

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

General Description of EUT	
Product Name:	Wireless Speaker/White Noise Machine
Test Model:	FM0167W
Sample ID:	HC-C-202404-0162-01-02-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 3.7V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202404-0162-1 The report only show the worst case data.	

Contents

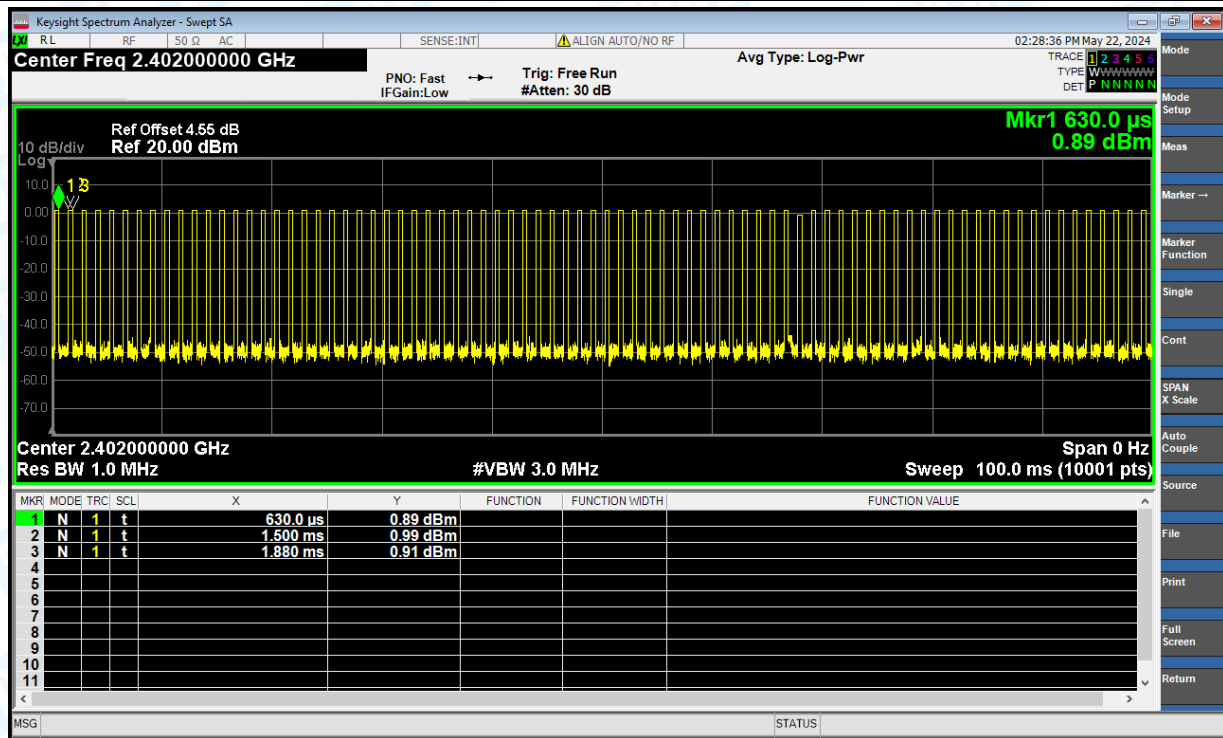
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1. Duty Cycle

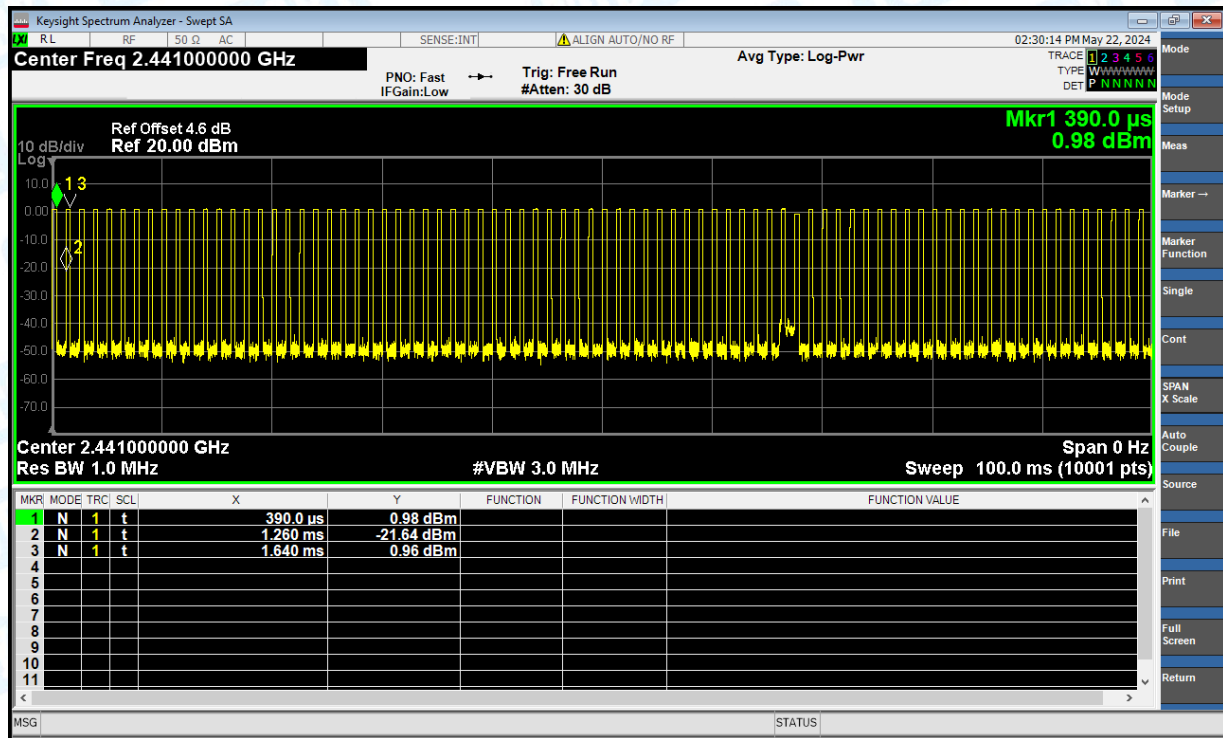
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	29.6	5.29	2.7
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	3-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2480	Ant1	31.2	5.06	2.56

Test Graphs

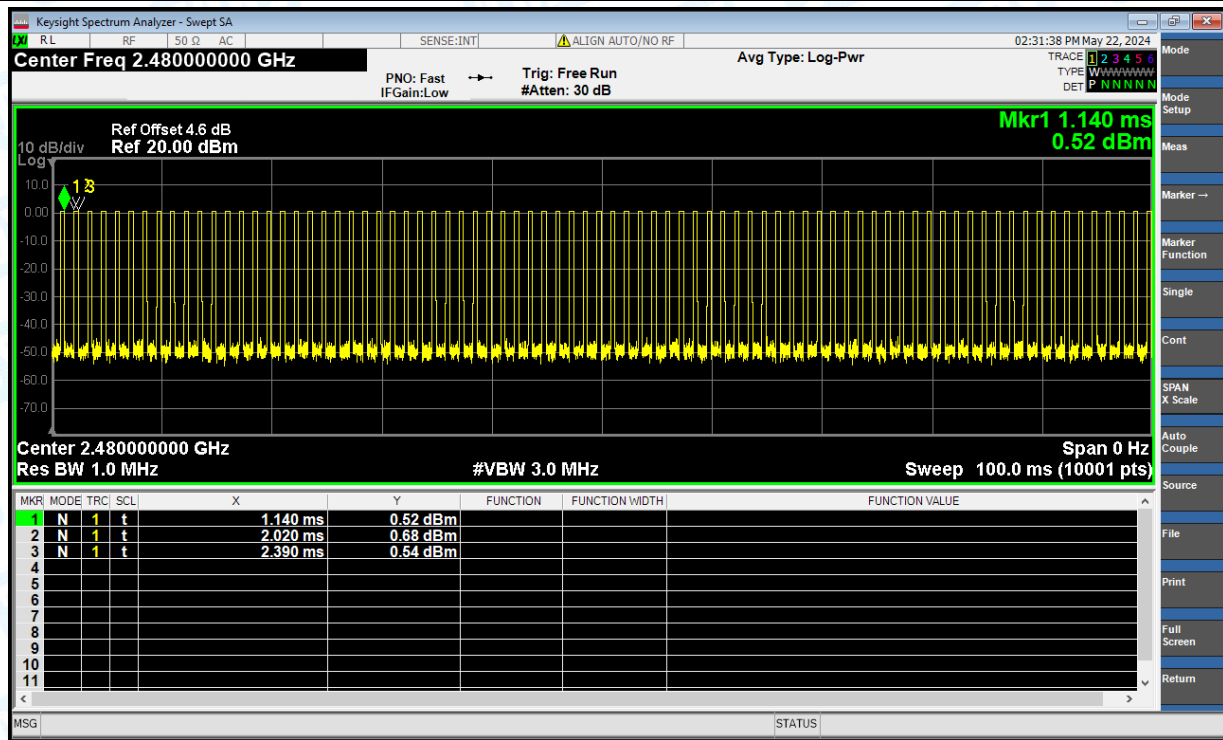
Duty Cycle NVNT 1-DH1 2402MHz Ant1



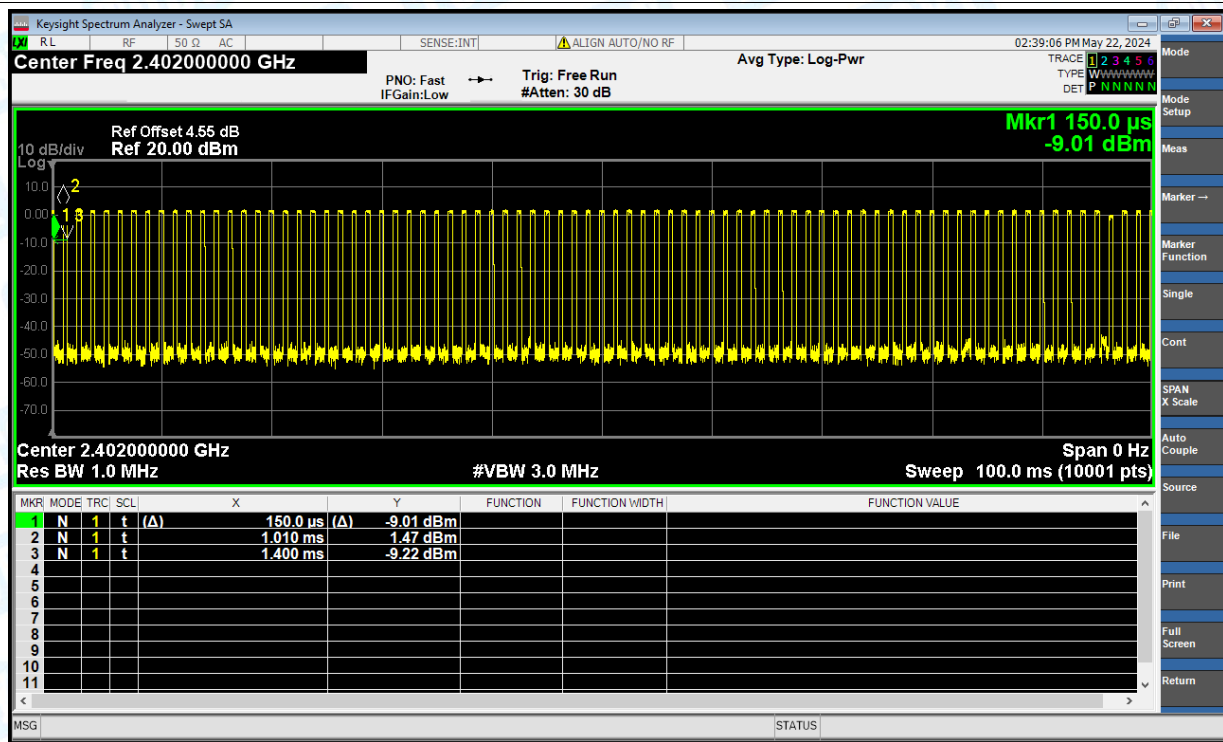
Duty Cycle NVNT 1-DH1 2441MHz Ant1



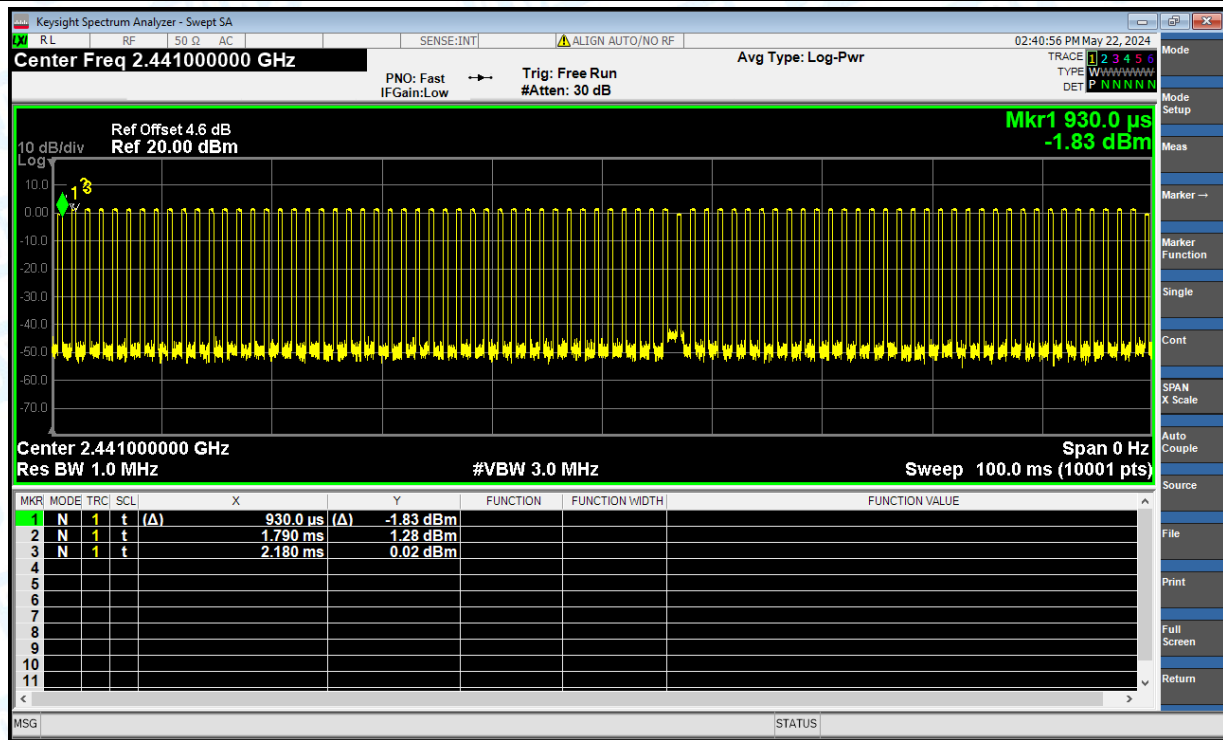
Duty Cycle NVNT 1-DH1 2480MHz Ant1



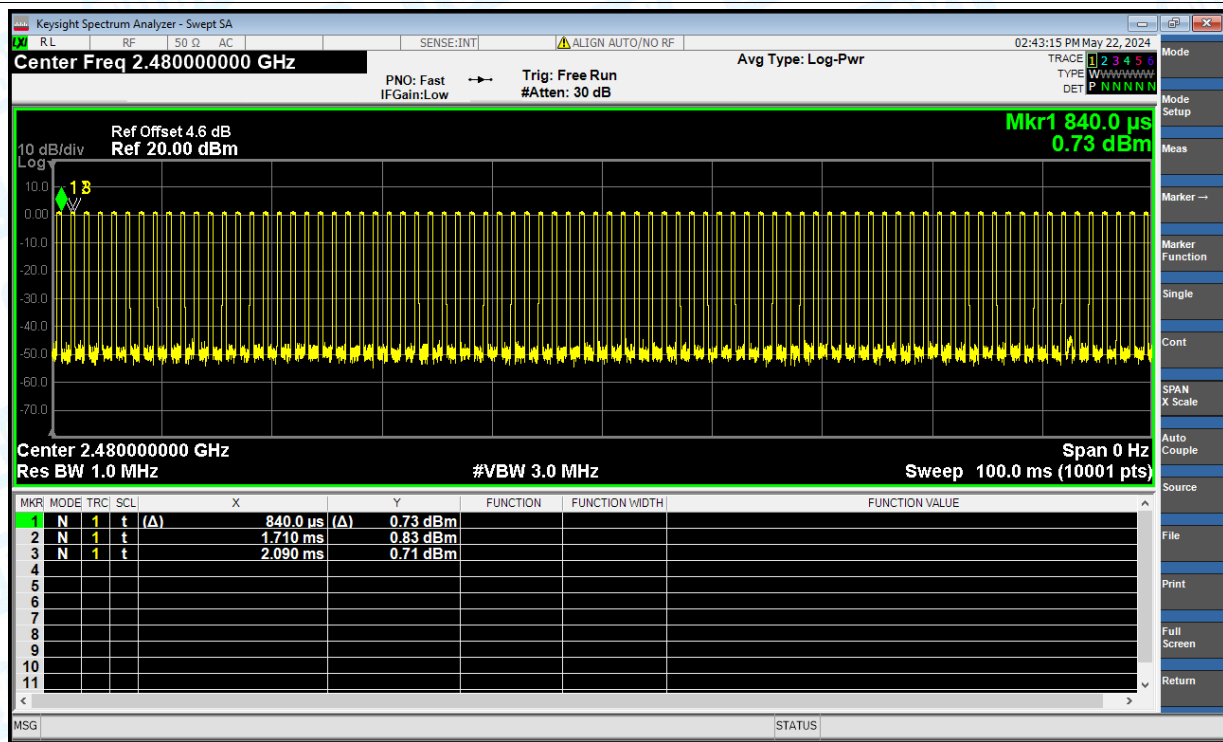
Duty Cycle NVNT 2-DH1 2402MHz Ant1



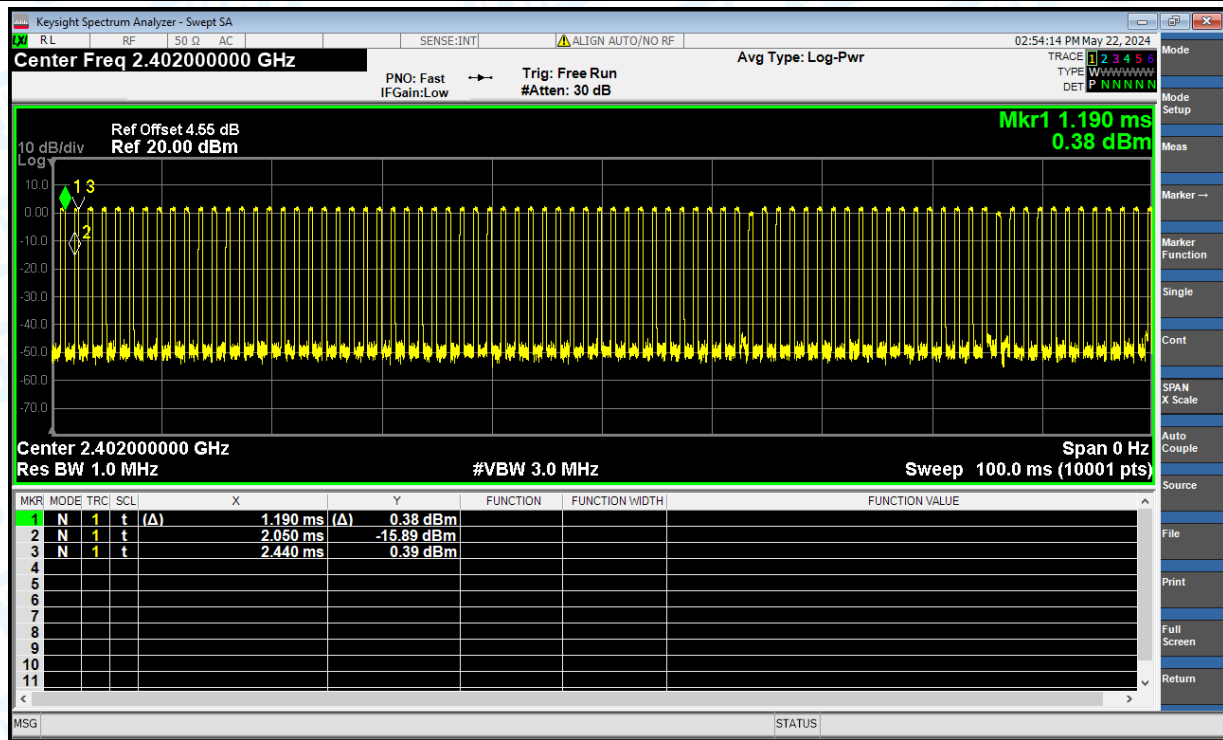
Duty Cycle NVNT 2-DH1 2441MHz Ant1



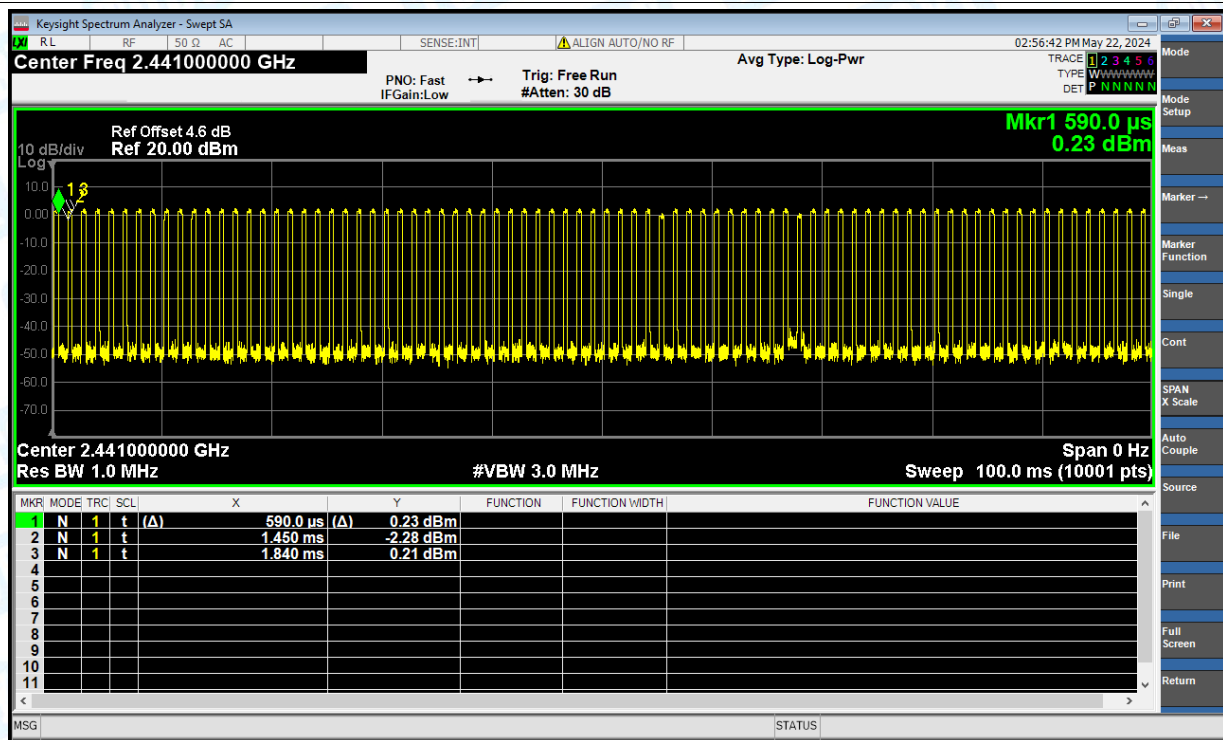
Duty Cycle NVNT 2-DH1 2480MHz Ant1



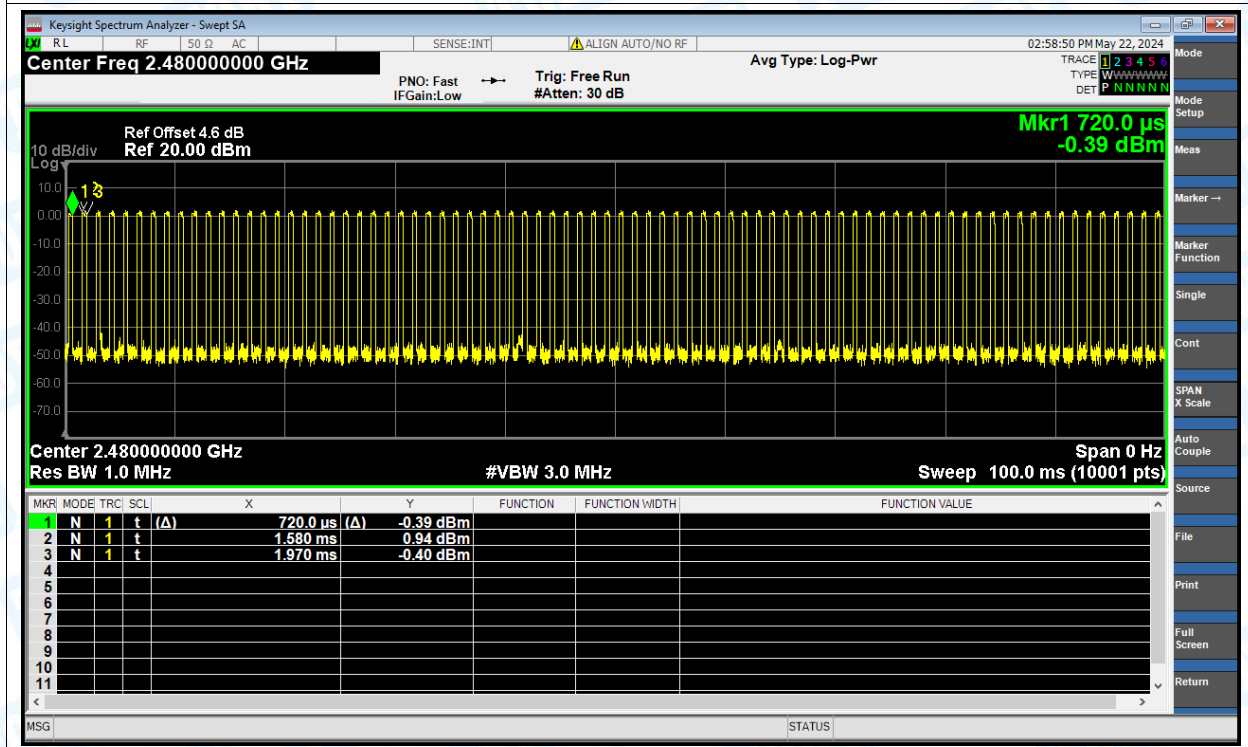
Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



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	1.08	21	Pass
NVNT	1-DH1	2441	Ant1	1.185	21	Pass
NVNT	1-DH1	2480	Ant1	0.779	21	Pass
NVNT	2-DH1	2402	Ant1	2.17	21	Pass
NVNT	2-DH1	2441	Ant1	2.124	21	Pass
NVNT	2-DH1	2480	Ant1	1.655	21	Pass
NVNT	3-DH1	2402	Ant1	2.666	21	Pass
NVNT	3-DH1	2441	Ant1	2.662	21	Pass
NVNT	3-DH1	2480	Ant1	2.234	21	Pass

Test Graphs

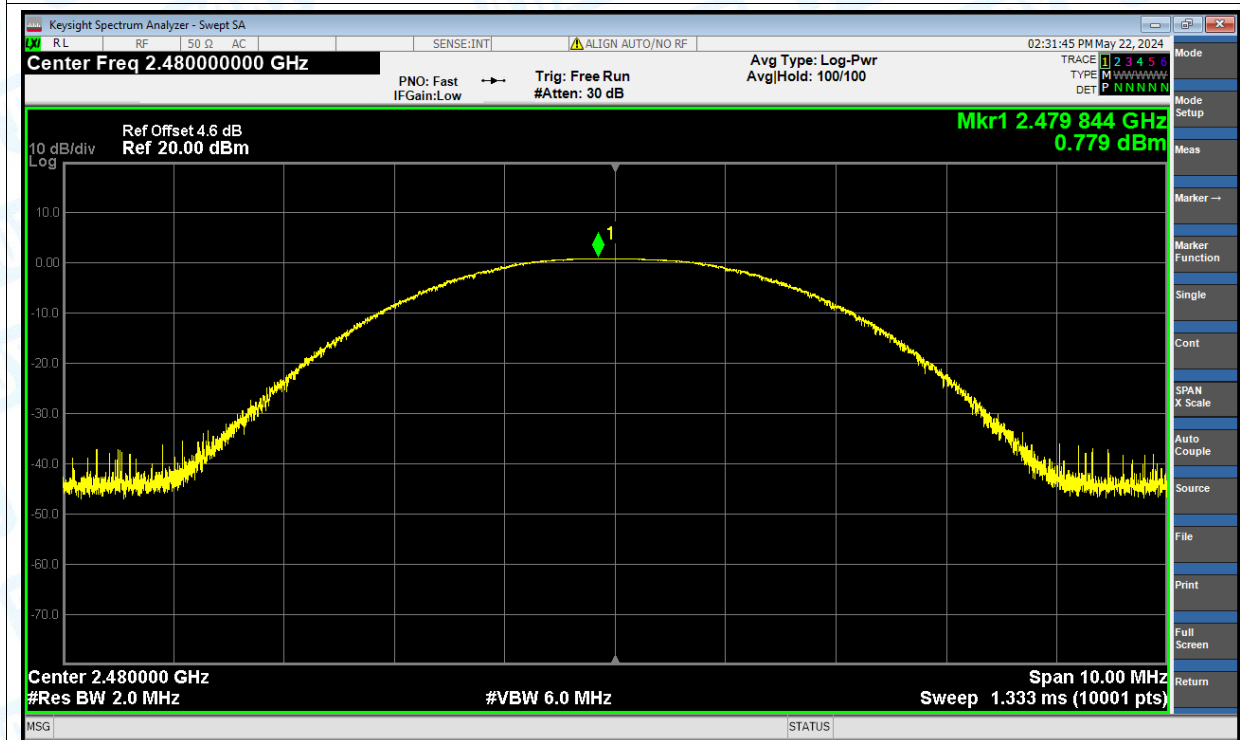
Power NVNT 1-DH1 2402MHz Ant1



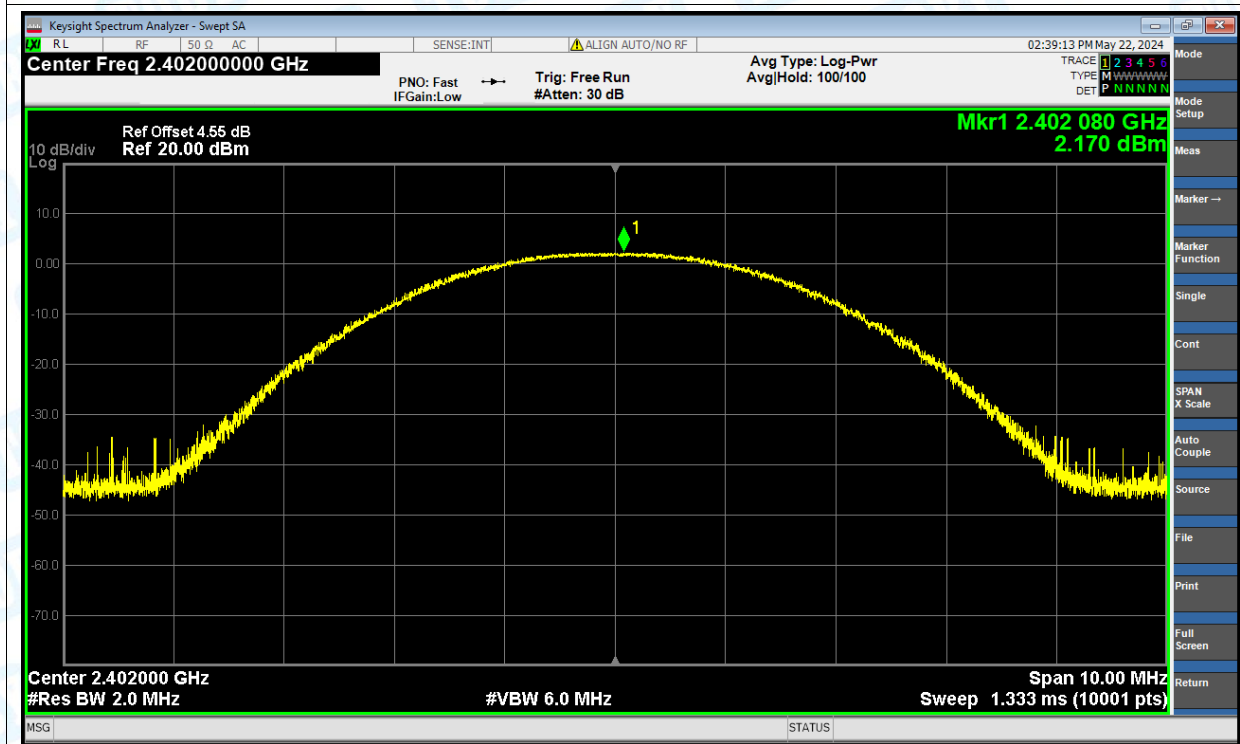
Power NVNT 1-DH1 2441MHz Ant1



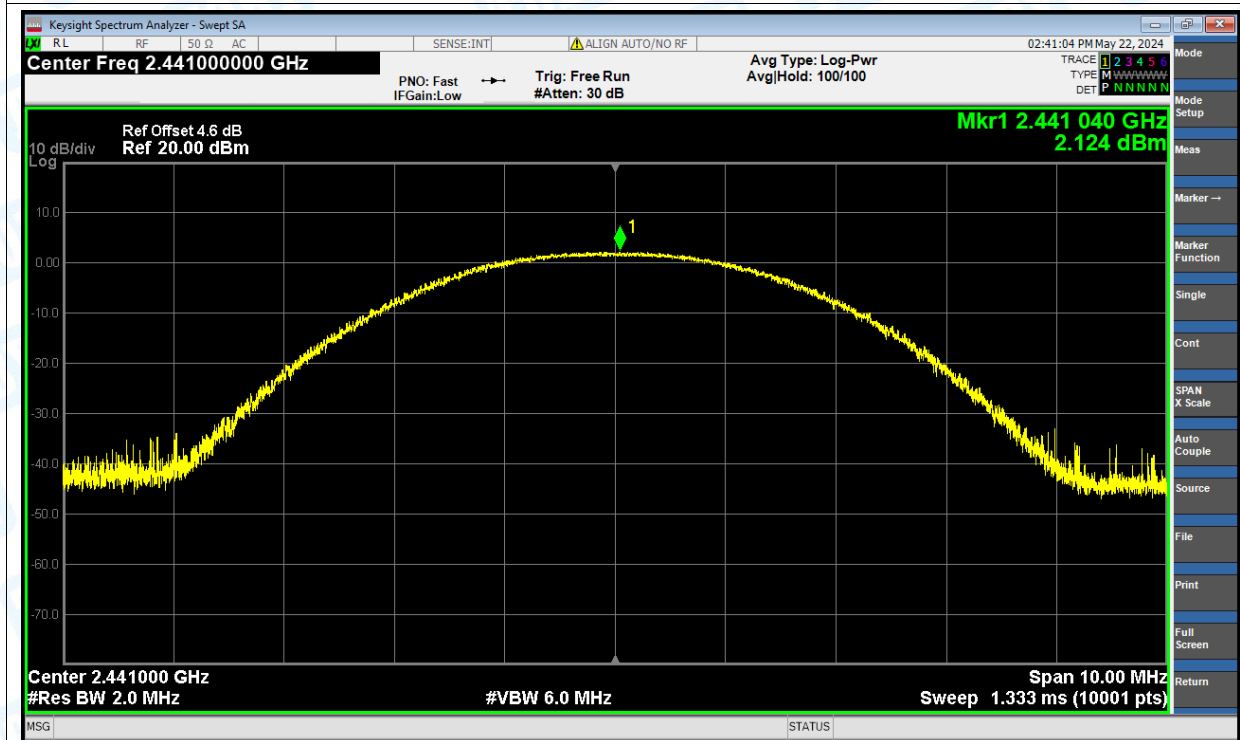
Power NVNT 1-DH1 2480MHz Ant1



Power NVNT 2-DH1 2402MHz Ant1



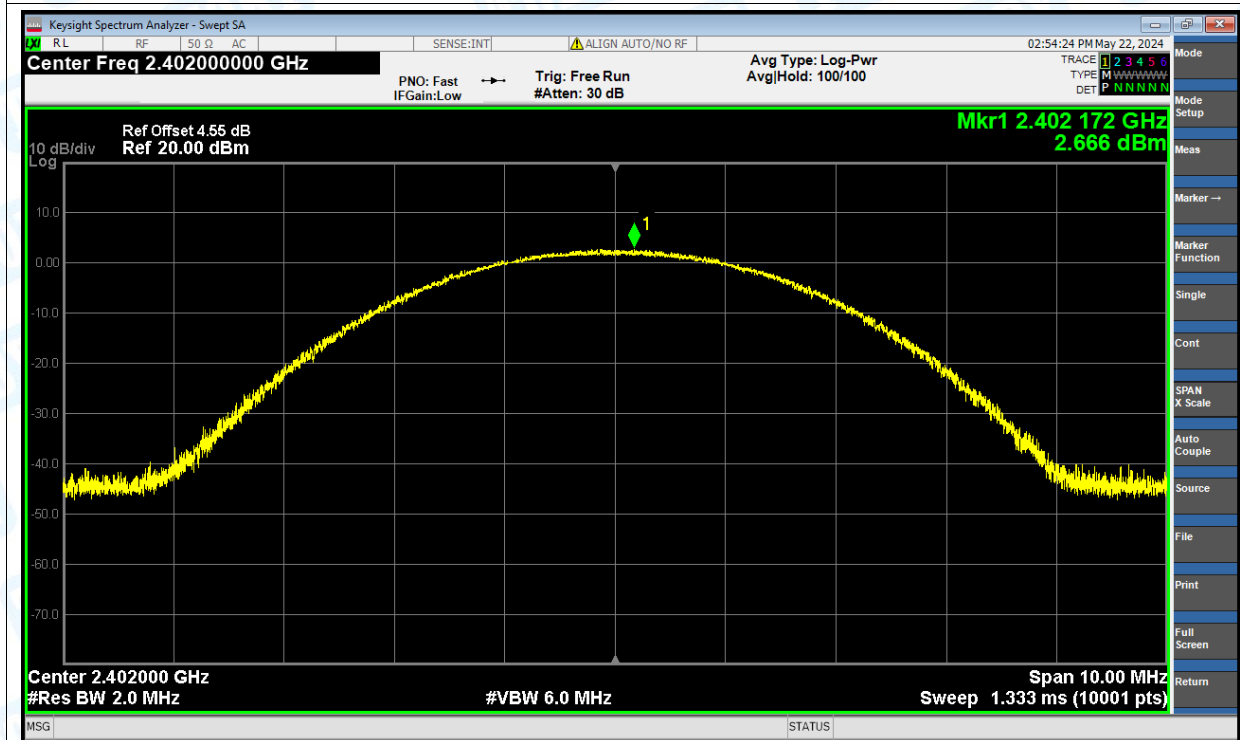
Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1

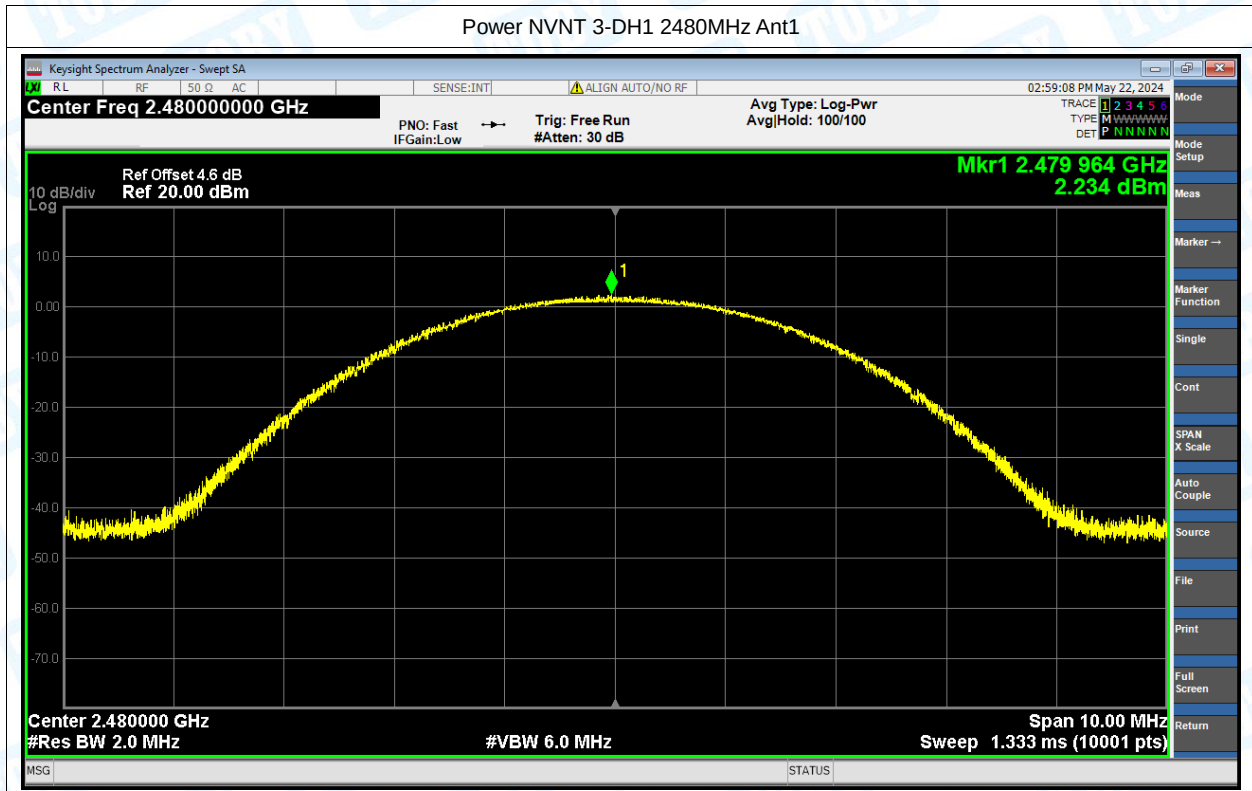


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1





3. -20dB Bandwidth

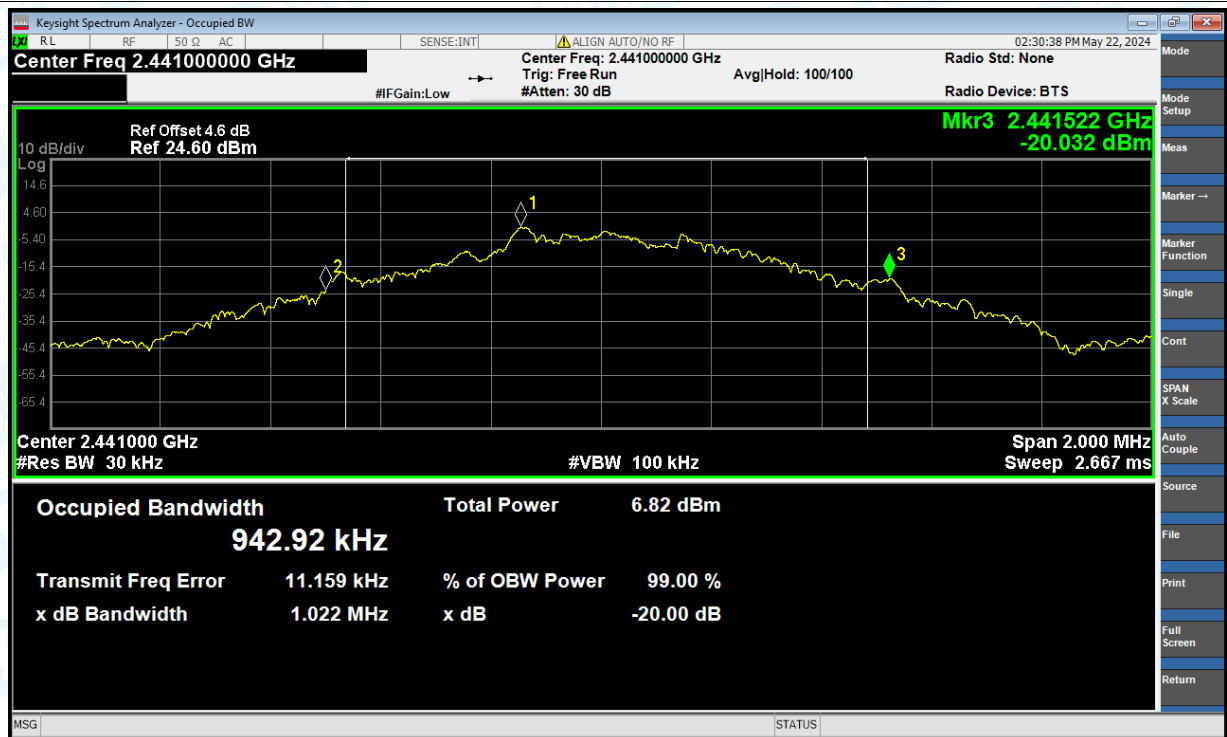
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	1.02	----	Pass
NVNT	1-DH1	2441	Ant1	1.02	----	Pass
NVNT	1-DH1	2480	Ant1	1.03	----	Pass
NVNT	2-DH1	2402	Ant1	1.27	----	Pass
NVNT	2-DH1	2441	Ant1	1.30	----	Pass
NVNT	2-DH1	2480	Ant1	1.28	----	Pass
NVNT	3-DH1	2402	Ant1	1.24	----	Pass
NVNT	3-DH1	2441	Ant1	1.30	----	Pass
NVNT	3-DH1	2480	Ant1	1.25	----	Pass

Test Graphs

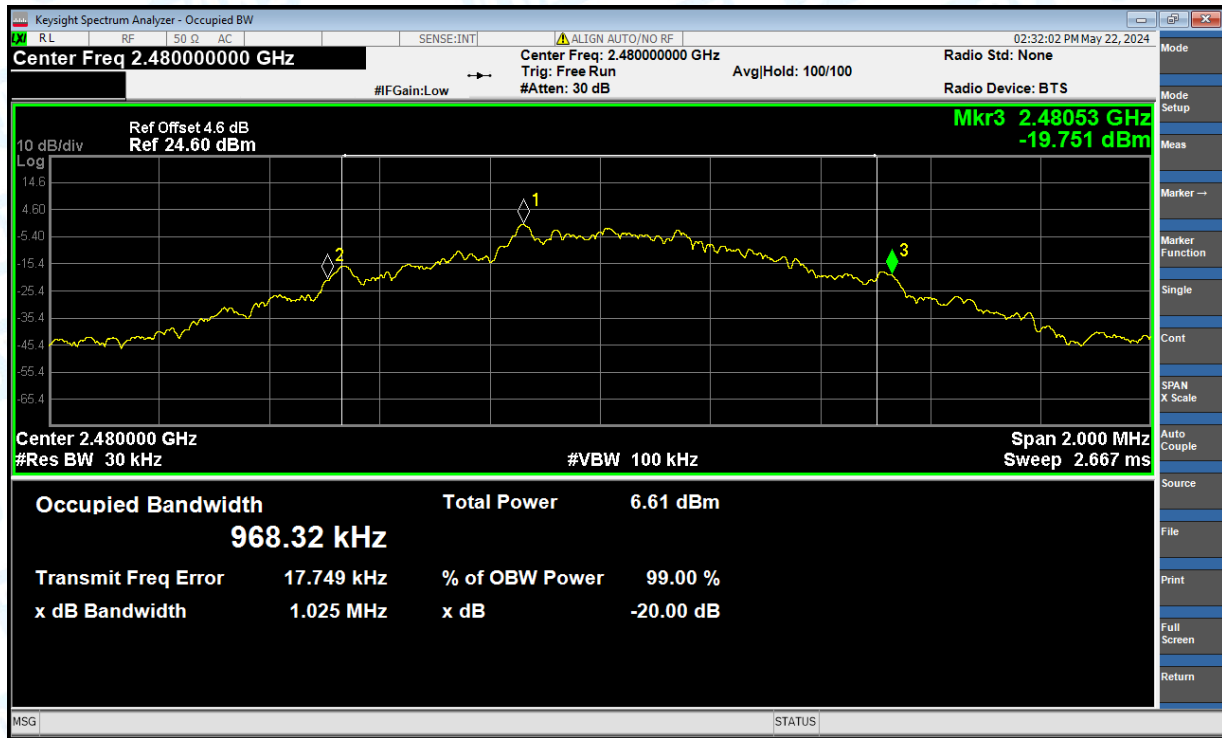
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



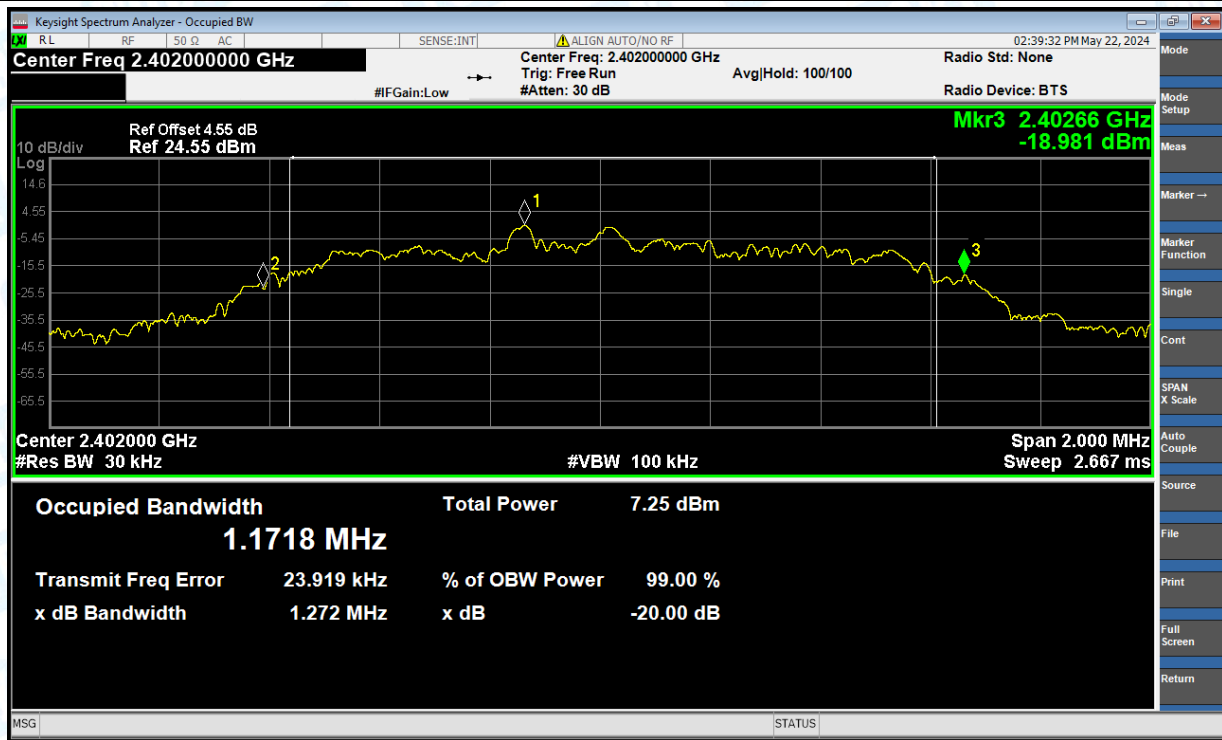
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



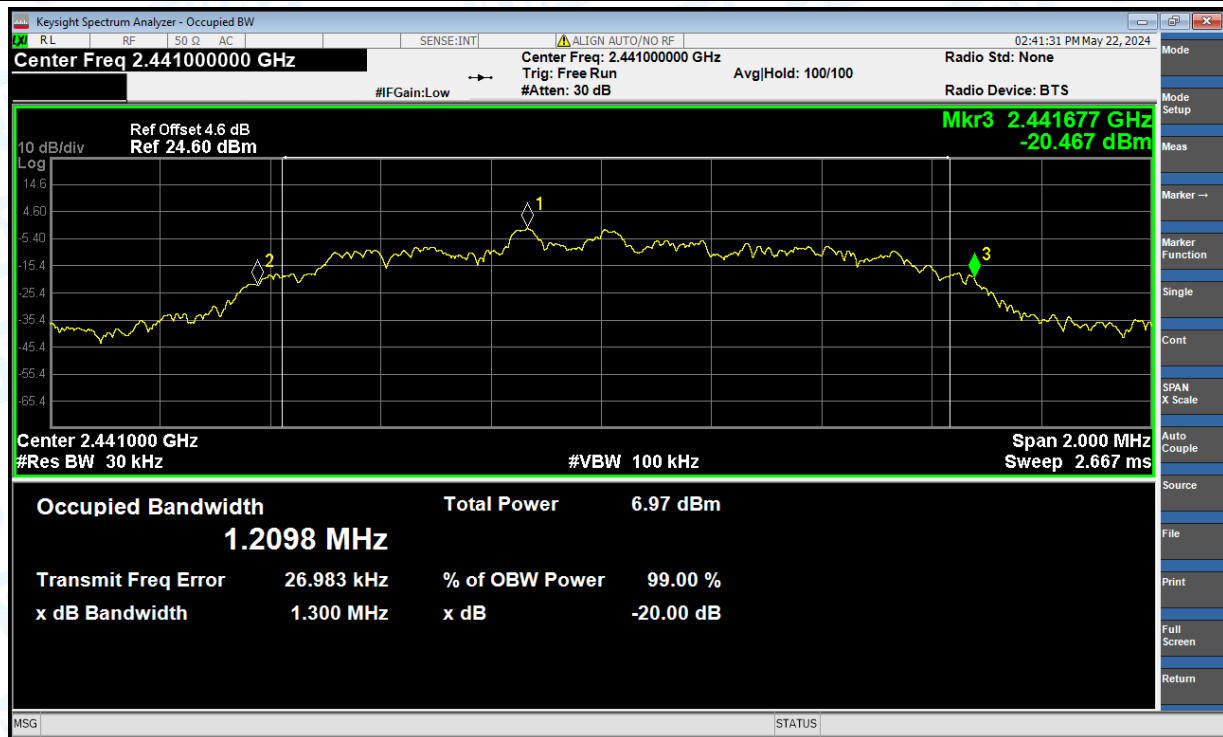
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



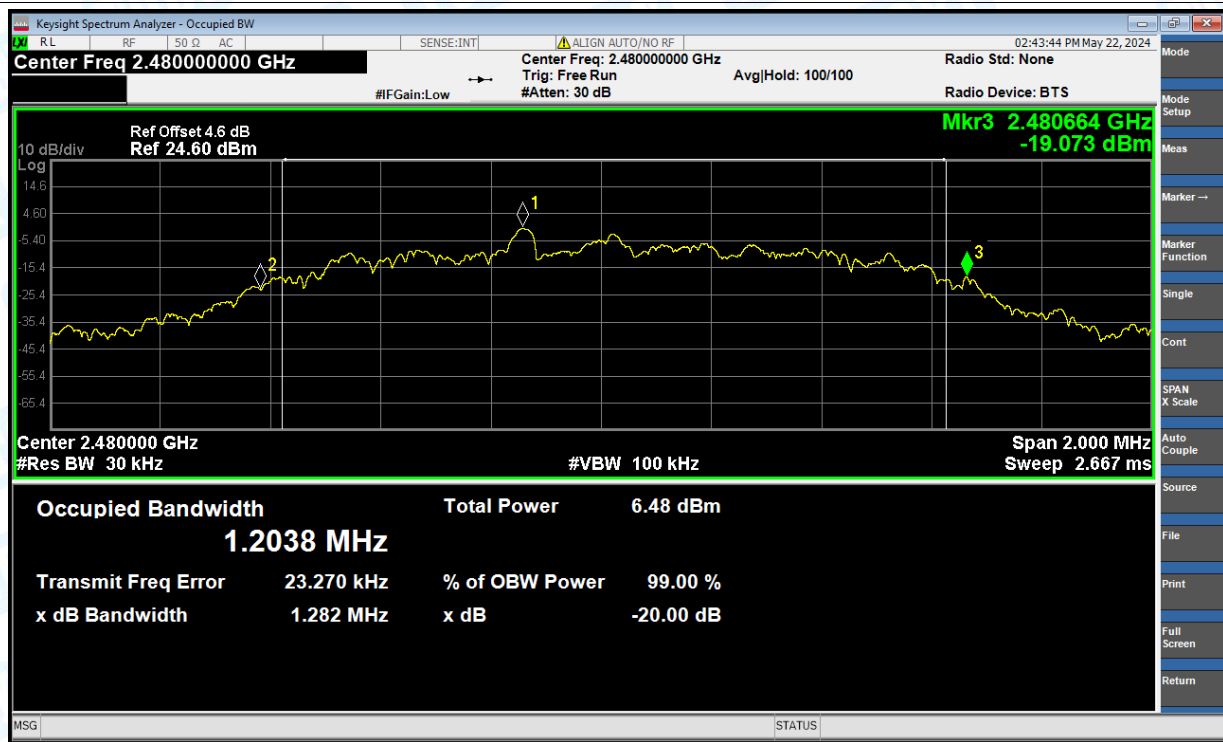
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



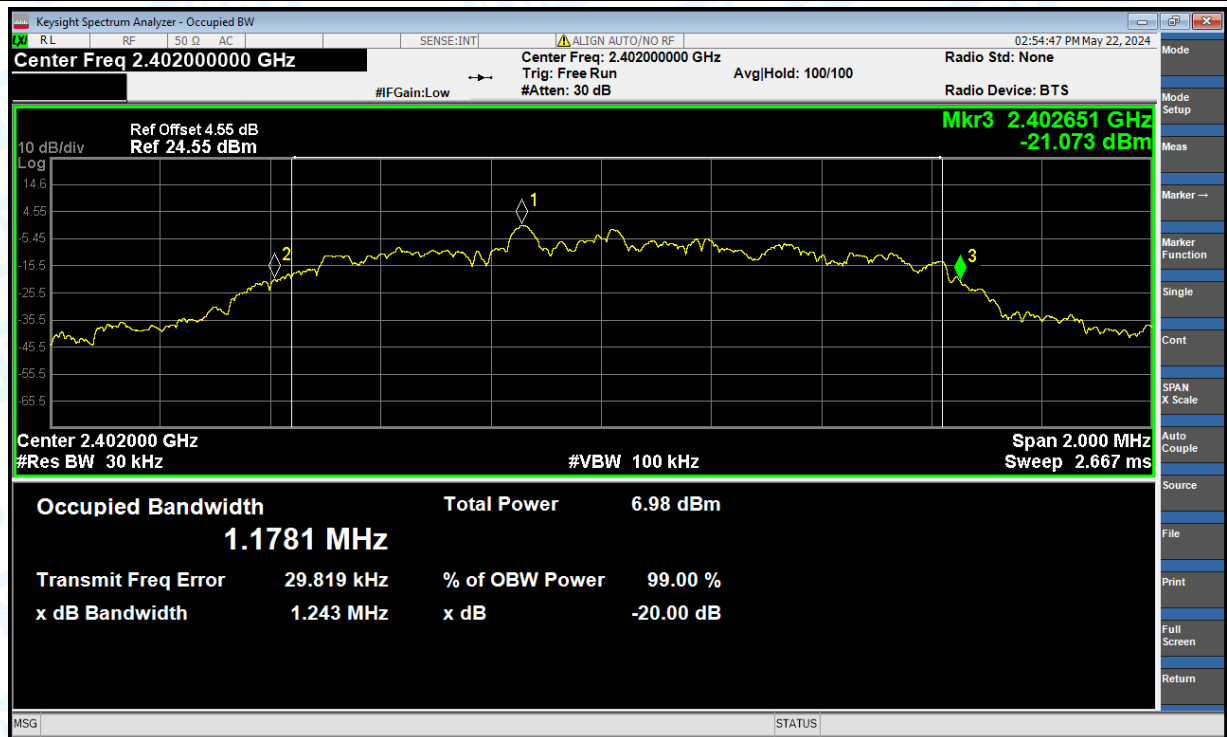
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



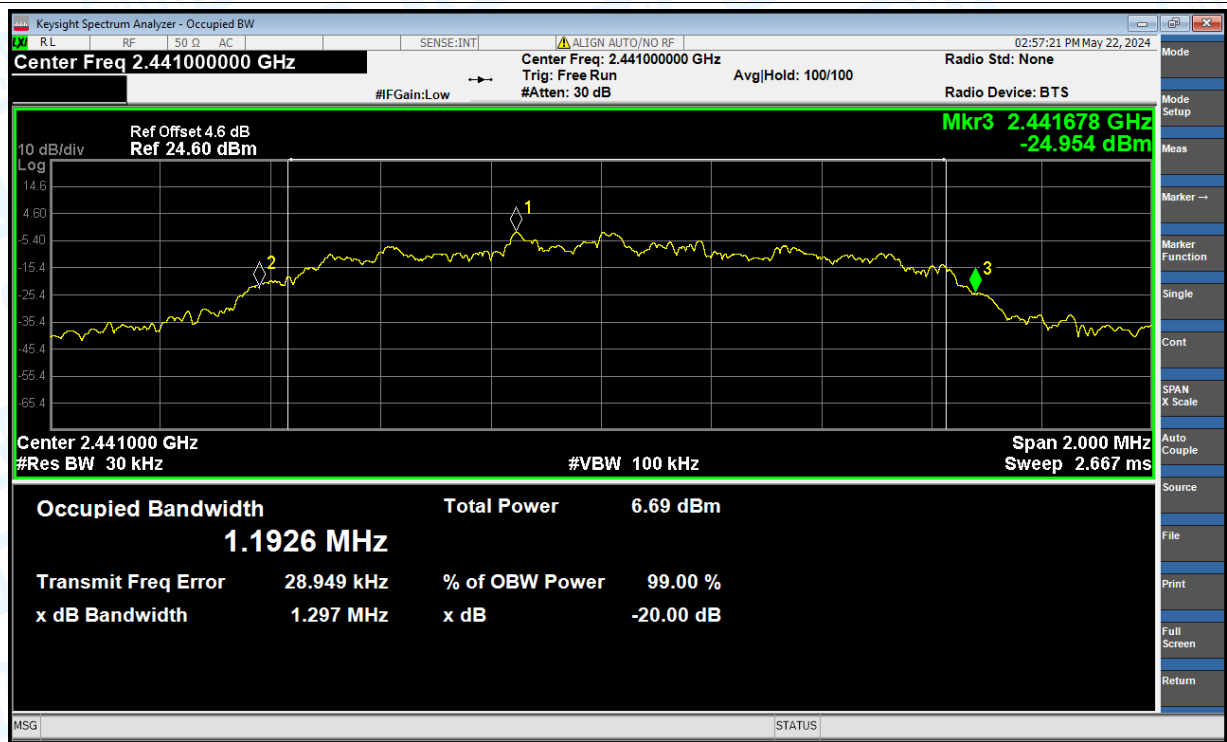
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

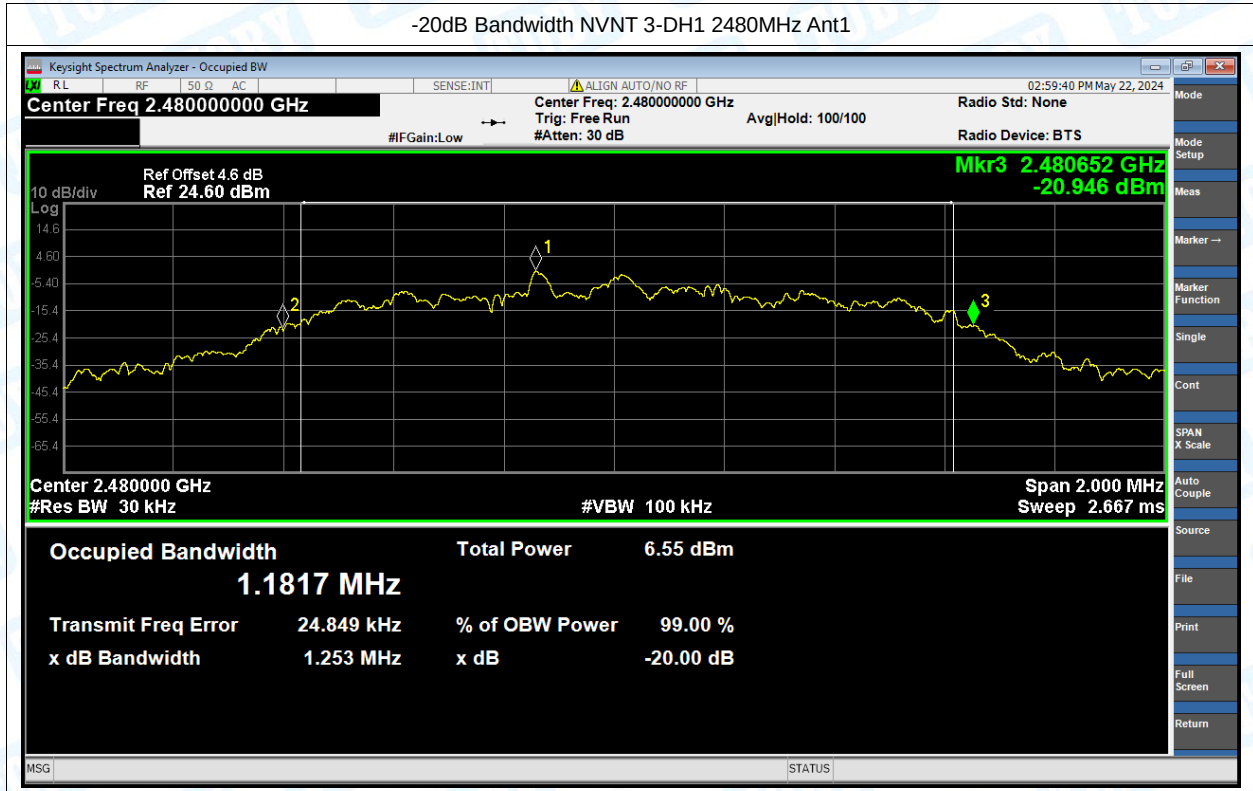


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



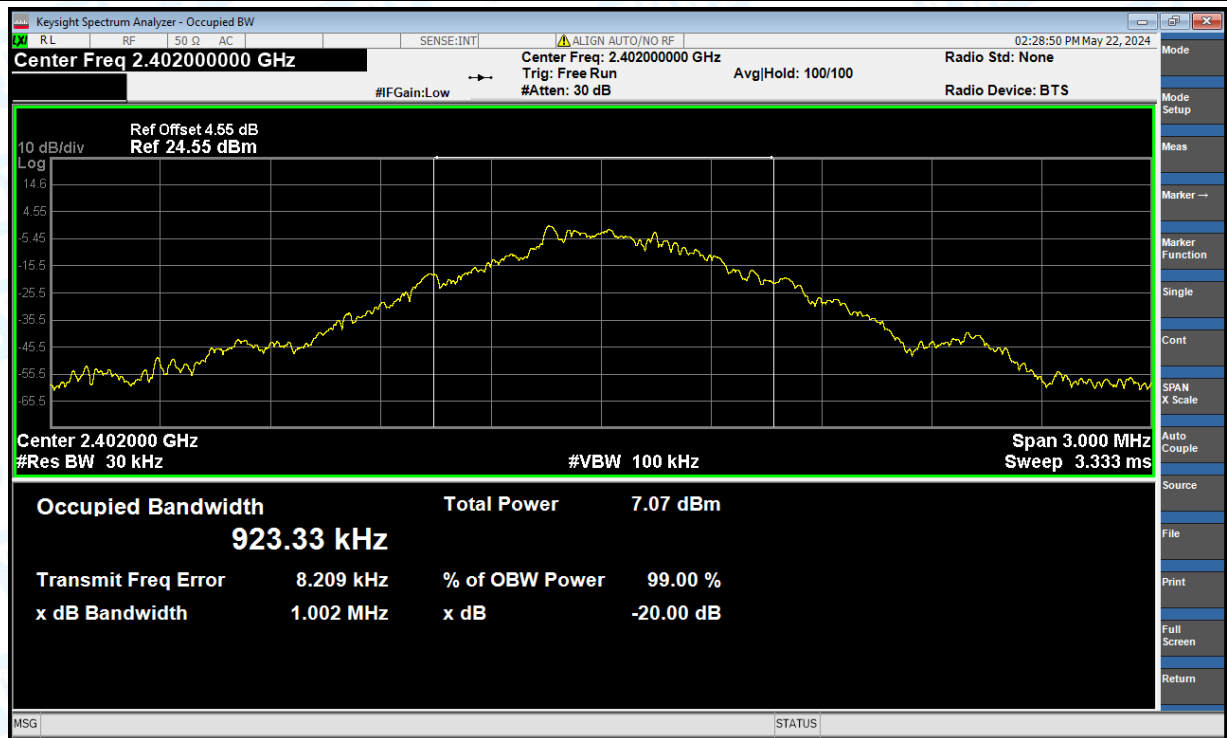


4. Occupied Channel Bandwidth

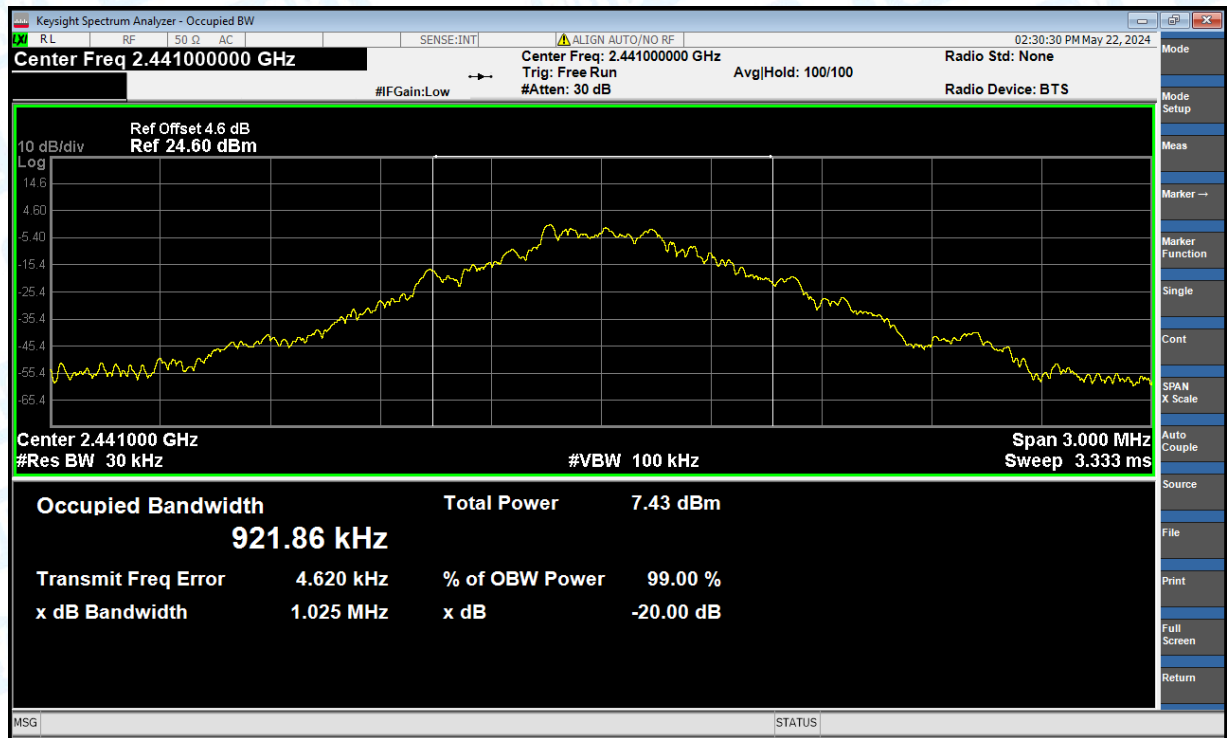
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.923
NVNT	1-DH1	2441	Ant1	0.922
NVNT	1-DH1	2480	Ant1	0.956
NVNT	2-DH1	2402	Ant1	1.193
NVNT	2-DH1	2441	Ant1	1.214
NVNT	2-DH1	2480	Ant1	1.183
NVNT	3-DH1	2402	Ant1	1.181
NVNT	3-DH1	2441	Ant1	1.186
NVNT	3-DH1	2480	Ant1	1.189

Test Graphs

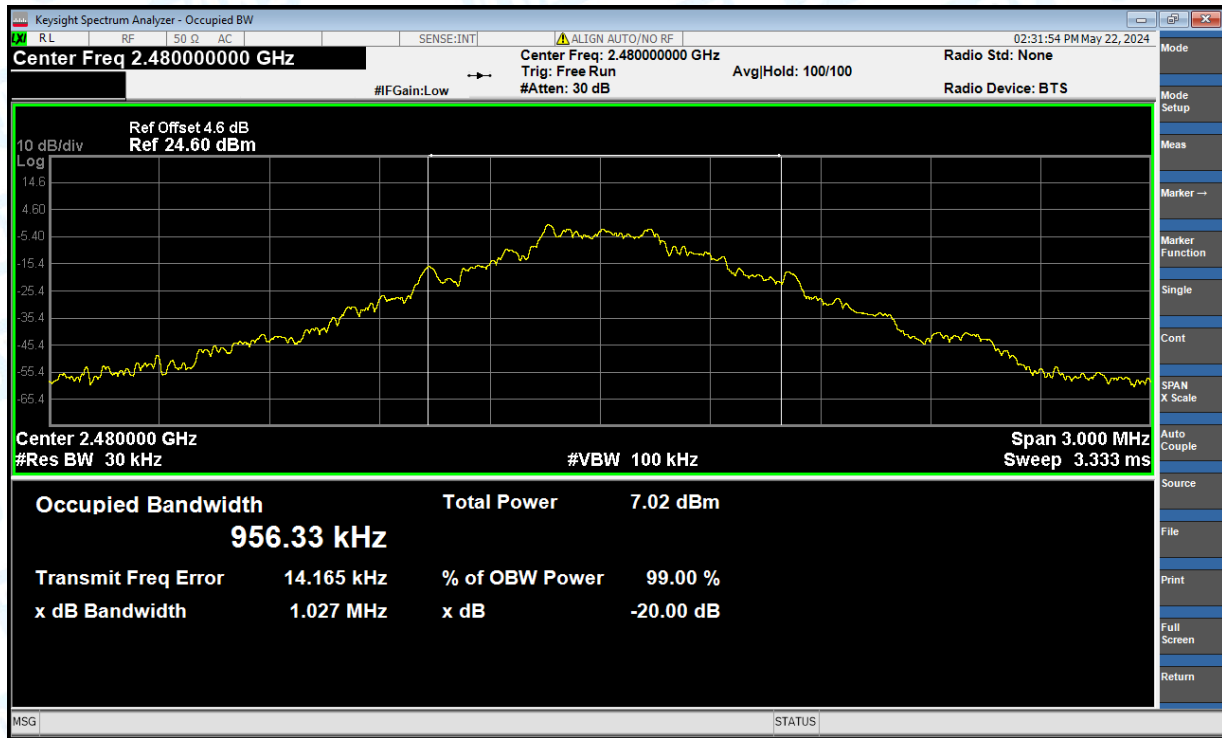
OBW NVNT 1-DH1 2402MHz Ant1



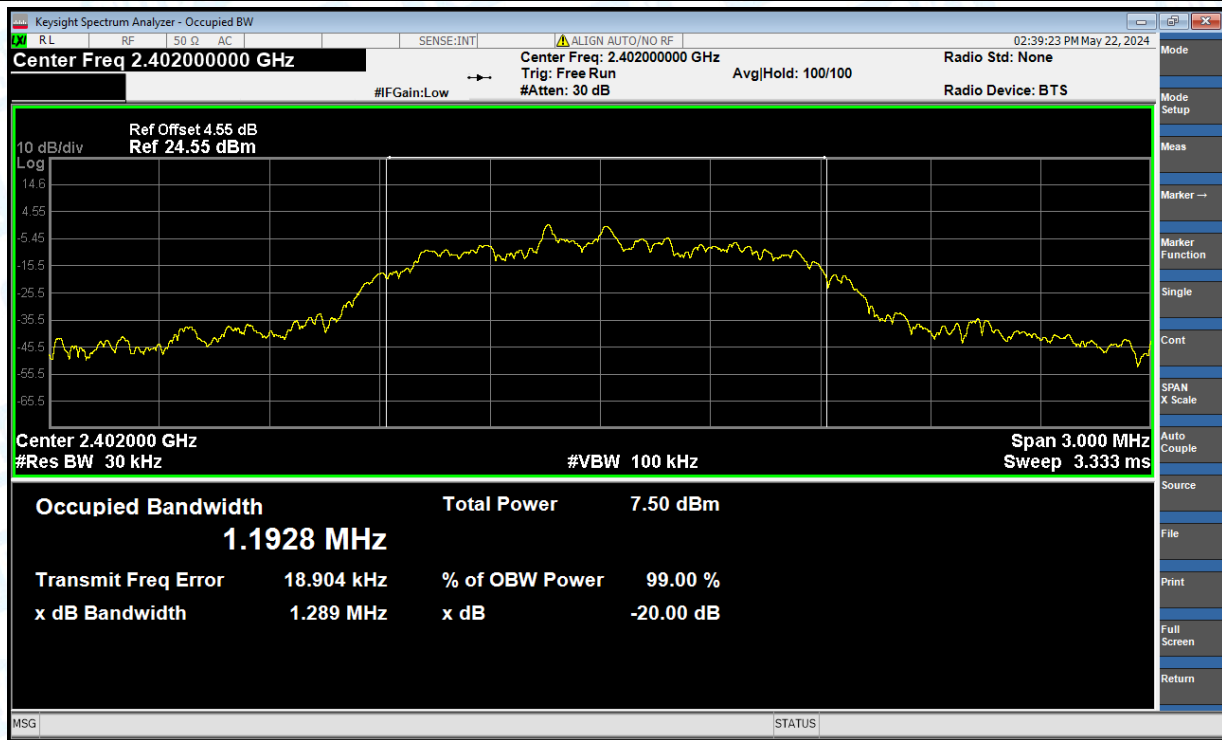
OBW NVNT 1-DH1 2441MHz Ant1



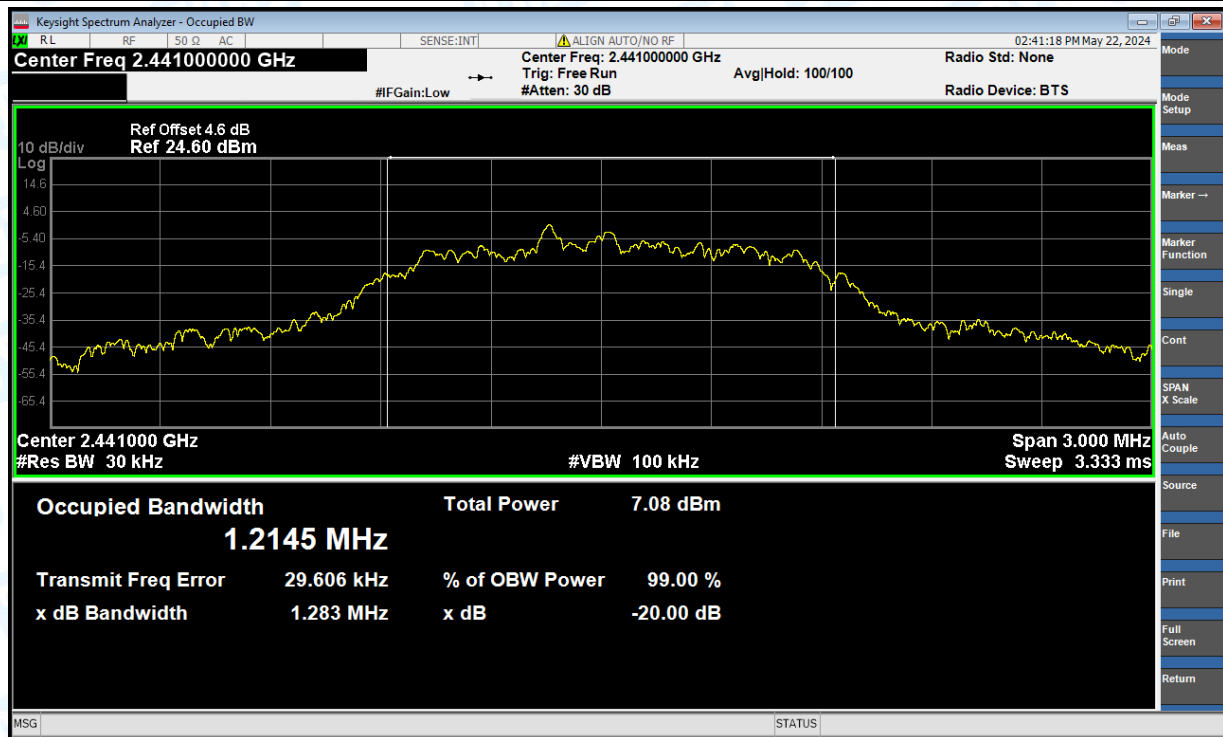
OBW NVNT 1-DH1 2480MHz Ant1



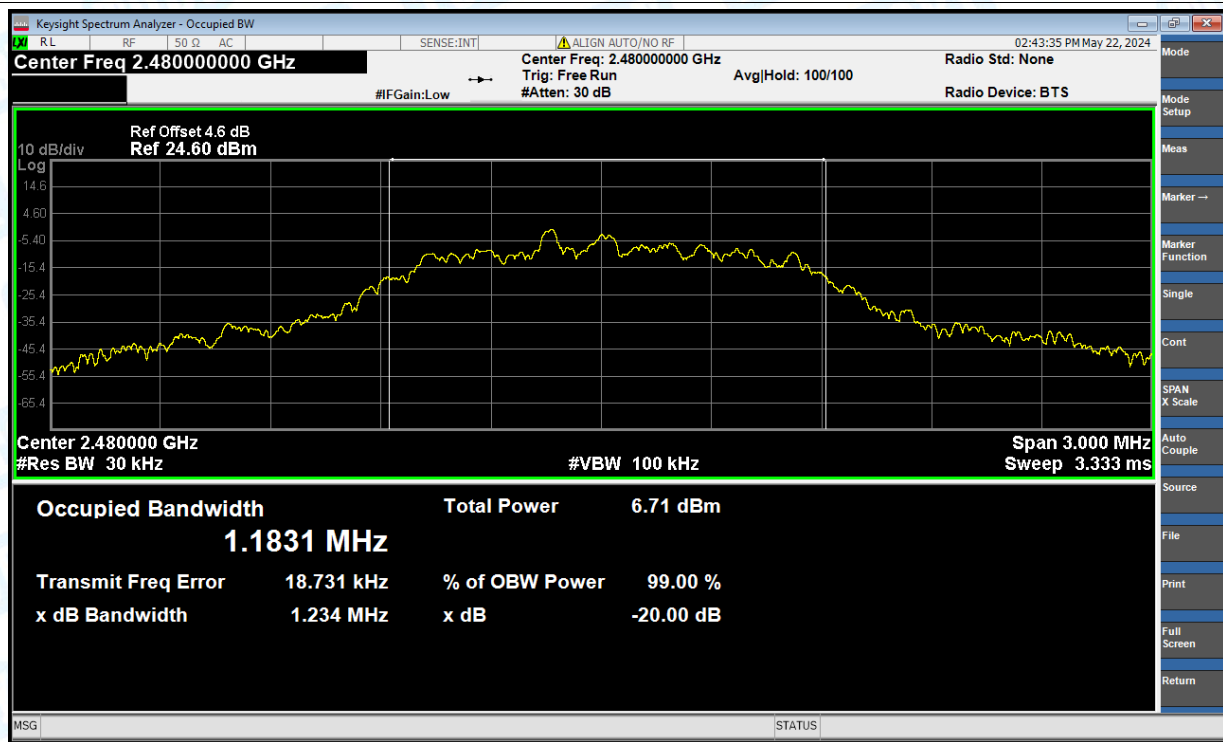
OBW NVNT 2-DH1 2402MHz Ant1



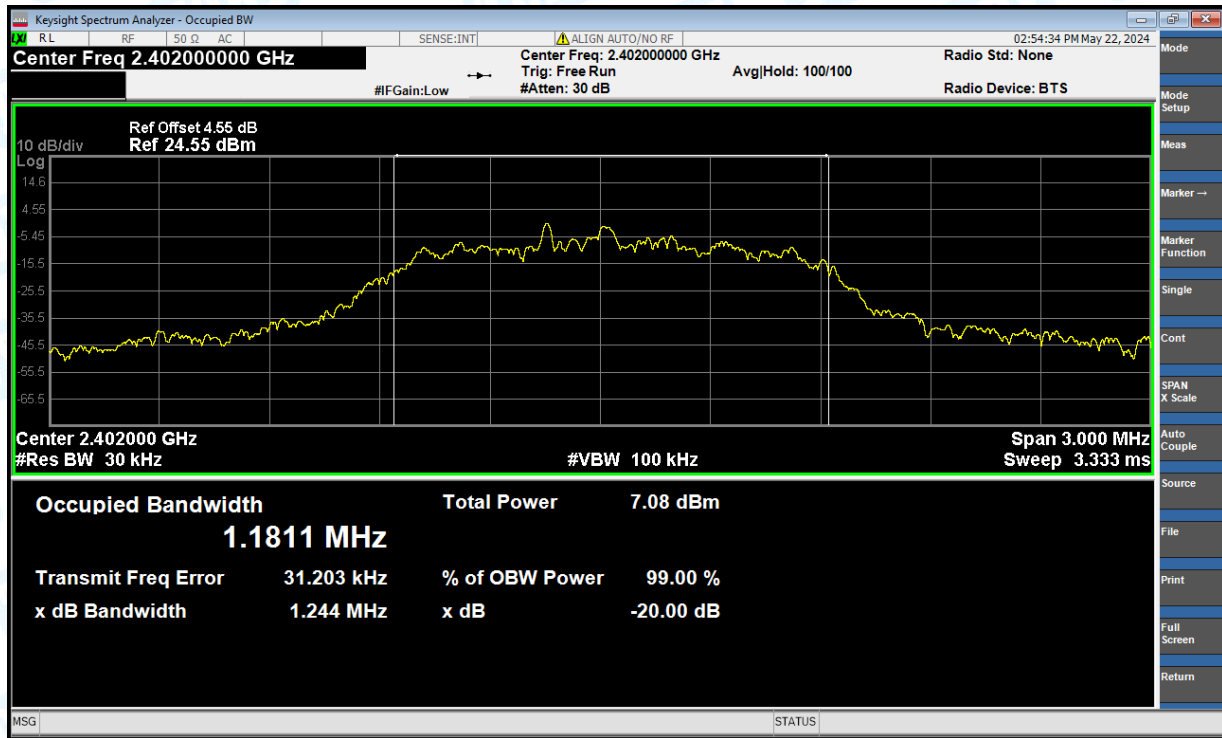
OBW NVNT 2-DH1 2441MHz Ant1



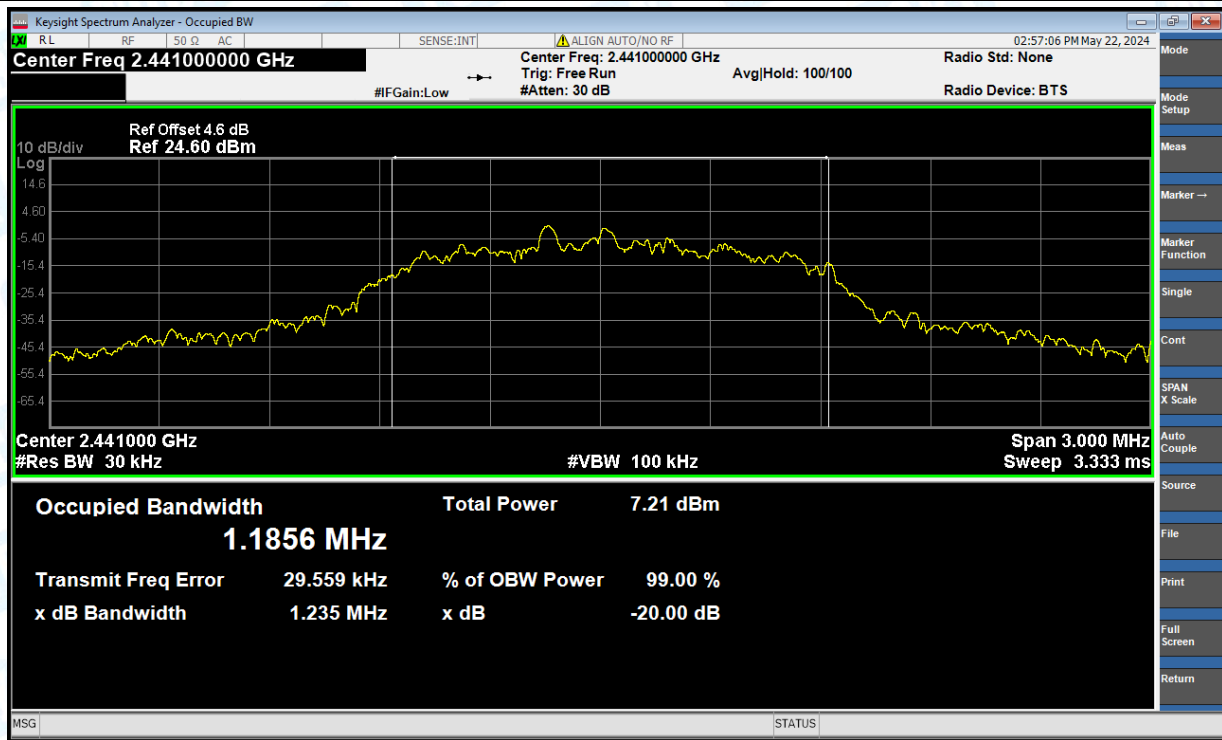
OBW NVNT 2-DH1 2480MHz Ant1

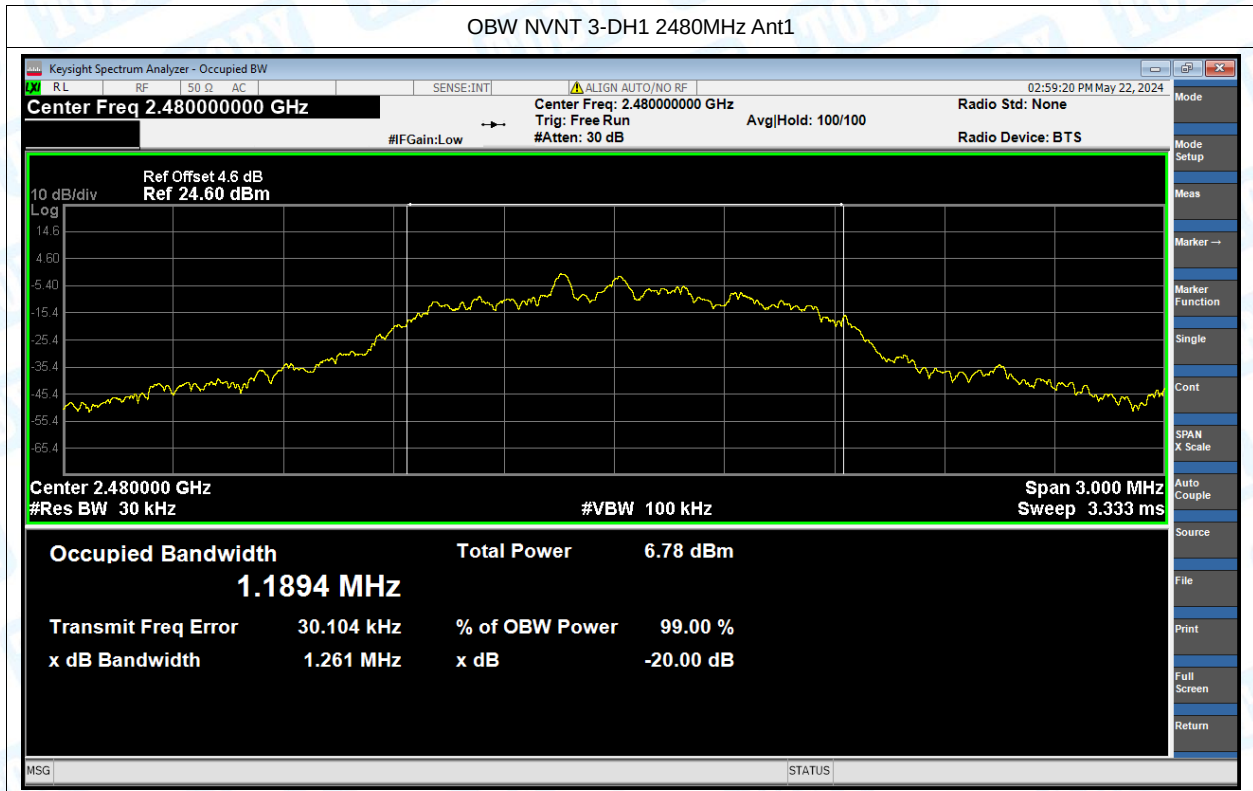


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



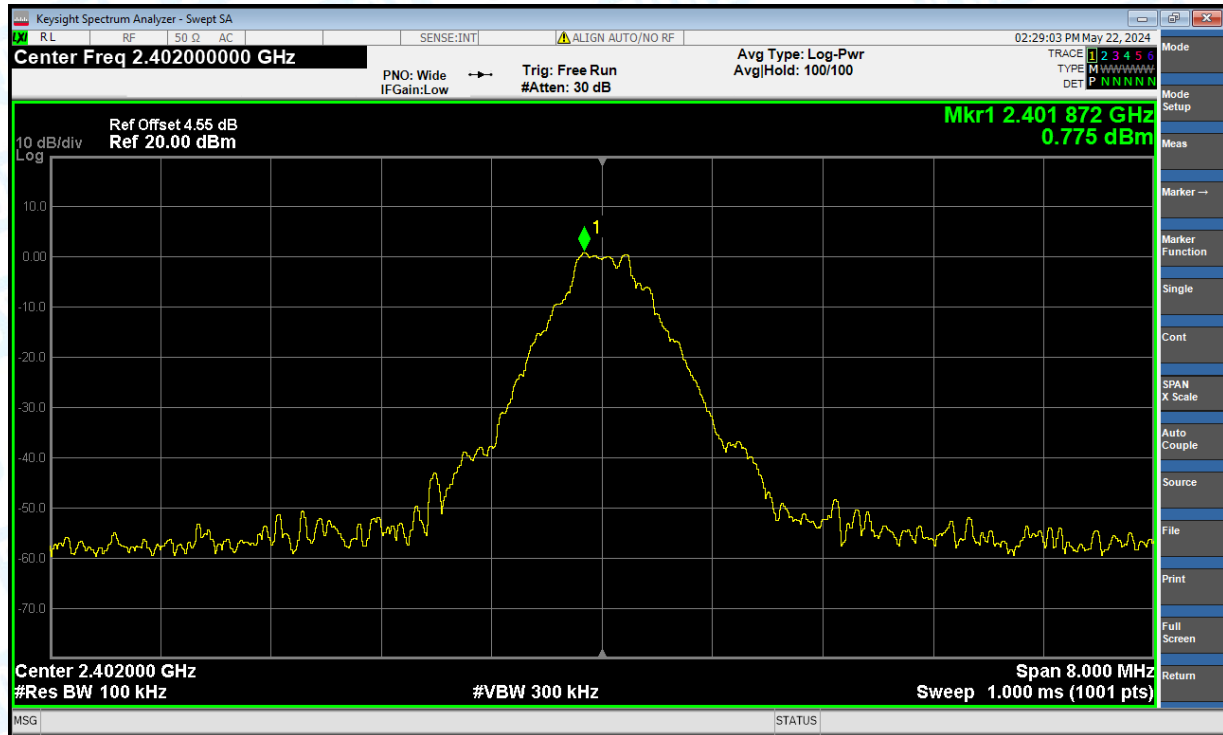


5. Band Edge

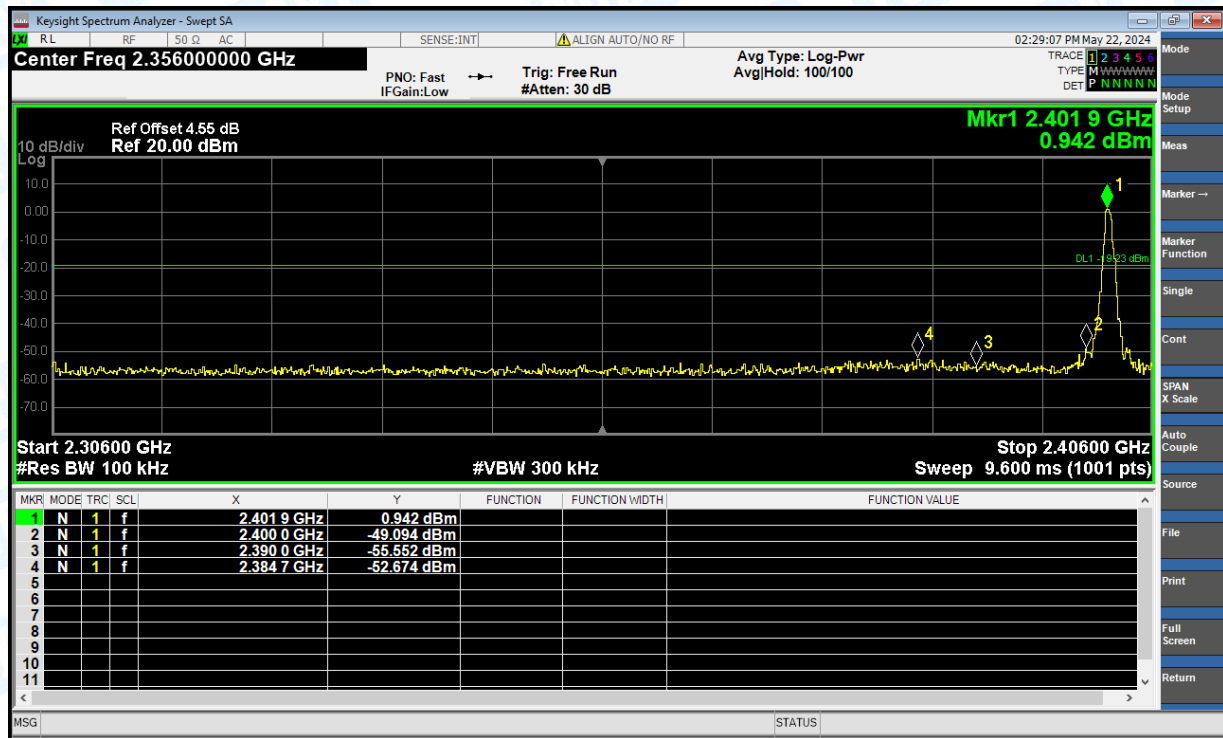
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-53.45	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-52.00	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-52.91	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-52.14	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-53.64	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-53.99	-20	Pass

Test Graphs

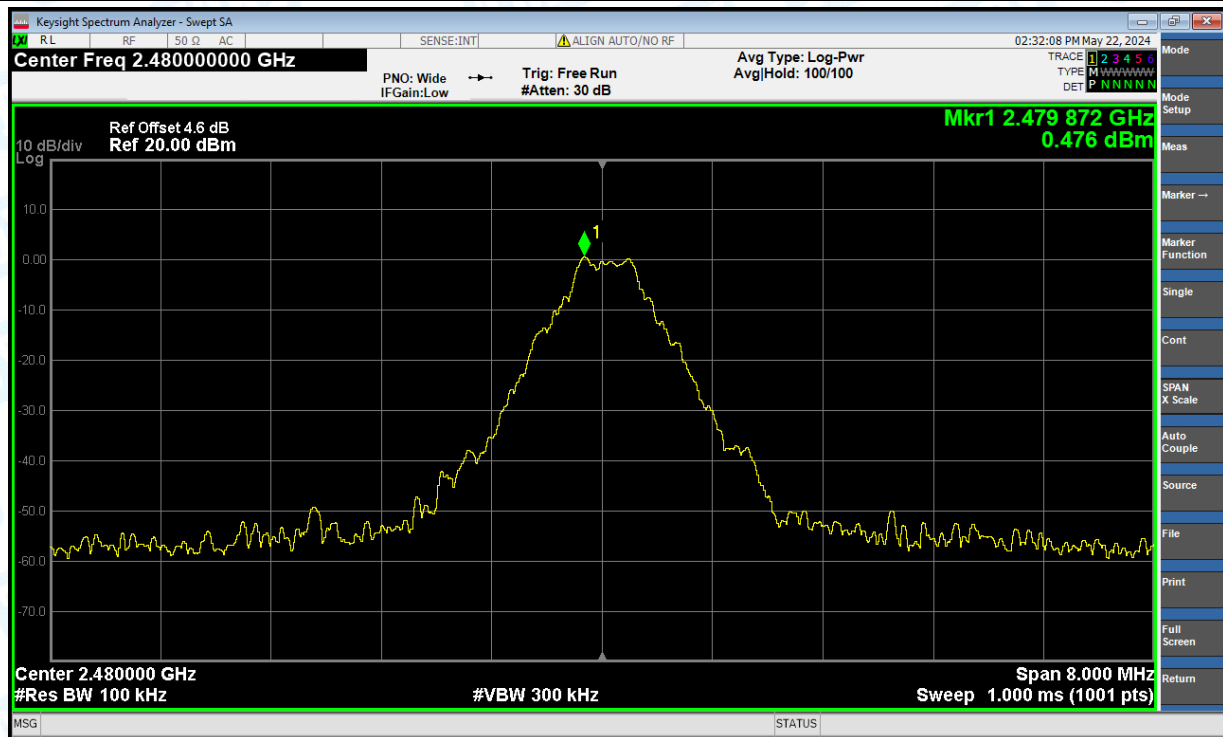
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



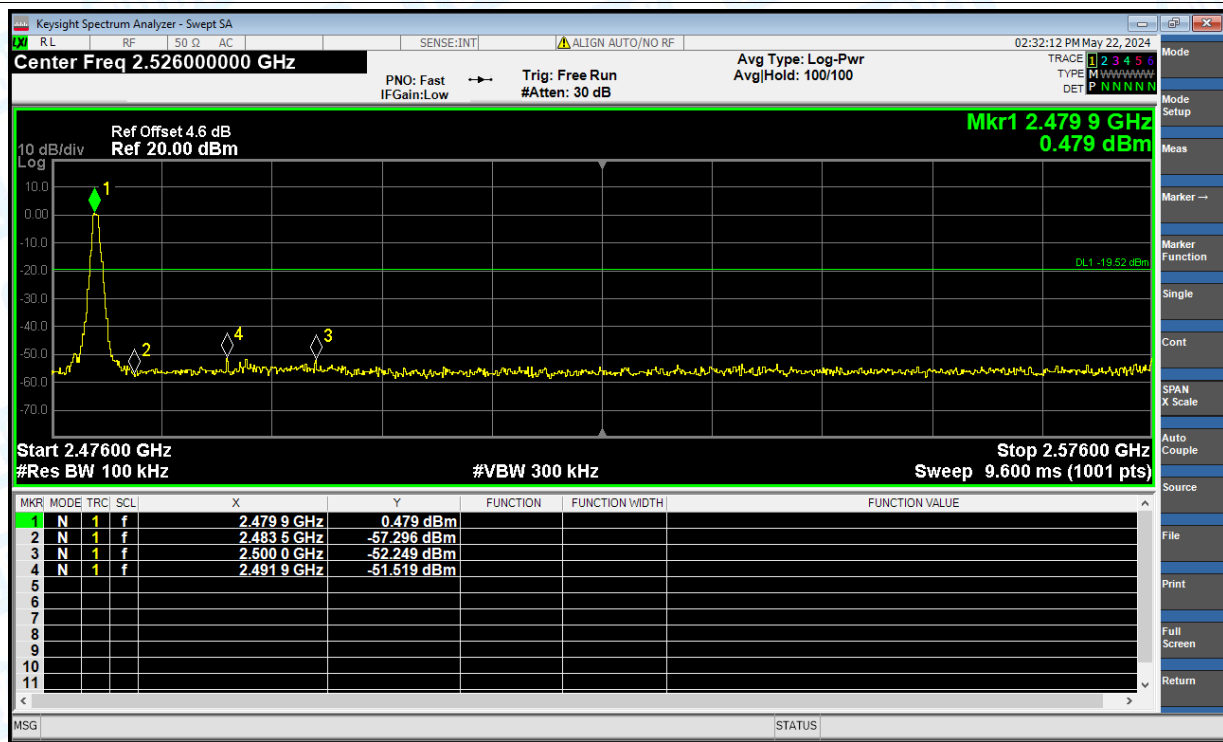
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



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



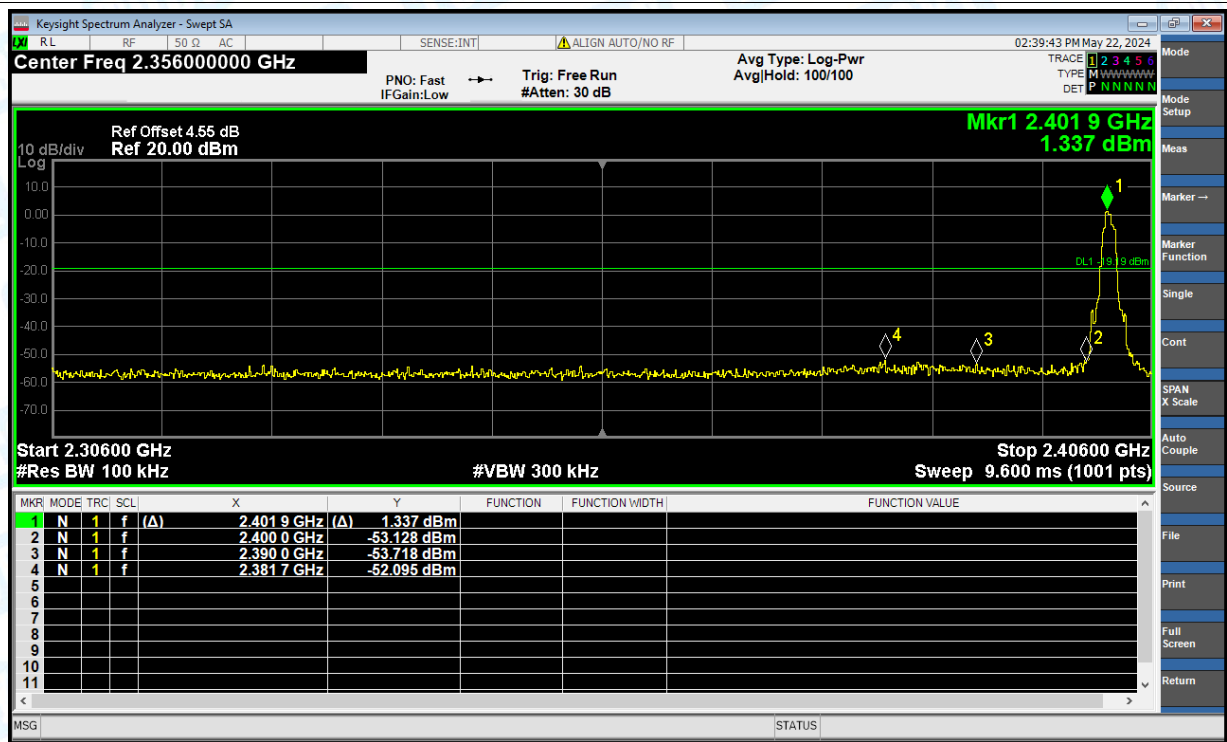
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



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



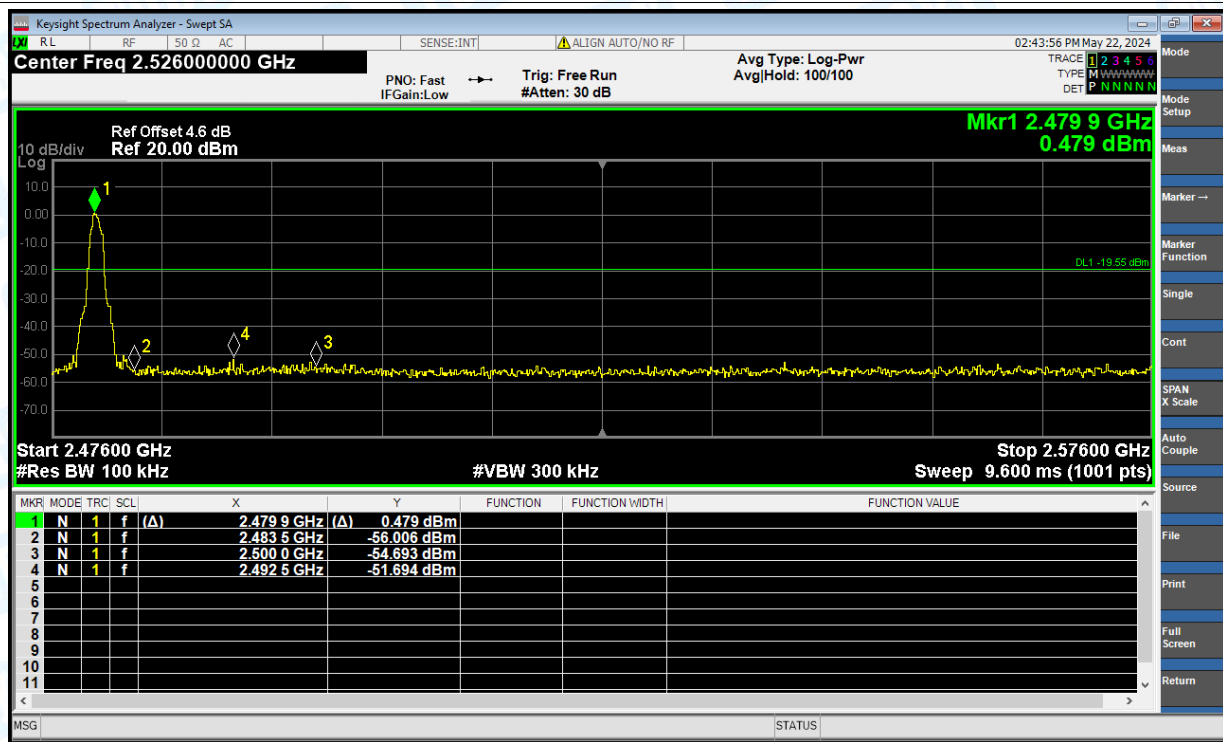
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



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



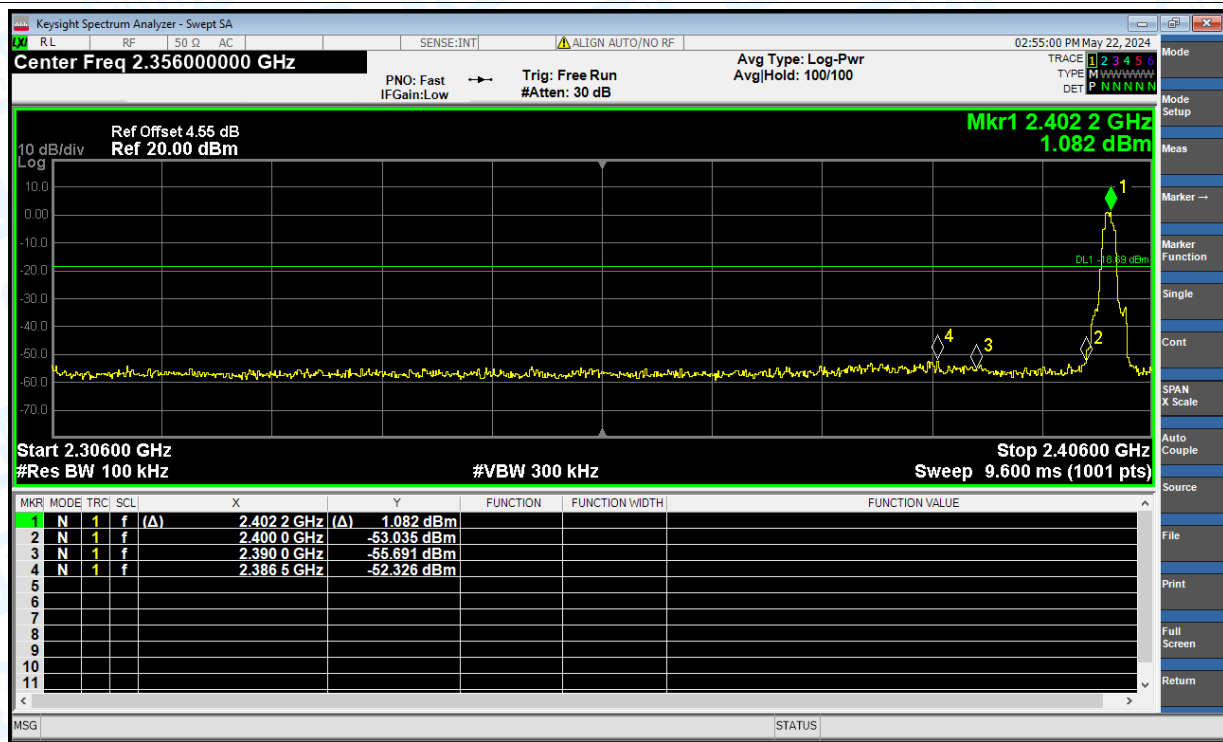
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



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



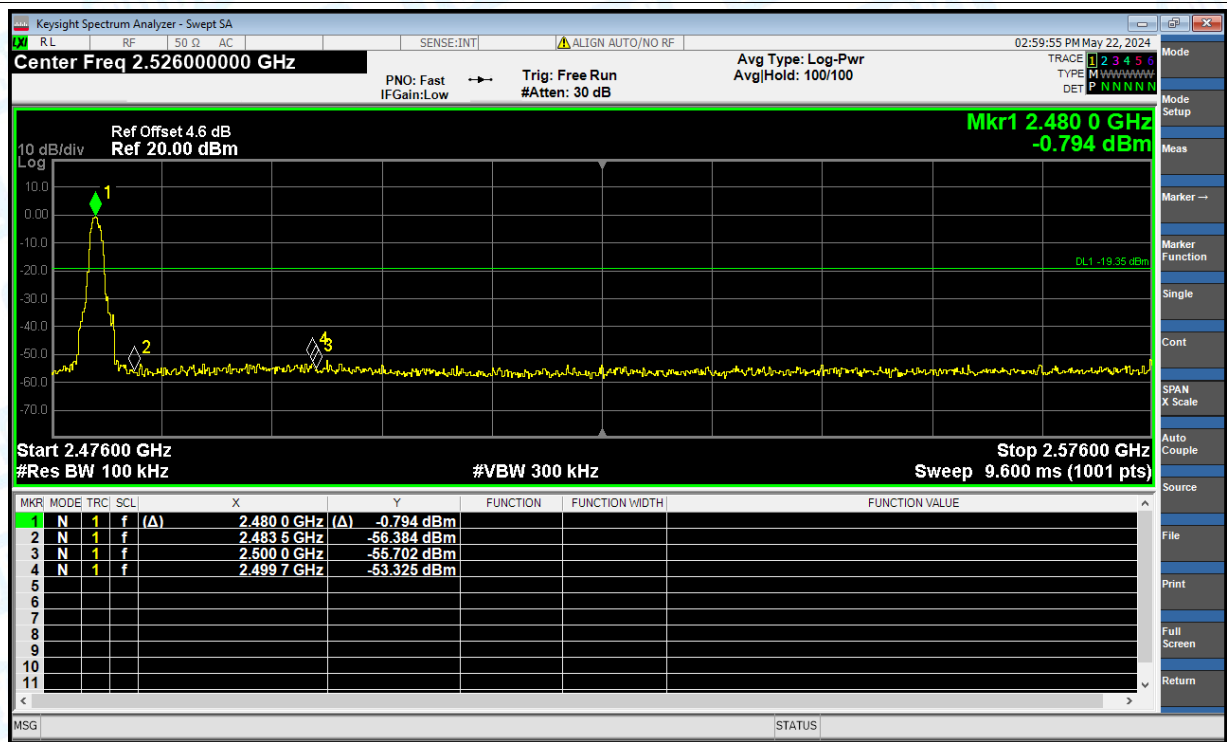
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6. Band Edge(Hopping)

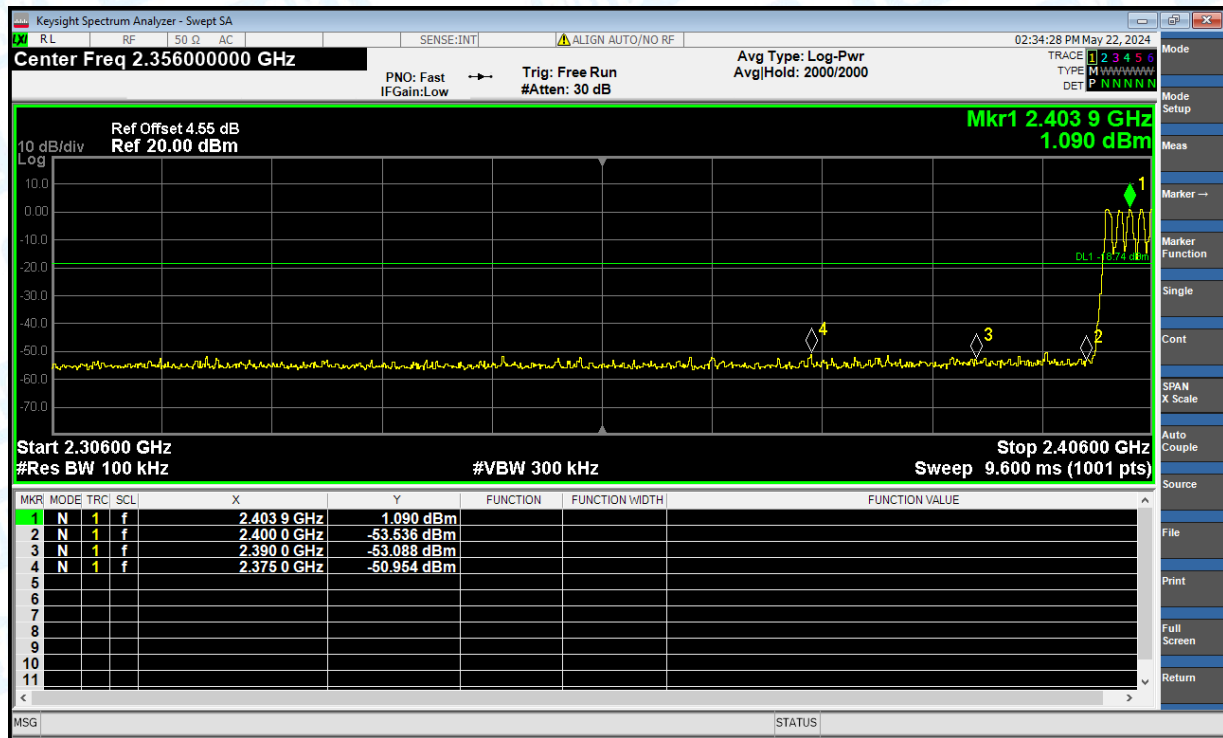
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-52.21	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-51.86	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-49.73	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-52.45	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-50.98	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-51.60	-20	Pass

Test Graphs

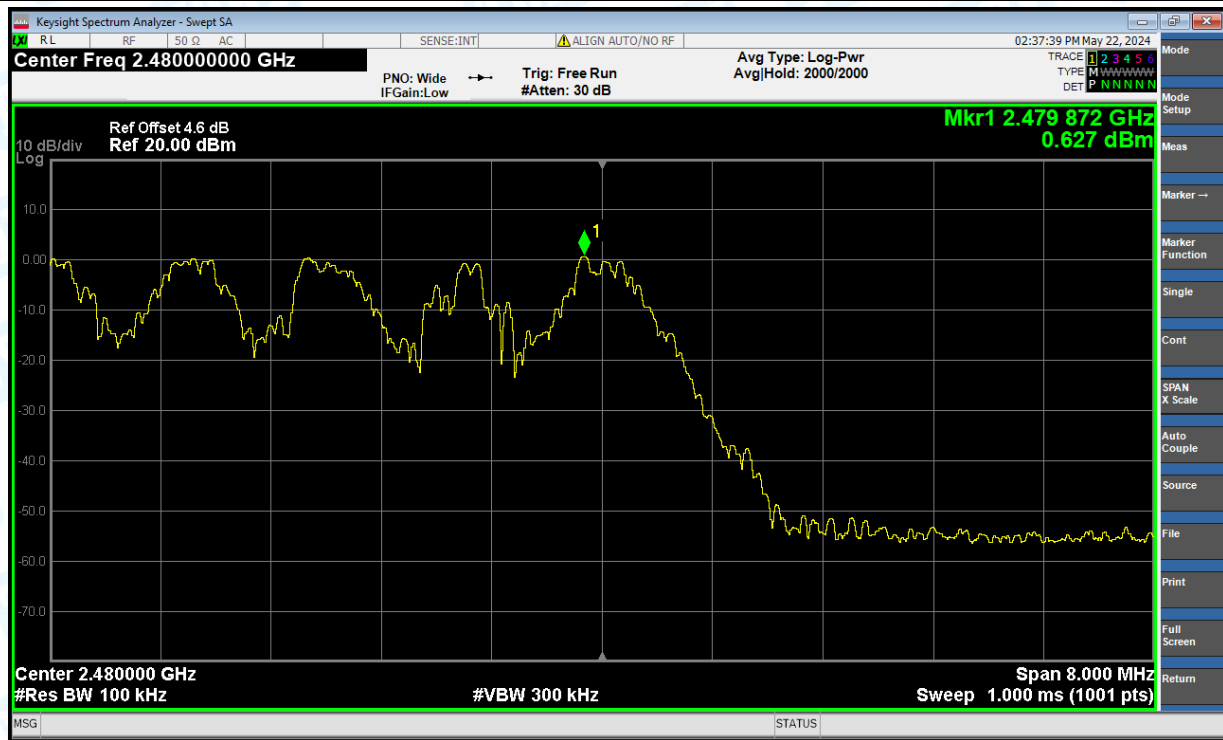
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



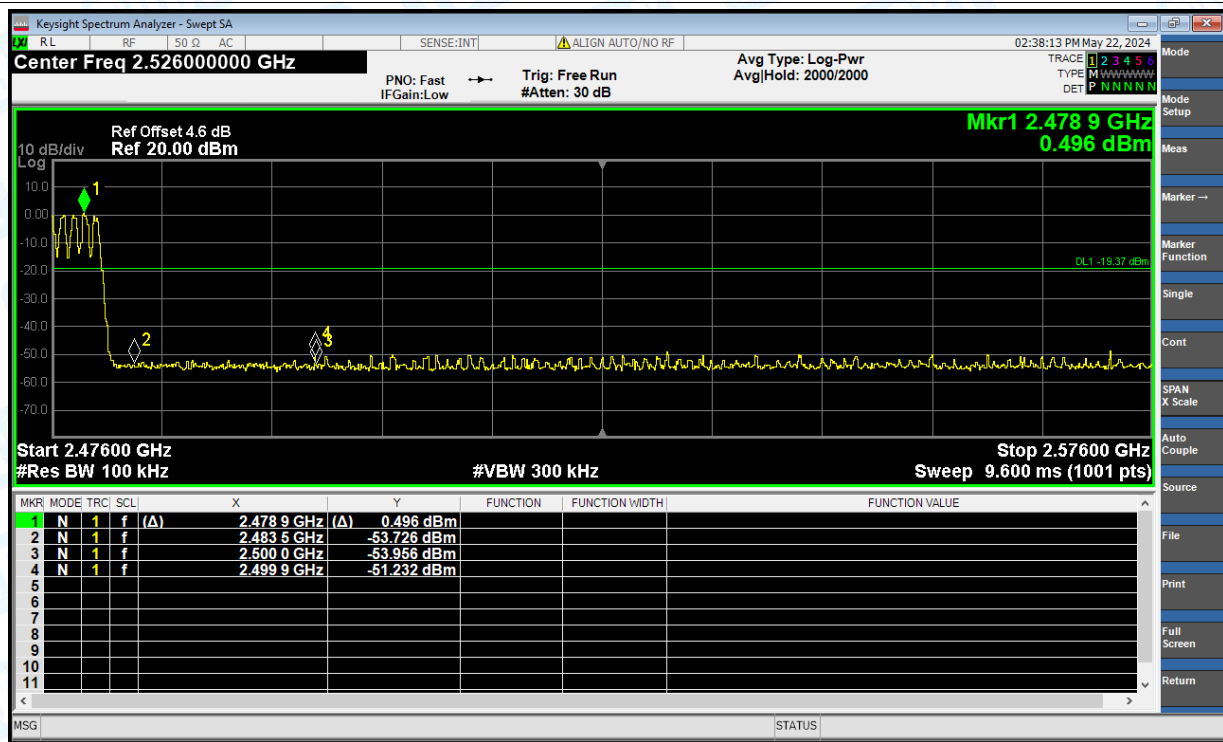
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



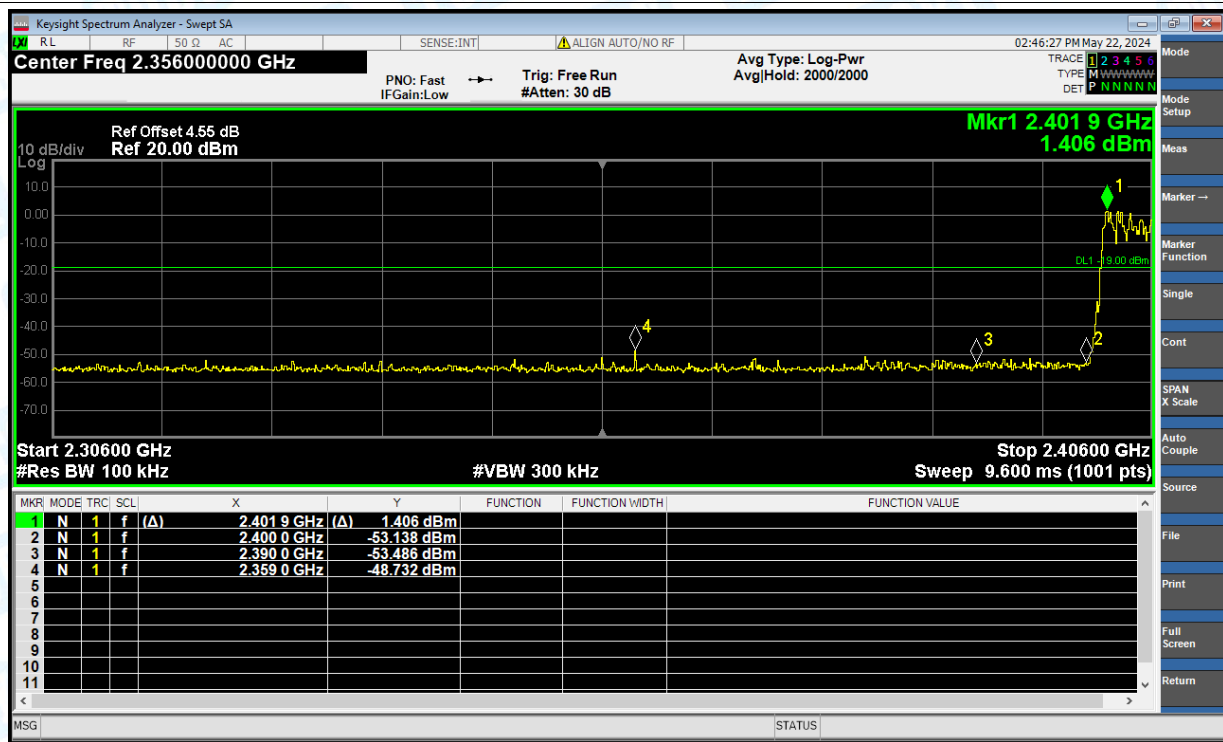
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



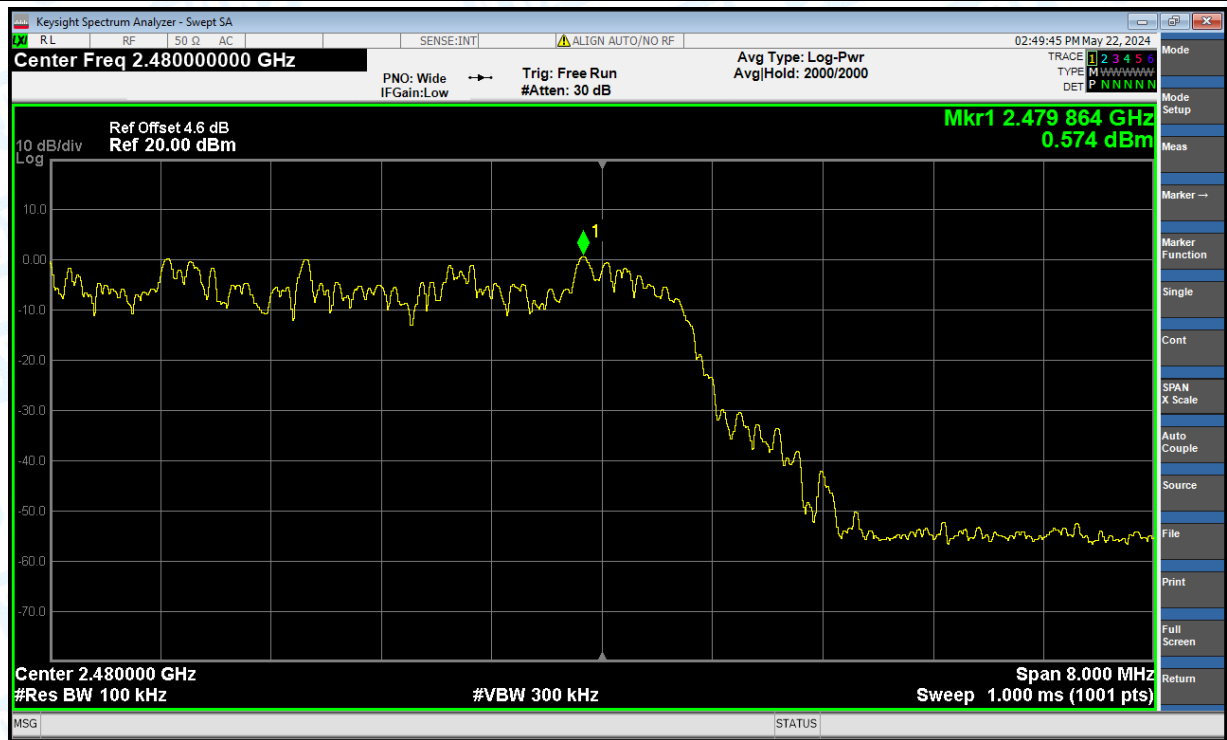
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



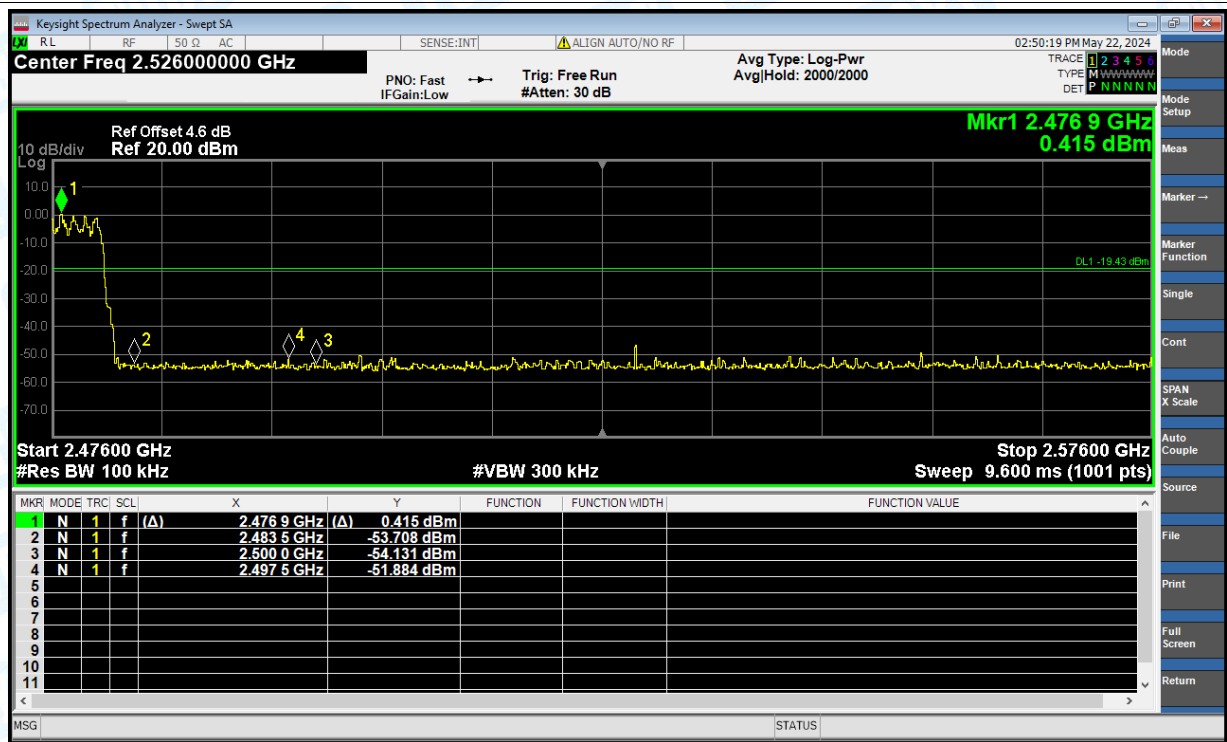
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



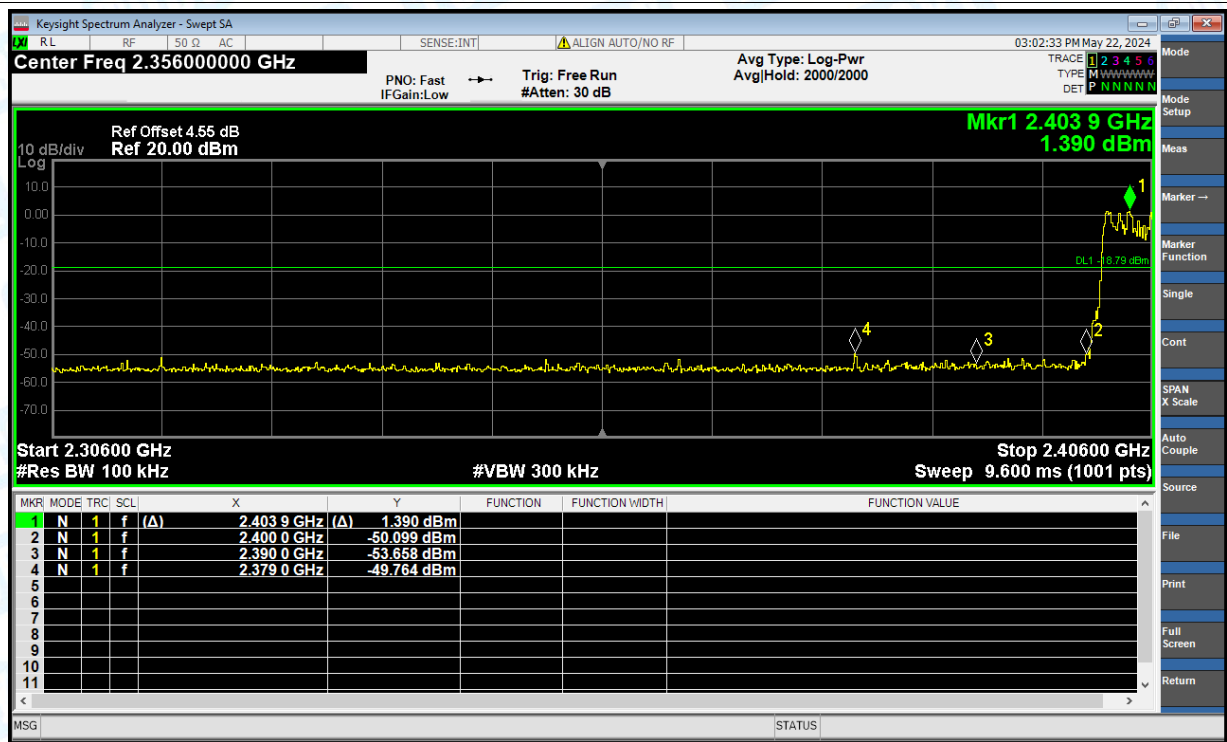
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



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



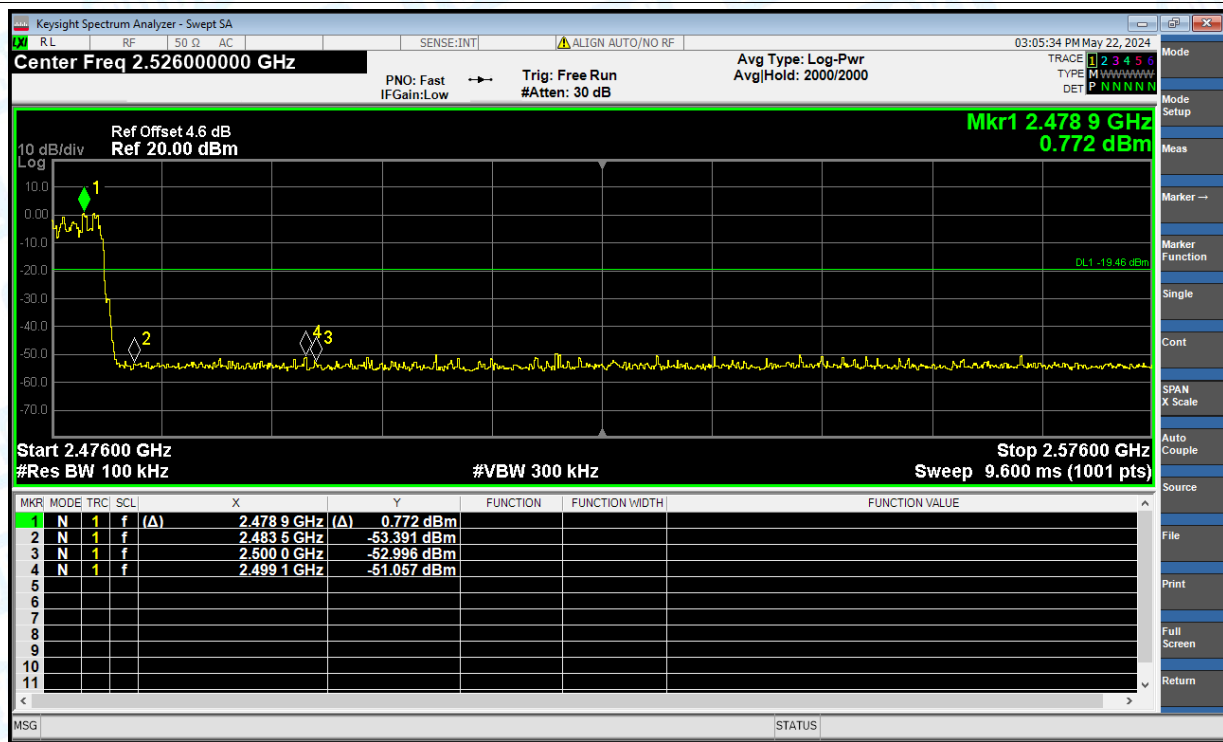
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

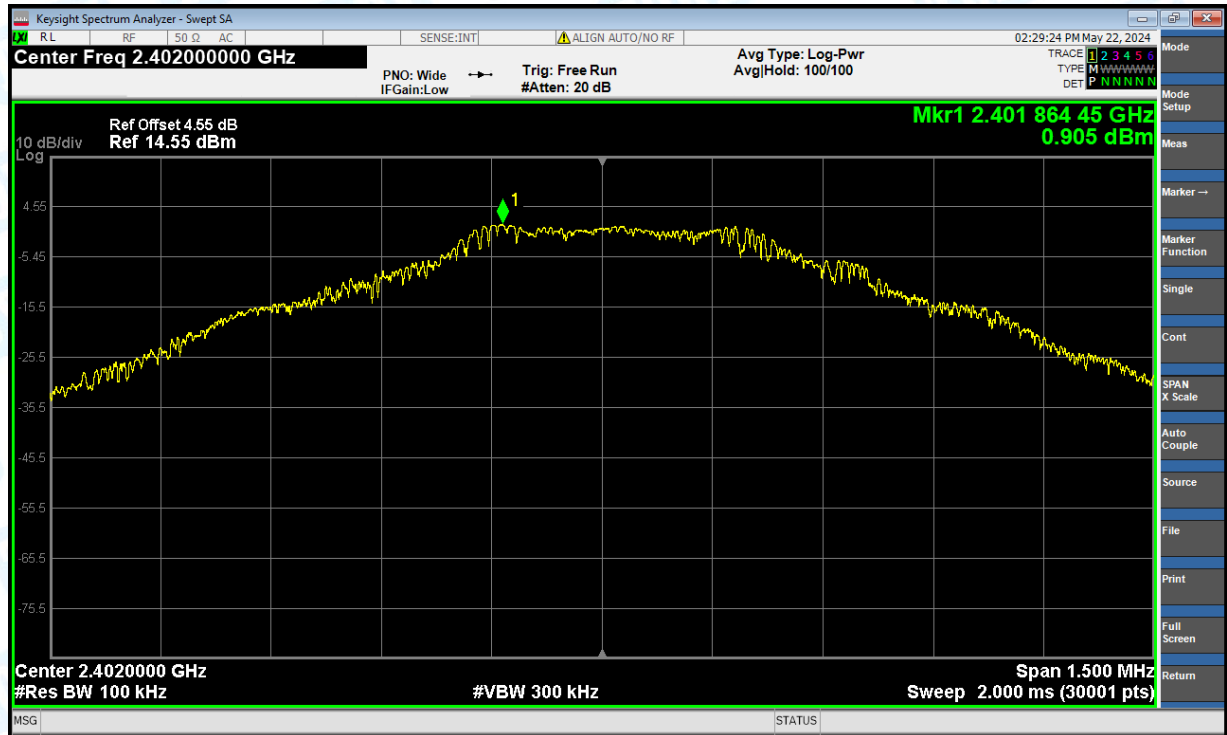


7. Conducted RF Spurious Emission

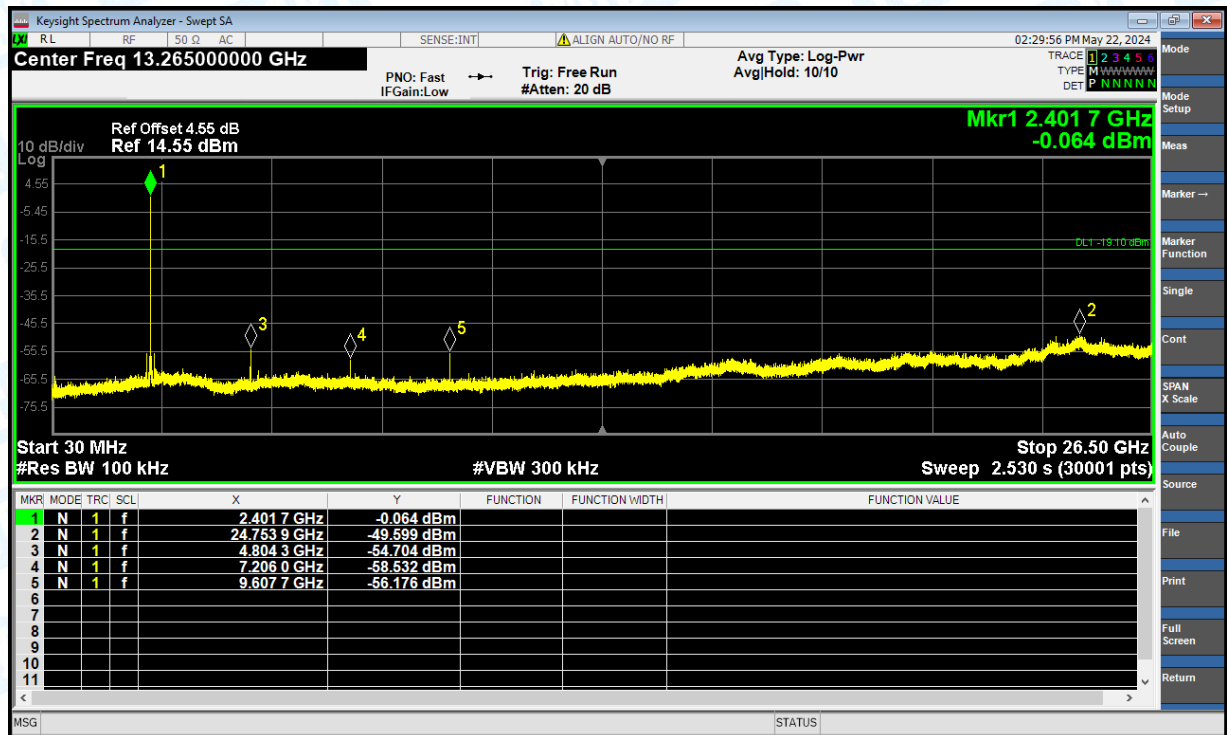
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-50.51	-20	Pass
NVNT	1-DH1	2441	Ant1	-50.56	-20	Pass
NVNT	1-DH1	2480	Ant1	-50.13	-20	Pass
NVNT	2-DH1	2402	Ant1	-51.09	-20	Pass
NVNT	2-DH1	2441	Ant1	-50.64	-20	Pass
NVNT	2-DH1	2480	Ant1	-49.56	-20	Pass
NVNT	3-DH1	2402	Ant1	-51.52	-20	Pass
NVNT	3-DH1	2441	Ant1	-49.42	-20	Pass
NVNT	3-DH1	2480	Ant1	-50.30	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



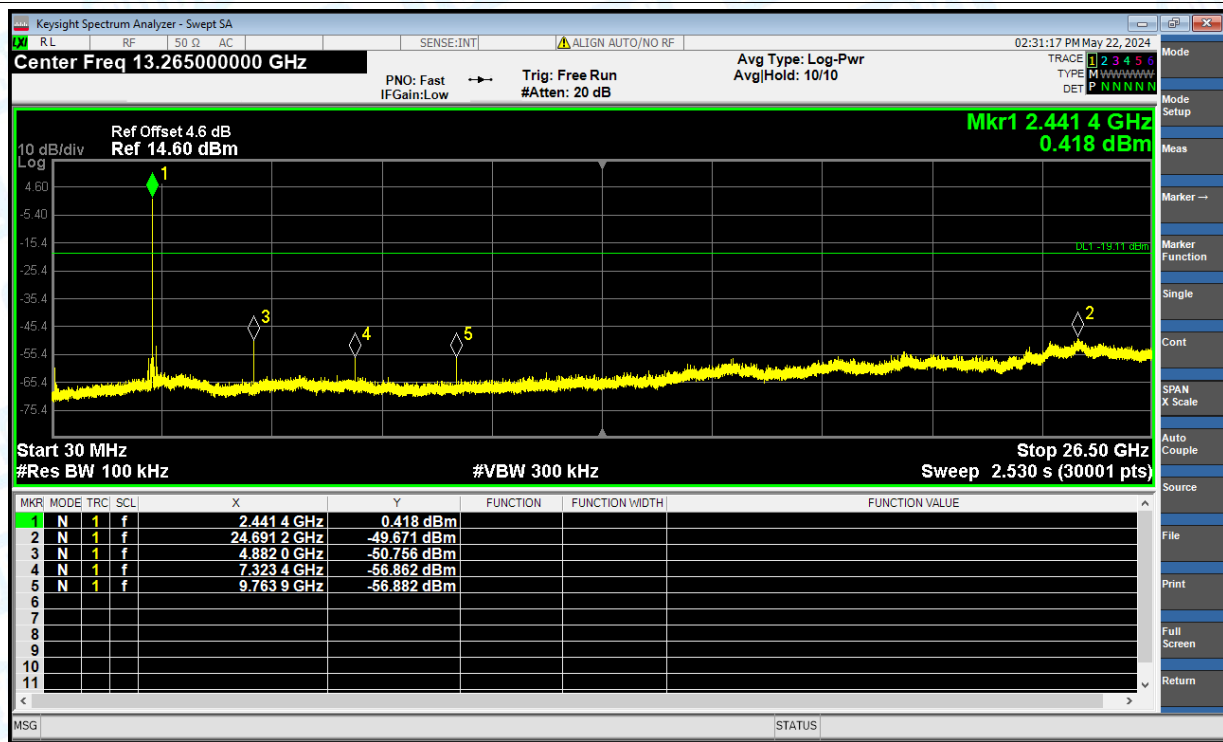
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



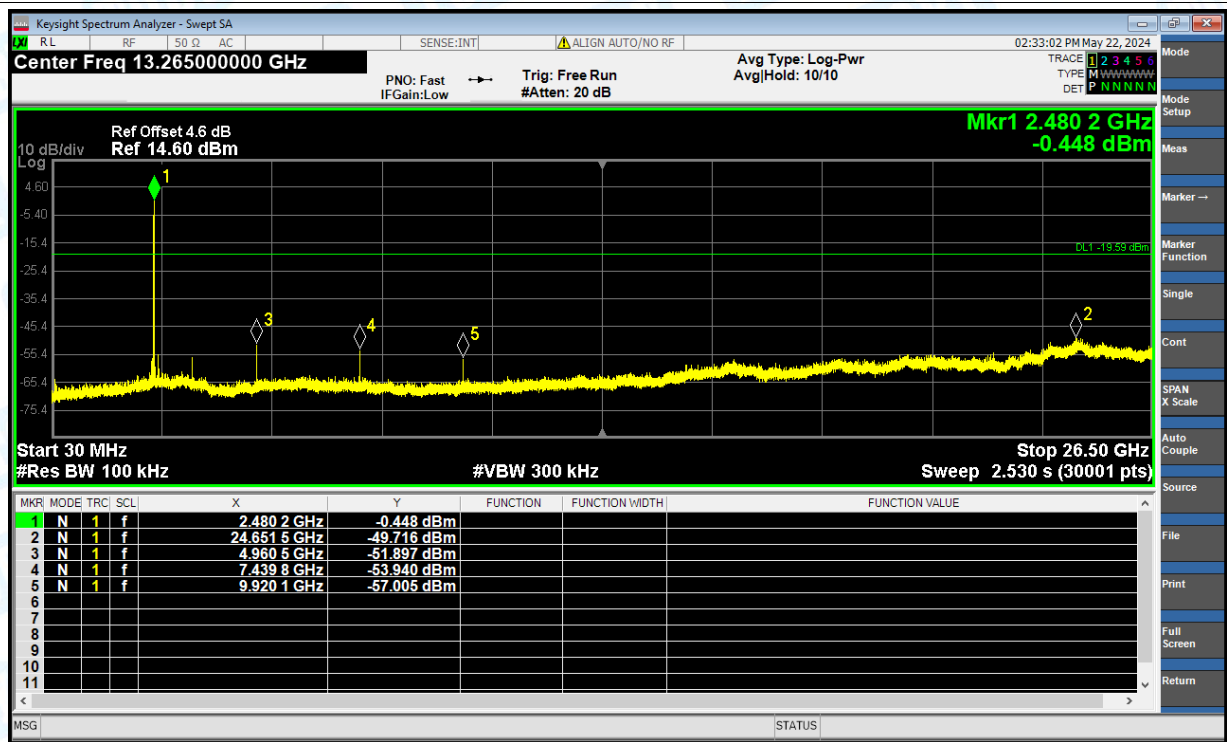
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



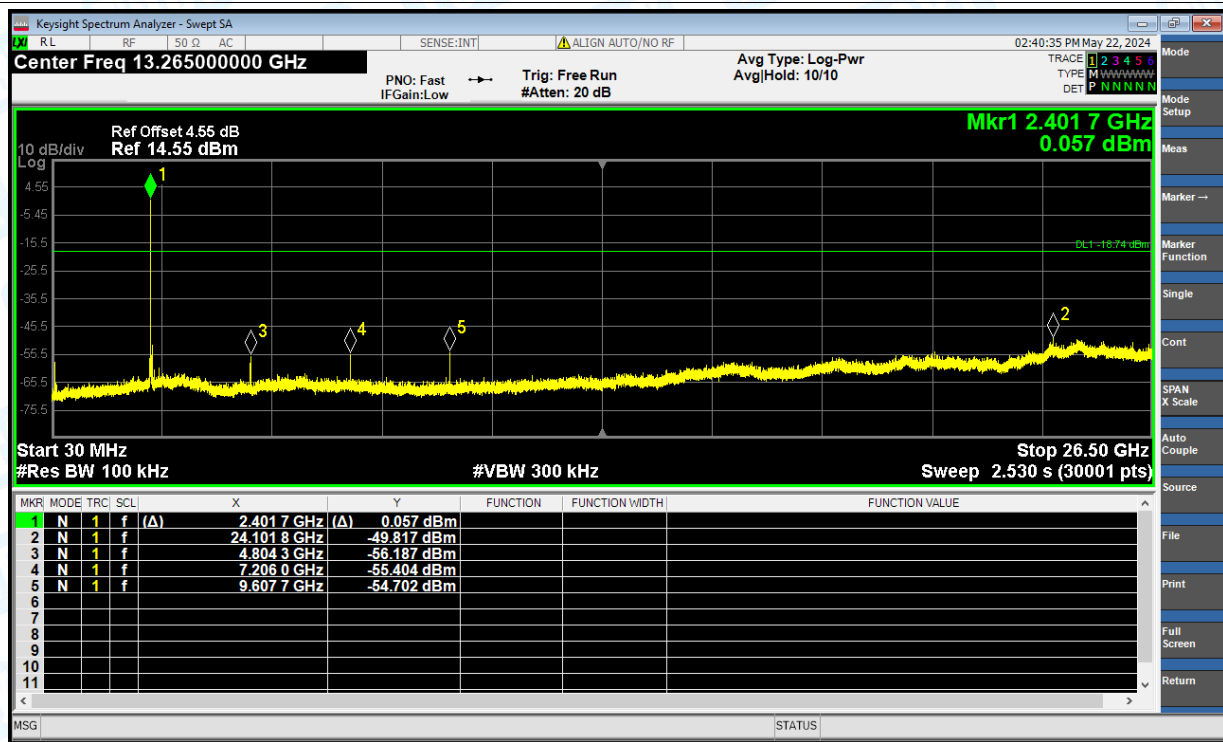
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



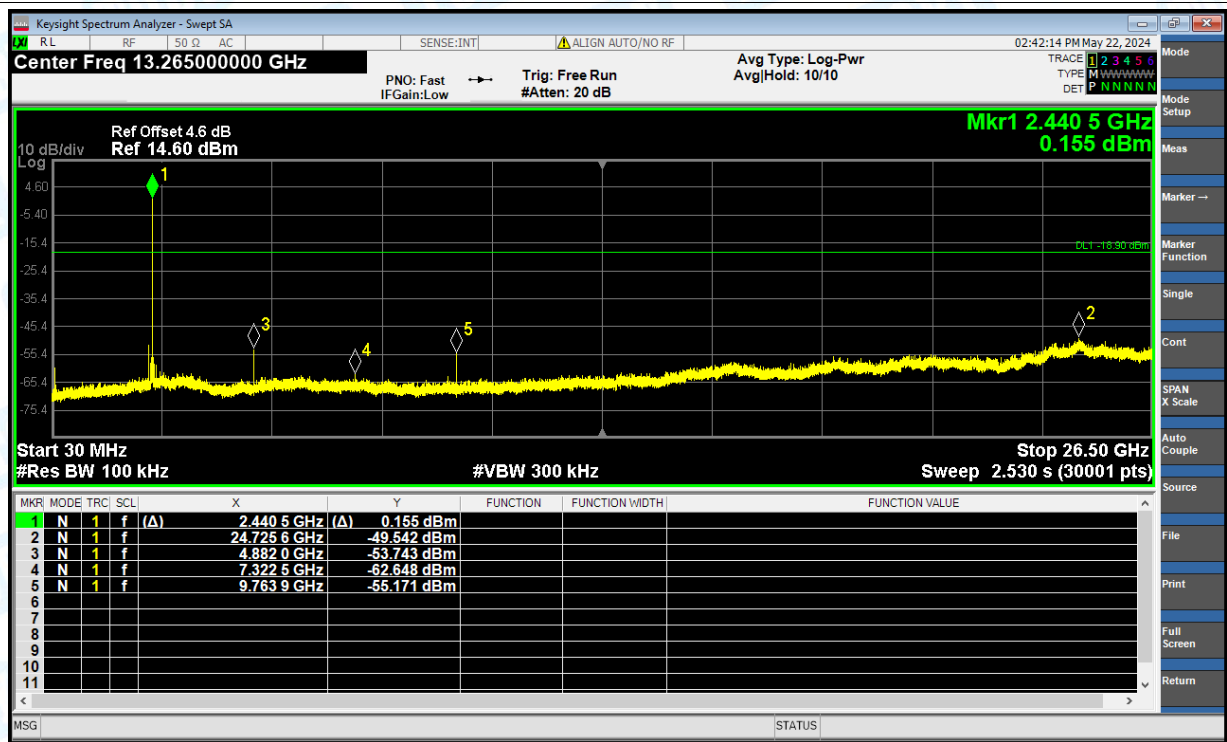
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



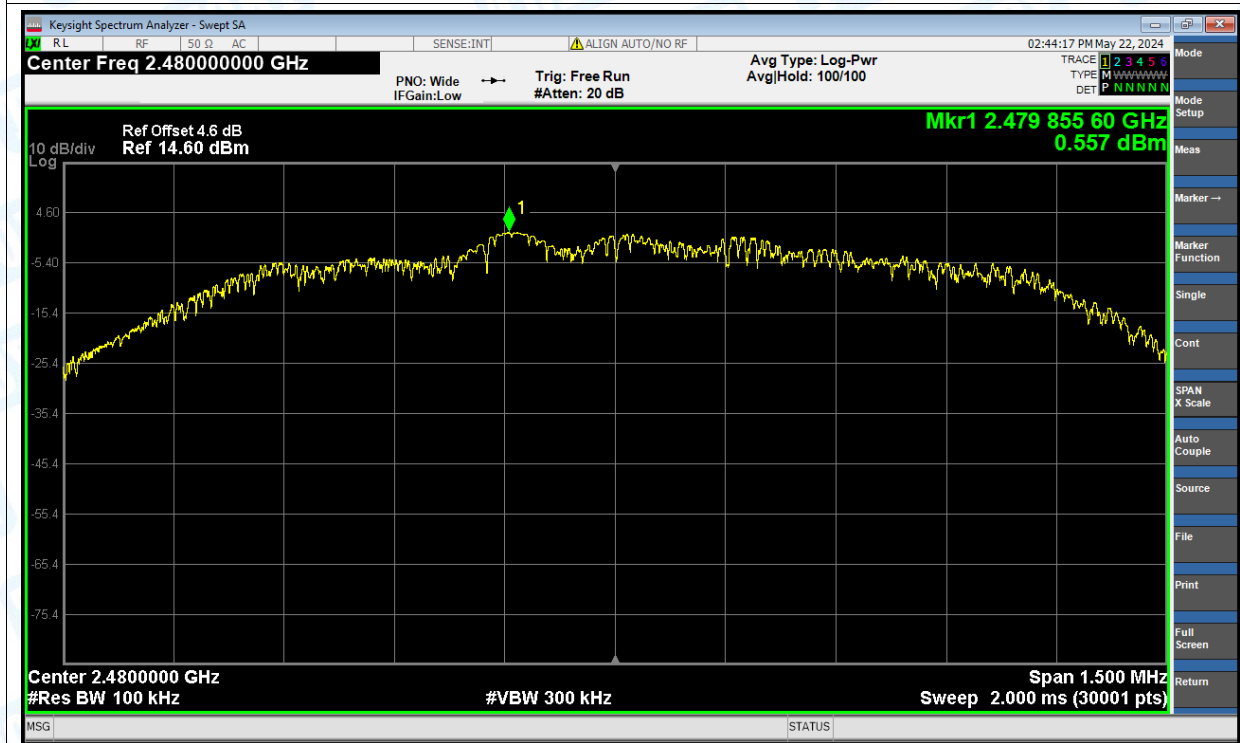
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



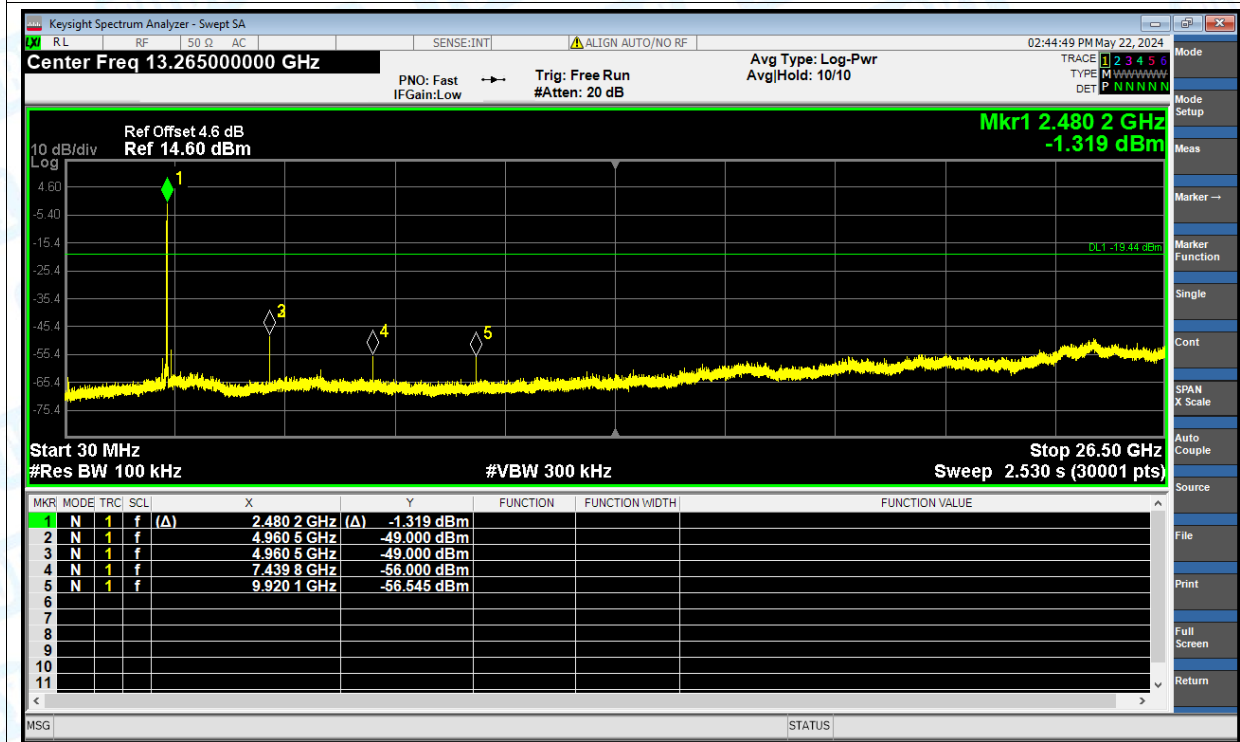
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



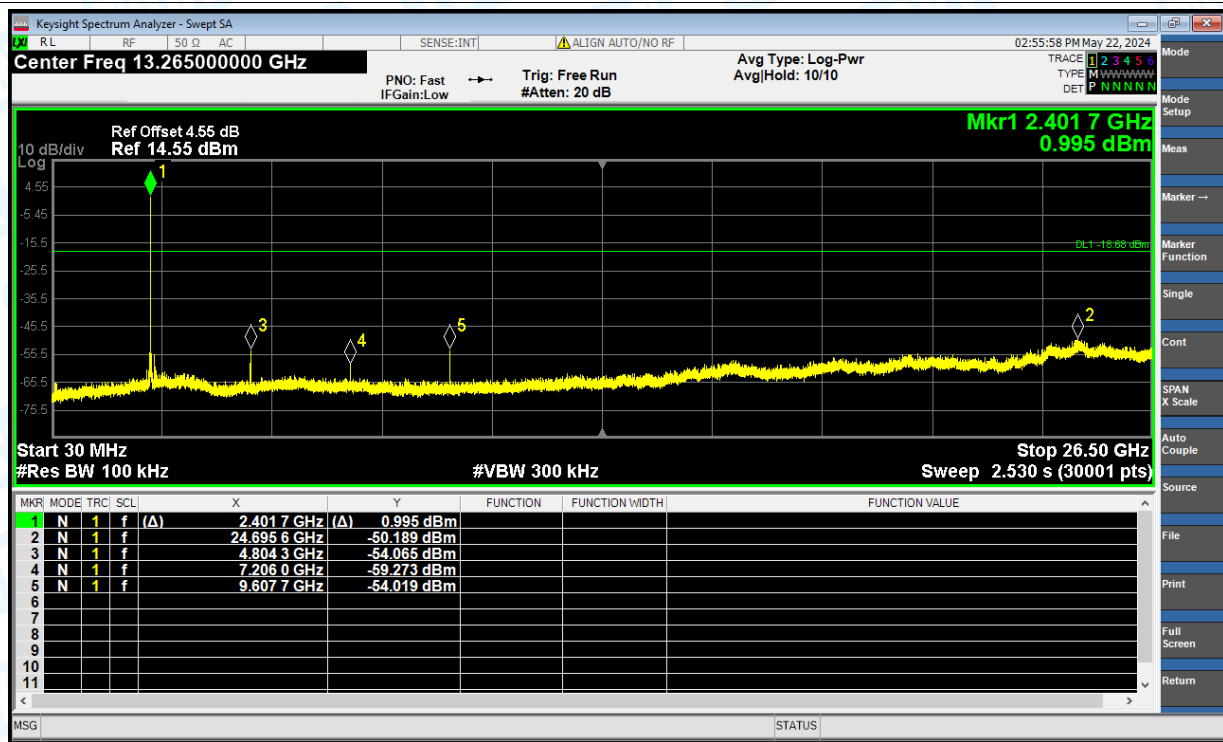
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



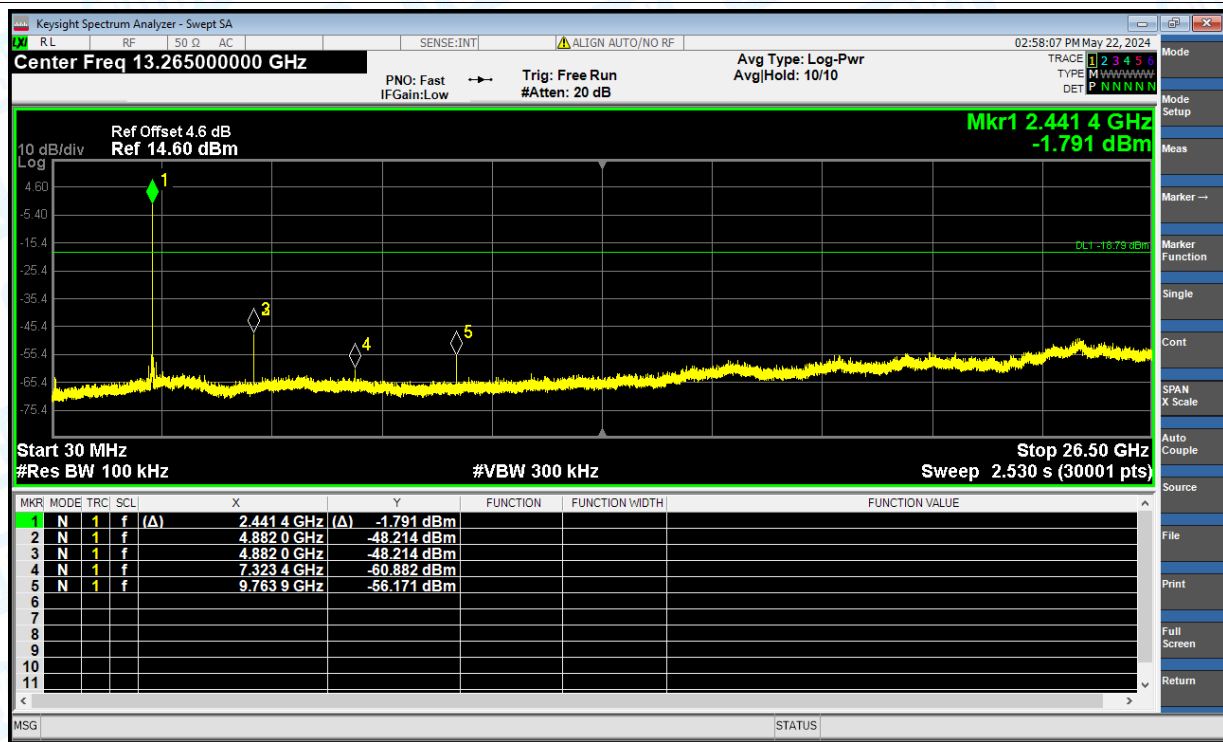
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



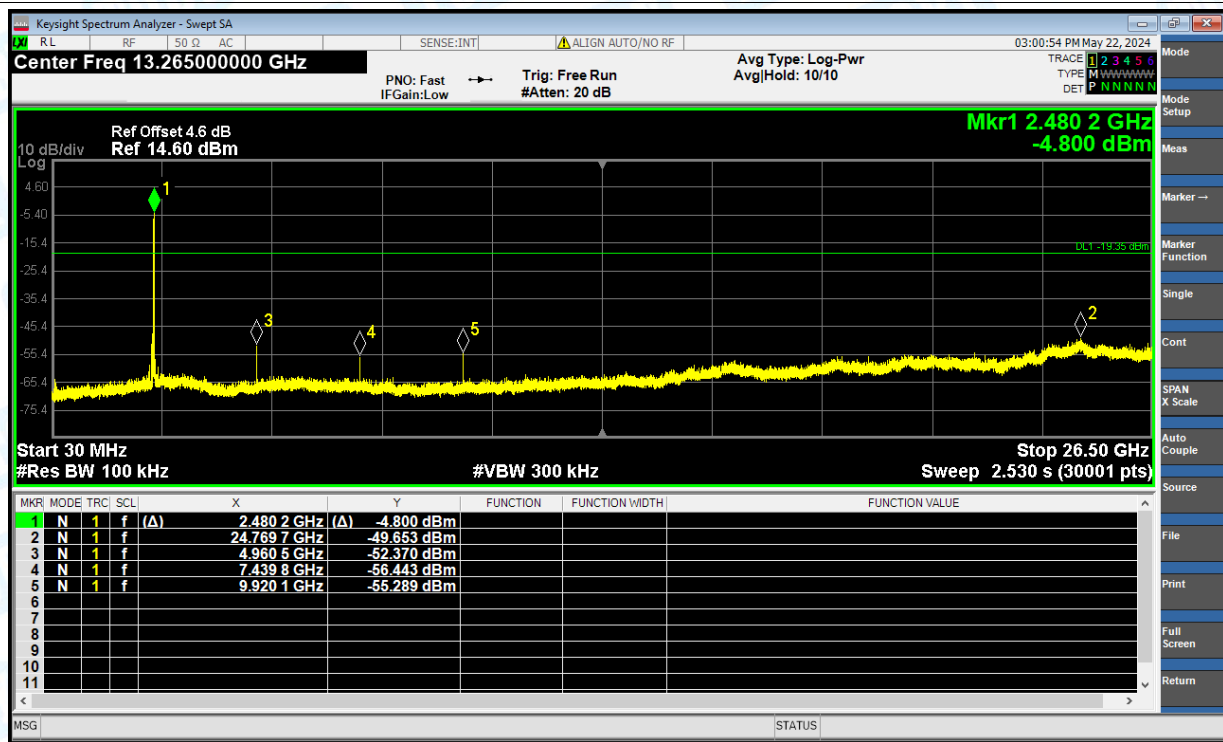
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

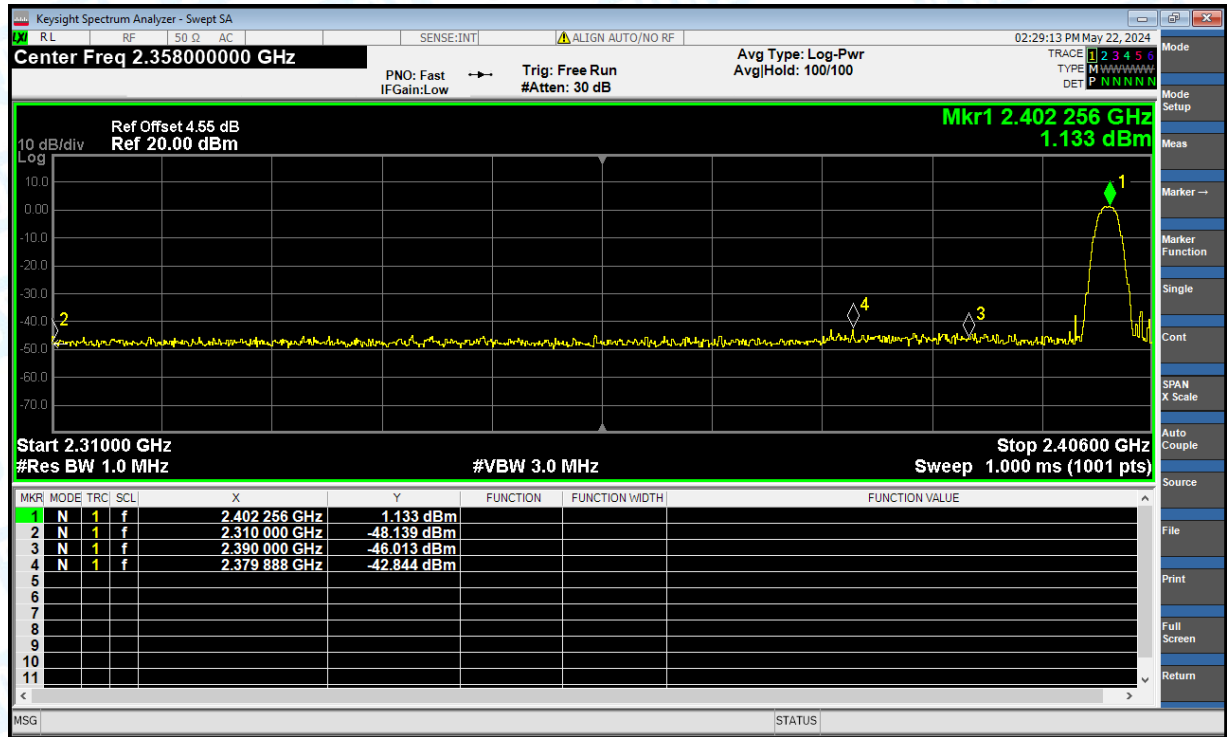


8. Restrict Band

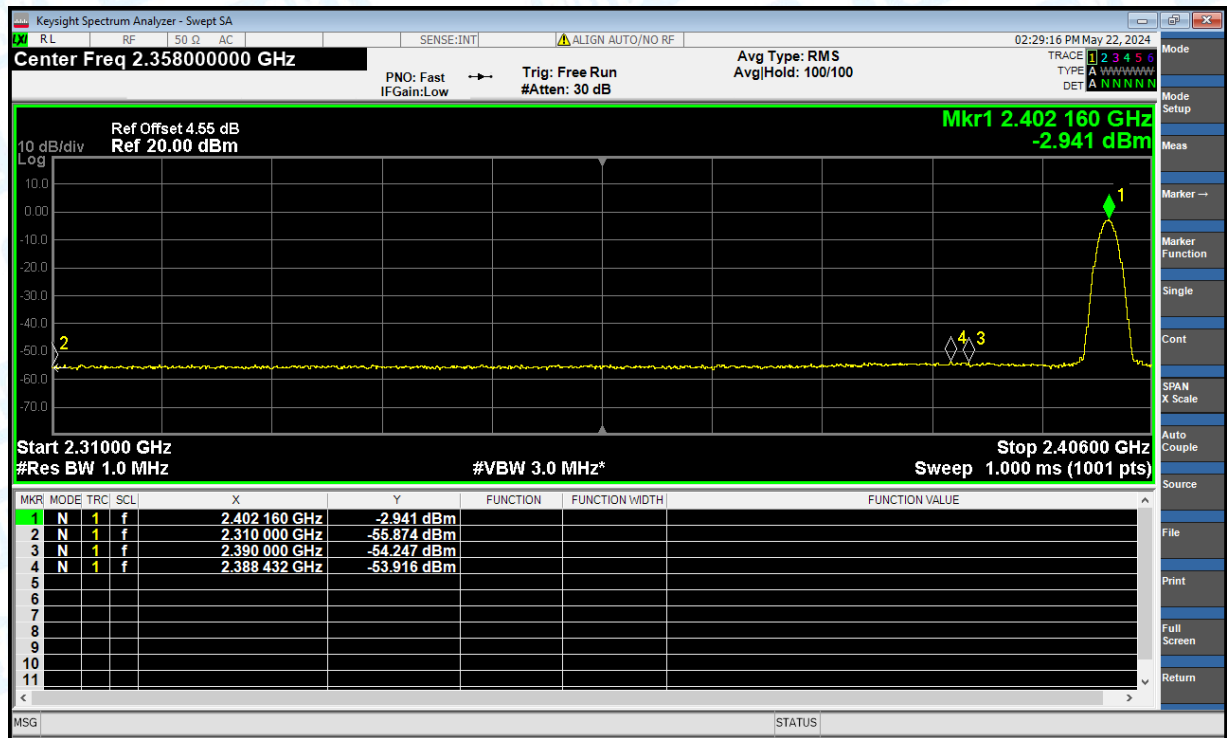
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-48.14	2	-	49.12	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-55.87	2	5.17	46.56	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2379.888	-42.84	2	-	54.42	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2388.432	-53.92	2	5.17	48.51	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-46.01	2	-	51.25	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-54.25	2	5.17	48.18	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46.99	2	-	50.27	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-54.87	2	5.29	47.68	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.584	-39.6	2	-	57.66	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2499.064	-53.5	2	5.29	49.05	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-45.34	2	-	51.92	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.52	2	5.29	48.03	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.23	2	-	50.03	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-55.23	2	5.06	47.09	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2383.152	-43.08	2	-	54.18	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2382.384	-53.77	2	5.06	48.55	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-45.98	2	-	51.28	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-54.54	2	5.06	47.78	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-38.67	2	-	58.59	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.01	2	5.17	47.42	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-38.67	2	-	58.59	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2497.024	-53.2	2	5.17	49.23	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-45.71	2	-	51.55	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-54.06	2	5.17	48.37	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-46.81	2	-	50.45	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-55.74	2	5.06	46.58	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2385.36	-43.55	2	-	53.71	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2388.816	-53.81	2	5.06	48.51	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-46.43	2	-	50.83	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-54.57	2	5.06	47.75	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-45.84	2	-	51.42	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-54.66	2	5.06	47.66	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-41.18	2	-	56.08	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2498.632	-53.65	2	5.06	48.67	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-54.42	2	5.06	47.9	Average	54	Pass

Test Graphs

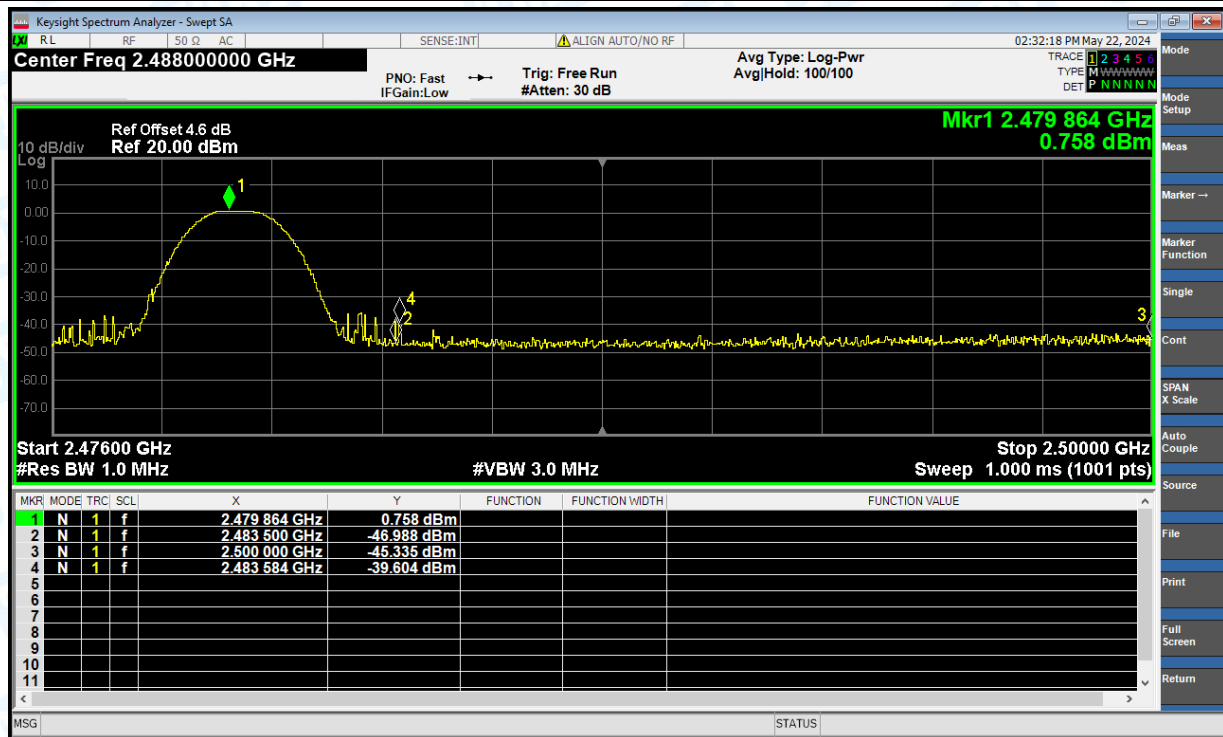
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



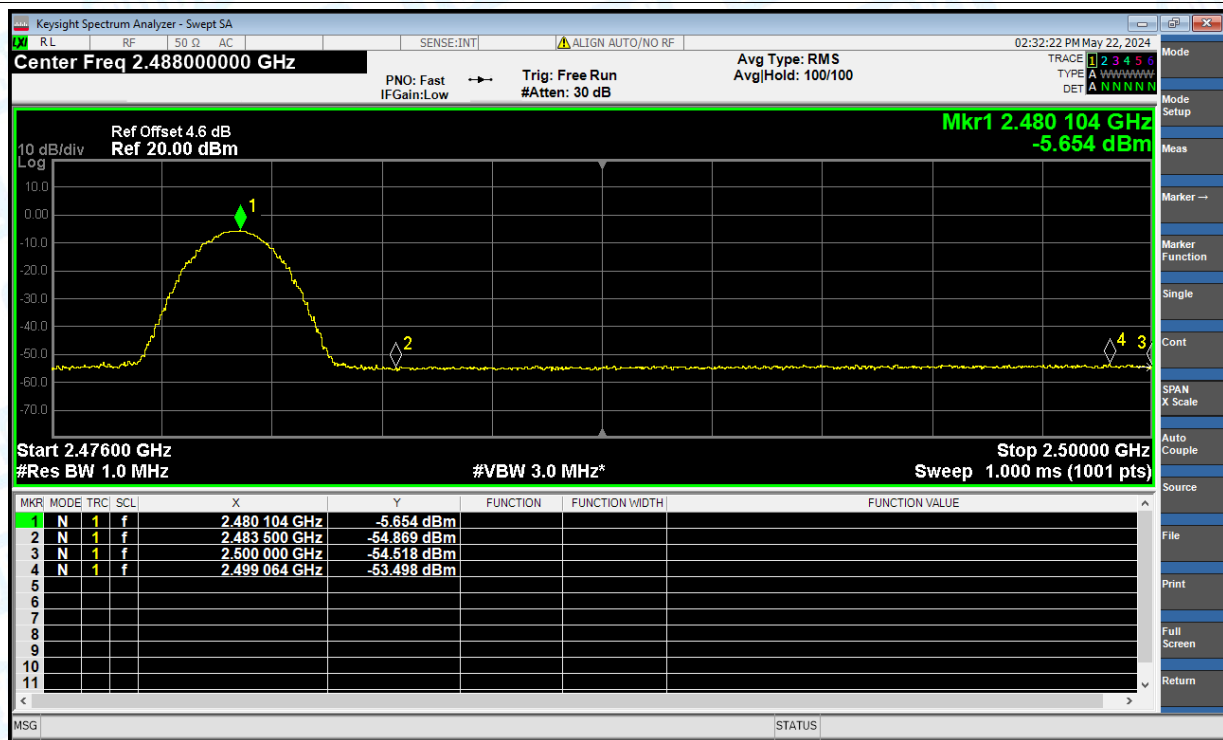
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



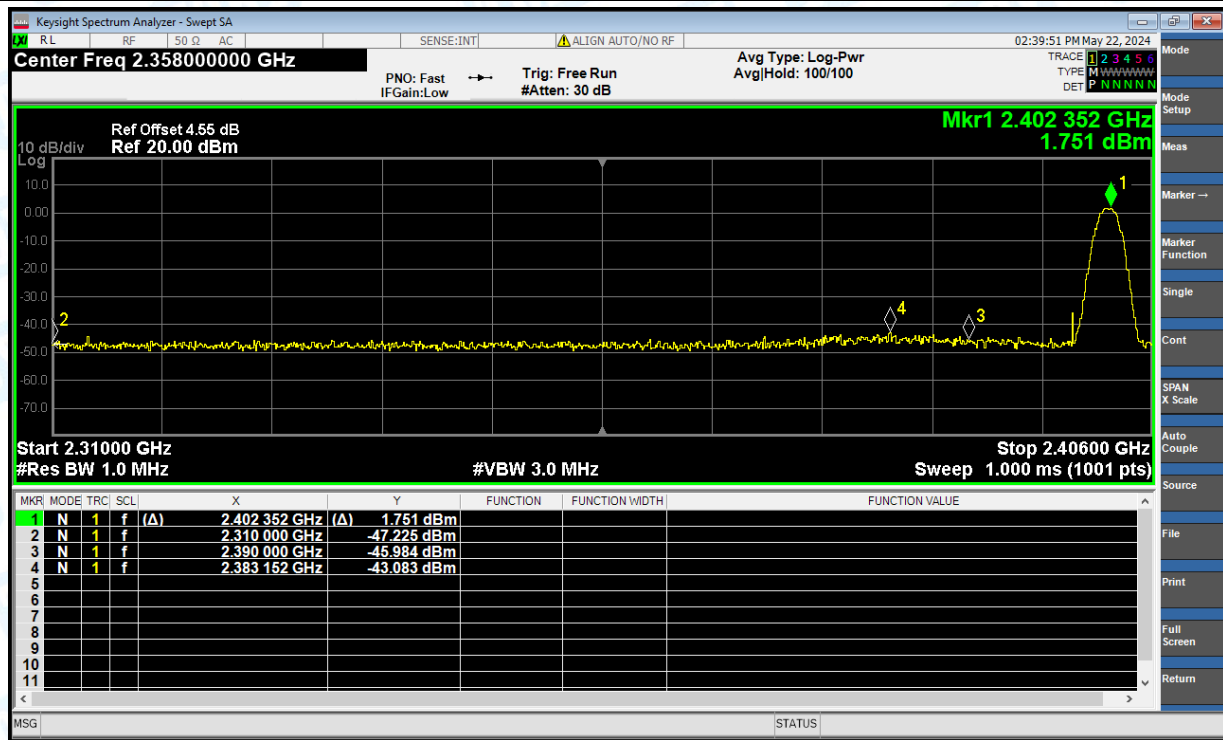
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



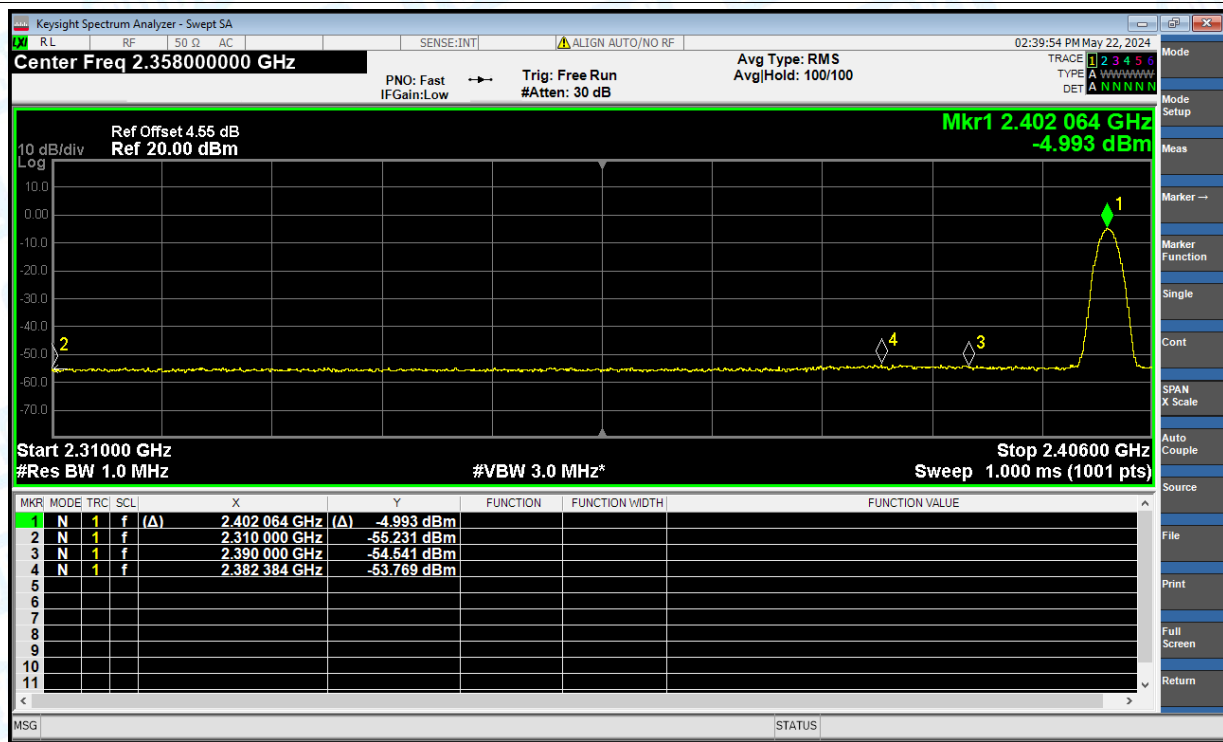
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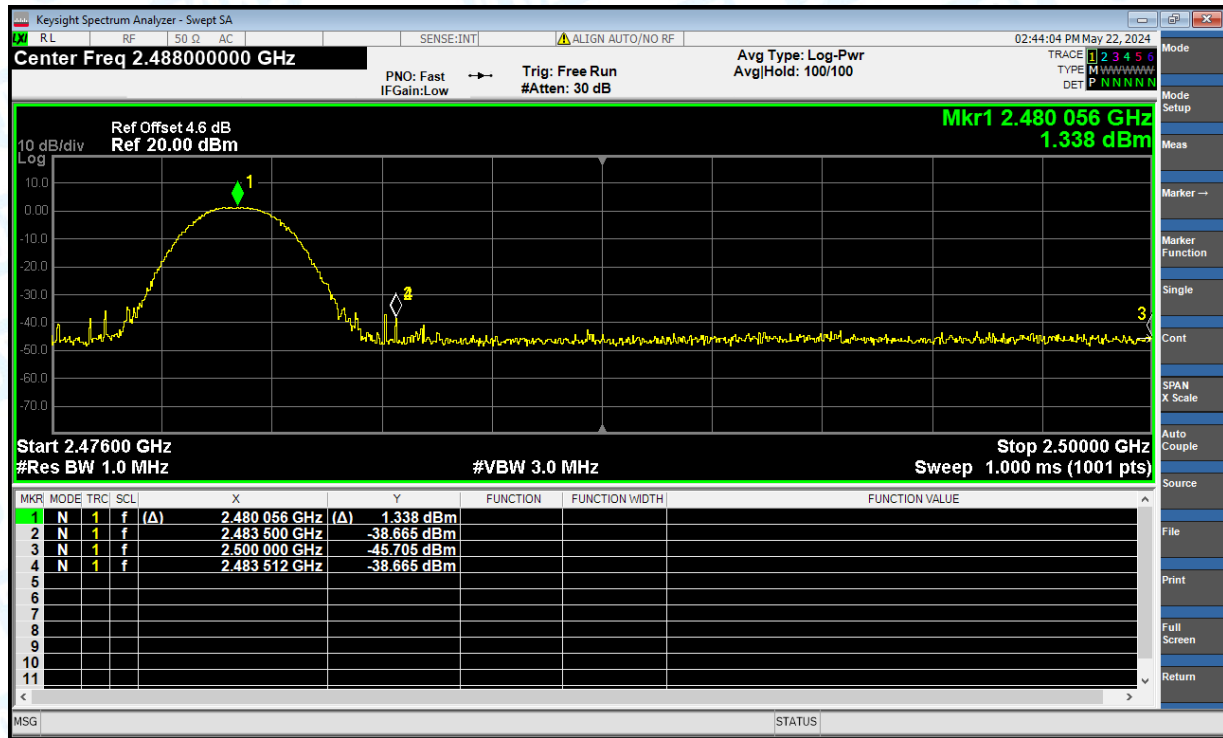
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Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



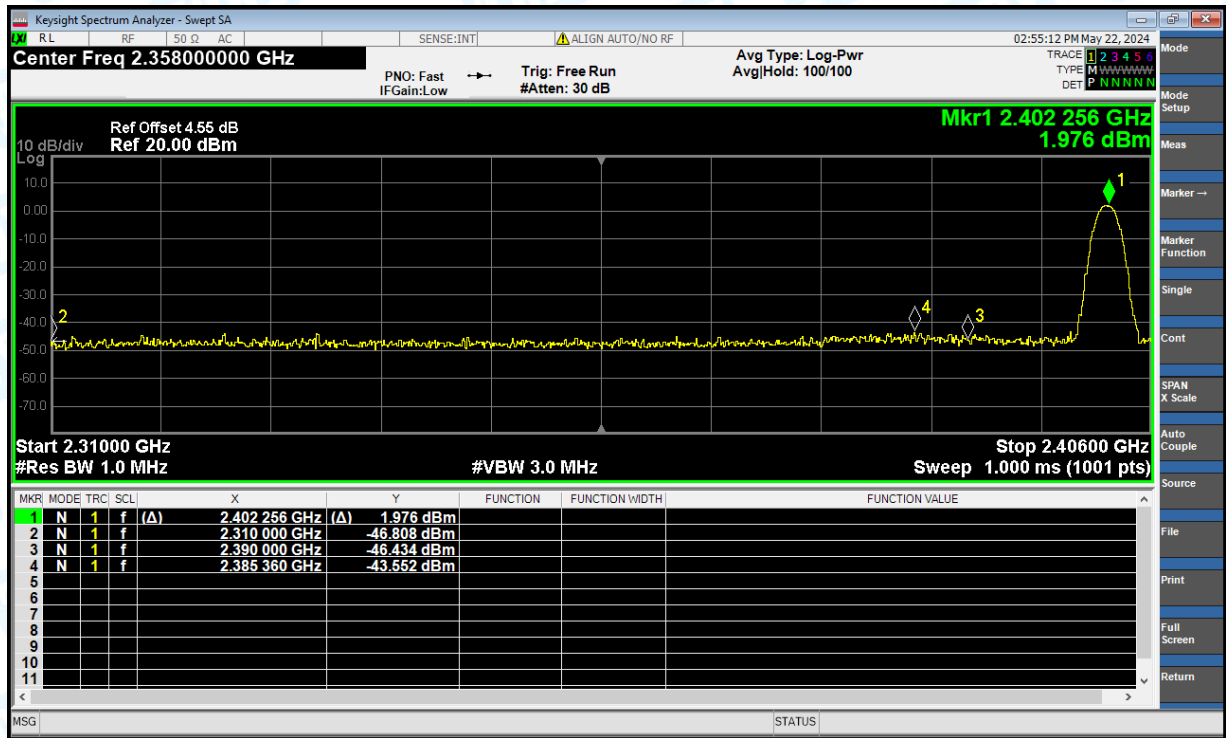
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



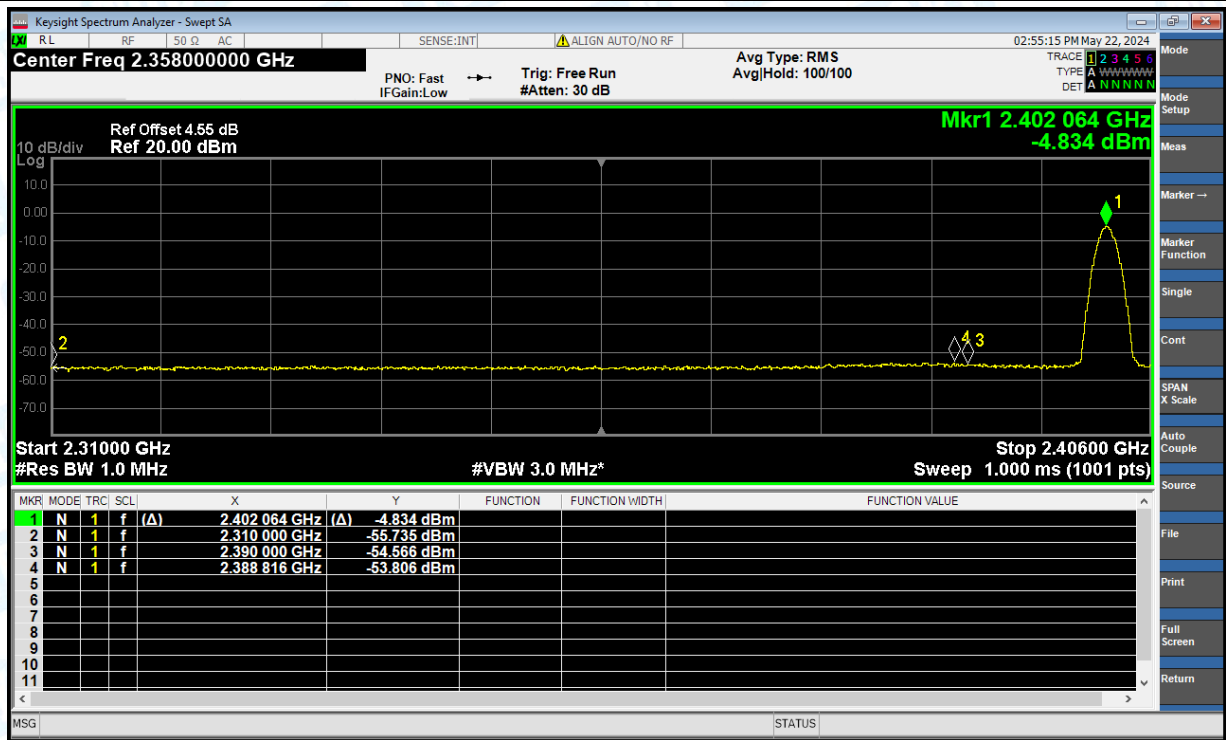
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



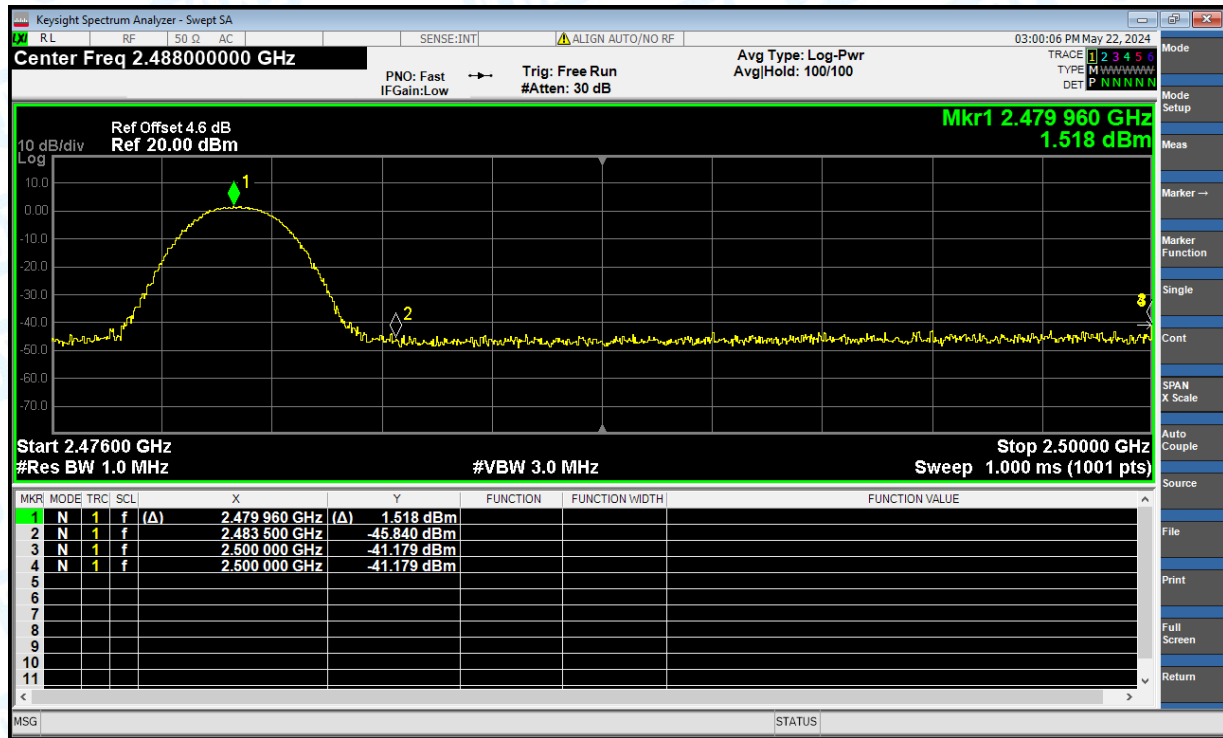
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



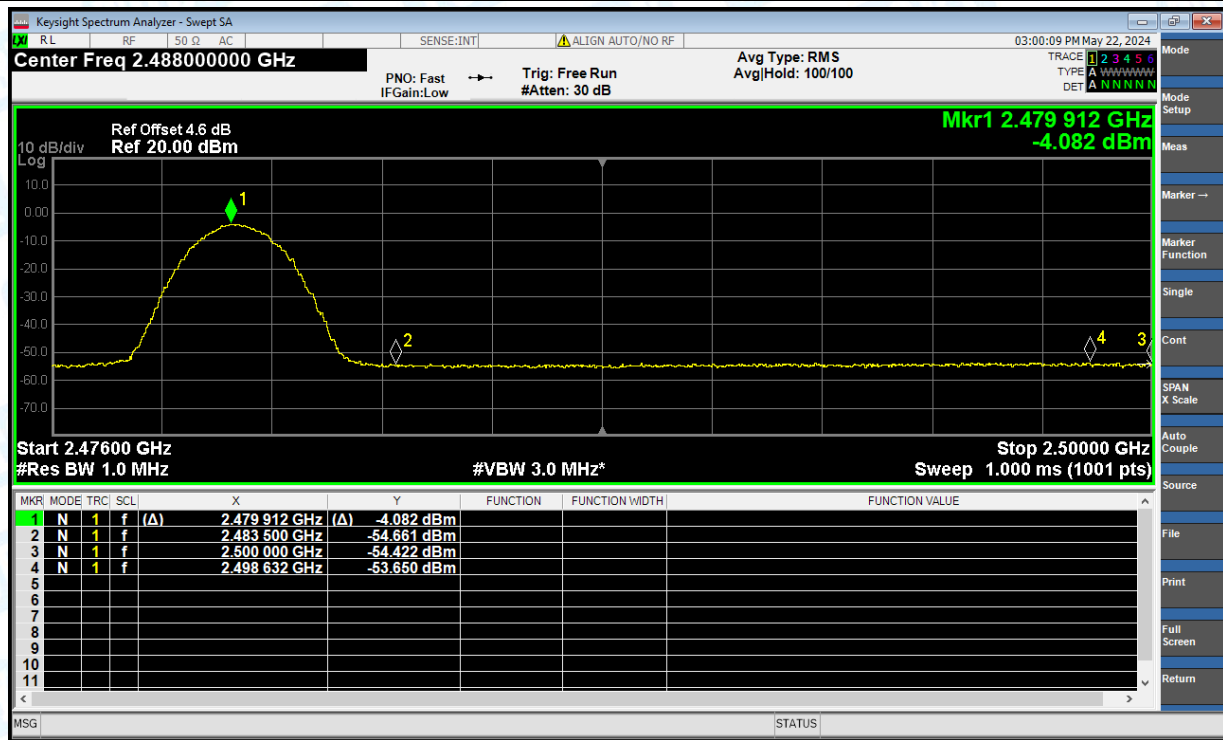
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

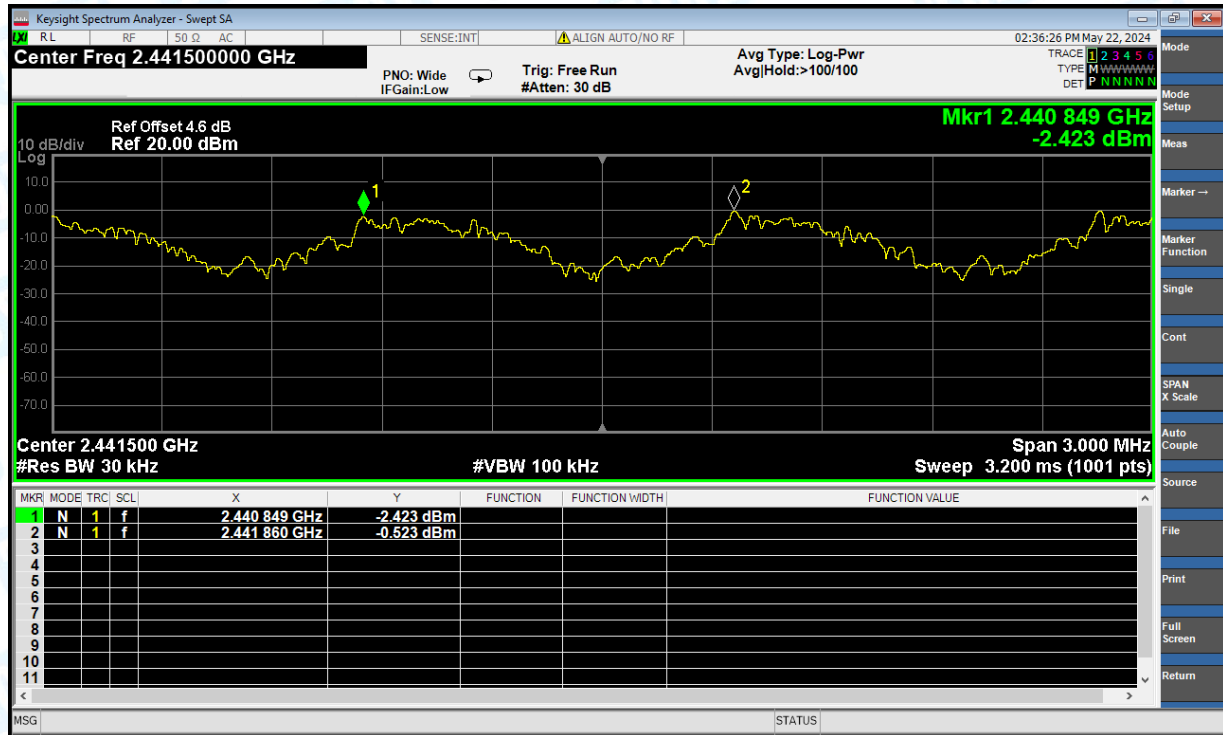


9. Carrier Frequencies Separation

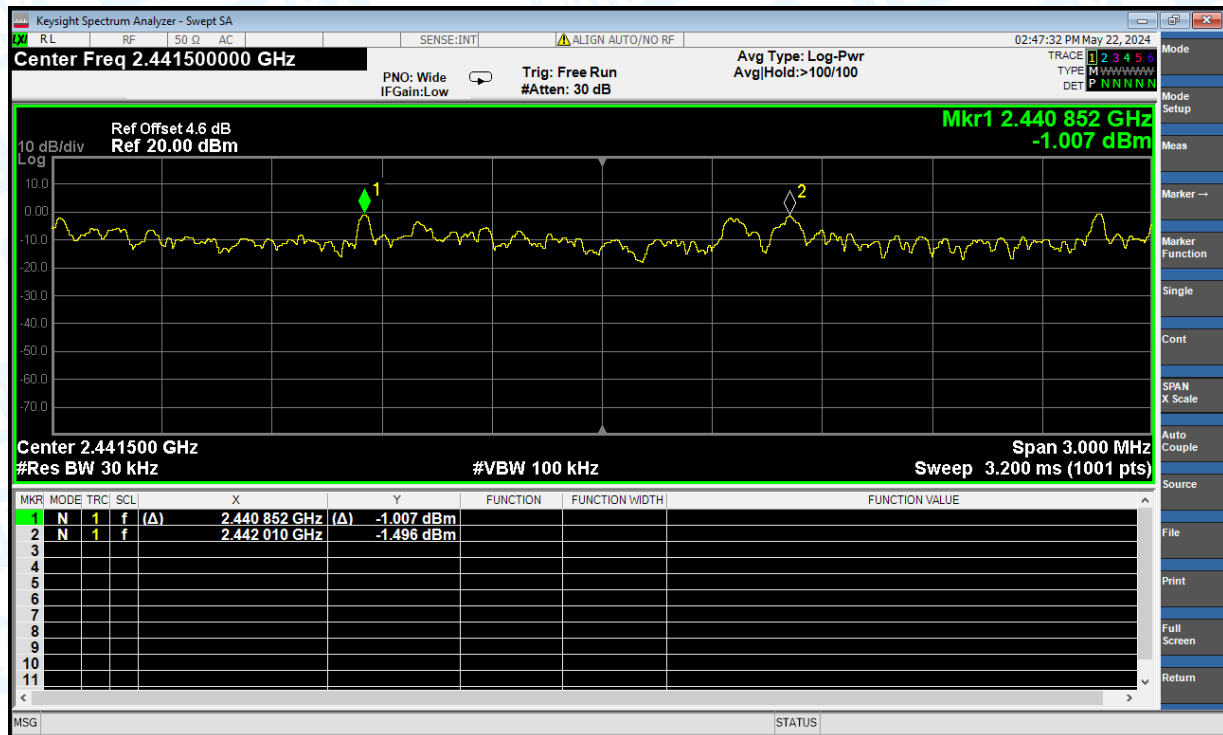
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.849	2441.86	1.011	0.687	Pass
NVNT	2-DH1	Ant1	2440.852	2442.01	1.158	0.867	Pass
NVNT	3-DH1	Ant1	2440.861	2441.866	1.005	0.867	Pass

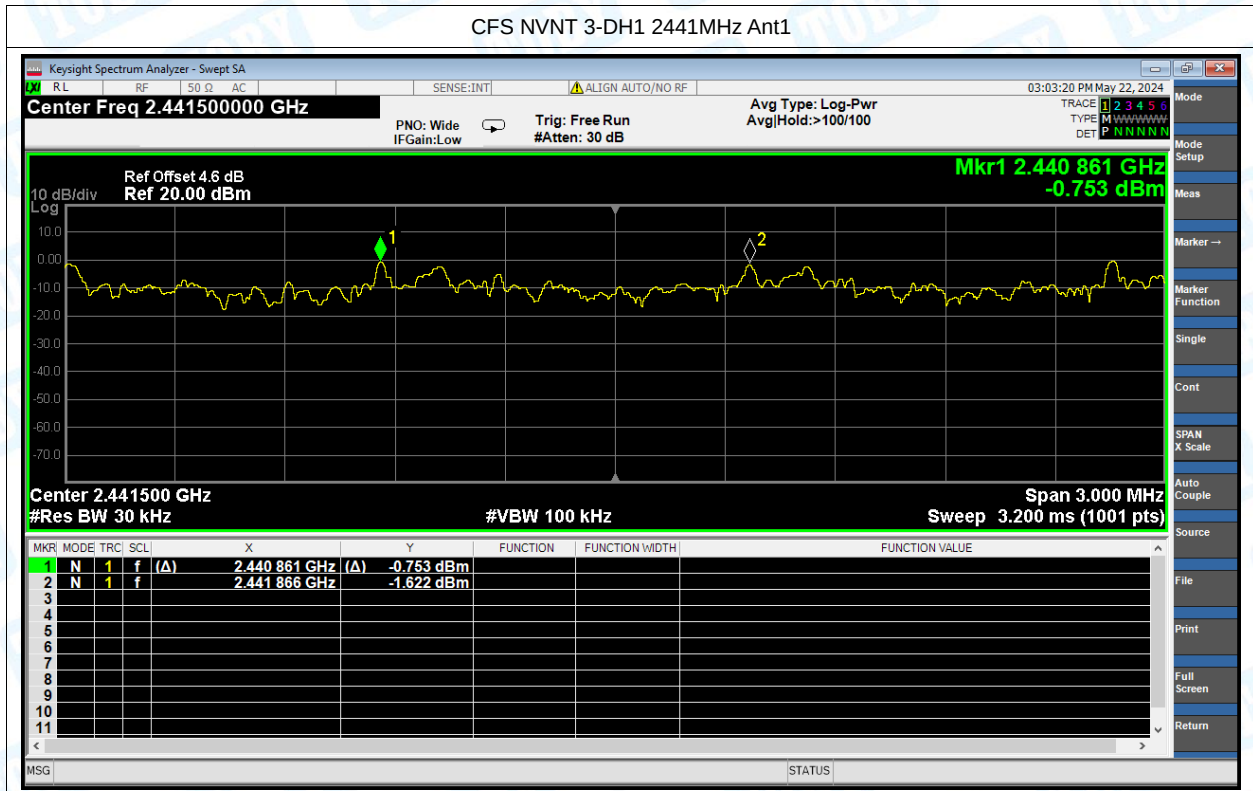
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



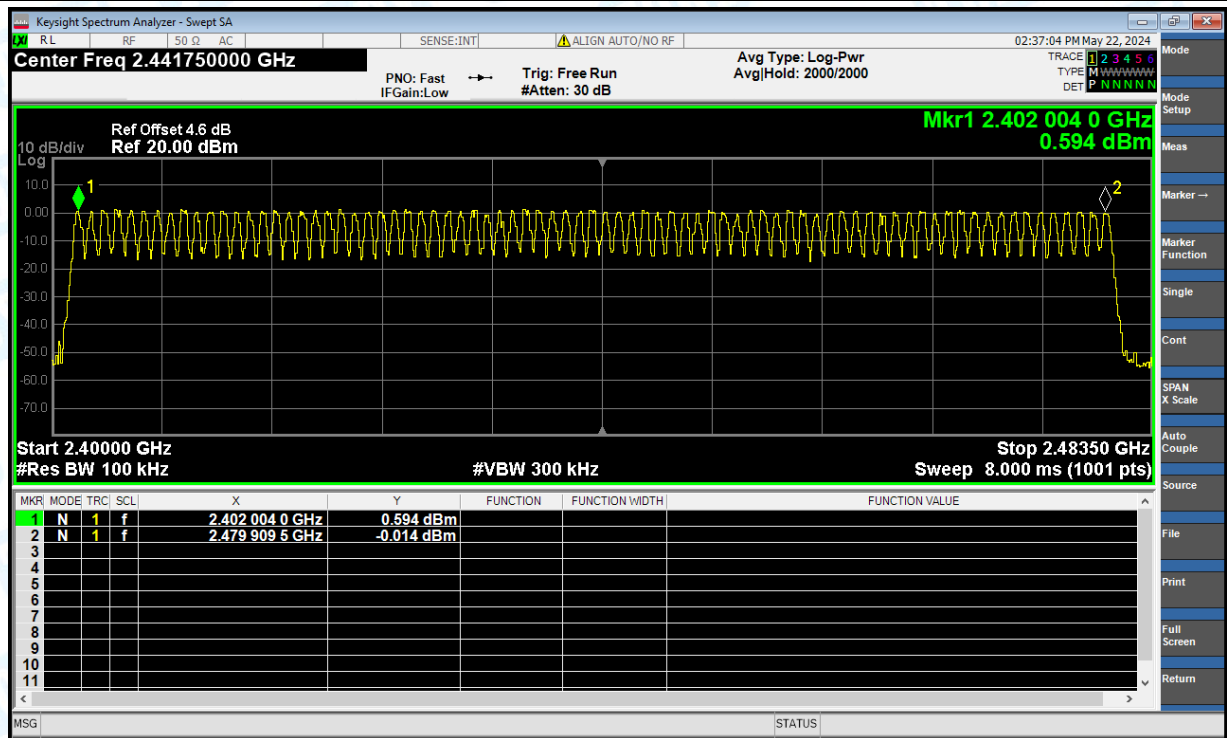


10. Number of Hopping Channel

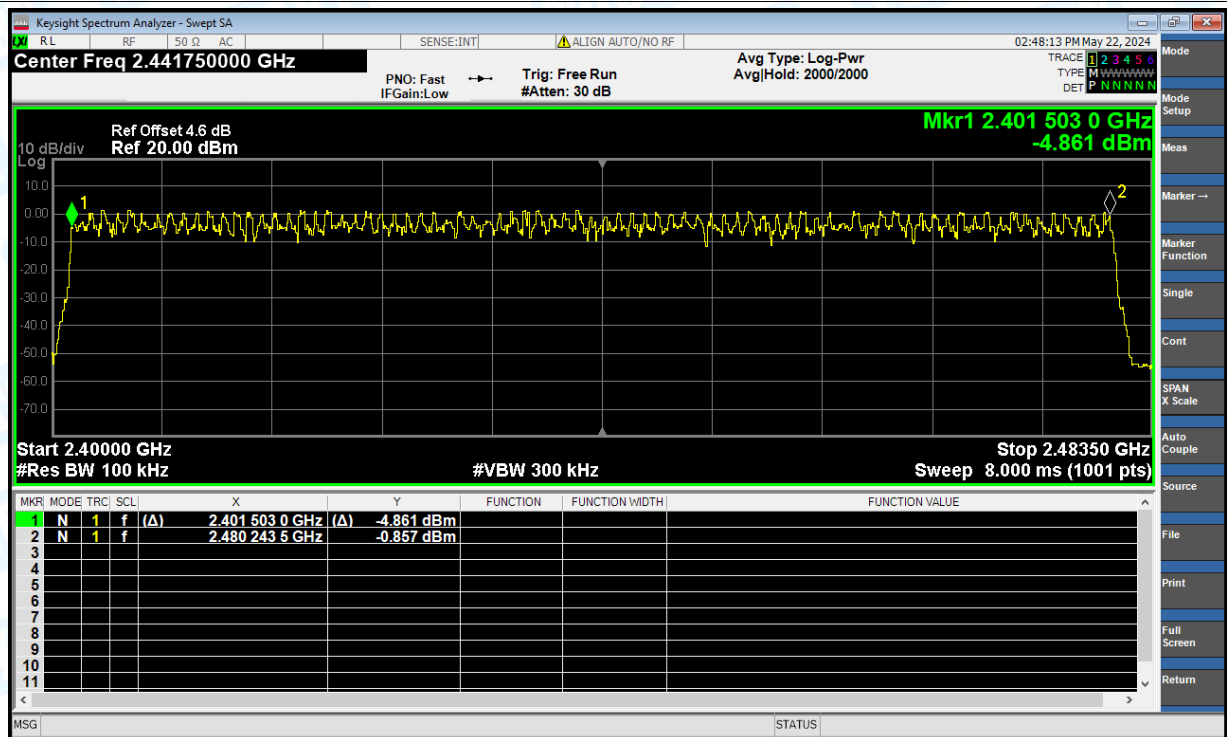
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

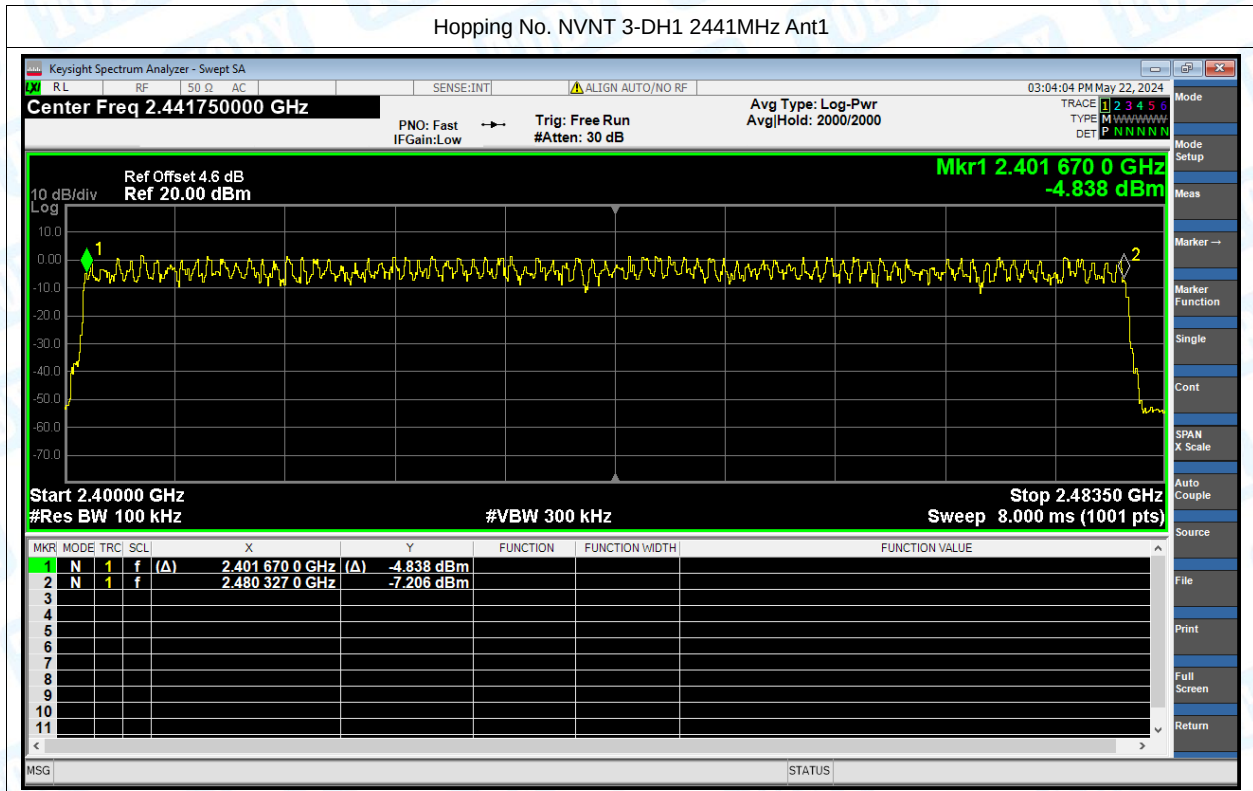
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



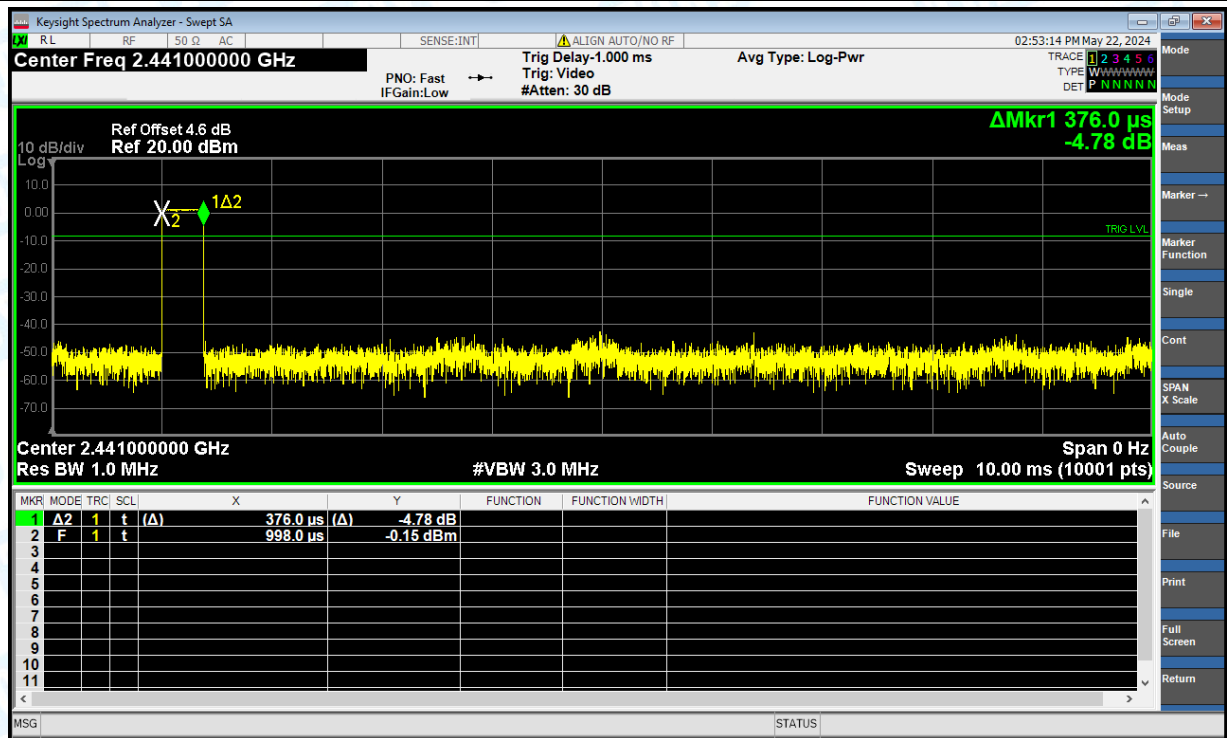


11. Dwell Time

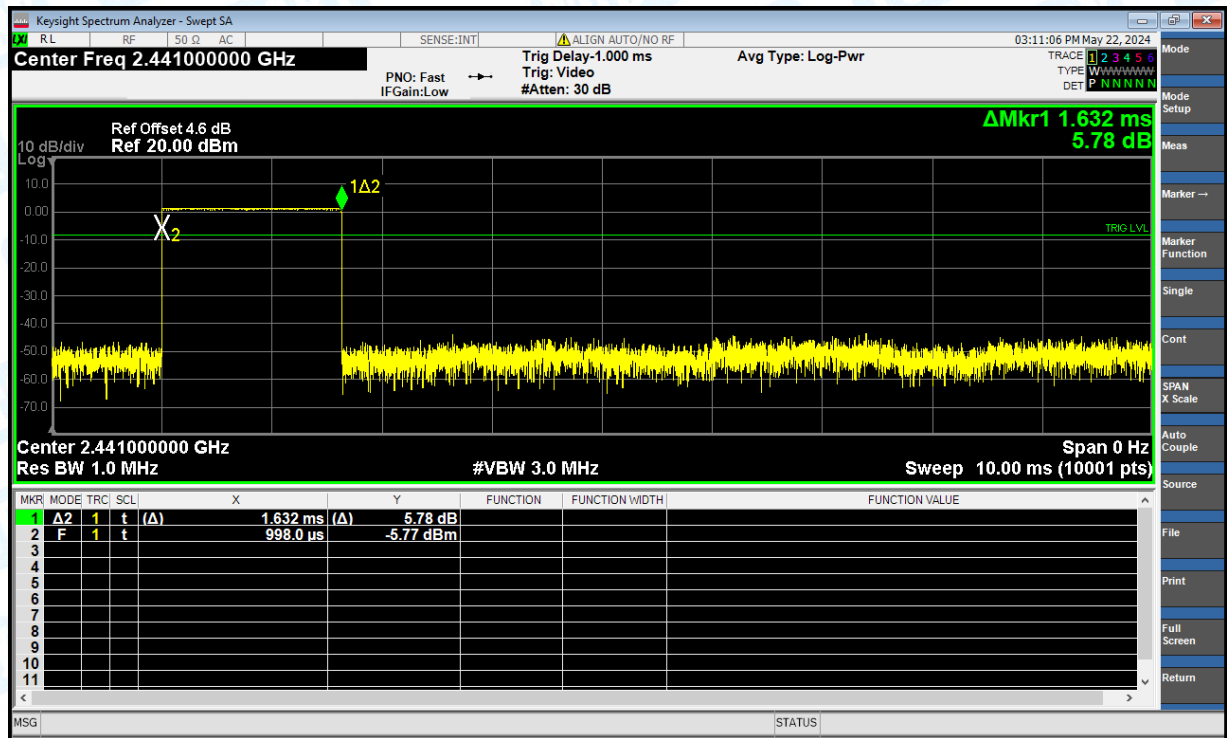
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.376	120.32	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.632	261.12	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.88	307.2	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.386	123.52	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.638	262.08	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.885	307.733	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.387	123.84	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.637	261.92	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.888	308.053	31600	400	Pass

Test Graphs

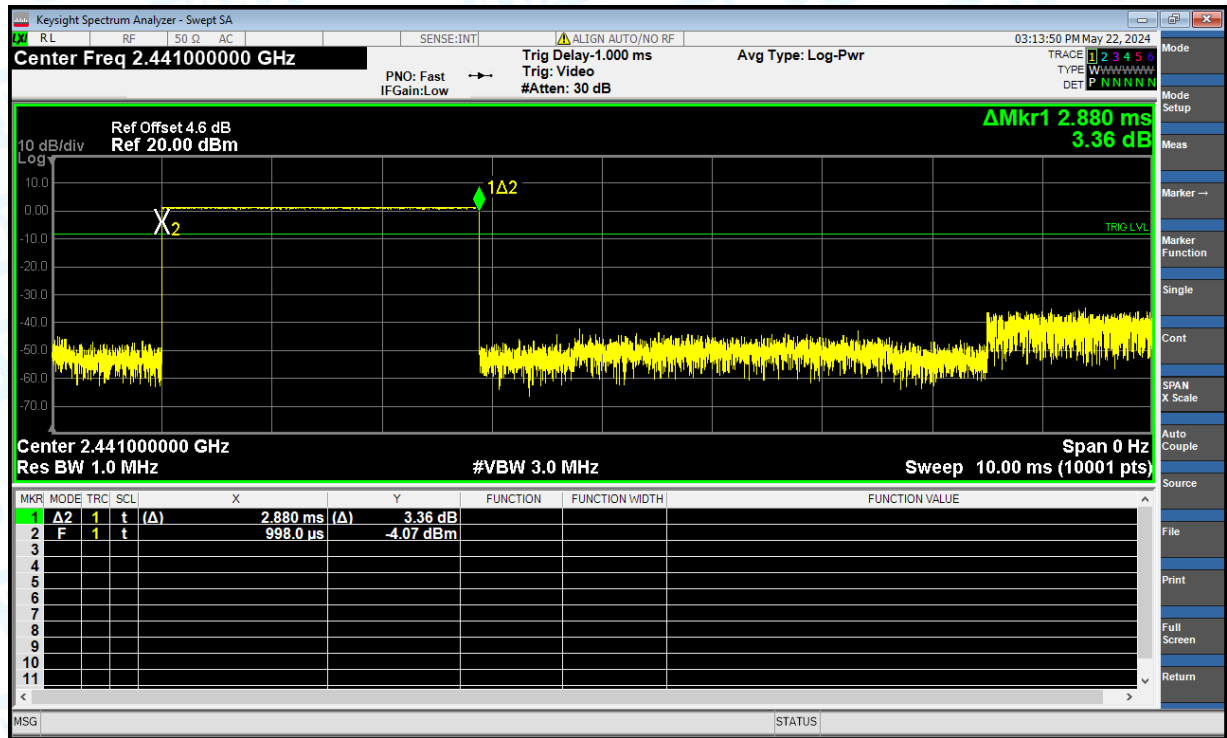
Dwell NVNT 1-DH1 2441MHz Ant1



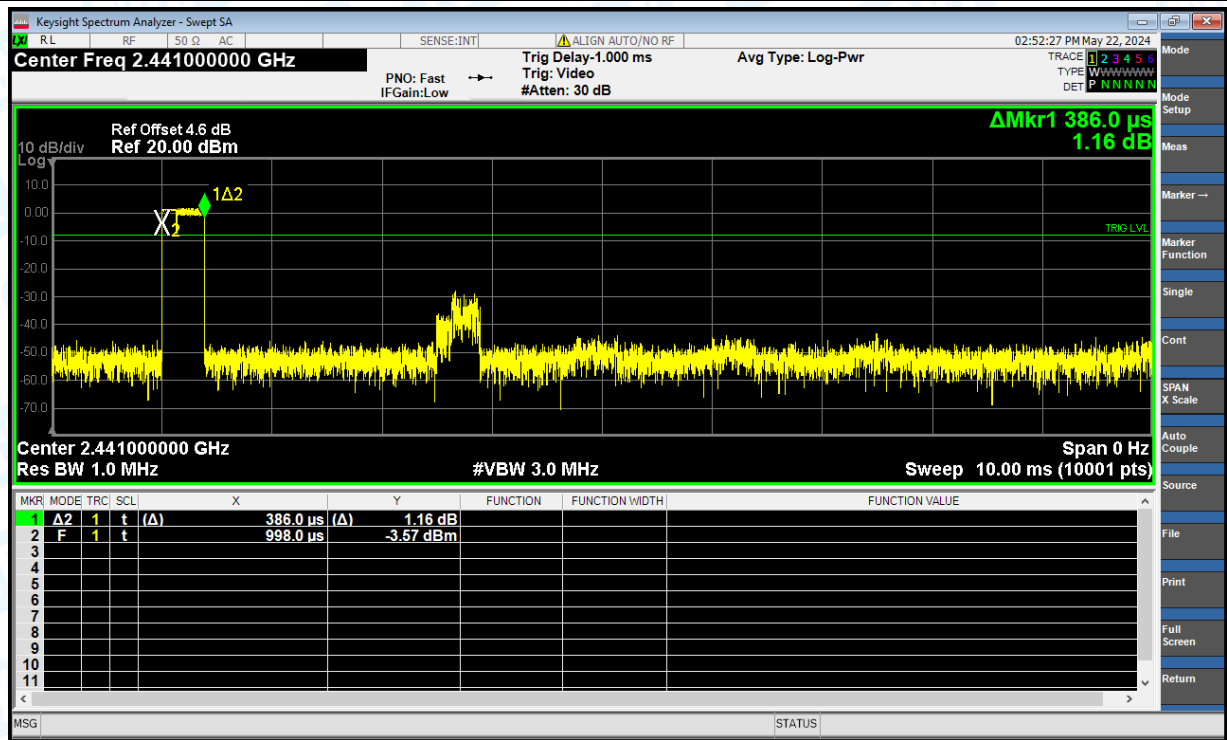
Dwell NVNT 1-DH3 2441MHz Ant1

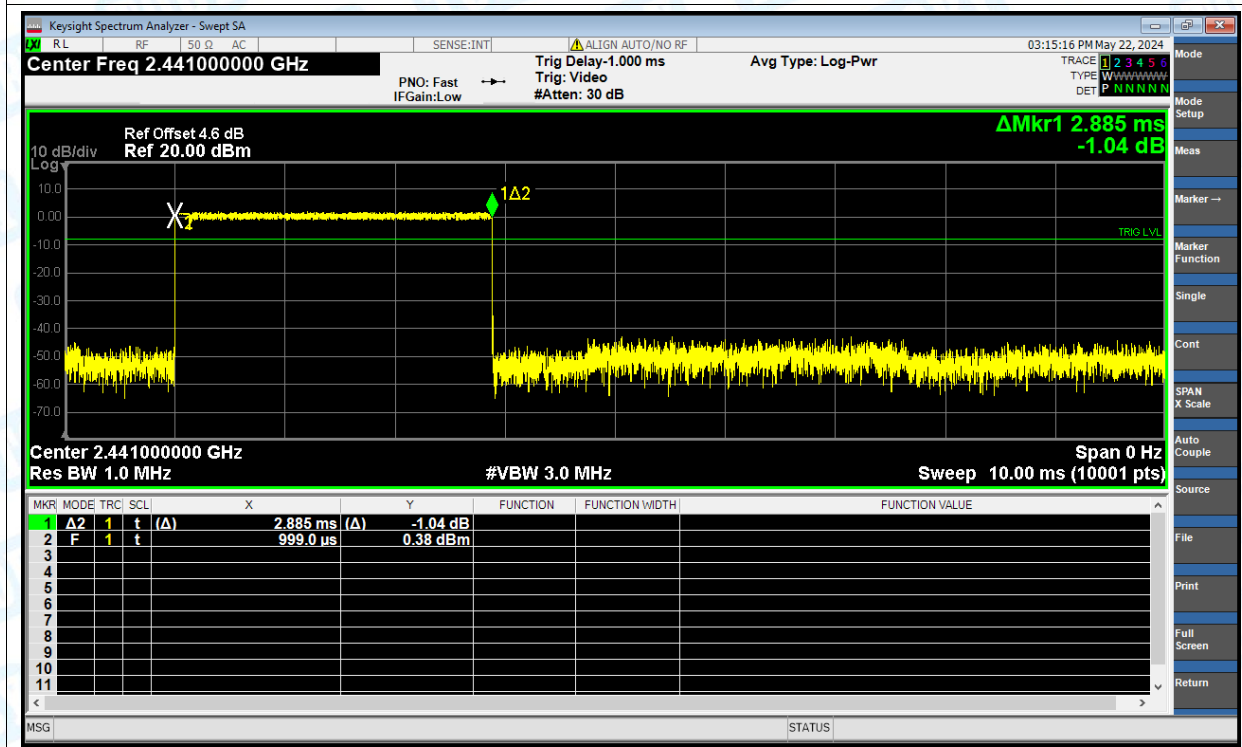


Dwell NVNT 1-DH5 2441MHz Ant1

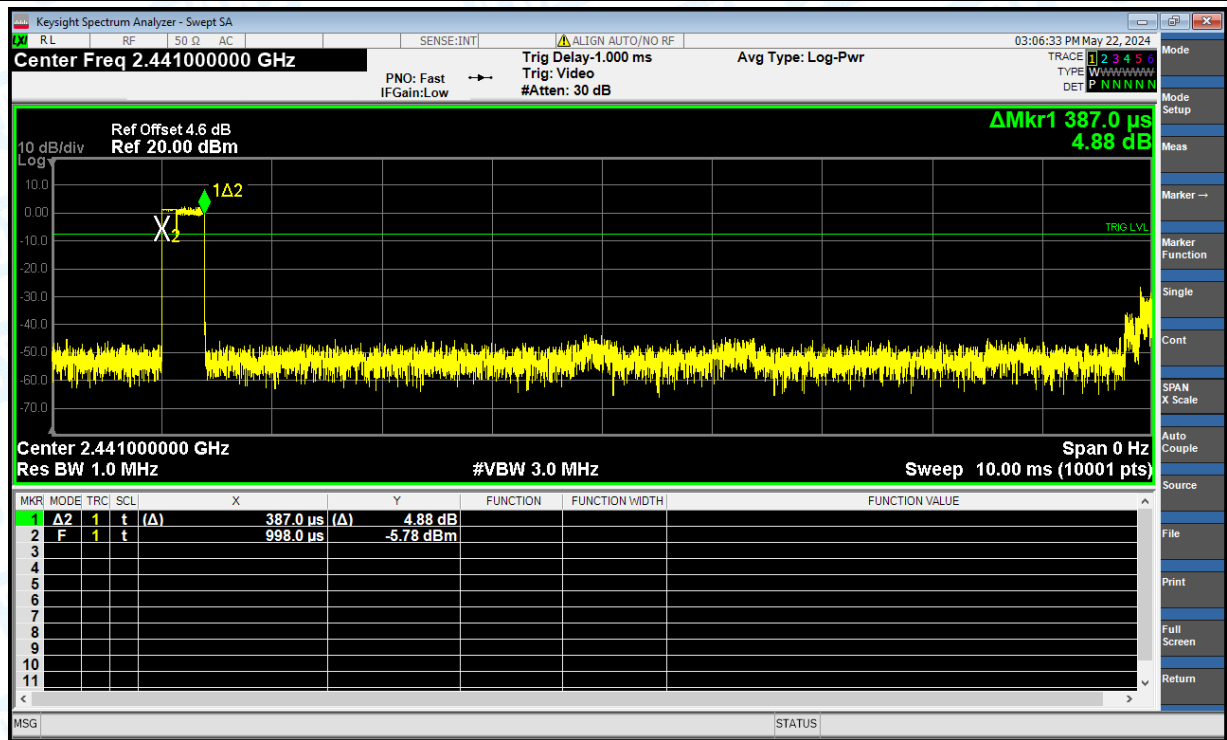


Dwell NVNT 2-DH1 2441MHz Ant1

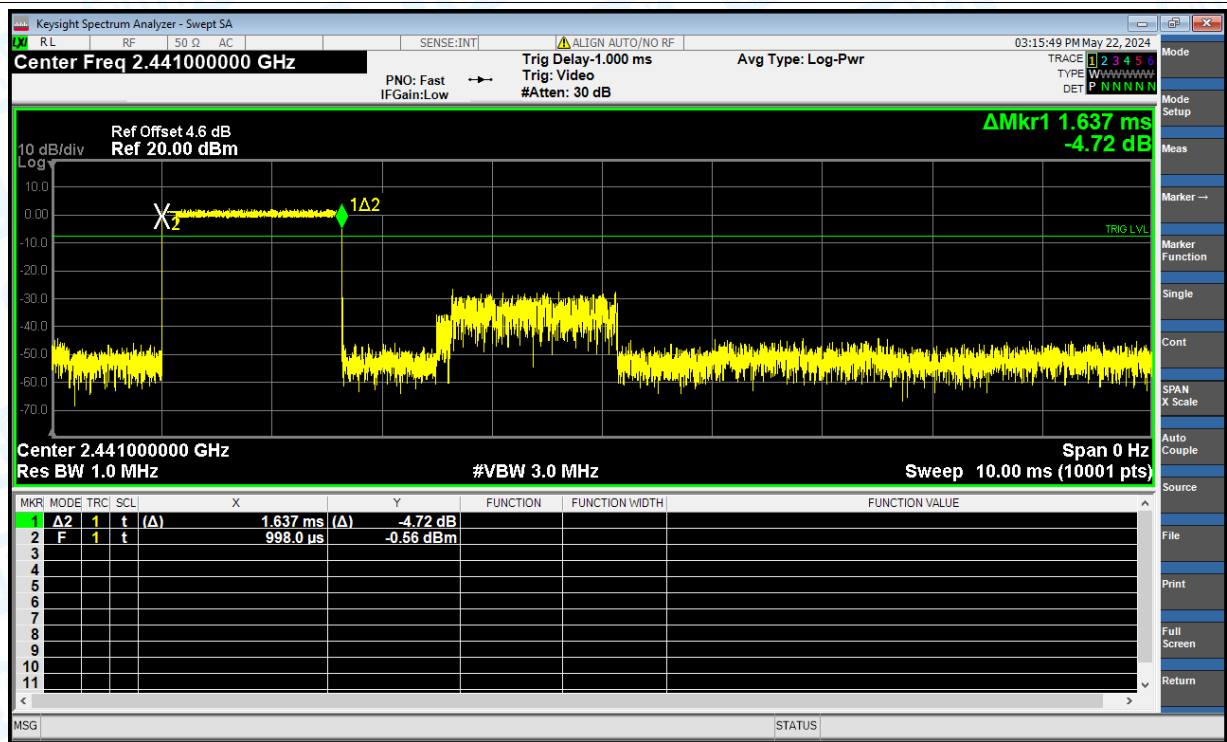


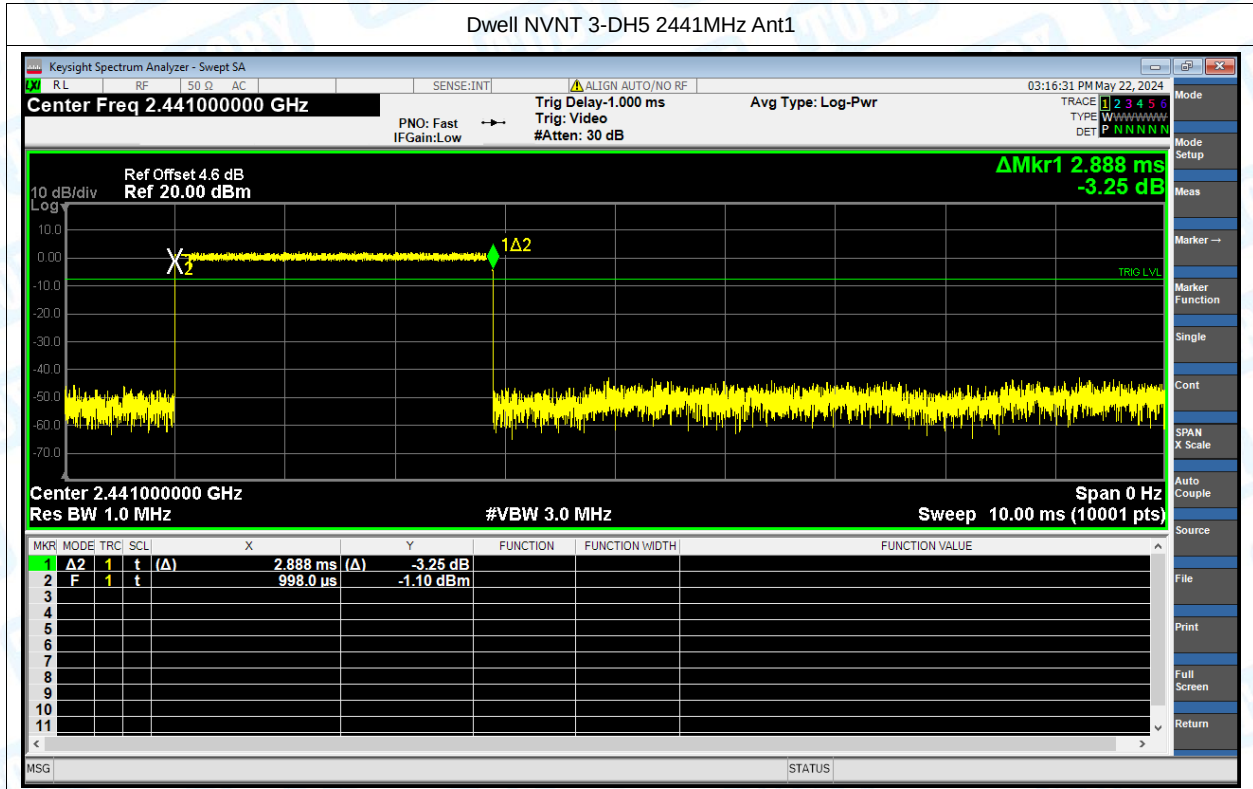


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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