

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Smart Watch
Test Model:	KR92
Sample ID:	HC-C-202505-0044-01-02#
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 5V
Test Engineer:	Rick Chen
Note: For a more detailed features description, please refer to the report TBR-C-202505-0044-101 The report only show the worst case data.	

Contents

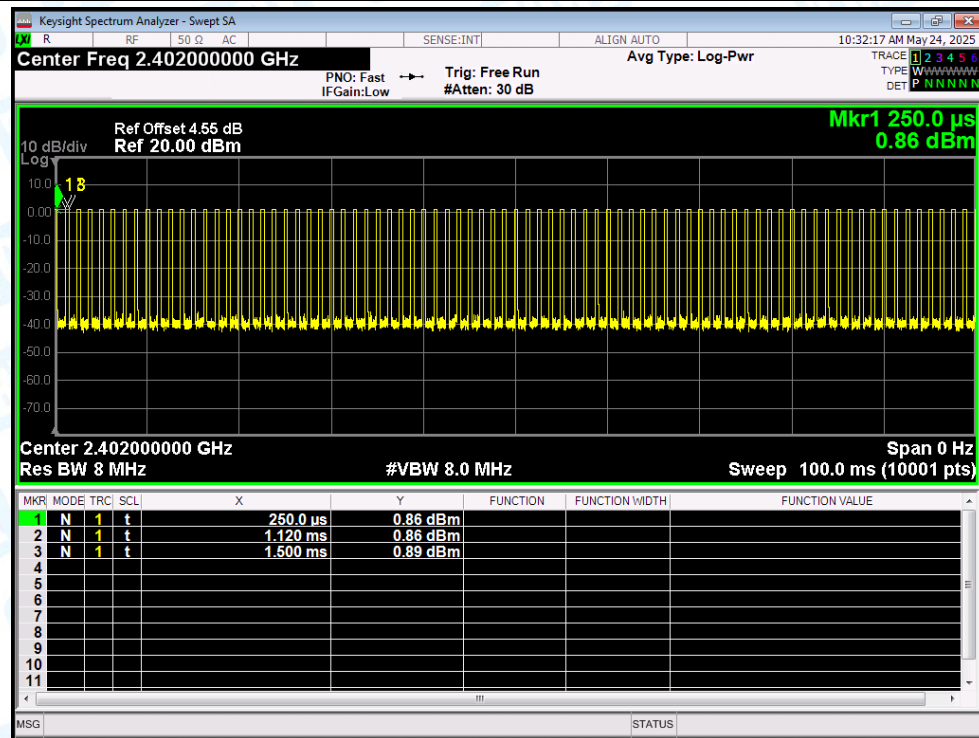
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1.Duty Cycle

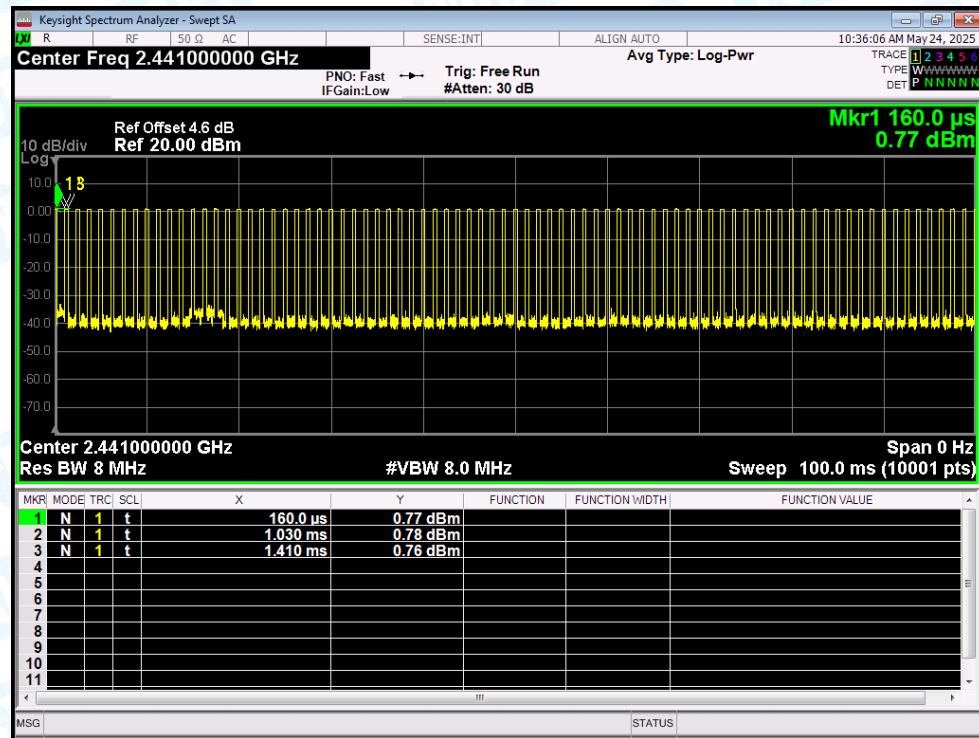
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	32	4.95	2.5
NVNT	2-DH1	2441	Ant1	32	4.95	2.5
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT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

Test Graphs

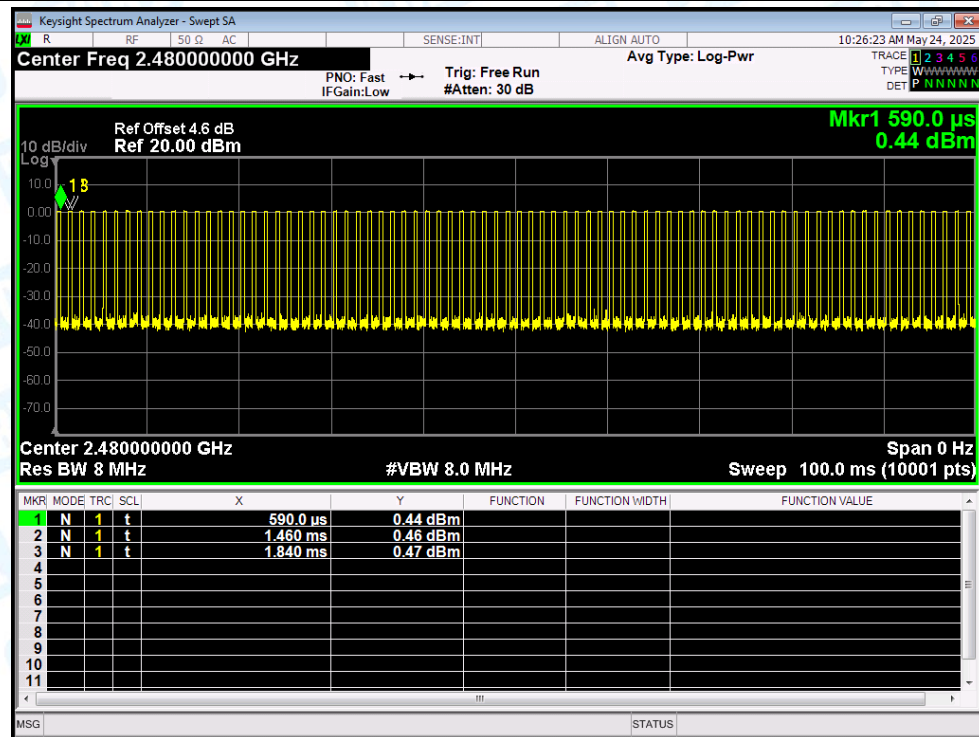
Duty Cycle NVNT 1-DH1 2402MHz Ant1



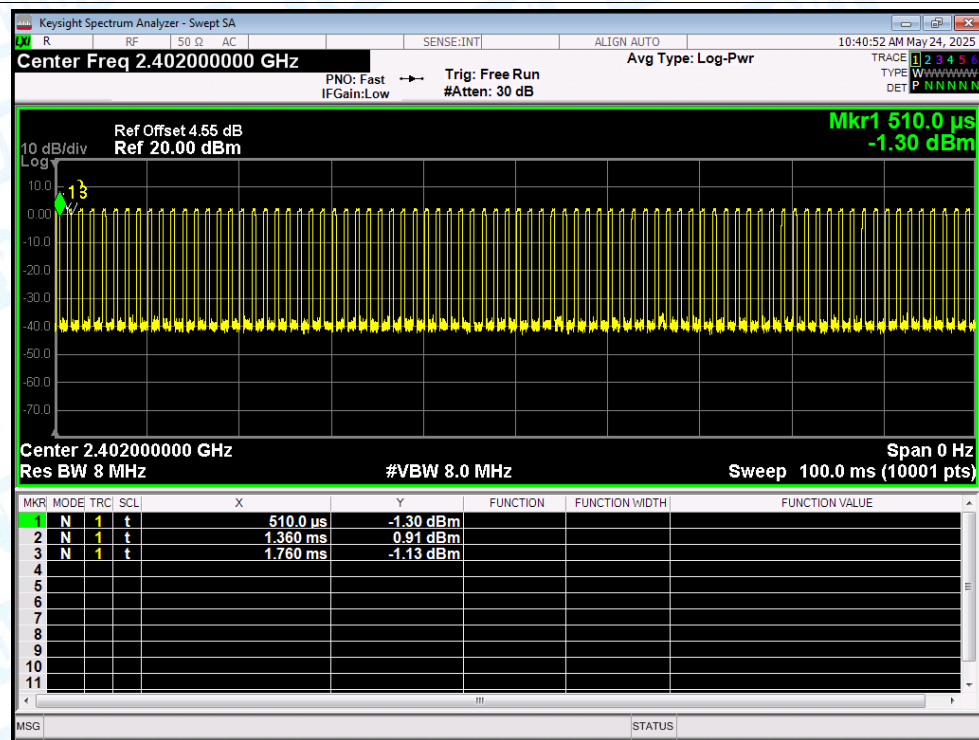
Duty Cycle NVNT 1-DH1 2441MHz Ant1



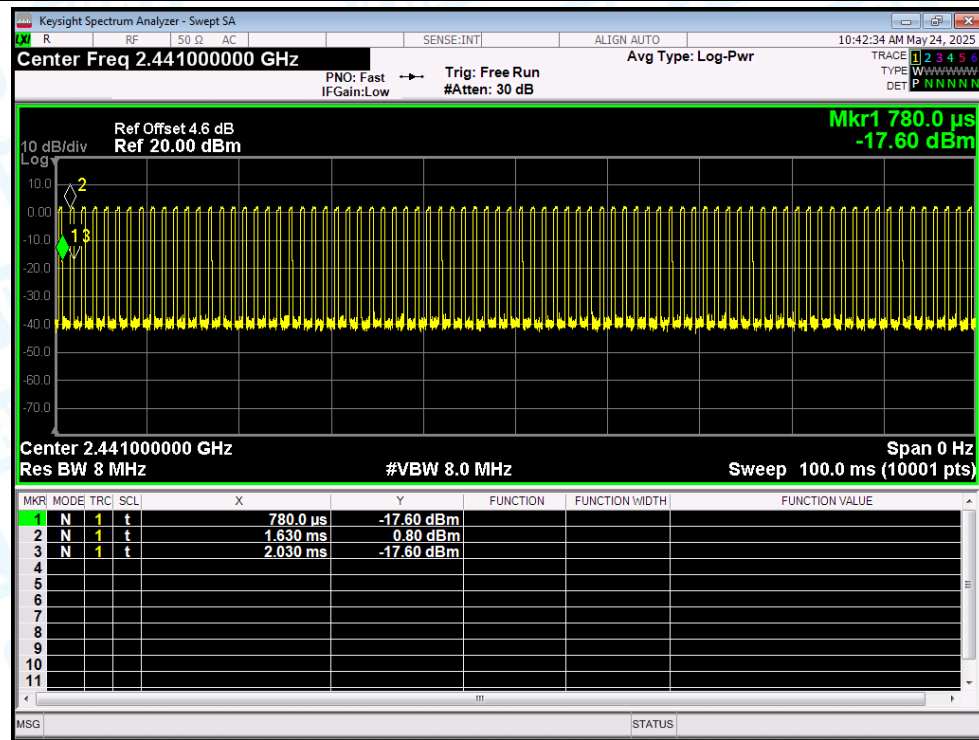
Duty Cycle NVNT 1-DH1 2480MHz Ant1



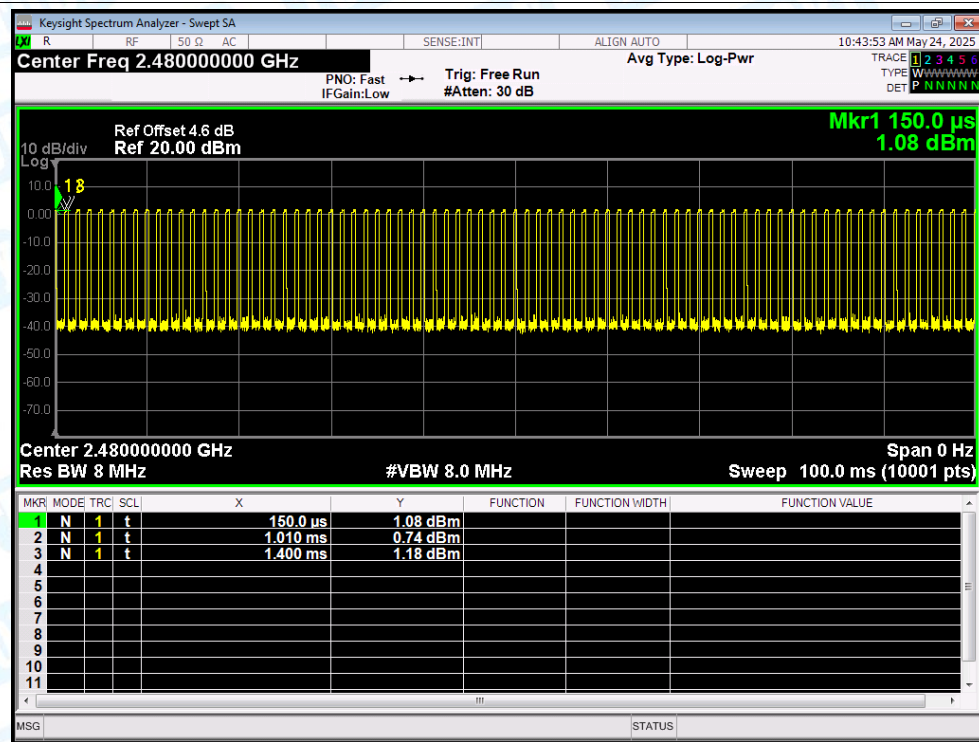
Duty Cycle NVNT 2-DH1 2402MHz Ant1



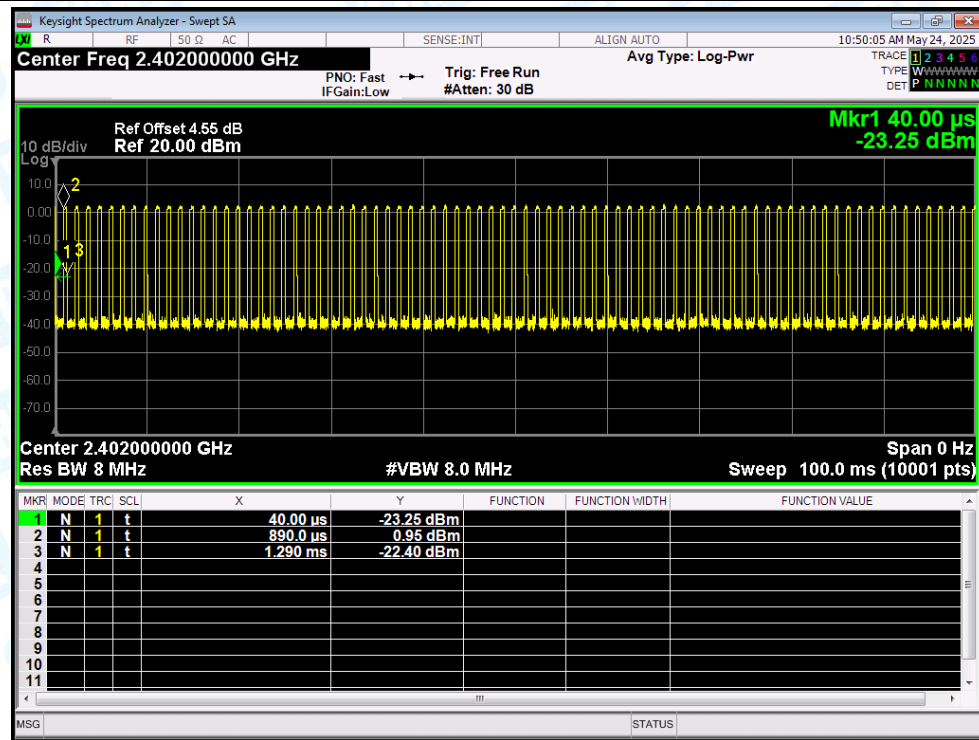
Duty Cycle NVNT 2-DH1 2441MHz Ant1



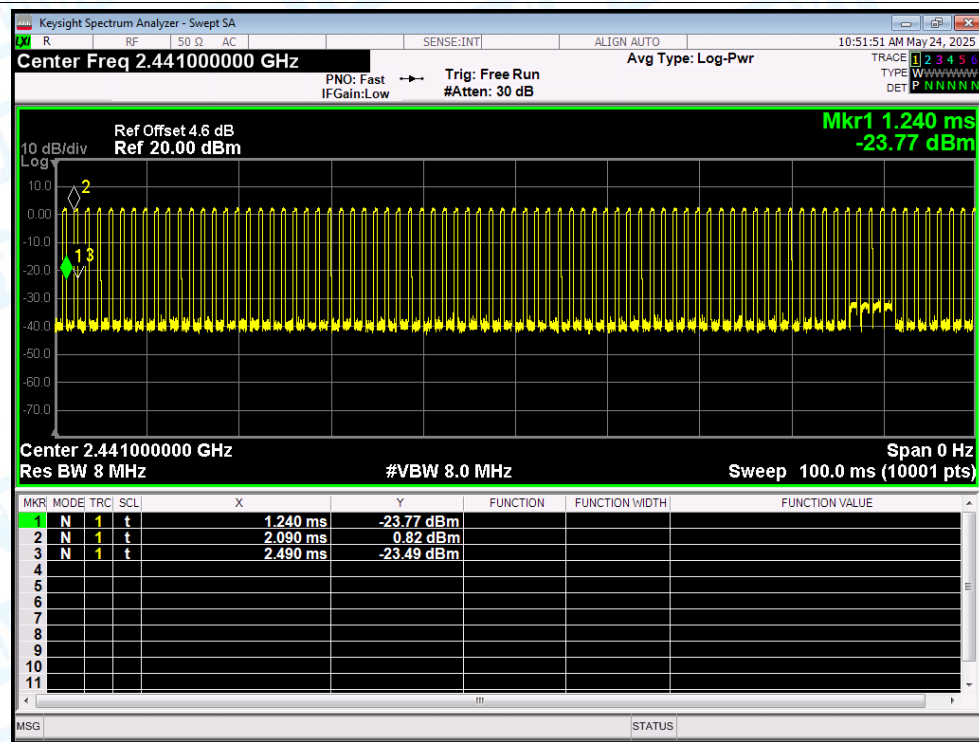
Duty Cycle NVNT 2-DH1 2480MHz Ant1

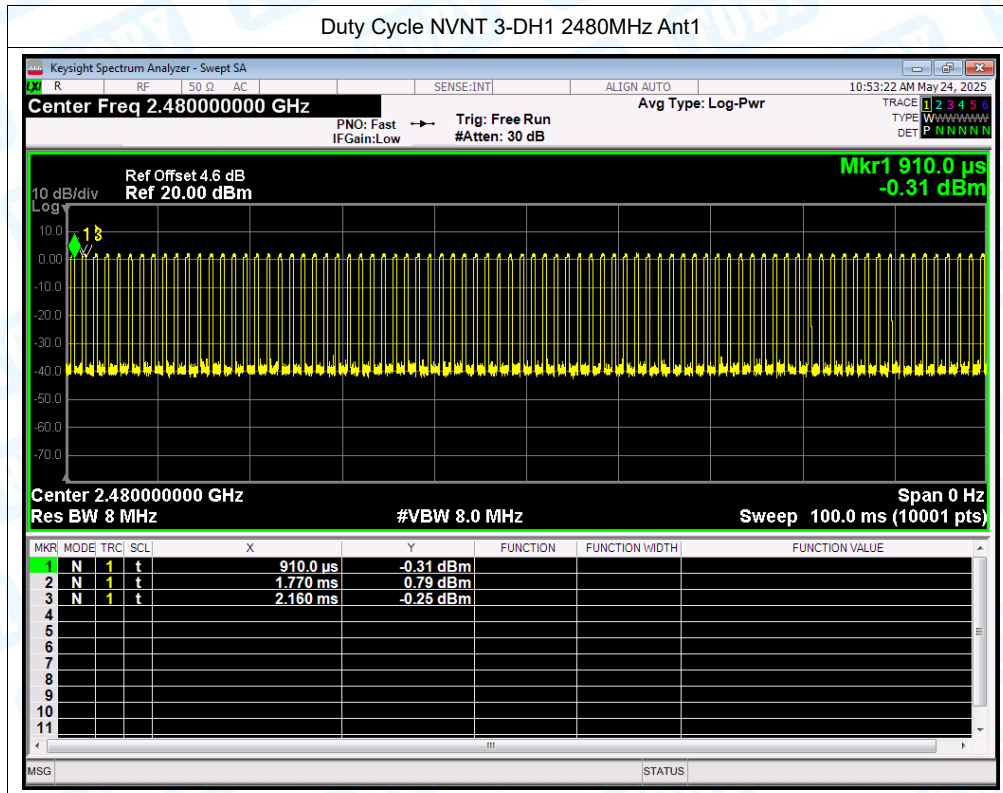


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



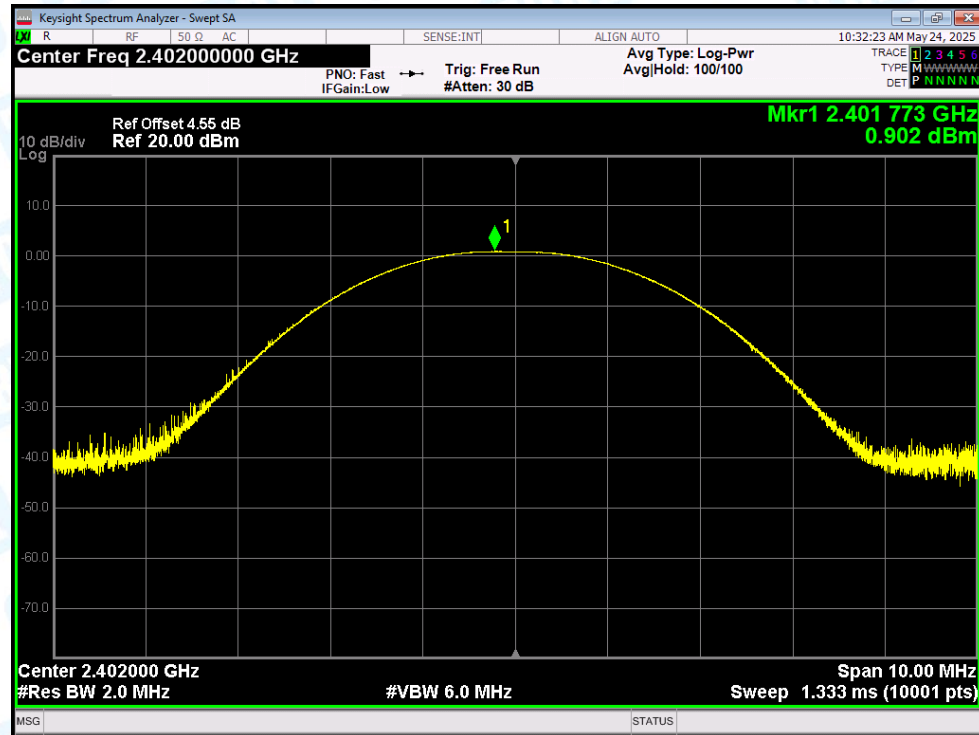


2.Maximum Conducted Output Power

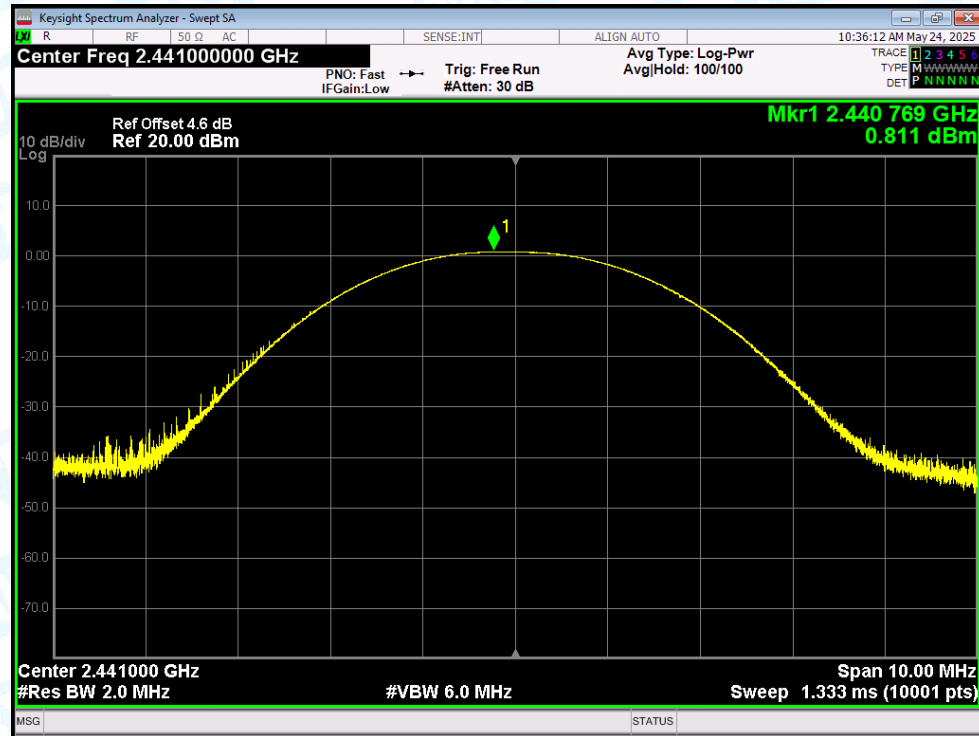
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	0.902	21	Pass
NVNT	1-DH1	2441	Ant1	0.811	21	Pass
NVNT	1-DH1	2480	Ant1	0.461	21	Pass
NVNT	2-DH1	2402	Ant1	1.765	21	Pass
NVNT	2-DH1	2441	Ant1	1.664	21	Pass
NVNT	2-DH1	2480	Ant1	1.555	21	Pass
NVNT	3-DH1	2402	Ant1	2.415	21	Pass
NVNT	3-DH1	2441	Ant1	2.269	21	Pass
NVNT	3-DH1	2480	Ant1	2.107	21	Pass

Test Graphs

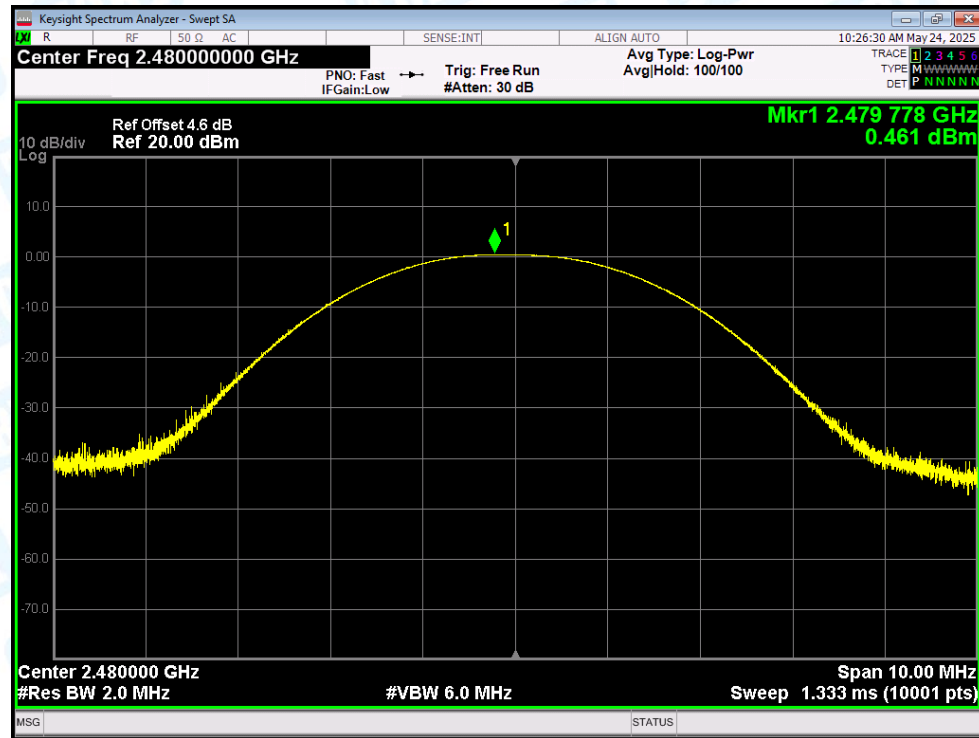
Power NVNT 1-DH1 2402MHz Ant1



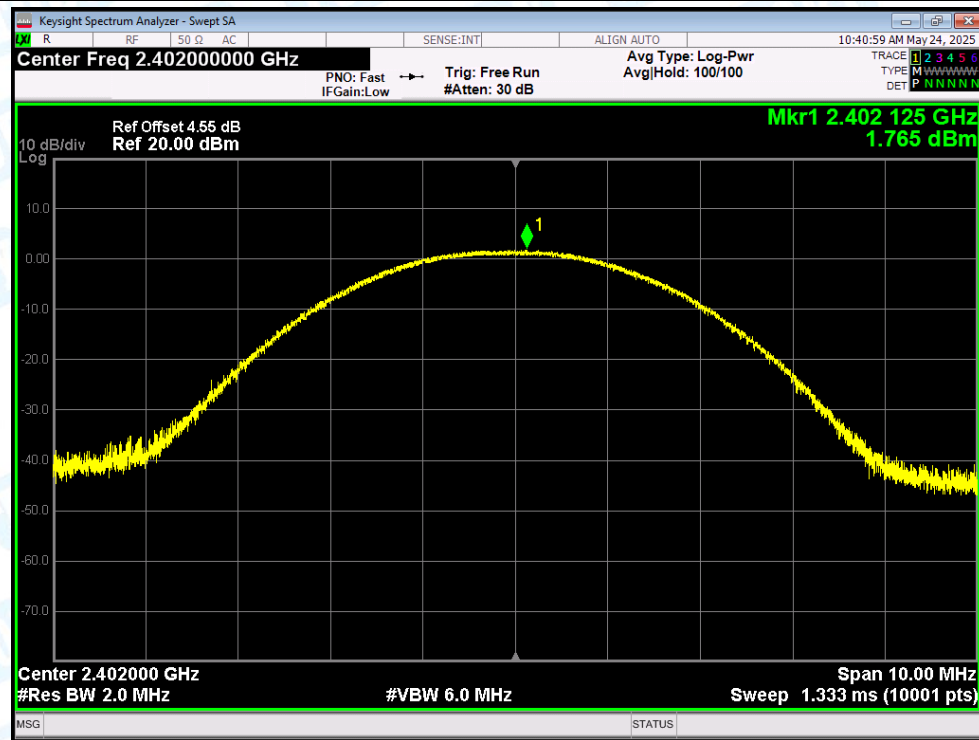
Power NVNT 1-DH1 2441MHz Ant1



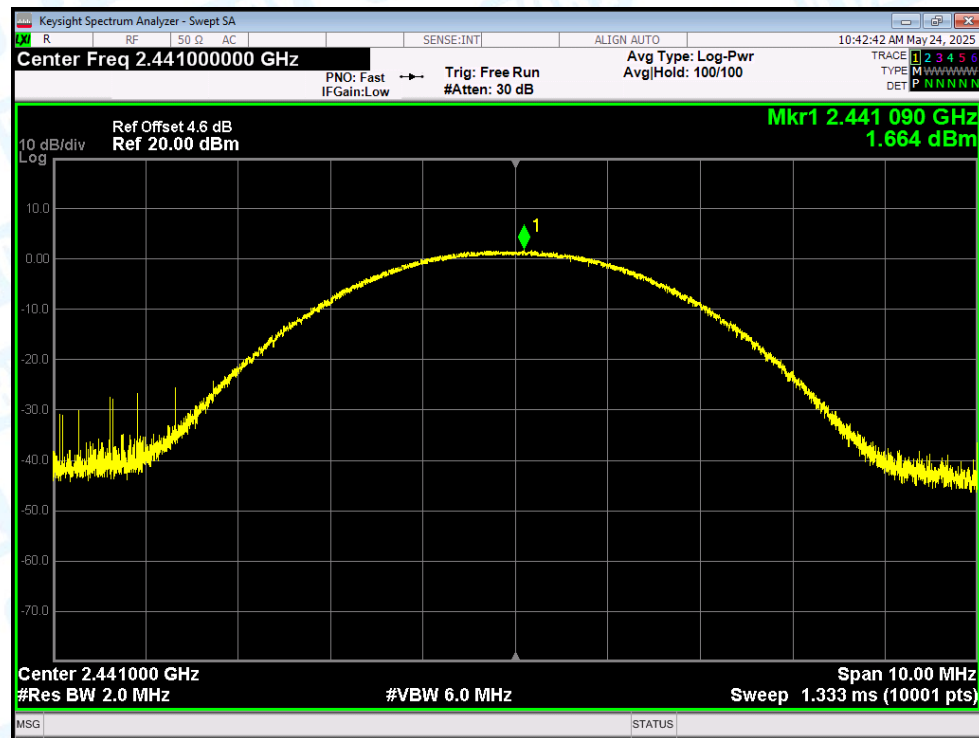
Power NVNT 1-DH1 2480MHz Ant1



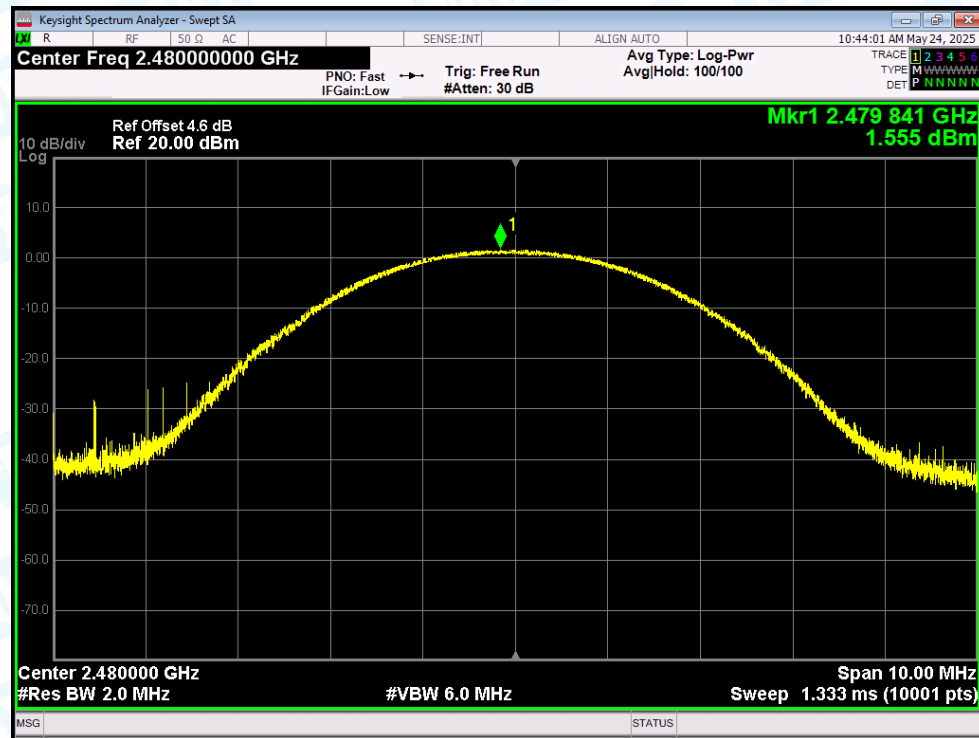
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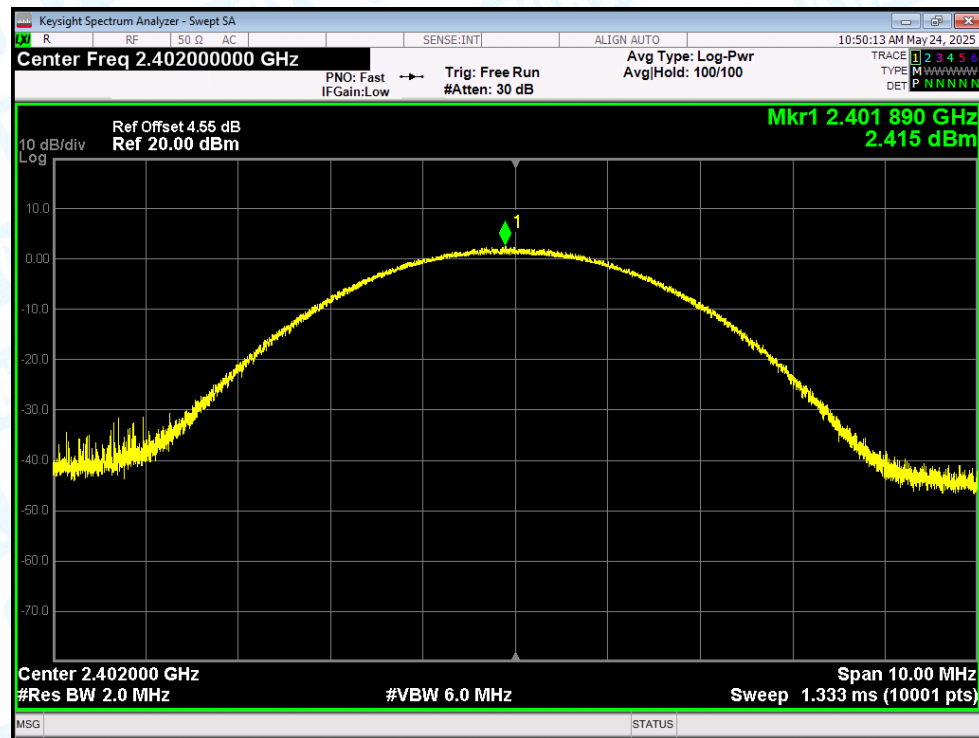
Power NVNT 2-DH1 2441MHz Ant1



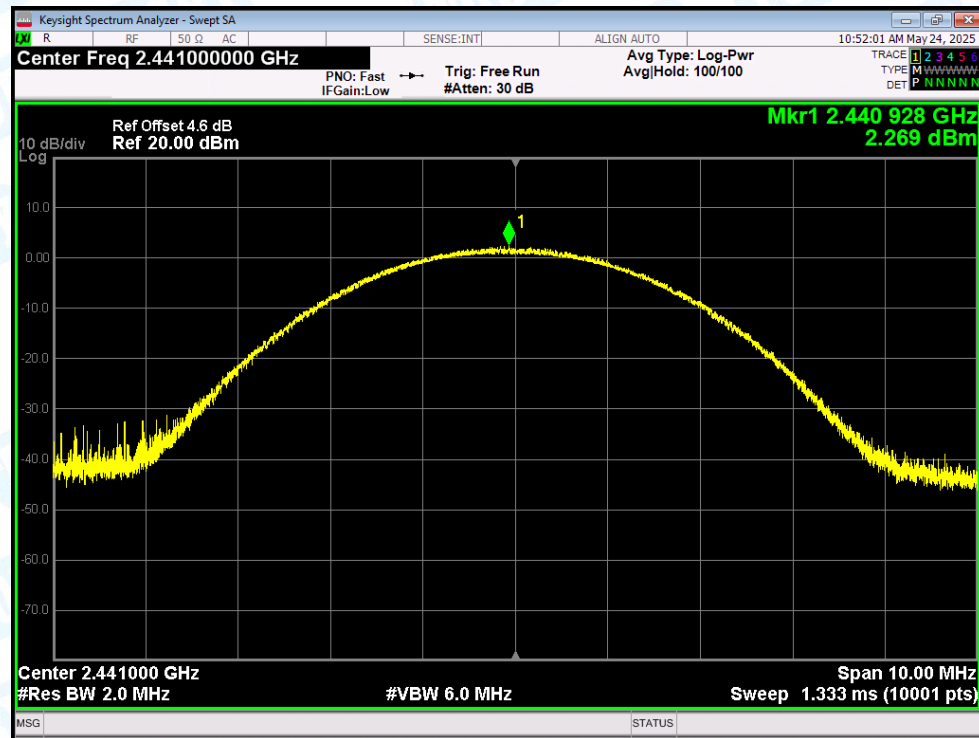
Power NVNT 2-DH1 2480MHz Ant1

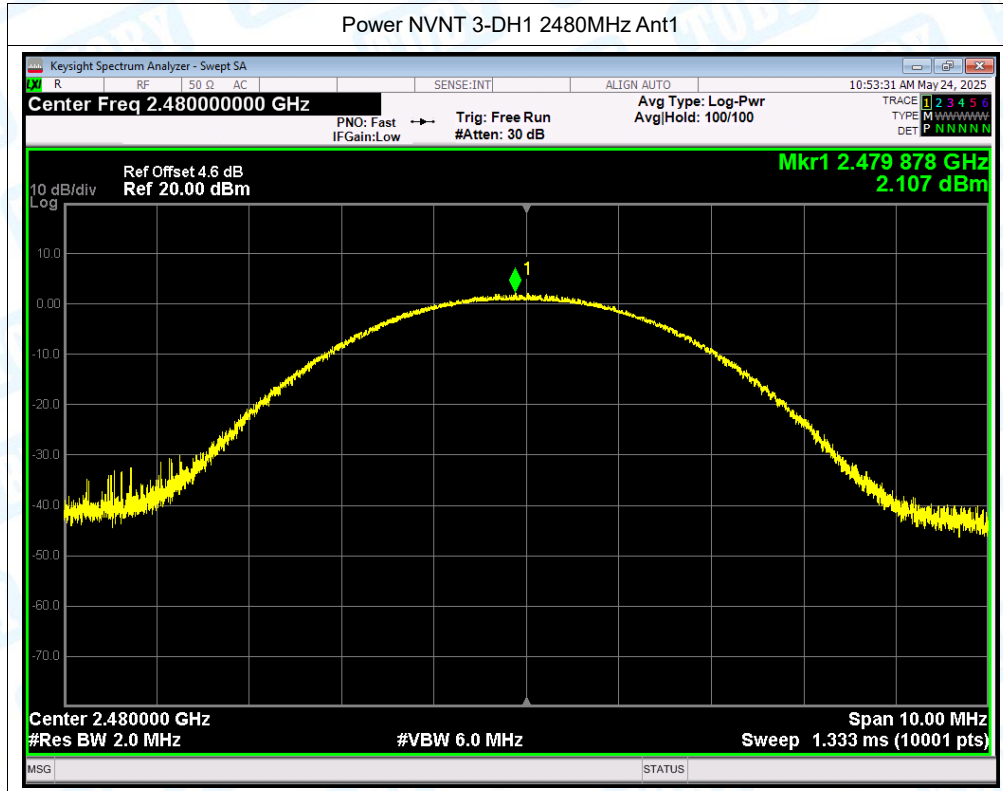


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



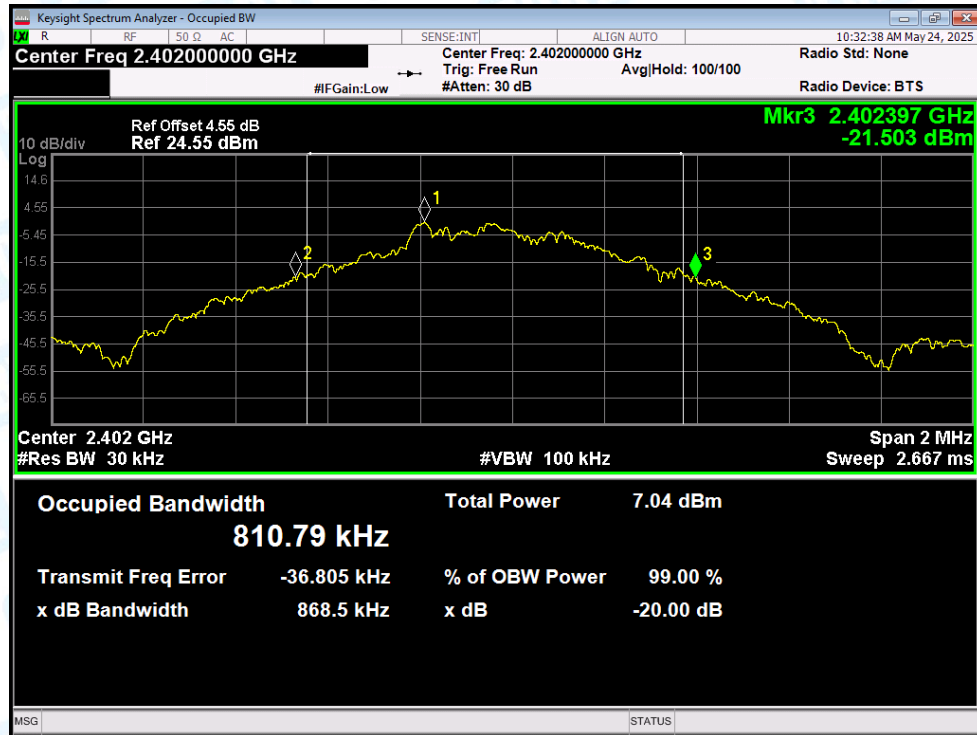


3.-20dB Bandwidth

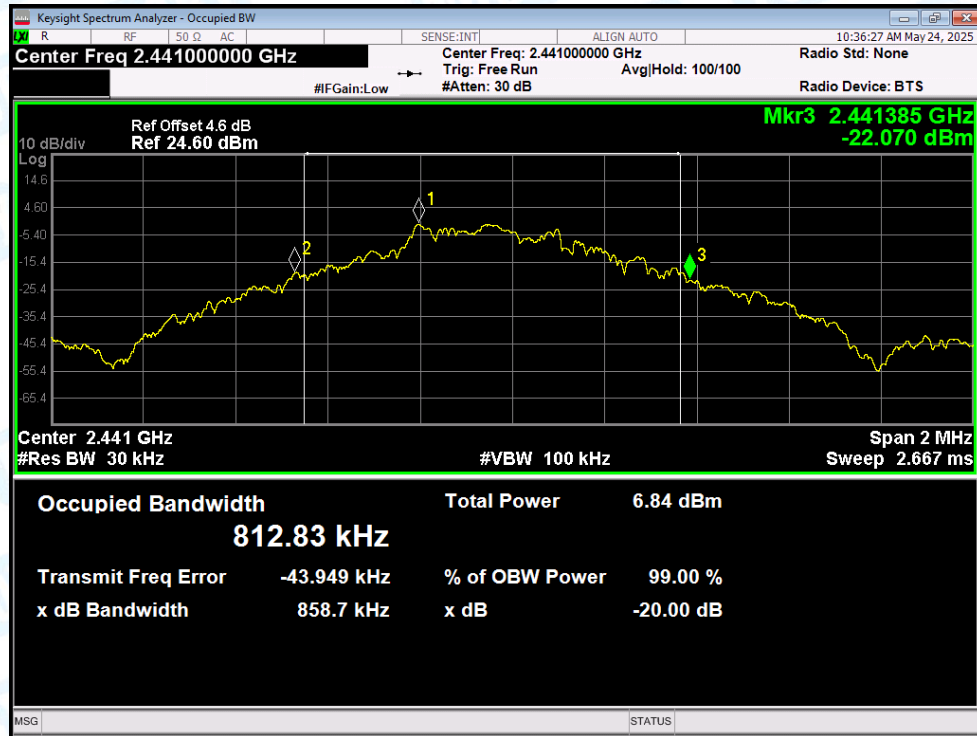
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.87	0	Pass
NVNT	1-DH1	2441	Ant1	0.86	0	Pass
NVNT	1-DH1	2480	Ant1	0.87	0	Pass
NVNT	2-DH1	2402	Ant1	1.23	0	Pass
NVNT	2-DH1	2441	Ant1	1.23	0	Pass
NVNT	2-DH1	2480	Ant1	1.2	0	Pass
NVNT	3-DH1	2402	Ant1	1.21	0	Pass
NVNT	3-DH1	2441	Ant1	1.22	0	Pass
NVNT	3-DH1	2480	Ant1	1.22	0	Pass

Test Graphs

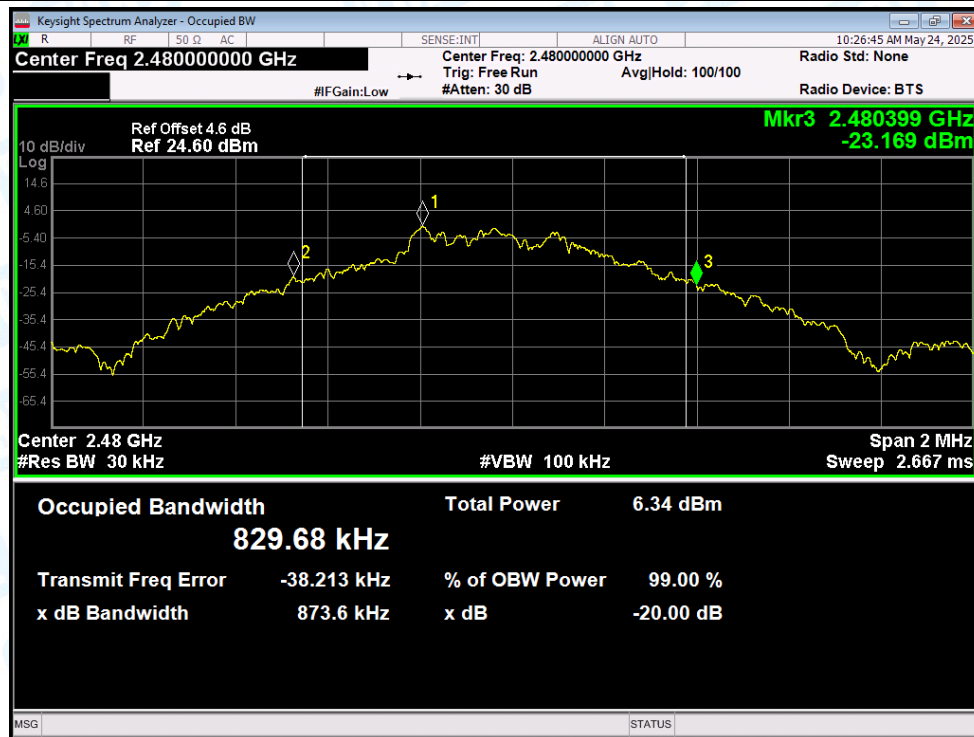
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



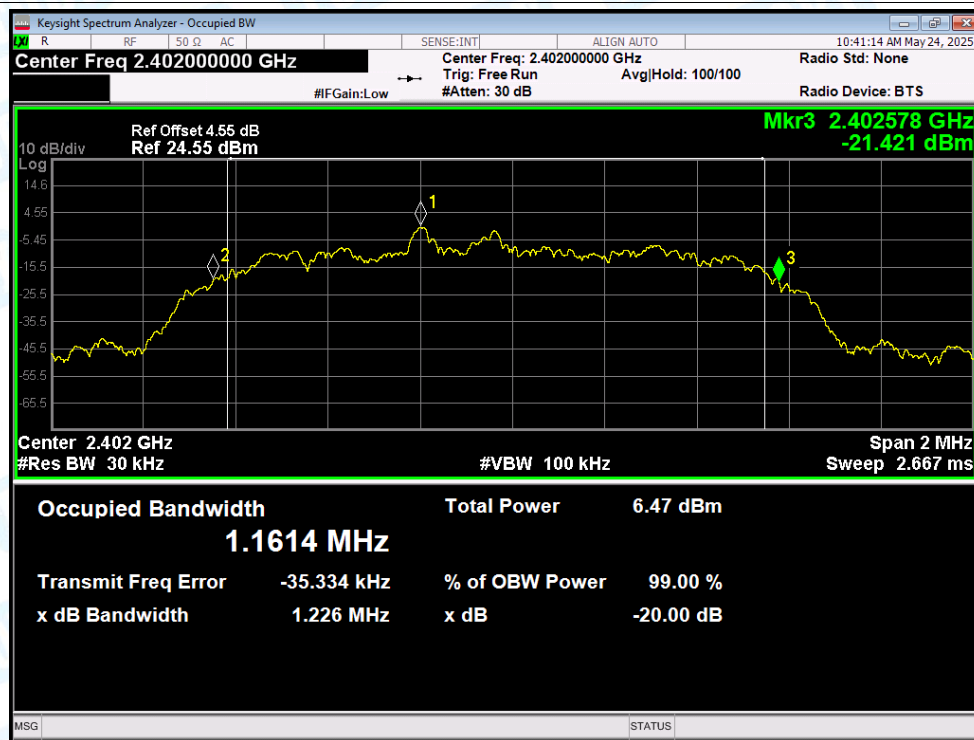
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



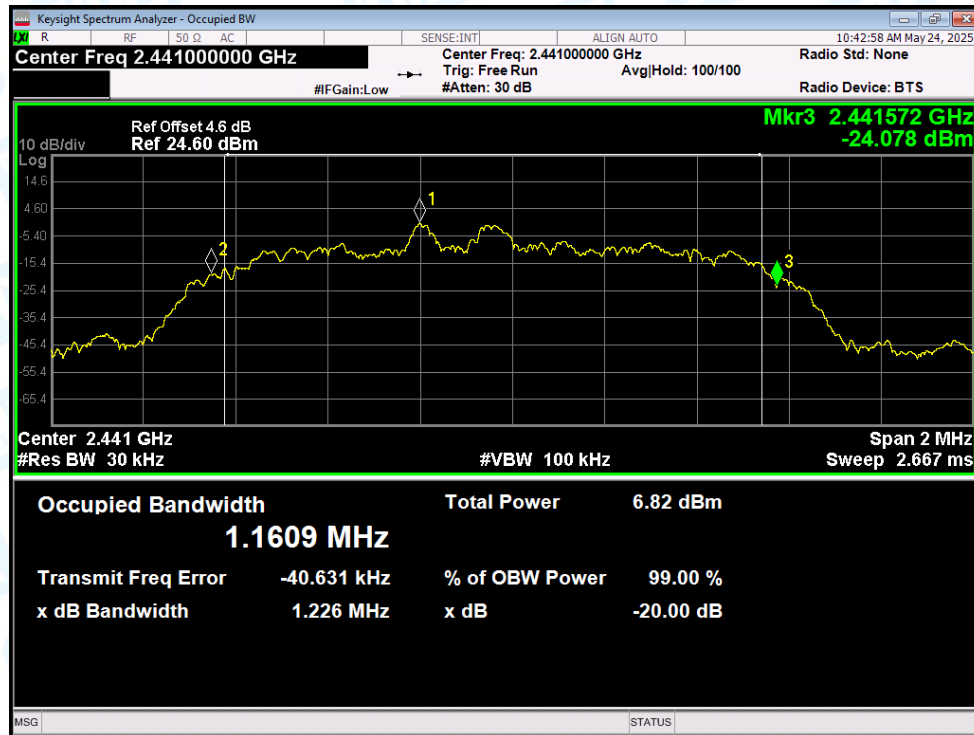
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



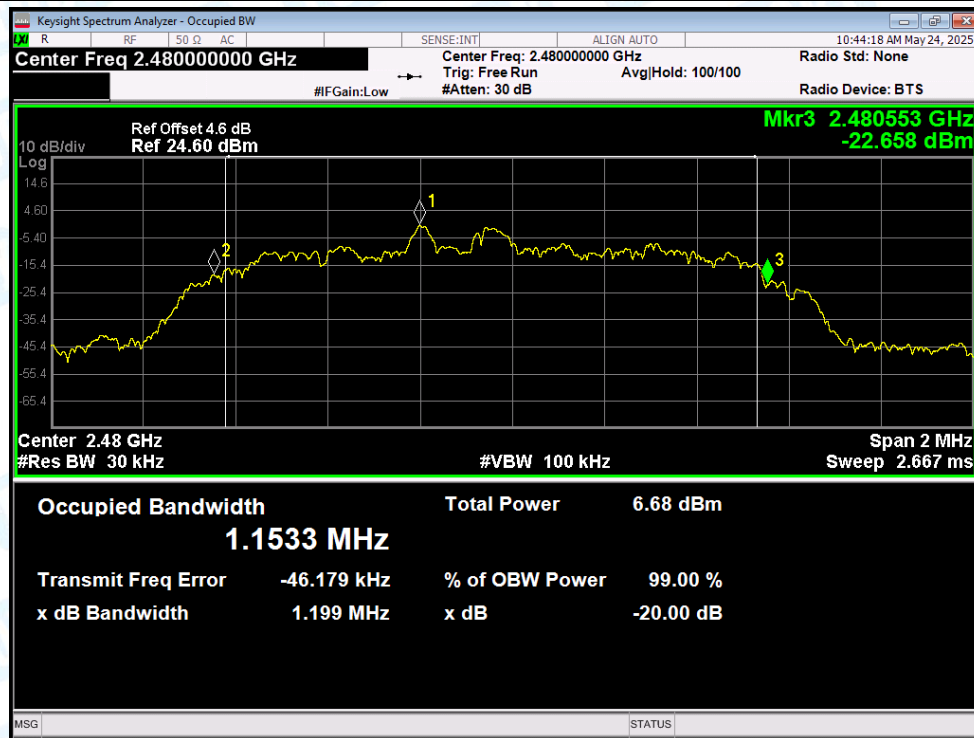
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



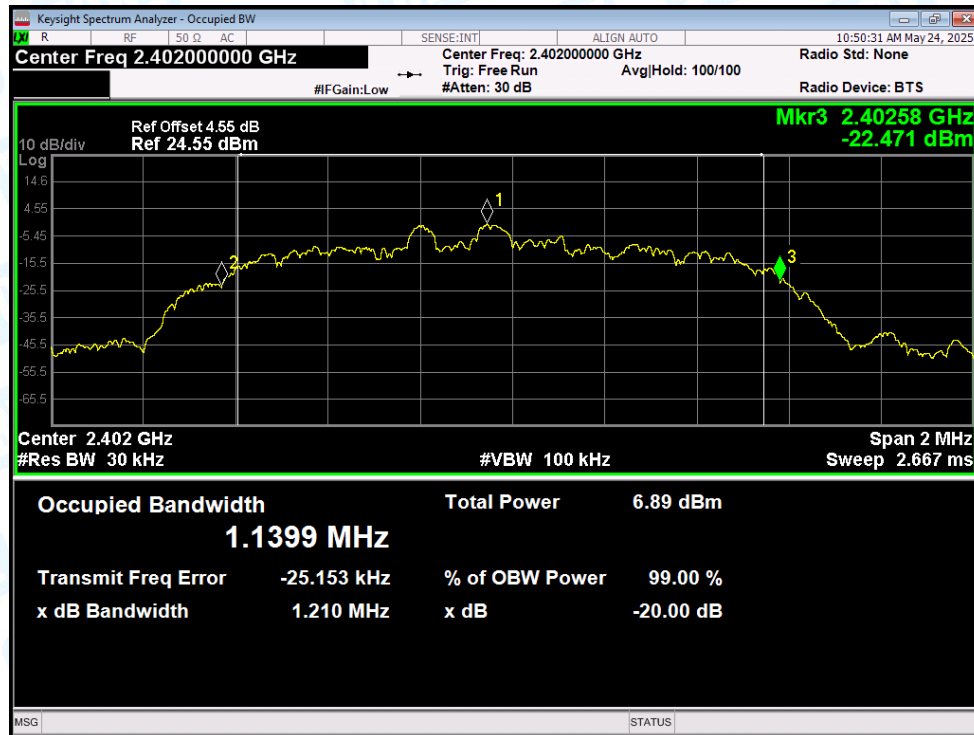
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



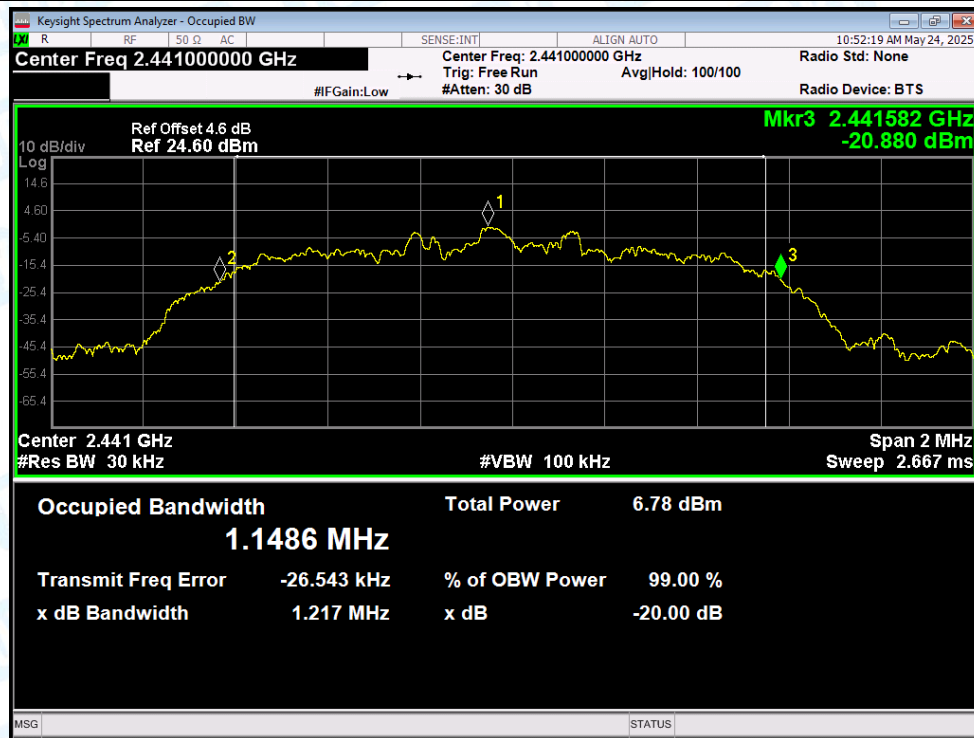
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

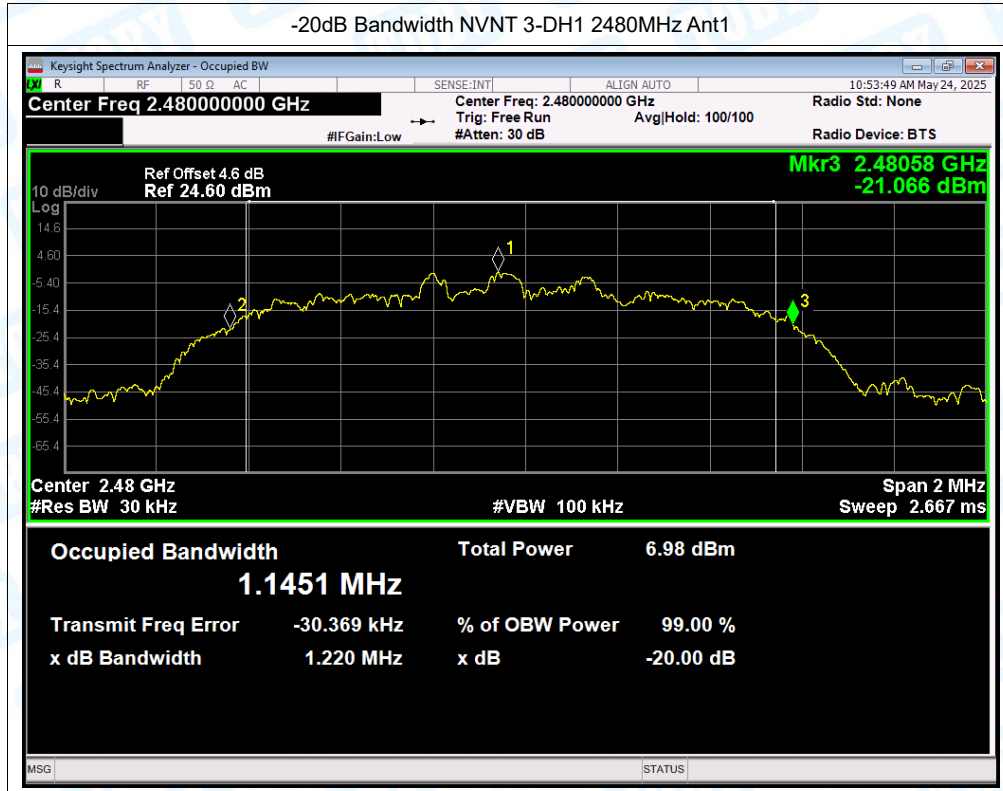


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



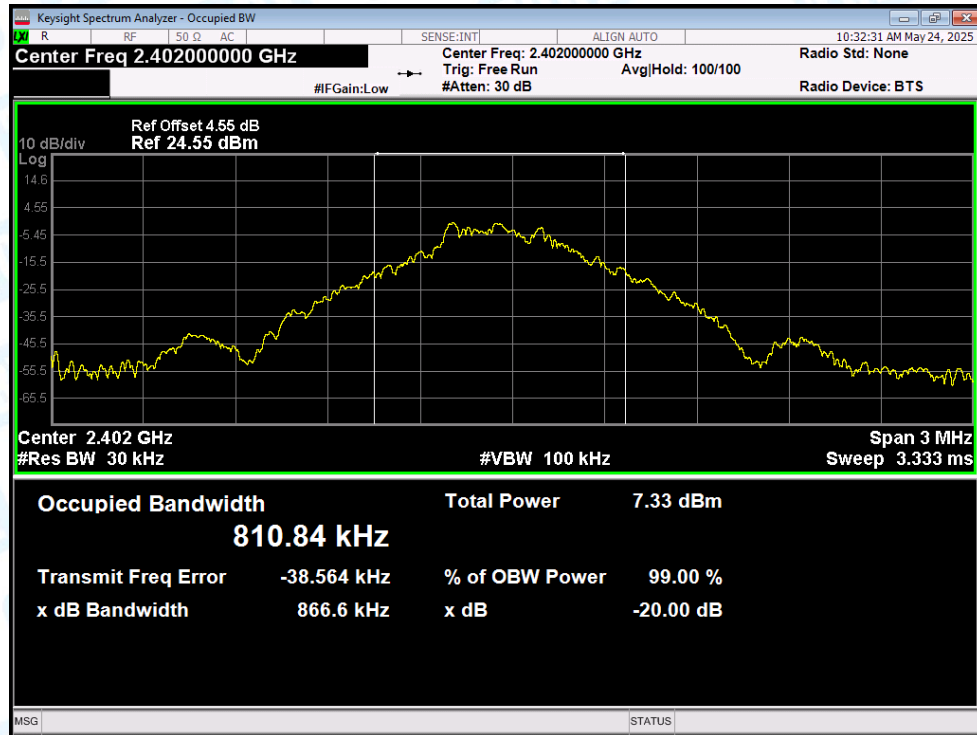


4.Occupied Channel Bandwidth

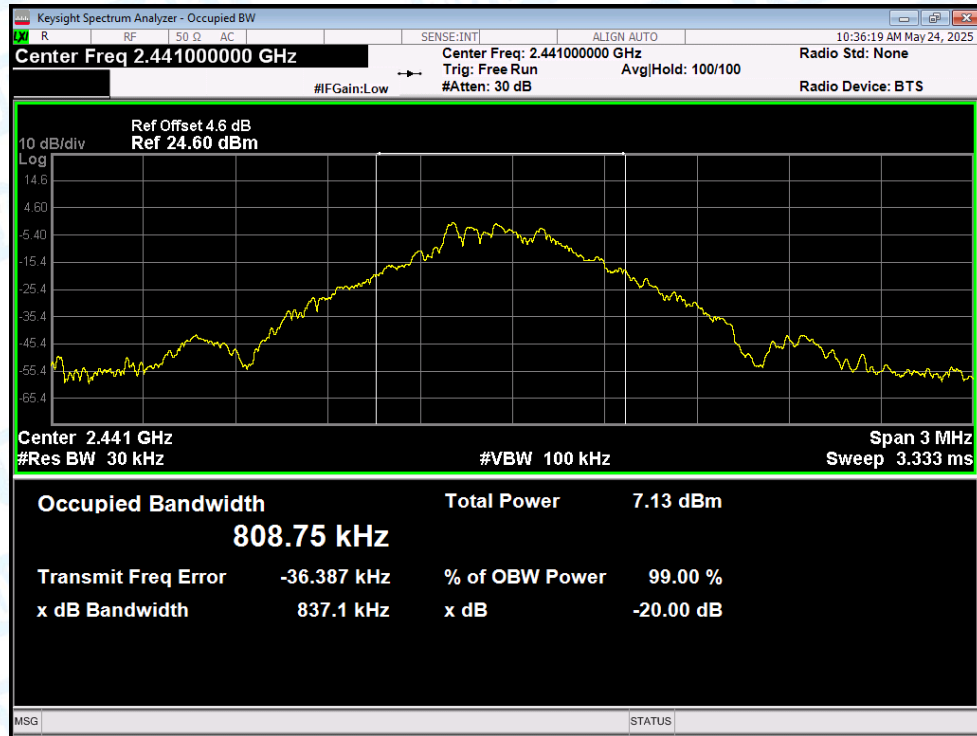
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.811
NVNT	1-DH1	2441	Ant1	0.809
NVNT	1-DH1	2480	Ant1	0.811
NVNT	2-DH1	2402	Ant1	1.153
NVNT	2-DH1	2441	Ant1	1.153
NVNT	2-DH1	2480	Ant1	1.168
NVNT	3-DH1	2402	Ant1	1.143
NVNT	3-DH1	2441	Ant1	1.139
NVNT	3-DH1	2480	Ant1	1.149

Test Graphs

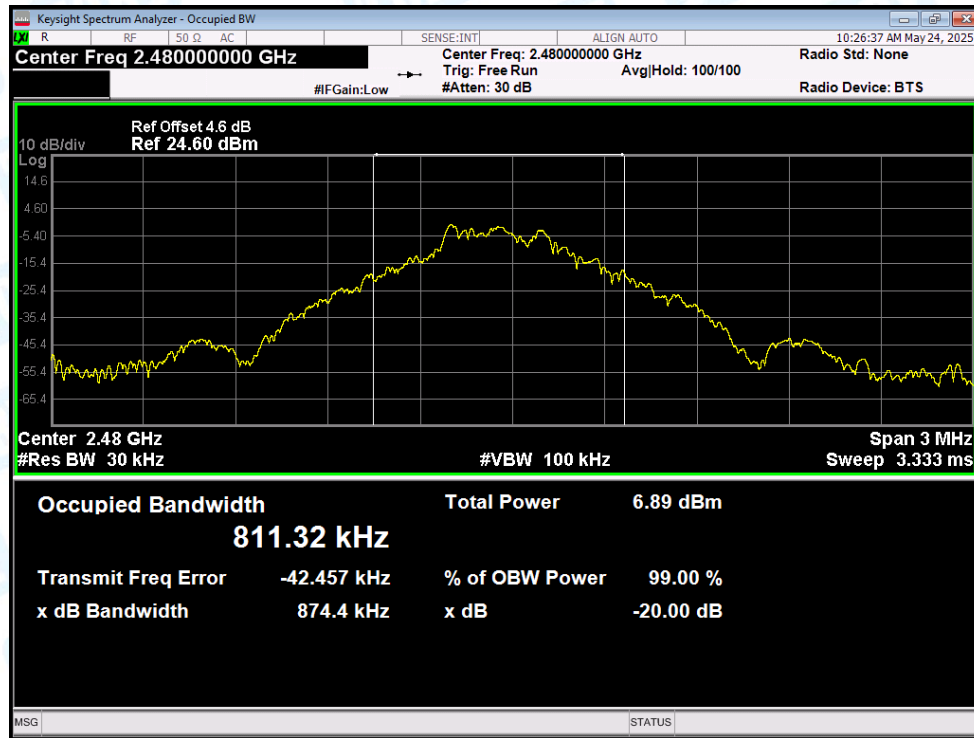
OBW NVNT 1-DH1 2402MHz Ant1



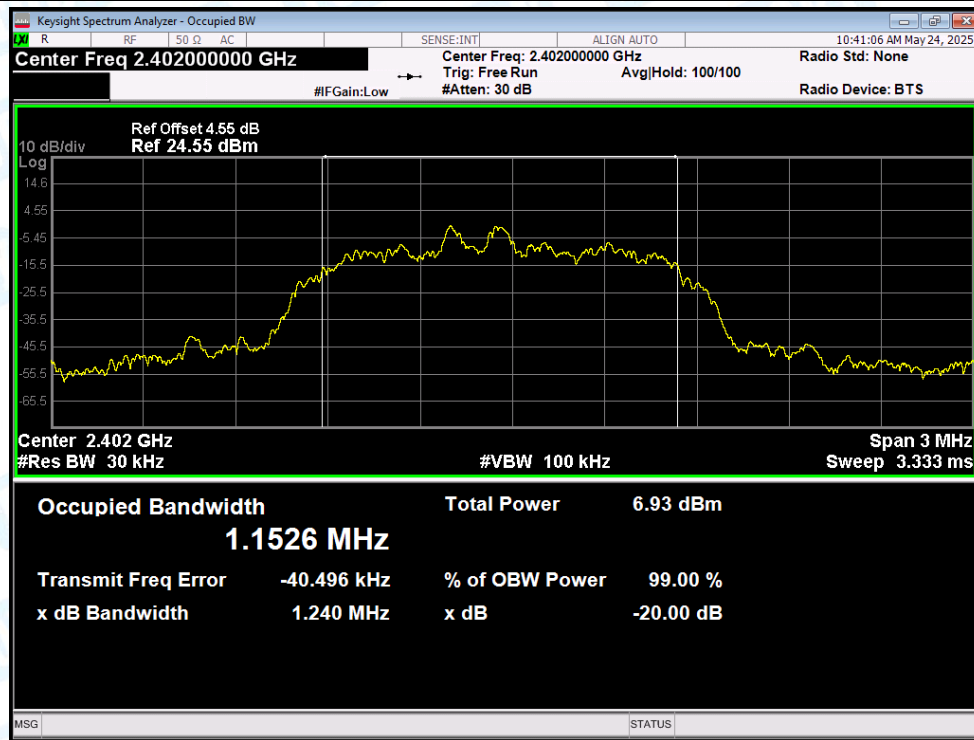
OBW NVNT 1-DH1 2441MHz Ant1



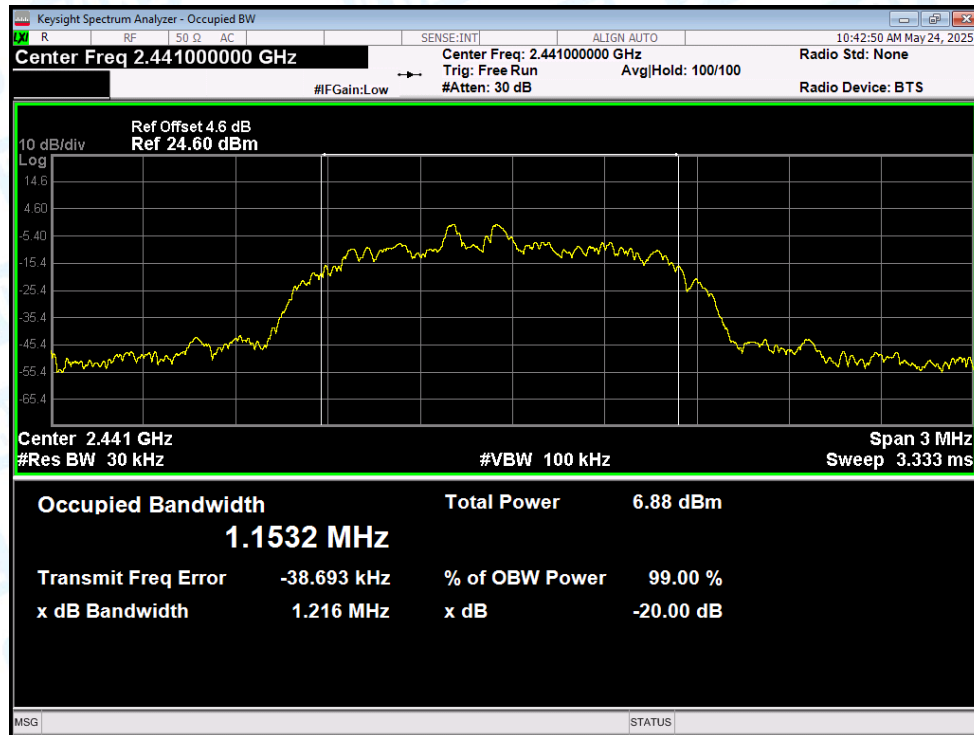
OBW NVNT 1-DH1 2480MHz Ant1



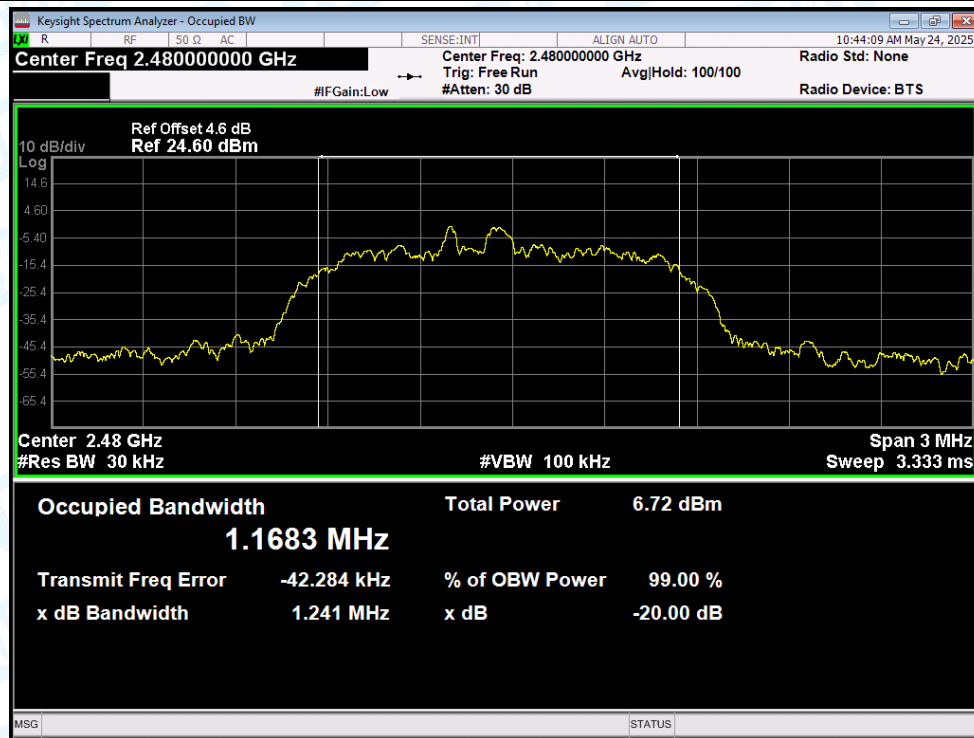
OBW NVNT 2-DH1 2402MHz Ant1



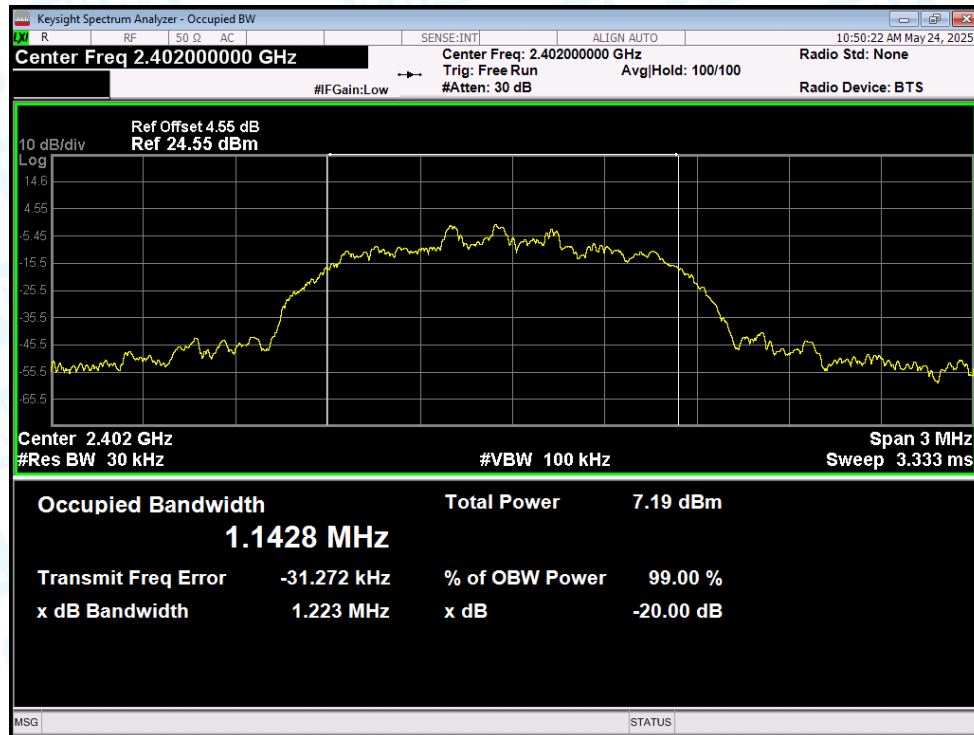
OBW NVNT 2-DH1 2441MHz Ant1



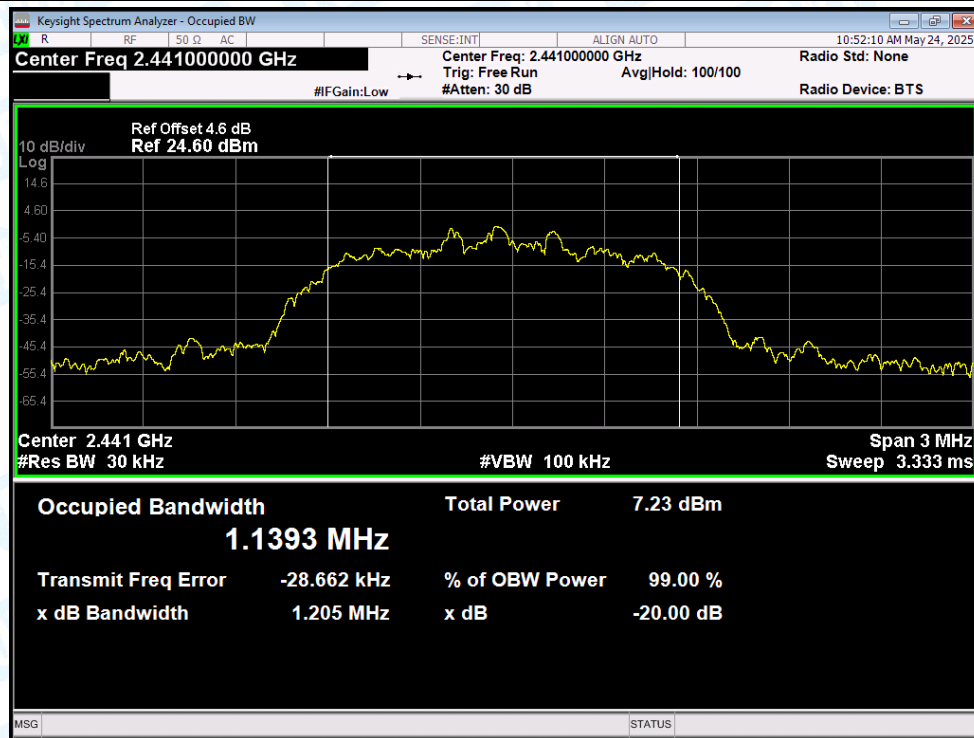
OBW NVNT 2-DH1 2480MHz Ant1

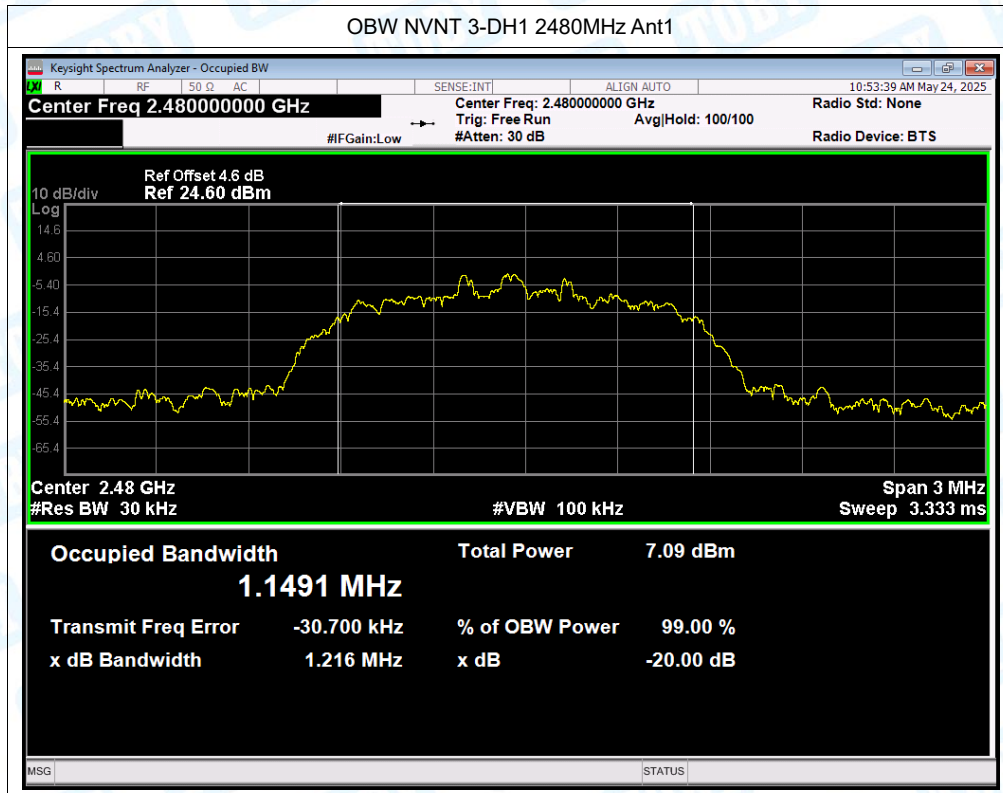


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



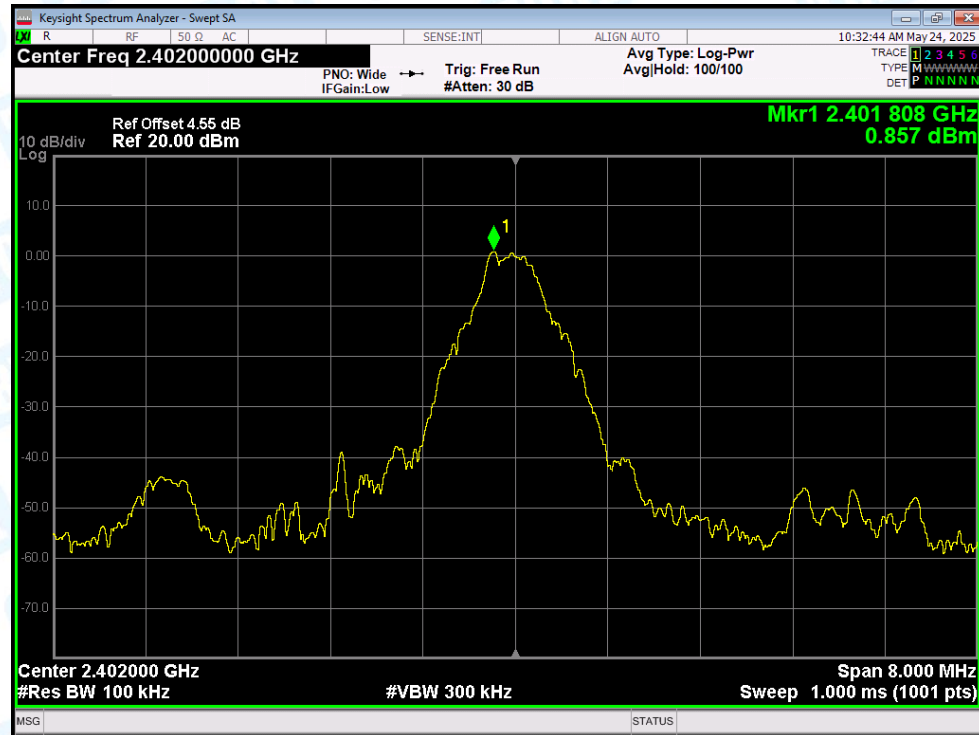


5.Band Edge

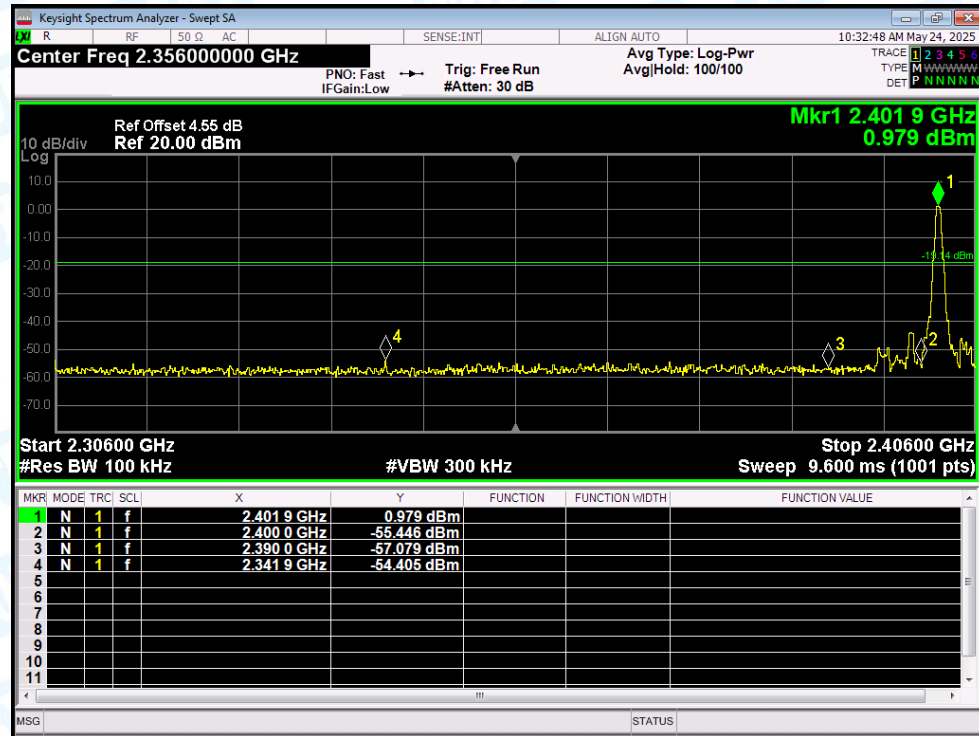
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-55.27	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-47.31	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-55.17	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-48.4	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-53.98	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-45.58	-20	Pass

Test Graphs

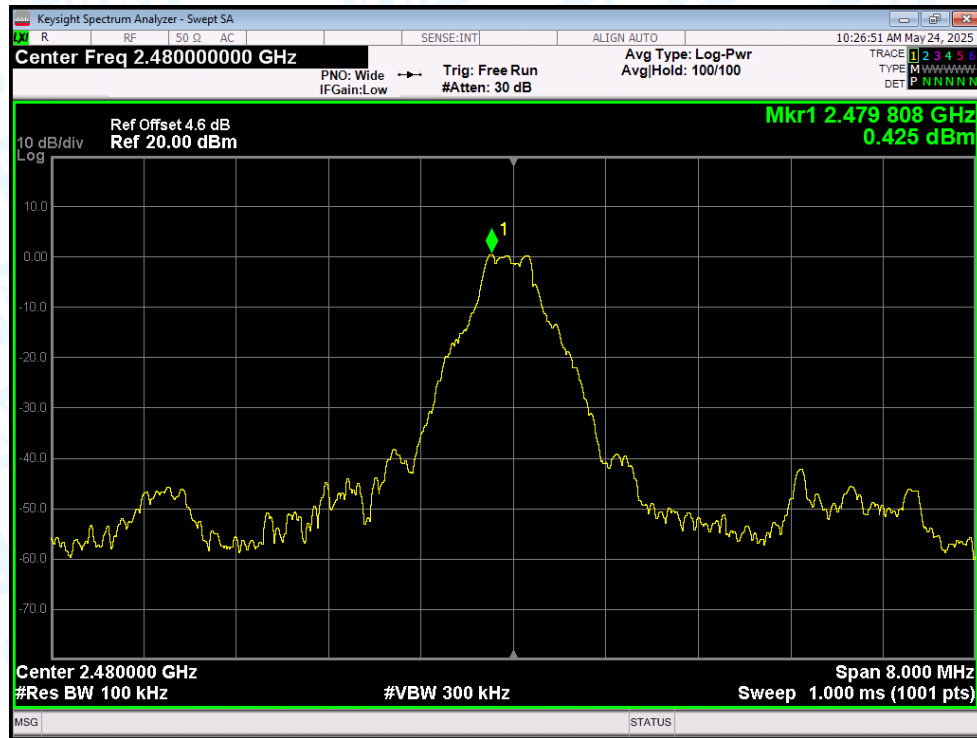
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



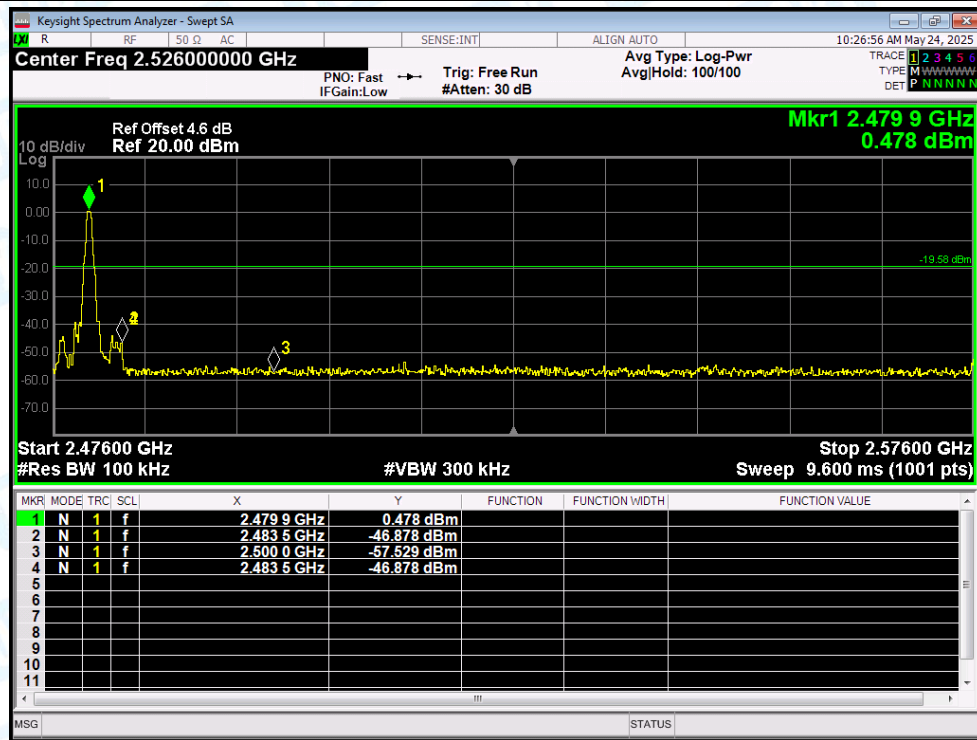
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

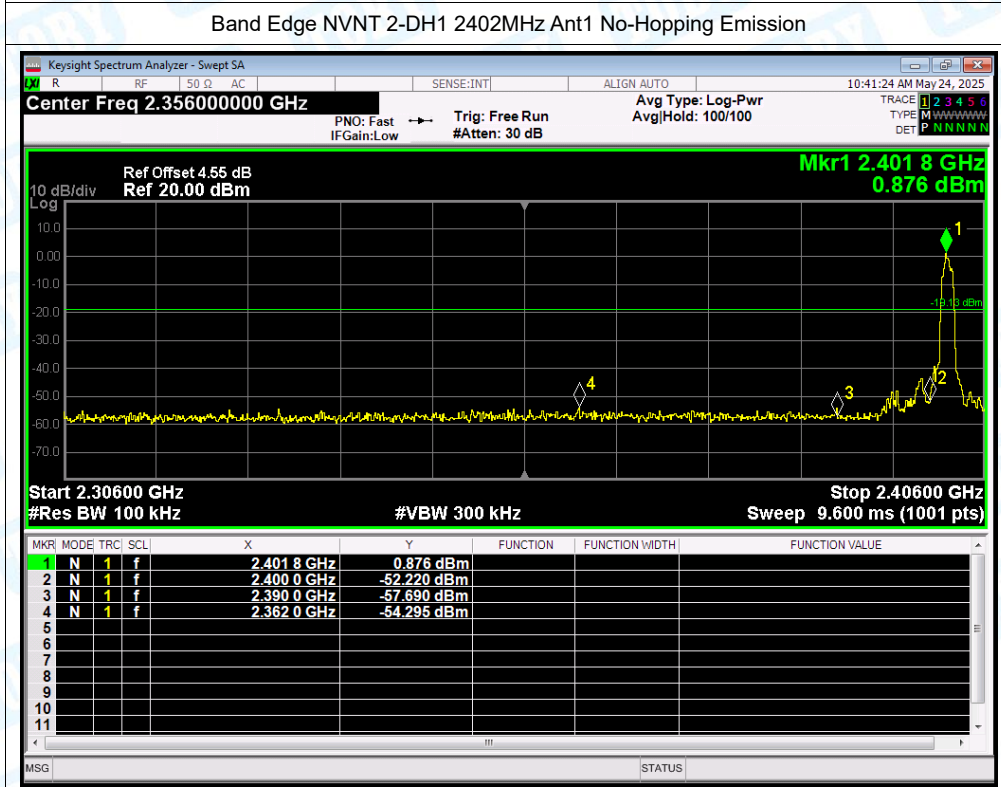
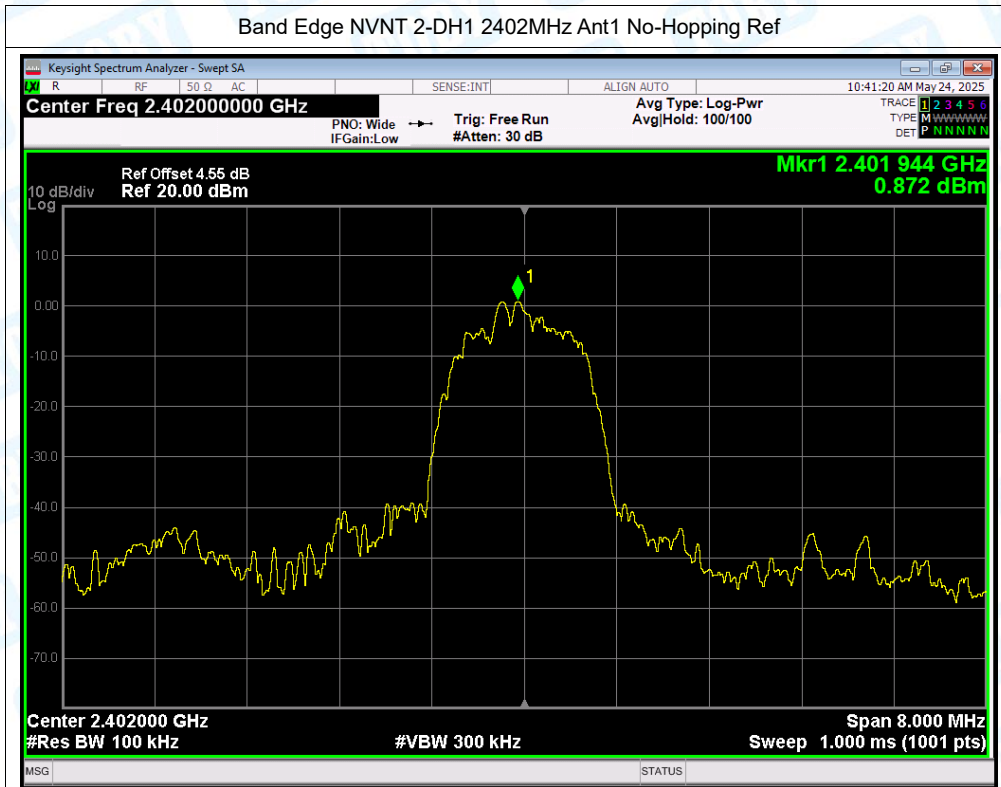


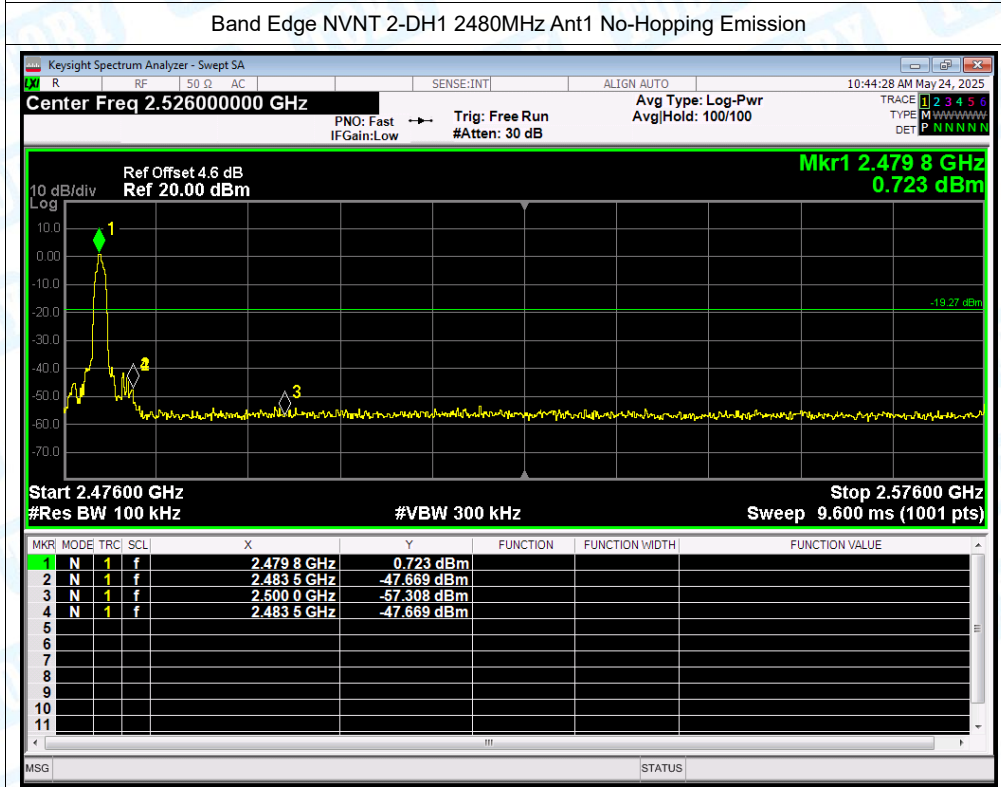
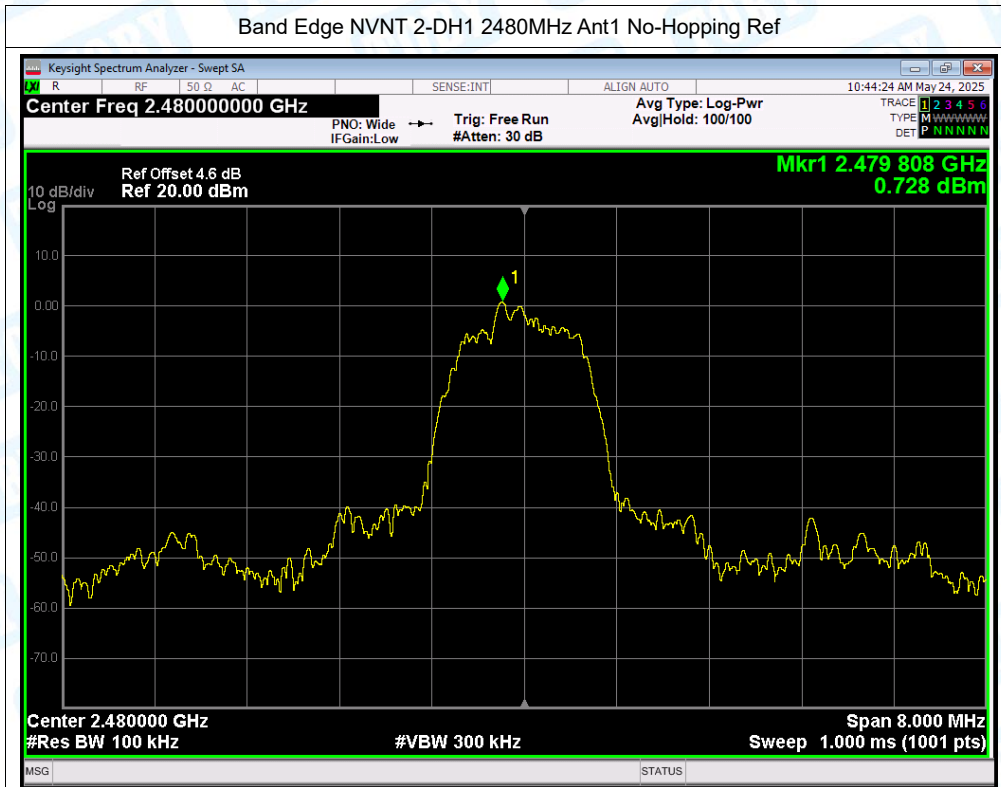
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref

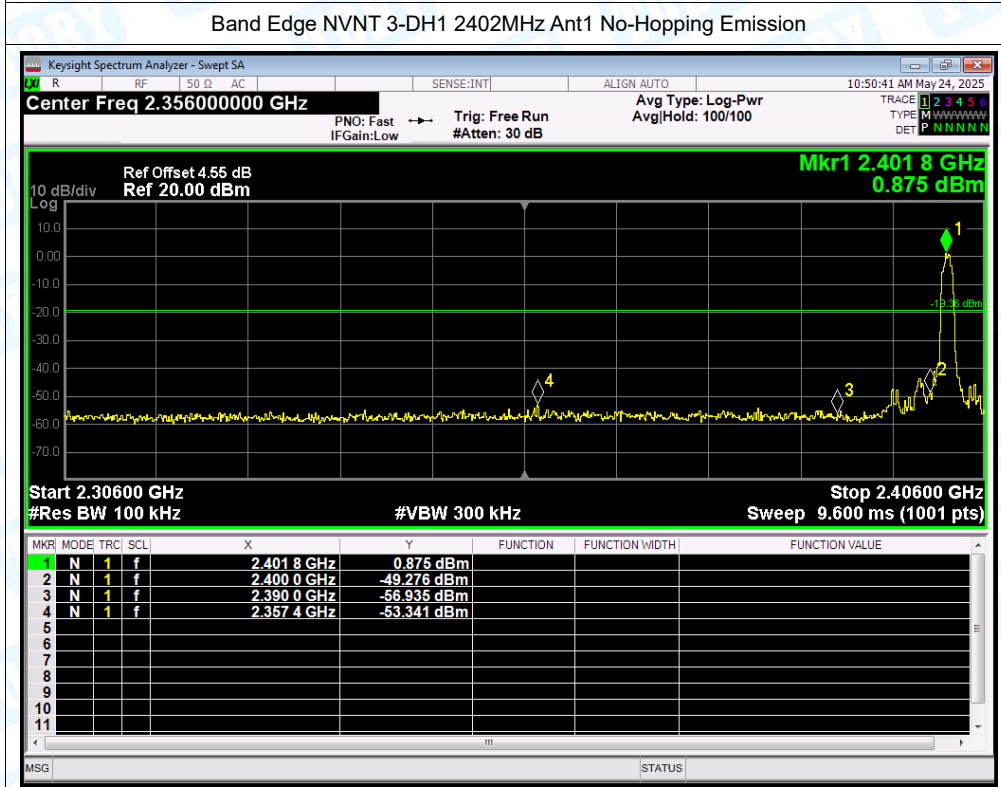
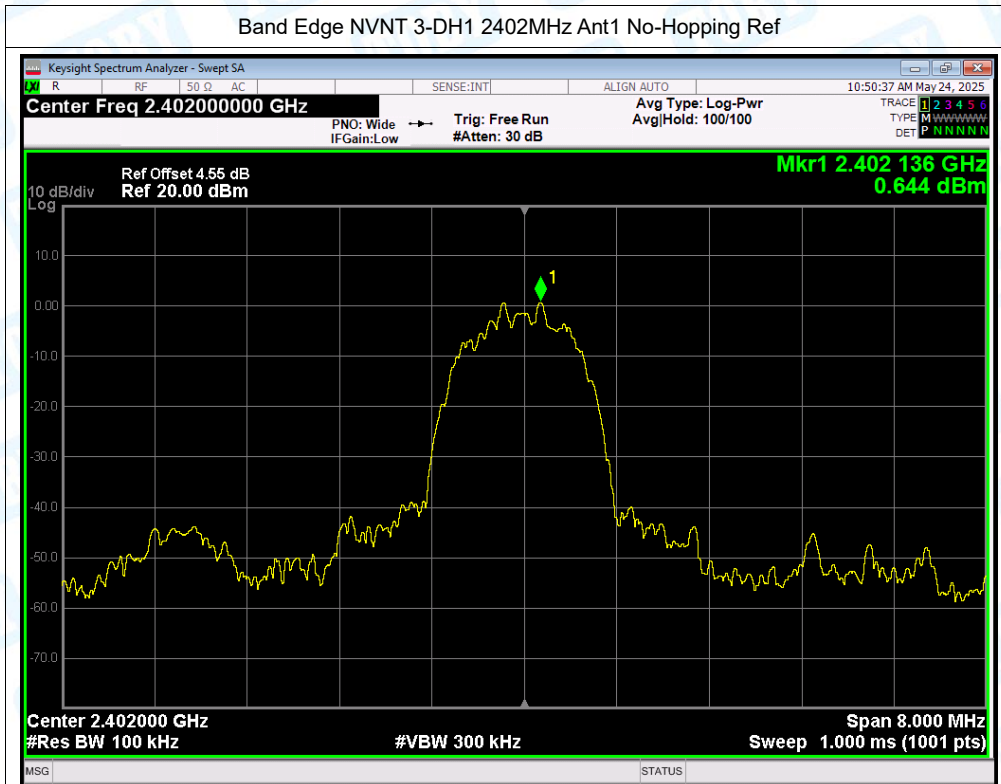


Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission





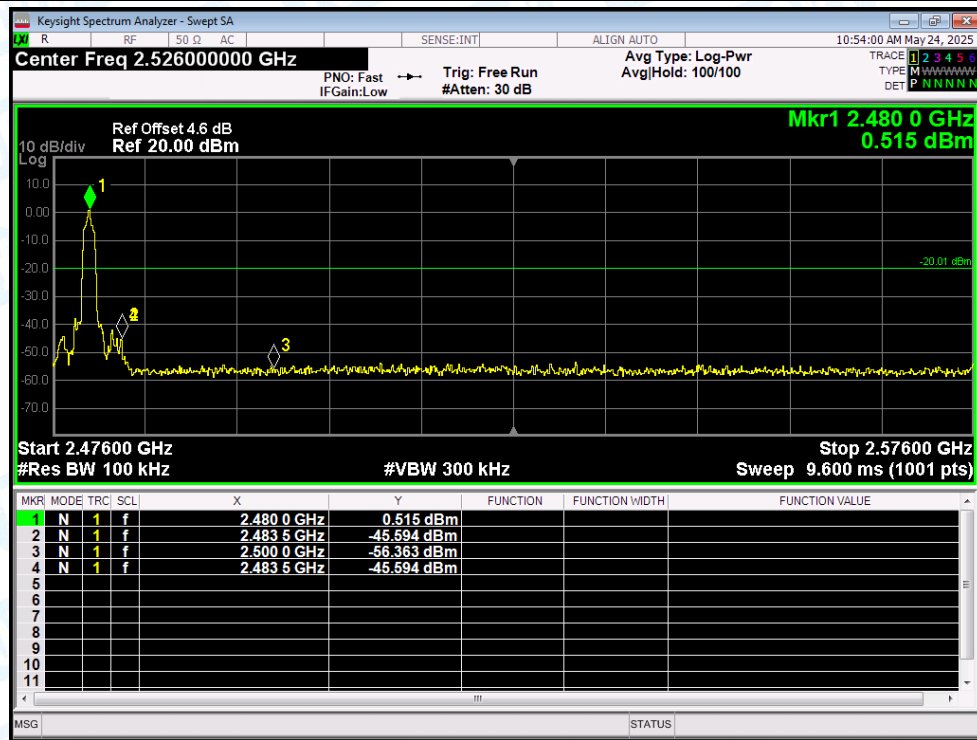




Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Ref



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

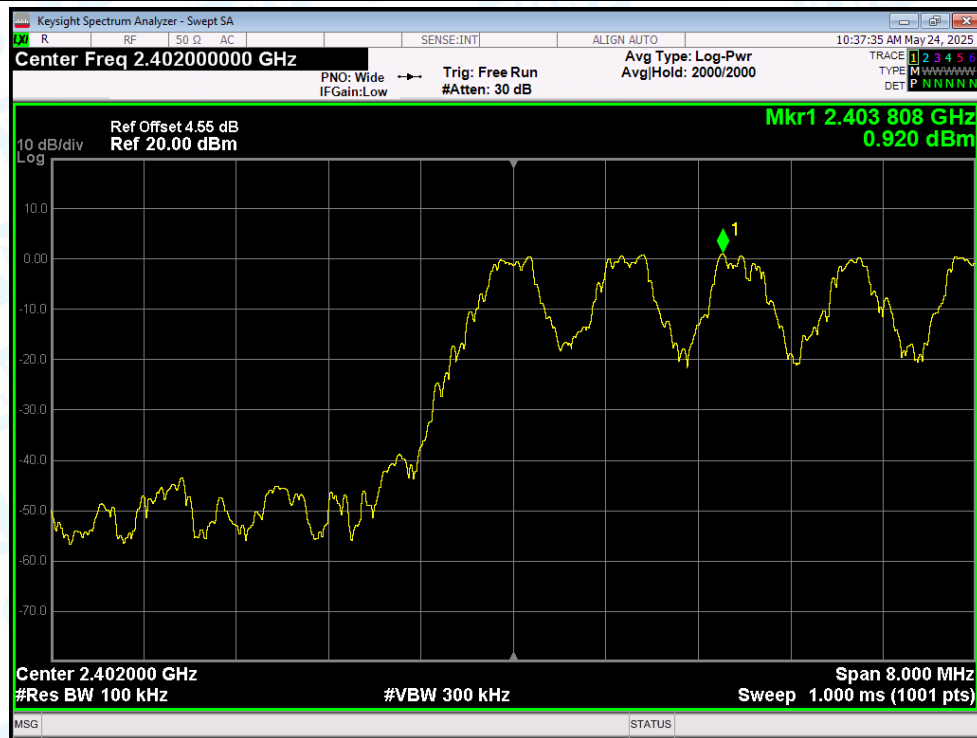


6. Band Edge(Hopping)

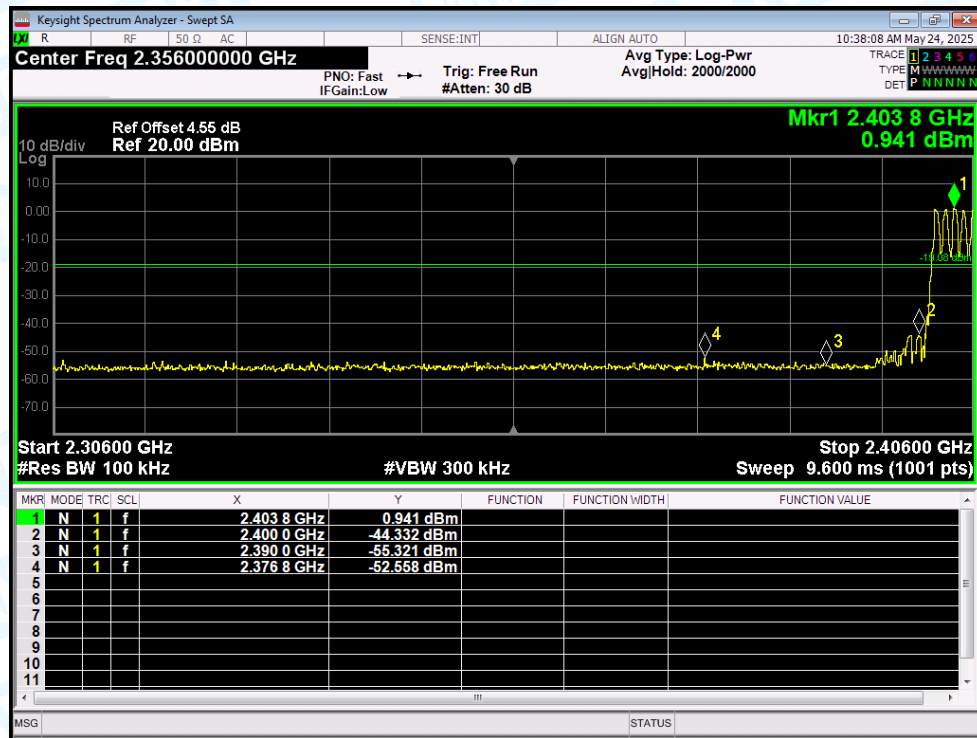
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-53.48	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-46.72	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-53.63	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-52.4	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-52.96	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-49.71	-20	Pass

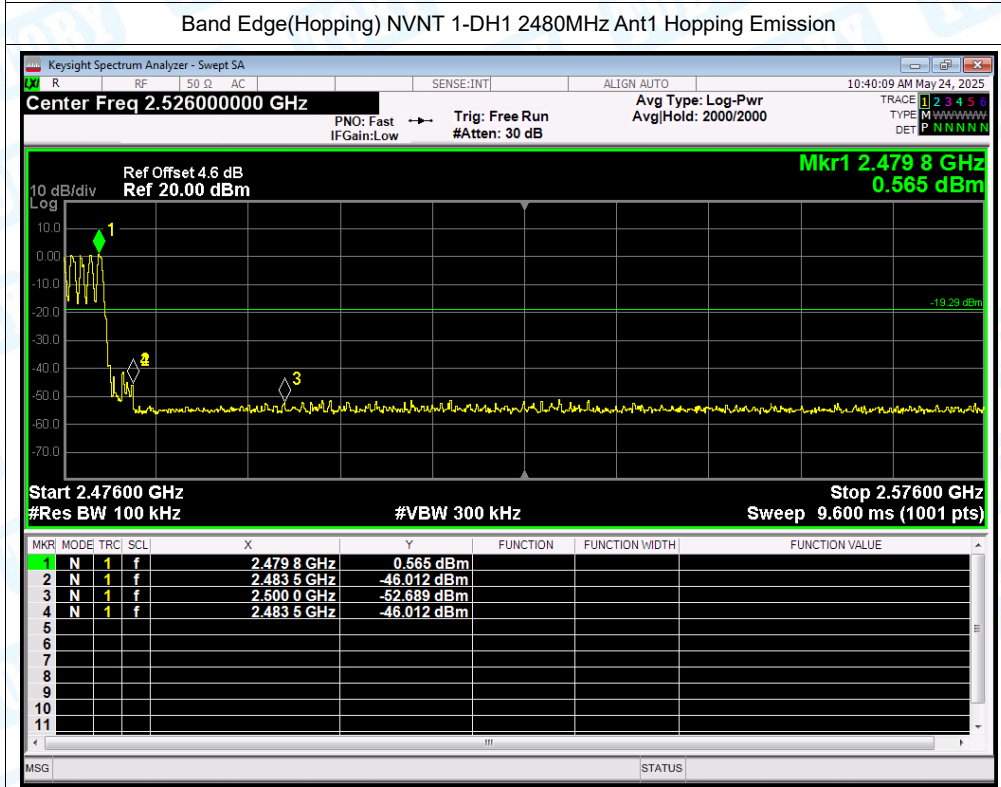
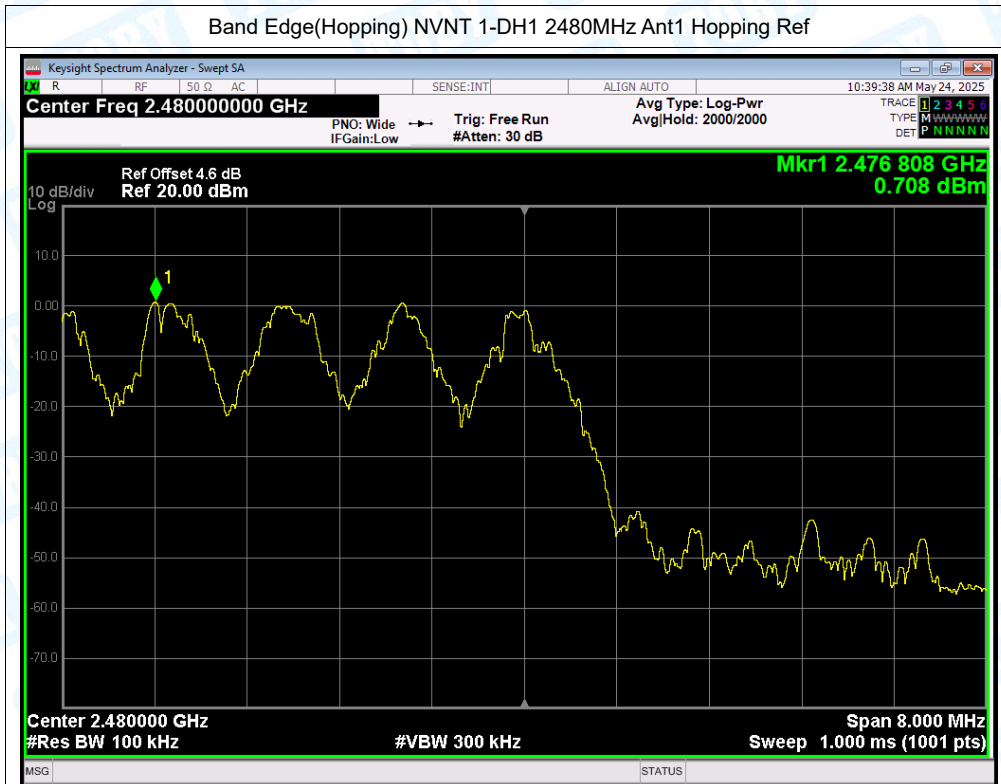
Test Graphs

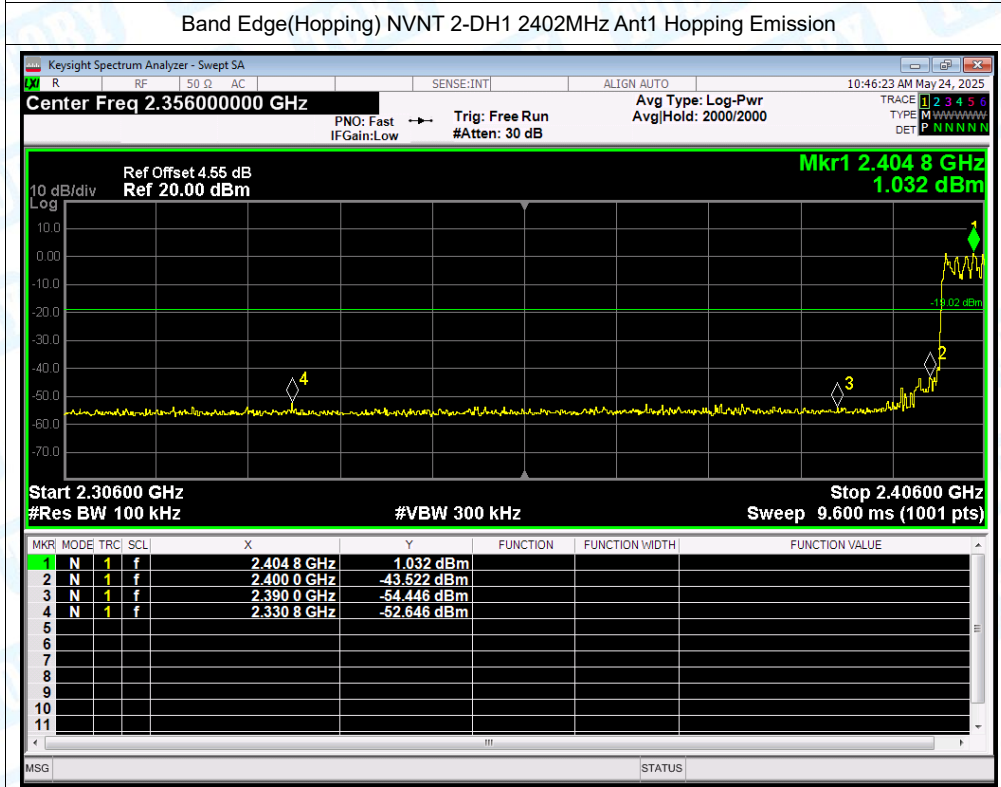
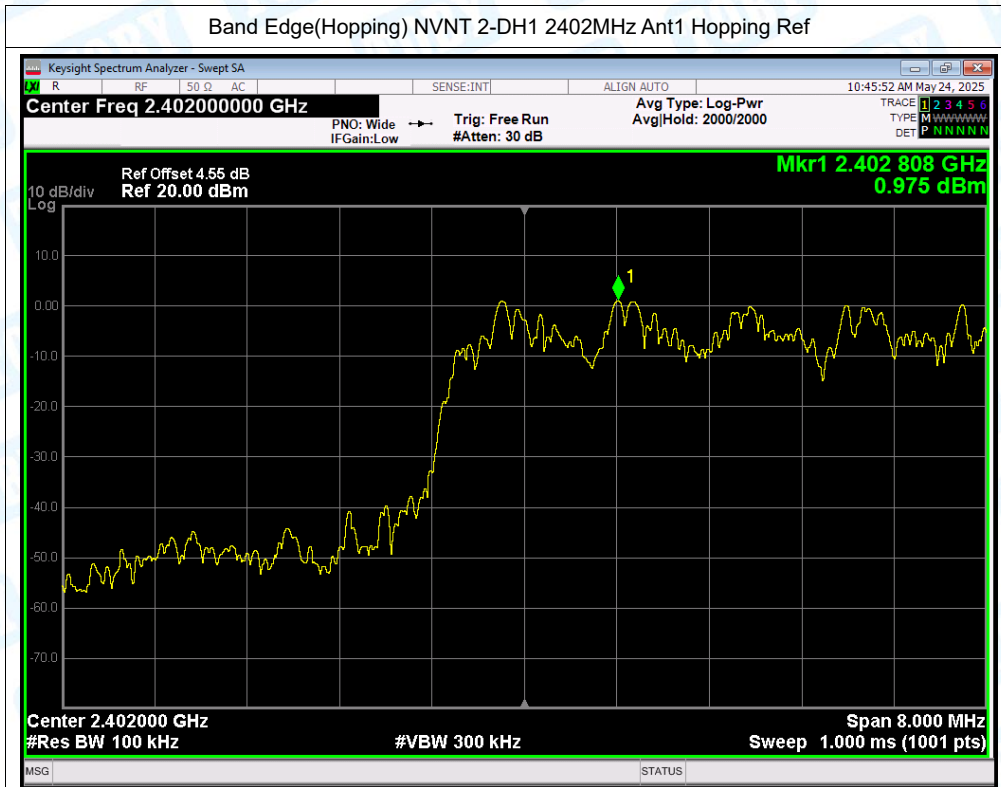
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref

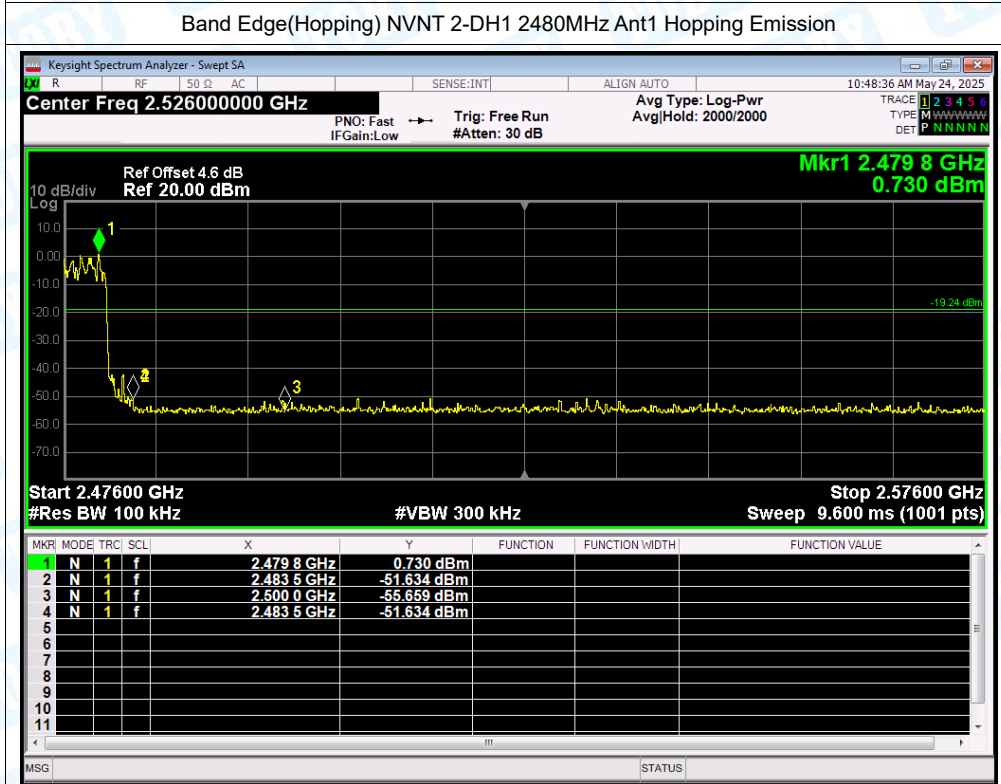
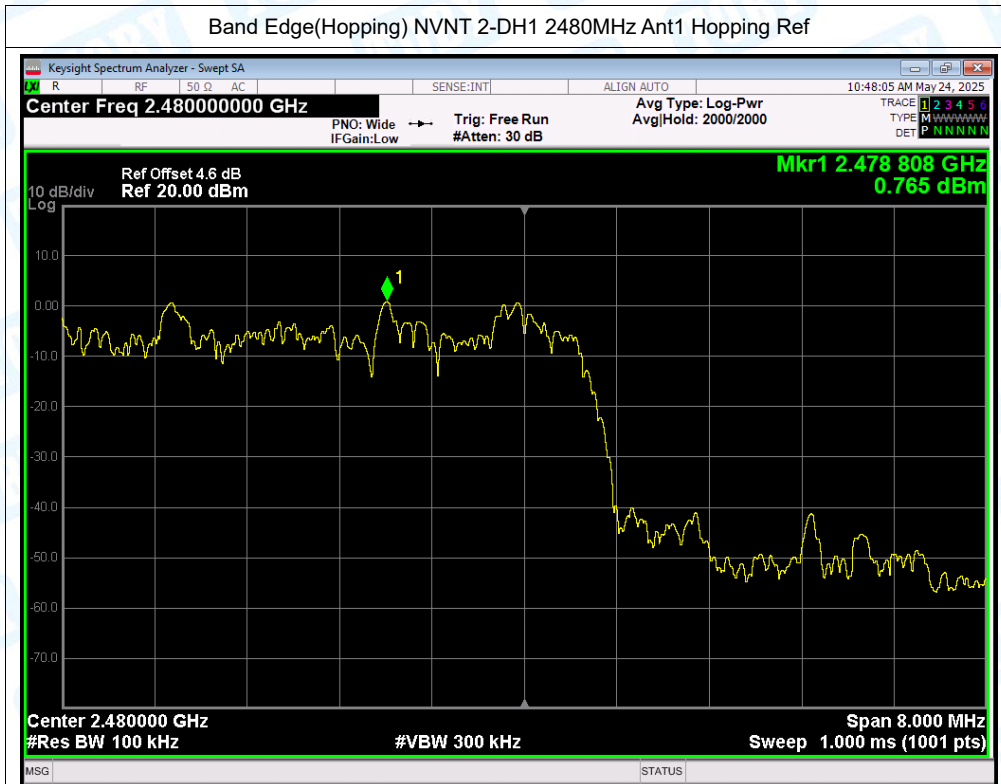


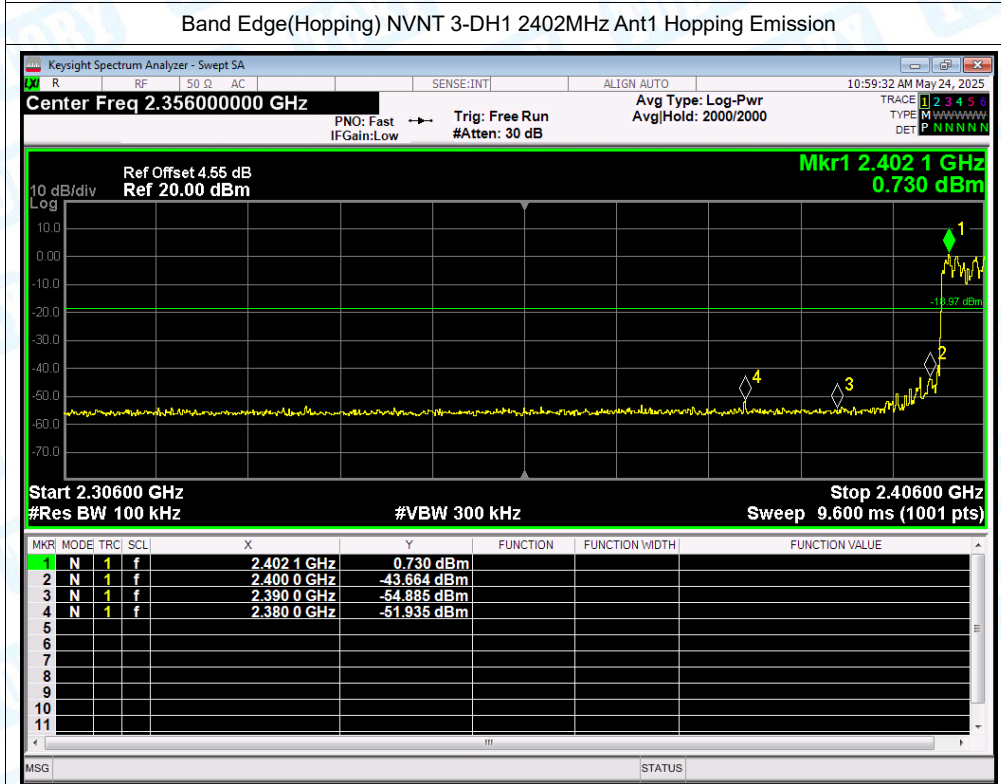
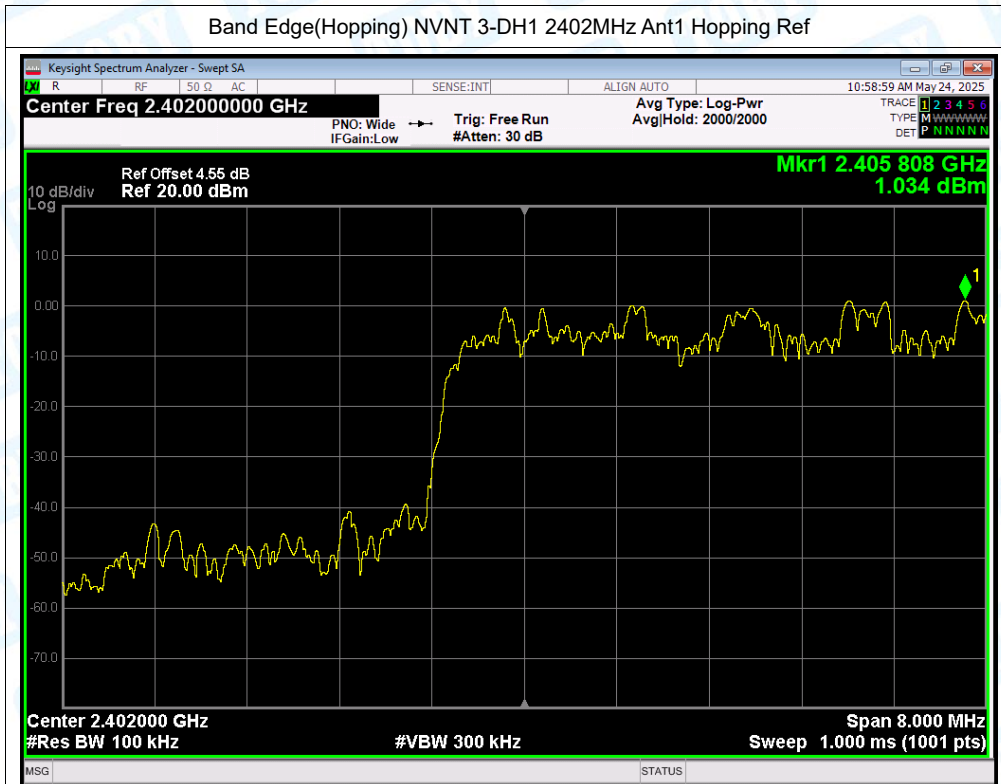
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

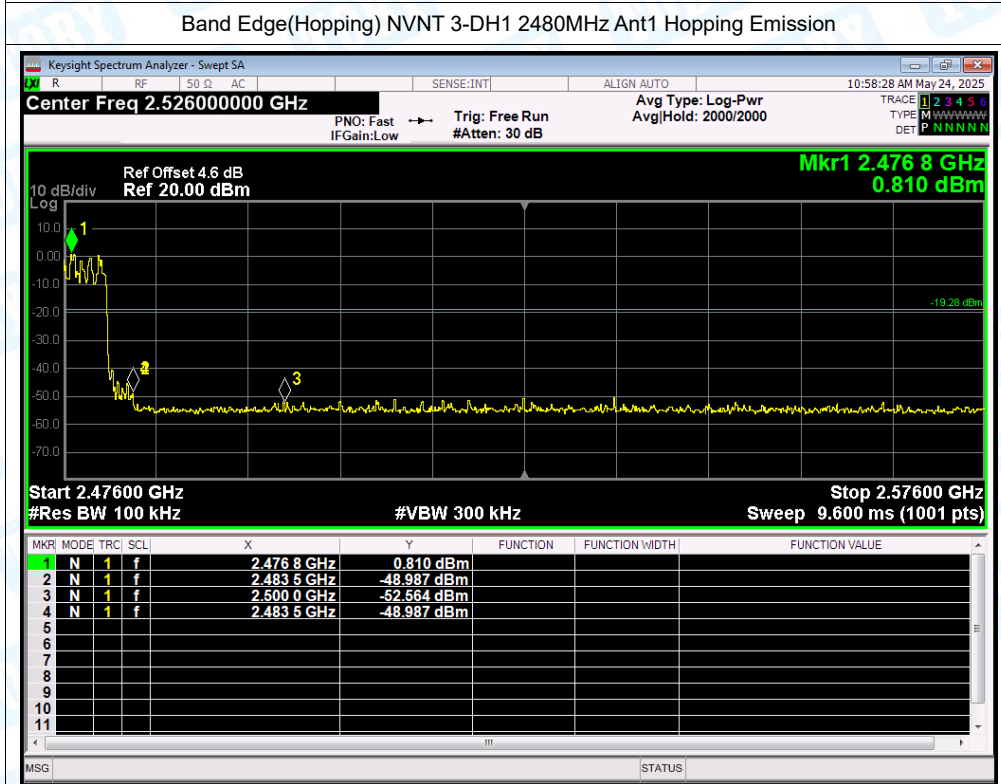
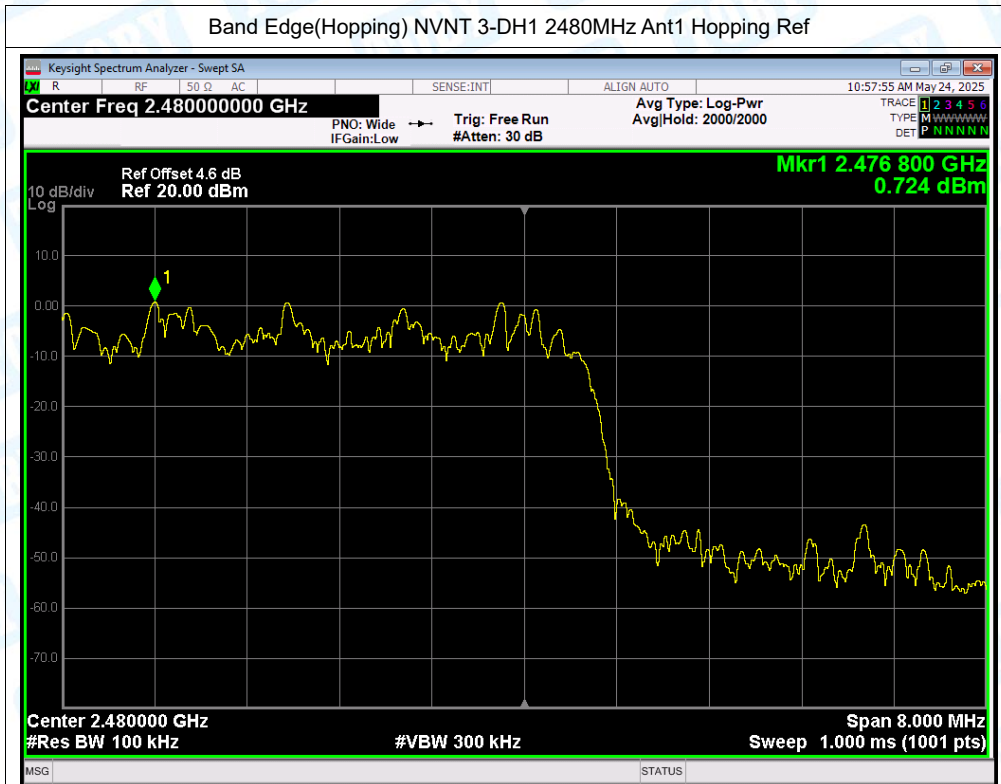










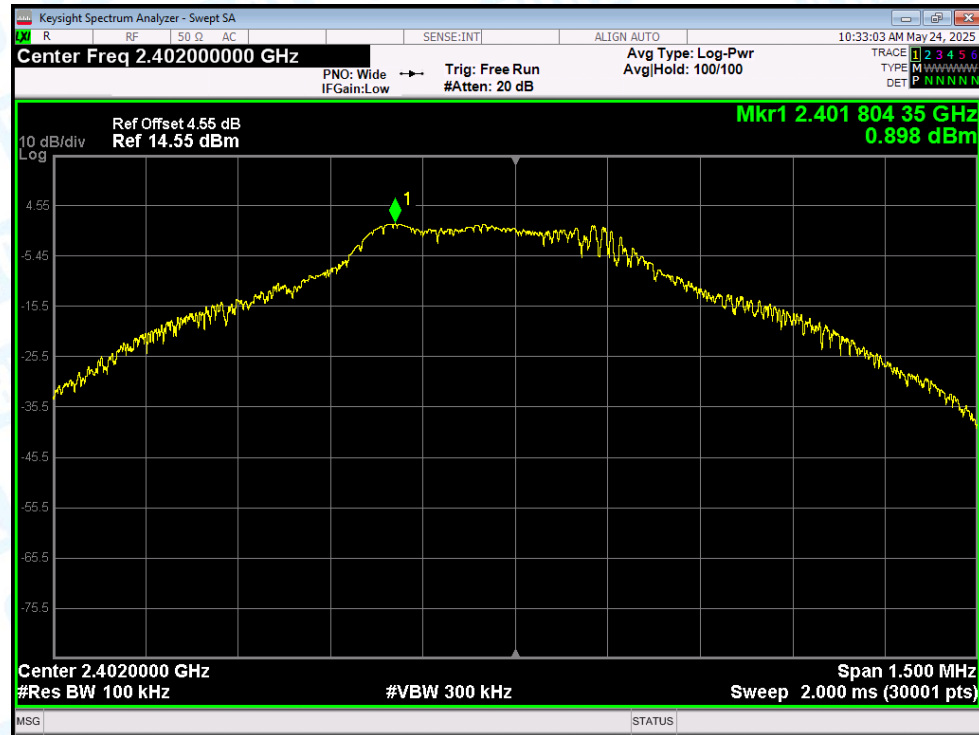


7. Conducted RF Spurious Emission

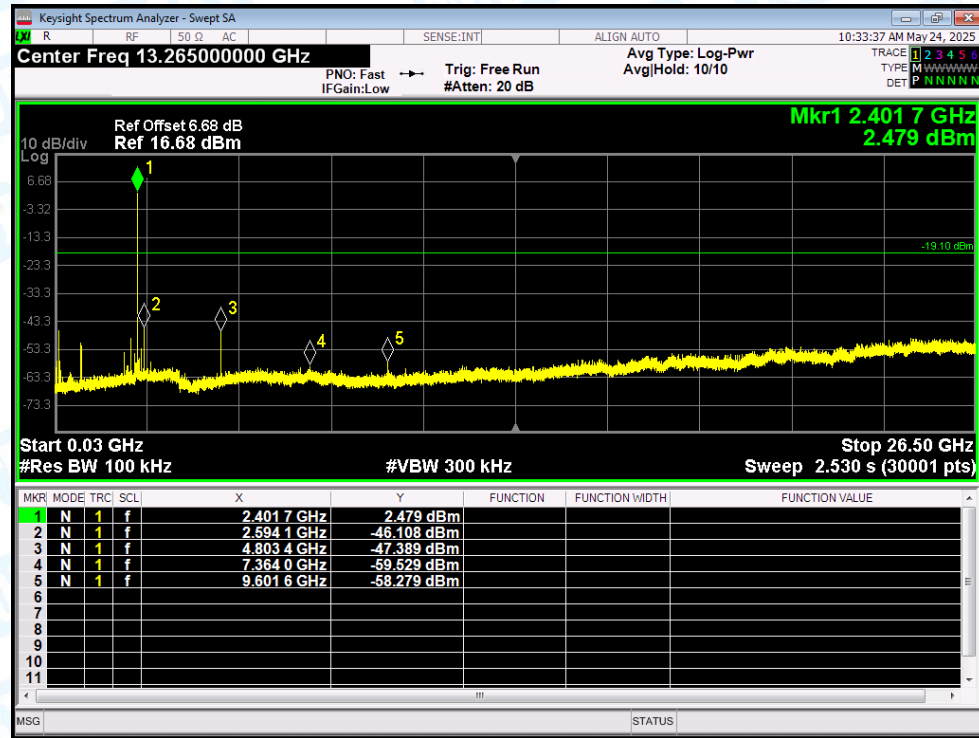
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-47.01	-20	Pass
NVNT	1-DH1	2441	Ant1	-46.34	-20	Pass
NVNT	1-DH1	2480	Ant1	-45.92	-20	Pass
NVNT	2-DH1	2402	Ant1	-47.87	-20	Pass
NVNT	2-DH1	2441	Ant1	-46.58	-20	Pass
NVNT	2-DH1	2480	Ant1	-47.05	-20	Pass
NVNT	3-DH1	2402	Ant1	-46.34	-20	Pass
NVNT	3-DH1	2441	Ant1	-46.76	-20	Pass
NVNT	3-DH1	2480	Ant1	-46.44	-20	Pass

Test Graphs

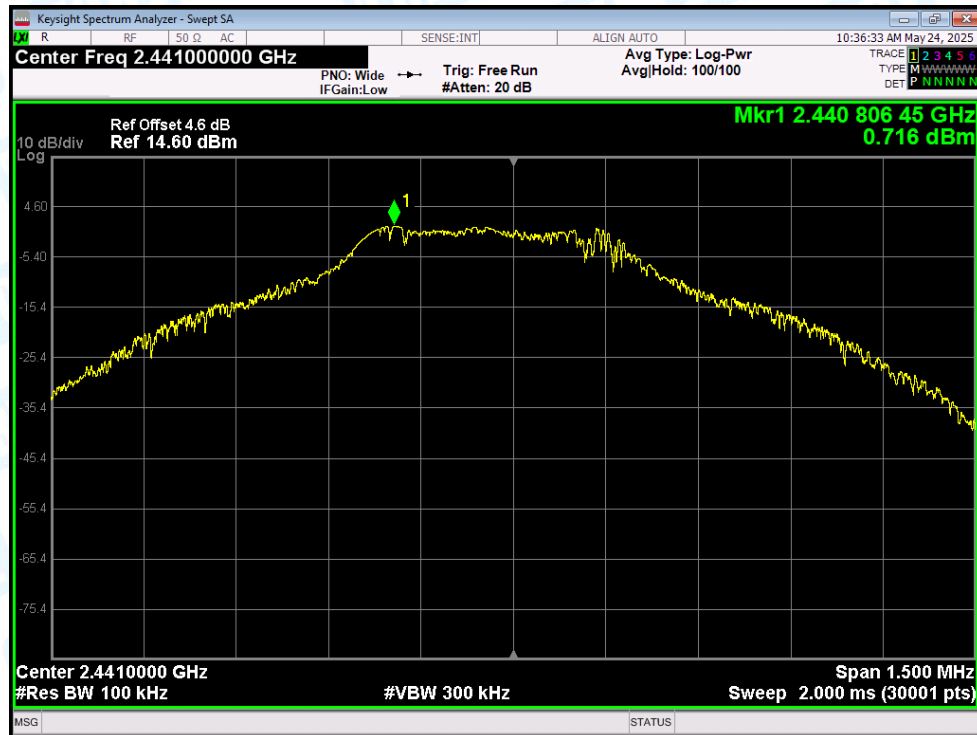
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



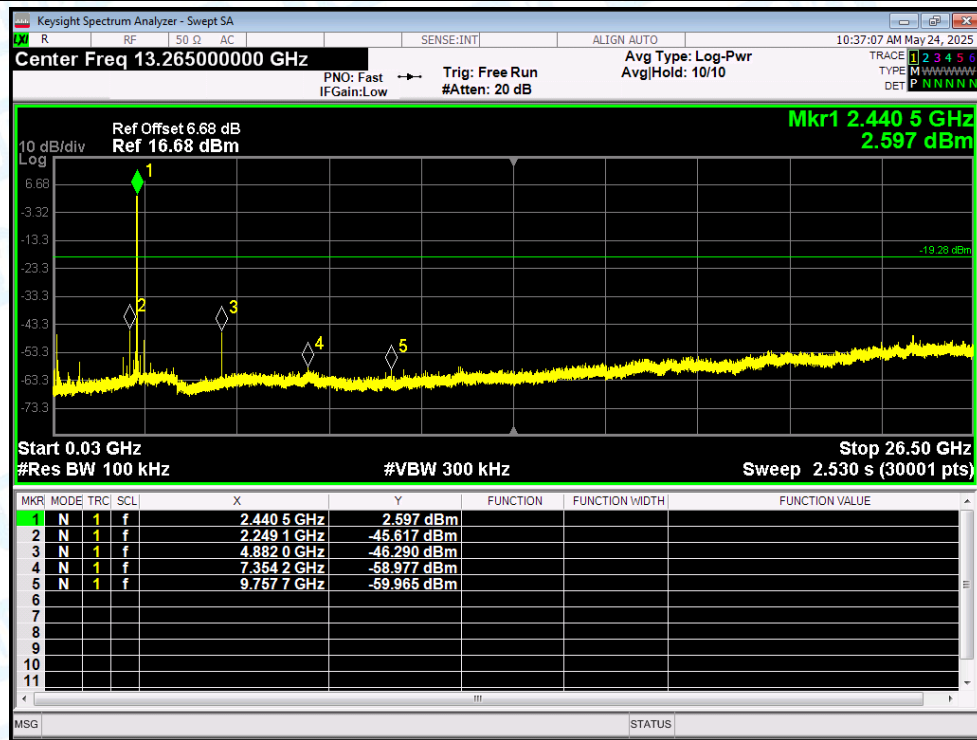
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



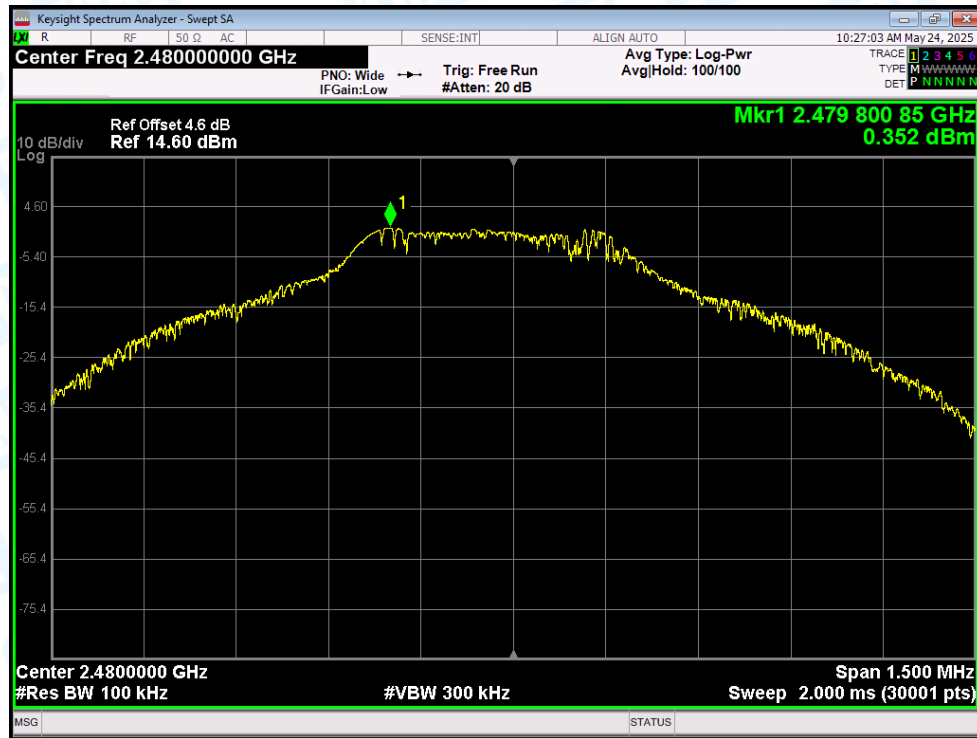
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



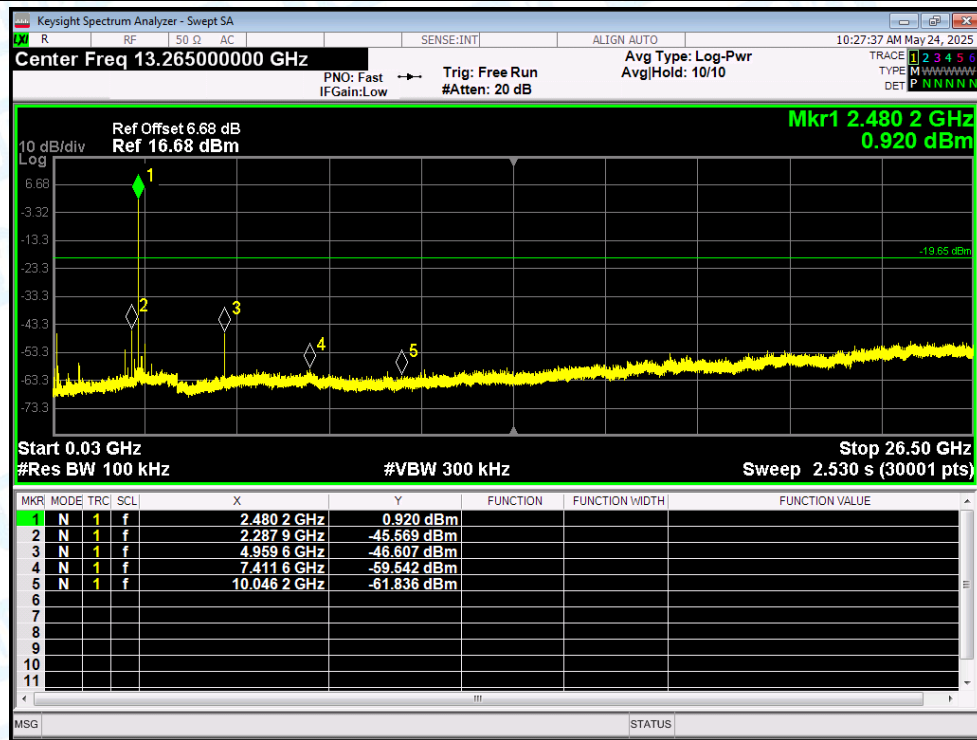
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



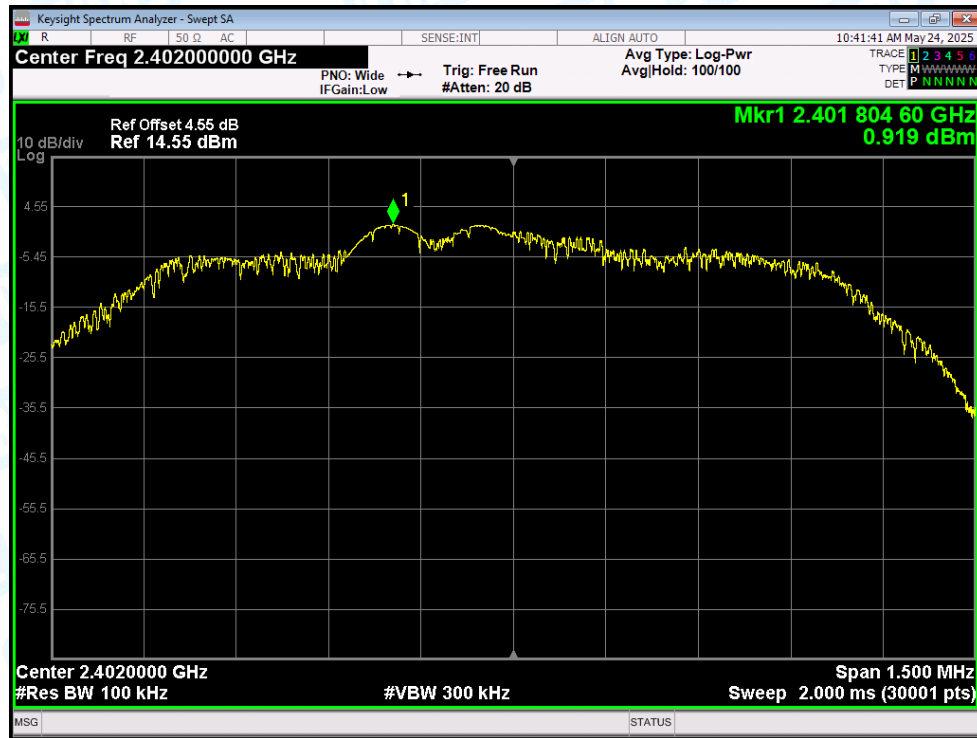
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



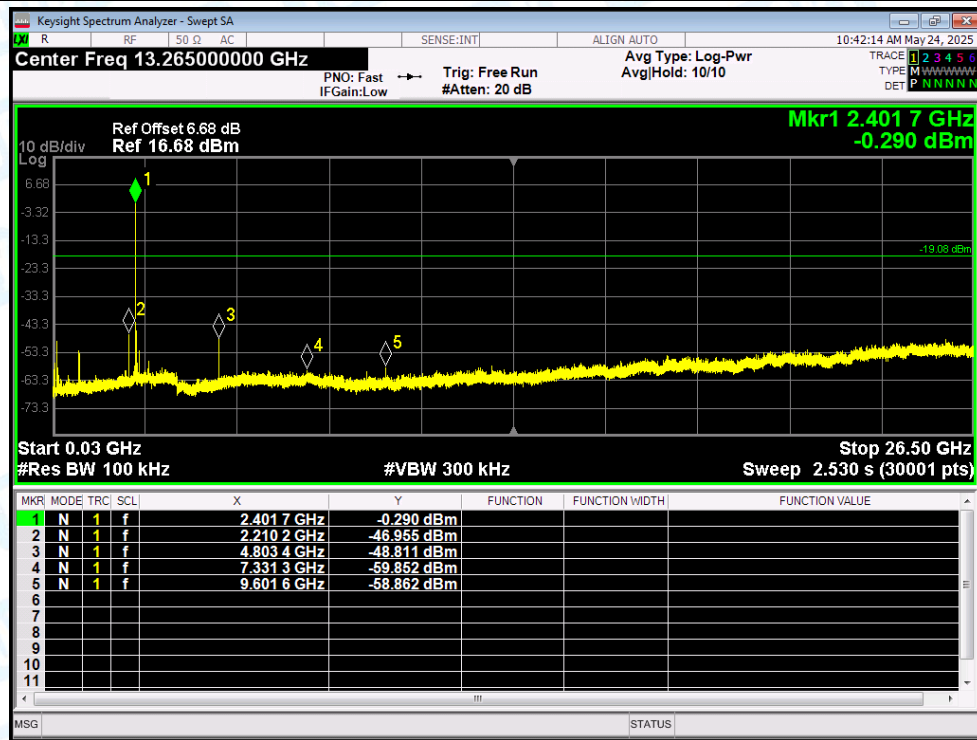
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



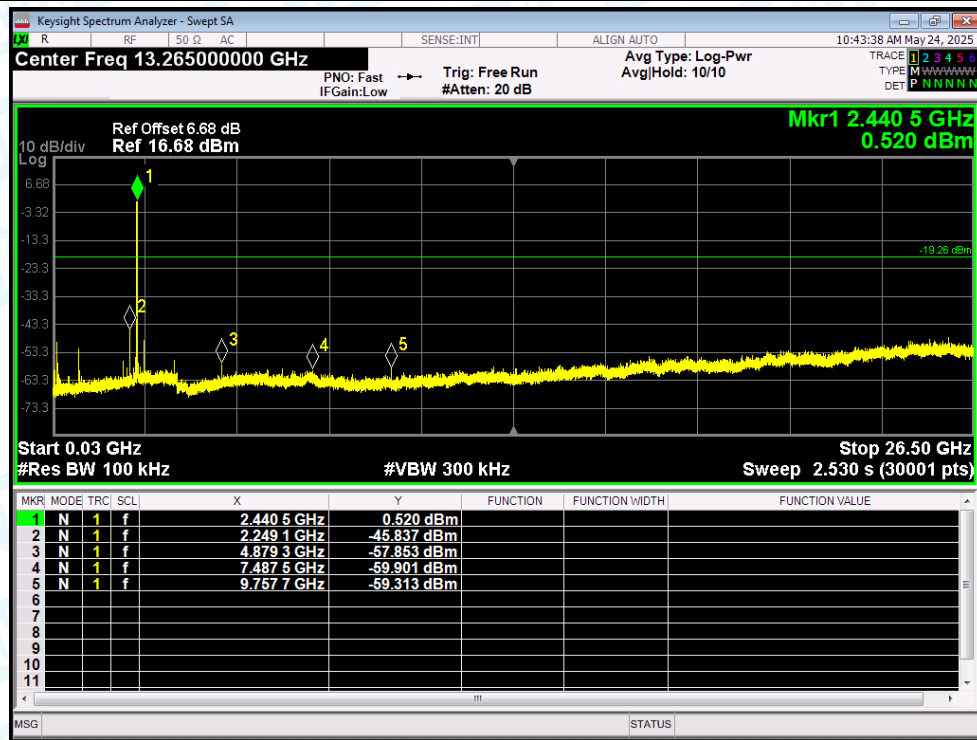
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



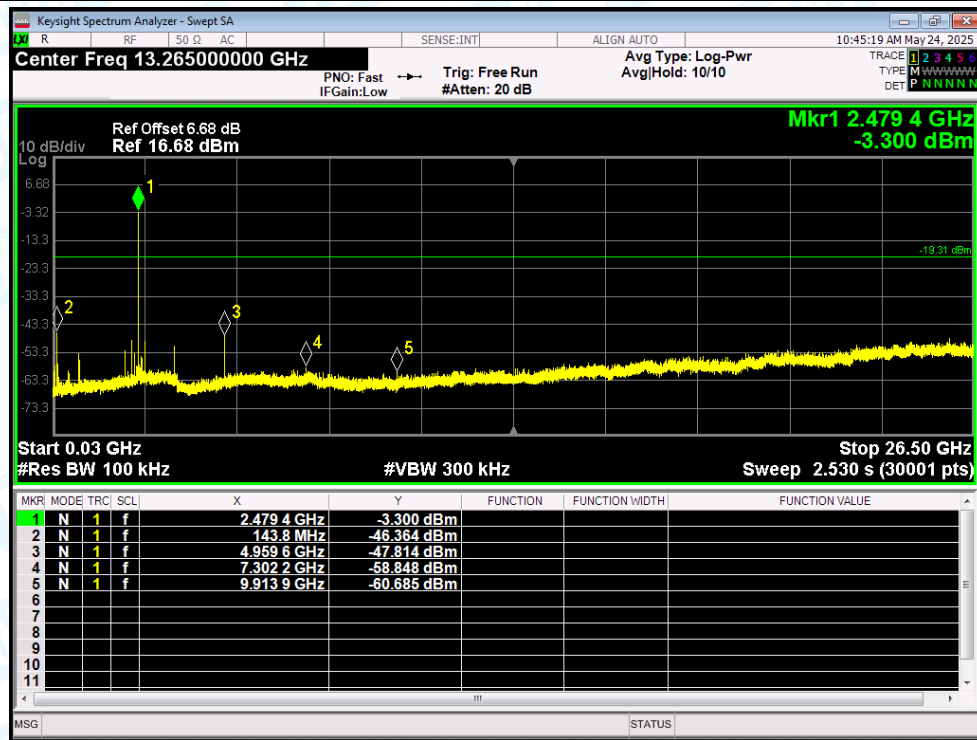
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



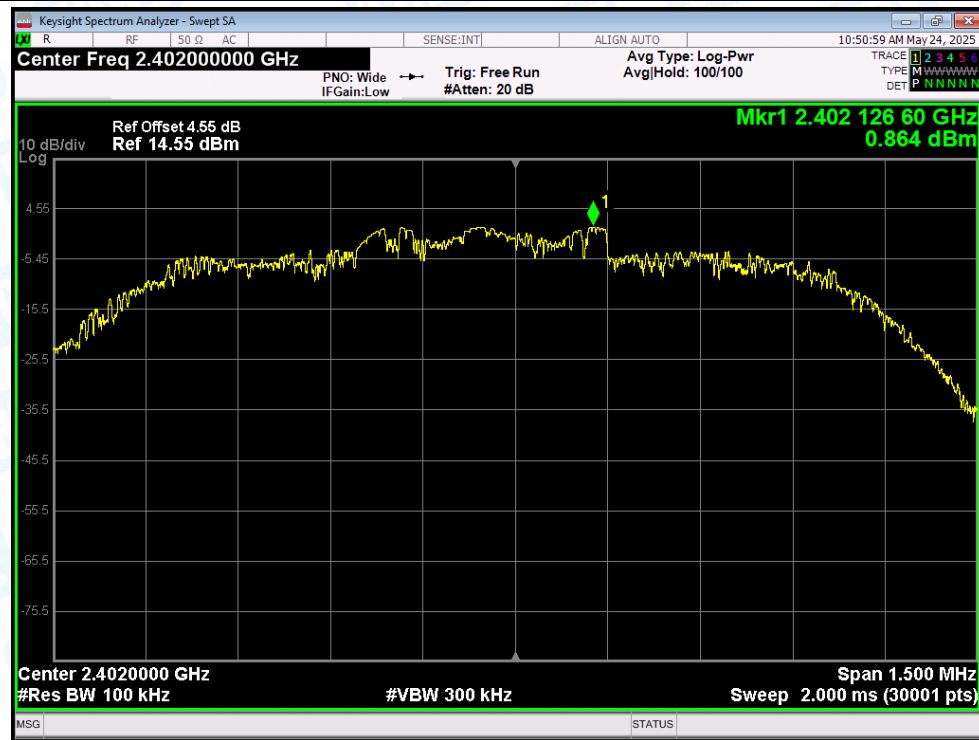
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



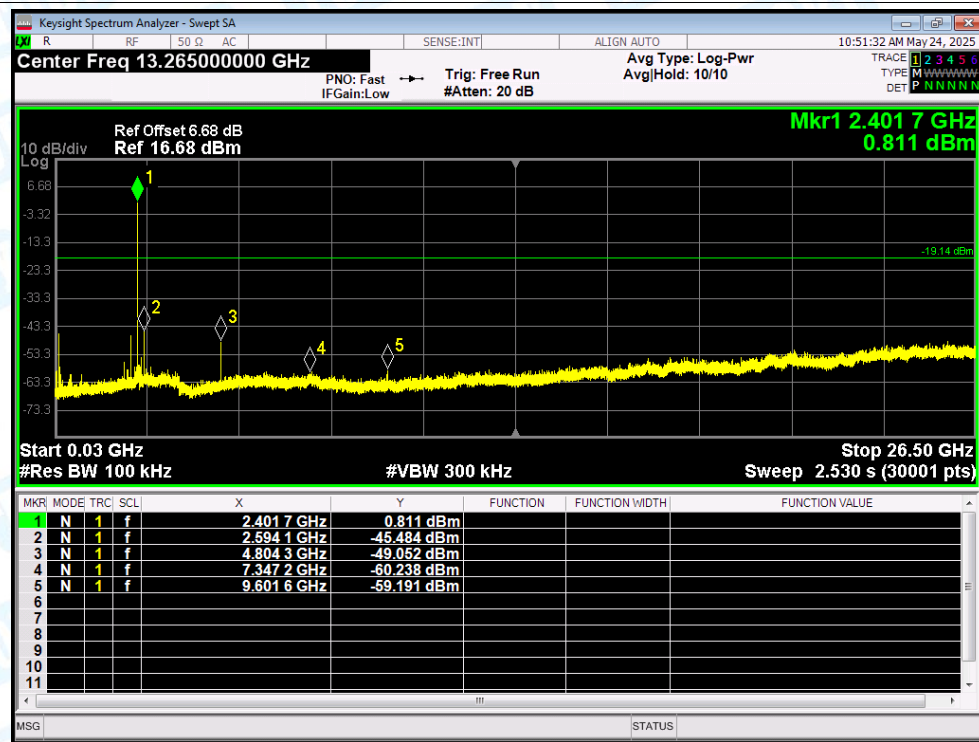
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



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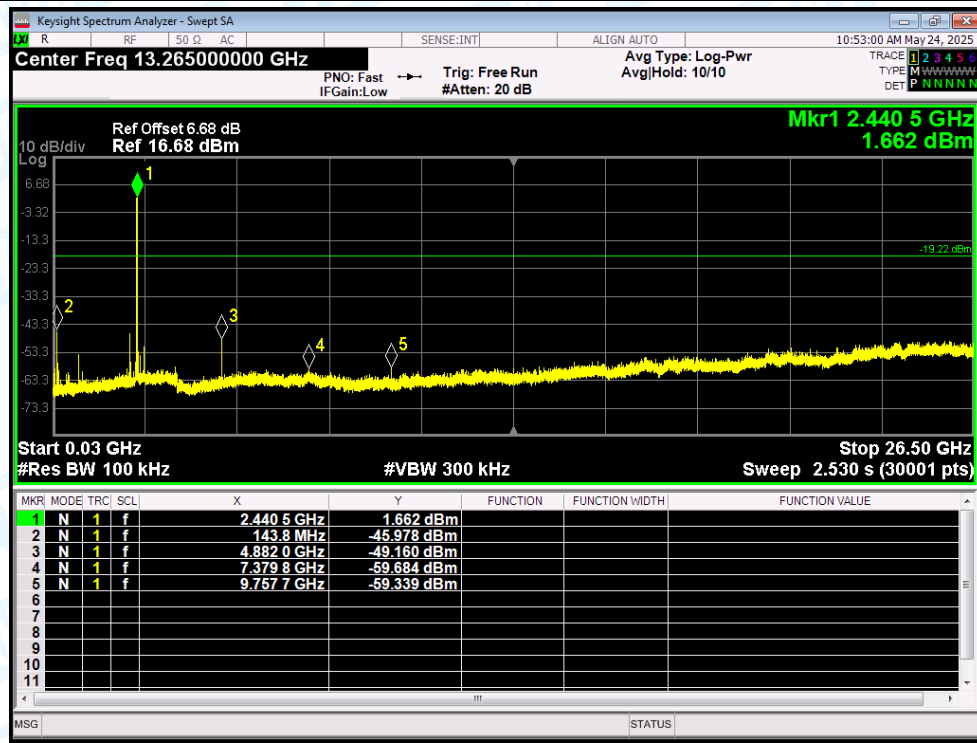
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



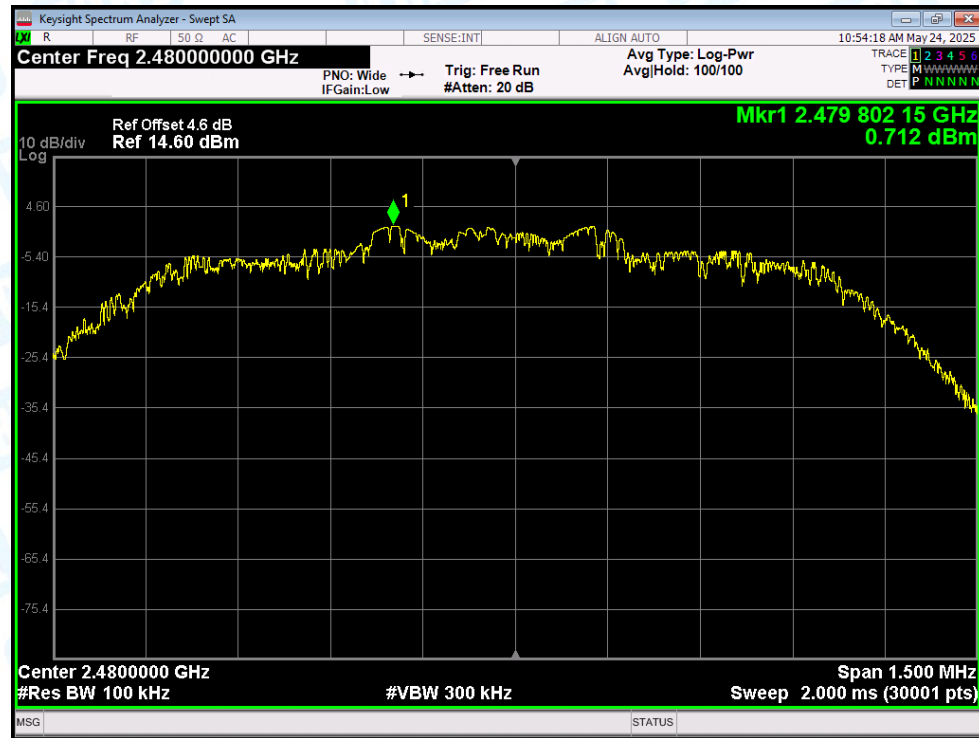
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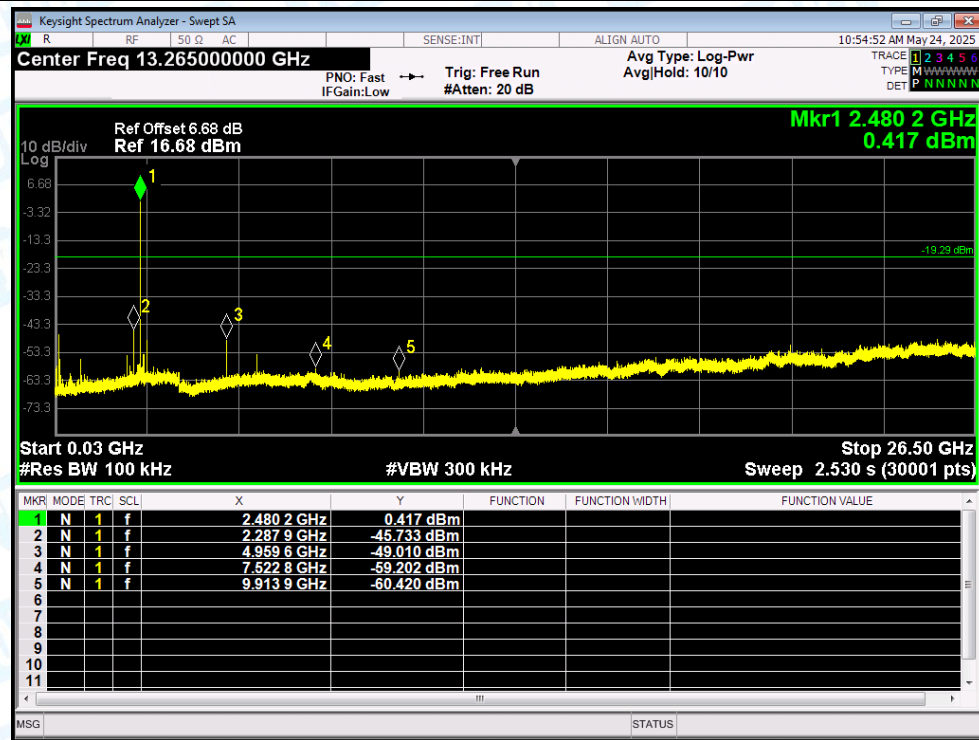
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

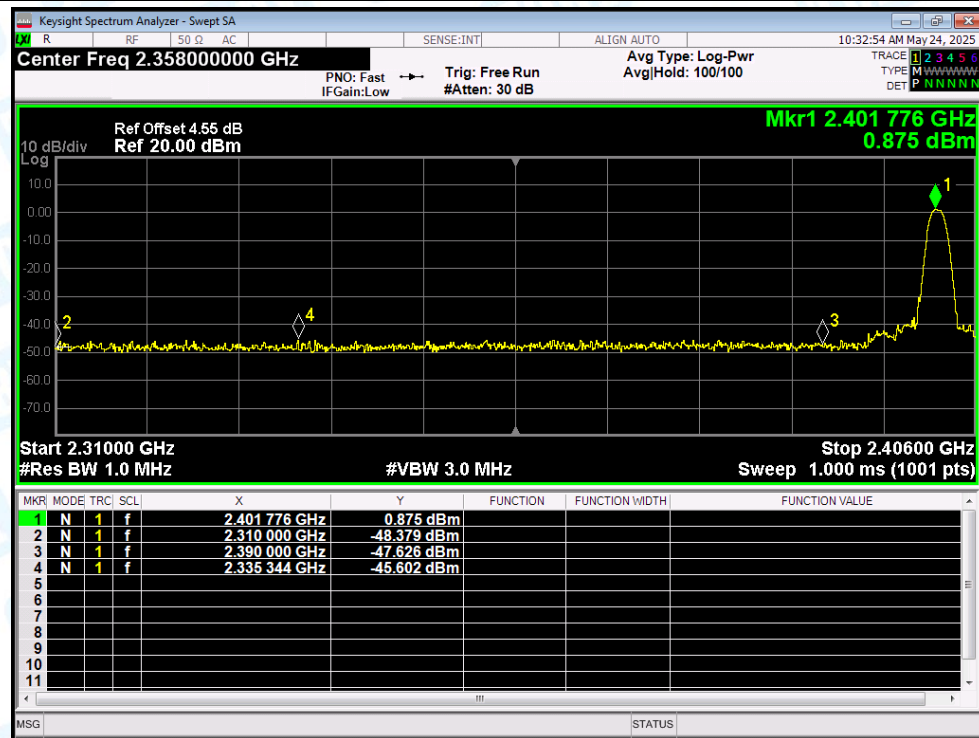


8.Restrict Band

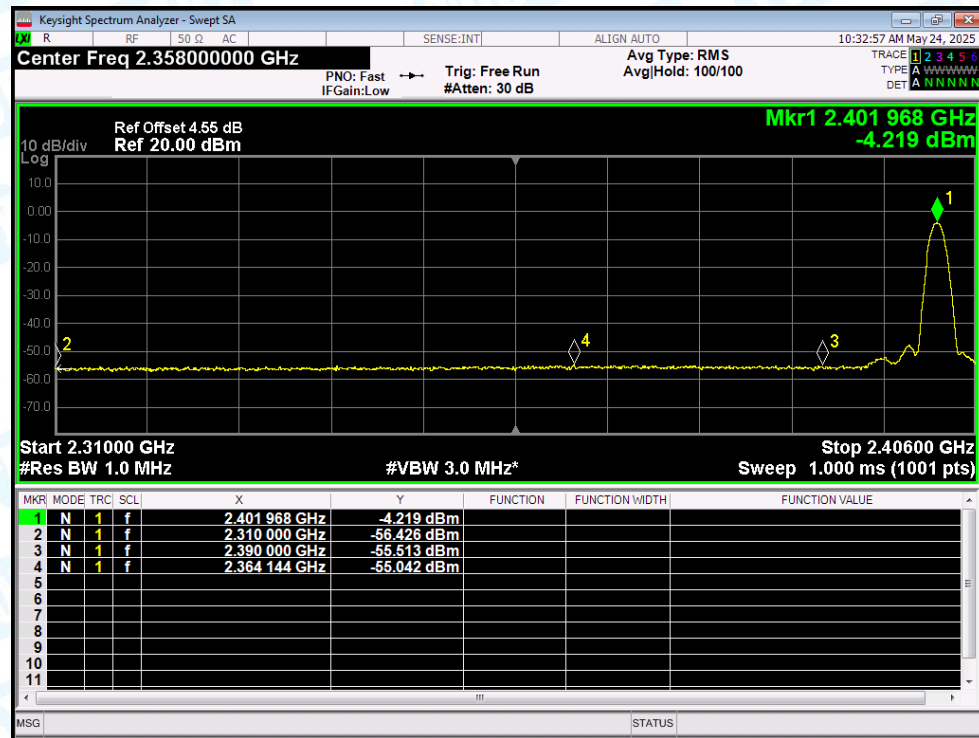
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-48.38	2	-	48.88	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.43	2	5.17	46	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2335.344	-45.6	2	-	51.66	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2364.144	-55.04	2	5.17	47.39	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-47.63	2	-	49.63	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.51	2	5.17	46.92	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-41.71	2	-	55.55	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-51.08	2	5.17	51.35	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.584	-41.5	2	-	55.76	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.584	-50.5	2	5.17	51.93	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-47.4	2	-	49.86	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.31	2	5.17	47.12	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.4	2	-	49.86	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.57	2	4.95	45.64	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2389.2	-44.78	2	-	52.48	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2364.048	-54.82	2	4.95	47.39	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-46.87	2	-	50.39	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.75	2	4.95	46.46	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-40.73	2	-	56.53	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-52.43	2	5.06	49.89	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.632	-40.48	2	-	56.78	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.536	-51.82	2	5.06	50.5	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.13	2	-	50.13	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.22	2	5.06	47.1	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.03	2	-	49.23	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.11	2	4.95	46.1	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2383.824	-44.39	2	-	52.87	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2369.04	-55.08	2	4.95	47.13	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.46	2	-	49.8	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.57	2	4.95	46.64	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-42.09	2	-	55.17	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-51.8	2	5.06	50.52	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.848	-40.96	2	-	56.3	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.512	-51.8	2	5.06	50.52	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-48.25	2	-	49.01	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.8	2	5.06	46.52	Average	54	Pass

Test Graphs

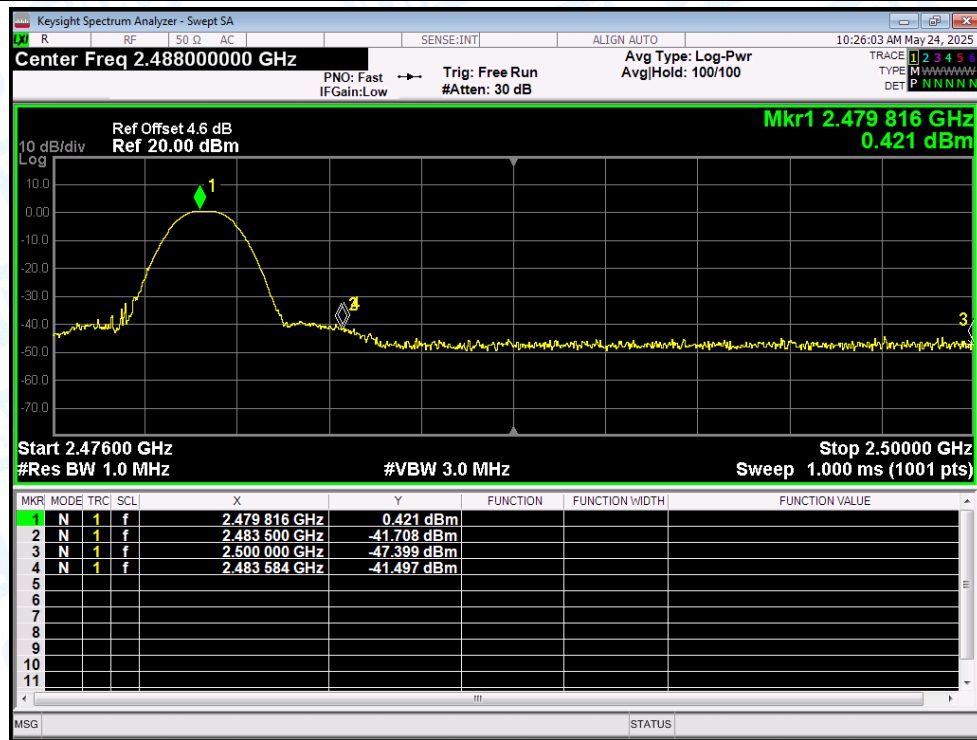
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



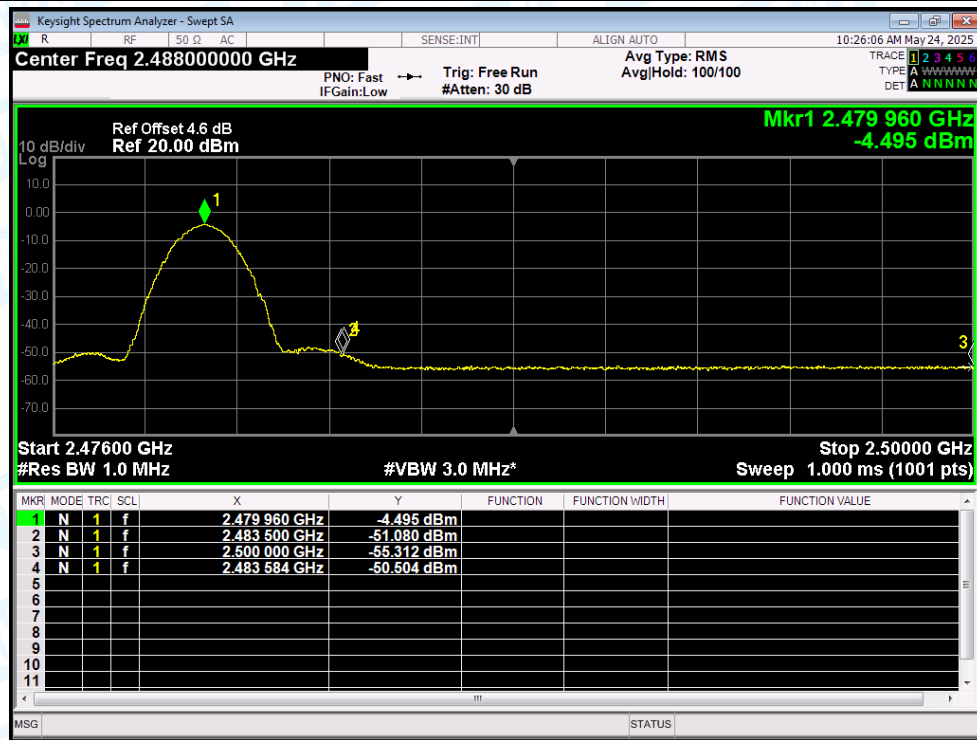
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



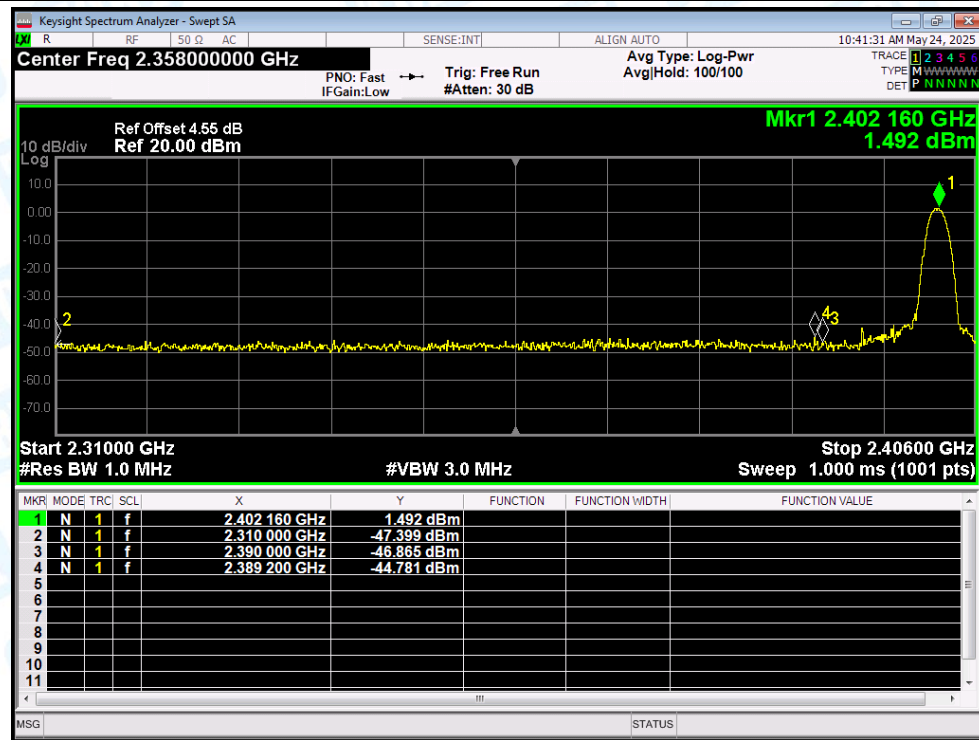
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



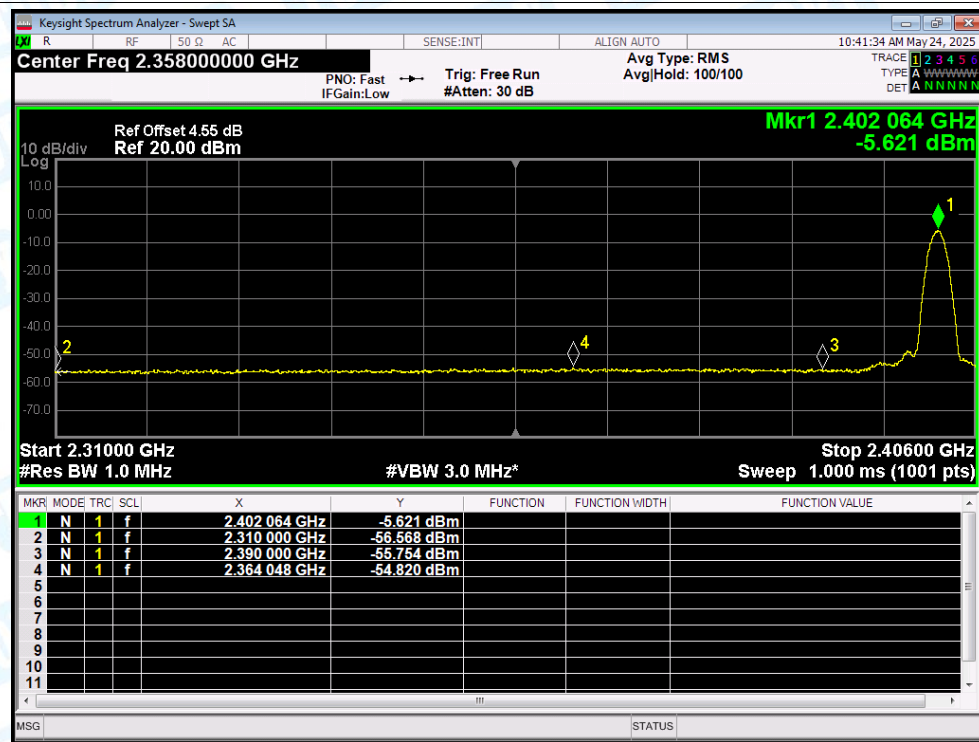
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



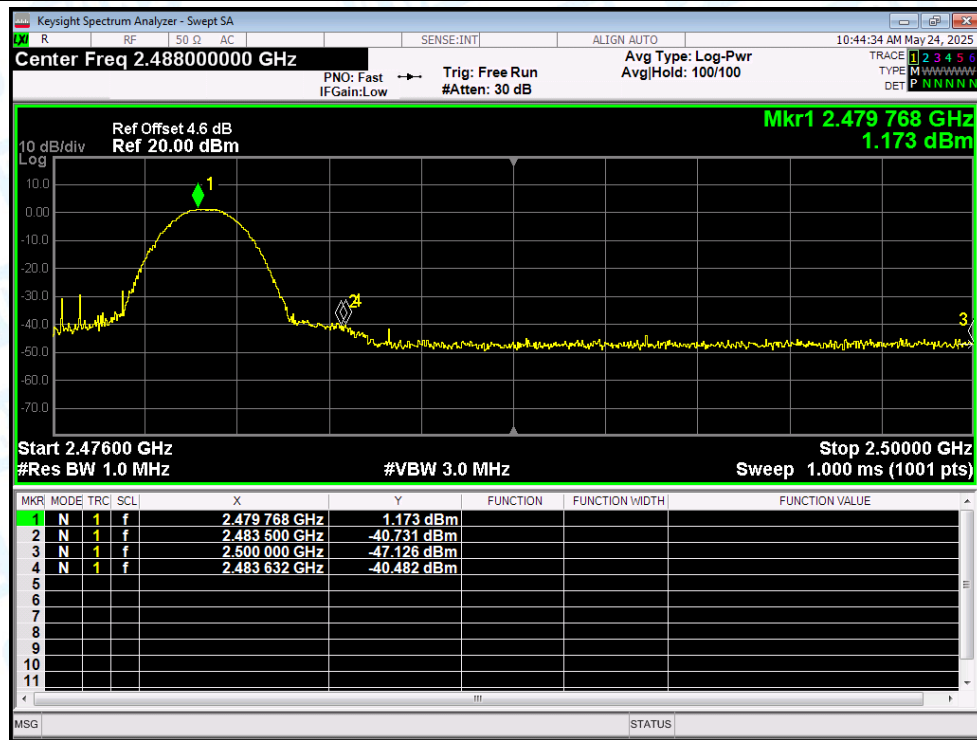
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



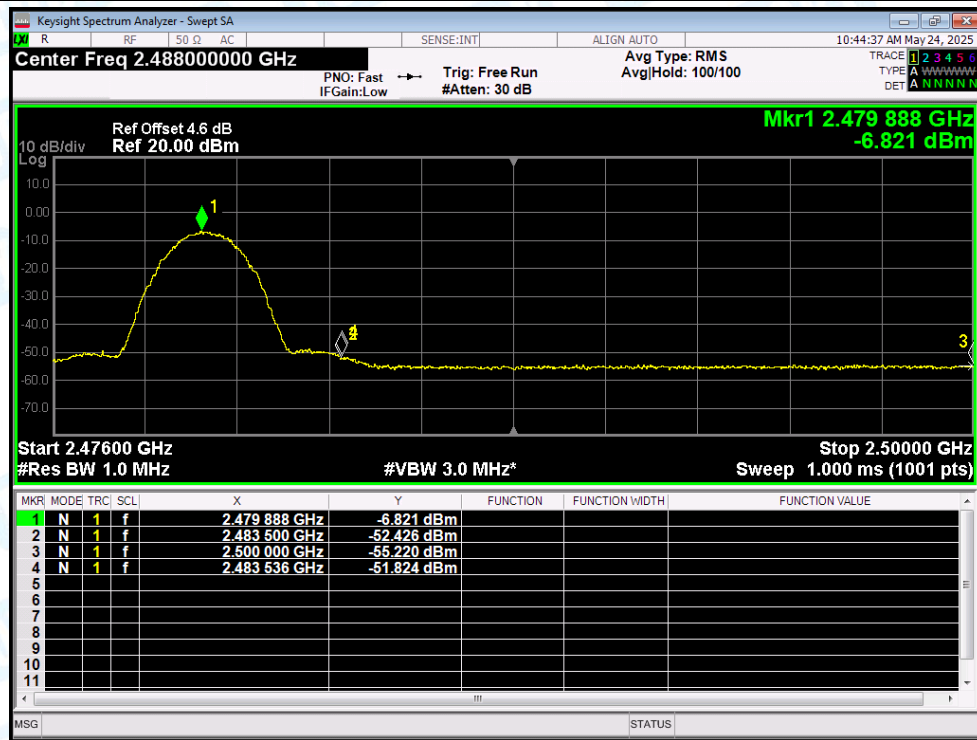
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



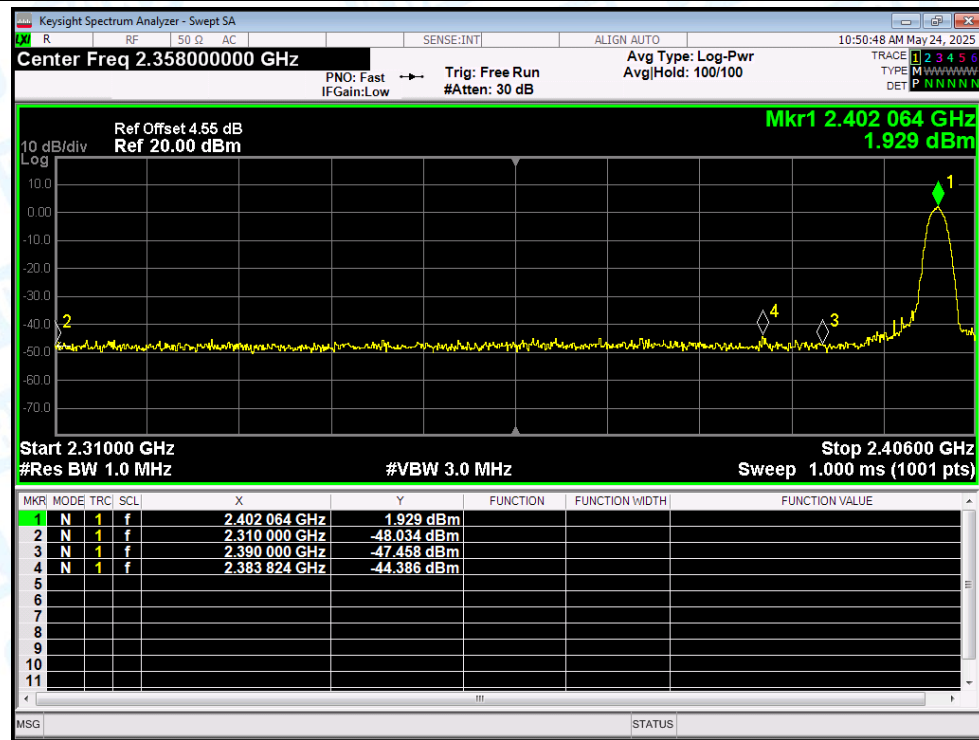
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



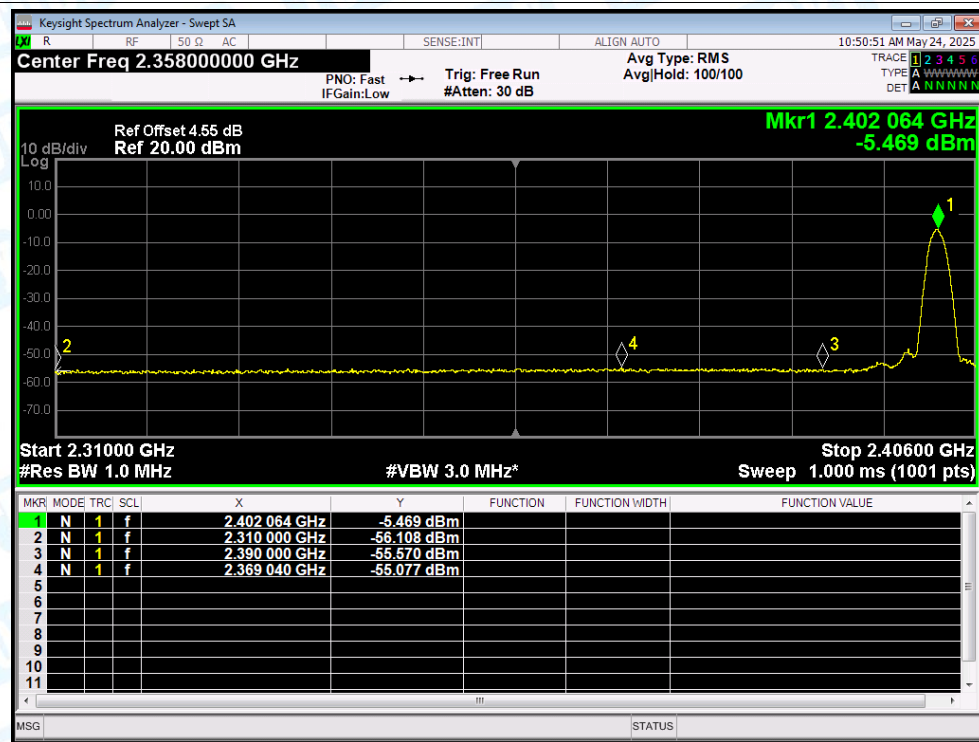
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



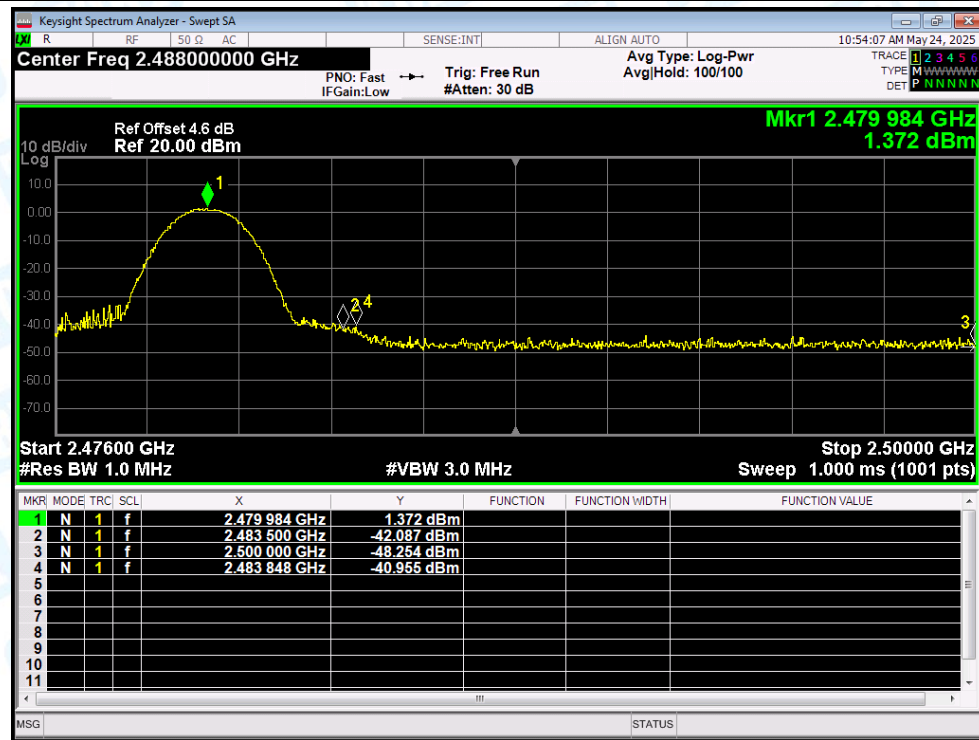
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



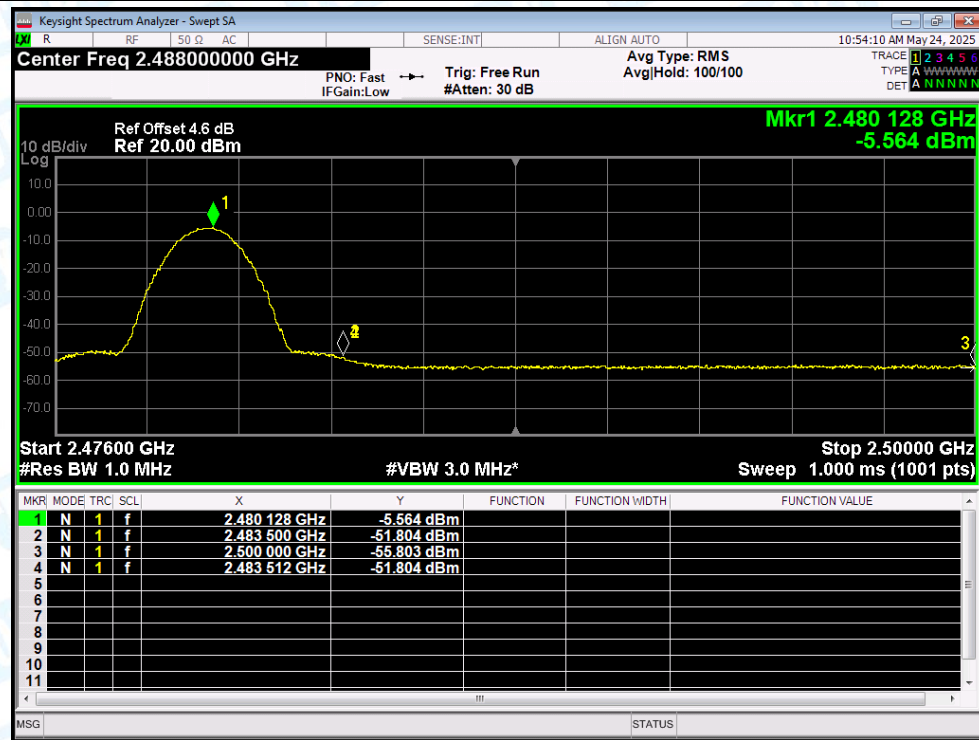
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

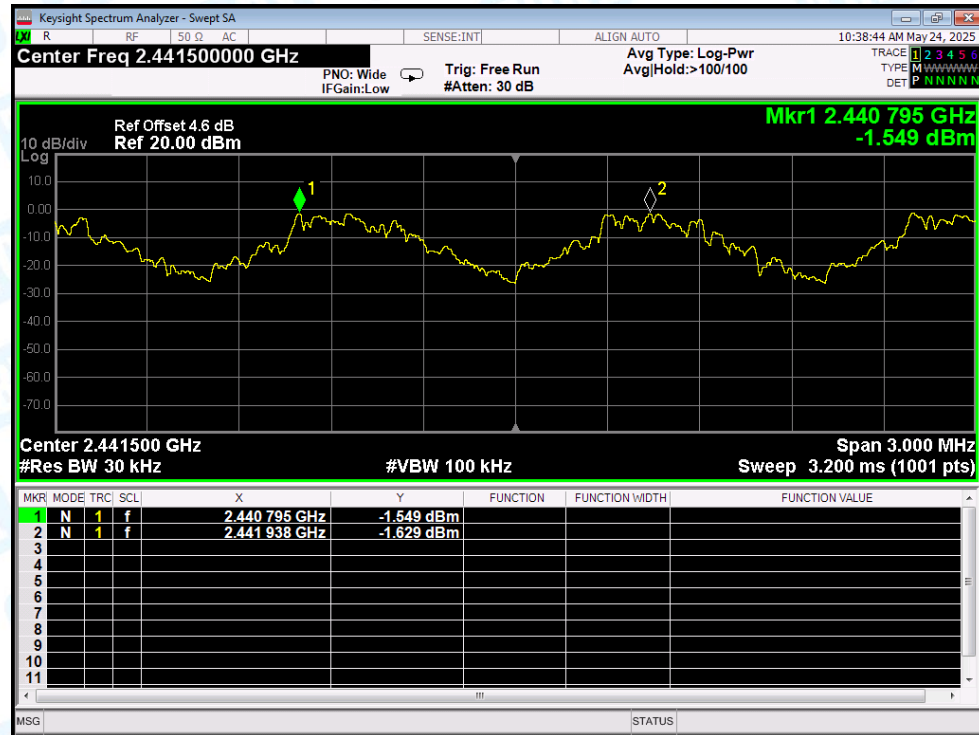


9.Carrier Frequencies Separation

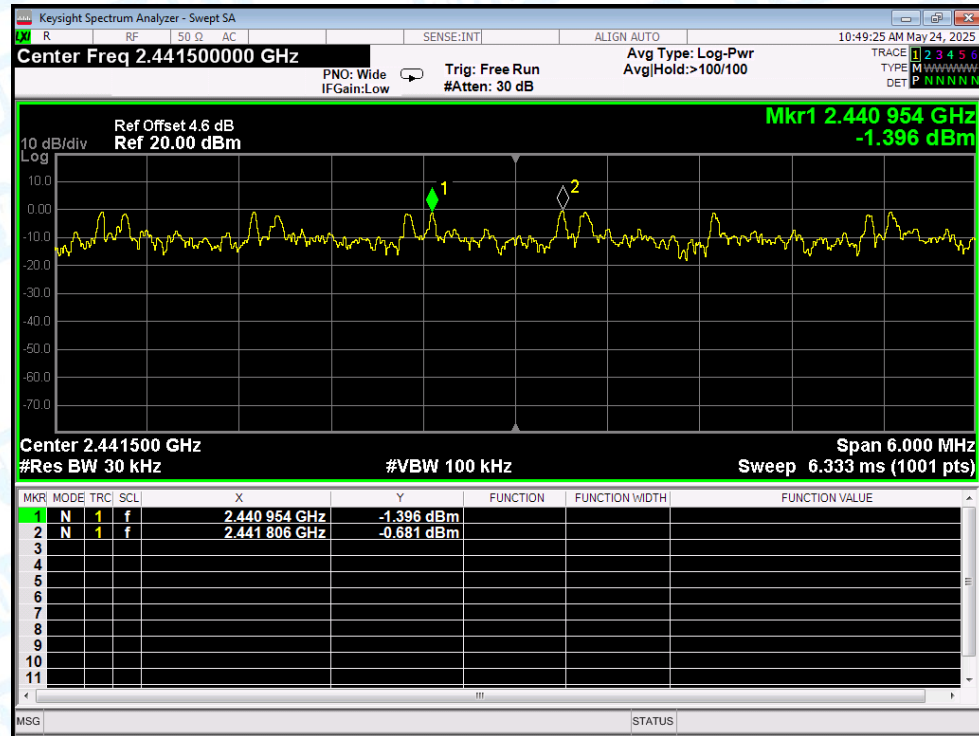
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.795	2441.938	1.143	0.573	Pass
NVNT	2-DH1	Ant1	2440.954	2441.806	0.852	0.82	Pass
NVNT	3-DH1	Ant1	2440.942	2441.944	1.002	0.813	Pass

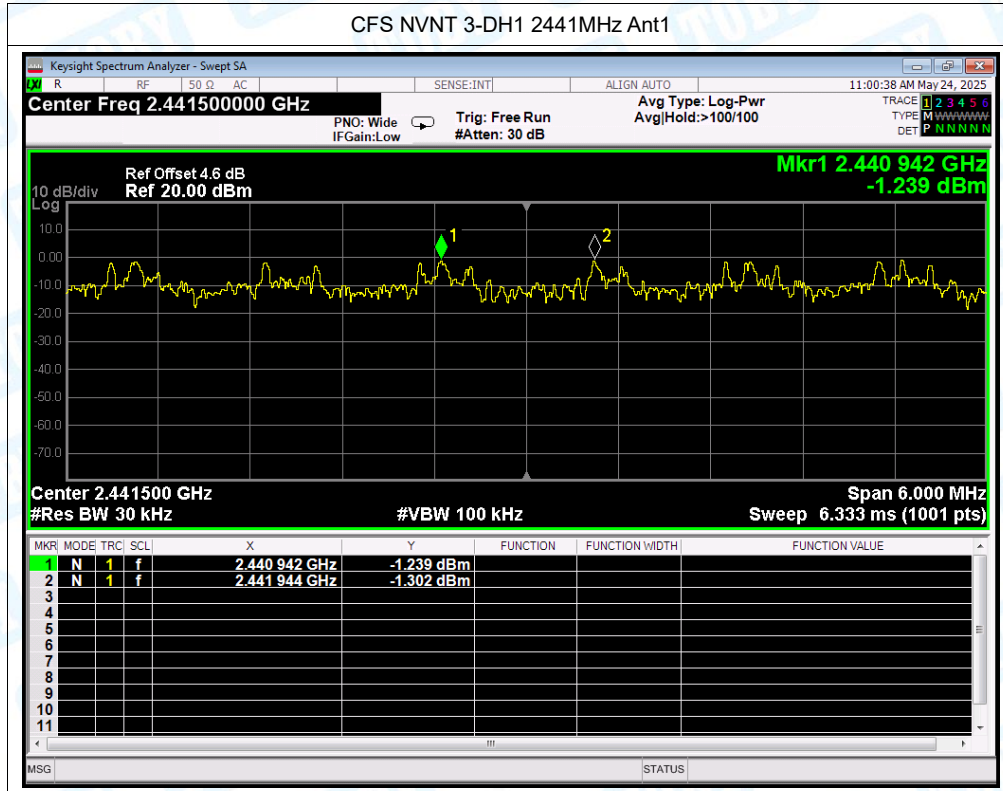
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



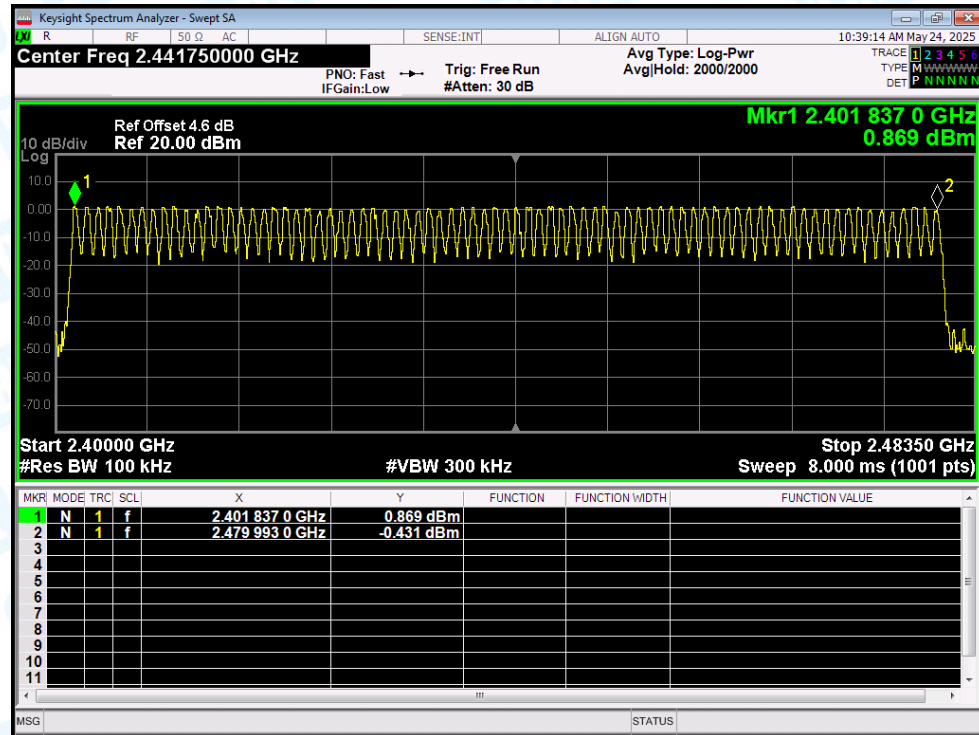


10.Number of Hopping Channel

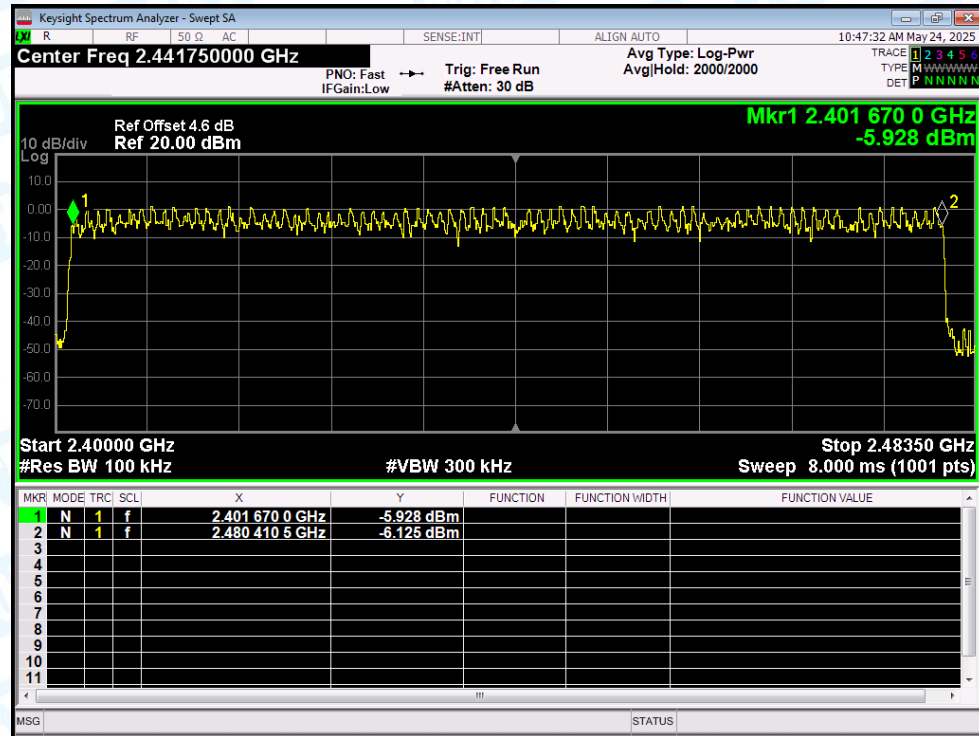
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

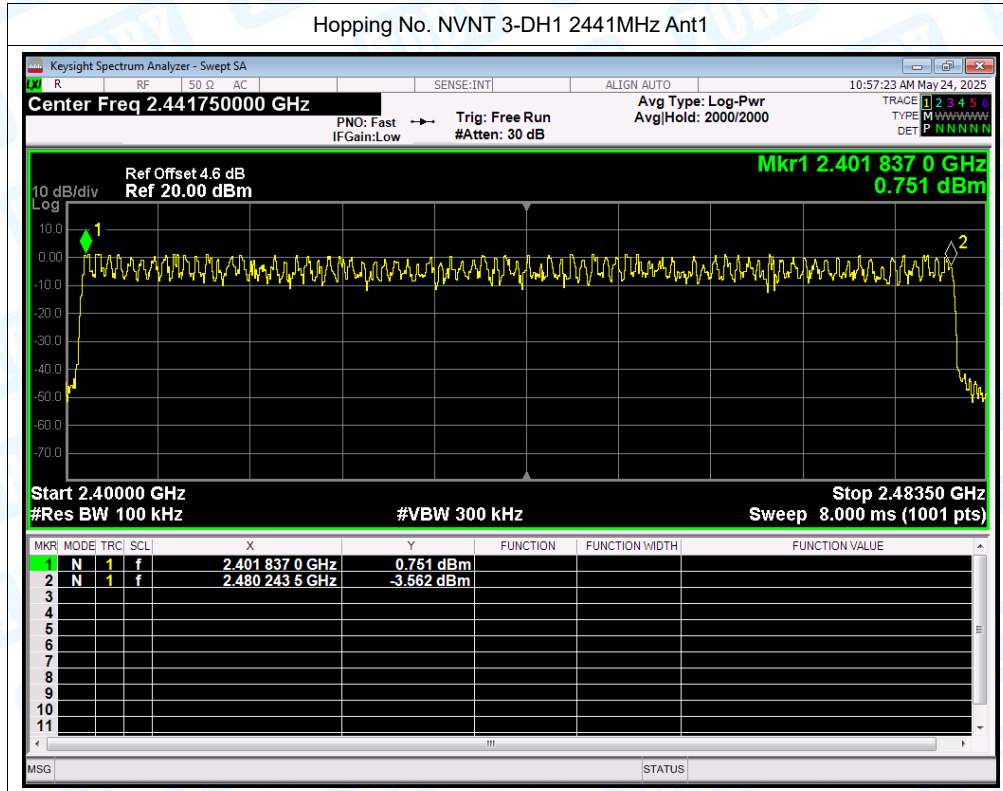
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



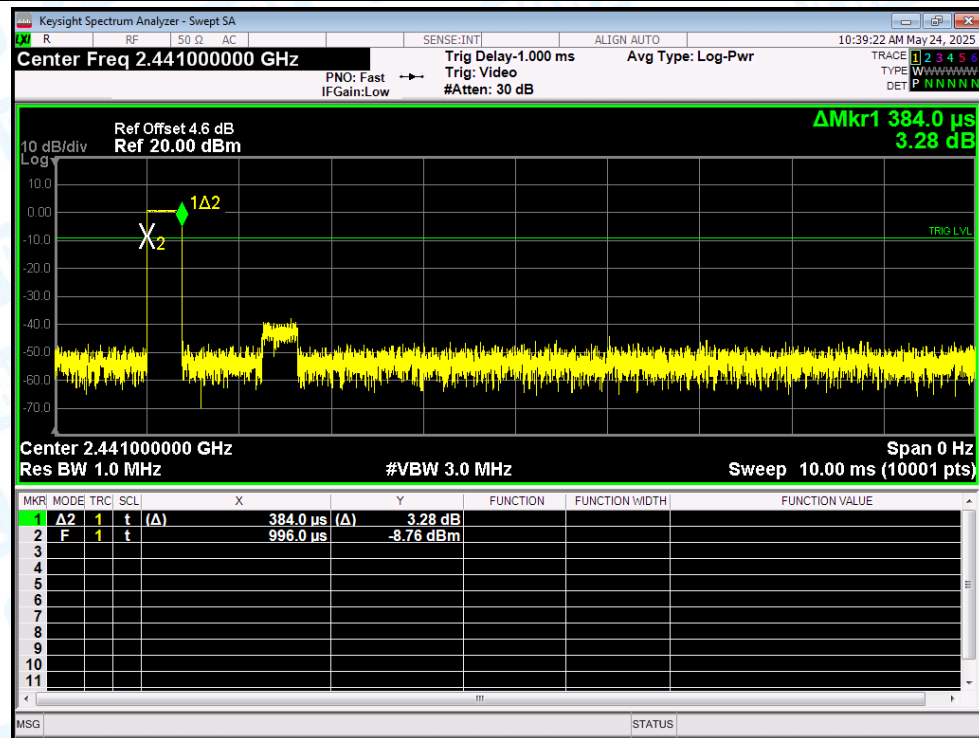


11.Dwell Time

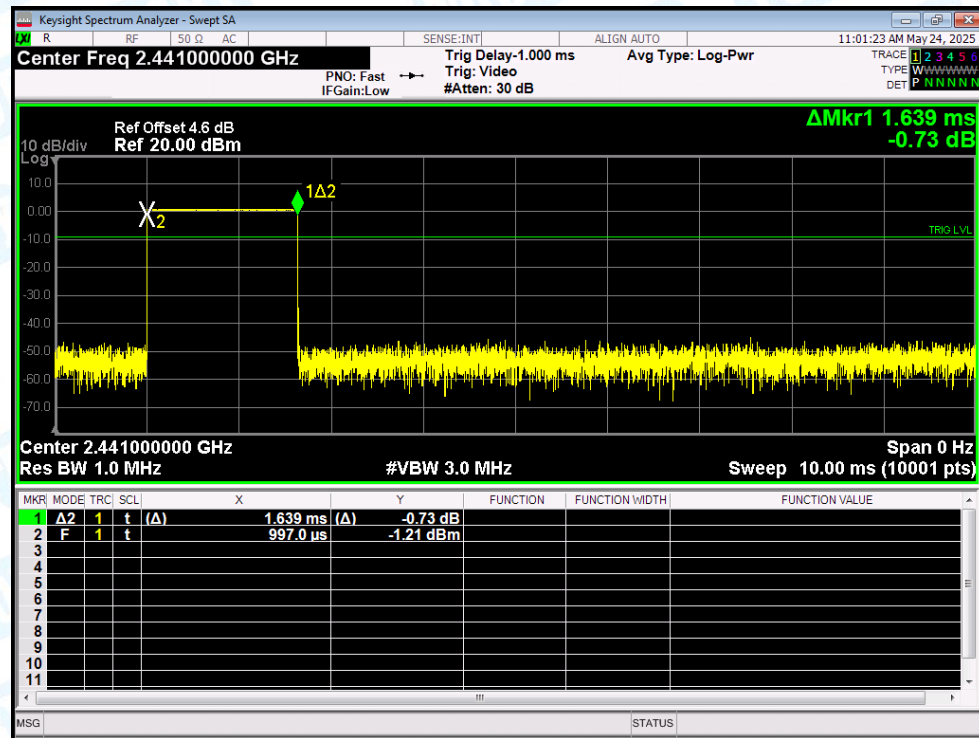
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.384	122.88	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.645	263.2	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	2.895	308.8	31600	400	Pass

Test Graphs

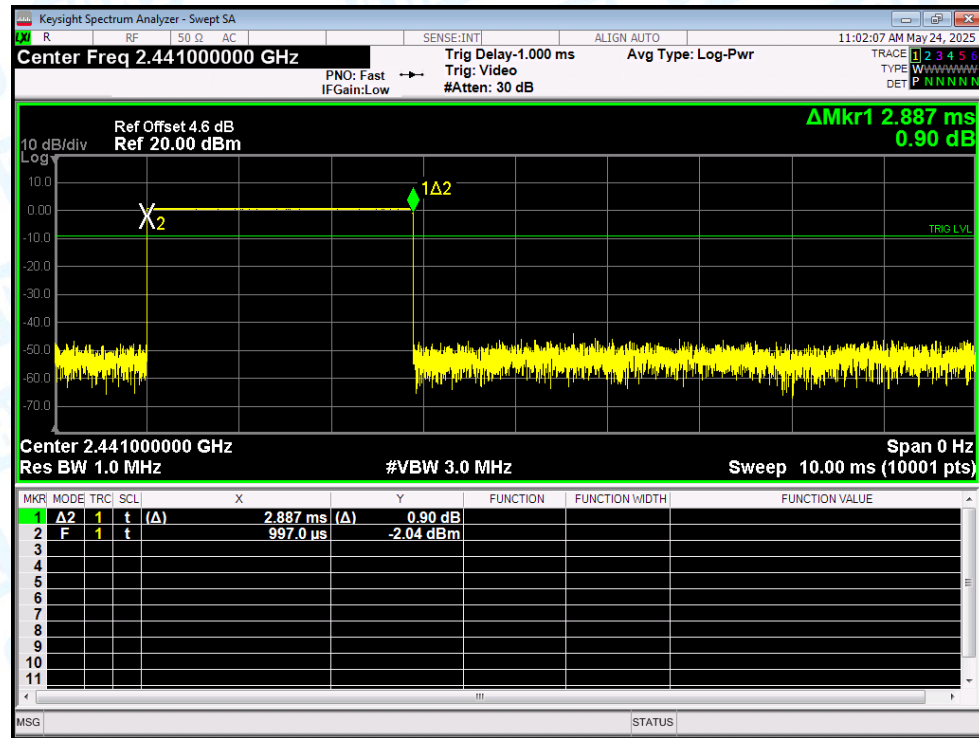
Dwell NVNT 1-DH1 2441MHz Ant1



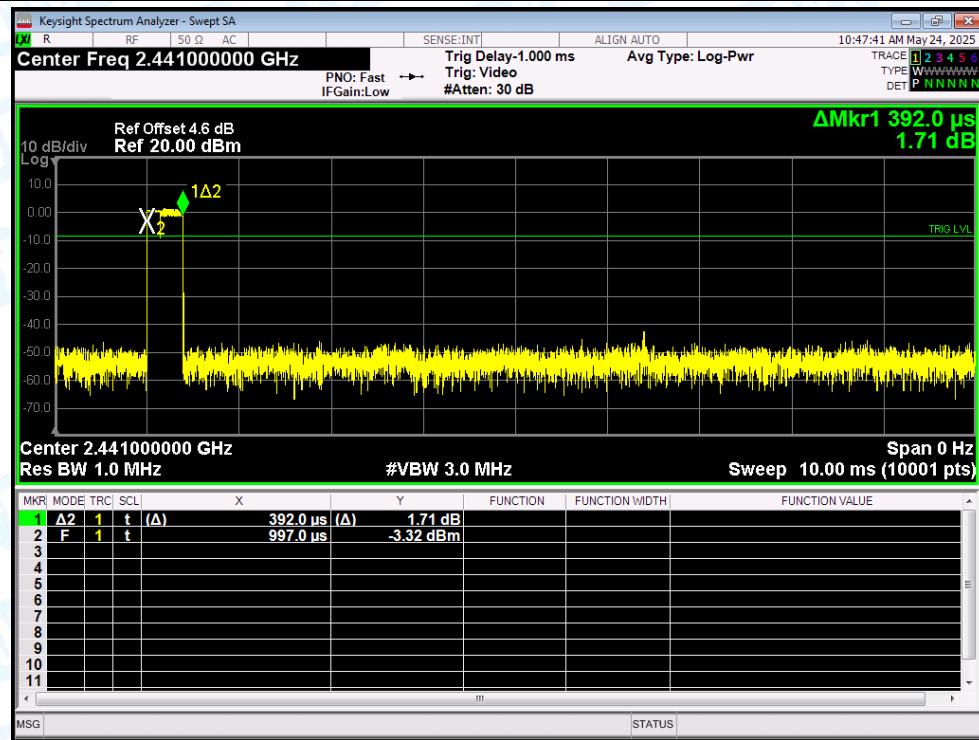
Dwell NVNT 1-DH3 2441MHz Ant1



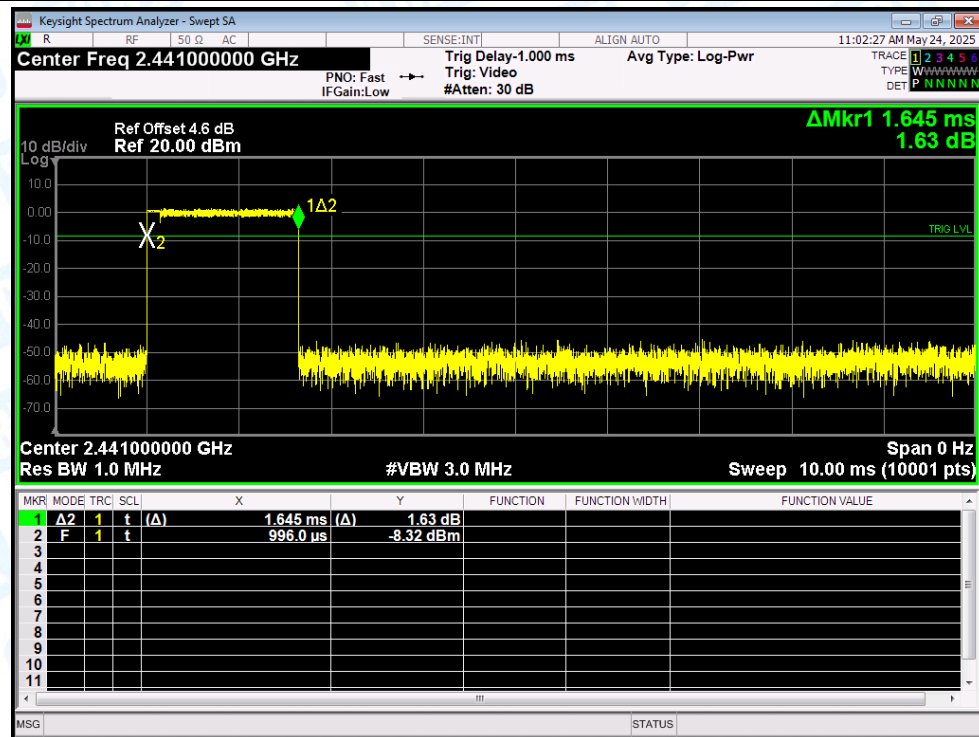
Dwell NVNT 1-DH5 2441MHz Ant1



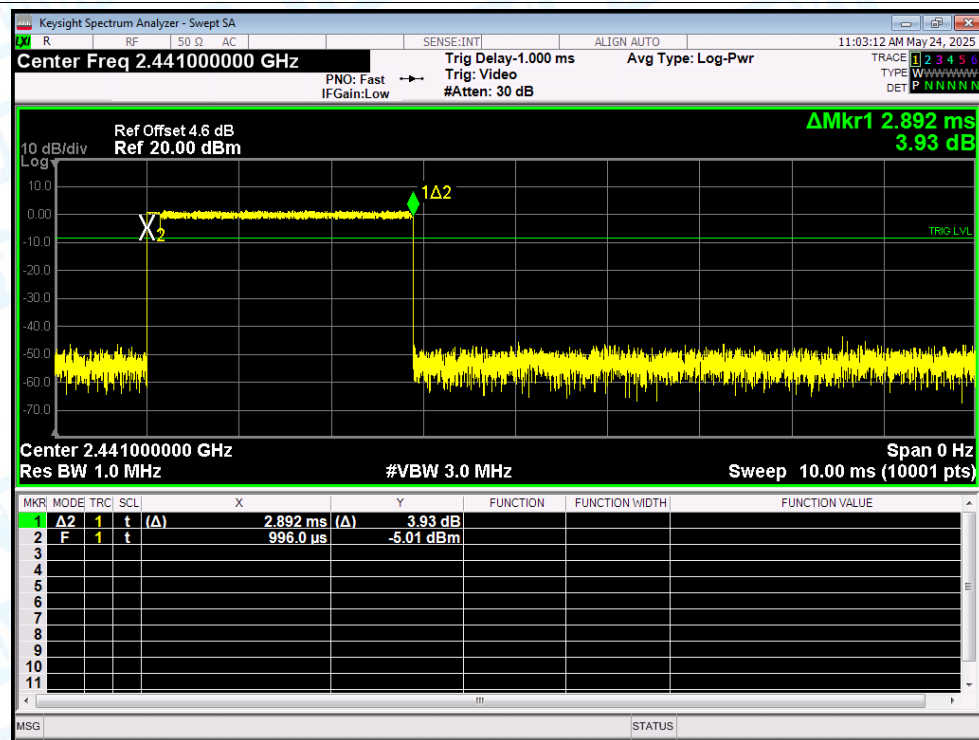
Dwell NVNT 2-DH1 2441MHz Ant1



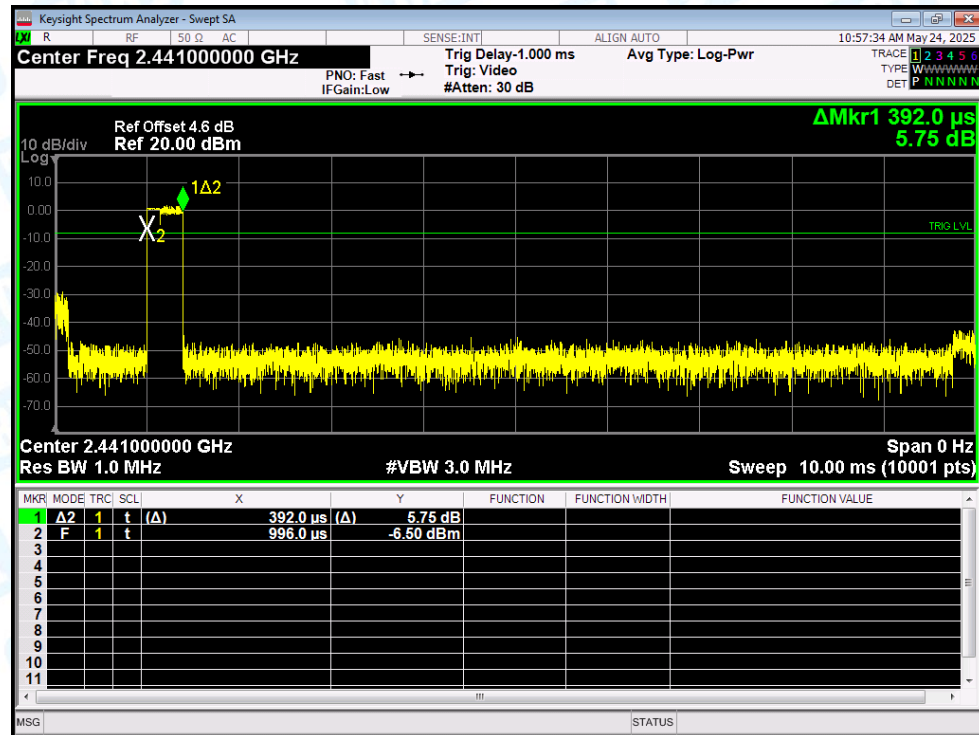
Dwell NVNT 2-DH3 2441MHz Ant1



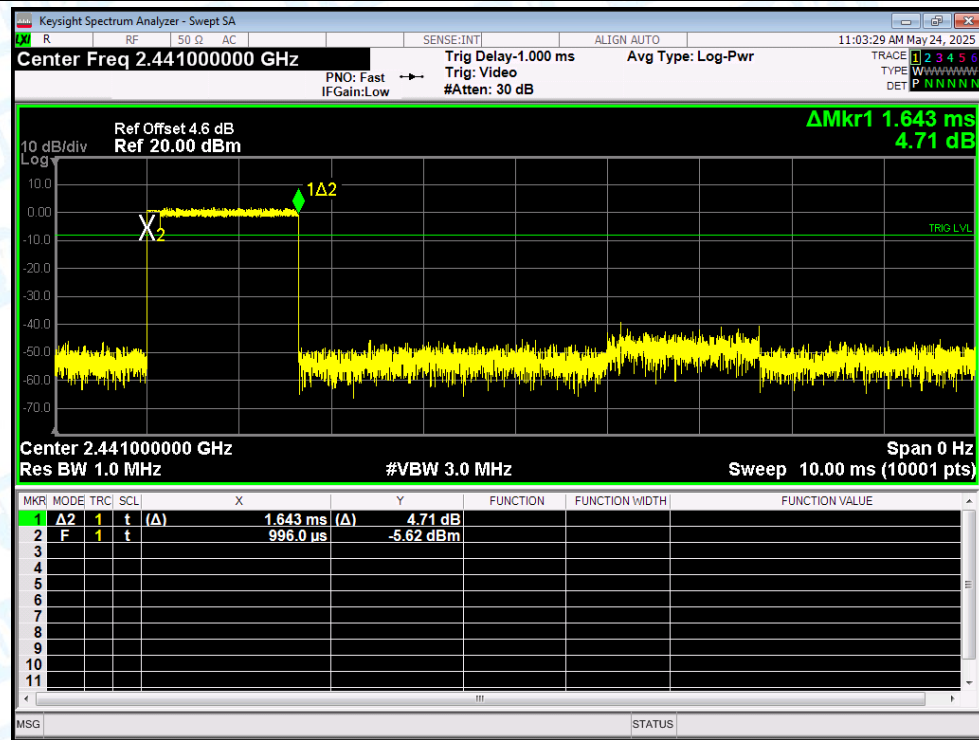
Dwell NVNT 2-DH5 2441MHz Ant1

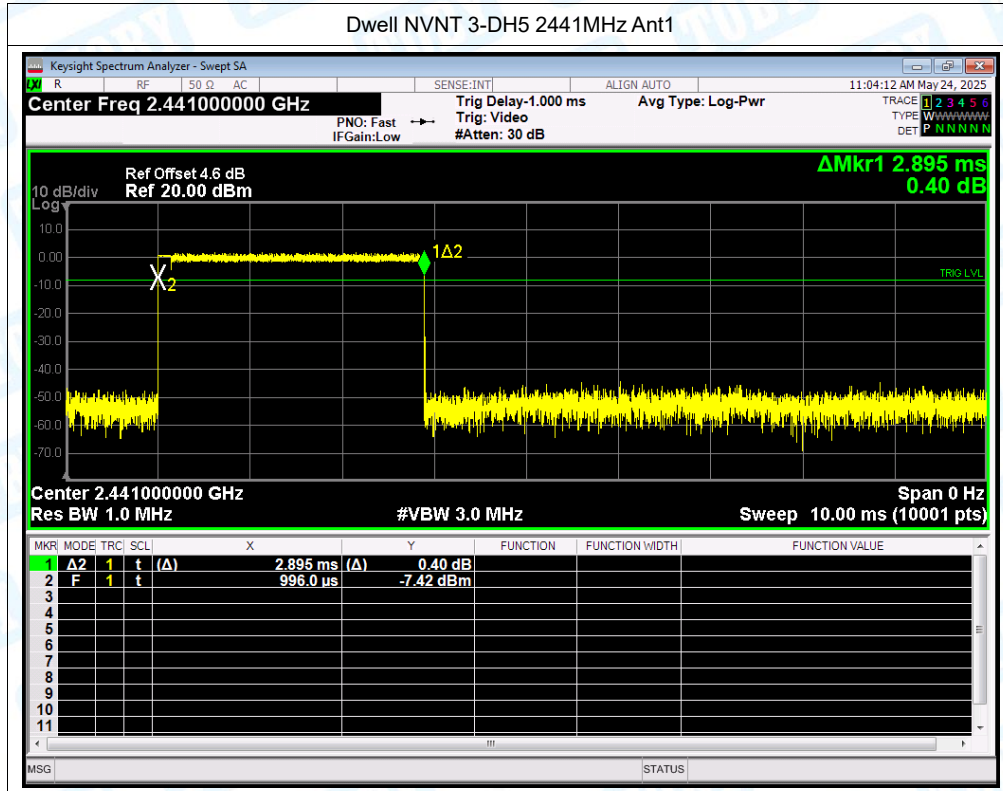


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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