

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Voice Amplifier
Test Model:	VC-AMP
Sample ID:	HC-C-202503-0183-01-2#
Environmental Conditions	
Temperature:	24.8℃
Relative Humidity:	50%
Test Voltage:	DC 3.7V
Test Engineer:	Lily Zhang
Note: For a more detailed features description, please refer to the report TBR-C-202503-0183-7 The report only show the worst case data.	

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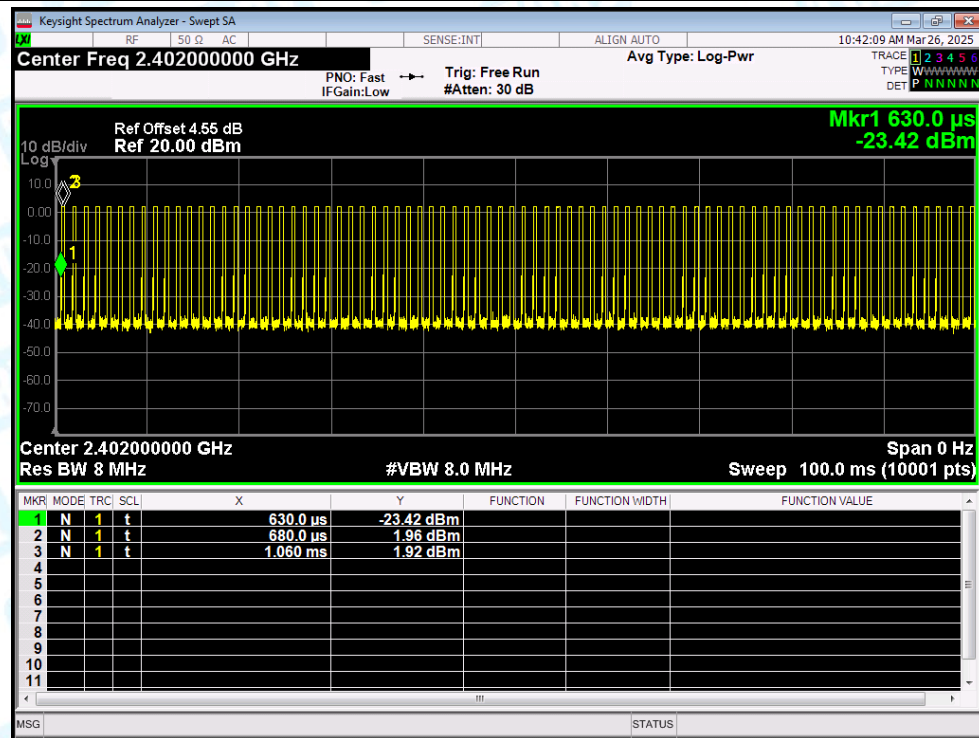
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1. Duty Cycle

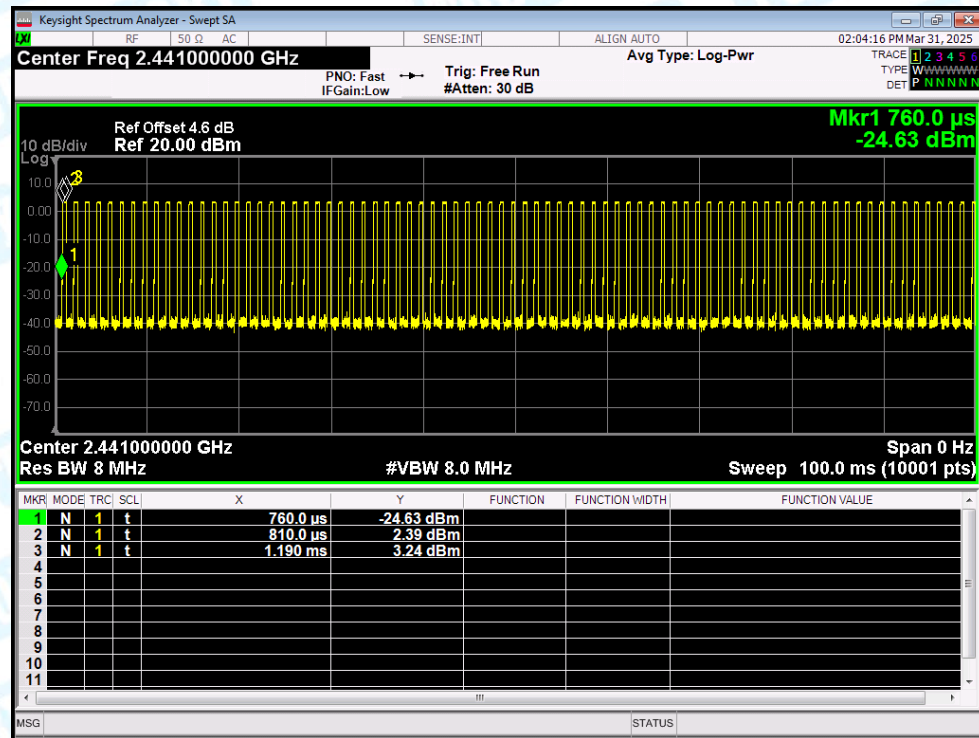
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	88.37	0.54	2.63
NVNT	1-DH1	2441	Ant1	88.37	0.54	2.63
NVNT	1-DH1	2480	Ant1	90.48	0.43	2.63
NVNT	2-DH1	2402	Ant1	90.7	0.42	2.56
NVNT	2-DH1	2441	Ant1	88.64	0.52	2.56
NVNT	2-DH1	2480	Ant1	88.64	0.52	2.56
NVNT	3-DH1	2402	Ant1	88.64	0.52	2.56
NVNT	3-DH1	2441	Ant1	90.7	0.42	2.56
NVNT	3-DH1	2480	Ant1	88.64	0.52	2.56

Test Graphs

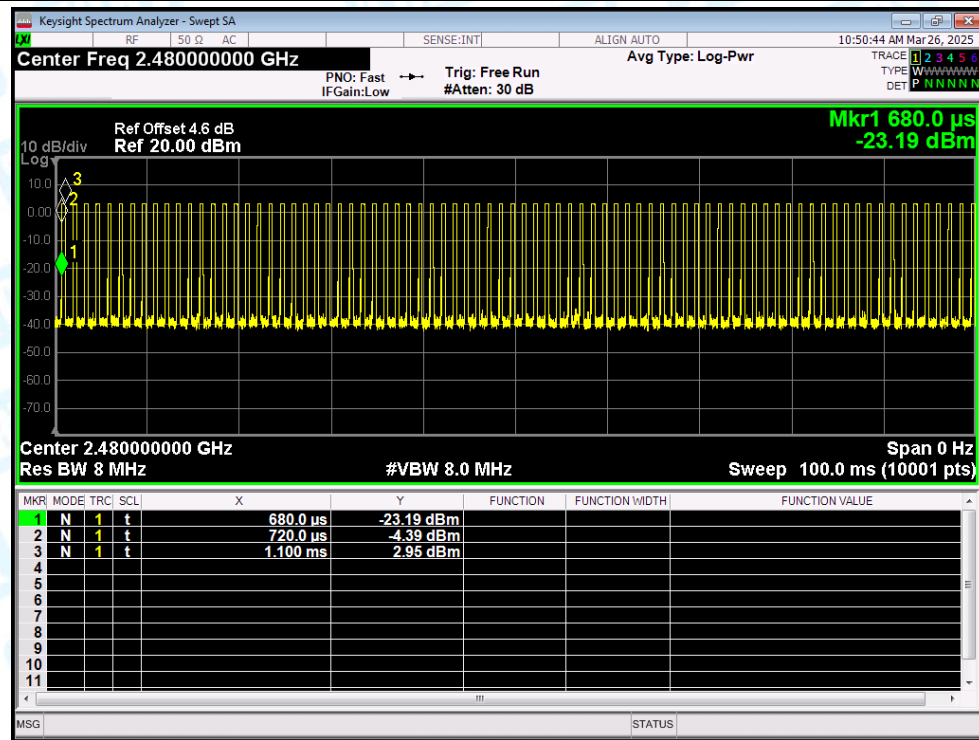
Duty Cycle NVNT 1-DH1 2402MHz Ant1



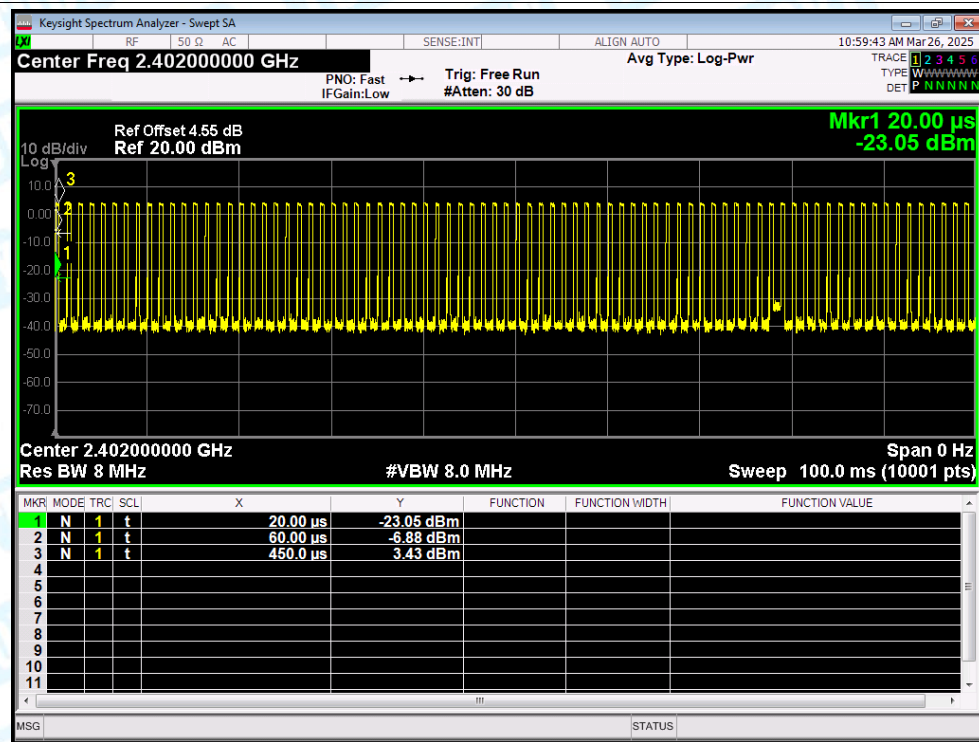
Duty Cycle NVNT 1-DH1 2441MHz Ant1



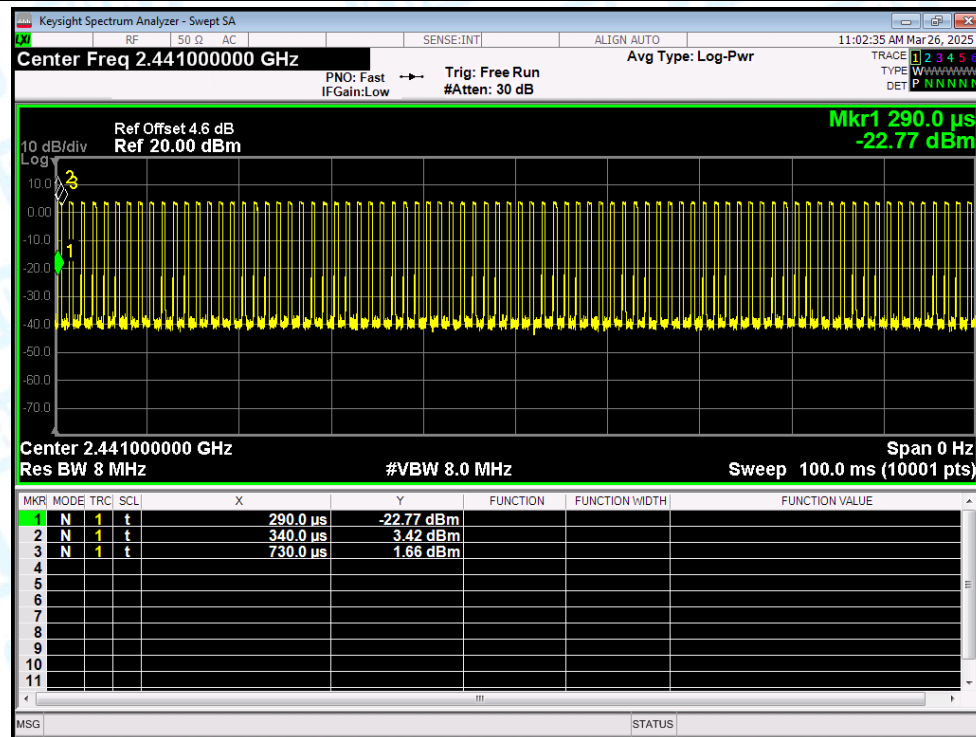
Duty Cycle NVNT 1-DH1 2480MHz Ant1



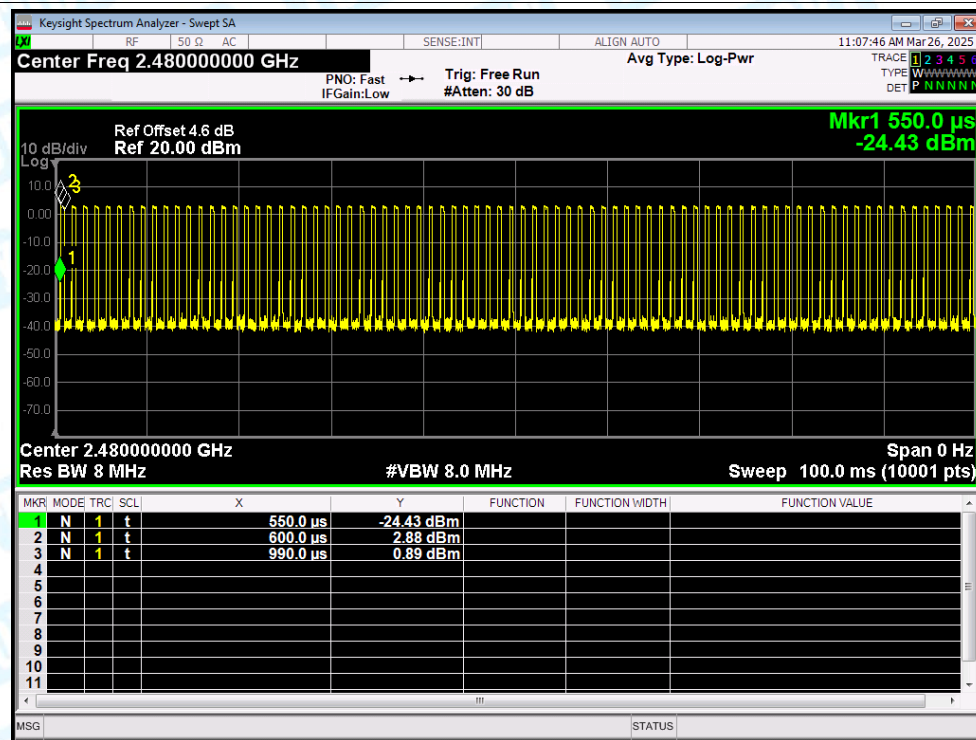
Duty Cycle NVNT 2-DH1 2402MHz Ant1



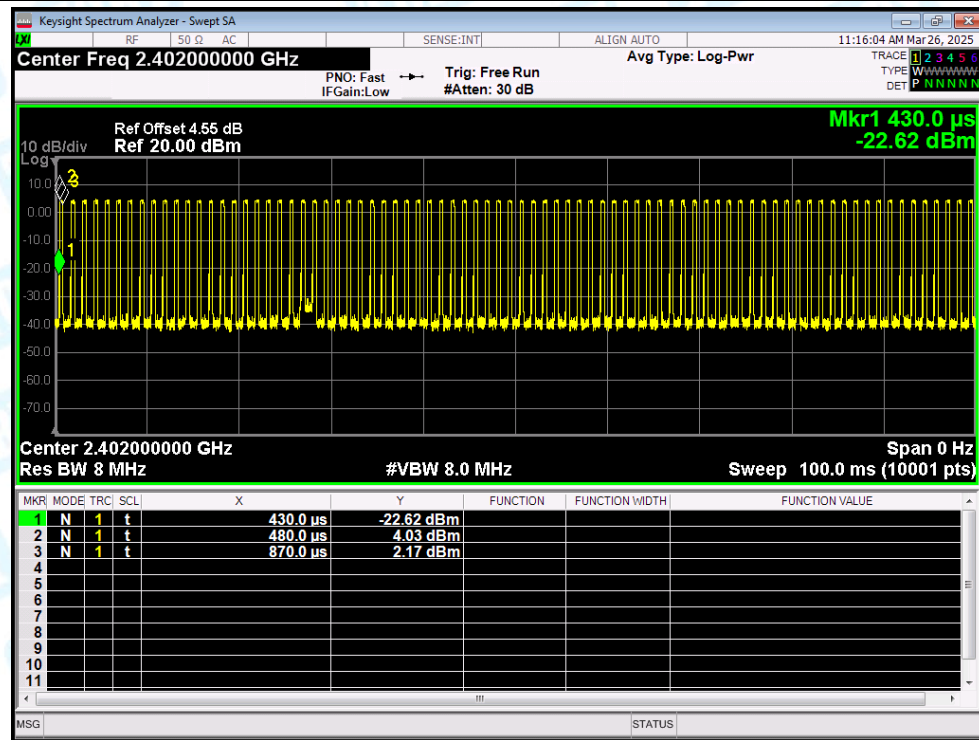
Duty Cycle NVNT 2-DH1 2441MHz Ant1



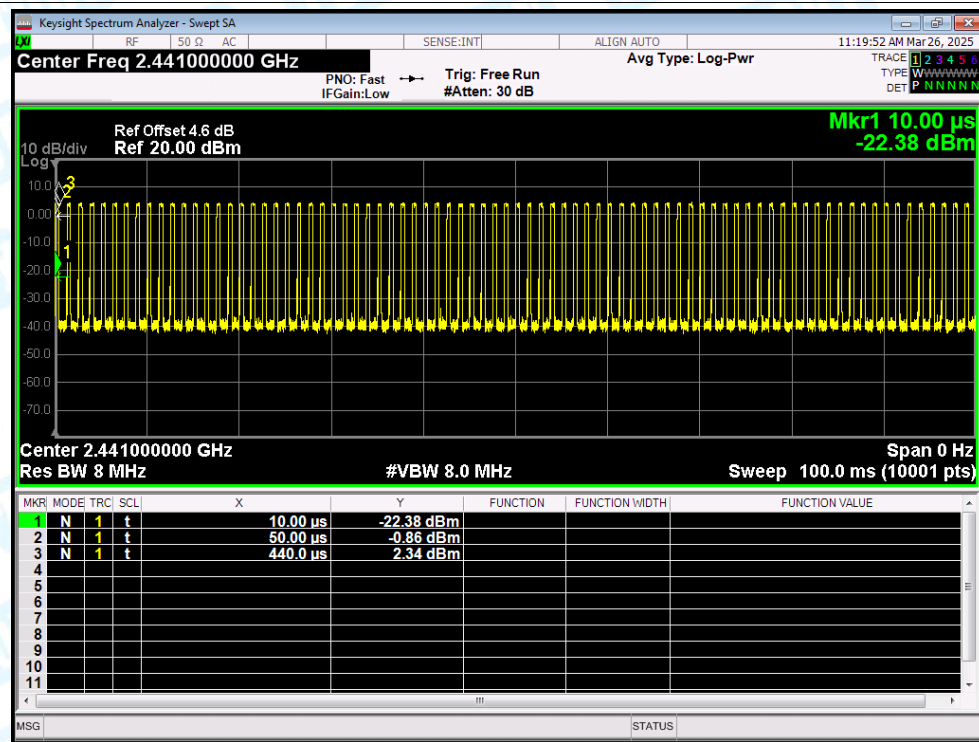
Duty Cycle NVNT 2-DH1 2480MHz Ant1

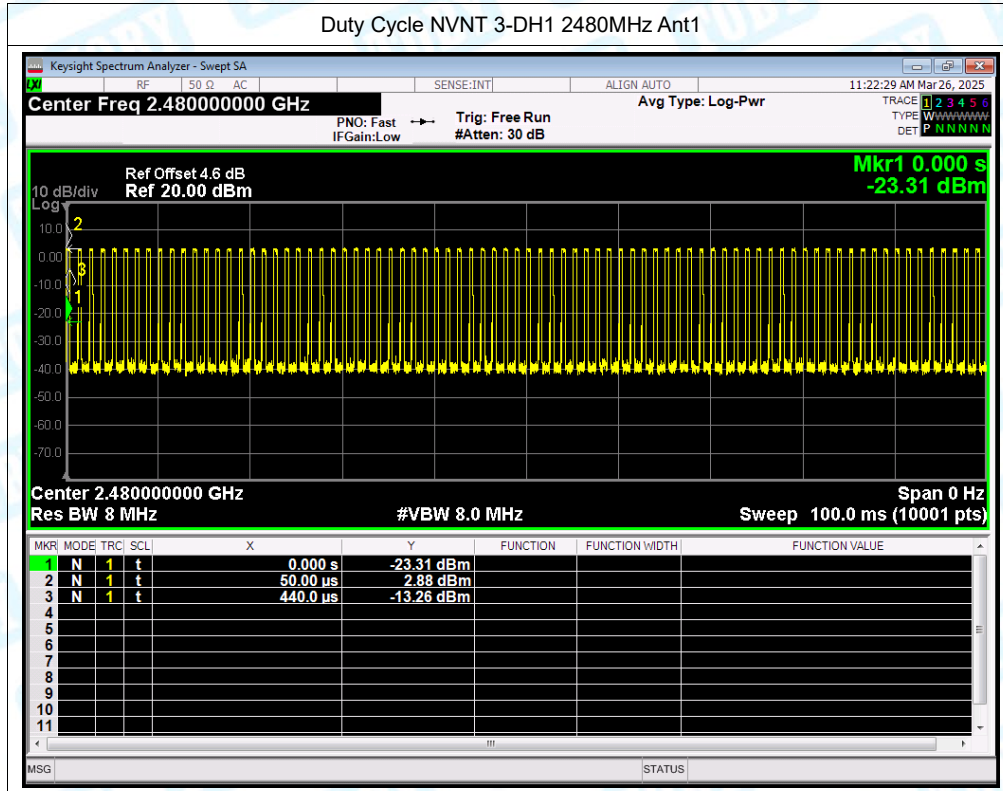


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



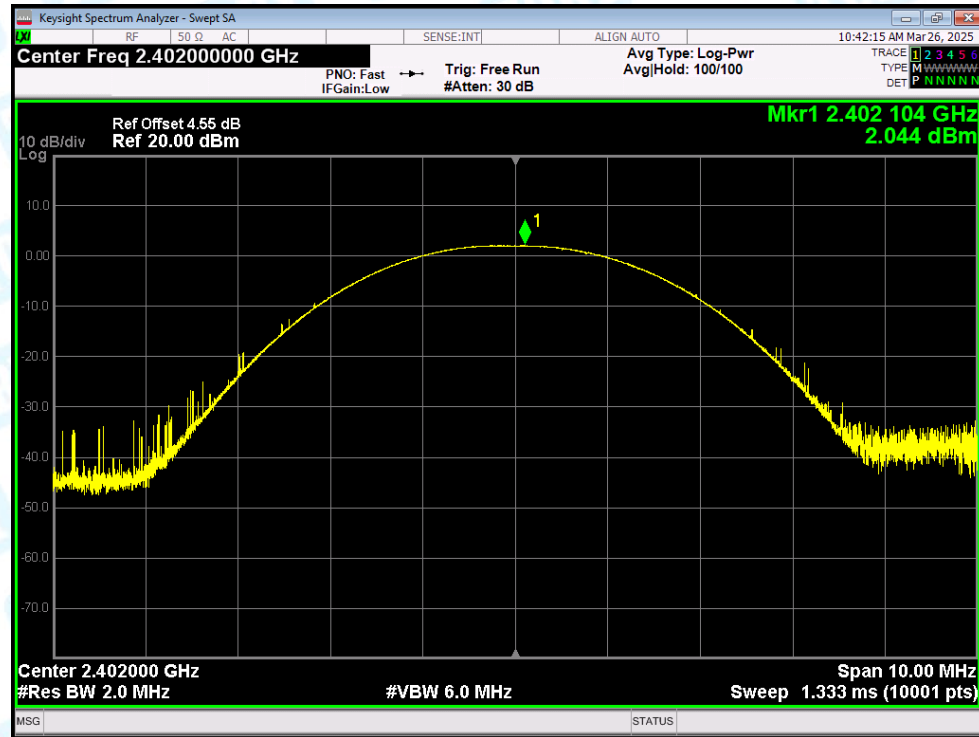


2. Maximum Conducted Output Power

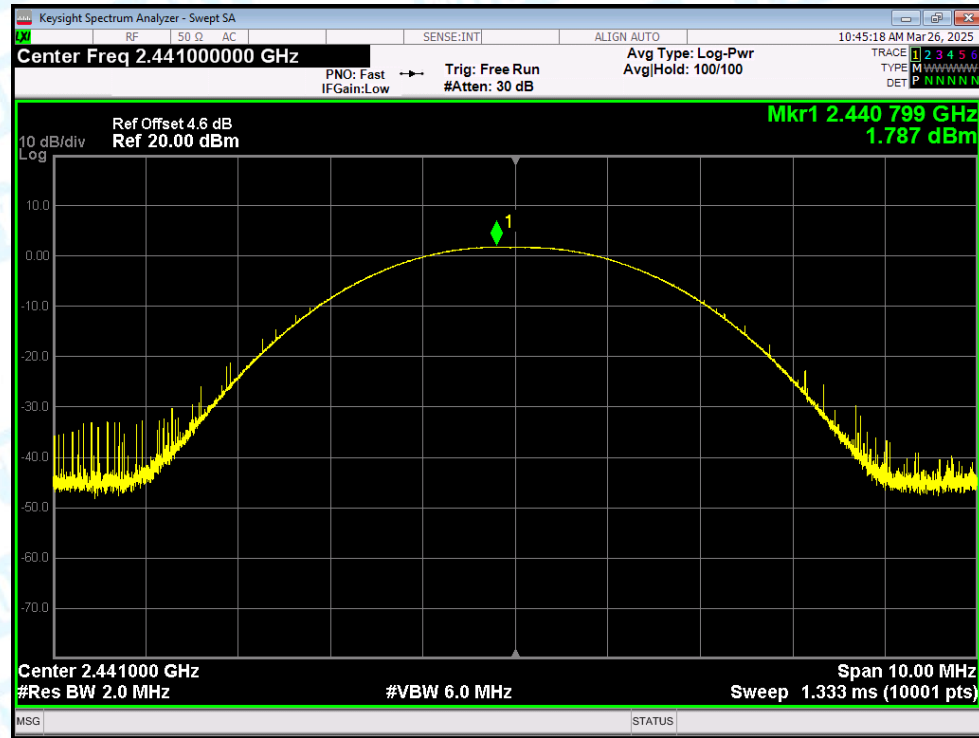
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	2.044	21	Pass
NVNT	1-DH1	2441	Ant1	1.787	21	Pass
NVNT	1-DH1	2480	Ant1	3.052	21	Pass
NVNT	1-DH3	2441	Ant1	3.459	21	Pass
NVNT	1-DH5	2441	Ant1	3.576	21	Pass
NVNT	2-DH1	2402	Ant1	3.967	21	Pass
NVNT	2-DH1	2441	Ant1	3.706	21	Pass
NVNT	2-DH1	2480	Ant1	2.902	21	Pass
NVNT	2-DH3	2441	Ant1	3.615	21	Pass
NVNT	2-DH5	2441	Ant1	3.494	21	Pass
NVNT	3-DH1	2402	Ant1	4.385	21	Pass
NVNT	3-DH1	2441	Ant1	3.913	21	Pass
NVNT	3-DH1	2480	Ant1	3.306	21	Pass
NVNT	3-DH3	2441	Ant1	3.992	21	Pass
NVNT	3-DH5	2441	Ant1	3.938	21	Pass

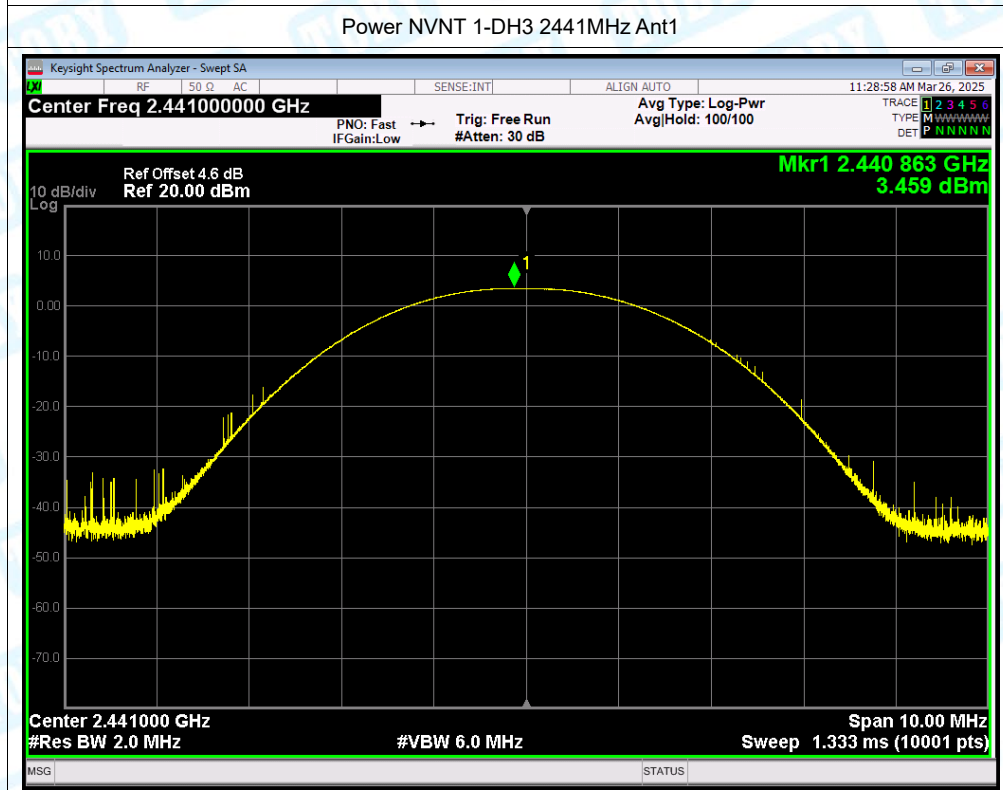
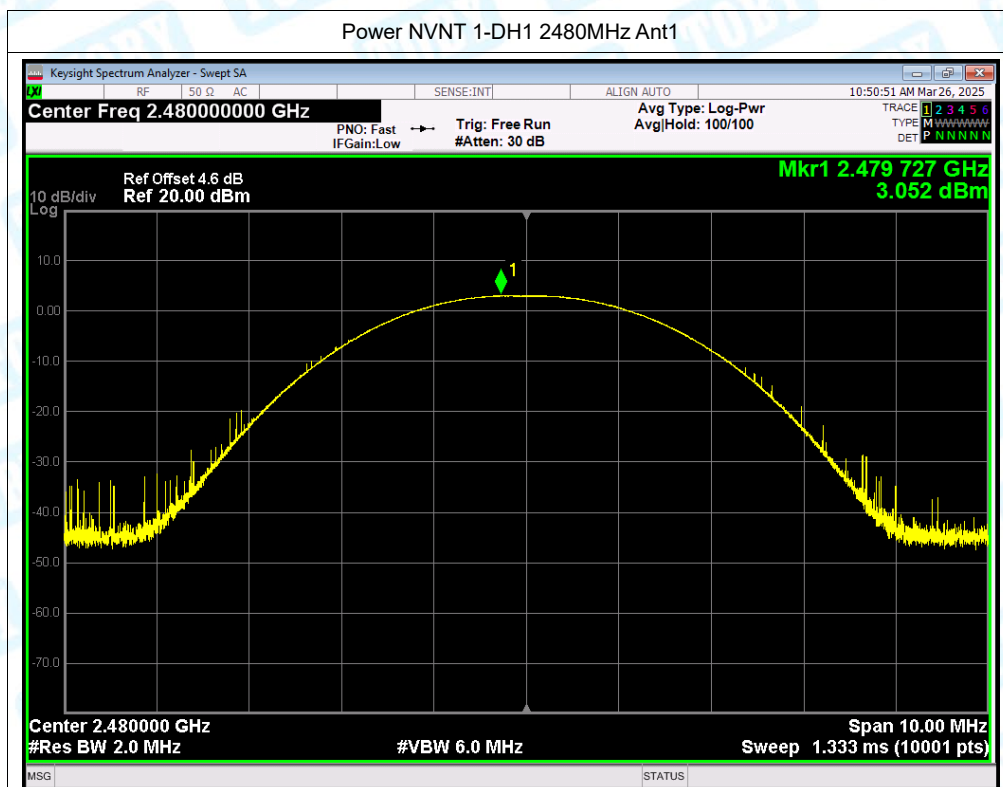
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1

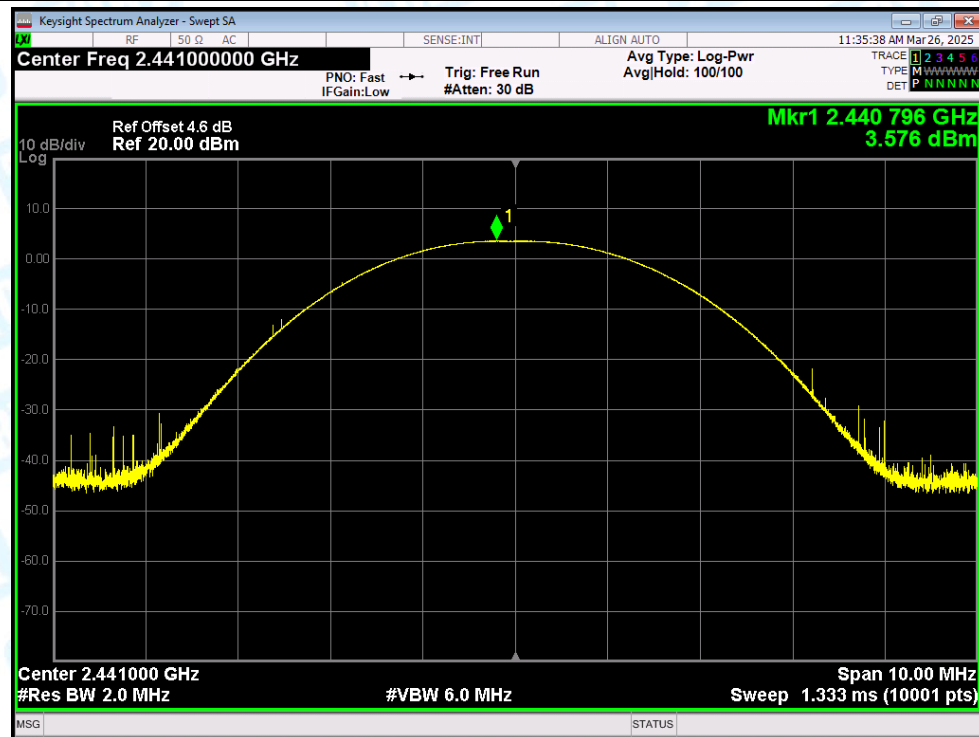


Power NVNT 1-DH1 2441MHz Ant1

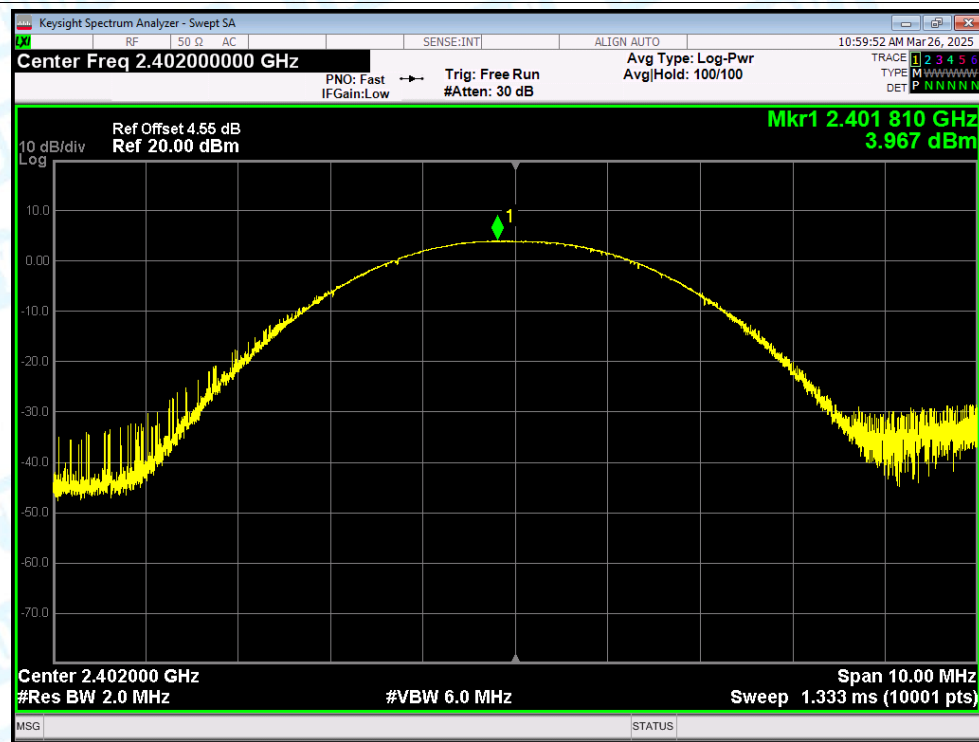


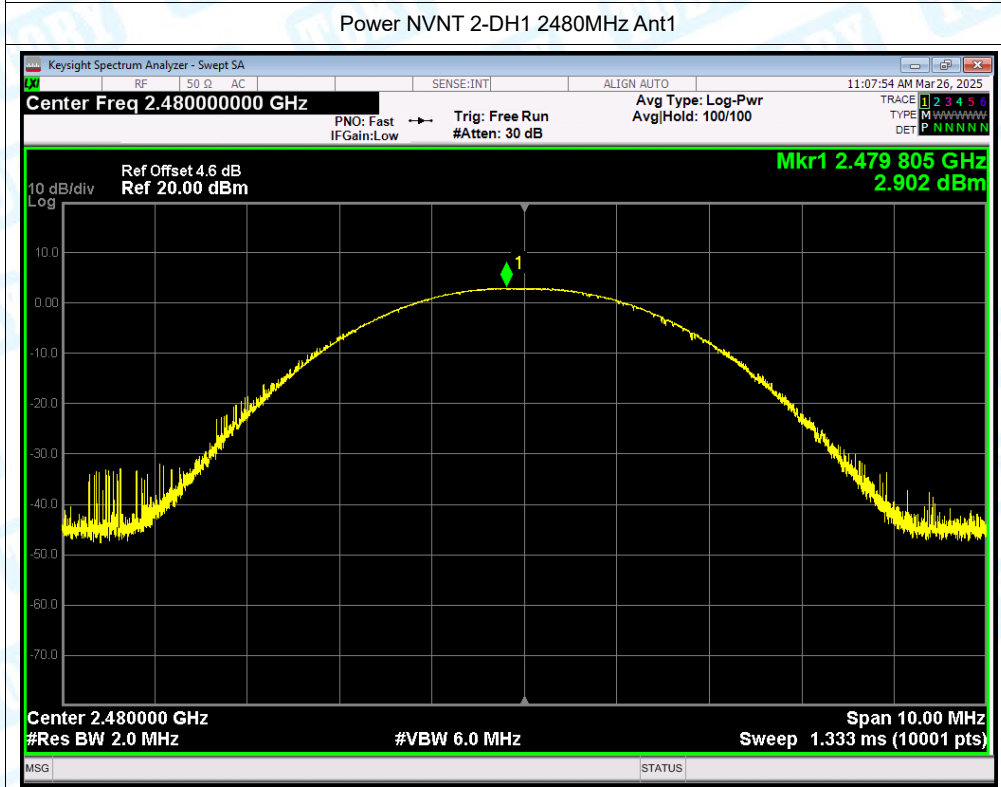
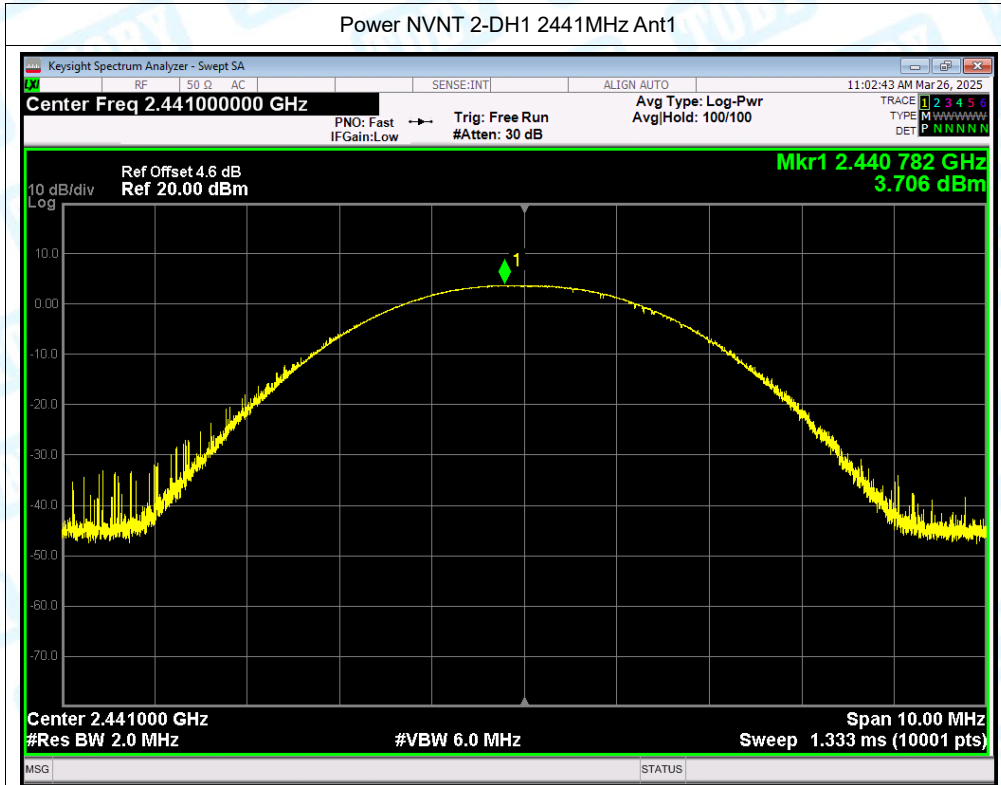


Power NVNT 1-DH5 2441MHz Ant1

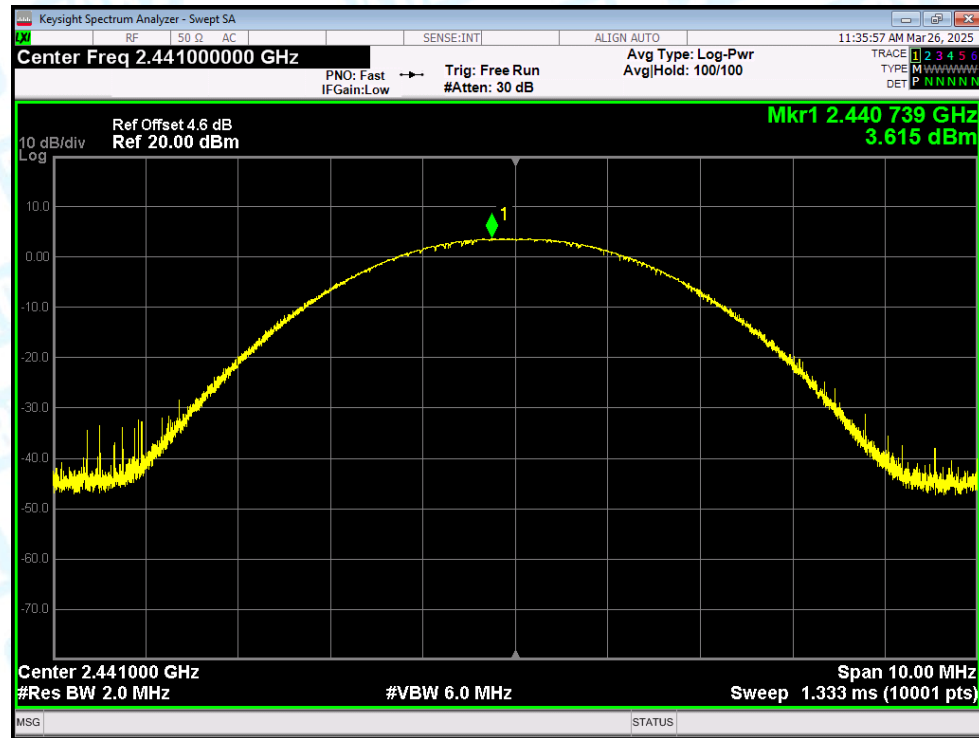


Power NVNT 2-DH1 2402MHz Ant1

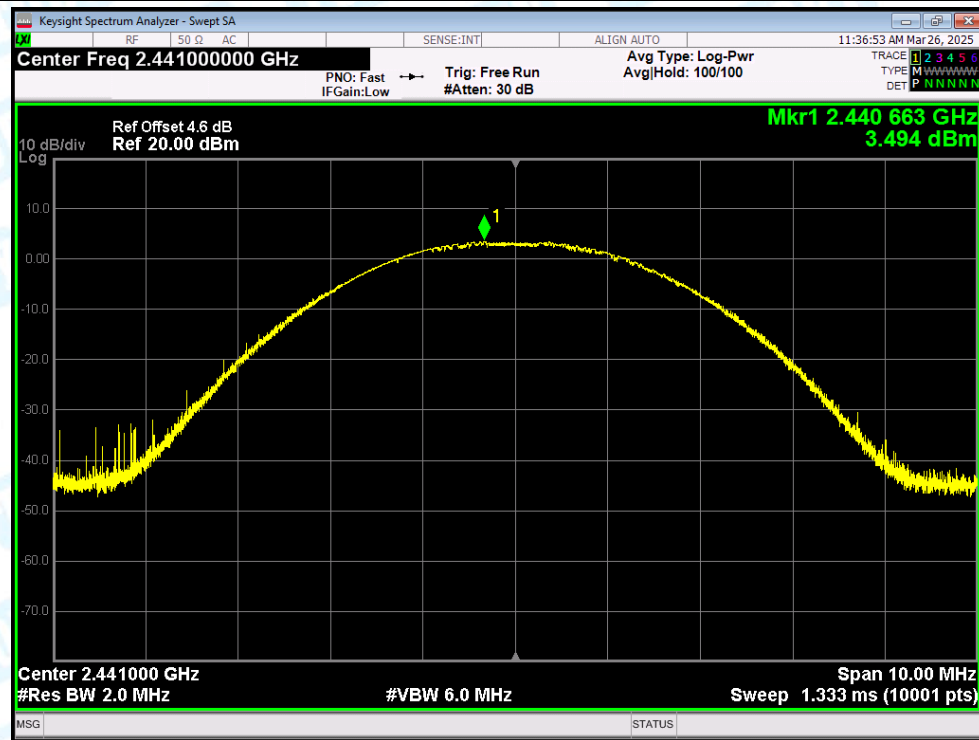


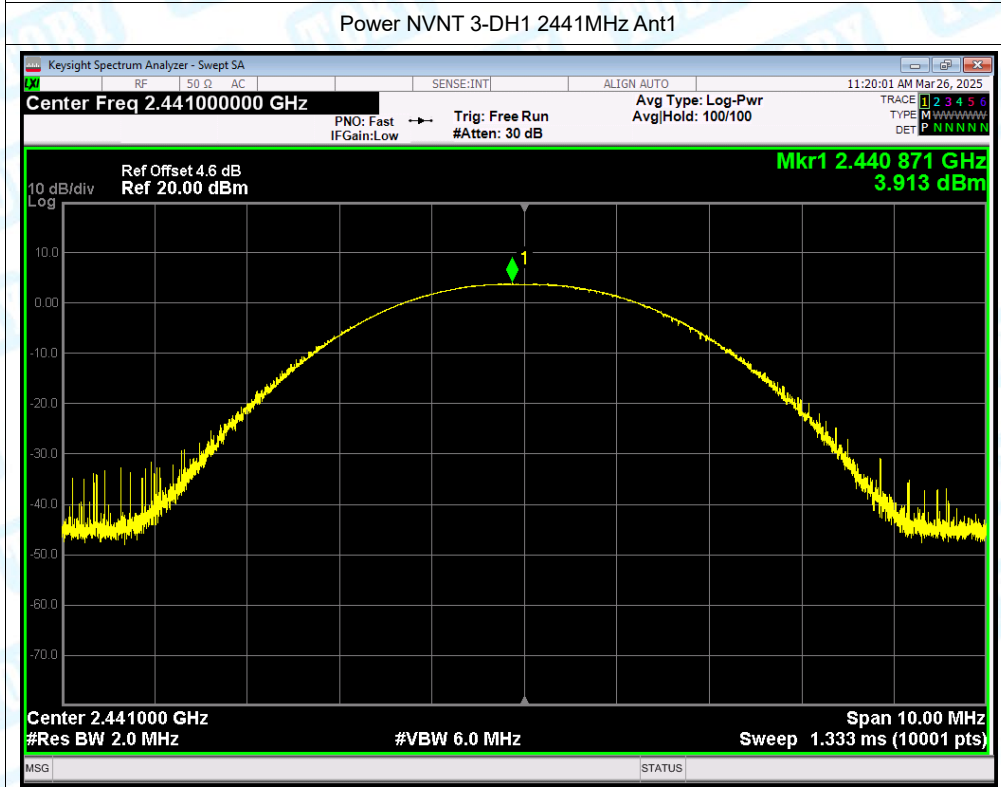
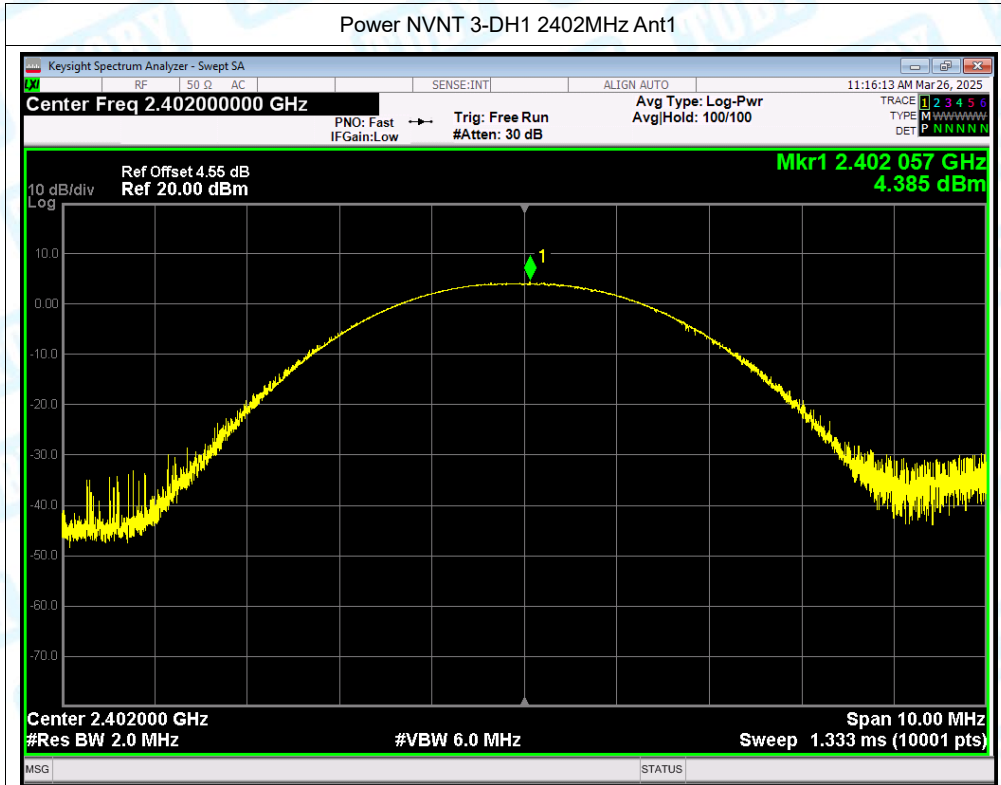


Power NVNT 2-DH3 2441MHz Ant1

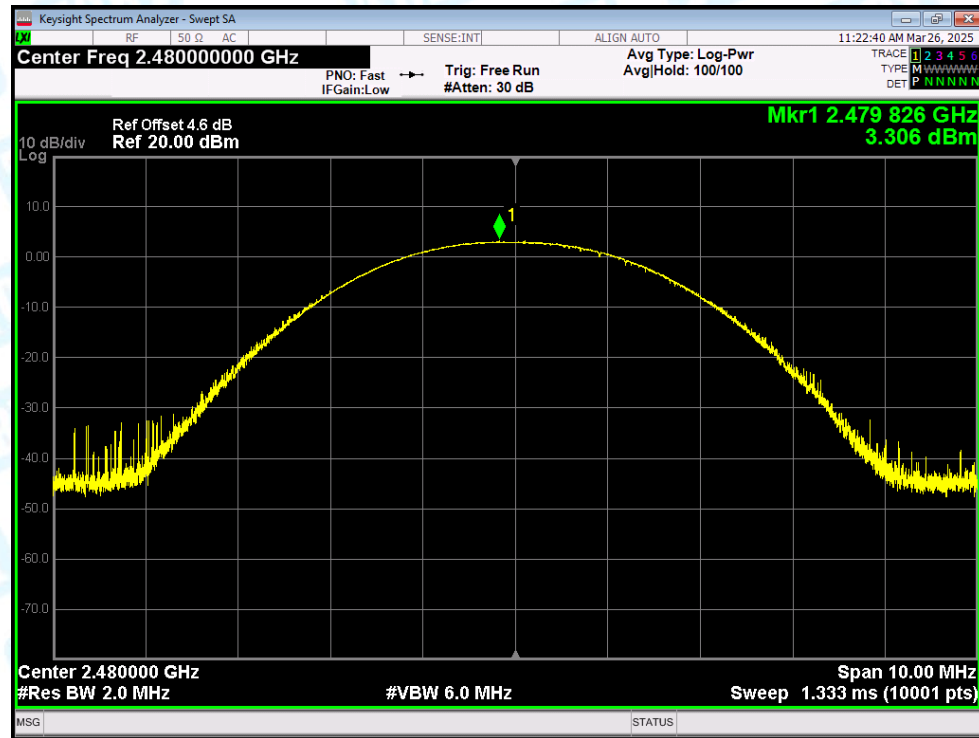


Power NVNT 2-DH5 2441MHz Ant1

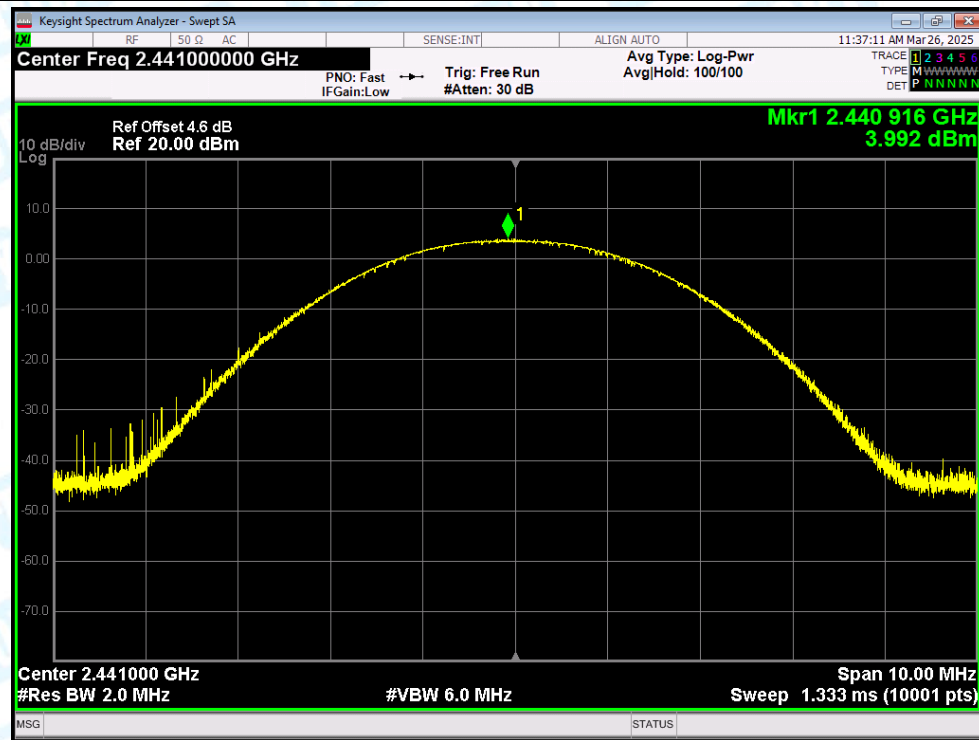


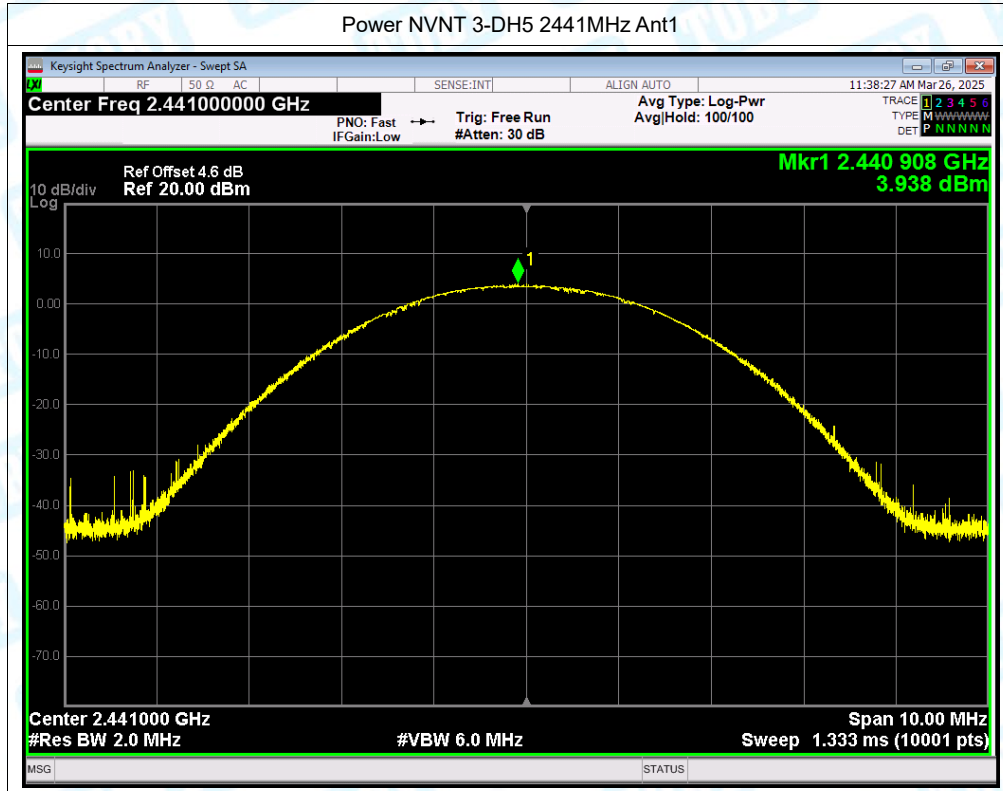


Power NVNT 3-DH1 2480MHz Ant1



Power NVNT 3-DH3 2441MHz Ant1



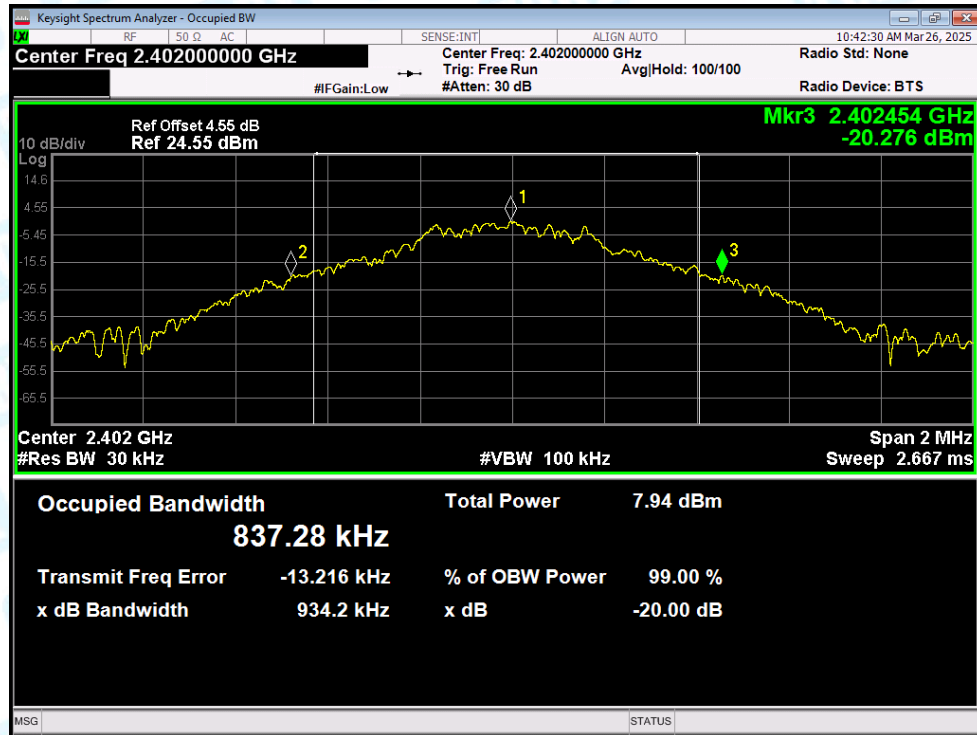


3. -20dB Bandwidth

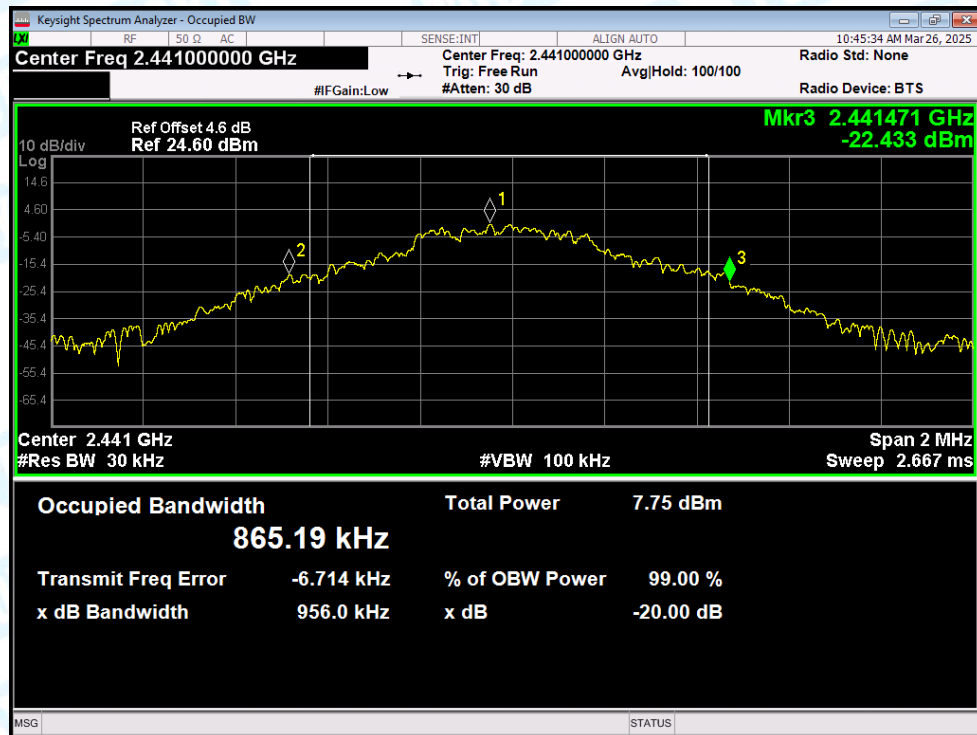
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.93	0	Pass
NVNT	1-DH1	2441	Ant1	0.96	0	Pass
NVNT	1-DH1	2480	Ant1	0.94	0	Pass
NVNT	2-DH1	2402	Ant1	1.25	0	Pass
NVNT	2-DH1	2441	Ant1	1.26	0	Pass
NVNT	2-DH1	2480	Ant1	1.23	0	Pass
NVNT	3-DH1	2402	Ant1	1.26	0	Pass
NVNT	3-DH1	2441	Ant1	1.24	0	Pass
NVNT	3-DH1	2480	Ant1	1.25	0	Pass

Test Graphs

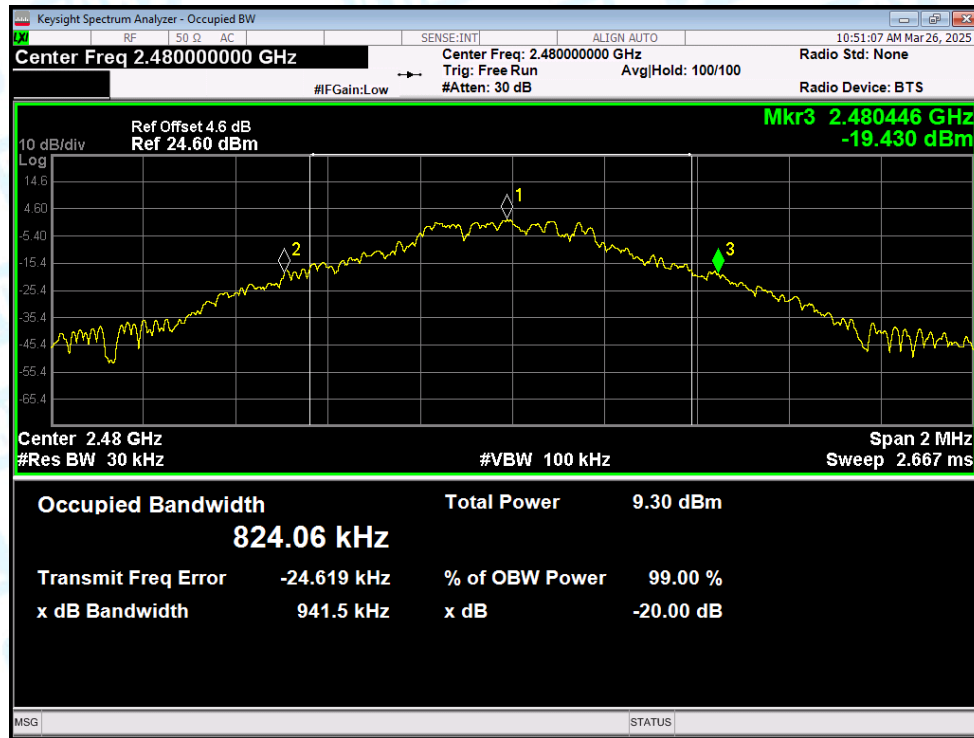
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



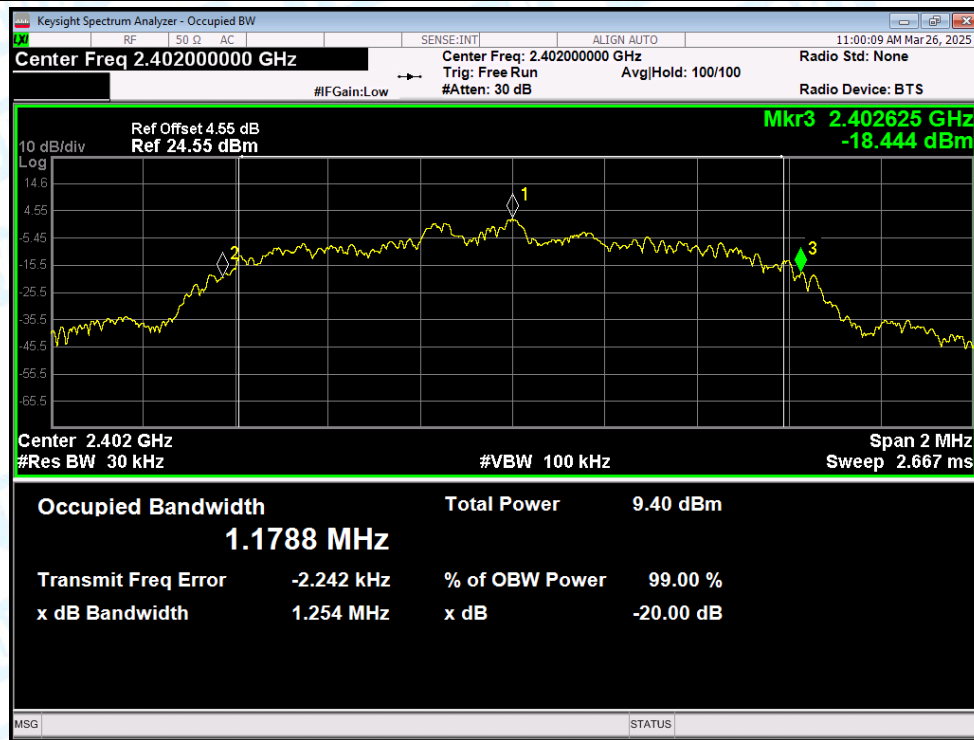
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



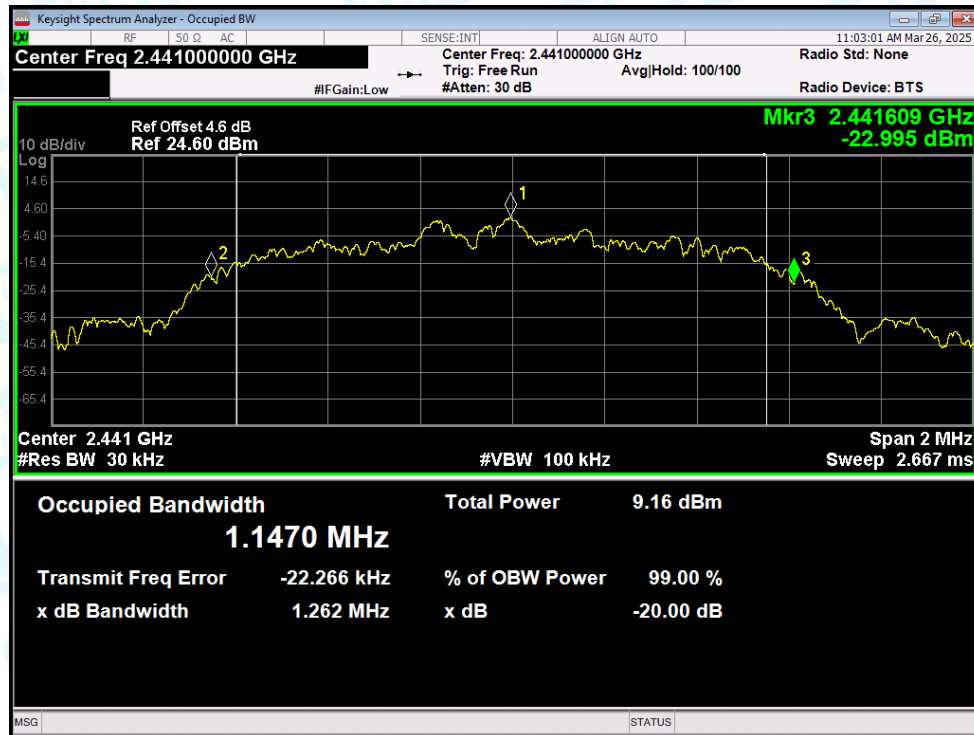
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



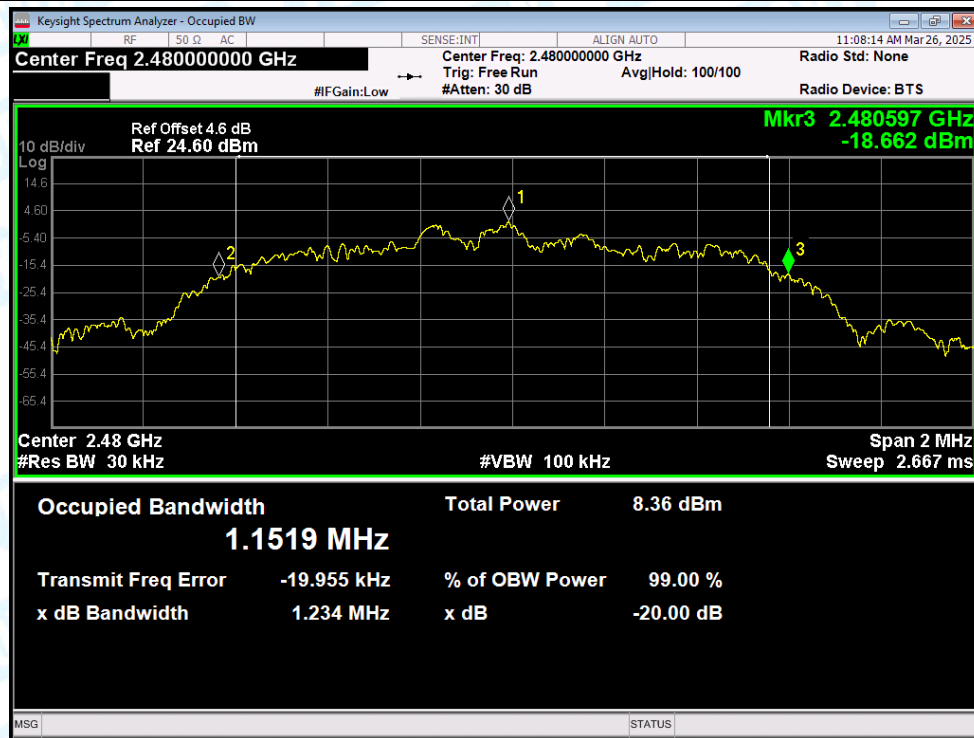
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



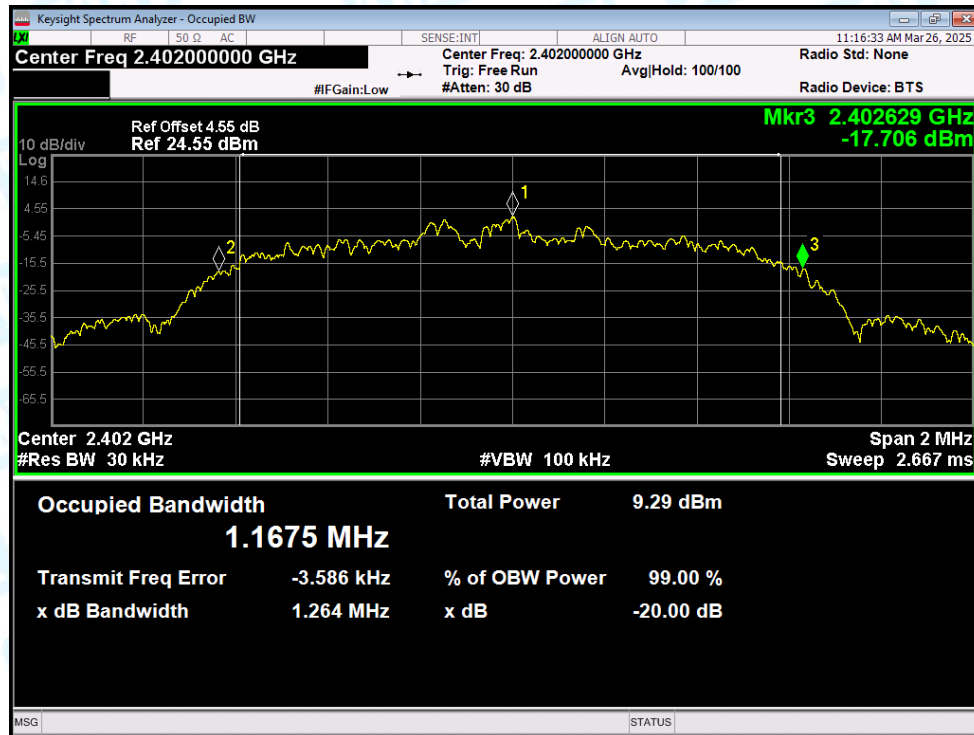
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

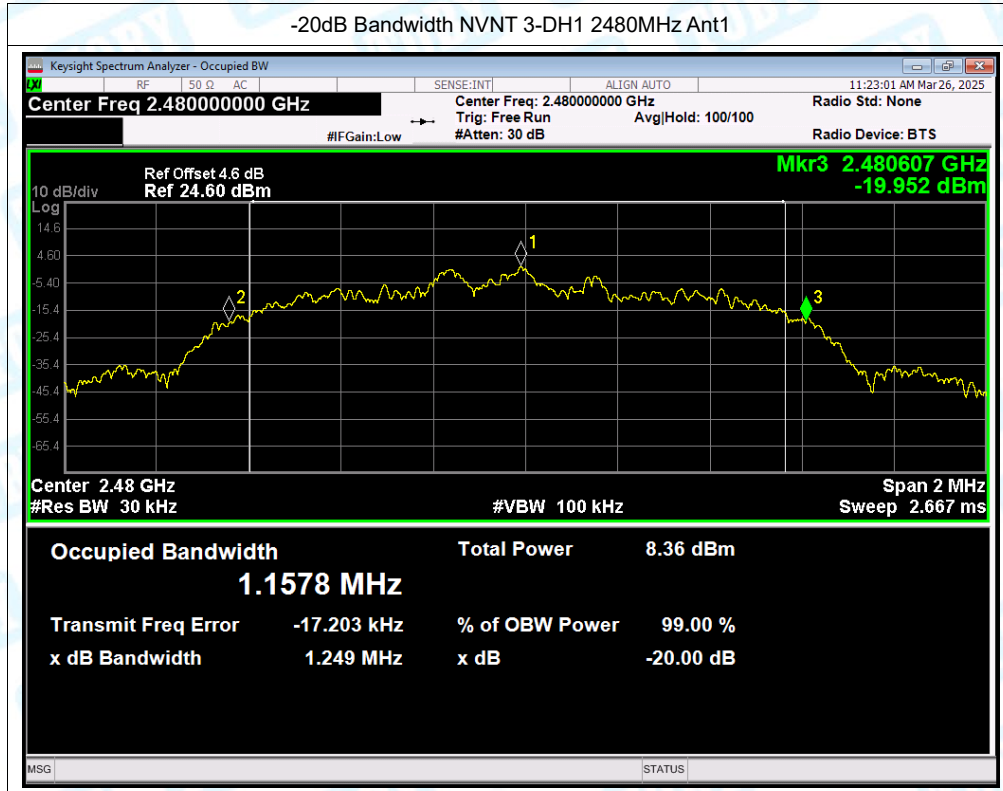


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



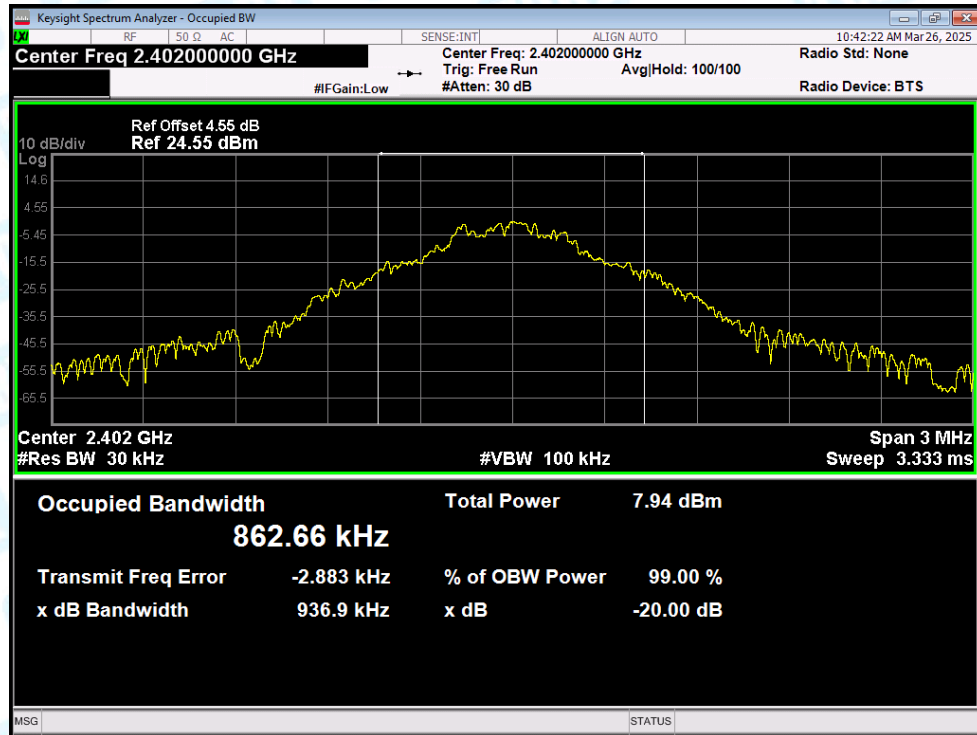


4. Occupied Channel Bandwidth

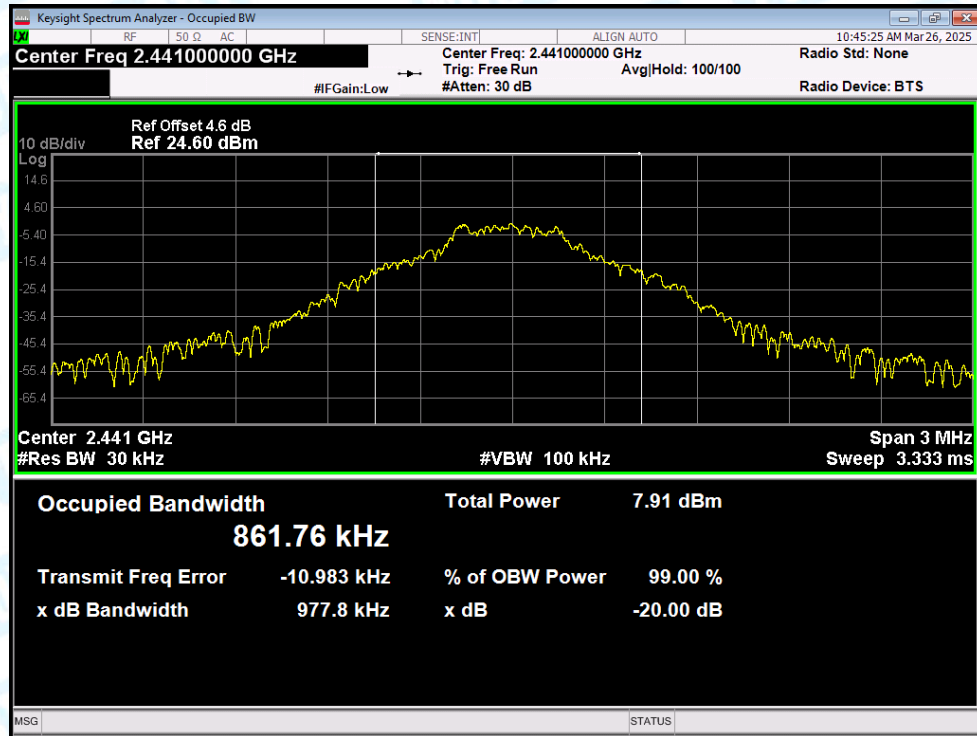
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.863
NVNT	1-DH1	2441	Ant1	0.862
NVNT	1-DH1	2480	Ant1	0.851
NVNT	2-DH1	2402	Ant1	1.174
NVNT	2-DH1	2441	Ant1	1.176
NVNT	2-DH1	2480	Ant1	1.16
NVNT	3-DH1	2402	Ant1	1.175
NVNT	3-DH1	2441	Ant1	1.171
NVNT	3-DH1	2480	Ant1	1.172

Test Graphs

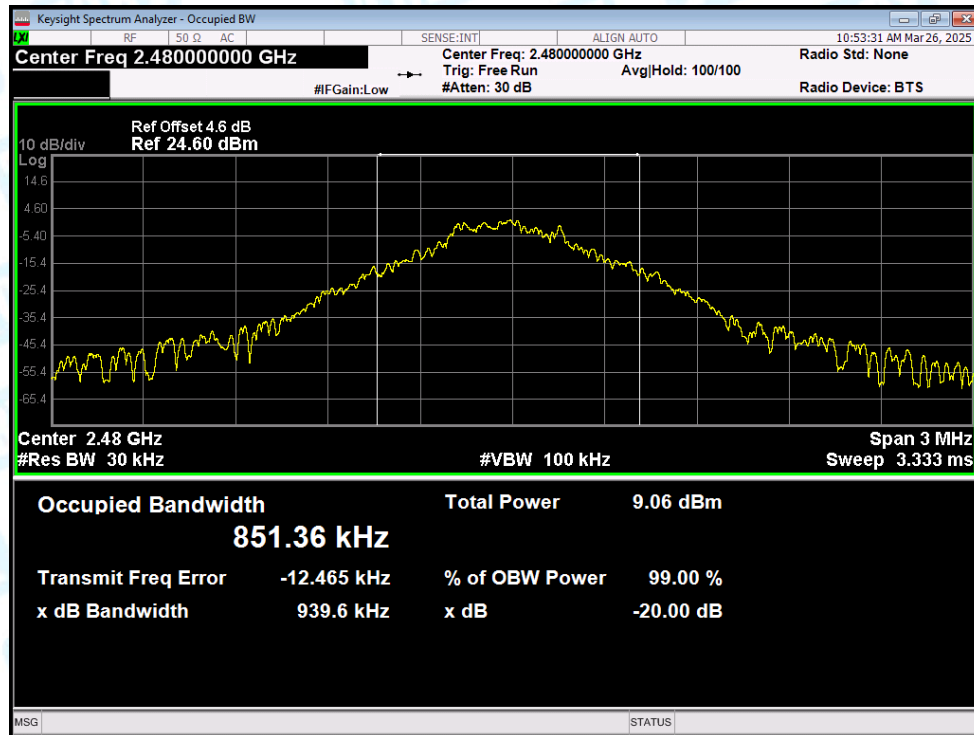
OBW NVNT 1-DH1 2402MHz Ant1



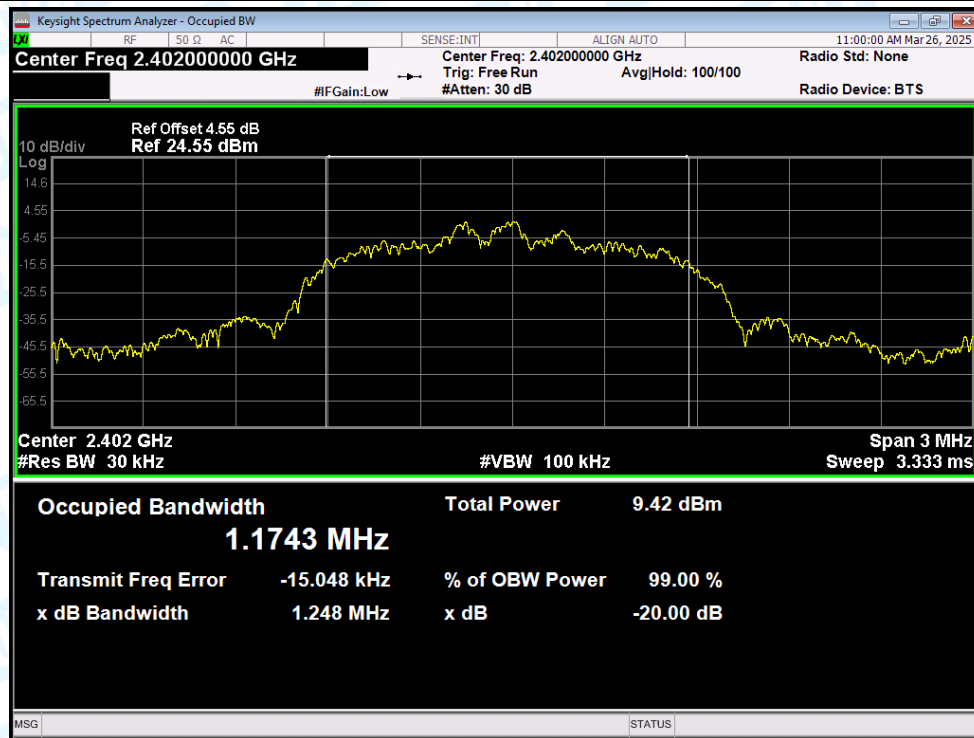
OBW NVNT 1-DH1 2441MHz Ant1



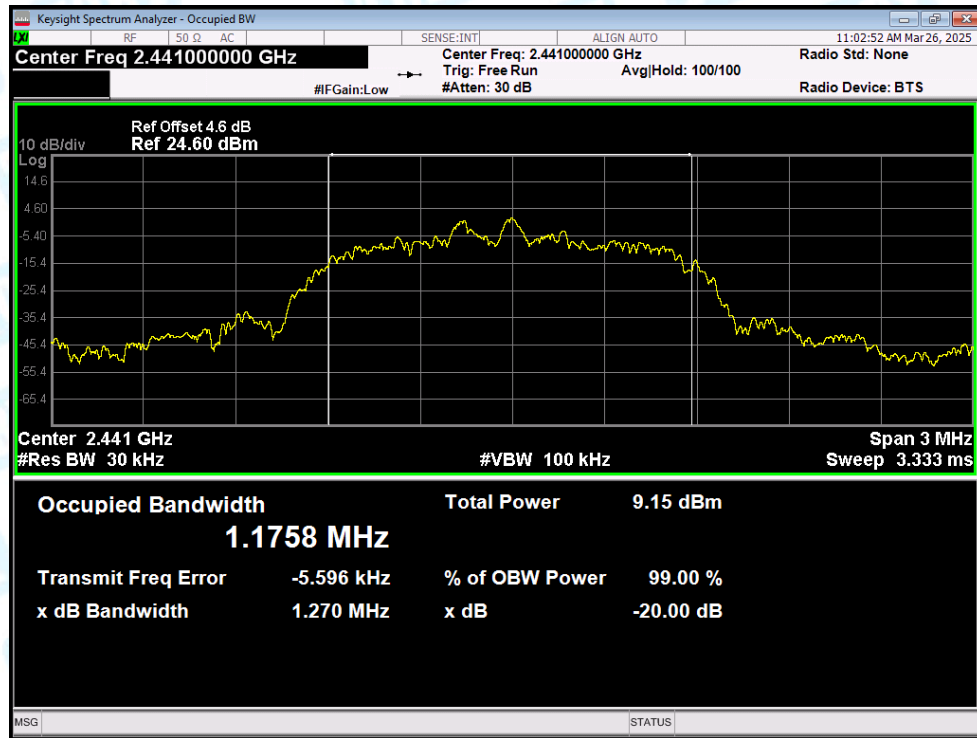
OBW NVNT 1-DH1 2480MHz Ant1



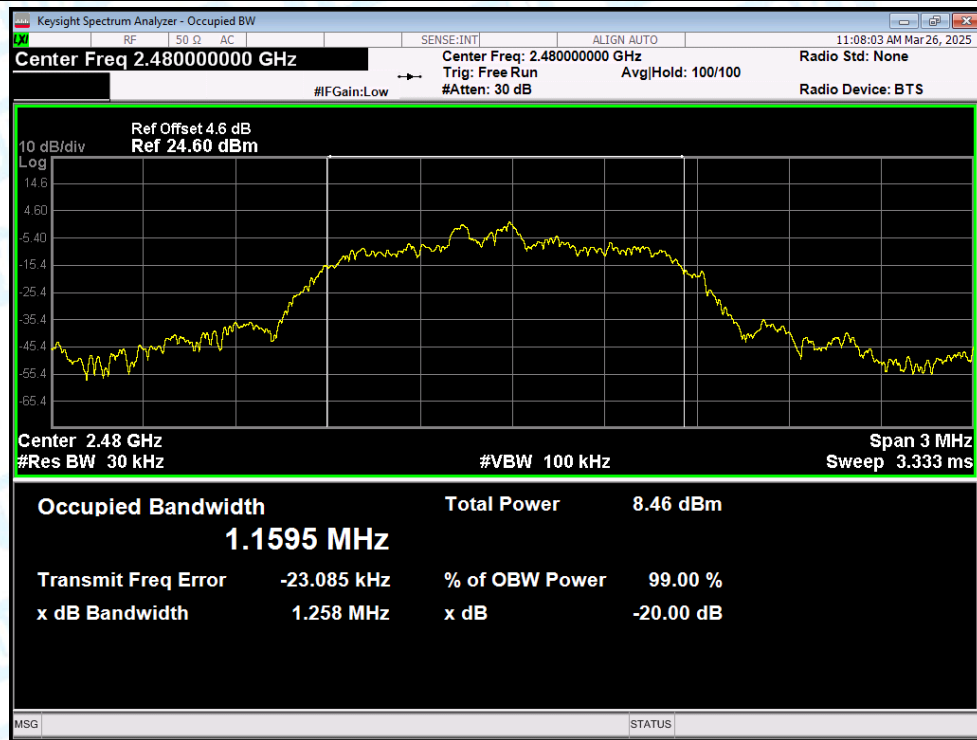
OBW NVNT 2-DH1 2402MHz Ant1



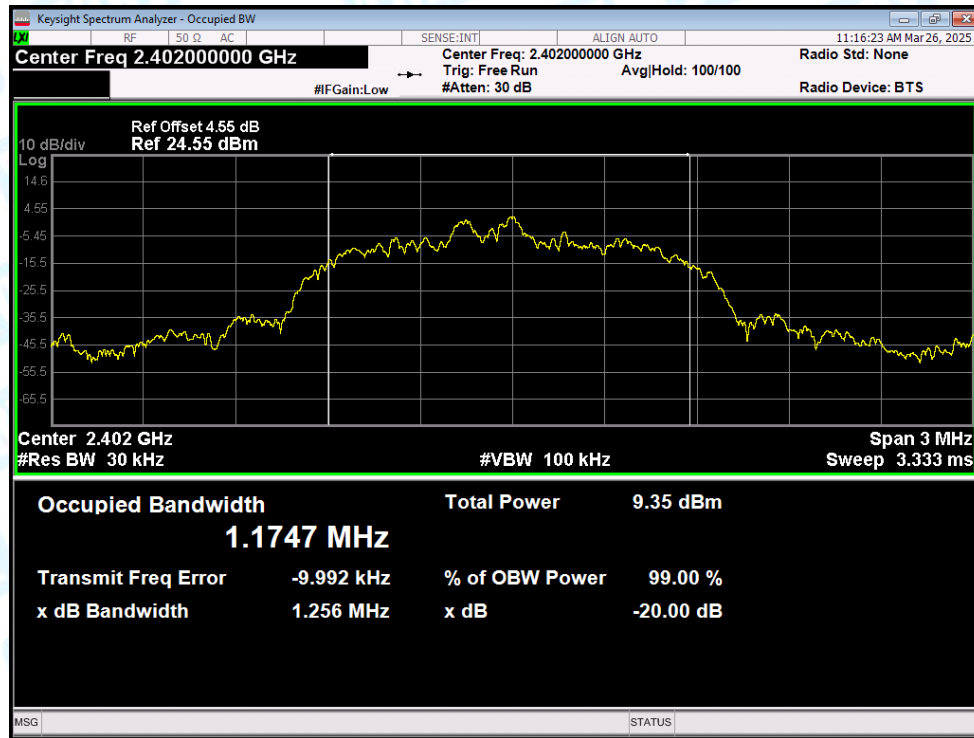
OBW NVNT 2-DH1 2441MHz Ant1



OBW NVNT 2-DH1 2480MHz Ant1

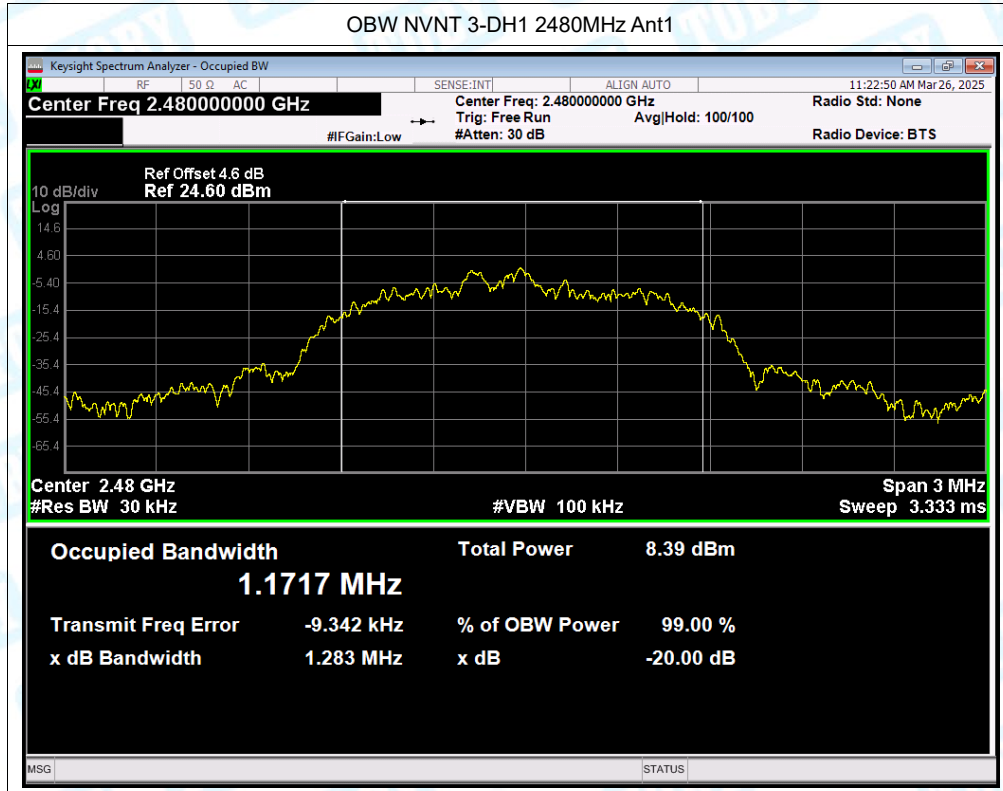


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



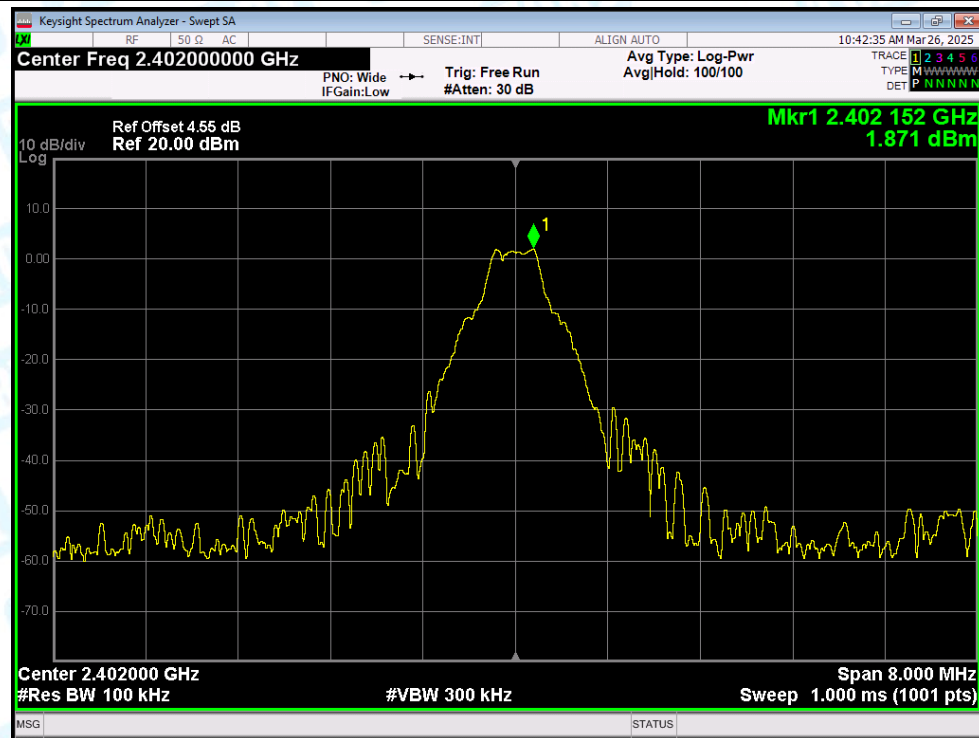


5. Band Edge

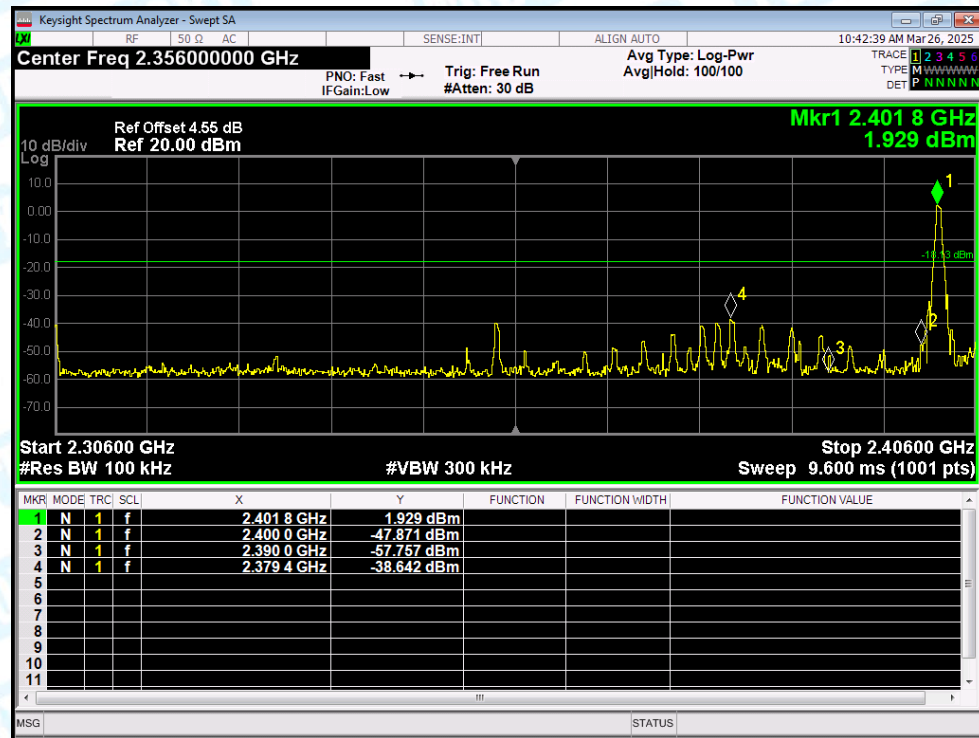
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-40.51	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-44.66	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-40.68	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-44	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-41.02	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-44.21	-20	Pass

Test Graphs

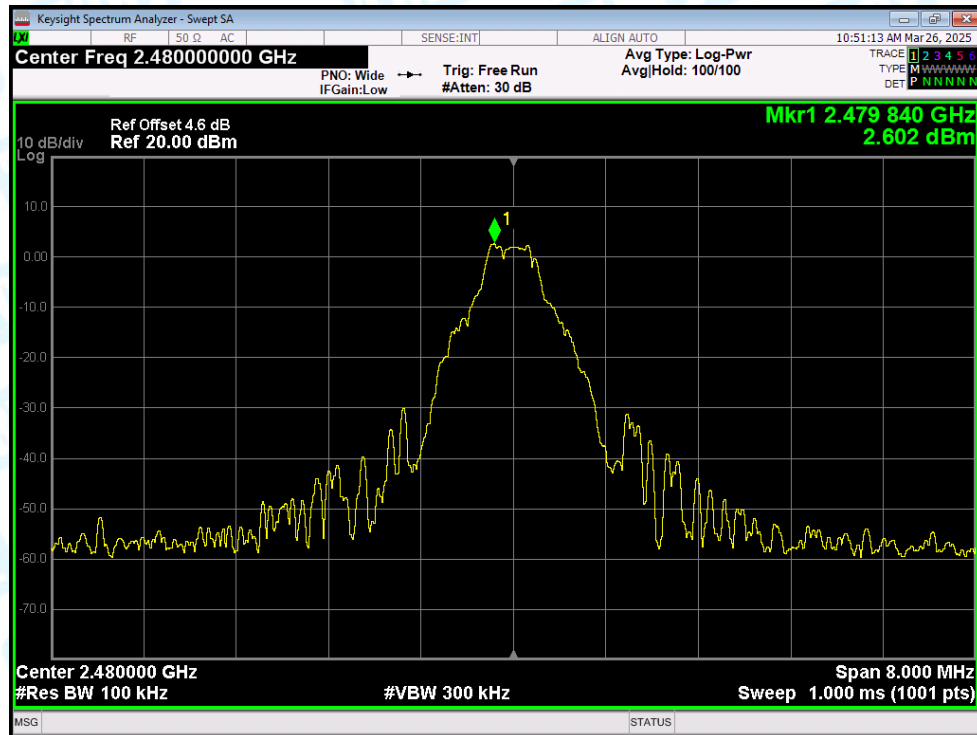
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



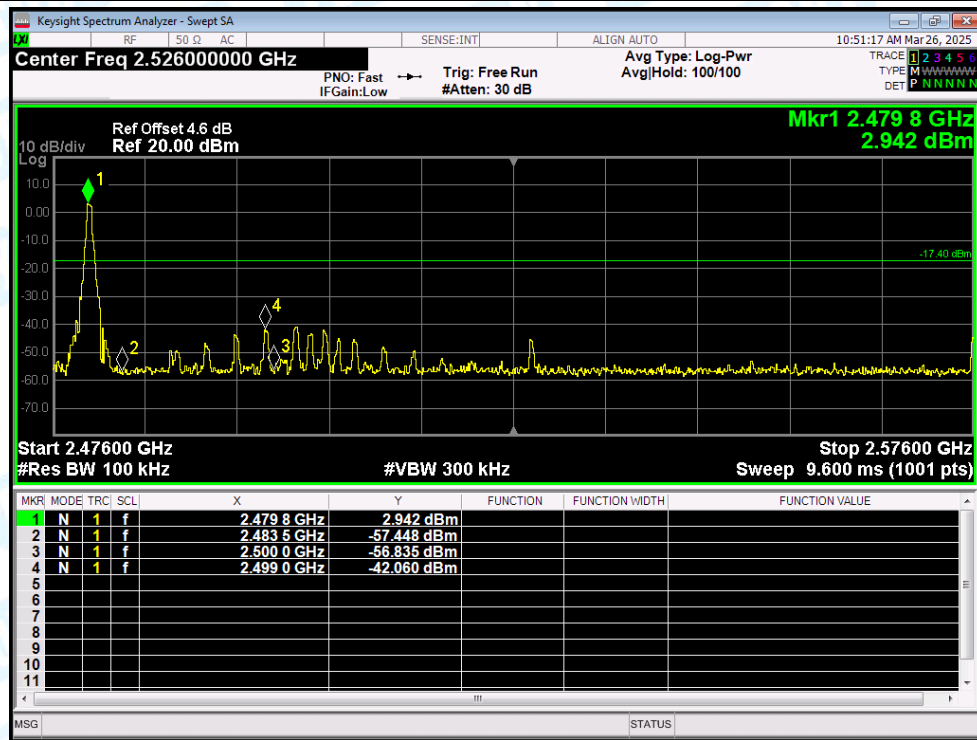
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

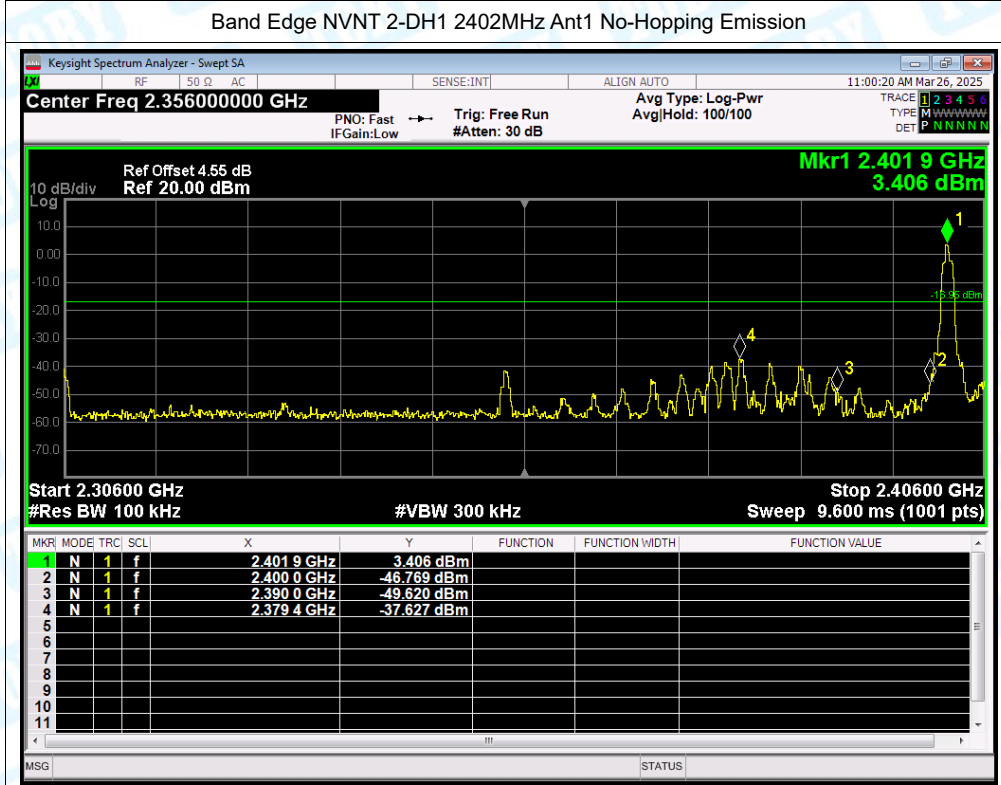
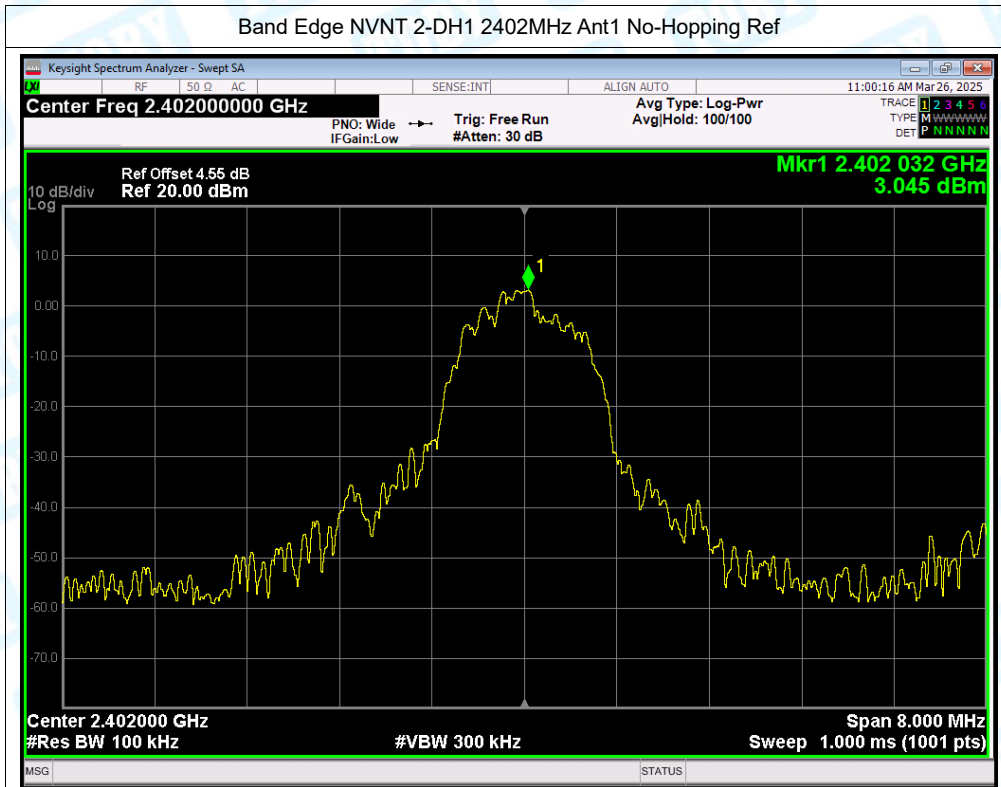


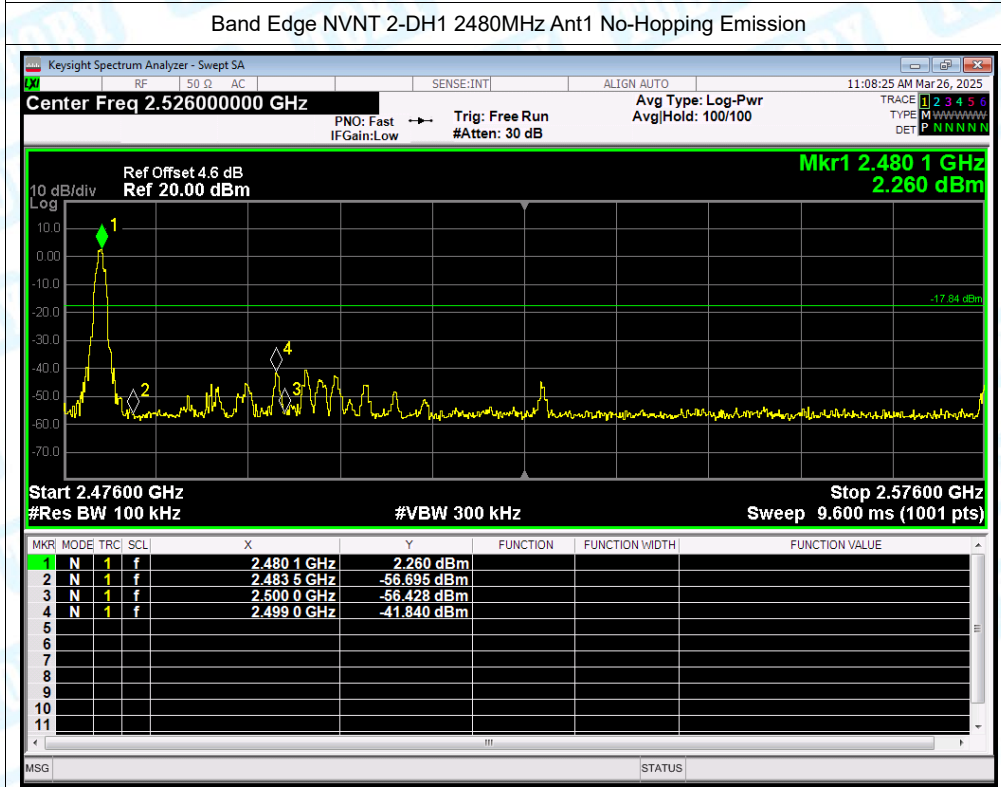
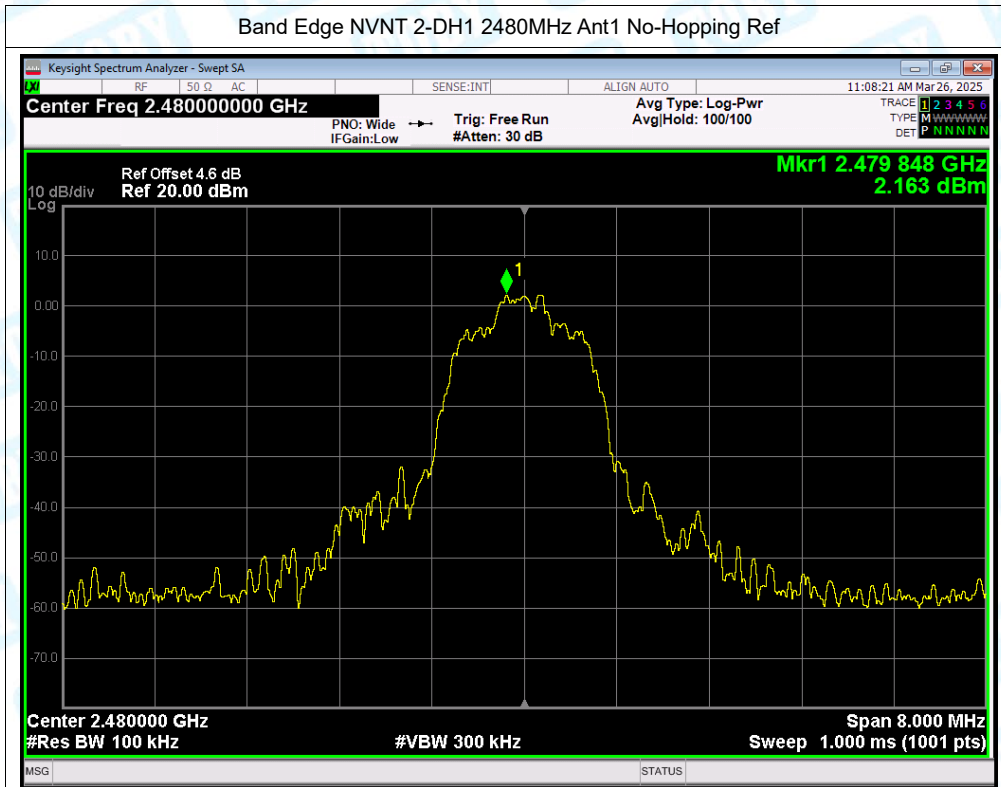
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref



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



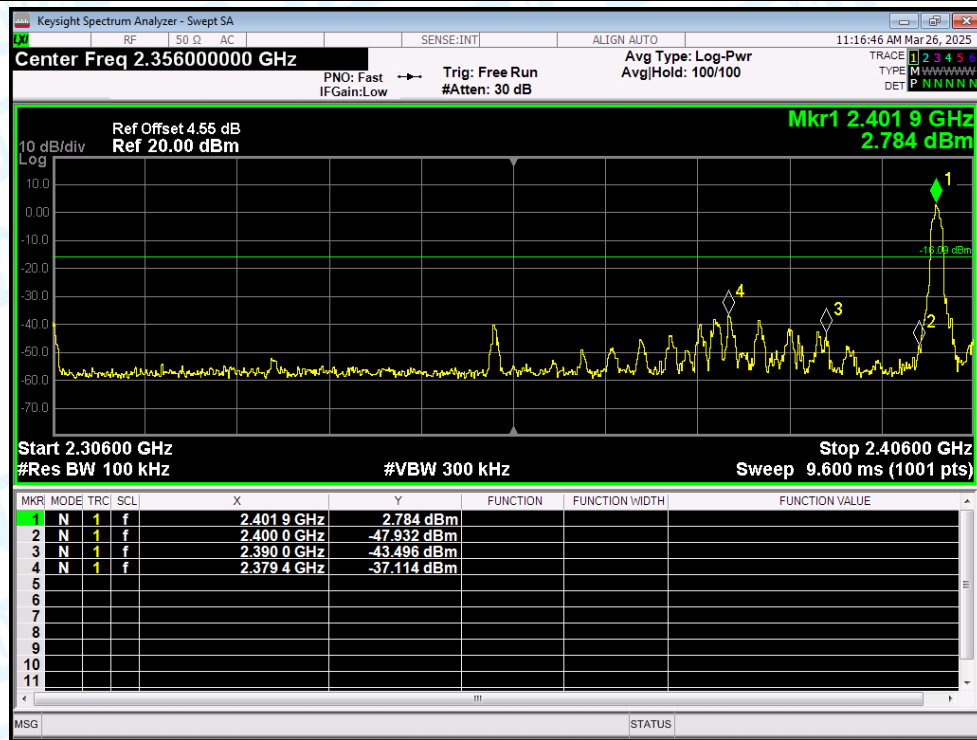




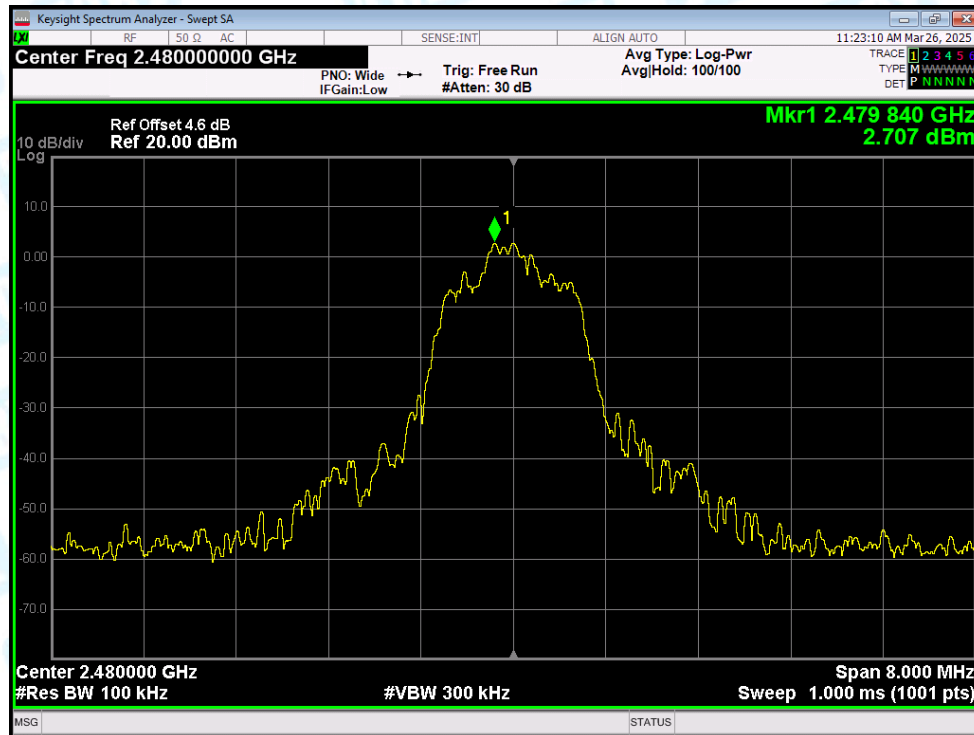
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



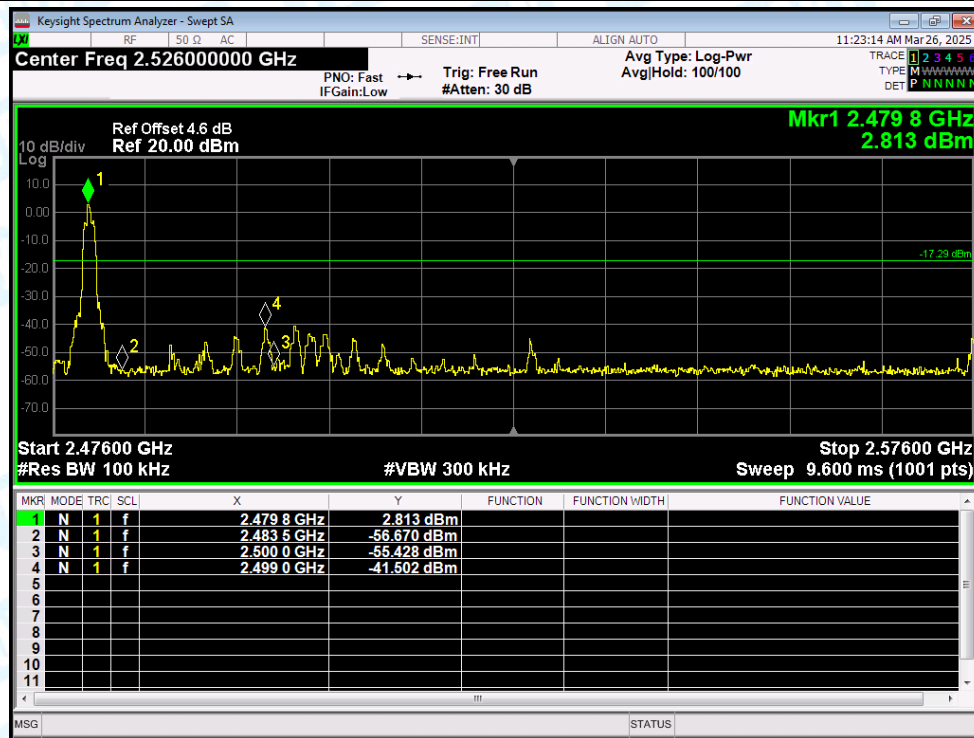
Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



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



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



6. Band Edge(Hopping)

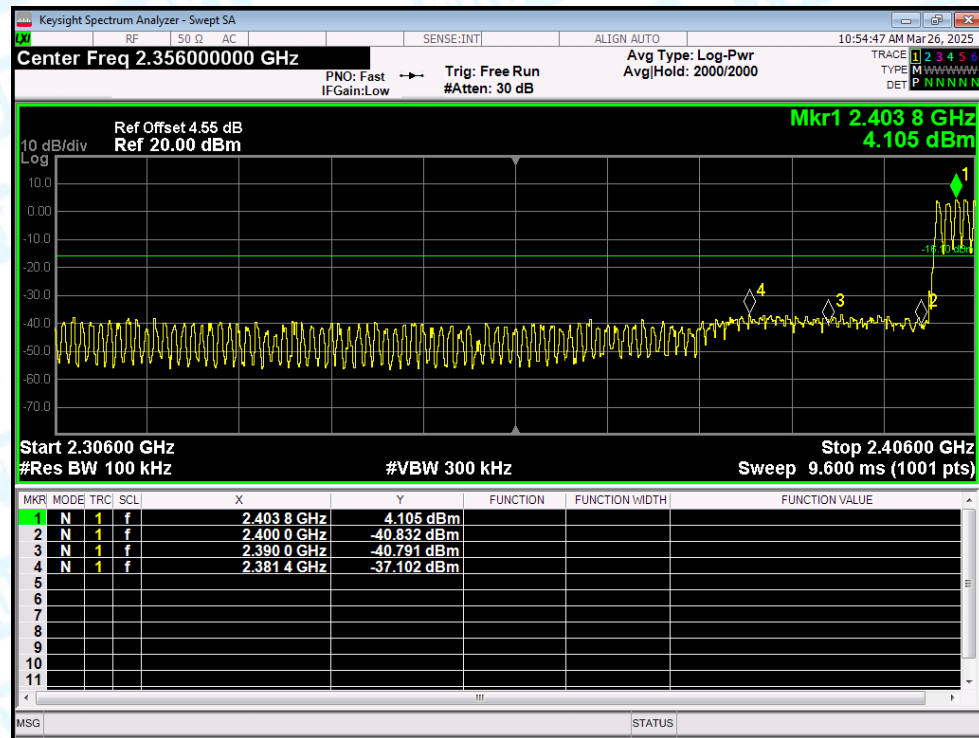
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-41	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-41.98	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-41.32	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-41.91	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-41.99	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-42.54	-20	Pass

Test Graphs

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



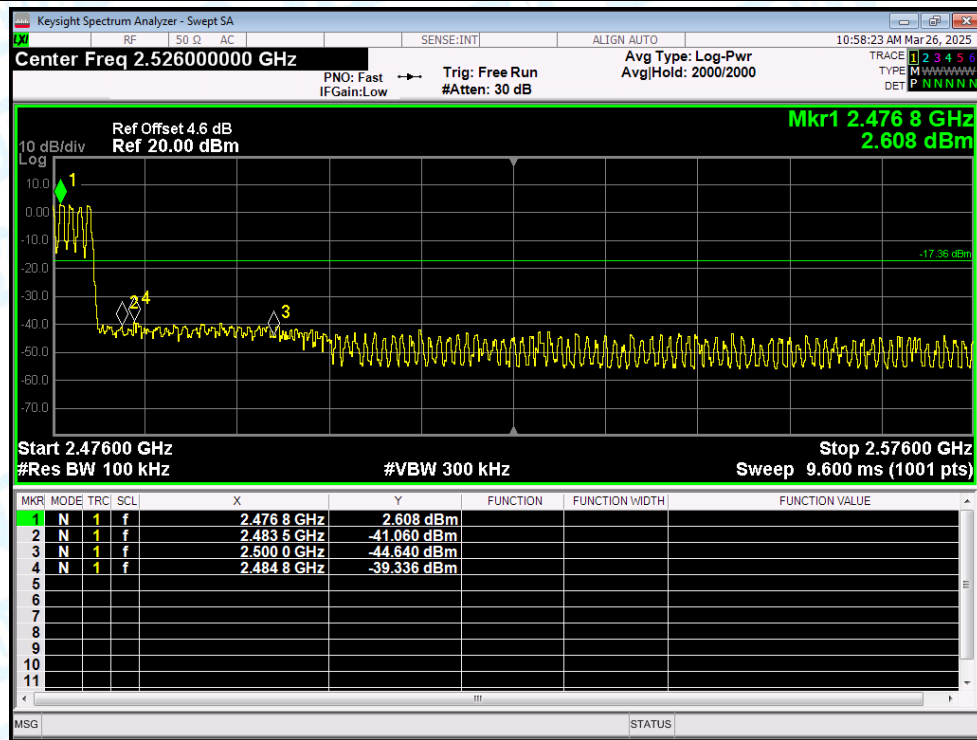
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



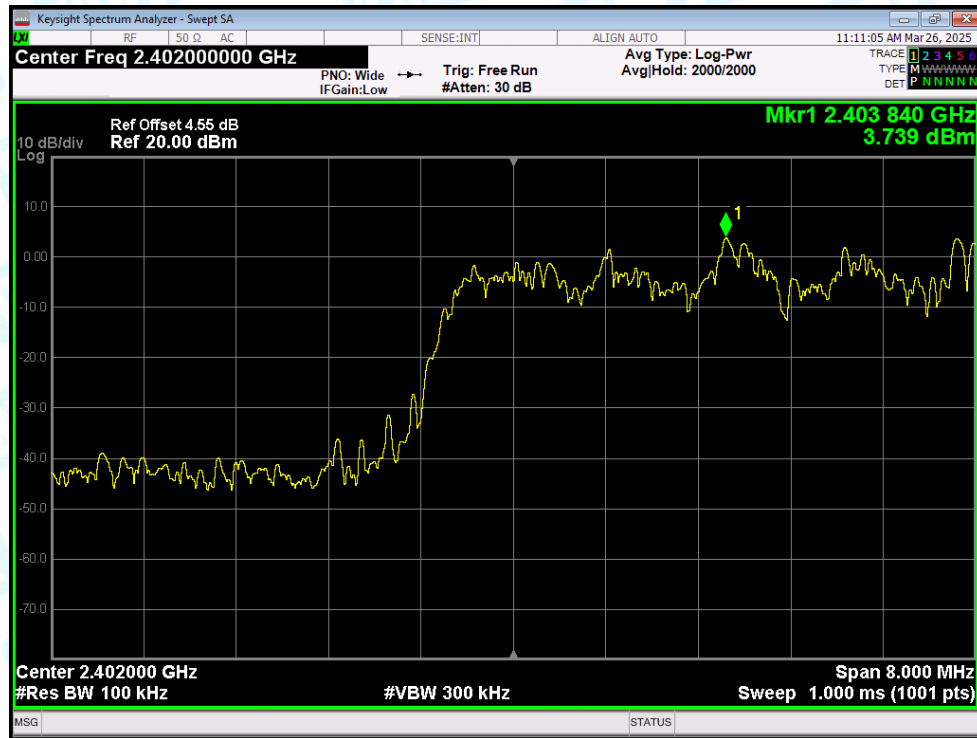
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



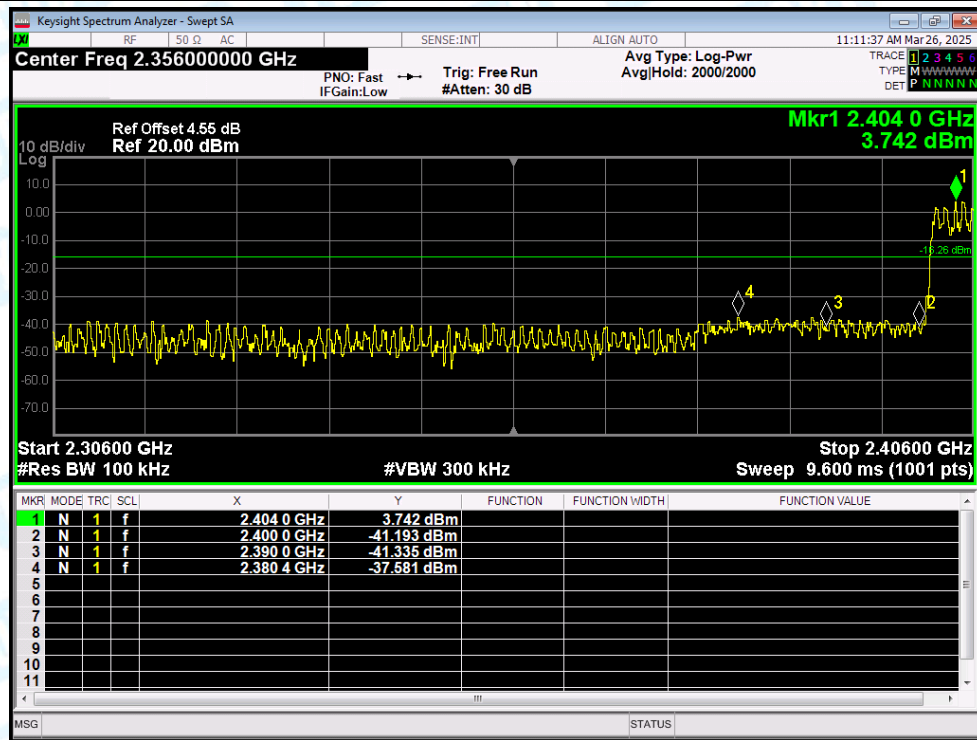
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



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



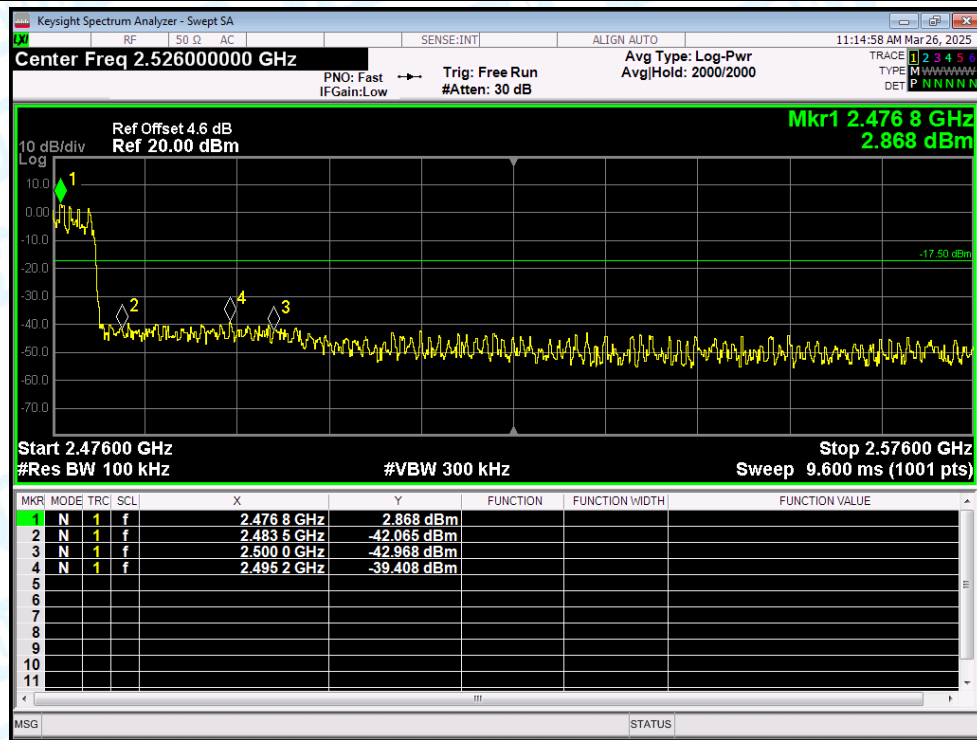
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



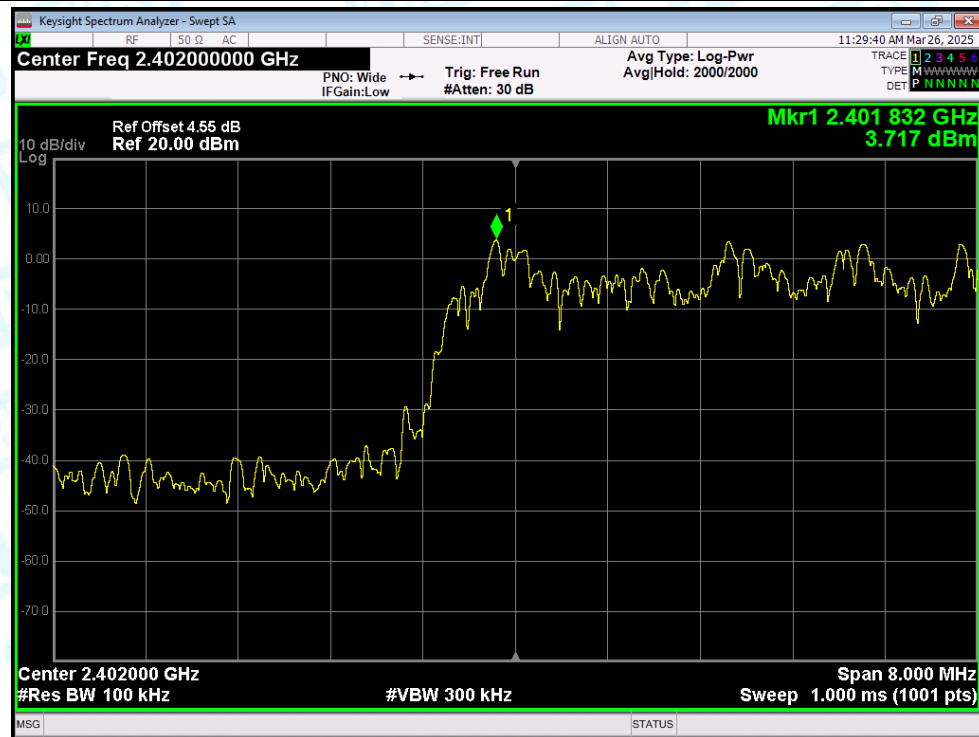
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



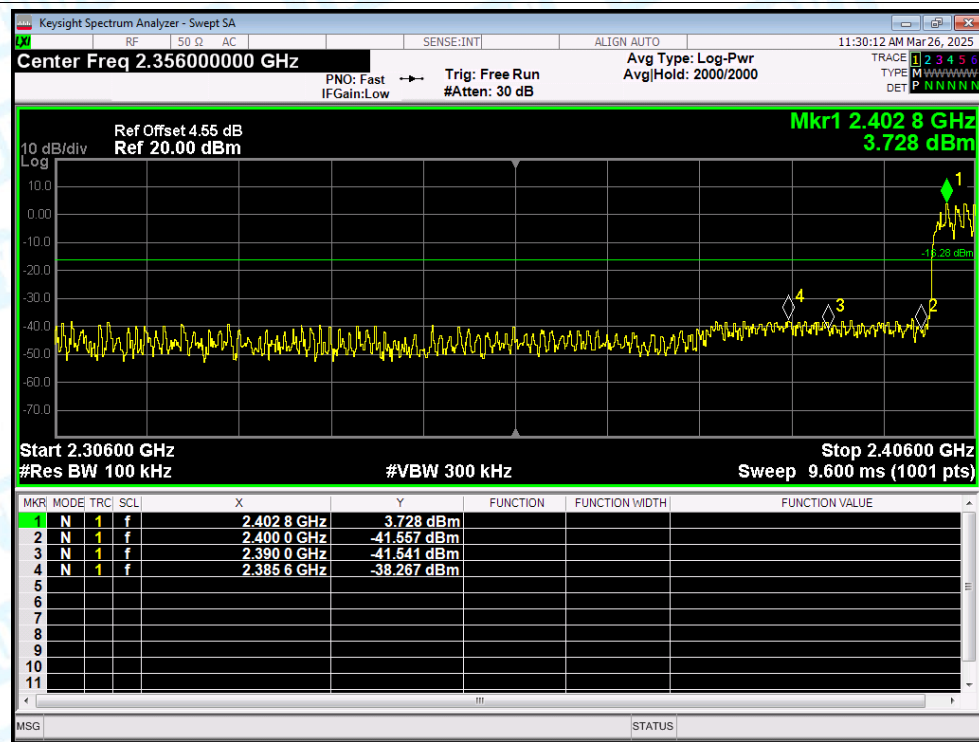
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



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



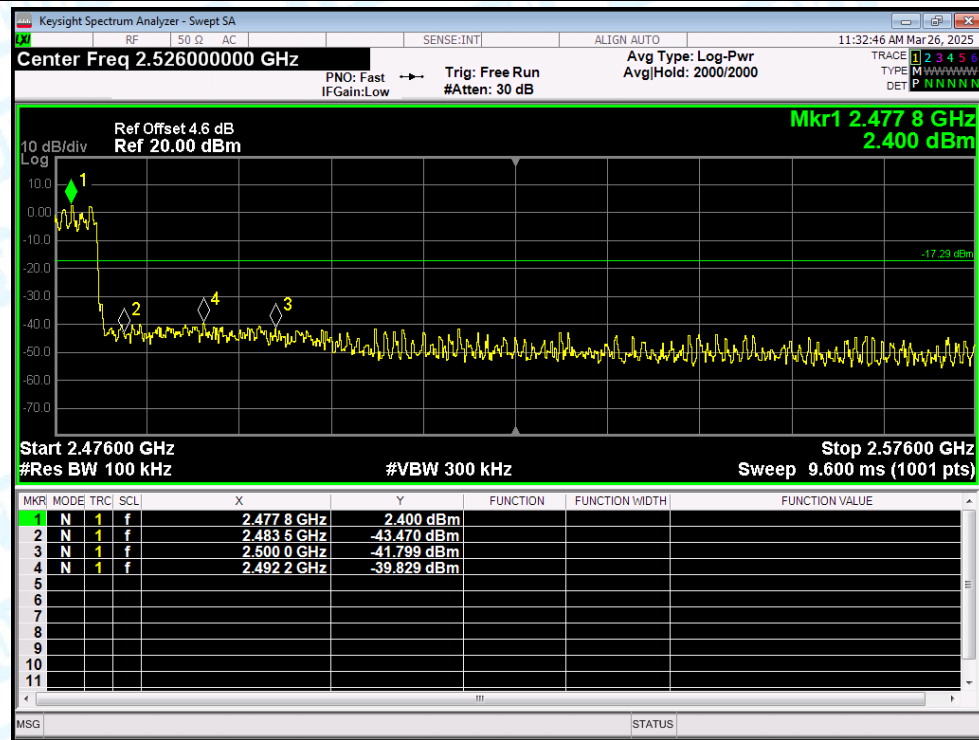
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



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



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

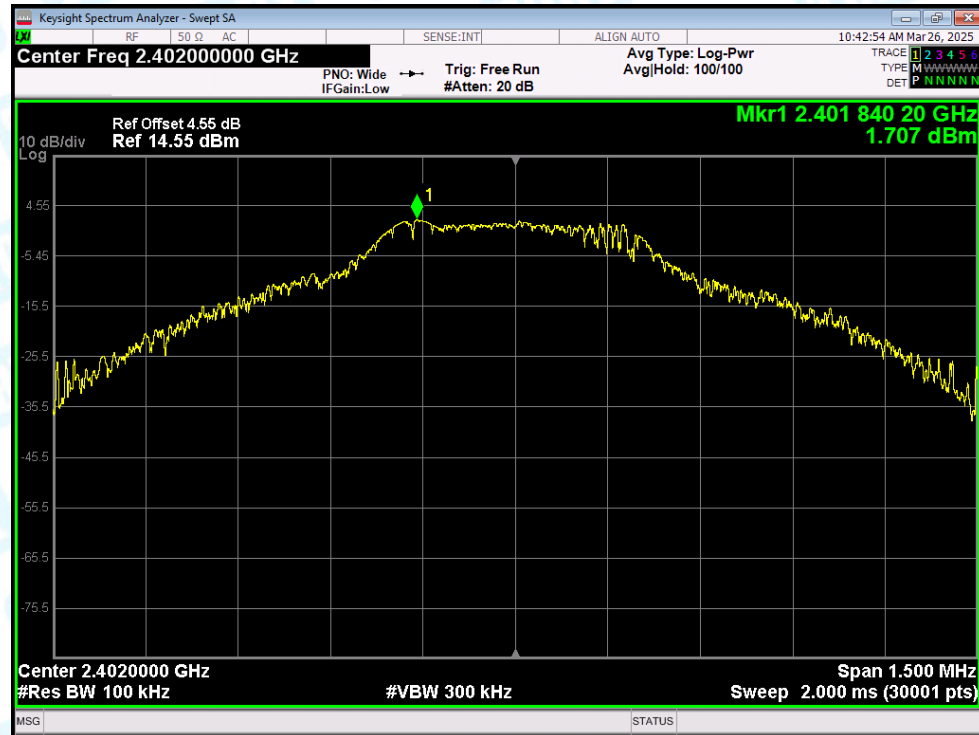


7. Conducted RF Spurious Emission

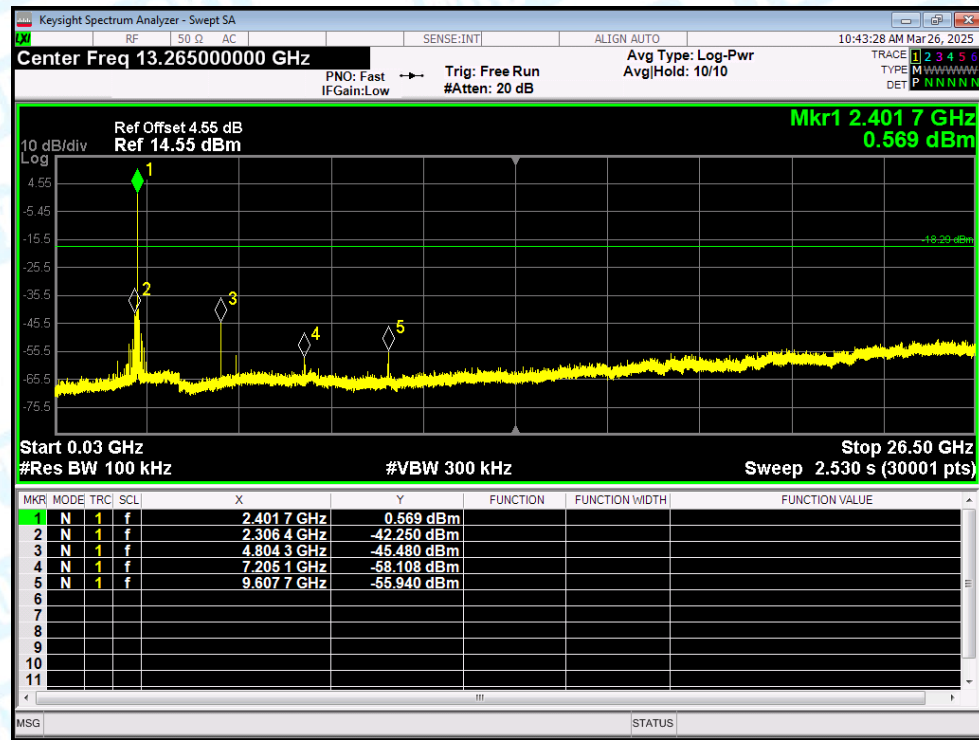
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-43.96	-20	Pass
NVNT	1-DH1	2441	Ant1	-50.23	-20	Pass
NVNT	1-DH1	2480	Ant1	-46.79	-20	Pass
NVNT	2-DH1	2402	Ant1	-47.39	-20	Pass
NVNT	2-DH1	2441	Ant1	-46.98	-20	Pass
NVNT	2-DH1	2480	Ant1	-46.64	-20	Pass
NVNT	3-DH1	2402	Ant1	-43.98	-20	Pass
NVNT	3-DH1	2441	Ant1	-48.61	-20	Pass
NVNT	3-DH1	2480	Ant1	-45.72	-20	Pass

Test Graphs

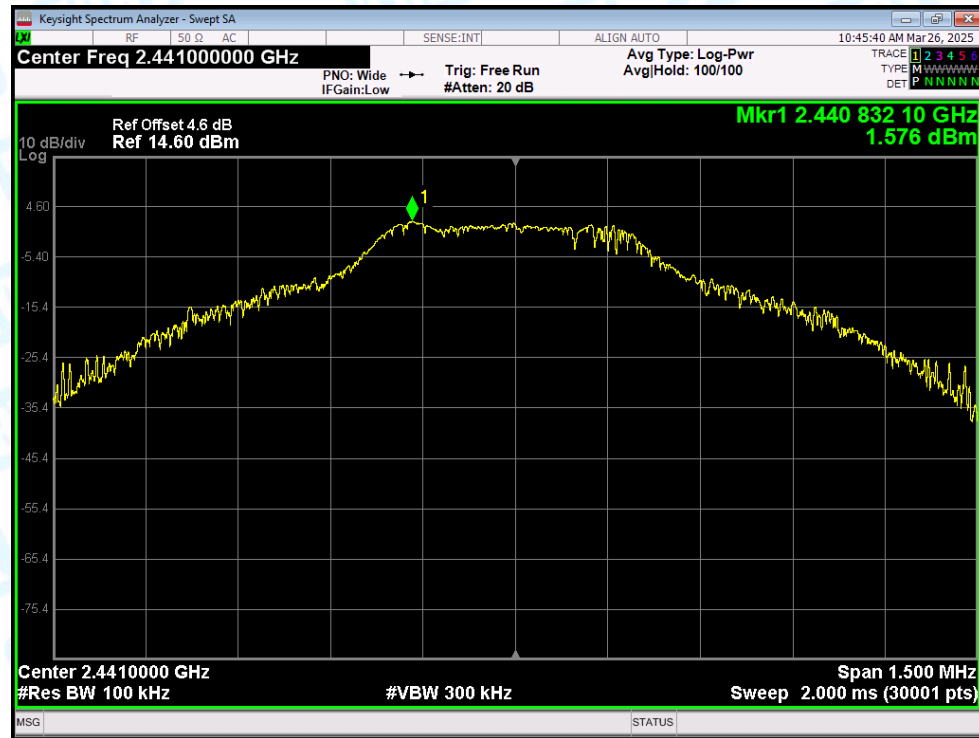
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



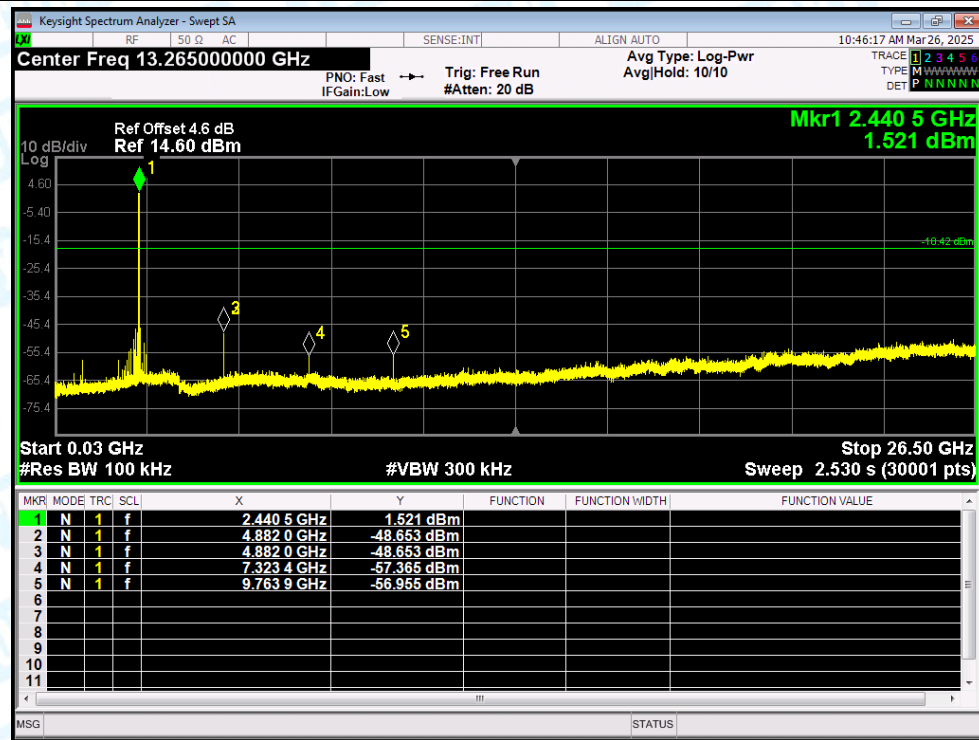
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



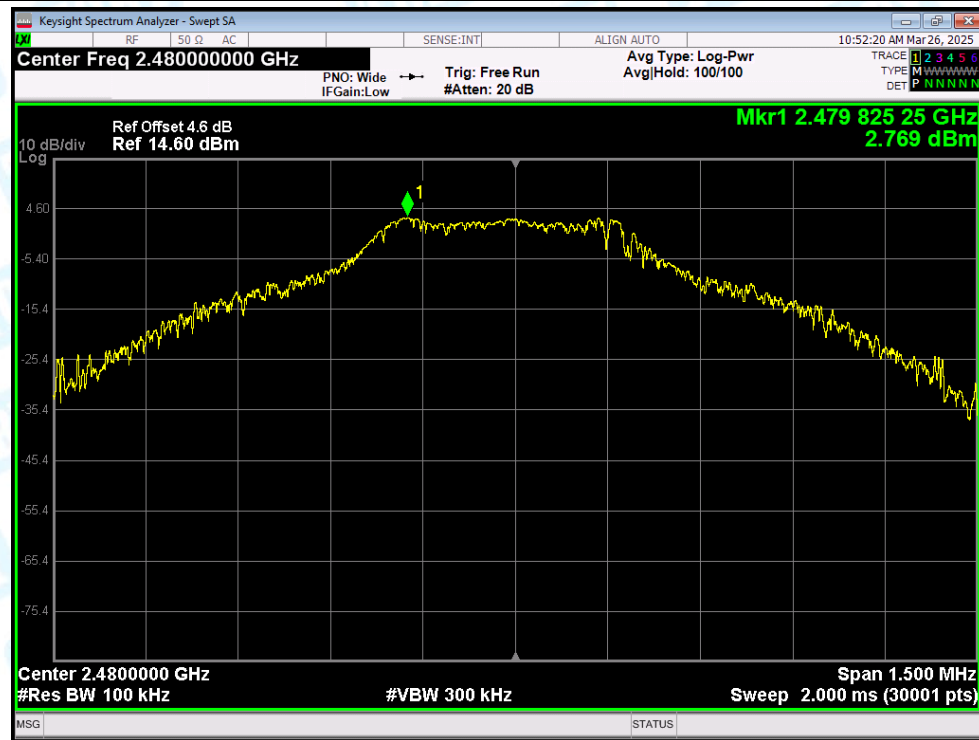
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



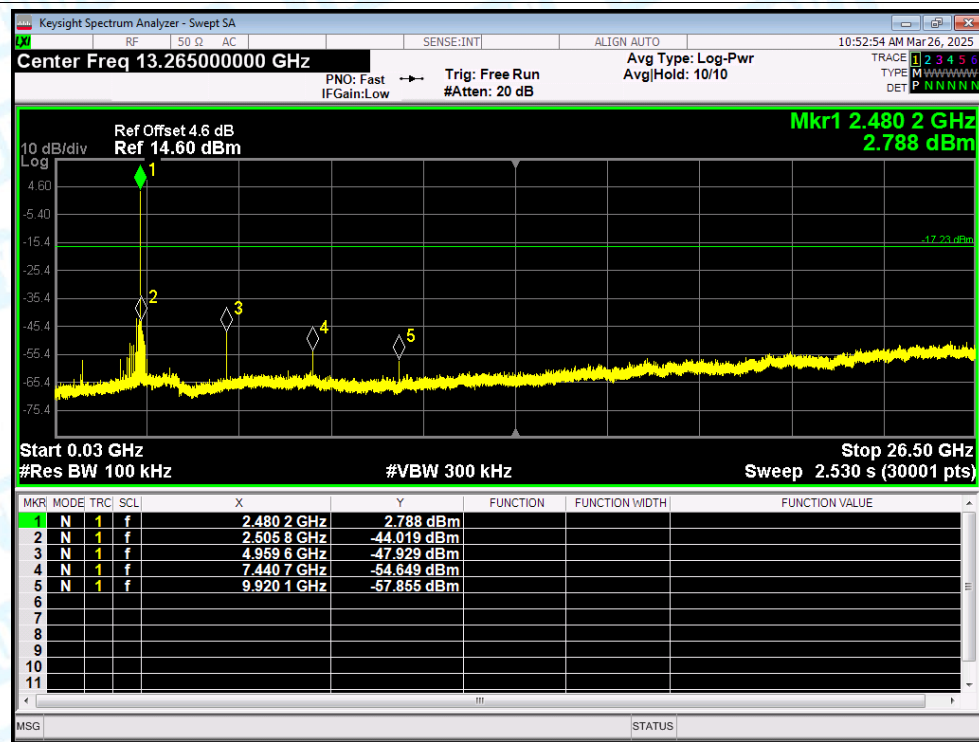
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



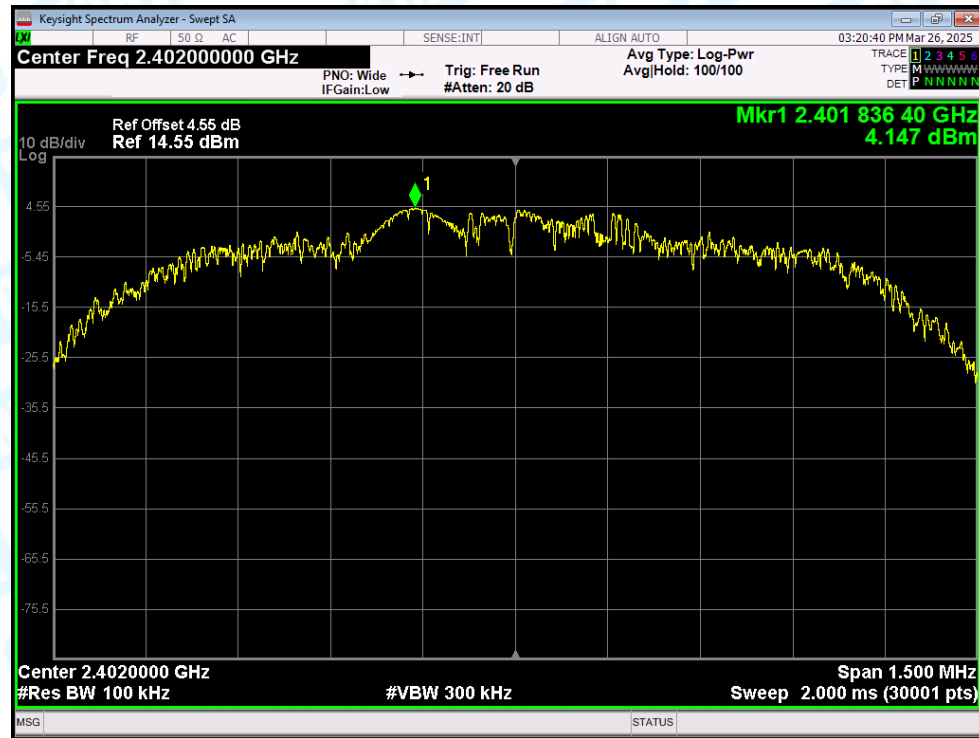
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



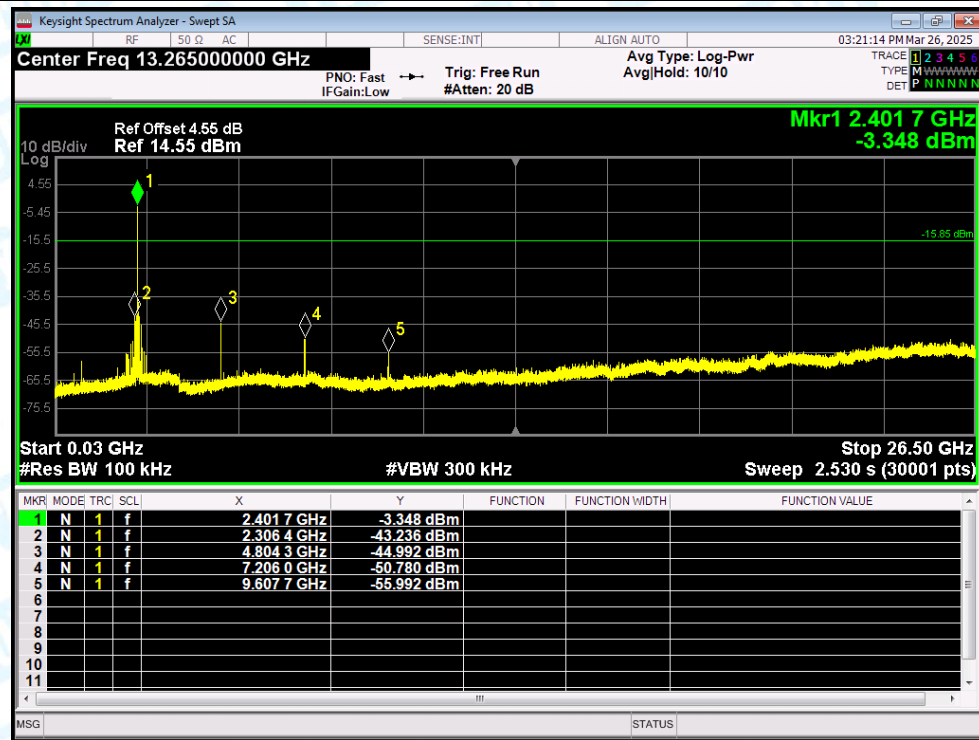
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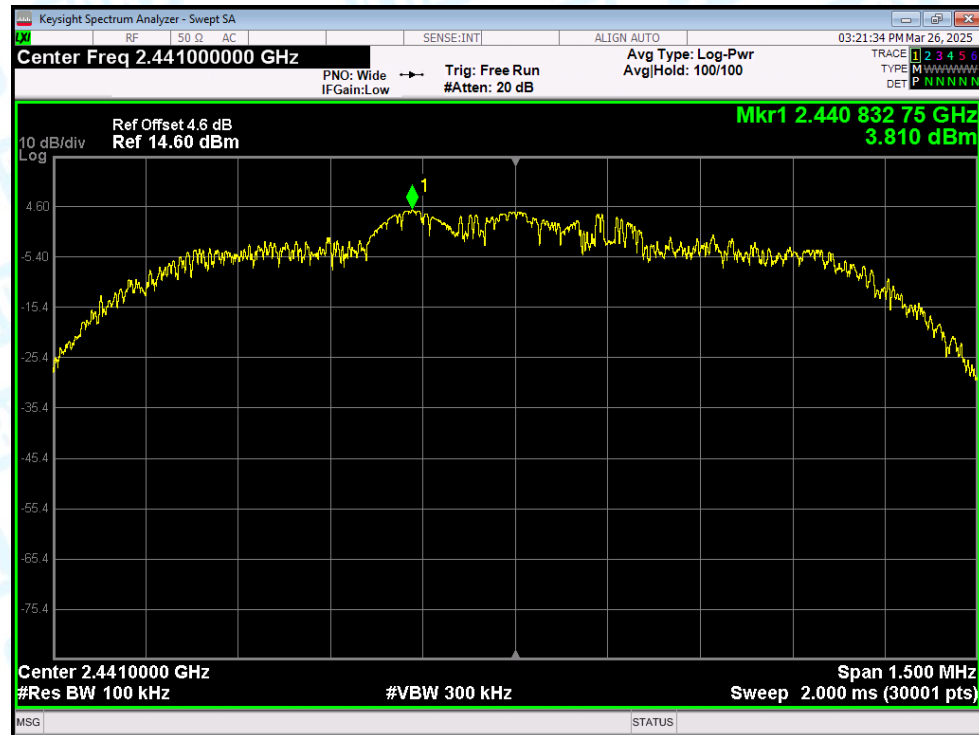
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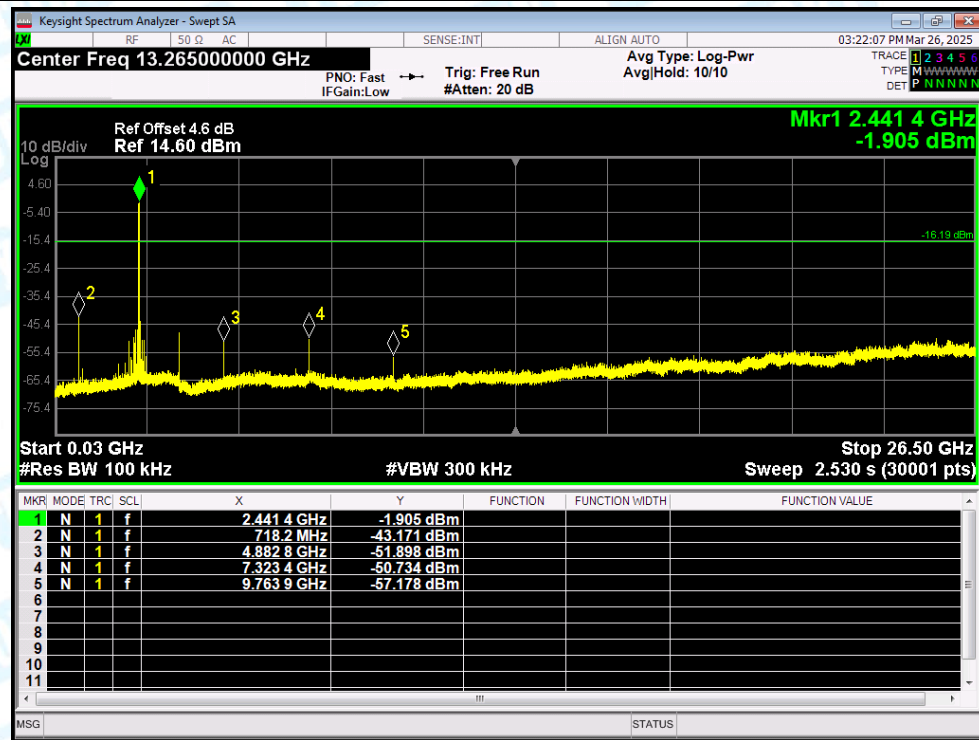
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



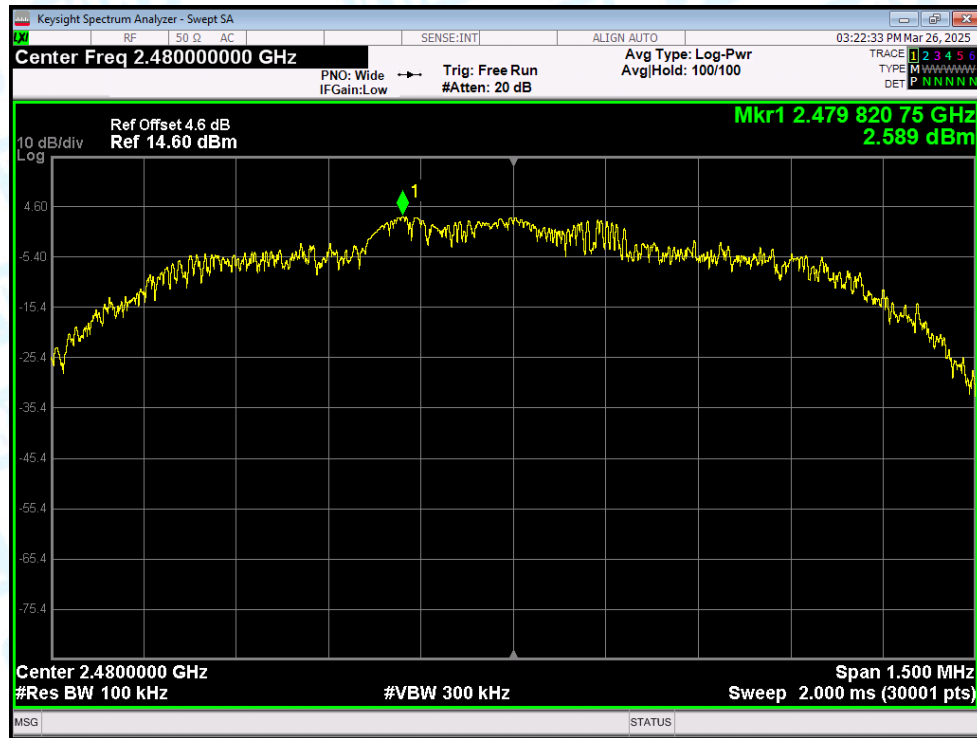
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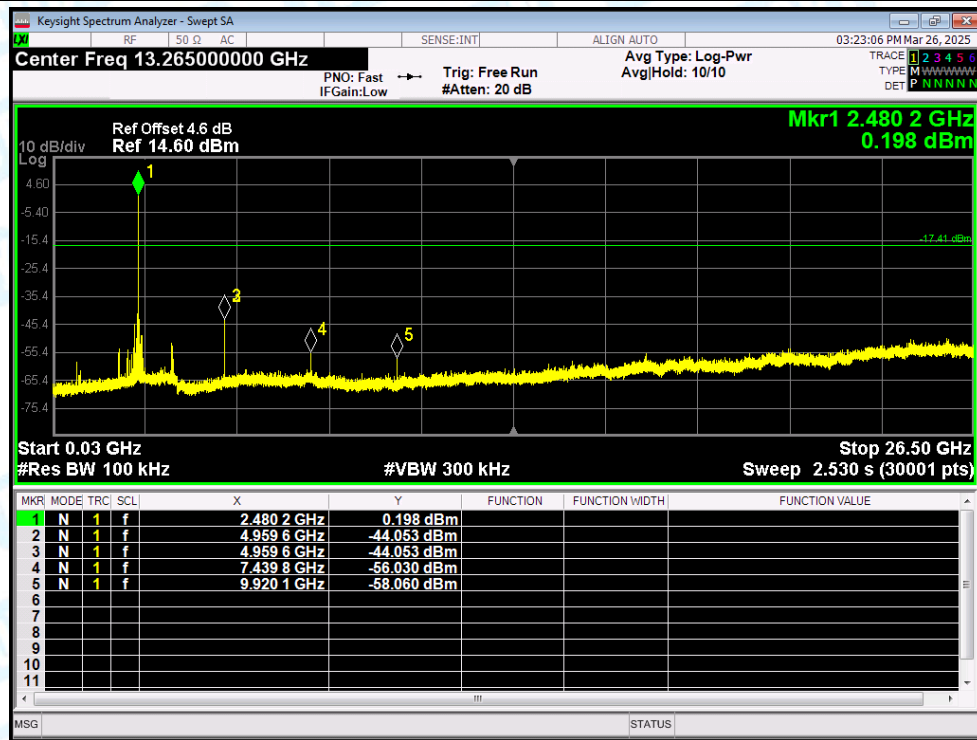
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



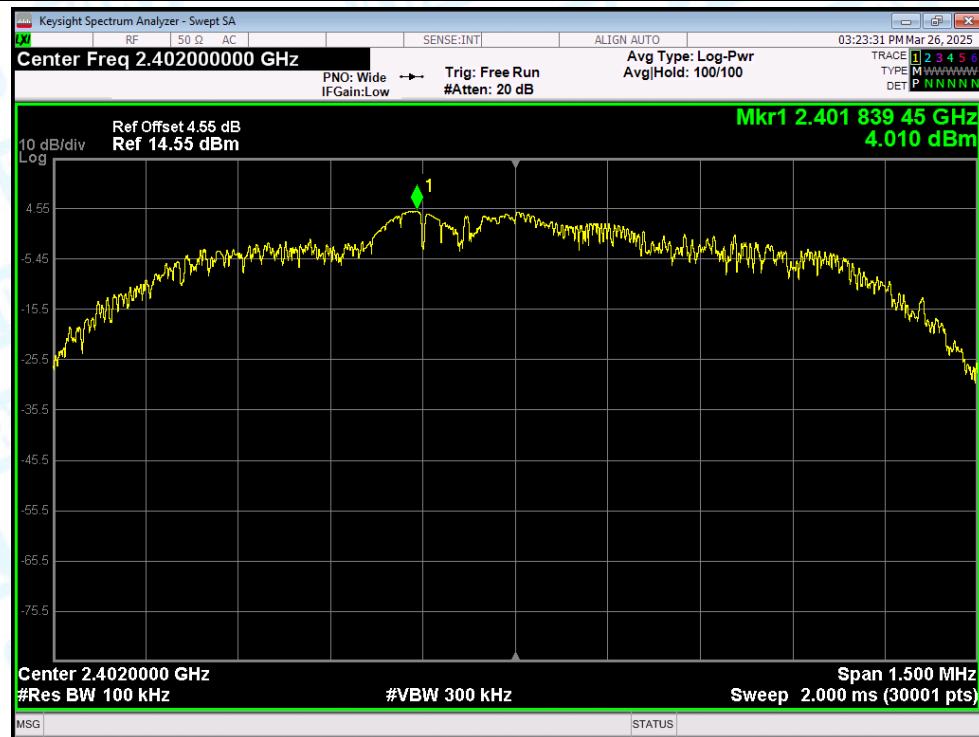
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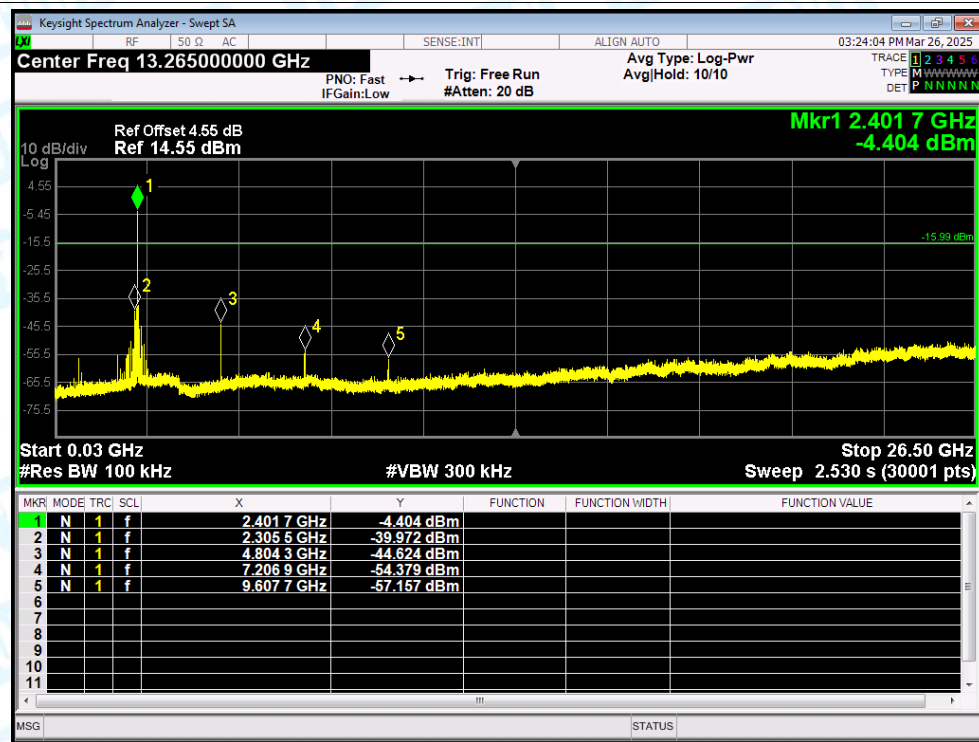
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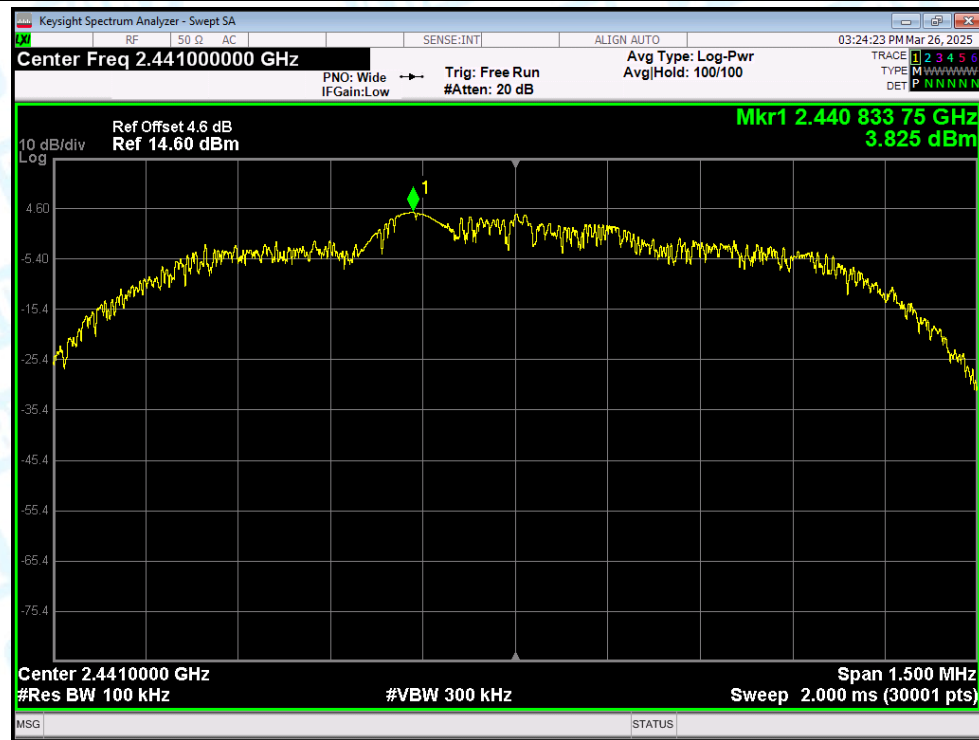
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



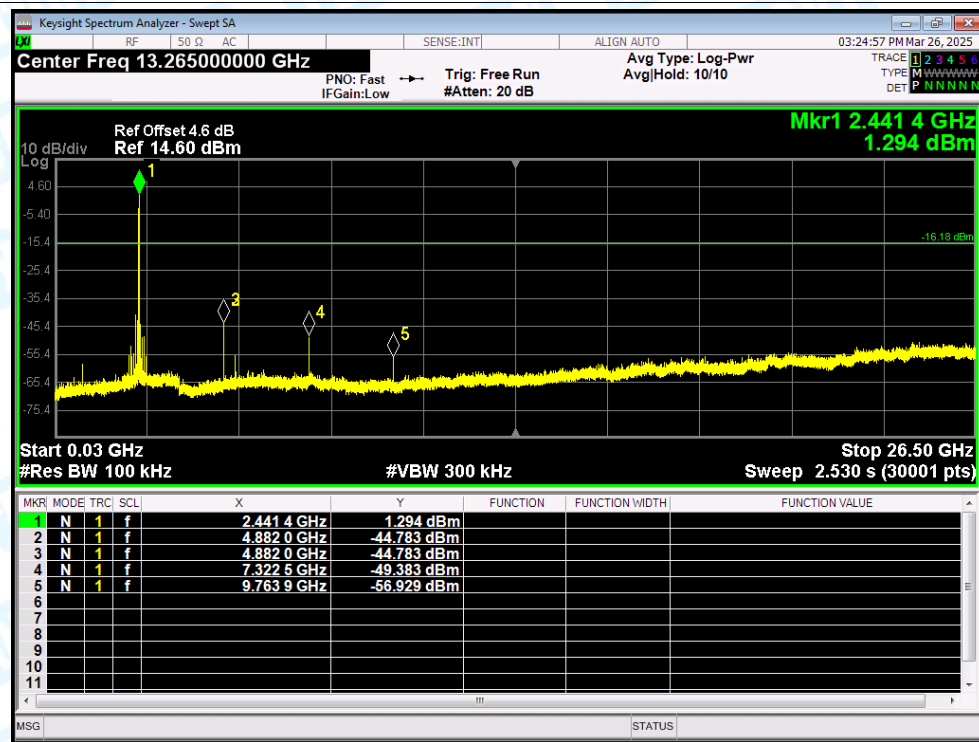
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



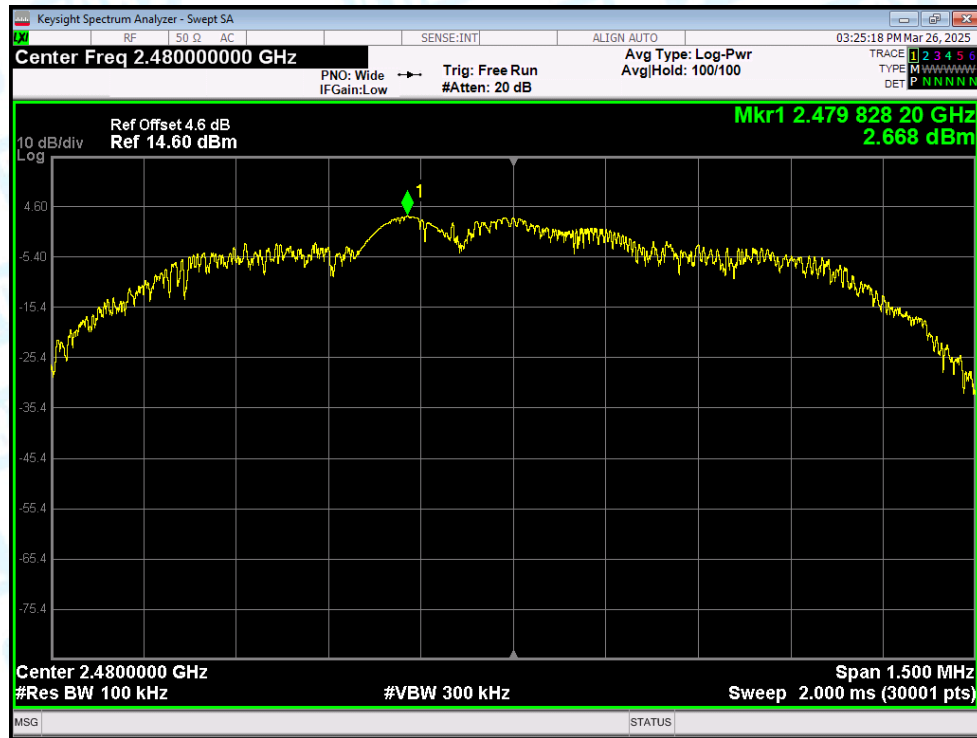
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



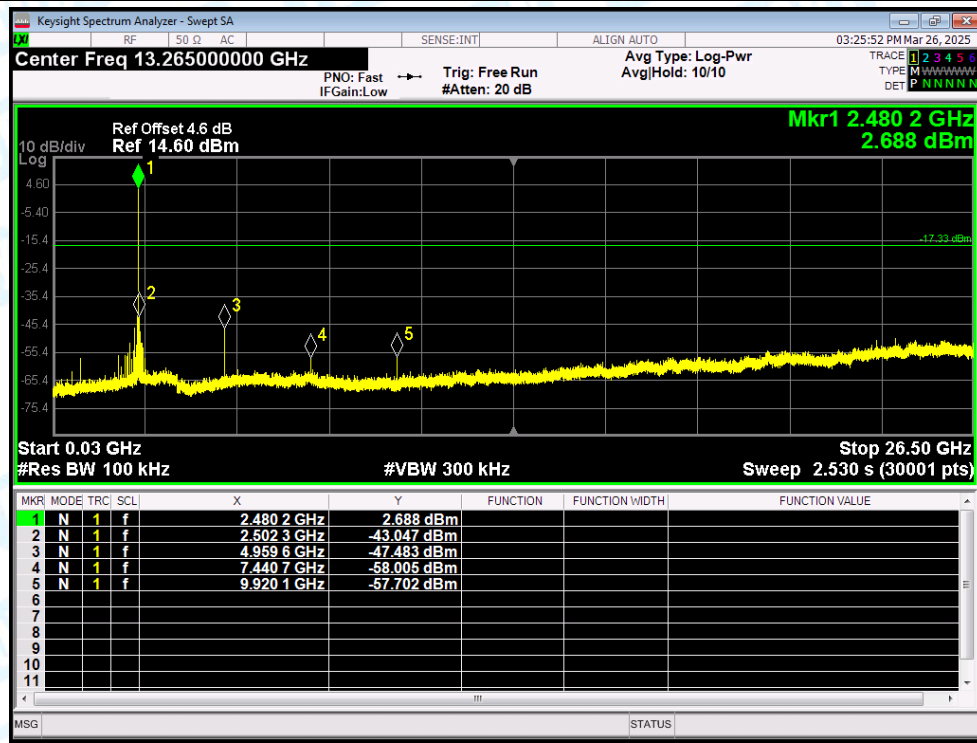
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

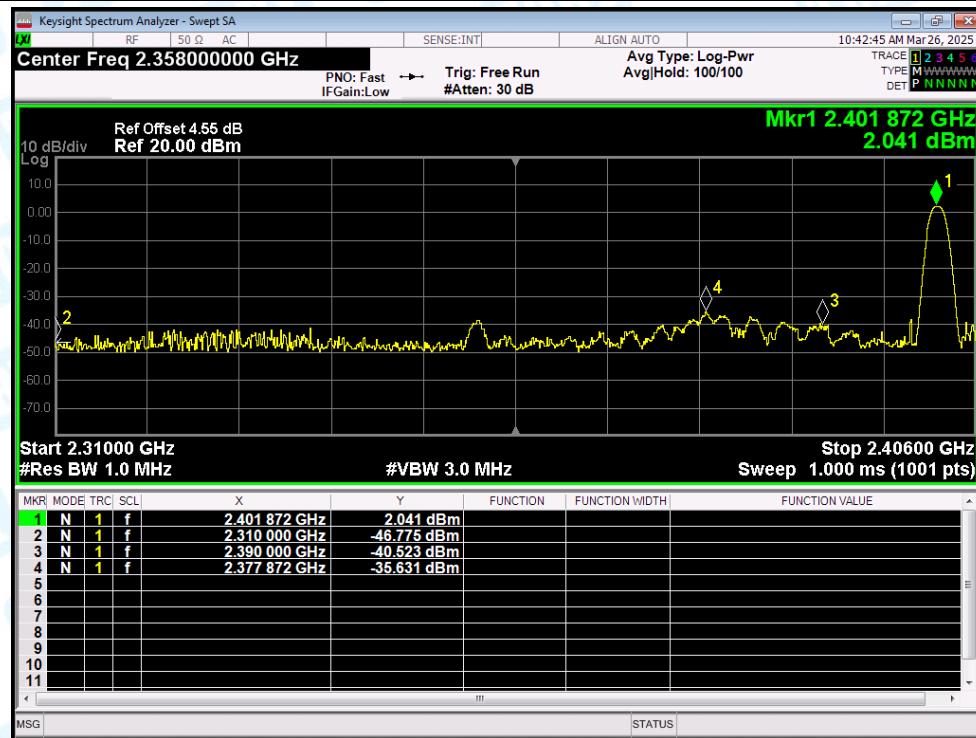


8. Restrict Band

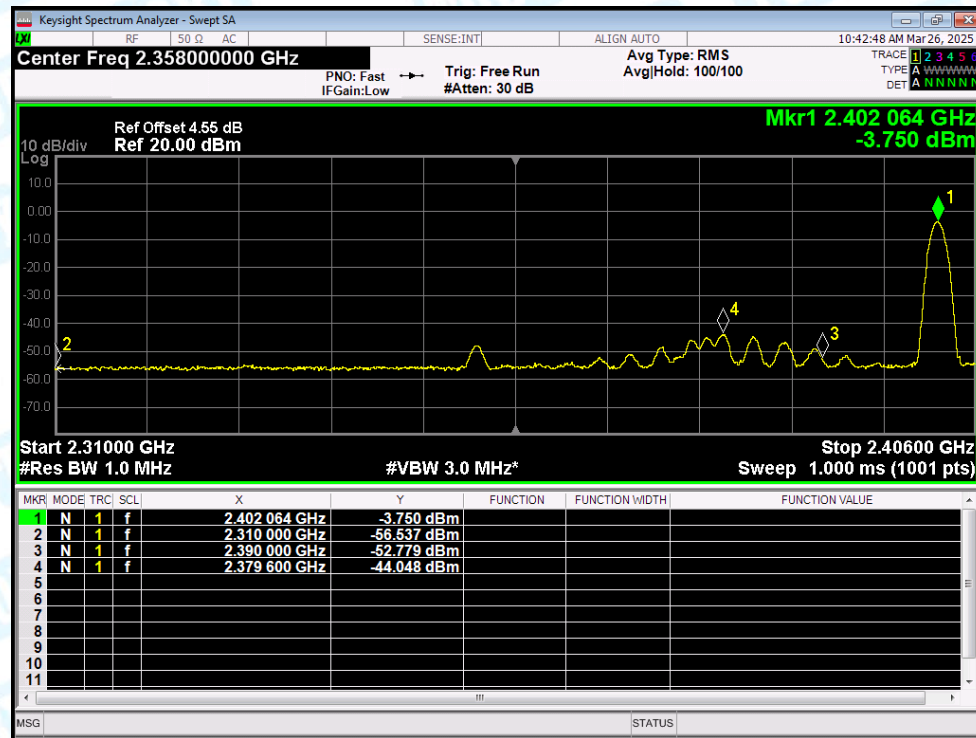
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-46.78	2	-	50.48	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.54	2	0.54	41.26	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2377.872	-35.63	2	-	61.63	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2379.6	-44.05	2	0.54	53.75	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-40.52	2	-	56.74	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-52.78	2	0.54	45.02	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-46.81	2	-	50.45	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.17	2	0.43	42.52	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2499.568	-35.72	2	-	61.54	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2499.088	-46.95	2	0.43	50.74	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-42.99	2	-	54.27	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-52.33	2	0.43	45.36	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-47.88	2	-	49.38	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-55.83	2	0.42	41.85	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2378.448	-35.52	2	-	61.74	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2378.16	-45.16	2	0.42	52.52	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-43.96	2	-	53.3	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-52.44	2	0.42	45.24	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-45.94	2	-	51.32	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.56	2	0.52	42.22	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2499.208	-38.92	2	-	58.34	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2499.328	-48.98	2	0.52	48.8	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-40.84	2	-	56.42	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-52.11	2	0.52	45.67	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-48.23	2	-	49.03	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.59	2	0.52	41.19	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2378.16	-35.15	2	-	62.11	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2378.064	-44.48	2	0.52	53.3	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-40.03	2	-	57.23	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-52.48	2	0.52	45.3	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-47.84	2	-	49.42	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.31	2	0.52	42.47	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2499.328	-38.9	2	-	58.36	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2499.208	-47.72	2	0.52	50.06	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-43.63	2	-	53.63	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-52.53	2	0.52	45.25	Average	54	Pass

Test Graphs

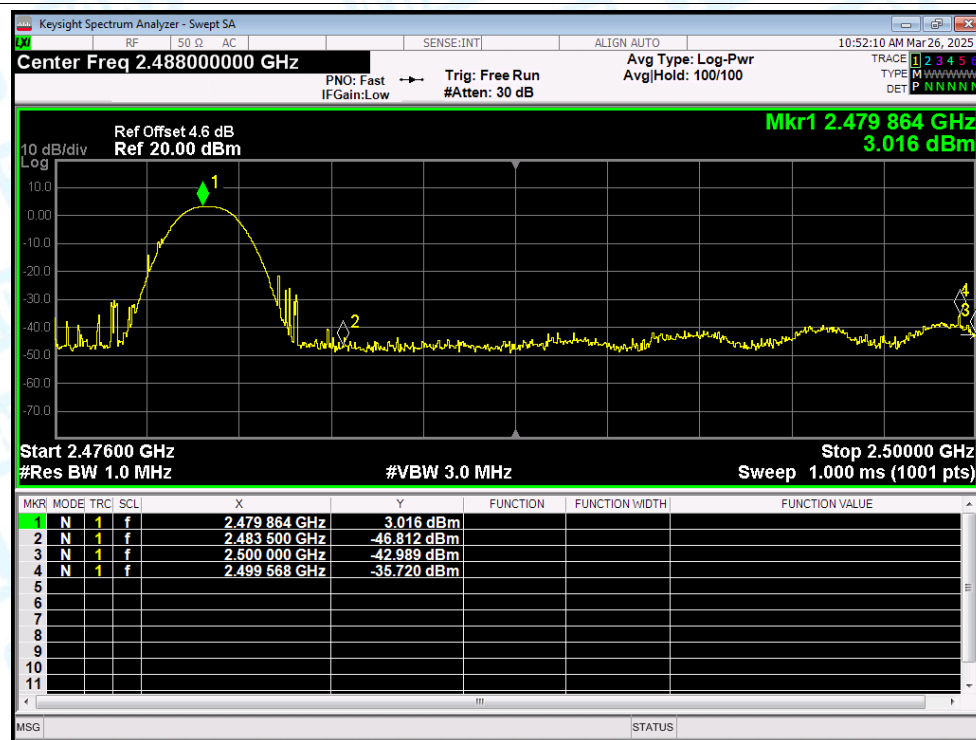
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



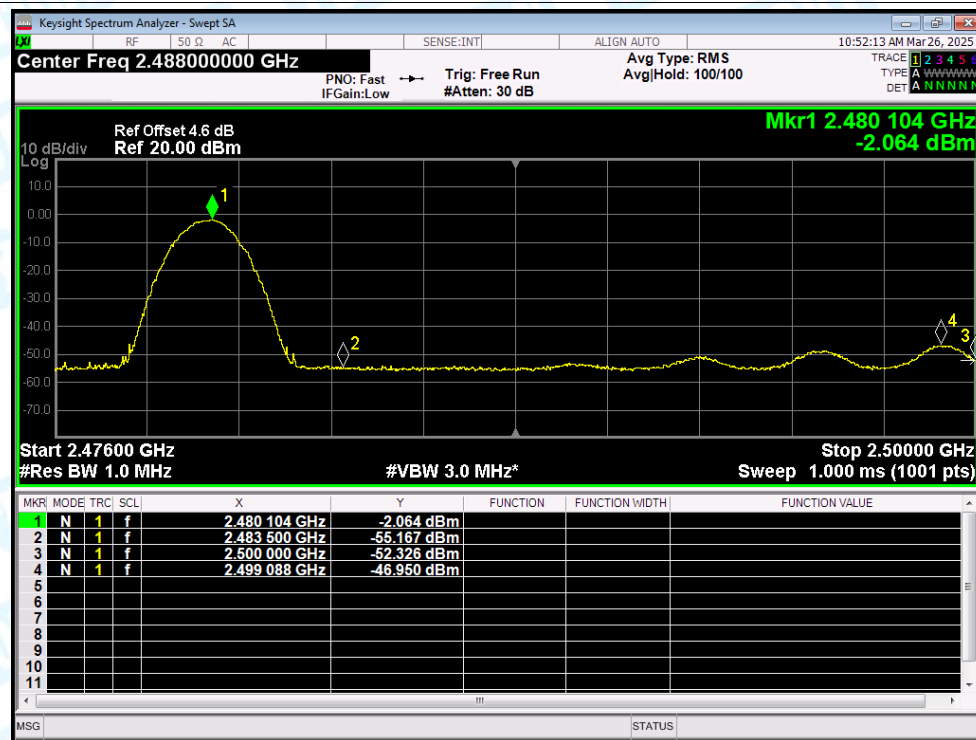
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



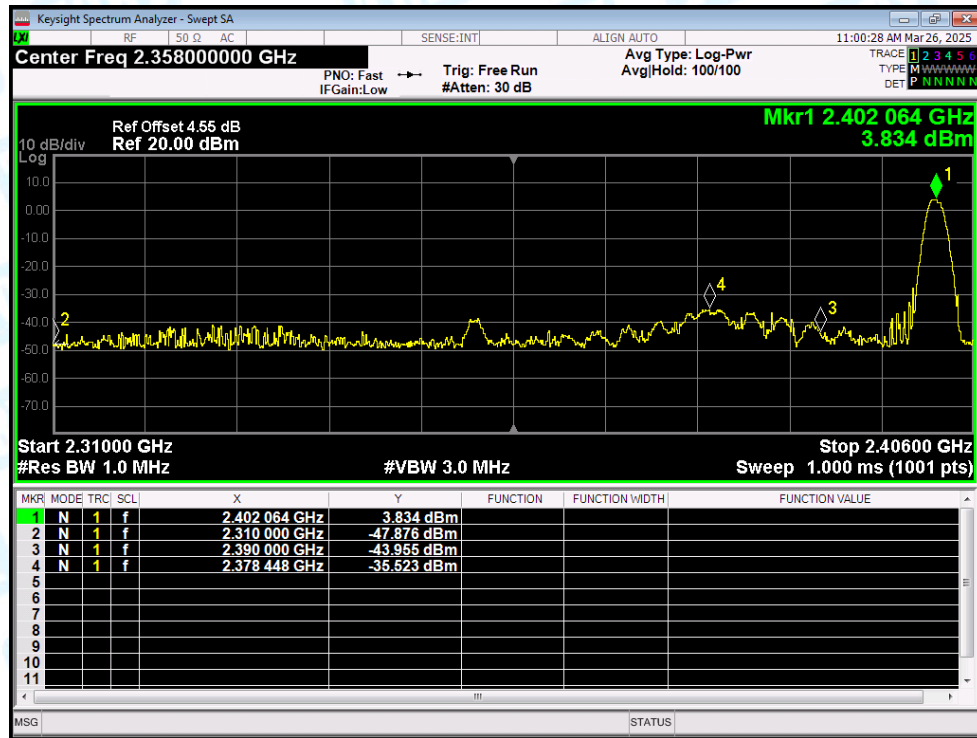
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



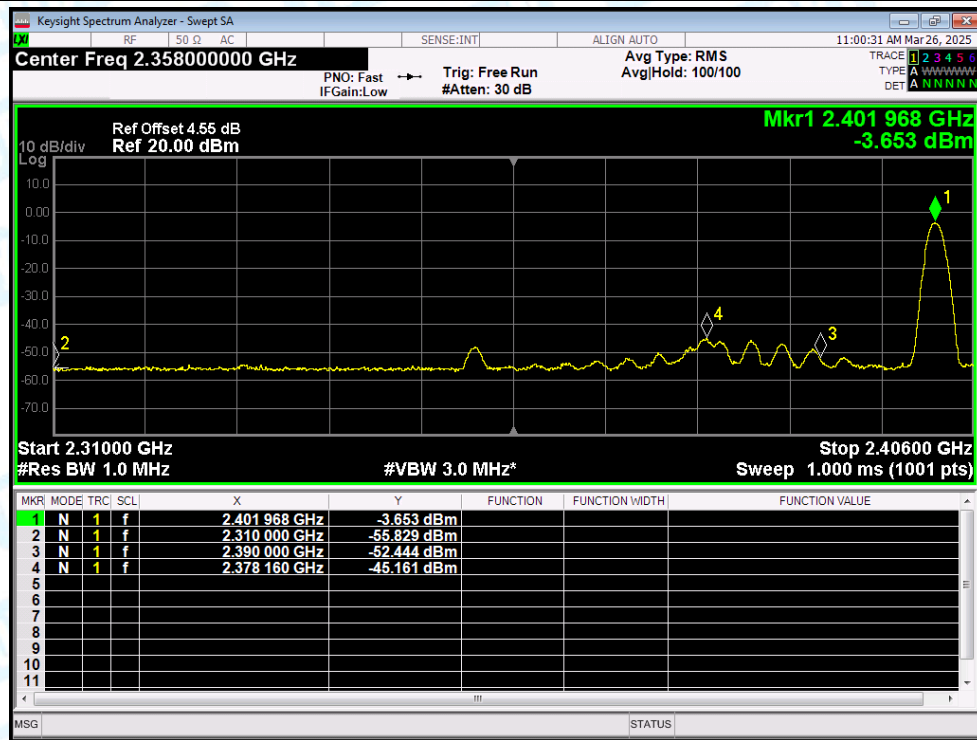
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



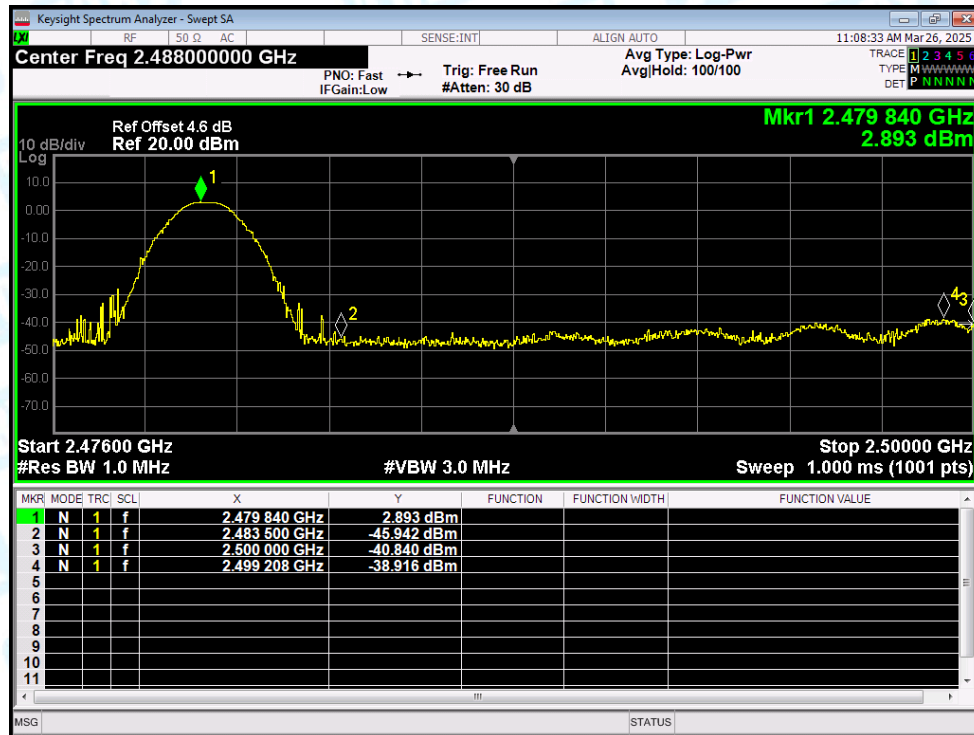
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



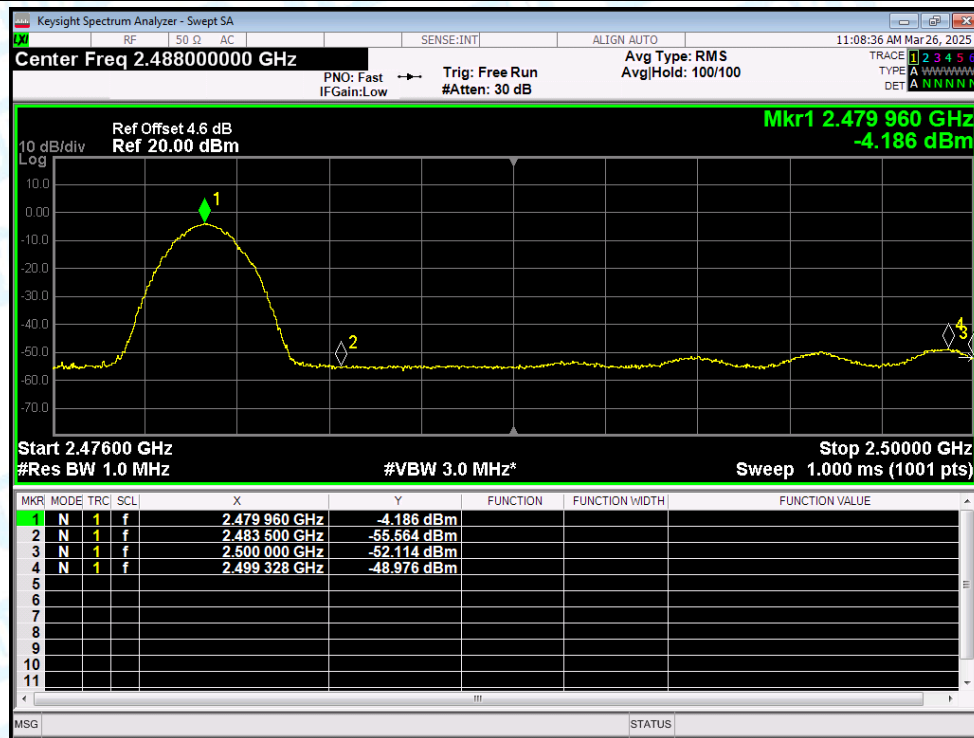
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



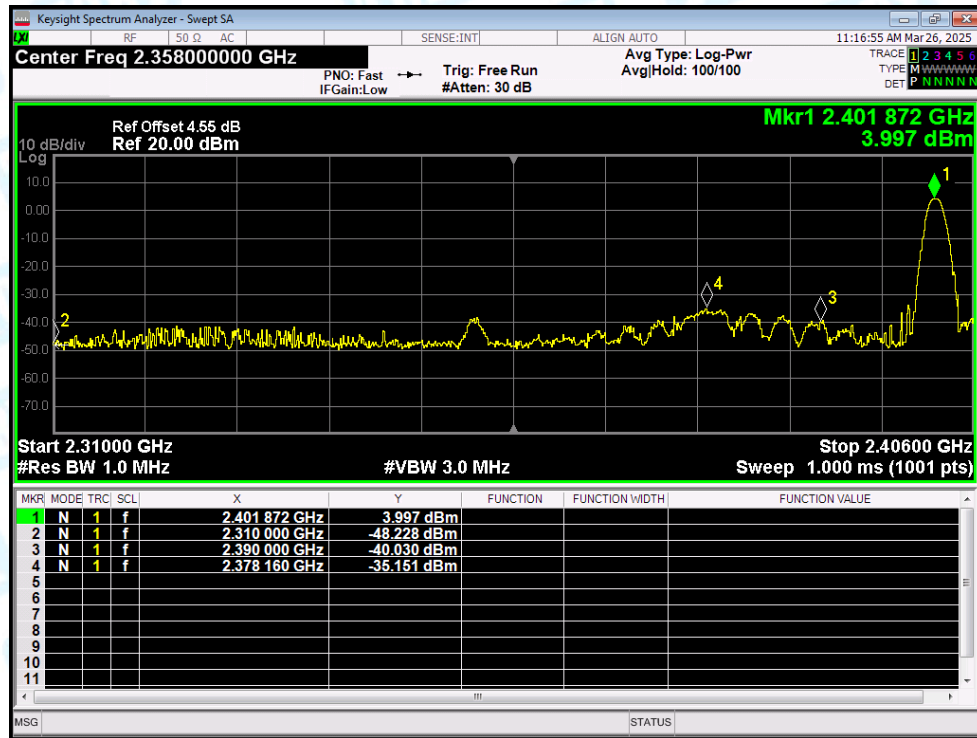
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



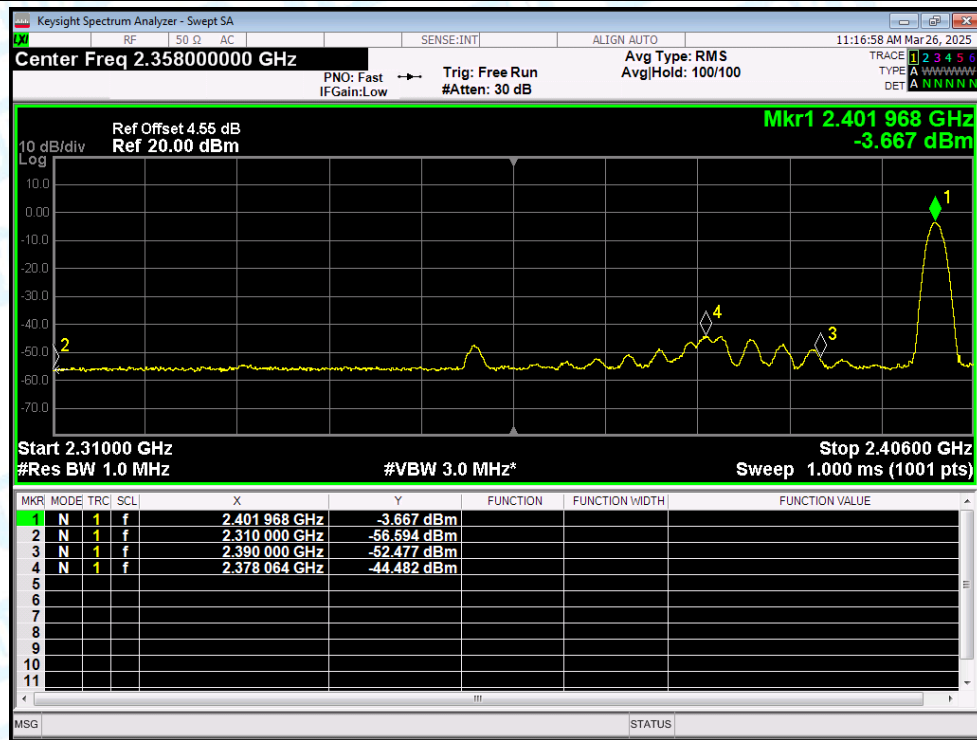
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



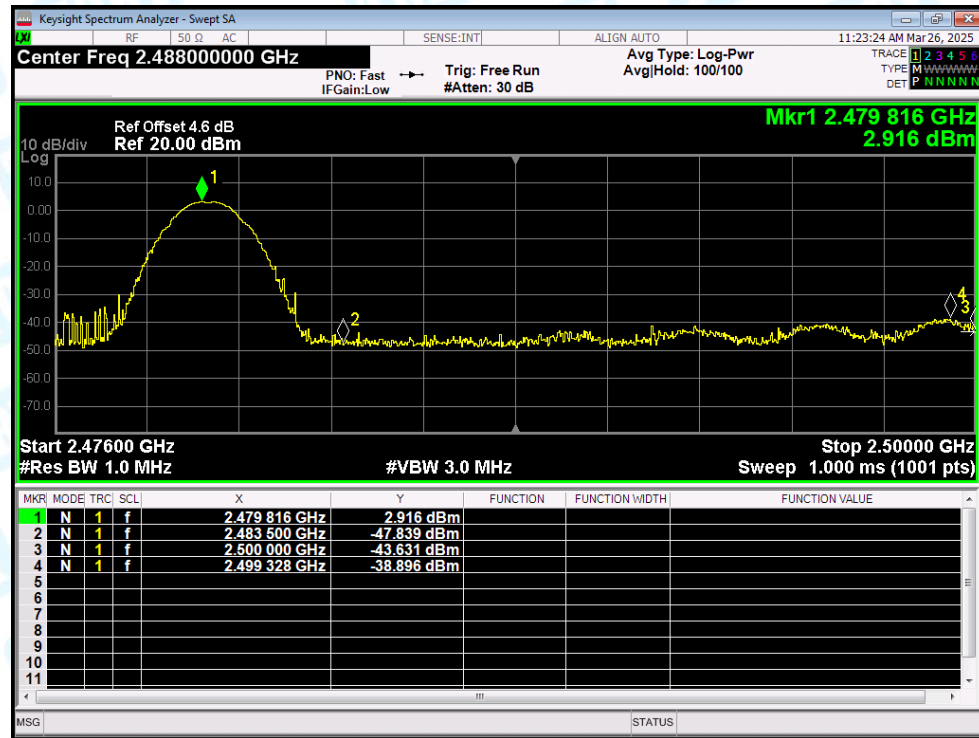
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



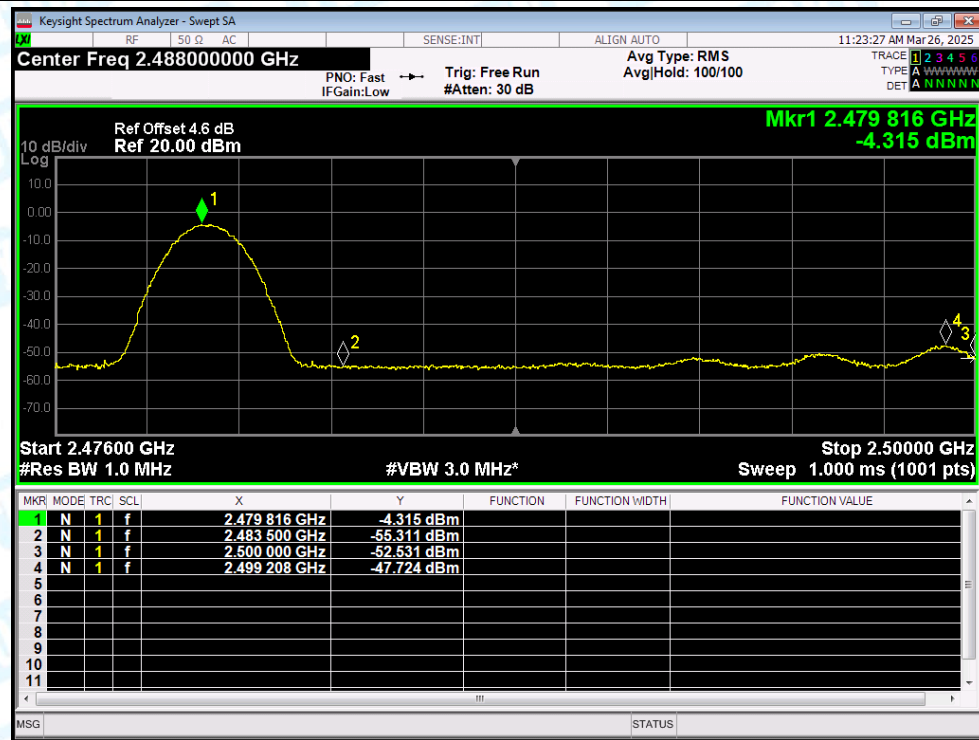
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

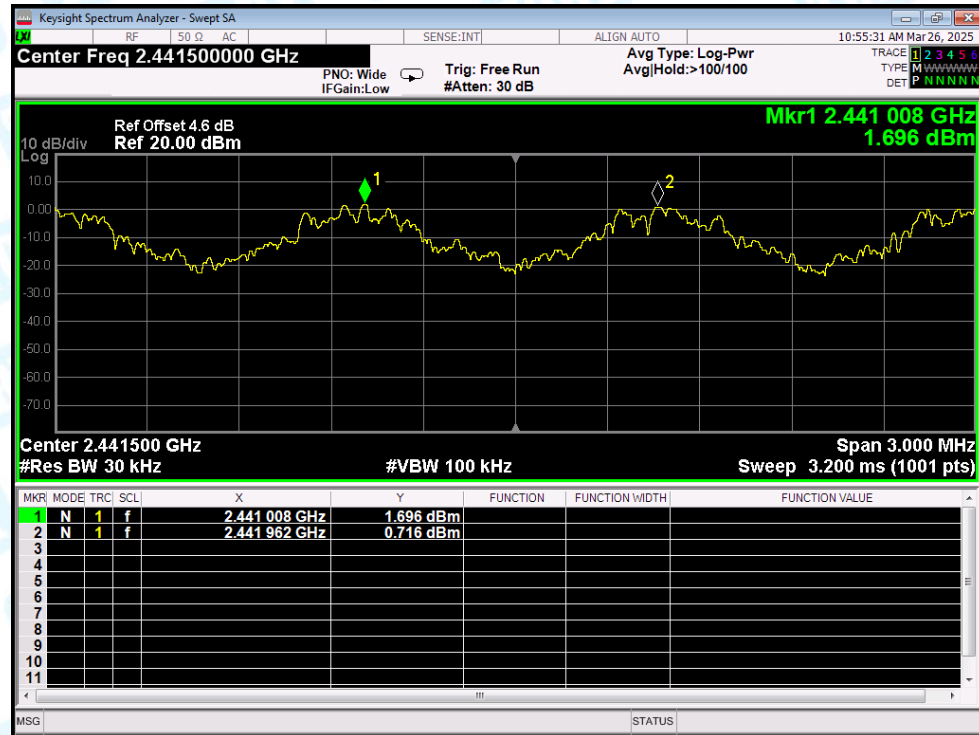


9. Carrier Frequencies Separation

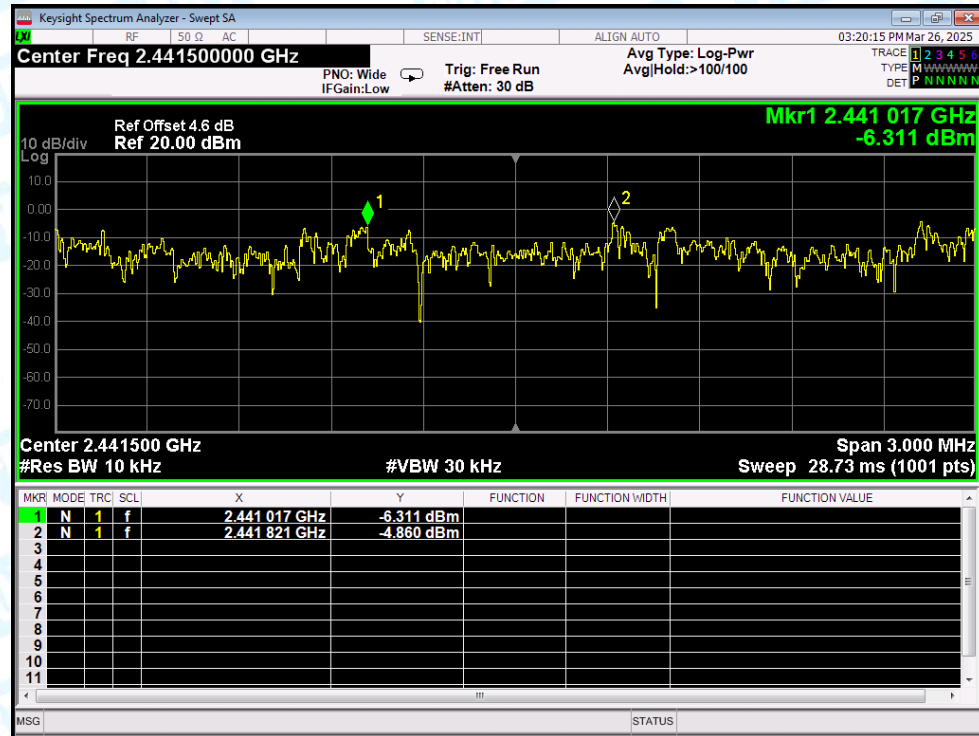
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.008	2441.962	0.954	0.64	Pass
NVNT	2-DH1	Ant1	2441.017	2441.821	0.804	0.025	Pass
NVNT	3-DH1	Ant1	2440.984	2441.983	0.999	0.025	Pass

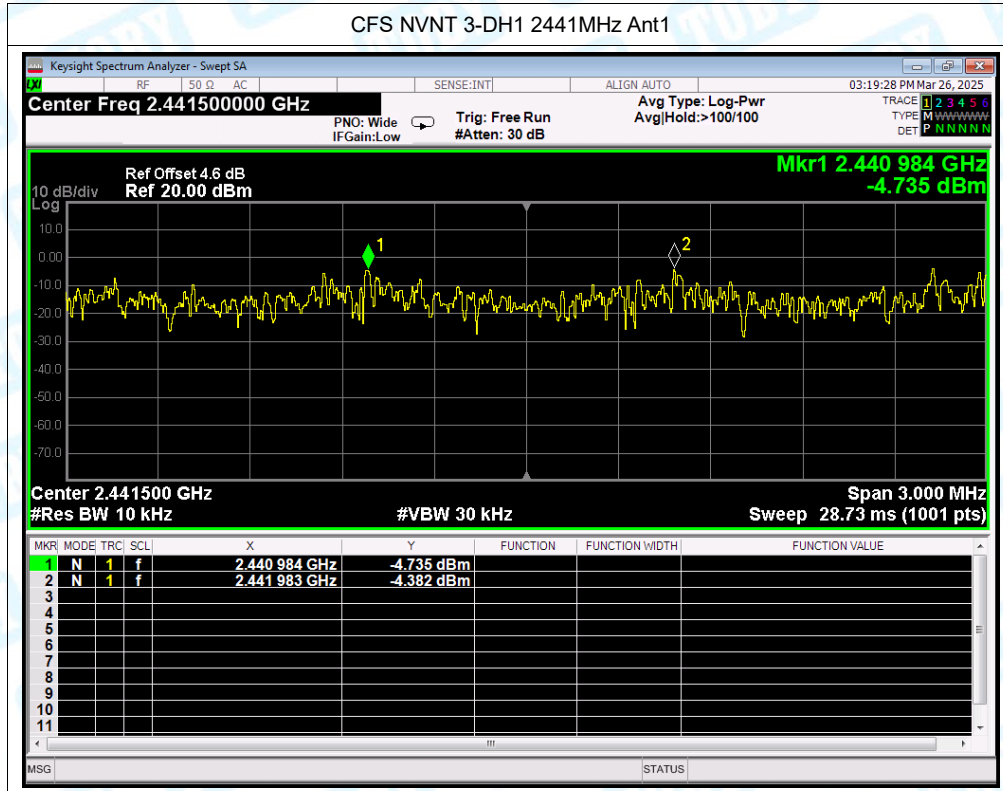
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



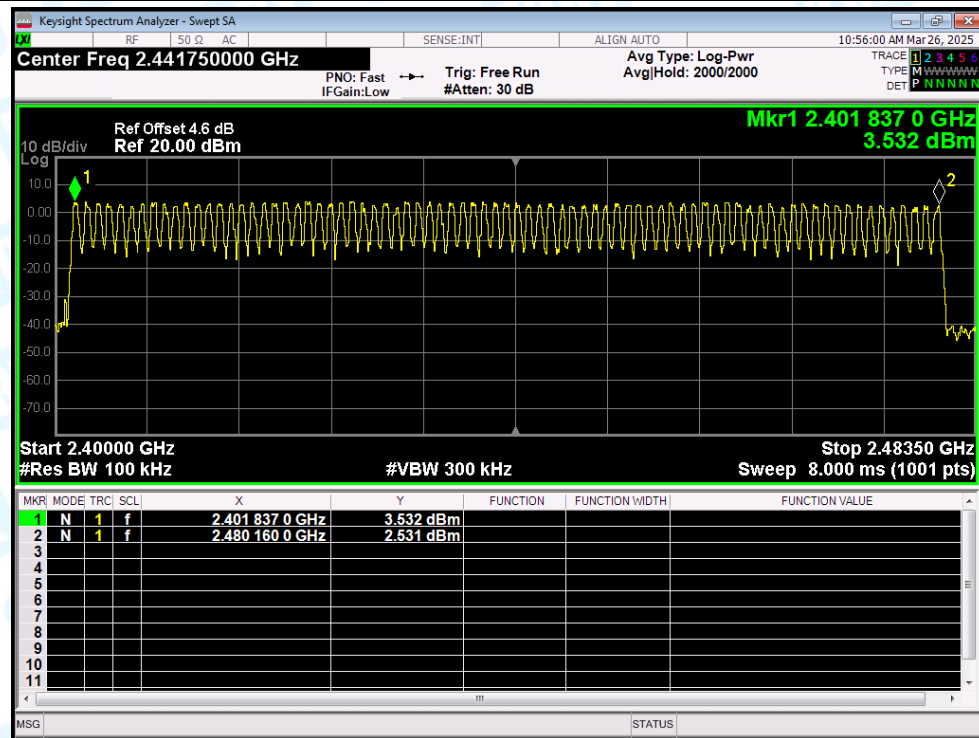


10. Number of Hopping Channel

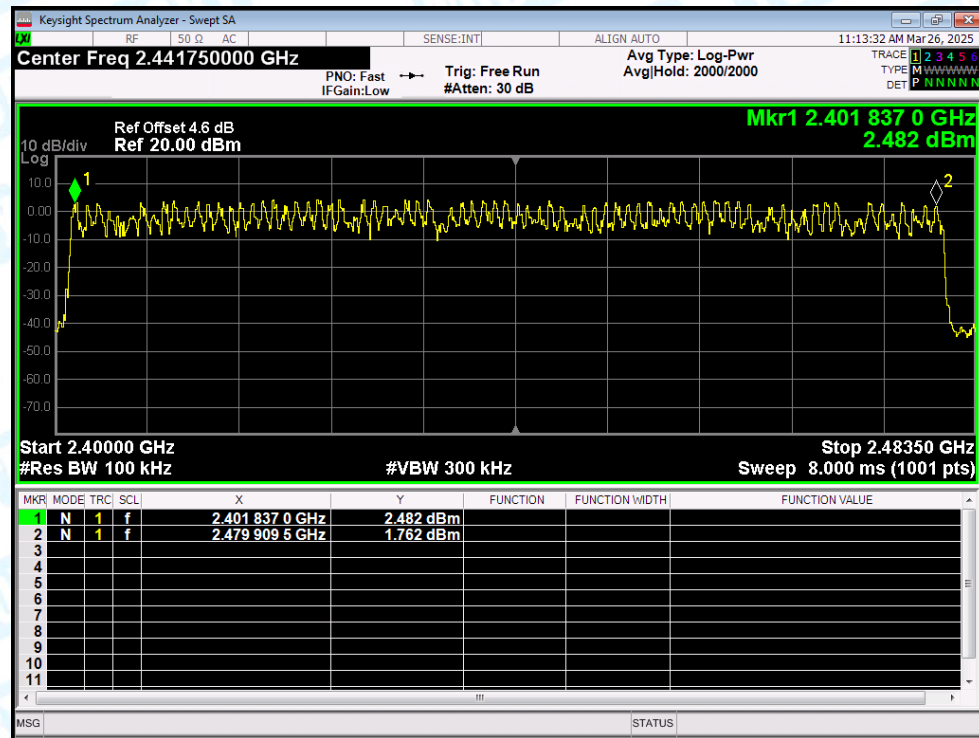
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

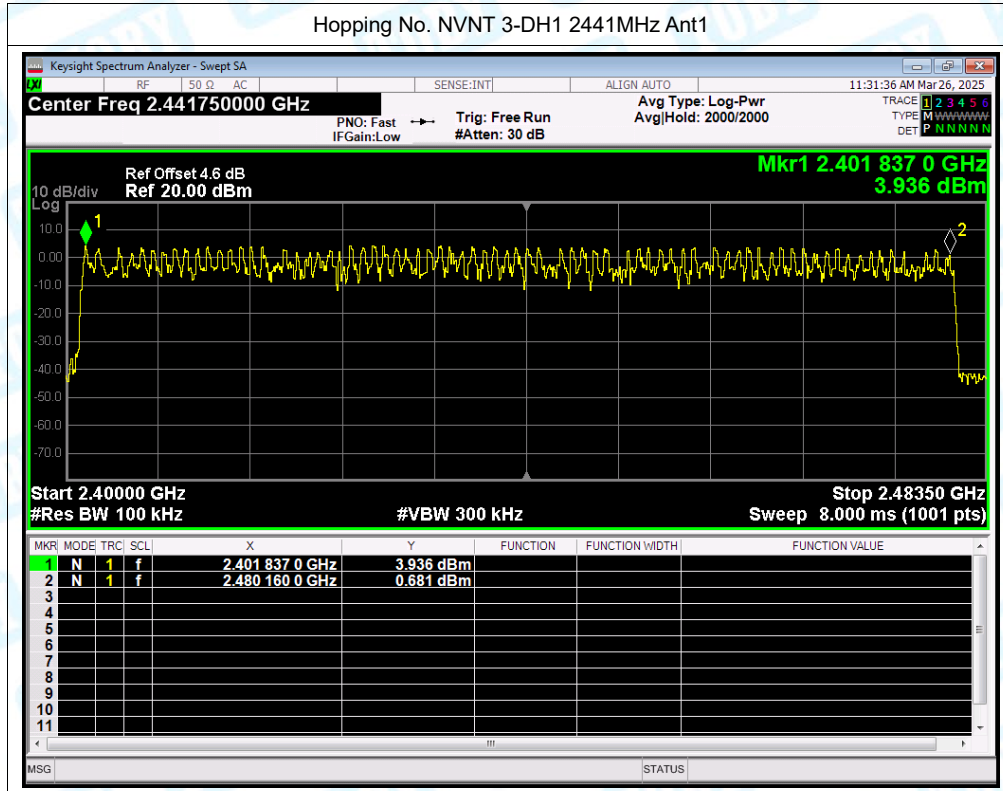
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



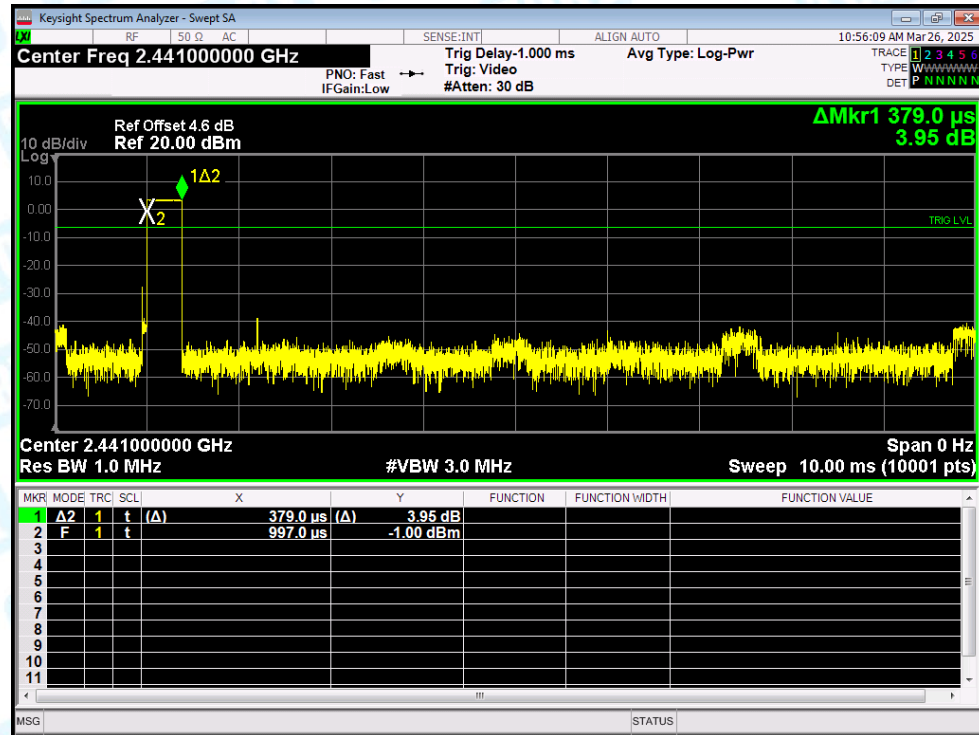


11. Dwell Time

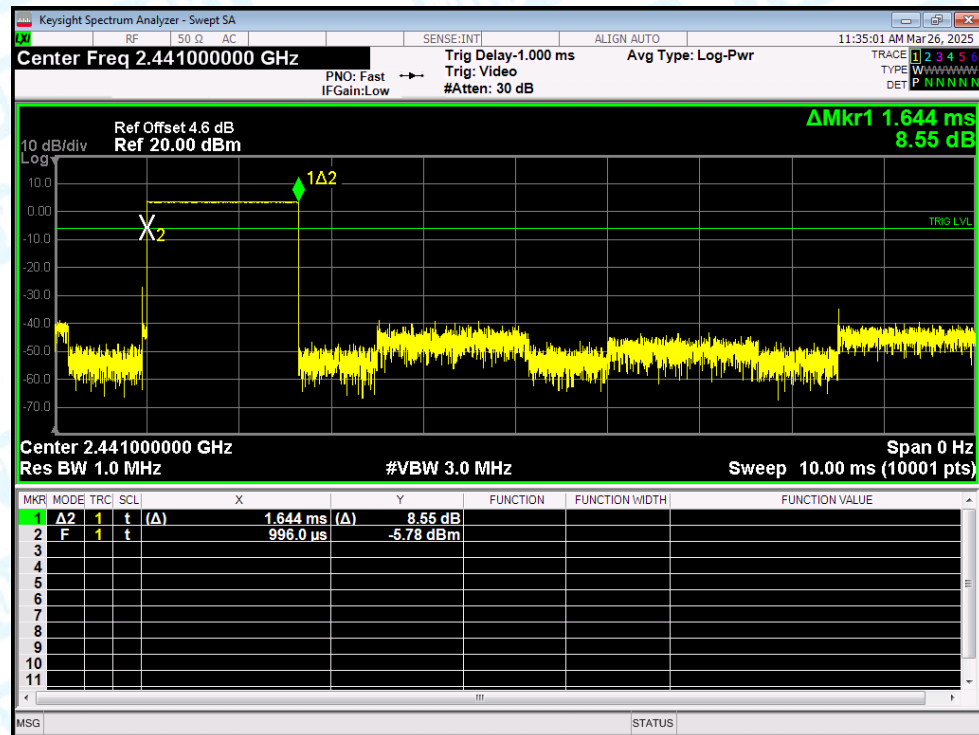
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.379	121.28	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.644	263.04	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.891	308.373	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.387	123.84	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.639	262.24	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.886	307.84	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.386	123.52	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.636	261.76	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.887	307.947	31600	400	Pass

Test Graphs

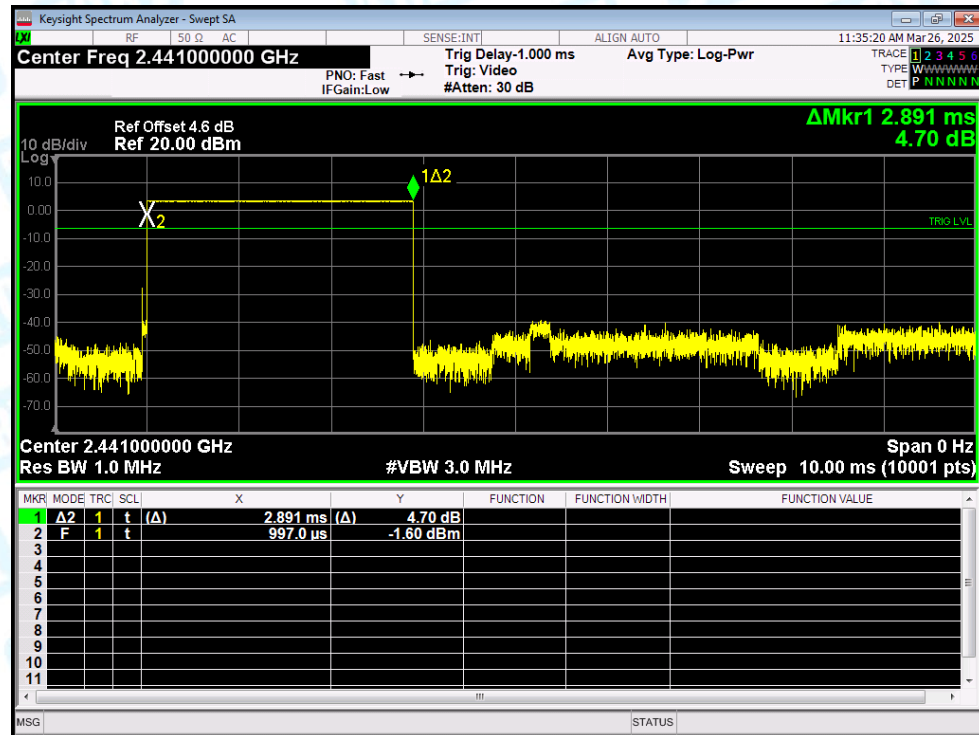
Dwell NVNT 1-DH1 2441MHz Ant1



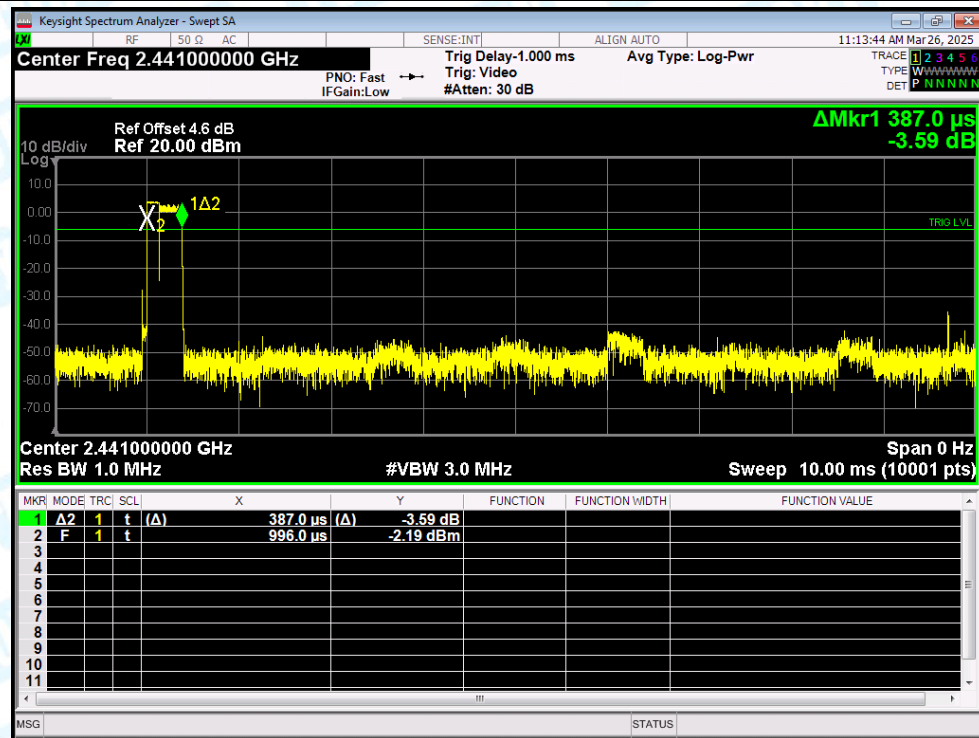
Dwell NVNT 1-DH3 2441MHz Ant1



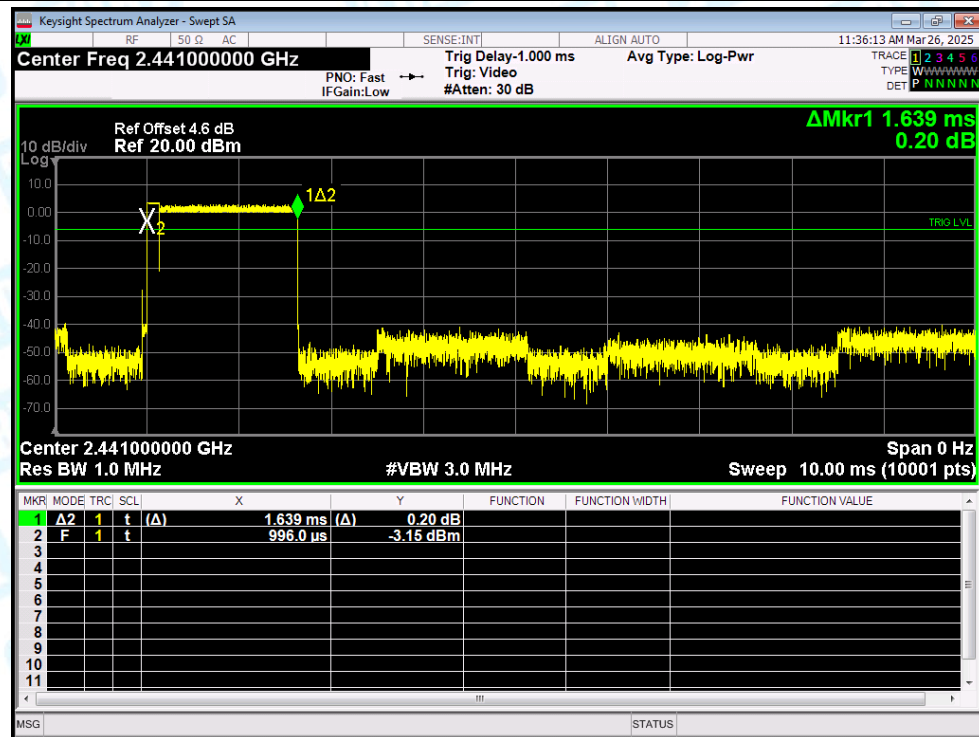
Dwell NVNT 1-DH5 2441MHz Ant1



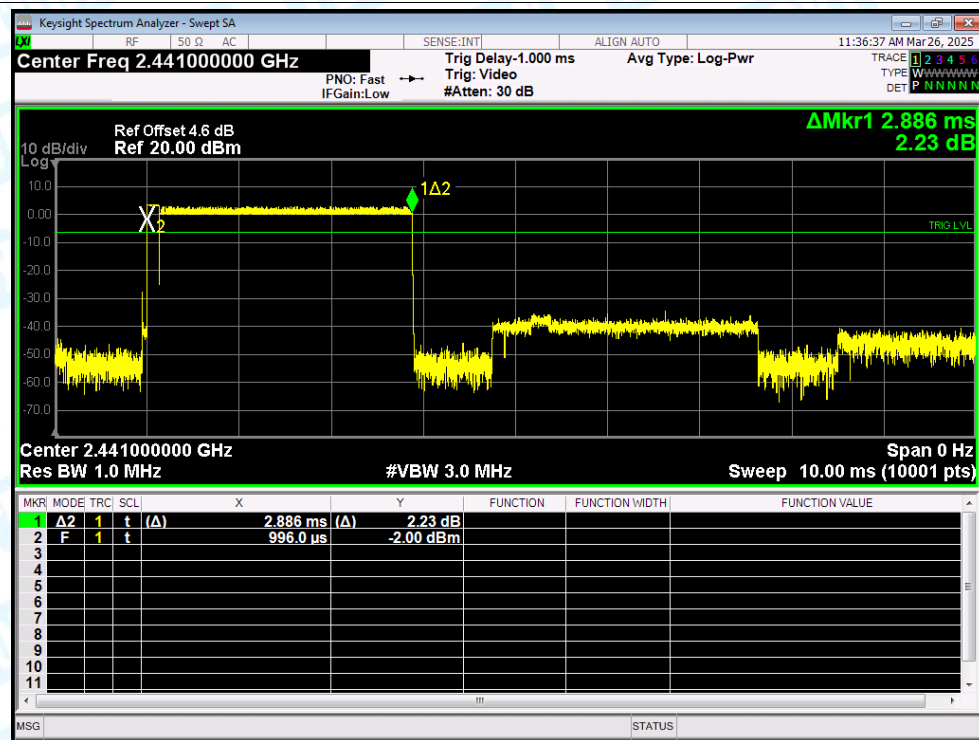
Dwell NVNT 2-DH1 2441MHz Ant1



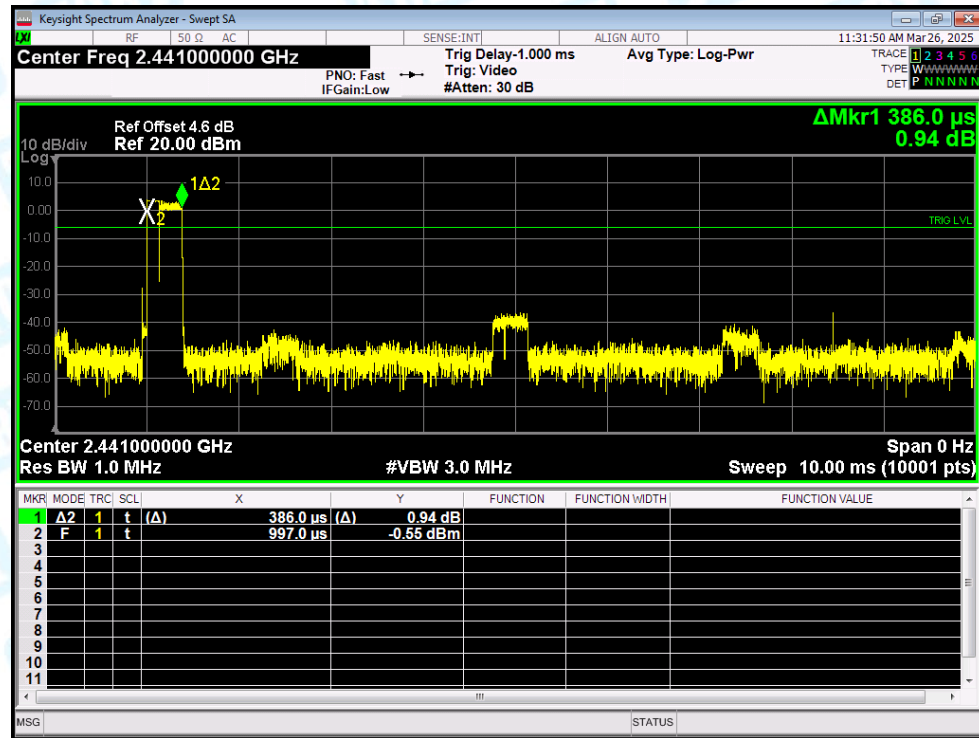
Dwell NVNT 2-DH3 2441MHz Ant1



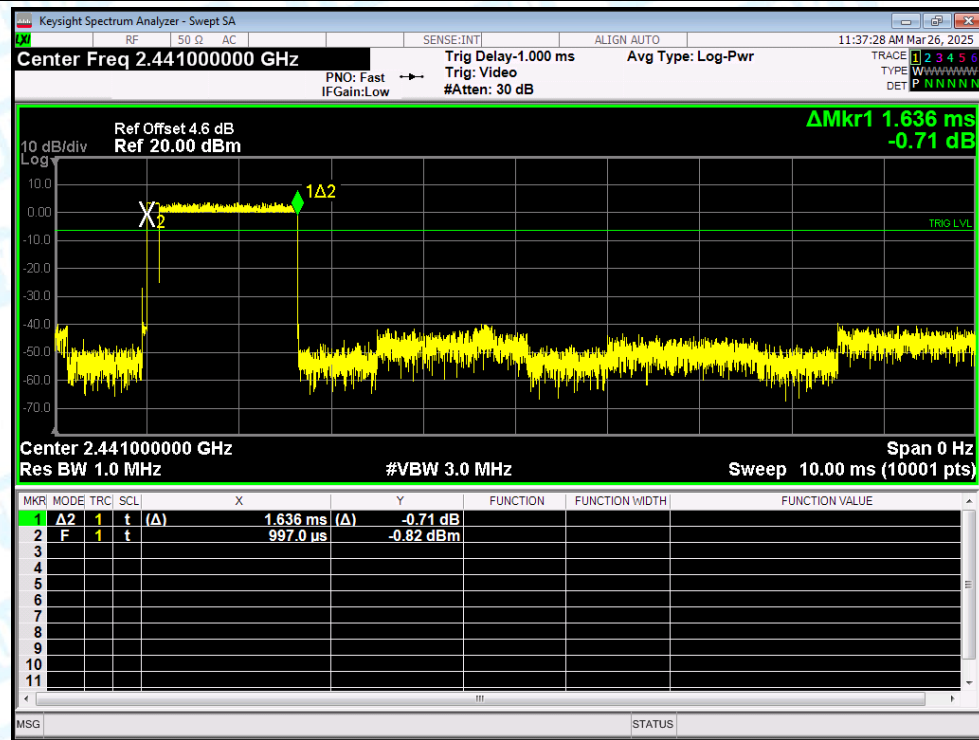
Dwell NVNT 2-DH5 2441MHz Ant1

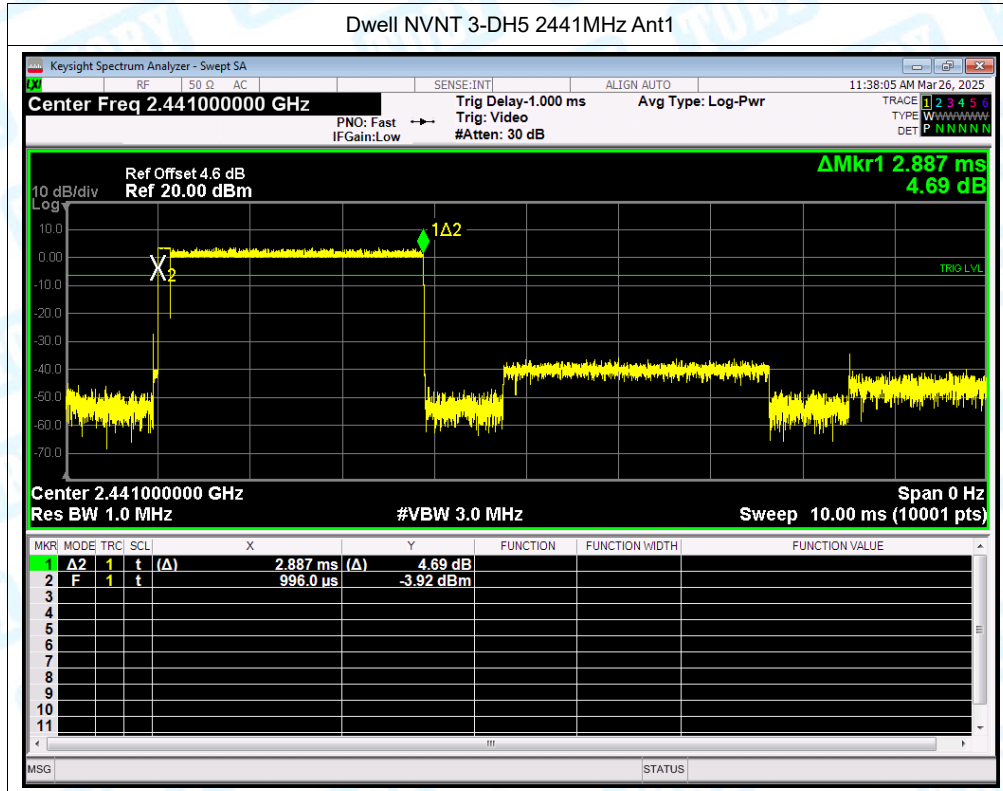


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





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