

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Smart Watch
Test Model:	NoiseFit Halo 3
Sample ID:	HC-C-202507-0179-02-01#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 5V
Test Engineer:	Lily Zhang
Note: For a more detailed features description, please refer to the report TBR-C-202507-0179-191 The report only show the worst case data.	

Contents

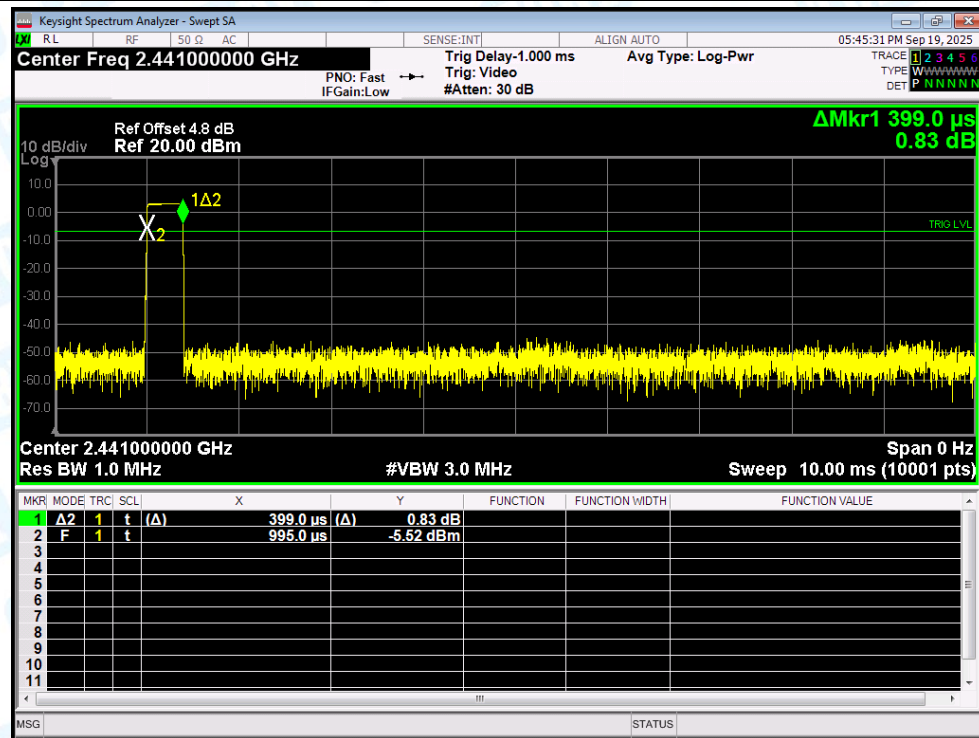
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1.Dwell Time

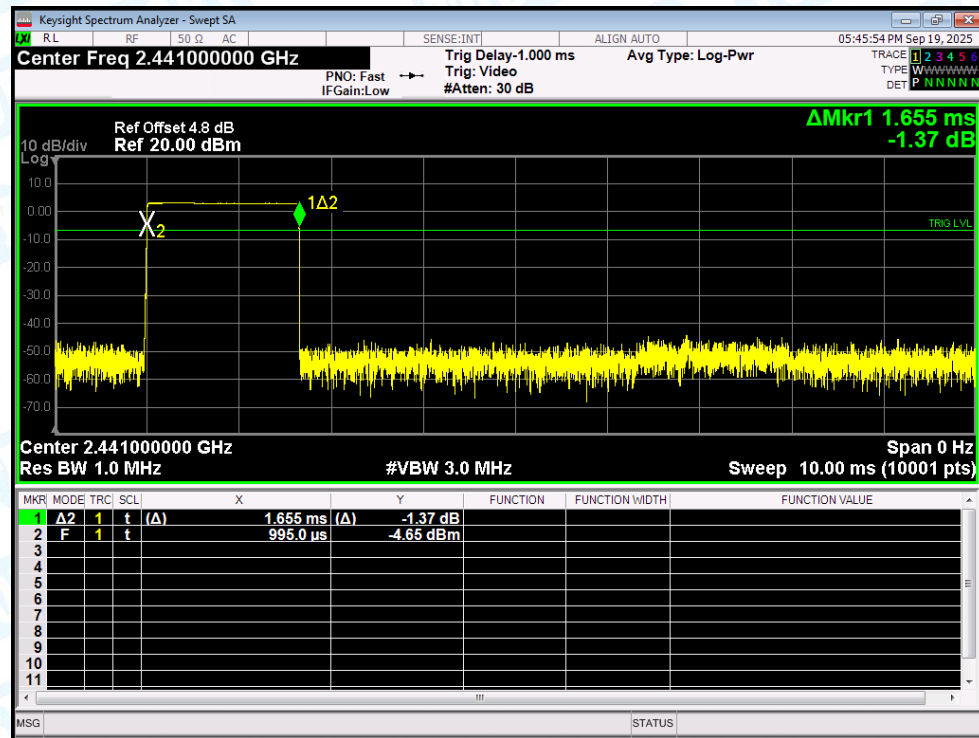
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.399	127.68	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.655	264.8	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.902	309.547	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.381	121.92	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.633	261.28	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.882	307.413	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.381	121.92	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.631	260.96	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.883	307.52	31600	400	Pass

Test Graphs

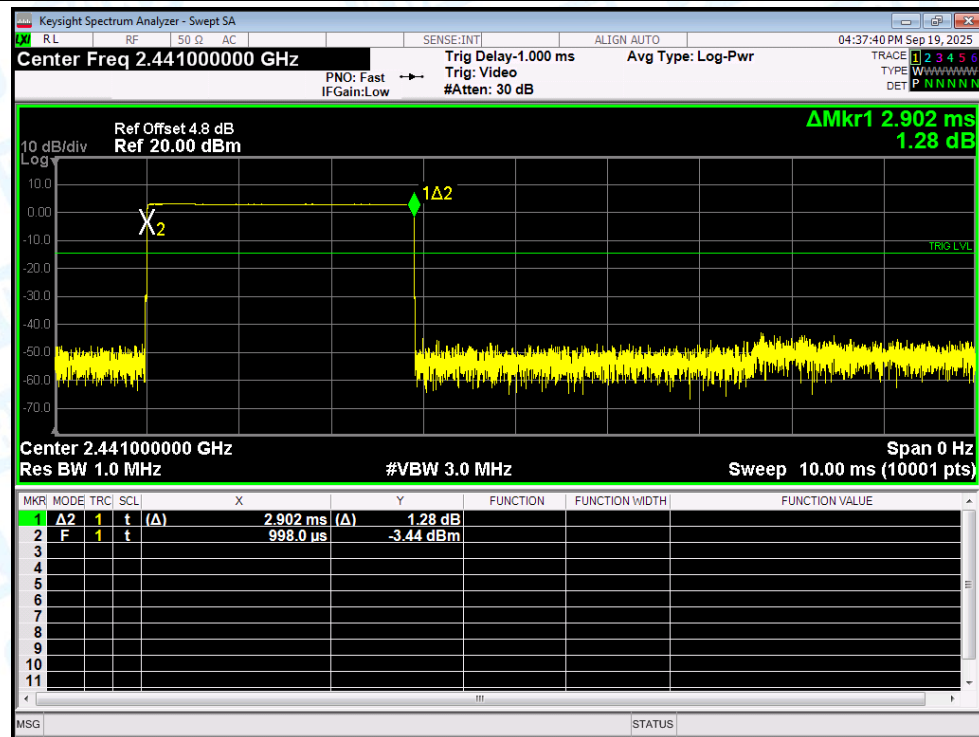
Dwell NVNT 1-DH1 2441MHz Ant1



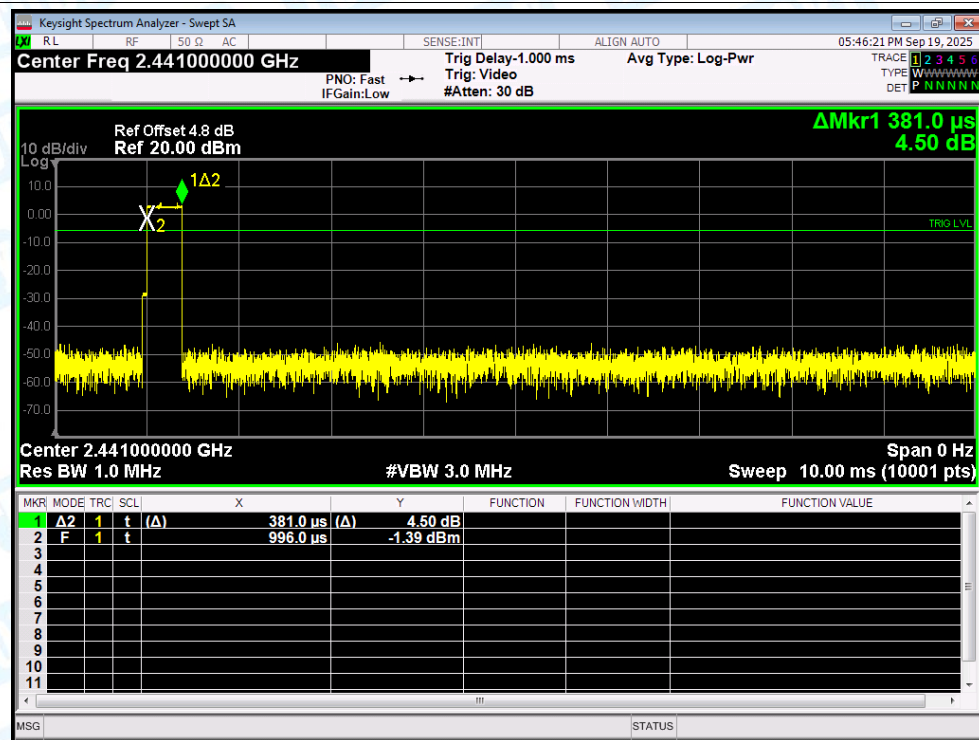
Dwell NVNT 1-DH3 2441MHz Ant1



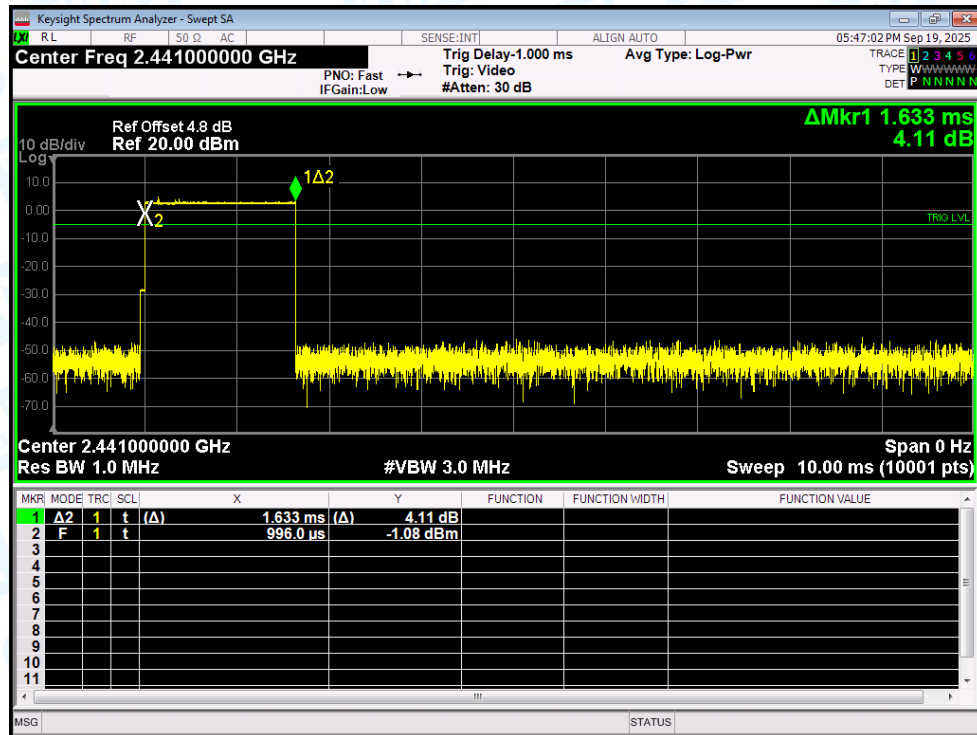
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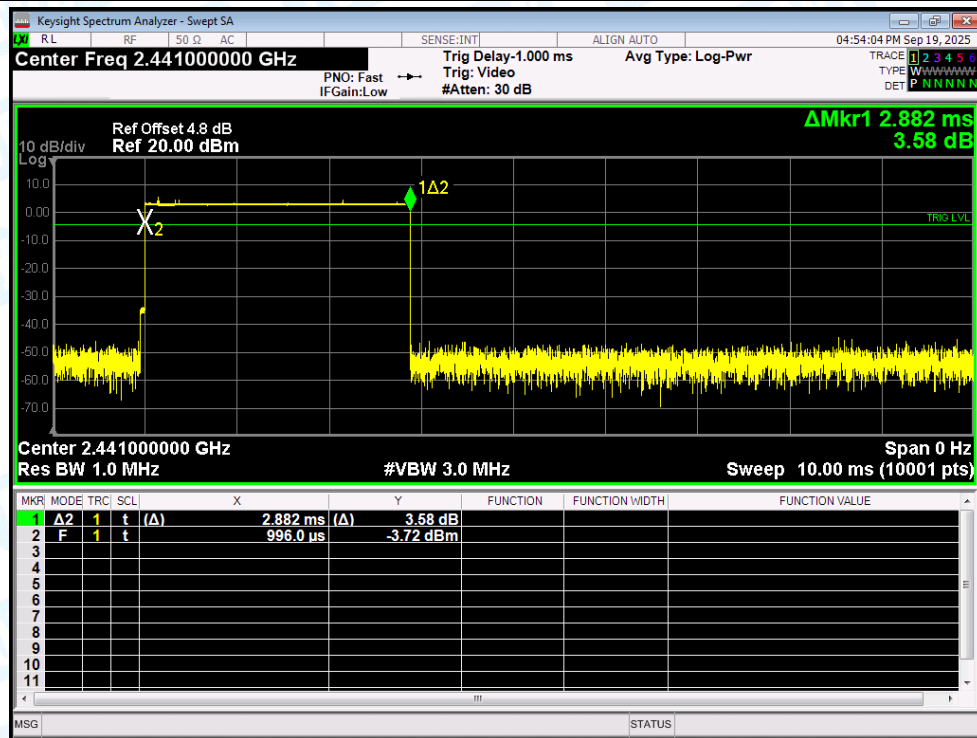
Dwell NVNT 2-DH1 2441MHz Ant1



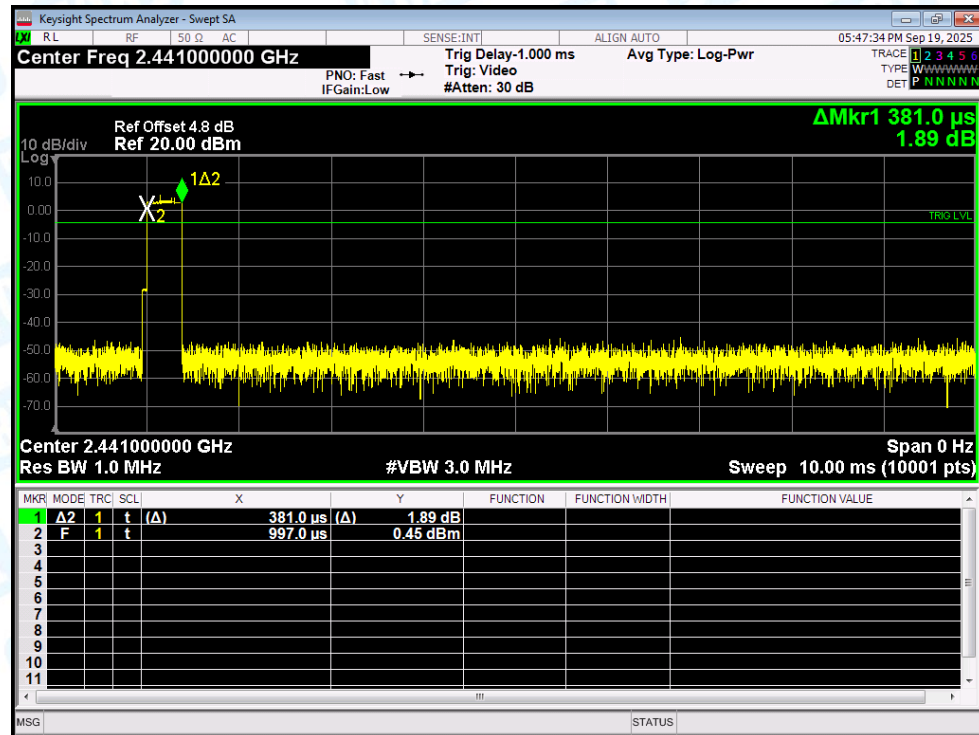
Dwell NVNT 2-DH3 2441MHz Ant1



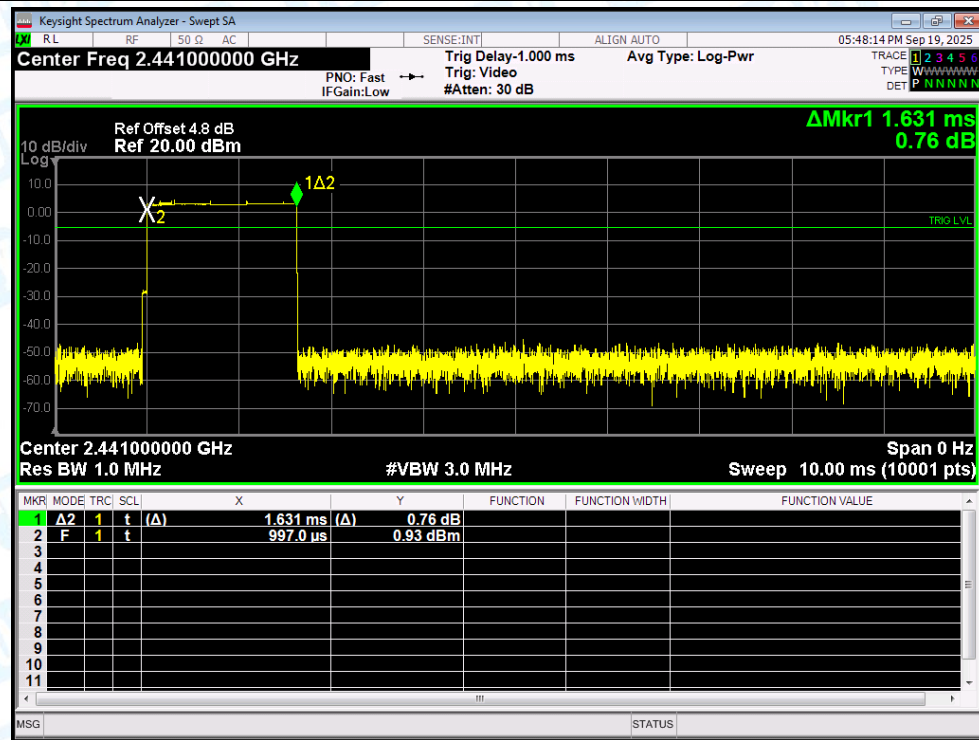
Dwell NVNT 2-DH5 2441MHz Ant1

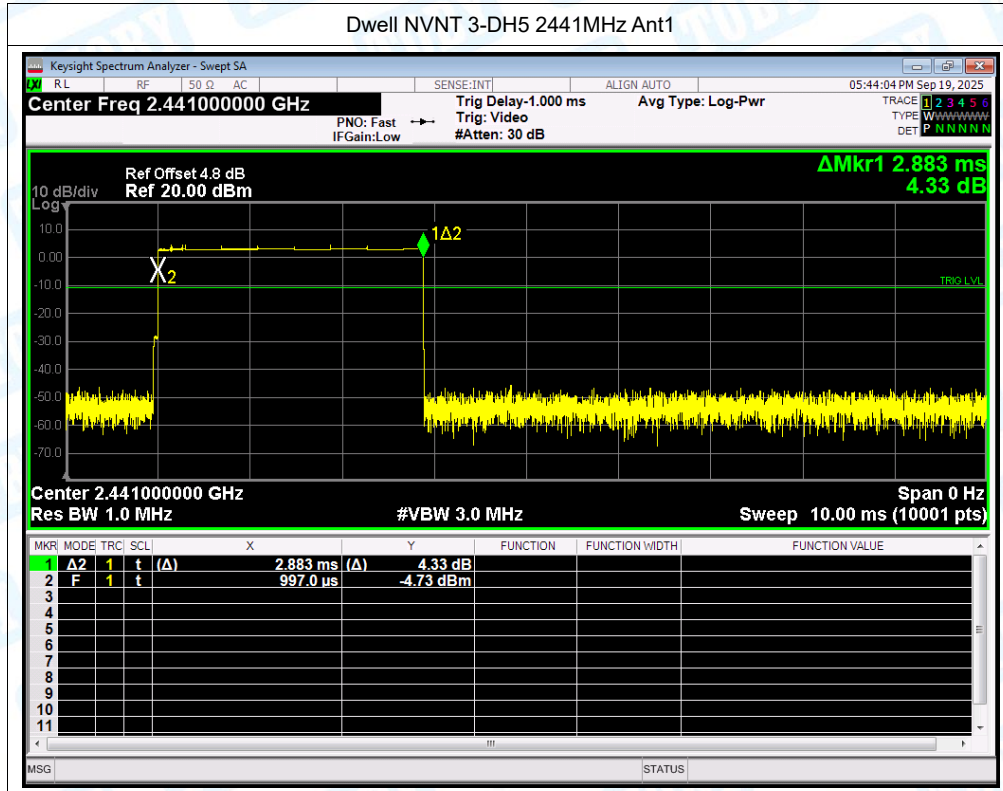


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1



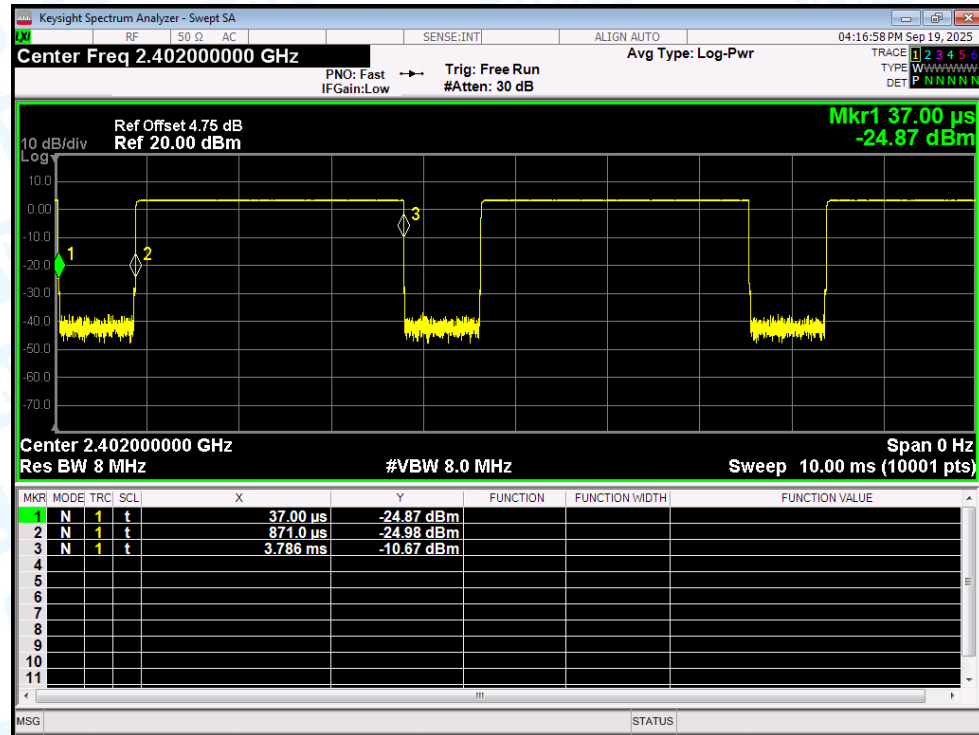


2.Duty Cycle

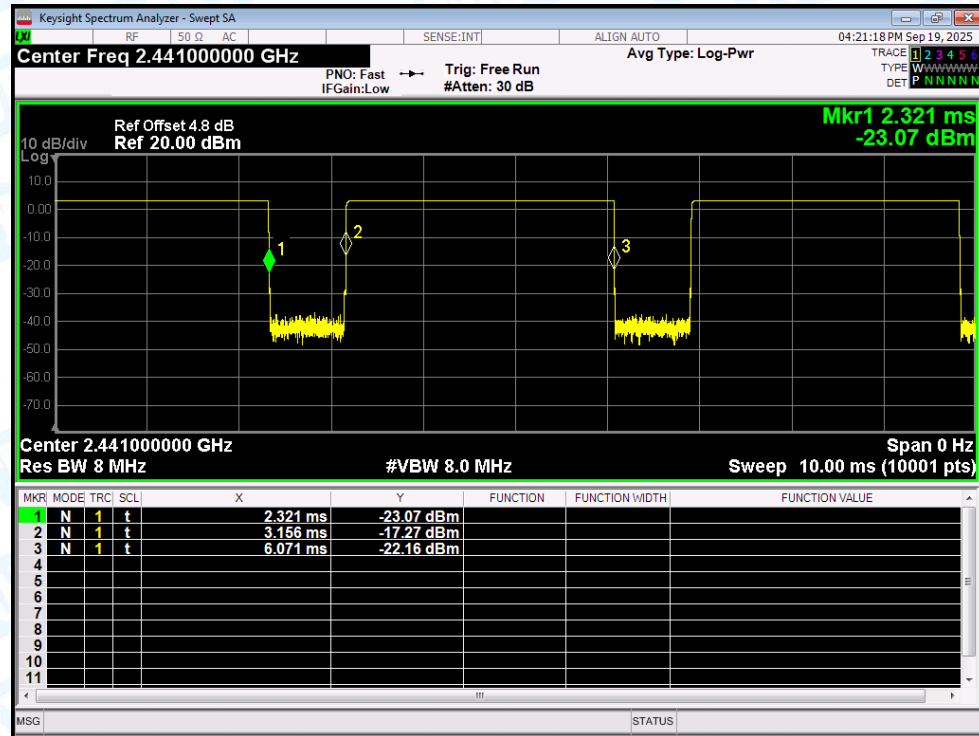
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.75	1.09	0.34
NVNT	1-DH5	2441	Ant1	77.73	1.09	0.34
NVNT	1-DH5	2480	Ant1	77.73	1.09	0.34
NVNT	2-DH5	2402	Ant1	76.91	1.14	0.35
NVNT	2-DH5	2441	Ant1	76.91	1.14	0.35
NVNT	2-DH5	2480	Ant1	76.91	1.14	0.35
NVNT	3-DH5	2402	Ant1	76.93	1.14	0.35
NVNT	3-DH5	2441	Ant1	76.93	1.14	0.35
NVNT	3-DH5	2480	Ant1	76.93	1.14	0.35

Test Graphs

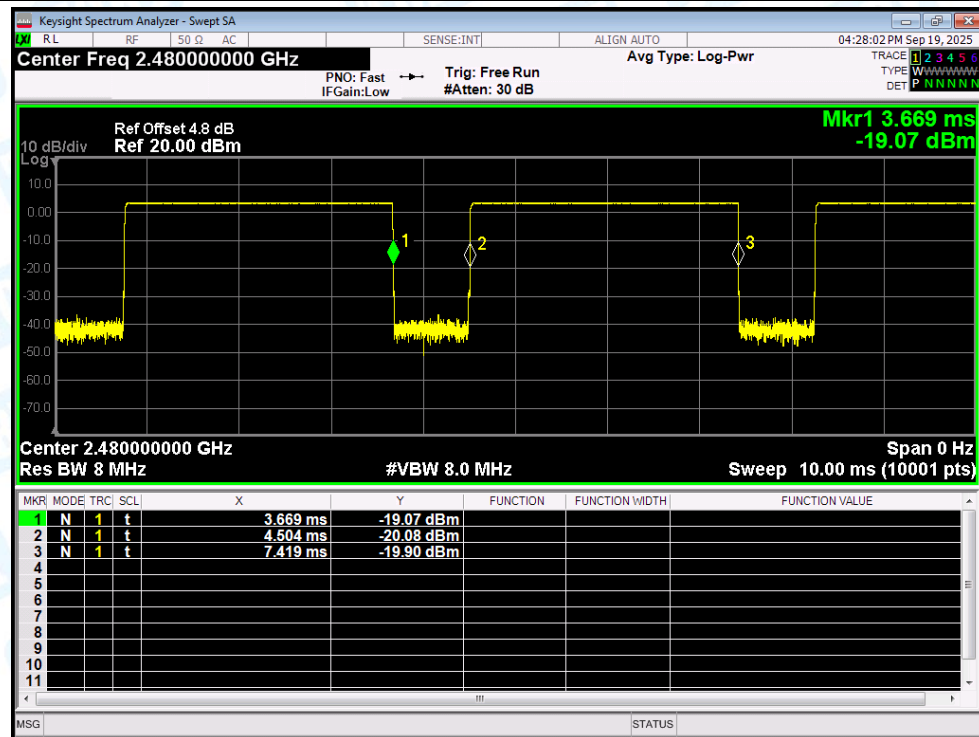
Duty Cycle NVNT 1-DH5 2402MHz Ant1



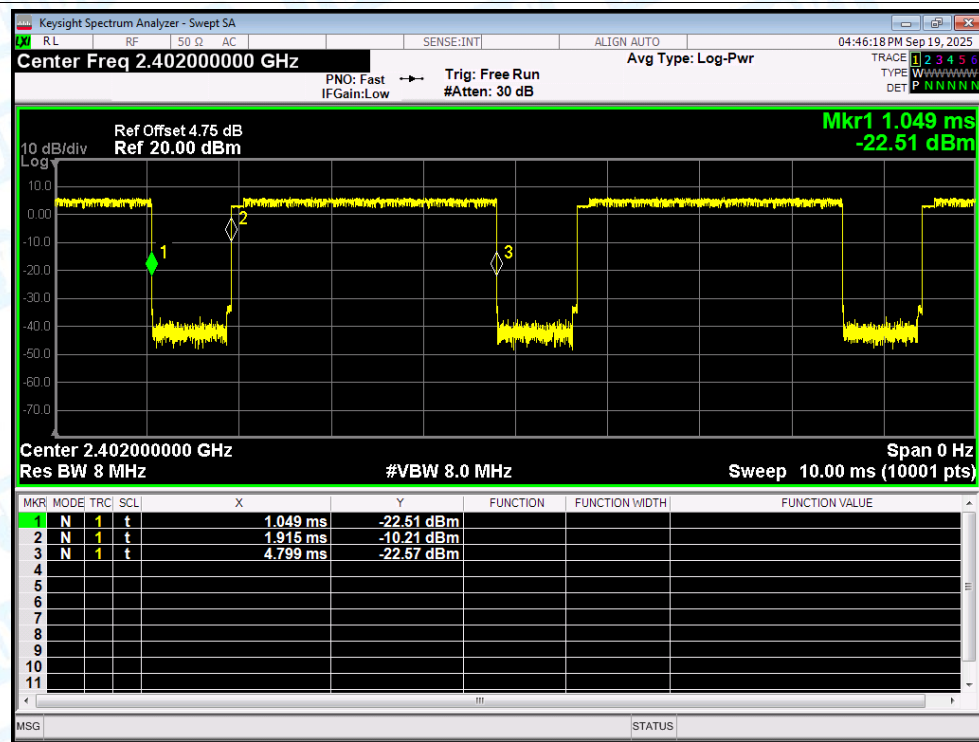
Duty Cycle NVNT 1-DH5 2441MHz Ant1



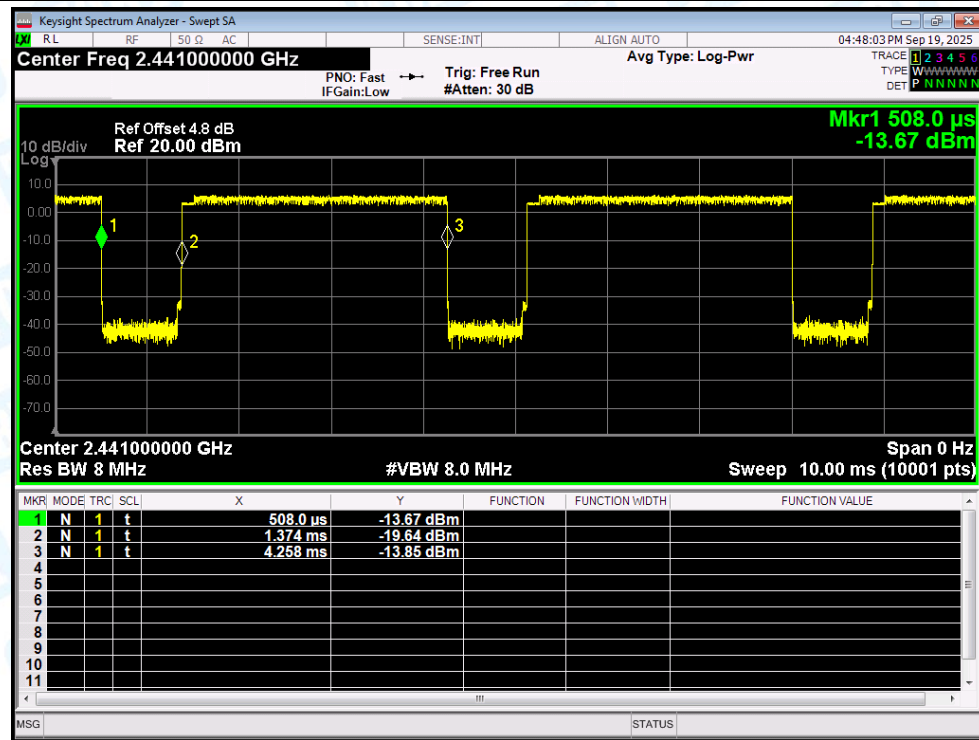
Duty Cycle NVNT 1-DH5 2480MHz Ant1



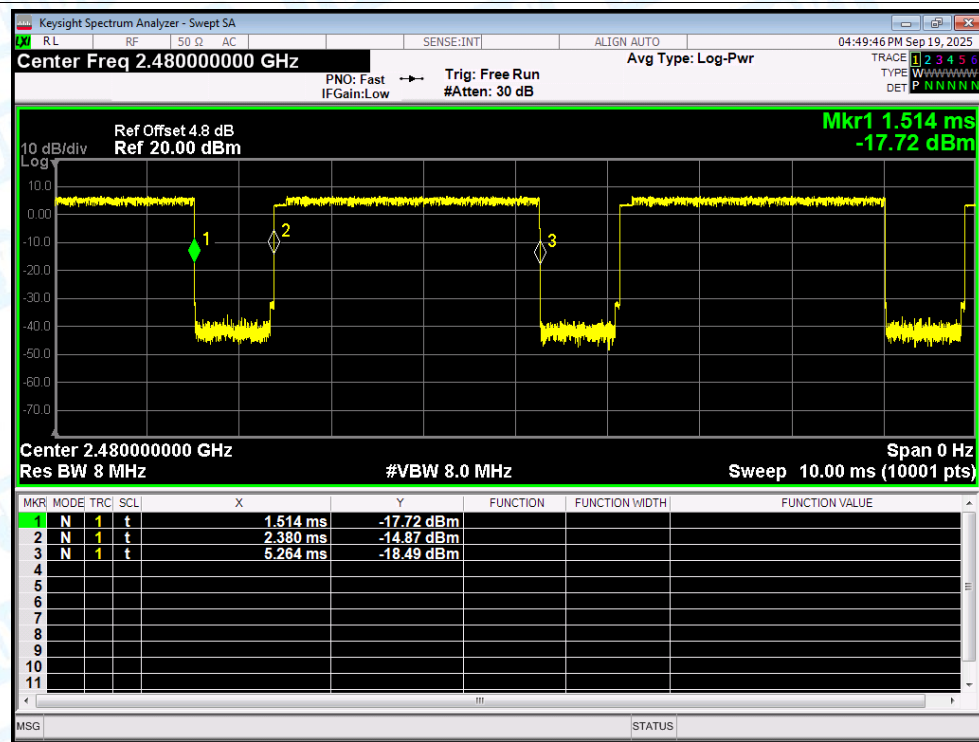
Duty Cycle NVNT 2-DH5 2402MHz Ant1



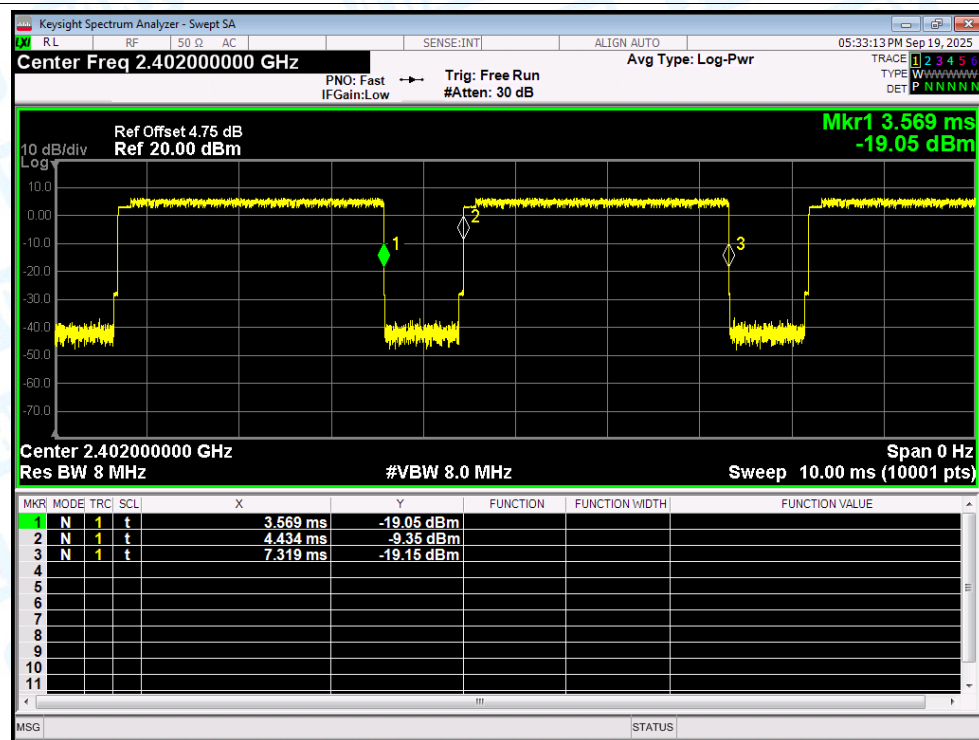
Duty Cycle NVNT 2-DH5 2441MHz Ant1



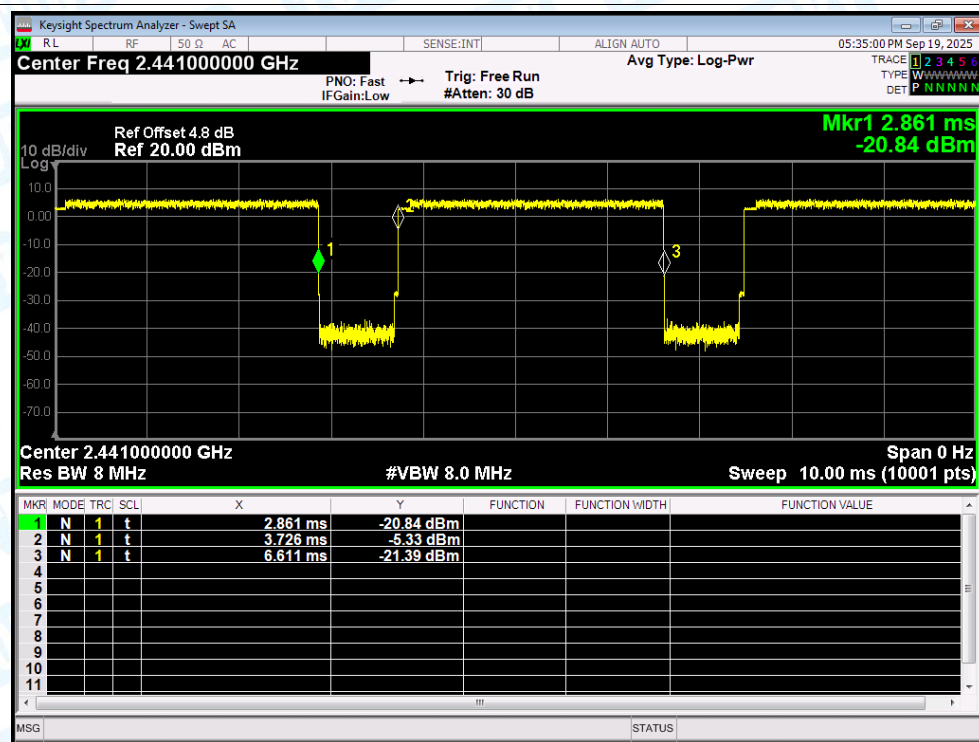
Duty Cycle NVNT 2-DH5 2480MHz Ant1

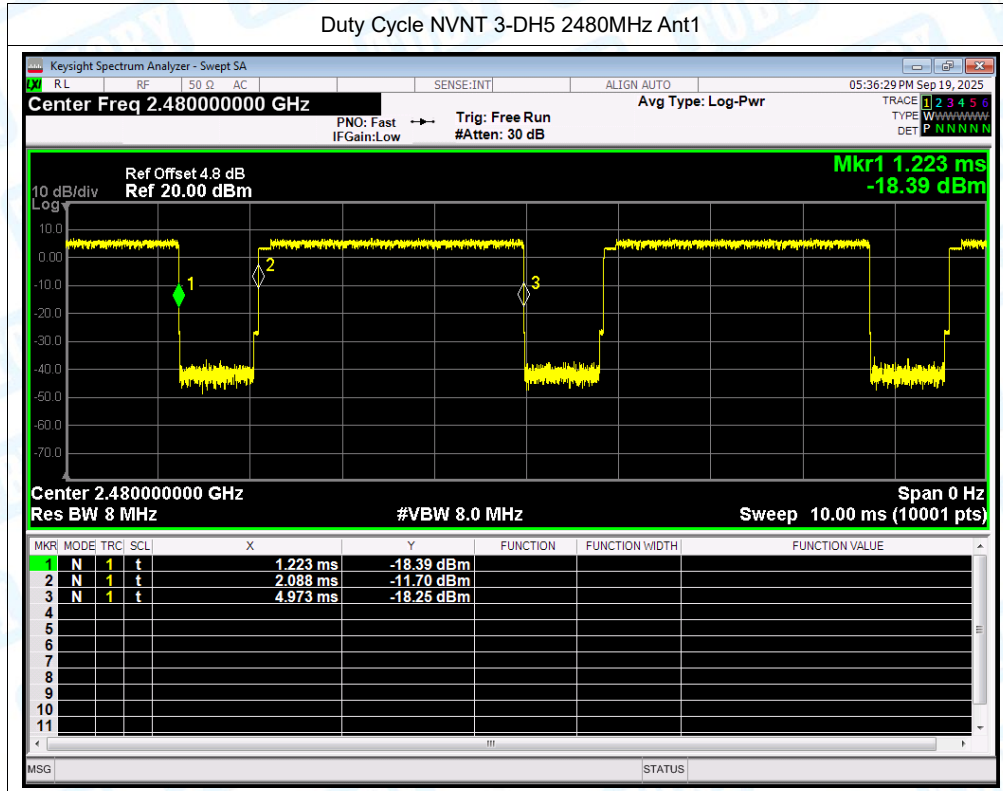


Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1



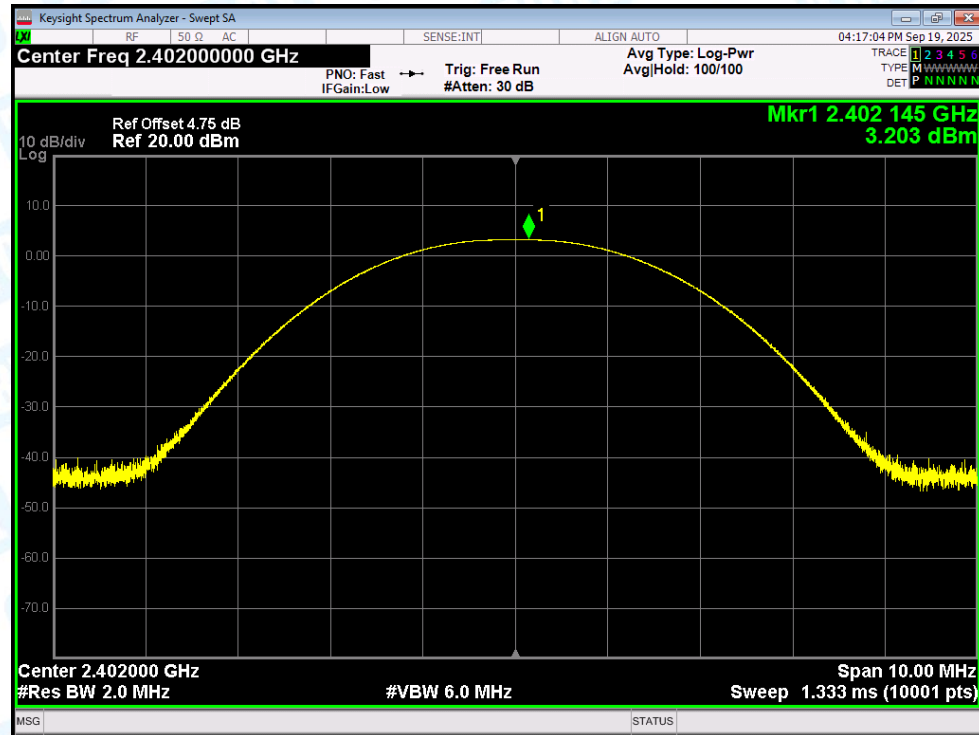


3.Maximum Conducted Output Power

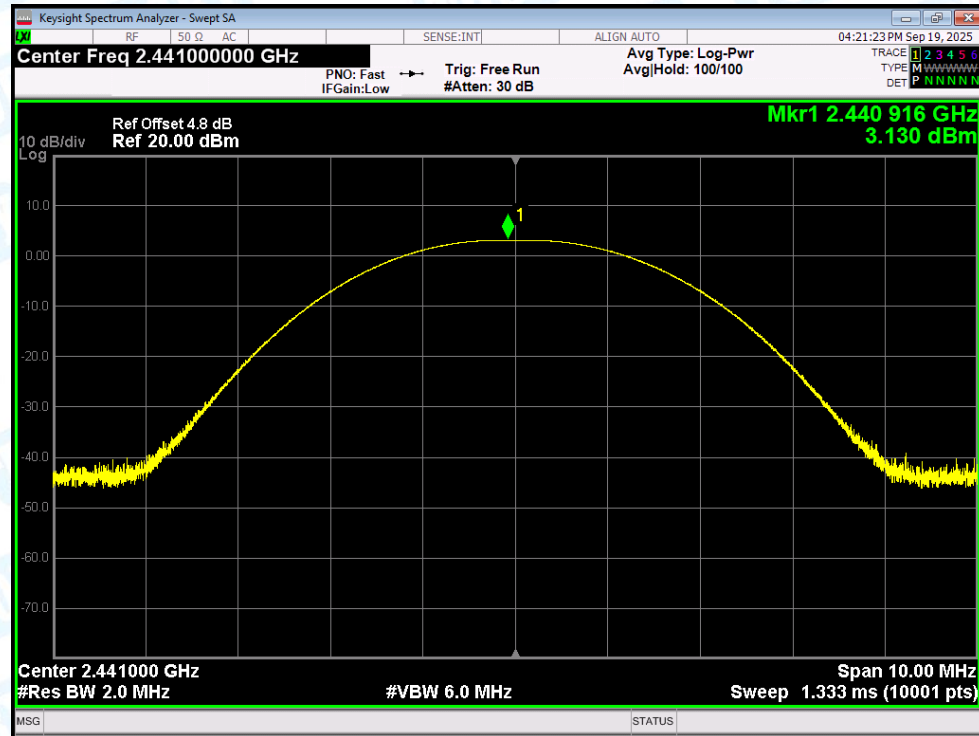
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	3.203	21	Pass
NVNT	1-DH5	2441	Ant1	3.13	21	Pass
NVNT	1-DH5	2480	Ant1	3.26	21	Pass
NVNT	2-DH5	2402	Ant1	5.584	21	Pass
NVNT	2-DH5	2441	Ant1	5.762	21	Pass
NVNT	2-DH5	2480	Ant1	6.062	21	Pass
NVNT	3-DH5	2402	Ant1	5.939	21	Pass
NVNT	3-DH5	2441	Ant1	5.984	21	Pass
NVNT	3-DH5	2480	Ant1	6.516	21	Pass

Test Graphs

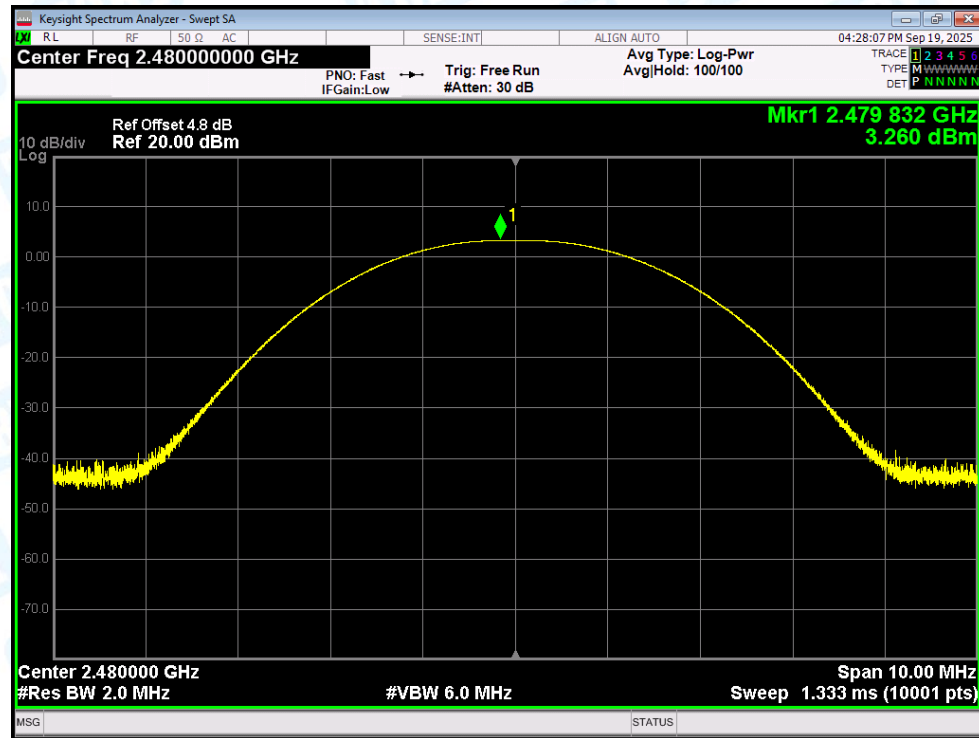
Power NVNT 1-DH5 2402MHz Ant1



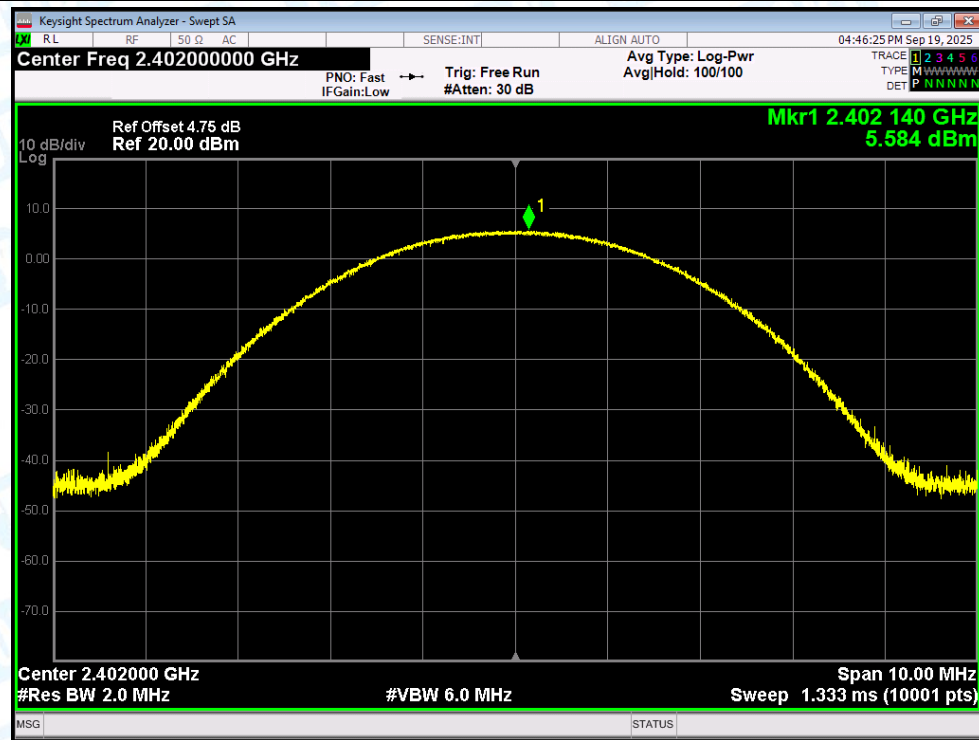
Power NVNT 1-DH5 2441MHz Ant1



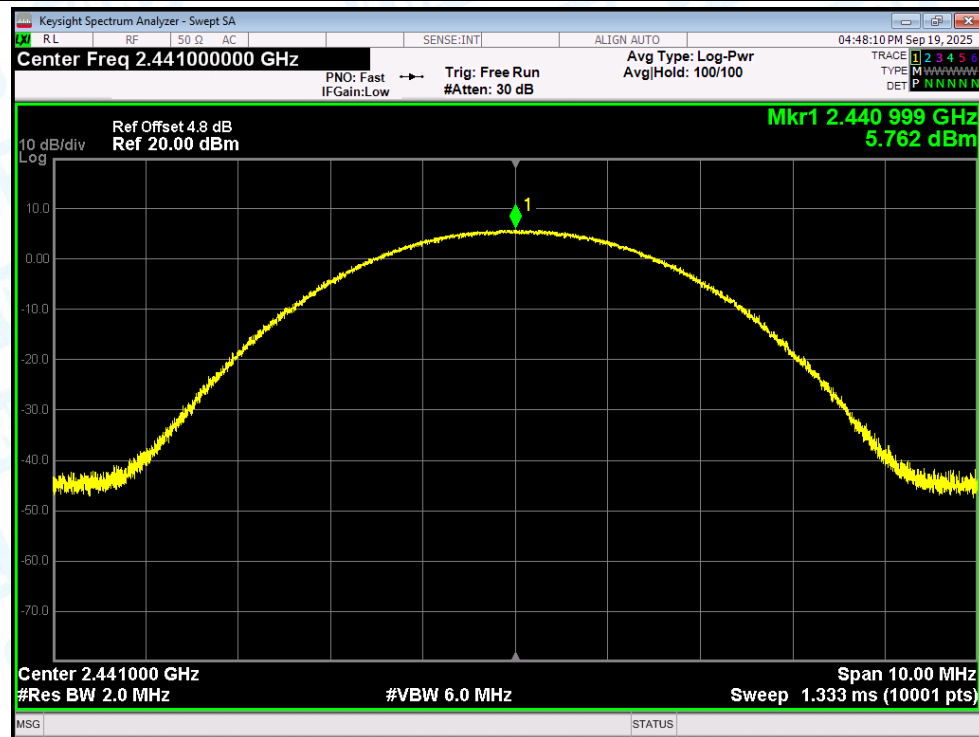
Power NVNT 1-DH5 2480MHz Ant1



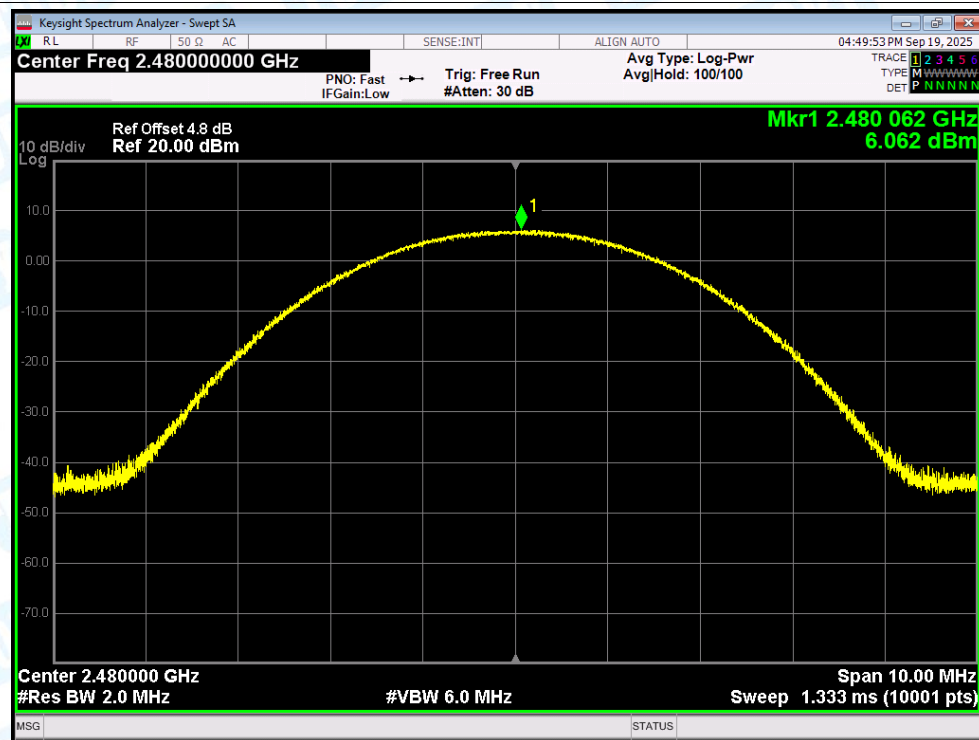
Power NVNT 2-DH5 2402MHz Ant1



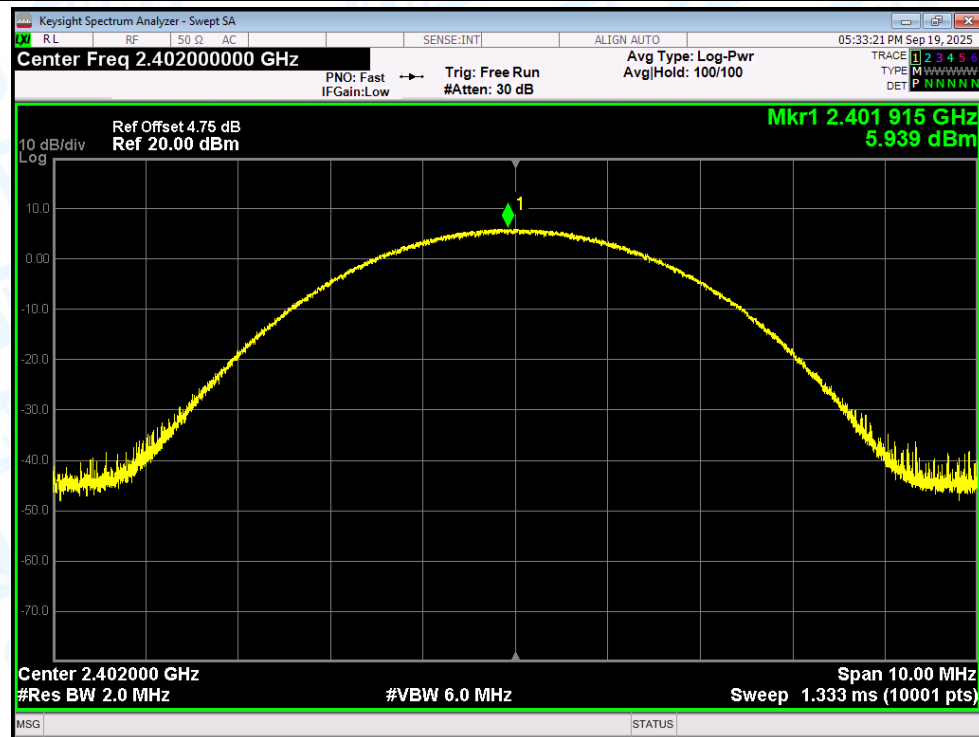
Power NVNT 2-DH5 2441MHz Ant1



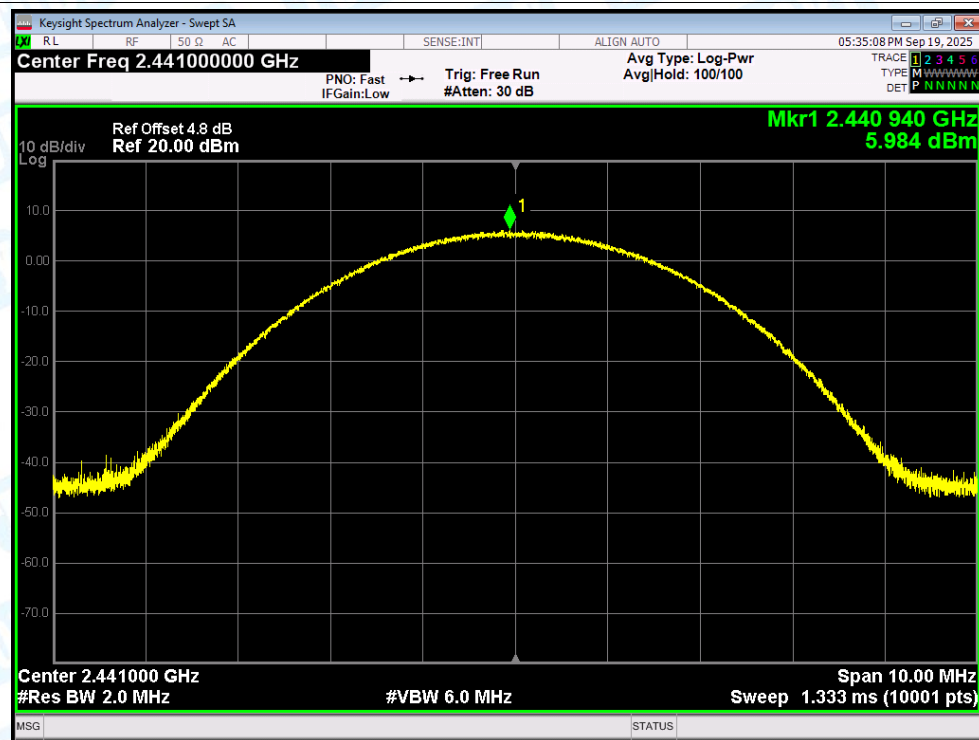
Power NVNT 2-DH5 2480MHz Ant1

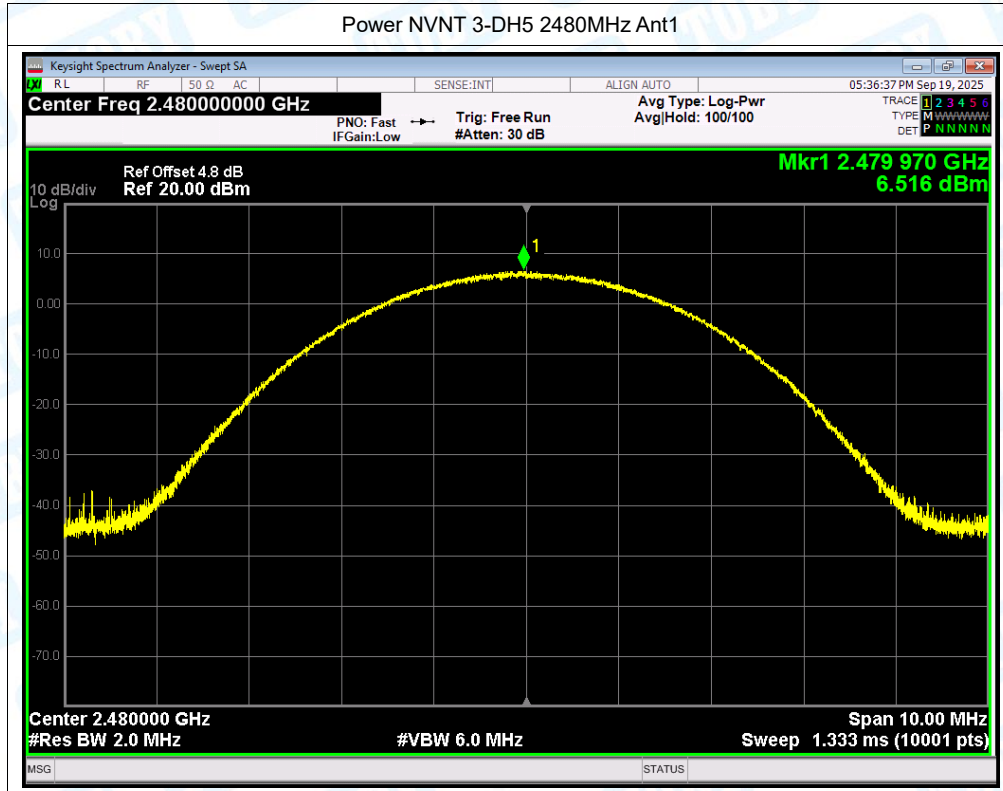


Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



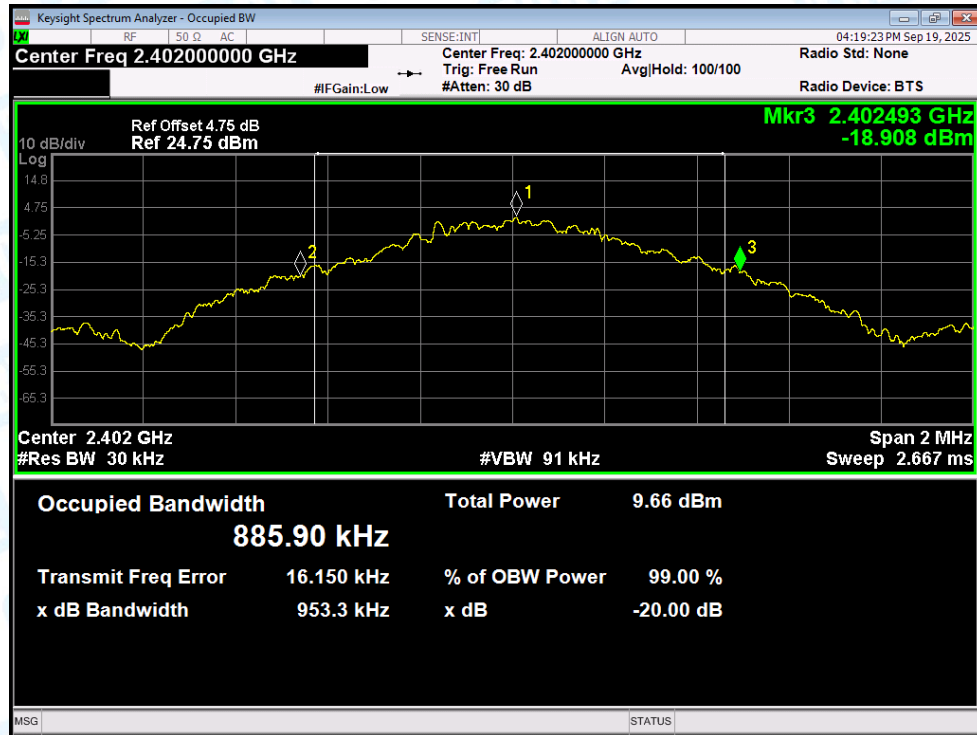


4.-20dB Bandwidth

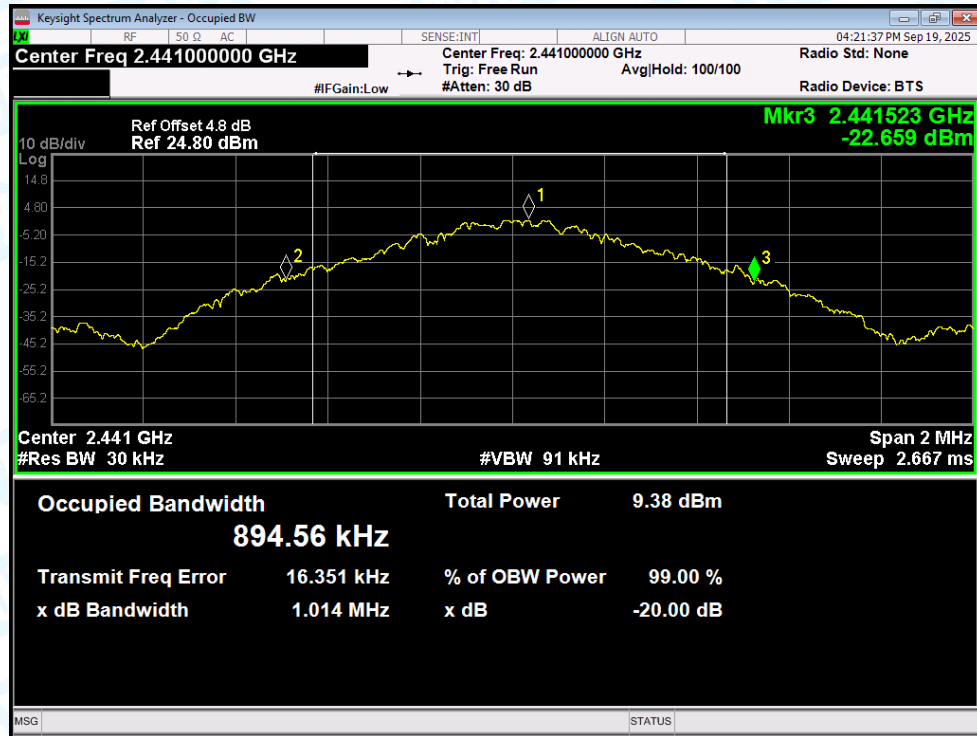
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.95	0	Pass
NVNT	1-DH5	2441	Ant1	1.01	0	Pass
NVNT	1-DH5	2480	Ant1	0.96	0	Pass
NVNT	2-DH5	2402	Ant1	1.32	0	Pass
NVNT	2-DH5	2441	Ant1	1.32	0	Pass
NVNT	2-DH5	2480	Ant1	1.33	0	Pass
NVNT	3-DH5	2402	Ant1	1.33	0	Pass
NVNT	3-DH5	2441	Ant1	1.32	0	Pass
NVNT	3-DH5	2480	Ant1	1.34	0	Pass

Test Graphs

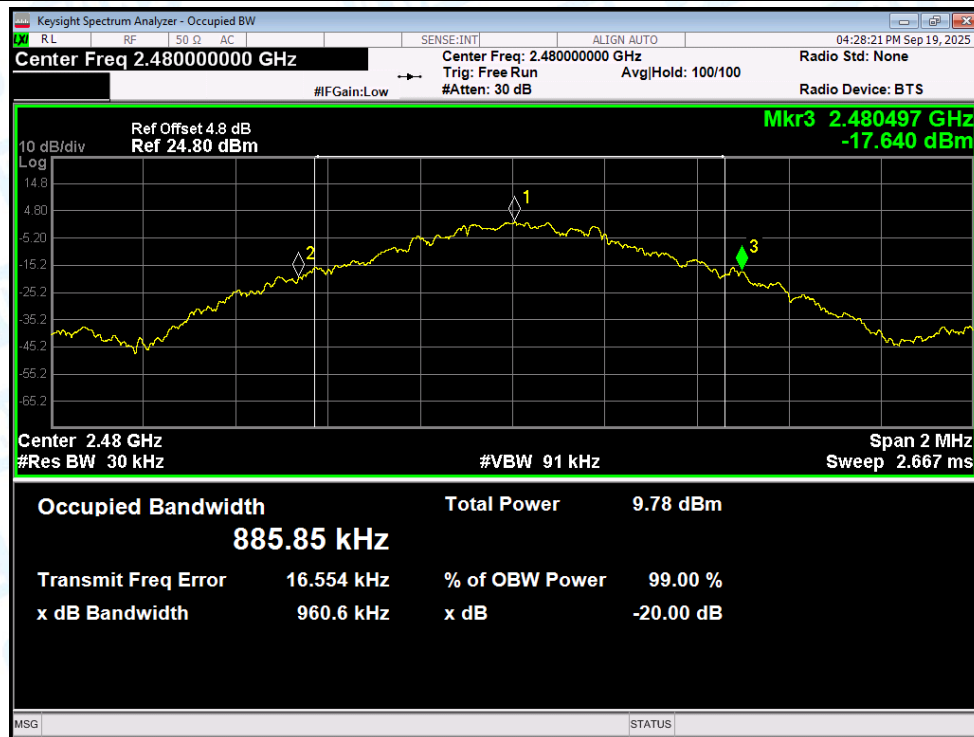
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



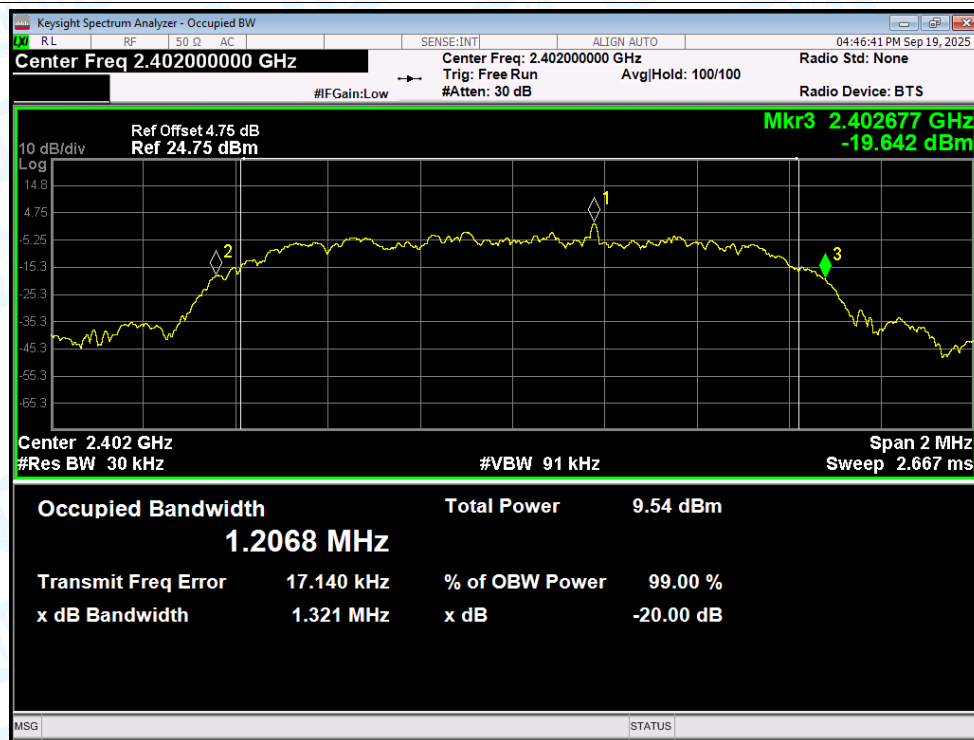
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



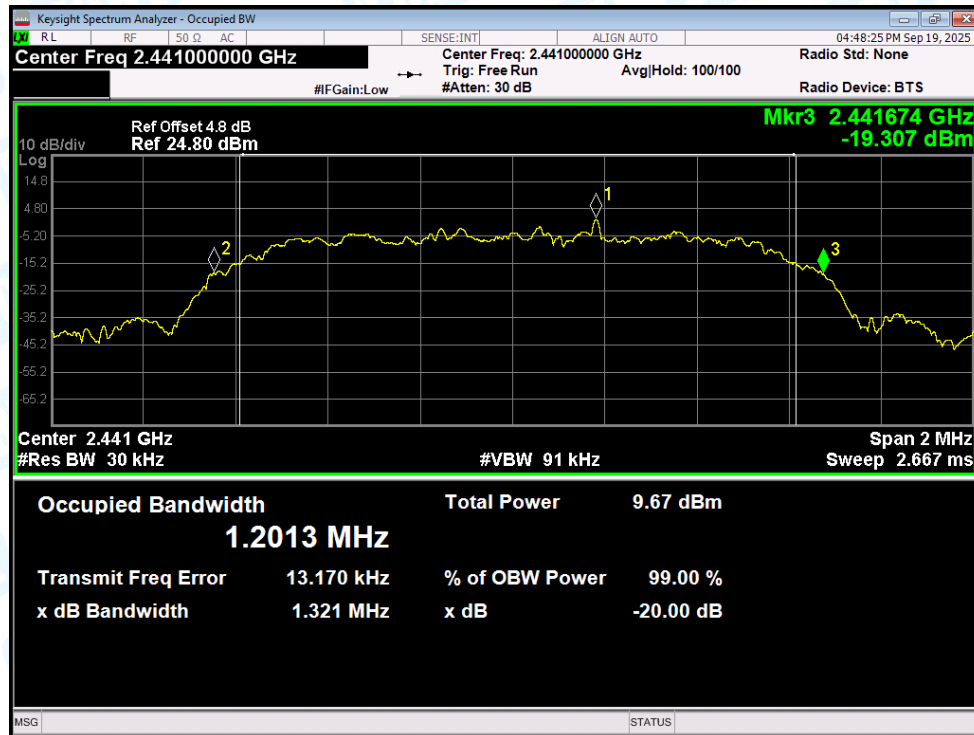
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



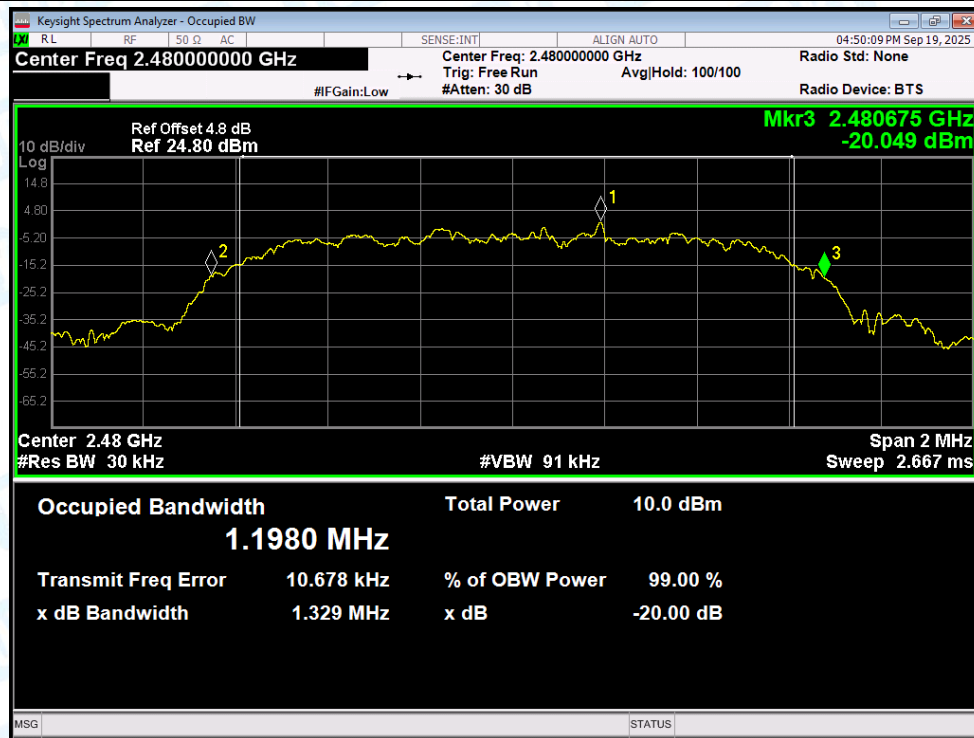
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



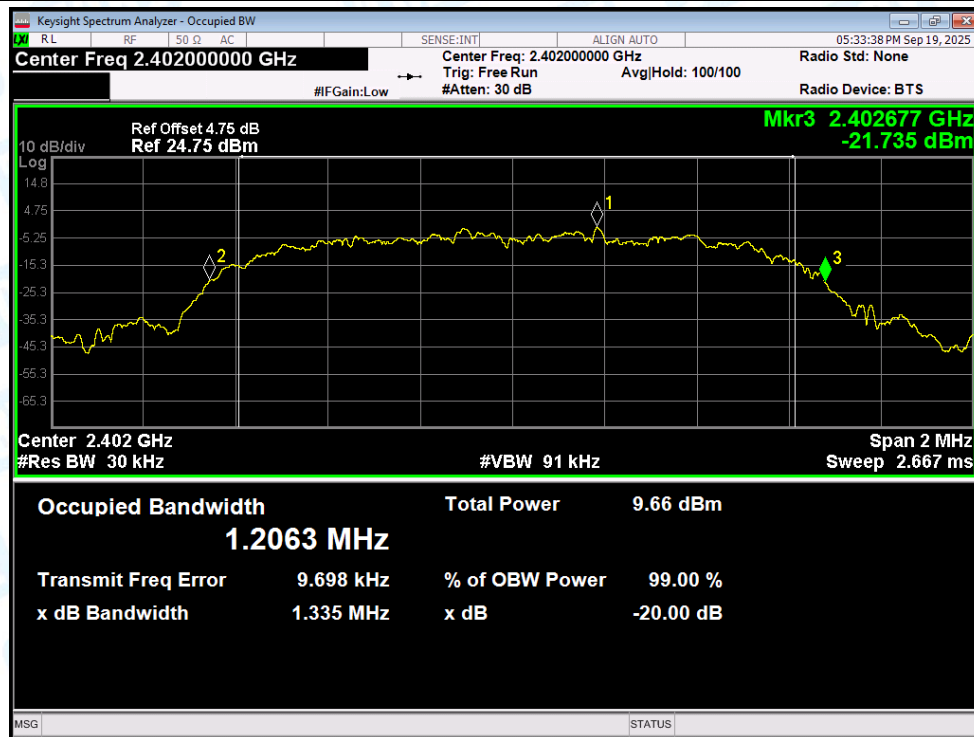
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



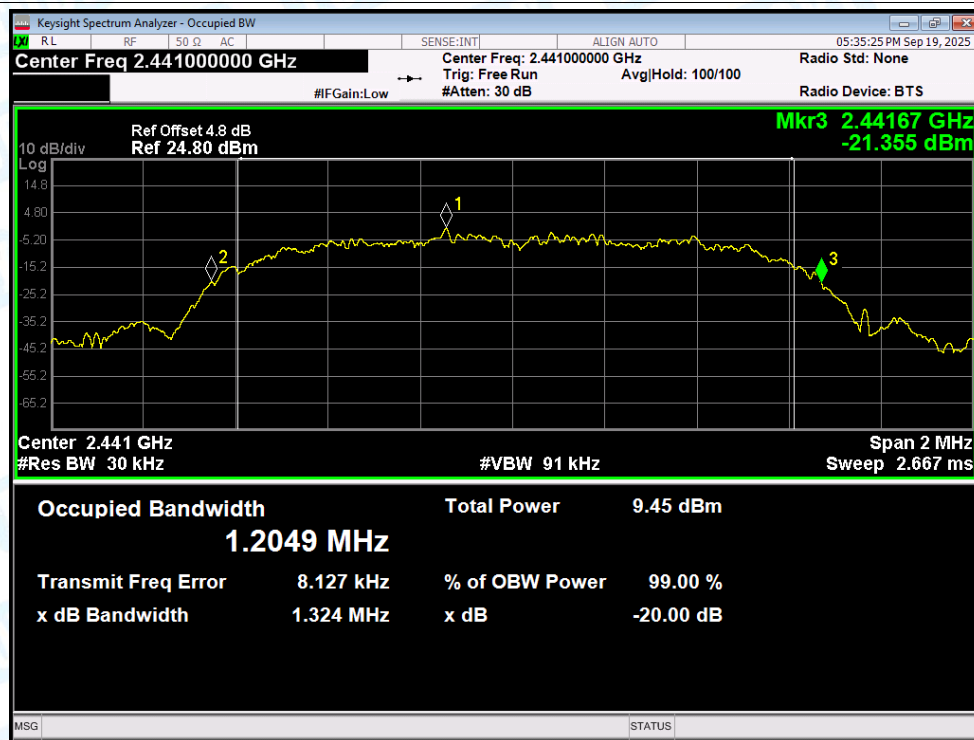
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

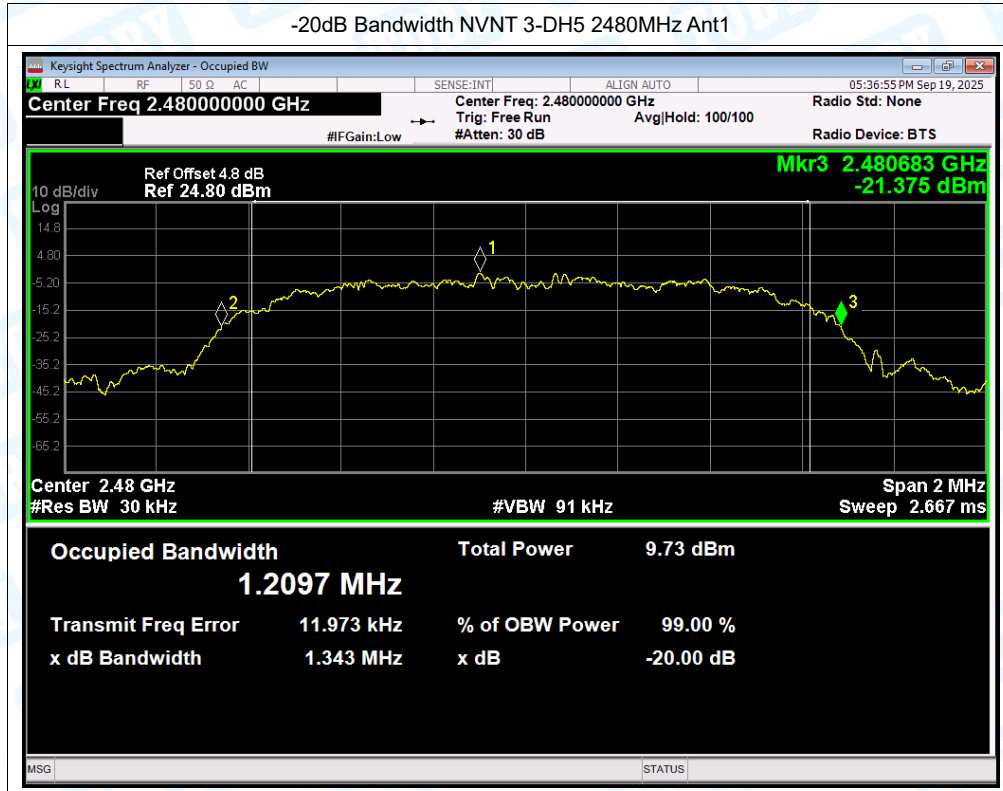


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



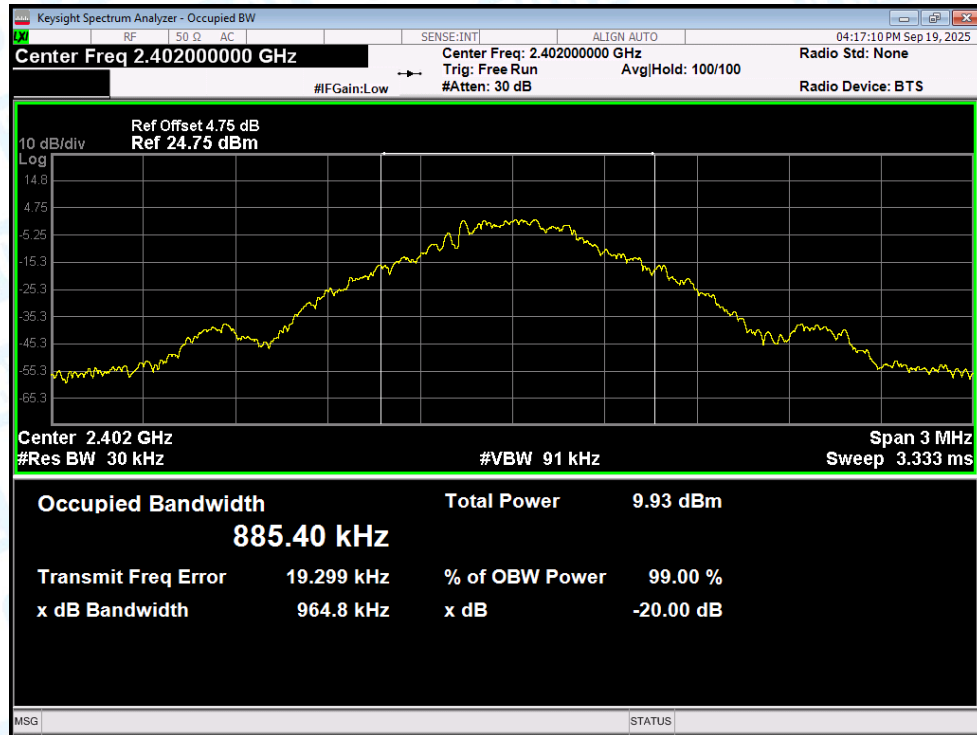


5.Occupied Channel Bandwidth

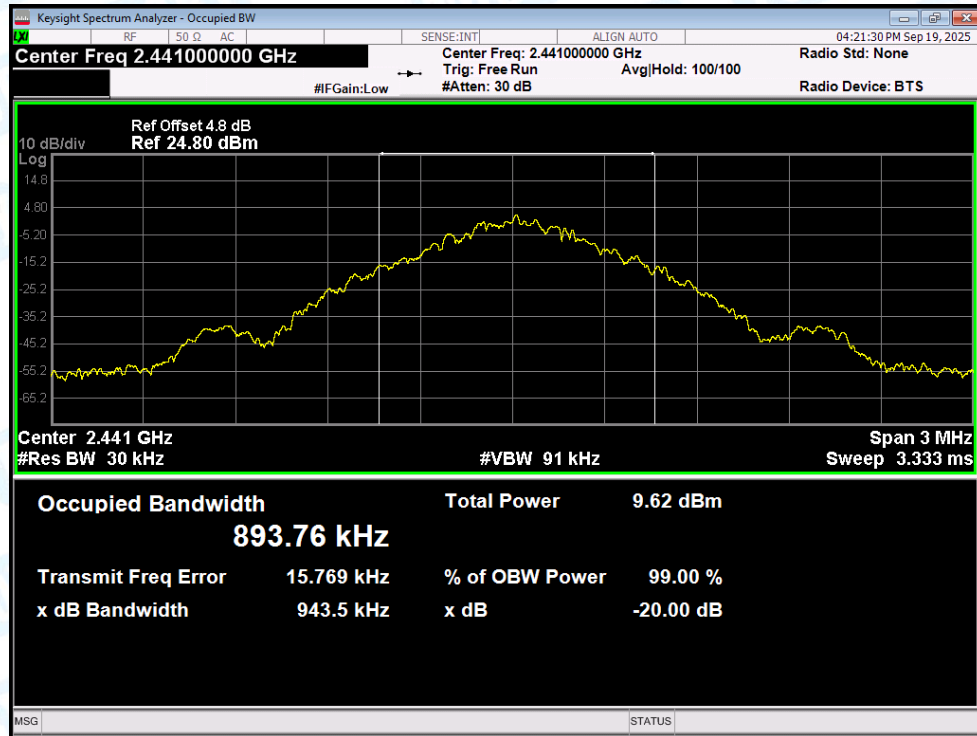
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH5	2402	Ant1	0.885
NVNT	1-DH5	2441	Ant1	0.894
NVNT	1-DH5	2480	Ant1	0.893
NVNT	2-DH5	2402	Ant1	1.2
NVNT	2-DH5	2441	Ant1	1.194
NVNT	2-DH5	2480	Ant1	1.21
NVNT	3-DH5	2402	Ant1	1.21
NVNT	3-DH5	2441	Ant1	1.205
NVNT	3-DH5	2480	Ant1	1.21

Test Graphs

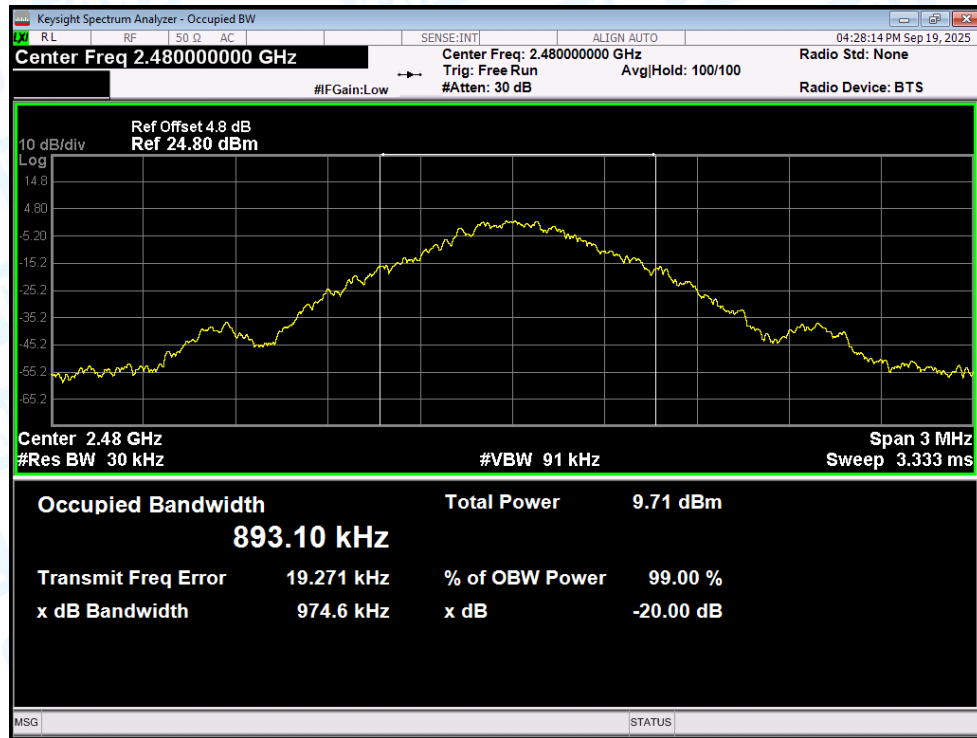
OBW NVNT 1-DH5 2402MHz Ant1



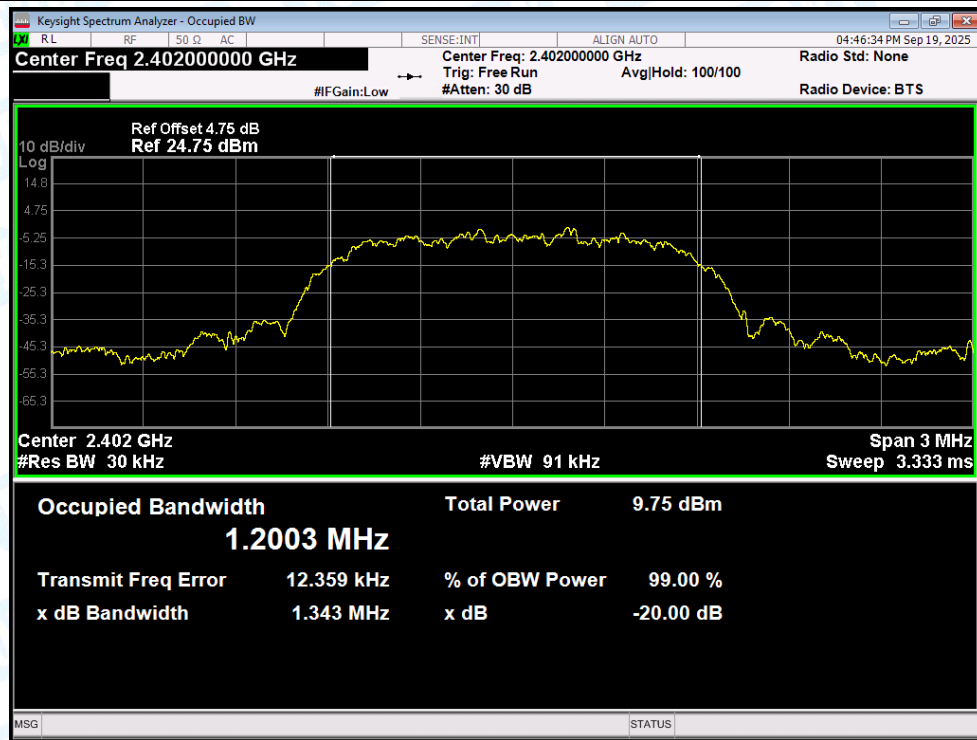
OBW NVNT 1-DH5 2441MHz Ant1



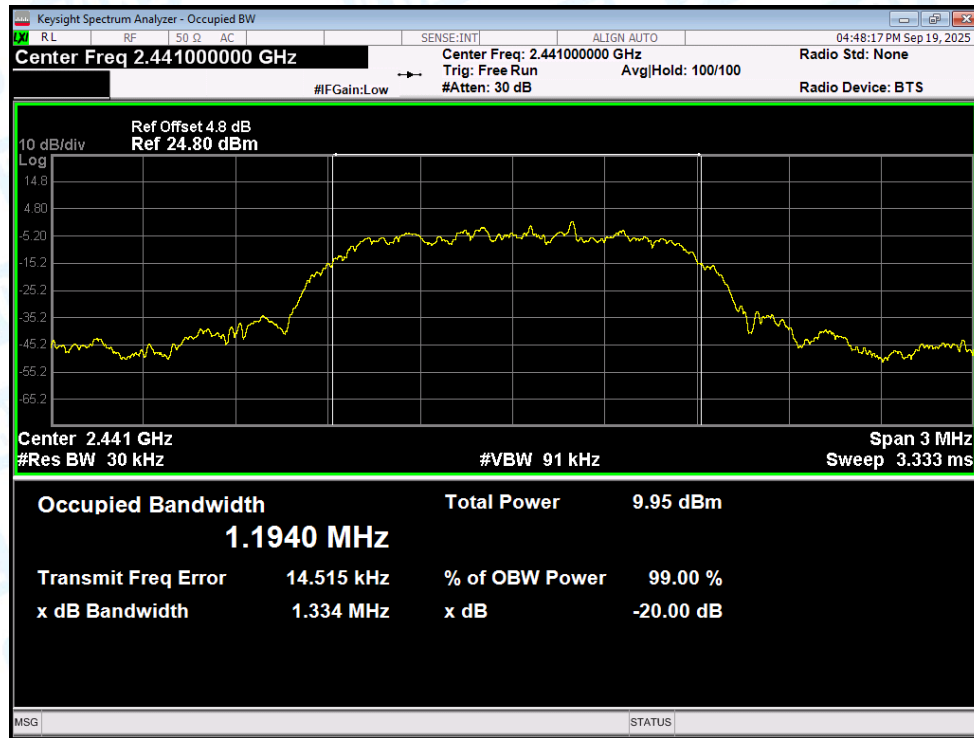
OBW NVNT 1-DH5 2480MHz Ant1



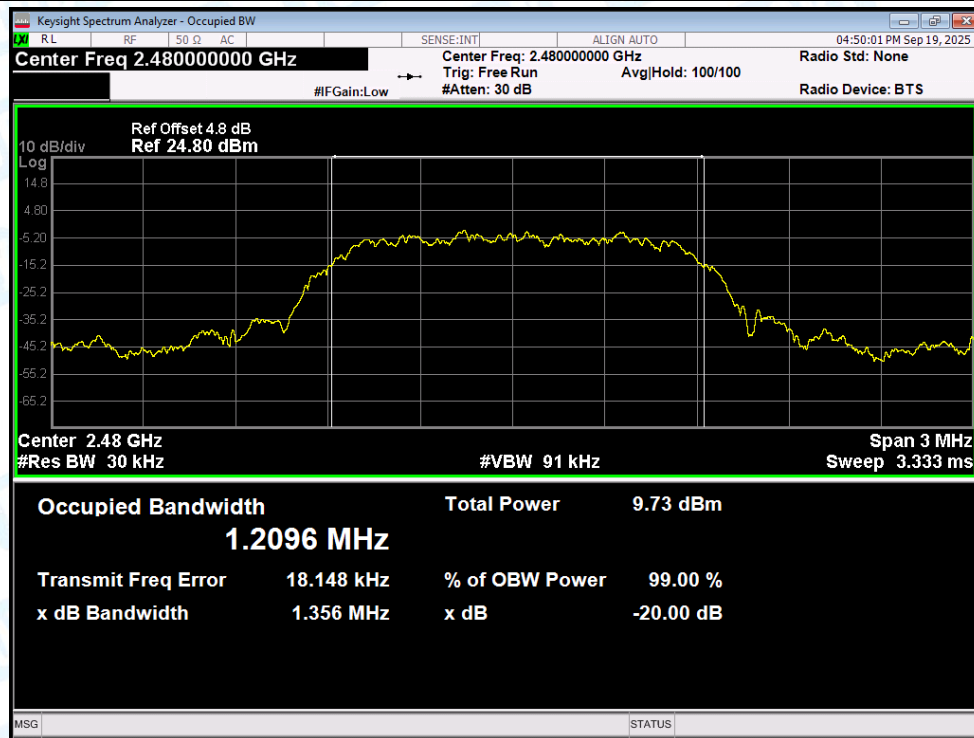
OBW NVNT 2-DH5 2402MHz Ant1



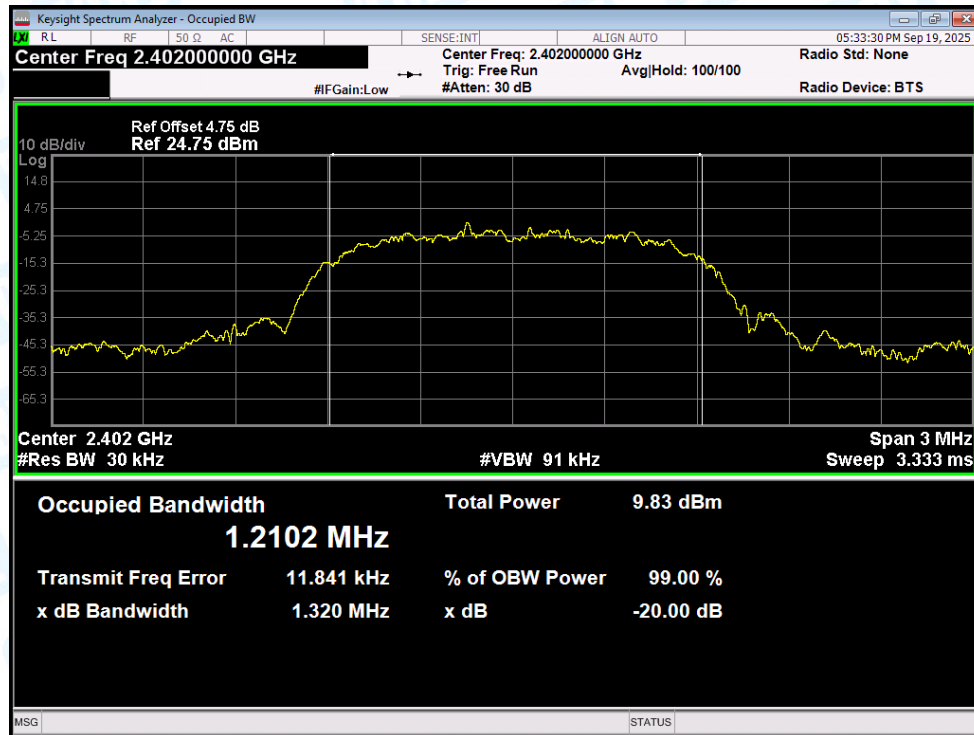
OBW NVNT 2-DH5 2441MHz Ant1



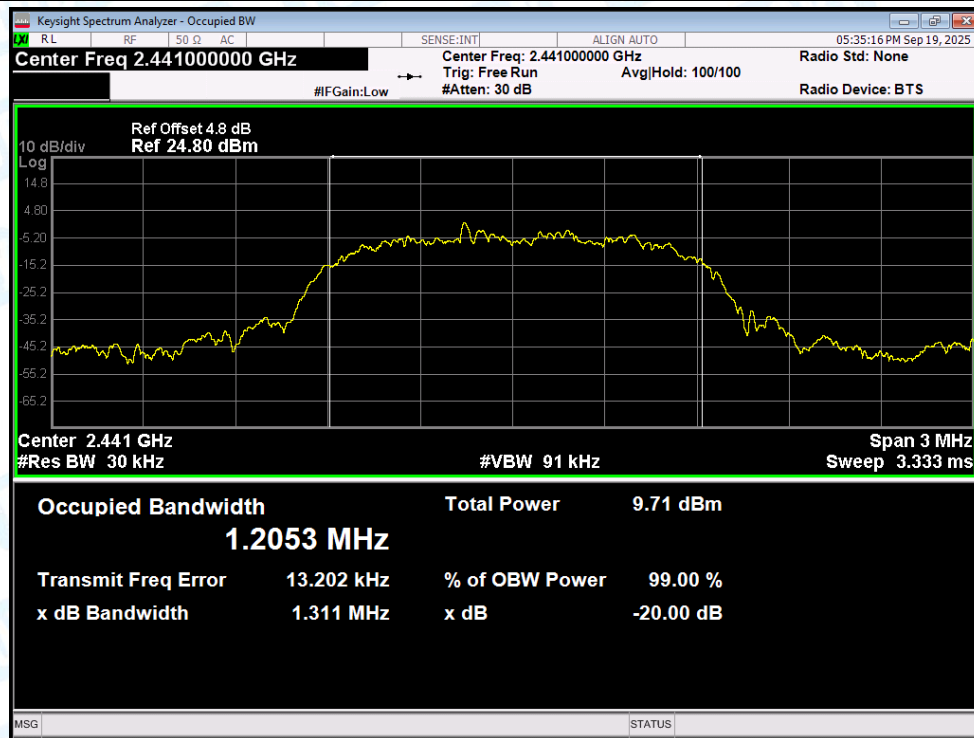
OBW NVNT 2-DH5 2480MHz Ant1

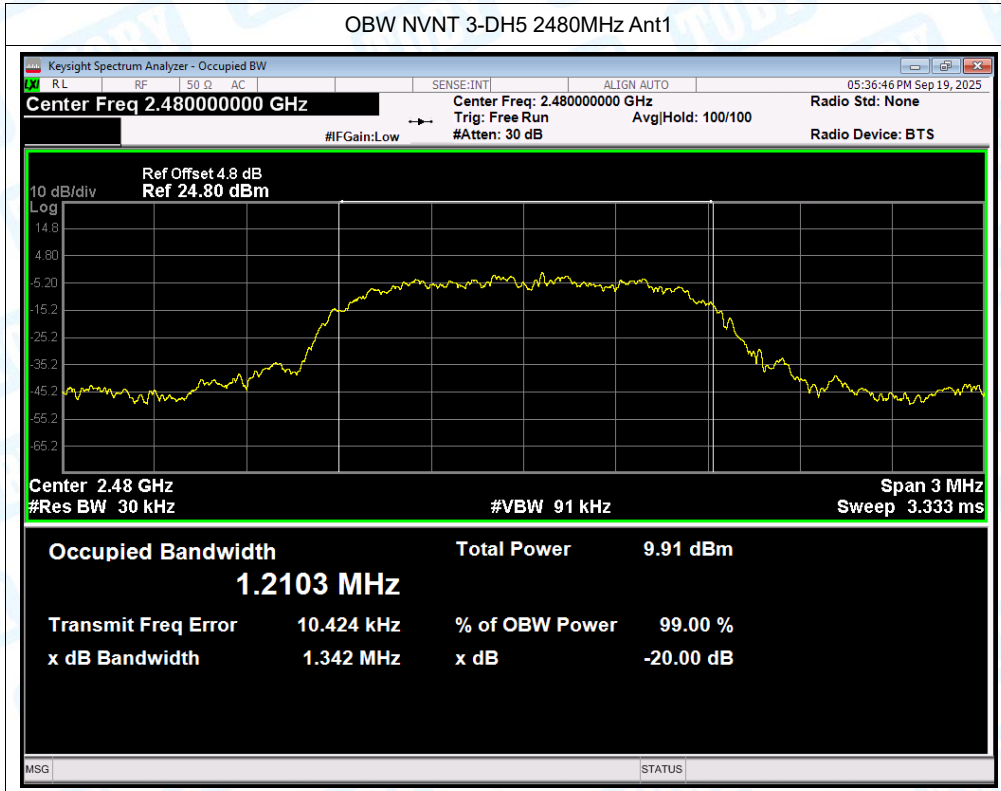


OBW NVNT 3-DH5 2402MHz Ant1



OBW NVNT 3-DH5 2441MHz Ant1



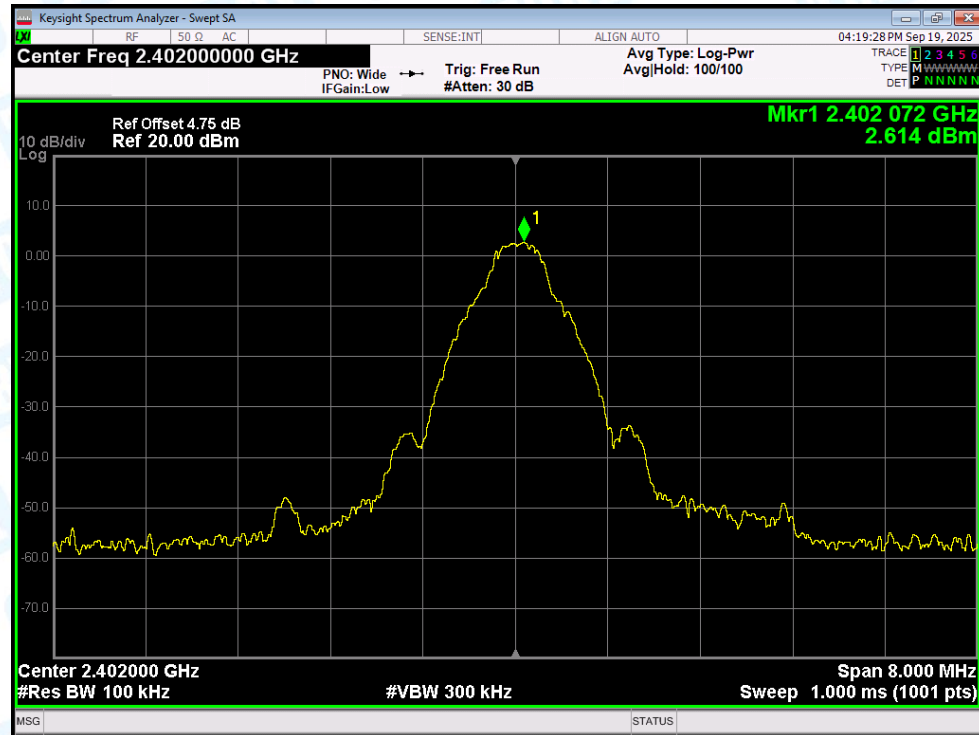


6.Band Edge

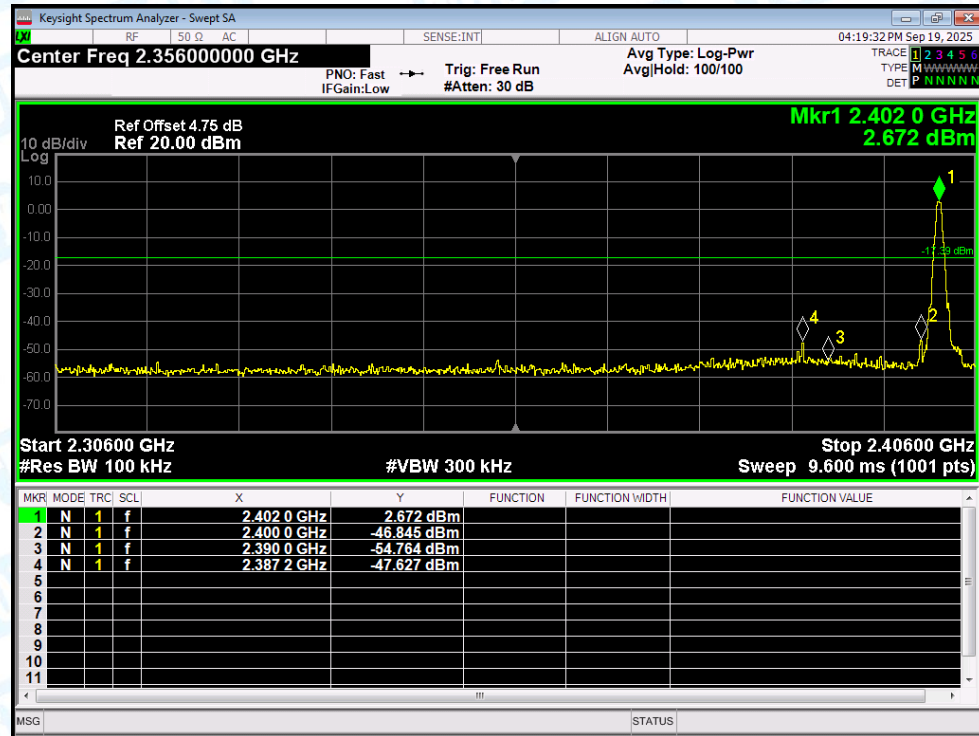
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-50.24	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-53.22	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-55.94	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-56.78	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-49.92	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-55.29	-20	Pass

Test Graphs

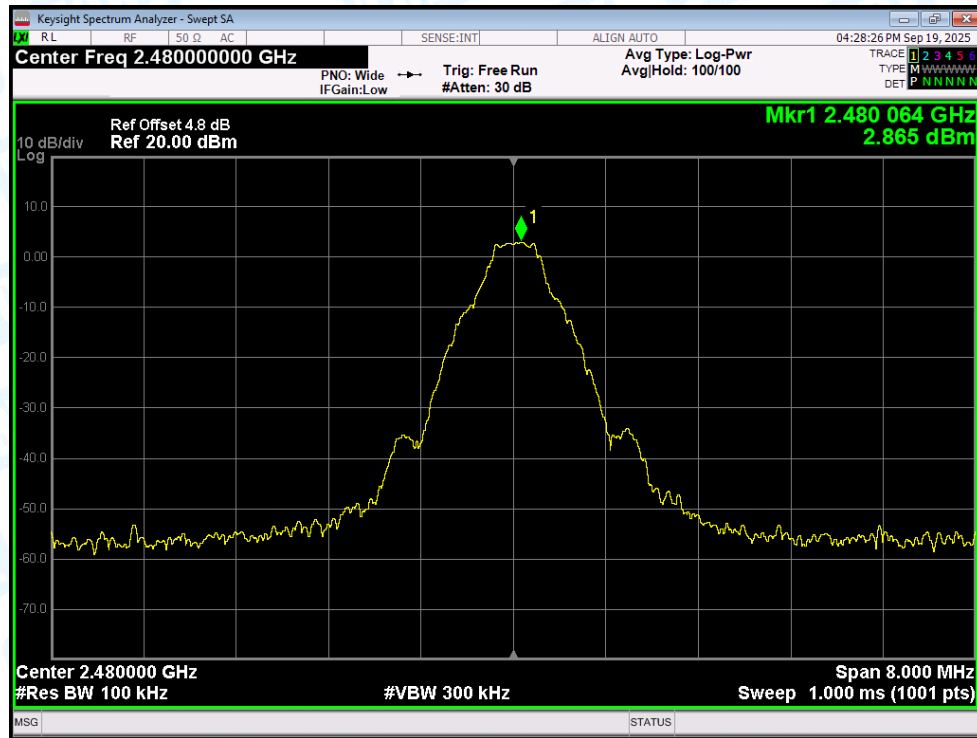
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



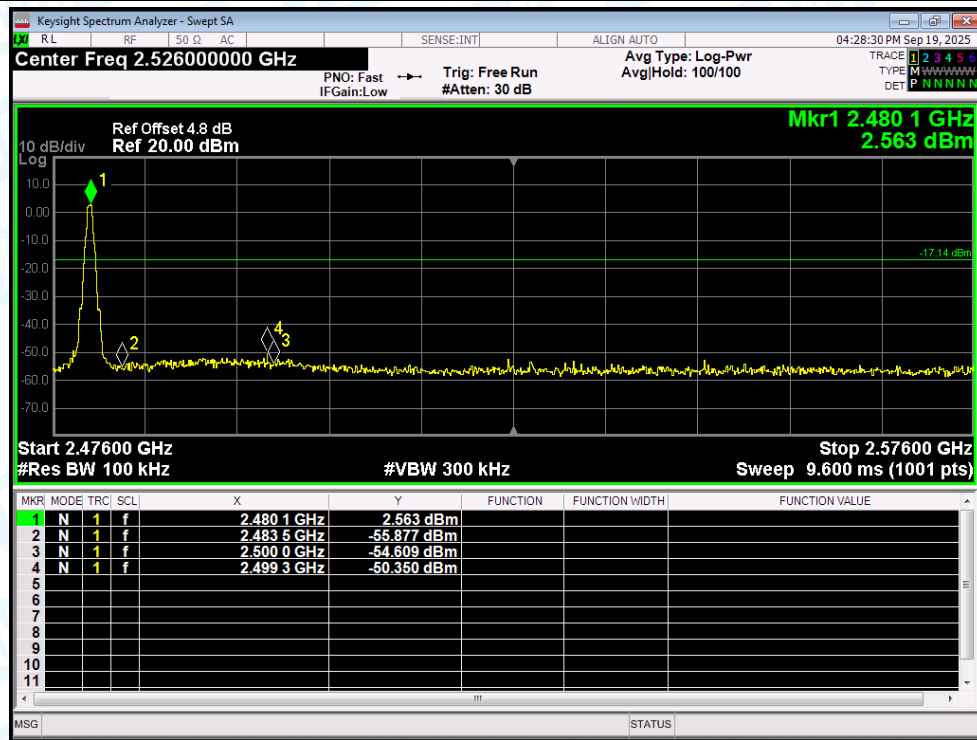
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

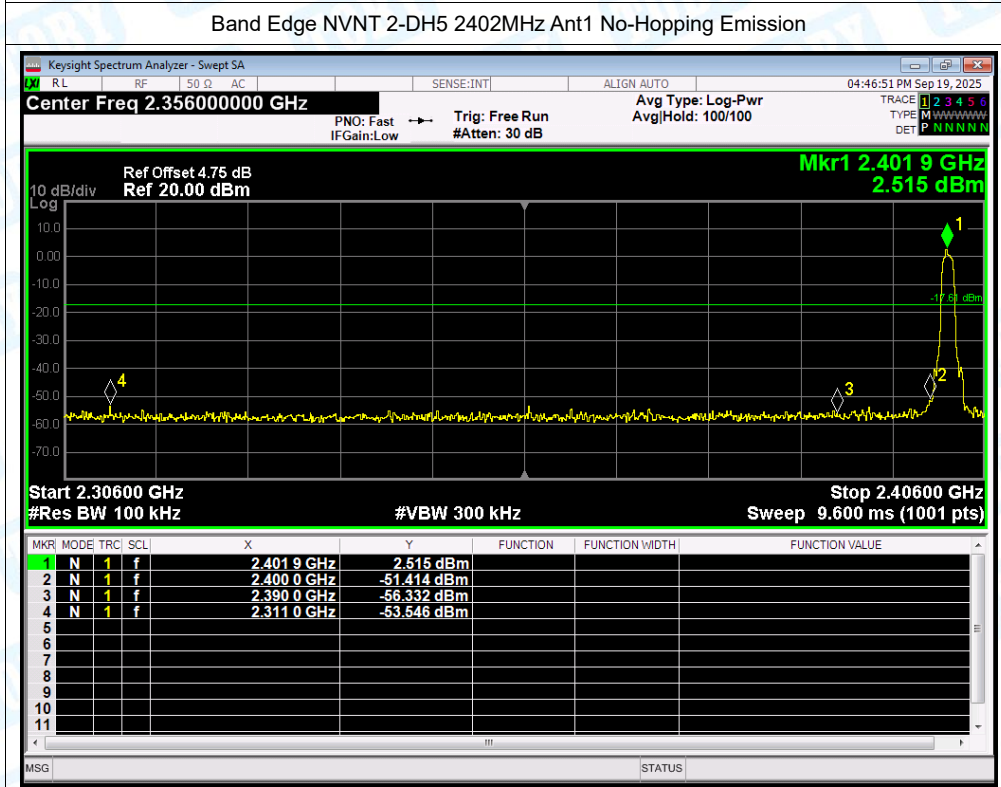
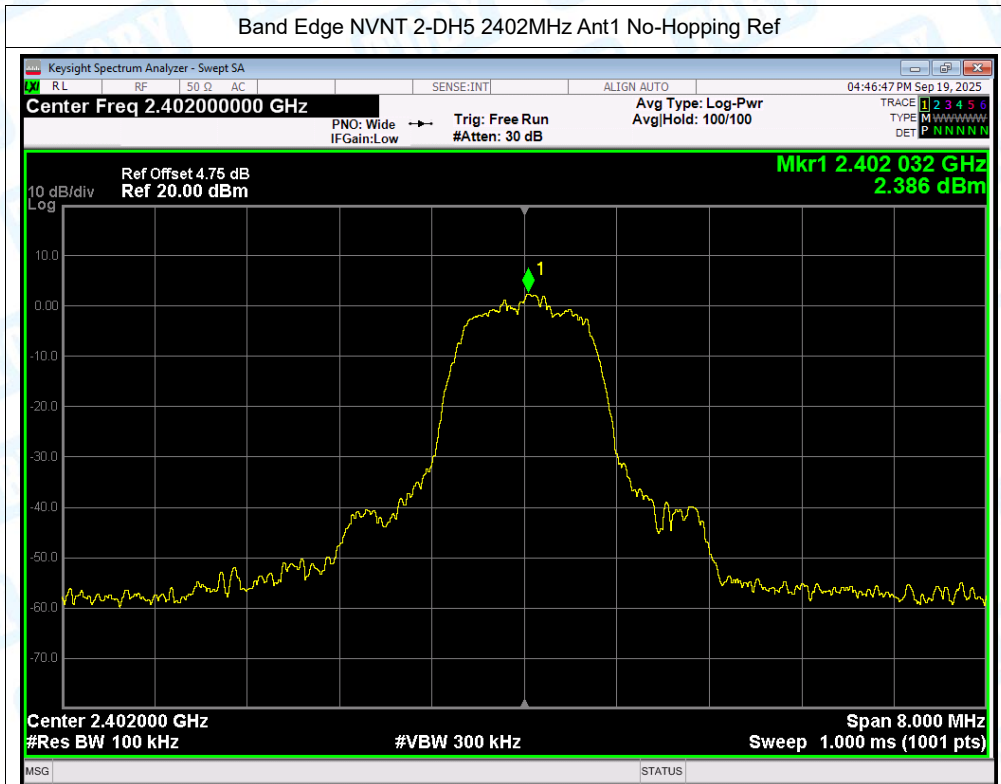


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

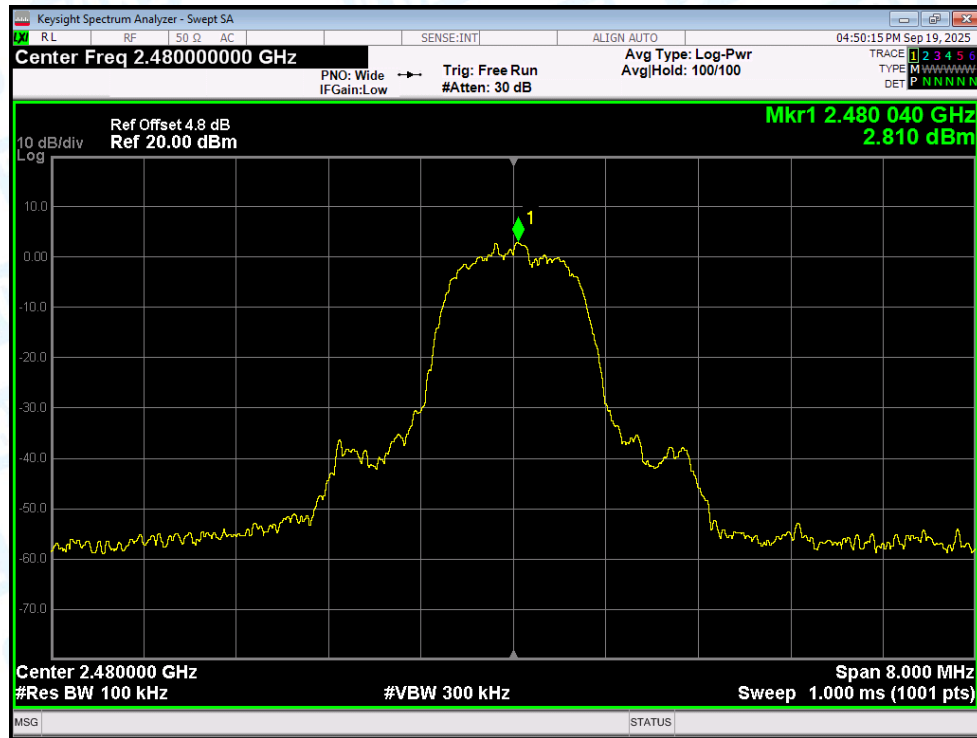


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

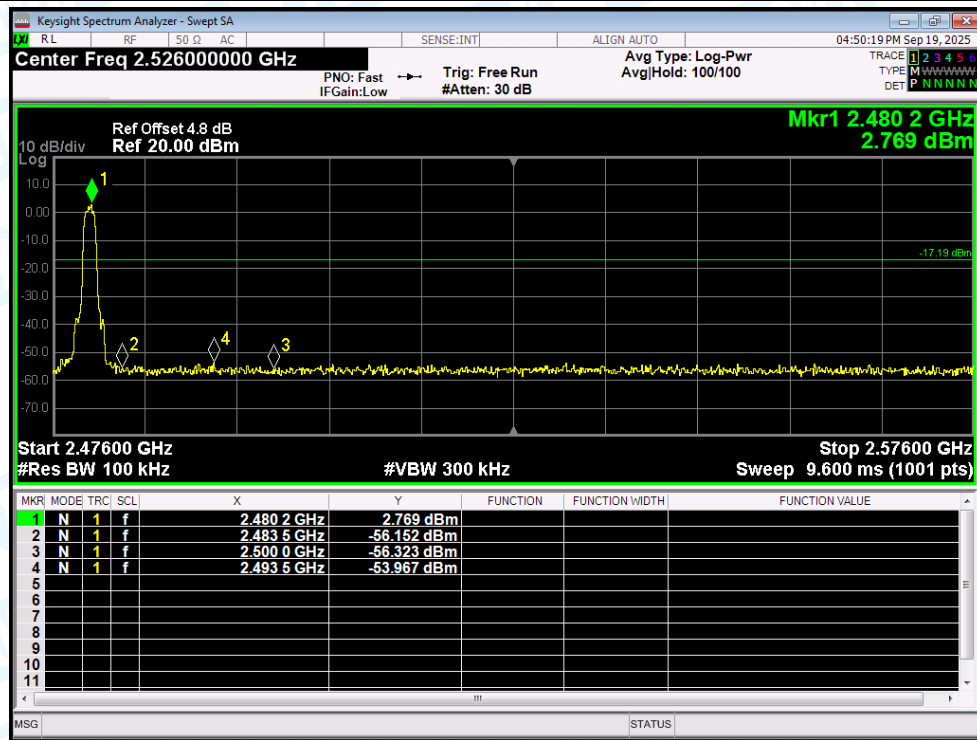


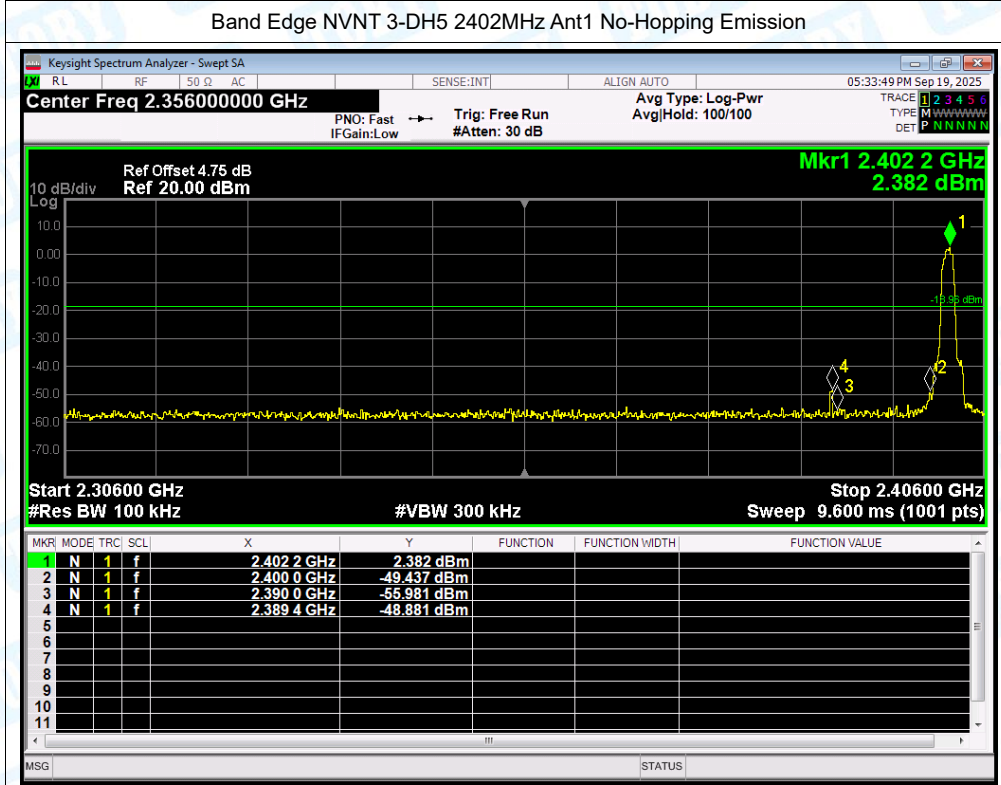
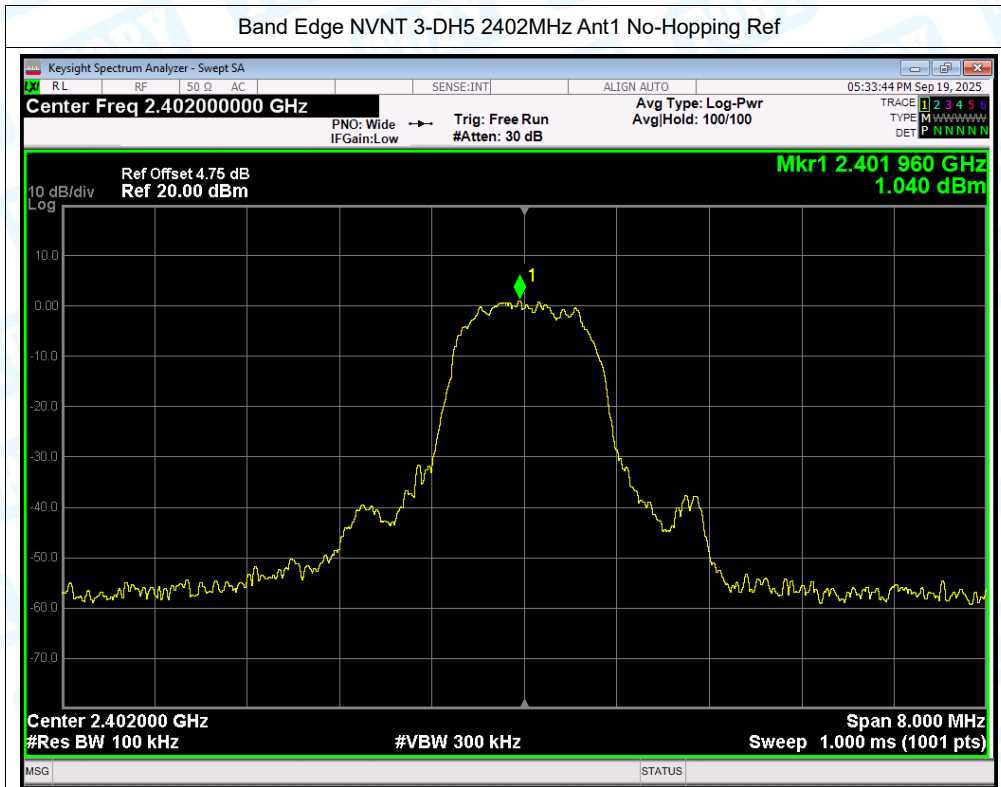


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref

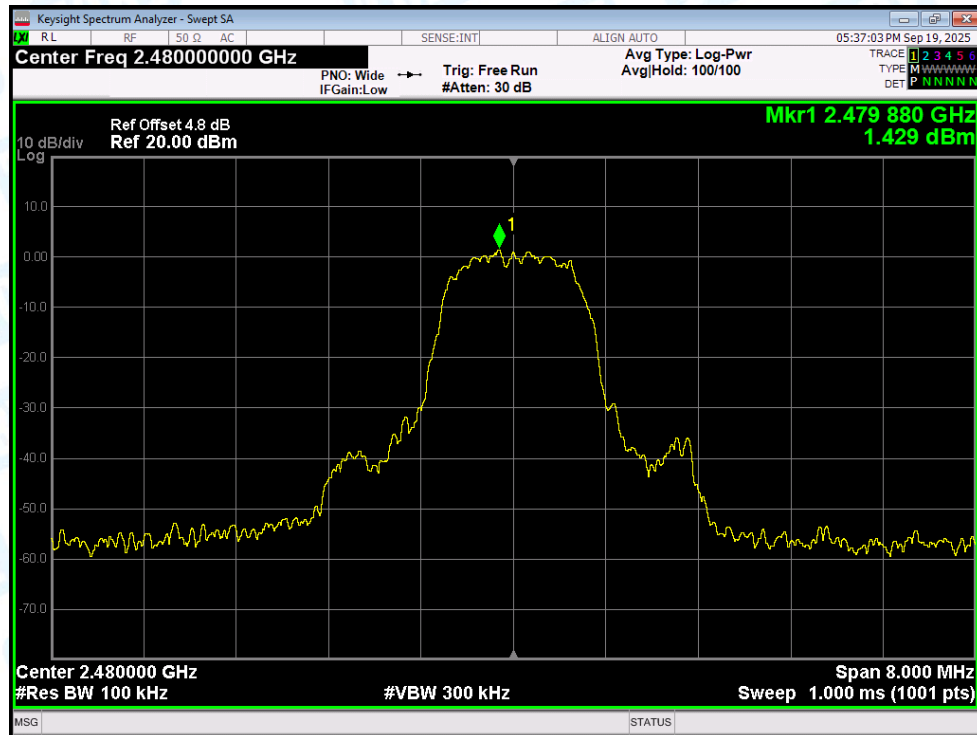


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

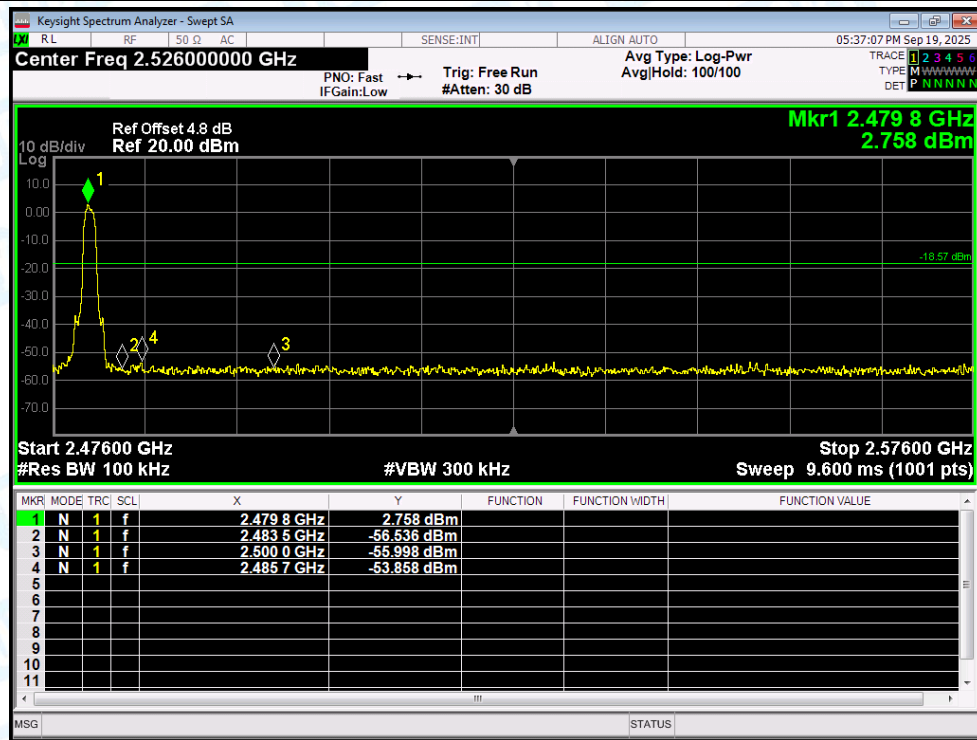




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission



7. Band Edge(Hopping)

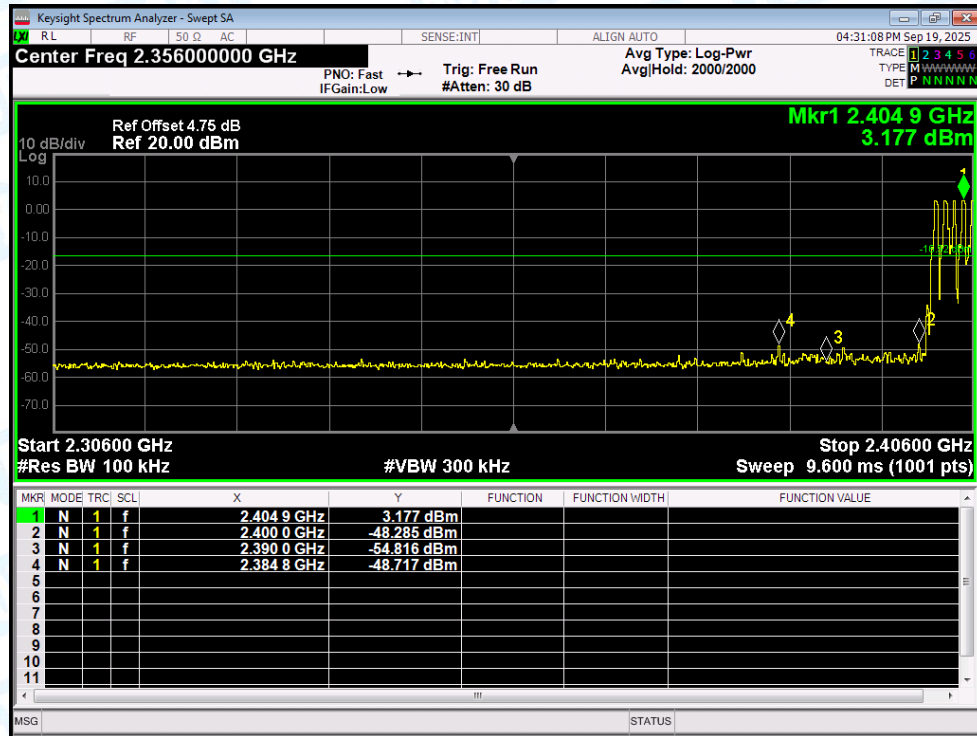
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-51.8	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-48.57	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-56.56	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-56.38	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-56.35	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-56.95	-20	Pass

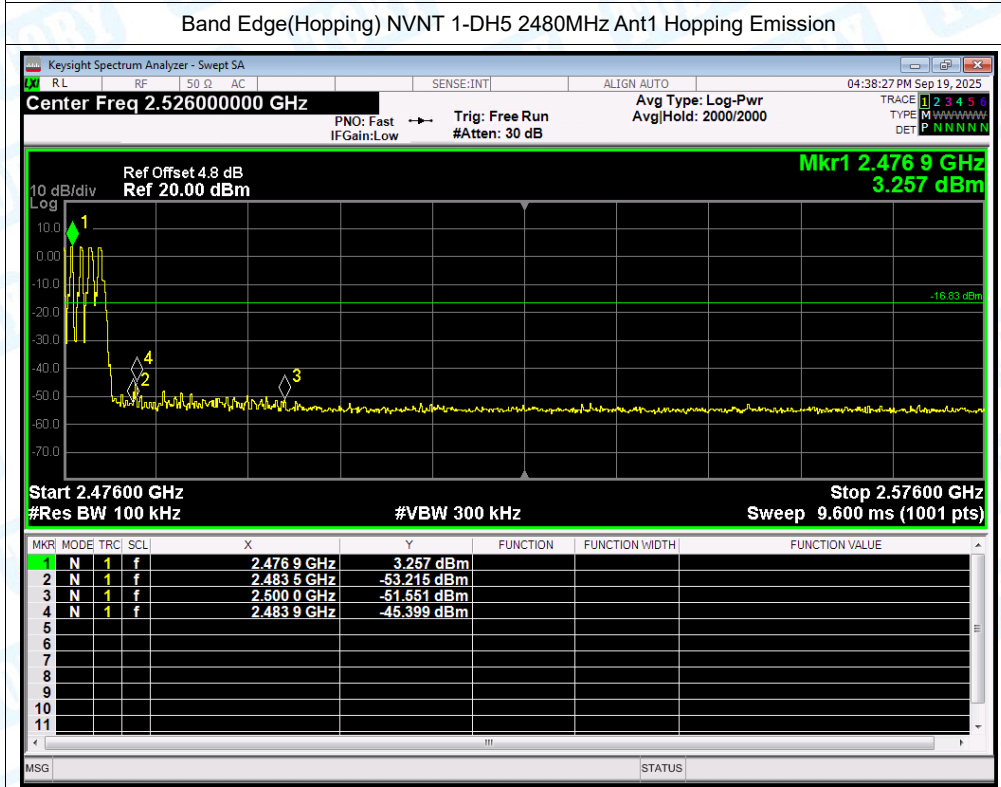
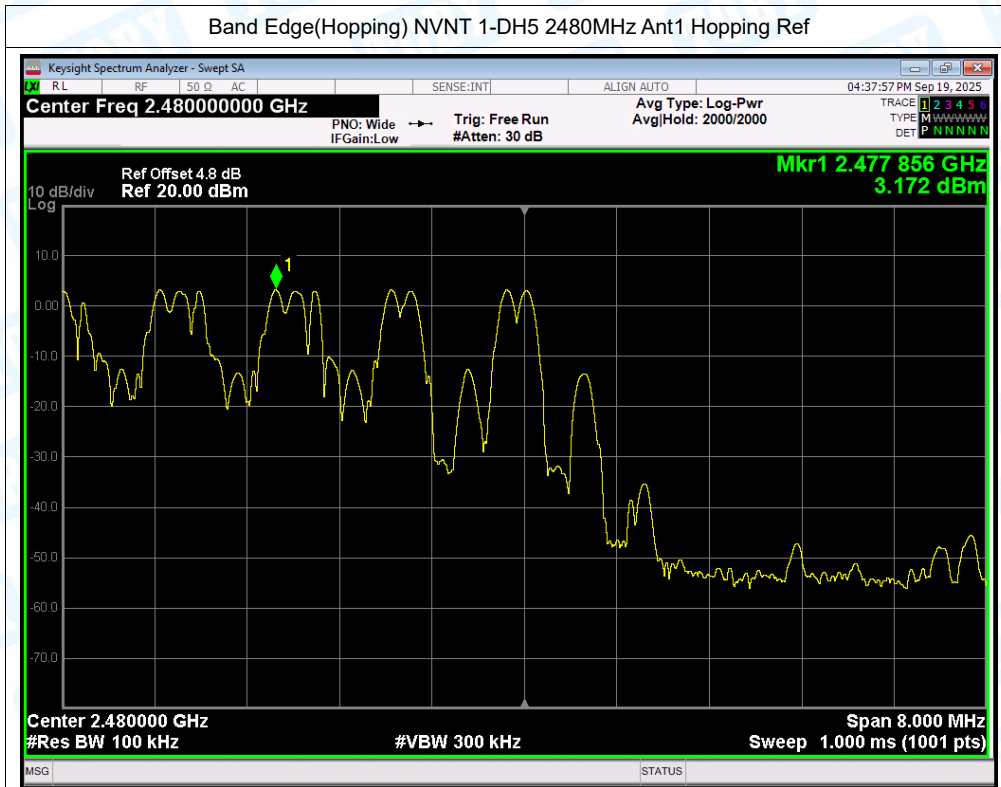
Test Graphs

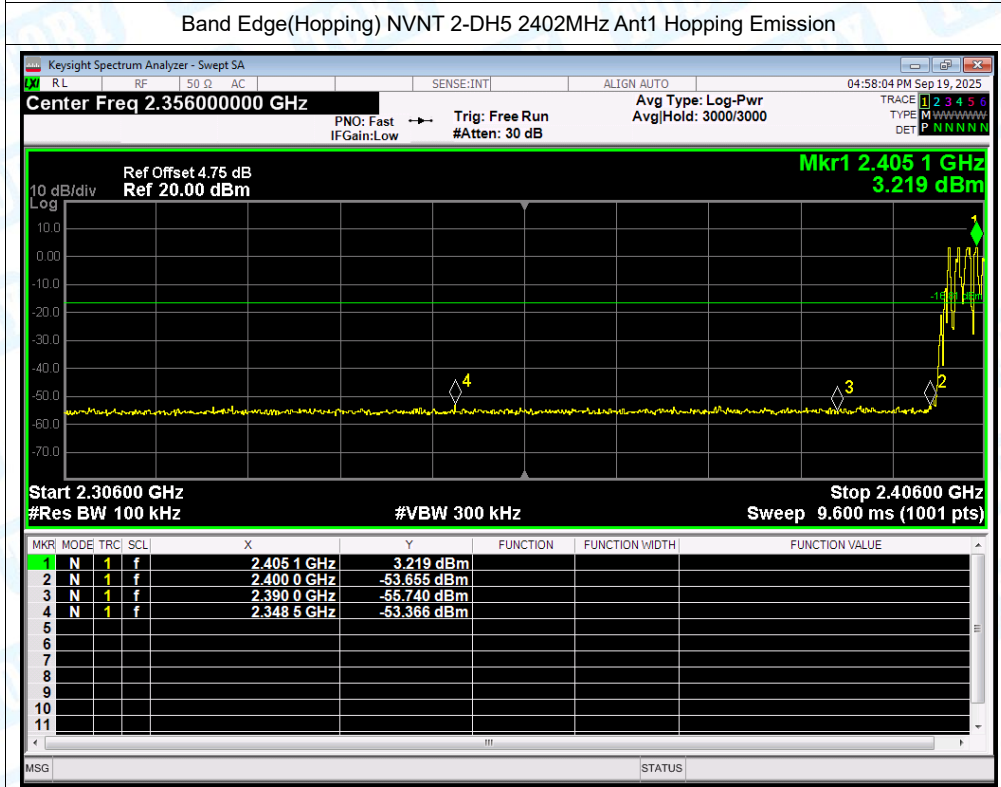
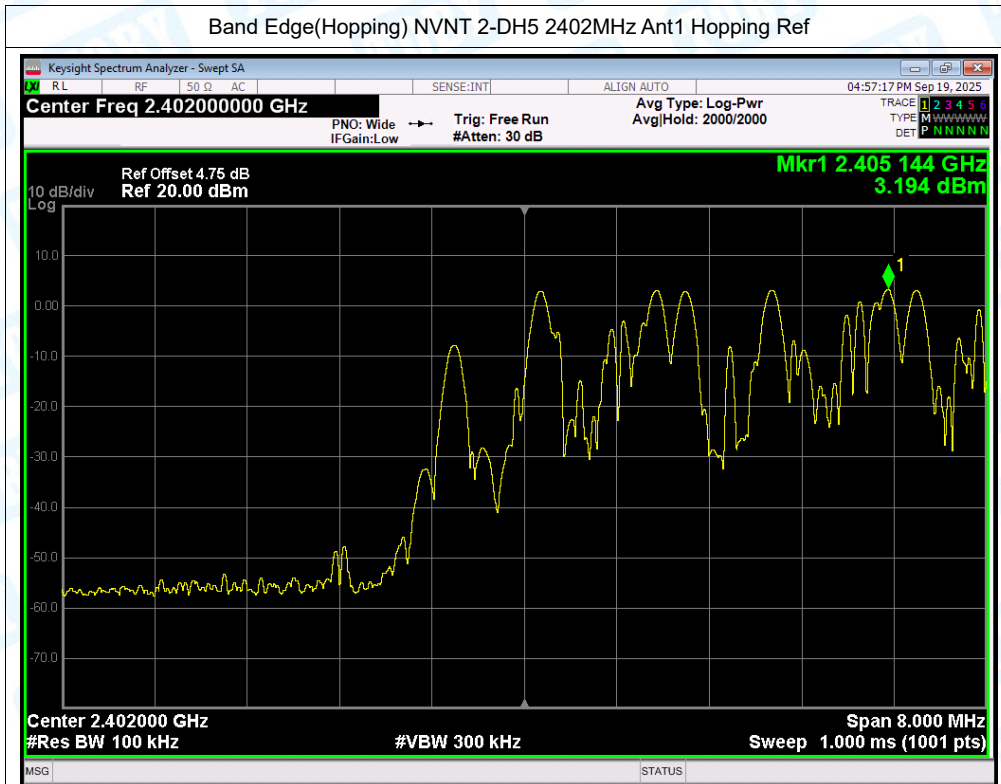
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref

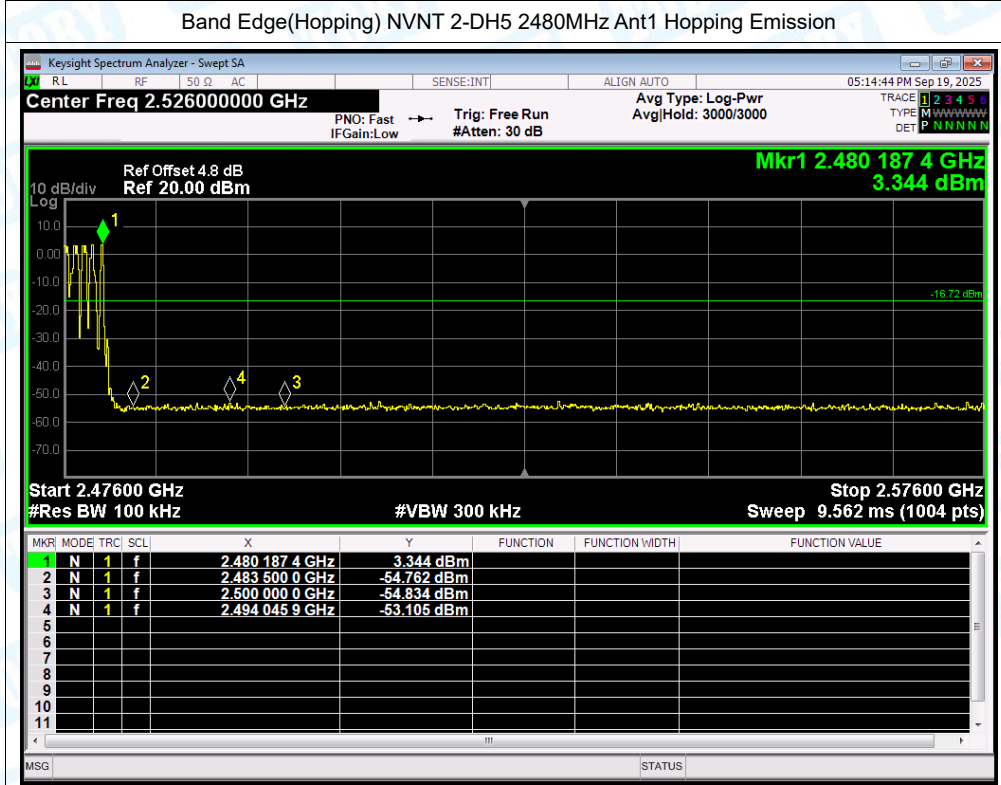
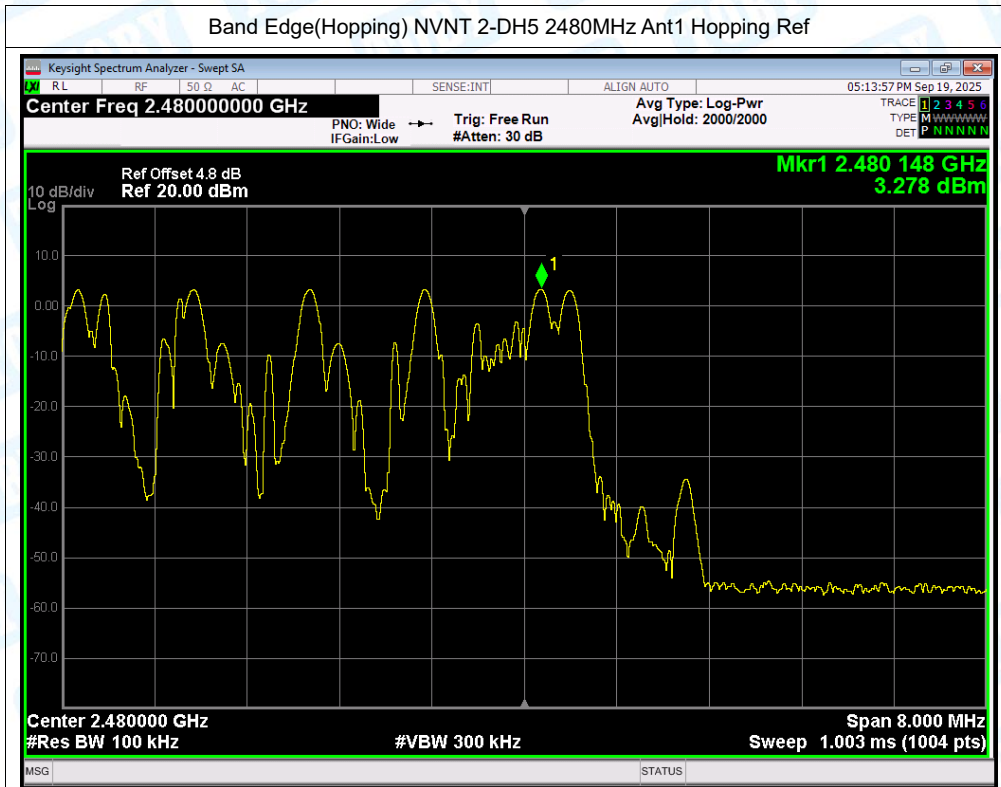


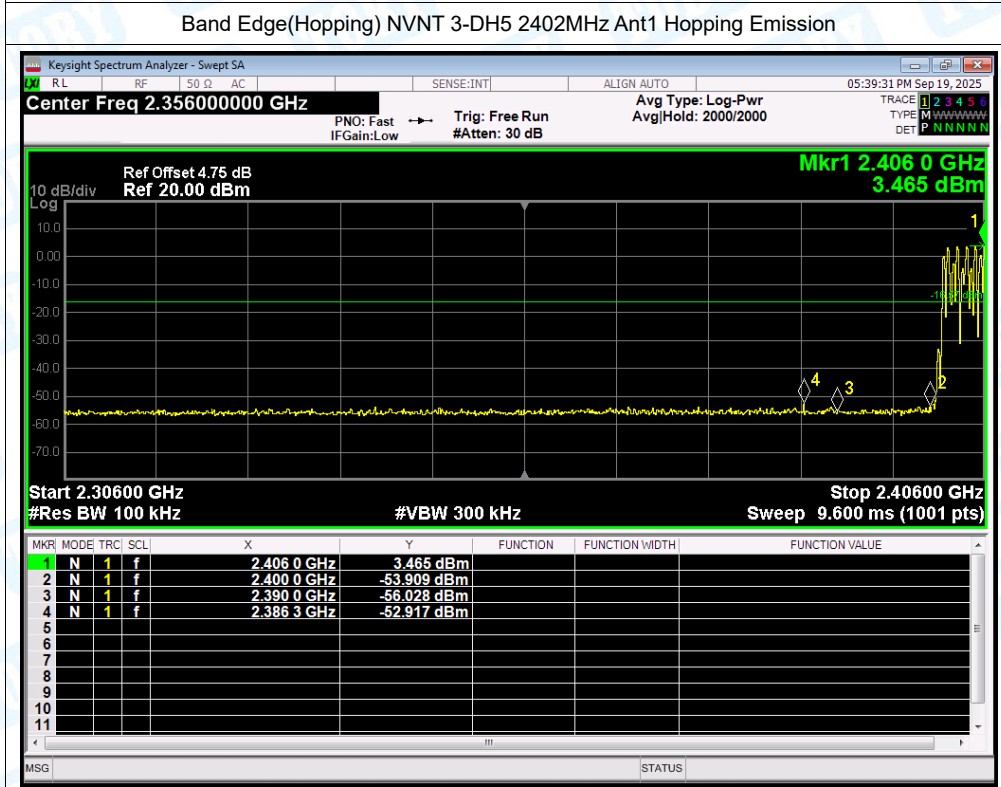
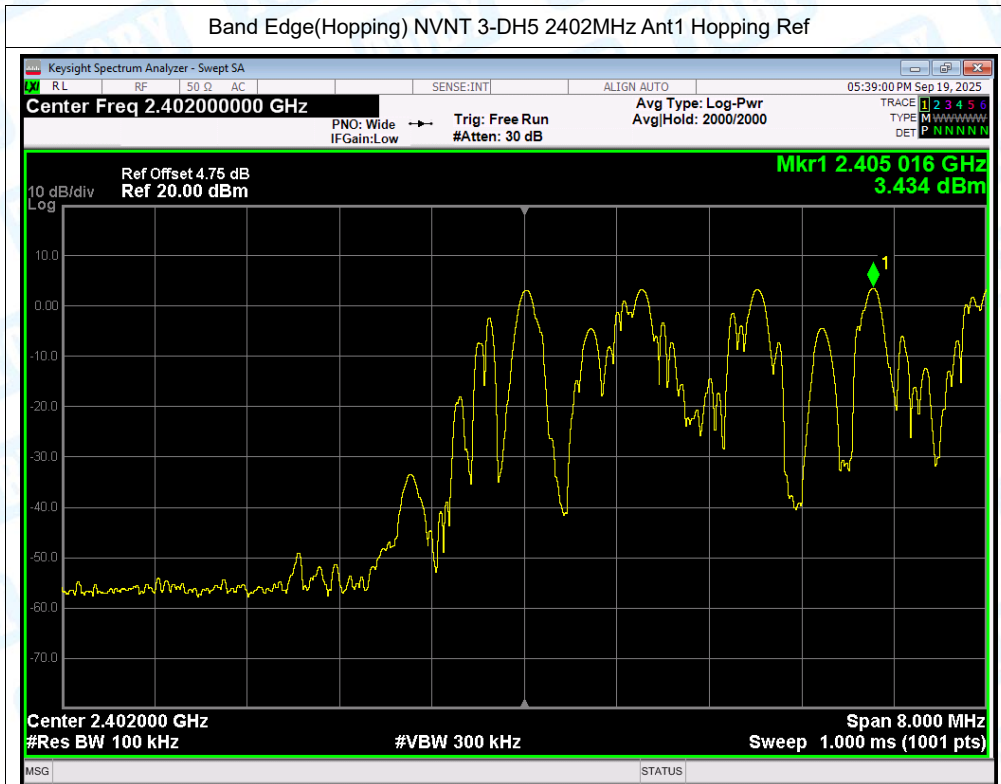
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

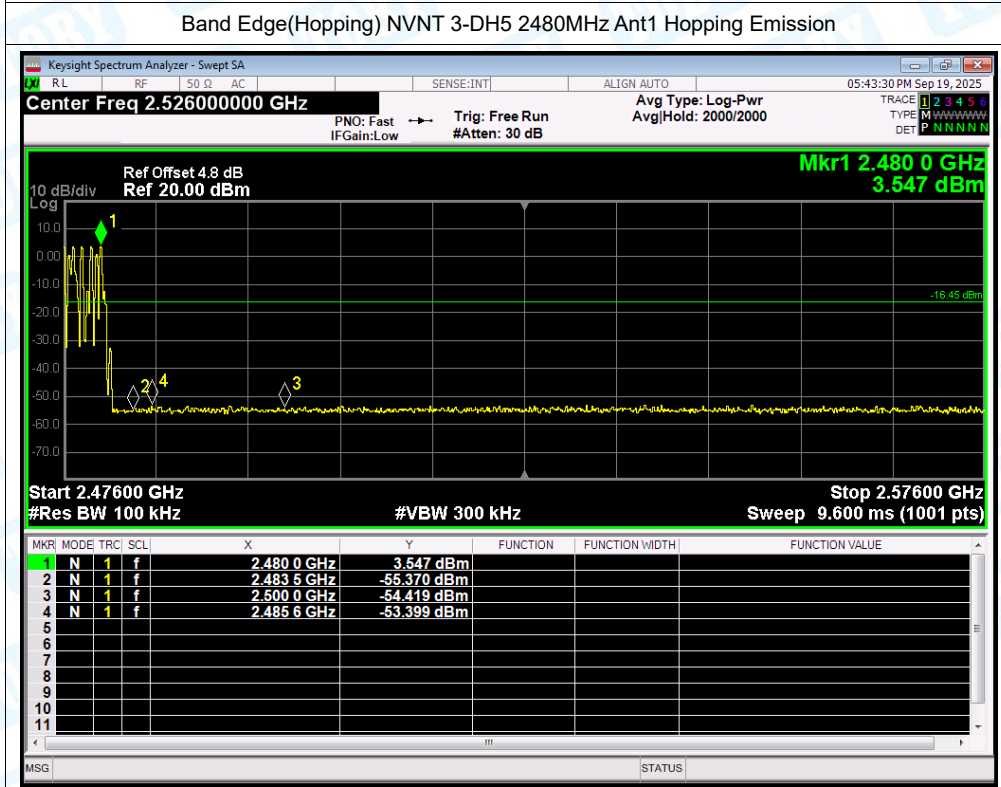
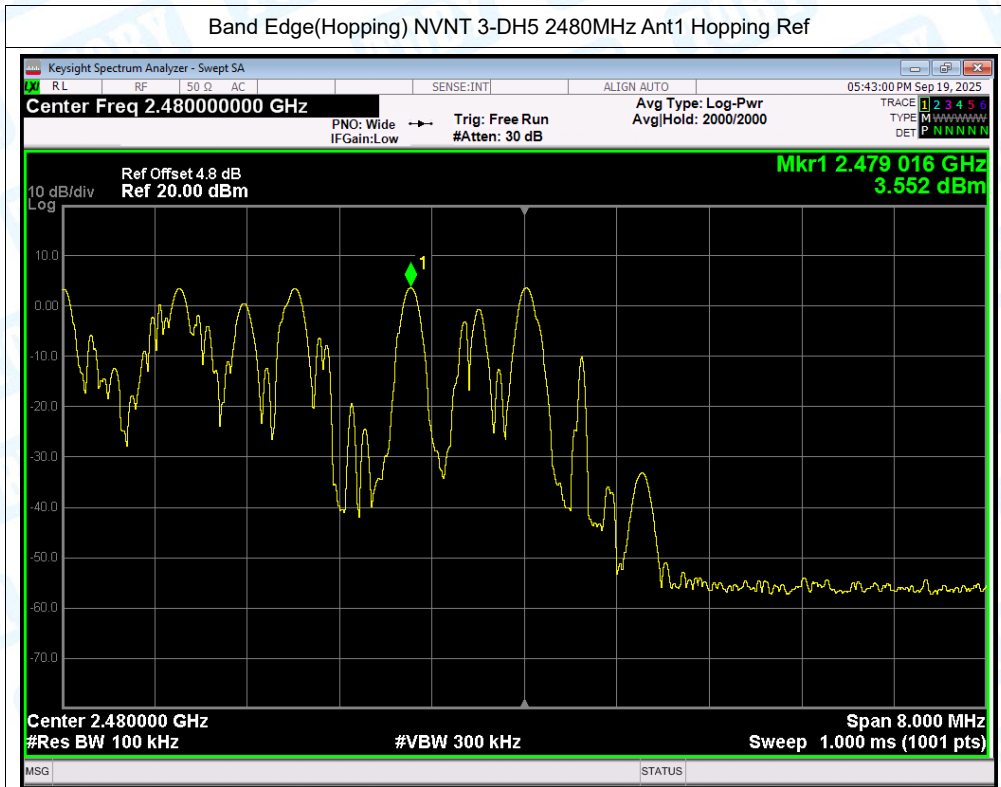










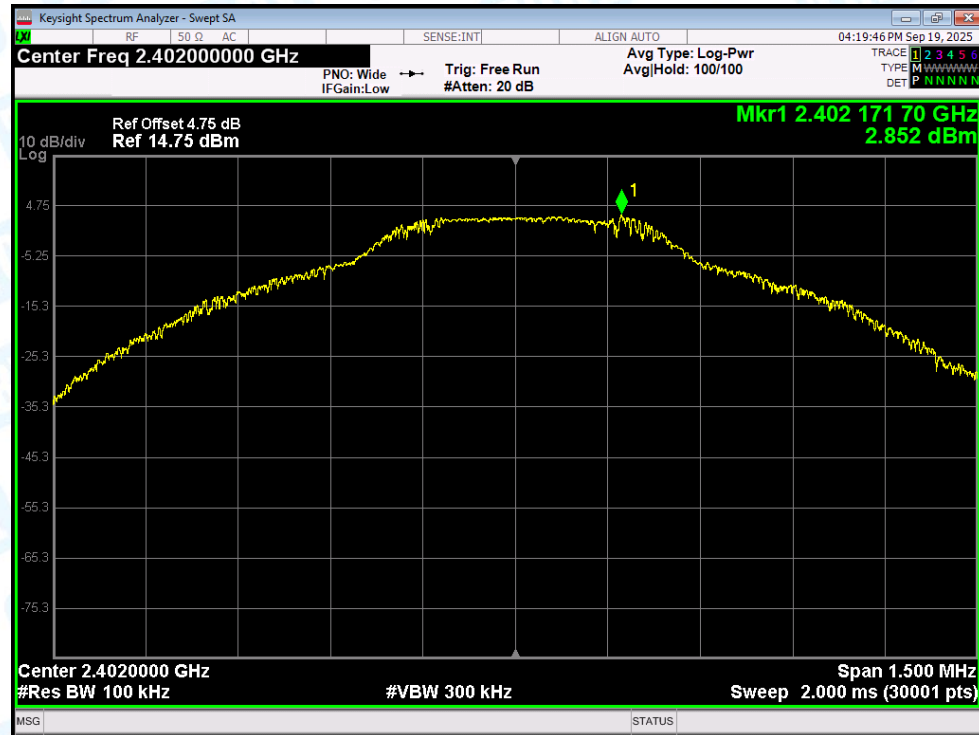


8. Conducted RF Spurious Emission

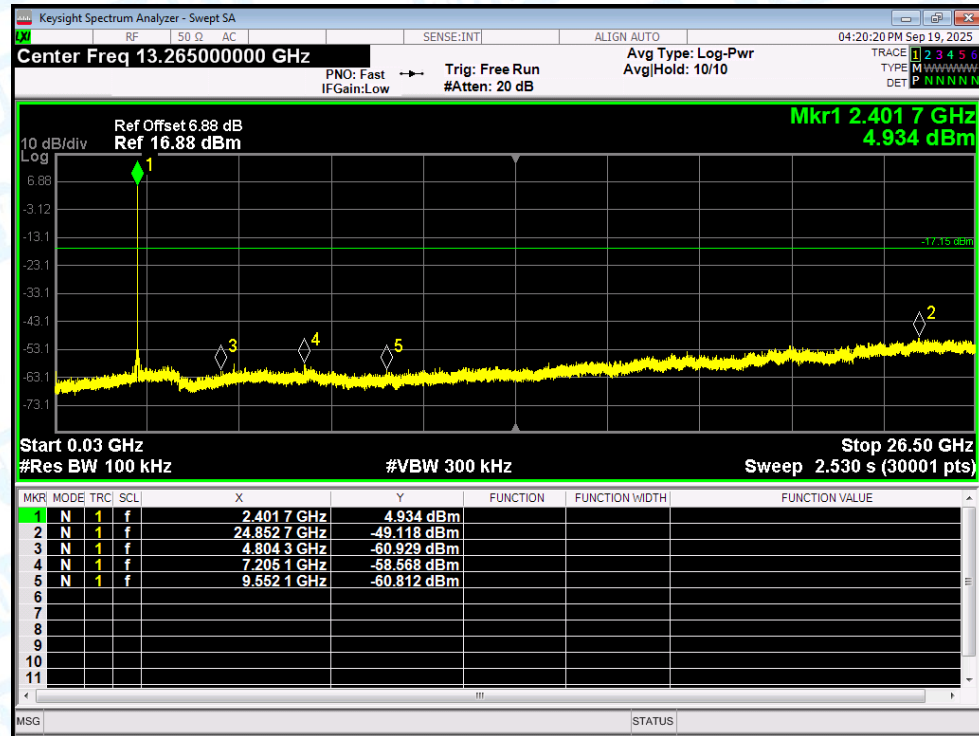
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-51.97	-20	Pass
NVNT	1-DH5	2441	Ant1	-51.71	-20	Pass
NVNT	1-DH5	2480	Ant1	-51.92	-20	Pass
NVNT	2-DH5	2402	Ant1	-51.29	-20	Pass
NVNT	2-DH5	2441	Ant1	-51.39	-20	Pass
NVNT	2-DH5	2480	Ant1	-51.17	-20	Pass
NVNT	3-DH5	2402	Ant1	-52.15	-20	Pass
NVNT	3-DH5	2441	Ant1	-51.87	-20	Pass
NVNT	3-DH5	2480	Ant1	-51.17	-20	Pass

Test Graphs

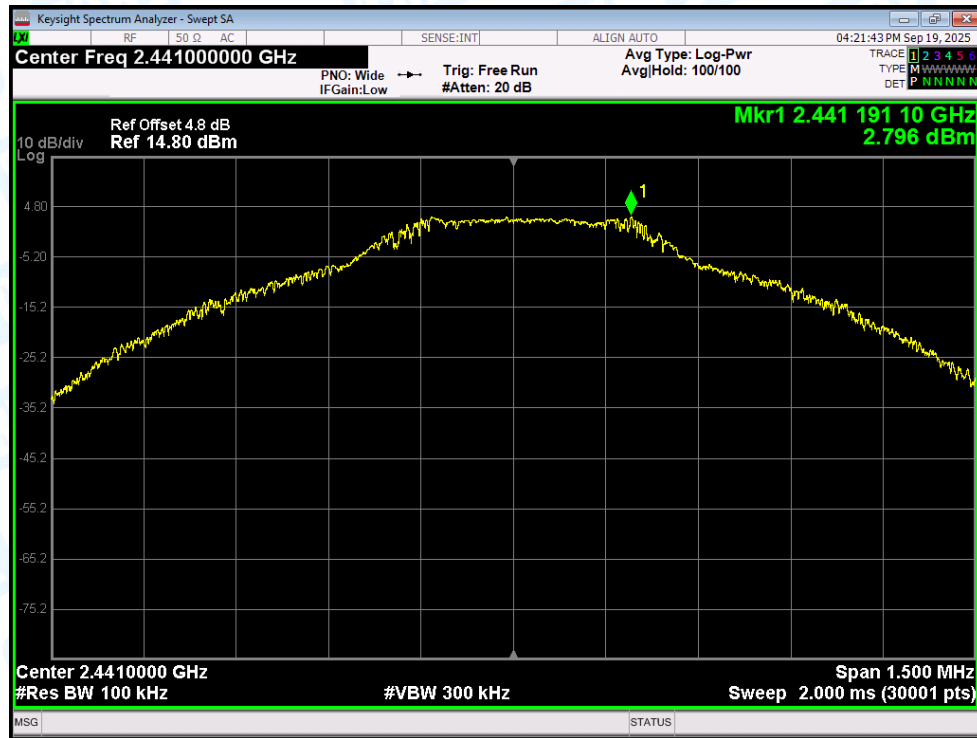
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



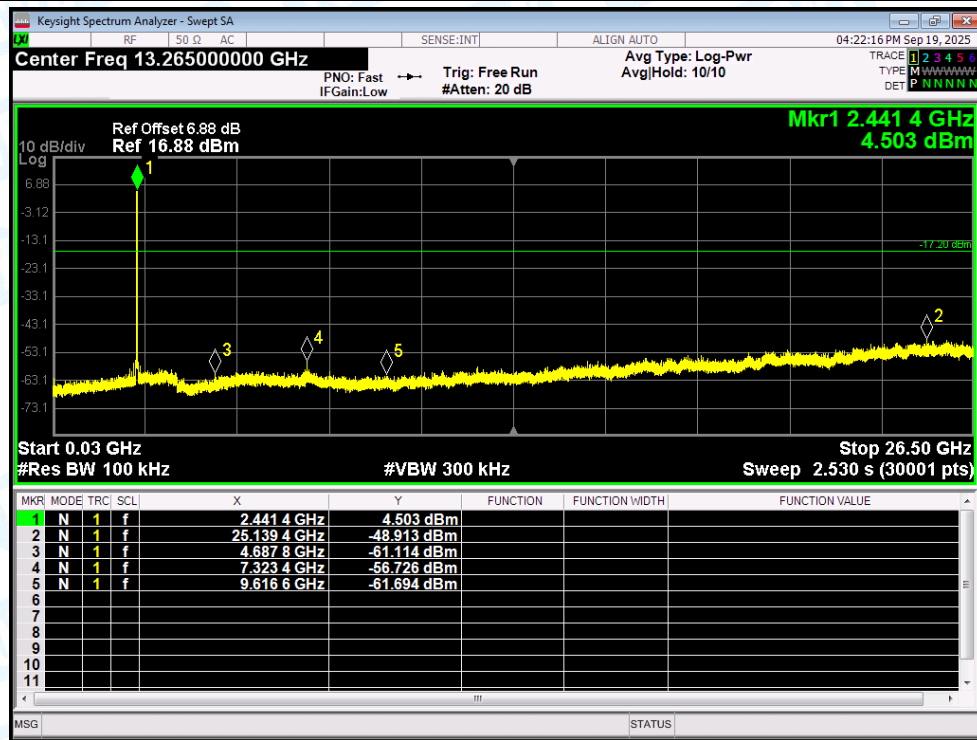
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



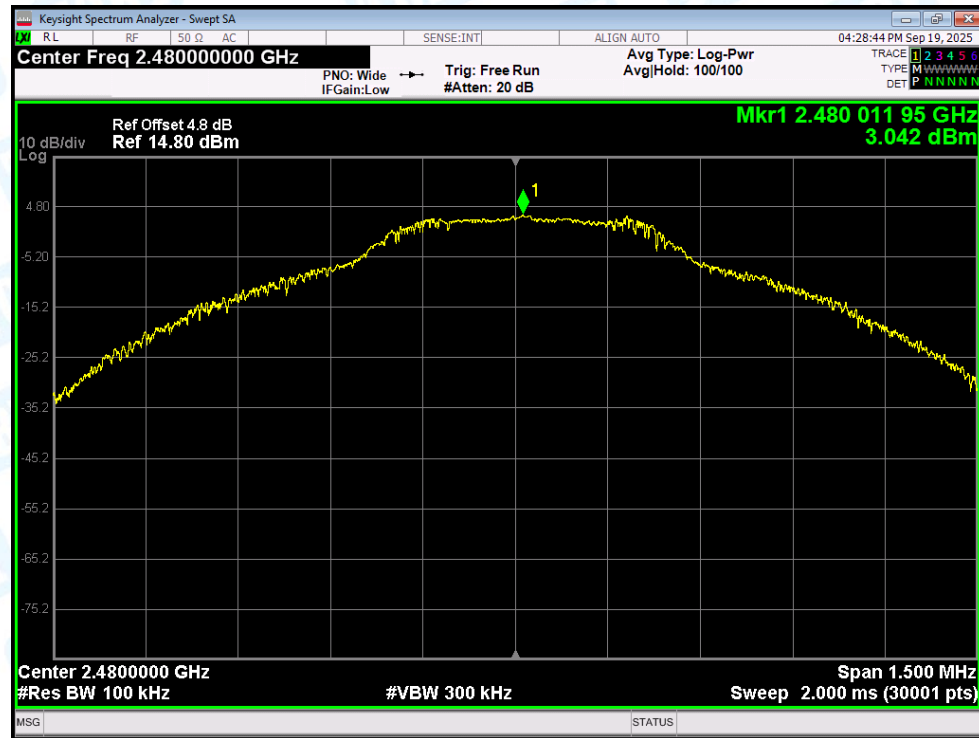
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



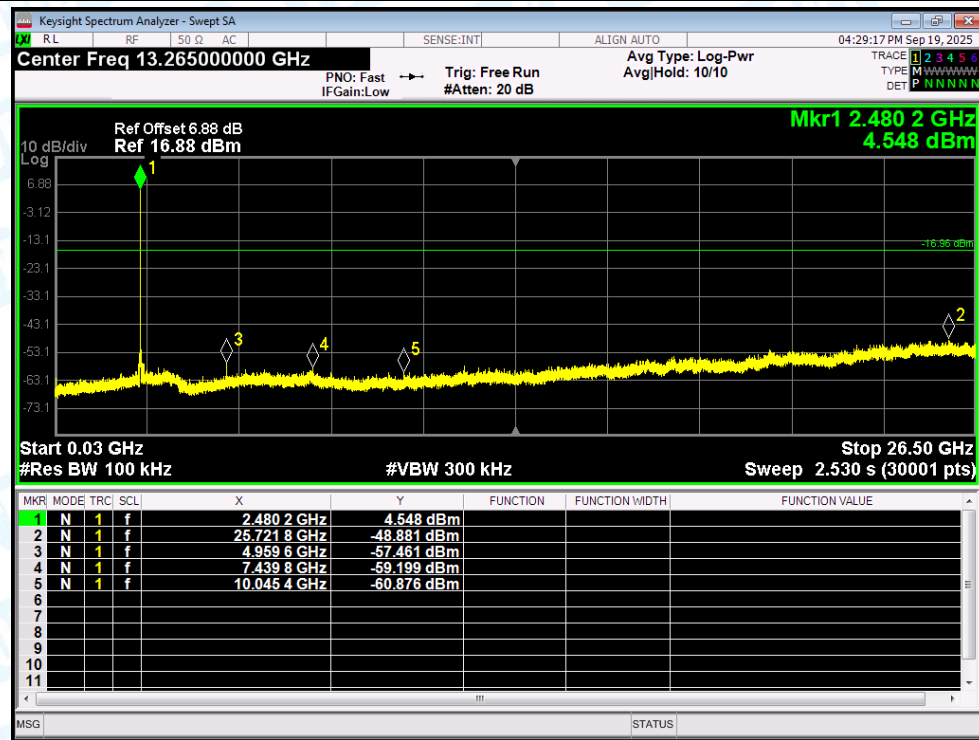
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



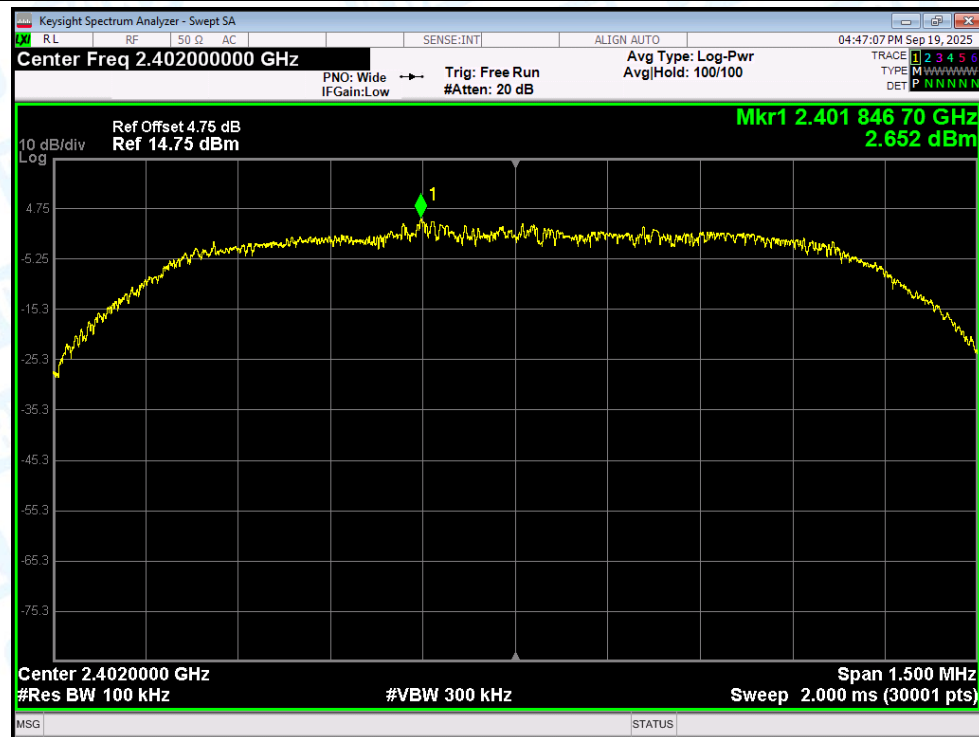
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



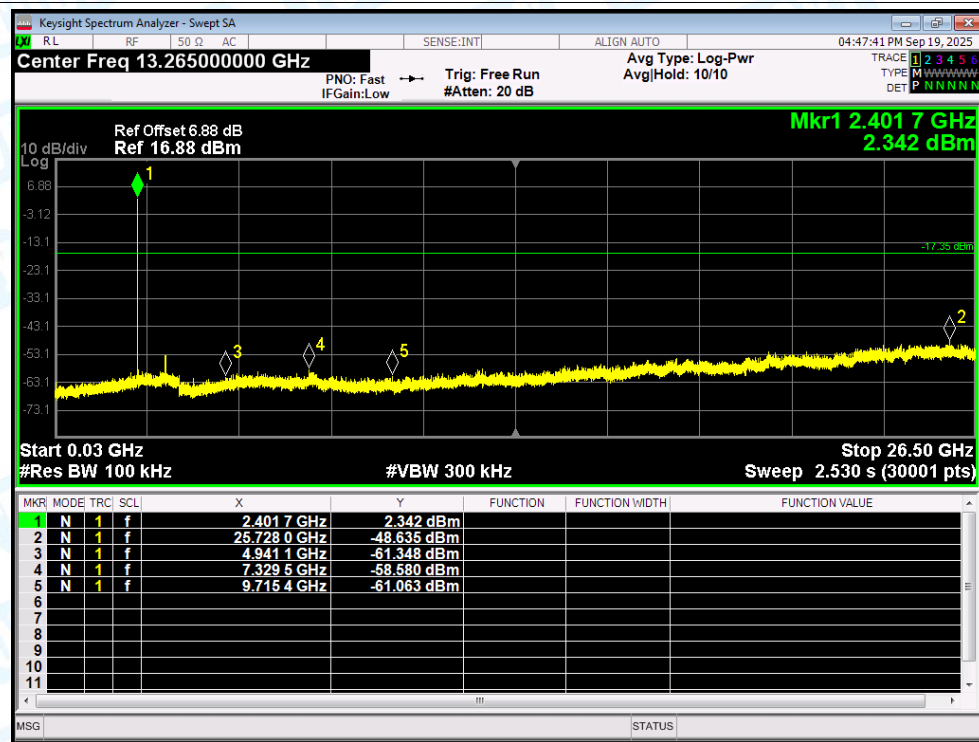
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



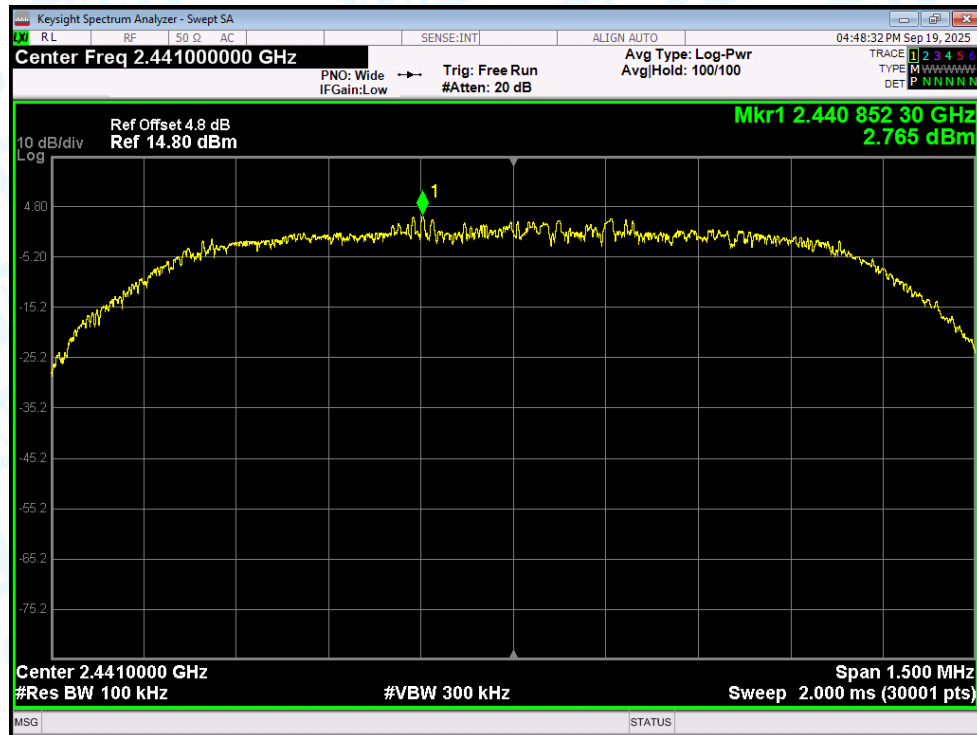
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



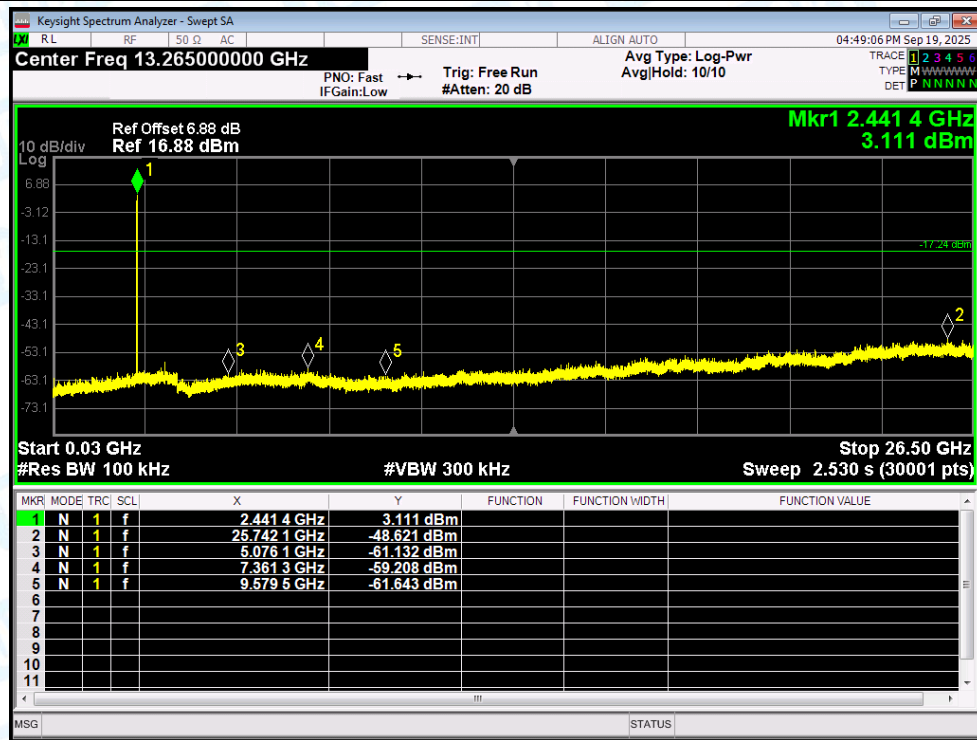
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



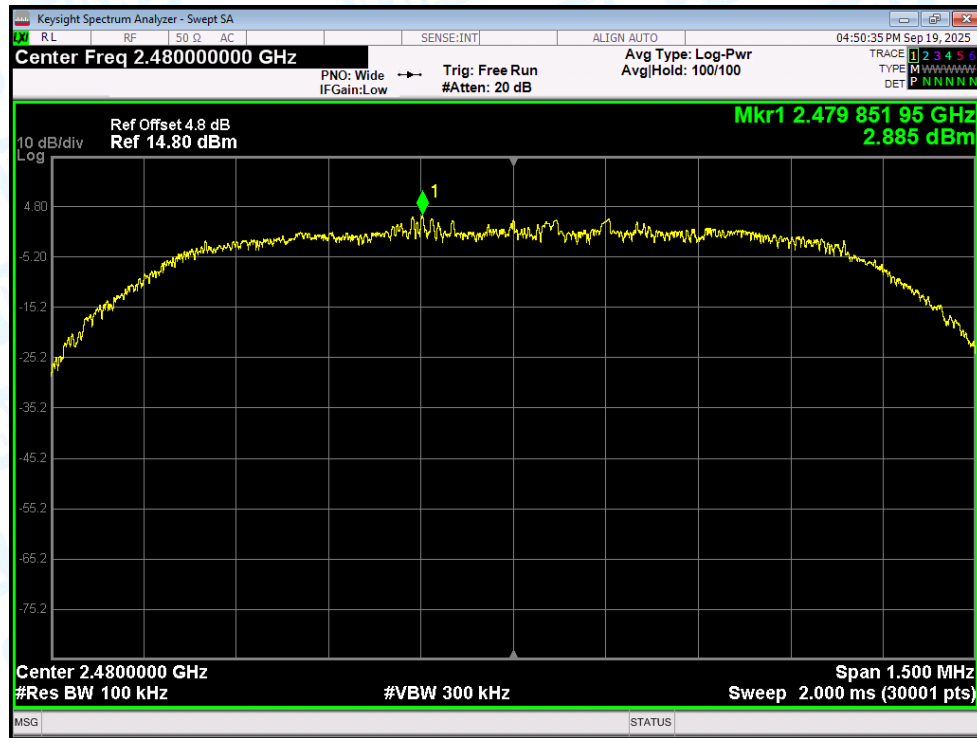
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



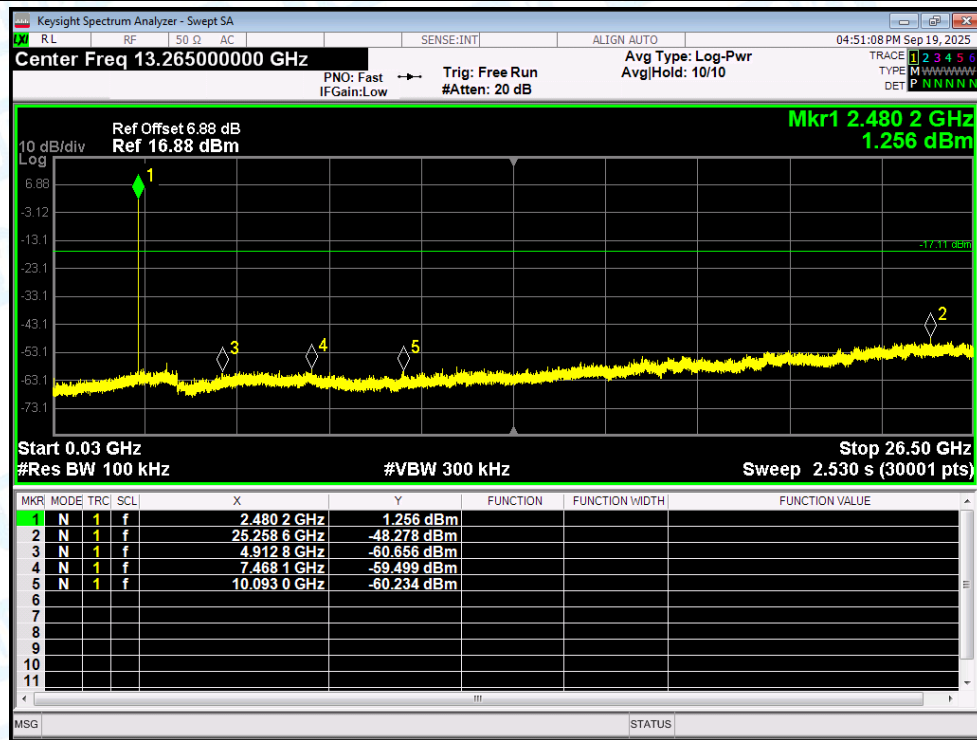
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



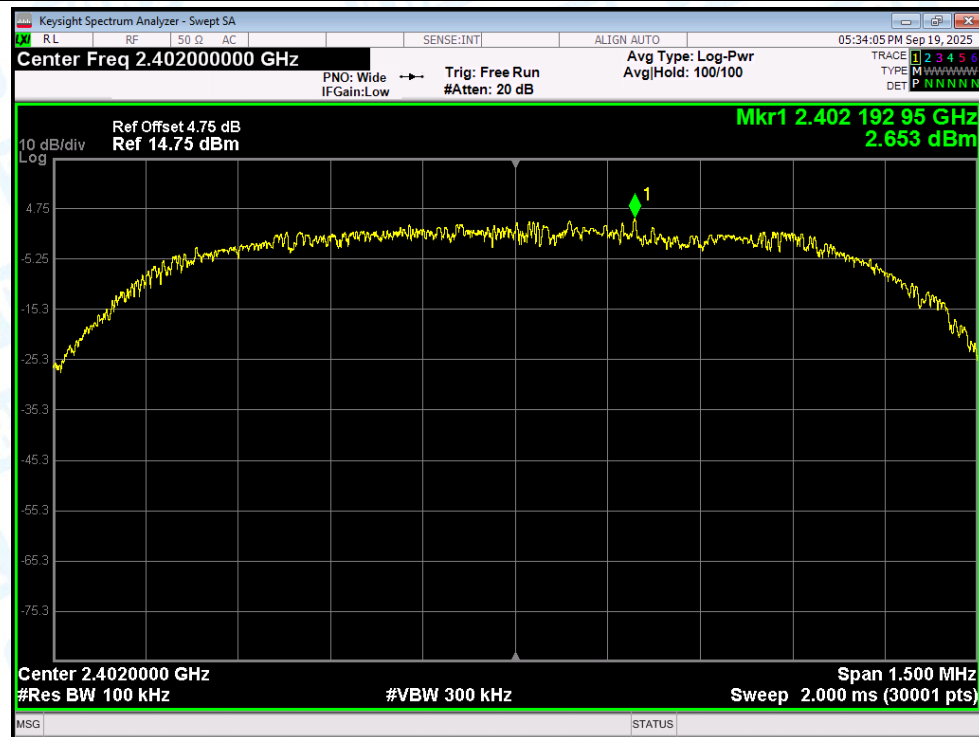
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



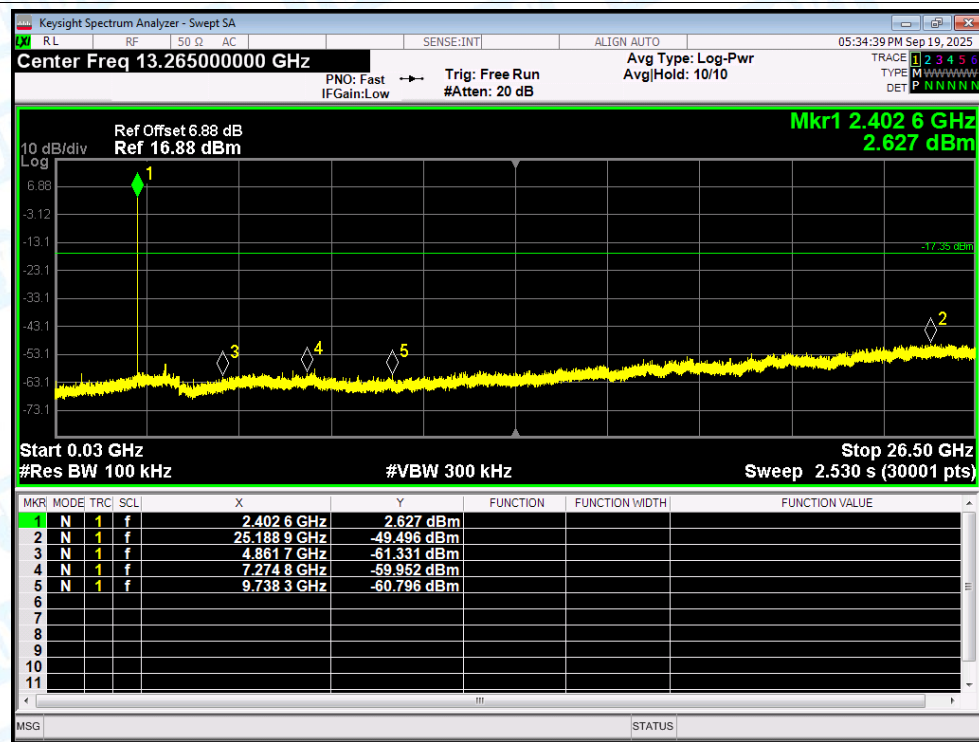
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



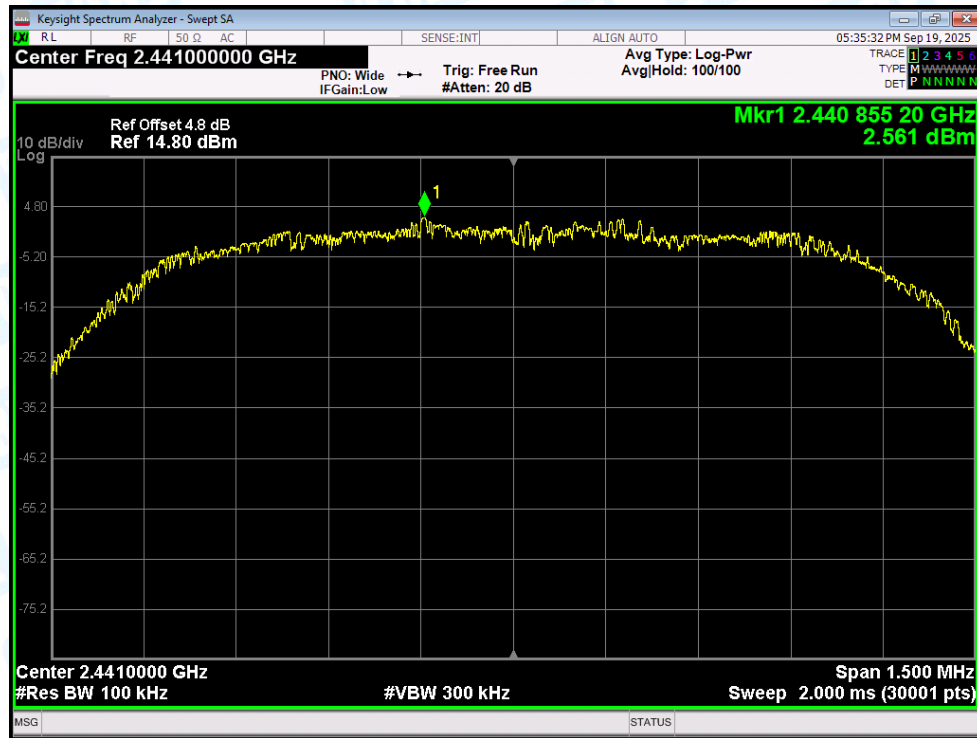
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



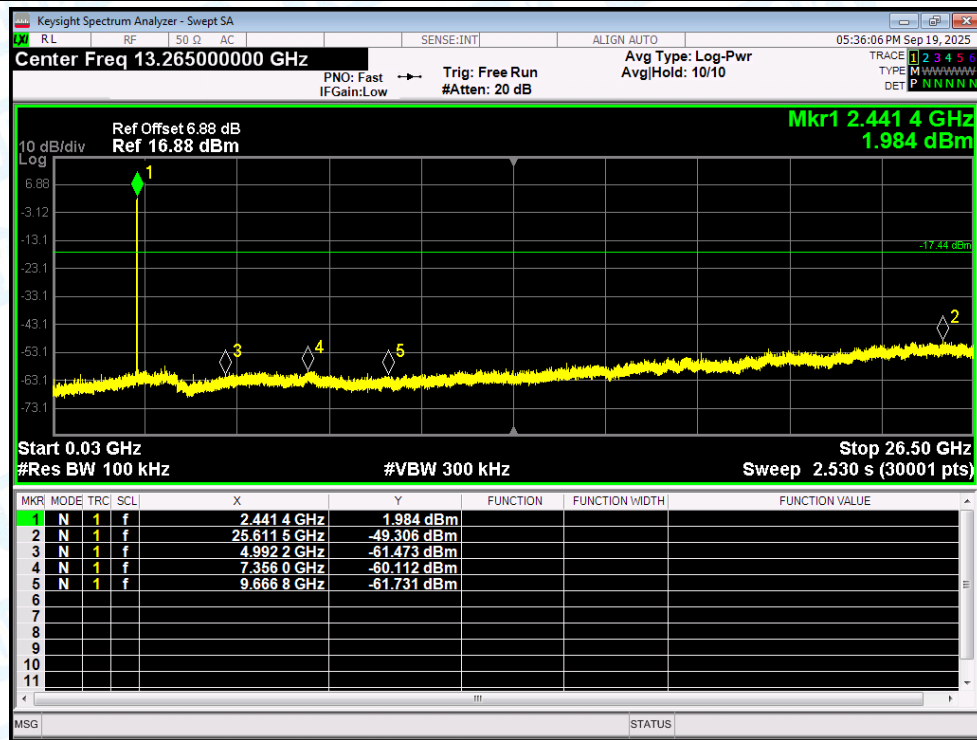
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



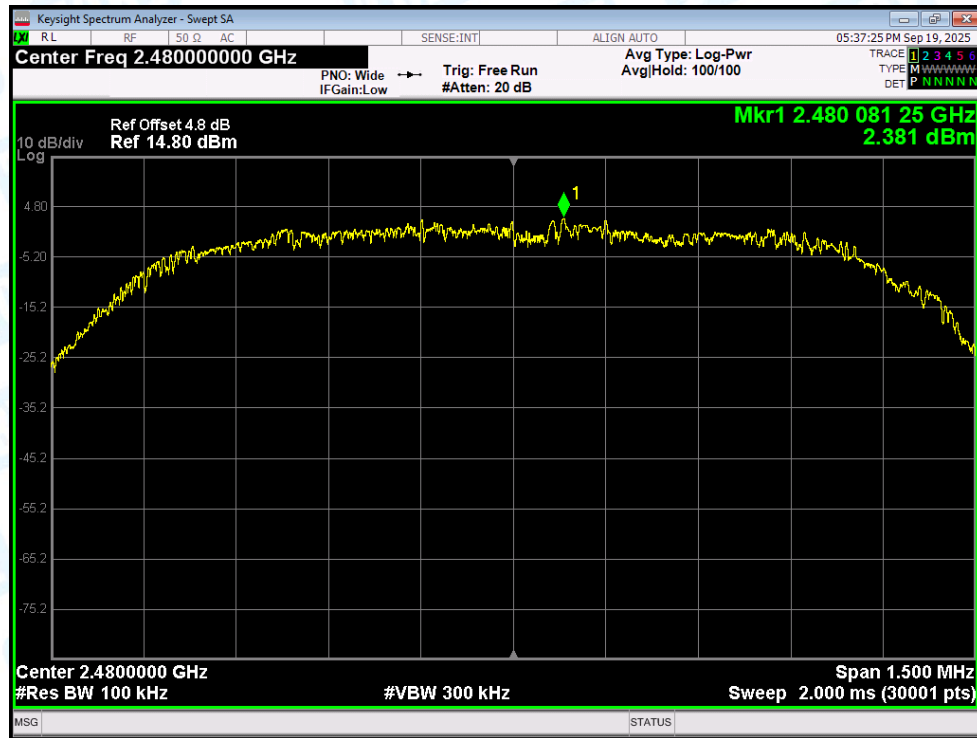
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



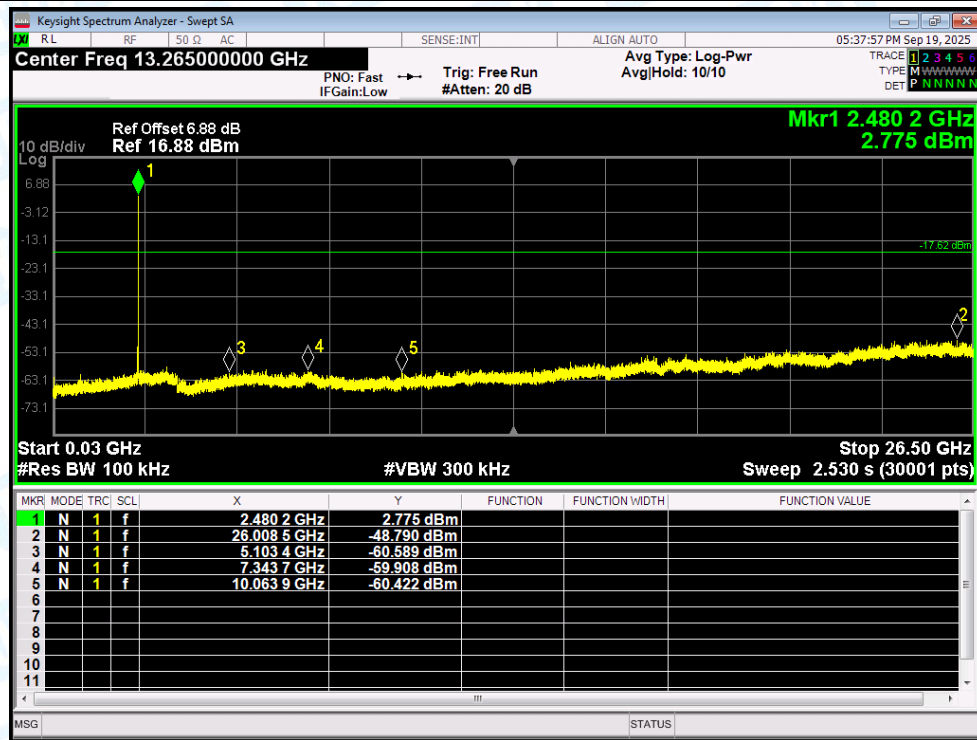
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

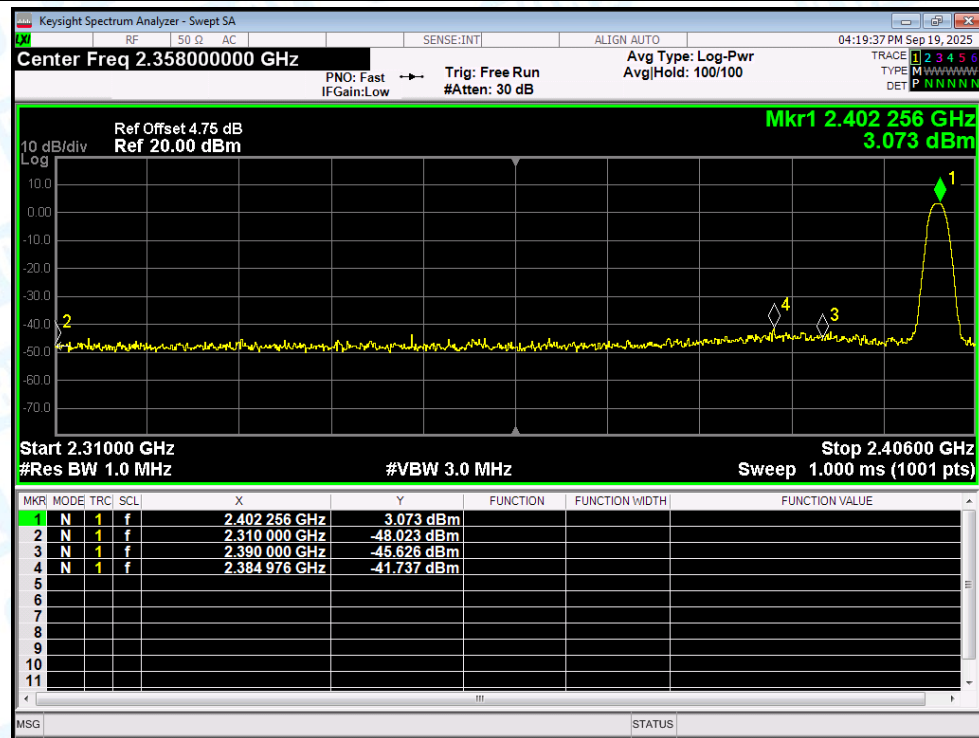


9.Restrict Band

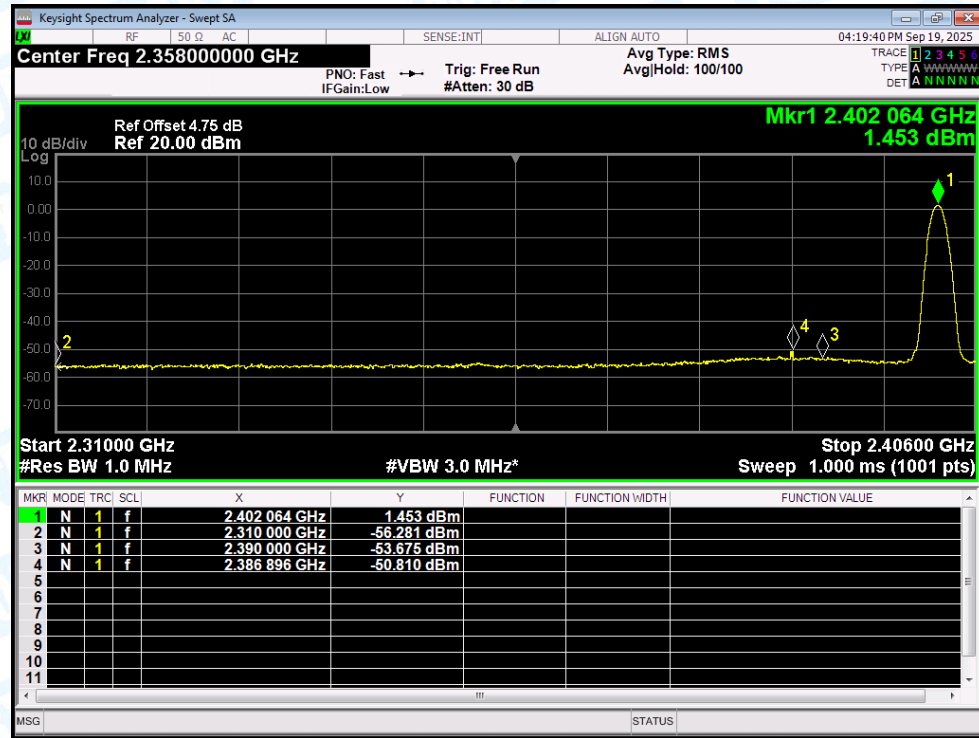
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-48.02	2	-	49.24	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-56.28	2	1.09	42.07	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2384.976	-41.74	2	-	55.52	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2386.896	-50.81	2	1.09	47.54	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-45.63	2	-	51.63	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-53.68	2	1.09	44.67	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-45.58	2	-	51.68	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-53.83	2	1.09	44.52	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2496.16	-40.92	2	-	56.34	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2496.256	-51.69	2	1.09	46.66	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-45.8	2	-	51.46	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-52.47	2	1.09	45.88	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-46.61	2	-	50.65	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-55.62	2	1.14	42.78	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2352.432	-43.76	2	-	53.5	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2389.008	-54.85	2	1.14	43.55	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-47.56	2	-	49.7	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-55.11	2	1.14	43.29	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-46.91	2	-	50.35	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-54.13	2	1.14	44.27	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2490.928	-43.81	2	-	53.45	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.928	-54.03	2	1.14	44.37	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-46.19	2	-	51.07	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-55.48	2	1.14	42.92	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-49.05	2	-	48.21	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-56.01	2	1.14	42.39	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2389.008	-33.37	2	-	63.89	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2385.84	-54.86	2	1.14	43.54	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-48.67	2	-	48.59	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-55.6	2	1.14	42.8	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-46.95	2	-	50.31	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-54.63	2	1.14	43.77	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2488	-44.1	2	-	53.16	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.536	-53.89	2	1.14	44.51	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-47.58	2	-	49.68	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-55.17	2	1.14	43.23	Average	54	Pass

Test Graphs

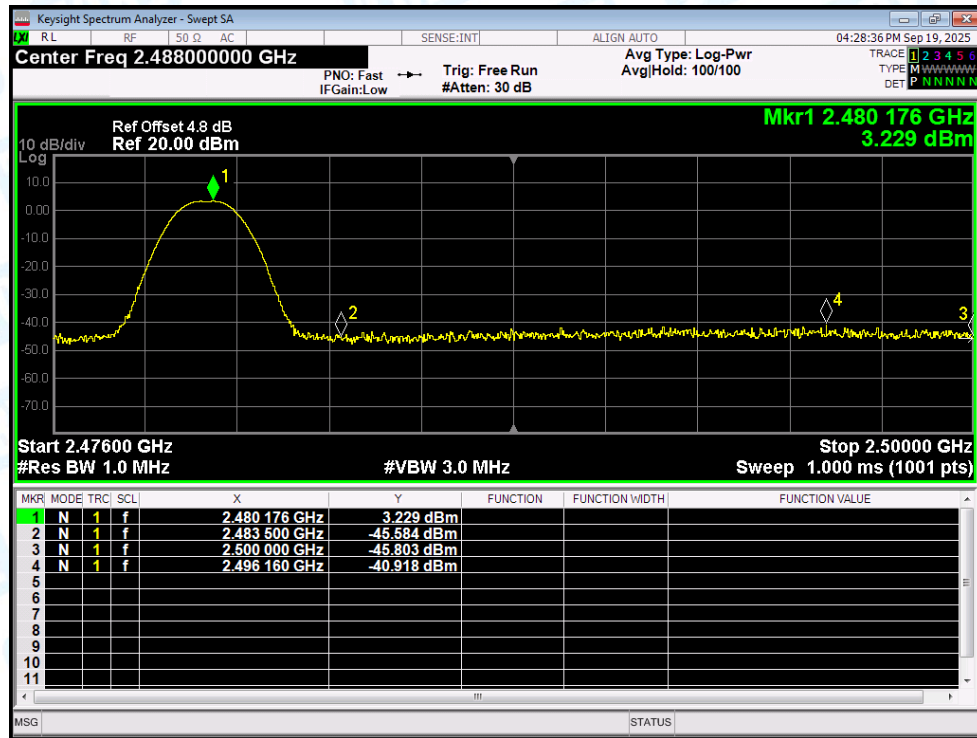
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



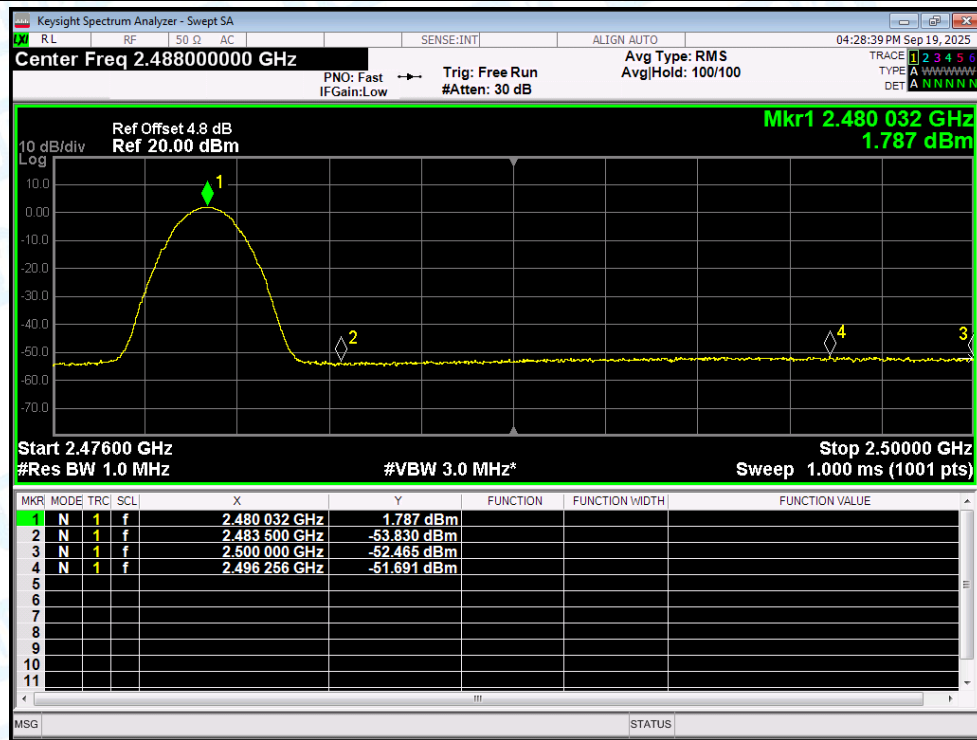
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



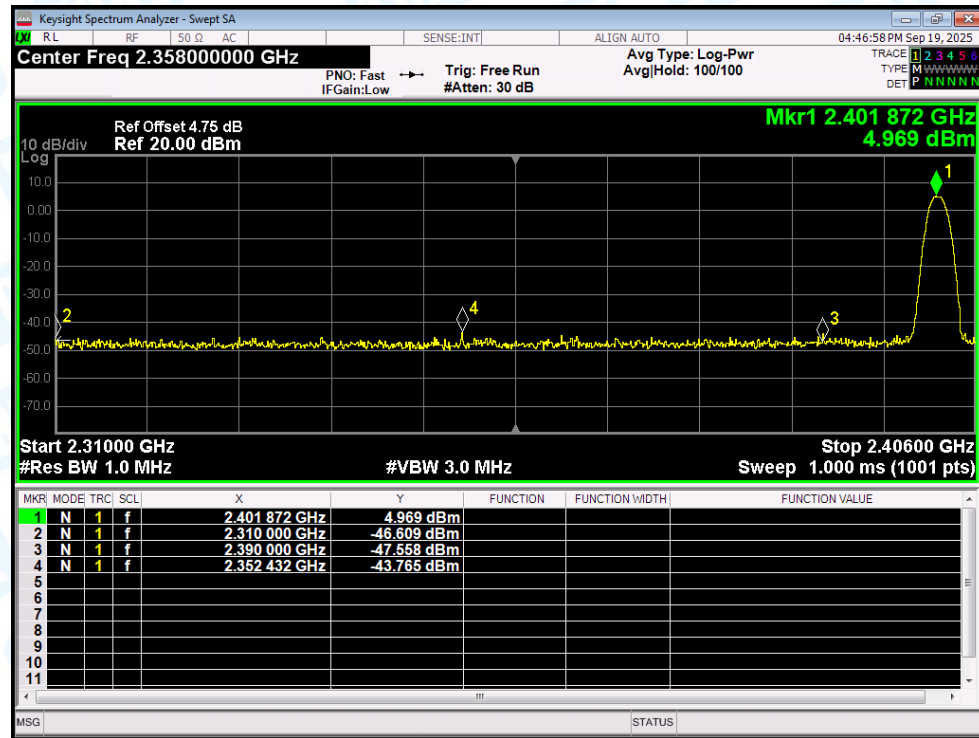
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



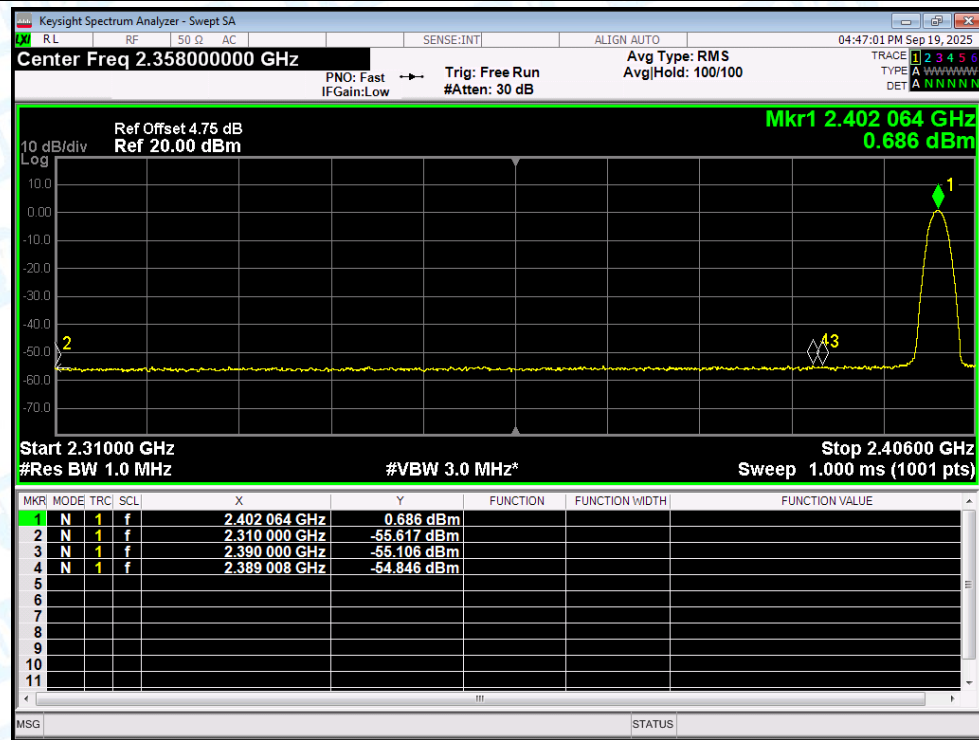
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



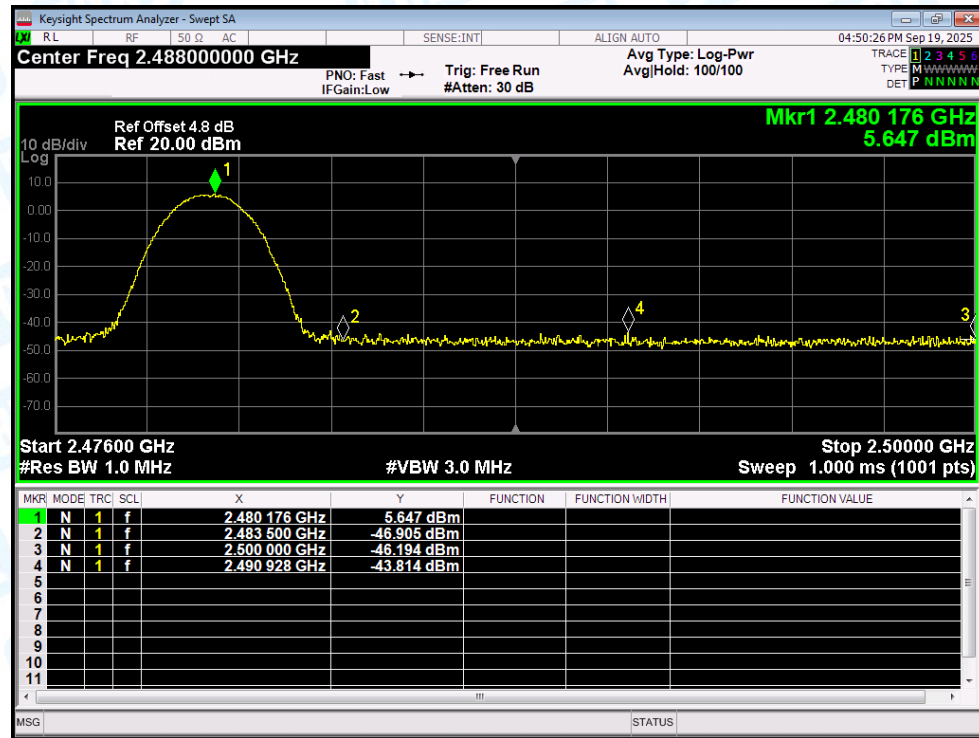
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



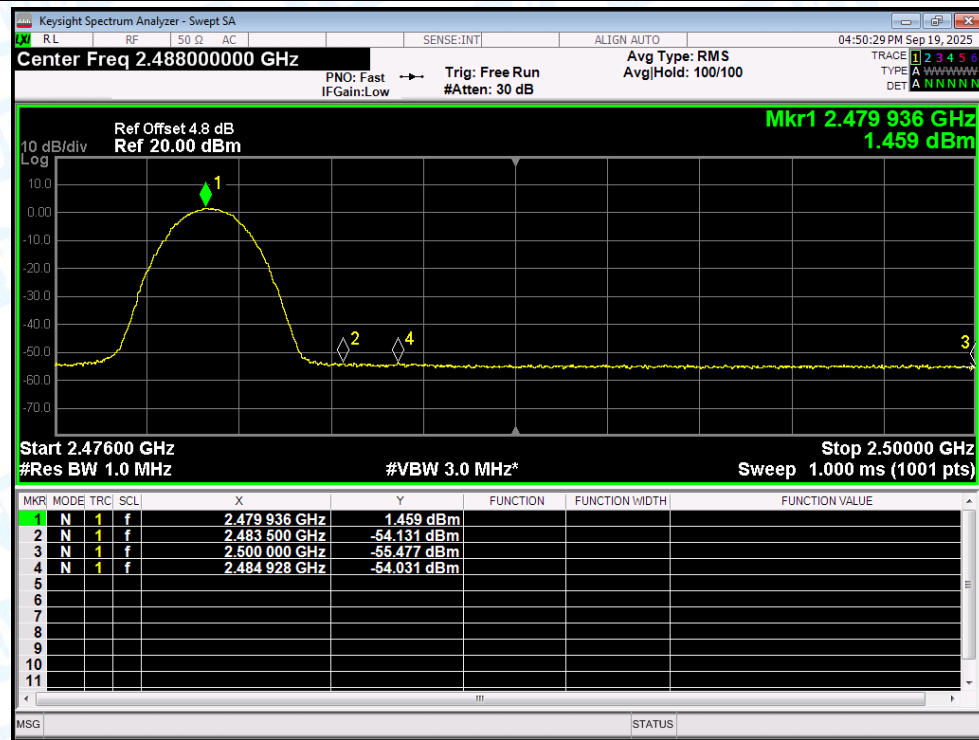
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average



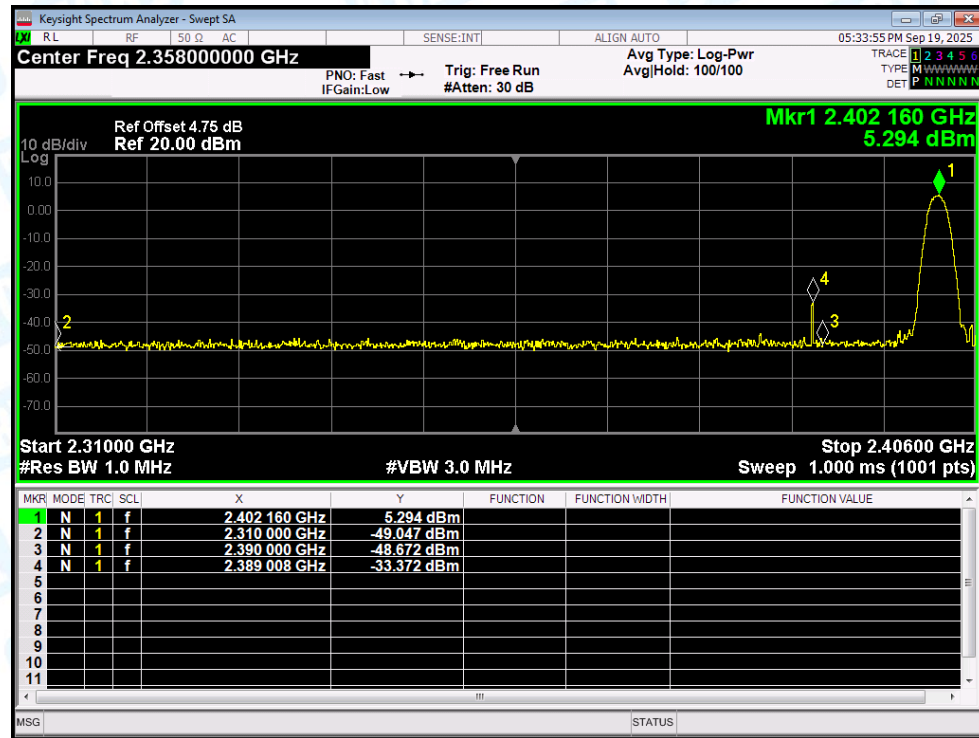
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



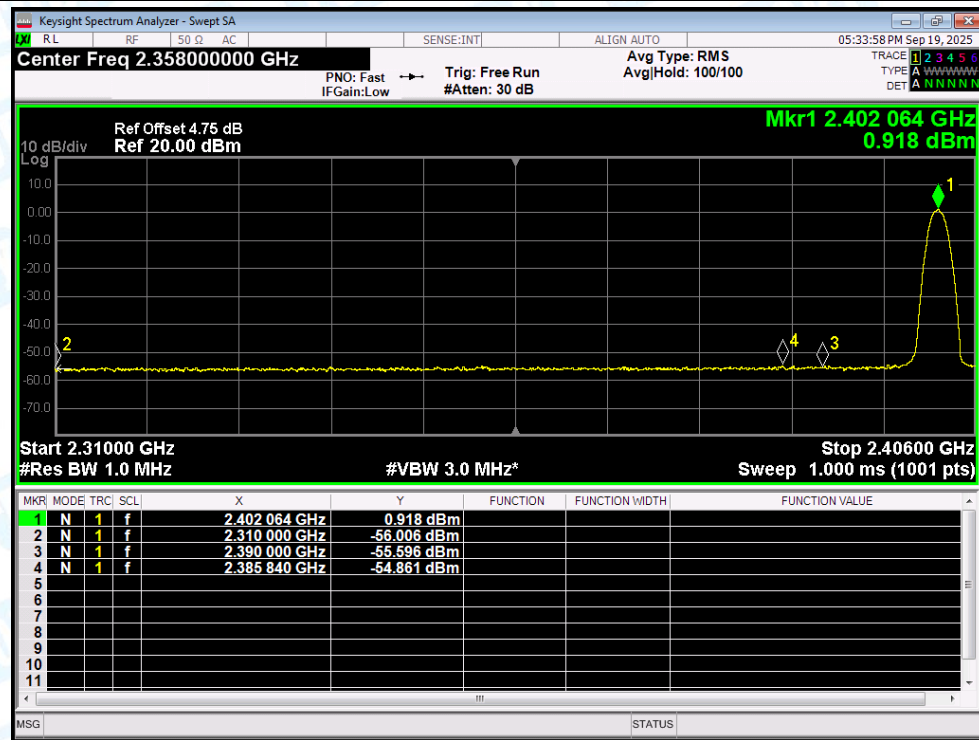
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average



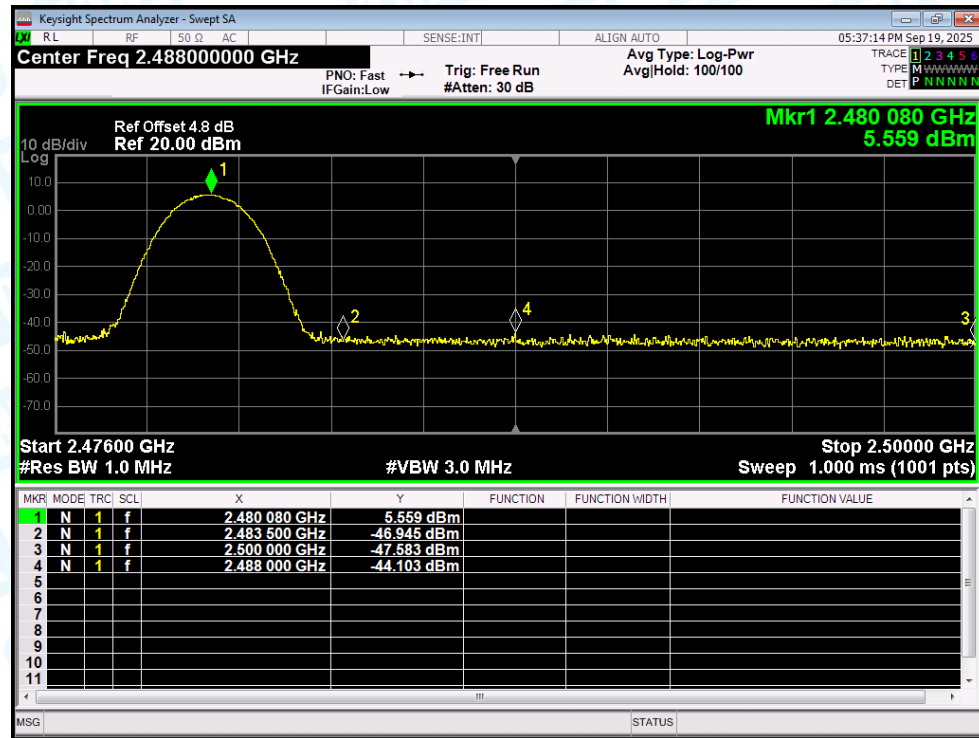
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



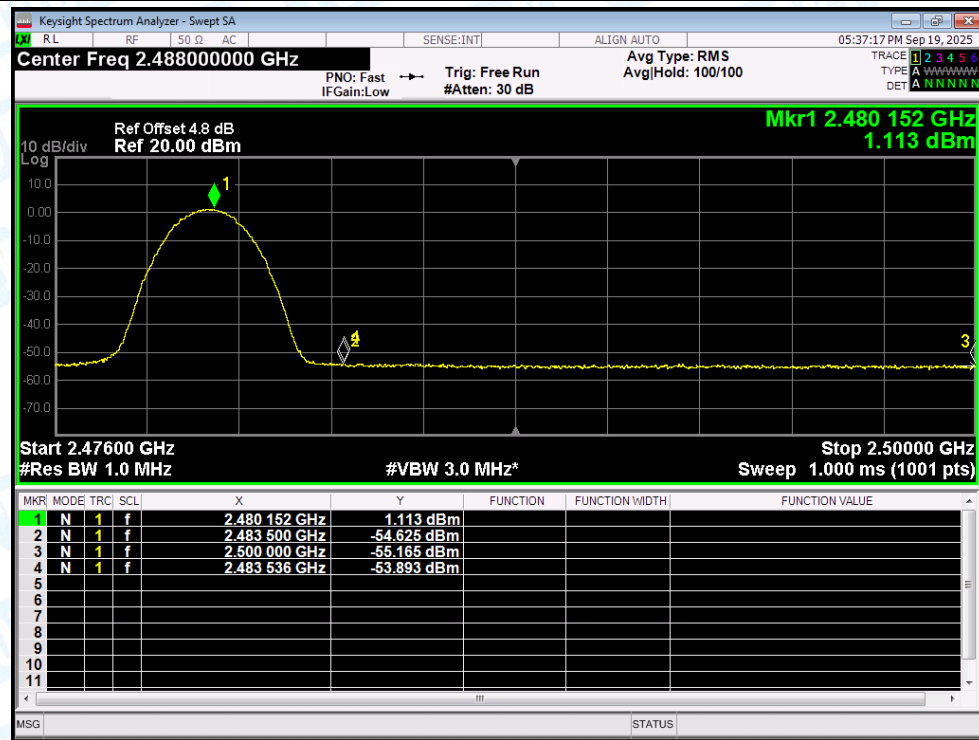
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average



Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Average

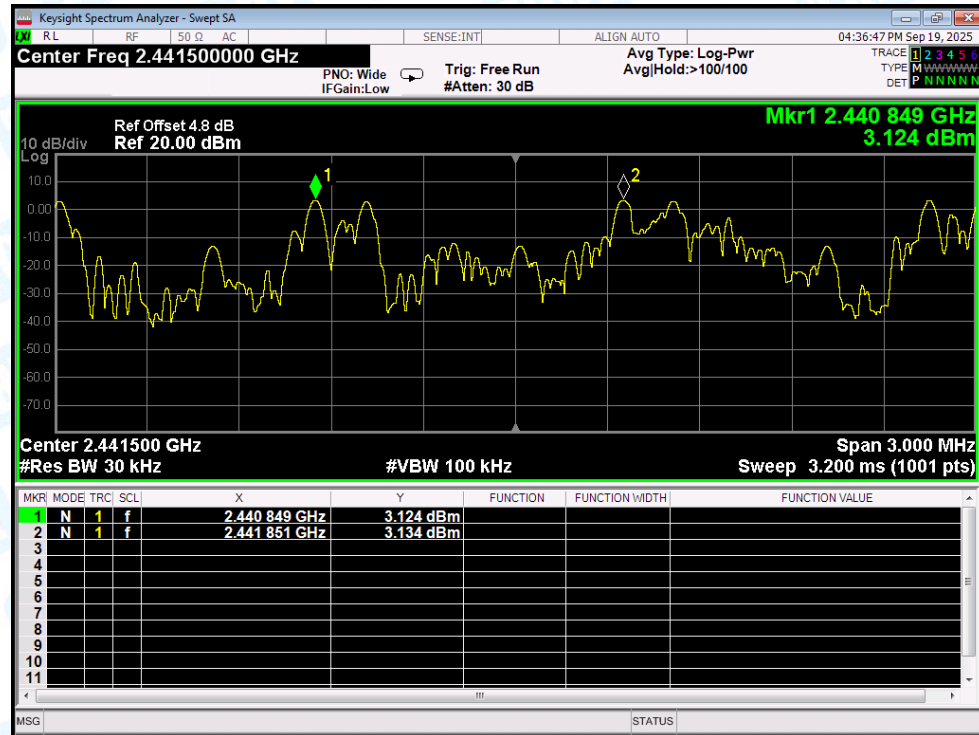


10.Carrier Frequencies Separation

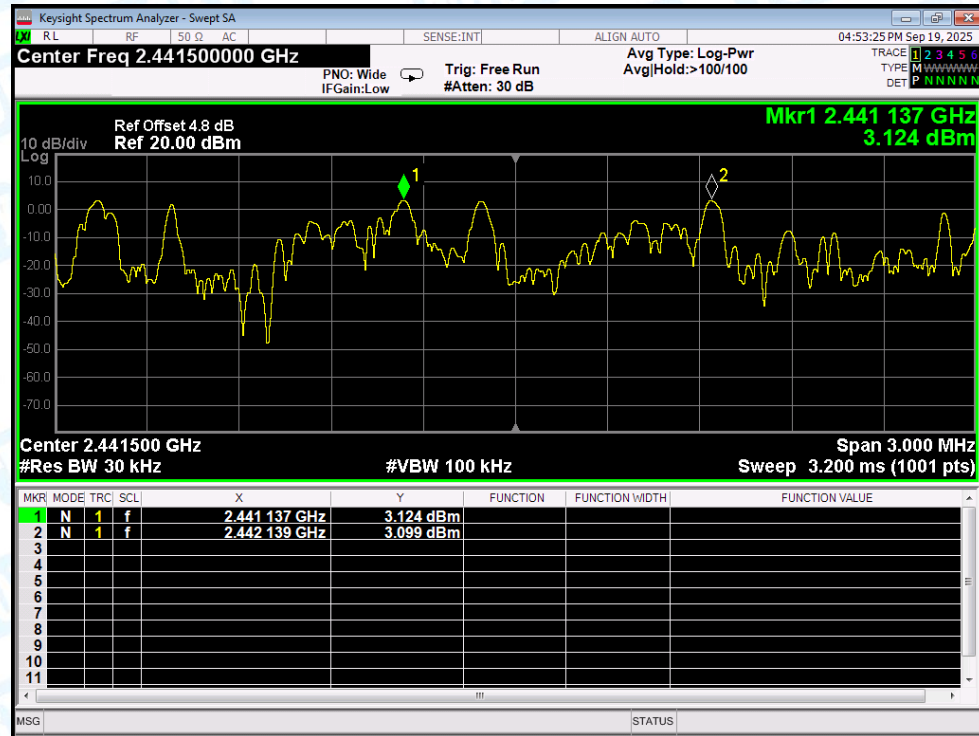
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2440.849	2441.851	1.002	0.025	Pass
NVNT	2-DH5	Ant1	2441.137	2442.139	1.002	0.88	Pass
NVNT	3-DH5	Ant1	2441.014	2442.013	0.999	0.88	Pass

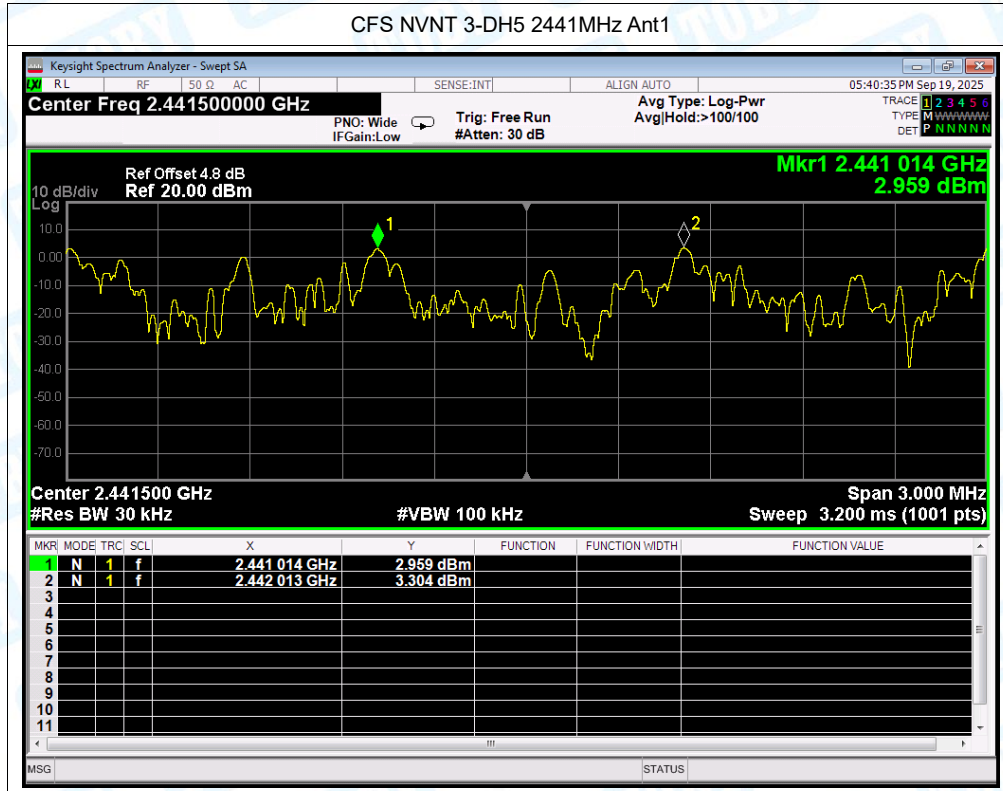
Test Graphs

CFS NVNT 1-DH5 2441MHz Ant1



CFS NVNT 2-DH5 2441MHz Ant1



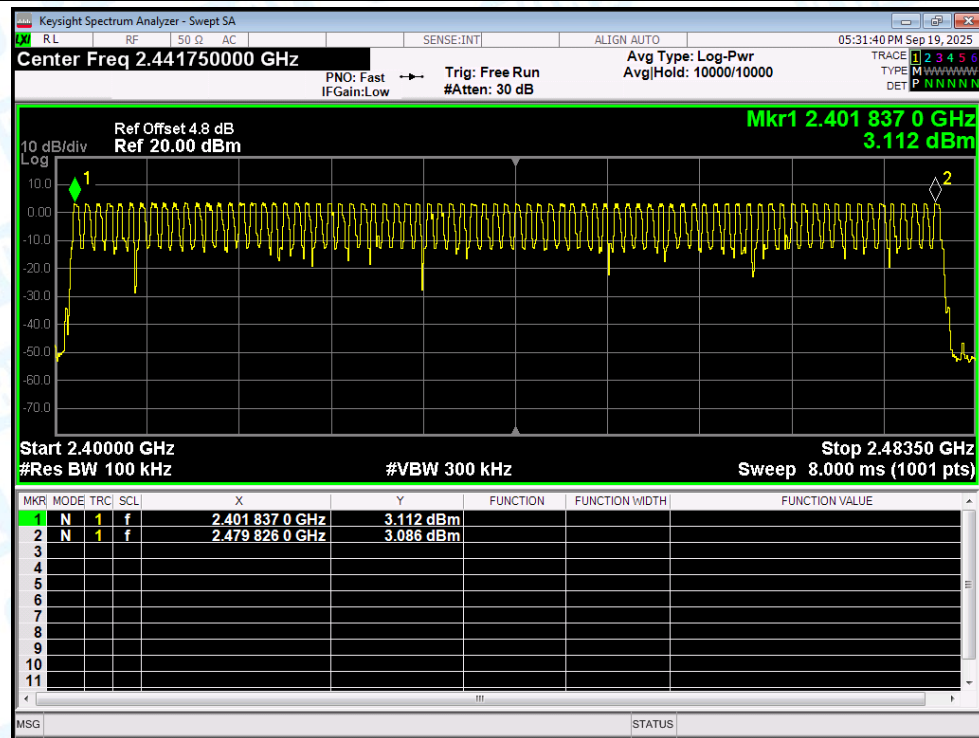


11.Number of Hopping Channel

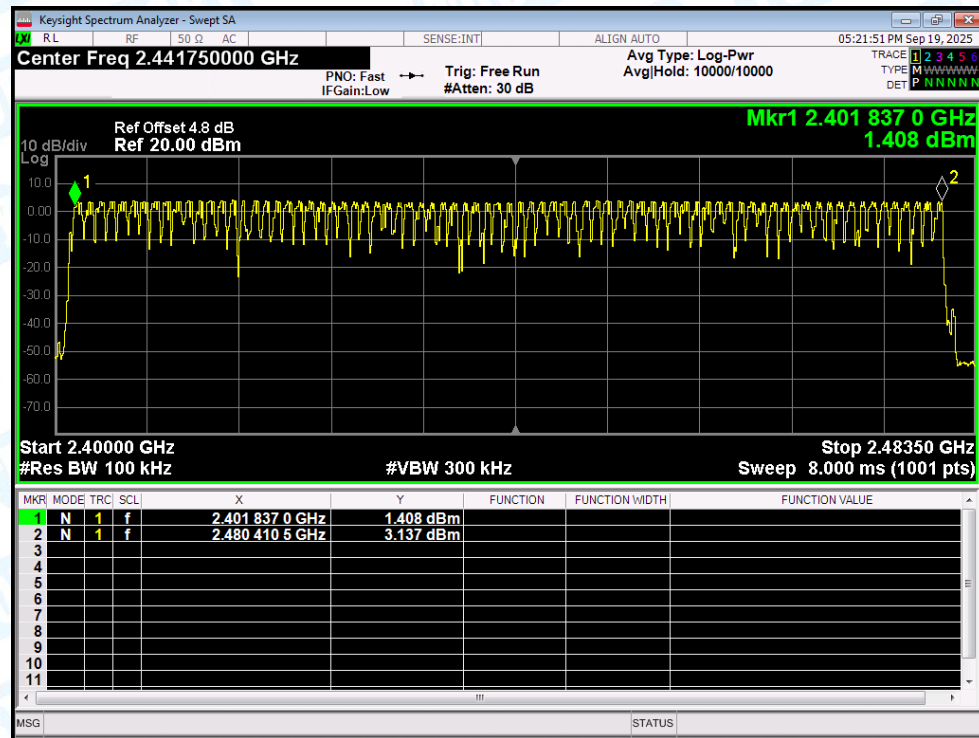
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

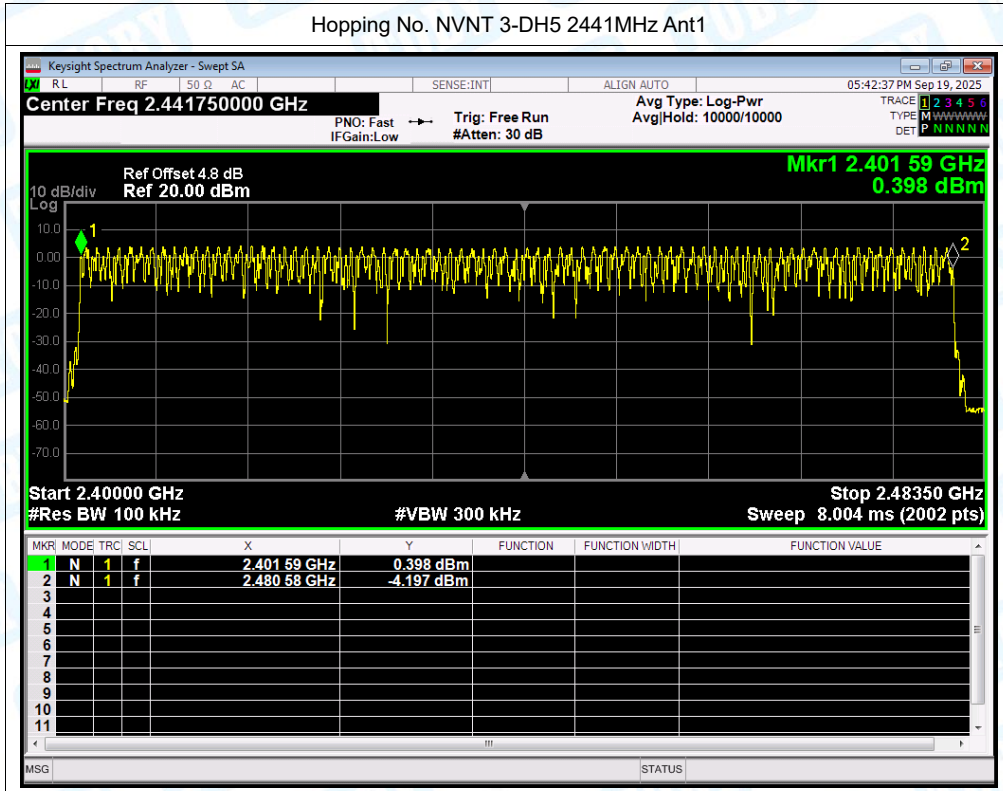
Test Graphs

Hopping No. NVNT 1-DH5 2441MHz Ant1



Hopping No. NVNT 2-DH5 2441MHz Ant1





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