

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

General Description of EUT	
Product Name:	Mobile Lidar Scanner
Test Model:	LixelKity K1
Sample ID:	HC-C-202401-0032-02-02-1
Environmental Conditions	
Temperature:	23.5℃
Relative Humidity:	47%
Test Voltage:	DC 14.4V
Test Engineer:	Mike Yan
Note: For a more detailed features description, please refer to the report TBR-C-202401-0032-121 The report only show the worst case data.	

Contents

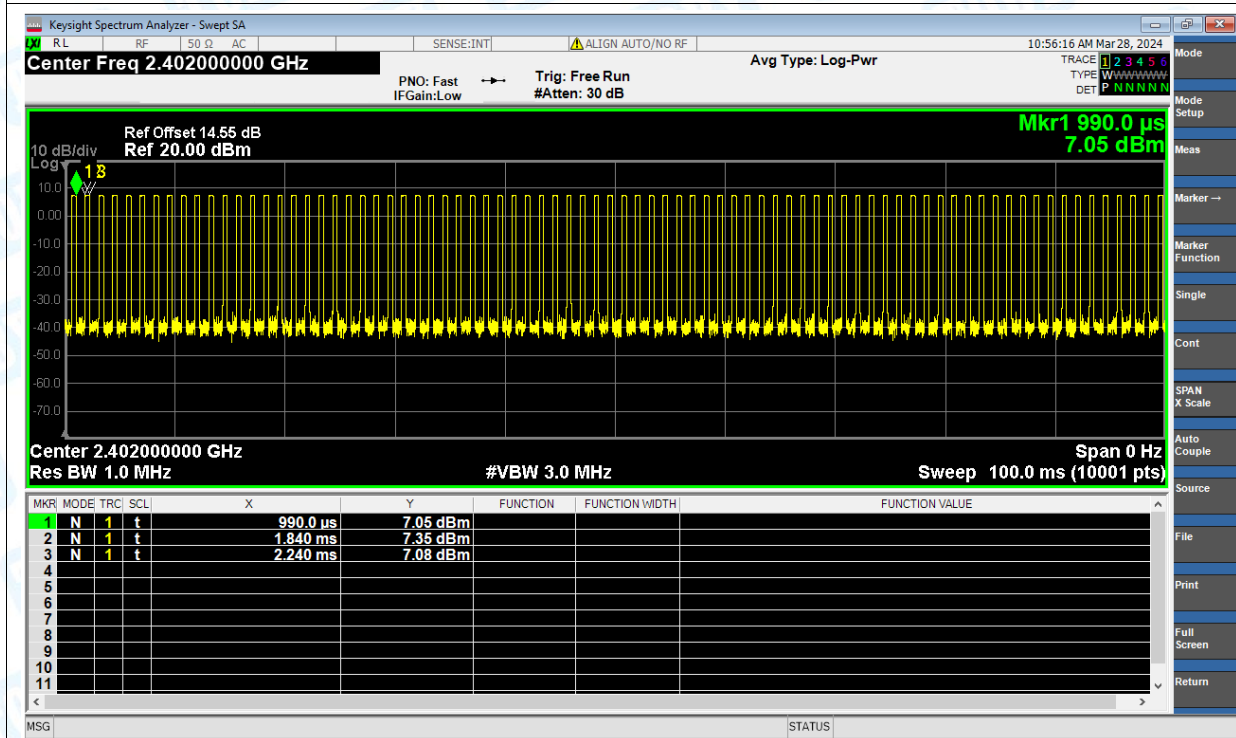
1.	Duty Cycle	3
2.	Maximum Conducted Output Power	12
3.	-20dB Bandwidth	18
4.	Occupied Channel Bandwidth	24
5.	Band Edge	30
6.	Band Edge(Hopping)	37
7.	Conducted RF Spurious Emission	44
8.	Restrict Band	54
9.	Carrier Frequencies Separation	61
10.	Number of Hopping Channel	64
11.	Dwell Time	67

1. Duty Cycle

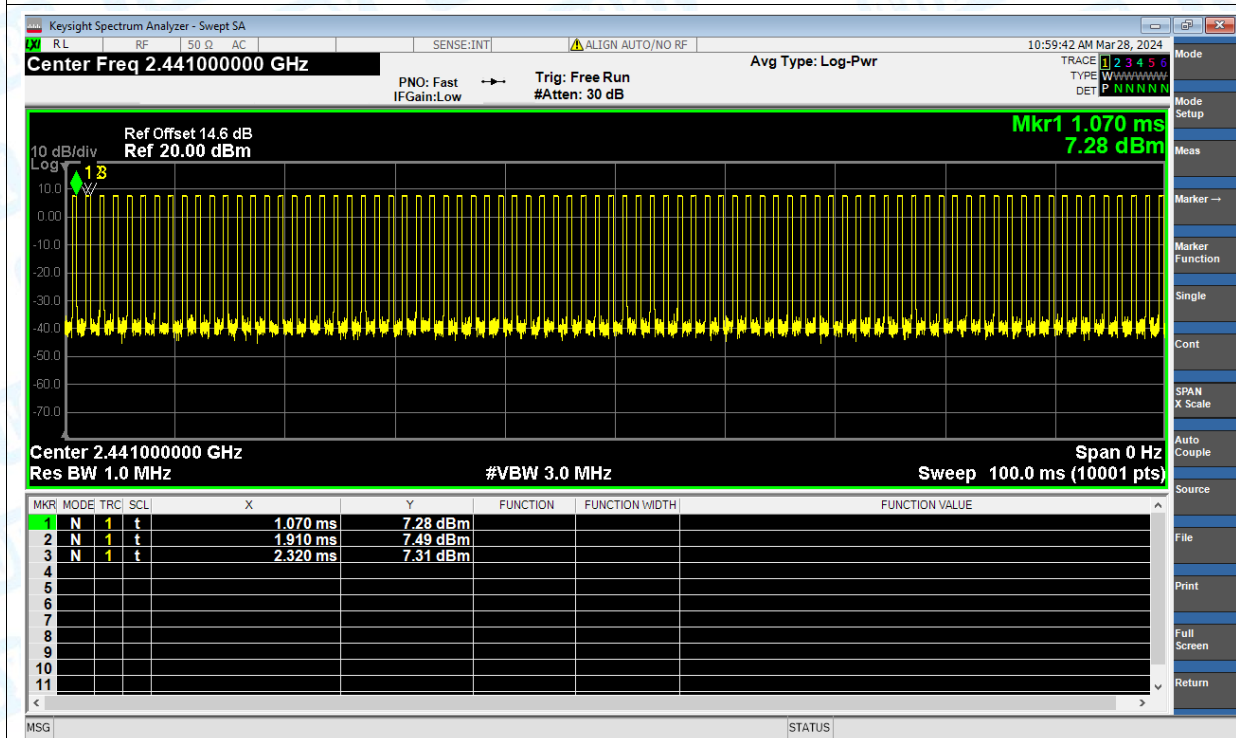
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	32	4.95	2.5
NVNT	1-DH1	2441	Ant1	32.8	4.84	2.44
NVNT	1-DH1	2480	Ant1	32.8	4.84	2.44
NVNT	1-DH3	2441	Ant1	66.8	1.75	0.6
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	2-DH1	2402	Ant1	32	4.95	2.5
NVNT	2-DH1	2441	Ant1	32	4.95	2.5
NVNT	2-DH1	2480	Ant1	32	4.95	2.5
NVNT	2-DH3	2441	Ant1	66	1.8	0.61
NVNT	2-DH5	2441	Ant1	77.33	1.12	0.34
NVNT	3-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2441	Ant1	32	4.95	2.5
NVNT	3-DH1	2480	Ant1	32	4.95	2.5
NVNT	3-DH3	2441	Ant1	65.6	1.83	0.61
NVNT	3-DH5	2441	Ant1	77.33	1.12	0.34

Test Graphs

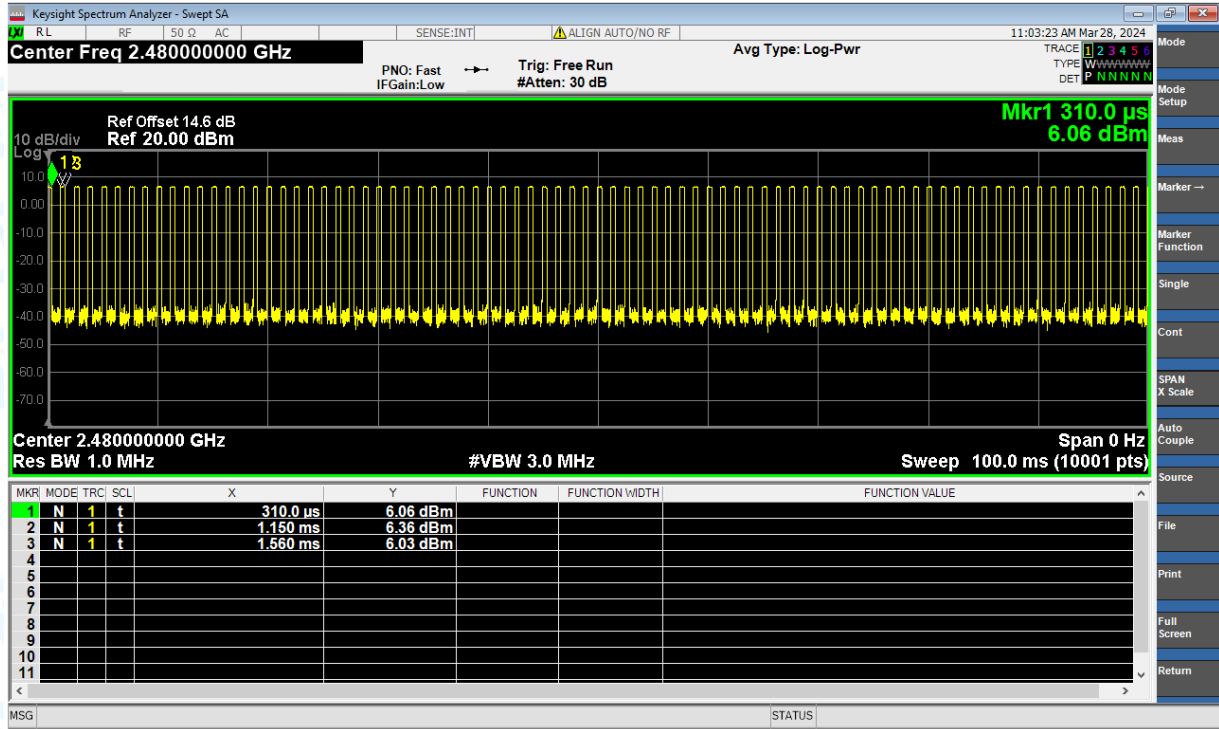
Duty Cycle NVNT 1-DH1 2402MHz Ant1



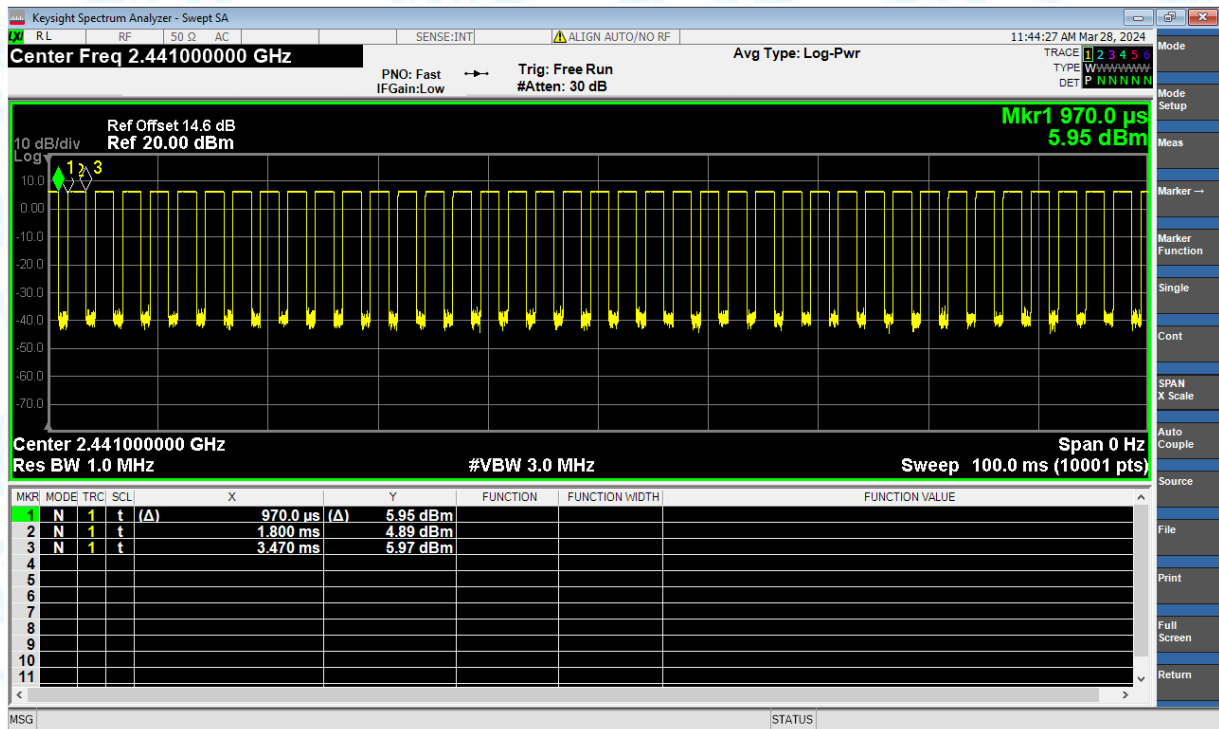
Duty Cycle NVNT 1-DH1 2441MHz Ant1



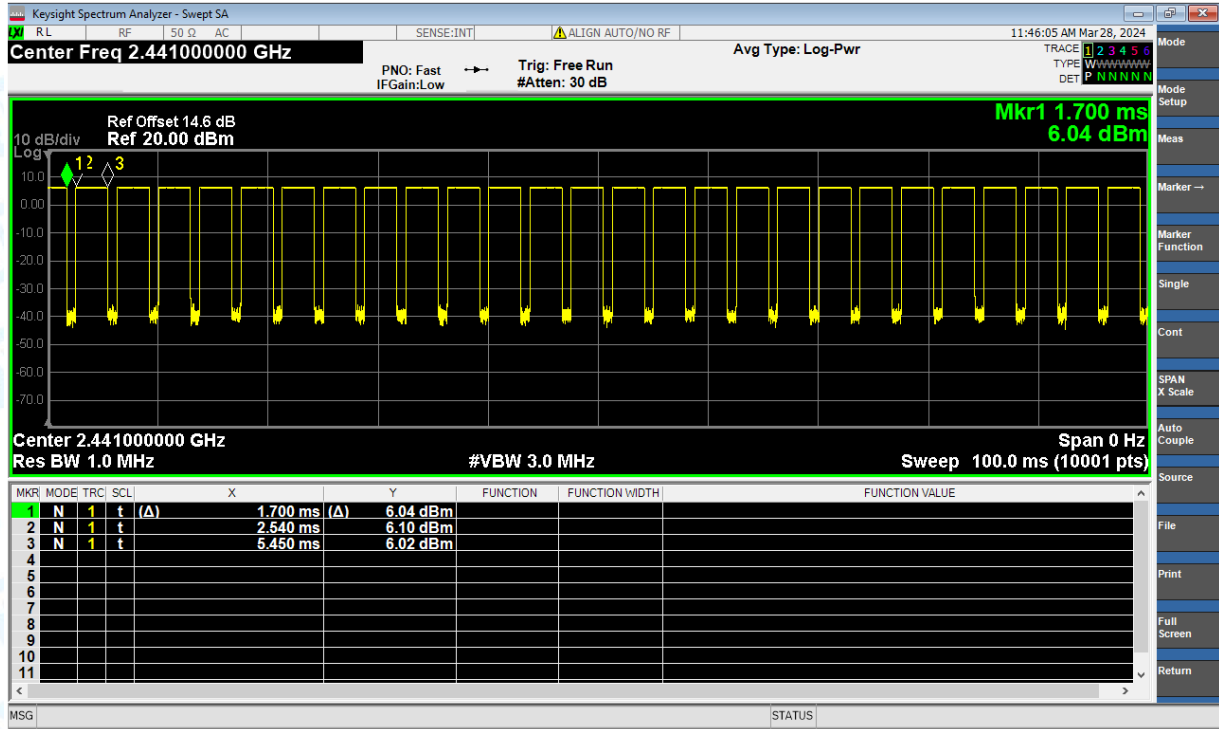
Duty Cycle NVNT 1-DH1 2480MHz Ant1



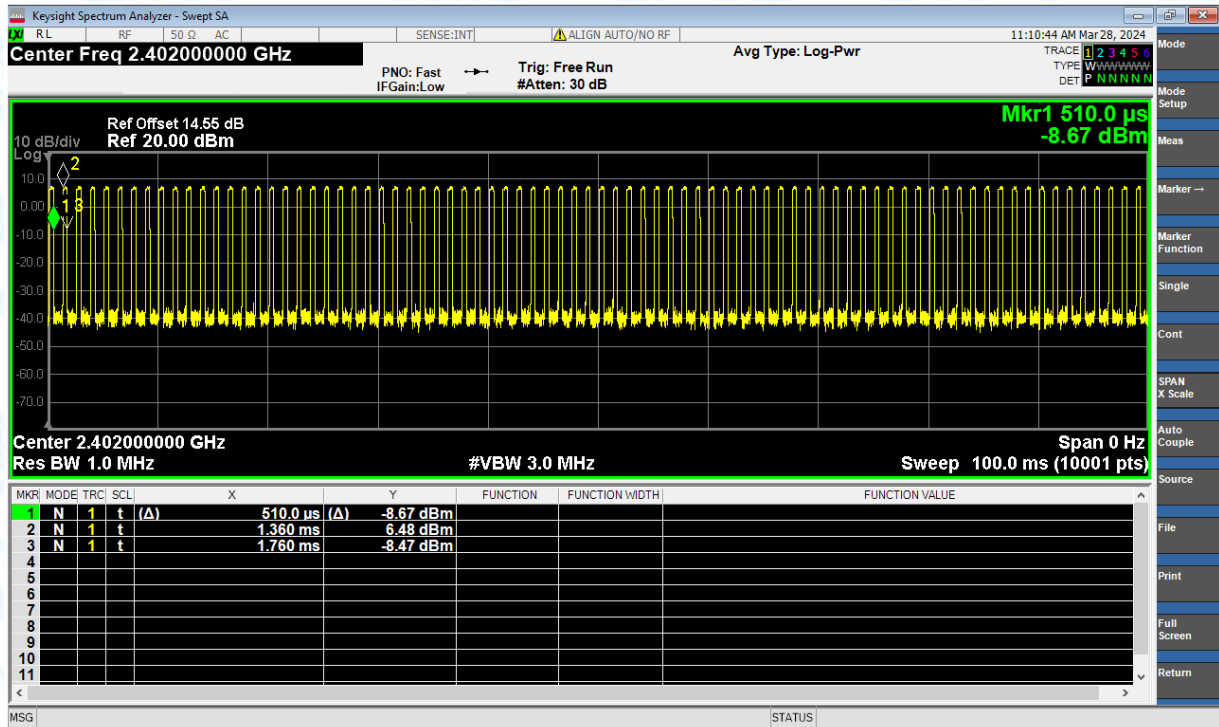
Duty Cycle NVNT 1-DH3 2441MHz Ant1



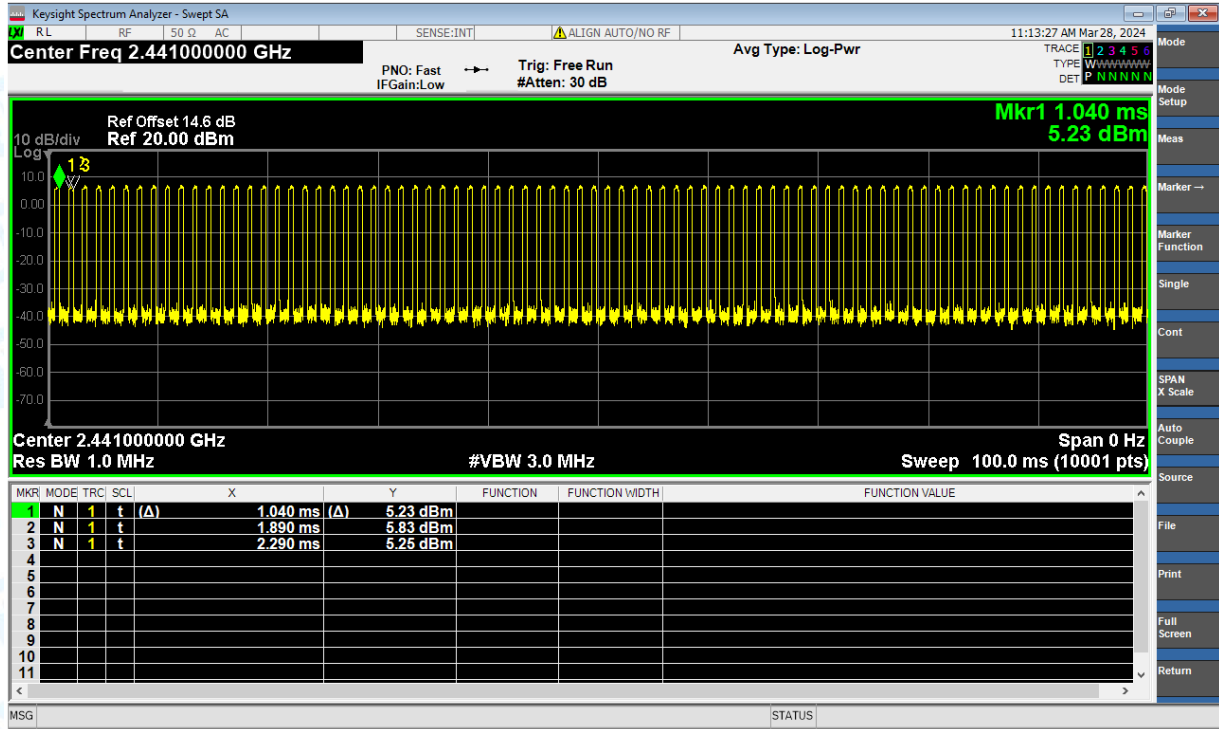
Duty Cycle NVNT 1-DH5 2441MHz Ant1



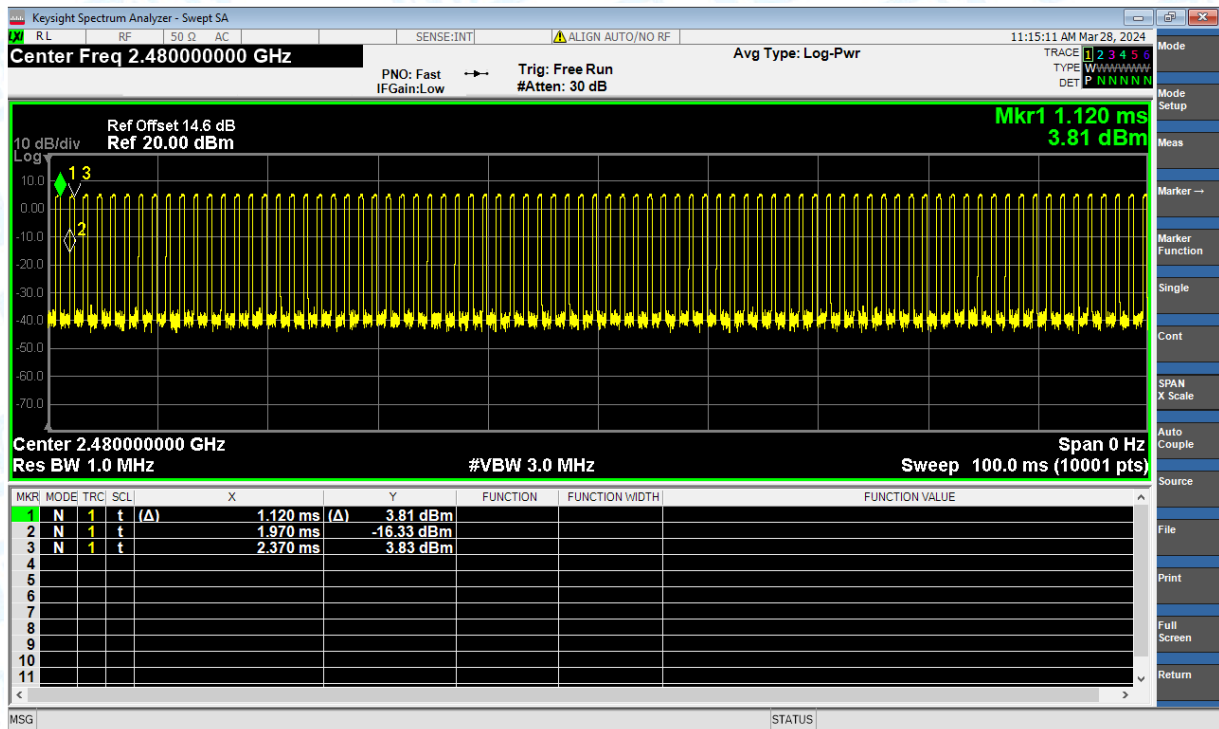
Duty Cycle NVNT 2-DH1 2402MHz Ant1



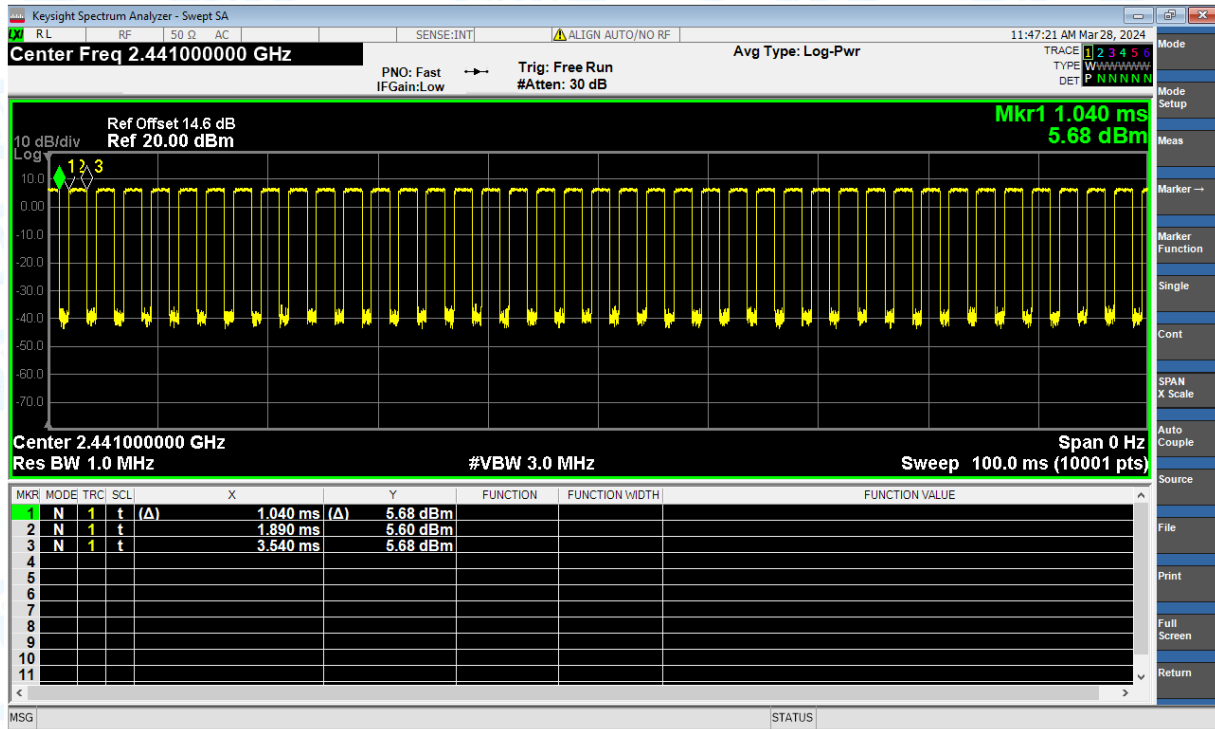
Duty Cycle NVNT 2-DH1 2441MHz Ant1



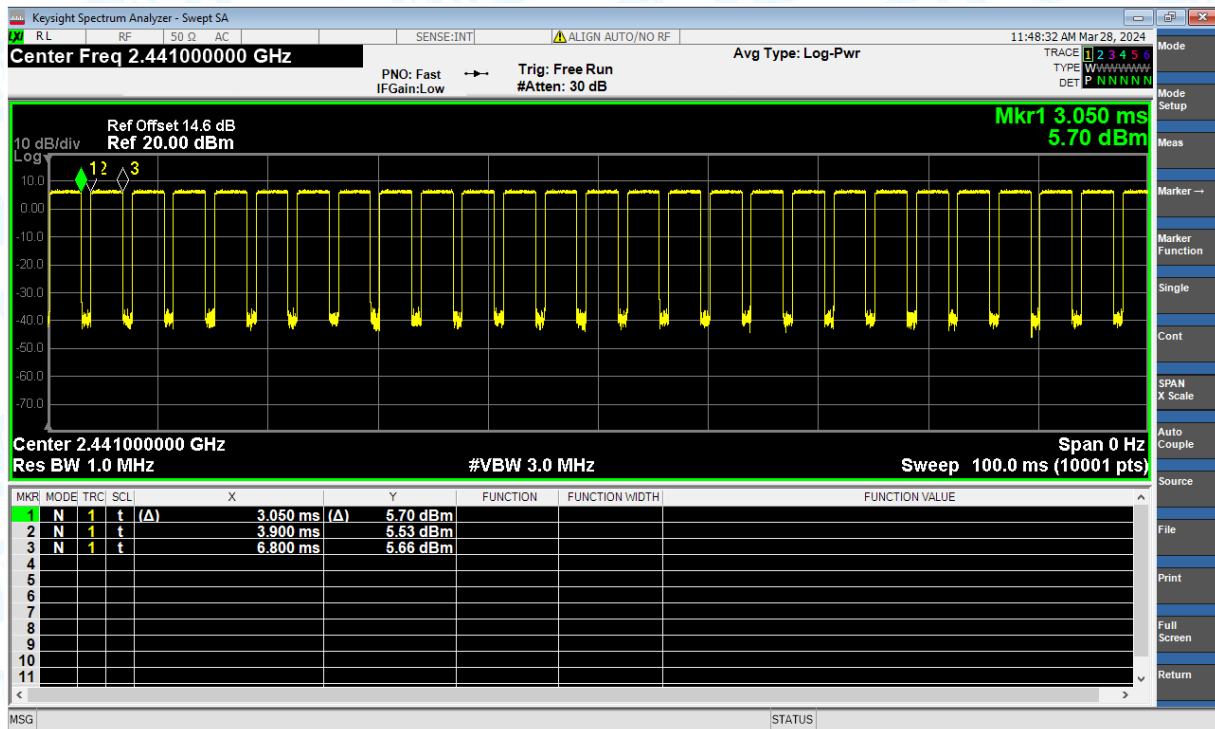
Duty Cycle NVNT 2-DH1 2480MHz Ant1



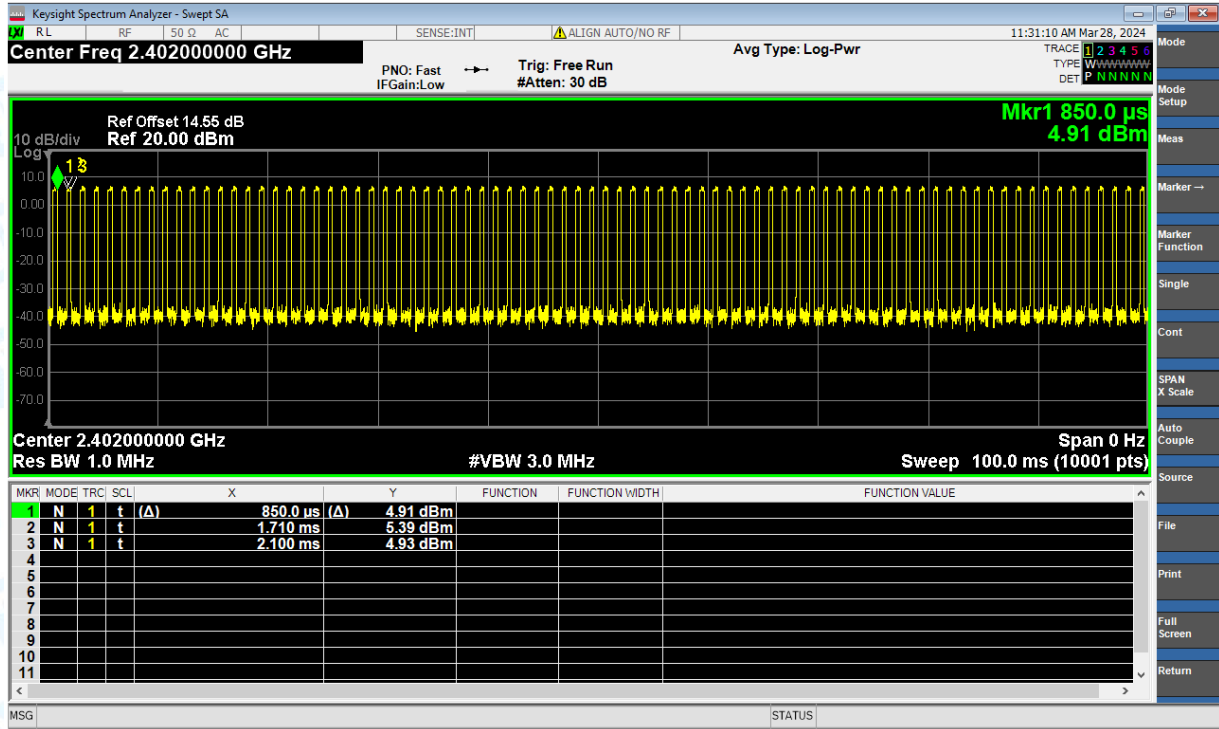
Duty Cycle NVNT 2-DH3 2441MHz Ant1



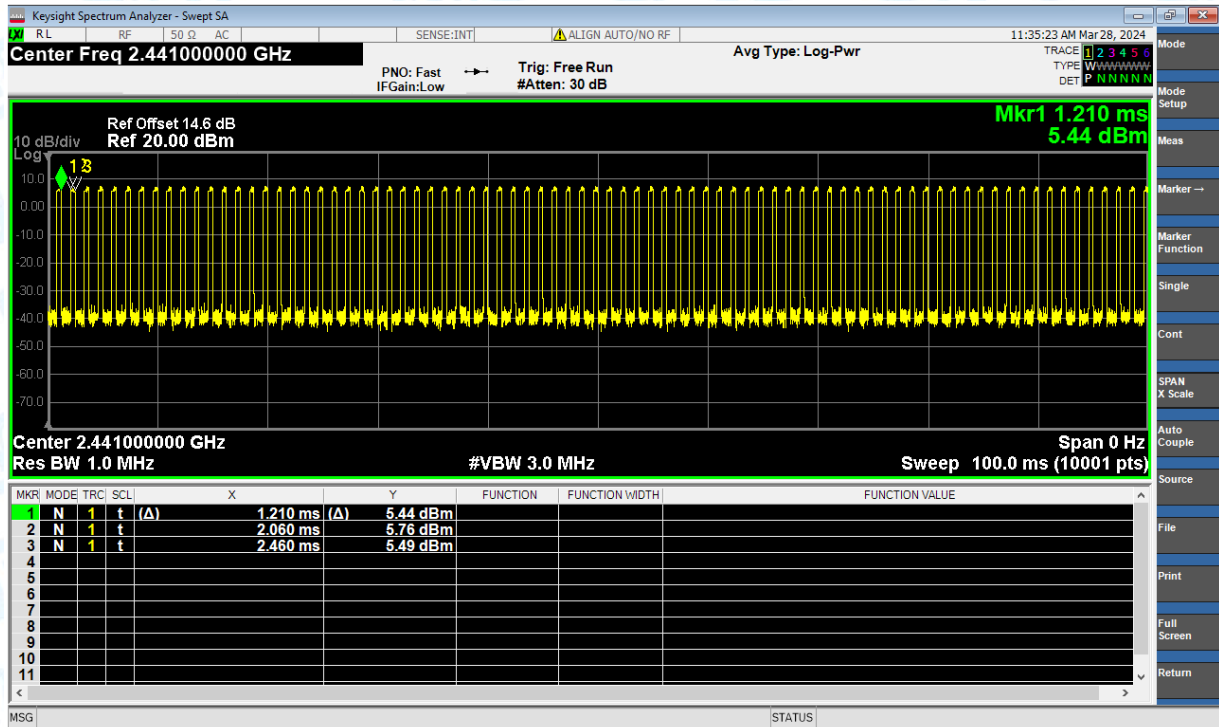
Duty Cycle NVNT 2-DH5 2441MHz Ant1



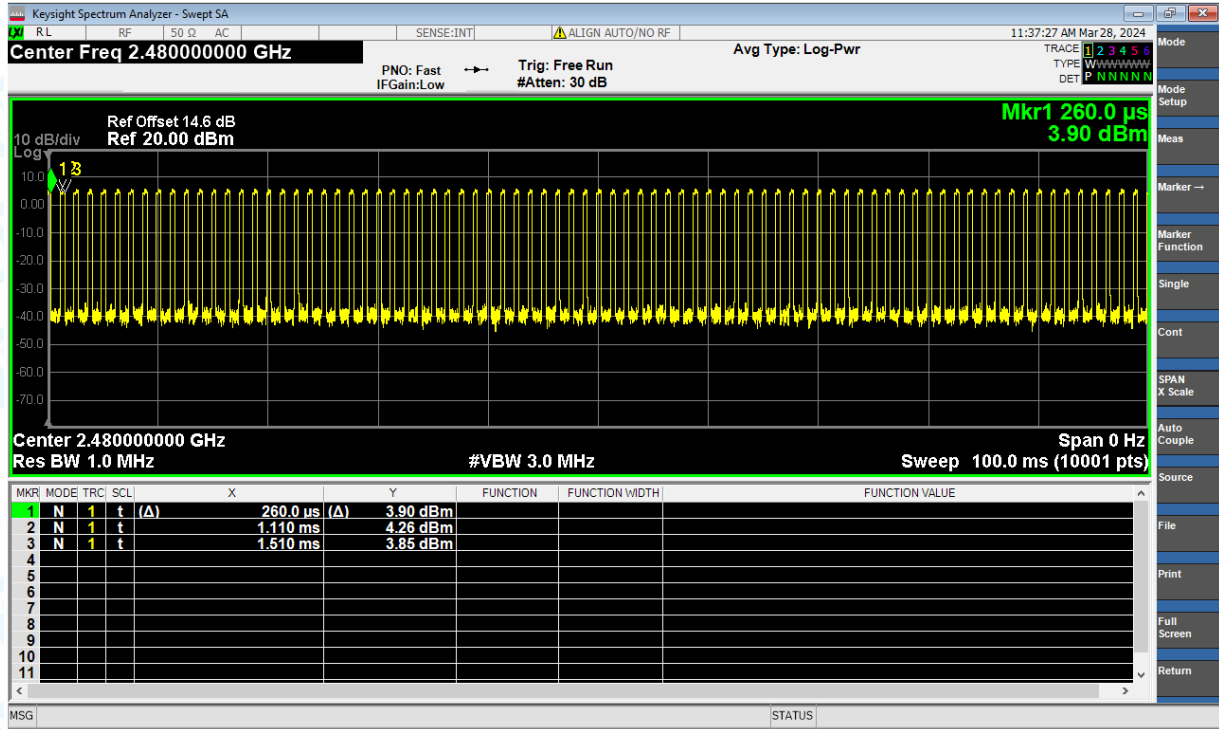
Duty Cycle NVNT 3-DH1 2402MHz Ant1



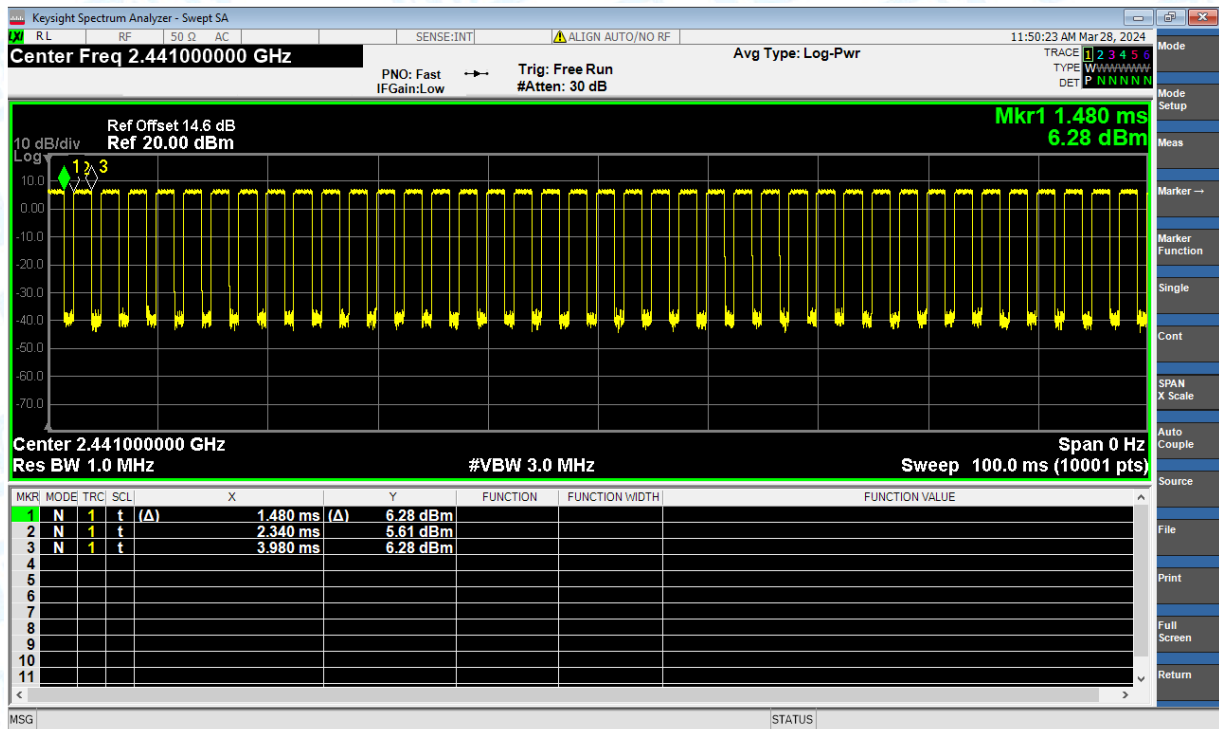
Duty Cycle NVNT 3-DH1 2441MHz Ant1

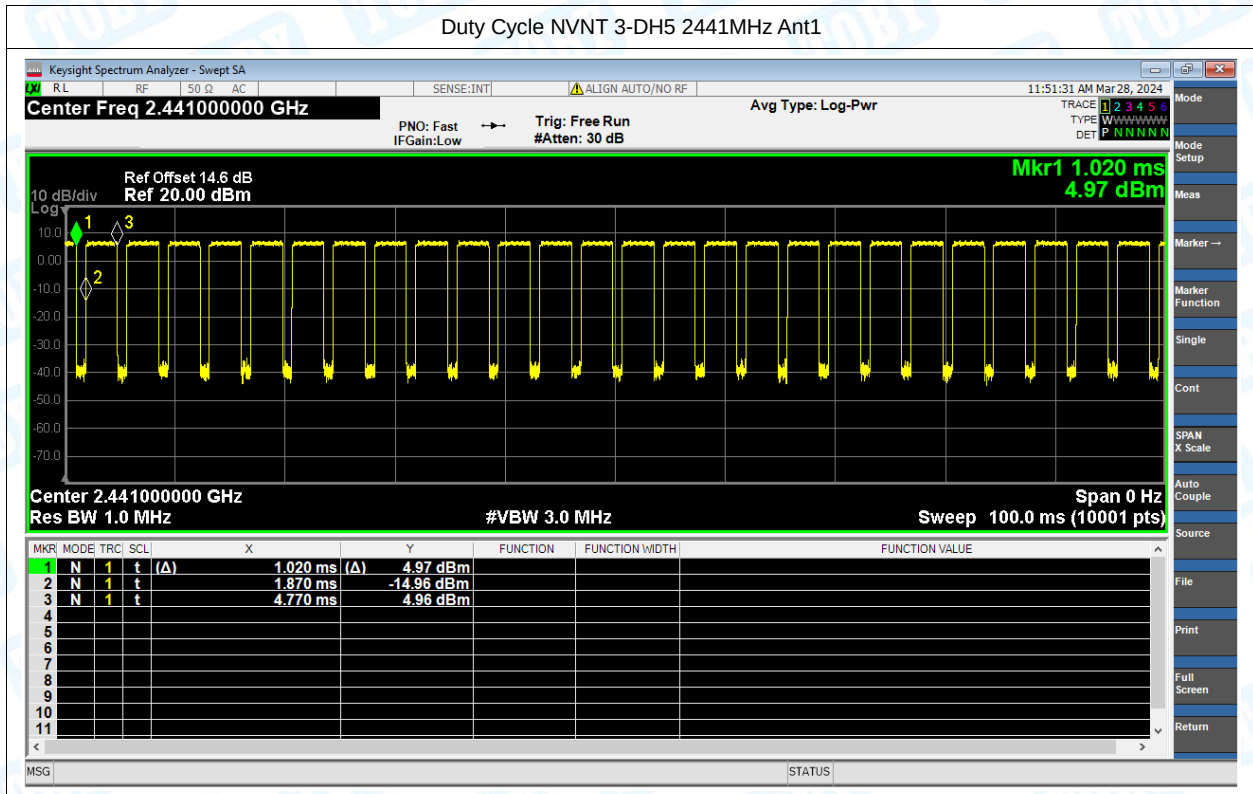


Duty Cycle NVNT 3-DH1 2480MHz Ant1



Duty Cycle NVNT 3-DH3 2441MHz Ant1



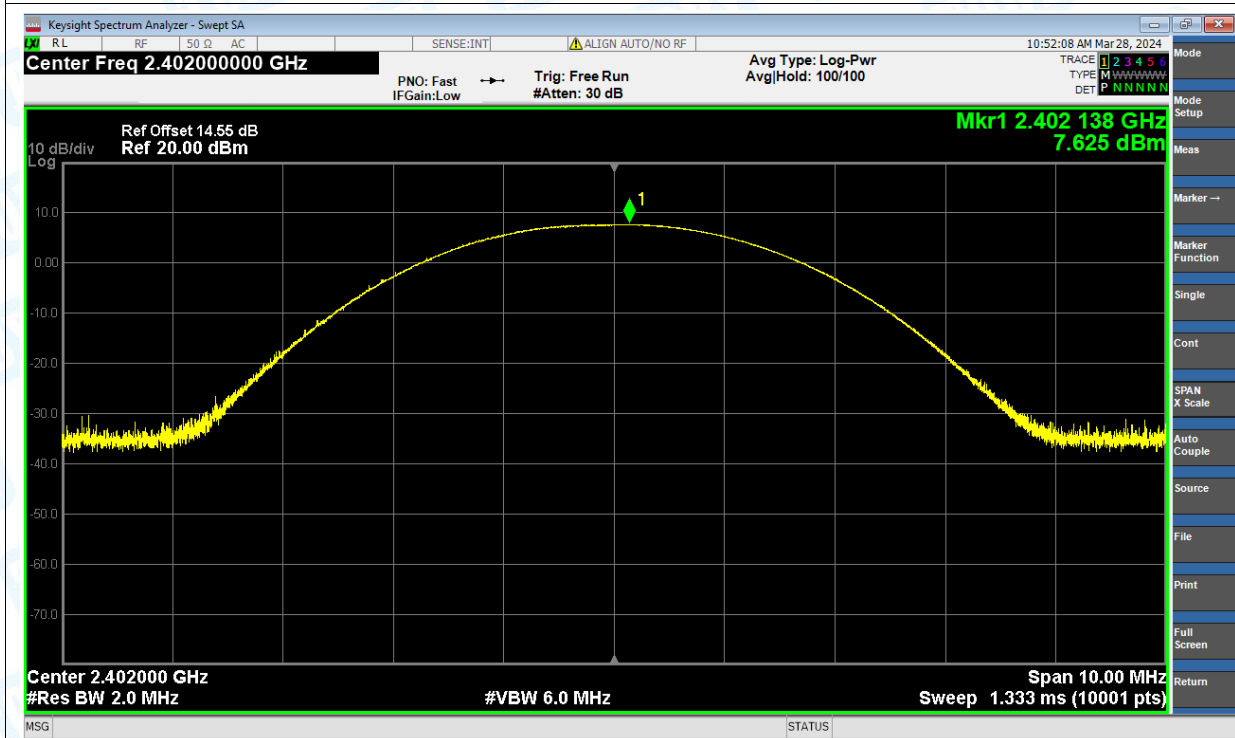


2. Maximum Conducted Output Power

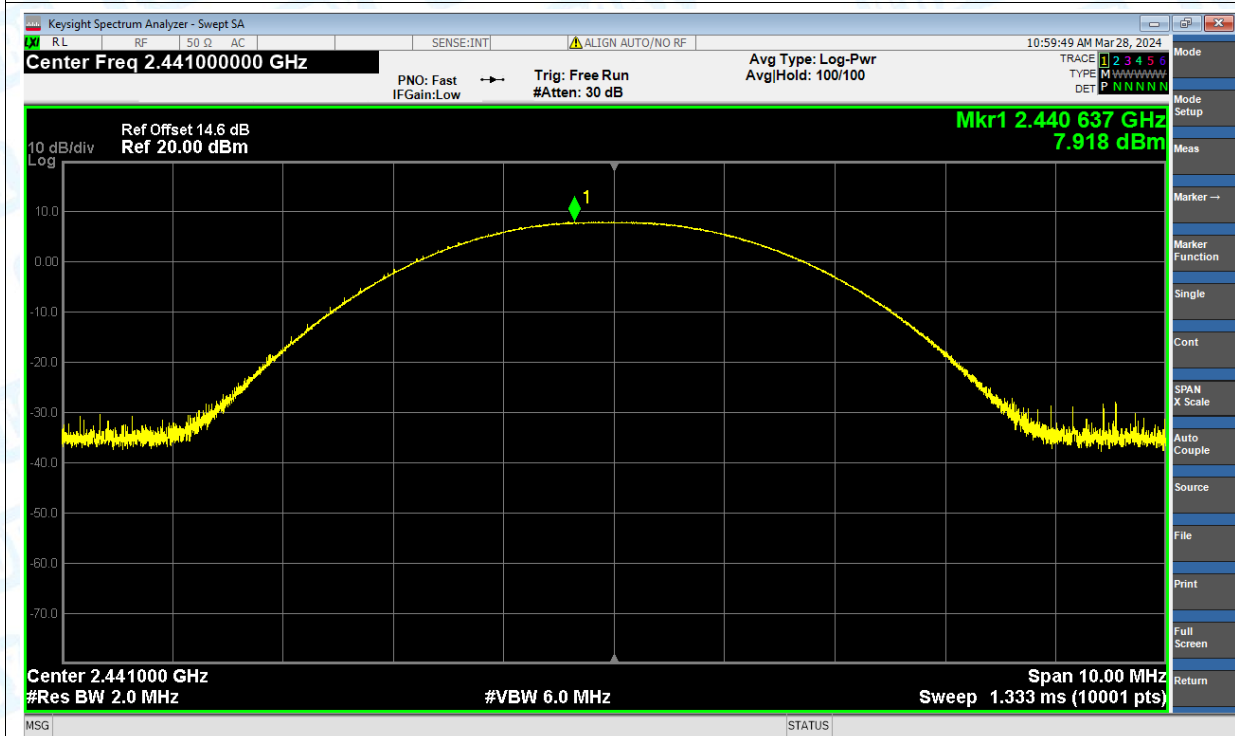
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	7.625	21	Pass
NVNT	1-DH1	2441	Ant1	7.918	21	Pass
NVNT	1-DH1	2480	Ant1	6.894	21	Pass
NVNT	2-DH1	2402	Ant1	6.602	21	Pass
NVNT	2-DH1	2441	Ant1	7.497	21	Pass
NVNT	2-DH1	2480	Ant1	6.09	21	Pass
NVNT	3-DH1	2402	Ant1	7.104	21	Pass
NVNT	3-DH1	2441	Ant1	7.76	21	Pass
NVNT	3-DH1	2480	Ant1	6.197	21	Pass

Test Graphs

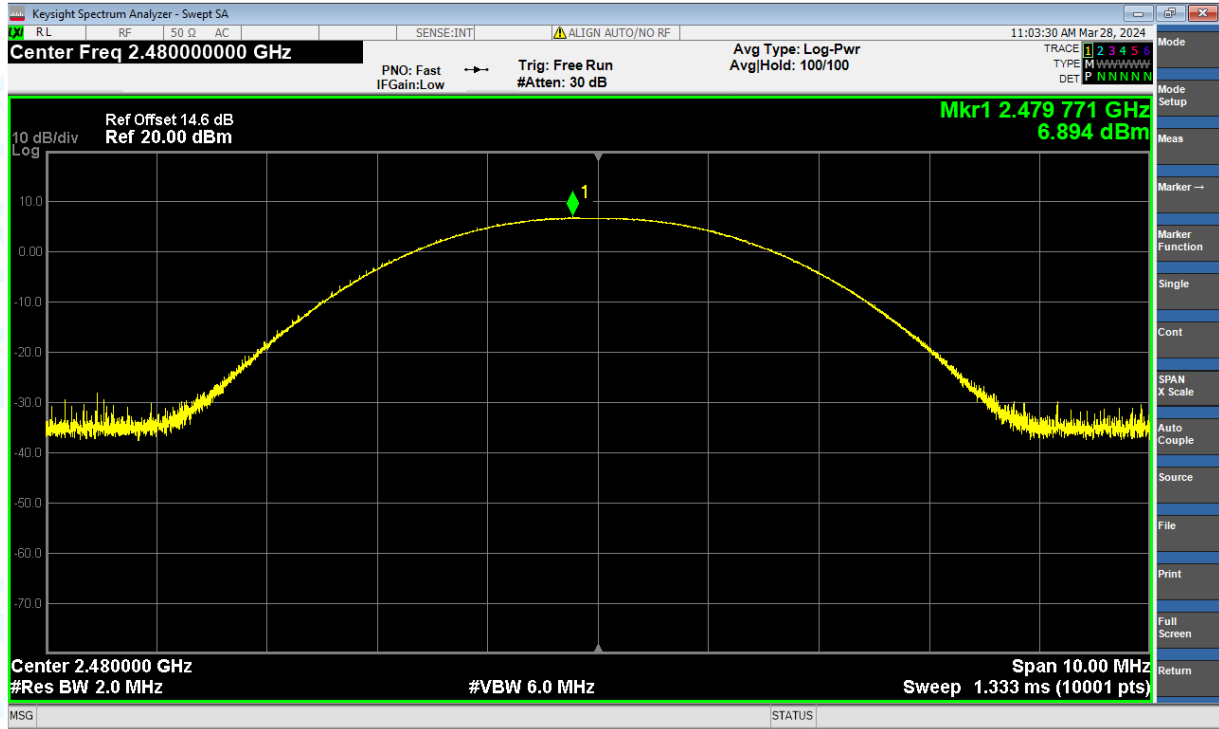
Power NVNT 1-DH1 2402MHz Ant1



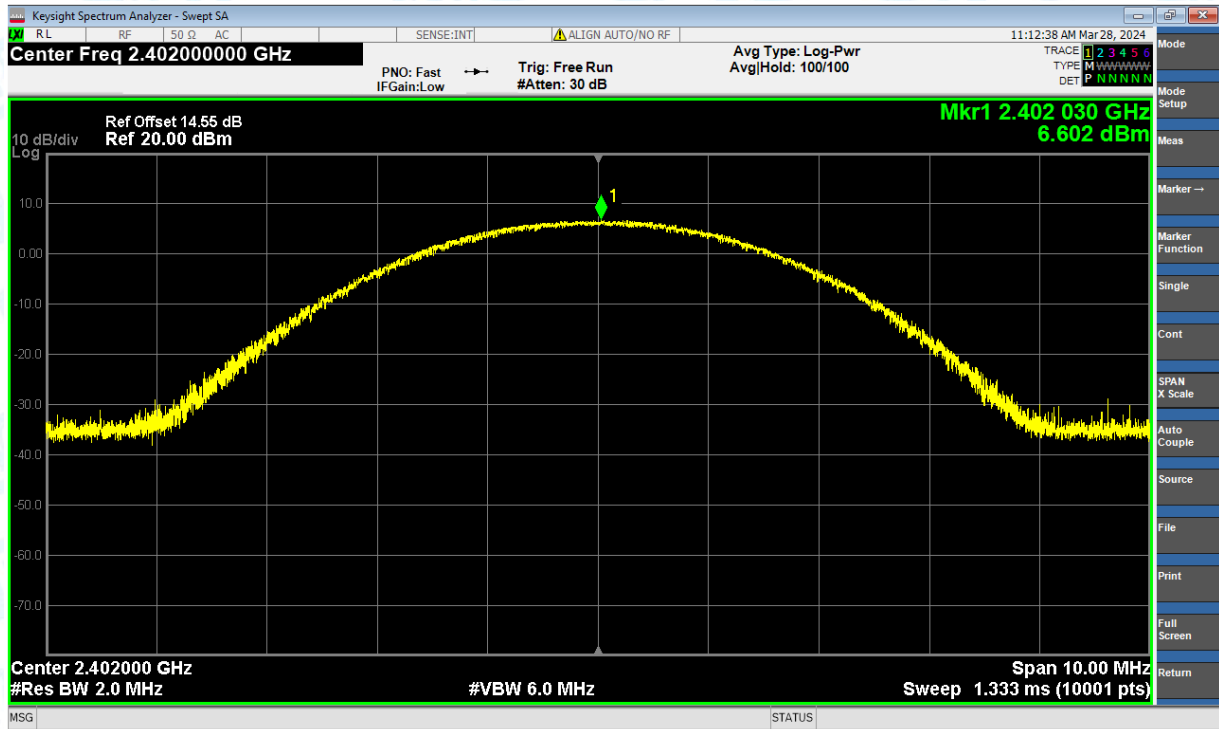
Power NVNT 1-DH1 2441MHz Ant1



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



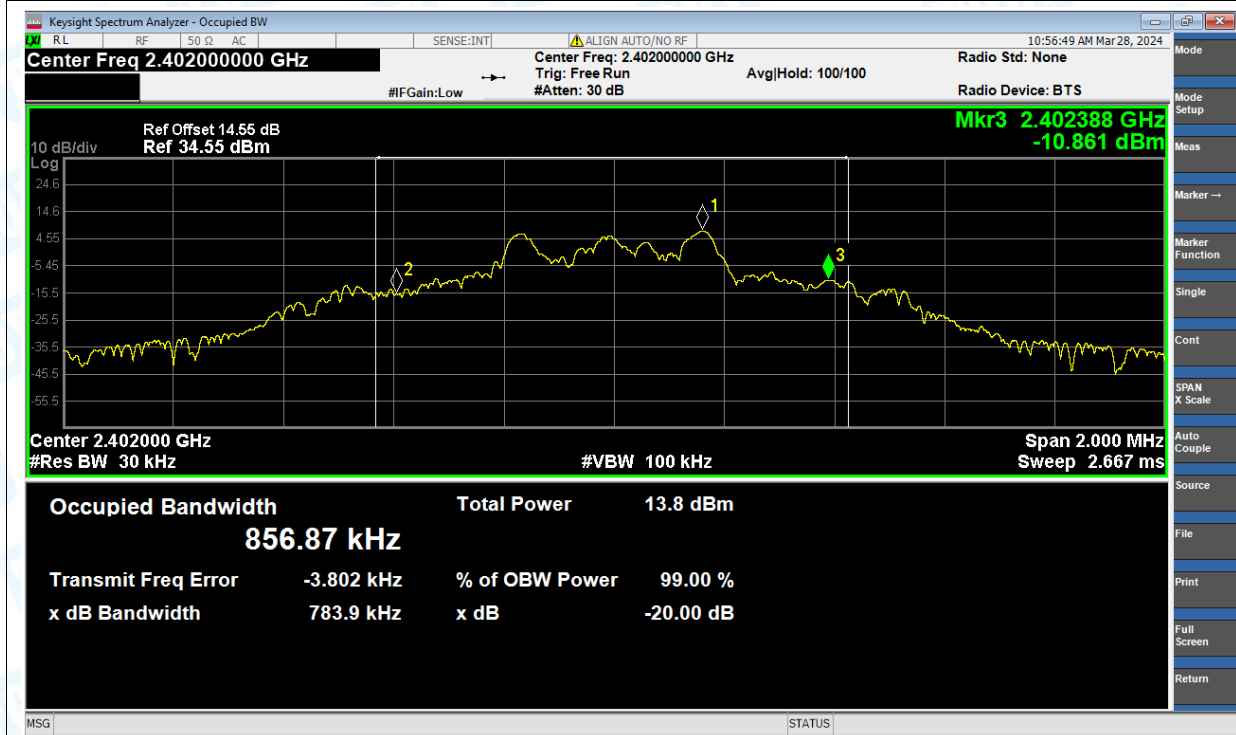


3. -20dB Bandwidth

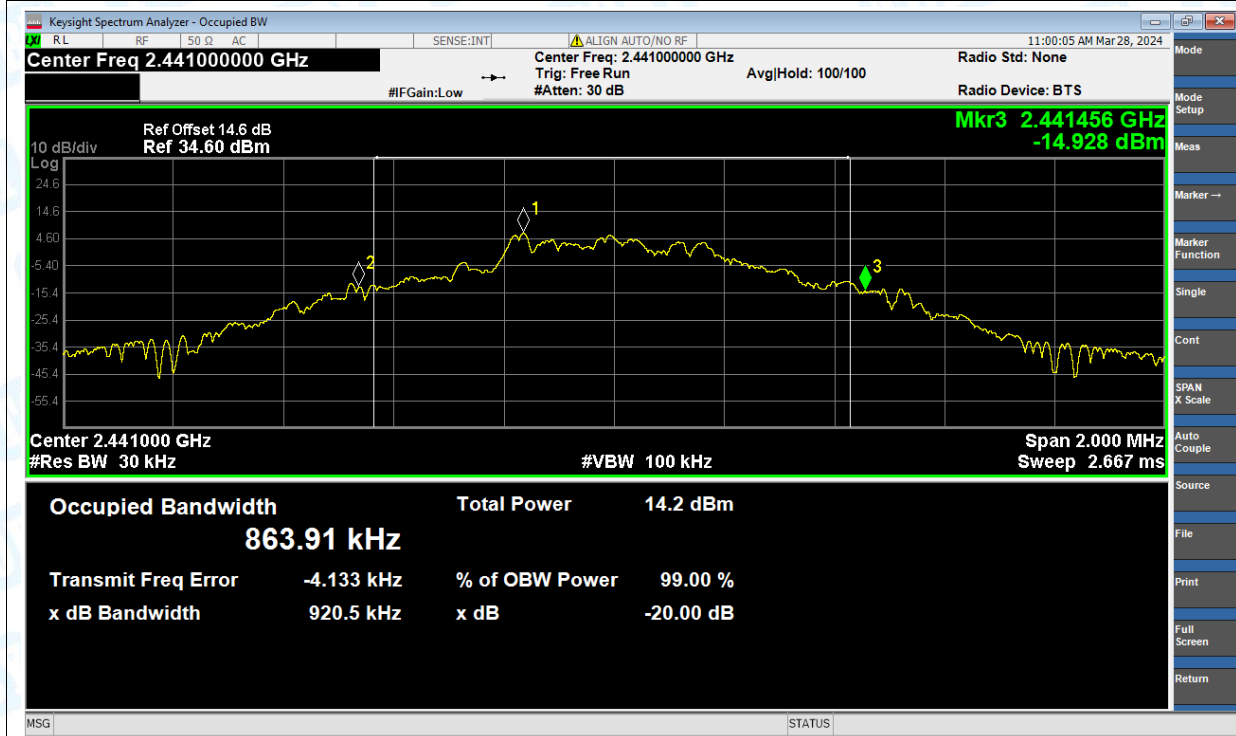
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.78	---	----
NVNT	1-DH1	2441	Ant1	0.92	---	----
NVNT	1-DH1	2480	Ant1	0.91	---	----
NVNT	2-DH1	2402	Ant1	1.26	---	----
NVNT	2-DH1	2441	Ant1	1.27	---	----
NVNT	2-DH1	2480	Ant1	1.26	---	----
NVNT	3-DH1	2402	Ant1	1.22	---	----
NVNT	3-DH1	2441	Ant1	1.22	---	----
NVNT	3-DH1	2480	Ant1	1.27	---	----

Test Graphs

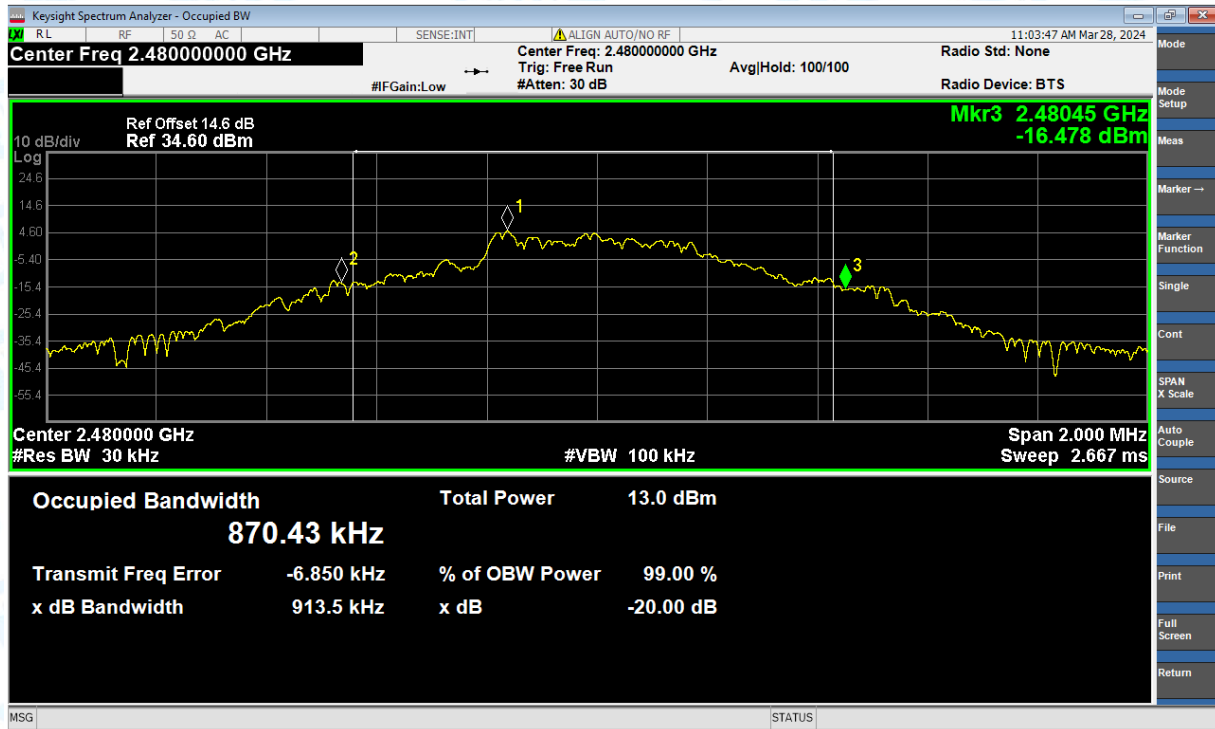
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



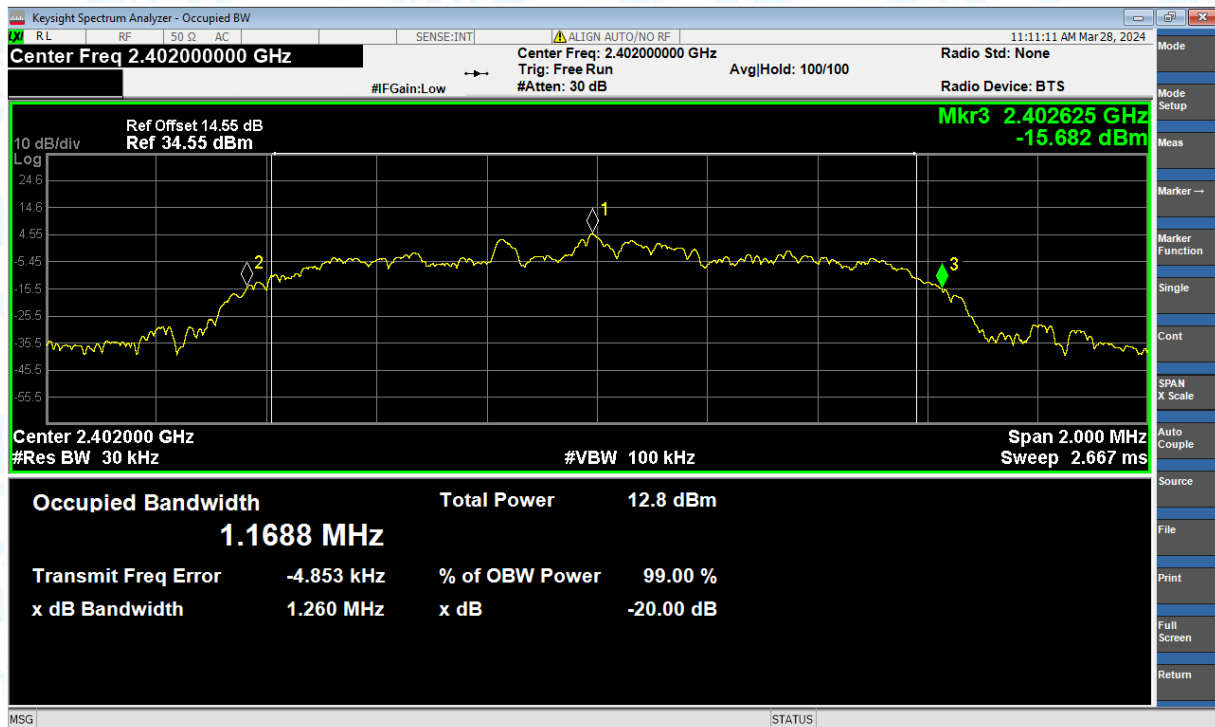
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



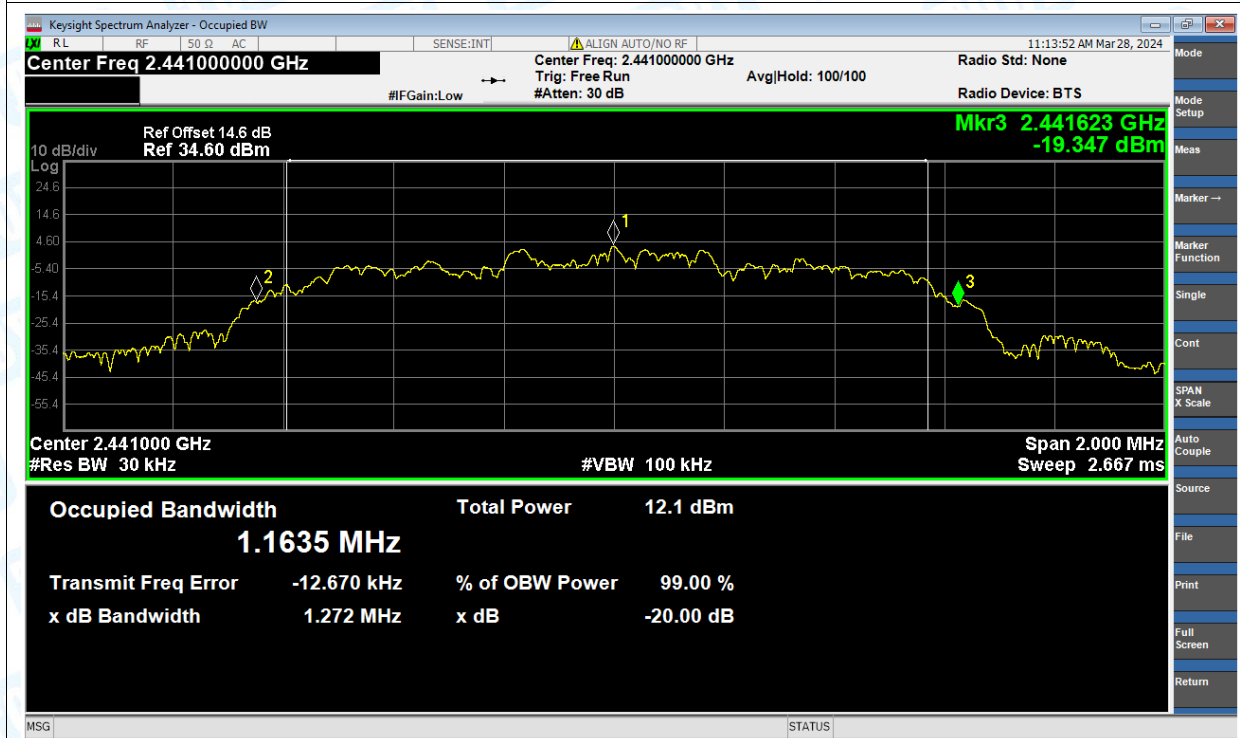
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



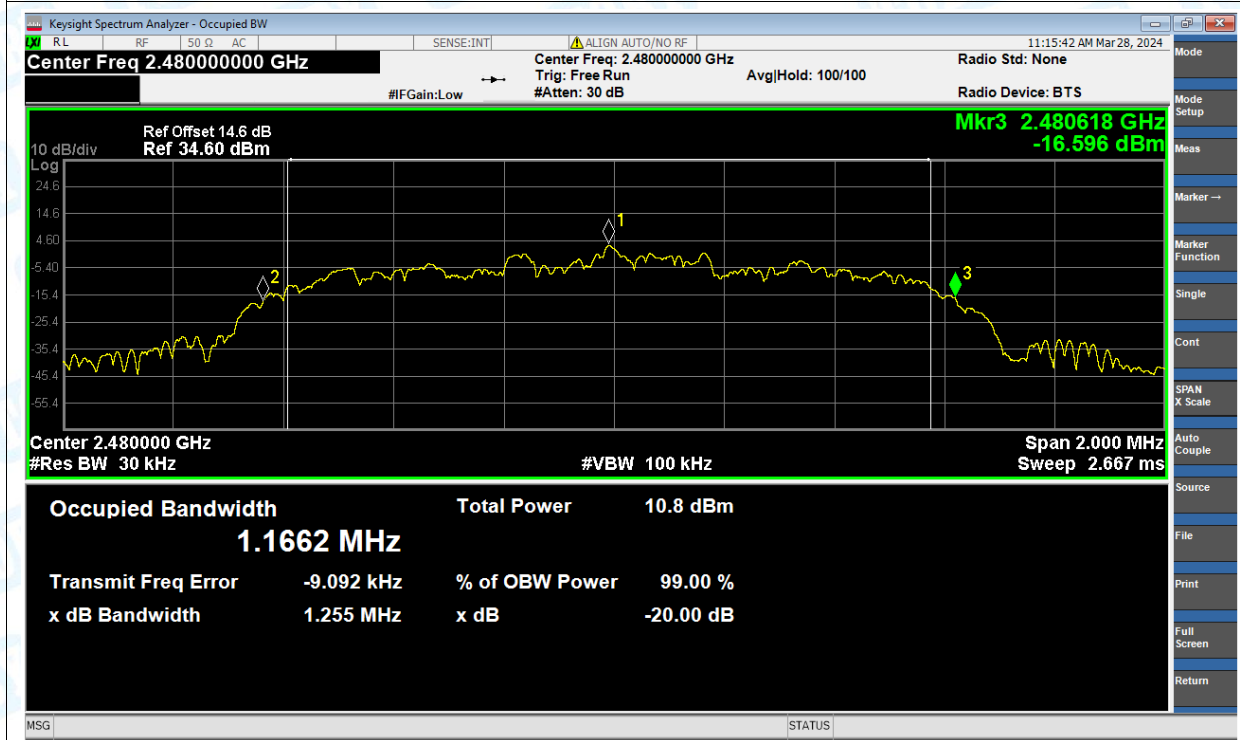
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



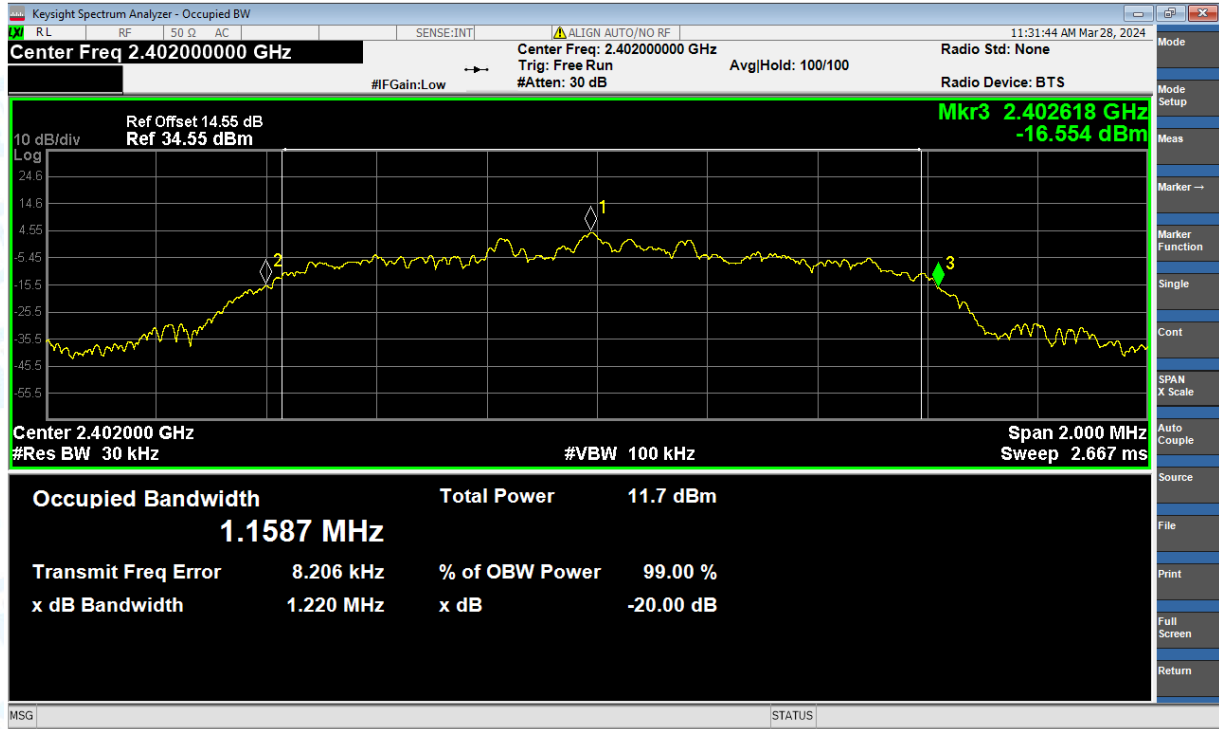
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



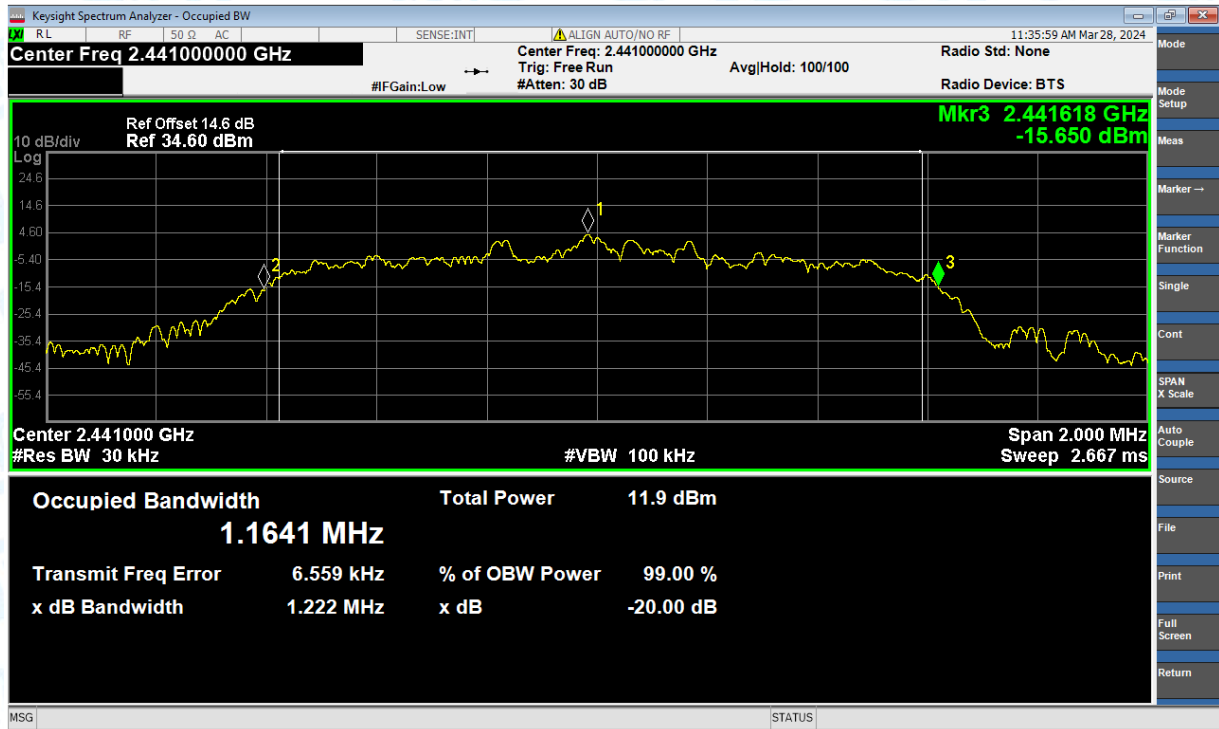
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

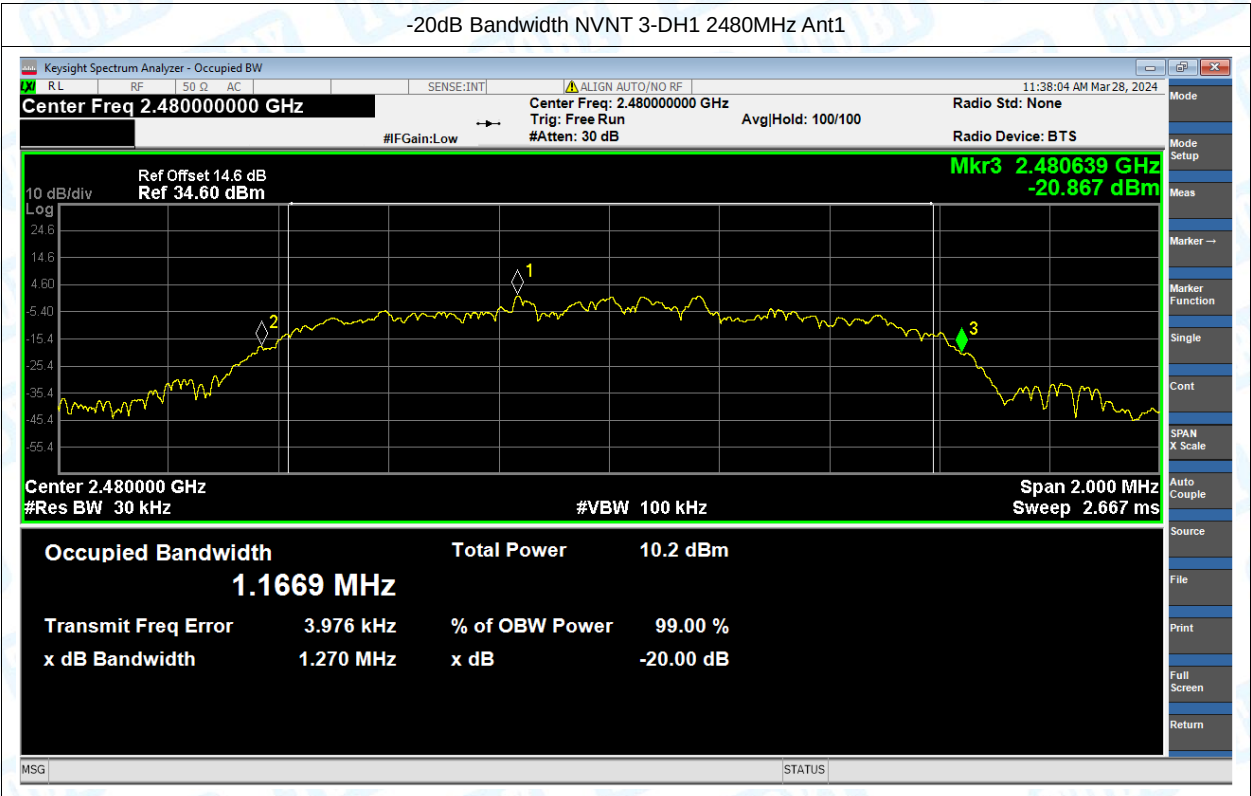


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



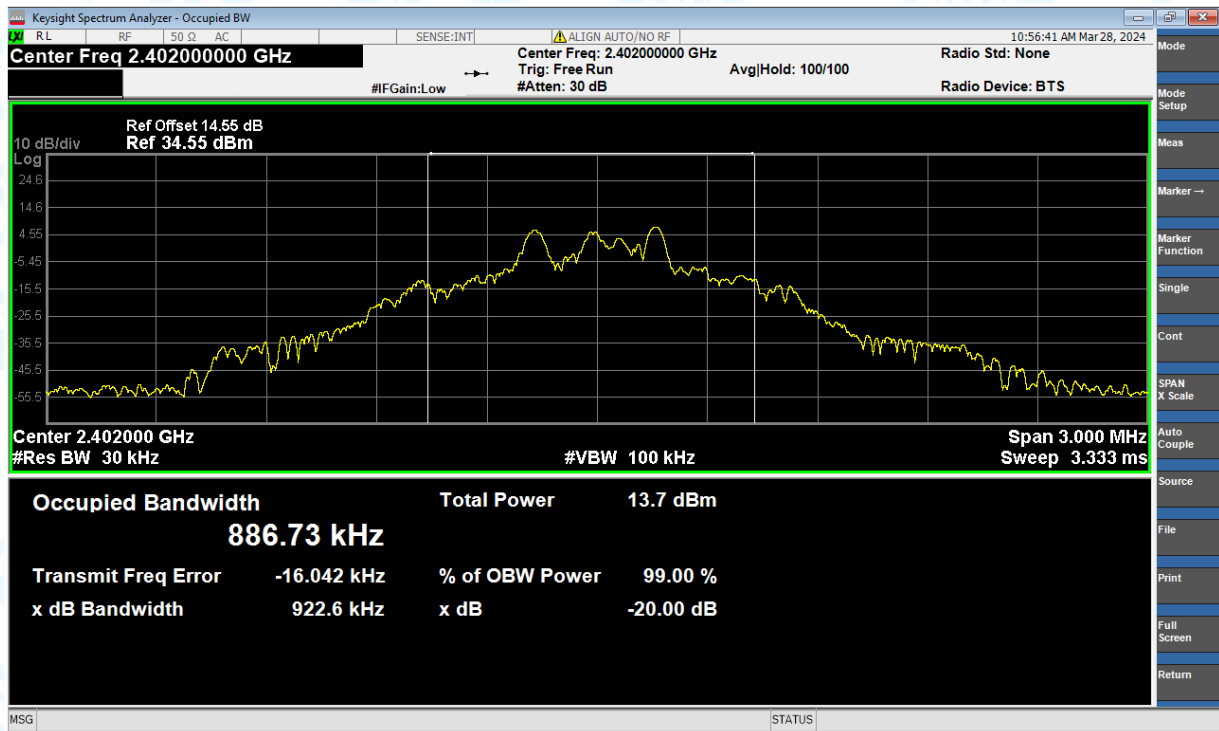


4. Occupied Channel Bandwidth

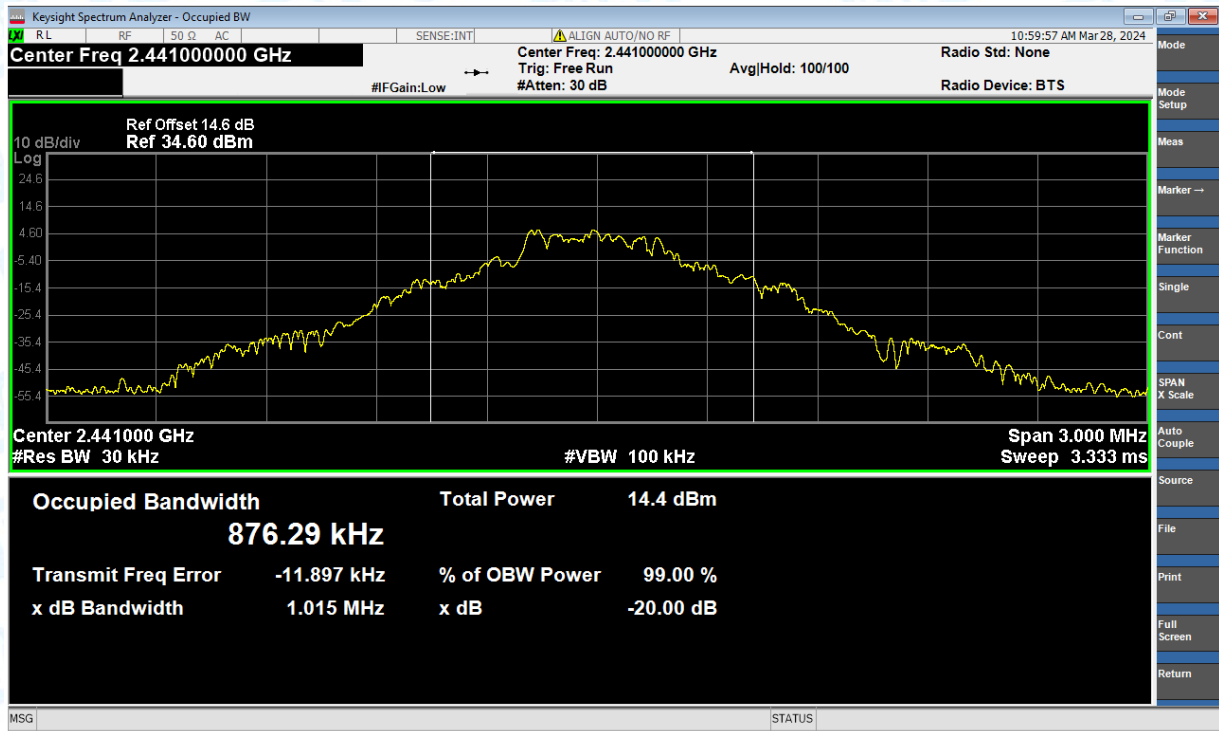
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.887
NVNT	1-DH1	2441	Ant1	0.876
NVNT	1-DH1	2480	Ant1	0.872
NVNT	2-DH1	2402	Ant1	1.167
NVNT	2-DH1	2441	Ant1	1.173
NVNT	2-DH1	2480	Ant1	1.17
NVNT	3-DH1	2402	Ant1	1.165
NVNT	3-DH1	2441	Ant1	1.165
NVNT	3-DH1	2480	Ant1	1.16

Test Graphs

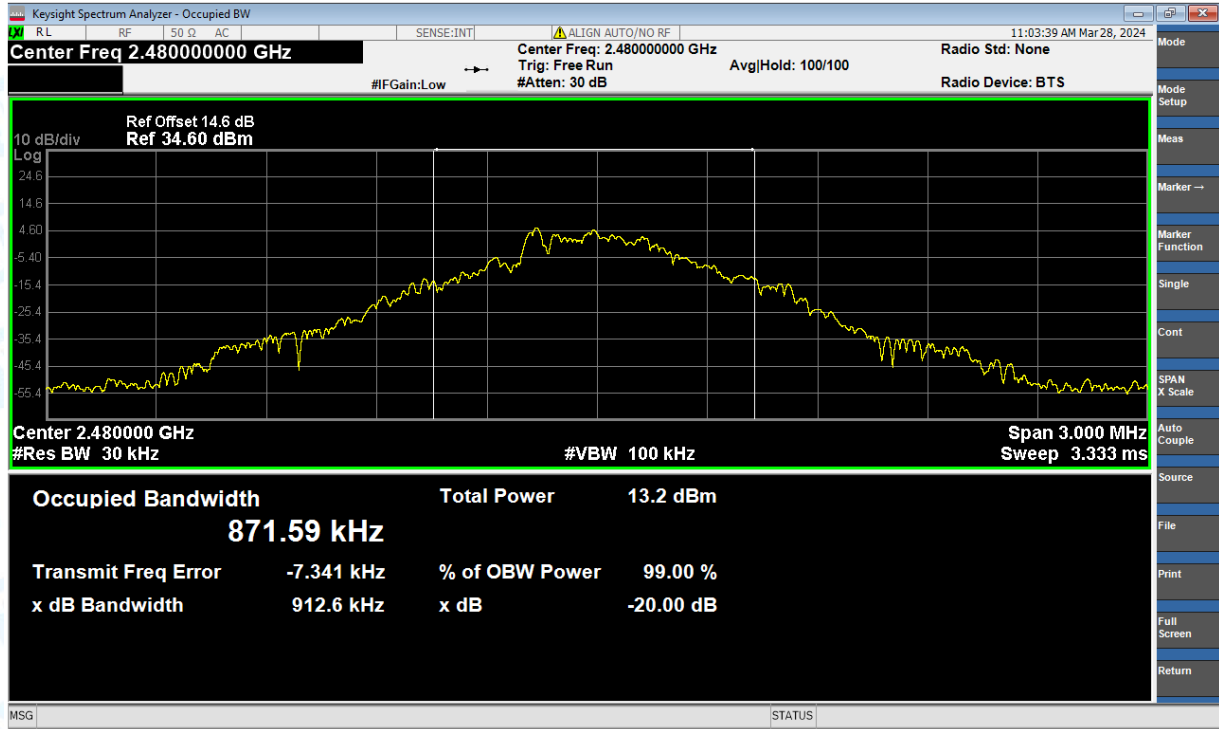
OBW NVNT 1-DH1 2402MHz Ant1



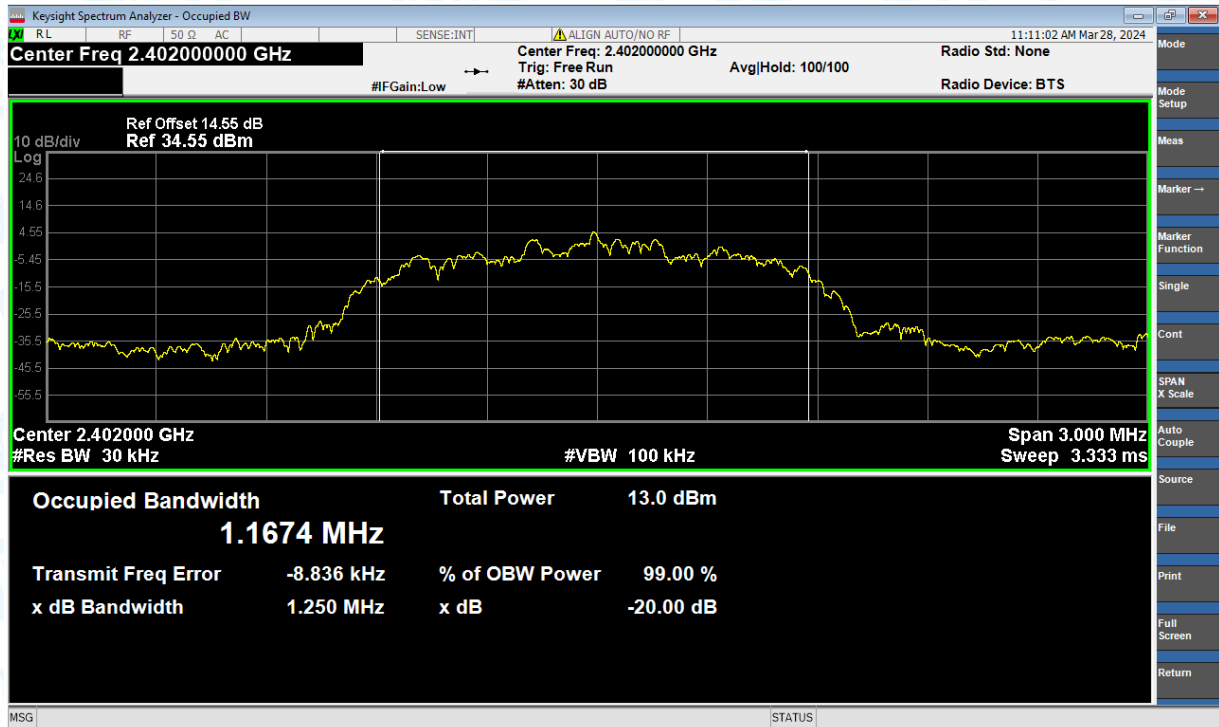
OBW NVNT 1-DH1 2441MHz Ant1



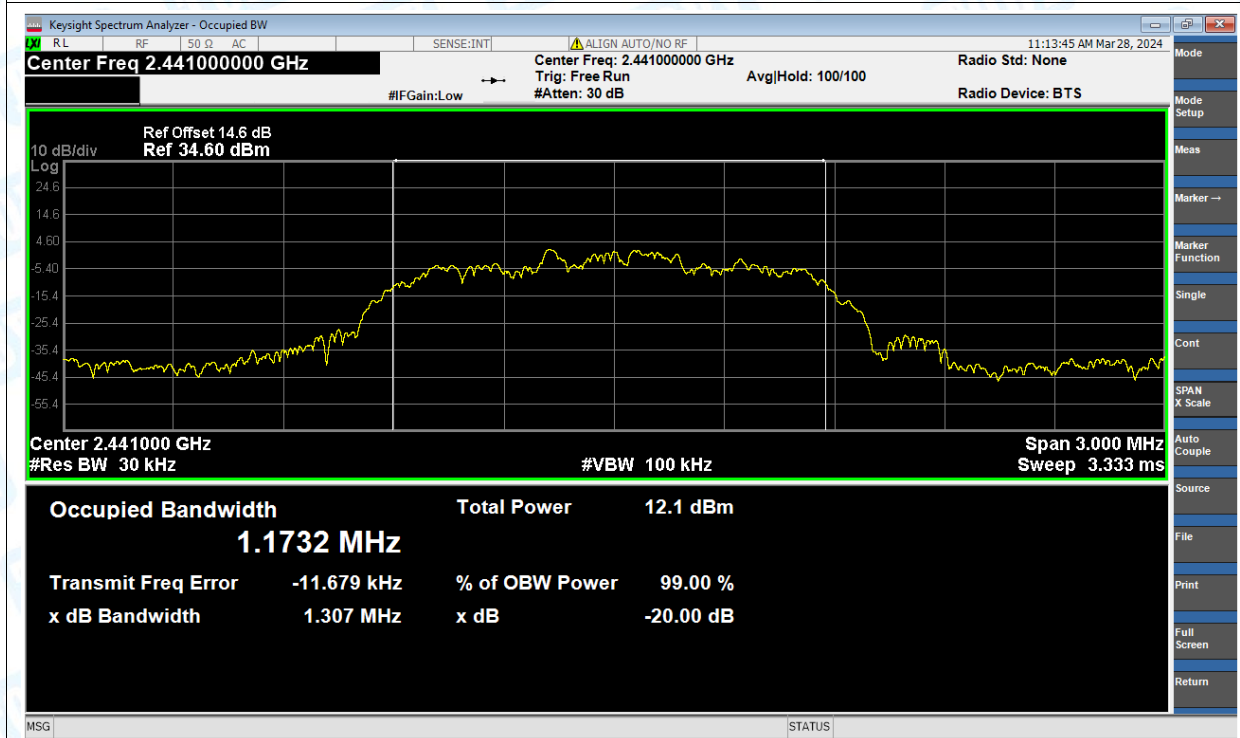
OBW NVNT 1-DH1 2480MHz Ant1



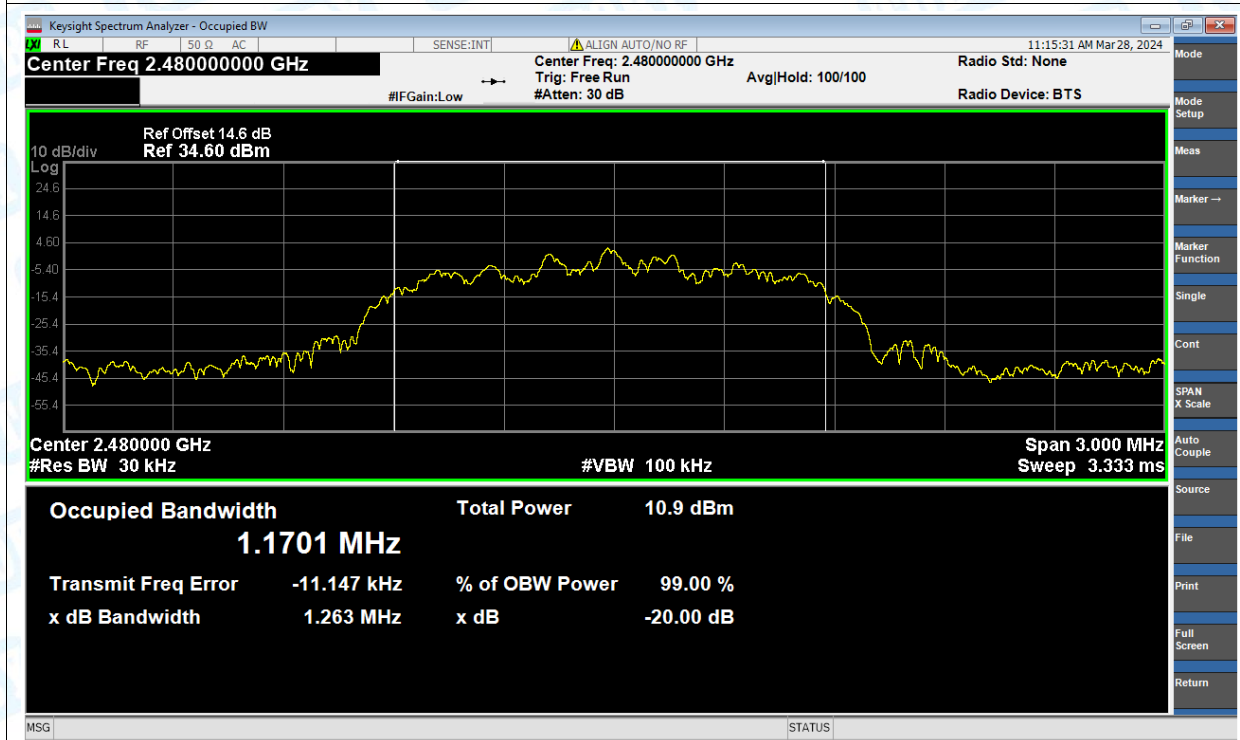
OBW NVNT 2-DH1 2402MHz Ant1



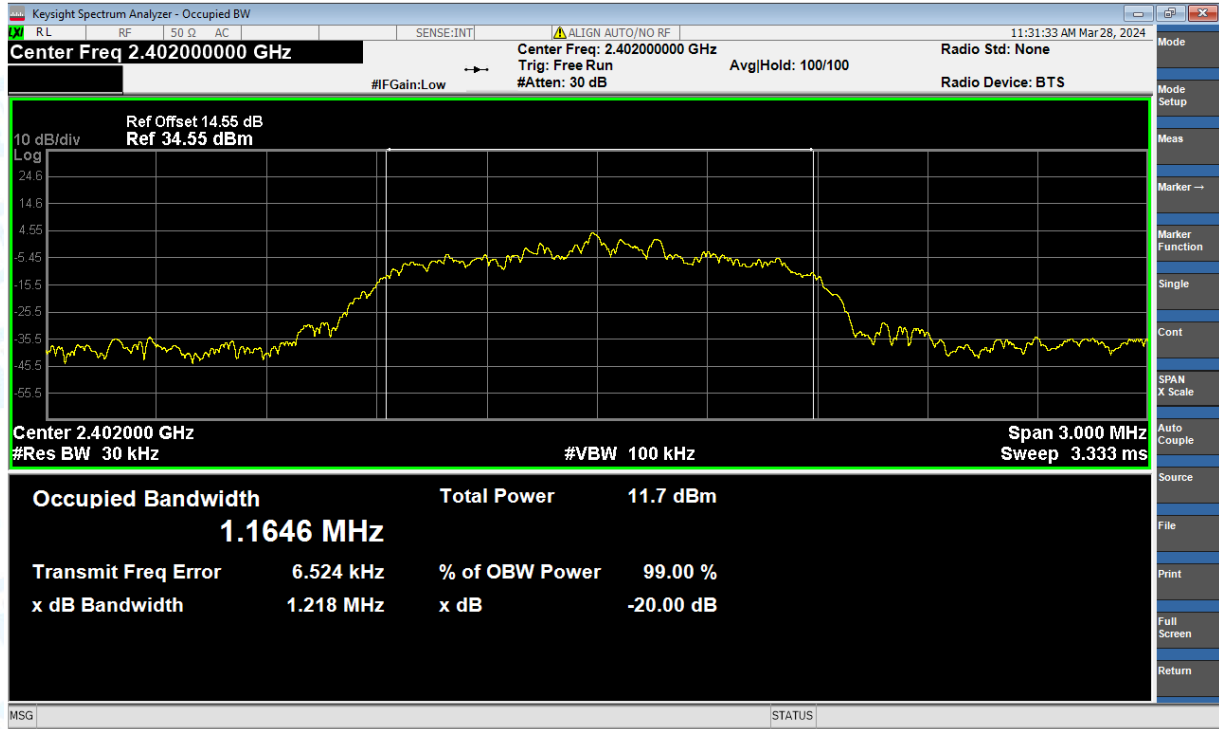
OBW NVNT 2-DH1 2441MHz Ant1



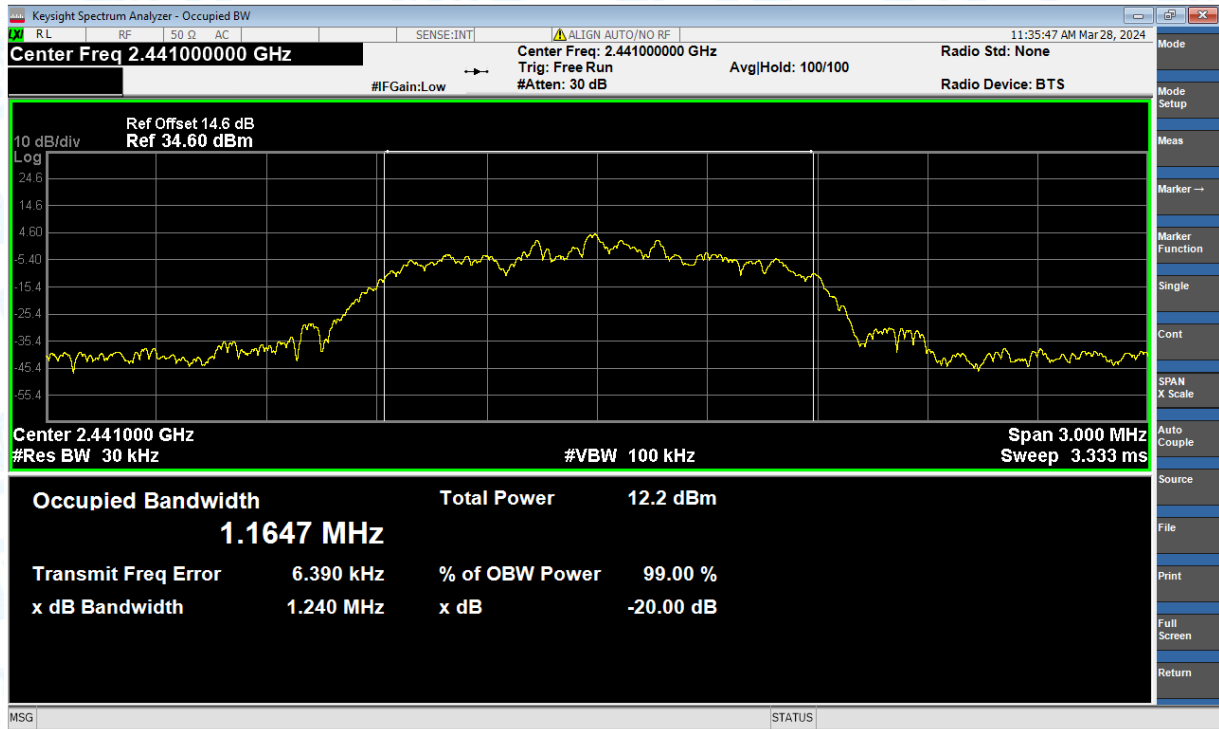
OBW NVNT 2-DH1 2480MHz Ant1

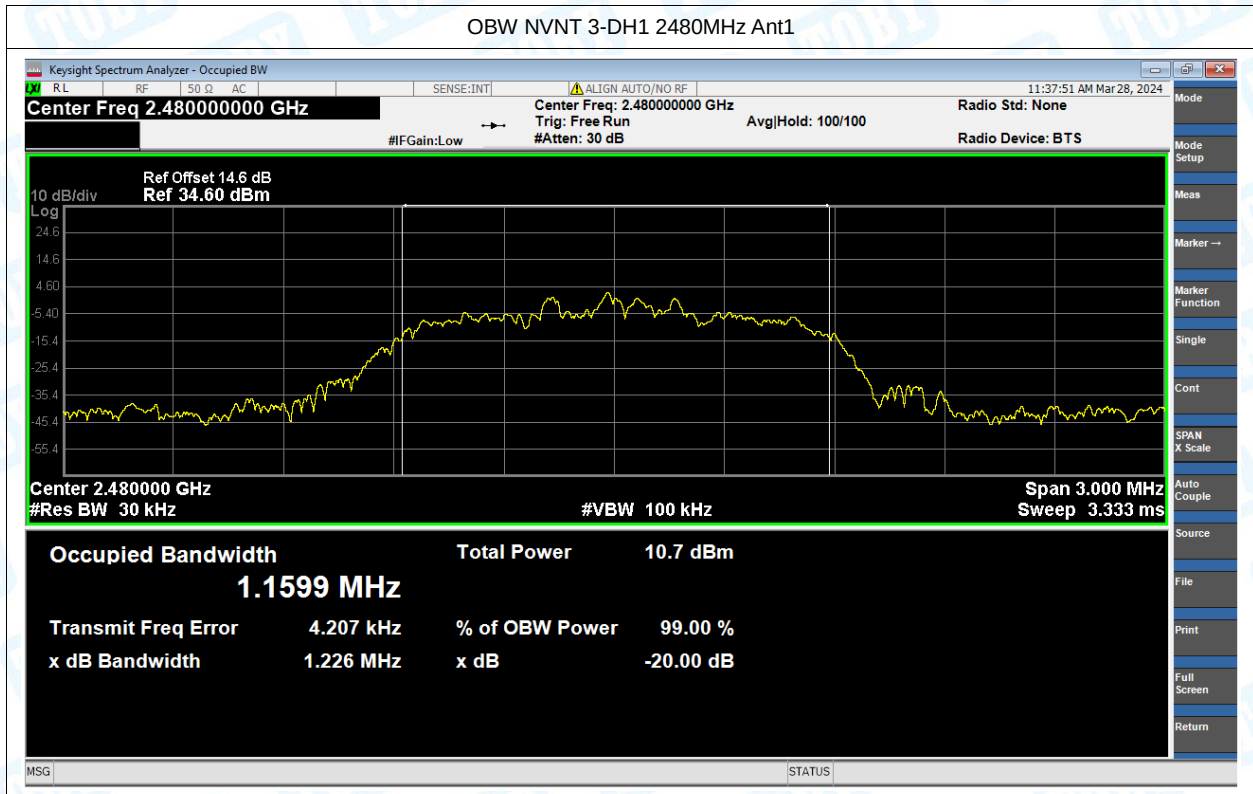


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



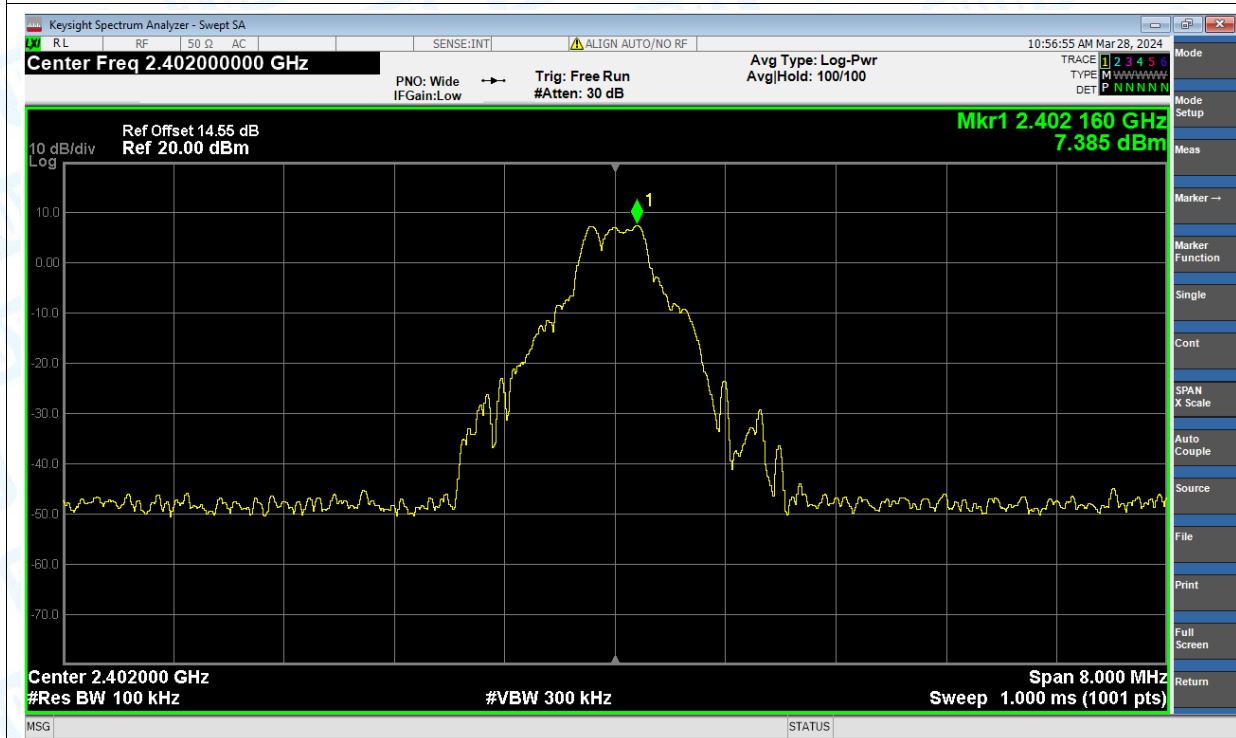


5. Band Edge

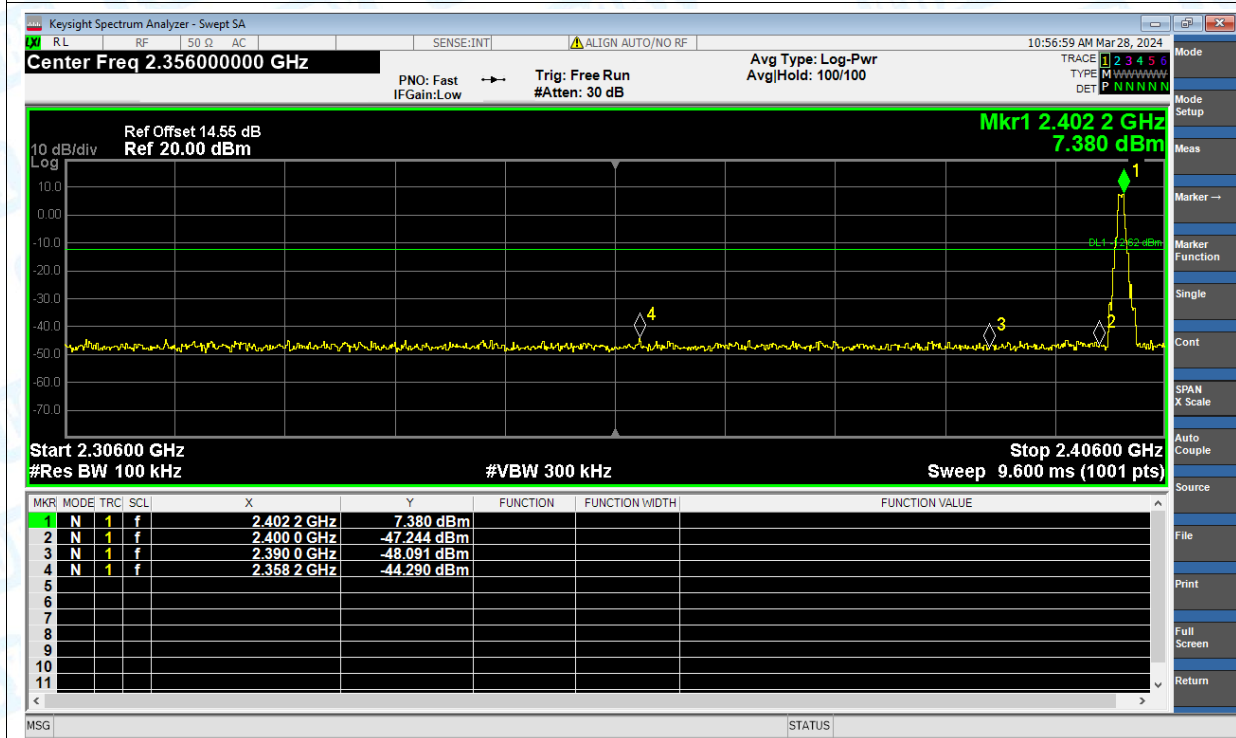
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-51.68	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-50.92	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-50.45	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-48.3	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-49.72	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-48.96	-20	Pass

Test Graphs

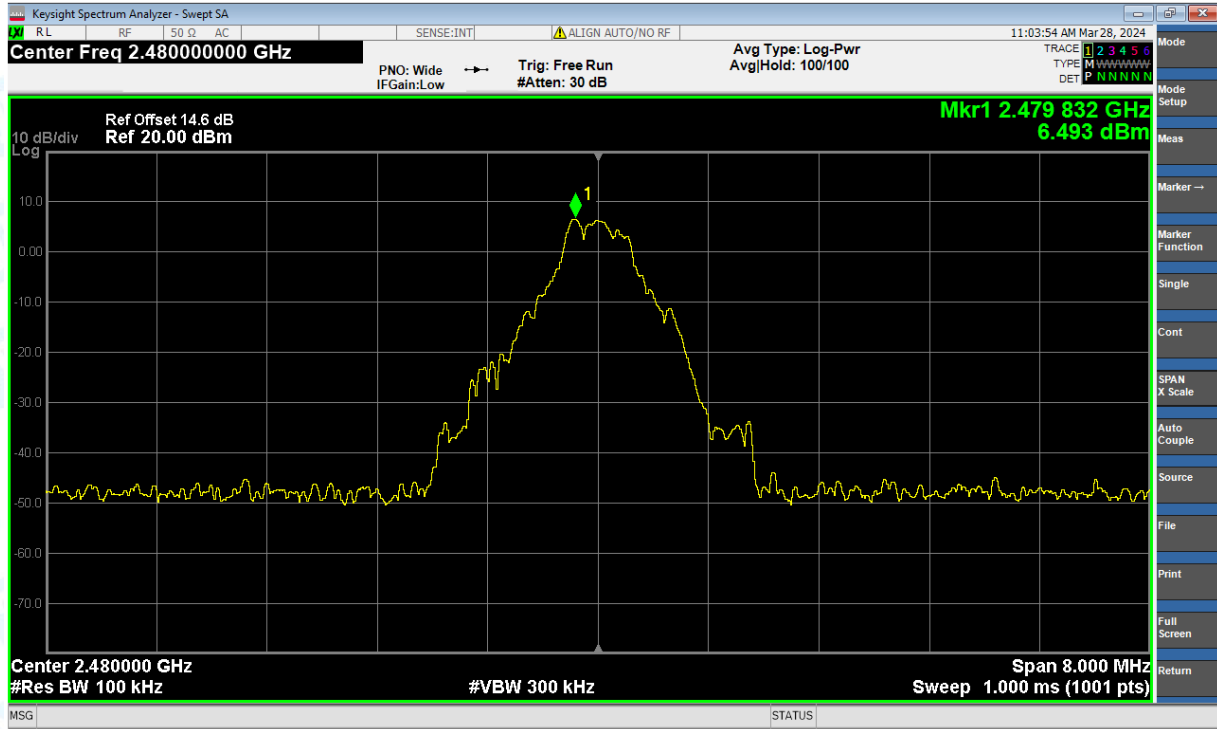
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



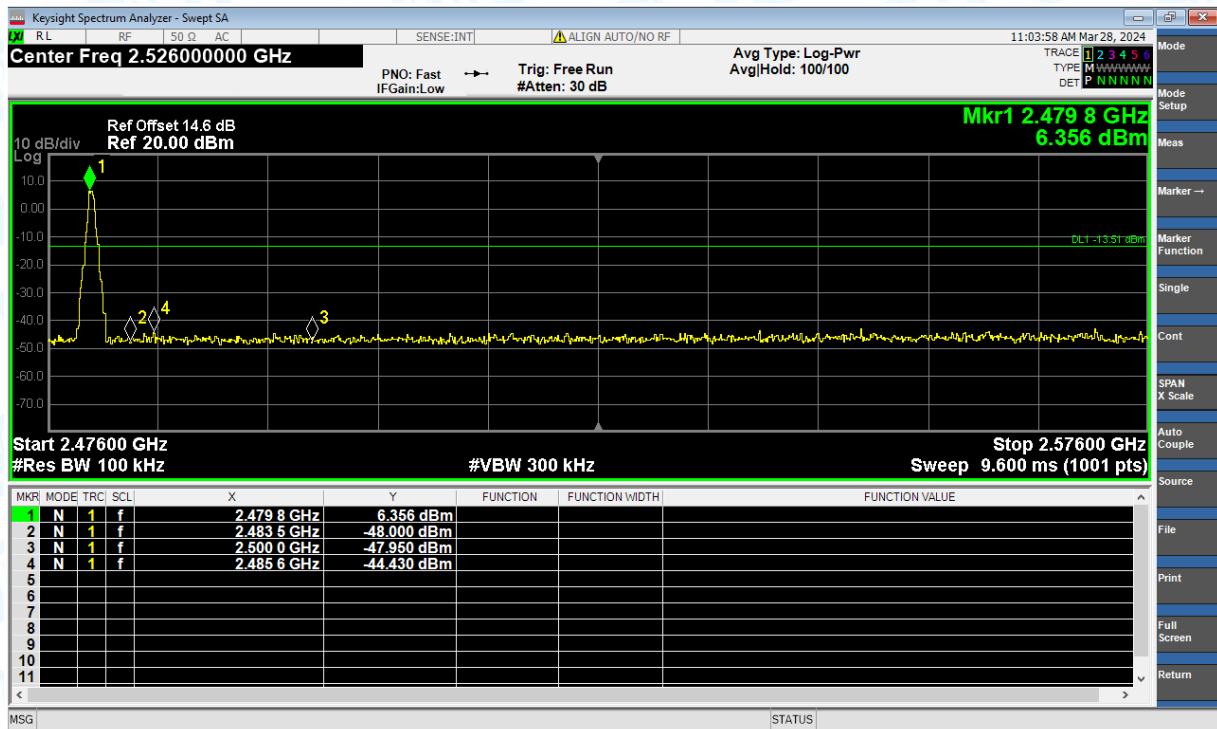
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



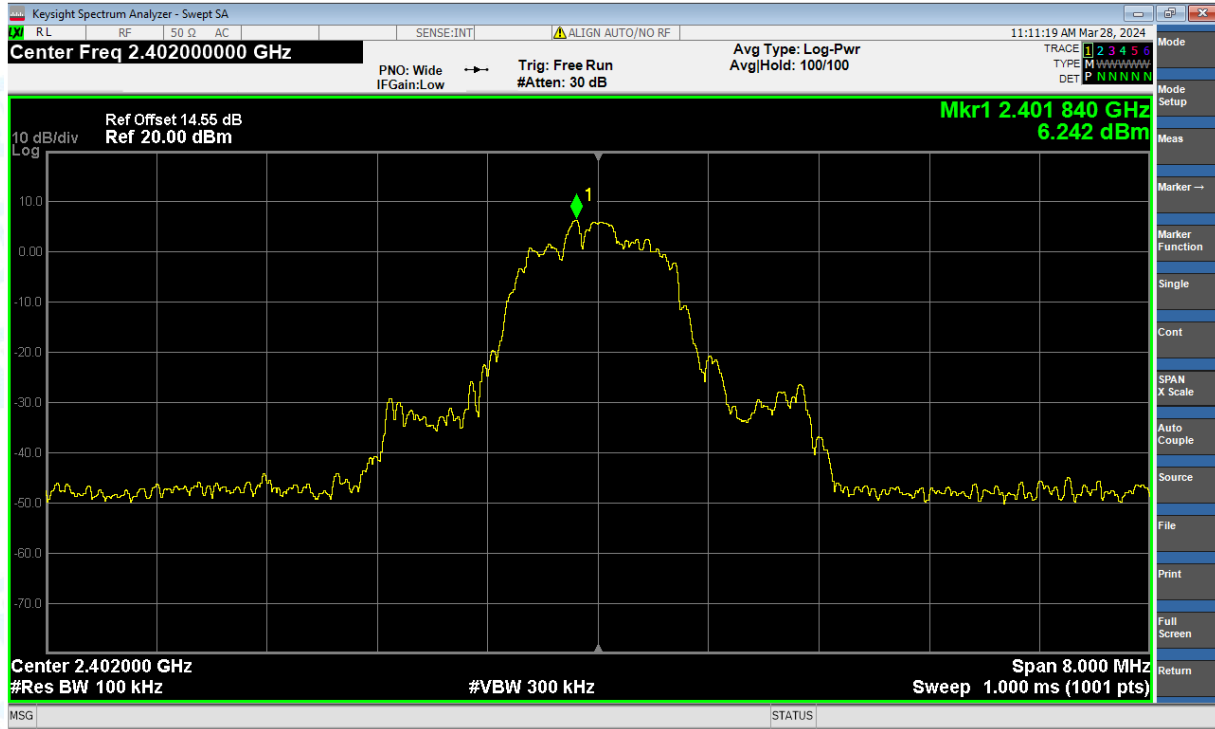
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



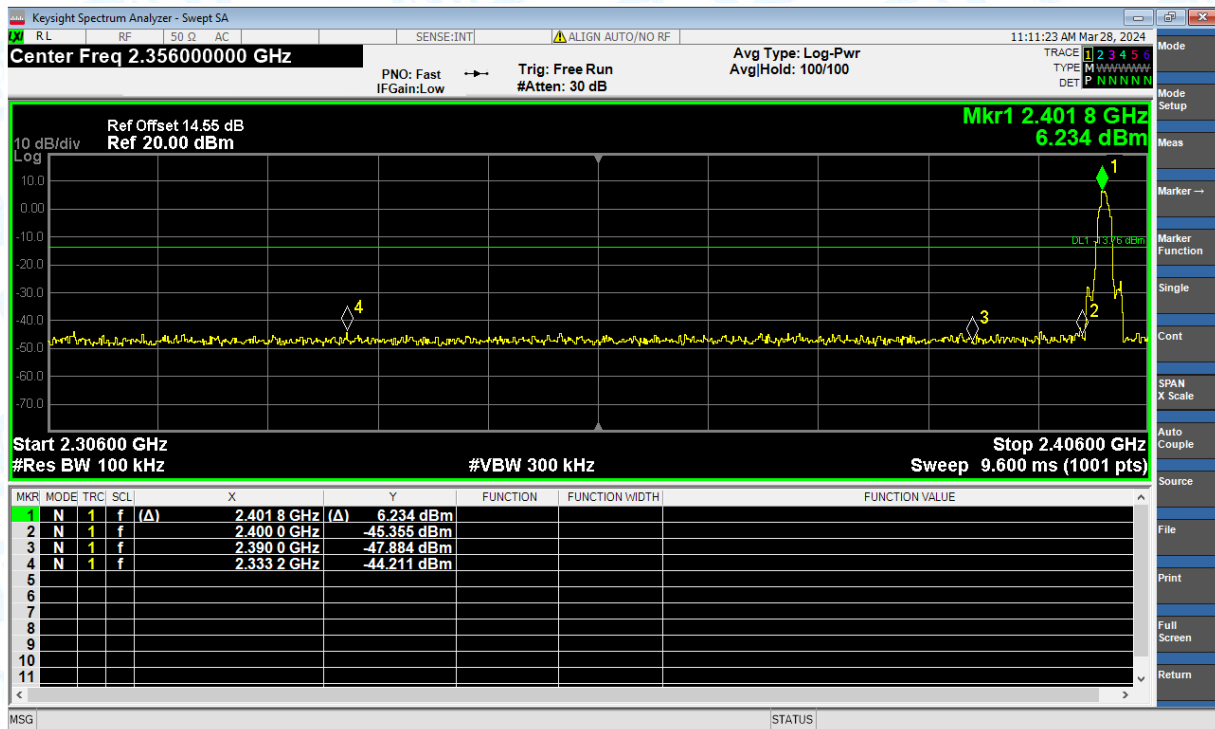
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



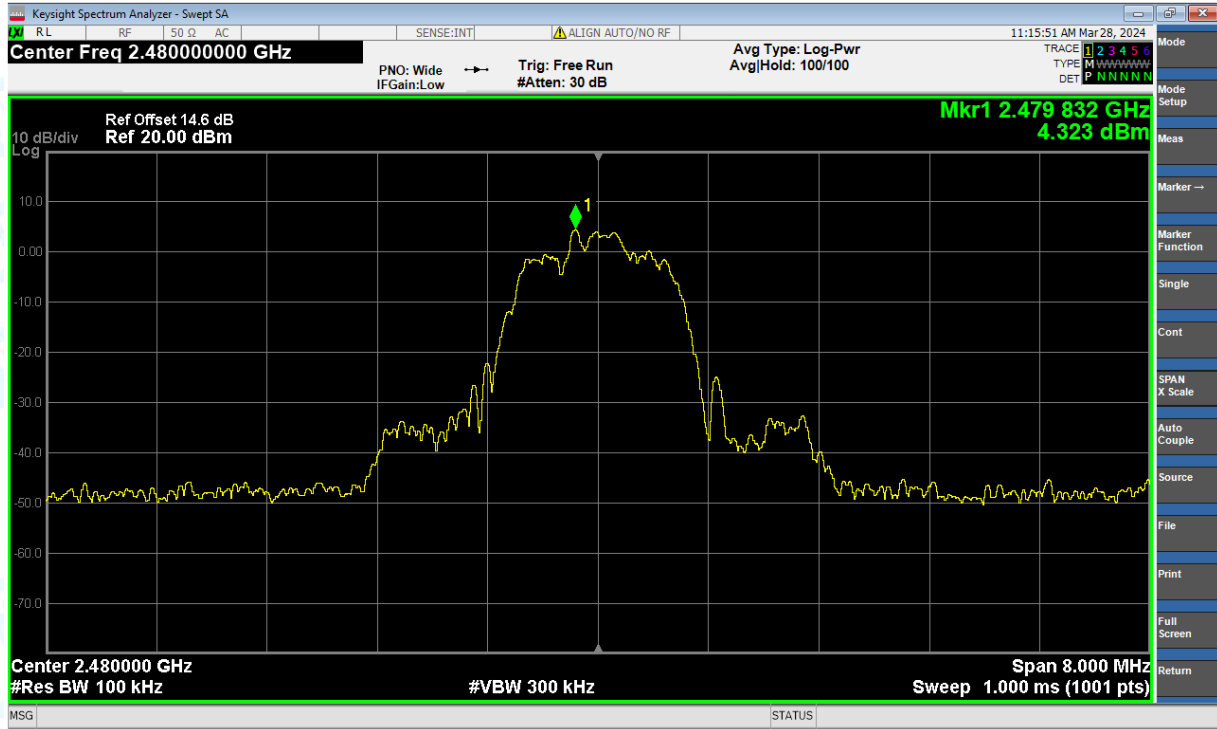
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



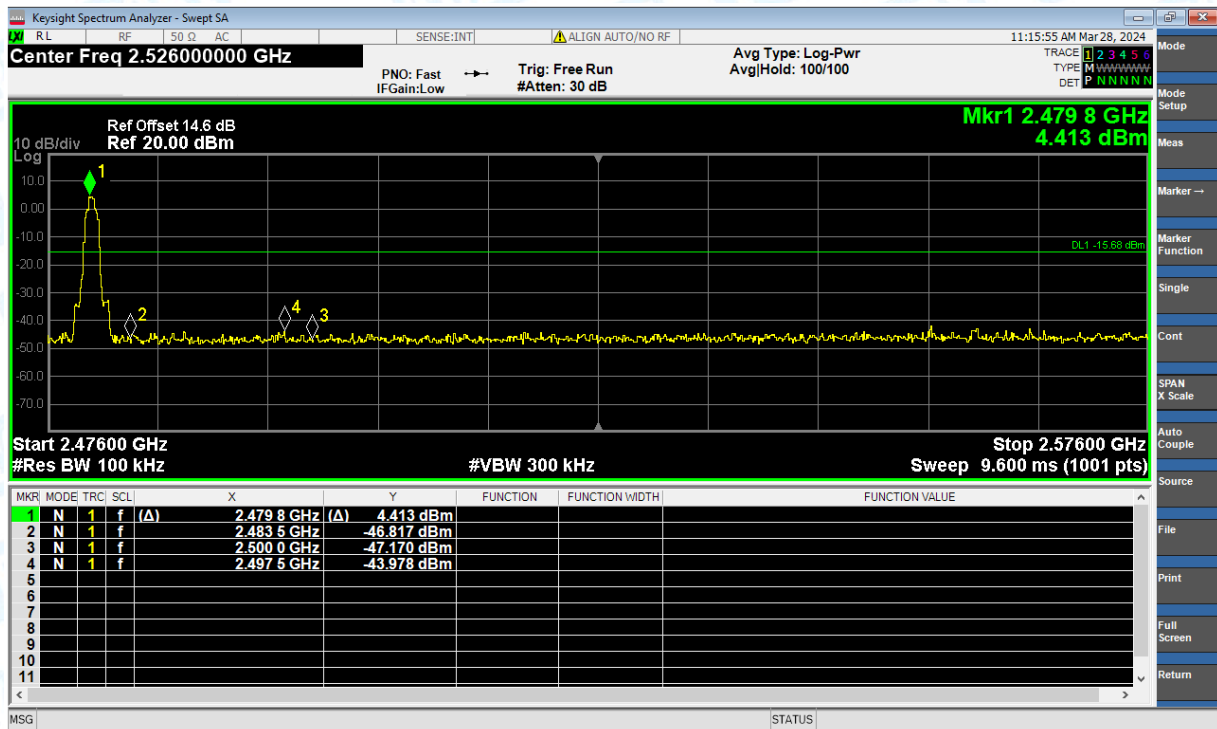
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



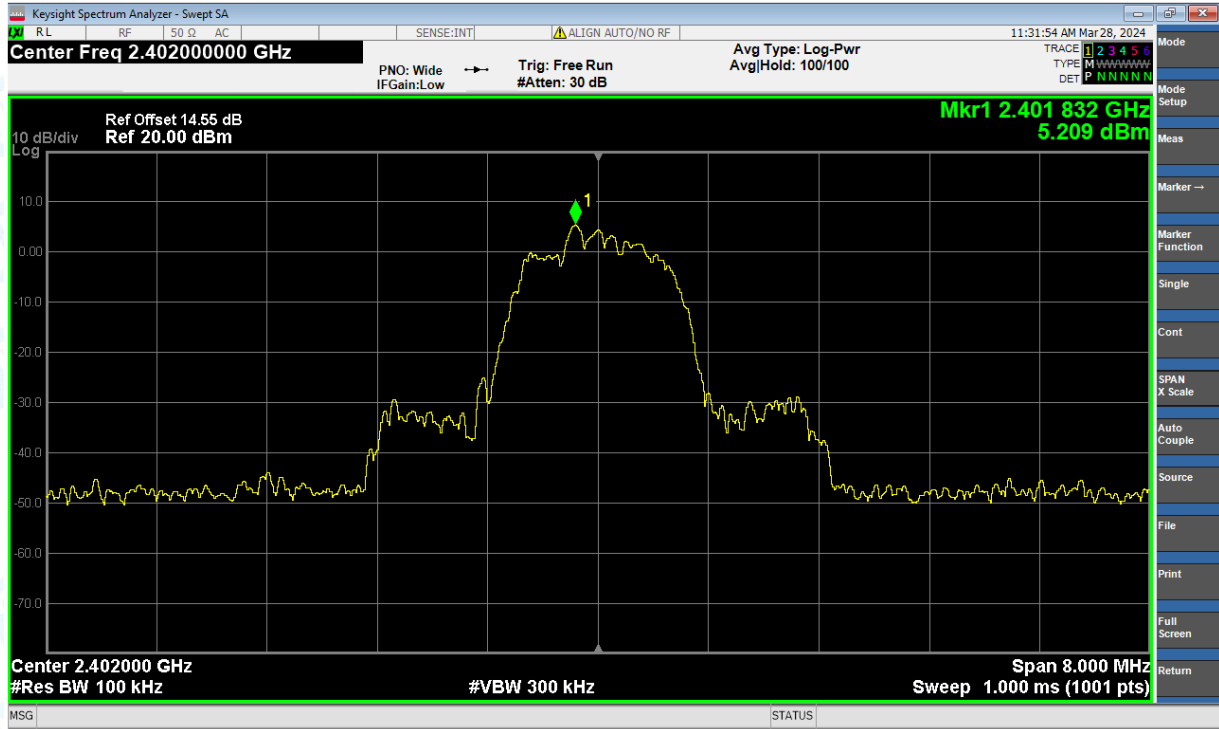
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



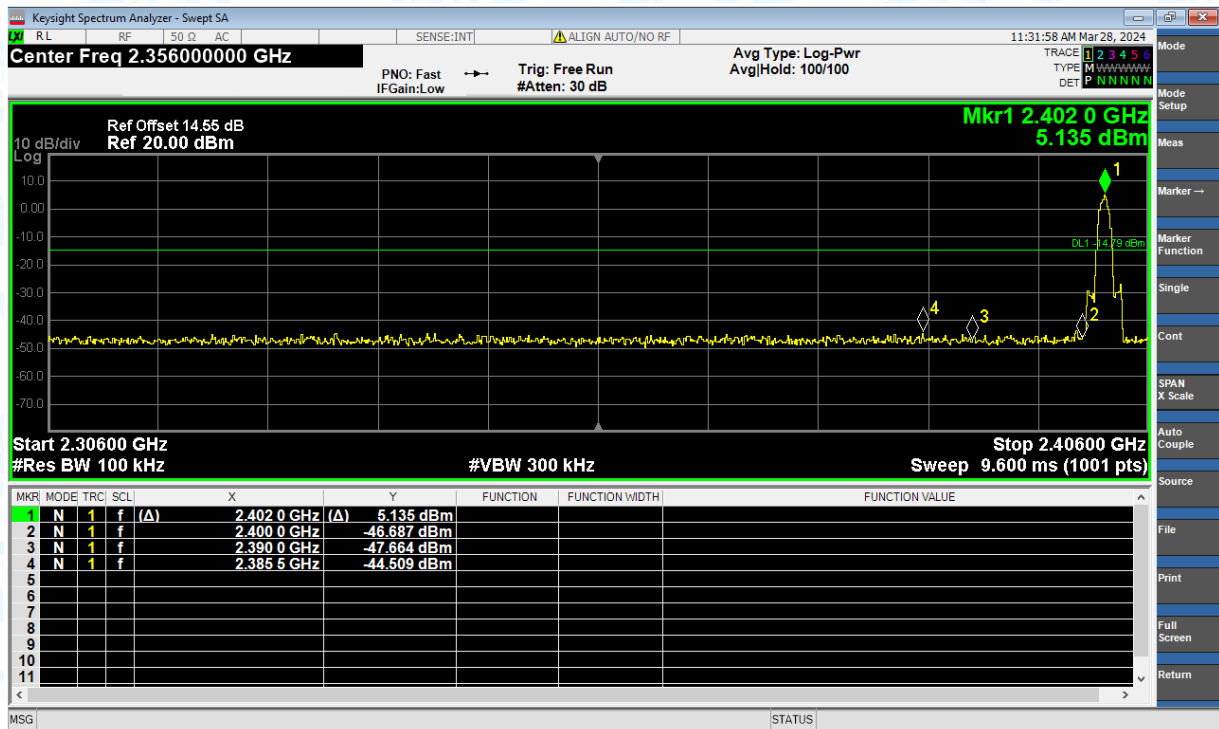
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



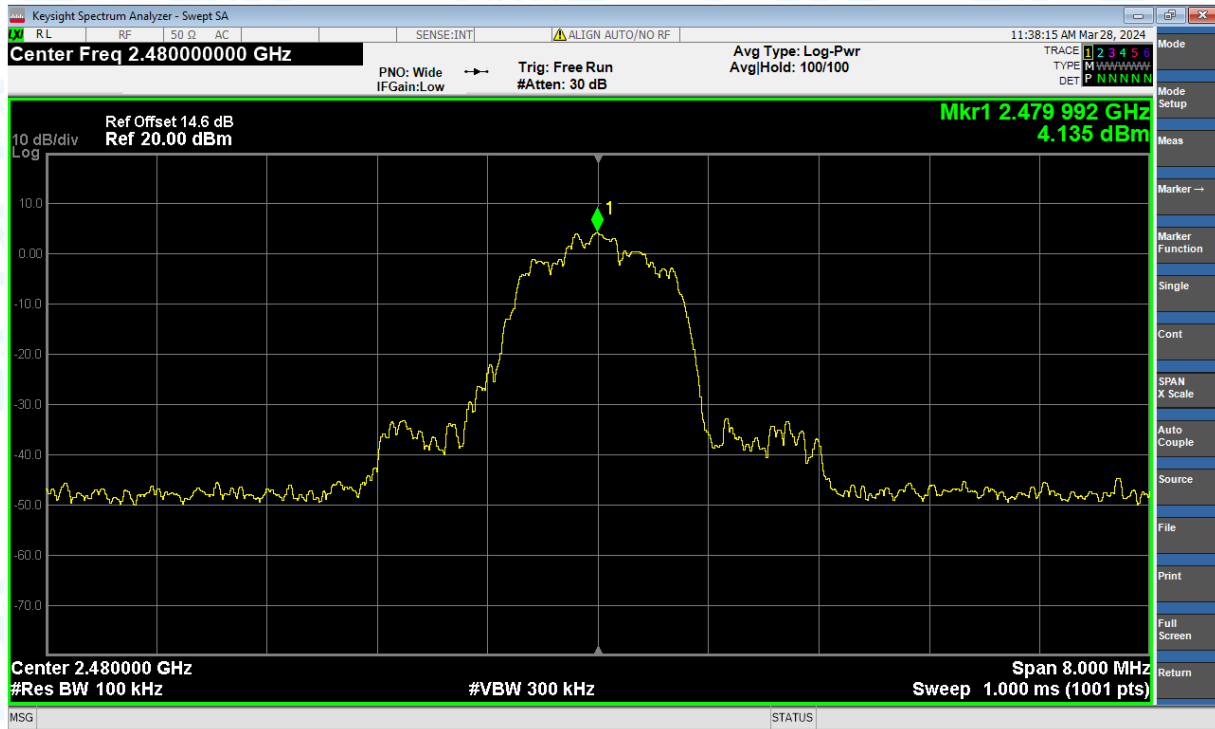
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



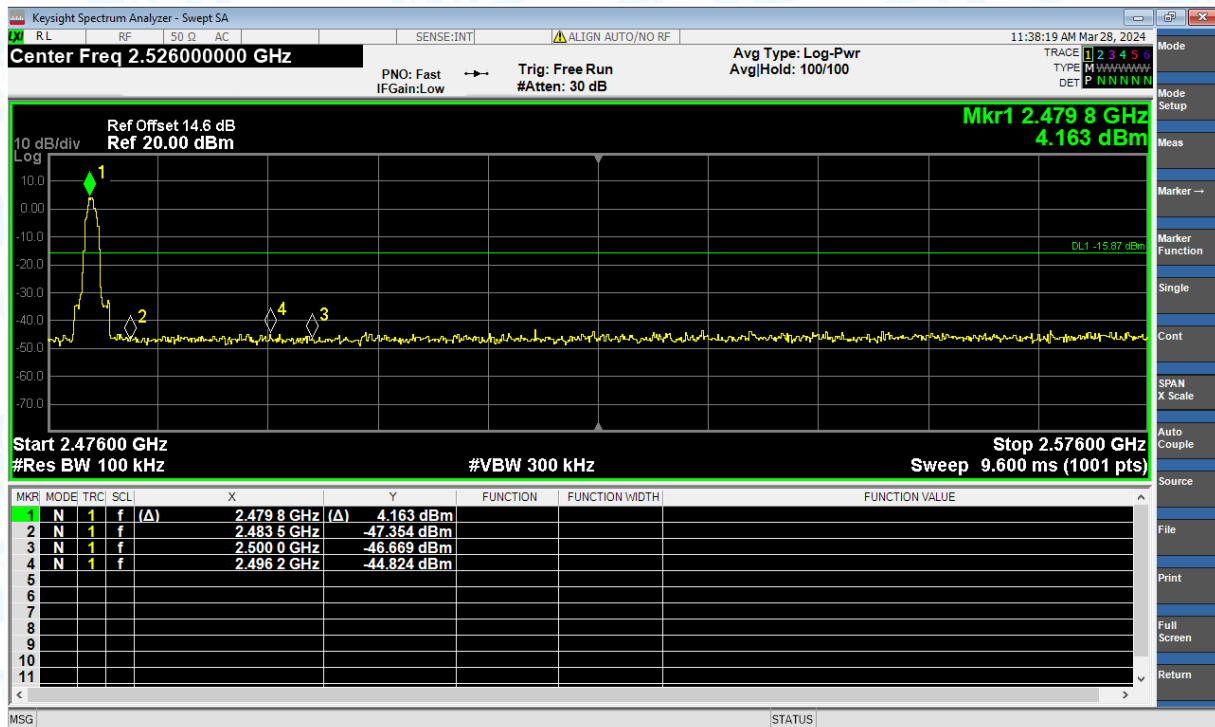
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6. Band Edge(Hopping)

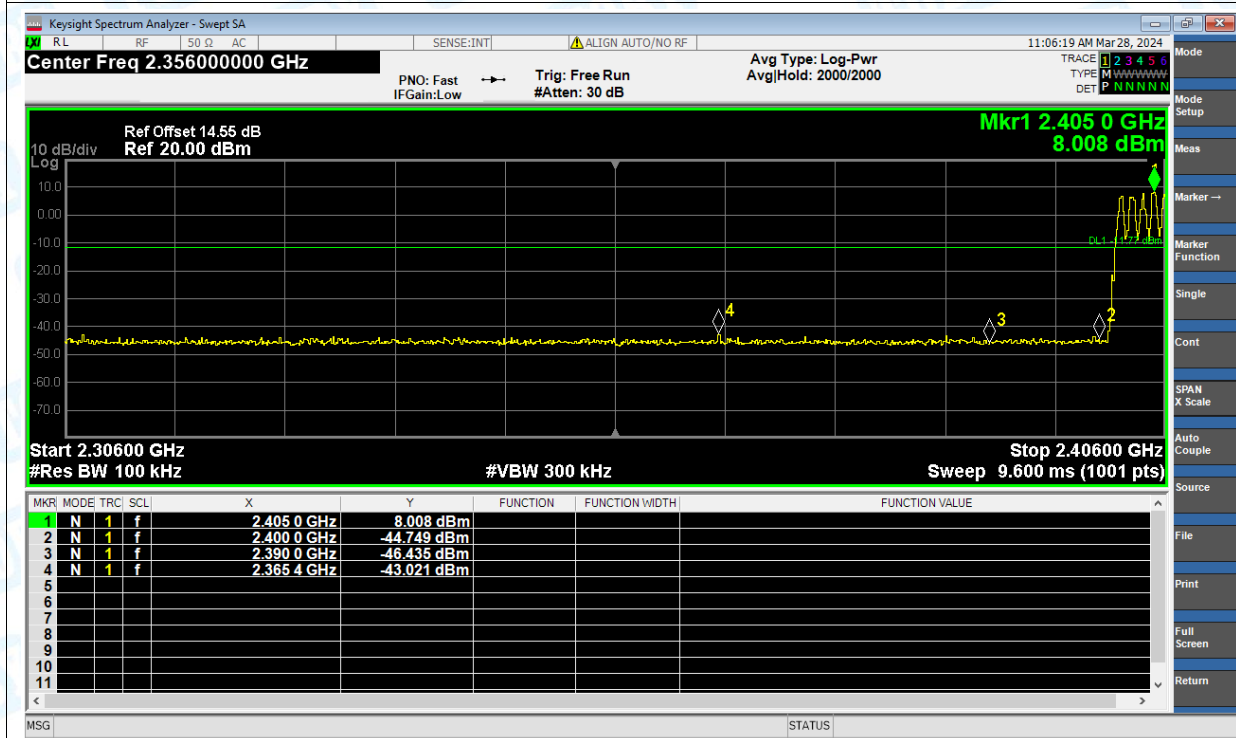
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-51.25	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-50.53	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-48.9	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-47.26	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-49.17	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-46.42	-20	Pass

Test Graphs

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



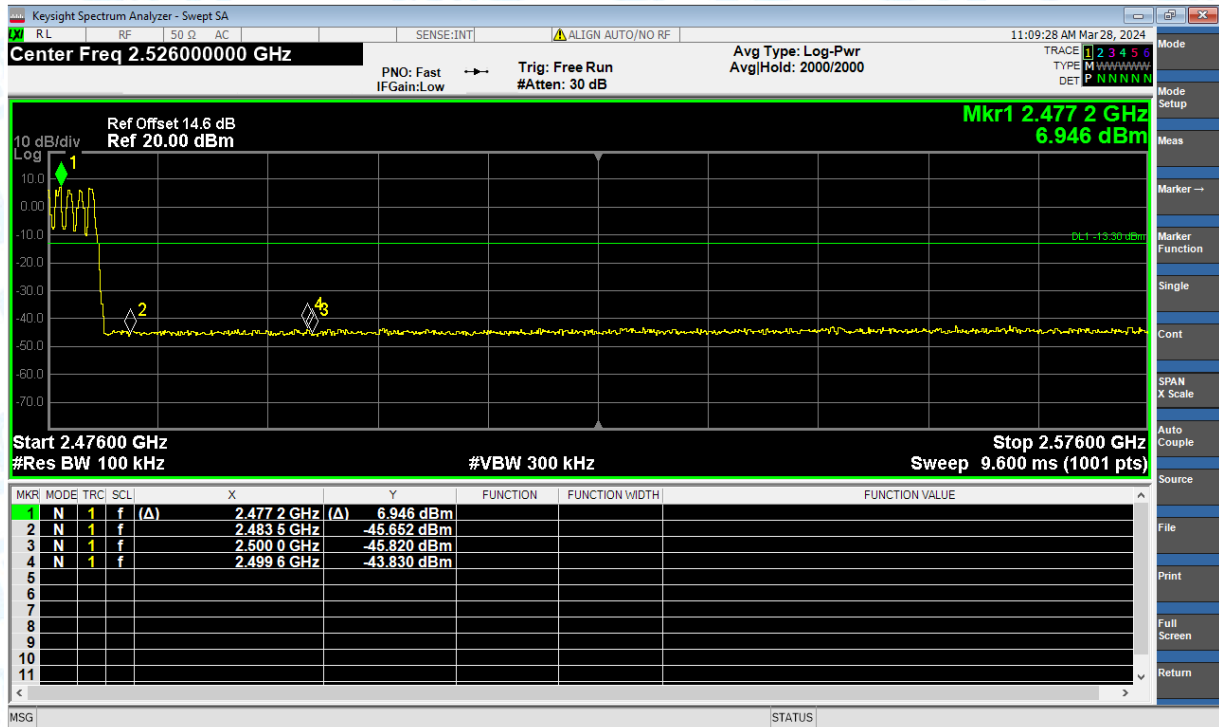
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



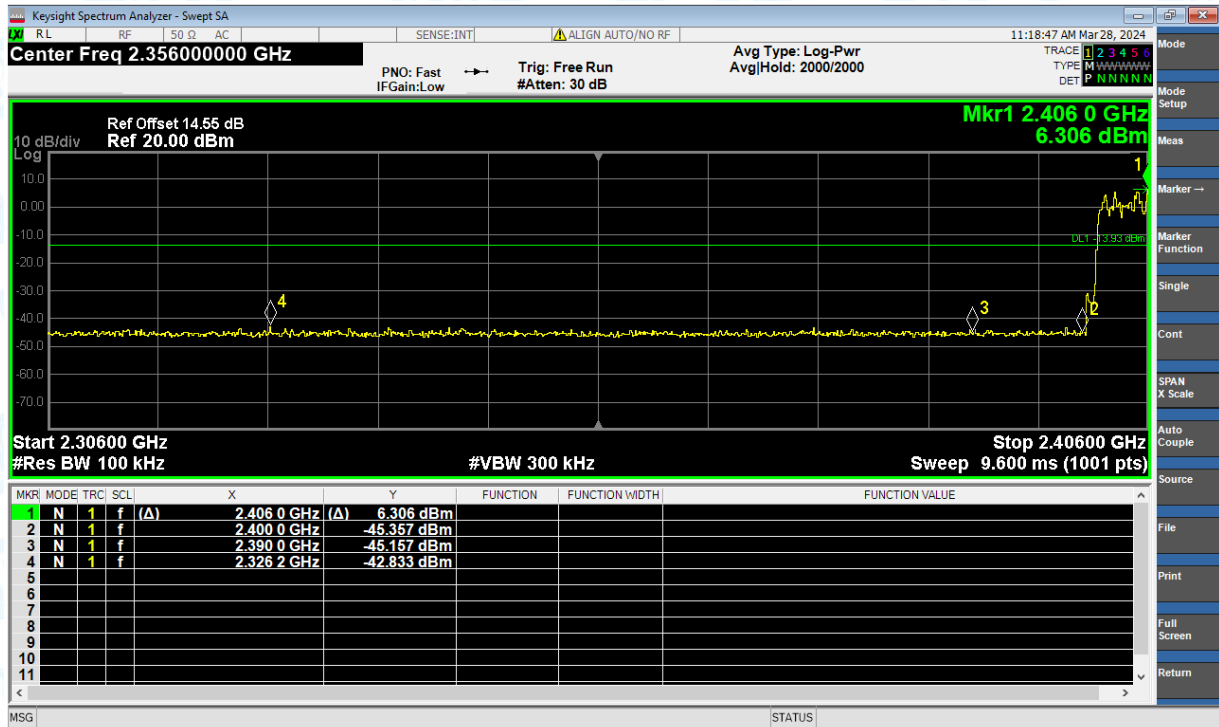
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



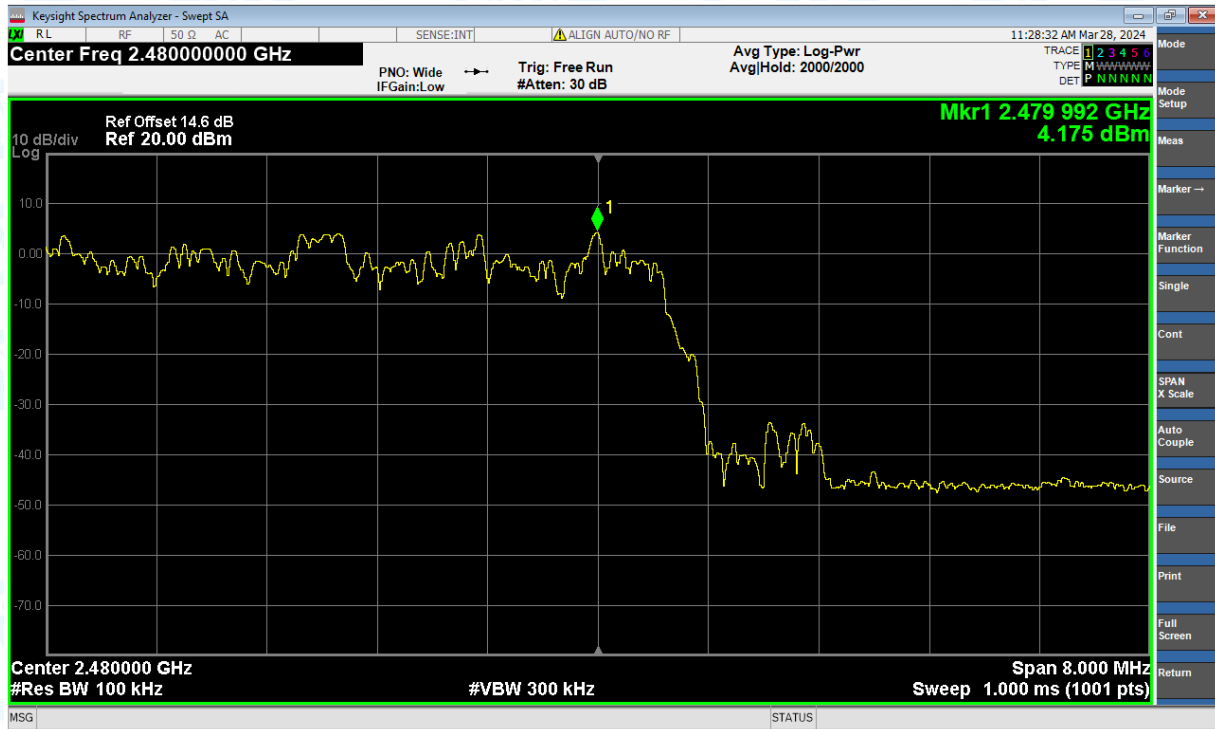
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



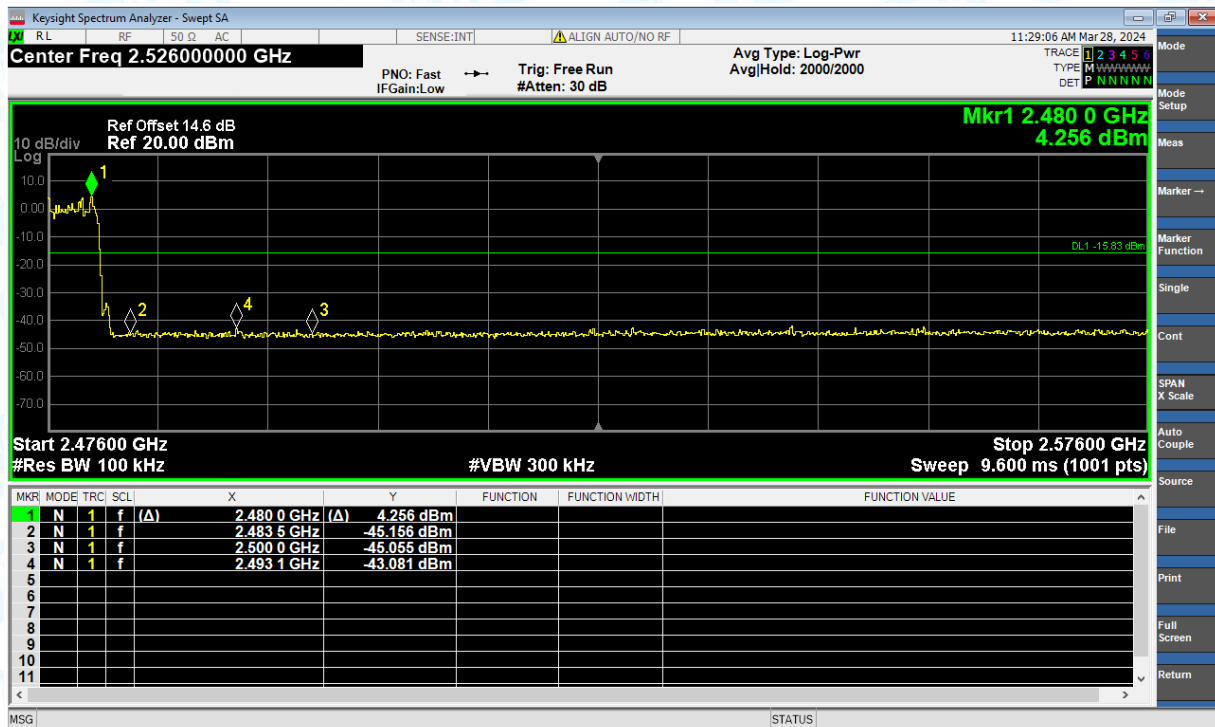
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



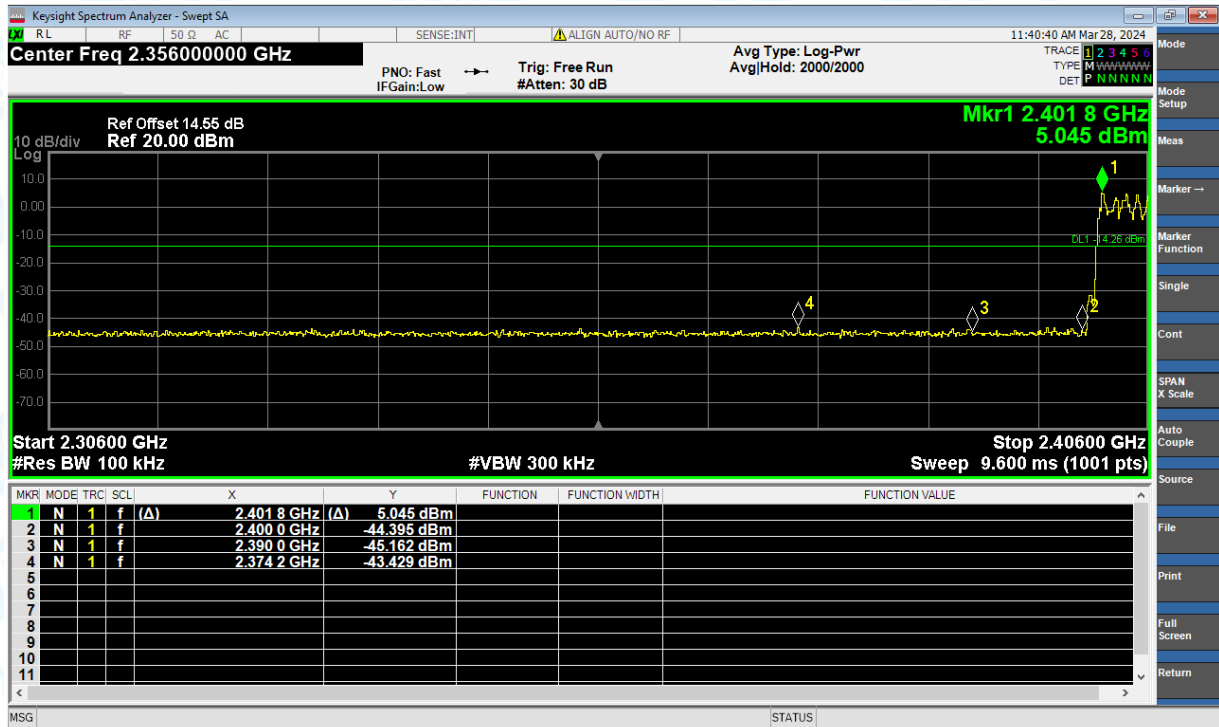
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



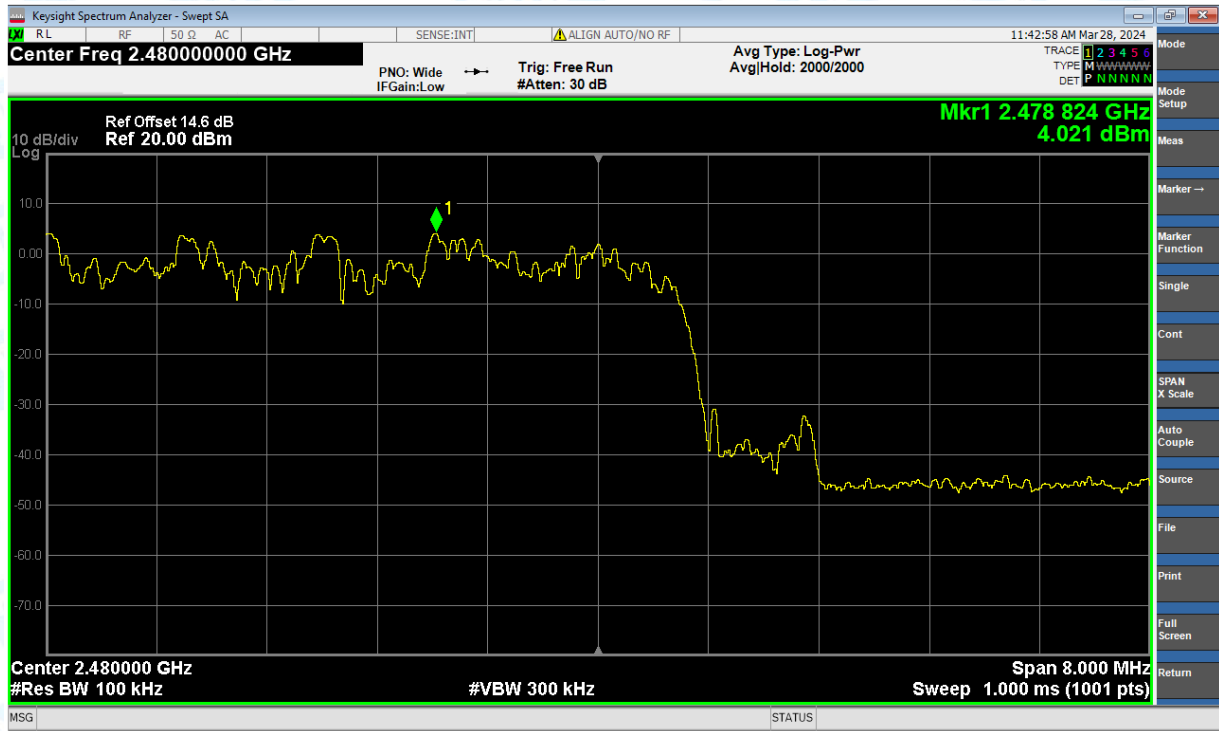
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



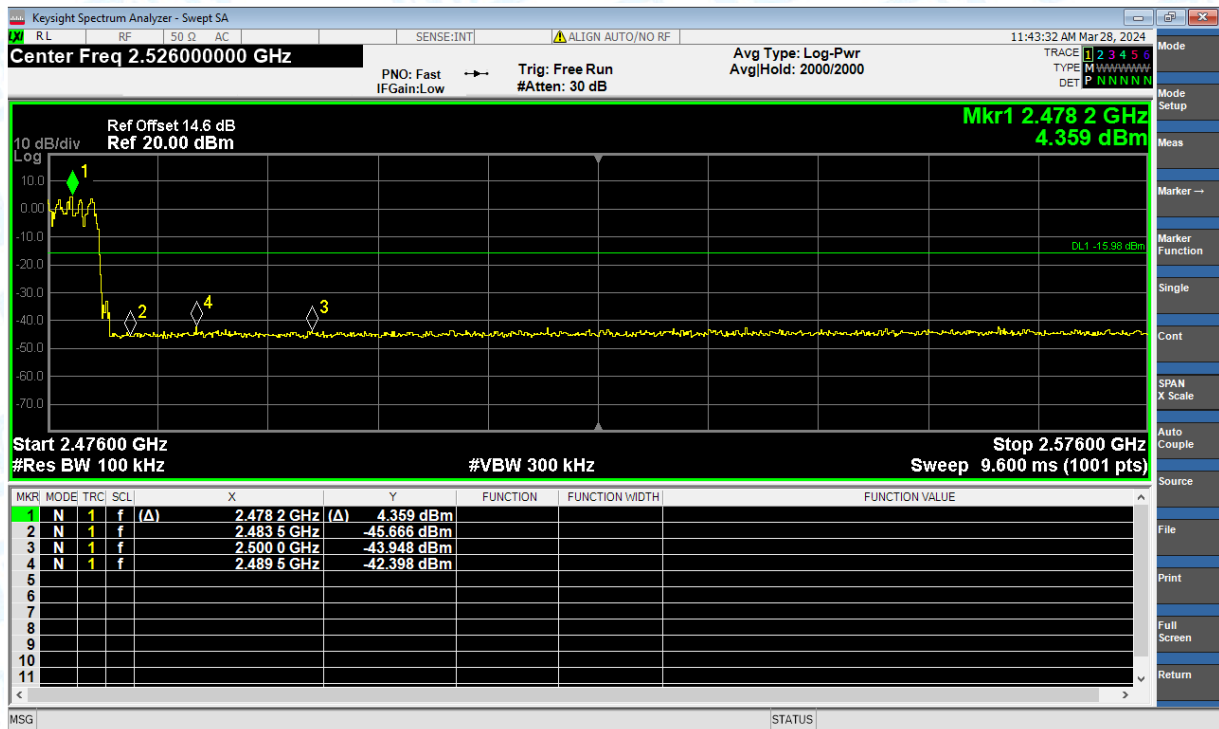
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

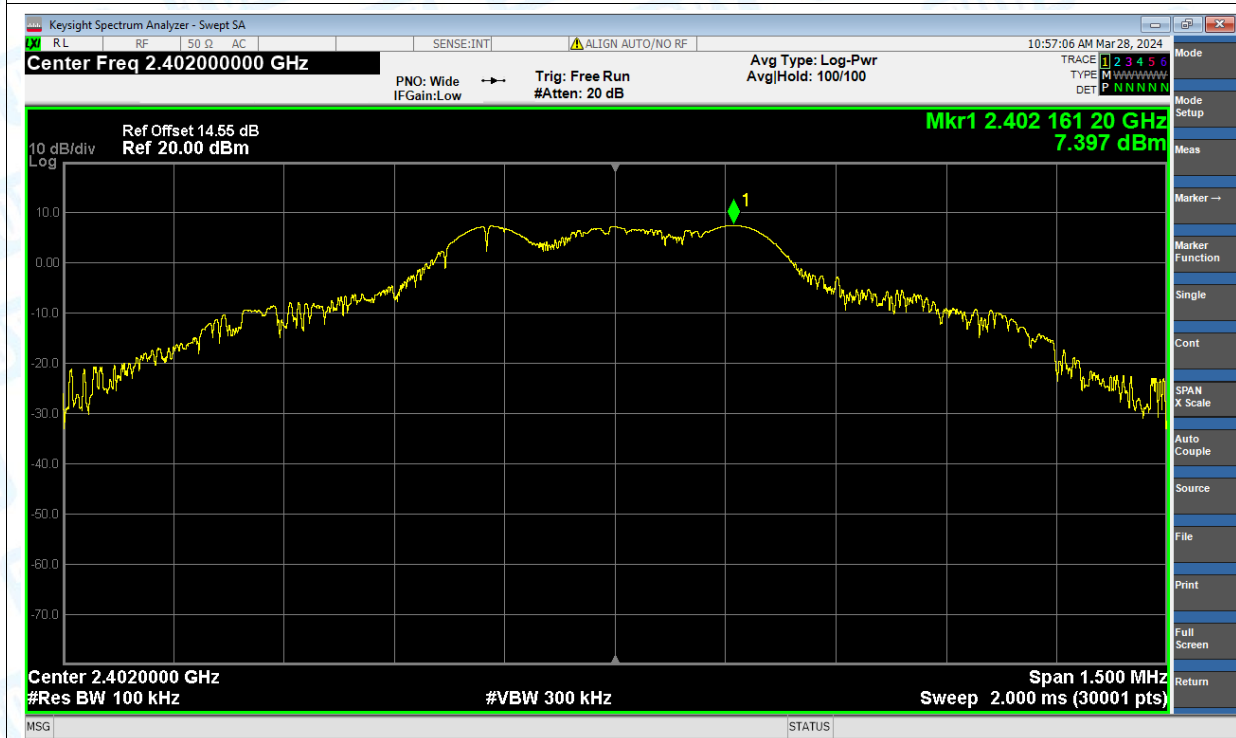


7. Conducted RF Spurious Emission

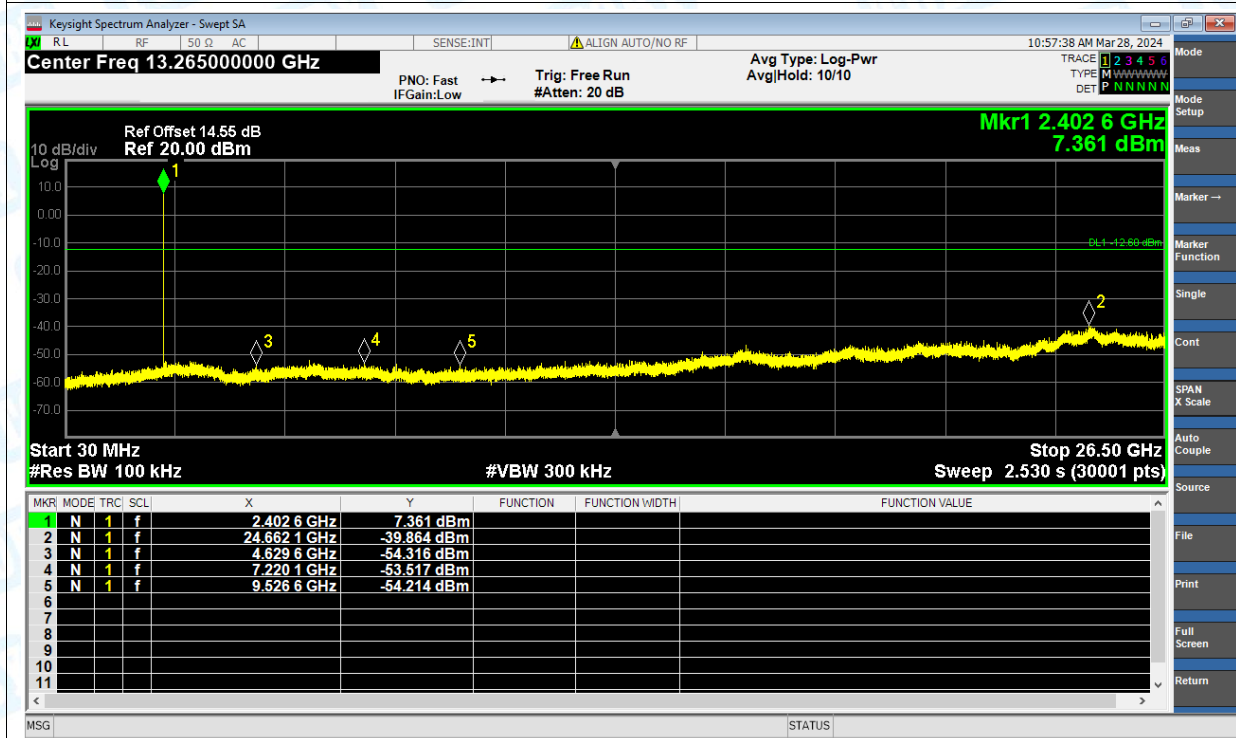
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-47.26	-20	Pass
NVNT	1-DH1	2441	Ant1	-47.46	-20	Pass
NVNT	1-DH1	2480	Ant1	-45.6	-20	Pass
NVNT	2-DH1	2402	Ant1	-45.13	-20	Pass
NVNT	2-DH1	2441	Ant1	-44.29	-20	Pass
NVNT	2-DH1	2480	Ant1	-44.05	-20	Pass
NVNT	3-DH1	2402	Ant1	-44.88	-20	Pass
NVNT	3-DH1	2441	Ant1	-45.45	-20	Pass
NVNT	3-DH1	2480	Ant1	-43.65	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



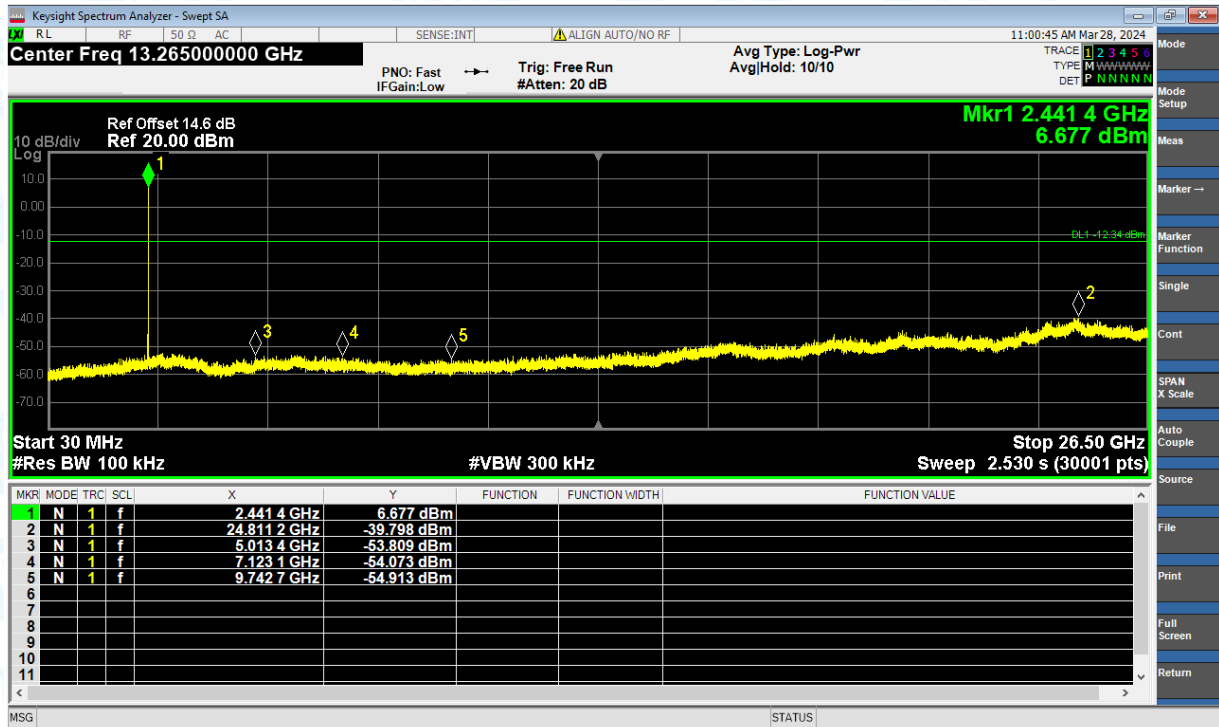
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



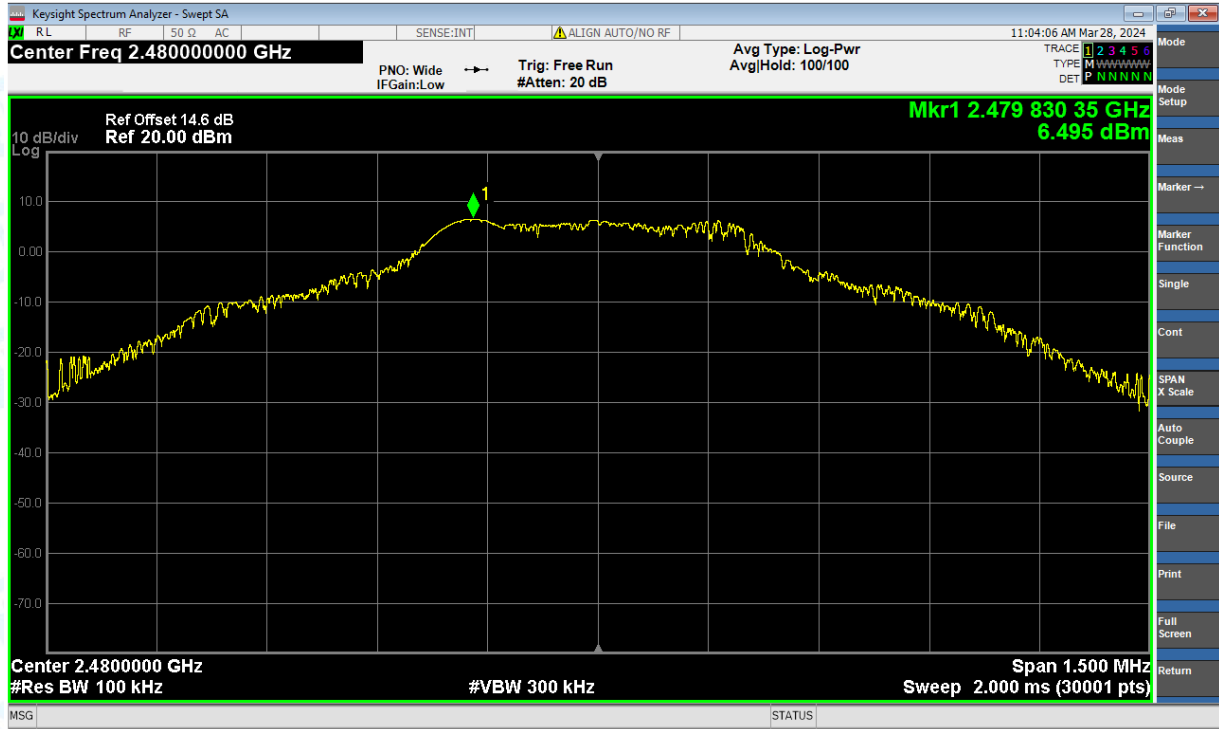
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



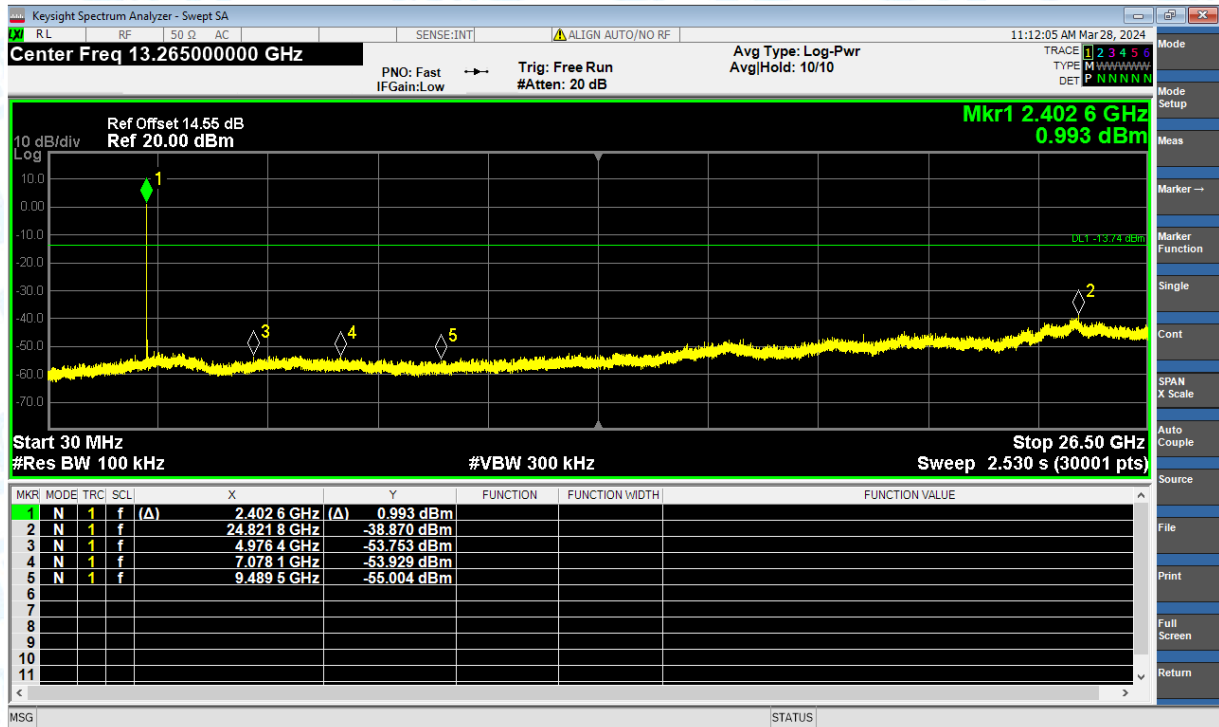
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



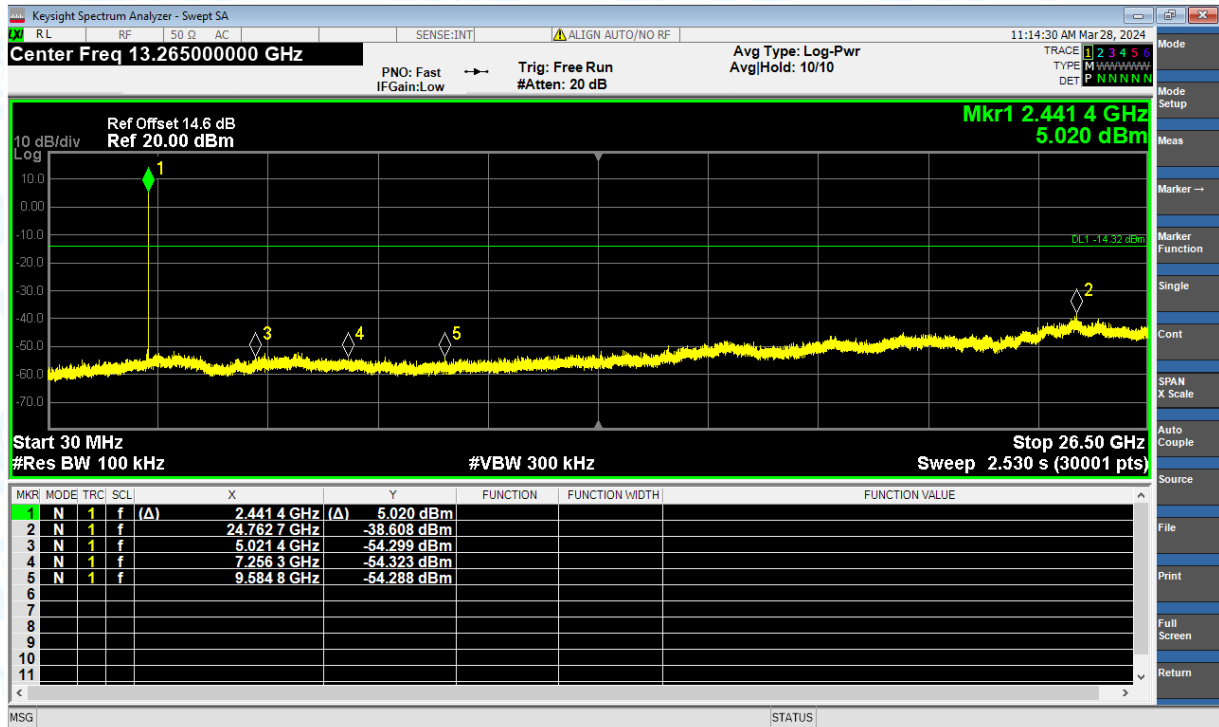
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



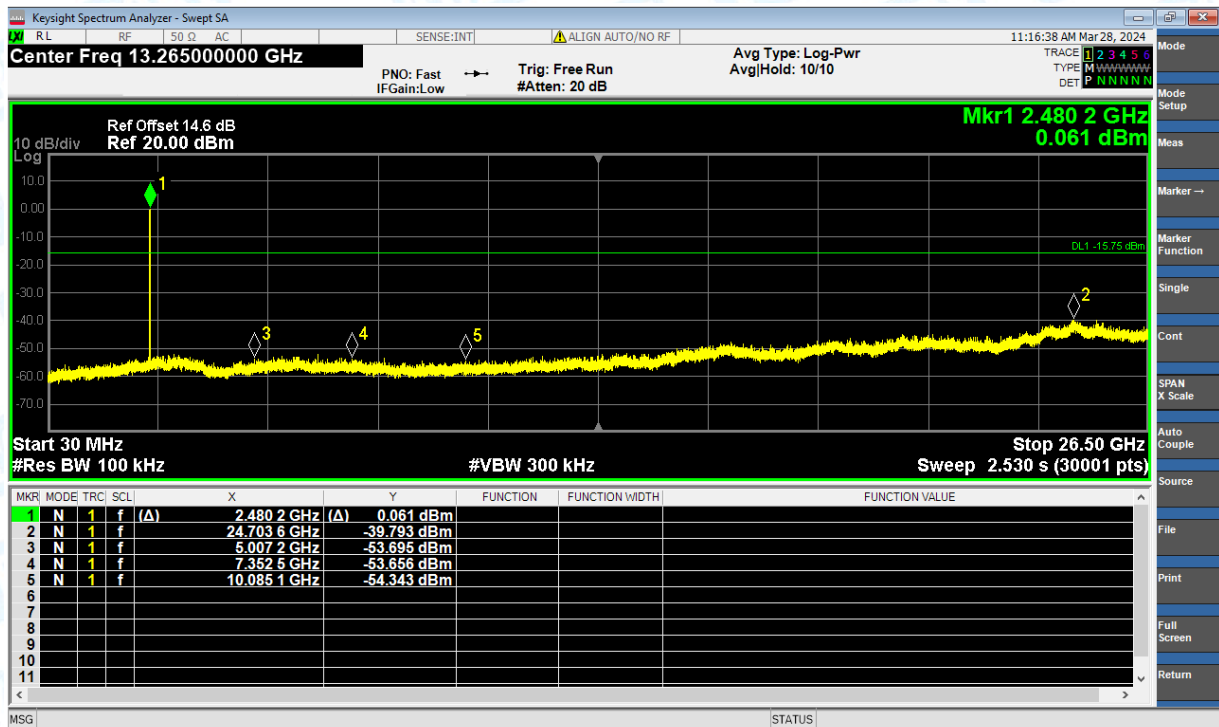
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



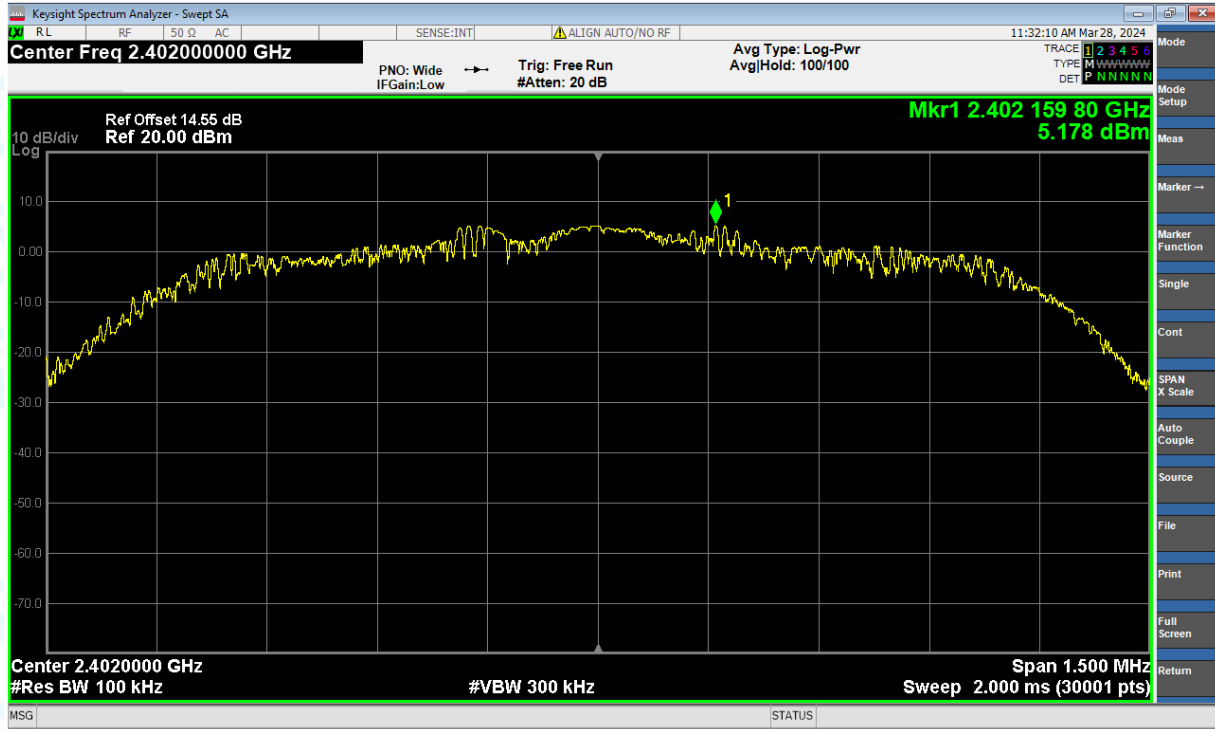
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



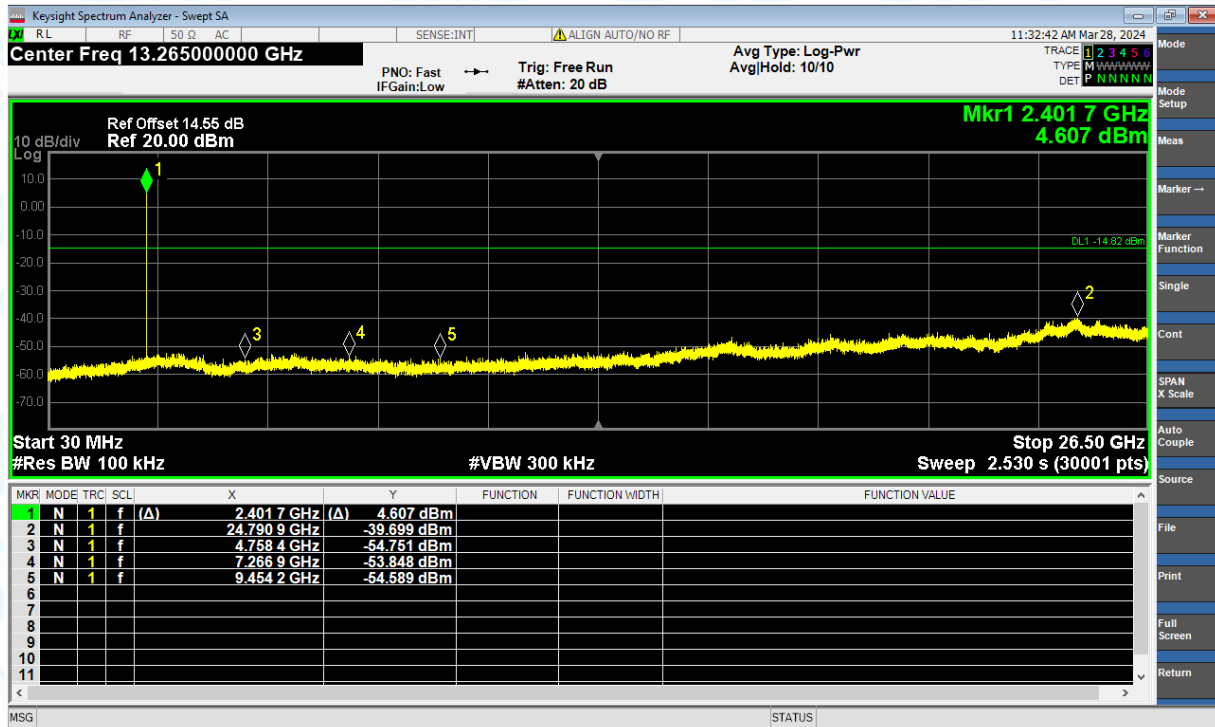
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



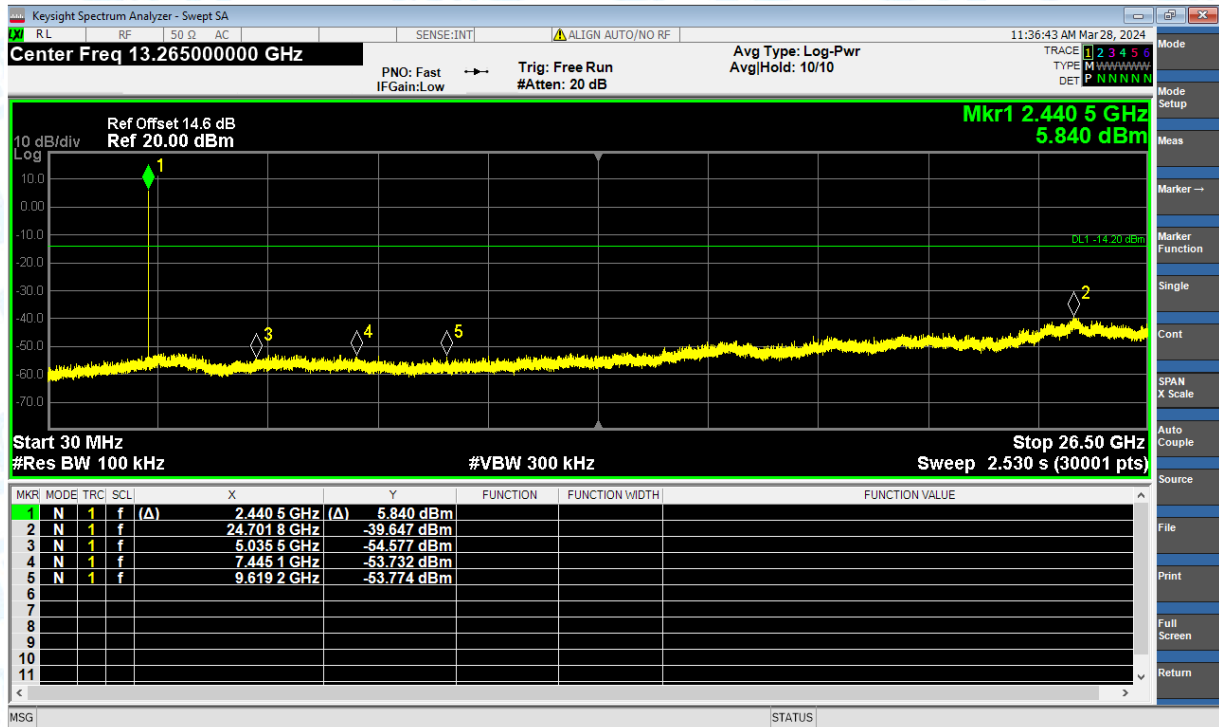
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



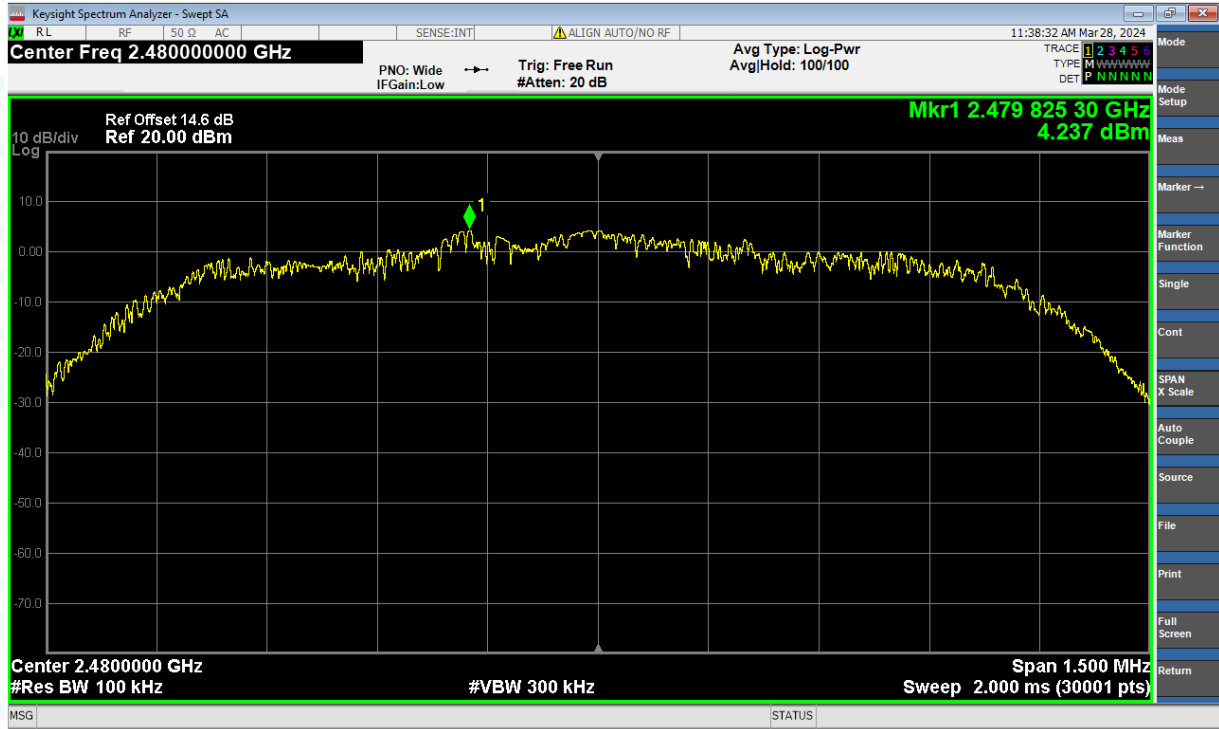
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



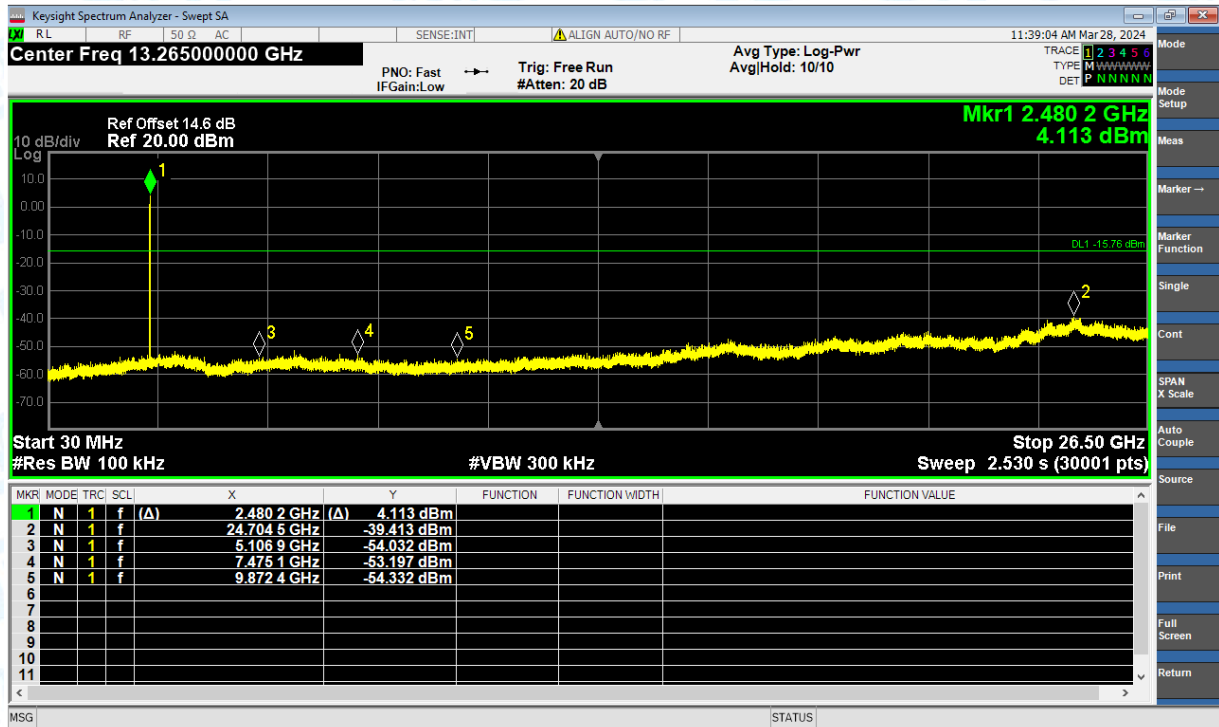
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

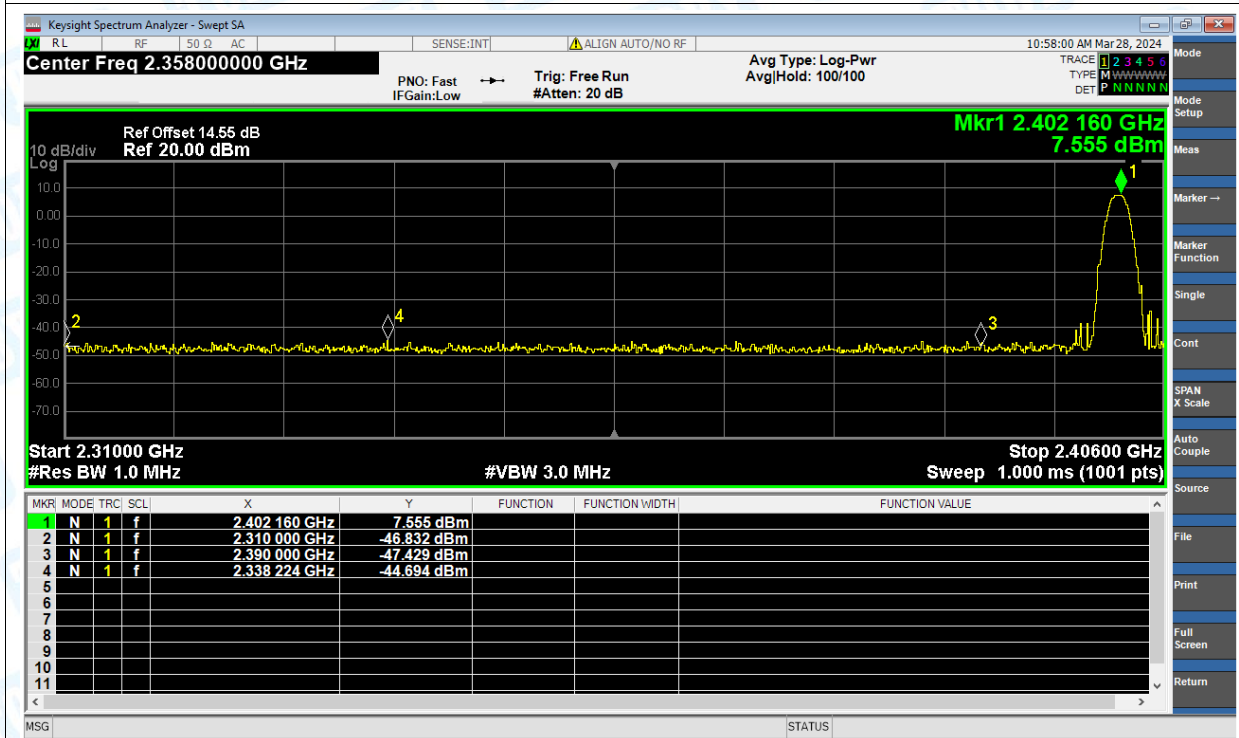


8. Restrict Band

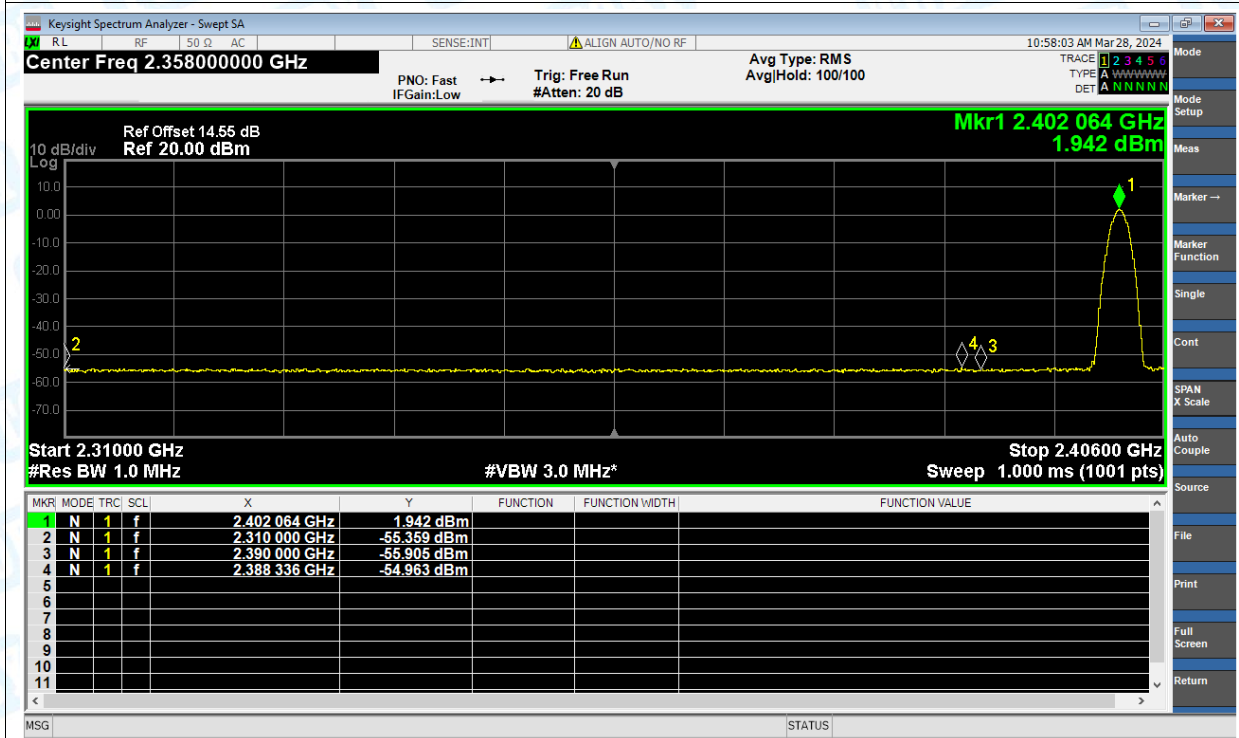
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-46.83	2	-	50.43	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-55.36	2	4.95	46.85	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2338.224	-44.69	2	-	52.57	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2388.336	-54.96	2	4.95	47.25	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-47.43	2	-	49.83	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.91	2	4.95	46.3	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-47.01	2	-	50.25	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.29	2	4.84	46.81	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.776	-36.85	2	-	60.41	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.184	-53.93	2	4.84	48.17	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-47.12	2	-	50.14	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.1	2	4.84	47	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.05	2	-	50.21	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-55.82	2	4.95	46.39	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2314.896	-44.59	2	-	52.67	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2346	-54.52	2	4.95	47.69	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.7	2	-	49.56	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.54	2	4.95	46.67	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-46.95	2	-	50.31	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-54.92	2	4.95	47.29	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.992	-37.81	2	-	59.45	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.656	-53.68	2	4.95	48.53	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-46.05	2	-	51.21	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.47	2	4.95	46.74	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-46.72	2	-	50.54	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-55.05	2	5.06	47.27	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2388.72	-44.44	2	-	52.82	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2354.352	-54.82	2	5.06	47.5	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-48.26	2	-	49	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.8	2	5.06	46.52	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-44.65	2	-	52.61	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-54.14	2	4.95	48.07	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.824	-37.16	2	-	60.1	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.944	-53.93	2	4.95	48.28	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-47.94	2	-	49.32	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.09	2	4.95	47.12	Average	54	Pass

Test Graphs

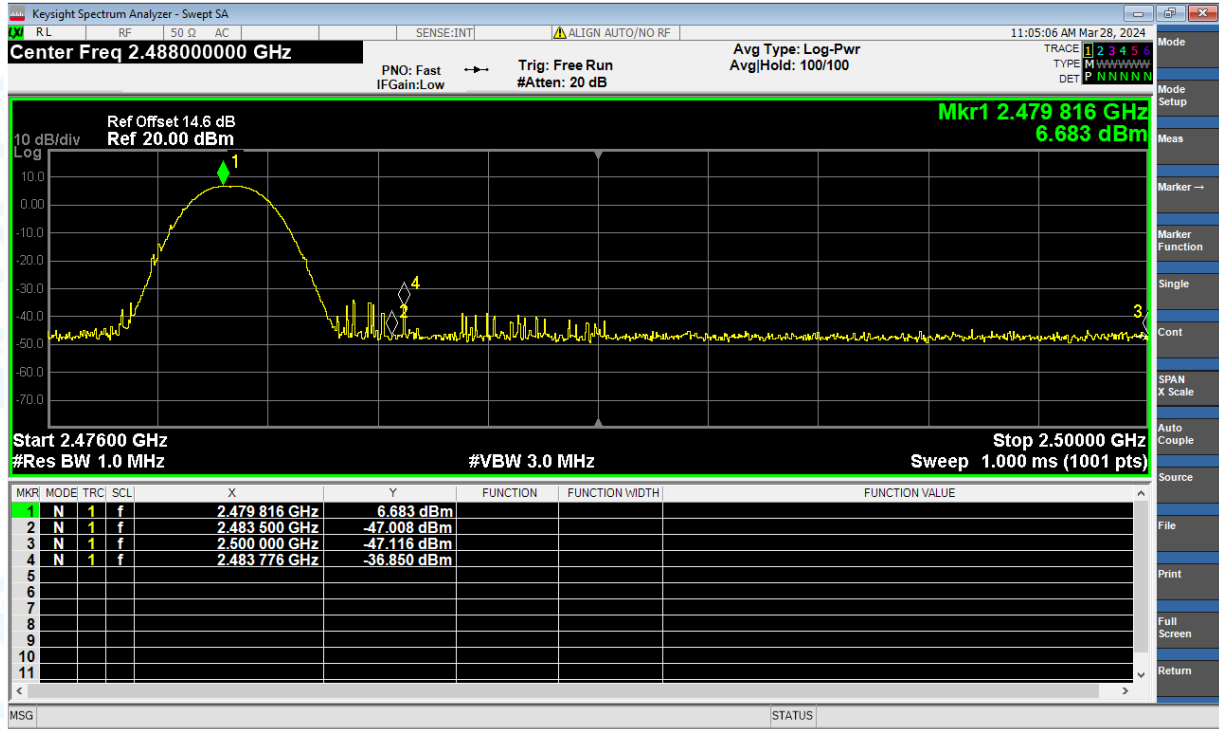
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



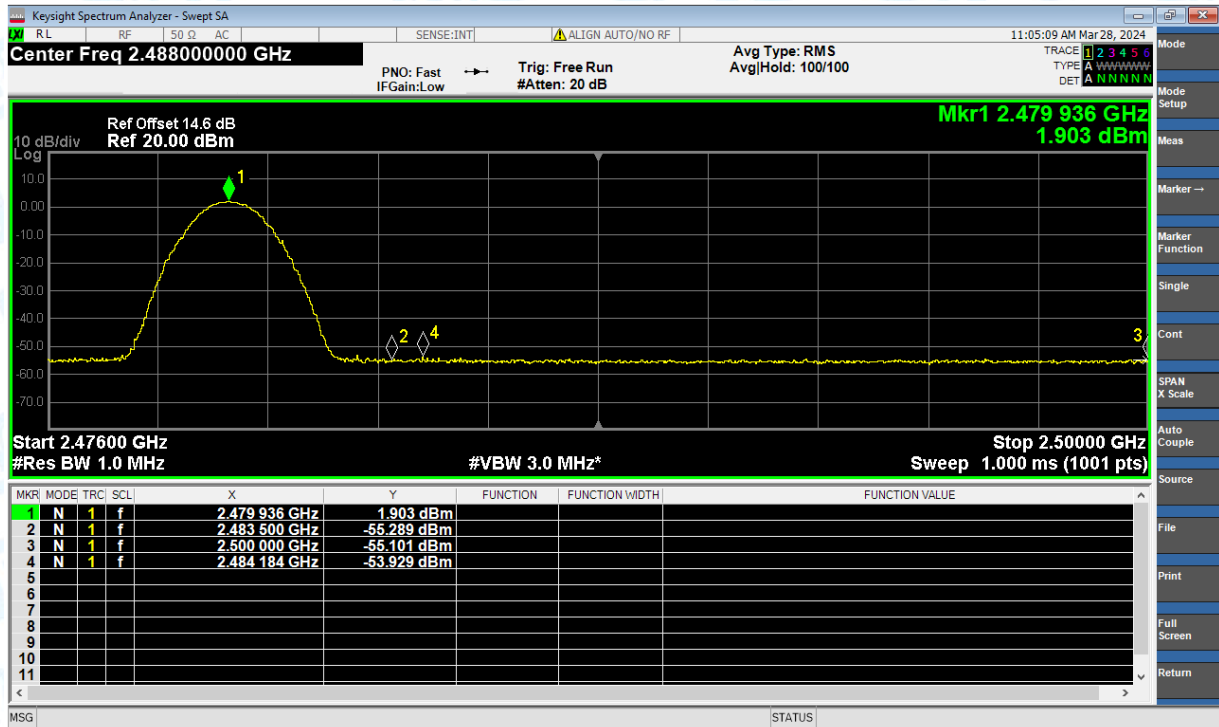
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



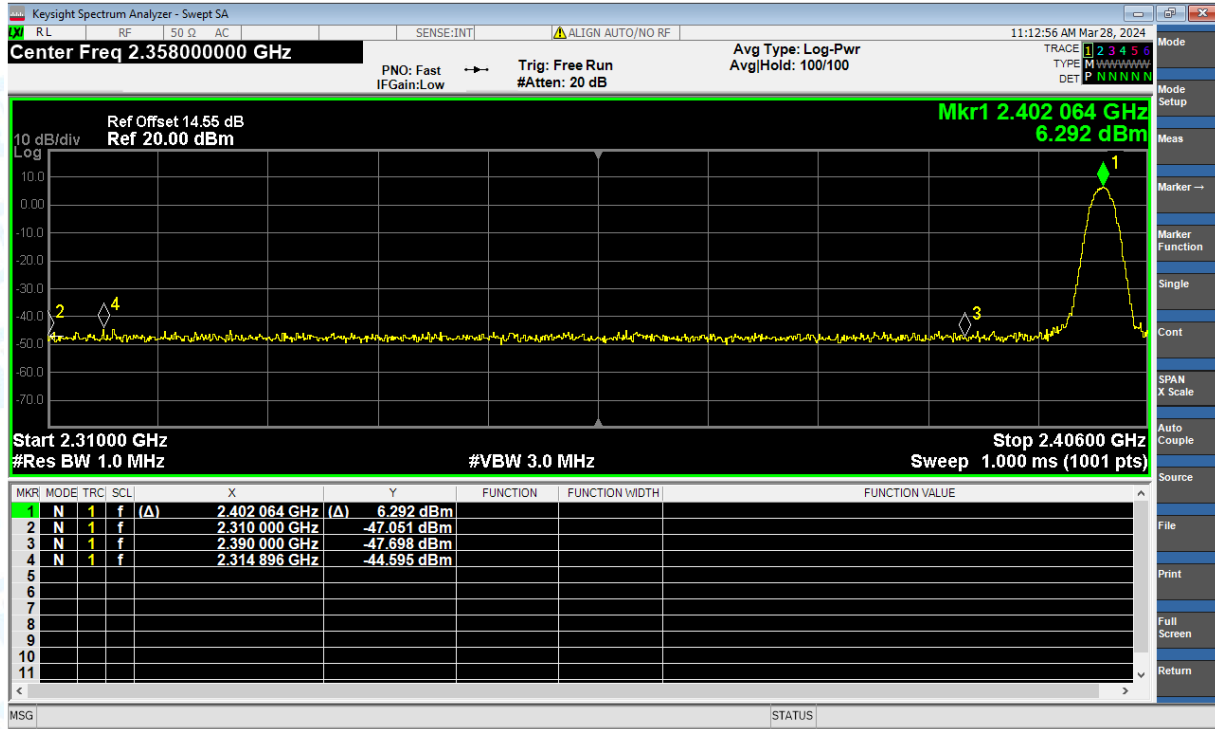
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



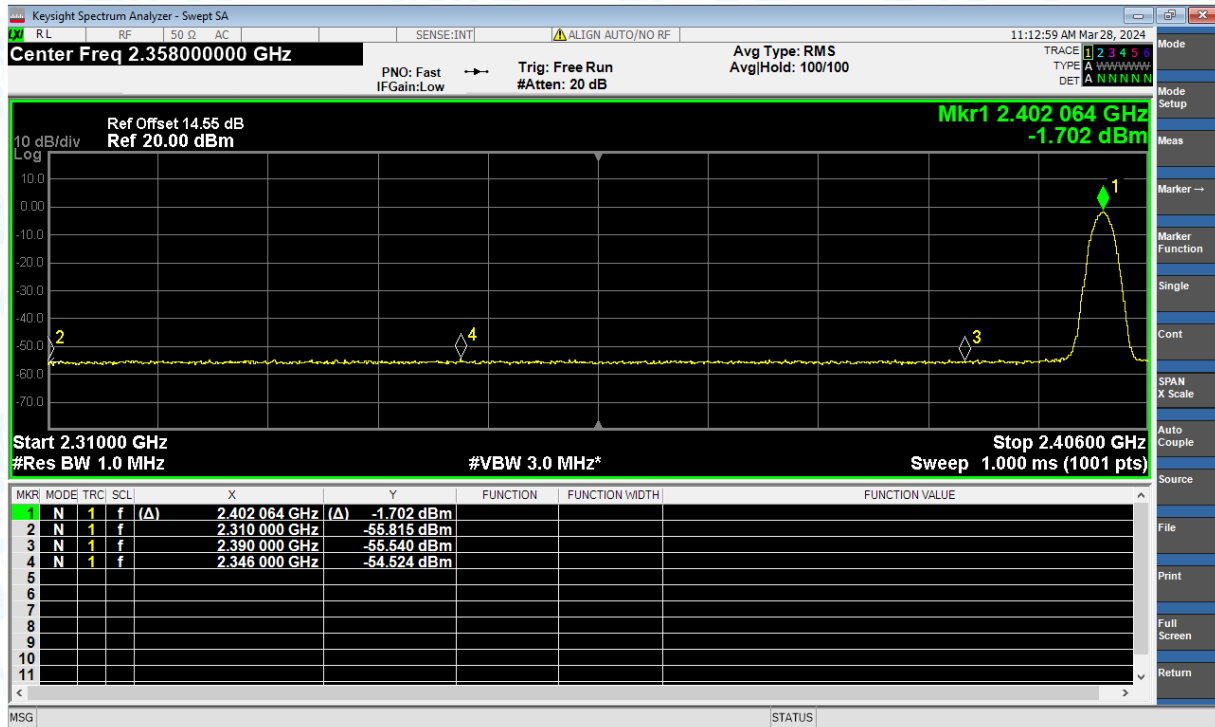
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



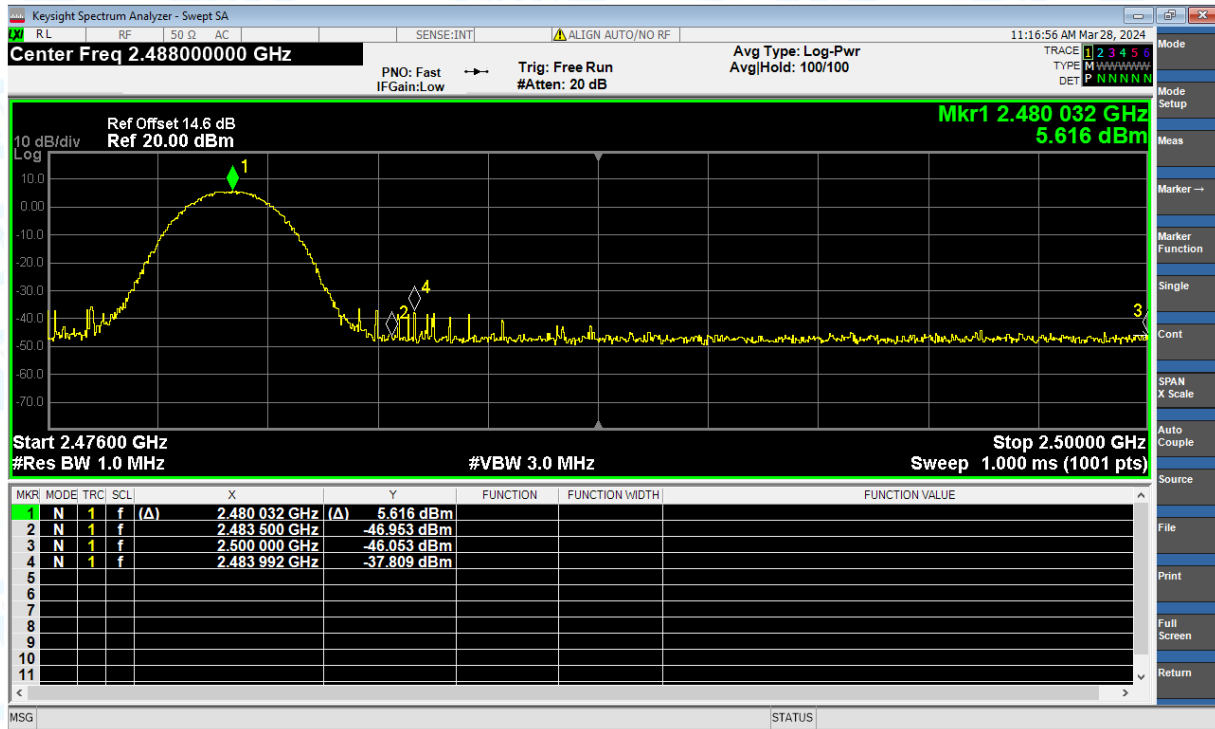
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



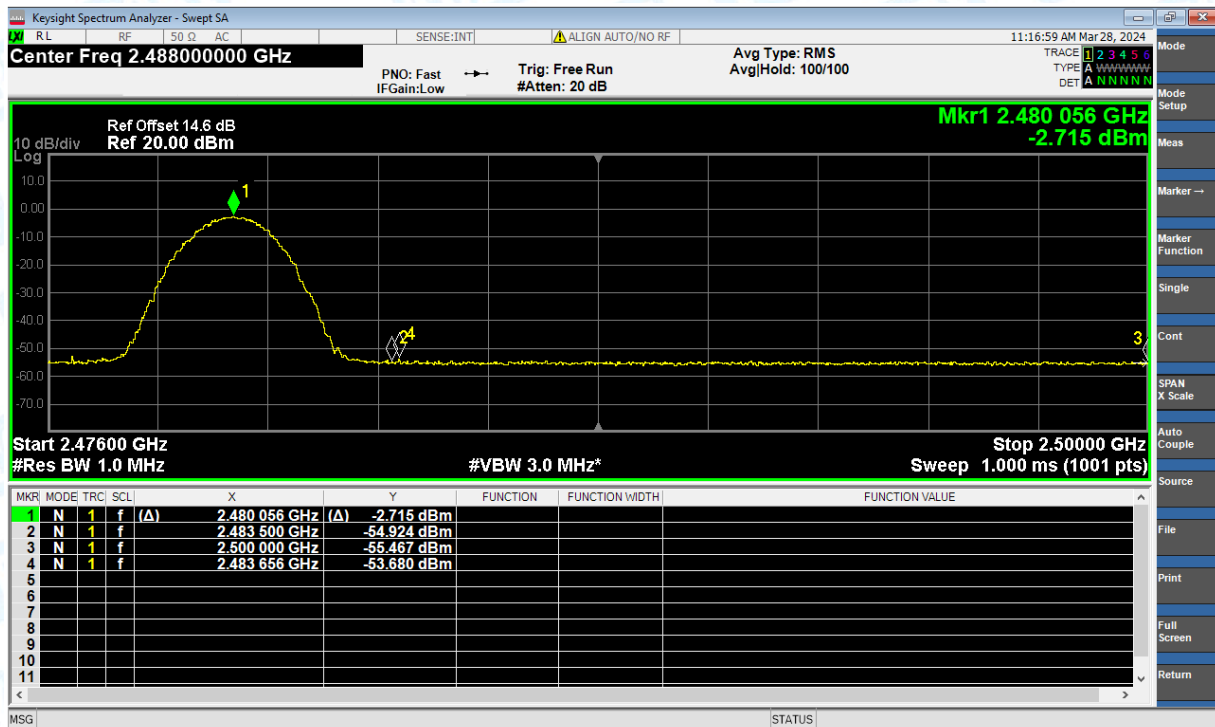
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



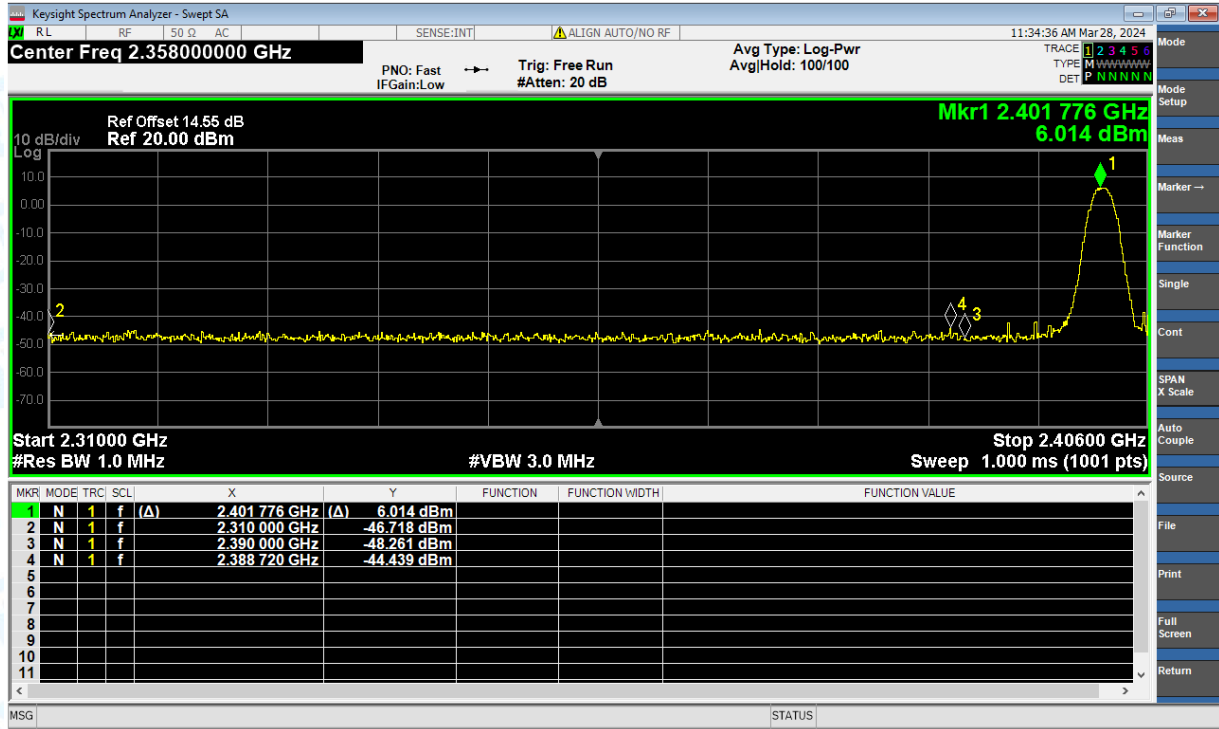
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



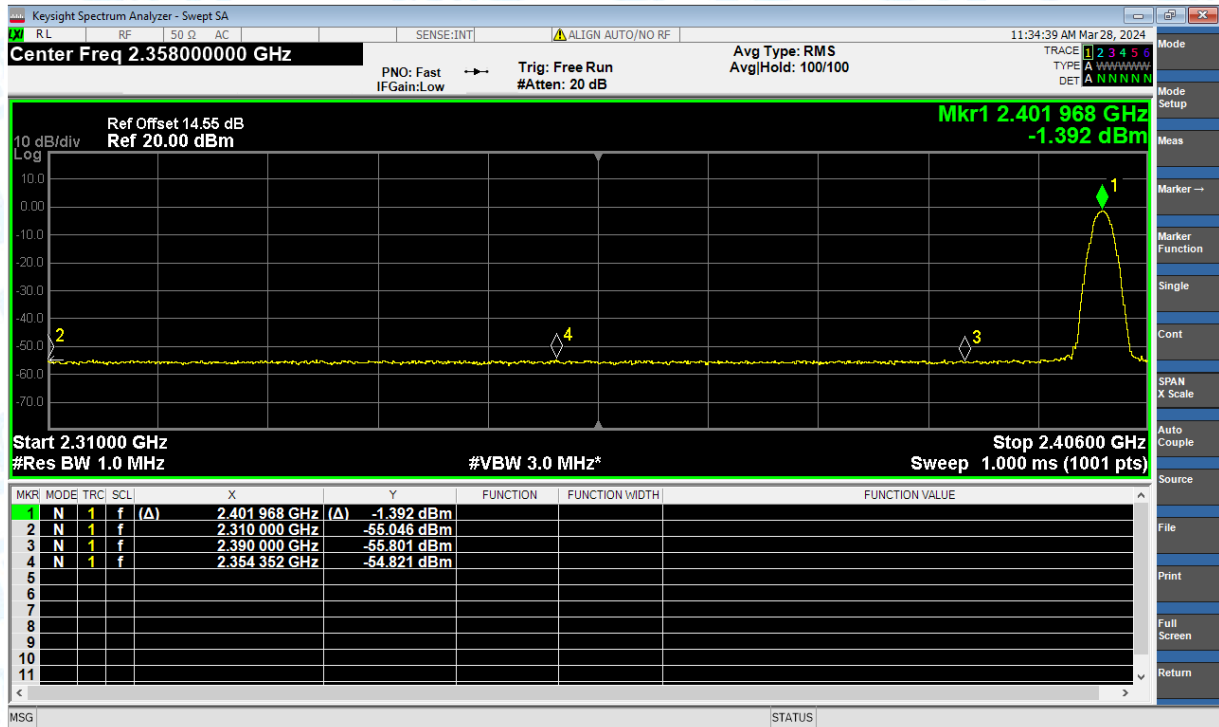
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



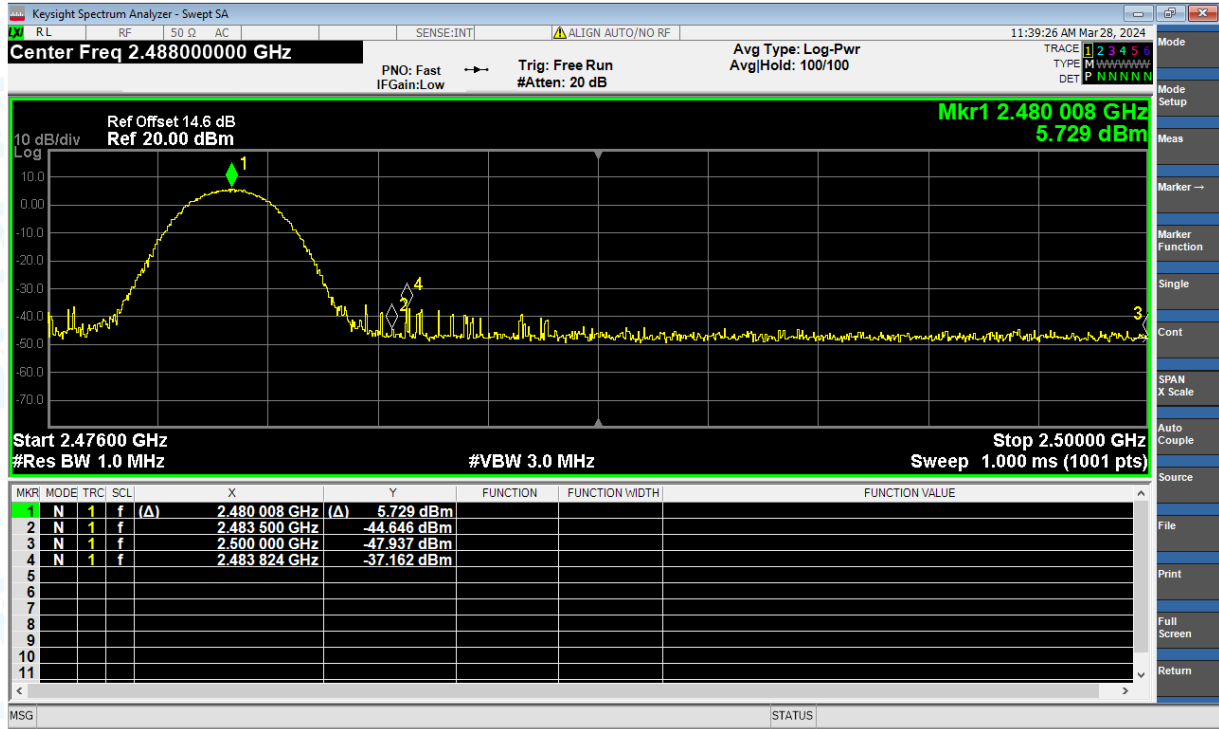
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



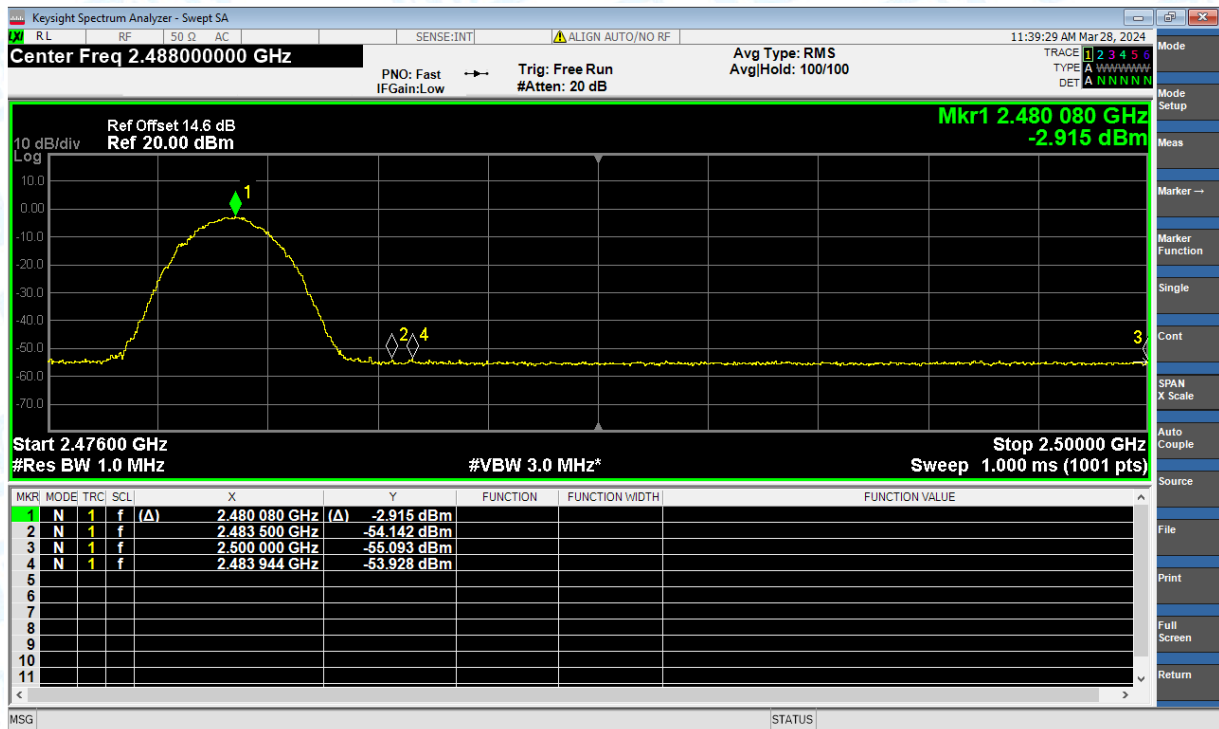
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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



9. Carrier Frequencies Separation

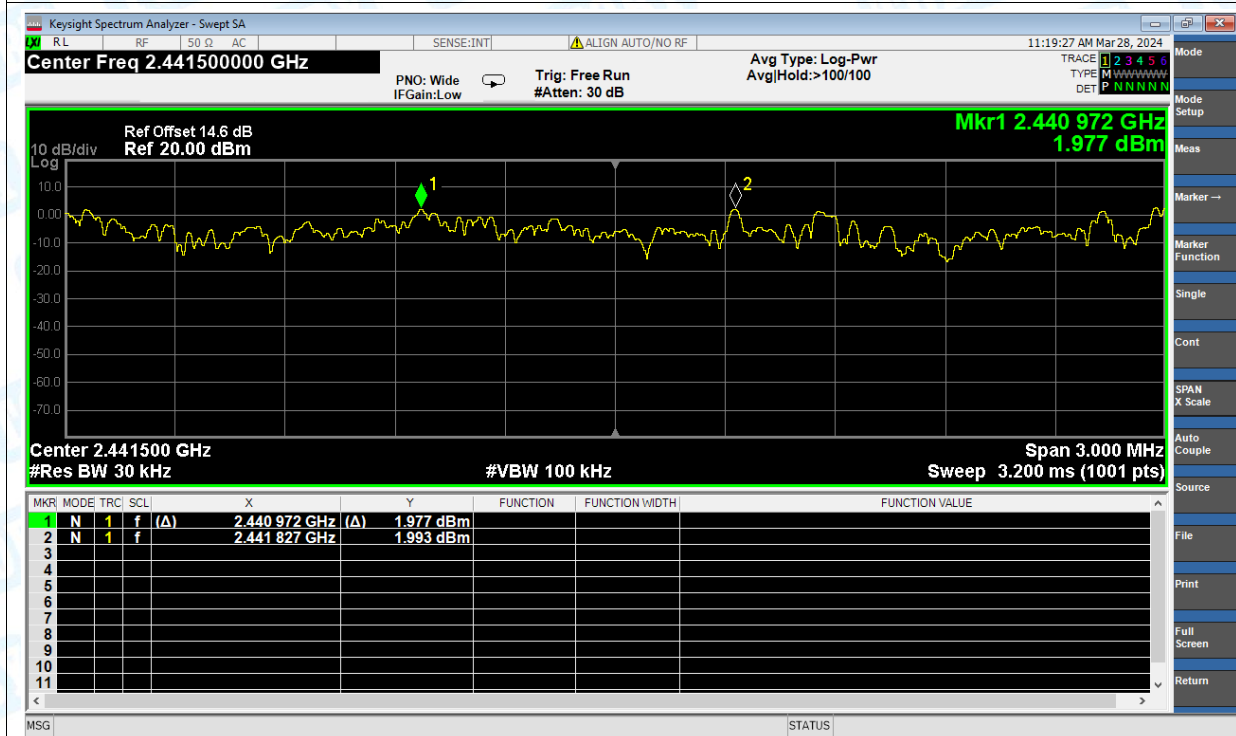
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.99	2441.836	0.846	0.613	Pass
NVNT	2-DH1	Ant1	2440.972	2441.827	0.855	0.847	Pass
NVNT	3-DH1	Ant1	2440.996	2441.992	0.996	0.813	Pass

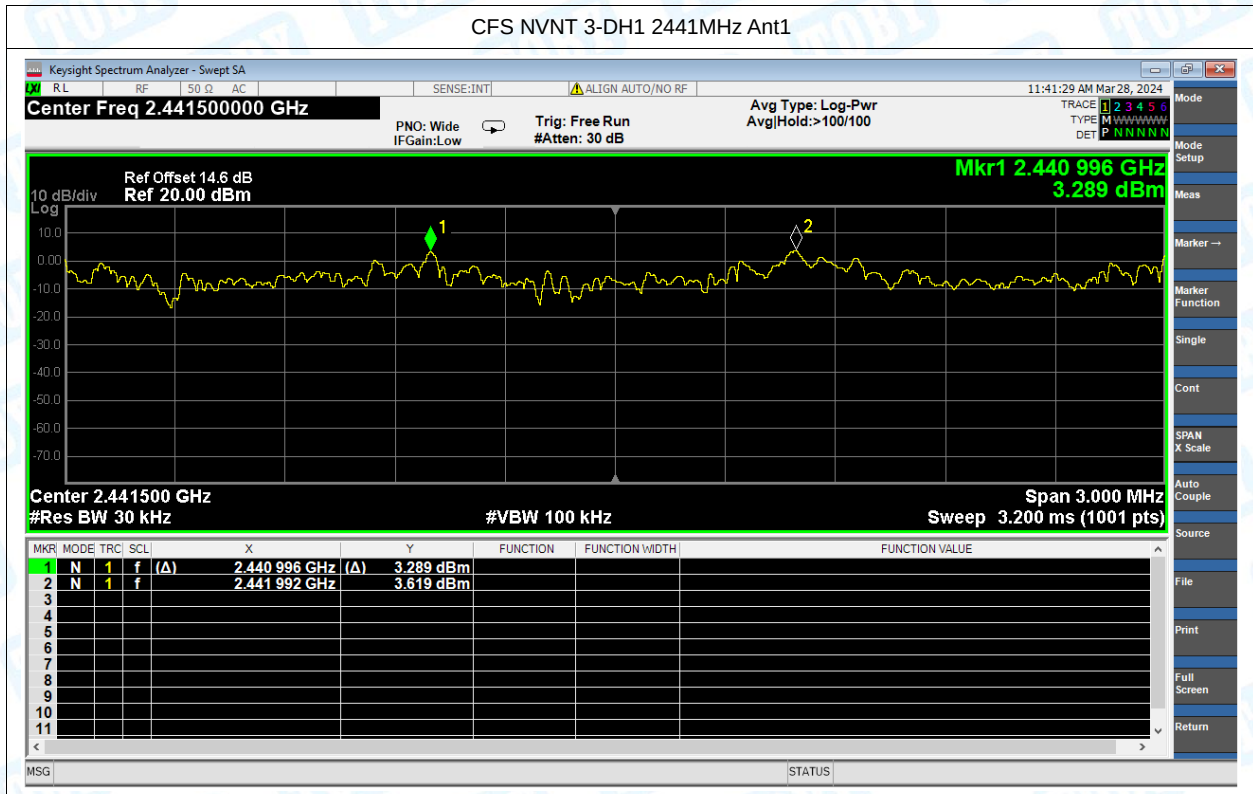
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



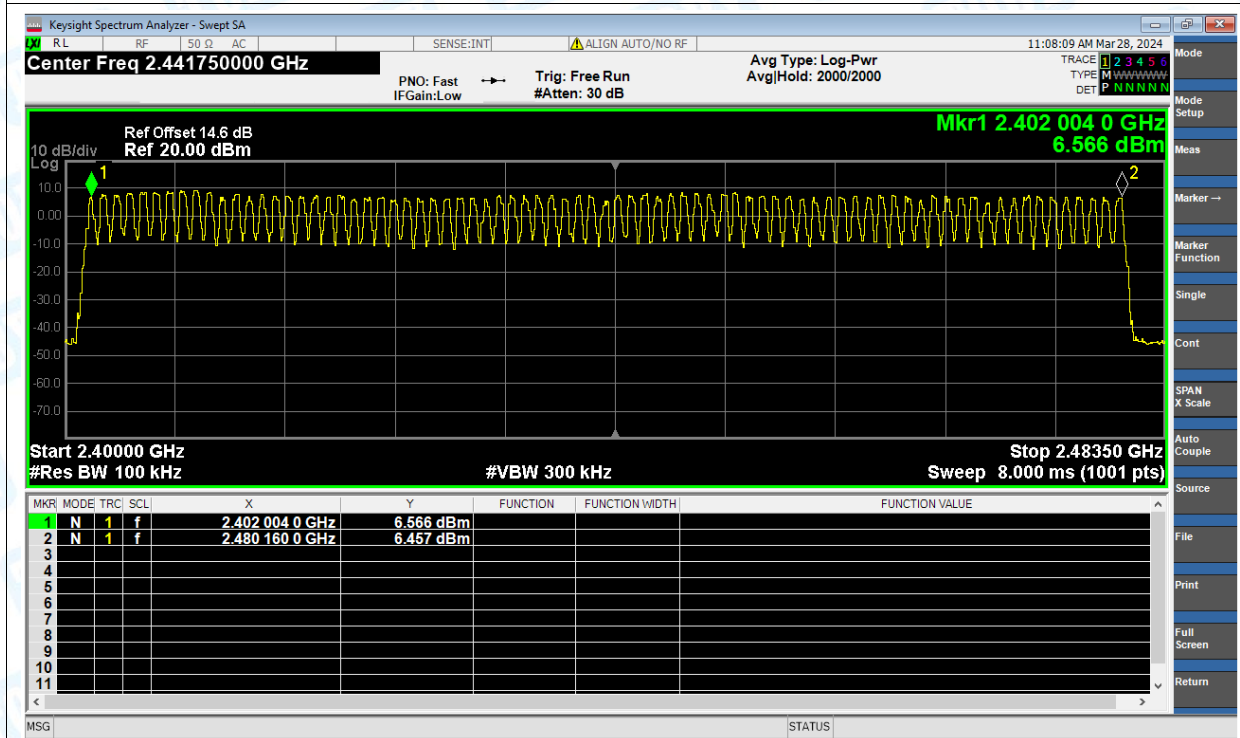


10. Number of Hopping Channel

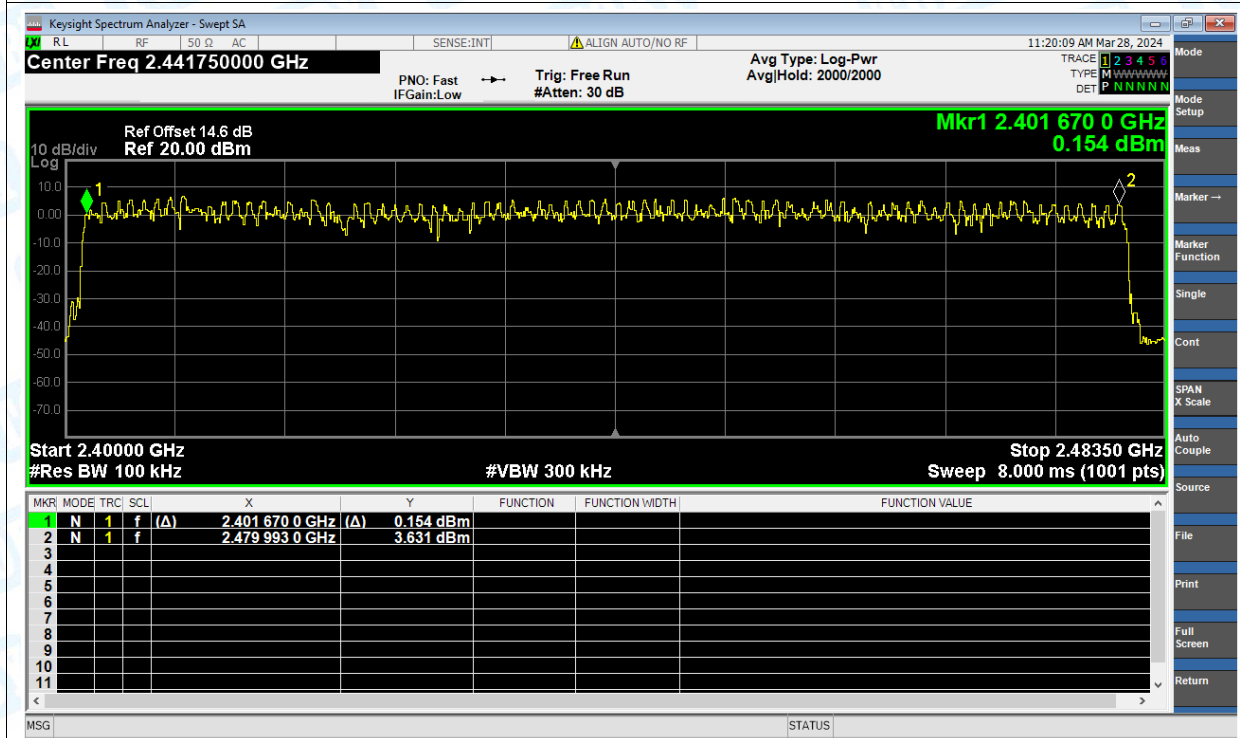
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

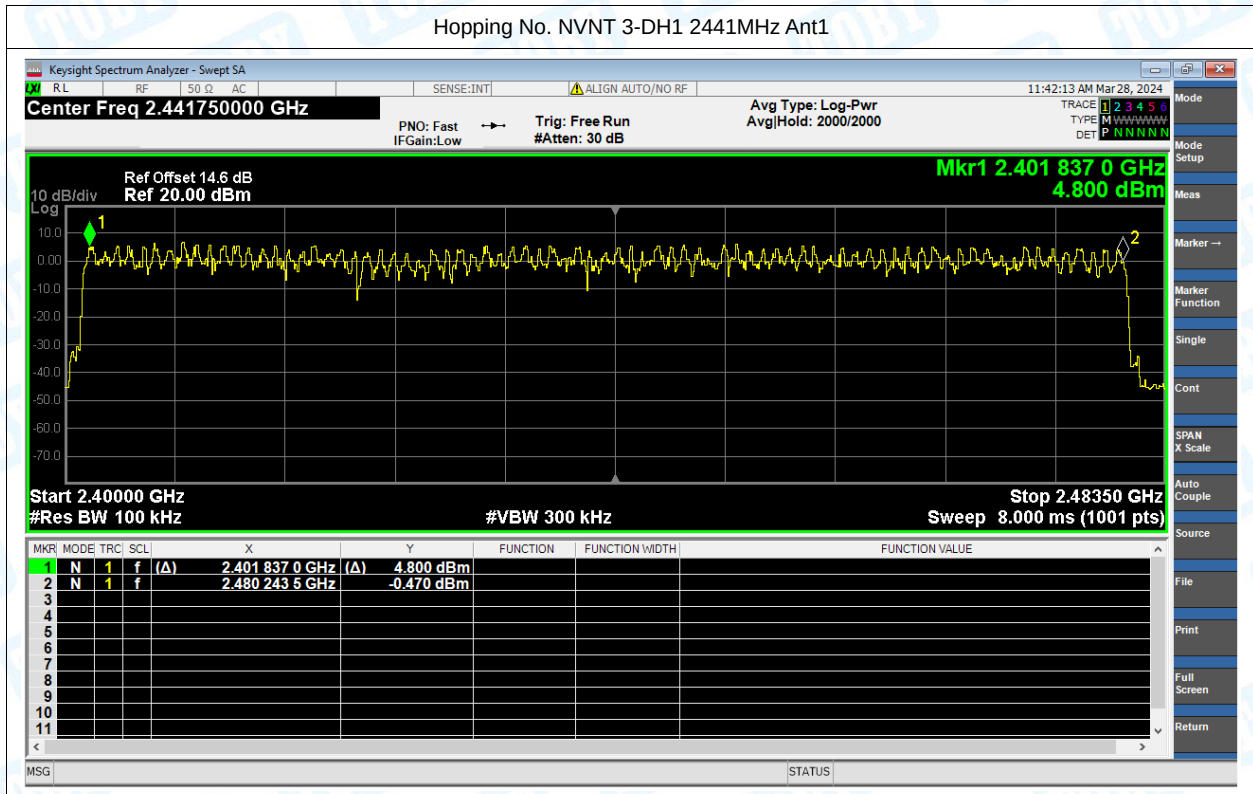
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



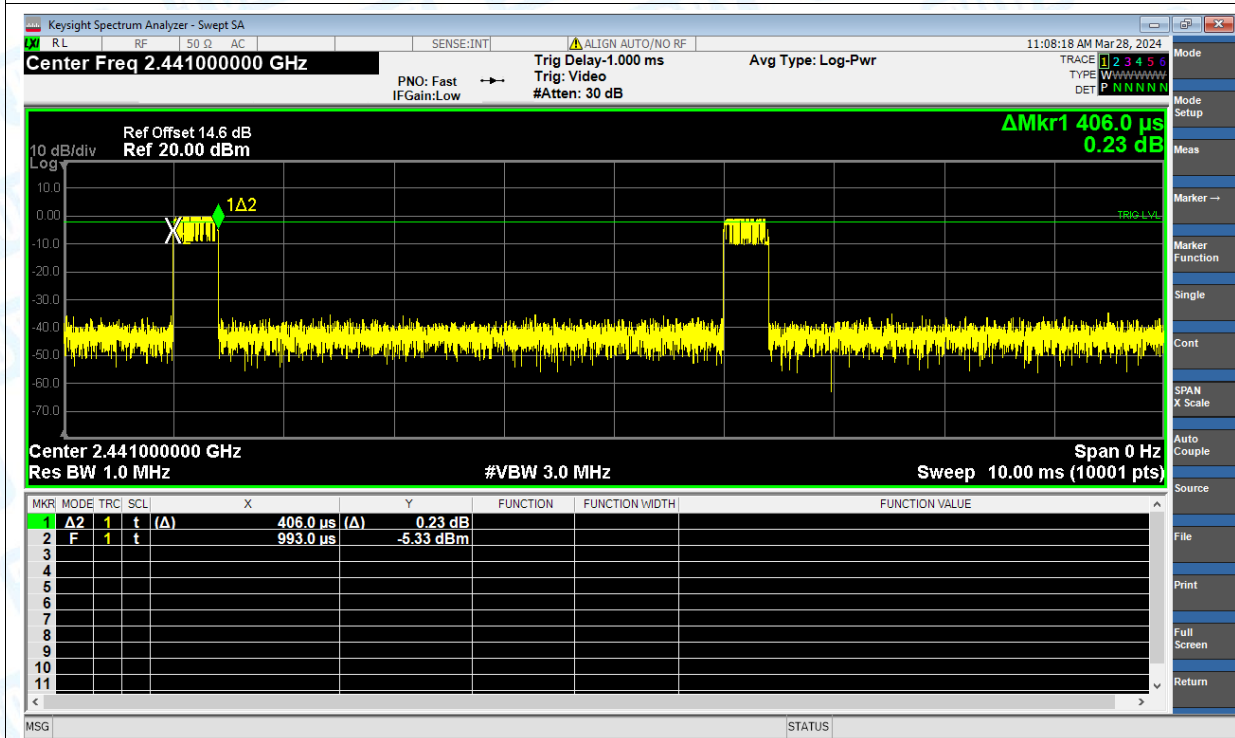


11. Dwell Time

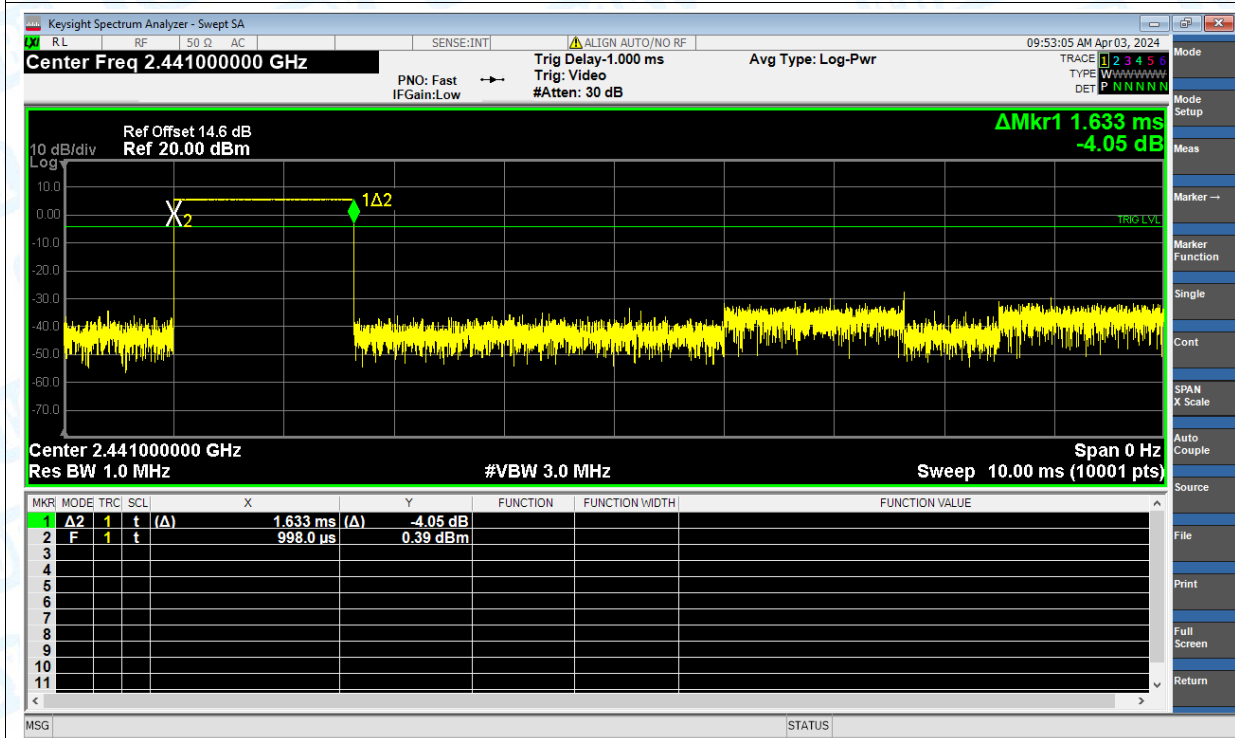
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.406	129.92	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.633	261.28	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.88	307.2	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.399	127.68	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.638	262.08	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.879	307.093	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.396	126.72	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.636	261.76	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.888	308.053	31600	400	Pass

Test Graphs

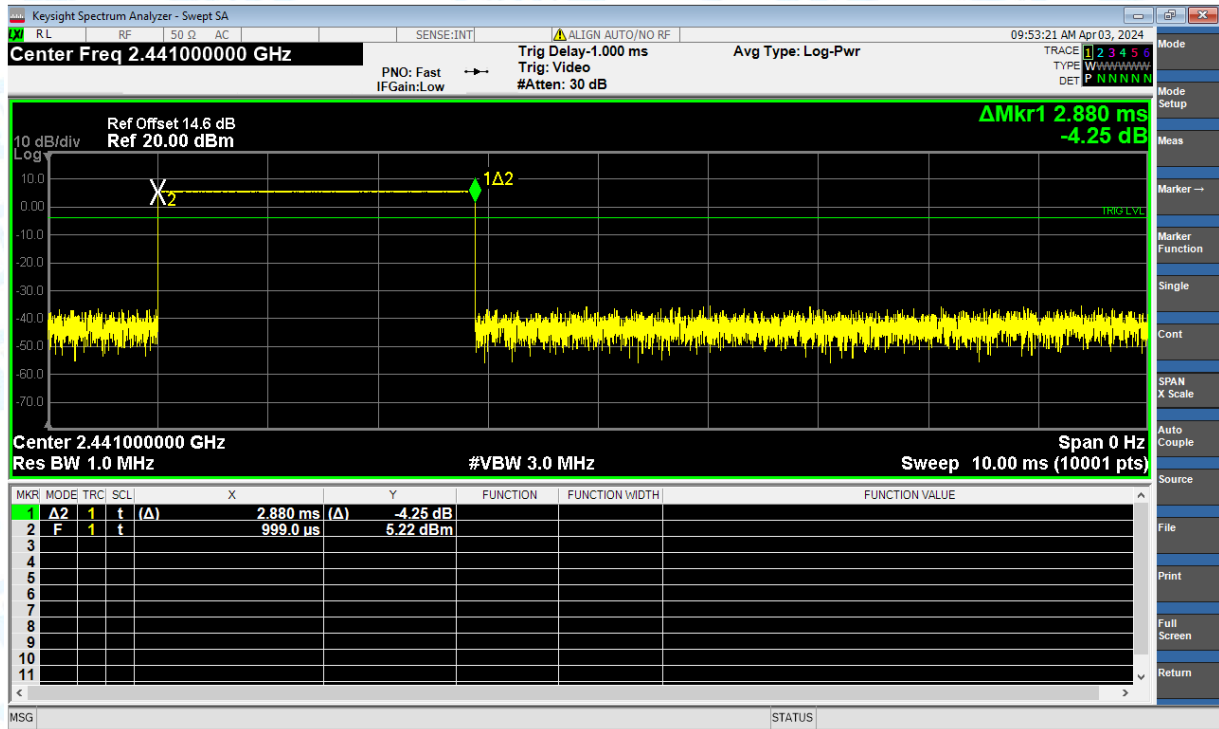
Dwell NVNT 1-DH1 2441MHz Ant1



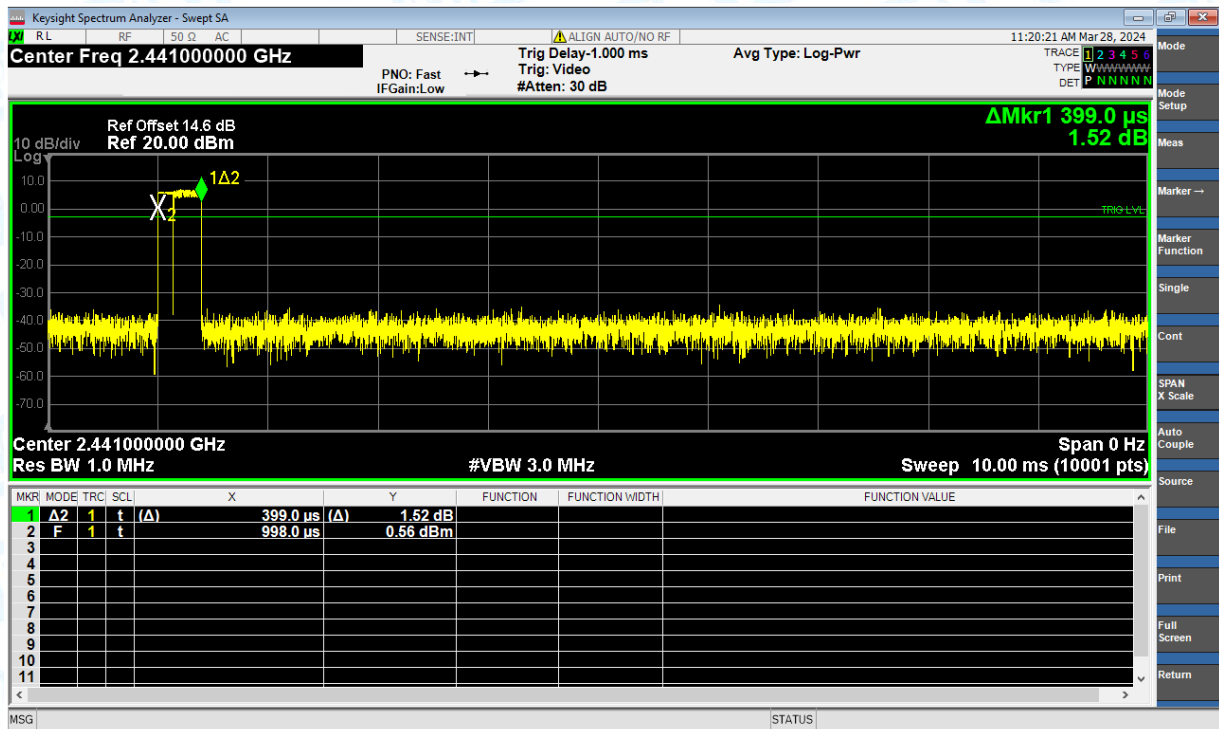
Dwell NVNT 1-DH3 2441MHz Ant1



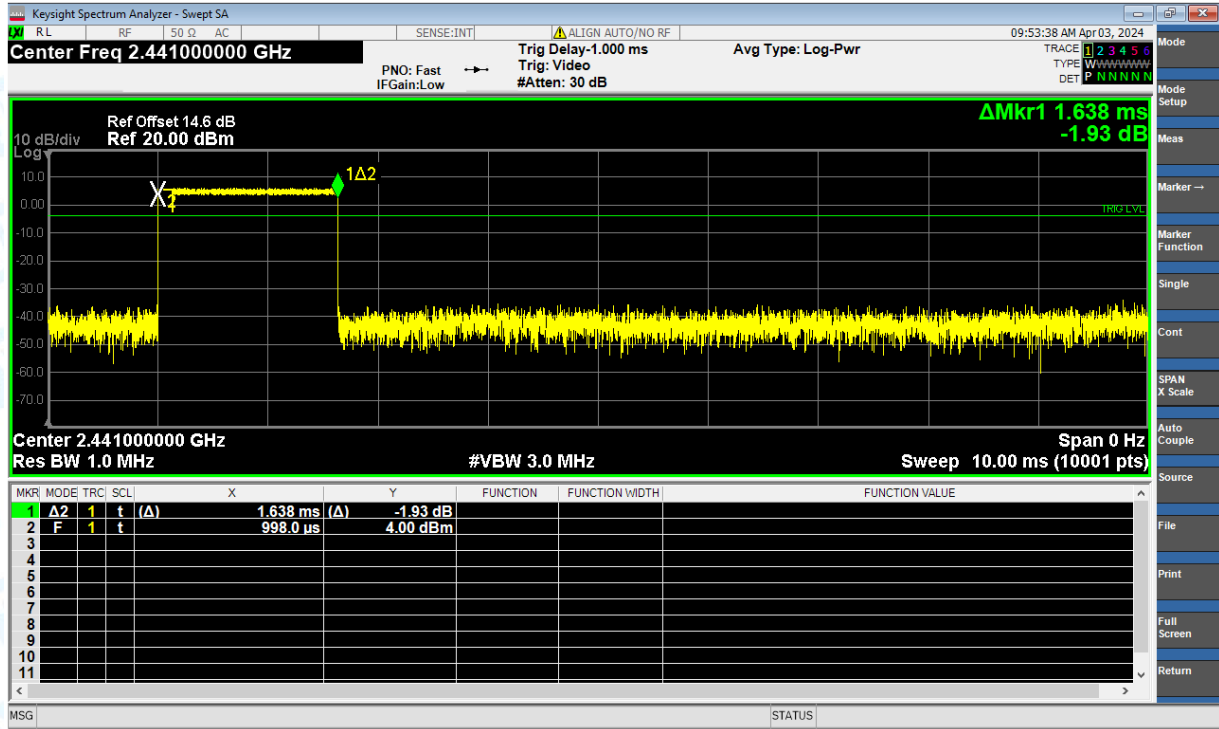
Dwell NVNT 1-DH5 2441MHz Ant1



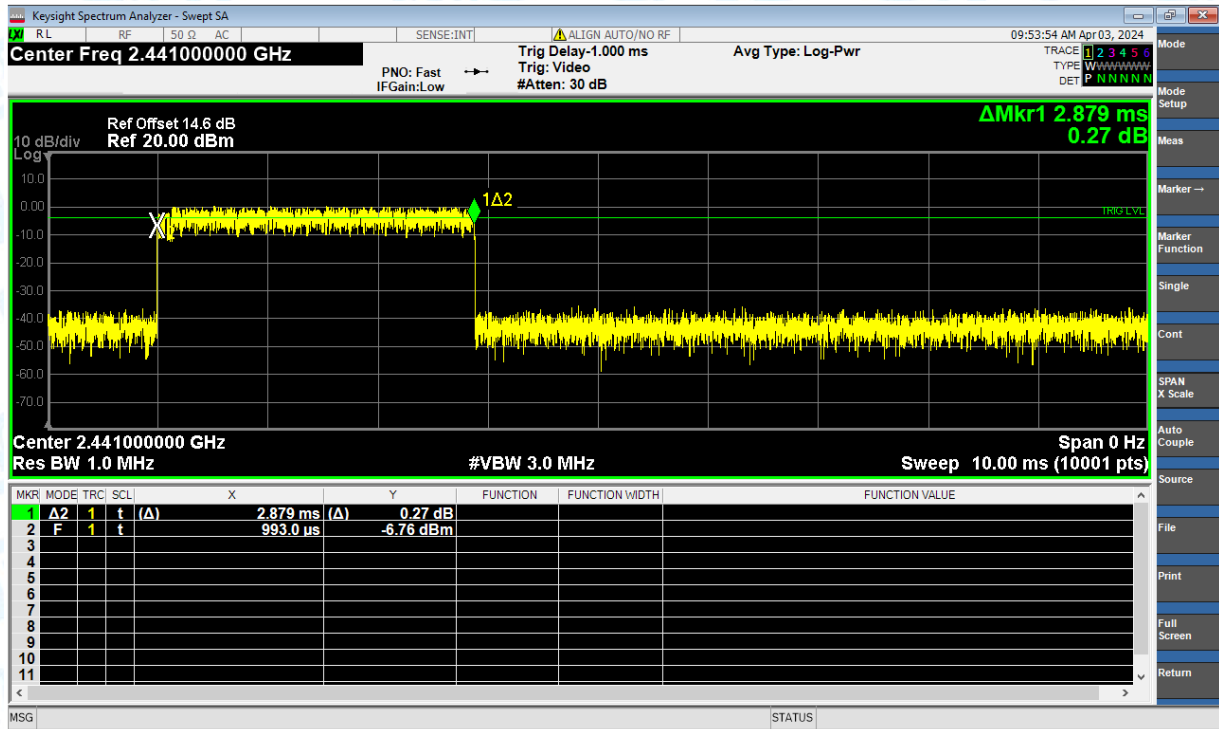
Dwell NVNT 2-DH1 2441MHz Ant1



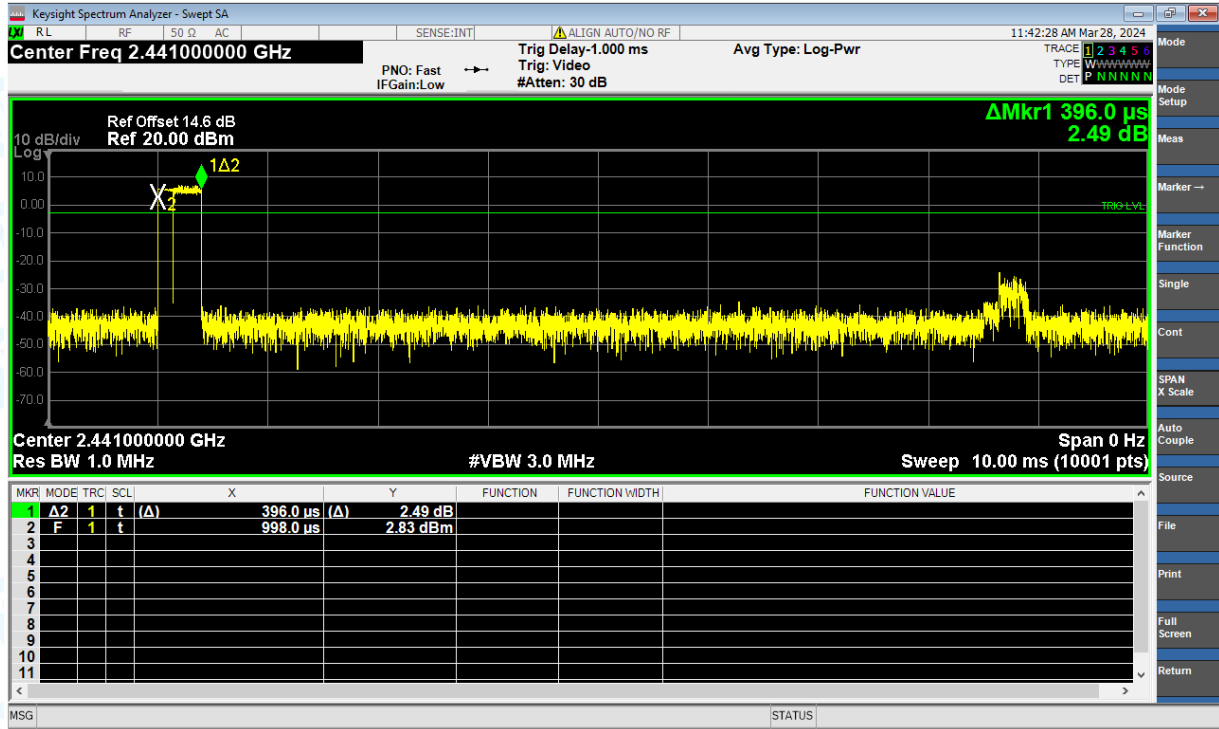
Dwell NVNT 2-DH3 2441MHz Ant1



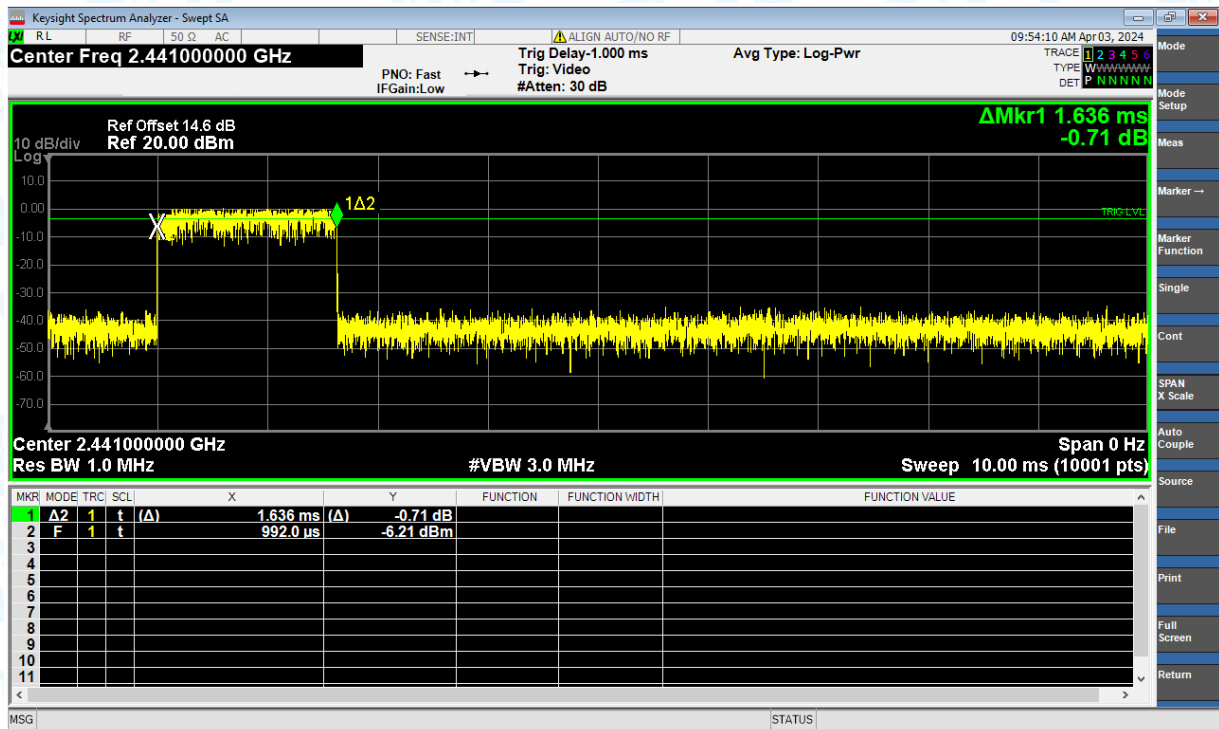
Dwell NVNT 2-DH5 2441MHz Ant1

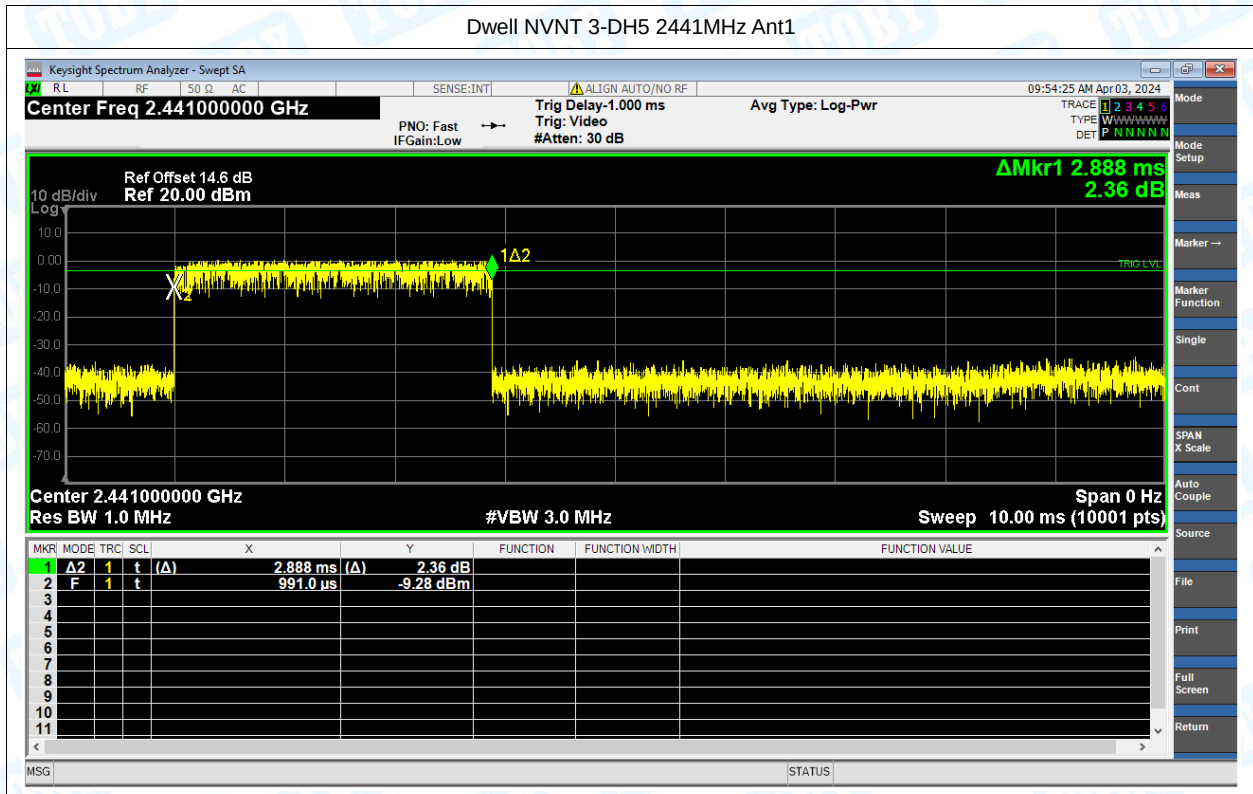


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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