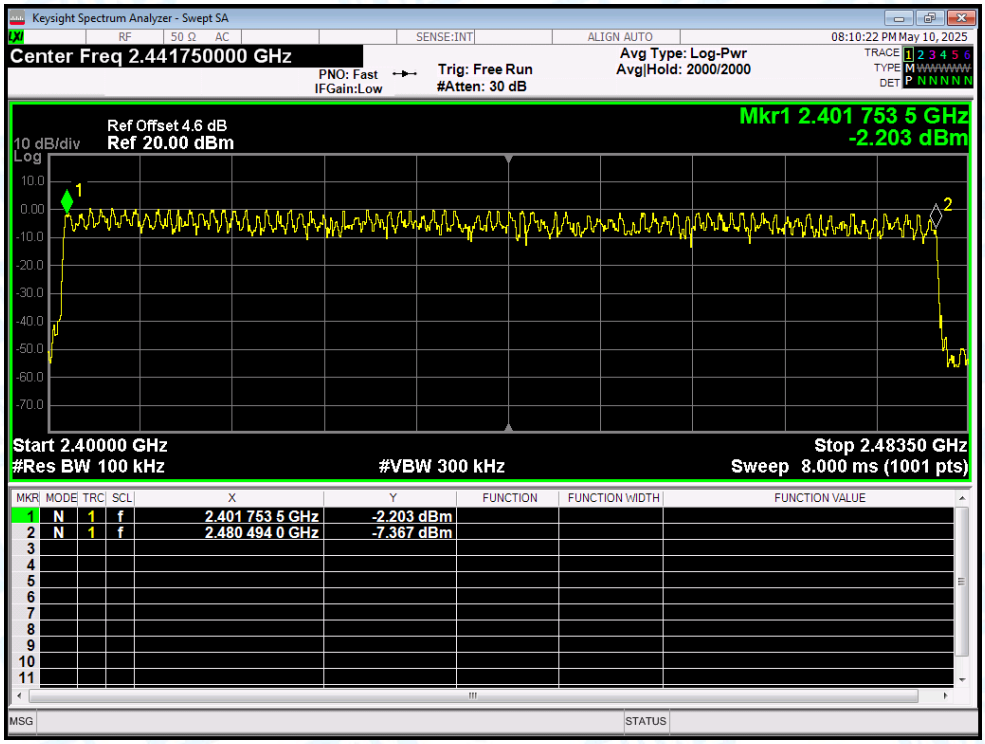
Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



Hopping No. NVNT 3-DH1 2441MHz Ant1

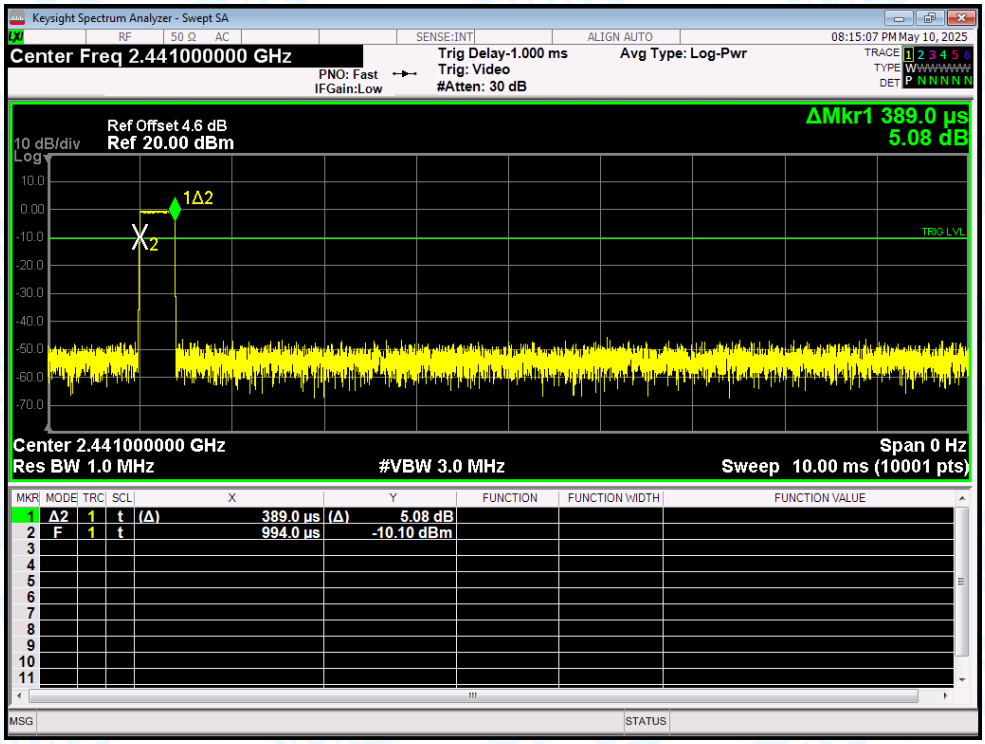


11.Dwell Time

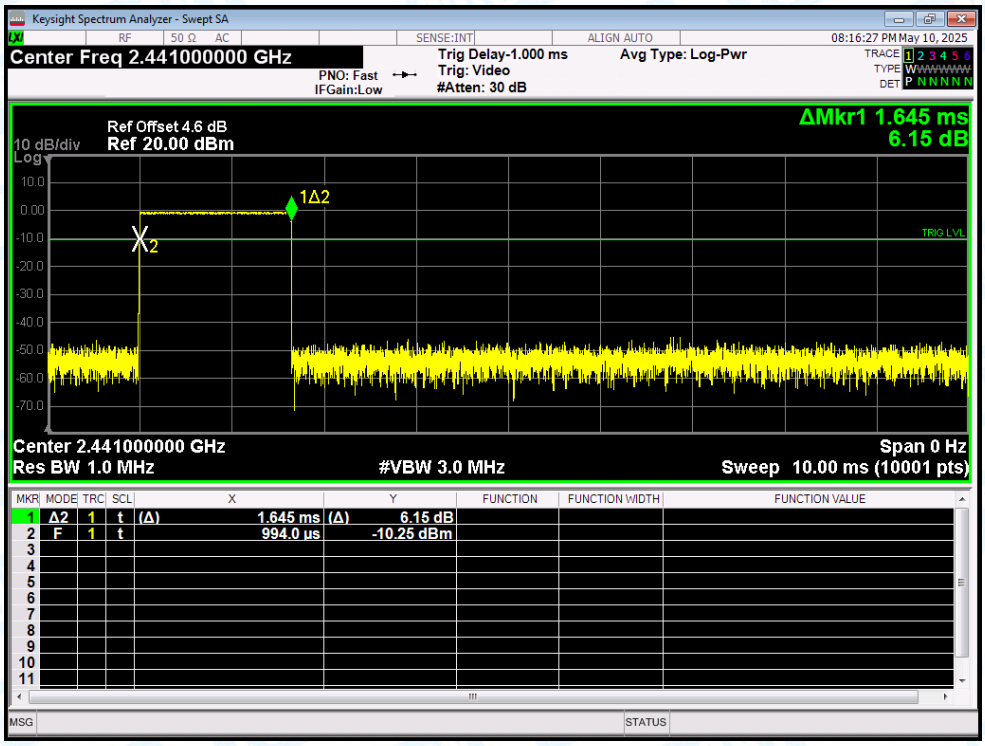
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.389	124.48	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.645	263.2	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.893	308.587	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.398	127.36	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.649	263.84	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.898	309.12	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	2.9	309.333	31600	400	Pass

Test Graphs

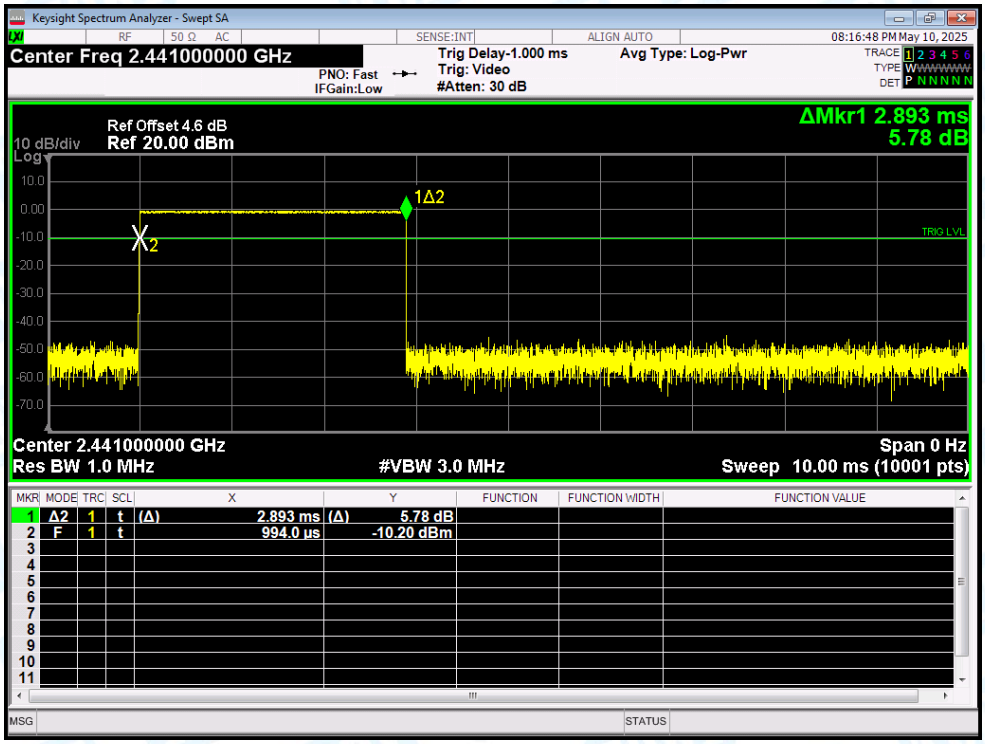
Dwell NVNT 1-DH1 2441MHz Ant1



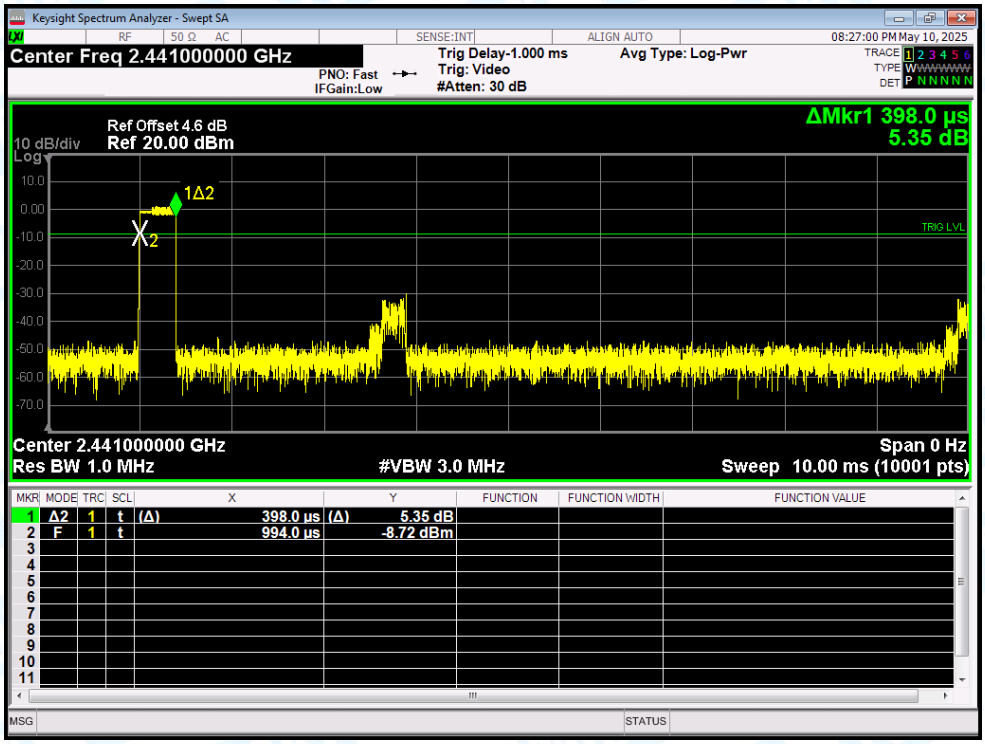
Dwell NVNT 1-DH3 2441MHz Ant1



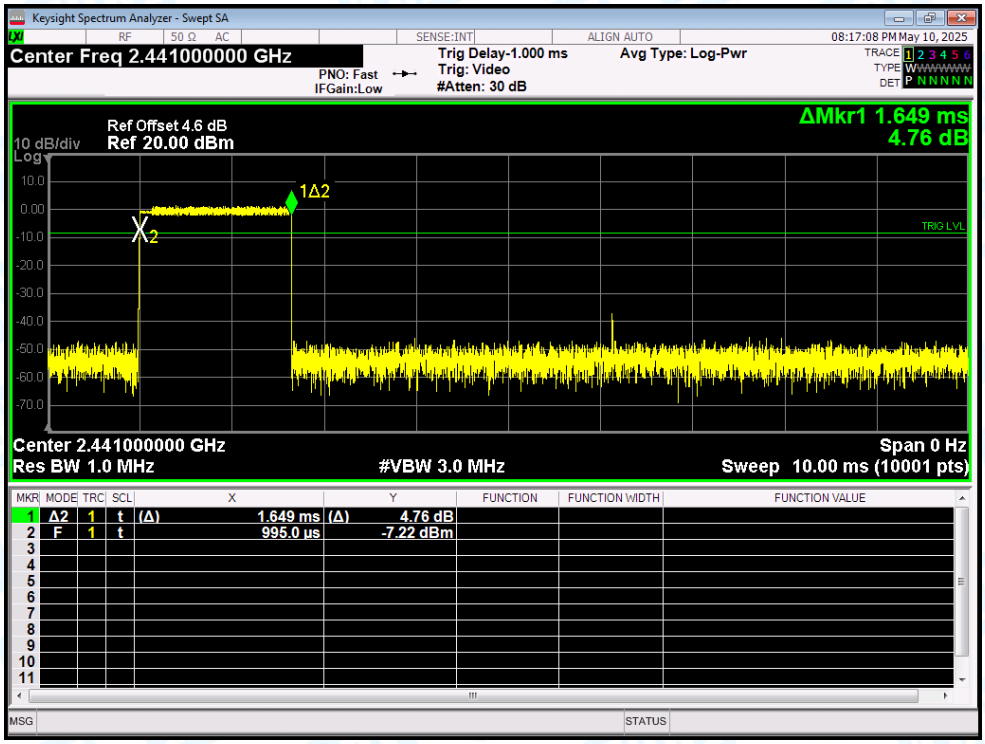
Dwell NVNT 1-DH5 2441MHz Ant1



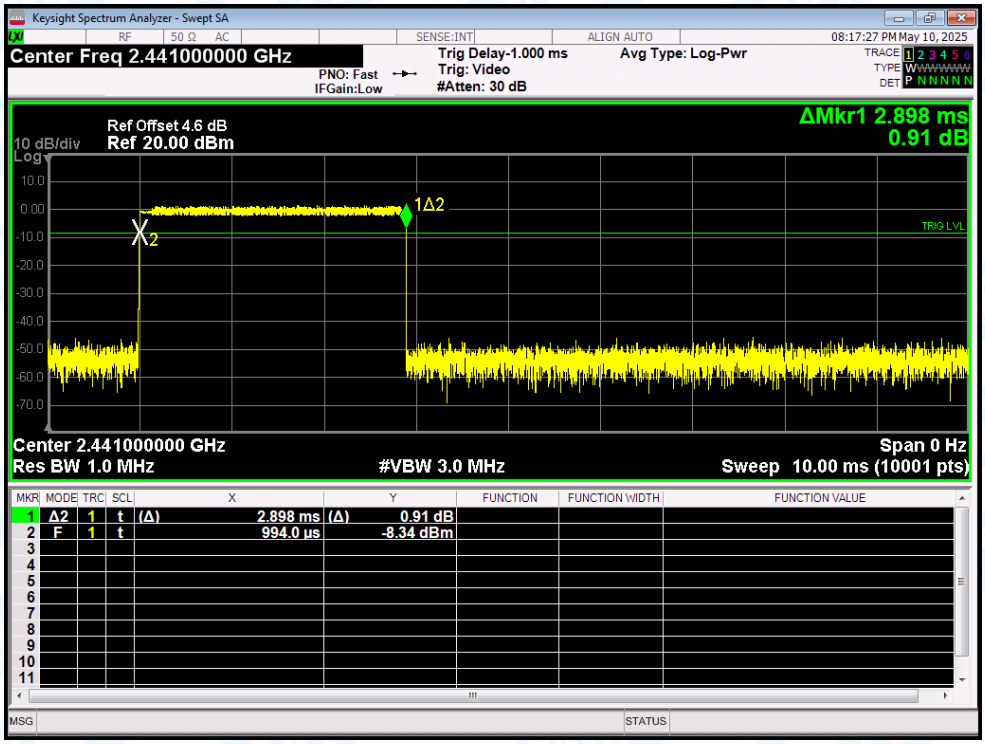
Dwell NVNT 2-DH1 2441MHz Ant1



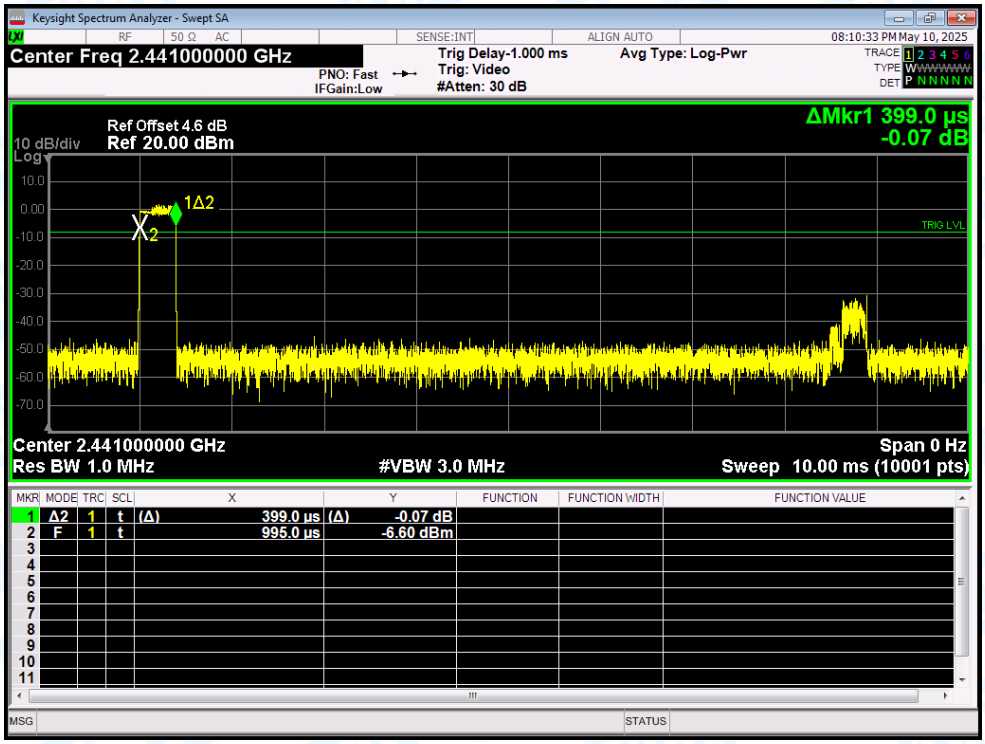
Dwell NVNT 2-DH3 2441MHz Ant1



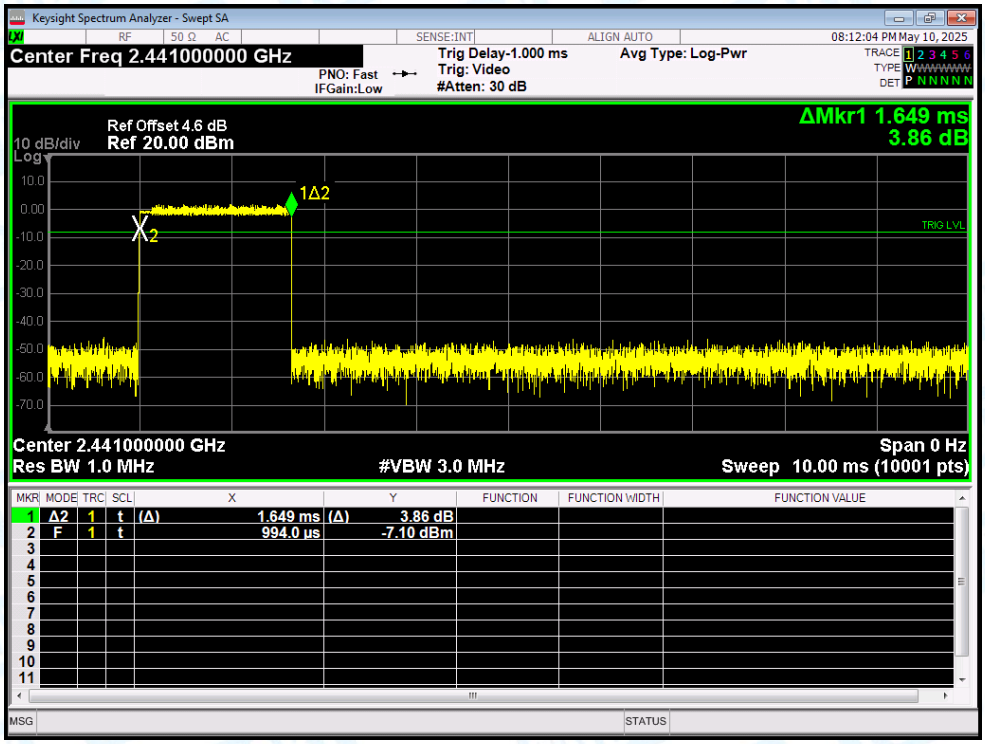
Dwell NVNT 2-DH5 2441MHz Ant1



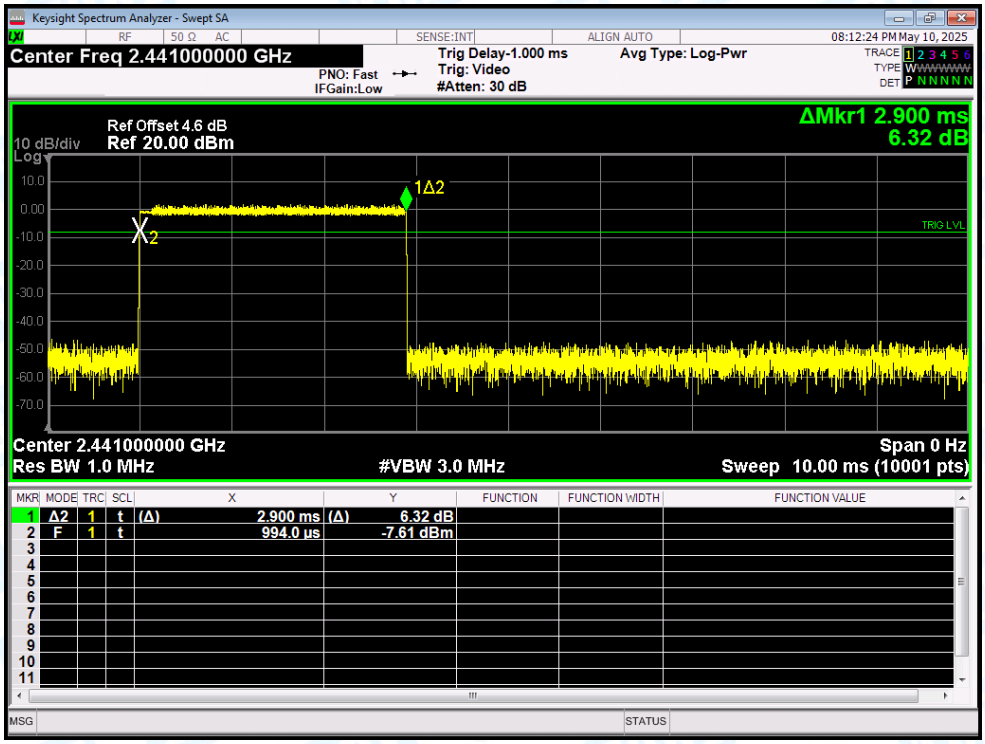
Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1



Dwell NVNT 3-DH5 2441MHz Ant1



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