

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Yarbo Core
Test Model:	2429 US
Sample ID:	HC-C-202406-0011-01-05#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 36V
Test Engineer:	ZKn Zhou
Note: For a more detailed features description, please refer to the report TBR-C-202406-0011-31 The report only show the worst case data.	

Contents

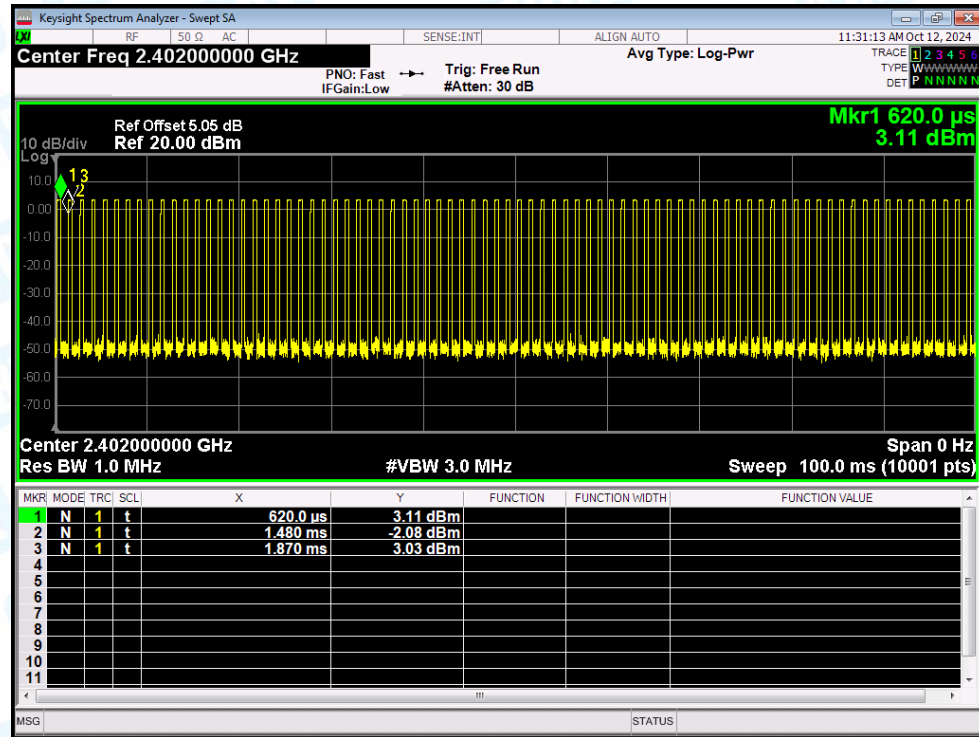
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1.Duty Cycle

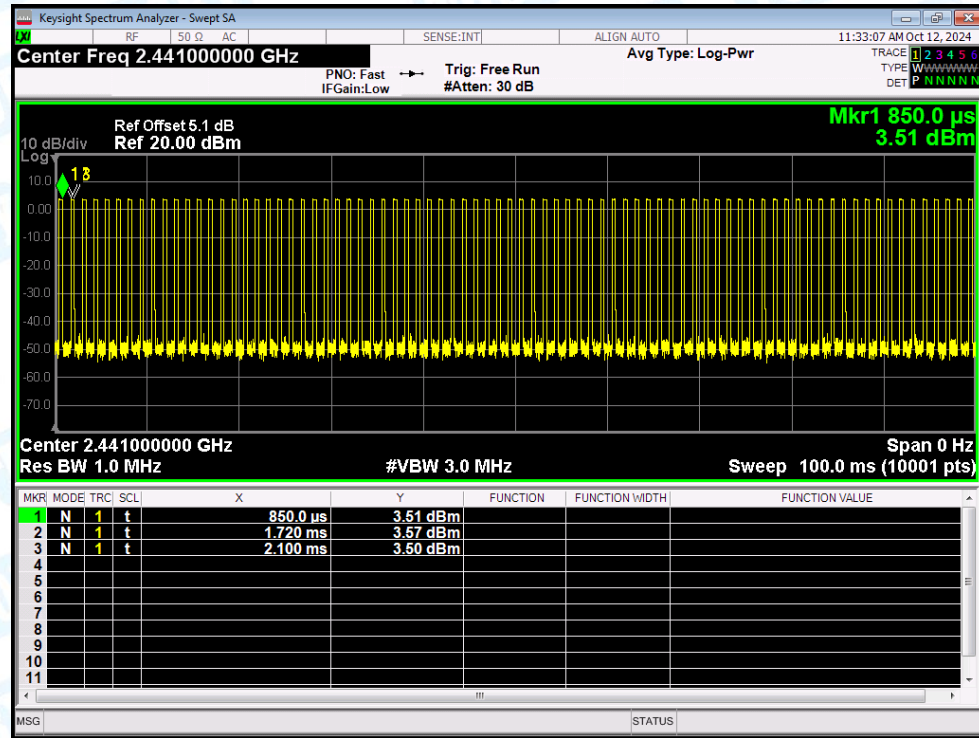
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	32	4.95	2.5
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2480	Ant1	32	4.95	2.5

Test Graphs

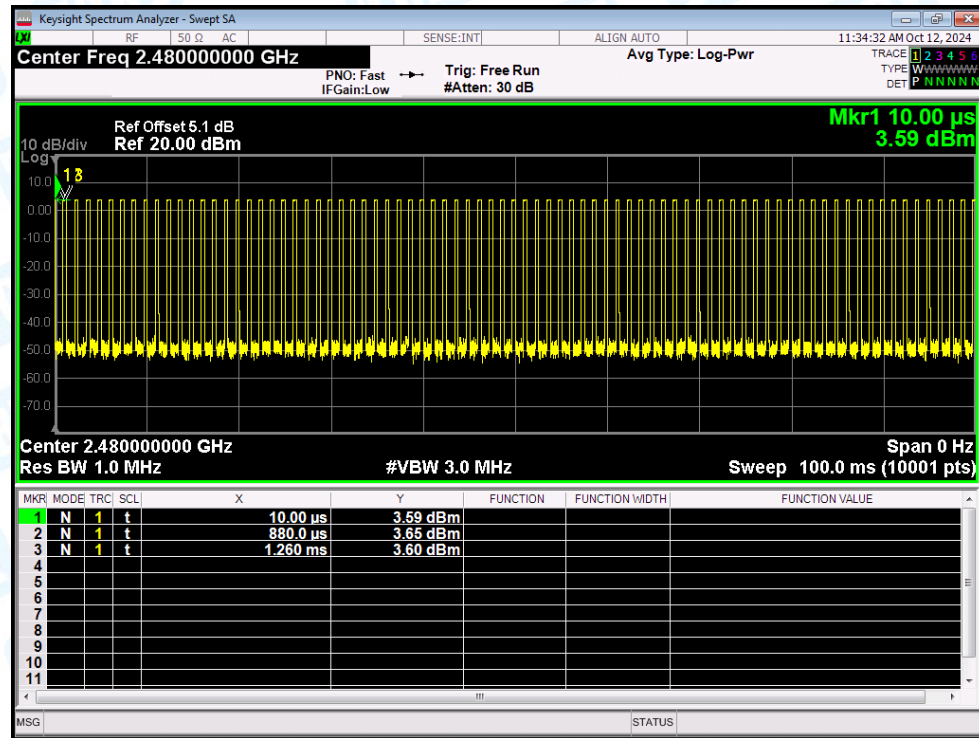
Duty Cycle NVNT 1-DH1 2402MHz Ant1



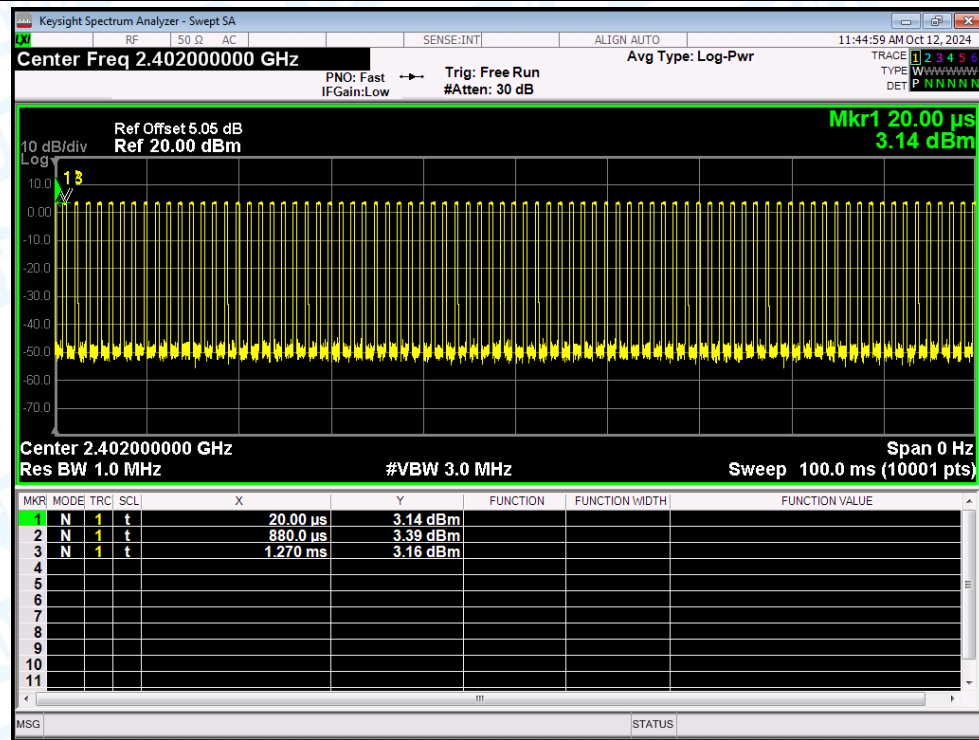
Duty Cycle NVNT 1-DH1 2441MHz Ant1



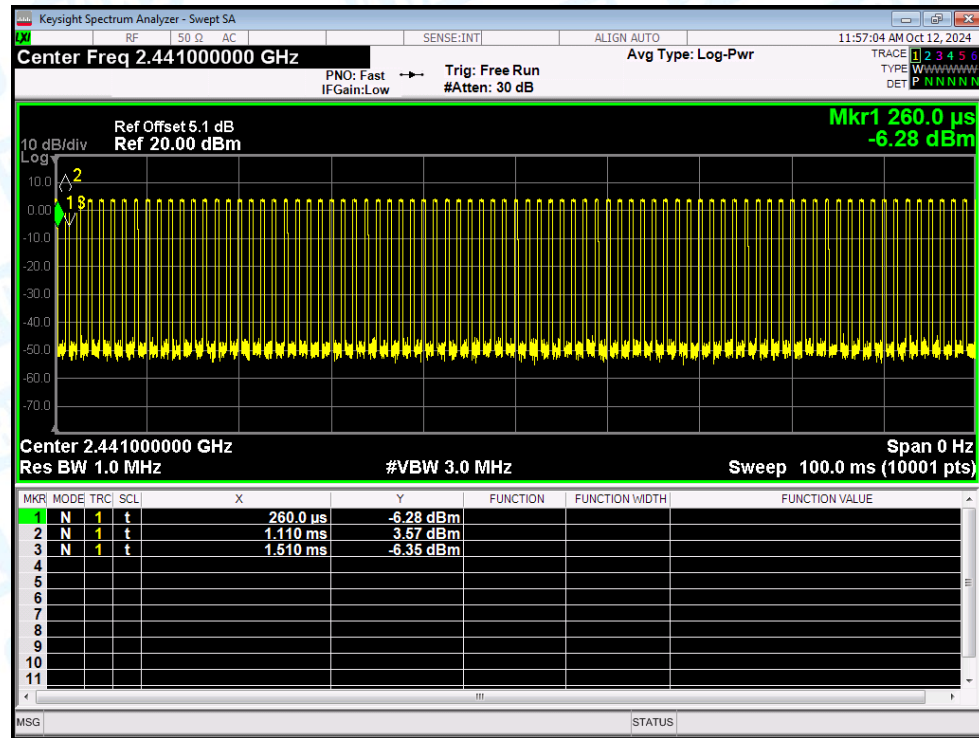
Duty Cycle NVNT 1-DH1 2480MHz Ant1



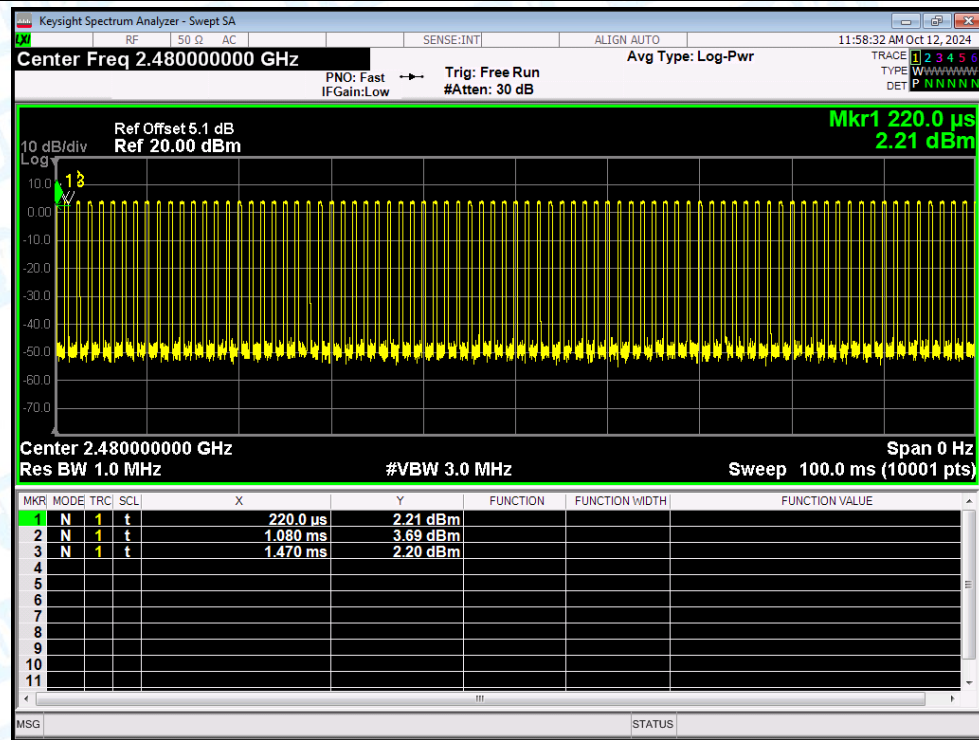
Duty Cycle NVNT 2-DH1 2402MHz Ant1



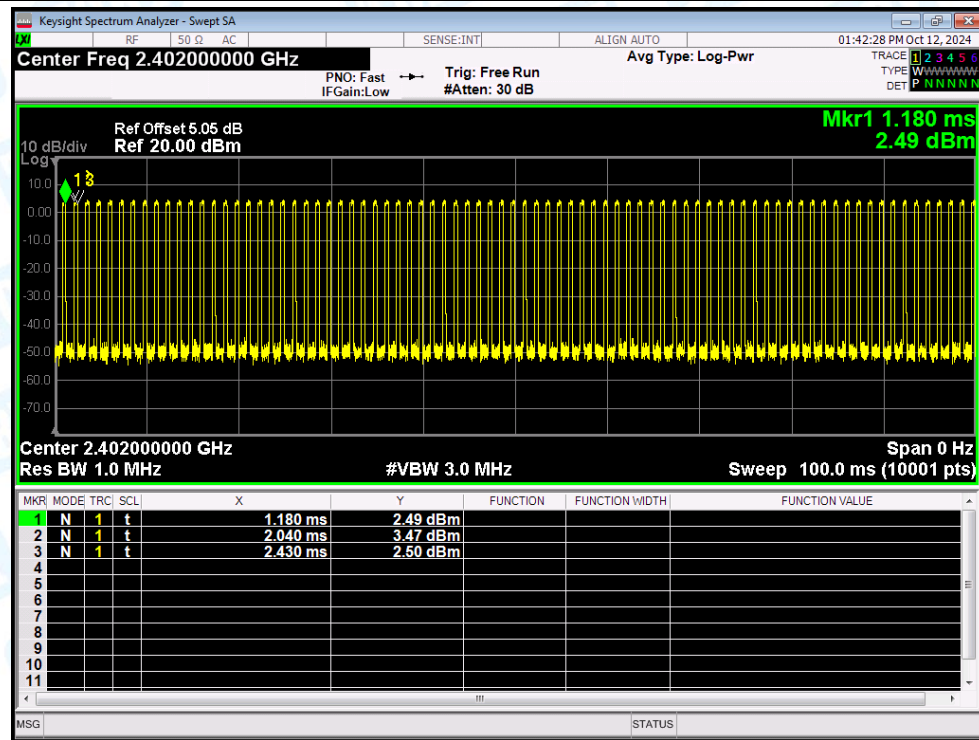
Duty Cycle NVNT 2-DH1 2441MHz Ant1



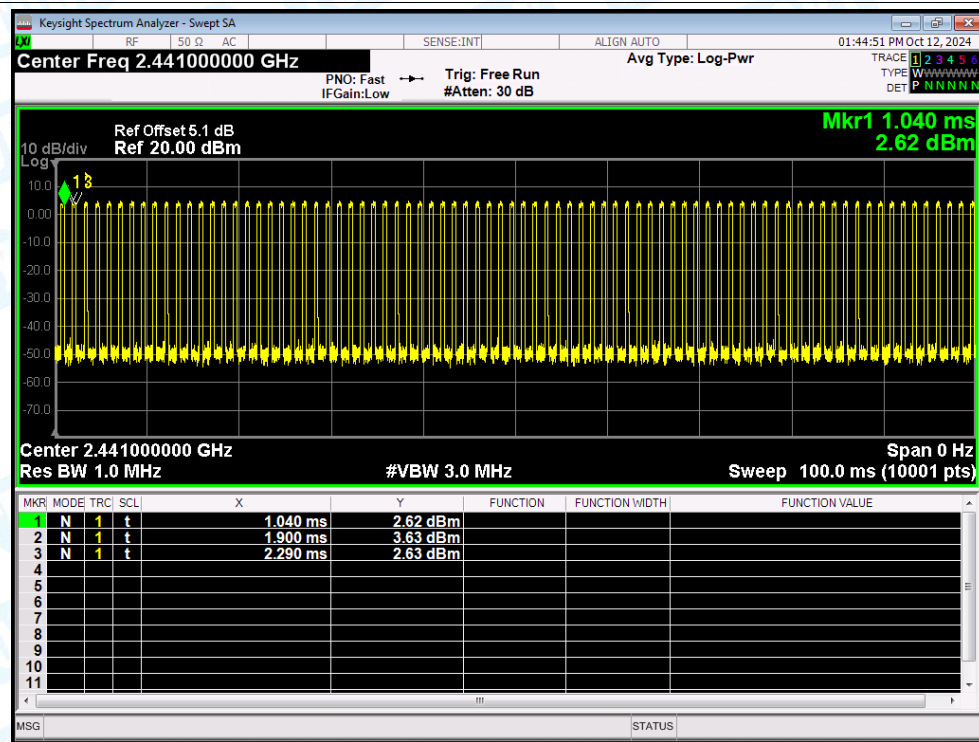
Duty Cycle NVNT 2-DH1 2480MHz Ant1

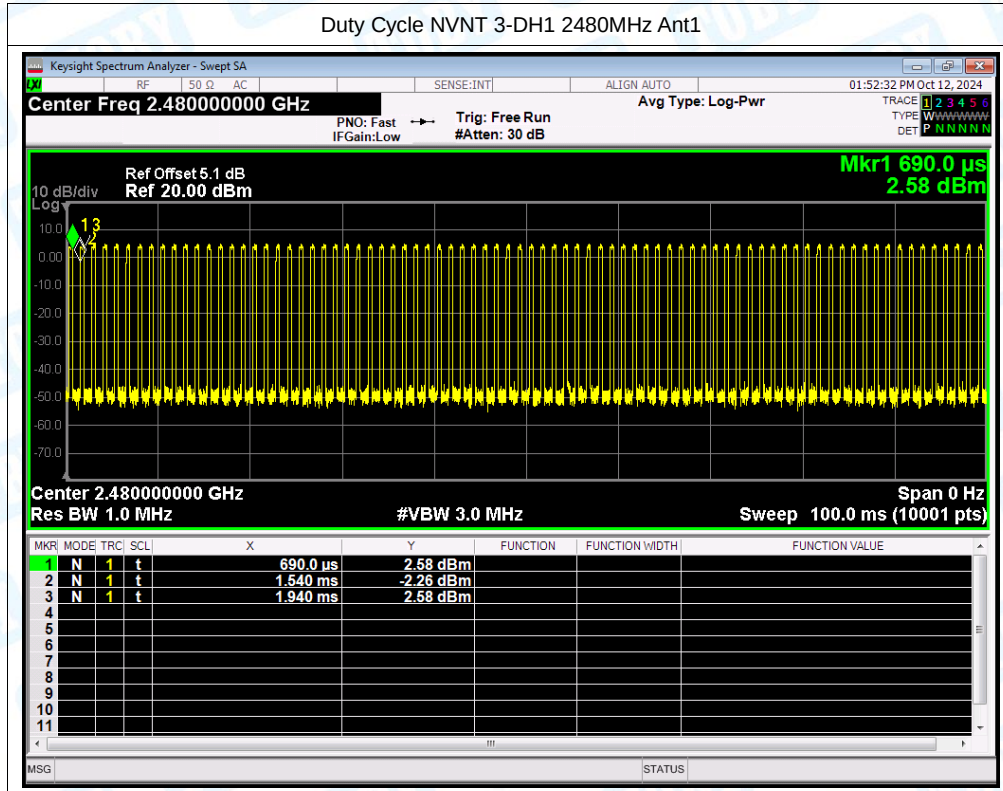


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



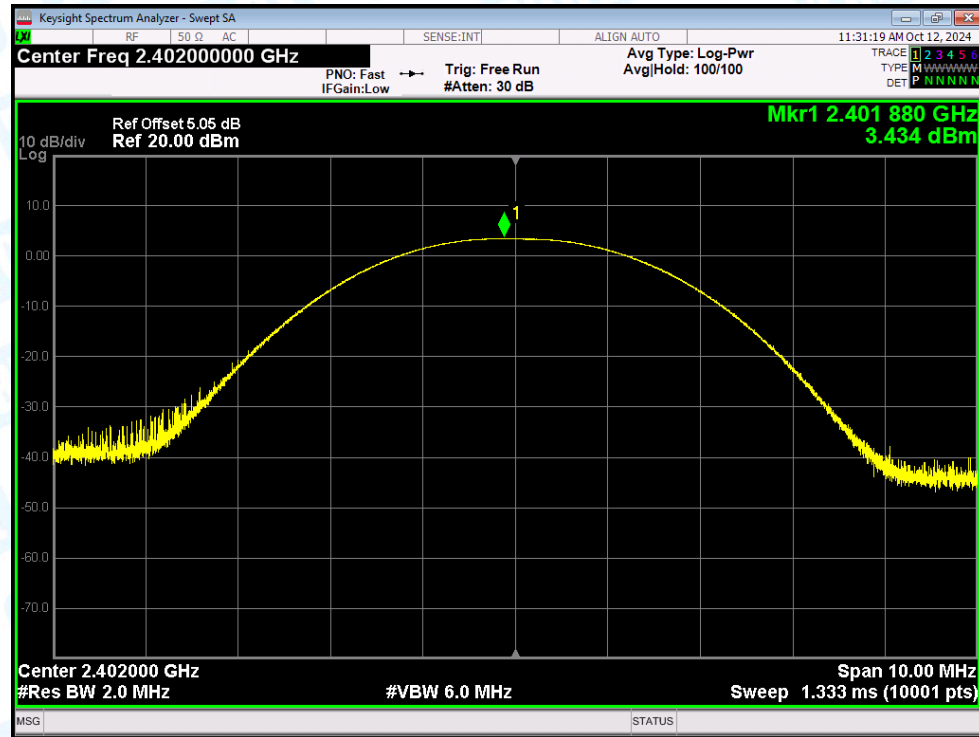


2.Maximum Conducted Output Power

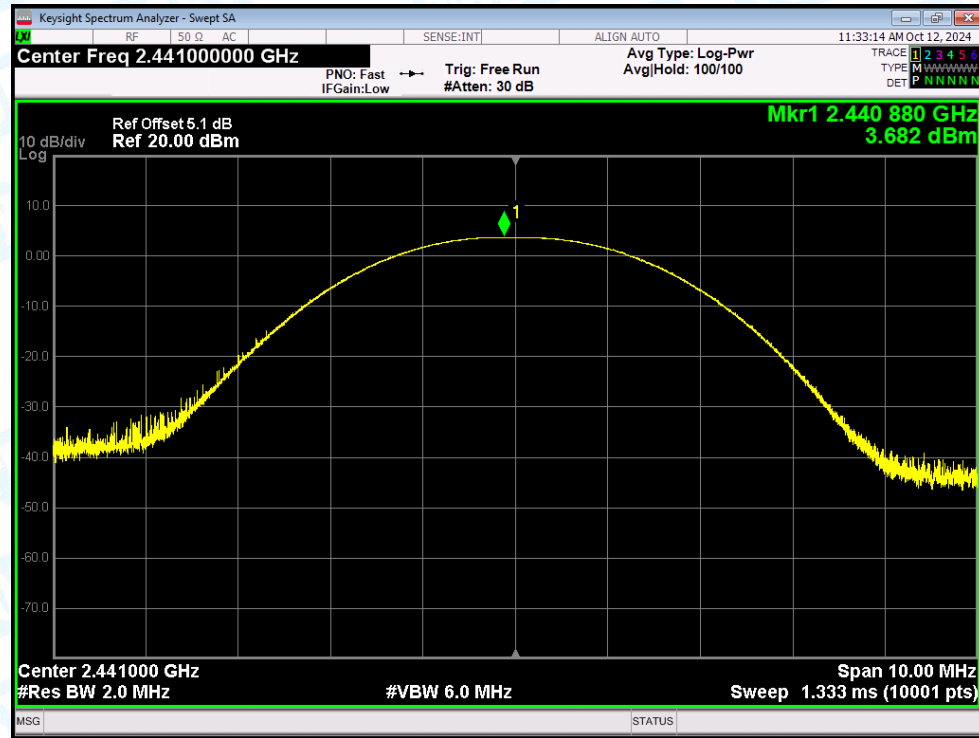
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	E.I.R.P (dBm)	E.I.R.P Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	3.434	21	6.334	36	Pass
NVNT	1-DH1	2441	Ant1	3.682	21	6.582	36	Pass
NVNT	1-DH1	2480	Ant1	3.733	21	6.633	36	Pass
NVNT	2-DH1	2402	Ant1	4.285	21	7.185	36	Pass
NVNT	2-DH1	2441	Ant1	4.491	21	7.391	36	Pass
NVNT	2-DH1	2480	Ant1	4.5	21	7.400	36	Pass
NVNT	3-DH1	2402	Ant1	4.89	21	7.790	36	Pass
NVNT	3-DH1	2441	Ant1	5.031	21	7.931	36	Pass
NVNT	3-DH1	2480	Ant1	5.027	21	7.927	36	Pass

Test Graphs

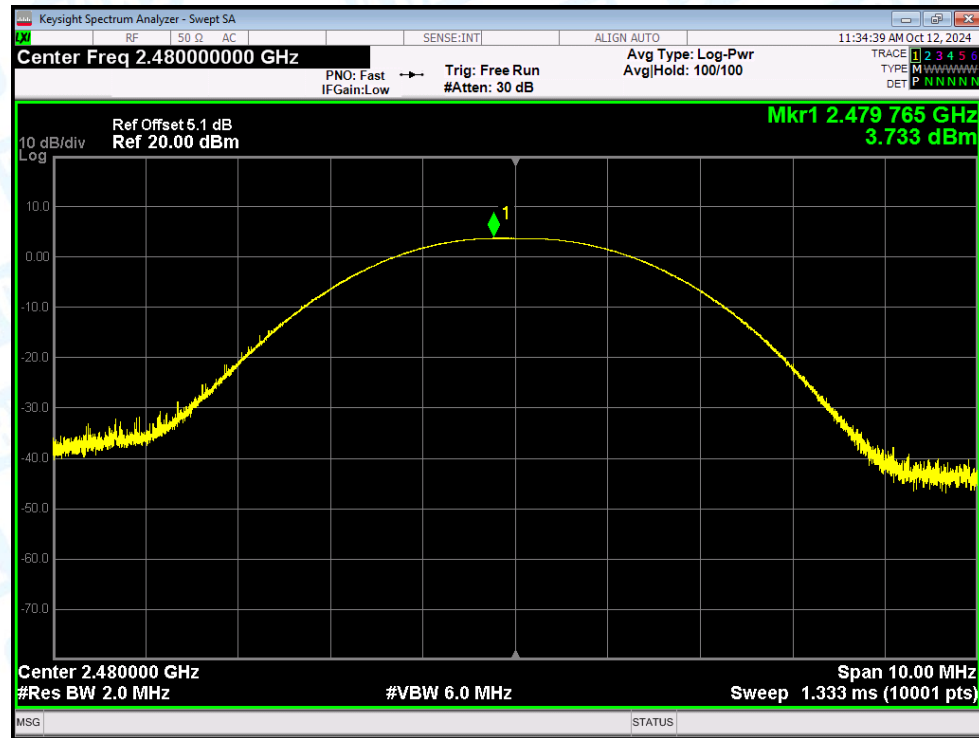
Power NVNT 1-DH1 2402MHz Ant1



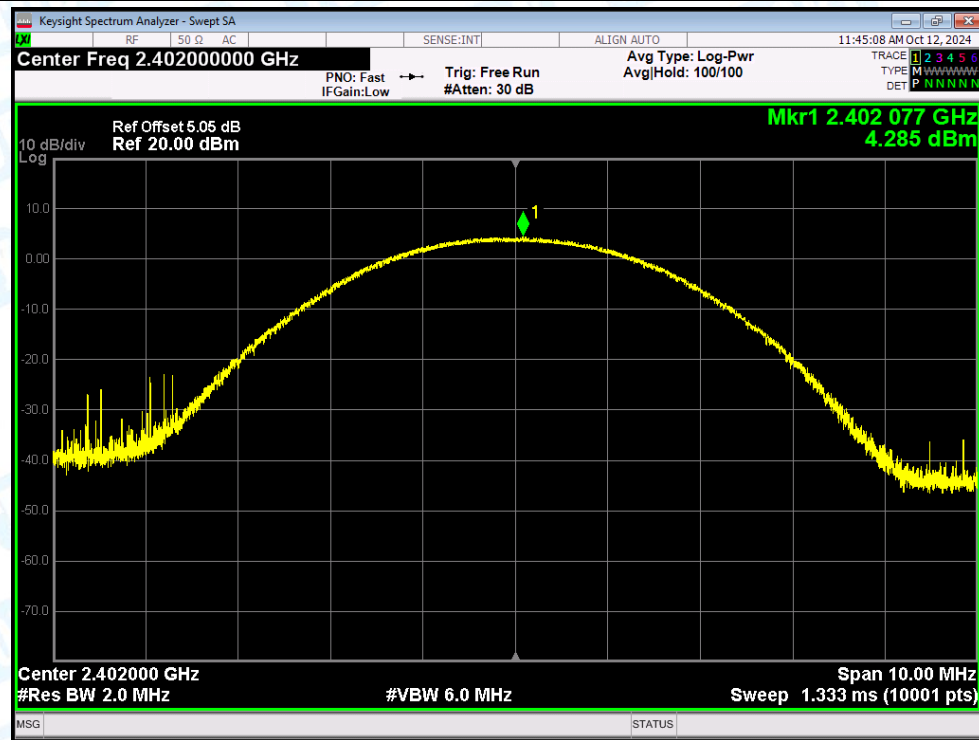
Power NVNT 1-DH1 2441MHz Ant1



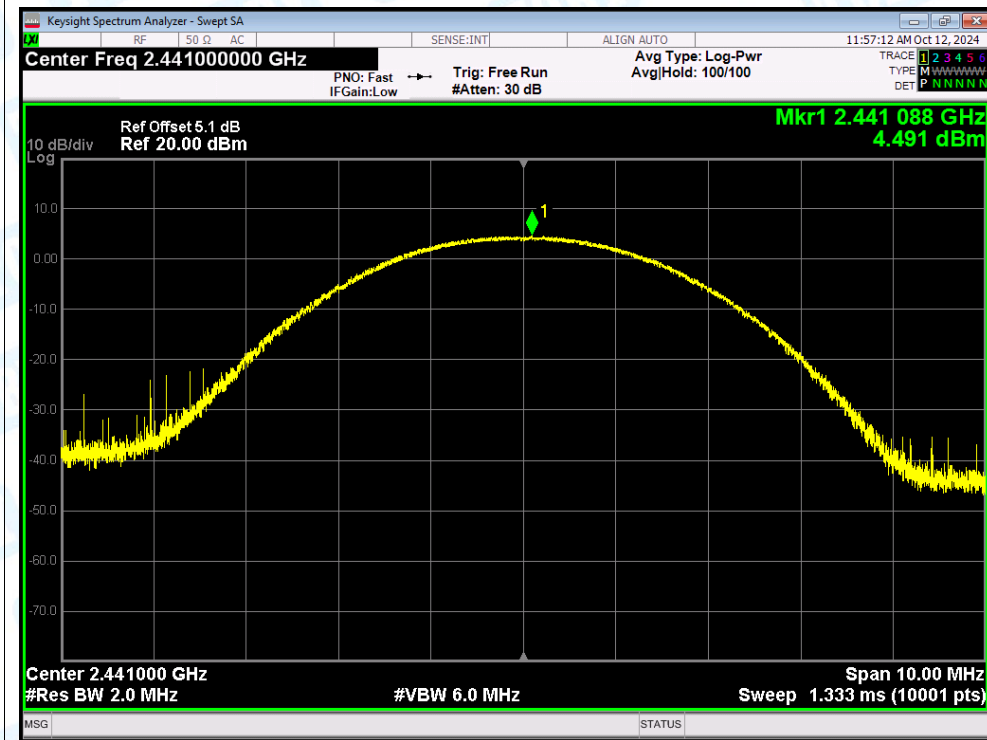
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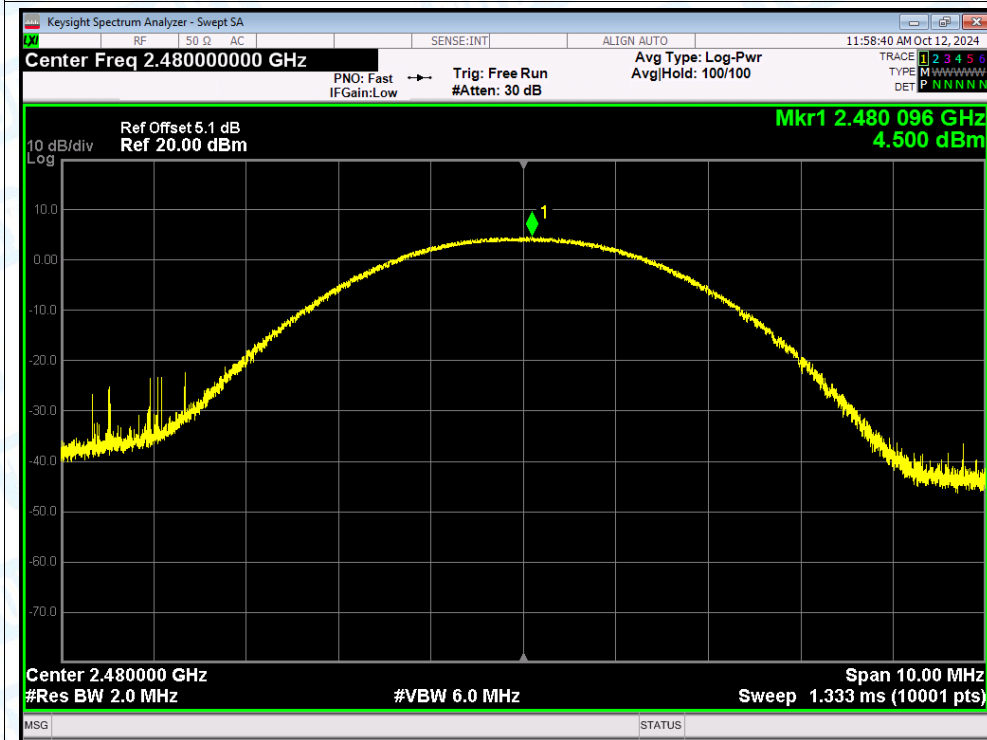
Power NVNT 2-DH1 2402MHz Ant1



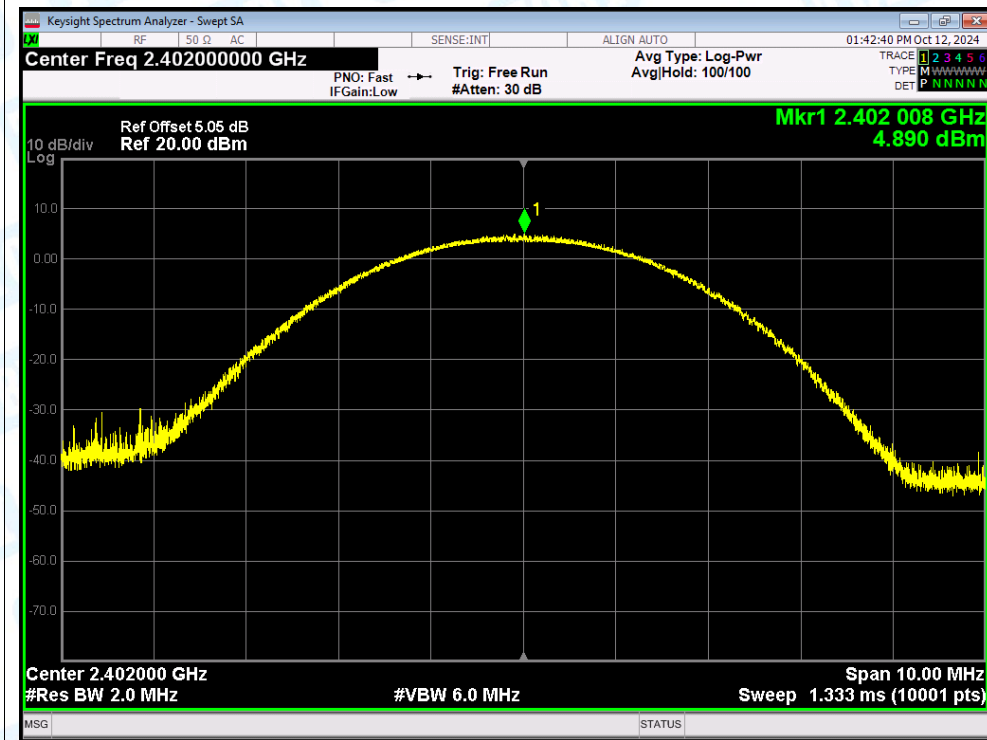
Power NVNT 2-DH1 2441MHz Ant1



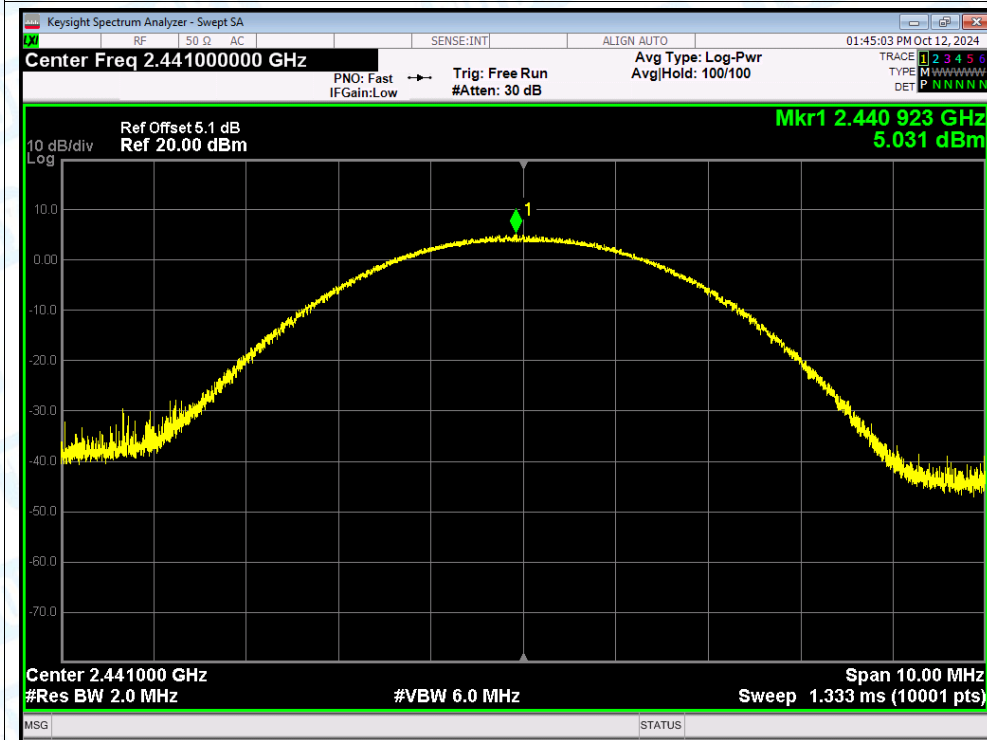
Power NVNT 2-DH1 2480MHz Ant1

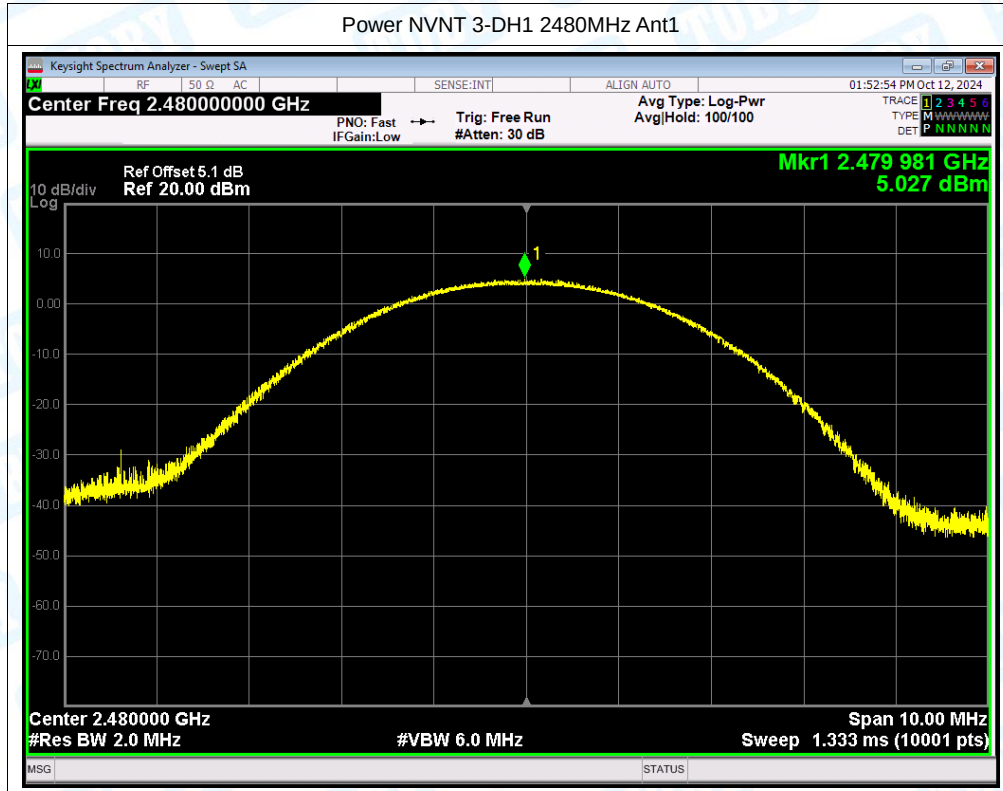


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1





3.-20dB Bandwidth

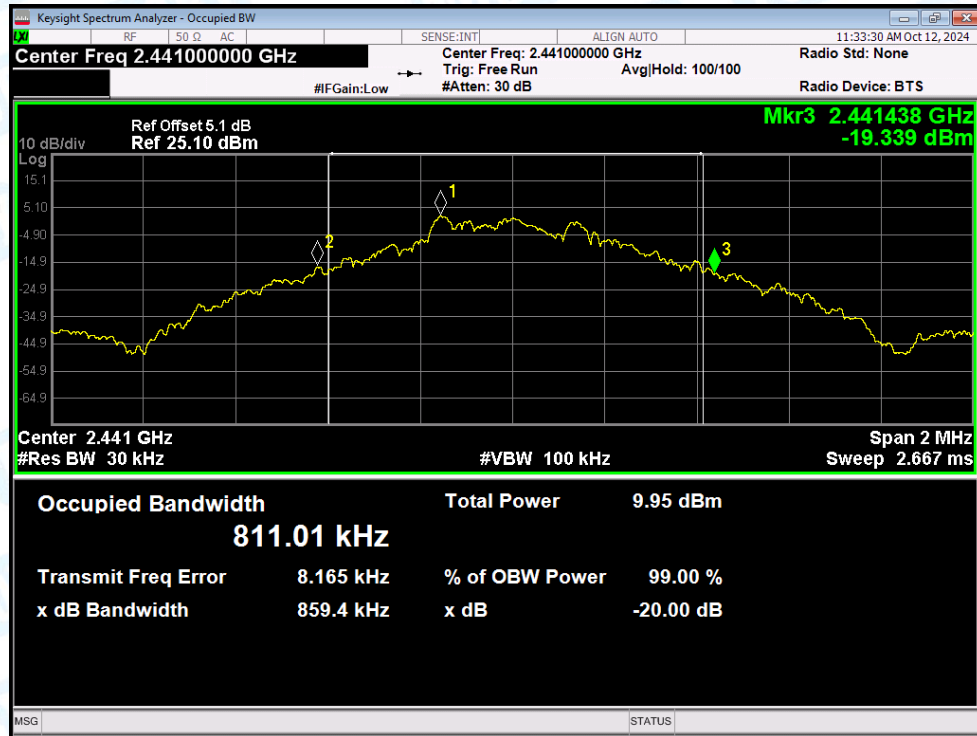
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.87	0	Pass
NVNT	1-DH1	2441	Ant1	0.86	0	Pass
NVNT	1-DH1	2480	Ant1	0.87	0	Pass
NVNT	2-DH1	2402	Ant1	1.26	0	Pass
NVNT	2-DH1	2441	Ant1	1.22	0	Pass
NVNT	2-DH1	2480	Ant1	1.24	0	Pass
NVNT	3-DH1	2402	Ant1	1.21	0	Pass
NVNT	3-DH1	2441	Ant1	1.21	0	Pass
NVNT	3-DH1	2480	Ant1	1.21	0	Pass

Test Graphs

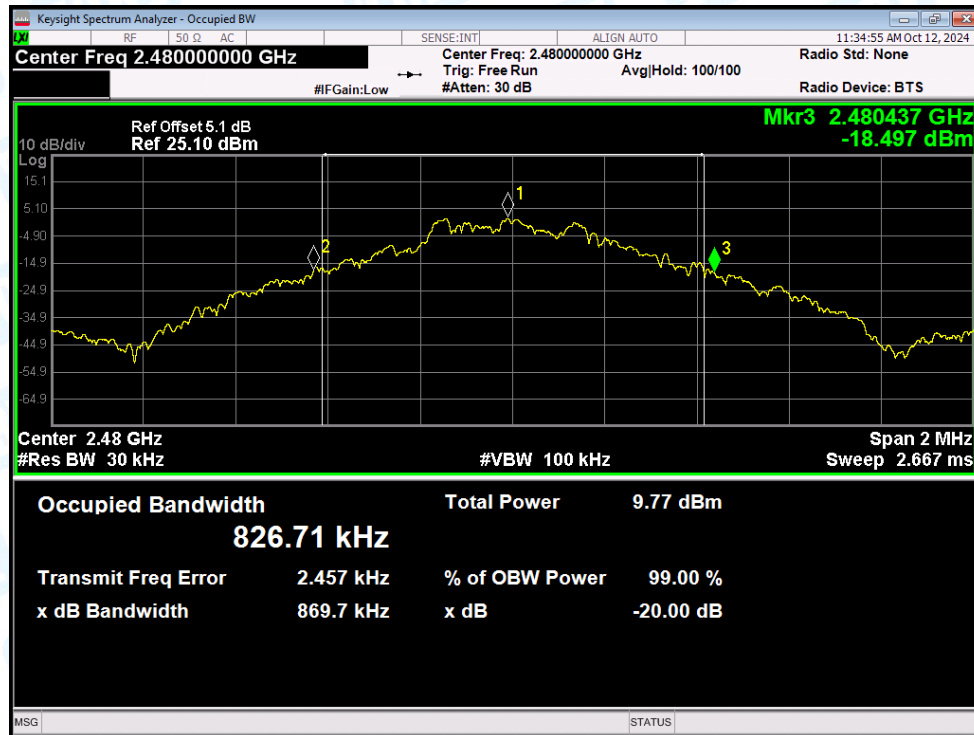
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



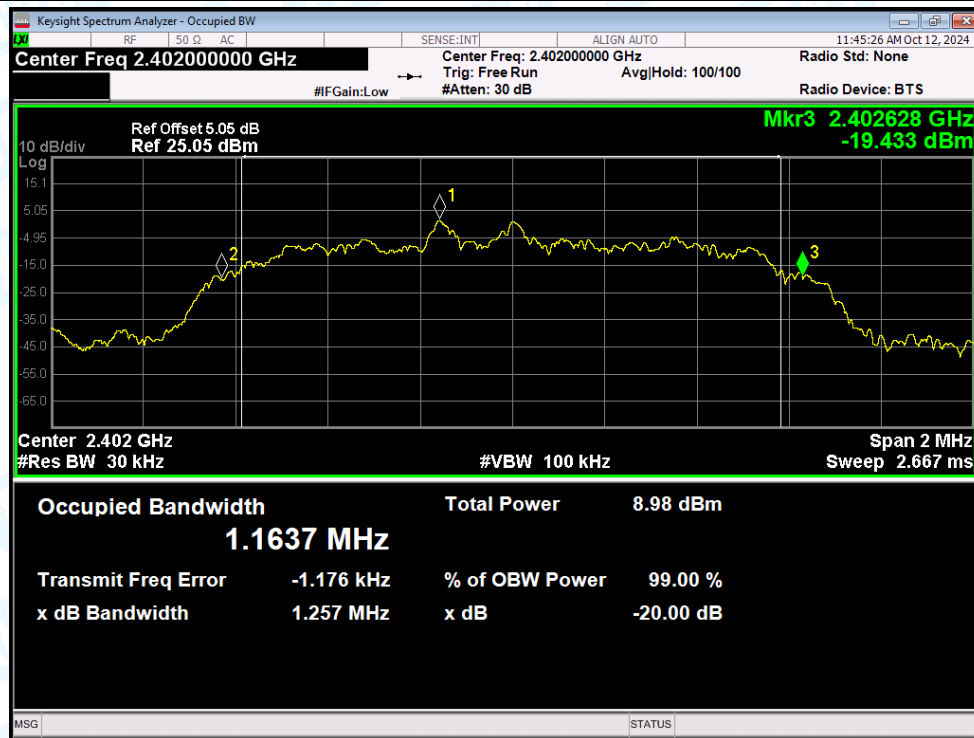
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



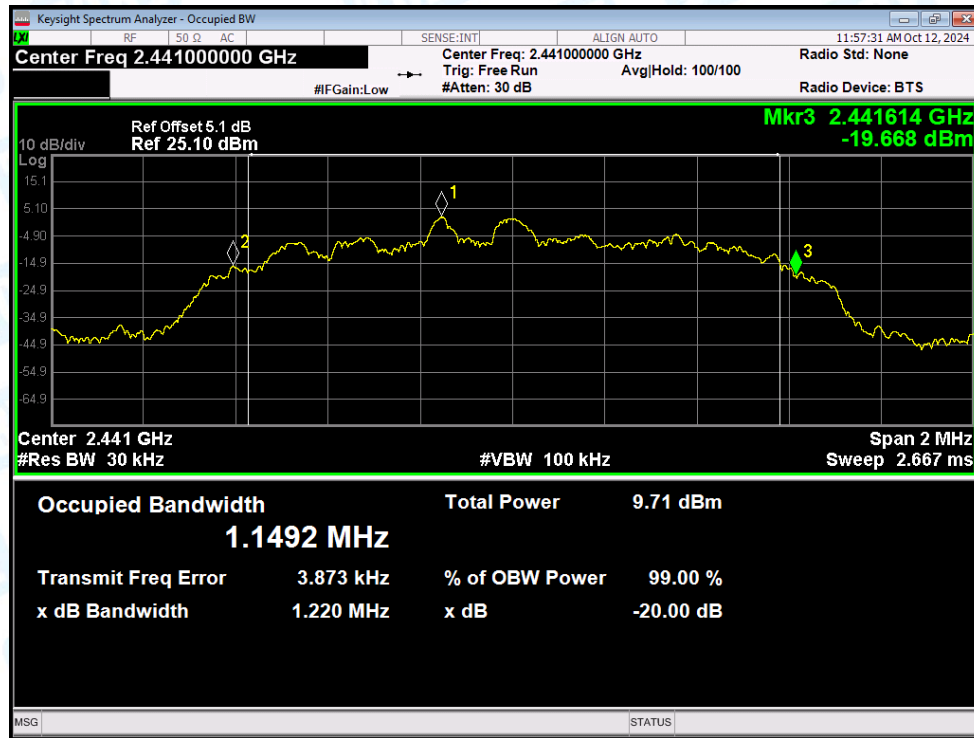
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



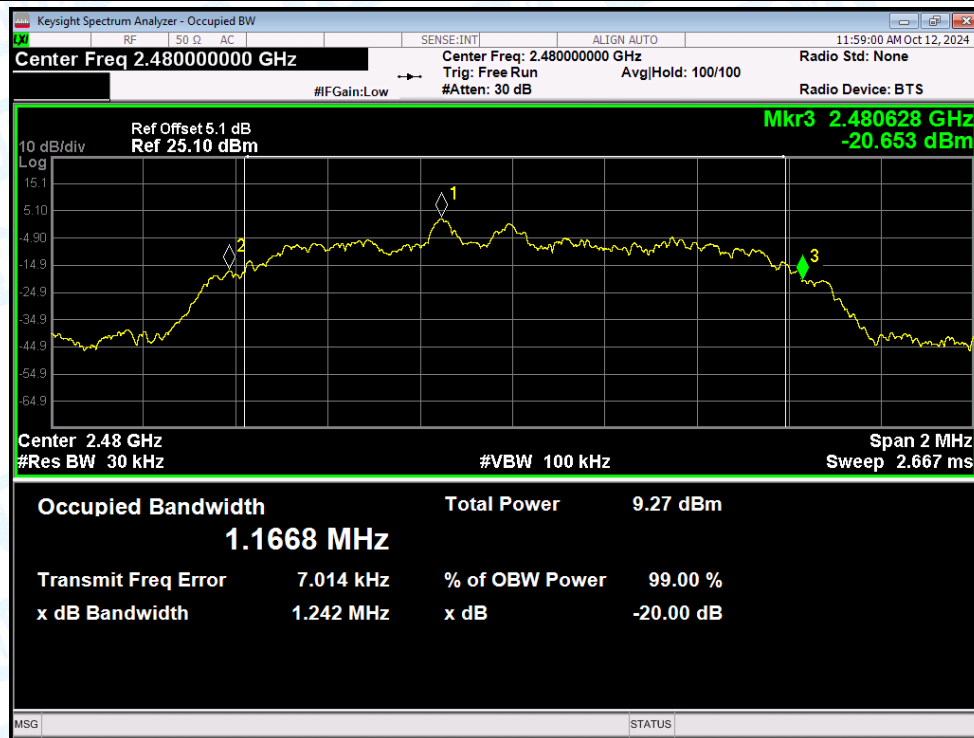
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



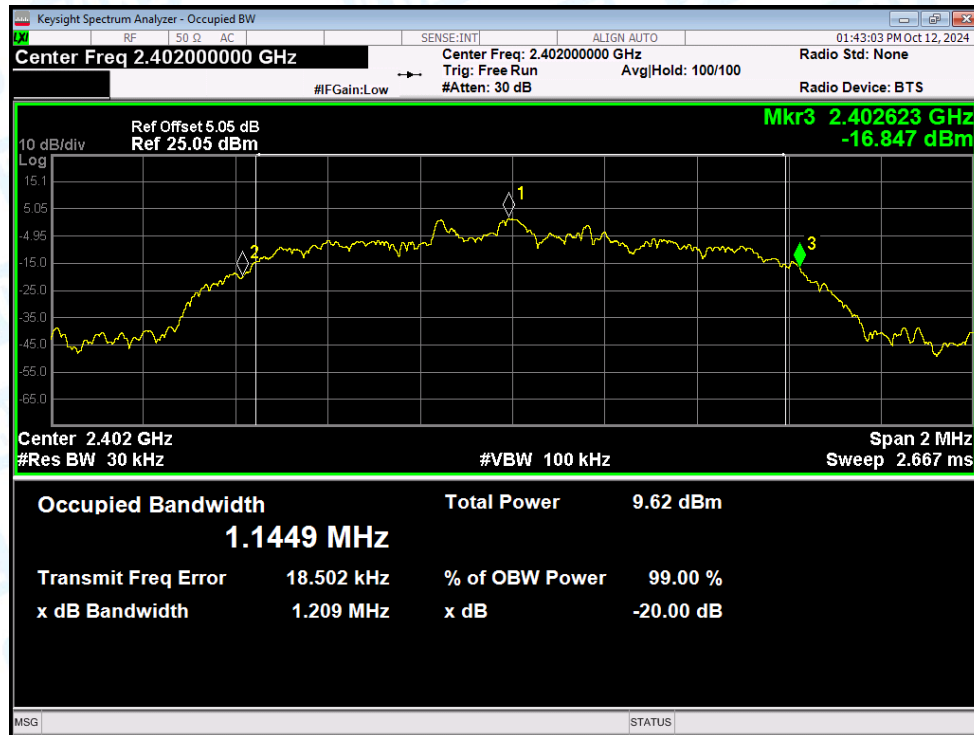
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



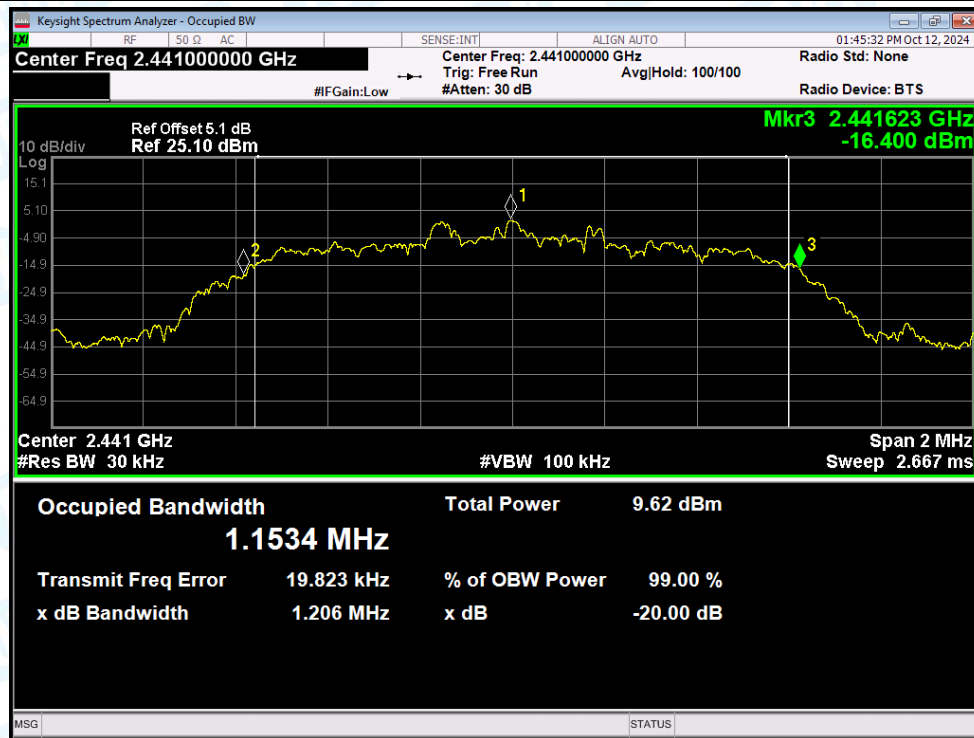
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

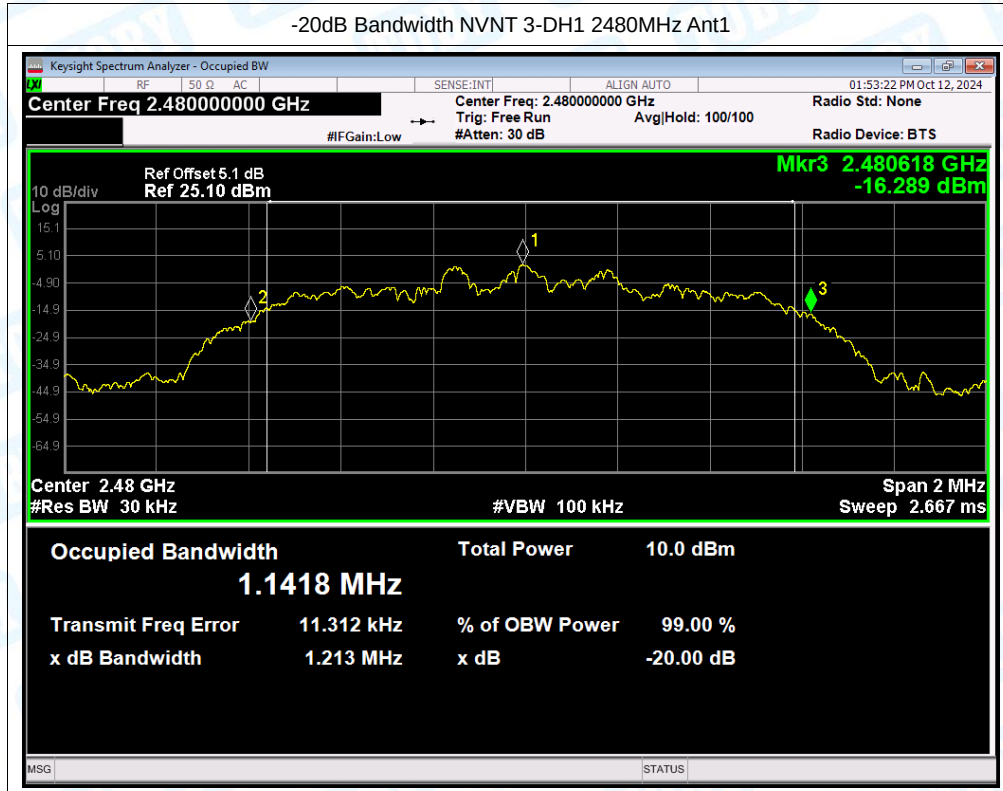


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



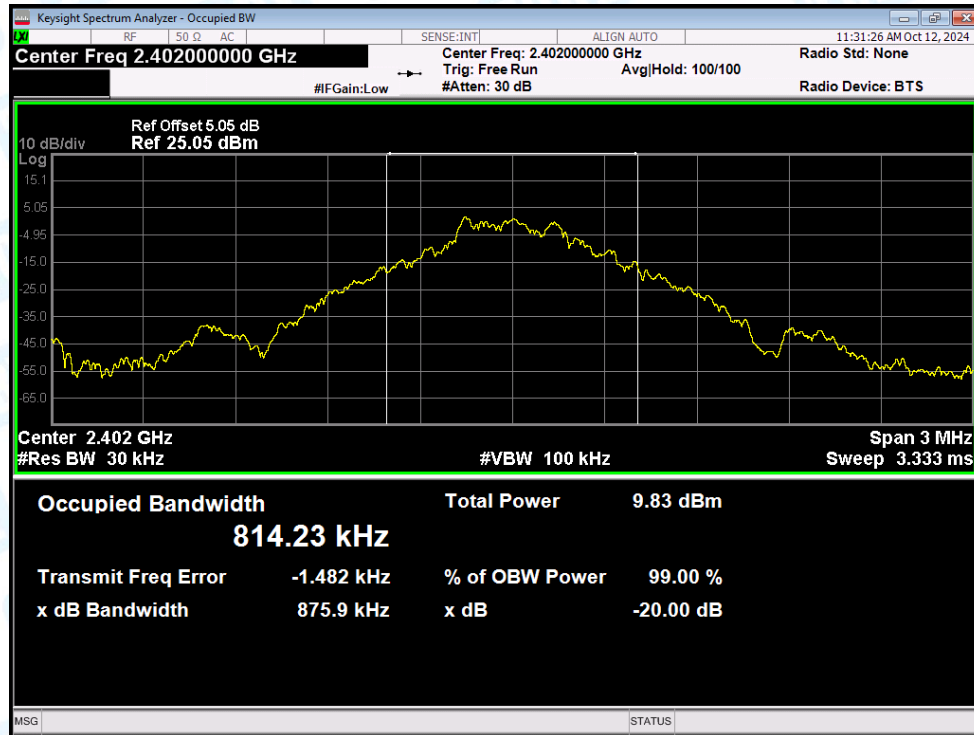


4.Occupied Channel Bandwidth

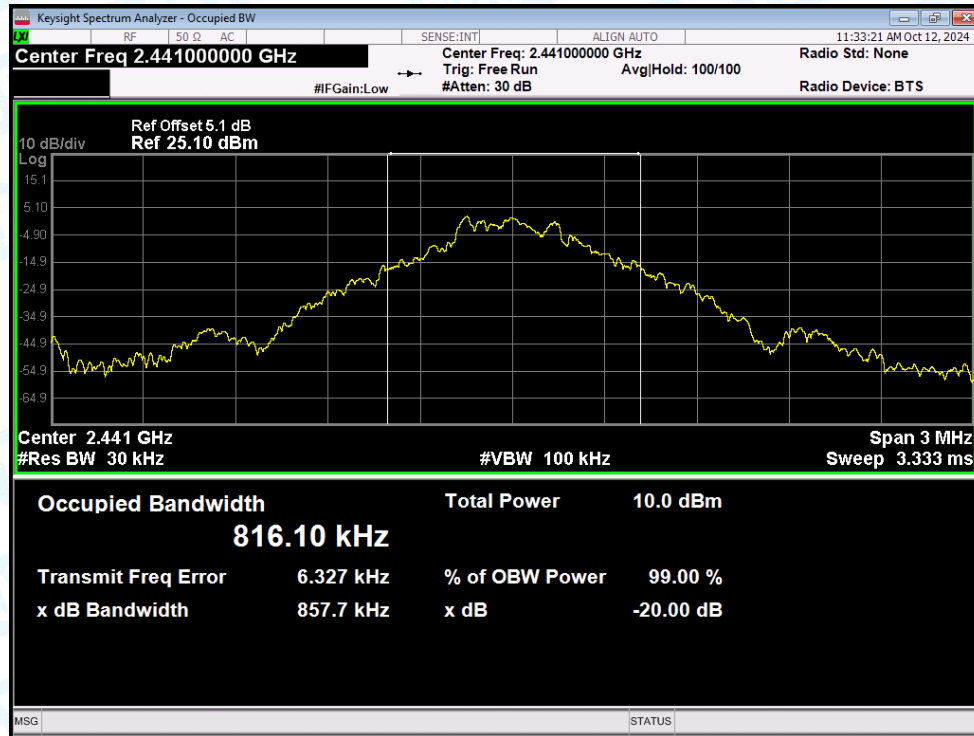
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.814
NVNT	1-DH1	2441	Ant1	0.816
NVNT	1-DH1	2480	Ant1	0.822
NVNT	2-DH1	2402	Ant1	1.133
NVNT	2-DH1	2441	Ant1	1.163
NVNT	2-DH1	2480	Ant1	1.173
NVNT	3-DH1	2402	Ant1	1.156
NVNT	3-DH1	2441	Ant1	1.154
NVNT	3-DH1	2480	Ant1	1.141

Test Graphs

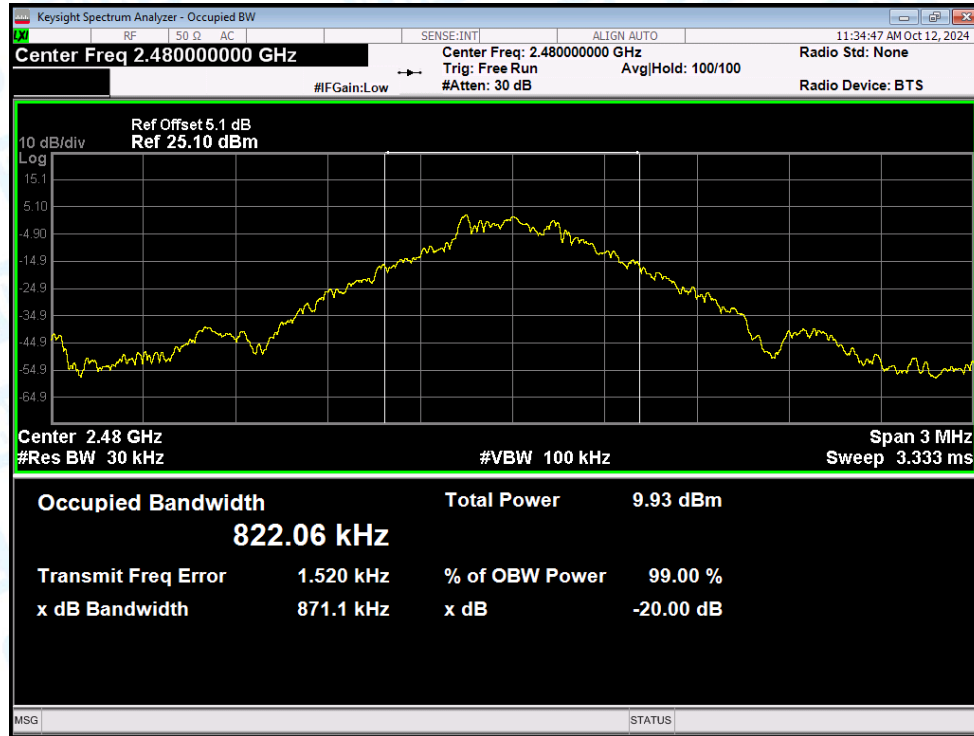
OBW NVNT 1-DH1 2402MHz Ant1



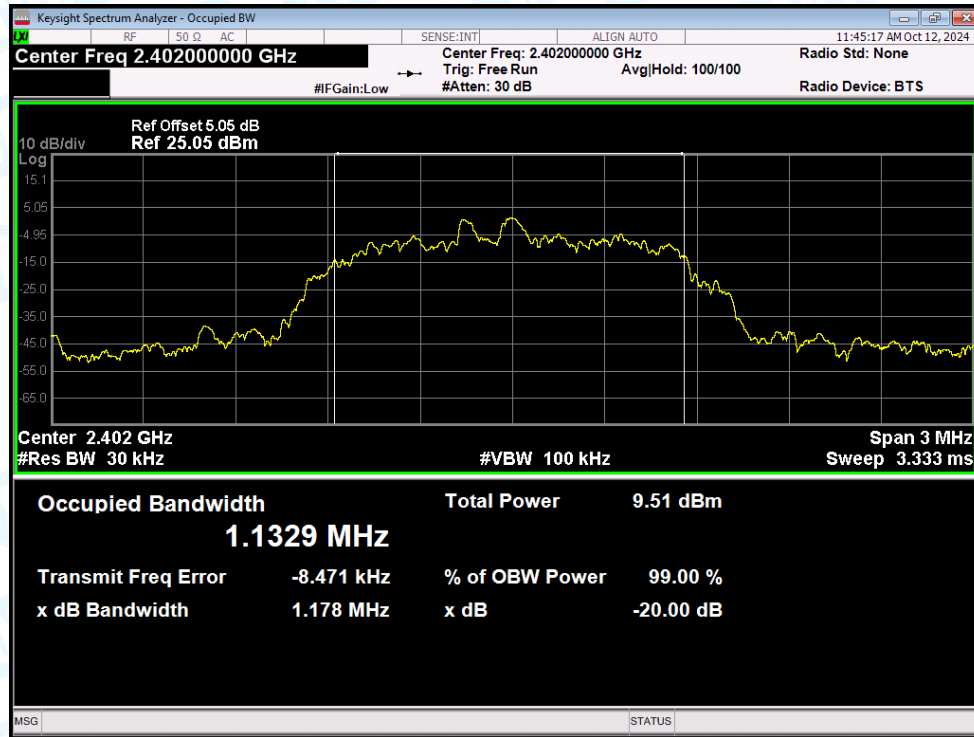
OBW NVNT 1-DH1 2441MHz Ant1



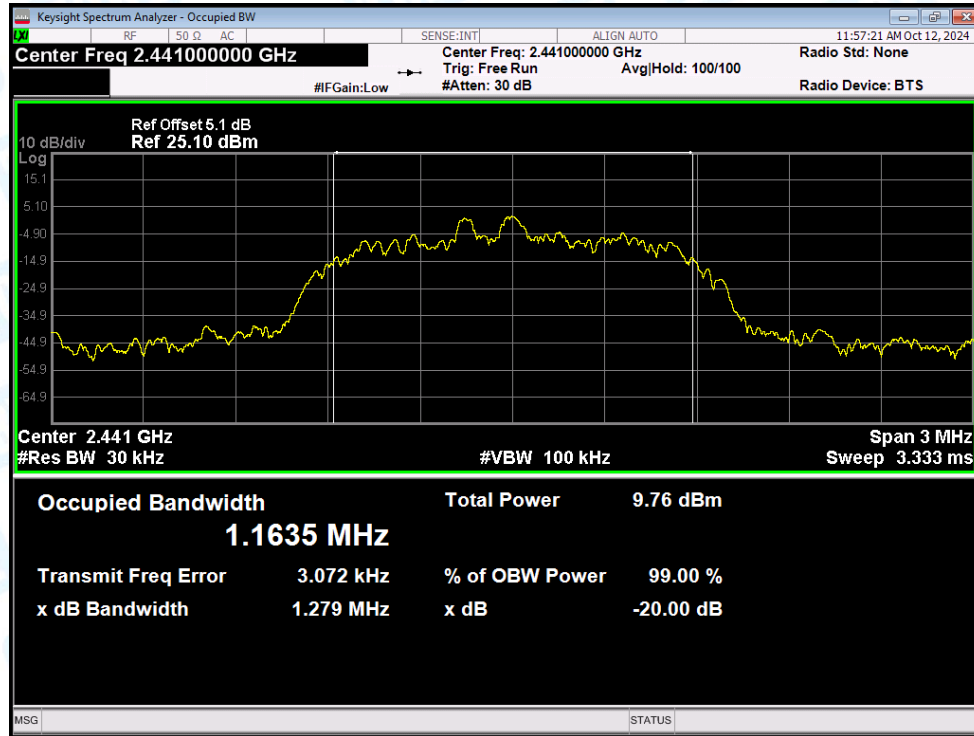
OBW NVNT 1-DH1 2480MHz Ant1



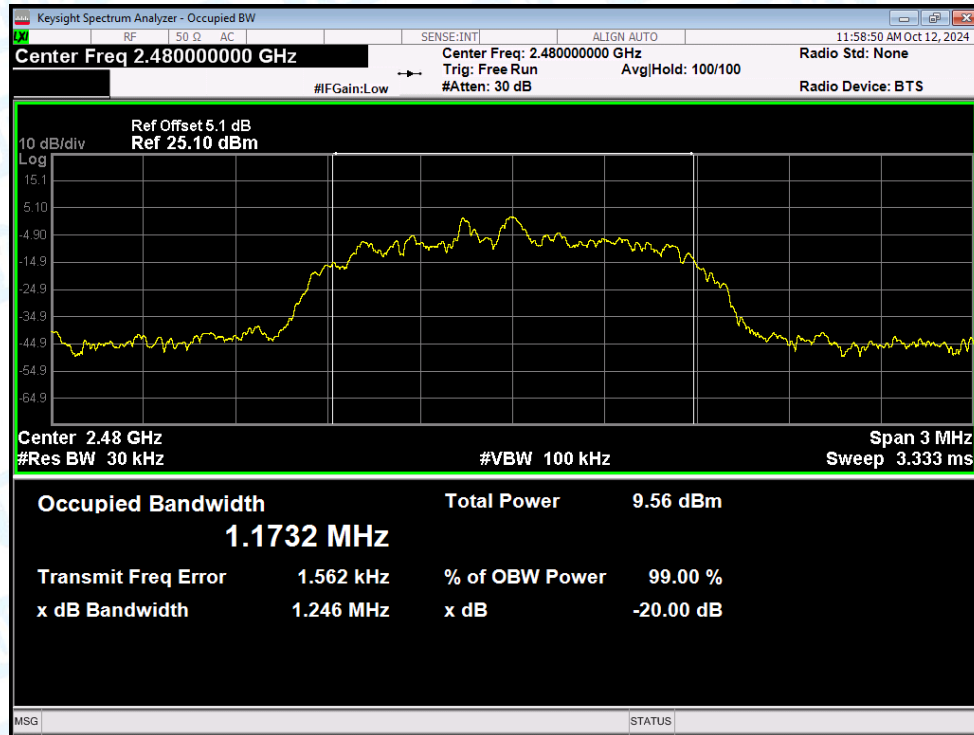
OBW NVNT 2-DH1 2402MHz Ant1



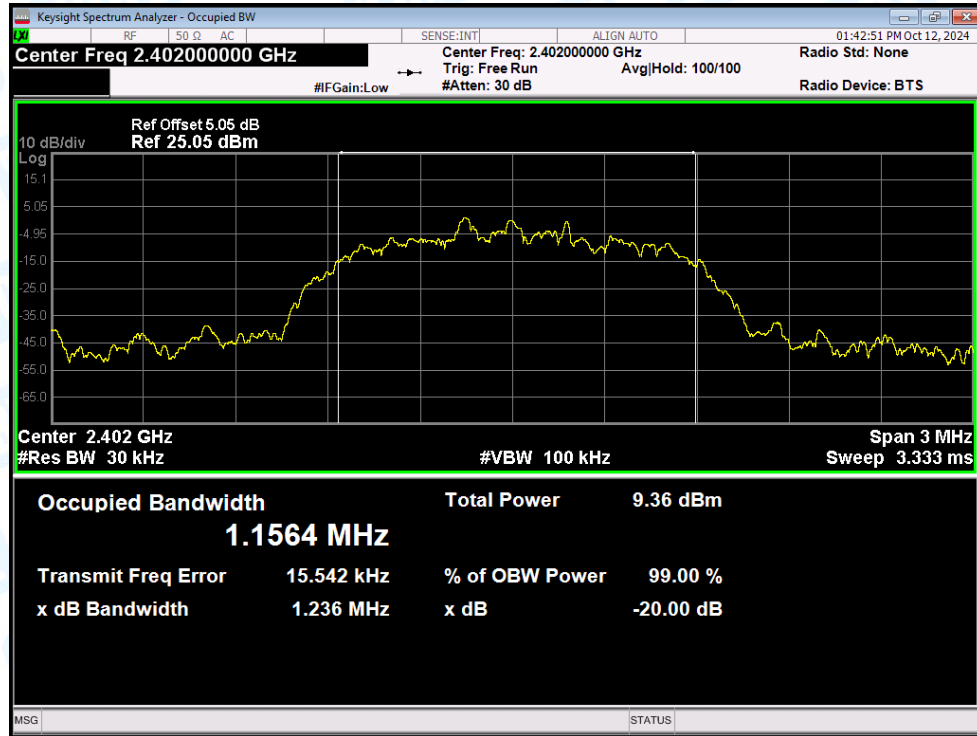
OBW NVNT 2-DH1 2441MHz Ant1



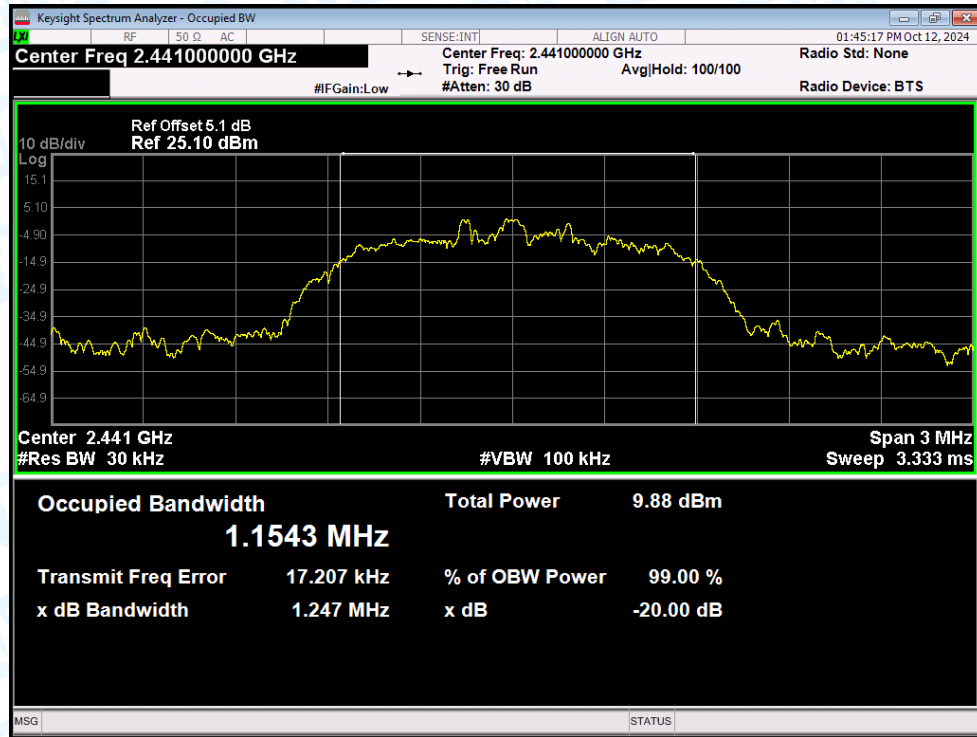
OBW NVNT 2-DH1 2480MHz Ant1

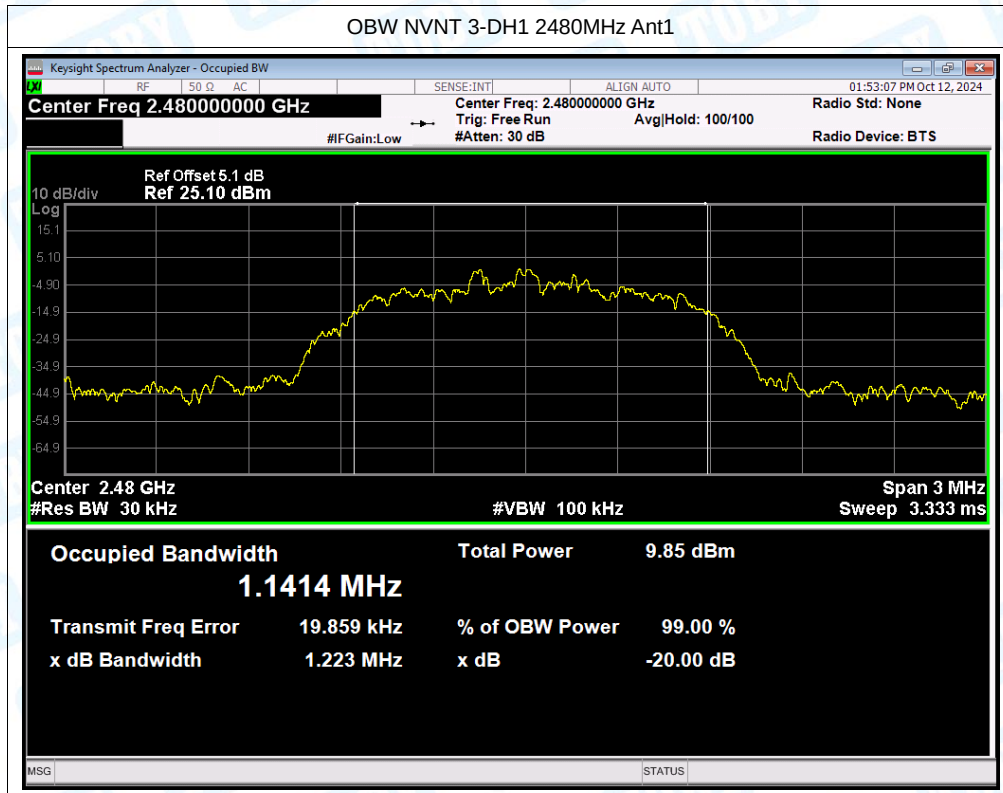


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1





5.Band Edge

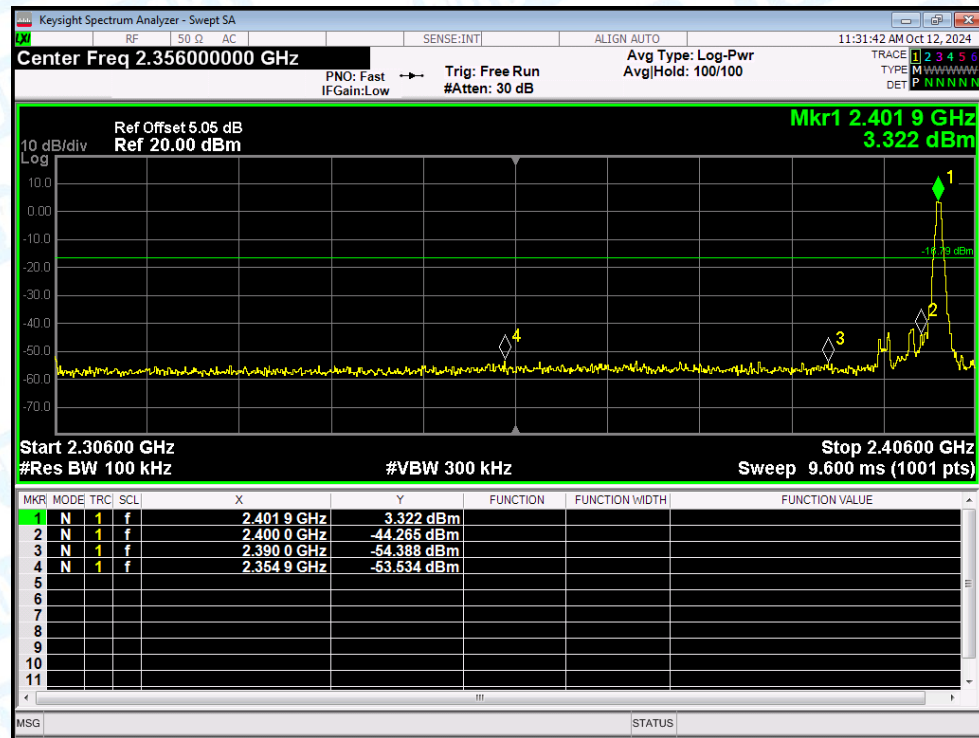
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-56.74	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-55.42	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-56.44	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-55.36	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-56.67	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-54.8	-20	Pass

Test Graphs

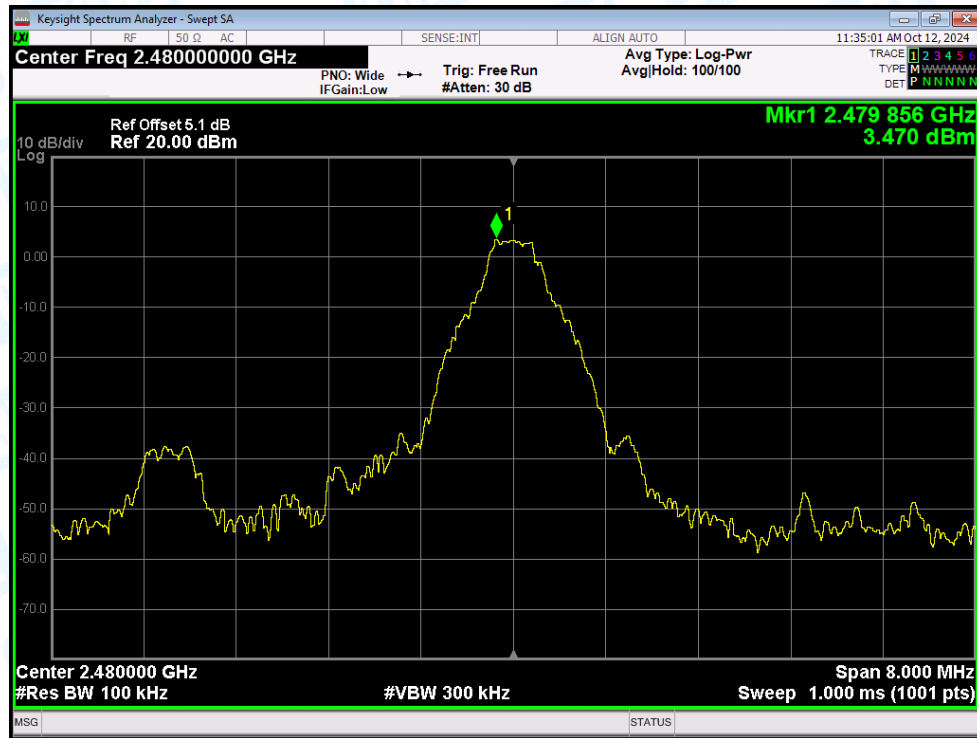
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



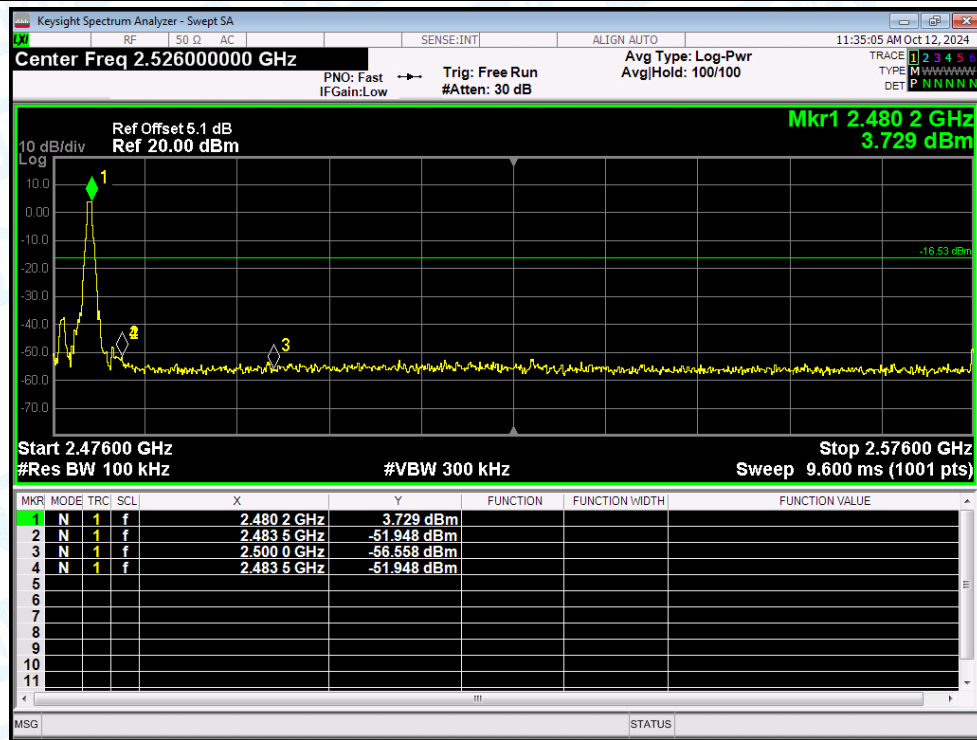
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



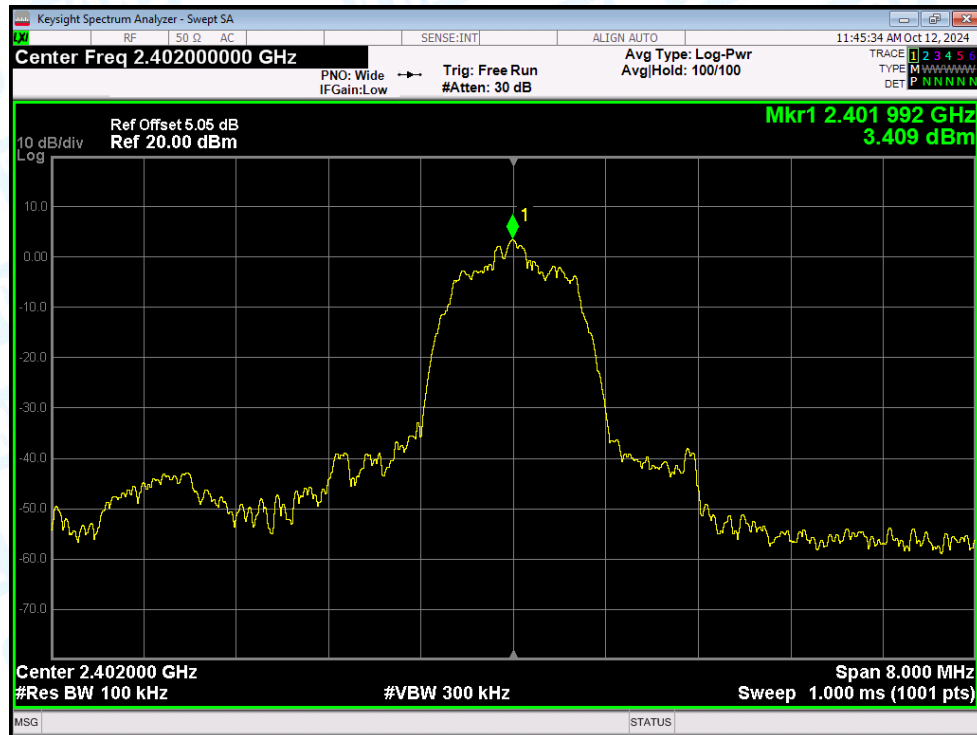
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



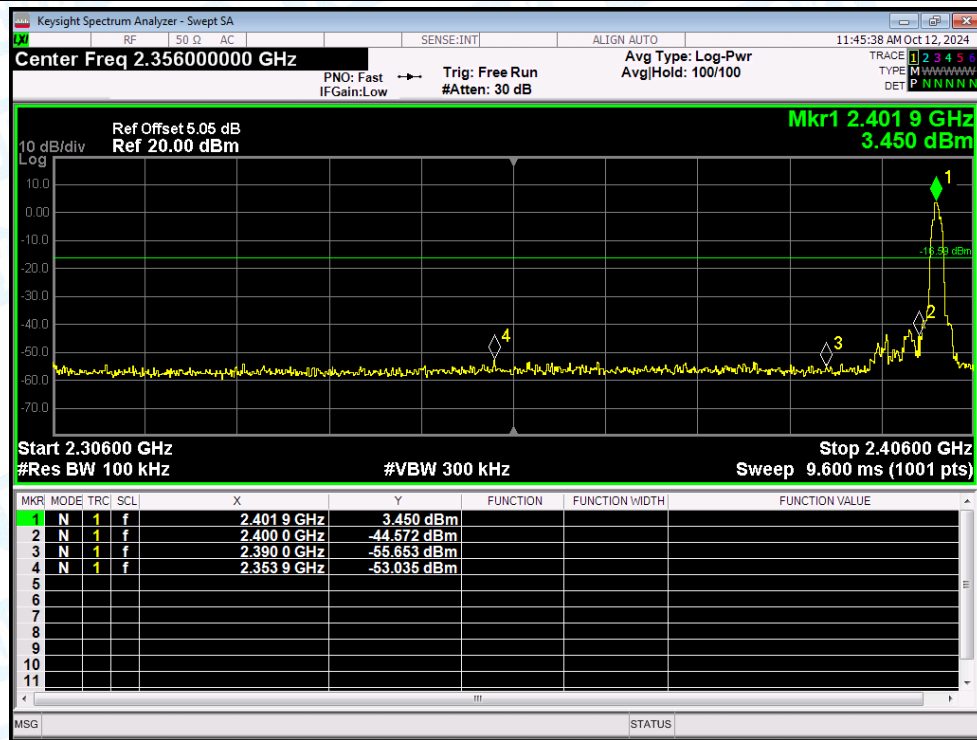
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



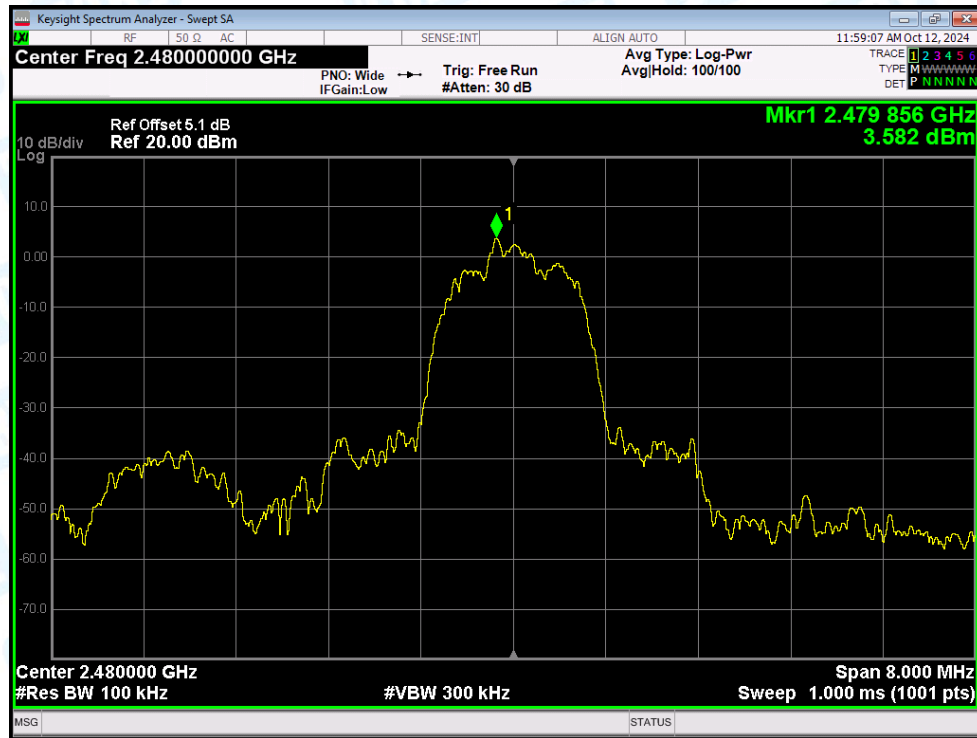
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



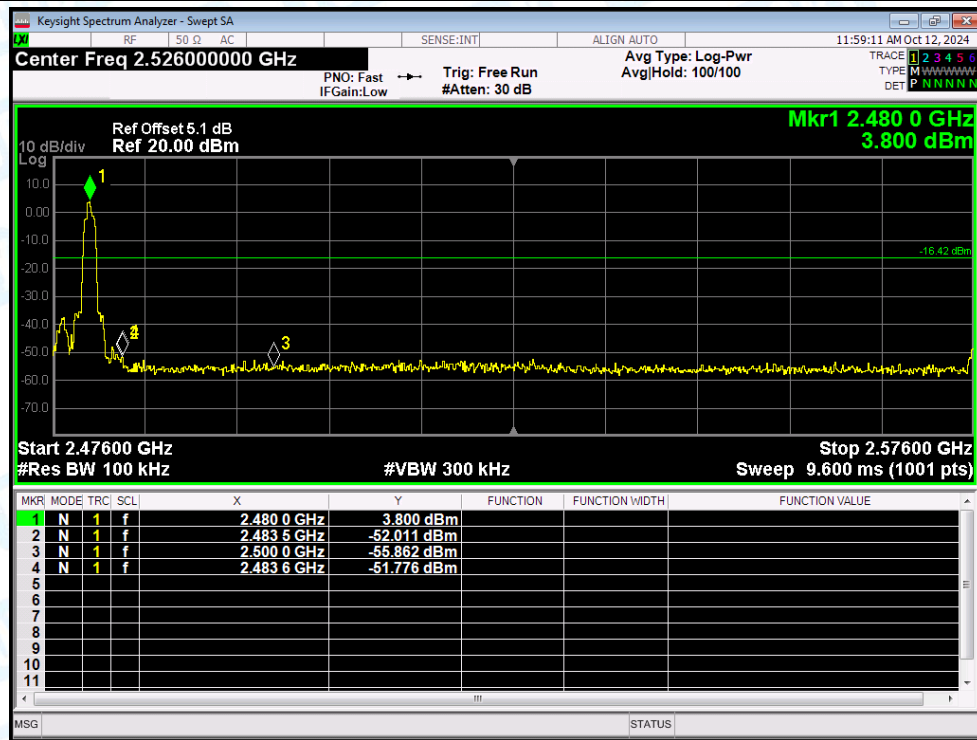
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



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



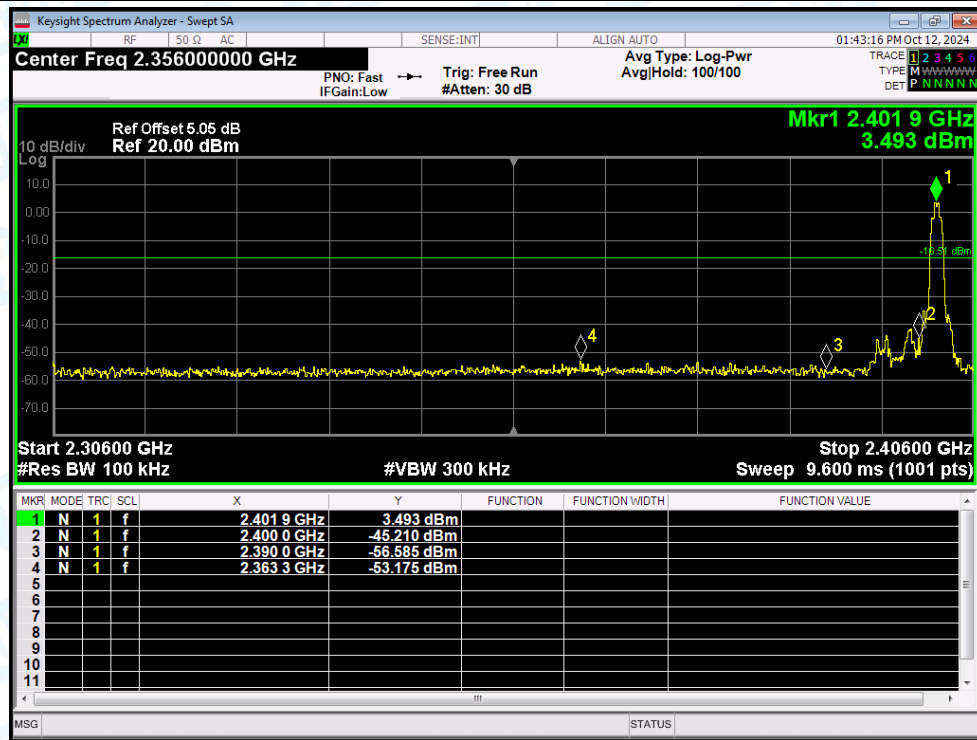
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



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



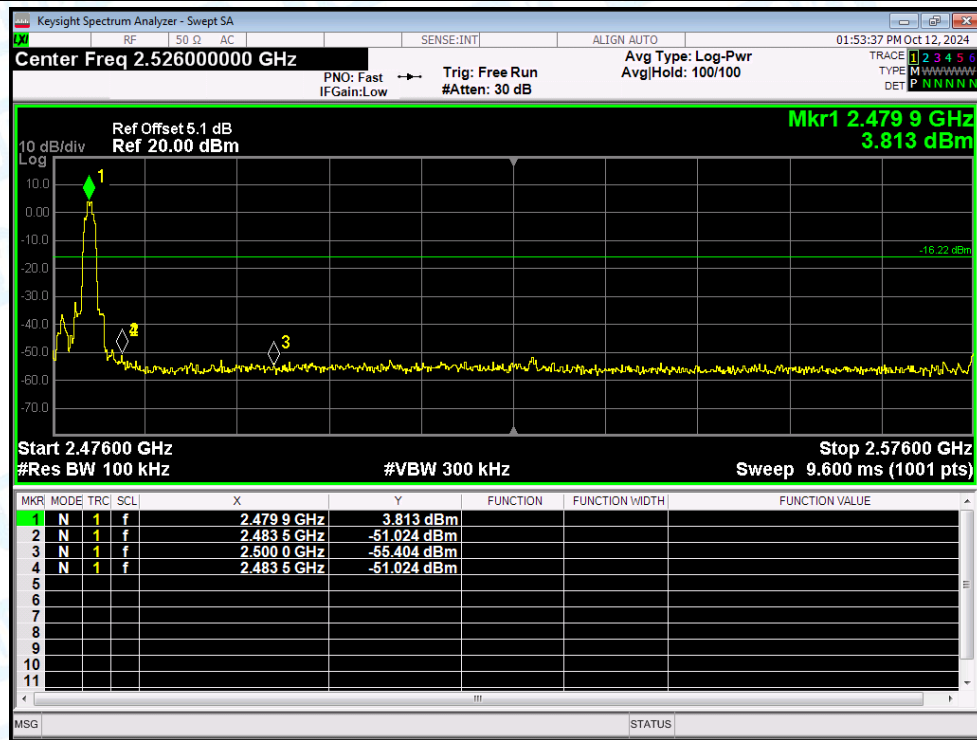
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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

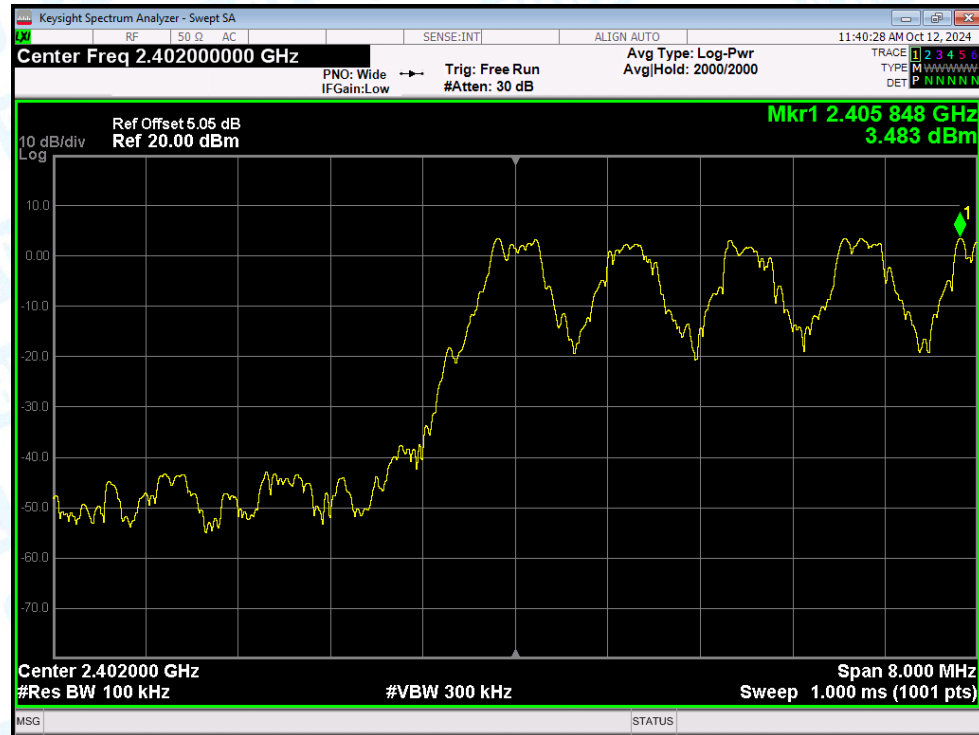


6. Band Edge(Hopping)

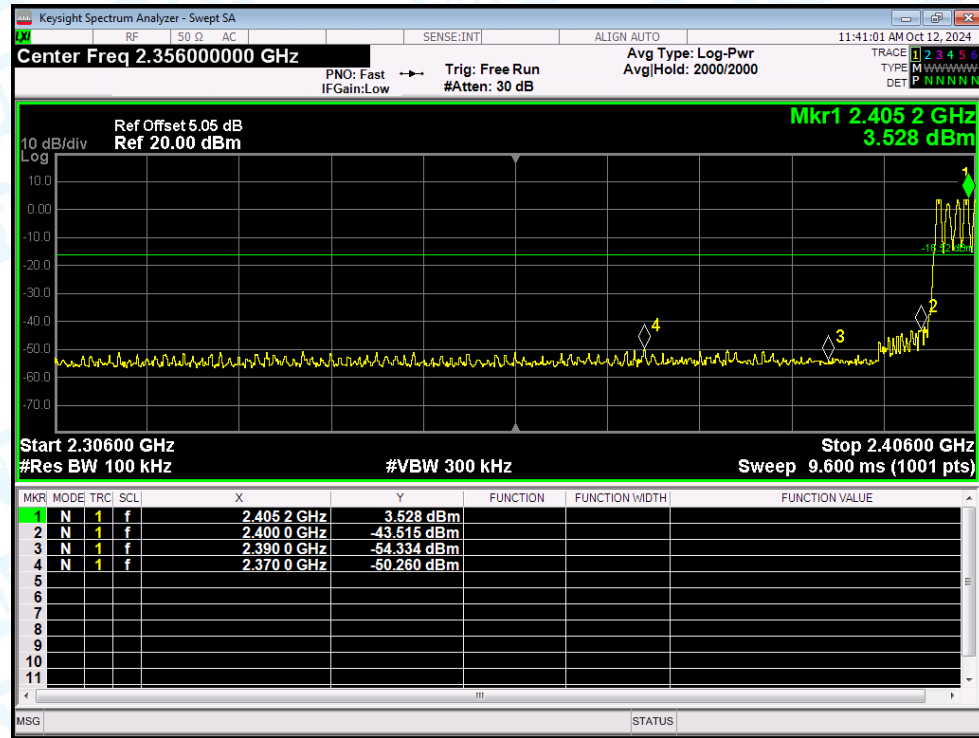
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-53.74	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-52.22	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-53.91	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-52.85	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-53.76	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-52.73	-20	Pass

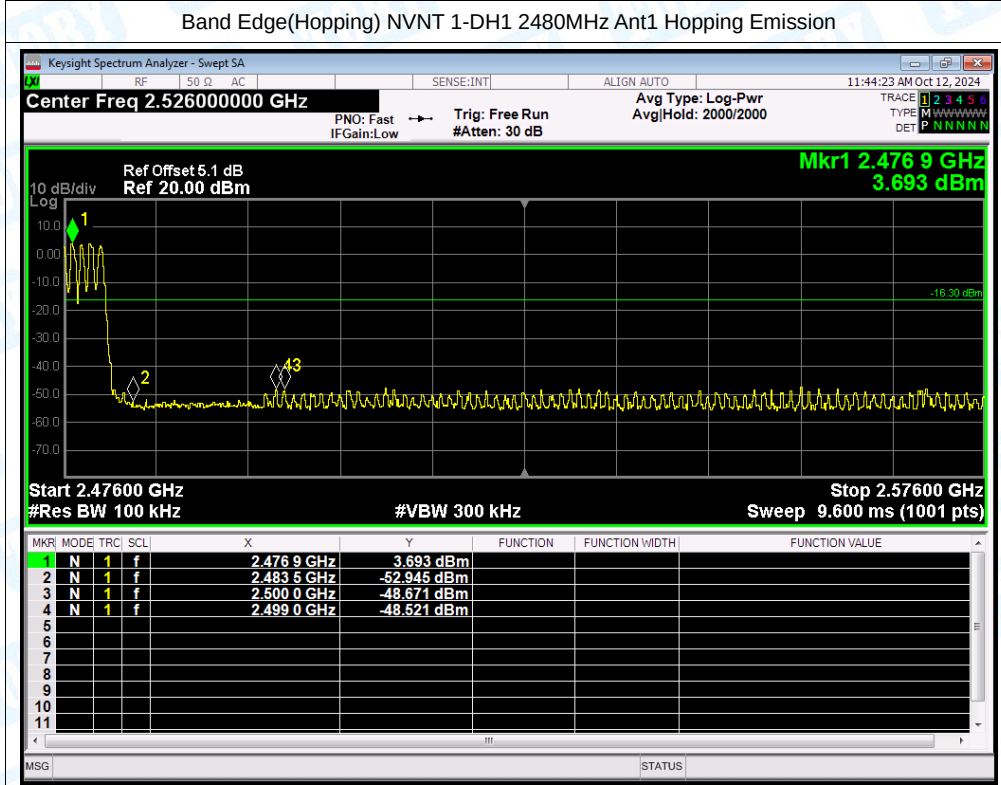
Test Graphs

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



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

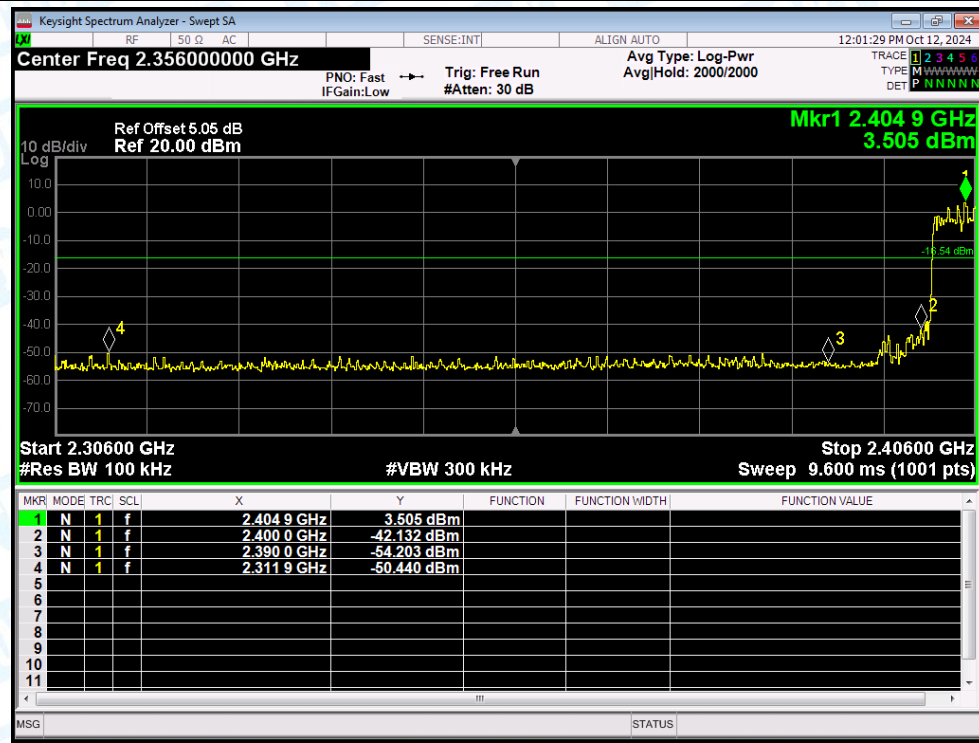


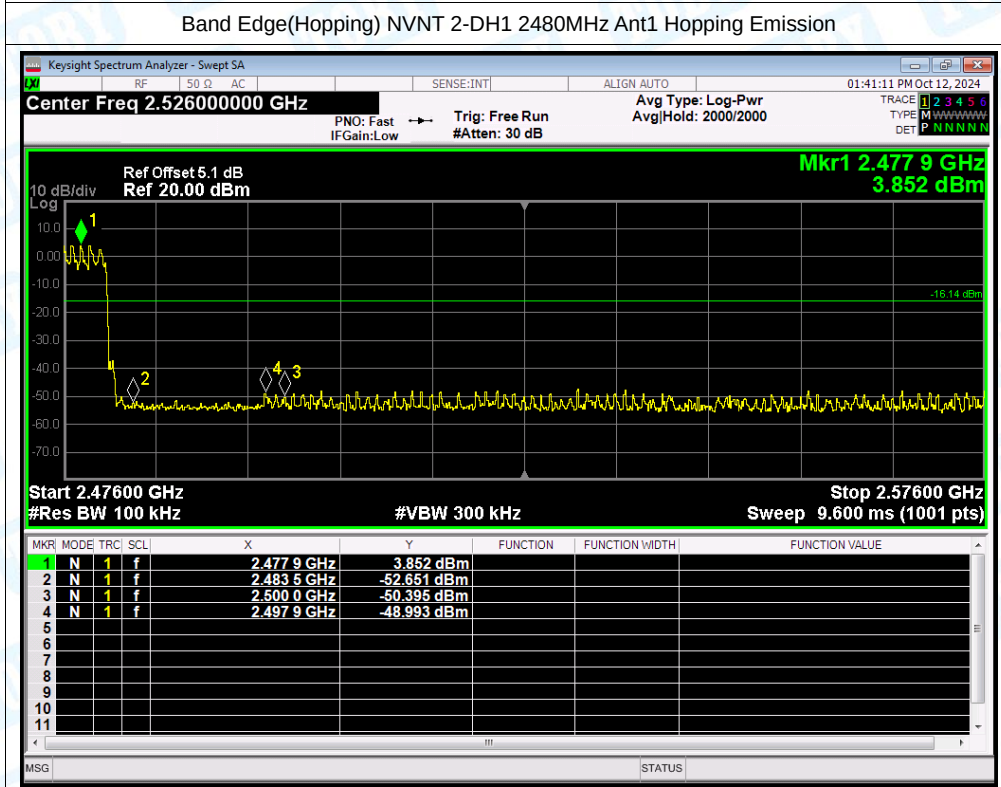


Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref

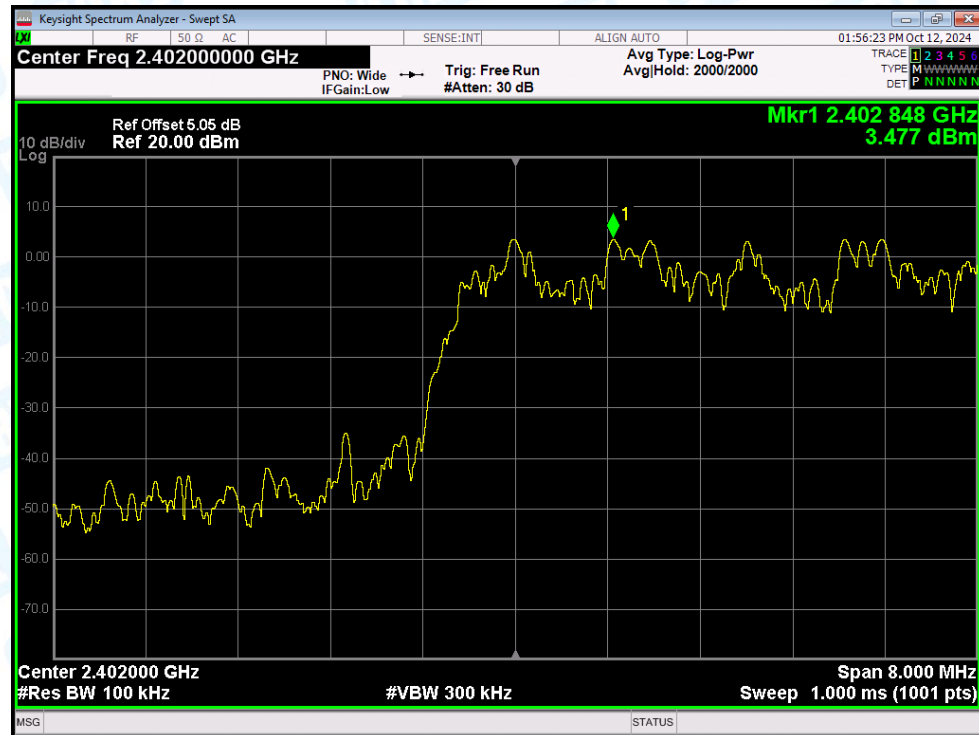


Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission

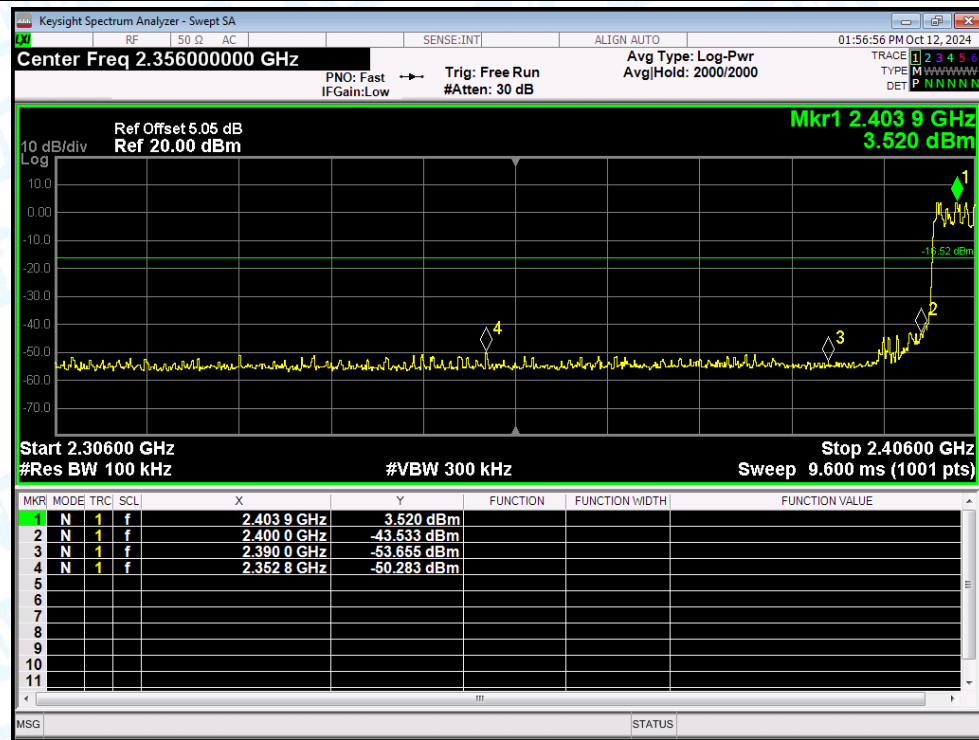


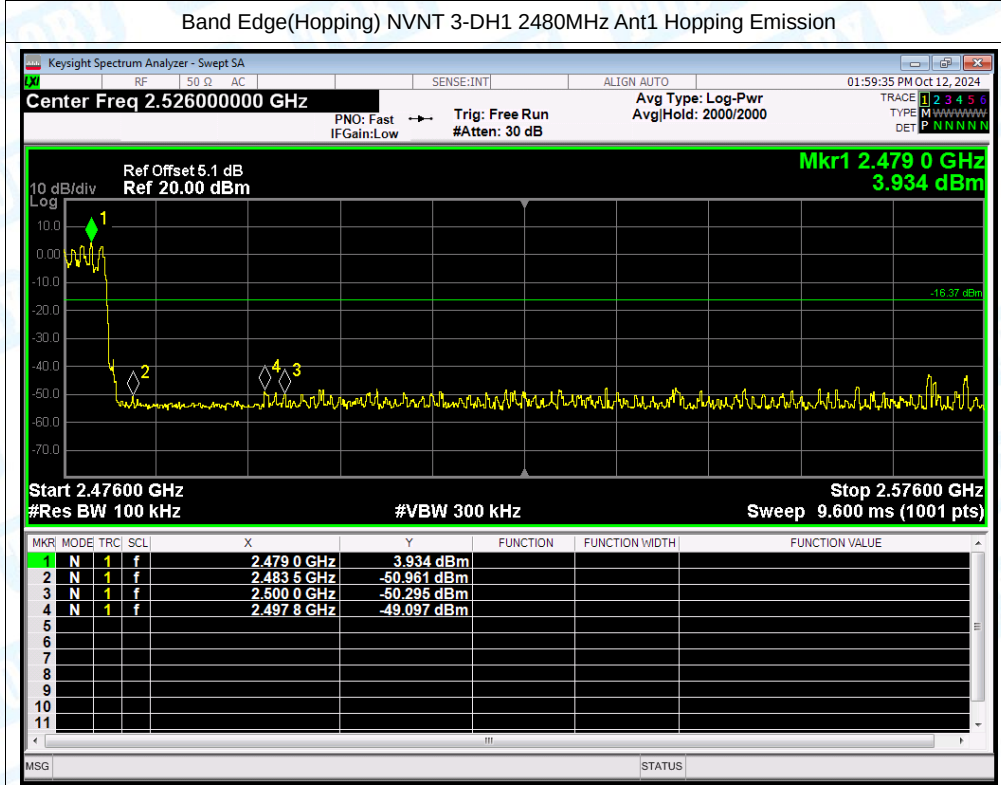
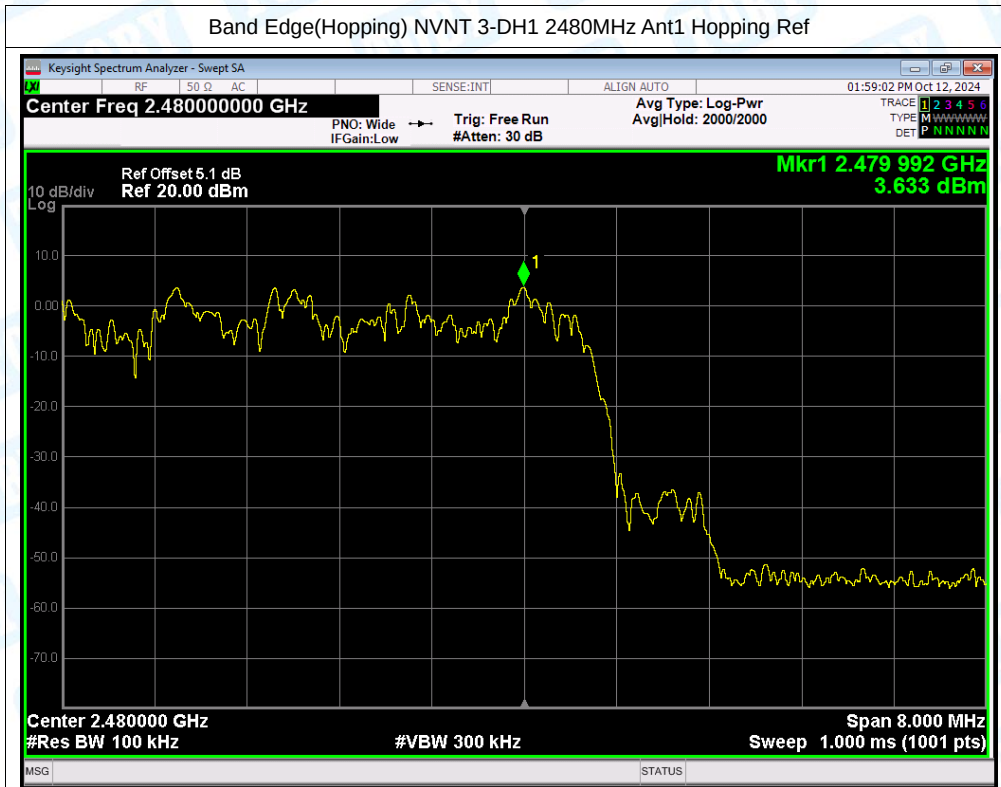


Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



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



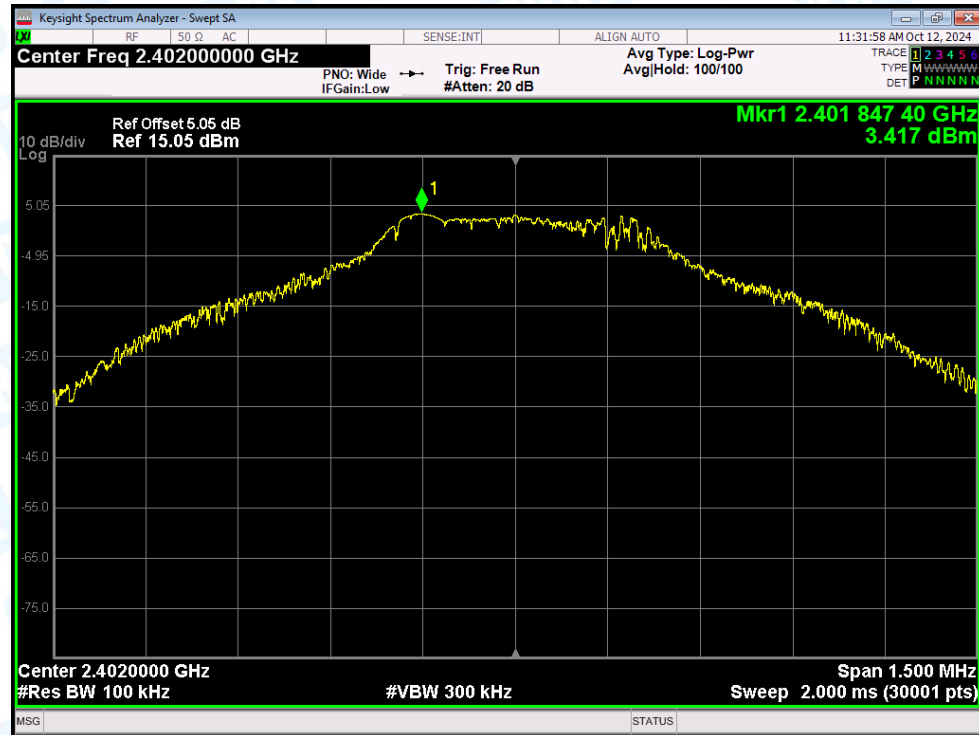


7. Conducted RF Spurious Emission

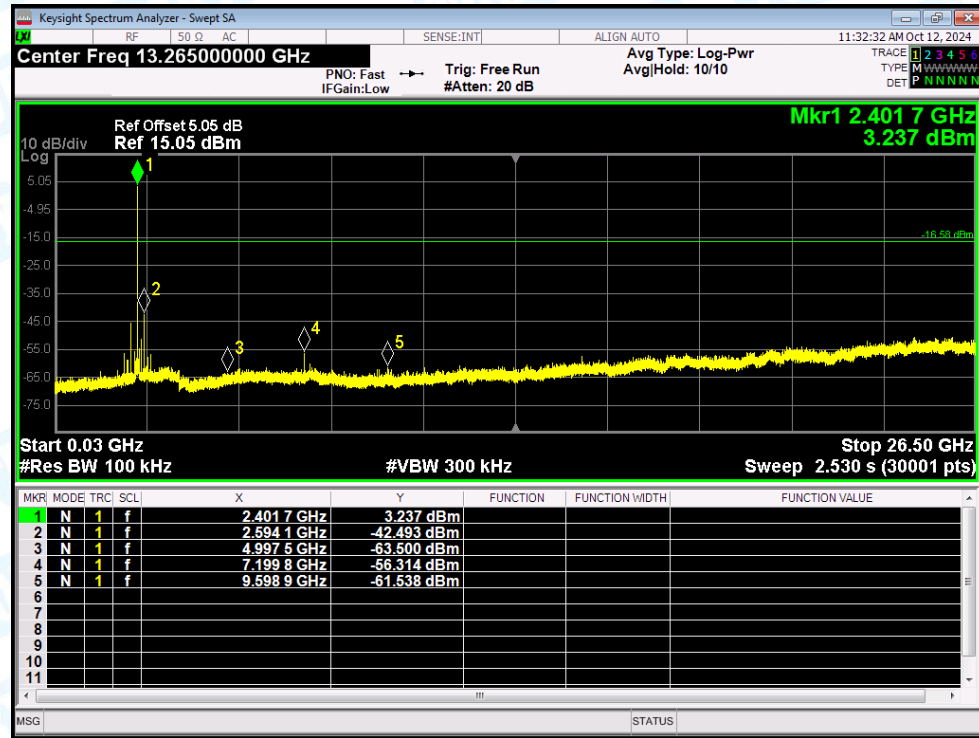
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-45.91	-20	Pass
NVNT	1-DH1	2441	Ant1	-47.13	-20	Pass
NVNT	1-DH1	2480	Ant1	-47.33	-20	Pass
NVNT	2-DH1	2402	Ant1	-49.83	-20	Pass
NVNT	2-DH1	2441	Ant1	-47.83	-20	Pass
NVNT	2-DH1	2480	Ant1	-47.17	-20	Pass
NVNT	3-DH1	2402	Ant1	-47.68	-20	Pass
NVNT	3-DH1	2441	Ant1	-47.97	-20	Pass
NVNT	3-DH1	2480	Ant1	-48.4	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



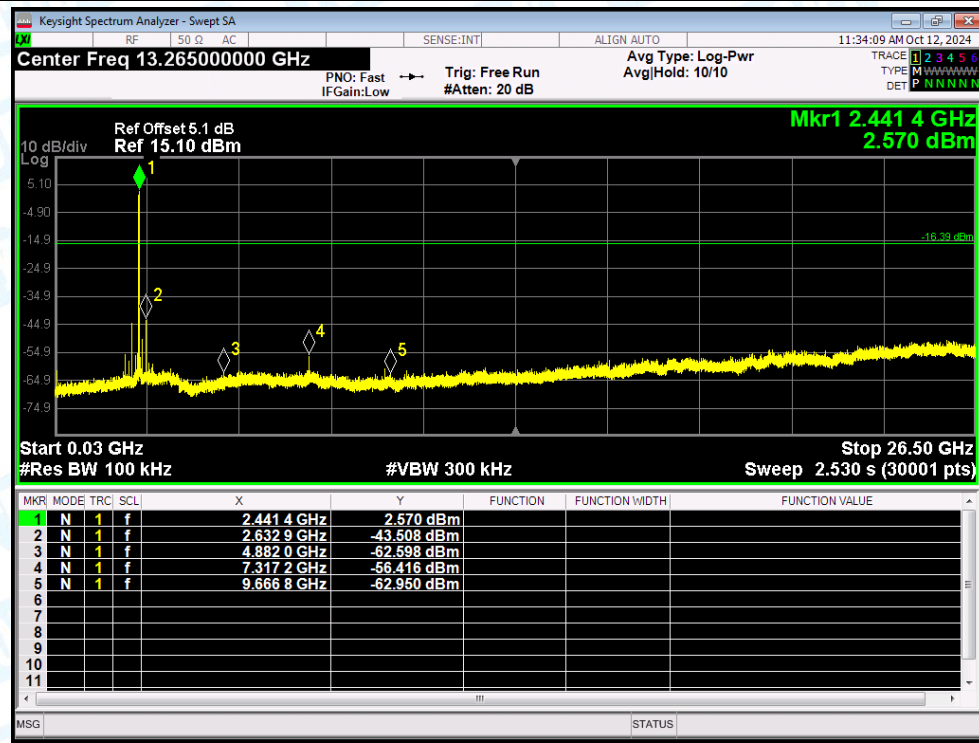
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



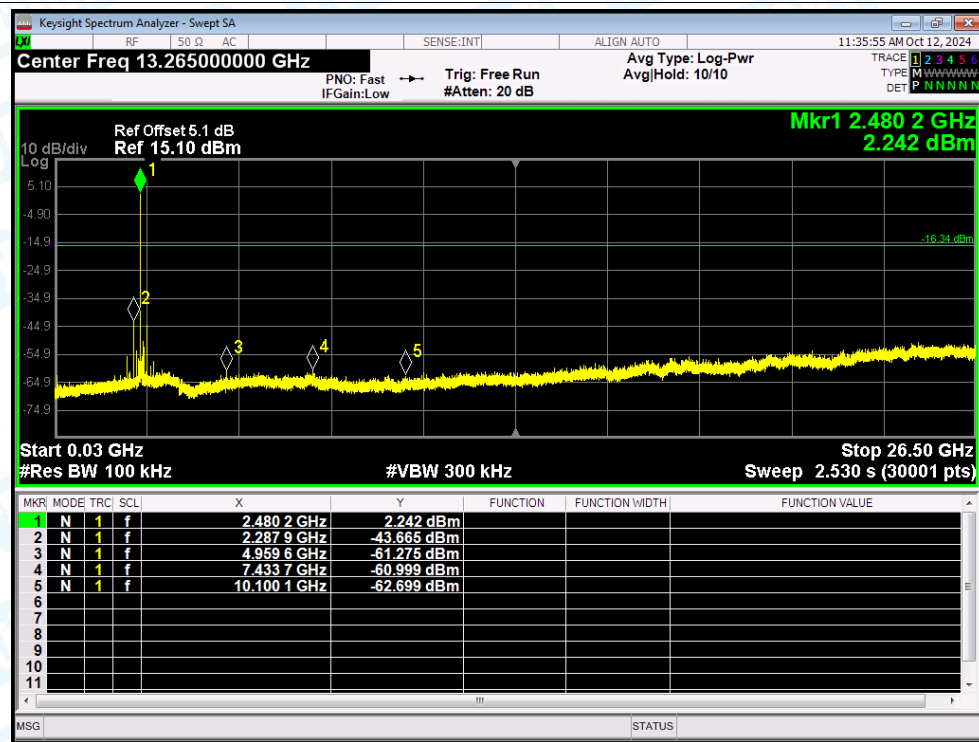
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



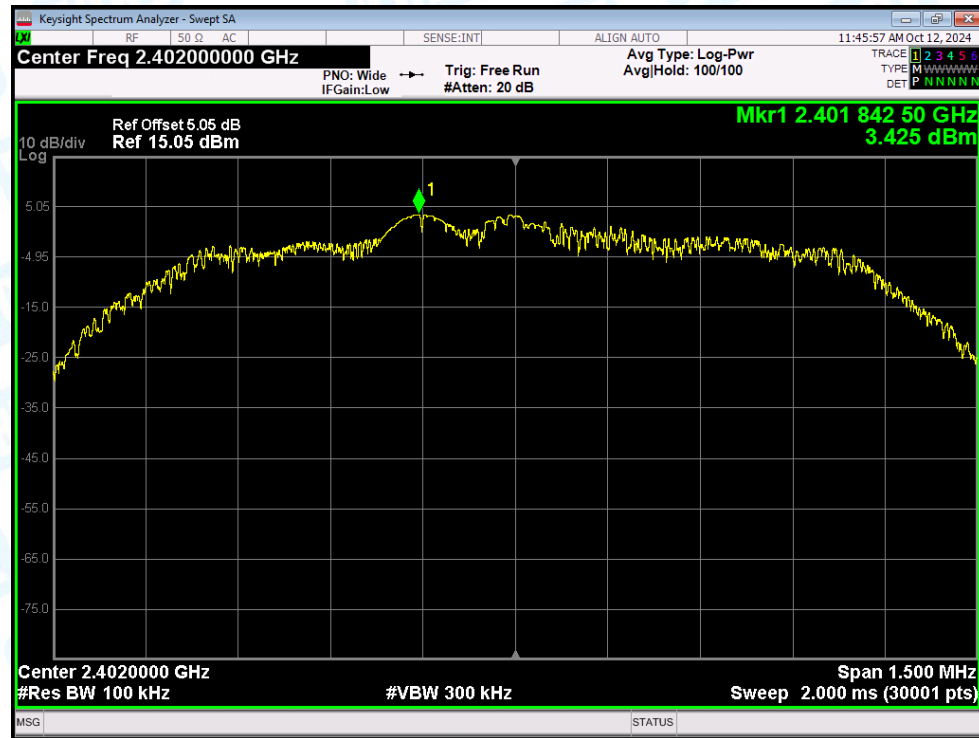
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



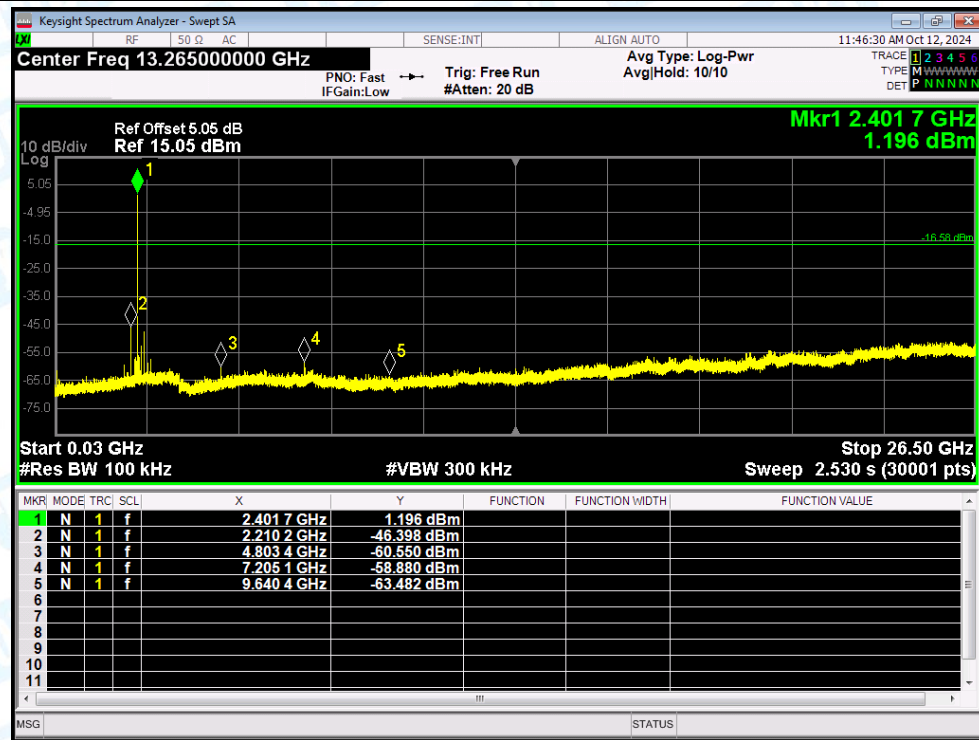
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



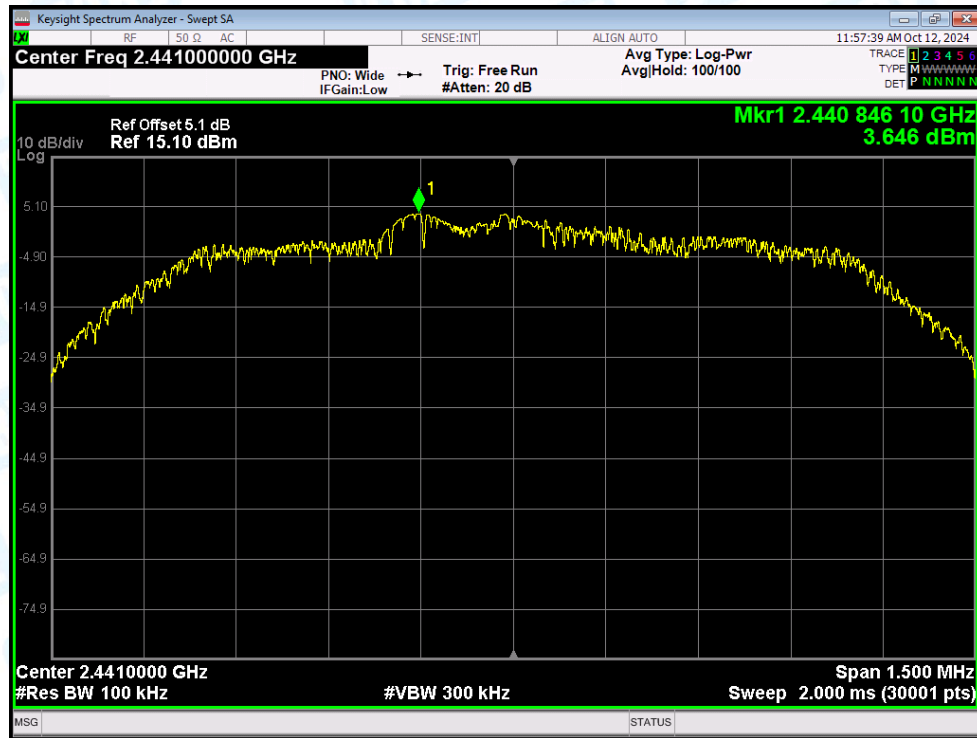
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



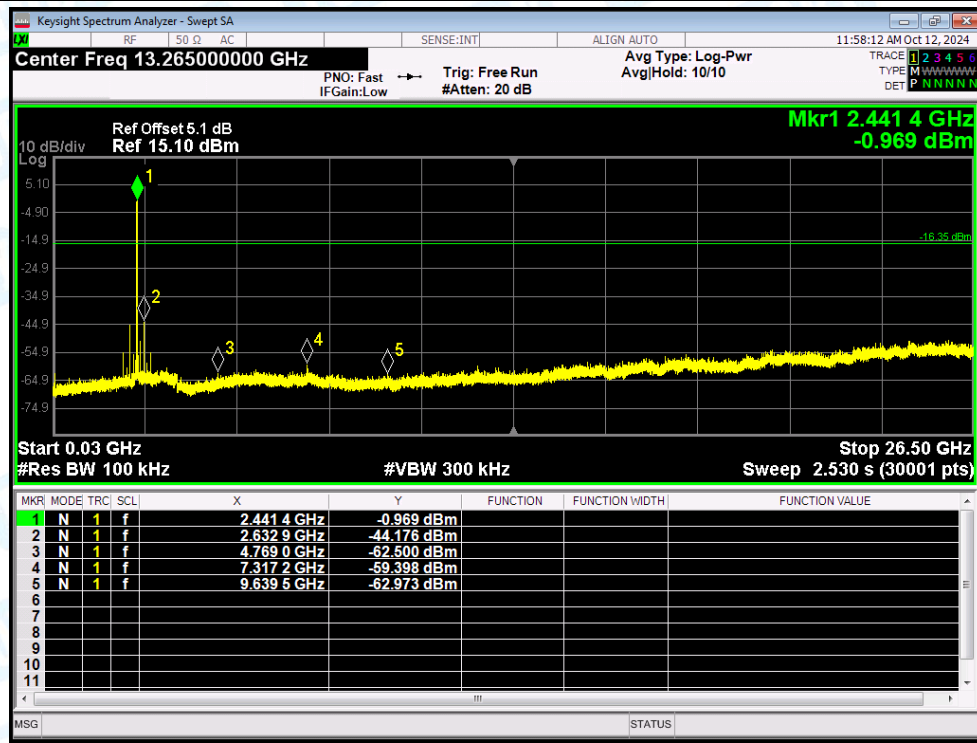
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



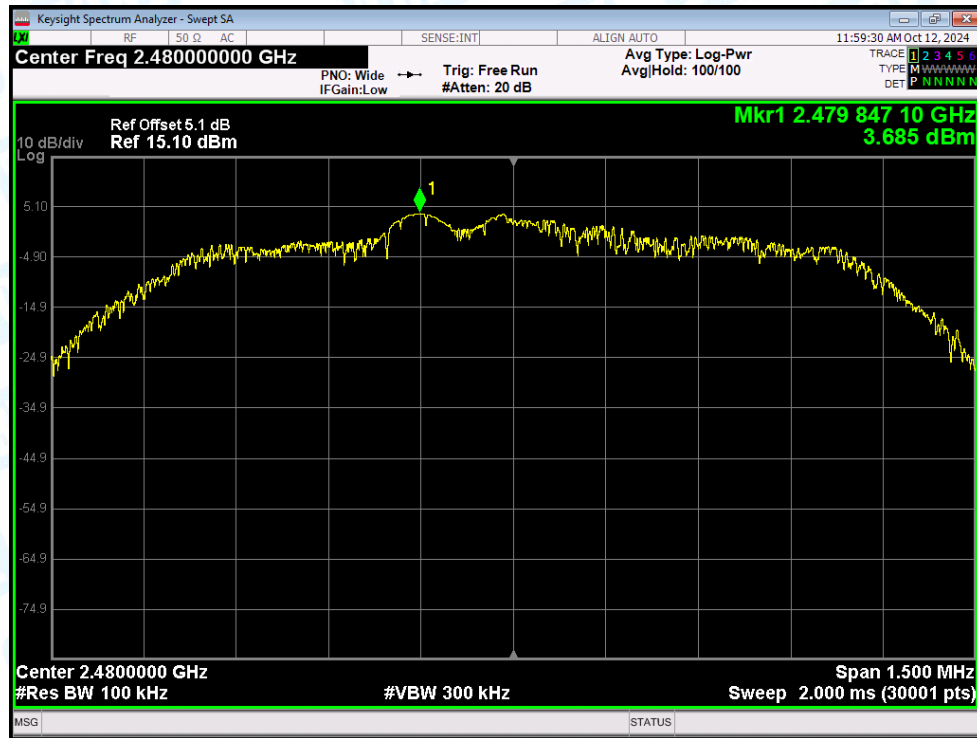
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



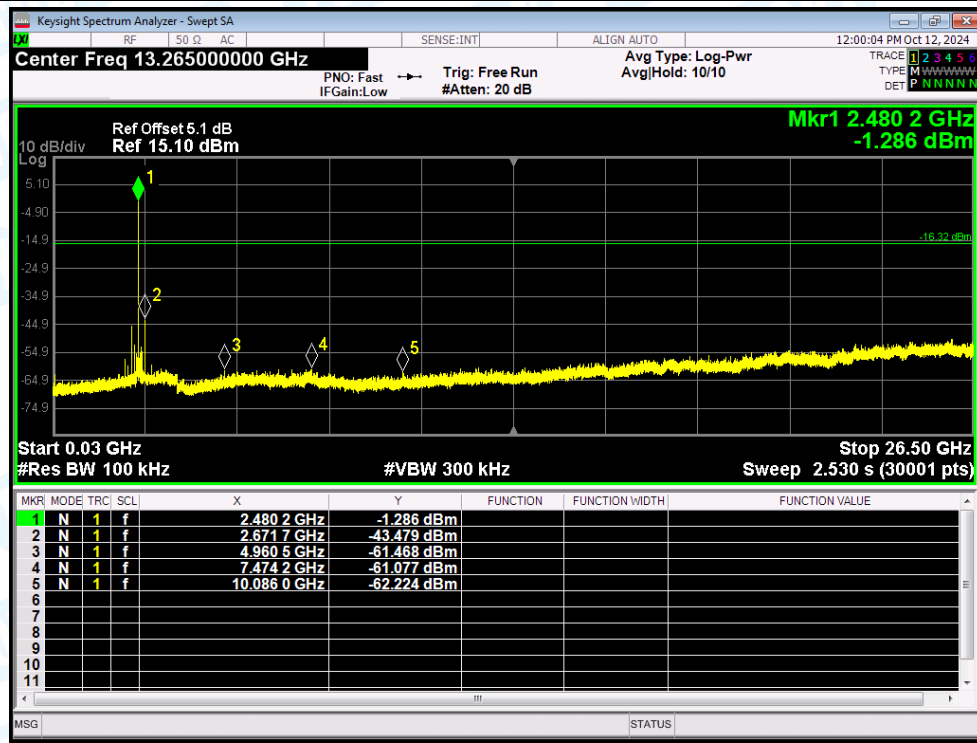
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



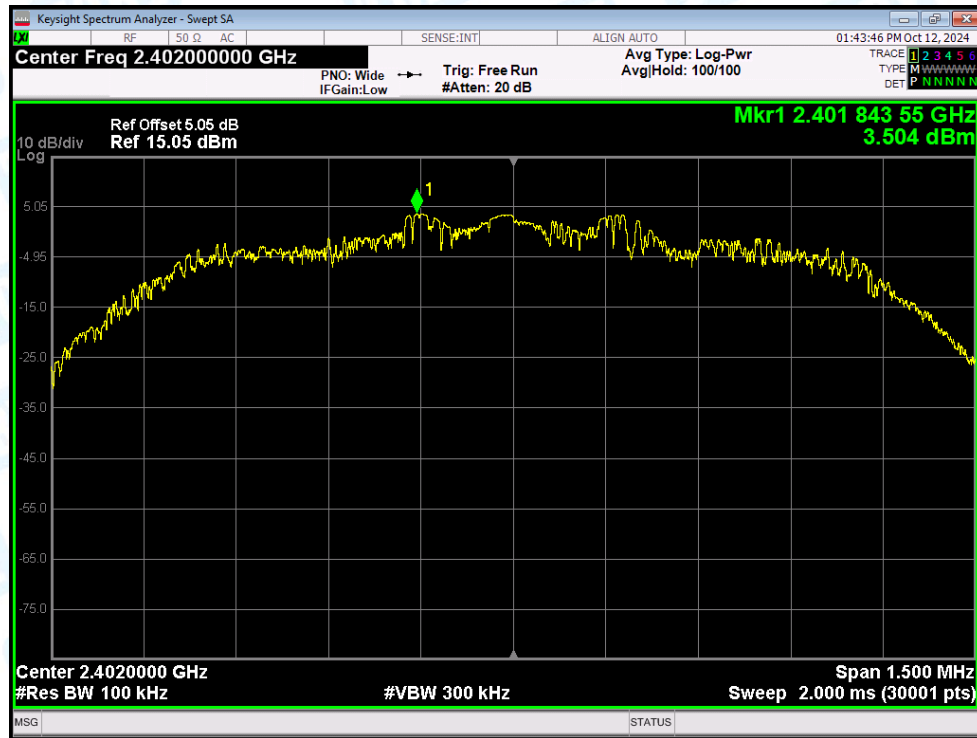
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



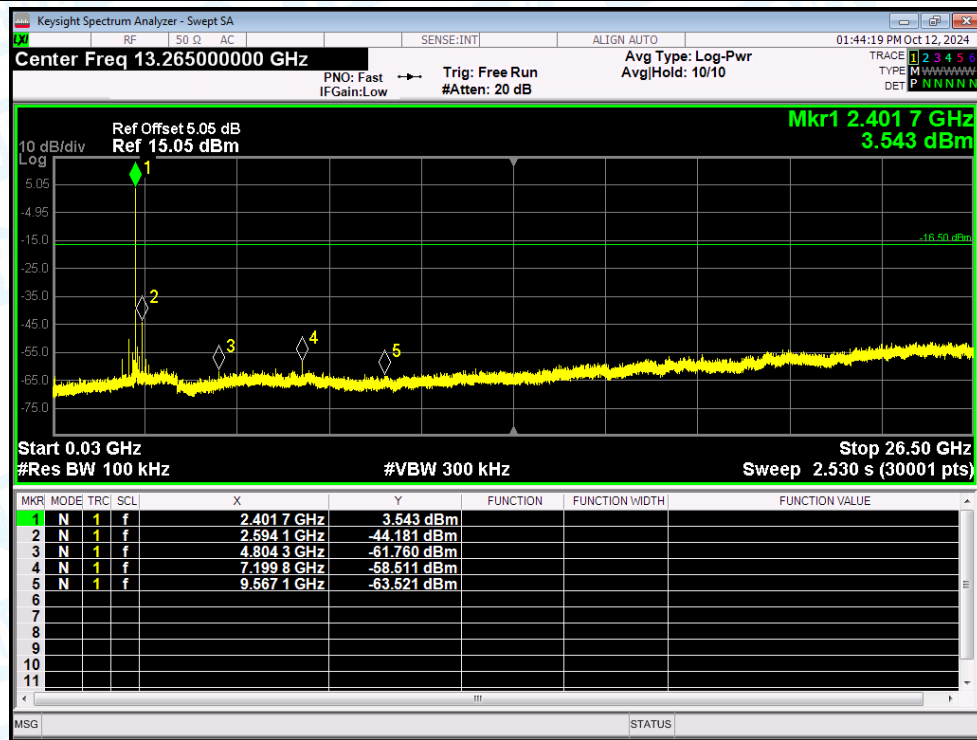
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



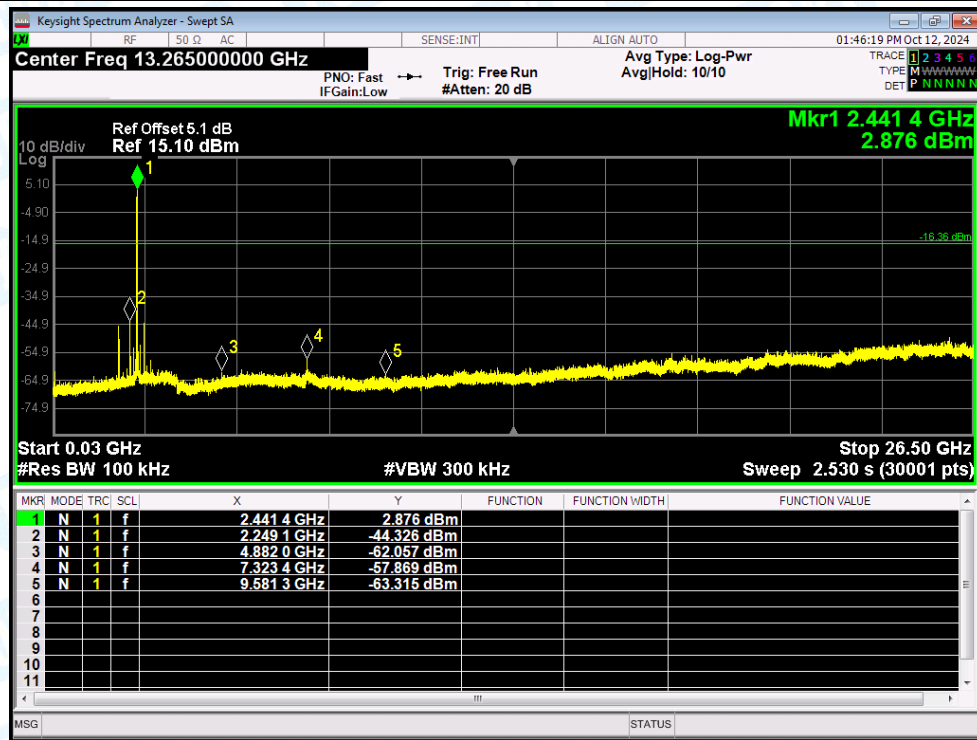
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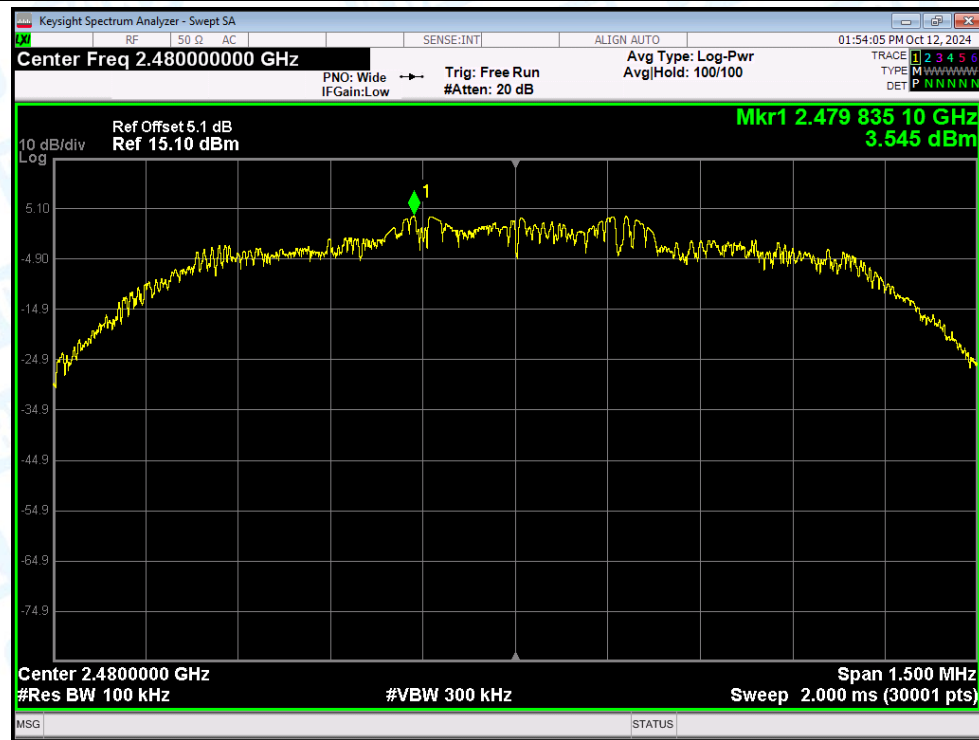
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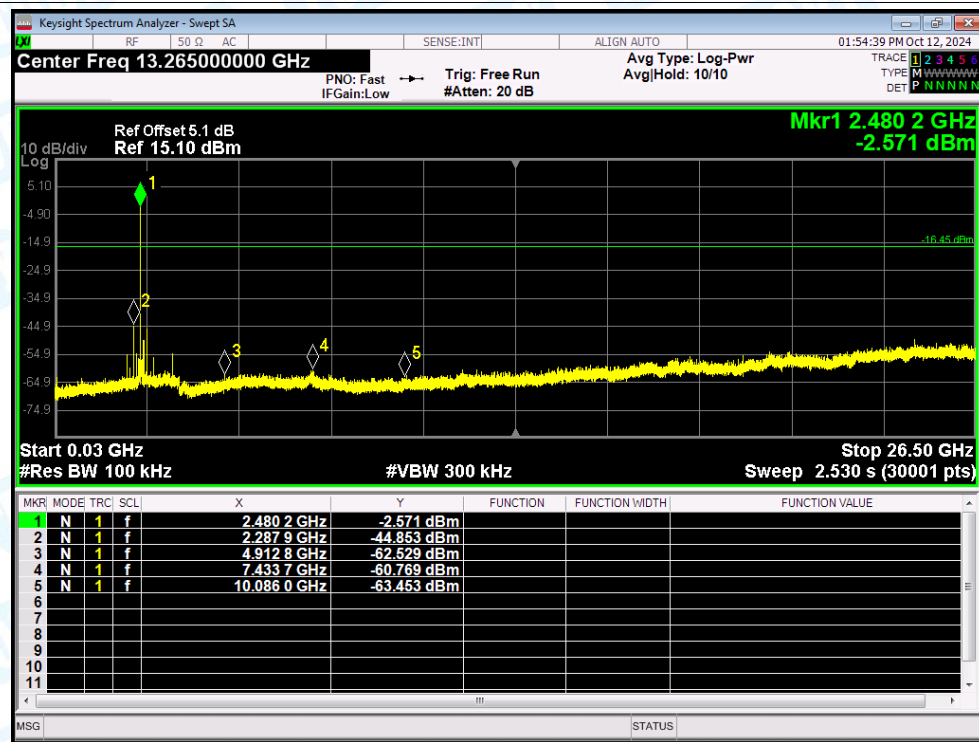
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

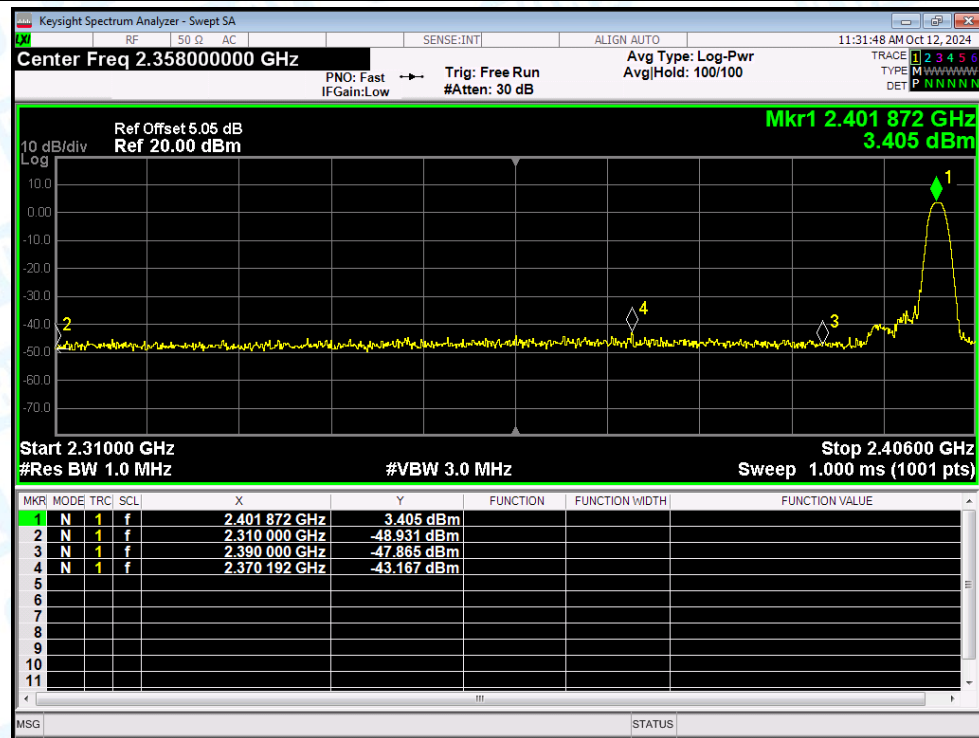


8.Restrict Band

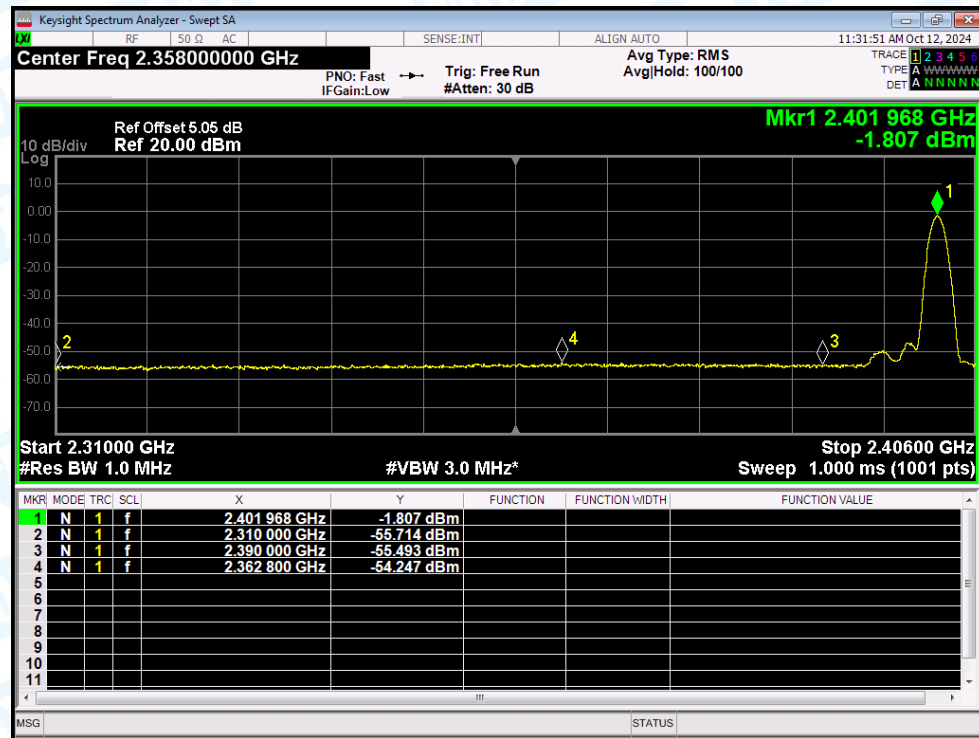
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-48.93	2.9	-	49.23	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-55.71	2.9	5.06	47.51	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2370.192	-43.17	2.9	-	54.99	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2362.8	-54.25	2.9	5.06	48.97	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-47.87	2.9	-	50.29	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.49	2.9	5.06	47.73	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-44.31	2.9	-	53.85	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-53.94	2.9	5.17	49.39	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.896	-41.56	2.9	-	56.6	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.656	-53.21	2.9	5.17	50.12	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-47.28	2.9	-	50.88	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.25	2.9	5.17	49.08	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-49.46	2.9	-	48.7	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.31	2.9	5.06	46.91	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2378.064	-42.93	2.9	-	55.23	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2354.448	-54.1	2.9	5.06	49.12	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-46.03	2.9	-	52.13	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.23	2.9	5.06	47.99	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-43.98	2.9	-	54.18	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-52.49	2.9	5.06	50.73	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.632	-42.38	2.9	-	55.78	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-52.49	2.9	5.06	50.73	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.11	2.9	-	51.05	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-54.94	2.9	5.06	48.28	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-46.4	2.9	-	51.76	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-55.71	2.9	5.06	47.51	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2373.552	-44.61	2.9	-	53.55	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2375.28	-54.26	2.9	5.06	48.96	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.82	2.9	-	50.34	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.1	2.9	5.06	48.12	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-44.78	2.9	-	53.38	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-53.61	2.9	4.95	49.5	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2498.176	-42.75	2.9	-	55.41	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.56	-53.06	2.9	4.95	50.05	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-46.4	2.9	-	51.76	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-54.58	2.9	4.95	48.53	Average	54	Pass

Test Graphs

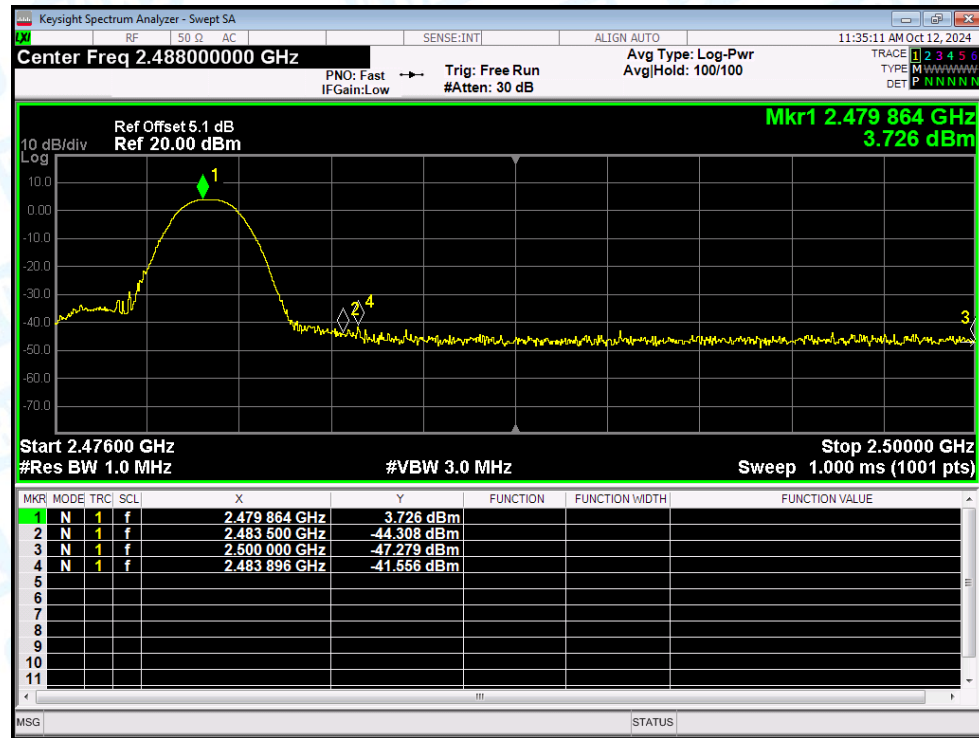
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



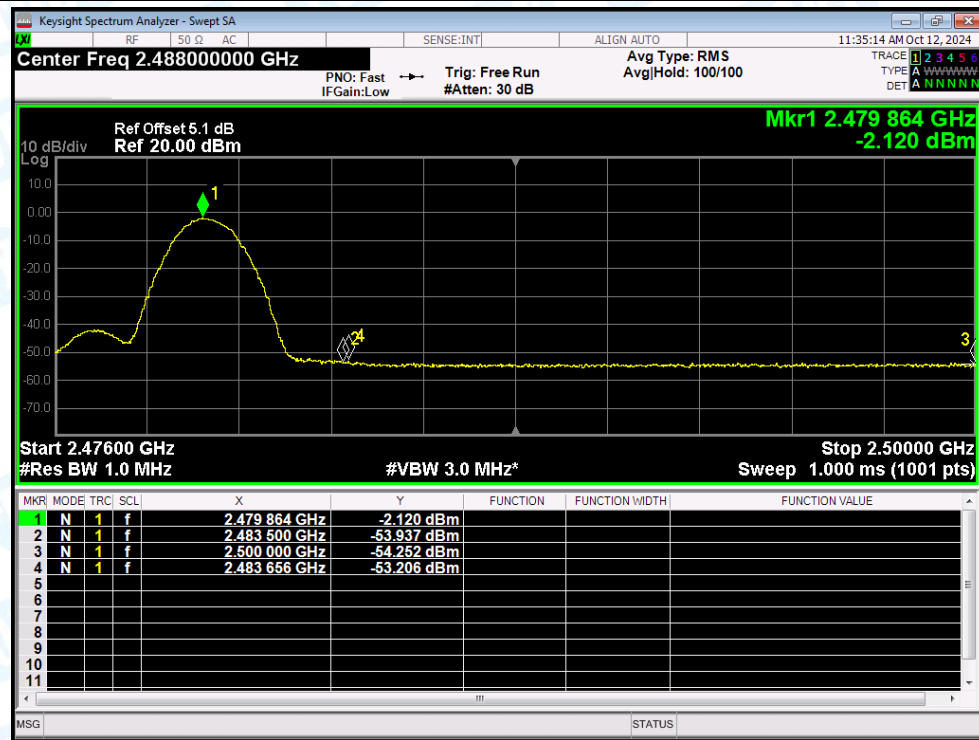
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



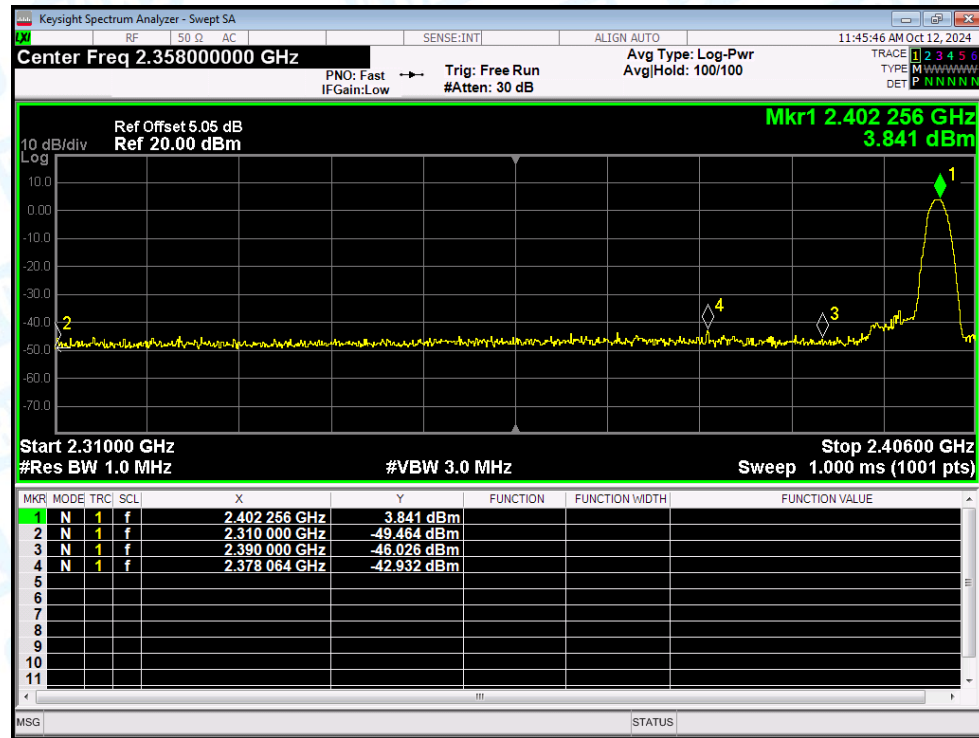
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



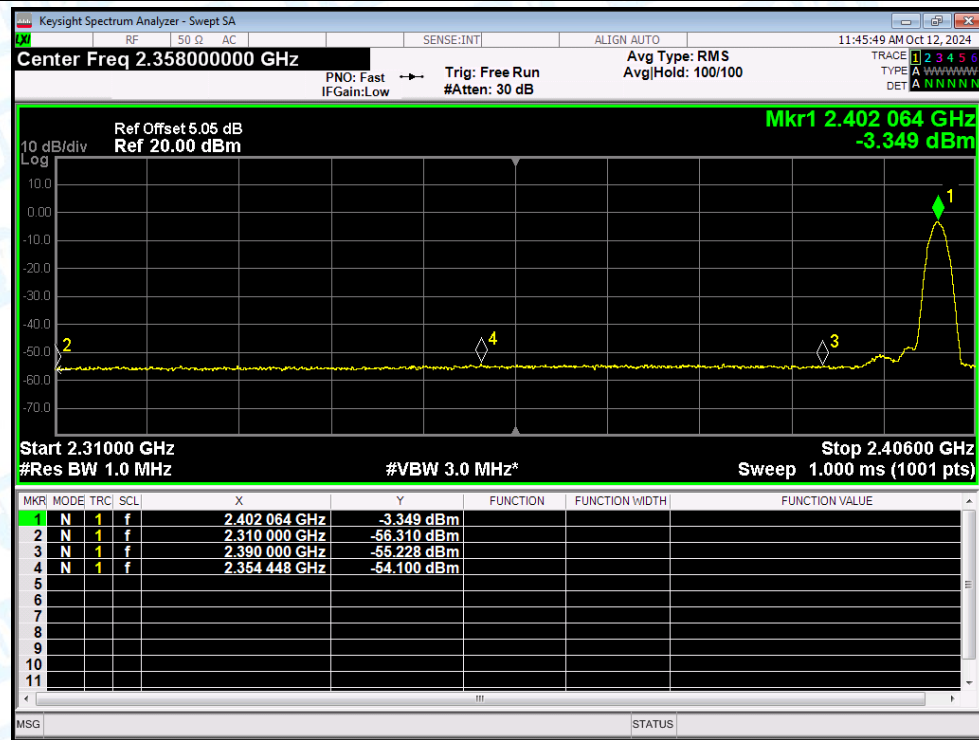
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



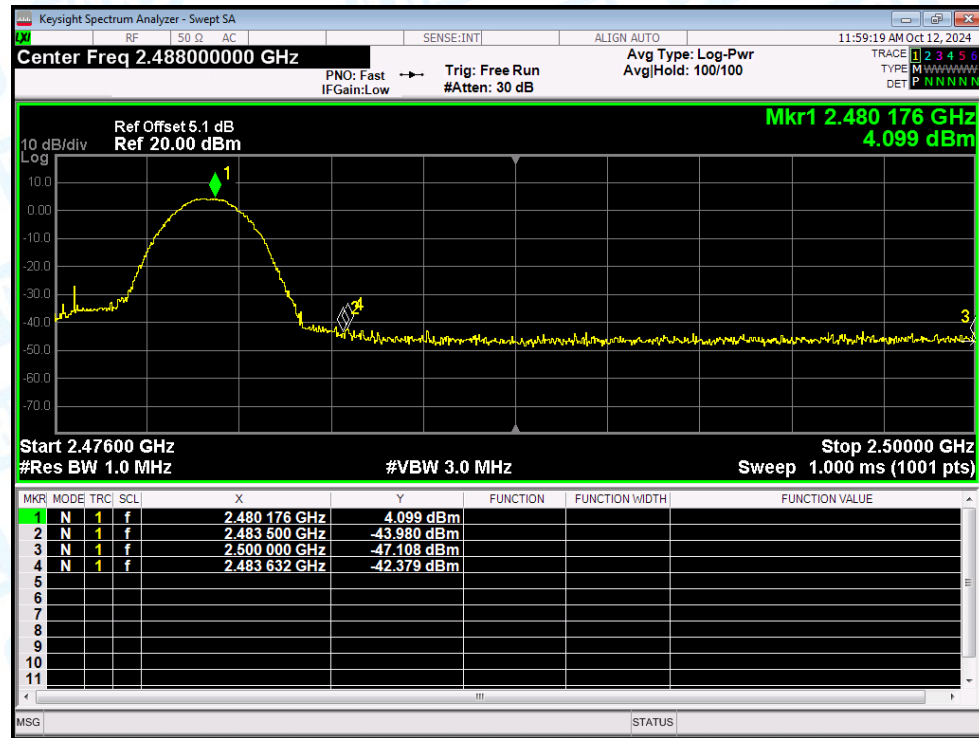
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



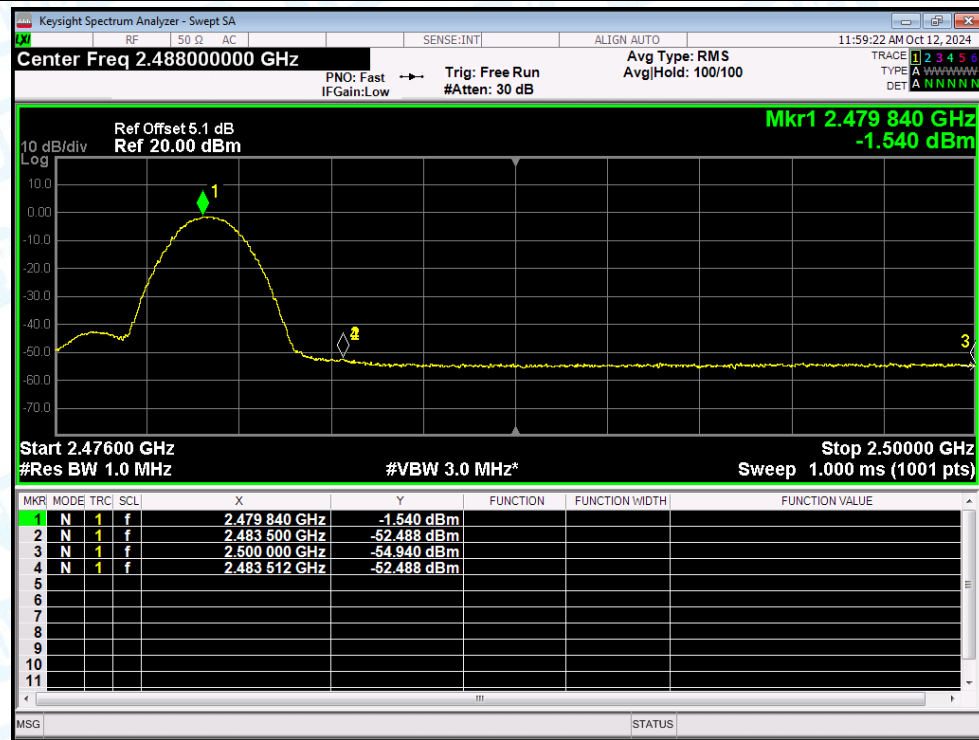
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



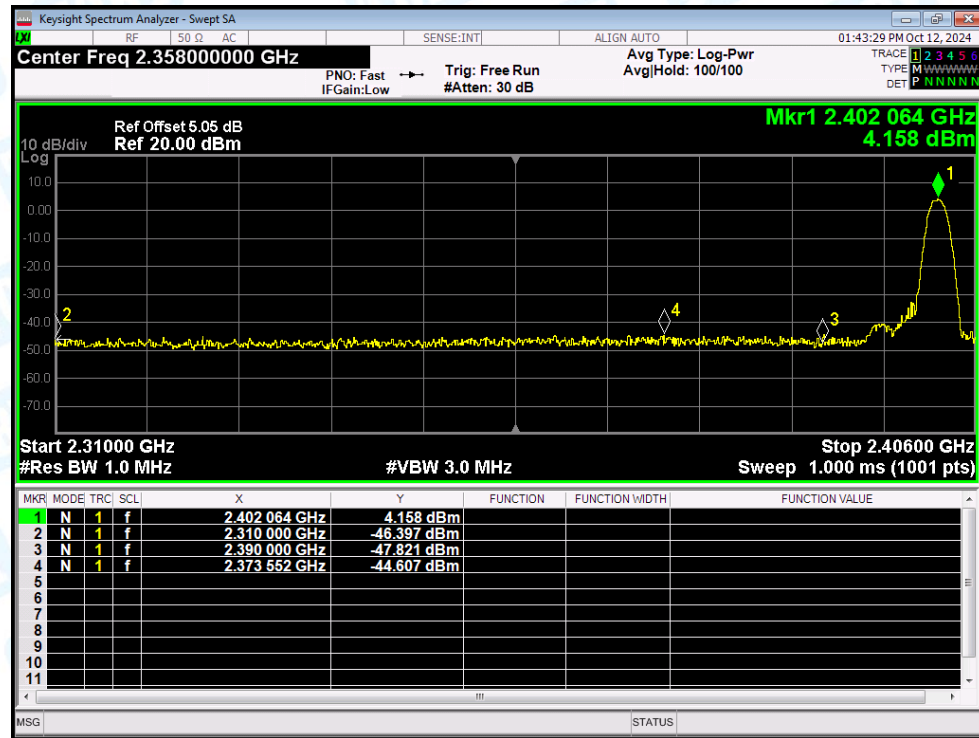
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



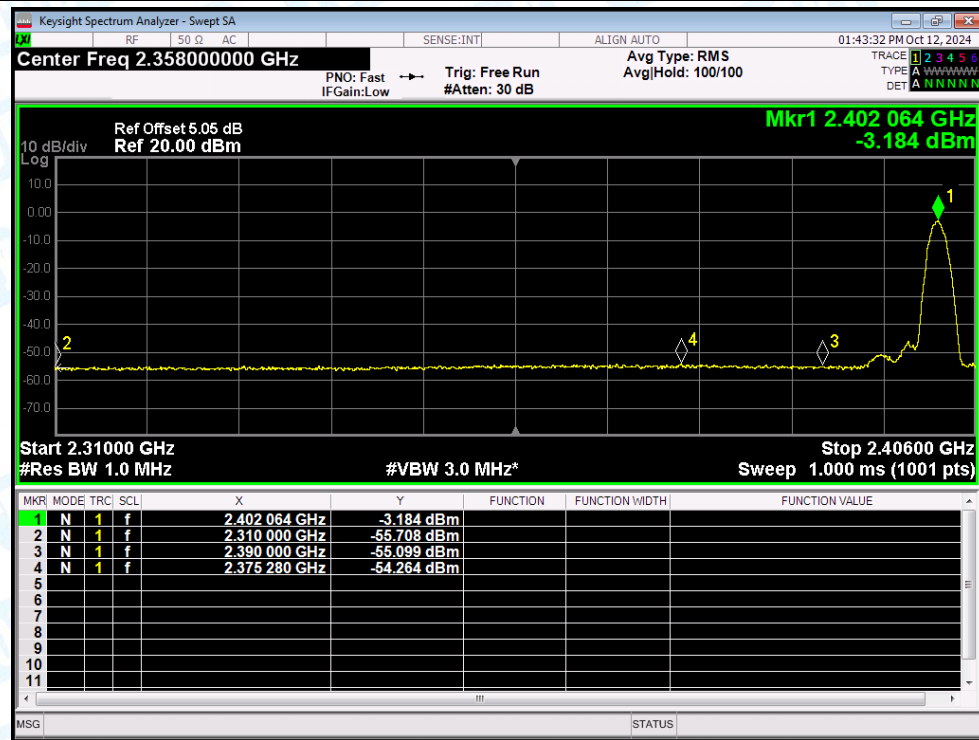
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



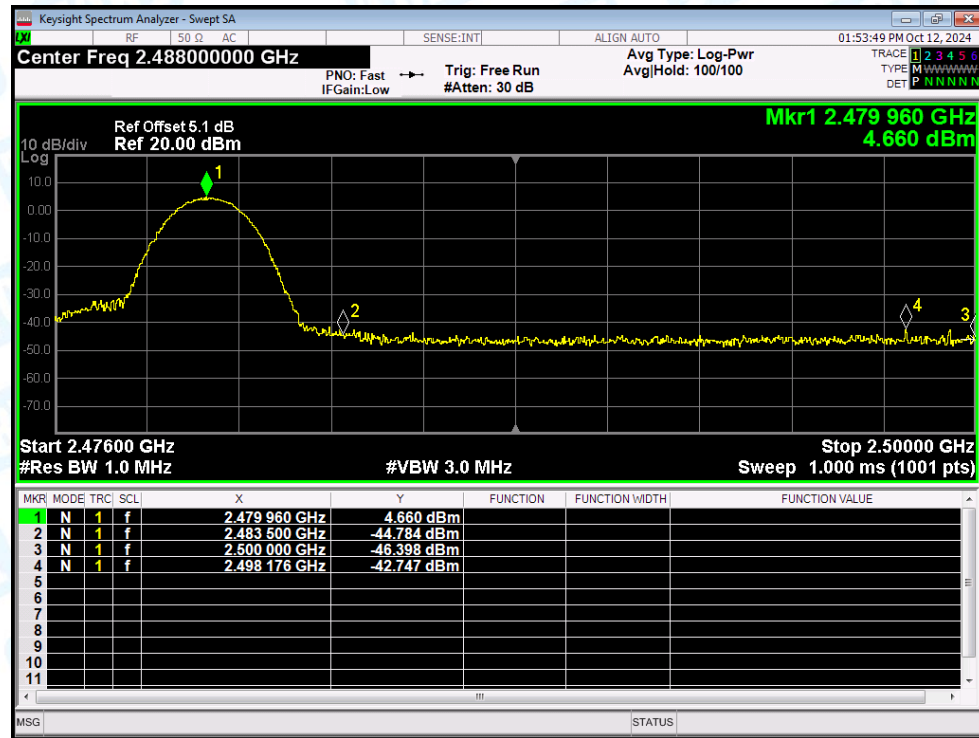
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



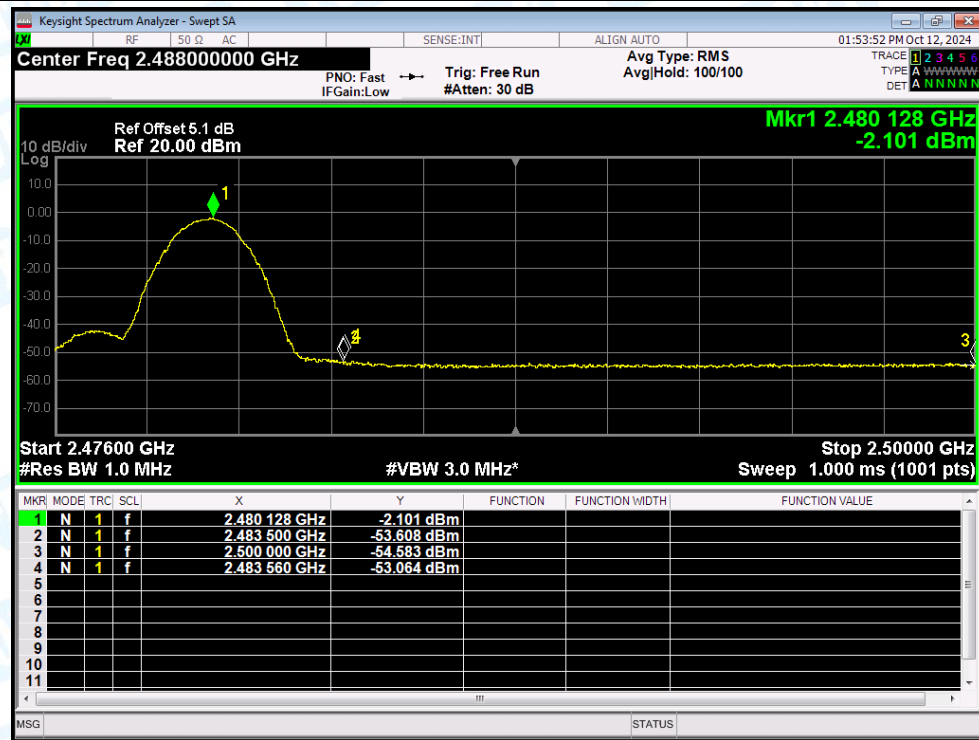
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

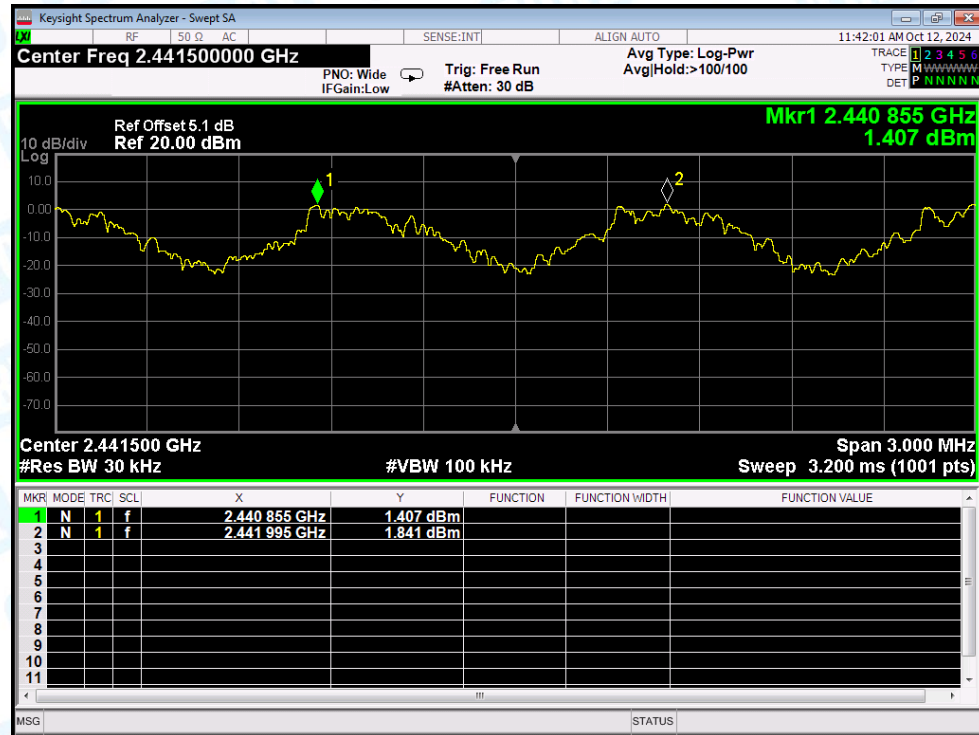


9.Carrier Frequencies Separation

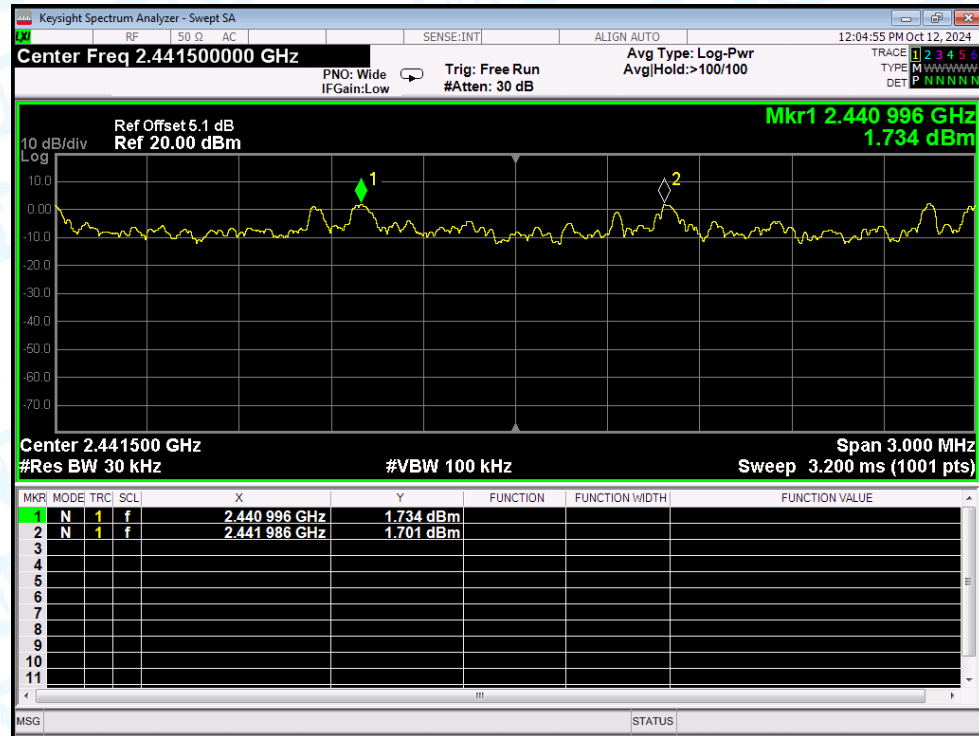
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.855	2441.995	1.14	0.573	Pass
NVNT	2-DH1	Ant1	2440.996	2441.986	0.99	0.813	Pass
NVNT	3-DH1	Ant1	2440.99	2441.992	1.002	0.807	Pass

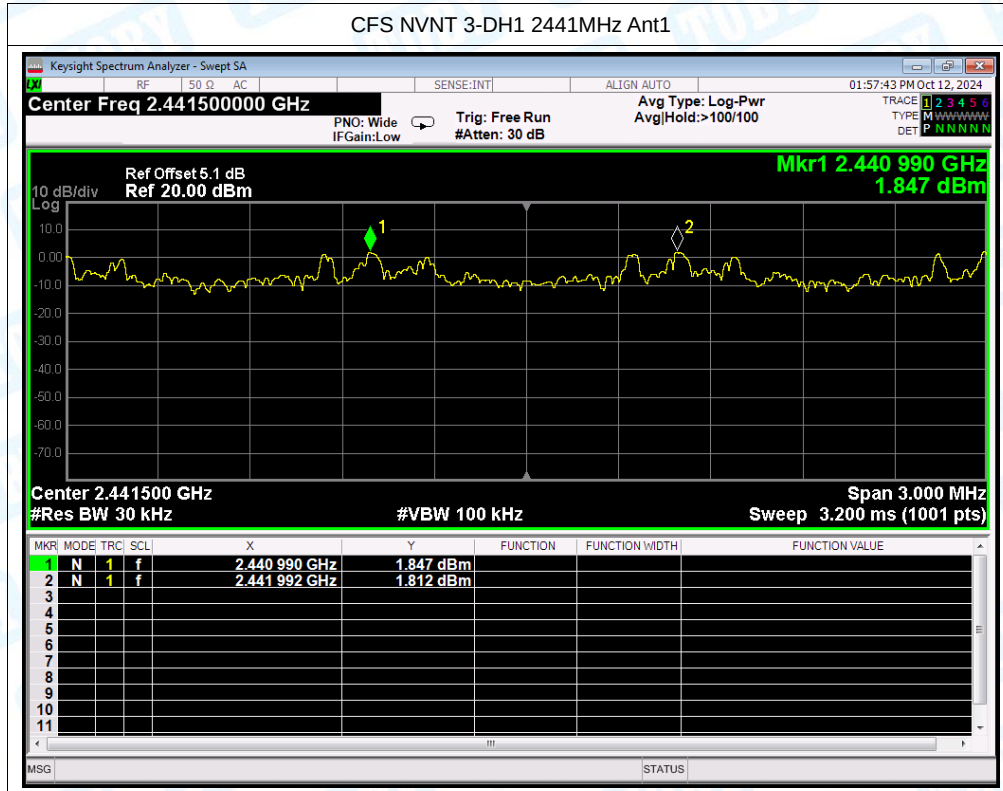
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



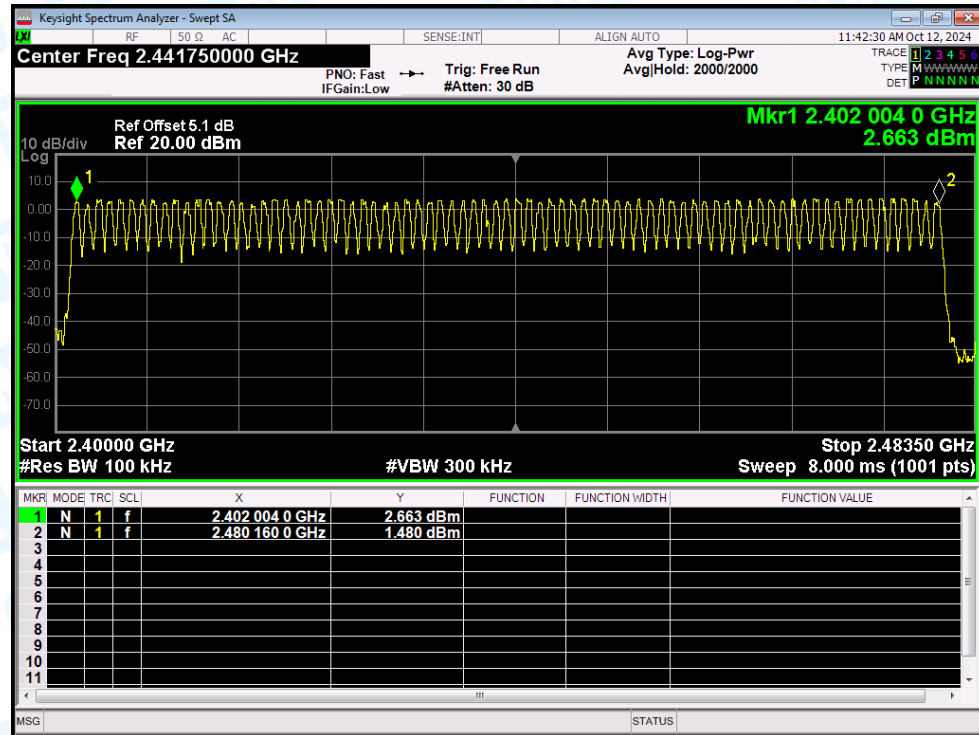


10.Number of Hopping Channel

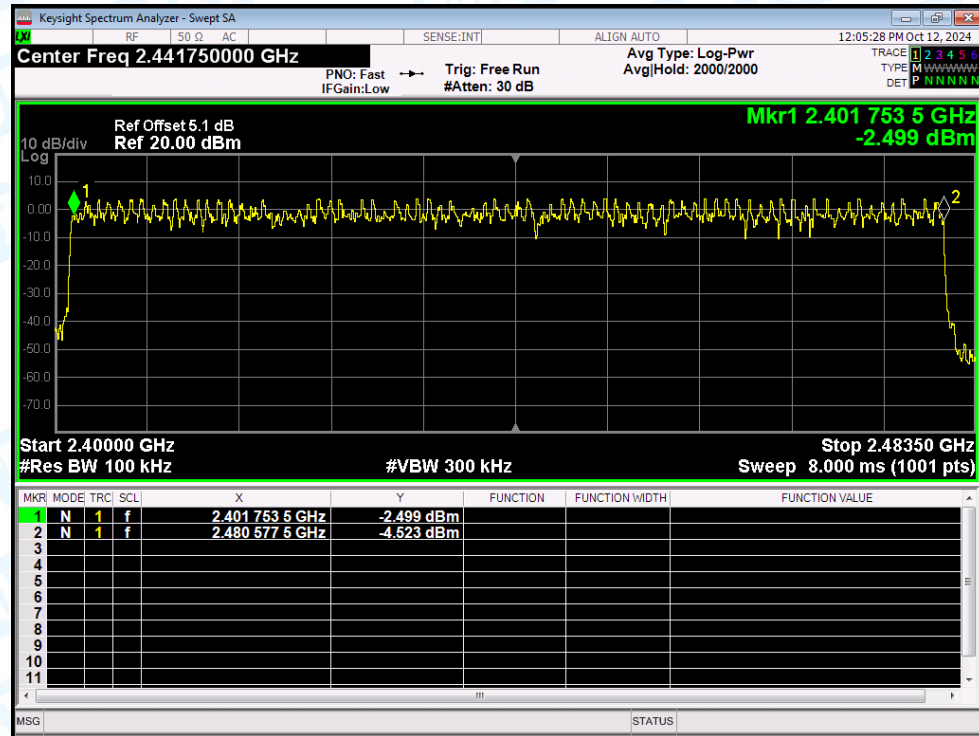
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

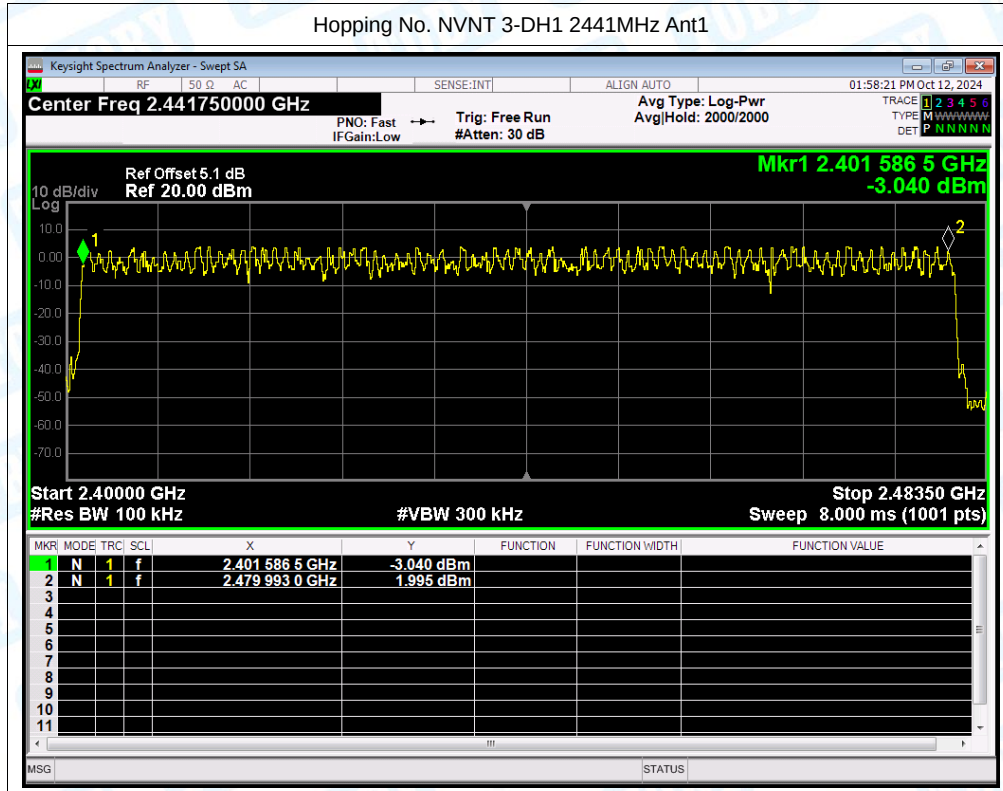
Test Graphs

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	0.384	122.88	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.888	308.053	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.644	263.04	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.892	308.48	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.894	308.693	31600	400	Pass

Note:

1DH1 Total of Dwell= Pulse Time*(1600/2)*31.6/79

1DH3 Total of Dwell= Pulse Time*(1600/4)*31.6/79

1DH5 Total of Dwell= Pulse Time*(1600/6)*31.6/79

2DH1 Total of Dwell= Pulse Time*(1600/2)*31.6/79

2DH3 Total of Dwell= Pulse Time*(1600/4)*31.6/79

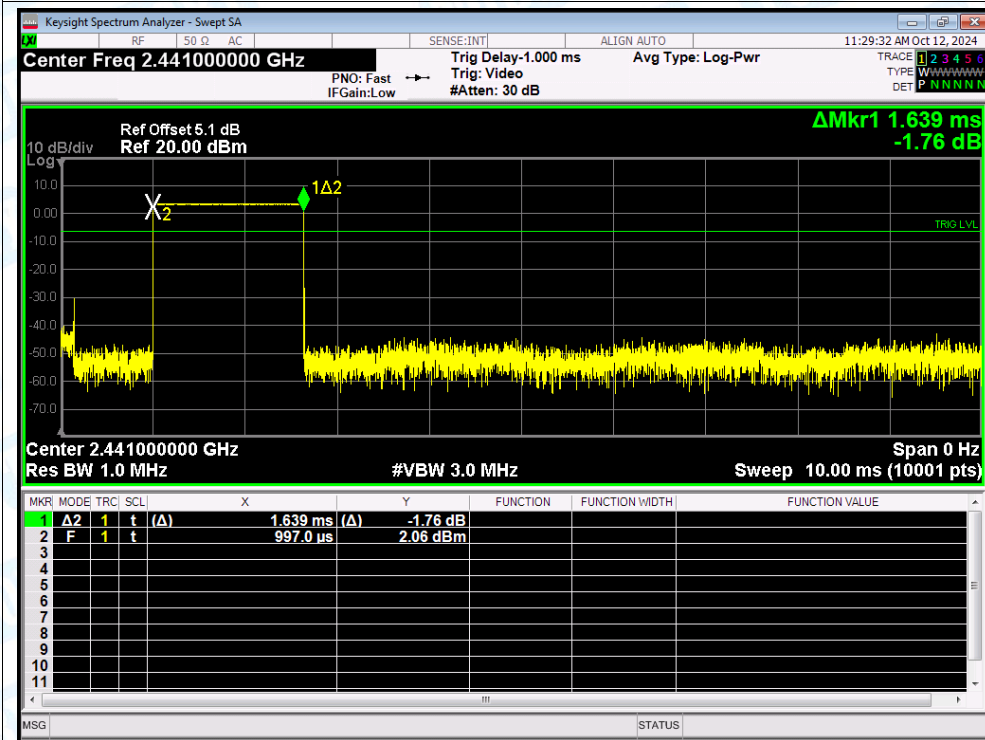
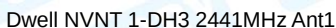
2DH5 Total of Dwell= Pulse Time*(1600/6)*31.6/79

3DH1 Total of Dwell= Pulse Time*(1600/2)*31.6/79

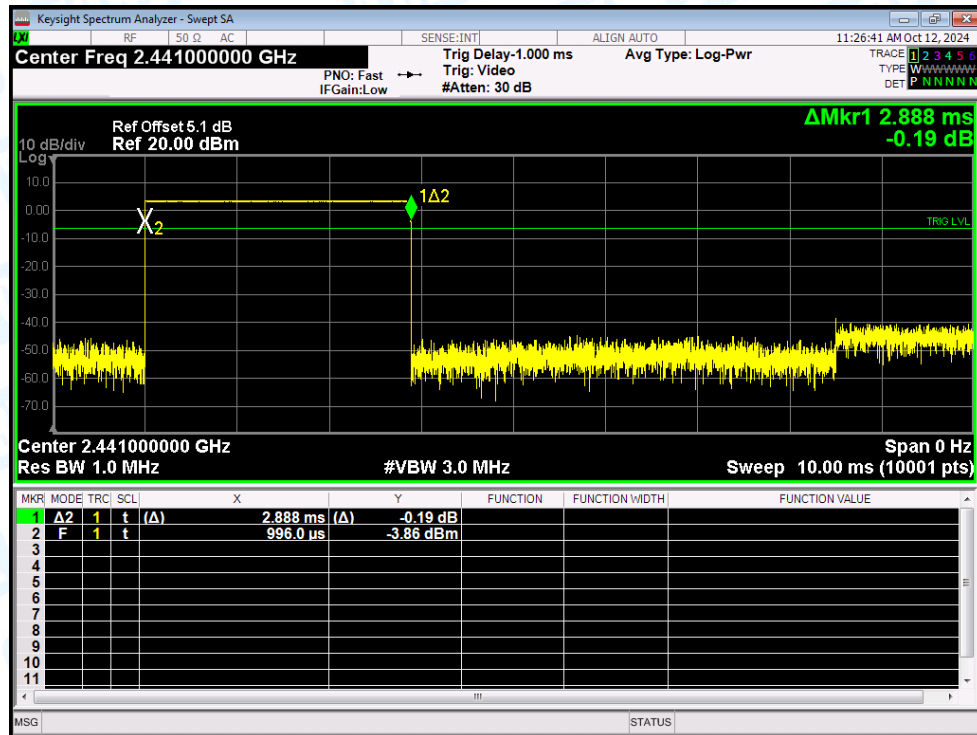
3DH3 Total of Dwell= Pulse Time*(1600/4)*31.6/79

3DH5 Total of Dwell= Pulse Time*(1600/6)*31.6/79

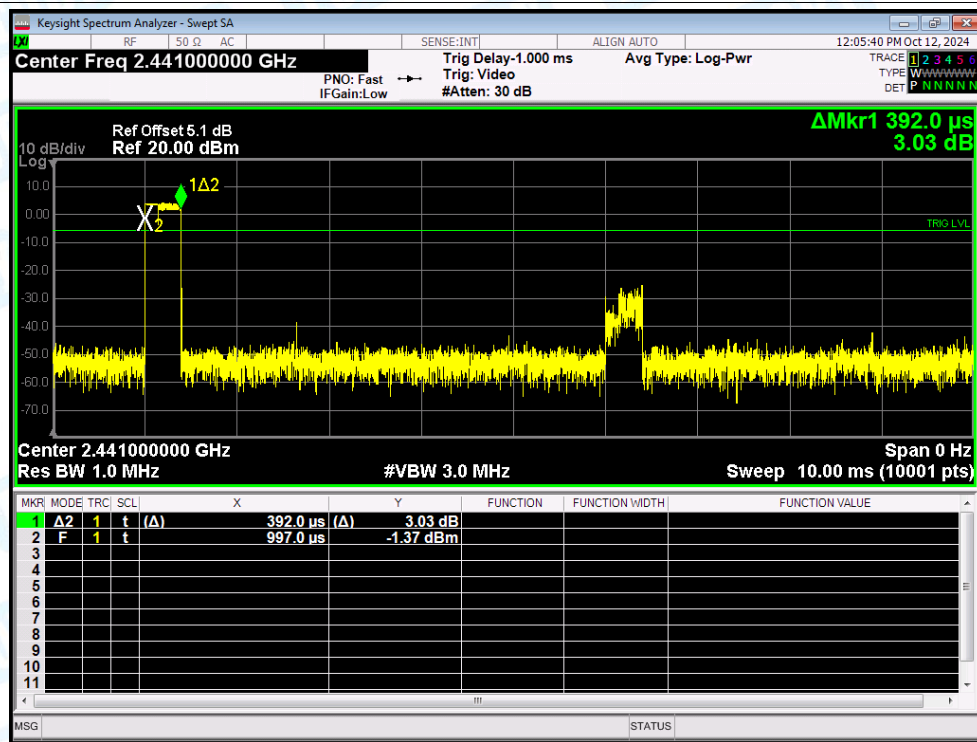
Dwell NVNT 1-DH1 2441MHz Ant1



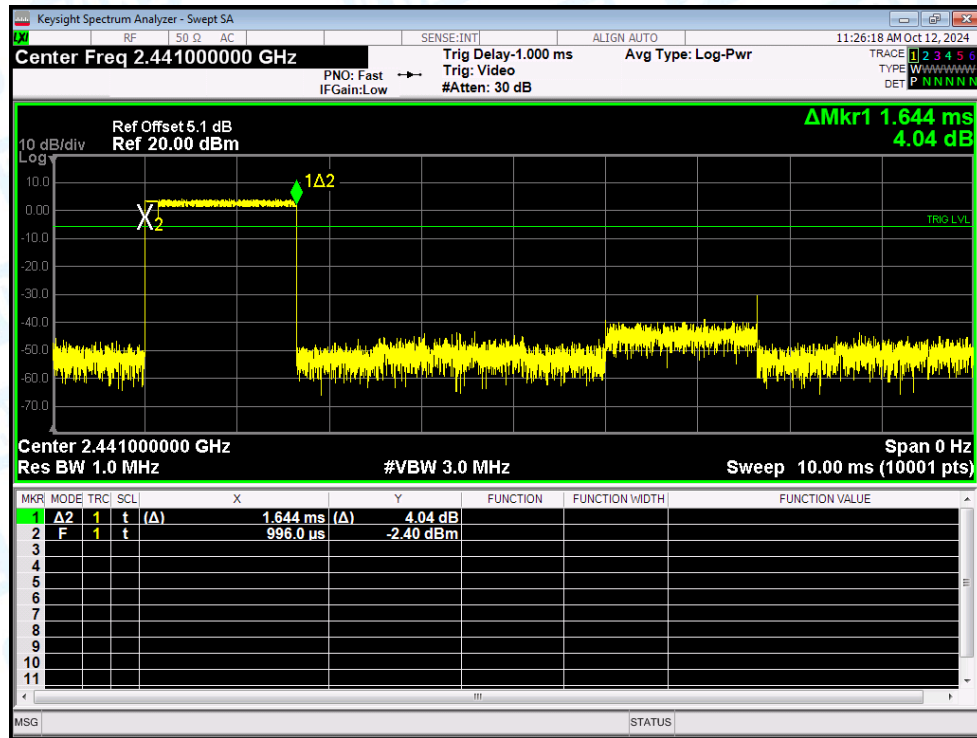
Dwell NVNT 1-DH5 2441MHz Ant1



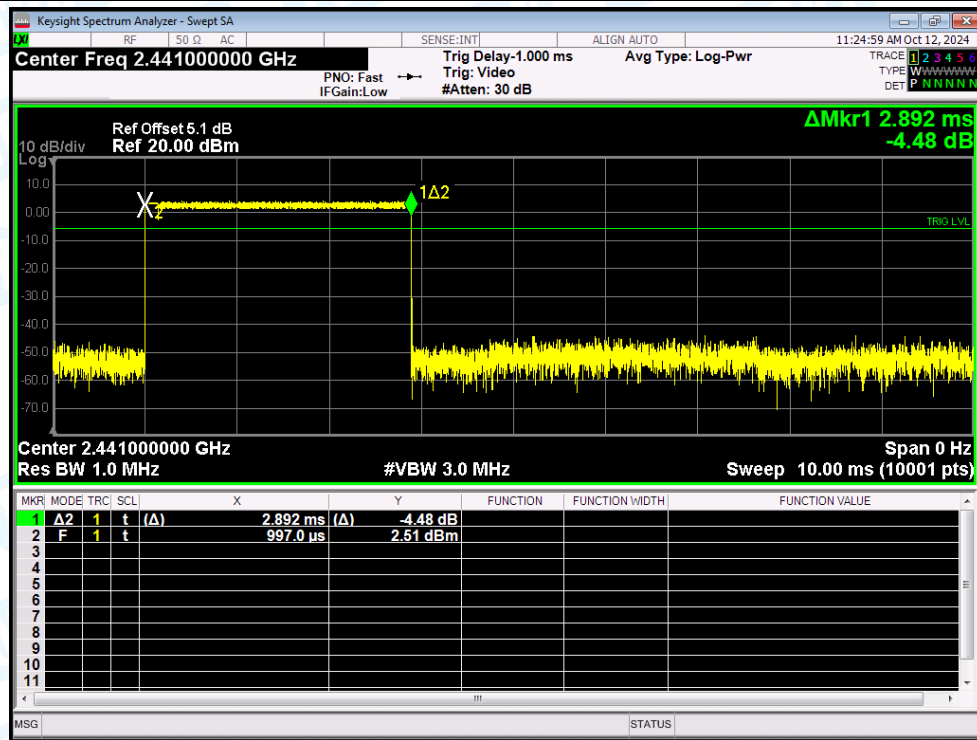
Dwell NVNT 2-DH1 2441MHz Ant1



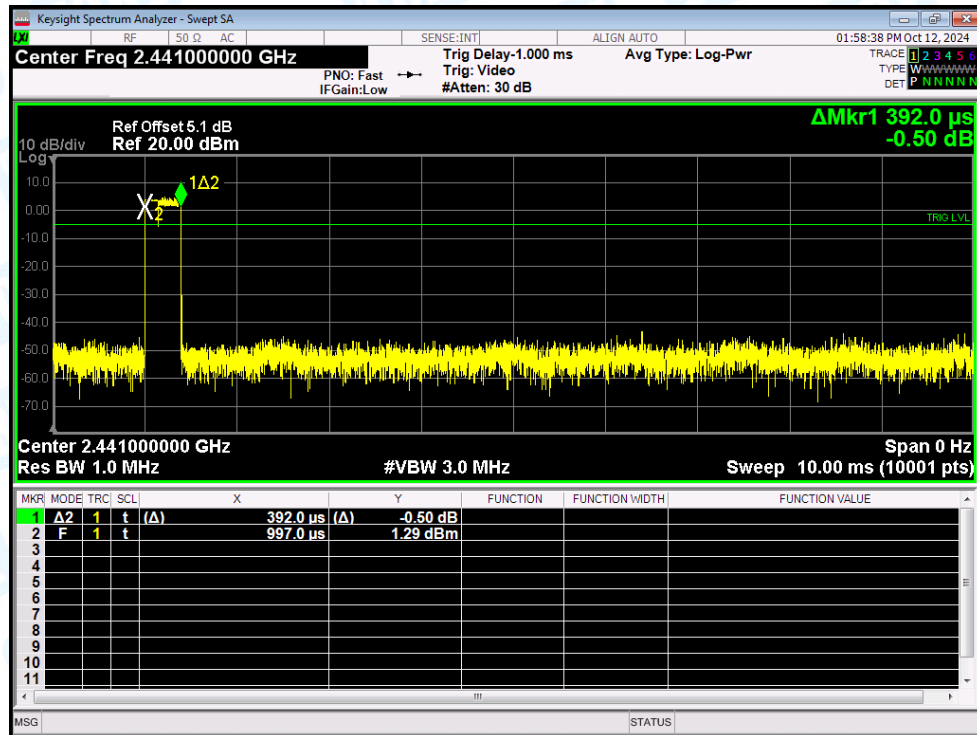
Dwell NVNT 2-DH3 2441MHz Ant1



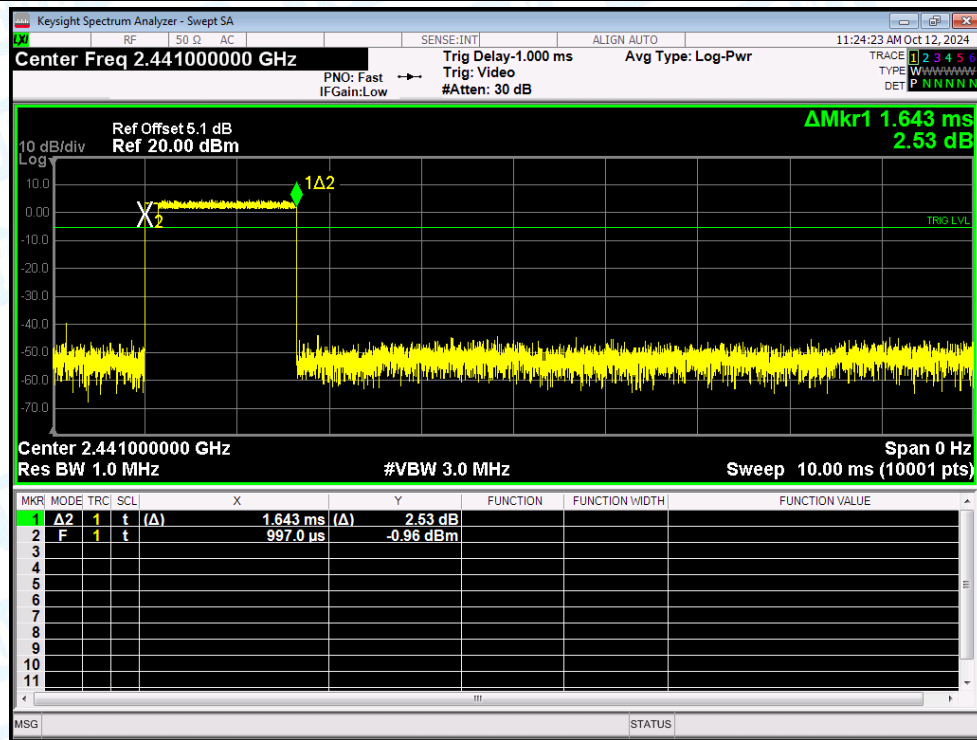
Dwell NVNT 2-DH5 2441MHz Ant1

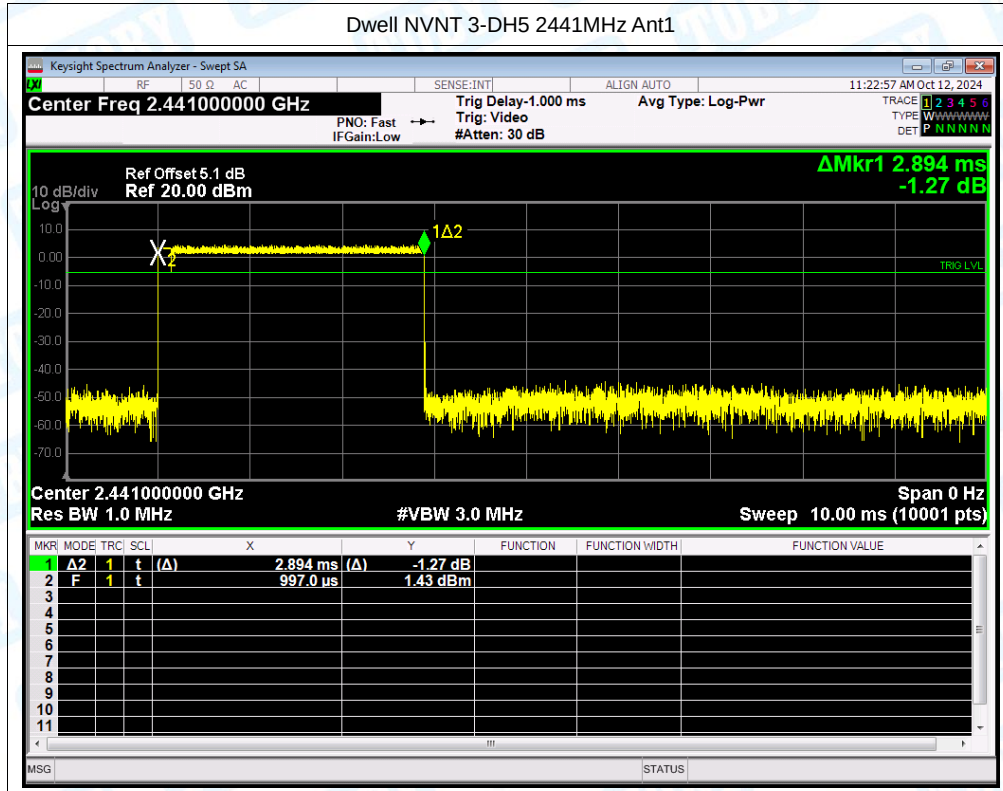


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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