

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Smart Watch
Test Model:	Ix307
Sample ID:	HC-C-202411-0224-01-02#
Environmental Conditions	
Temperature:	24.2℃
Relative Humidity:	45%
Test Voltage:	DC 3.7V
Test Engineer:	ZKN Zhou
Note: For a more detailed features description, please refer to the report TBR-C-202411-0224-91 The report only show the worst case data.	

Contents

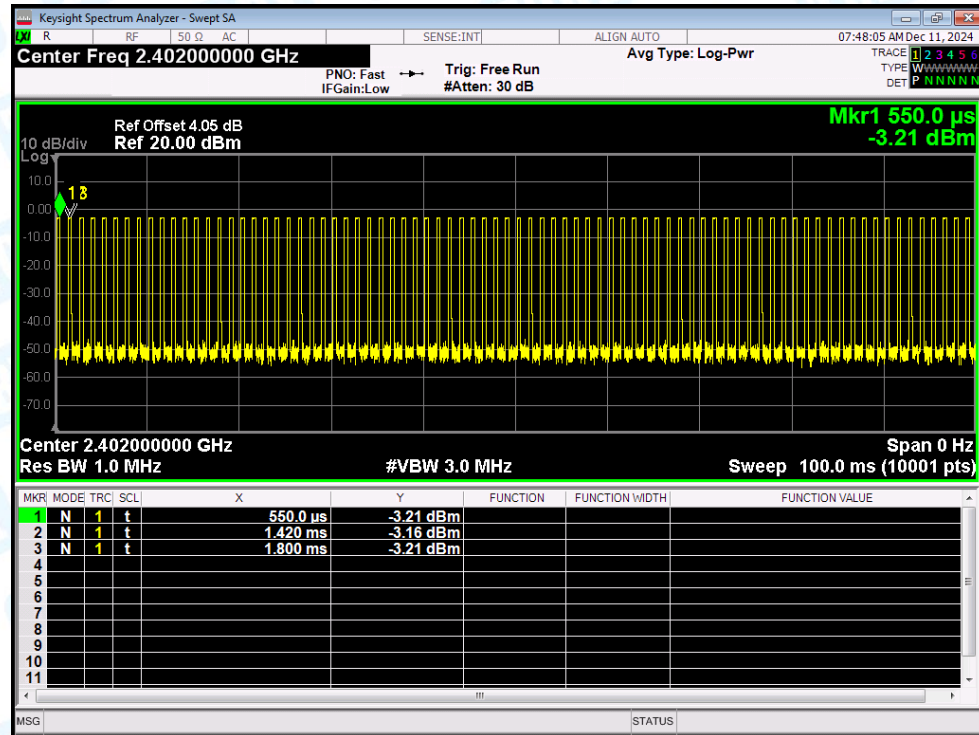
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1.Duty Cycle

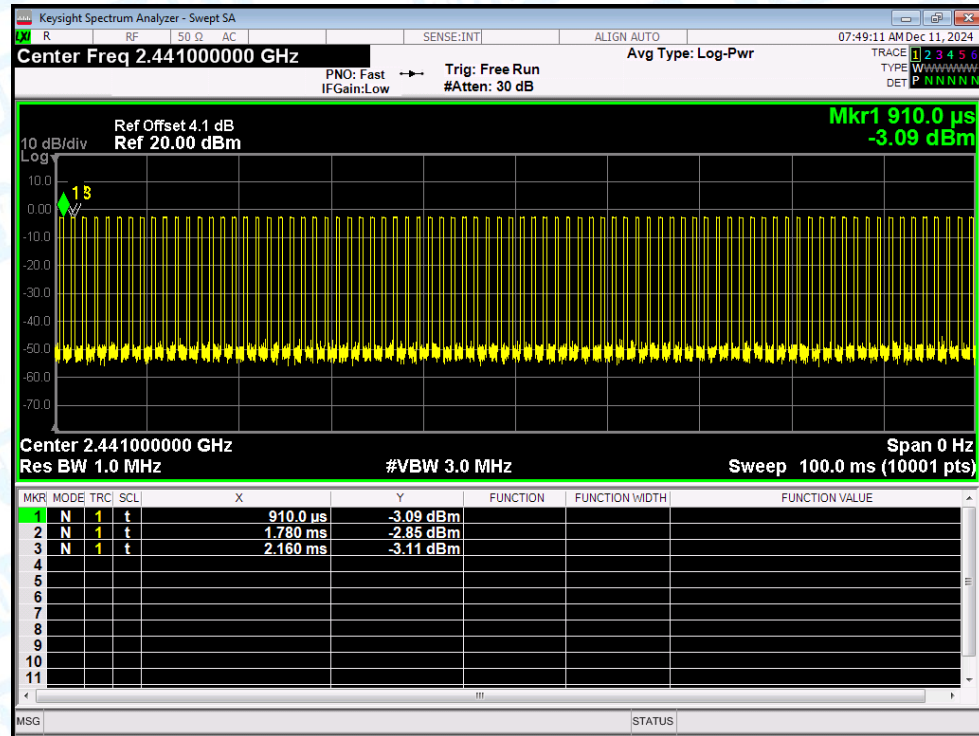
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56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

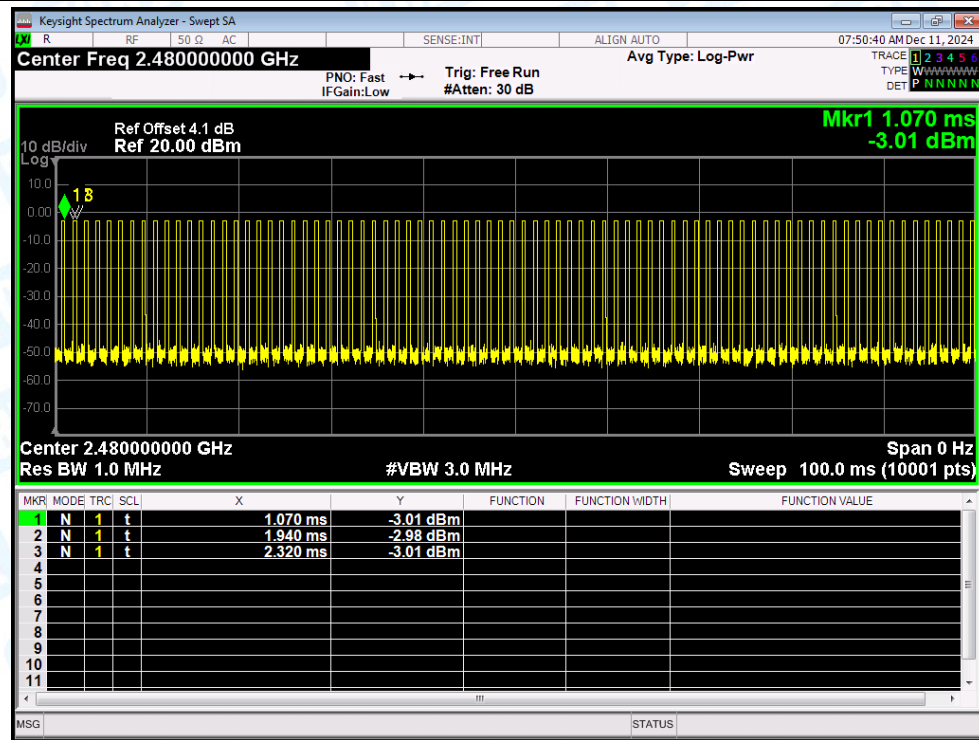
Duty Cycle NVNT 1-DH1 2402MHz Ant1



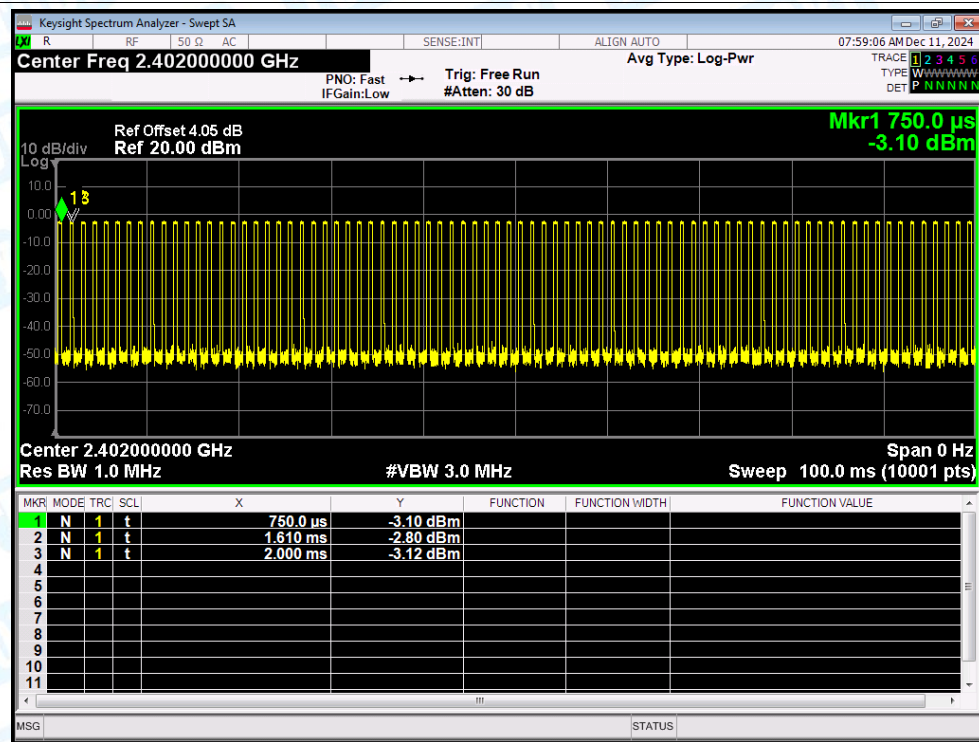
Duty Cycle NVNT 1-DH1 2441MHz Ant1



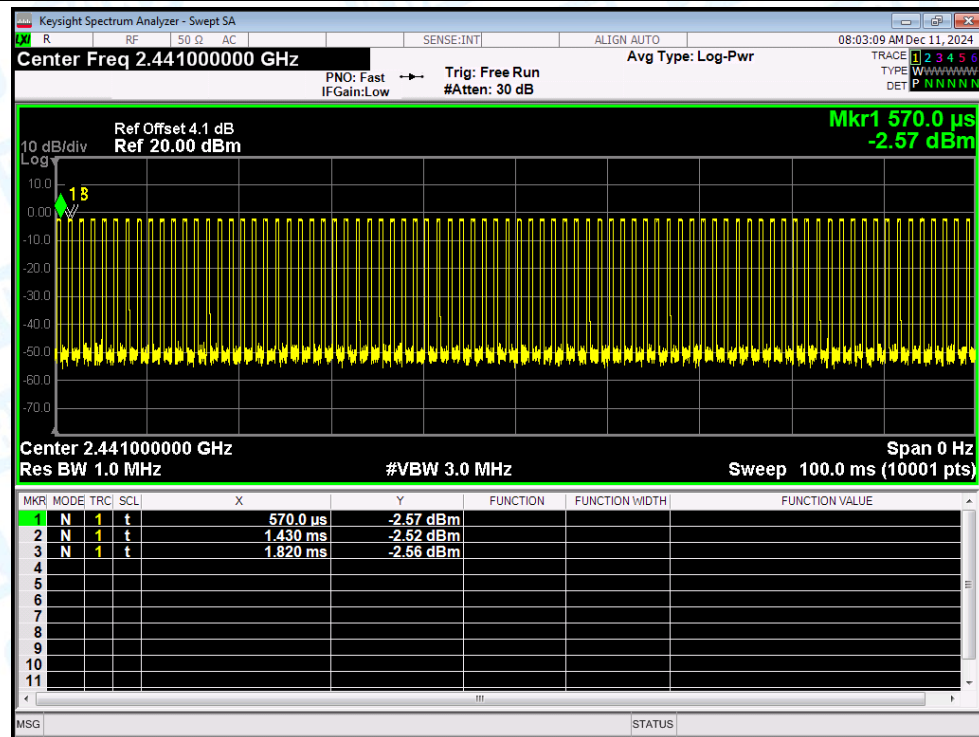
Duty Cycle NVNT 1-DH1 2480MHz Ant1



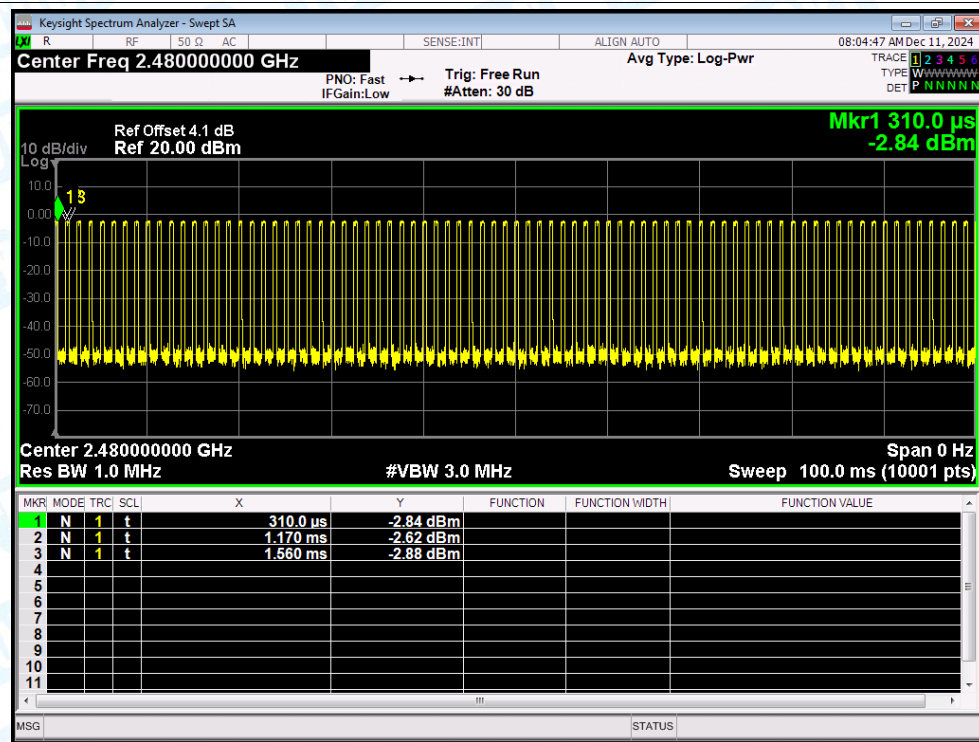
Duty Cycle NVNT 2-DH1 2402MHz Ant1



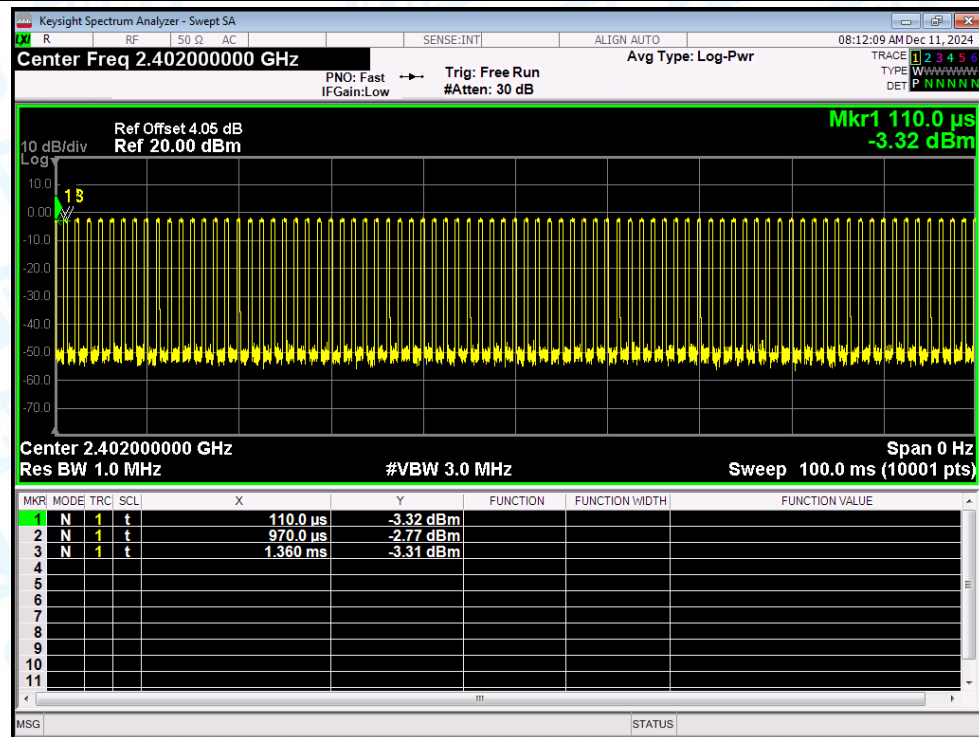
Duty Cycle NVNT 2-DH1 2441MHz Ant1



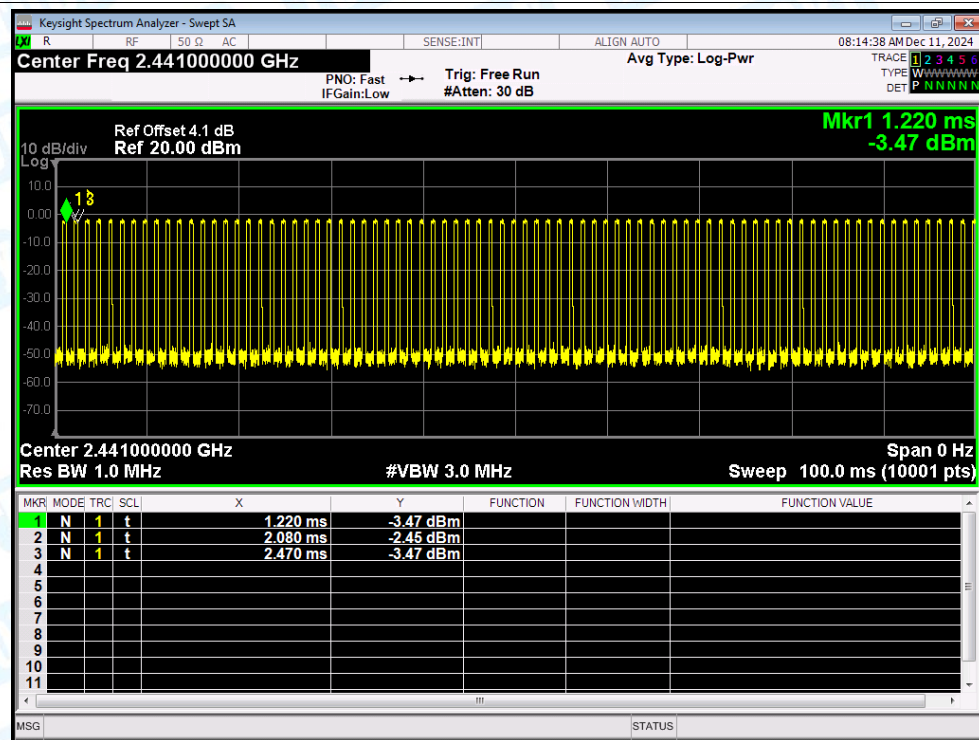
Duty Cycle NVNT 2-DH1 2480MHz Ant1

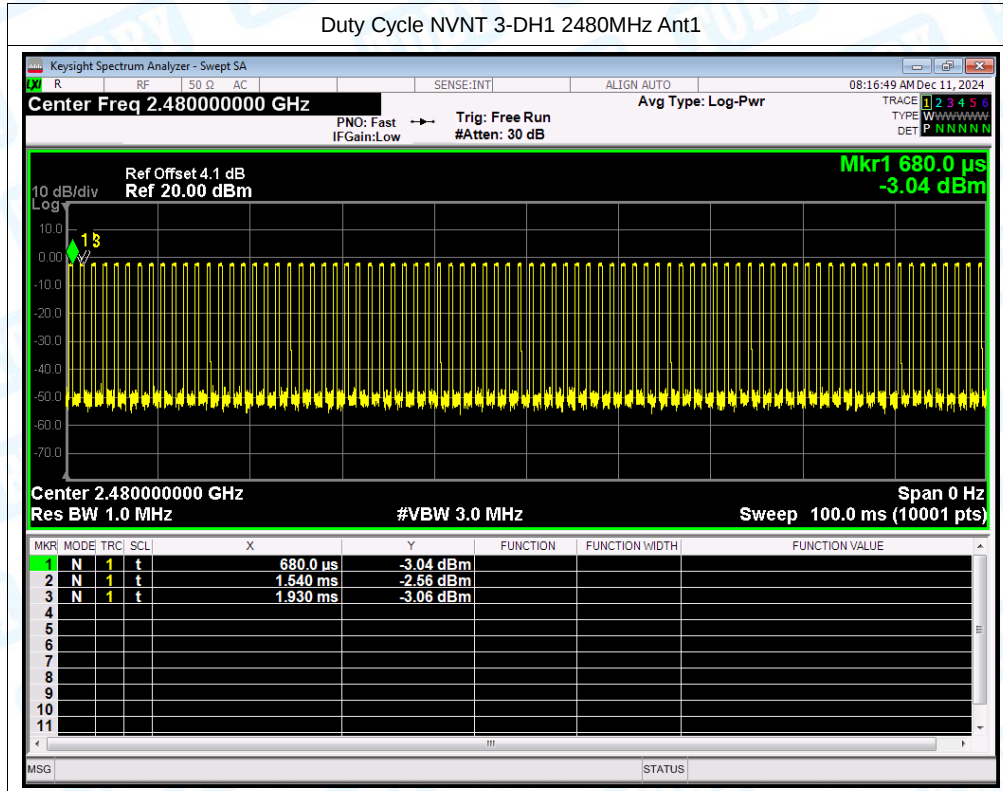


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



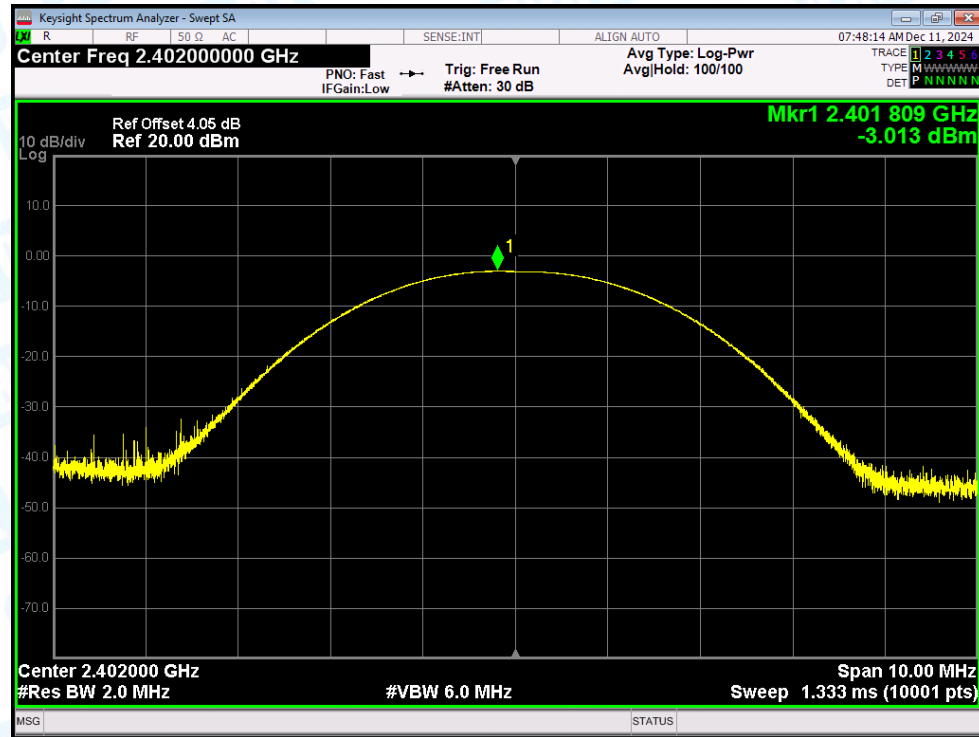


2.Maximum Conducted Output Power

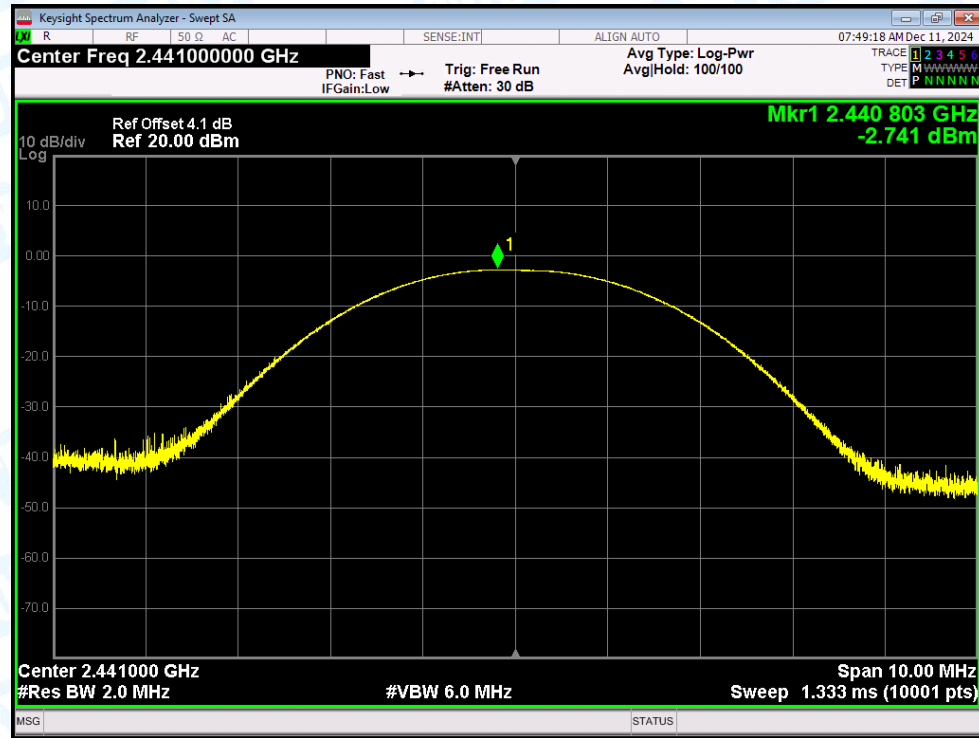
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-3.013	21	Pass
NVNT	1-DH1	2441	Ant1	-2.741	21	Pass
NVNT	1-DH1	2480	Ant1	-2.825	21	Pass
NVNT	2-DH1	2402	Ant1	-2.018	21	Pass
NVNT	2-DH1	2441	Ant1	-1.866	21	Pass
NVNT	2-DH1	2480	Ant1	-1.991	21	Pass
NVNT	3-DH1	2402	Ant1	-1.859	21	Pass
NVNT	3-DH1	2441	Ant1	-1.446	21	Pass
NVNT	3-DH1	2480	Ant1	-1.567	21	Pass

Test Graphs

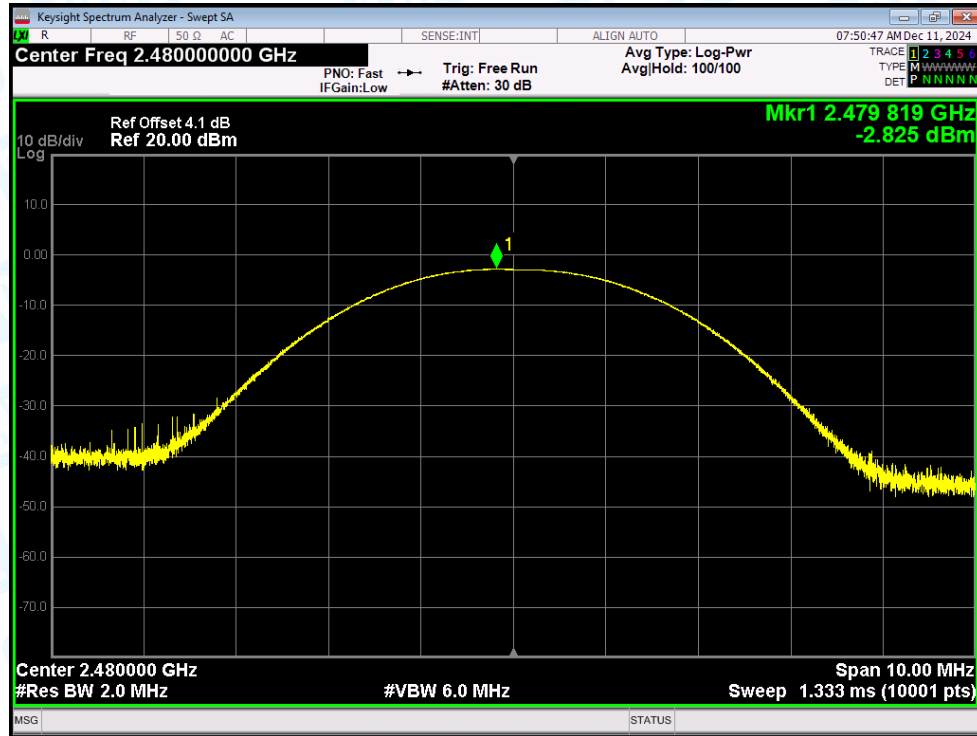
Power NVNT 1-DH1 2402MHz Ant1



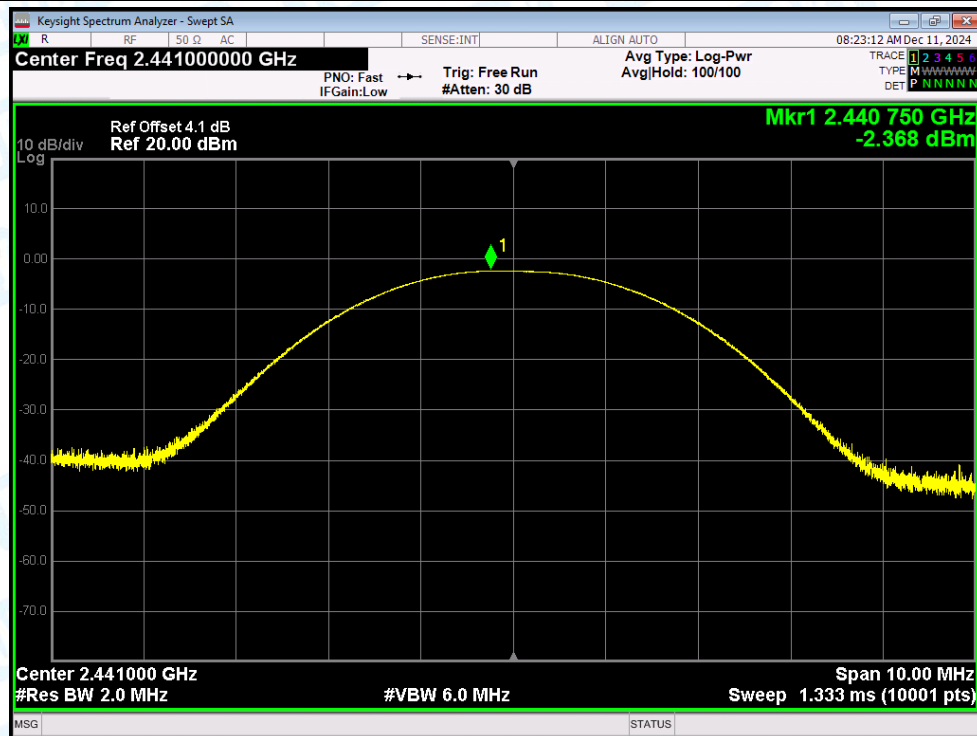
Power NVNT 1-DH1 2441MHz Ant1



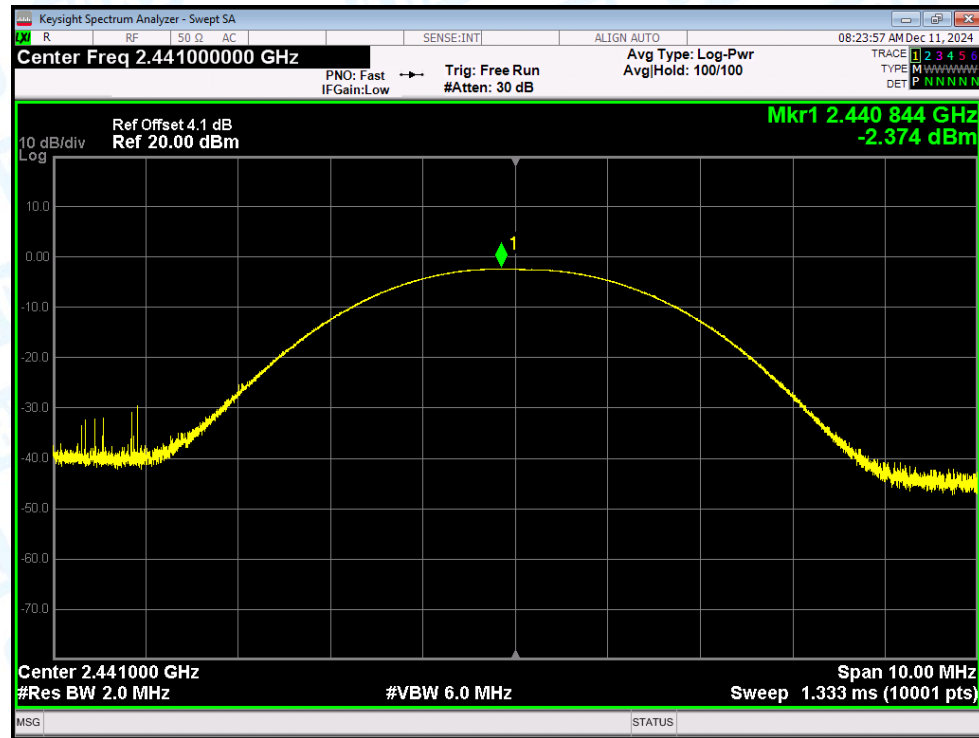
Power NVNT 1-DH1 2480MHz Ant1



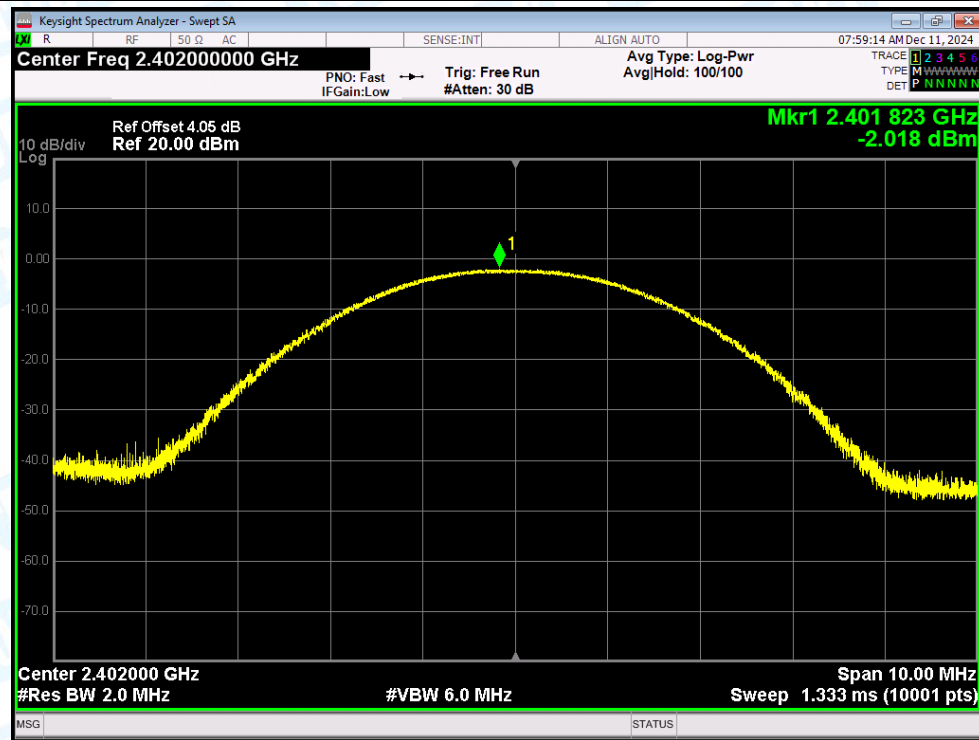
Power NVNT 1-DH3 2441MHz Ant1



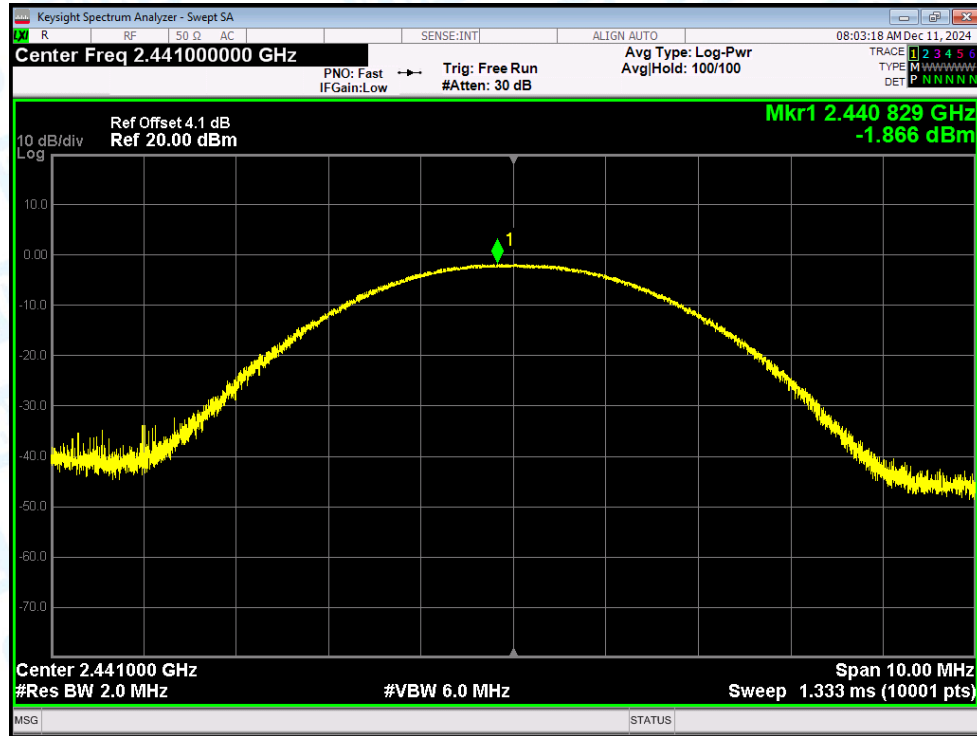
Power NVNT 1-DH5 2441MHz Ant1



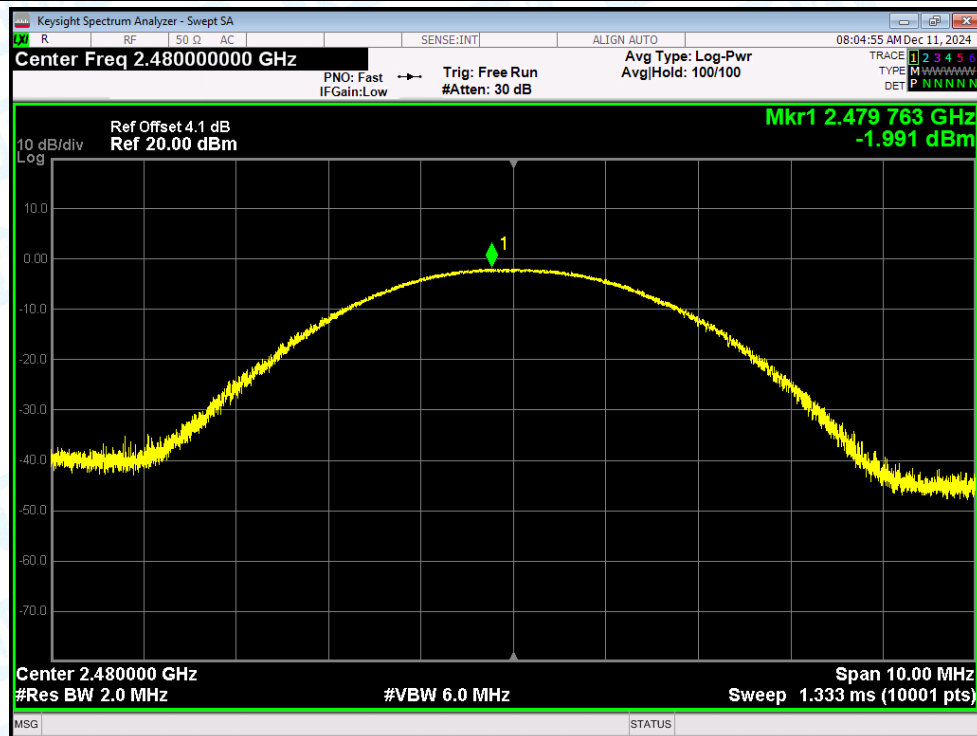
Power NVNT 2-DH1 2402MHz Ant1



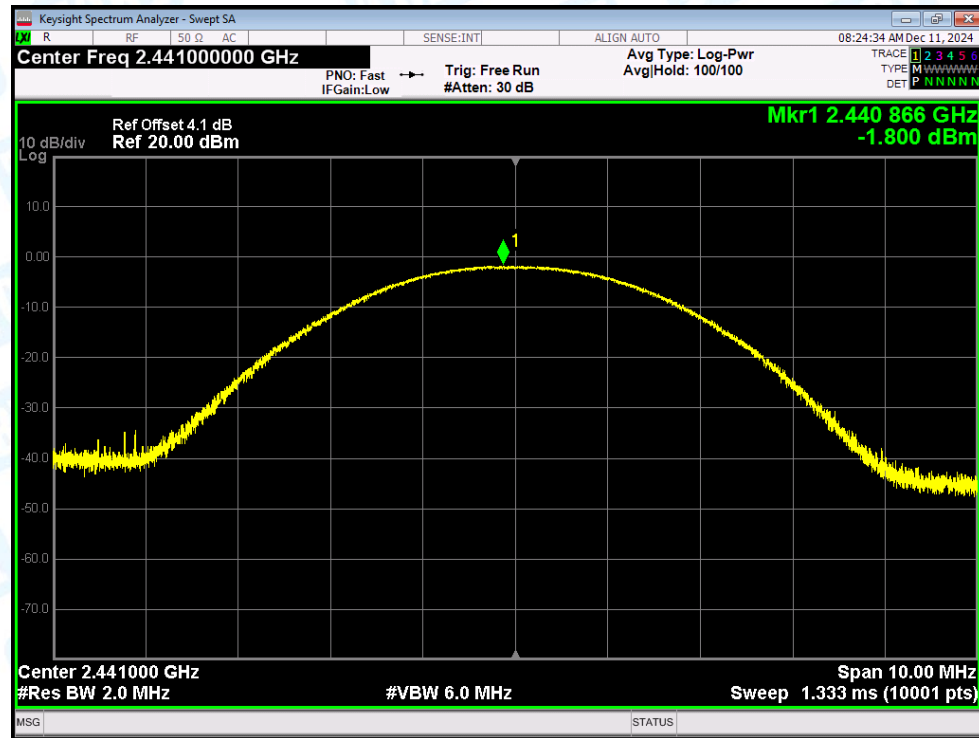
Power NVNT 2-DH1 2441MHz Ant1



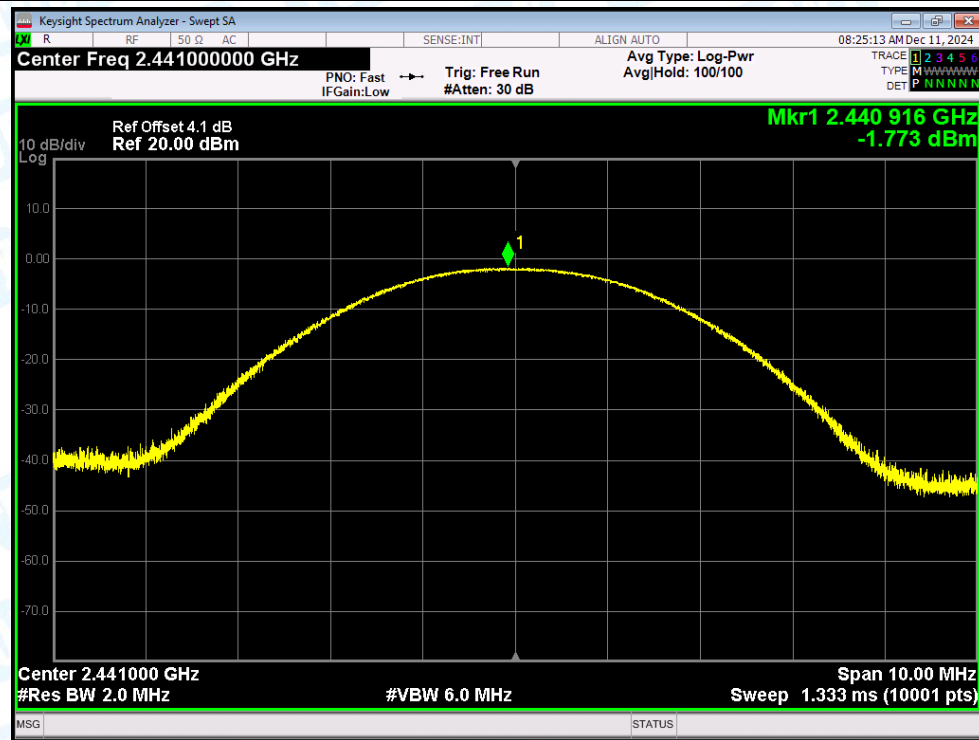
Power NVNT 2-DH1 2480MHz Ant1



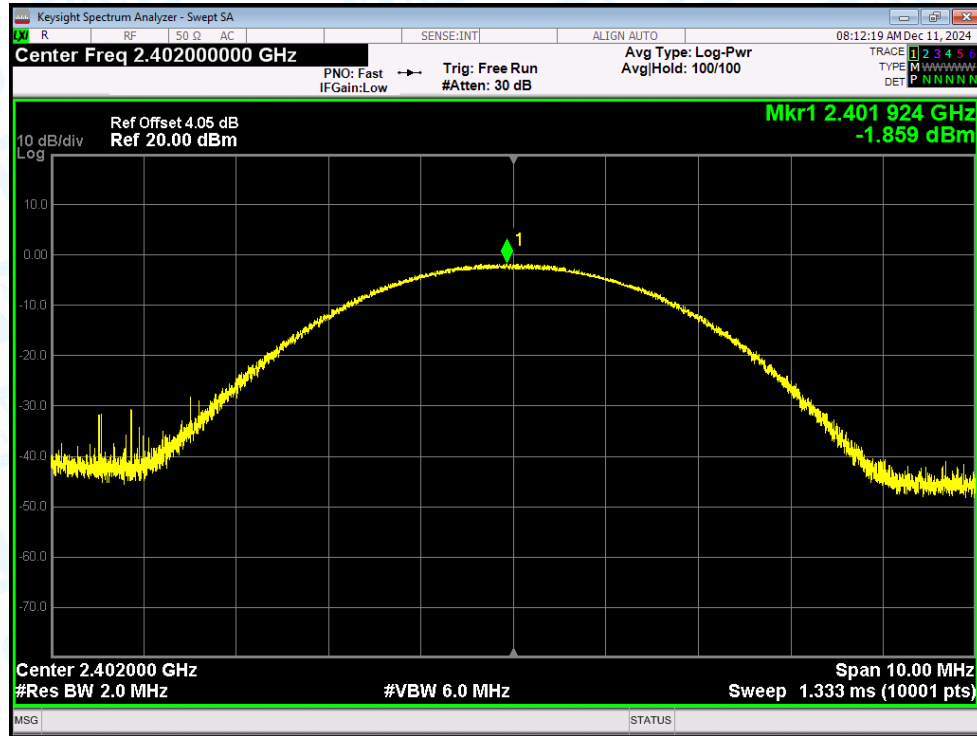
Power NVNT 2-DH3 2441MHz Ant1



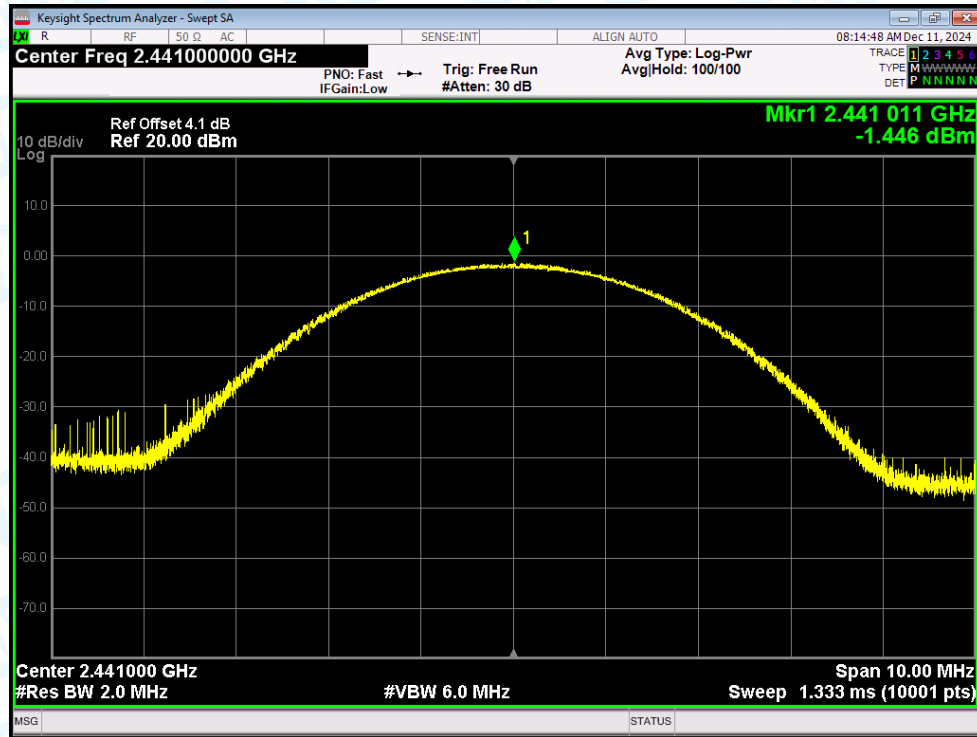
Power NVNT 2-DH5 2441MHz Ant1



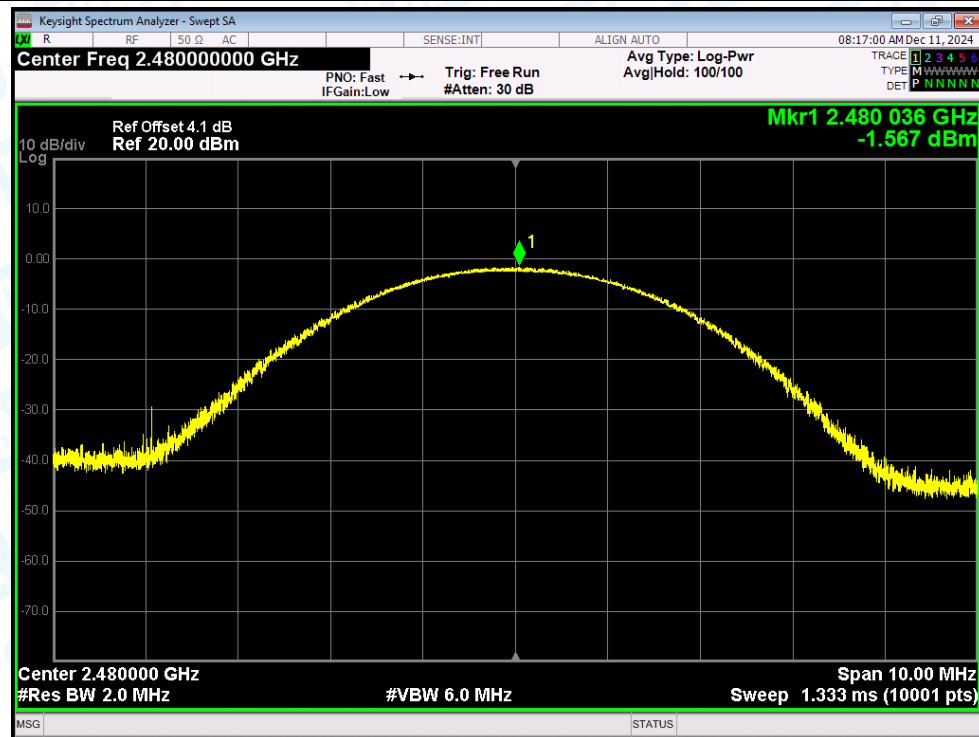
Power NVNT 3-DH1 2402MHz Ant1



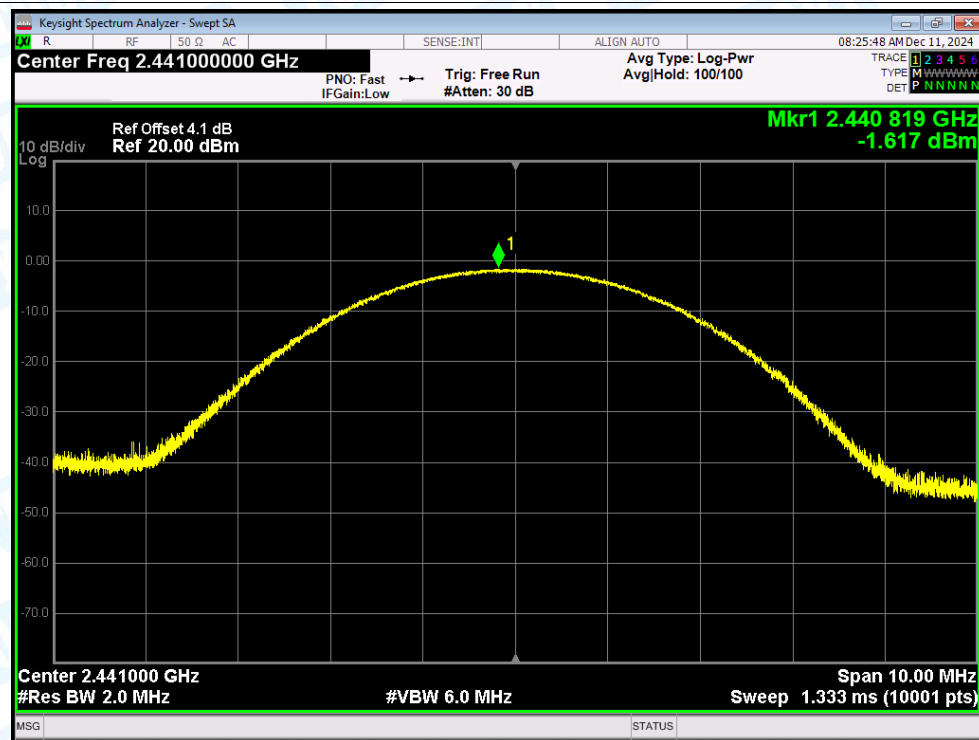
Power NVNT 3-DH1 2441MHz Ant1

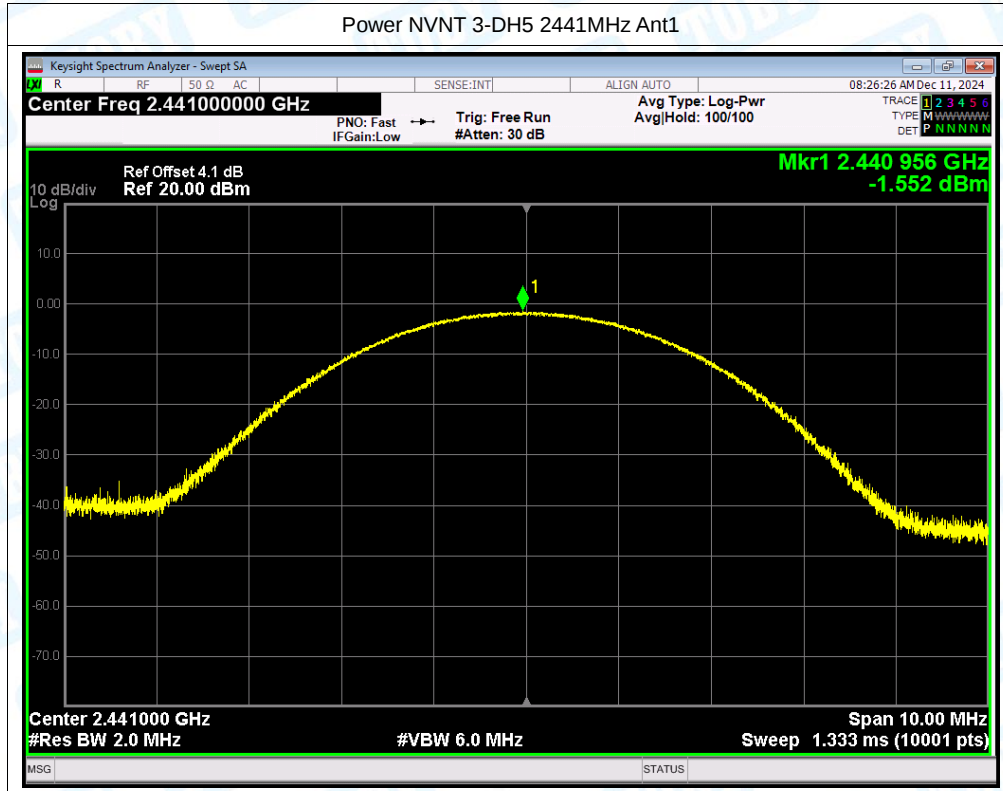


Power NVNT 3-DH1 2480MHz Ant1



Power NVNT 3-DH3 2441MHz Ant1



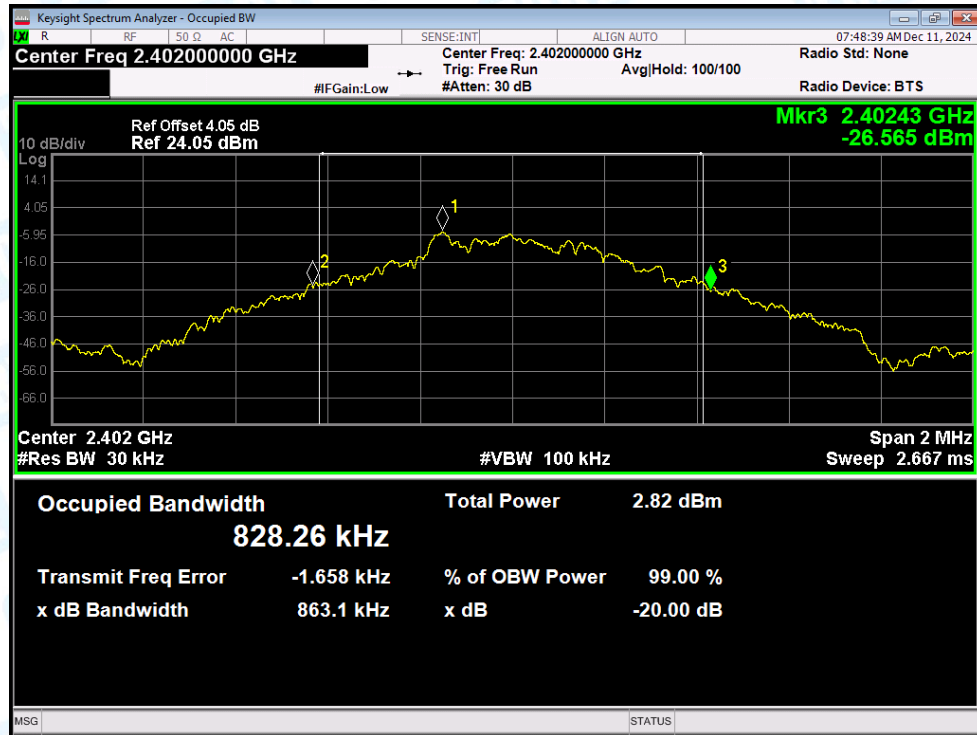


3.-20dB Bandwidth

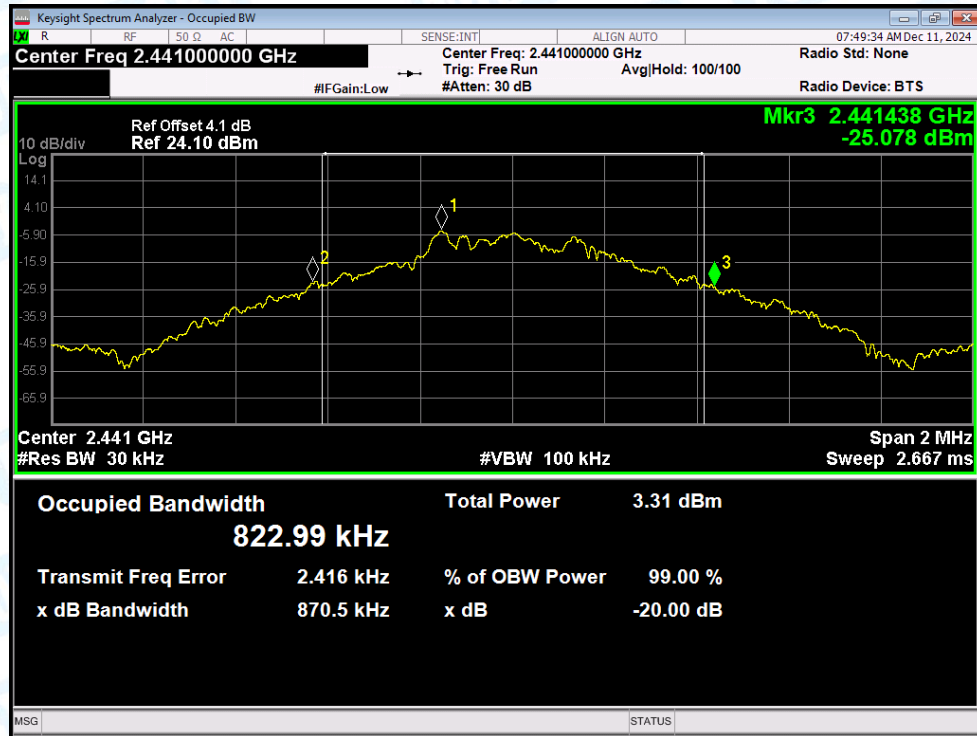
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.86	0	Pass
NVNT	1-DH1	2441	Ant1	0.87	0	Pass
NVNT	1-DH1	2480	Ant1	0.87	0	Pass
NVNT	2-DH1	2402	Ant1	1.27	0	Pass
NVNT	2-DH1	2441	Ant1	1.24	0	Pass
NVNT	2-DH1	2480	Ant1	1.21	0	Pass
NVNT	3-DH1	2402	Ant1	1.21	0	Pass
NVNT	3-DH1	2441	Ant1	1.23	0	Pass
NVNT	3-DH1	2480	Ant1	1.22	0	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



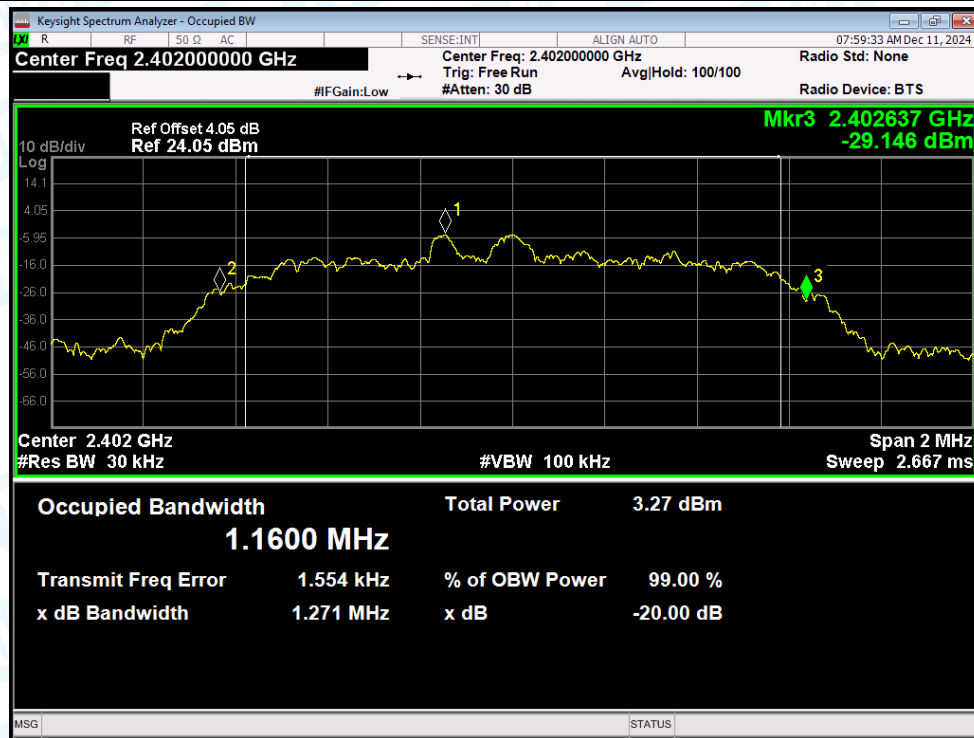
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



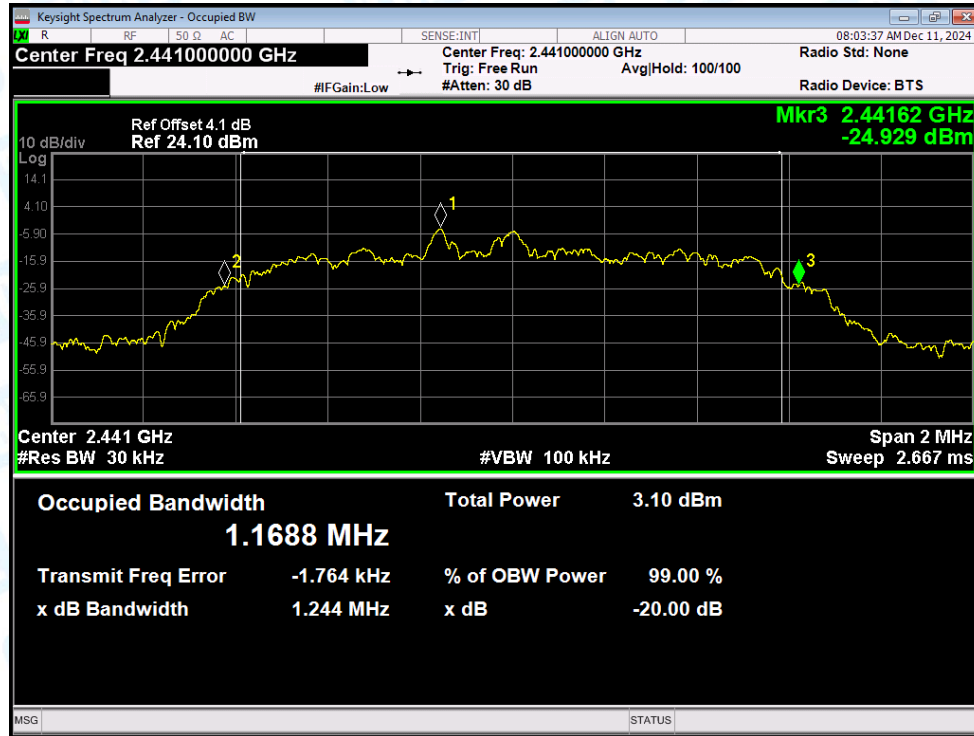
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



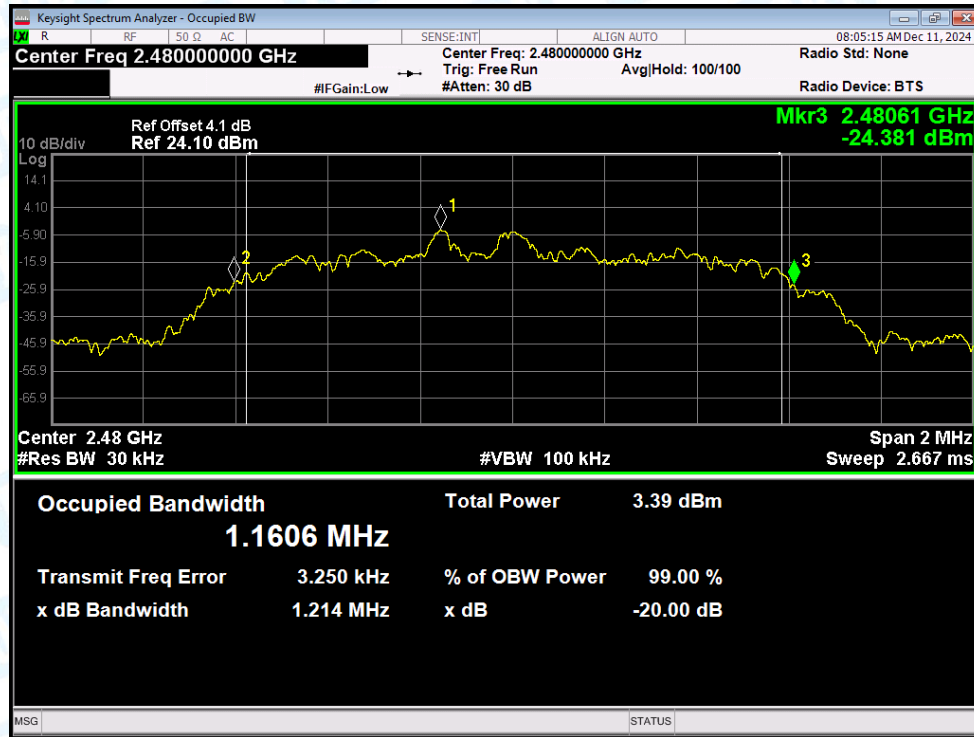
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



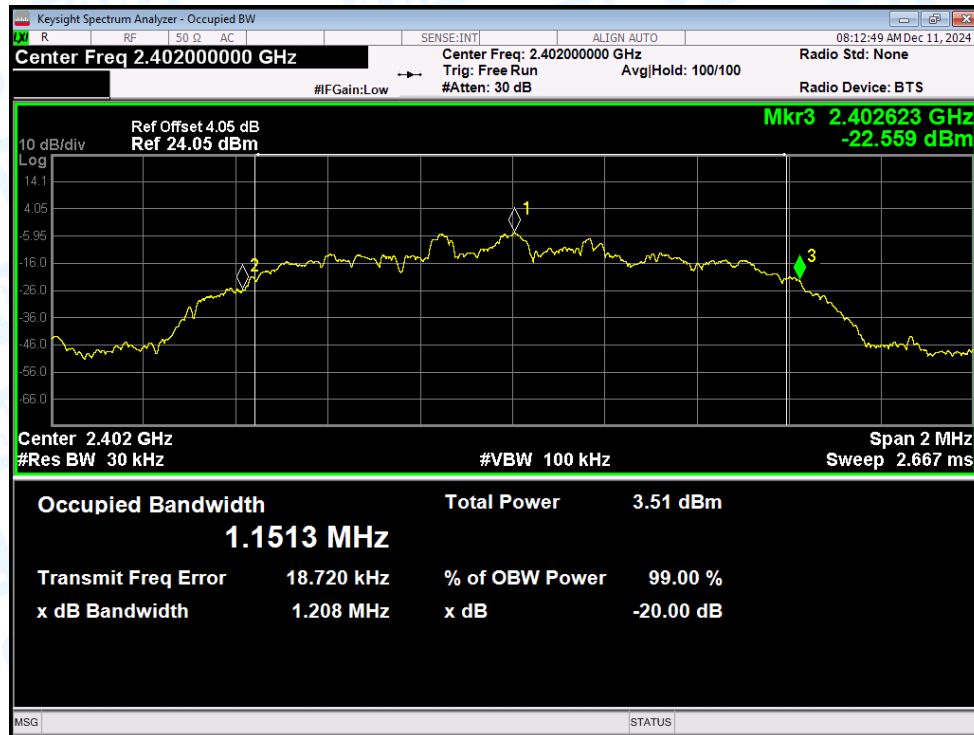
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



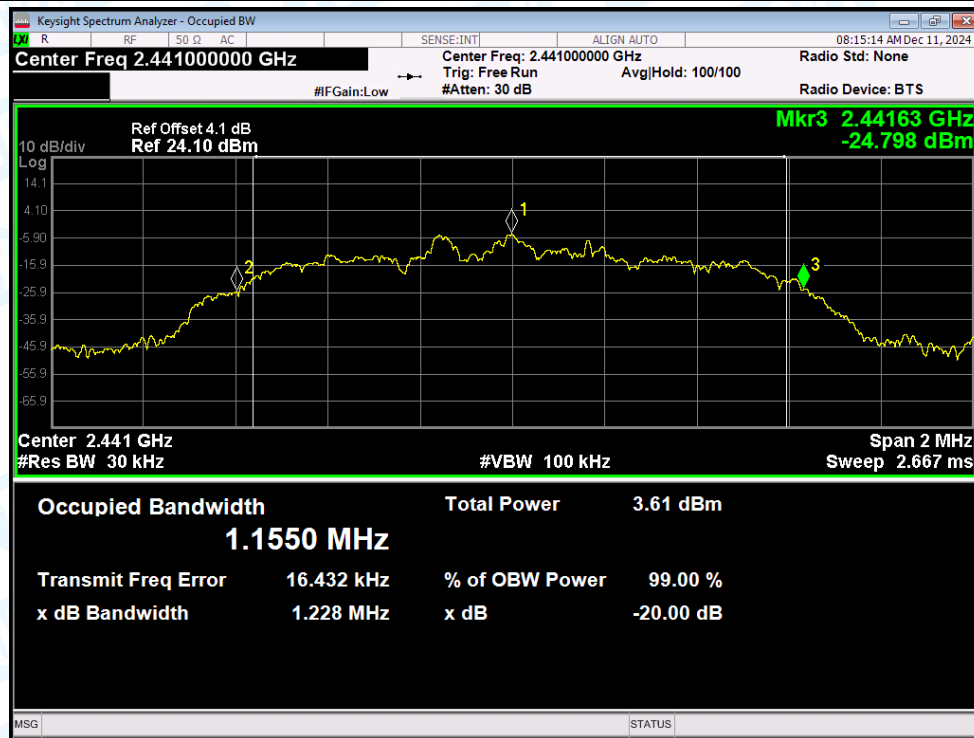
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

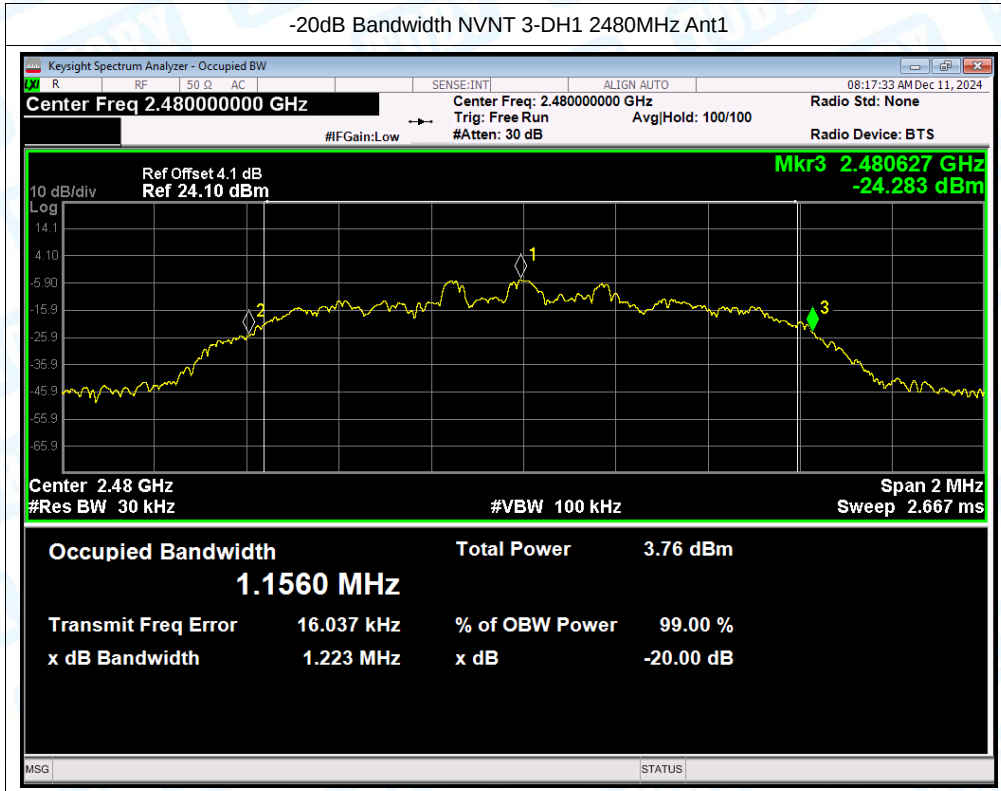


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



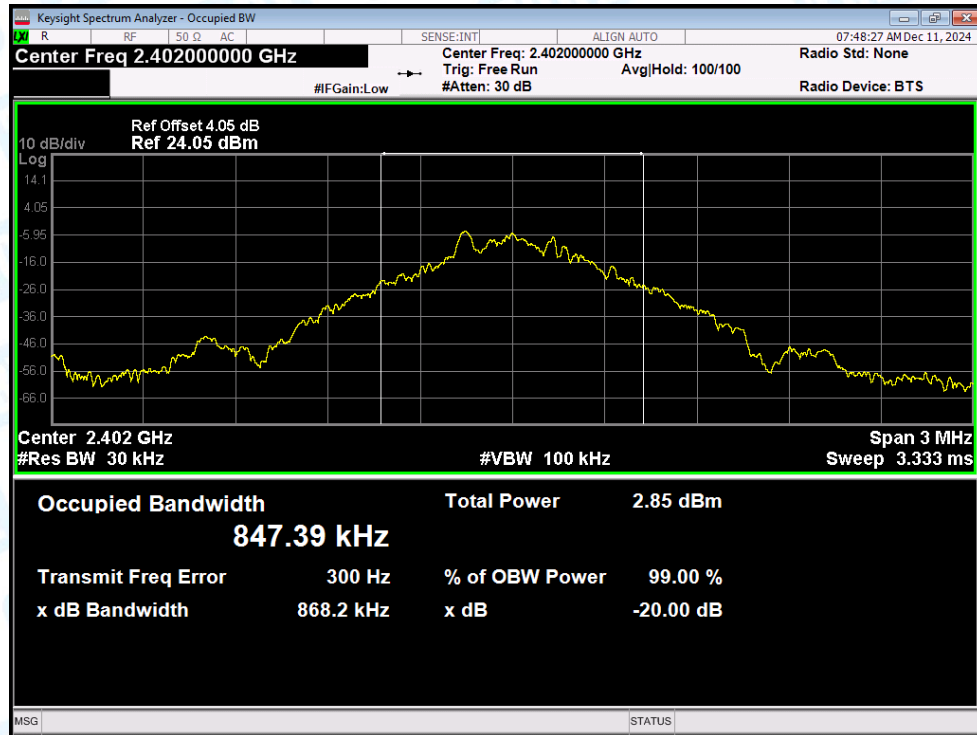


4.Occupied Channel Bandwidth

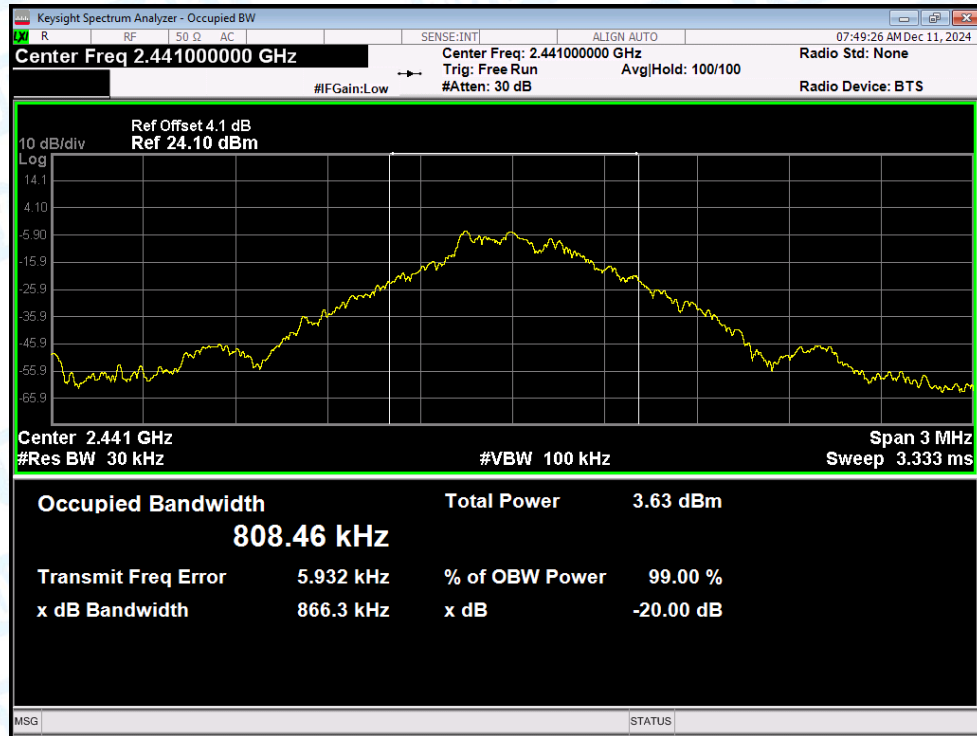
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.847
NVNT	1-DH1	2441	Ant1	0.808
NVNT	1-DH1	2480	Ant1	0.829
NVNT	2-DH1	2402	Ant1	1.149
NVNT	2-DH1	2441	Ant1	1.175
NVNT	2-DH1	2480	Ant1	1.172
NVNT	3-DH1	2402	Ant1	1.147
NVNT	3-DH1	2441	Ant1	1.157
NVNT	3-DH1	2480	Ant1	1.149

Test Graphs

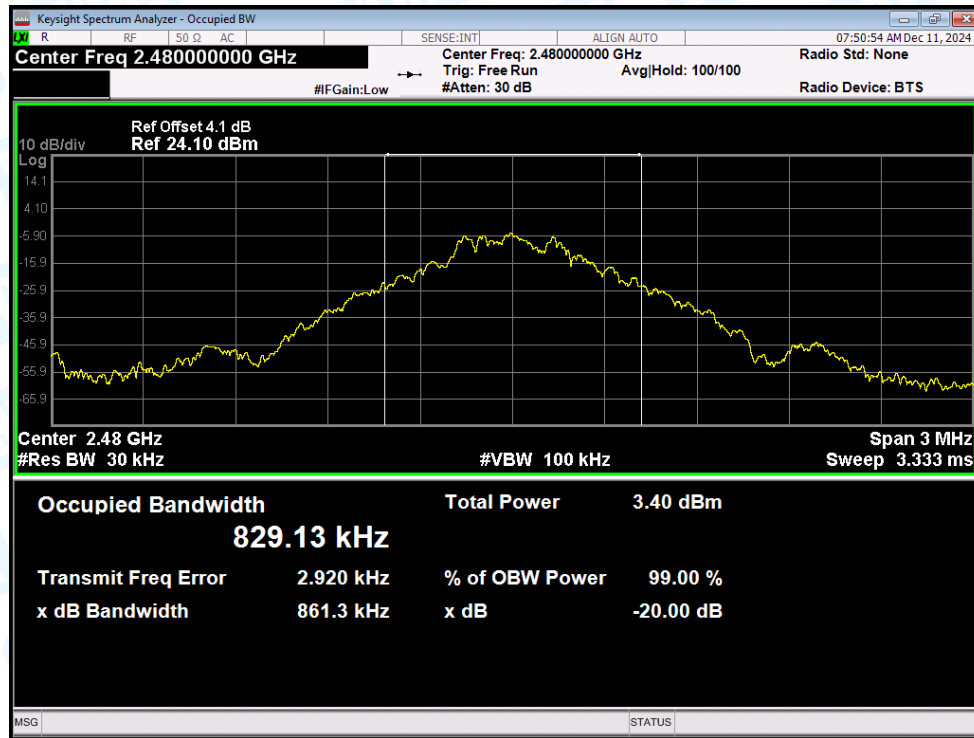
OBW NVNT 1-DH1 2402MHz Ant1



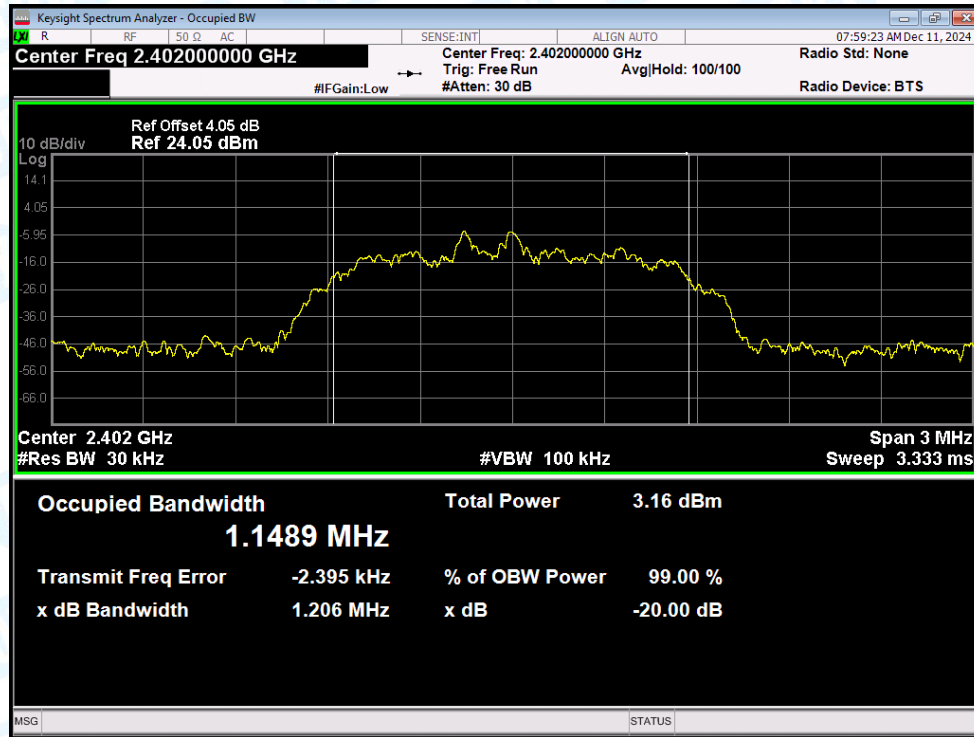
OBW NVNT 1-DH1 2441MHz Ant1



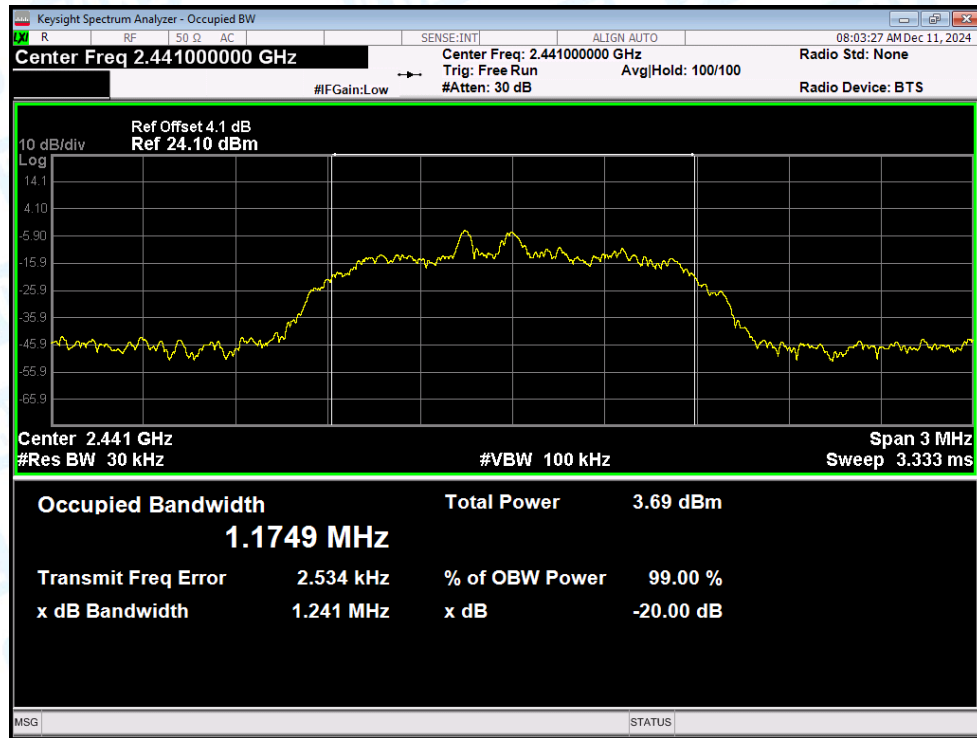
OBW NVNT 1-DH1 2480MHz Ant1



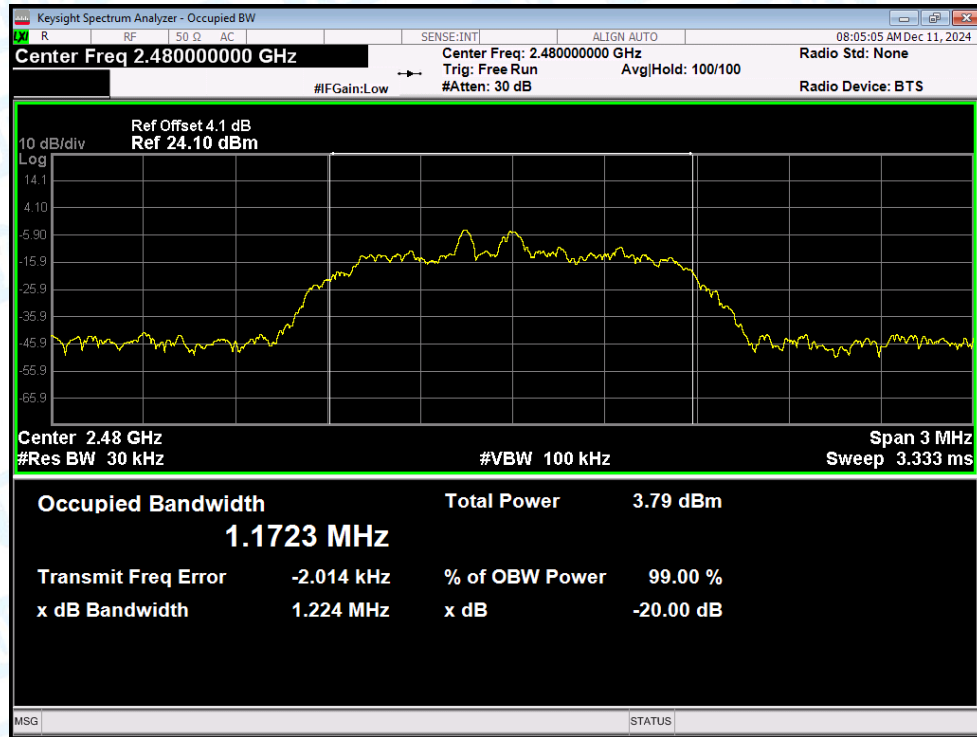
OBW NVNT 2-DH1 2402MHz Ant1



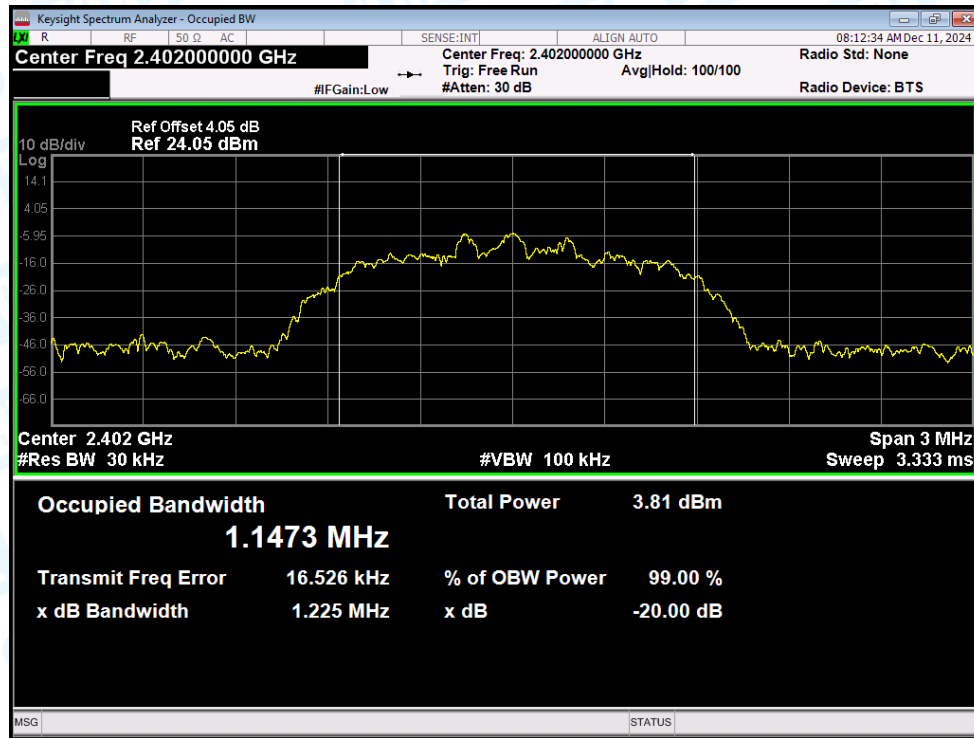
OBW NVNT 2-DH1 2441MHz Ant1



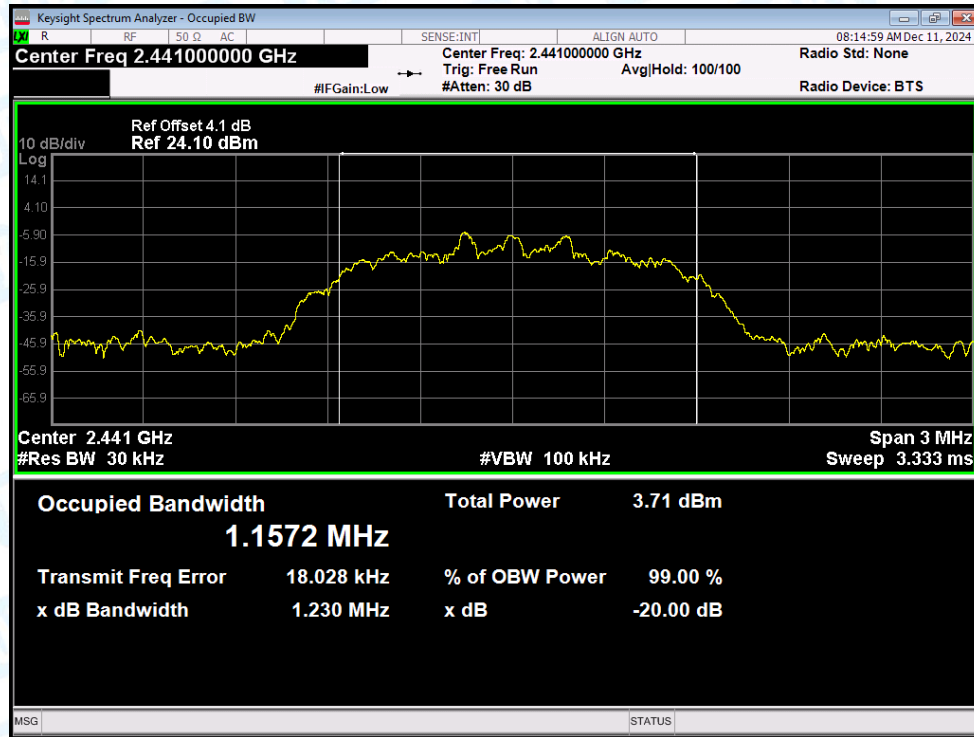
OBW NVNT 2-DH1 2480MHz Ant1

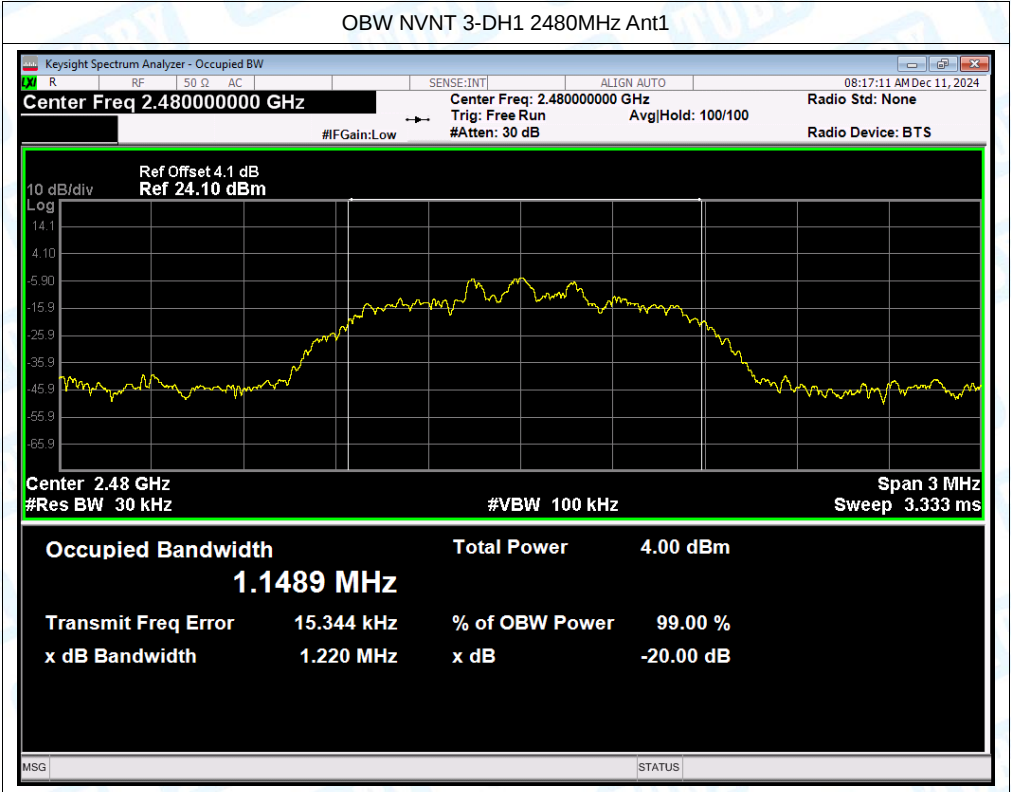


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



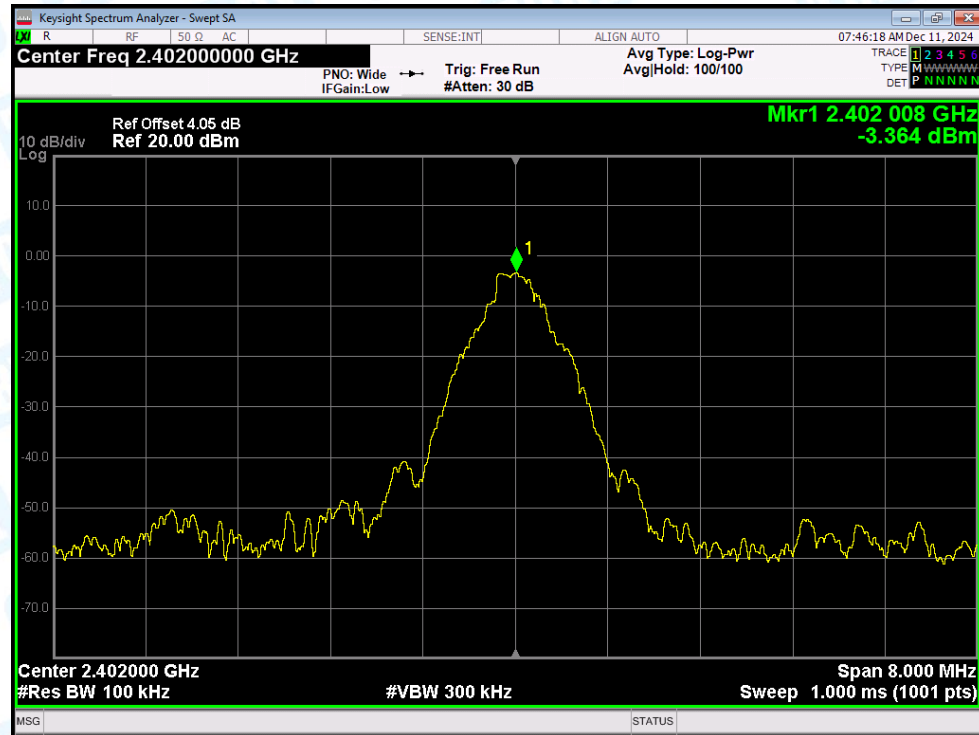


5.Band Edge

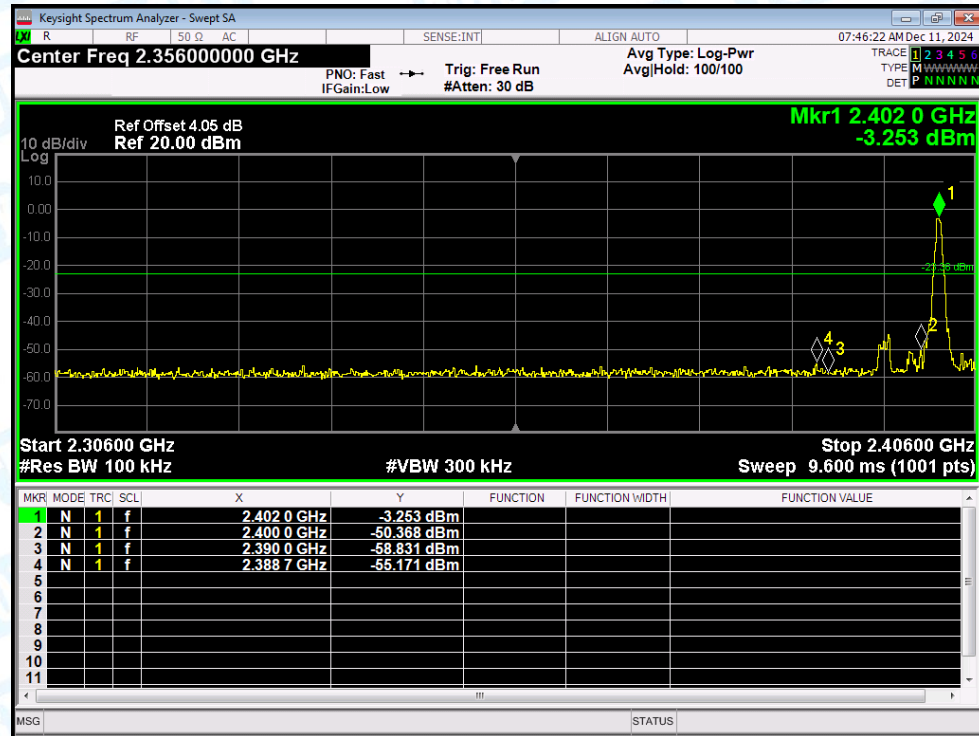
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-51.81	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-48.45	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-51.73	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-51.53	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-52.67	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-47.78	-20	Pass

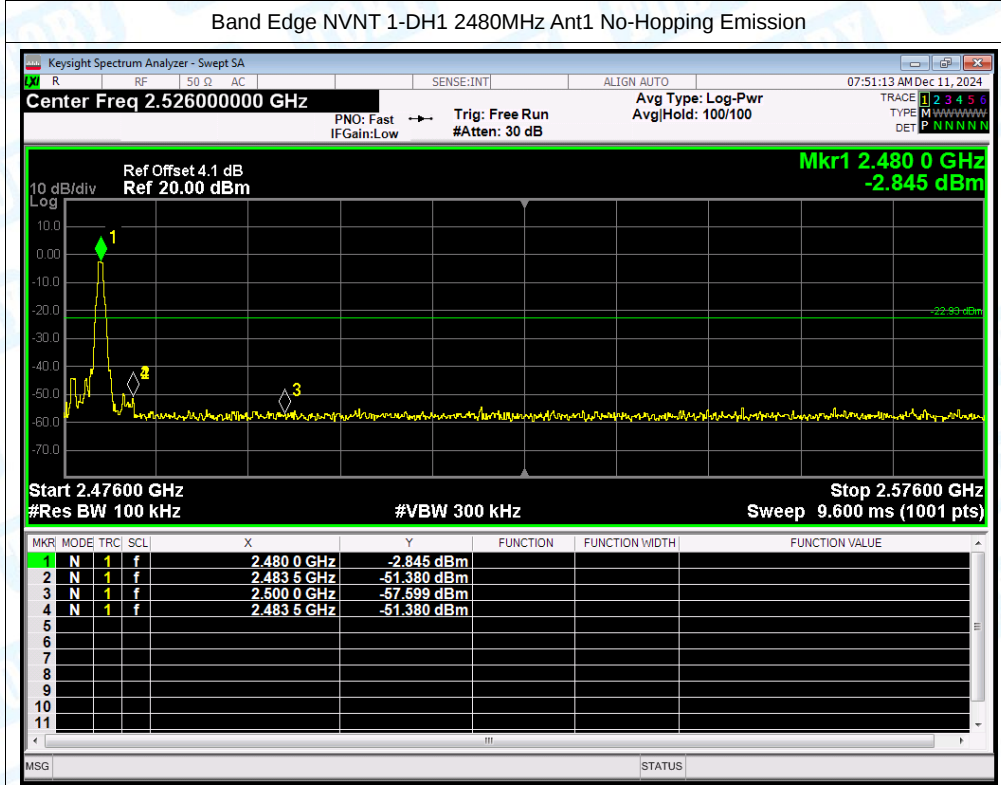
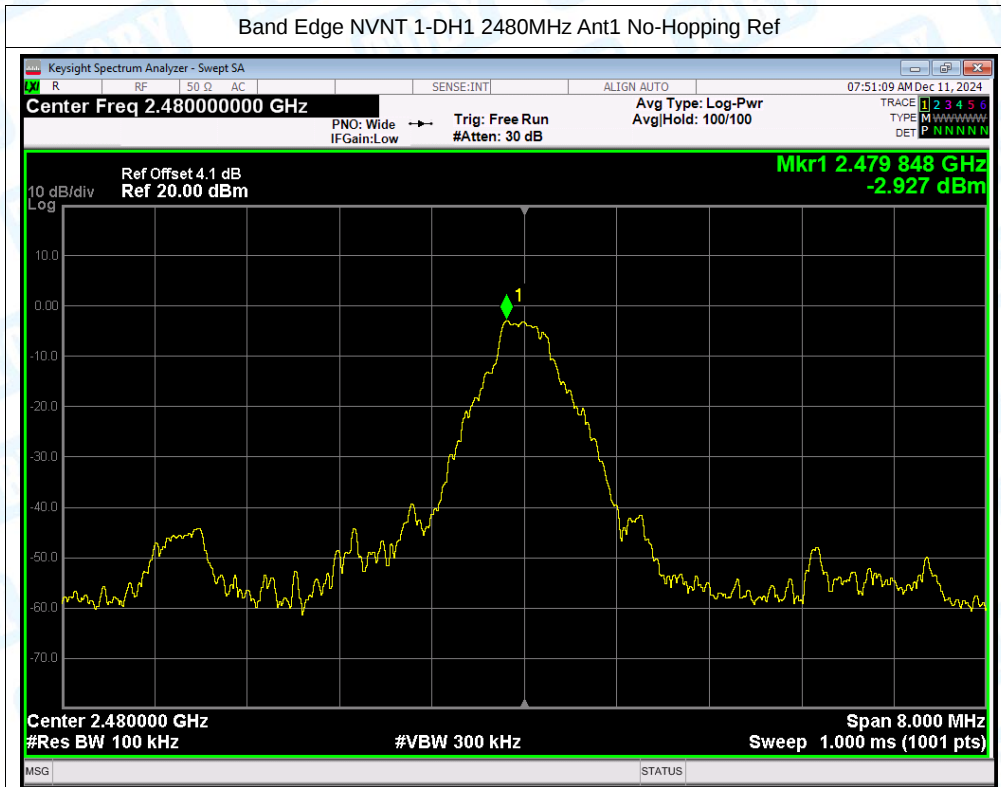
Test Graphs

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

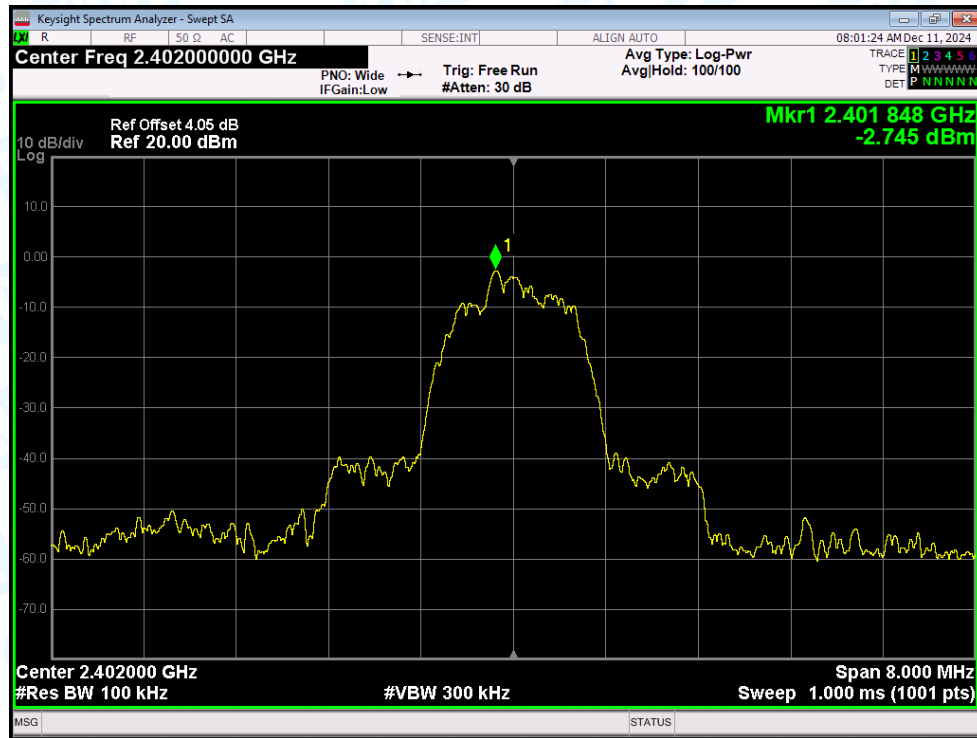


Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

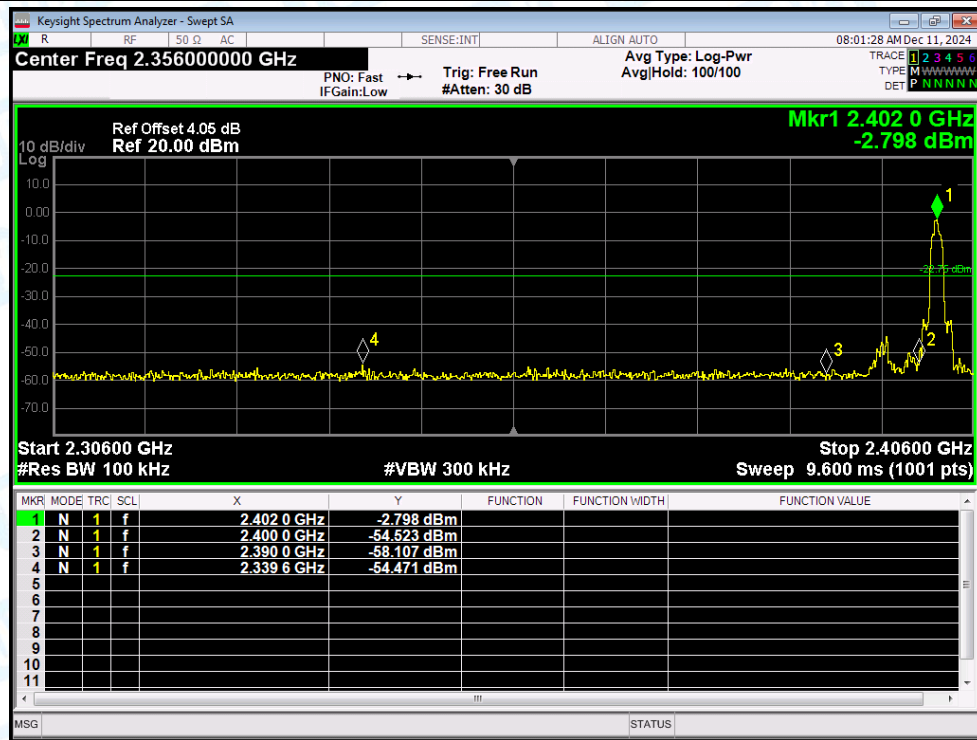




Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



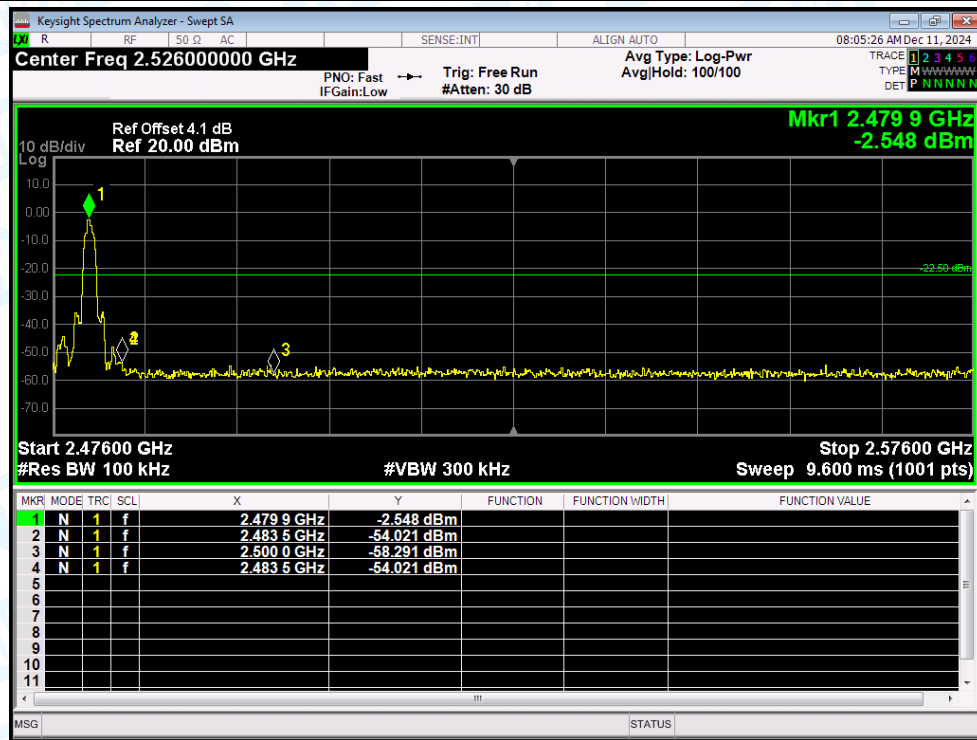
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission



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



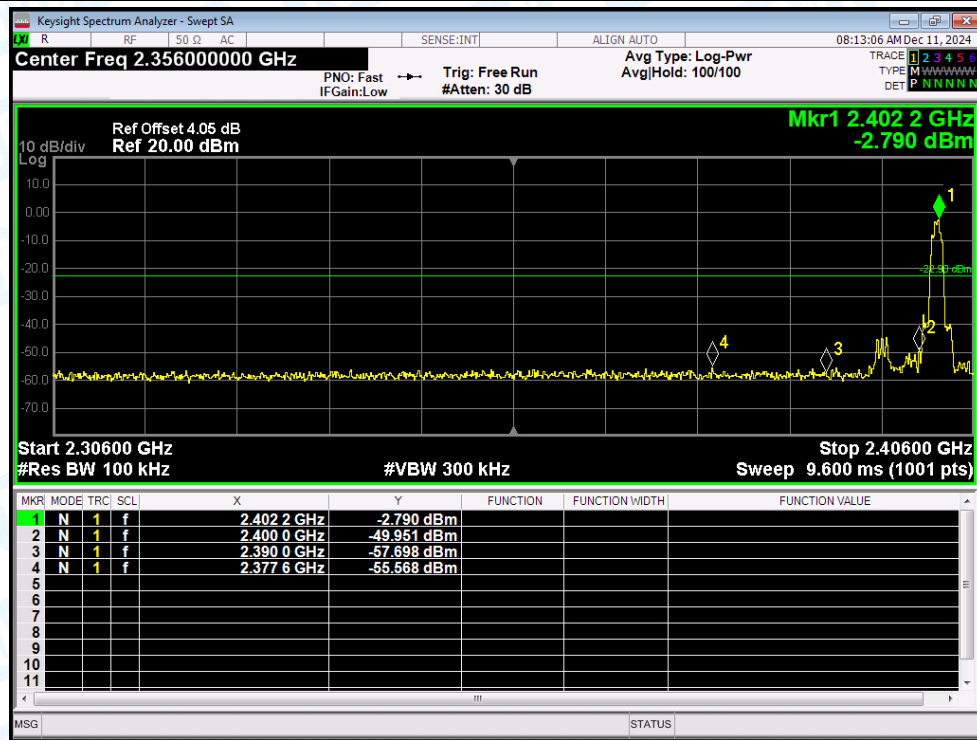
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission



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



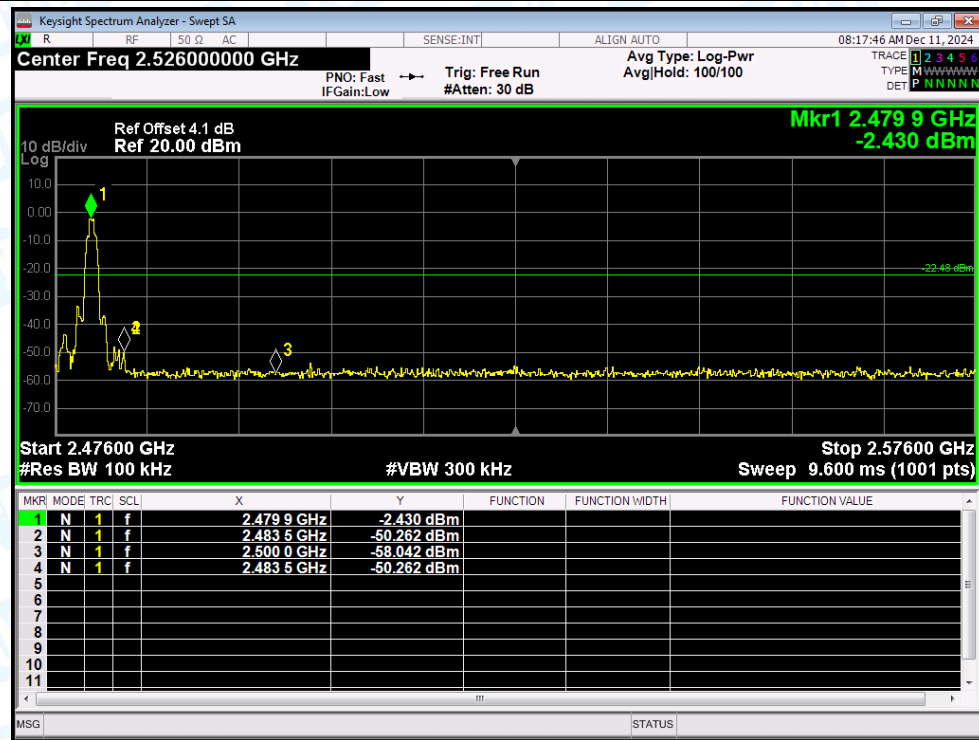
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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

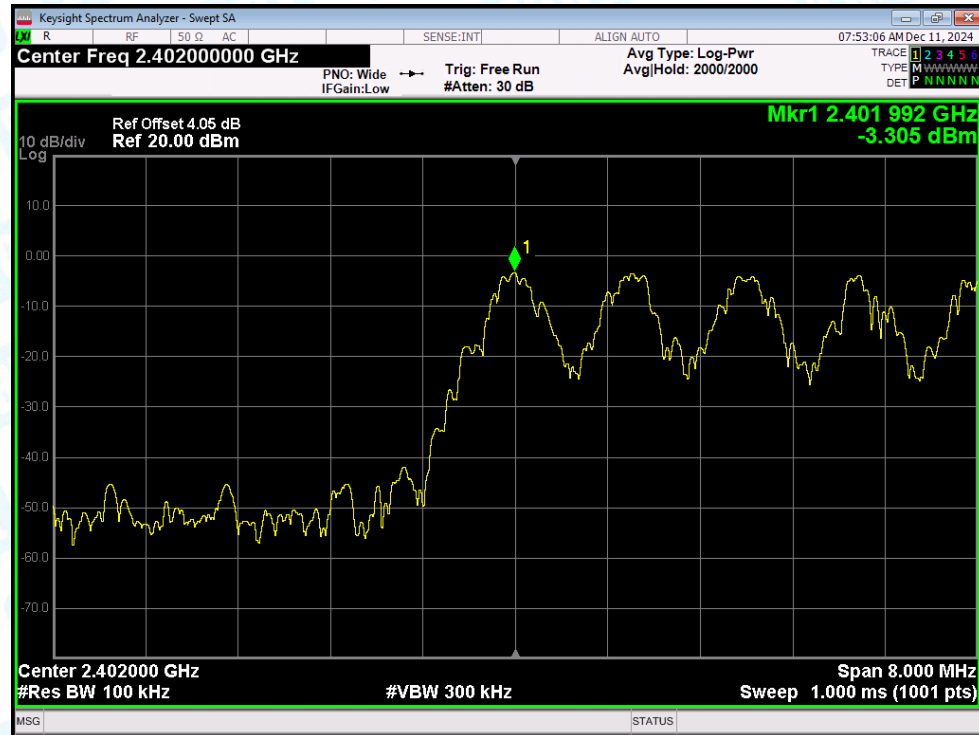


6. Band Edge(Hopping)

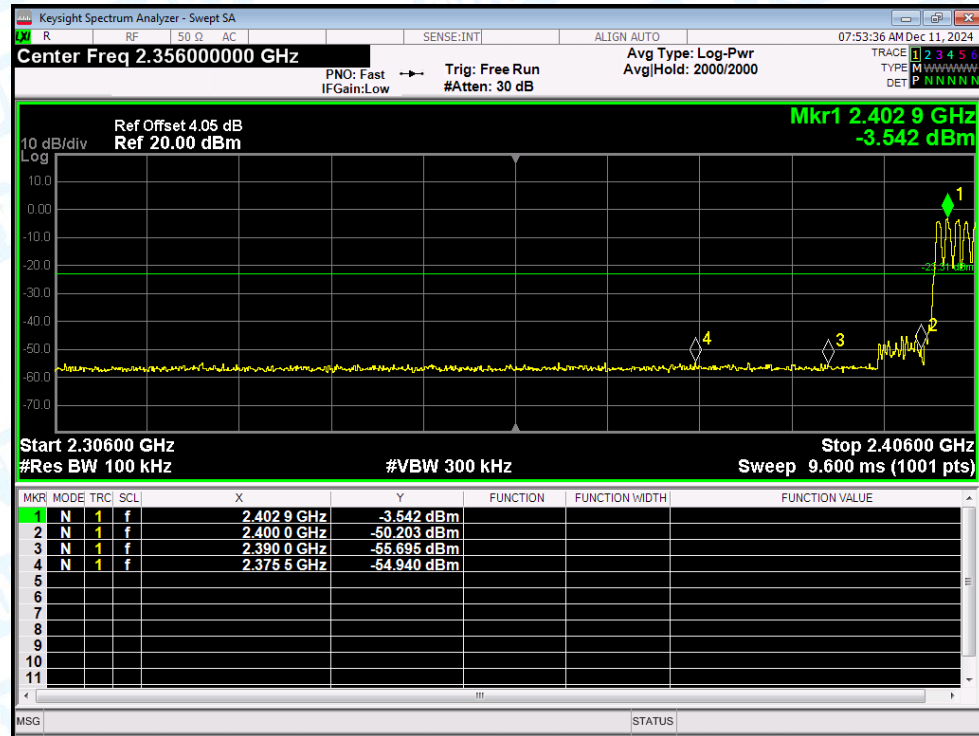
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-51.64	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-48.63	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-51.52	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-50.91	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-51.78	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-48.59	-20	Pass

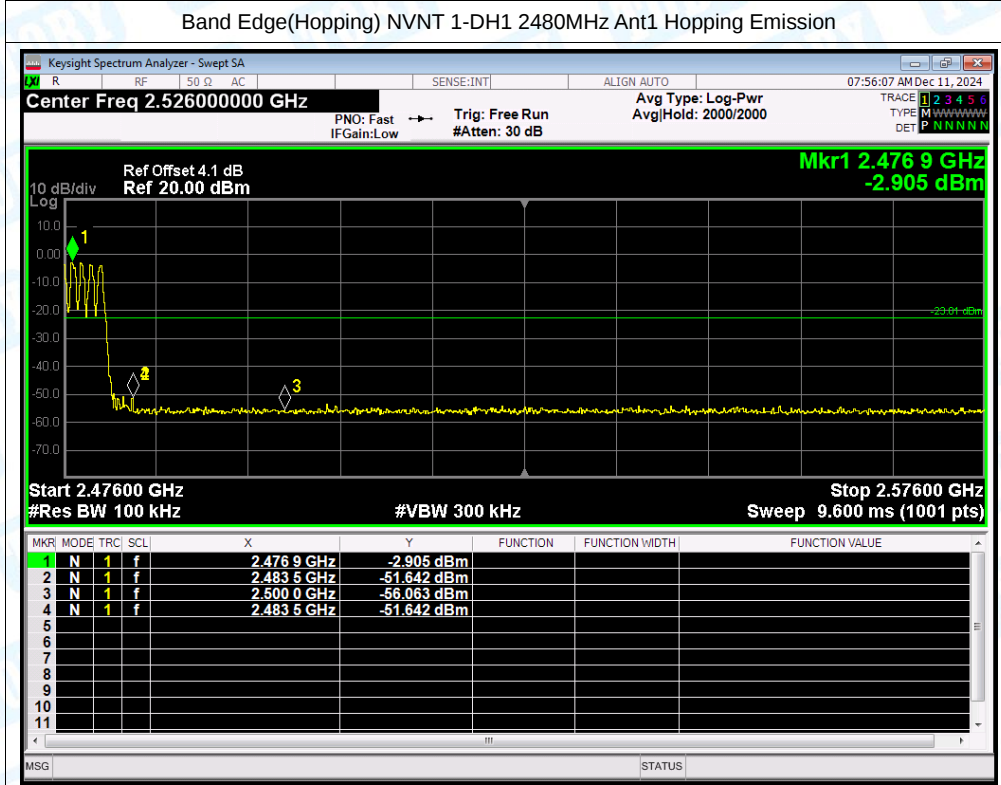
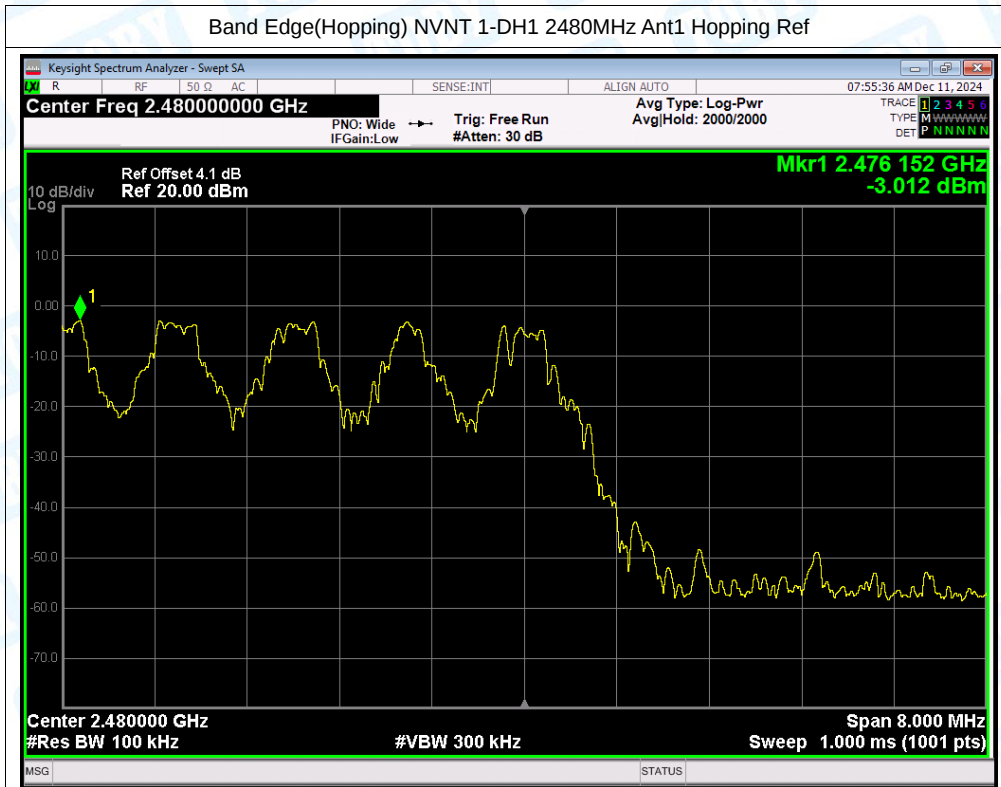
Test Graphs

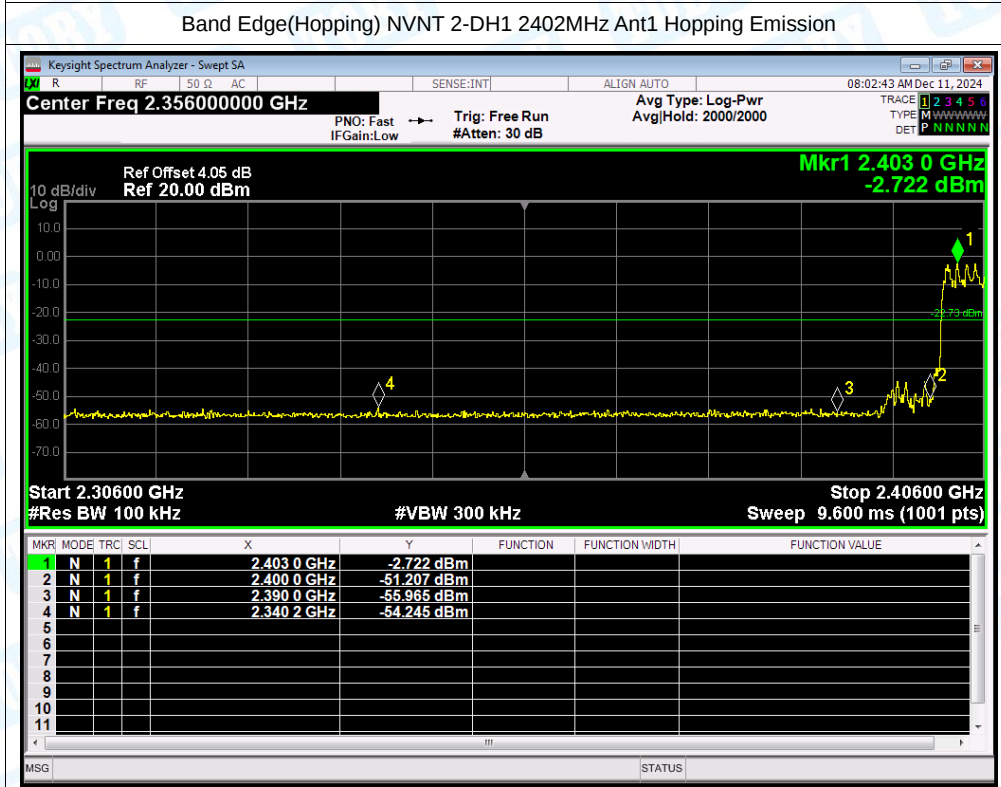
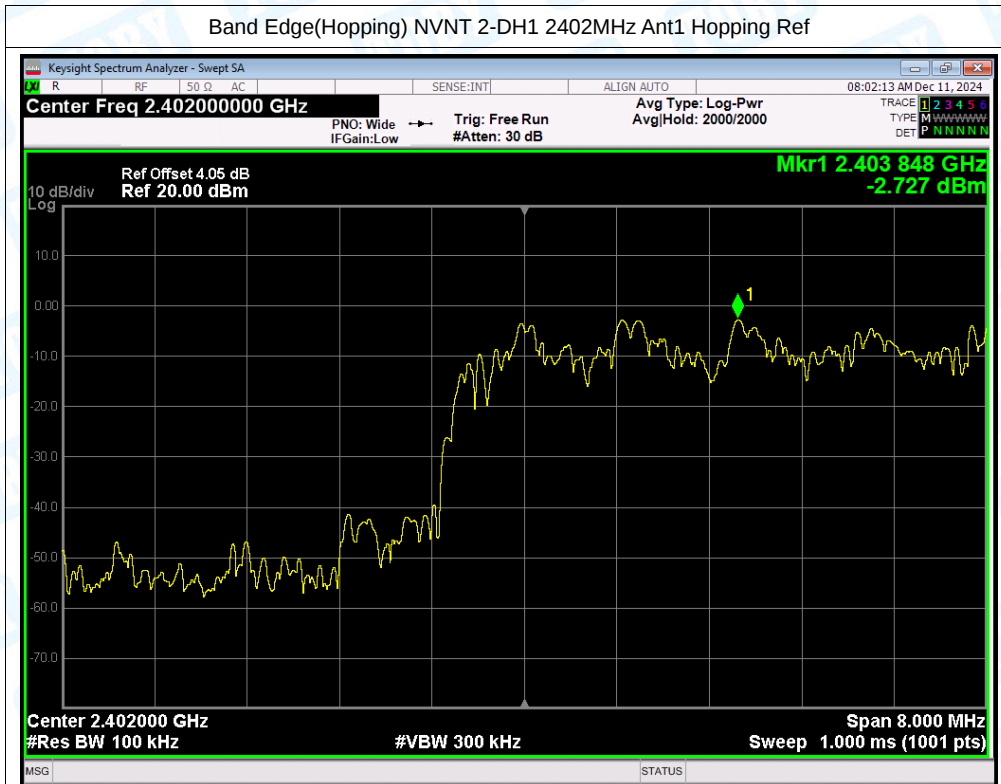
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref

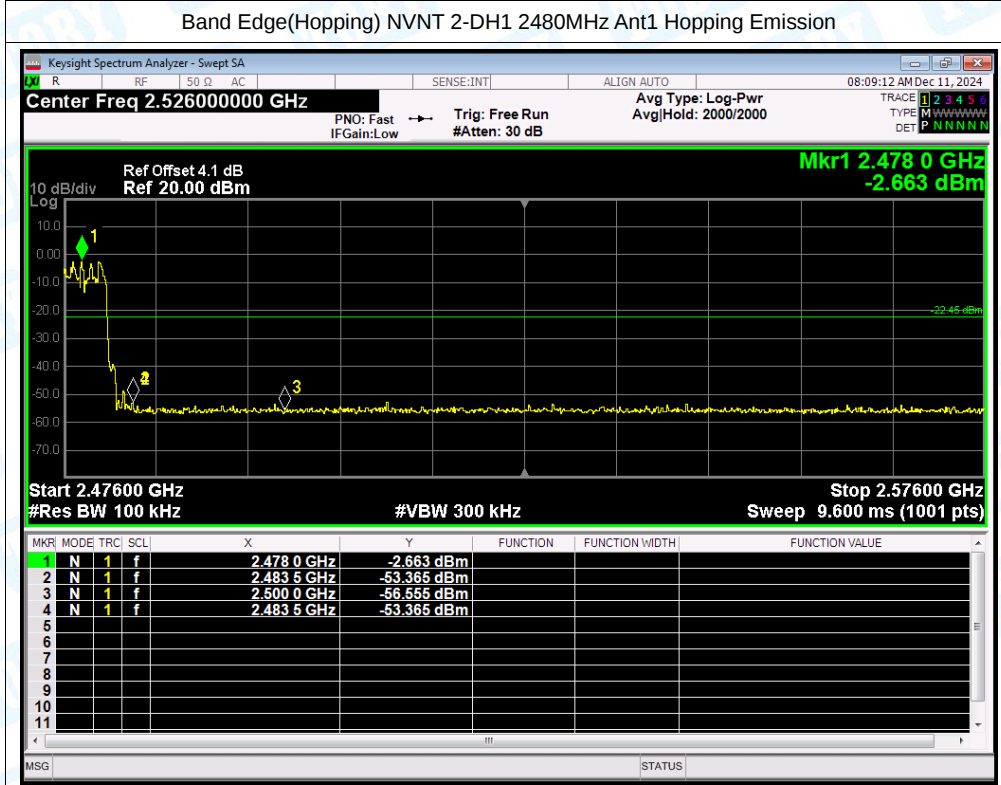


Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission





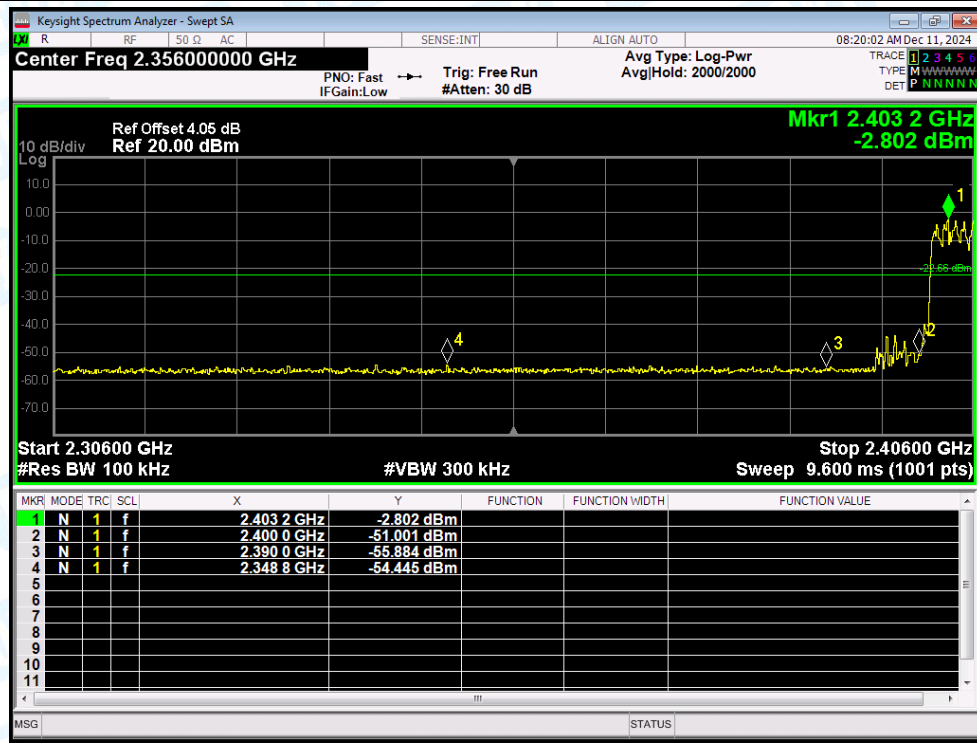


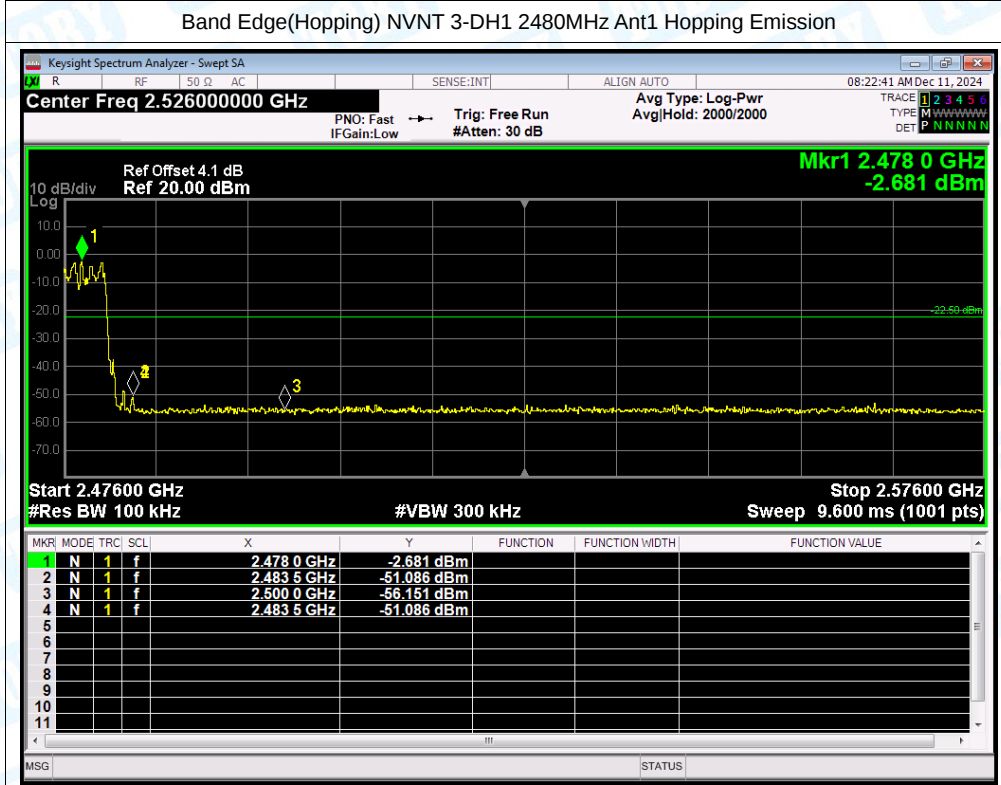


Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



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



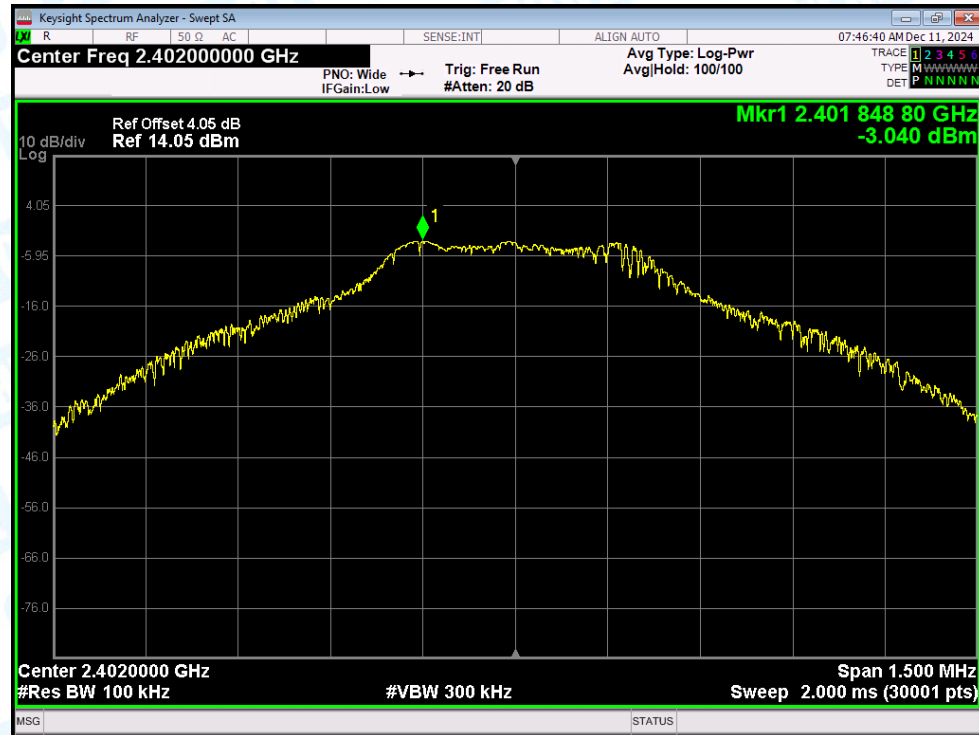


7. Conducted RF Spurious Emission

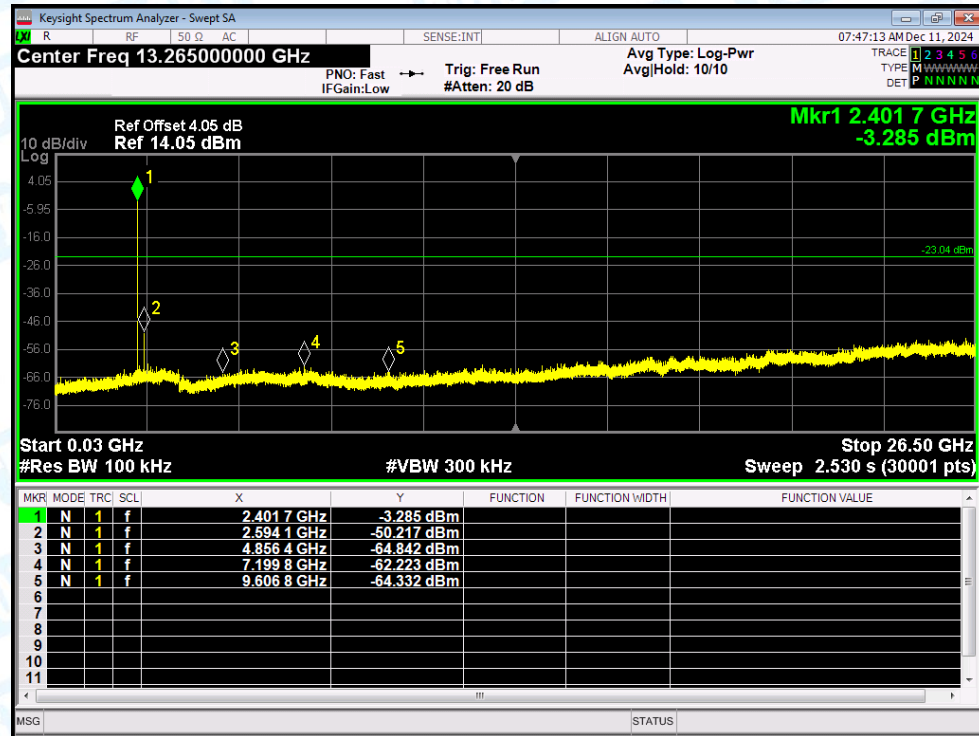
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-47.18	-20	Pass
NVNT	1-DH1	2441	Ant1	-49.25	-20	Pass
NVNT	1-DH1	2480	Ant1	-46.86	-20	Pass
NVNT	2-DH1	2402	Ant1	-46.53	-20	Pass
NVNT	2-DH1	2441	Ant1	-46.61	-20	Pass
NVNT	2-DH1	2480	Ant1	-47.53	-20	Pass
NVNT	3-DH1	2402	Ant1	-47.68	-20	Pass
NVNT	3-DH1	2441	Ant1	-46.74	-20	Pass
NVNT	3-DH1	2480	Ant1	-46.37	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



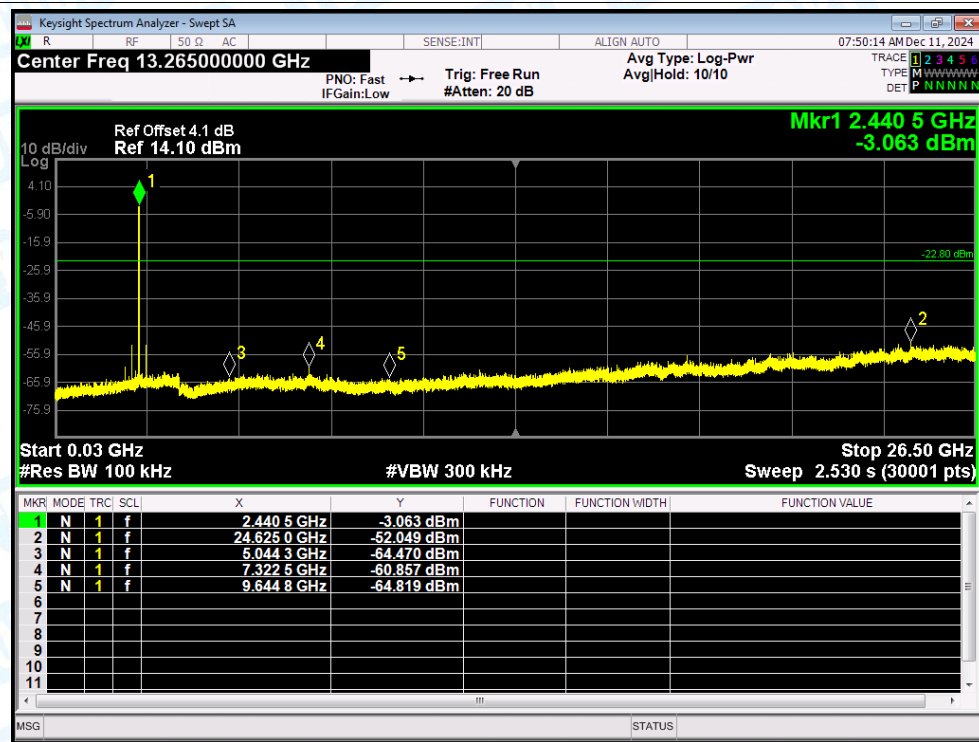
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



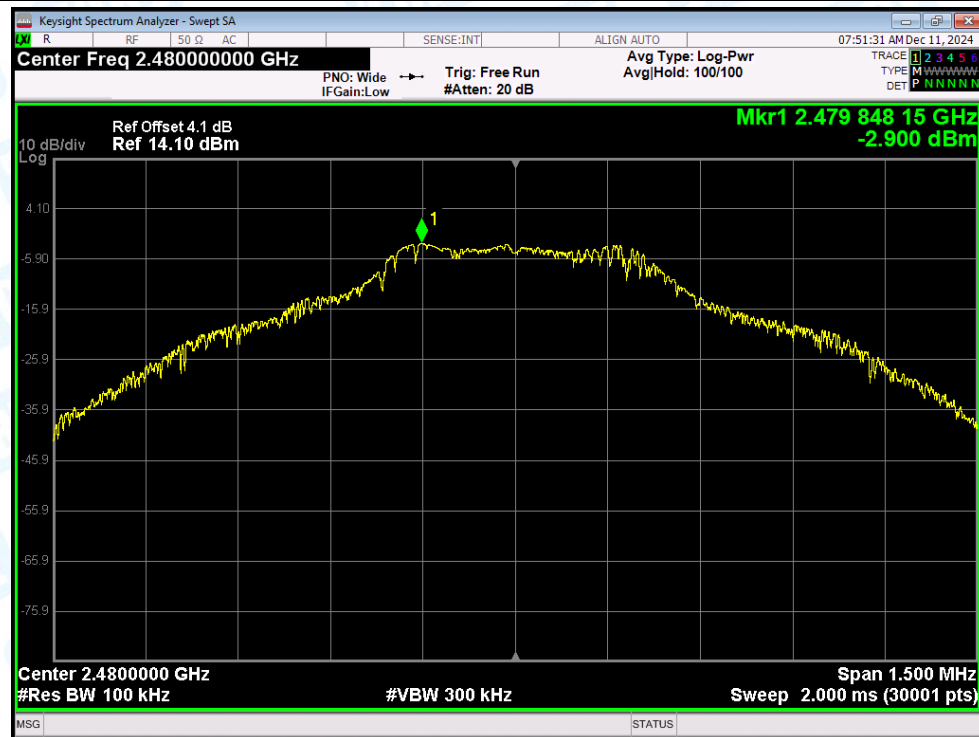
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



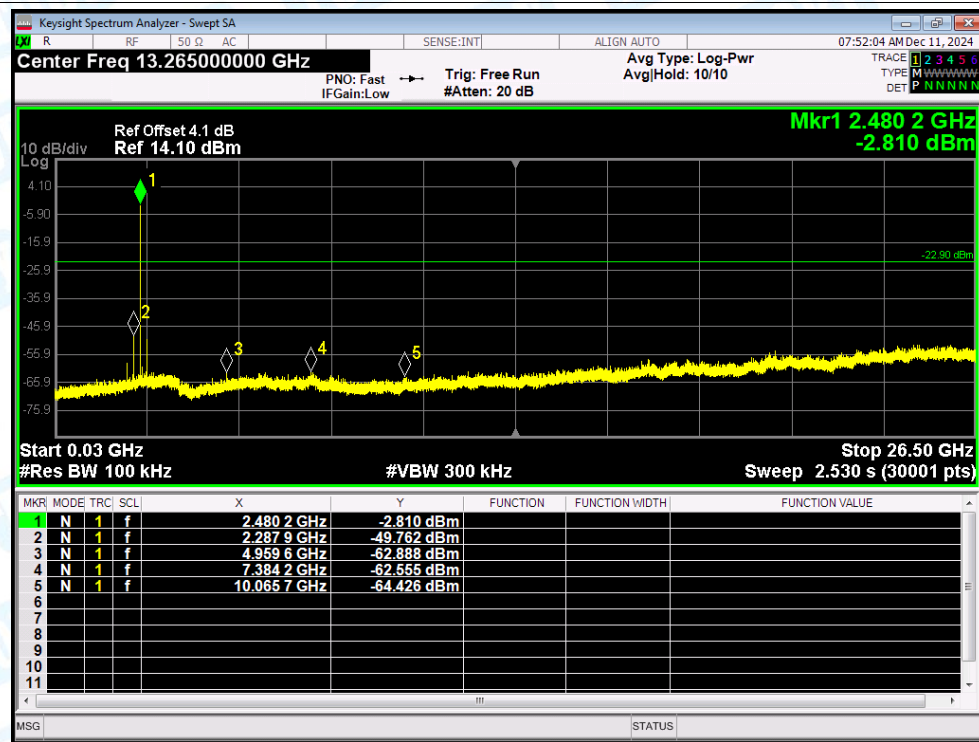
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



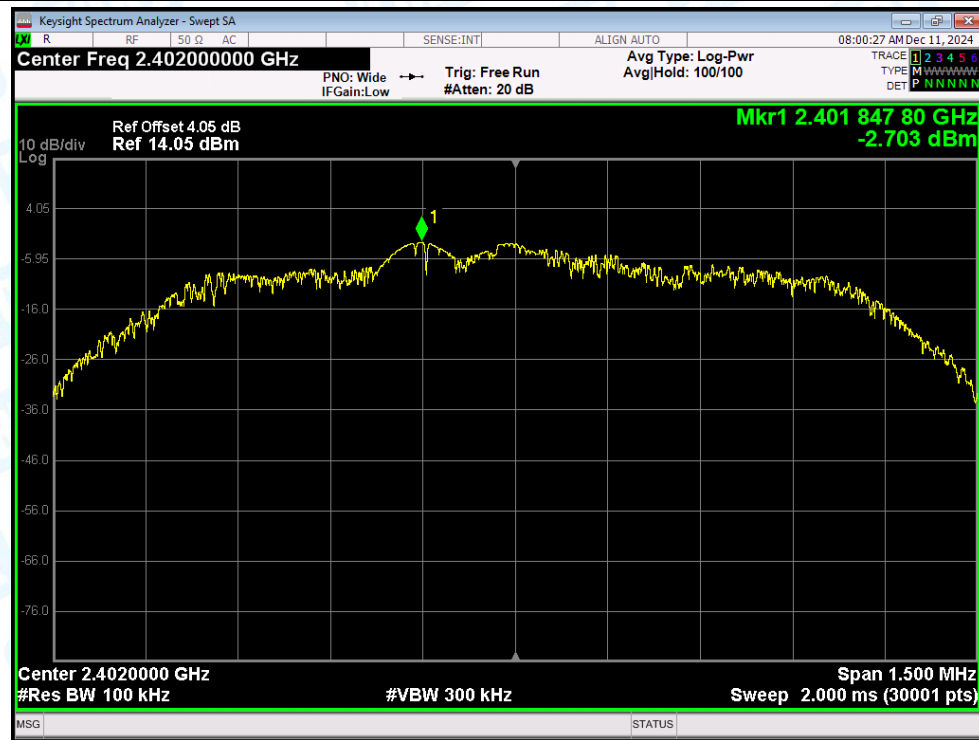
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



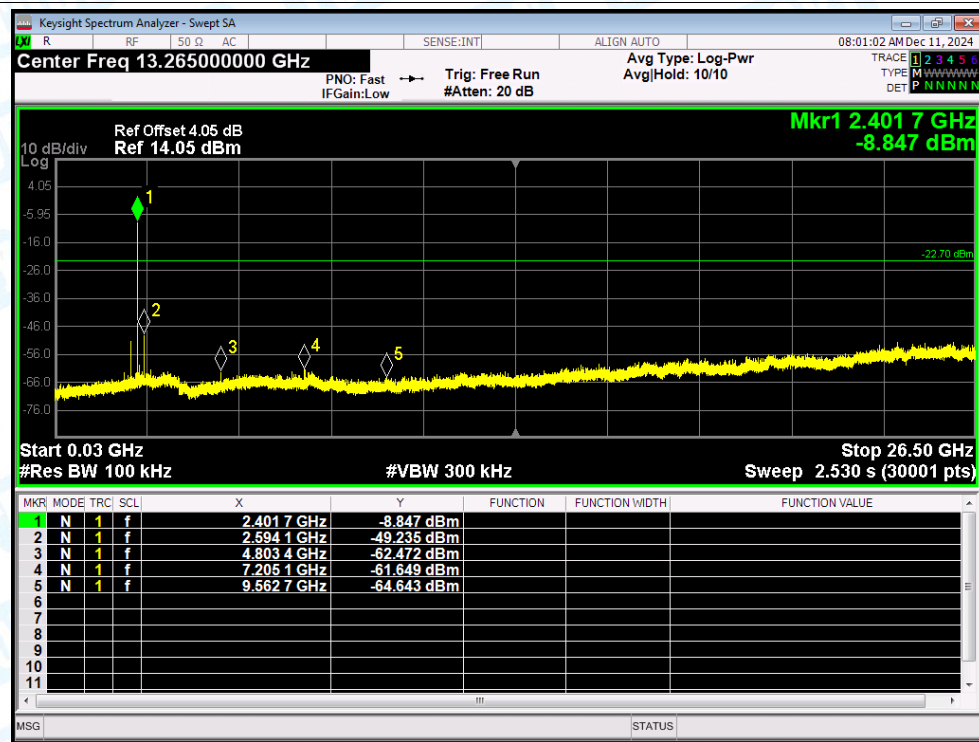
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



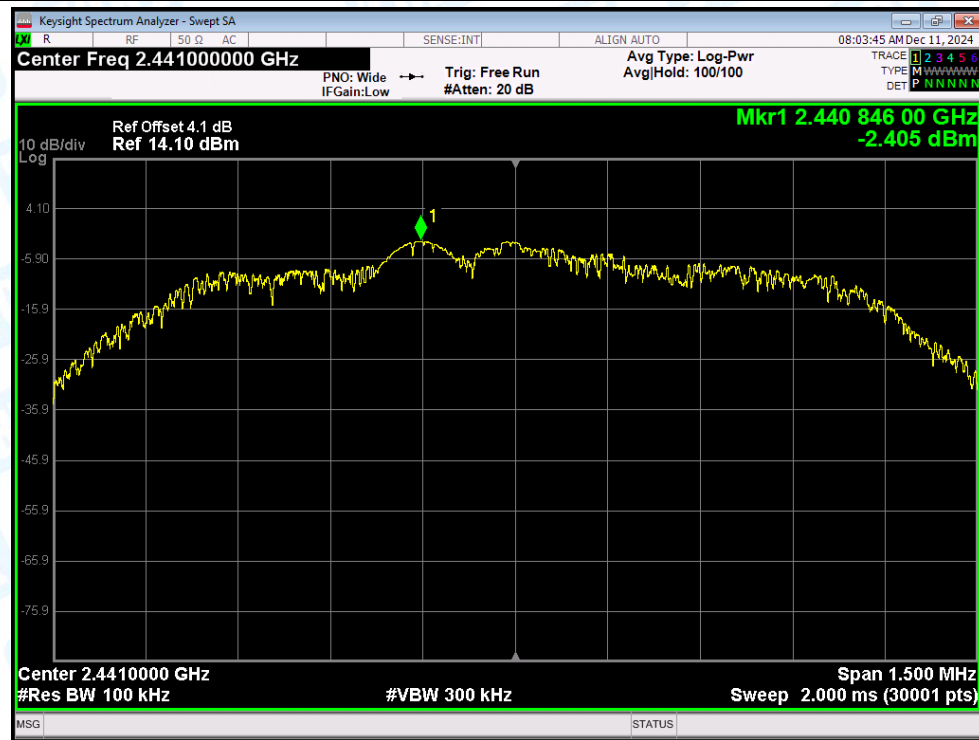
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



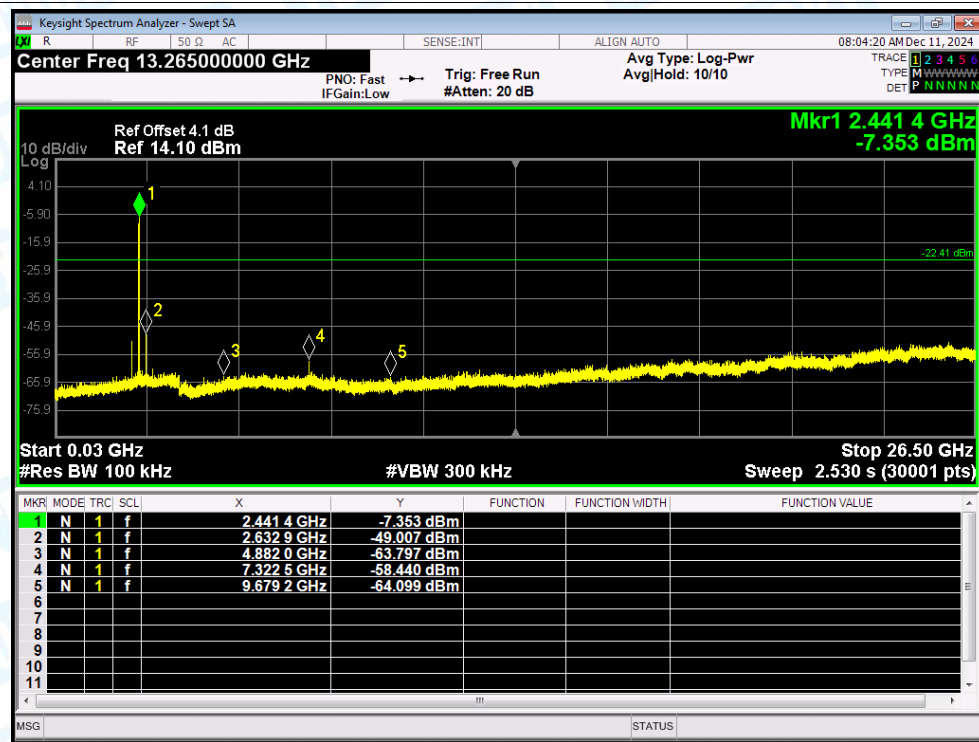
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



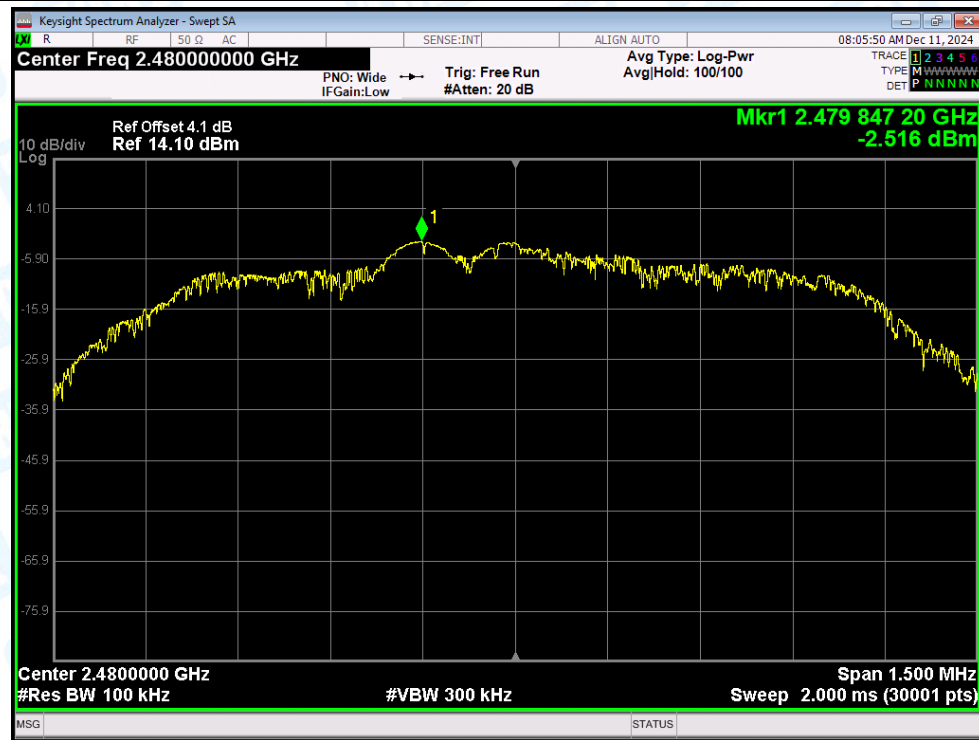
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



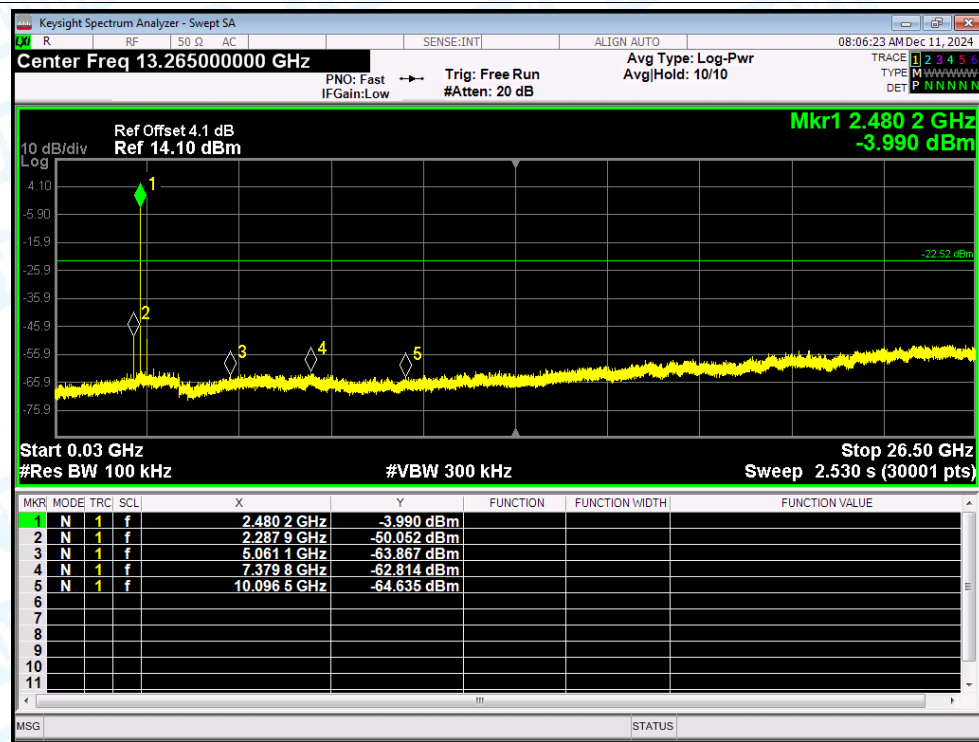
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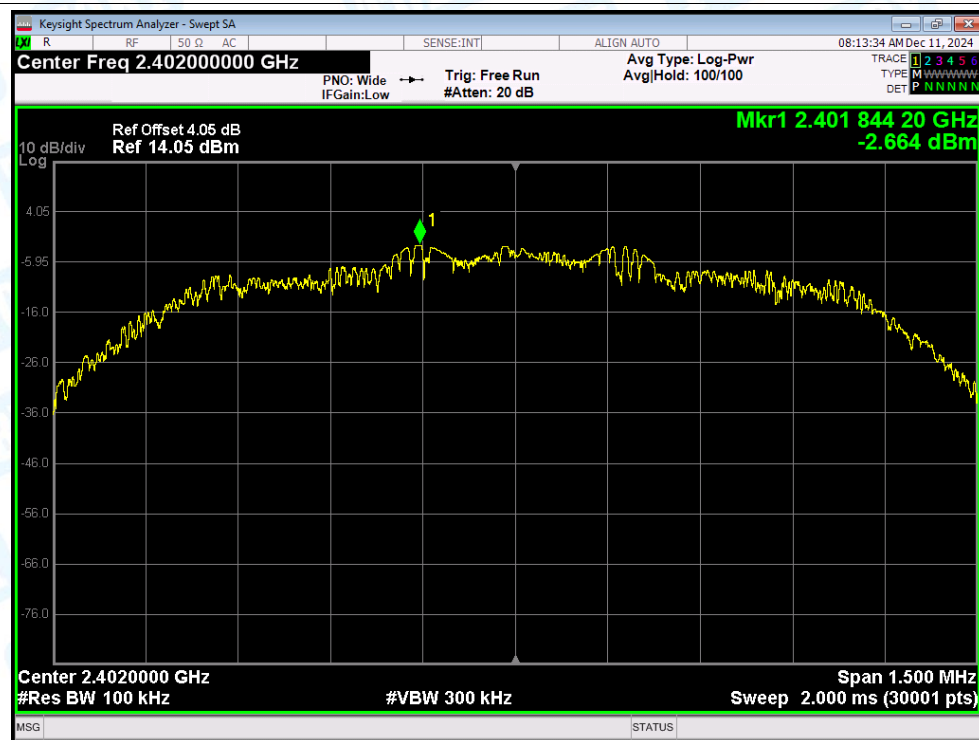
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



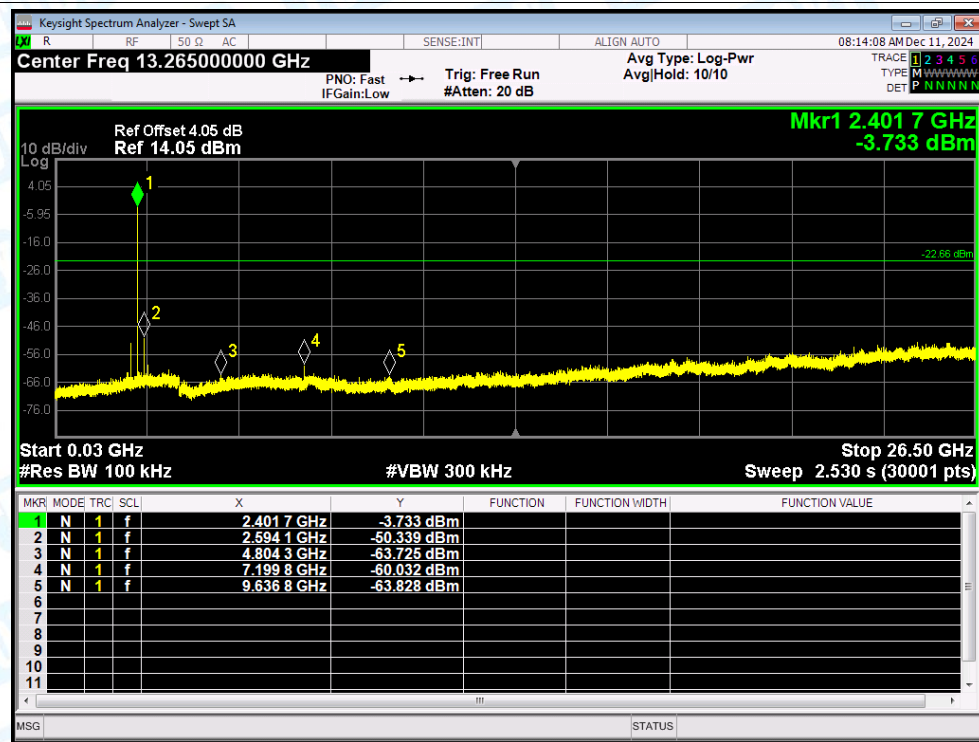
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



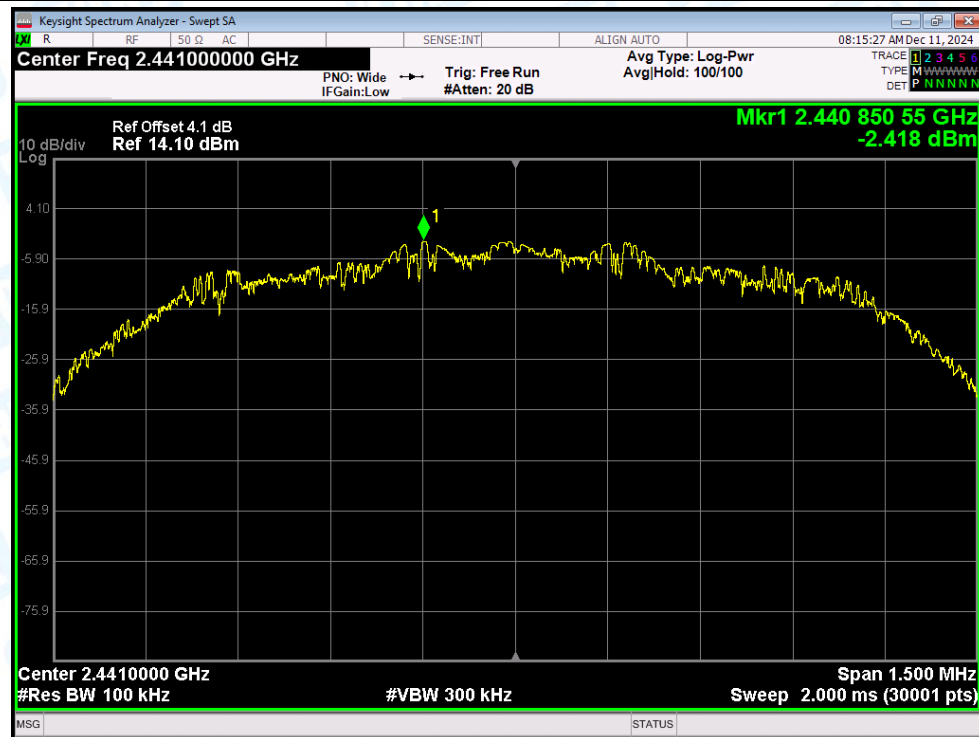
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



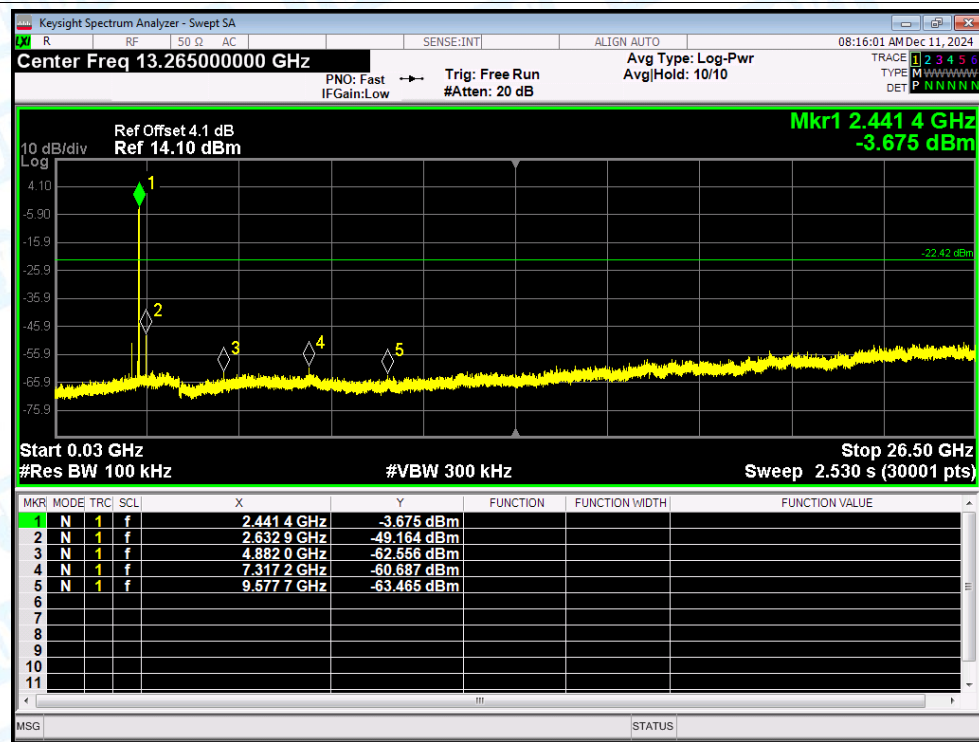
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



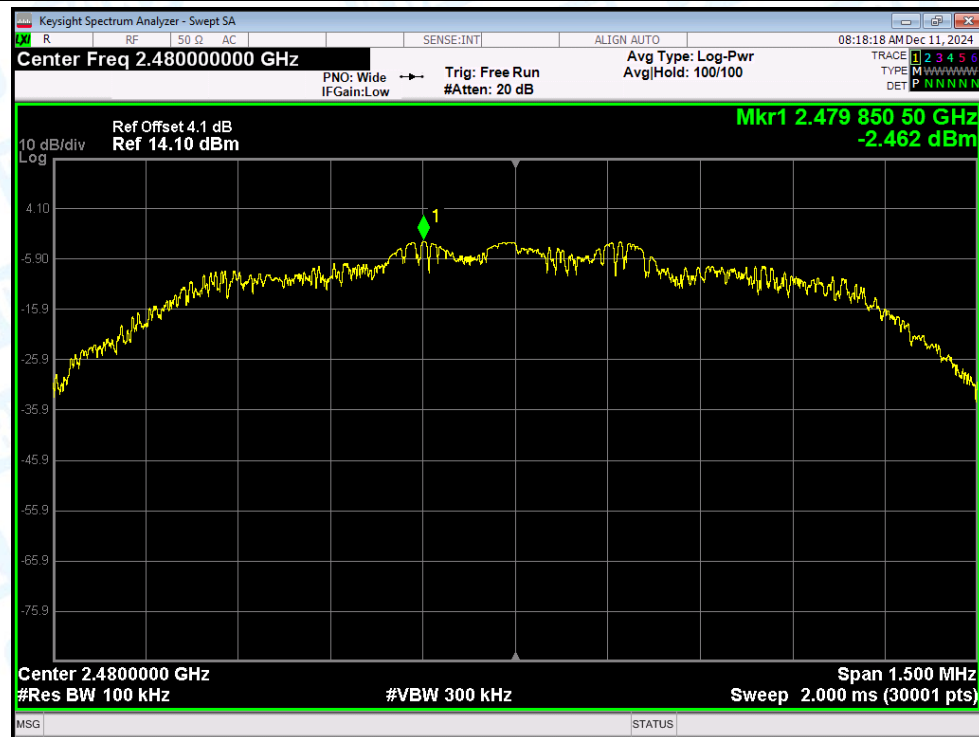
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



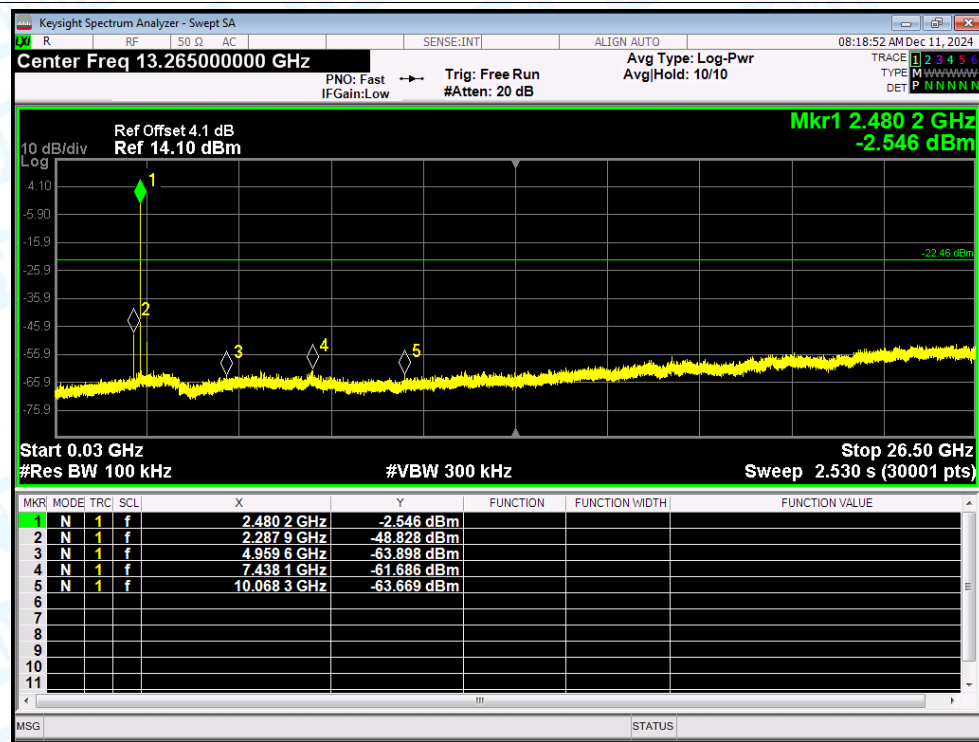
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

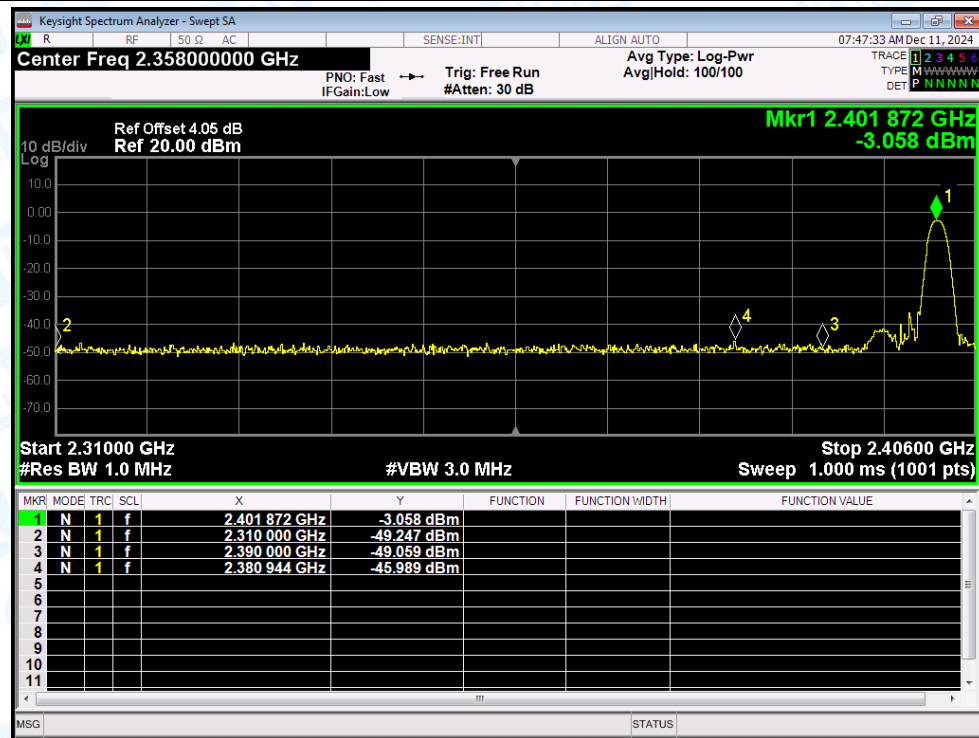


8.Restrict Band

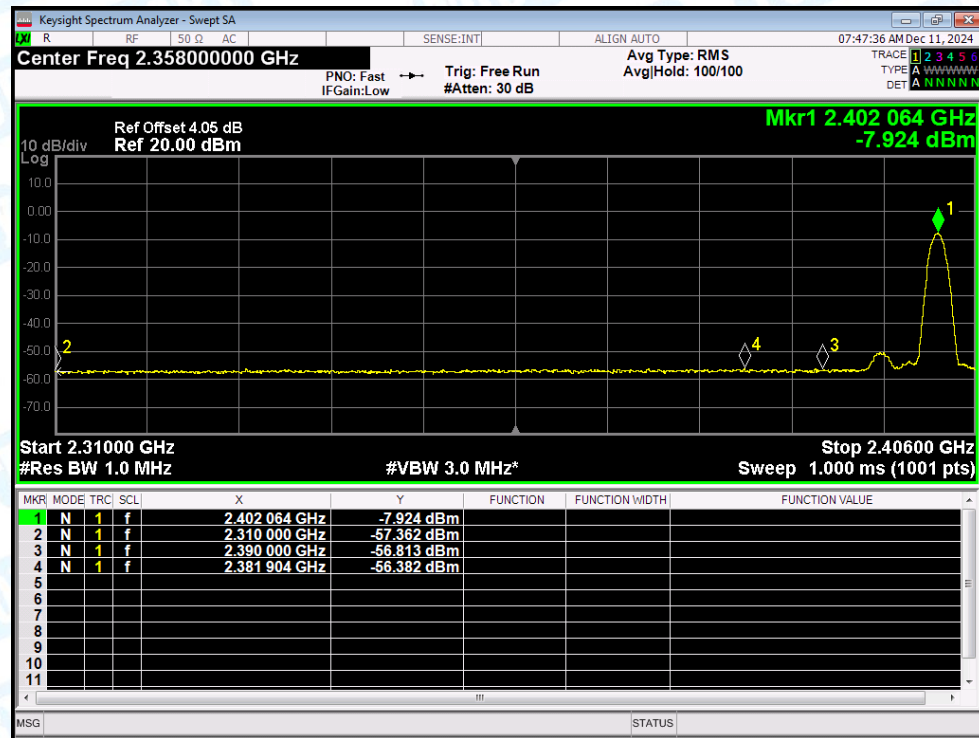
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-49.25	2	-	48.01	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-57.36	2	0	39.9	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2380.944	-45.99	2	-	51.27	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2381.904	-56.38	2	0	40.88	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-49.06	2	-	48.2	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.81	2	0	40.45	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46.37	2	-	50.89	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-54.57	2	5.17	47.86	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2486.056	-44.26	2	-	53	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.752	-54.29	2	5.17	48.14	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-48.87	2	-	48.39	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-56.94	2	5.17	45.49	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-49.49	2	-	47.77	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-57.16	2	5.06	45.16	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2374.512	-45.92	2	-	51.34	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2388.624	-55.76	2	5.06	46.56	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-49.8	2	-	47.46	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-56.92	2	5.06	45.4	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-45.31	2	-	51.95	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-54.48	2	5.06	47.84	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.632	-44.03	2	-	53.23	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.56	-54.47	2	5.06	47.85	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.85	2	-	49.41	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.81	2	5.06	46.51	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-50.13	2	-	47.13	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.96	2	5.06	45.36	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2370.192	-45.89	2	-	51.37	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2356.176	-56.02	2	5.06	46.3	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-48.33	2	-	48.93	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-56.41	2	5.06	45.91	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-44.32	2	-	52.94	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.01	2	5.06	47.31	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2498.56	-44.18	2	-	53.08	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.656	-54.17	2	5.06	48.15	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-48.61	2	-	48.65	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-56.51	2	5.06	45.81	Average	54	Pass

Test Graphs

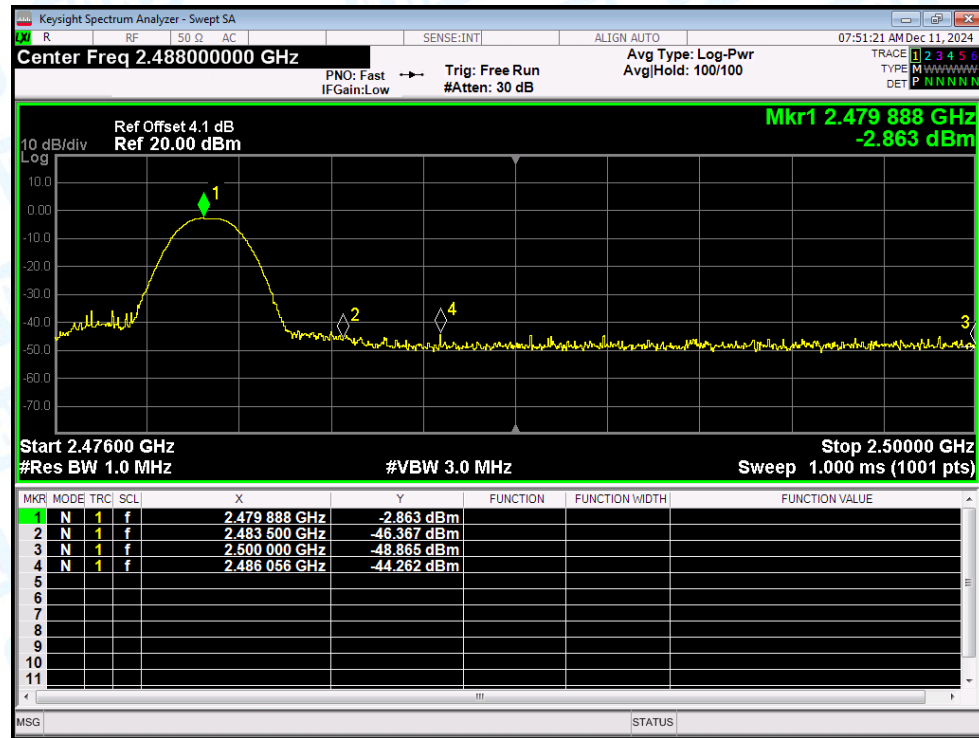
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



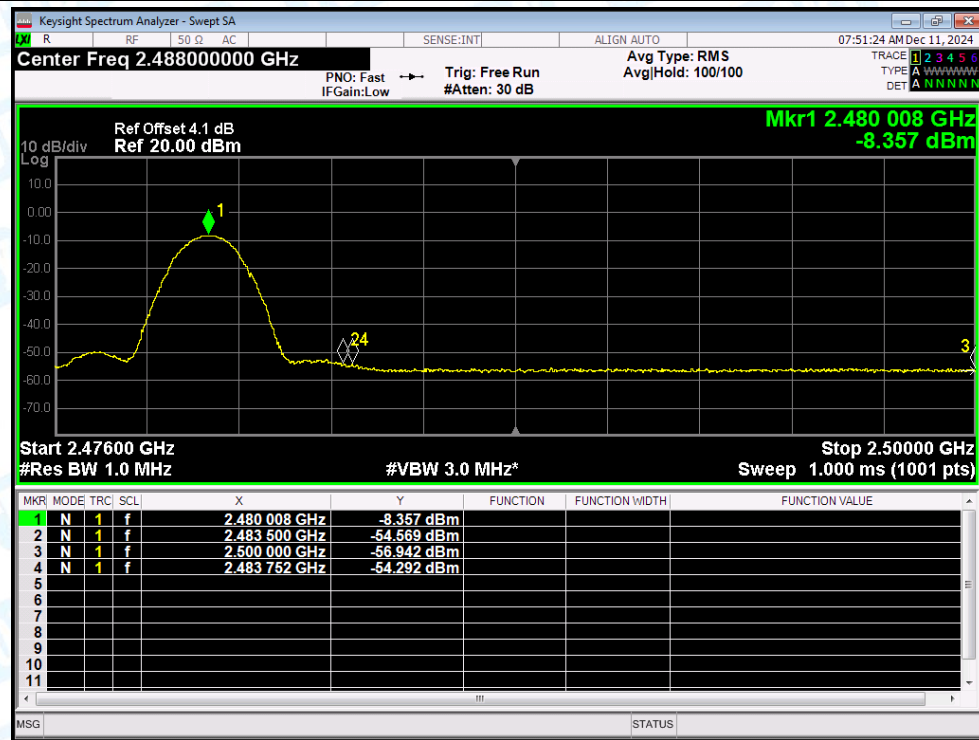
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



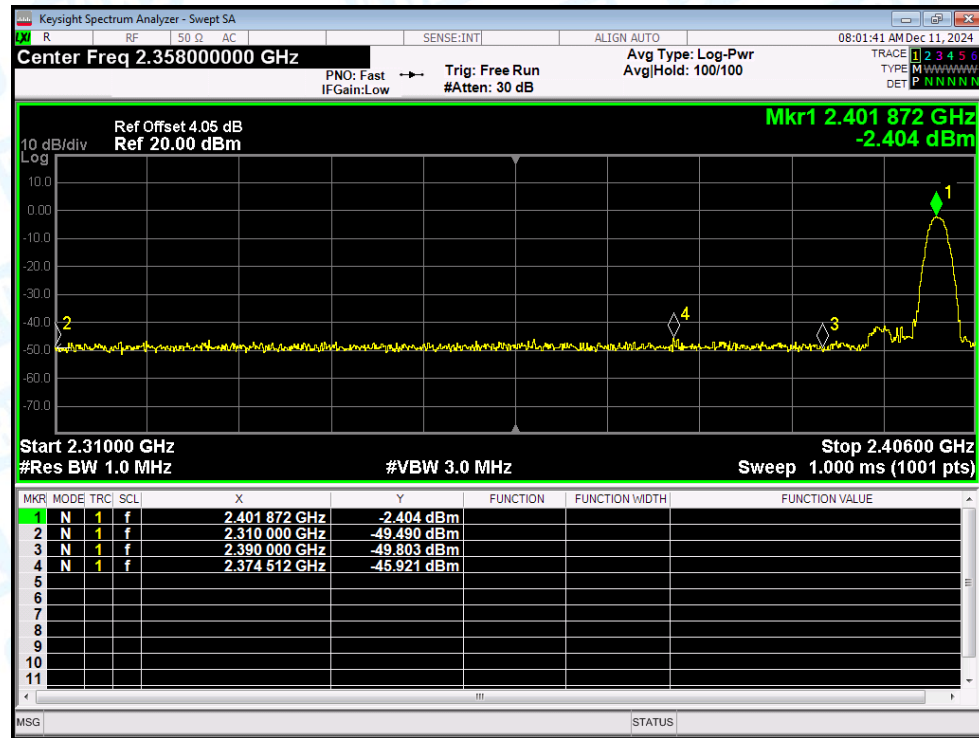
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



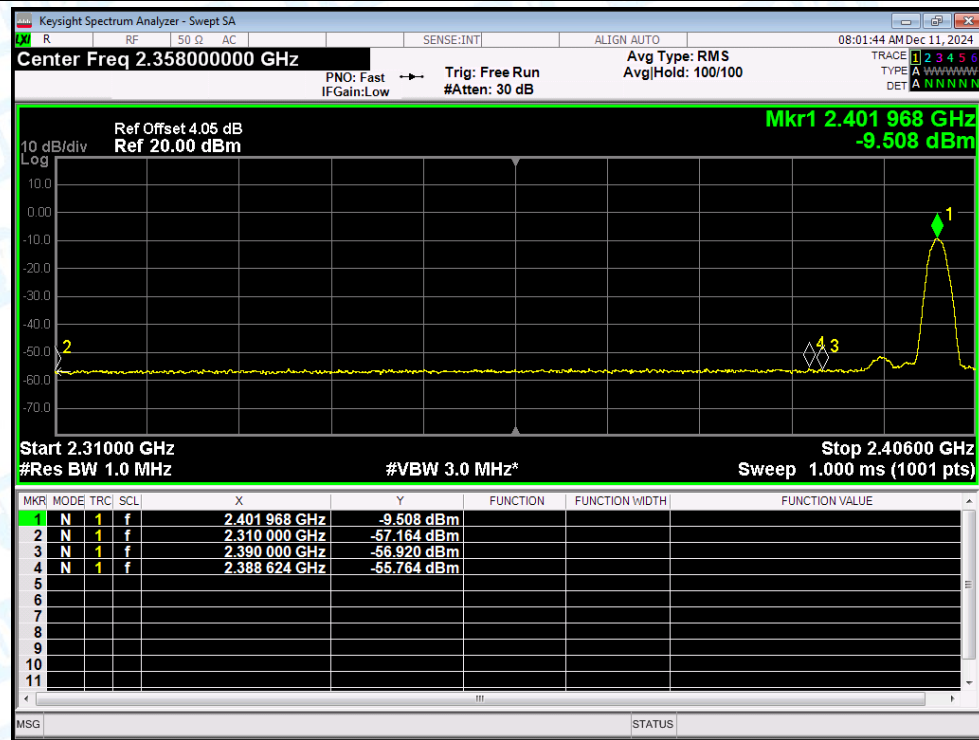
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



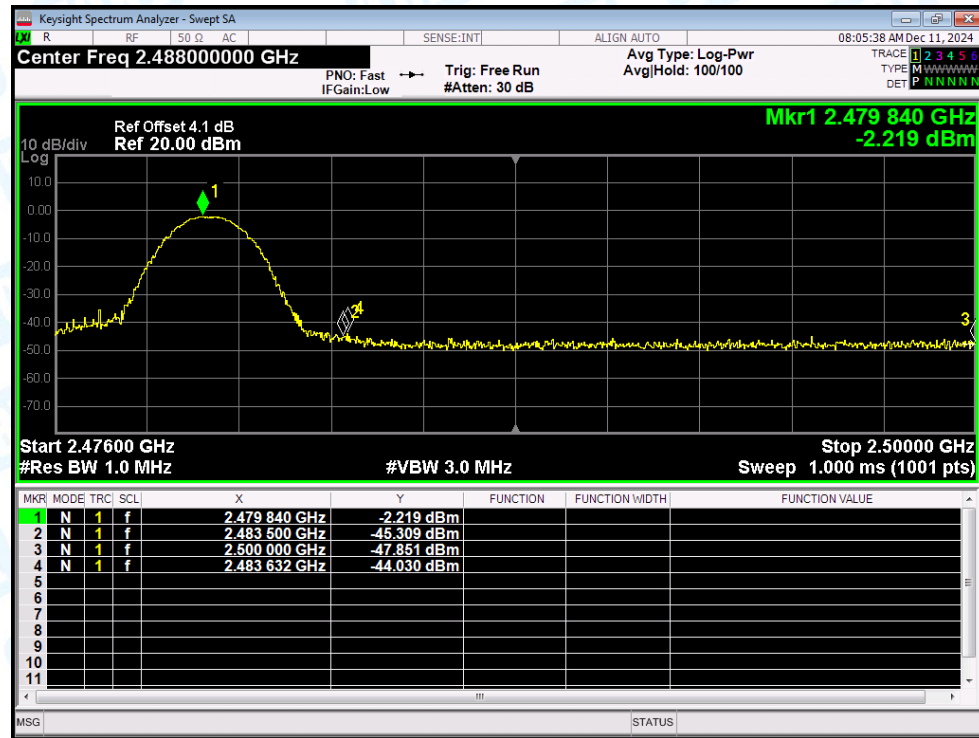
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



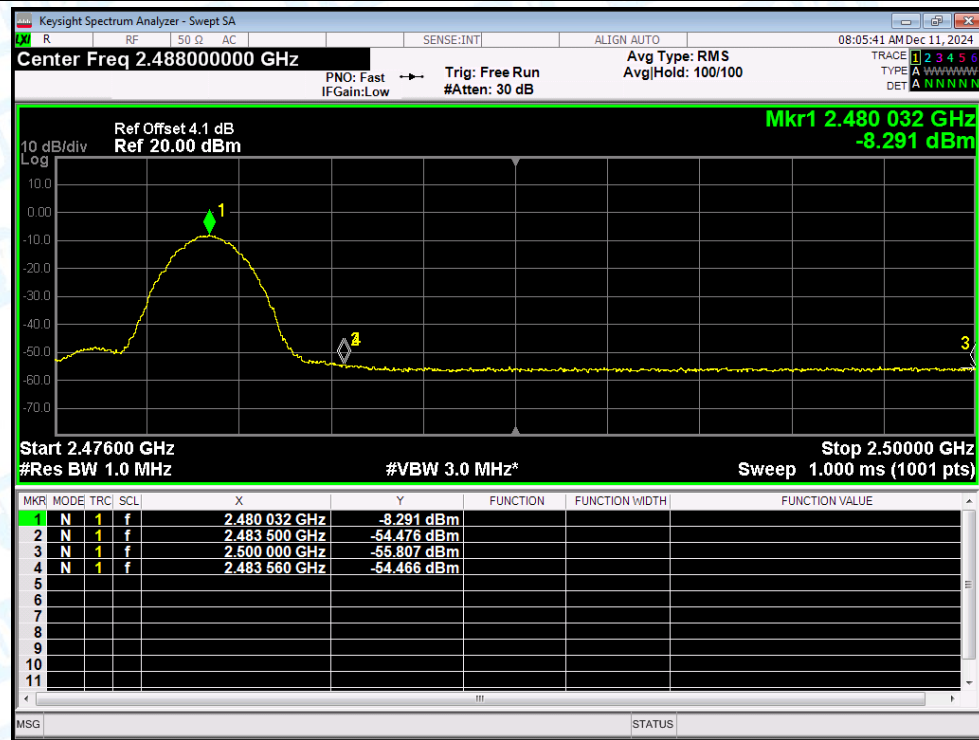
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



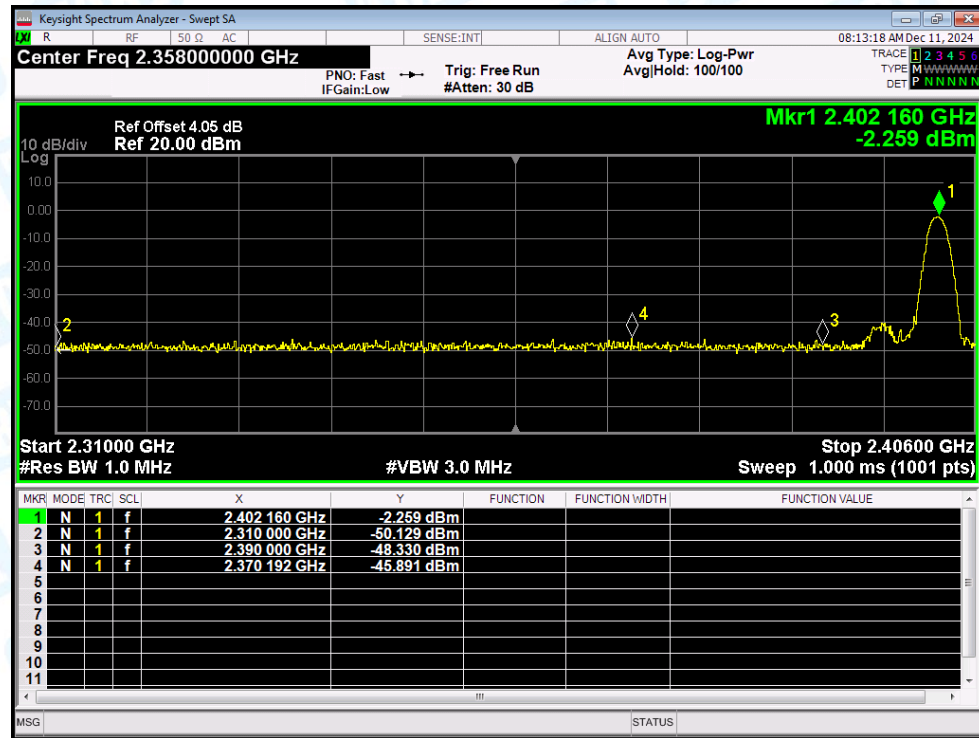
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



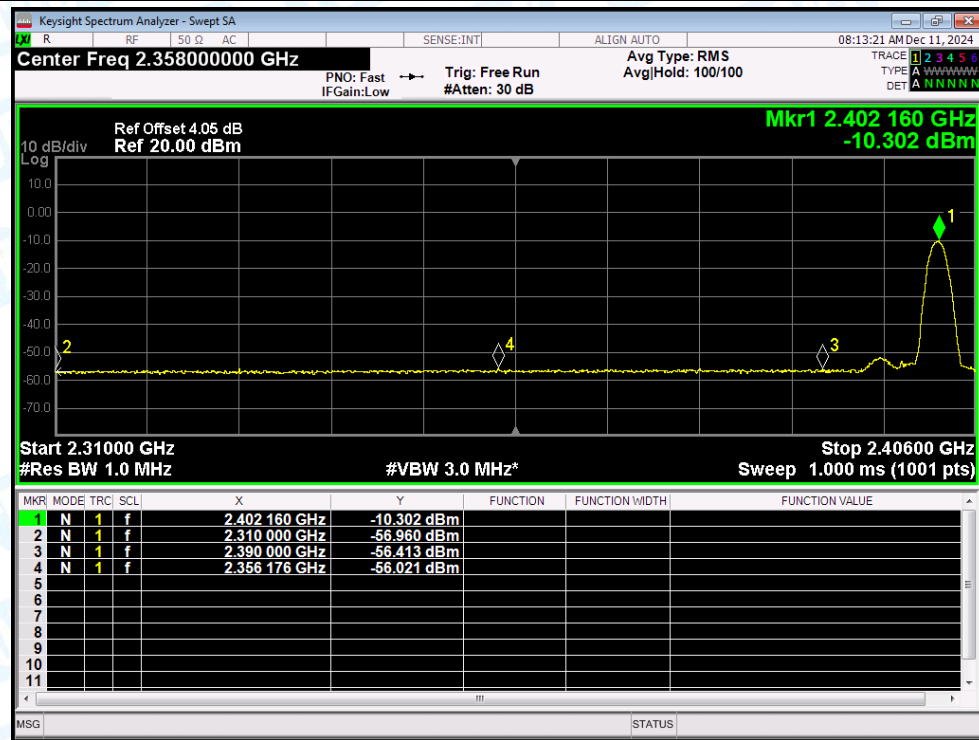
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



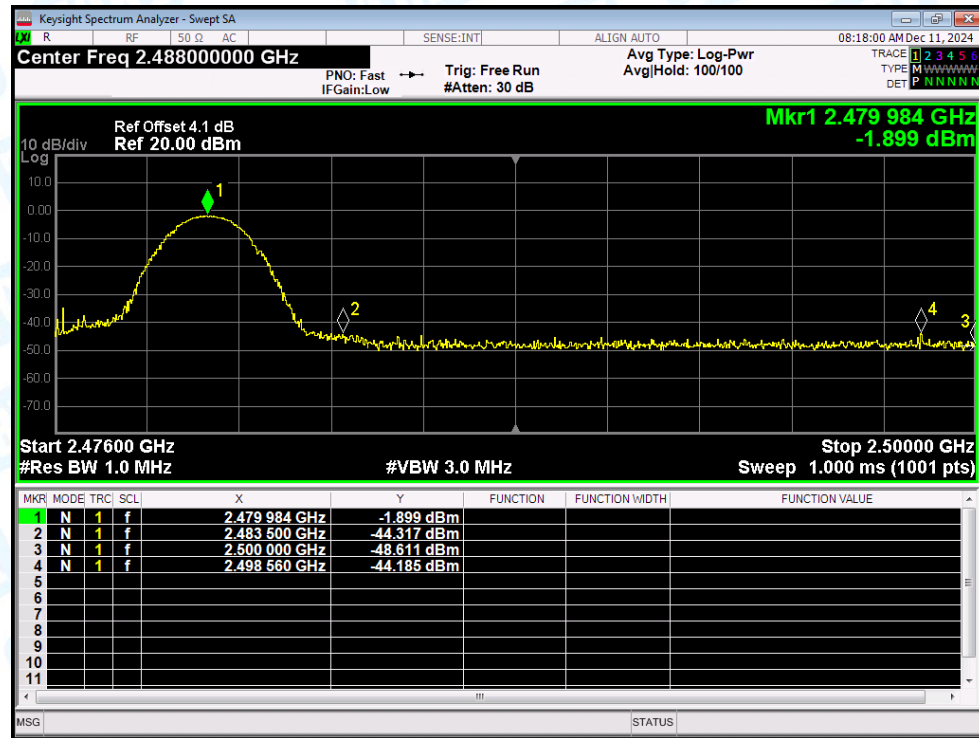
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



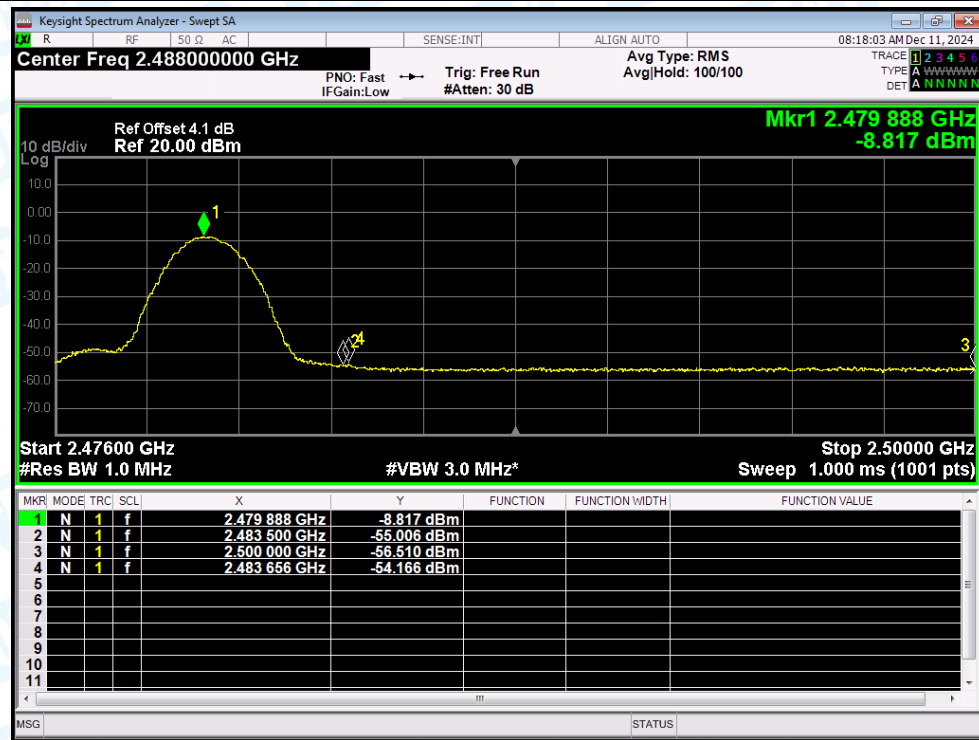
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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



9.Carrier Frequencies Separation

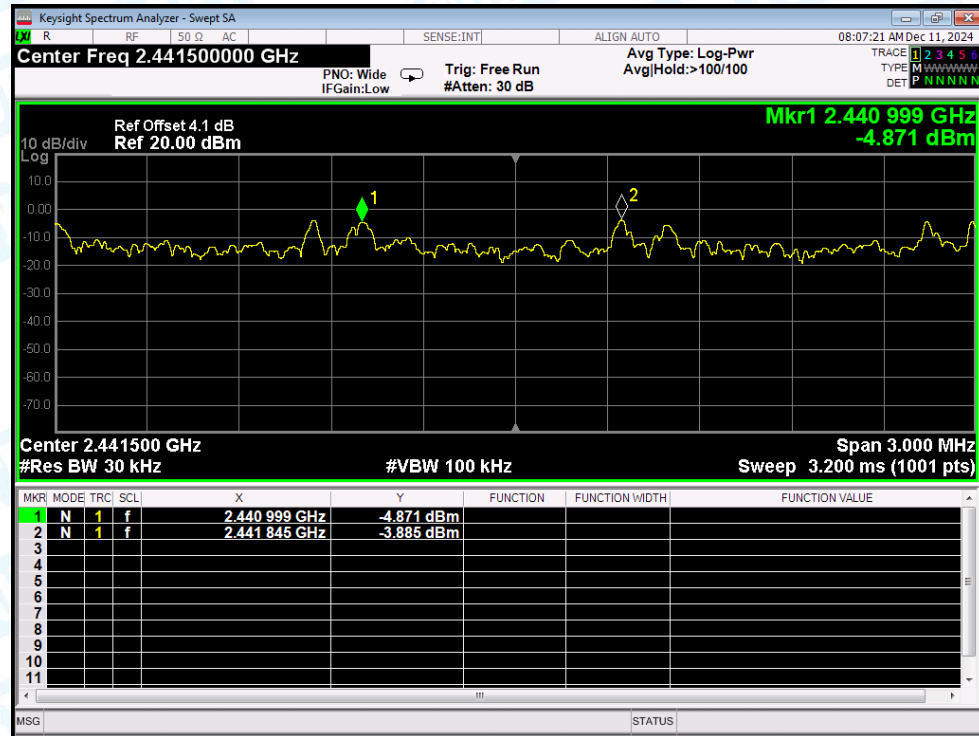
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.855	2441.851	0.996	0.58	Pass
NVNT	2-DH1	Ant1	2440.999	2441.845	0.846	0.827	Pass
NVNT	3-DH1	Ant1	2441.005	2441.998	0.993	0.82	Pass

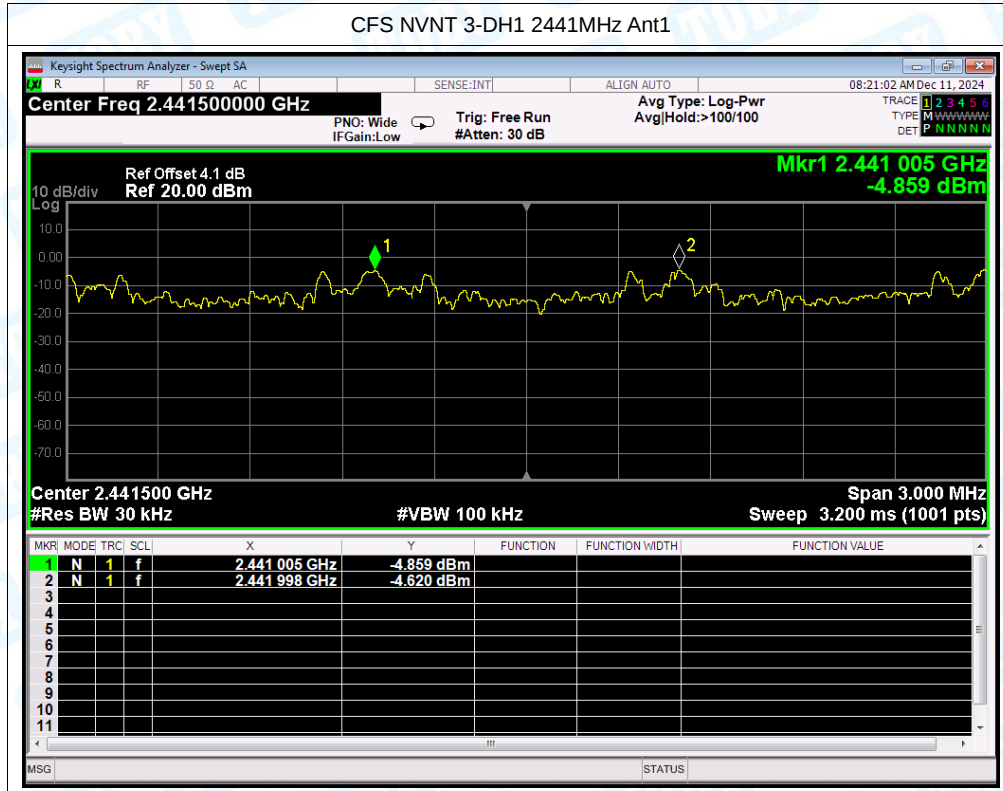
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



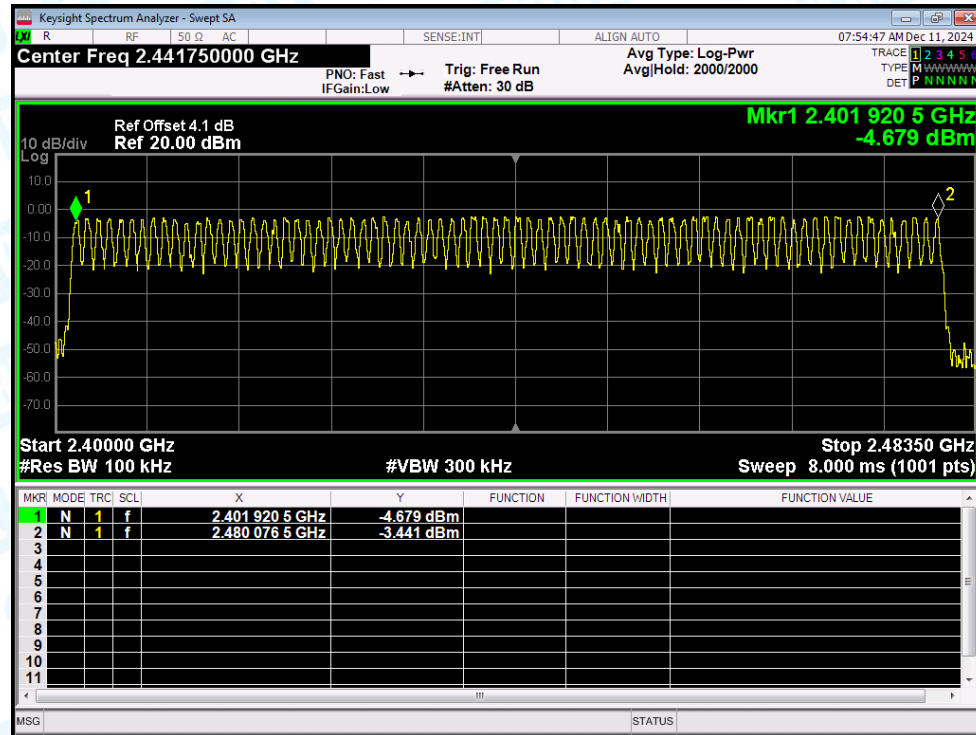


10.Number of Hopping Channel

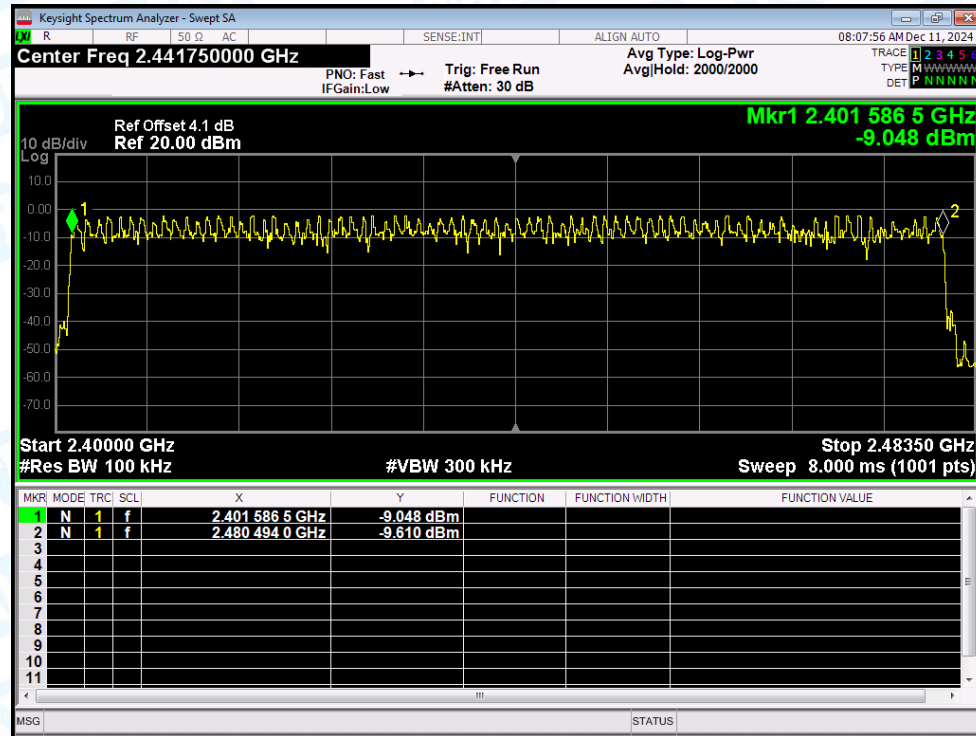
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

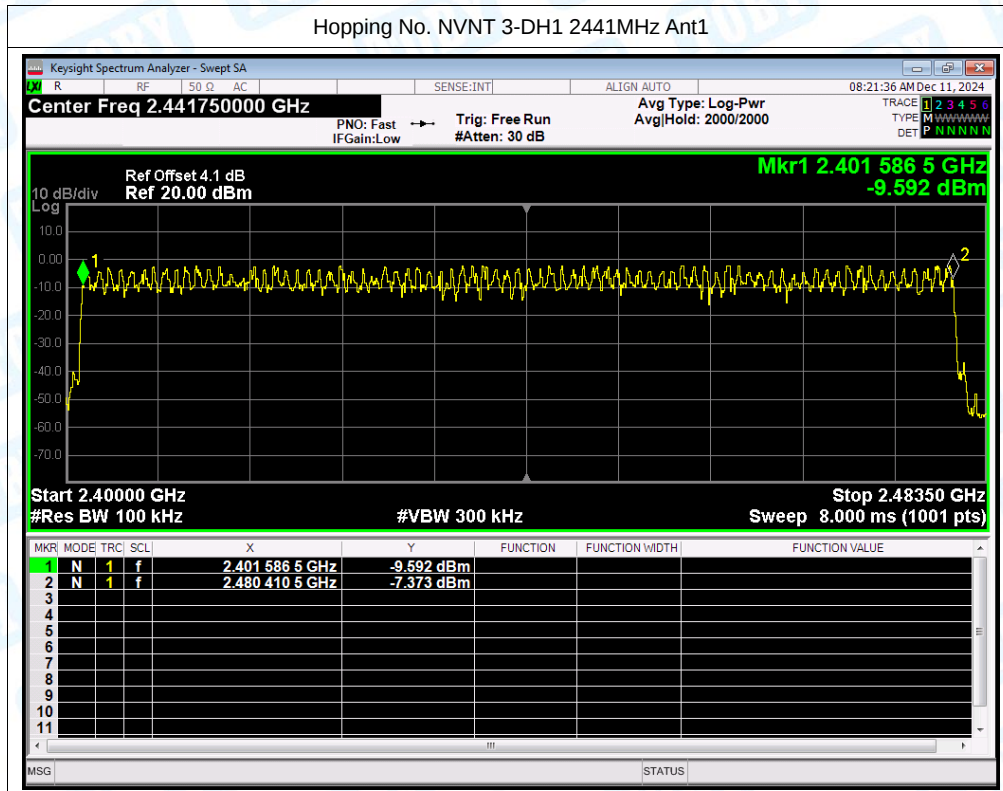
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



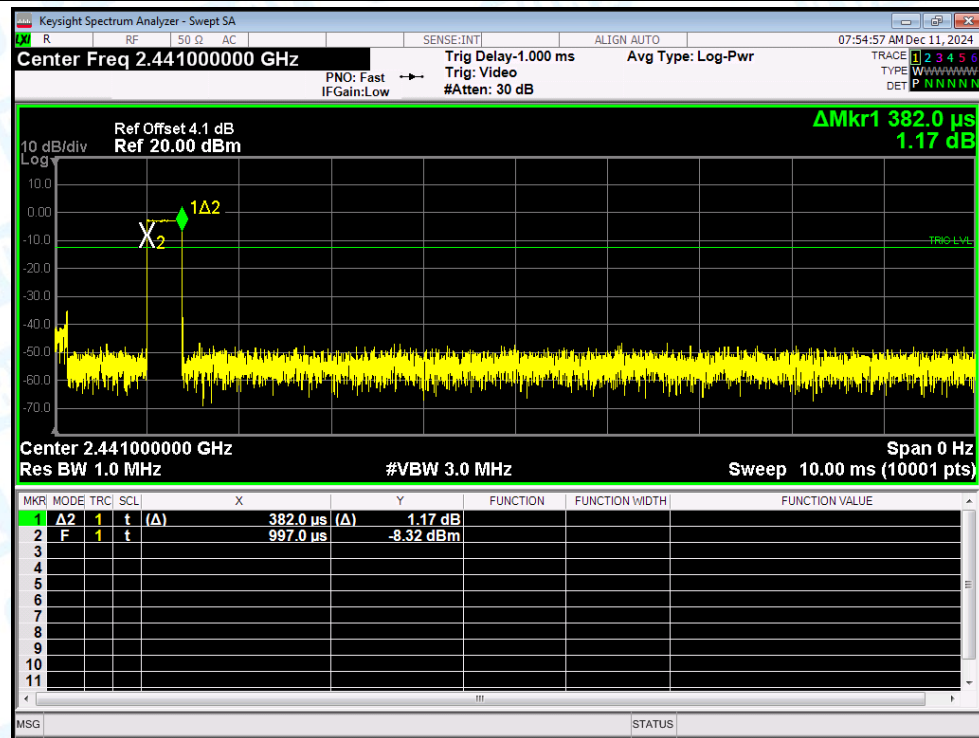


11.Dwell Time

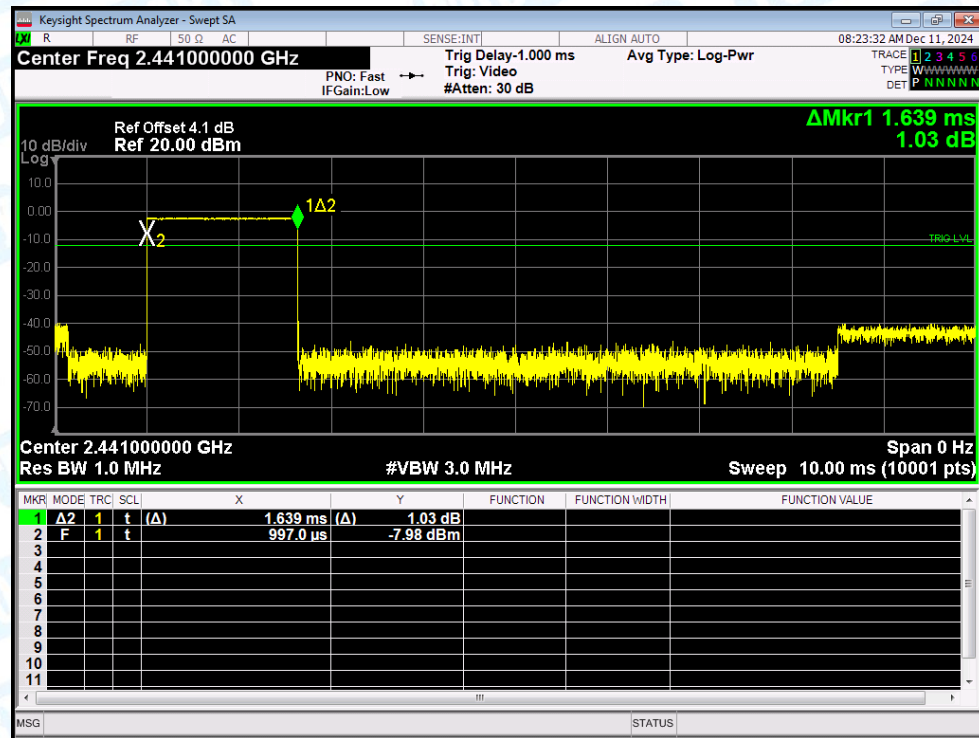
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.382	122.24	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.887	307.947	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.39	124.8	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.885	307.733	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.391	125.12	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.642	262.72	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.894	308.693	31600	400	Pass

Test Graphs

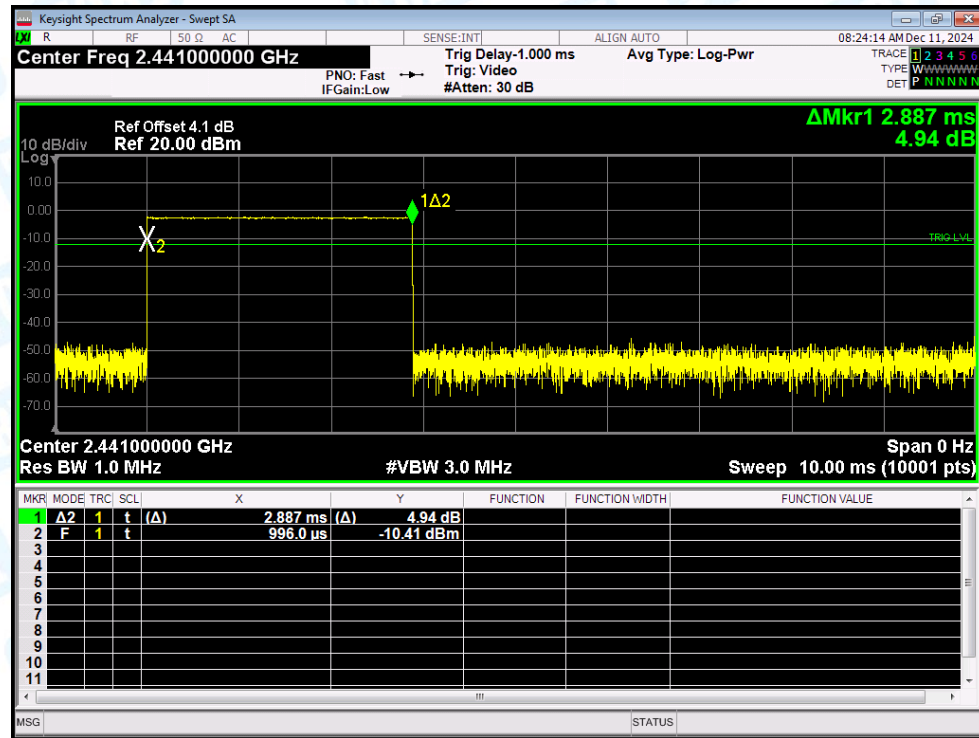
Dwell NVNT 1-DH1 2441MHz Ant1



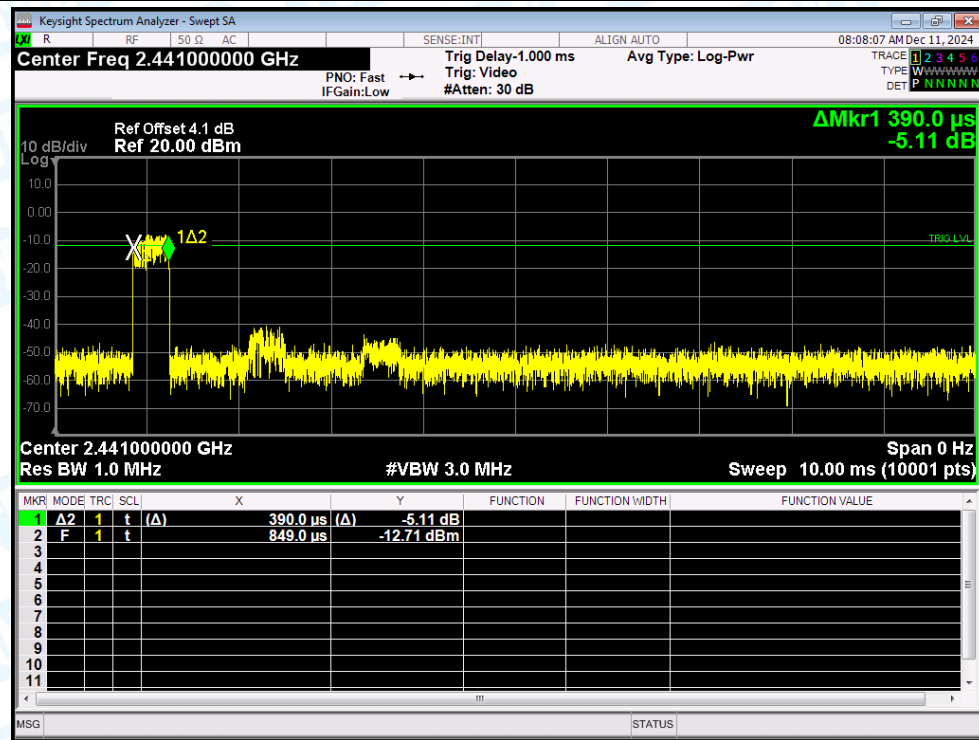
Dwell NVNT 1-DH3 2441MHz Ant1



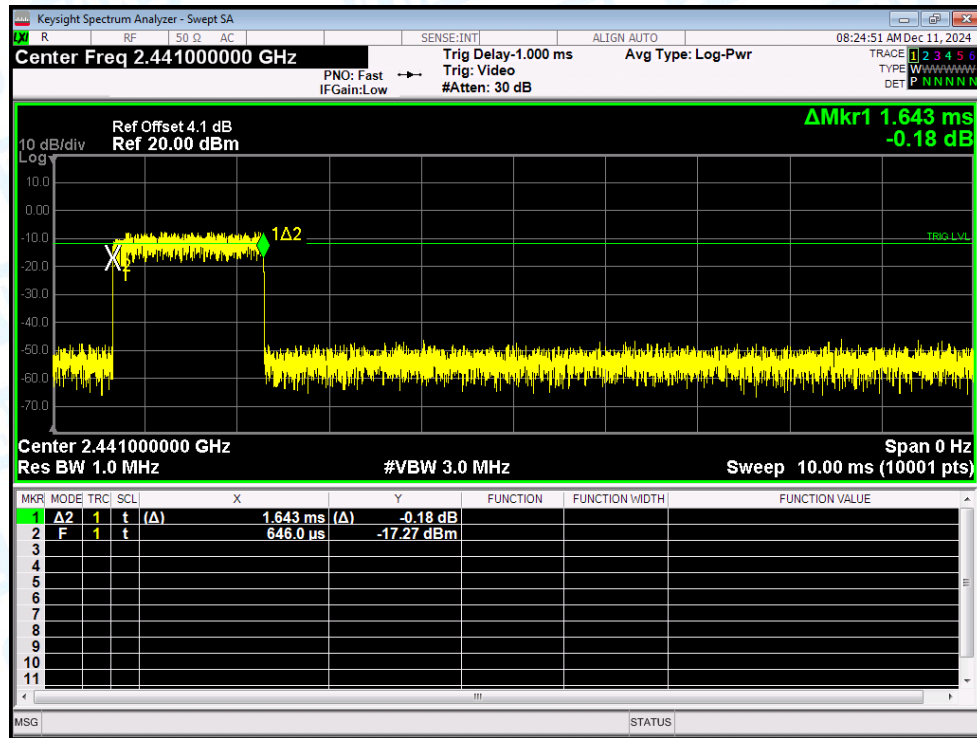
Dwell NVNT 1-DH5 2441MHz Ant1



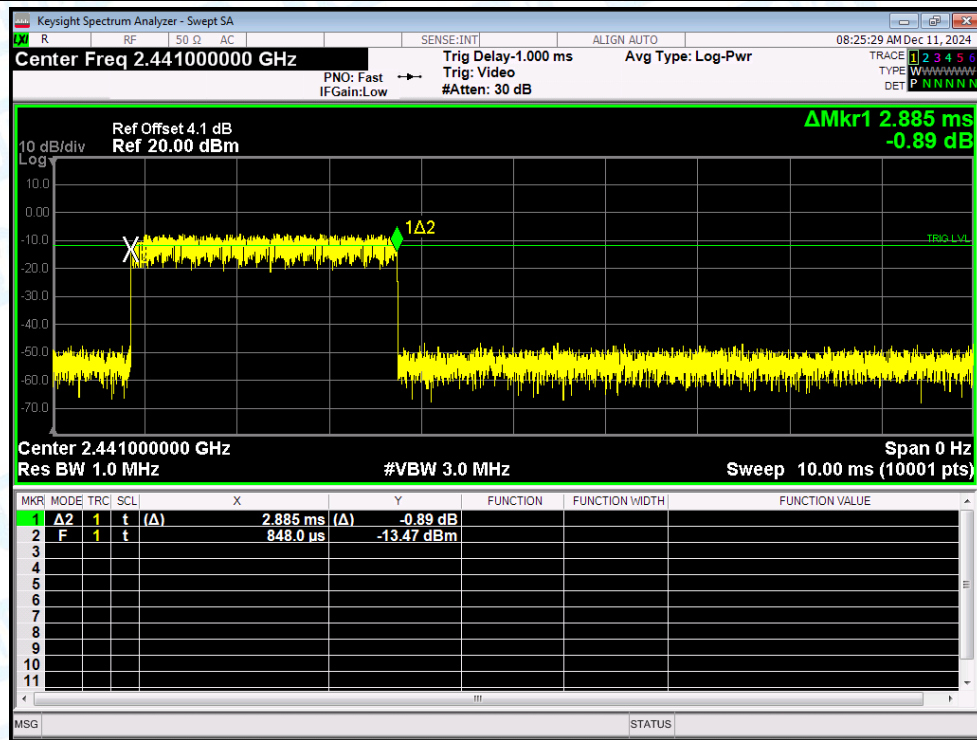
Dwell NVNT 2-DH1 2441MHz Ant1



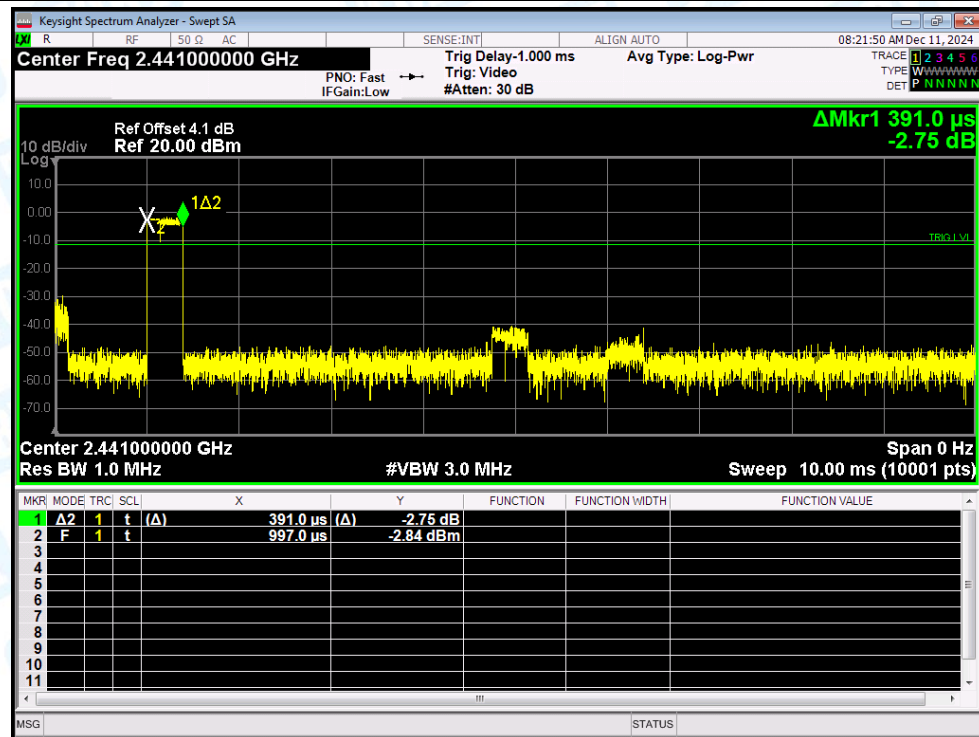
Dwell NVNT 2-DH3 2441MHz Ant1



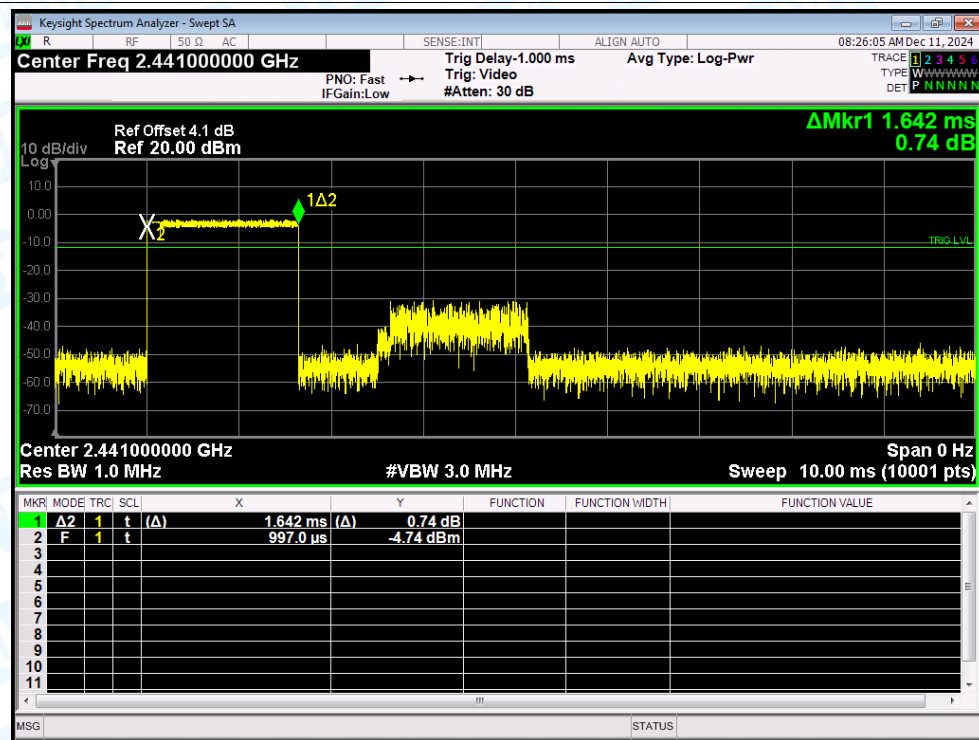
Dwell NVNT 2-DH5 2441MHz Ant1

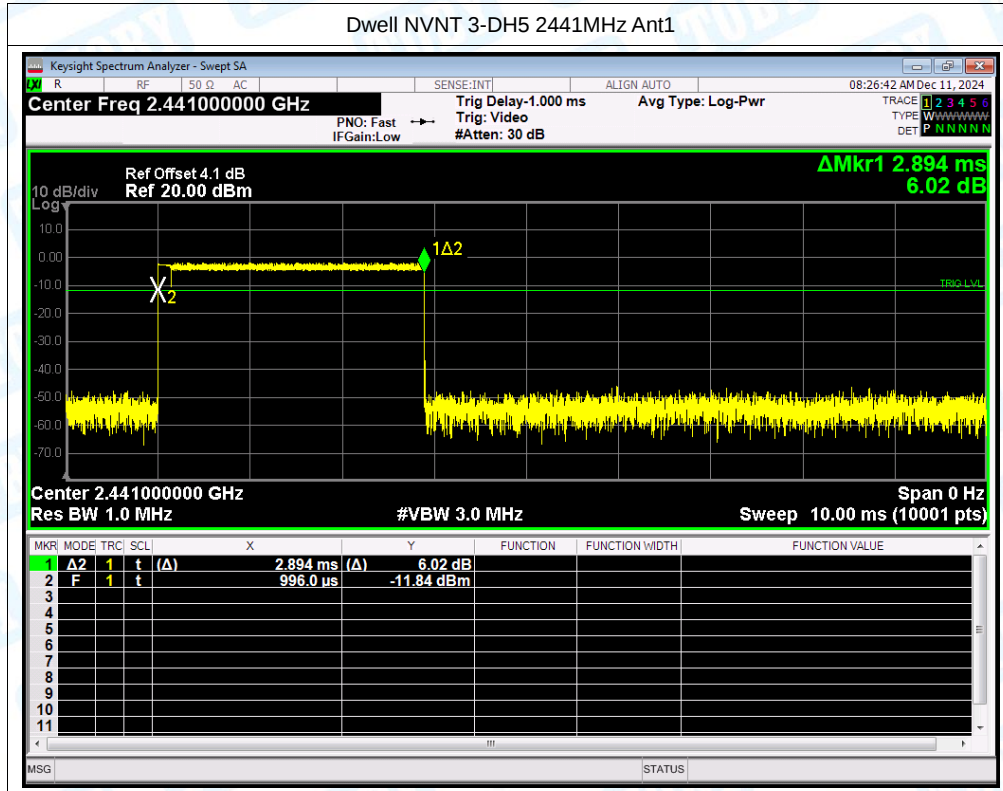


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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