

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

General Description of EUT	
Product Name:	2.4GHz Digital Wireless Audio Parent Unit
Test Model:	HB168
Sample ID:	202311-0255-1-2#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 5V
Test Engineer:	Li ying jing
Note: For a more detailed features description, please refer to the report TBR-C-202311-0255-1 The report only show the worst case data.	

Contents

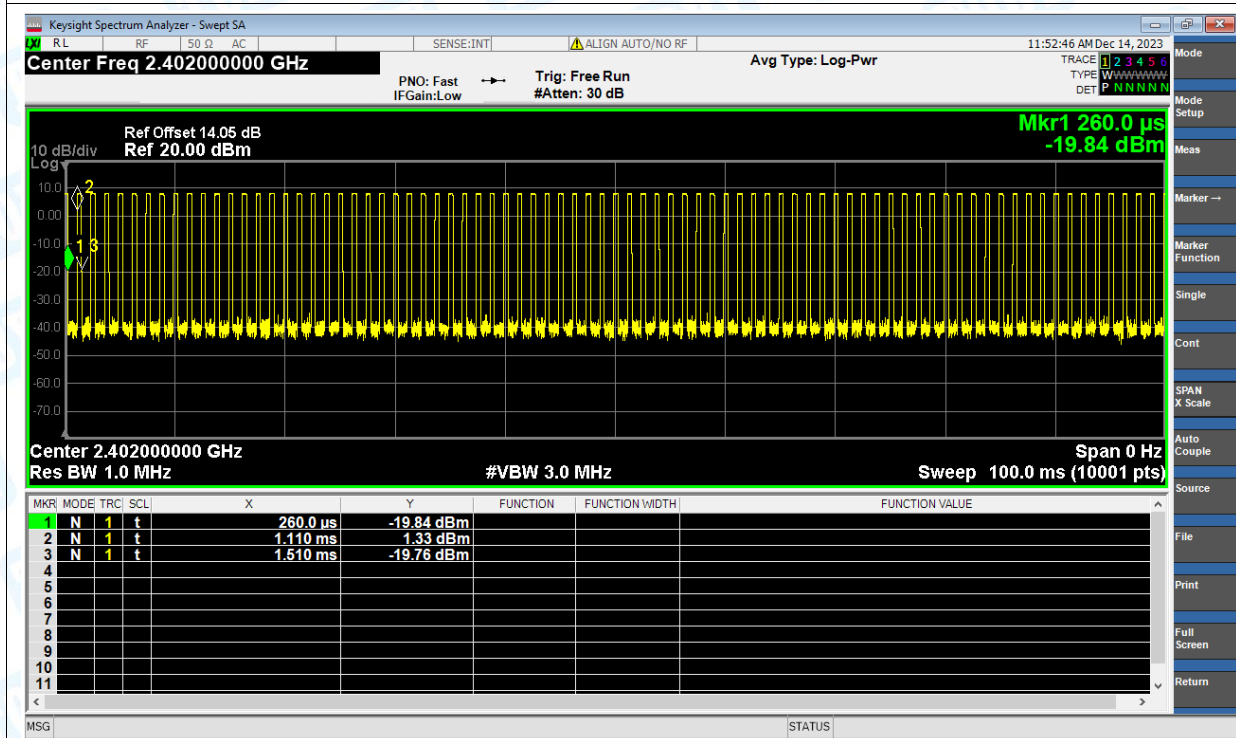
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1. Duty Cycle

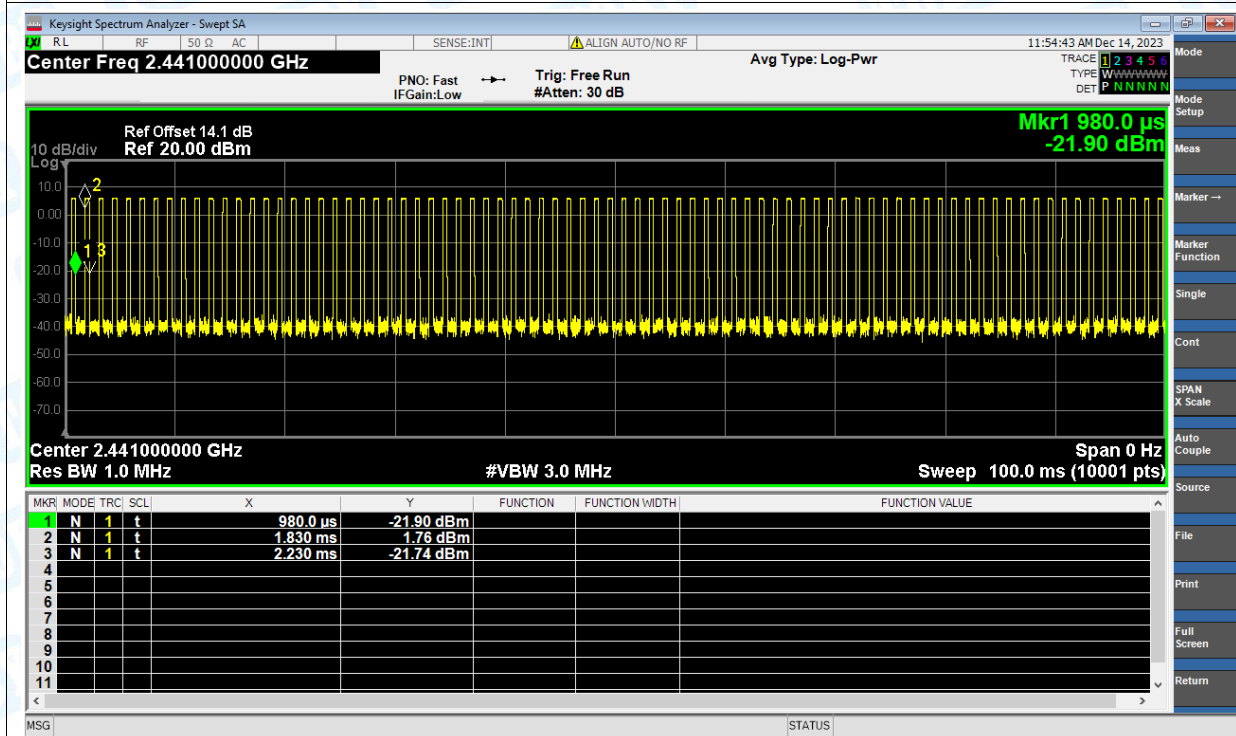
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	32	4.95	2.5
NVNT	1-DH1	2441	Ant1	32	4.95	2.5
NVNT	1-DH1	2480	Ant1	32	4.95	2.5
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT	3-DH1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

Test Graphs

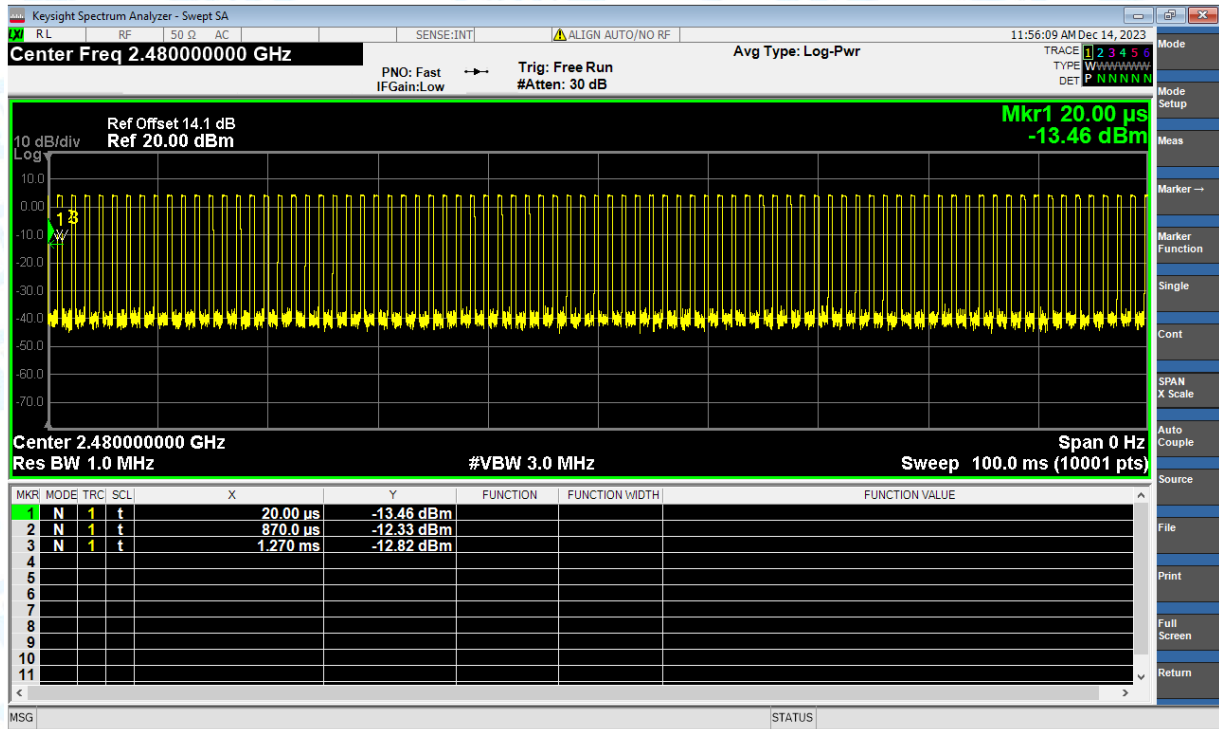
Duty Cycle NVNT 1-DH1 2402MHz Ant1



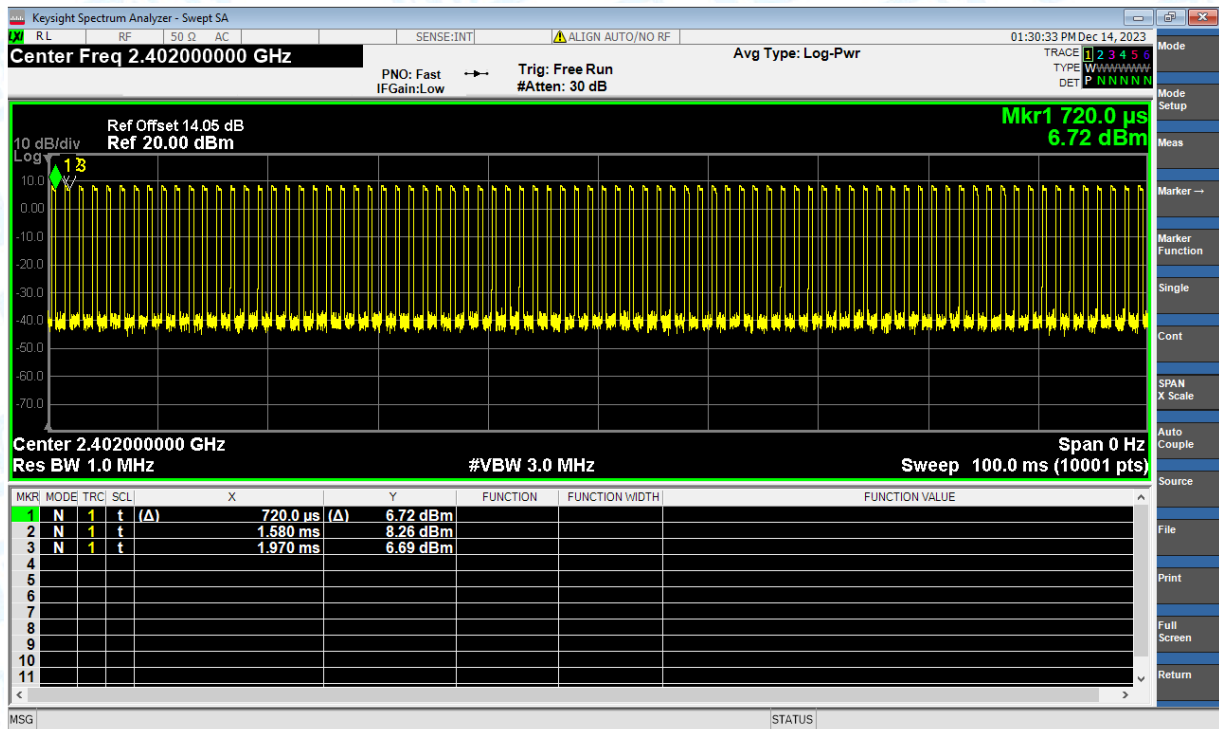
Duty Cycle NVNT 1-DH1 2441MHz Ant1



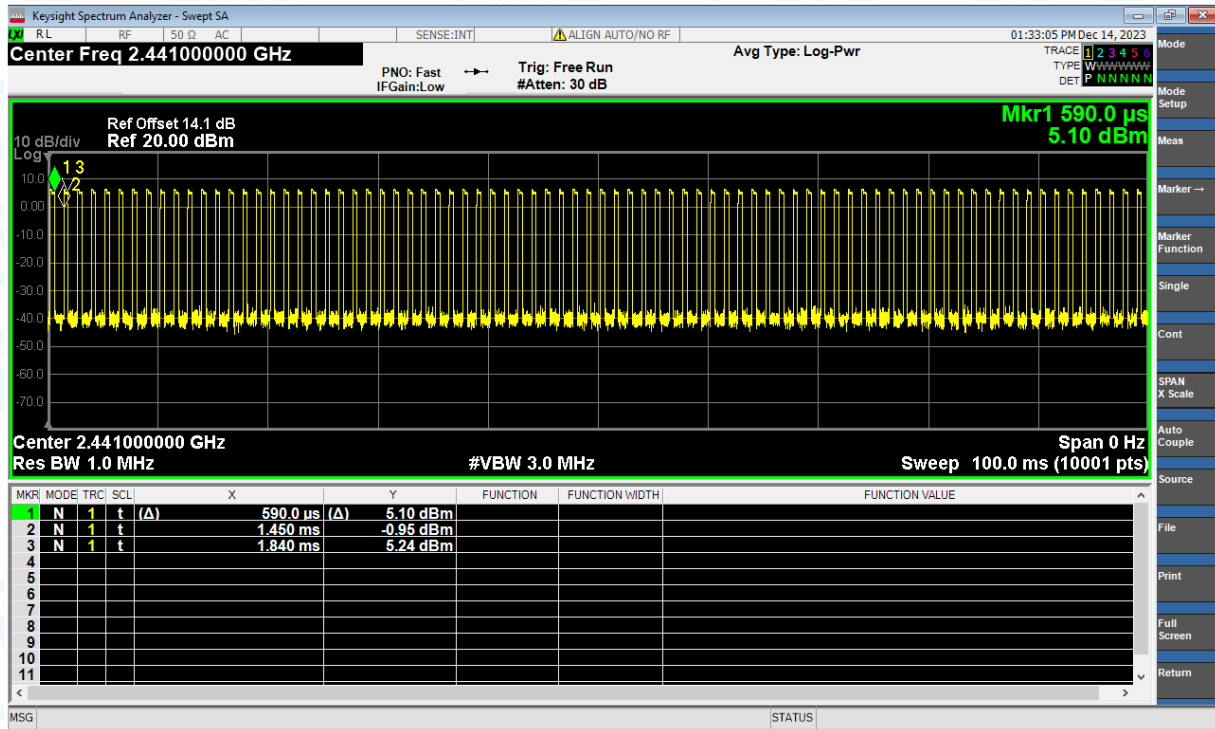
Duty Cycle NVNT 1-DH1 2480MHz Ant1



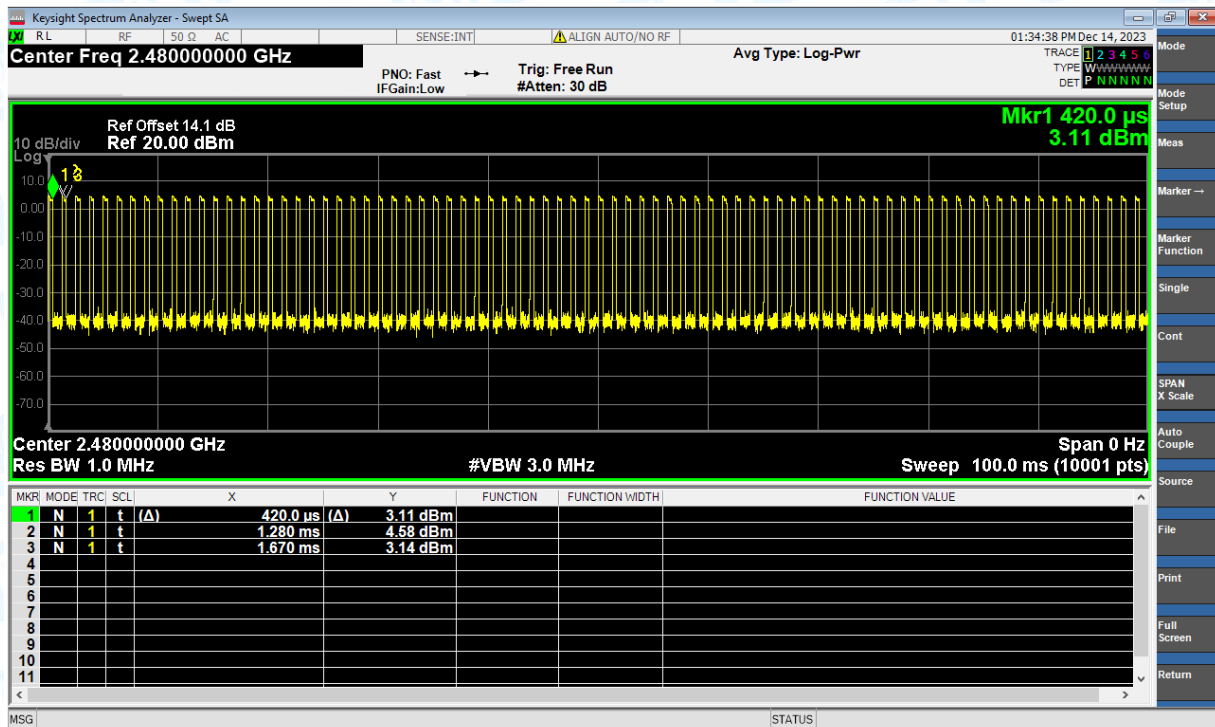
Duty Cycle NVNT 2-DH1 2402MHz Ant1



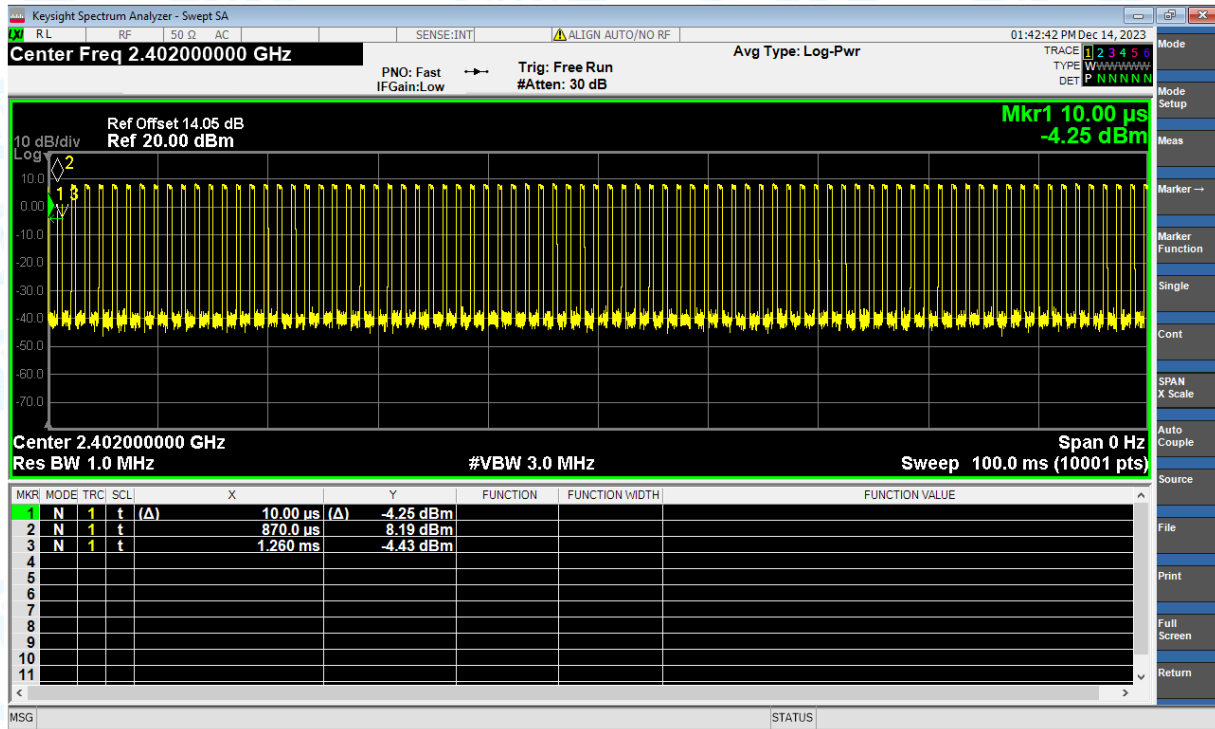
Duty Cycle NVNT 2-DH1 2441MHz Ant1



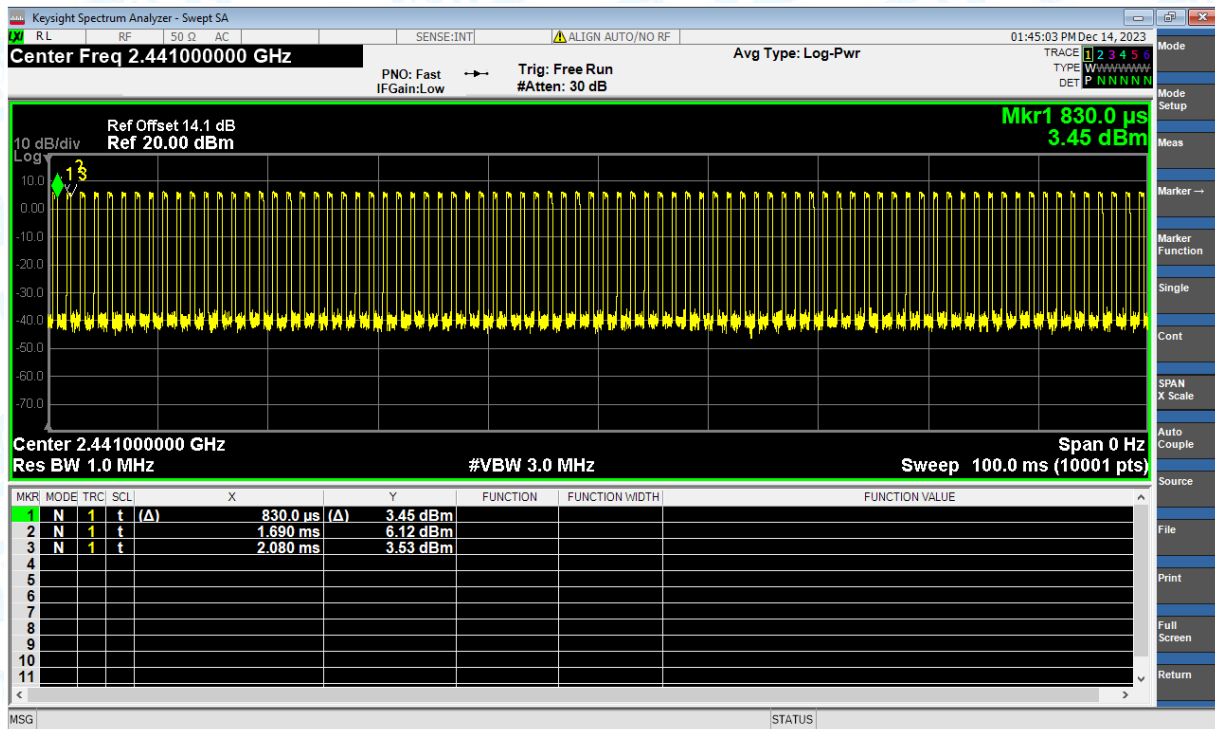
Duty Cycle NVNT 2-DH1 2480MHz Ant1

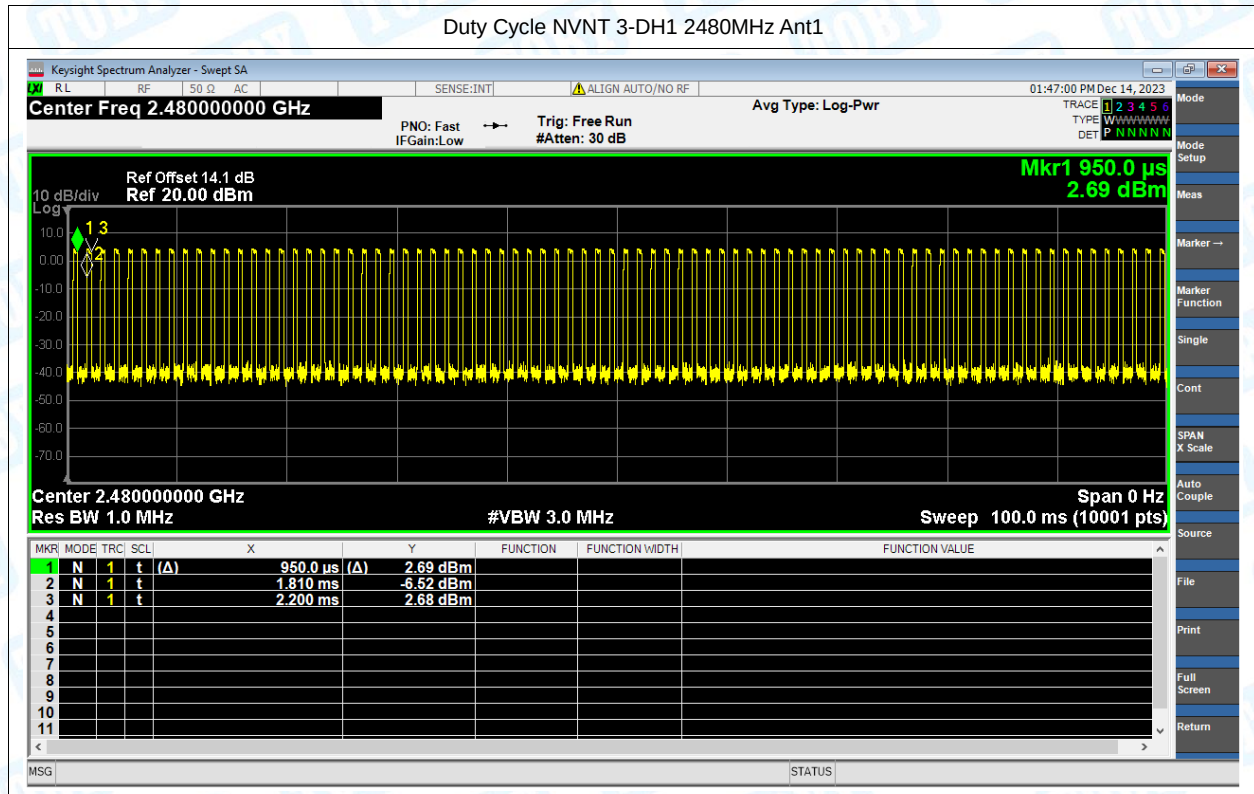


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1





2. Maximum Conducted Output Power

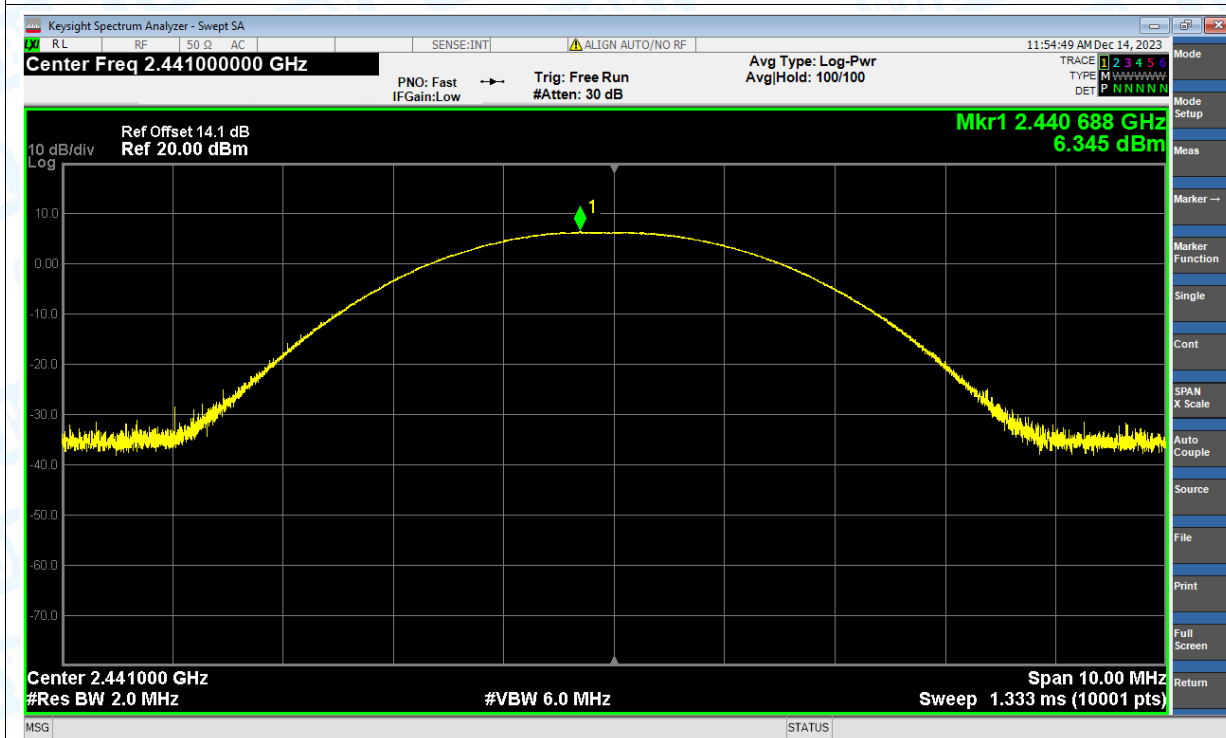
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	8.387	21	Pass
NVNT	1-DH1	2441	Ant1	6.345	21	Pass
NVNT	1-DH1	2480	Ant1	4.540	21	Pass
NVNT	2-DH1	2402	Ant1	8.536	21	Pass
NVNT	2-DH1	2441	Ant1	6.559	21	Pass
NVNT	2-DH1	2480	Ant1	4.723	21	Pass
NVNT	3-DH1	2402	Ant1	8.419	21	Pass
NVNT	3-DH1	2441	Ant1	6.433	21	Pass
NVNT	3-DH1	2480	Ant1	4.600	21	Pass

Test Graphs

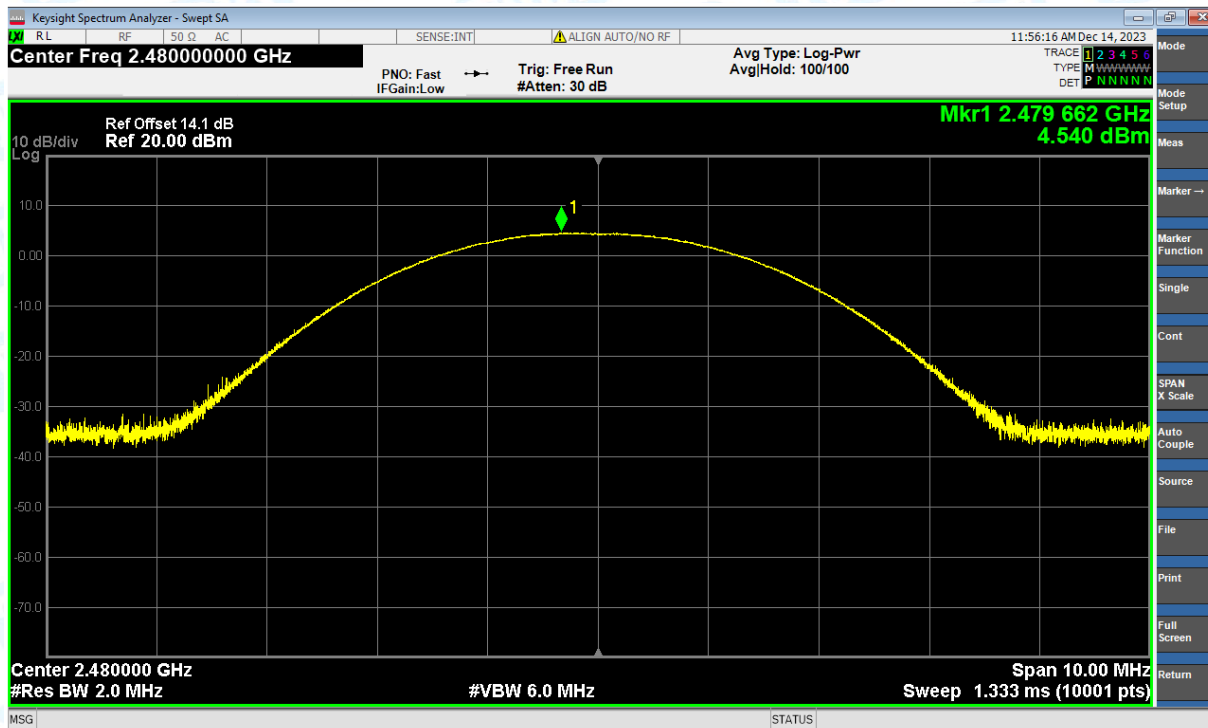
Power NVNT 1-DH1 2402MHz Ant1



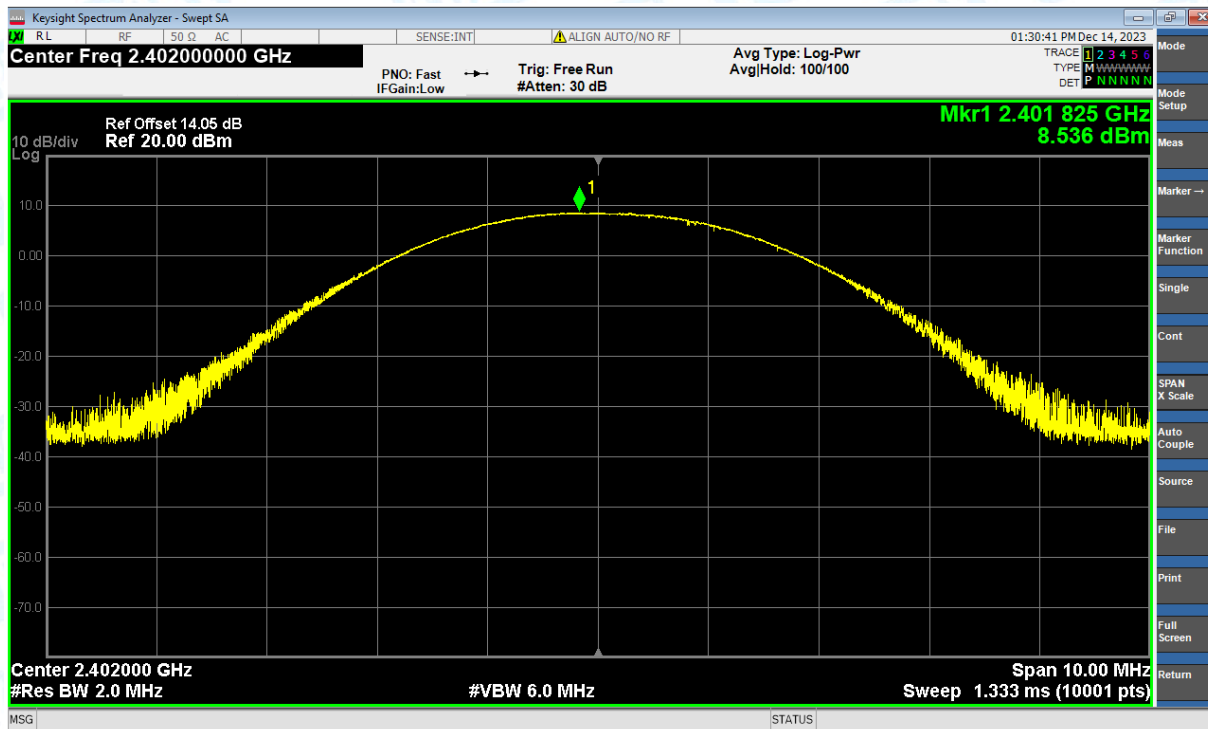
Power NVNT 1-DH1 2441MHz Ant1



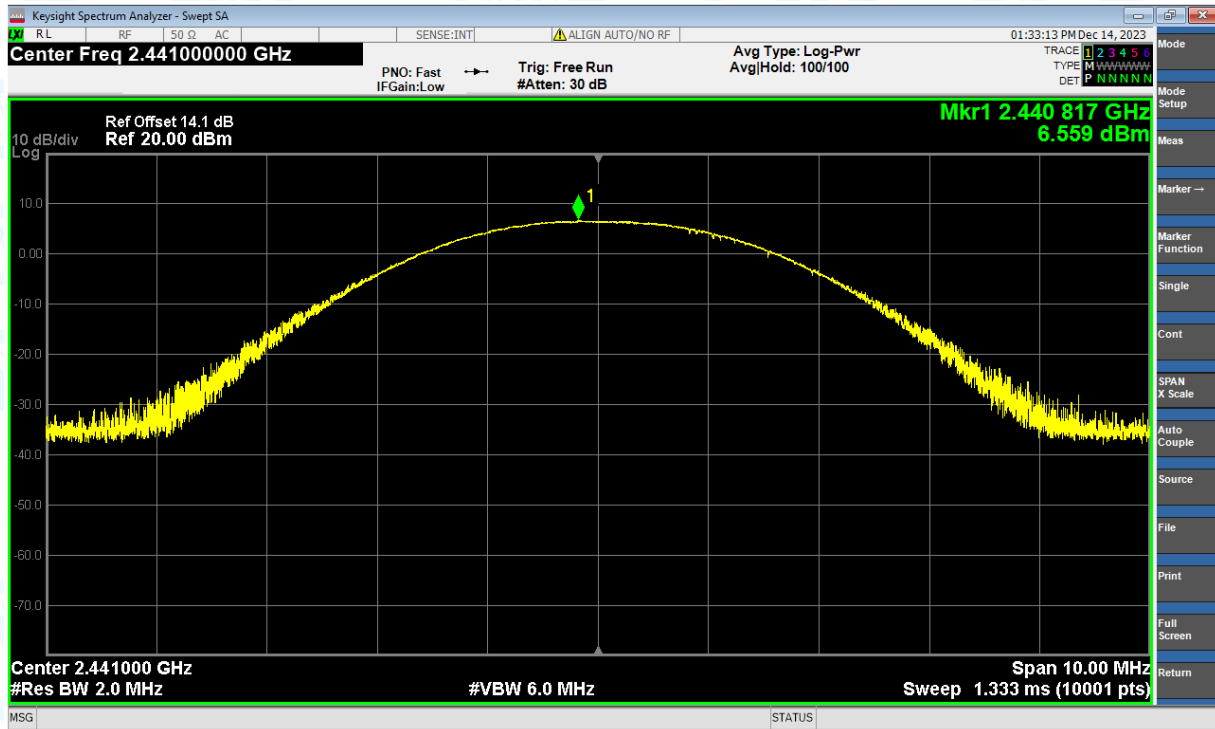
Power NVNT 1-DH1 2480MHz Ant1



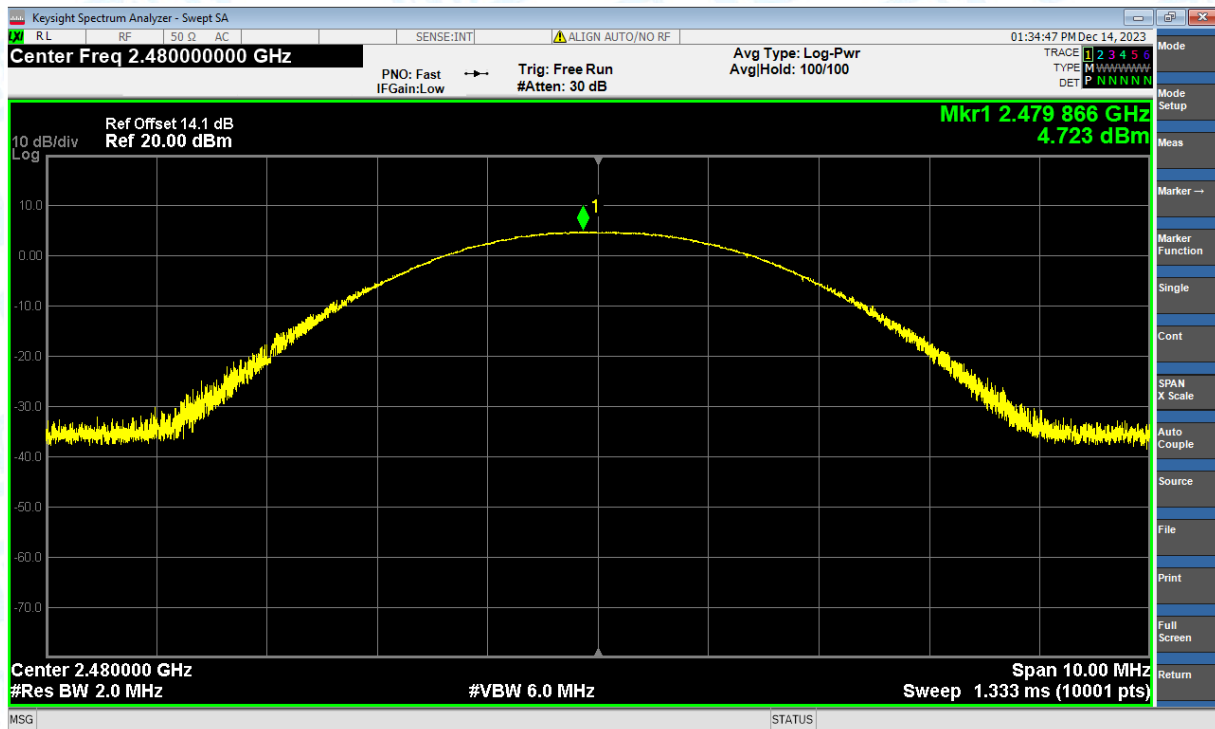
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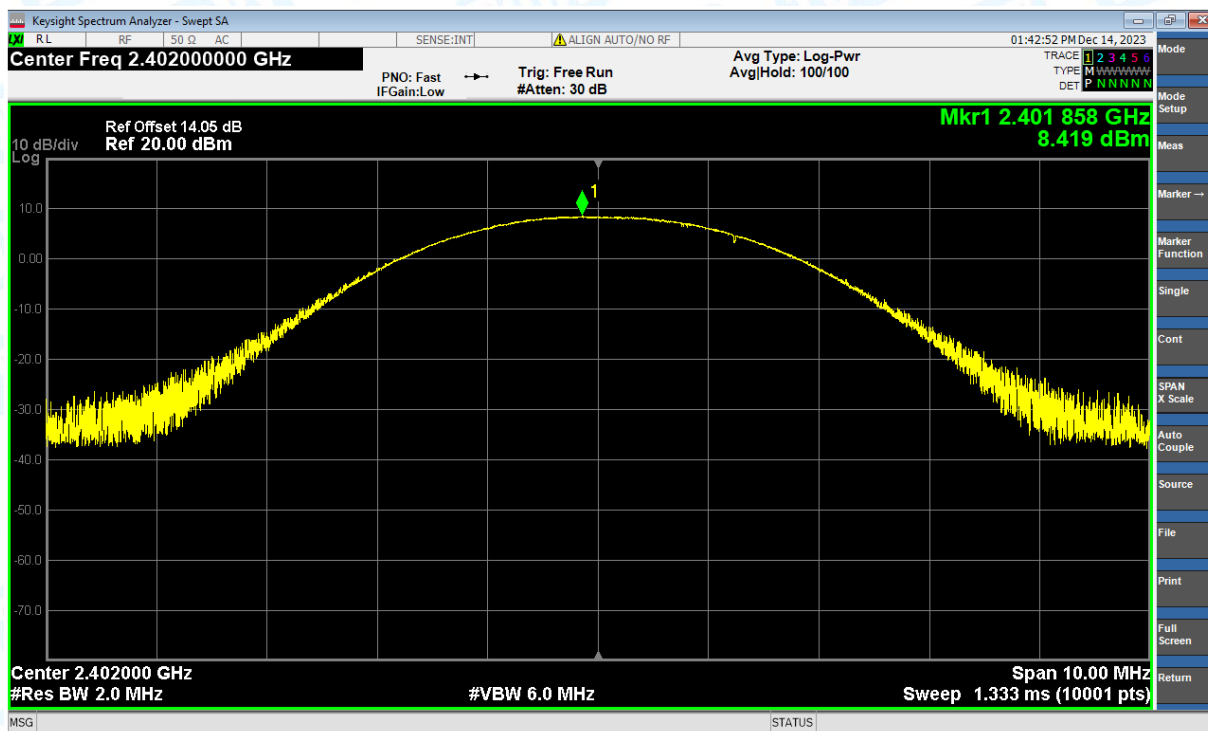
Power NVNT 2-DH1 2441MHz Ant1



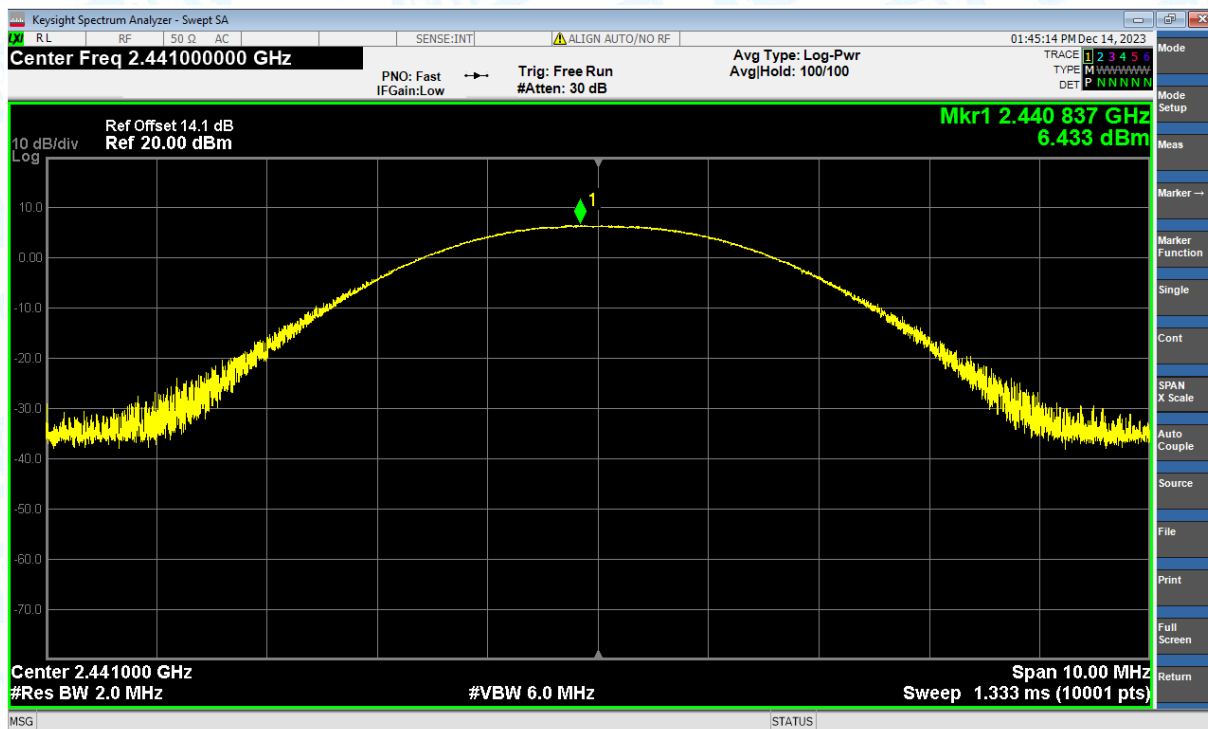
Power NVNT 2-DH1 2480MHz Ant1



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	0.92	----	Pass
NVNT	1-DH1	2441	Ant1	0.93	----	Pass
NVNT	1-DH1	2480	Ant1	0.95	----	Pass
NVNT	2-DH1	2402	Ant1	1.26	----	Pass
NVNT	2-DH1	2441	Ant1	1.21	----	Pass
NVNT	2-DH1	2480	Ant1	1.20	----	Pass
NVNT	3-DH1	2402	Ant1	1.20	----	Pass
NVNT	3-DH1	2441	Ant1	1.19	----	Pass
NVNT	3-DH1	2480	Ant1	1.20	----	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



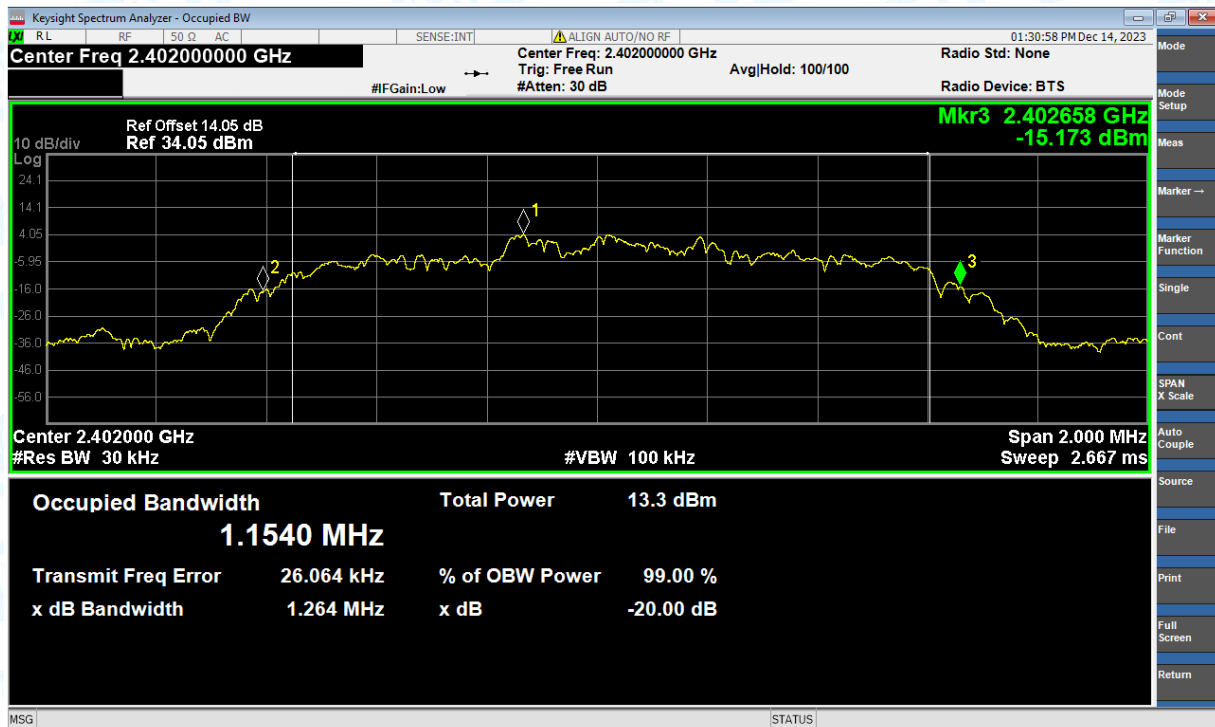
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



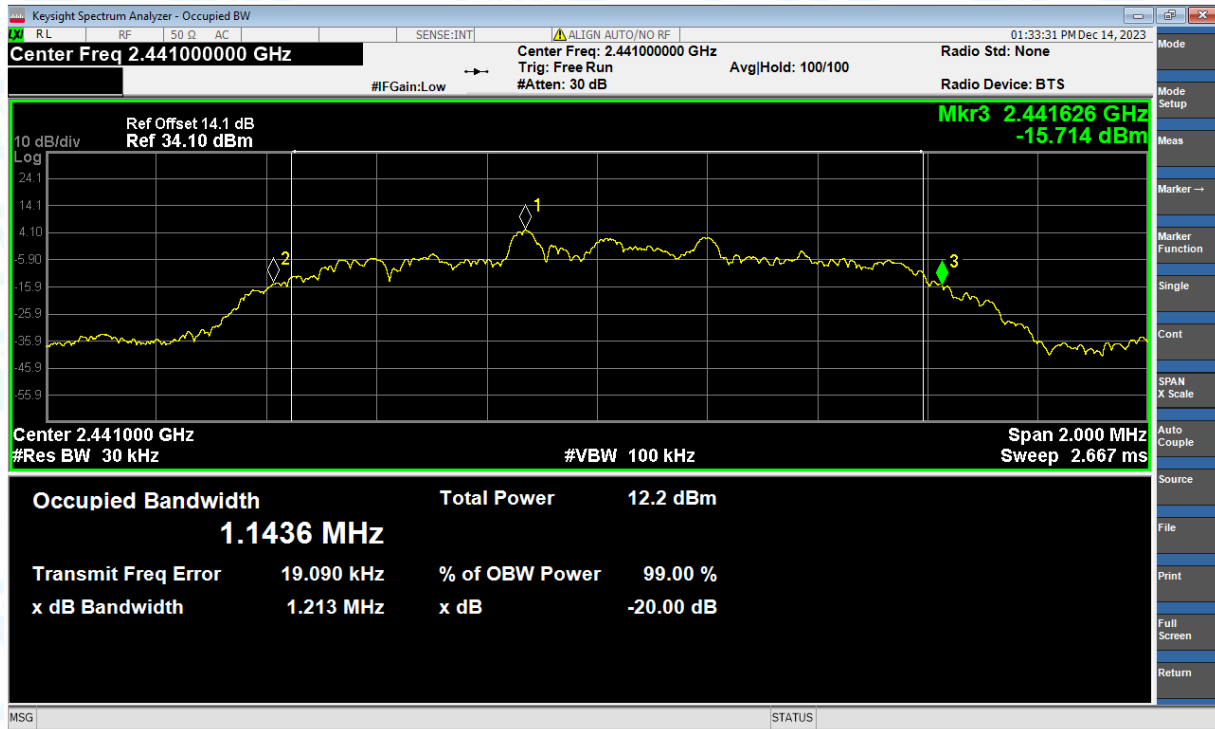
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



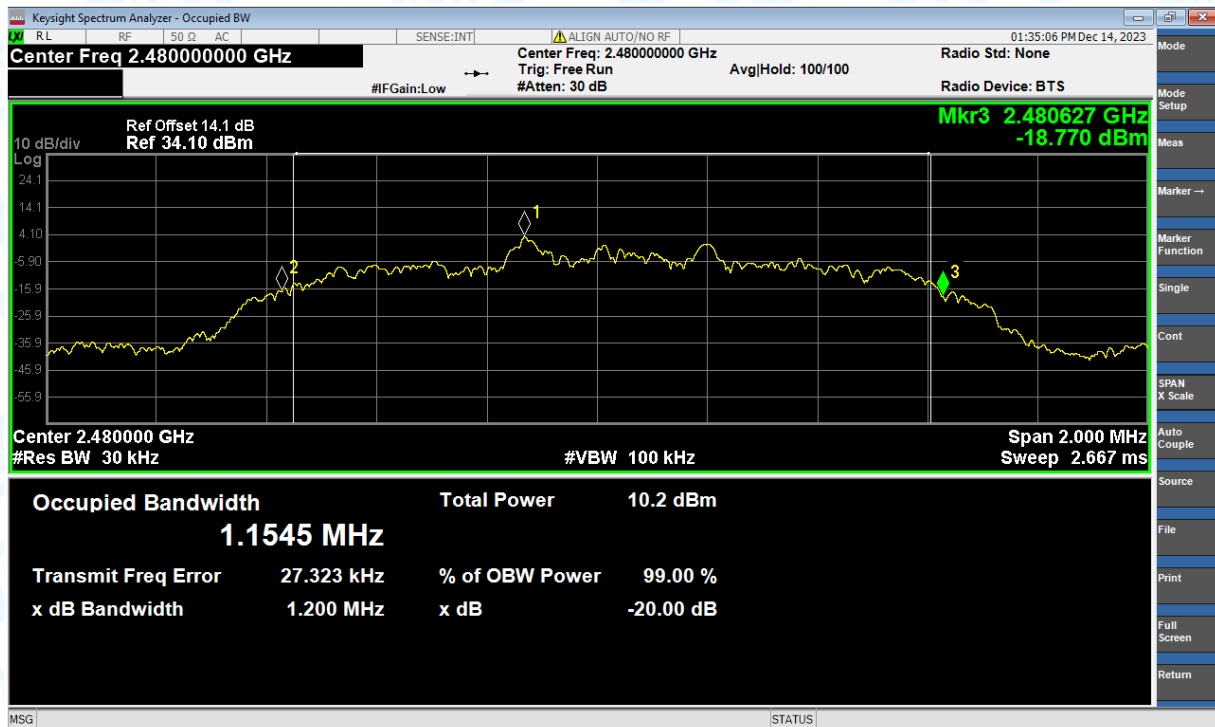
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



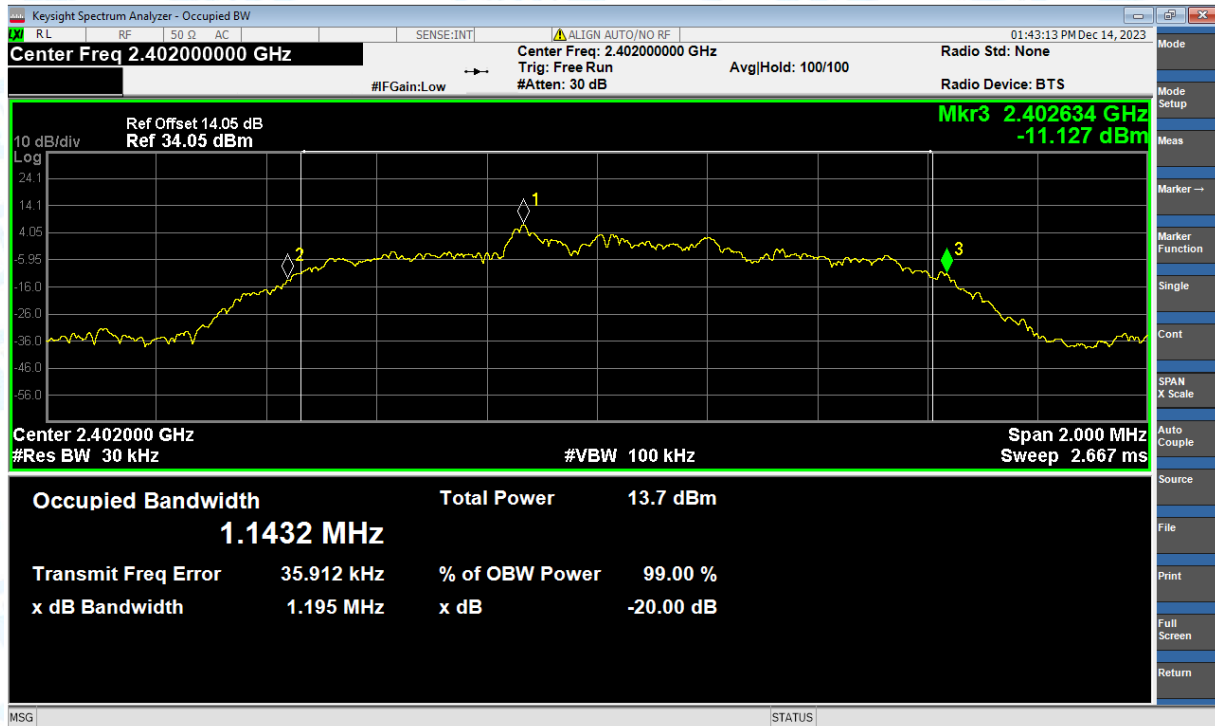
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

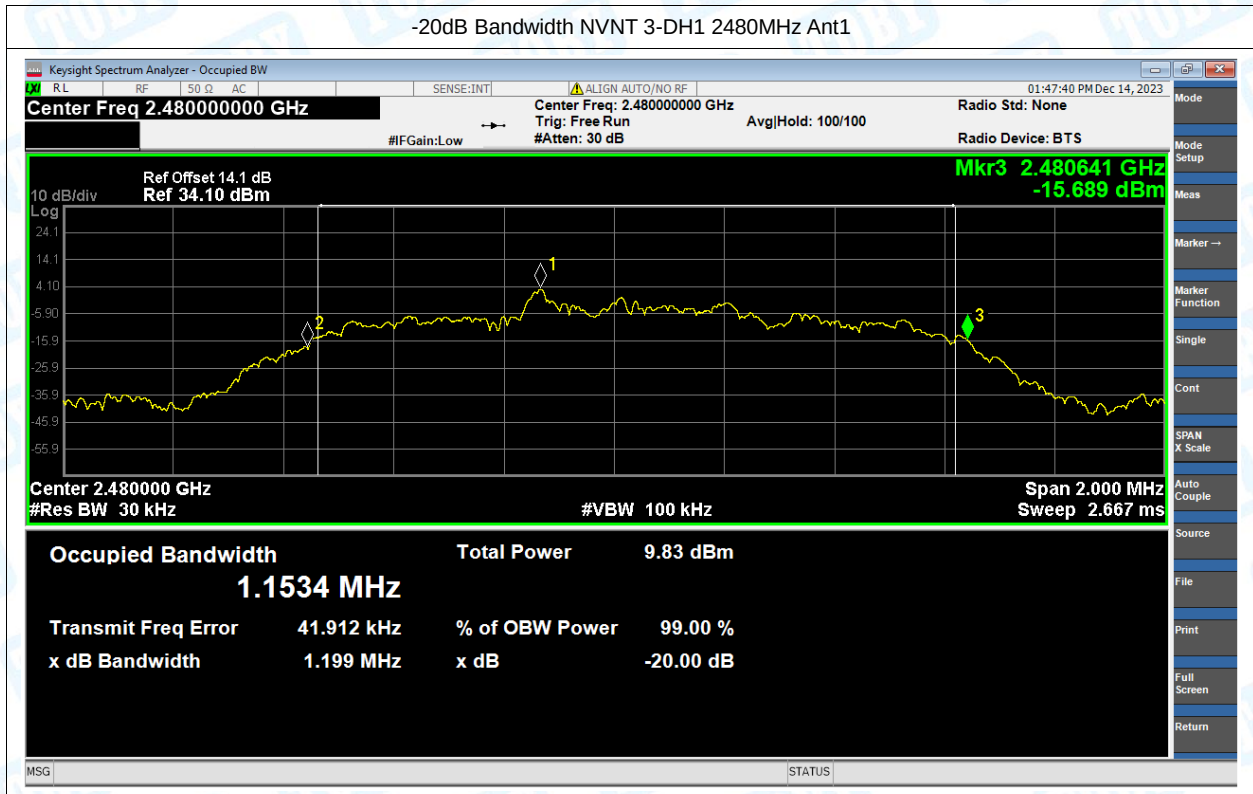


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



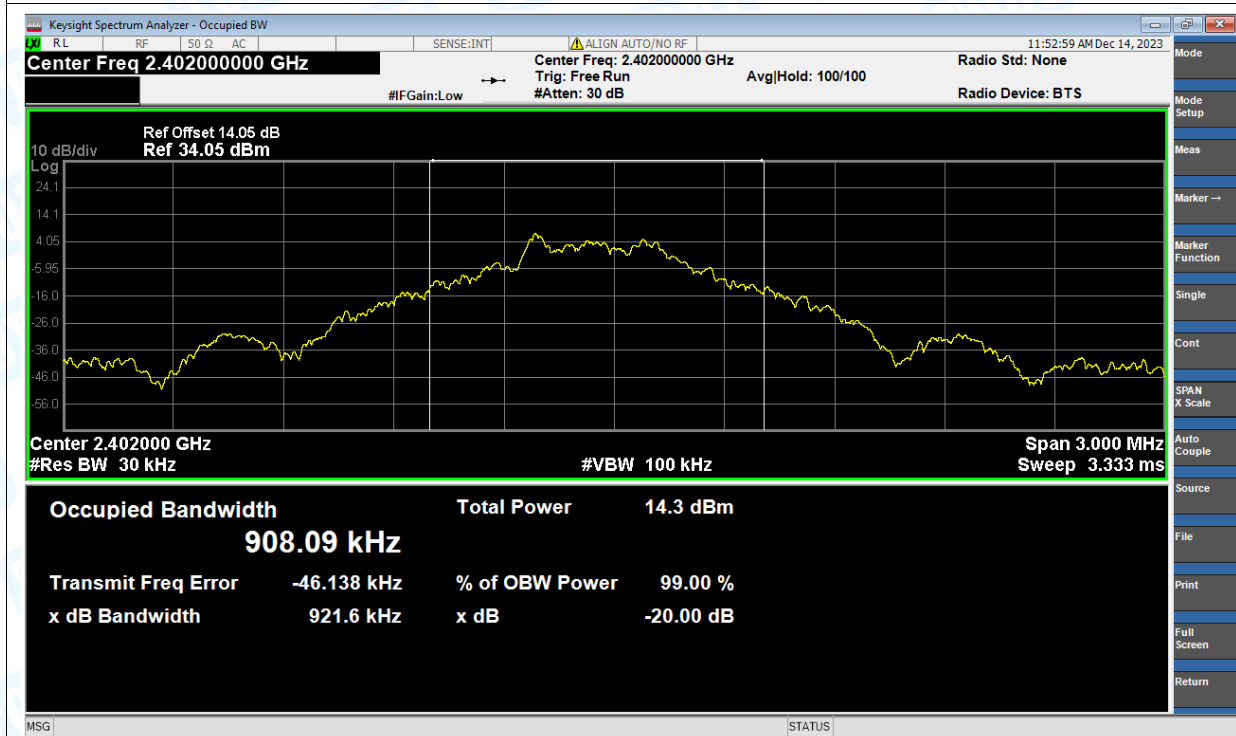


4. Occupied Channel Bandwidth

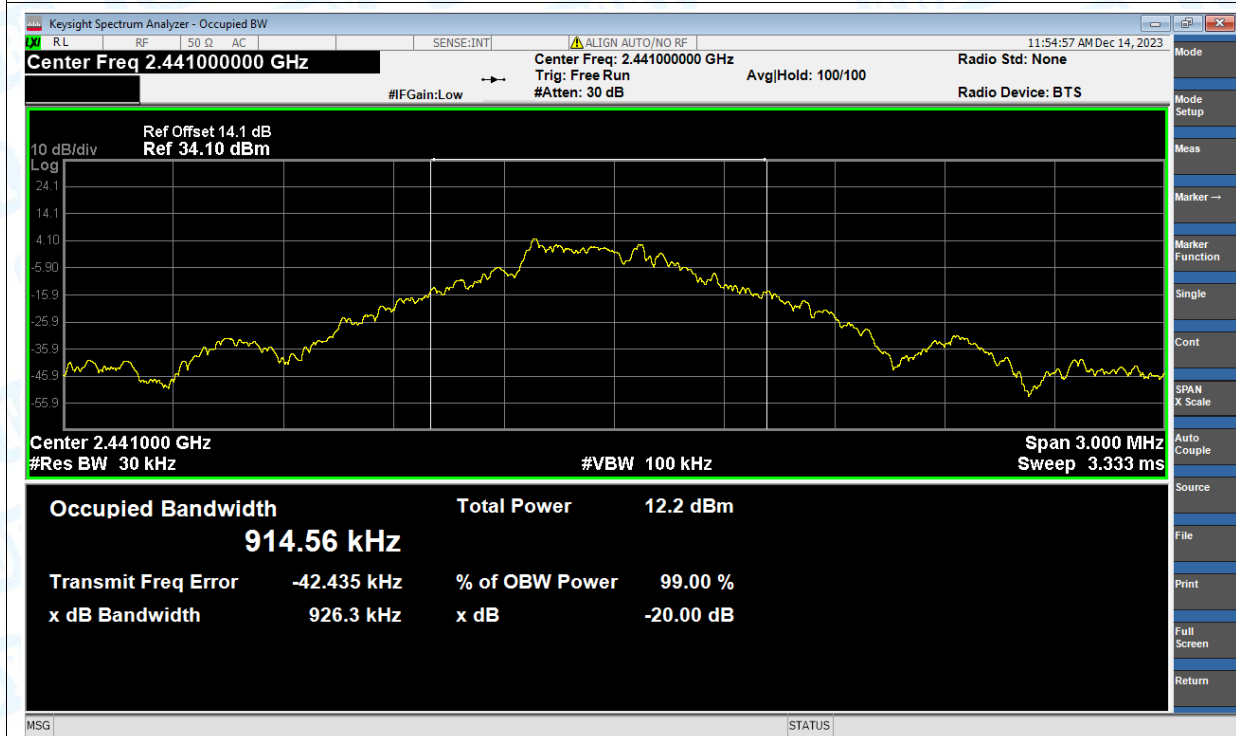
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.908
NVNT	1-DH1	2441	Ant1	0.915
NVNT	1-DH1	2480	Ant1	0.912
NVNT	2-DH1	2402	Ant1	1.157
NVNT	2-DH1	2441	Ant1	1.147
NVNT	2-DH1	2480	Ant1	1.158
NVNT	3-DH1	2402	Ant1	1.157
NVNT	3-DH1	2441	Ant1	1.157
NVNT	3-DH1	2480	Ant1	1.147

Test Graphs

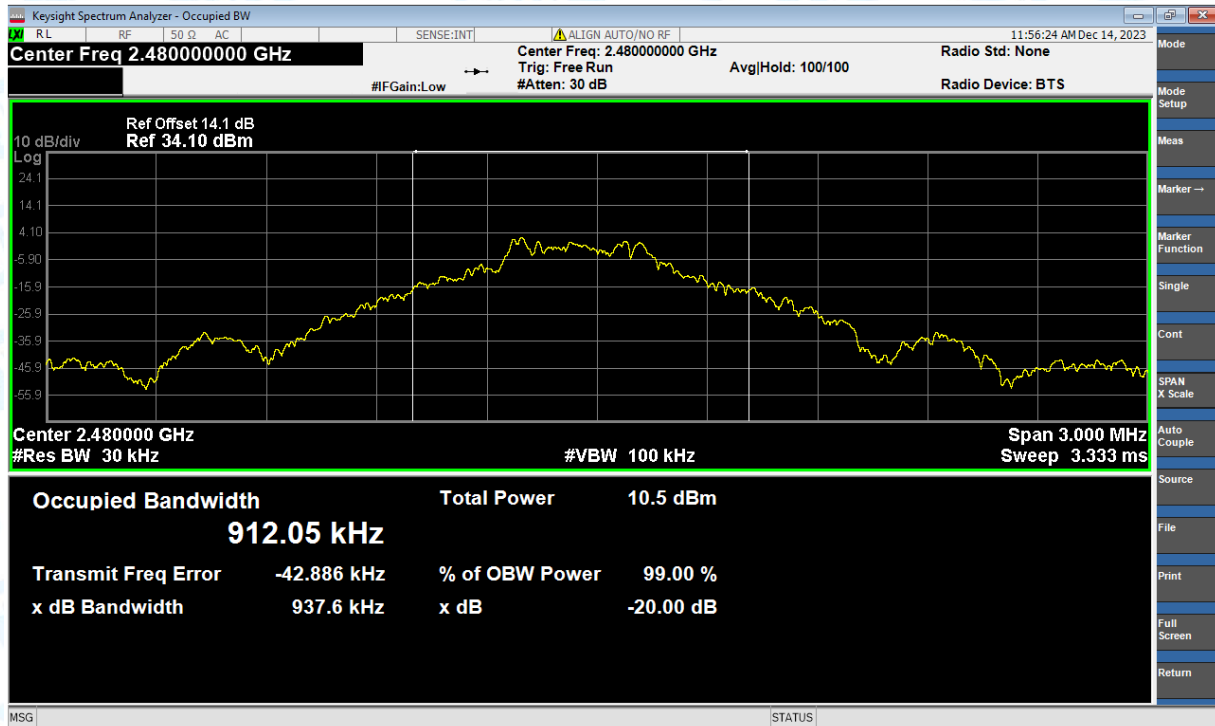
OBW NVNT 1-DH1 2402MHz Ant1



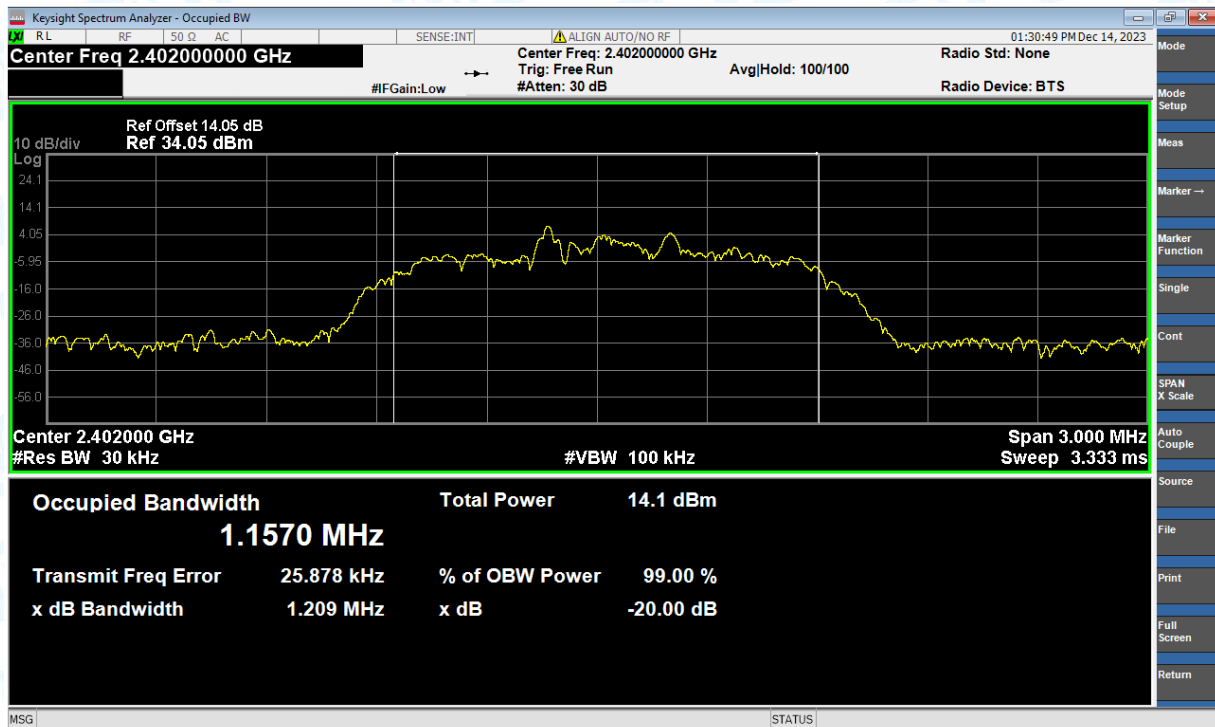
OBW NVNT 1-DH1 2441MHz Ant1



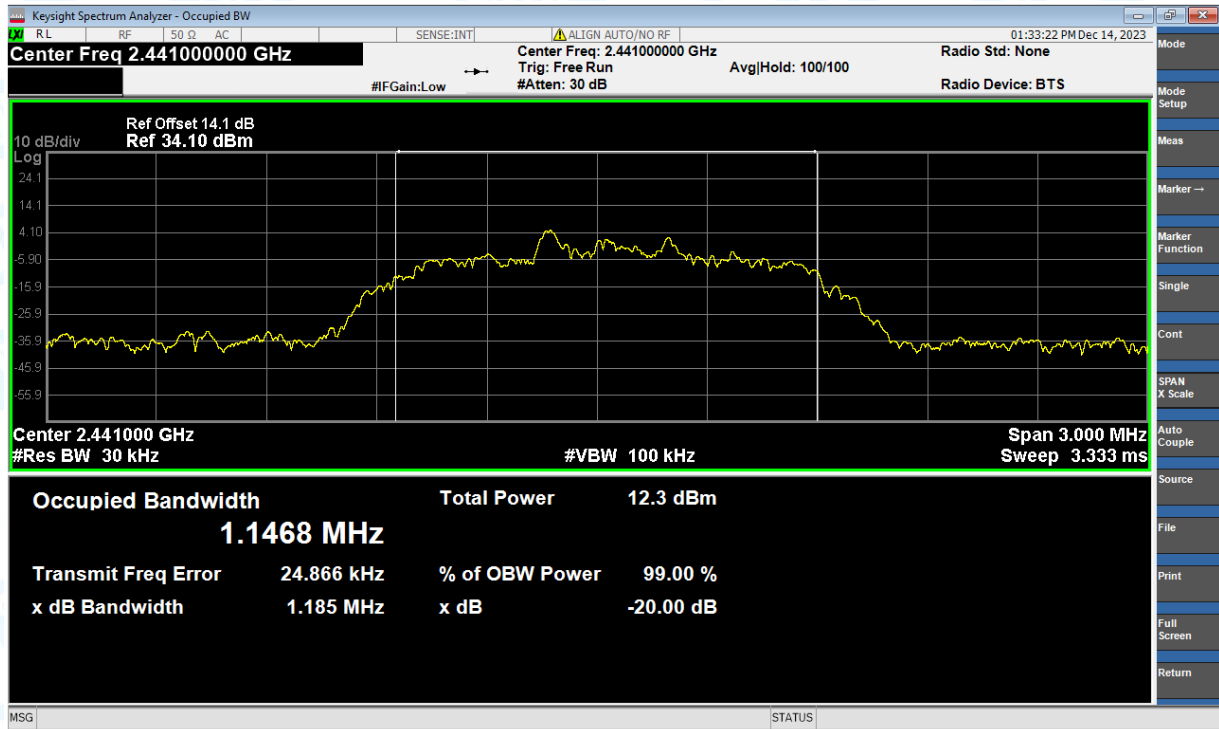
OBW NVNT 1-DH1 2480MHz Ant1



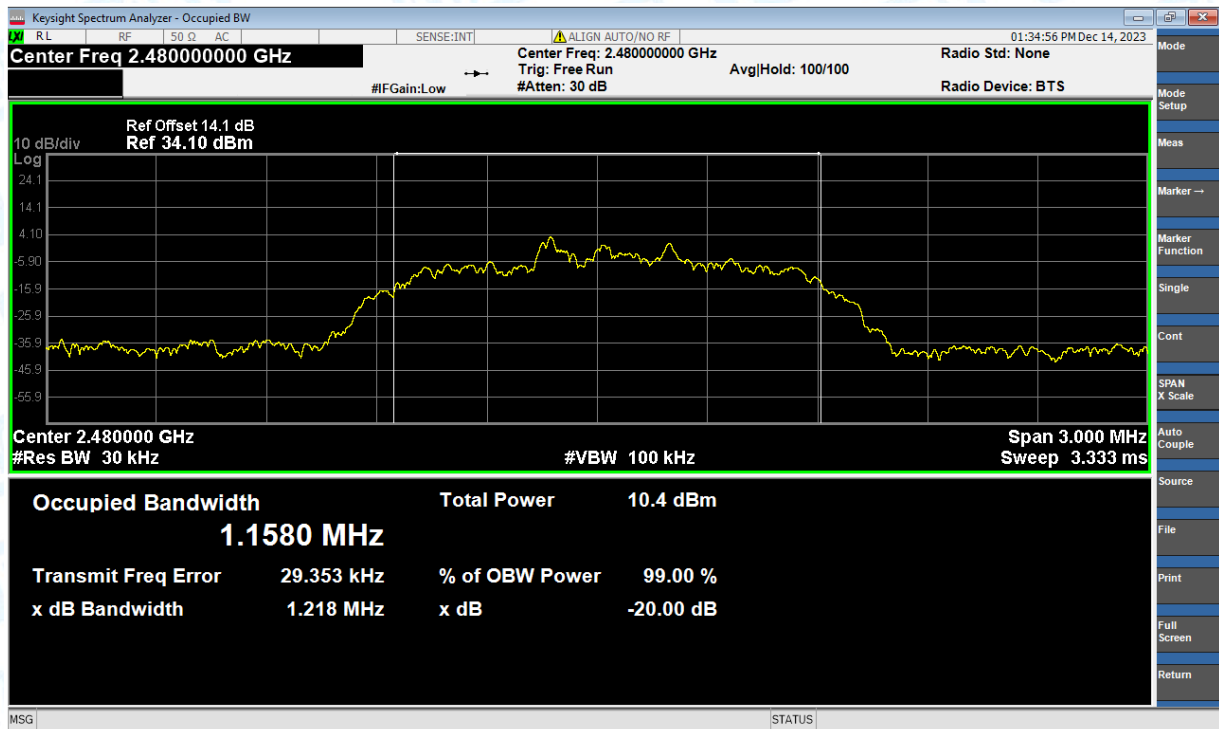
OBW NVNT 2-DH1 2402MHz Ant1



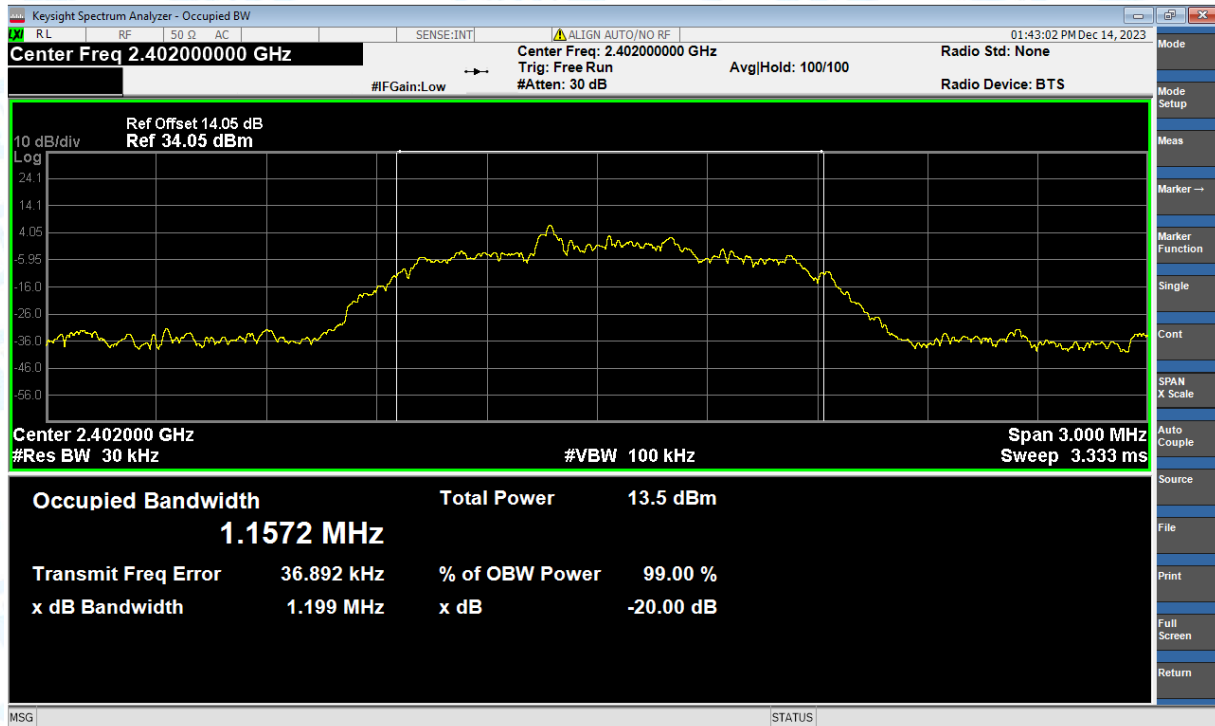
OBW NVNT 2-DH1 2441MHz Ant1



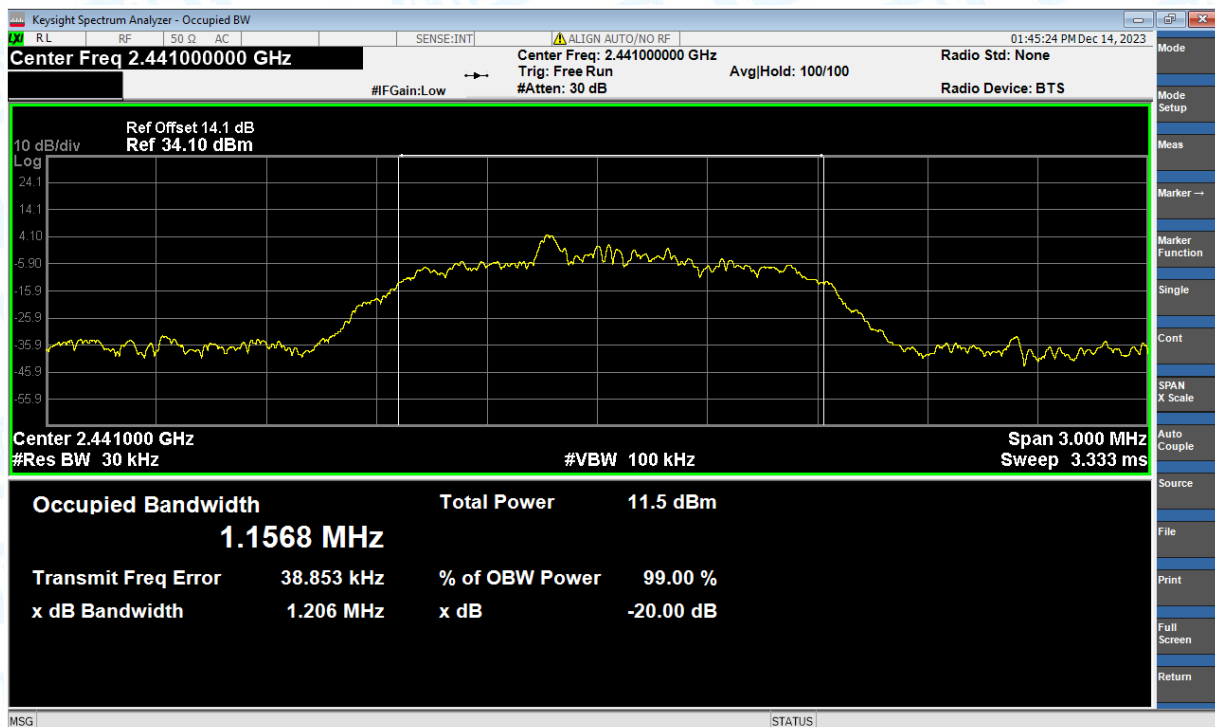
OBW NVNT 2-DH1 2480MHz Ant1

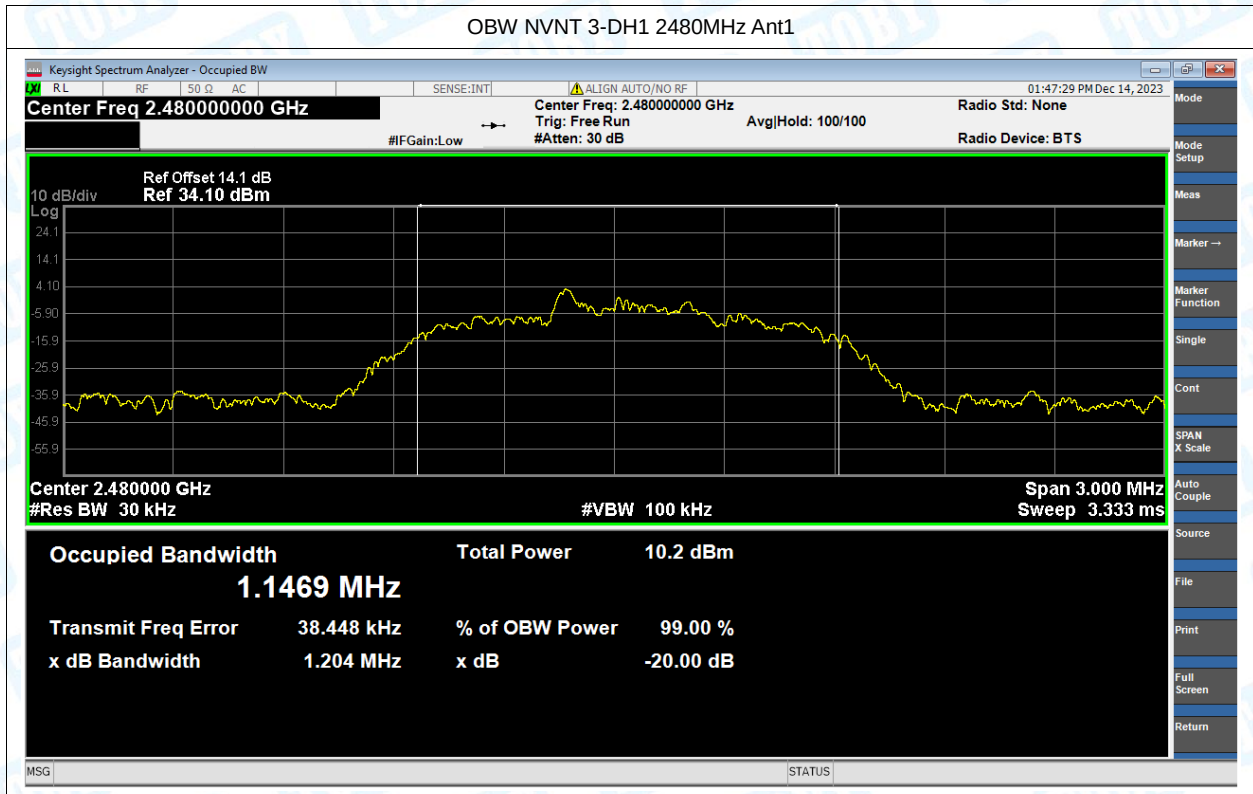


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



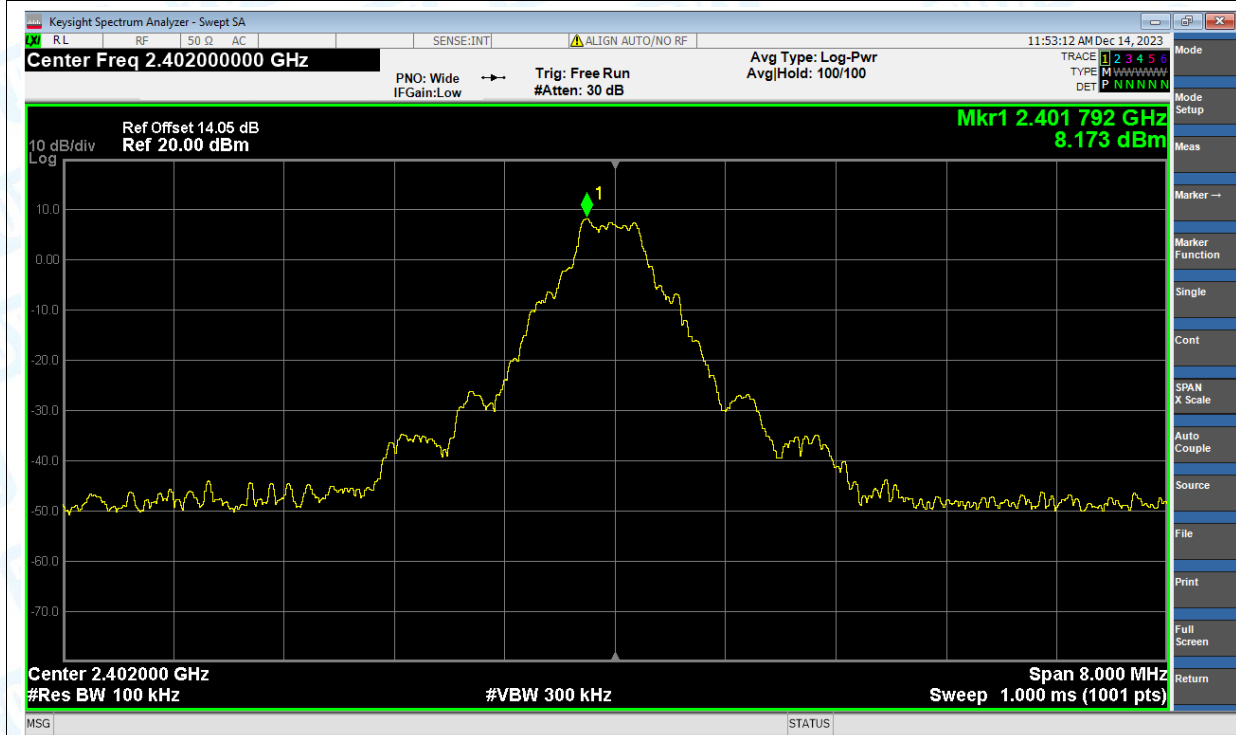


5. Band Edge

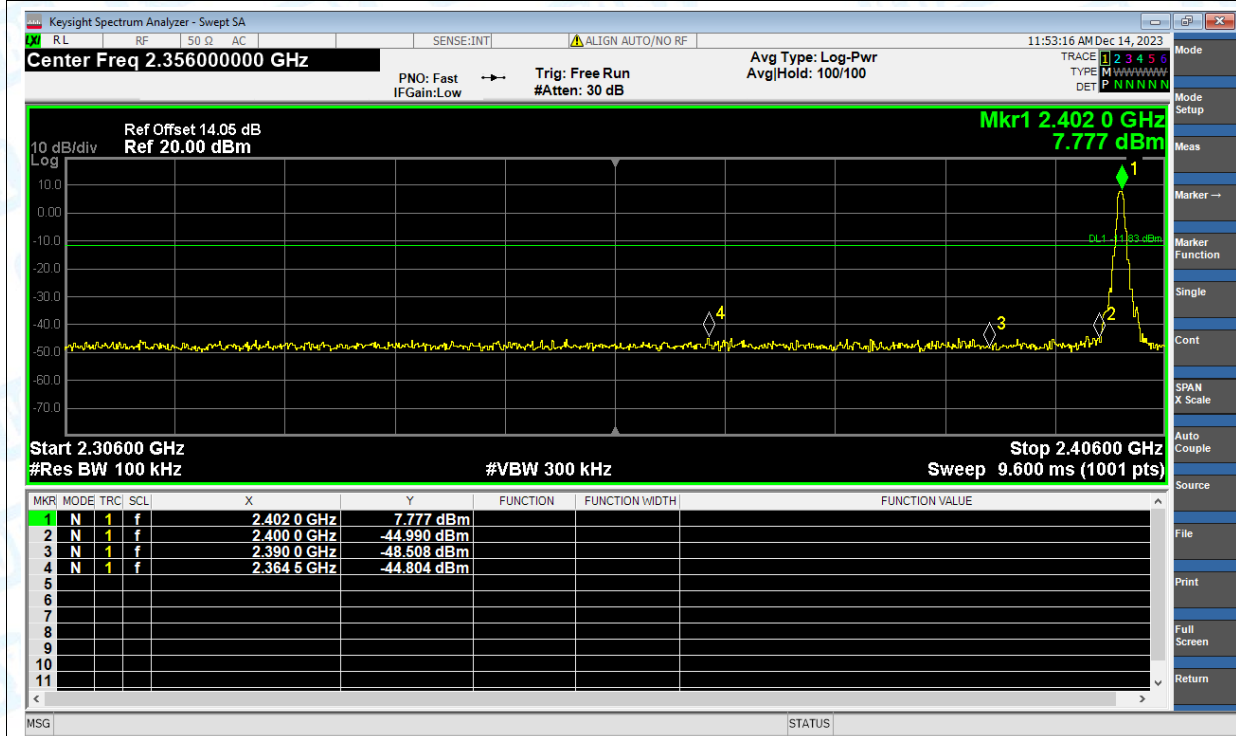
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-52.97	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-49.74	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-53.43	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-49.40	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-52.86	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-49.44	-20	Pass

Test Graphs

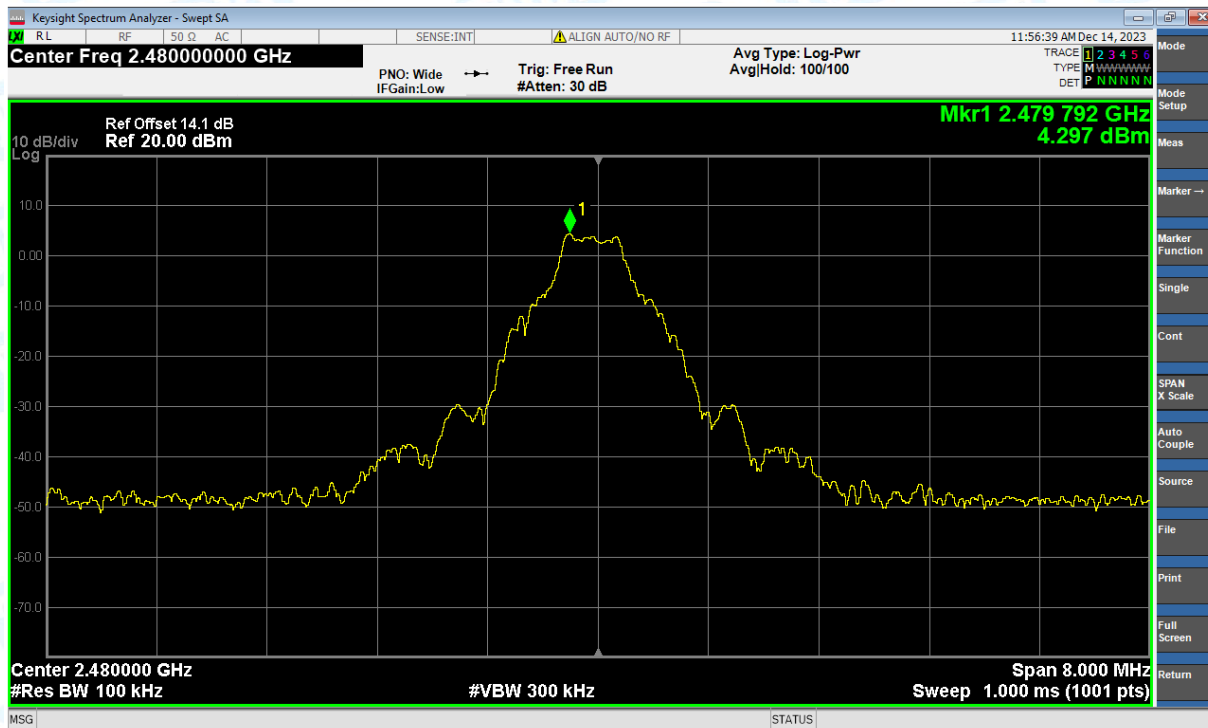
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



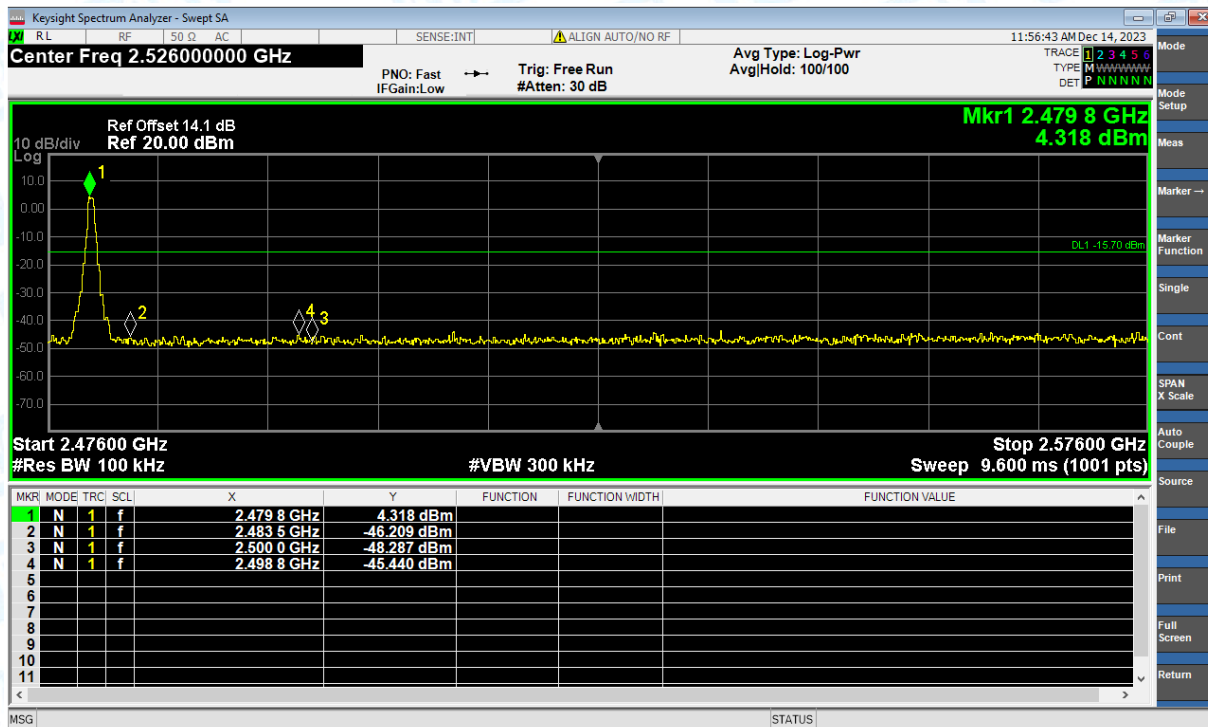
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



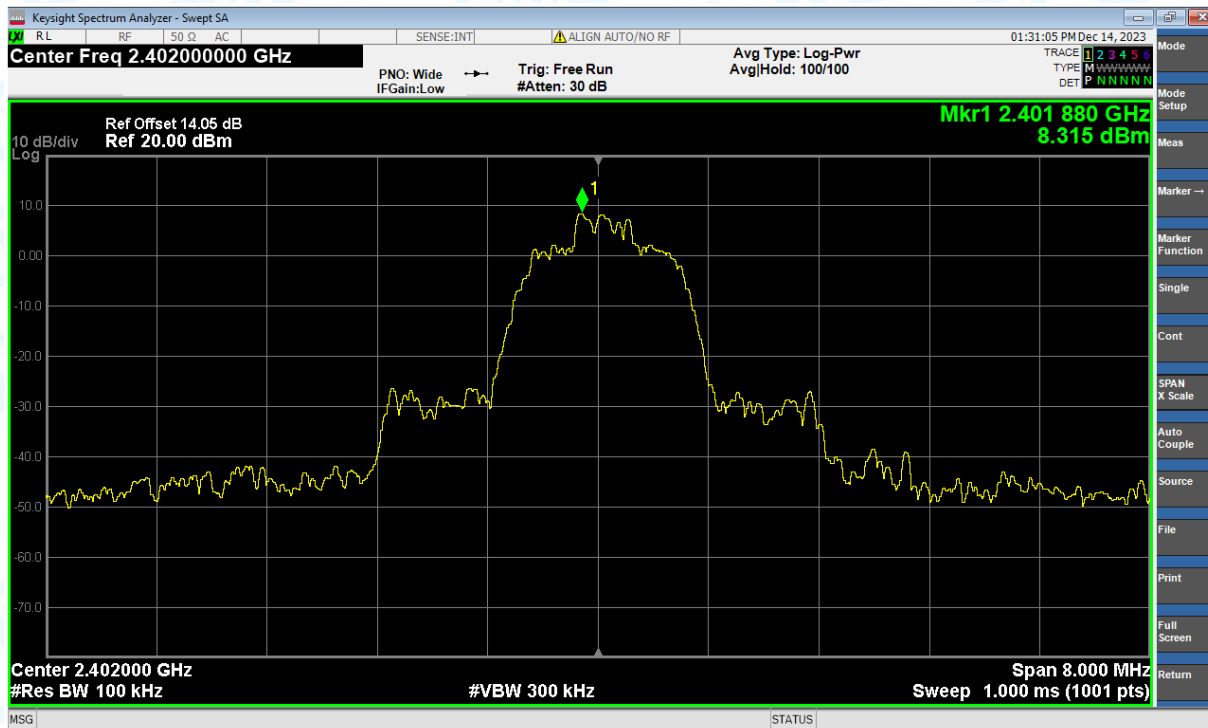
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



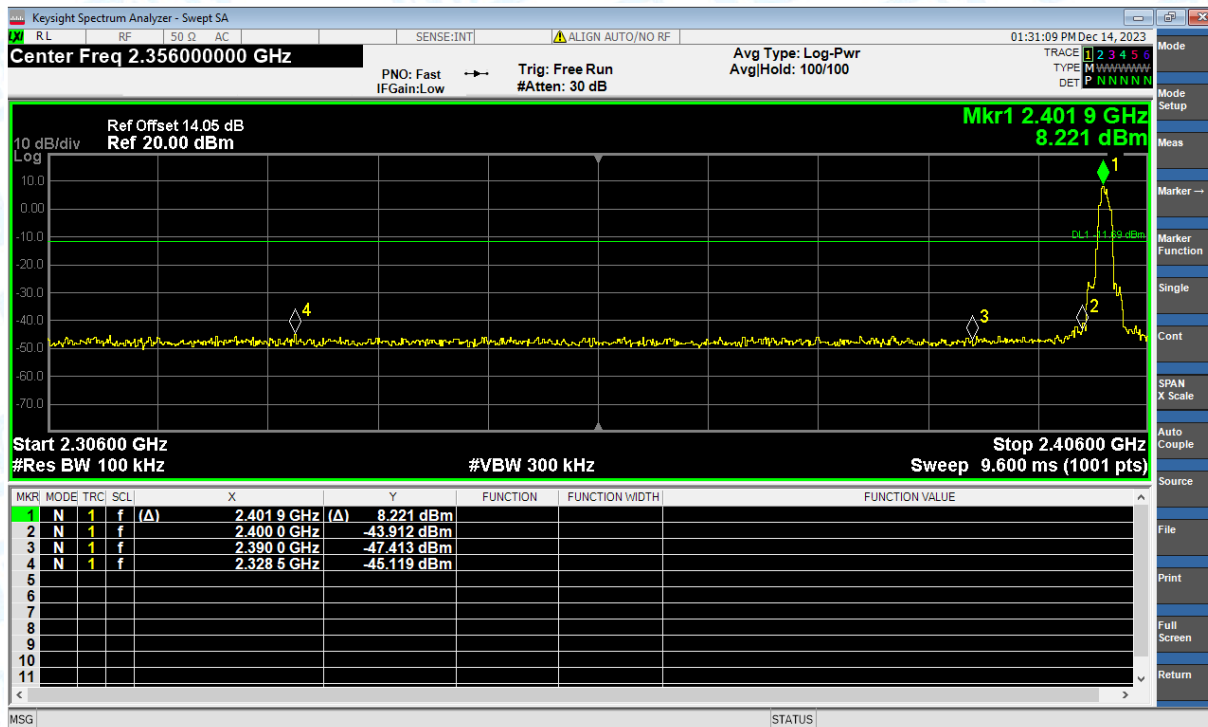
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission



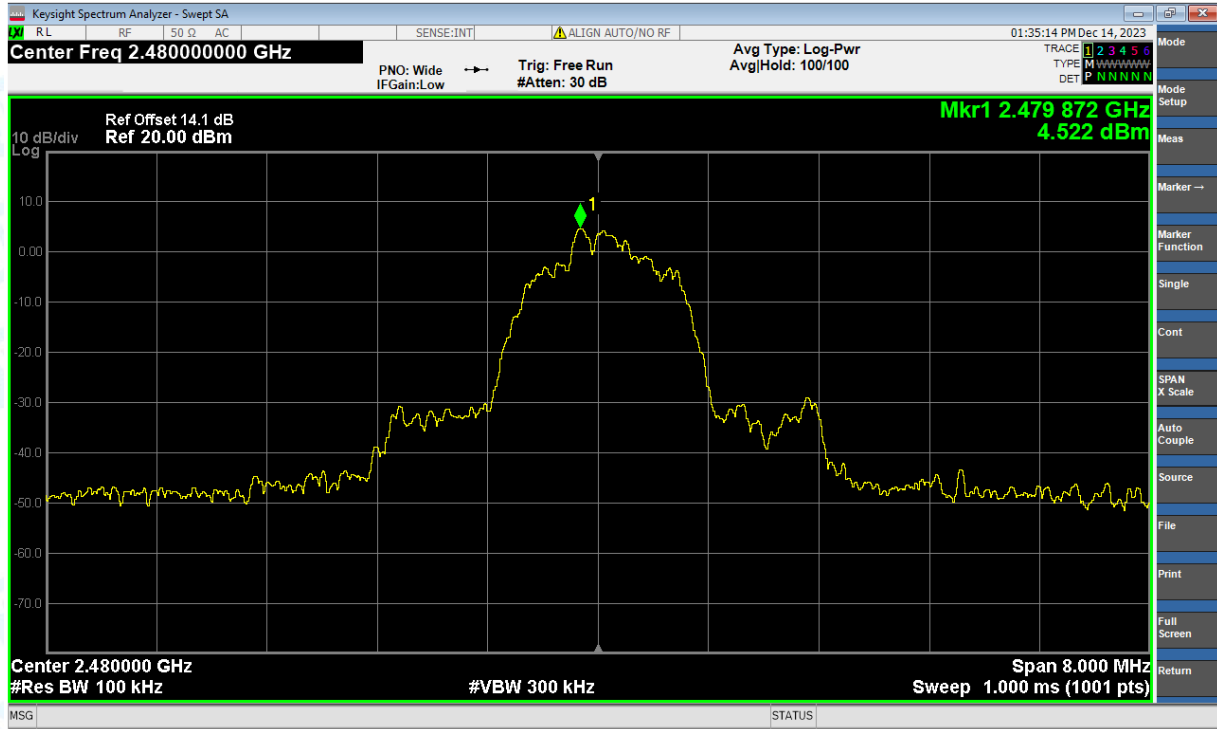
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



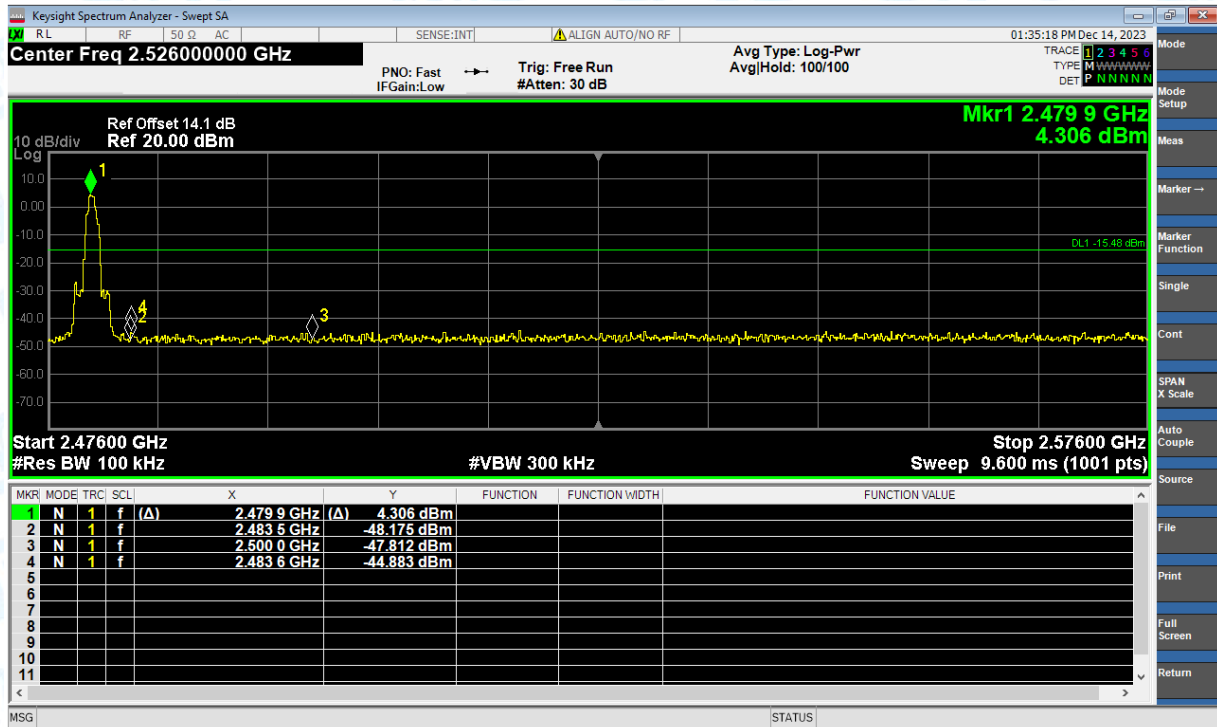
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



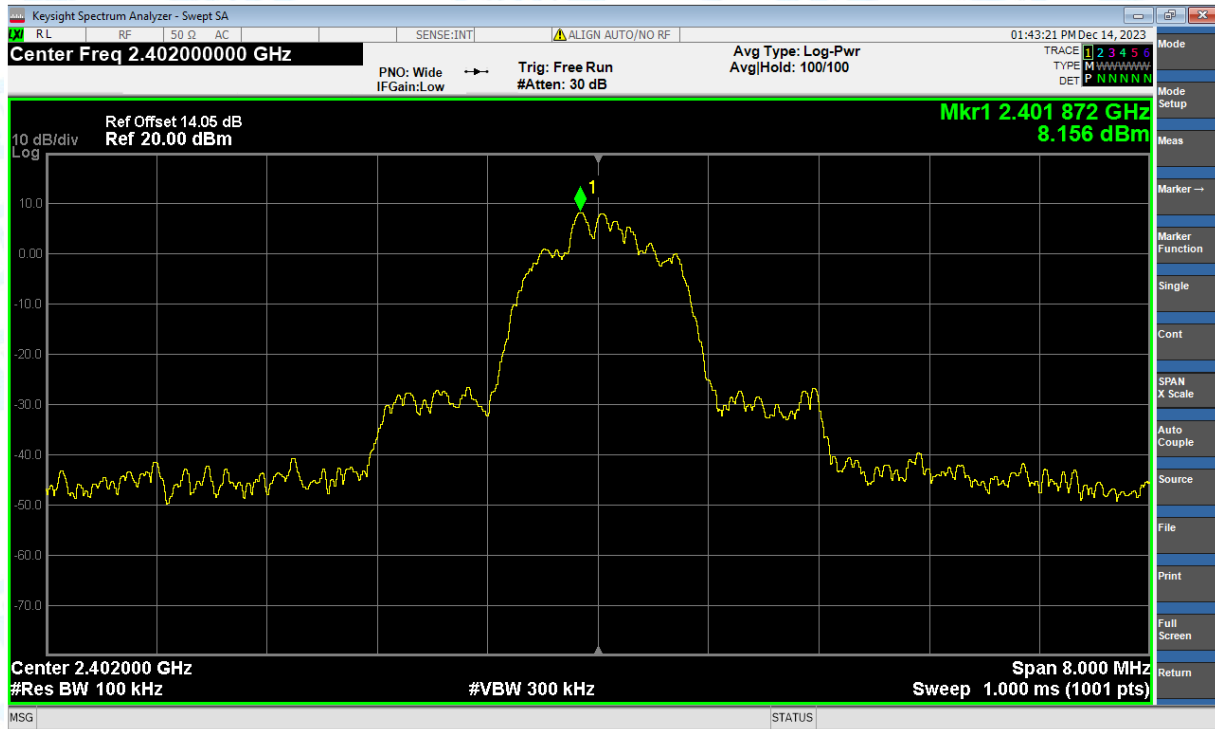
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



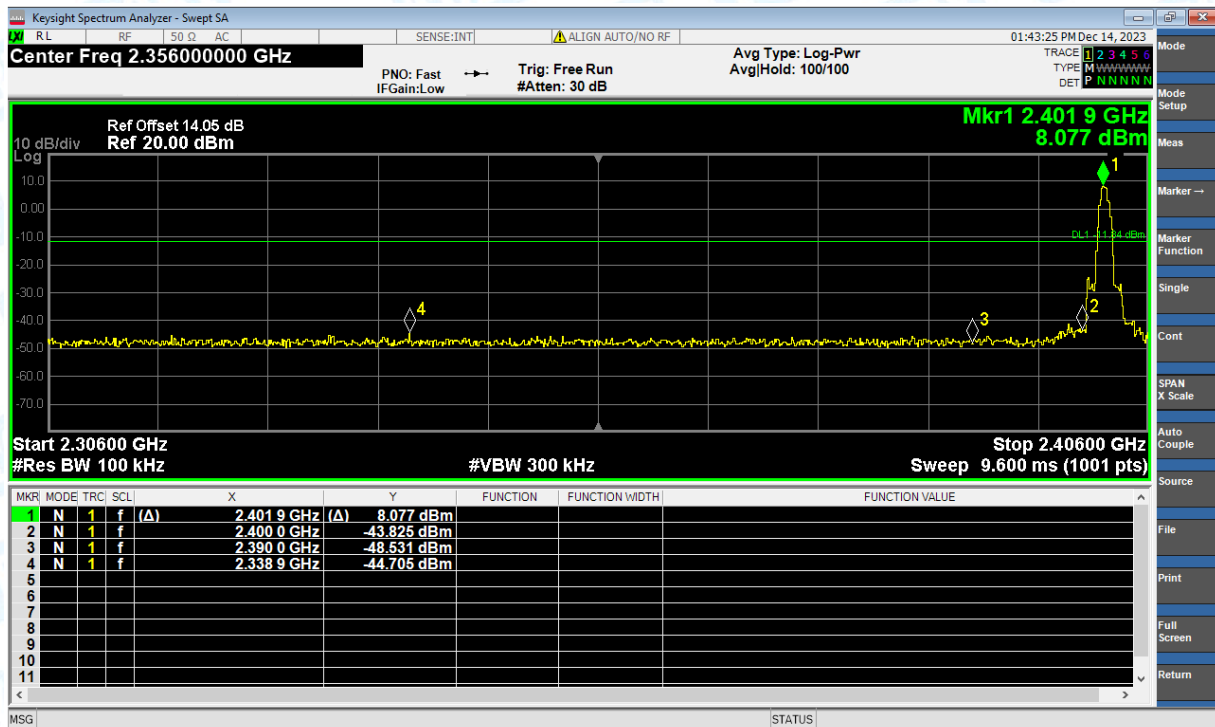
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



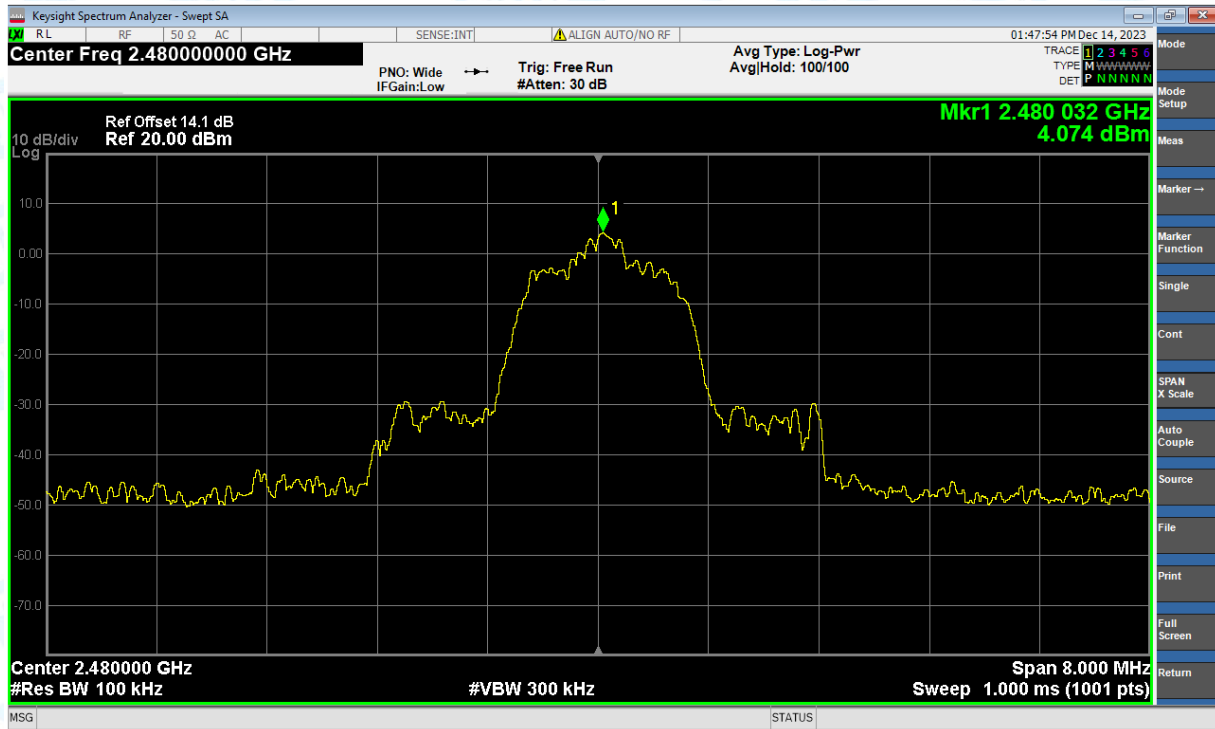
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



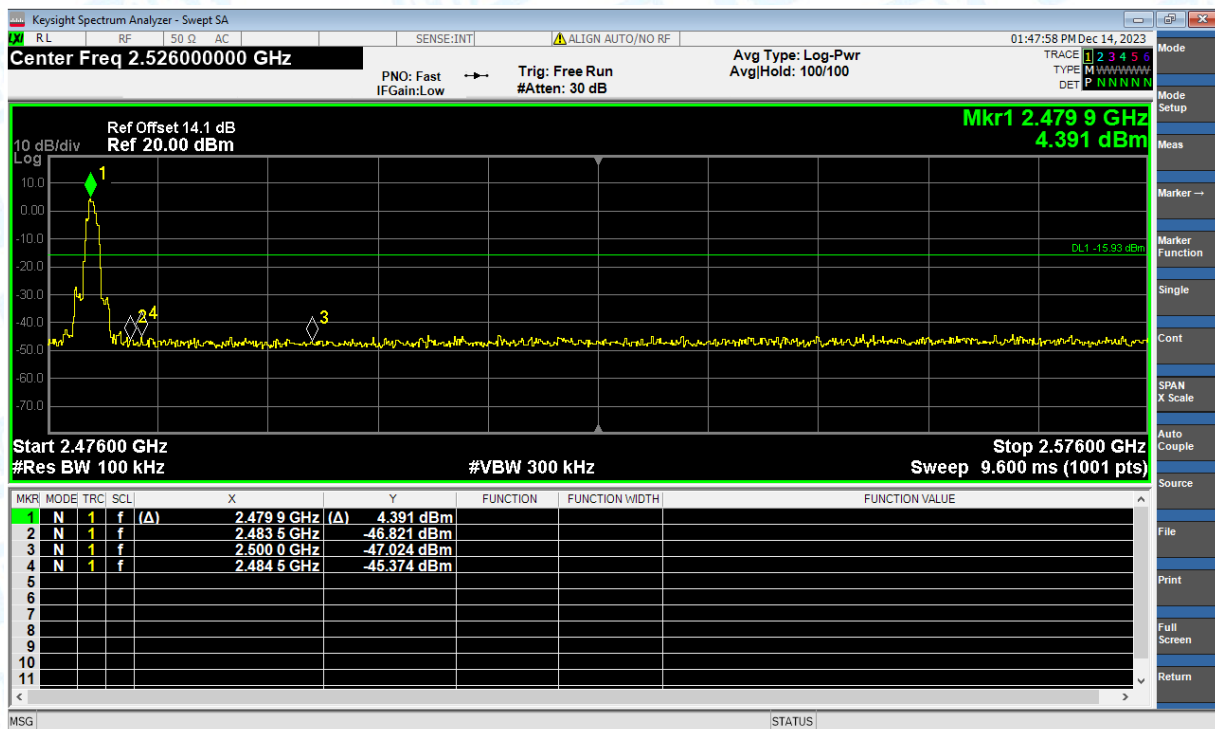
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6. Band Edge(Hopping)

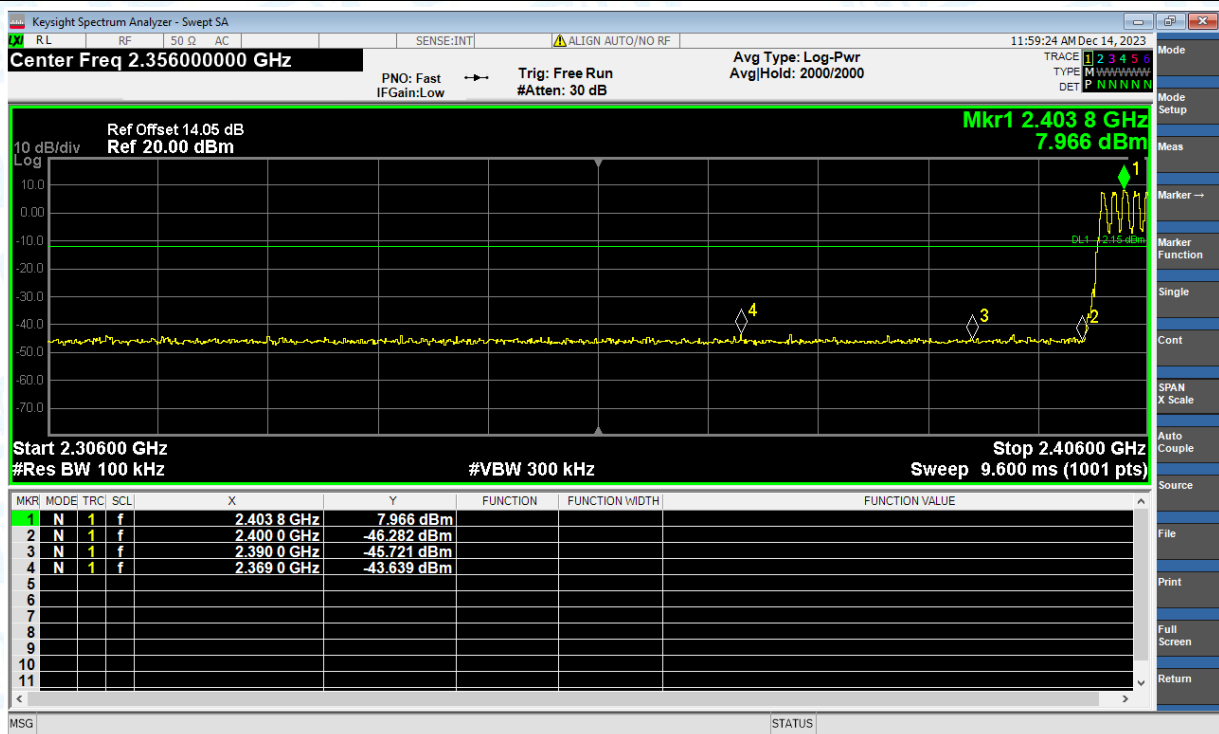
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-51.49	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-48.32	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-51.64	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-48.61	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-51.30	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-47.58	-20	Pass

Test Graphs

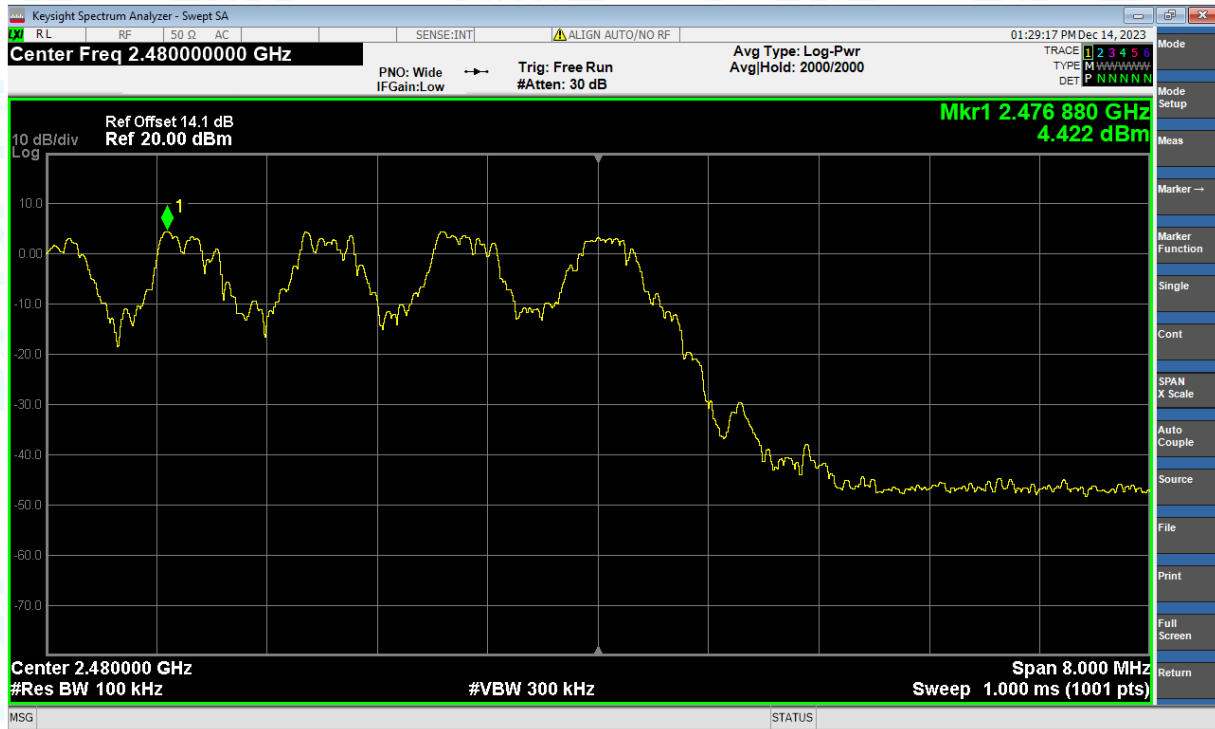
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



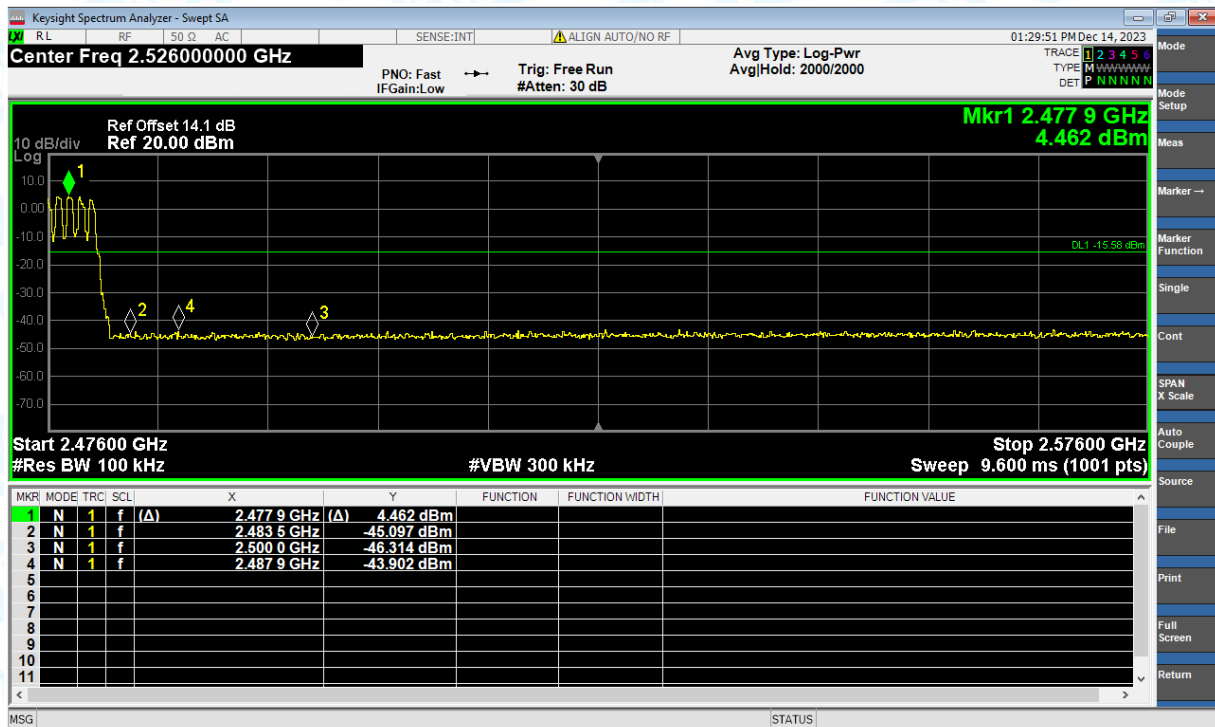
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



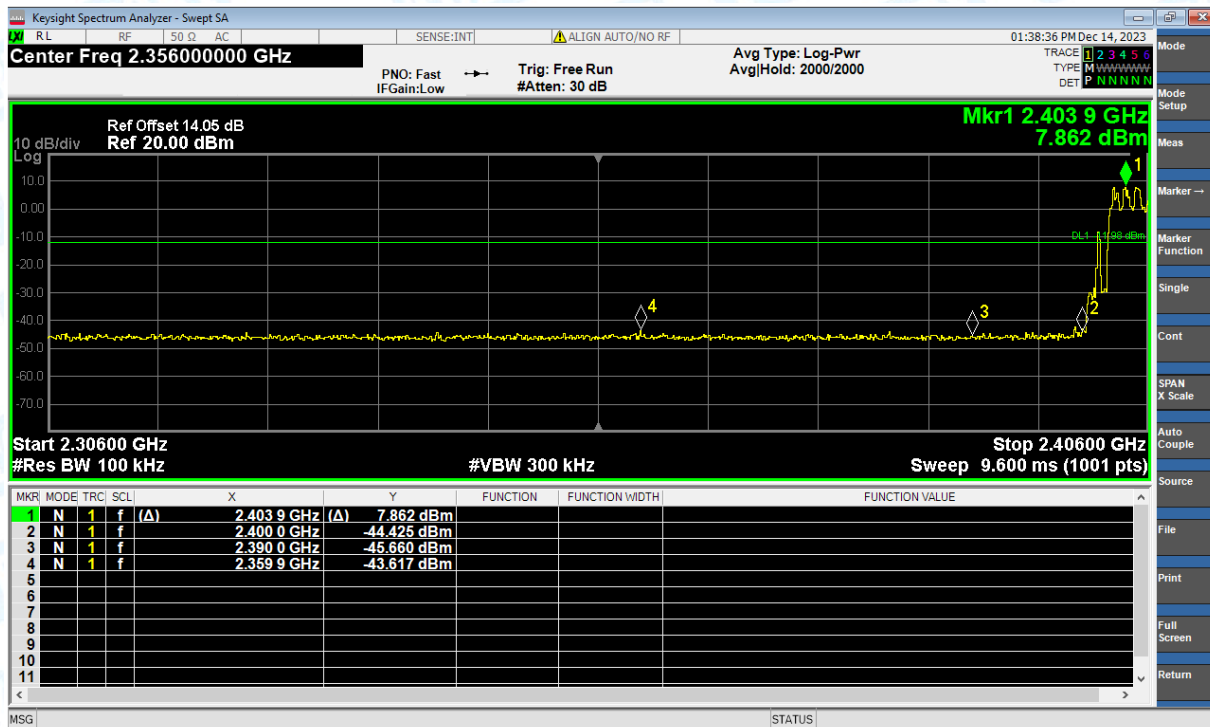
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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



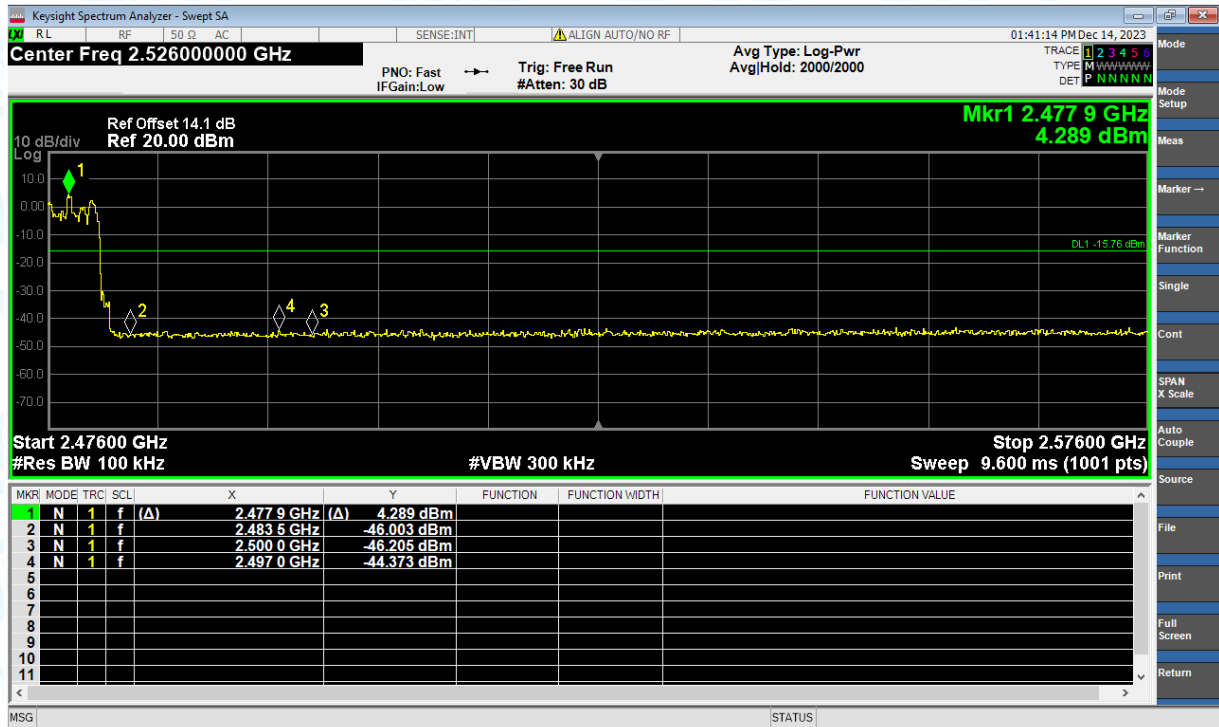
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



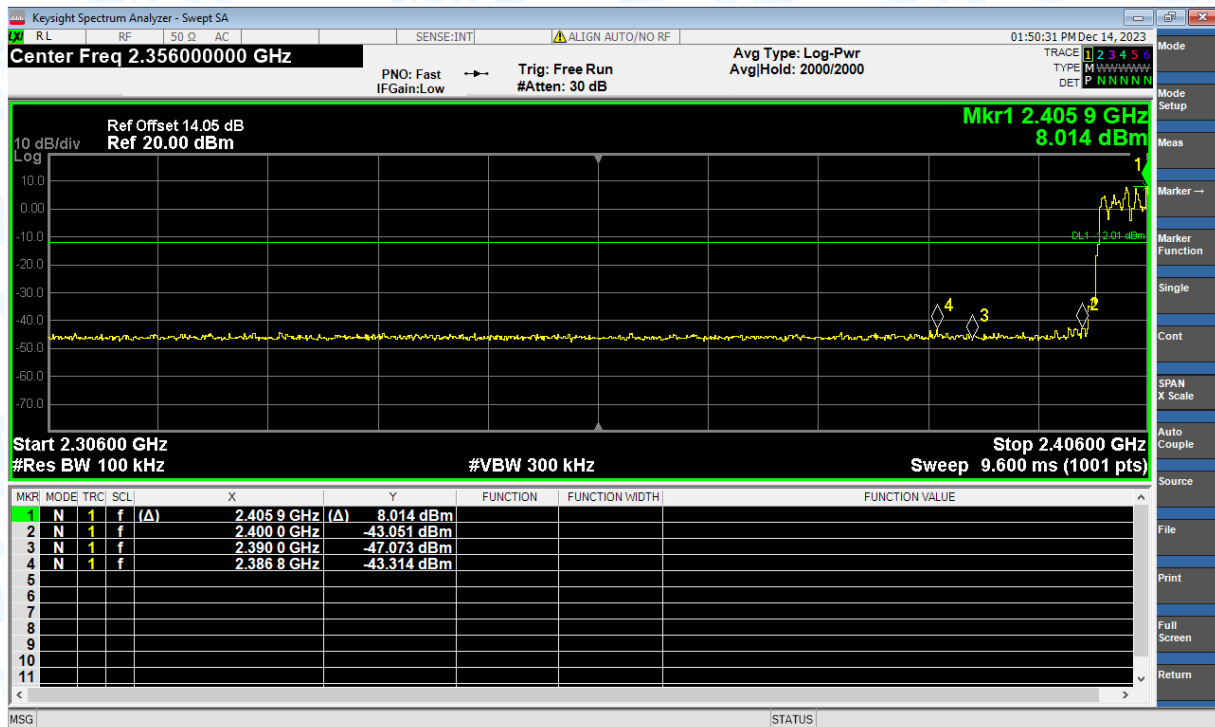
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



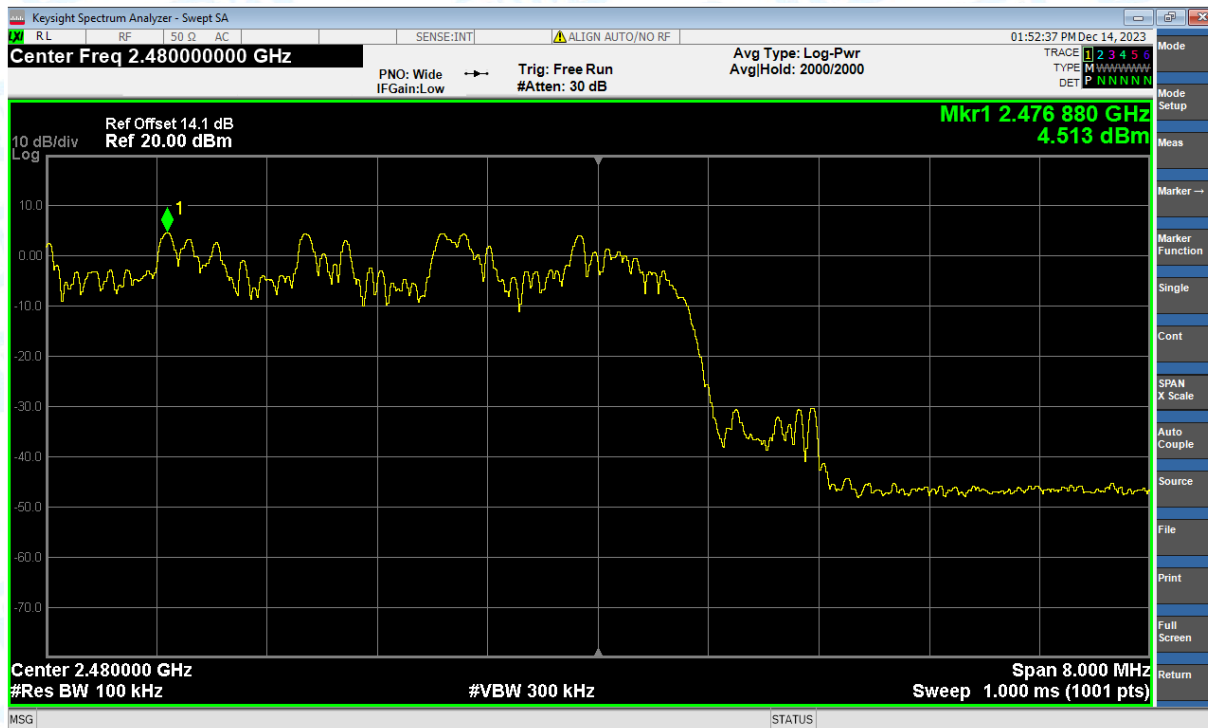
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



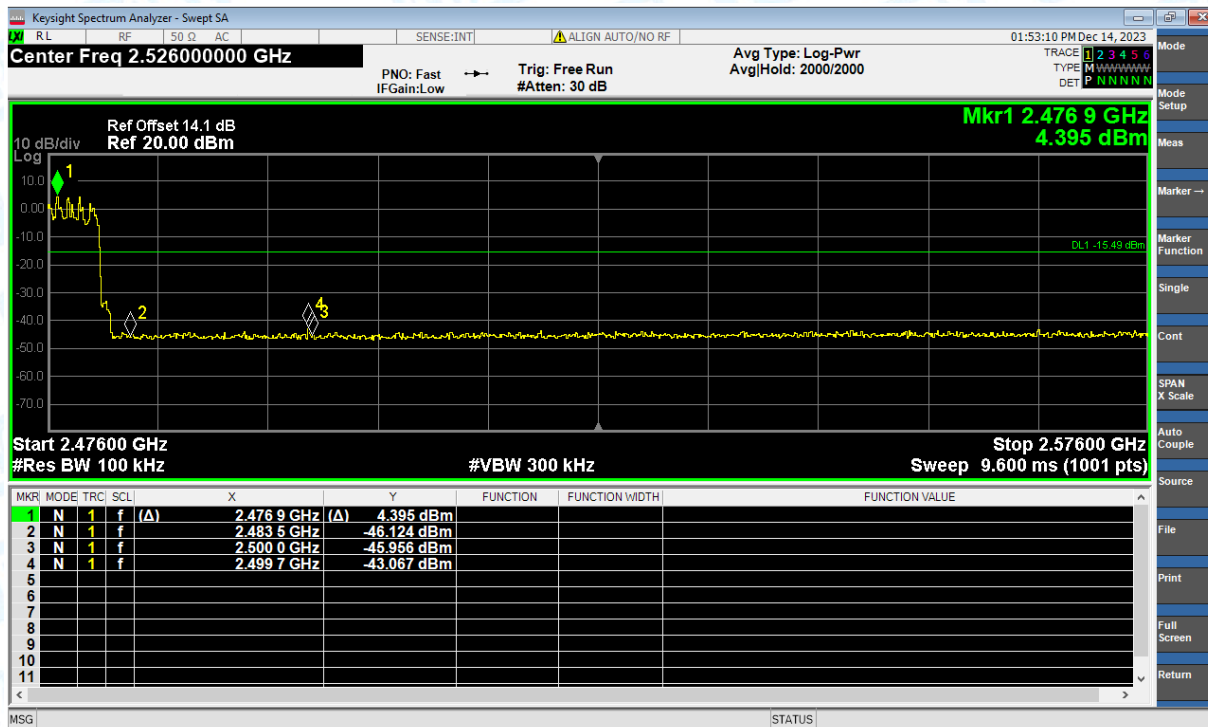
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

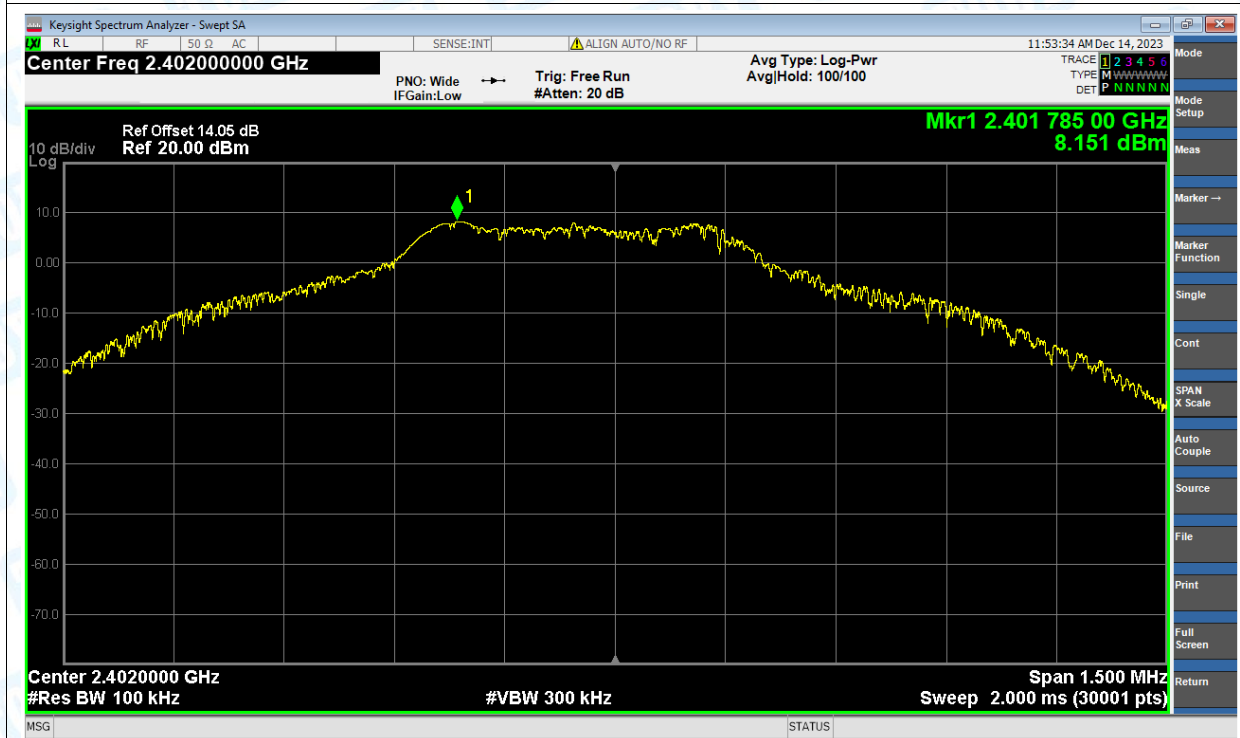


7. Conducted RF Spurious Emission

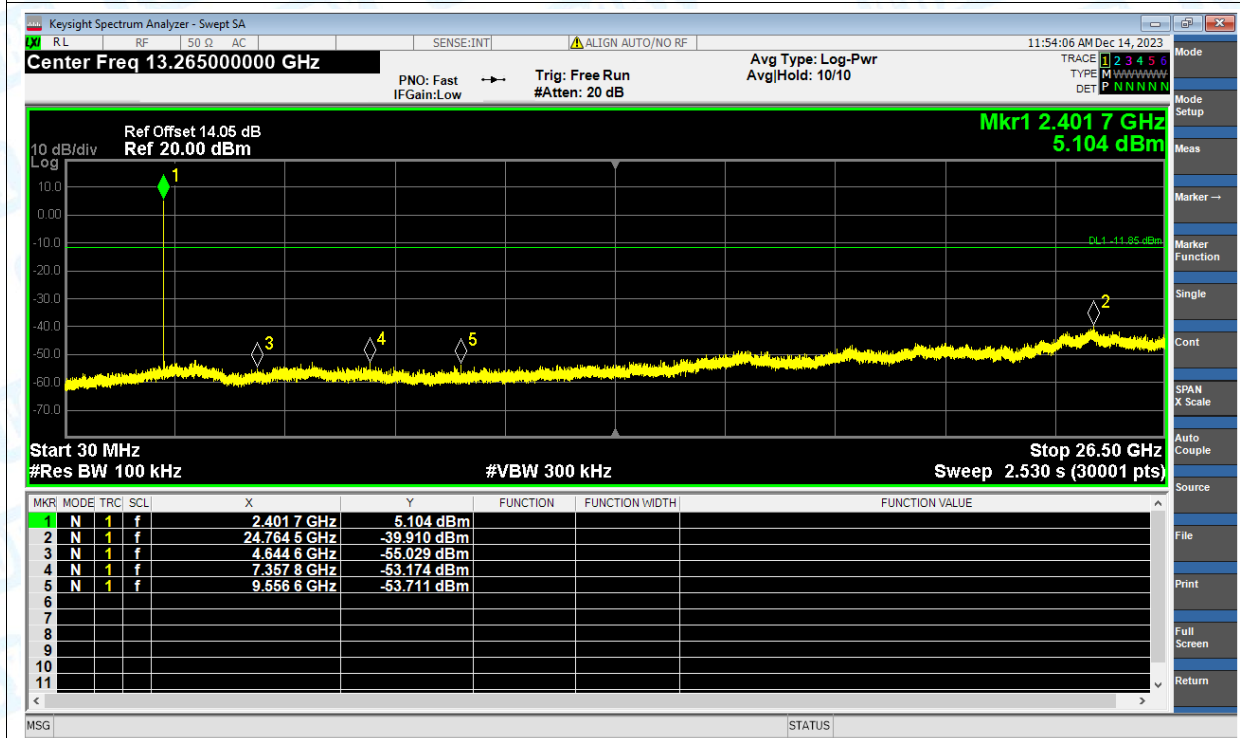
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-48.06	-20	Pass
NVNT	1-DH1	2441	Ant1	-46.38	-20	Pass
NVNT	1-DH1	2480	Ant1	-44.93	-20	Pass
NVNT	2-DH1	2402	Ant1	-48.74	-20	Pass
NVNT	2-DH1	2441	Ant1	-46.54	-20	Pass
NVNT	2-DH1	2480	Ant1	-44.70	-20	Pass
NVNT	3-DH1	2402	Ant1	-48.10	-20	Pass
NVNT	3-DH1	2441	Ant1	-46.54	-20	Pass
NVNT	3-DH1	2480	Ant1	-44.51	-20	Pass

Test Graphs

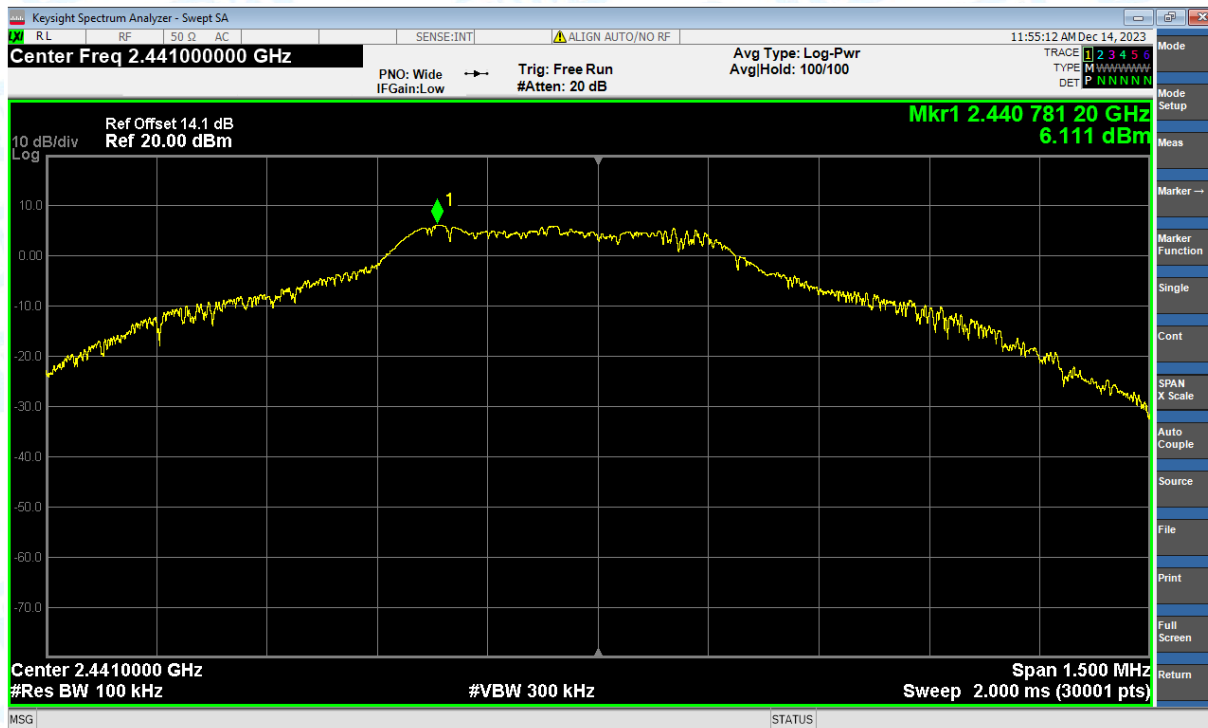
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



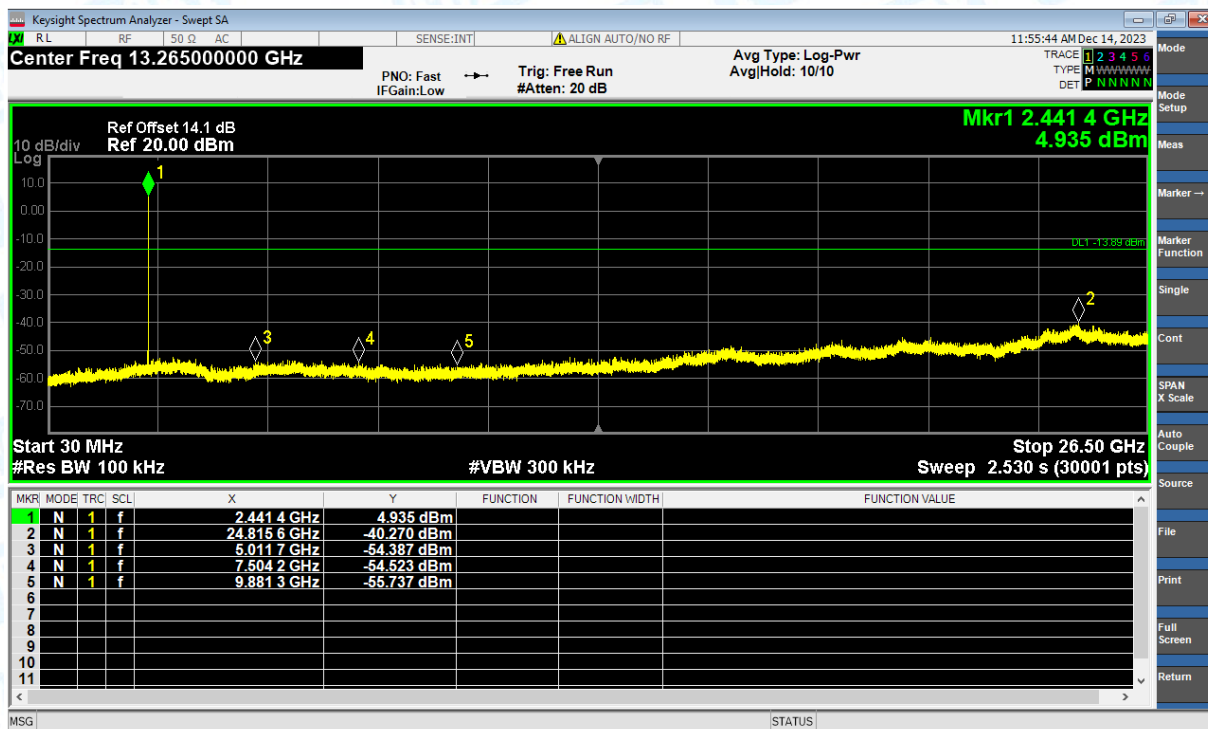
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



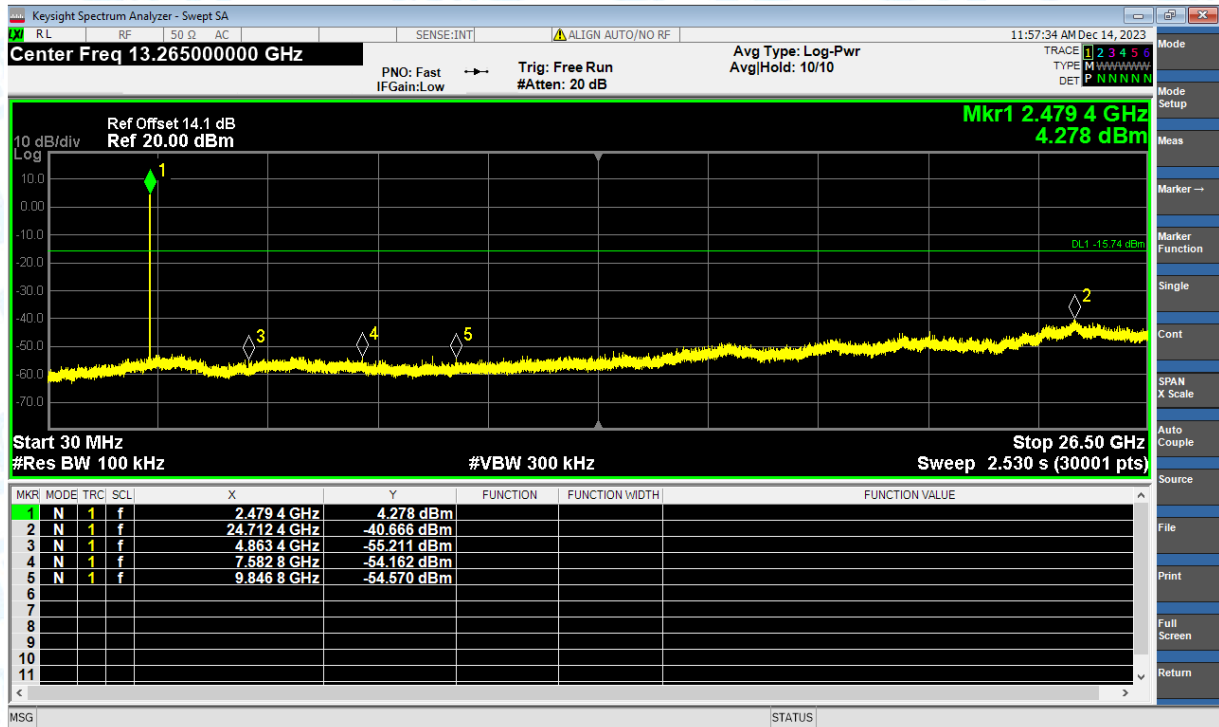
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



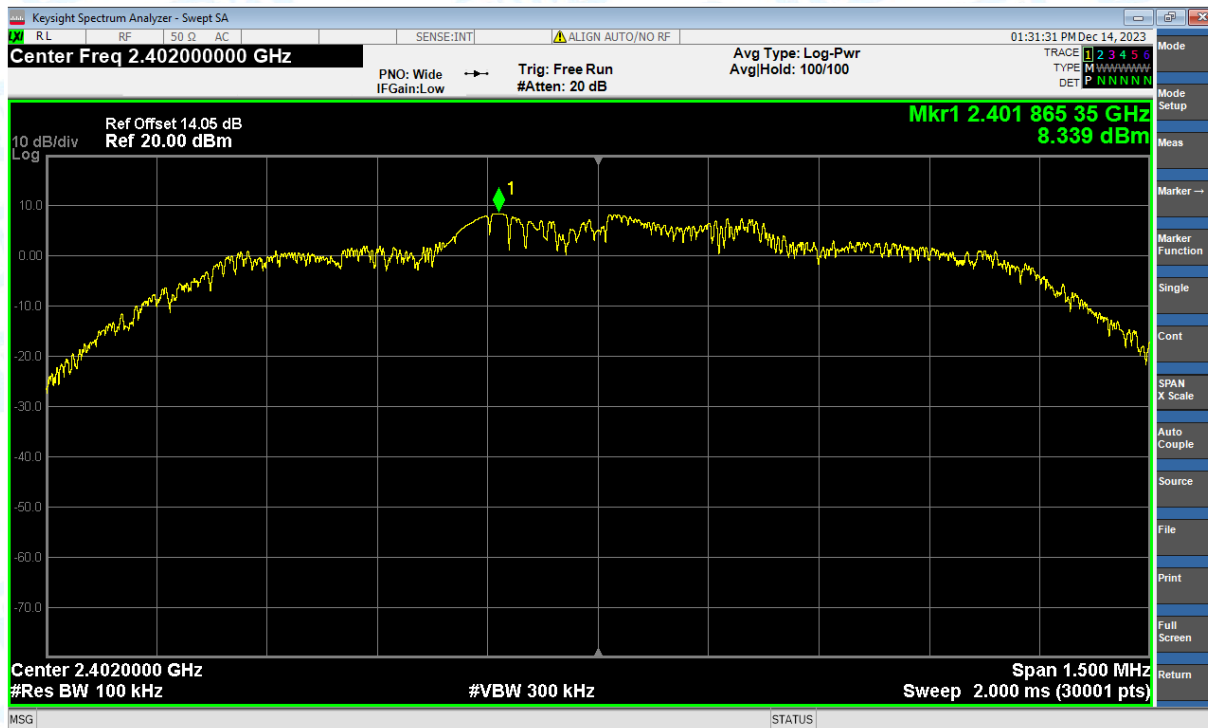
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



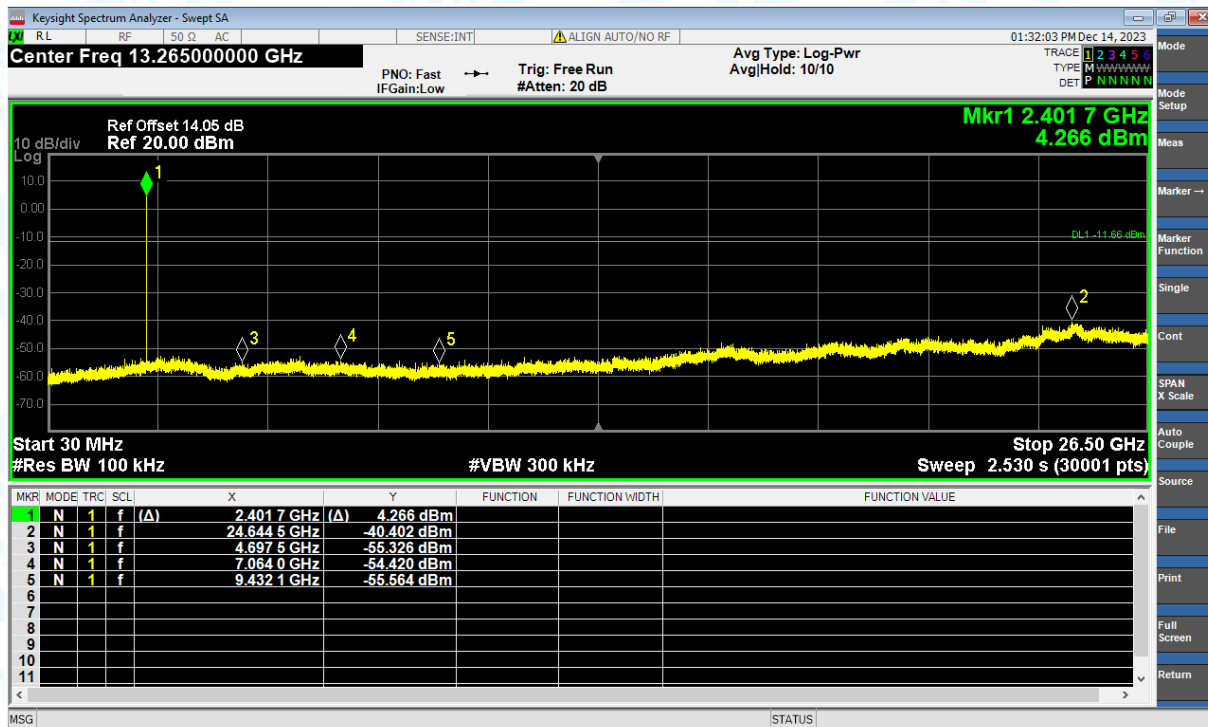
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



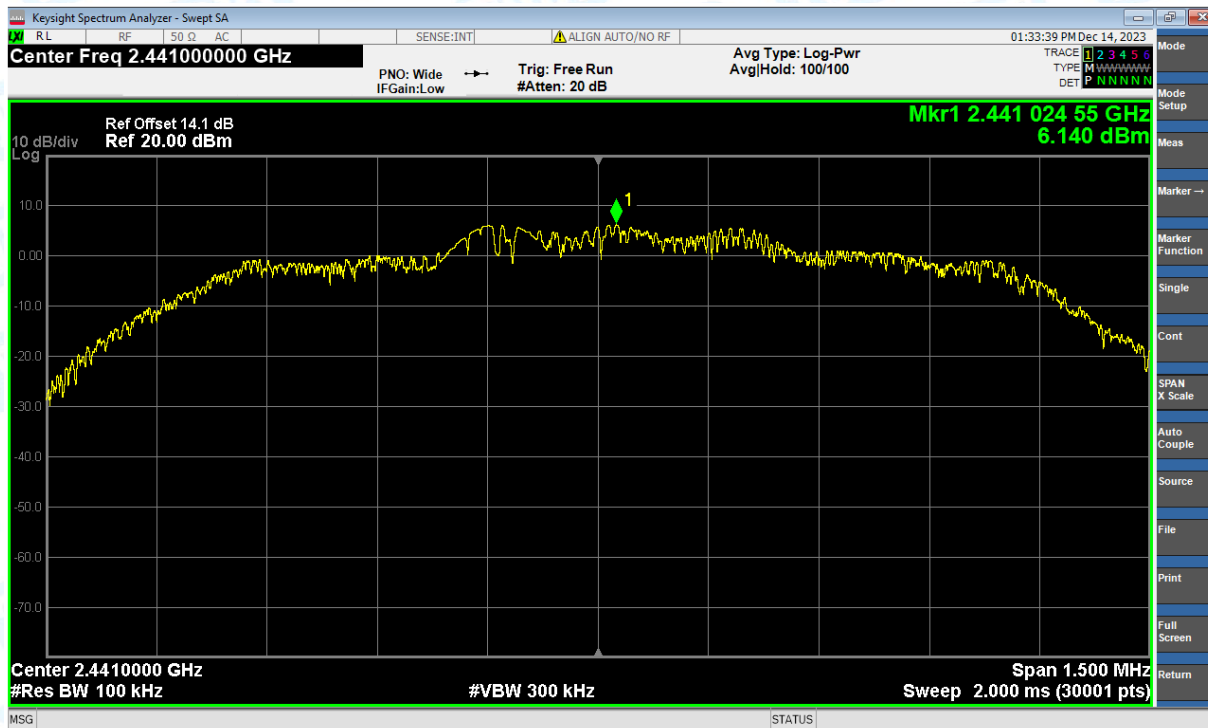
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



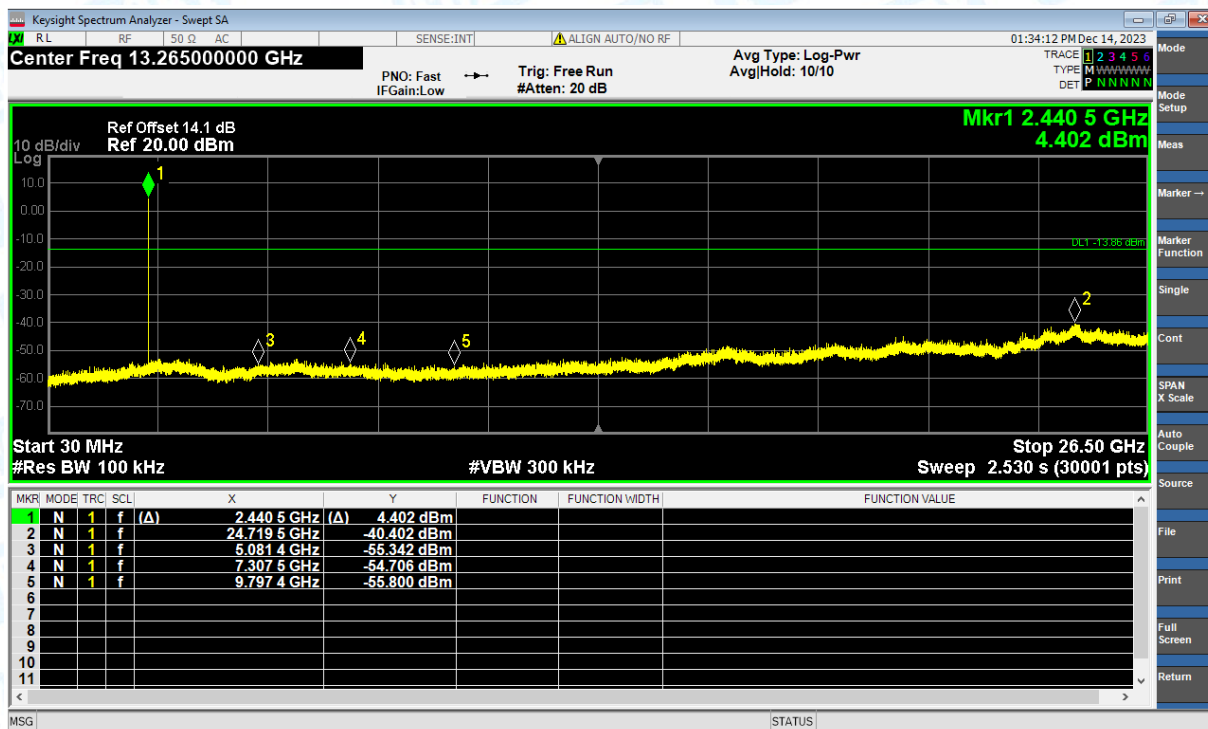
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



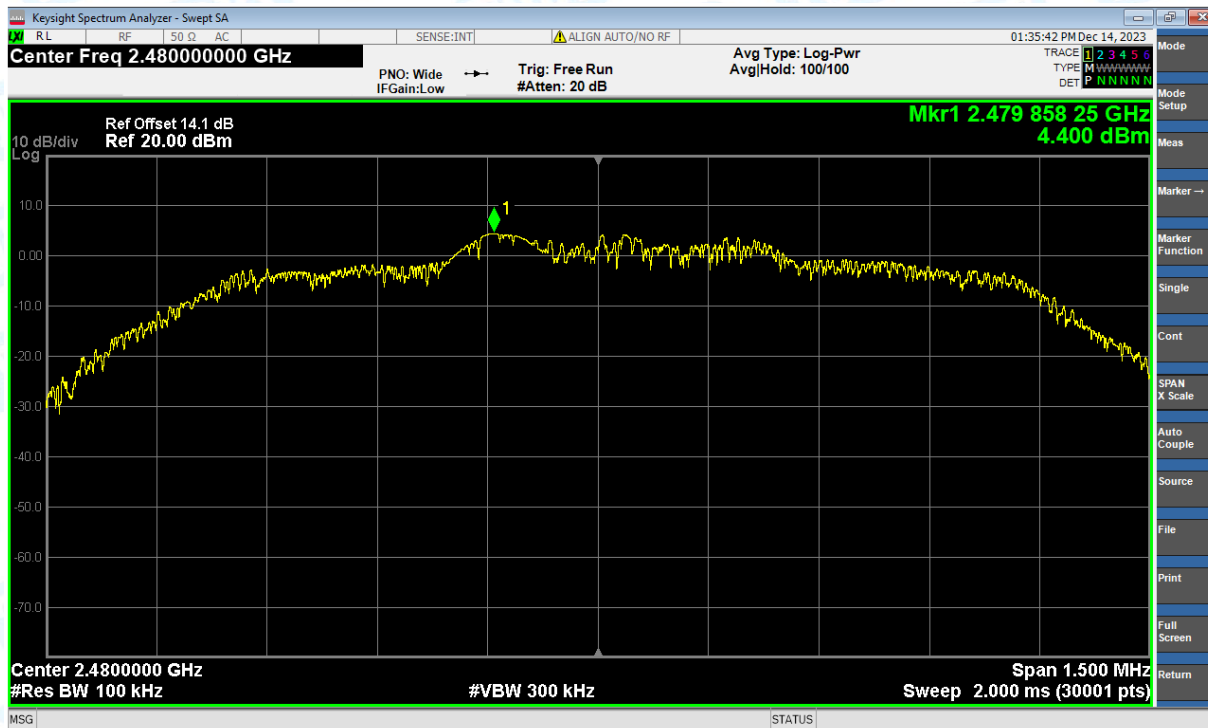
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



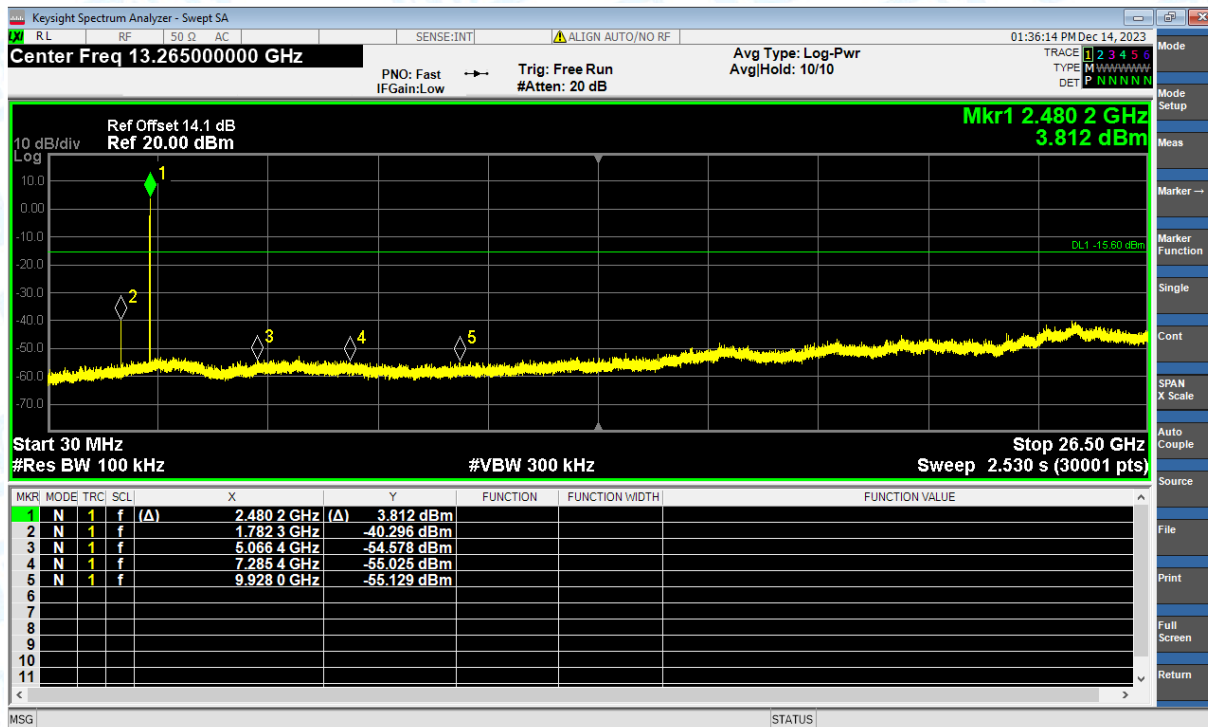
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



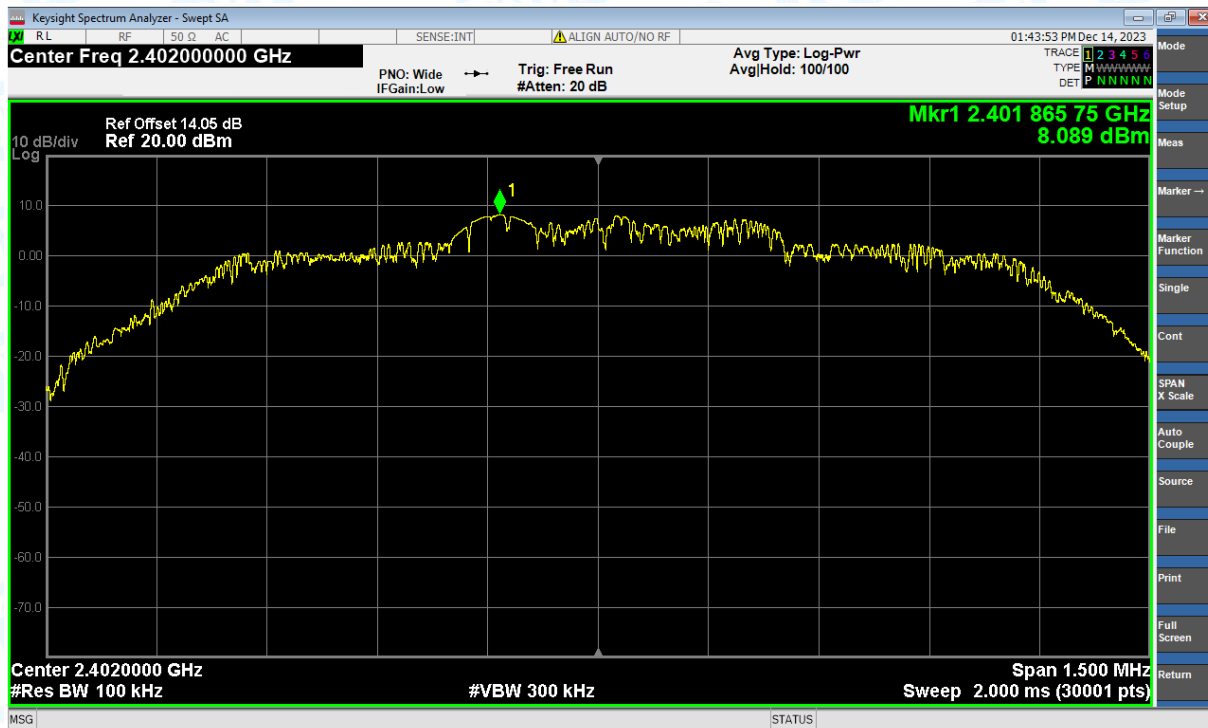
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



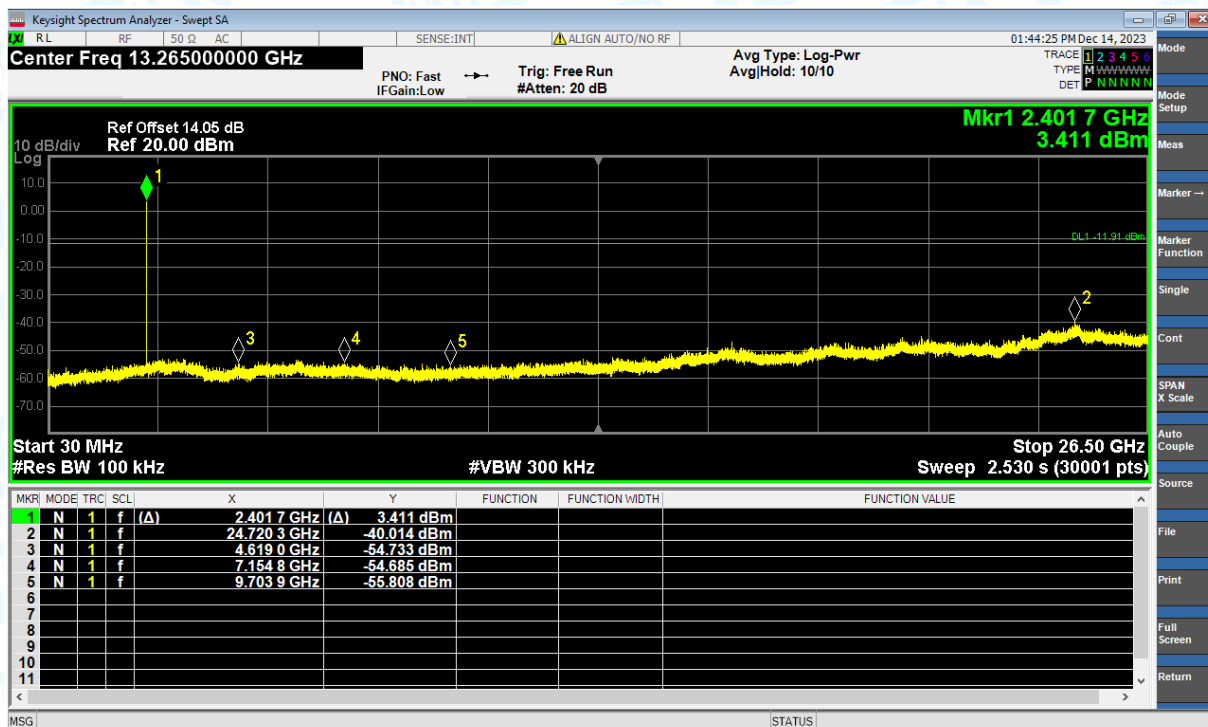
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



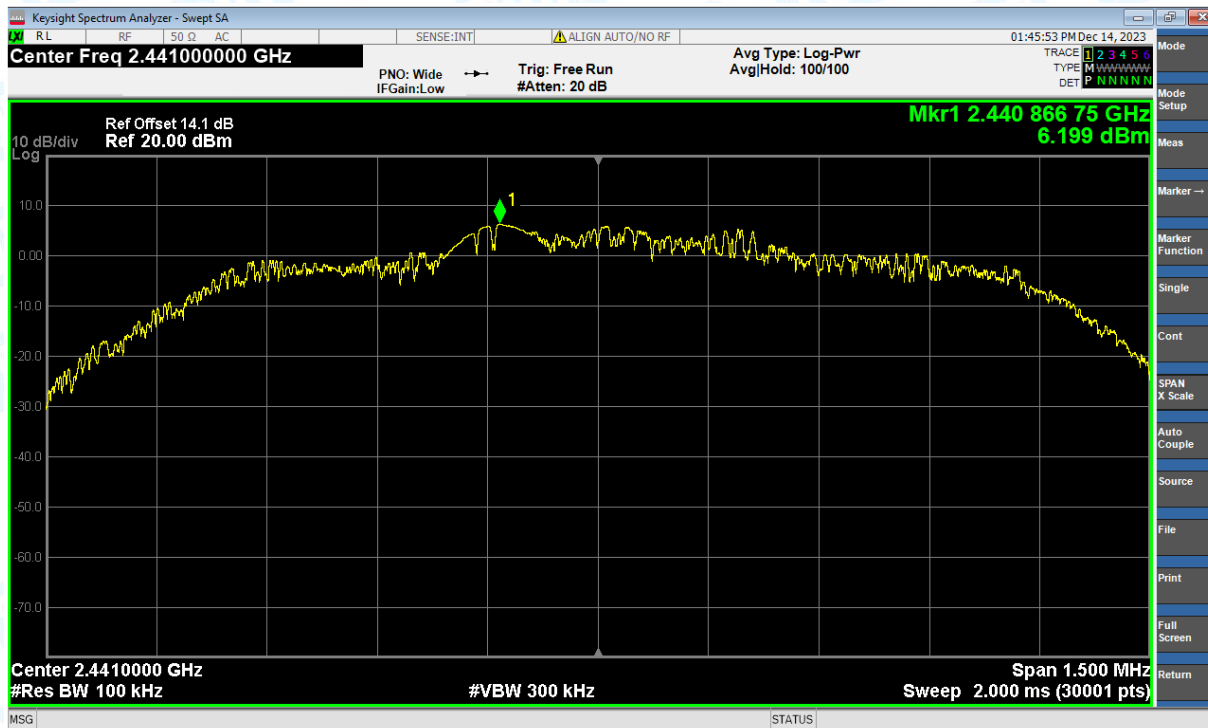
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



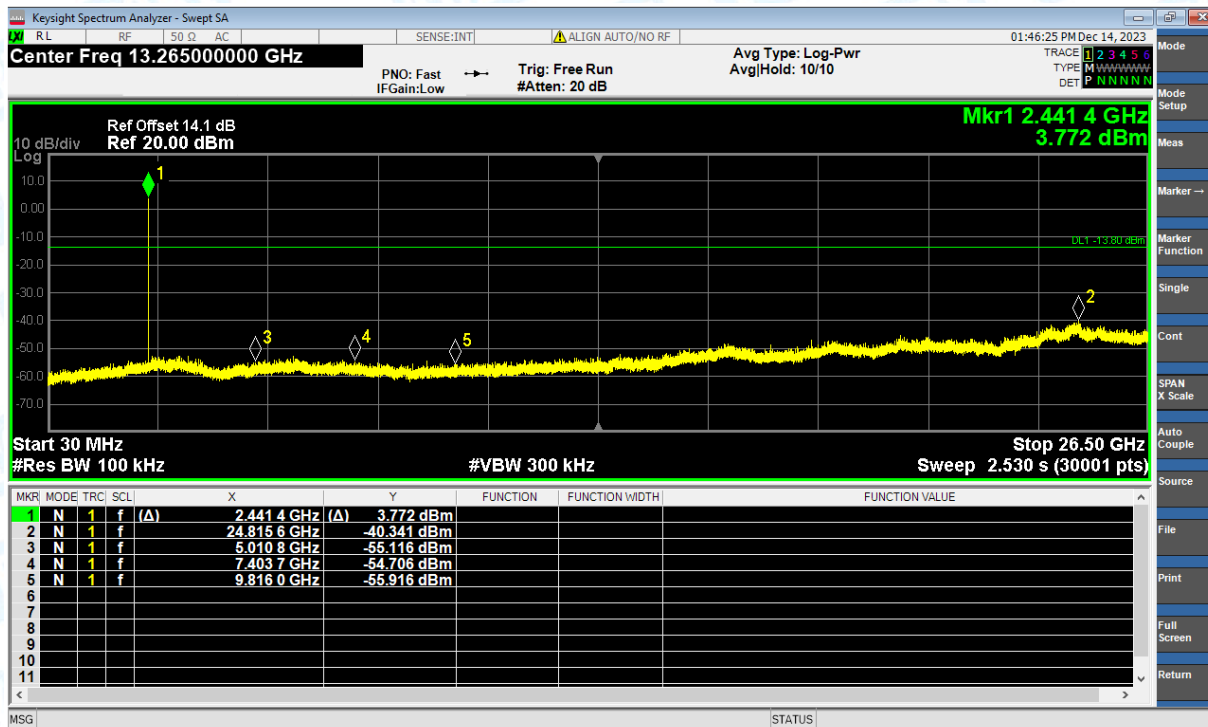
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



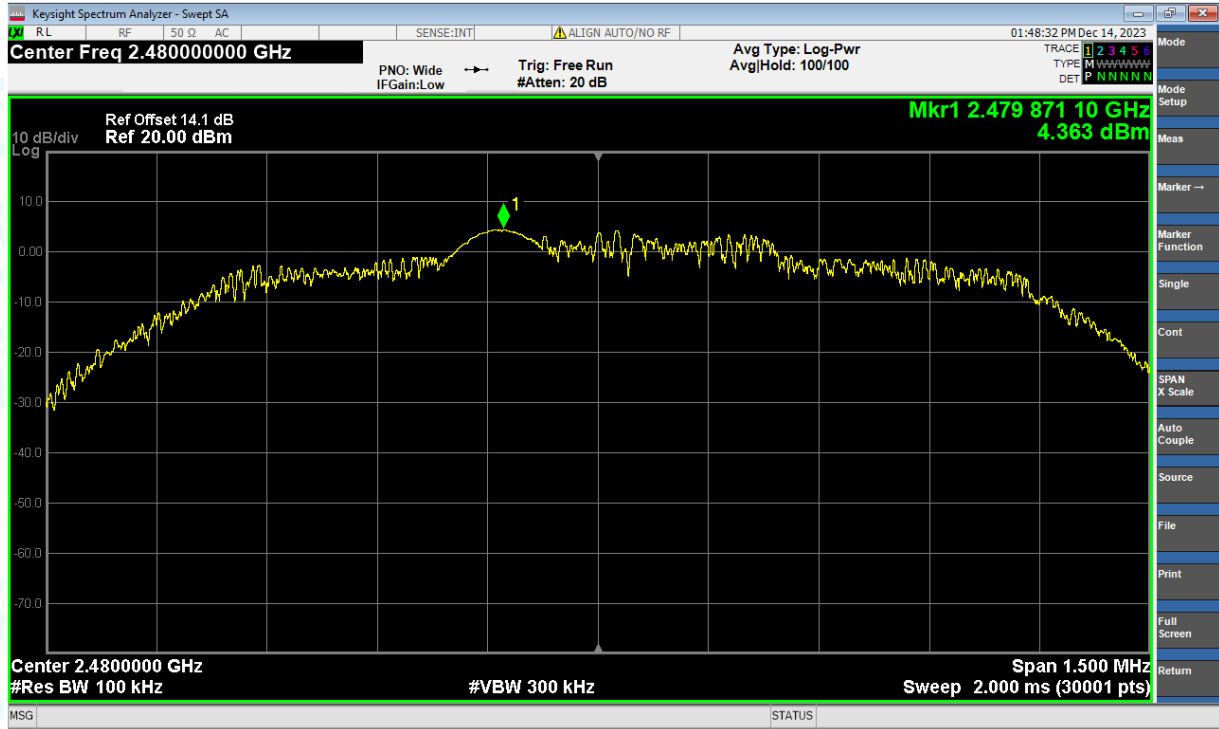
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



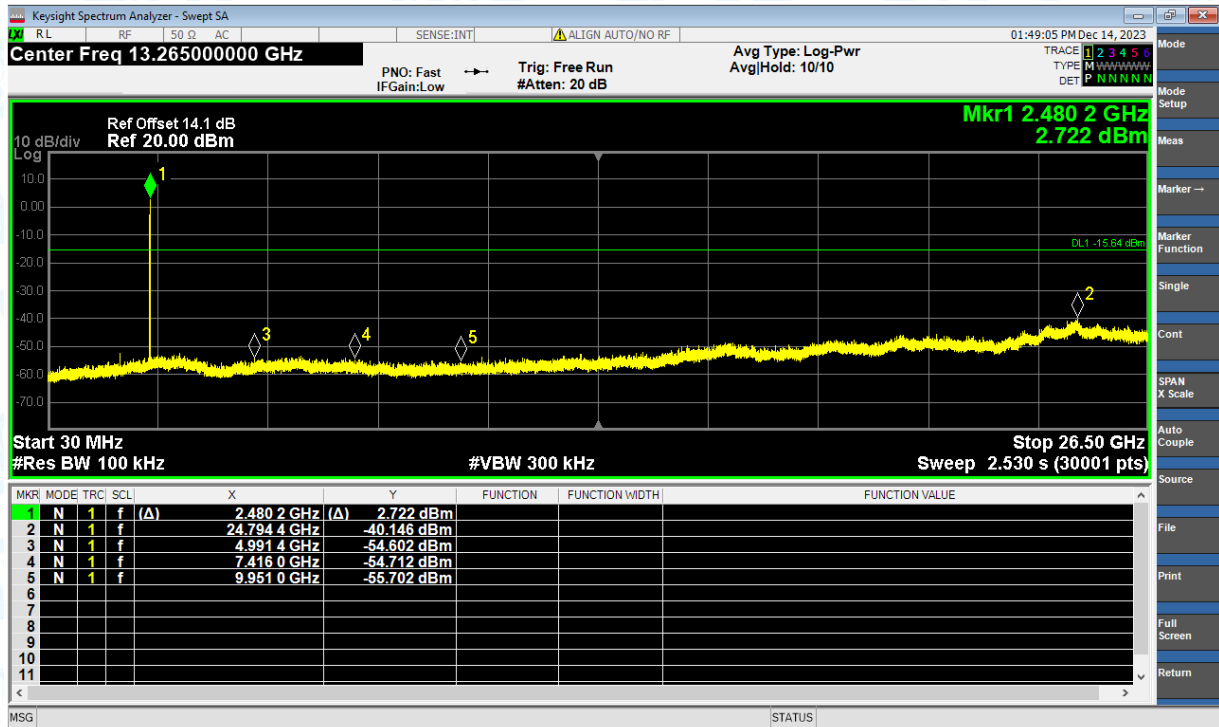
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

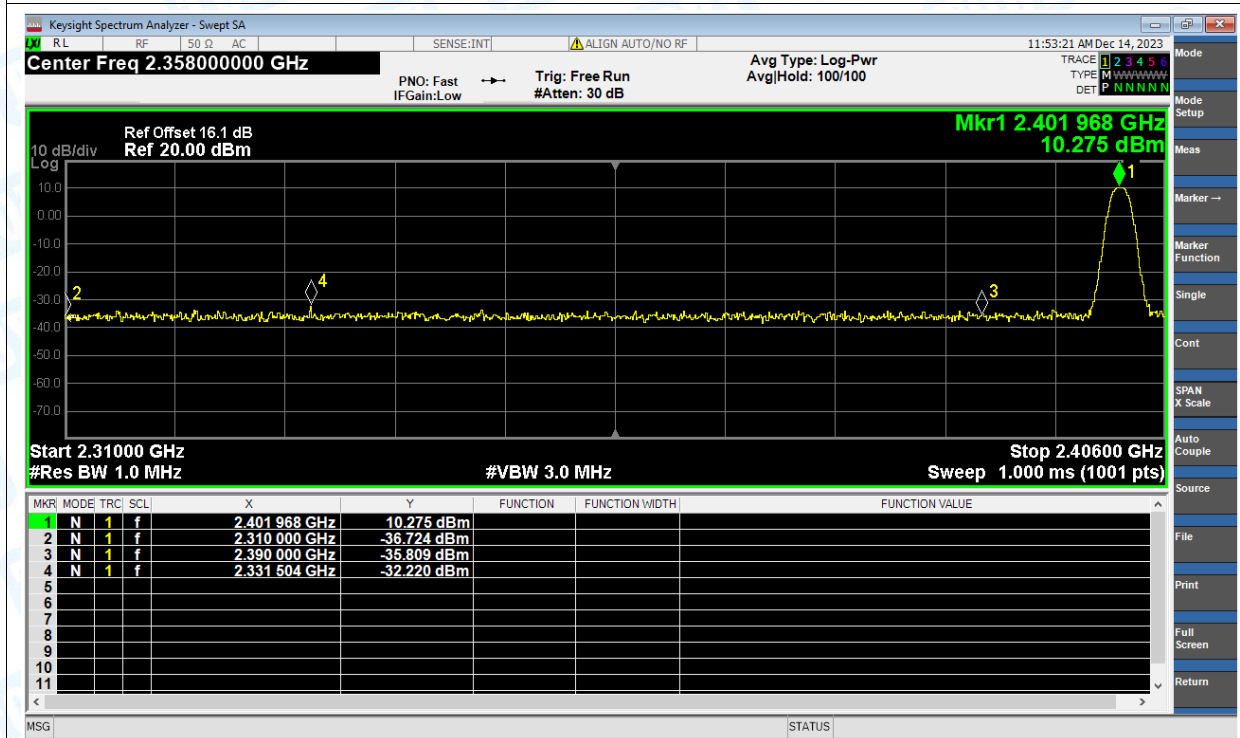


8. Restrict Band

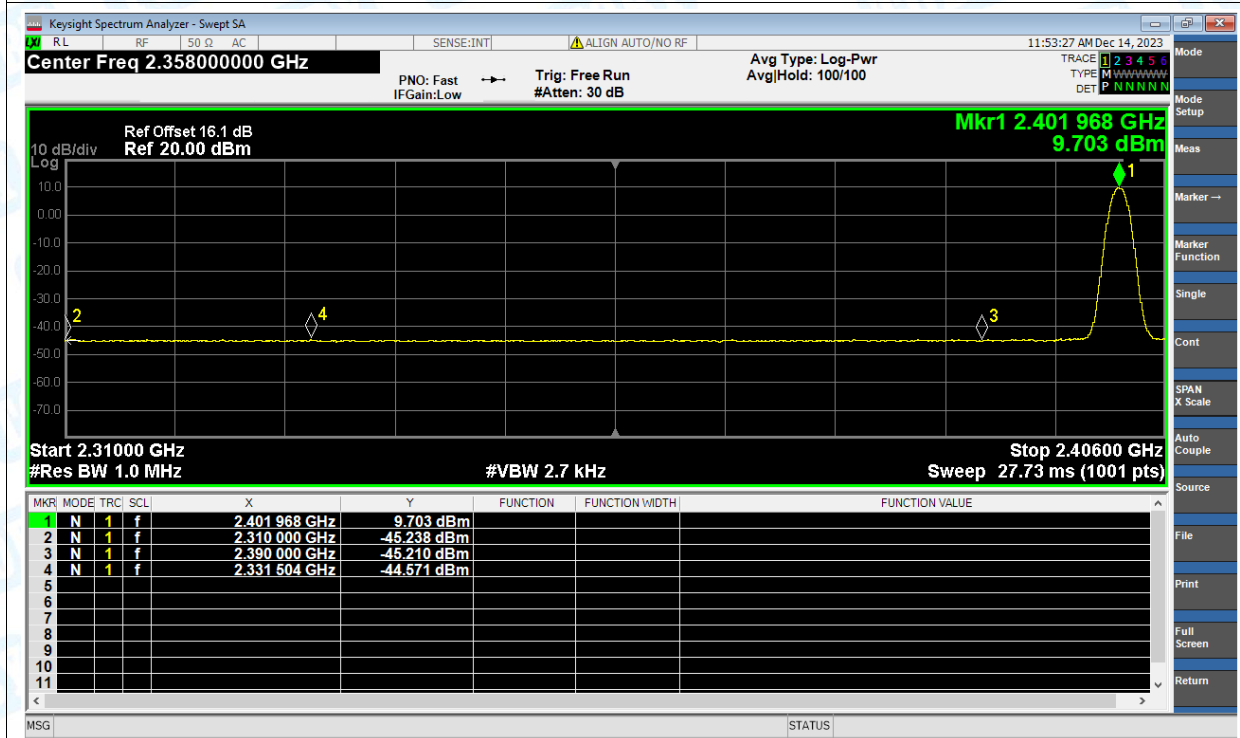
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-36.72	2.05	60.59	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-45.24	2.05	52.07	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2331.504	-32.22	2.05	65.09	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2331.504	-44.57	2.05	52.74	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-35.46	2.05	61.85	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-45.18	2.05	52.13	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-36.26	2.05	61.05	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-44.63	2.05	52.68	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2496.304	-32.89	2.05	64.42	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2497.024	-44.33	2.05	52.98	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-35.44	2.05	61.87	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-44.95	2.05	52.36	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-37.33	2.05	59.98	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-45.3	2.05	52.01	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2342.736	-33.48	2.05	63.83	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2362.224	-44.62	2.05	52.69	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-34.88	2.05	62.43	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-45.16	2.05	52.15	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-34.95	2.05	62.36	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-44.28	2.05	53.03	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2484.256	-32.78	2.05	64.53	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-44.28	2.05	53.03	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-36.14	2.05	61.17	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-44.9	2.05	52.41	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-36.21	2.05	61.1	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-45.01	2.05	52.3	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2389.584	-33.17	2.05	64.14	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2385.552	-44.73	2.05	52.58	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-34.5	2.05	62.81	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-45.03	2.05	52.28	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-34.79	2.05	62.52	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-44.75	2.05	52.56	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2486.968	-32.86	2.05	64.45	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2492.416	-44.28	2.05	53.03	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-35.93	2.05	61.38	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-44.93	2.05	52.38	Average	54	Pass

Test Graphs

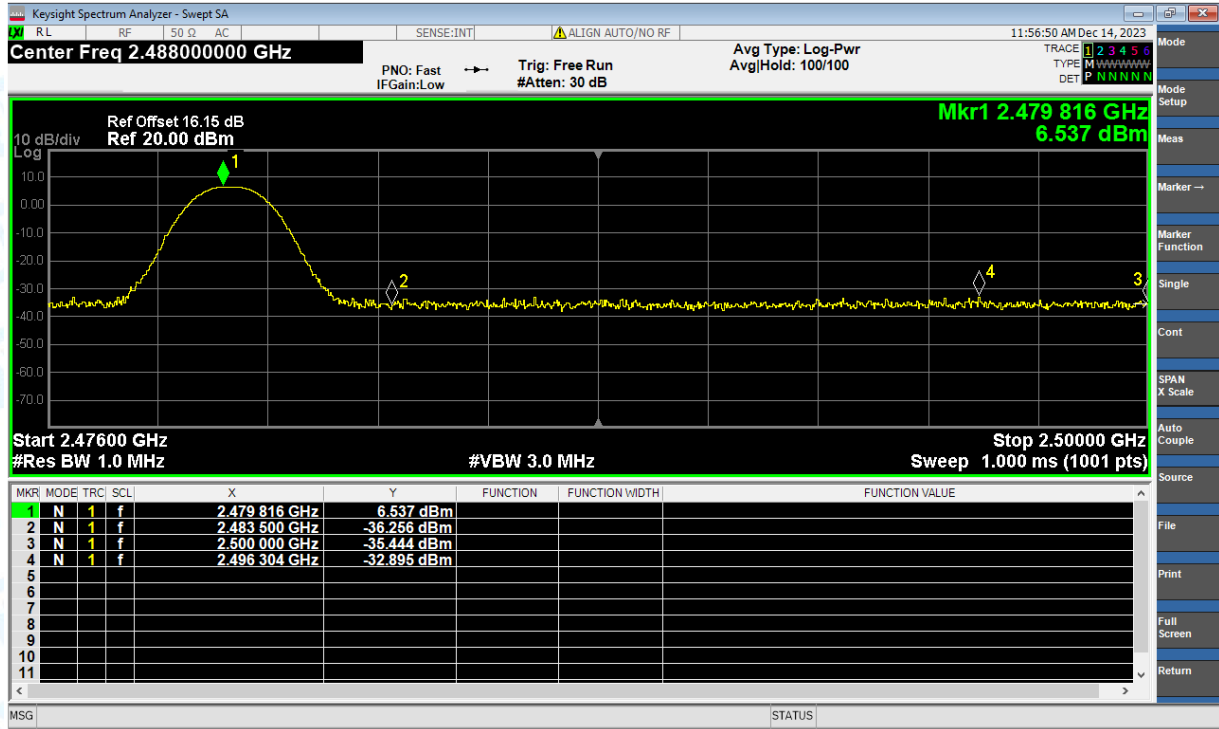
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



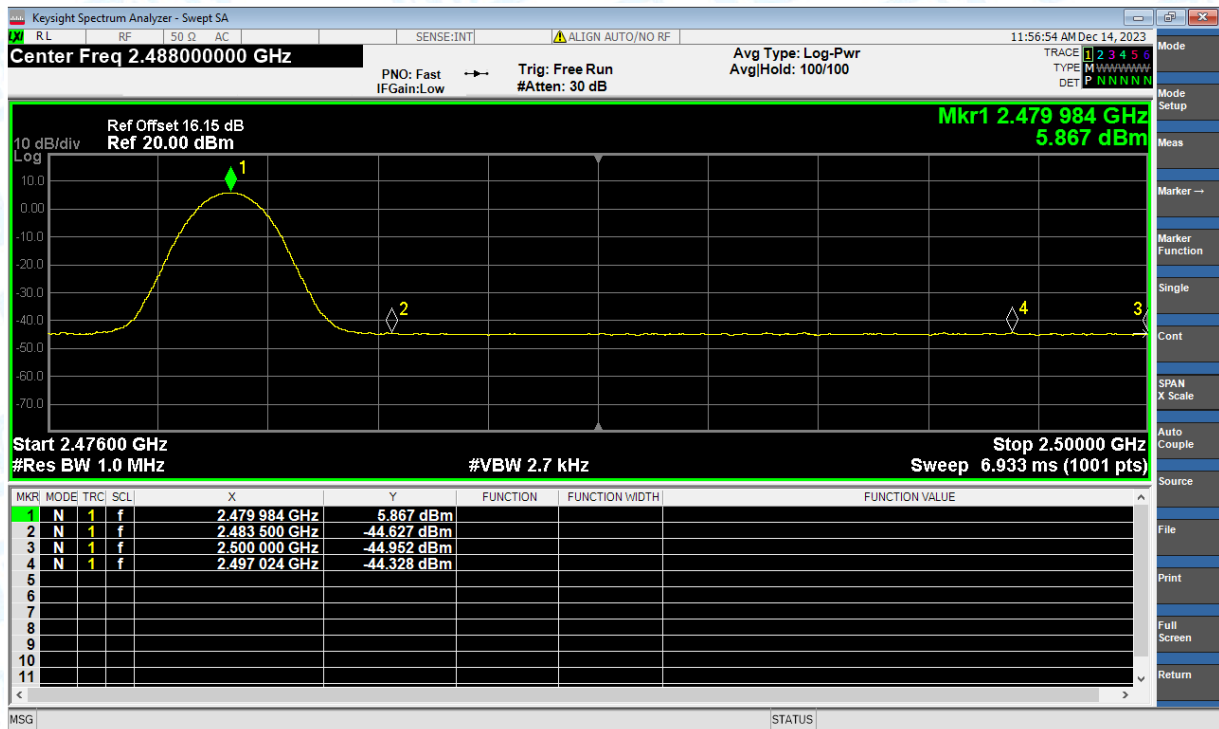
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



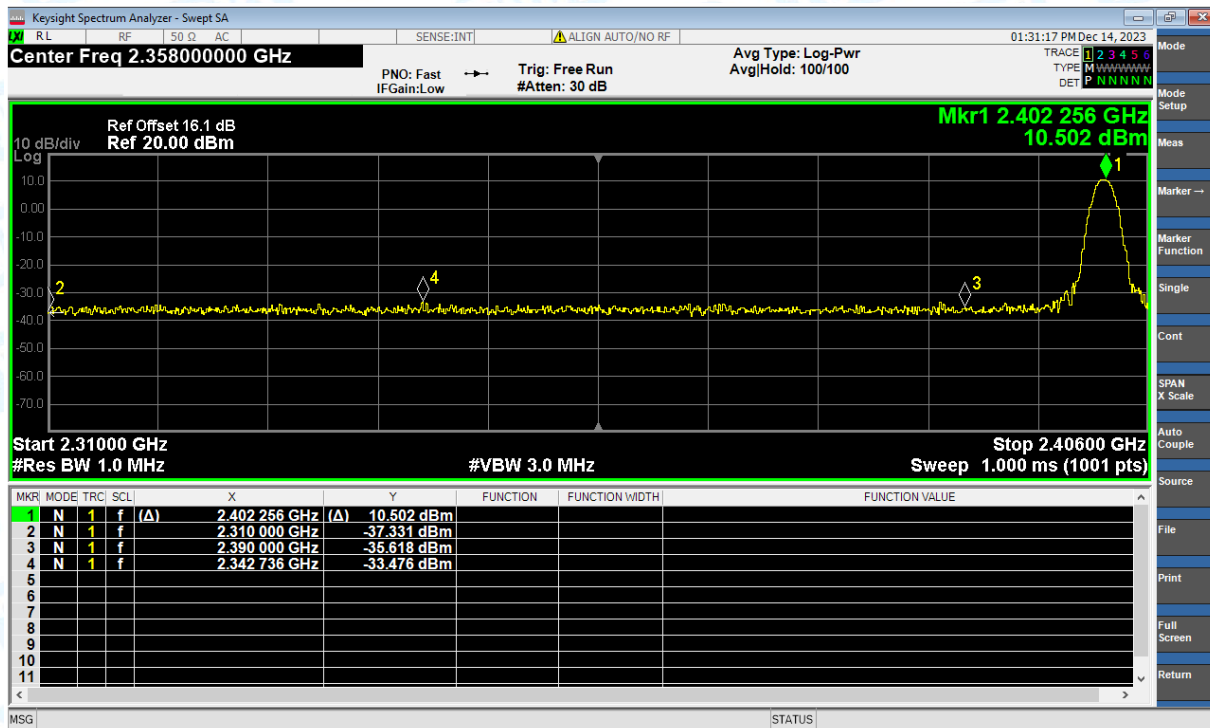
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



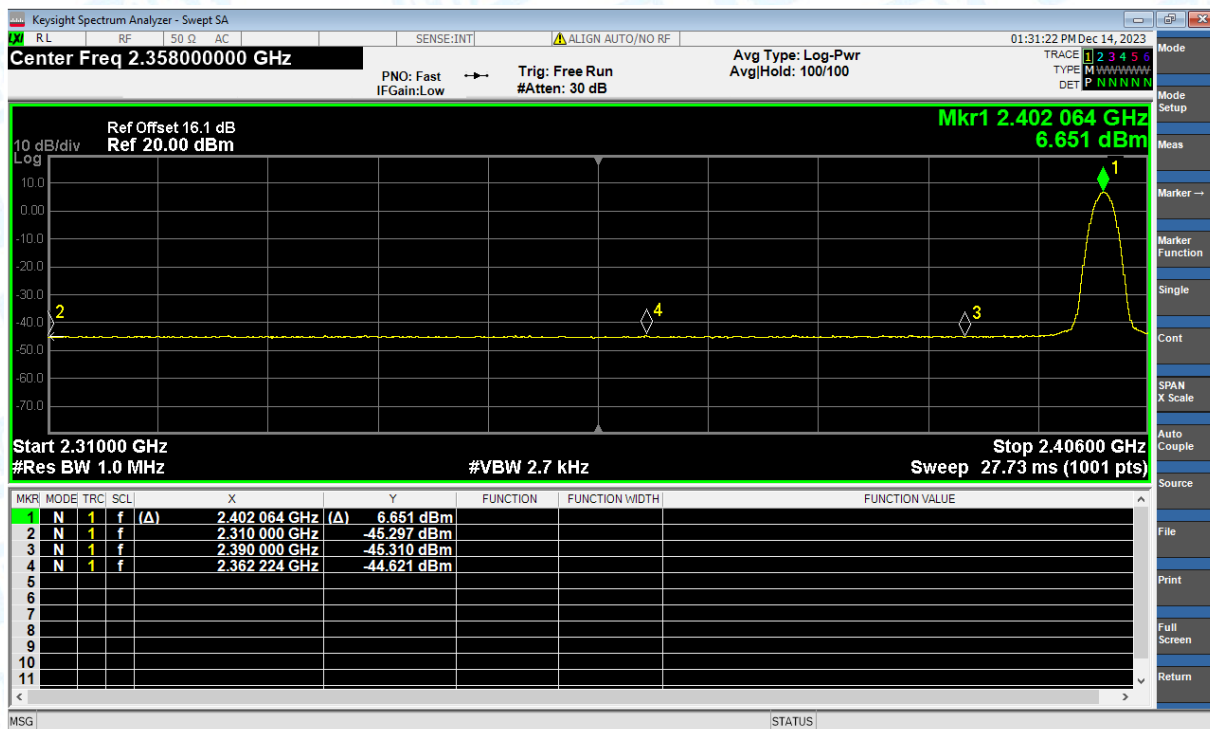
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



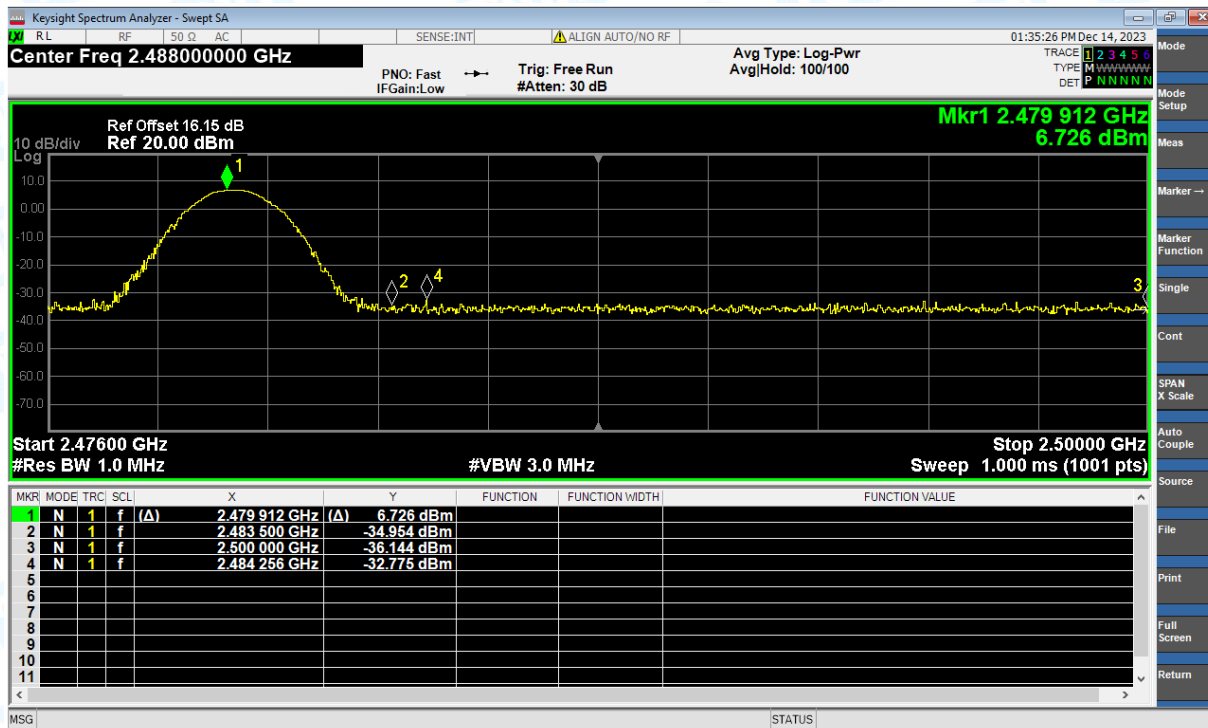
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



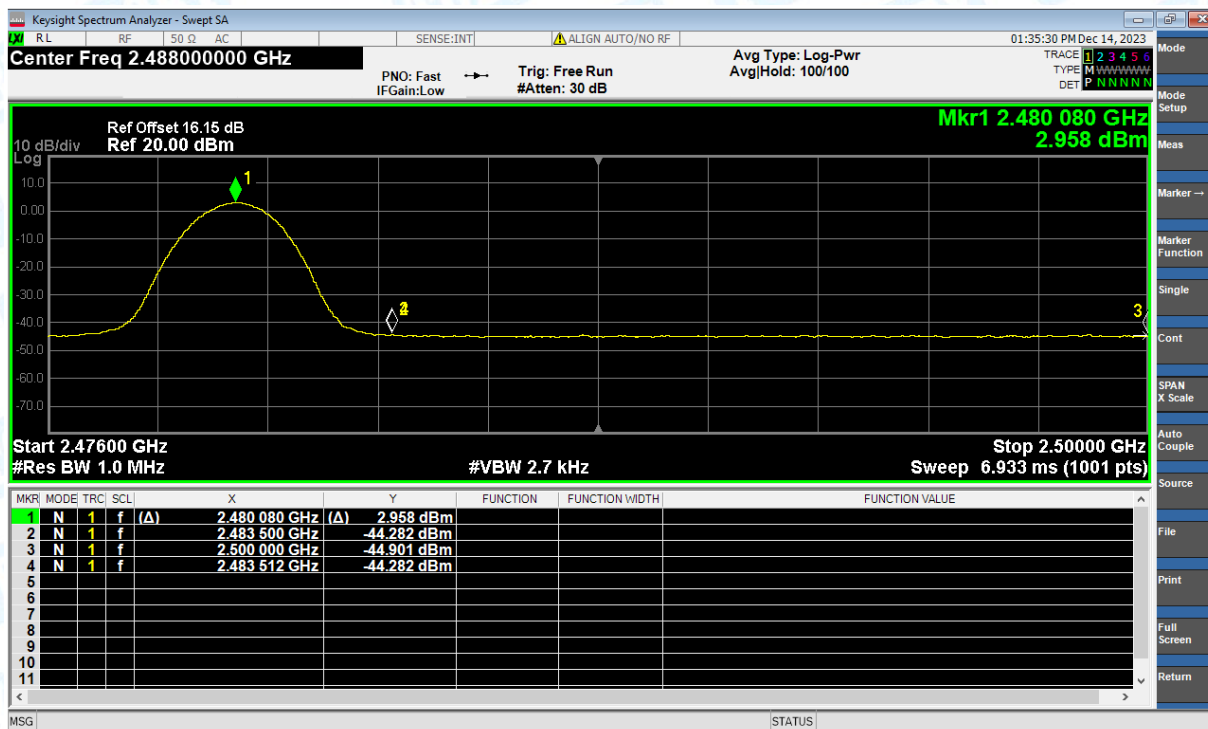
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



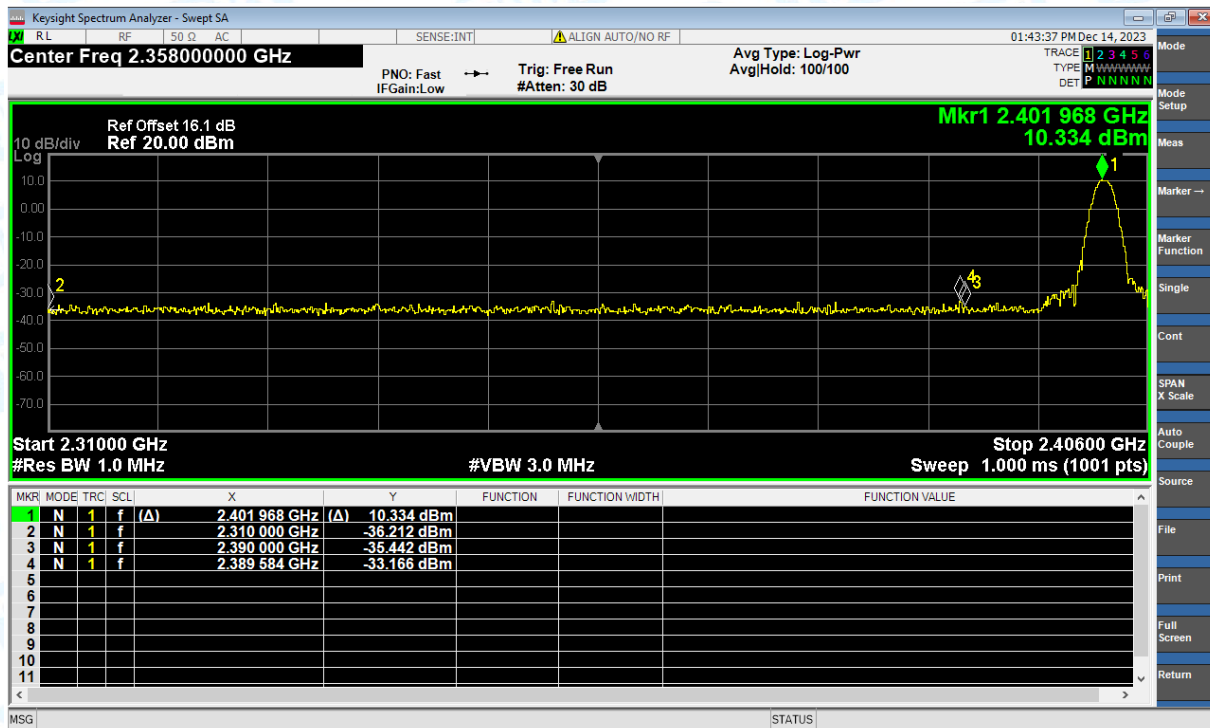
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



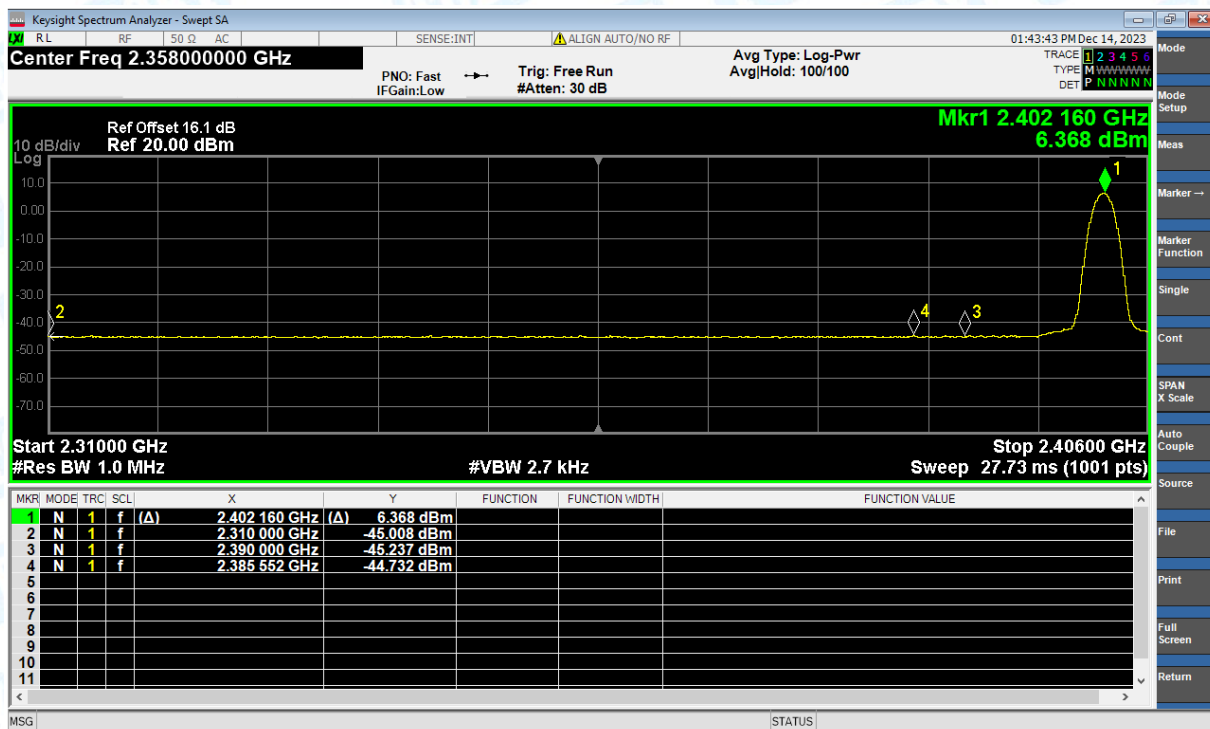
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



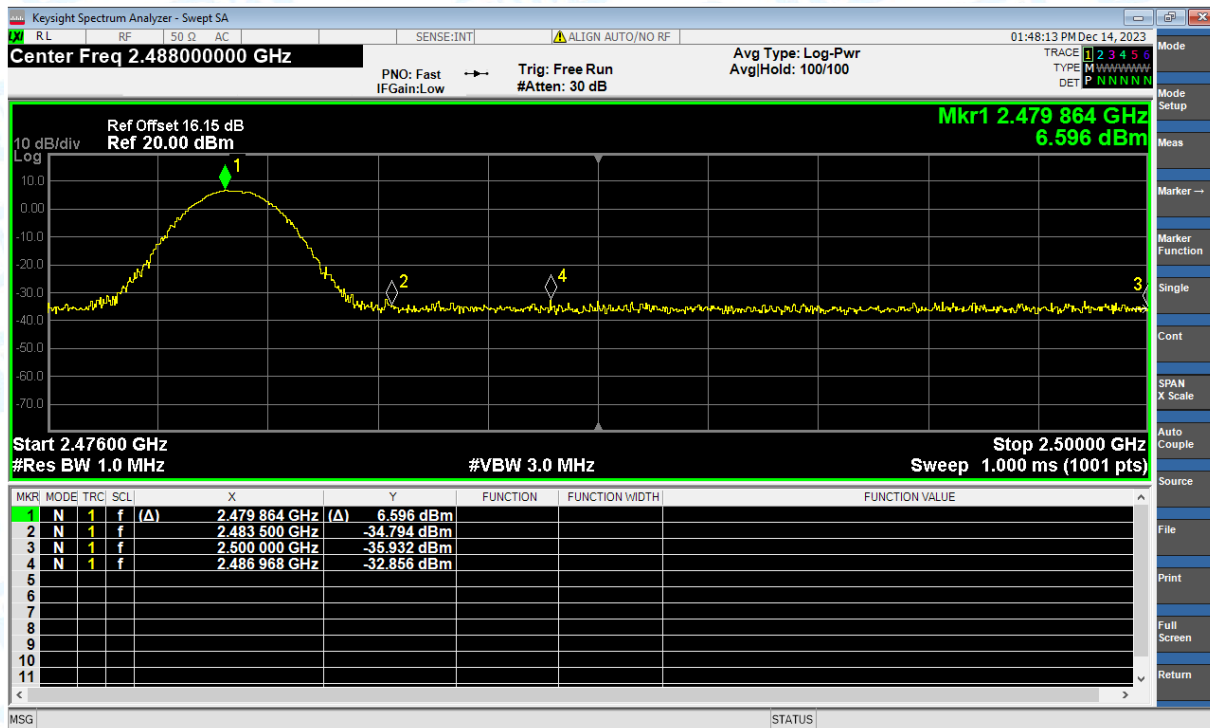
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



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

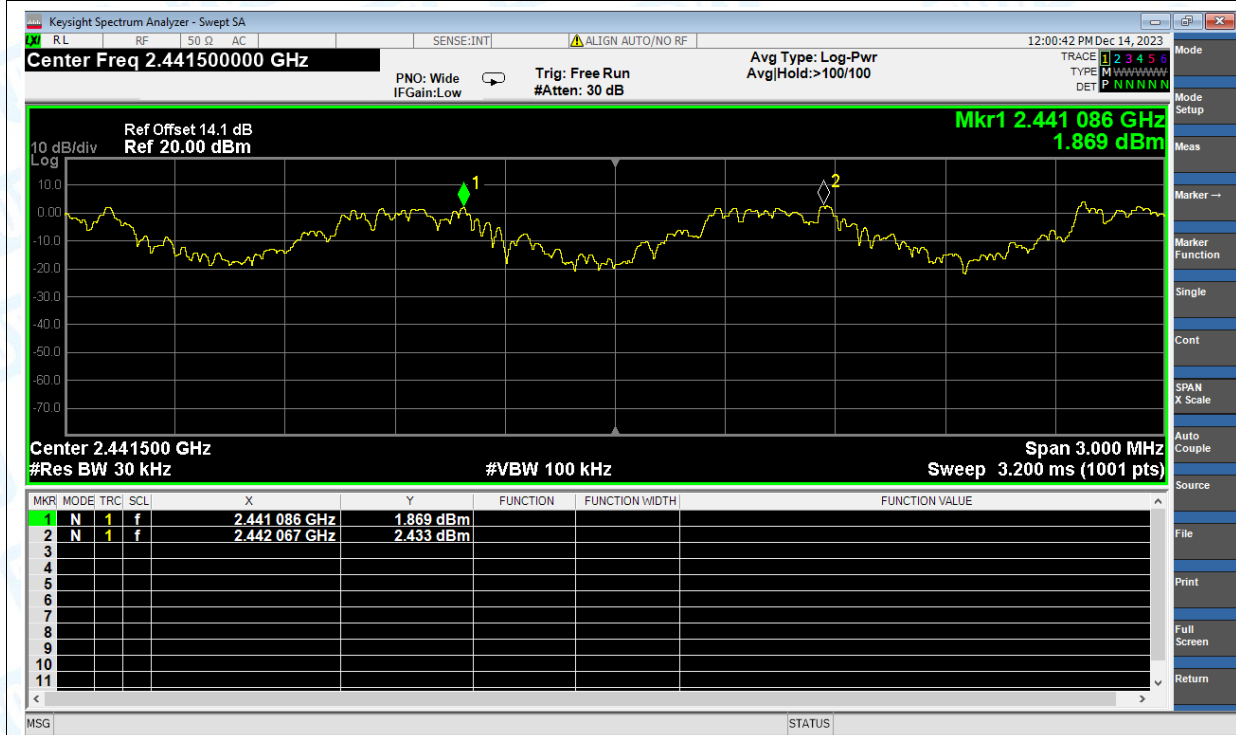


9. Carrier Frequencies Separation

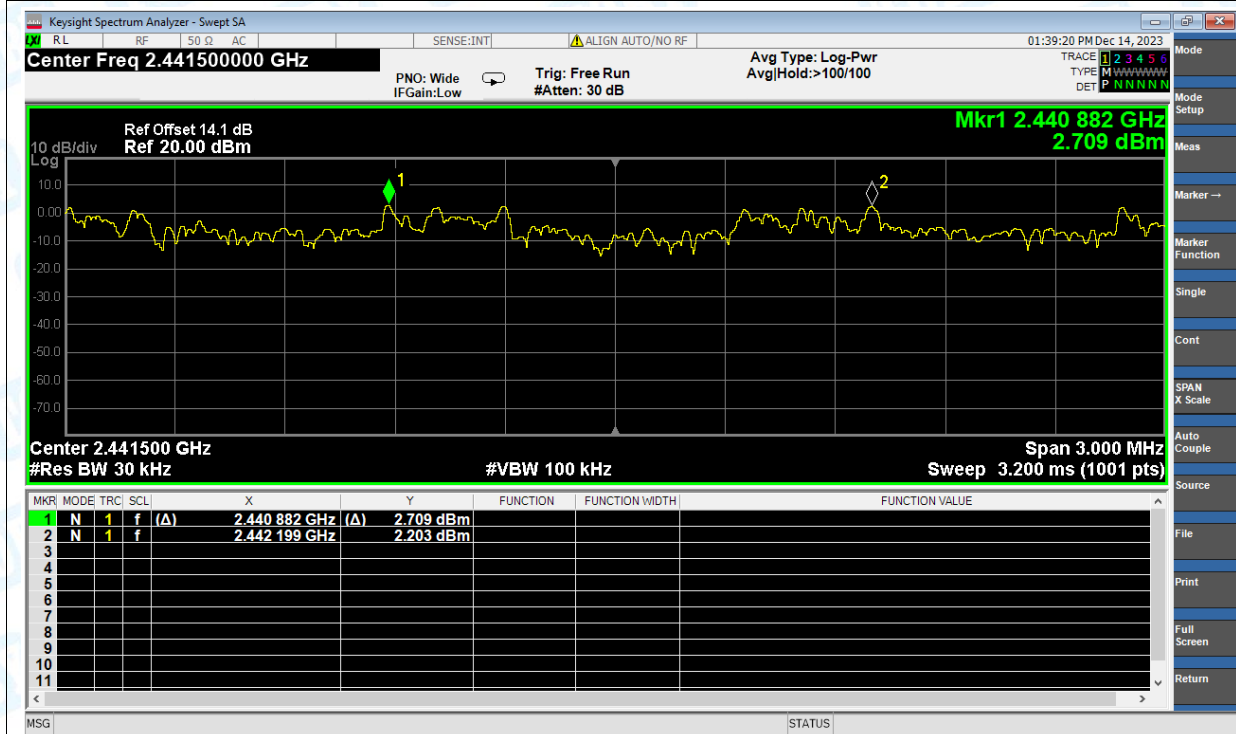
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.086	2442.067	0.981	0.633	Pass
NVNT	2-DH1	Ant1	2440.882	2442.199	1.317	0.840	Pass
NVNT	3-DH1	Ant1	2440.861	2441.866	1.005	0.800	Pass

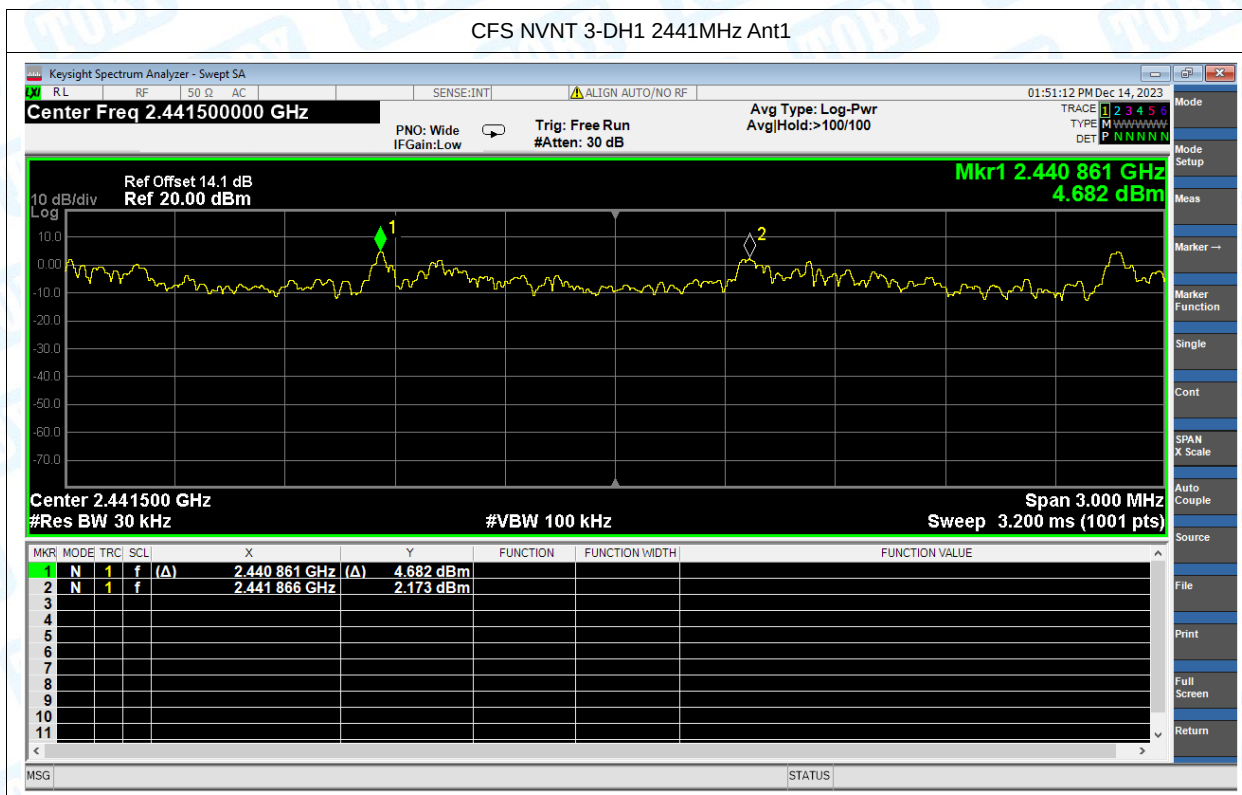
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



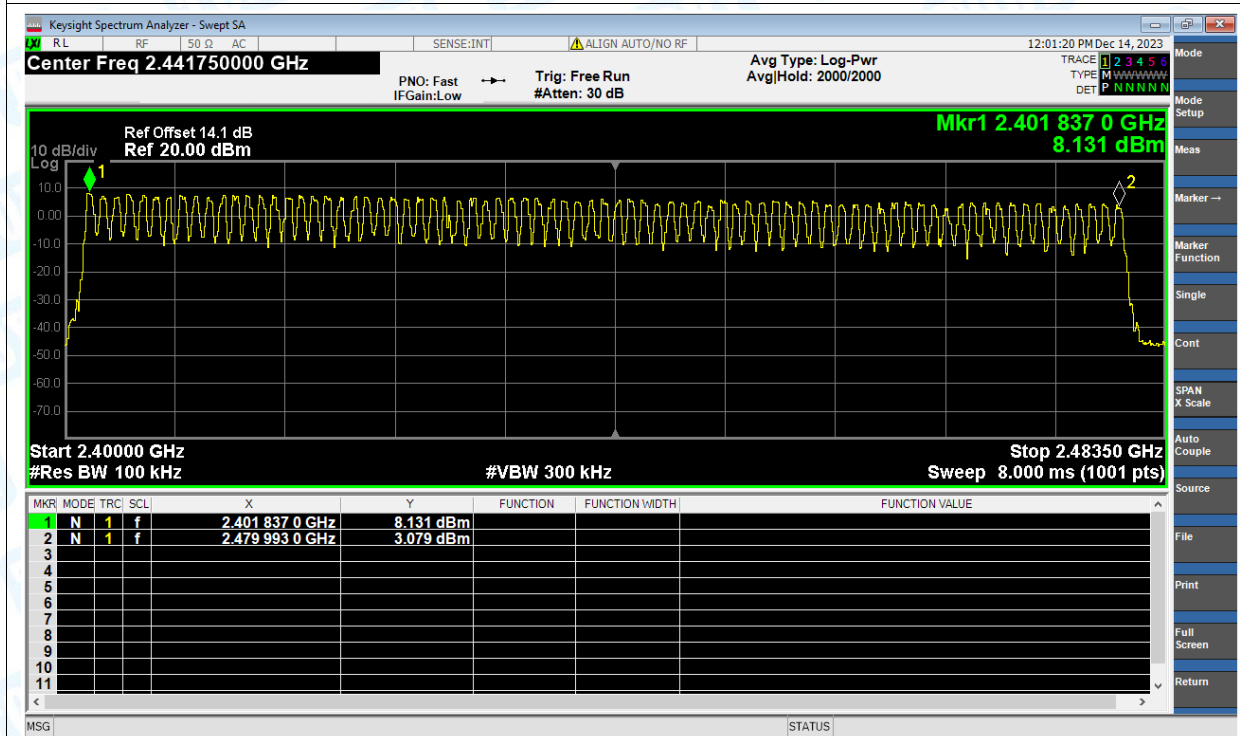


10. Number of Hopping Channel

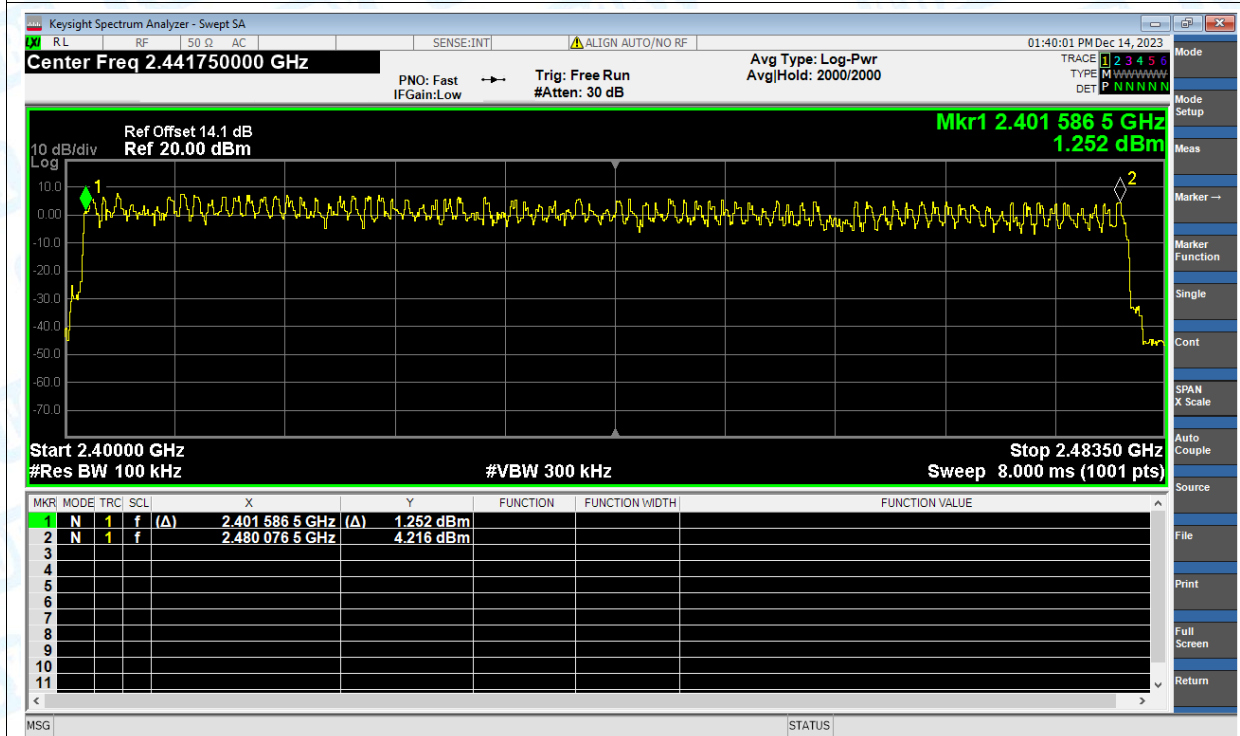
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

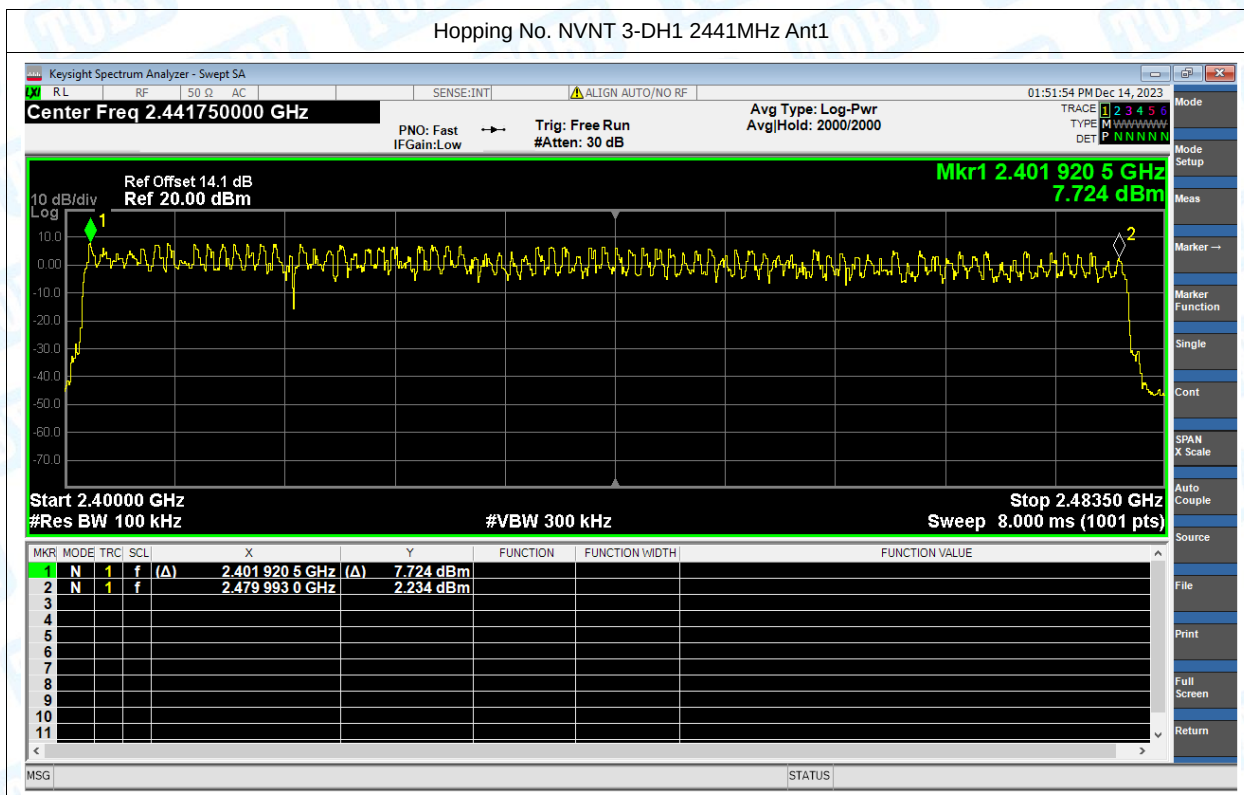
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



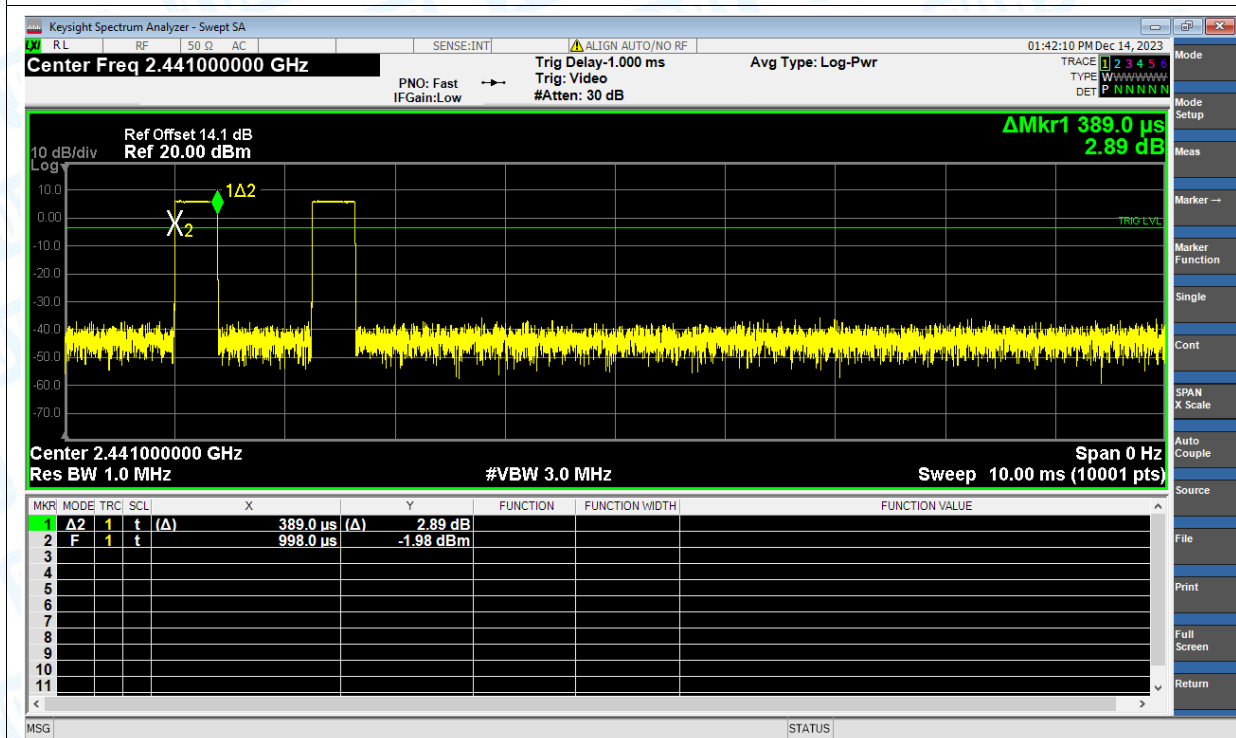


11. Dwell Time

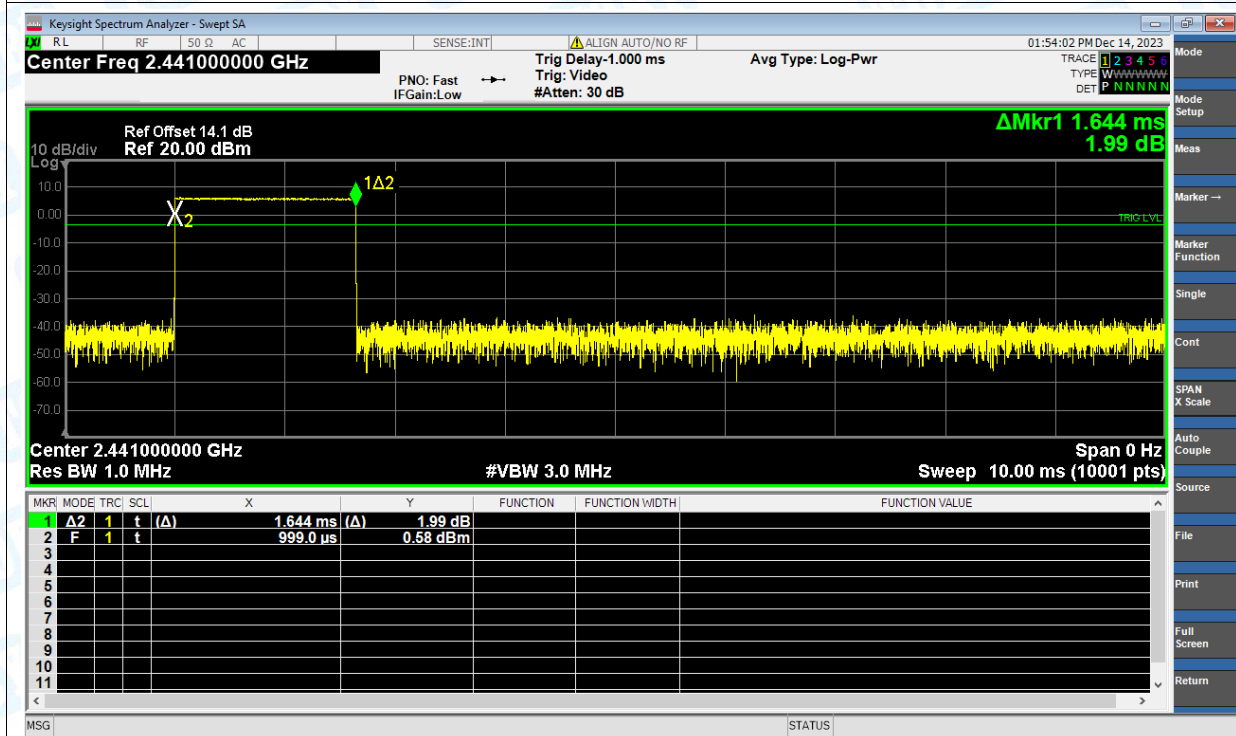
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.389	124.48	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.644	263.04	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.892	308.48	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.387	123.84	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.634	261.44	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.885	307.733	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.386	123.52	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.635	261.6	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.887	307.947	31600	400	Pass

Test Graphs

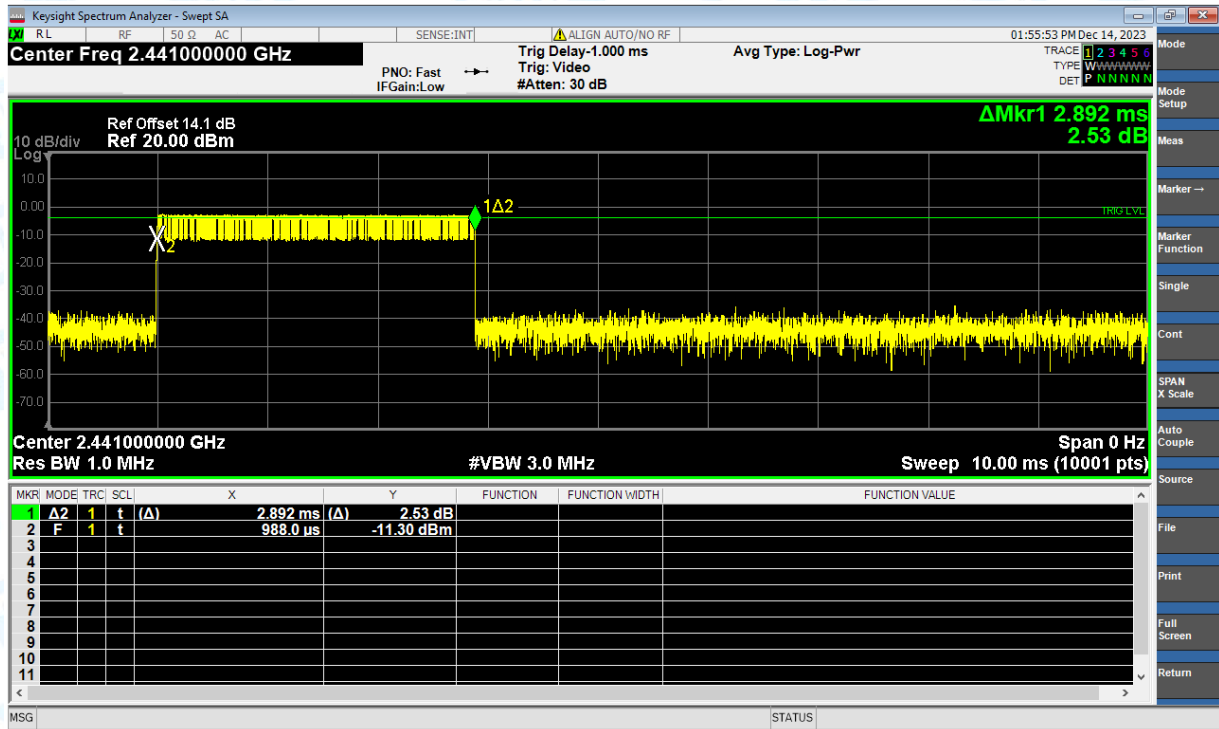
Dwell NVNT 1-DH1 2441MHz Ant1



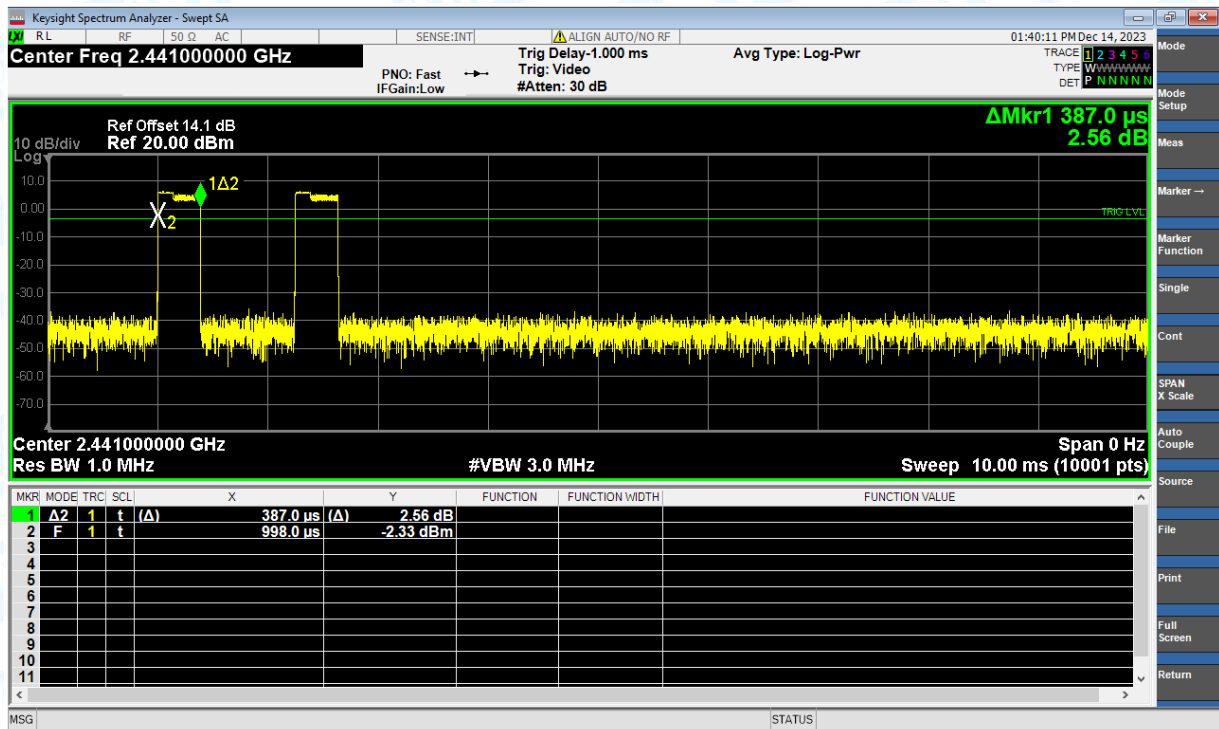
Dwell NVNT 1-DH3 2441MHz Ant1



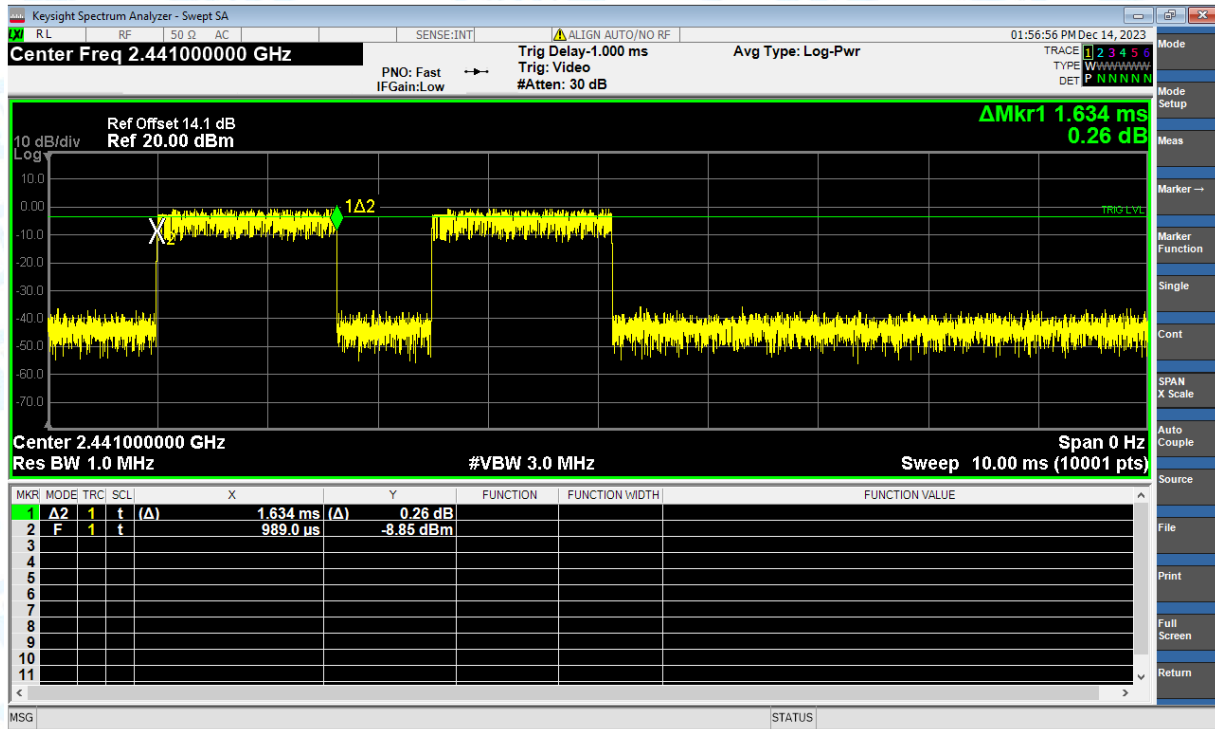
Dwell NVNT 1-DH5 2441MHz Ant1



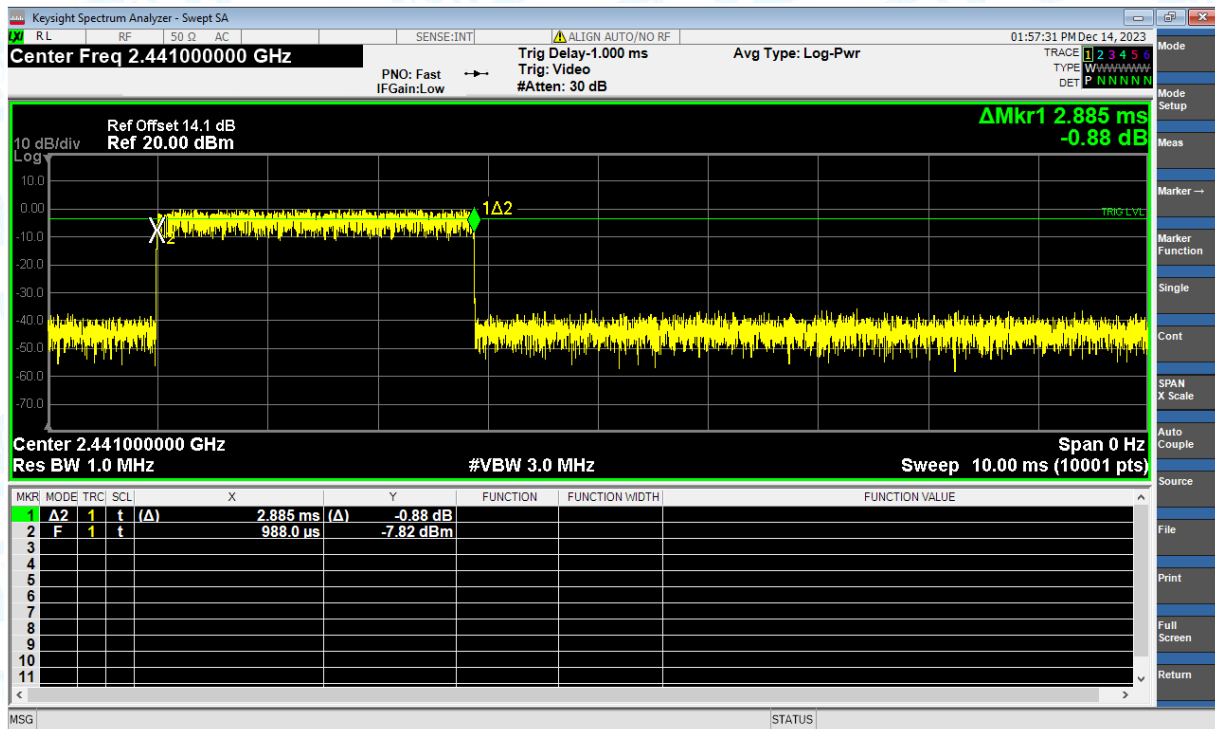
Dwell NVNT 2-DH1 2441MHz Ant1



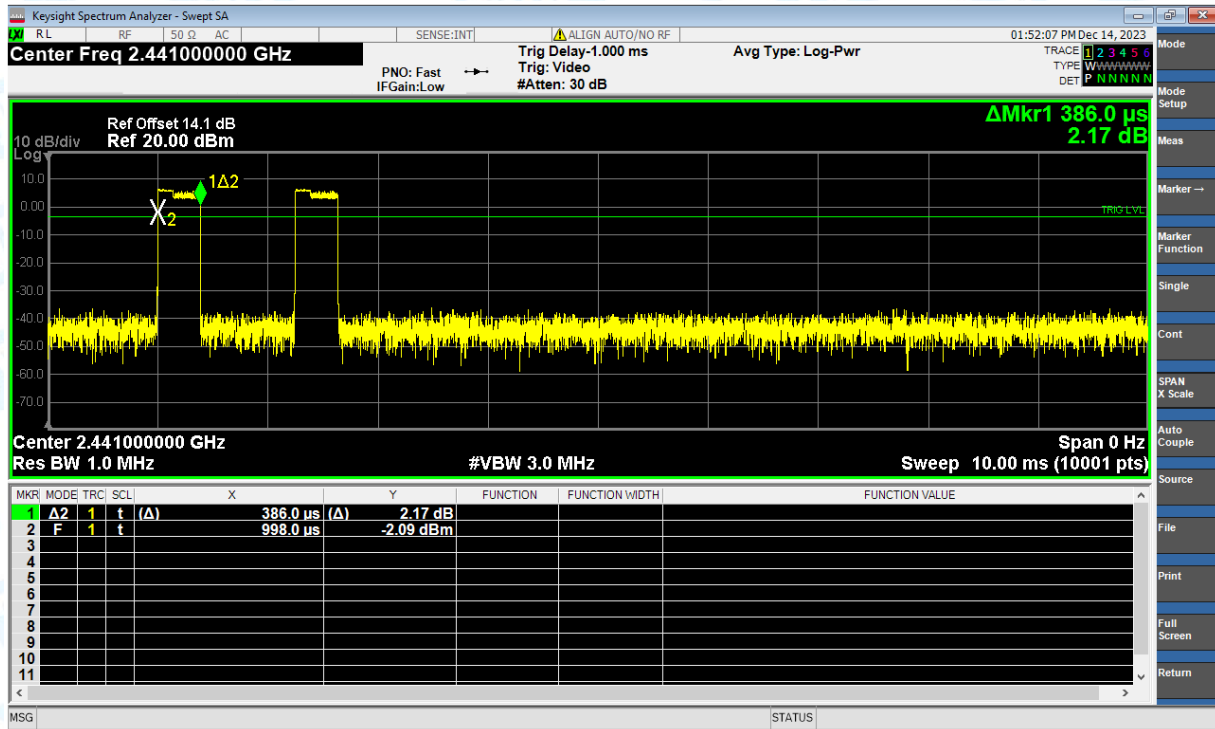
Dwell NVNT 2-DH3 2441MHz Ant1



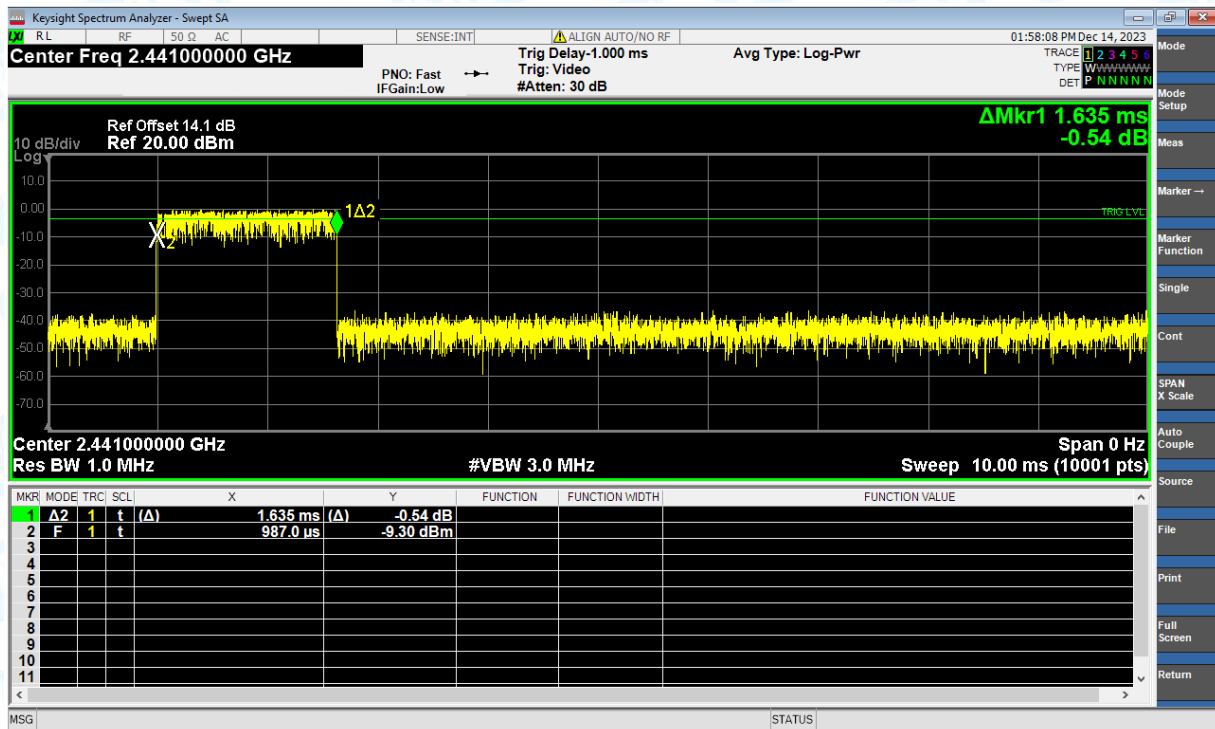
Dwell NVNT 2-DH5 2441MHz Ant1

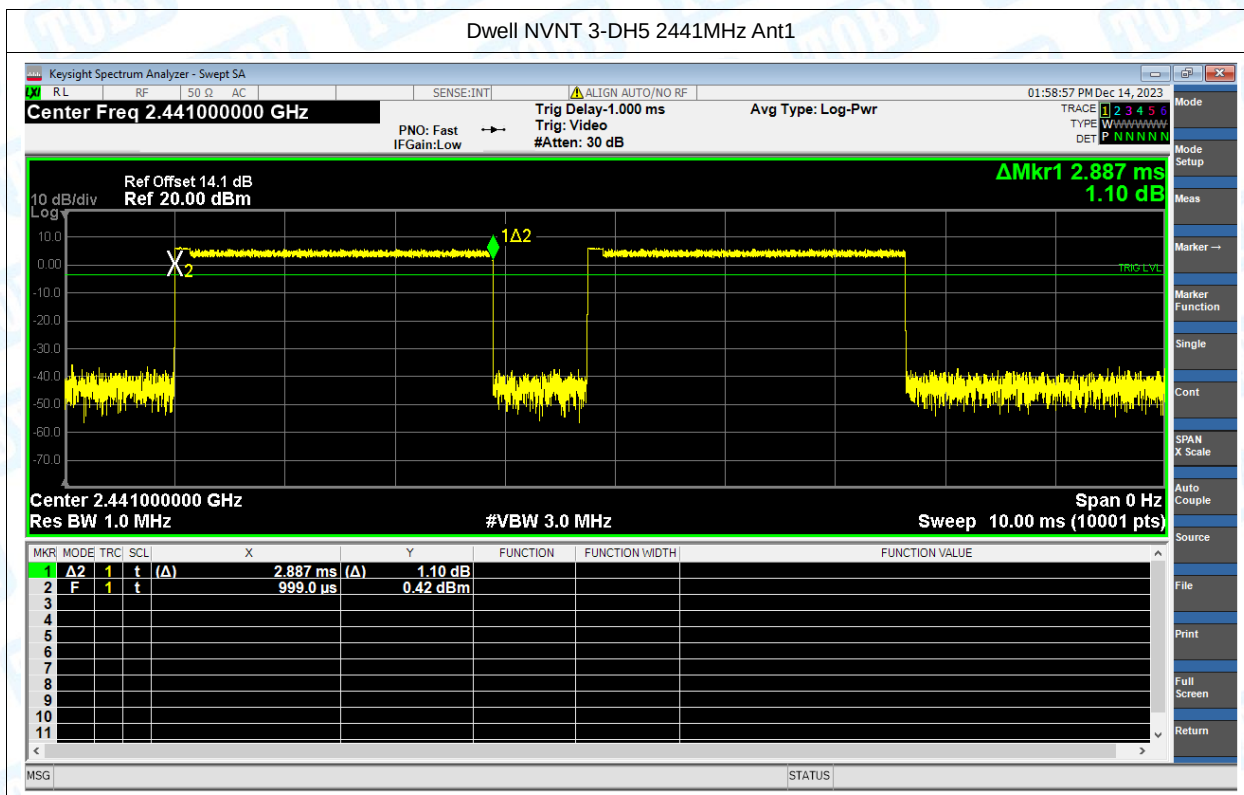


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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