

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

General Description of EUT	
Product Name:	Total station
Test Model:	NS30
Sample ID:	202306-0191-1-2#
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 12V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202306-0191-11 The report only show the worst case data.	

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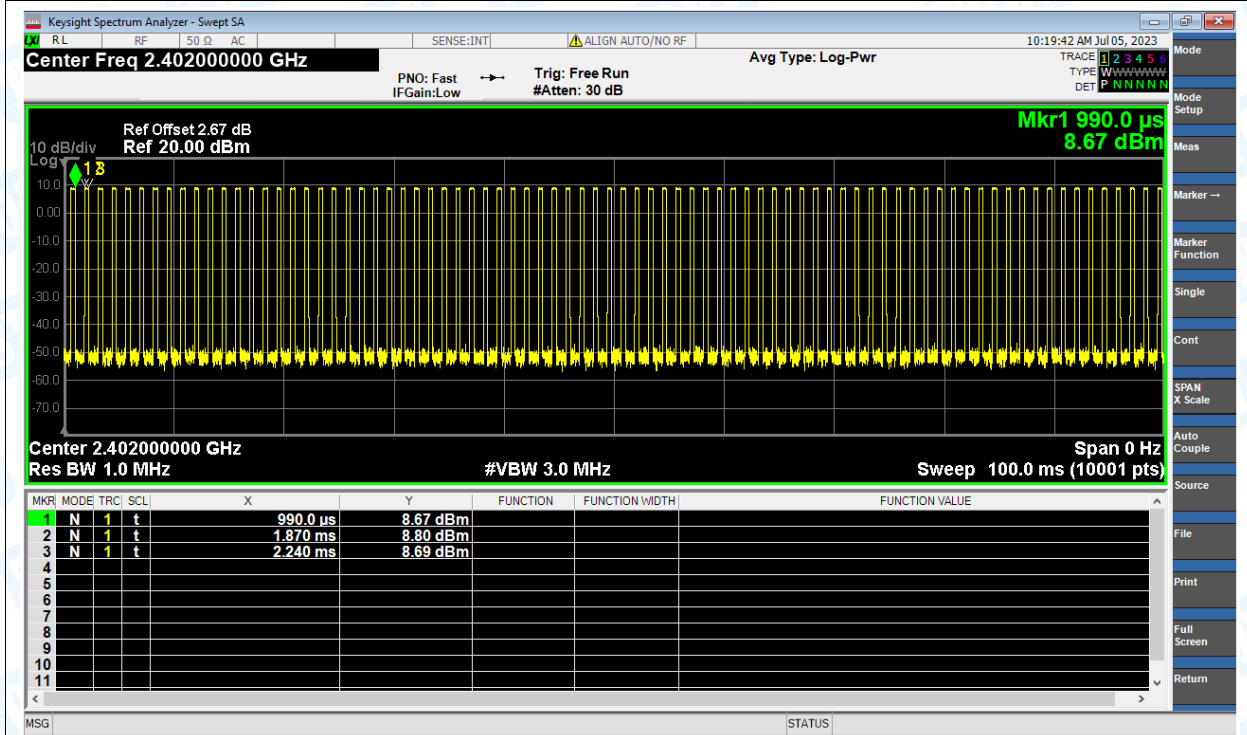
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1. Duty Cycle

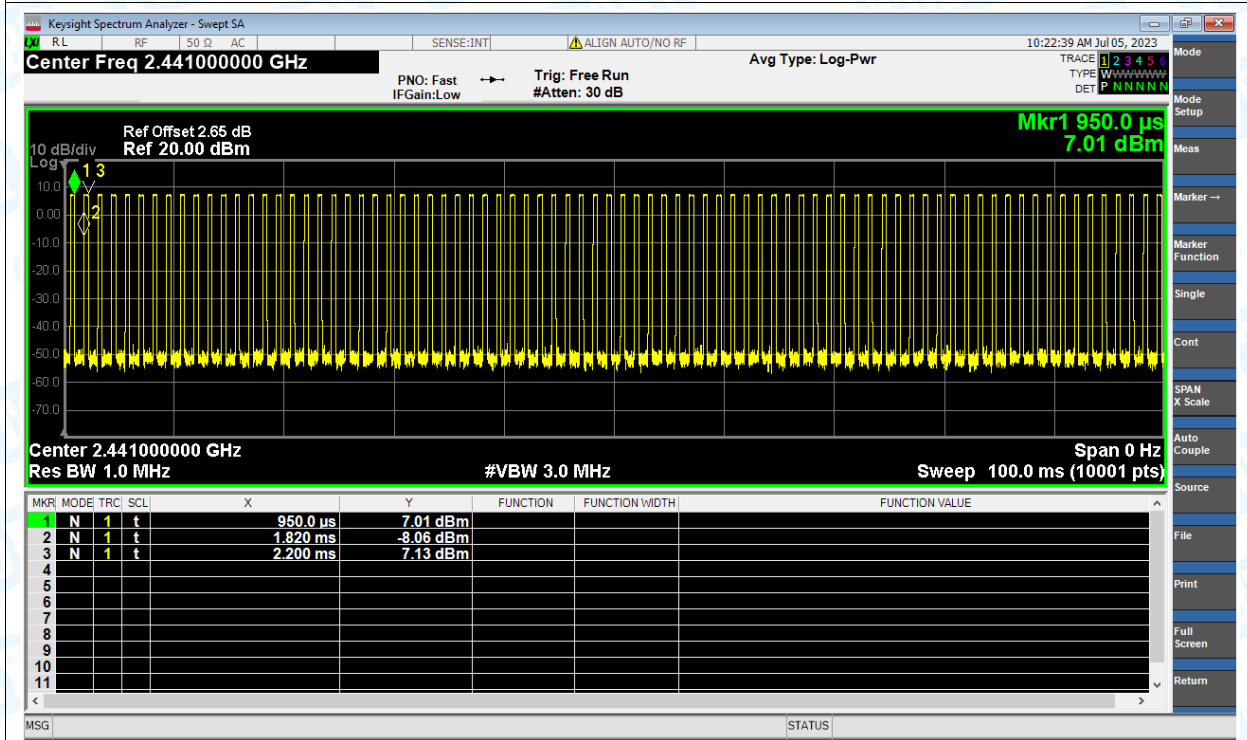
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	29.6	5.29	2.7
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56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

Test Graphs

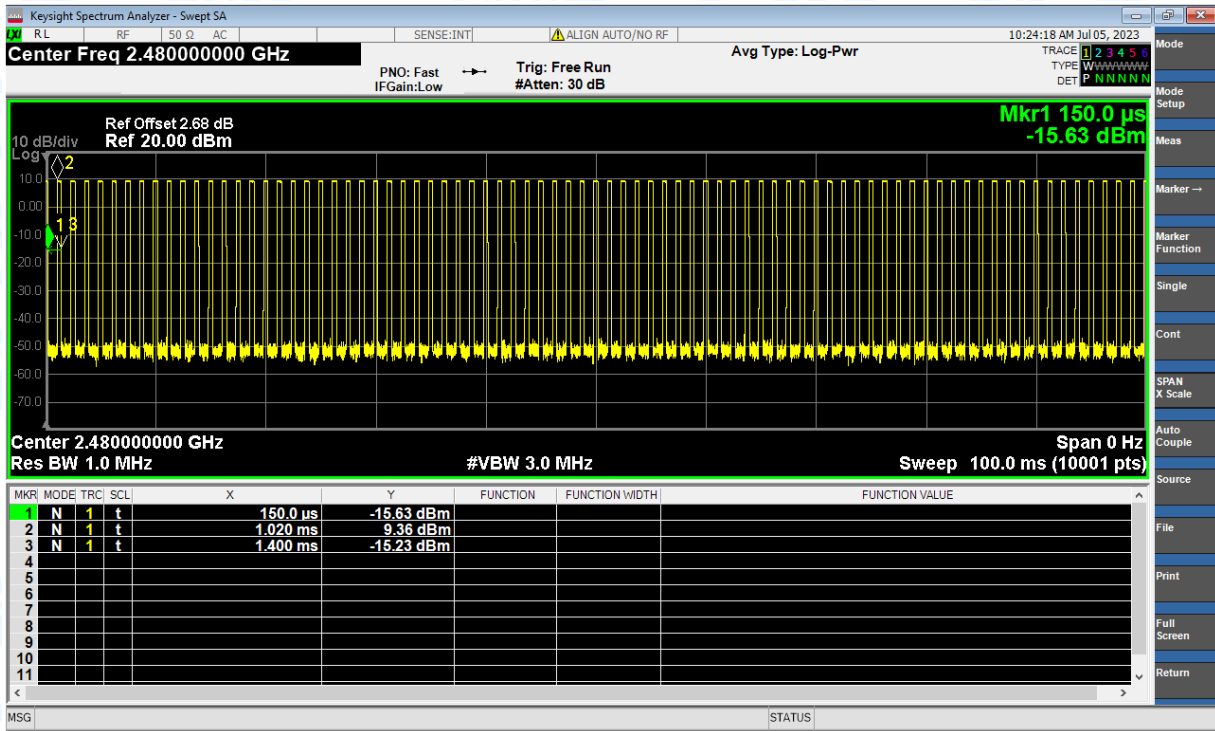
Duty Cycle NVNT 1-DH1 2402MHz Ant1



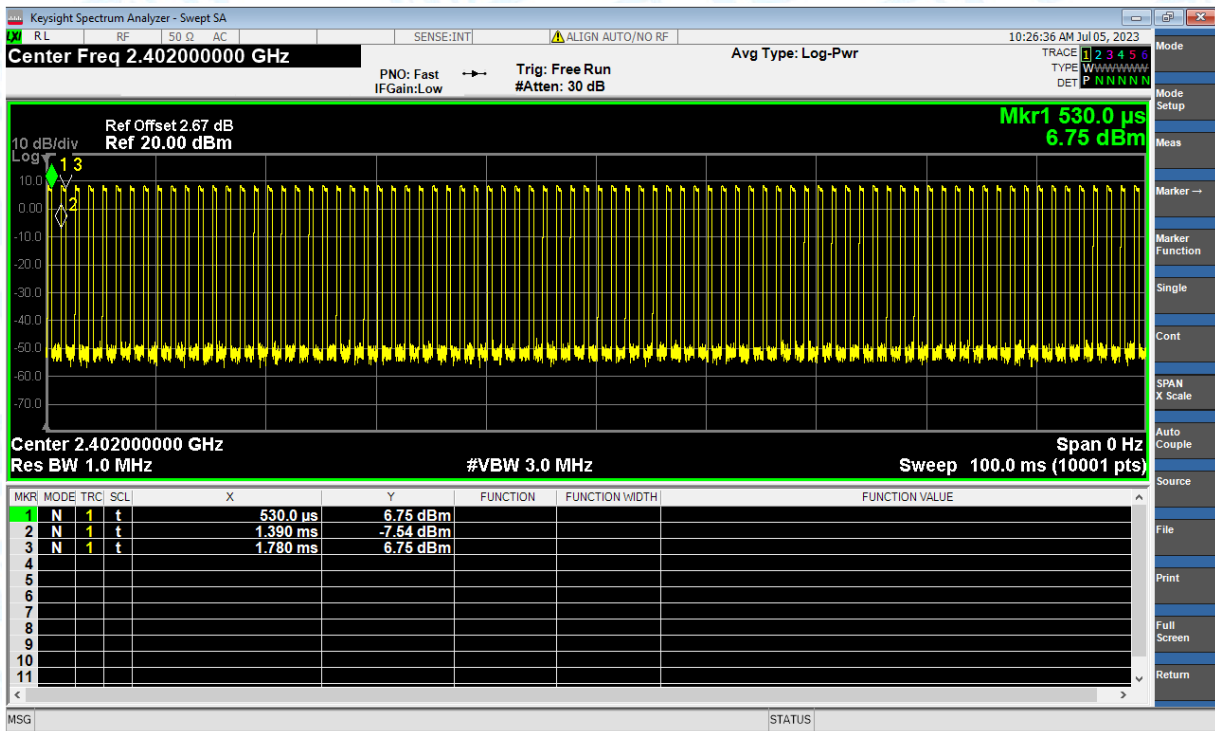
Duty Cycle NVNT 1-DH1 2441MHz Ant1



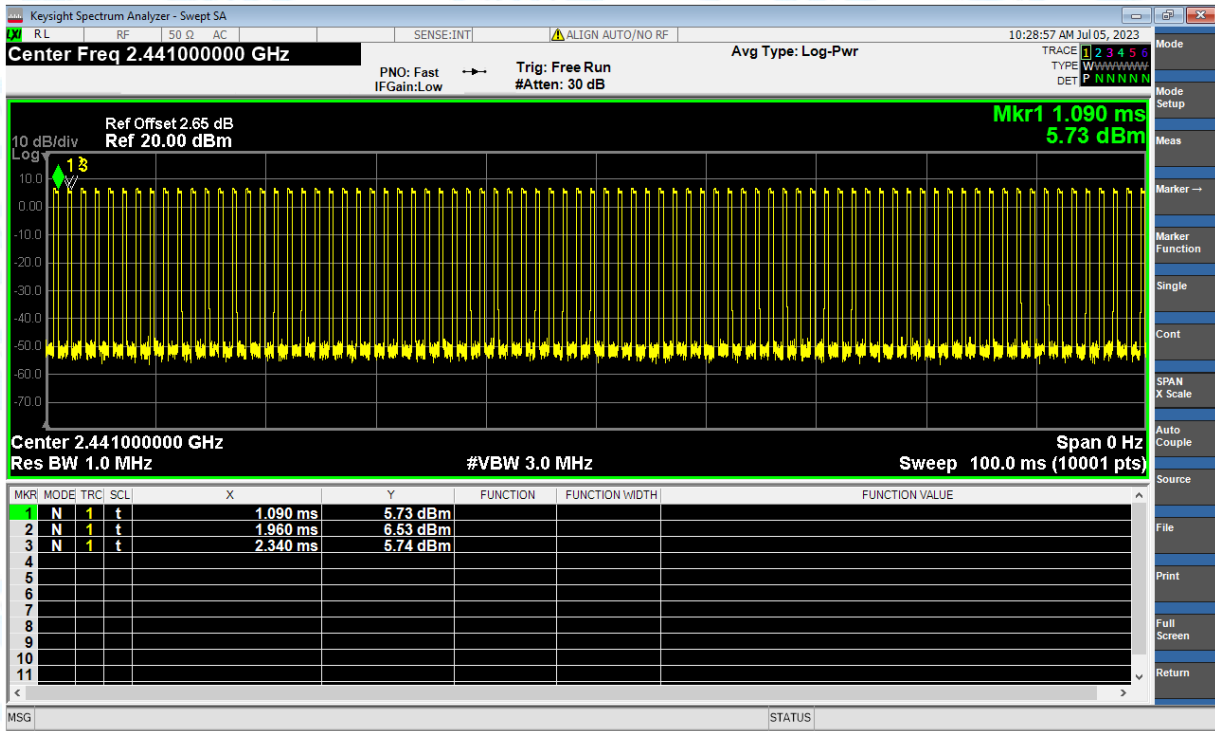
Duty Cycle NVNT 1-DH1 2480MHz Ant1



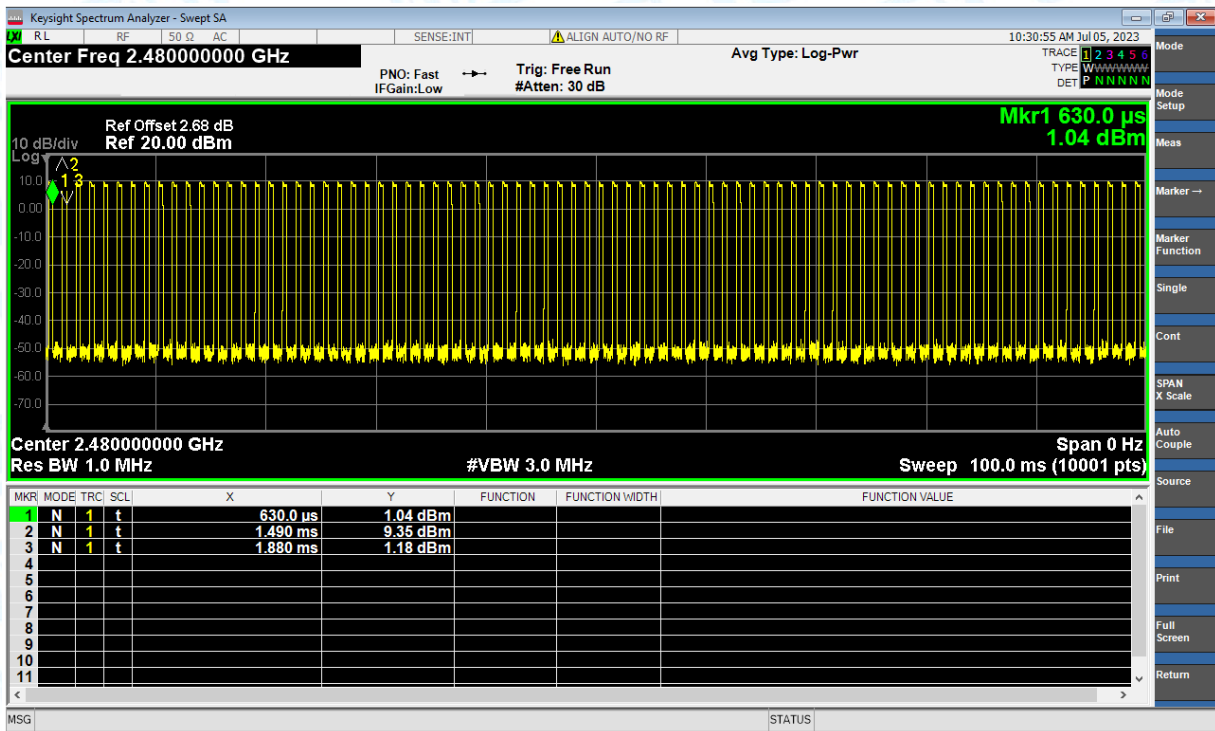
Duty Cycle NVNT 2-DH1 2402MHz Ant1



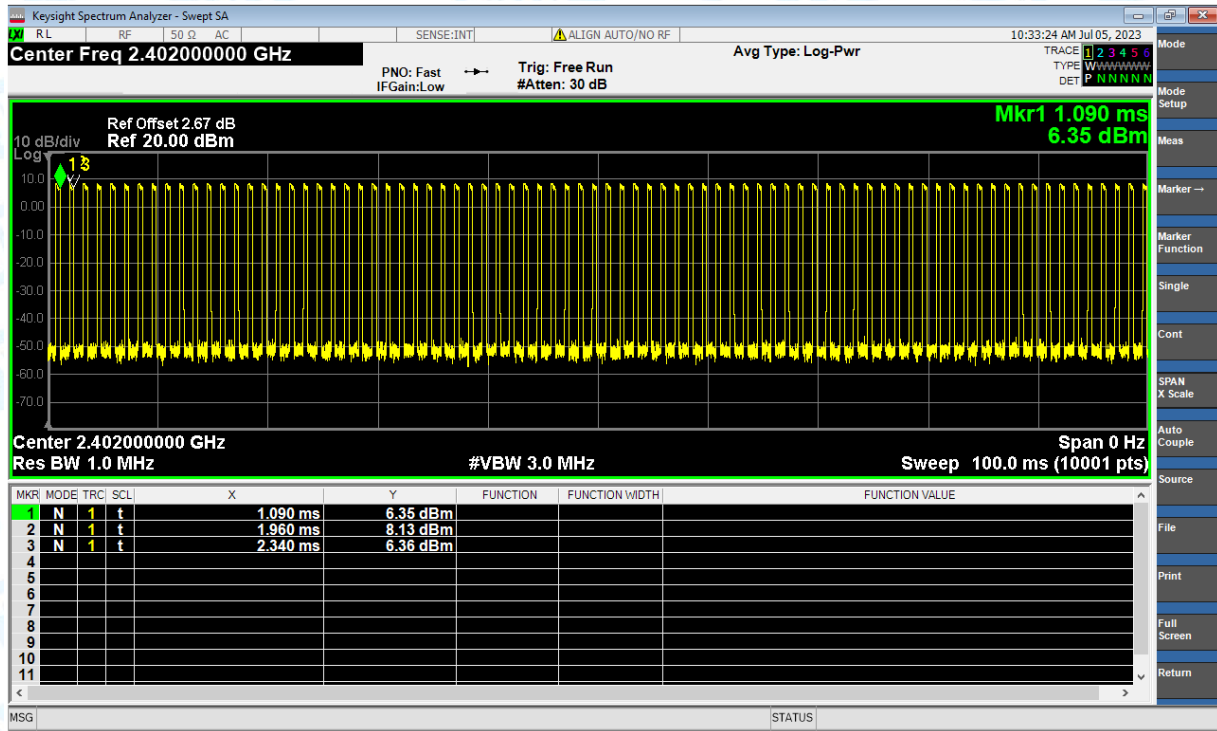
Duty Cycle NVNT 2-DH1 2441MHz Ant1



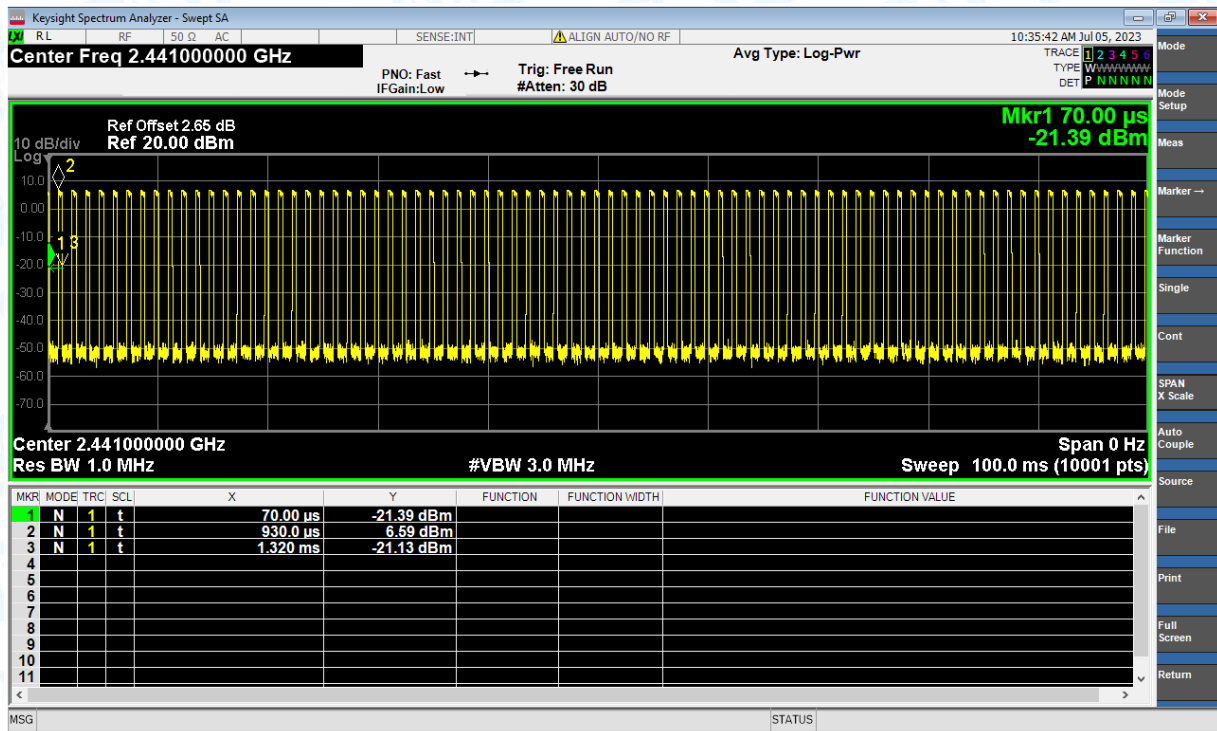
Duty Cycle NVNT 2-DH1 2480MHz Ant1

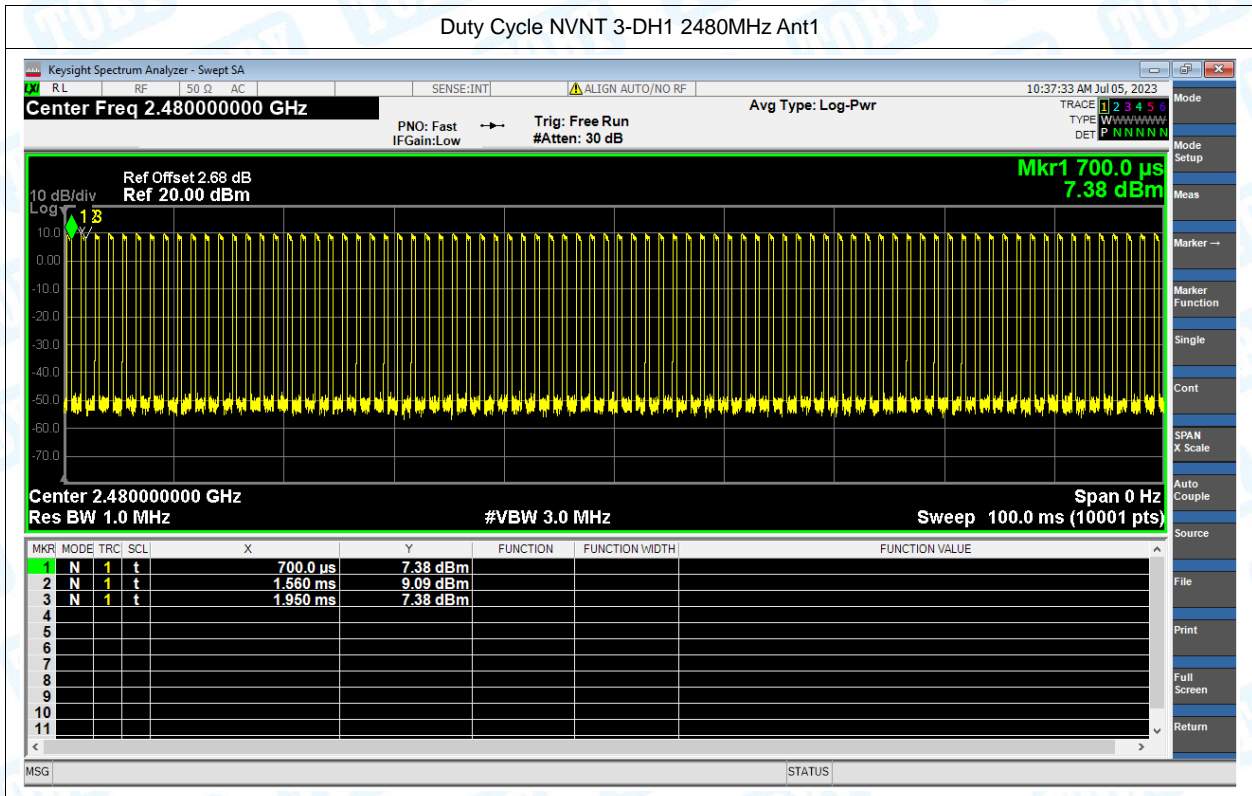


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



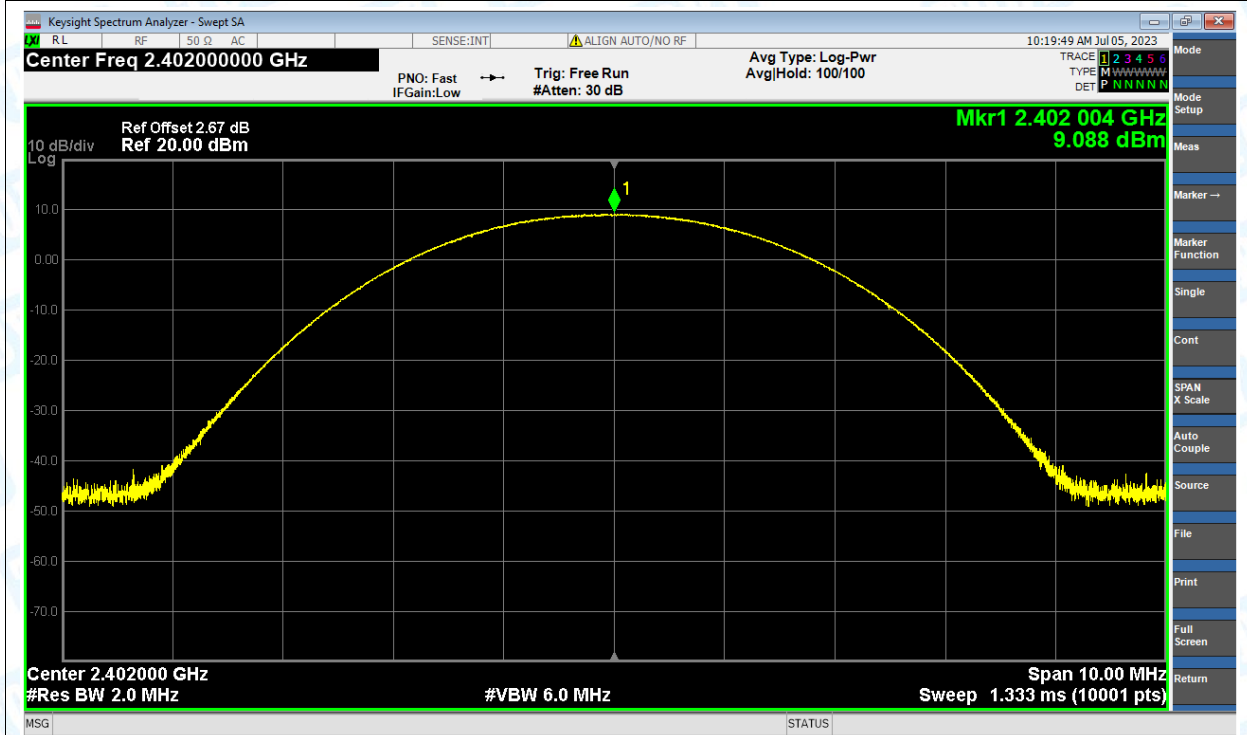


2. Maximum Conducted Output Power

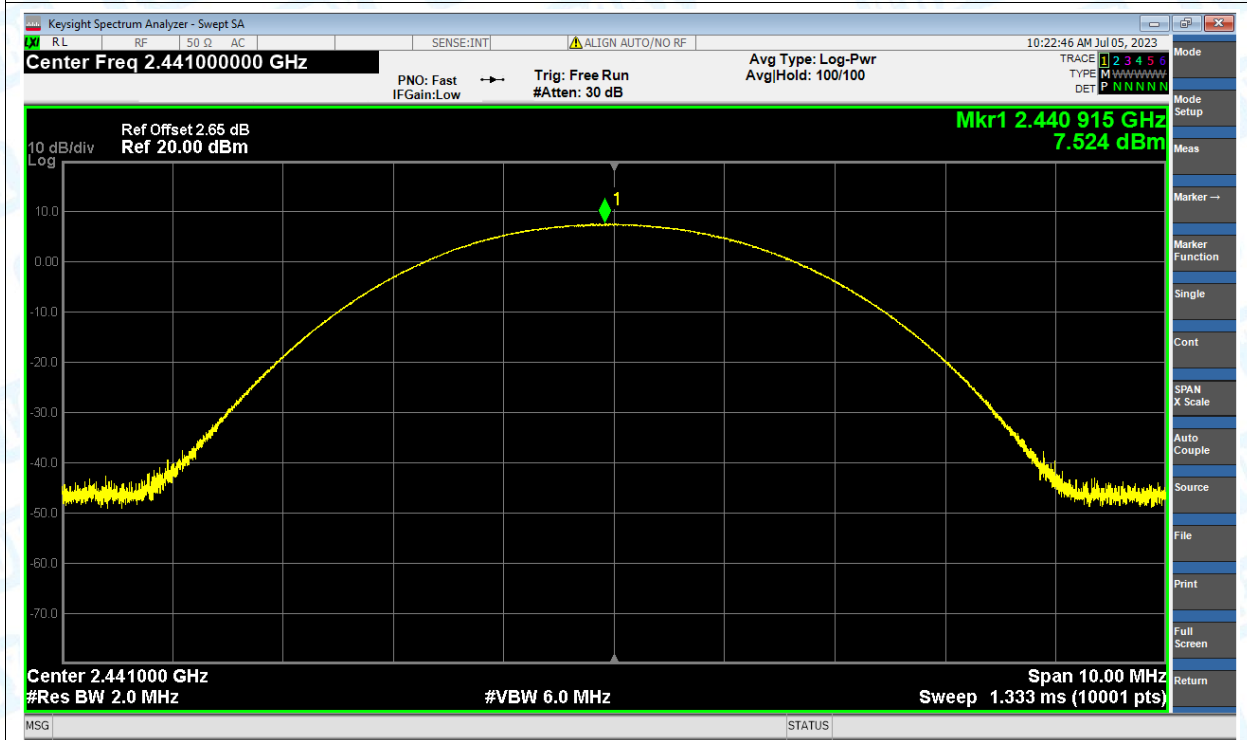
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	9.088	21	Pass
NVNT	1-DH1	2441	Ant1	7.524	21	Pass
NVNT	1-DH1	2480	Ant1	9.669	21	Pass
NVNT	1-DH3	2441	Ant1	7.644	21	Pass
NVNT	1-DH5	2441	Ant1	7.56	21	Pass
NVNT	2-DH1	2402	Ant1	8.476	21	Pass
NVNT	2-DH1	2441	Ant1	6.922	21	Pass
NVNT	2-DH1	2480	Ant1	9.81	21	Pass
NVNT	2-DH3	2441	Ant1	6.978	21	Pass
NVNT	2-DH5	2441	Ant1	6.943	21	Pass
NVNT	3-DH1	2402	Ant1	8.511	21	Pass
NVNT	3-DH1	2441	Ant1	6.988	21	Pass
NVNT	3-DH1	2480	Ant1	9.848	21	Pass
NVNT	3-DH3	2441	Ant1	6.946	21	Pass
NVNT	3-DH5	2441	Ant1	6.905	21	Pass

Test Graphs

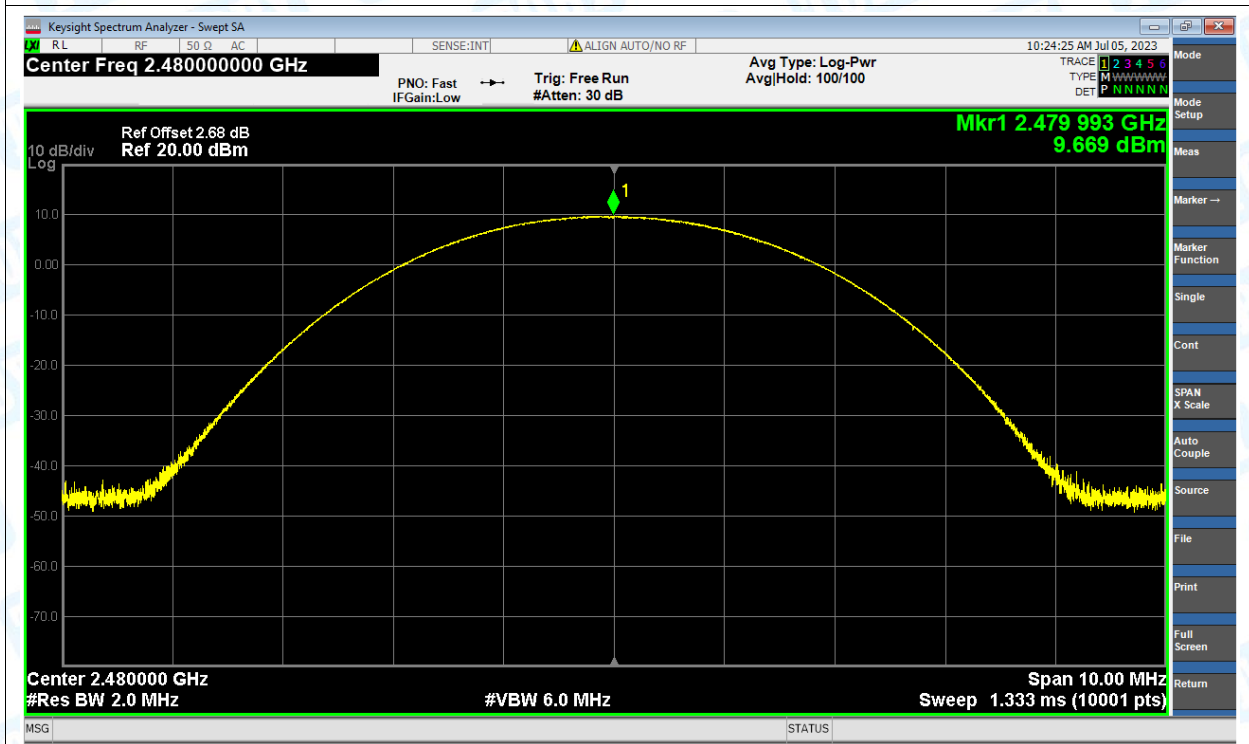
Power NVNT 1-DH1 2402MHz Ant1



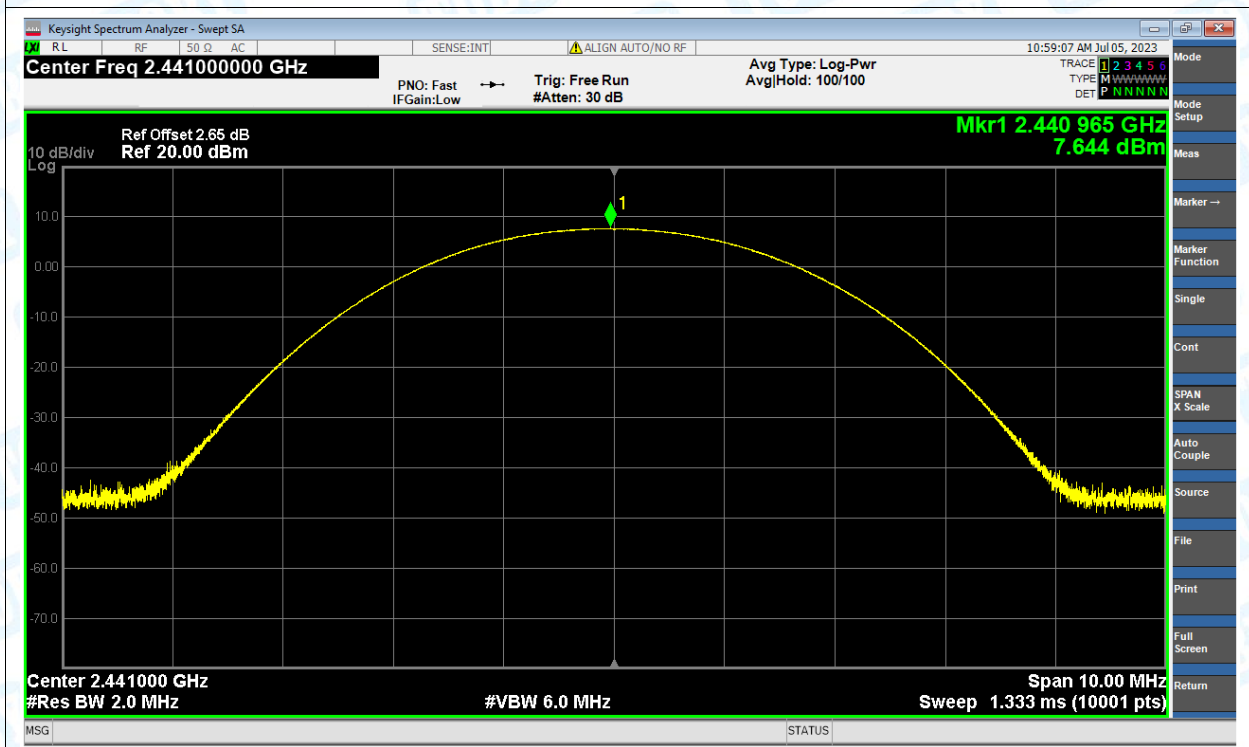
Power NVNT 1-DH1 2441MHz Ant1



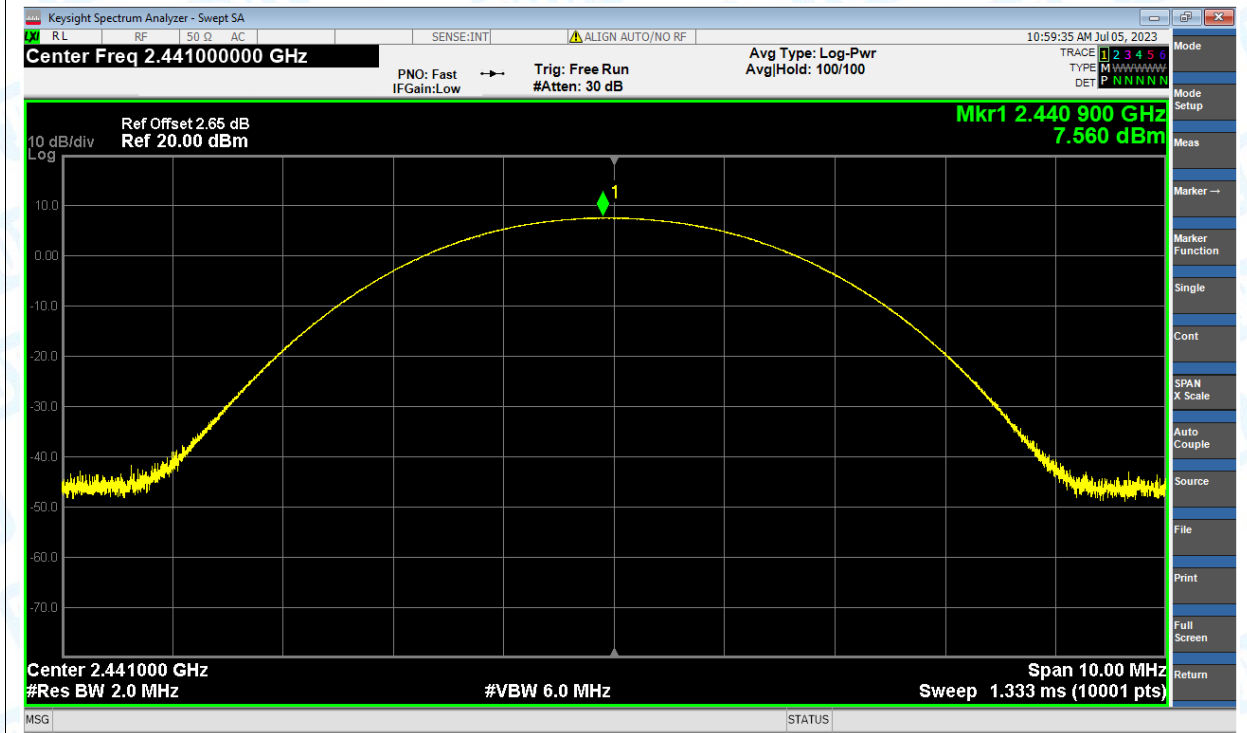
Power NVNT 1-DH1 2480MHz Ant1



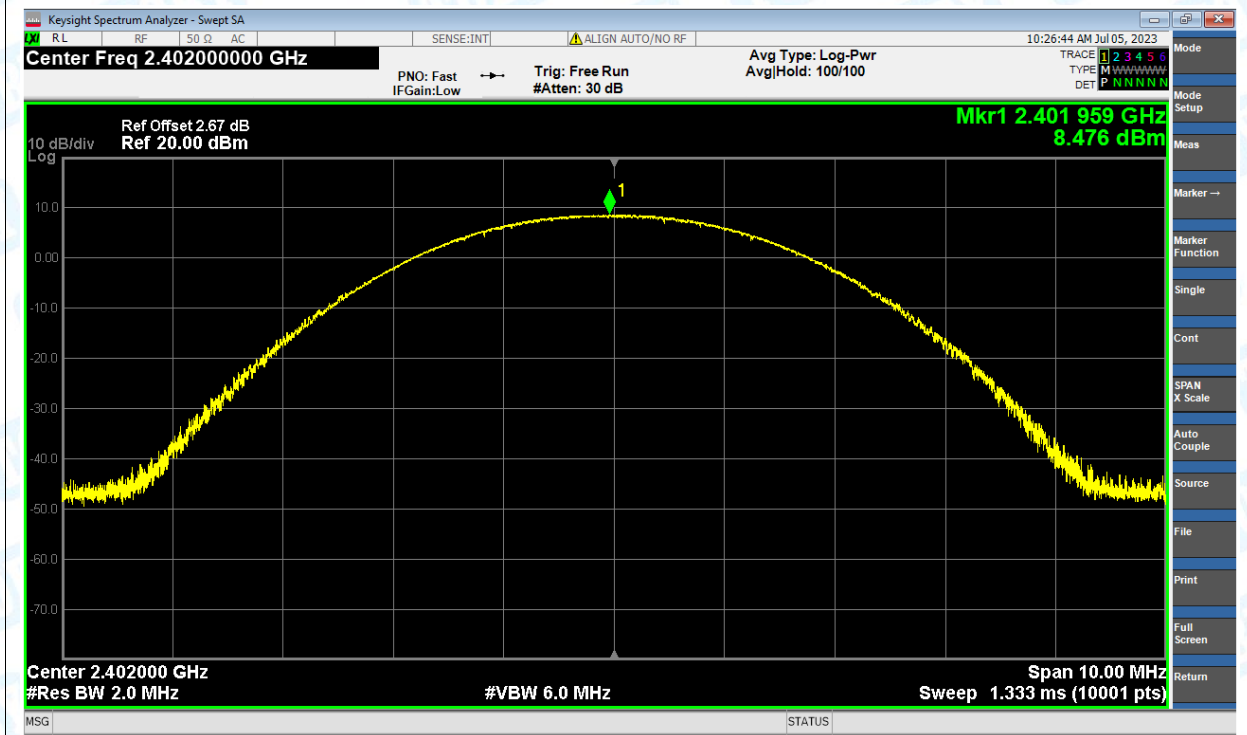
Power NVNT 1-DH3 2441MHz Ant1



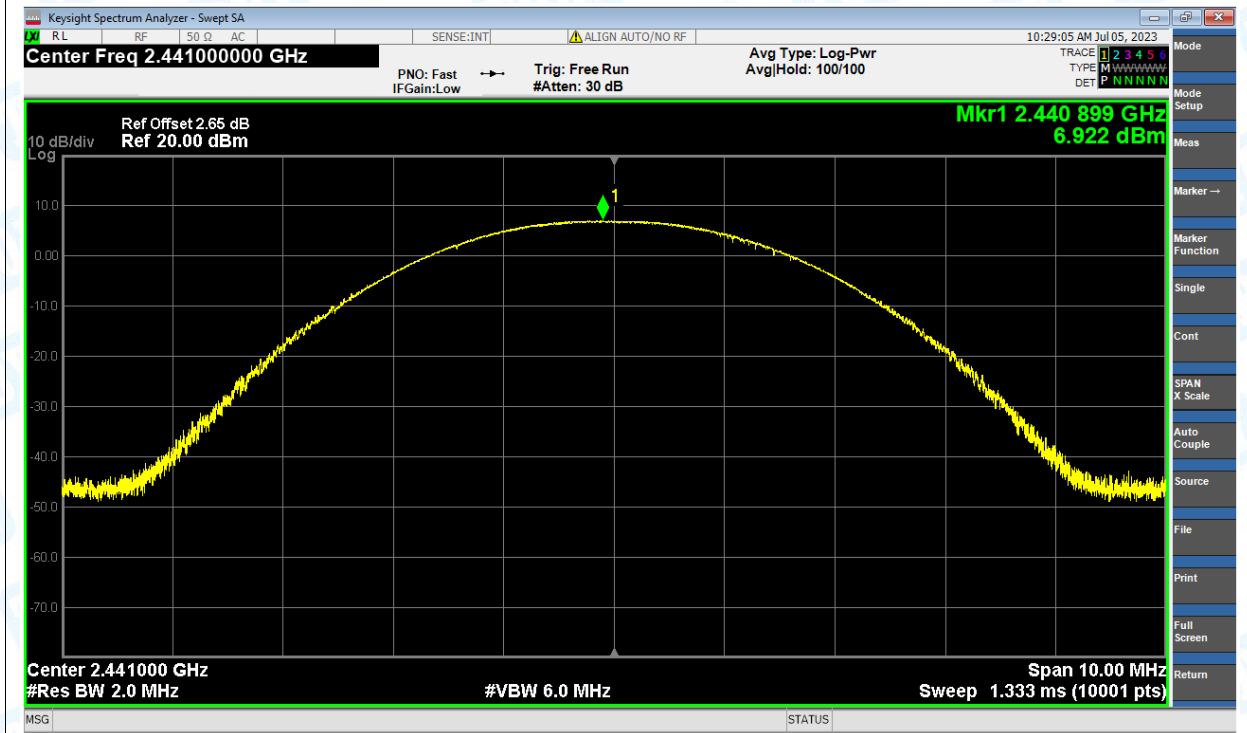
Power NVNT 1-DH5 2441MHz Ant1



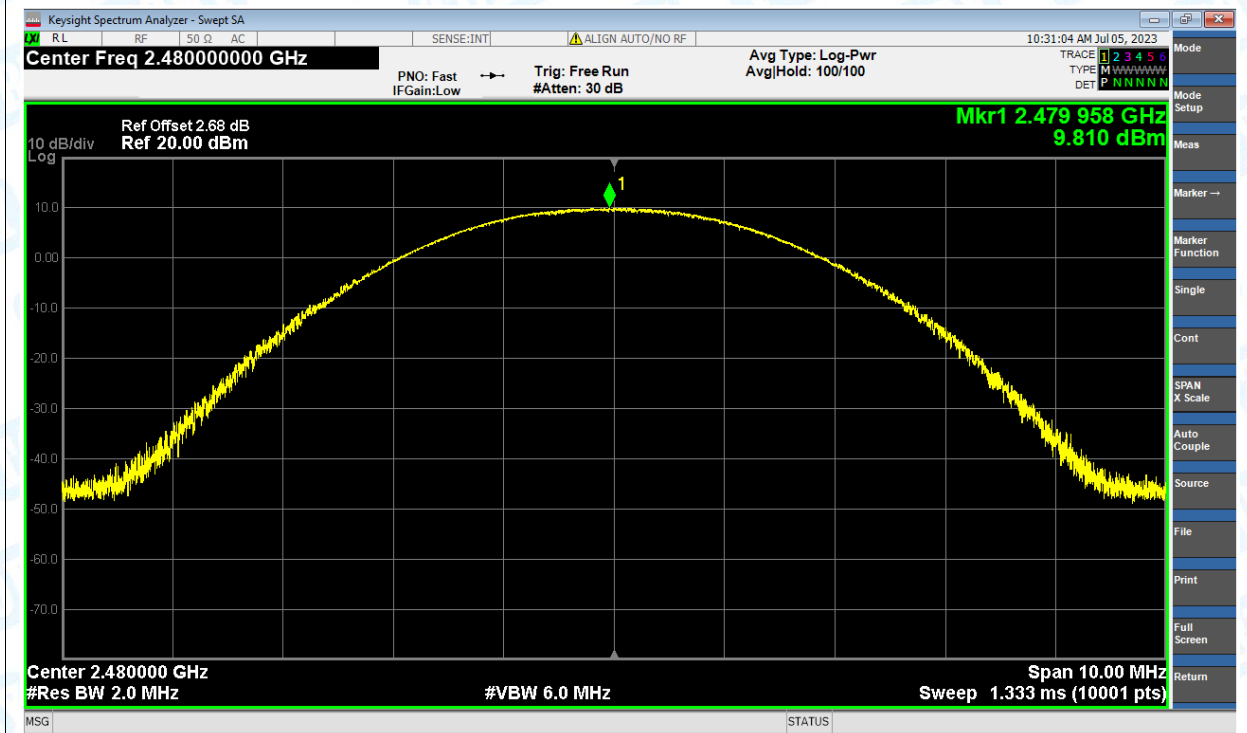
Power NVNT 2-DH1 2402MHz Ant1



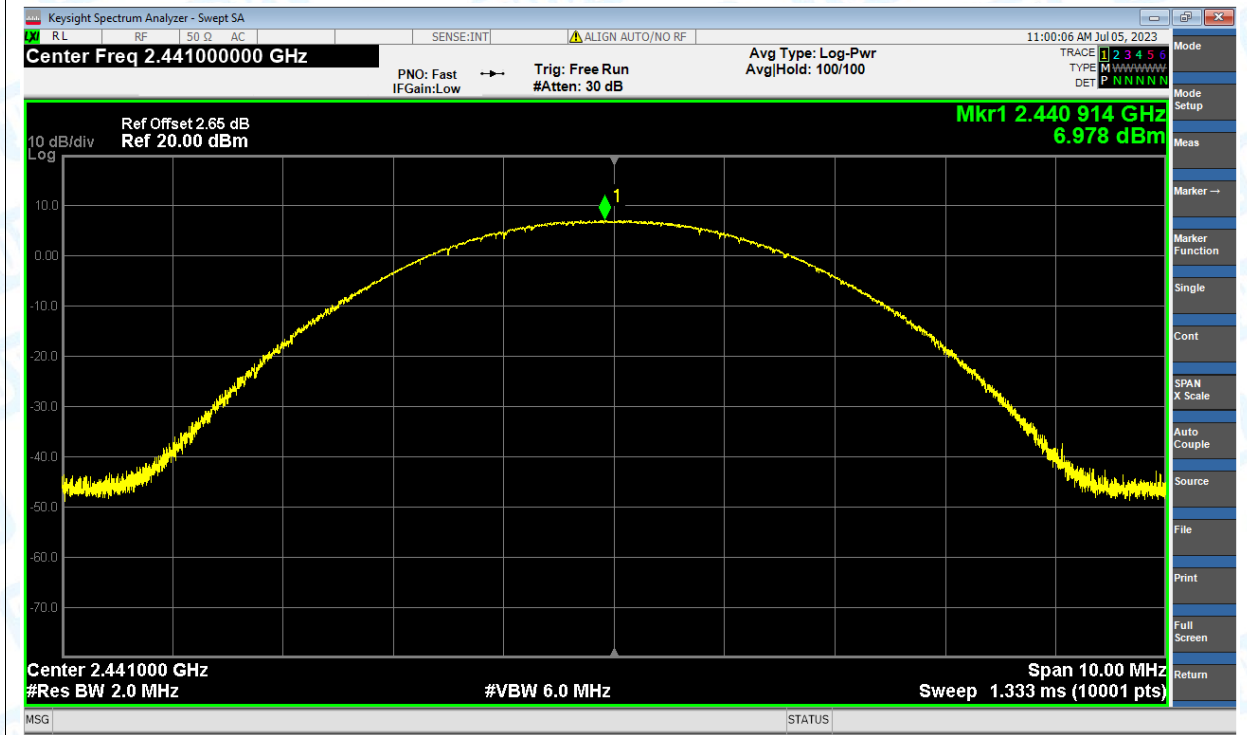
Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1

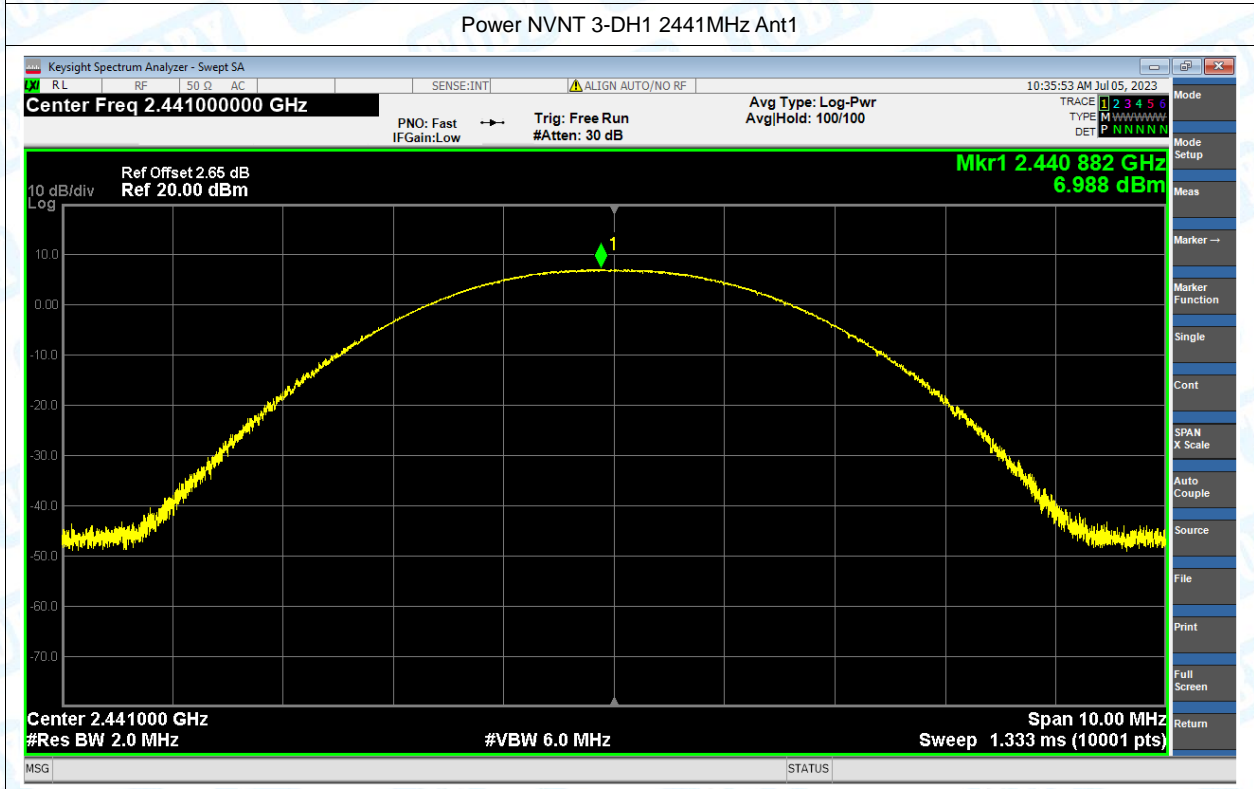


Power NVNT 2-DH3 2441MHz Ant1

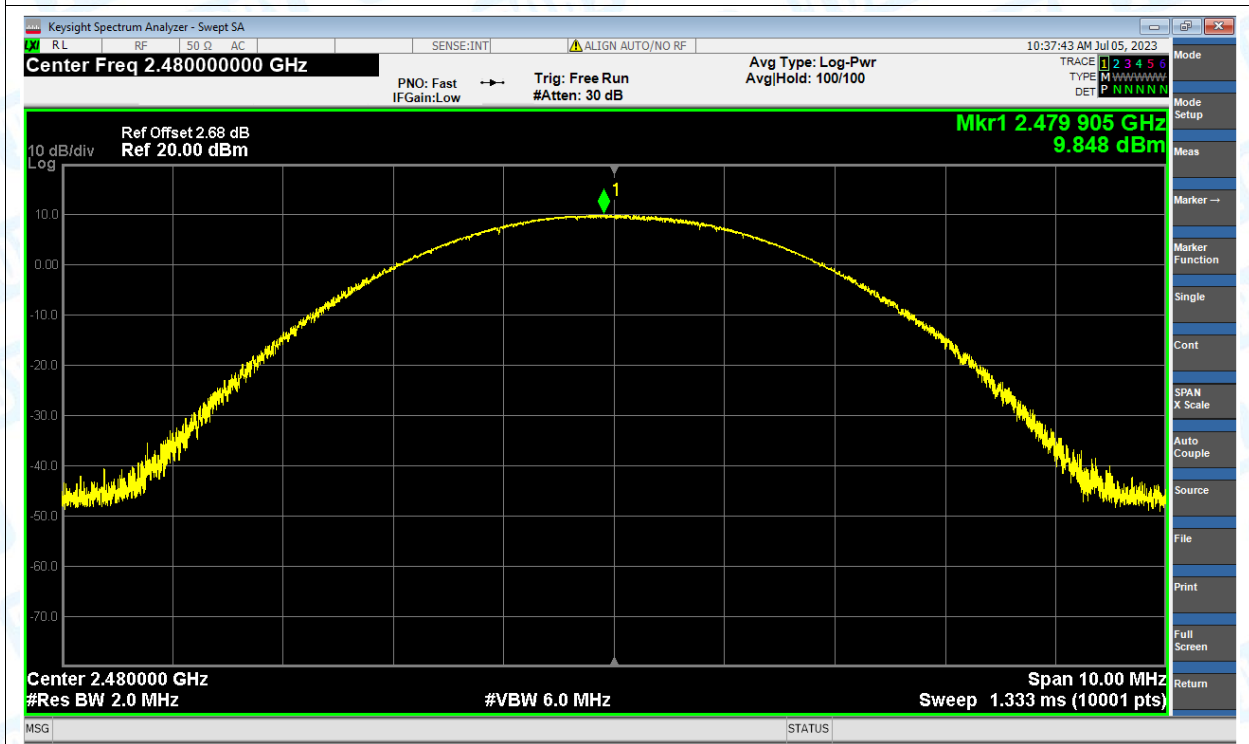


Power NVNT 2-DH5 2441MHz Ant1

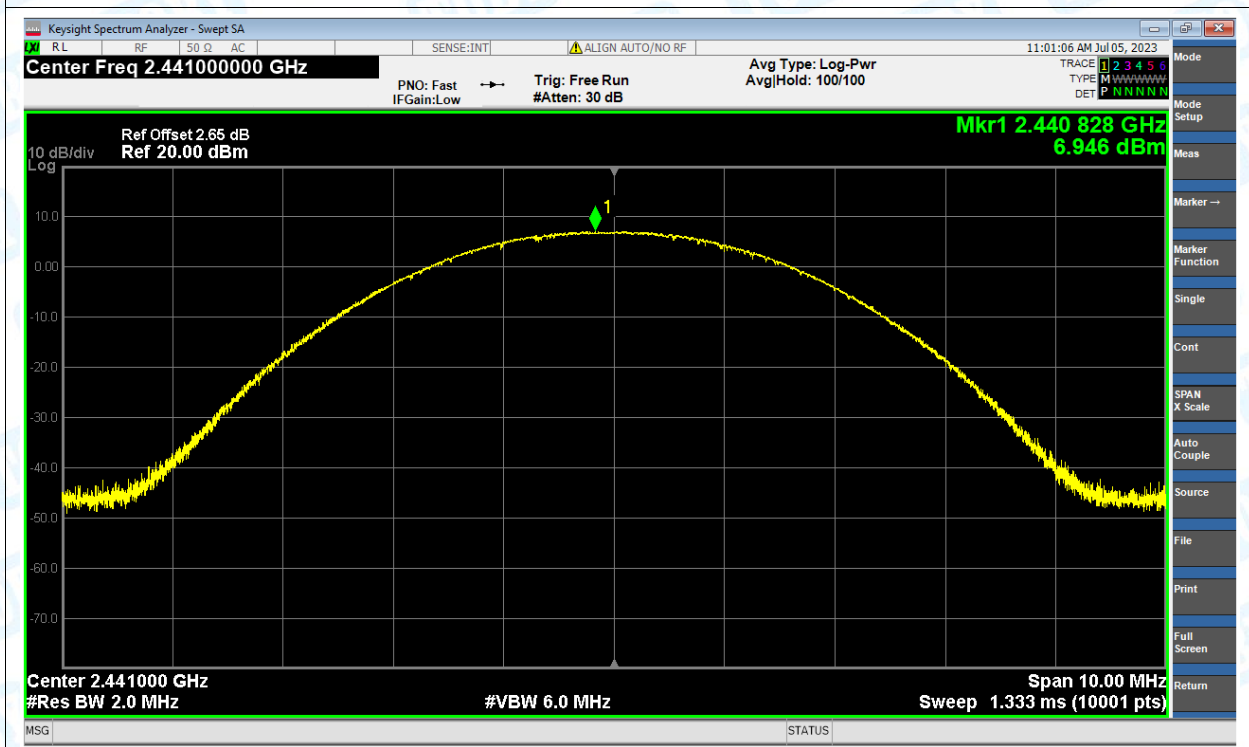




Power NVNT 3-DH1 2480MHz Ant1



Power NVNT 3-DH3 2441MHz Ant1



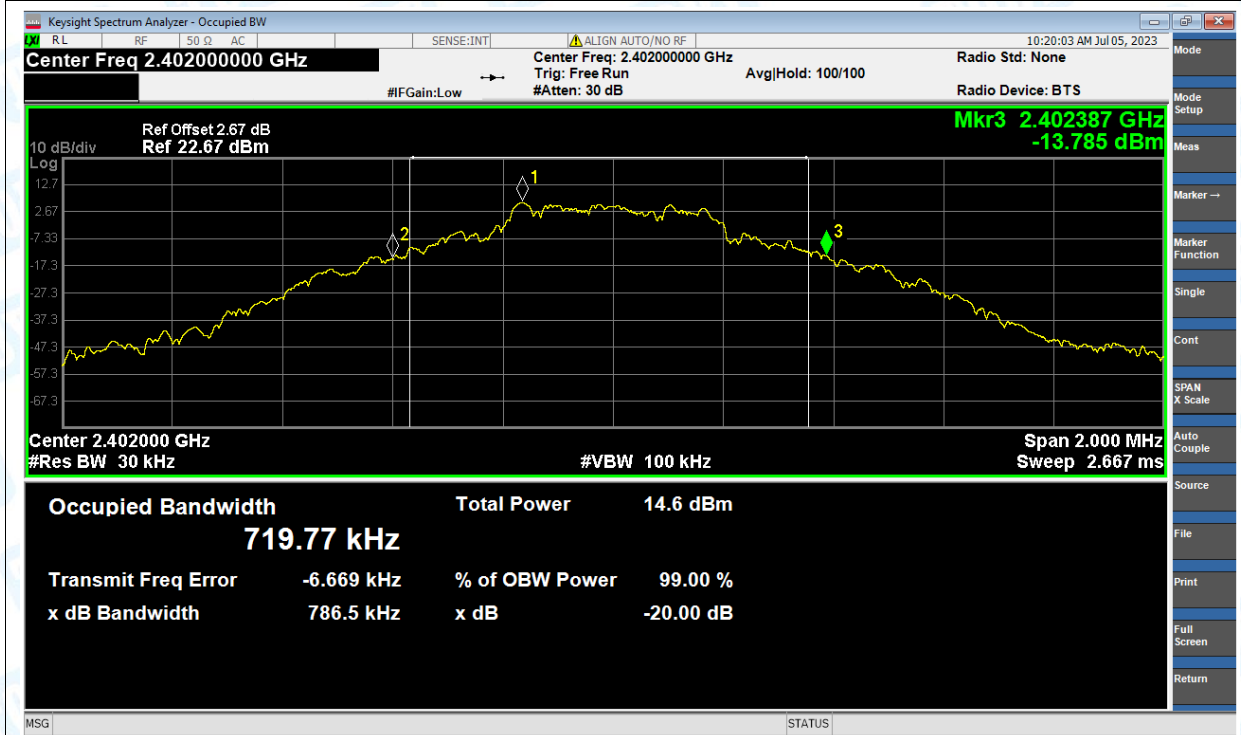


3. -20dB Bandwidth

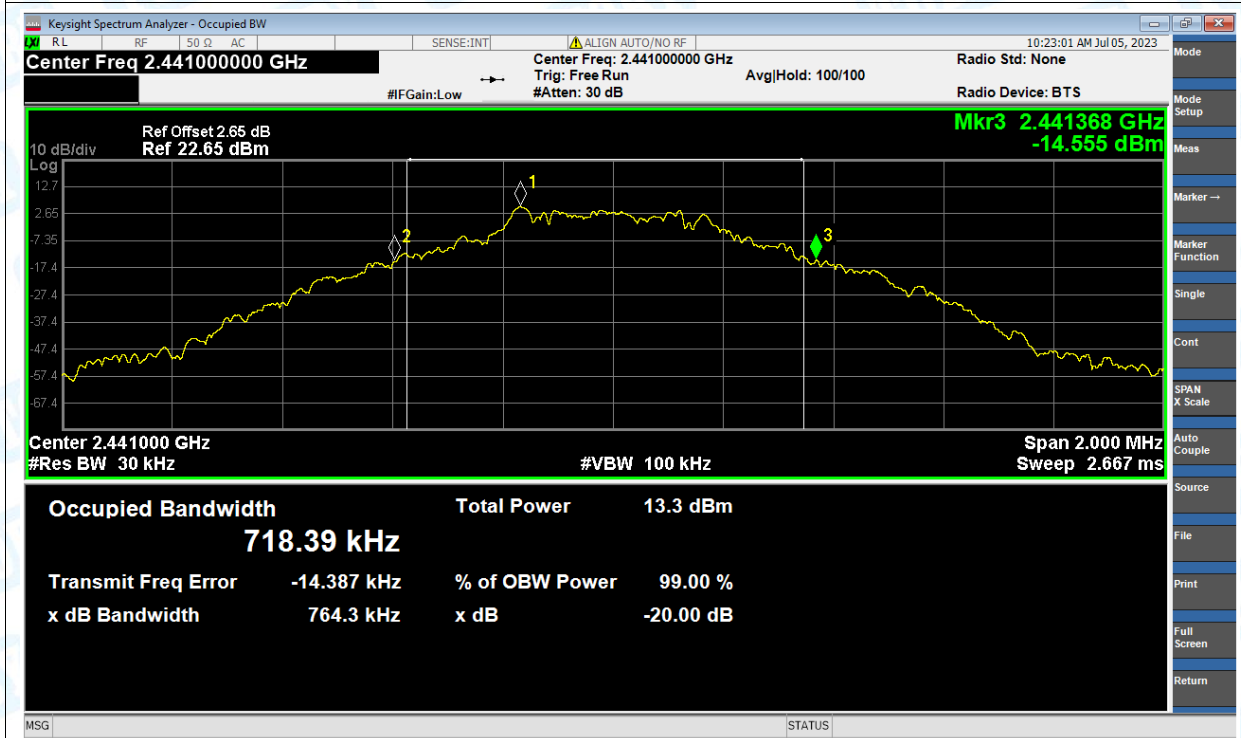
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.79	0	Pass
NVNT	1-DH1	2441	Ant1	0.76	0	Pass
NVNT	1-DH1	2480	Ant1	0.78	0	Pass
NVNT	2-DH1	2402	Ant1	1.25	0	Pass
NVNT	2-DH1	2441	Ant1	1.24	0	Pass
NVNT	2-DH1	2480	Ant1	1.22	0	Pass
NVNT	3-DH1	2402	Ant1	1.22	0	Pass
NVNT	3-DH1	2441	Ant1	1.21	0	Pass
NVNT	3-DH1	2480	Ant1	1.25	0	Pass

Test Graphs

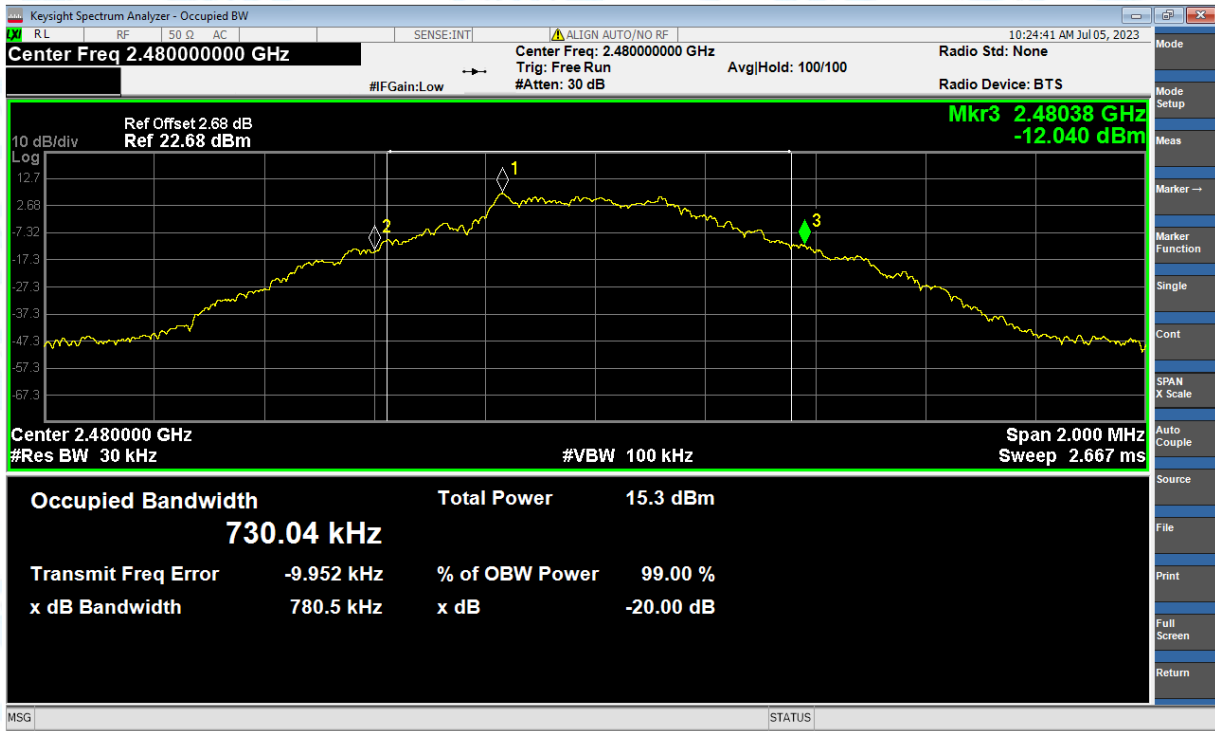
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



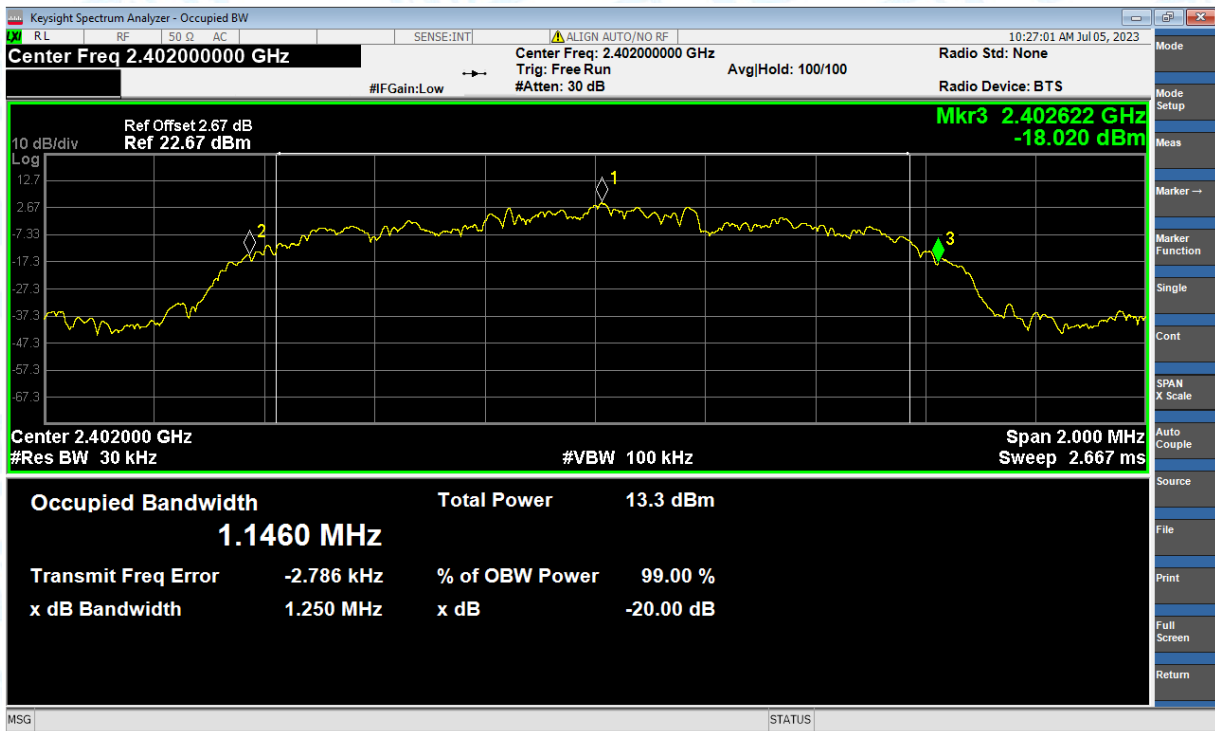
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



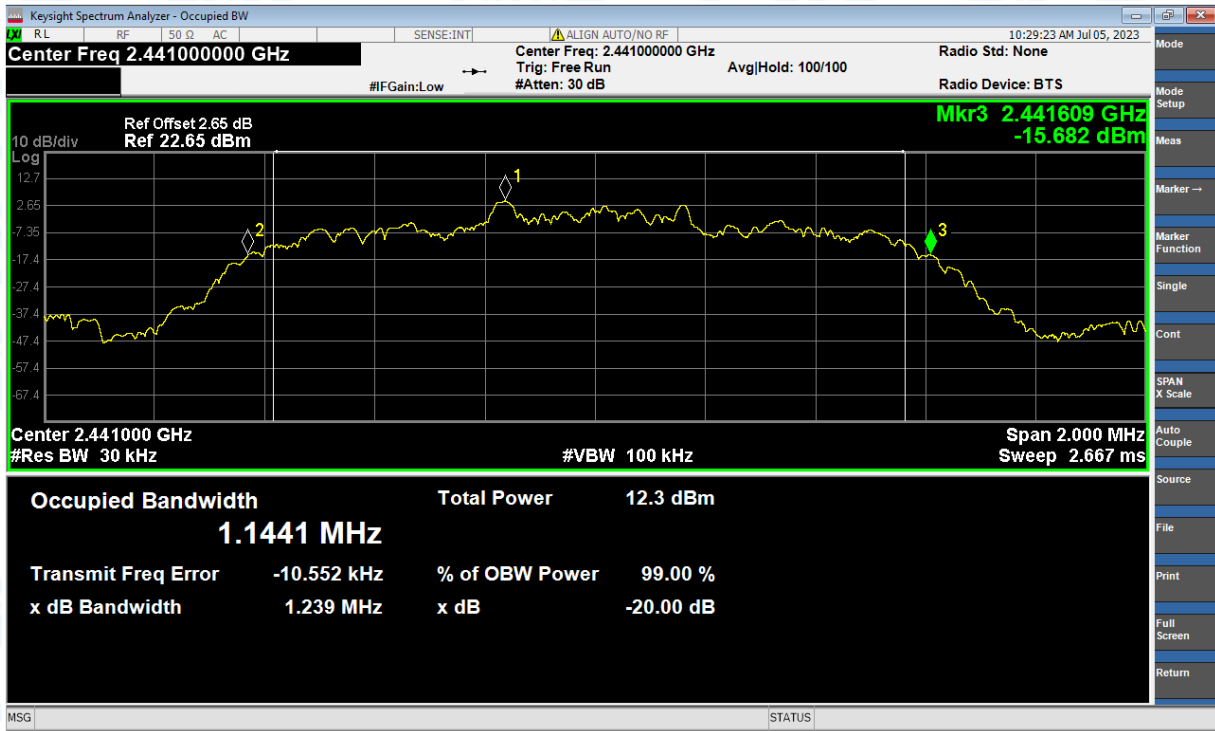
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



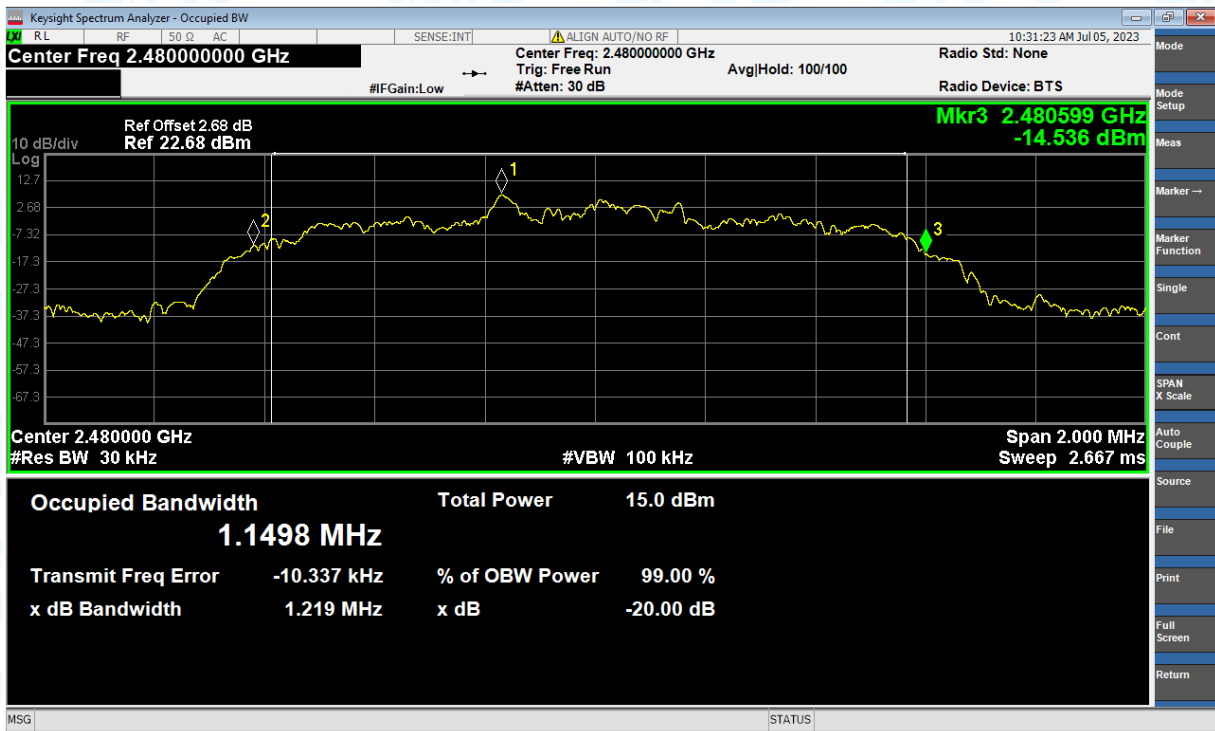
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



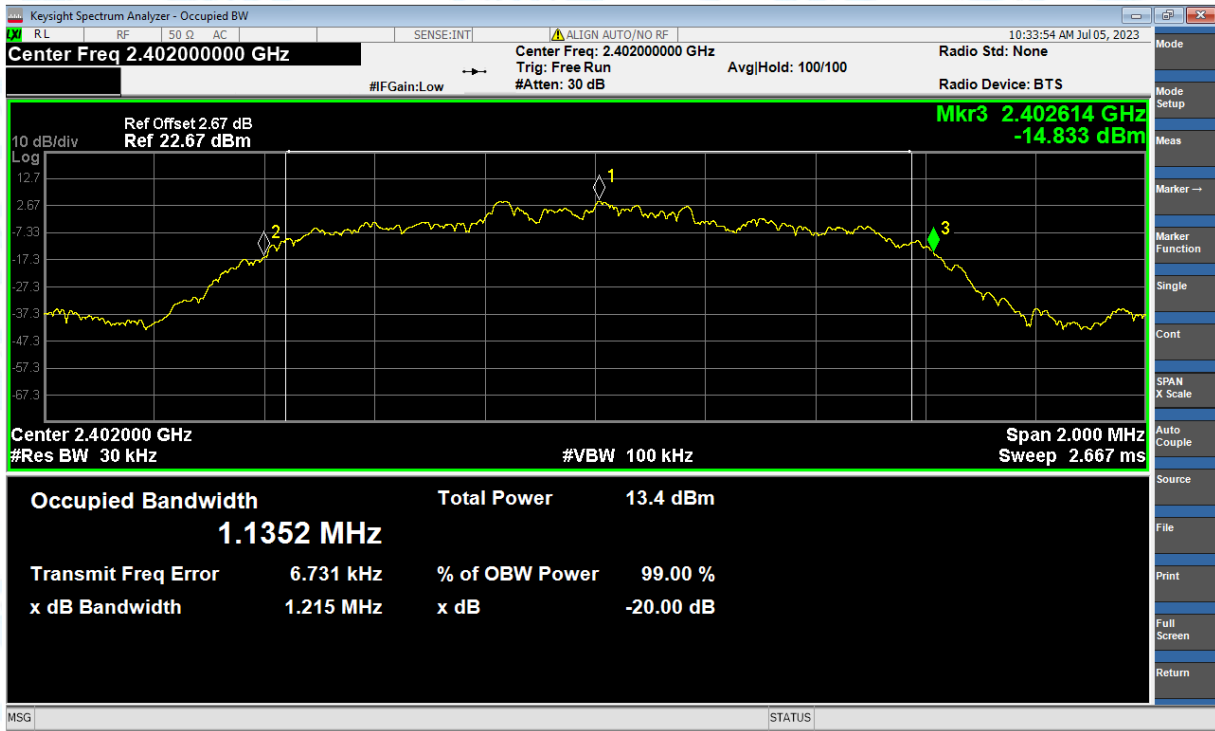
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



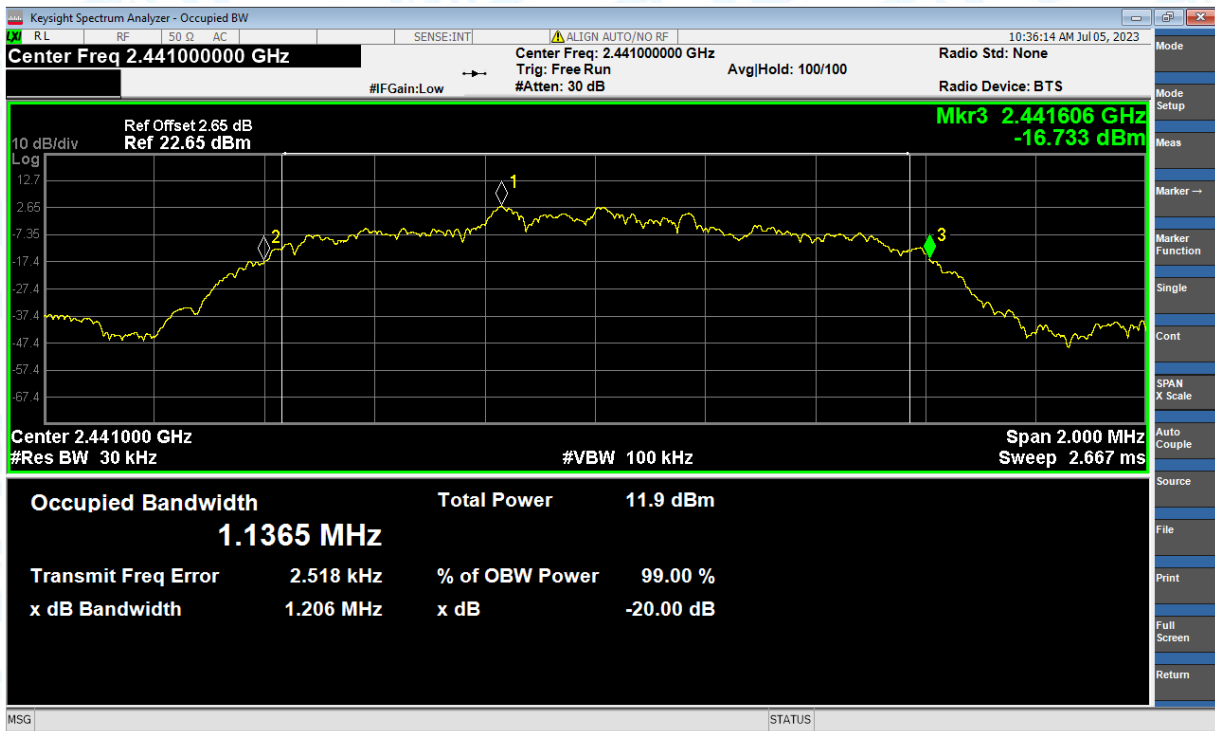
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

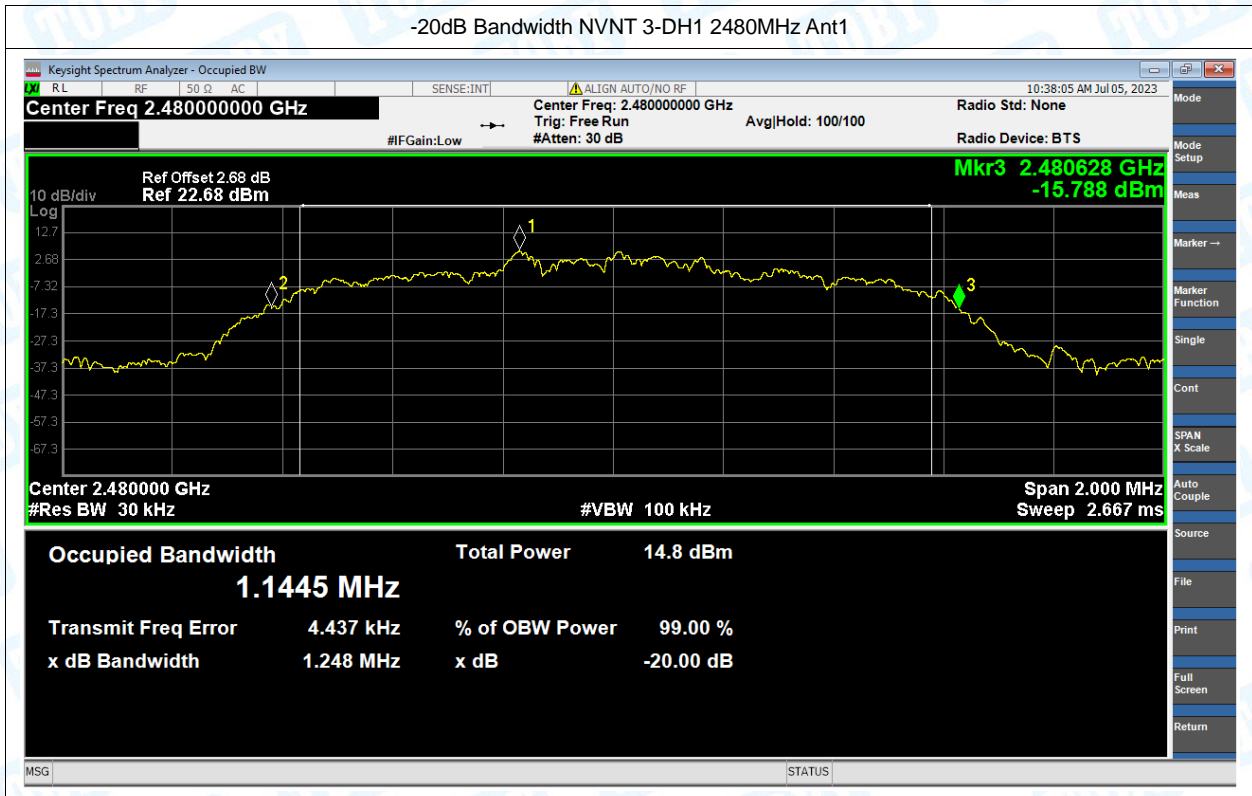


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



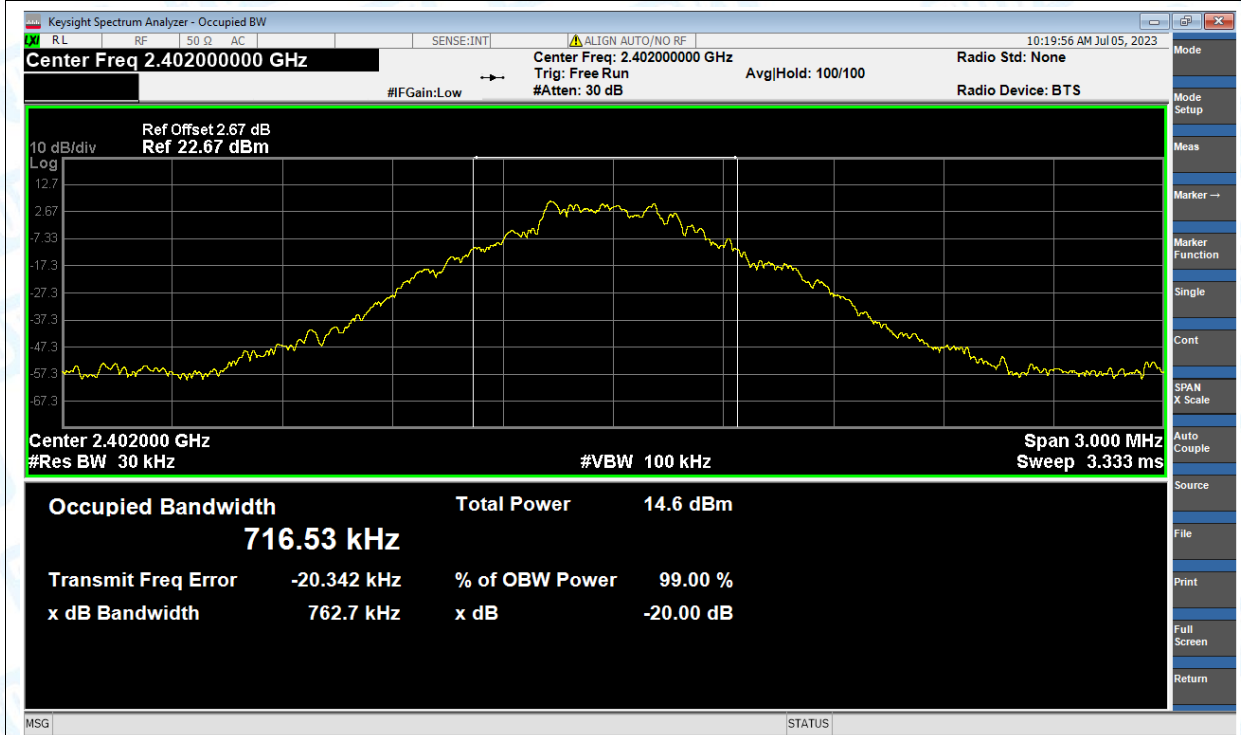


4. Occupied Channel Bandwidth

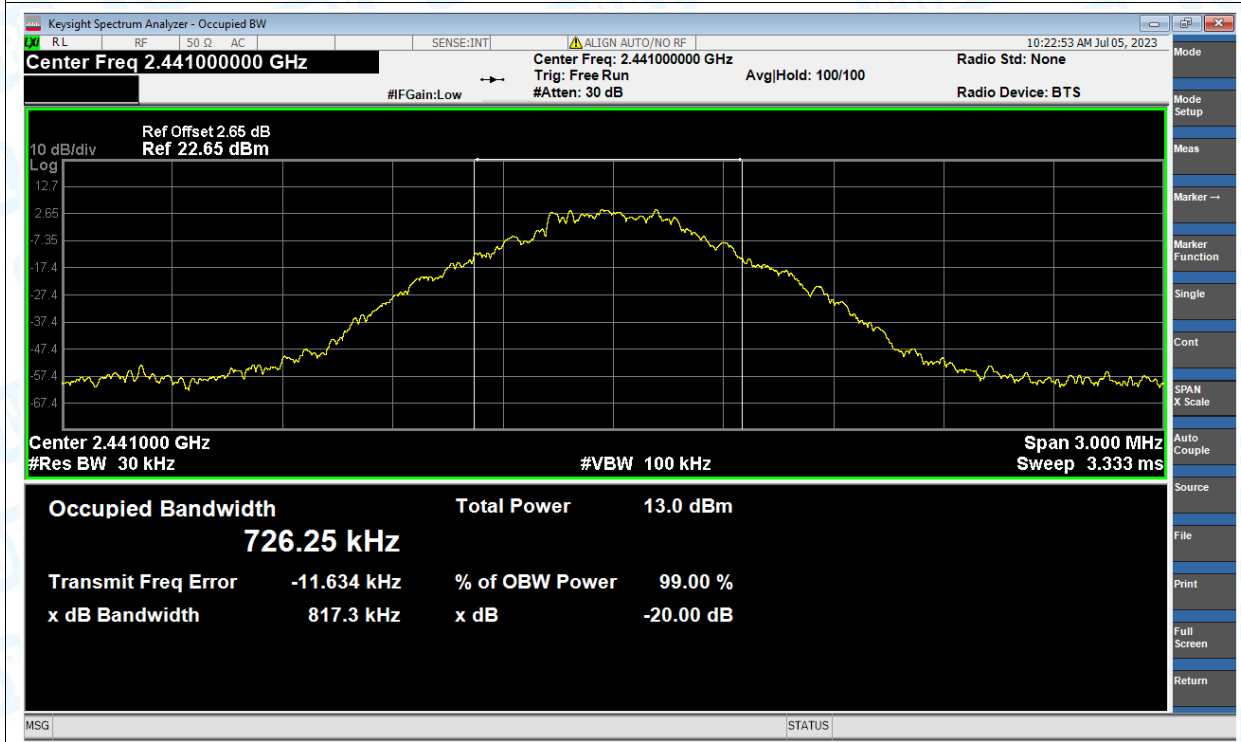
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.717
NVNT	1-DH1	2441	Ant1	0.726
NVNT	1-DH1	2480	Ant1	0.734
NVNT	2-DH1	2402	Ant1	1.146
NVNT	2-DH1	2441	Ant1	1.127
NVNT	2-DH1	2480	Ant1	1.148
NVNT	3-DH1	2402	Ant1	1.134
NVNT	3-DH1	2441	Ant1	1.137
NVNT	3-DH1	2480	Ant1	1.152

Test Graphs

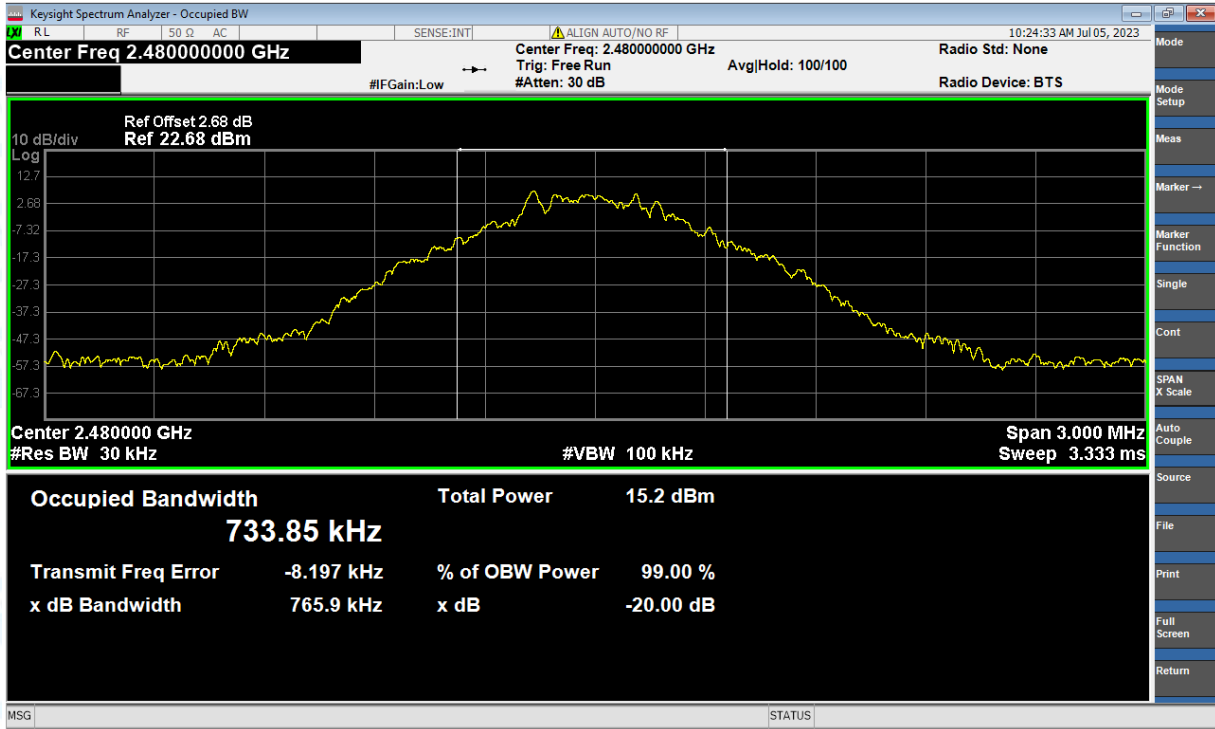
OBW NVNT 1-DH1 2402MHz Ant1



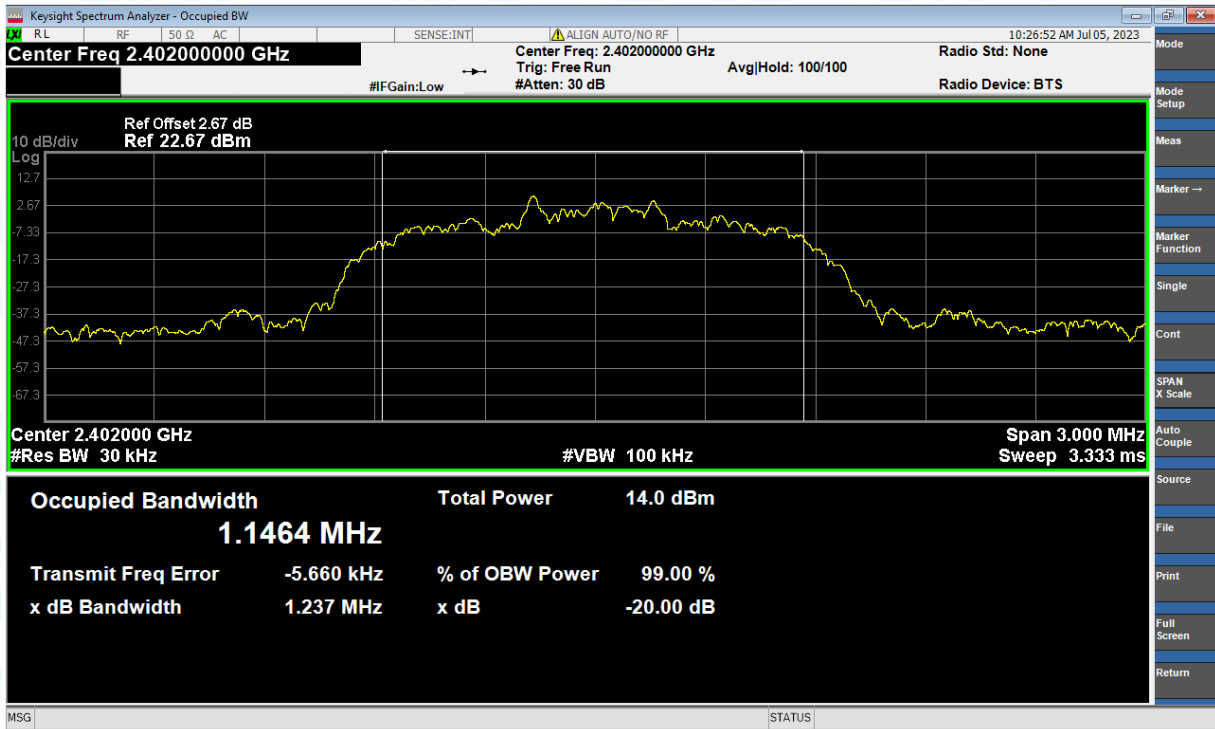
OBW NVNT 1-DH1 2441MHz Ant1



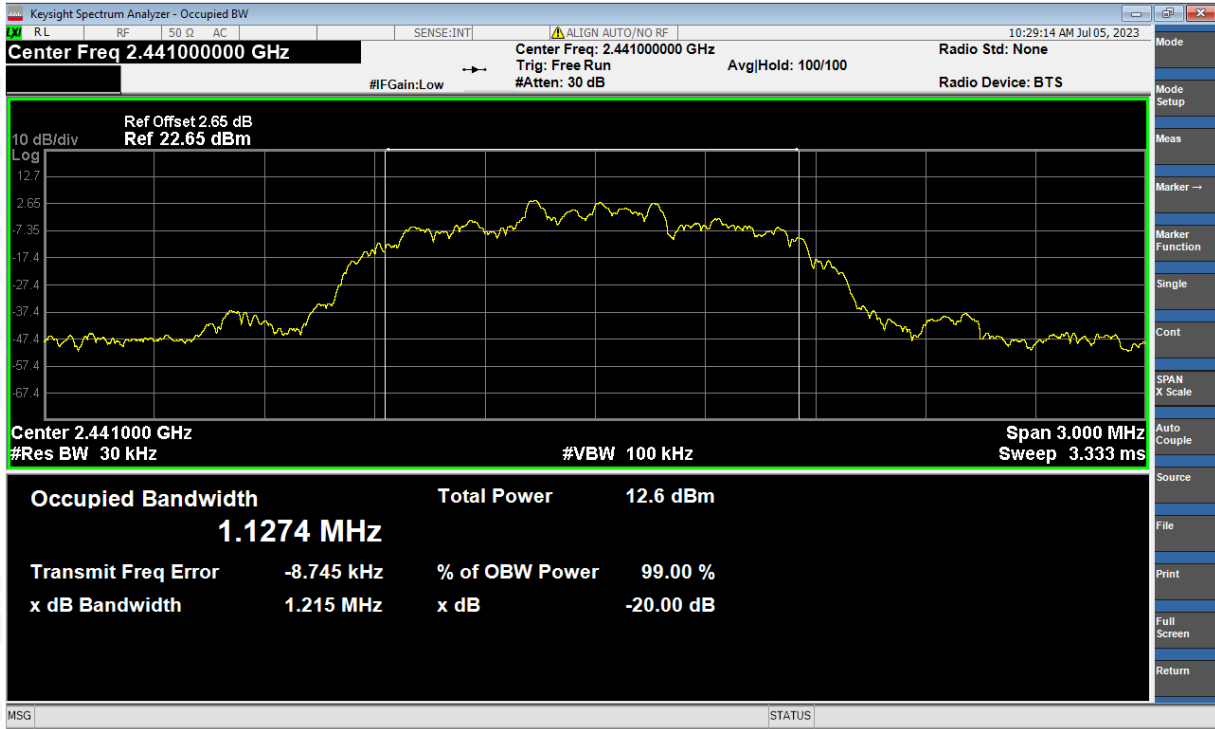
OBW NVNT 1-DH1 2480MHz Ant1



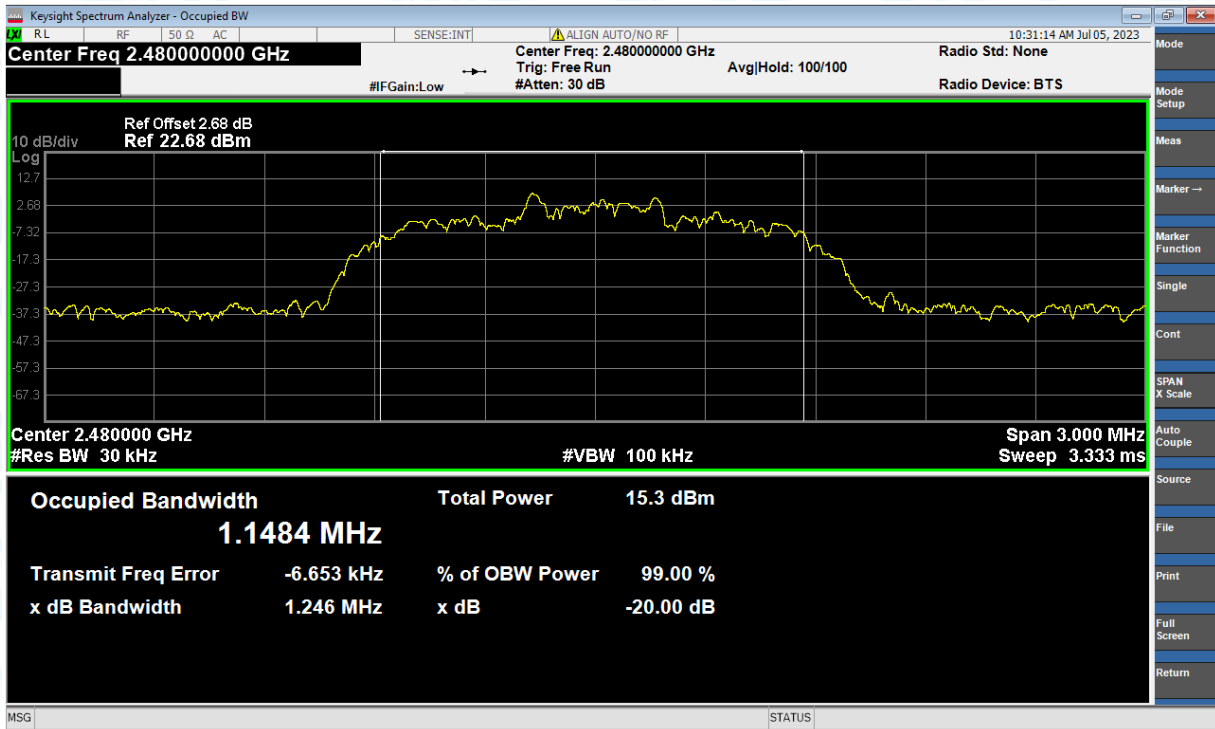
OBW NVNT 2-DH1 2402MHz Ant1



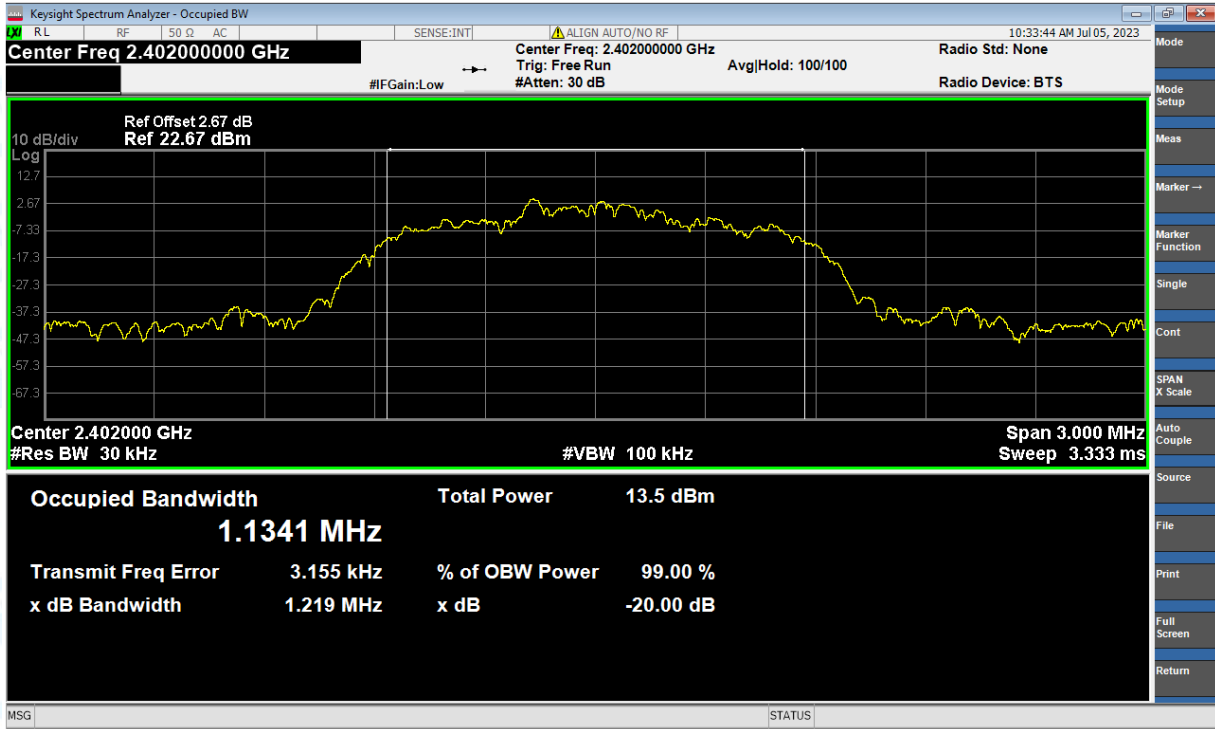
OBW NVNT 2-DH1 2441MHz Ant1



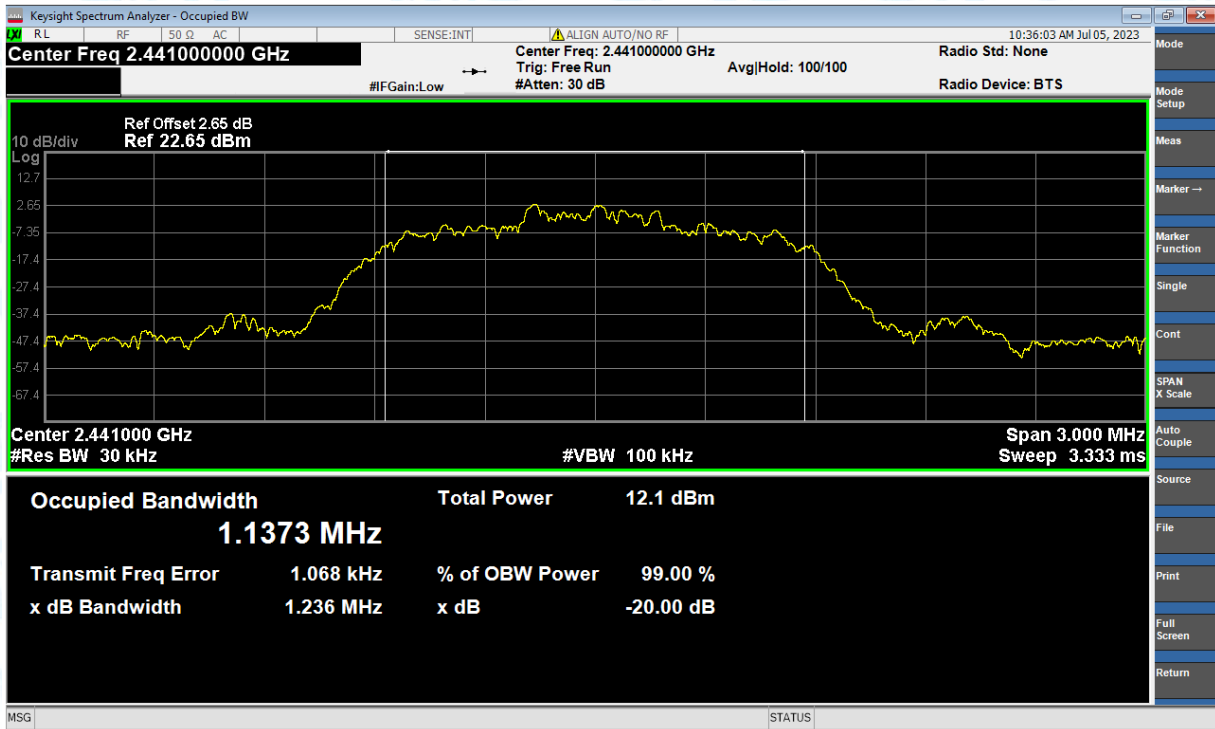
OBW NVNT 2-DH1 2480MHz Ant1

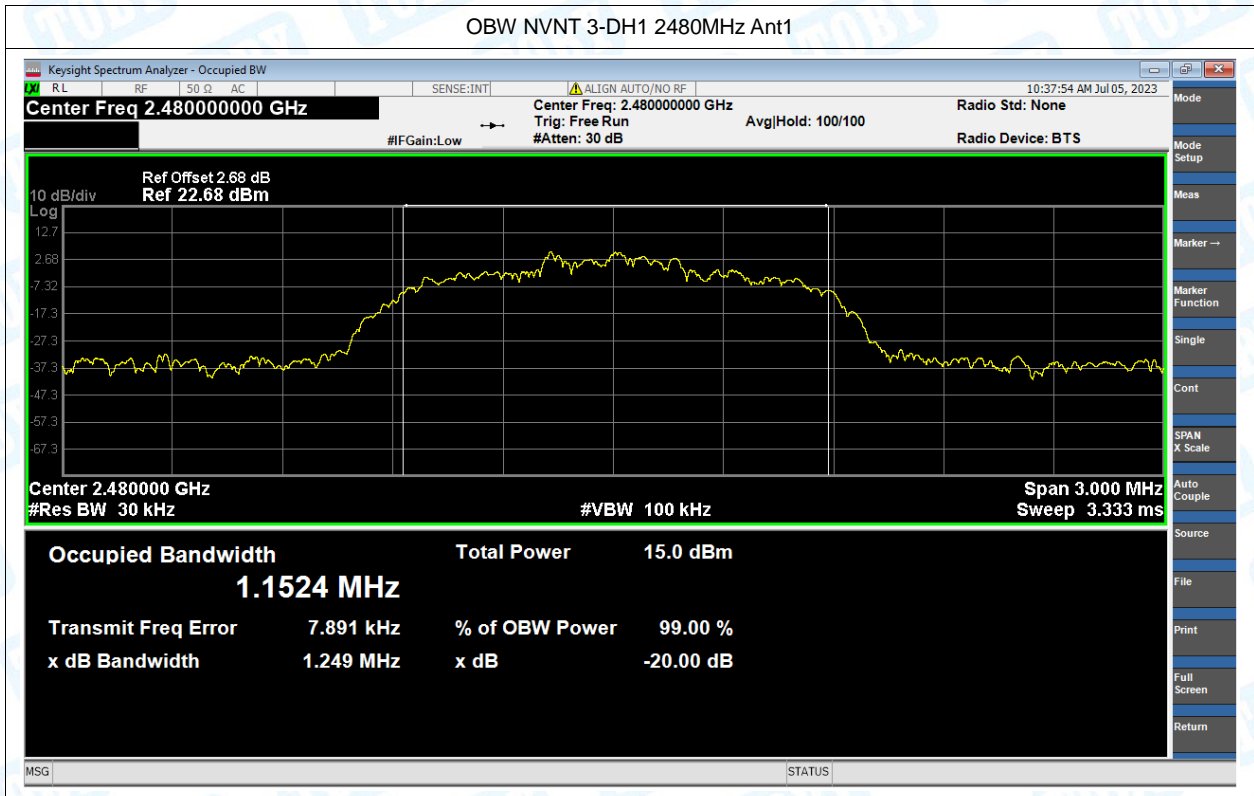


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



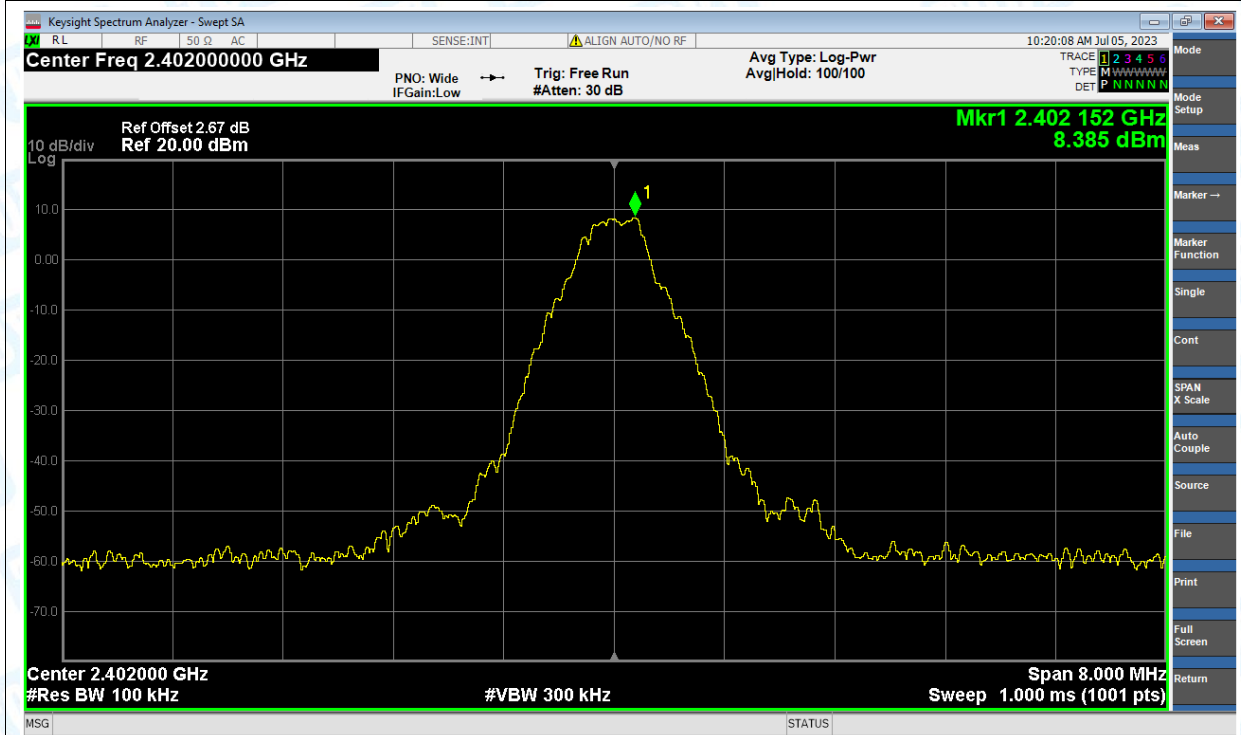


5. Band Edge

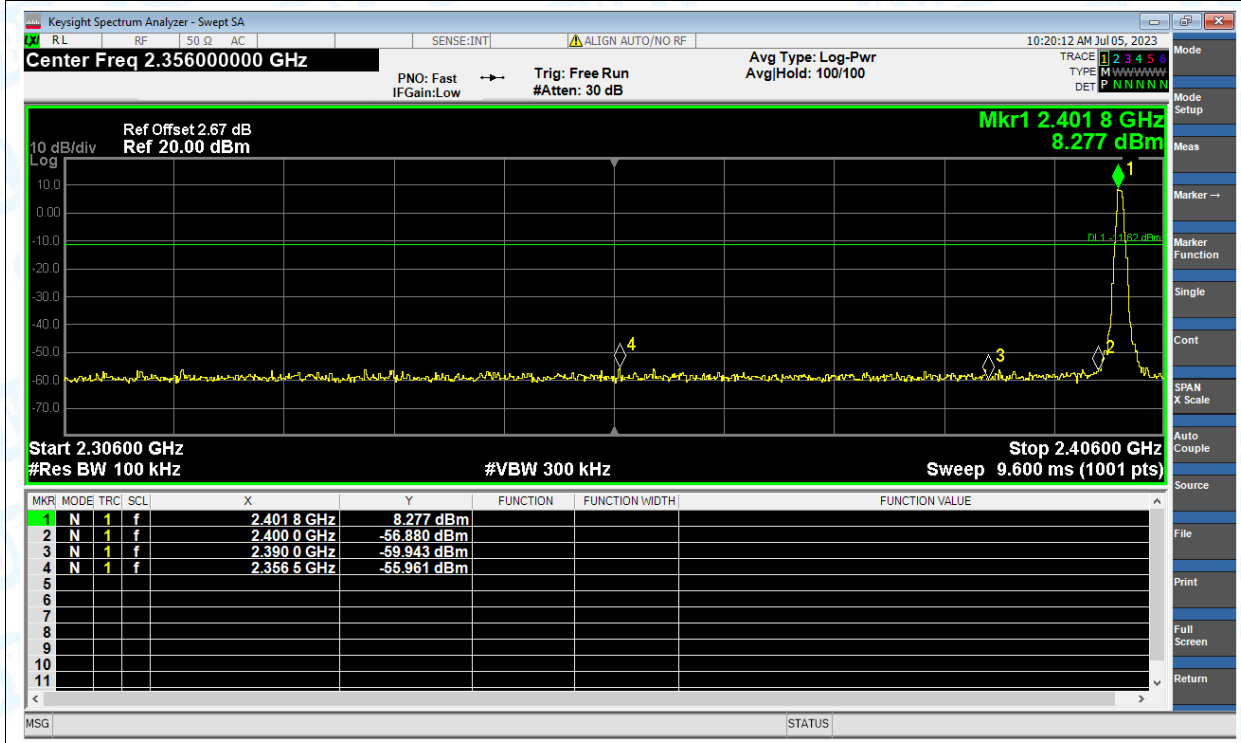
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-64.35	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-66.11	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-64.19	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-64.44	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-64.2	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-65.62	-20	Pass

Test Graphs

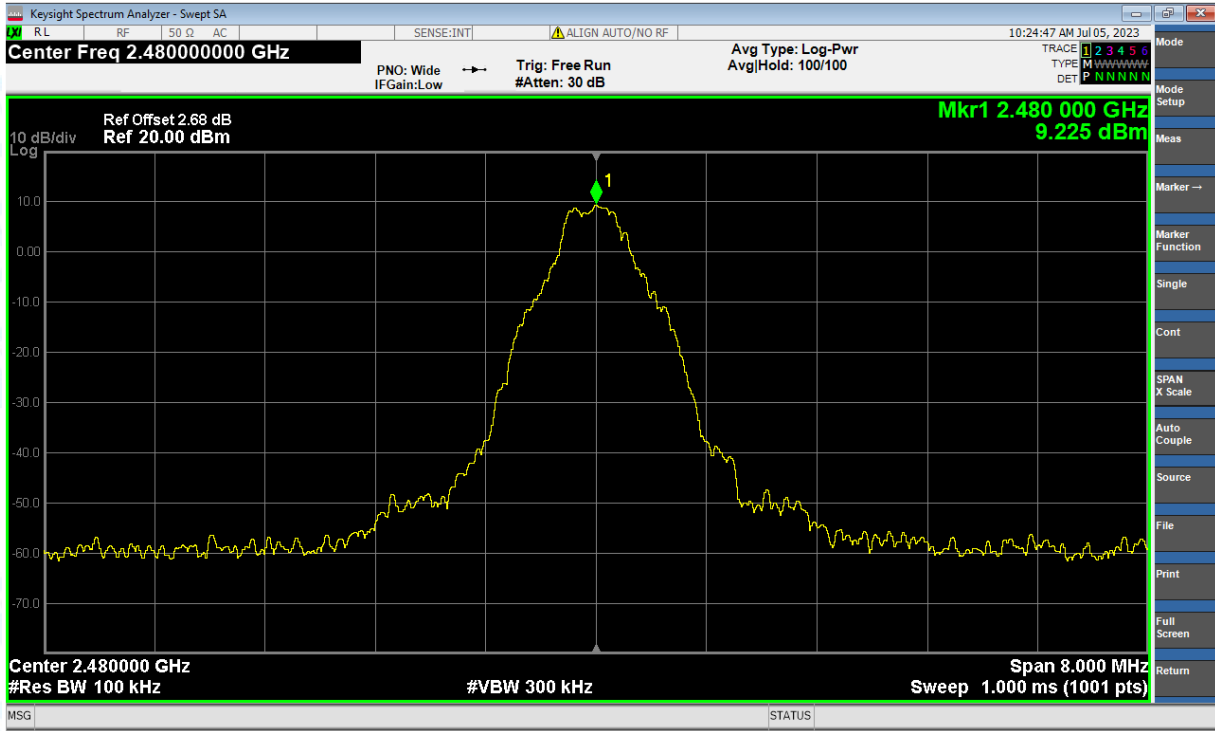
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



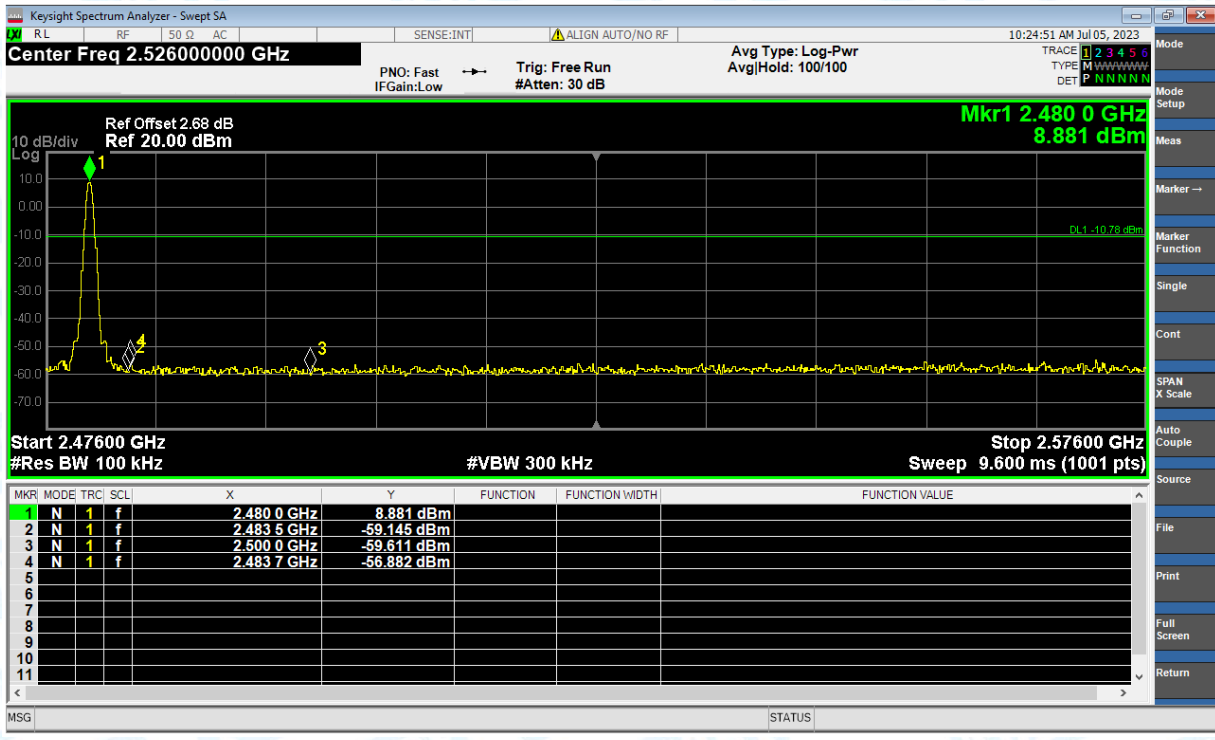
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



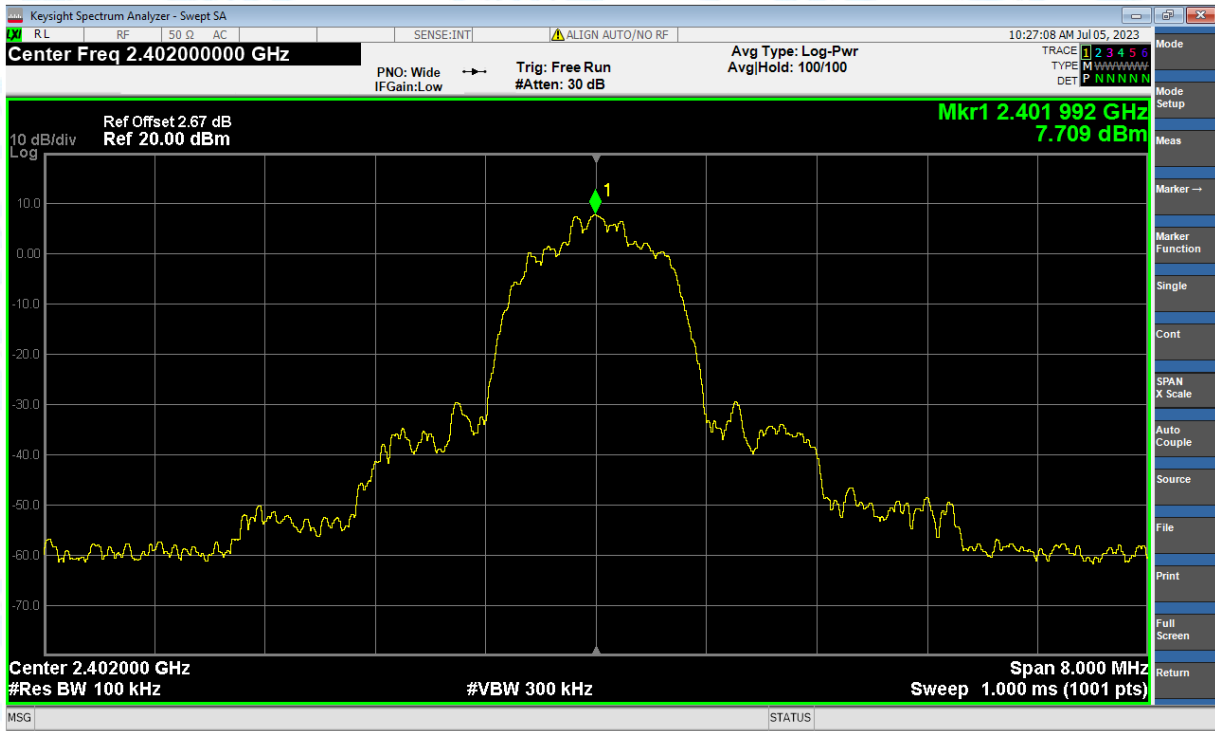
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



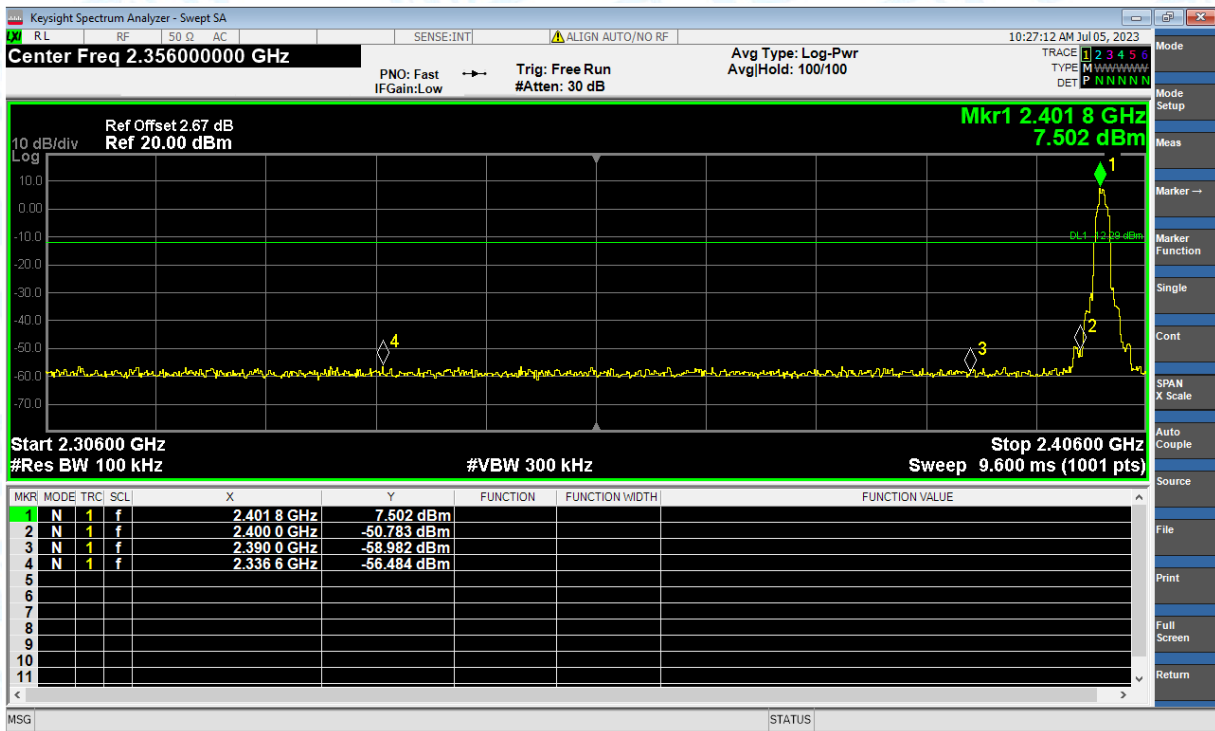
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



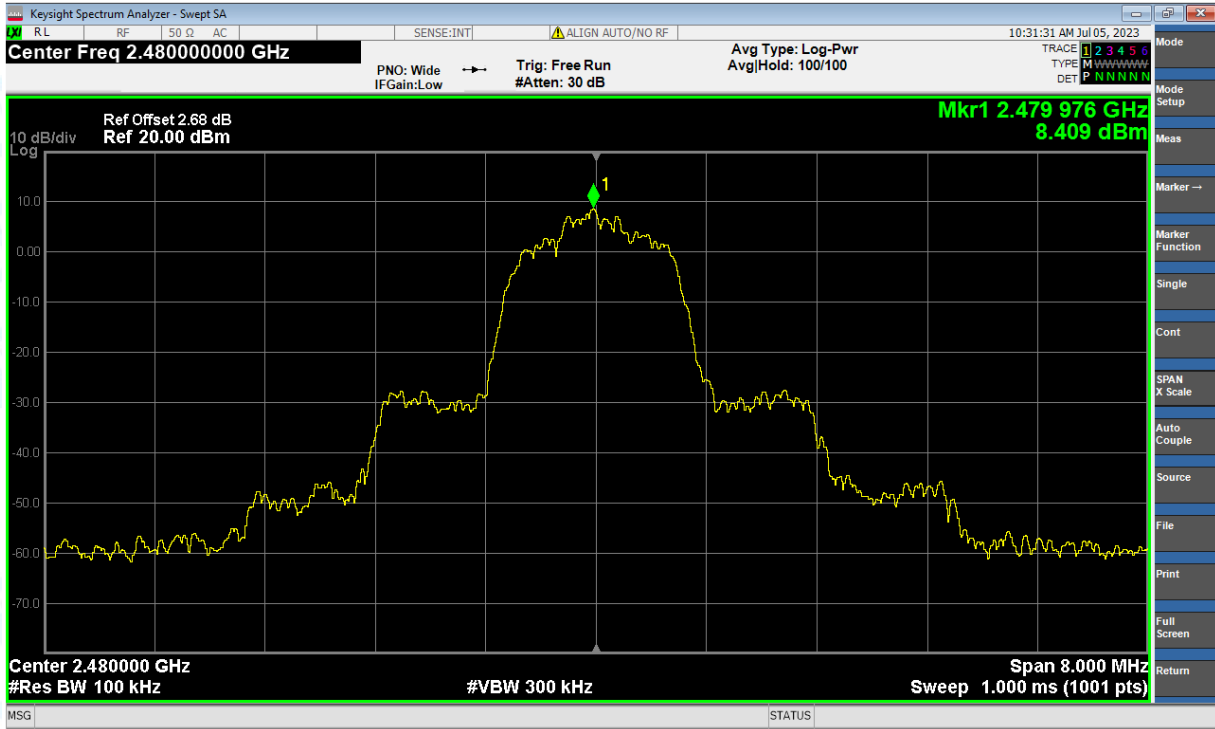
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



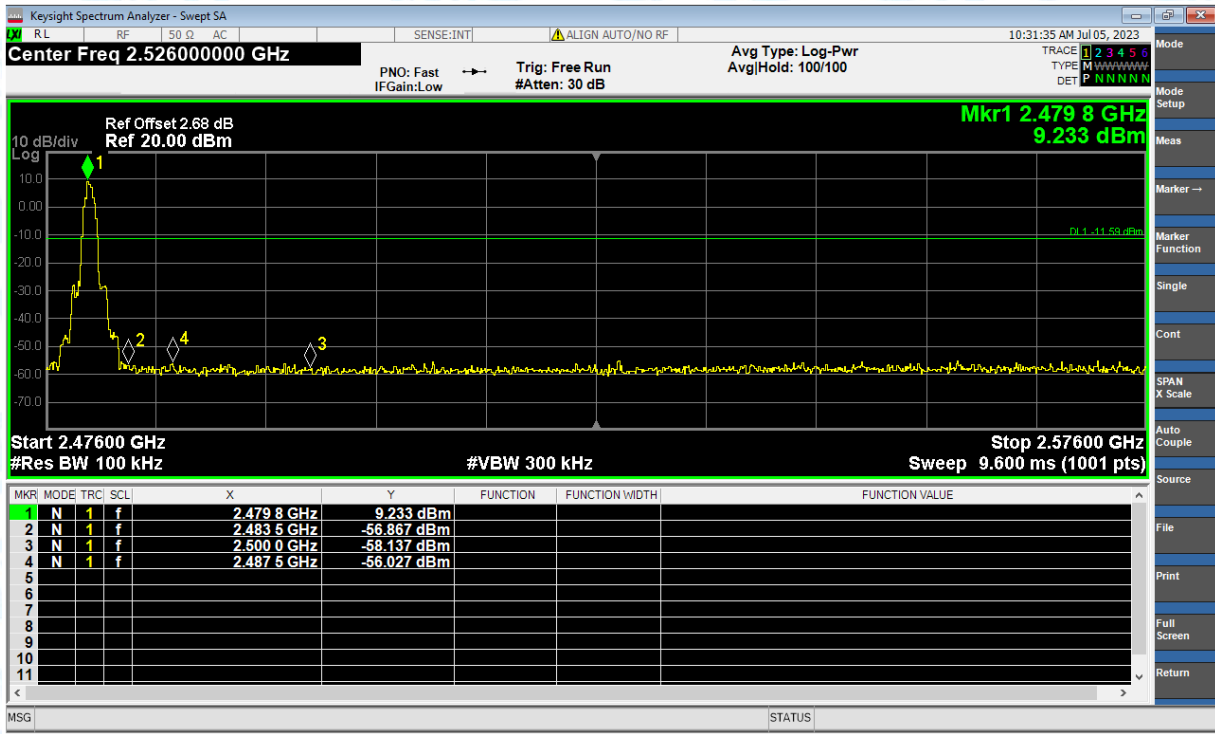
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



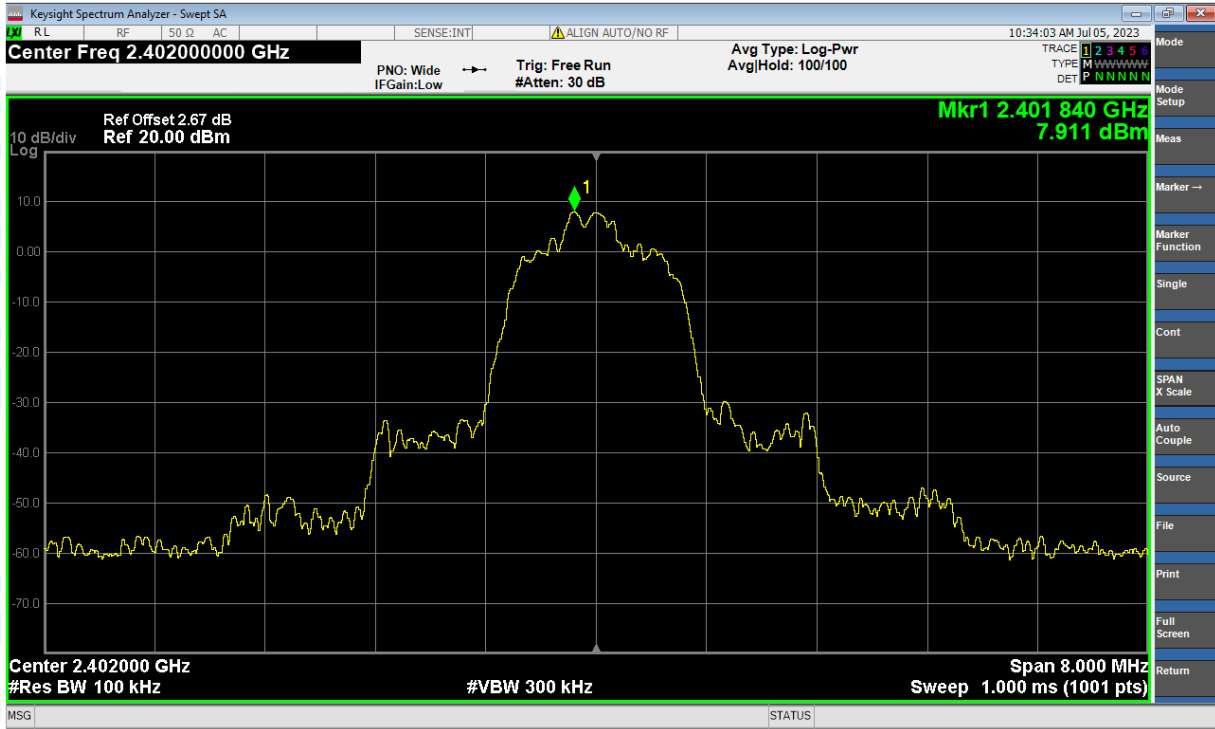
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



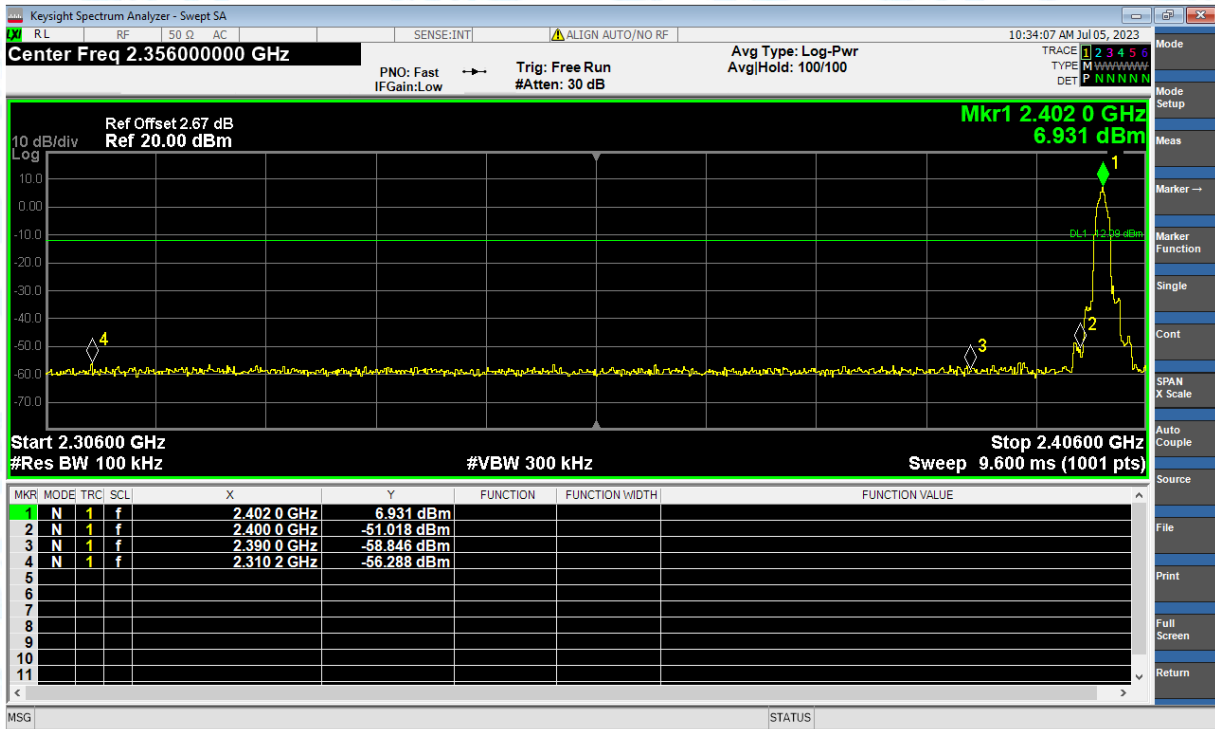
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



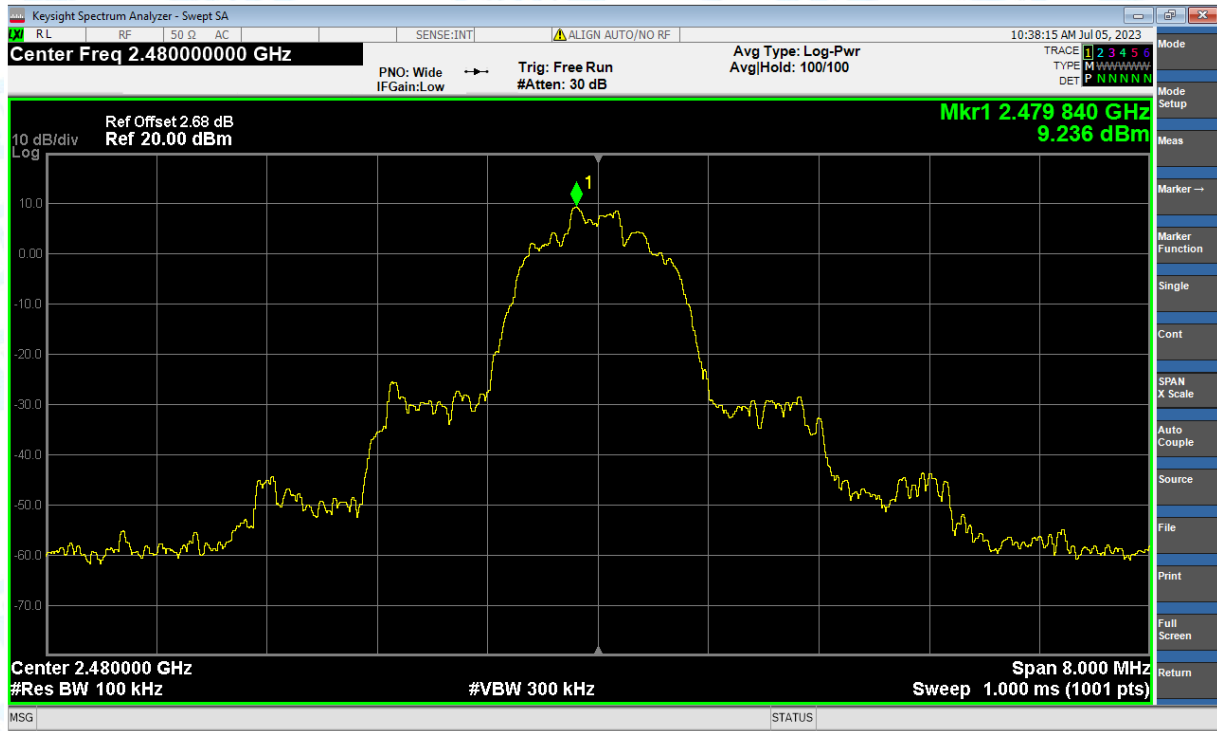
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



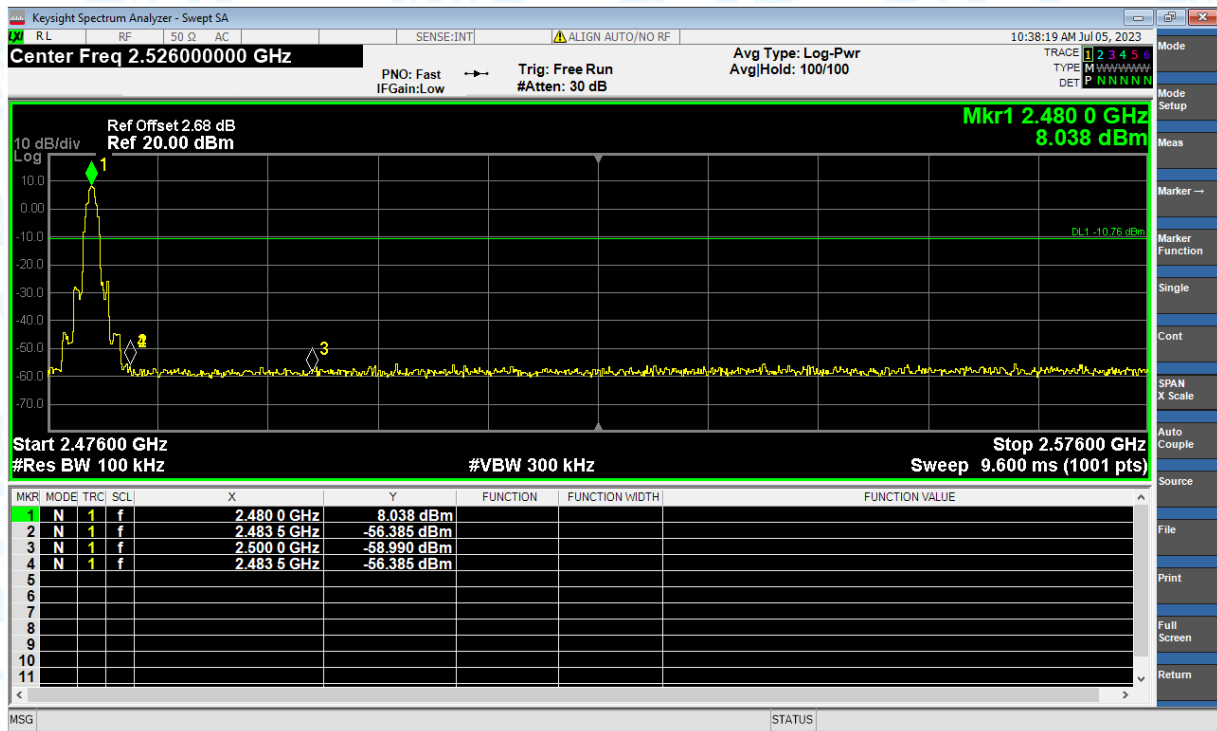
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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

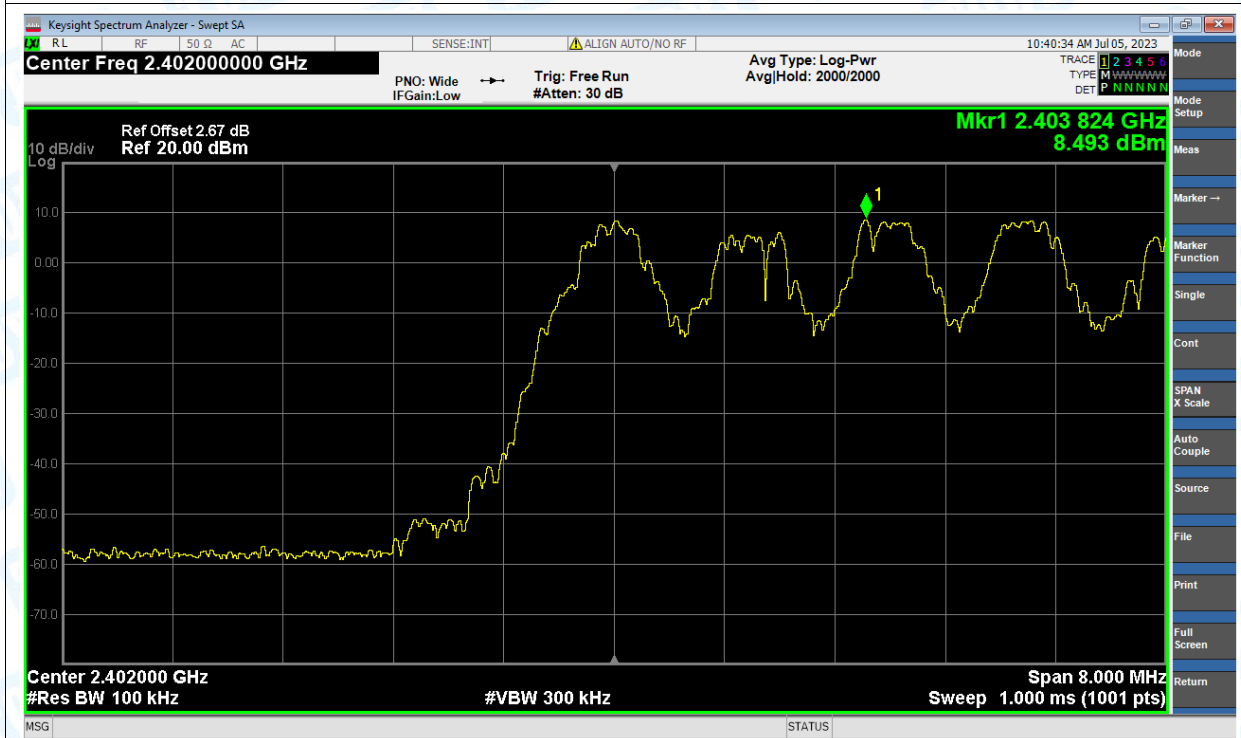


6. Band Edge(Hopping)

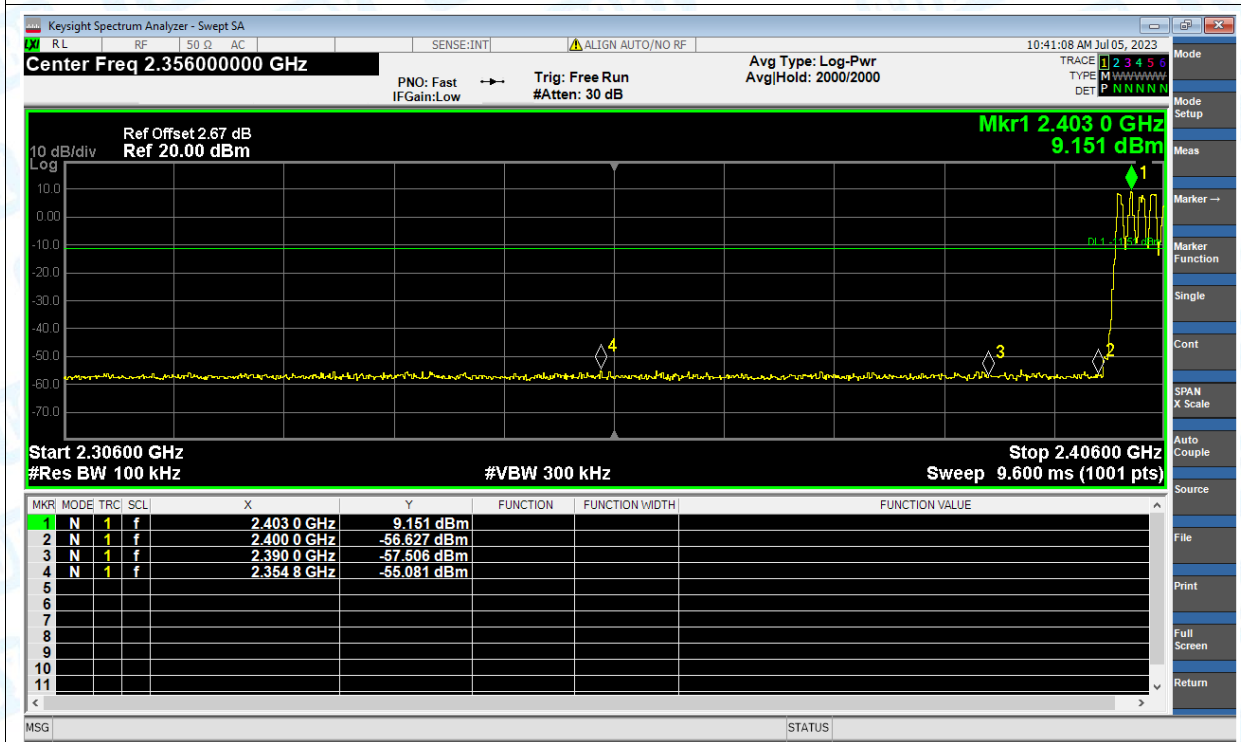
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-63.57	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-64.88	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-63.32	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-64.72	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-62.81	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-64.27	-20	Pass

Test Graphs

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



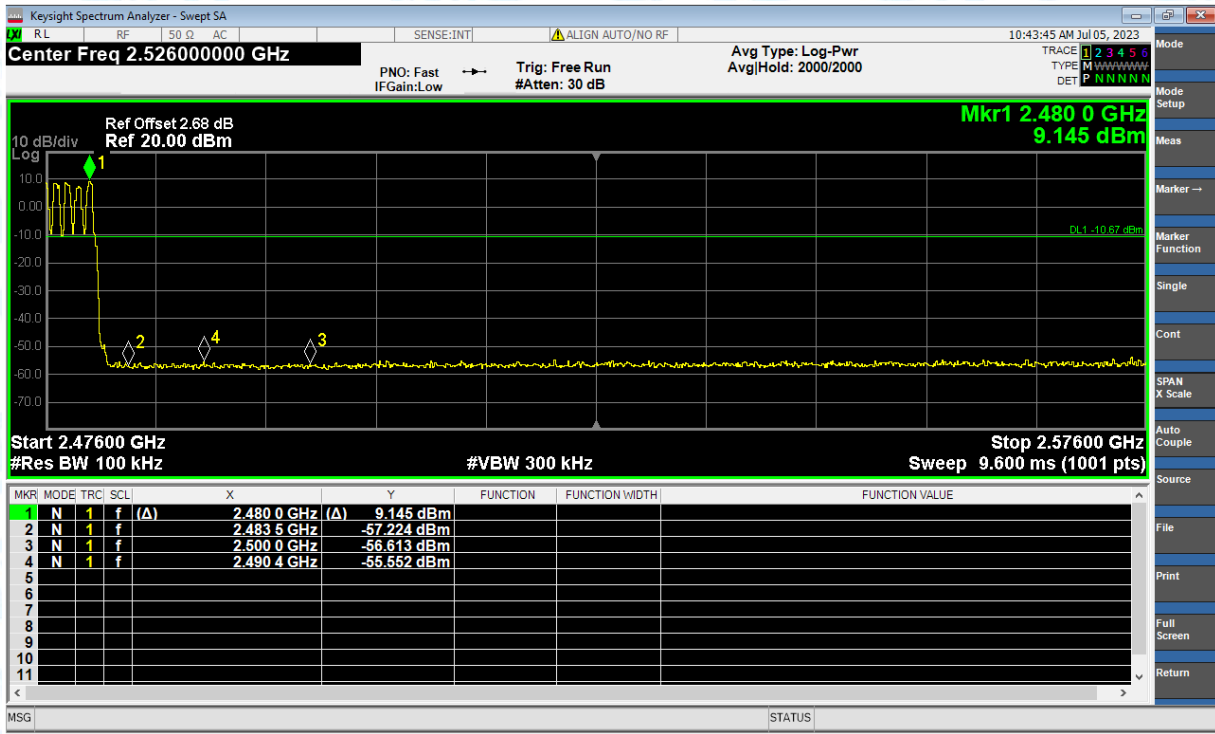
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



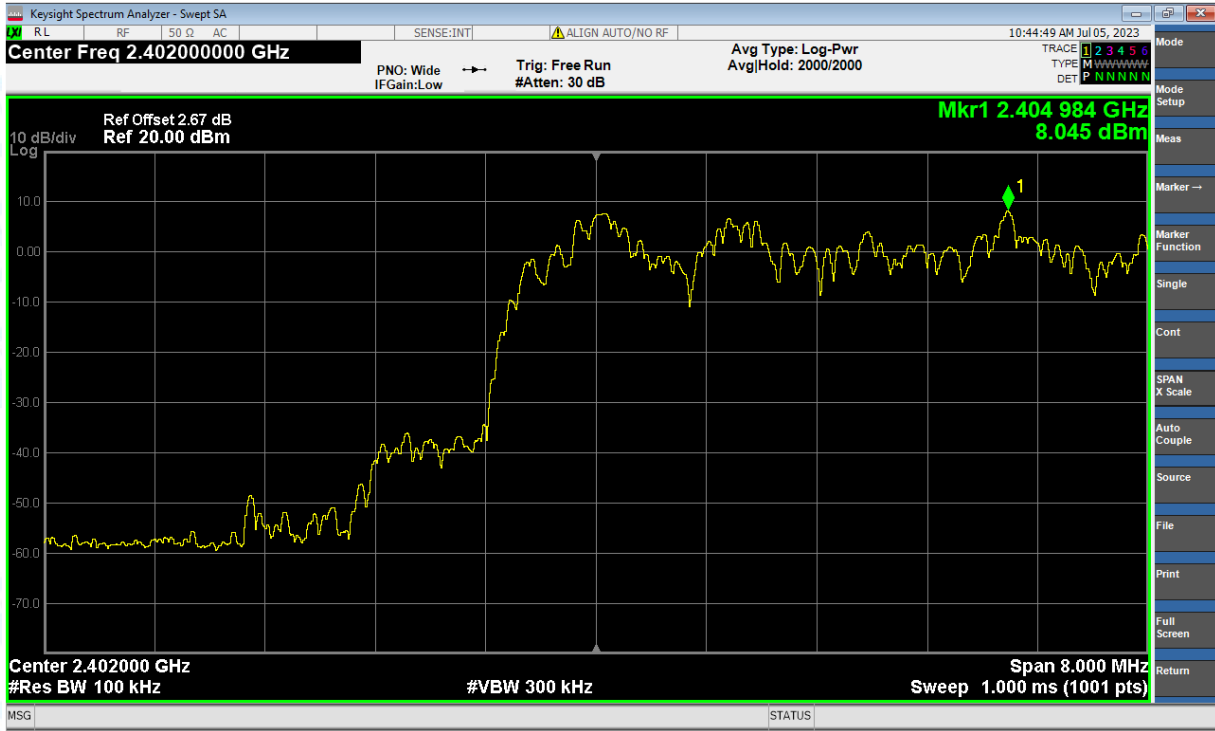
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



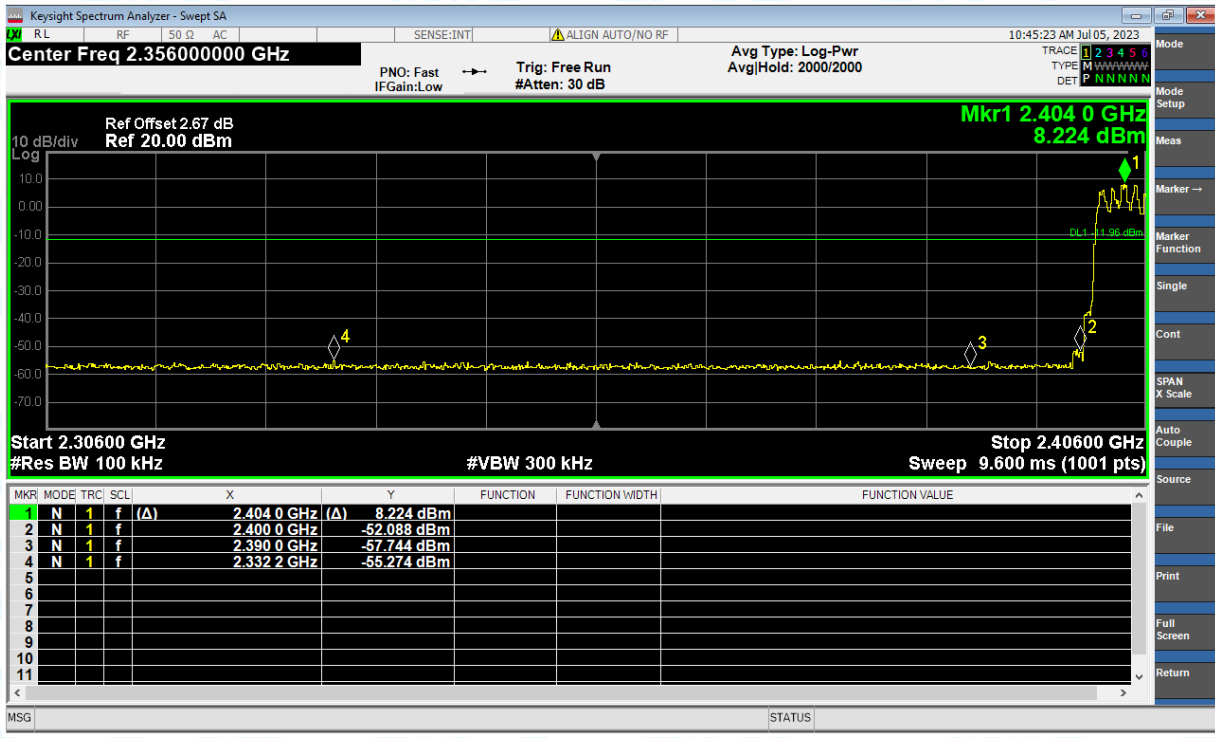
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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



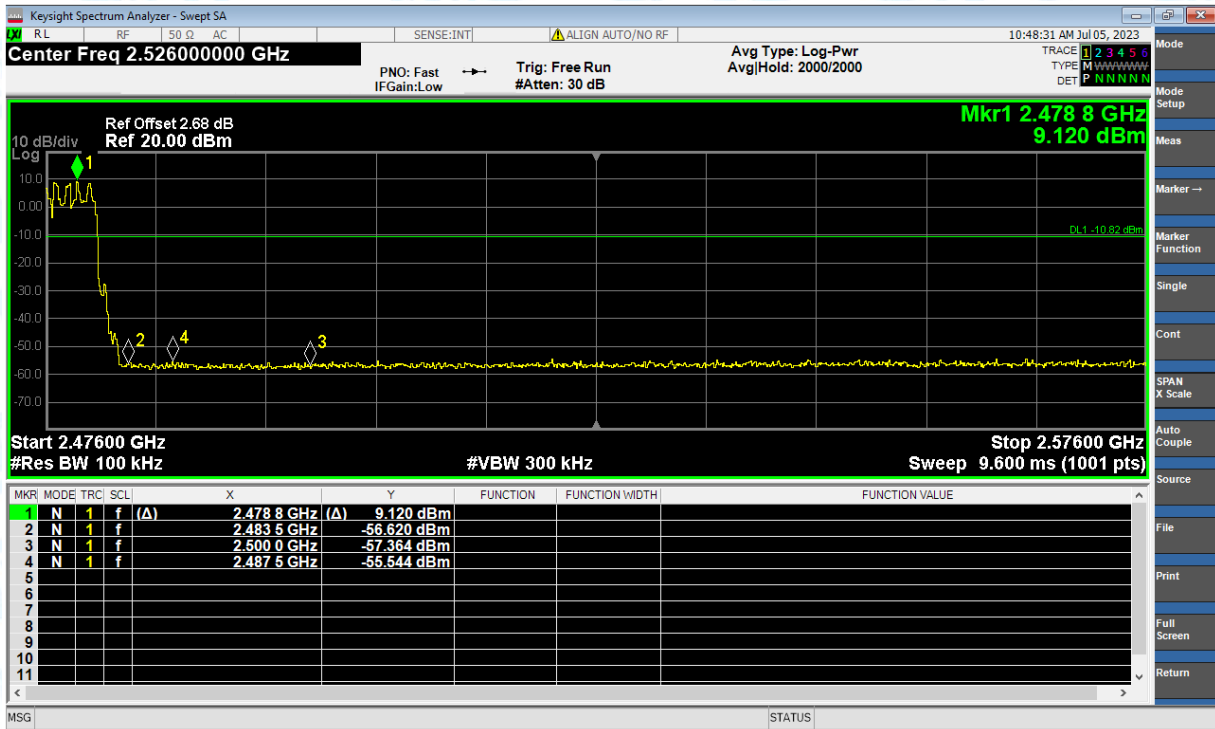
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



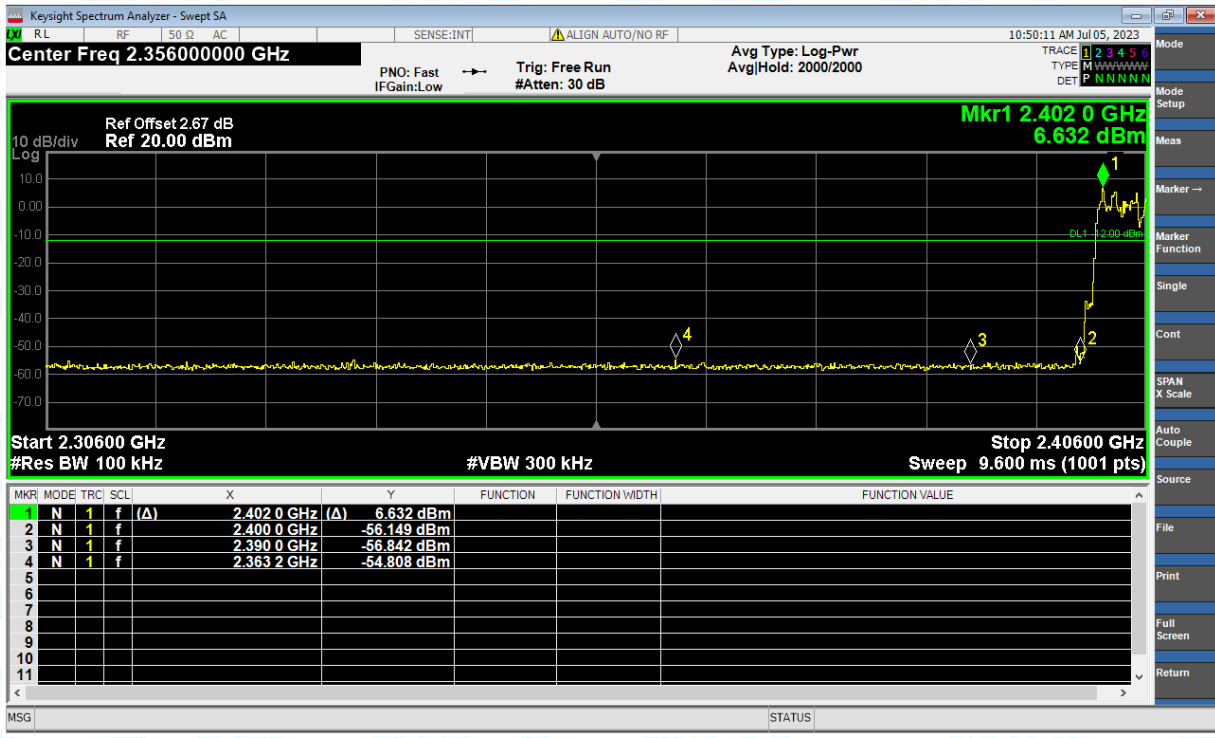
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



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



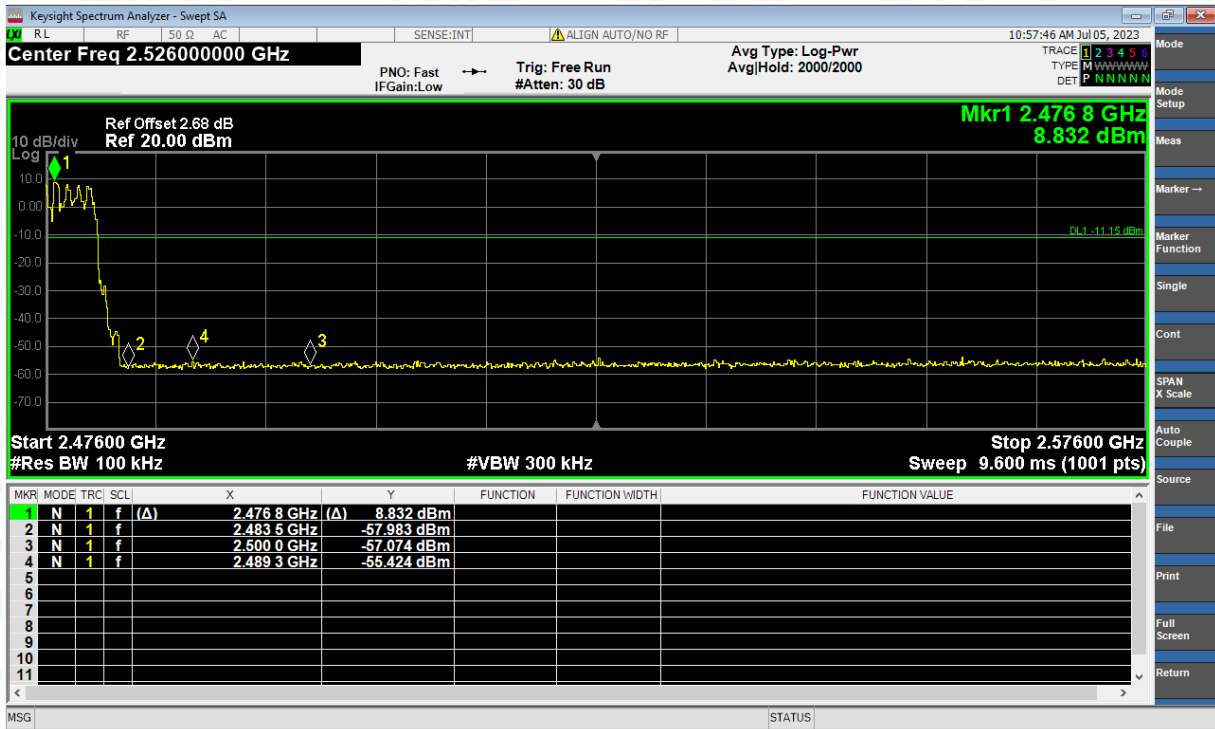
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

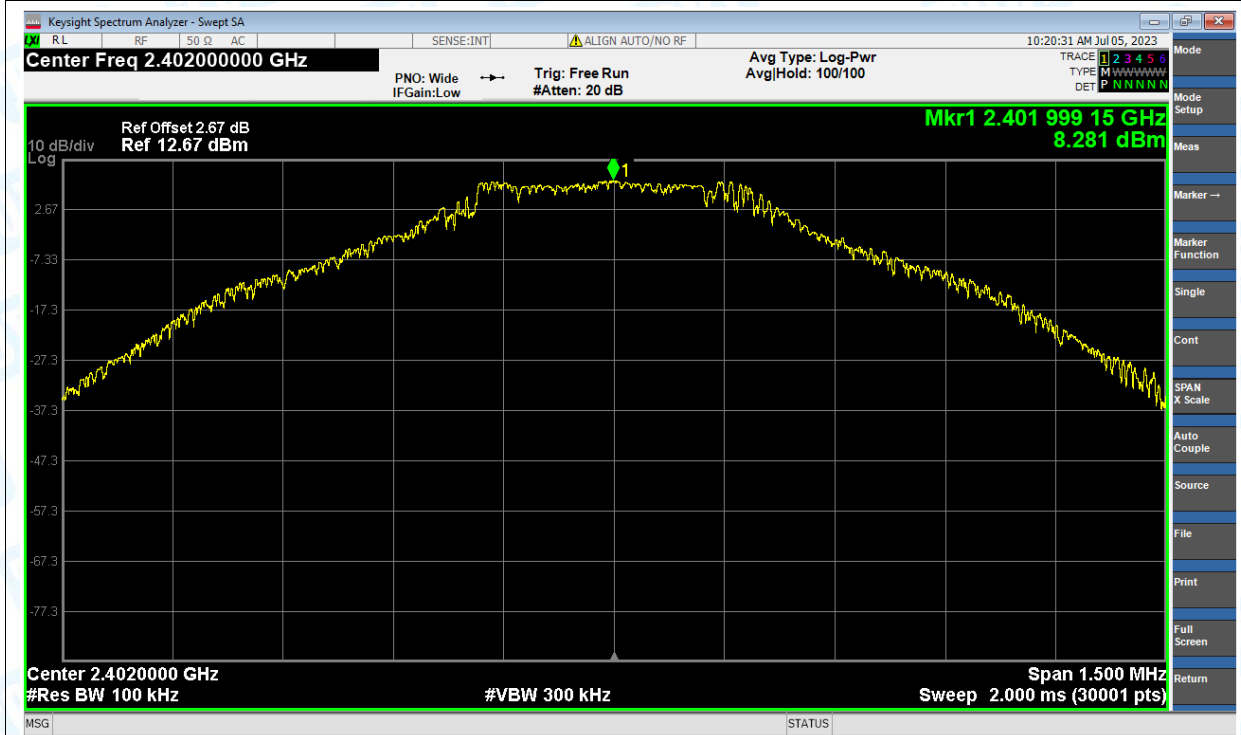


7. Conducted RF Spurious Emission

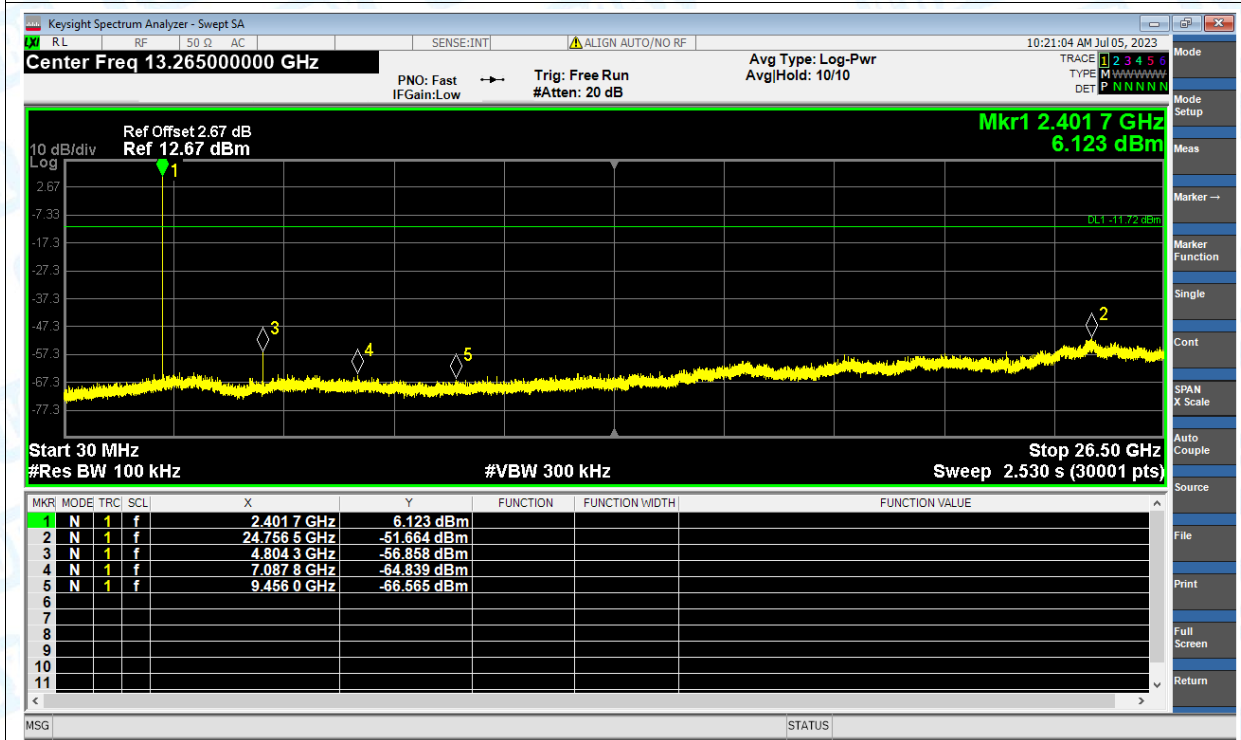
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-59.94	-20	Pass
NVNT	1-DH1	2441	Ant1	-58.58	-20	Pass
NVNT	1-DH1	2480	Ant1	-61.18	-20	Pass
NVNT	2-DH1	2402	Ant1	-60.06	-20	Pass
NVNT	2-DH1	2441	Ant1	-58.25	-20	Pass
NVNT	2-DH1	2480	Ant1	-59.15	-20	Pass
NVNT	3-DH1	2402	Ant1	-58.66	-20	Pass
NVNT	3-DH1	2441	Ant1	-58.52	-20	Pass
NVNT	3-DH1	2480	Ant1	-60.81	-20	Pass

Test Graphs

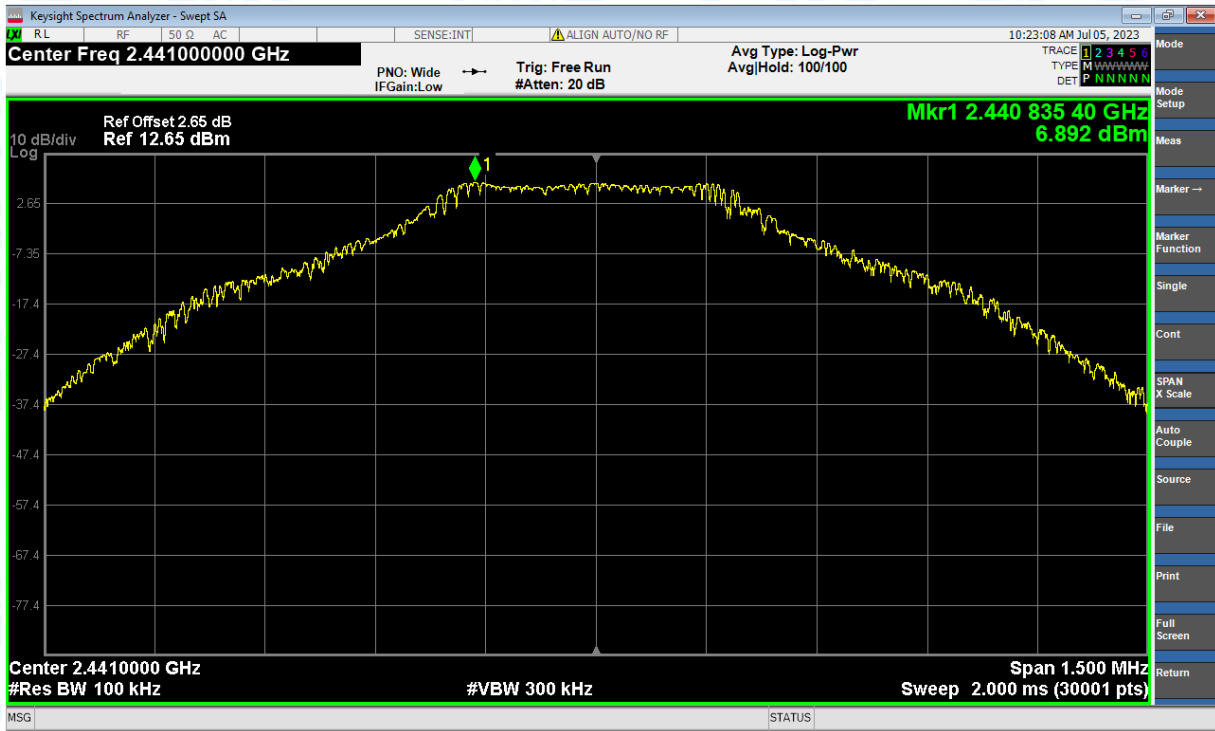
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



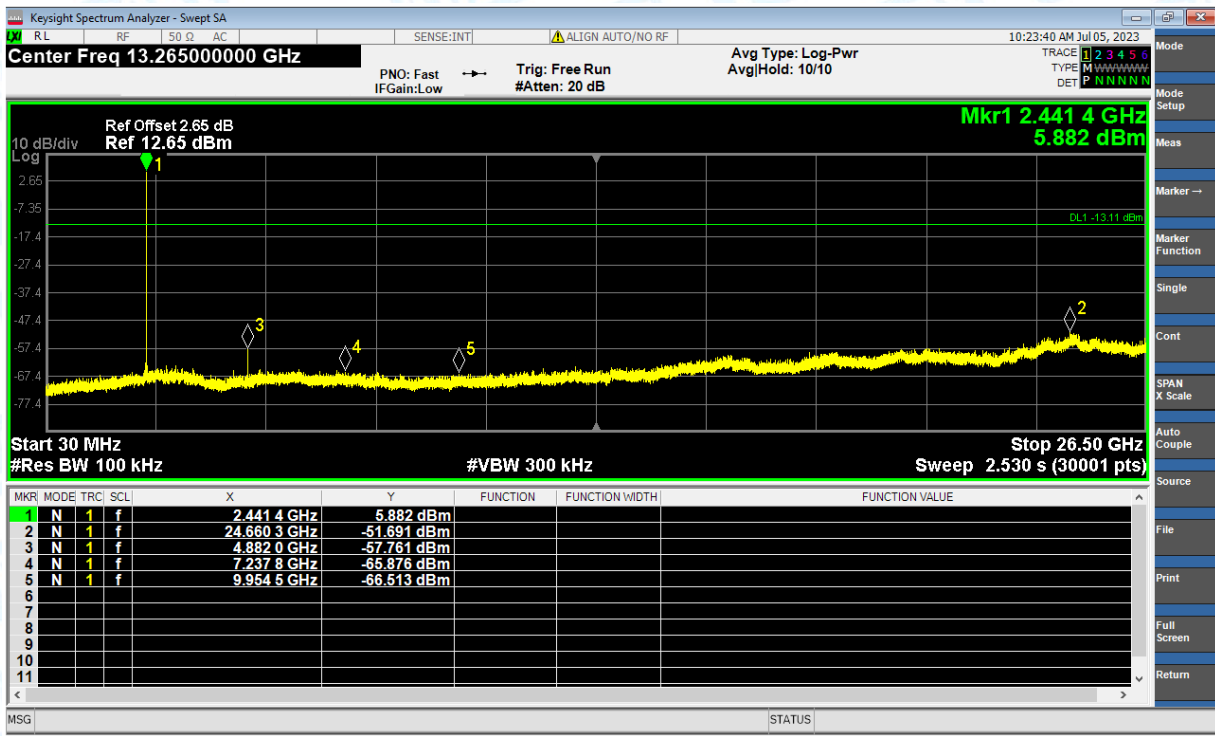
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



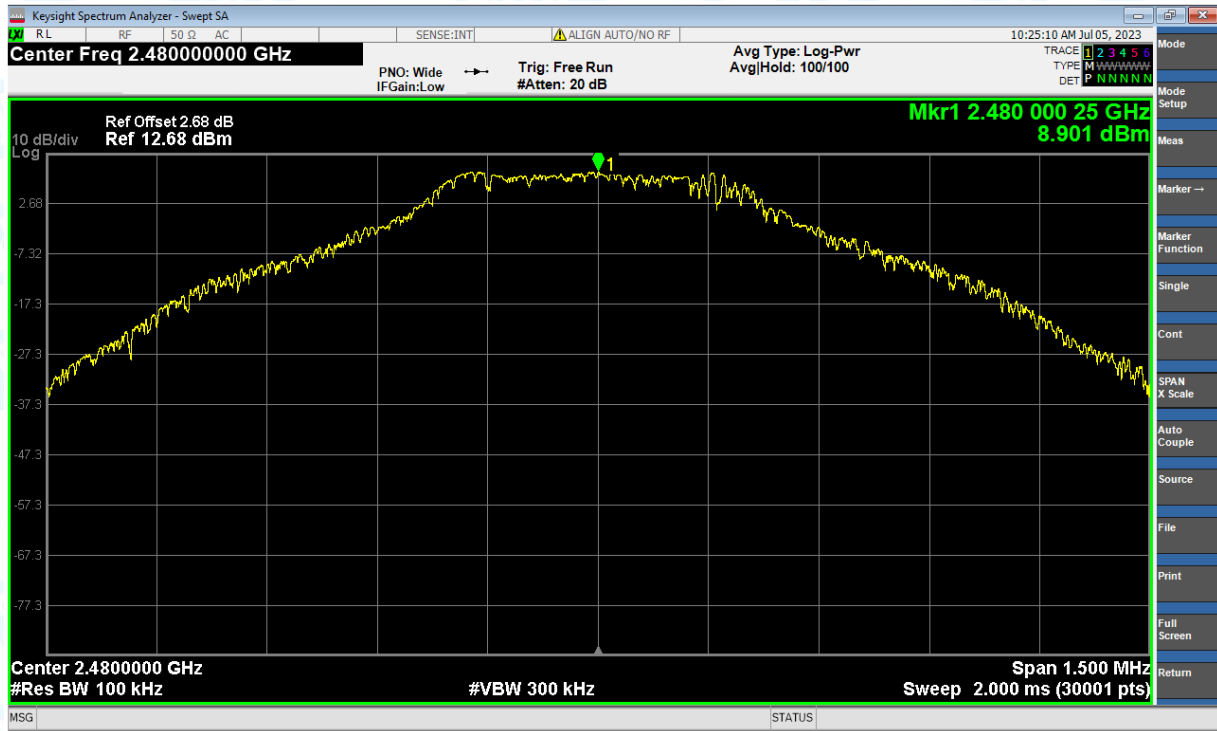
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



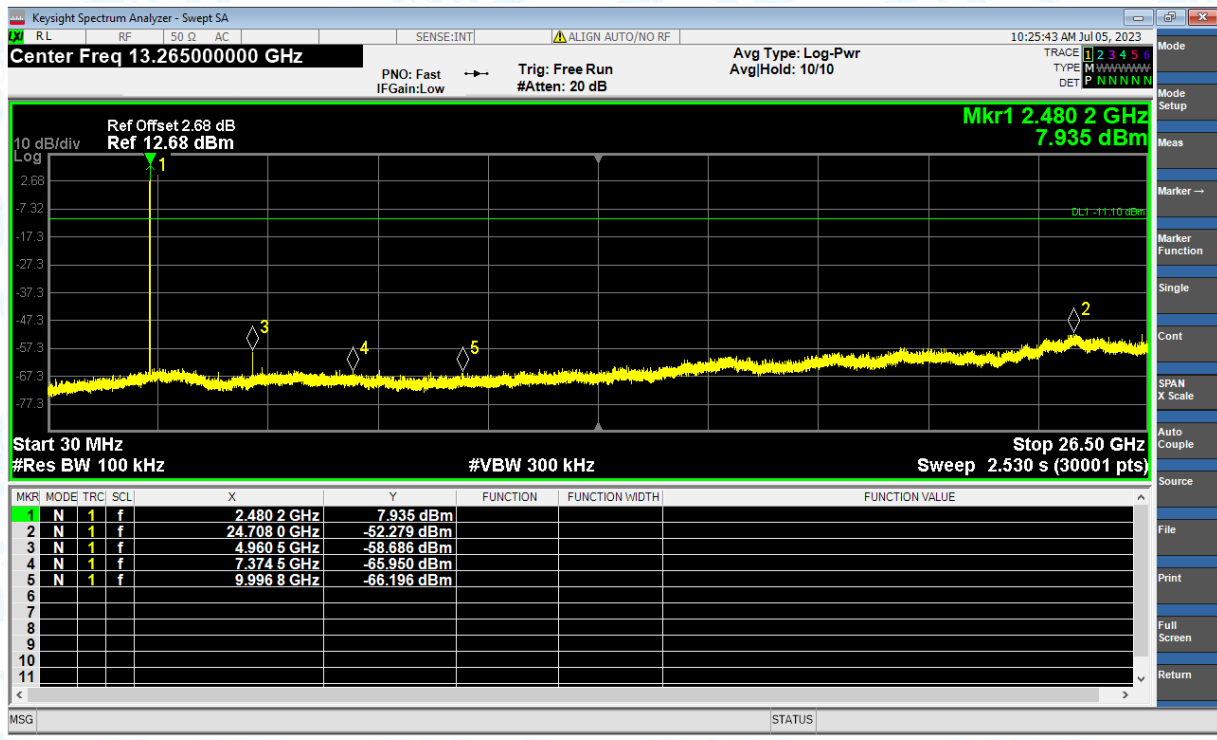
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



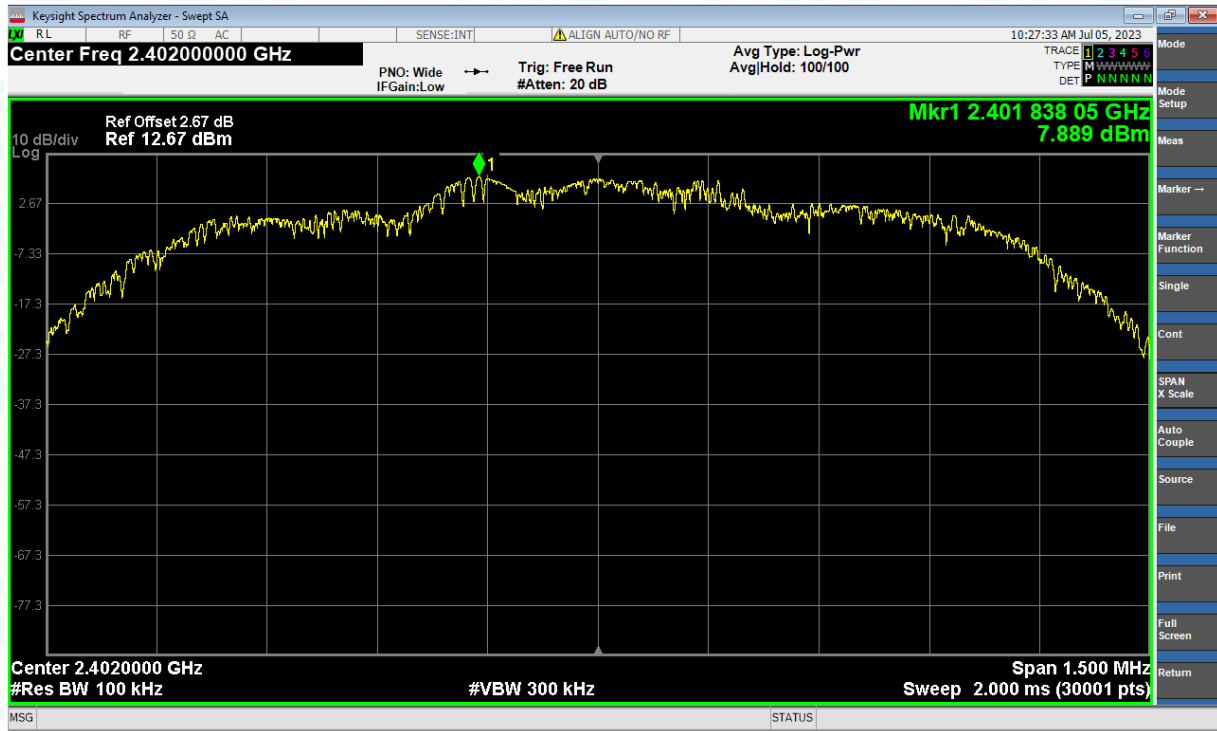
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



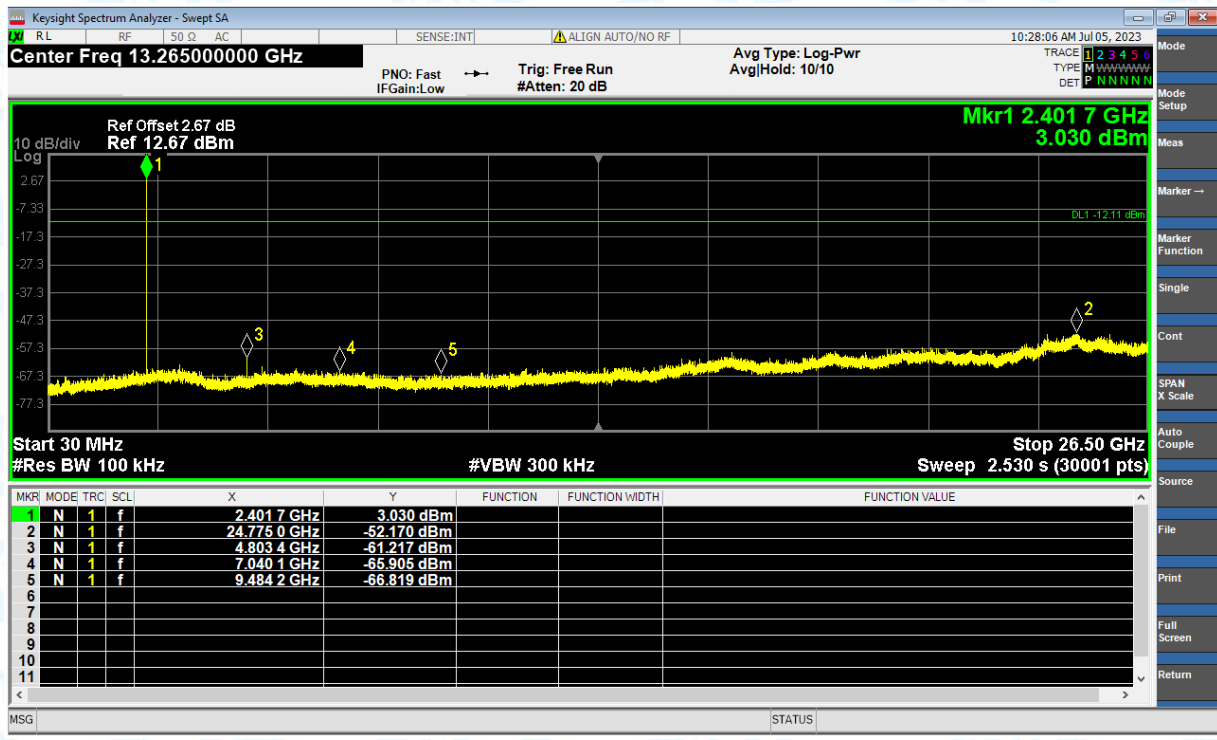
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



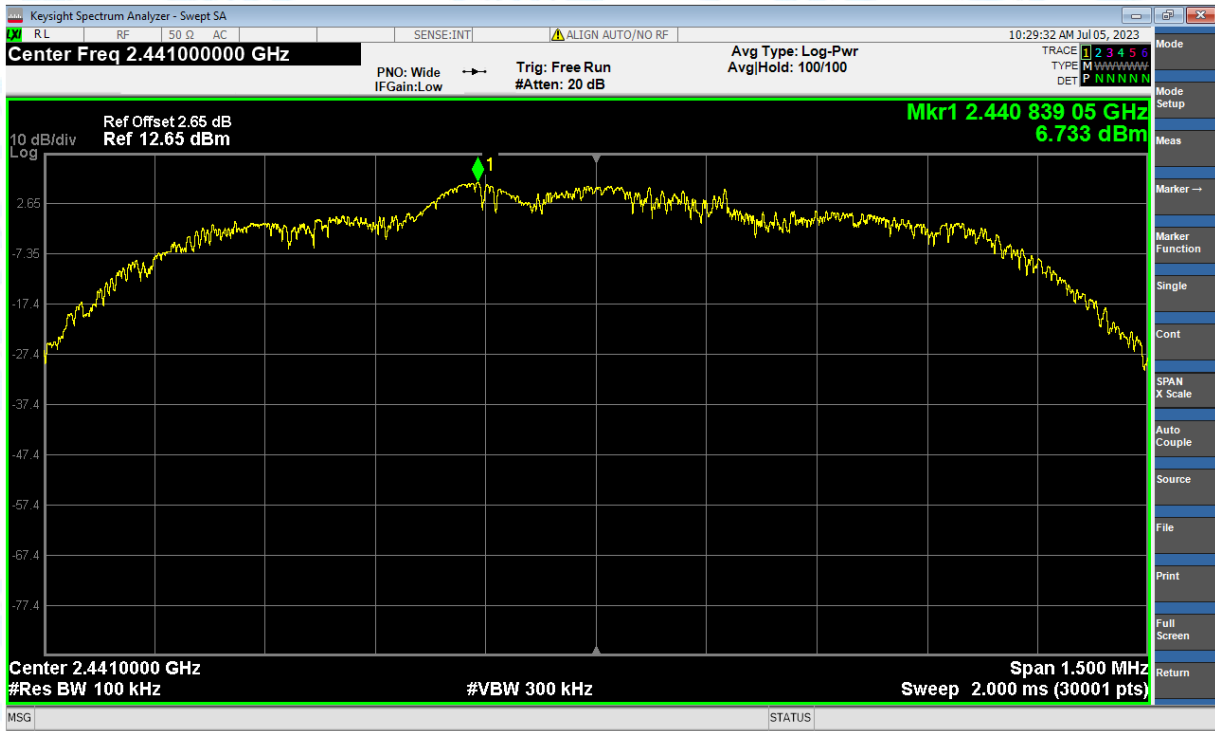
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



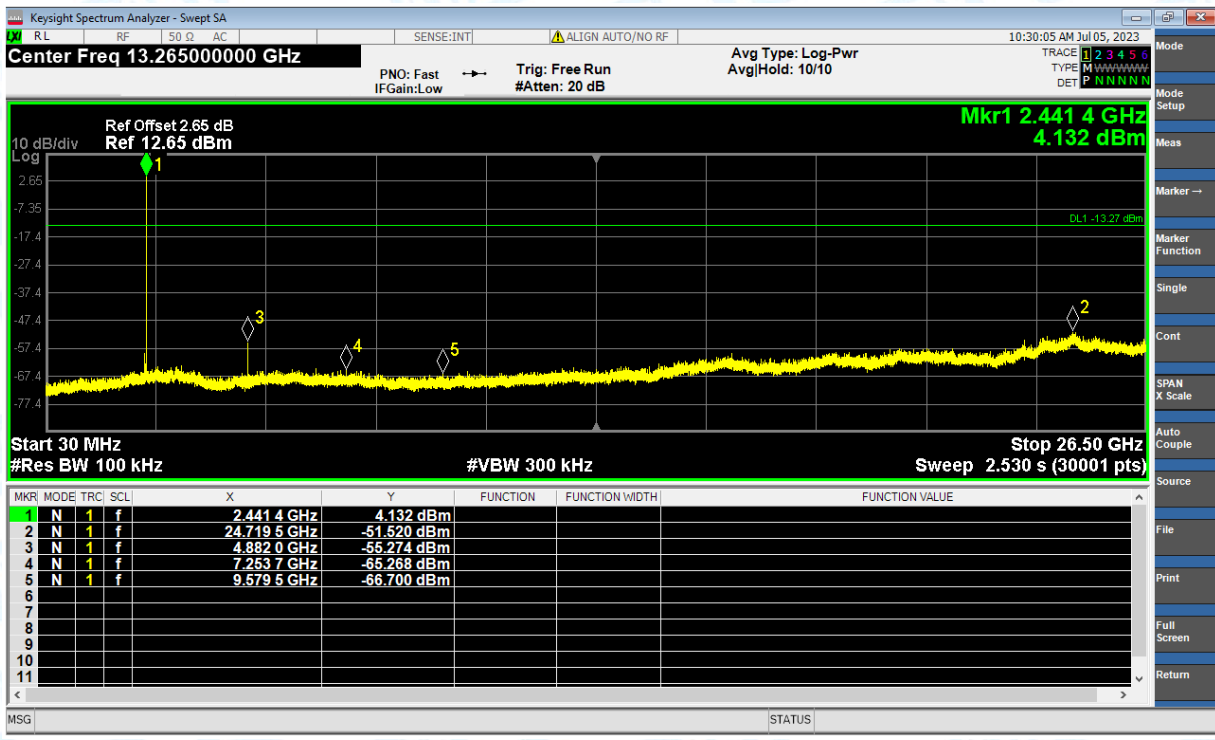
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



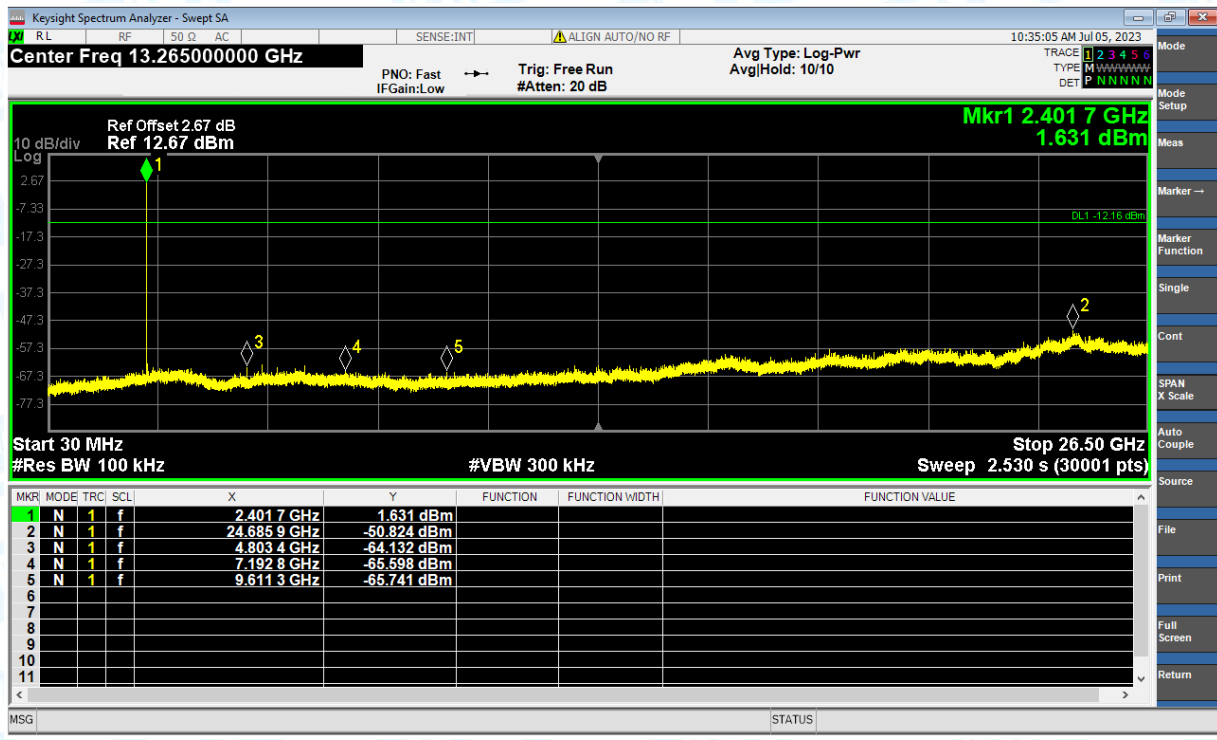
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



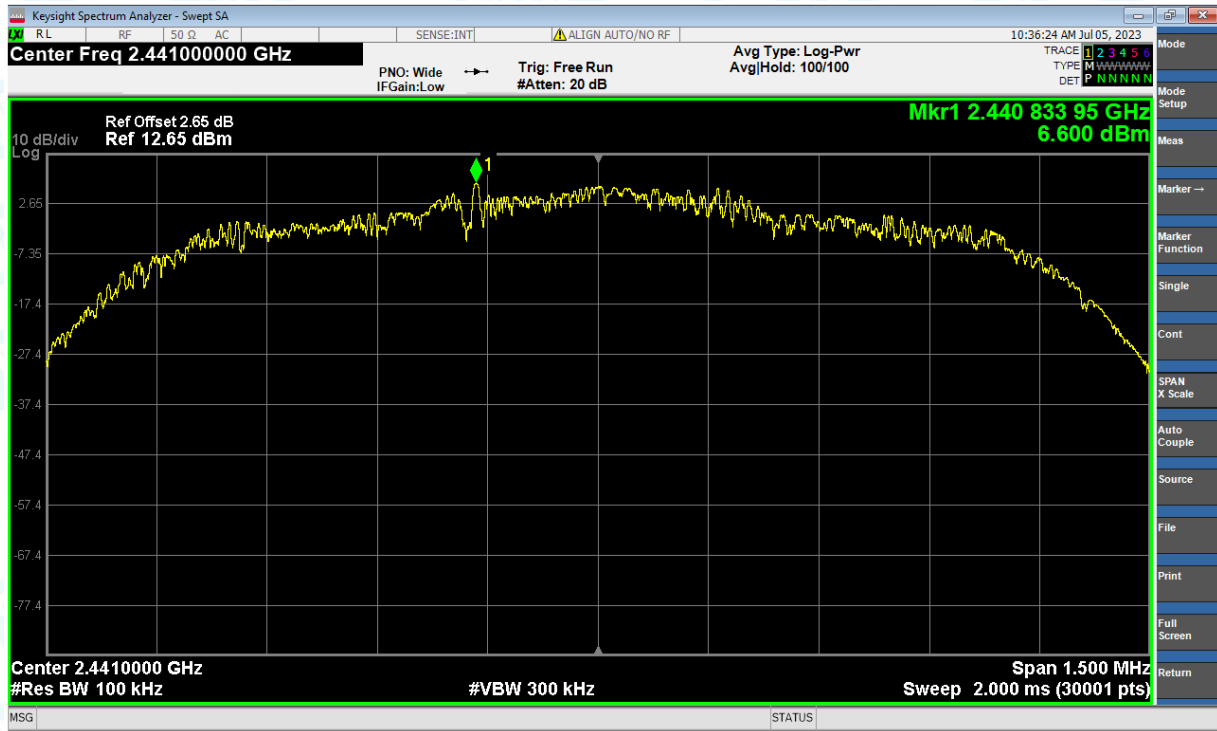
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



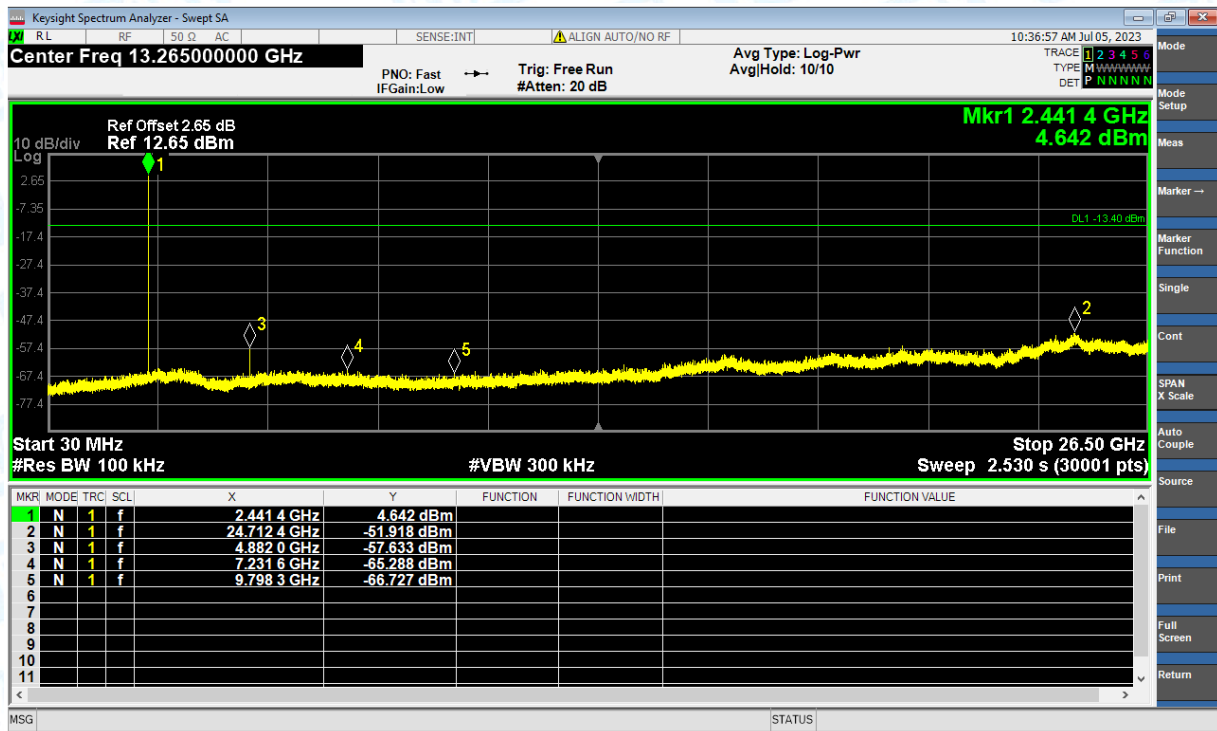
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



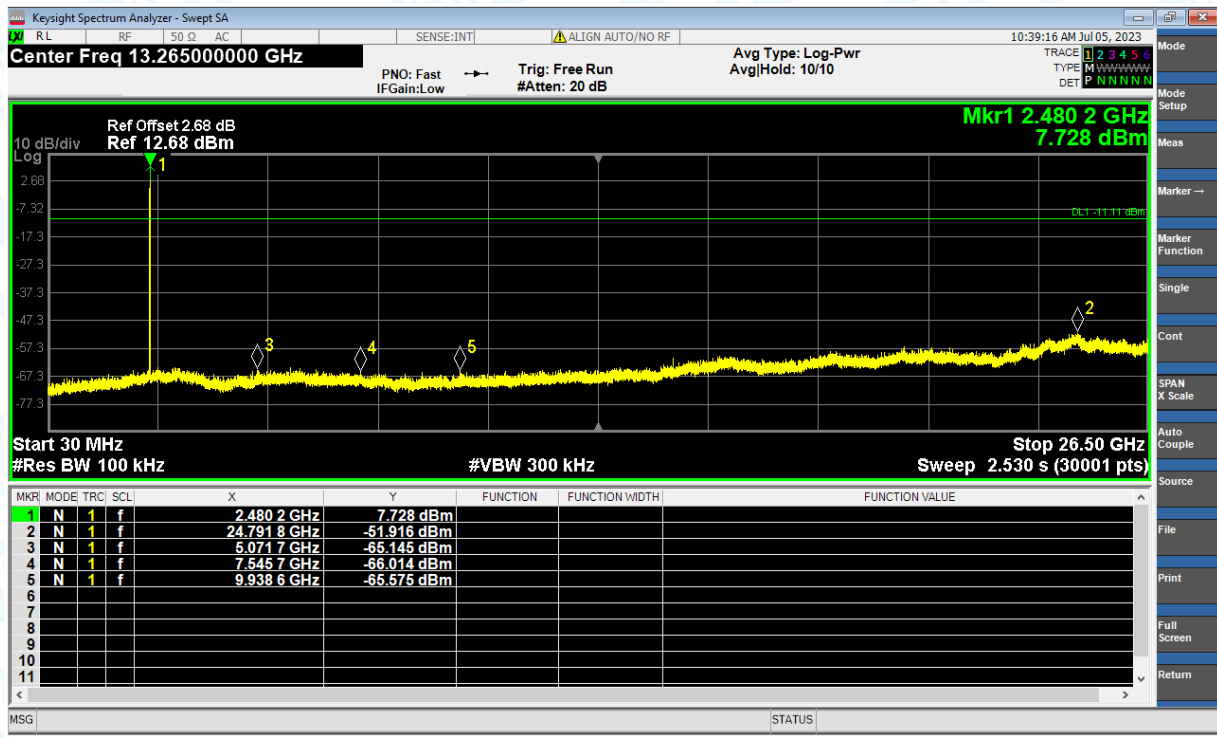
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

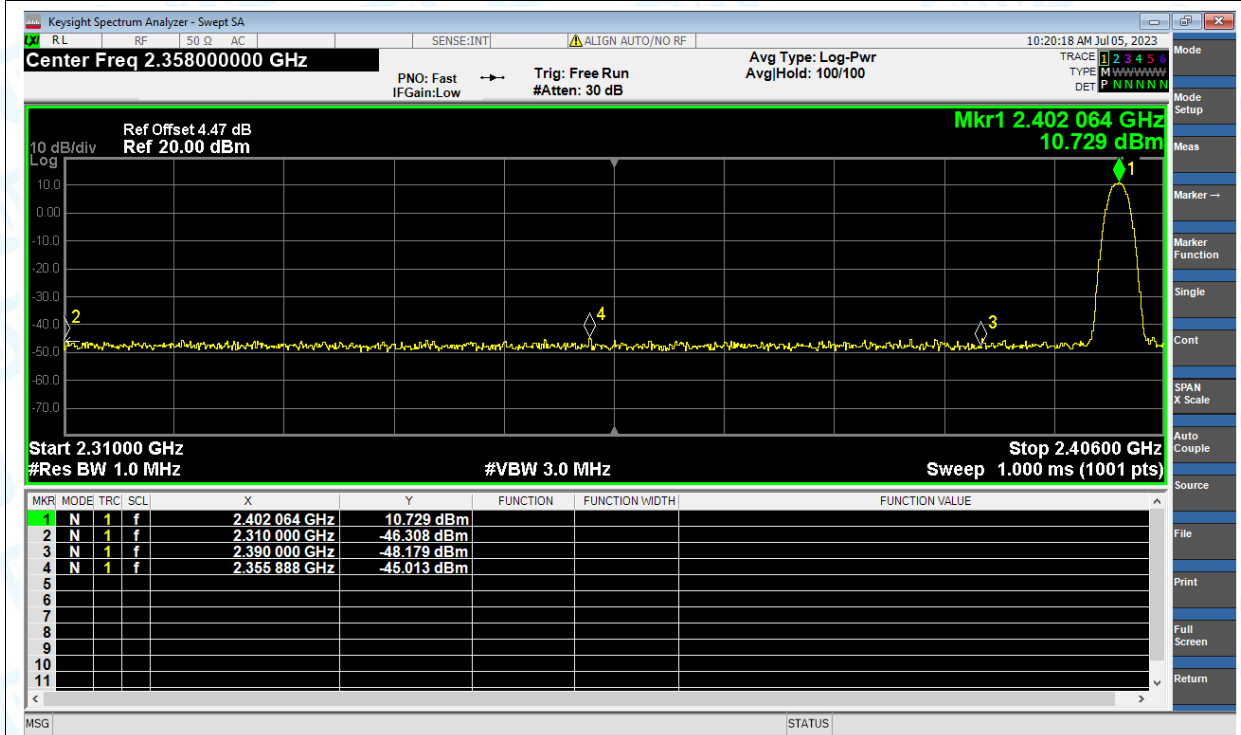


8. Restrict Band

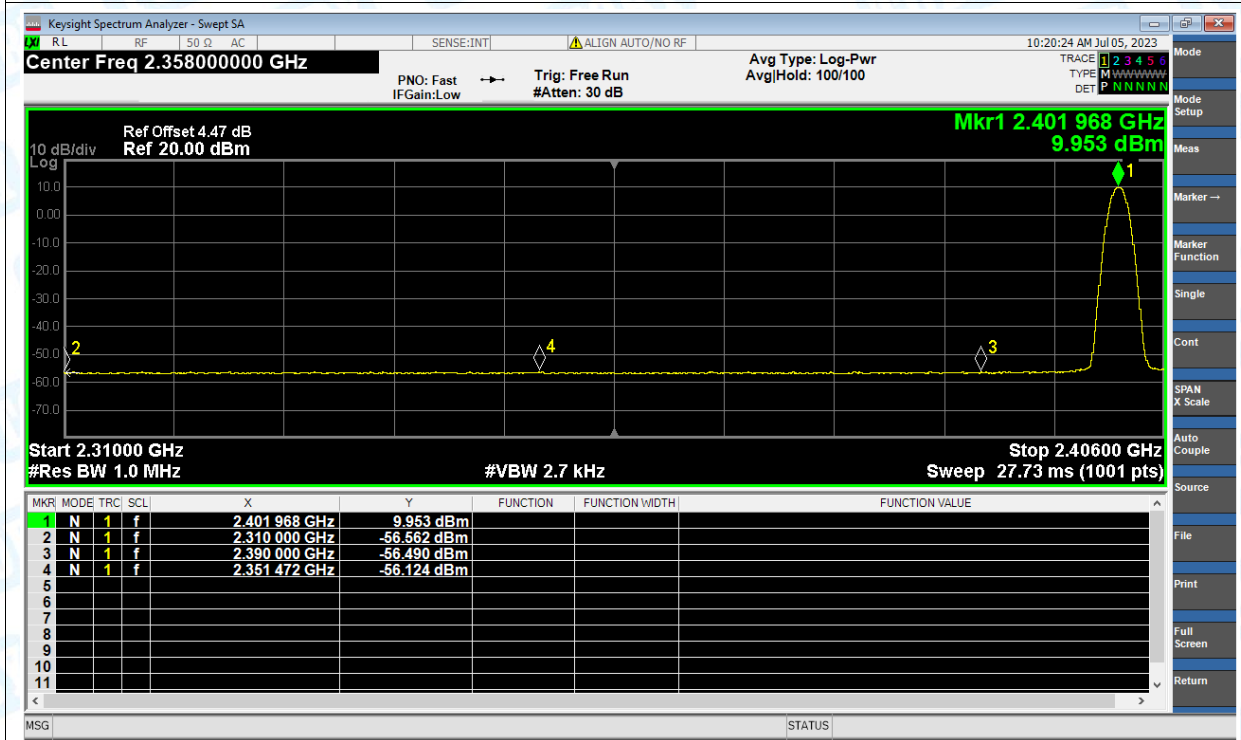
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-46.31	2	50.95	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.56	2	40.7	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2355.888	-45.01	2	52.25	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2351.472	-56.12	2	41.14	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-48.52	2	48.74	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.26	2	41	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46.94	2	50.32	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.13	2	42.13	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.112	-44.69	2	52.57	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.536	-55	2	42.26	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-48.33	2	48.93	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-56.17	2	41.09	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-48.89	2	48.37	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.48	2	40.78	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2337.648	-44.61	2	52.65	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2334.768	-56.18	2	41.08	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-46.8	2	50.46	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-56.62	2	40.64	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-44.47	2	52.79	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-54.23	2	43.03	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2484.208	-44.18	2	53.08	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.56	-54.19	2	43.07	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.61	2	49.65	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-56.49	2	40.77	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-47.19	2	50.07	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.85	2	40.41	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2375.28	-44.61	2	52.65	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2317.296	-55.99	2	41.27	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.71	2	49.55	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-56.65	2	40.61	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-42.23	2	55.03	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-54.33	2	42.93	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.512	-42.23	2	55.03	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.512	-54.33	2	42.93	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-47.32	2	49.94	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-56.41	2	40.85	Average	54	Pass

Test Graphs

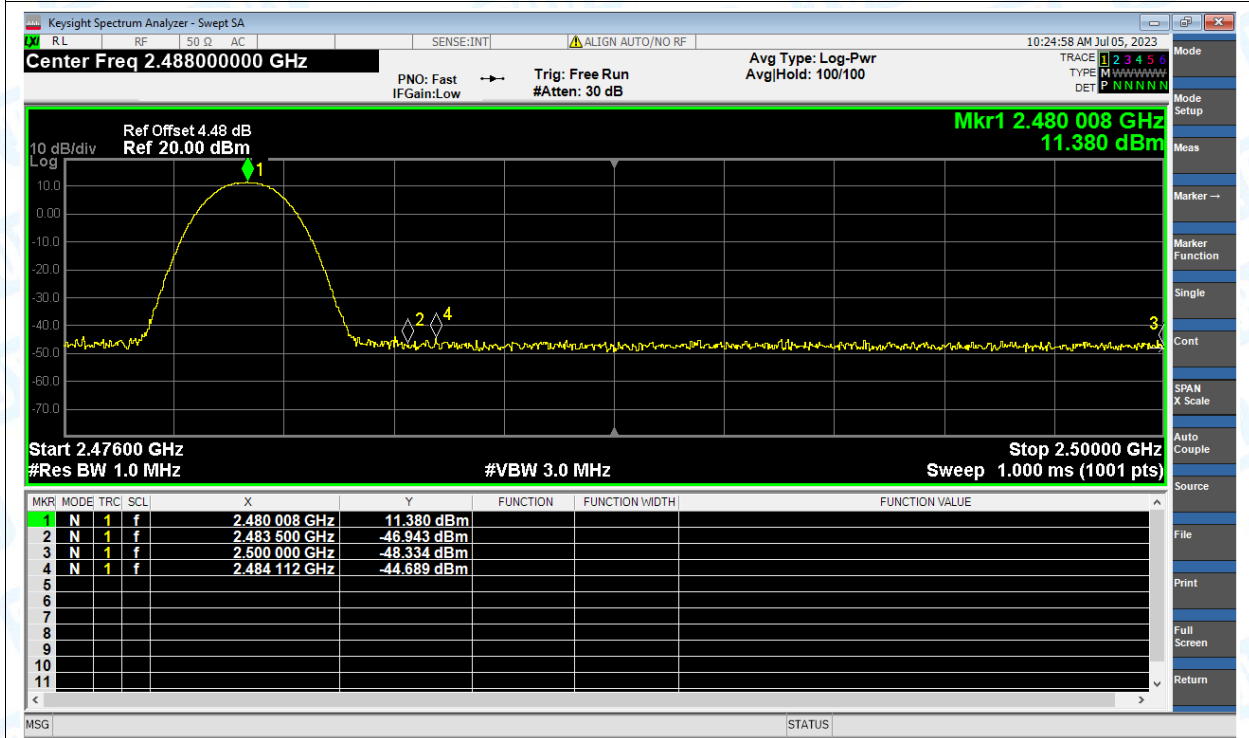
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



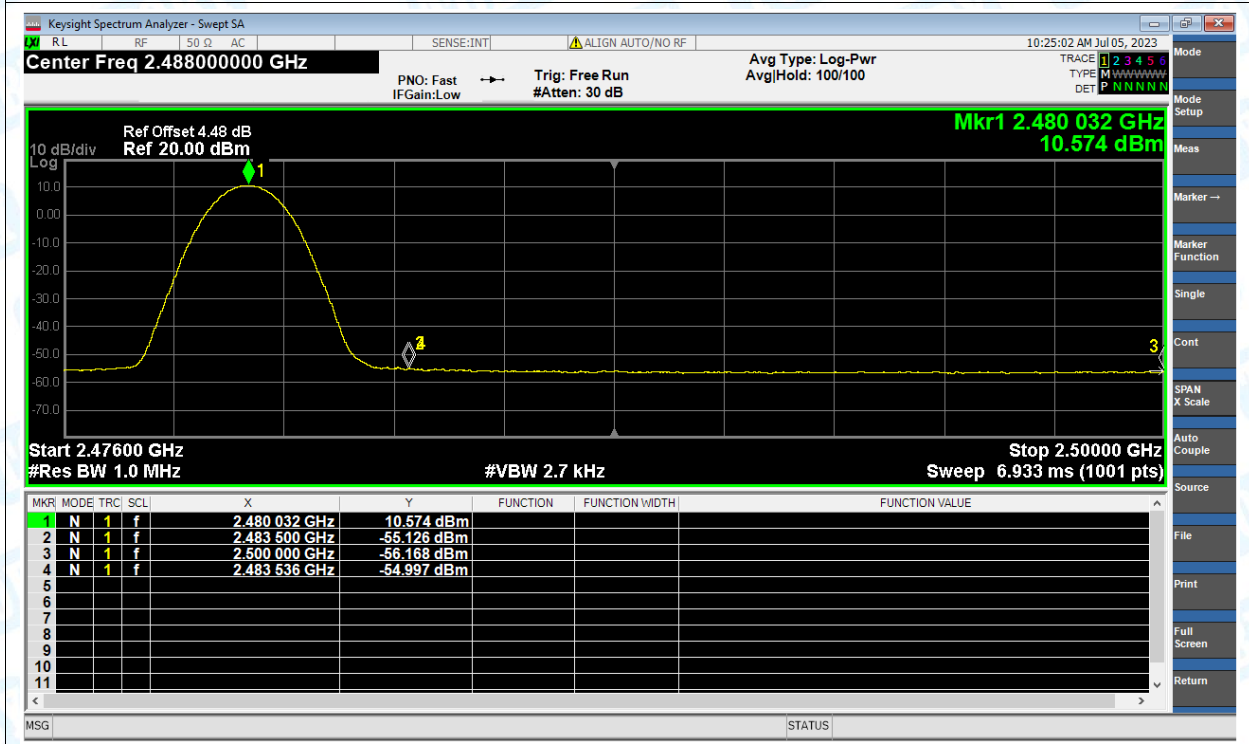
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



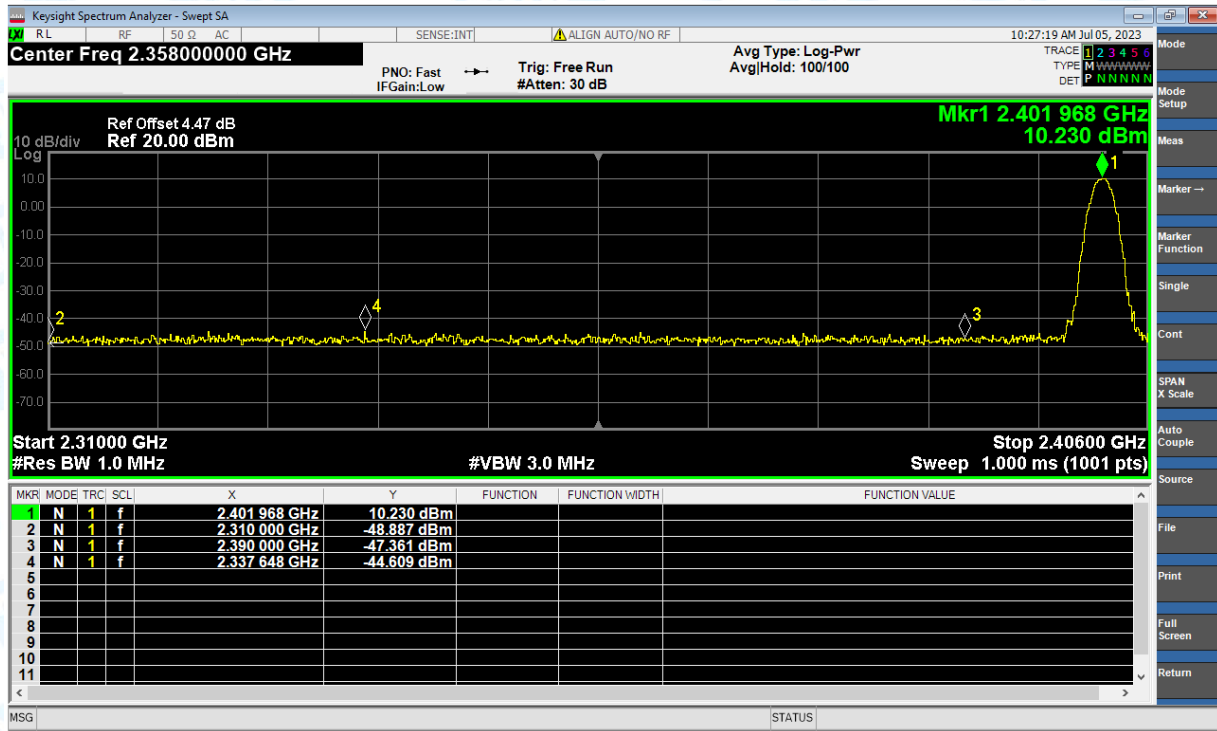
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



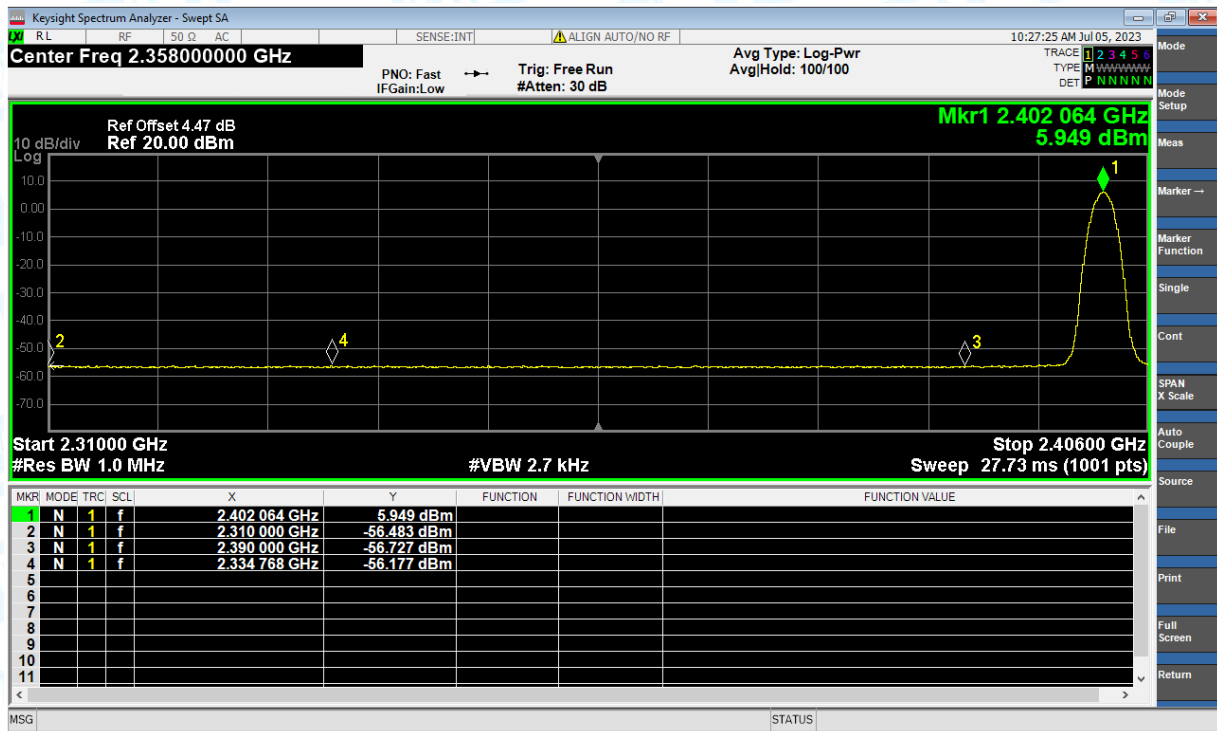
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



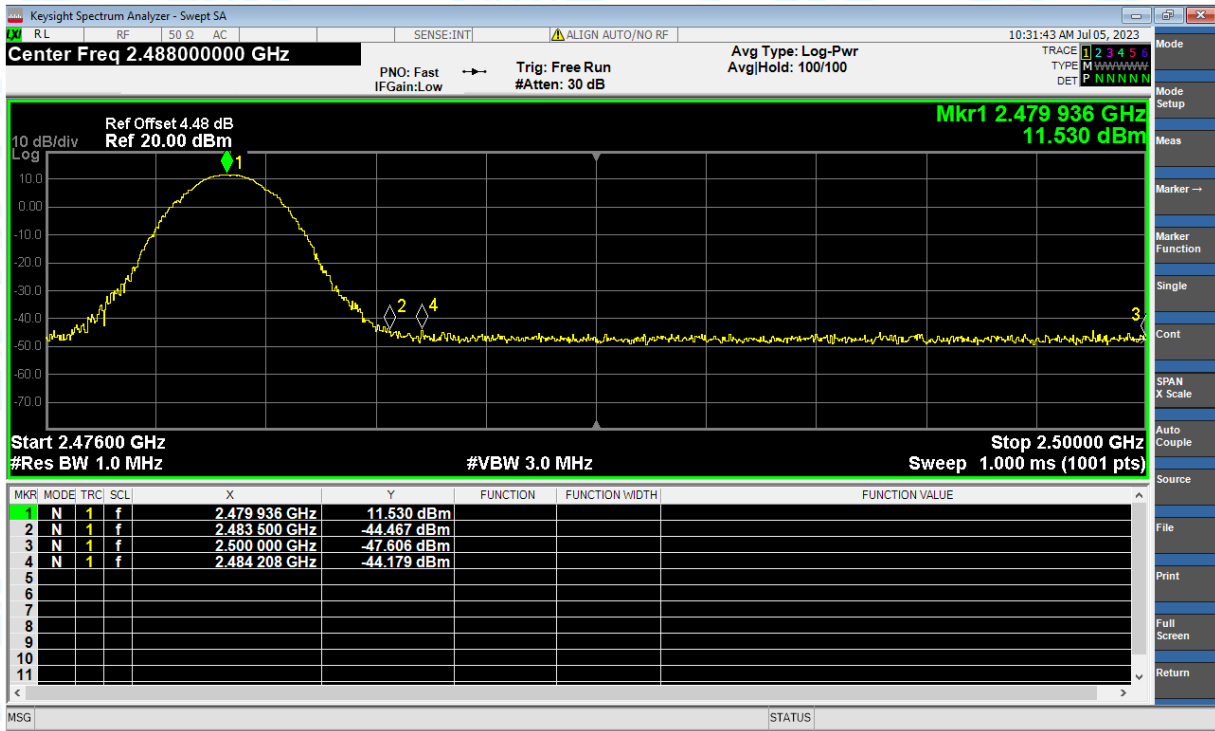
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



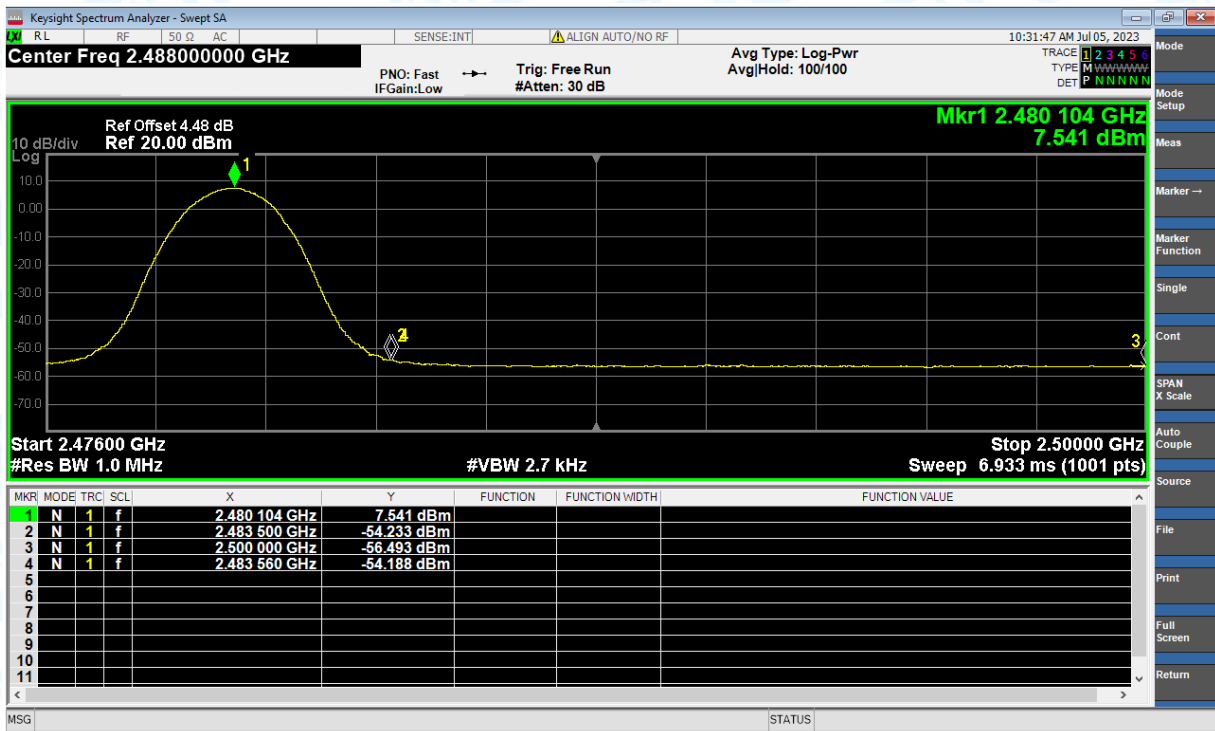
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



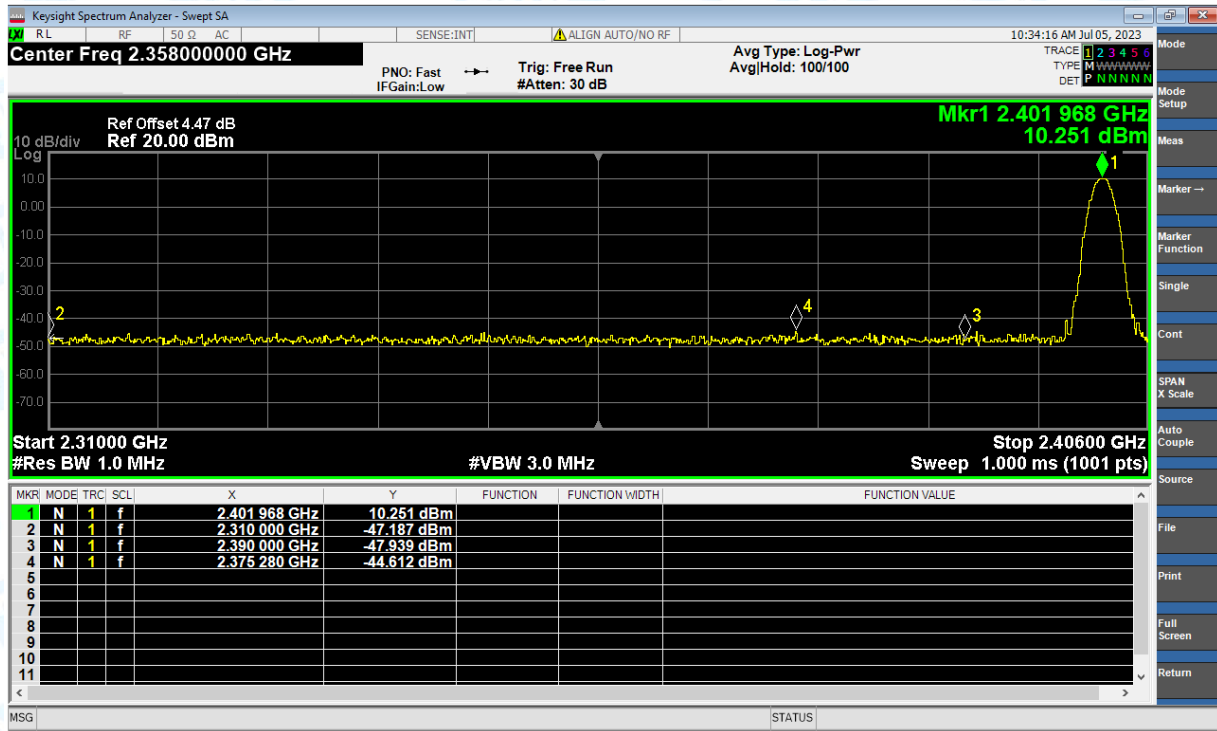
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



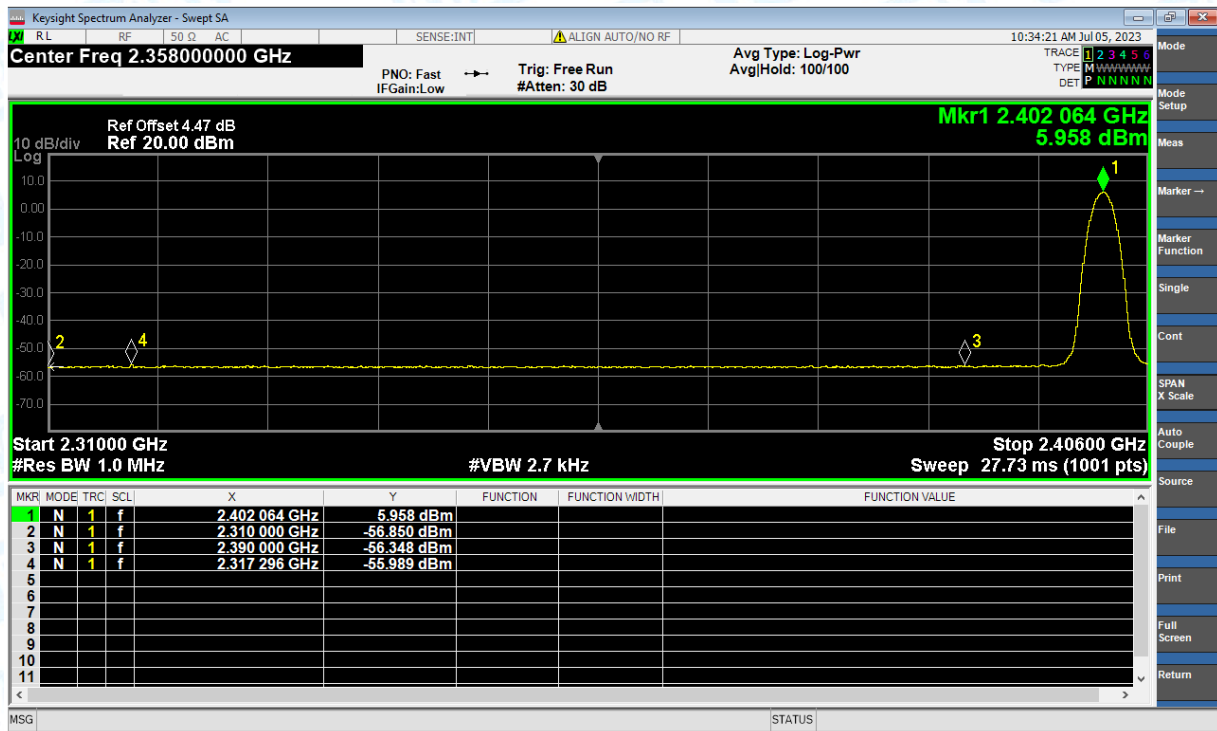
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



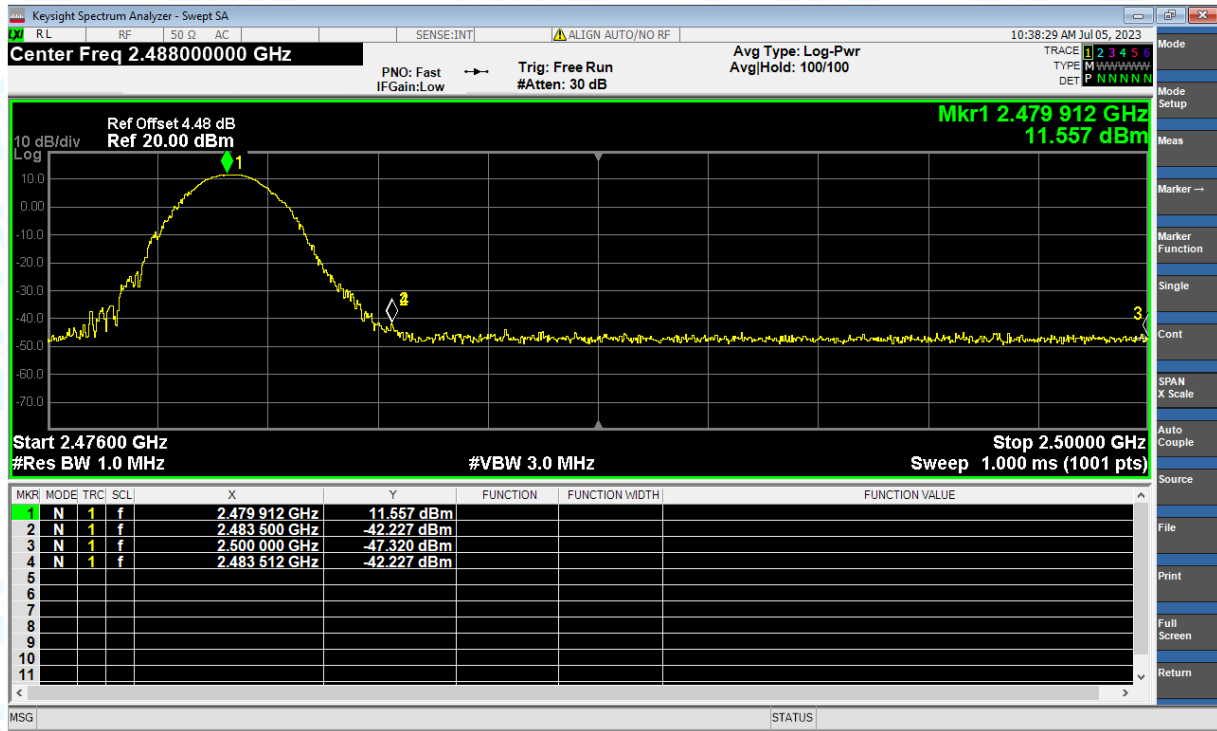
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



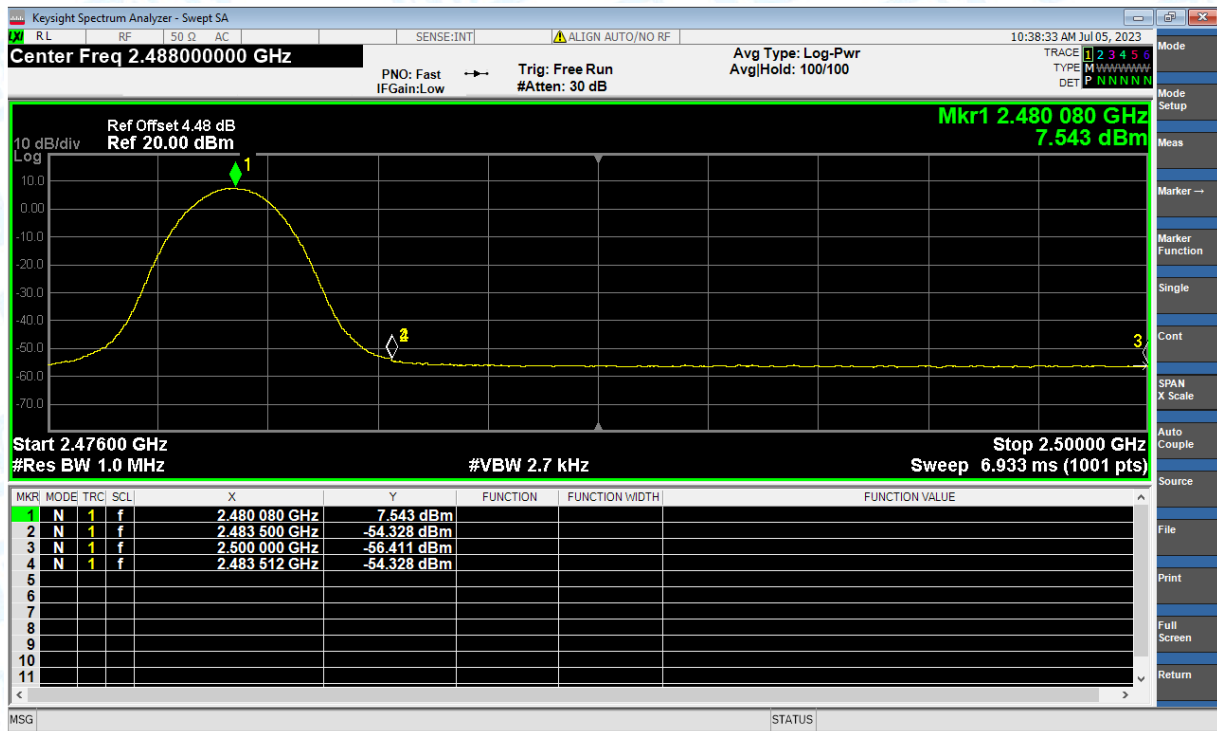
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

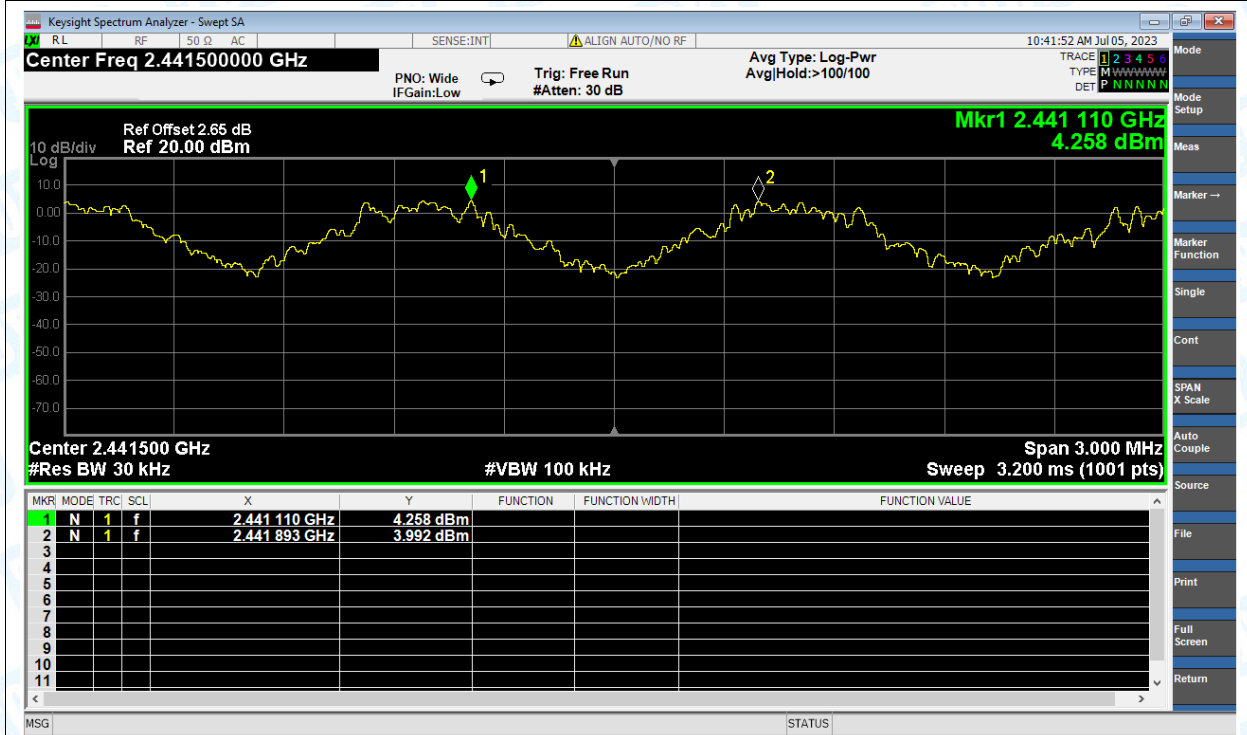


9. Carrier Frequencies Separation

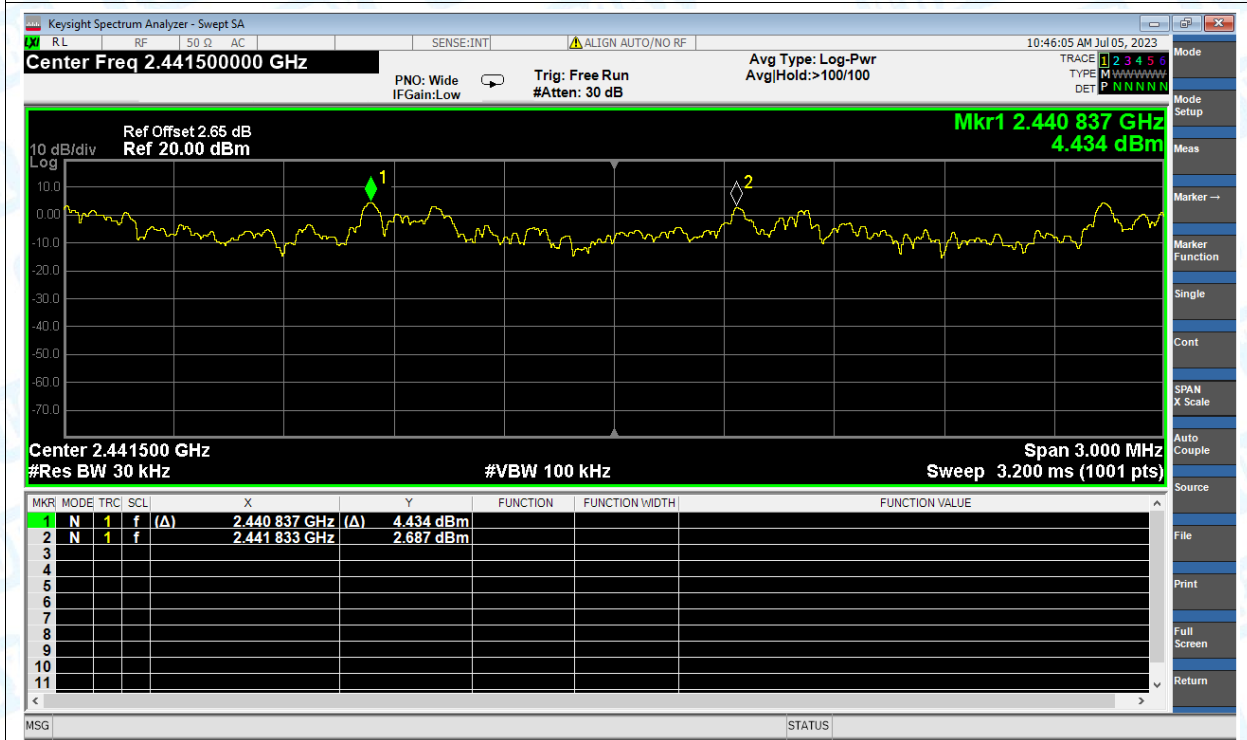
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.11	2441.893	0.783	0.507	Pass
NVNT	2-DH1	Ant1	2440.837	2441.833	0.996	0.827	Pass
NVNT	3-DH1	Ant1	2441.011	2441.83	0.819	0.807	Pass

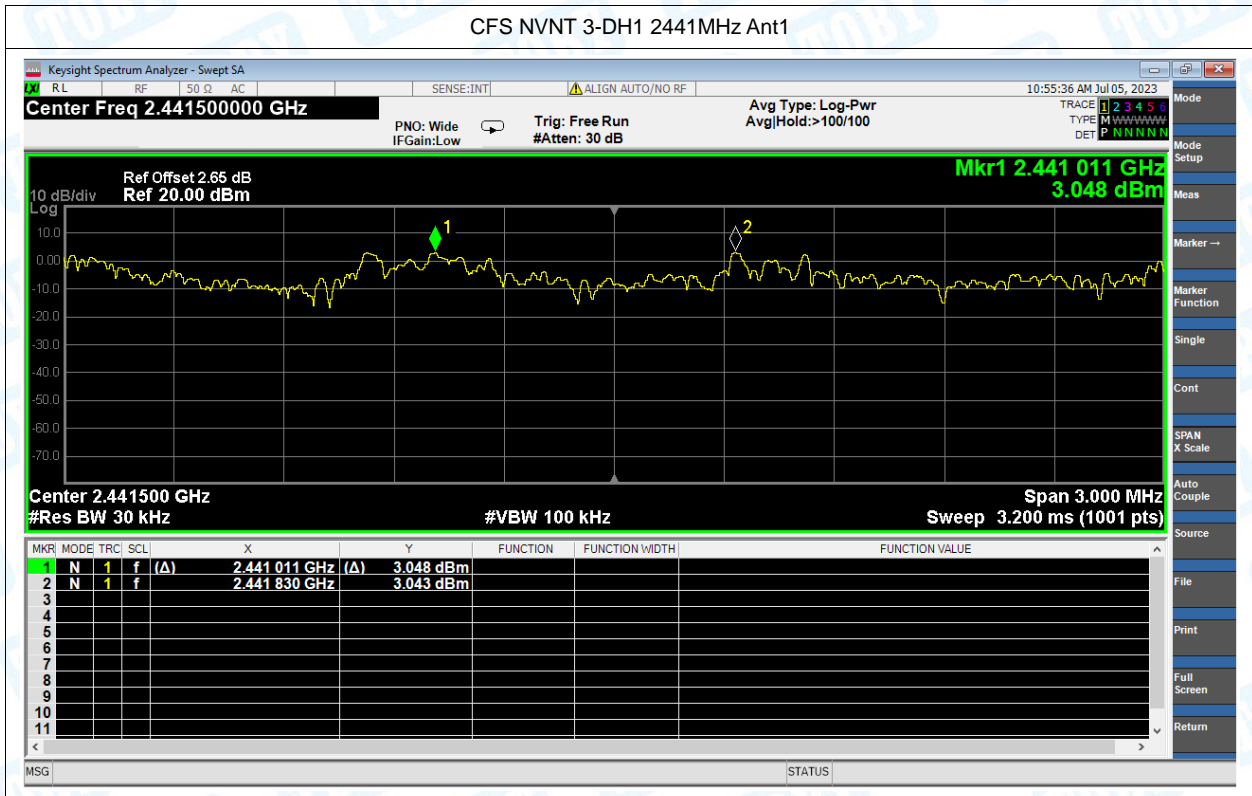
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



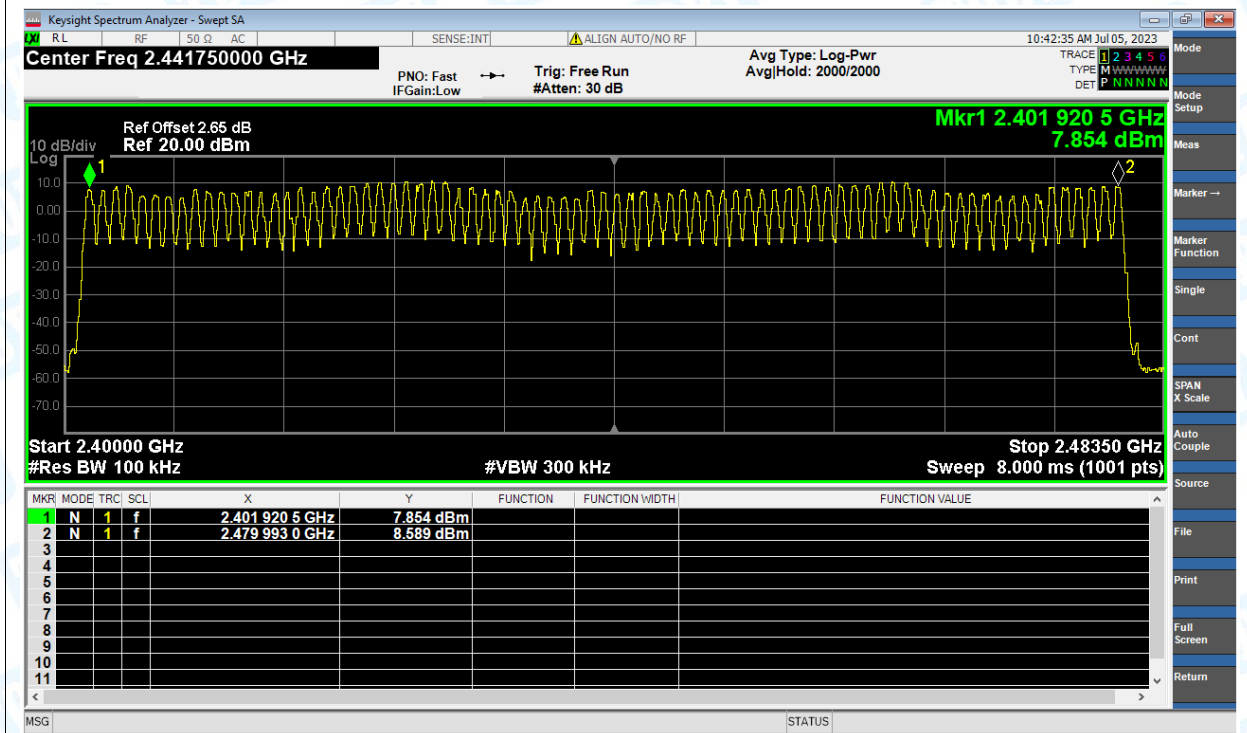


10. Number of Hopping Channel

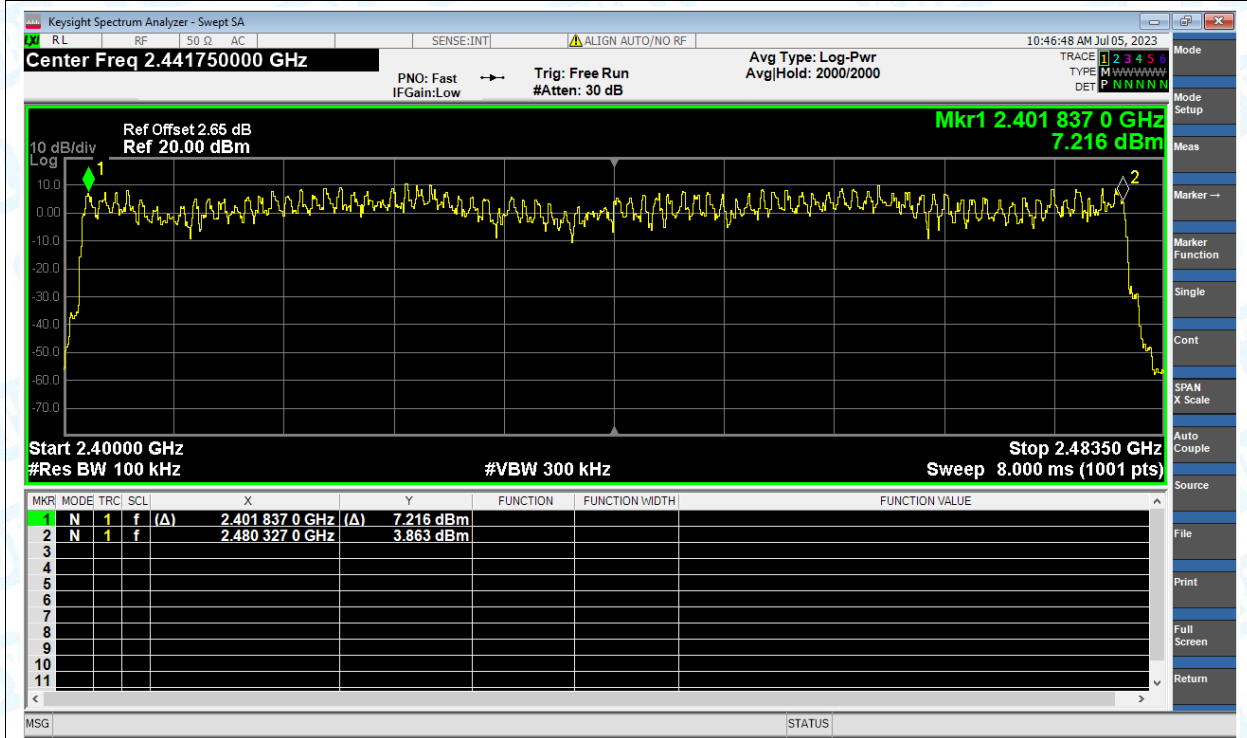
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

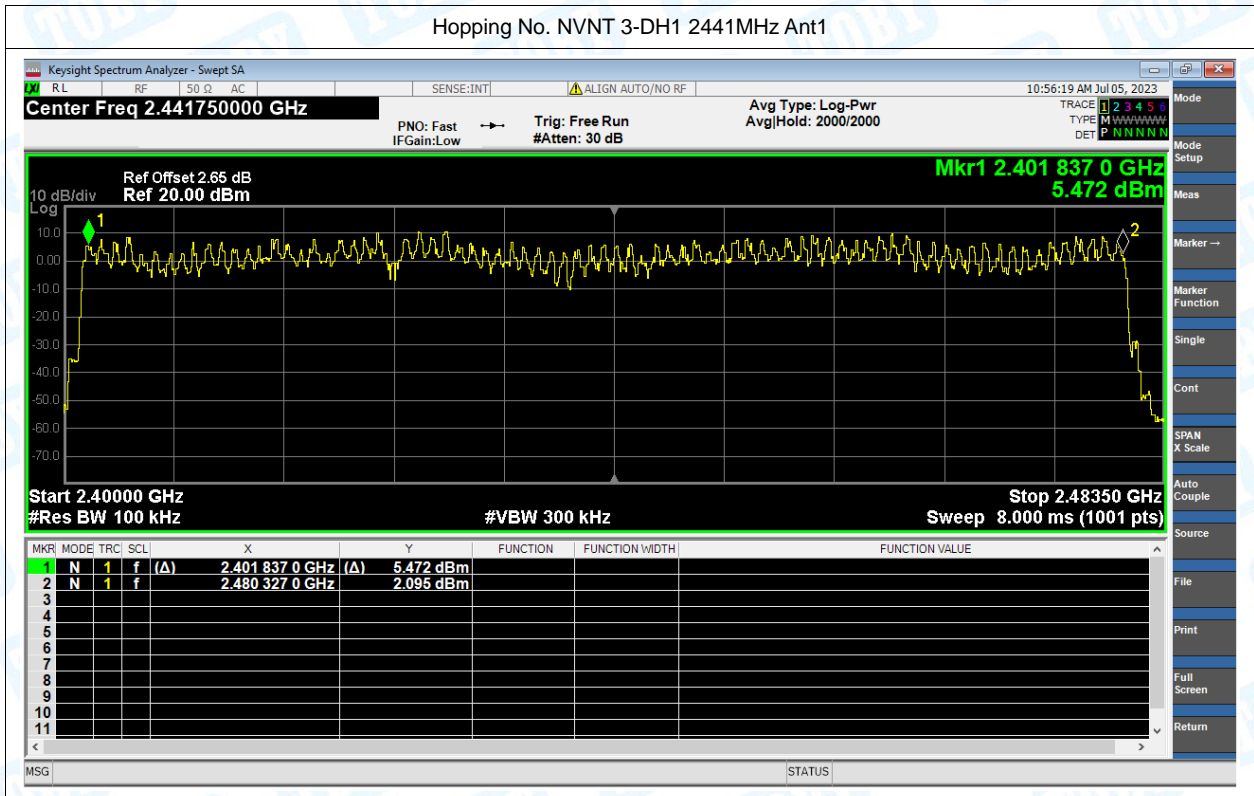
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



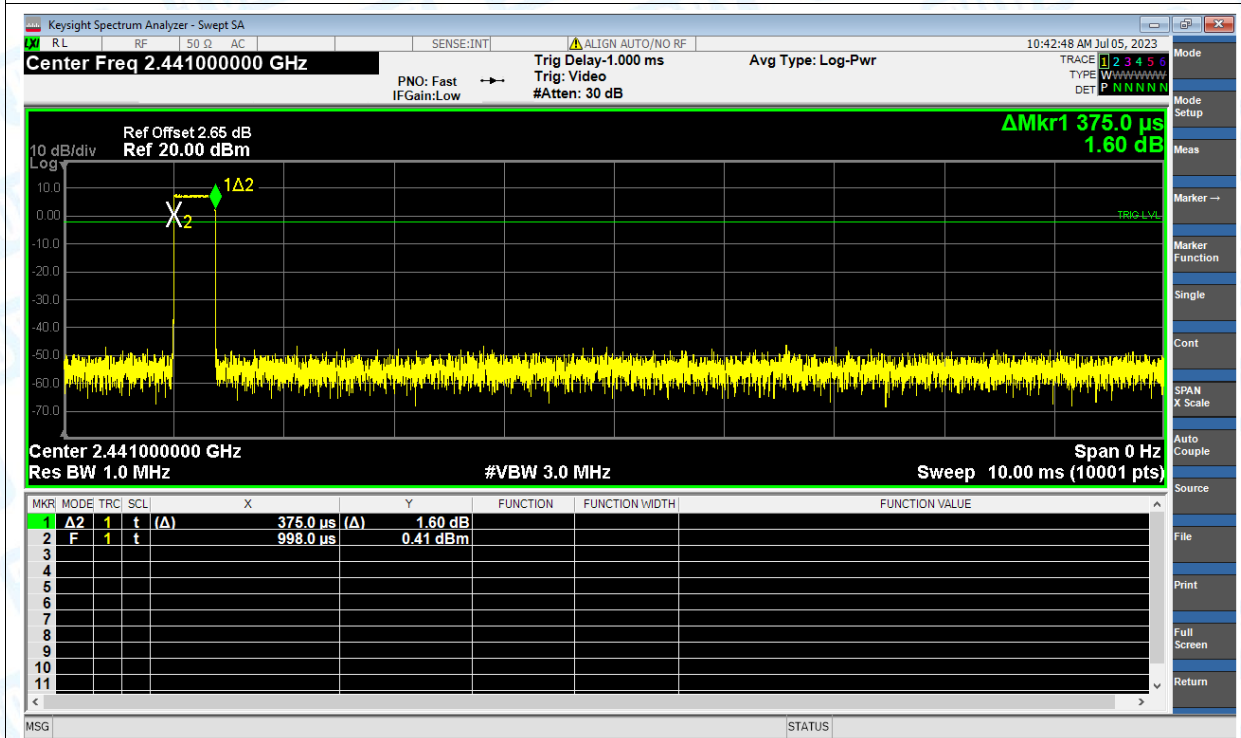


11. Dwell Time

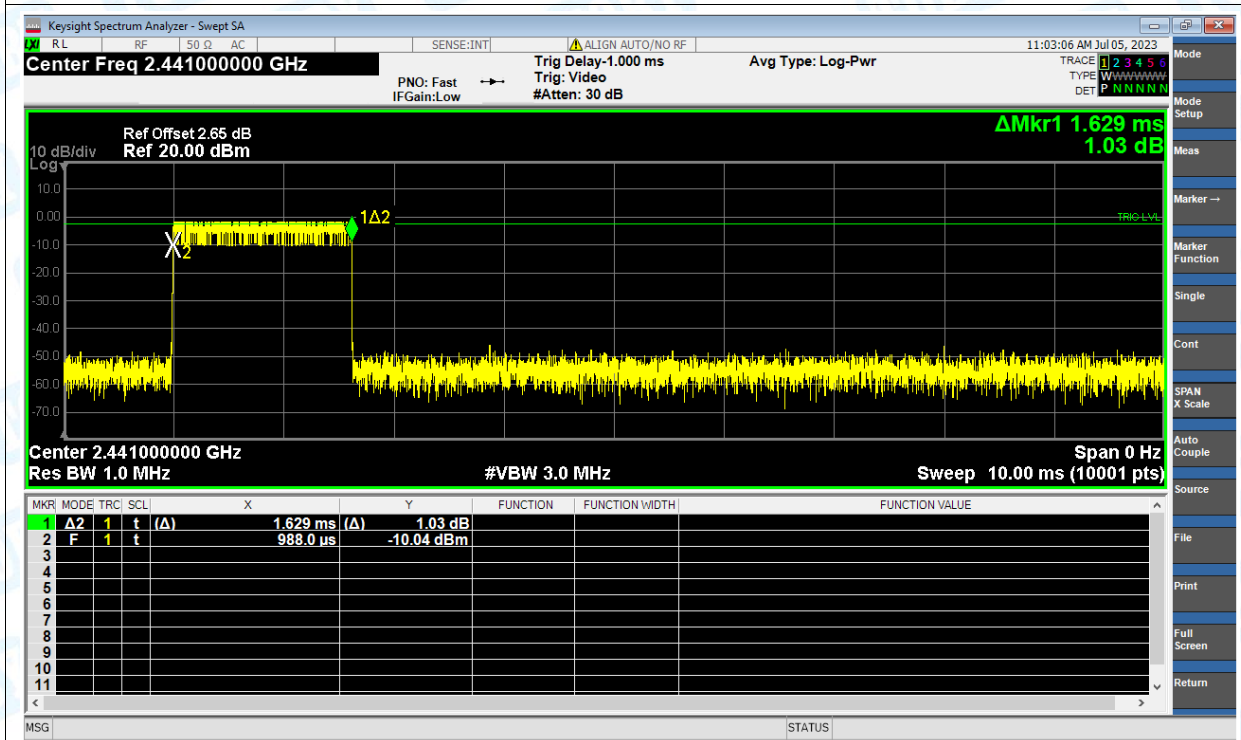
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.375	120	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.629	260.64	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.879	307.093	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.631	260.96	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.881	307.307	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.381	121.92	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.634	261.44	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.885	307.733	31600	400	Pass

Test Graphs

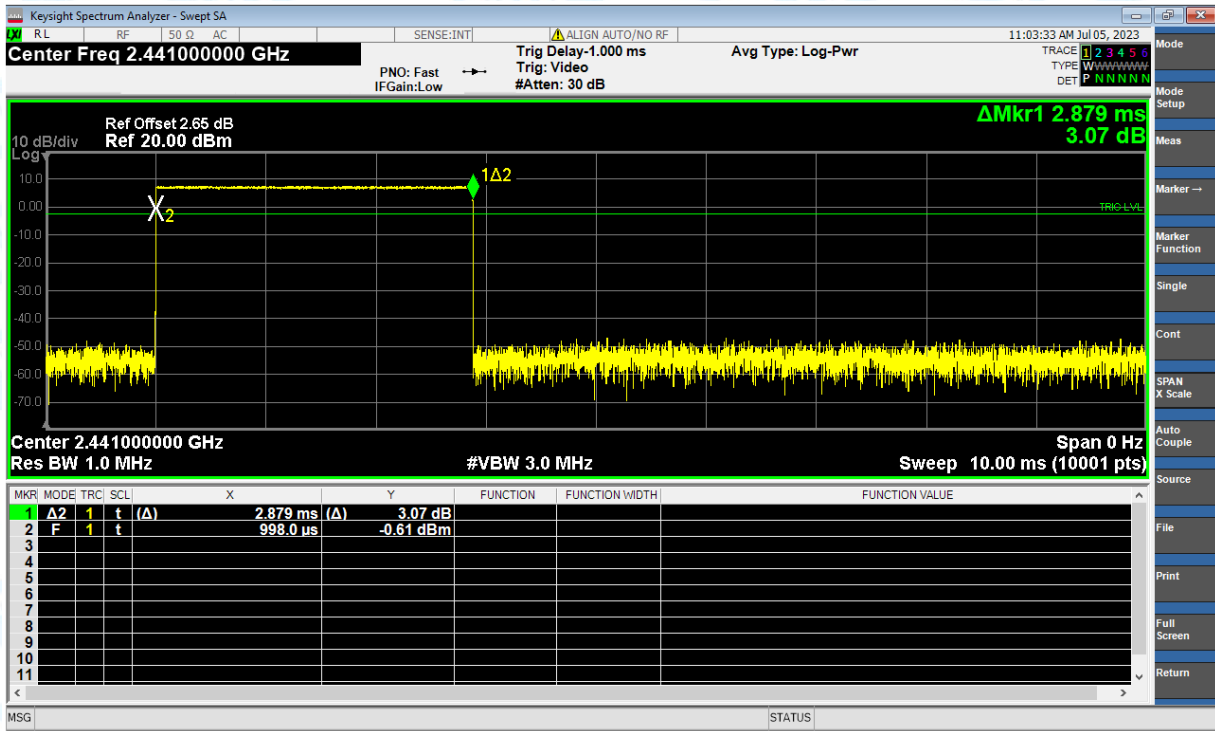
Dwell NVNT 1-DH1 2441MHz Ant1



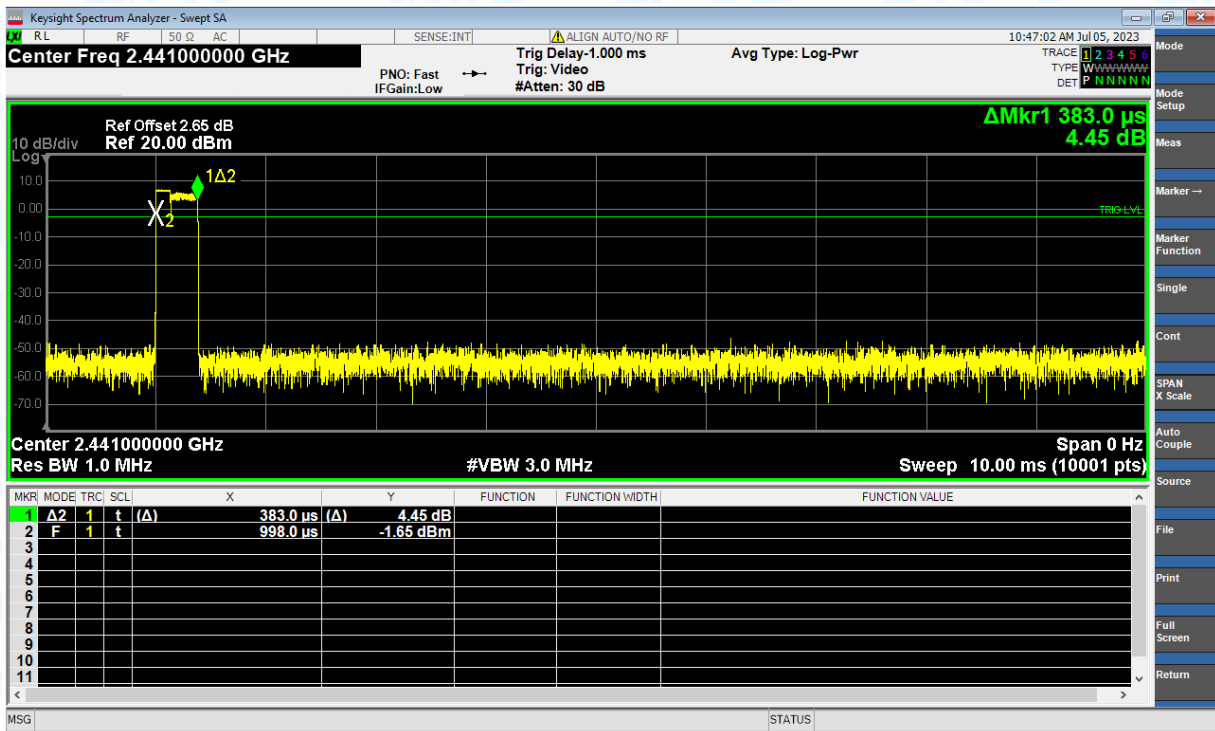
Dwell NVNT 1-DH3 2441MHz Ant1



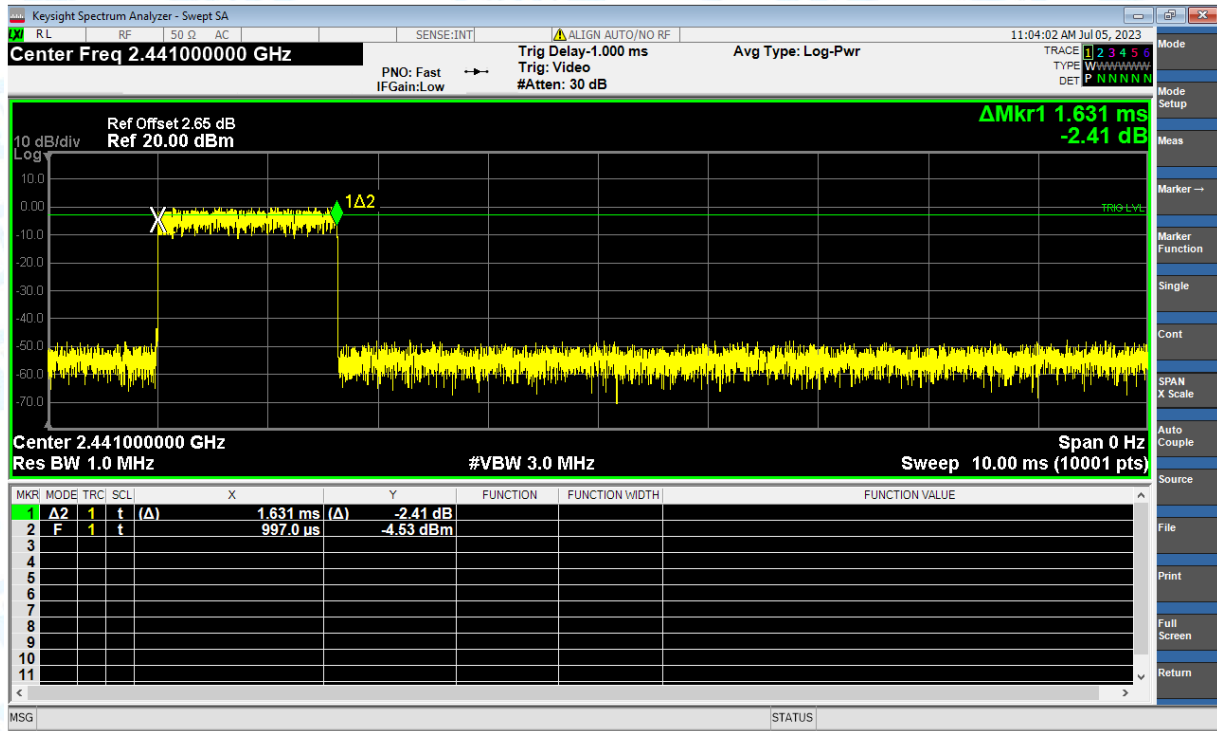
Dwell NVNT 1-DH5 2441MHz Ant1



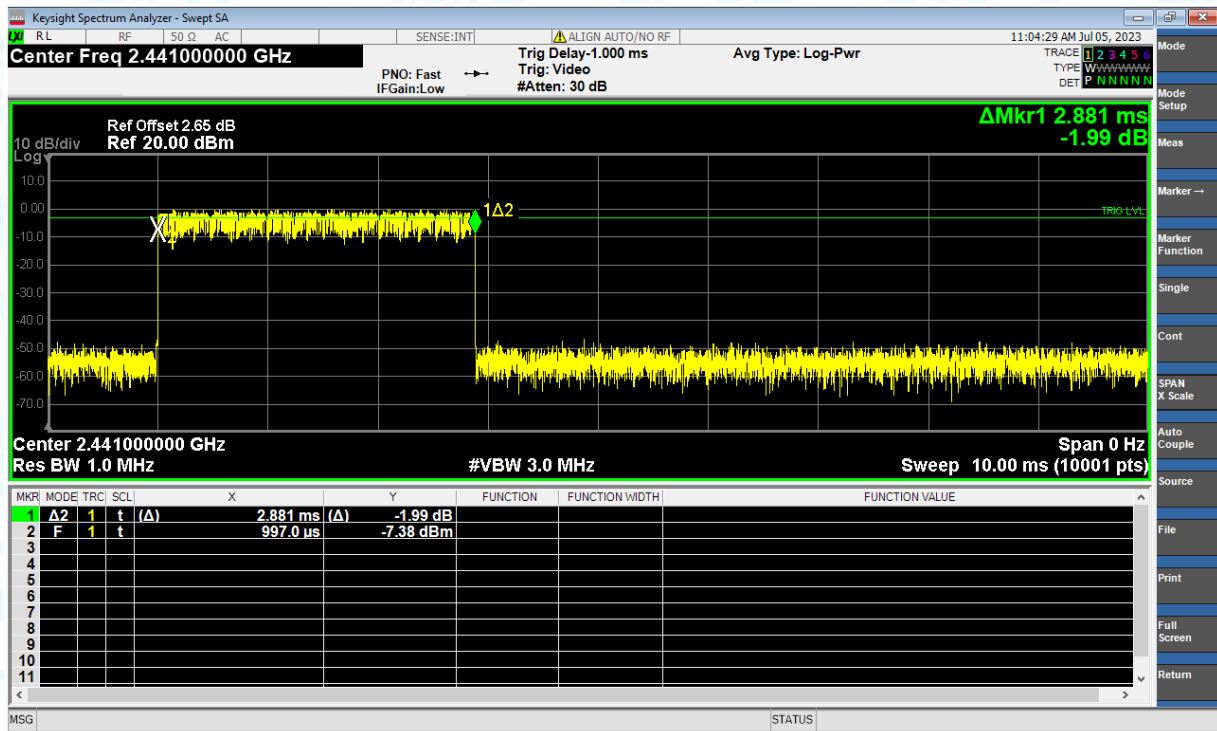
Dwell NVNT 2-DH1 2441MHz Ant1



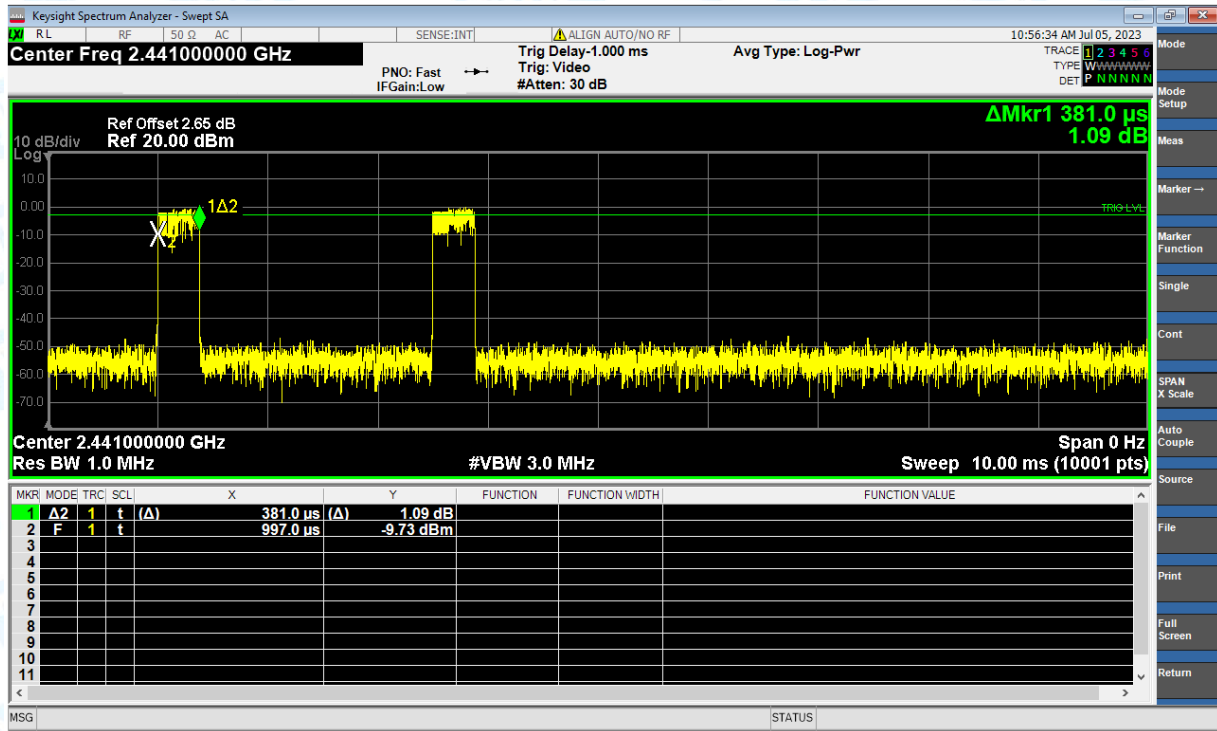
Dwell NVNT 2-DH3 2441MHz Ant1



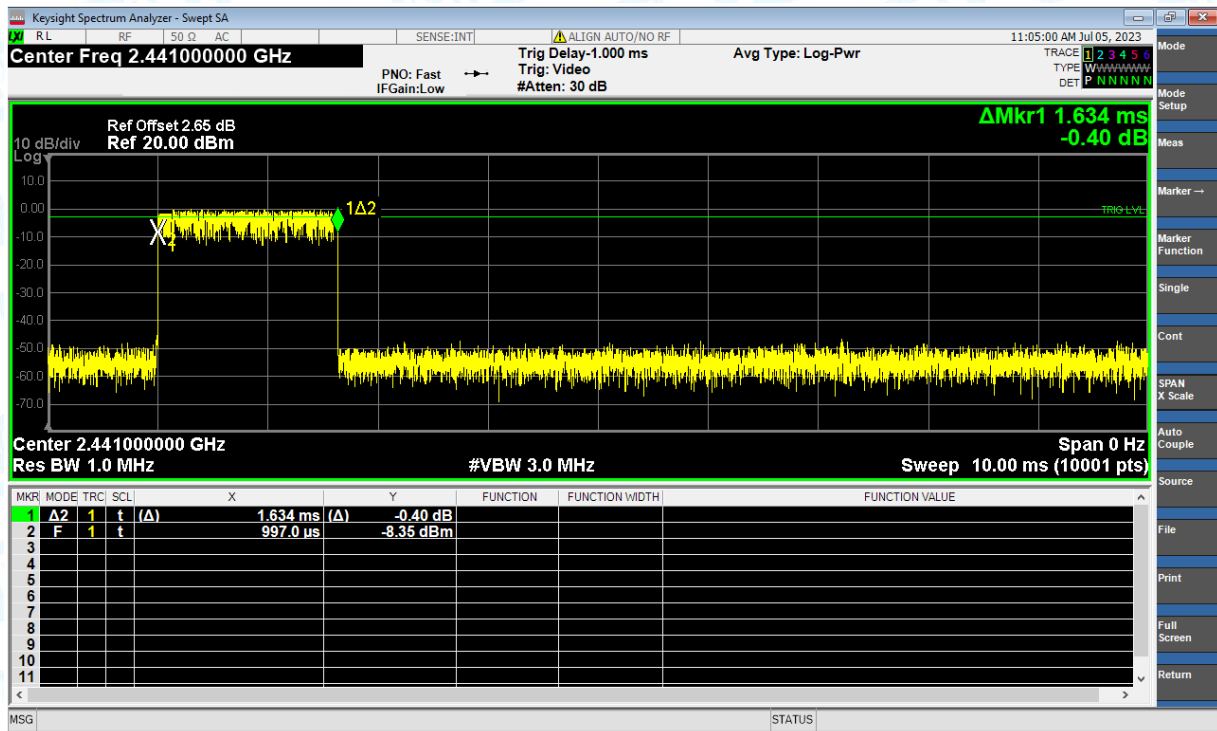
Dwell NVNT 2-DH5 2441MHz Ant1

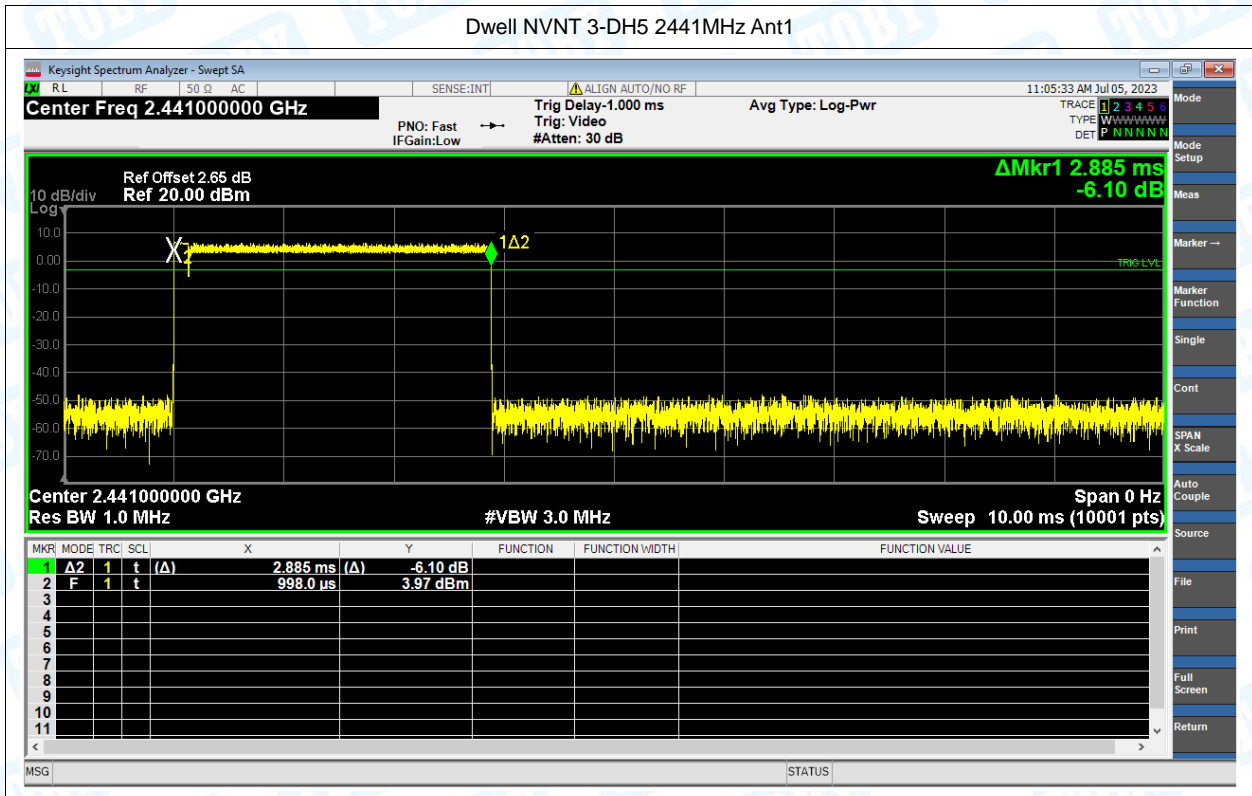


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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