

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

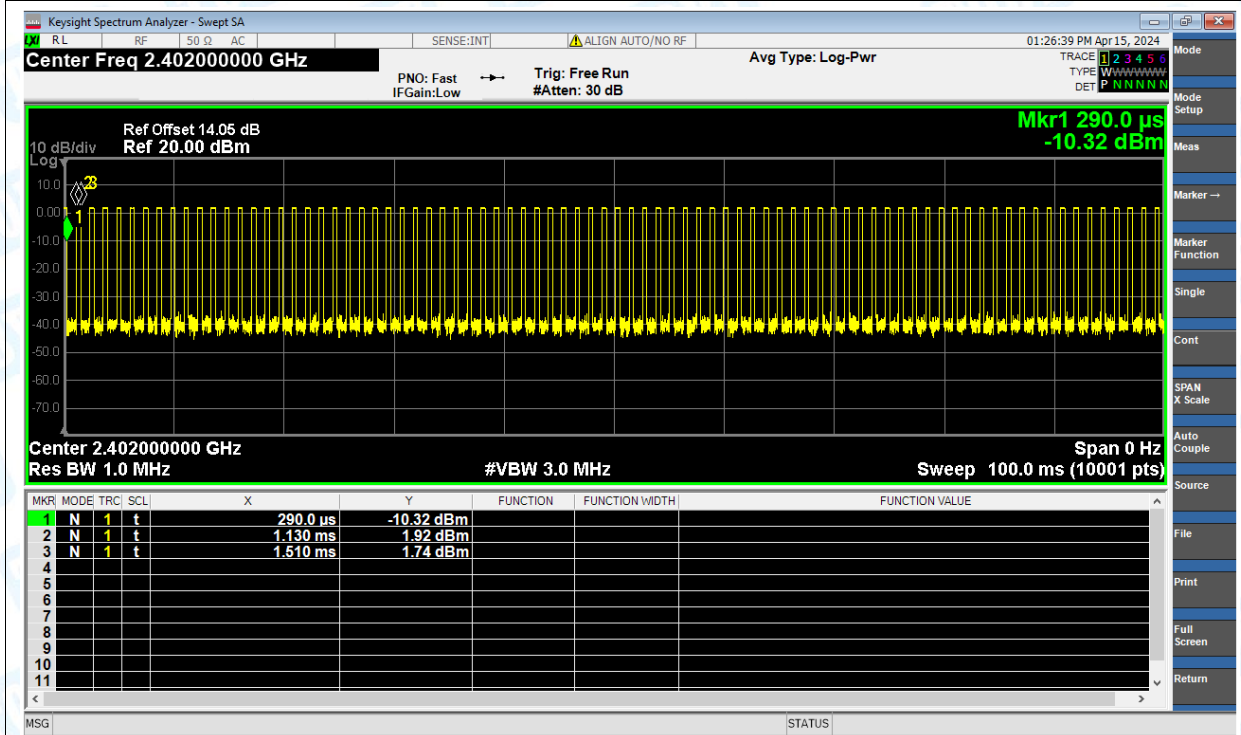
General Description of EUT	
Product Name:	Smart watch
Test Model:	FILA Pulse
Sample ID:	HC-C-202403-0386-01-01-2#
Environmental Conditions	
Temperature:	23.8°C
Relative Humidity:	48%
Test Voltage:	DC 3.7V
Test Engineer:	ZKN ZHOU
Note: For a more detailed features description, please refer to the report TBR-C-202403-0386-3 The report only show the worst case data.	

1. Duty Cycle

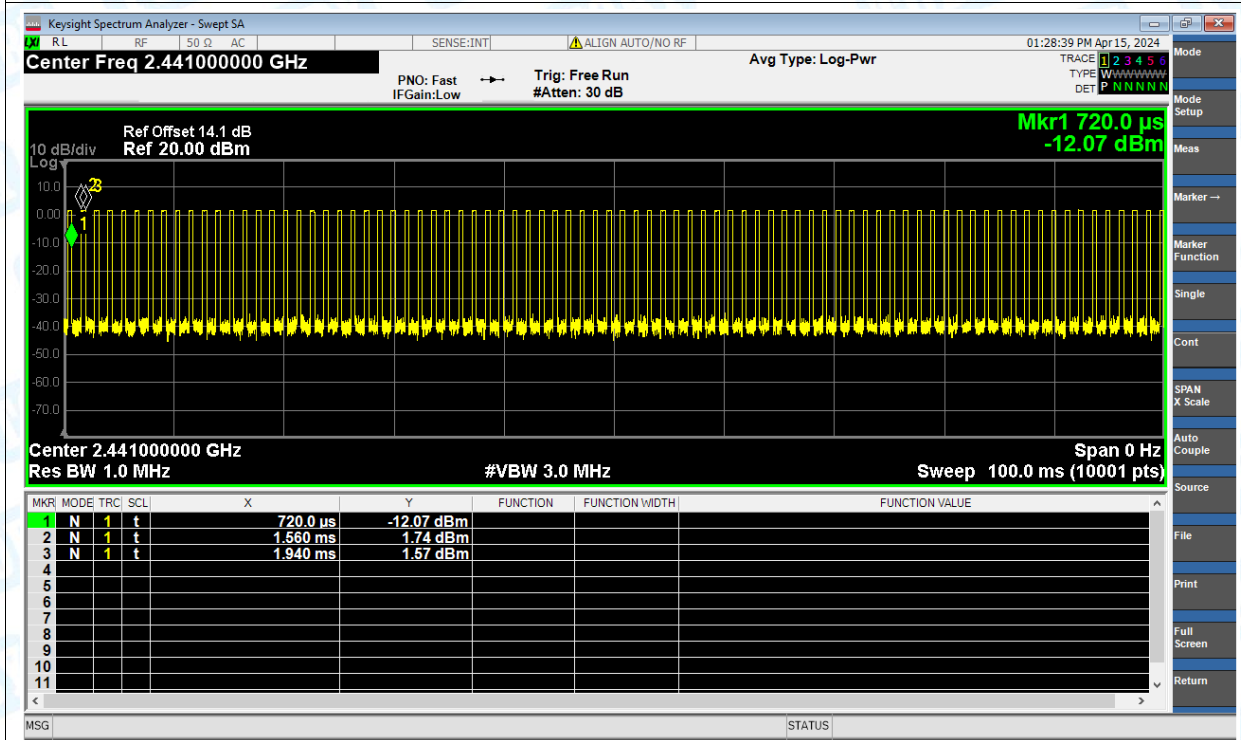
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	31.15	5.07	2.63
NVNT	1-DH1	2441	Ant1	31.15	5.07	2.63
NVNT	1-DH1	2480	Ant1	30.89	5.1	2.63
NVNT	2-DH1	2402	Ant1	31.45	5.02	2.56
NVNT	2-DH1	2441	Ant1	31.71	4.99	2.56
NVNT	2-DH1	2480	Ant1	30.89	5.1	2.63
NVNT	3-DH1	2402	Ant1	31.45	5.02	2.56
NVNT	3-DH1	2441	Ant1	30.89	5.1	2.63
NVNT	3-DH1	2480	Ant1	31.45	5.02	2.56

Test Graphs

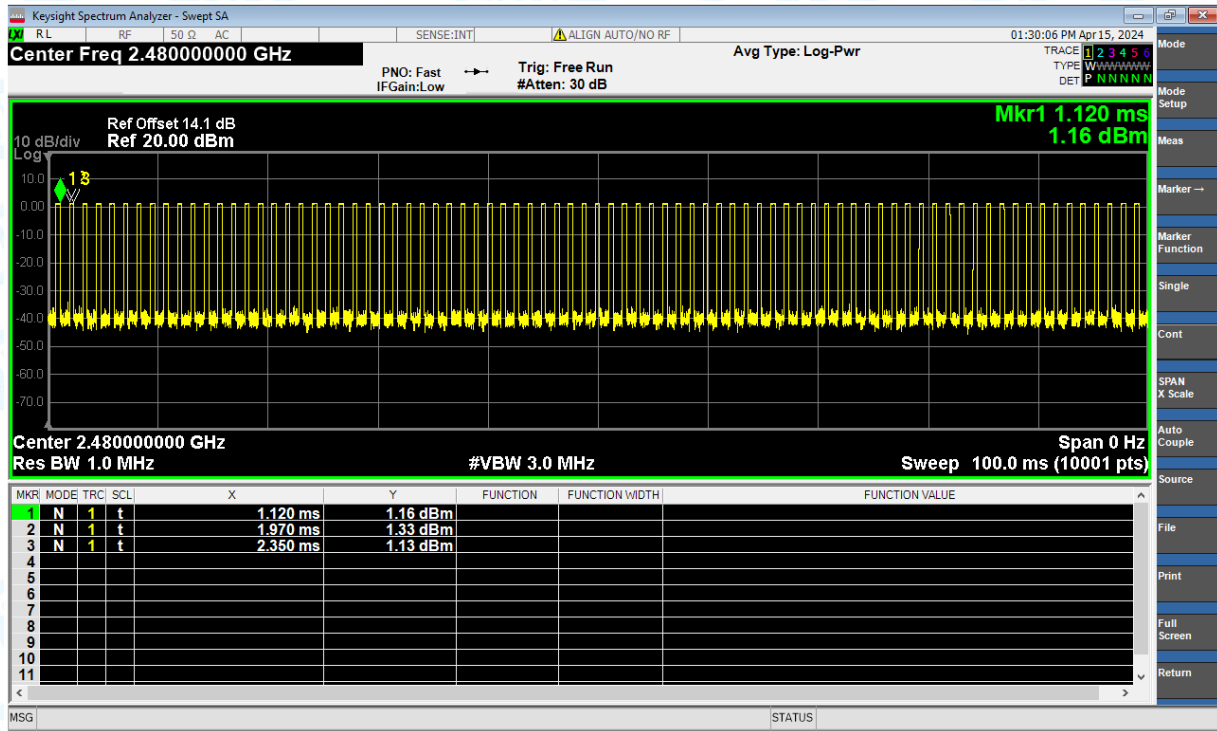
Duty Cycle NVNT 1-DH1 2402MHz Ant1



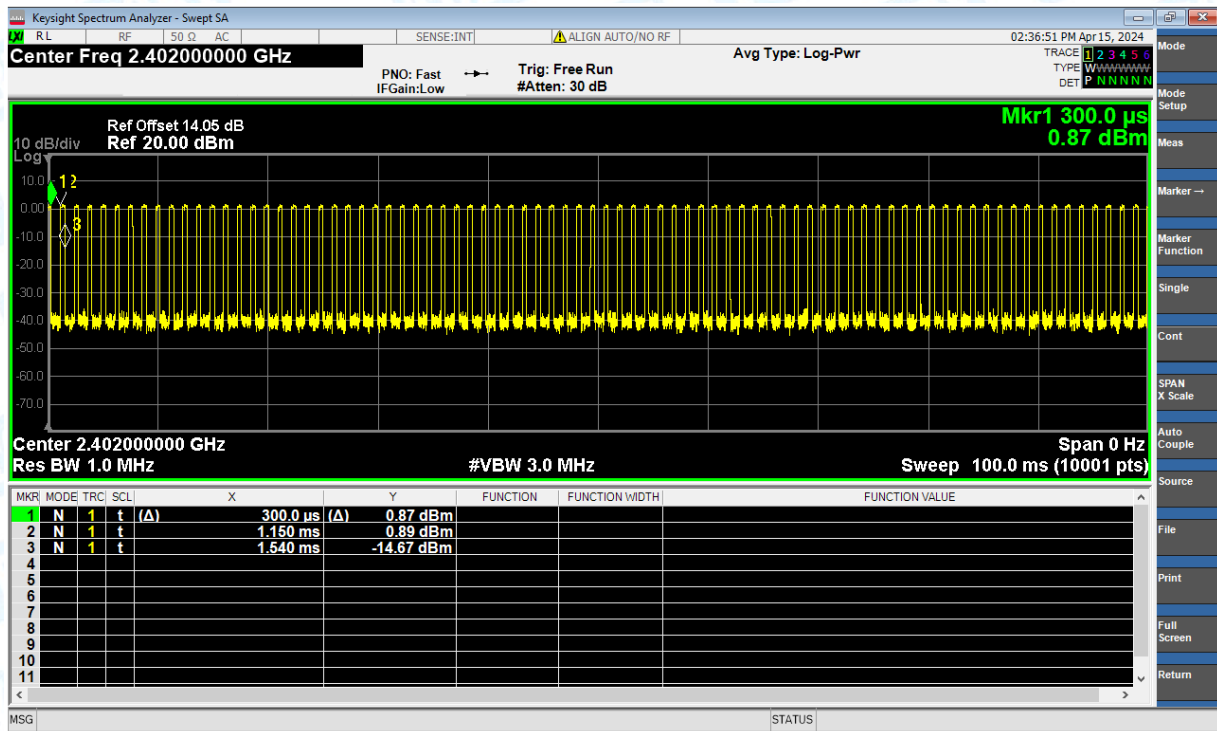
Duty Cycle NVNT 1-DH1 2441MHz Ant1



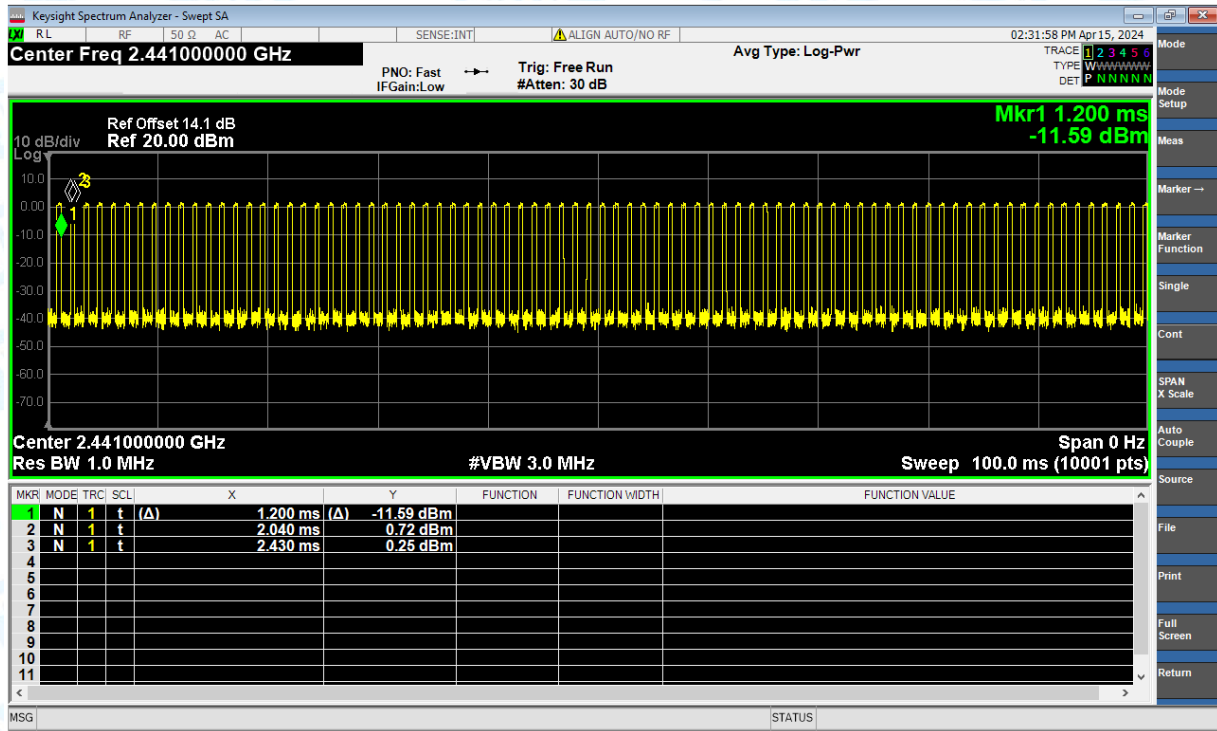
Duty Cycle NVNT 1-DH1 2480MHz Ant1



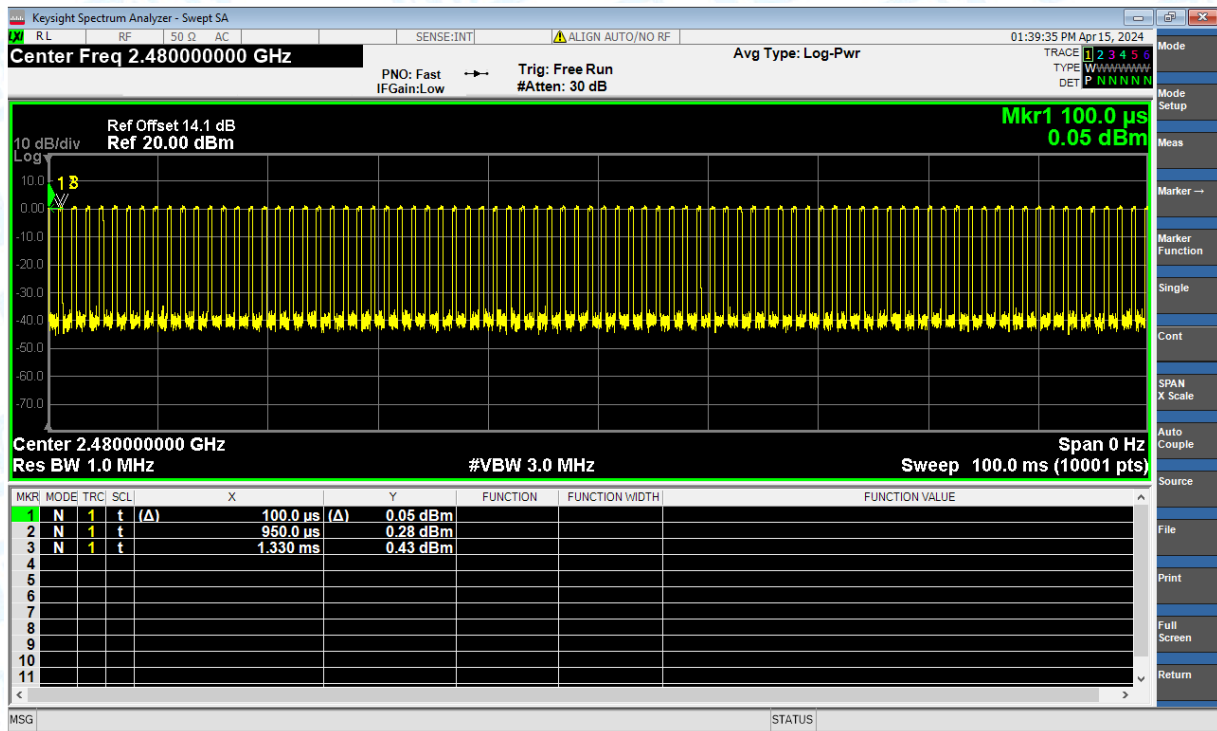
Duty Cycle NVNT 2-DH1 2402MHz Ant1



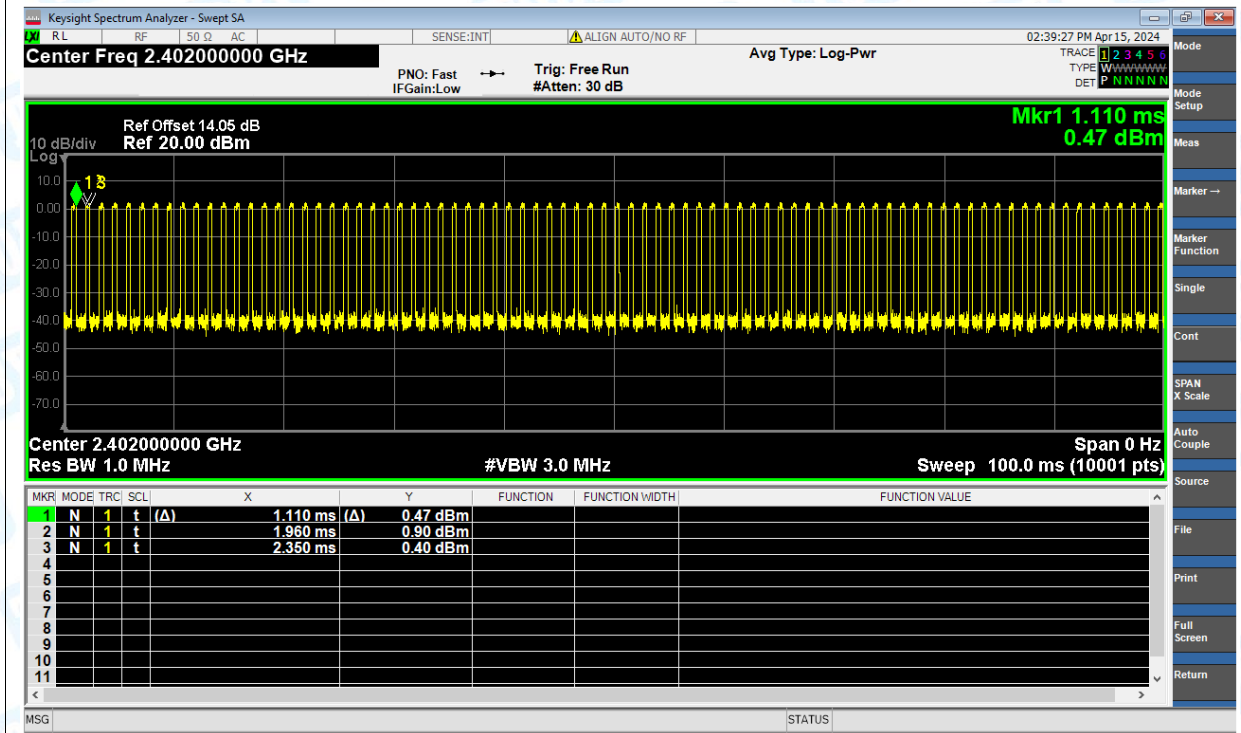
Duty Cycle NVNT 2-DH1 2441MHz Ant1



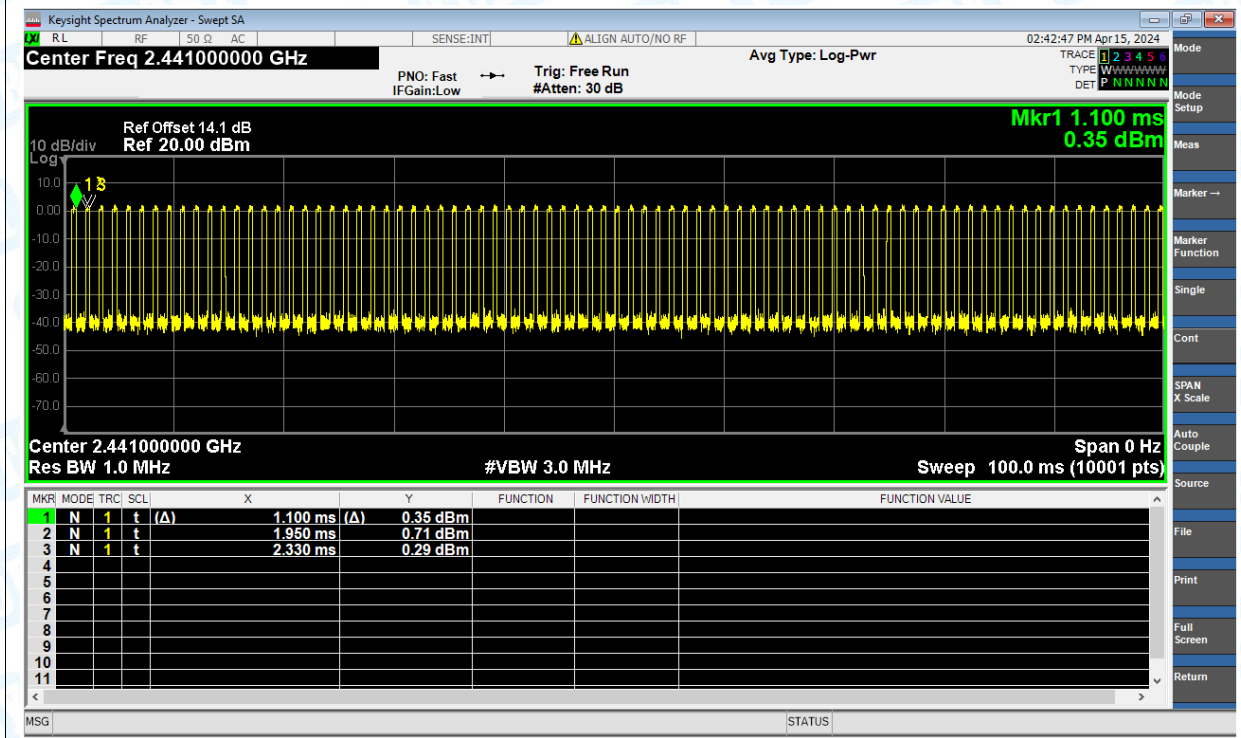
Duty Cycle NVNT 2-DH1 2480MHz Ant1

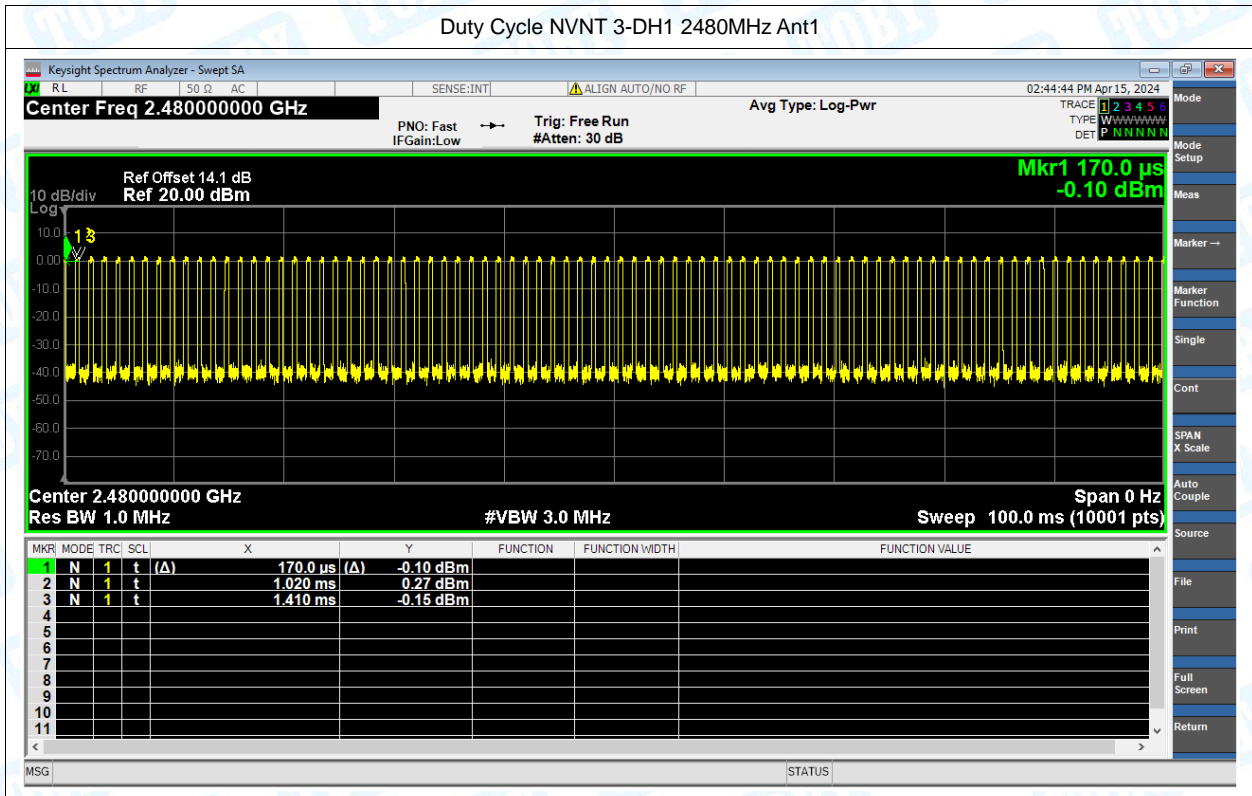


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



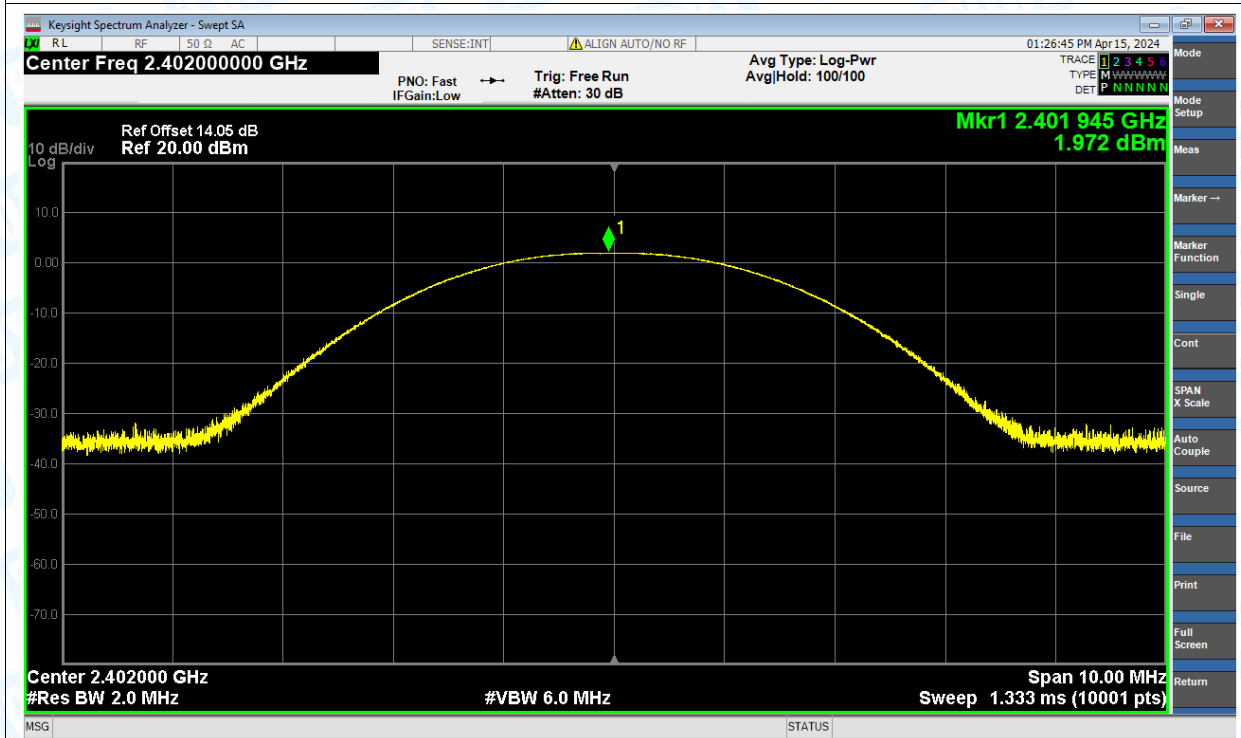


2. Maximum Conducted Output Power

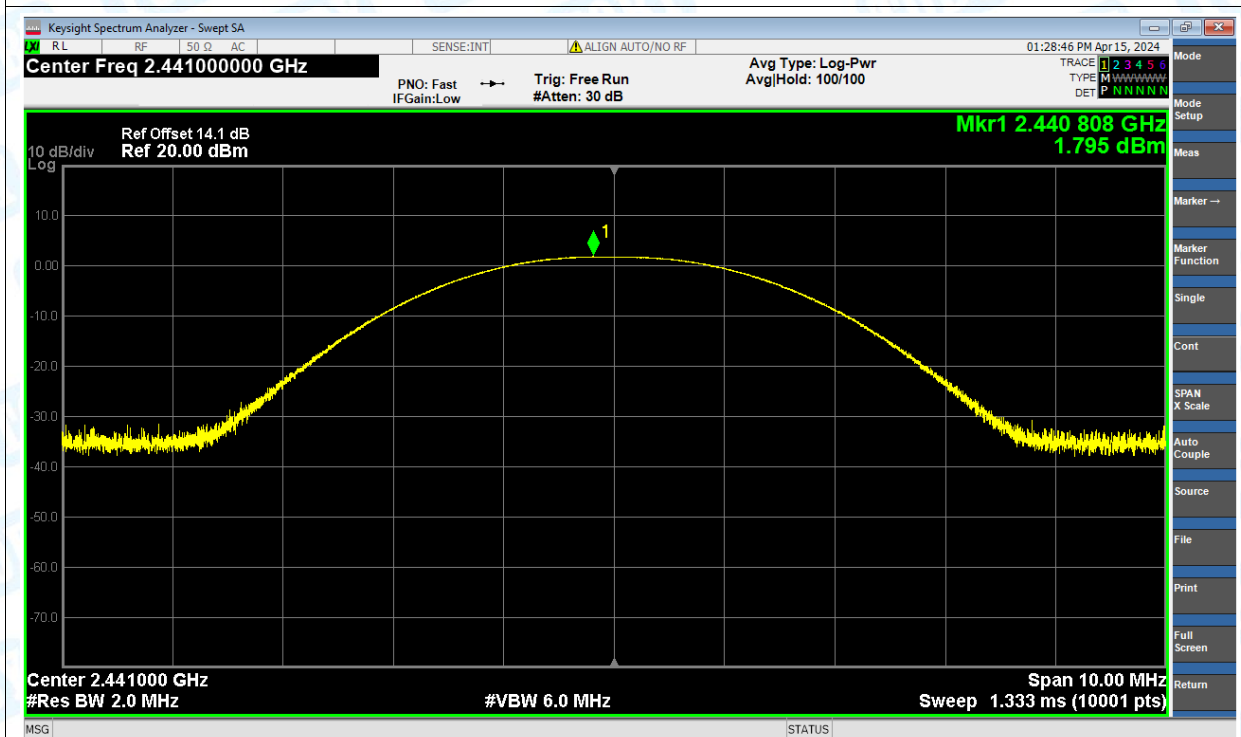
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	1.972	21	Pass
NVNT	1-DH1	2441	Ant1	1.795	21	Pass
NVNT	1-DH1	2480	Ant1	1.398	21	Pass
NVNT	2-DH1	2402	Ant1	2.216	21	Pass
NVNT	2-DH1	2441	Ant1	2.092	21	Pass
NVNT	2-DH1	2480	Ant1	1.637	21	Pass
NVNT	3-DH1	2402	Ant1	2.757	21	Pass
NVNT	3-DH1	2441	Ant1	2.650	21	Pass
NVNT	3-DH1	2480	Ant1	2.167	21	Pass

Test Graphs

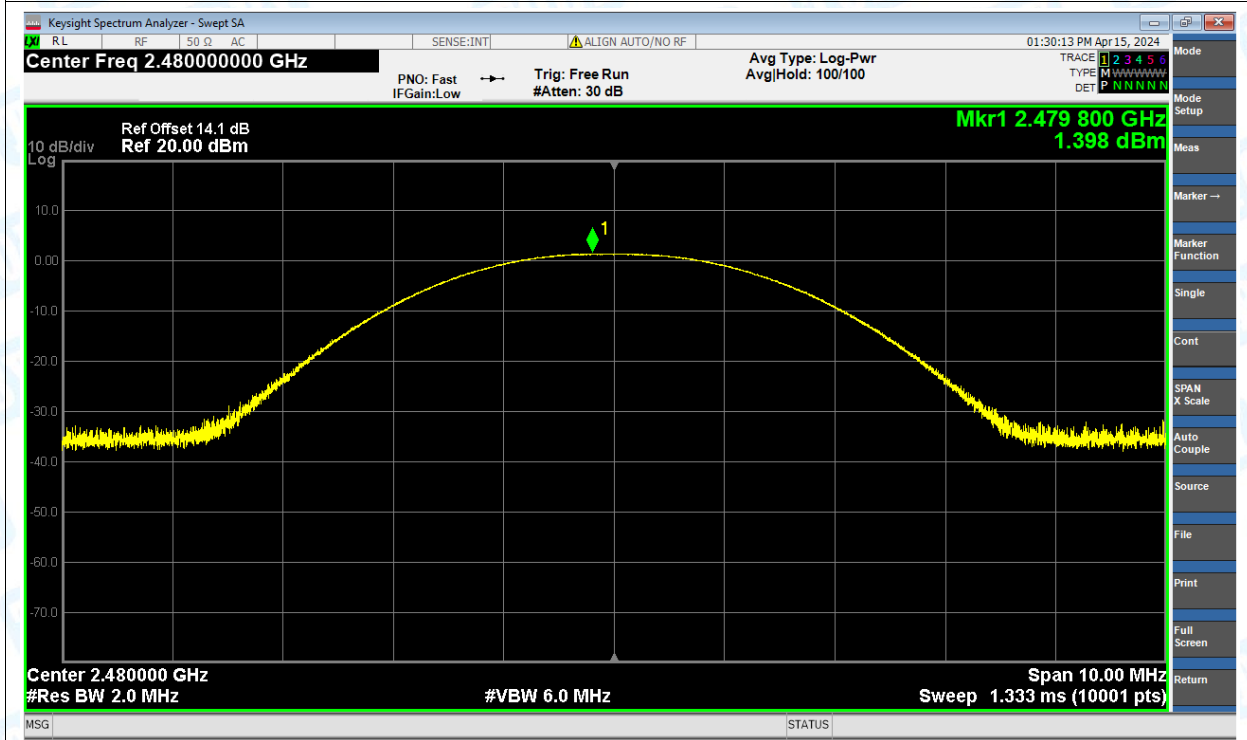
Power NVNT 1-DH1 2402MHz Ant1



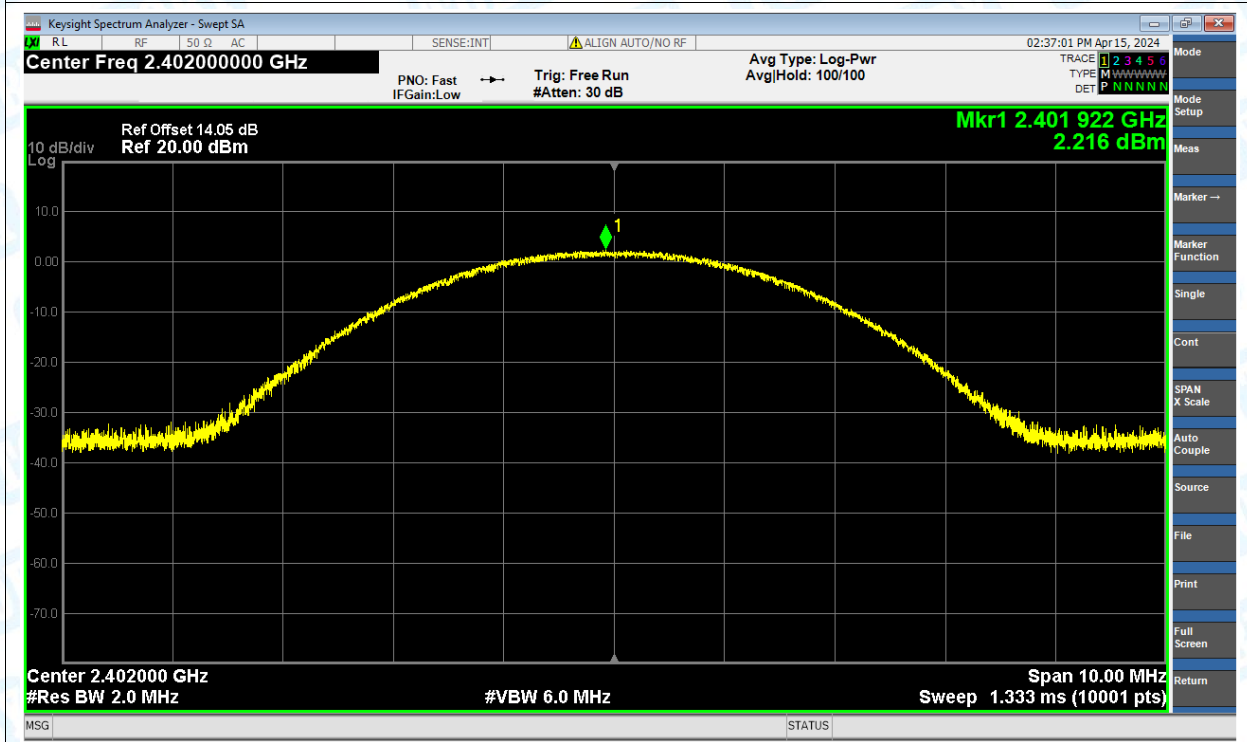
Power NVNT 1-DH1 2441MHz Ant1



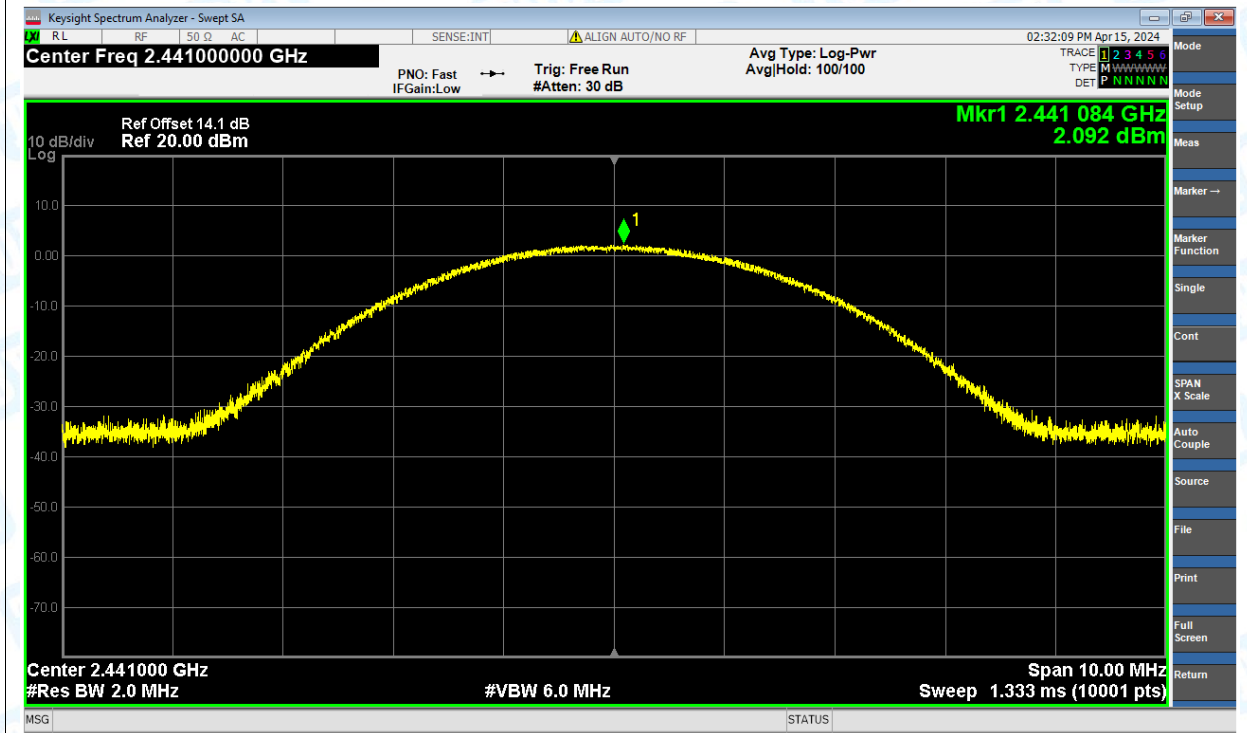
Power NVNT 1-DH1 2480MHz Ant1



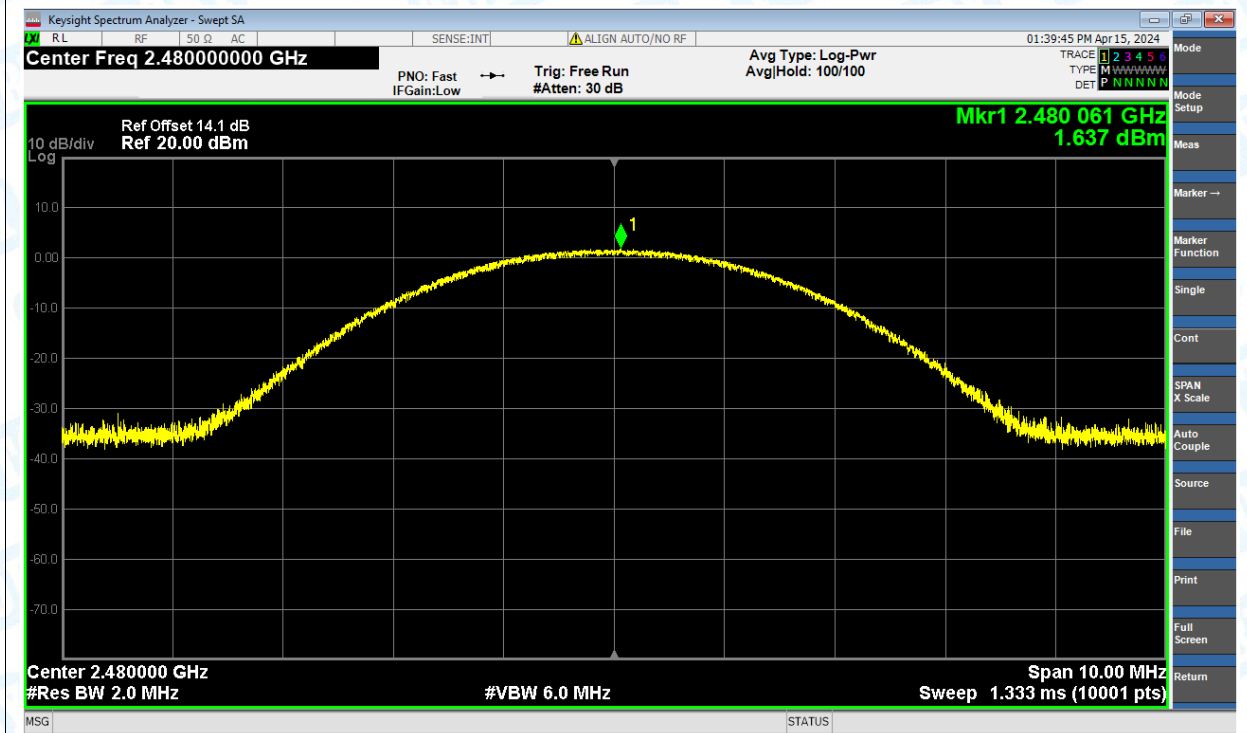
Power NVNT 2-DH1 2402MHz Ant1



Power NVNT 2-DH1 2441MHz Ant1



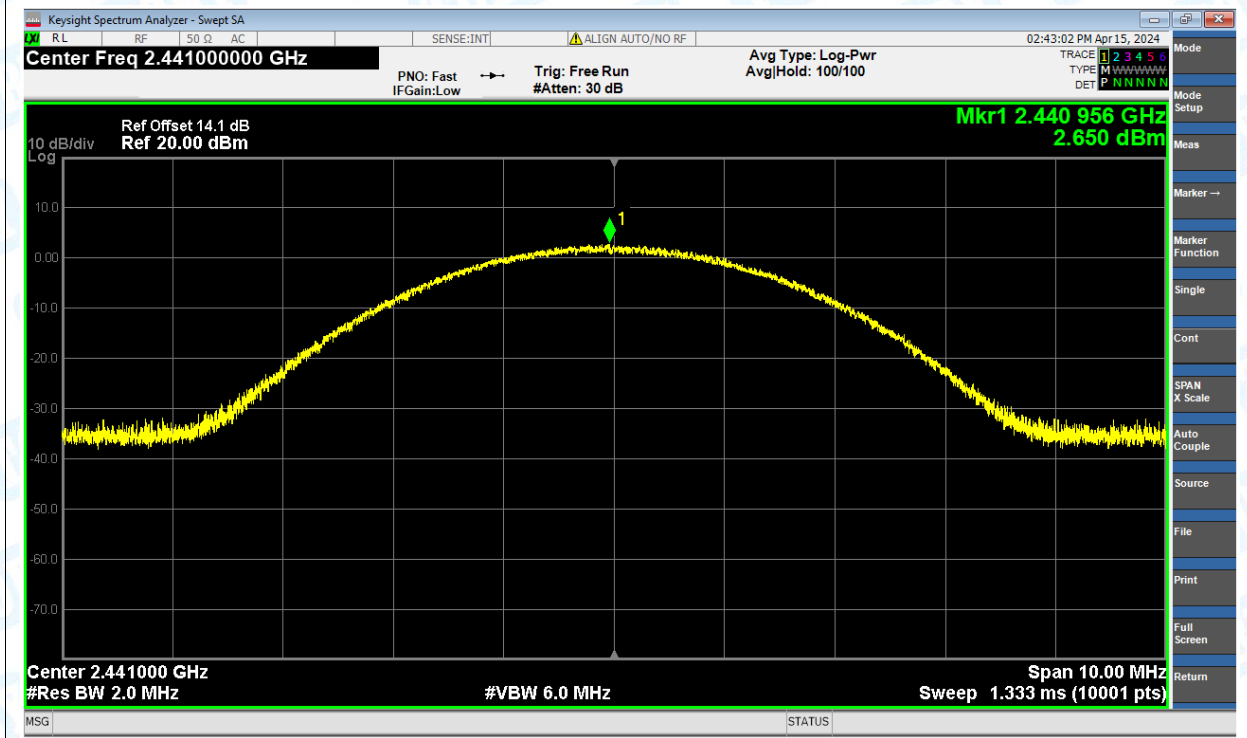
Power NVNT 2-DH1 2480MHz Ant1

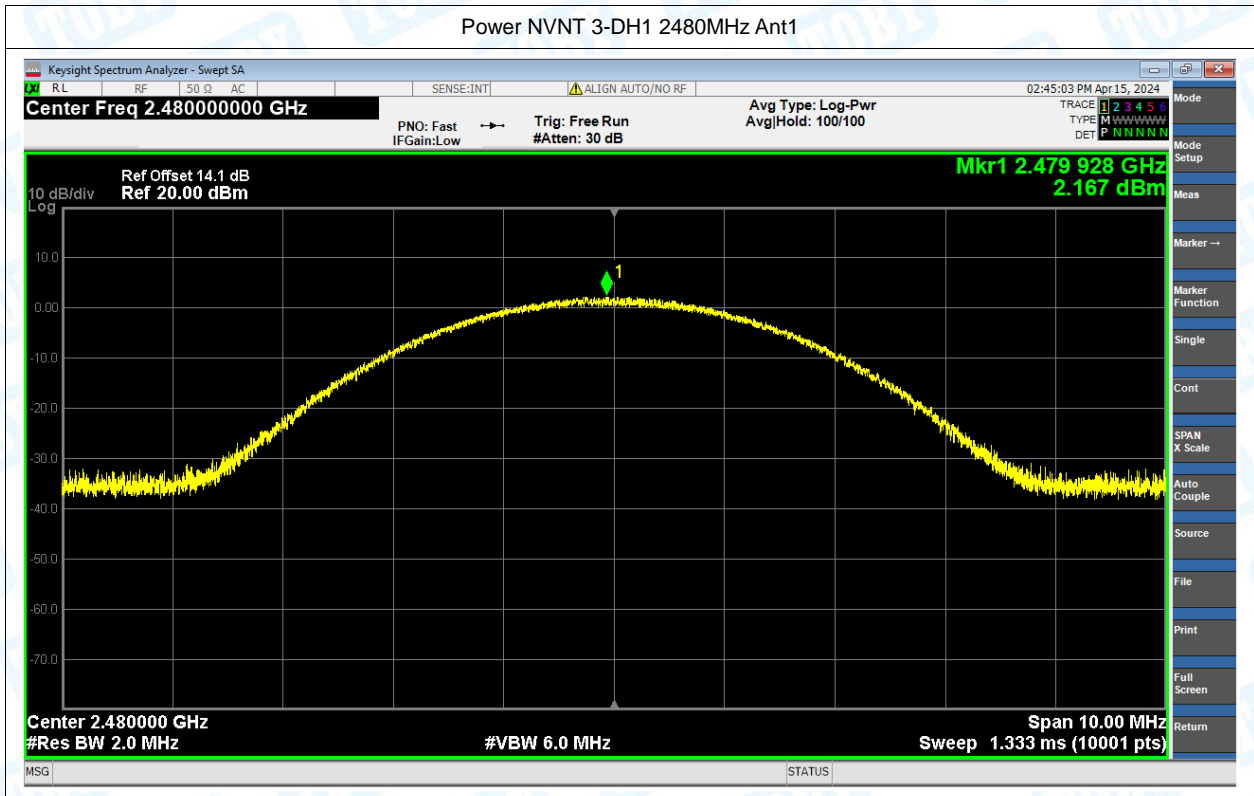


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



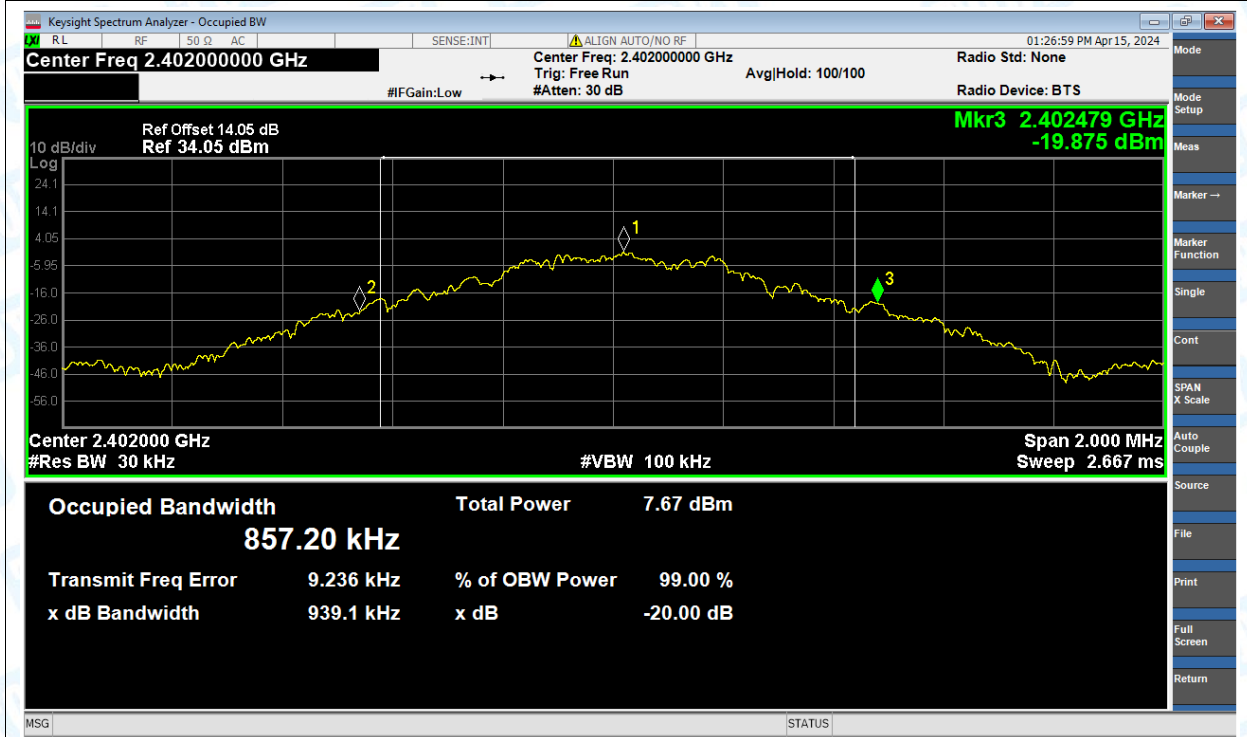


3. -20dB Bandwidth

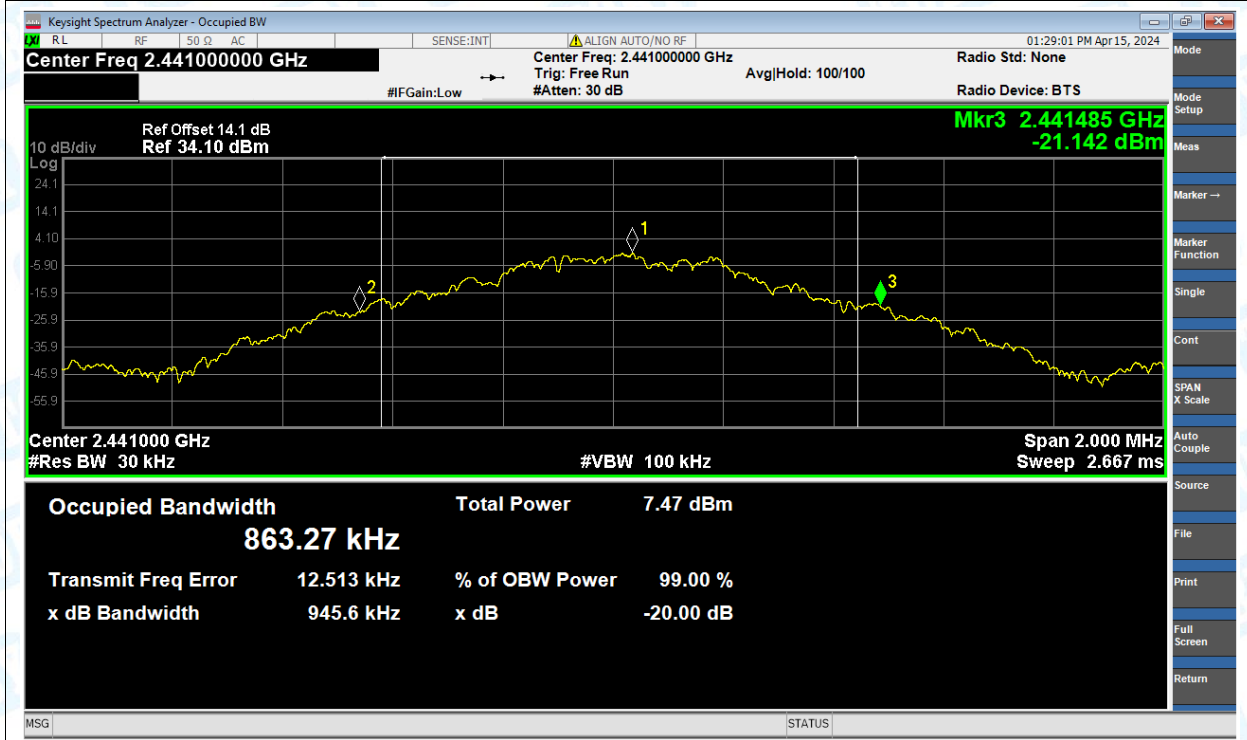
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.94	----	Pass
NVNT	1-DH1	2441	Ant1	0.95	----	Pass
NVNT	1-DH1	2480	Ant1	0.95	----	Pass
NVNT	2-DH1	2402	Ant1	1.25	----	Pass
NVNT	2-DH1	2441	Ant1	1.24	----	Pass
NVNT	2-DH1	2480	Ant1	1.23	----	Pass
NVNT	3-DH1	2402	Ant1	1.22	----	Pass
NVNT	3-DH1	2441	Ant1	1.20	----	Pass
NVNT	3-DH1	2480	Ant1	1.21	----	Pass

Test Graphs

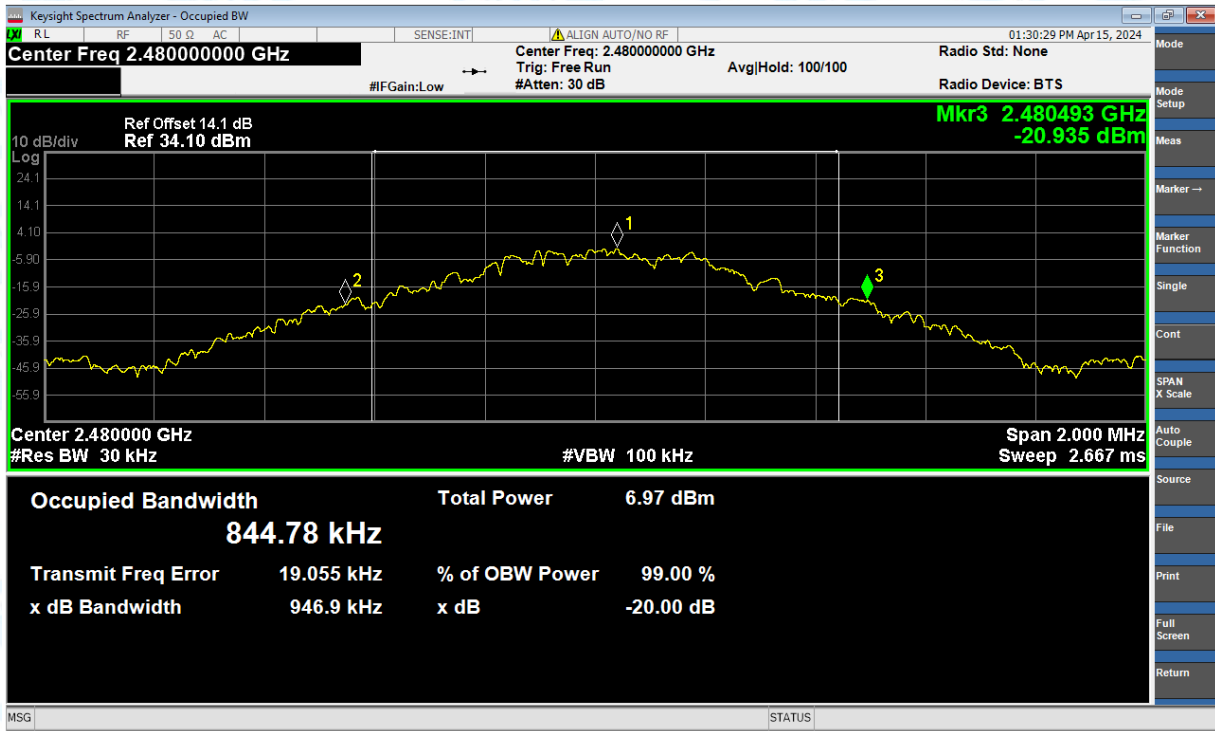
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



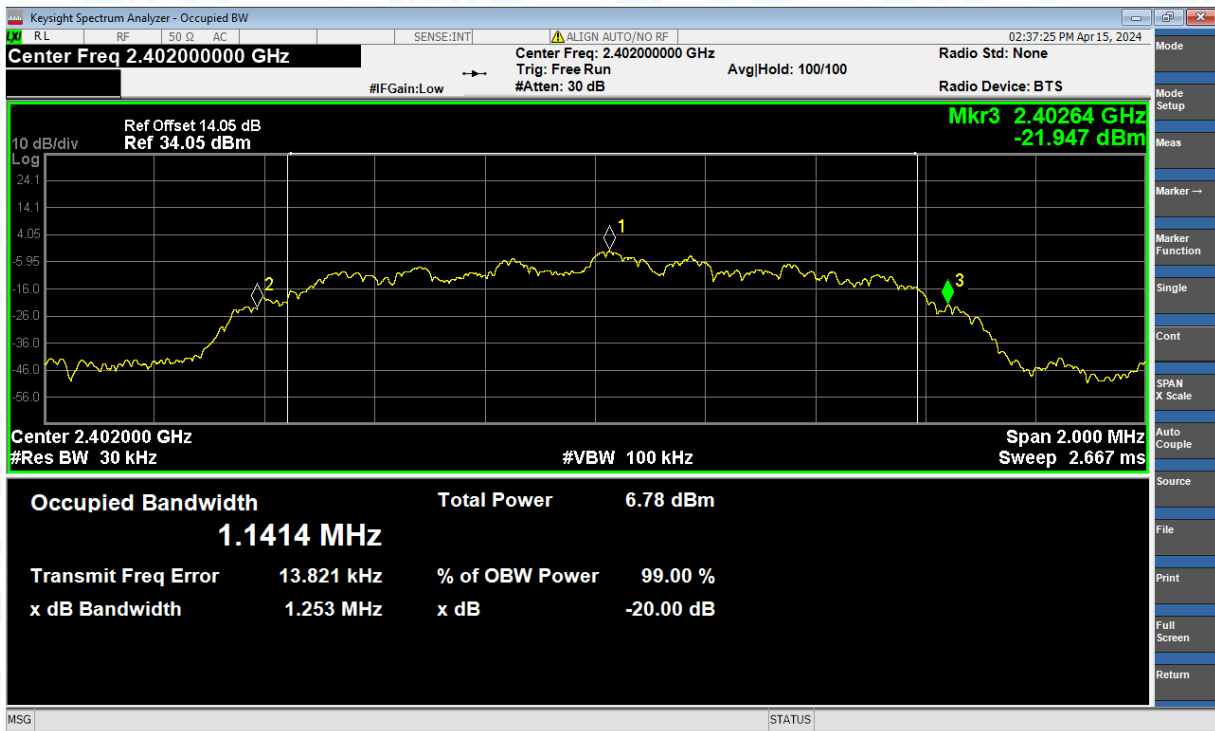
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



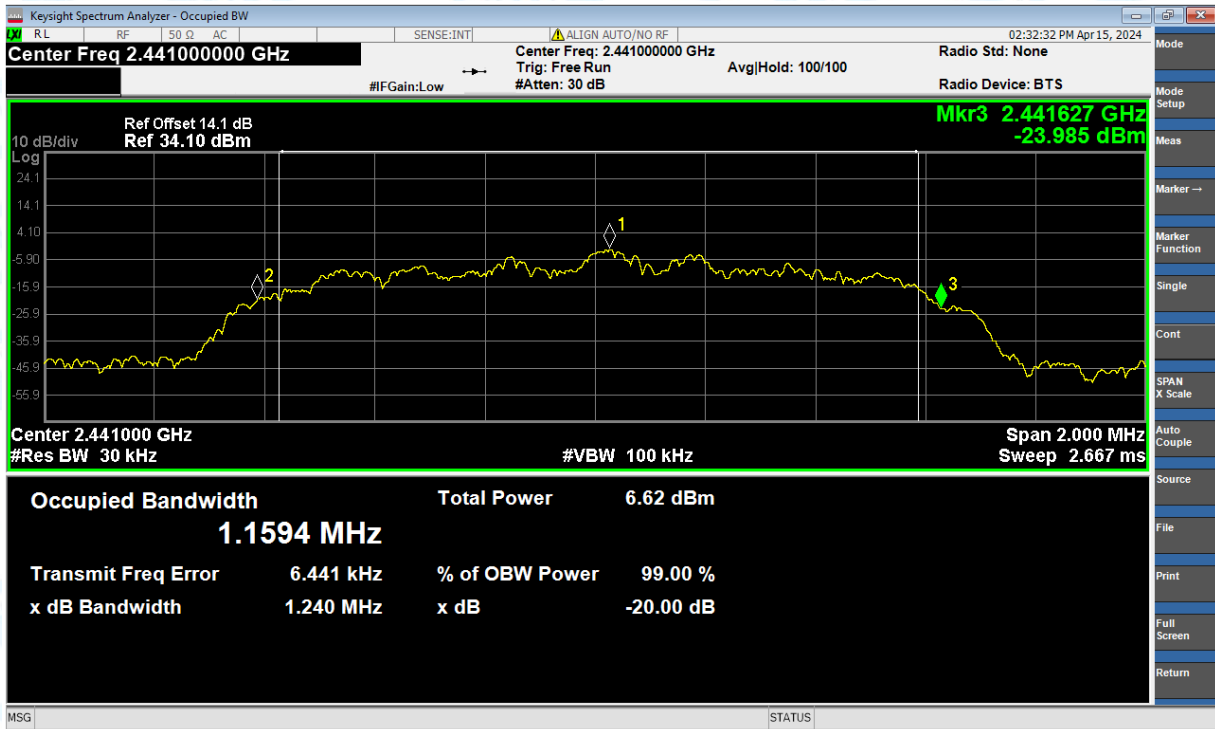
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



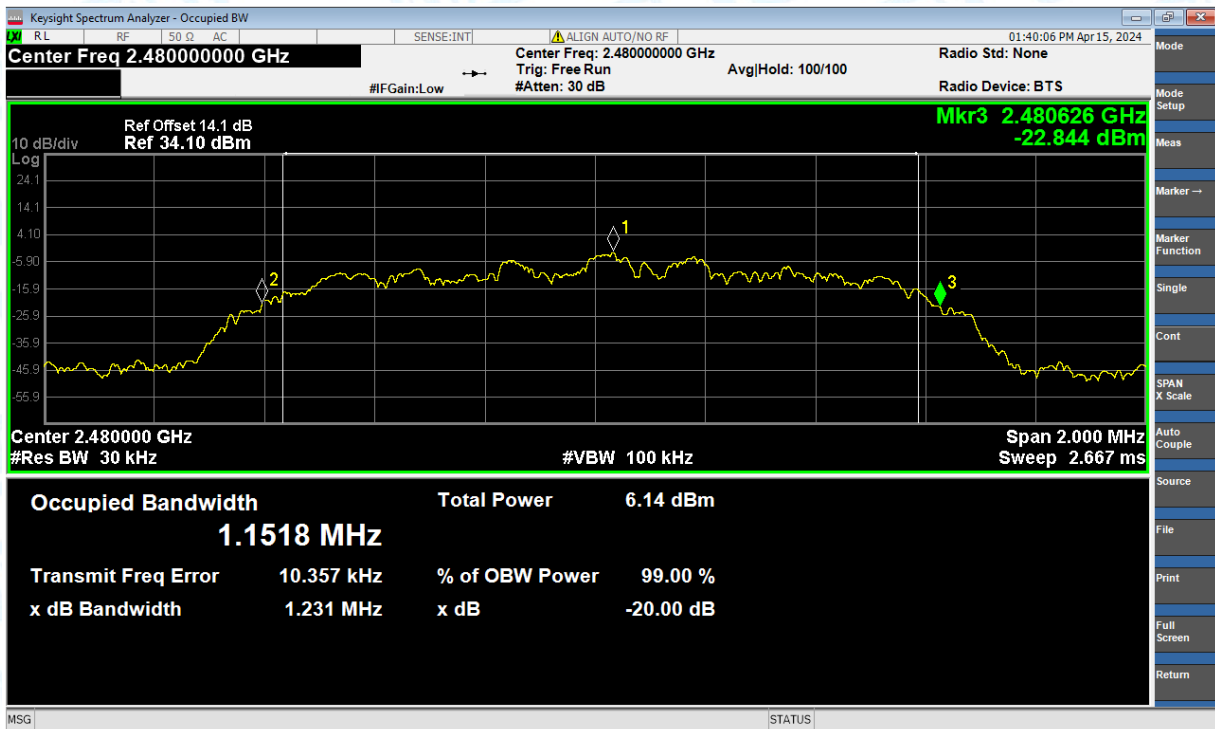
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



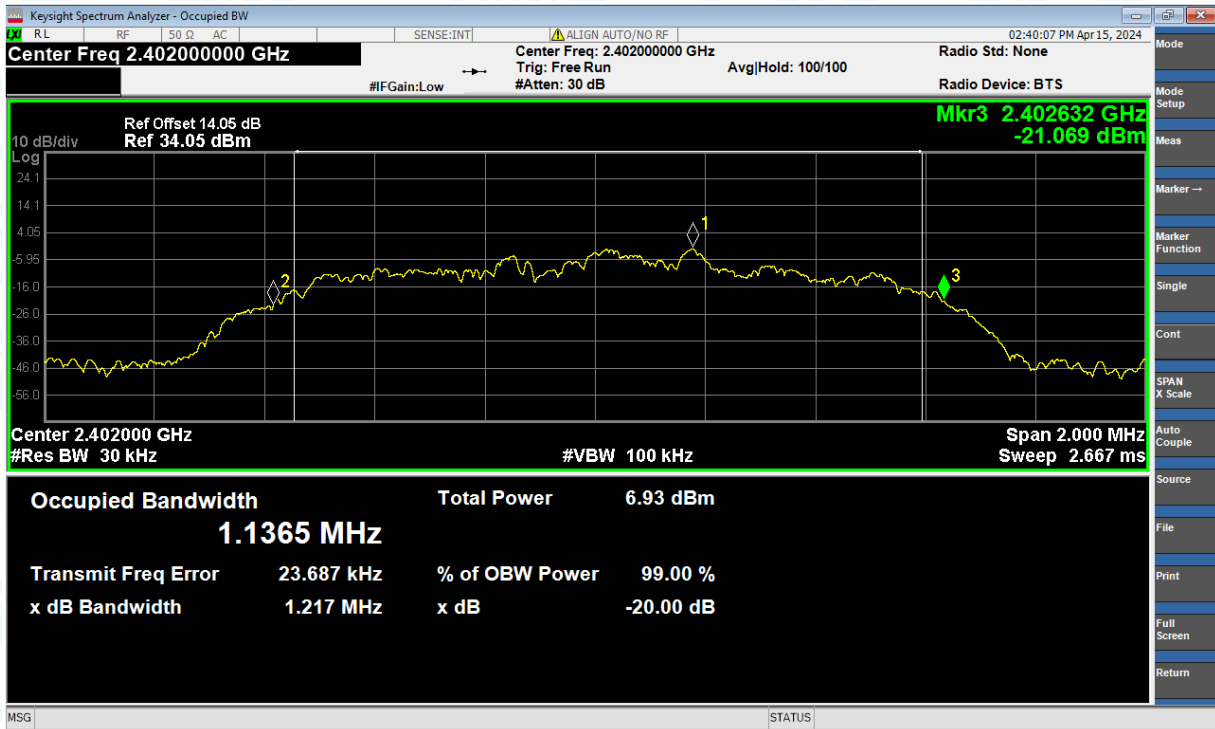
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



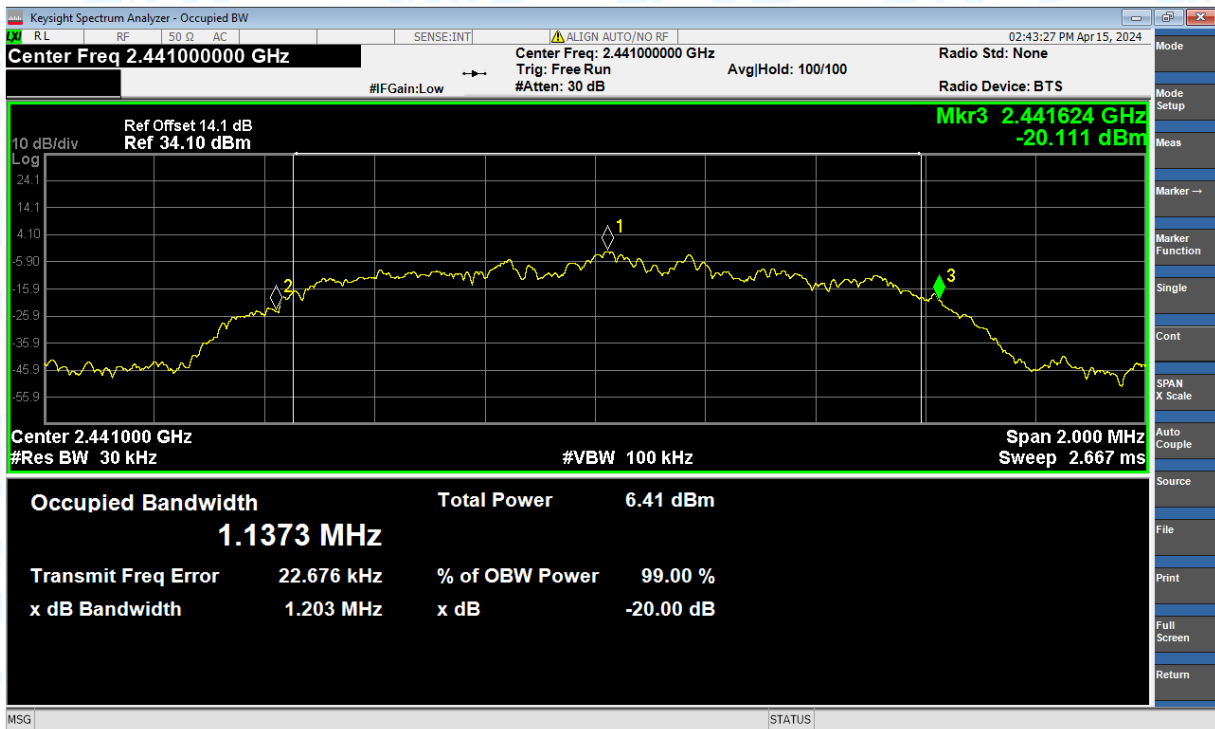
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

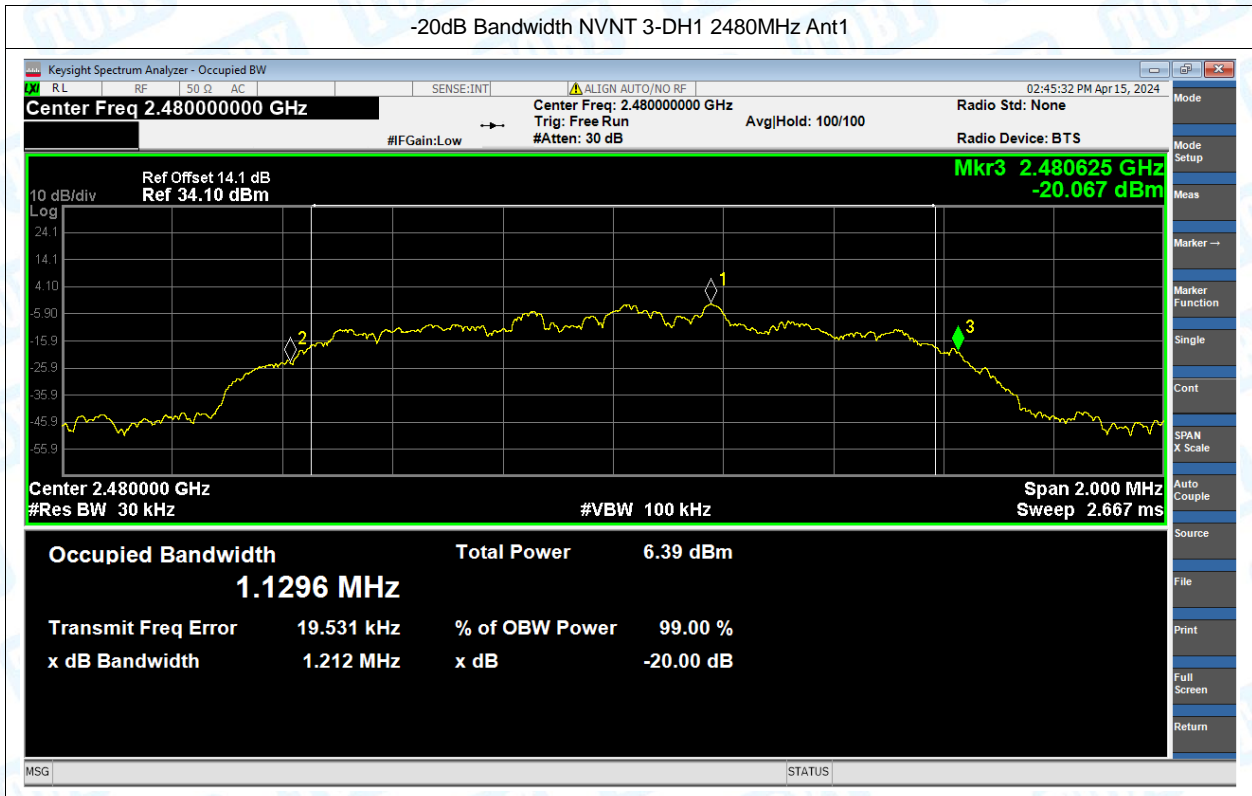


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



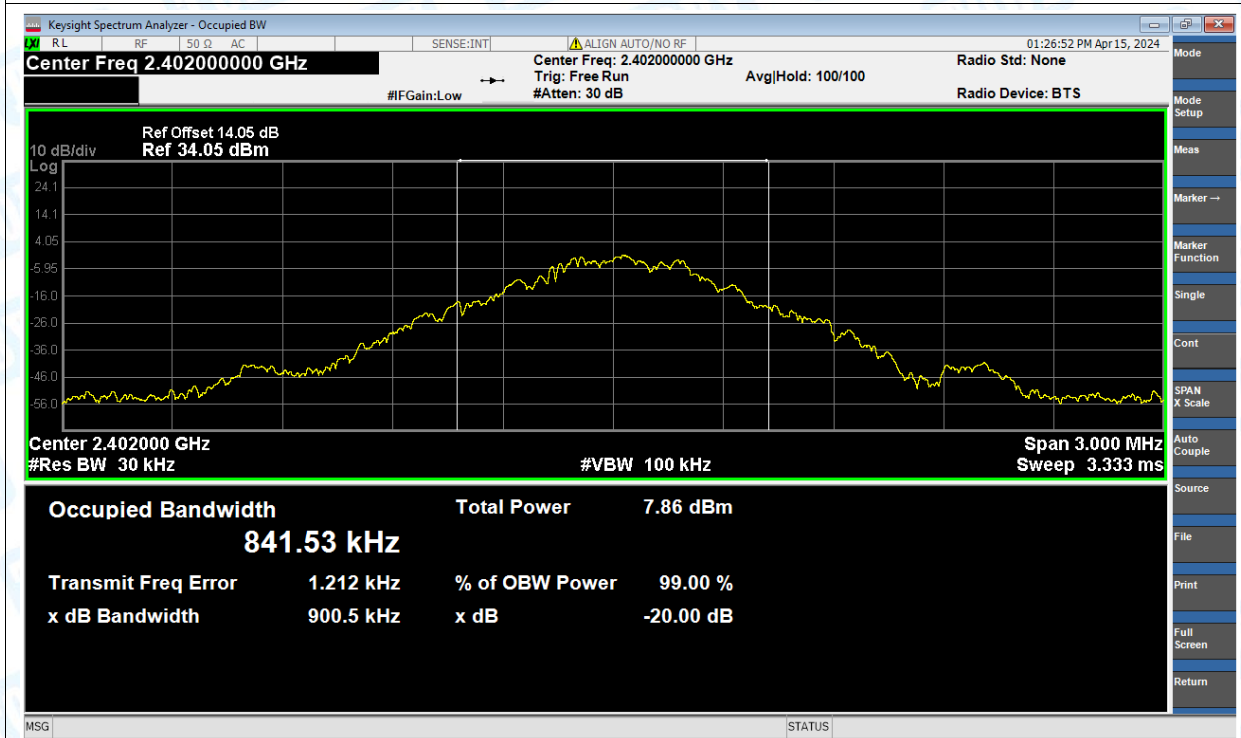


4. Occupied Channel Bandwidth

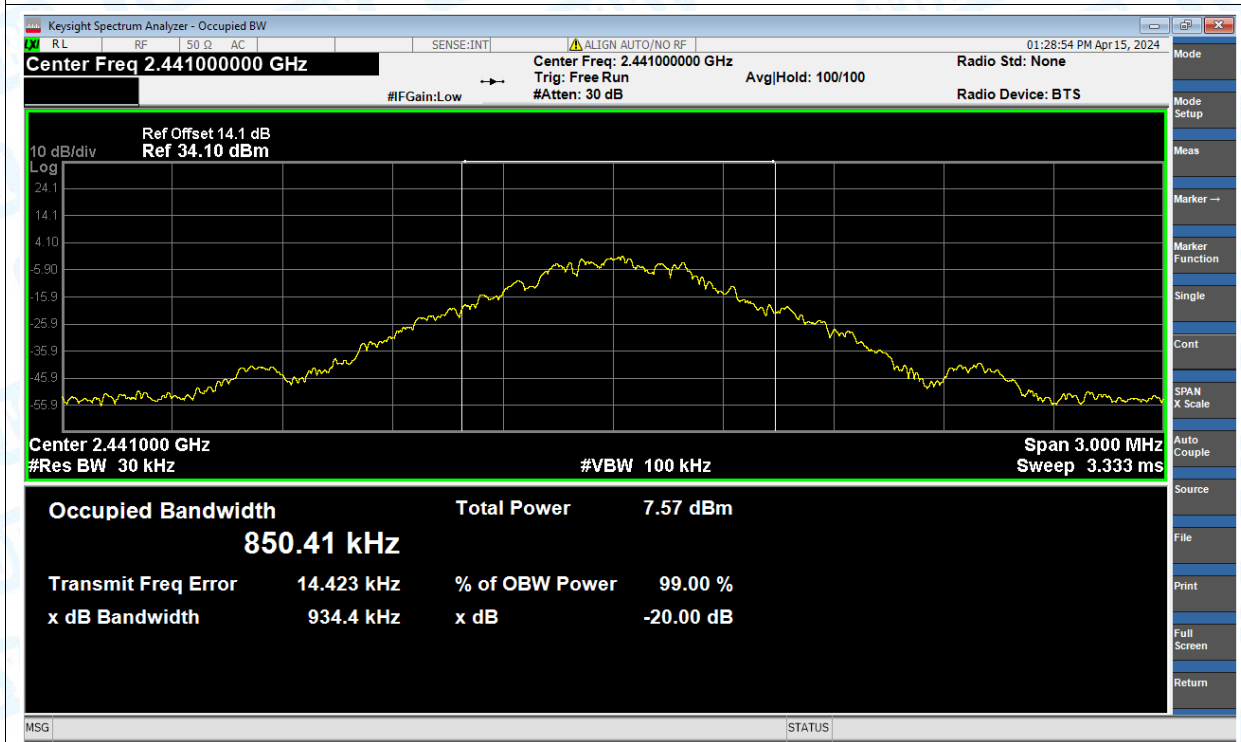
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.842
NVNT	1-DH1	2441	Ant1	0.850
NVNT	1-DH1	2480	Ant1	0.876
NVNT	2-DH1	2402	Ant1	1.157
NVNT	2-DH1	2441	Ant1	1.155
NVNT	2-DH1	2480	Ant1	1.159
NVNT	3-DH1	2402	Ant1	1.143
NVNT	3-DH1	2441	Ant1	1.146
NVNT	3-DH1	2480	Ant1	1.146

Test Graphs

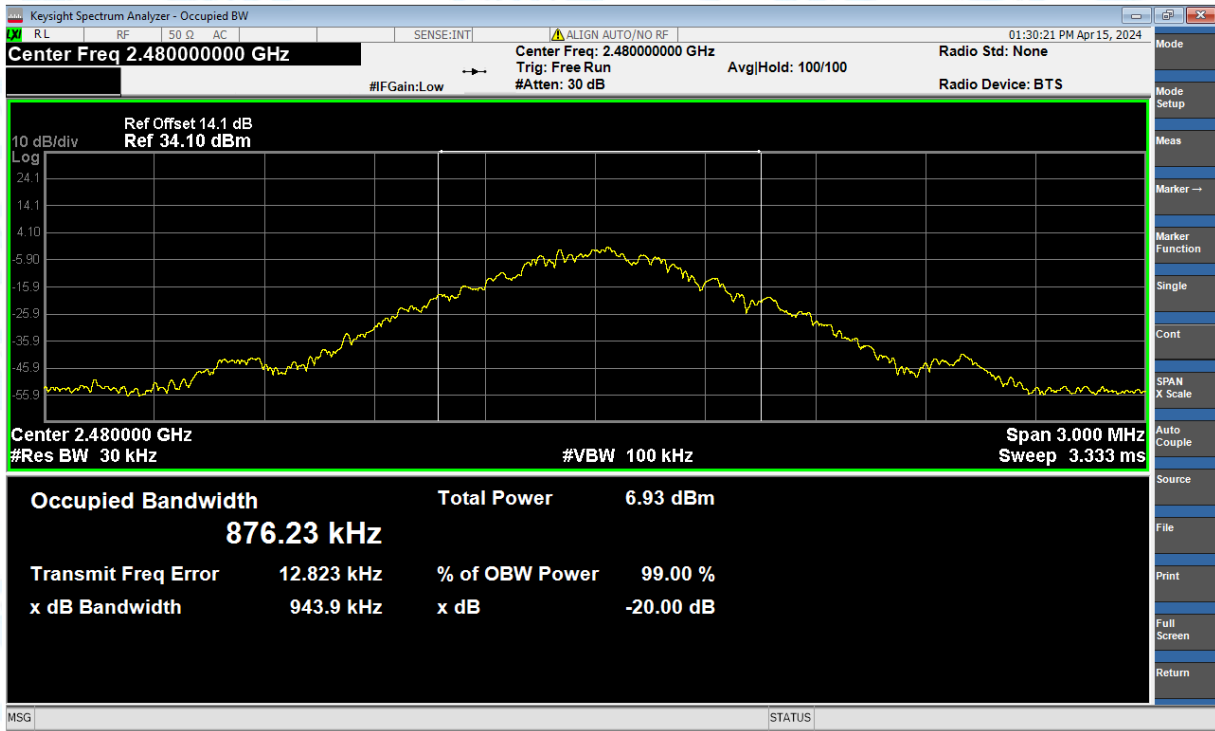
OBW NVNT 1-DH1 2402MHz Ant1



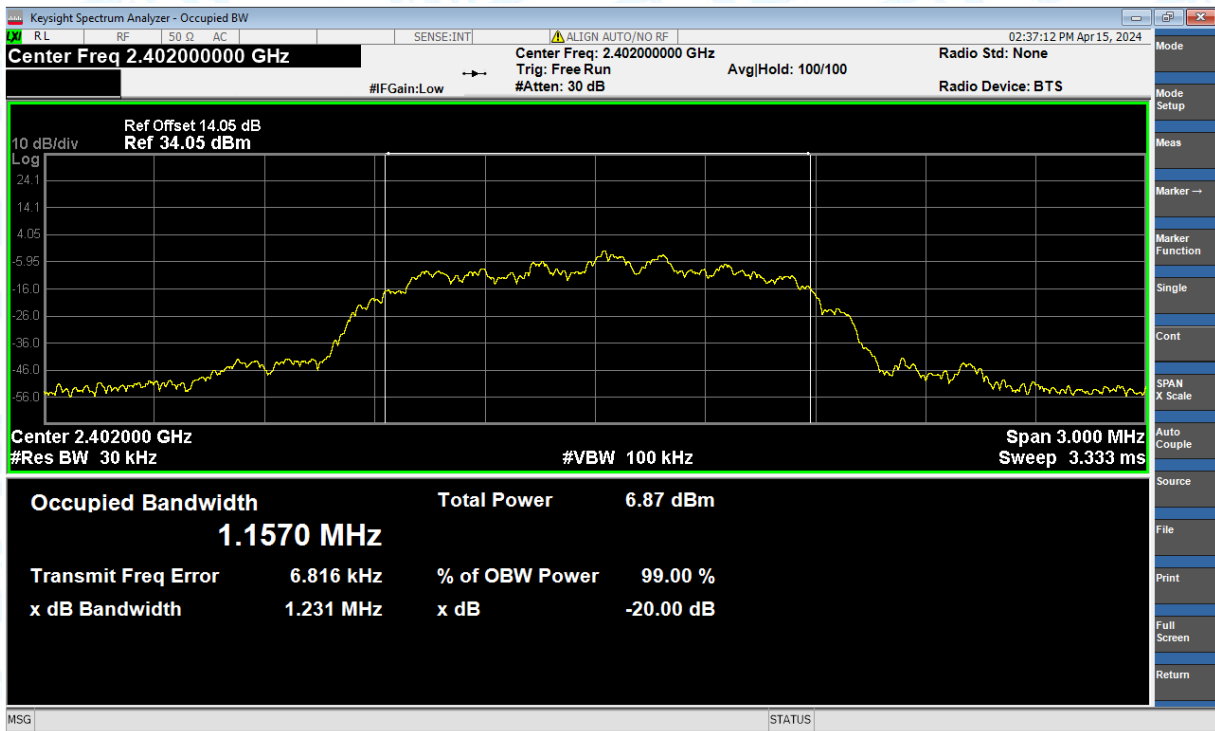
OBW NVNT 1-DH1 2441MHz Ant1



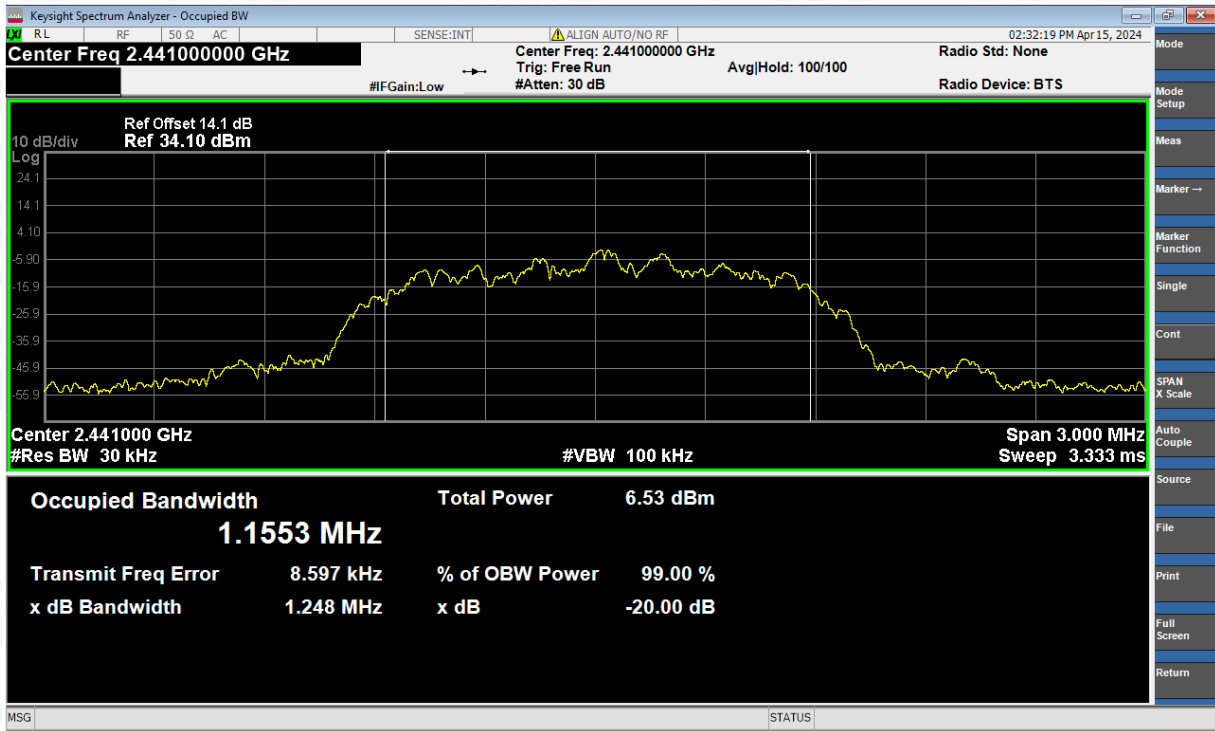
OBW NVNT 1-DH1 2480MHz Ant1



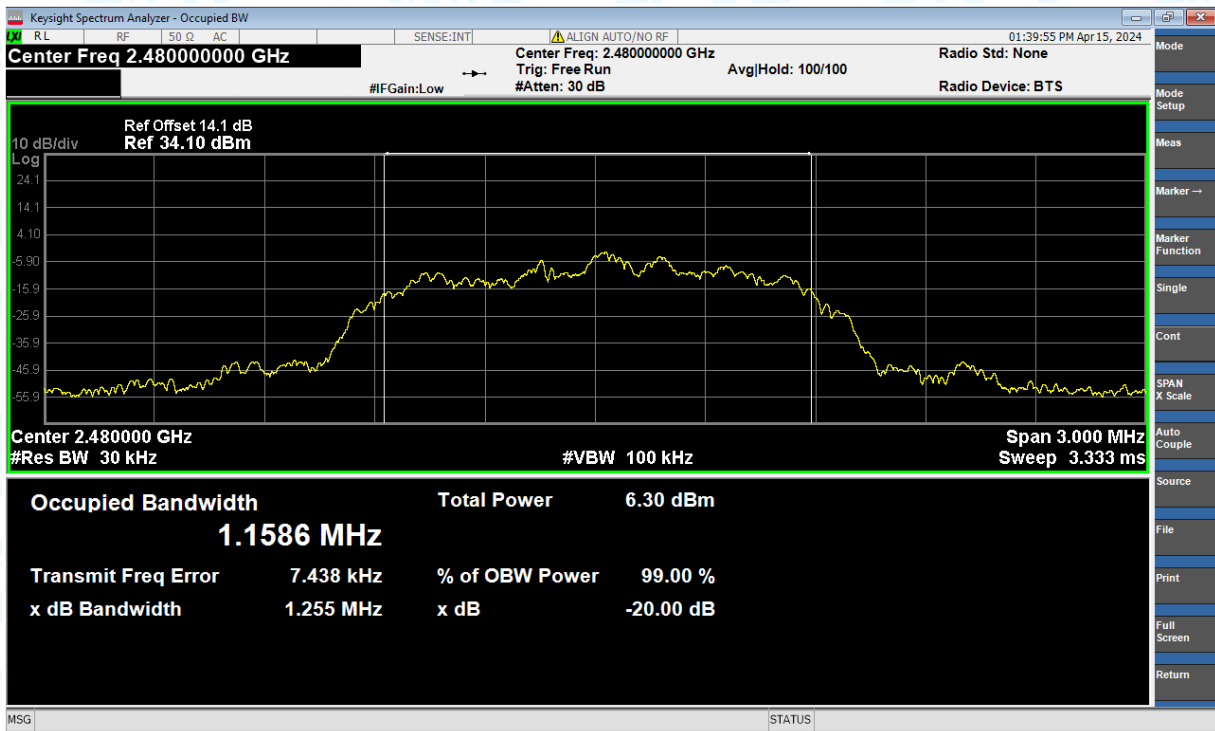
OBW NVNT 2-DH1 2402MHz Ant1



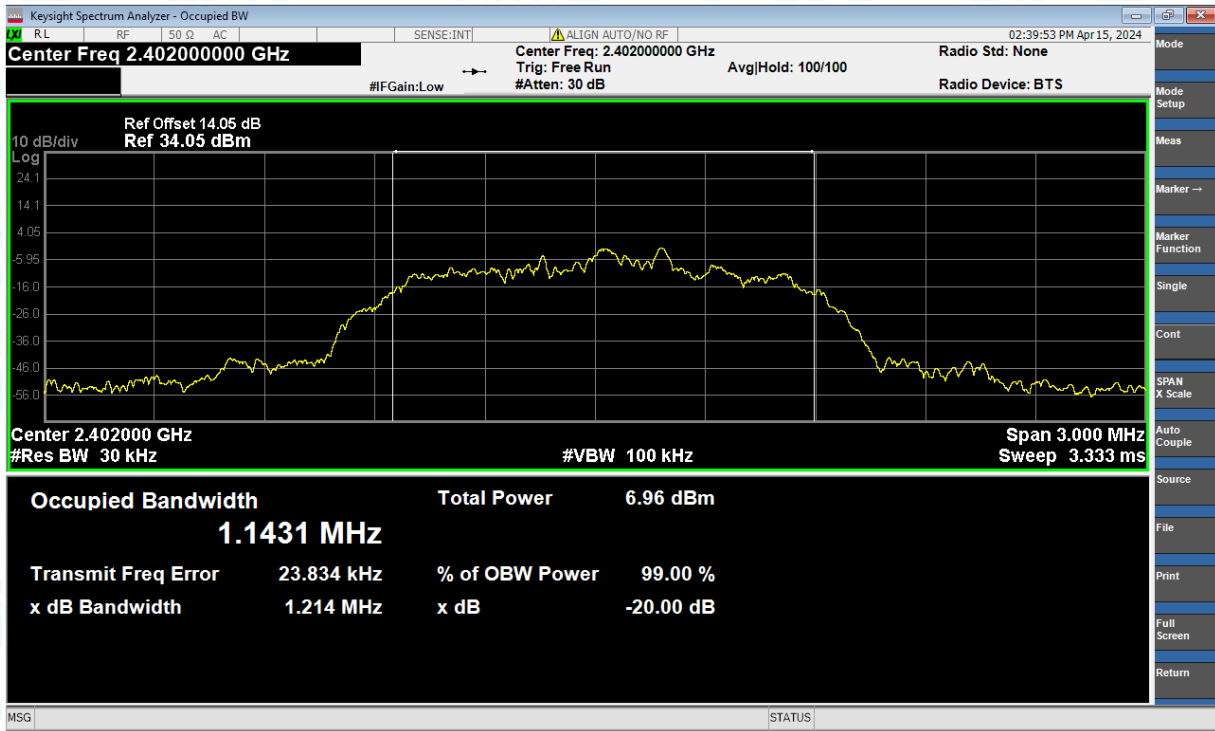
OBW NVNT 2-DH1 2441MHz Ant1



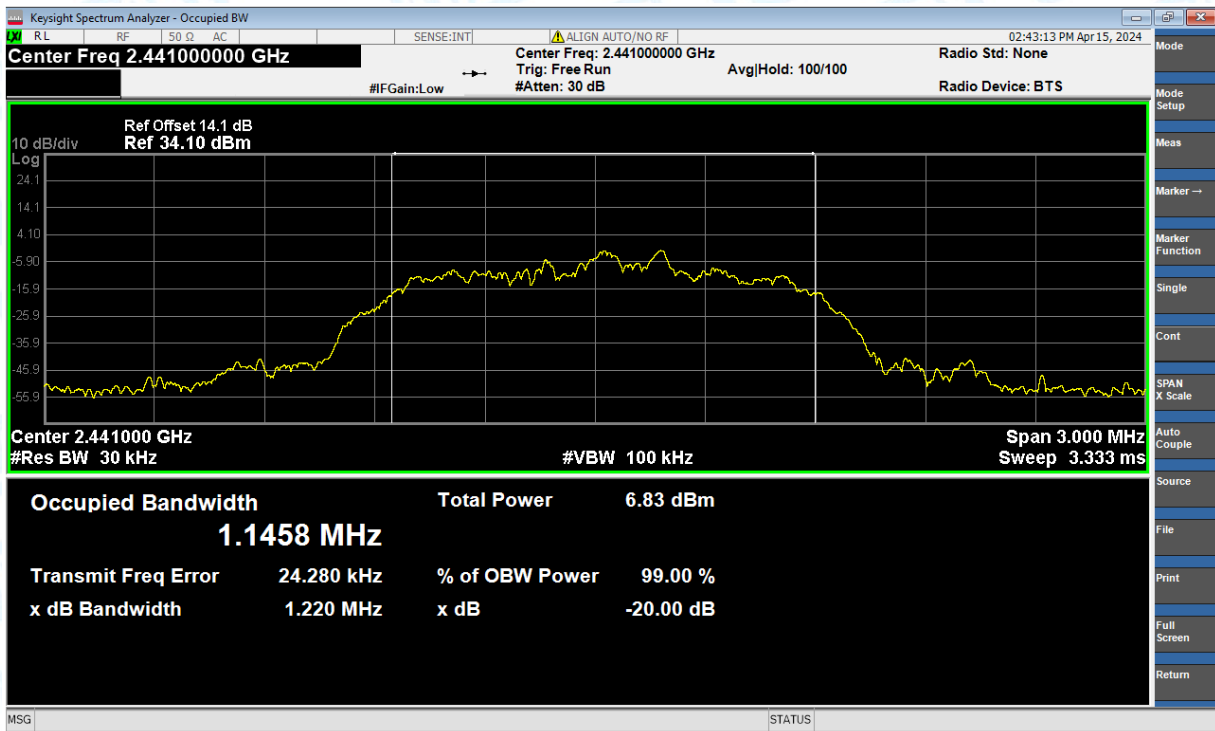
OBW NVNT 2-DH1 2480MHz Ant1

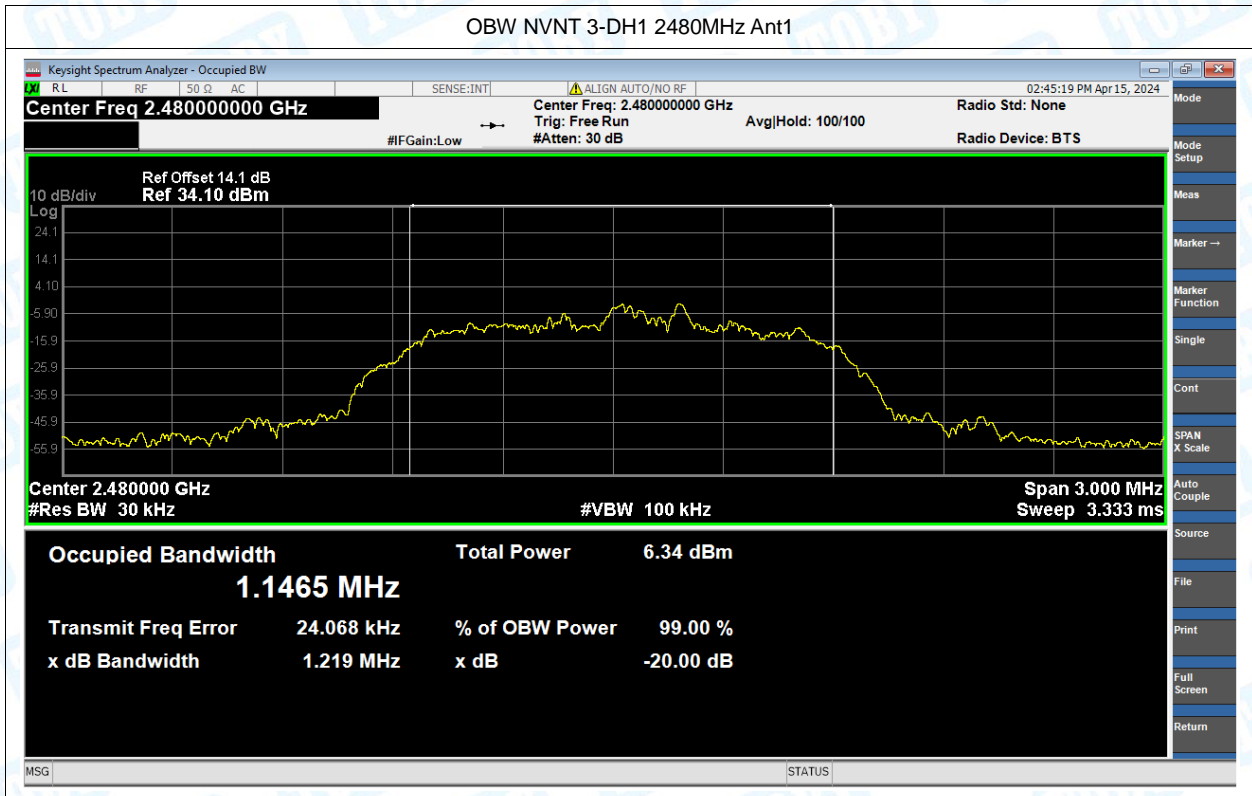


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



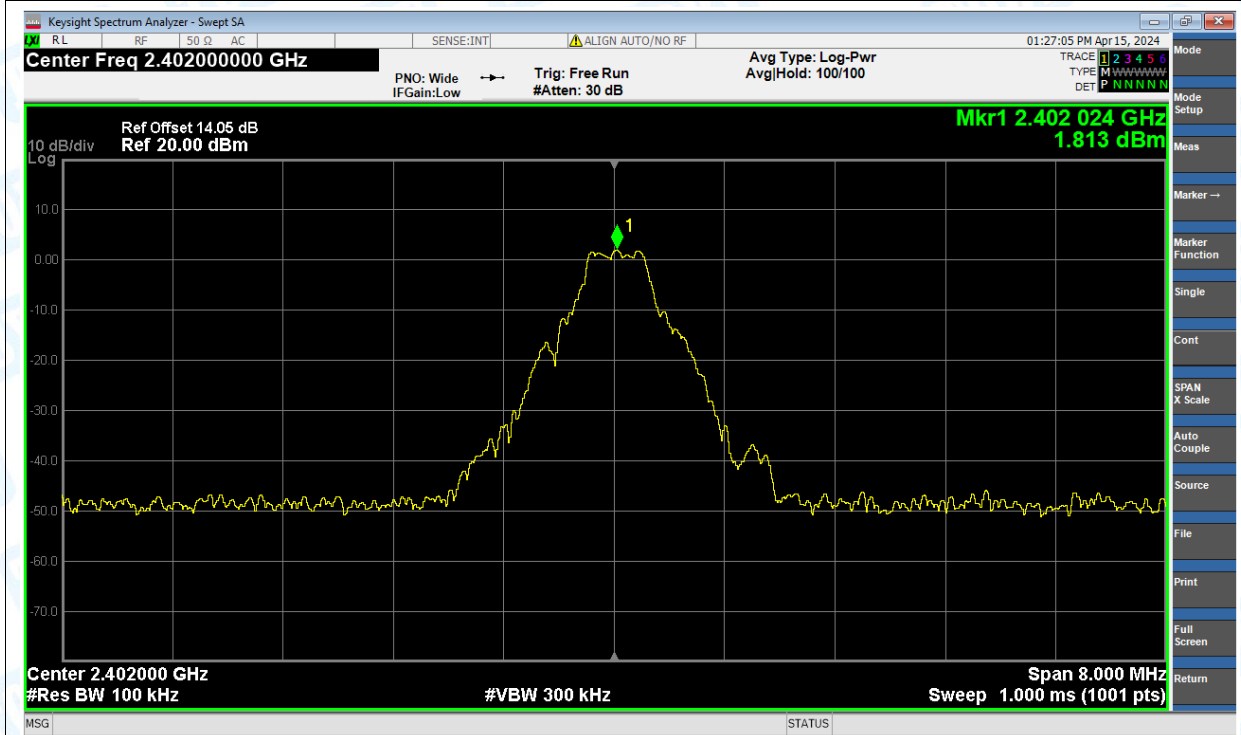


5. Band Edge

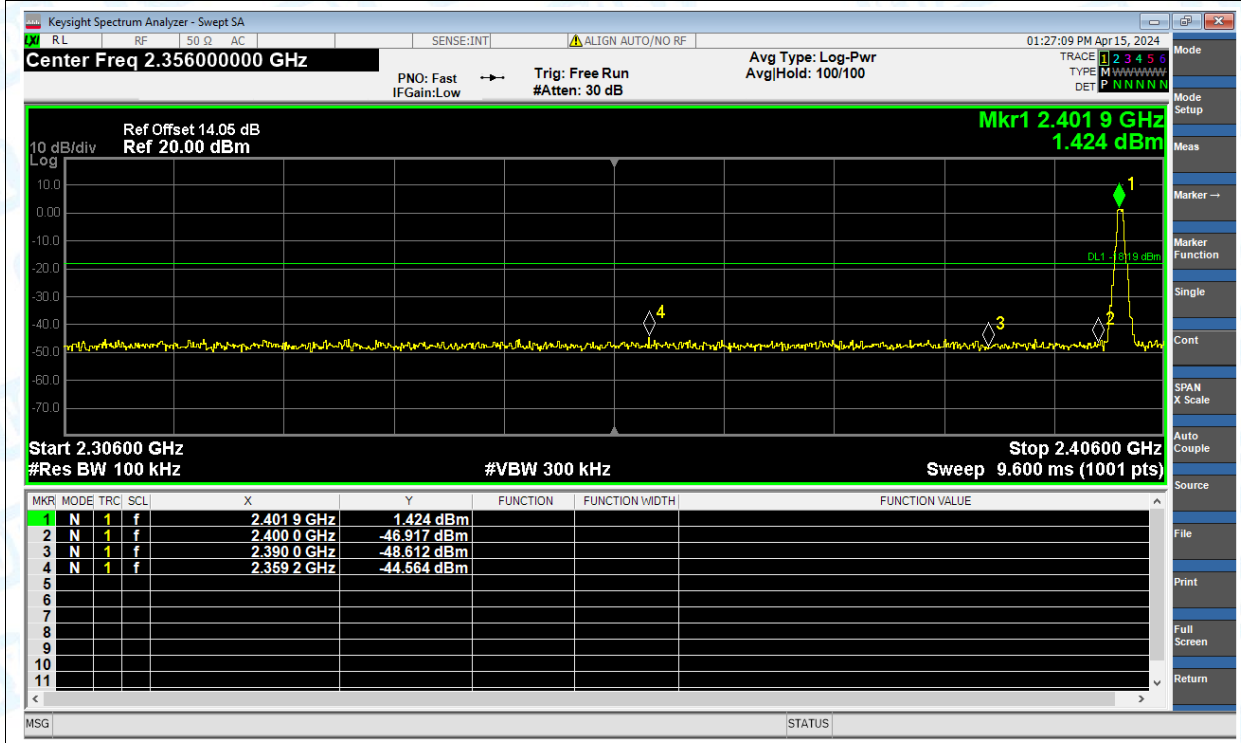
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-46.37	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-45.14	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-44.54	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-44.82	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-44.97	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-45.23	-20	Pass

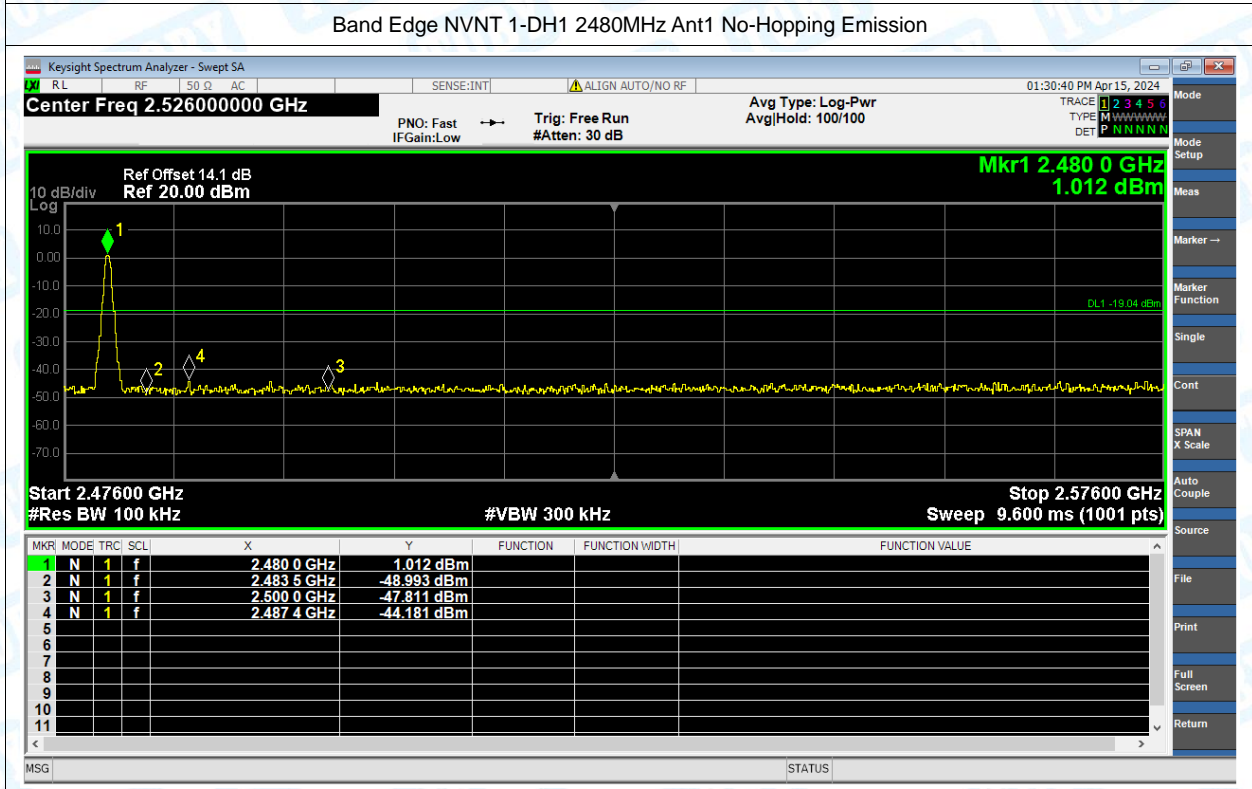
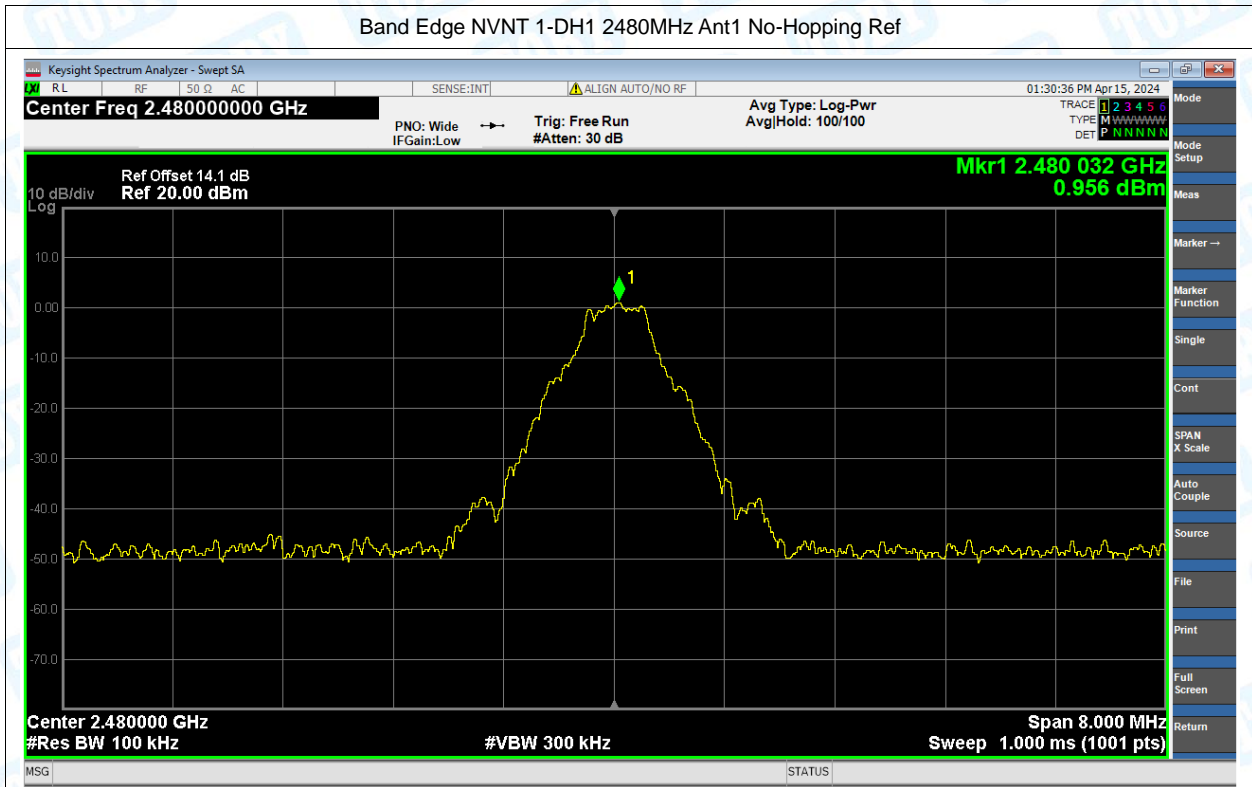
Test Graphs

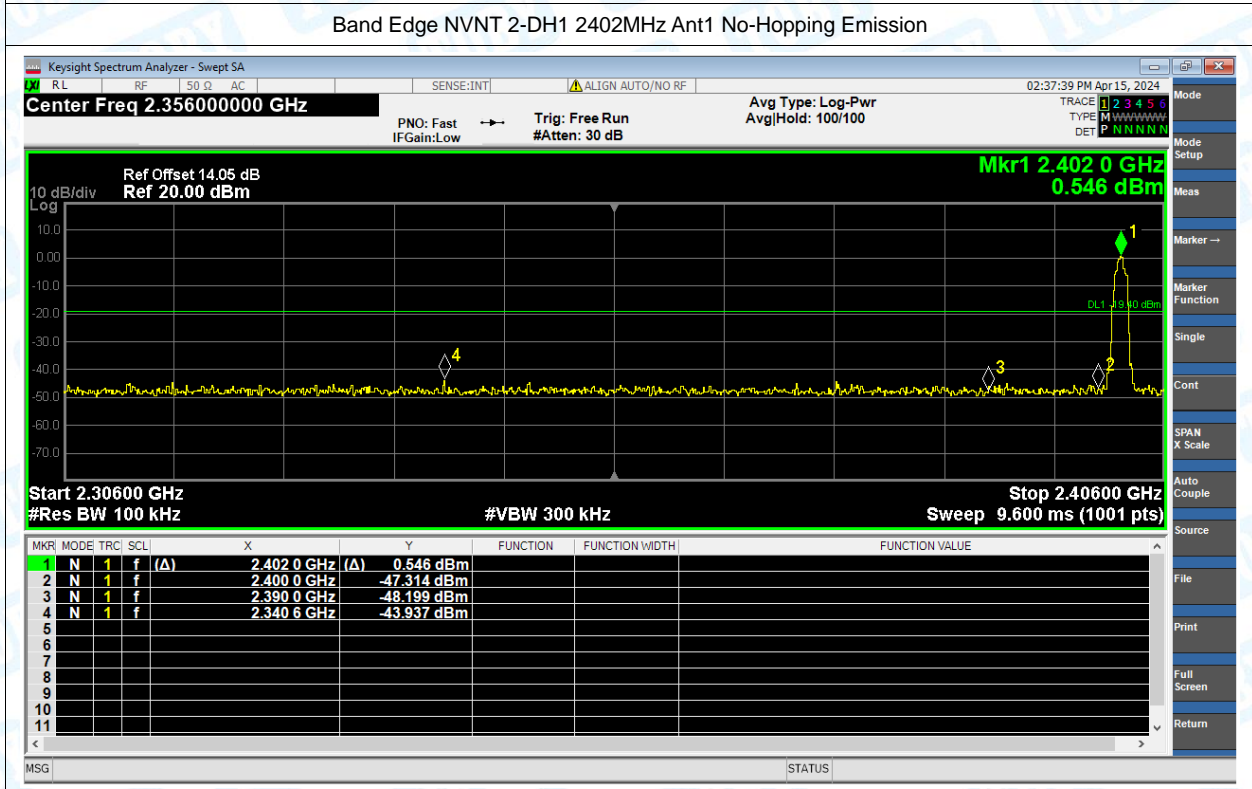
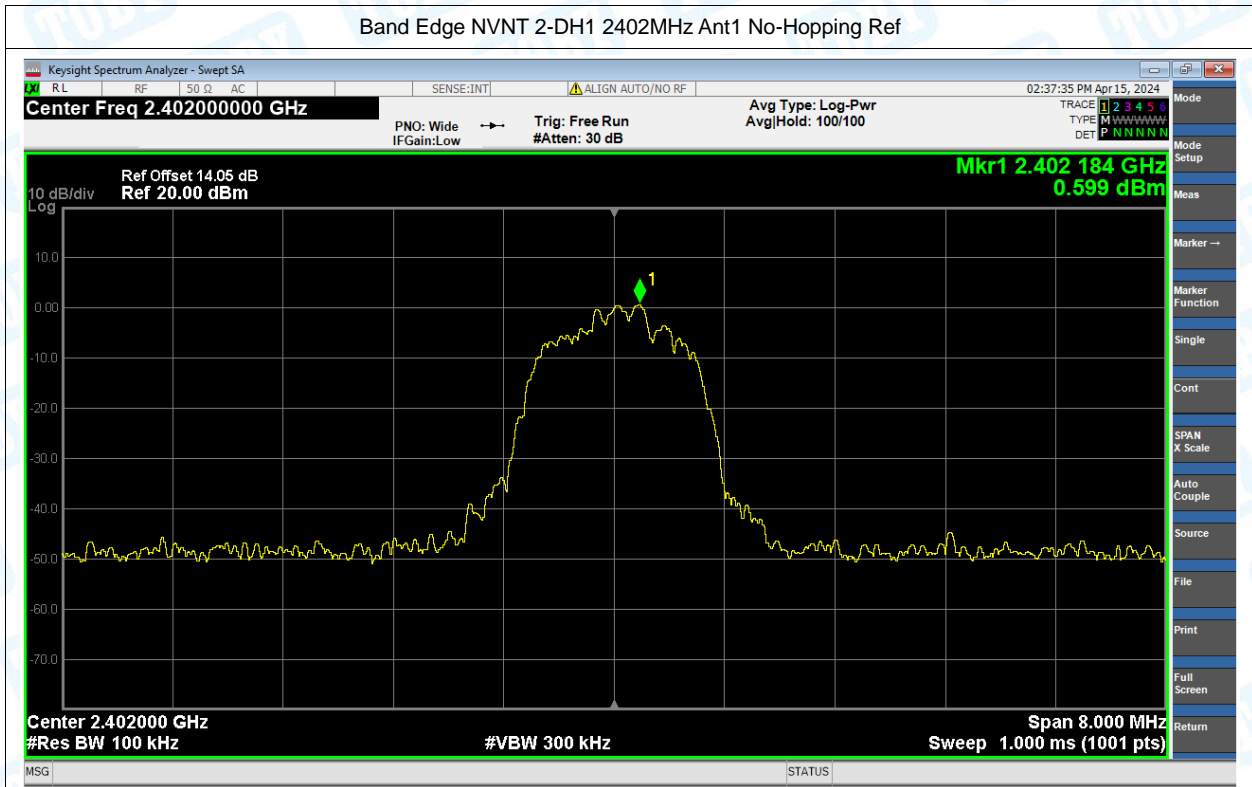
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref

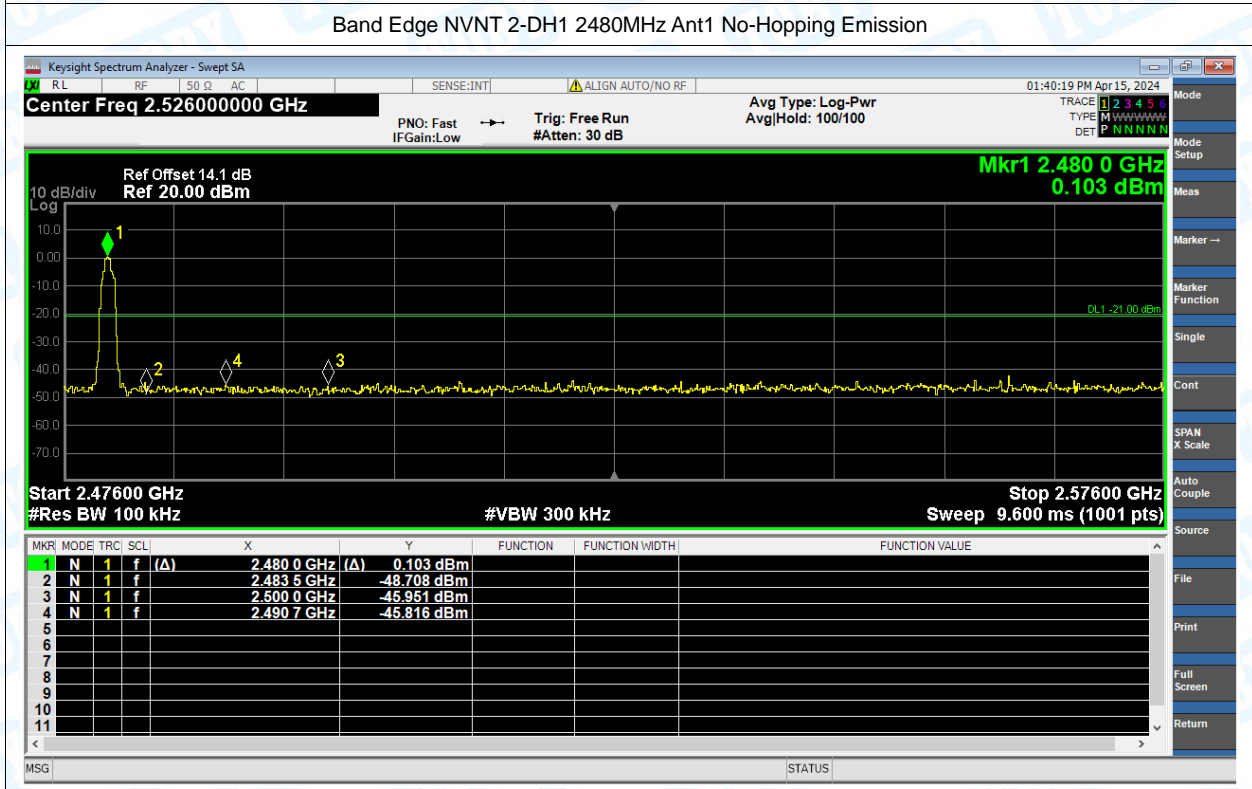
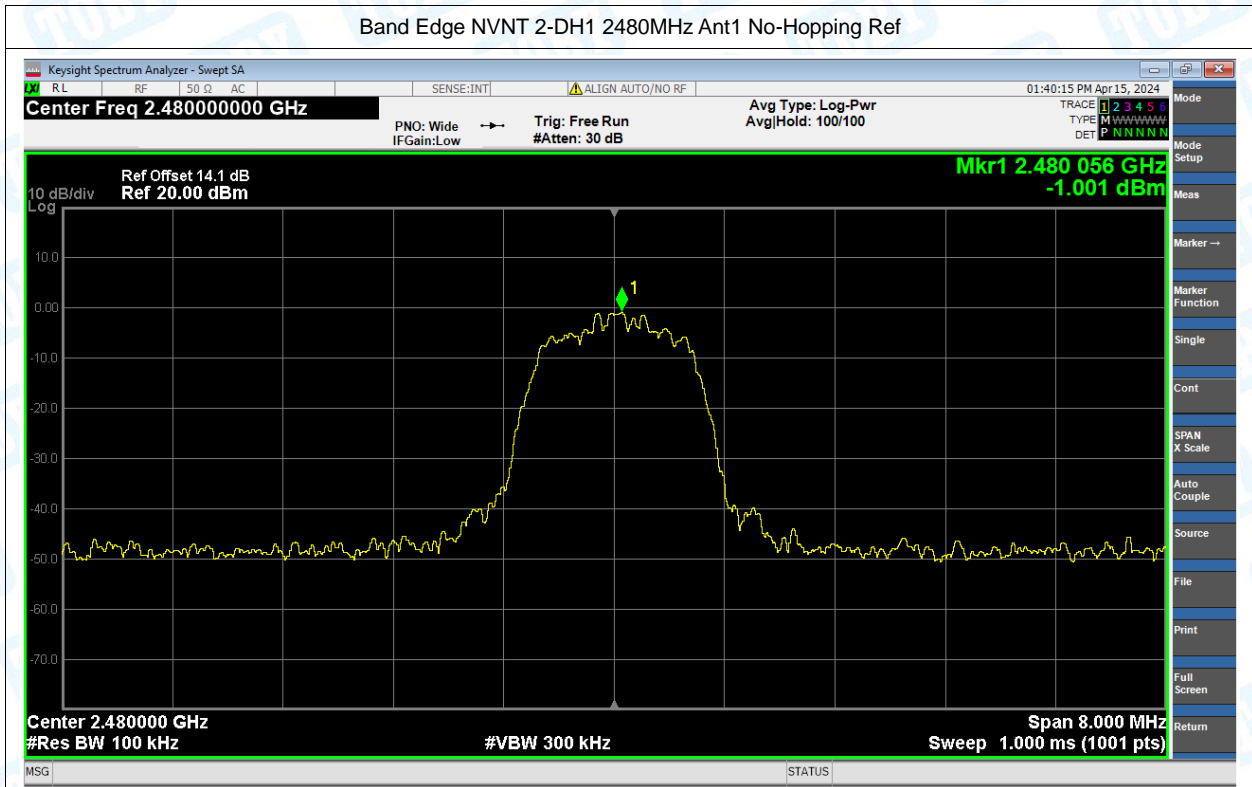


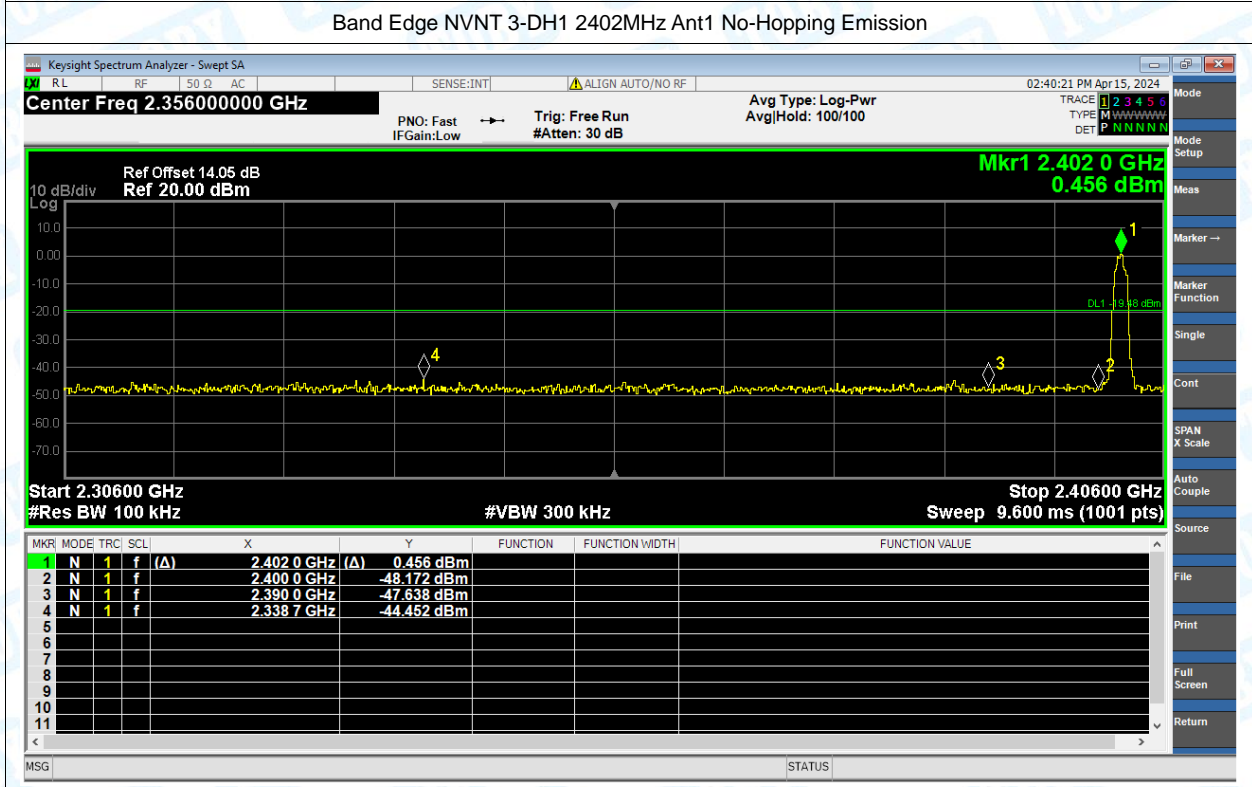
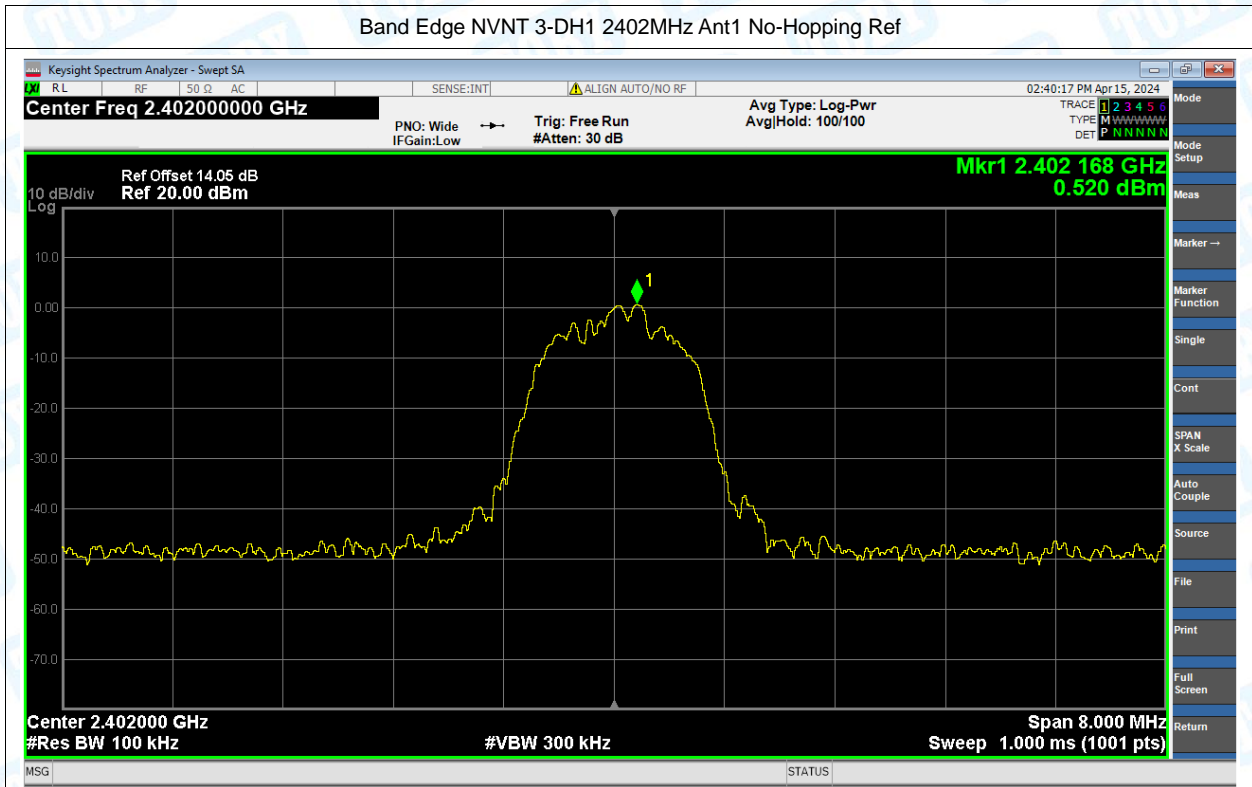
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

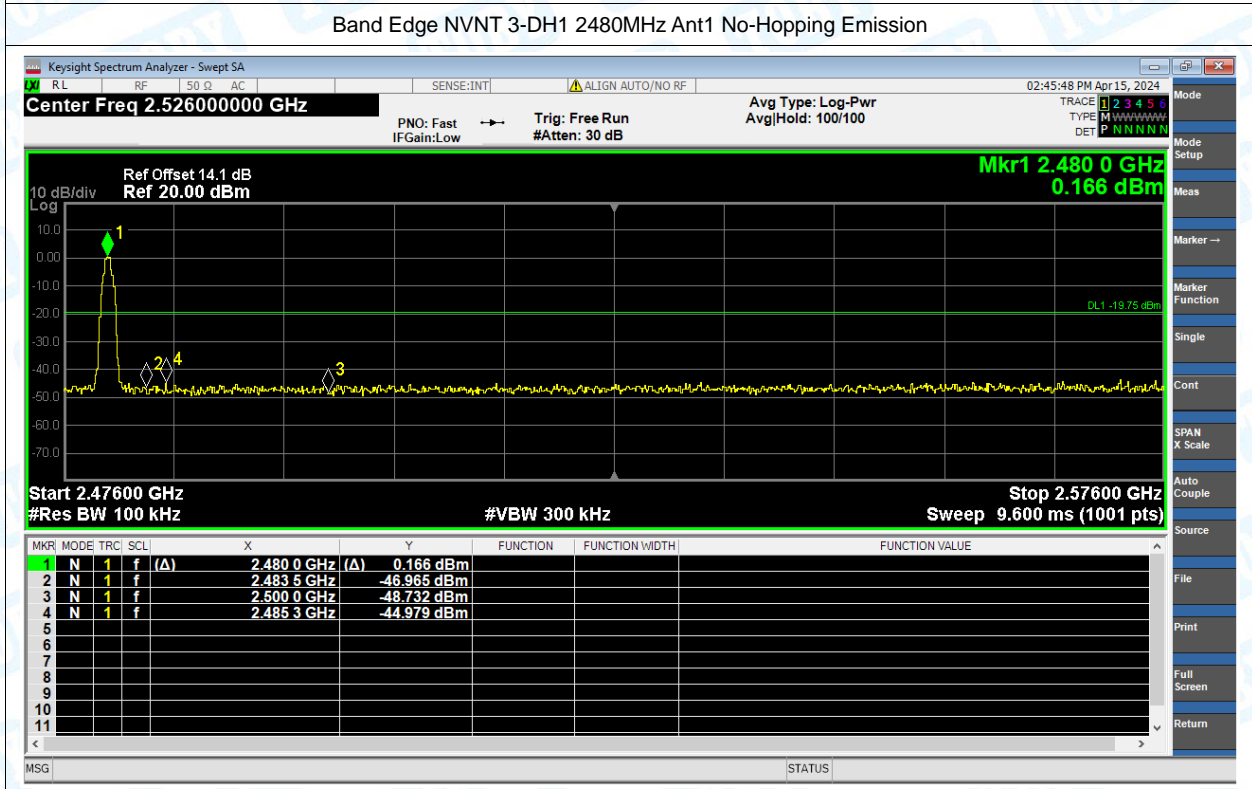
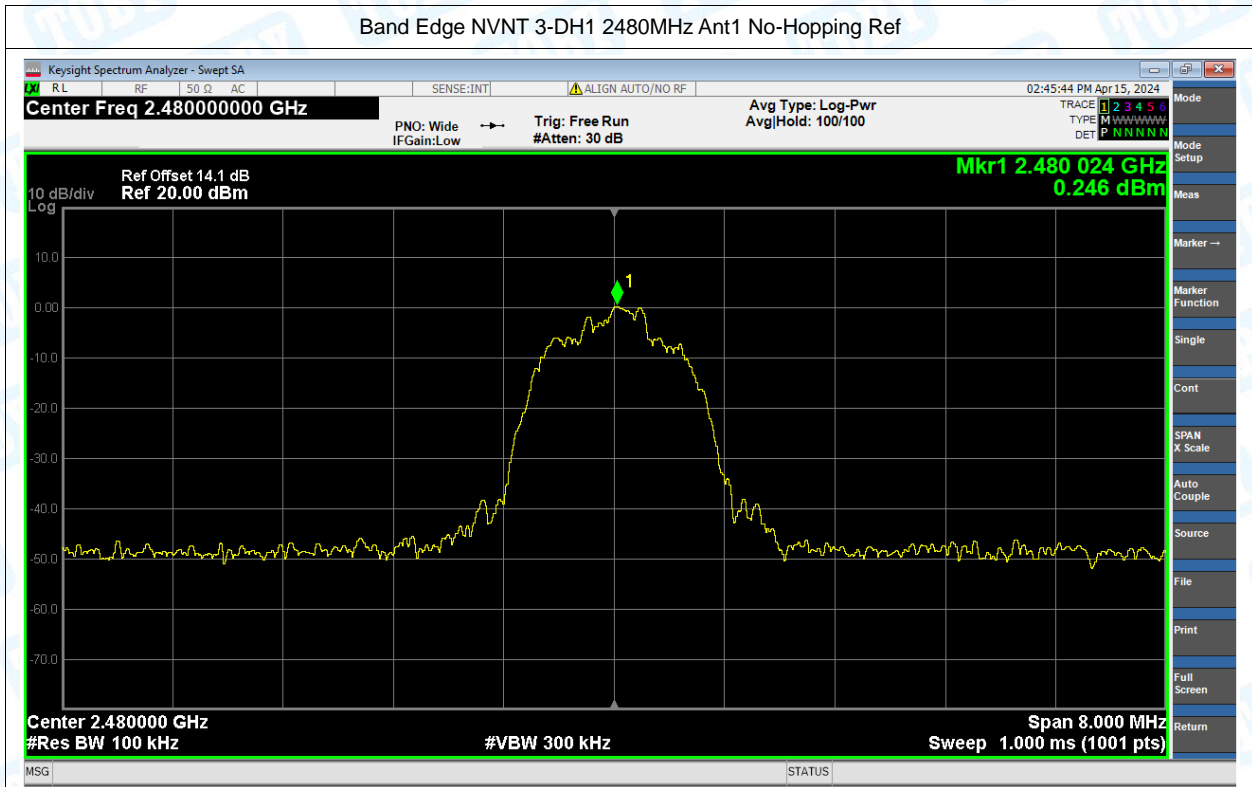












6. Band Edge(Hopping)

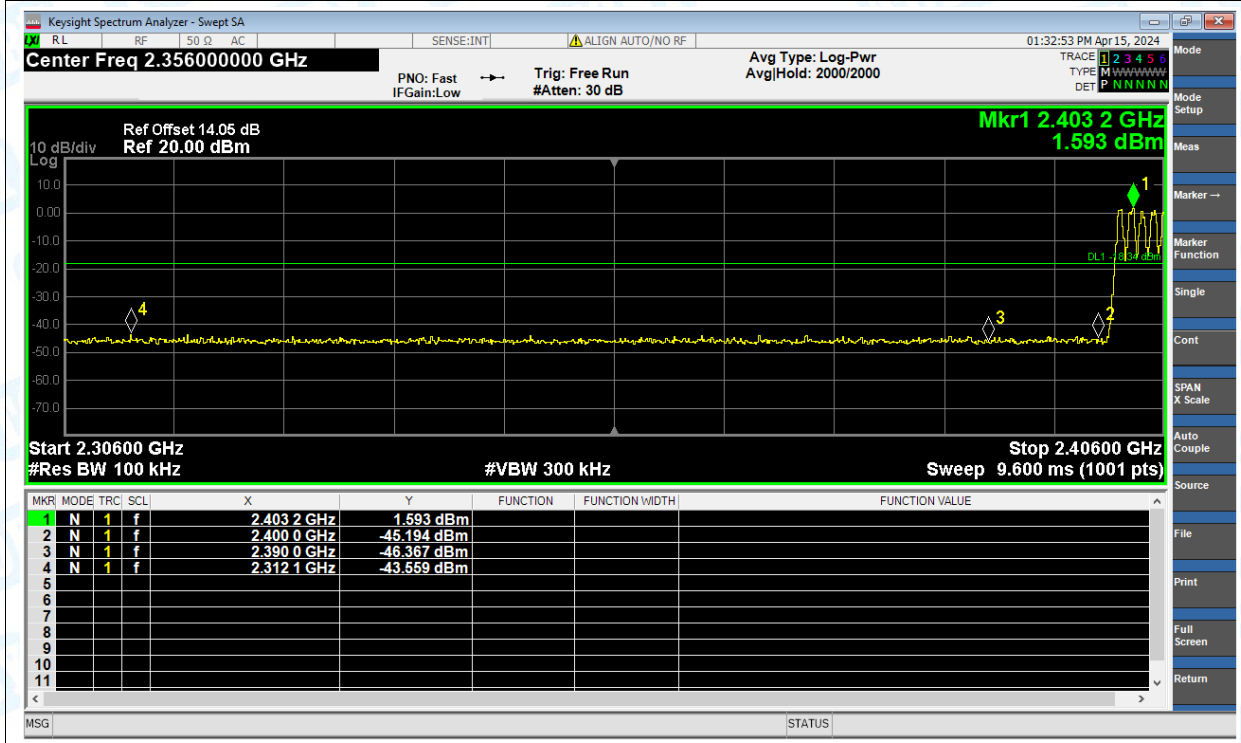
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-45.22	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-45.29	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-44.69	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-44.43	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-44.54	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-43.96	-20	Pass

Test Graphs

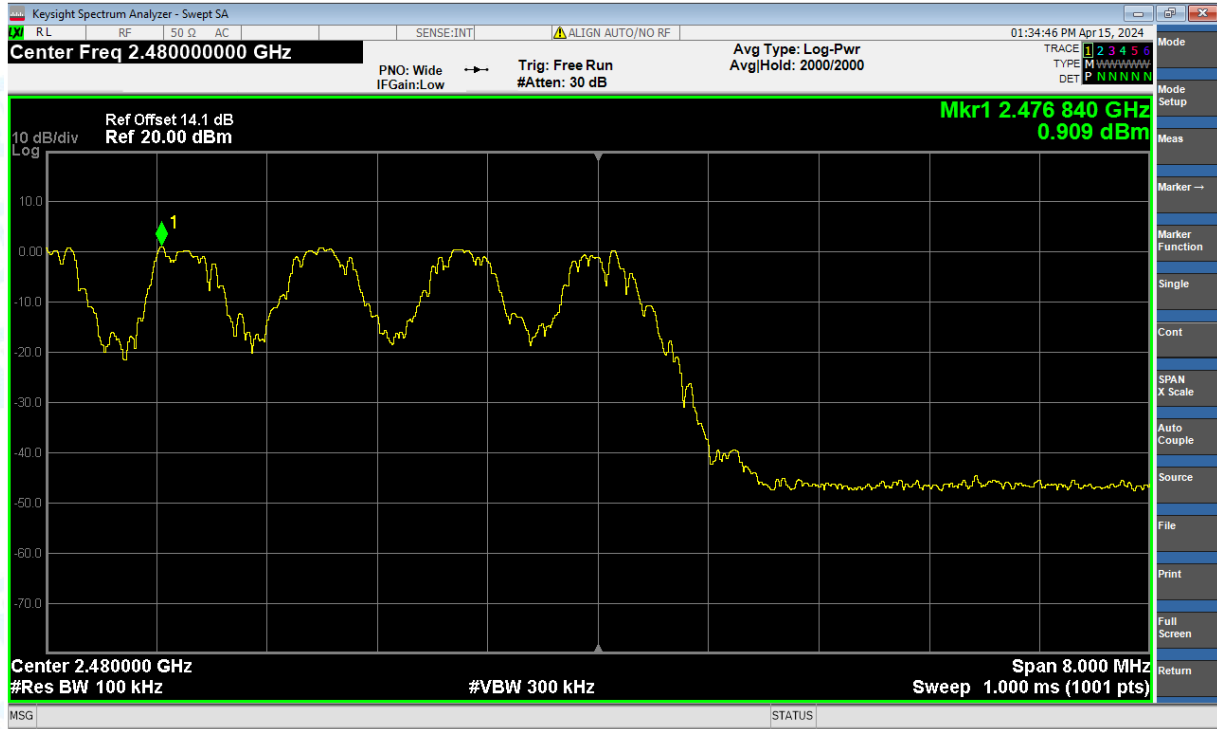
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



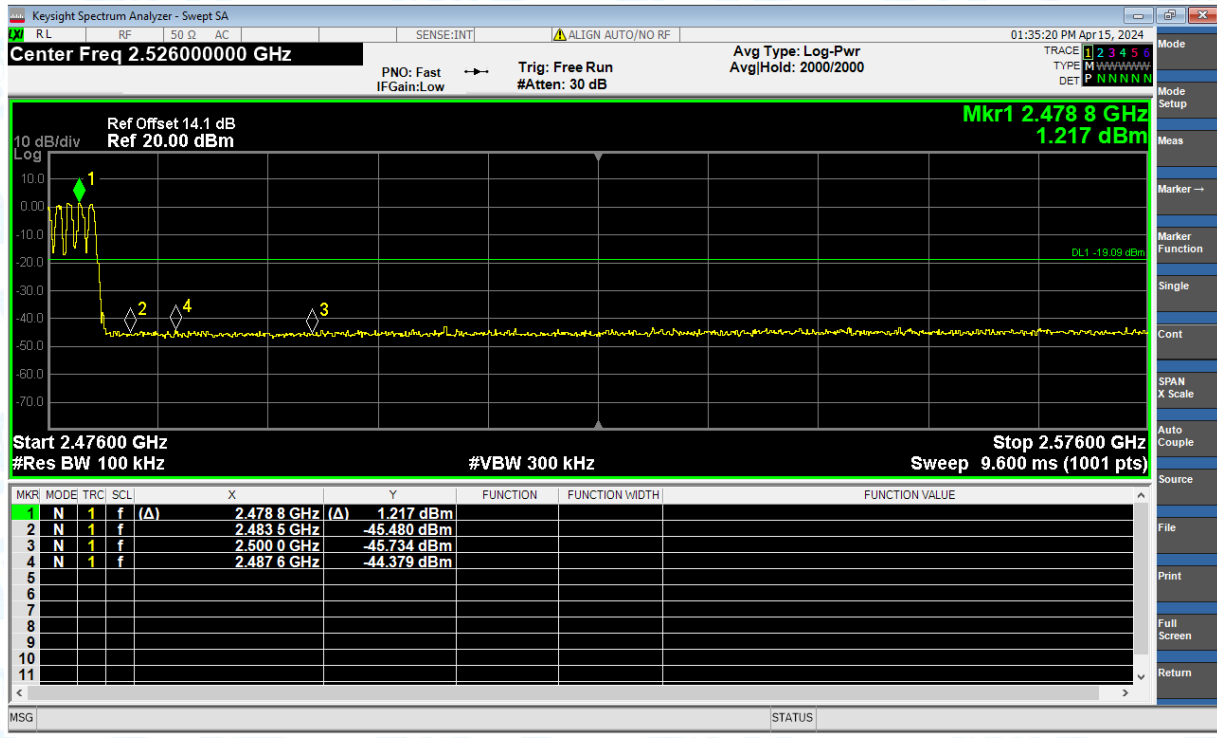
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



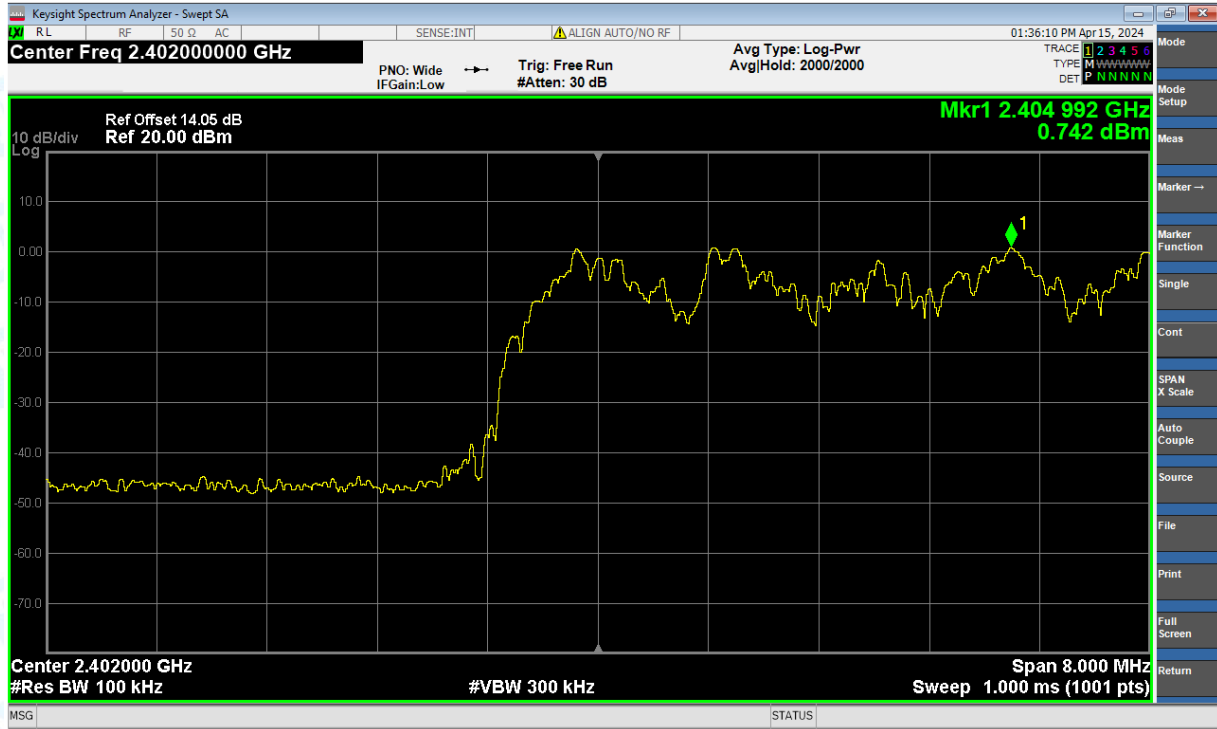
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



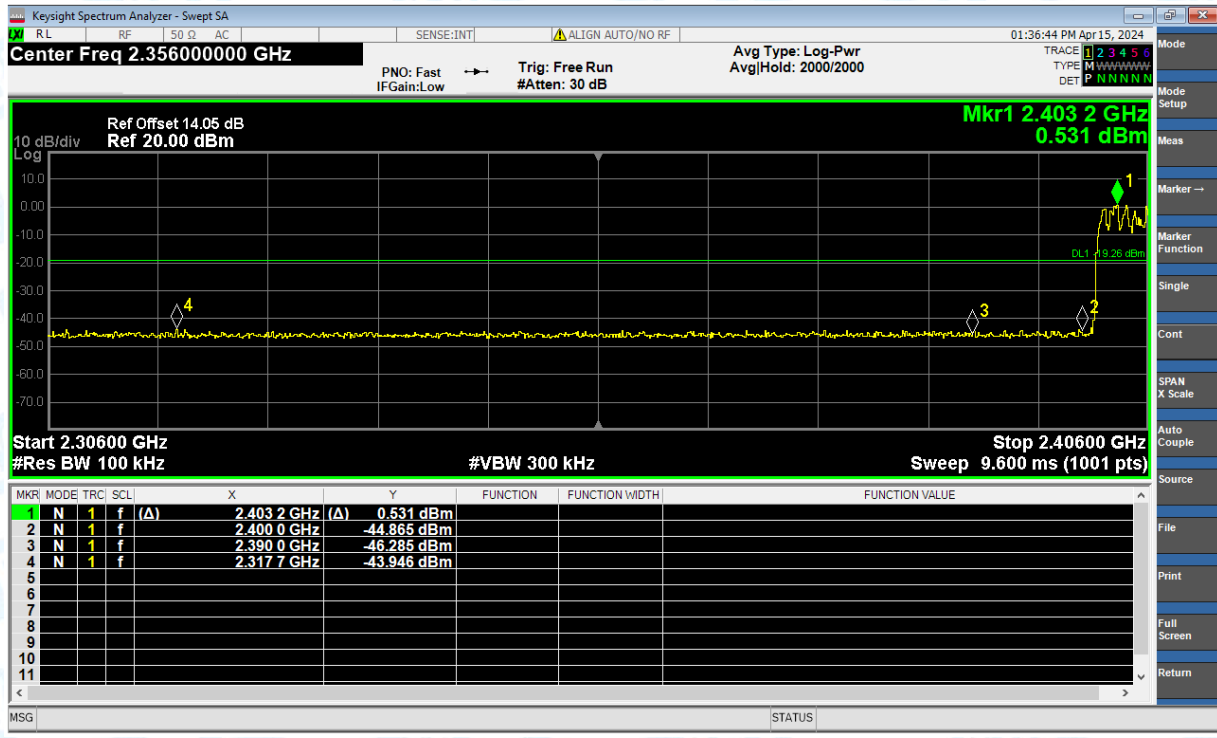
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



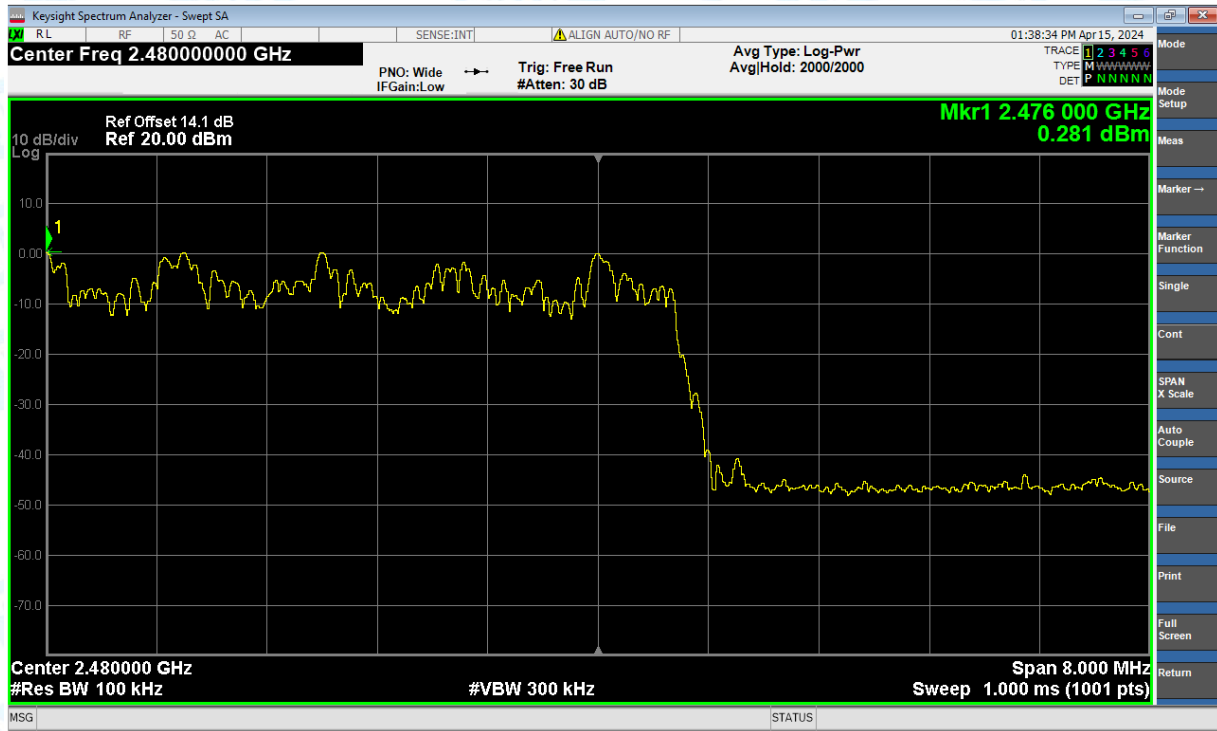
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



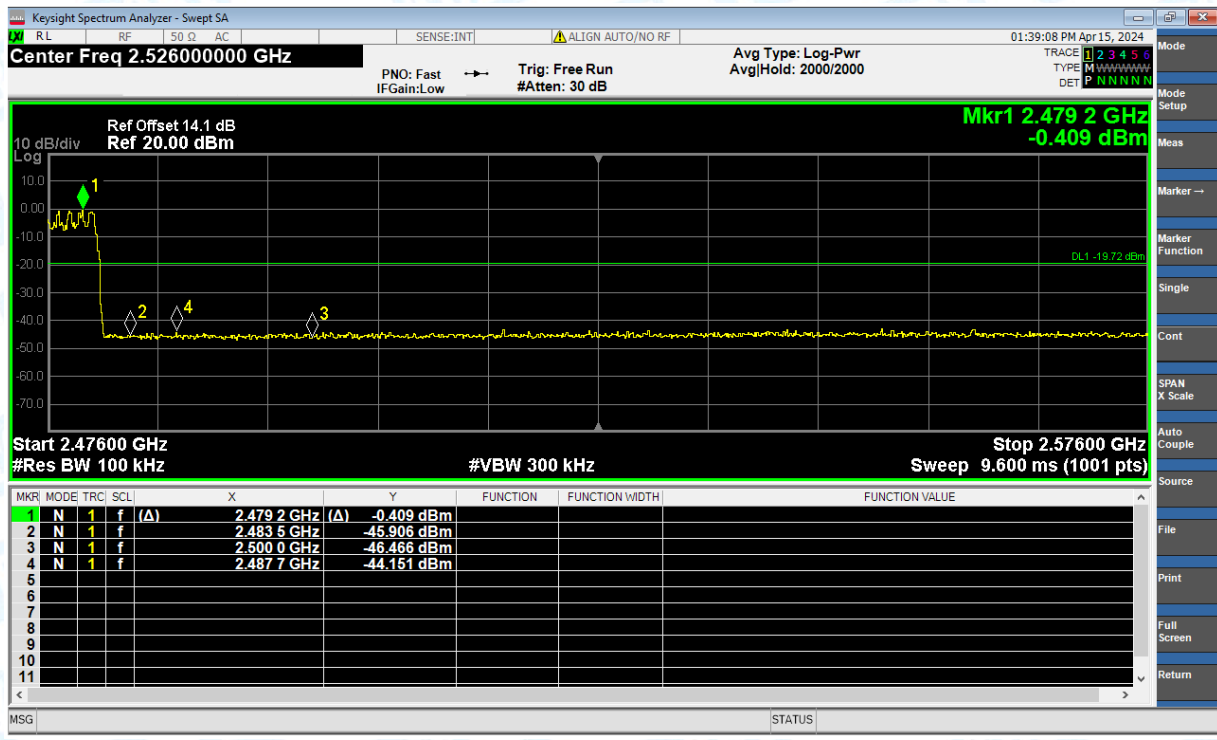
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



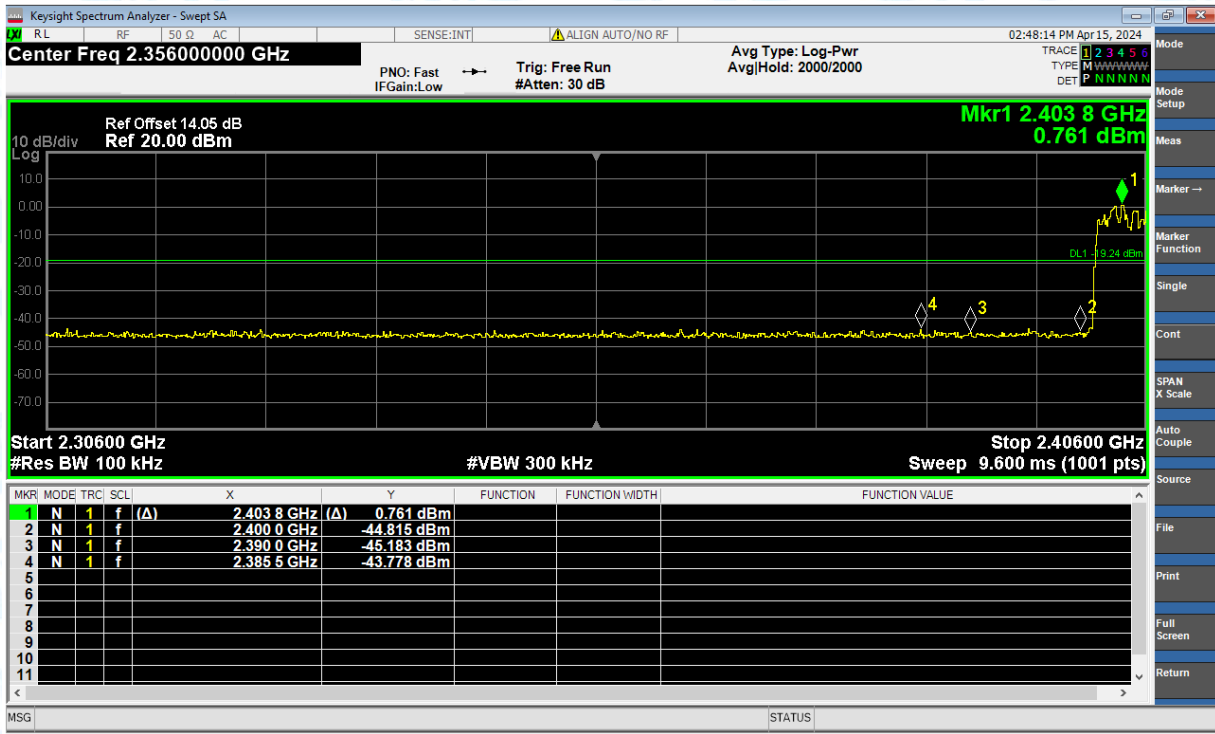
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



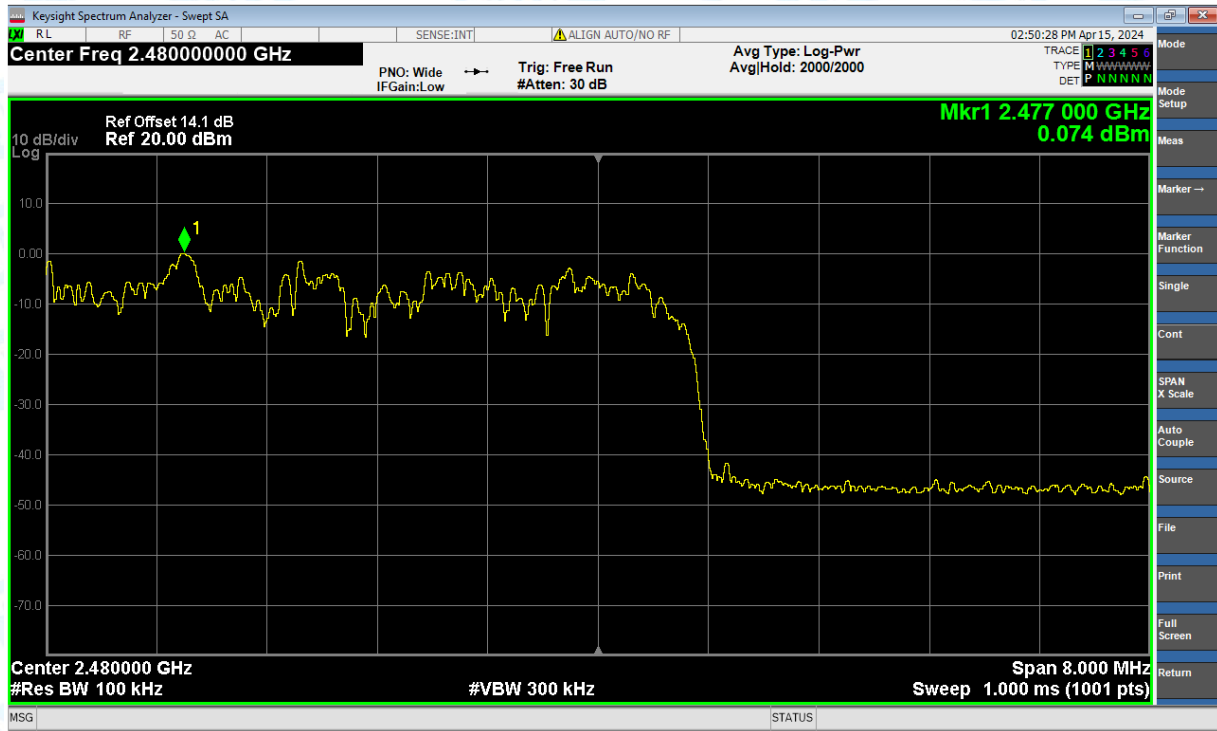
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



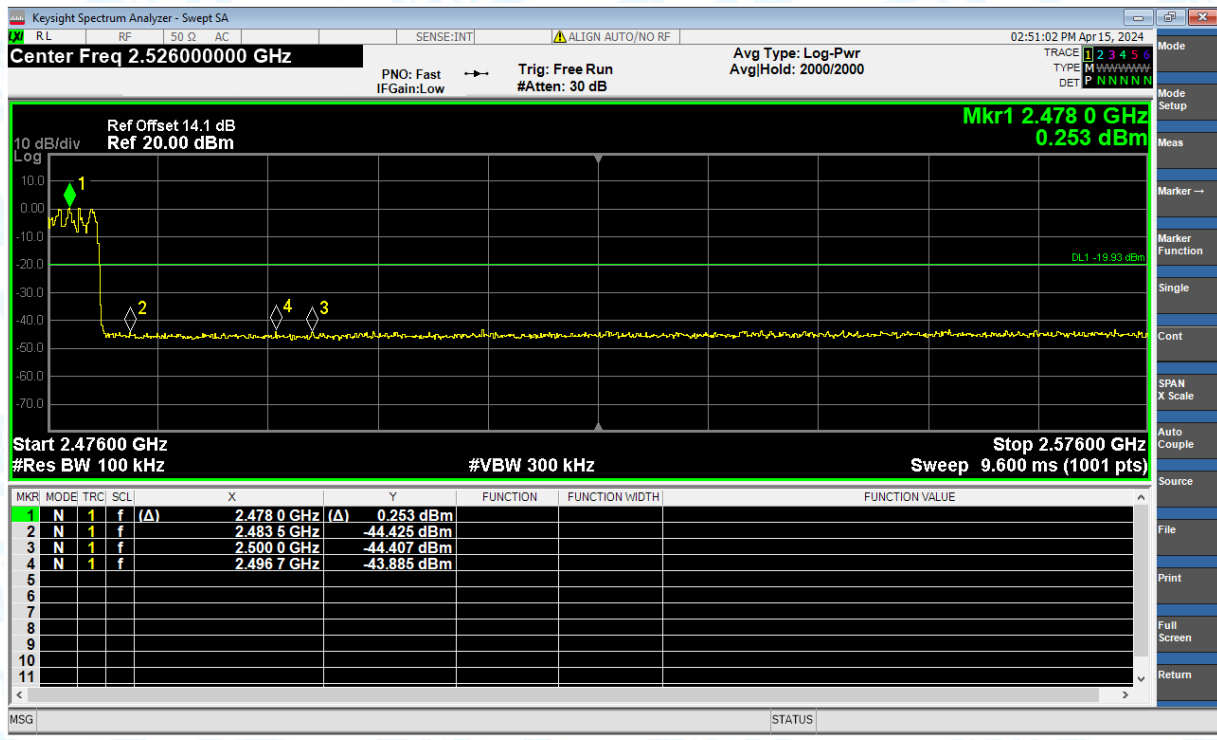
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

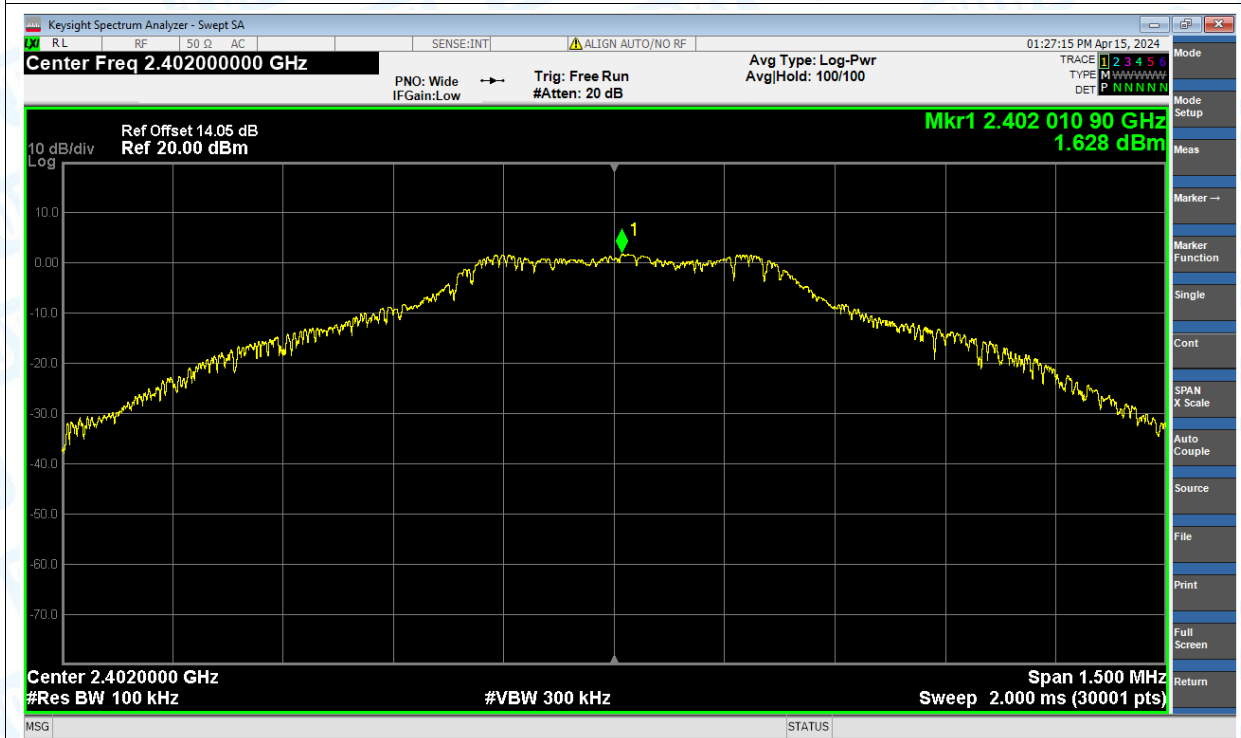


7. Conducted RF Spurious Emission

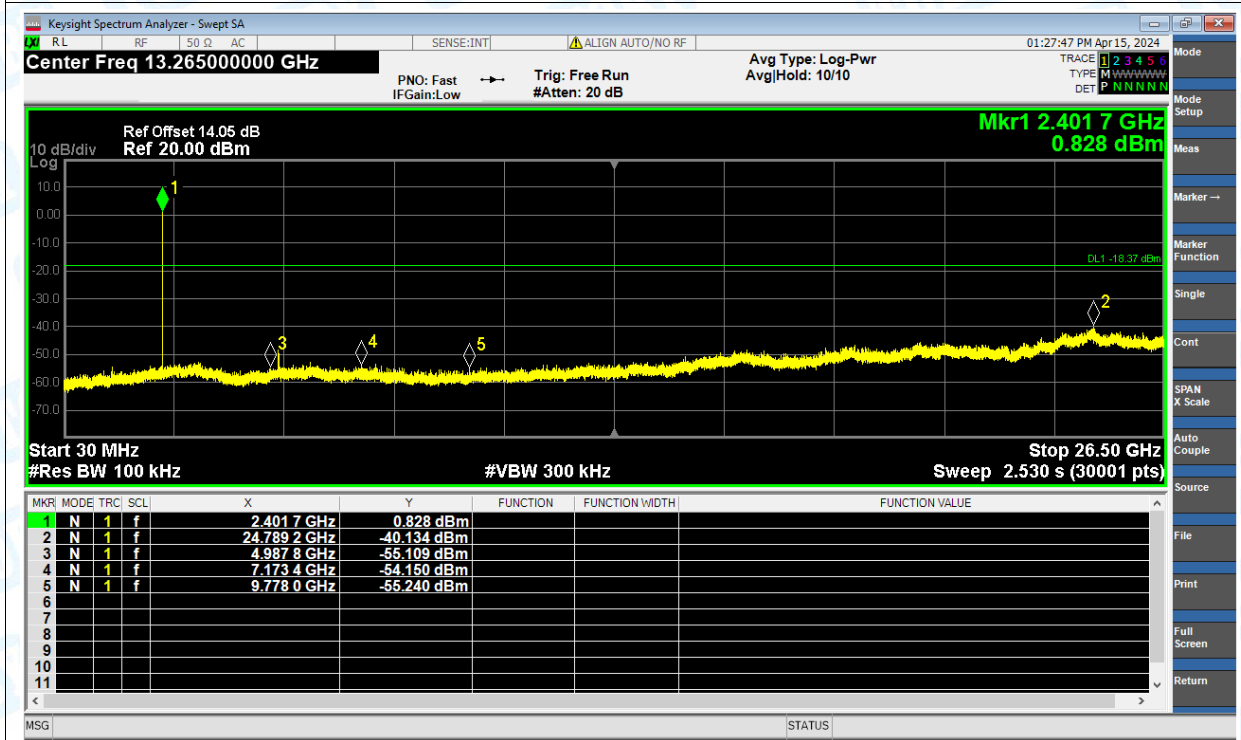
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-41.76	-20	Pass
NVNT	1-DH1	2441	Ant1	-42.14	-20	Pass
NVNT	1-DH1	2480	Ant1	-41.24	-20	Pass
NVNT	2-DH1	2402	Ant1	-40.69	-20	Pass
NVNT	2-DH1	2441	Ant1	-39.21	-20	Pass
NVNT	2-DH1	2480	Ant1	-40.24	-20	Pass
NVNT	3-DH1	2402	Ant1	-34.06	-20	Pass
NVNT	3-DH1	2441	Ant1	-40.84	-20	Pass
NVNT	3-DH1	2480	Ant1	-40.44	-20	Pass

Test Graphs

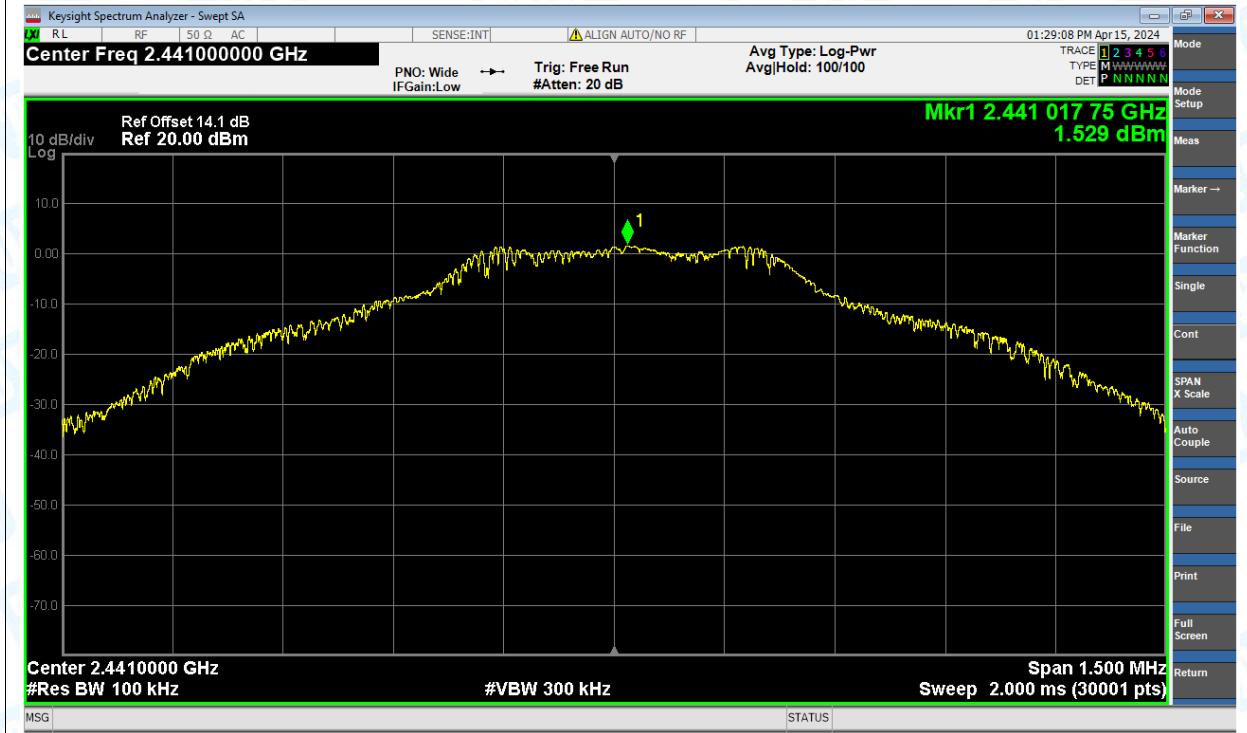
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



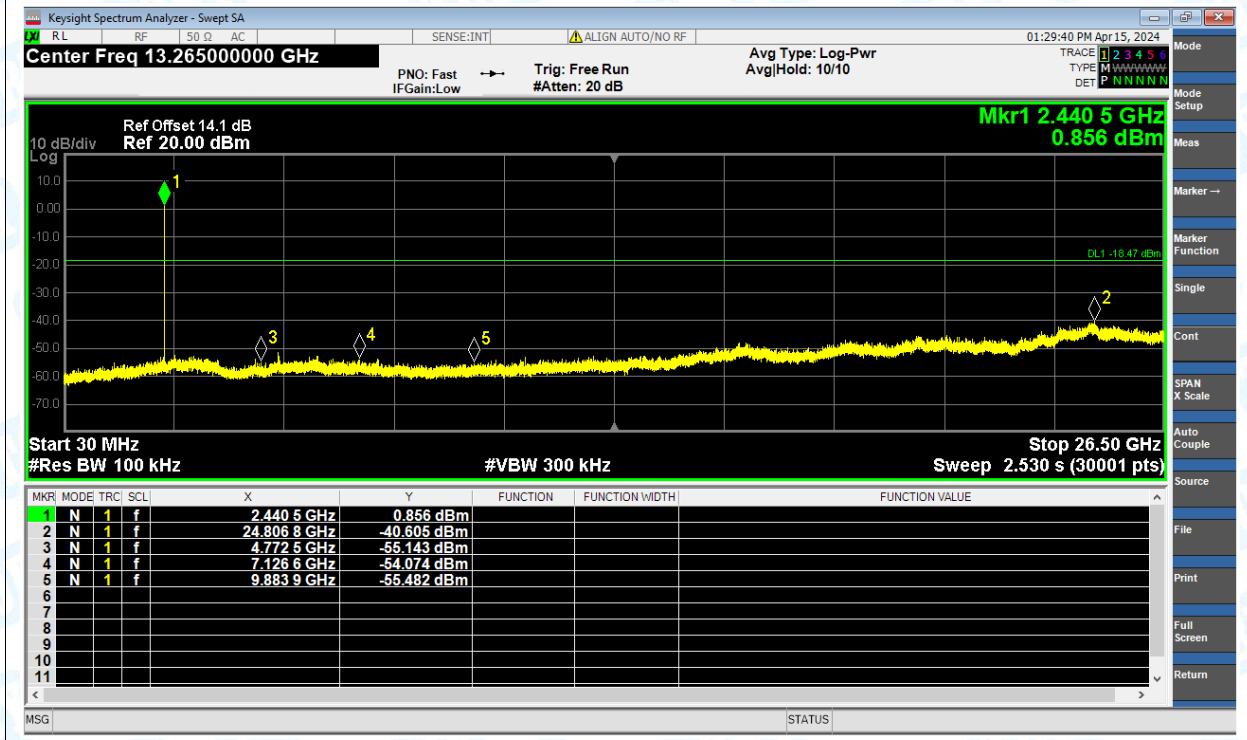
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



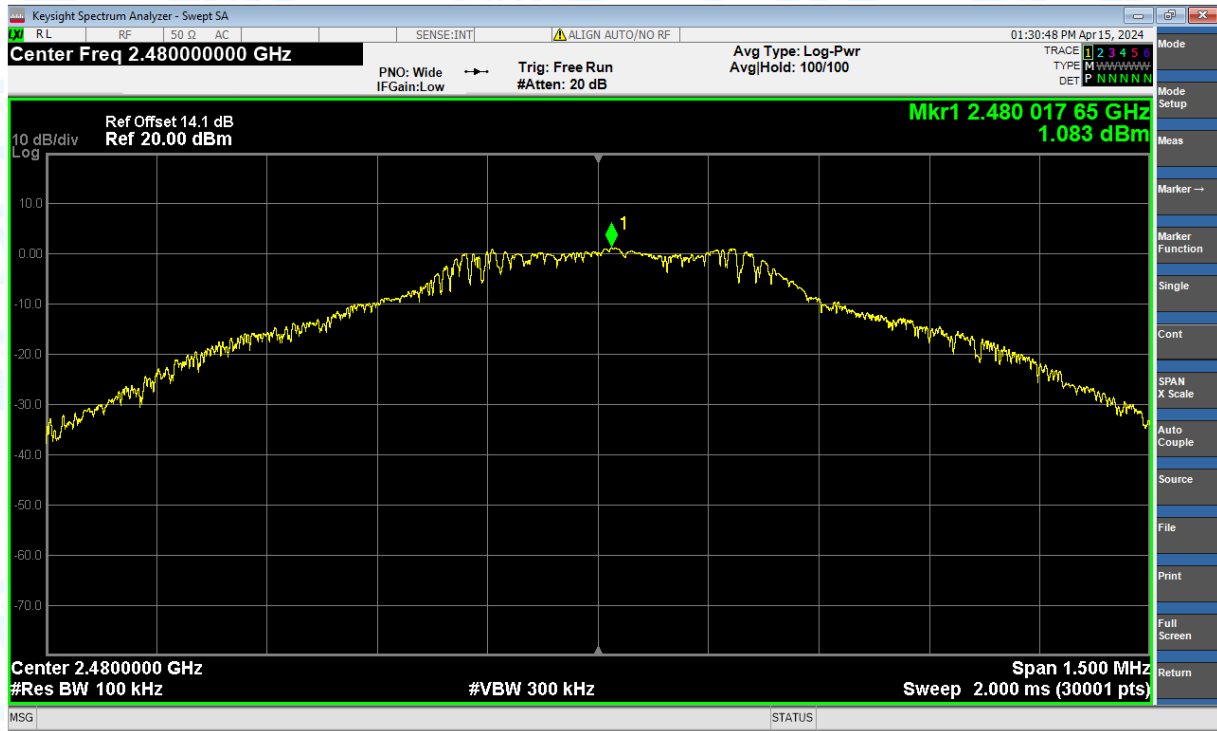
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



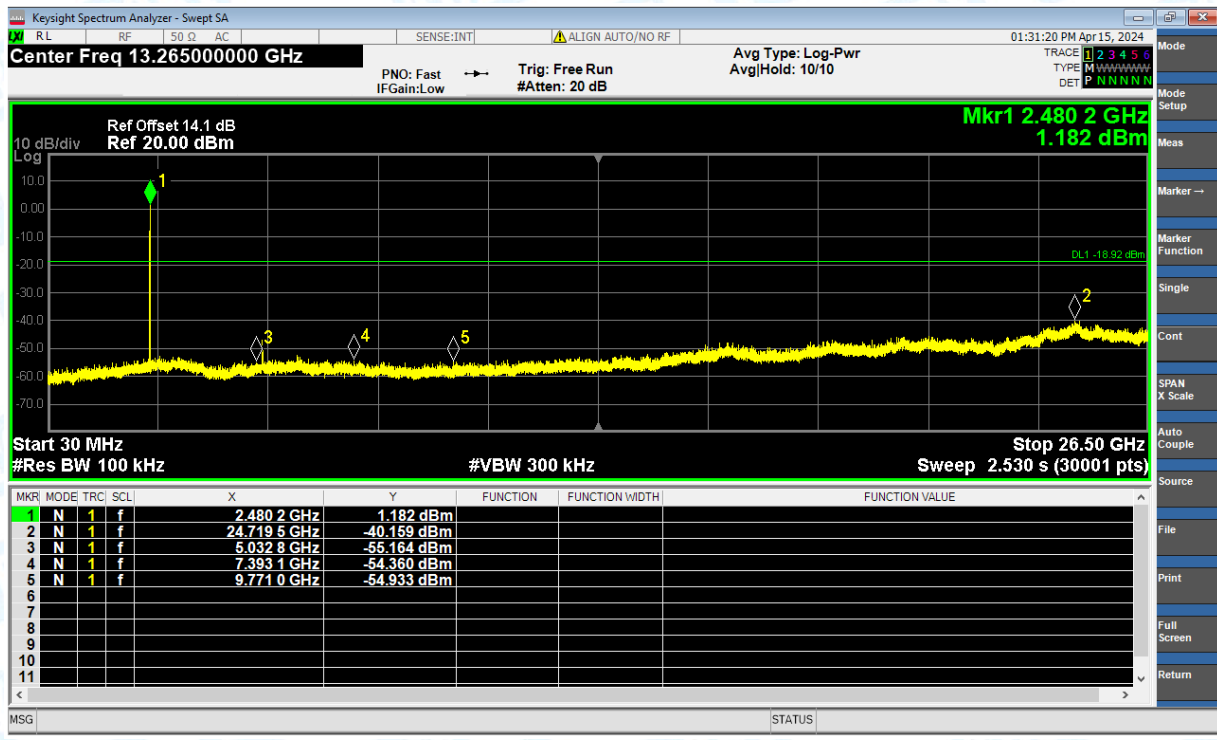
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



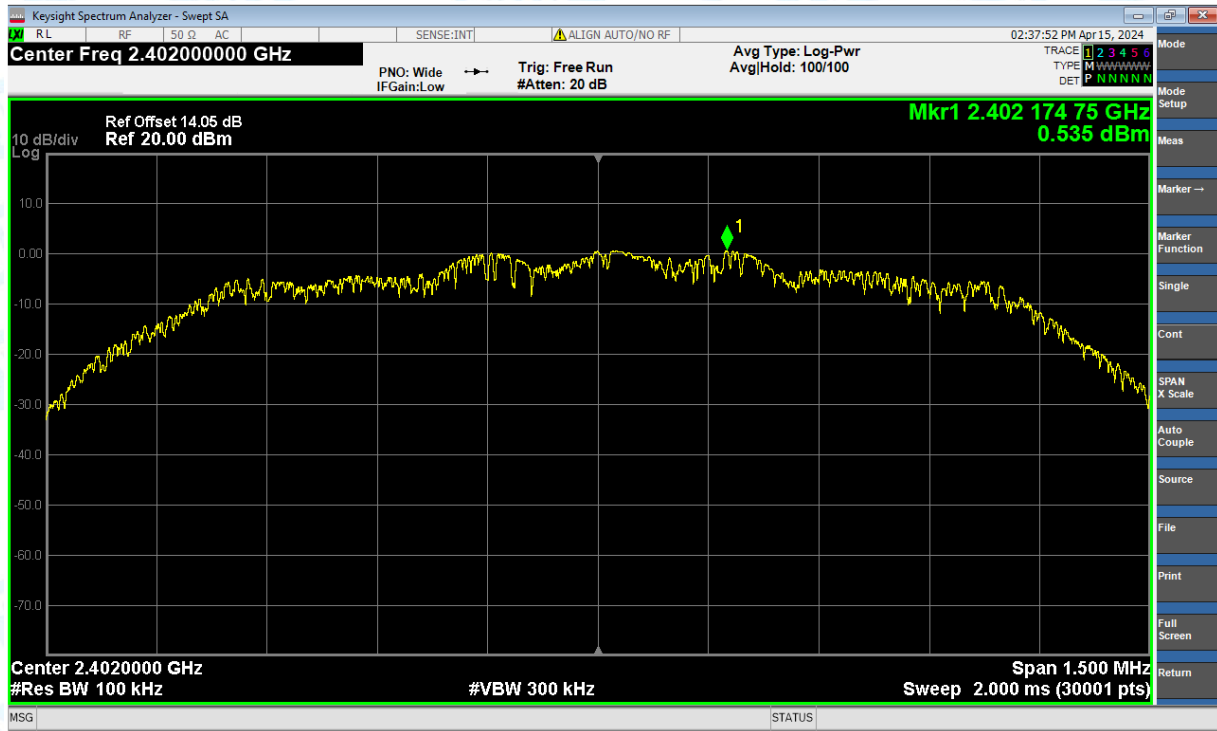
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



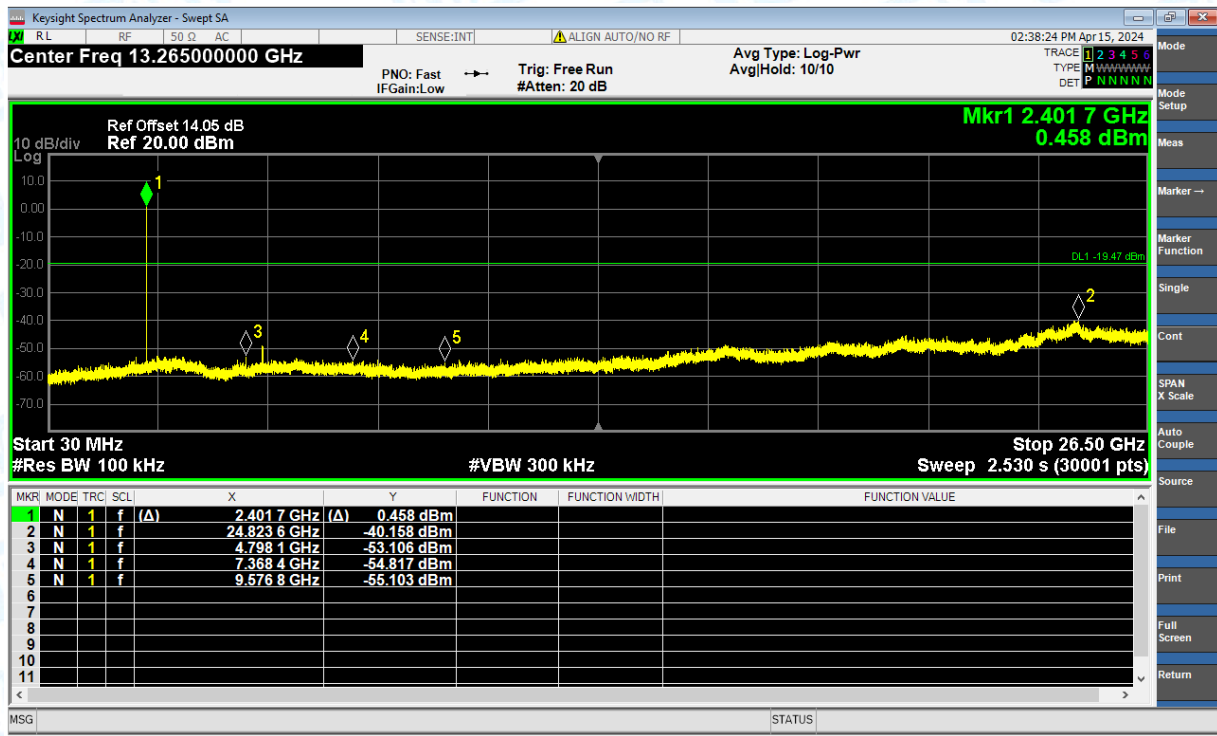
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



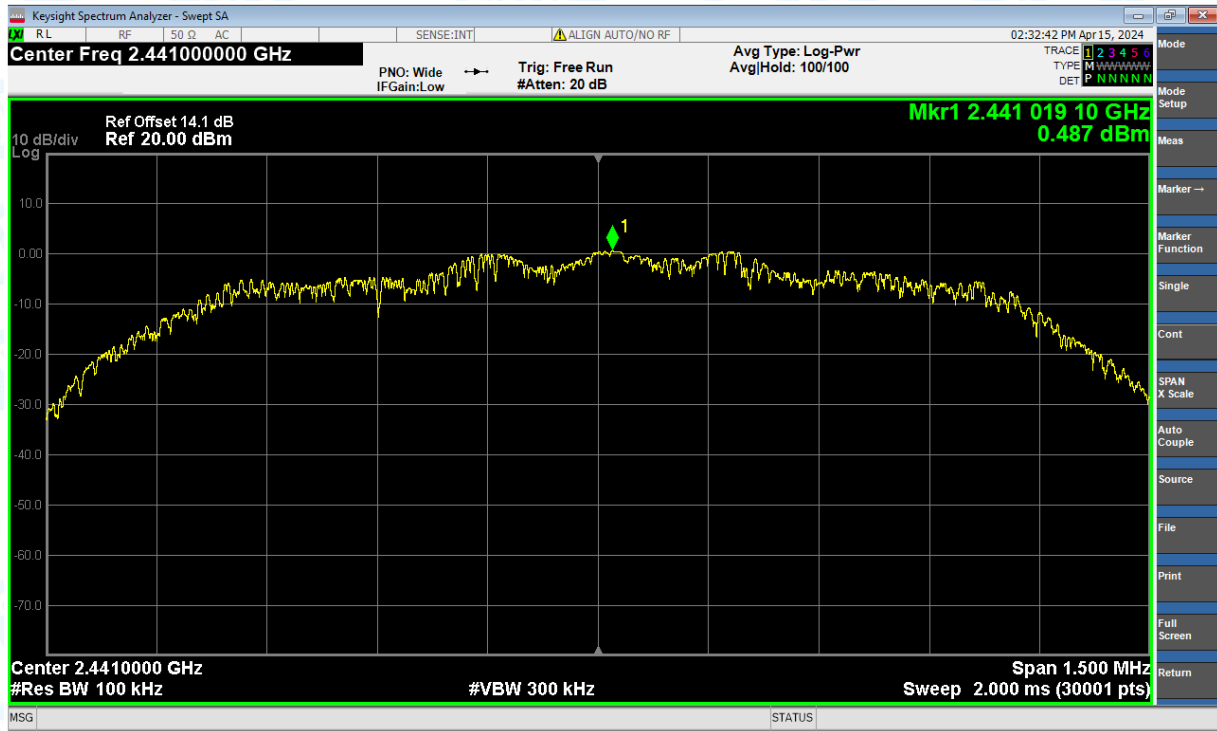
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



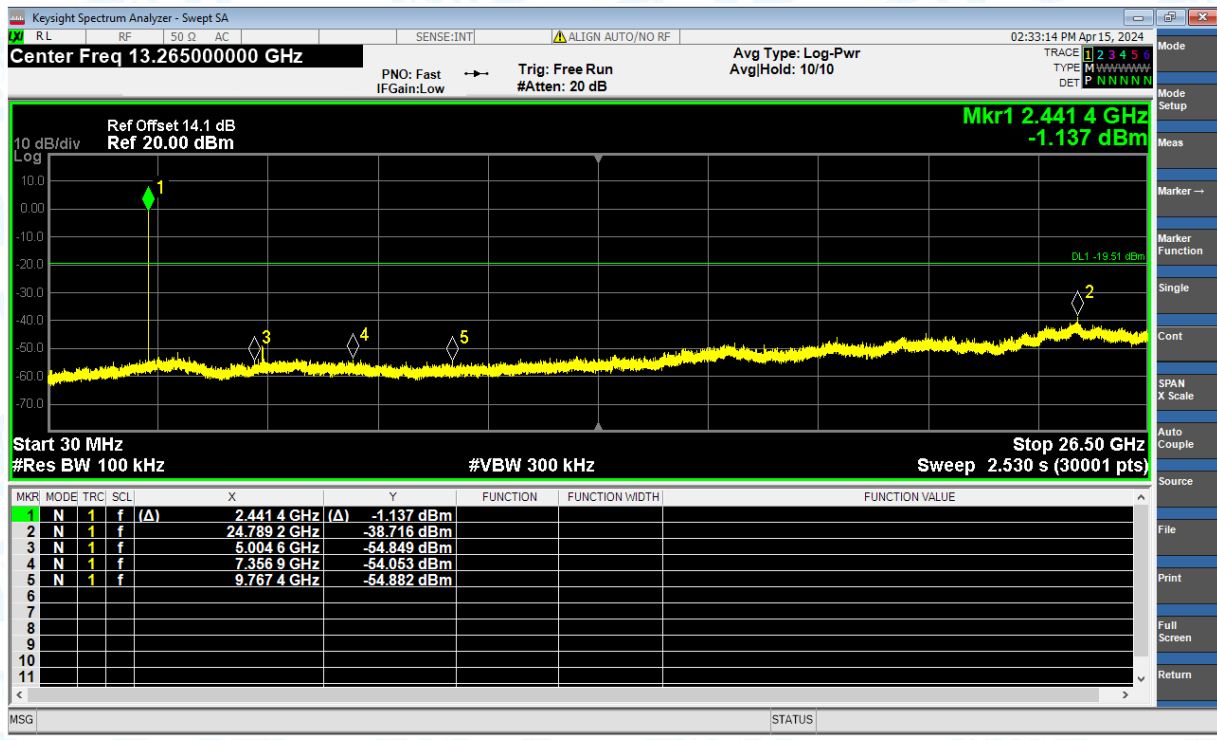
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



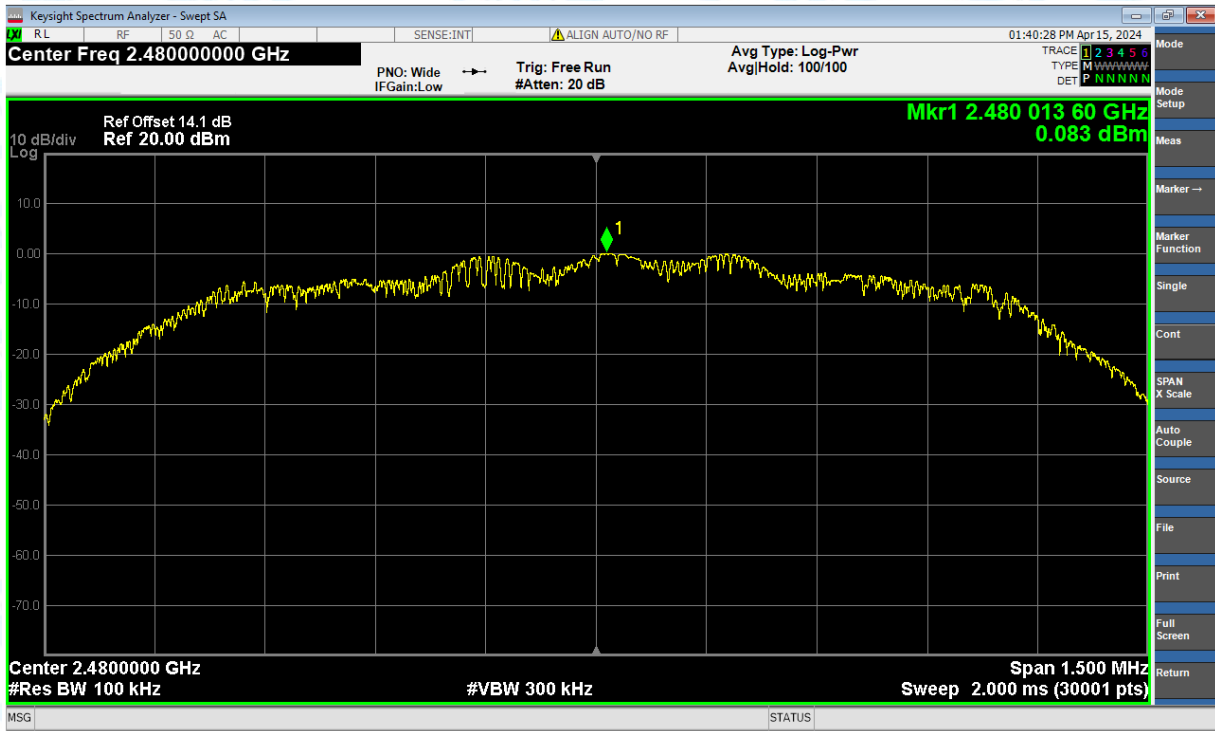
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



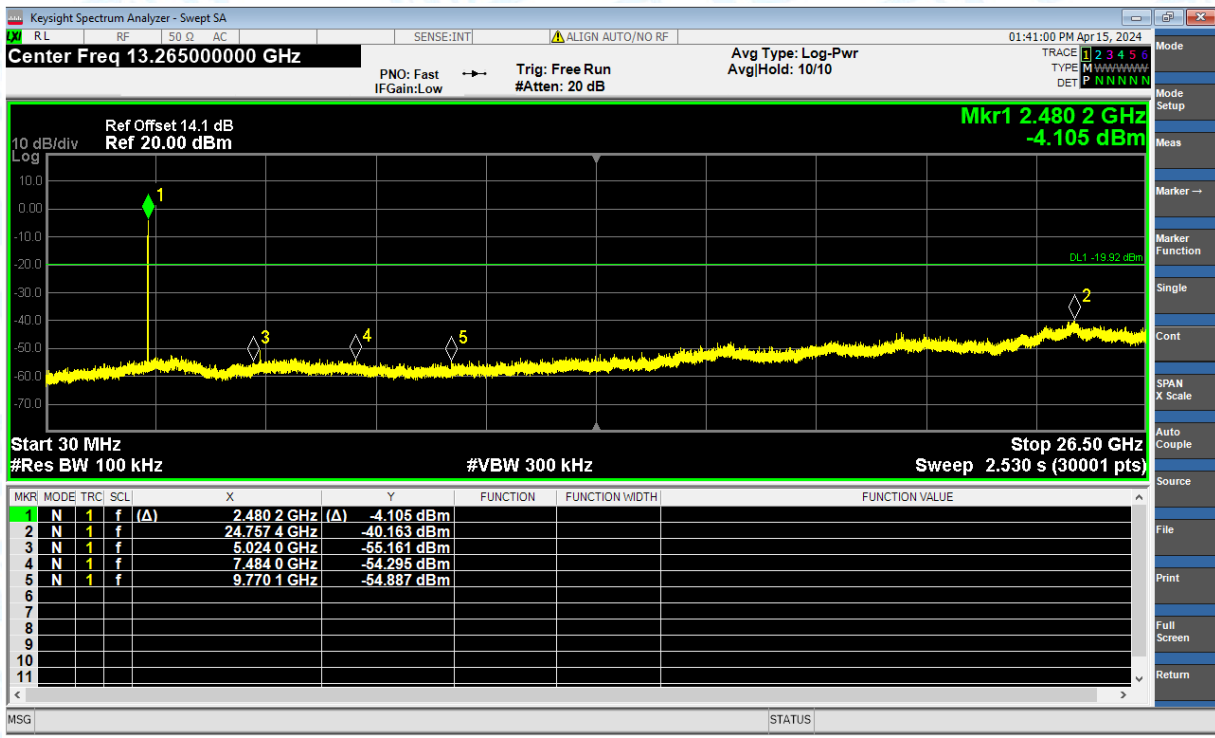
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



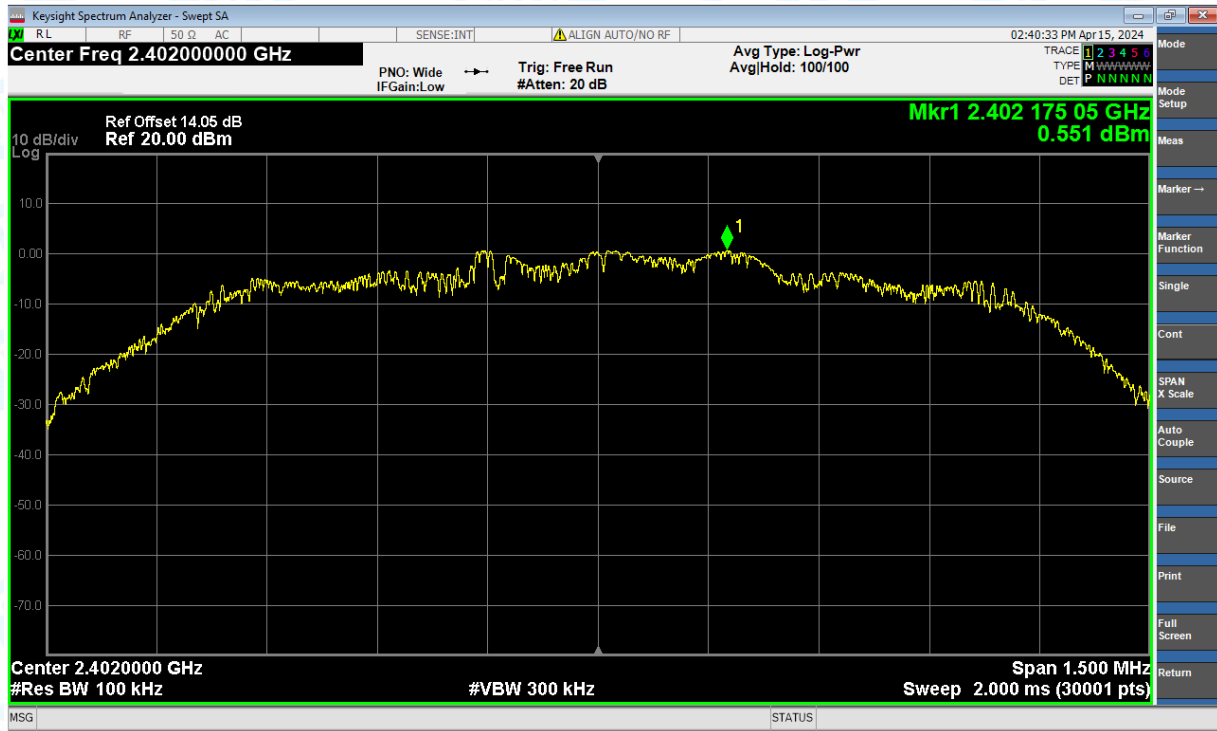
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



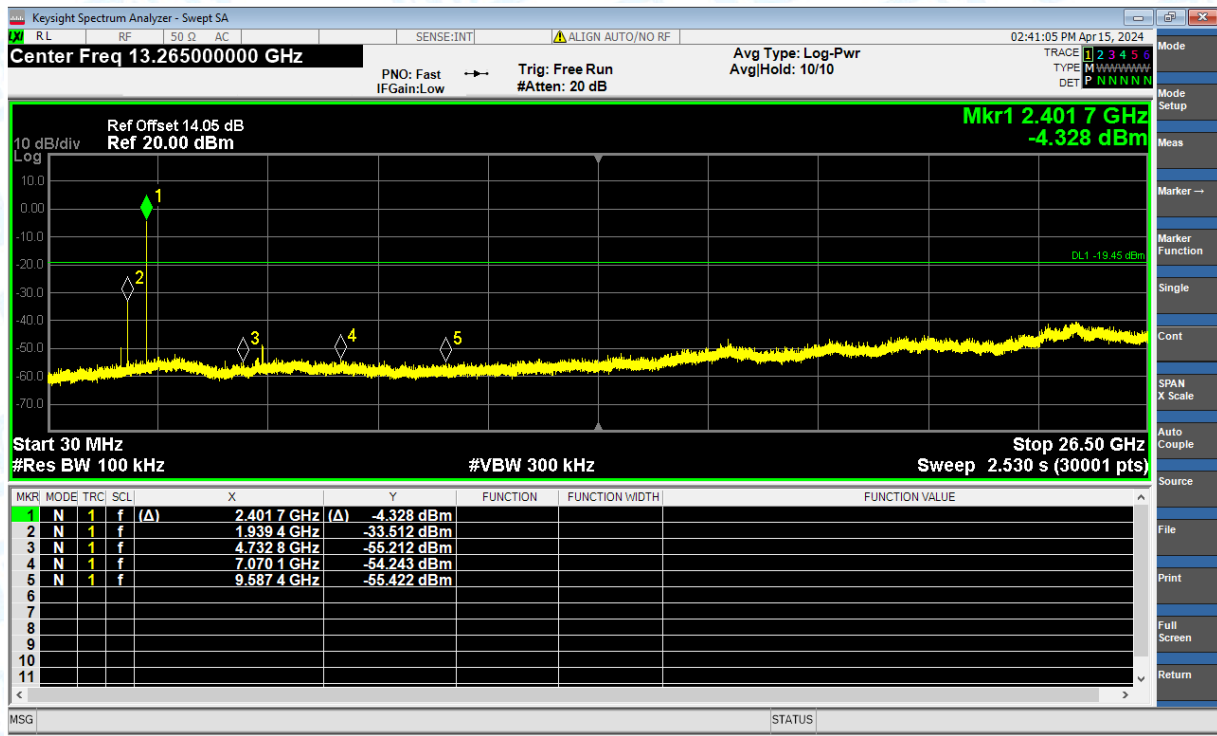
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



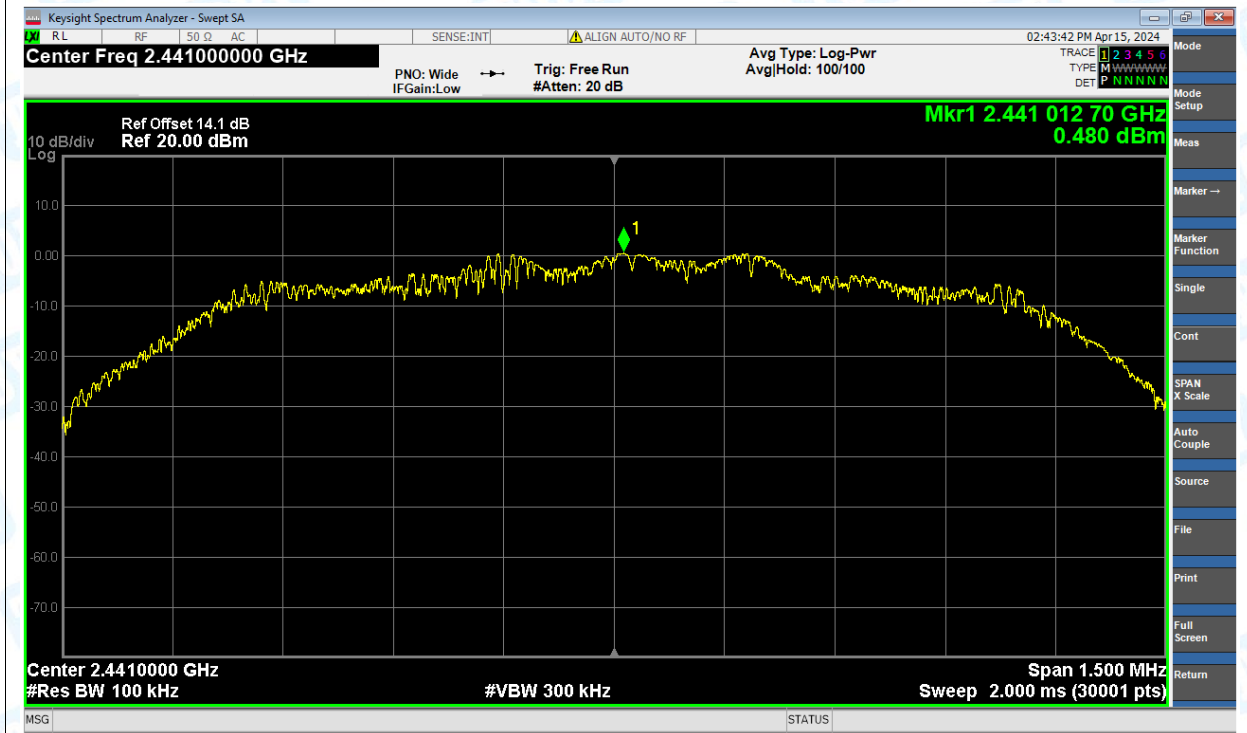
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



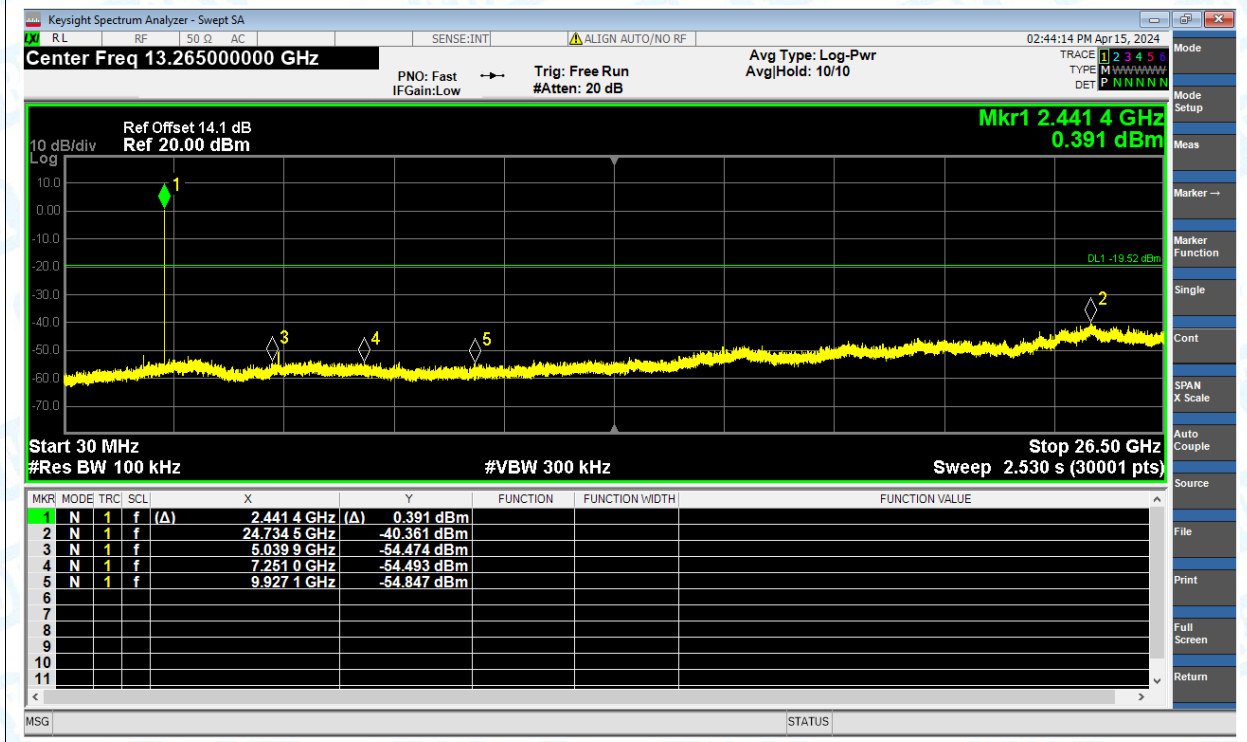
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



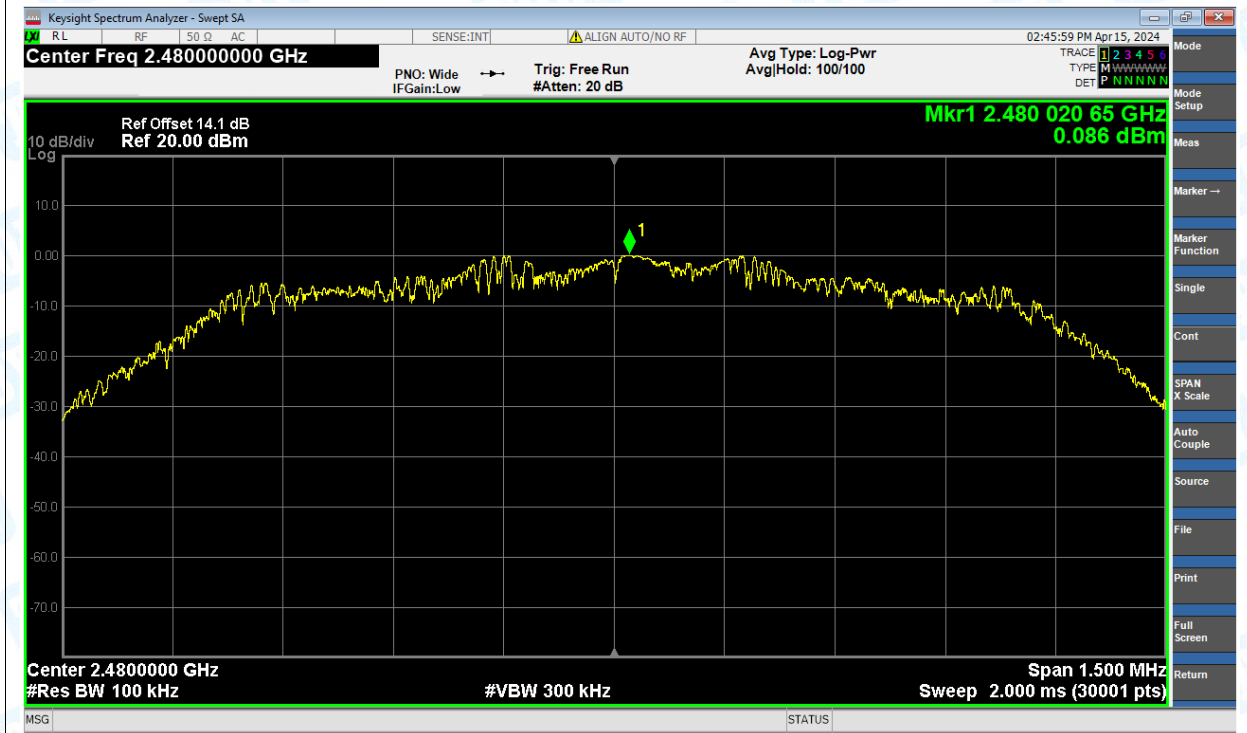
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



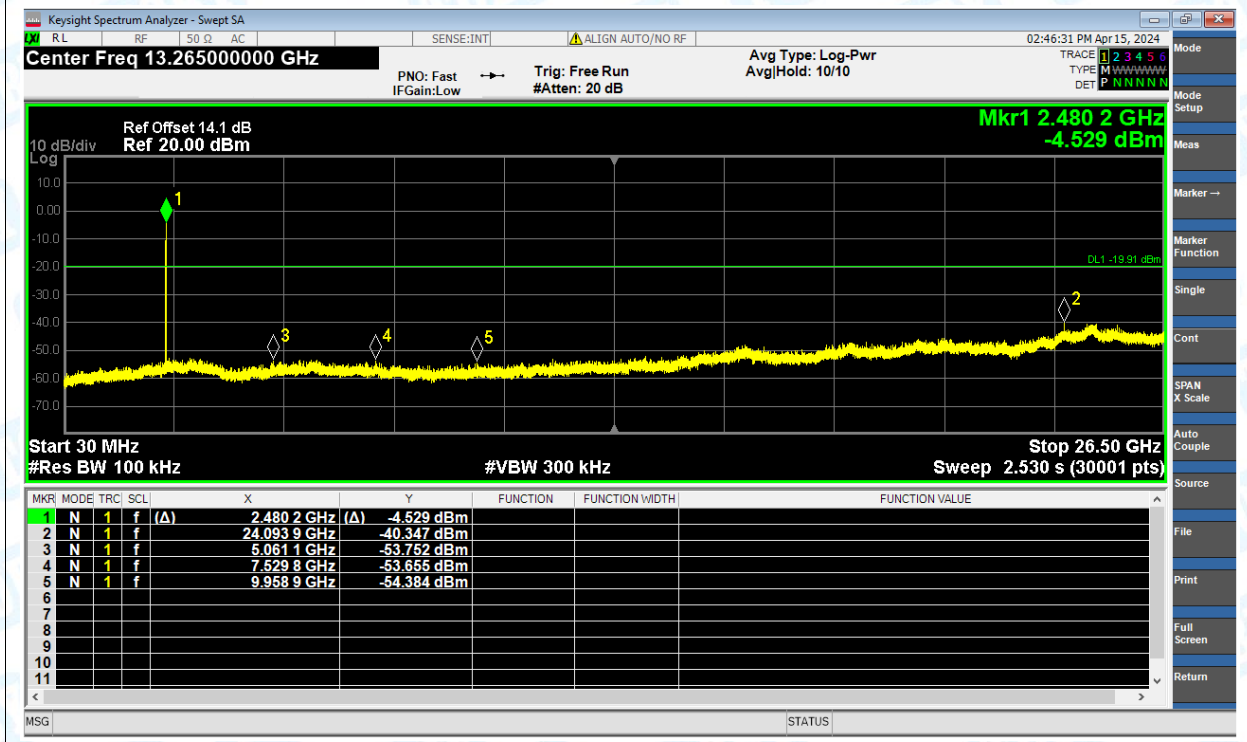
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

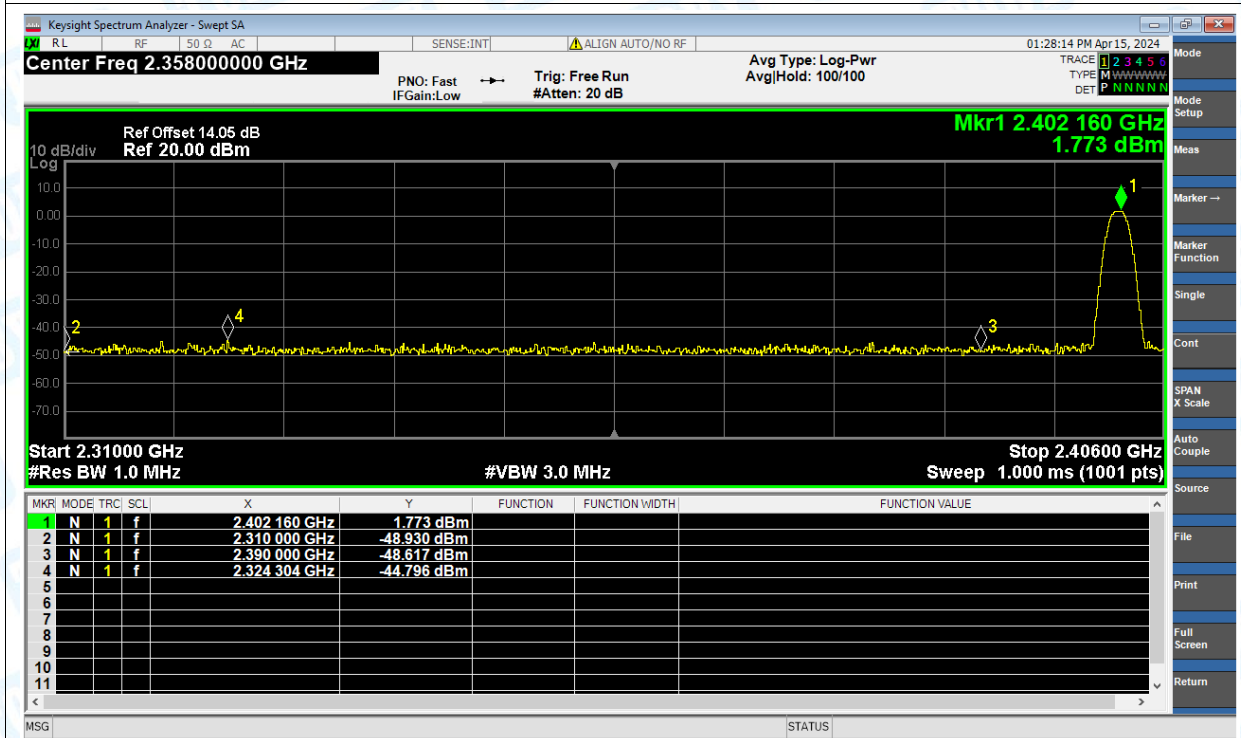


8. Restrict Band

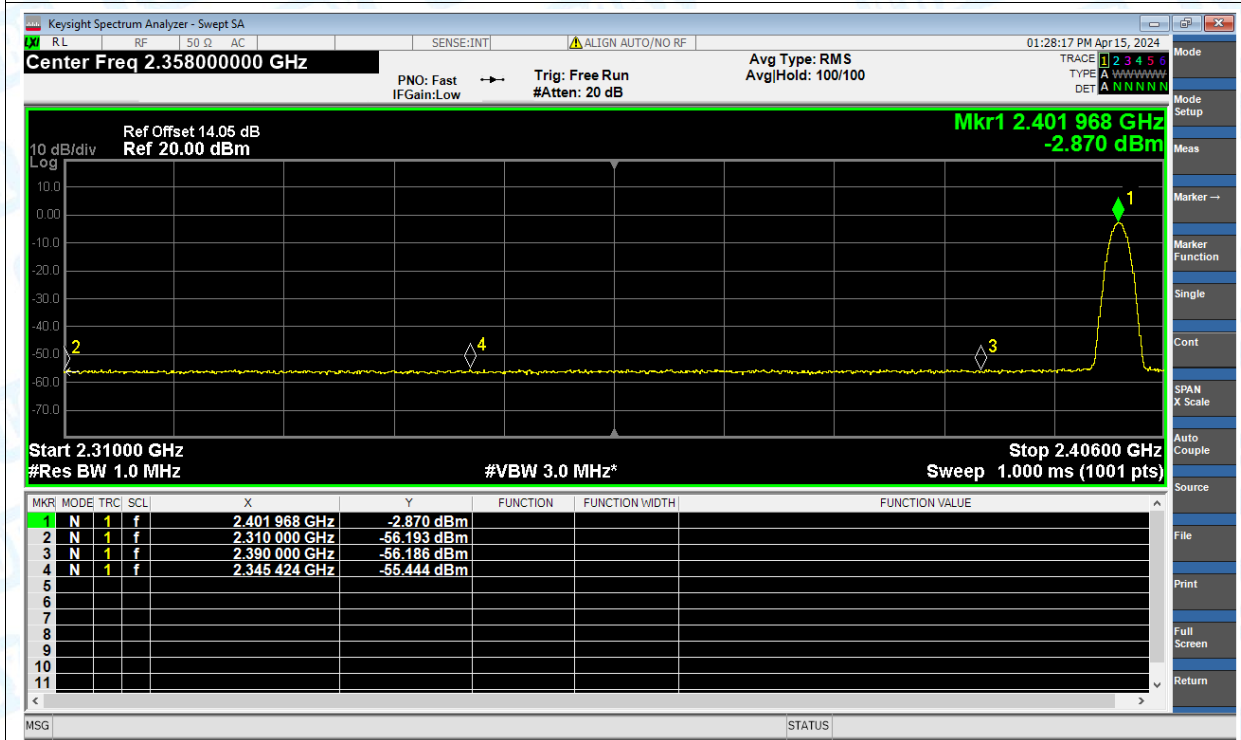
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-48.93	2	-	48.33	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.19	2	5.07	46.14	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2324.304	-44.8	2	-	52.46	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2345.424	-55.44	2	5.07	46.89	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-48.62	2	-	48.64	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.19	2	5.07	46.14	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-47.61	2	-	49.65	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.44	2	5.1	46.92	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.76	-44.73	2	-	52.53	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2485.72	-55.02	2	5.1	47.34	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-47.72	2	-	49.54	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.89	2	5.1	46.47	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.34	2	-	49.92	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-55.88	2	5.02	46.4	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2329.68	-44.84	2	-	52.42	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2366.832	-55.33	2	5.02	46.95	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-49.07	2	-	48.19	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.83	2	5.02	46.45	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-47.25	2	-	50.01	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.62	2	5.1	46.74	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2490.016	-44.97	2	-	52.29	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2485.816	-54.99	2	5.1	47.37	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-48.16	2	-	49.1	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-56.07	2	5.1	46.29	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-47.93	2	-	49.33	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.19	2	5.02	46.09	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2325.072	-44.54	2	-	52.72	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2387.184	-55.35	2	5.02	46.93	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-48.12	2	-	49.14	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-56.13	2	5.02	46.15	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-48.23	2	-	49.03	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.84	2	5.02	46.44	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.944	-44.49	2	-	52.77	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2486.032	-55.02	2	5.02	47.26	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-46.71	2	-	50.55	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.88	2	5.02	46.4	Average	54	Pass

Test Graphs

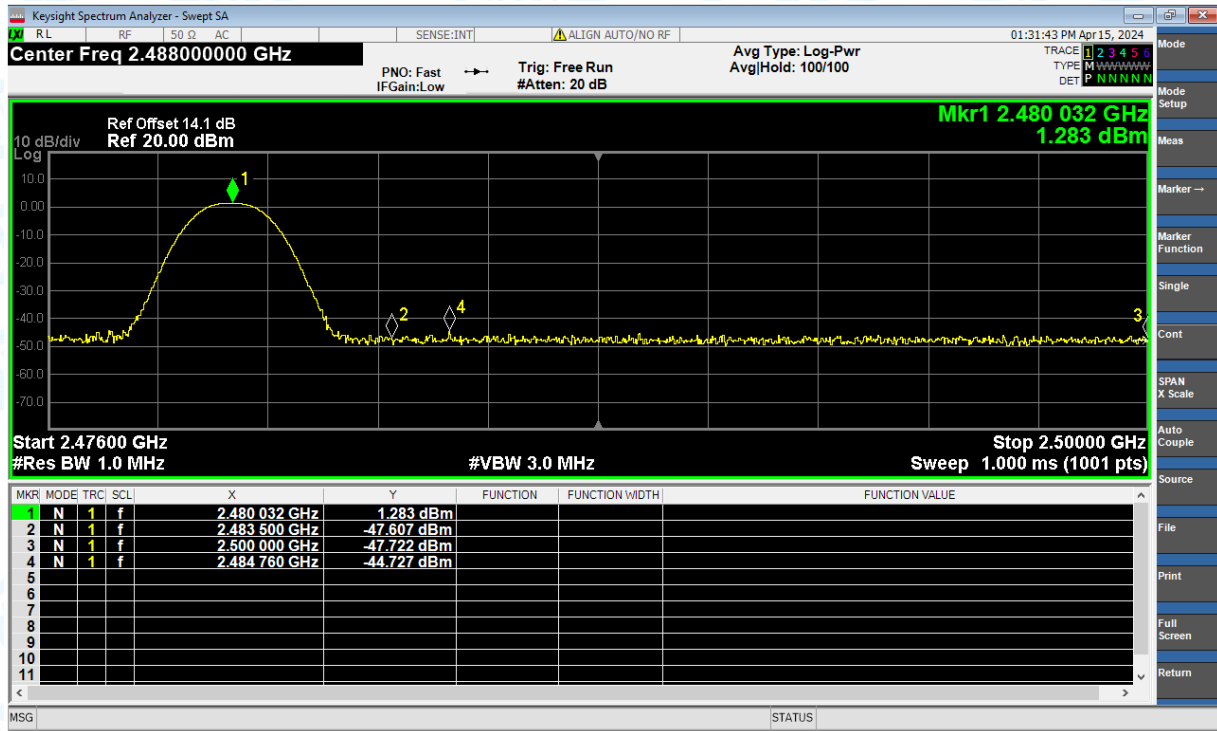
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



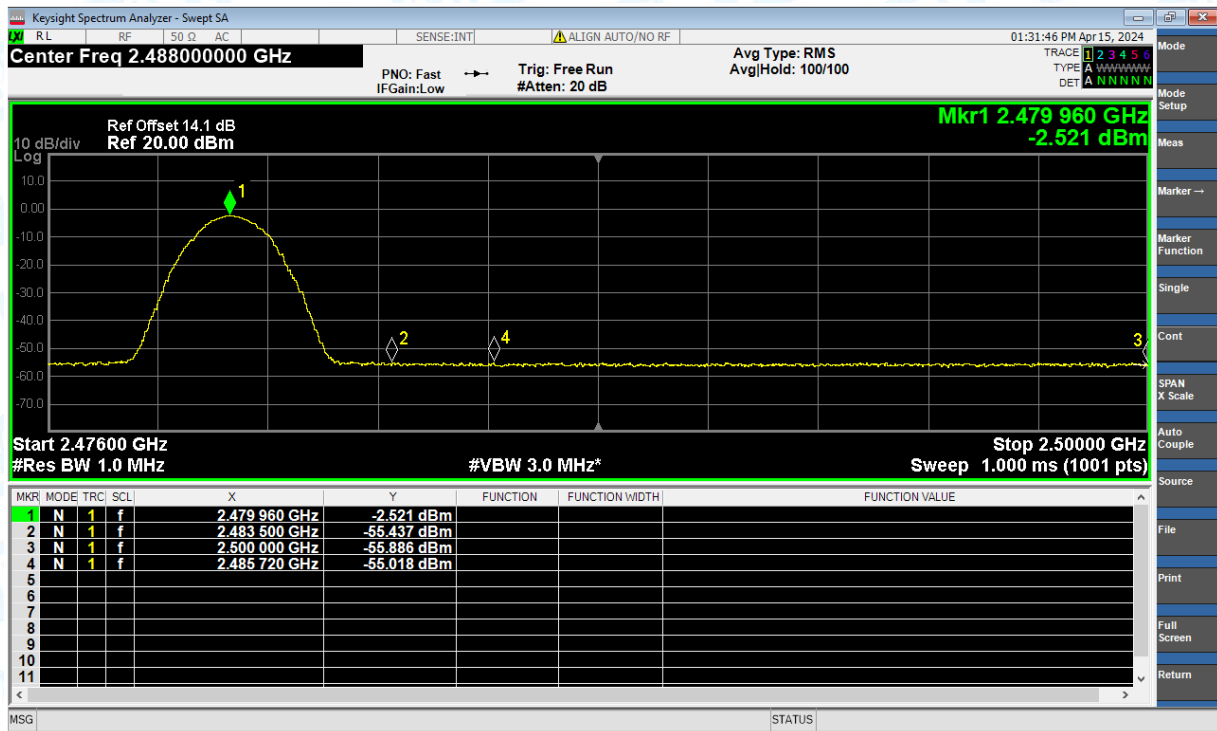
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



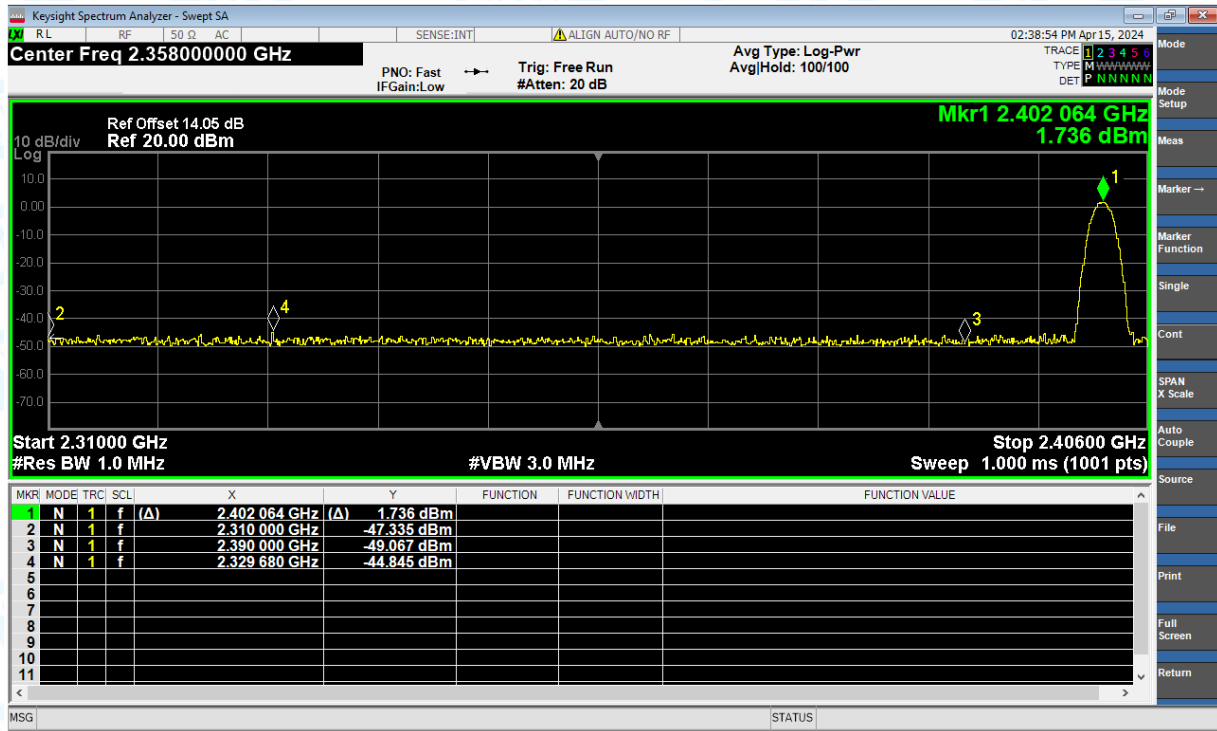
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



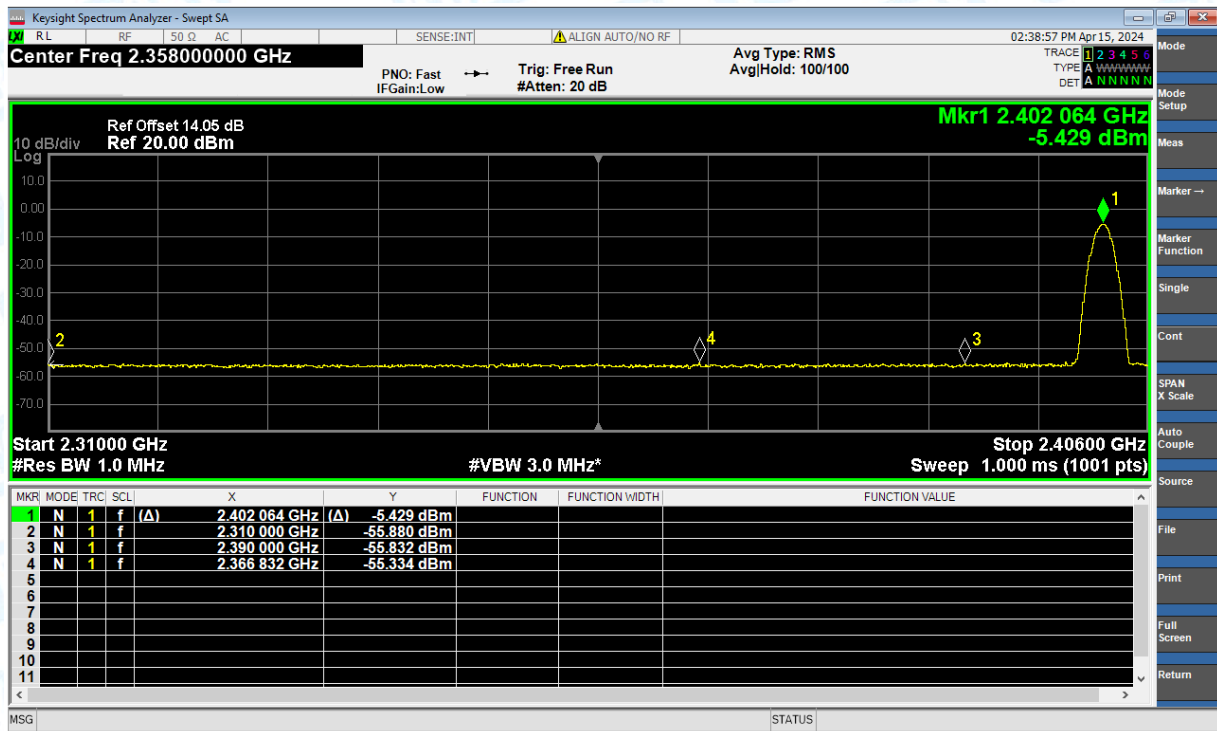
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



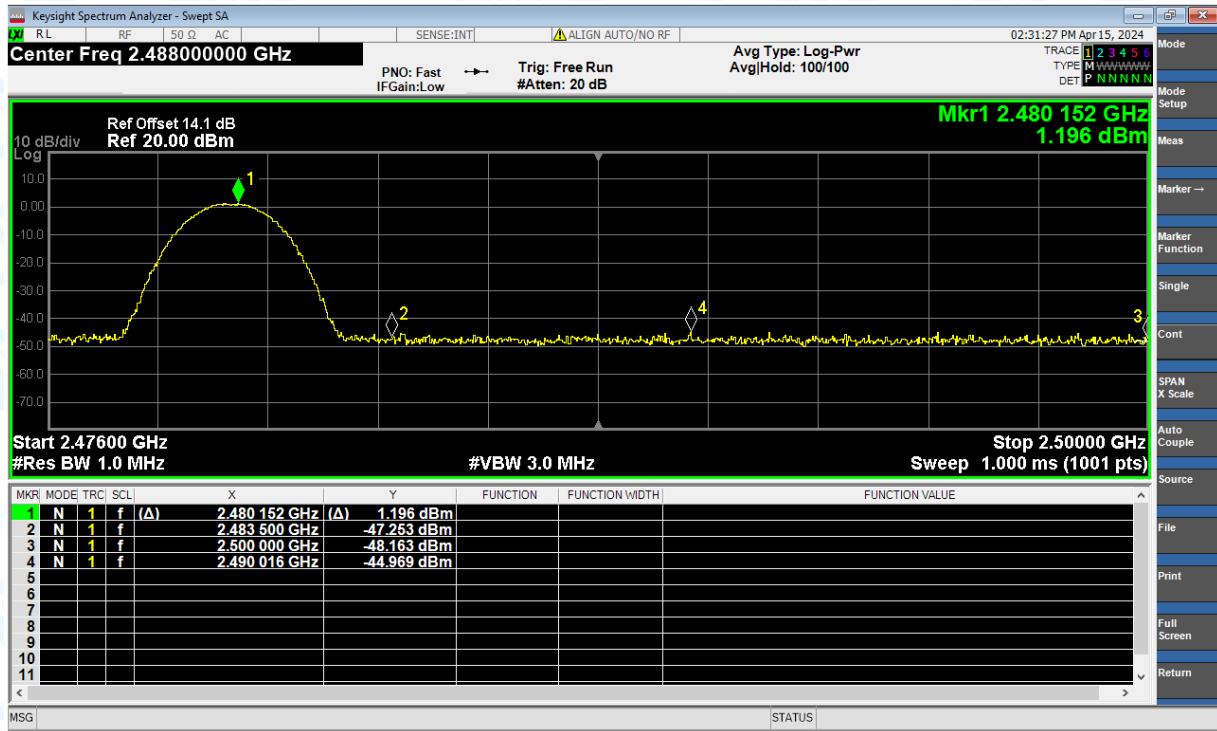
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



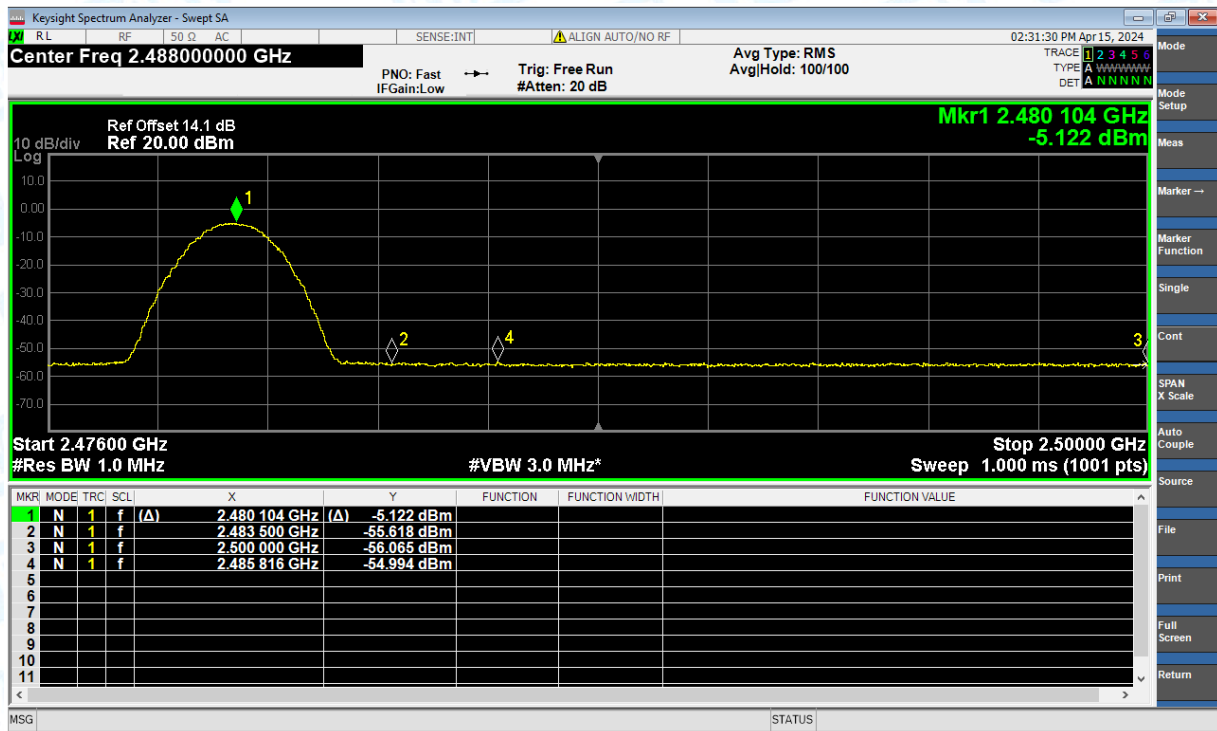
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



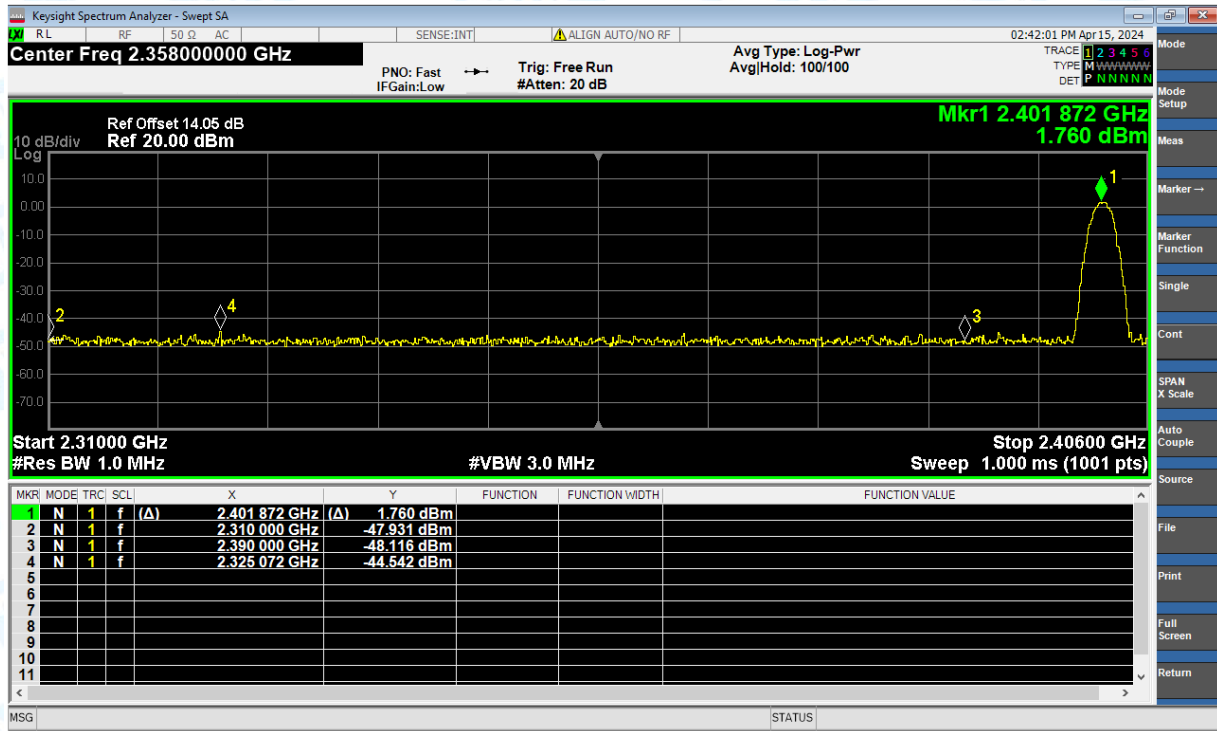
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



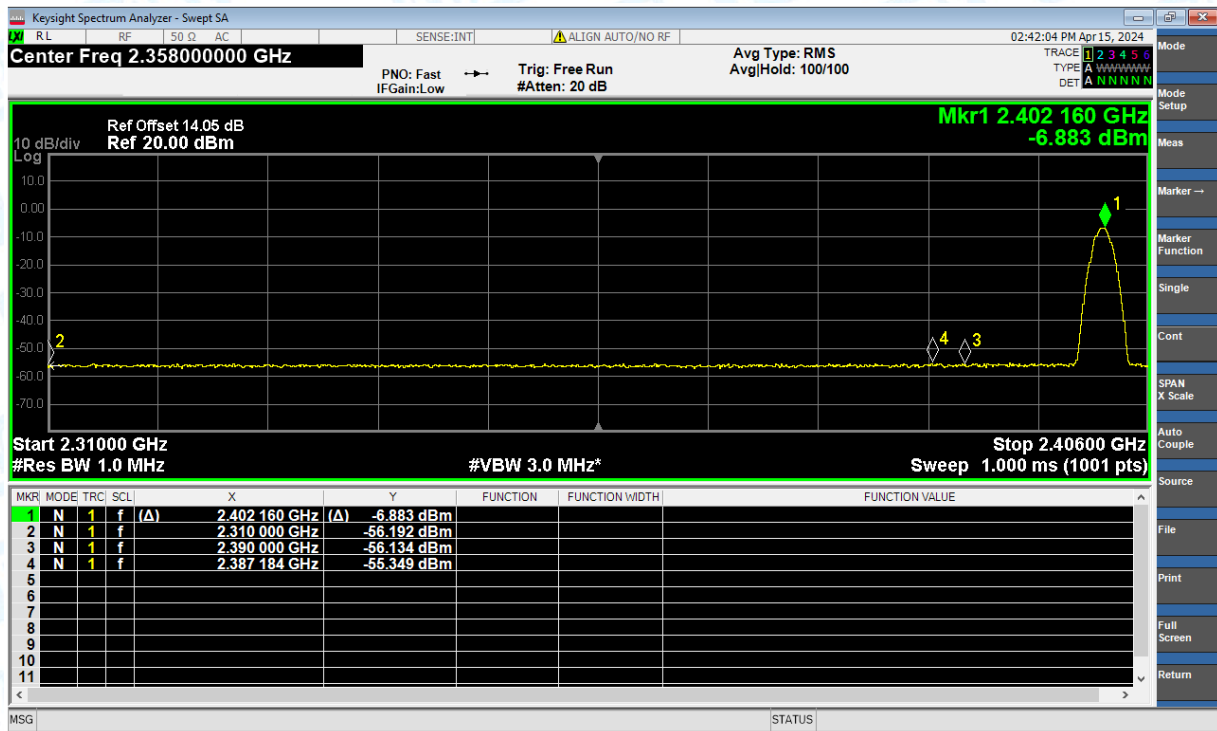
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



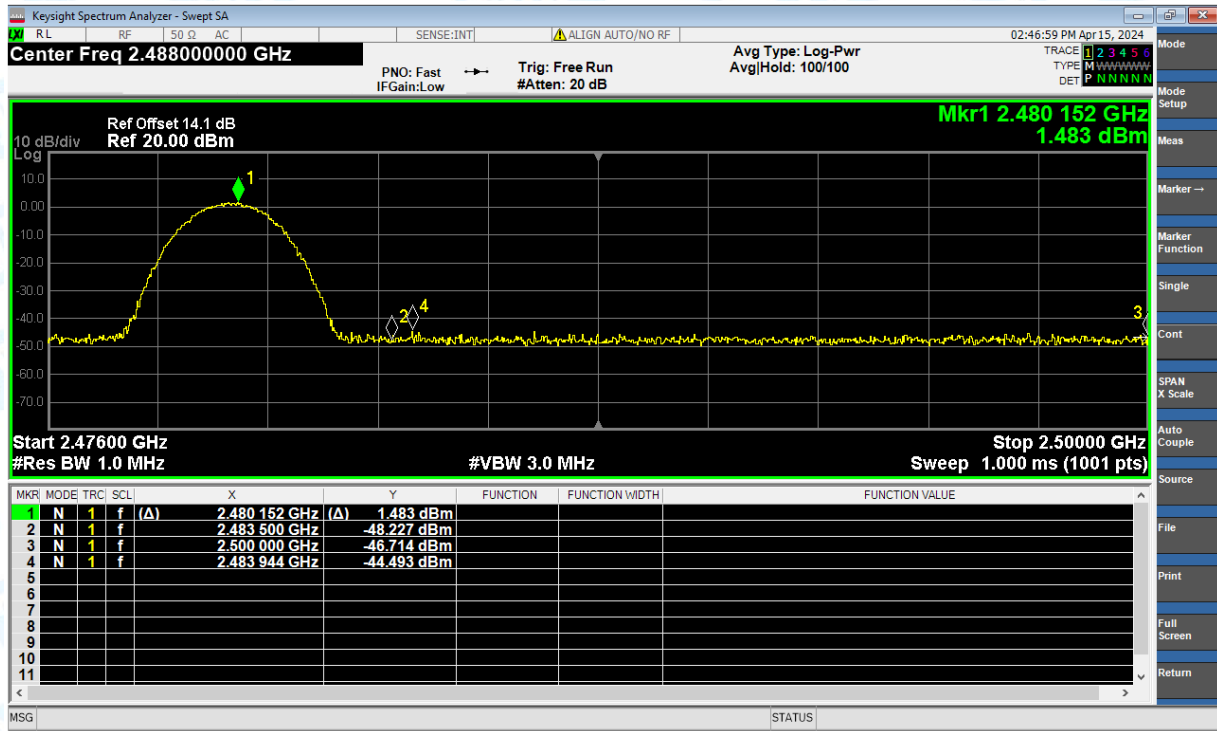
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



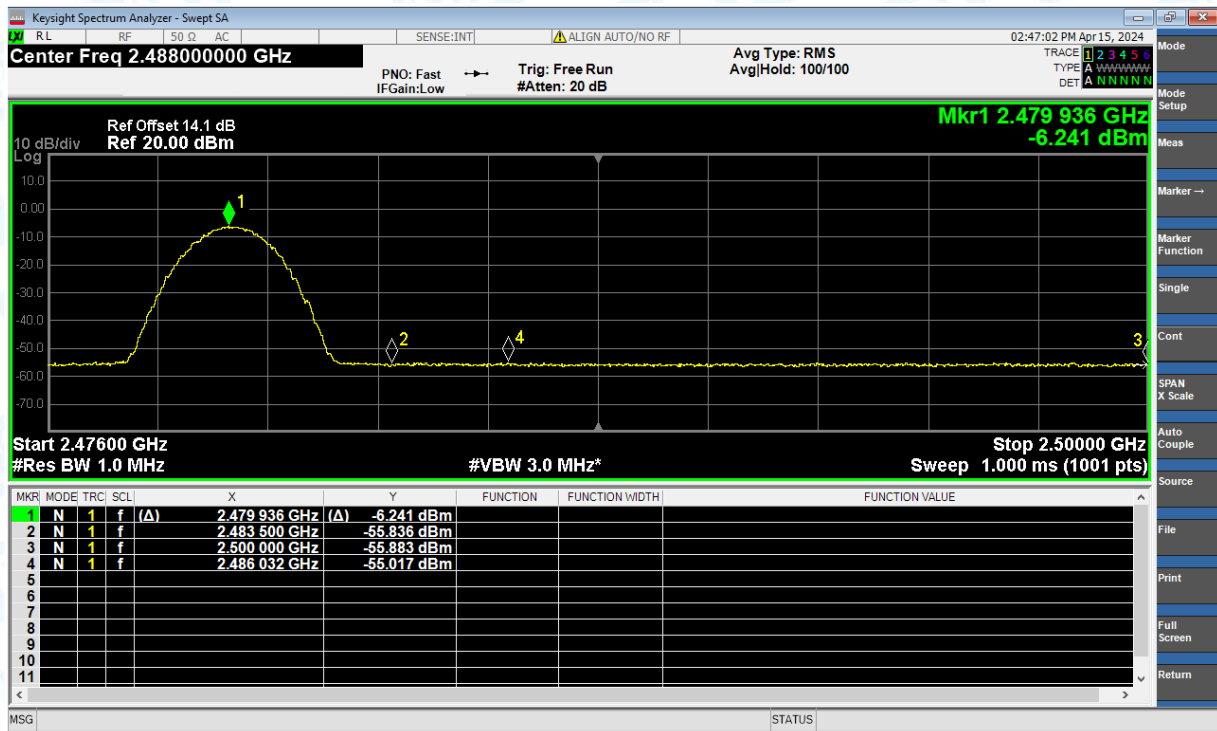
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

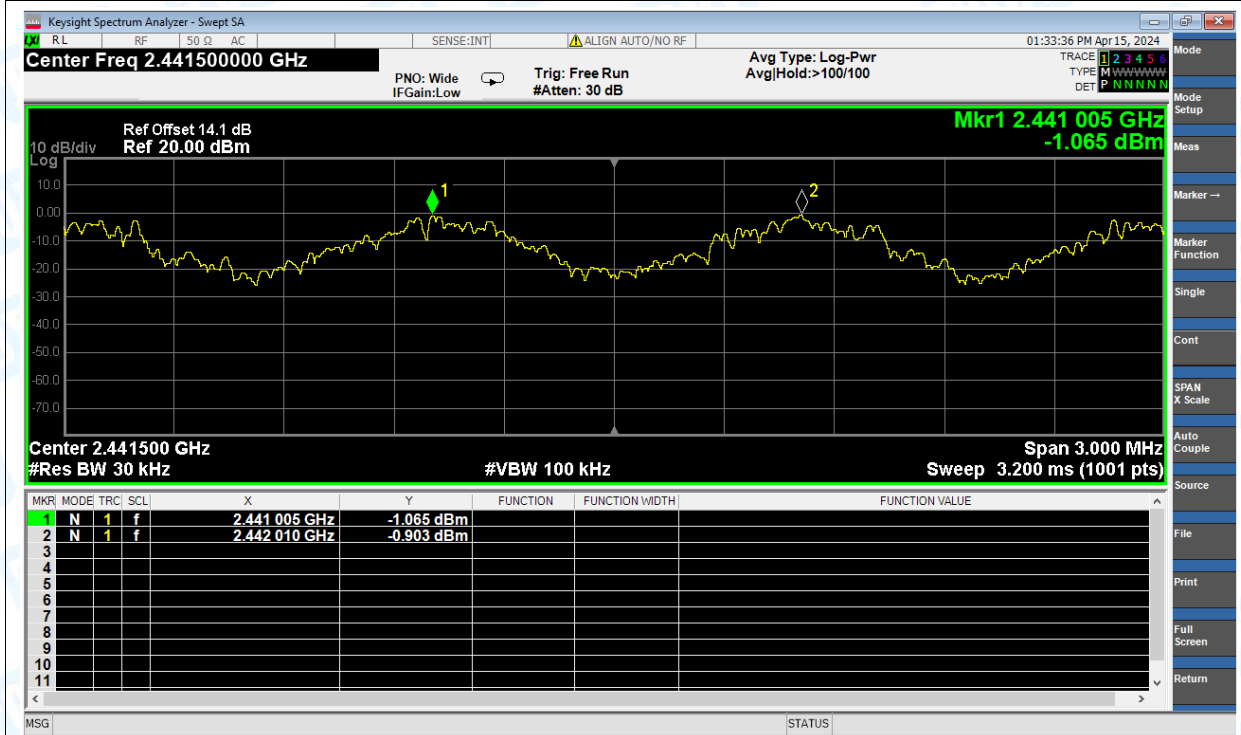


9. Carrier Frequencies Separation

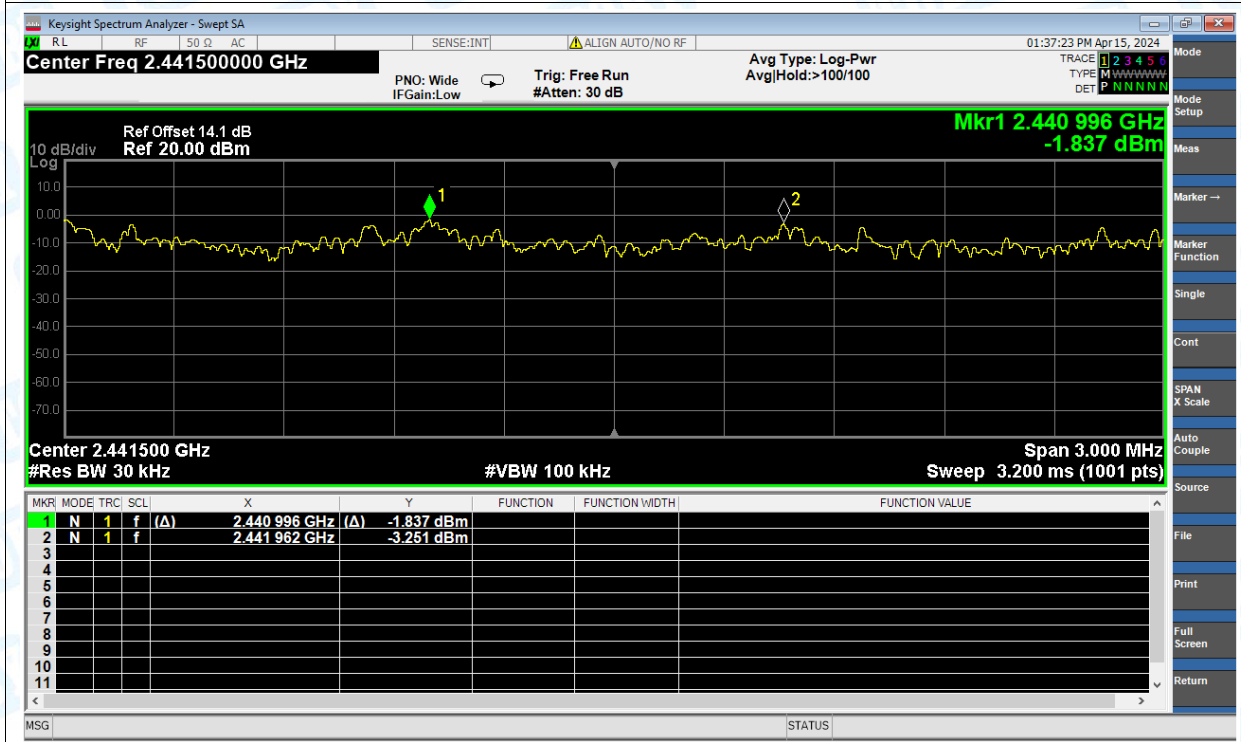
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.005	2442.01	1.005	0.633	Pass
NVNT	2-DH1	Ant1	2440.996	2441.962	0.966	0.833	Pass
NVNT	3-DH1	Ant1	2441.02	2442.166	1.146	0.813	Pass

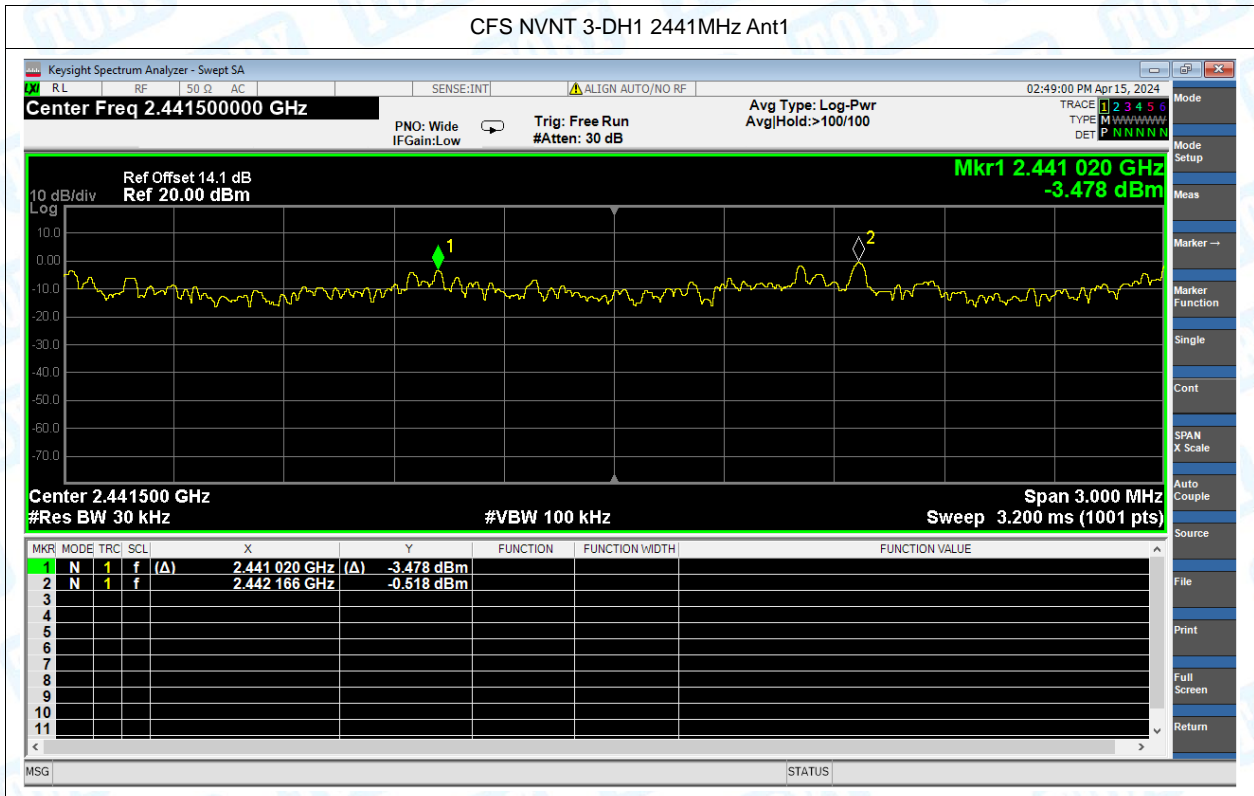
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



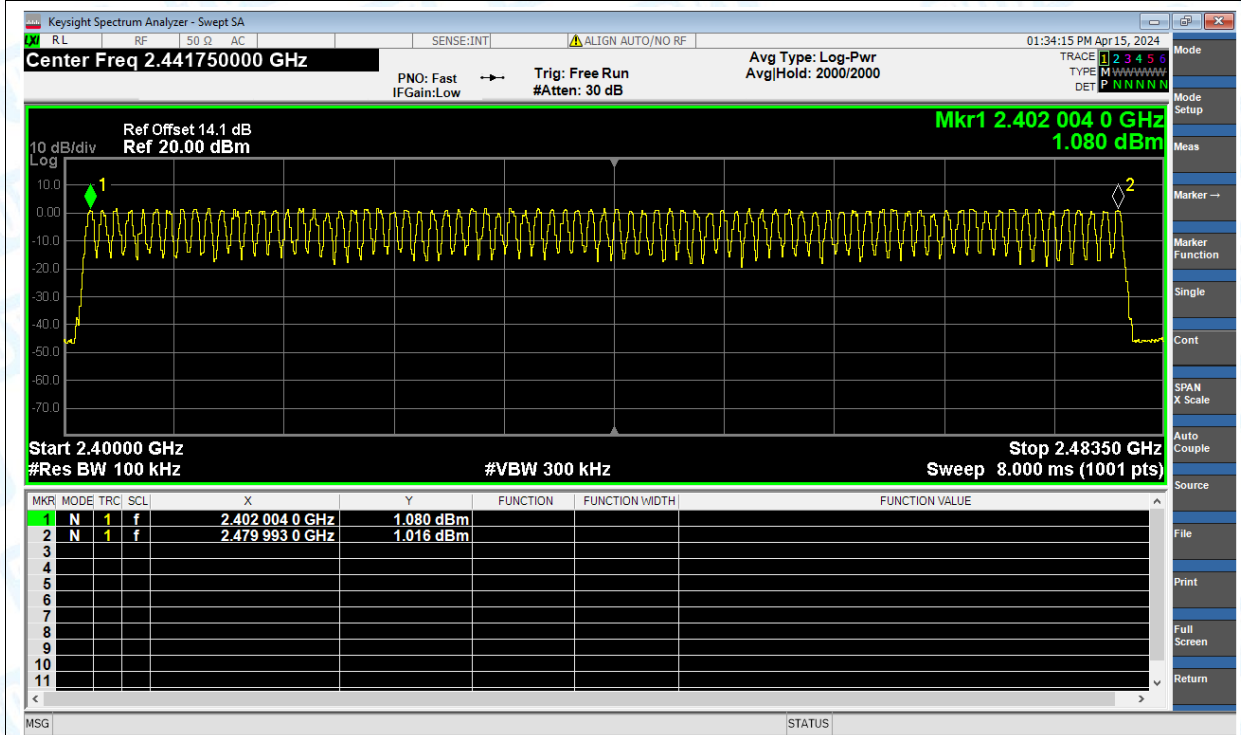


10. Number of Hopping Channel

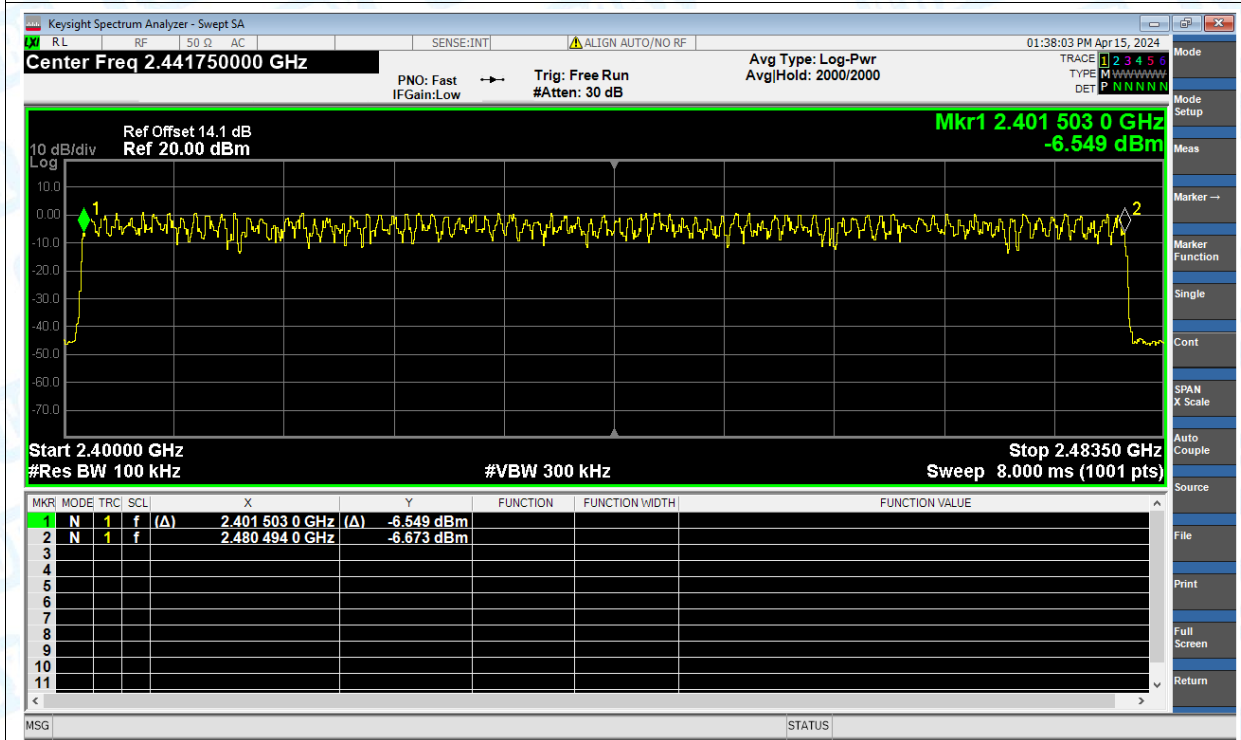
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

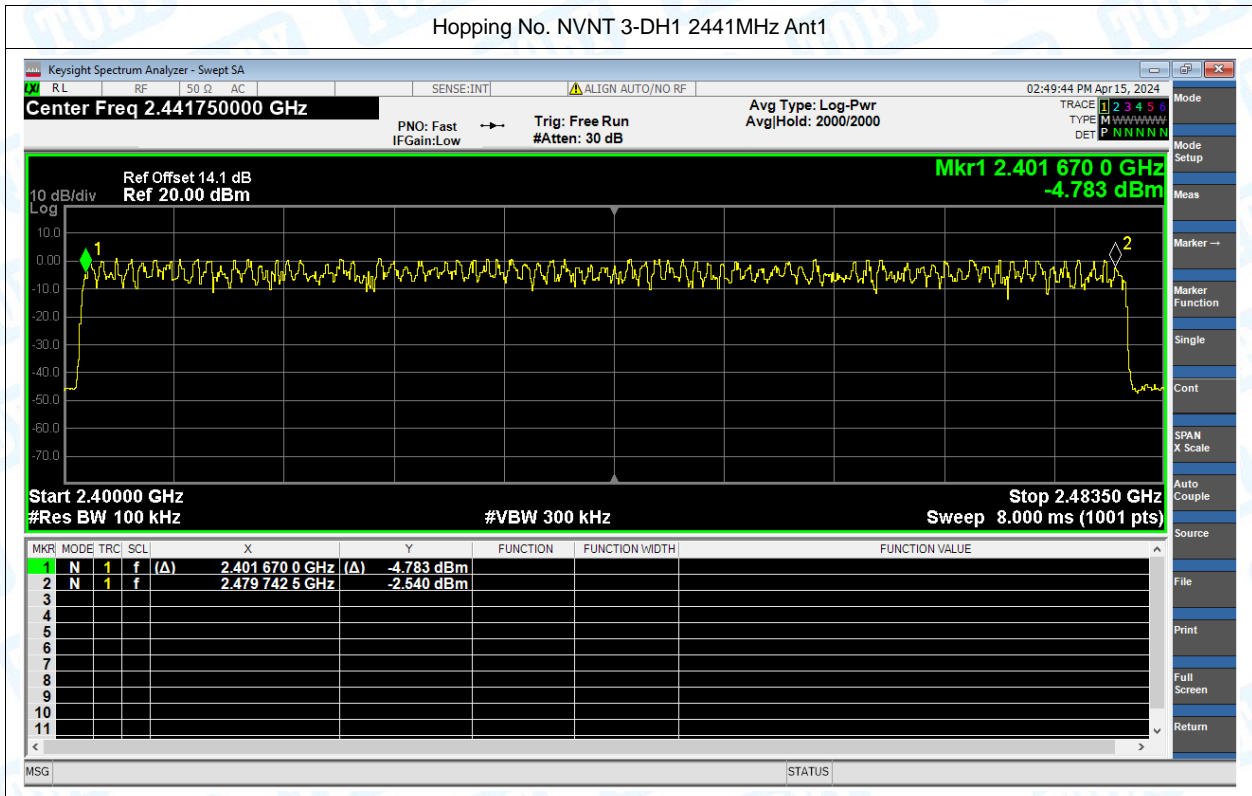
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



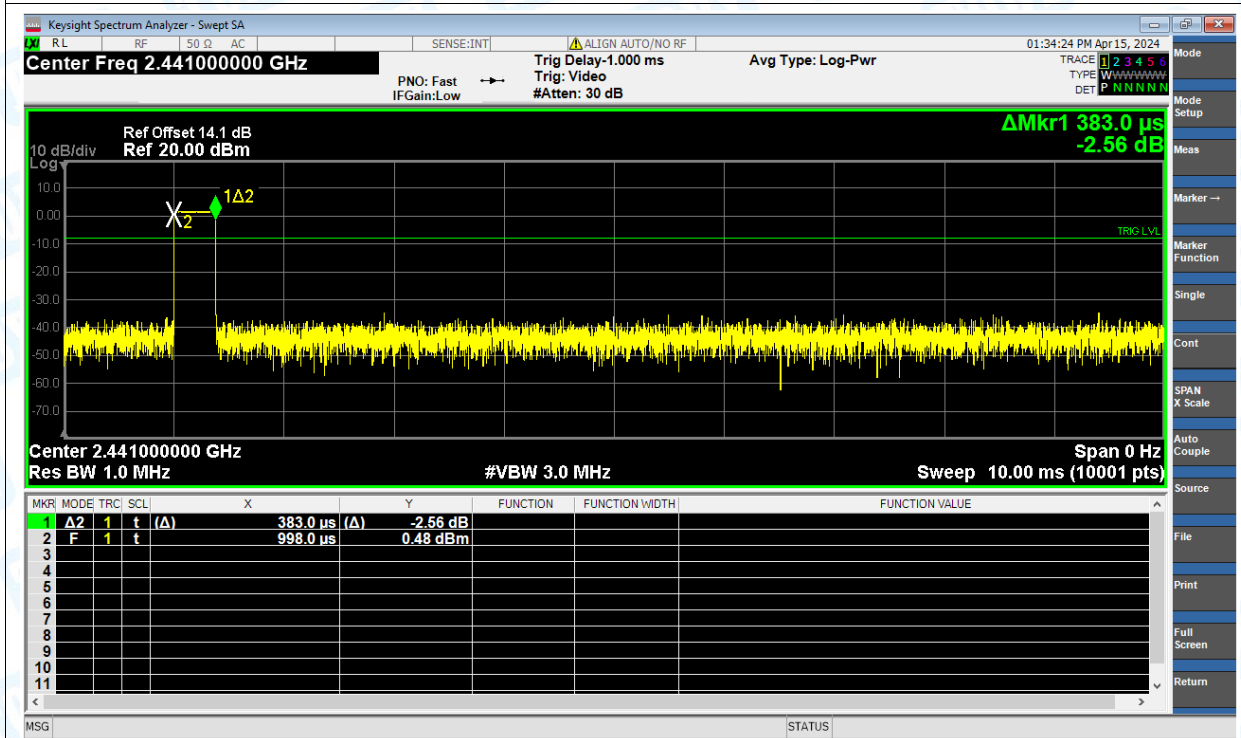


11. Dwell Time

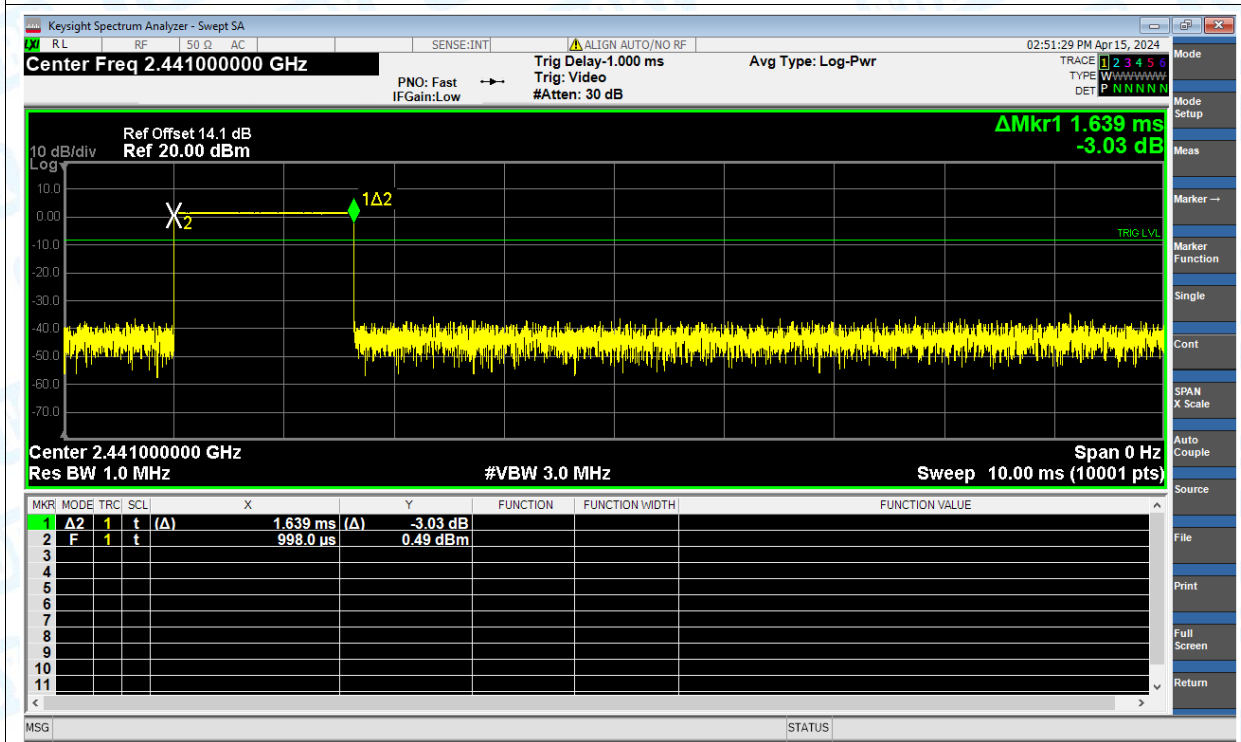
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.892	308.48	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.391	125.12	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.893	308.587	31600	400	Pass

Test Graphs

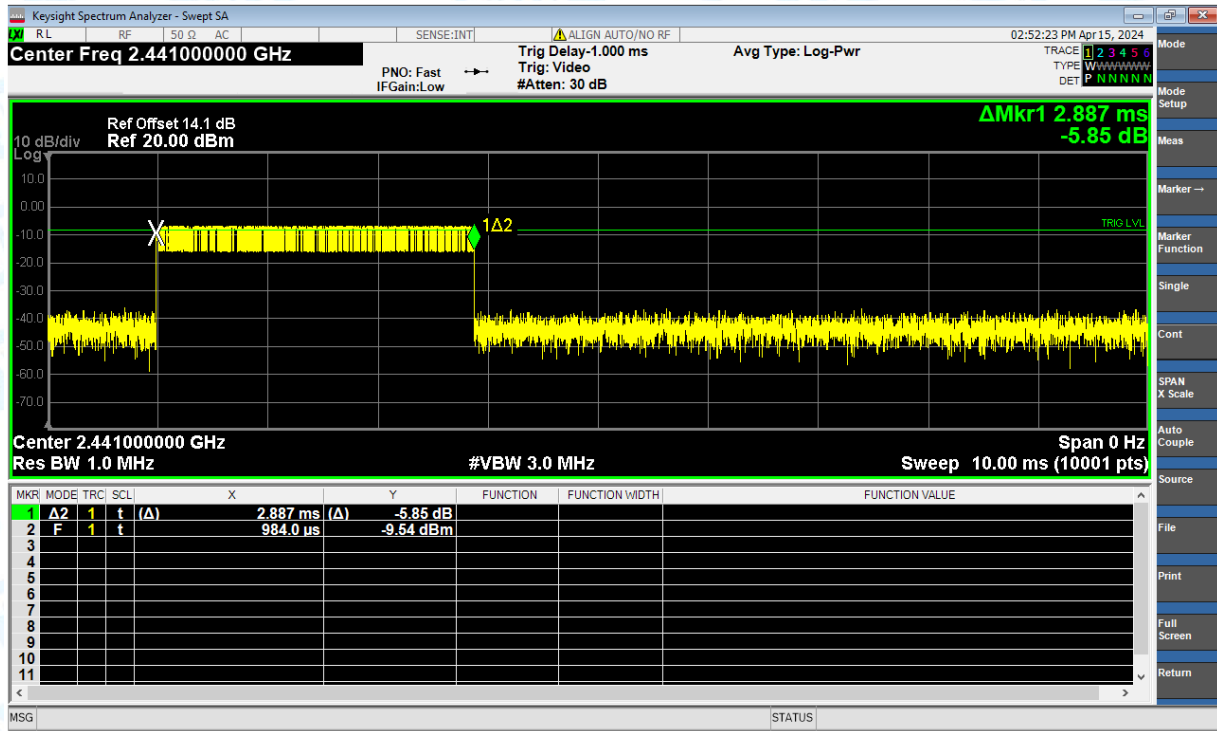
Dwell NVNT 1-DH1 2441MHz Ant1



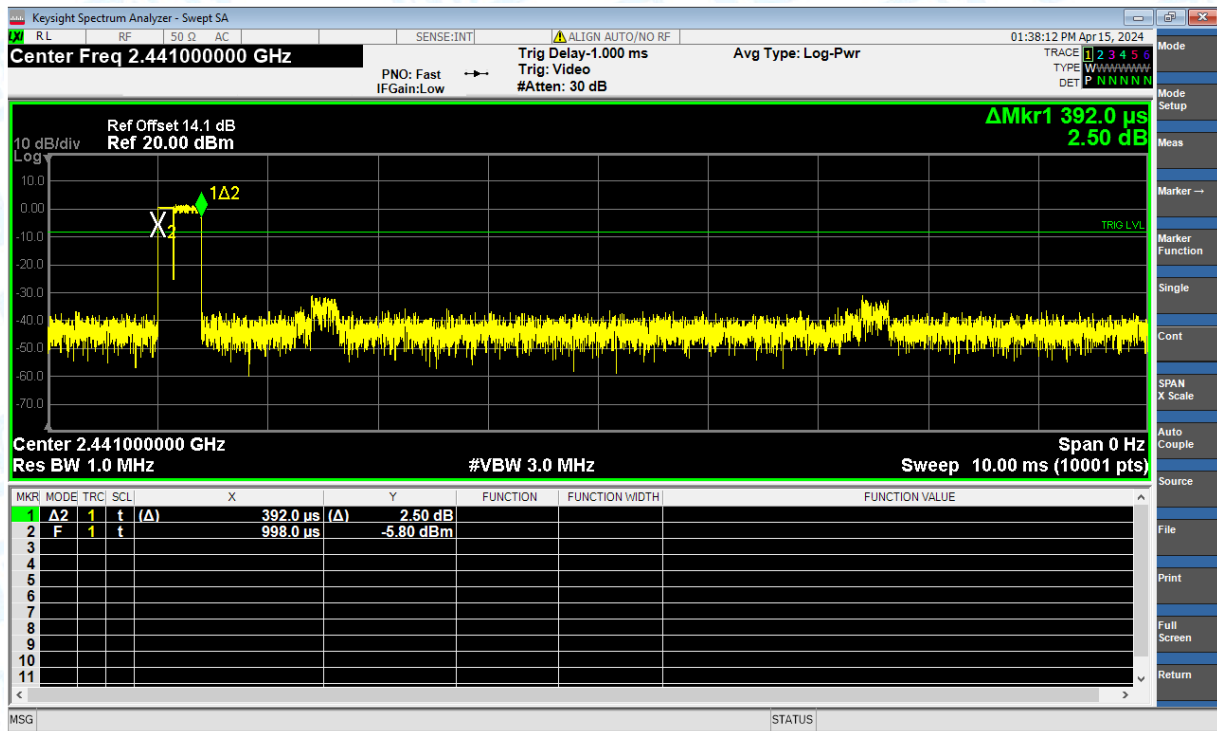
Dwell NVNT 1-DH3 2441MHz Ant1



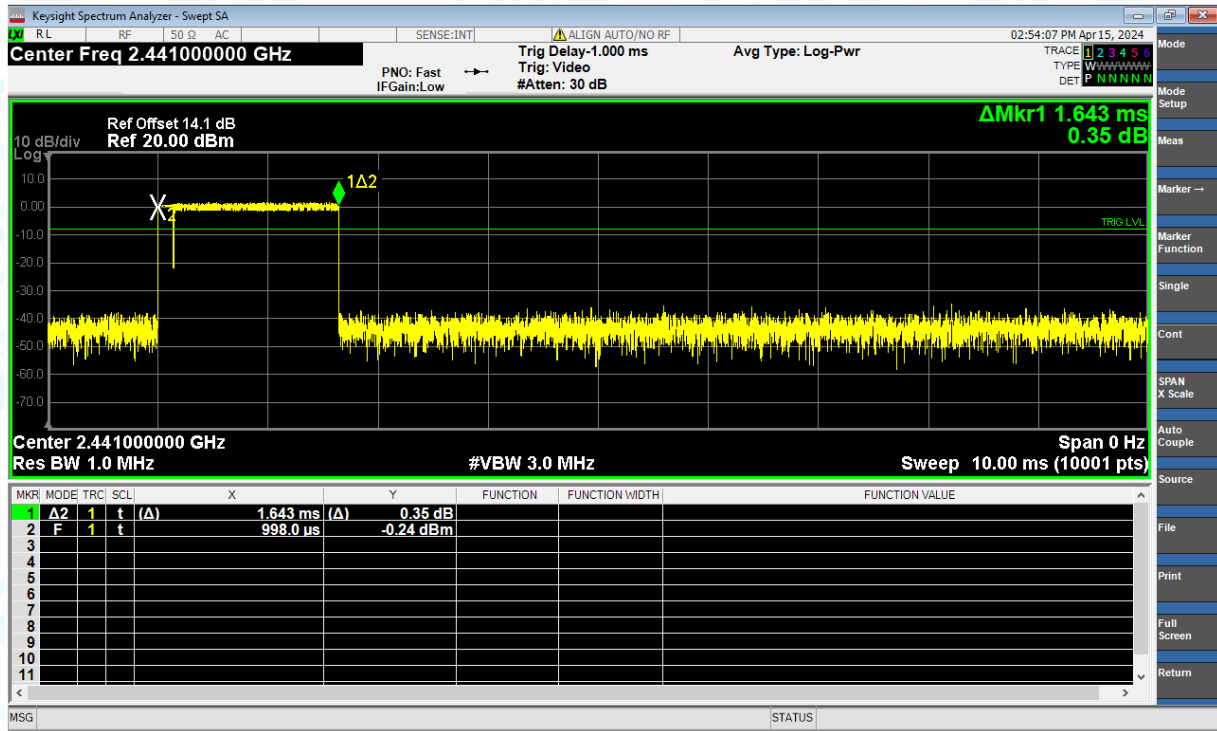
Dwell NVNT 1-DH5 2441MHz Ant1



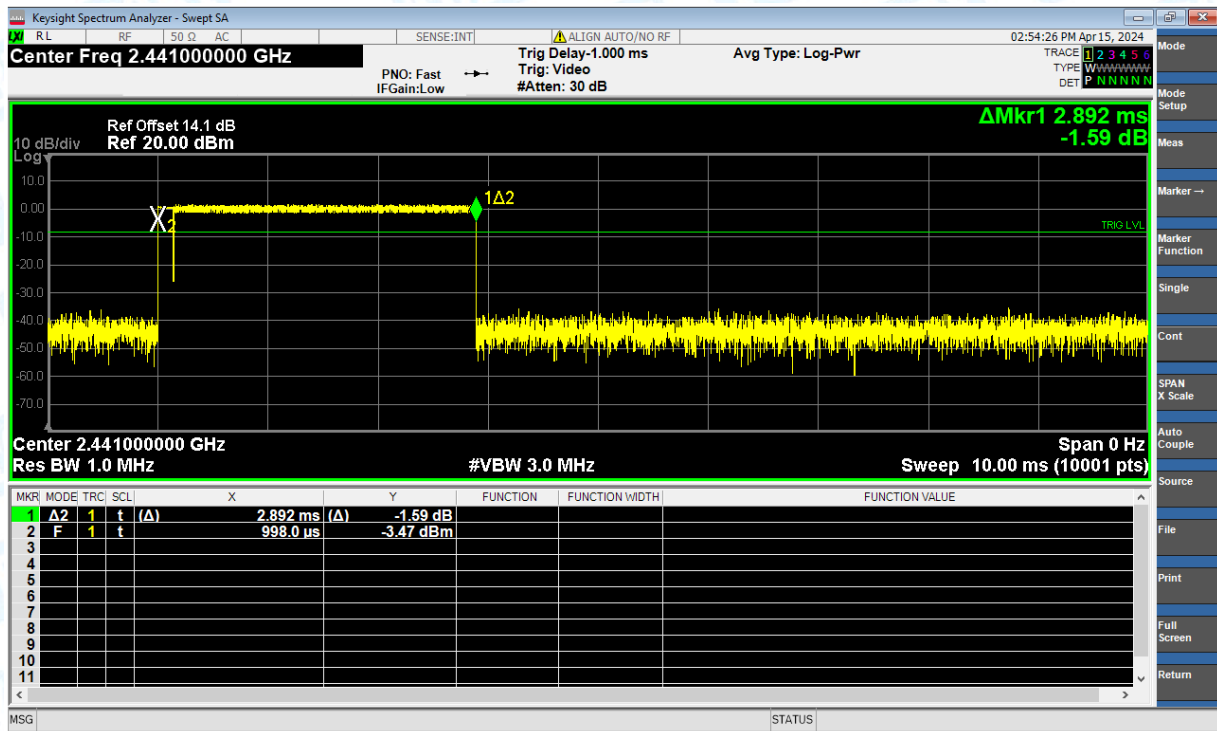
Dwell NVNT 2-DH1 2441MHz Ant1



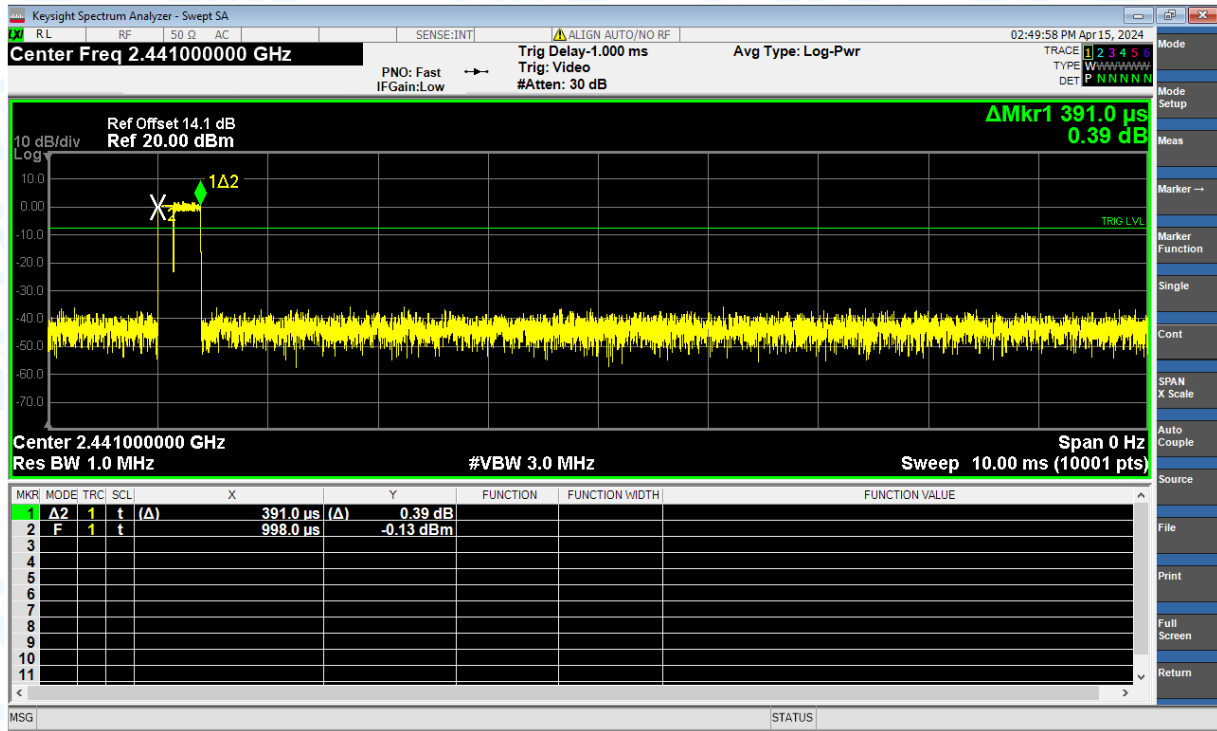
Dwell NVNT 2-DH3 2441MHz Ant1



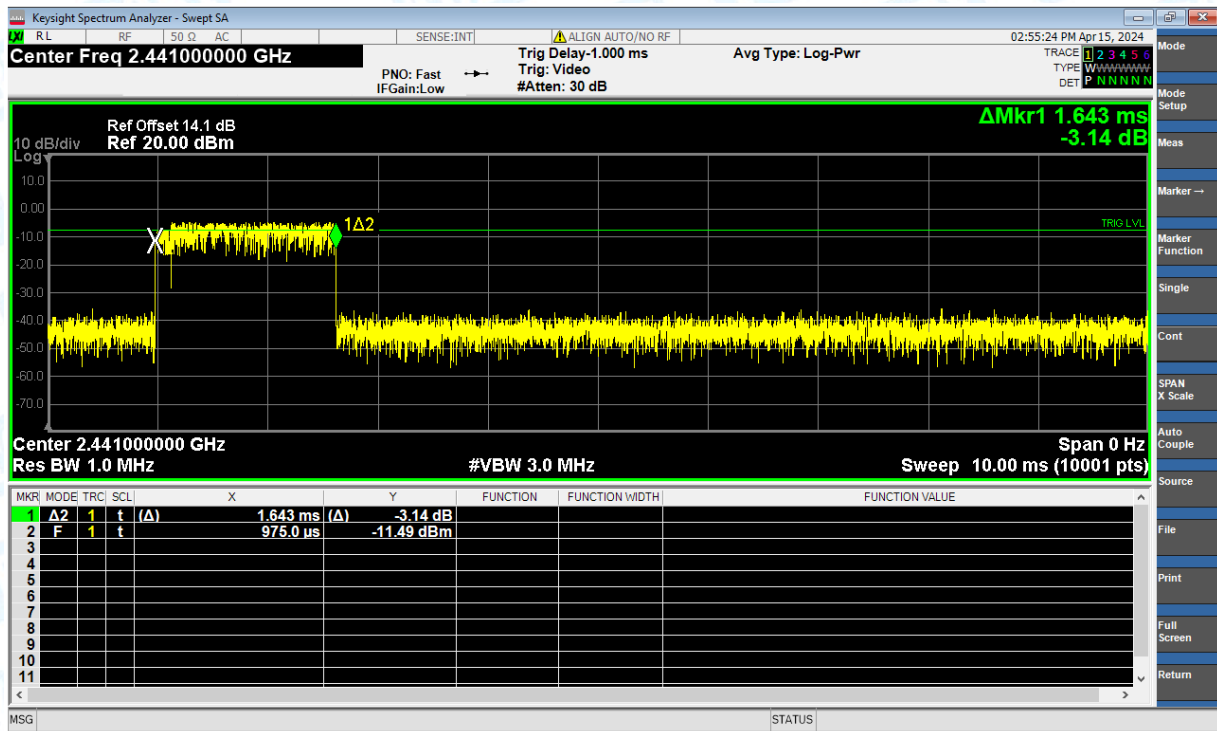
Dwell NVNT 2-DH5 2441MHz Ant1

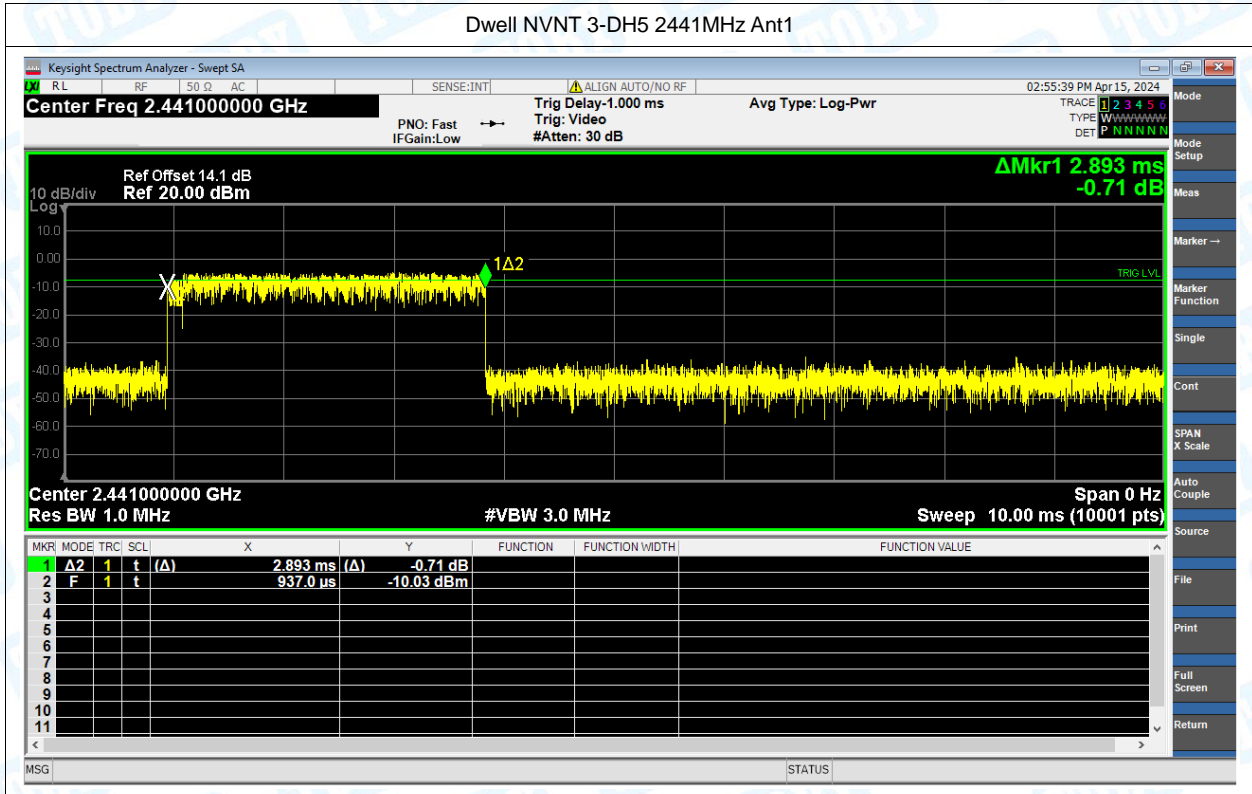


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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