

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

General Description of EUT	
Product Name:	Bluetooth headset
Test Model:	Q1
Sample ID:	20211125-05_1-02#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 3.7V
Test Engineer:	HEJINGCHANG
Note: For a more detailed features description, please refer to the report TB-RF185984	

Contents

1.Maximum Conducted Output Power	3
2.-20dB Bandwidth	8
3.Occupied Channel Bandwidth	12
4.Carrier Frequencies Separation	16
5.Number of Hopping Channel	20
6.Band Edge	22
7.Band Edge(Hopping).....	27
8.Conducted RF Spurious Emission	32
9.Dwell Time	37
10.Restrict Band	41

1.Maximum Conducted Output Power

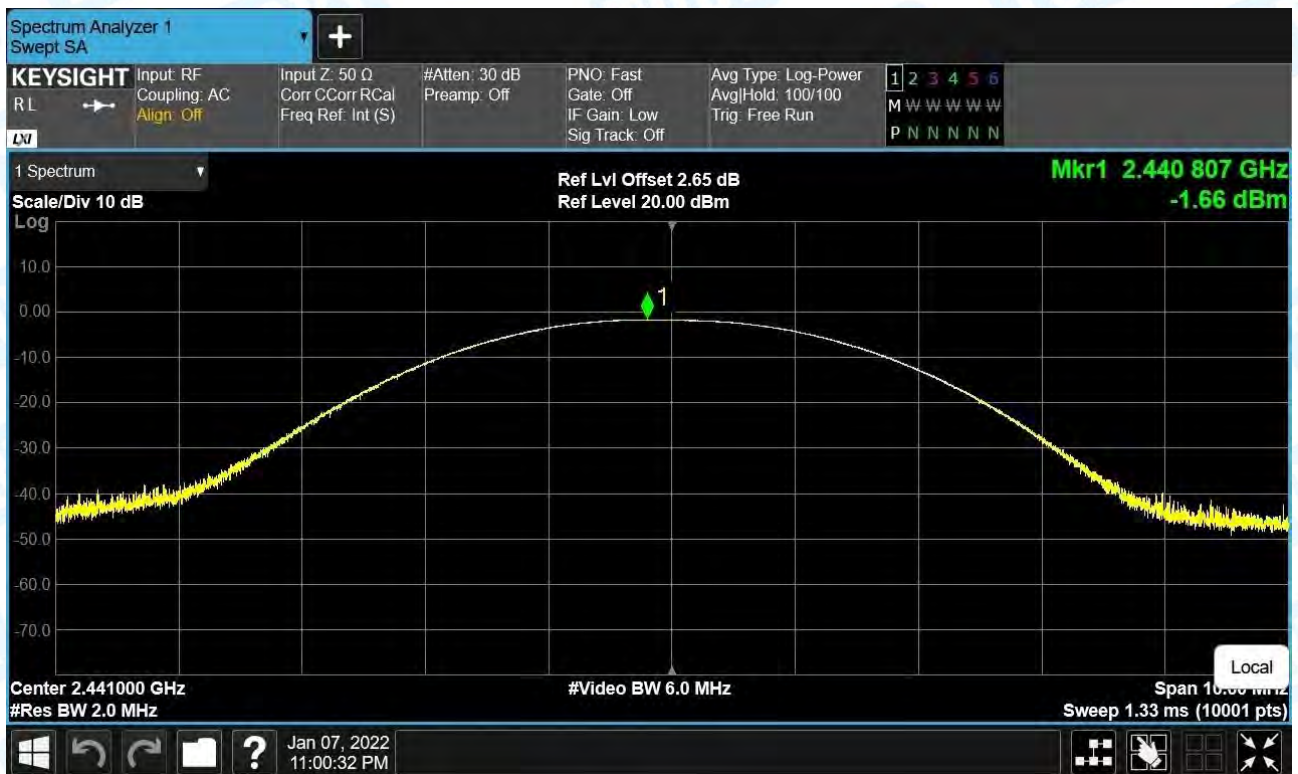
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-1.472	21	Pass
NVNT	1-DH1	2441	Ant1	-1.655	21	Pass
NVNT	1-DH1	2480	Ant1	-2.006	21	Pass
NVNT	2-DH1	2402	Ant1	-0.51	21	Pass
NVNT	2-DH1	2441	Ant1	-0.809	21	Pass
NVNT	2-DH1	2480	Ant1	-1.159	21	Pass

Test Graphs

Power NVNT 1-DH1 2402MHz Ant1



Power NVNT 1-DH1 2441MHz Ant1







Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1



2.-20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.86	0	Pass
NVNT	1-DH1	2441	Ant1	0.84	0	Pass
NVNT	1-DH1	2480	Ant1	0.86	0	Pass
NVNT	2-DH1	2402	Ant1	1.25	0	Pass
NVNT	2-DH1	2441	Ant1	1.28	0	Pass
NVNT	2-DH1	2480	Ant1	1.24	0	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



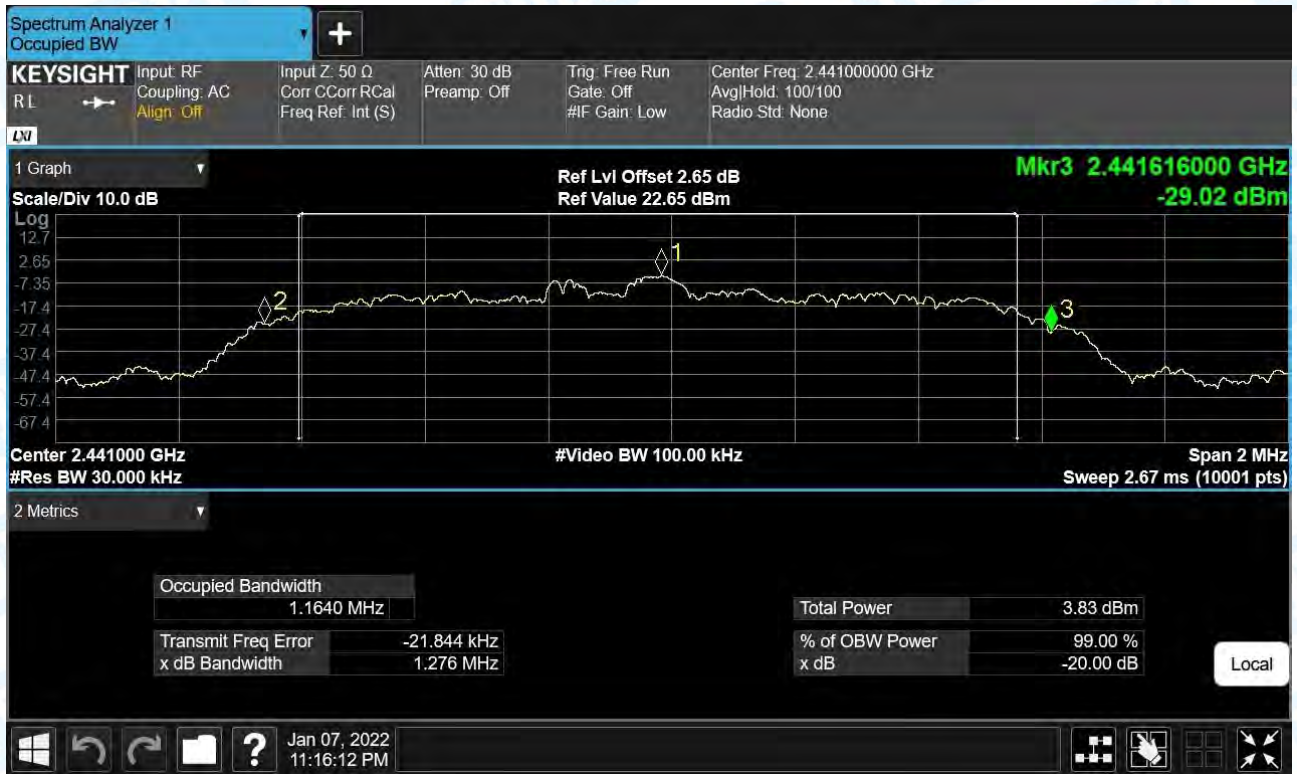
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

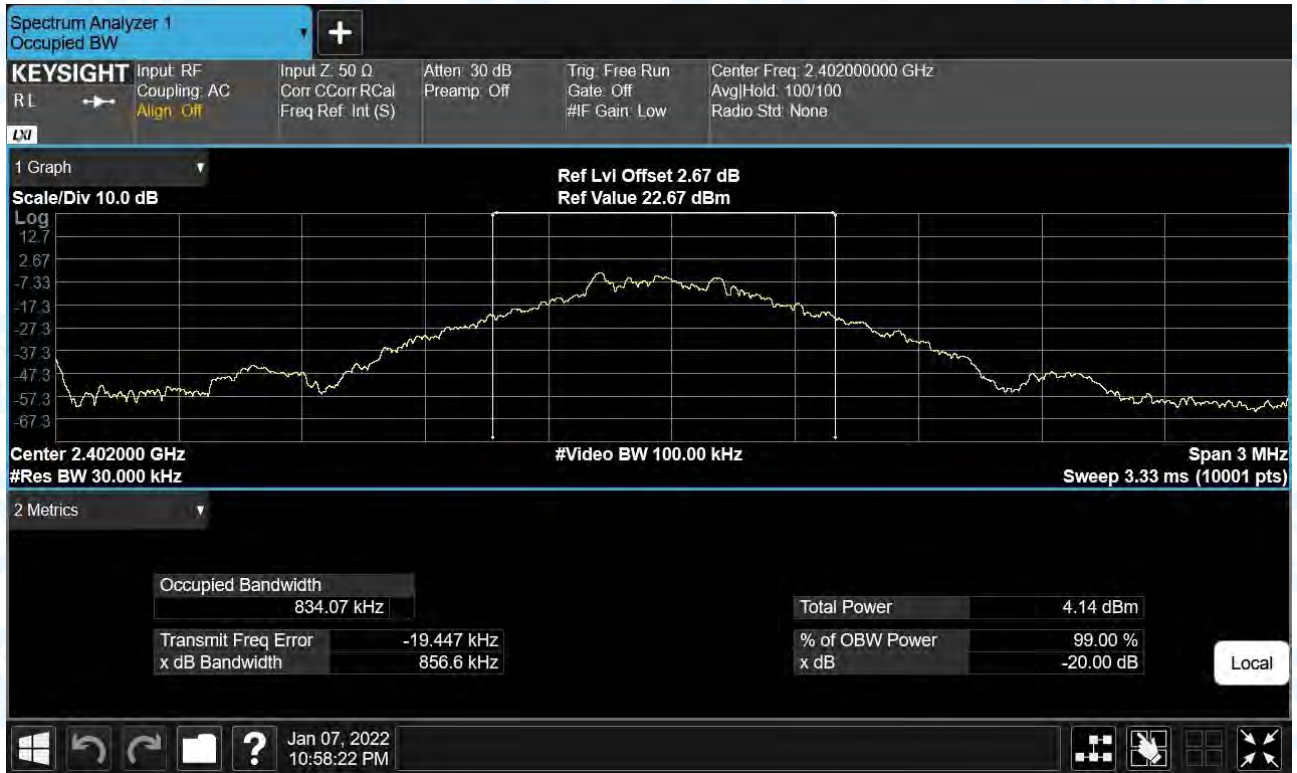


3.Occupied Channel Bandwidth

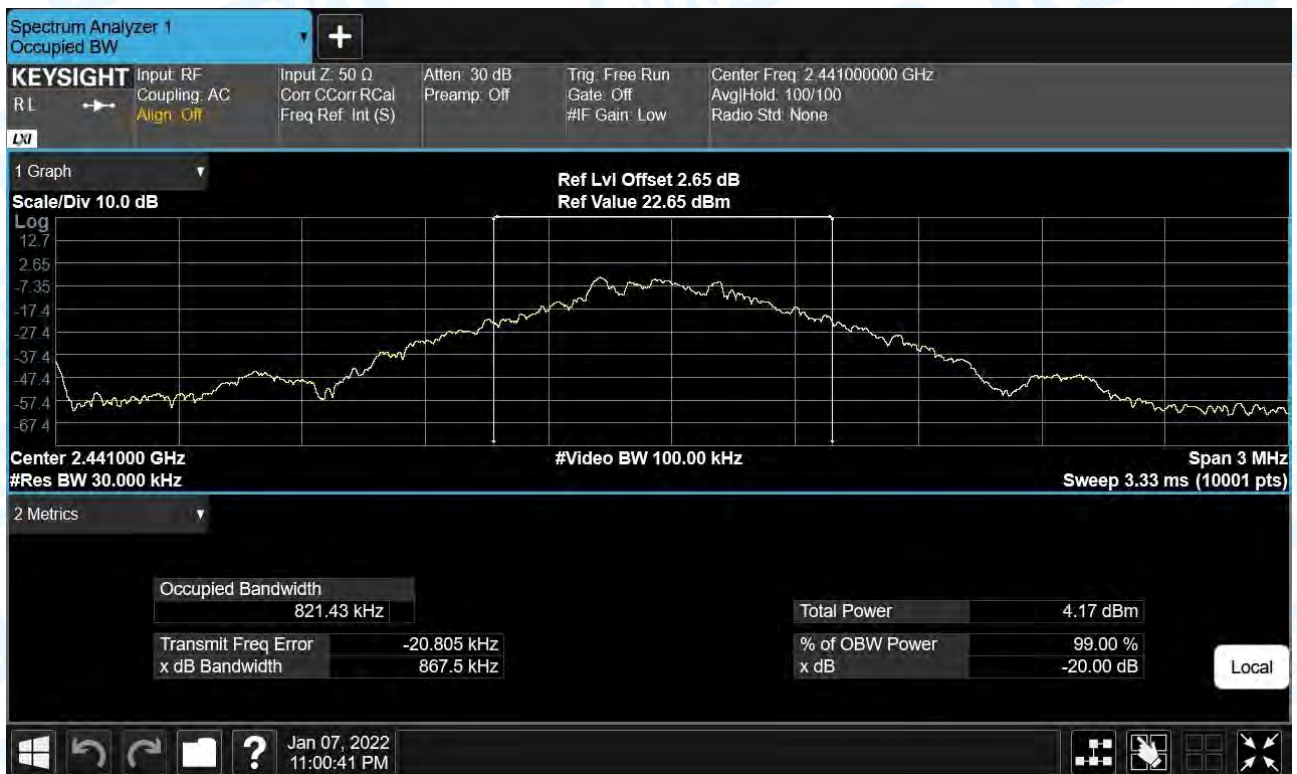
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.834
NVNT	1-DH1	2441	Ant1	0.821
NVNT	1-DH1	2480	Ant1	0.813
NVNT	2-DH1	2402	Ant1	1.164
NVNT	2-DH1	2441	Ant1	1.148
NVNT	2-DH1	2480	Ant1	1.147

Test Graphs

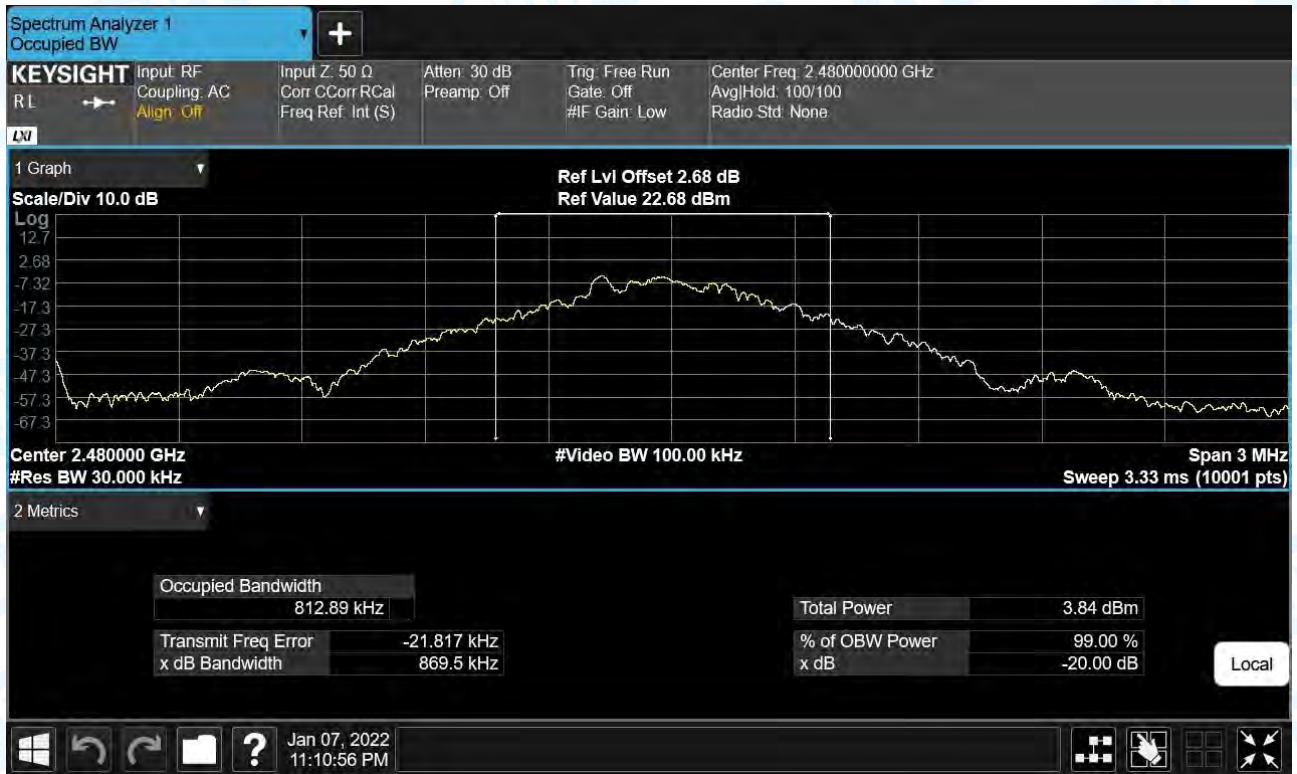
OBW NVNT 1-DH1 2402MHz Ant1



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



4.Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2401.834	2402.83	0.996	0.573	Pass
NVNT	1-DH1	Ant1	2440.825	2441.974	1.149	0.56	Pass
NVNT	1-DH1	Ant1	2478.819	2479.824	1.005	0.025	Pass
NVNT	2-DH1	Ant1	2401.969	2402.824	0.855	0.833	Pass
NVNT	2-DH1	Ant1	2440.822	2441.83	1.008	0.853	Pass
NVNT	2-DH1	Ant1	2478.969	2479.833	0.864	0.827	Pass

Test Graphs

CFS NVNT 1-DH1 2402MHz Ant1



CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 1-DH1 2480MHz Ant1



CFS NVNT 2-DH1 2402MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2480MHz Ant1

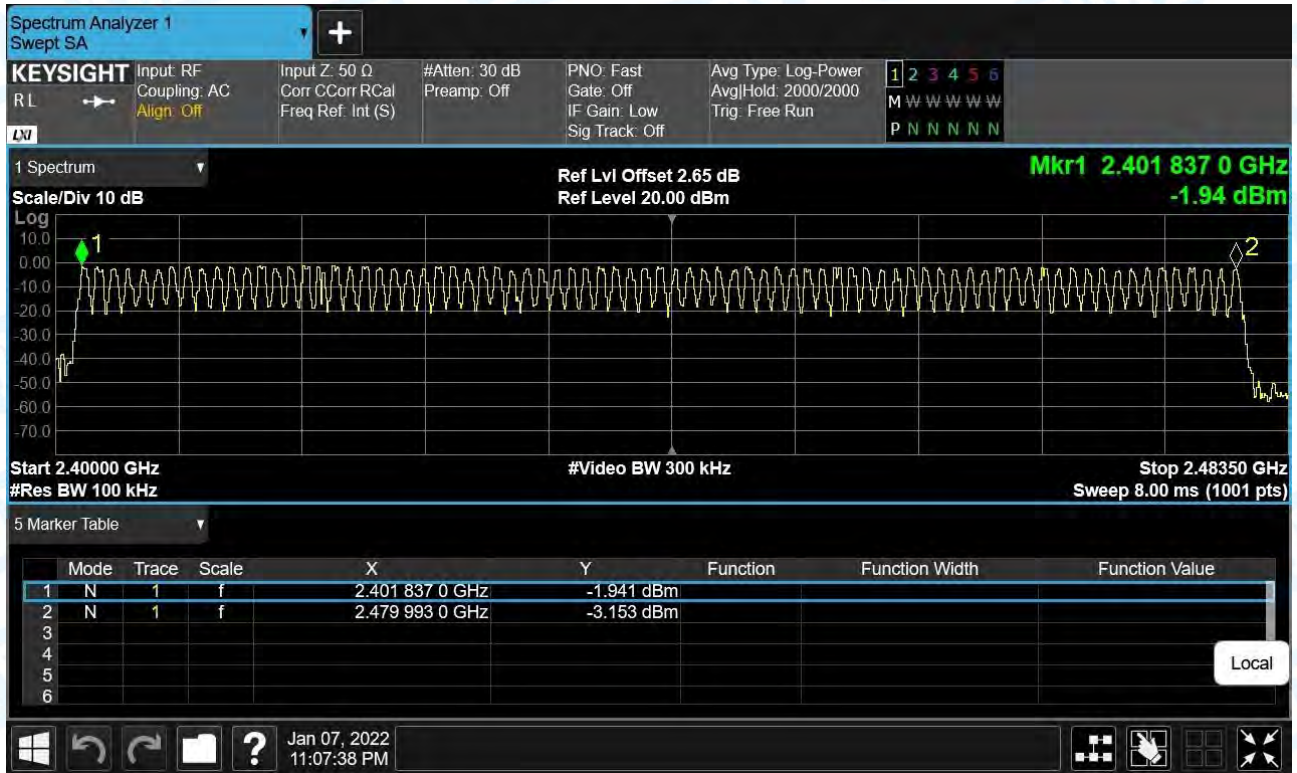


5.Number of Hopping Channel

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

Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



6.Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-53.19	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-51.67	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-53.03	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-52.2	-20	Pass



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

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: AC

Align: Off

Input Z: 50 Ω

Corr: CCorr RCal

Freq Ref: Int (S)

#Atten: 30 dB

Preamp: Off

PNO: Fast

Gate: Off

IF Gain: Low

Sig Track: Off

Avg Type: Log-Power

AvgHld: 100/100

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P N N N N N

1 Spectrum

Ref Lvl Offset 2.67 dB

Ref Level 20.00 dBm

Mkr1 2.401 8 GHz

-1.73 dBm

Start 2.30600 GHz

#Video BW 300 kHz

Stop 2.40600 GHz

Sweep 9.60 ms (1001 pts)

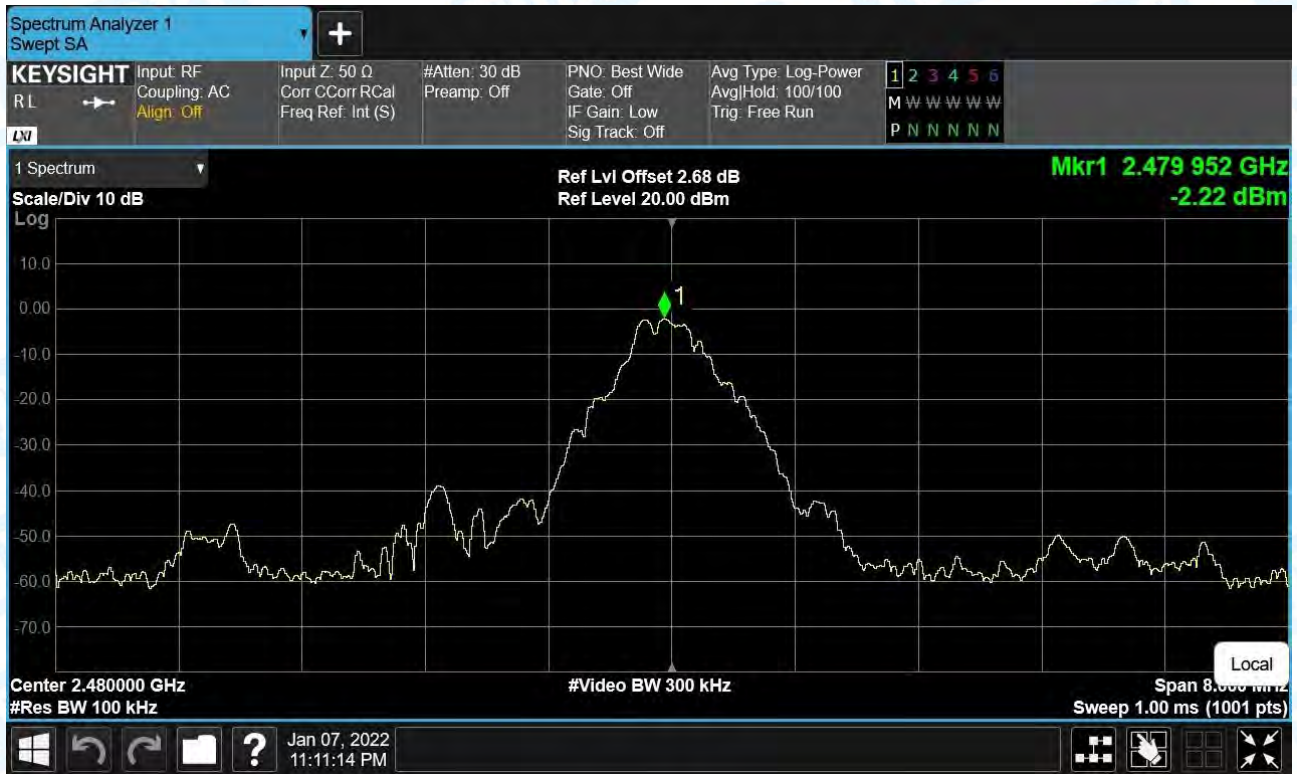
5 Marker Table

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.401 8 GHz	-1.726 dBm			
2	N	1	f	2.400 0 GHz	-54.27 dBm			
3	N	1	f	2.390 0 GHz	-55.04 dBm			
4	N	1	f	2.390 0 GHz	-55.04 dBm			
5								
6								

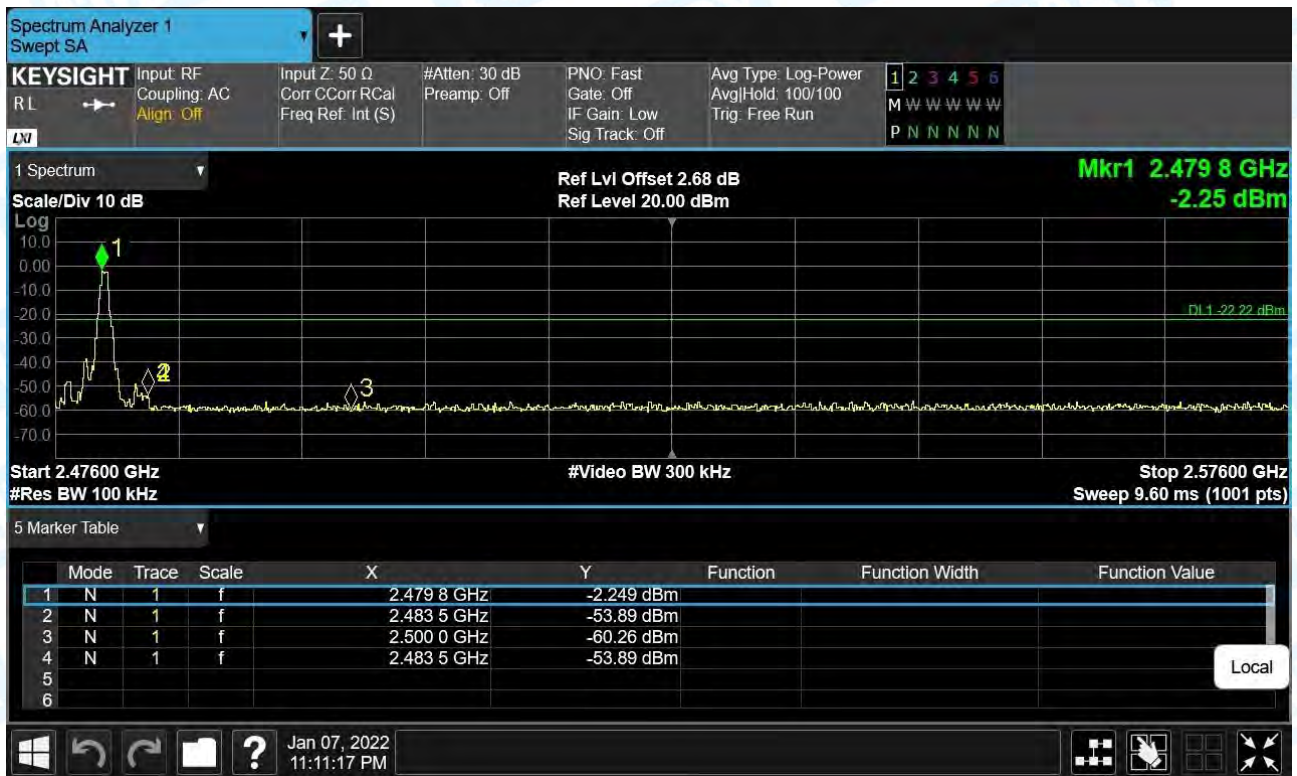
Jan 07, 2022 10:58:59 PM

Local

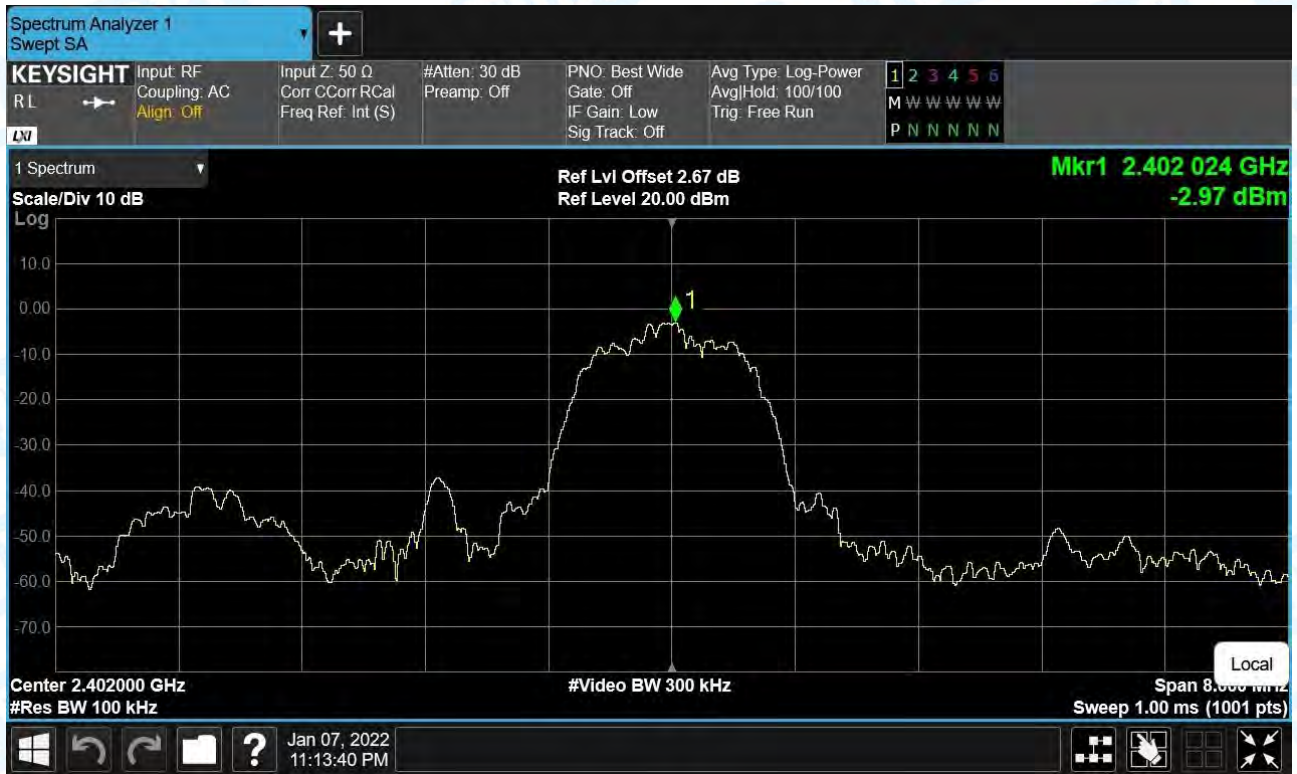
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



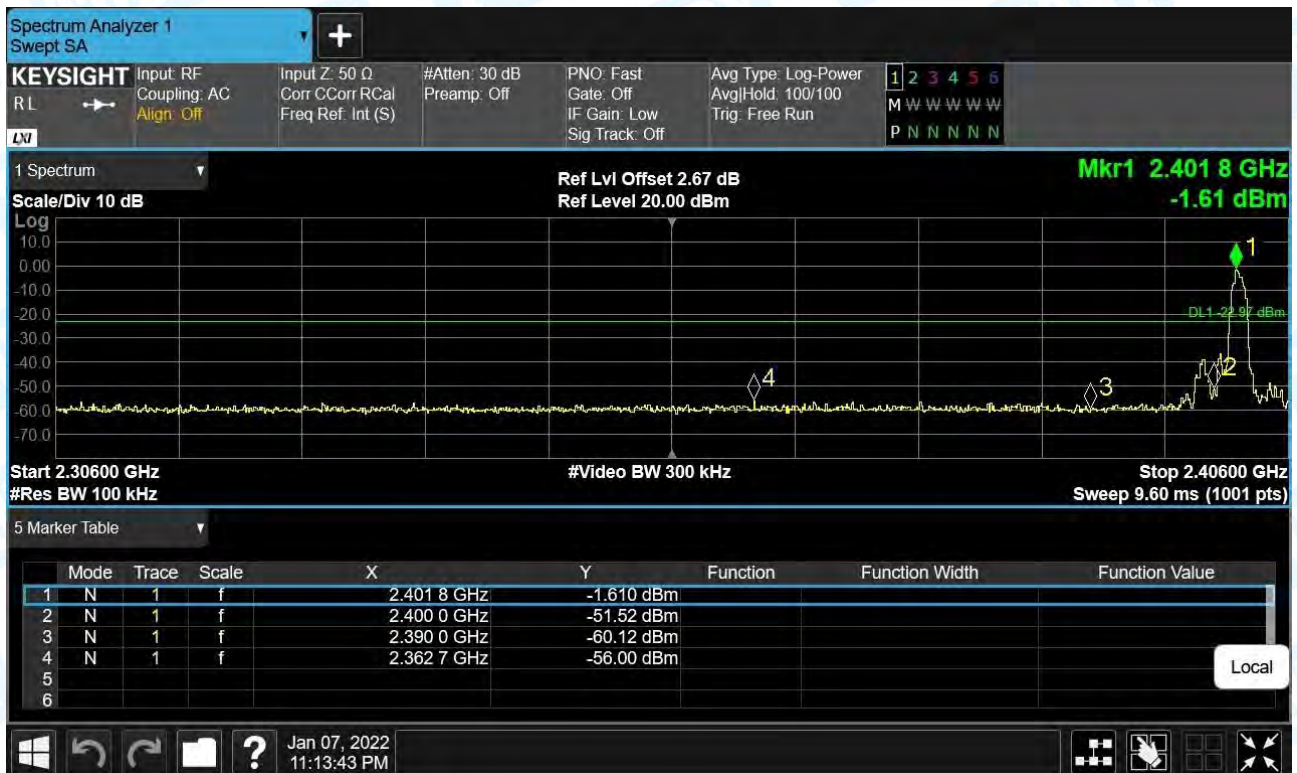
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



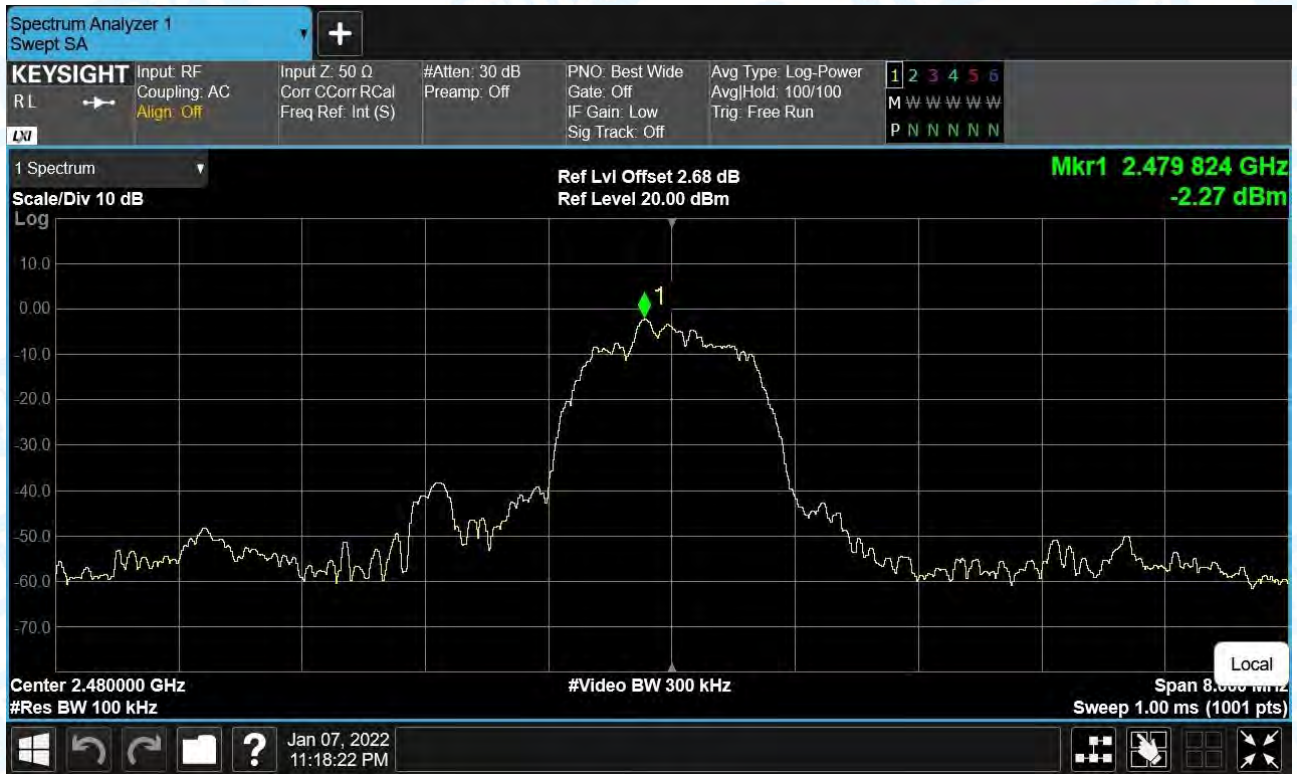
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



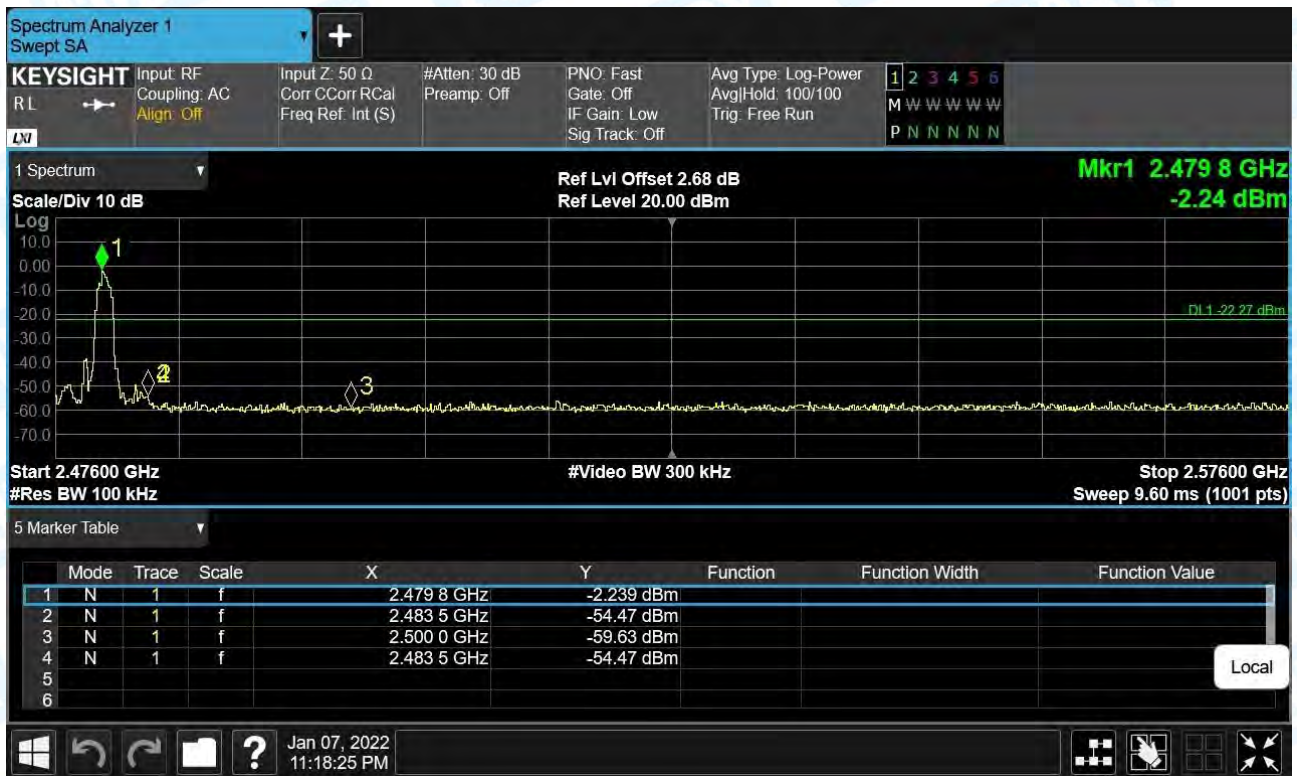
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



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



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



7.Band Edge(Hopping)

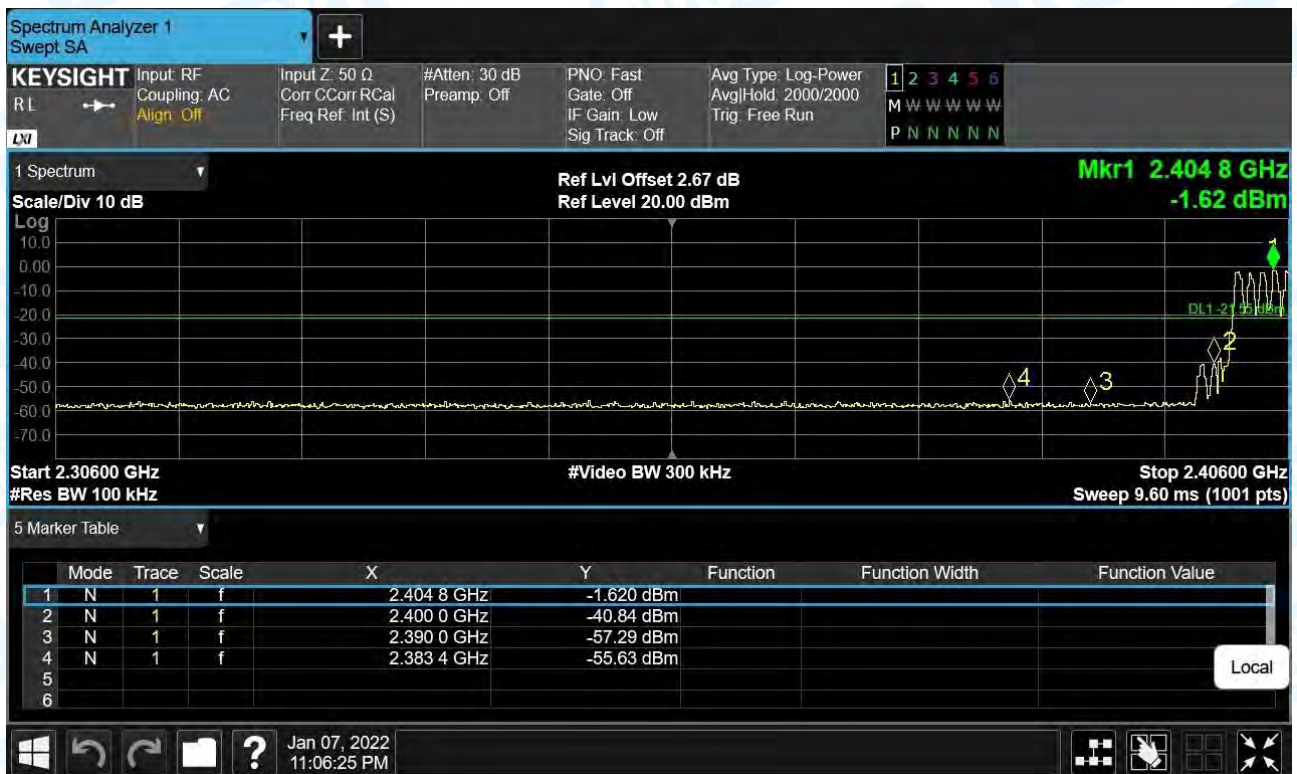
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-54.08	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-52.32	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-54.01	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-53.18	-20	Pass

Test Graphs

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



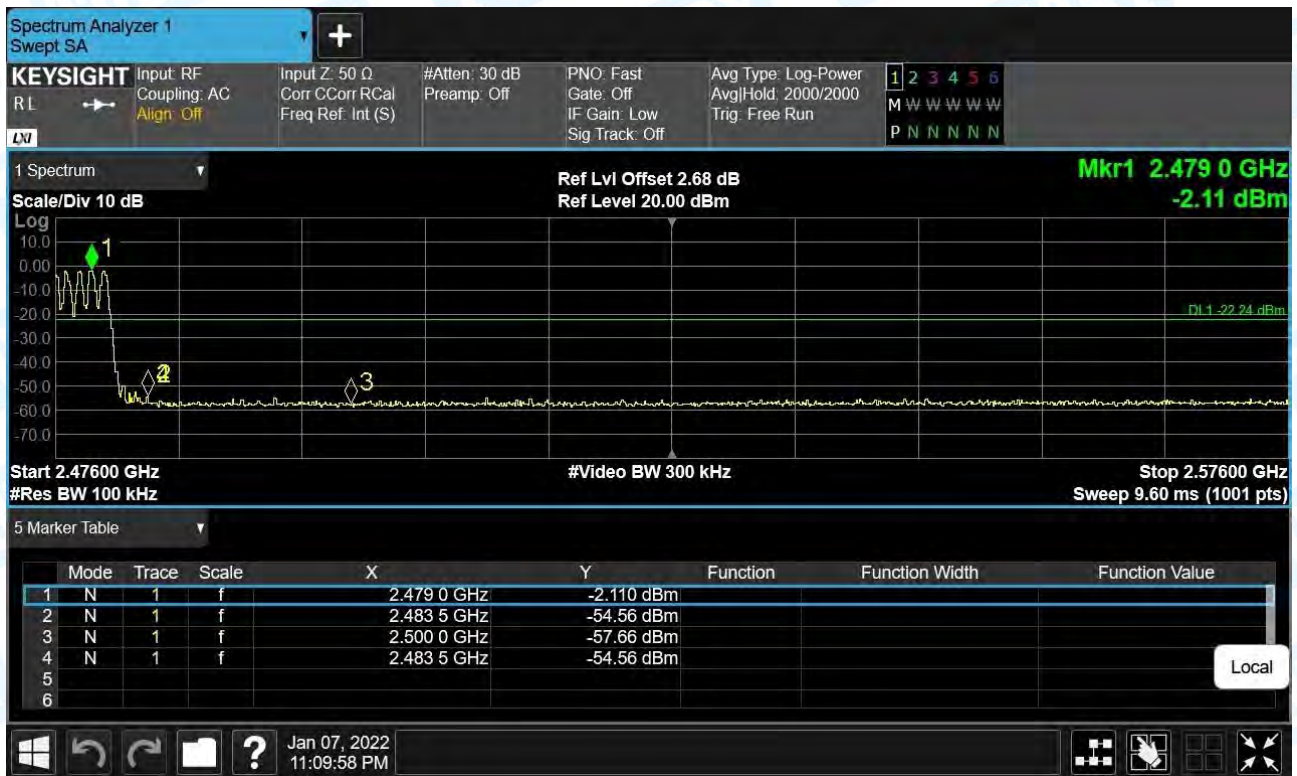
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



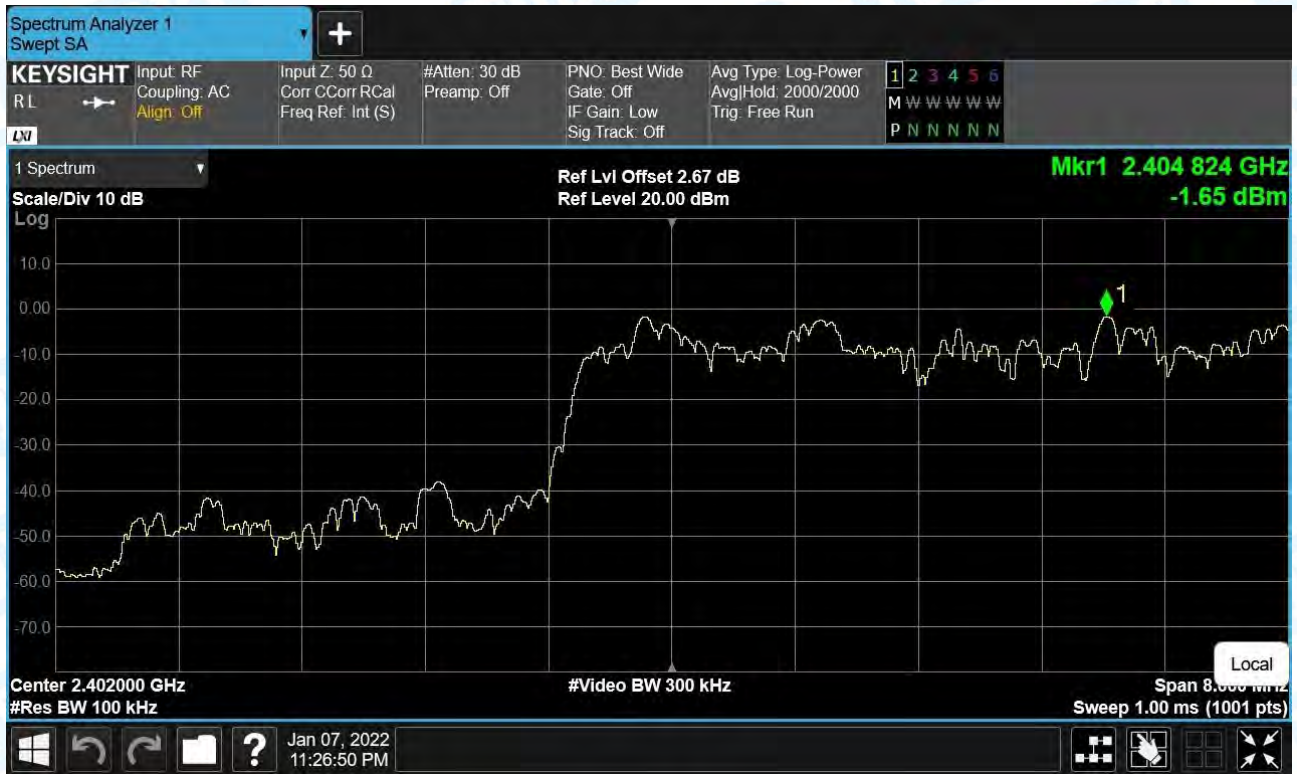
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



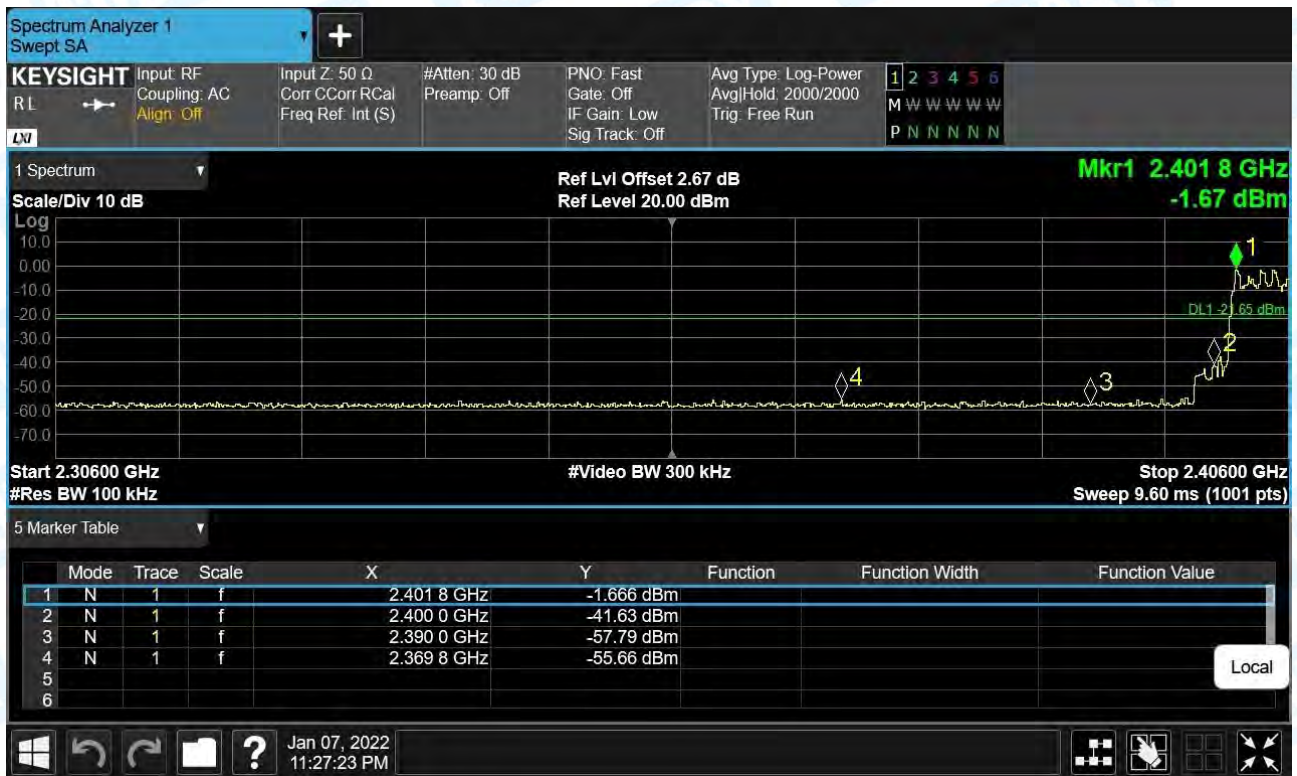
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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



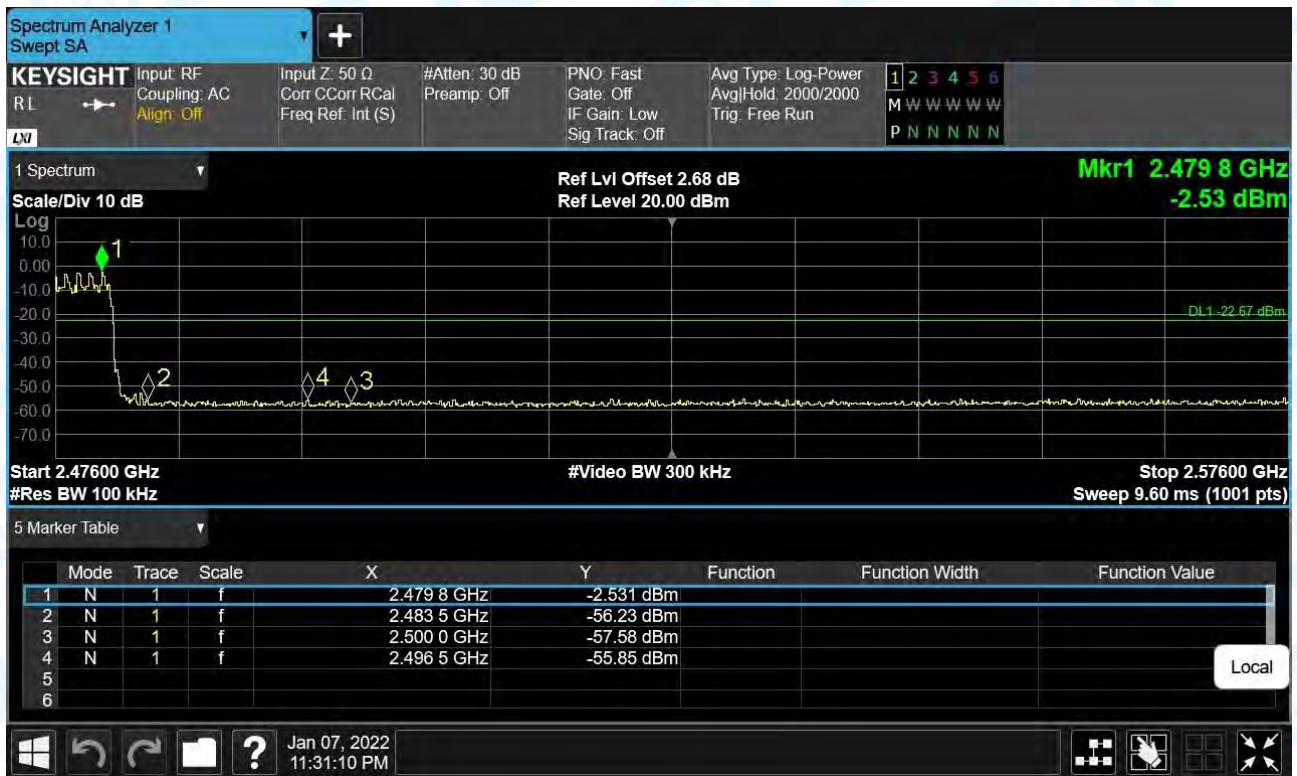
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



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



8.Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-37.18	-20	Pass
NVNT	1-DH1	2480	Ant1	-34.49	-20	Pass
NVNT	2-DH1	2402	Ant1	-37.18	-20	Pass
NVNT	2-DH1	2480	Ant1	-34.74	-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 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 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



9.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	0.382	122.24	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.638	262.08	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.387	123.84	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.891	308.373	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

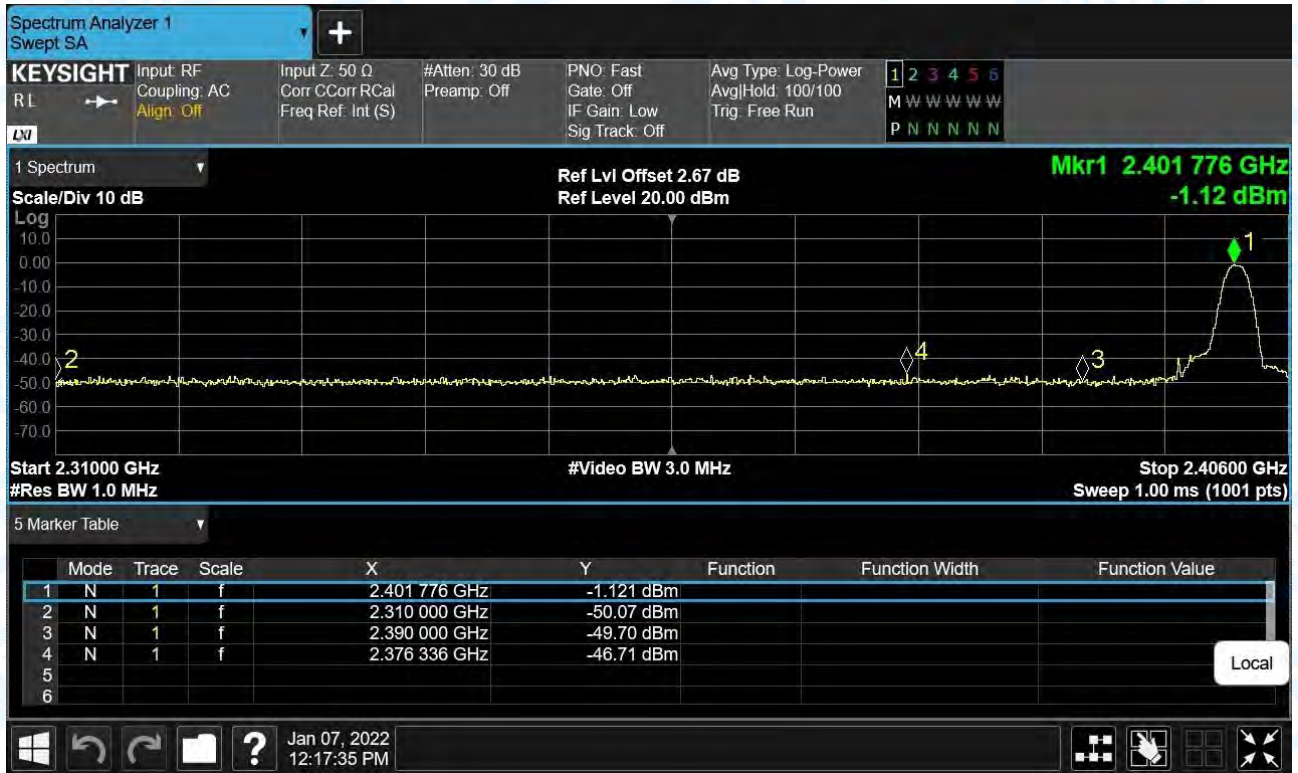


10.Restrict Band

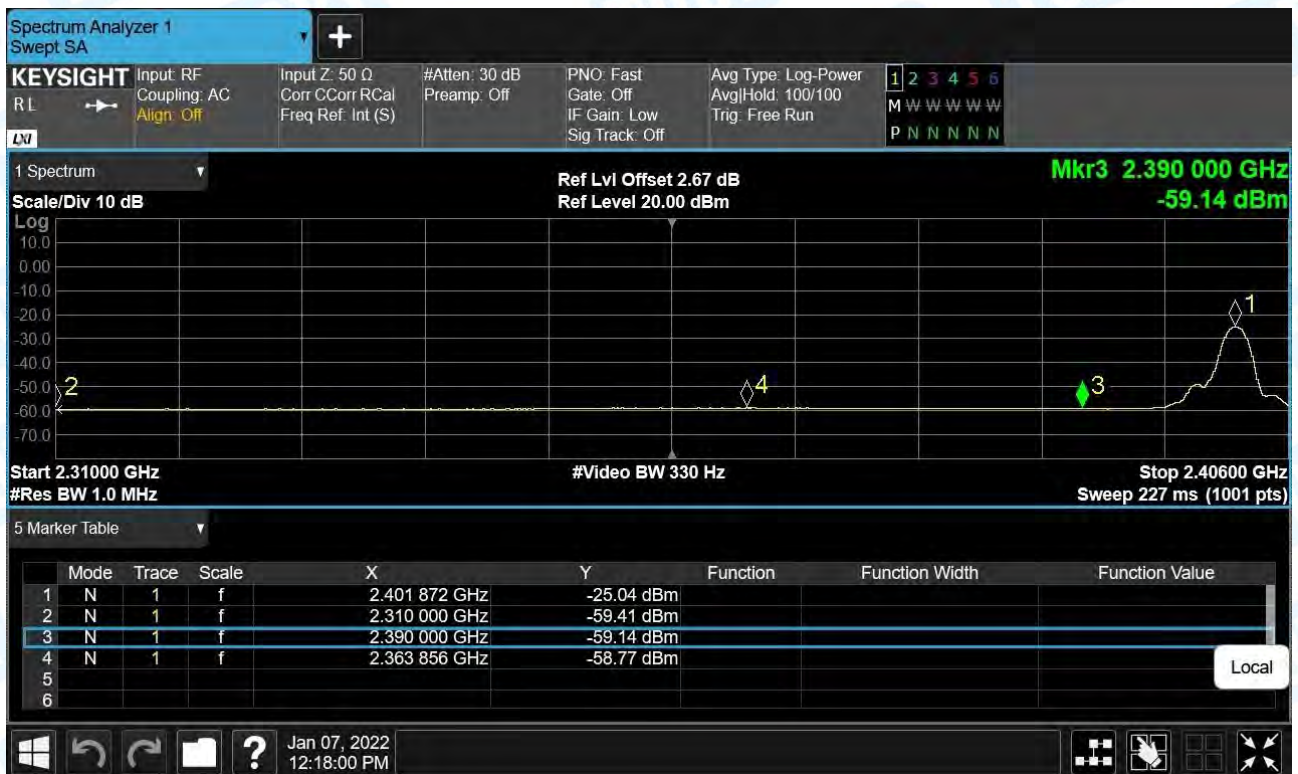
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-50.07	2	47.19	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-59.41	2	37.85	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2376.336	-46.71	2	50.55	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2363.856	-58.77	2	38.49	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-49.32	2	47.94	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-58.98	2	38.28	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46	2	51.26	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-56.76	2	40.5	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.704	-43.92	2	53.34	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.536	-56.7	2	40.56	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-50.45	2	46.81	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-58.91	2	38.35	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-49.76	2	47.5	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-59.35	2	37.91	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2363.664	-45.89	2	51.37	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2370.096	-58.79	2	38.47	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-50.52	2	46.74	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-59.18	2	38.08	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-48.35	2	48.91	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-57.34	2	39.92	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.752	-45.35	2	51.91	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-57.34	2	39.92	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-49.41	2	47.85	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-58.9	2	38.36	Average	54	Pass

Test Graphs

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



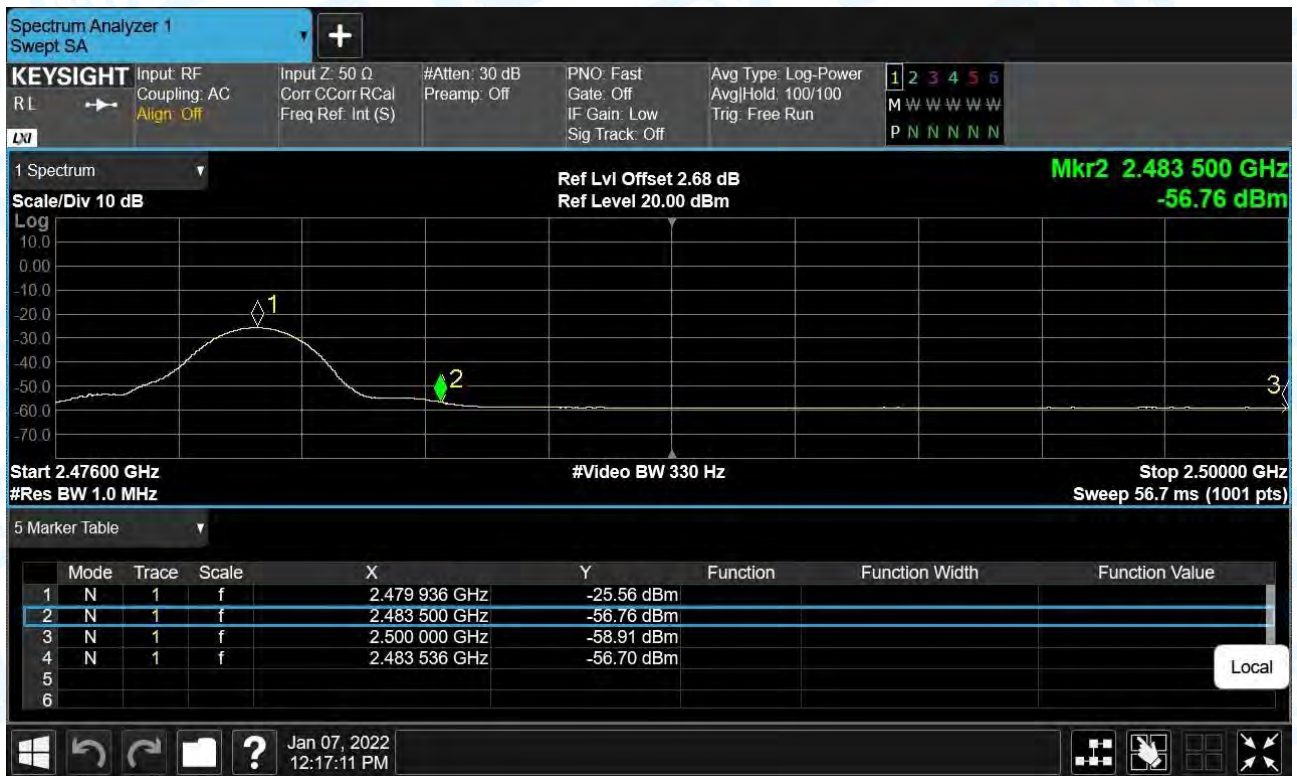
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



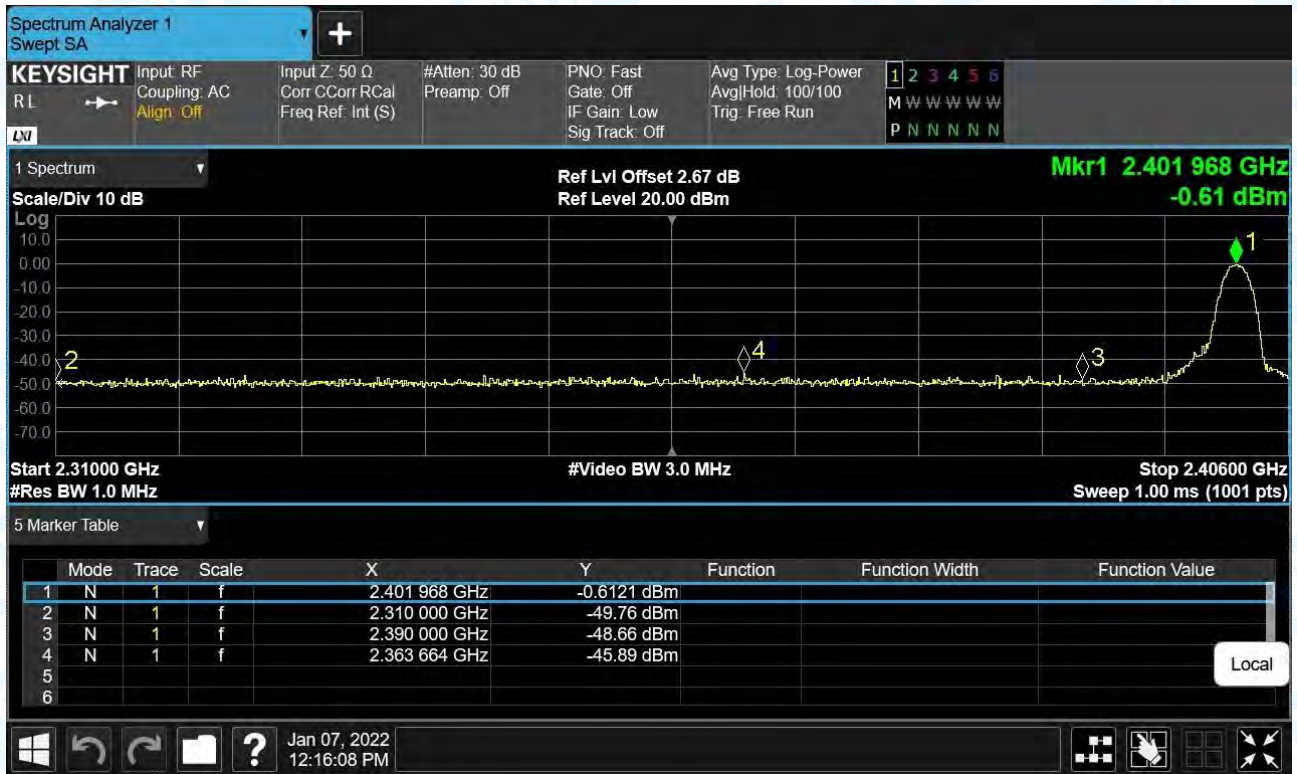
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



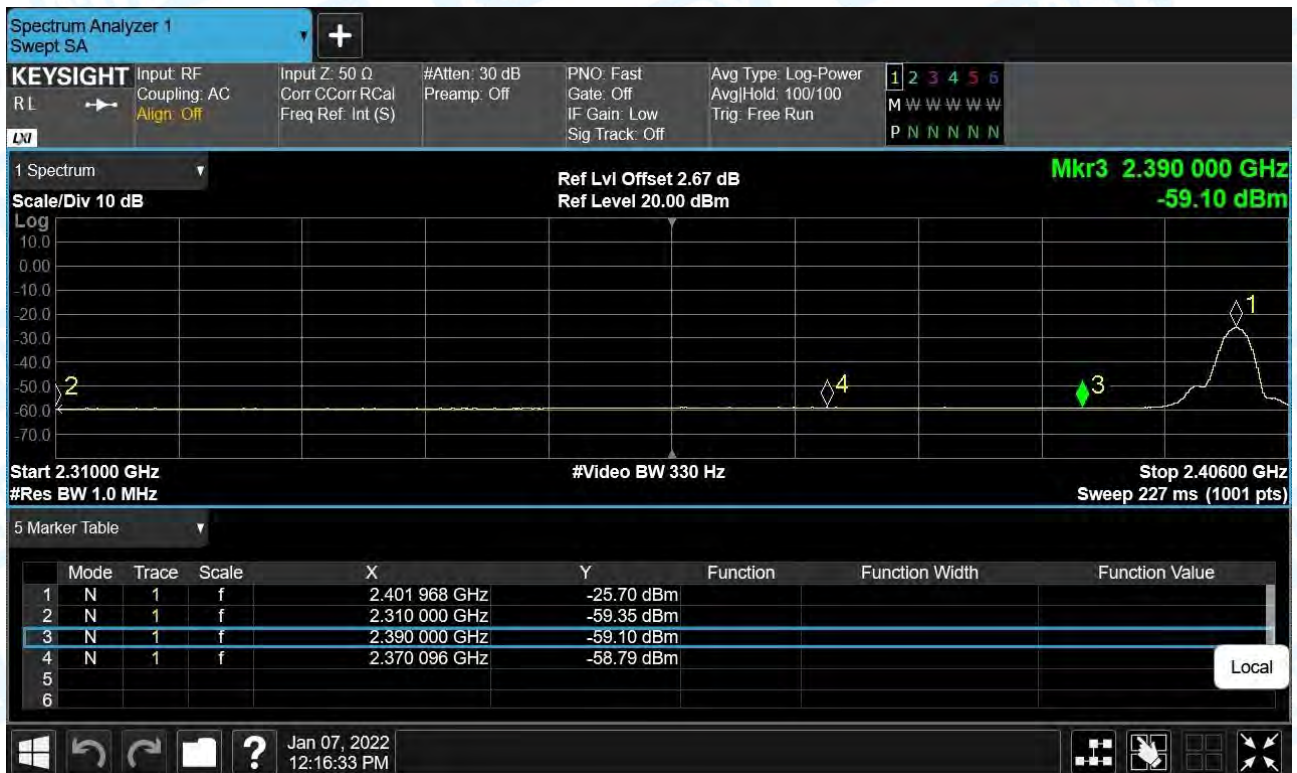
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



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



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