

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Smart Watch
Test Model:	KT79
Sample ID:	HC-C-202408-0165-02-01
Environmental Conditions	
Temperature:	24.2℃
Relative Humidity:	52.8%
Test Voltage:	DC 3.7V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202408-0165-61 The report only show the worst case data.	

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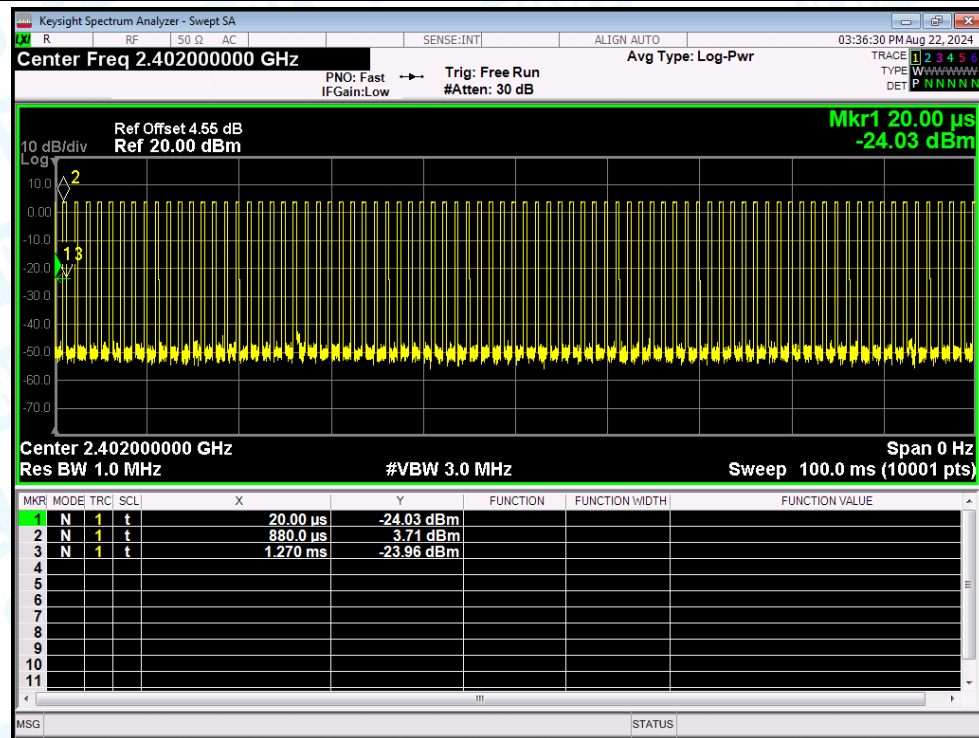
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1. Duty Cycle

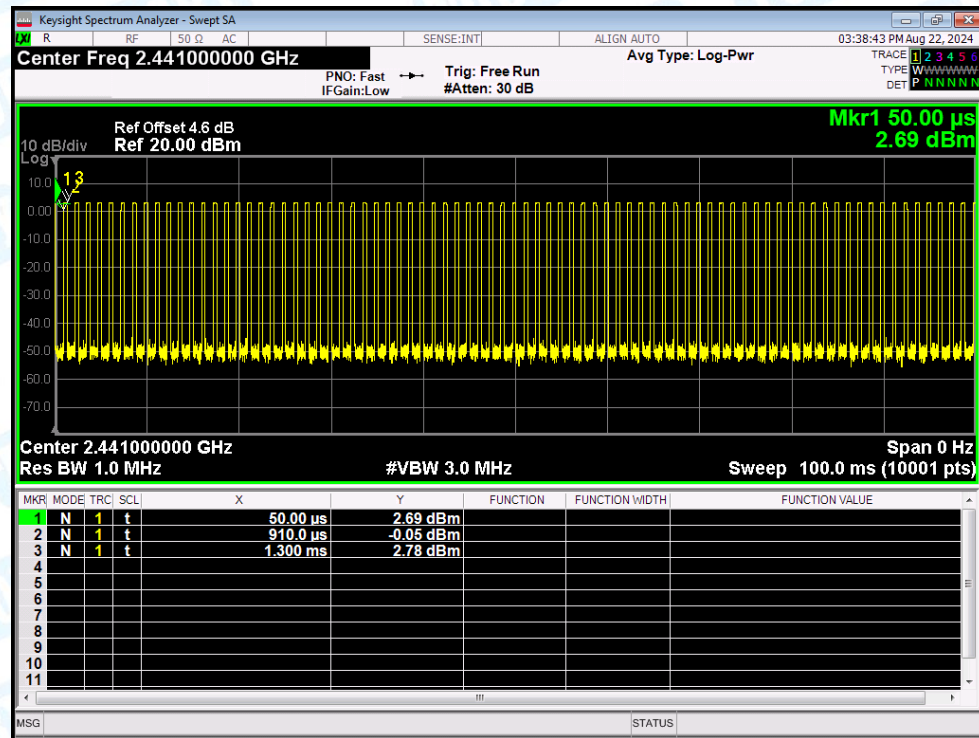
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	1-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	1-DH1	2480	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	32	4.95	2.5
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT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

Test Graphs

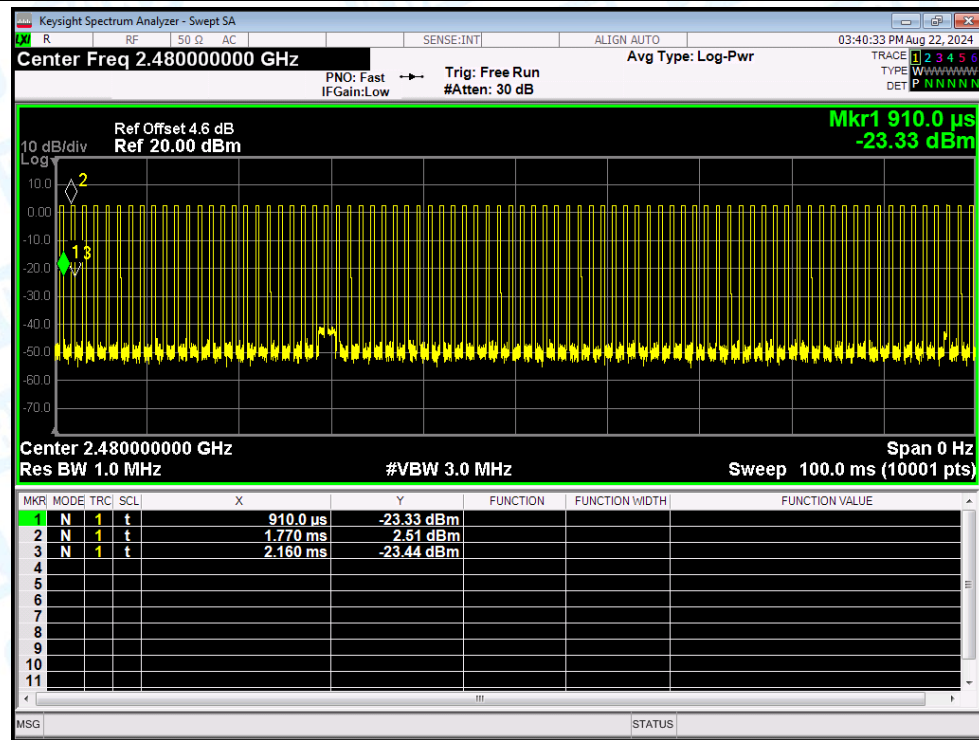
Duty Cycle NVNT 1-DH1 2402MHz Ant1



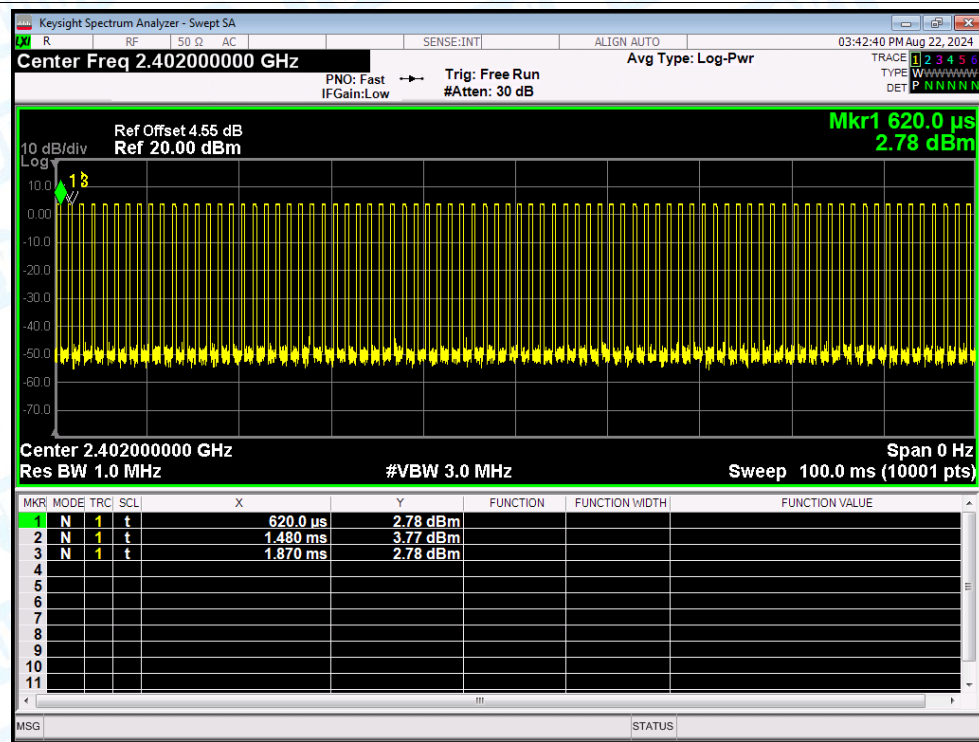
Duty Cycle NVNT 1-DH1 2441MHz Ant1



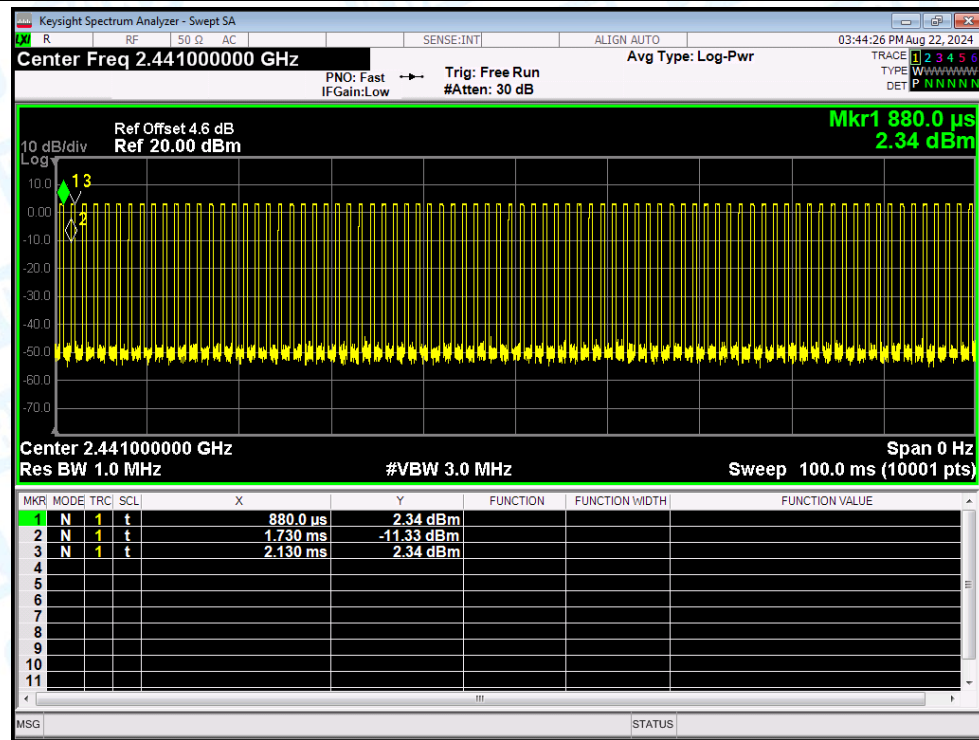
Duty Cycle NVNT 1-DH1 2480MHz Ant1



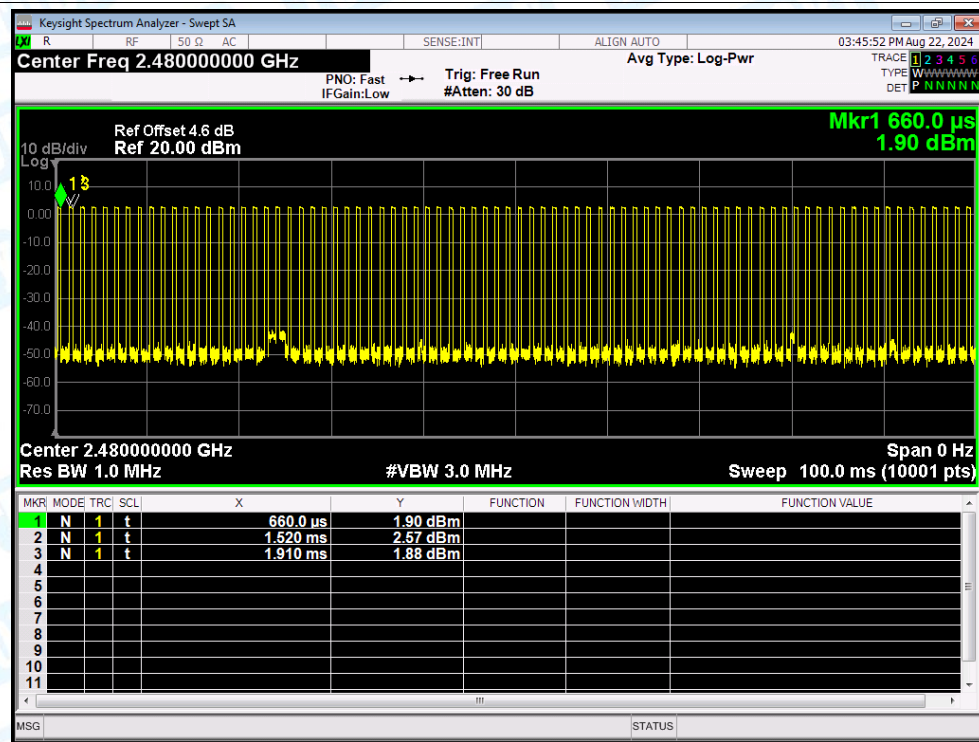
Duty Cycle NVNT 2-DH1 2402MHz Ant1



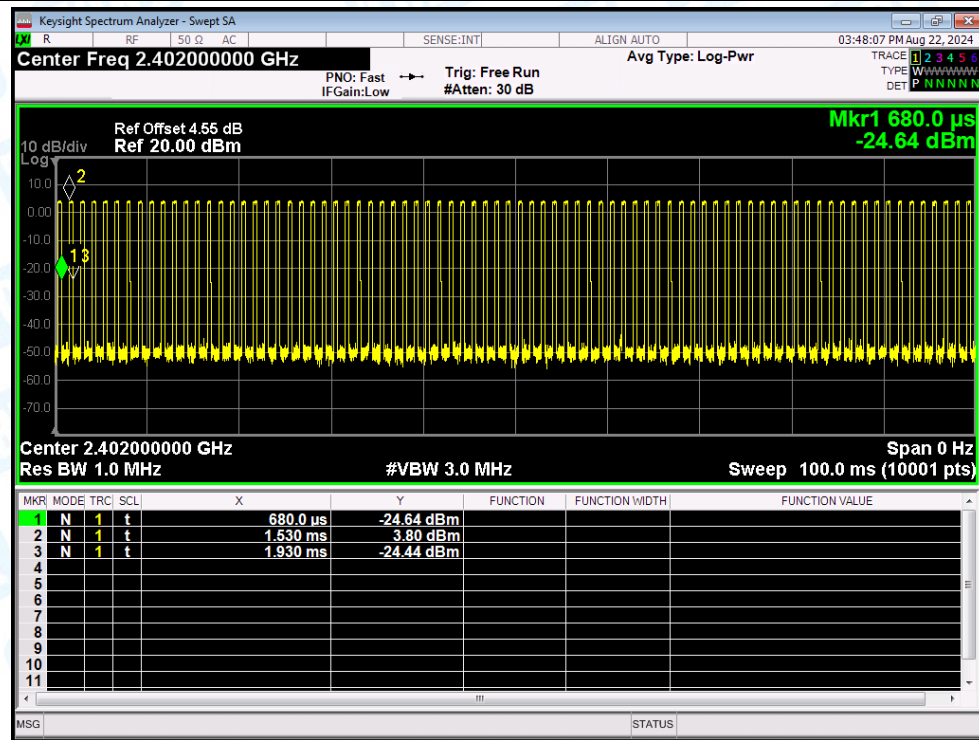
Duty Cycle NVNT 2-DH1 2441MHz Ant1



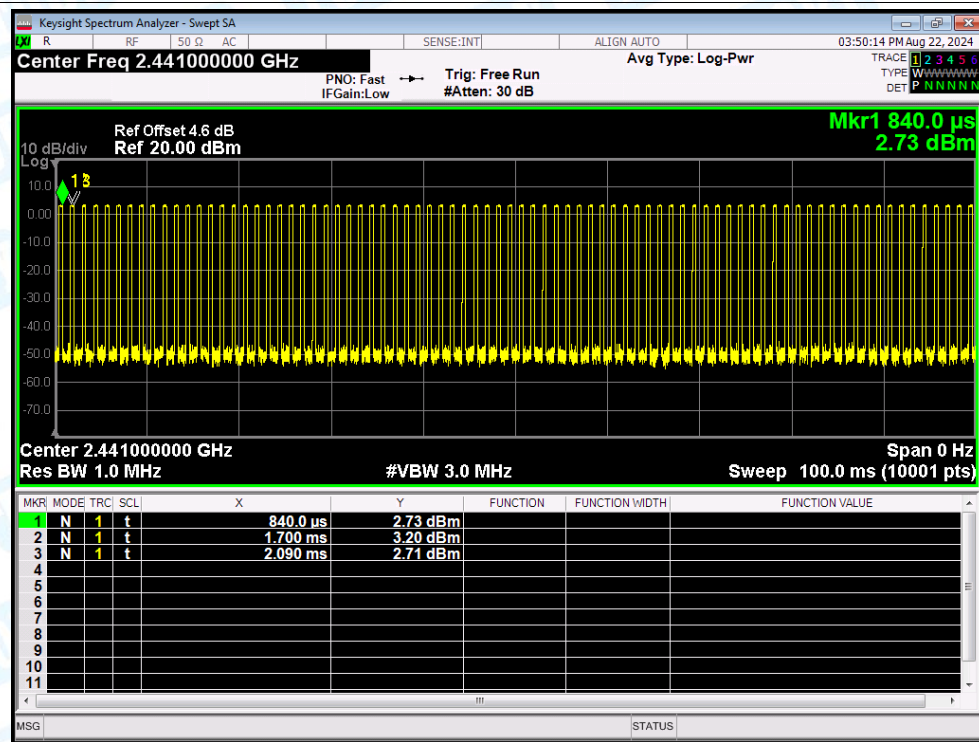
Duty Cycle NVNT 2-DH1 2480MHz Ant1

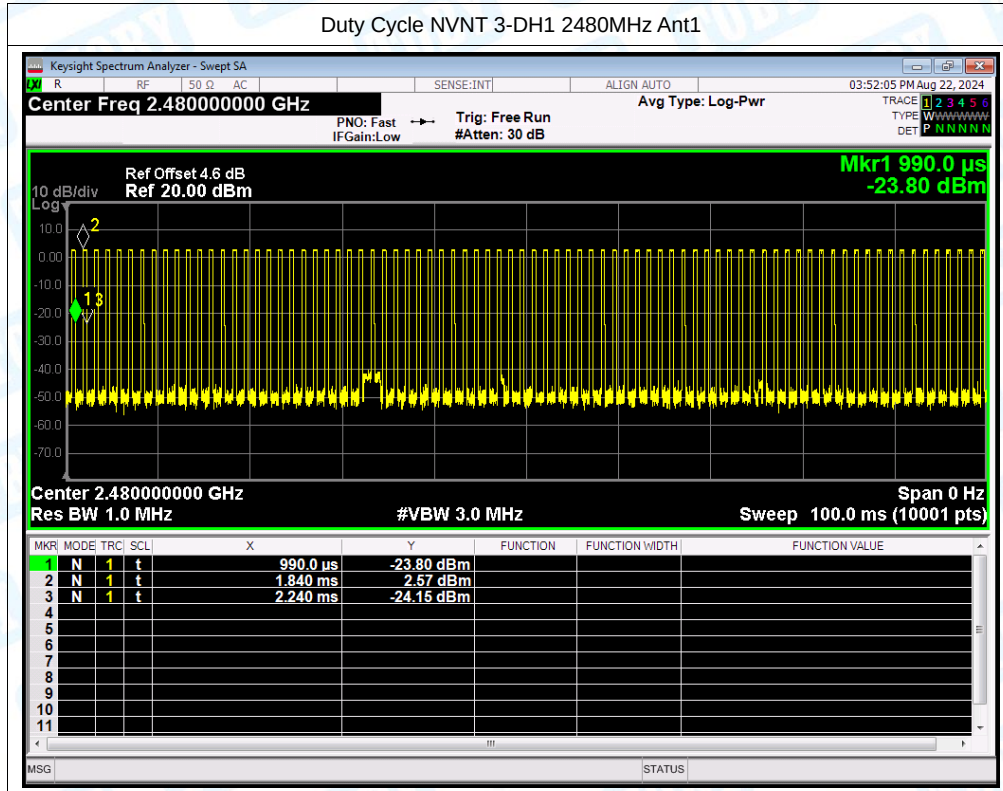


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



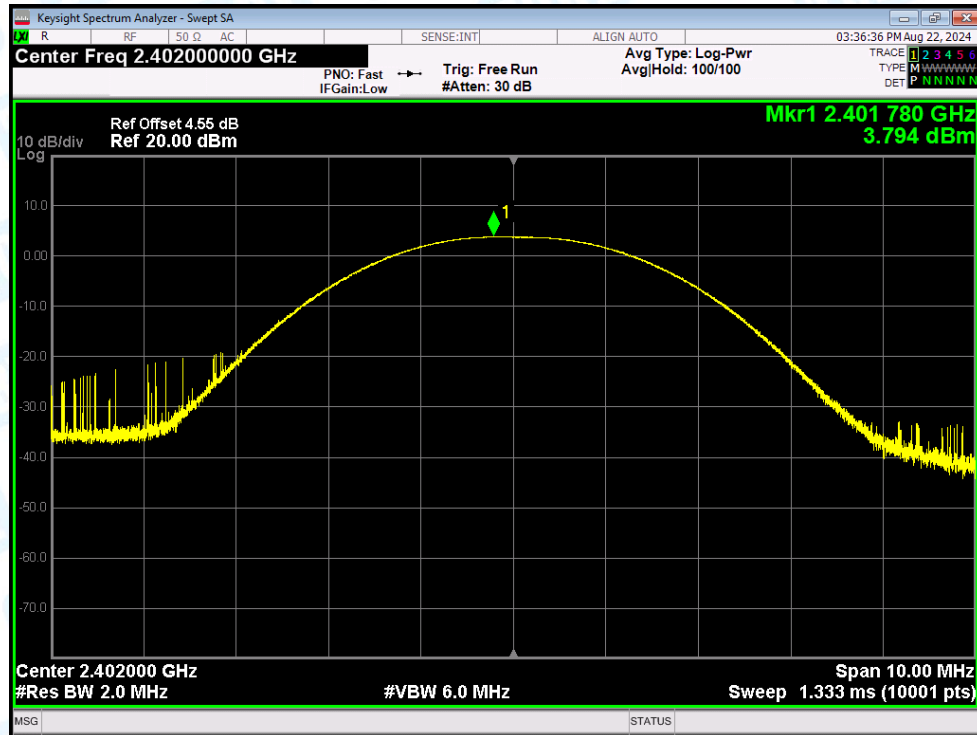


2. Maximum Conducted Output Power

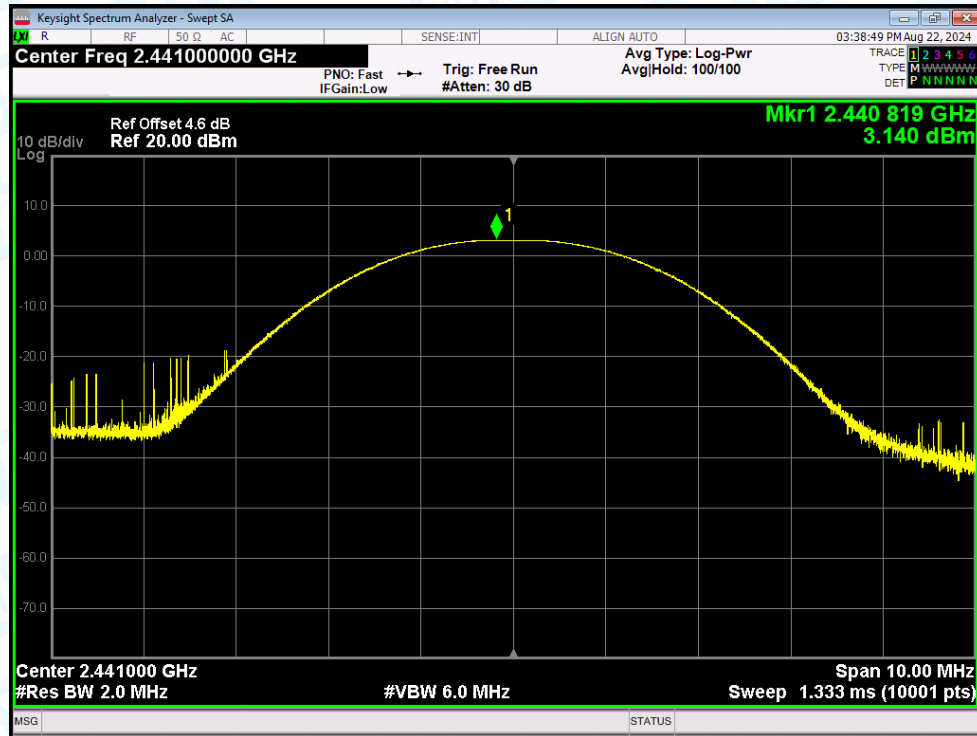
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	3.794	21	Pass
NVNT	1-DH1	2441	Ant1	3.14	21	Pass
NVNT	1-DH1	2480	Ant1	2.632	21	Pass
NVNT	2-DH1	2402	Ant1	4.129	21	Pass
NVNT	2-DH1	2441	Ant1	3.439	21	Pass
NVNT	2-DH1	2480	Ant1	2.821	21	Pass
NVNT	3-DH1	2402	Ant1	4.408	21	Pass
NVNT	3-DH1	2441	Ant1	3.667	21	Pass
NVNT	3-DH1	2480	Ant1	3.041	21	Pass

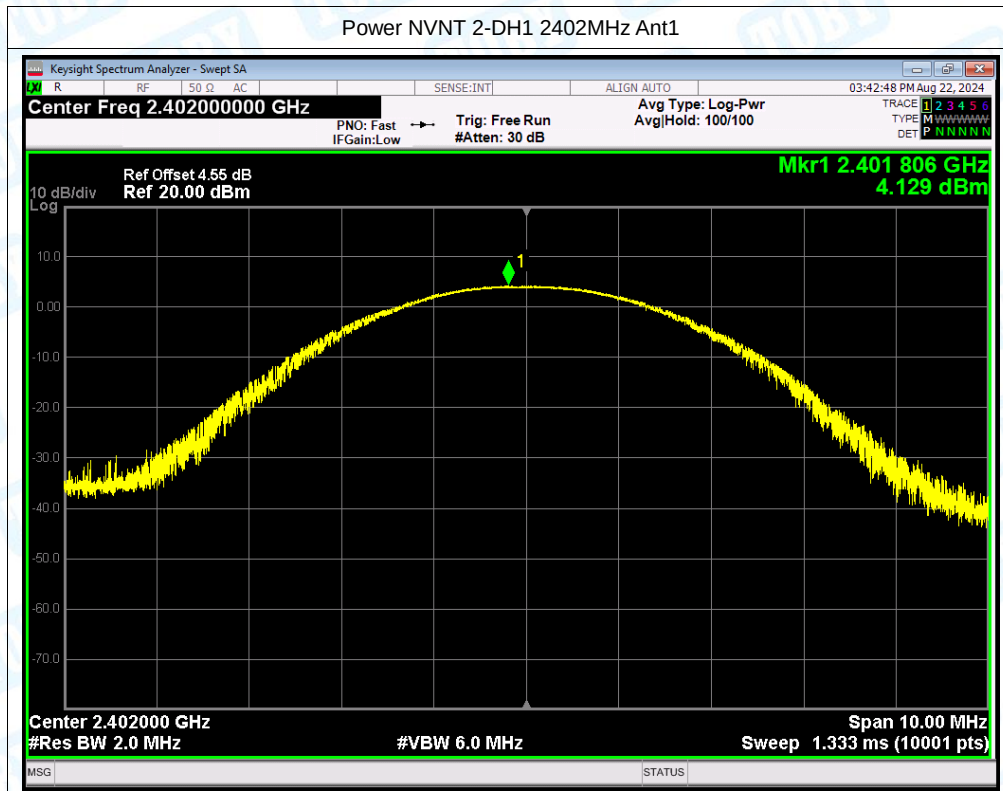
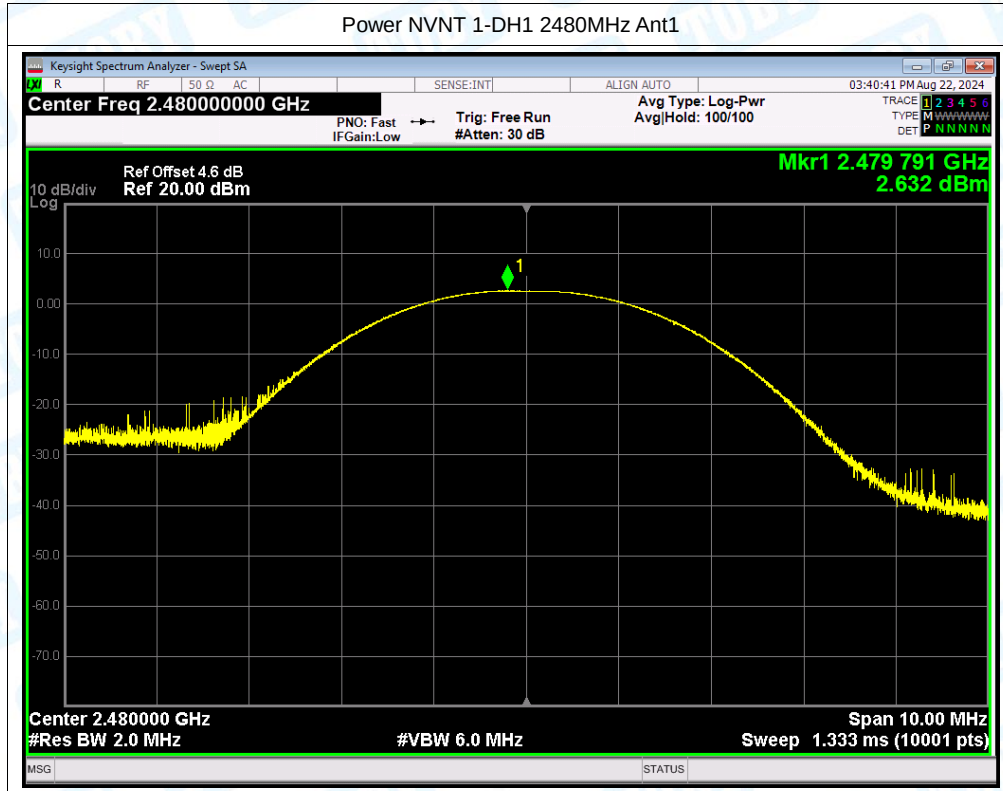
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1

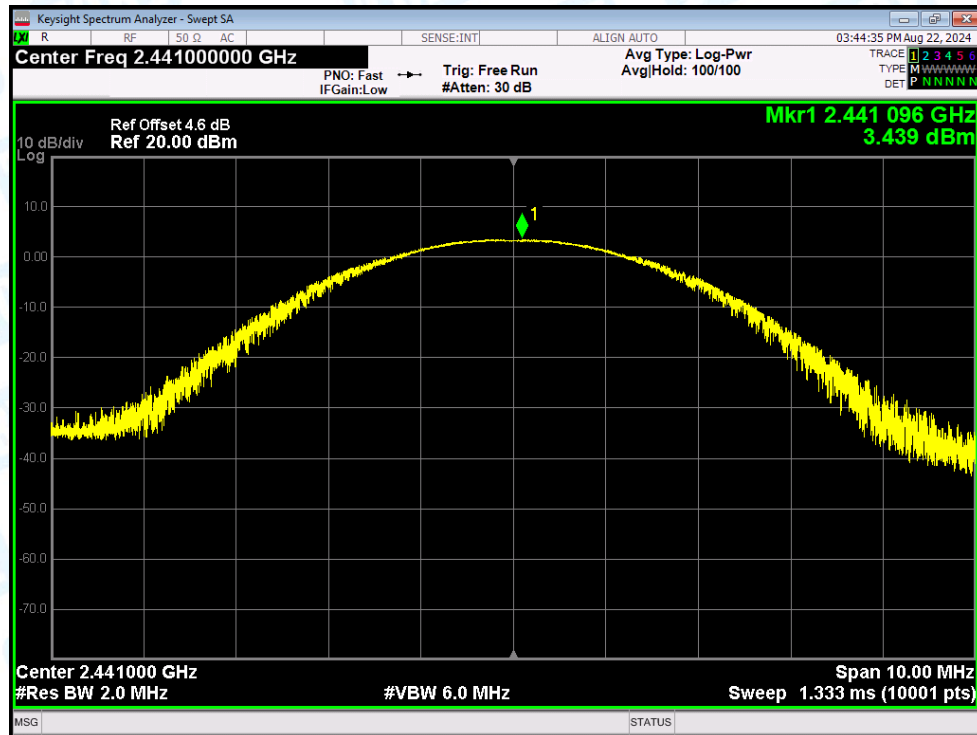


Power NVNT 1-DH1 2441MHz Ant1

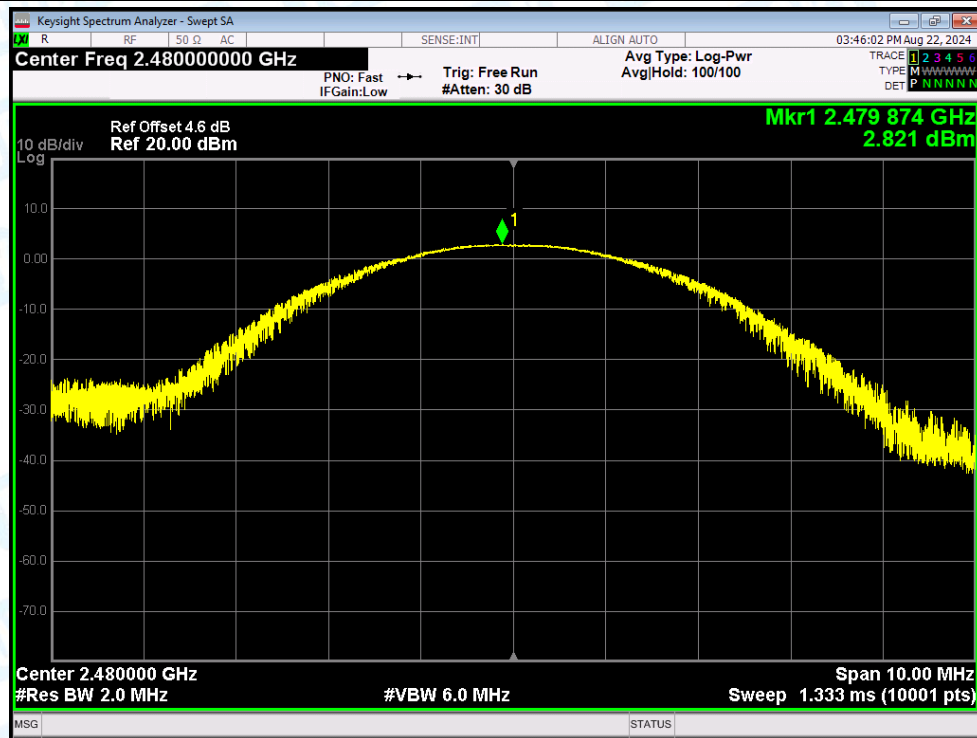




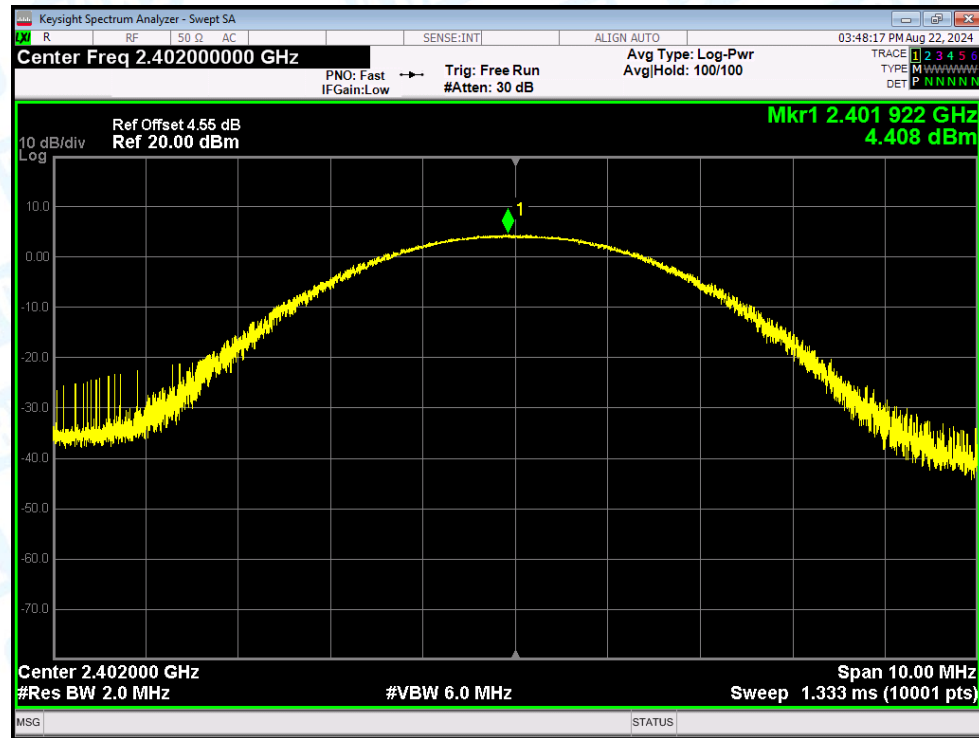
Power NVNT 2-DH1 2441MHz Ant1



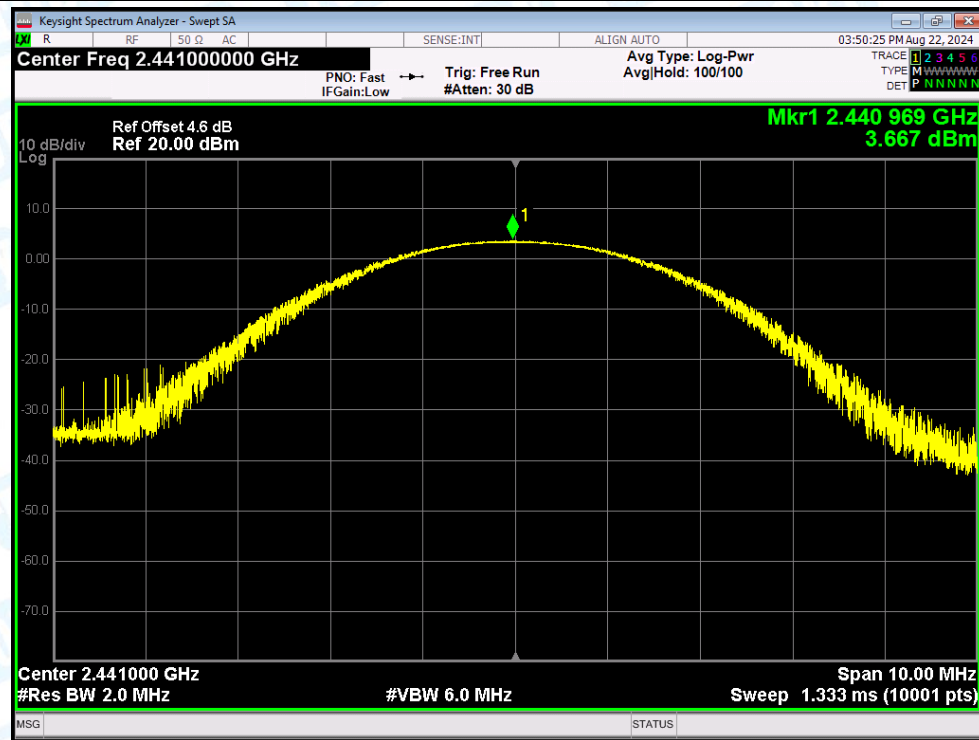
Power NVNT 2-DH1 2480MHz Ant1

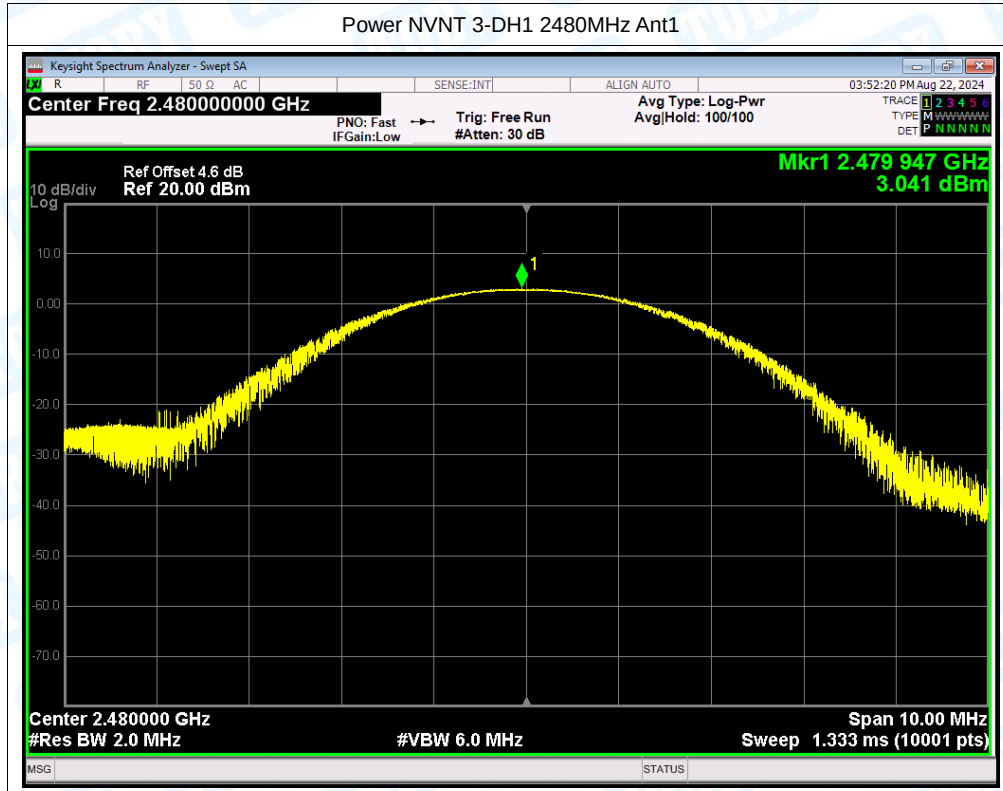


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



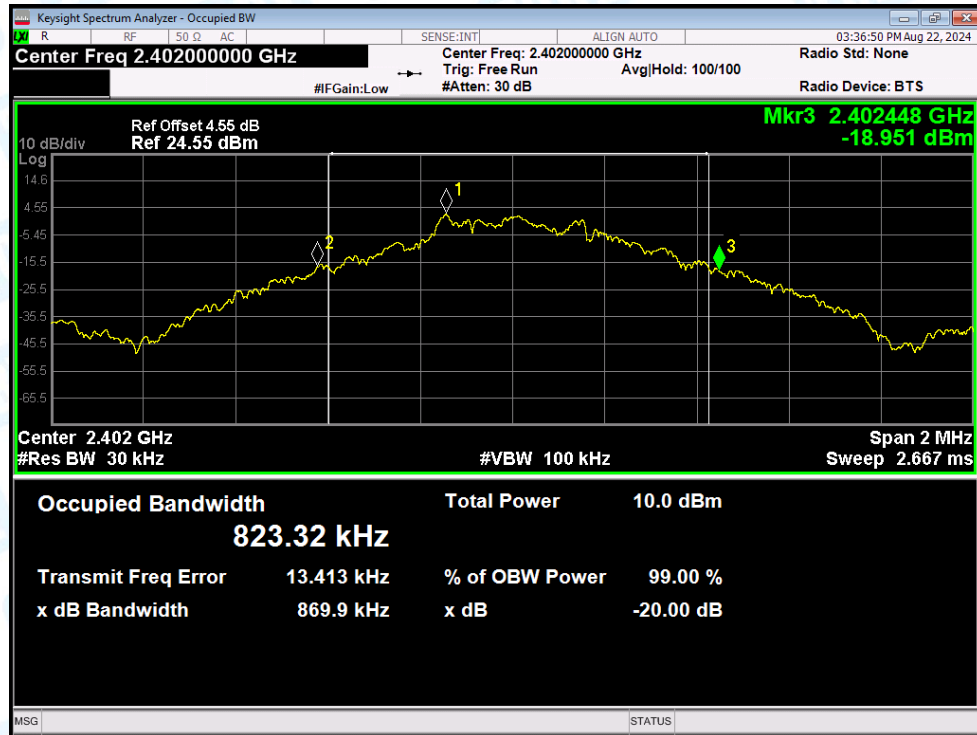


3. -20dB Bandwidth

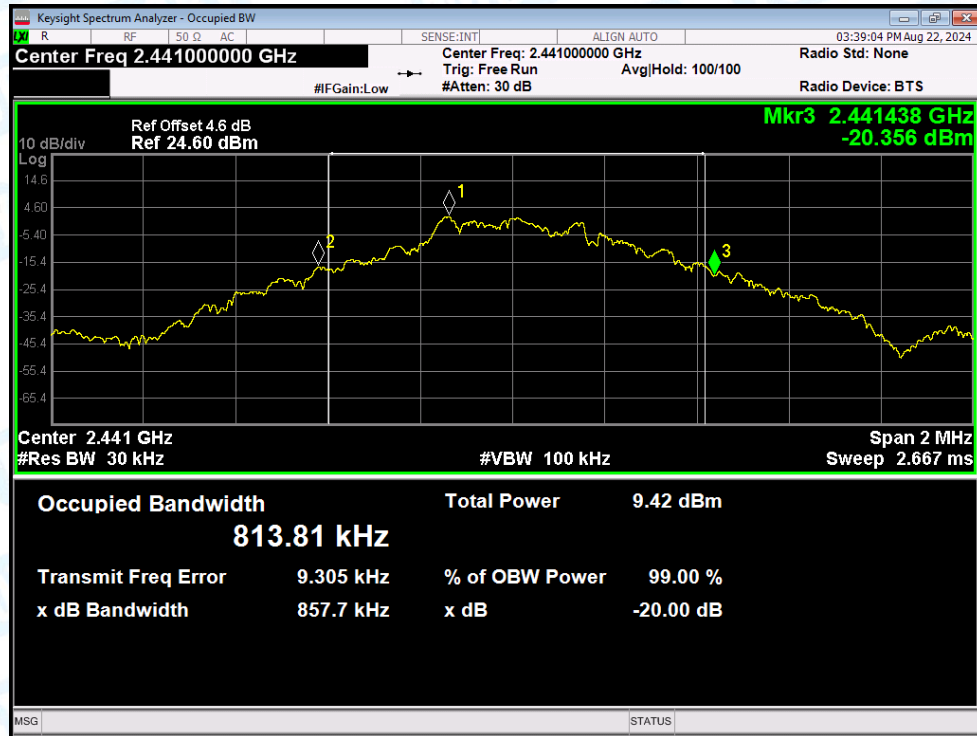
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.87	0	Pass
NVNT	1-DH1	2441	Ant1	0.86	0	Pass
NVNT	1-DH1	2480	Ant1	0.86	0	Pass
NVNT	2-DH1	2402	Ant1	1.25	0	Pass
NVNT	2-DH1	2441	Ant1	1.27	0	Pass
NVNT	2-DH1	2480	Ant1	1.28	0	Pass
NVNT	3-DH1	2402	Ant1	1.24	0	Pass
NVNT	3-DH1	2441	Ant1	1.26	0	Pass
NVNT	3-DH1	2480	Ant1	1.27	0	Pass

Test Graphs

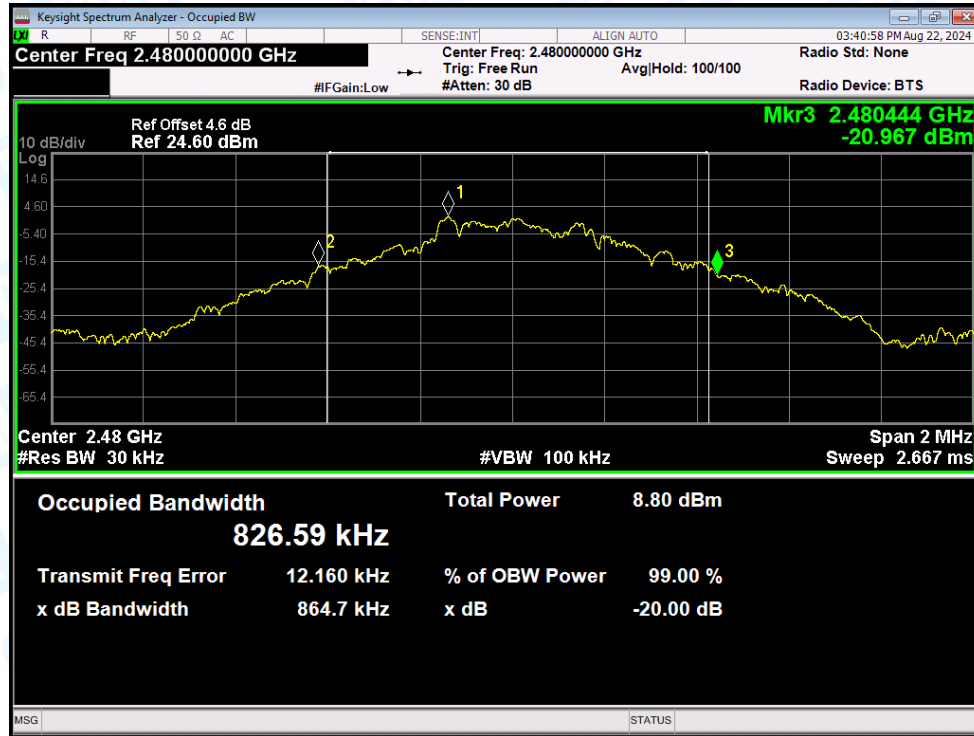
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



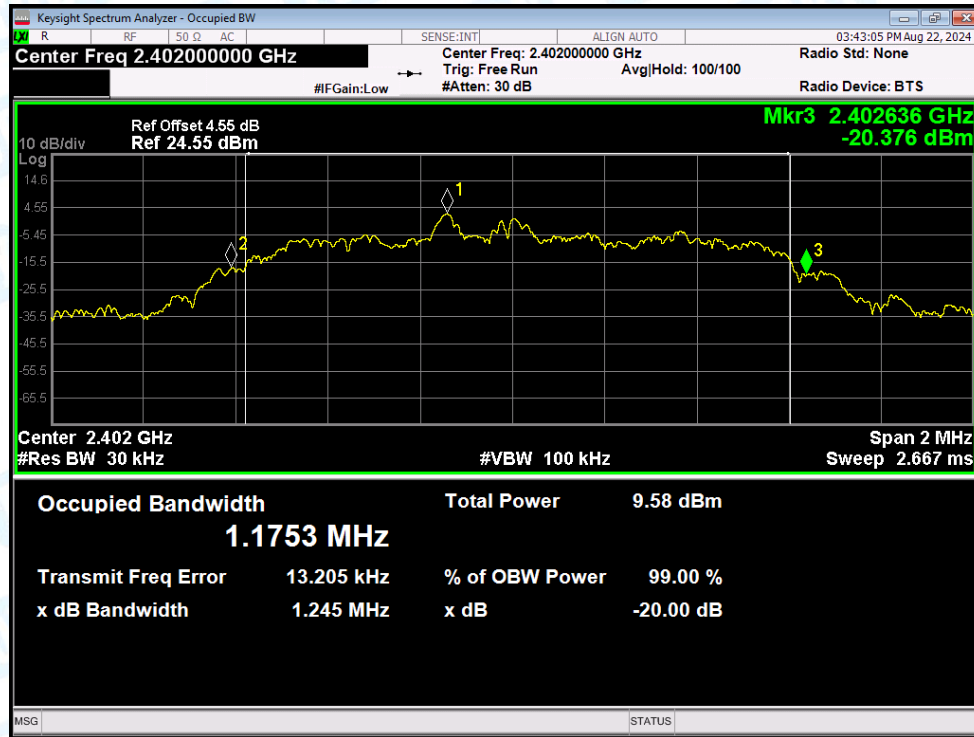
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



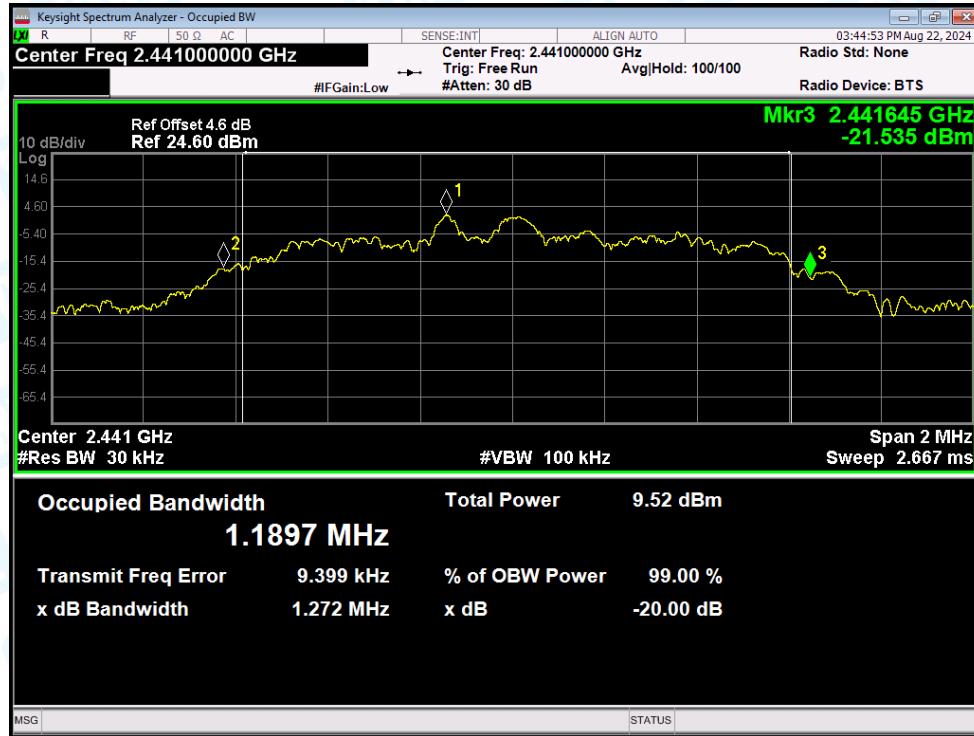
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



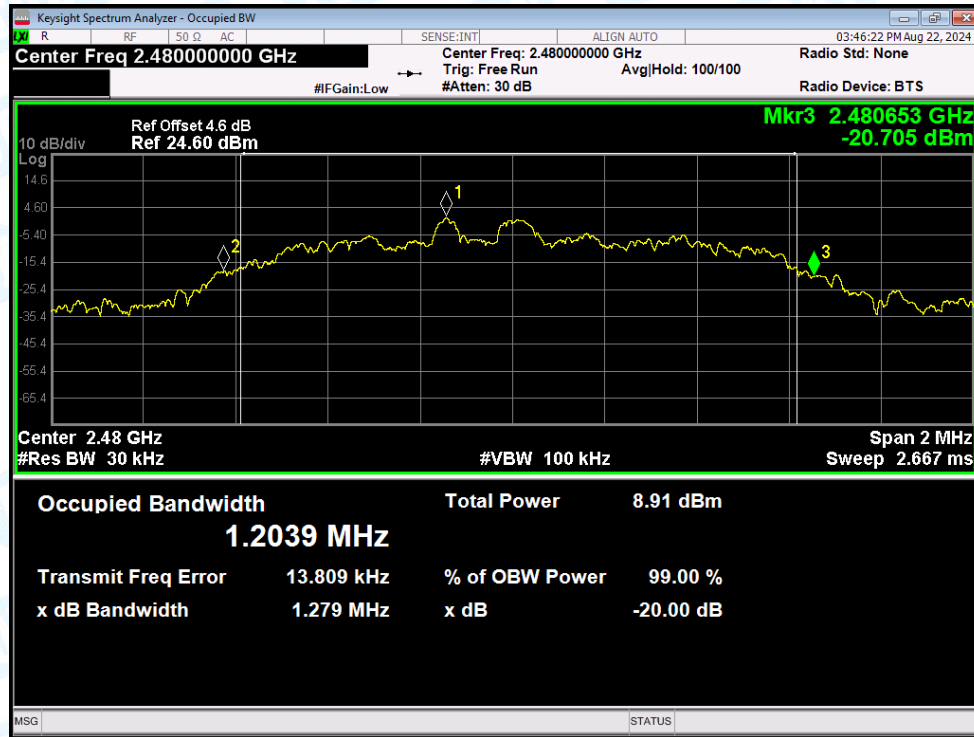
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



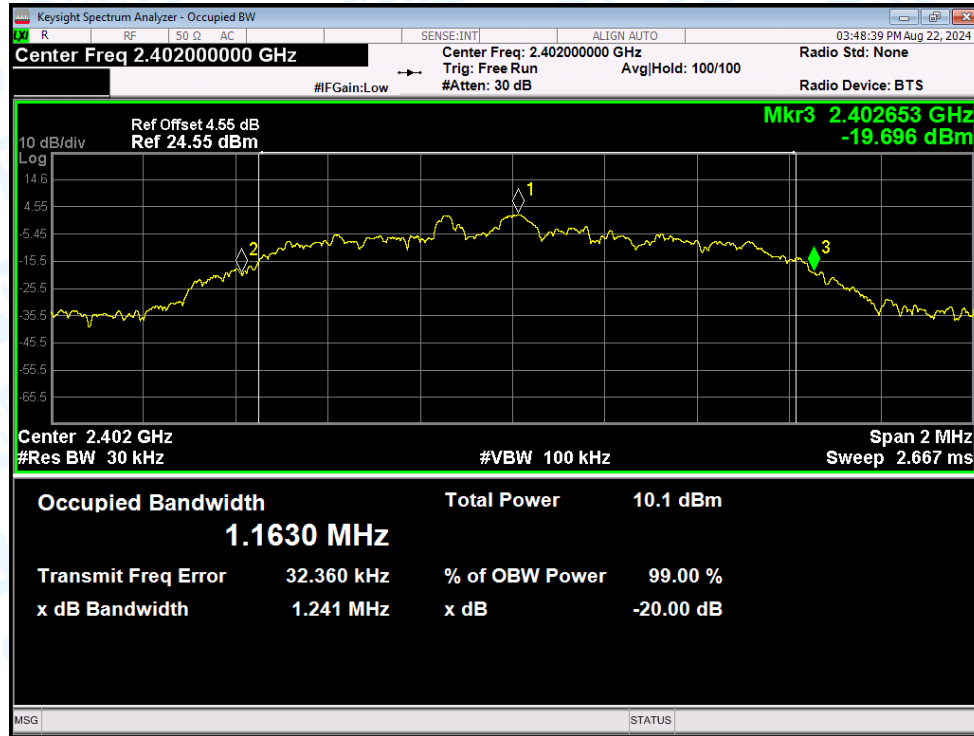
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



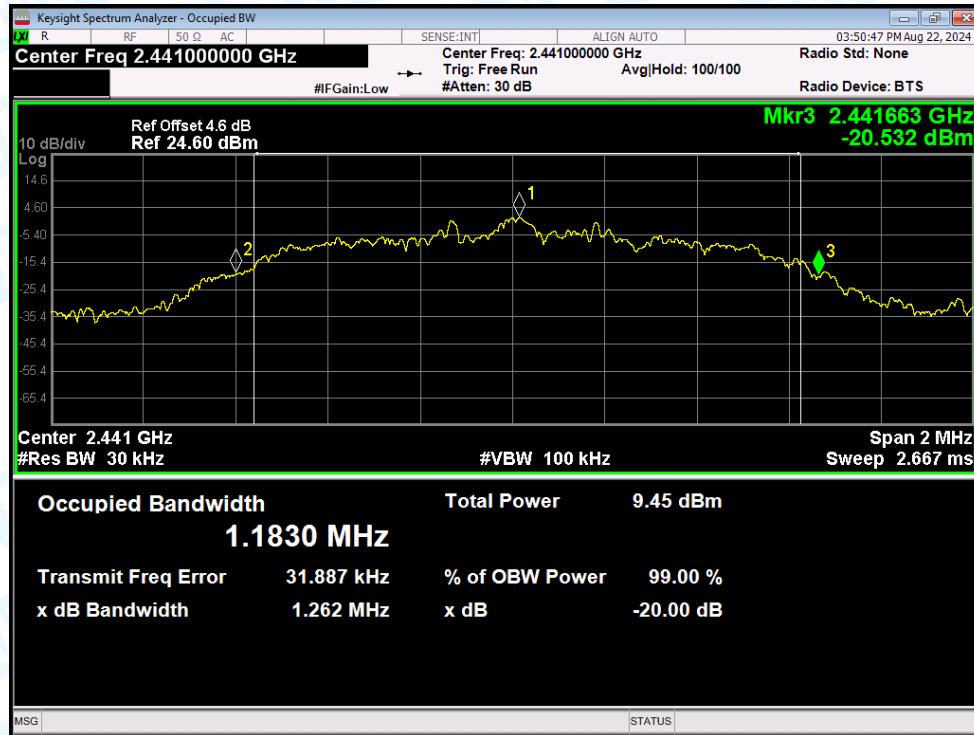
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

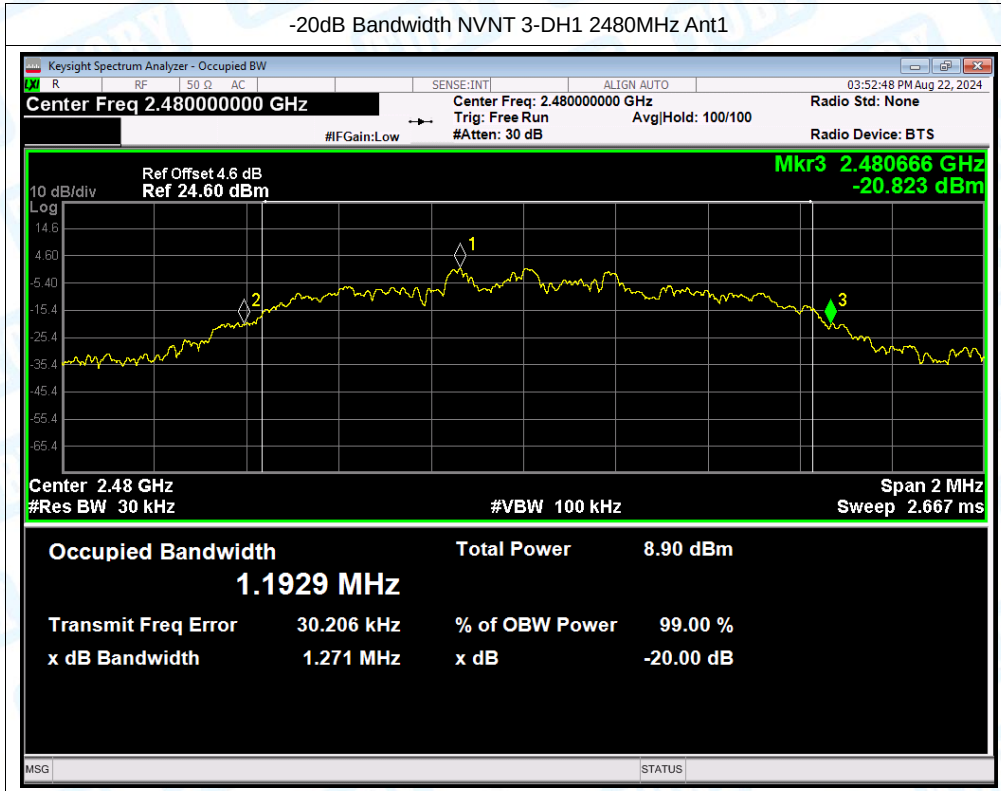


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



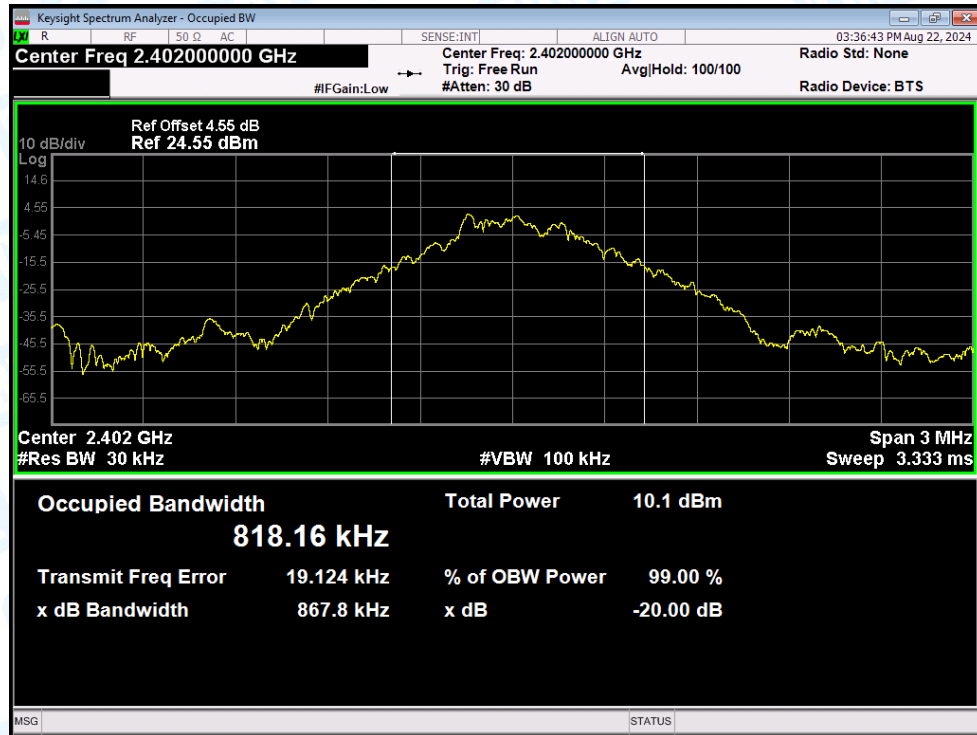


4. Occupied Channel Bandwidth

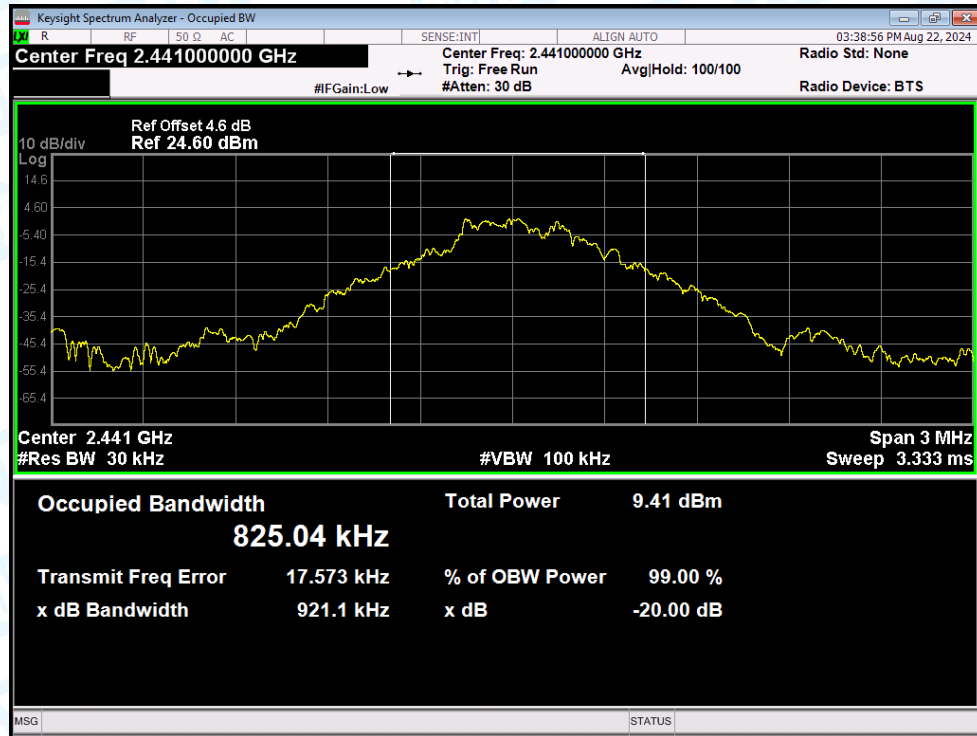
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.818
NVNT	1-DH1	2441	Ant1	0.825
NVNT	1-DH1	2480	Ant1	0.853
NVNT	2-DH1	2402	Ant1	1.207
NVNT	2-DH1	2441	Ant1	1.249
NVNT	2-DH1	2480	Ant1	1.297
NVNT	3-DH1	2402	Ant1	1.185
NVNT	3-DH1	2441	Ant1	1.226
NVNT	3-DH1	2480	Ant1	1.245

Test Graphs

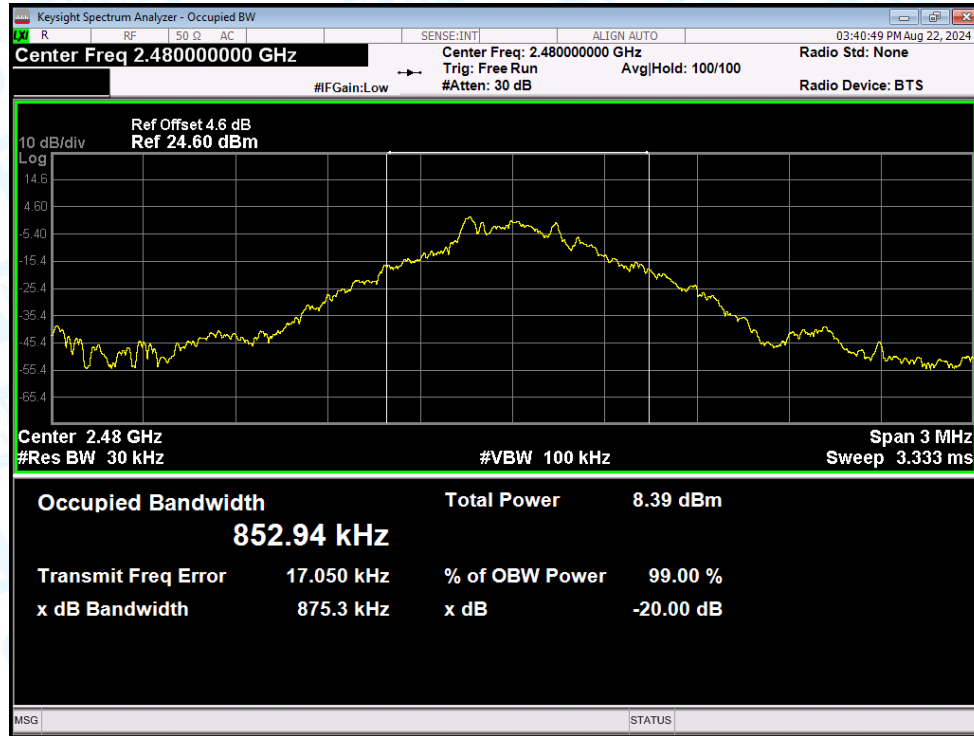
OBW NVNT 1-DH1 2402MHz Ant1



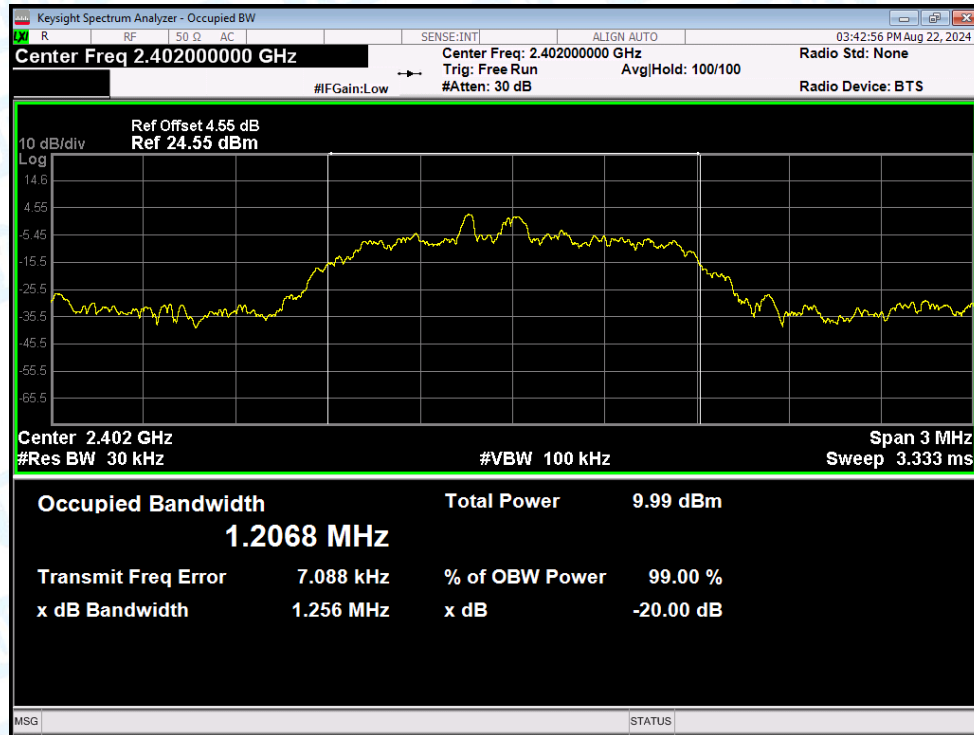
OBW NVNT 1-DH1 2441MHz Ant1



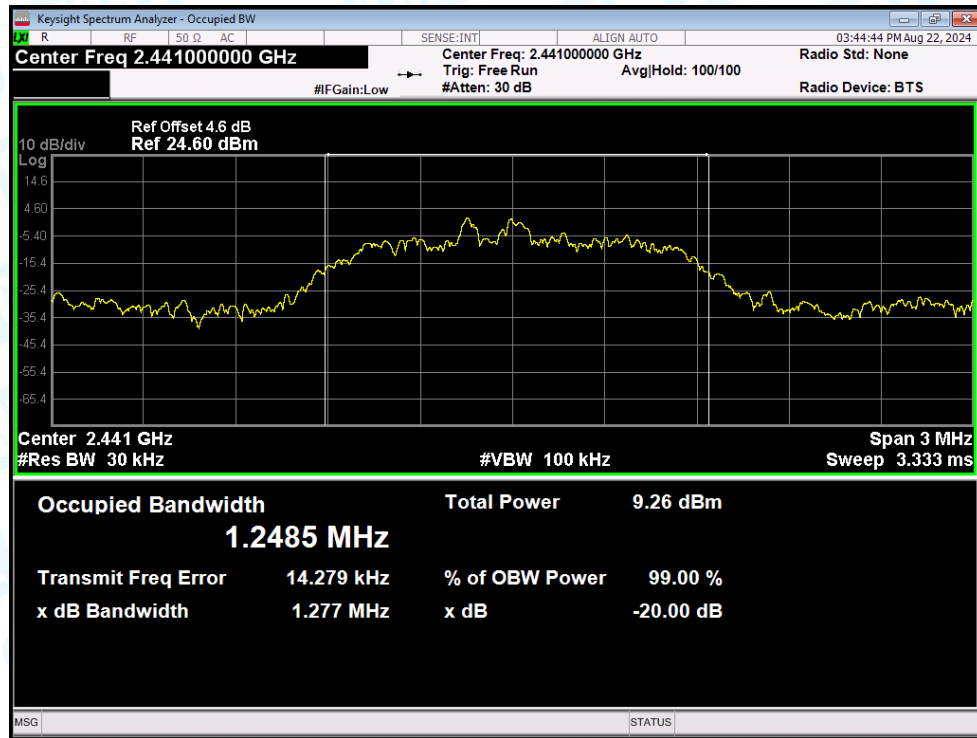
OBW NVNT 1-DH1 2480MHz Ant1



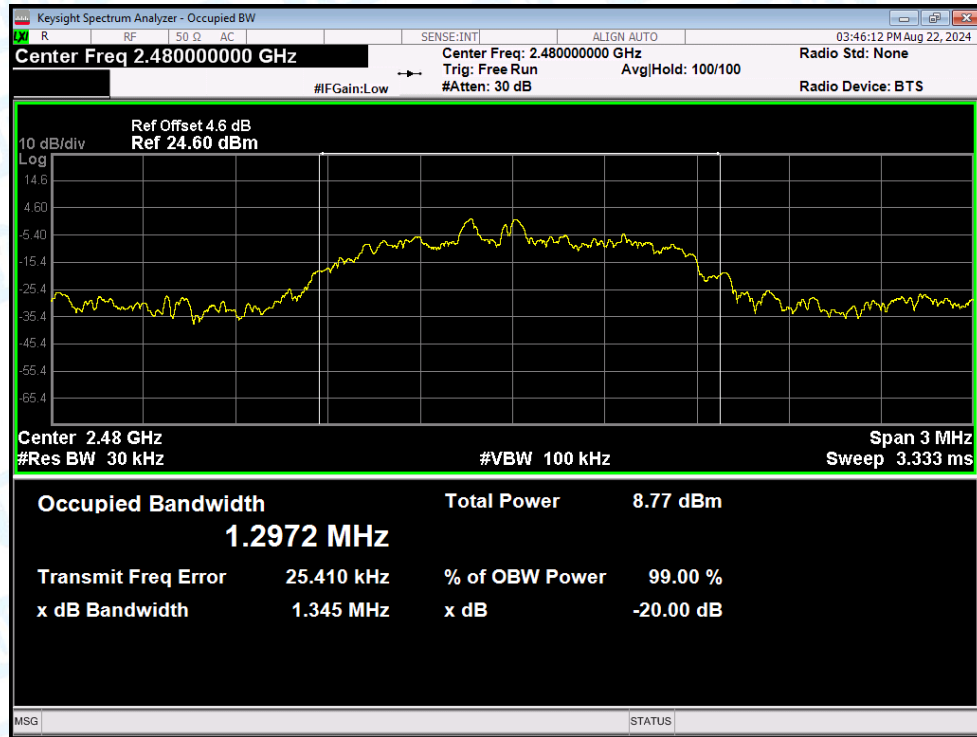
OBW NVNT 2-DH1 2402MHz Ant1



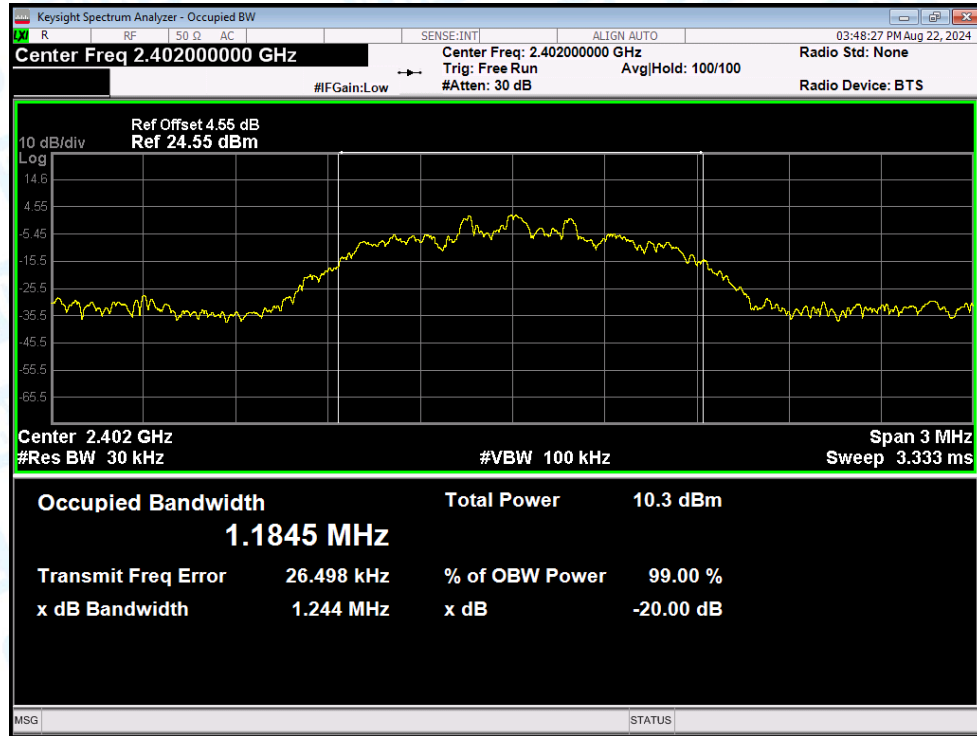
OBW NVNT 2-DH1 2441MHz Ant1



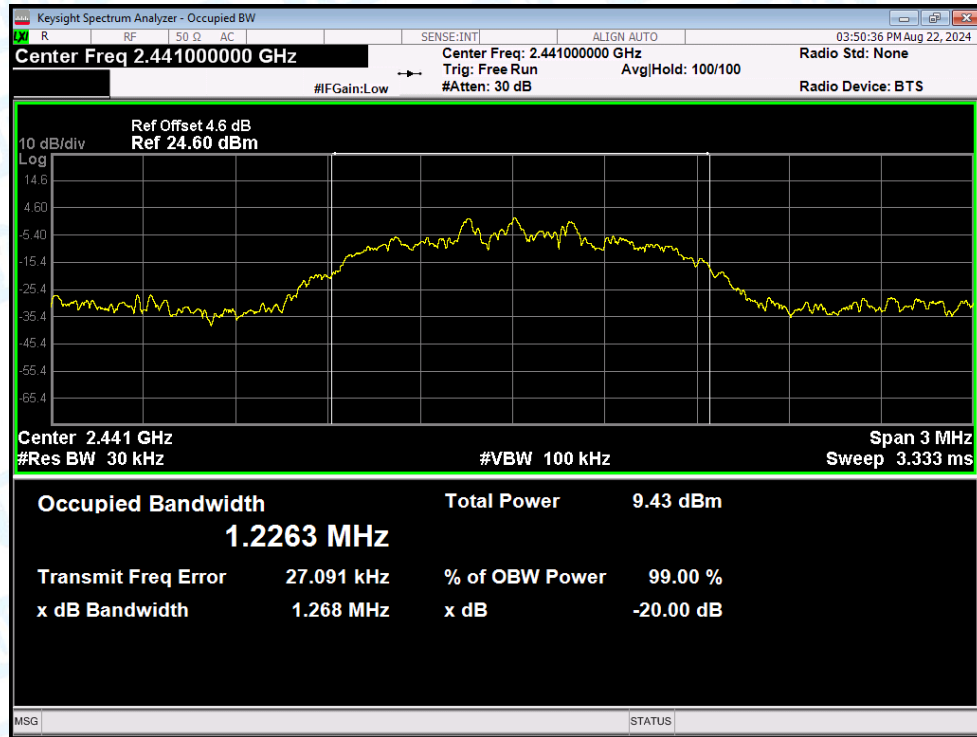
OBW NVNT 2-DH1 2480MHz Ant1

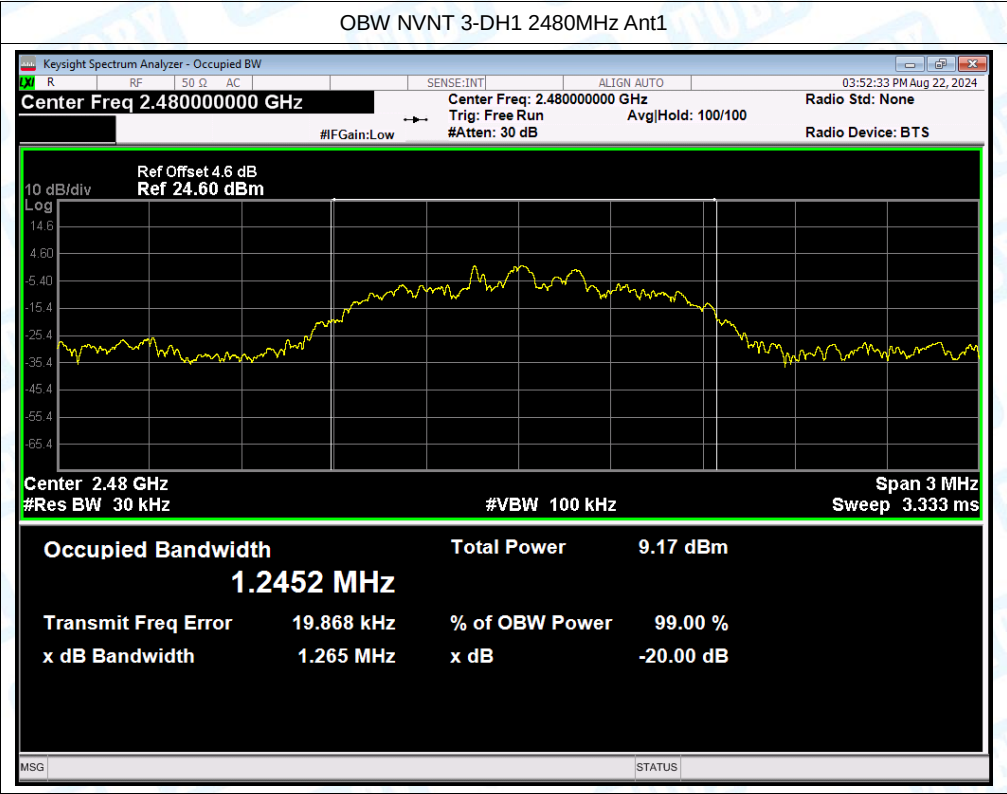


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



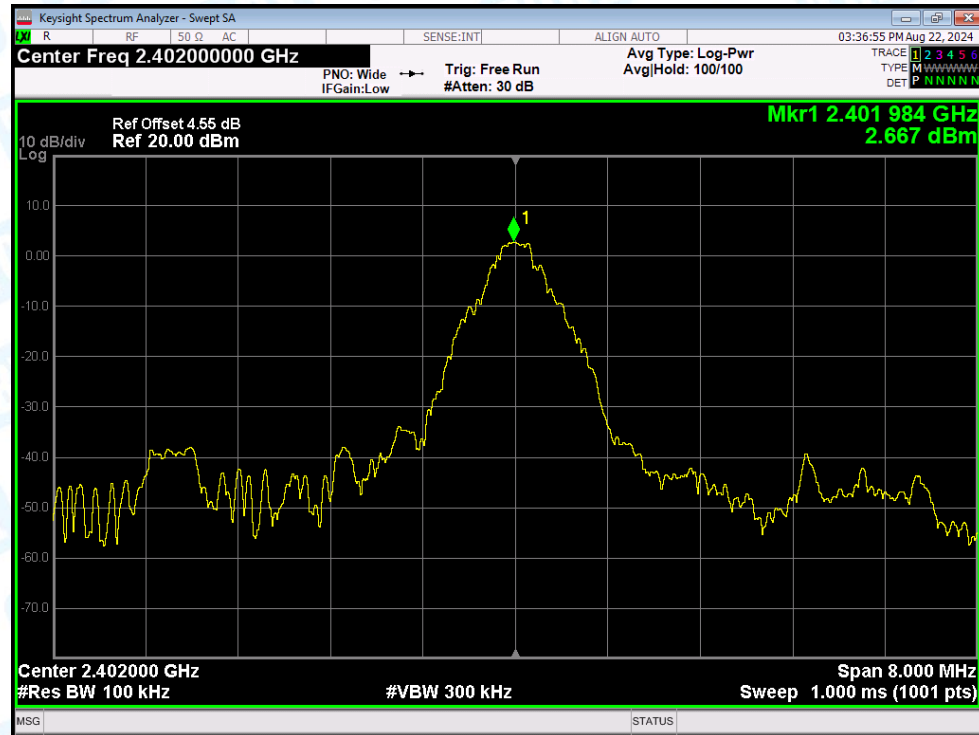


5. Band Edge

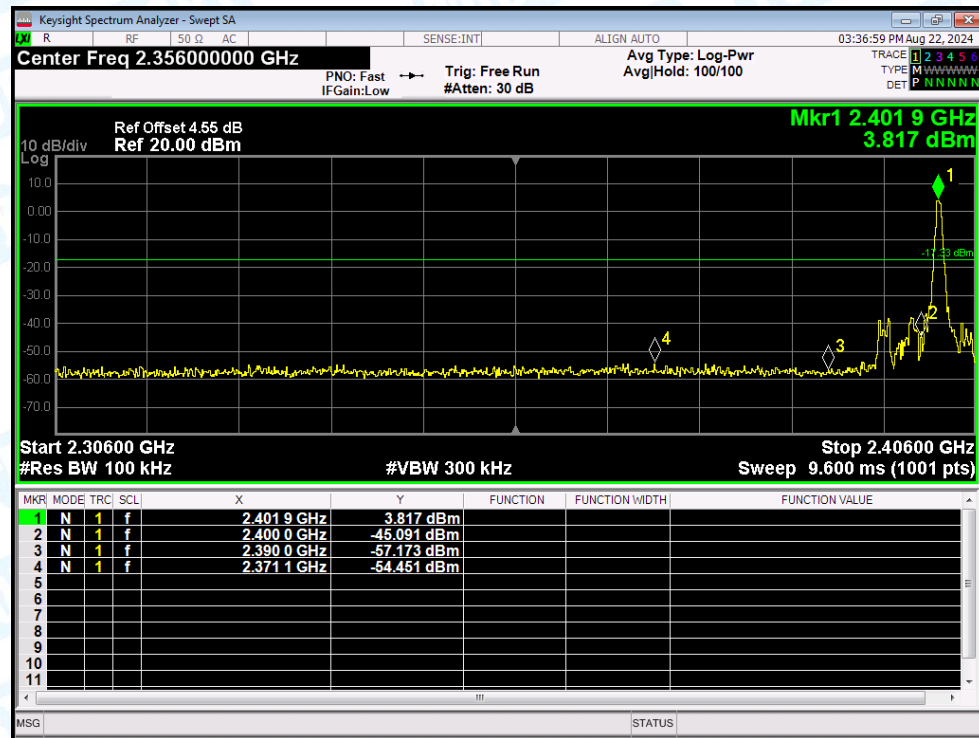
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-57.12	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-45.79	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-57.82	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-46.39	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-55.58	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-43.21	-20	Pass

Test Graphs

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



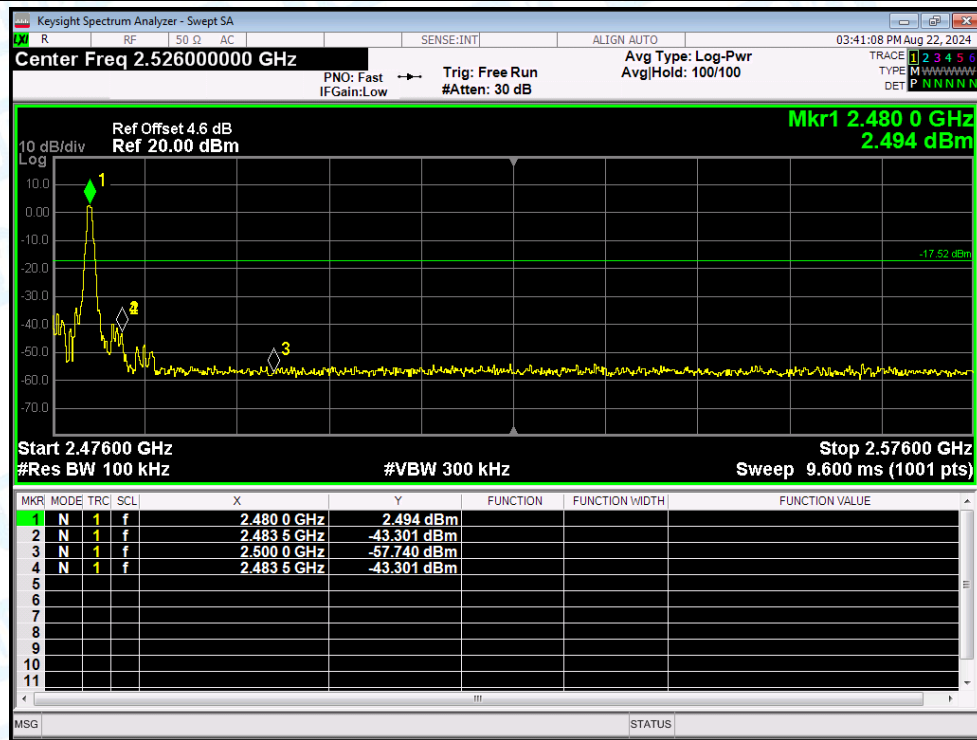
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



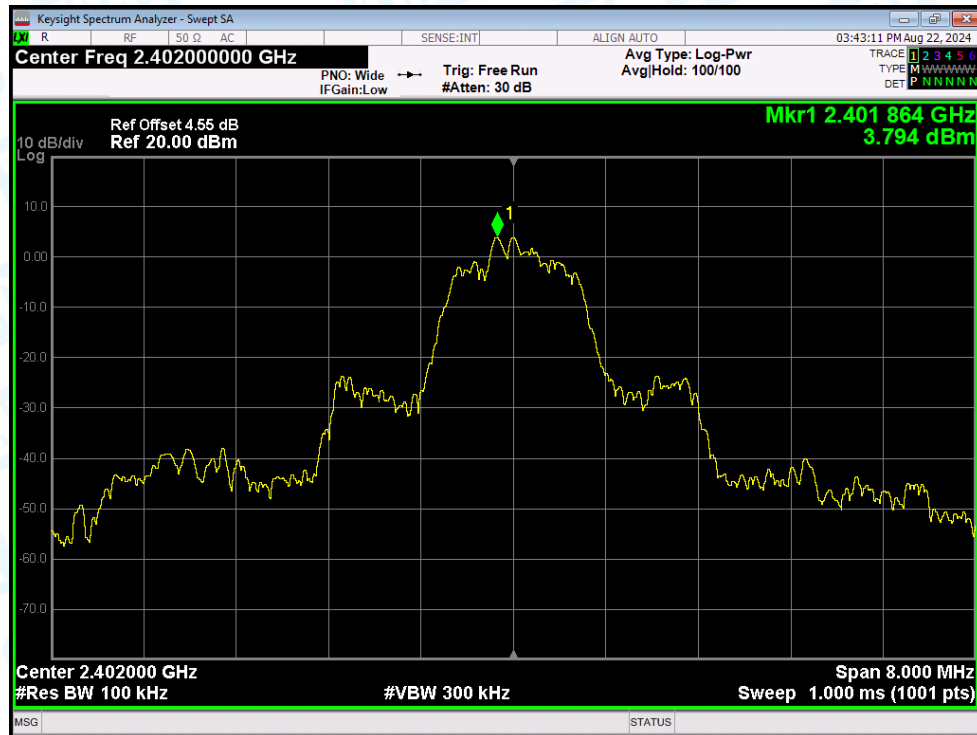
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



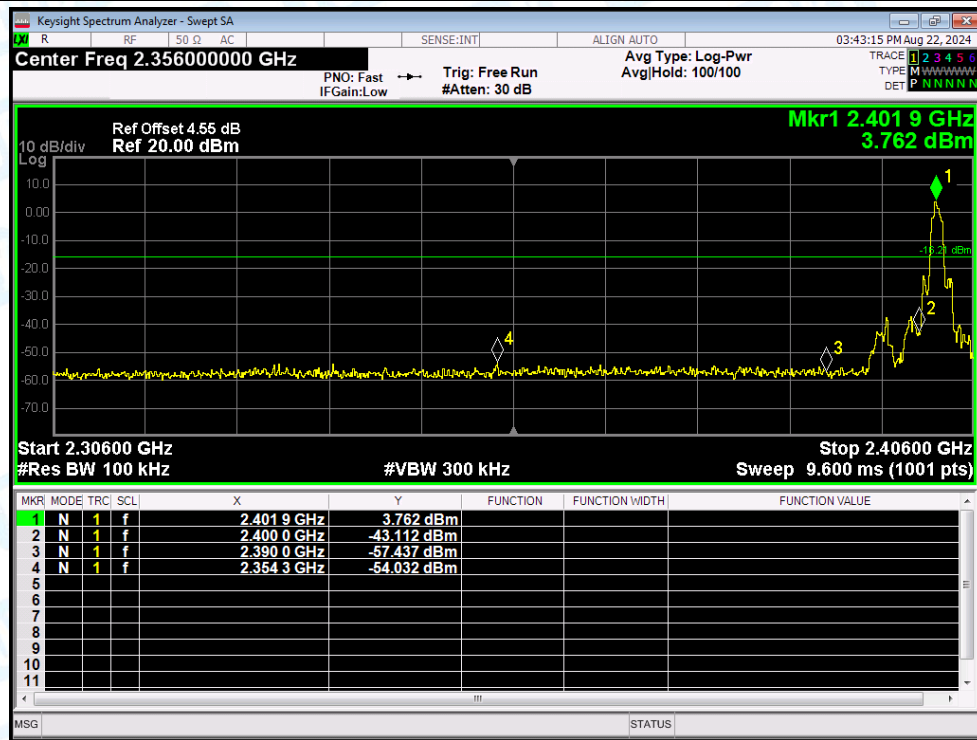
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission

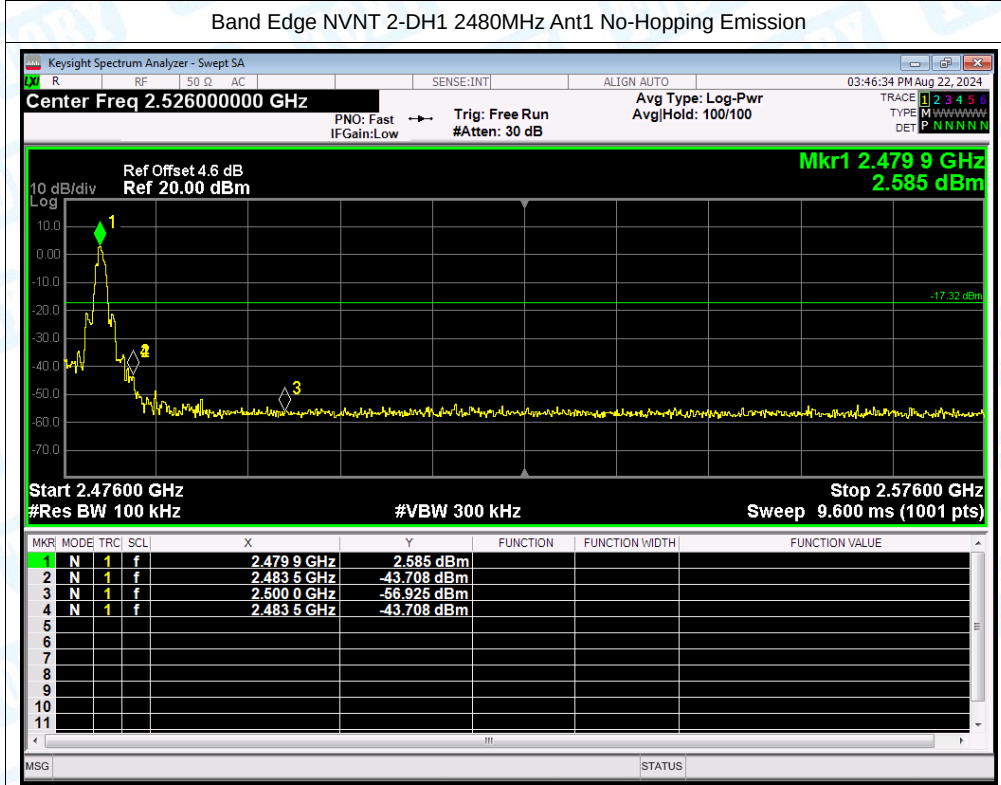


Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref



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

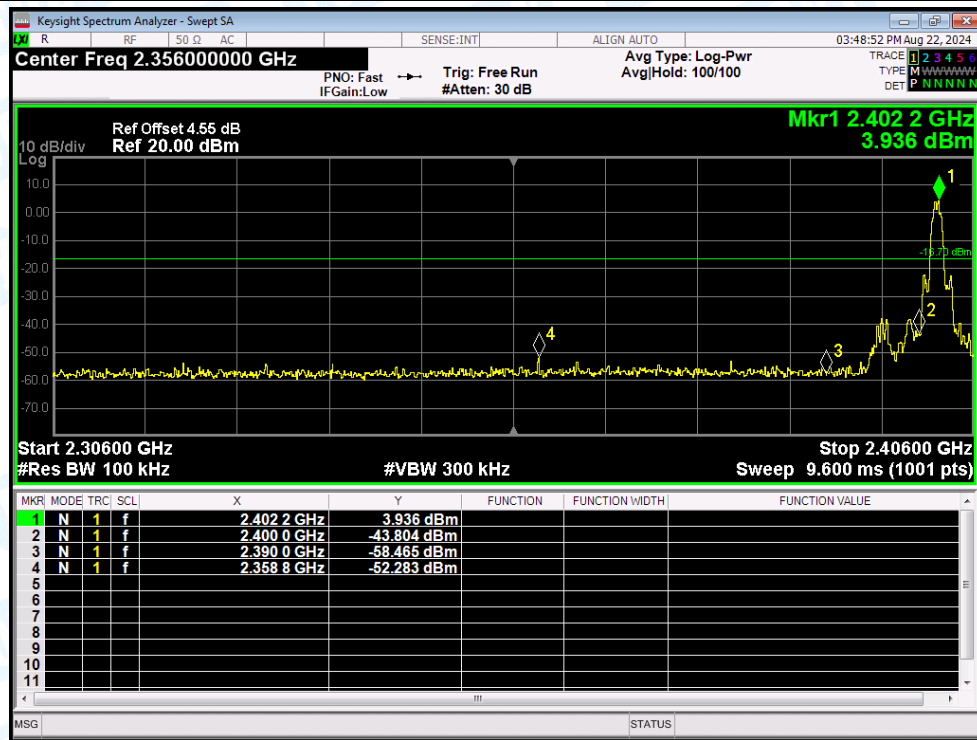




Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



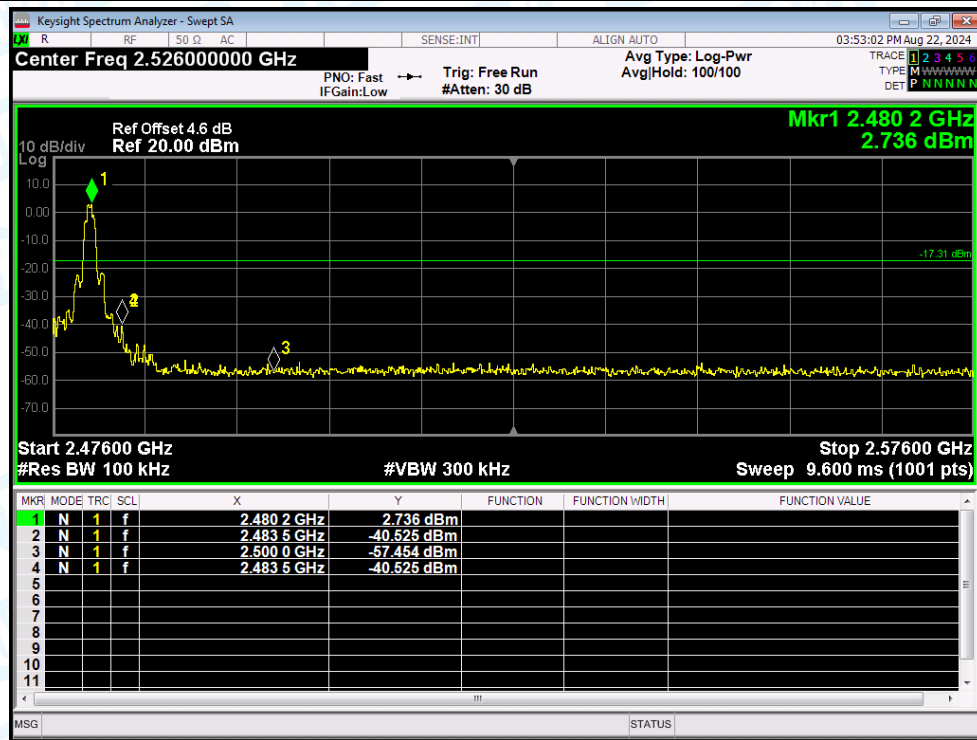
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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

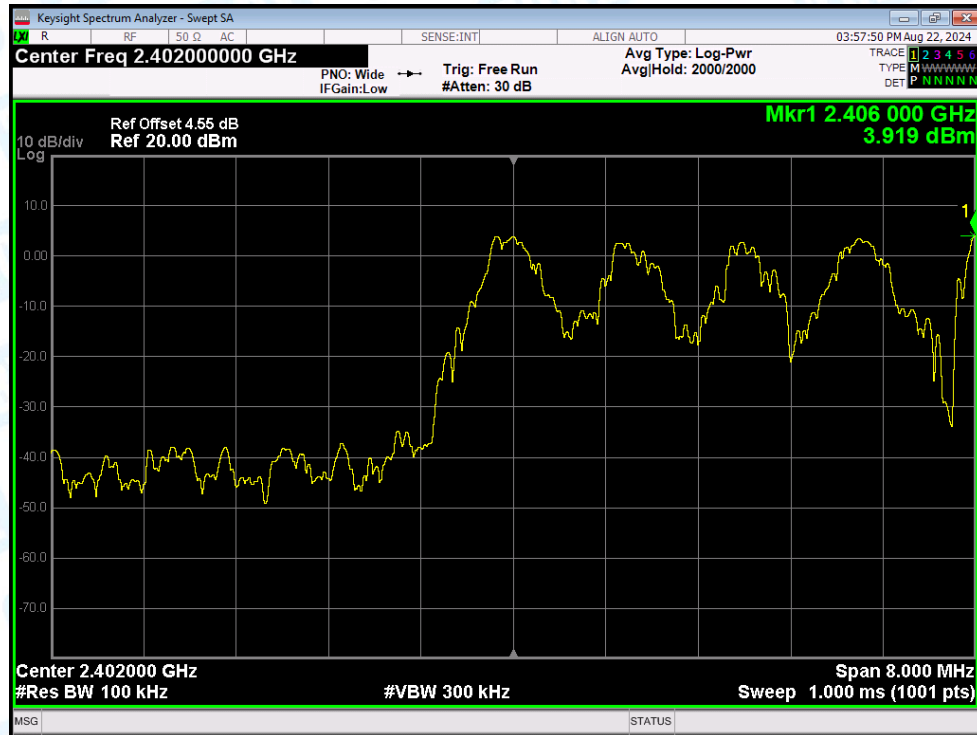


6. Band Edge(Hopping)

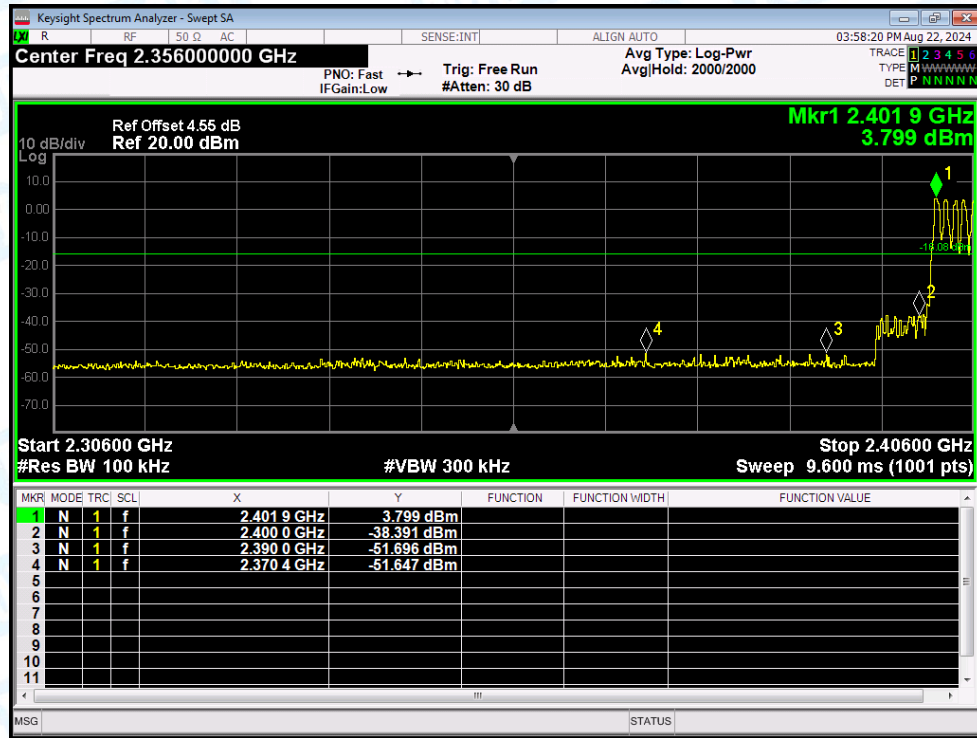
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-55.57	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-48.12	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-55.76	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-47.95	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-55.51	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-43.72	-20	Pass

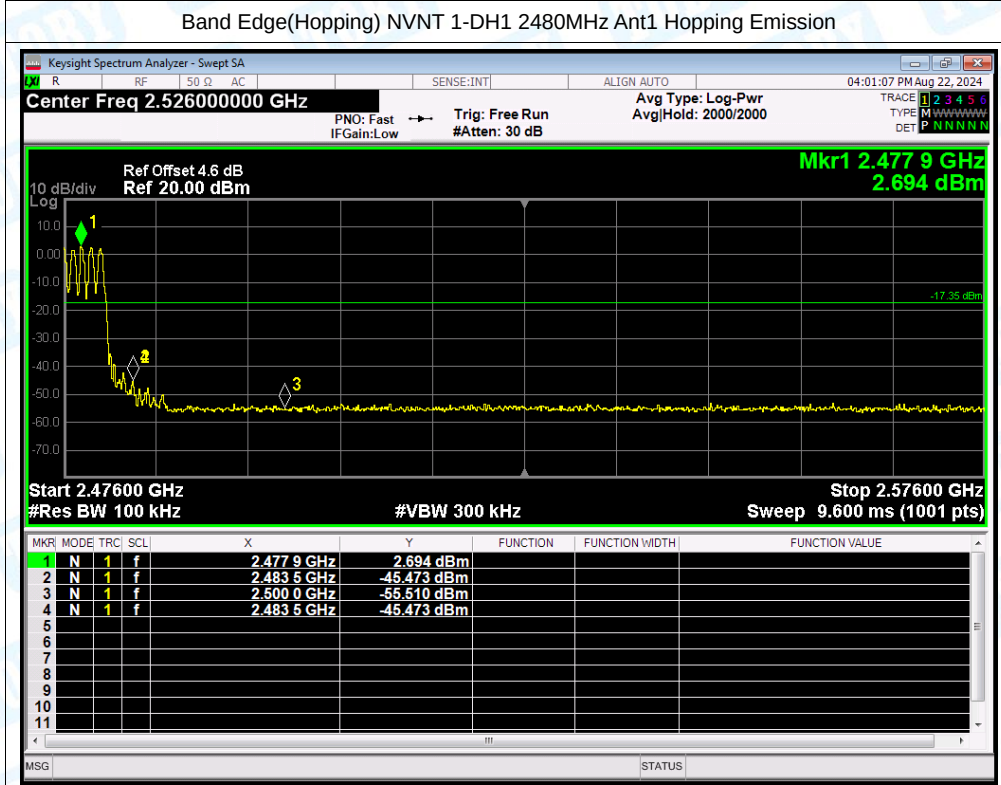
Test Graphs

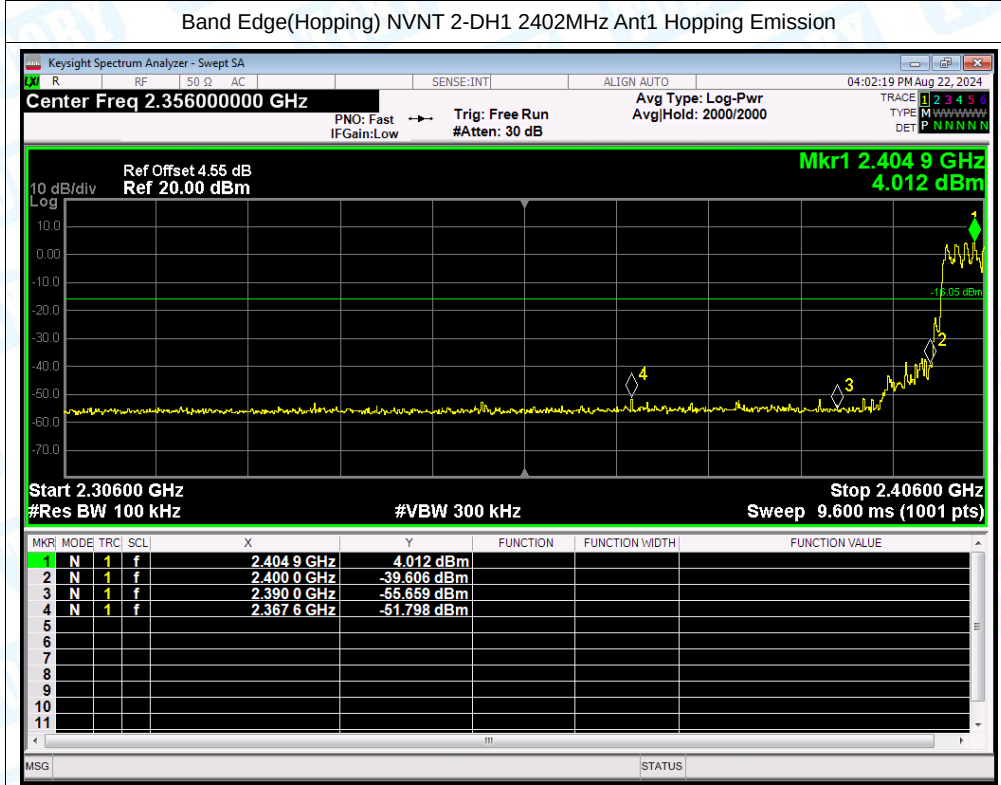
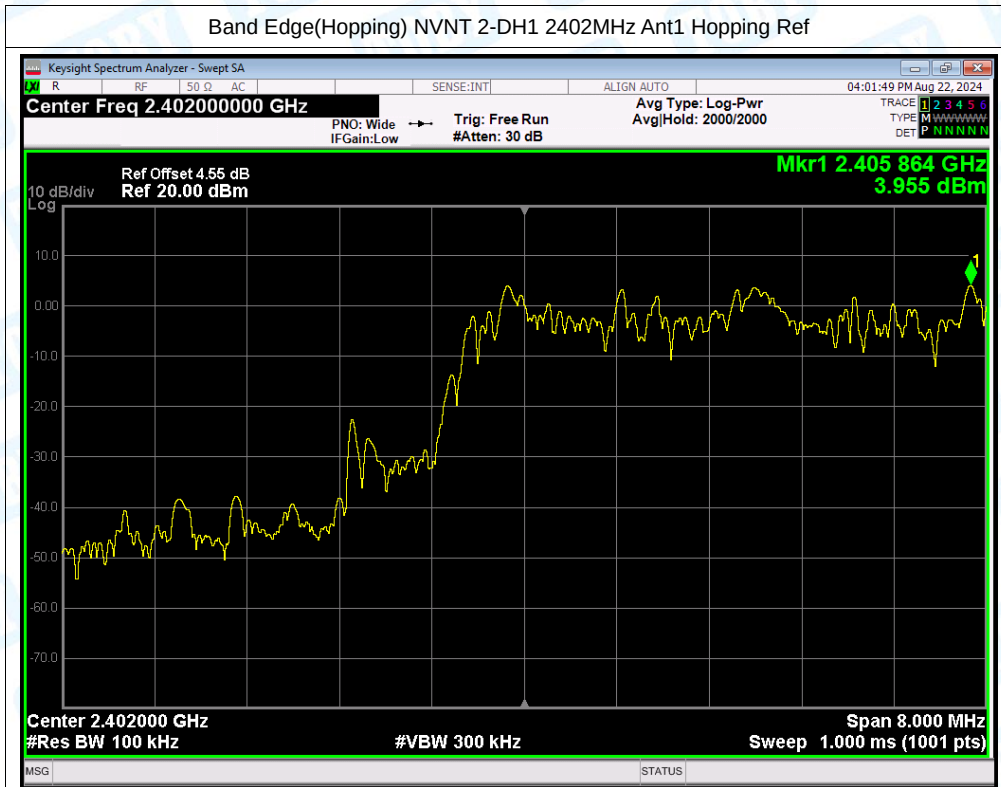
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref

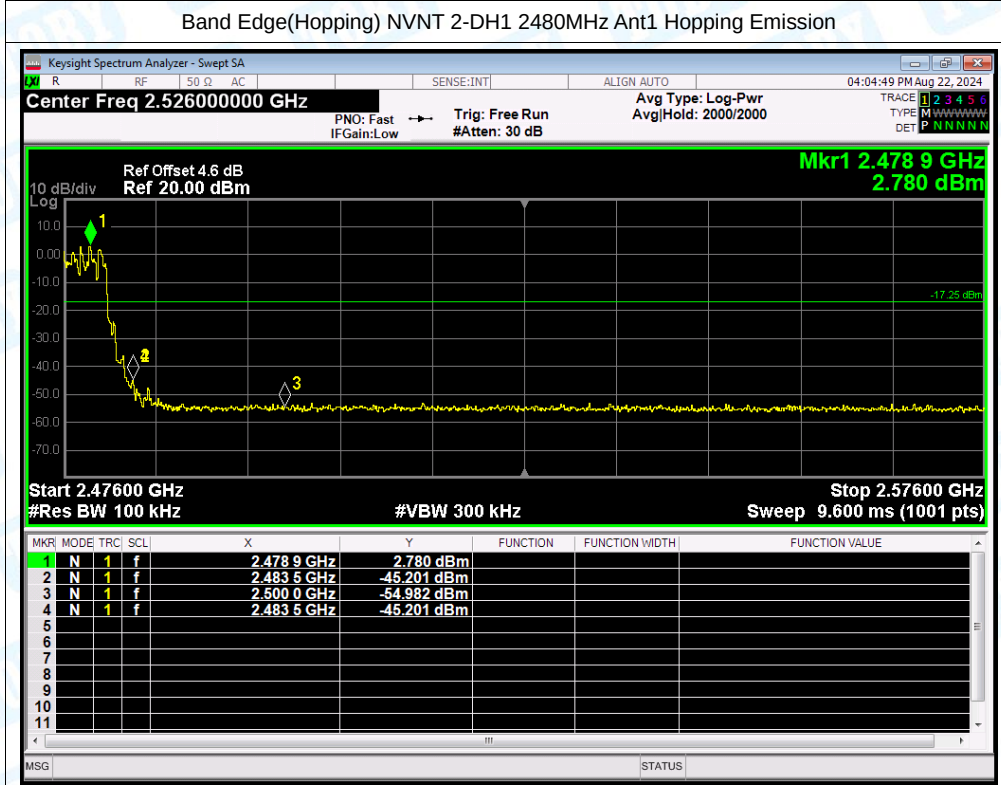
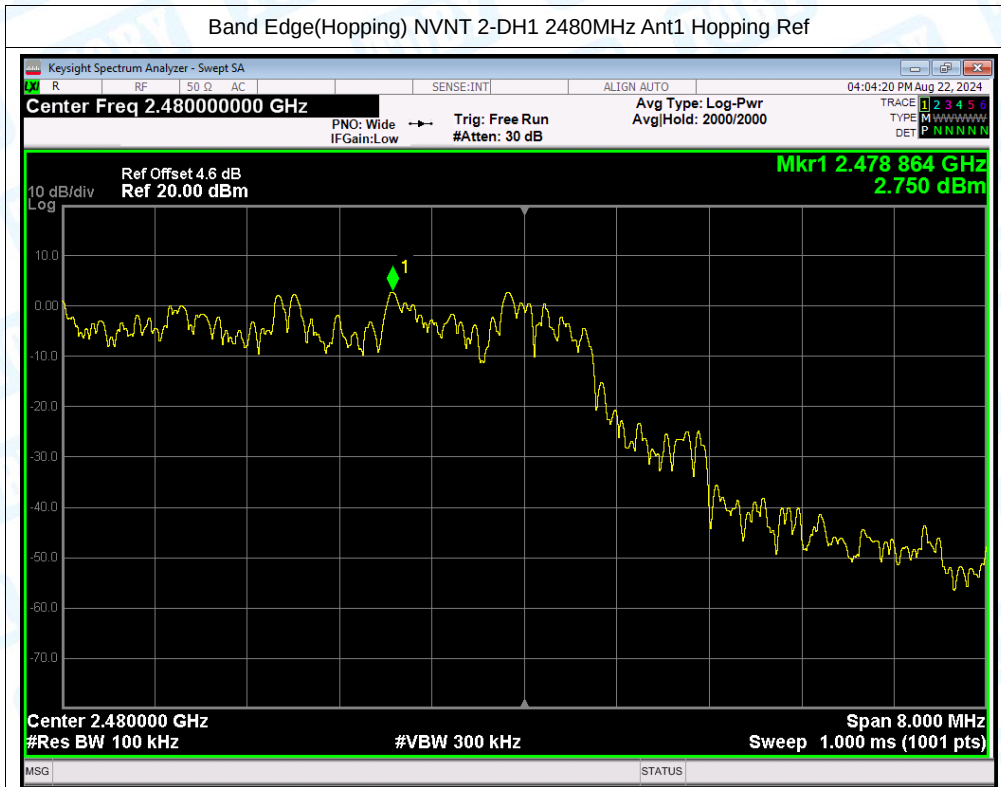


Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

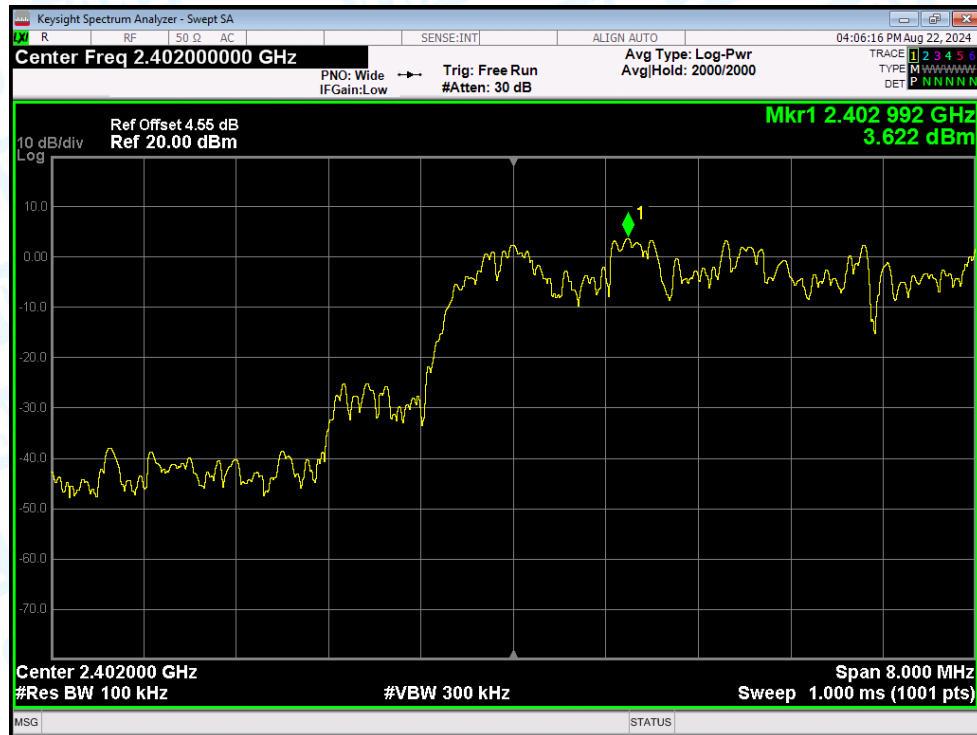




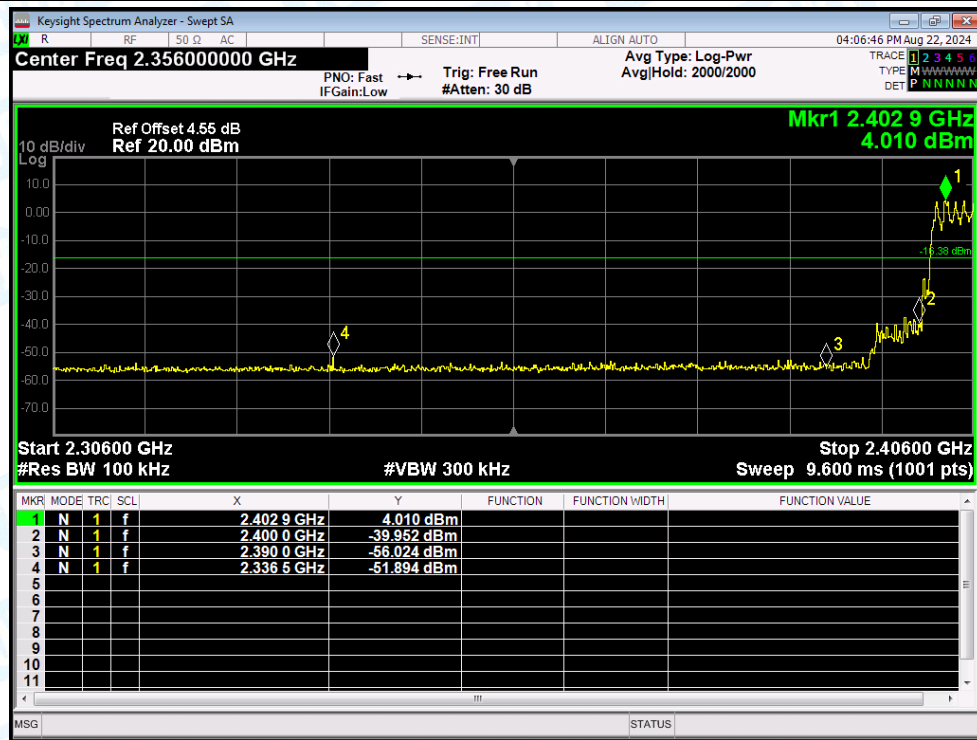


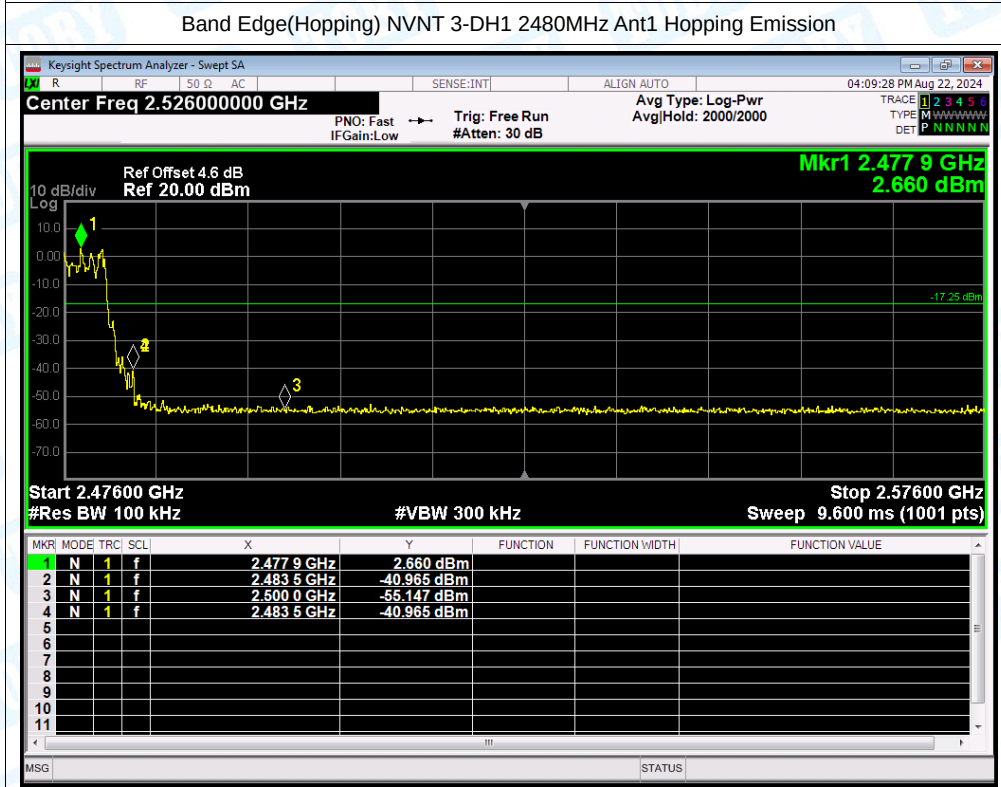


Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



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



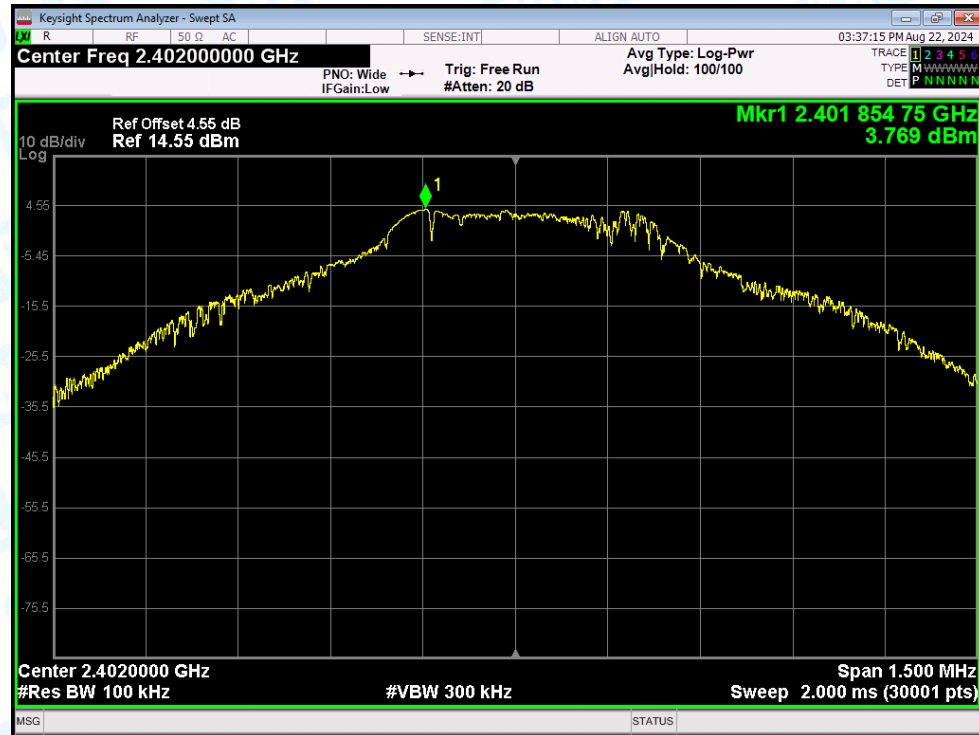


7. Conducted RF Spurious Emission

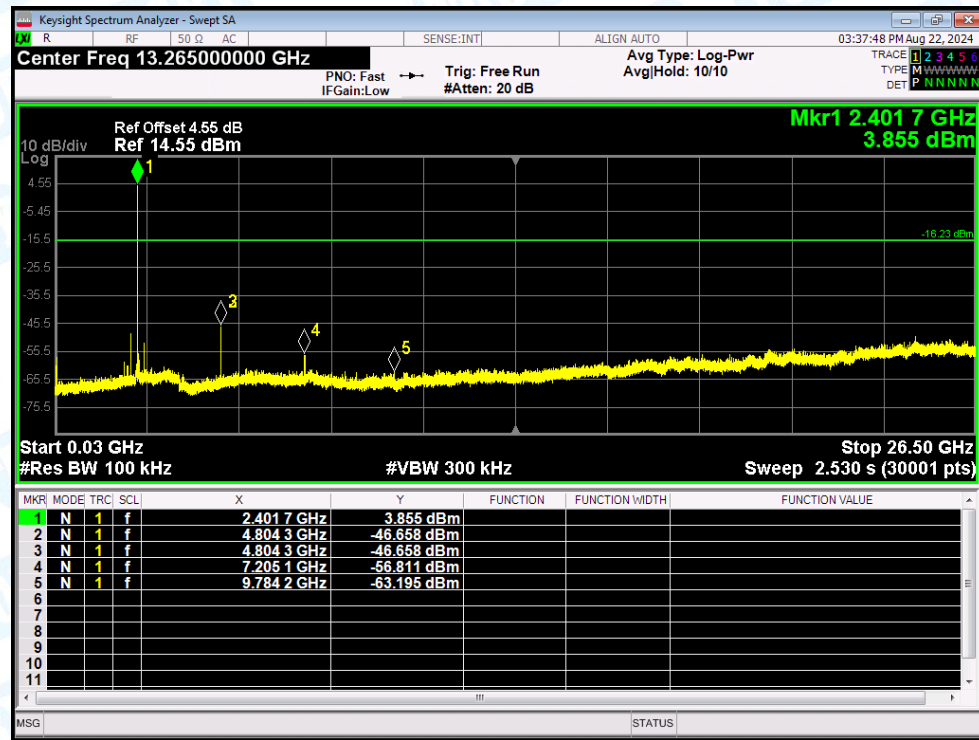
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-50.43	-20	Pass
NVNT	1-DH1	2441	Ant1	-49.54	-20	Pass
NVNT	1-DH1	2480	Ant1	-48.43	-20	Pass
NVNT	2-DH1	2402	Ant1	-54.54	-20	Pass
NVNT	2-DH1	2441	Ant1	-52.46	-20	Pass
NVNT	2-DH1	2480	Ant1	-47.56	-20	Pass
NVNT	3-DH1	2402	Ant1	-55.82	-20	Pass
NVNT	3-DH1	2441	Ant1	-46.53	-20	Pass
NVNT	3-DH1	2480	Ant1	-45.61	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



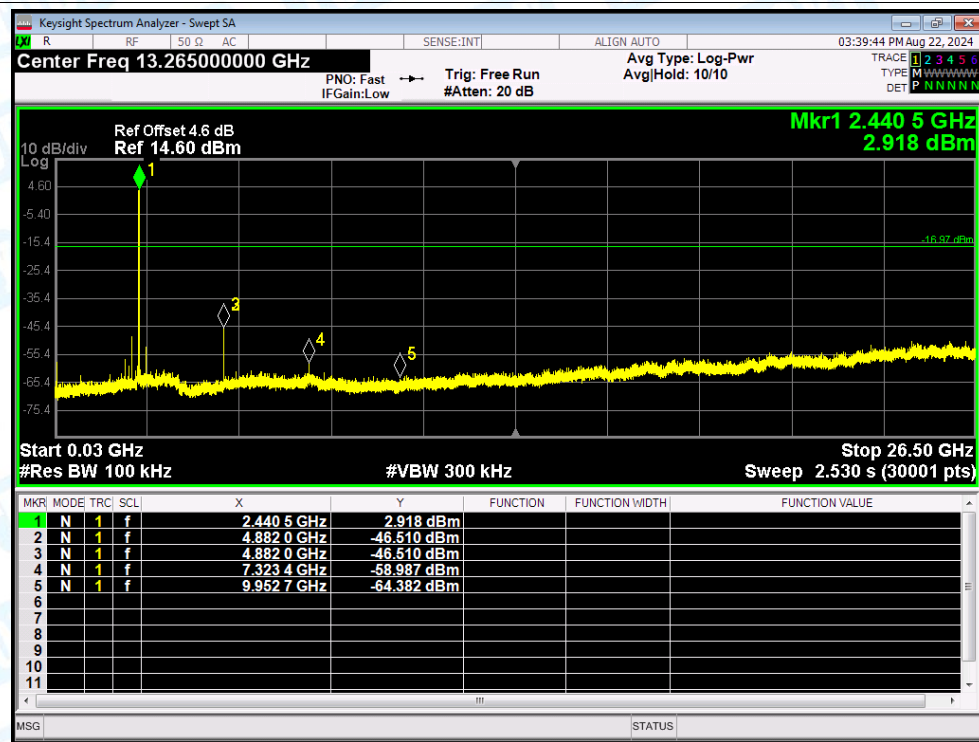
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



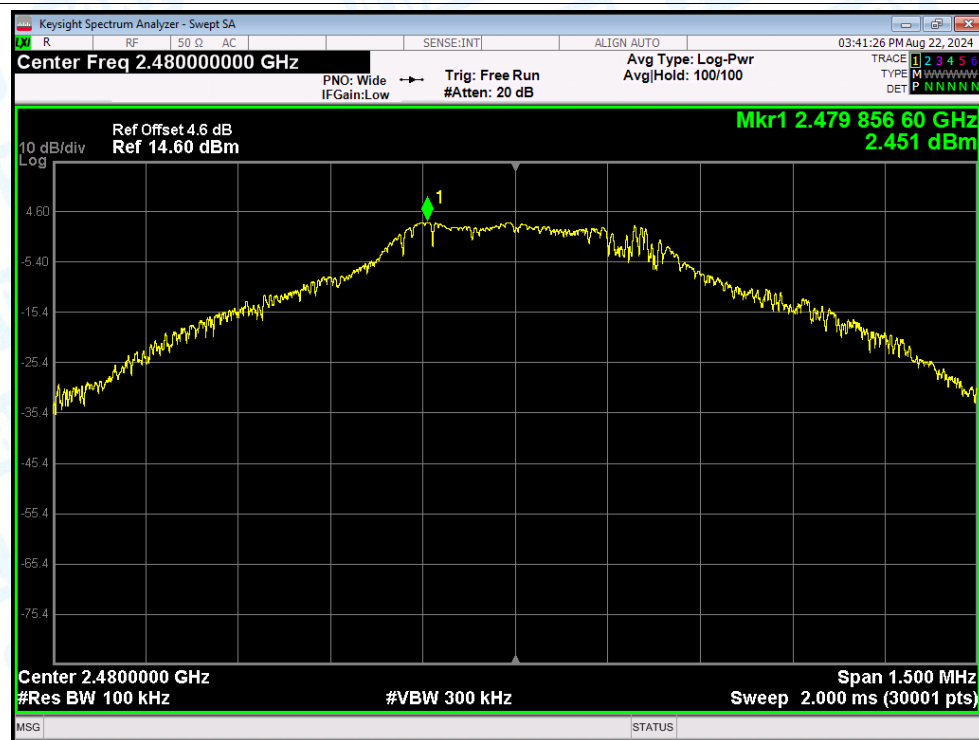
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



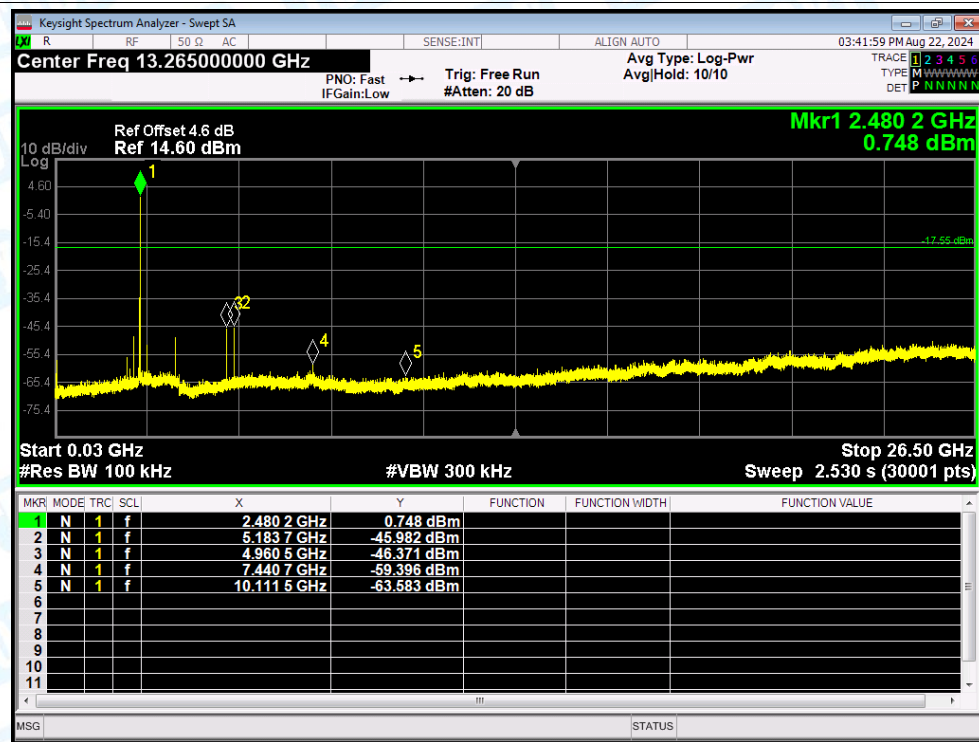
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



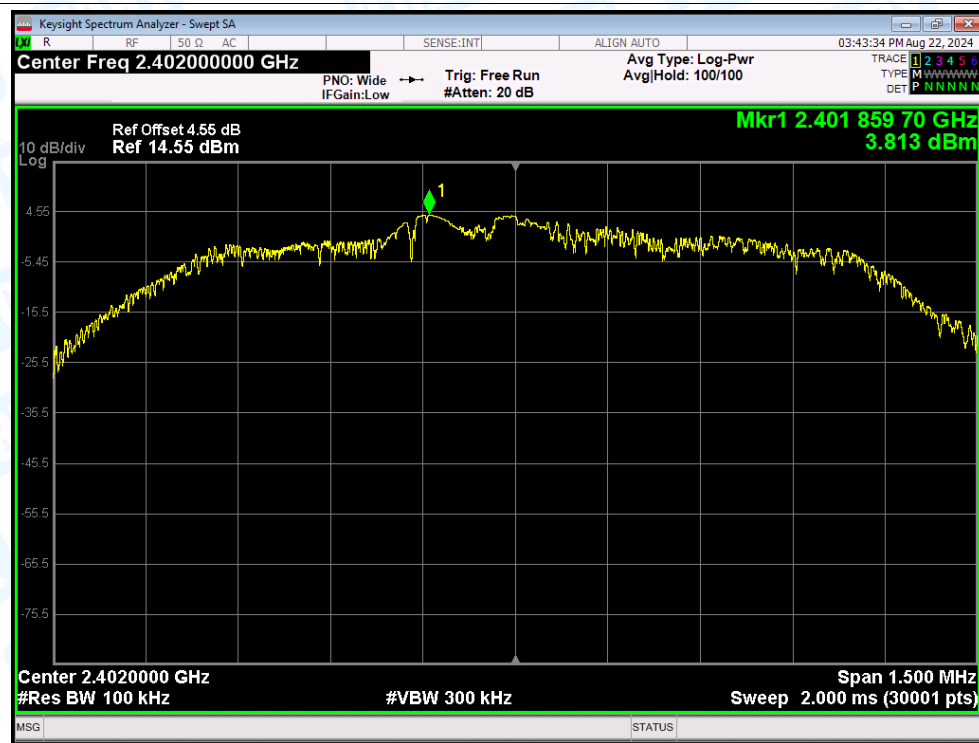
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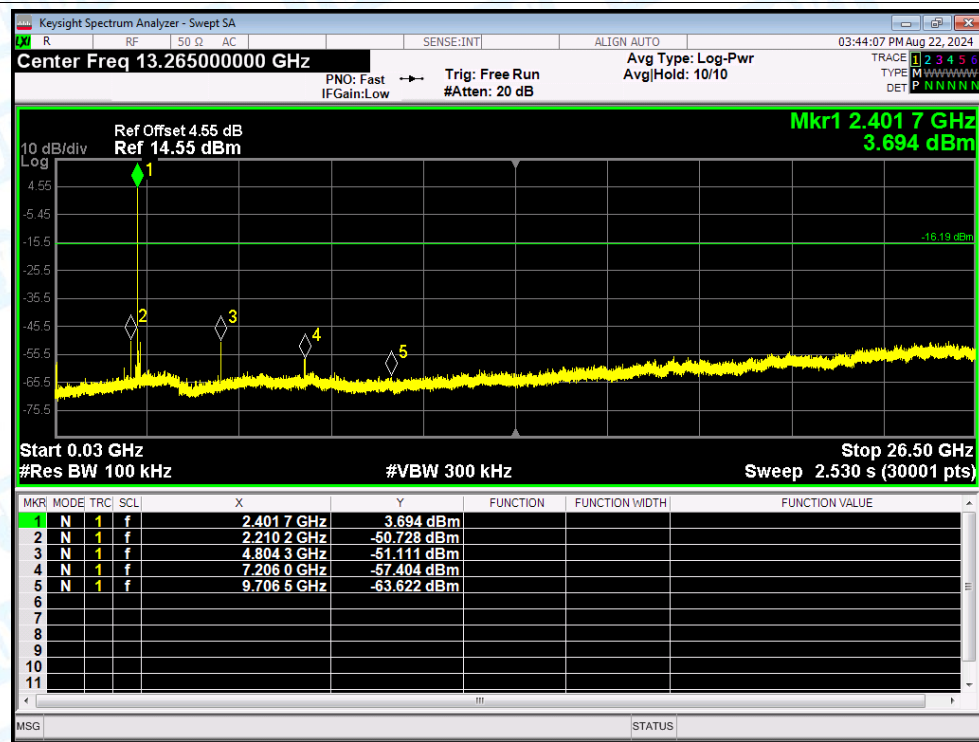
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



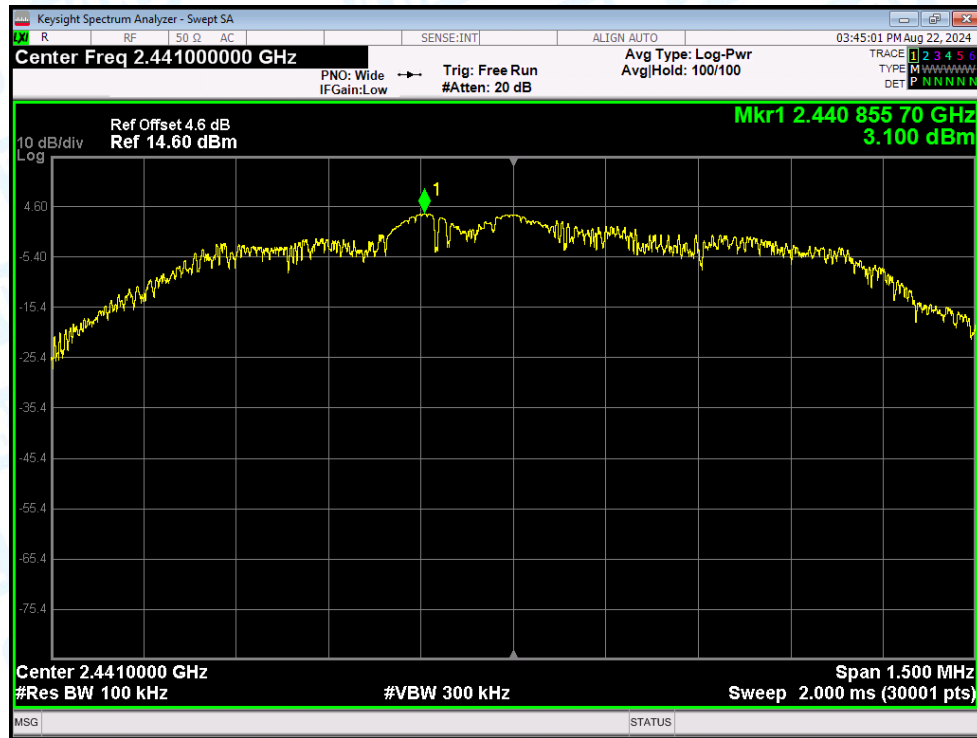
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



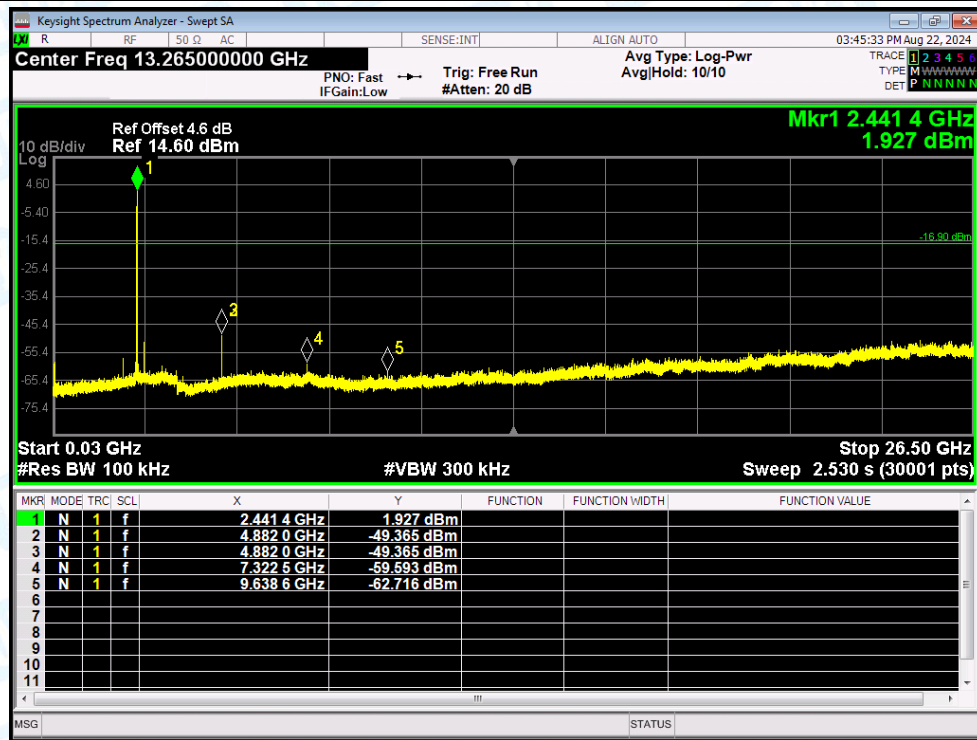
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



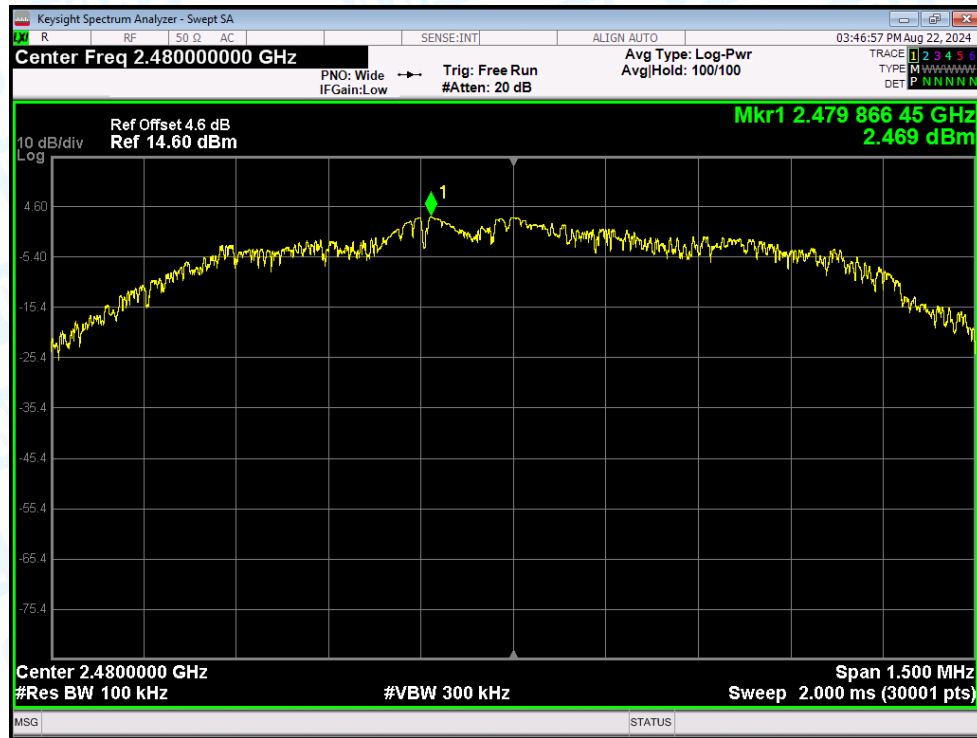
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



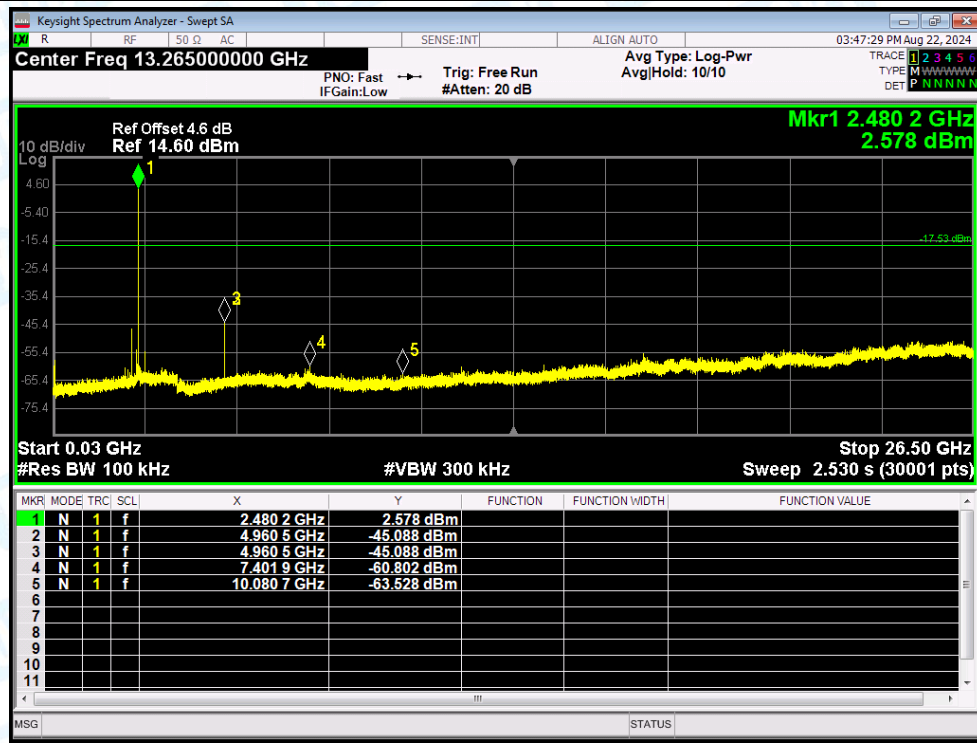
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



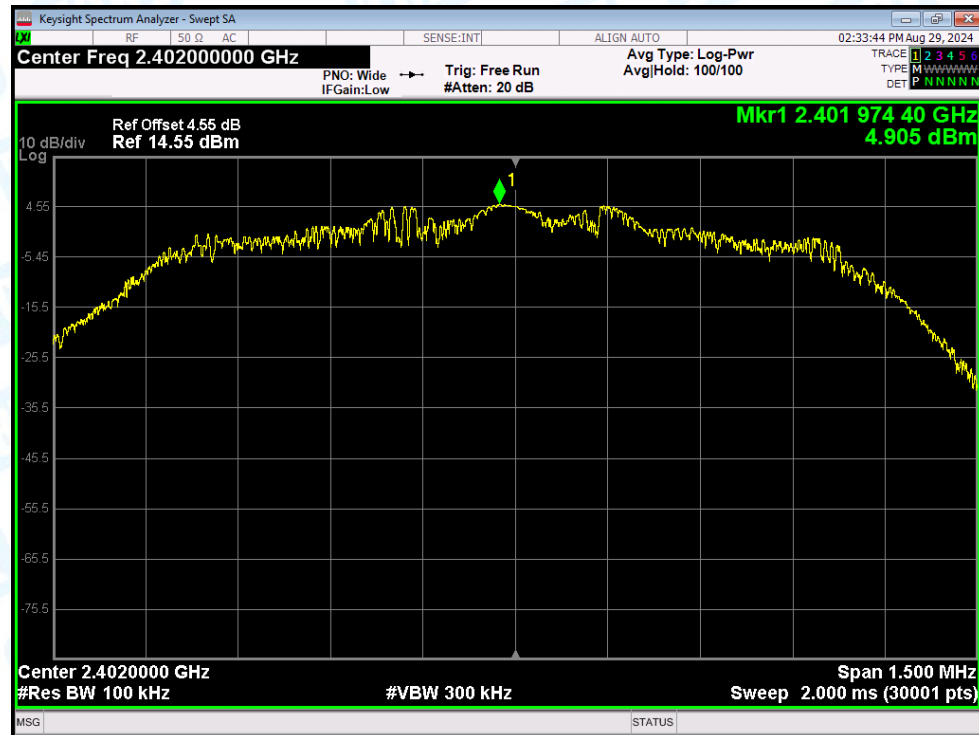
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



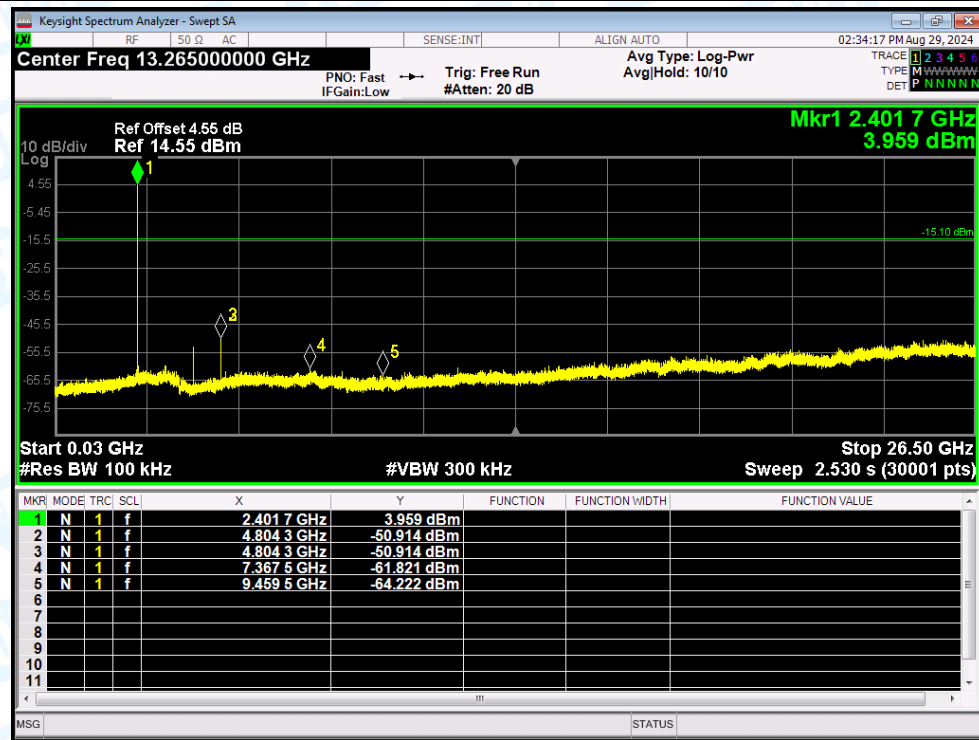
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



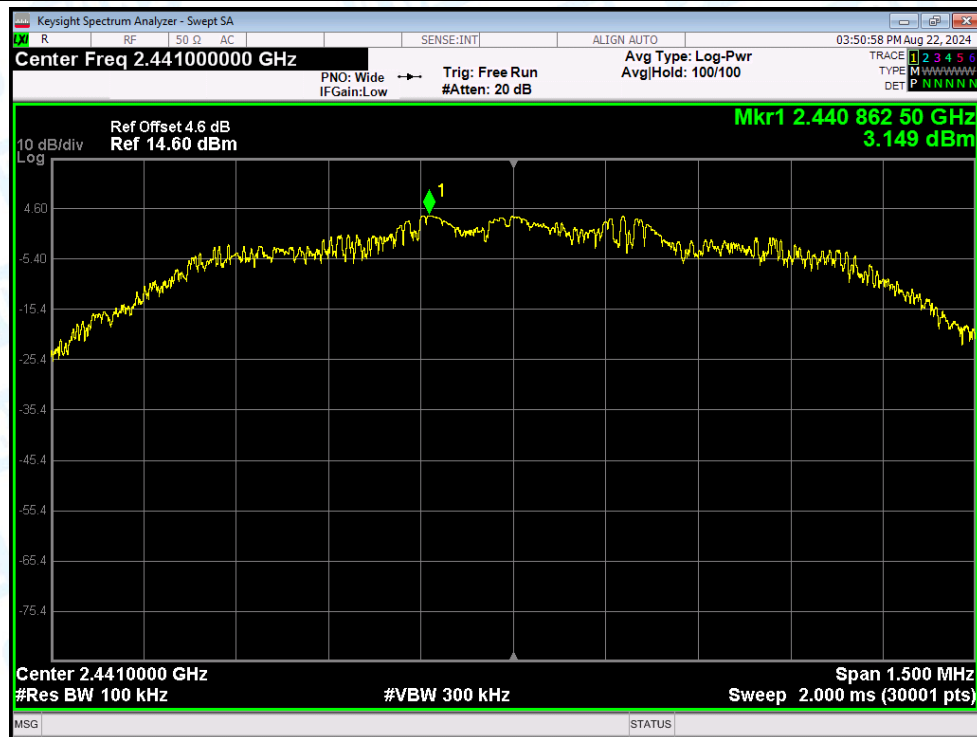
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



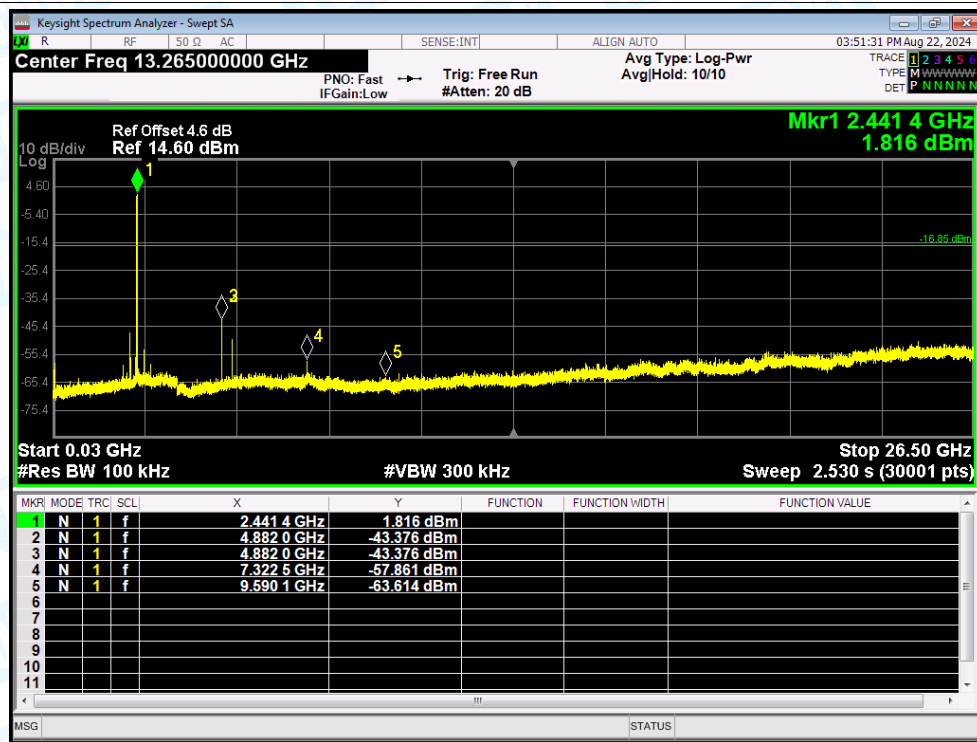
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



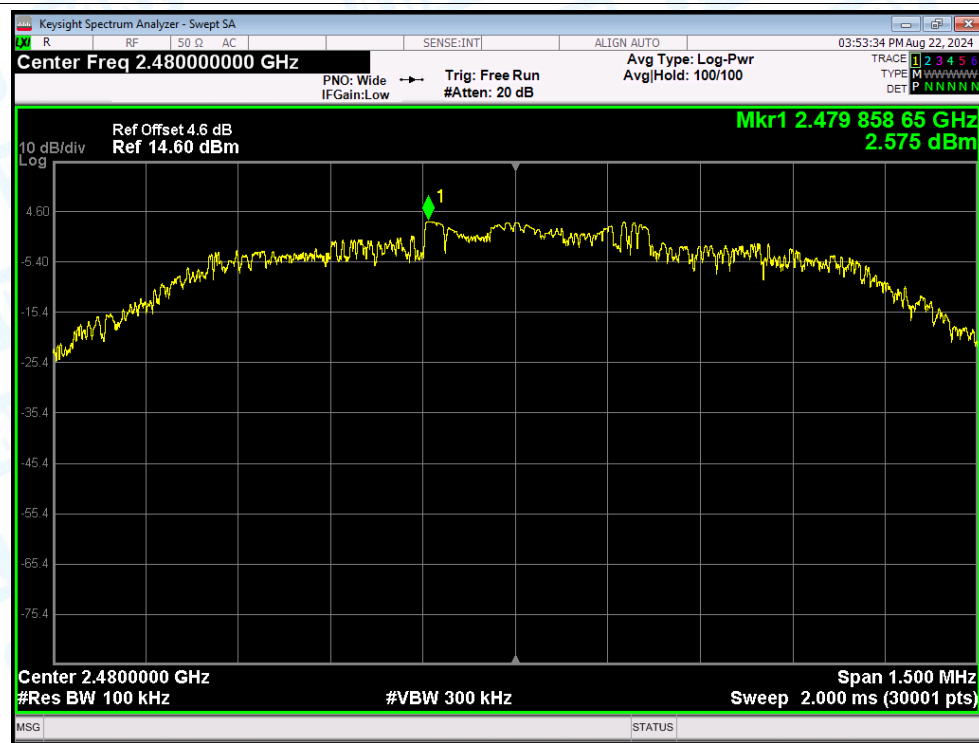
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



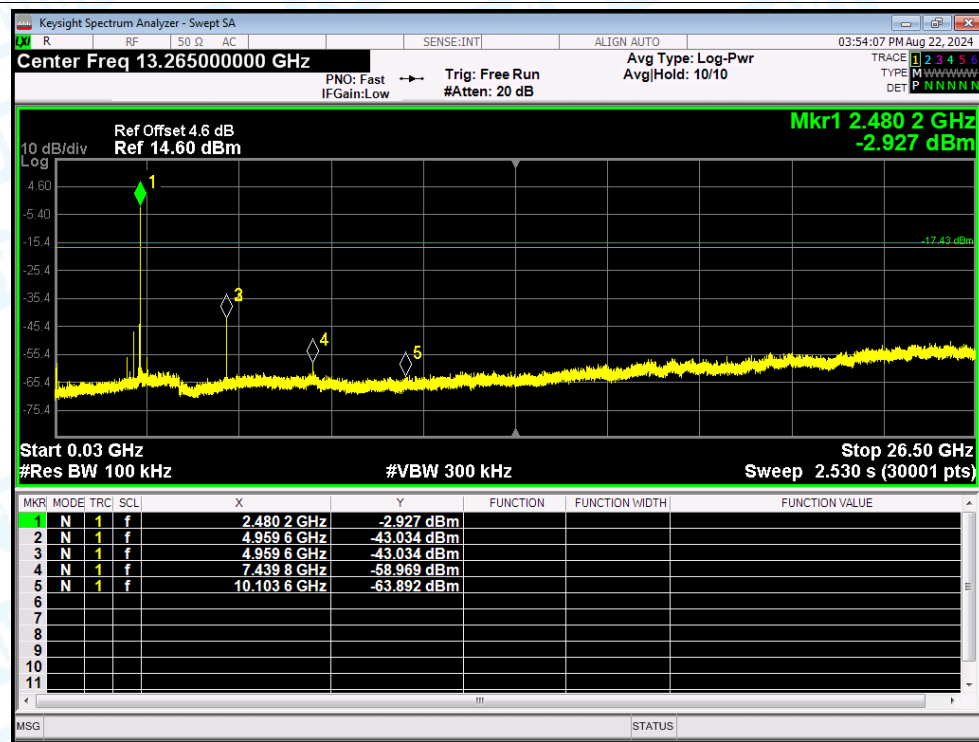
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

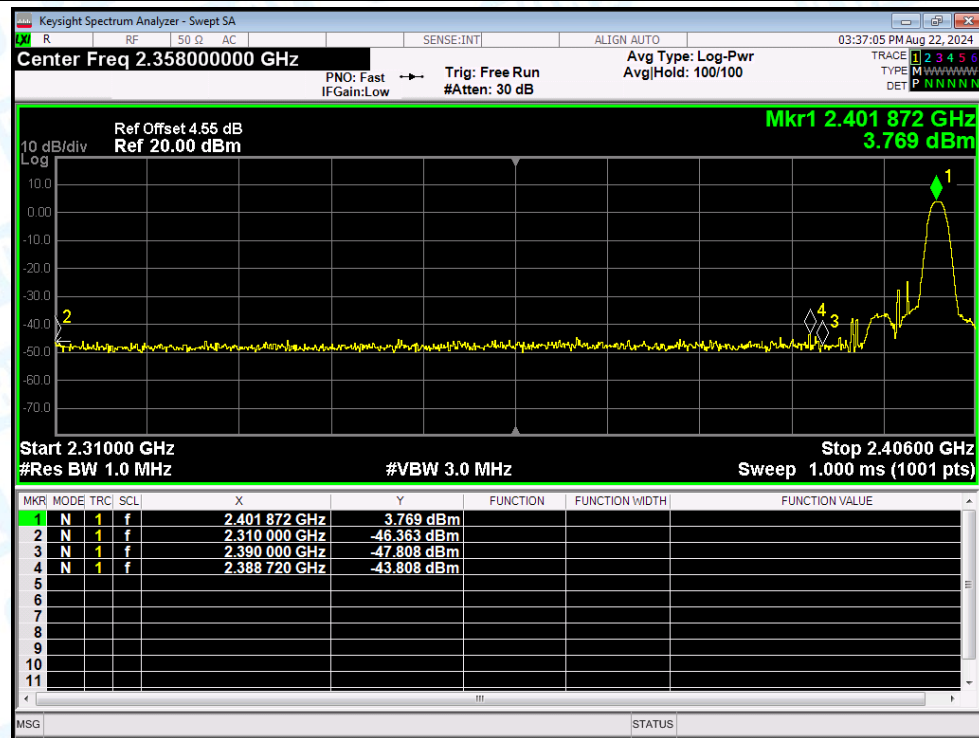


8. Restrict Band

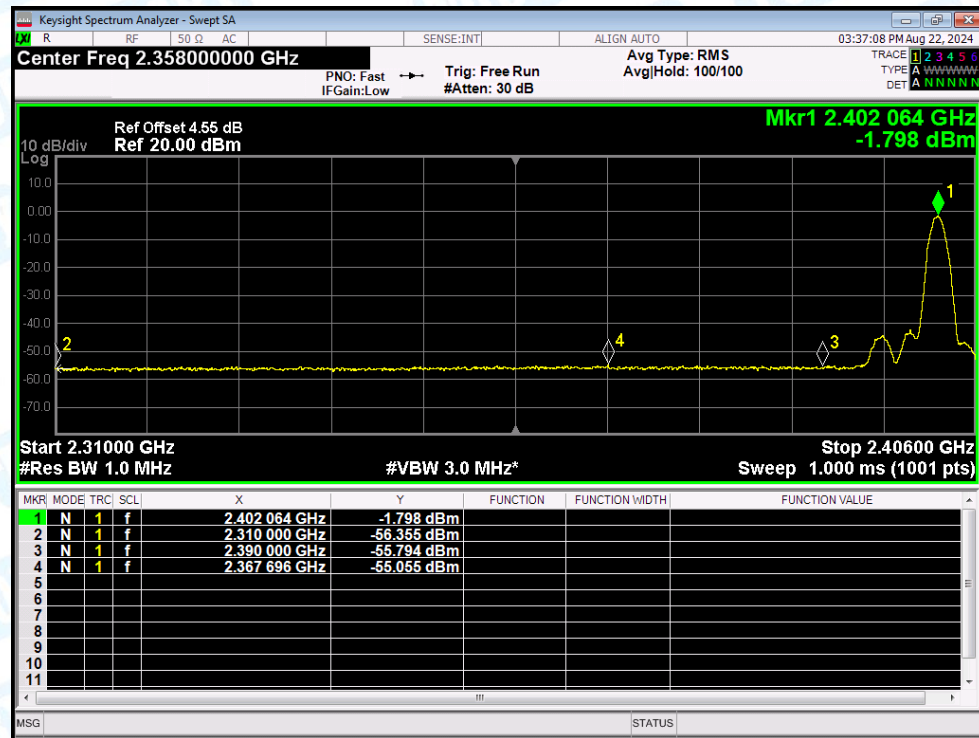
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-46.36	2	-	50.9	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.36	2	5.06	45.96	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2388.72	-43.81	2	-	53.45	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2367.696	-55.06	2	5.06	47.26	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-47.81	2	-	49.45	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-55.79	2	5.06	46.53	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-38.26	2	-	59	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-48.84	2	5.06	53.48	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2485.024	-36.76	2	-	60.5	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.584	-48.65	2	5.06	53.67	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-46.41	2	-	50.85	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.04	2	5.06	47.28	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-48.06	2	-	49.2	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.58	2	5.06	45.74	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2362.416	-45.02	2	-	52.24	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2369.04	-55.02	2	5.06	47.3	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.58	2	-	49.68	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.98	2	5.06	46.34	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-38.34	2	-	58.92	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-48.8	2	5.06	53.52	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.56	-33.44	2	-	63.82	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-48.8	2	5.06	53.52	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.94	2	-	49.32	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.4	2	5.06	46.92	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.13	2	-	49.13	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.88	2	4.95	45.33	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2389.104	-42	2	-	55.26	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2360.688	-55.03	2	4.95	47.18	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-48.16	2	-	49.1	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.45	2	4.95	46.76	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-39.8	2	-	57.46	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-49.71	2	4.95	52.5	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.656	-39.24	2	-	58.02	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.512	-49.71	2	4.95	52.5	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-48.01	2	-	49.25	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.05	2	4.95	47.16	Average	54	Pass

Test Graphs

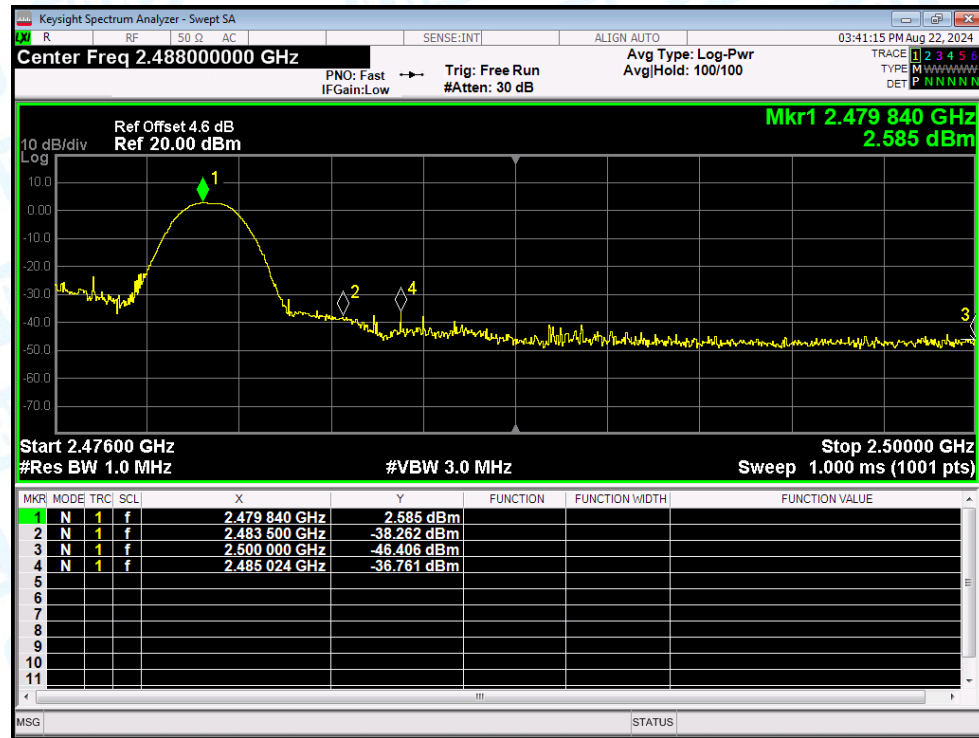
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



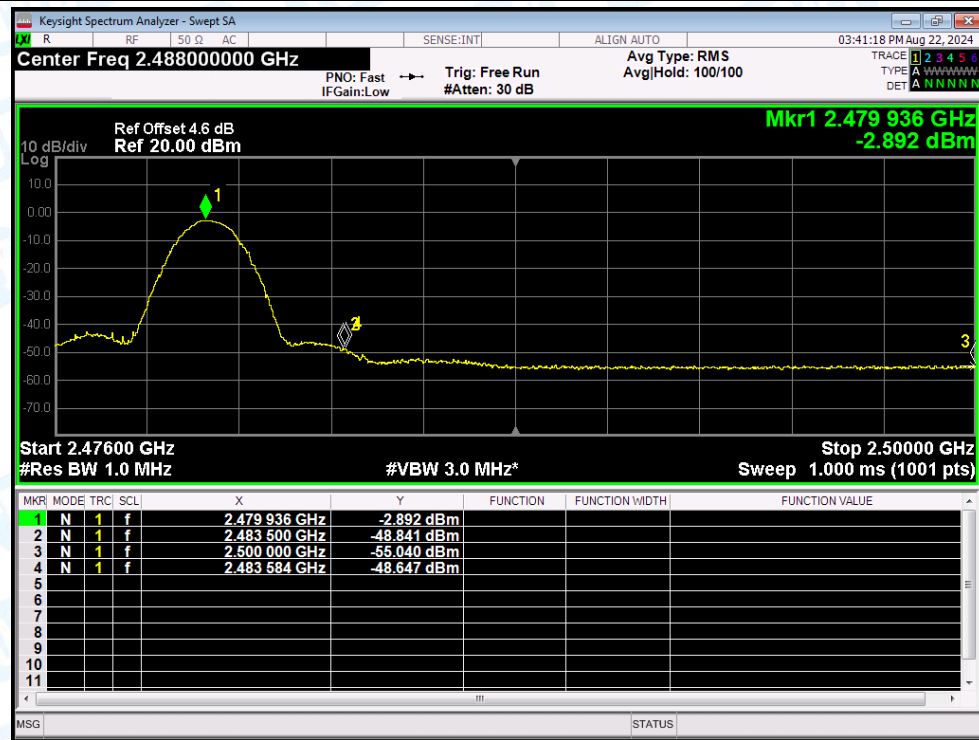
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



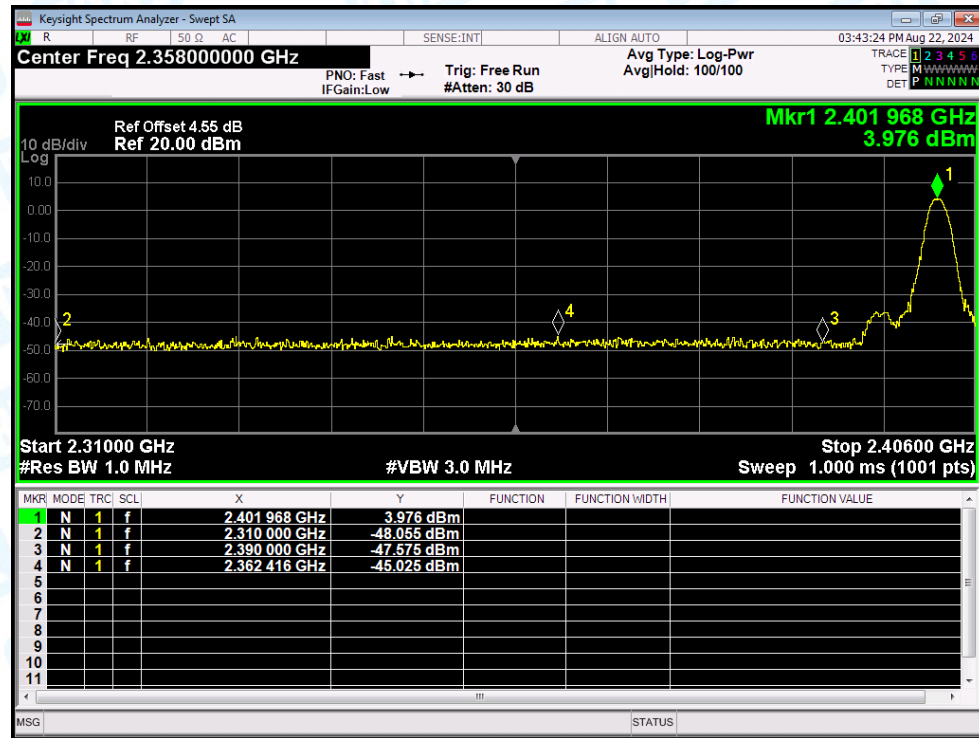
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



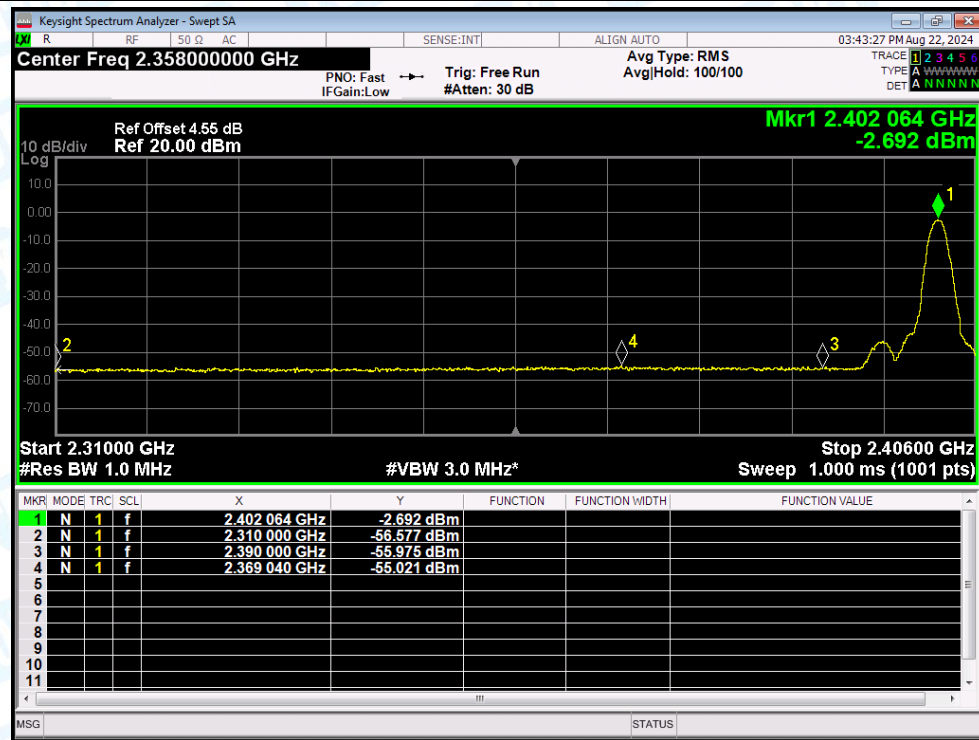
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



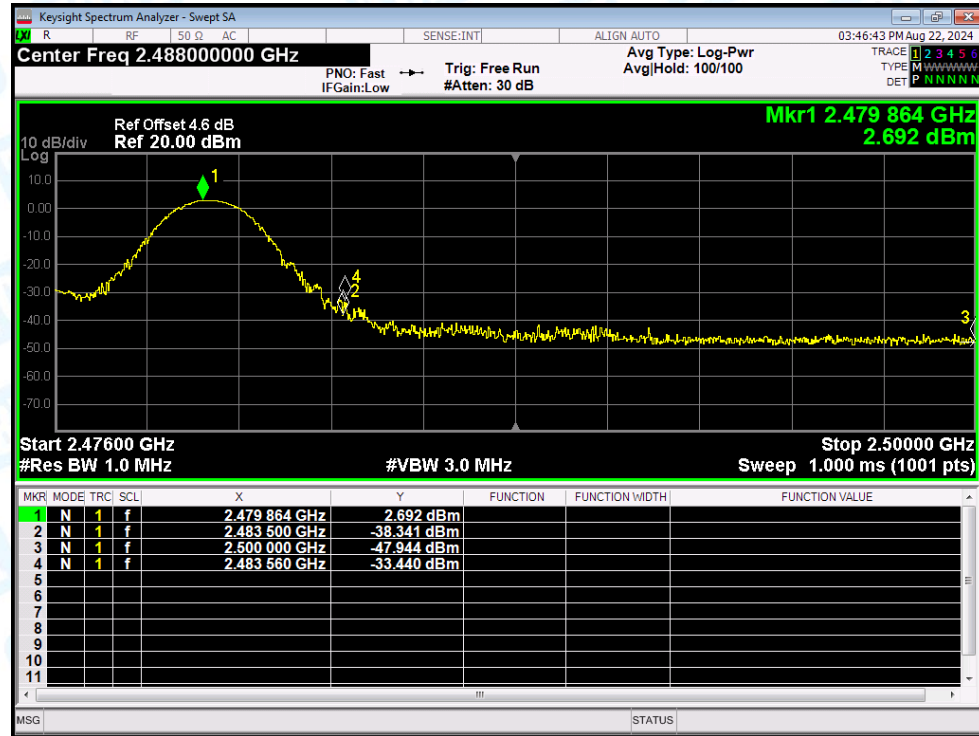
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



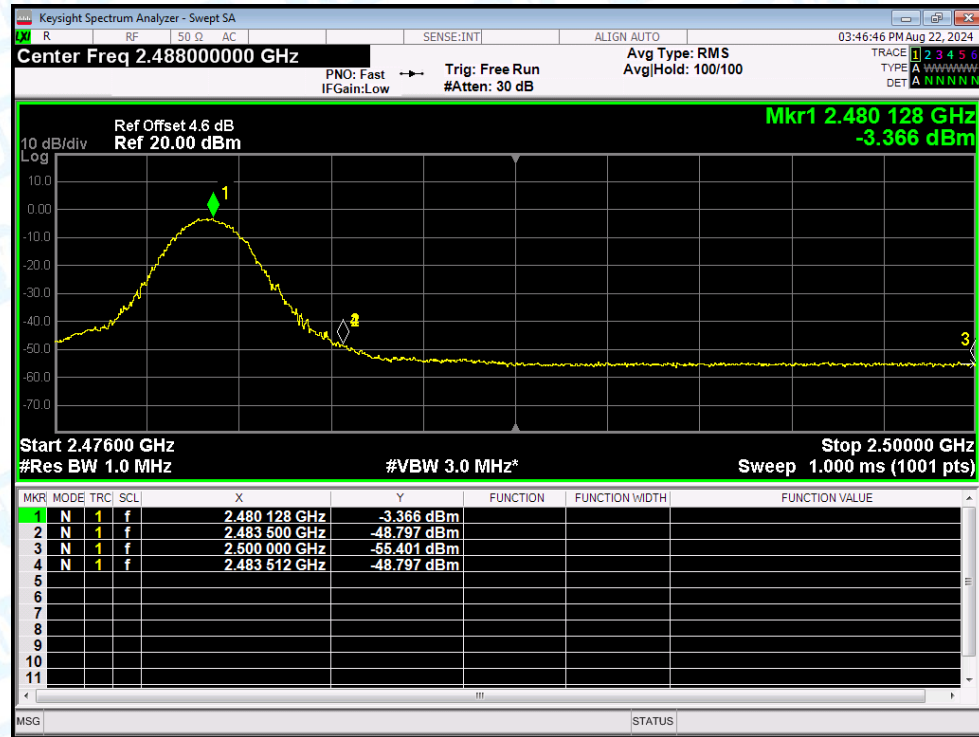
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



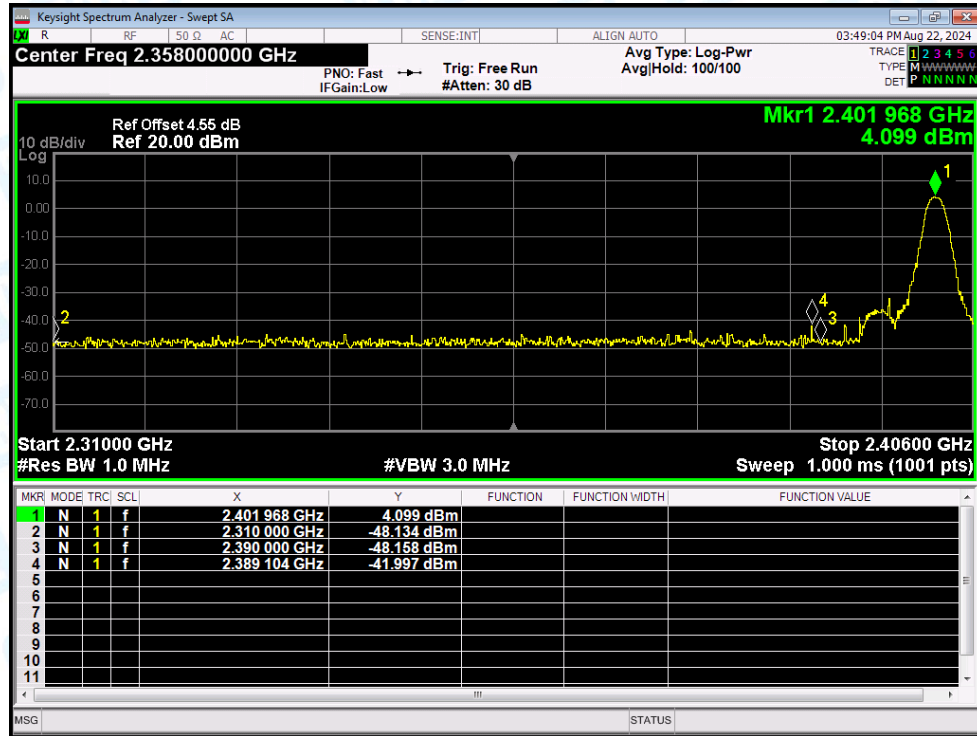
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



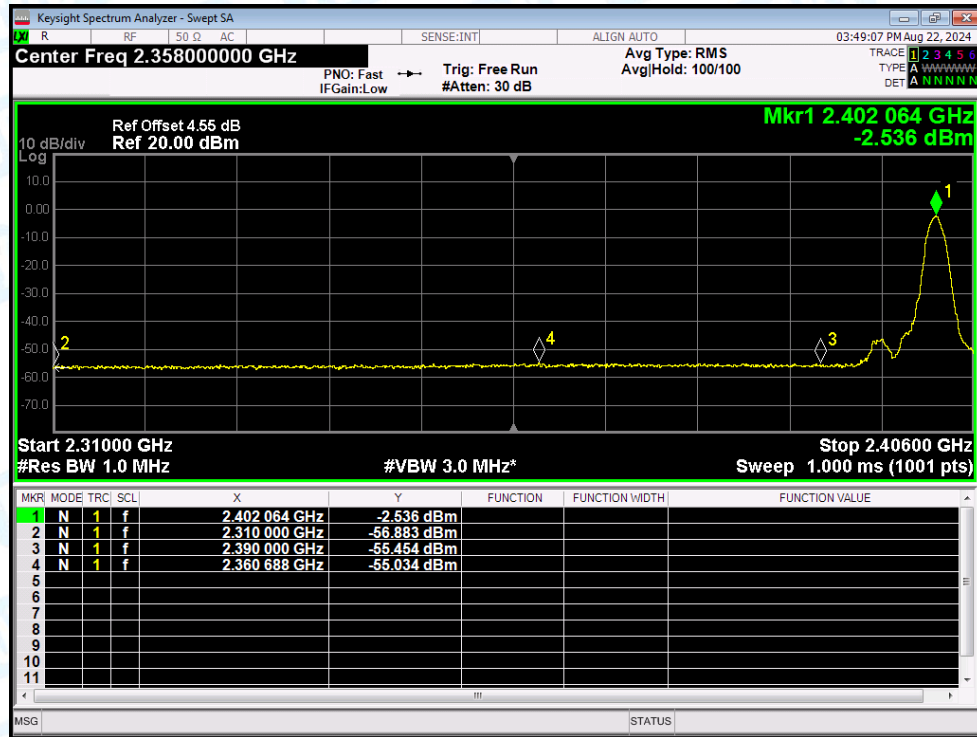
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



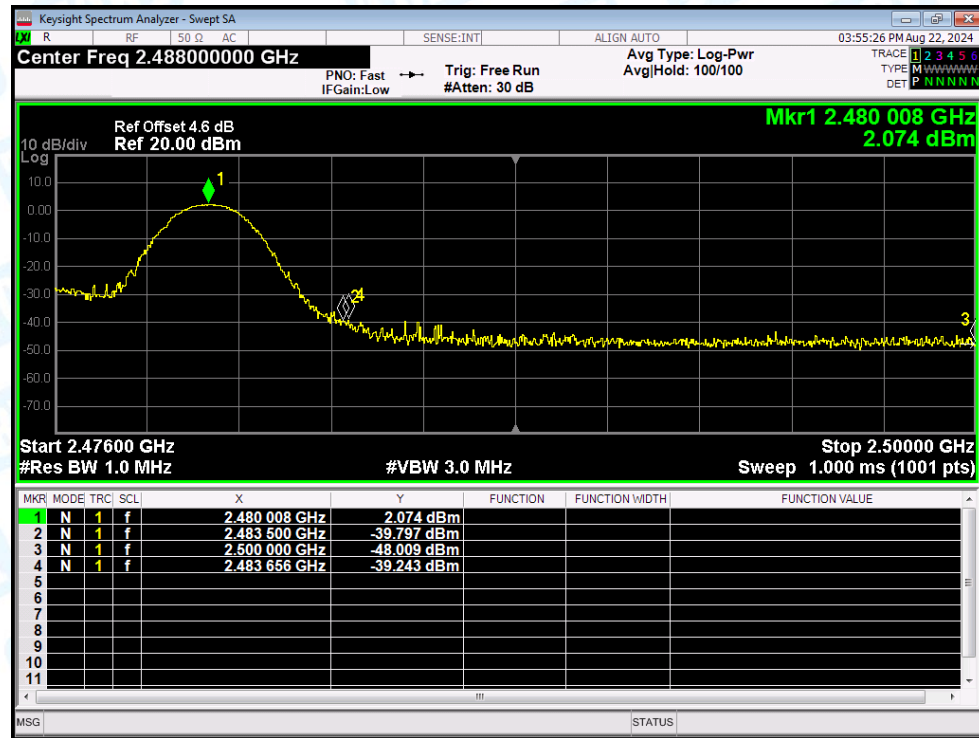
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



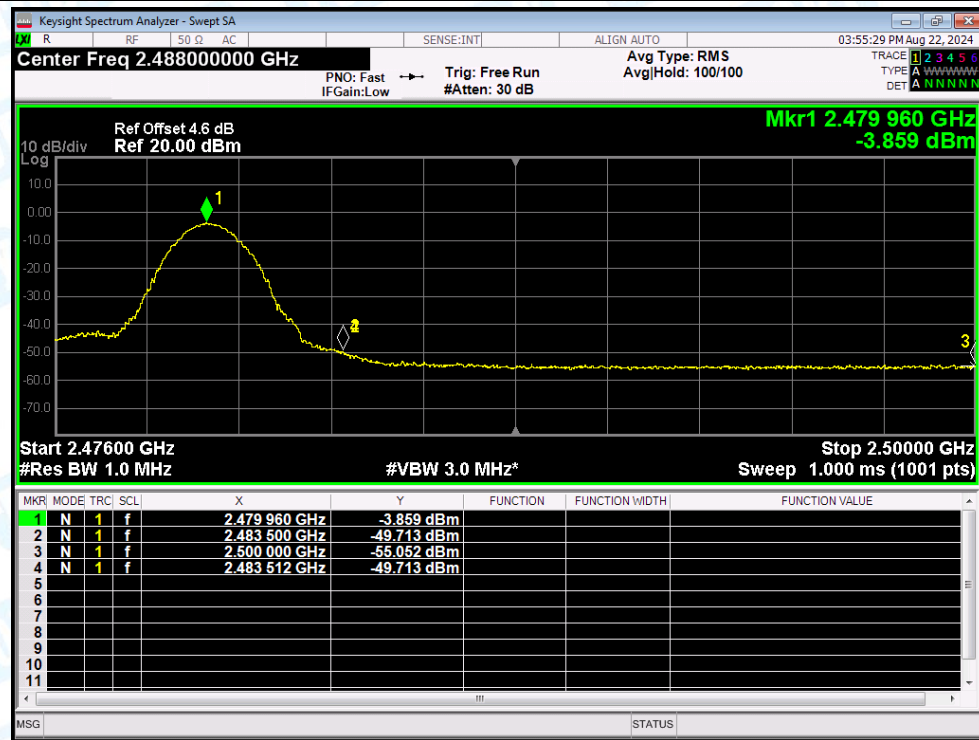
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

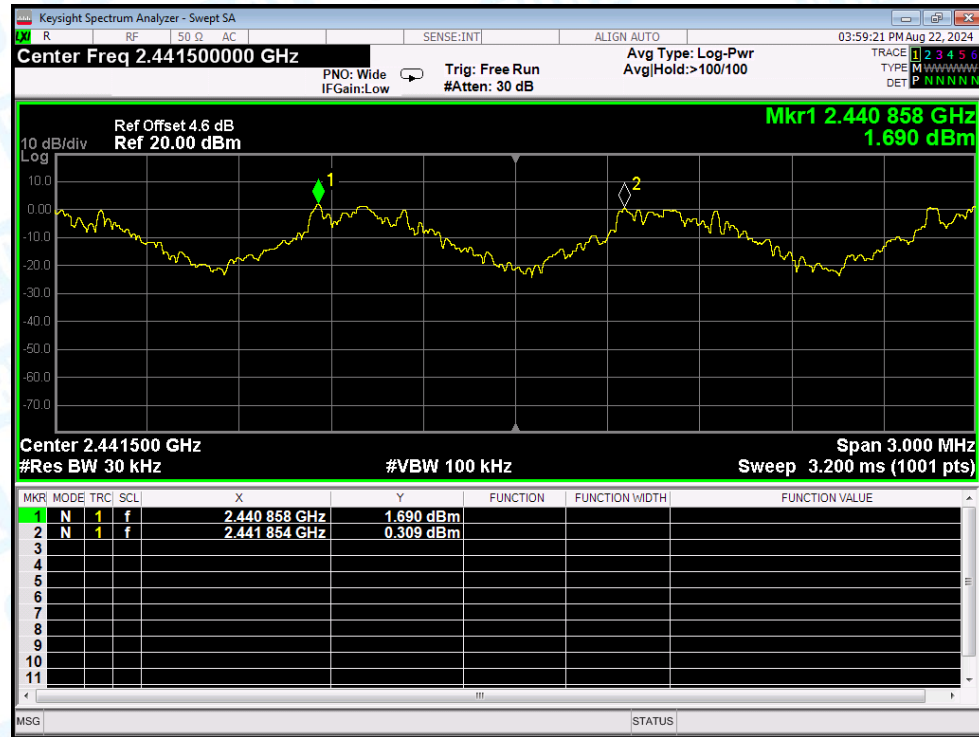


9. Carrier Frequencies Separation

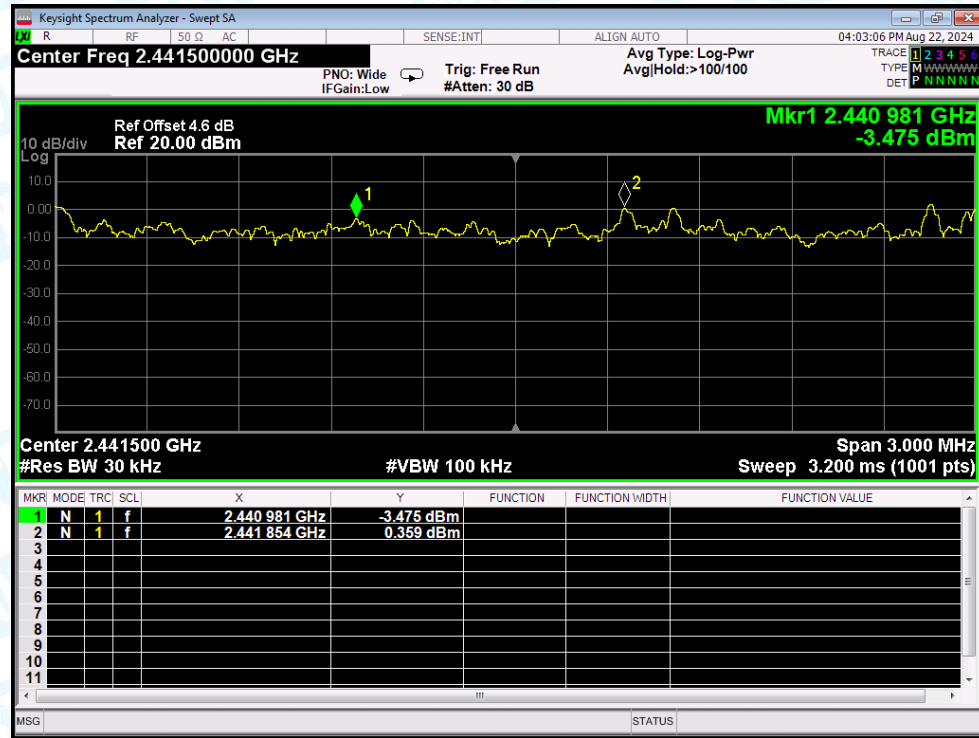
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.858	2441.854	0.996	0.573	Pass
NVNT	2-DH1	Ant1	2440.981	2441.854	0.873	0.847	Pass
NVNT	3-DH1	Ant1	2440.855	2441.998	1.143	0.84	Pass

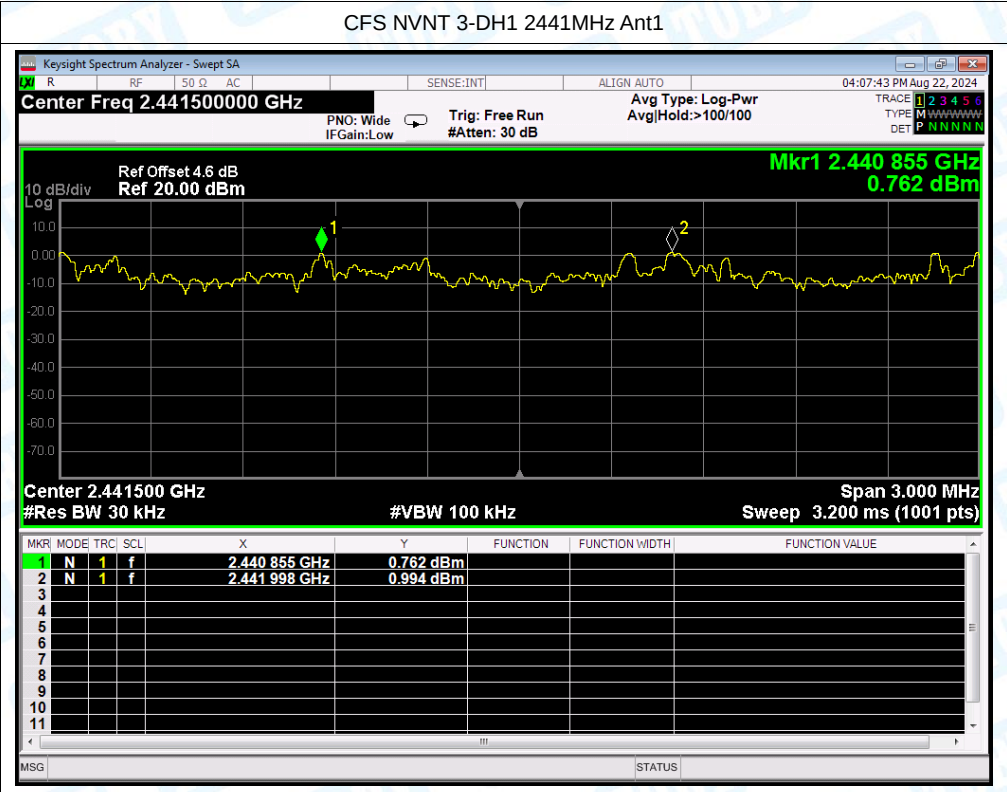
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



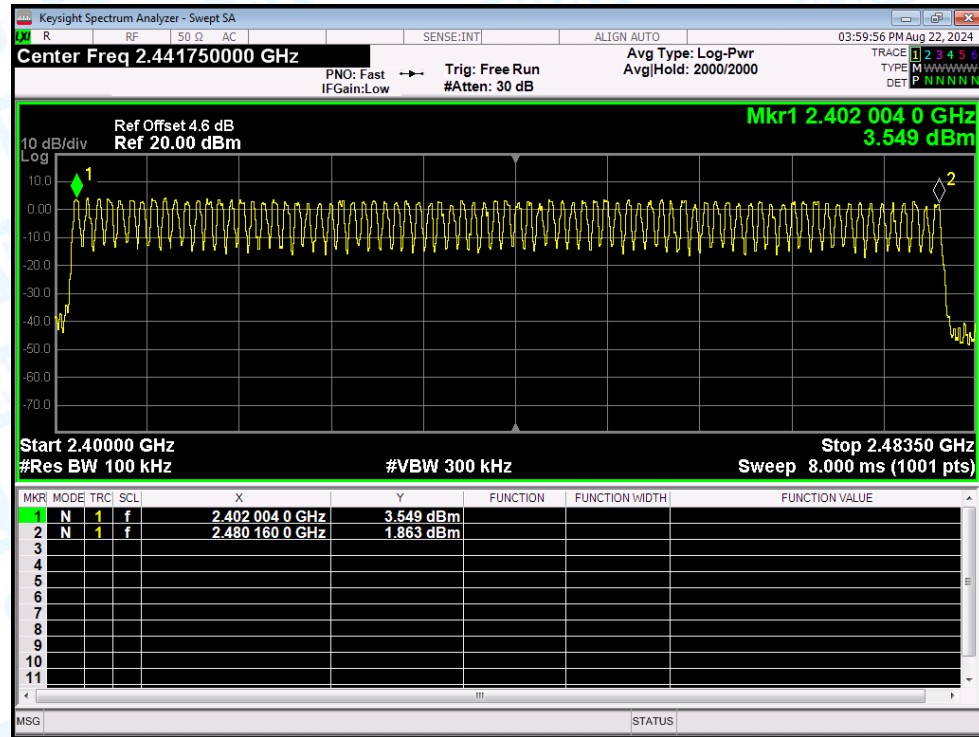


10. Number of Hopping Channel

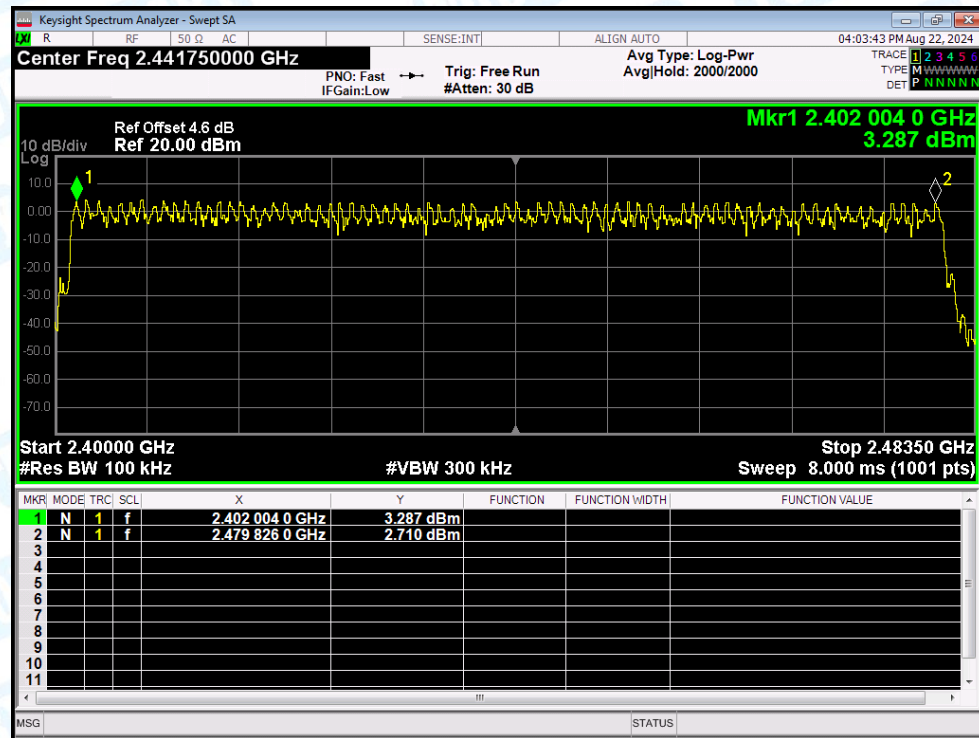
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

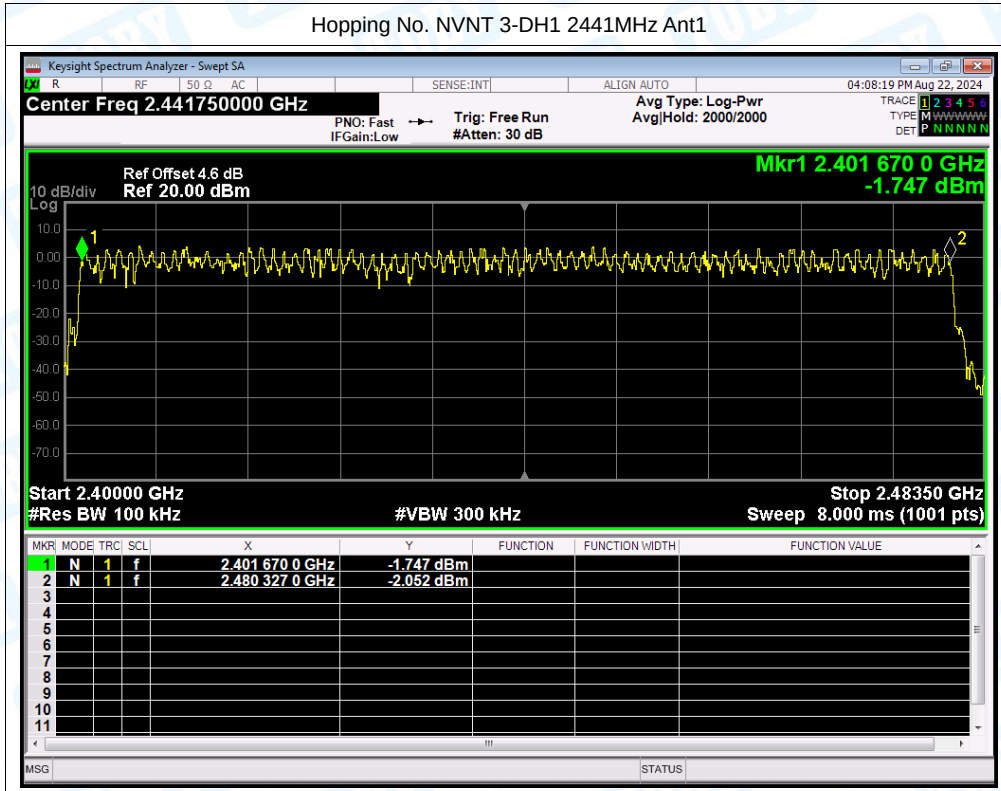
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



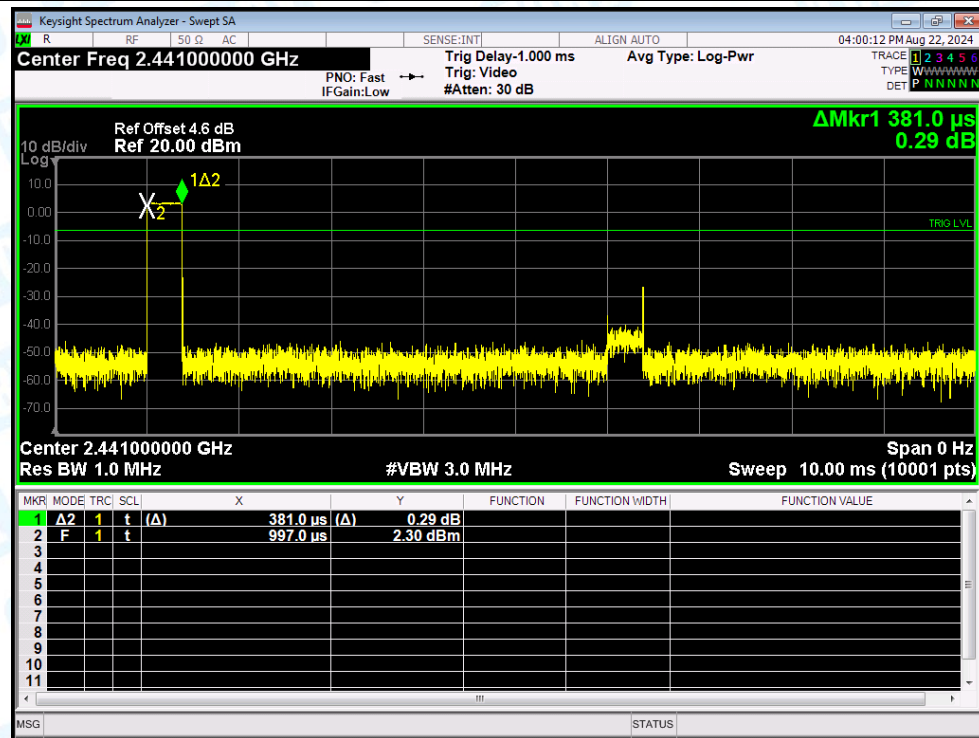


11. Dwell Time

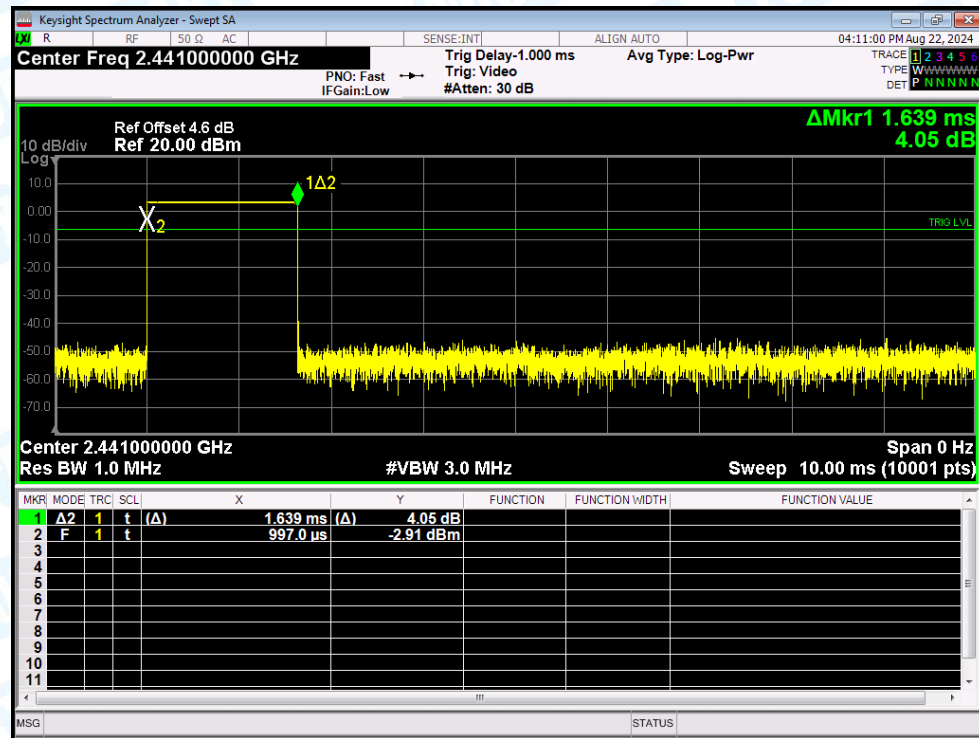
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.381	121.92	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.886	307.84	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.643	262.88	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.892	308.48	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	2.892	308.48	31600	400	Pass

Test Graphs

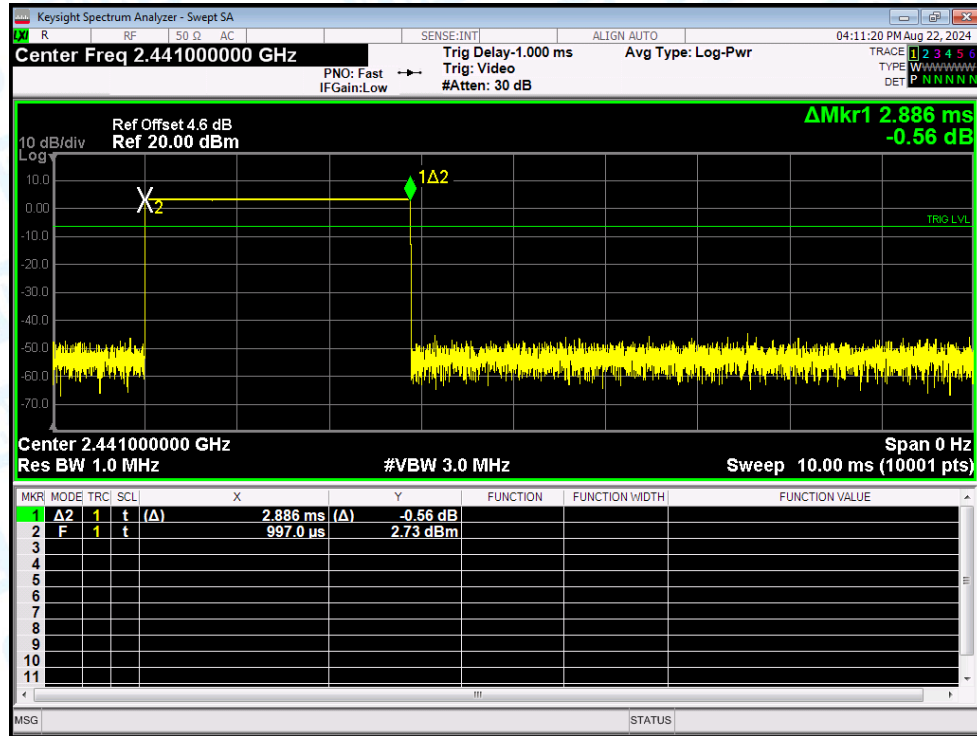
Dwell NVNT 1-DH1 2441MHz Ant1



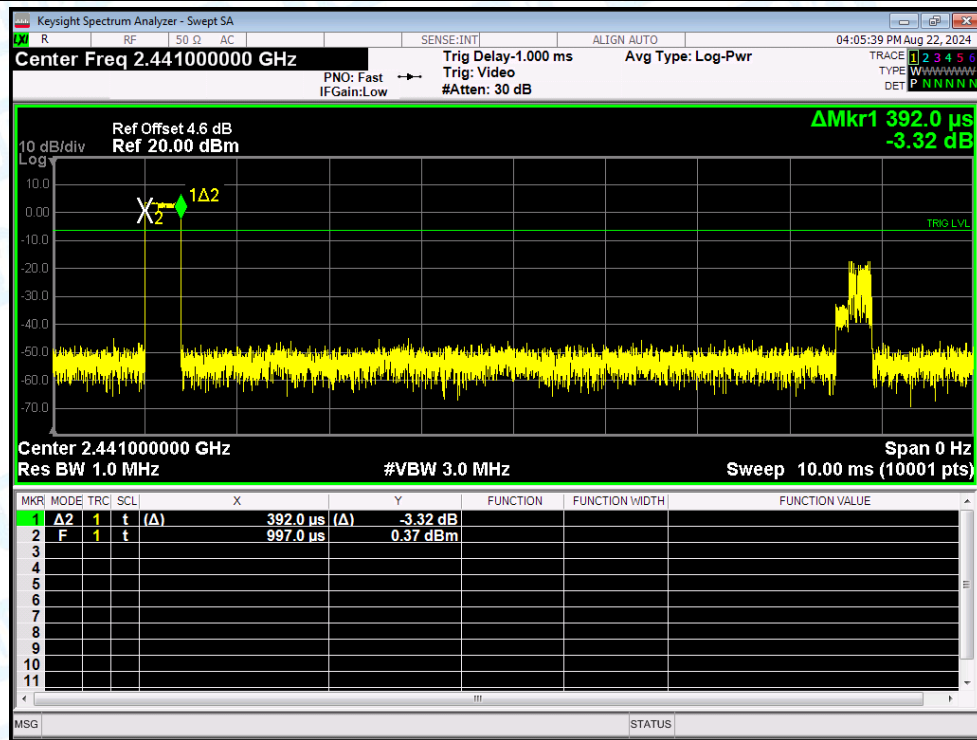
Dwell NVNT 1-DH3 2441MHz Ant1



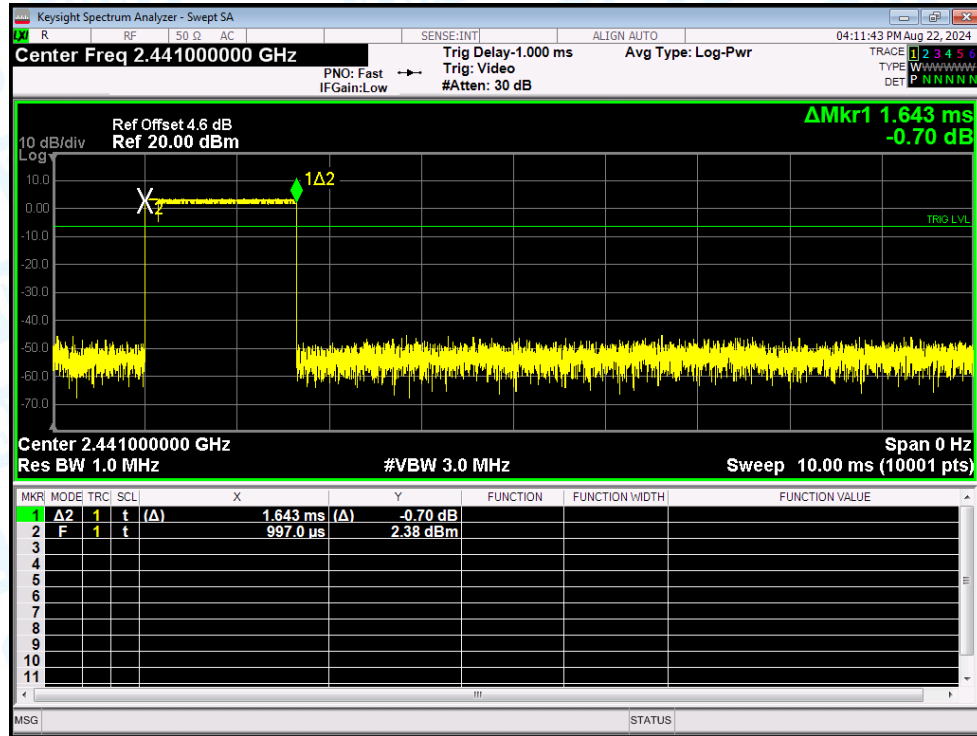
Dwell NVNT 1-DH5 2441MHz Ant1



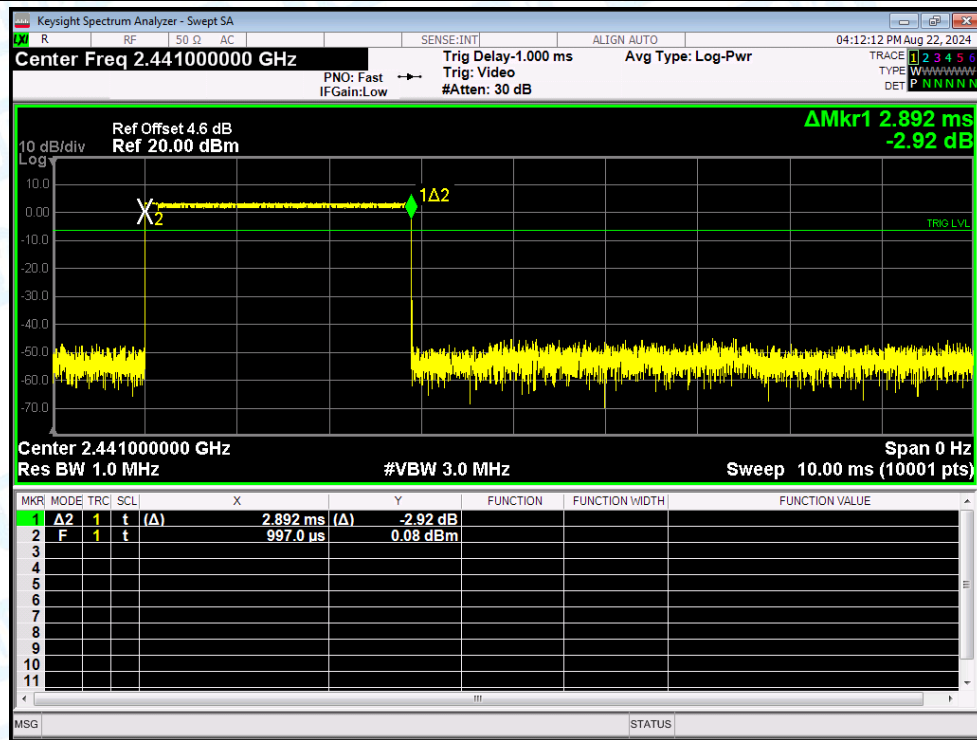
Dwell NVNT 2-DH1 2441MHz Ant1



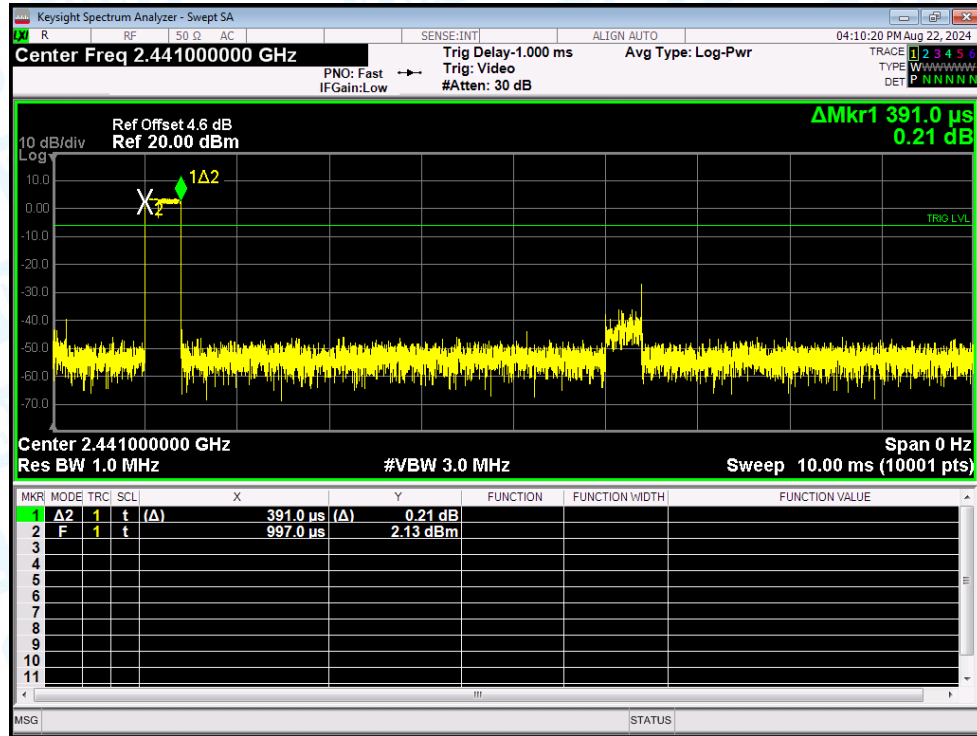
Dwell NVNT 2-DH3 2441MHz Ant1



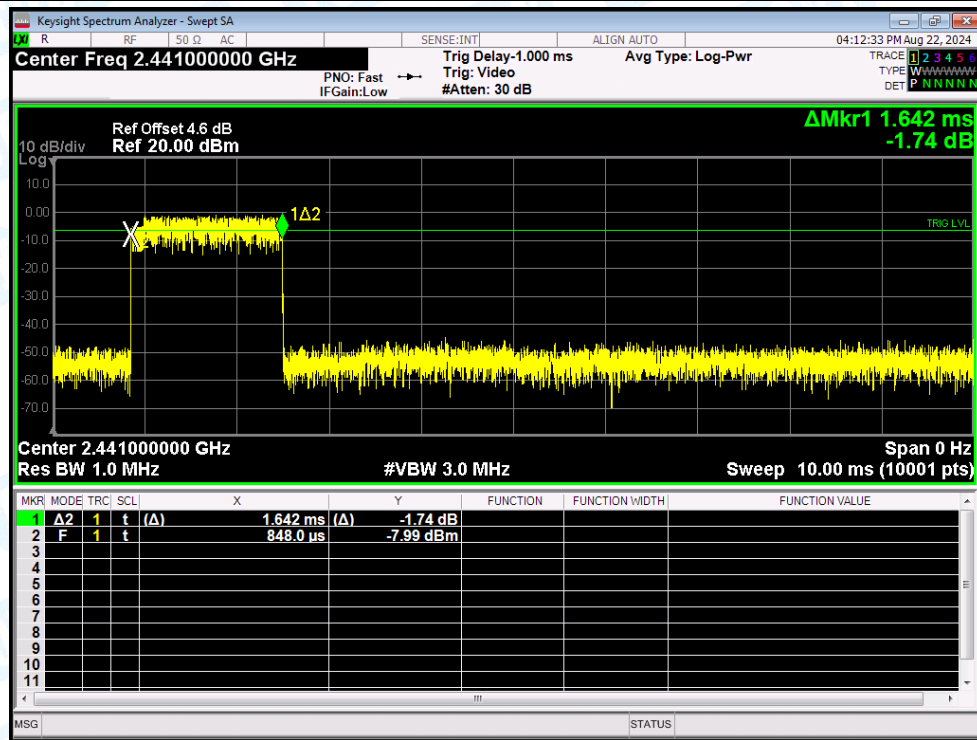
Dwell NVNT 2-DH5 2441MHz Ant1

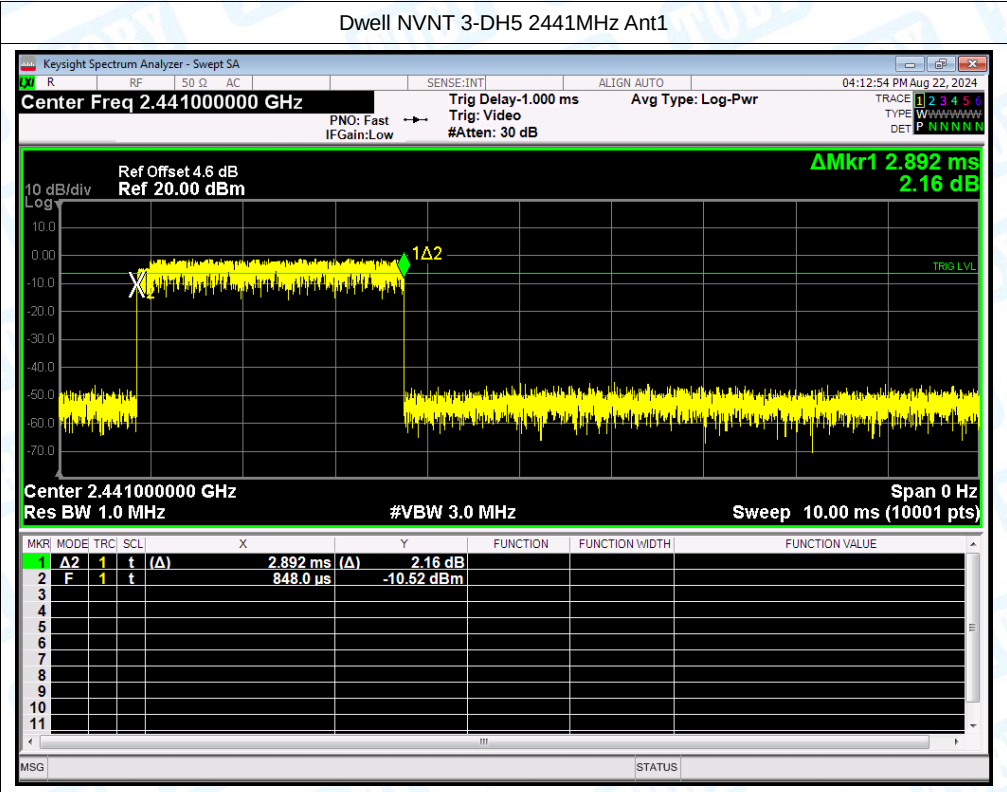


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





---- END OF REPORT ----