

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

General Description of EUT	
Product Name:	Dnut i5
Test Model:	I5
Sample ID:	202310-0120-1-2#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	AC 120V
Test Engineer:	Zhou zhen
Note: For a more detailed features description, please refer to the report TBR-C-202310-0120-1 The report only show the worst case data.	

Contents

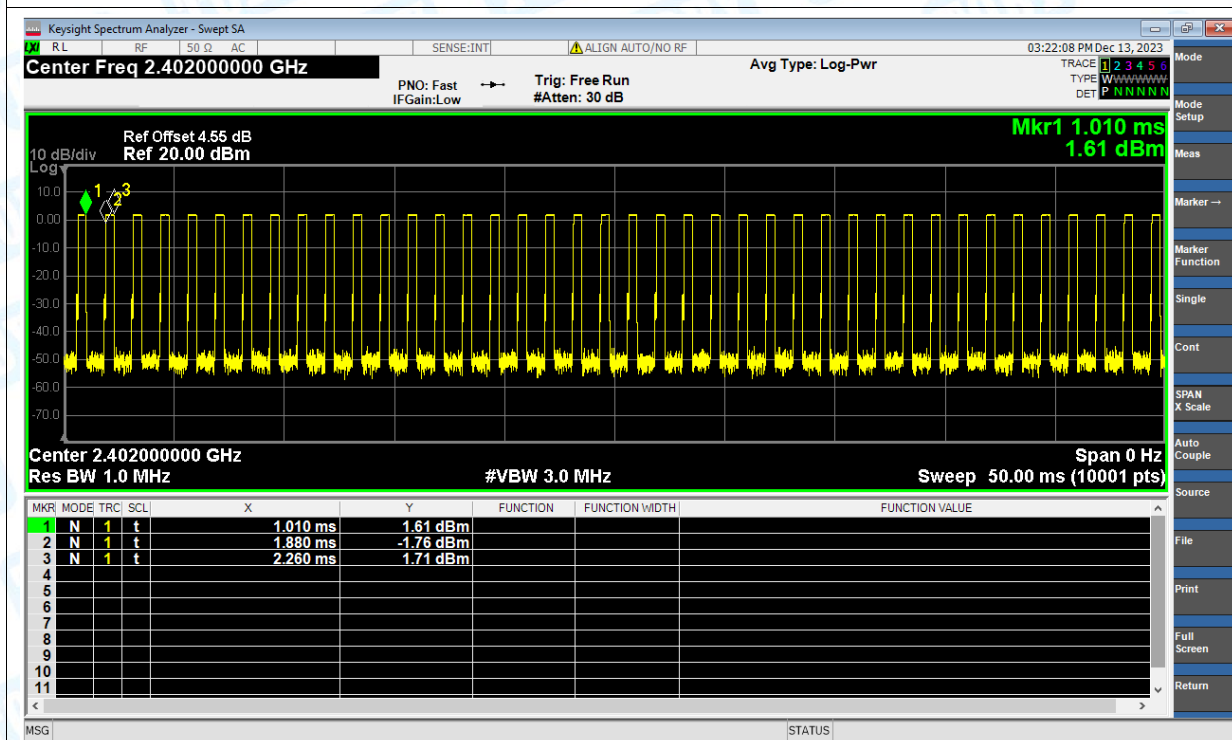
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1. Duty Cycle

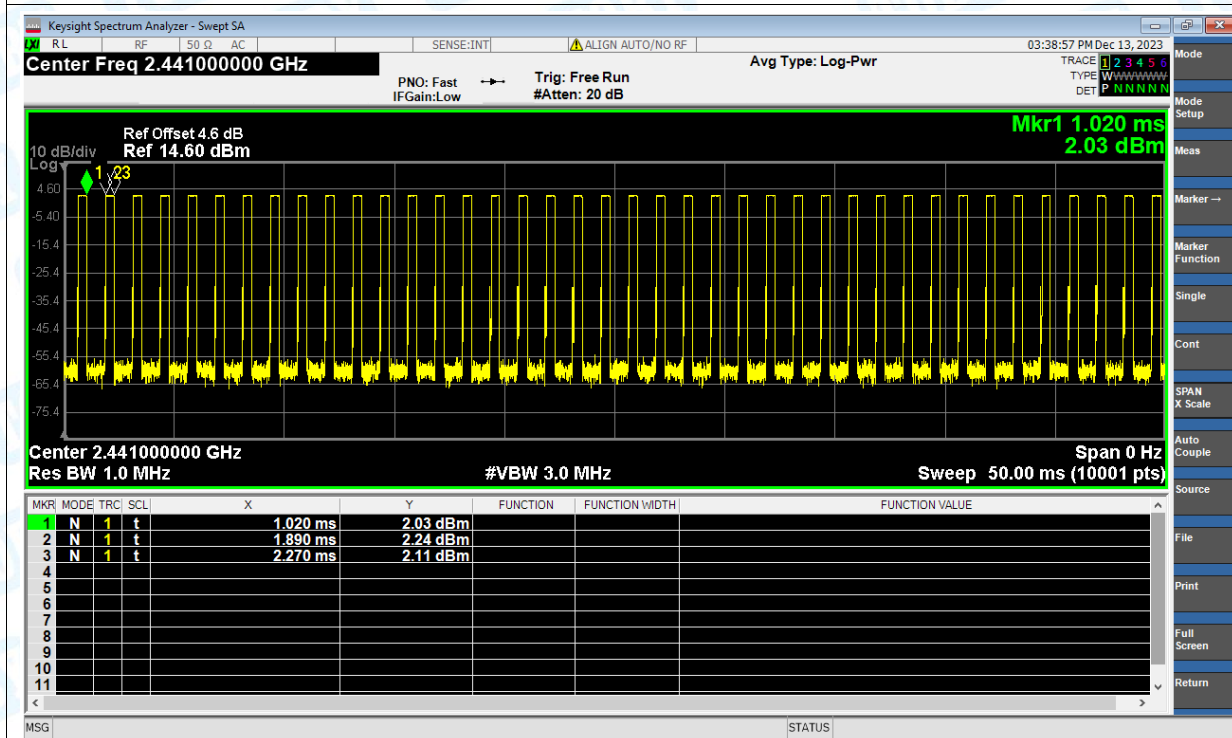
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	31.01	5.08	2.58
NVNT	3-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2441	Ant1	30.8	5.11	2.6
NVNT	3-DH1	2480	Ant1	31.04	5.08	2.58

Test Graphs

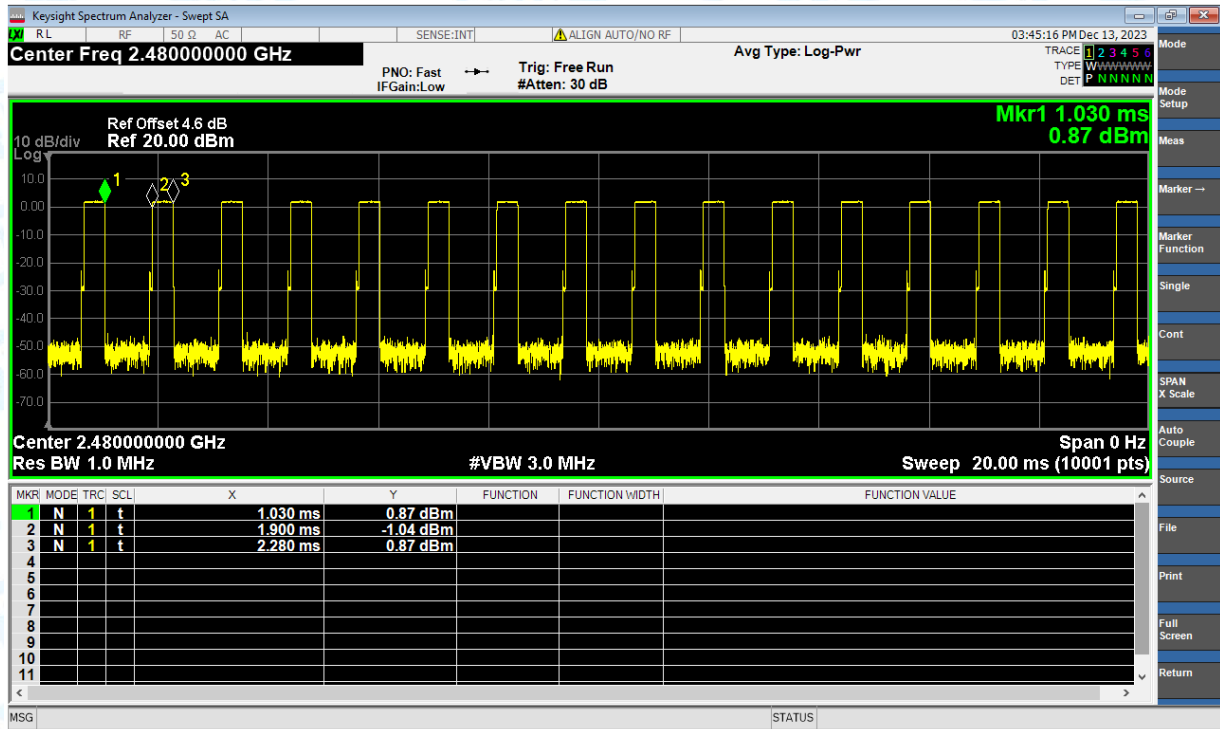
Duty Cycle NVNT 1-DH1 2402MHz Ant1



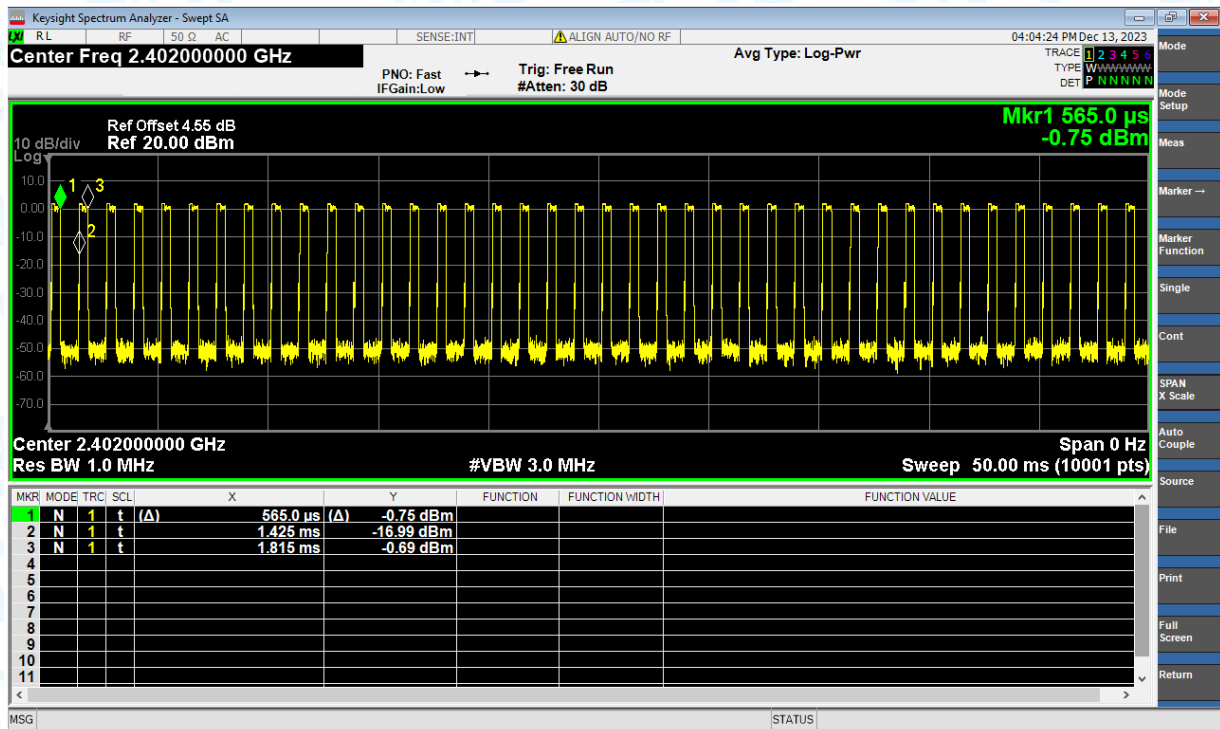
Duty Cycle NVNT 1-DH1 2441MHz Ant1



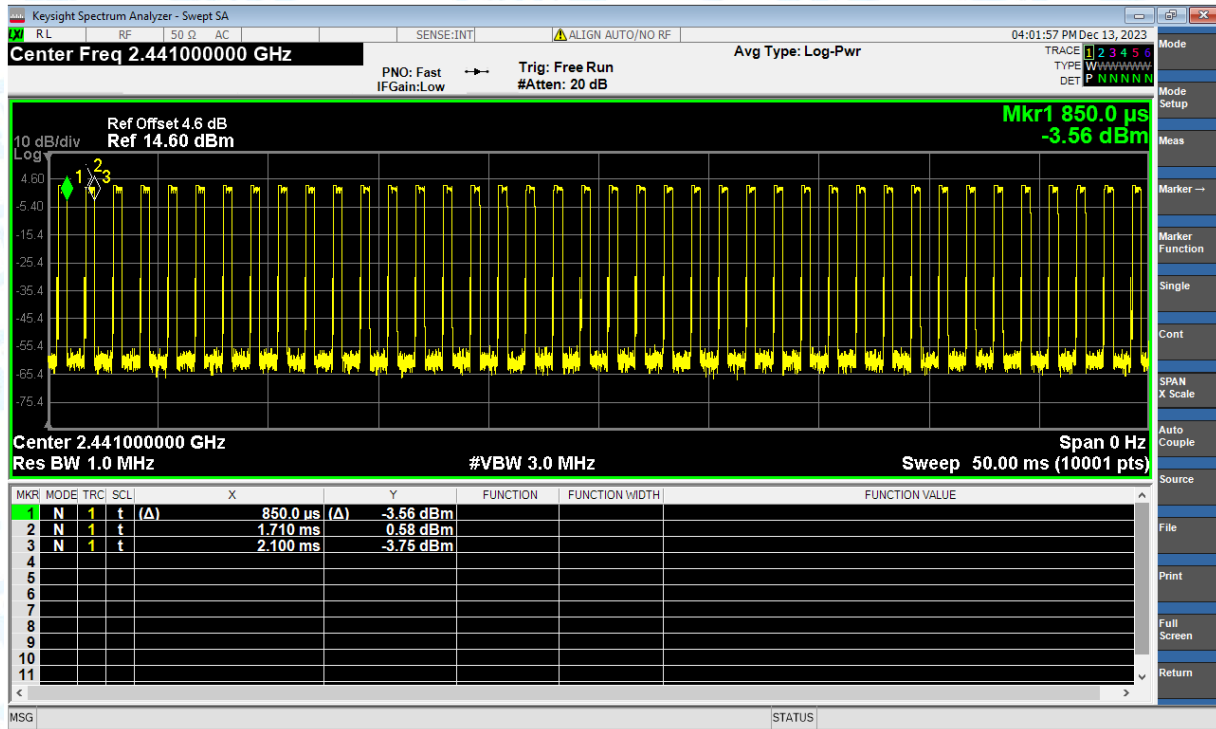
Duty Cycle NVNT 1-DH1 2480MHz Ant1



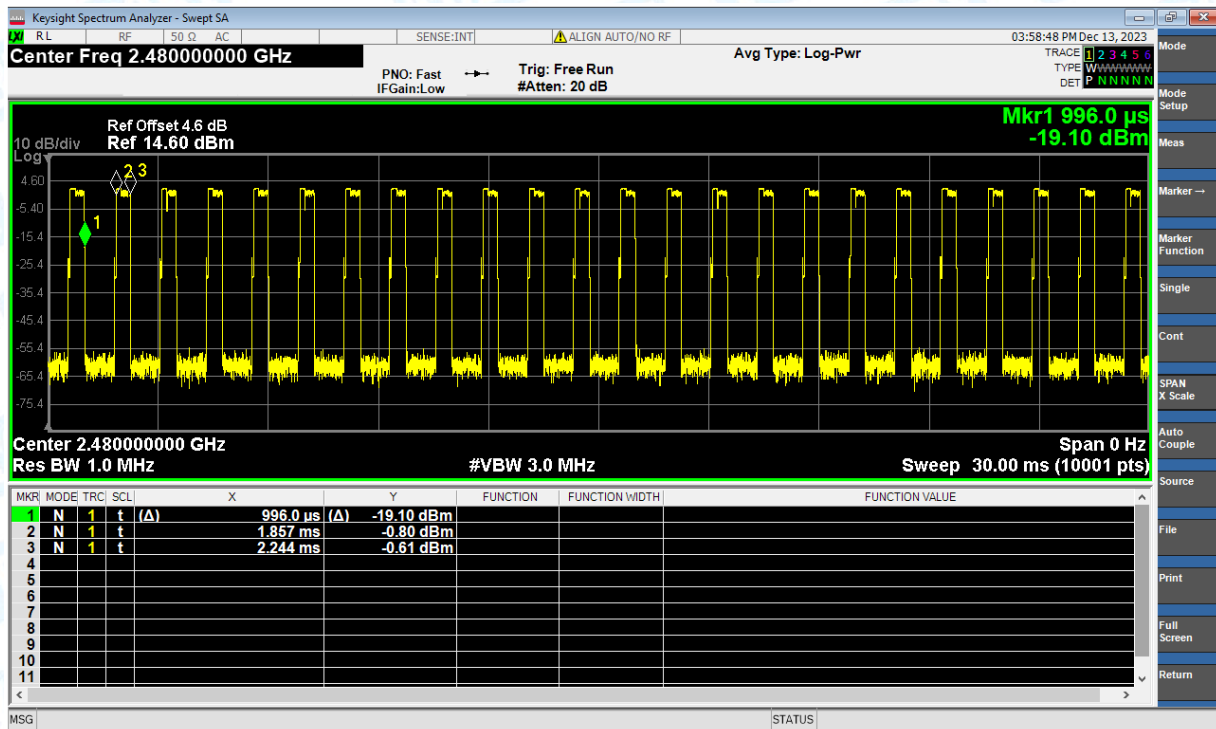
Duty Cycle NVNT 2-DH1 2402MHz Ant1



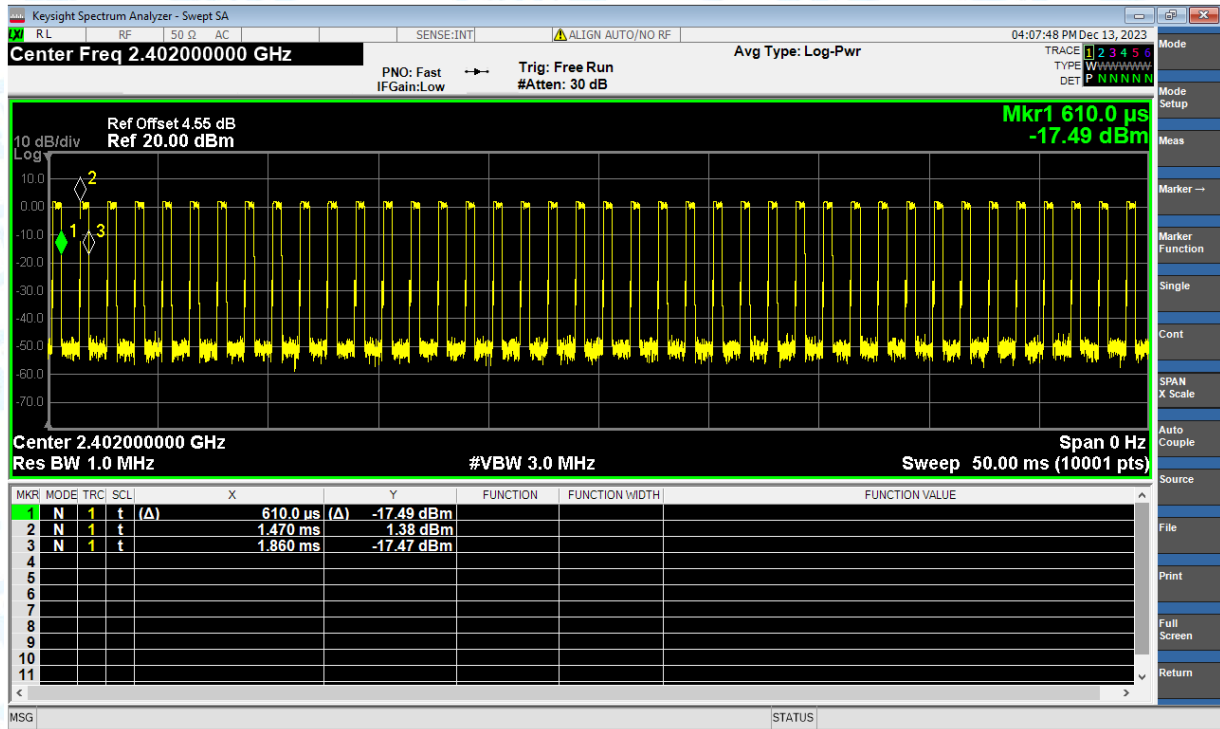
Duty Cycle NVNT 2-DH1 2441MHz Ant1



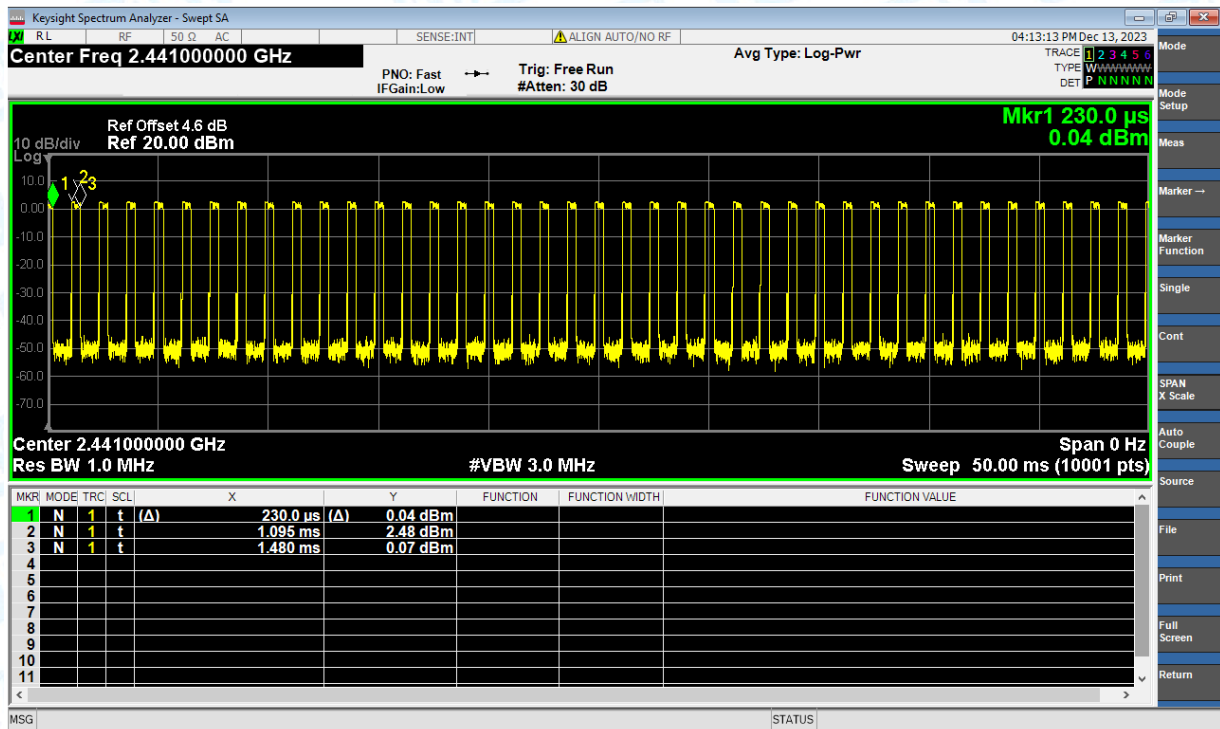
Duty Cycle NVNT 2-DH1 2480MHz Ant1

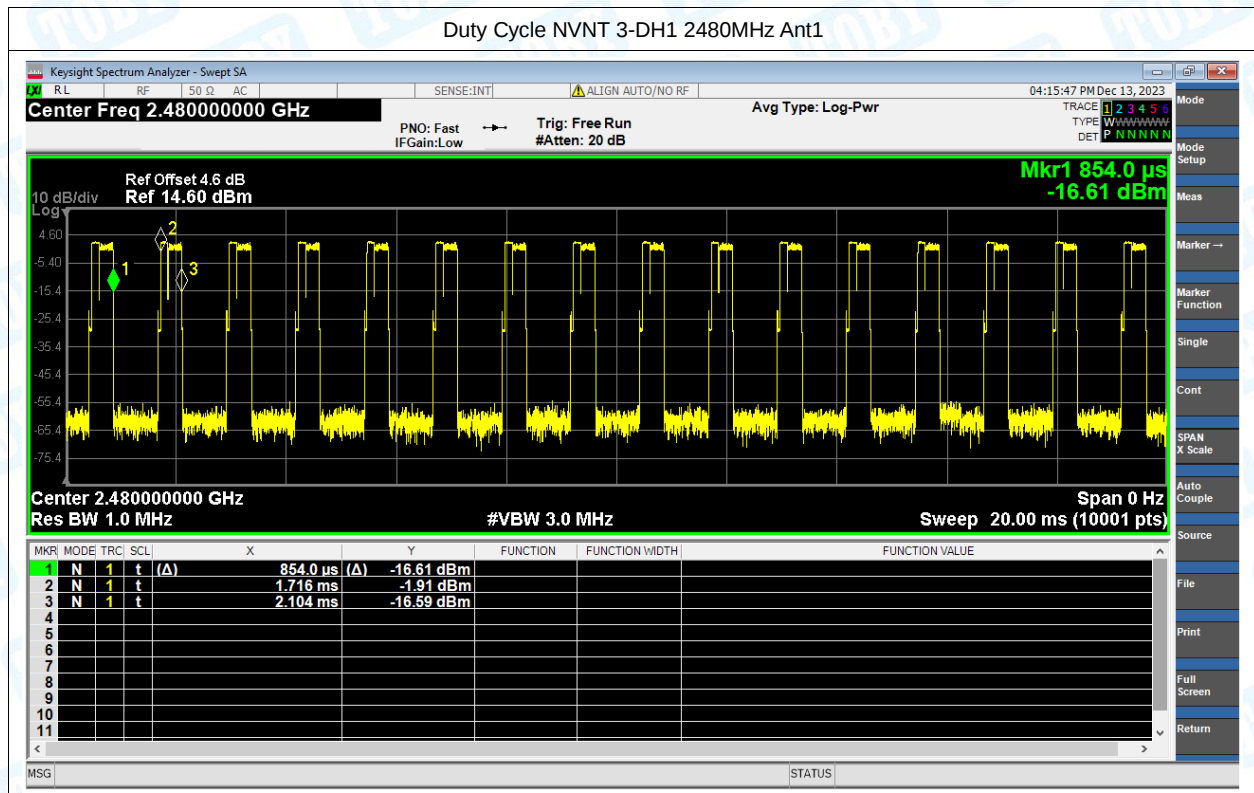


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



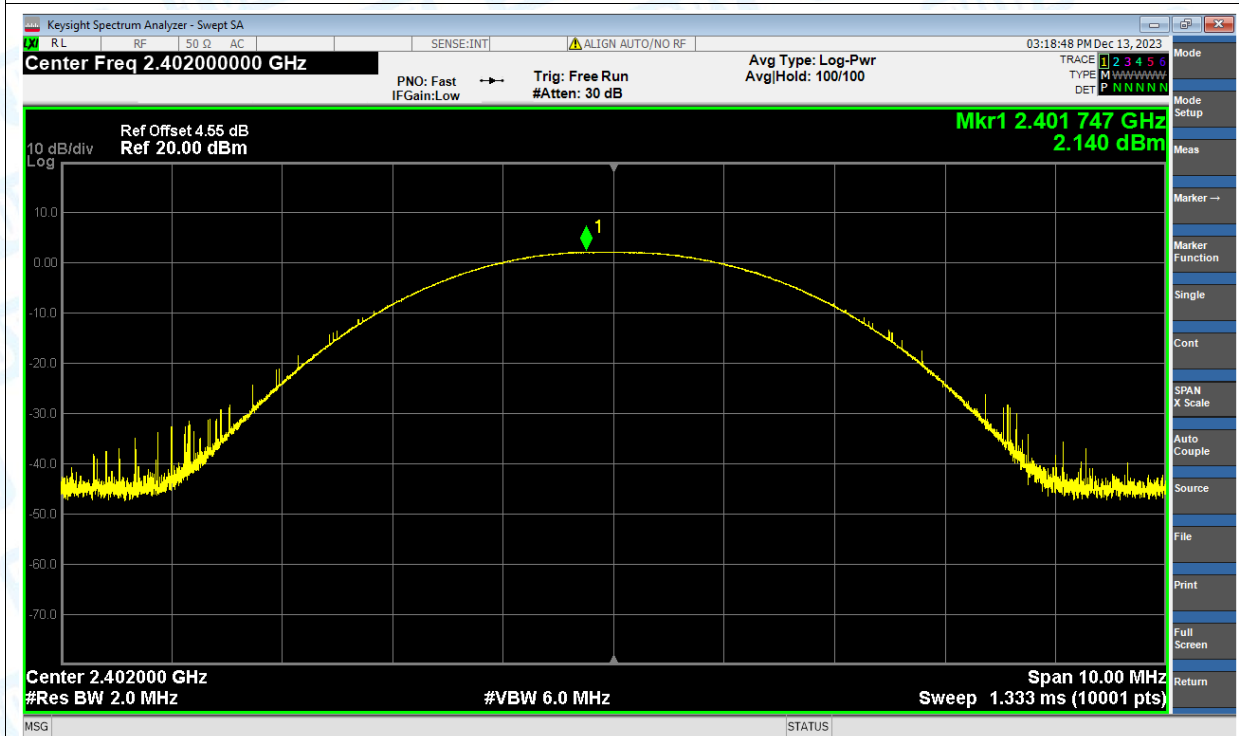


2. Maximum Conducted Output Power

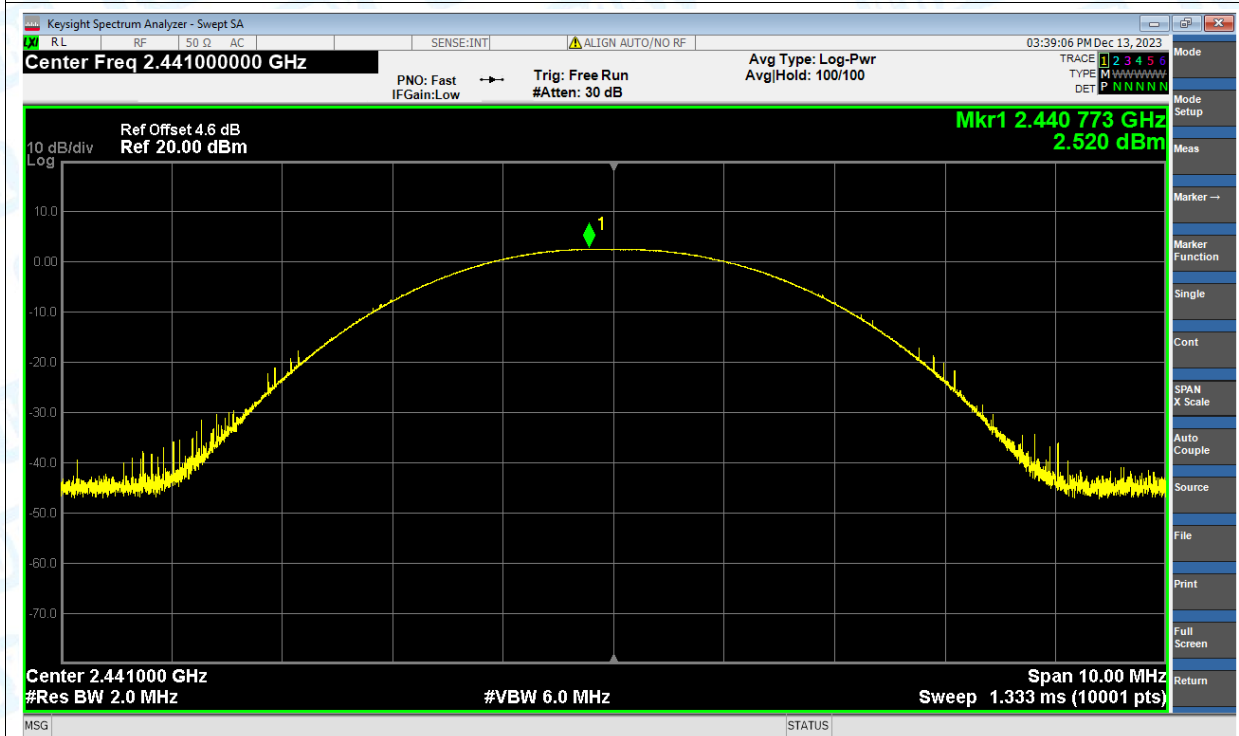
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	2.14	0	2.14	21	Pass
NVNT	1-DH1	2441	Ant1	2.52	0	2.52	21	Pass
NVNT	1-DH1	2480	Ant1	2.302	0	2.302	21	Pass
NVNT	2-DH1	2402	Ant1	2.197	0	2.197	21	Pass
NVNT	2-DH1	2441	Ant1	2.618	0	2.618	21	Pass
NVNT	2-DH1	2480	Ant1	2.312	0	2.312	21	Pass
NVNT	3-DH1	2402	Ant1	2.413	0	2.413	21	Pass
NVNT	3-DH1	2441	Ant1	2.829	0	2.829	21	Pass
NVNT	3-DH1	2480	Ant1	2.406	0	2.406	21	Pass

Test Graphs

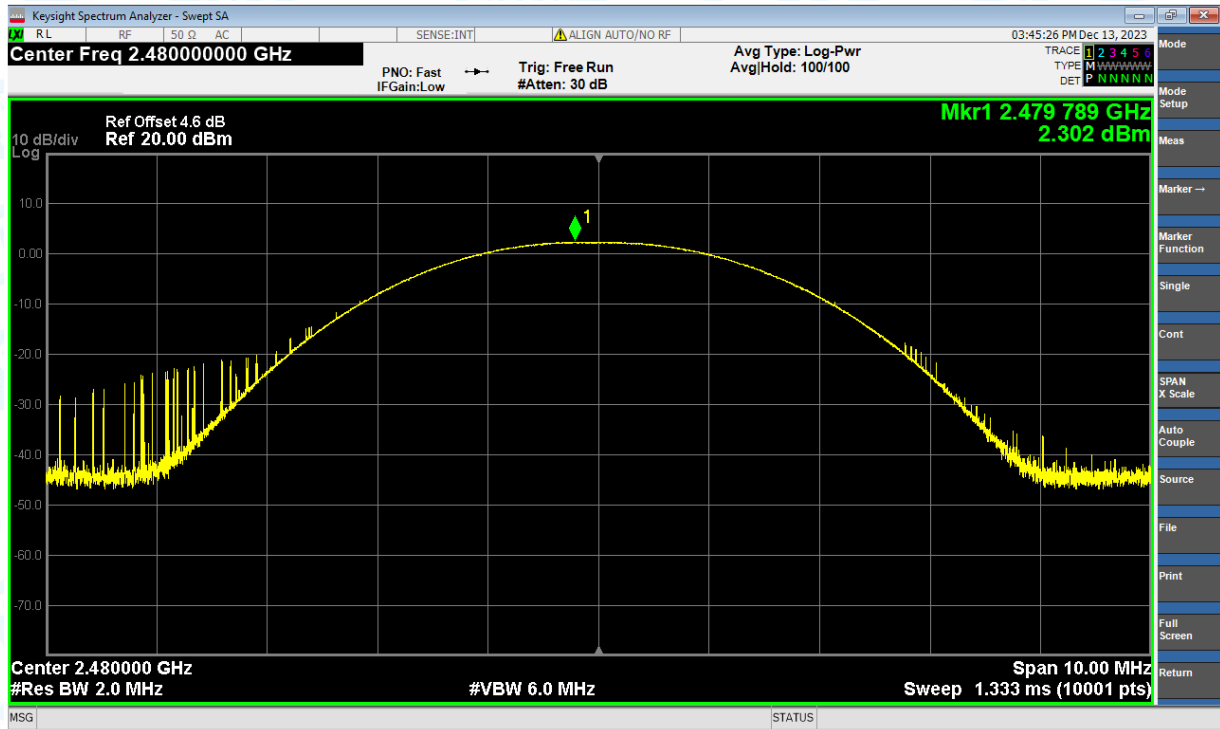
Power NVNT 1-DH1 2402MHz Ant1



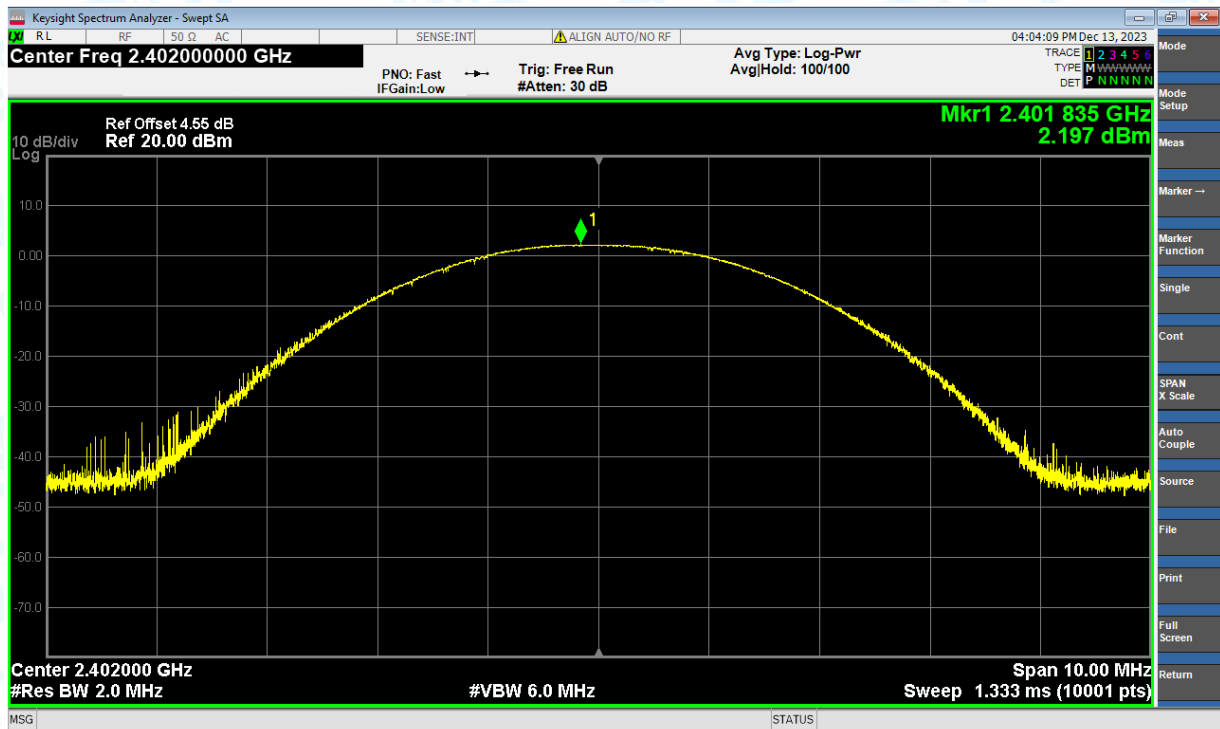
Power NVNT 1-DH1 2441MHz Ant1



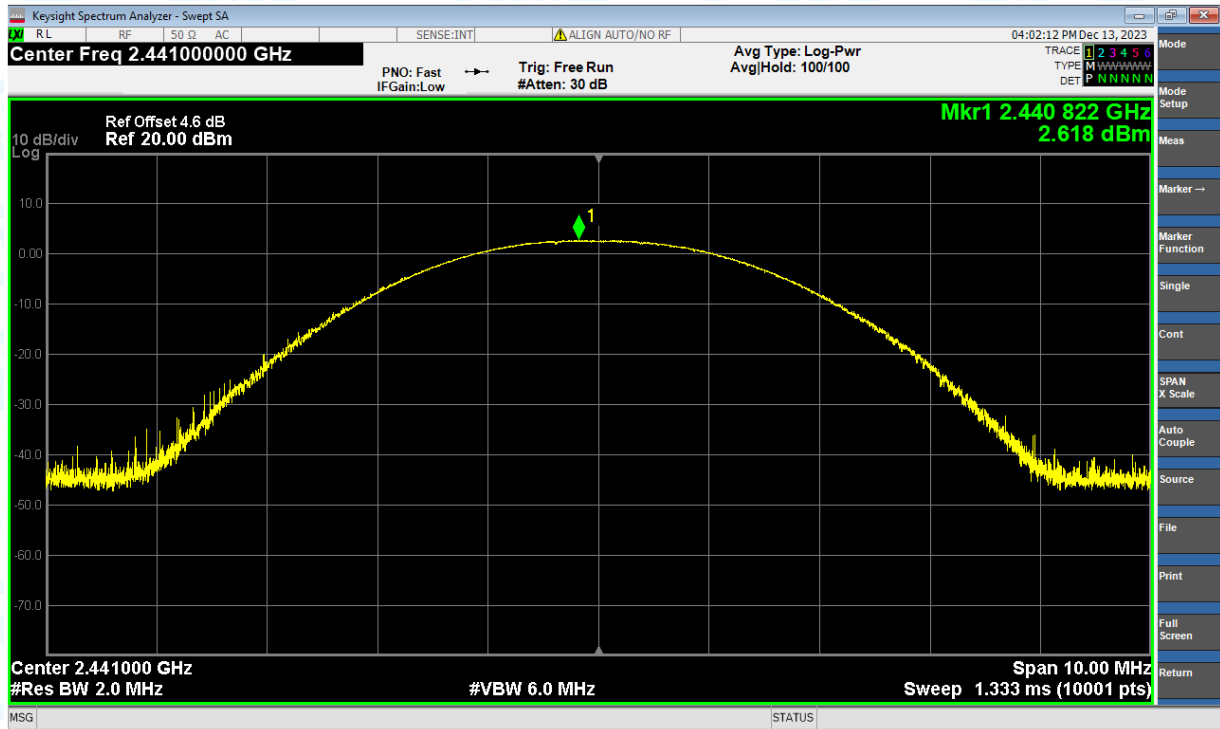
Power NVNT 1-DH1 2480MHz Ant1



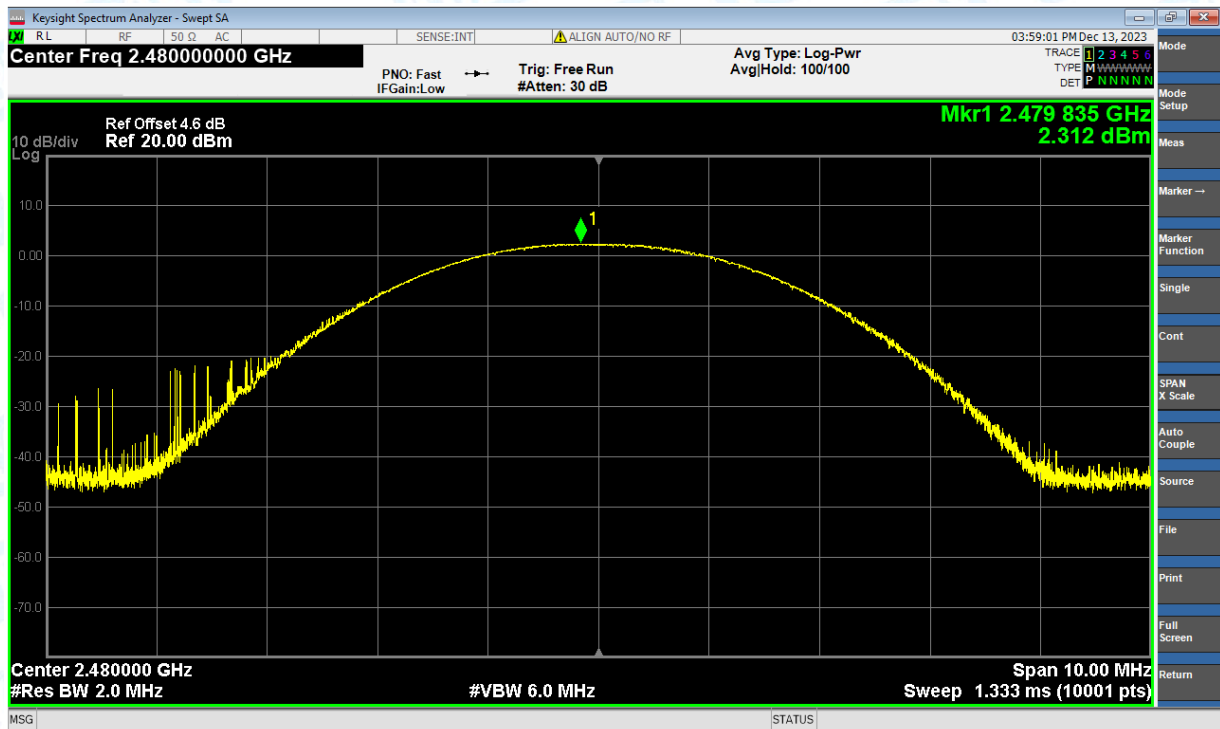
Power NVNT 2-DH1 2402MHz Ant1



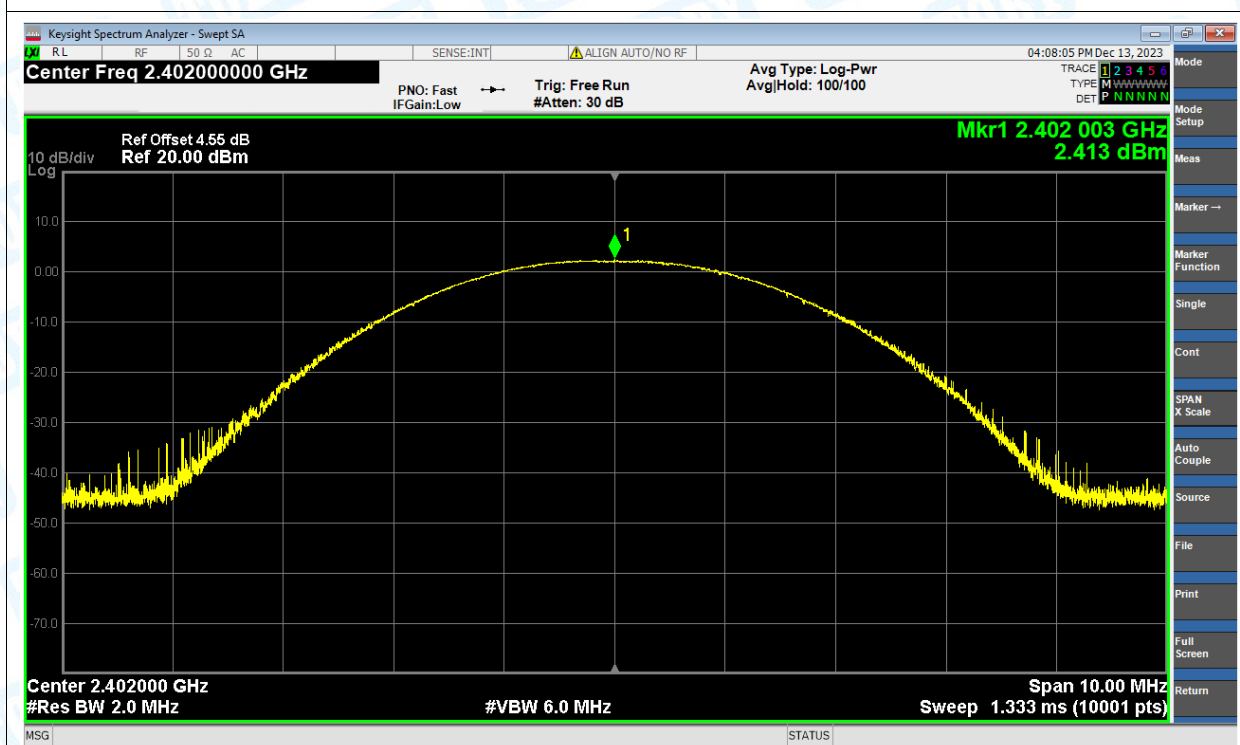
Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1

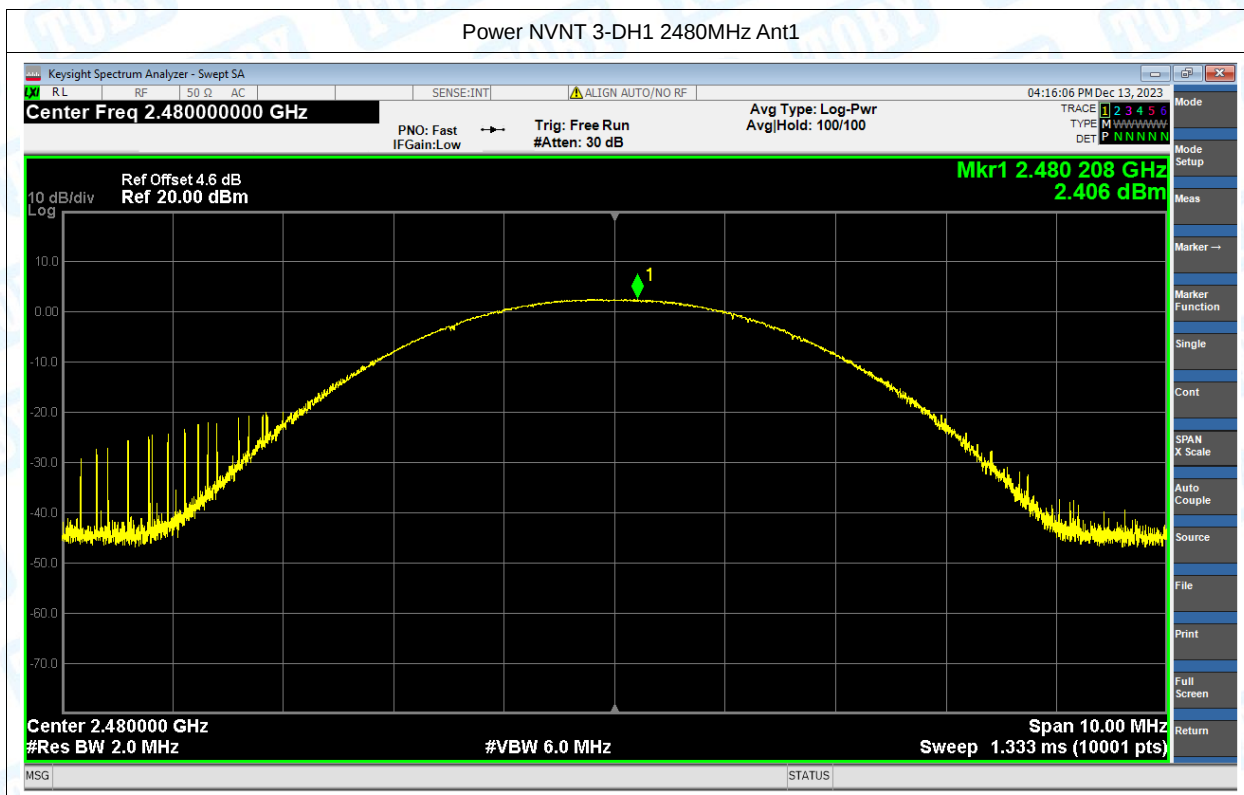


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



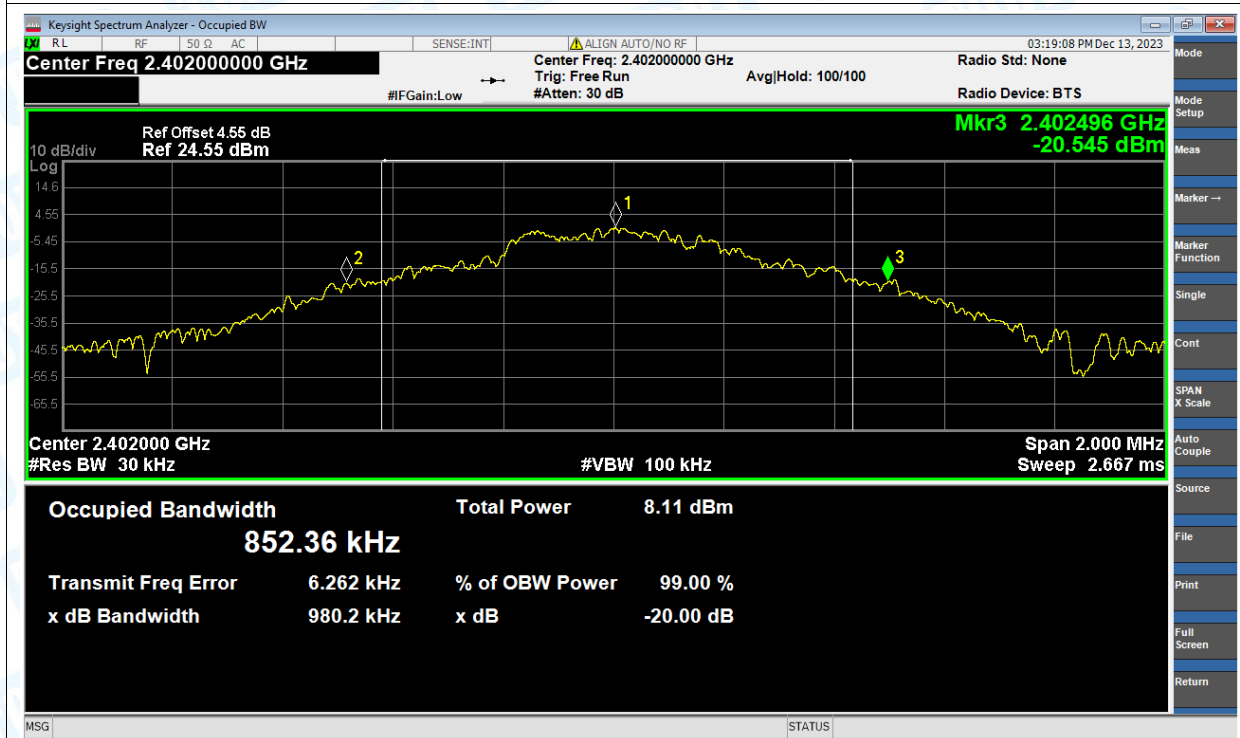


3. -20dB Bandwidth

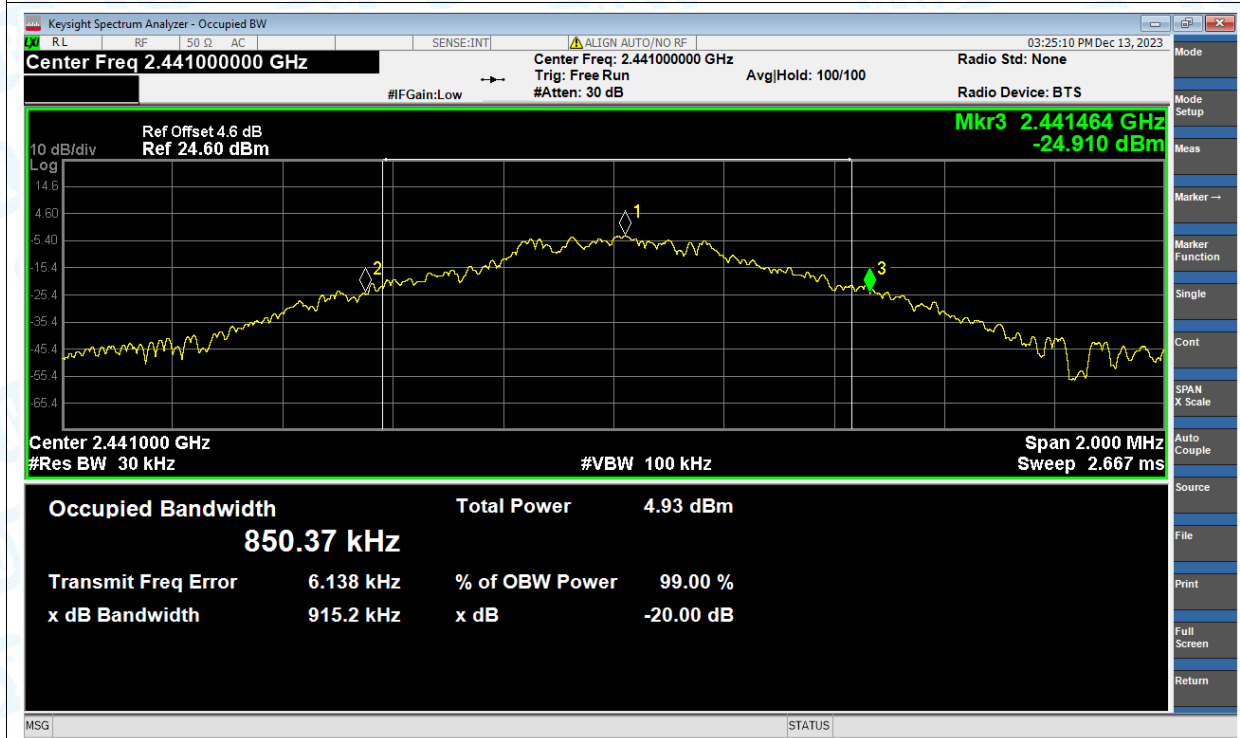
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.98	0	Pass
NVNT	1-DH1	2441	Ant1	0.92	0	Pass
NVNT	1-DH1	2480	Ant1	0.91	0	Pass
NVNT	2-DH1	2402	Ant1	1.27	0	Pass
NVNT	2-DH1	2441	Ant1	1.27	0	Pass
NVNT	2-DH1	2480	Ant1	1.21	0	Pass
NVNT	3-DH1	2402	Ant1	1.26	0	Pass
NVNT	3-DH1	2441	Ant1	1.26	0	Pass
NVNT	3-DH1	2480	Ant1	1.3	0	Pass

Test Graphs

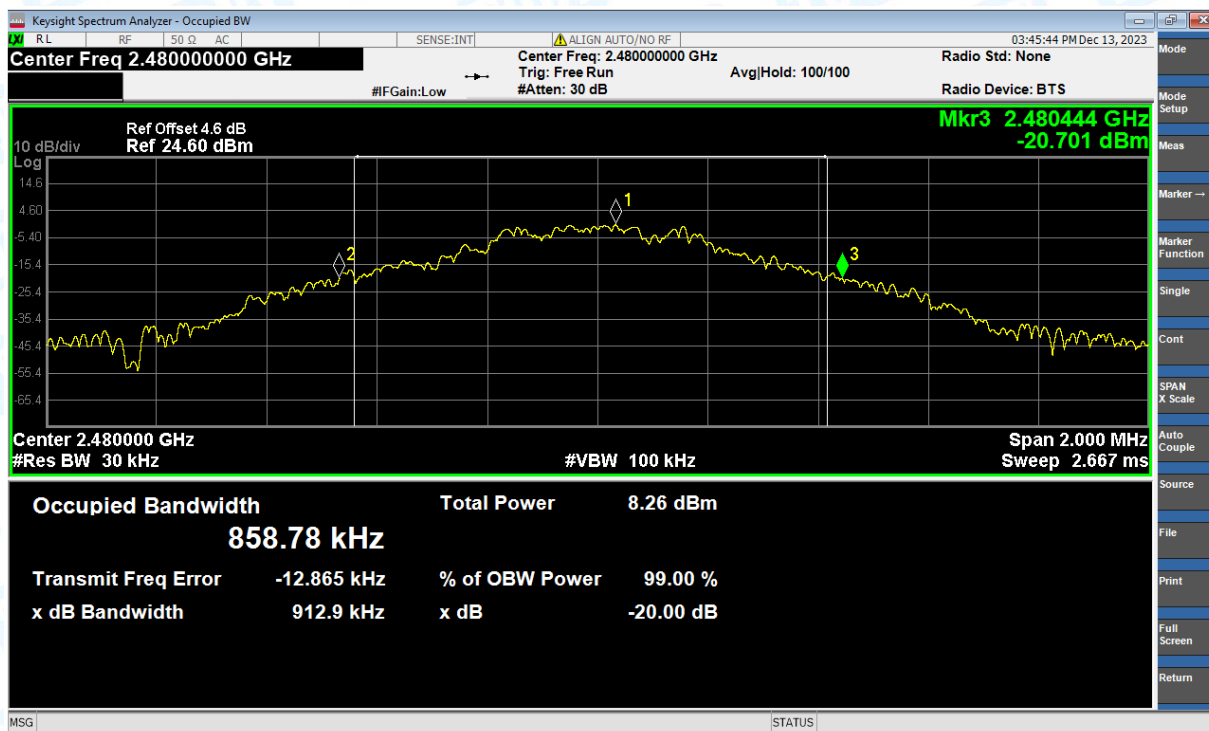
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



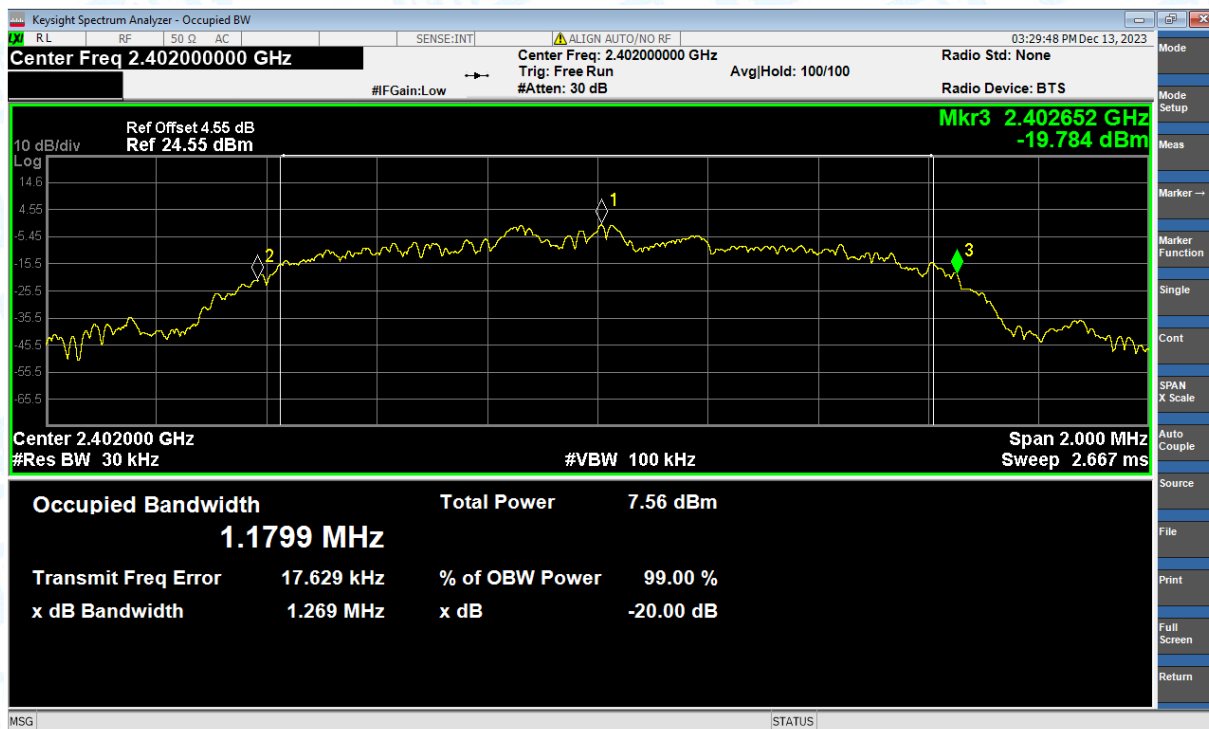
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



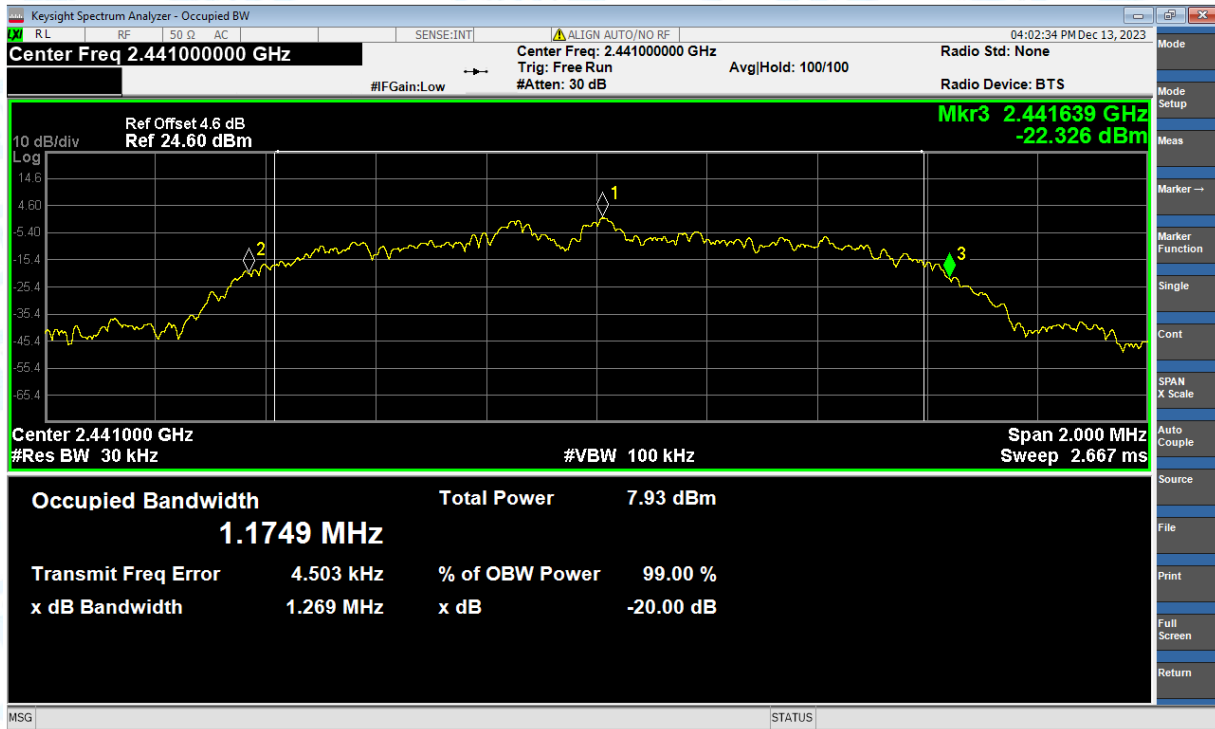
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



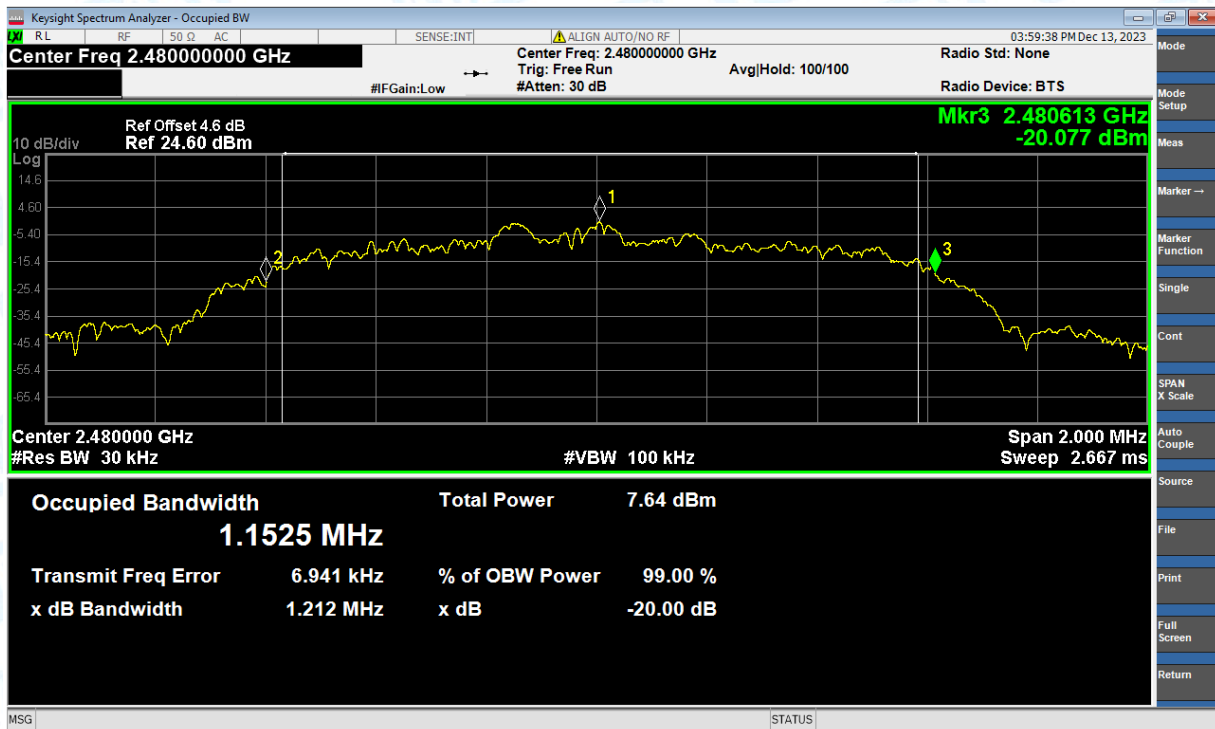
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



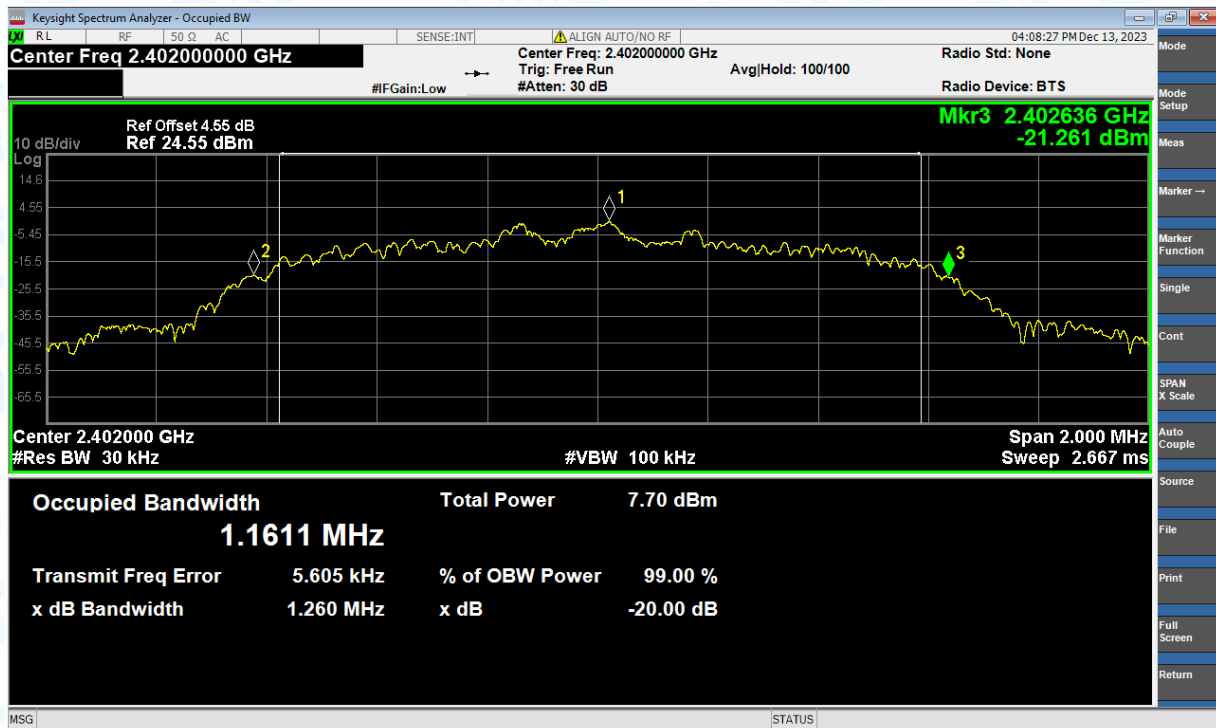
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



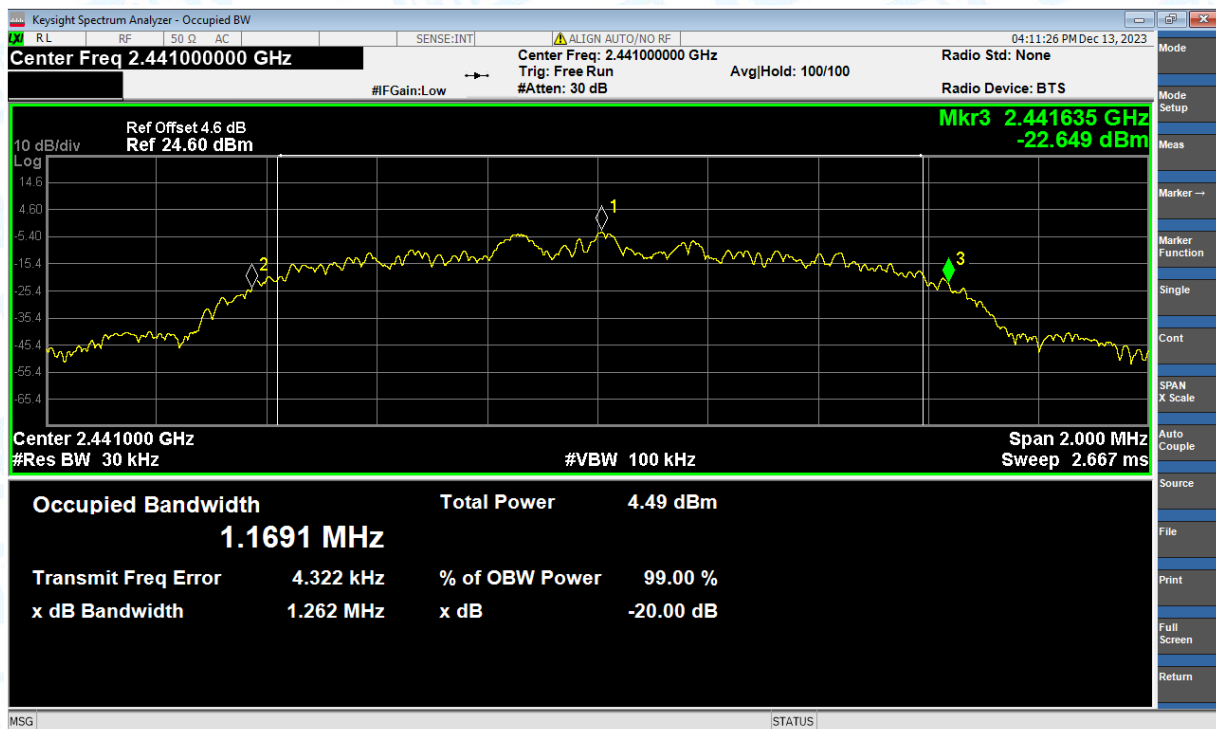
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

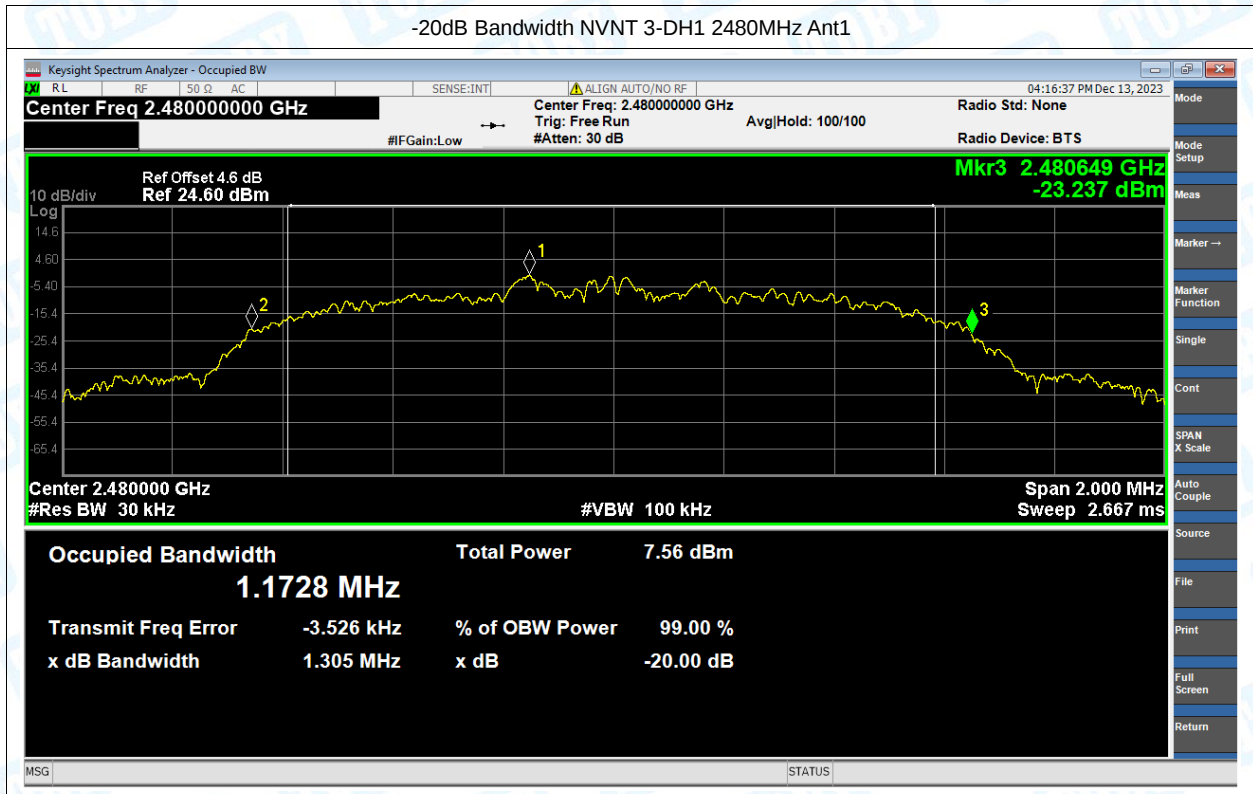


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



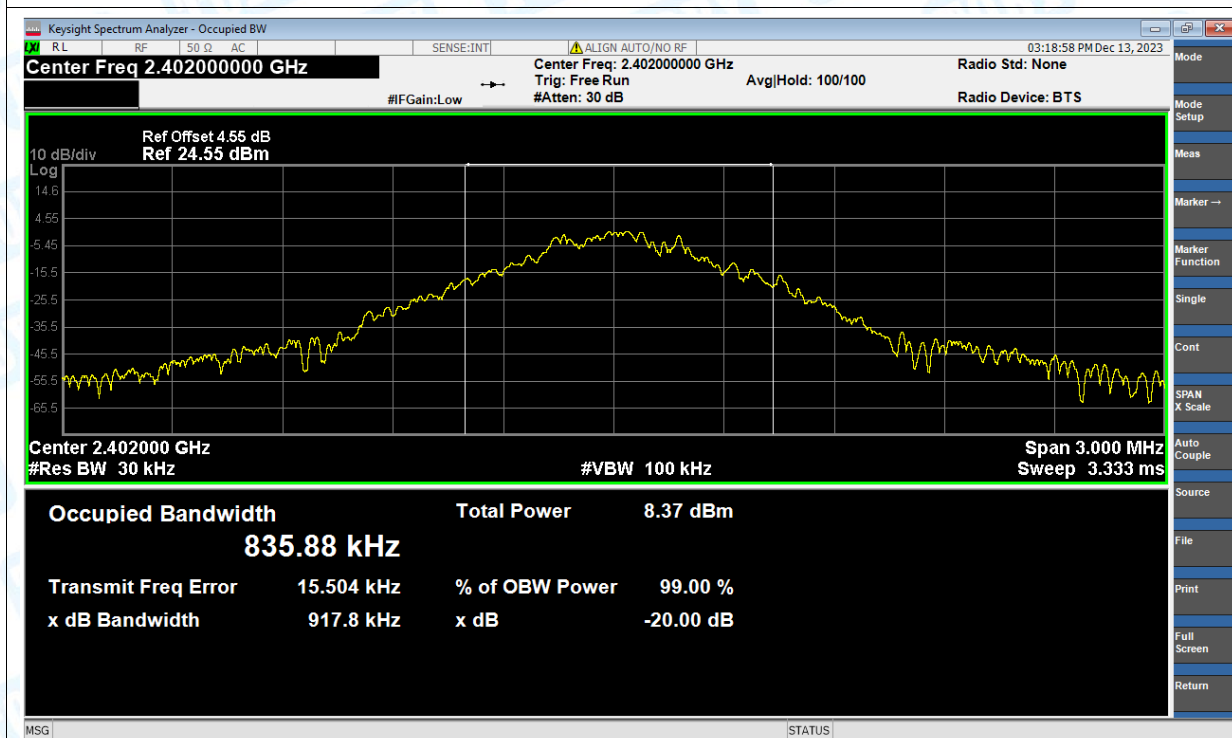


4. Occupied Channel Bandwidth

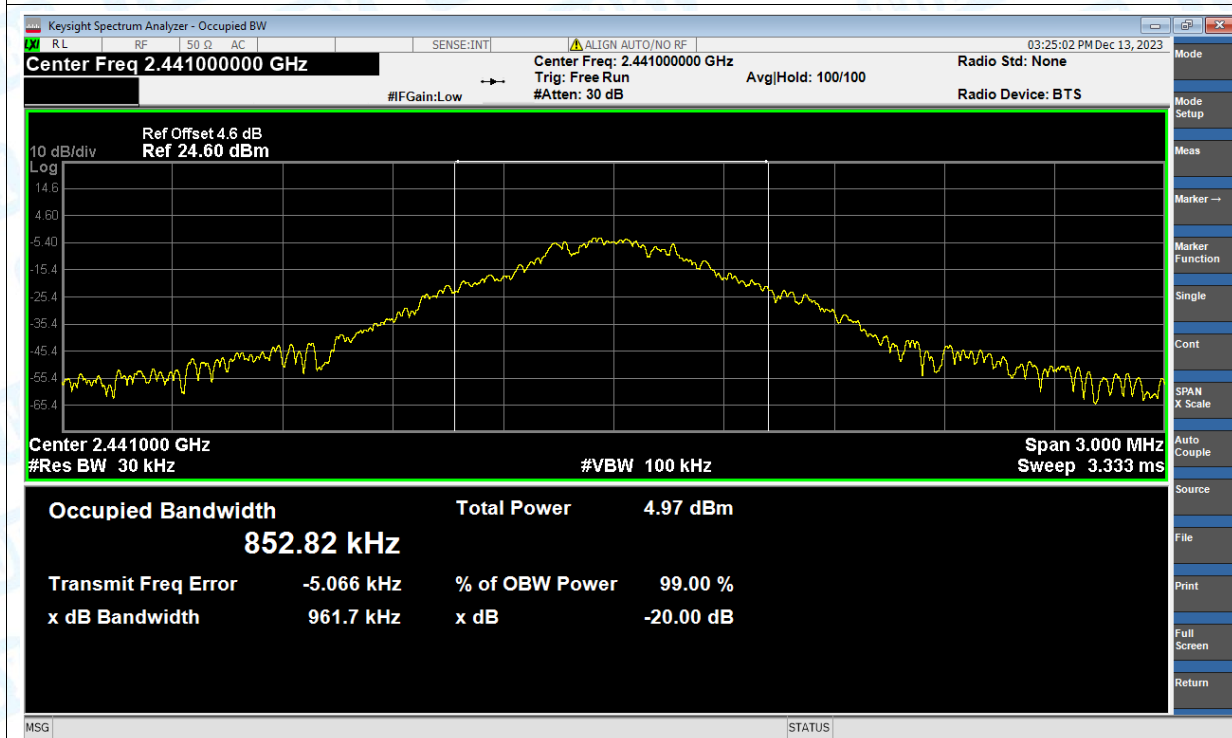
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.836
NVNT	1-DH1	2441	Ant1	0.853
NVNT	1-DH1	2480	Ant1	0.885
NVNT	2-DH1	2402	Ant1	1.169
NVNT	2-DH1	2441	Ant1	1.17
NVNT	2-DH1	2480	Ant1	1.194
NVNT	3-DH1	2402	Ant1	1.171
NVNT	3-DH1	2441	Ant1	1.188
NVNT	3-DH1	2480	Ant1	1.16

Test Graphs

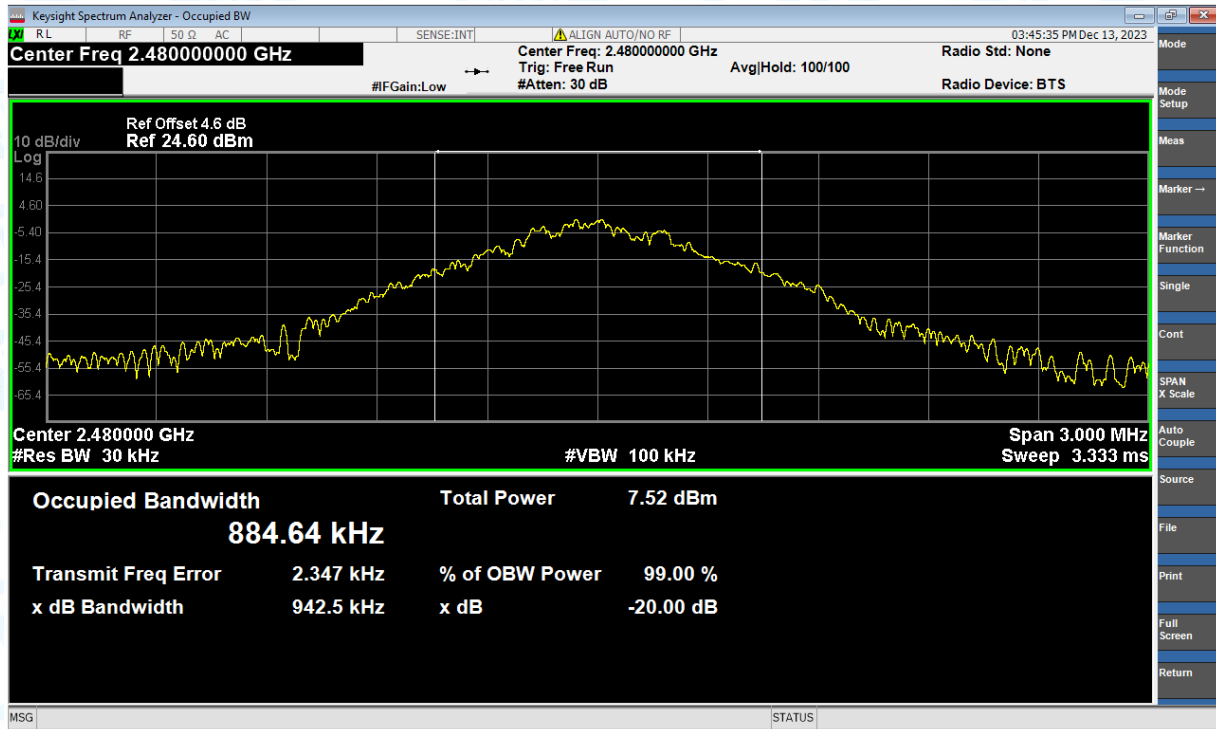
OBW NVNT 1-DH1 2402MHz Ant1



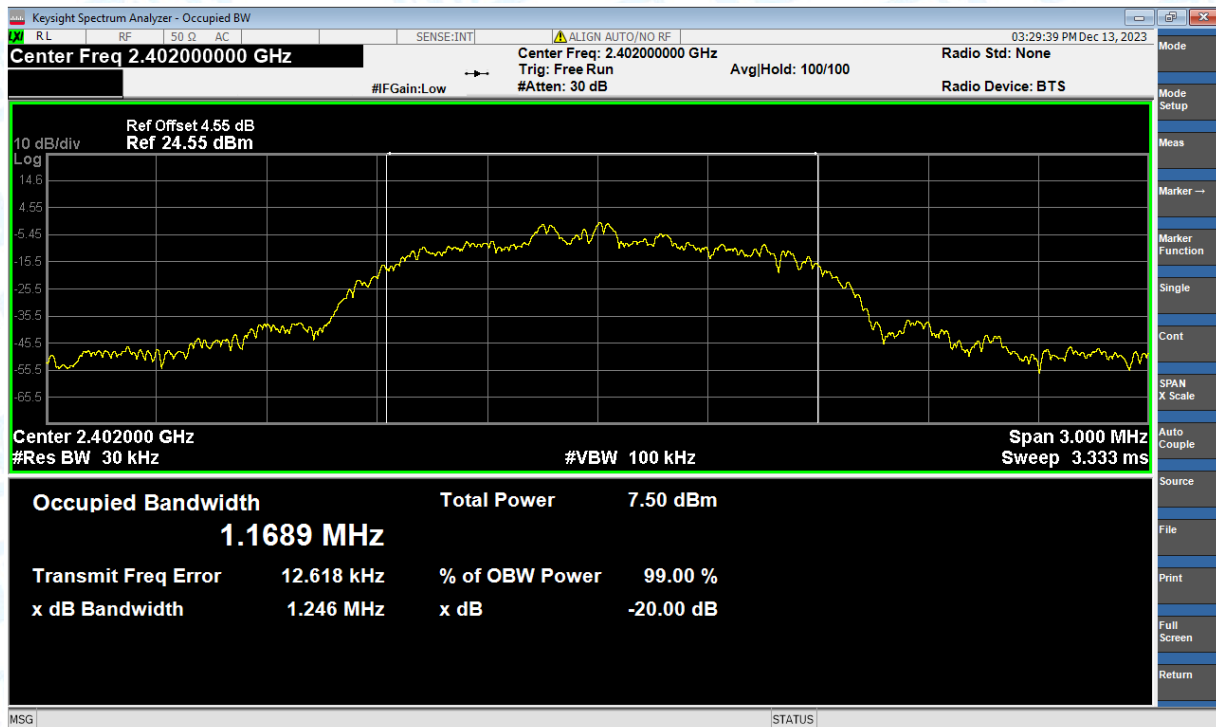
OBW NVNT 1-DH1 2441MHz Ant1



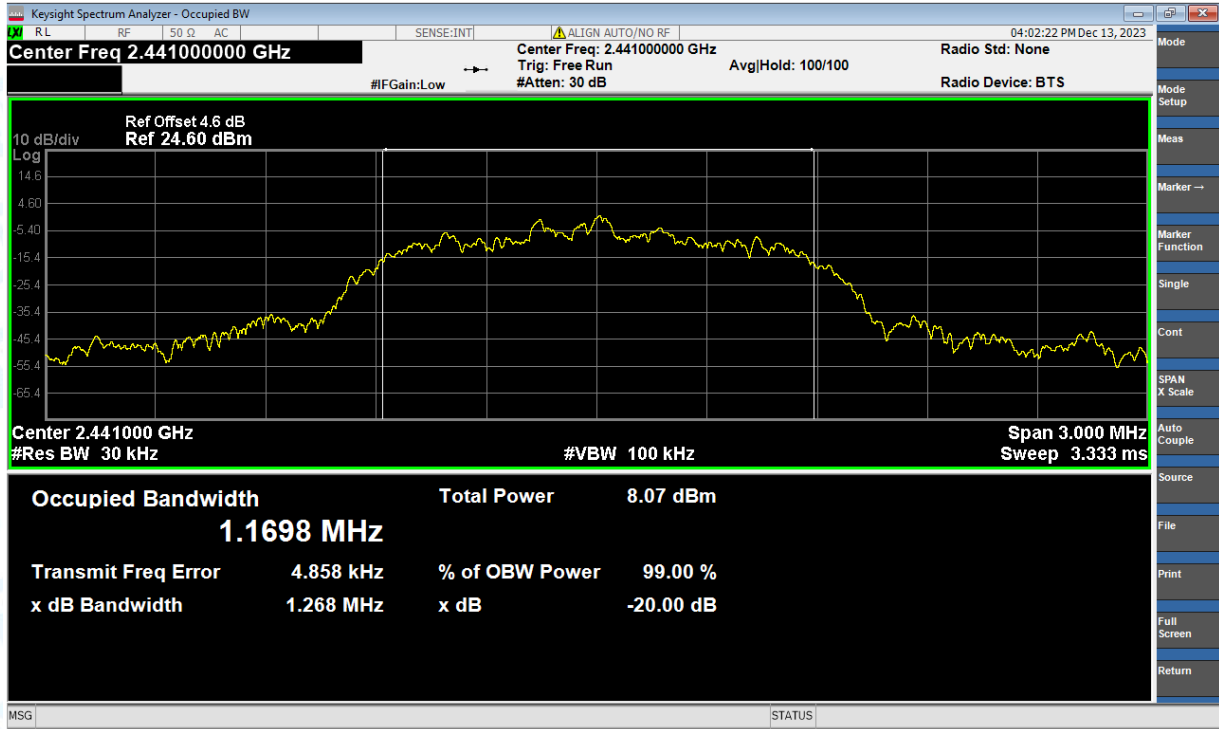
OBW NVNT 1-DH1 2480MHz Ant1



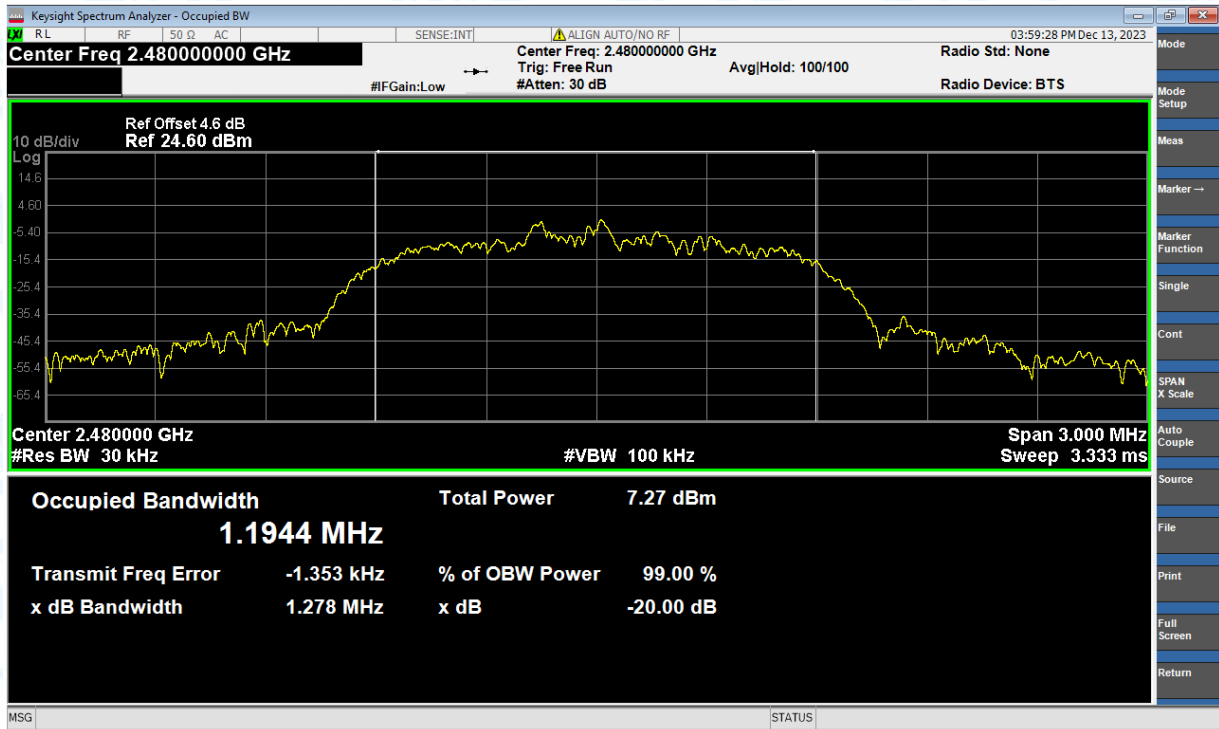
OBW NVNT 2-DH1 2402MHz Ant1



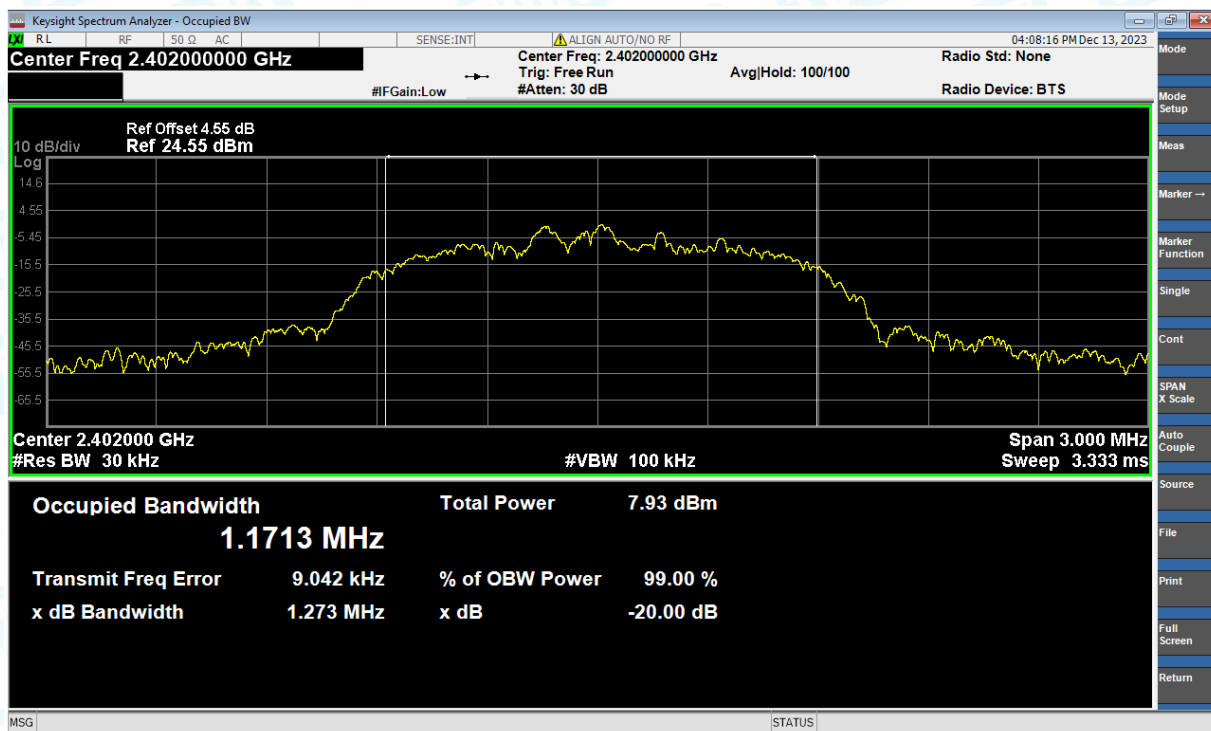
OBW NVNT 2-DH1 2441MHz Ant1



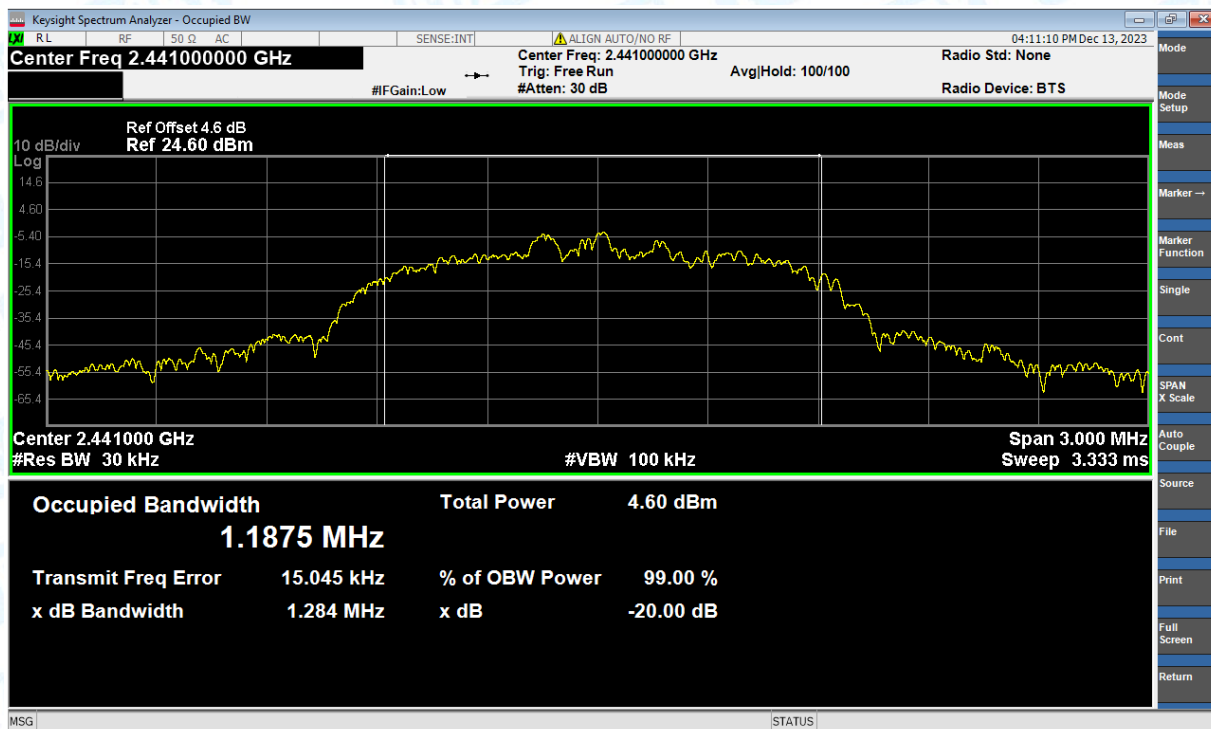
OBW NVNT 2-DH1 2480MHz Ant1

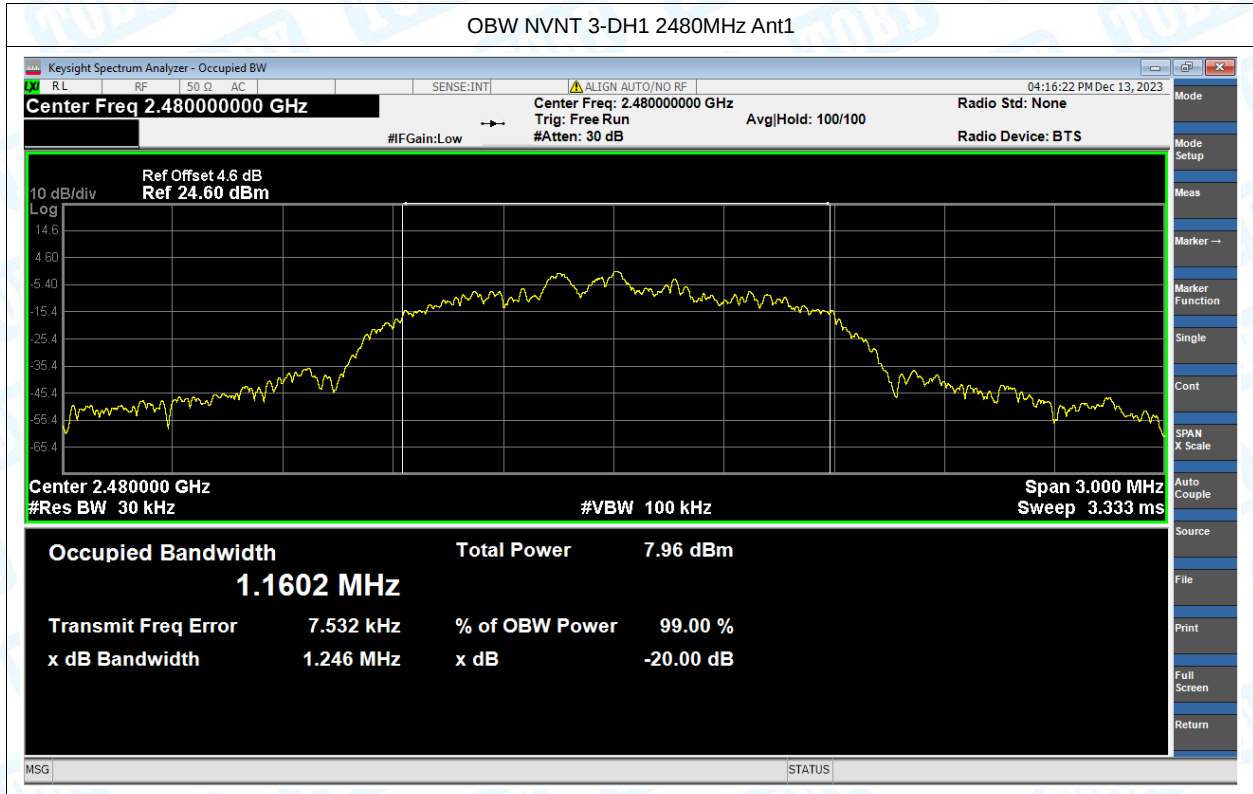


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



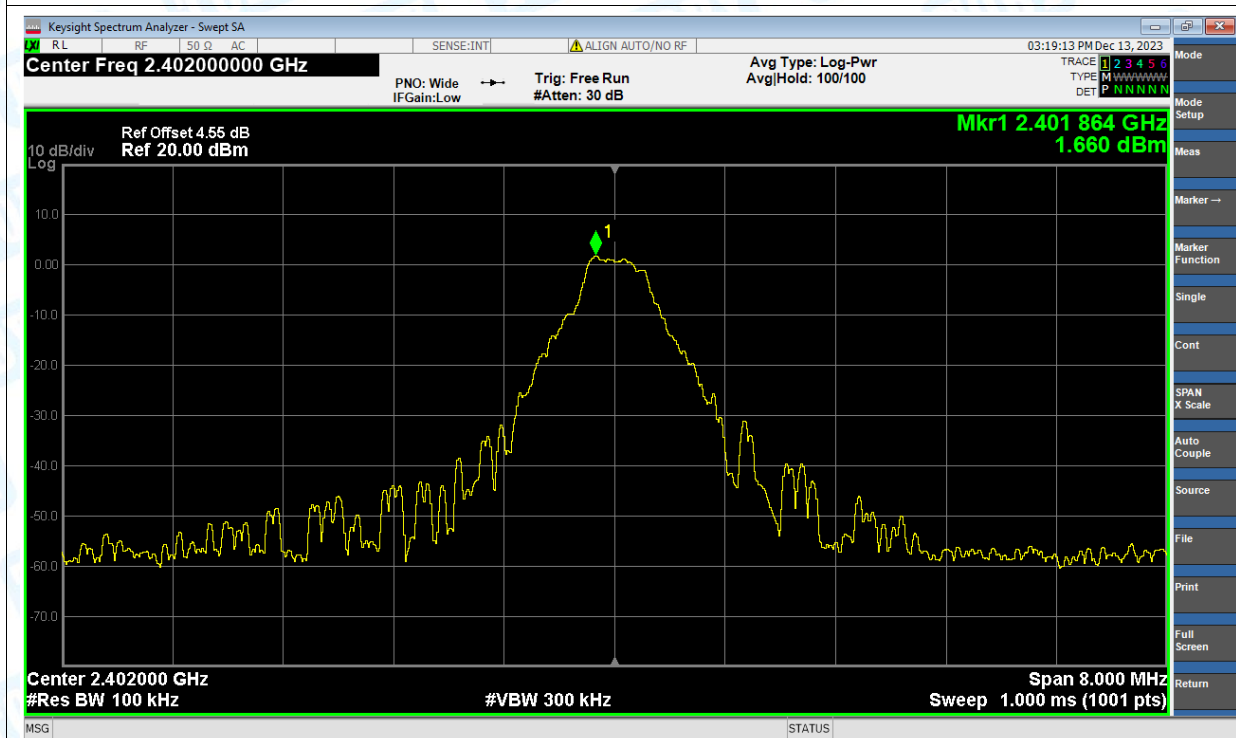


5. Band Edge

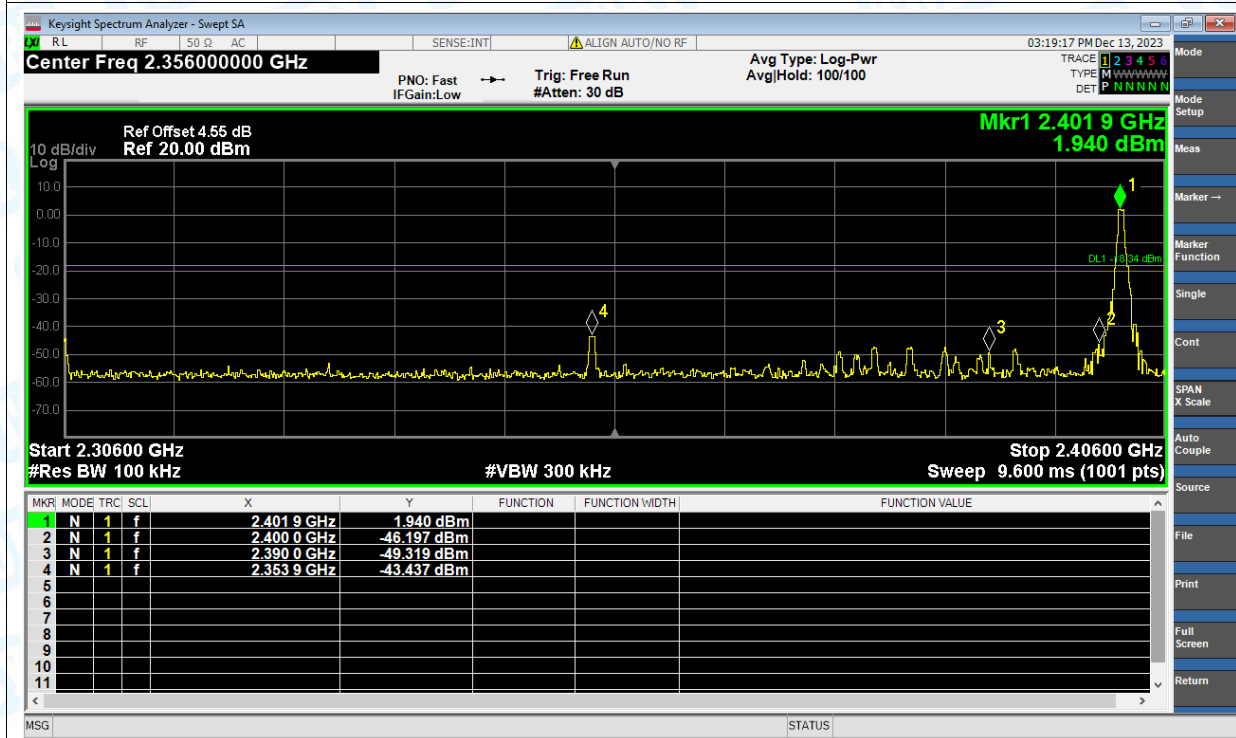
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-45.1	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-48.97	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-46.03	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-54.09	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-45.3	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-54.01	-20	Pass

Test Graphs

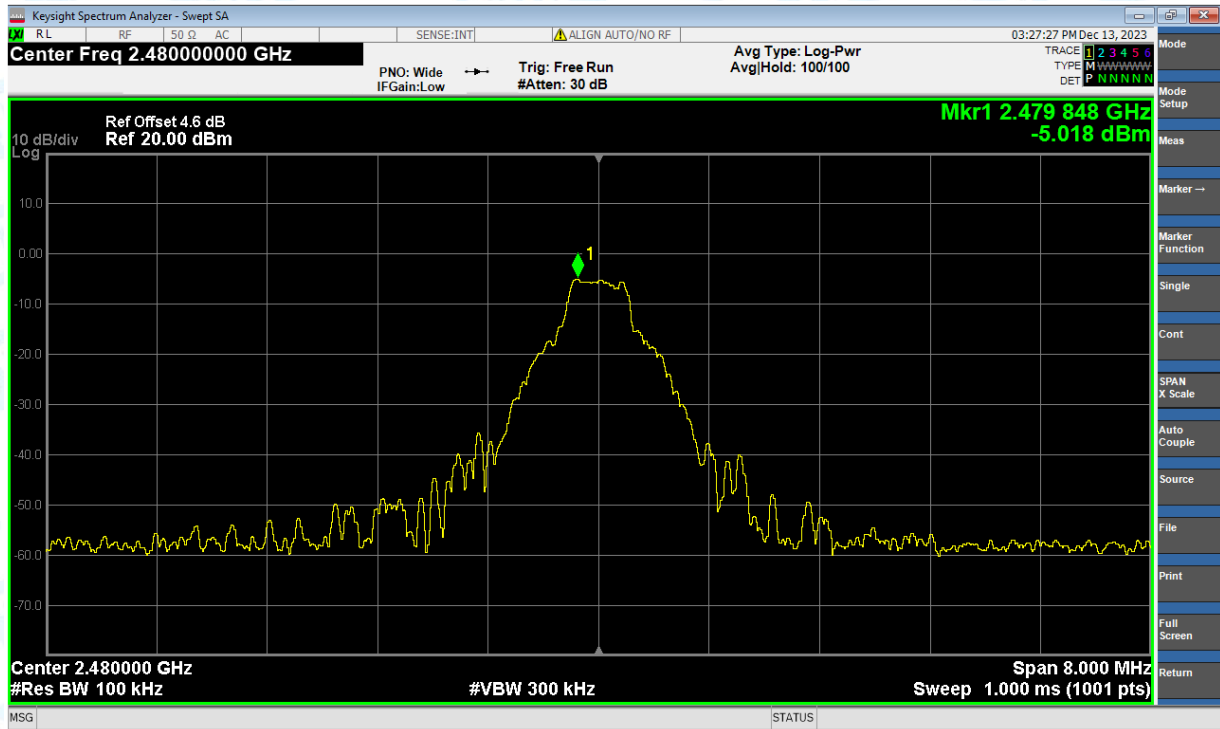
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



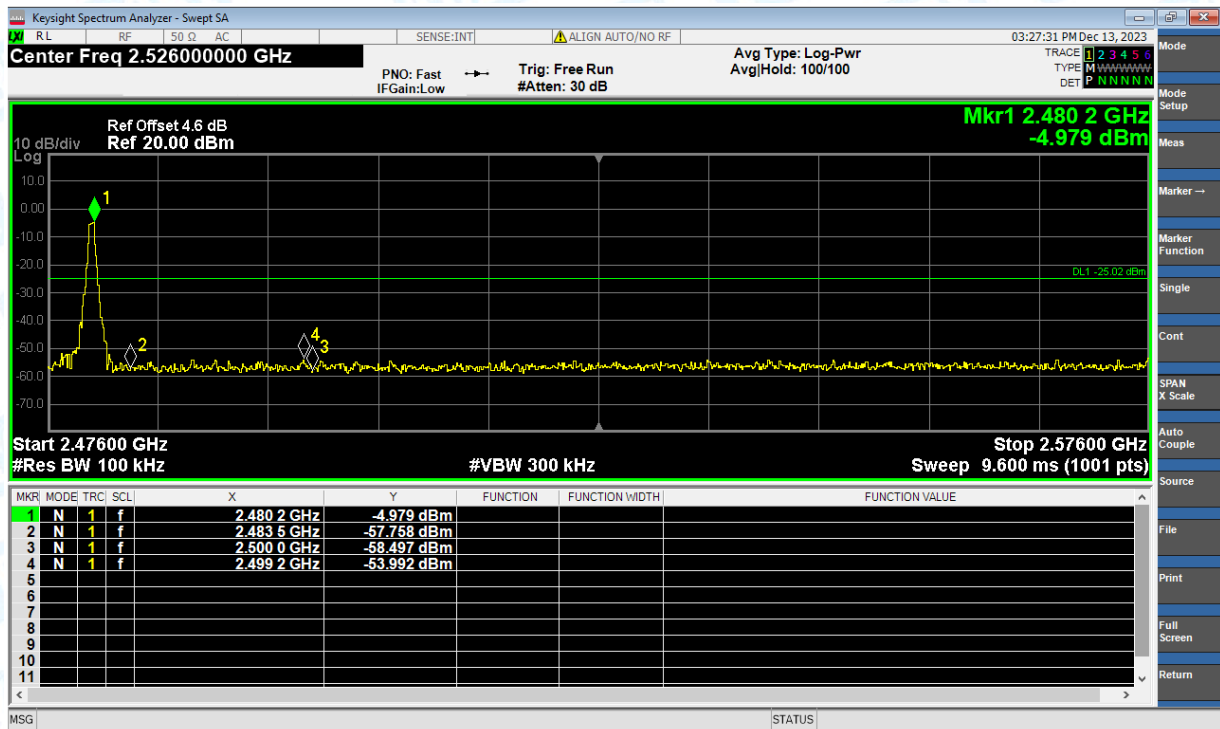
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



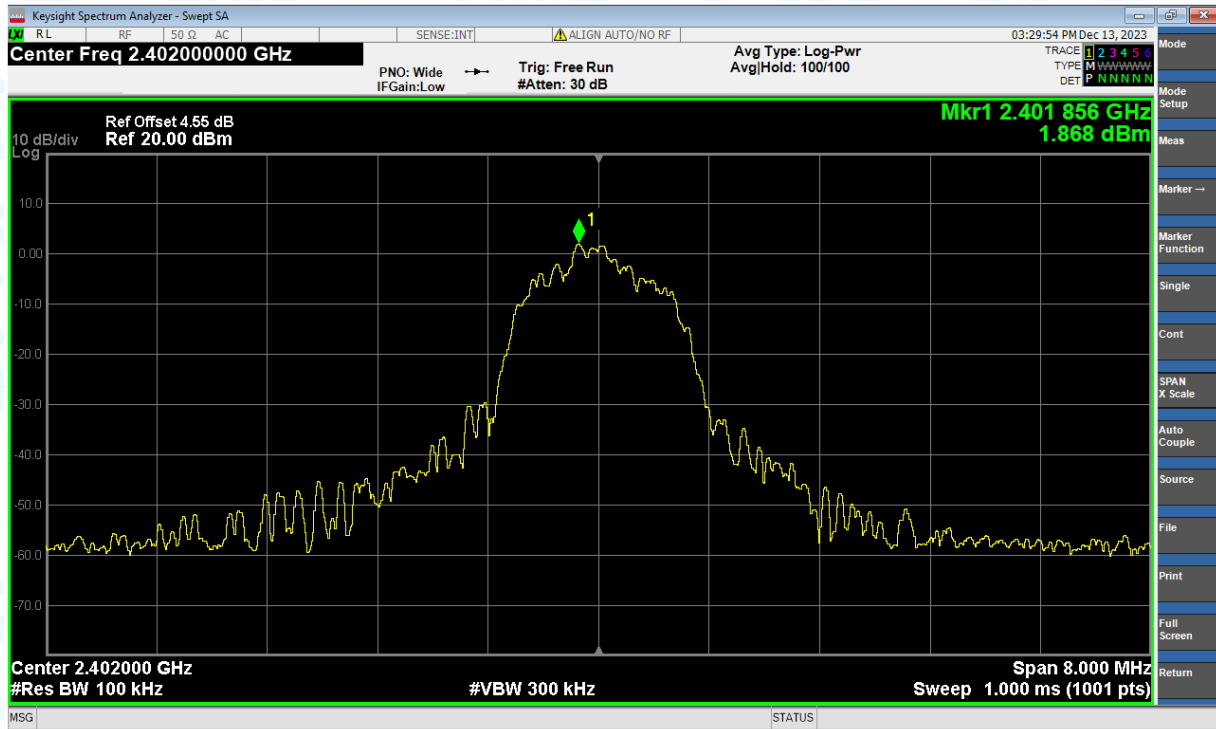
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



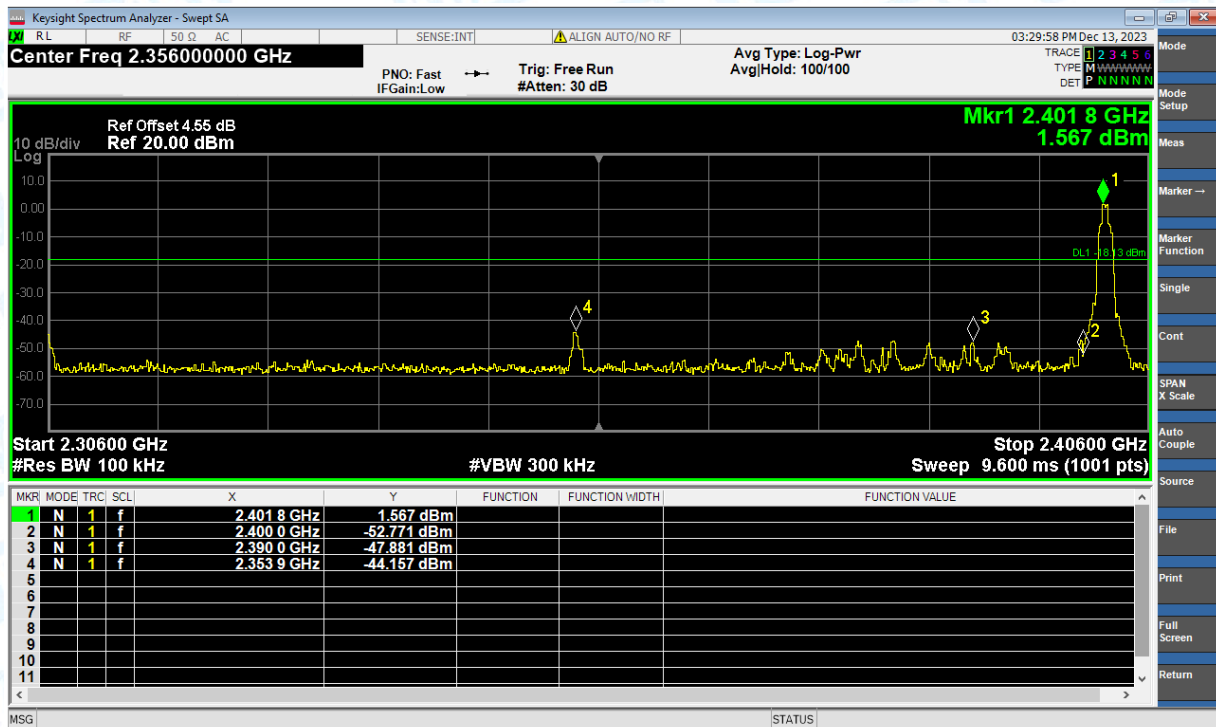
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



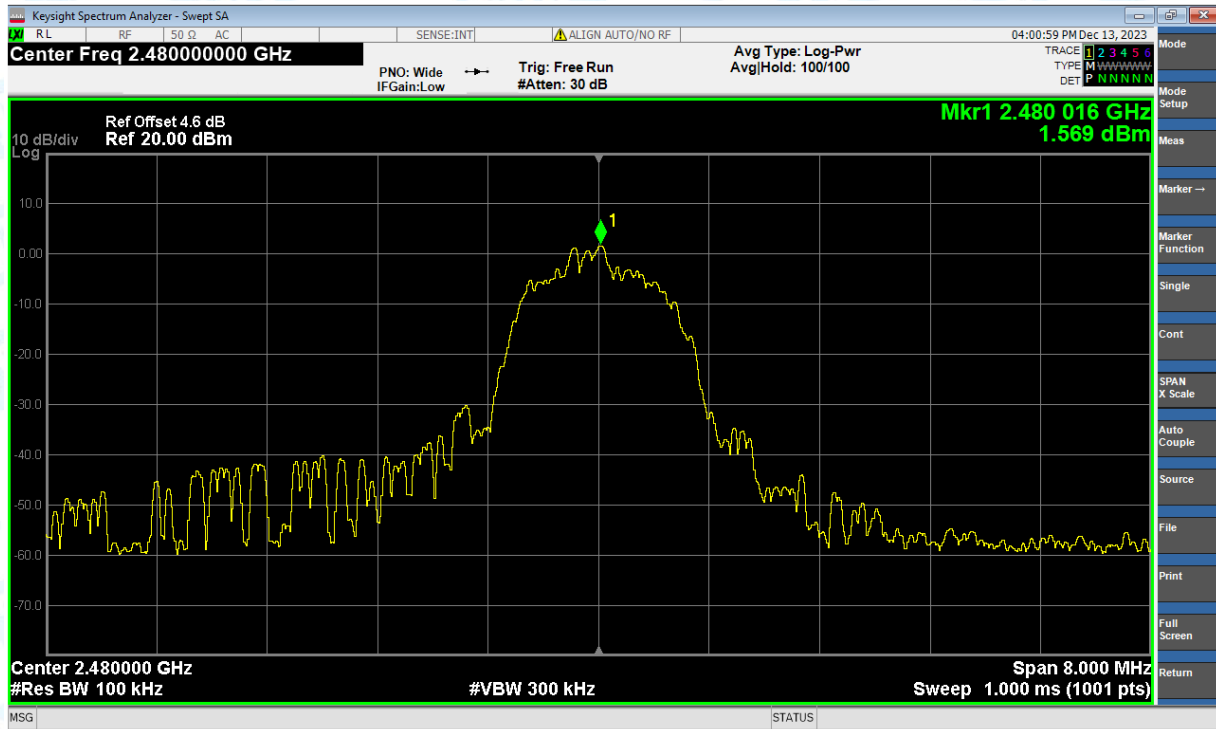
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



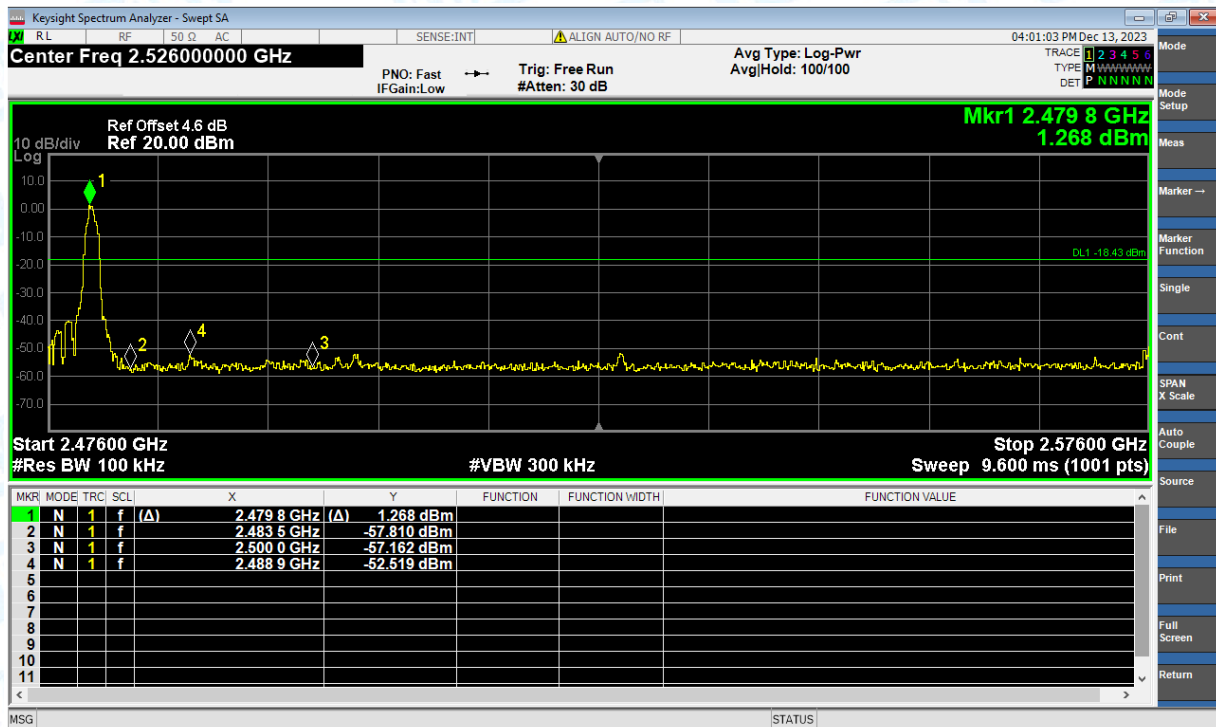
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



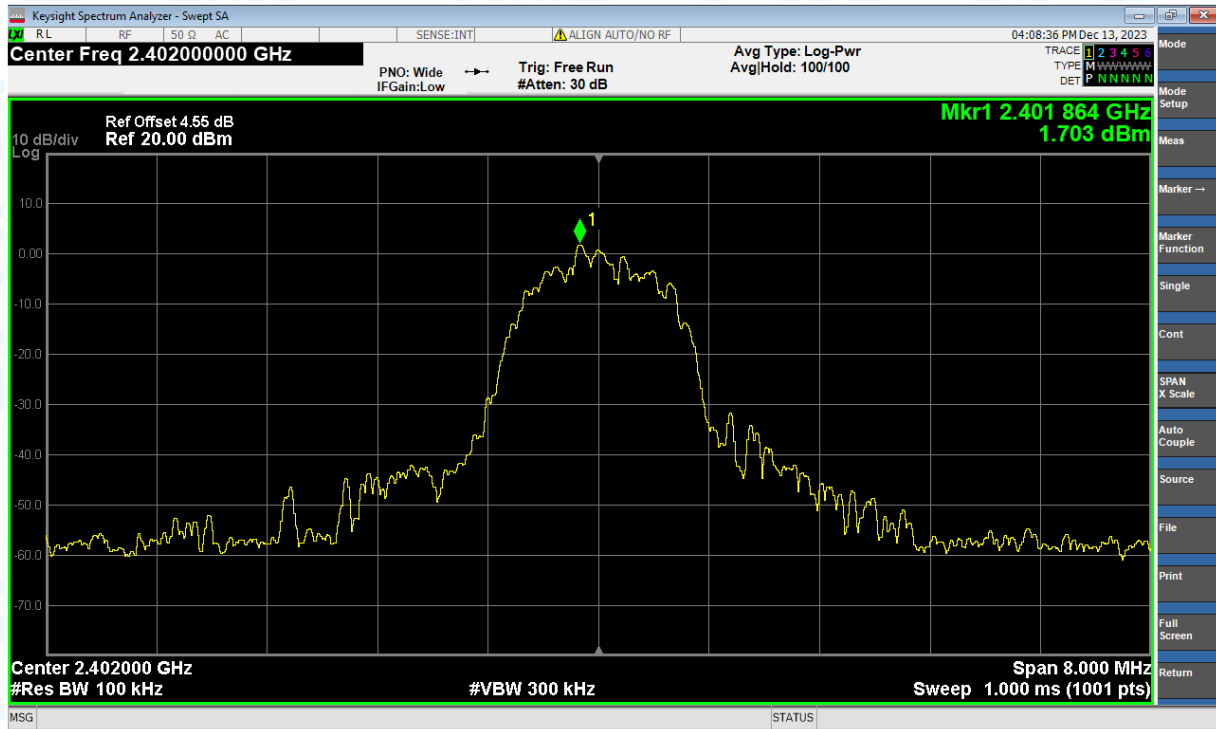
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



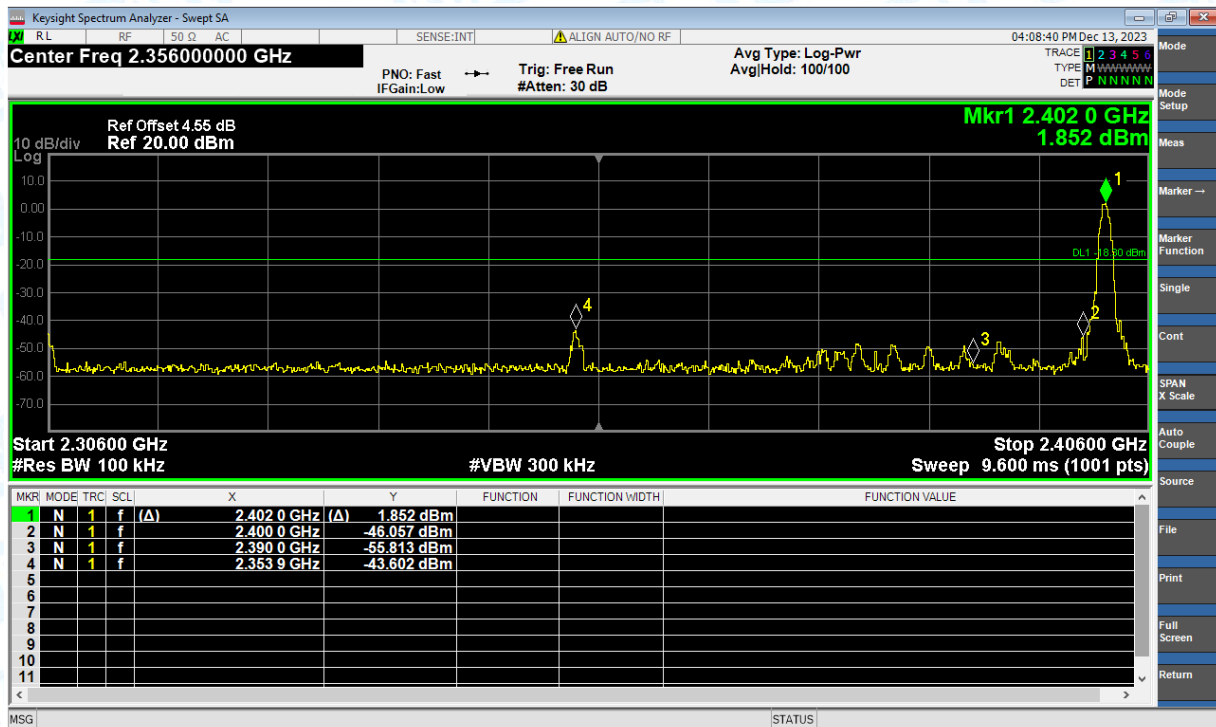
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



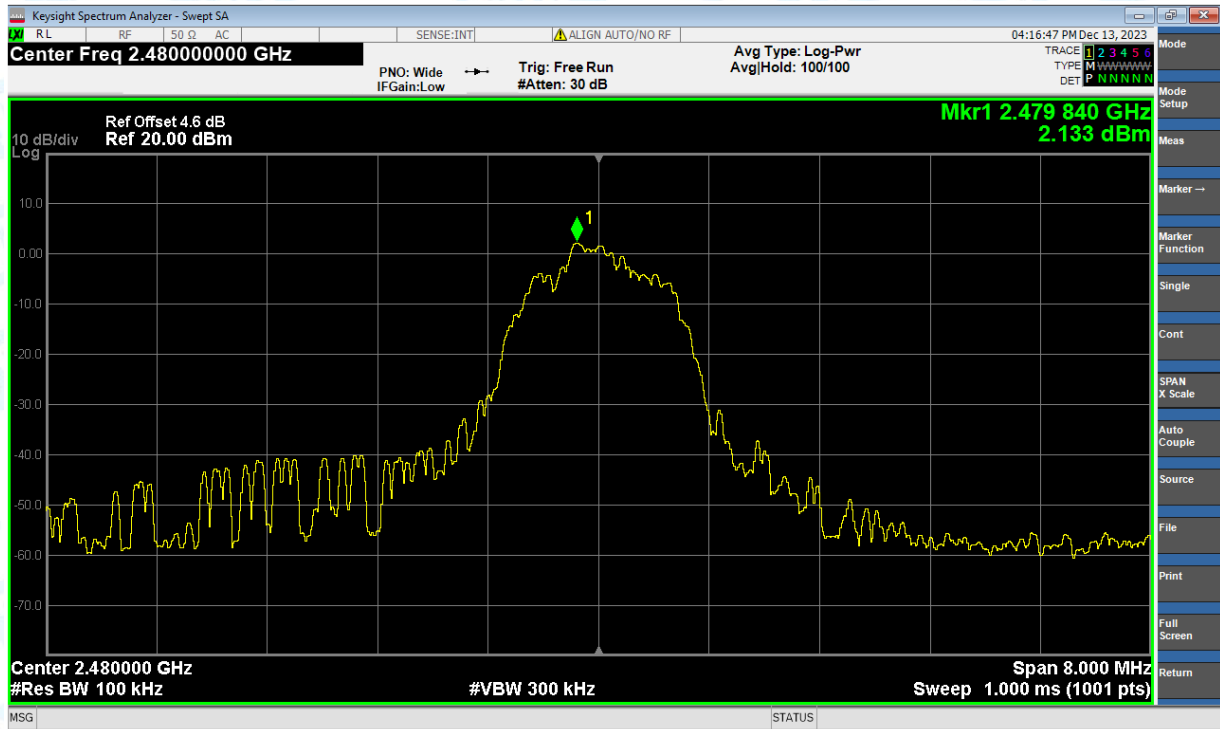
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



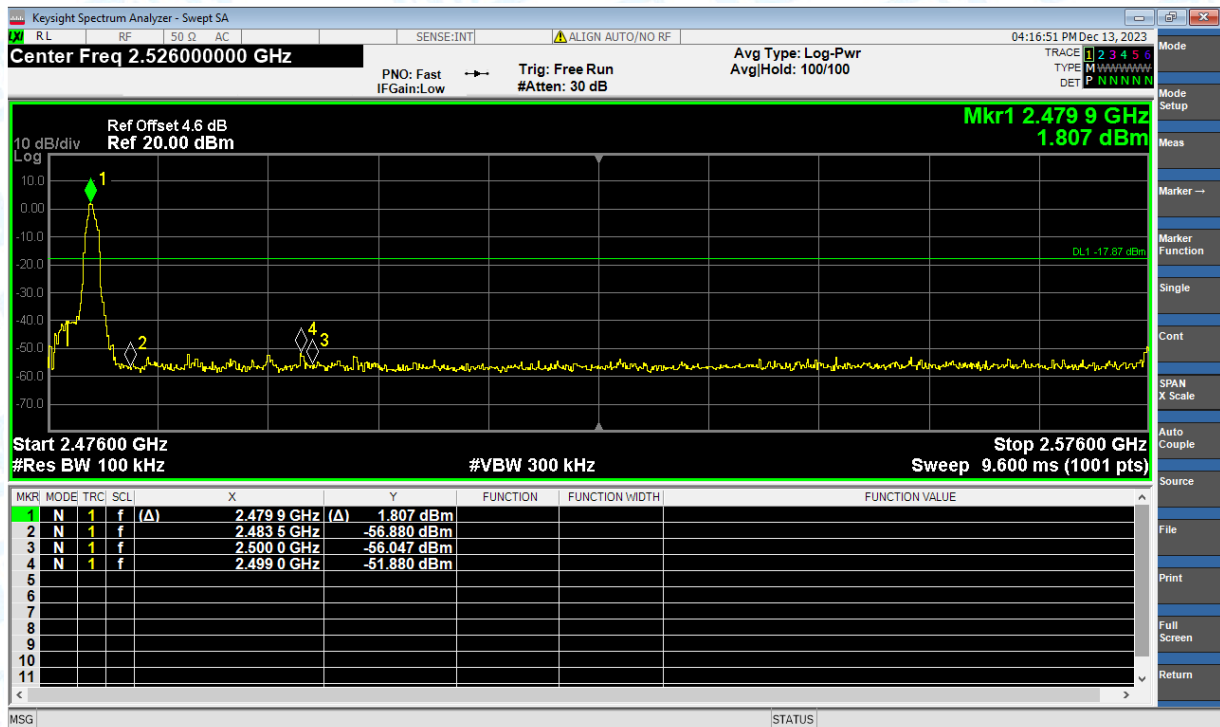
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6. Band Edge(Hopping)

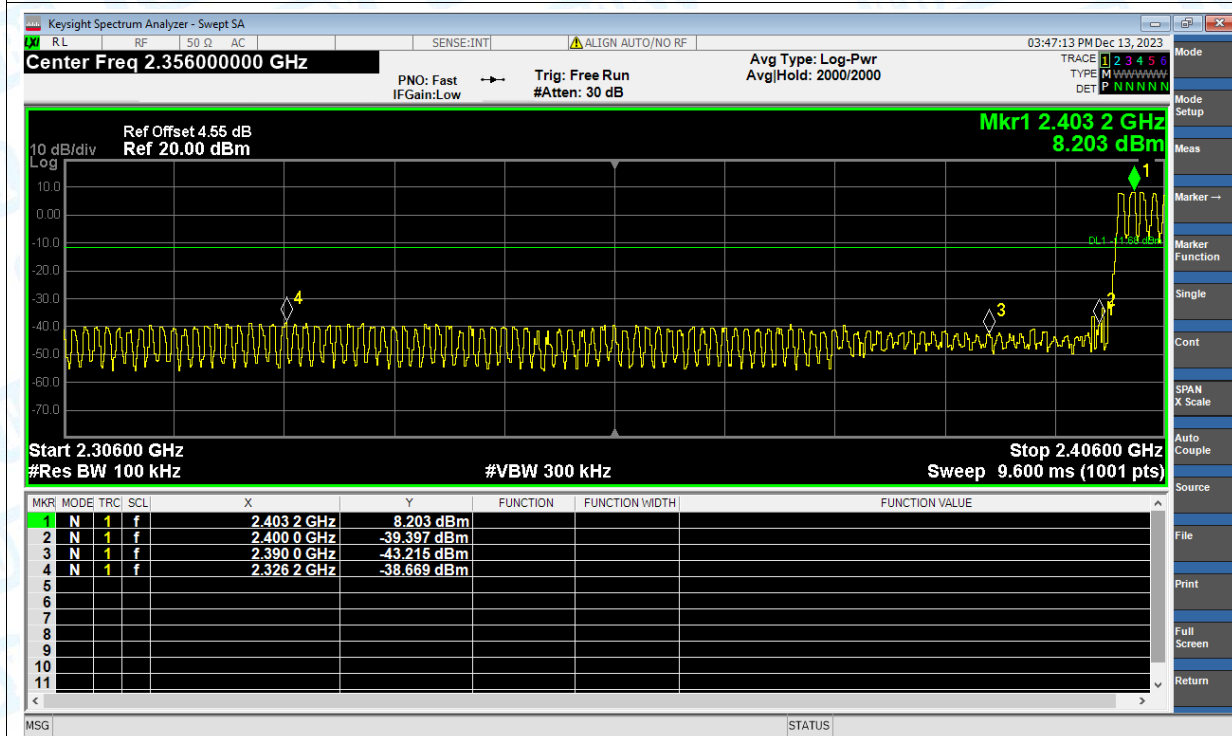
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-46.99	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-48.02	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-46.99	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-48.62	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-47.06	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-48.78	-20	Pass

Test Graphs

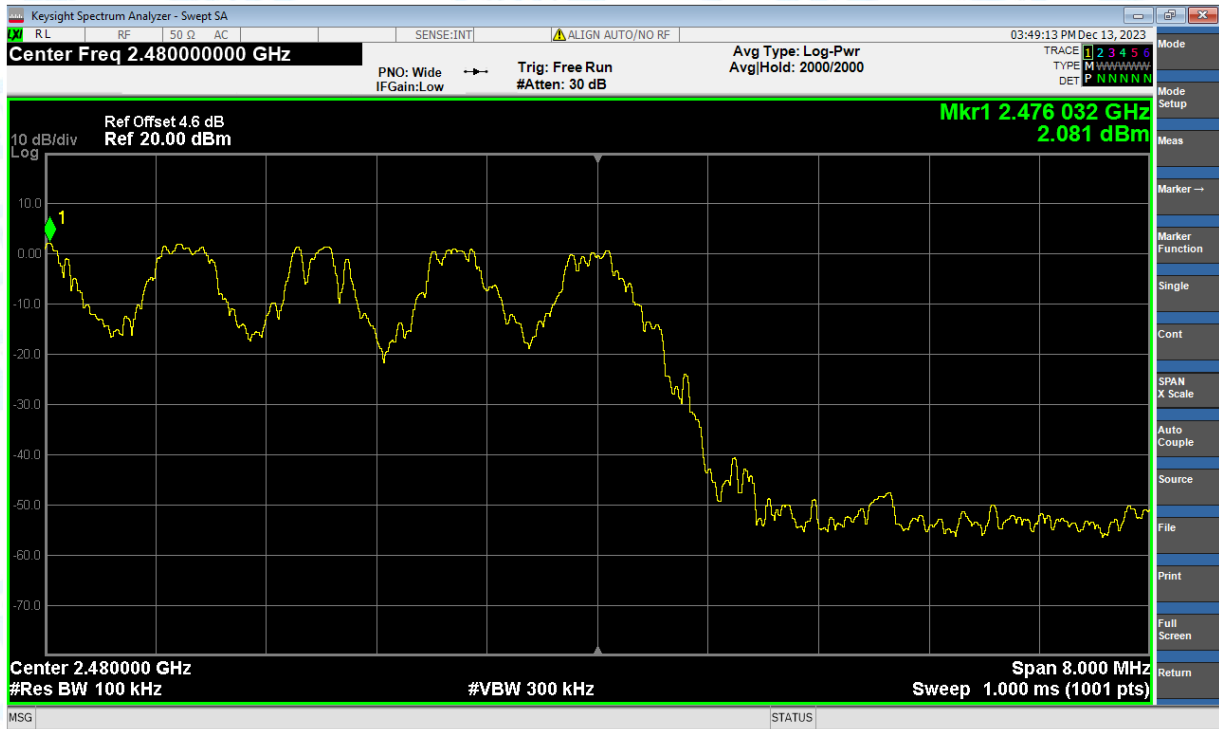
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



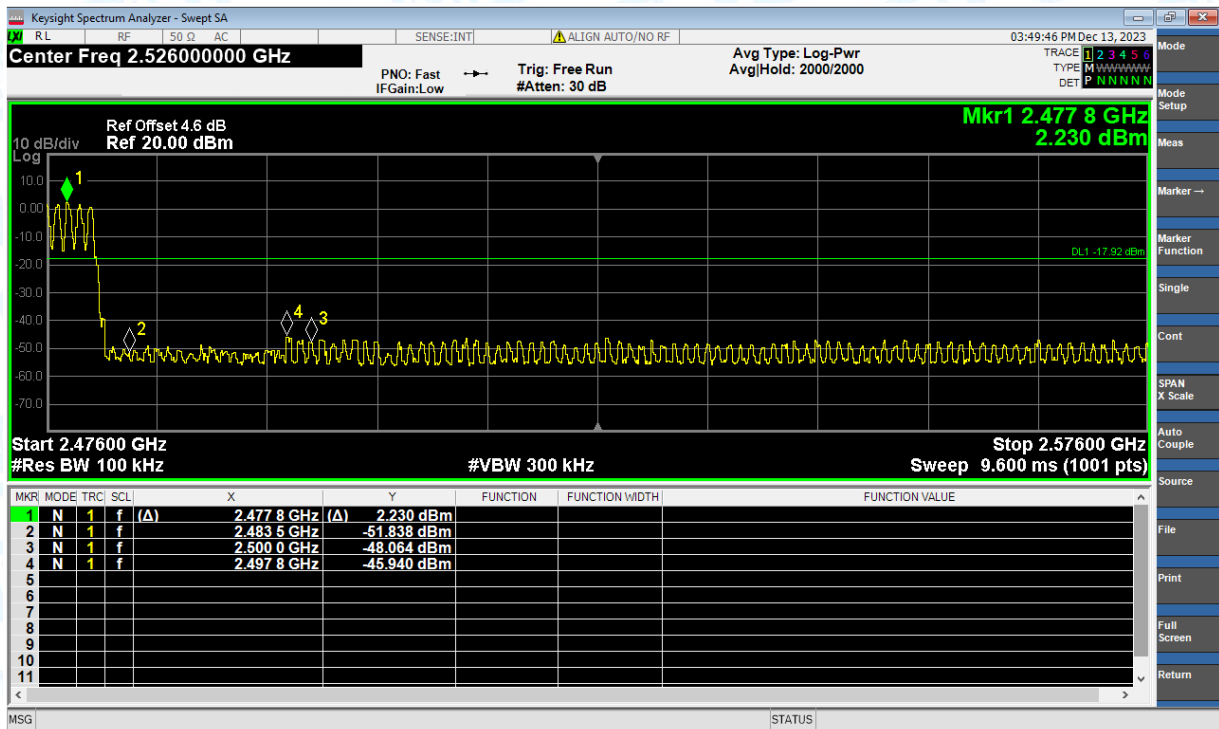
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



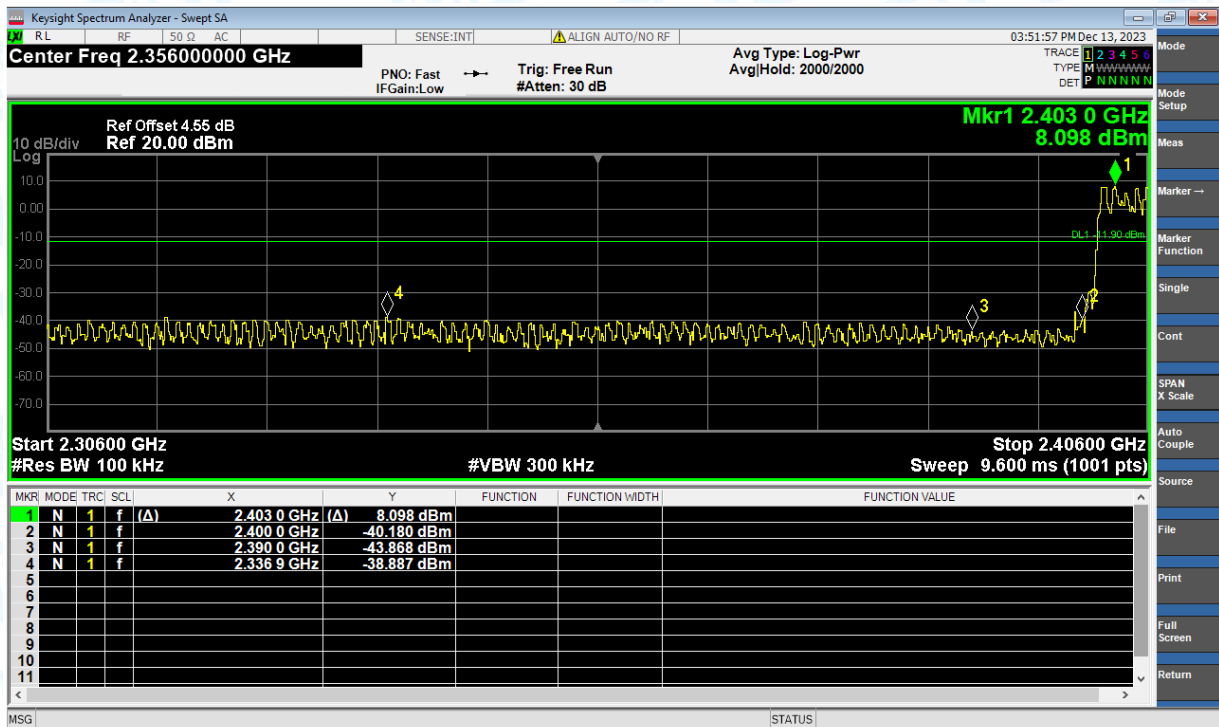
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



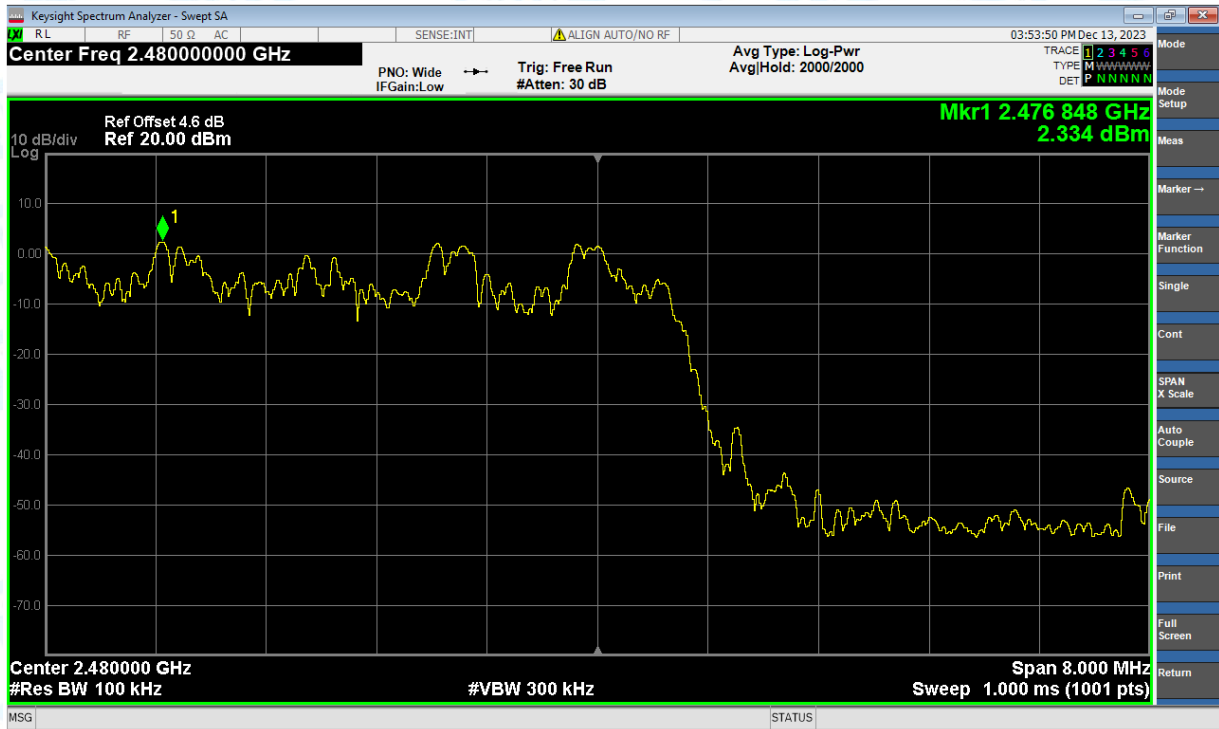
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



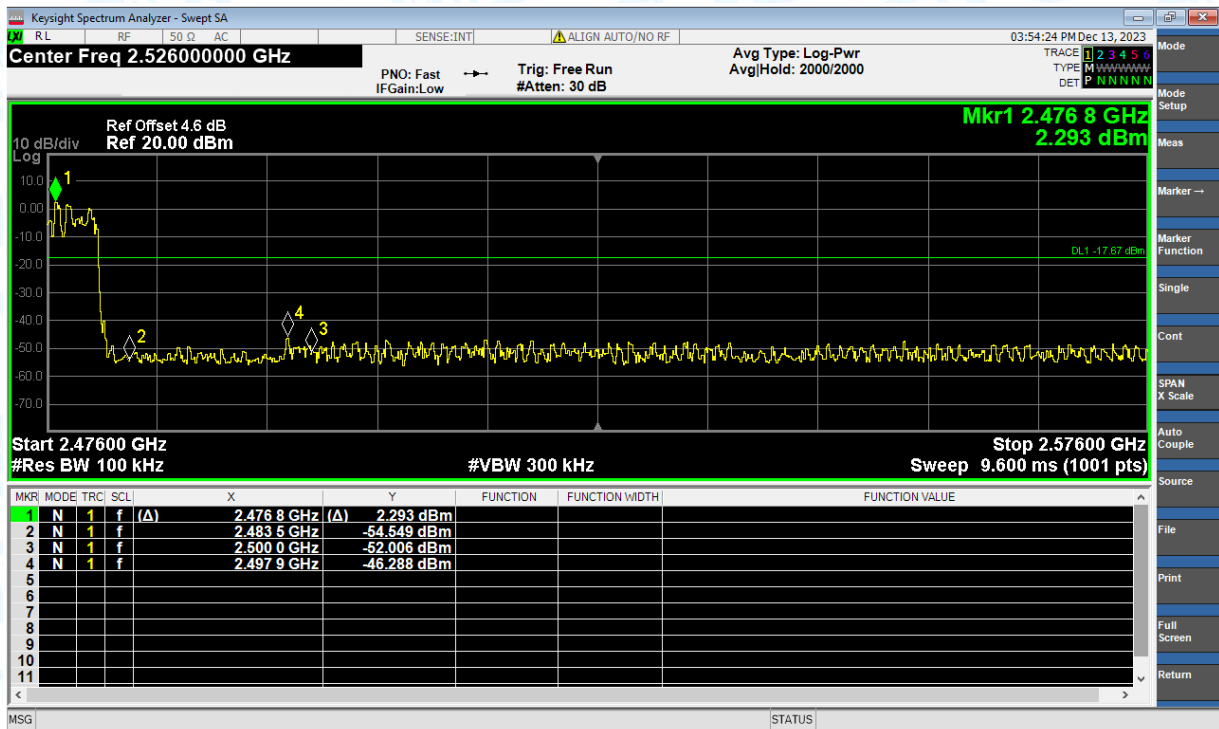
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



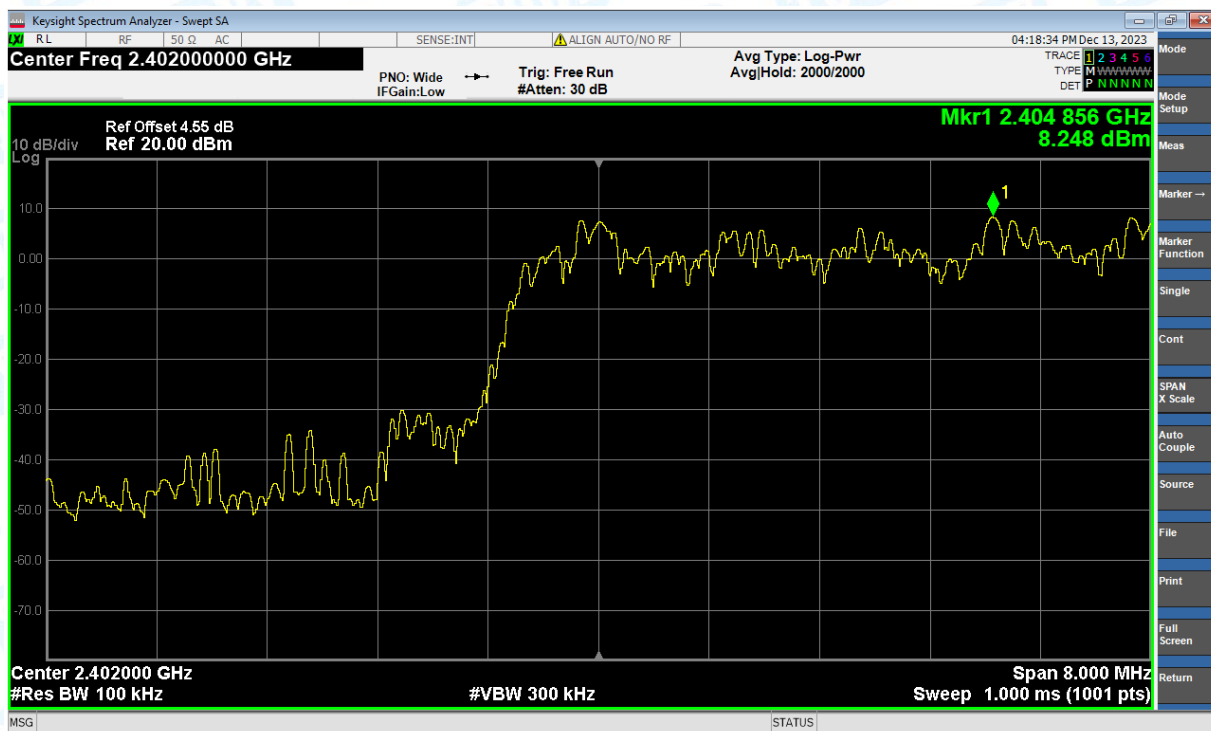
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



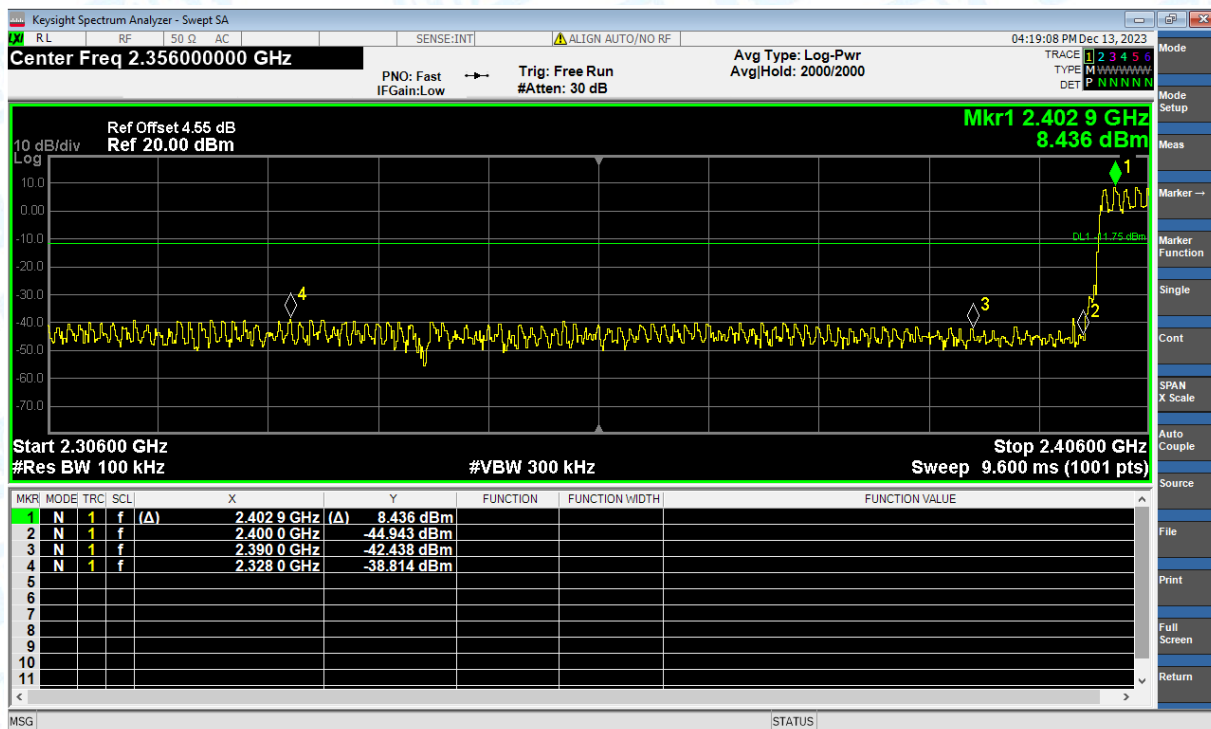
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



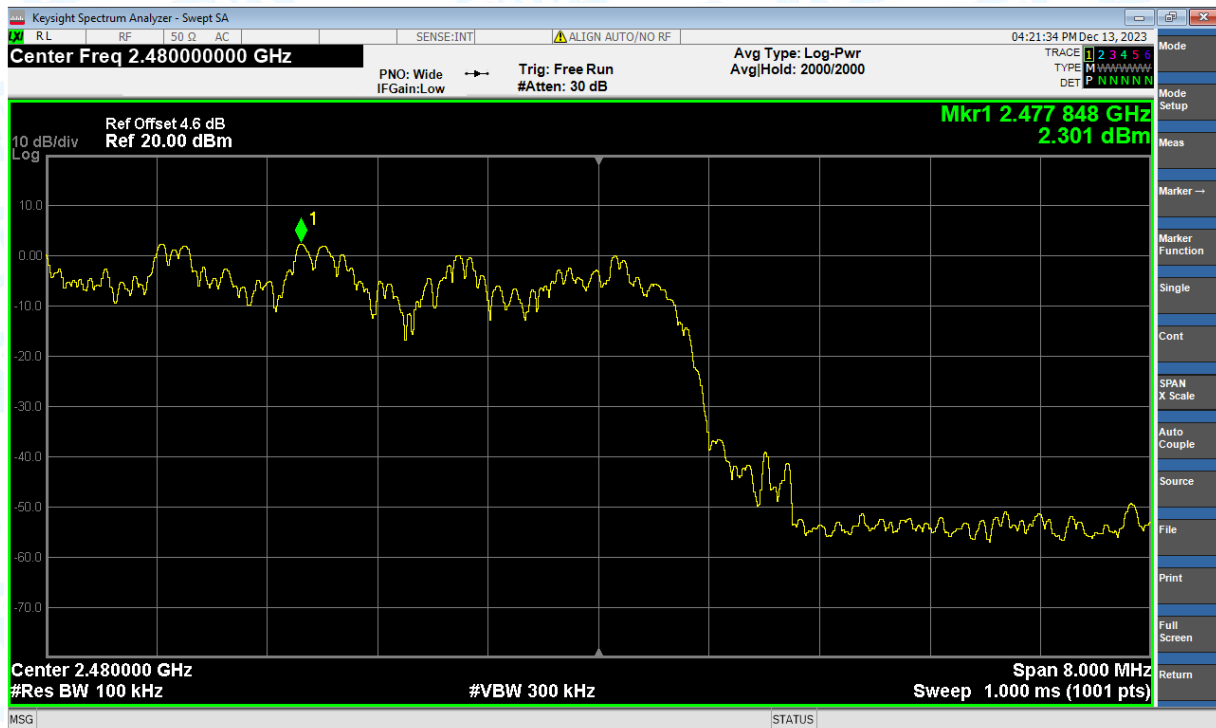
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



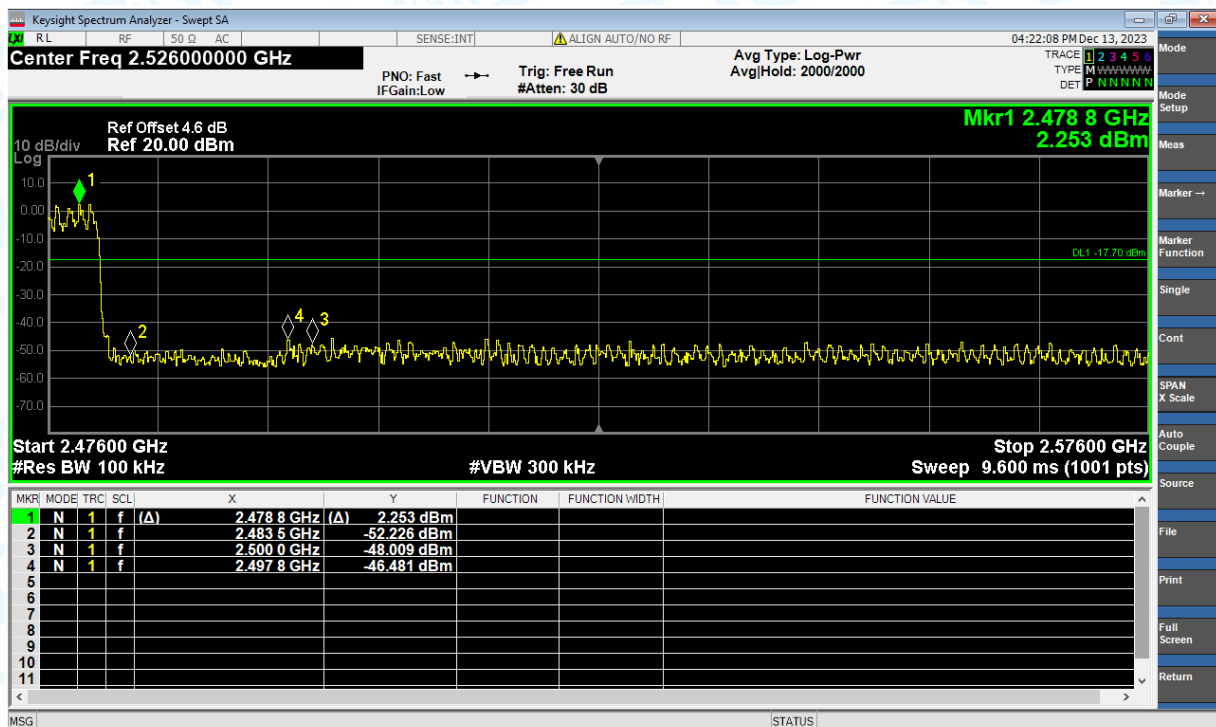
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

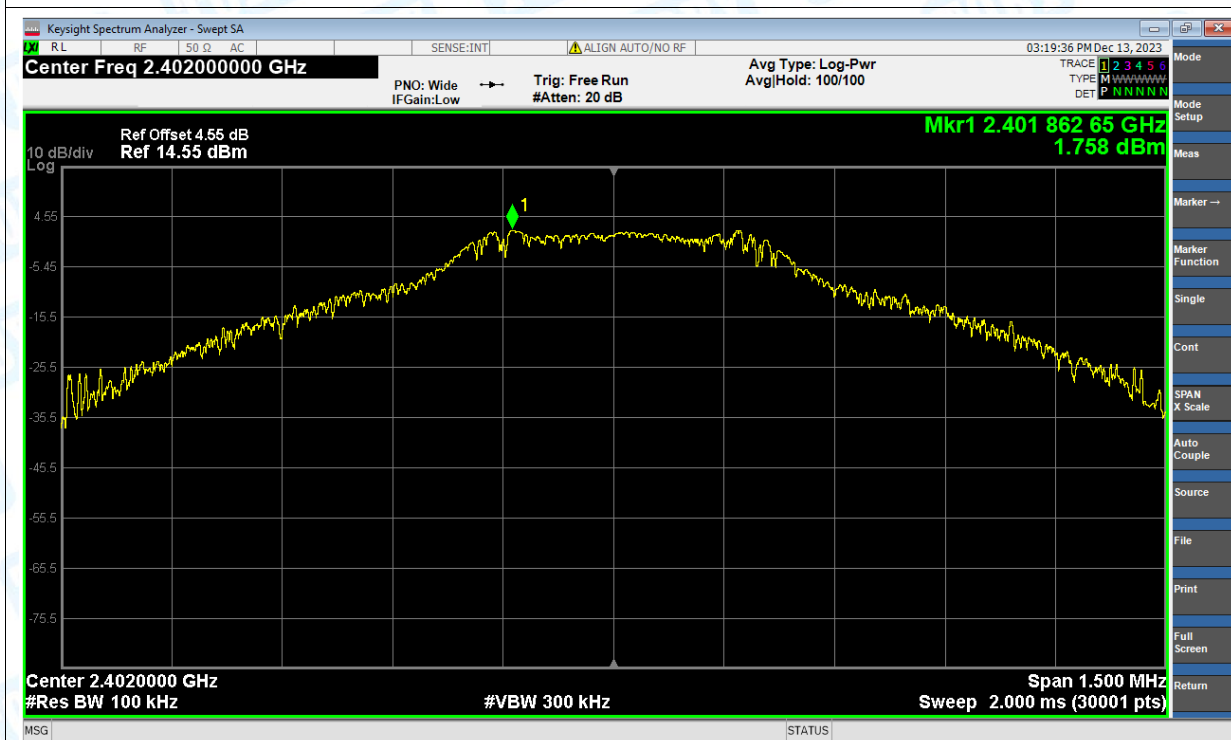


7. Conducted RF Spurious Emission

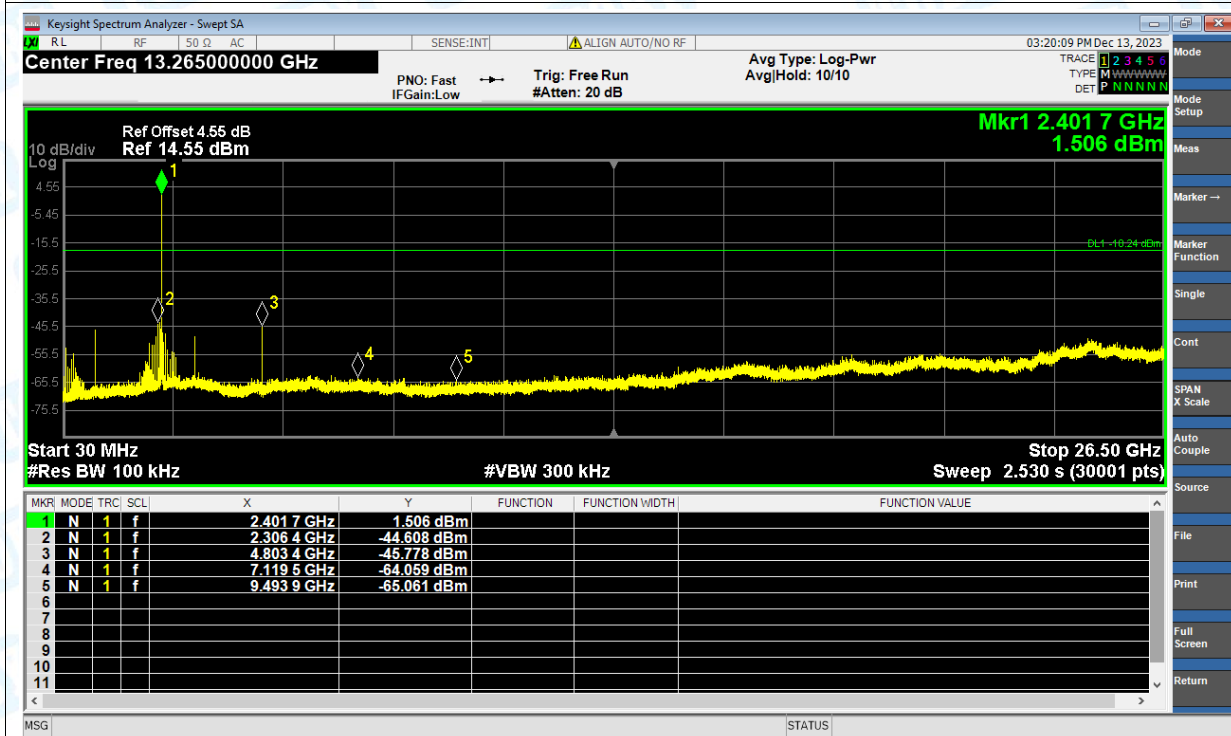
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-46.37	-20	Pass
NVNT	1-DH1	2441	Ant1	-46.32	-20	Pass
NVNT	1-DH1	2480	Ant1	-44.03	-20	Pass
NVNT	2-DH1	2402	Ant1	-49.94	-20	Pass
NVNT	2-DH1	2441	Ant1	-49.56	-20	Pass
NVNT	2-DH1	2480	Ant1	-47.45	-20	Pass
NVNT	3-DH1	2402	Ant1	-45.97	-20	Pass
NVNT	3-DH1	2441	Ant1	-46.62	-20	Pass
NVNT	3-DH1	2480	Ant1	-47.07	-20	Pass

Test Graphs

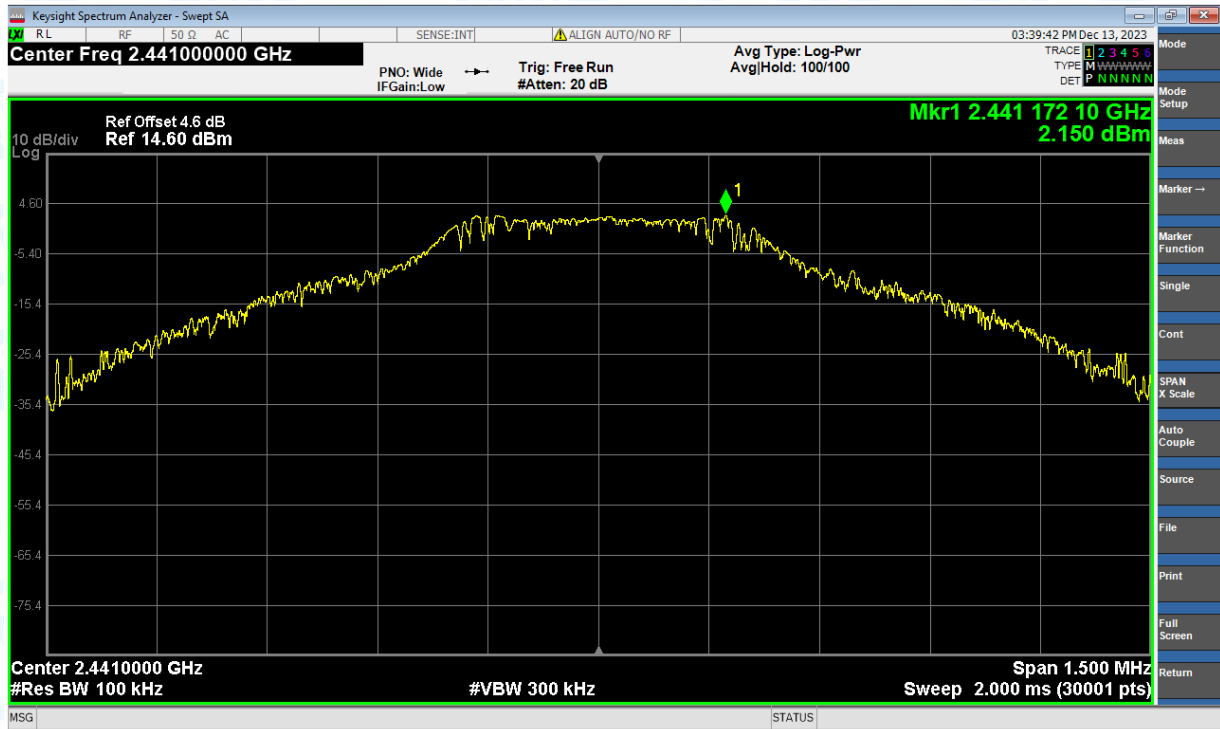
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



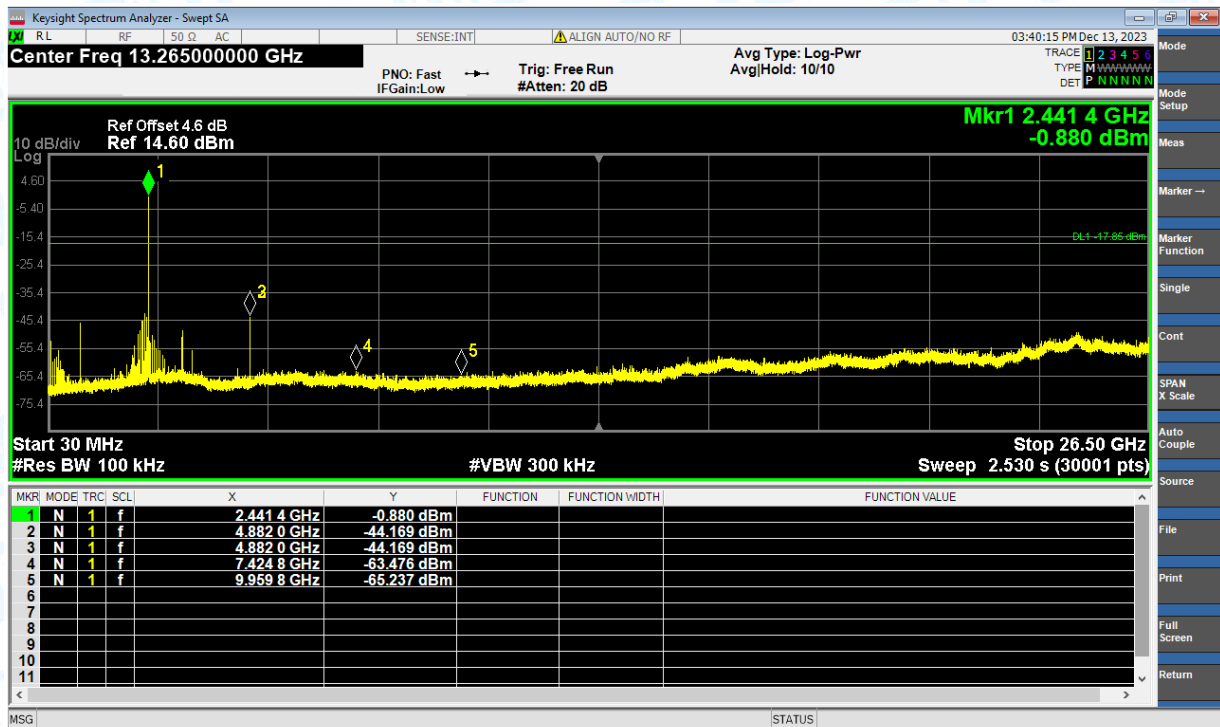
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



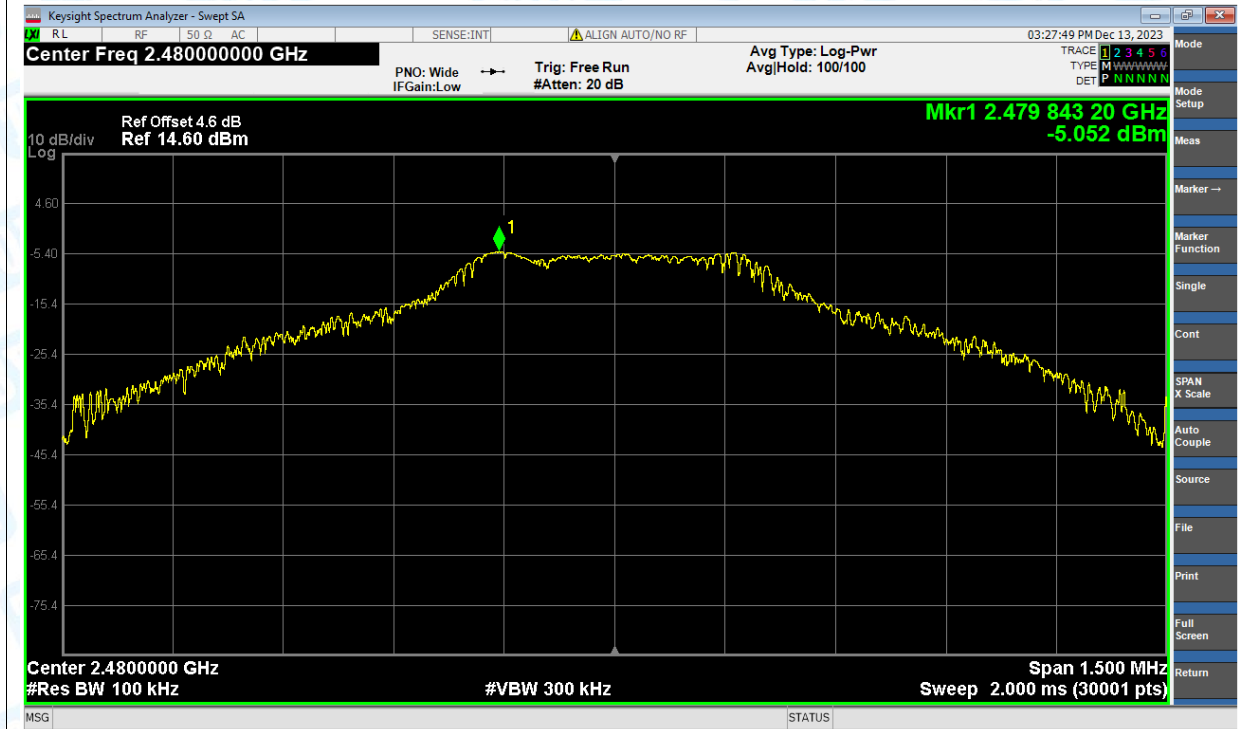
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



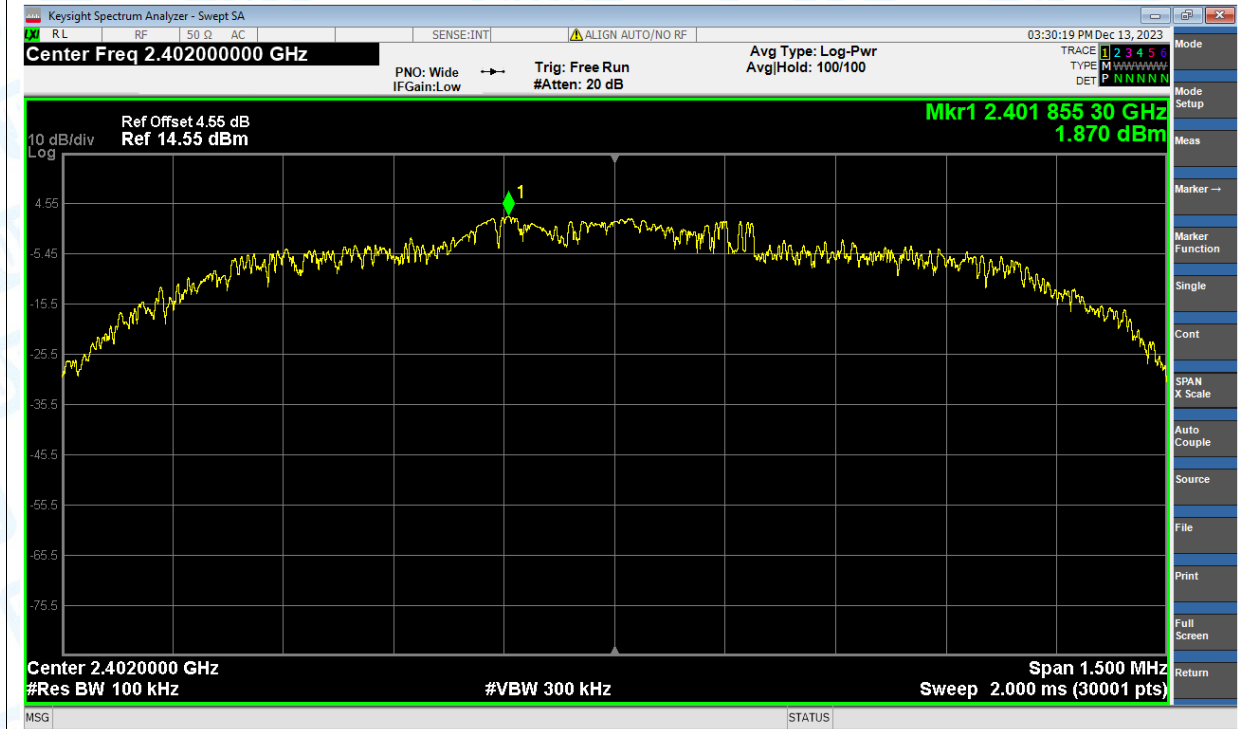
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



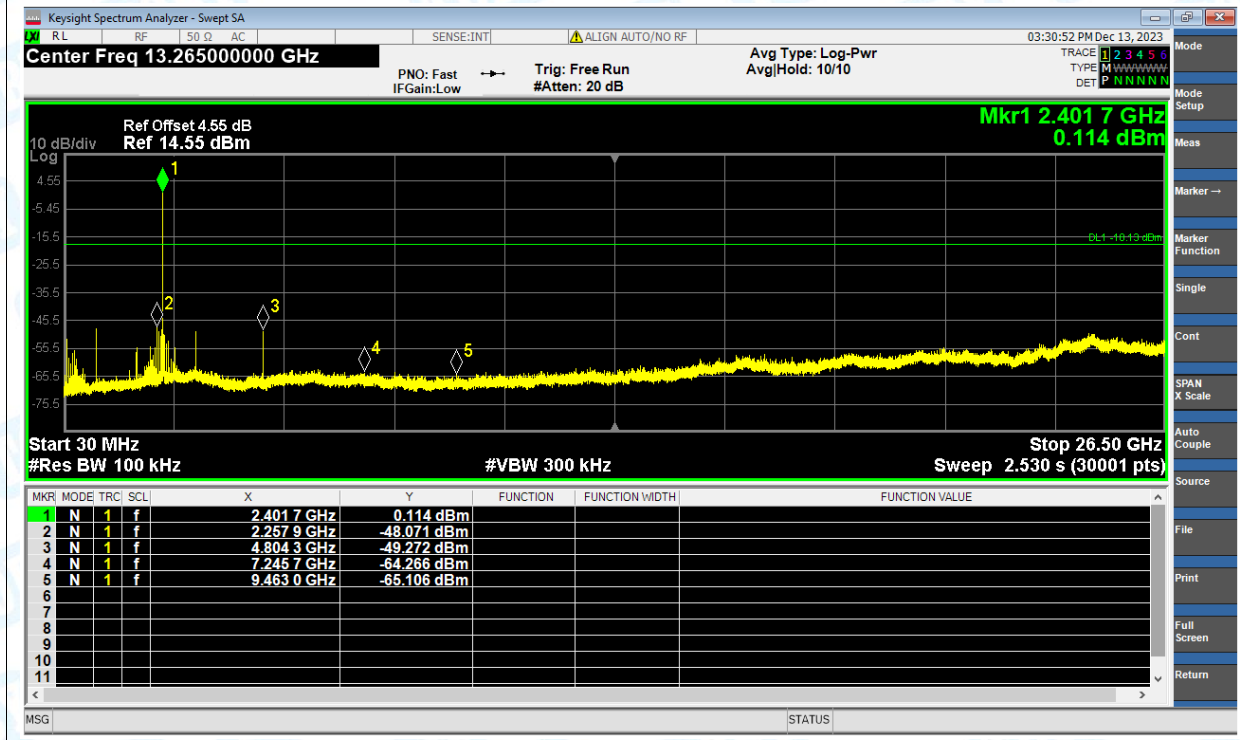
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



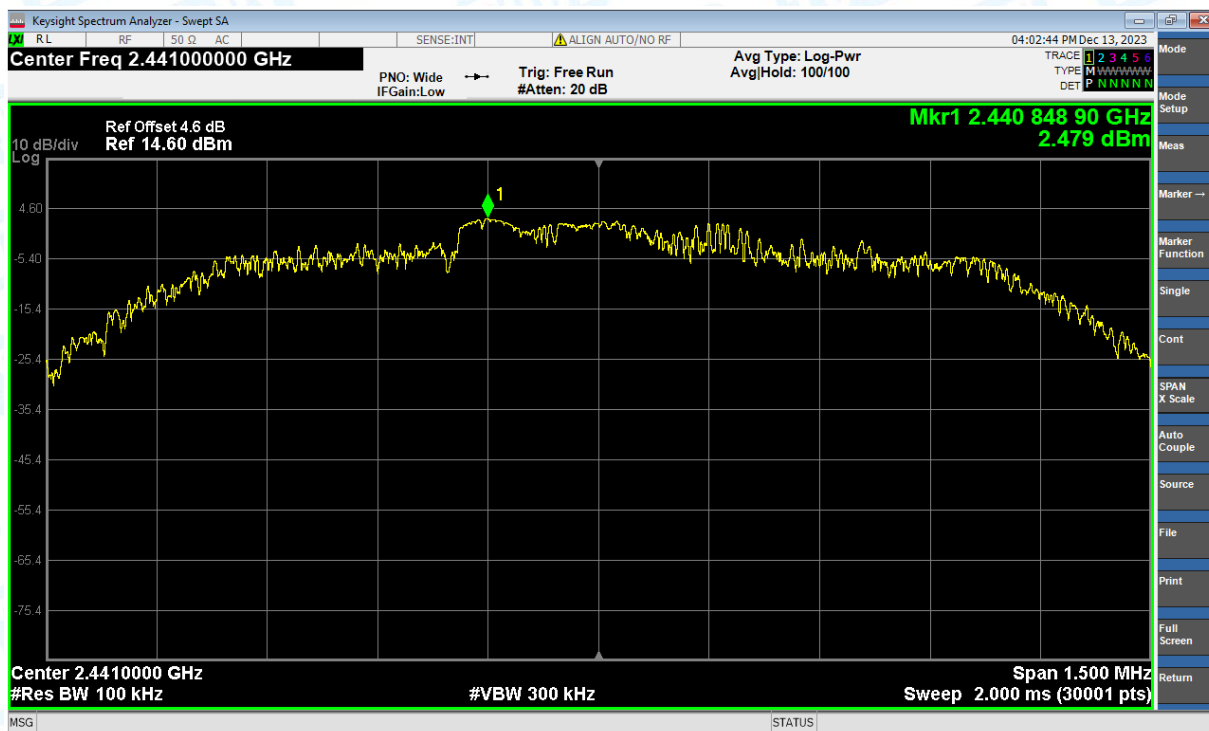
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



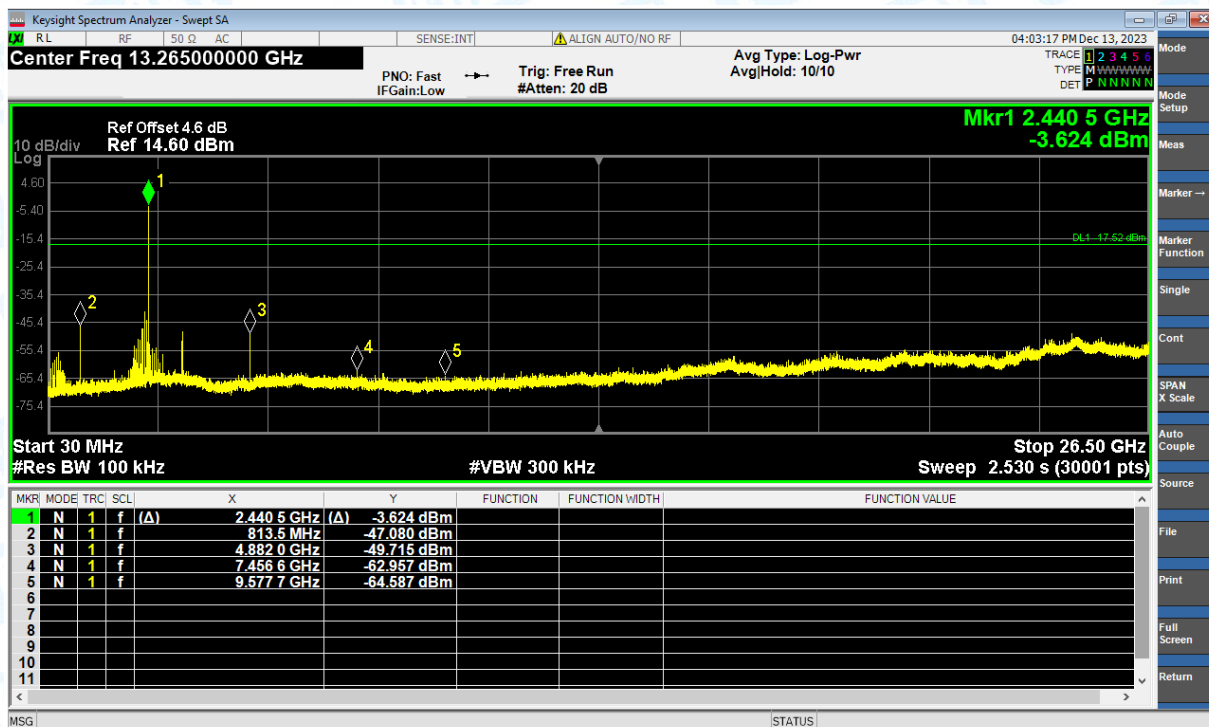
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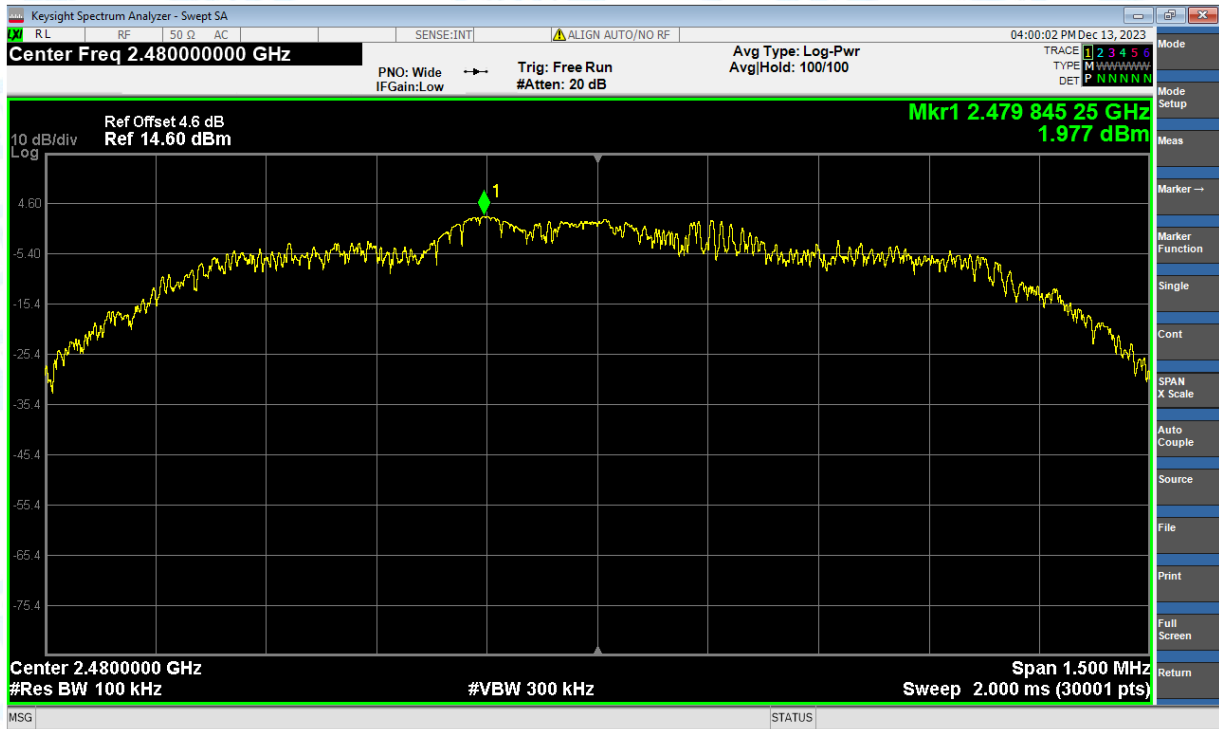
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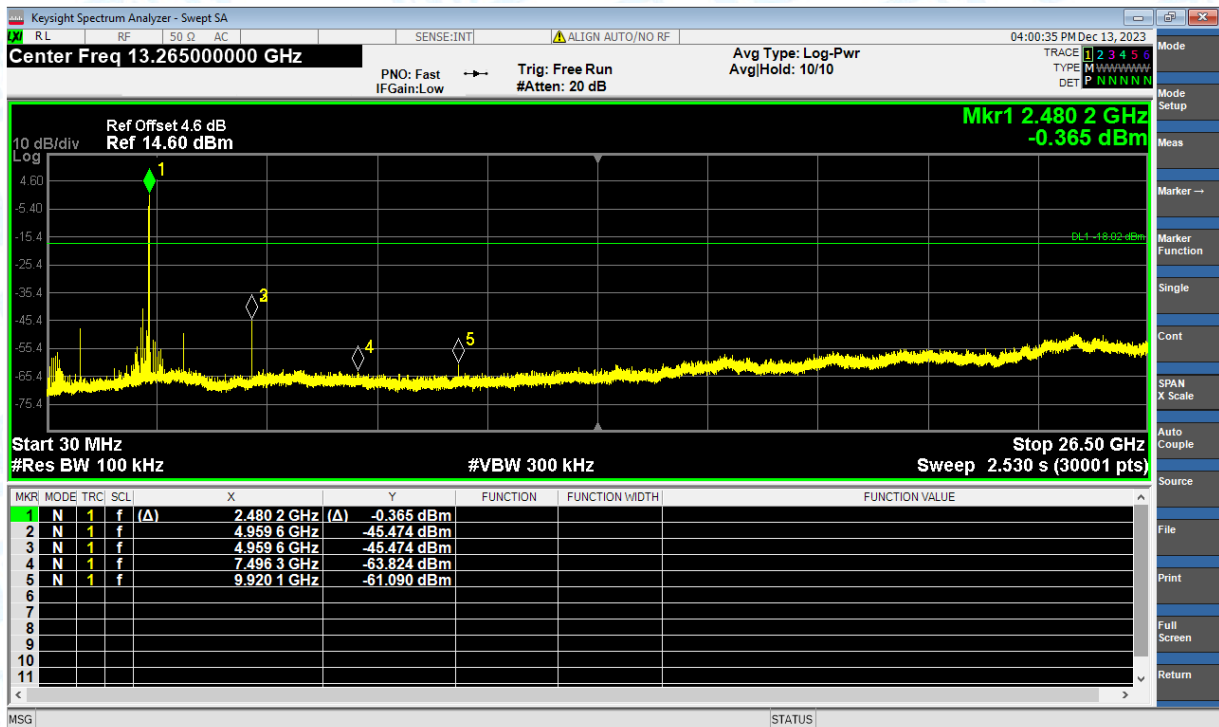
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



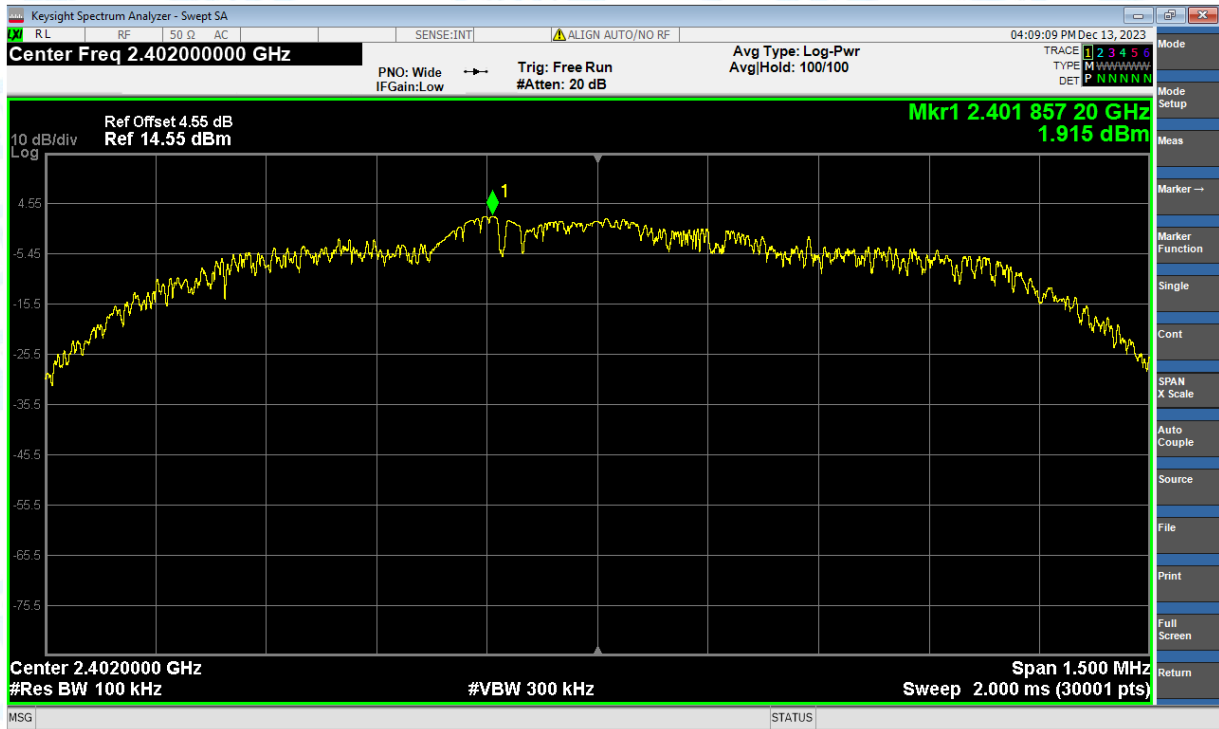
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



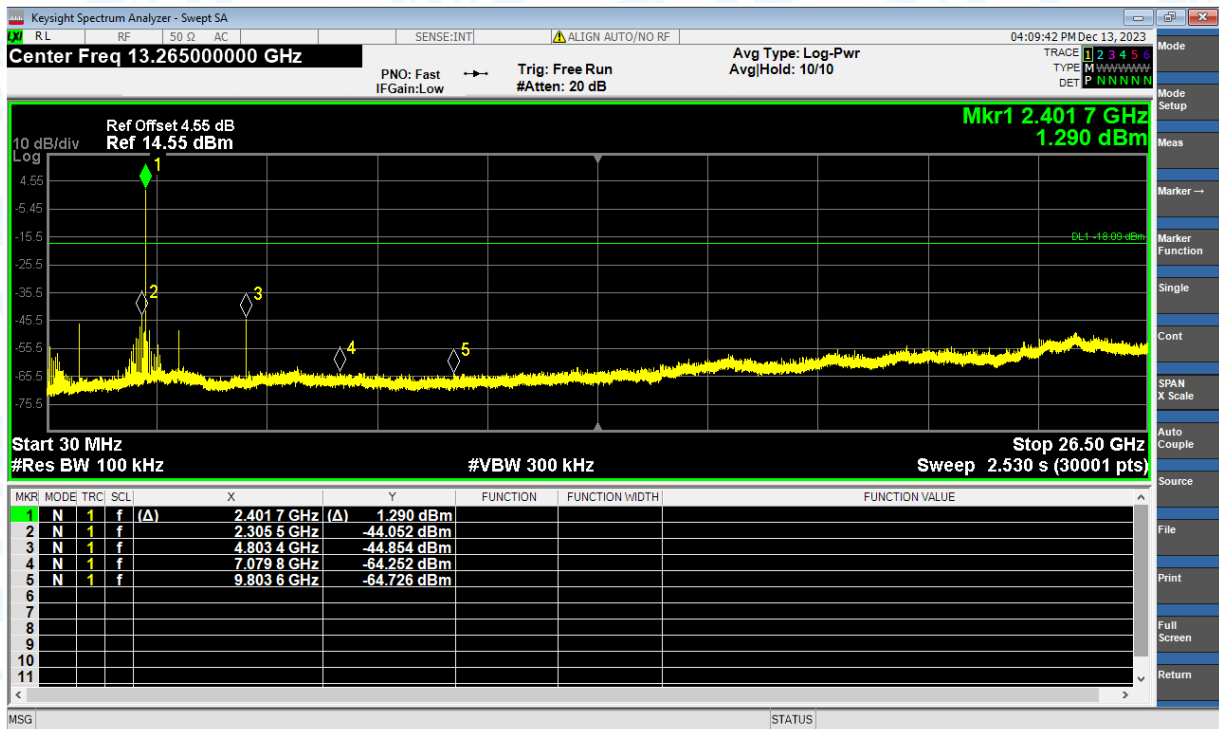
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



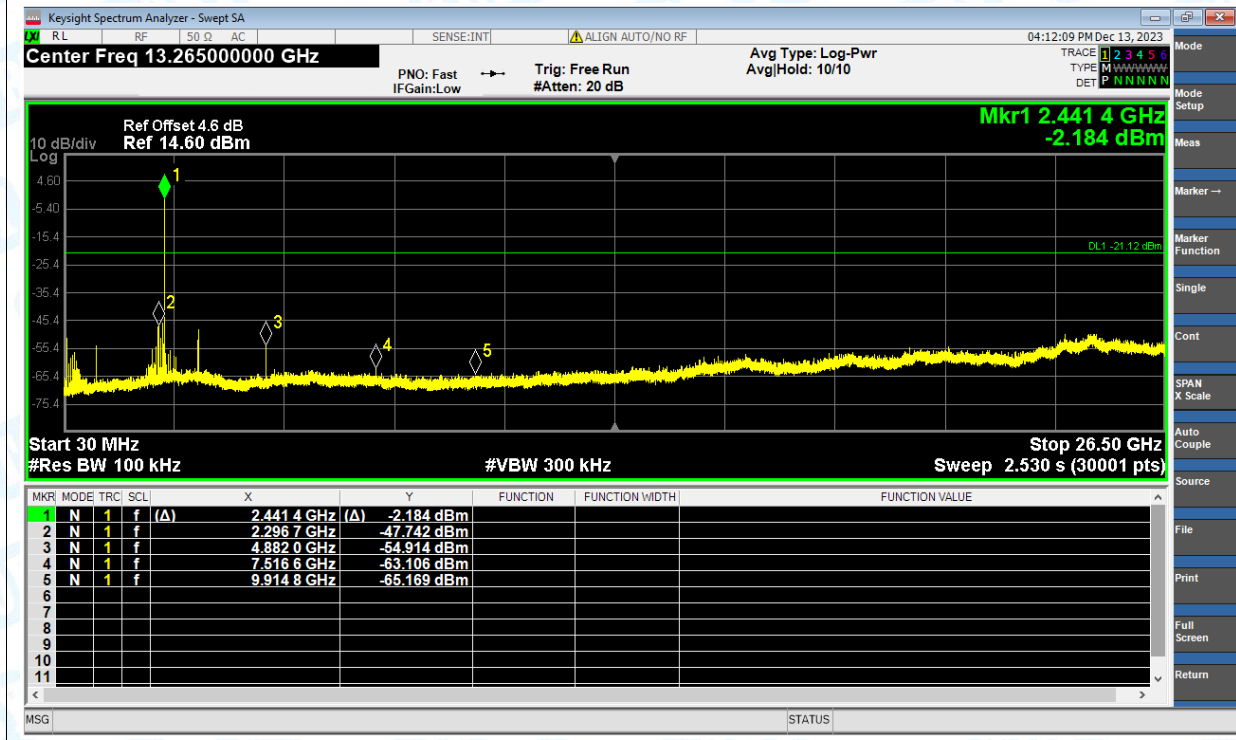
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



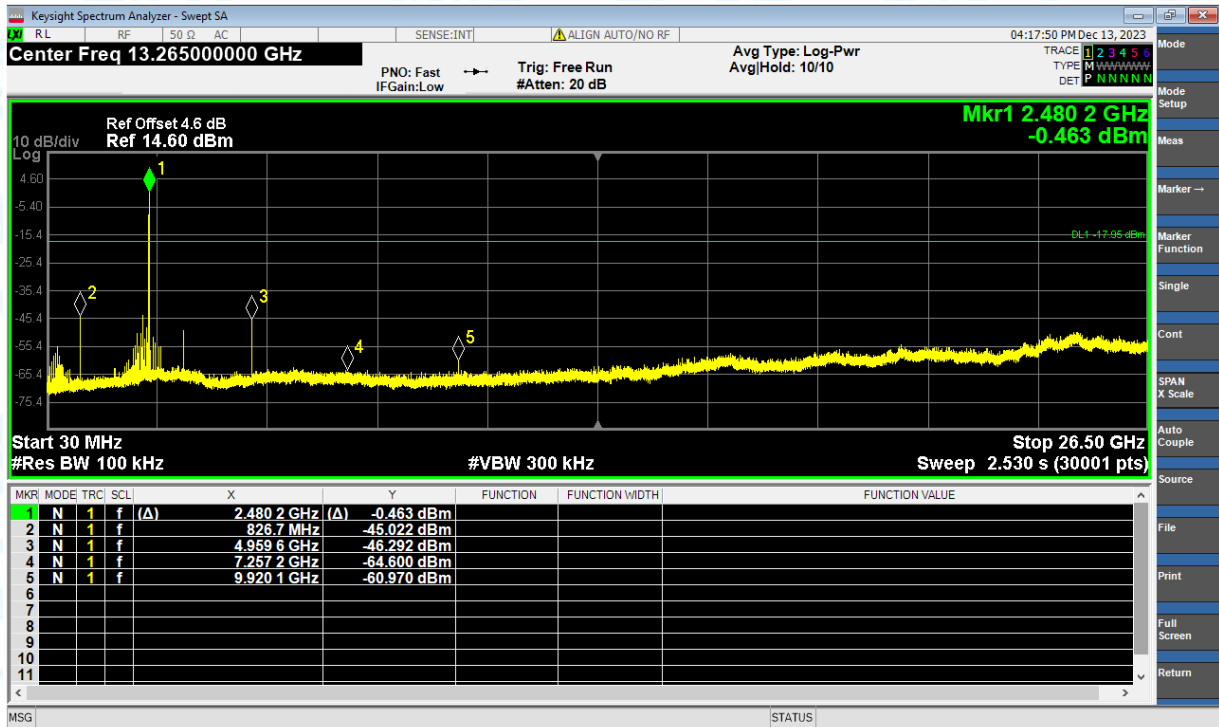
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

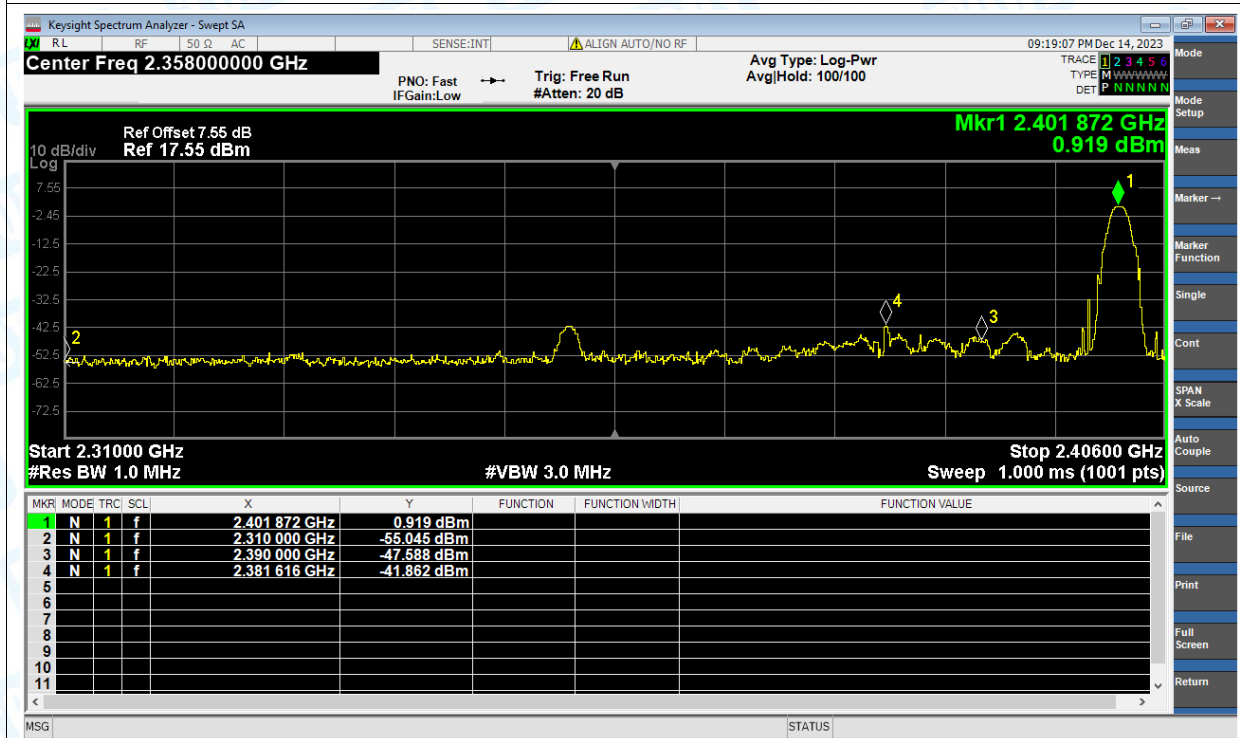


8. Restrict Band

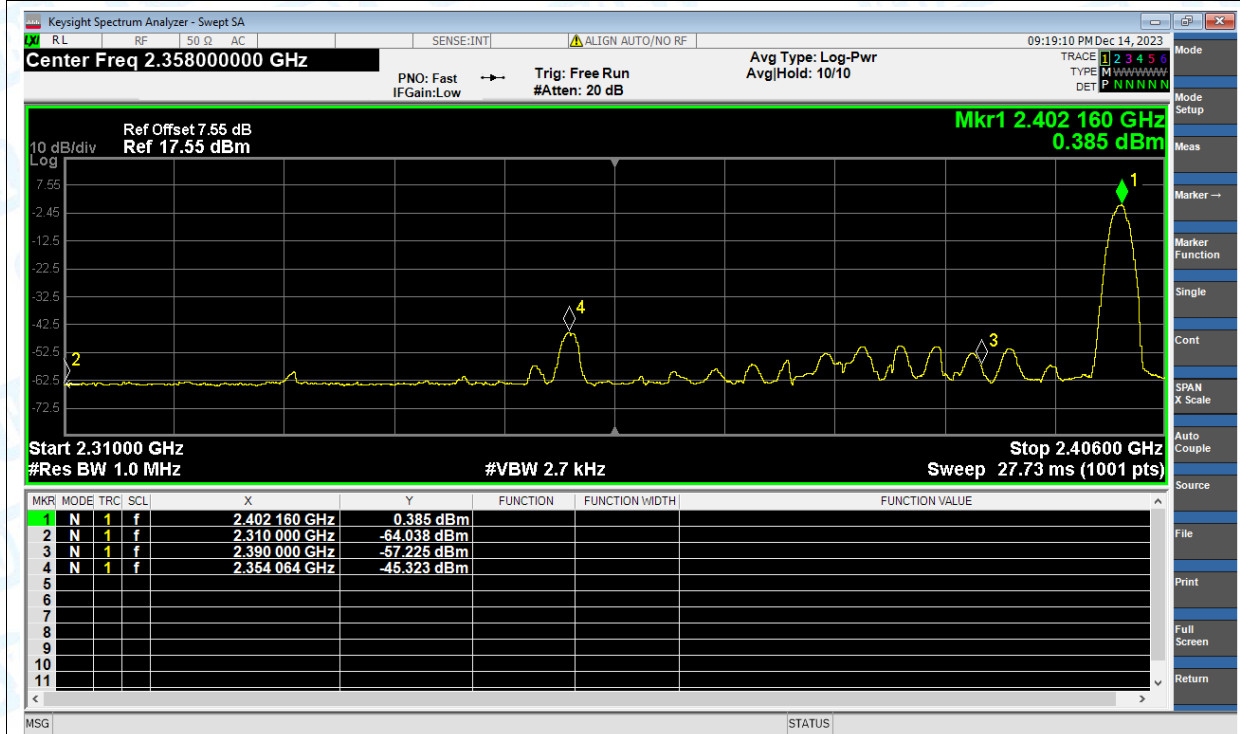
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-55.04	3	43.22	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-64.04	3	34.22	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2381.616	-41.86	3	56.4	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2354.064	-45.32	3	52.94	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-46.48	3	51.78	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-58.39	3	39.87	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-40.77	3	57.49	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-53.41	3	44.85	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.536	-40.65	3	57.61	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2489.056	-51.89	3	46.37	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-44.9	3	53.36	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-53.37	3	44.89	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-55.92	3	42.34	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-63.96	3	34.3	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2353.968	-42.04	3	56.22	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2354.064	-45.69	3	52.57	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-46.73	3	51.53	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-58.18	3	40.08	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-43.42	3	54.84	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-53.32	3	44.94	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.536	-39.59	3	58.67	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2489.176	-50.66	3	47.6	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-42.02	3	56.24	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-52.75	3	45.51	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-45.43	3	52.83	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-54.42	3	43.84	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2354.256	-37.82	3	60.44	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2353.968	-44.52	3	53.74	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-45.39	3	52.87	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-53.46	3	44.8	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-44.66	3	53.6	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-52.93	3	45.33	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2484.712	-40.16	3	58.1	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2489.104	-49.28	3	48.98	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-45.39	3	52.87	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-52.35	3	45.91	Average	54	Pass

Test Graphs

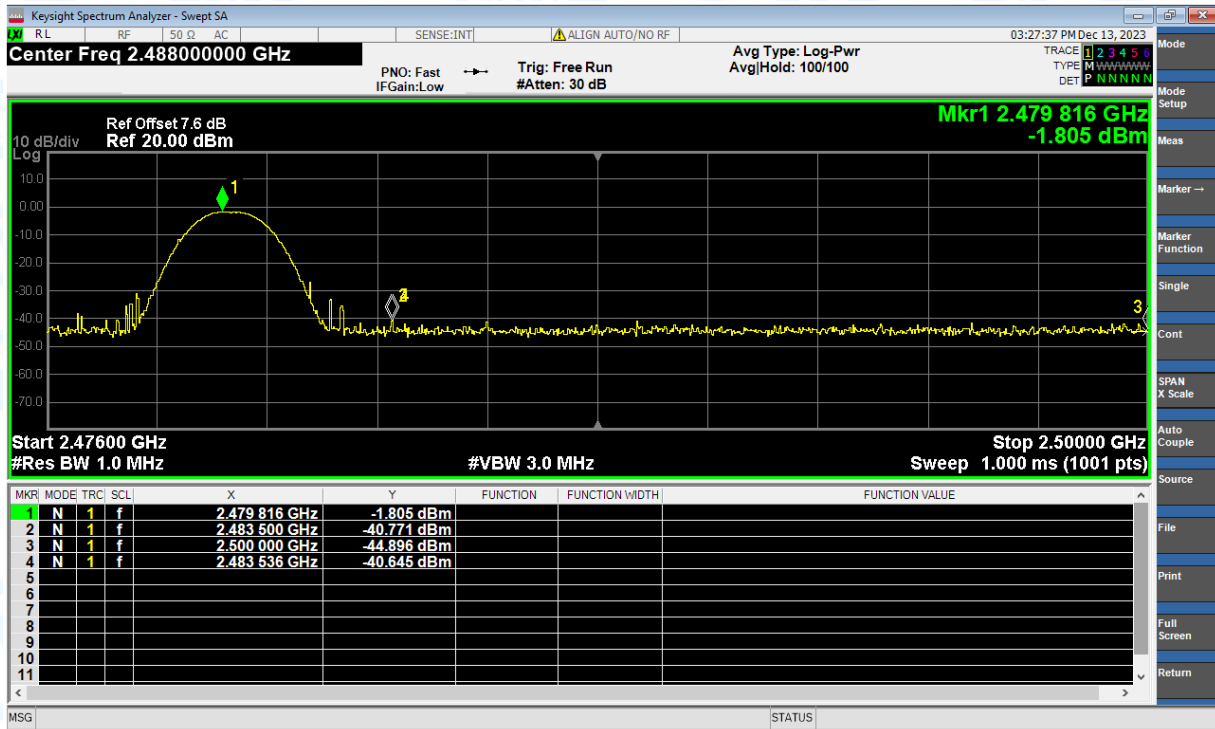
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



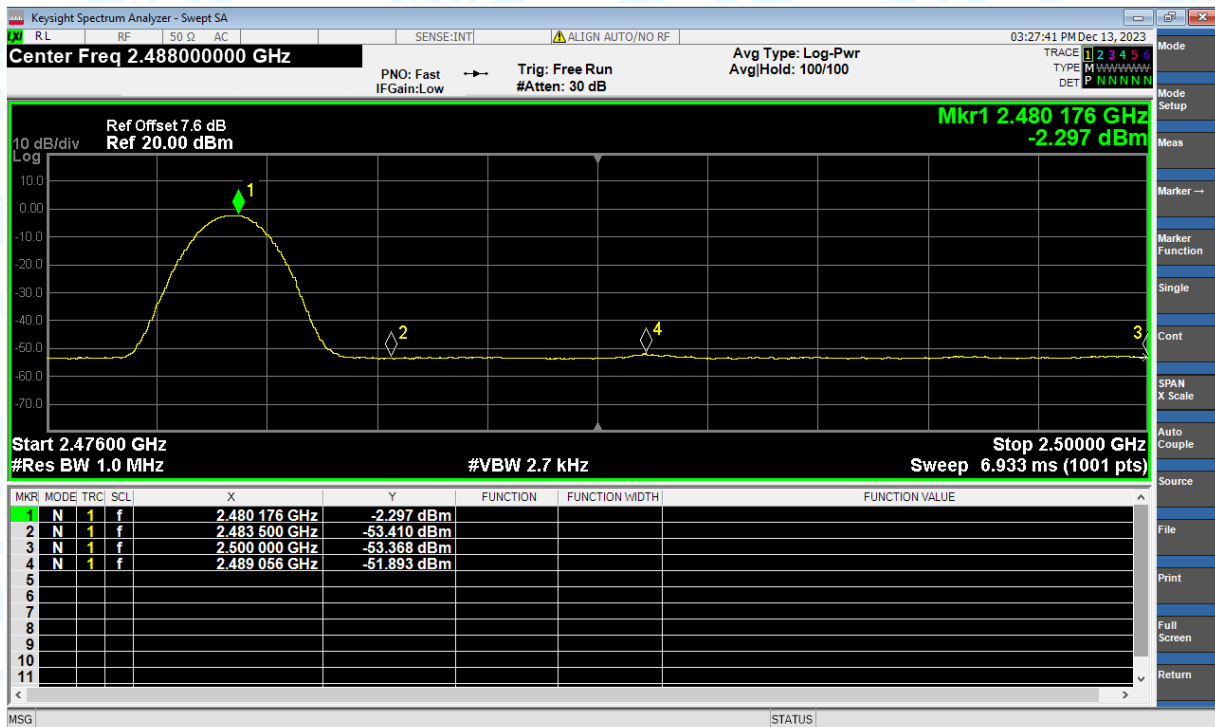
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



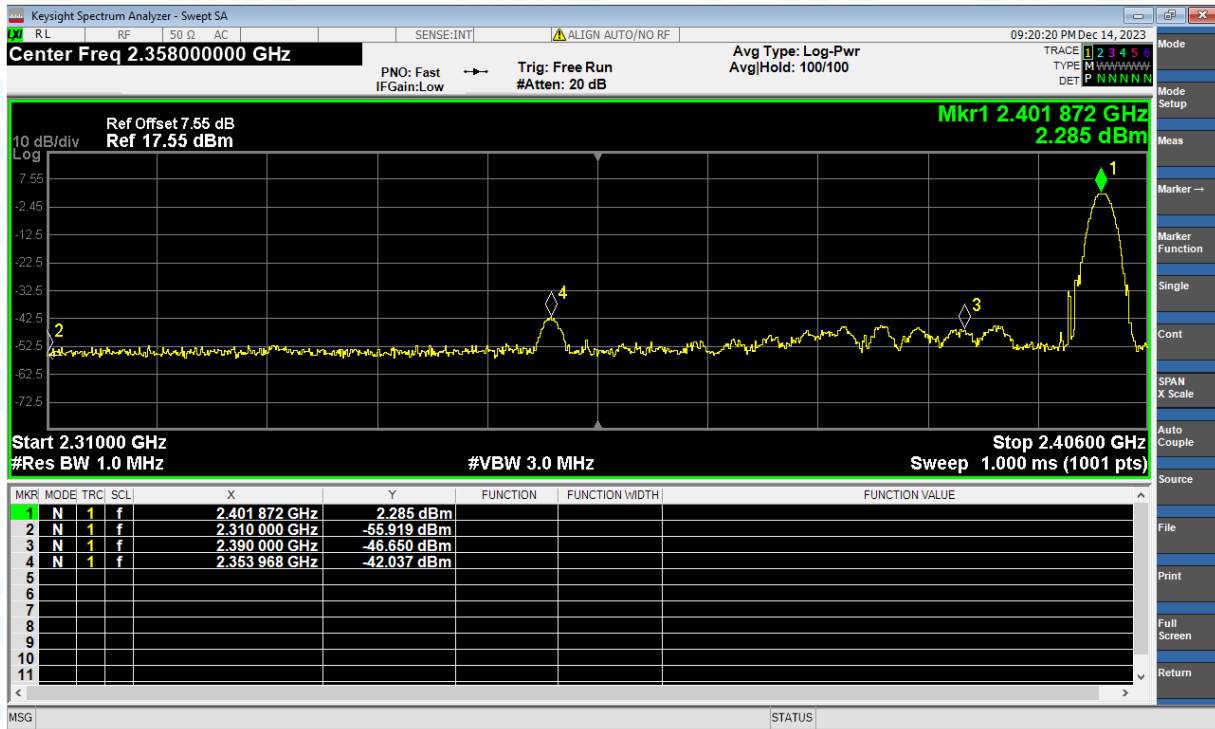
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



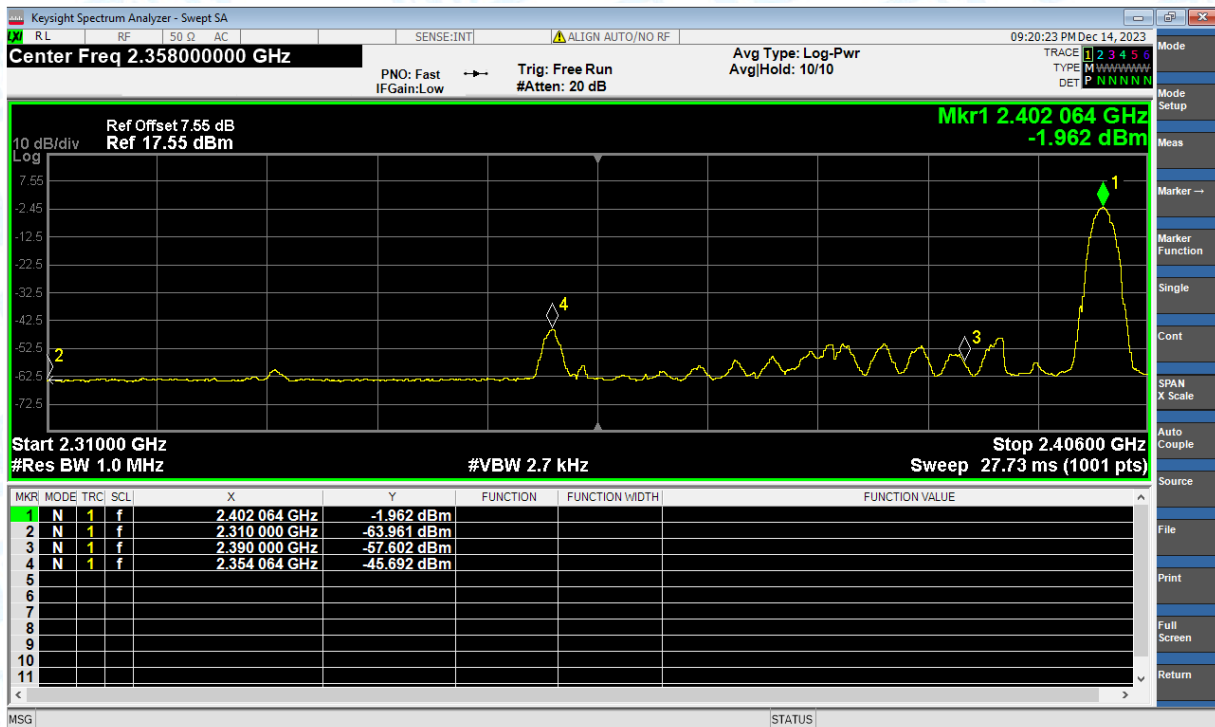
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



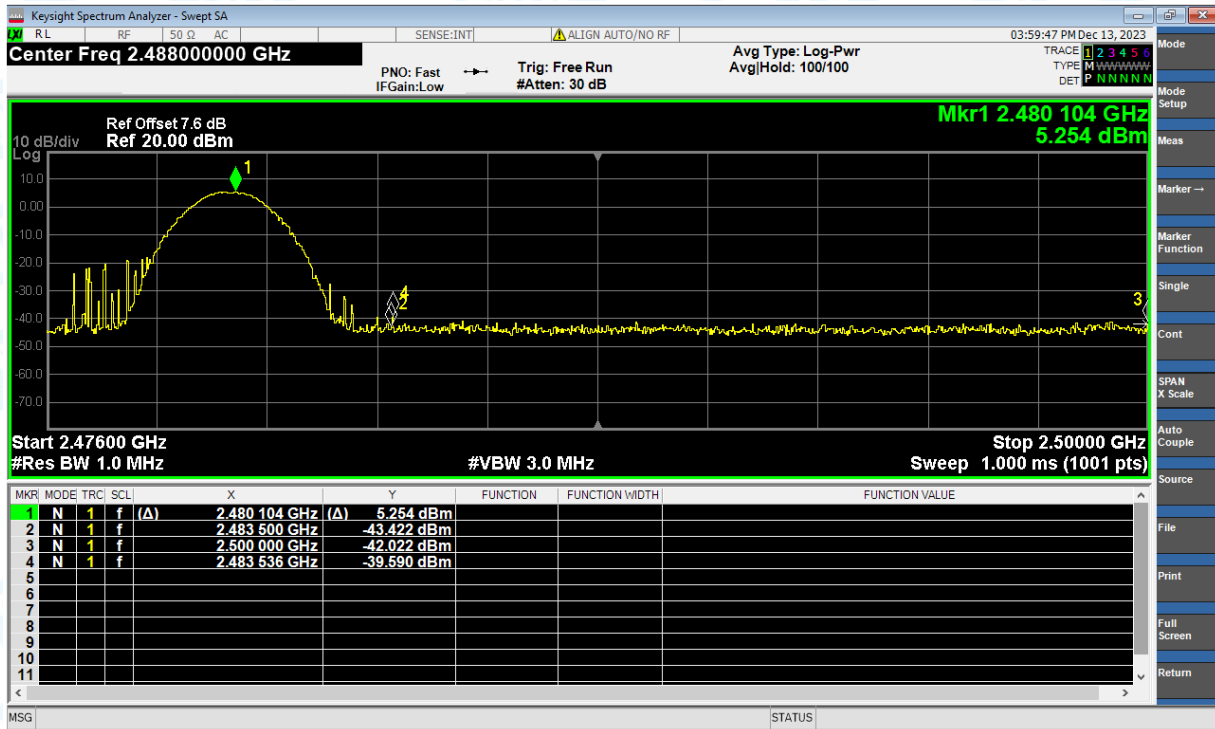
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



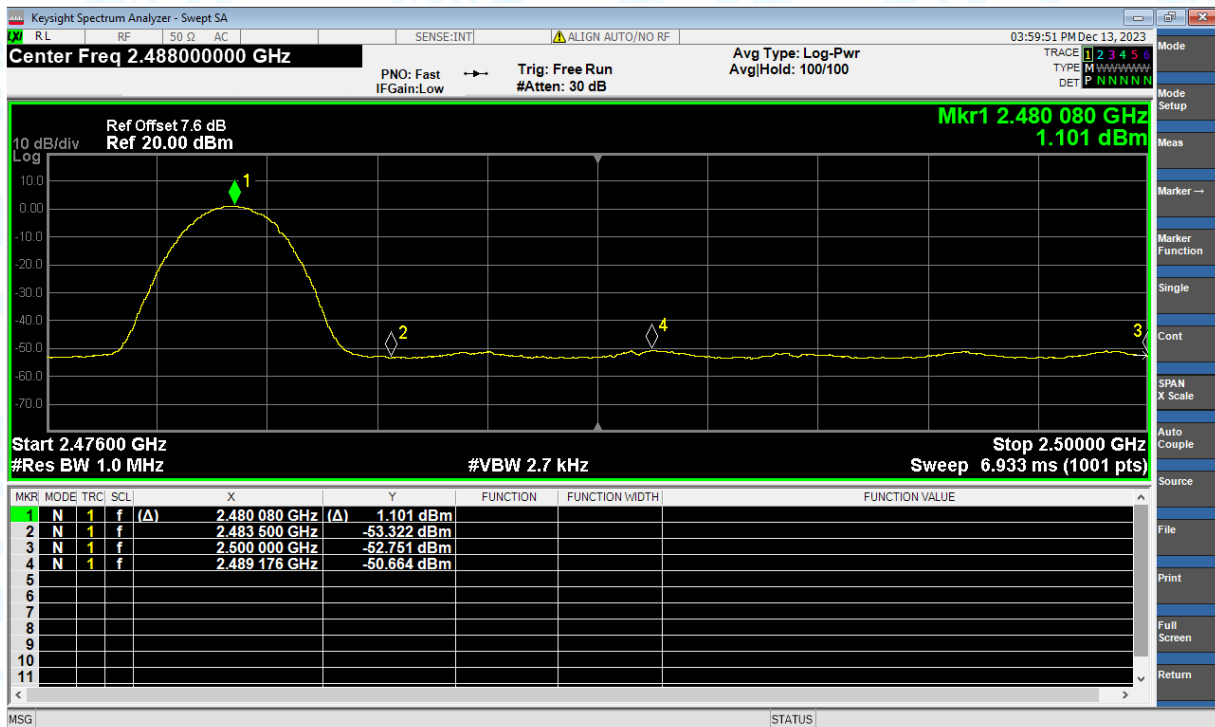
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



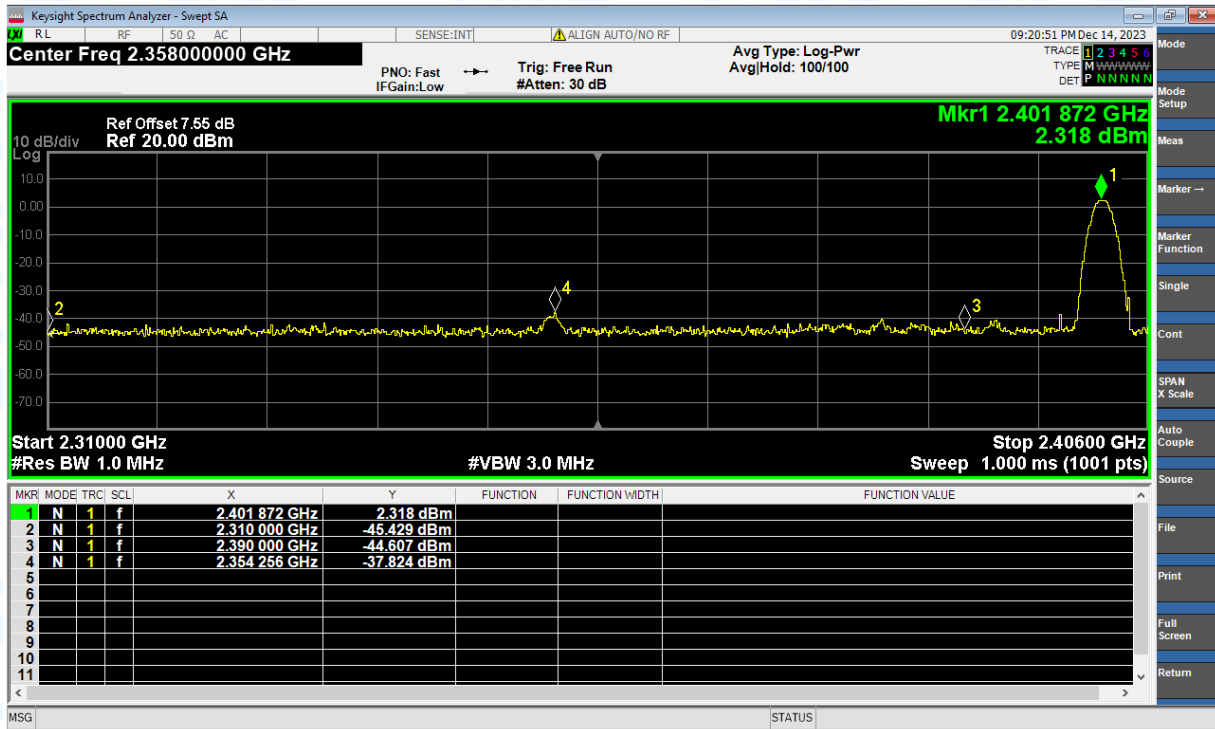
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



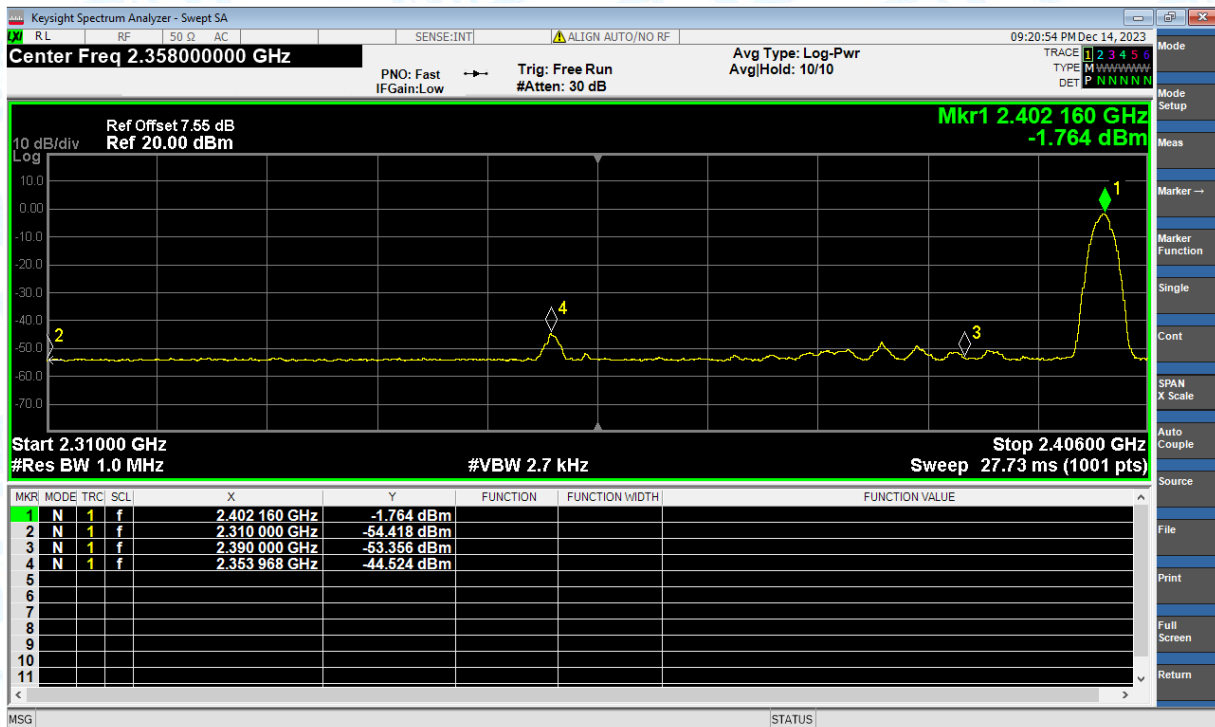
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



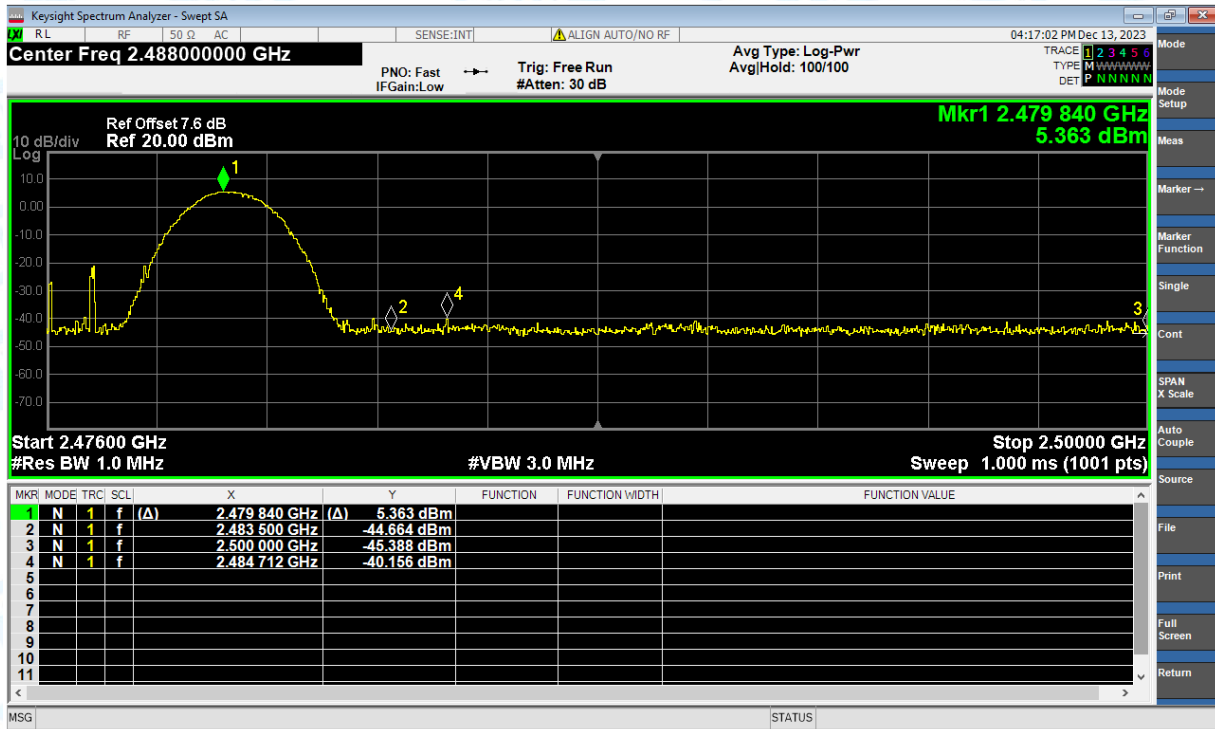
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



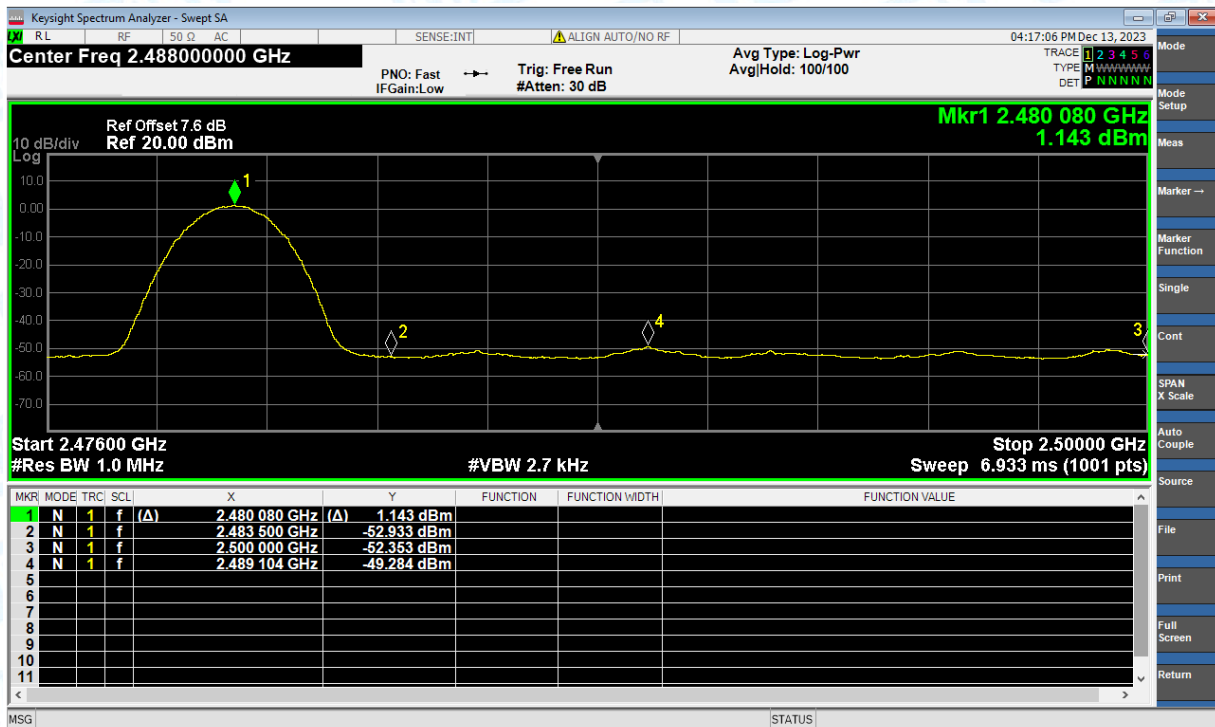
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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



9. Carrier Frequencies Separation

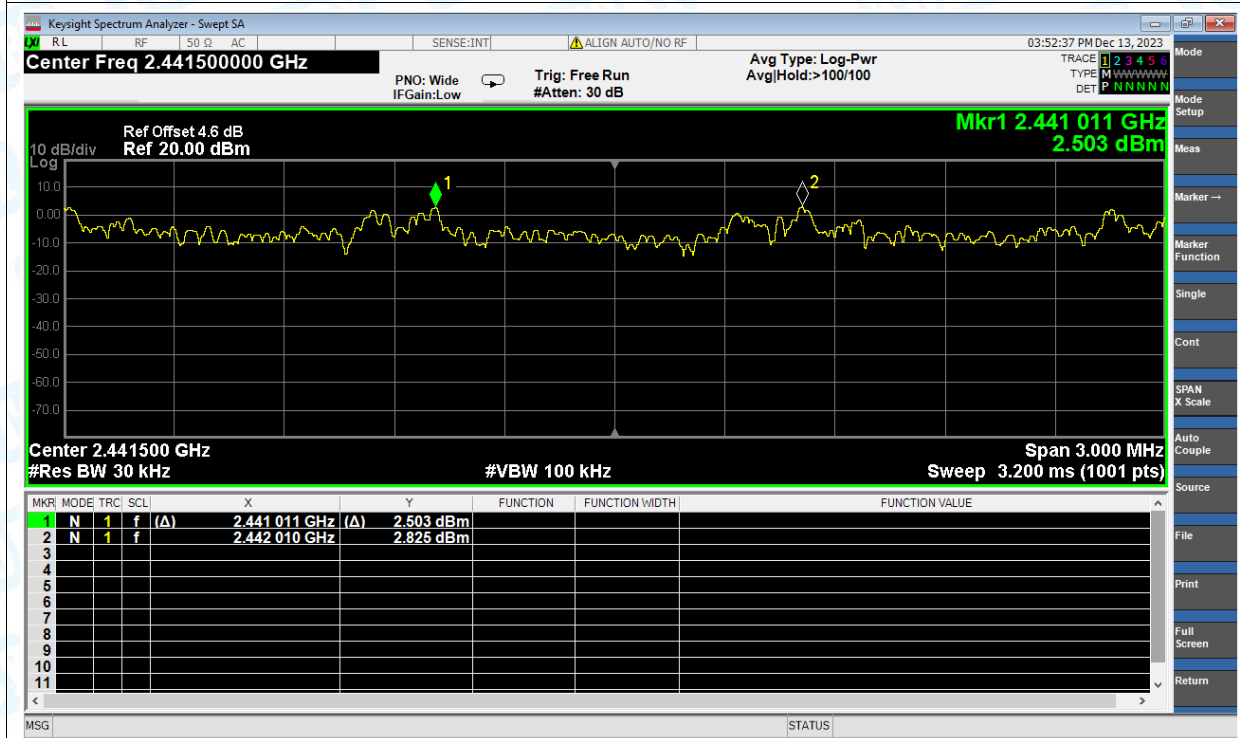
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.014	2441.992	0.978	0.613	Pass
NVNT	2-DH1	Ant1	2441.011	2442.01	0.999	0.025	Pass
NVNT	3-DH1	Ant1	2441.02	2442.013	0.993	0.84	Pass

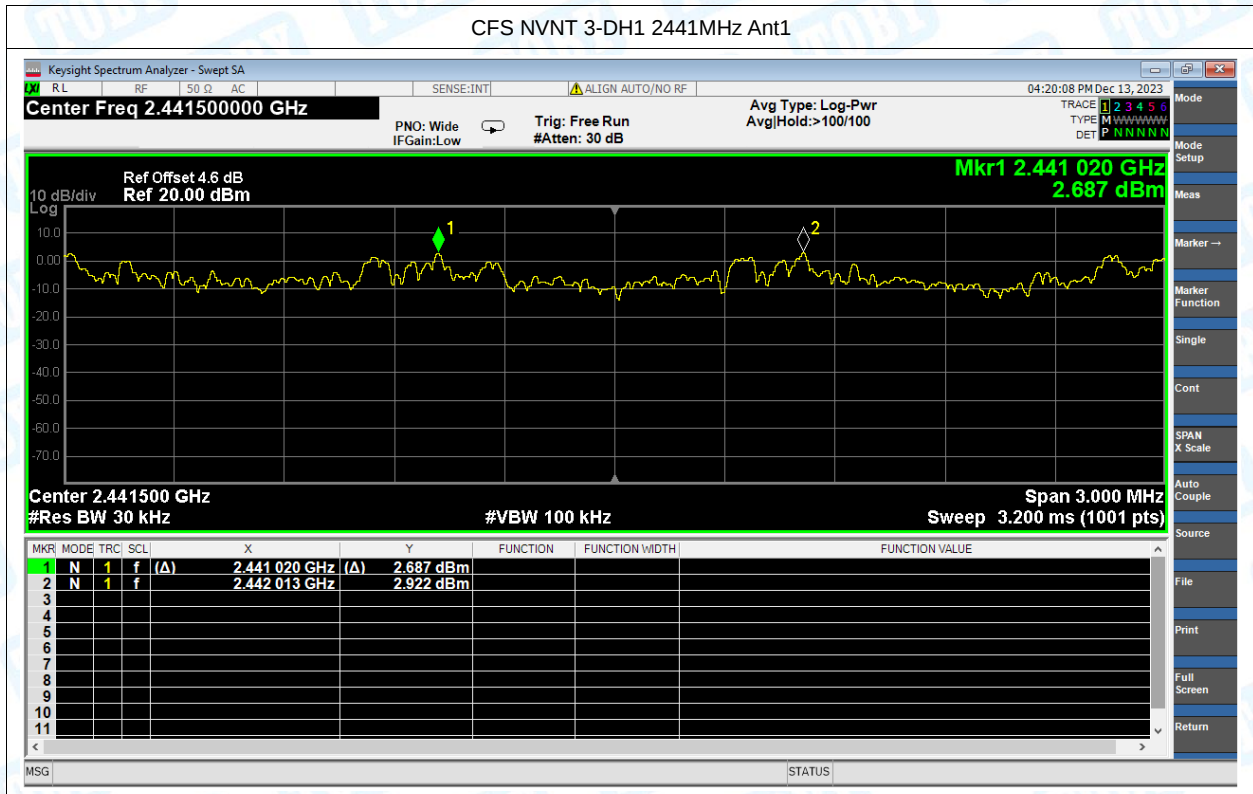
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



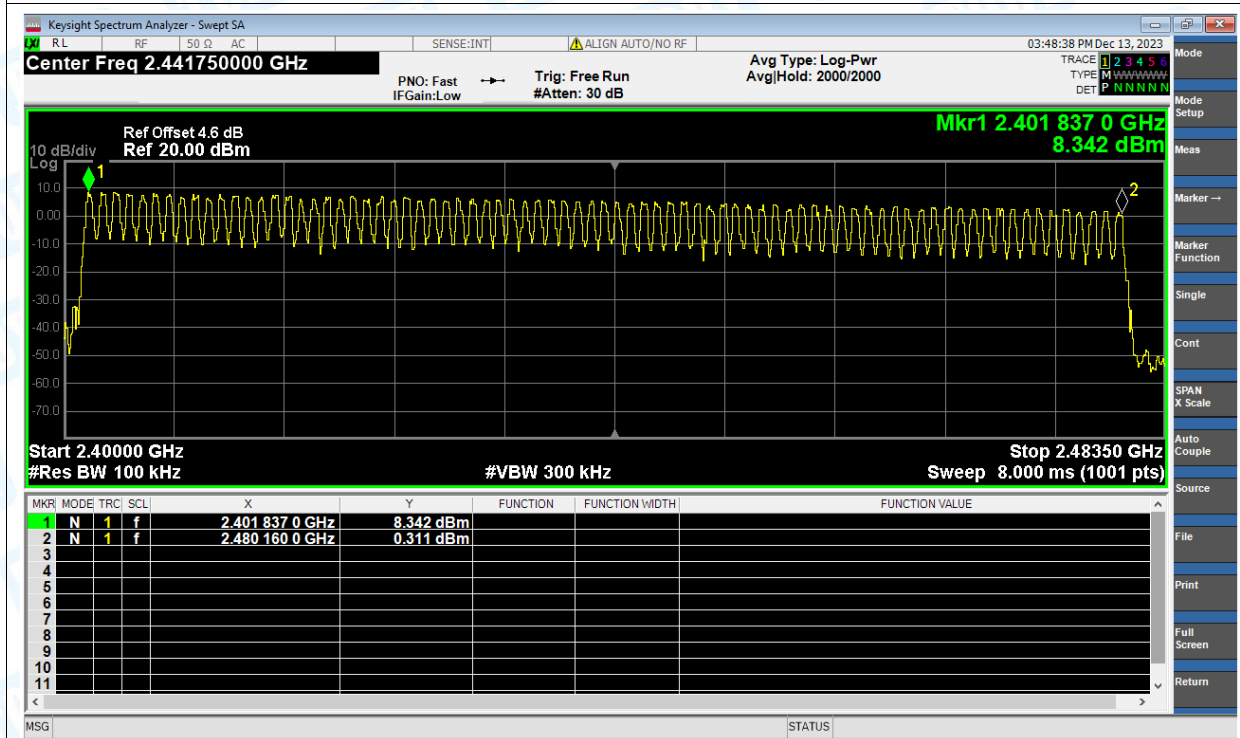


10. Number of Hopping Channel

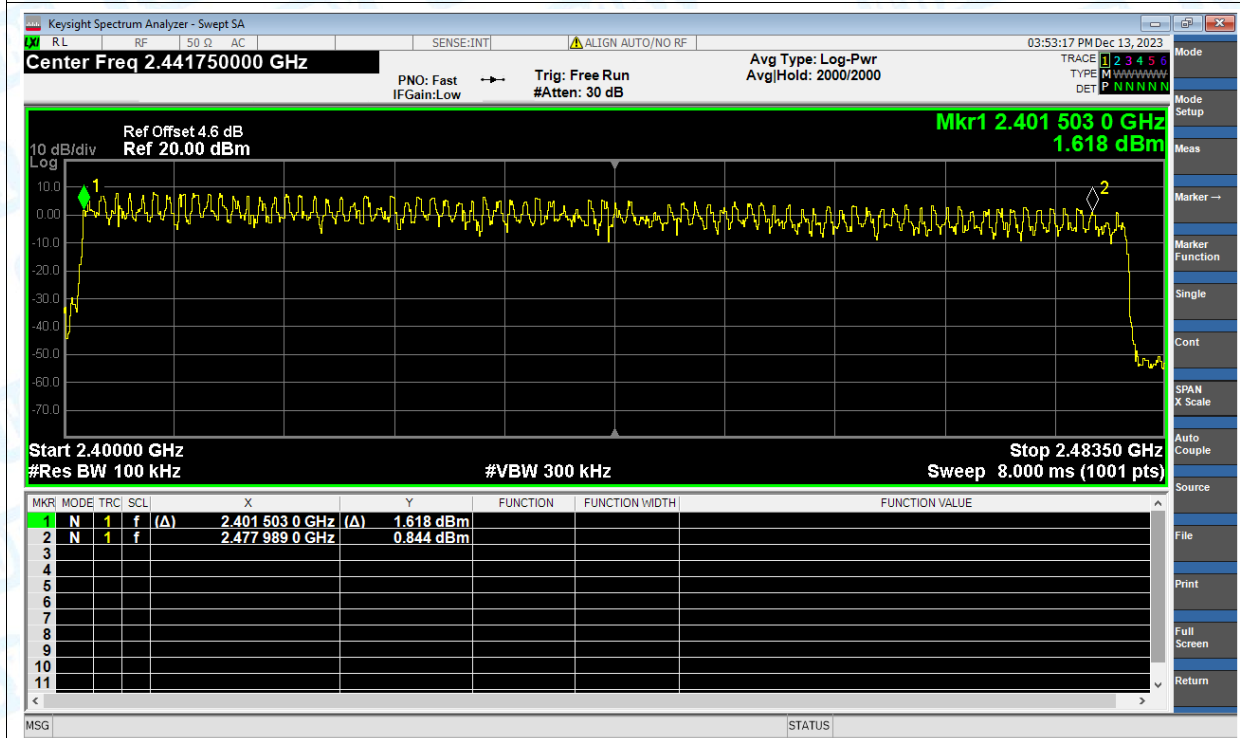
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

Test Graphs

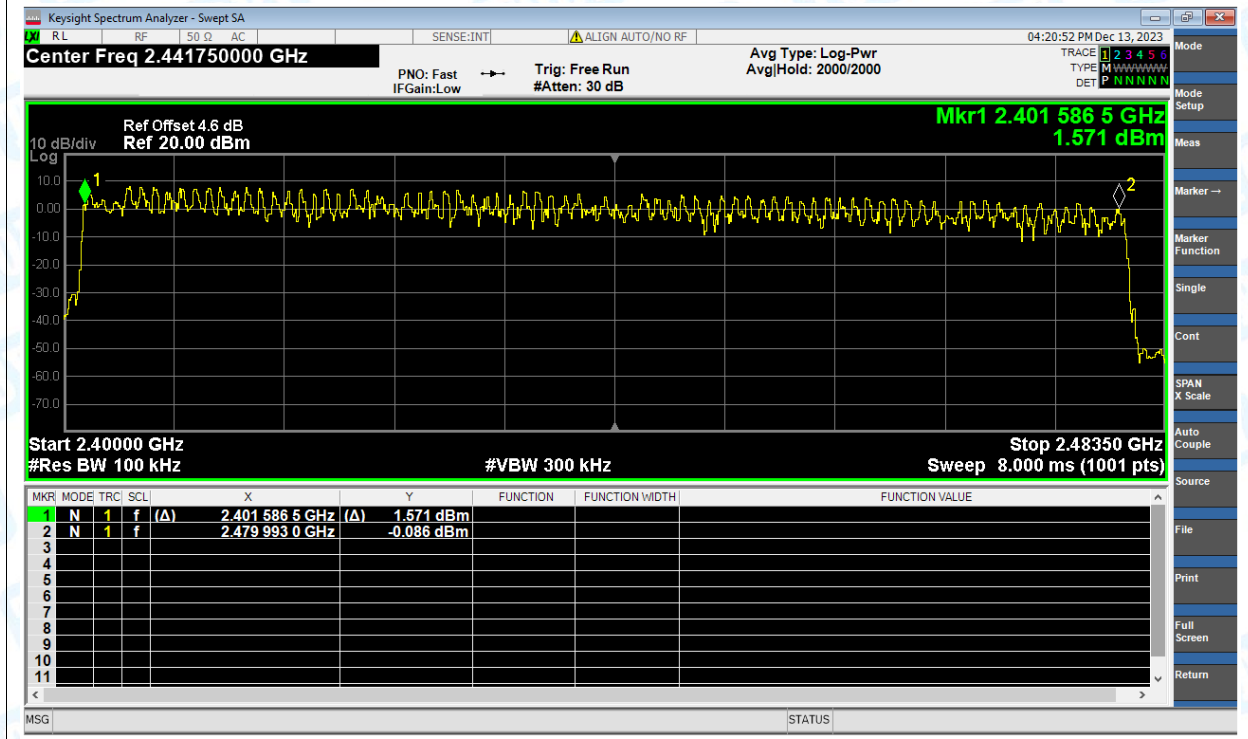
Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



Hopping No. NVNT 3-DH1 2441MHz Ant1

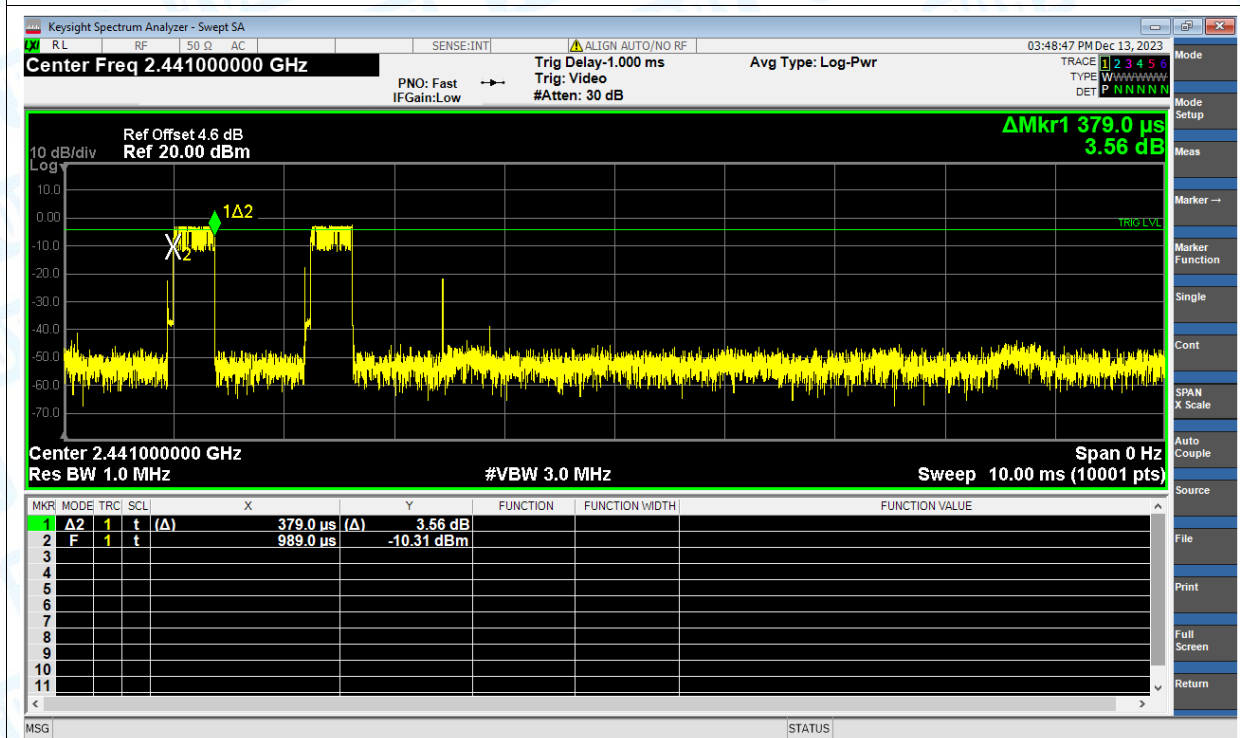


11. Dwell Time

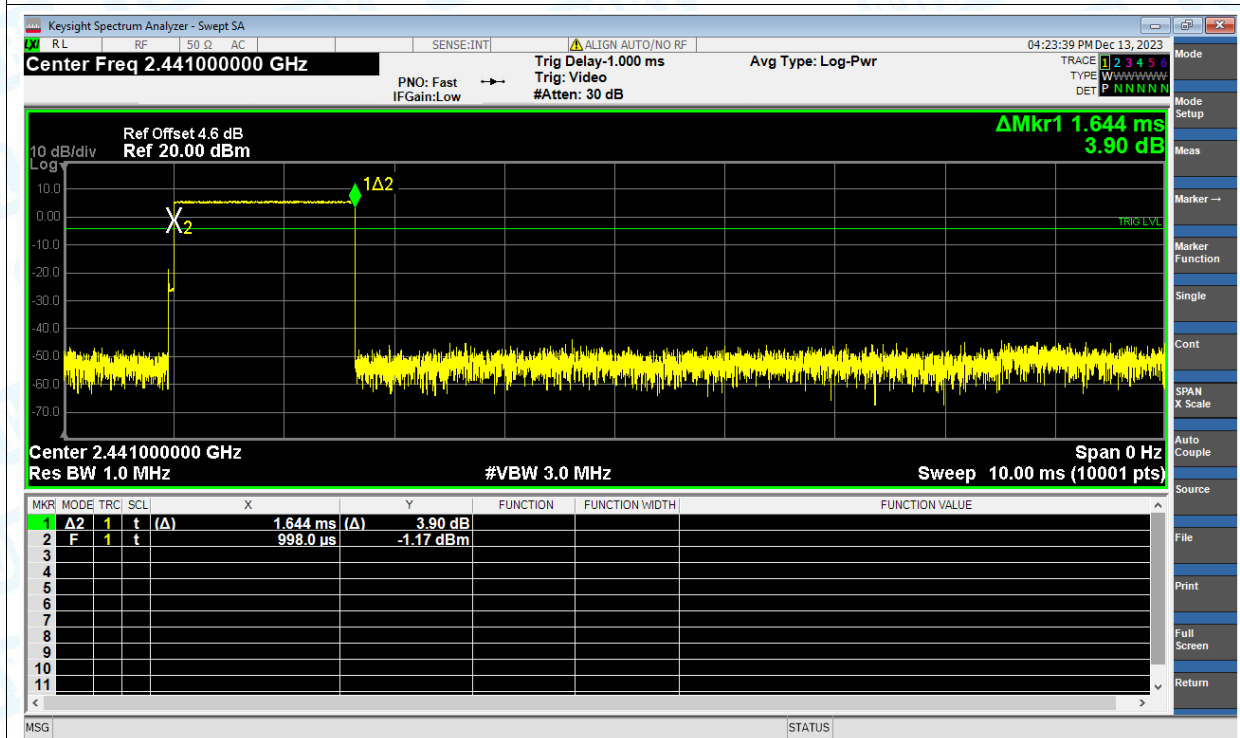
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.379	121.28	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.644	263.04	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.892	308.48	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.386	123.52	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.638	262.08	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.886	307.84	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.386	123.52	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.637	261.92	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.886	307.84	31600	400	Pass

Test Graphs

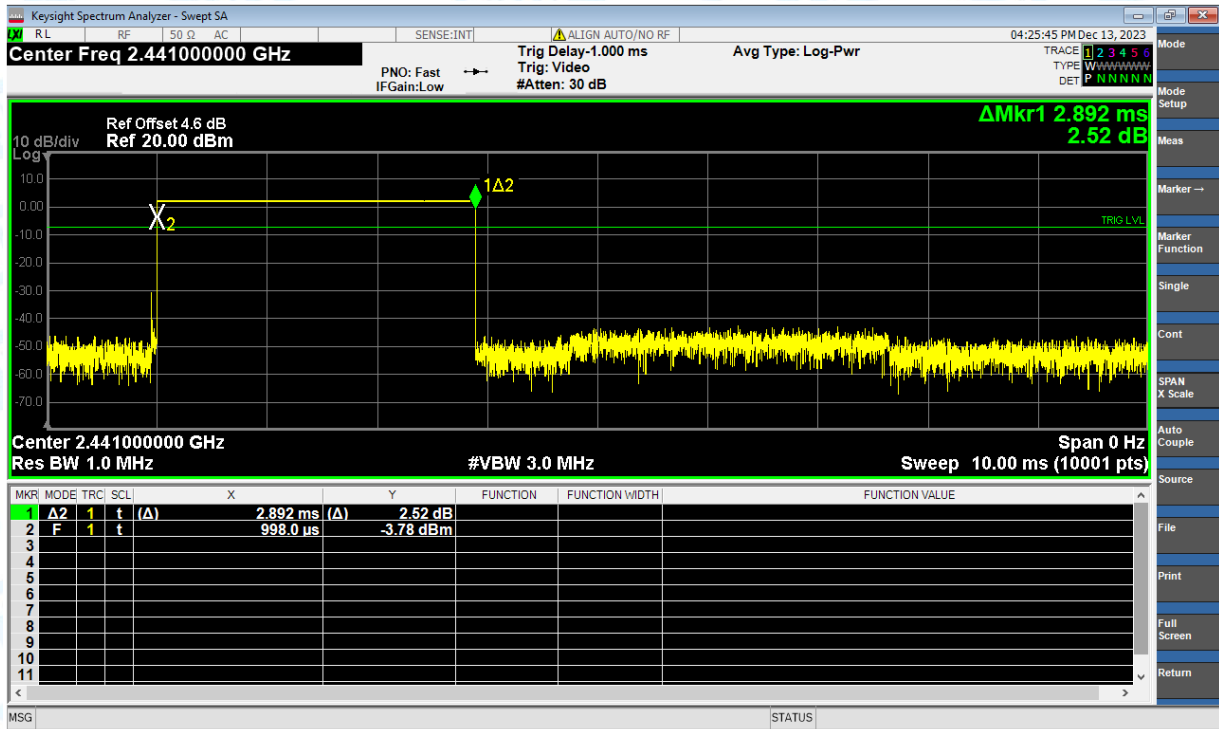
Dwell NVNT 1-DH1 2441MHz Ant1



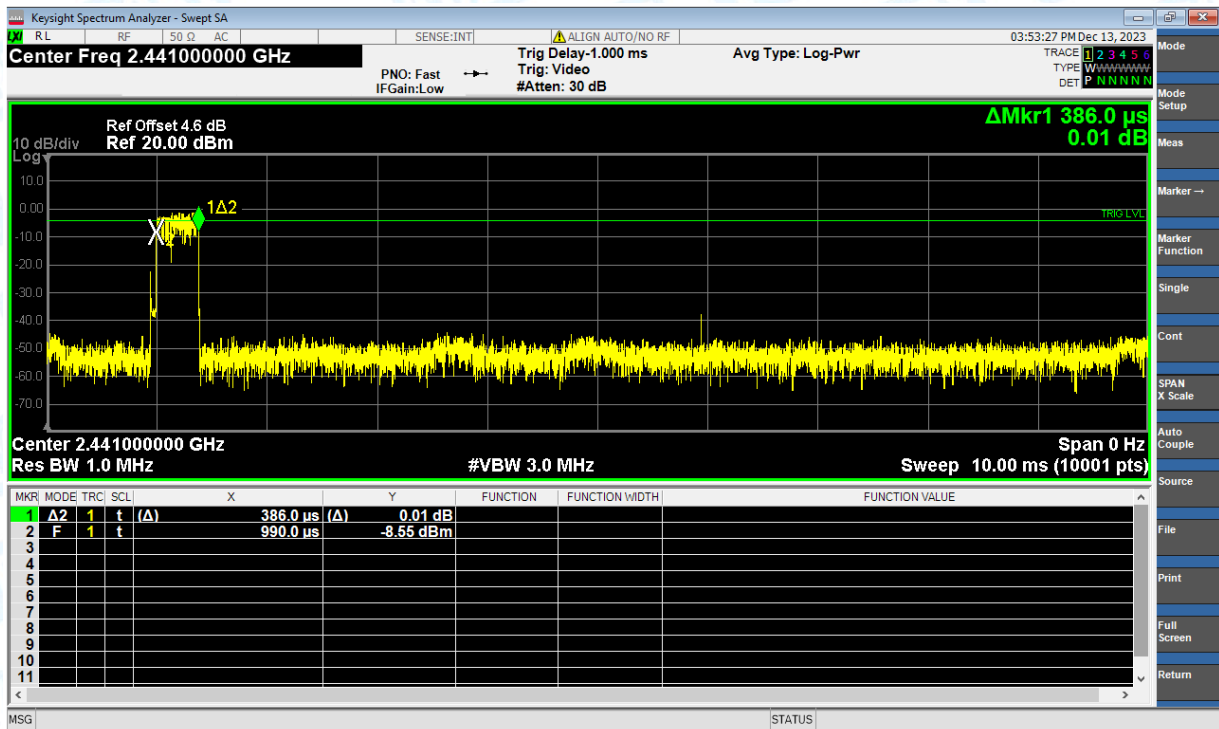
Dwell NVNT 1-DH3 2441MHz Ant1



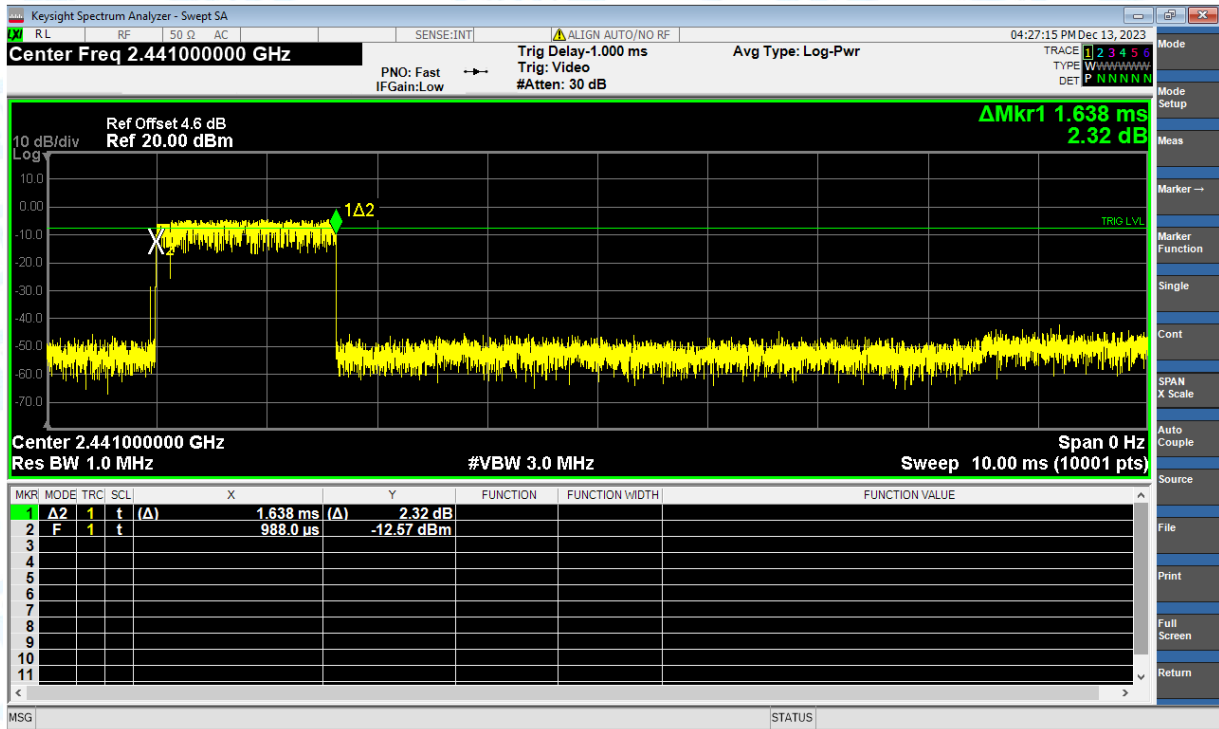
Dwell NVNT 1-DH5 2441MHz Ant1



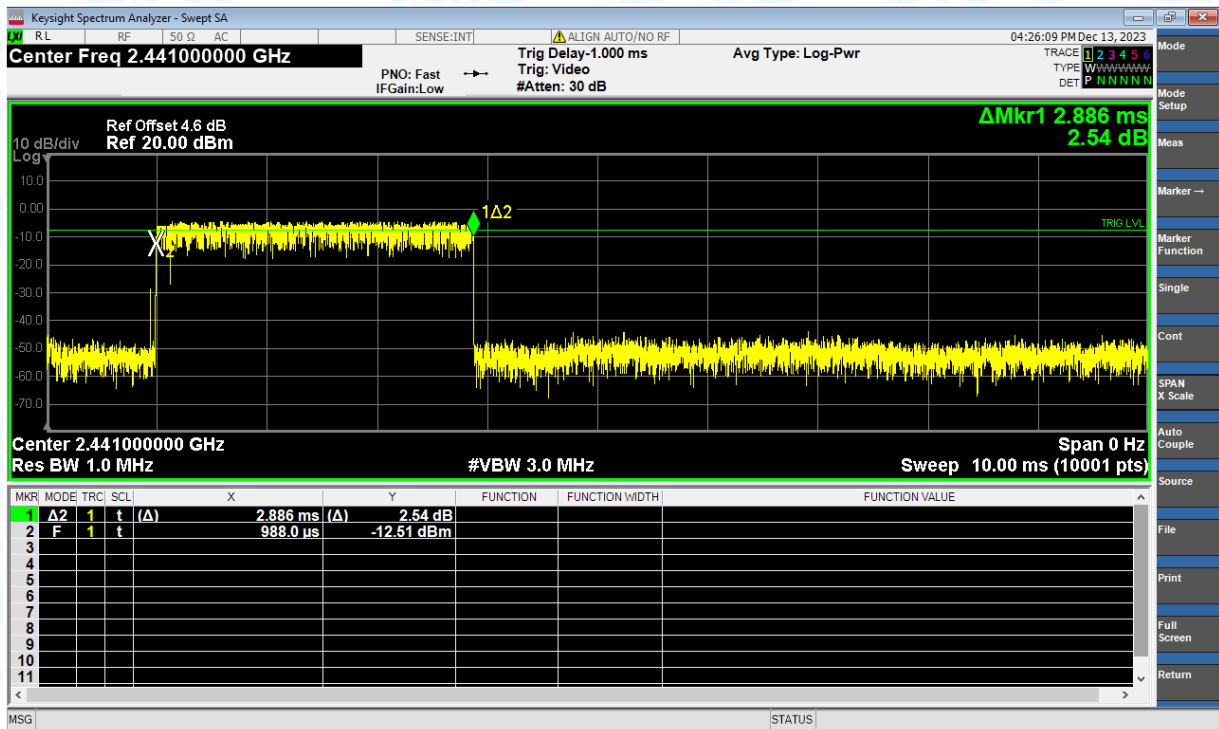
Dwell NVNT 2-DH1 2441MHz Ant1



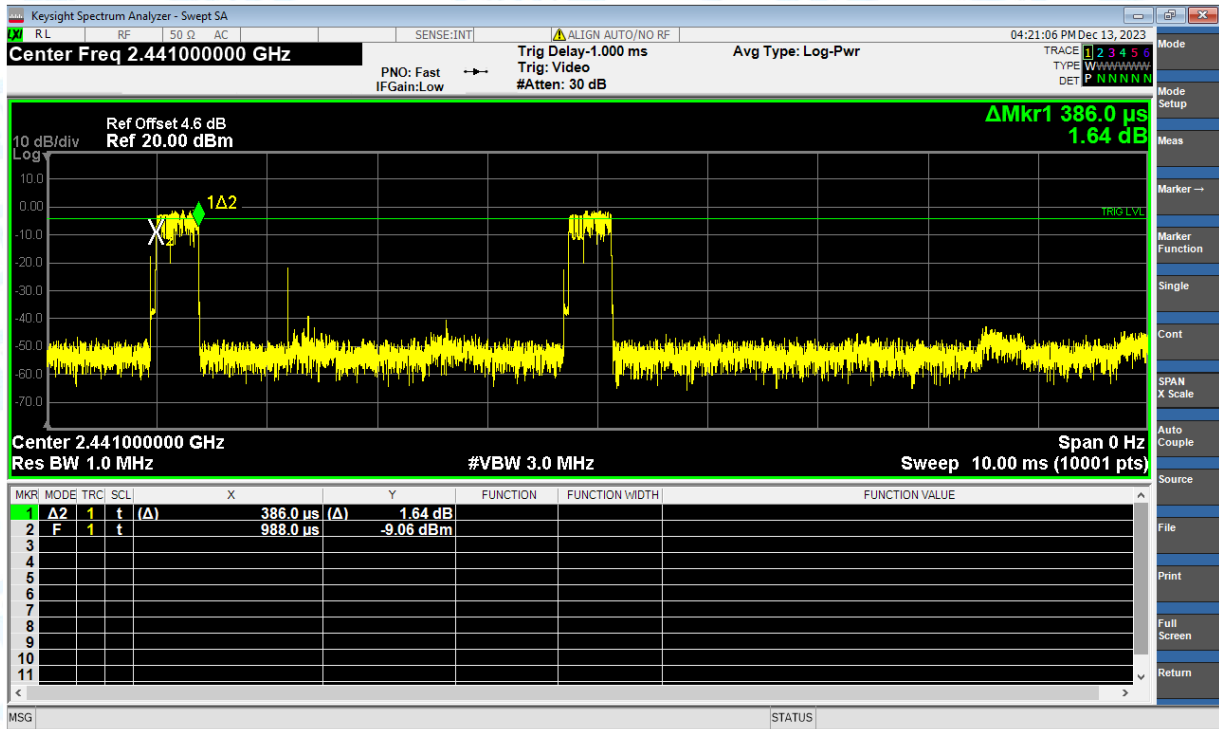
Dwell NVNT 2-DH3 2441MHz Ant1



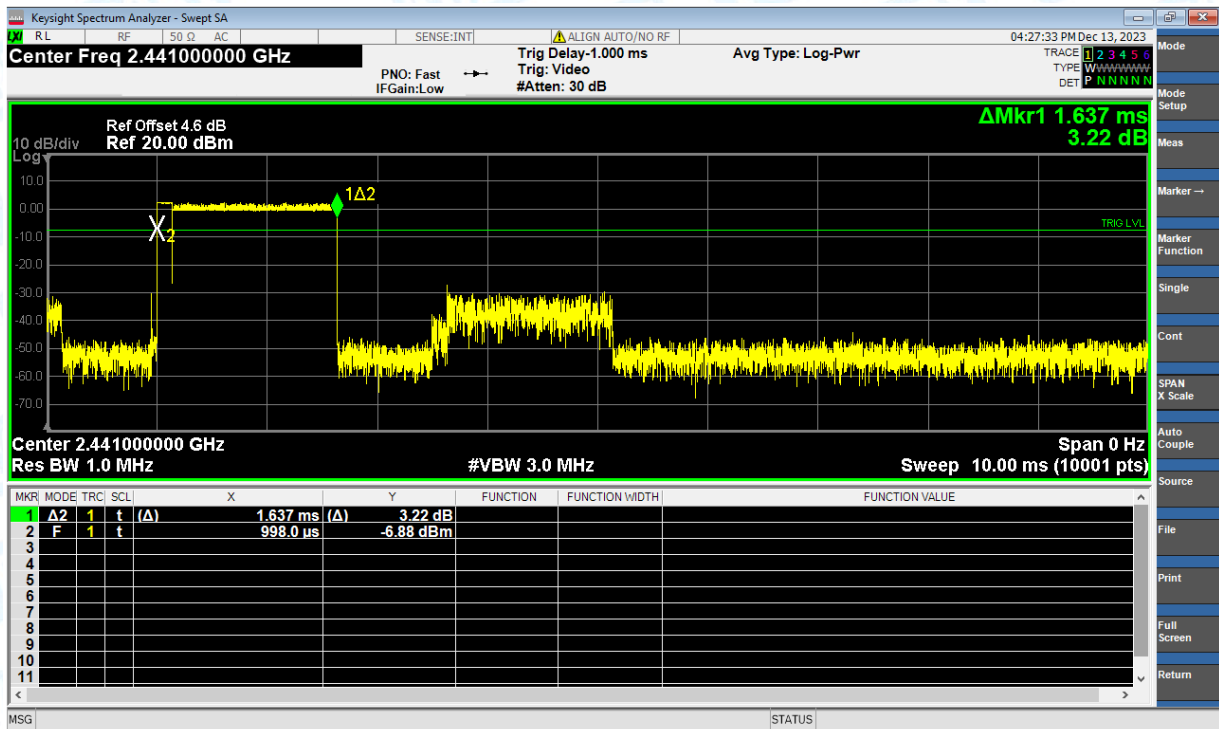
Dwell NVNT 2-DH5 2441MHz Ant1

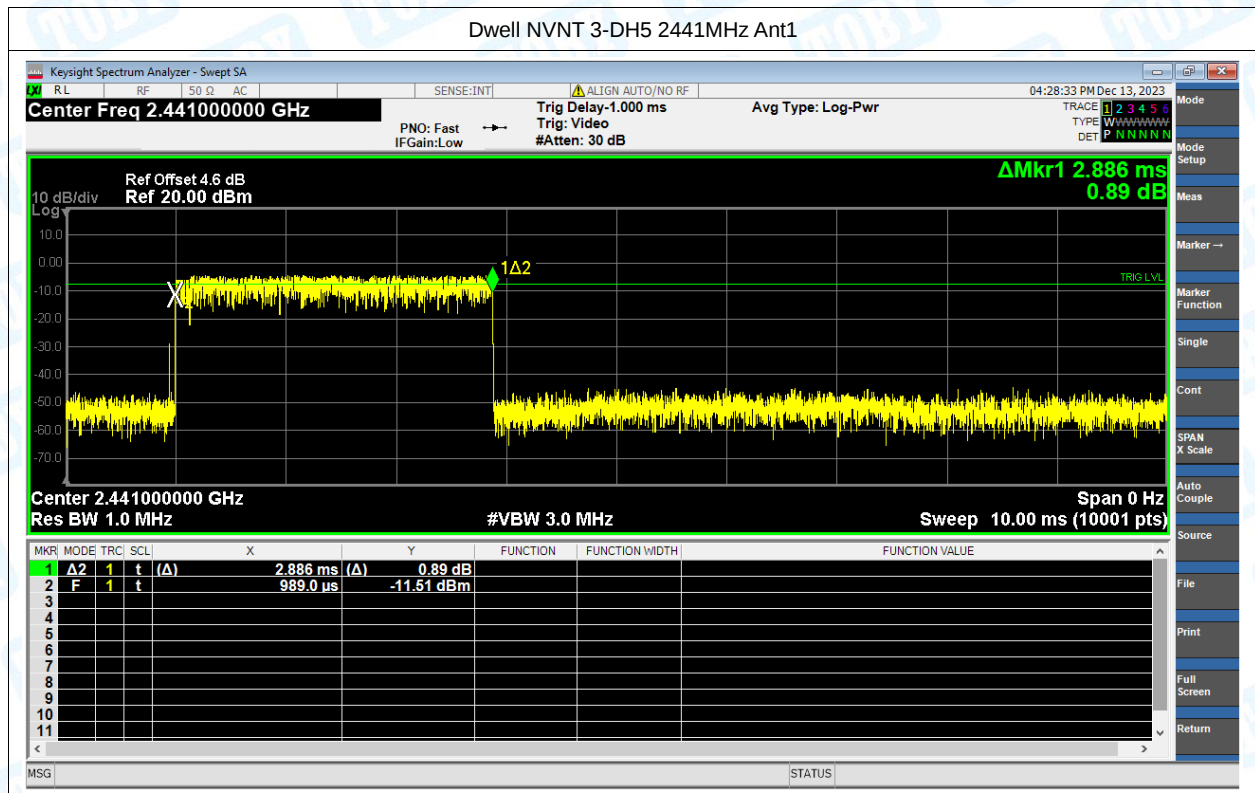


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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