

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

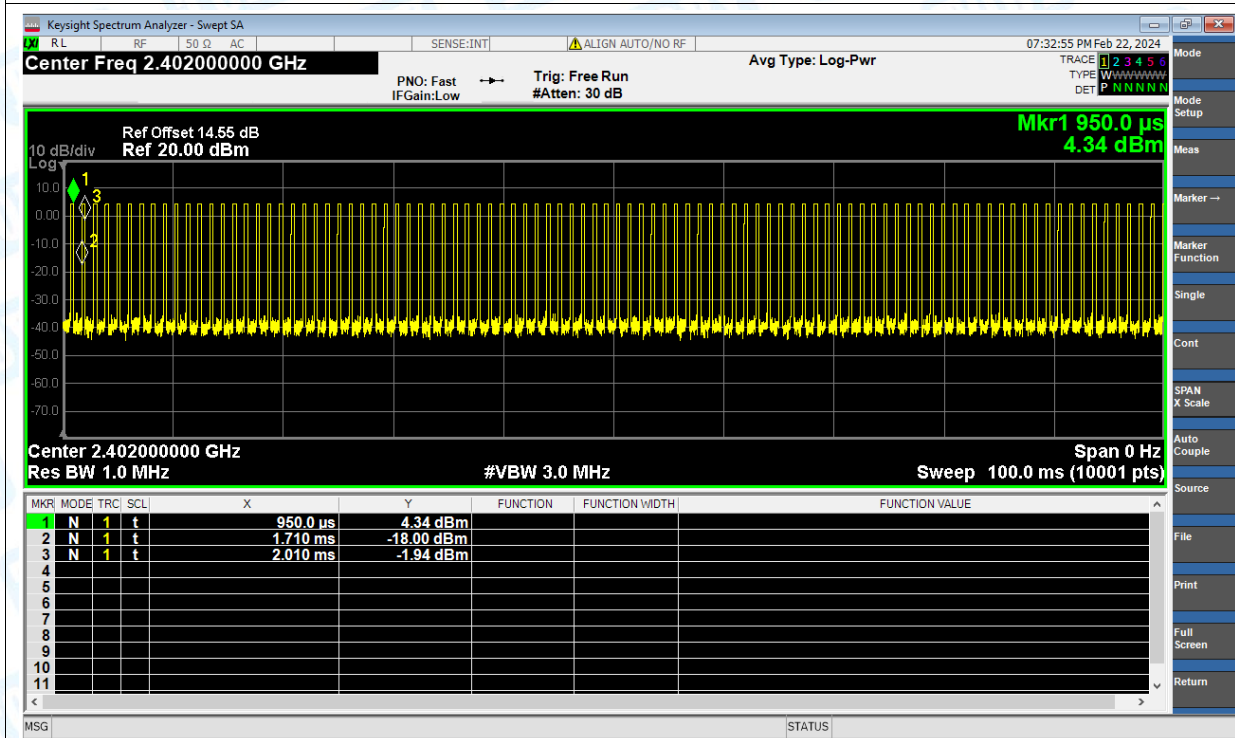
General Description of EUT	
Product Name:	efoil
Test Model:	Hobbywing efoil S1
Sample ID:	202401-0055-1-2#
Environmental Conditions	
Temperature:	24℃
Relative Humidity:	50%
Test Voltage:	DC 50.4V
Test Engineer:	Yanzheming
Note: For a more detailed features description, please refer to the report TBR-C-202401-0055-11 The report only show the worst case data.	

1.Duty Cycle

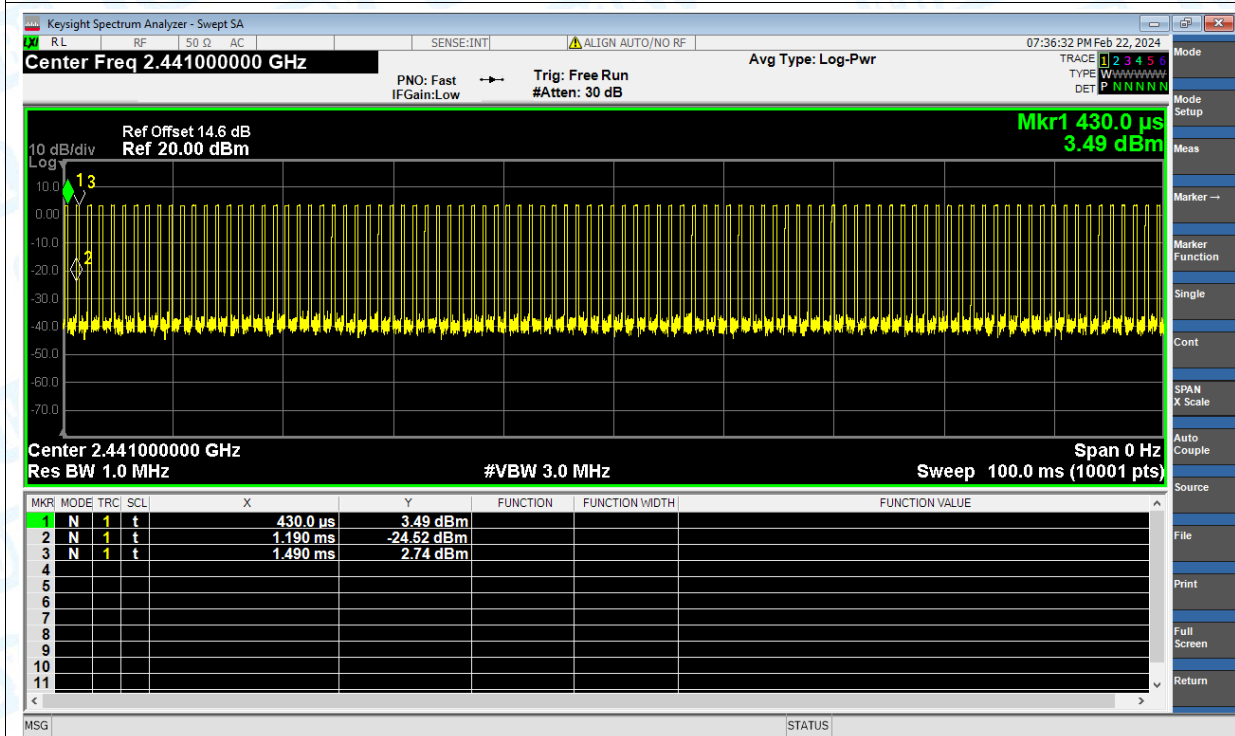
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	28.3	5.48	3.33
NVNT	1-DH1	2441	Ant1	28.3	5.48	3.33
NVNT	1-DH1	2480	Ant1	27.36	5.63	3.45

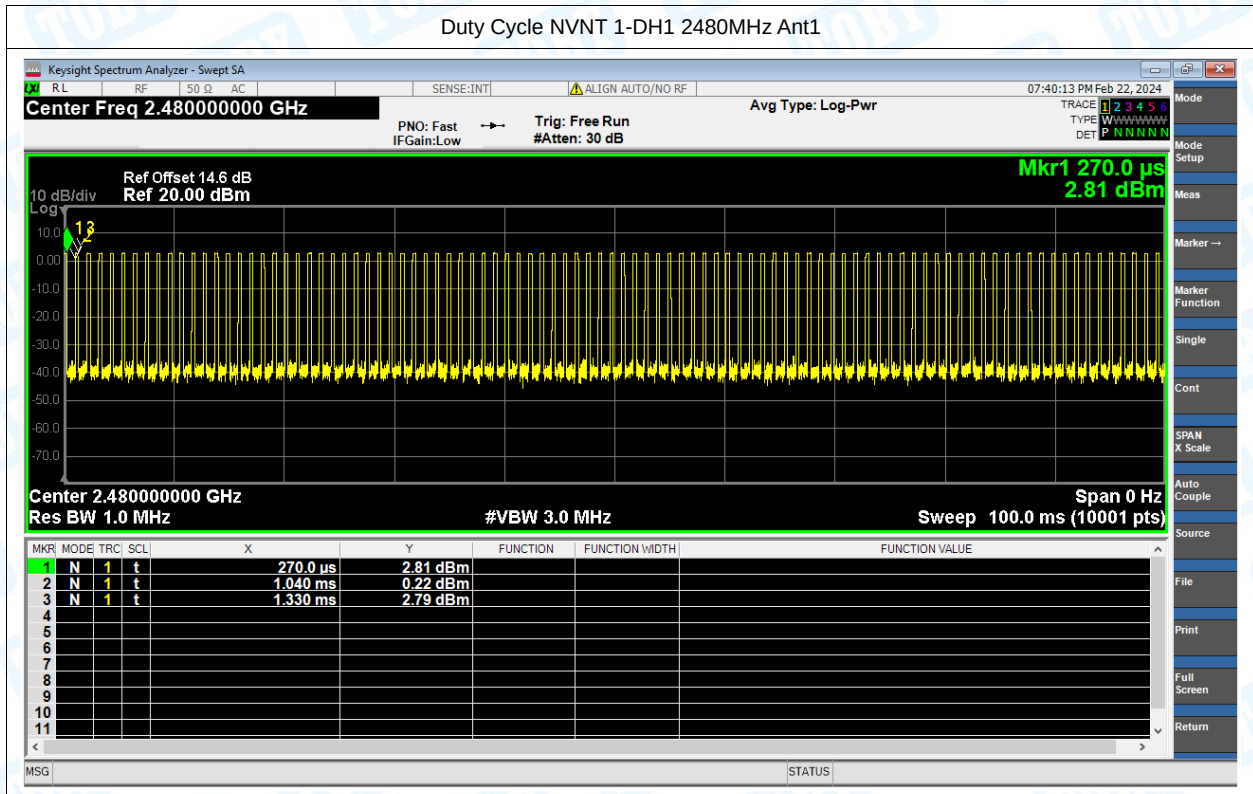
Test Graphs

Duty Cycle NVNT 1-DH1 2402MHz Ant1



Duty Cycle NVNT 1-DH1 2441MHz Ant1



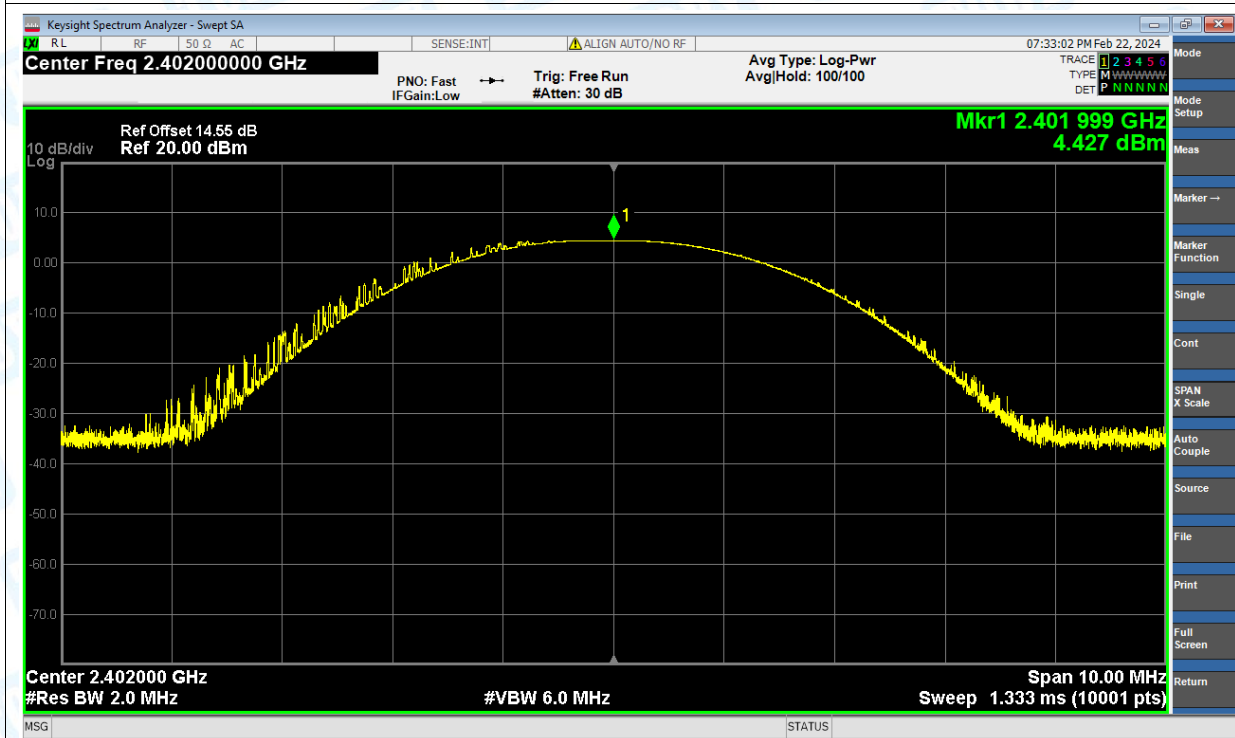


2.Maximum Conducted Output Power

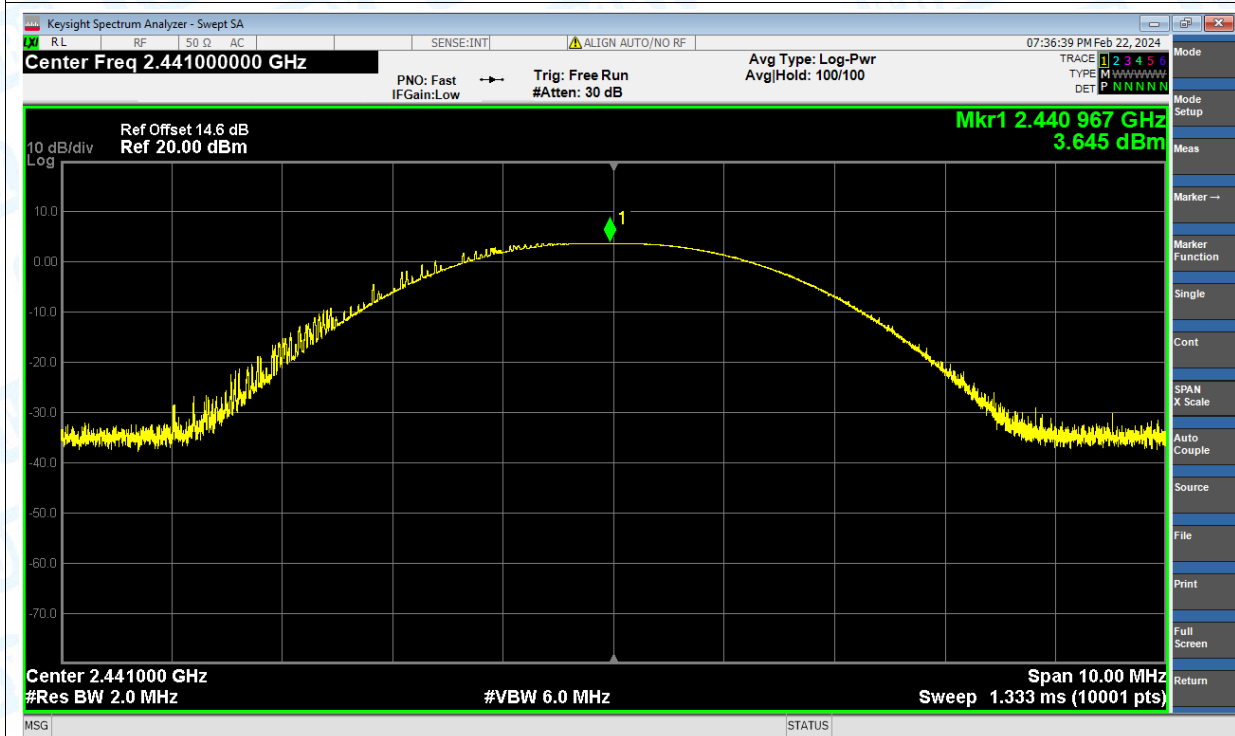
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	4.427	21	Pass
NVNT	1-DH1	2441	Ant1	3.645	21	Pass
NVNT	1-DH1	2480	Ant1	2.949	21	Pass

Test Graphs

Power NVNT 1-DH1 2402MHz Ant1



Power NVNT 1-DH1 2441MHz Ant1



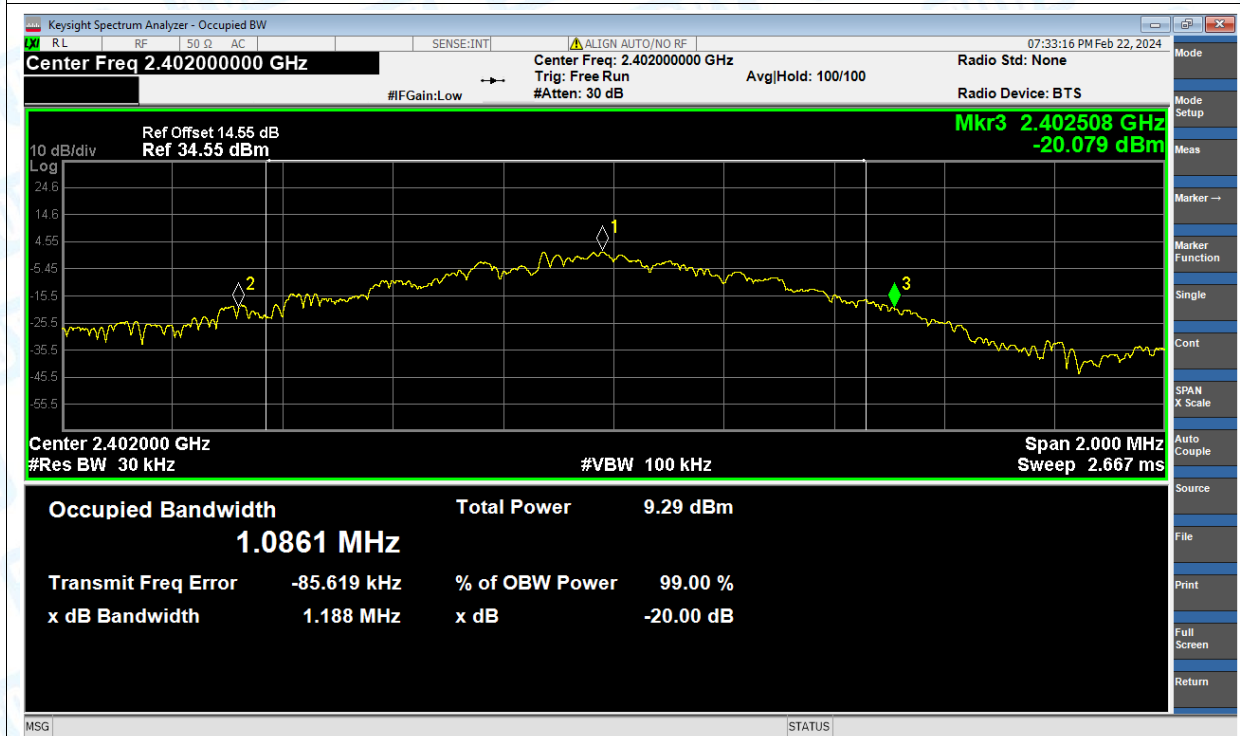


3.-20dB Bandwidth

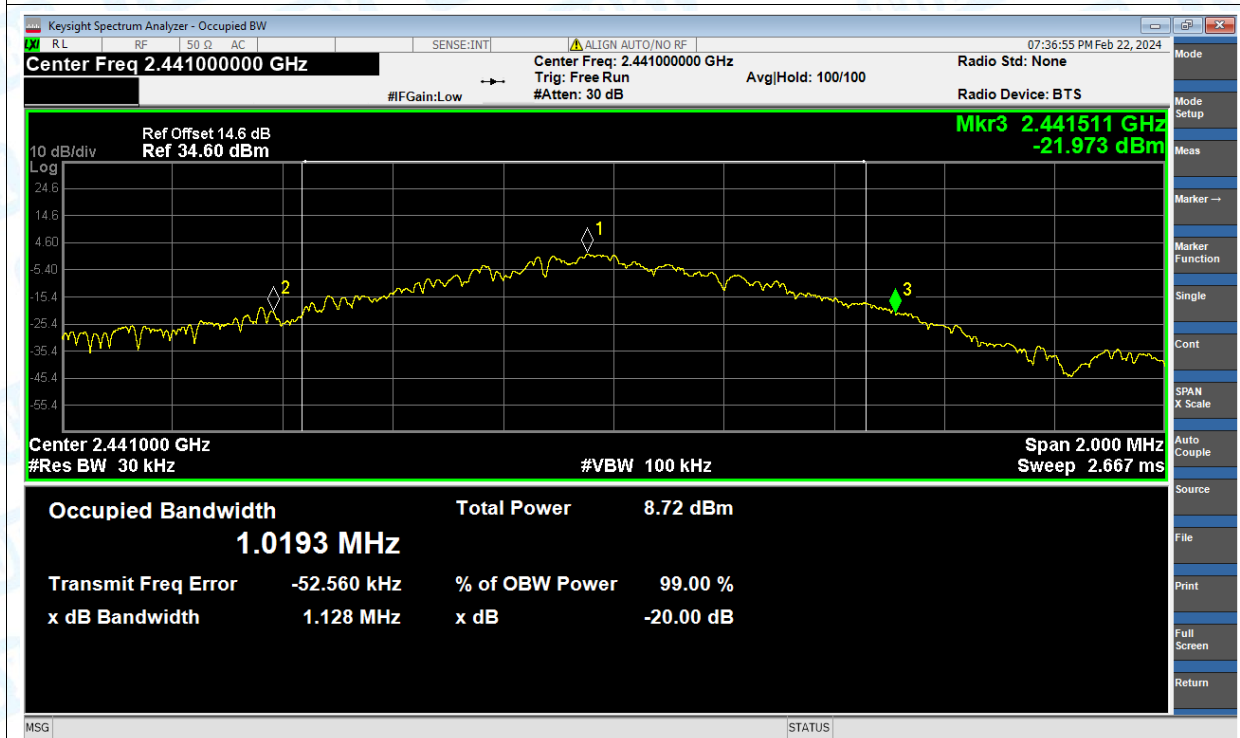
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	1.19	0	Pass
NVNT	1-DH1	2441	Ant1	1.13	0	Pass
NVNT	1-DH1	2480	Ant1	1.1	0	Pass

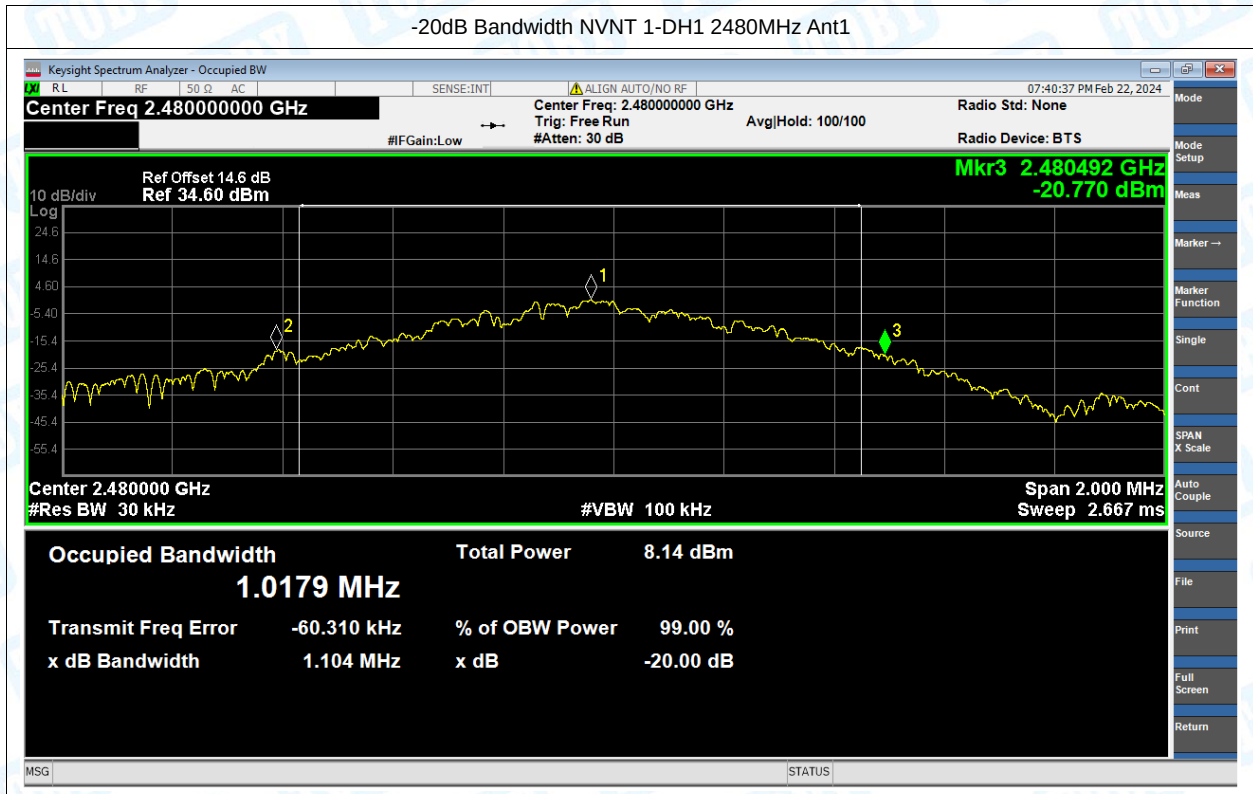
Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1





4.Occupied Channel Bandwidth

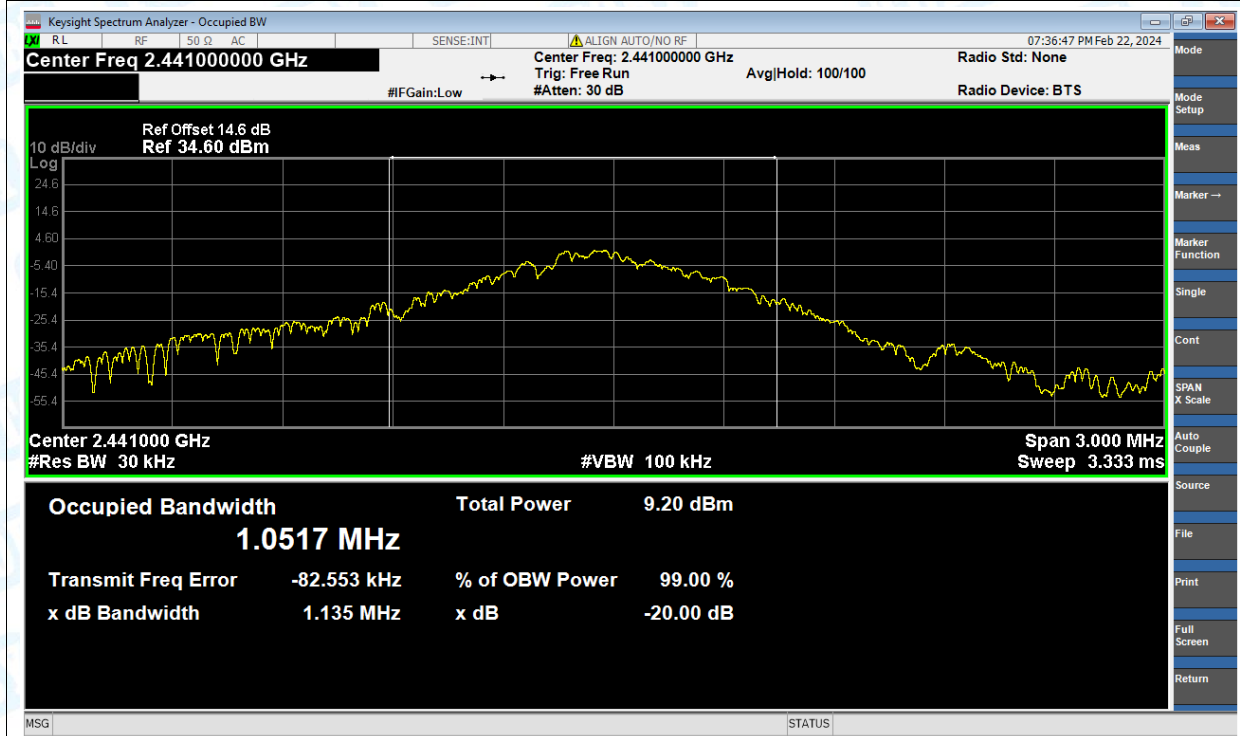
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	1.116
NVNT	1-DH1	2441	Ant1	1.052
NVNT	1-DH1	2480	Ant1	0.991

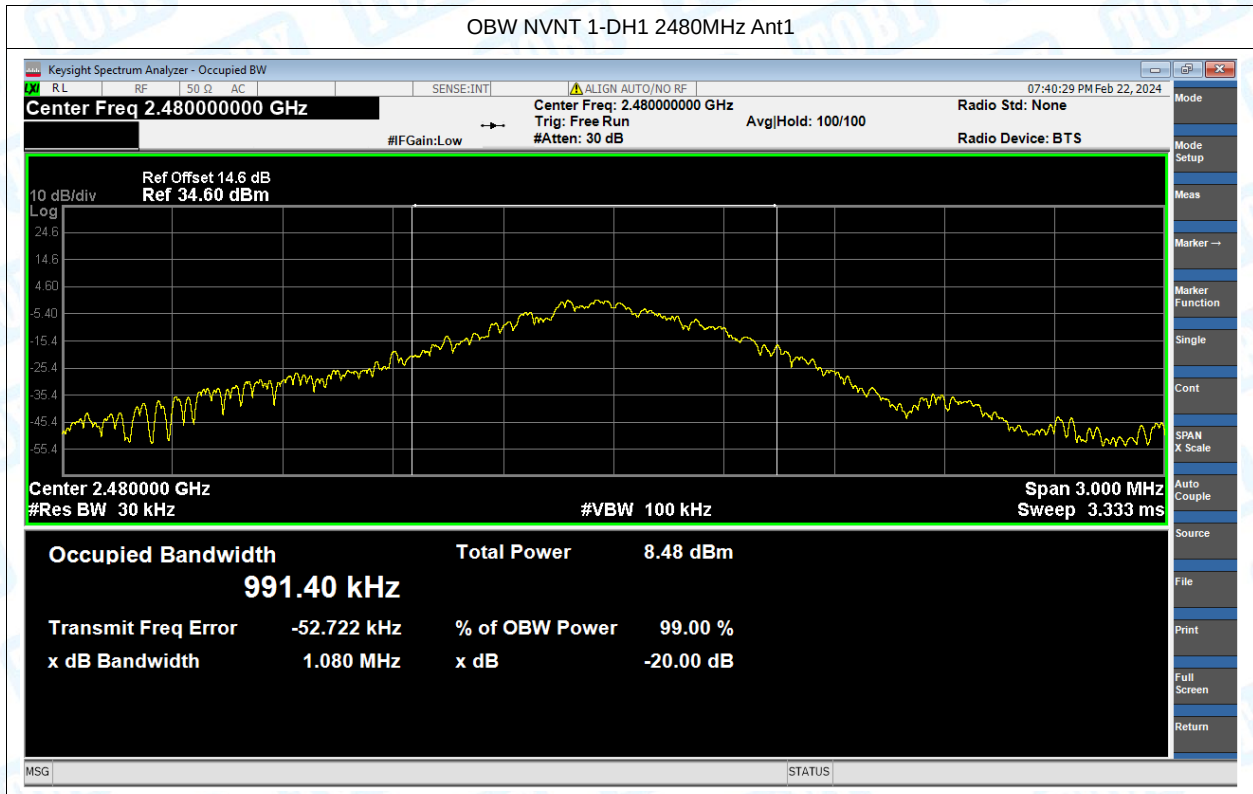
Test Graphs

OBW NVNT 1-DH1 2402MHz Ant1



OBW NVNT 1-DH1 2441MHz Ant1



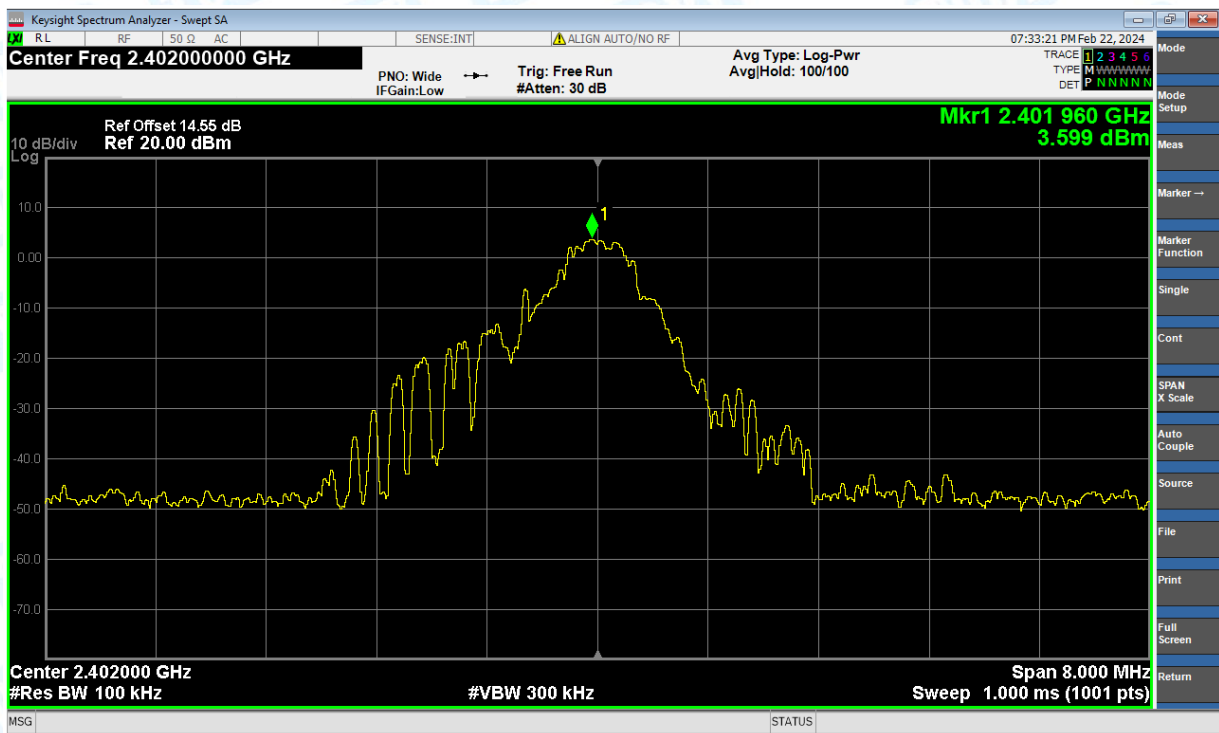


5.Band Edge

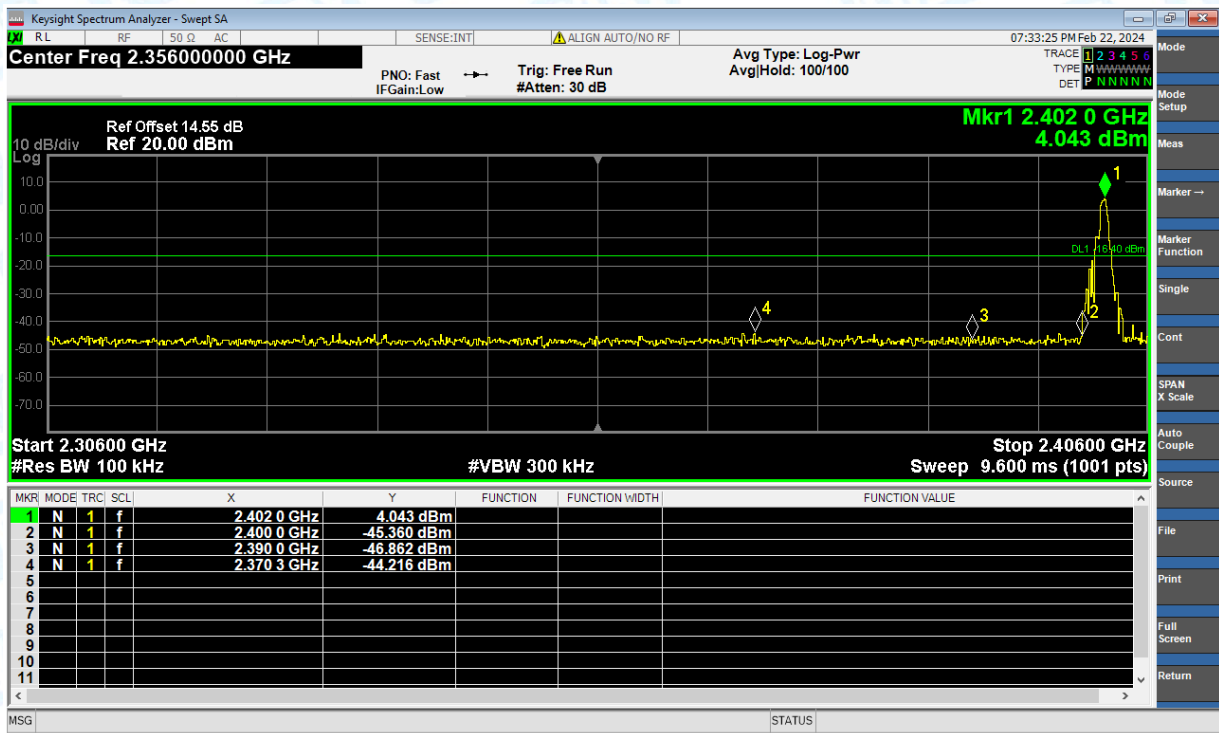
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-47.82	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-46.07	-20	Pass

Test Graphs

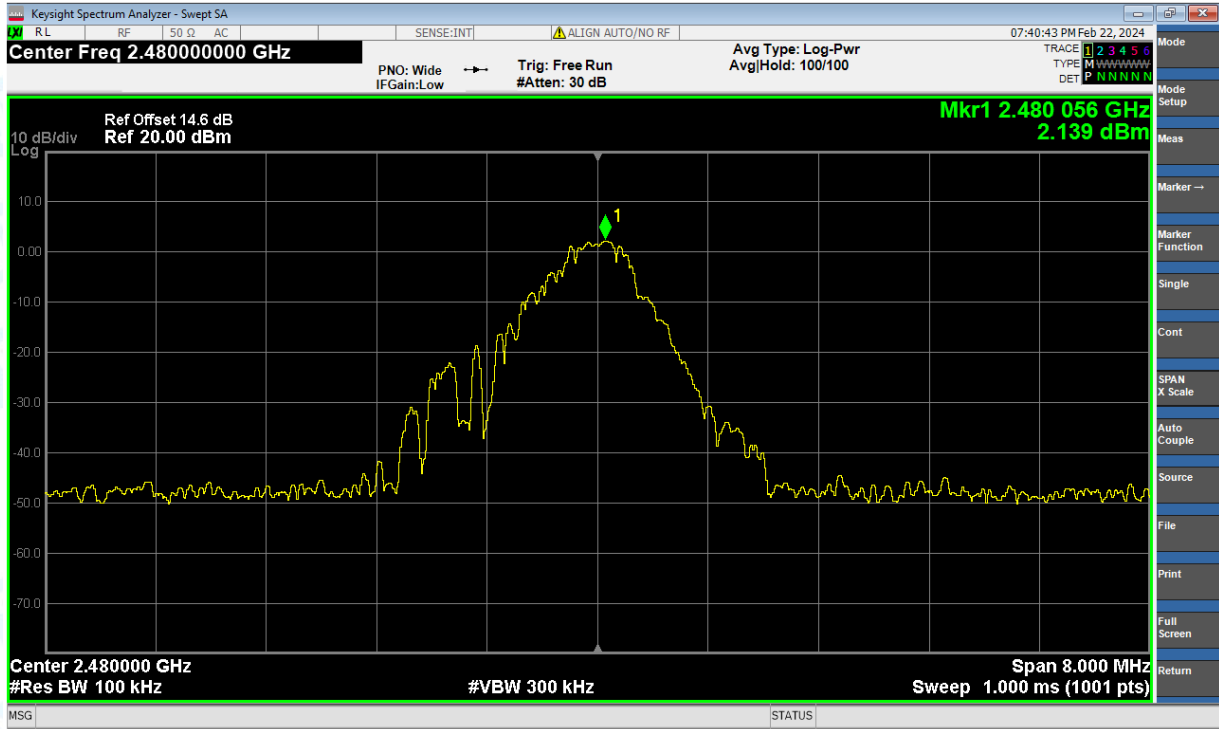
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



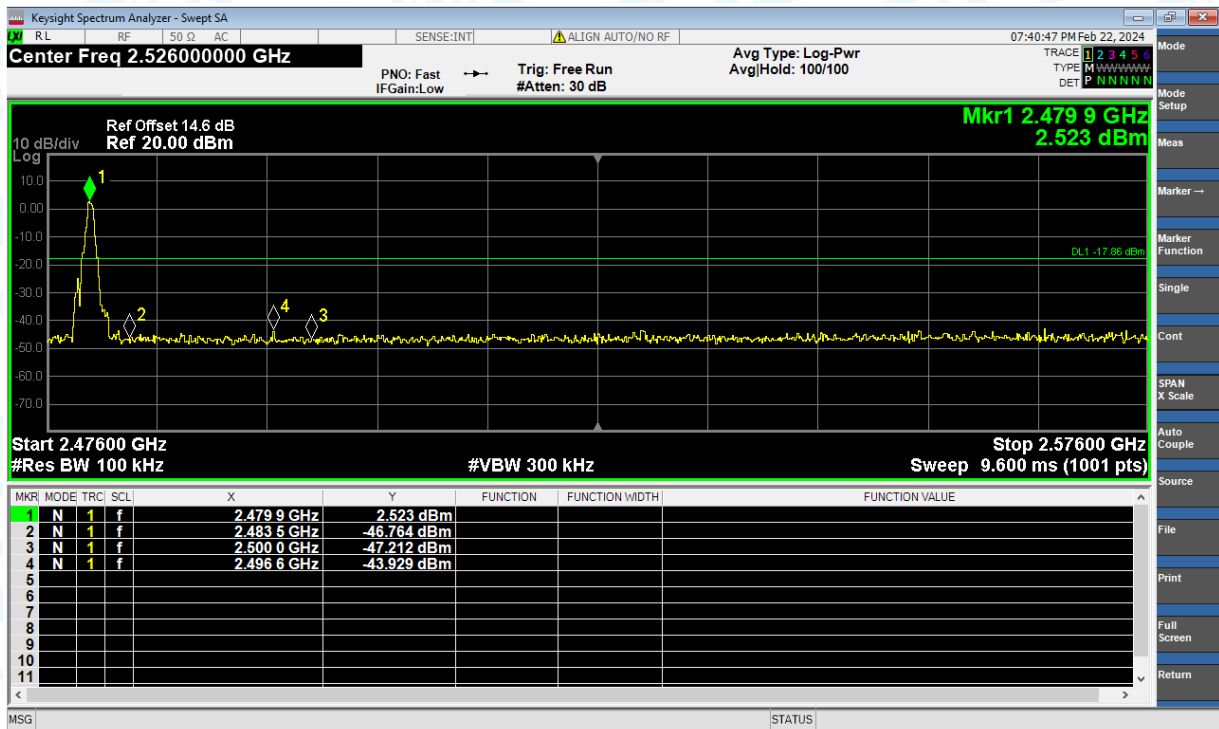
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6.Band Edge(Hopping)

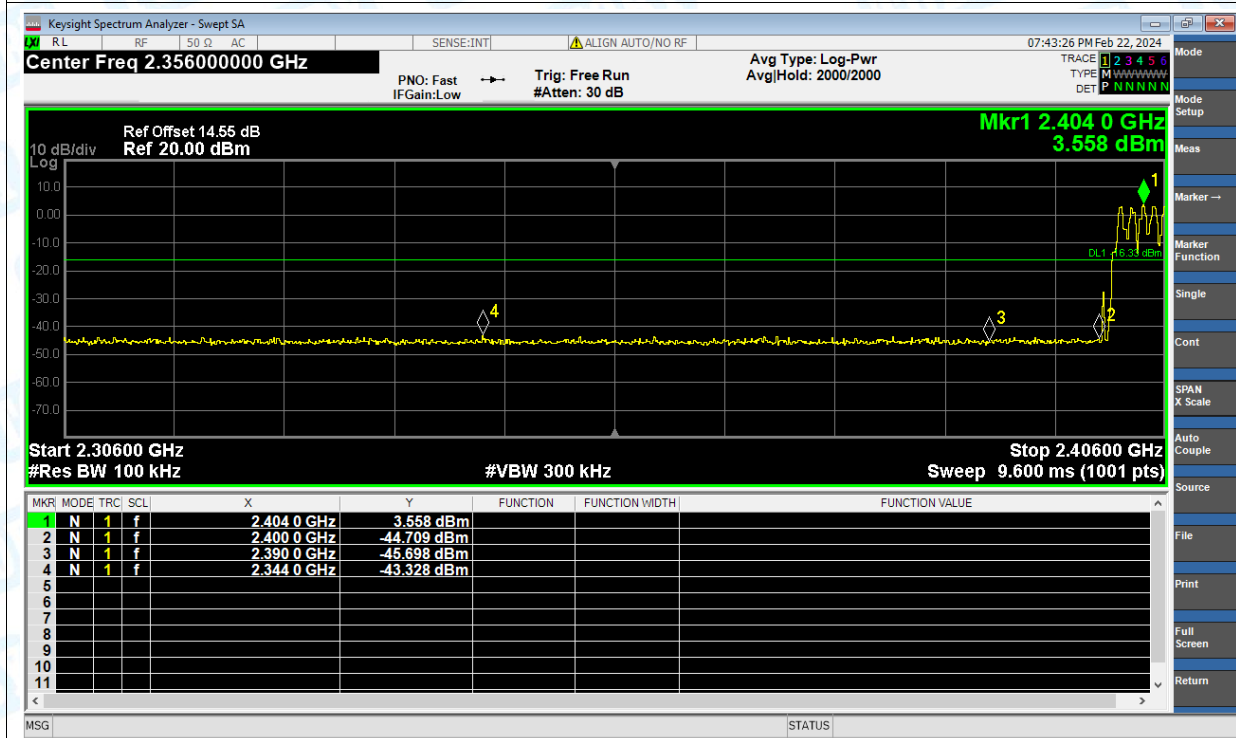
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-47	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-45.7	-20	Pass

Test Graphs

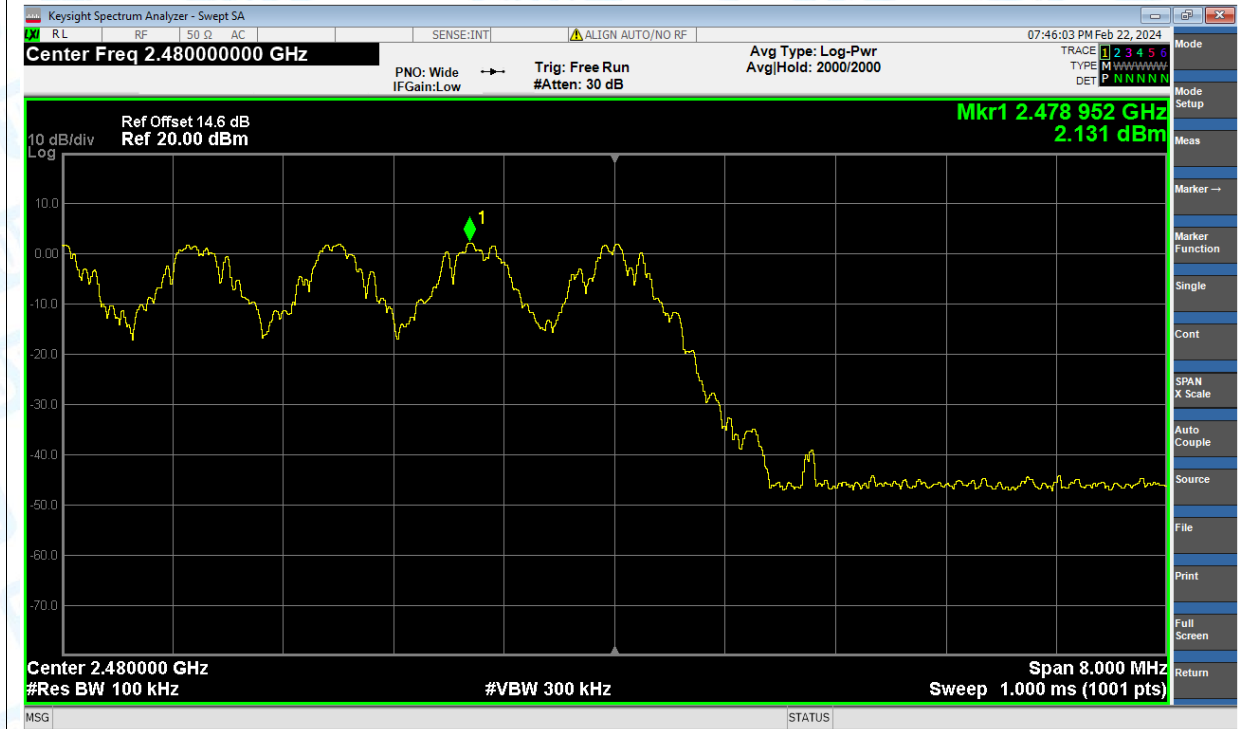
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



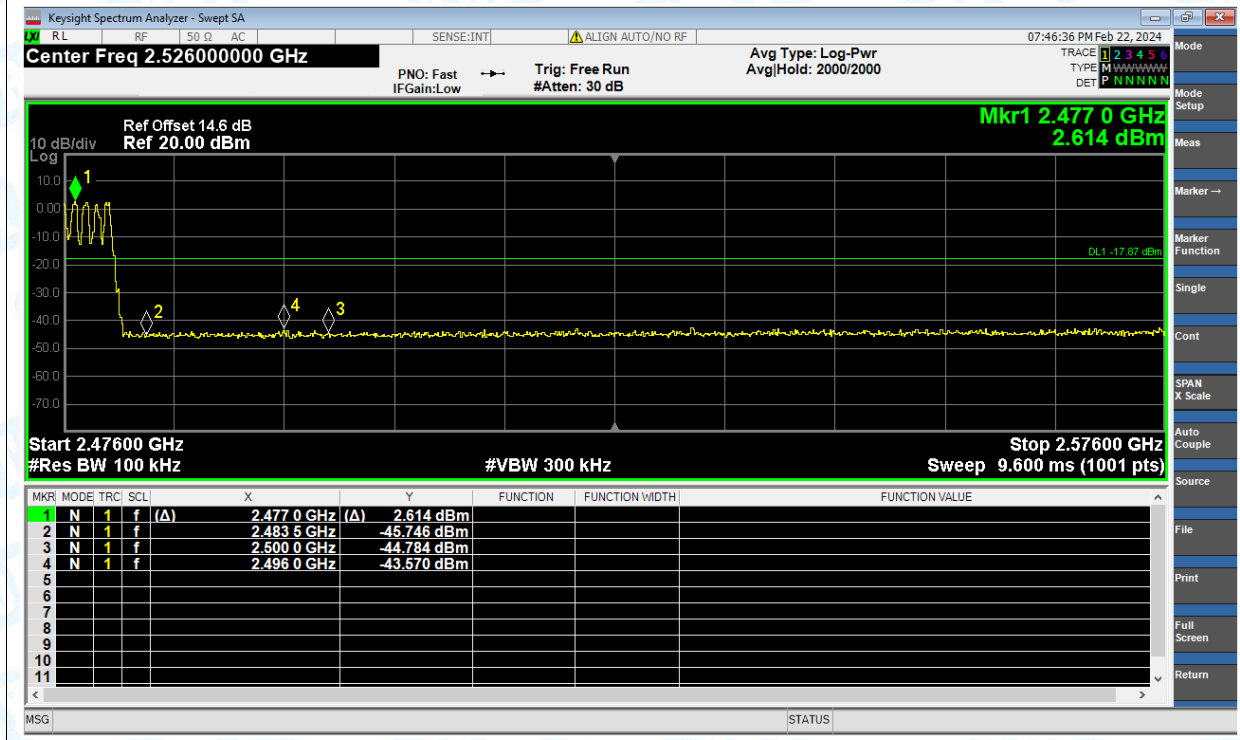
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



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

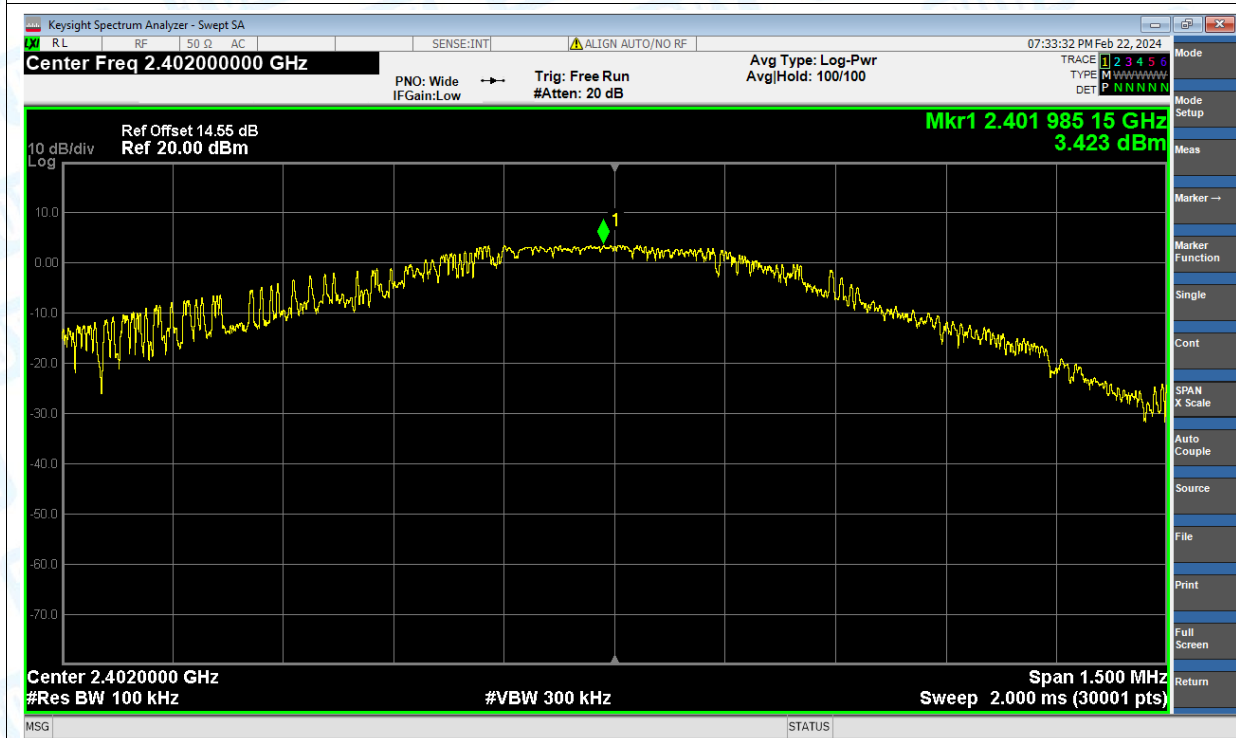


7. Conducted RF Spurious Emission

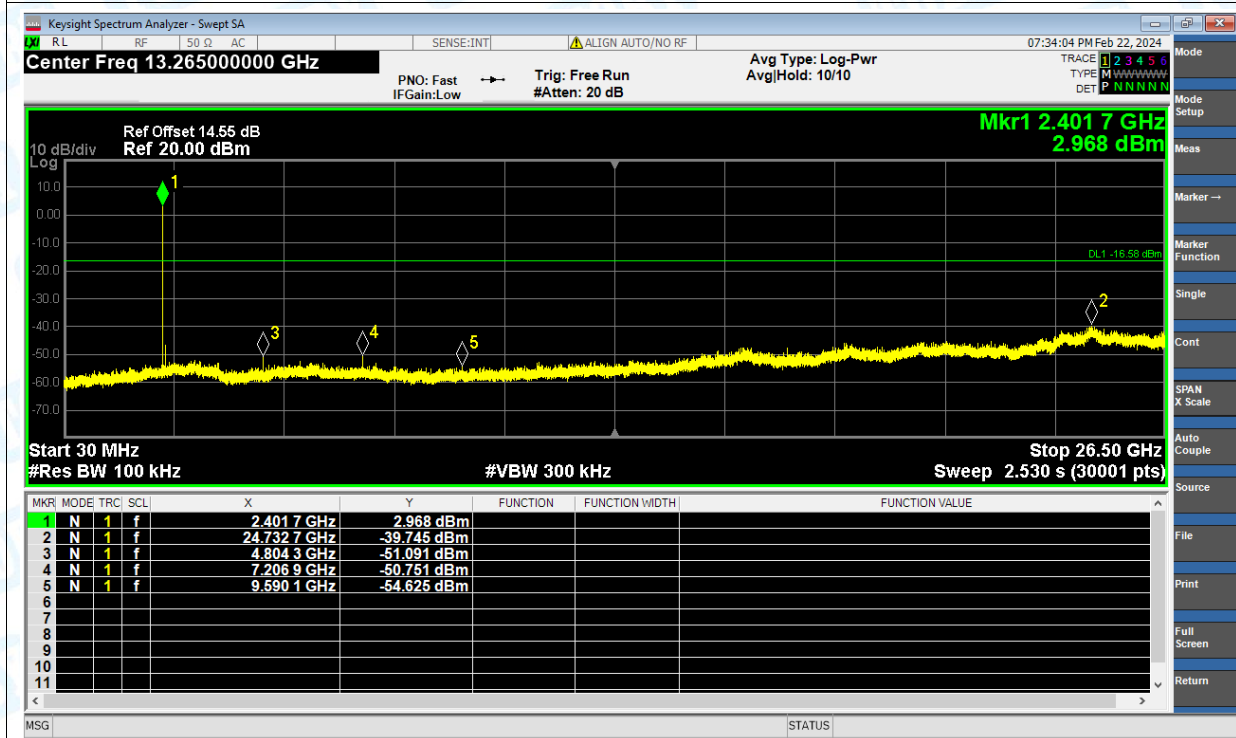
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-43.16	-20	Pass
NVNT	1-DH1	2441	Ant1	-42.27	-20	Pass
NVNT	1-DH1	2480	Ant1	-42.02	-20	Pass

Test Graphs

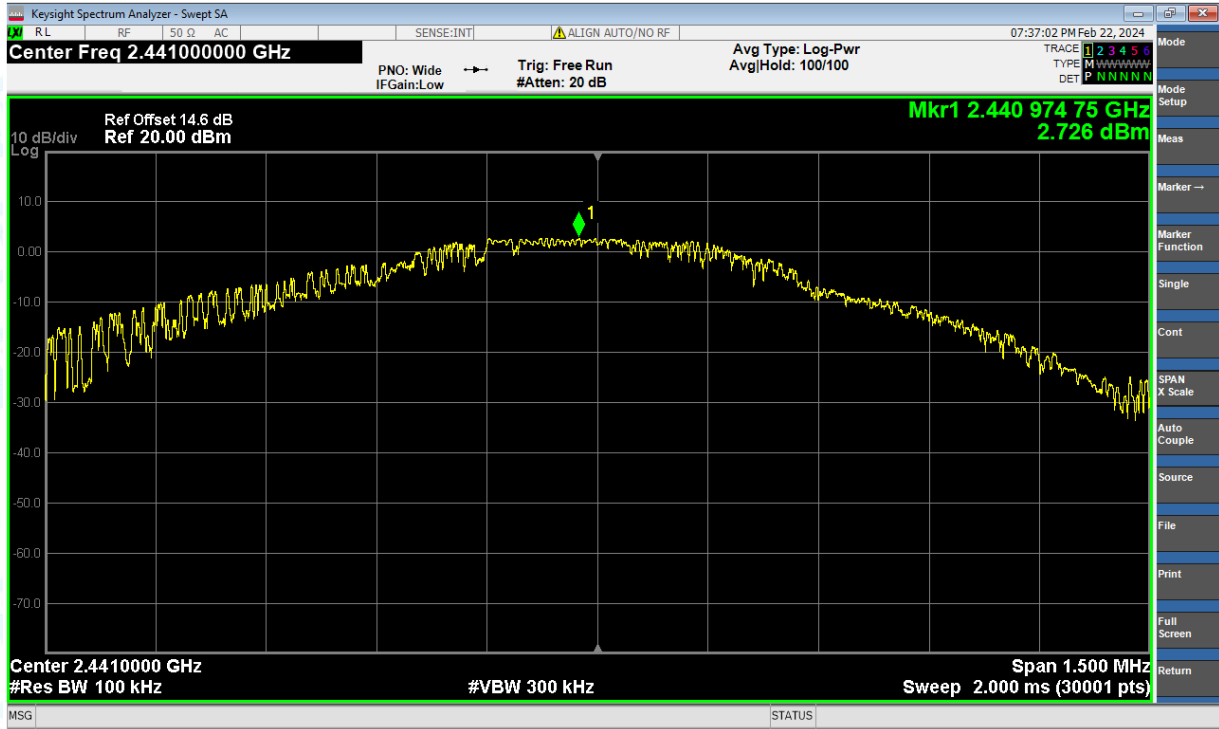
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



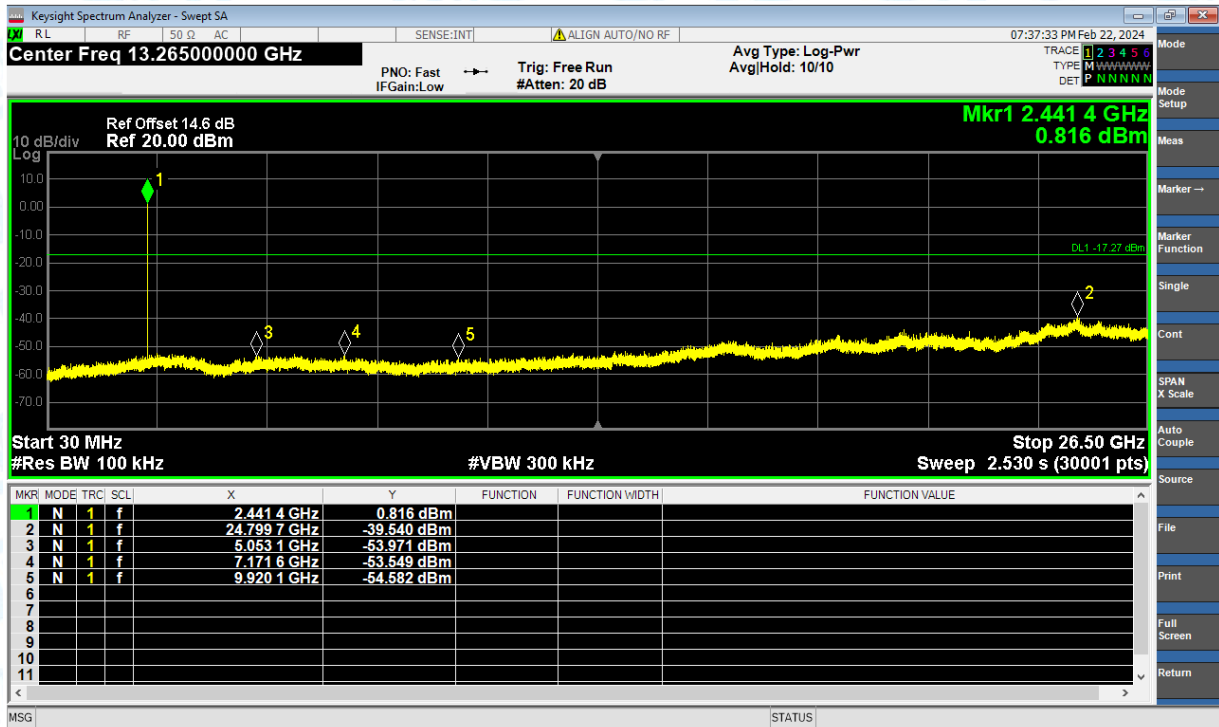
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



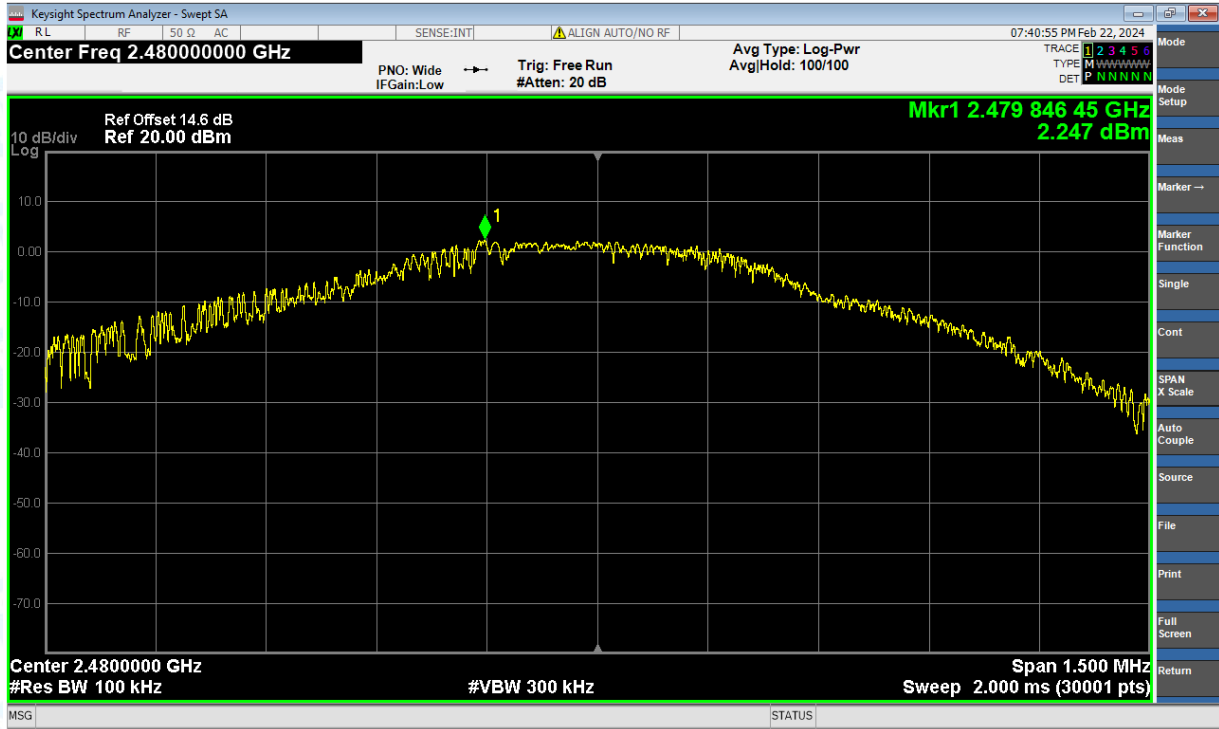
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission

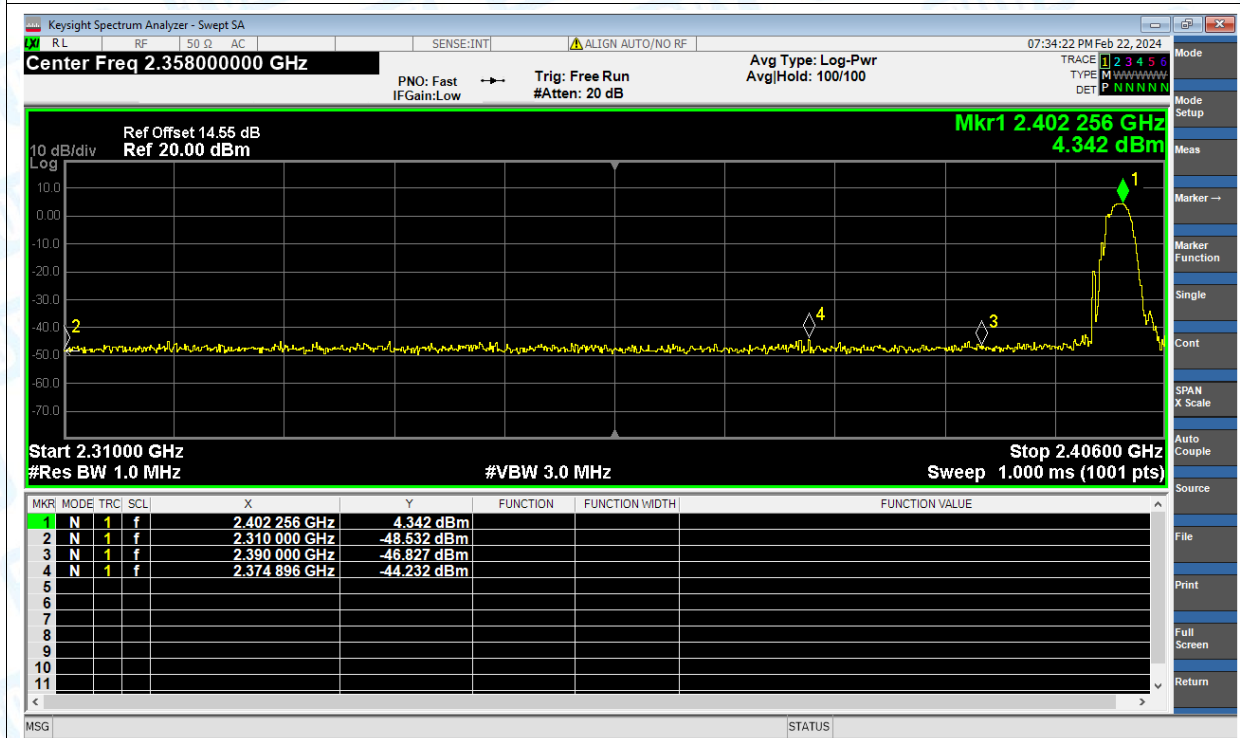


8.Restrict Band

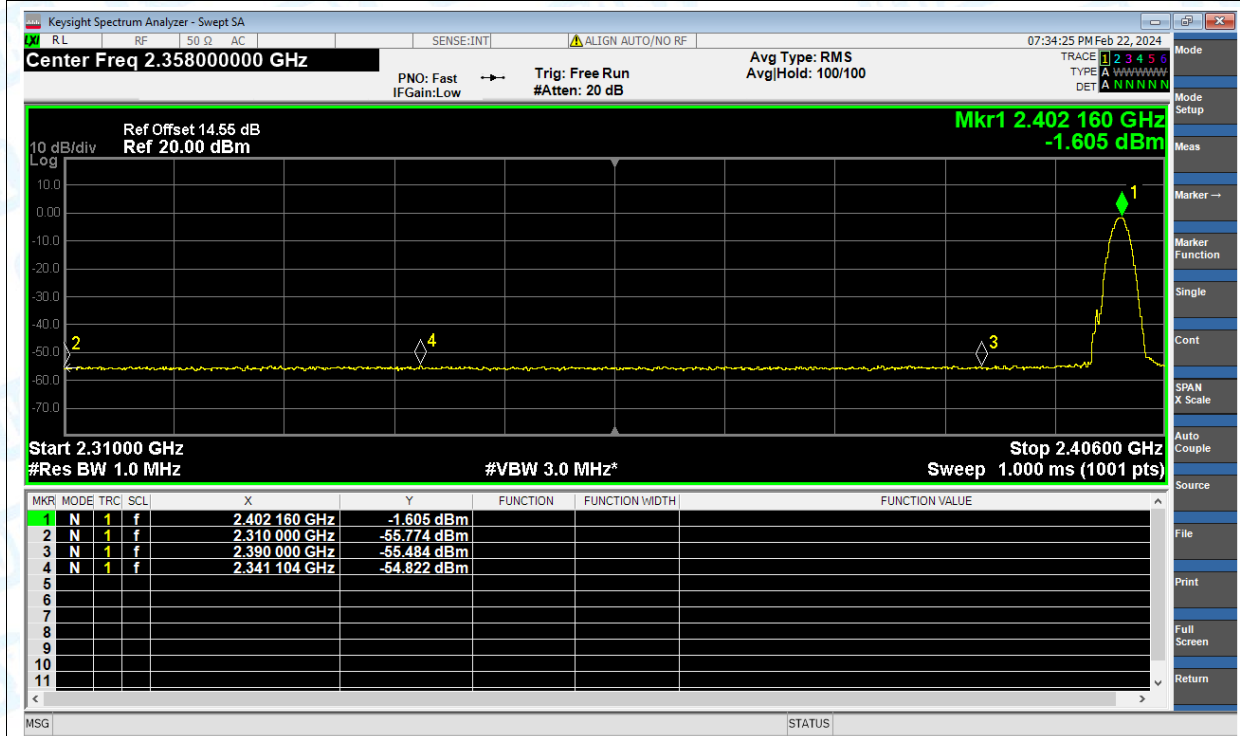
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-48.53	2	-	48.73	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-55.77	2	5.48	46.97	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2374.896	-44.23	2	-	53.03	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2341.104	-54.82	2	5.48	47.92	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-46.83	2	-	50.43	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.48	2	5.48	47.26	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-39.81	2	-	57.45	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-54.81	2	5.63	48.08	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-39.8	2	-	57.46	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.896	-54.15	2	5.63	48.74	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-46.97	2	-	50.29	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.91	2	5.63	47.98	Average	54	Pass

Test Graphs

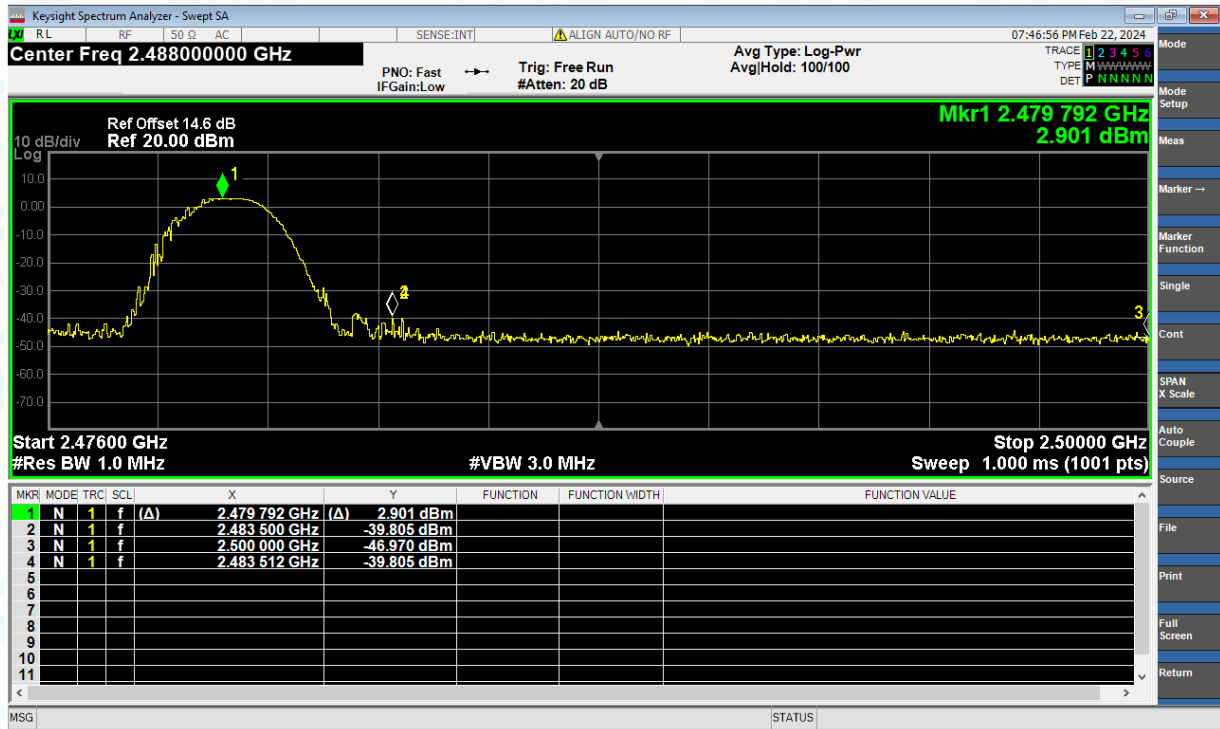
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



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



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

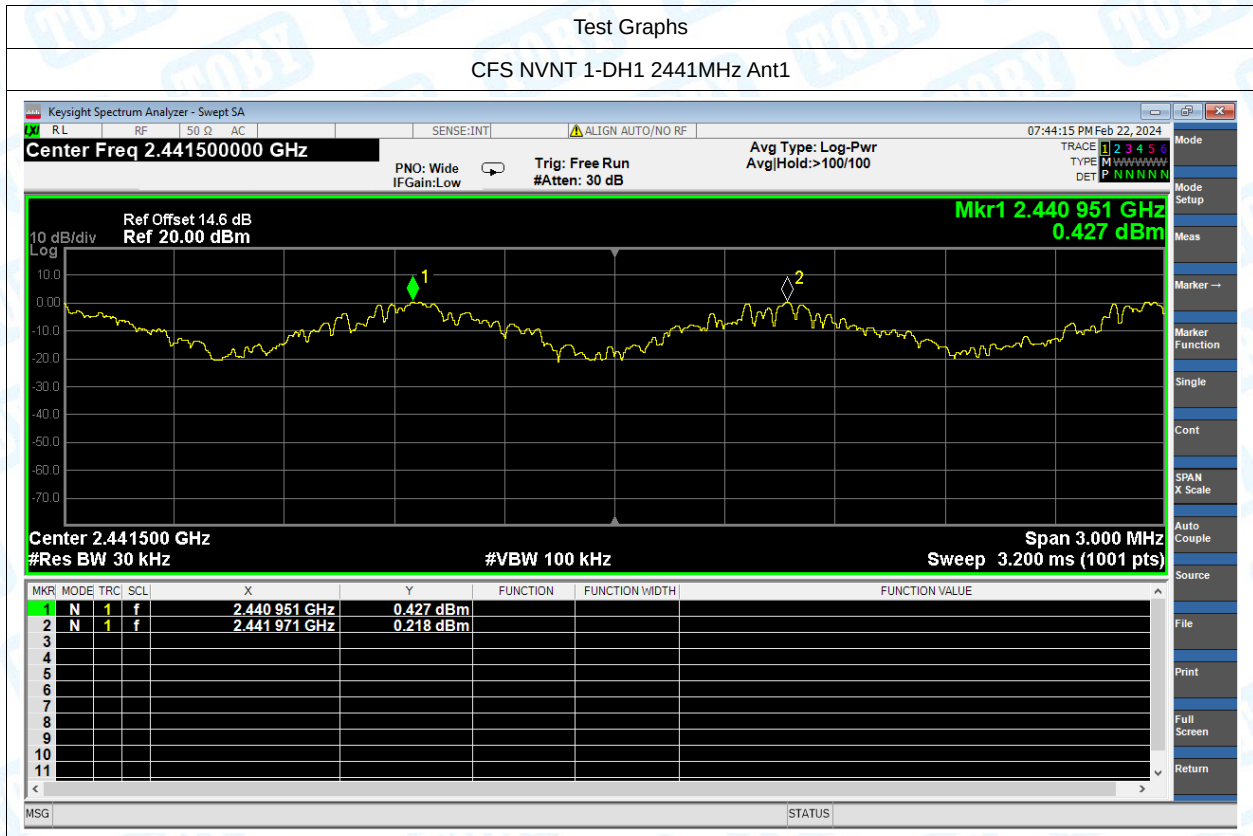


Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



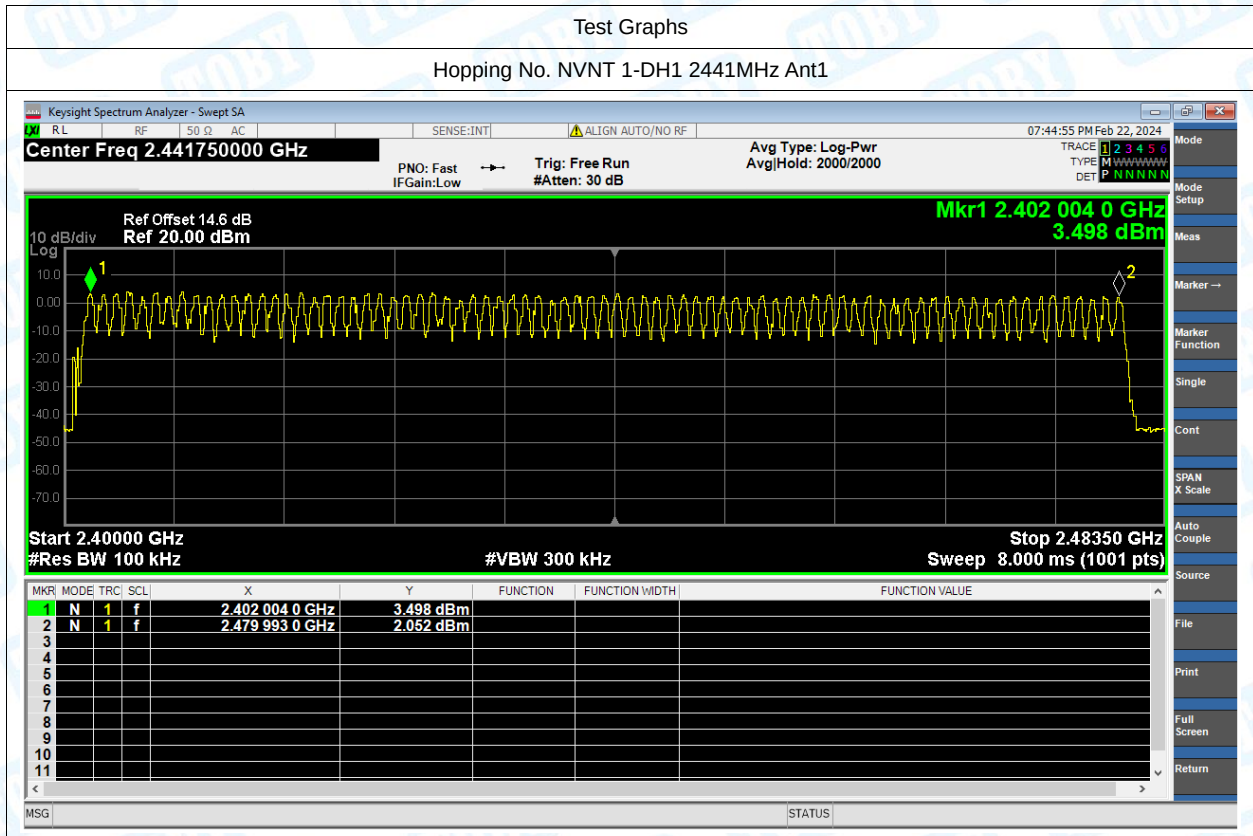
9.Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.951	2441.971	1.02	0.753	Pass



10. Number of Hopping Channel

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

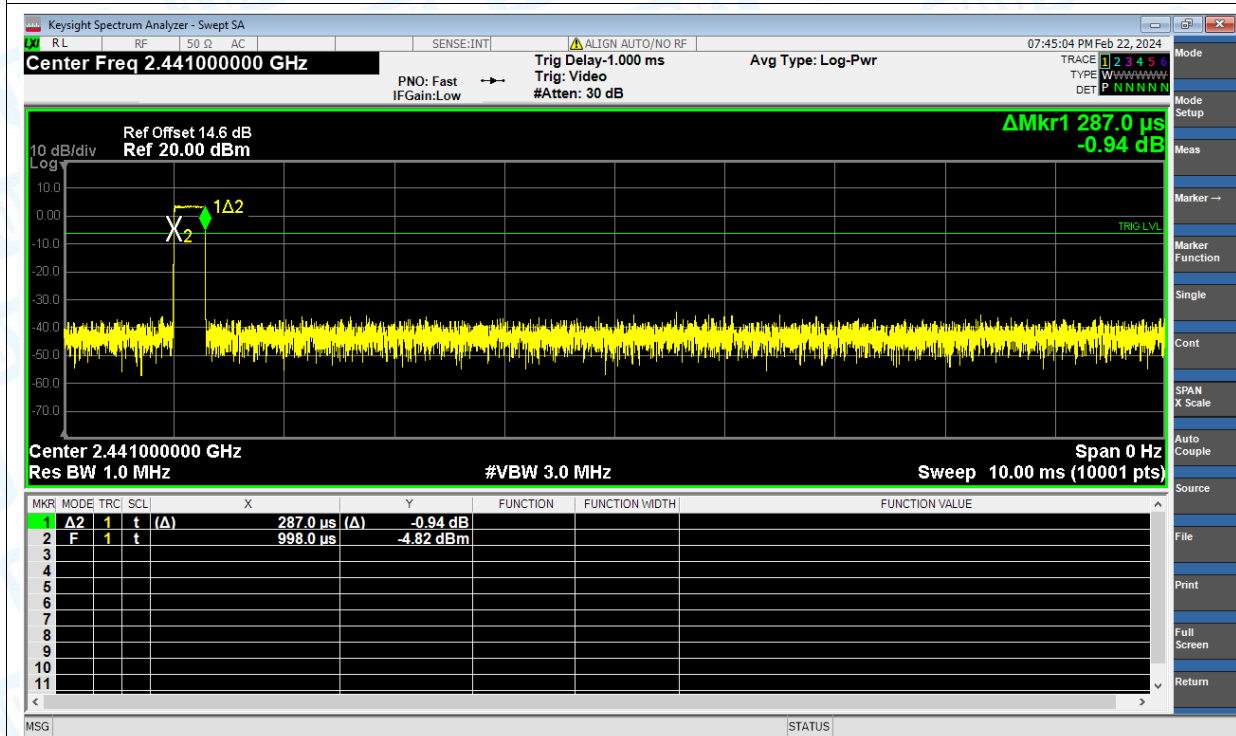


11.Dwell Time

Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.287	91.84	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.518	242.88	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.74	292.267	31600	400	Pass

Test Graphs

Dwell NVNT 1-DH1 2441MHz Ant1



Dwell NVNT 1-DH3 2441MHz Ant1

