

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

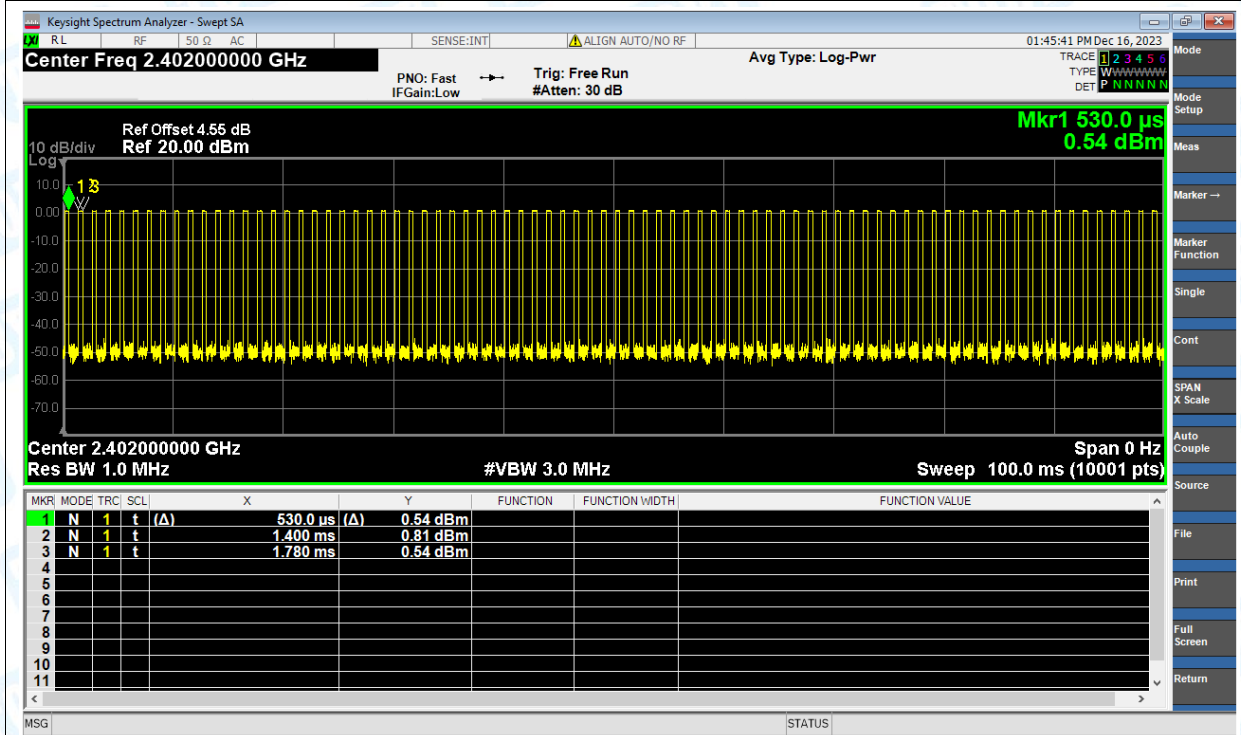
General Description of EUT	
Product Name:	Smart watch
Test Model:	D8
Sample ID:	HC-C-202311-0316-01-01-2#
Environmental Conditions	
Temperature:	23.8°C
Relative Humidity:	48%
Test Voltage:	DC 3.8V
Test Engineer:	Zhou Zhen
Note: For a more detailed features description, please refer to the report TBR-C-202311-0316-7 The report only show the worst case data.	

1. Duty Cycle

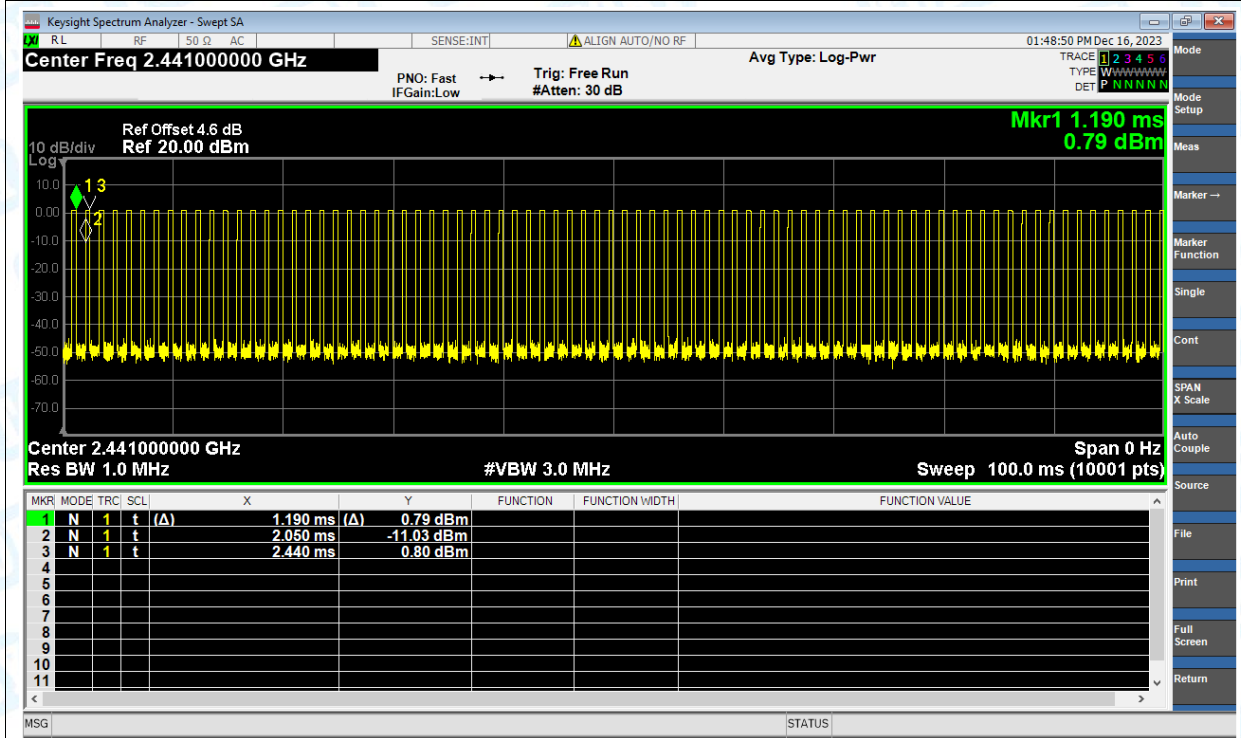
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	32	4.95	2.50
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	31.2	5.06	2.56

Test Graphs

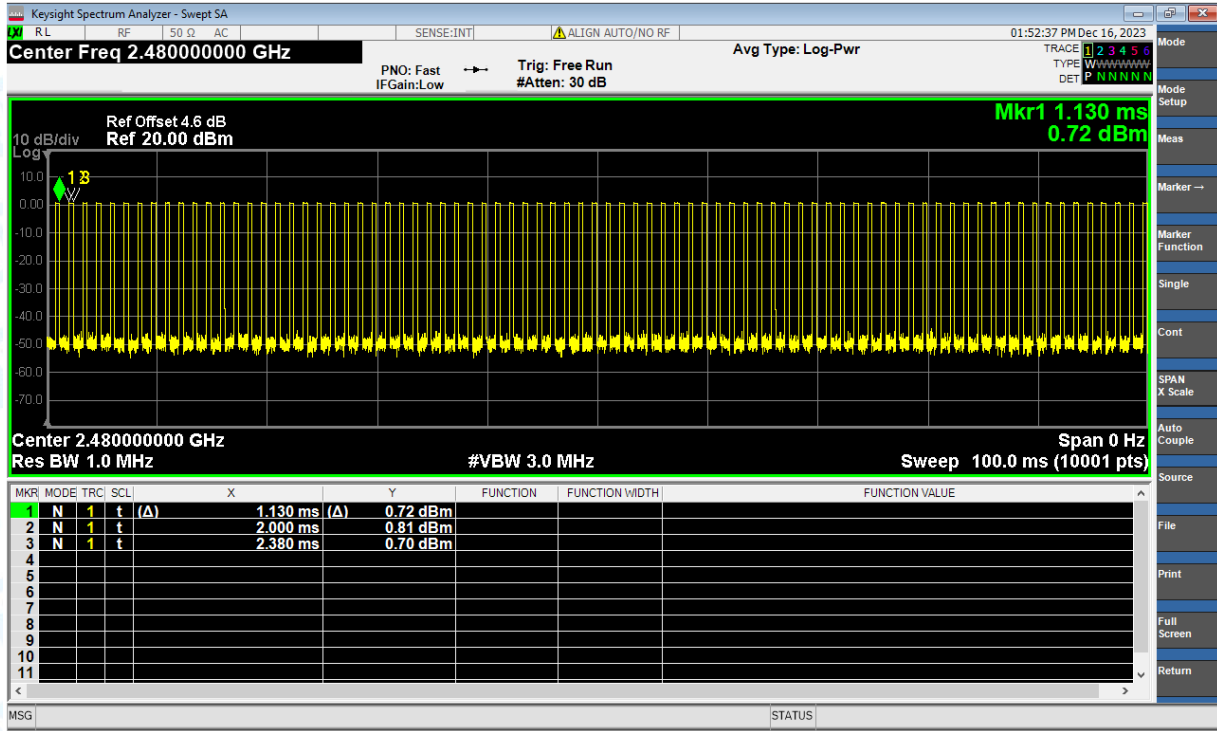
Duty Cycle NVNT 1-DH1 2402MHz Ant1



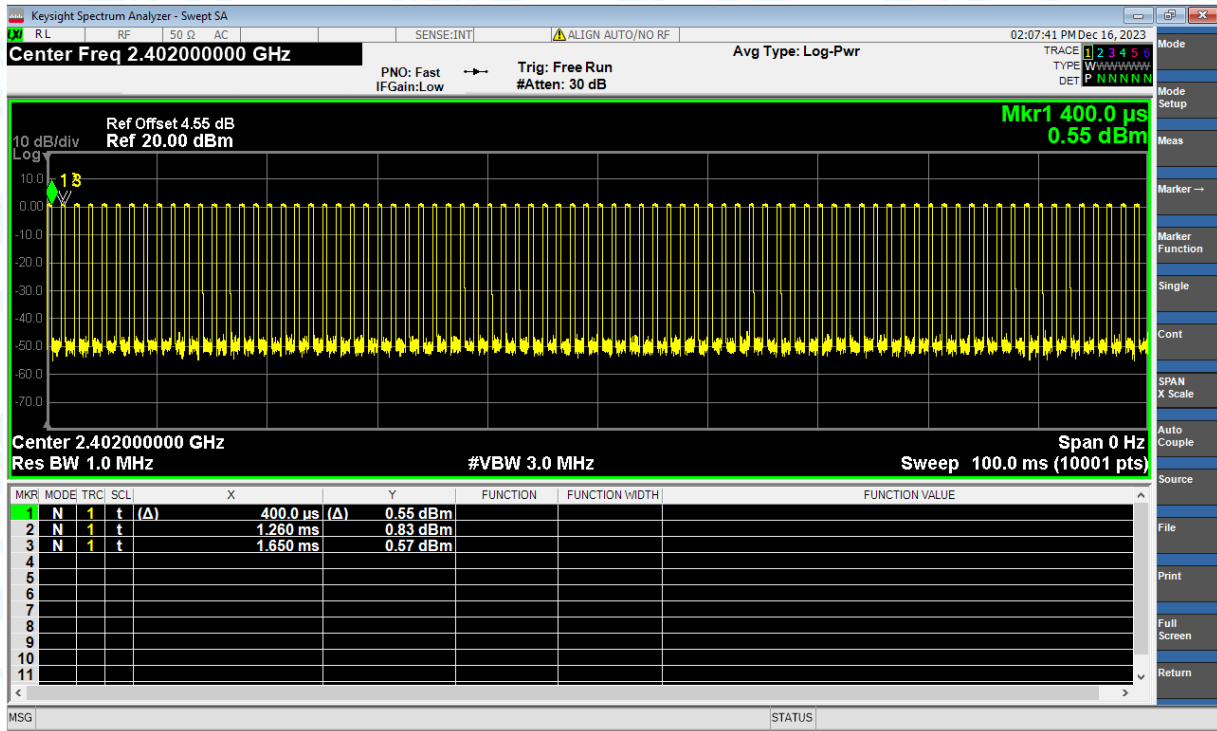
Duty Cycle NVNT 1-DH1 2441MHz Ant1



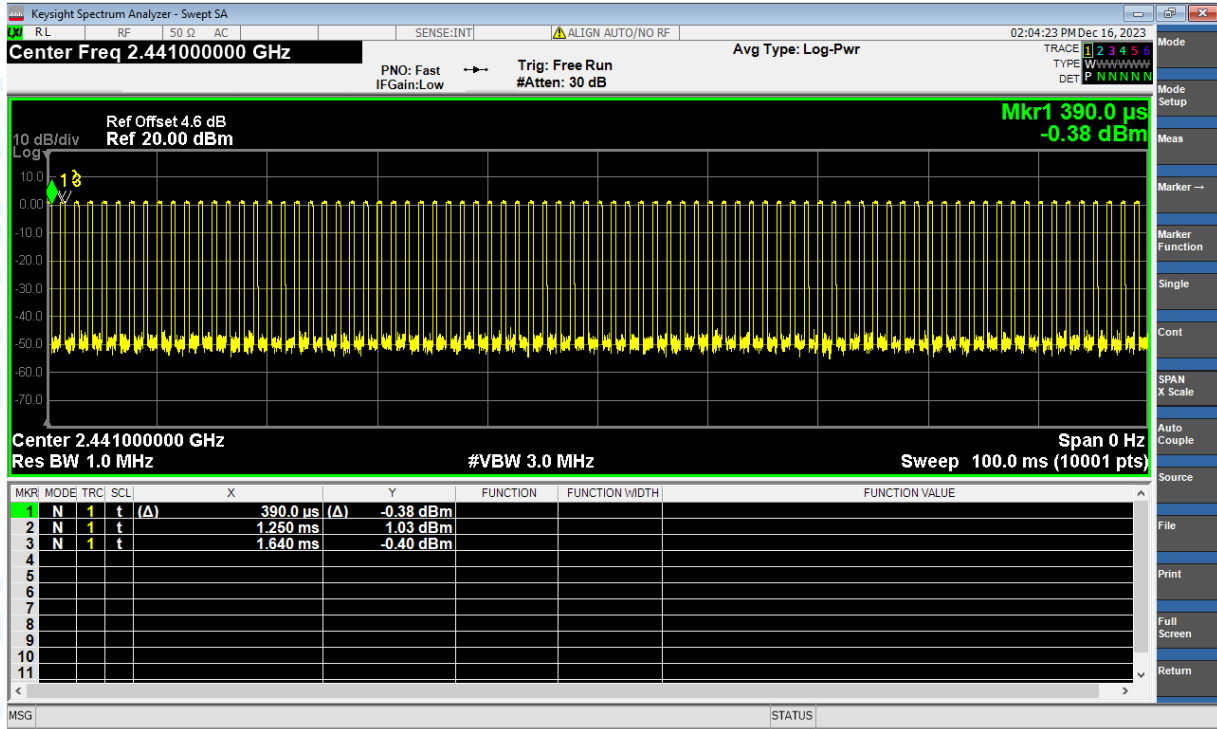
Duty Cycle NVNT 1-DH1 2480MHz Ant1



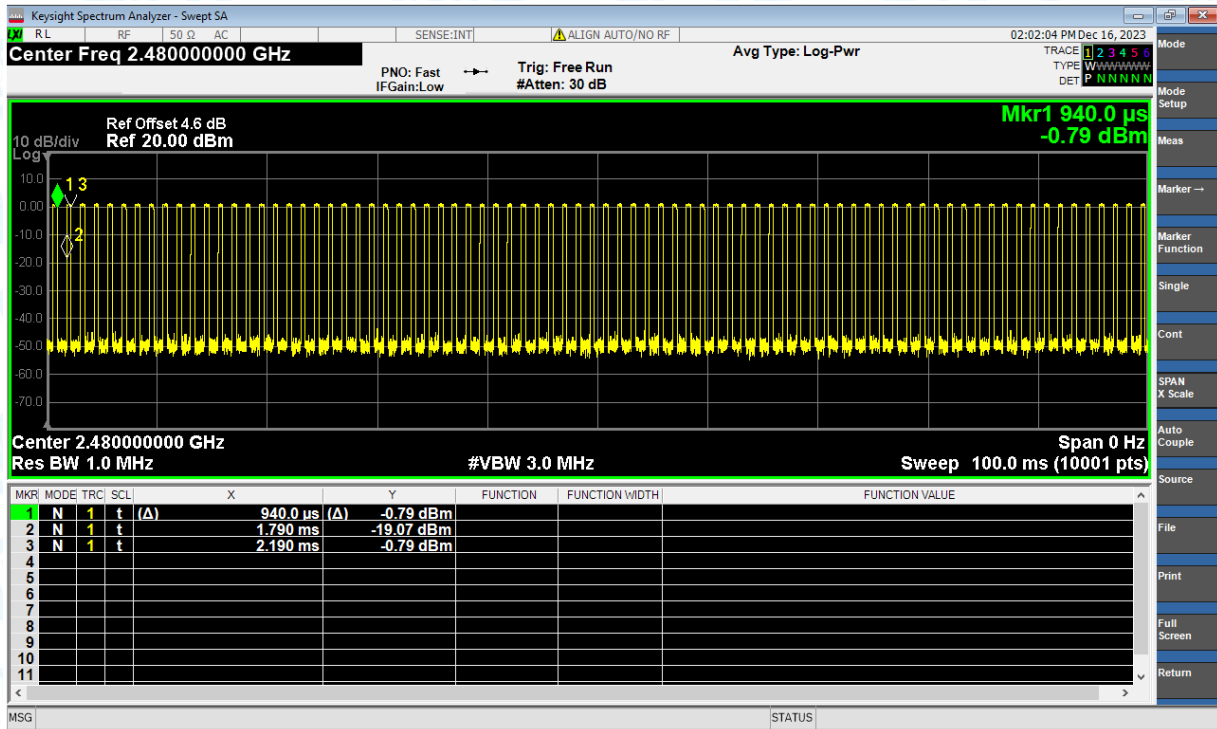
Duty Cycle NVNT 2-DH1 2402MHz Ant1



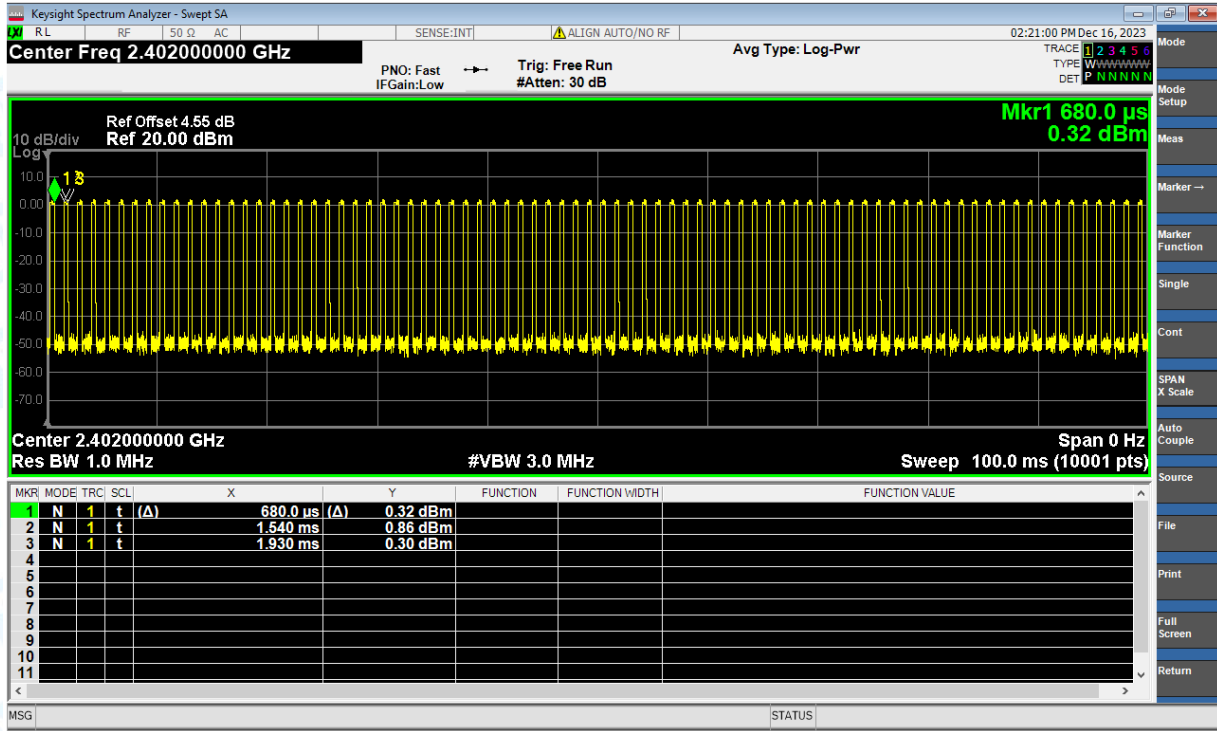
Duty Cycle NVNT 2-DH1 2441MHz Ant1



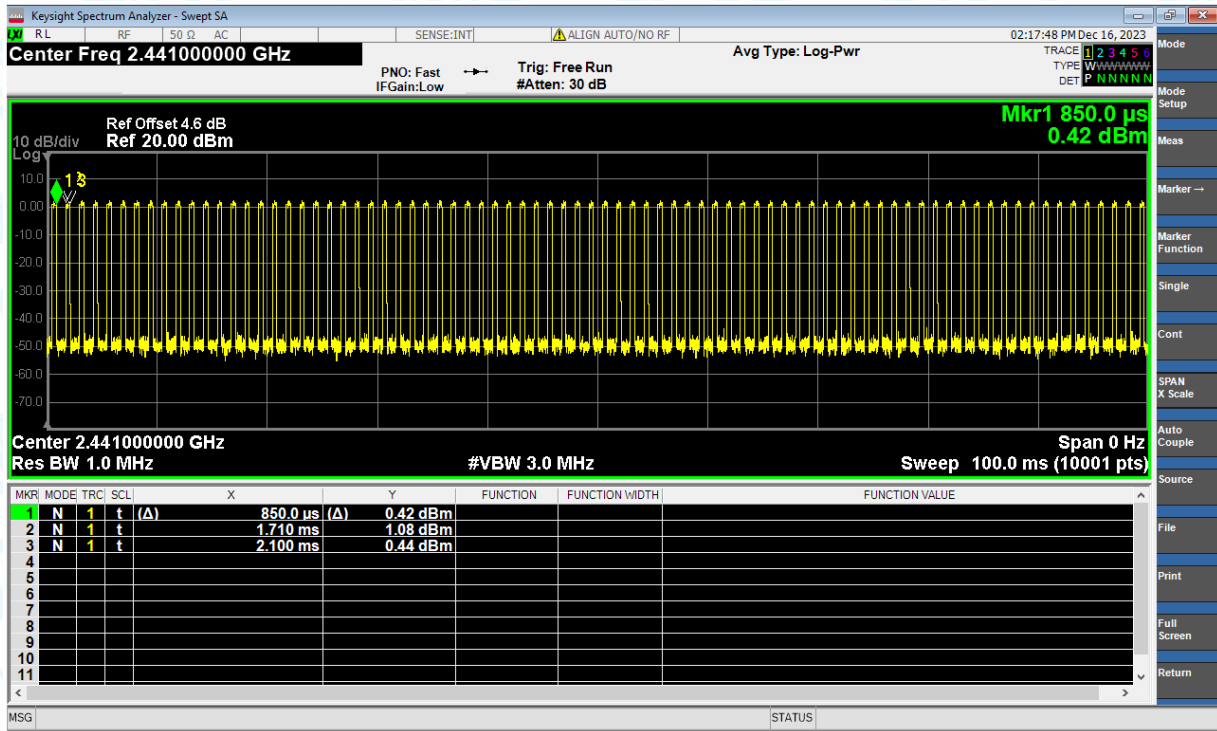
Duty Cycle NVNT 2-DH1 2480MHz Ant1

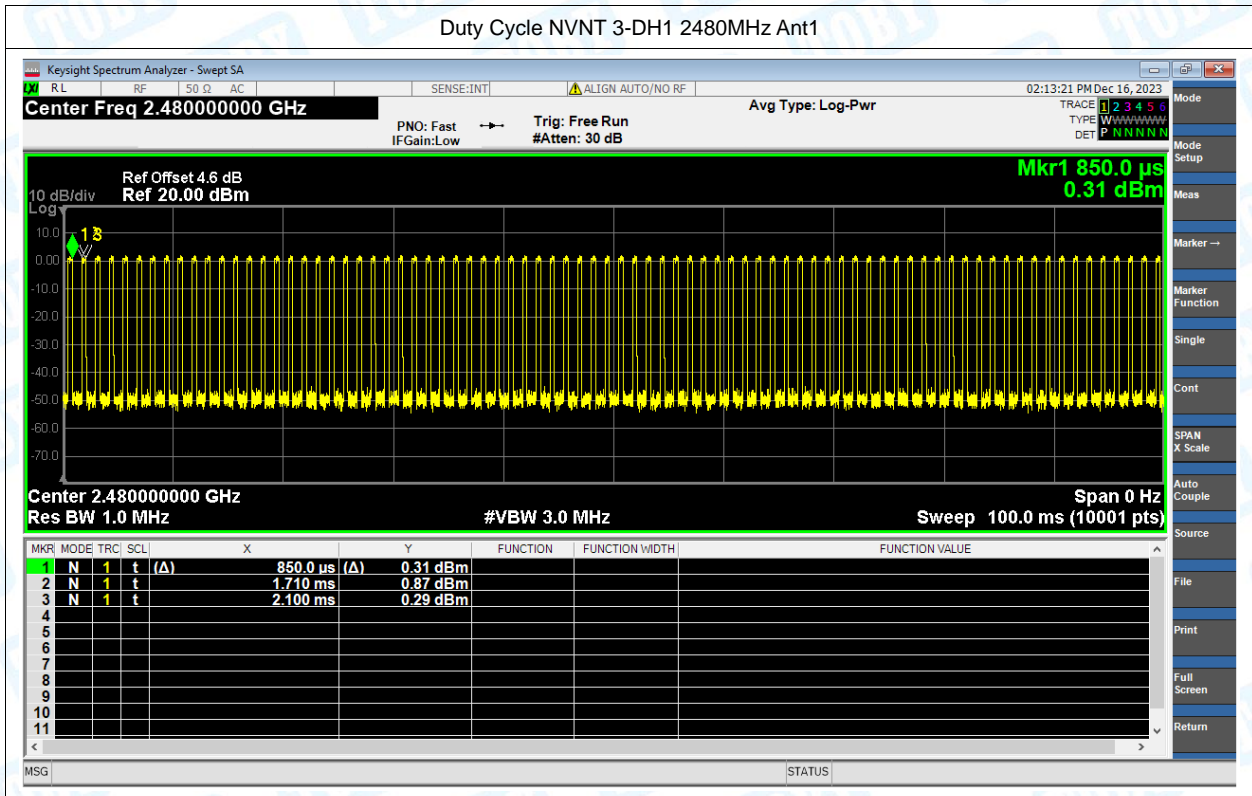


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



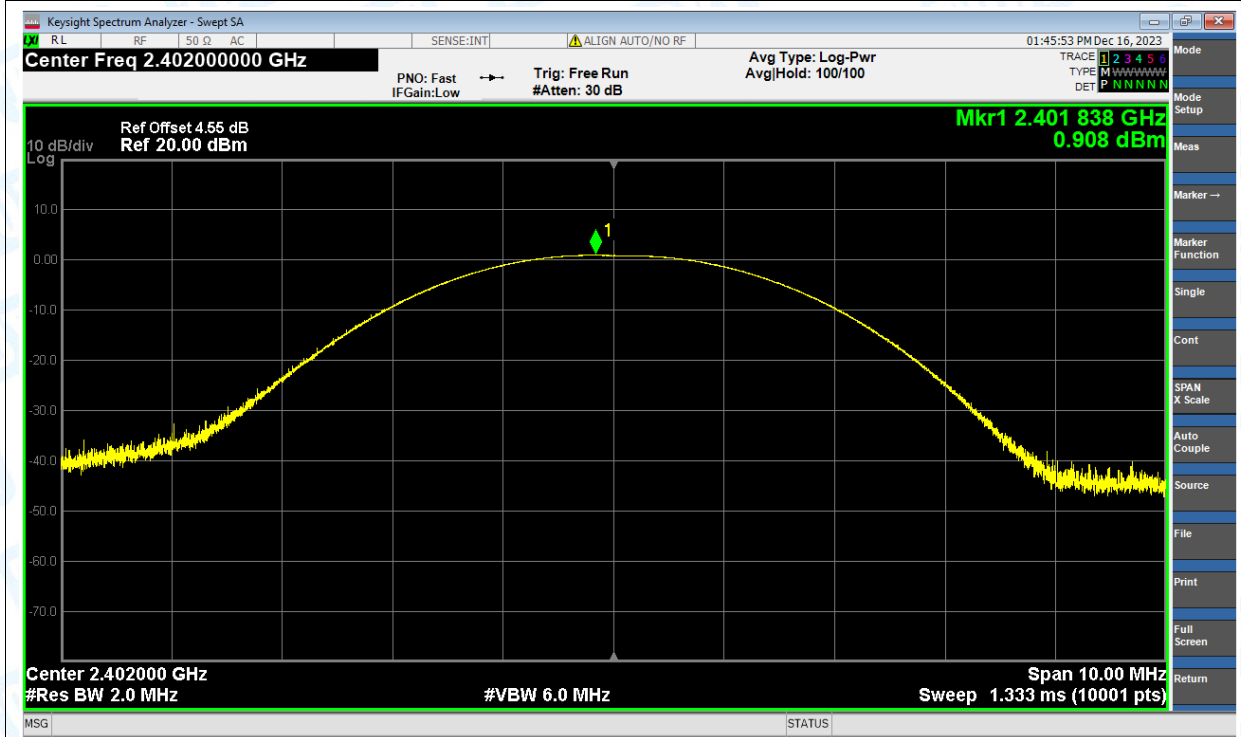


2. Maximum Conducted Output Power

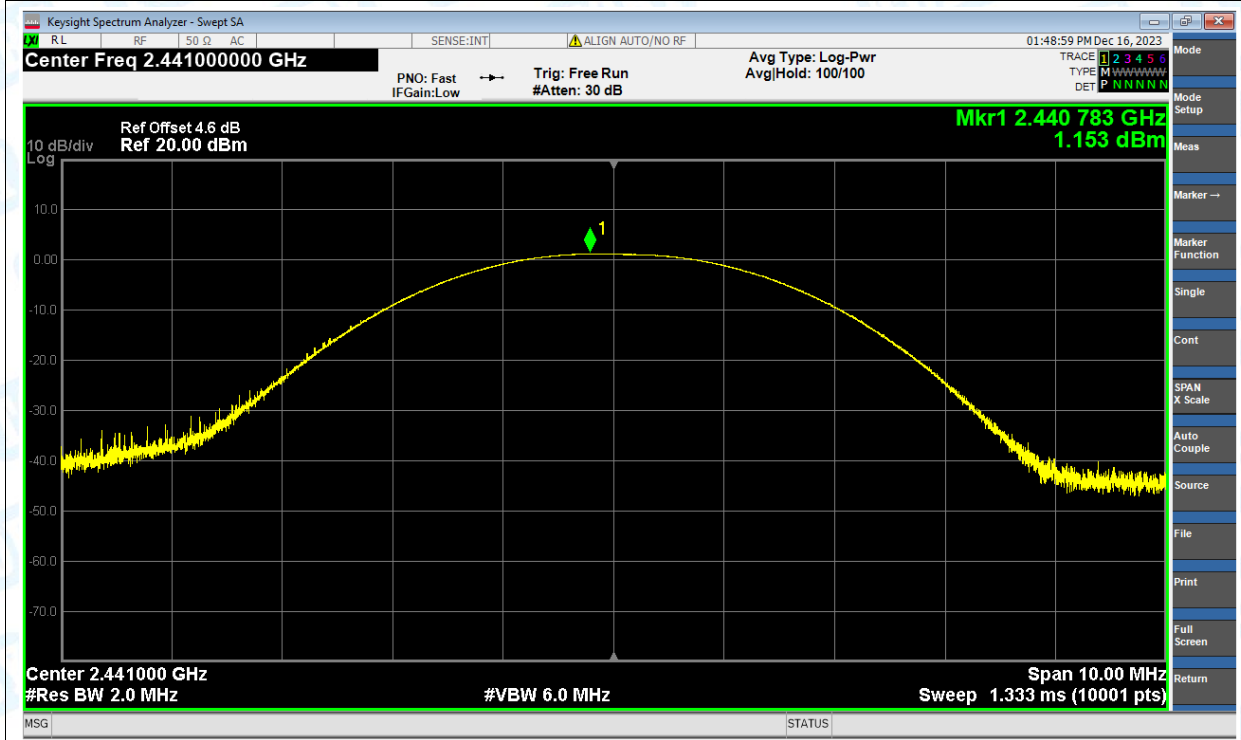
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	0.908	21	Pass
NVNT	1-DH1	2441	Ant1	1.153	21	Pass
NVNT	1-DH1	2480	Ant1	0.928	21	Pass
NVNT	2-DH1	2402	Ant1	1.759	21	Pass
NVNT	2-DH1	2441	Ant1	1.985	21	Pass
NVNT	2-DH1	2480	Ant1	1.745	21	Pass
NVNT	3-DH1	2402	Ant1	2.389	21	Pass
NVNT	3-DH1	2441	Ant1	2.595	21	Pass
NVNT	3-DH1	2480	Ant1	2.376	21	Pass

Test Graphs

Power NVNT 1-DH1 2402MHz Ant1



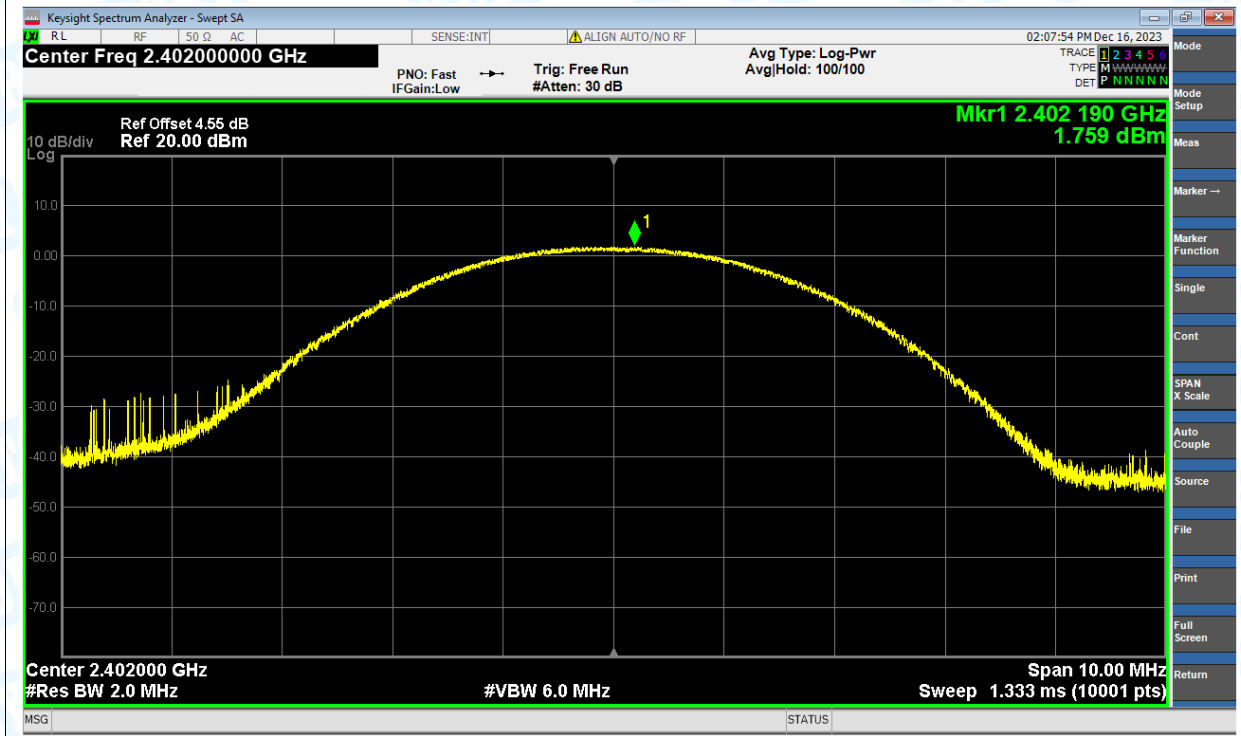
Power NVNT 1-DH1 2441MHz Ant1



Power NVNT 1-DH1 2480MHz Ant1



Power NVNT 2-DH1 2402MHz Ant1



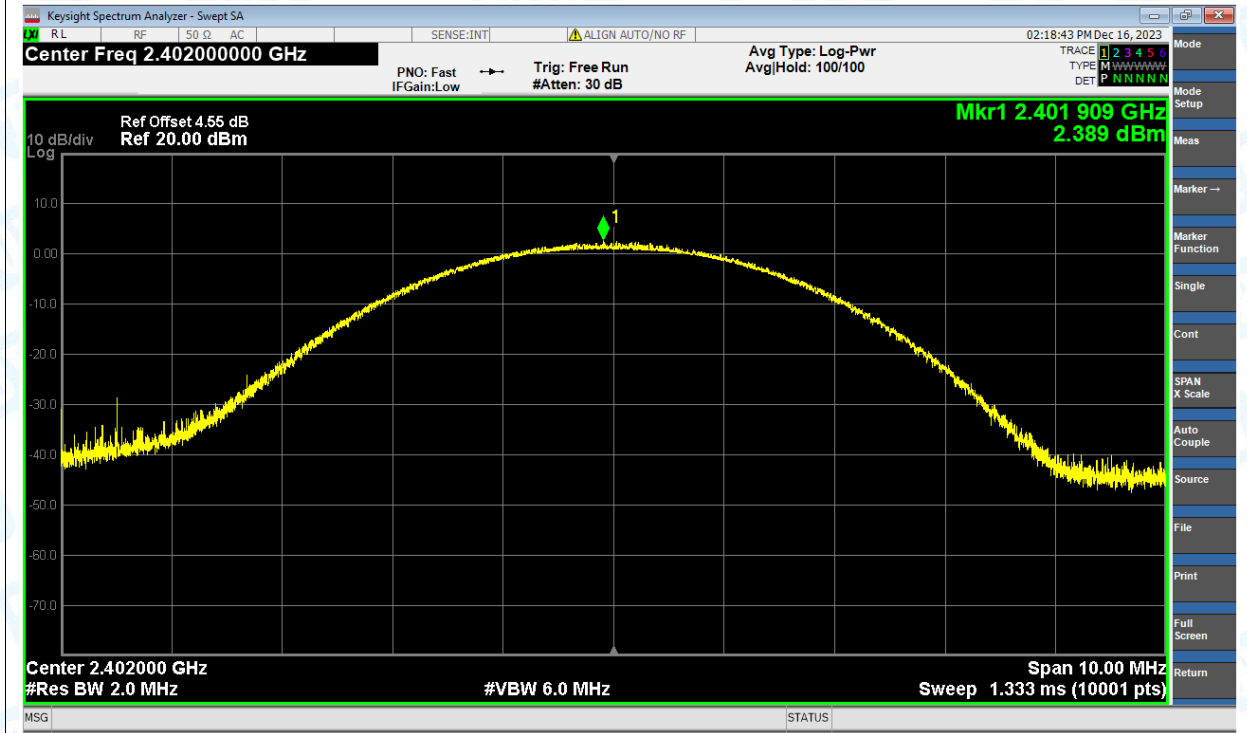
Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1

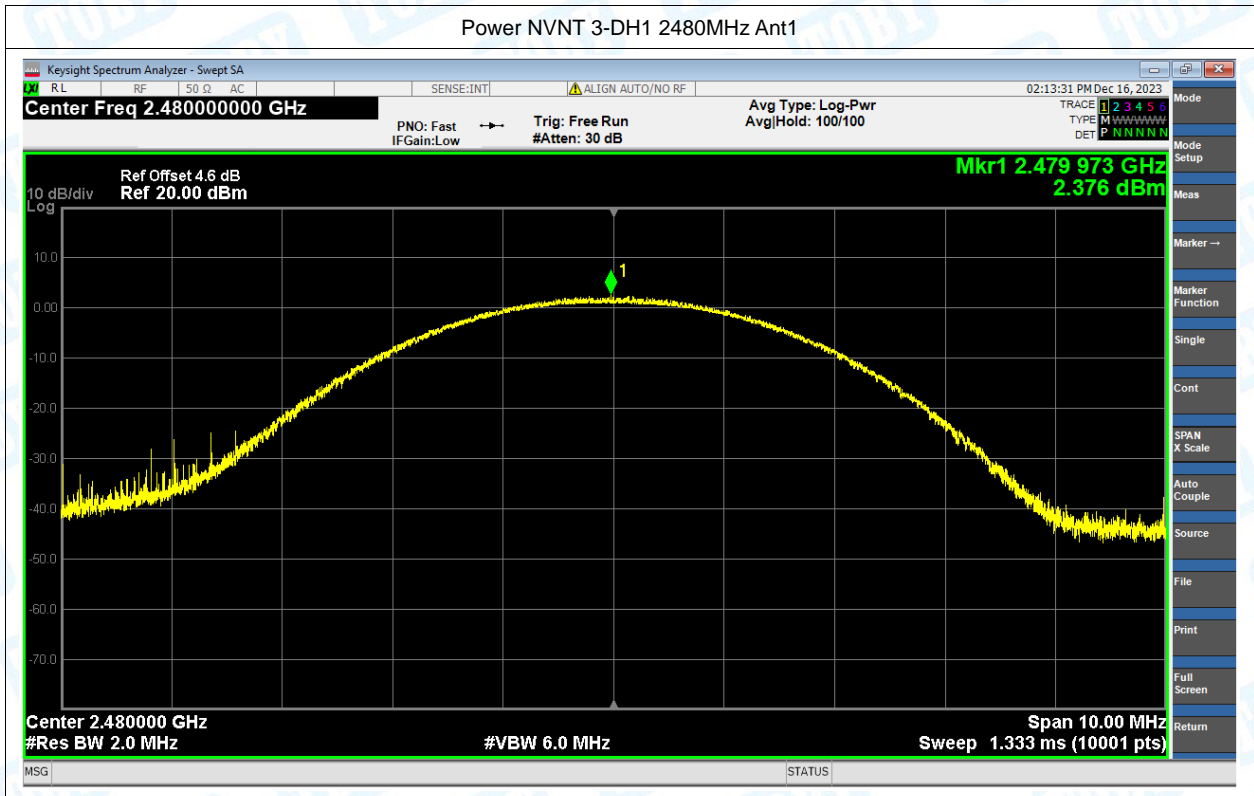


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



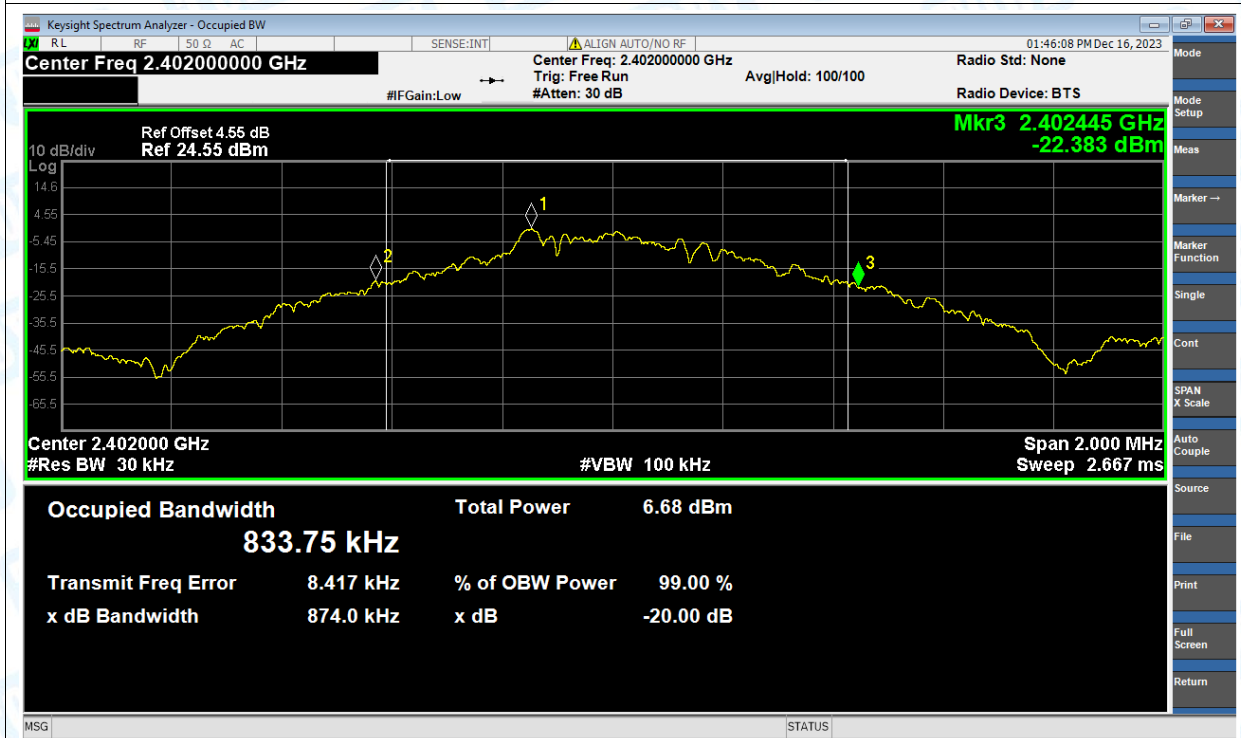


3. -20dB Bandwidth

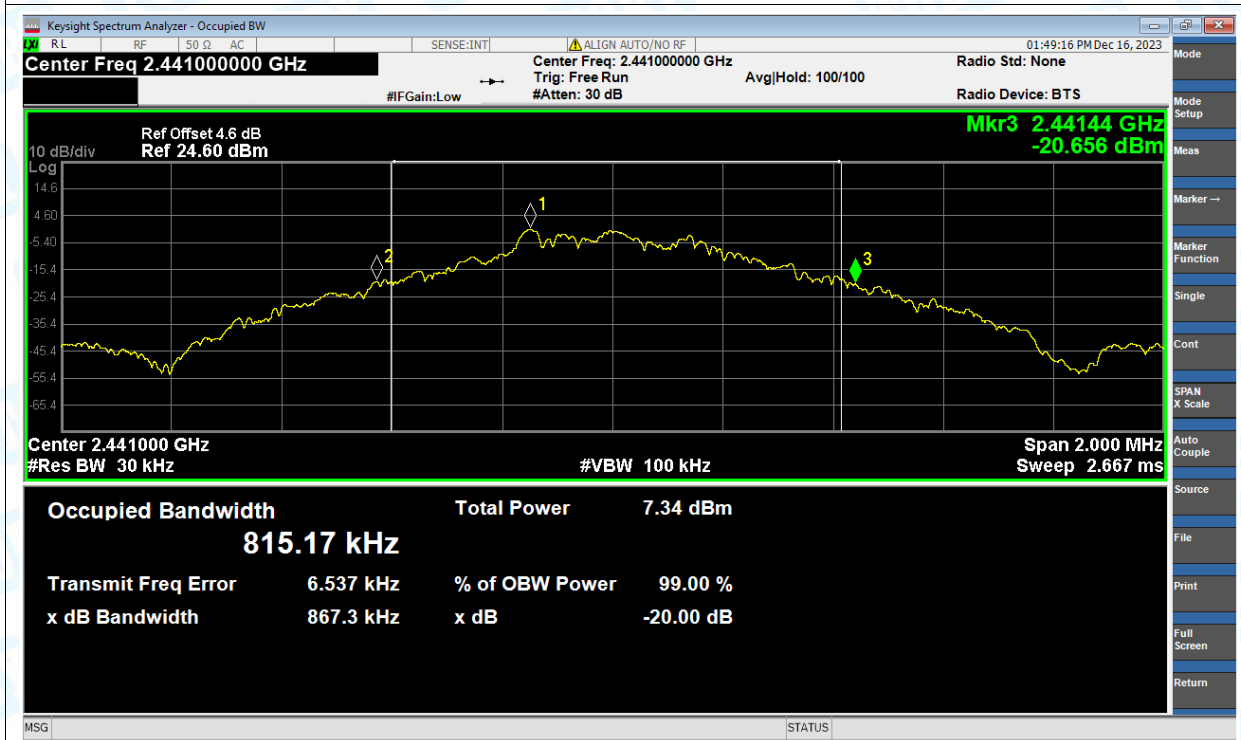
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.87	----	Pass
NVNT	1-DH1	2441	Ant1	0.87	----	Pass
NVNT	1-DH1	2480	Ant1	0.88	----	Pass
NVNT	2-DH1	2402	Ant1	1.24	----	Pass
NVNT	2-DH1	2441	Ant1	1.25	----	Pass
NVNT	2-DH1	2480	Ant1	1.25	----	Pass
NVNT	3-DH1	2402	Ant1	1.21	----	Pass
NVNT	3-DH1	2441	Ant1	1.24	----	Pass
NVNT	3-DH1	2480	Ant1	1.21	----	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



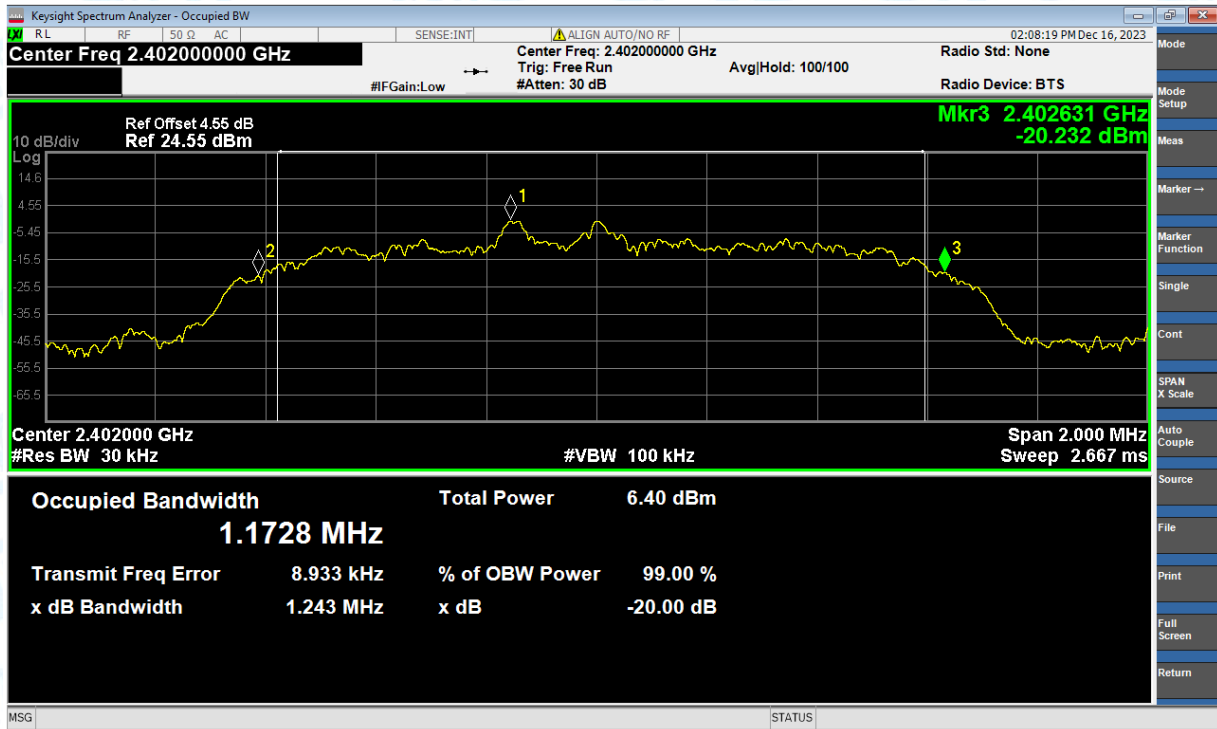
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



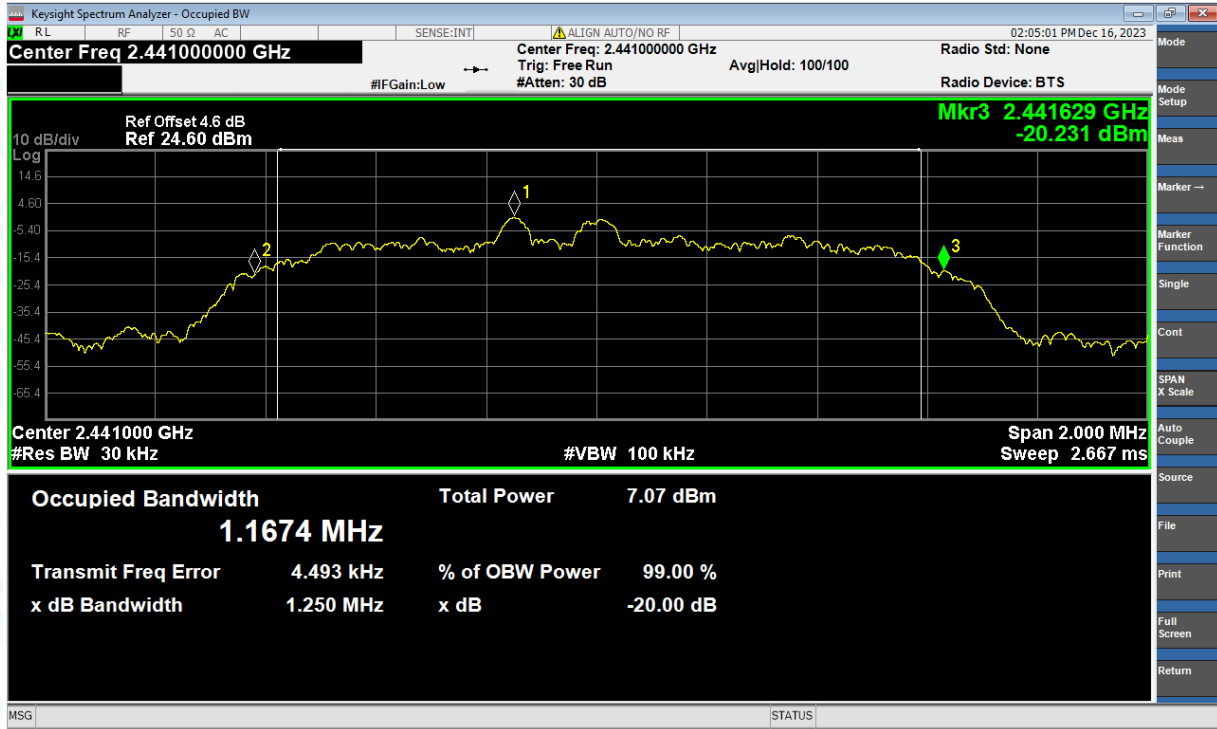
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



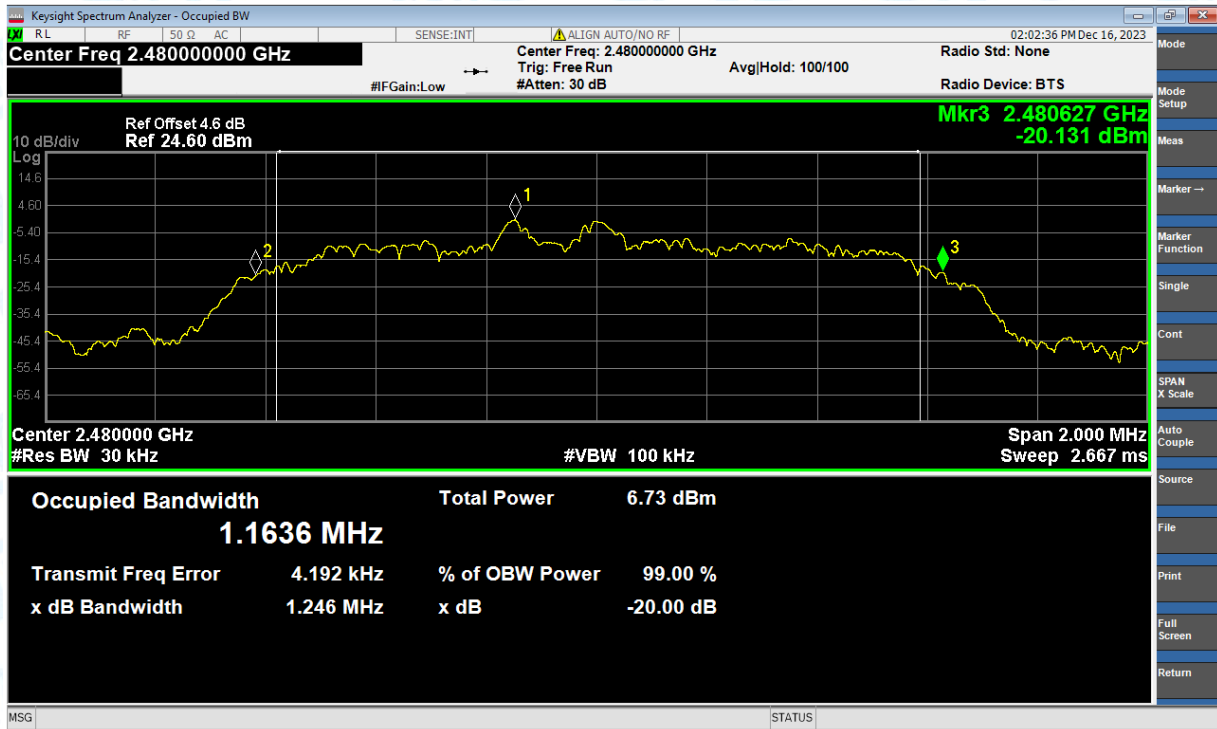
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



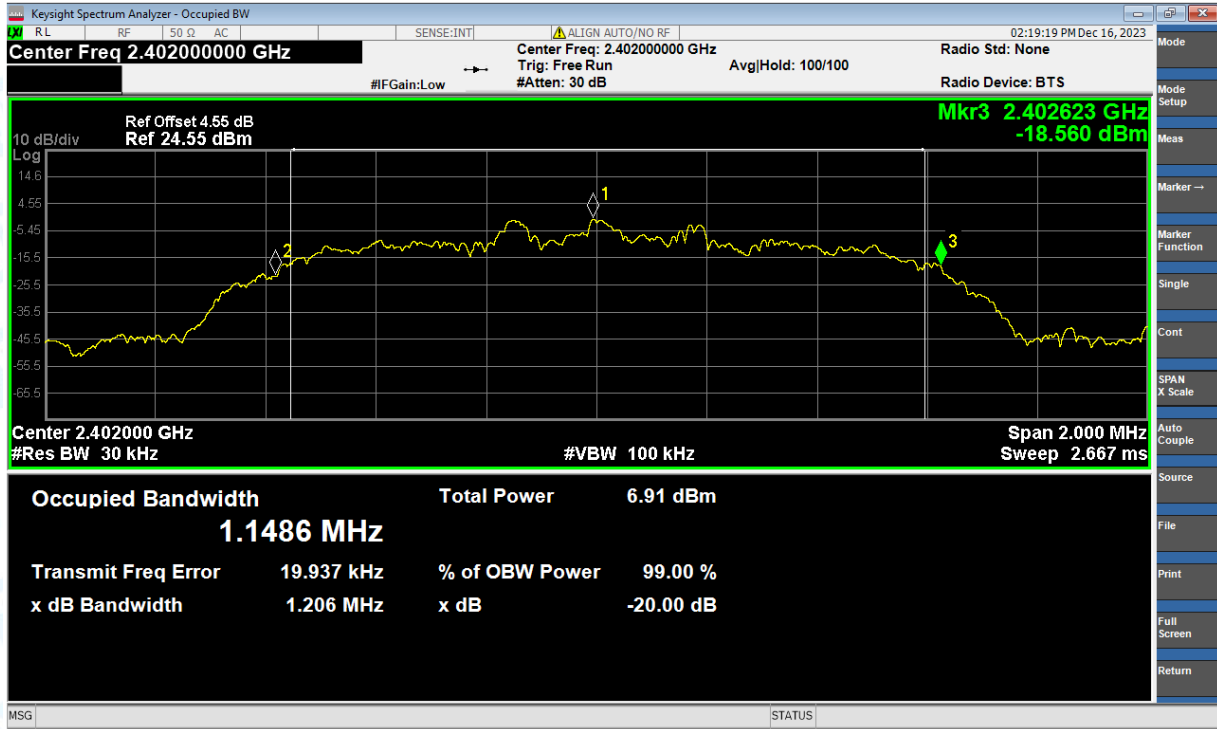
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



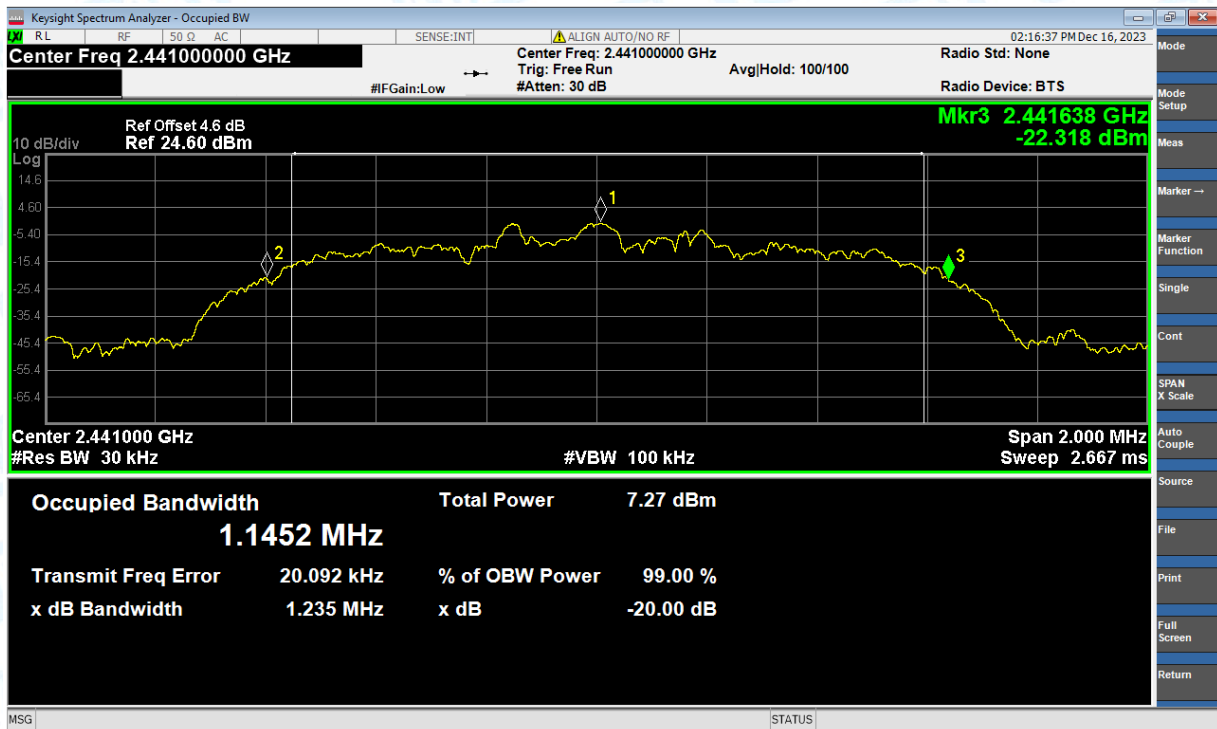
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

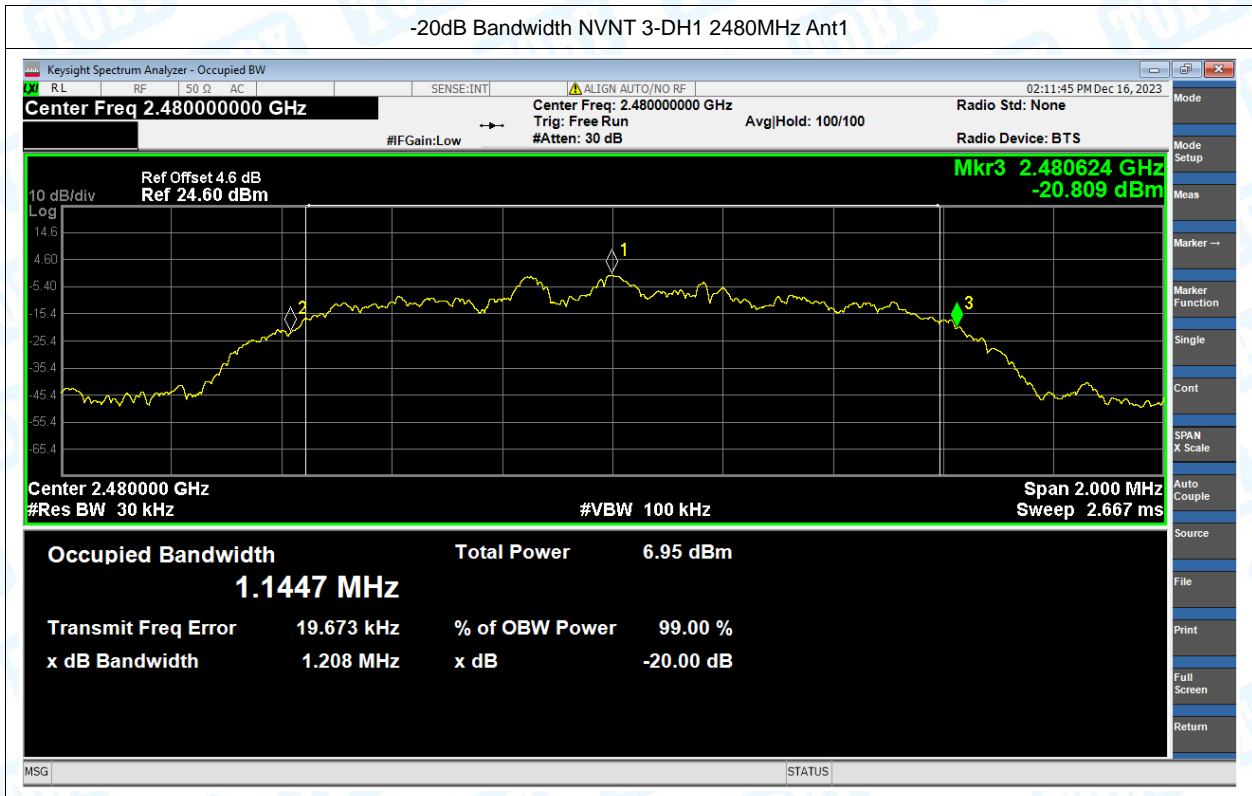


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



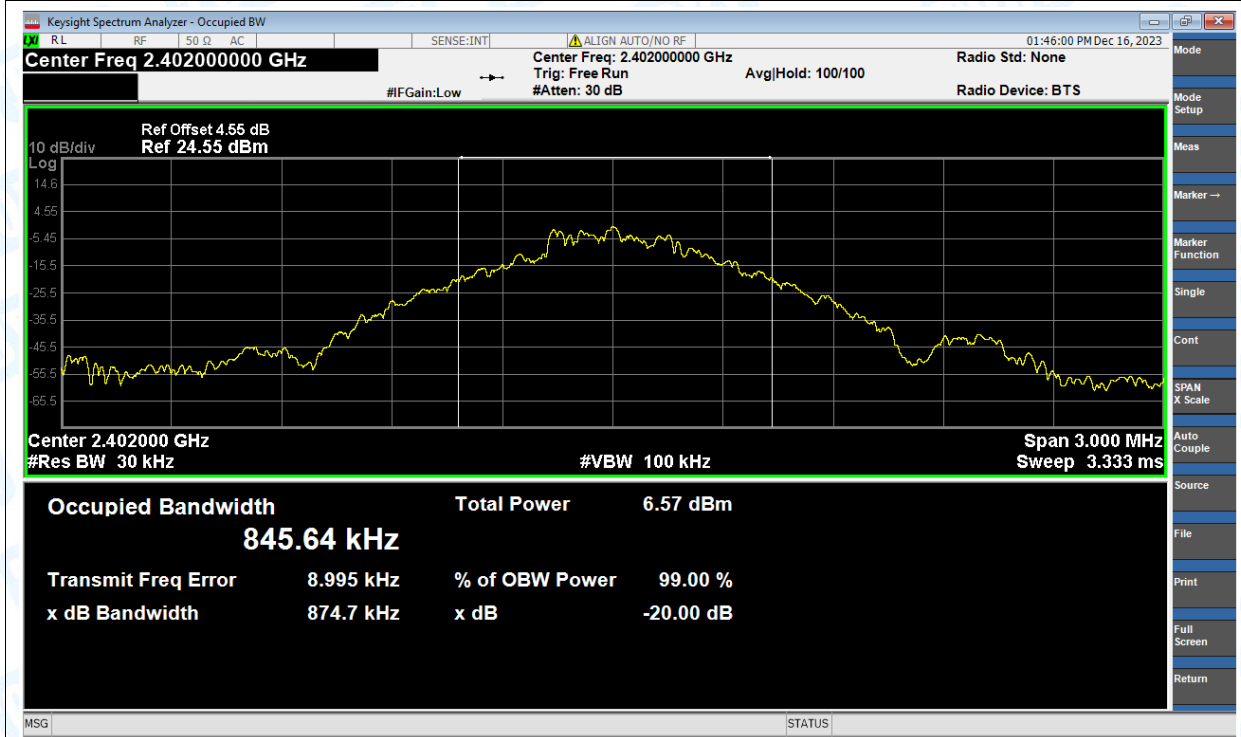


4. Occupied Channel Bandwidth

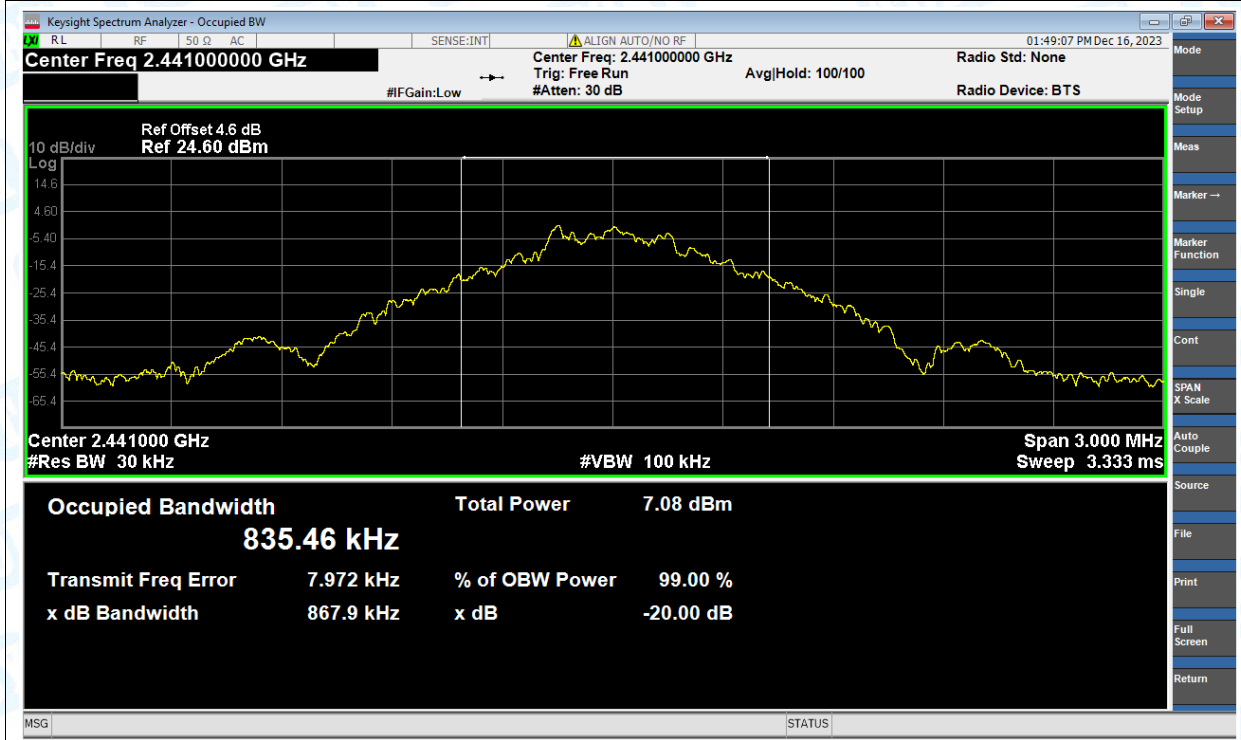
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.846
NVNT	1-DH1	2441	Ant1	0.835
NVNT	1-DH1	2480	Ant1	0.817
NVNT	2-DH1	2402	Ant1	1.140
NVNT	2-DH1	2441	Ant1	1.166
NVNT	2-DH1	2480	Ant1	1.168
NVNT	3-DH1	2402	Ant1	1.147
NVNT	3-DH1	2441	Ant1	1.156
NVNT	3-DH1	2480	Ant1	1.137

Test Graphs

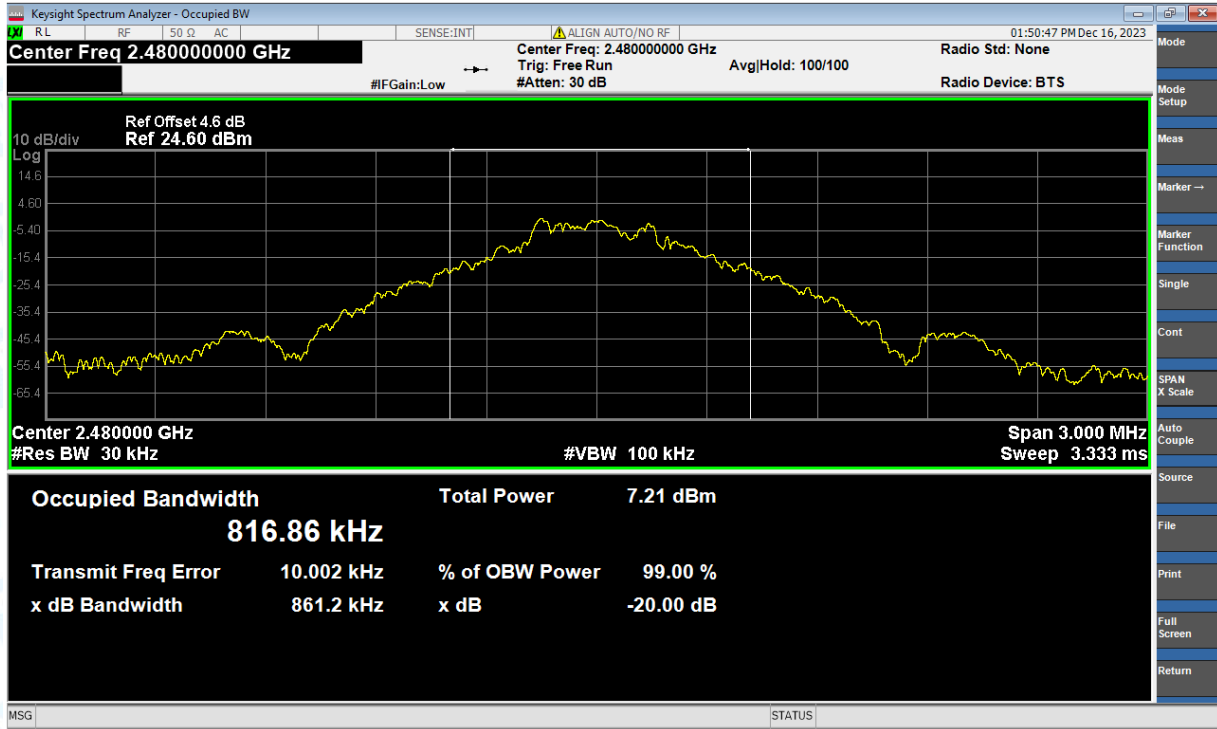
OBW NVNT 1-DH1 2402MHz Ant1



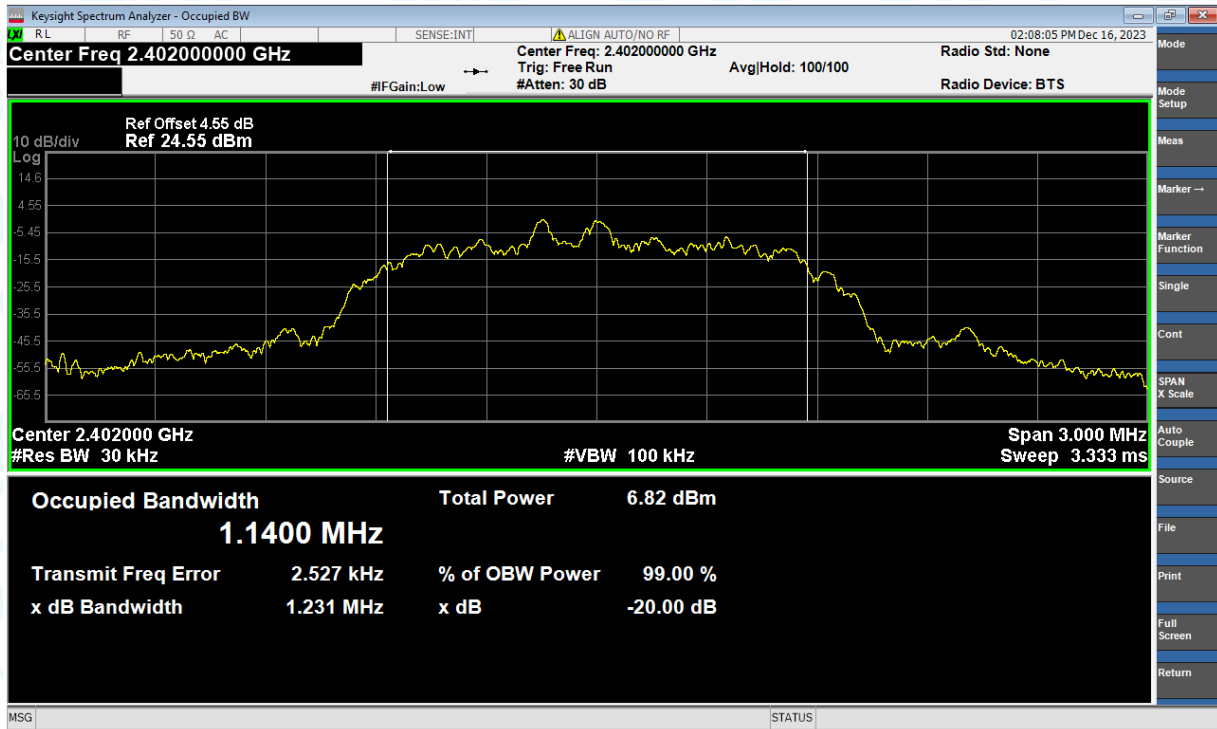
OBW NVNT 1-DH1 2441MHz Ant1



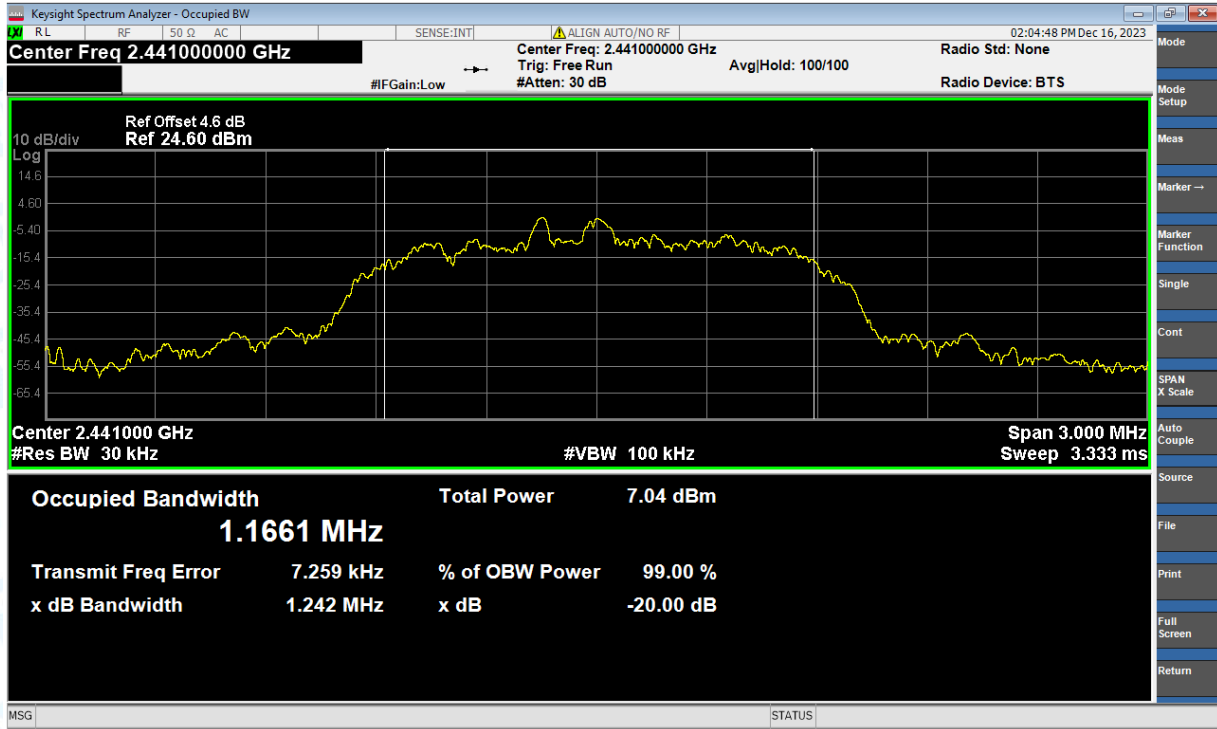
OBW NVNT 1-DH1 2480MHz Ant1



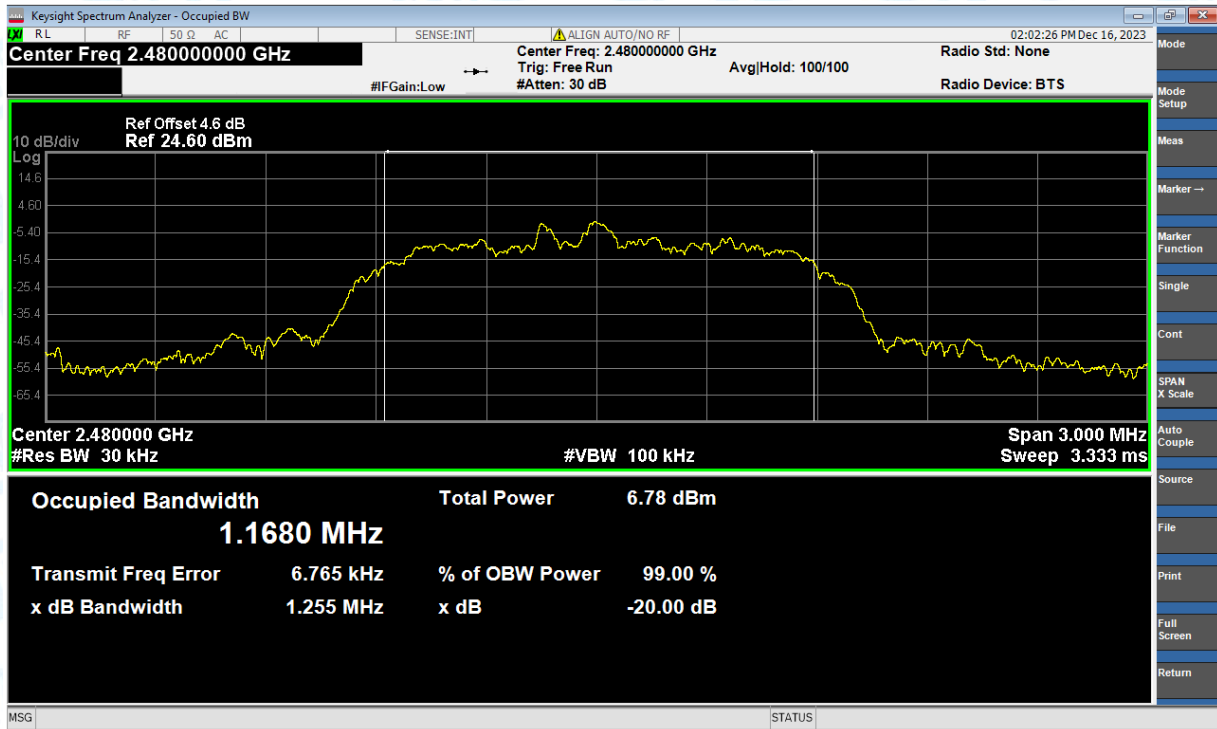
OBW NVNT 2-DH1 2402MHz Ant1



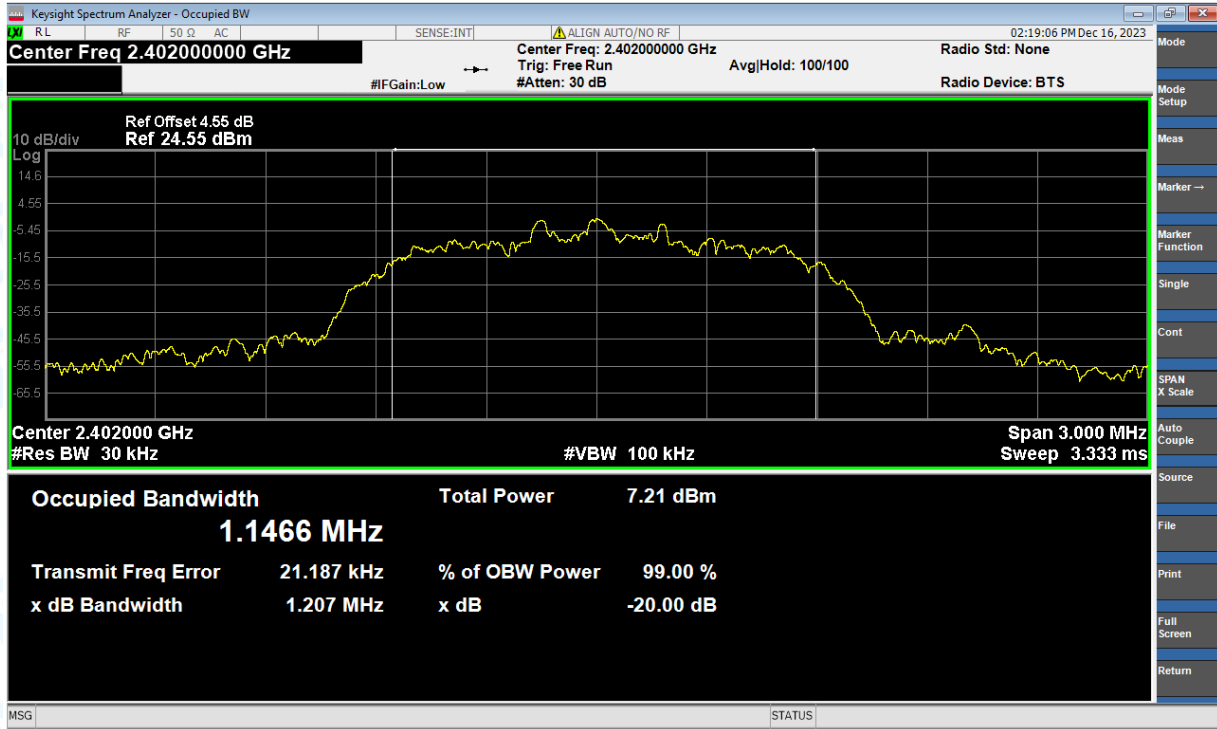
OBW NVNT 2-DH1 2441MHz Ant1



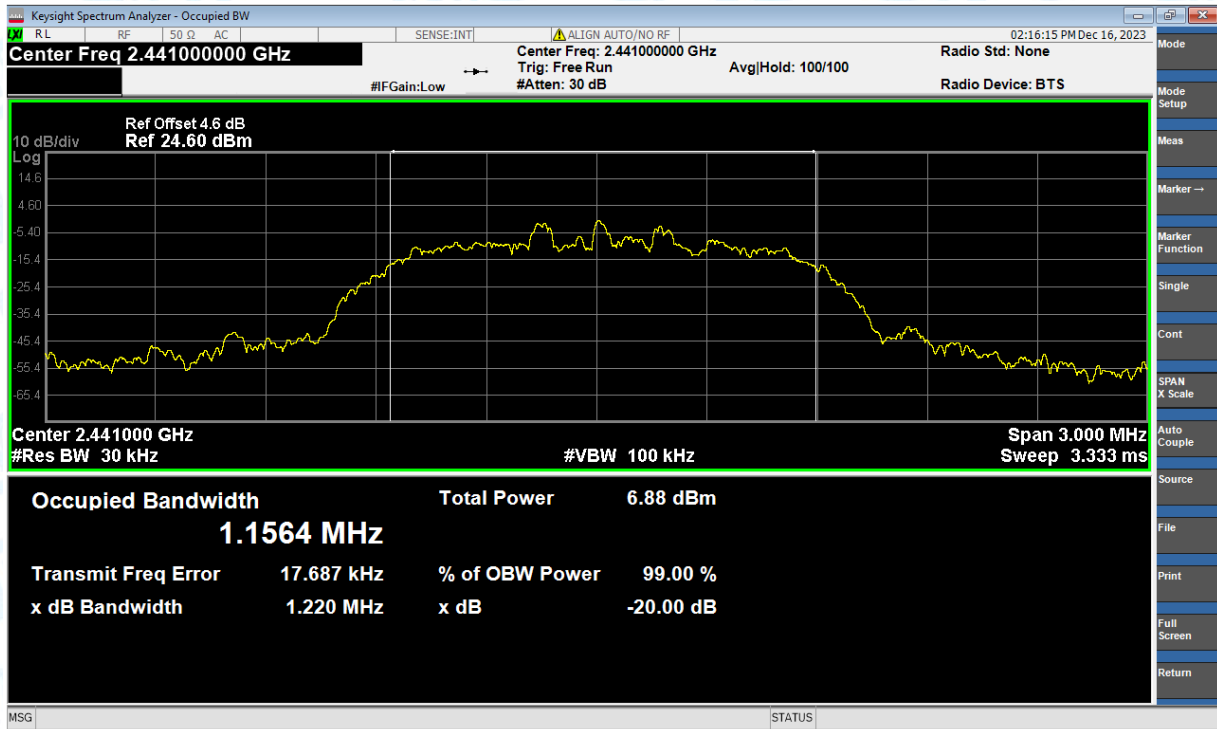
OBW NVNT 2-DH1 2480MHz Ant1

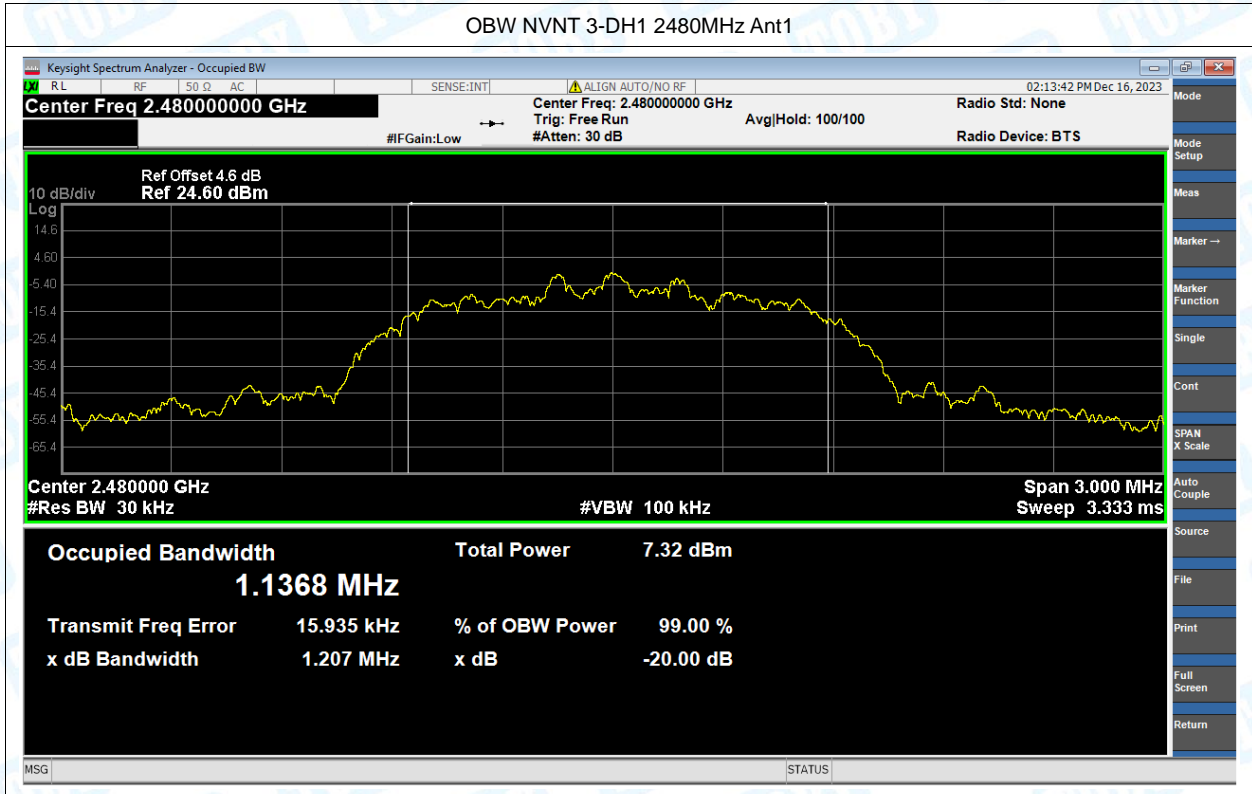


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



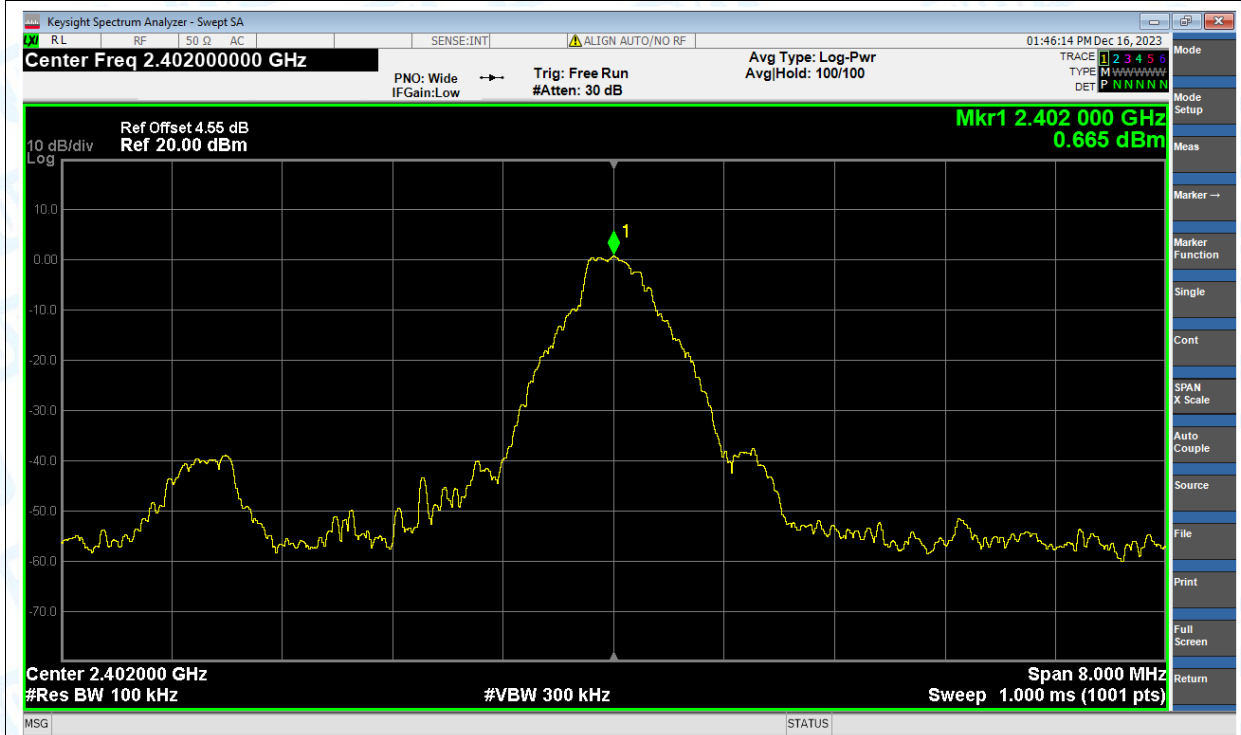


5. Band Edge

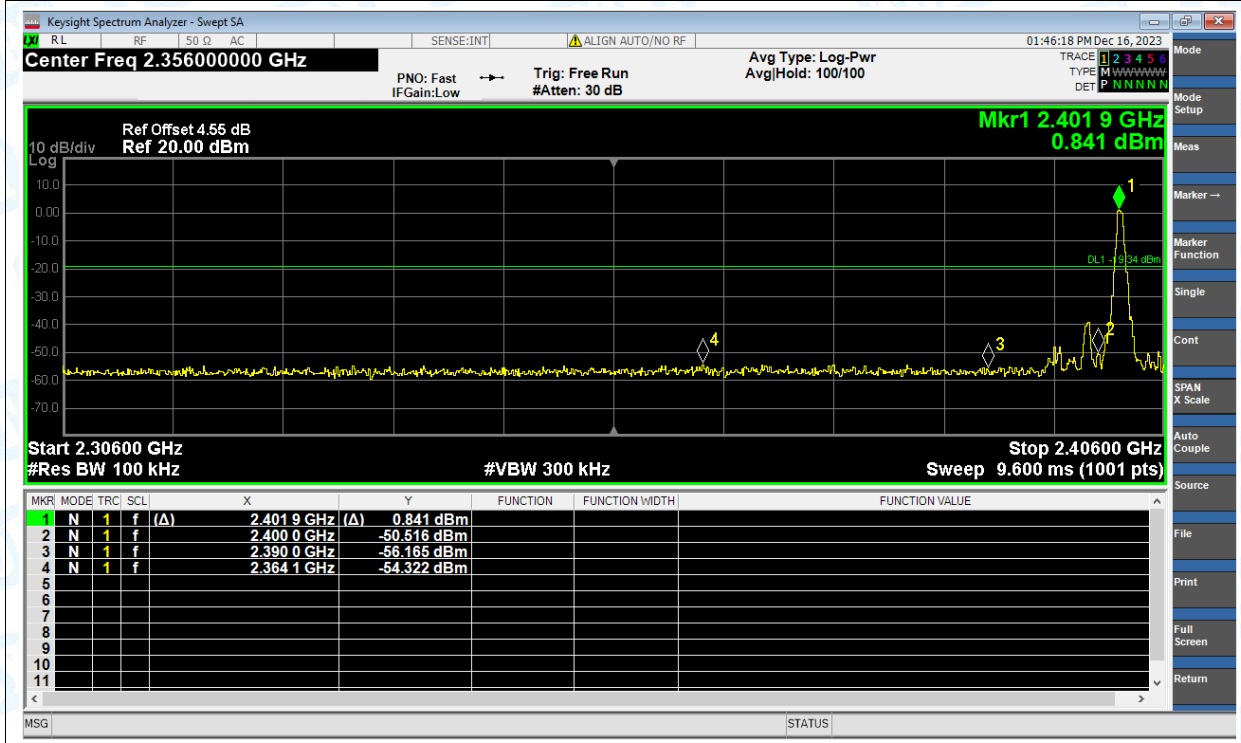
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-54.99	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-53.02	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-54.53	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-53.64	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-54.67	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-52.60	-20	Pass

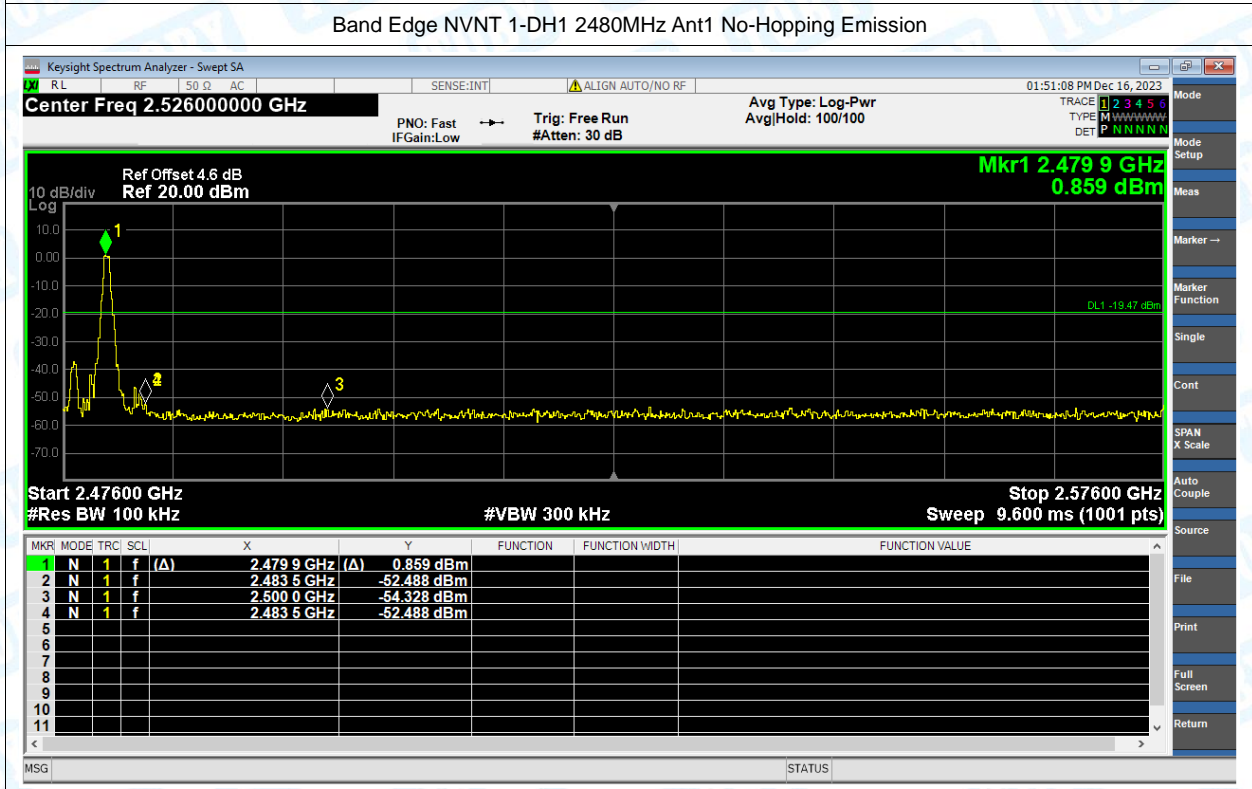
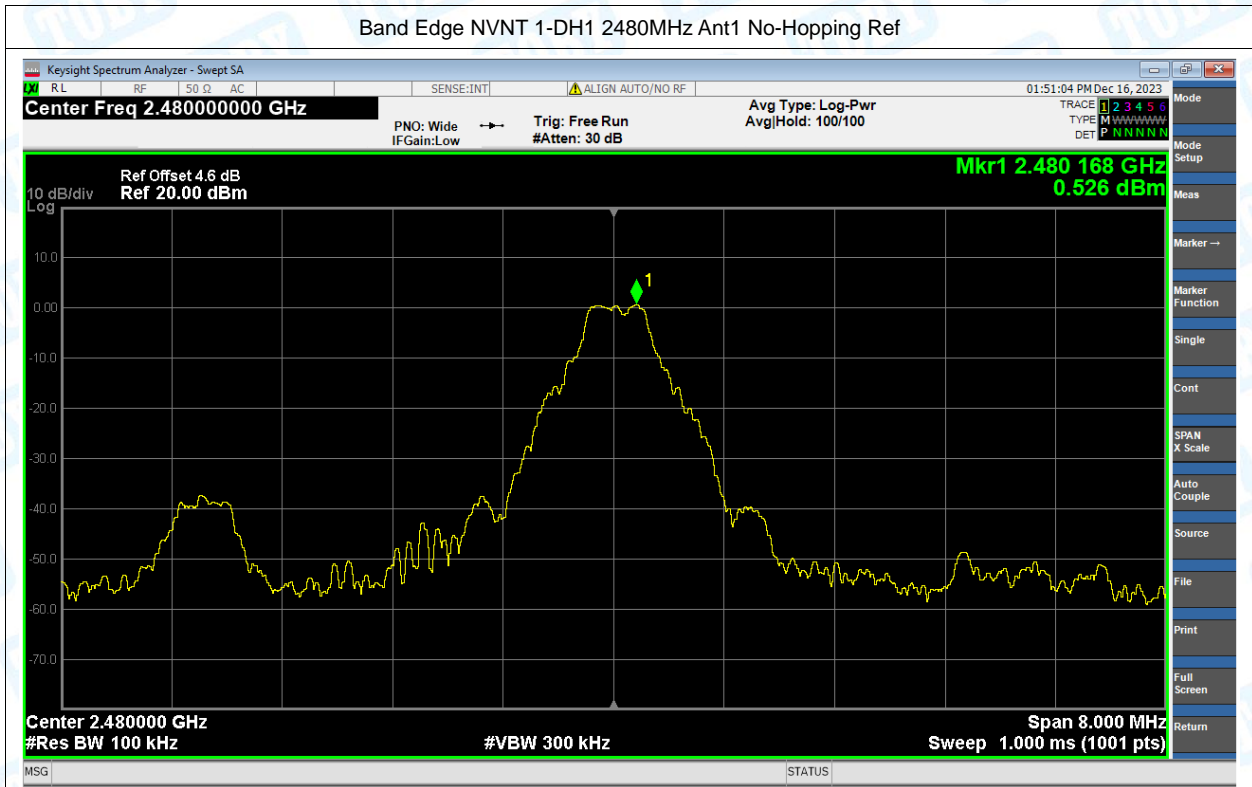
Test Graphs

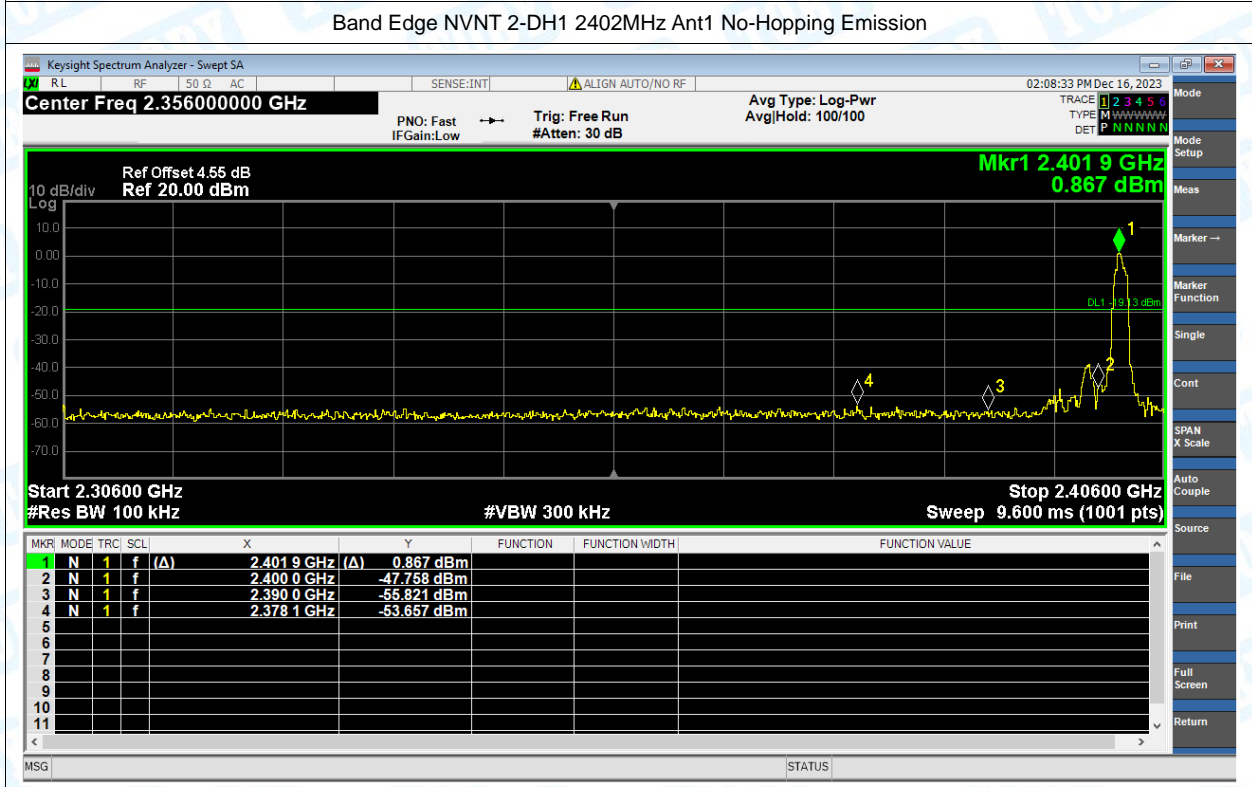
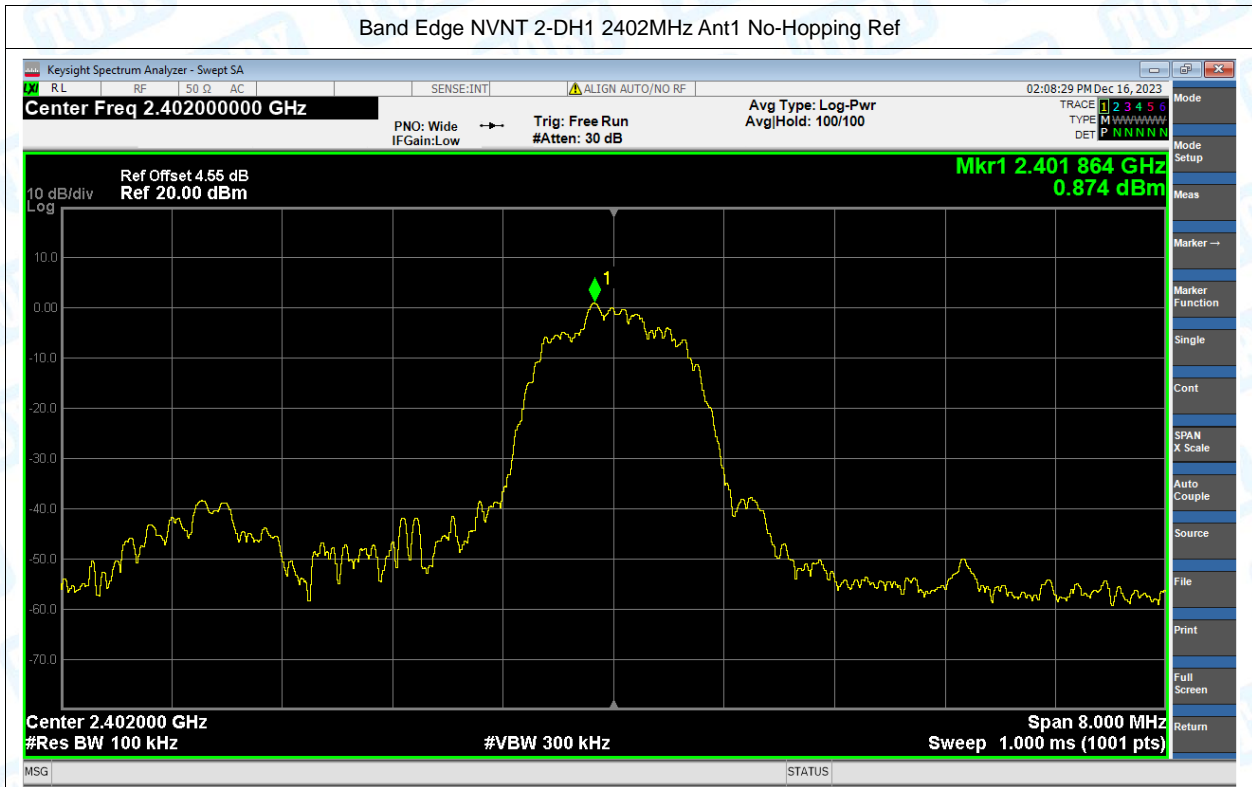
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref

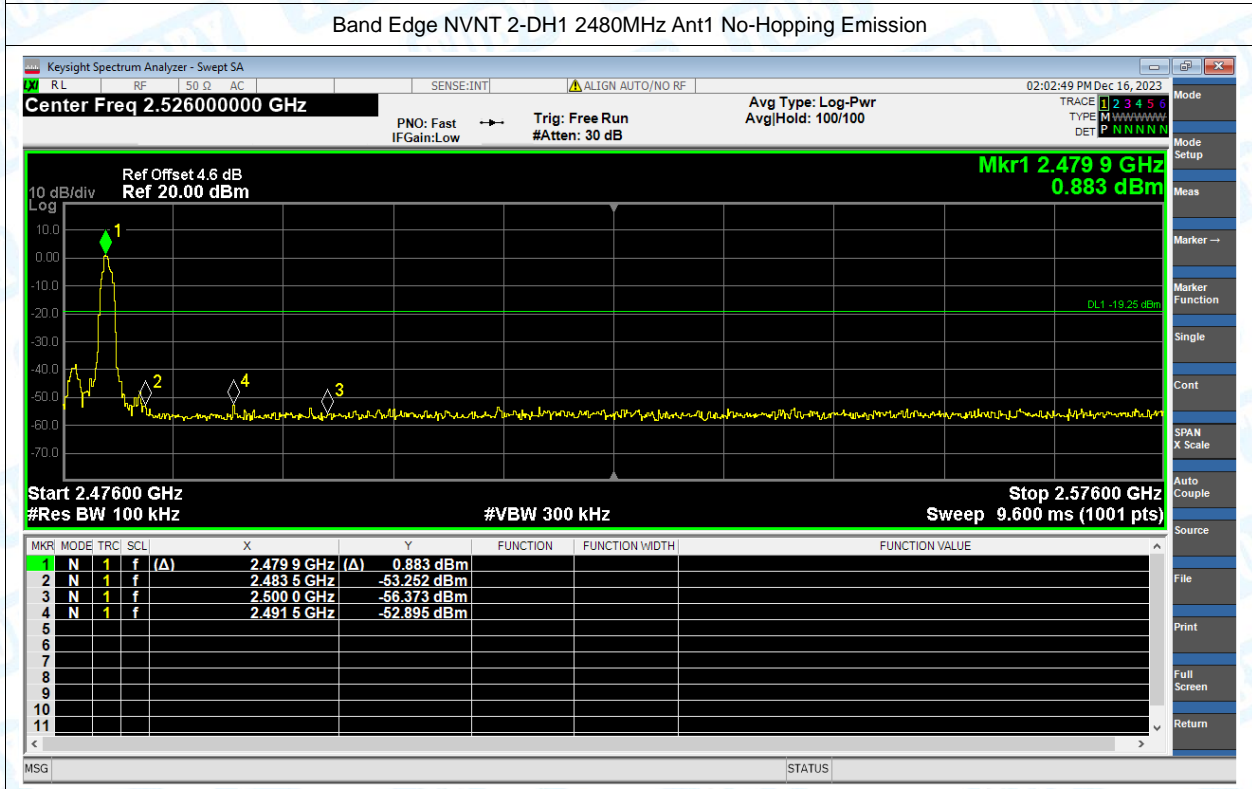
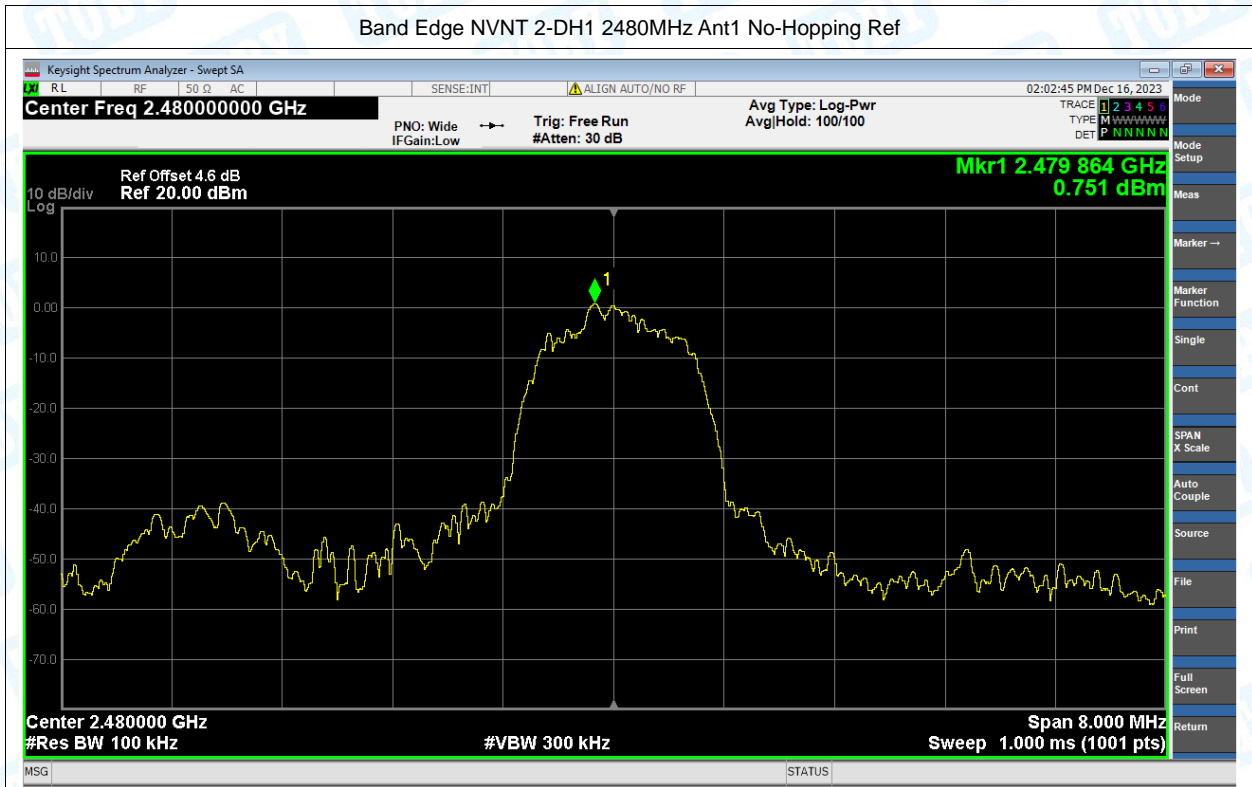


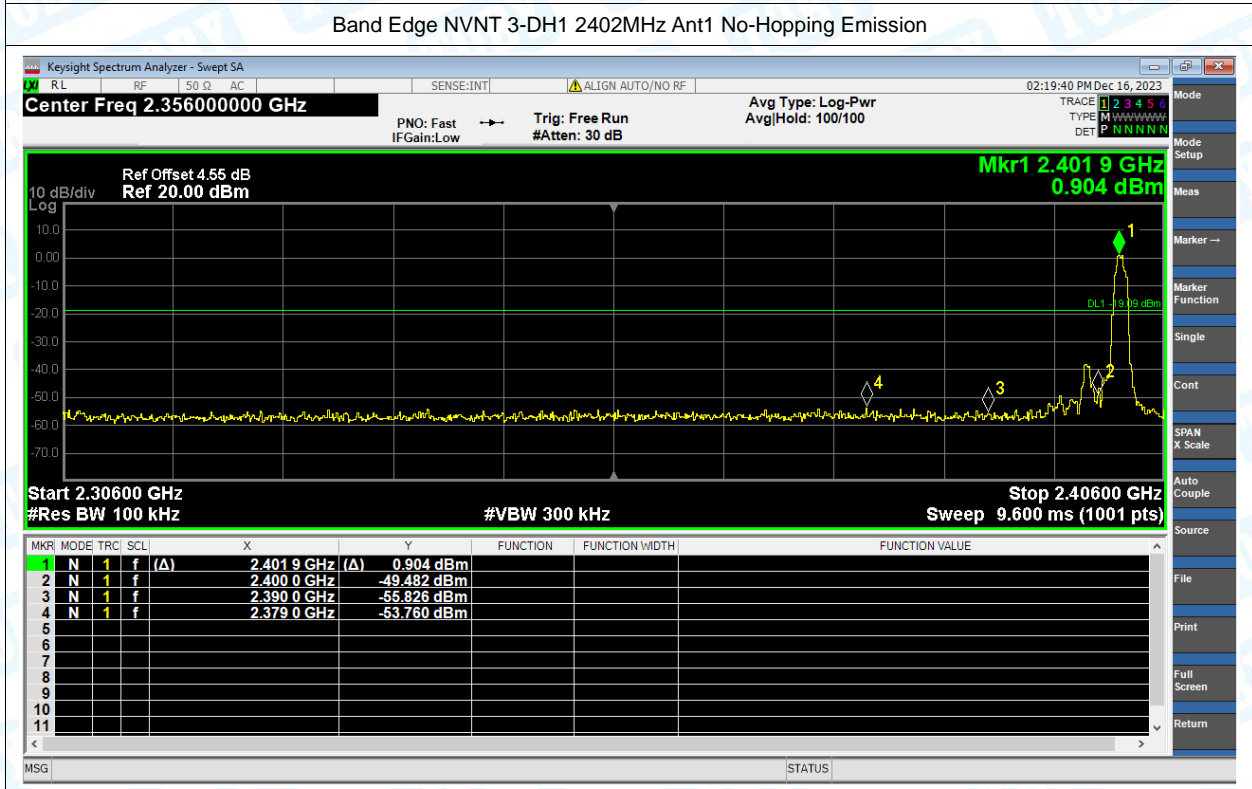
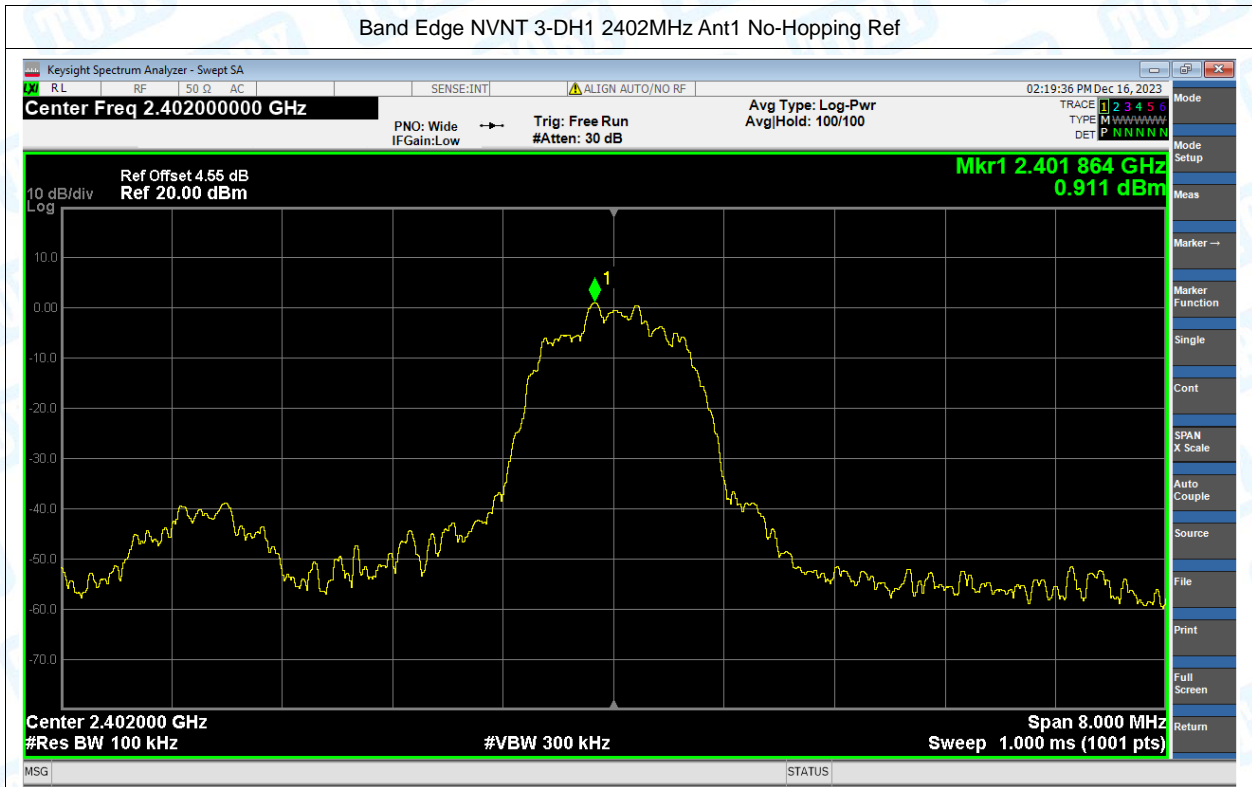
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

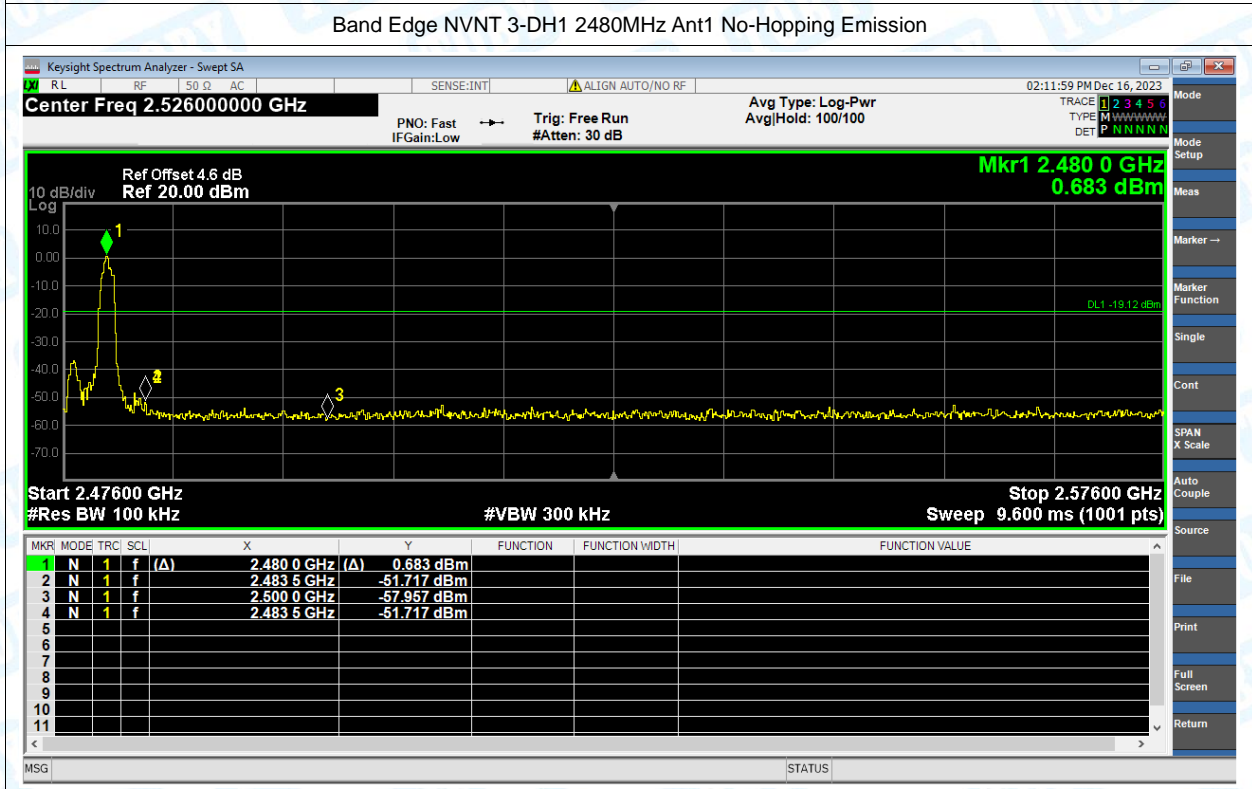
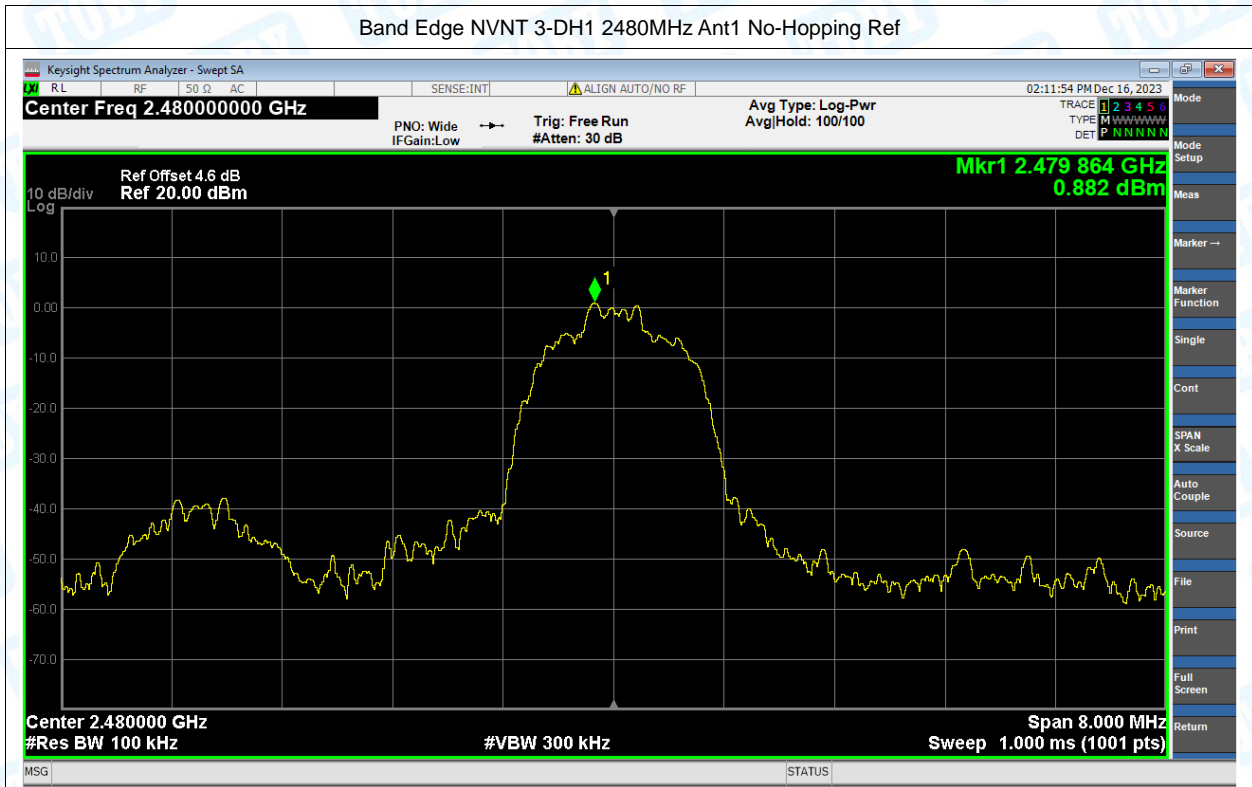












6. Band Edge(Hopping)

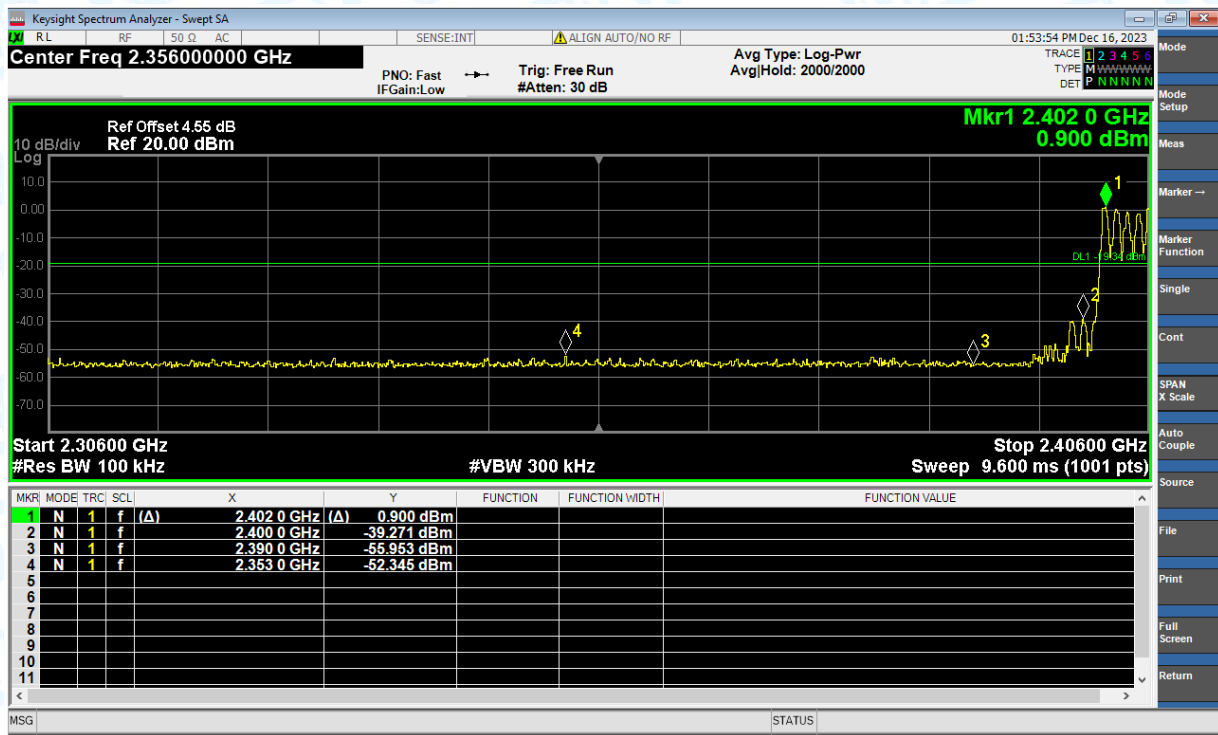
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-53.01	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-53.01	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-53.53	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-53.31	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-53.60	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-53.45	-20	Pass

Test Graphs

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



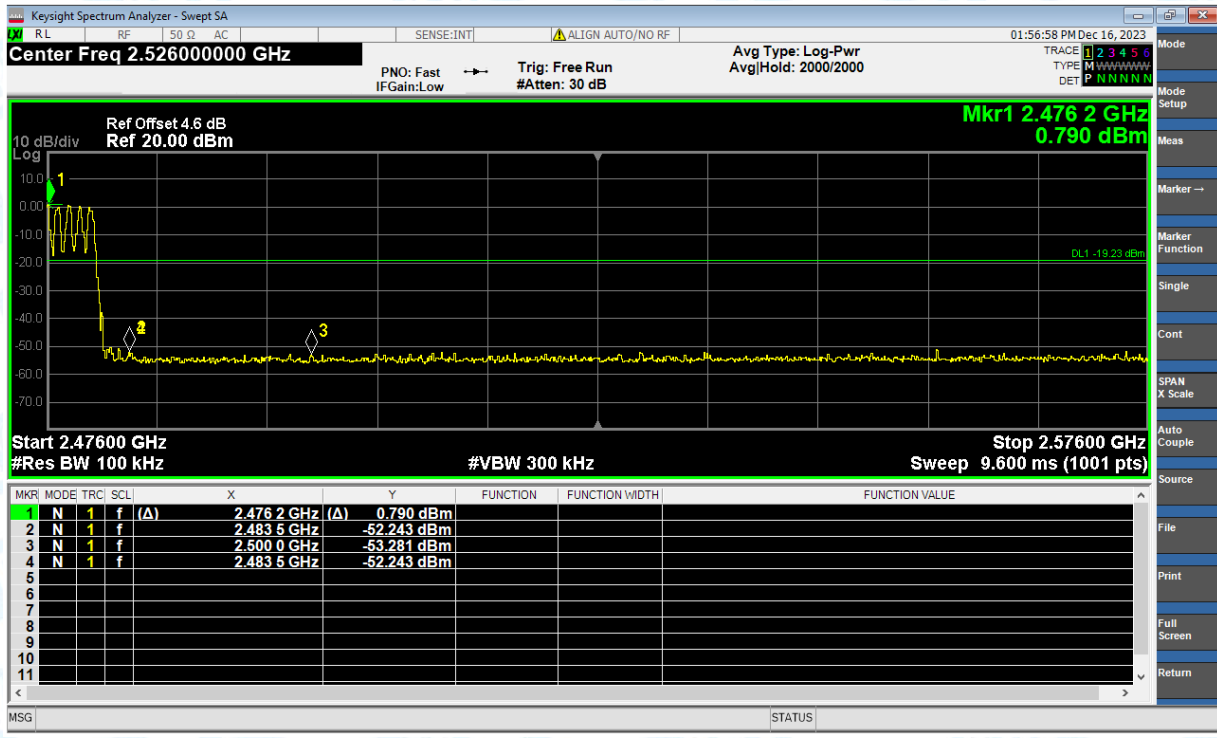
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



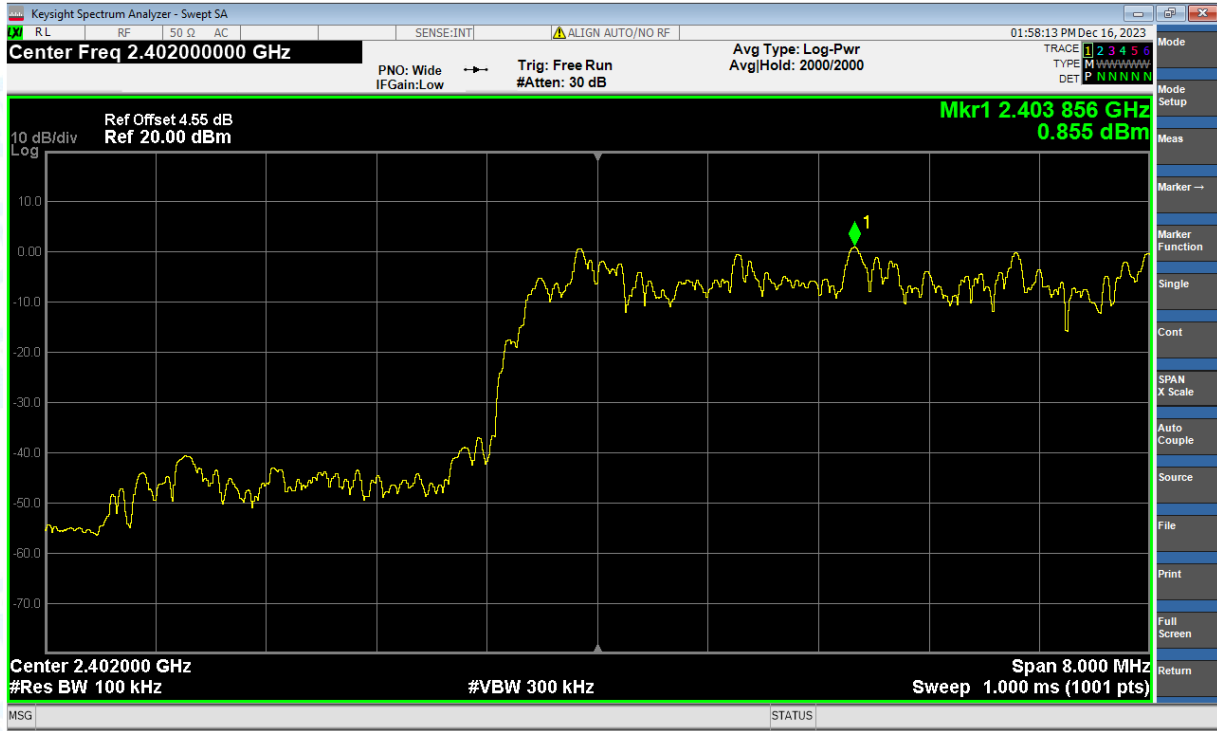
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



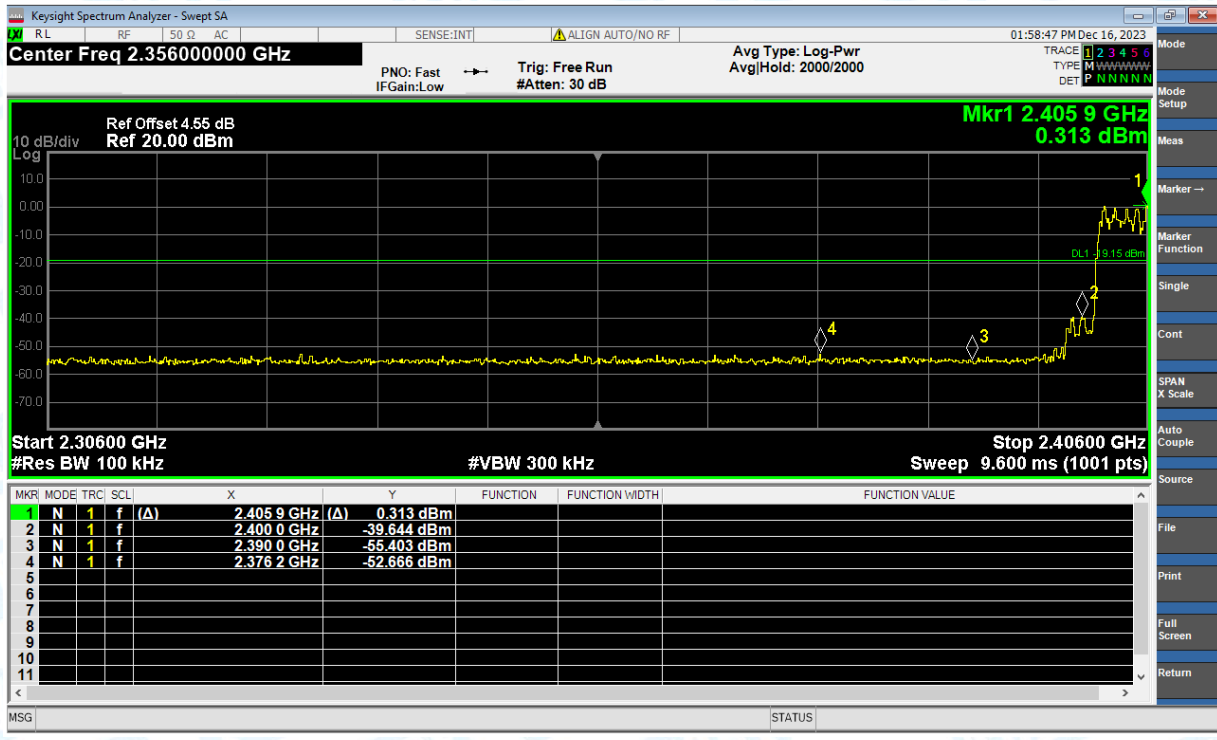
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission

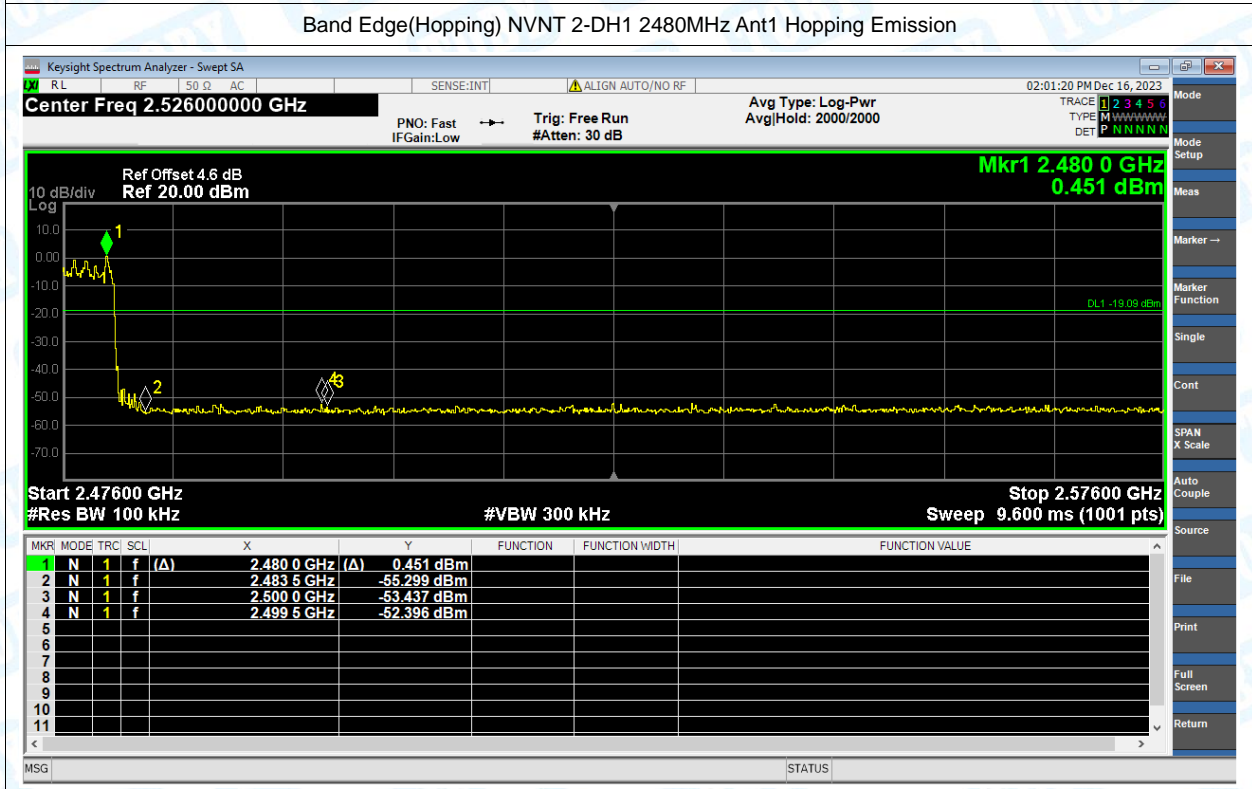
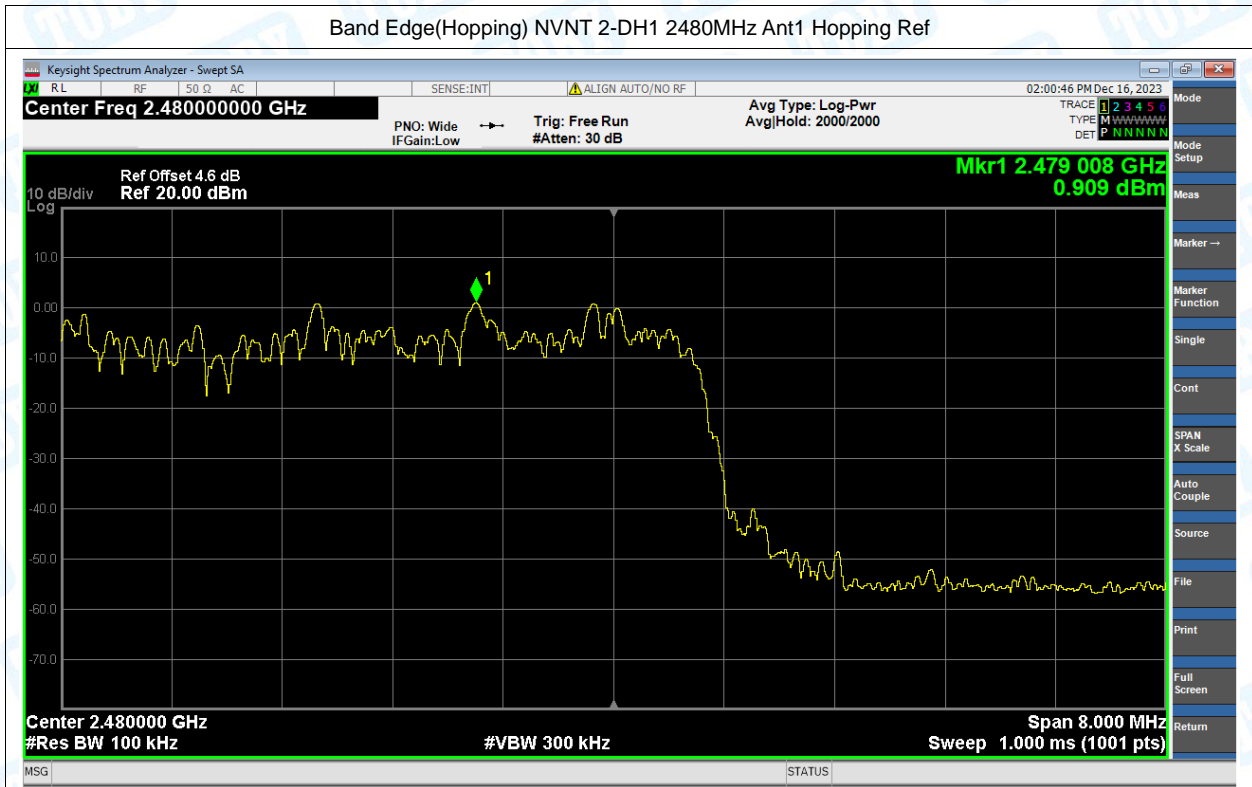


Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref

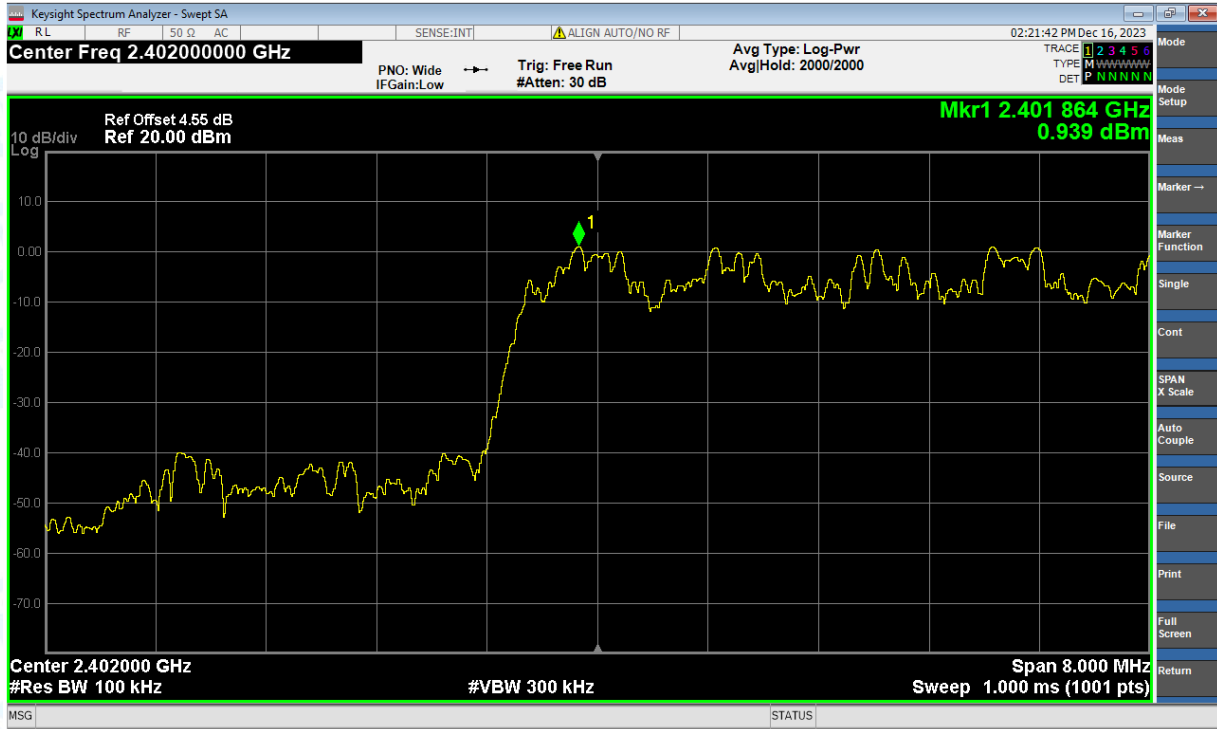


Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission

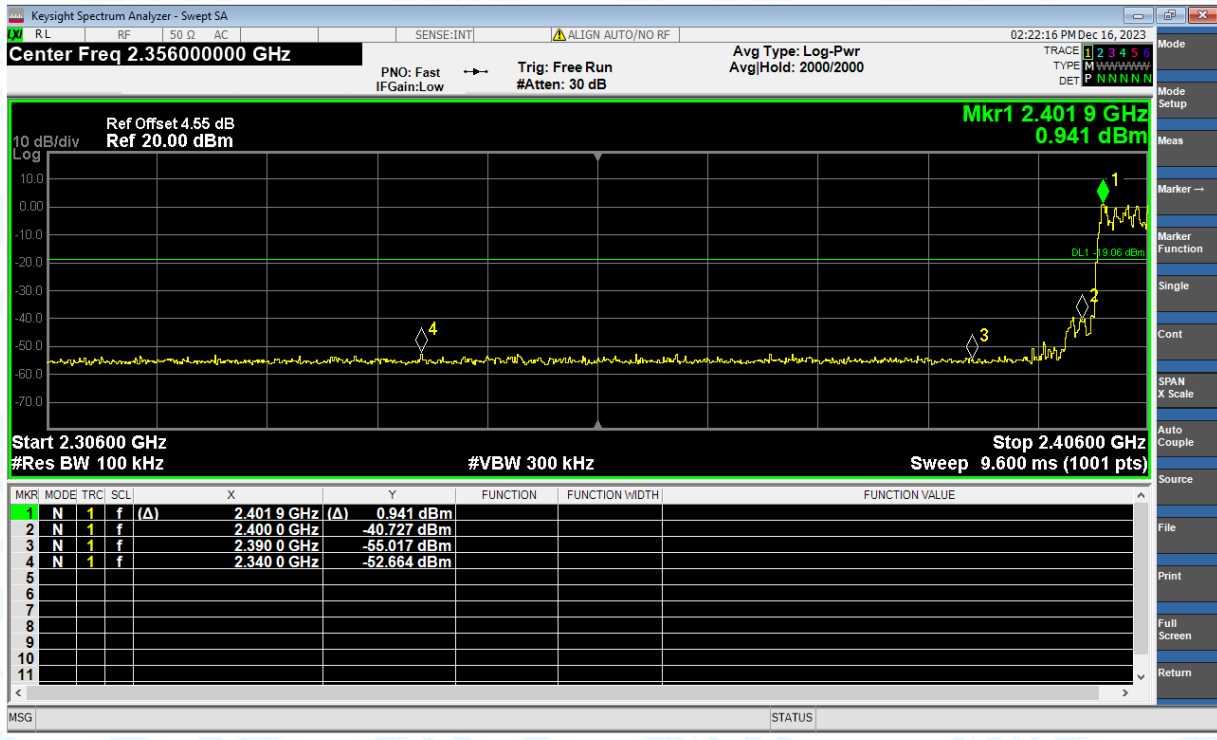




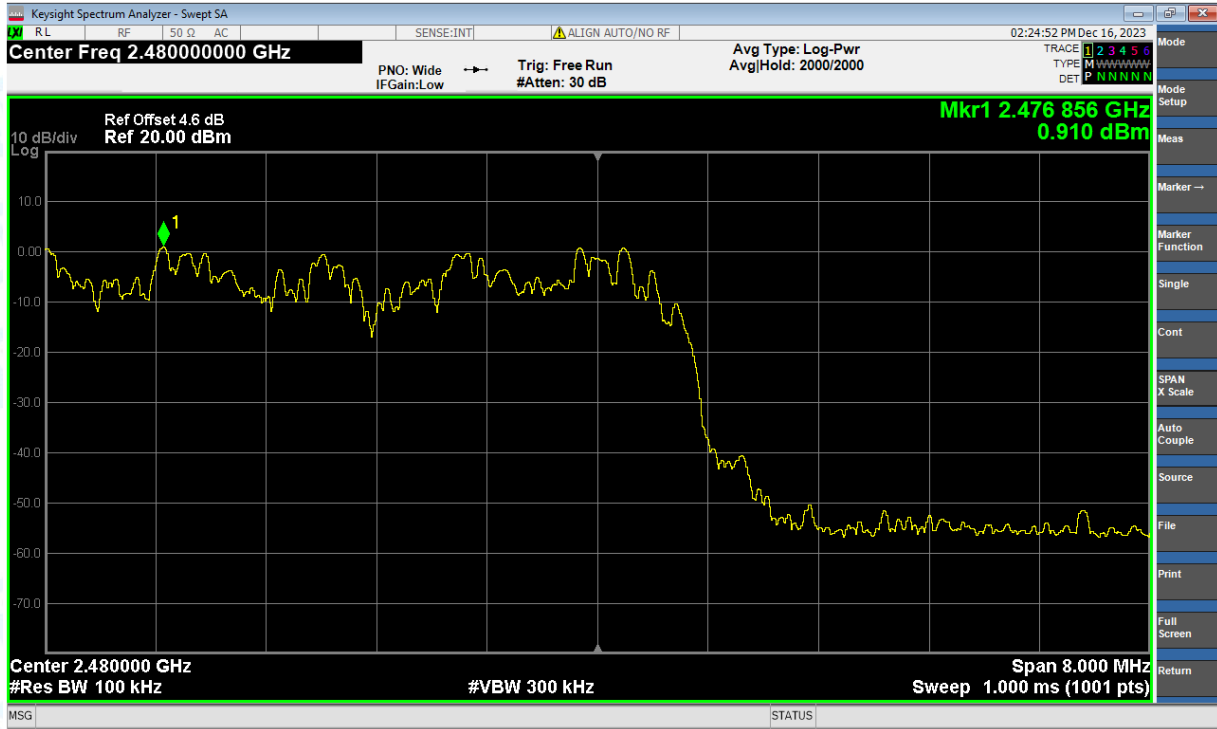
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



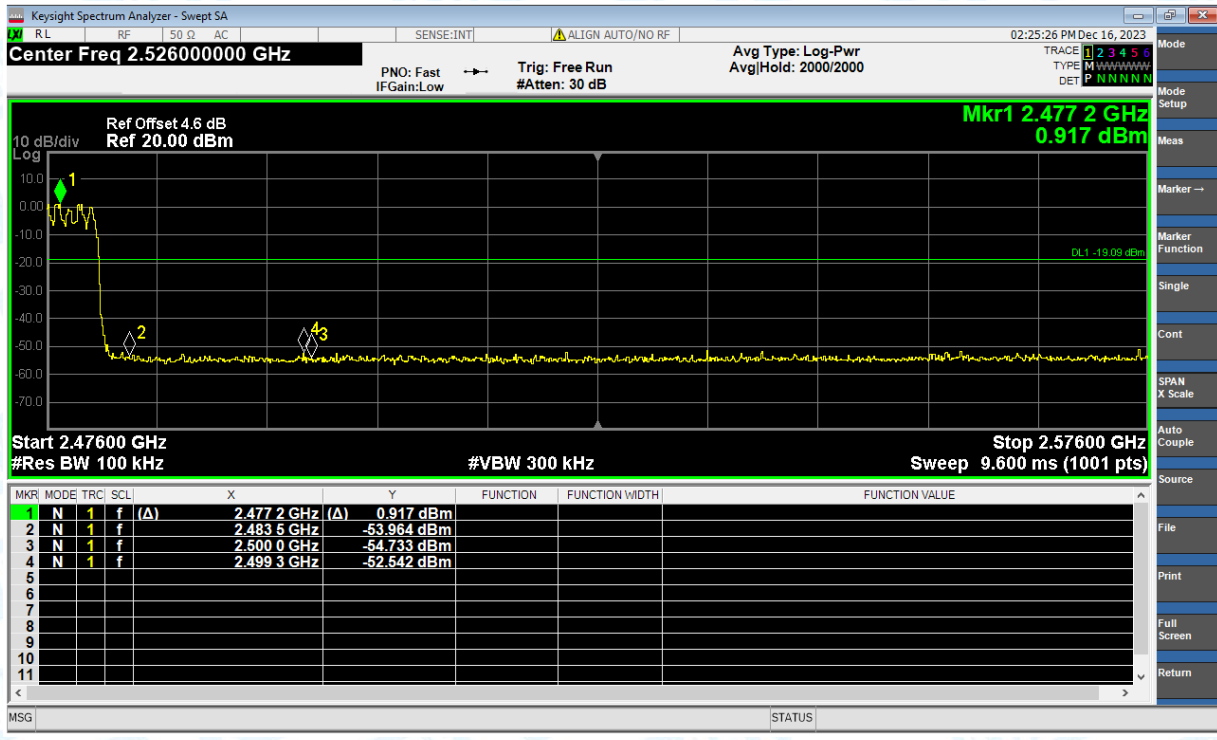
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

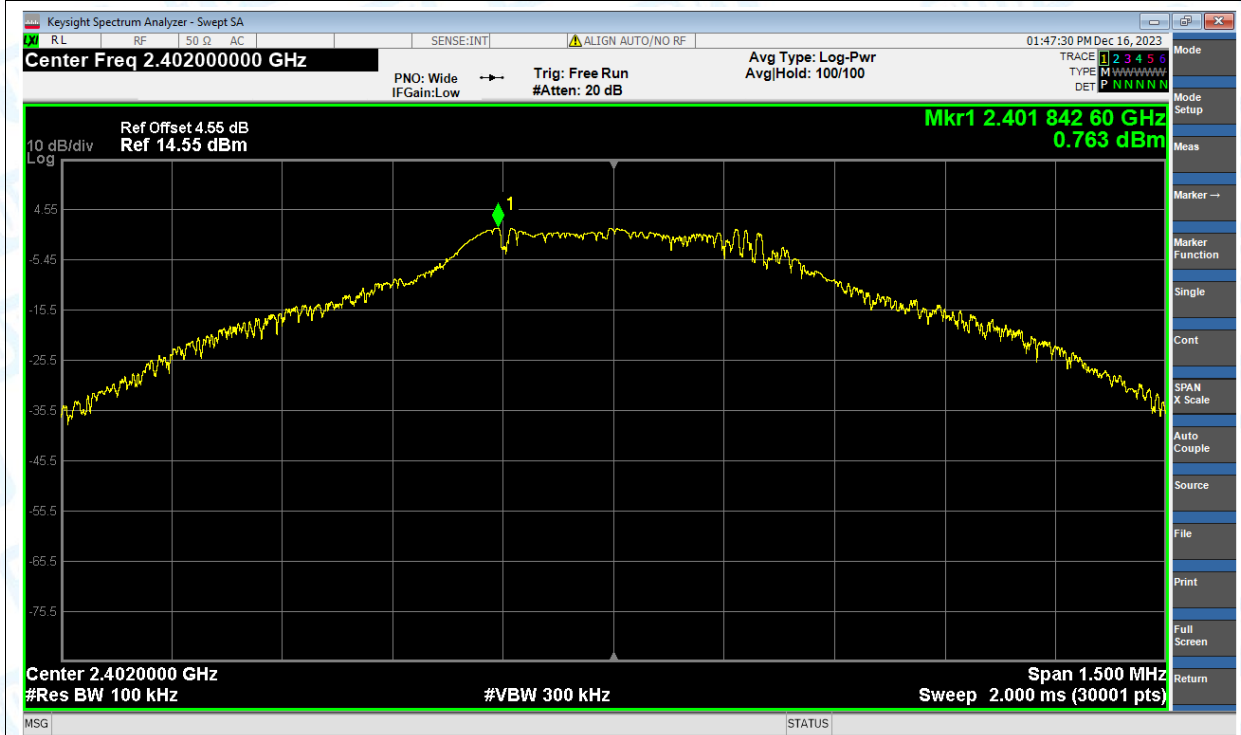


7. Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-45.60	-20	Pass
NVNT	1-DH1	2441	Ant1	-45.47	-20	Pass
NVNT	1-DH1	2480	Ant1	-43.66	-20	Pass
NVNT	2-DH1	2402	Ant1	-46.21	-20	Pass
NVNT	2-DH1	2441	Ant1	-45.71	-20	Pass
NVNT	2-DH1	2480	Ant1	-46.26	-20	Pass
NVNT	3-DH1	2402	Ant1	-46.41	-20	Pass
NVNT	3-DH1	2441	Ant1	-46.03	-20	Pass
NVNT	3-DH1	2480	Ant1	-46.24	-20	Pass

Test Graphs

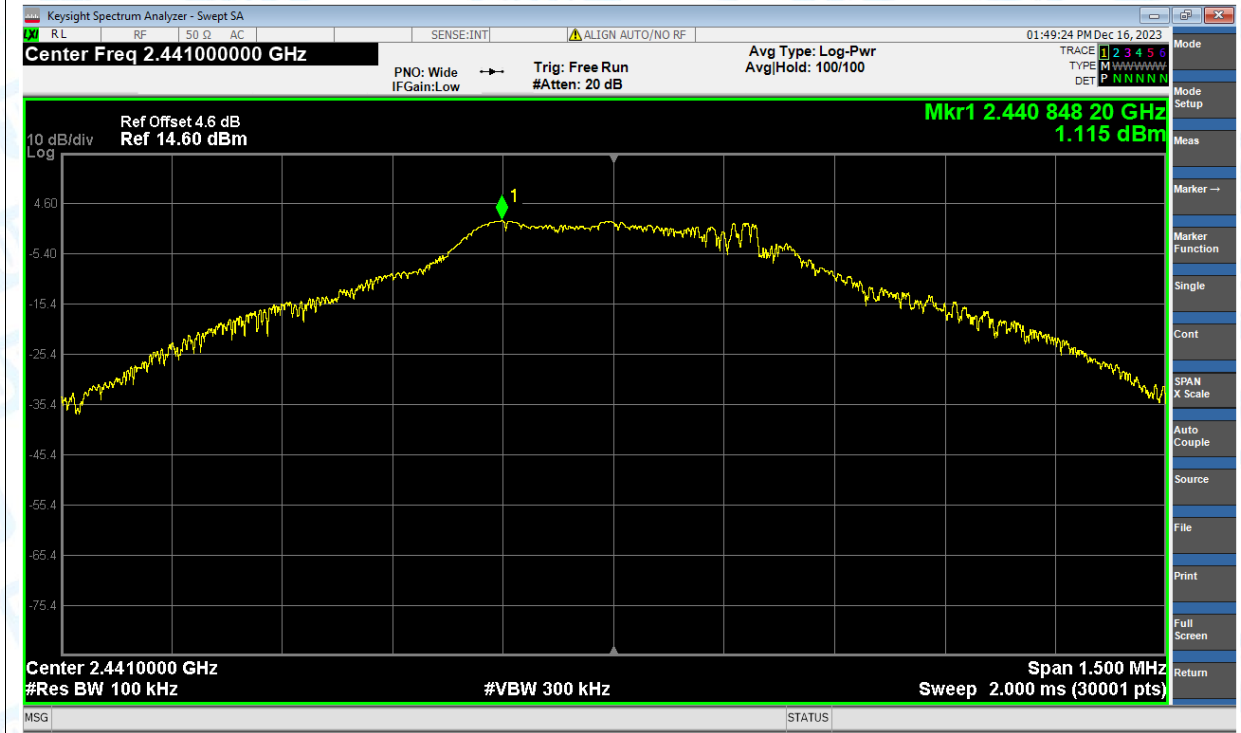
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



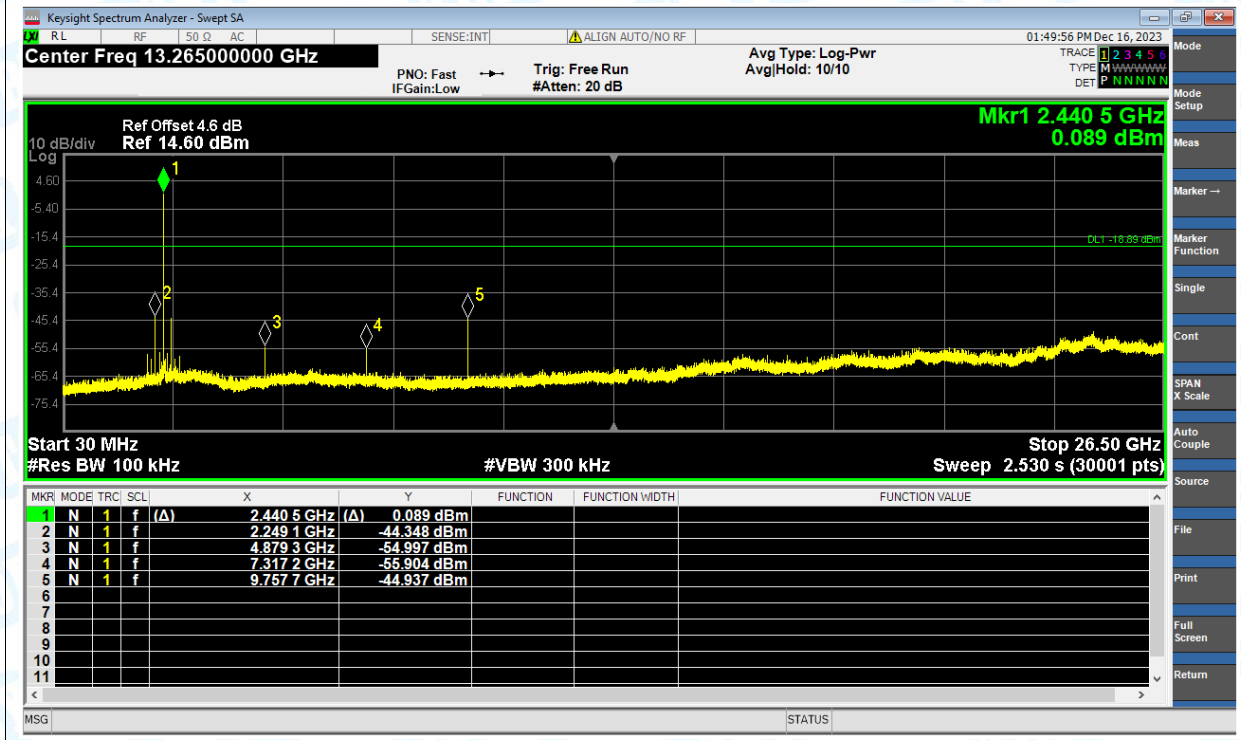
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



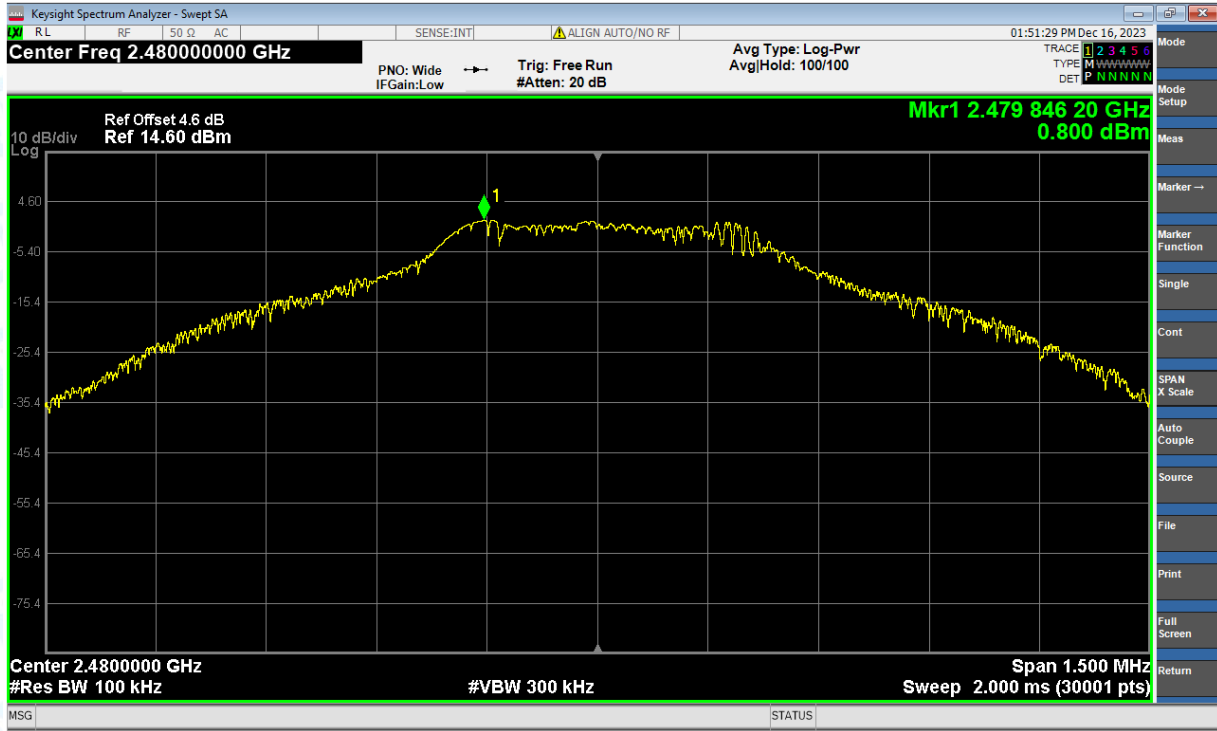
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



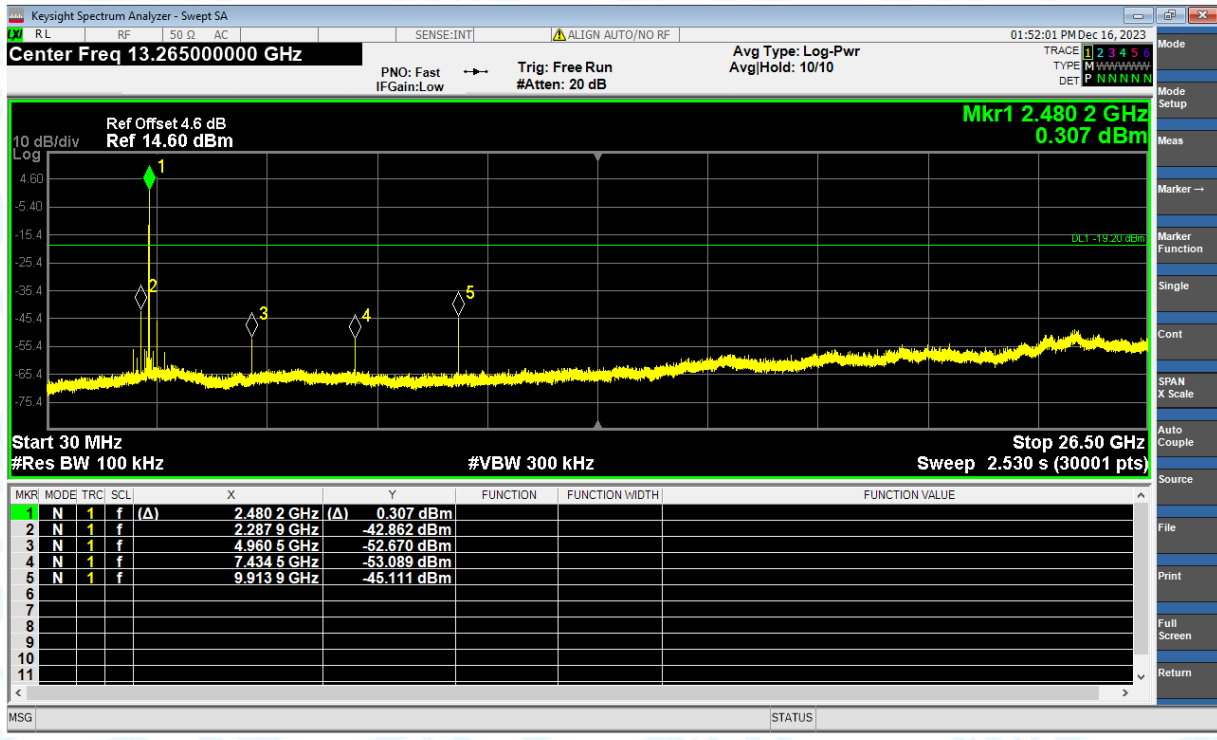
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



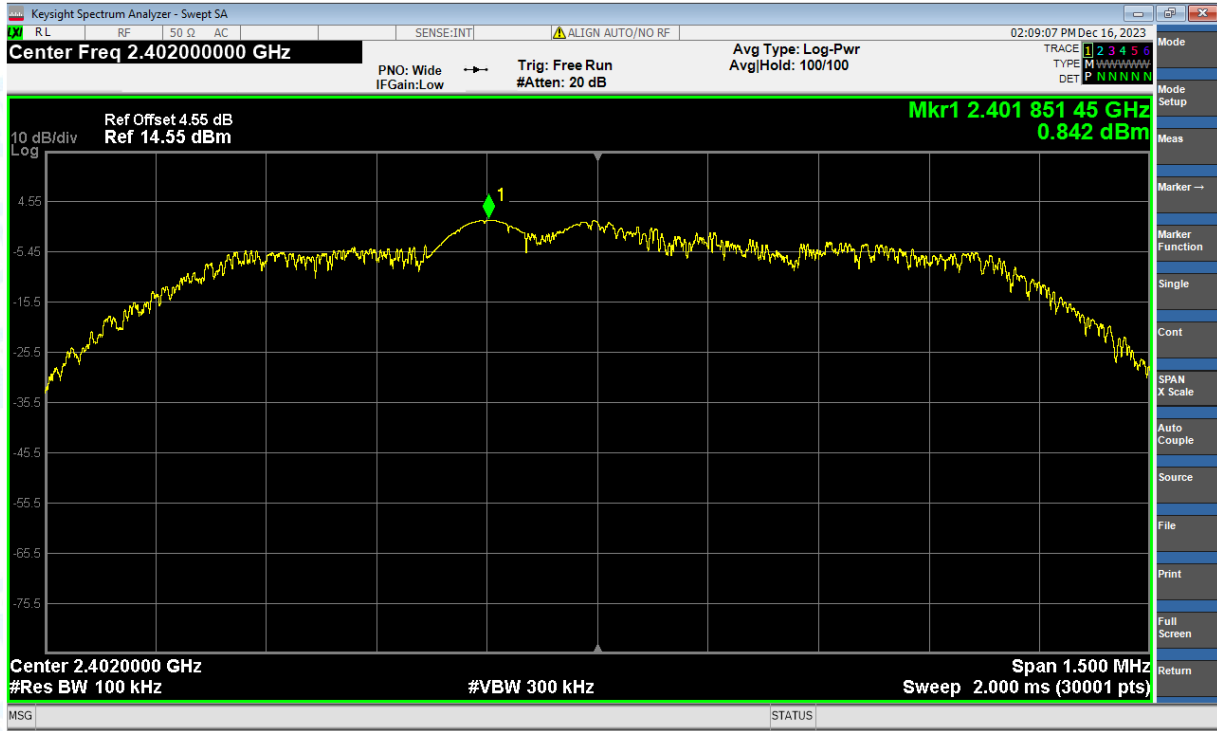
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



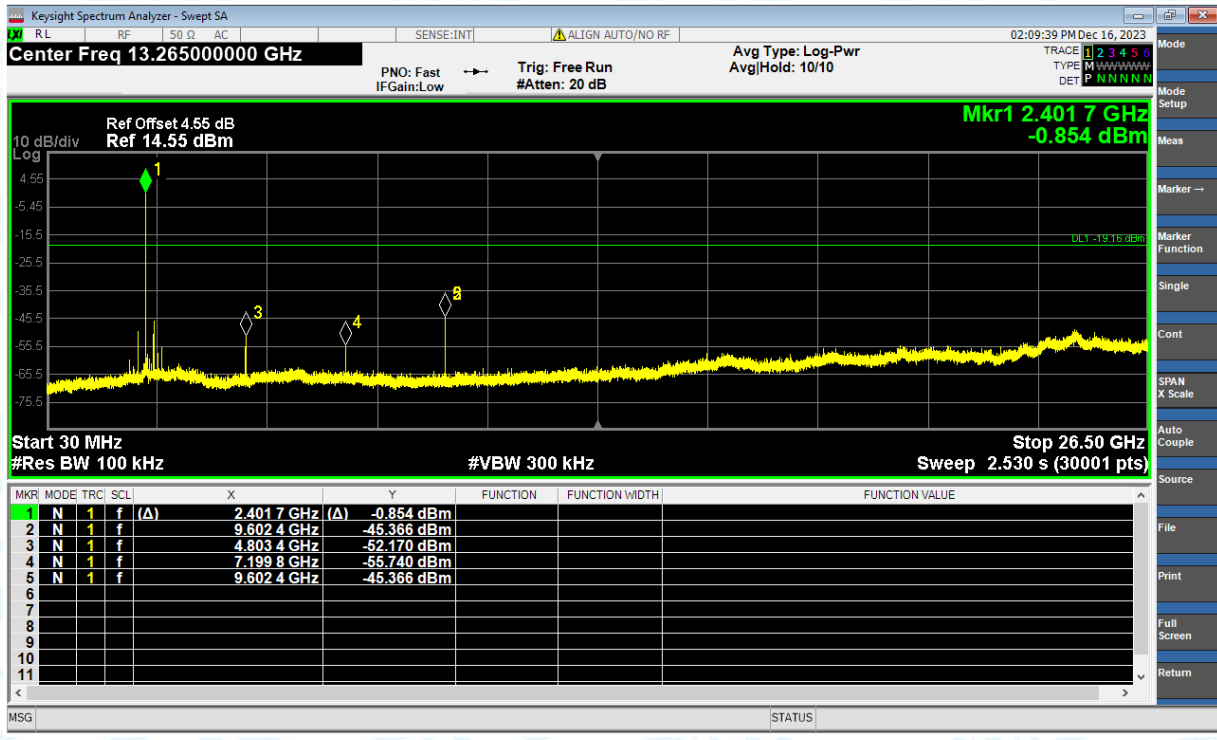
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



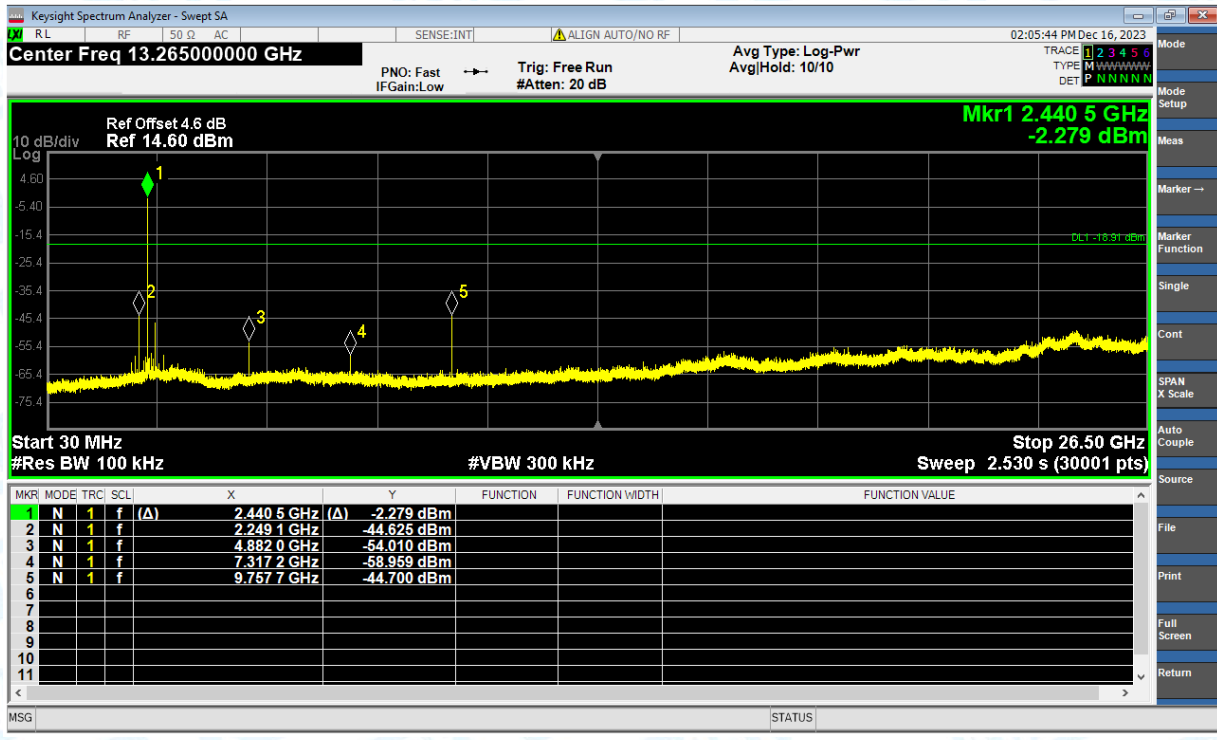
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



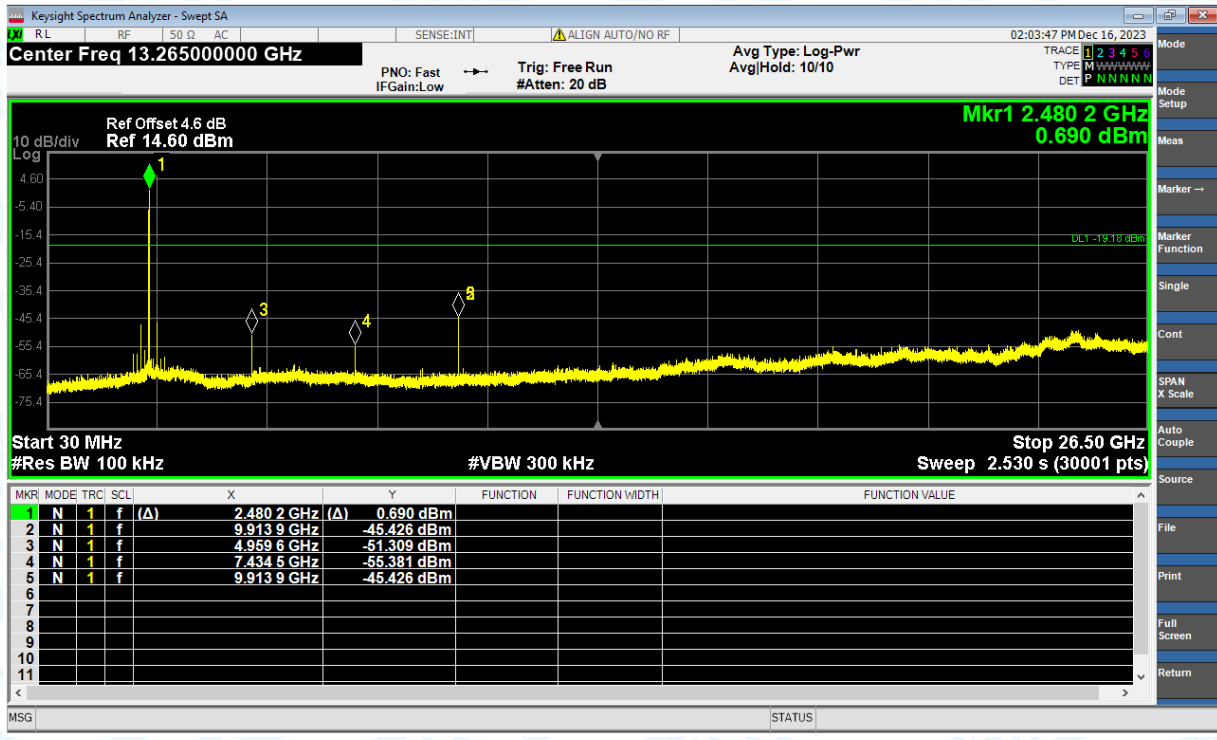
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



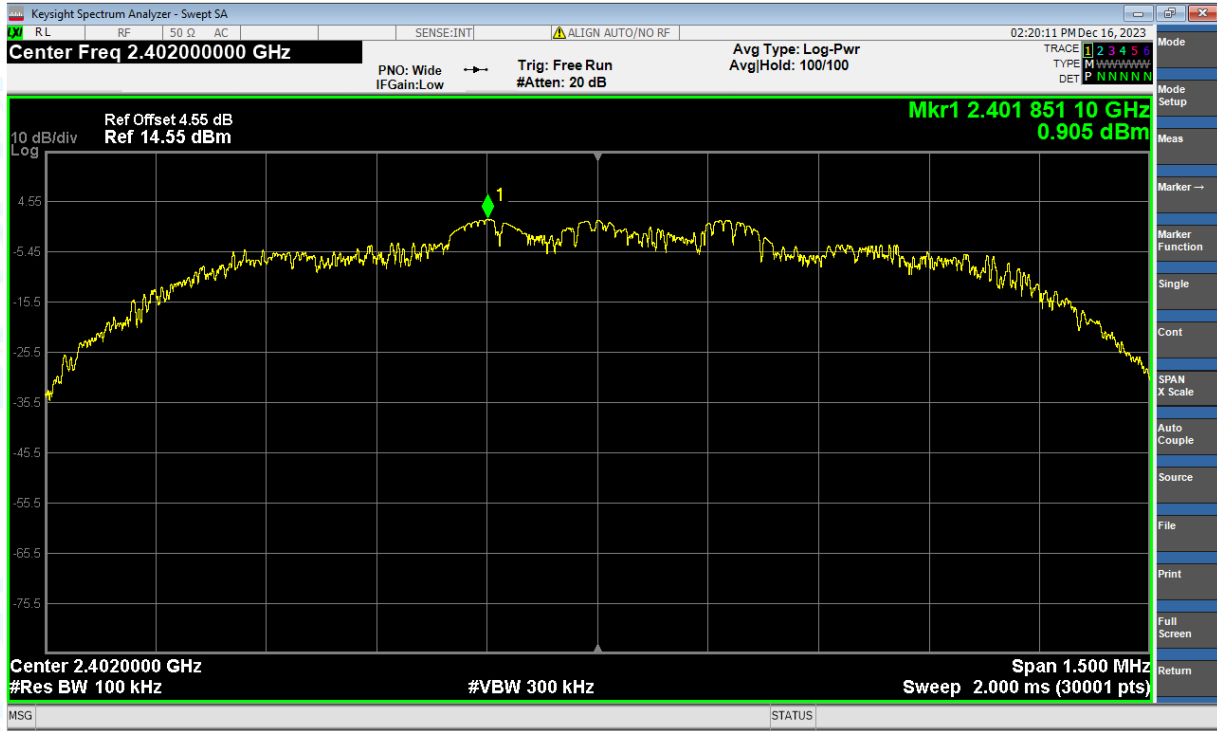
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



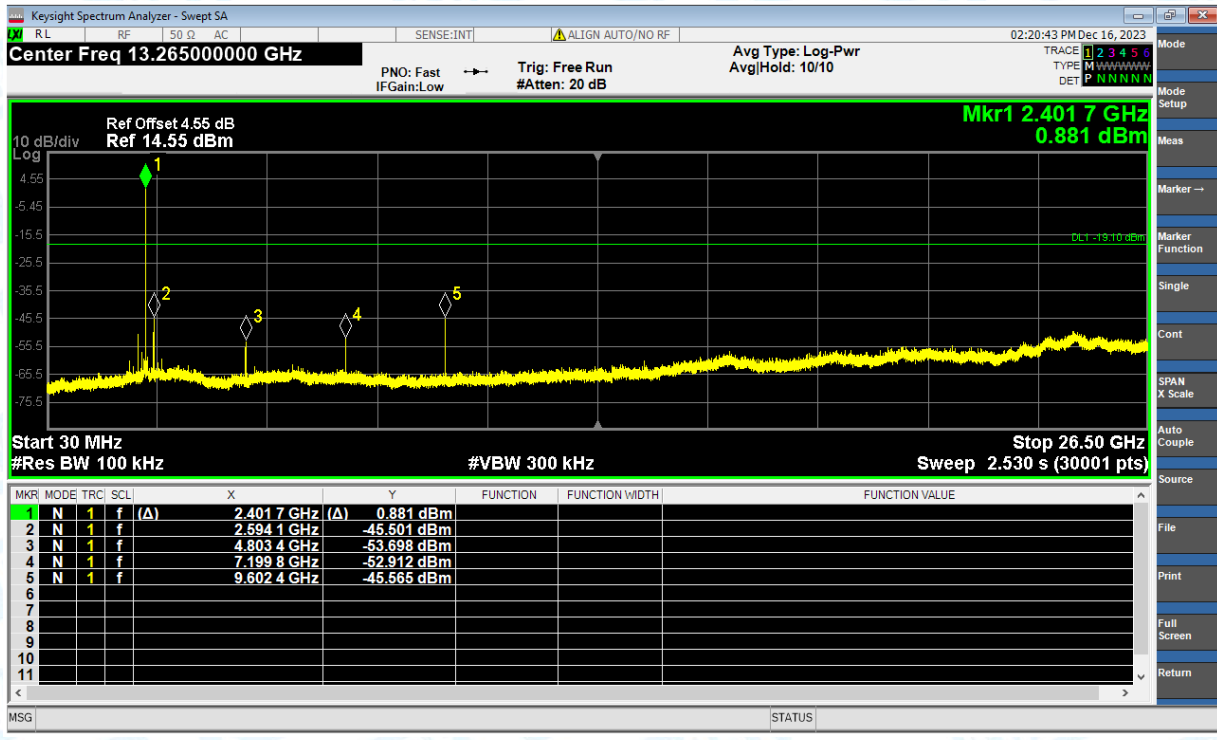
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



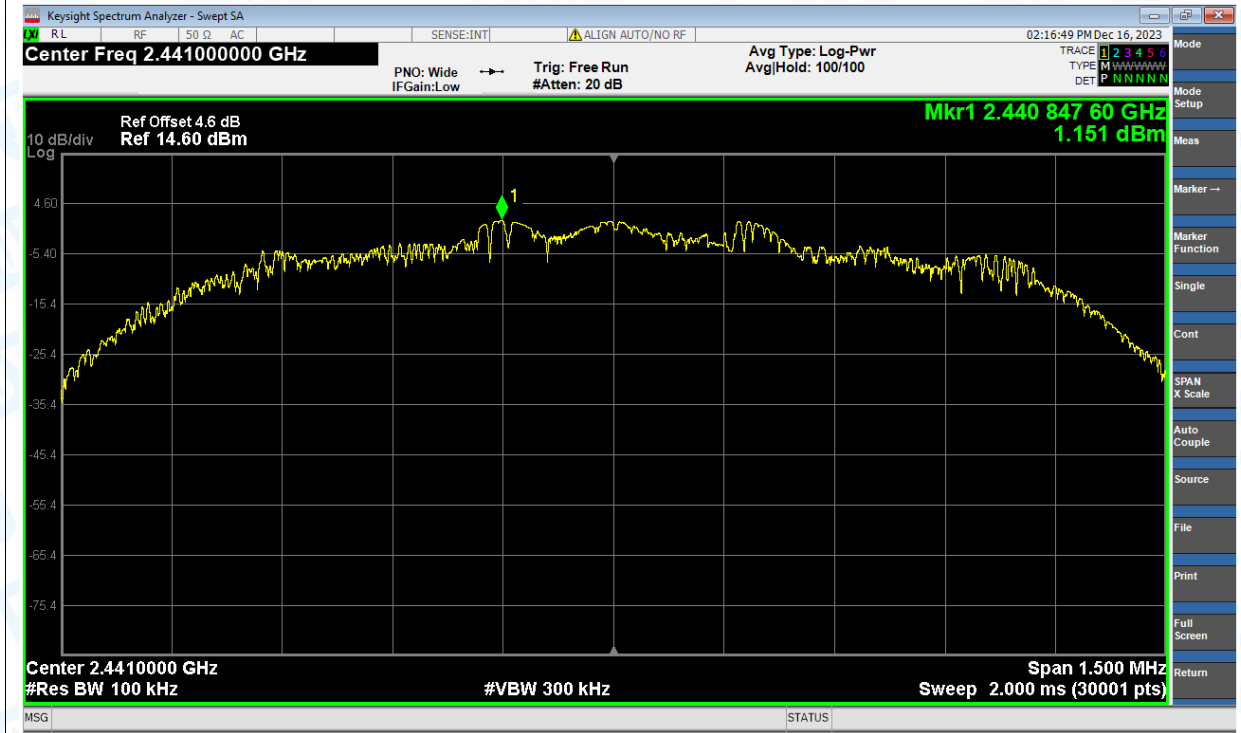
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



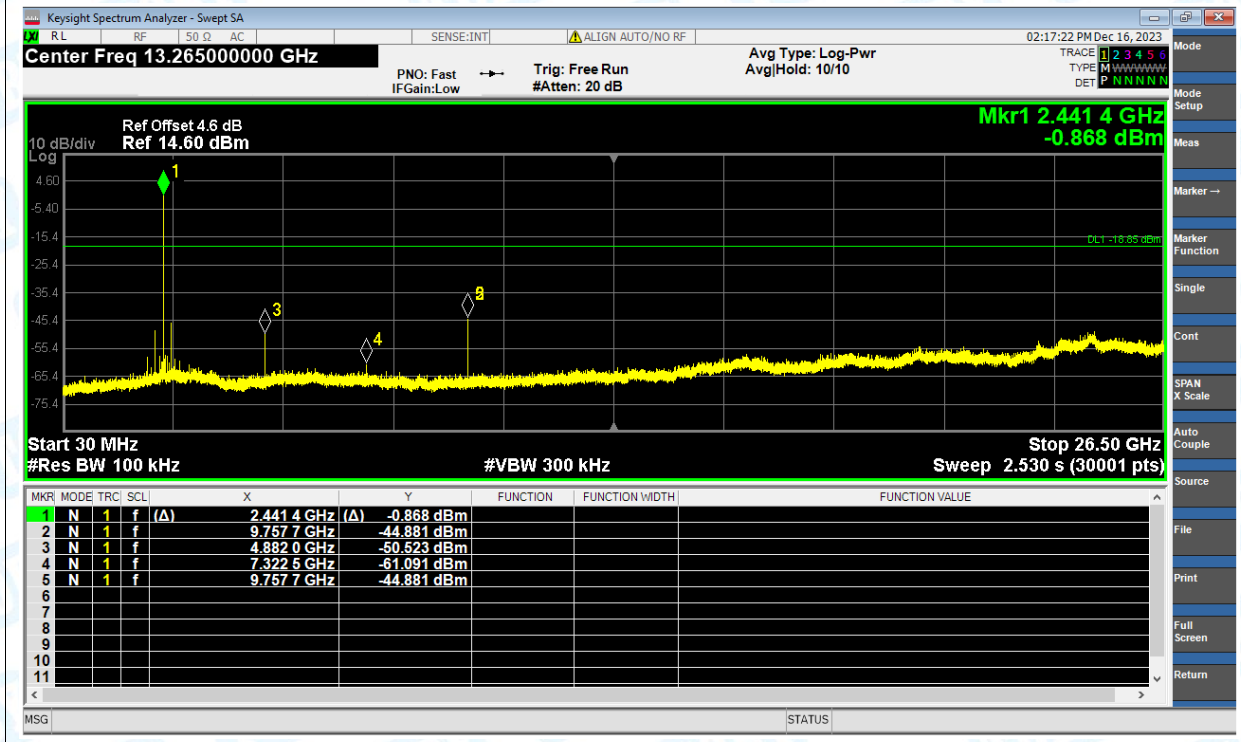
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



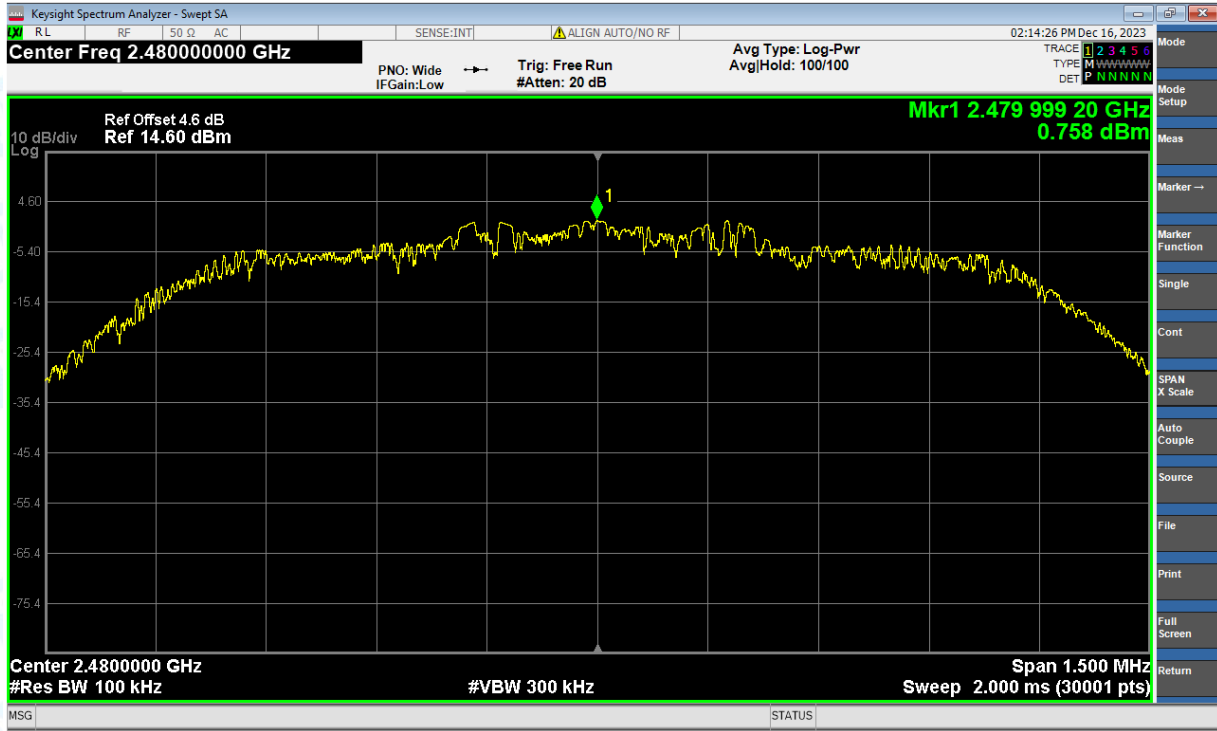
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



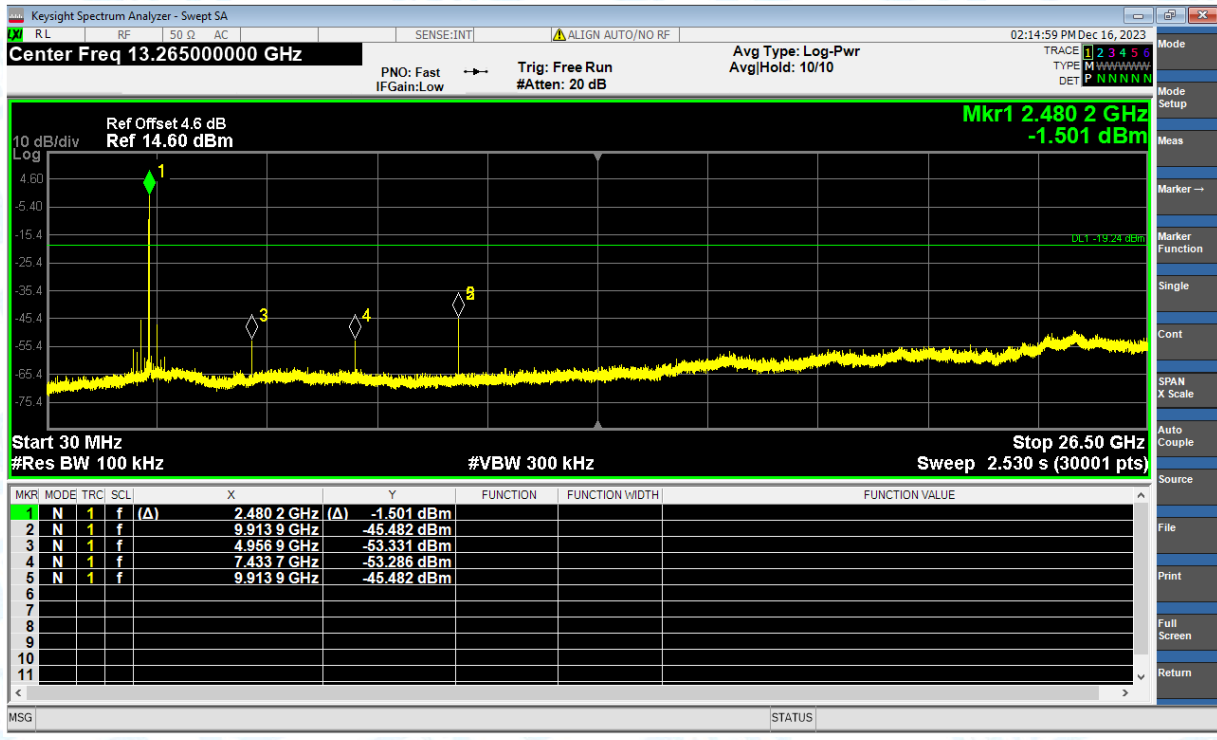
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

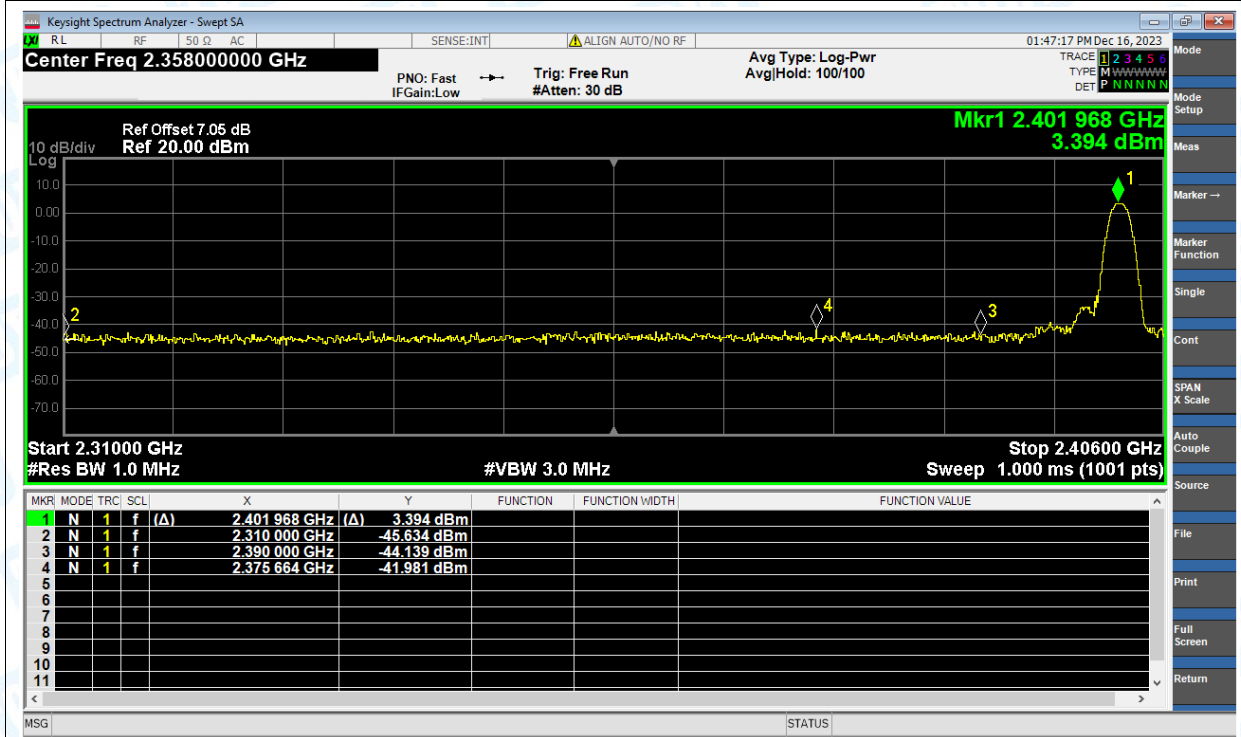


8. Restrict Band

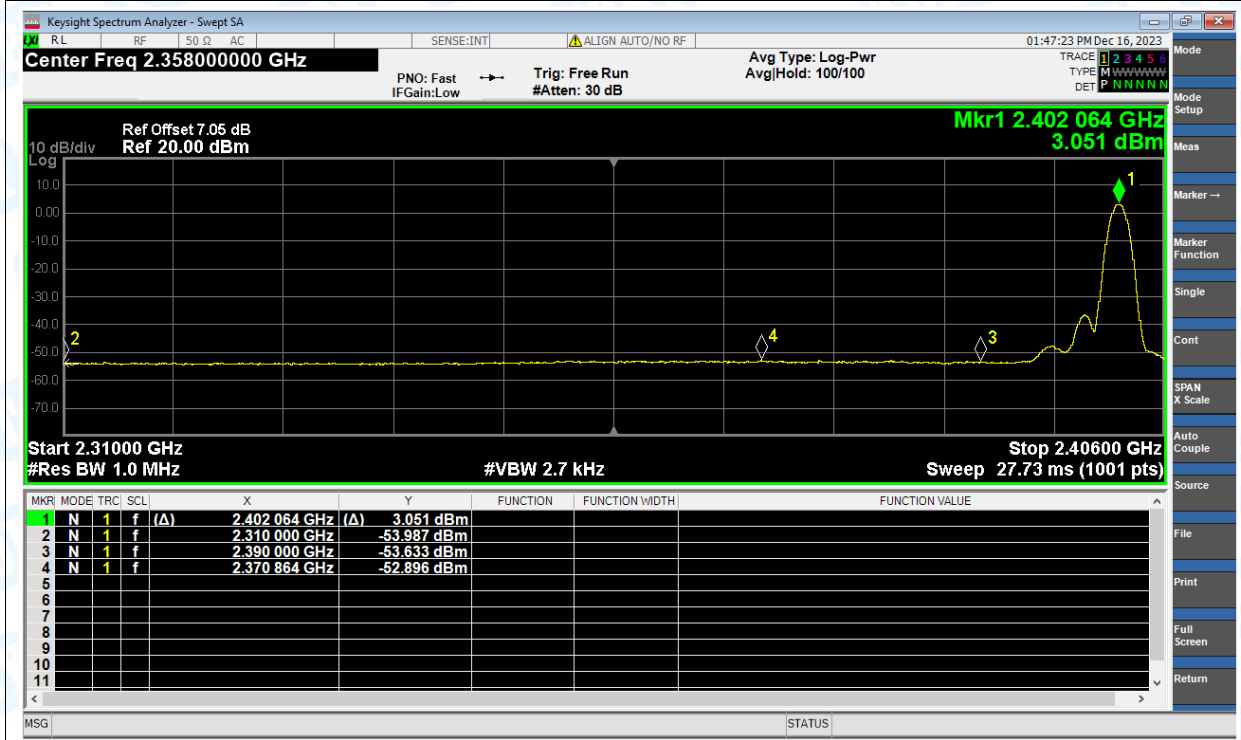
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-45.63	2.5	52.13	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-53.99	2.5	43.77	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2375.664	-41.98	2.5	55.78	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2370.864	-52.9	2.5	44.86	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-45.8	2.5	51.96	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-53.4	2.5	44.36	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-41.24	2.5	56.52	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-49.85	2.5	47.91	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.752	-40.44	2.5	57.32	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-49.85	2.5	47.91	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-44.44	2.5	53.32	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-53.17	2.5	44.59	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-45.49	2.5	52.27	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-54.26	2.5	43.5	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2380.752	-41.87	2.5	55.89	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2357.136	-52.65	2.5	45.11	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-45.05	2.5	52.71	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-53.78	2.5	43.98	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-42.64	2.5	55.12	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-50.8	2.5	46.96	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2485	-39.58	2.5	58.18	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-50.8	2.5	46.96	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-43.07	2.5	54.69	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-52.86	2.5	44.9	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-46.44	2.5	51.32	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-54.13	2.5	43.63	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2369.712	-42.01	2.5	55.75	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2374.128	-52.51	2.5	45.25	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-45.42	2.5	52.34	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-53.8	2.5	43.96	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-41.9	2.5	55.86	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-50.65	2.5	47.11	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2486.152	-39.52	2.5	58.24	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.56	-50.34	2.5	47.42	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-45.45	2.5	52.31	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-53.02	2.5	44.74	Average	54	Pass

Test Graphs

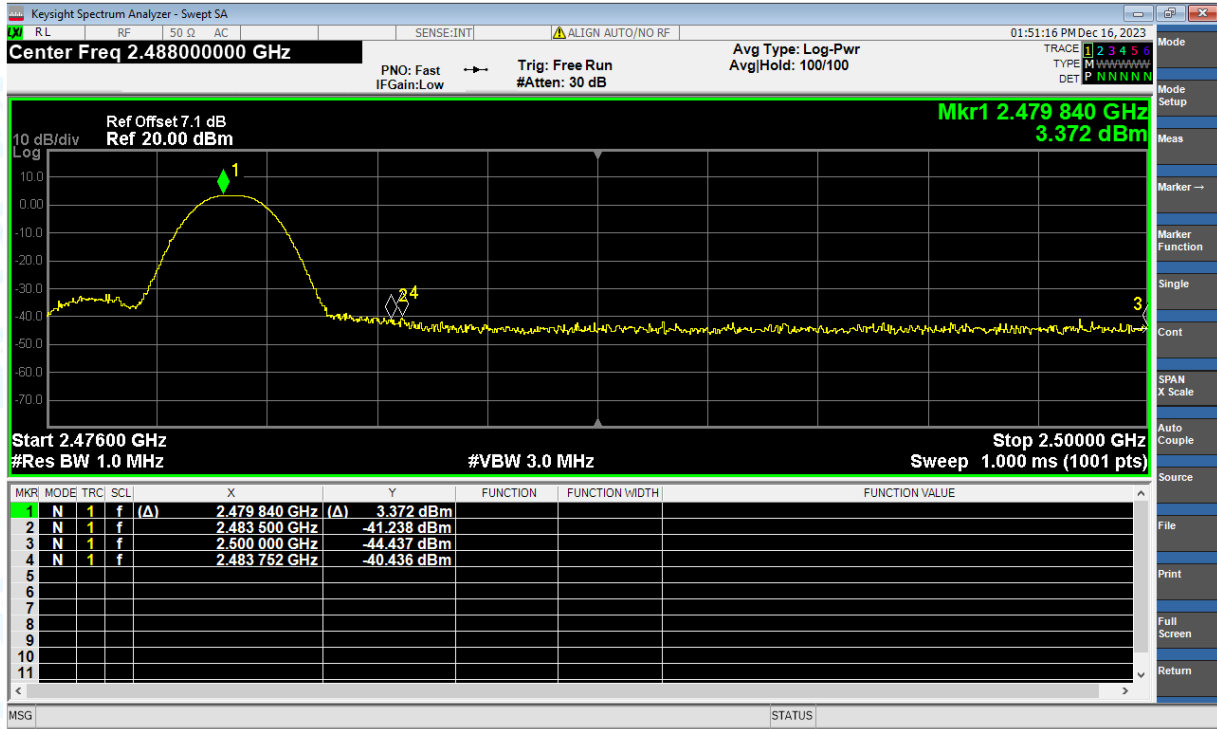
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



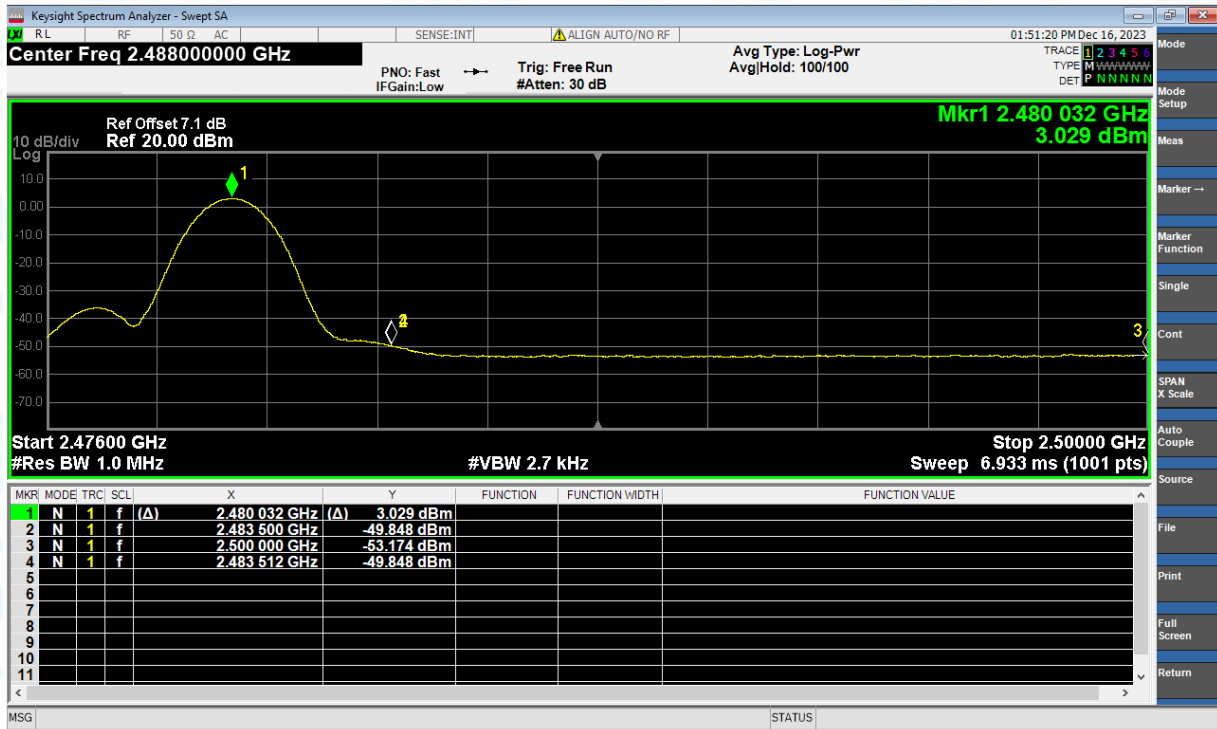
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



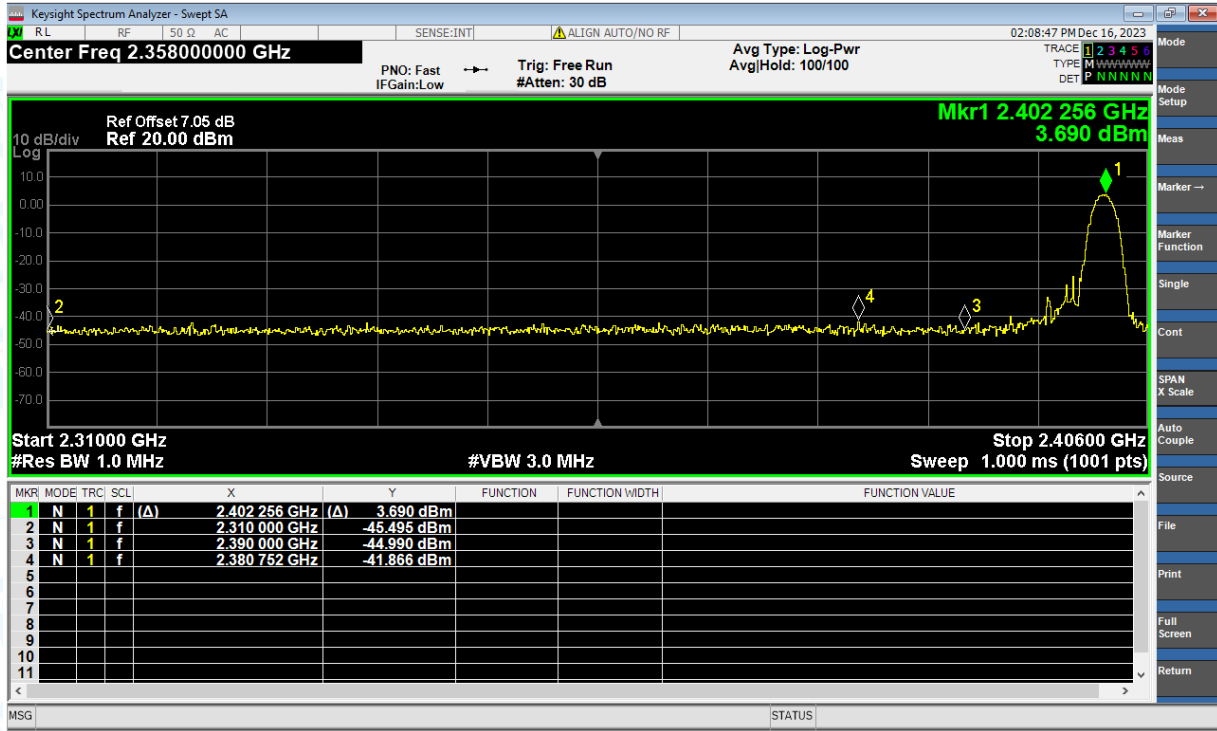
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



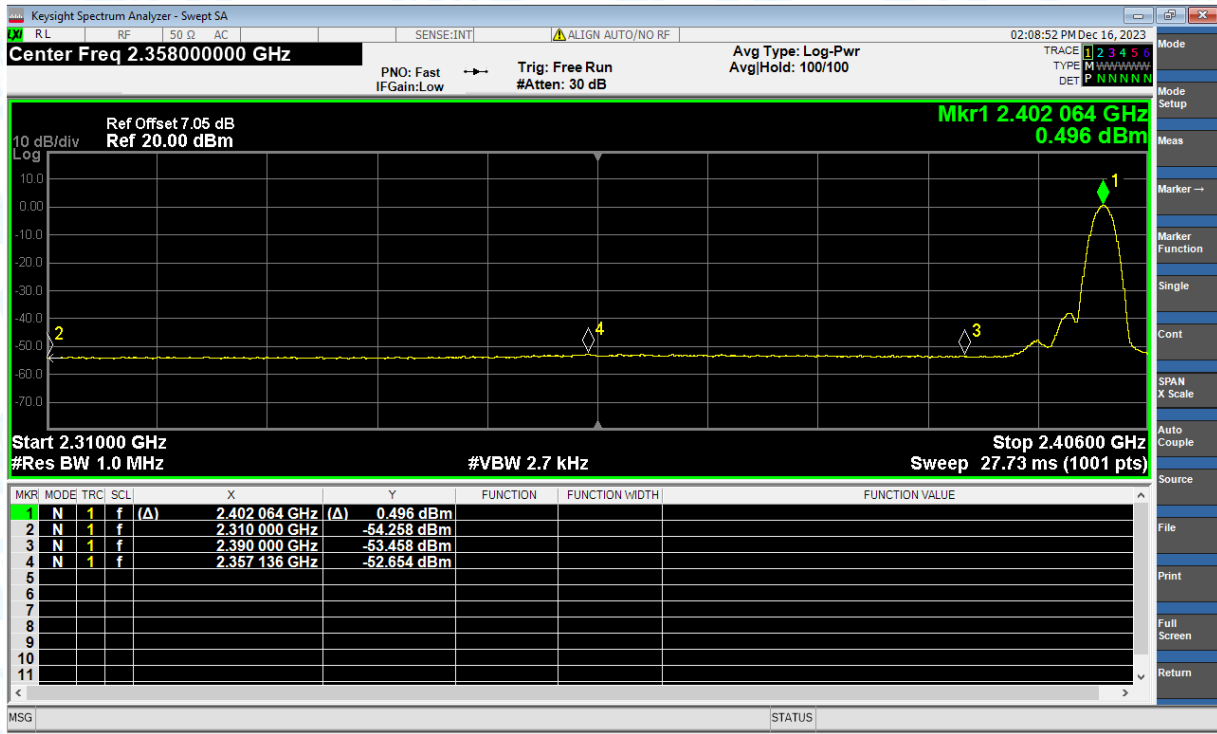
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



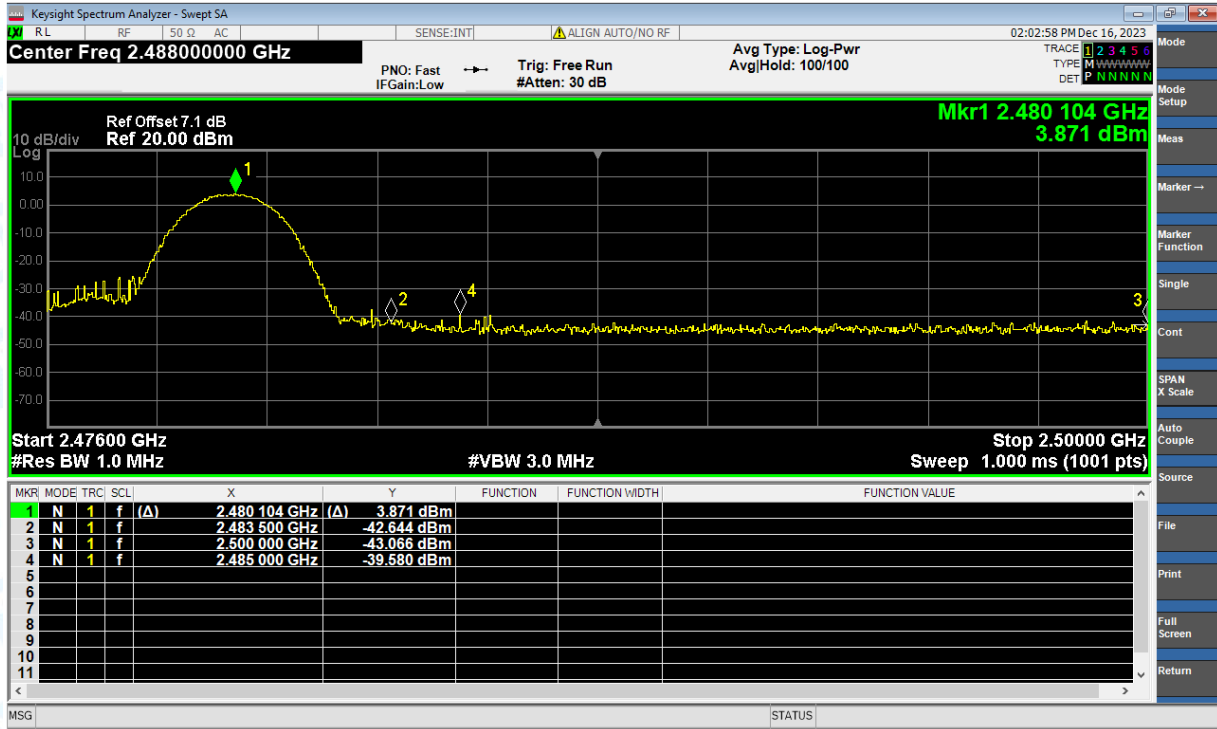
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



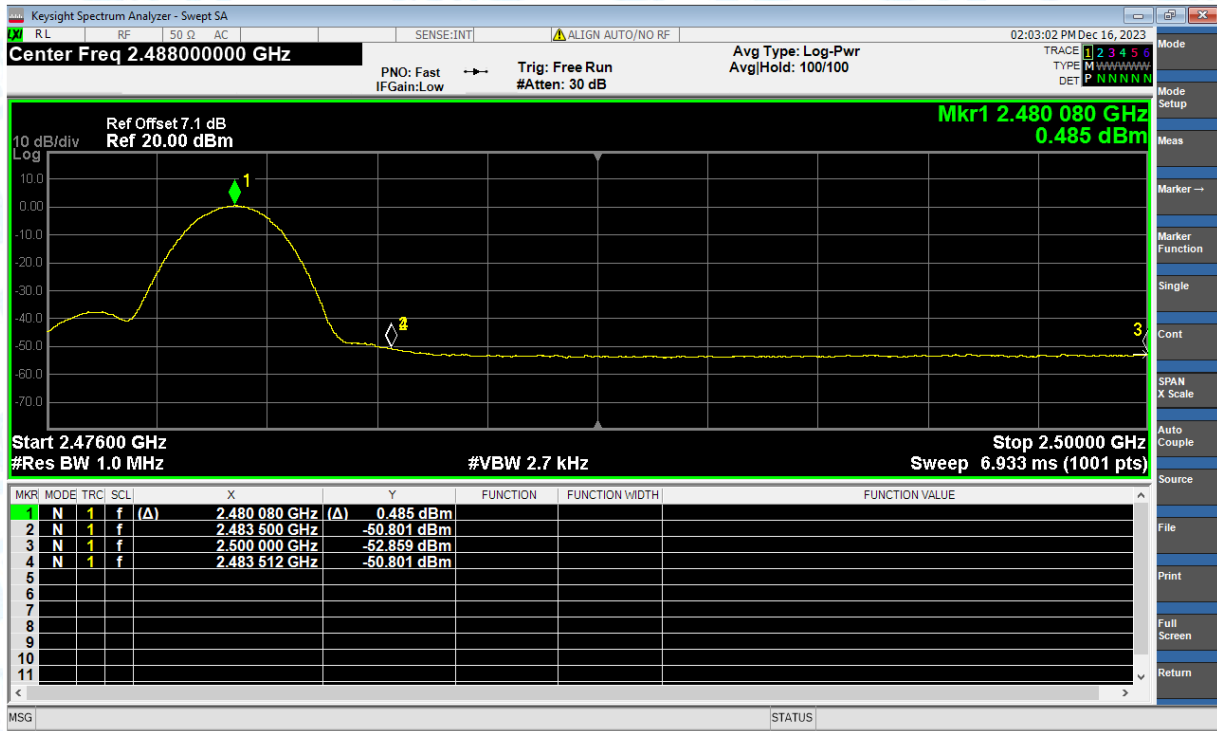
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



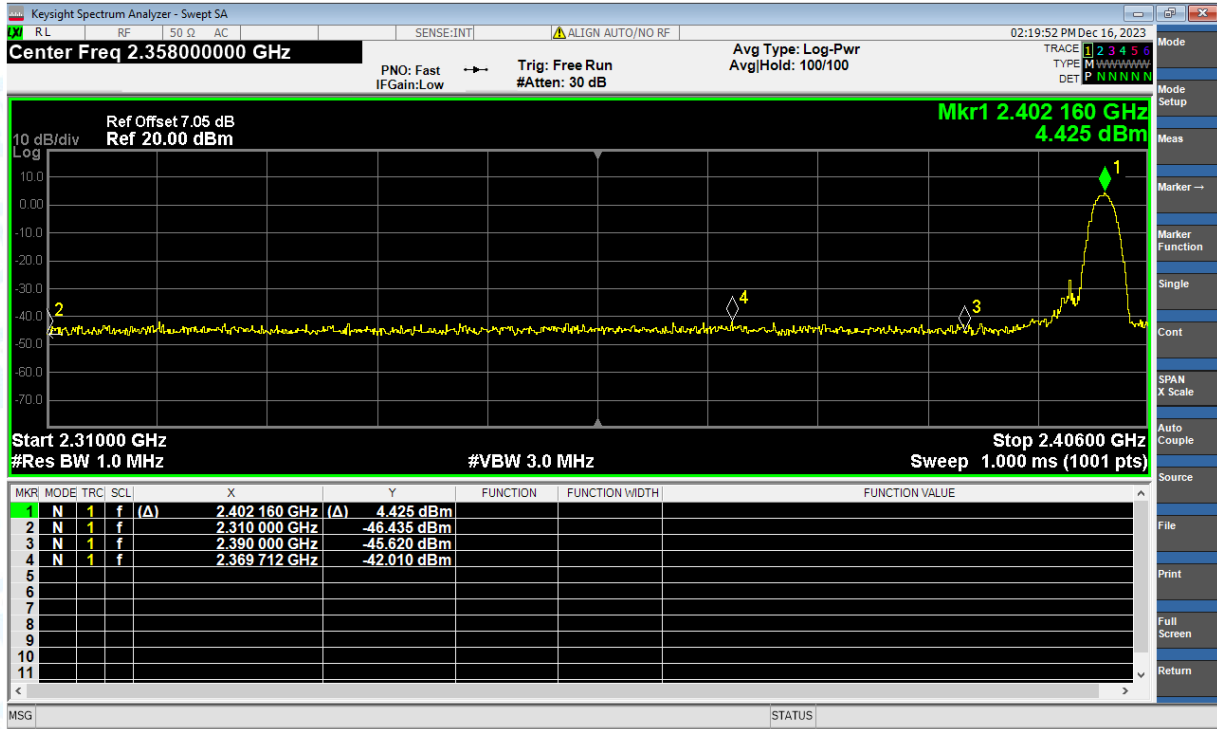
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



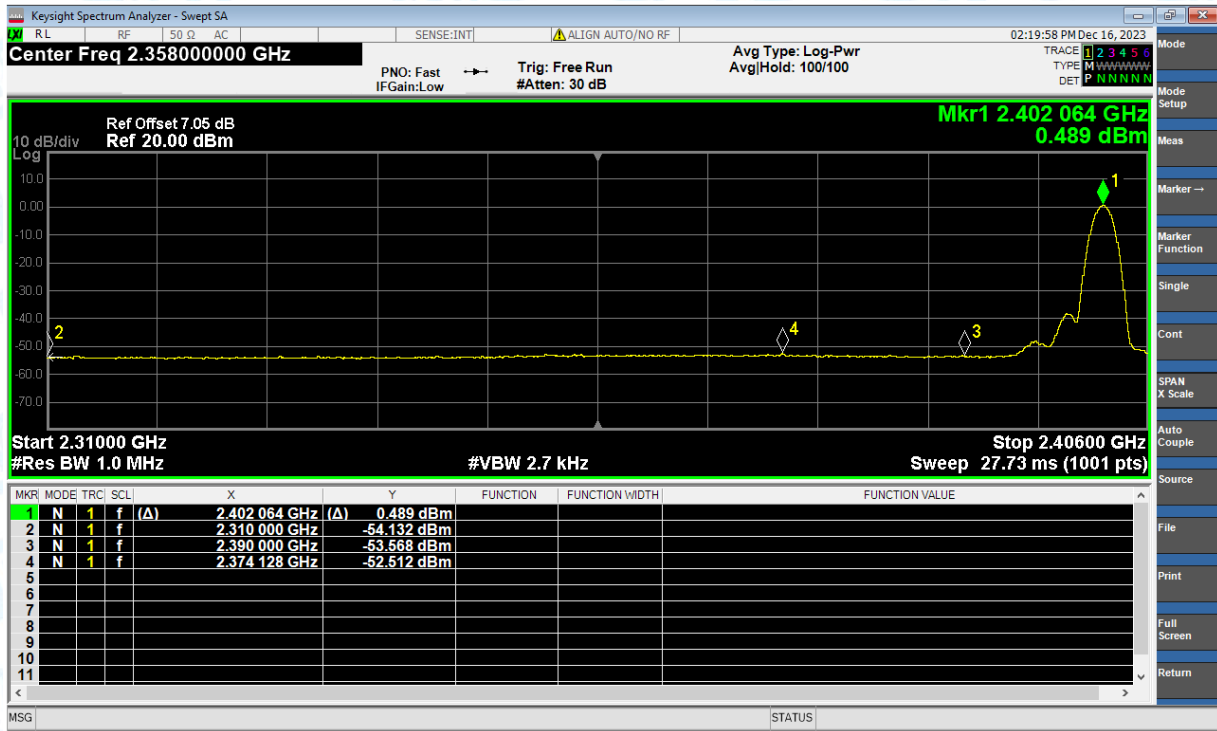
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



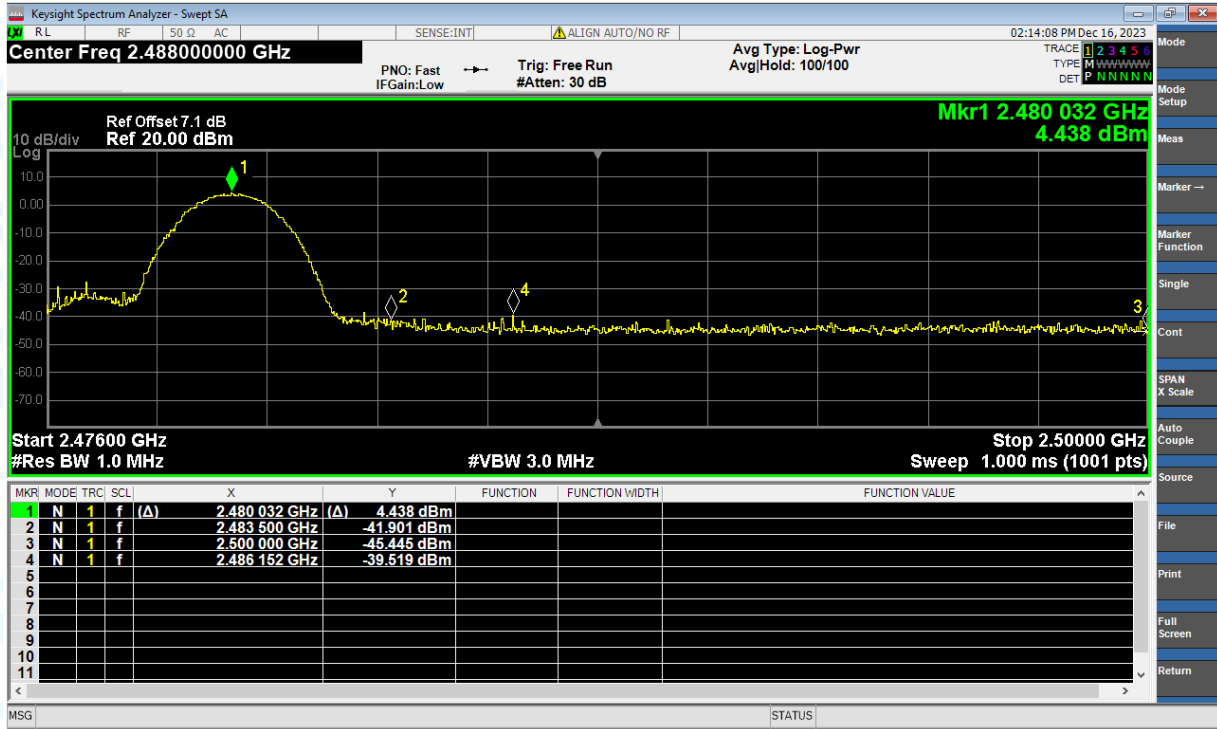
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



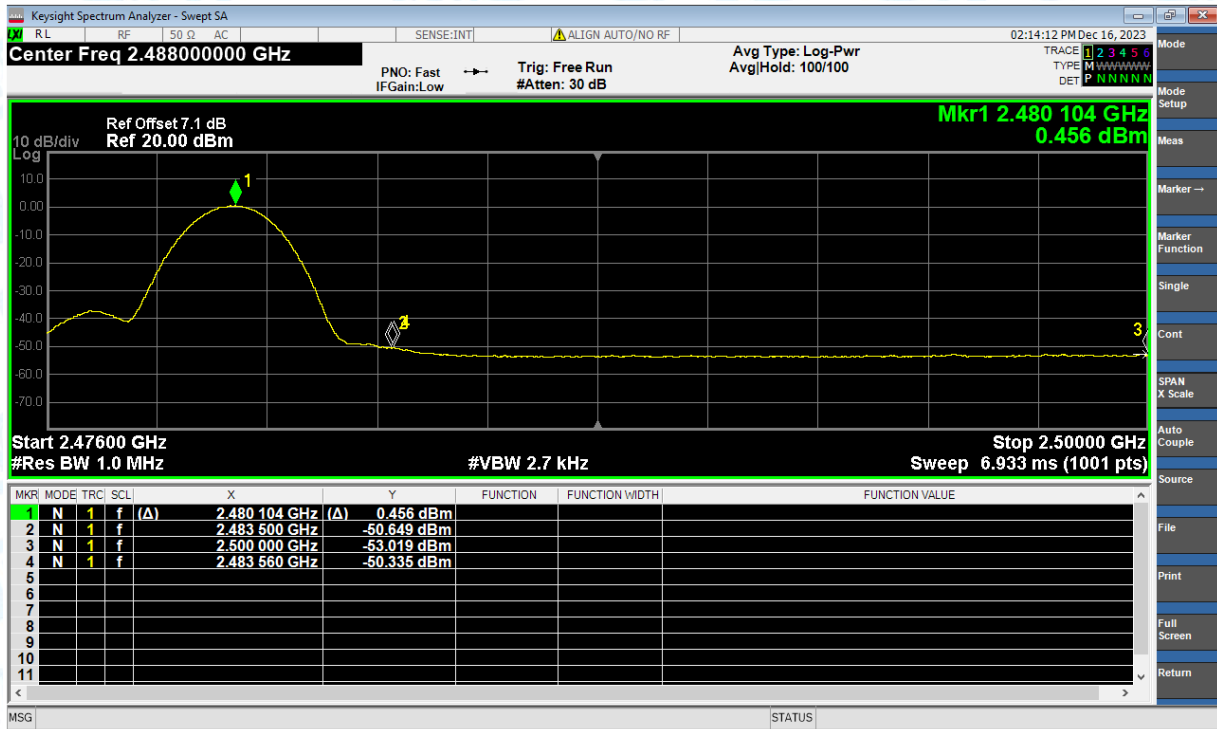
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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



9. Carrier Frequencies Separation

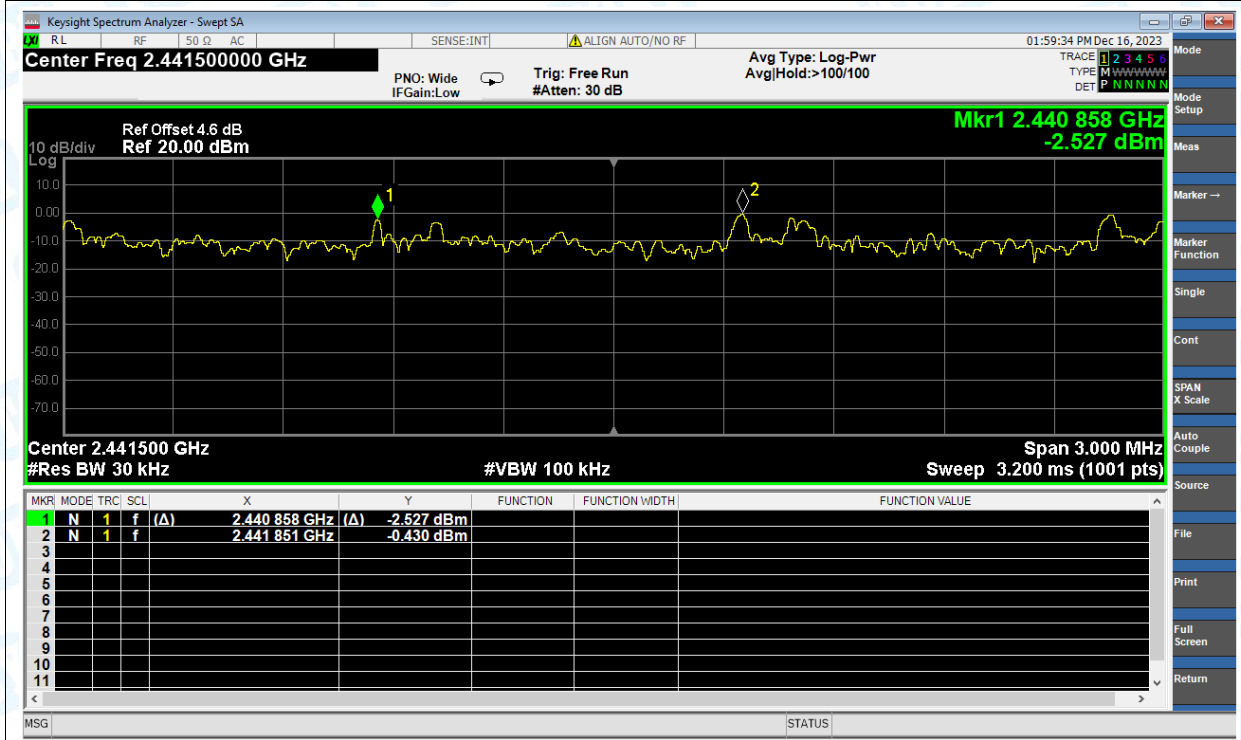
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.849	2442.001	1.152	0.587	Pass
NVNT	2-DH1	Ant1	2440.858	2441.851	0.993	0.833	Pass
NVNT	3-DH1	Ant1	2441.008	2441.86	0.852	0.827	Pass

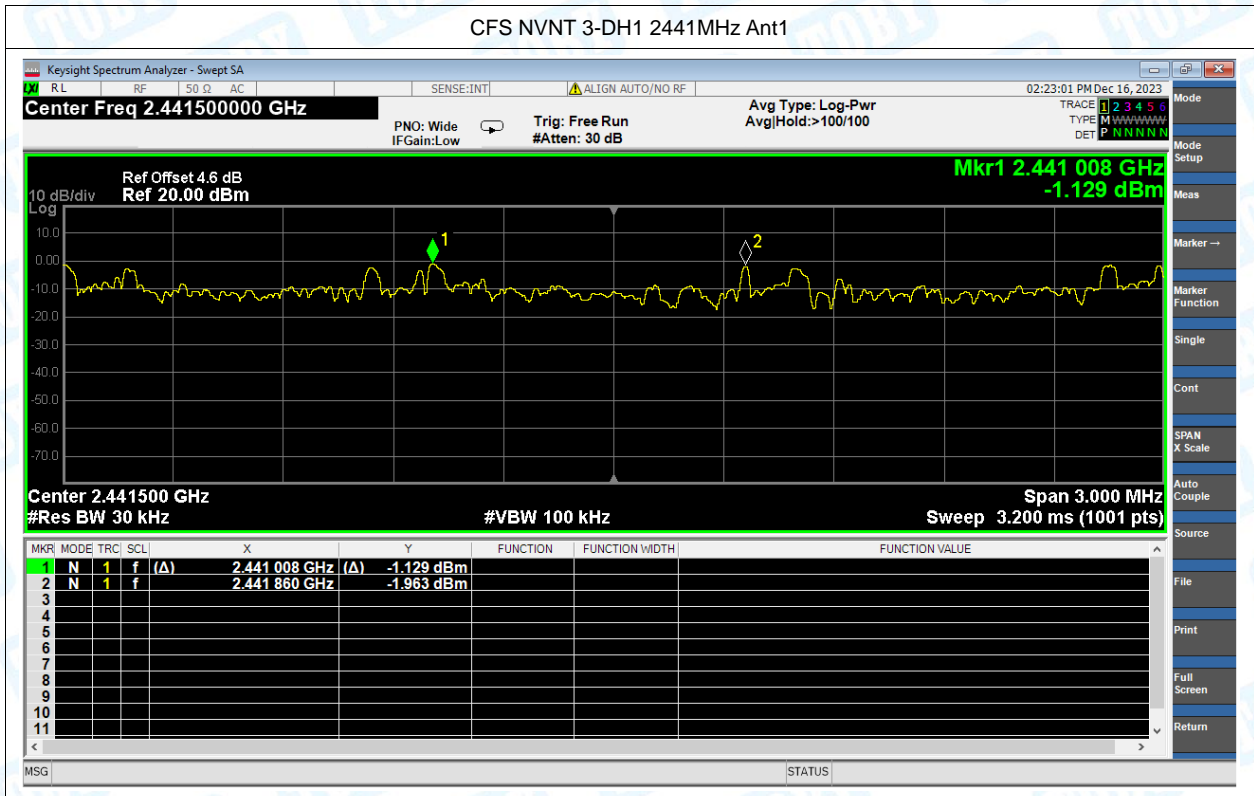
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



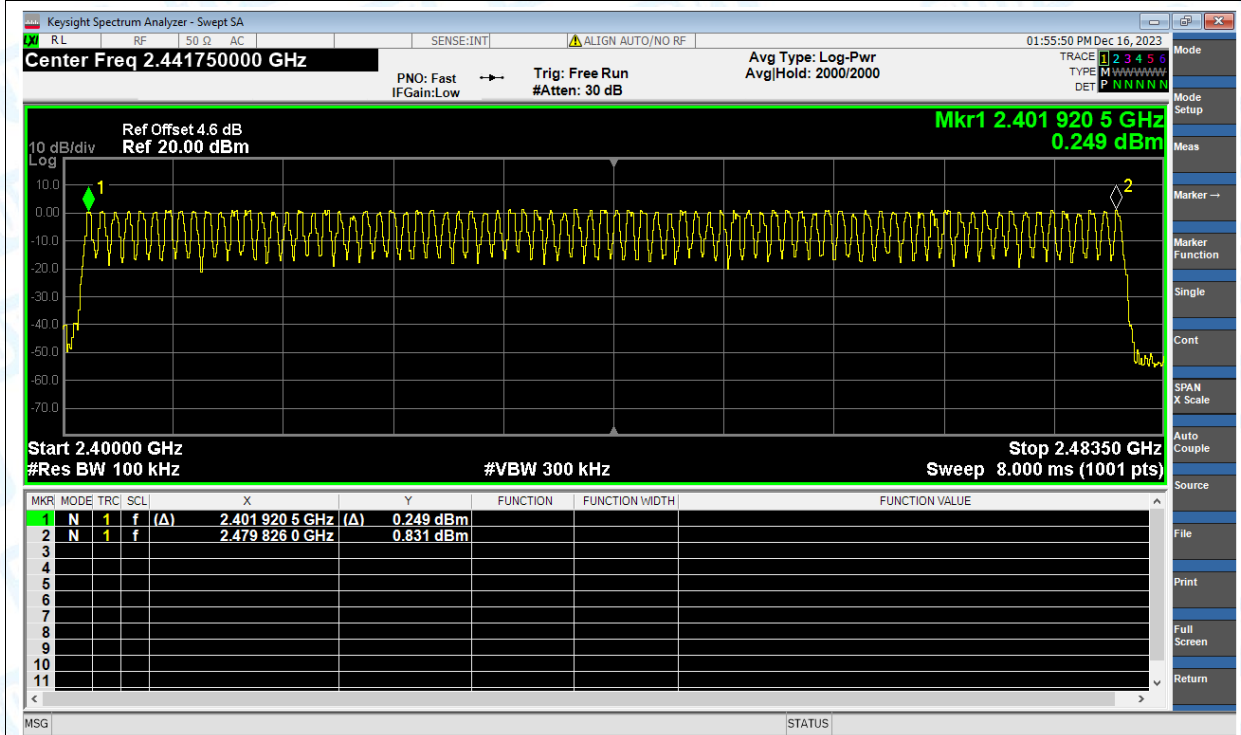


10. Number of Hopping Channel

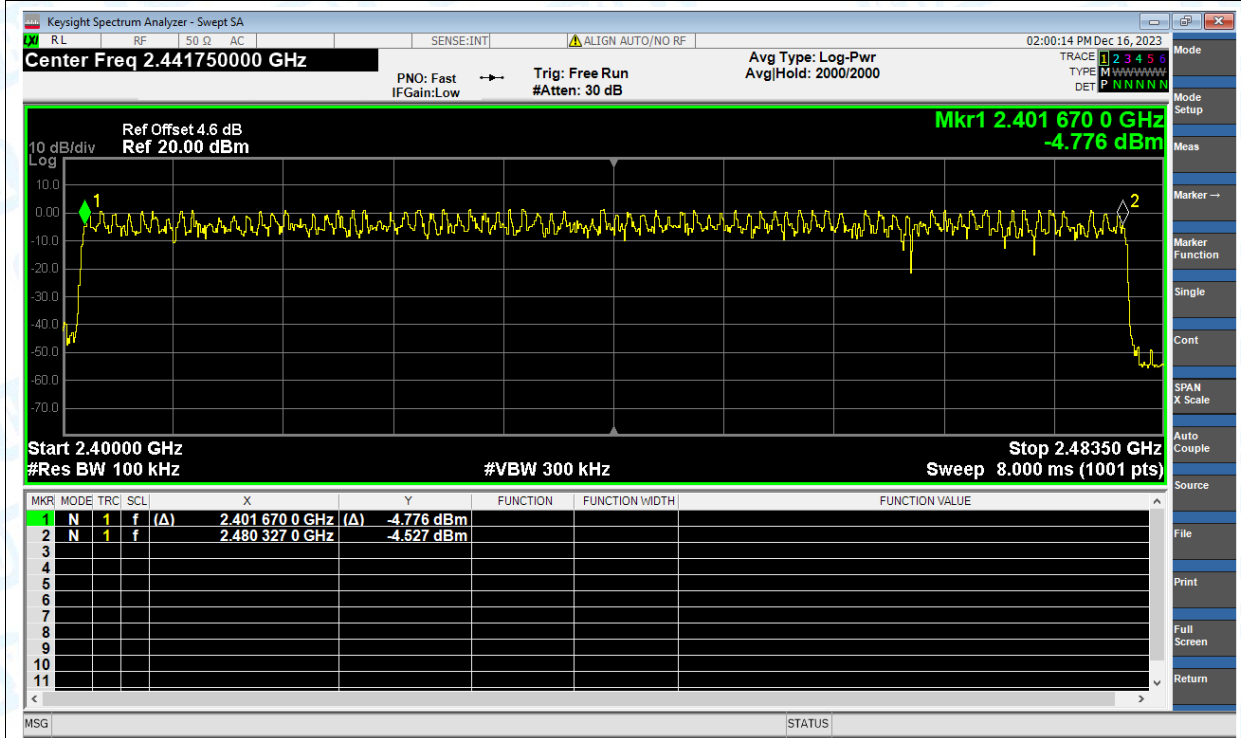
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

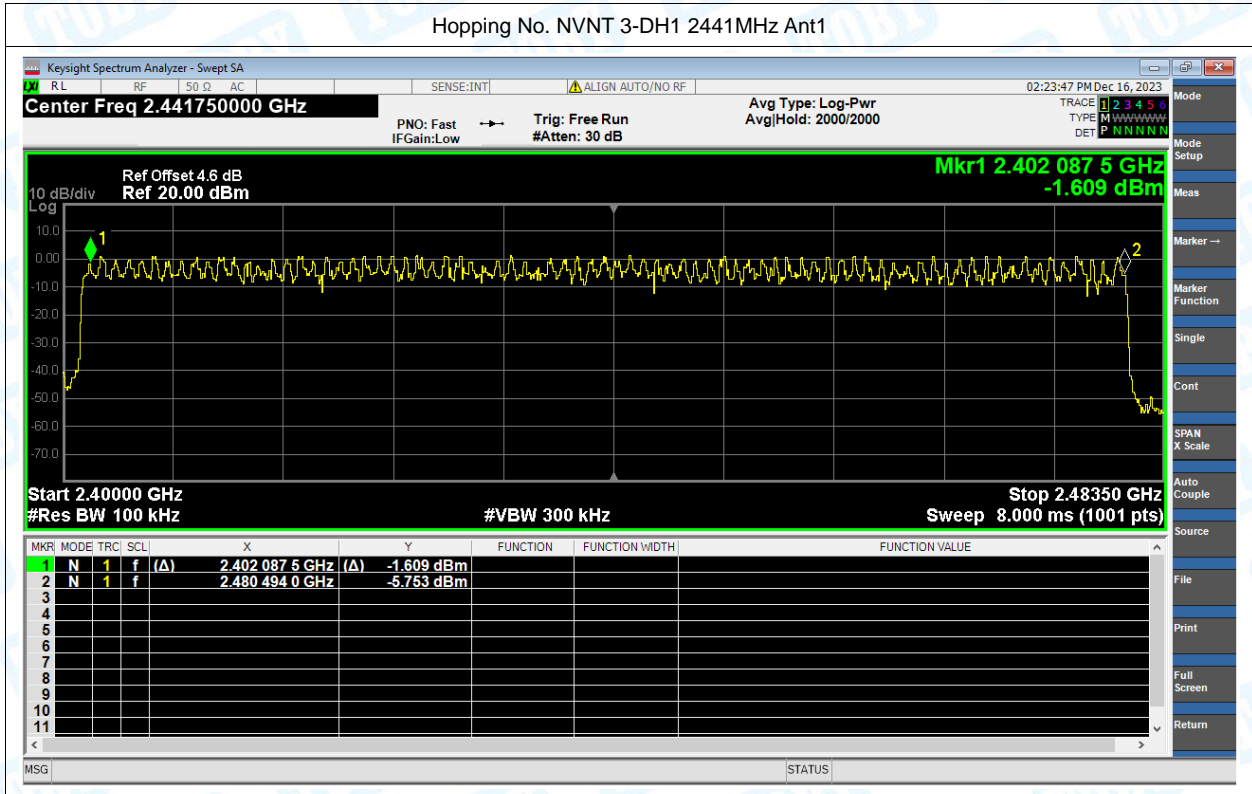
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



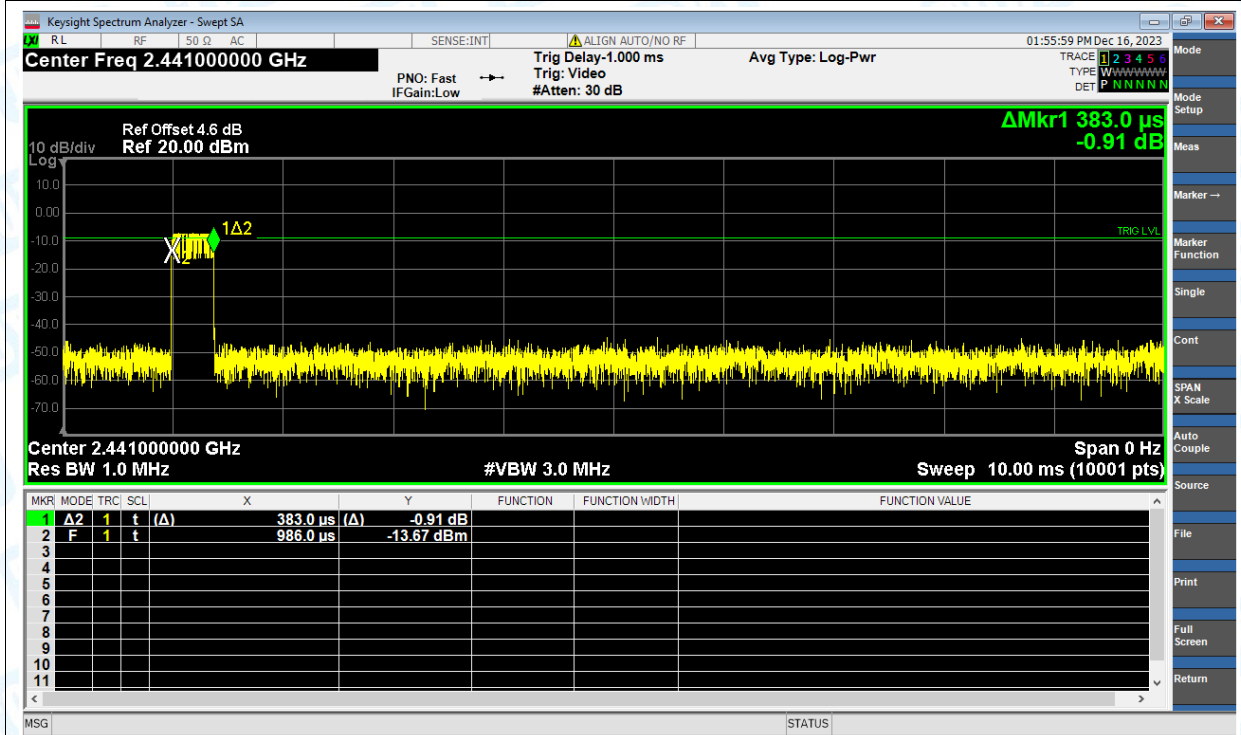


11. Dwell Time

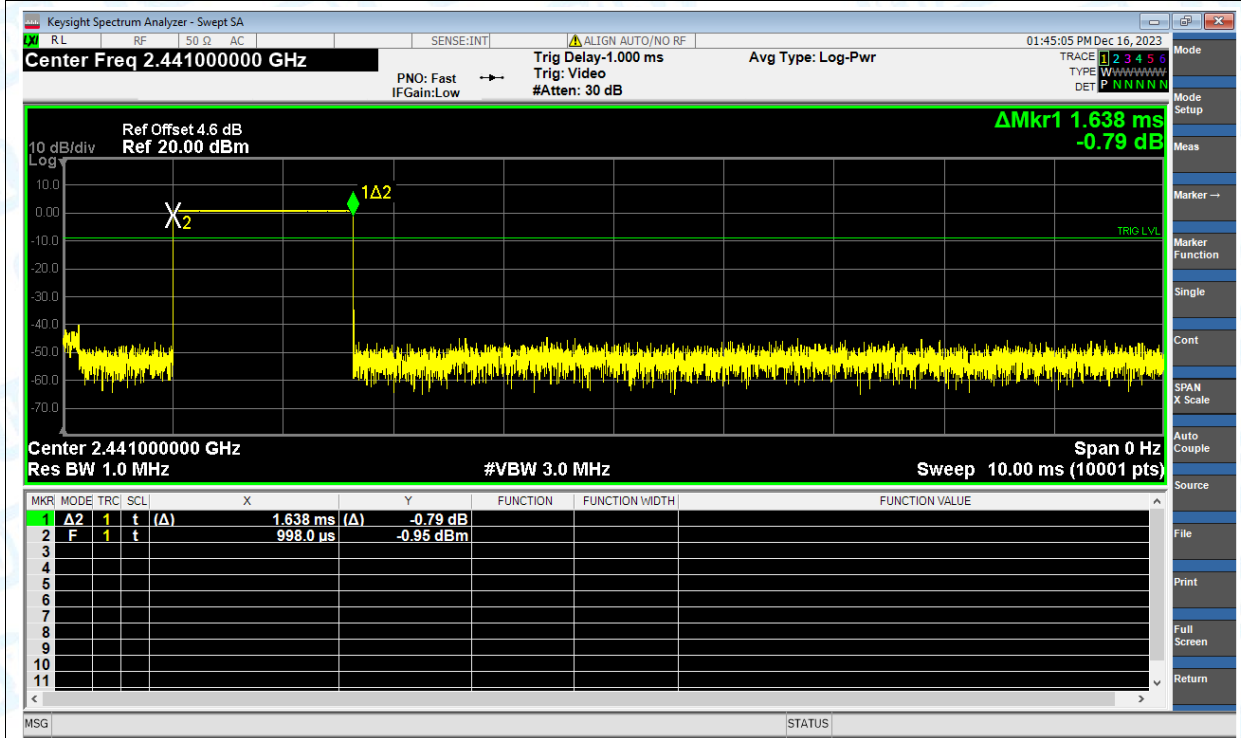
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.383	122.56	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.638	262.08	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.393	125.76	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.644	263.04	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.886	307.84	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	2.893	308.587	31600	400	Pass

Test Graphs

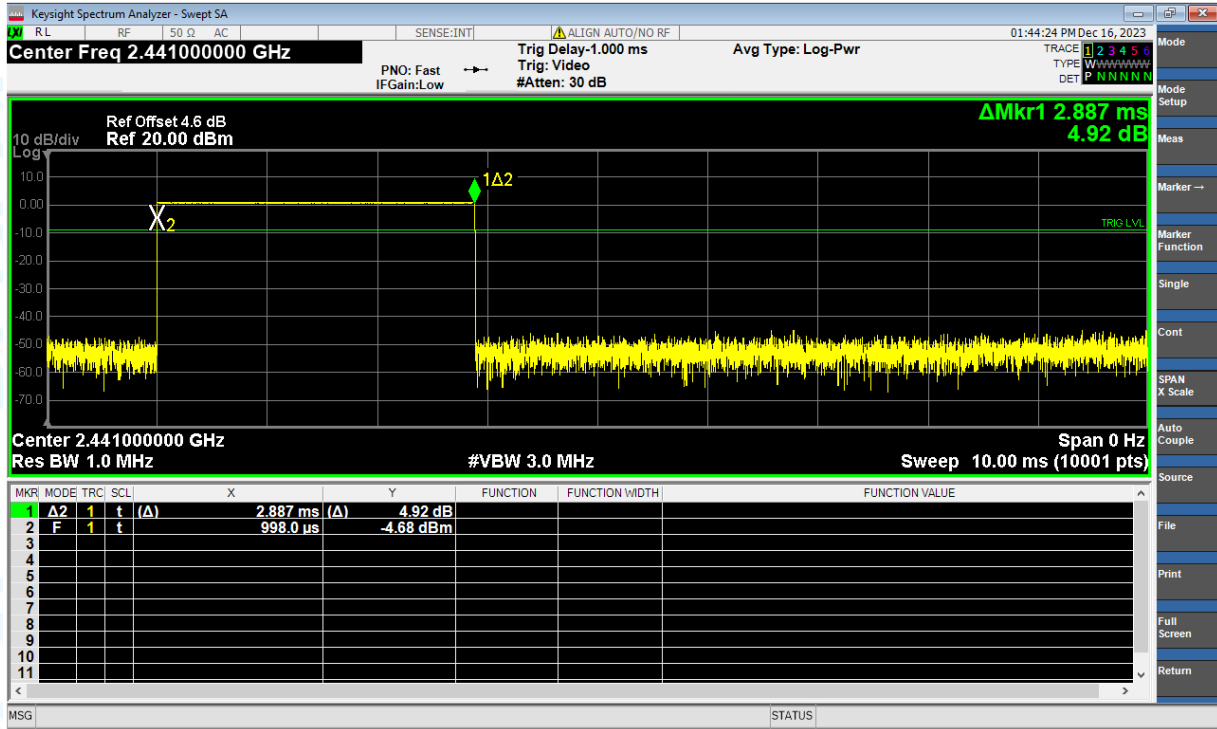
Dwell NVNT 1-DH1 2441MHz Ant1



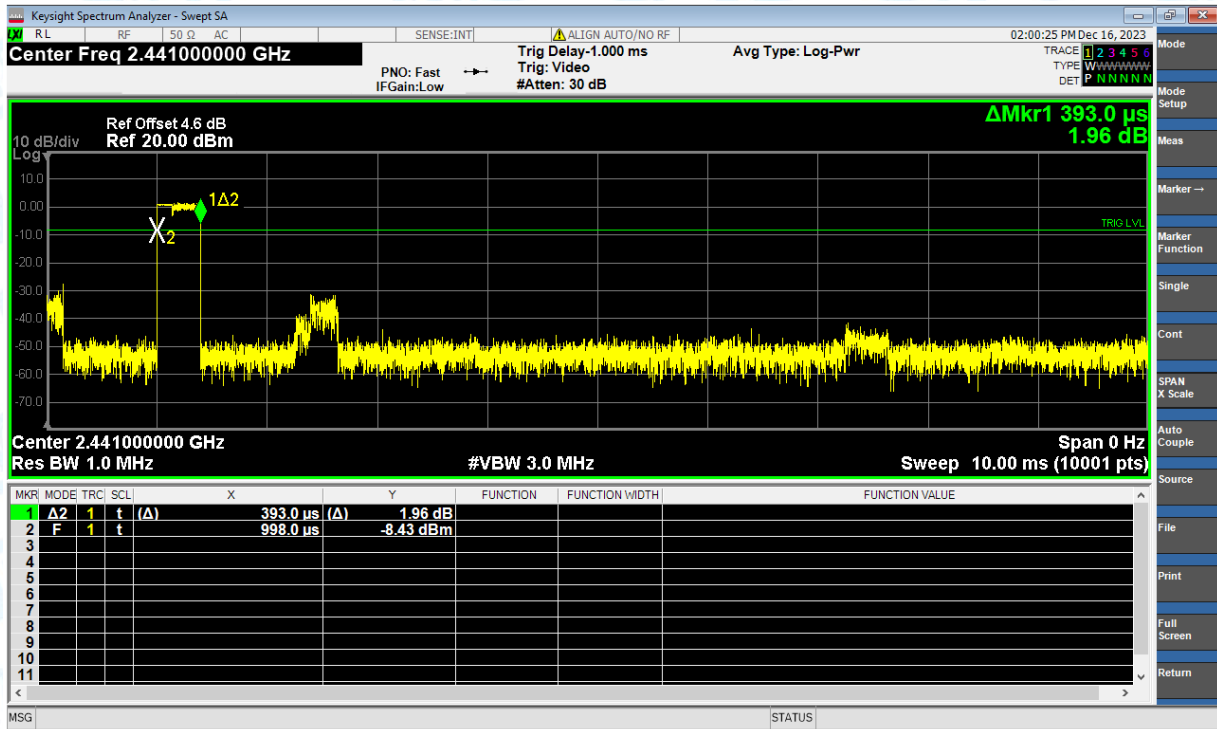
Dwell NVNT 1-DH3 2441MHz Ant1



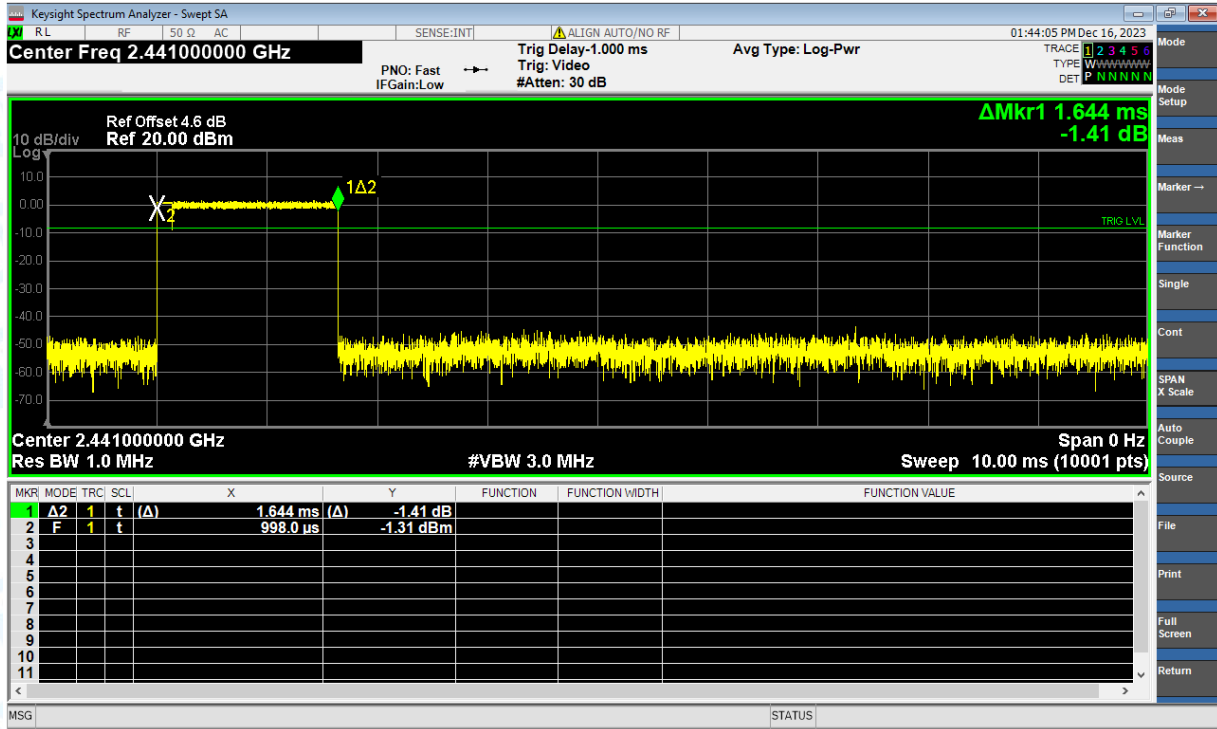
Dwell NVNT 1-DH5 2441MHz Ant1



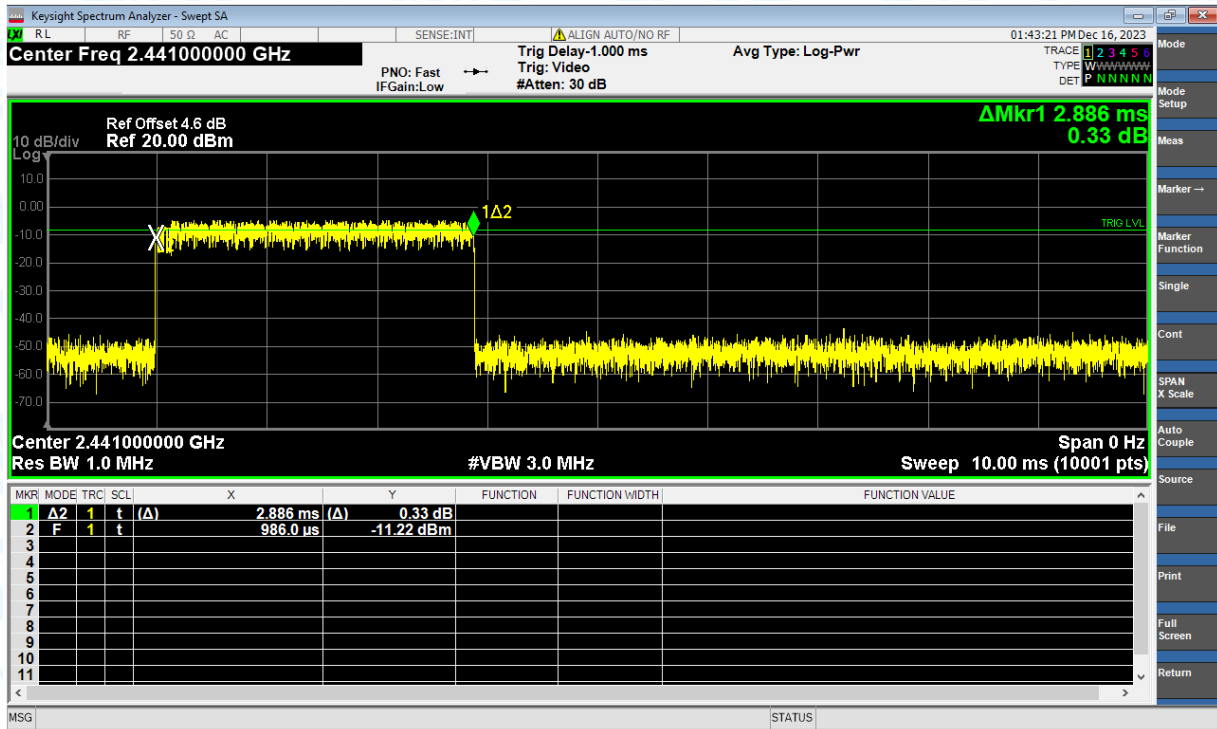
Dwell NVNT 2-DH1 2441MHz Ant1



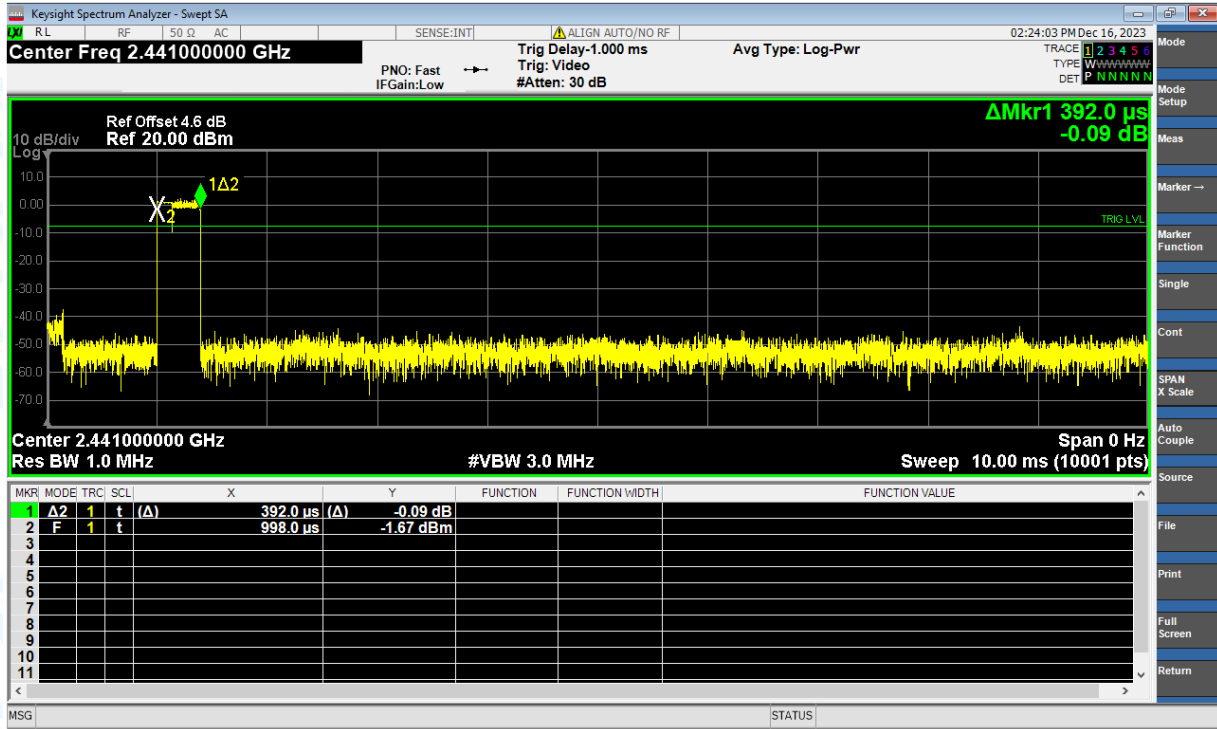
Dwell NVNT 2-DH3 2441MHz Ant1



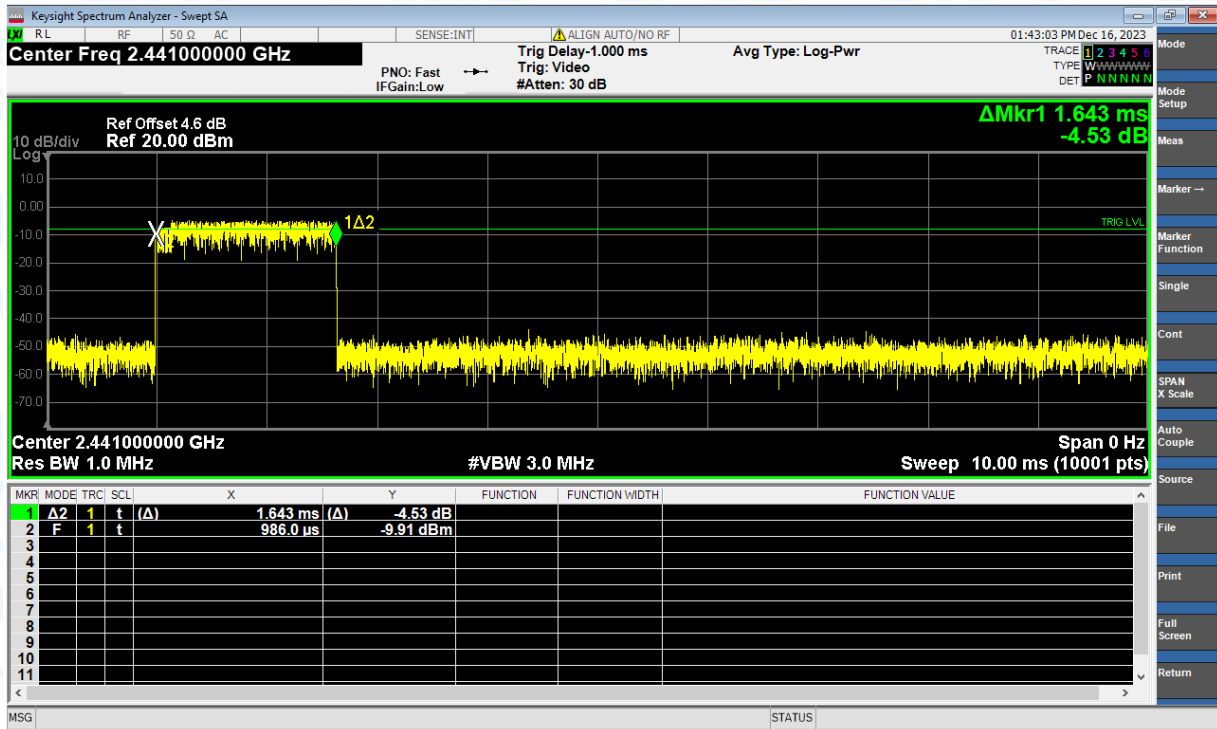
Dwell NVNT 2-DH5 2441MHz Ant1

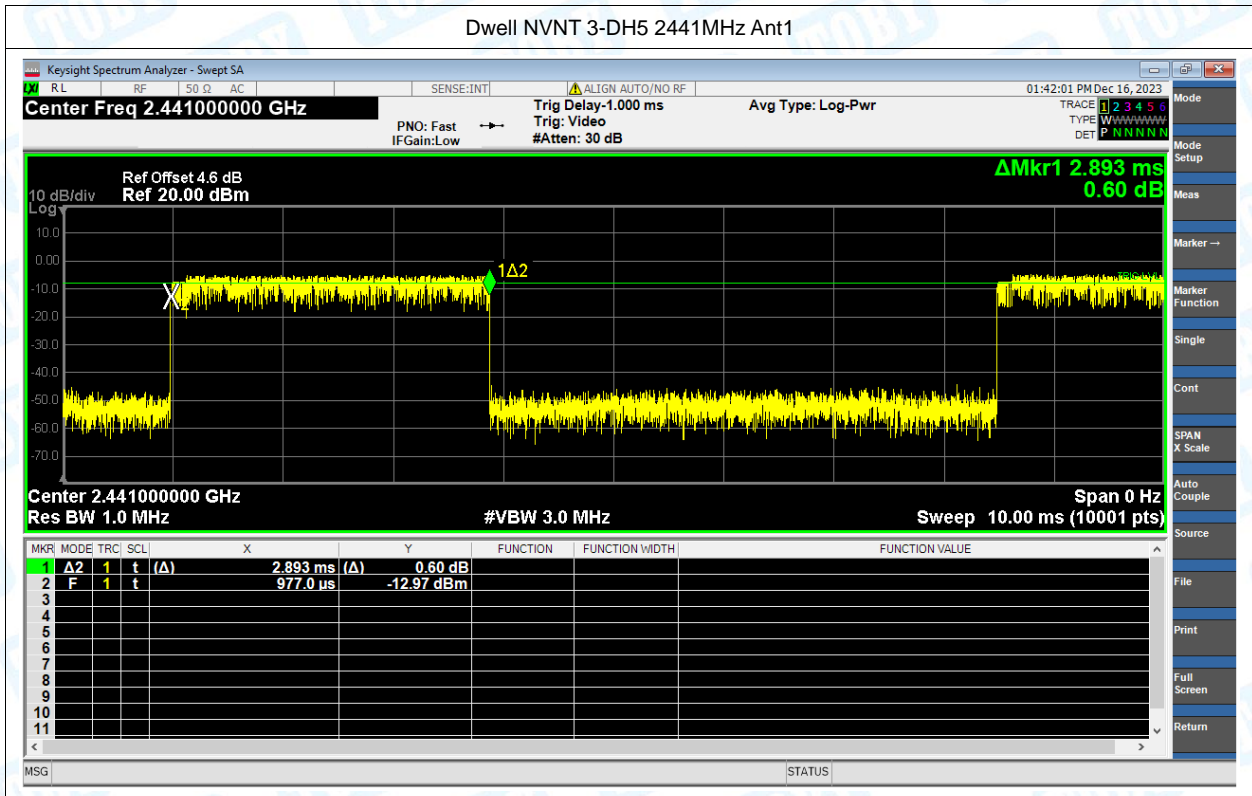


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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