

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Smart Bluetooth glasses
Test Model:	JM91
Sample ID:	HC-C-202607-0431-01-01
Environmental Conditions	
Temperature:	24.6℃
Relative Humidity:	48.2%
Test Voltage:	DC 3.8V
Test Engineer:	Gold zhang
Note: For a more detailed features description, please refer to the report TBR-C-202607-0431-11 The report only show the worst case data.	

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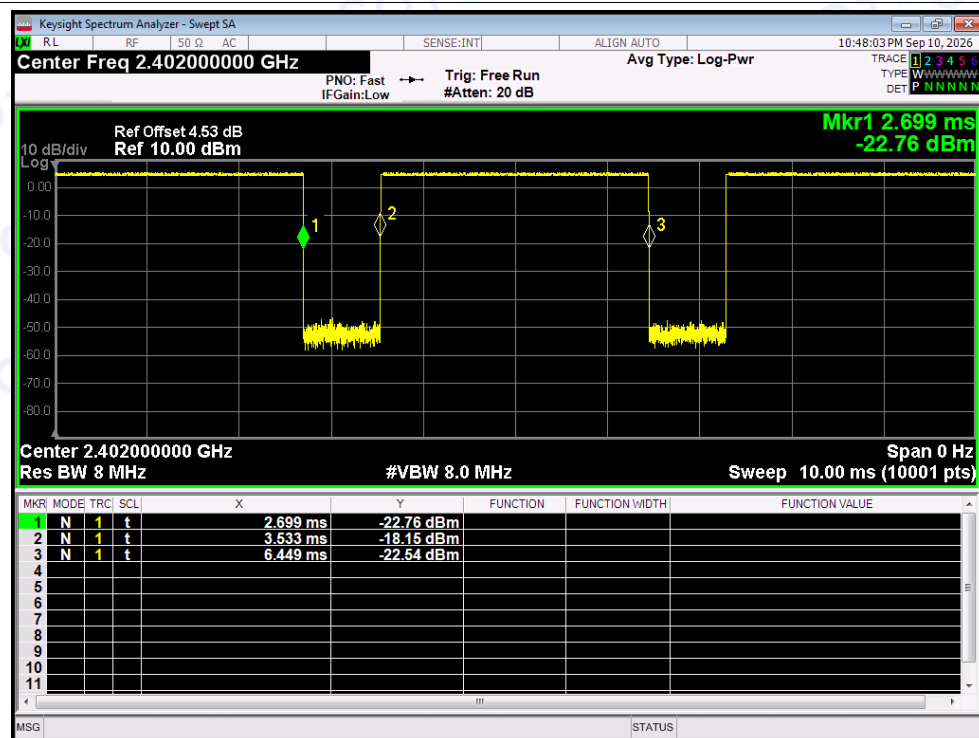
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1. Duty Cycle

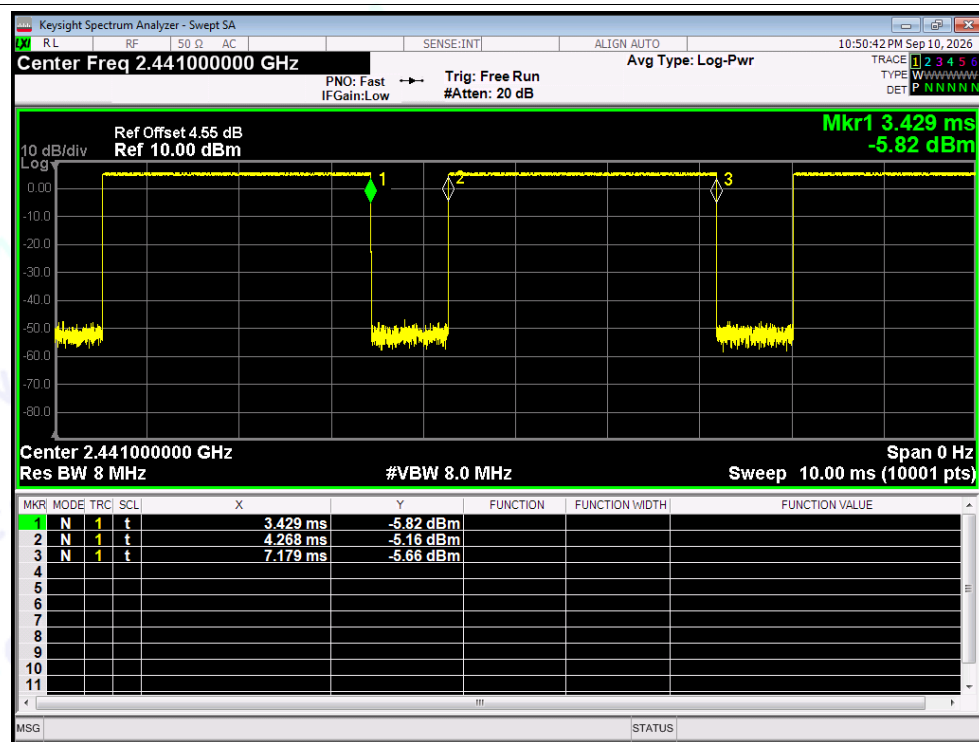
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.76	1.09	0.34
NVNT	1-DH5	2441	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.63	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.76	1.09	0.34
NVNT	2-DH5	2441	Ant1	77.79	1.09	0.34
NVNT	2-DH5	2480	Ant1	77.89	1.09	0.34
NVNT	3-DH5	2402	Ant1	77.79	1.09	0.34
NVNT	3-DH5	2441	Ant1	77.81	1.09	0.34
NVNT	3-DH5	2480	Ant1	77.81	1.09	0.34

Test Graphs

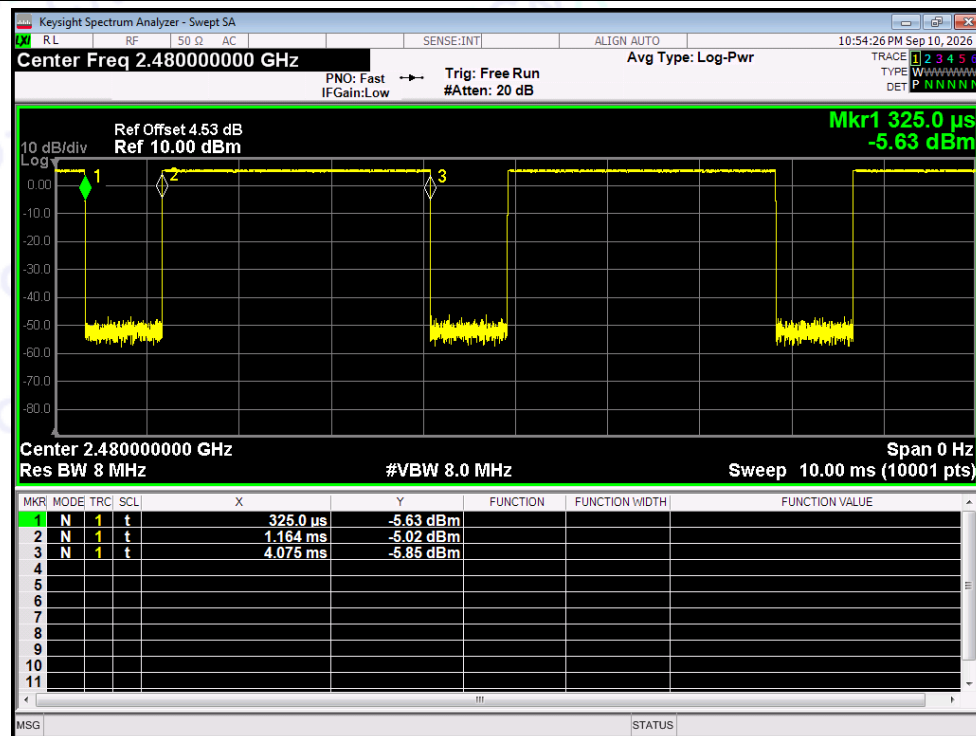
Duty Cycle NVNT 1-DH5 2402MHz Ant1



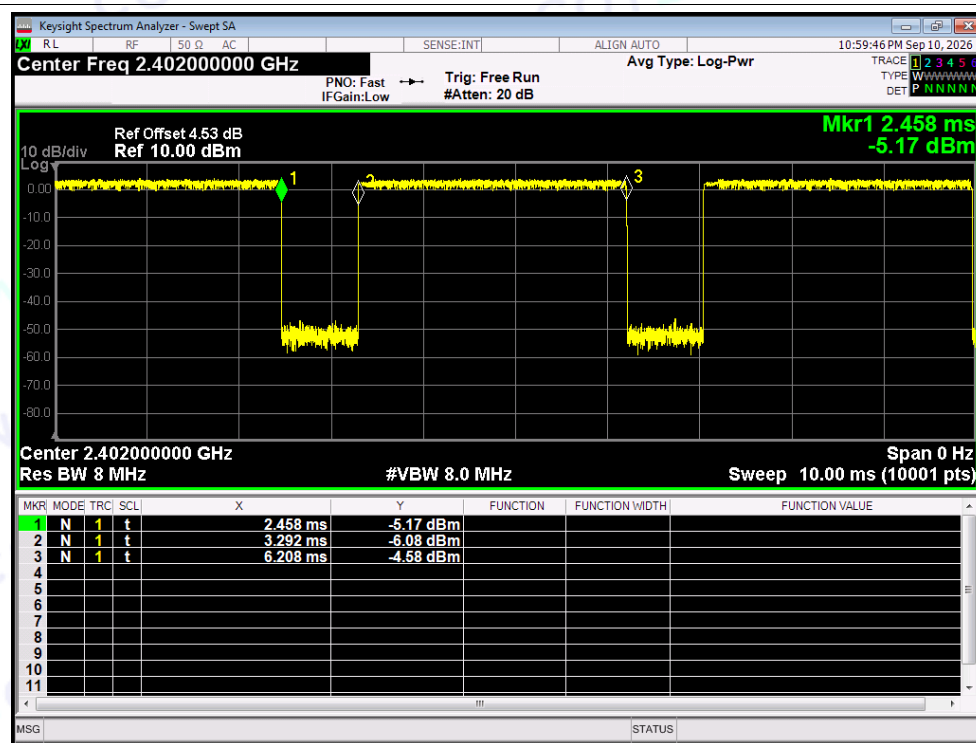
Duty Cycle NVNT 1-DH5 2441MHz Ant1



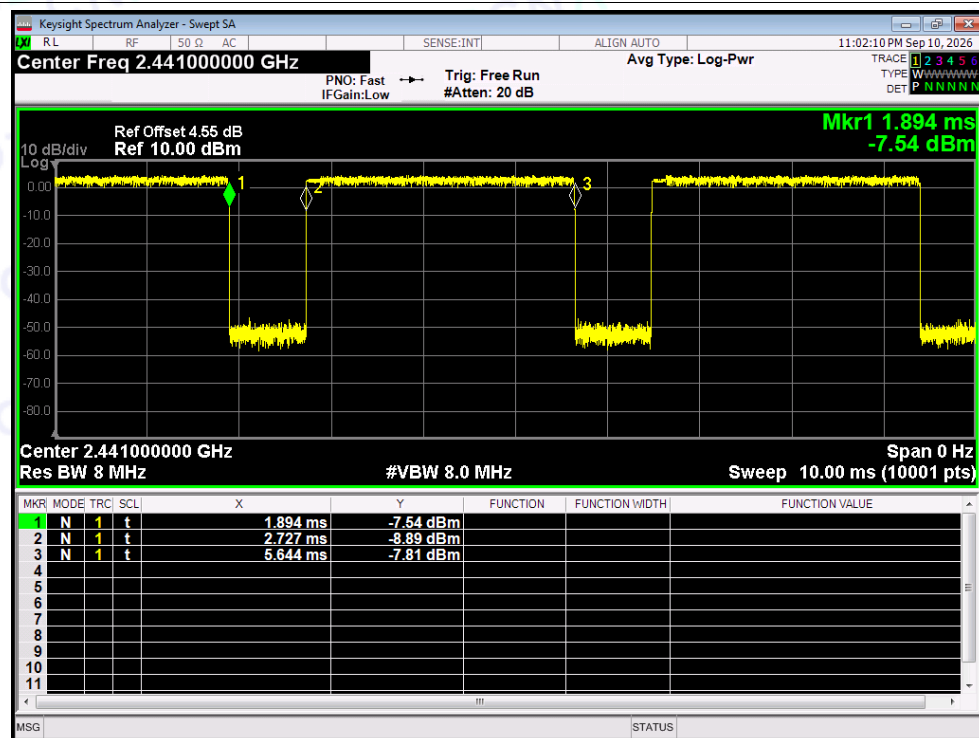
Duty Cycle NVNT 1-DH5 2480MHz Ant1



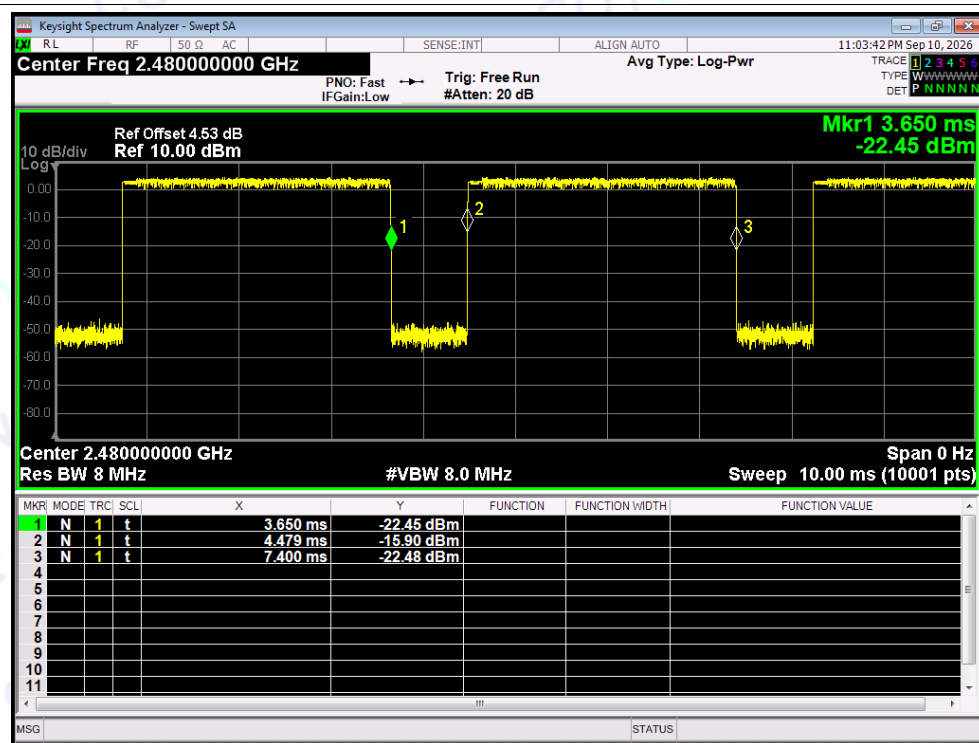
Duty Cycle NVNT 2-DH5 2402MHz Ant1



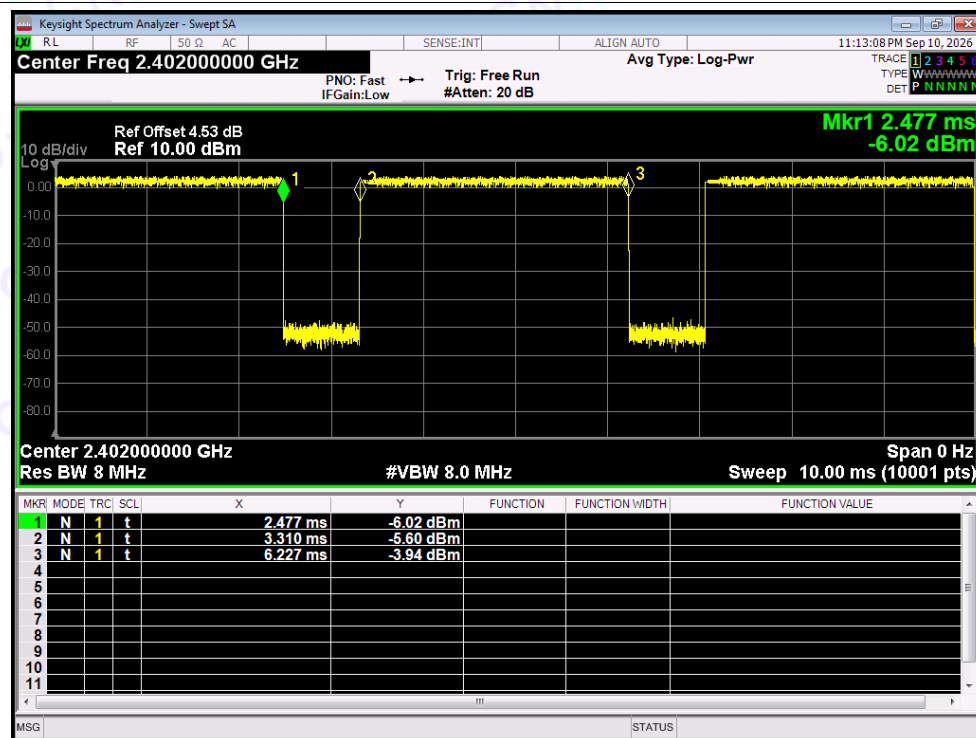
Duty Cycle NVNT 2-DH5 2441MHz Ant1



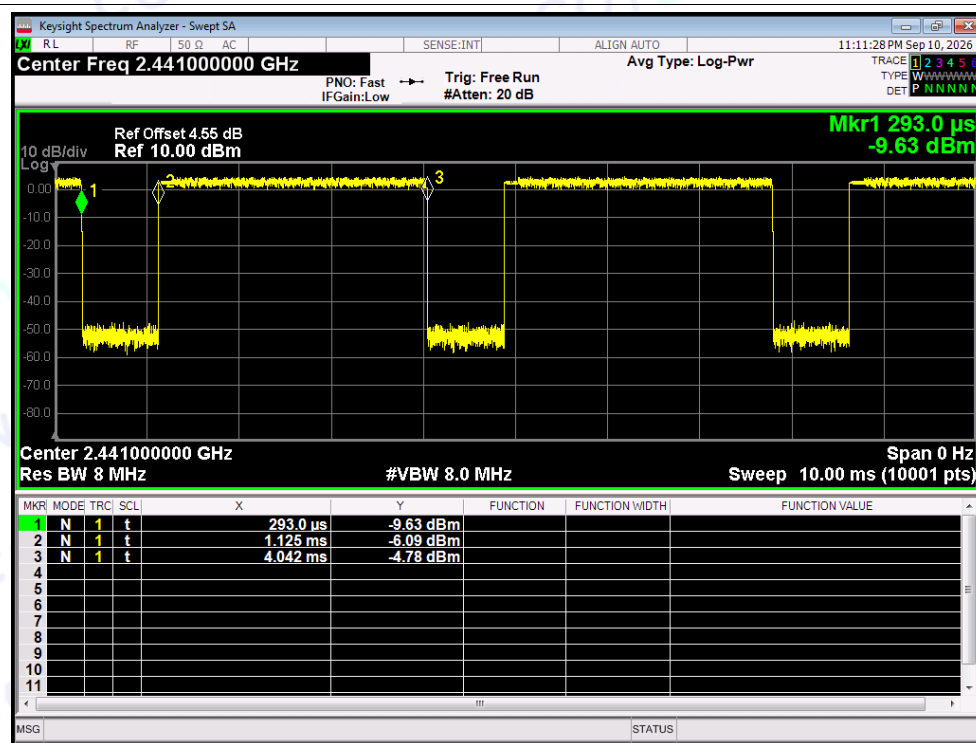
Duty Cycle NVNT 2-DH5 2480MHz Ant1

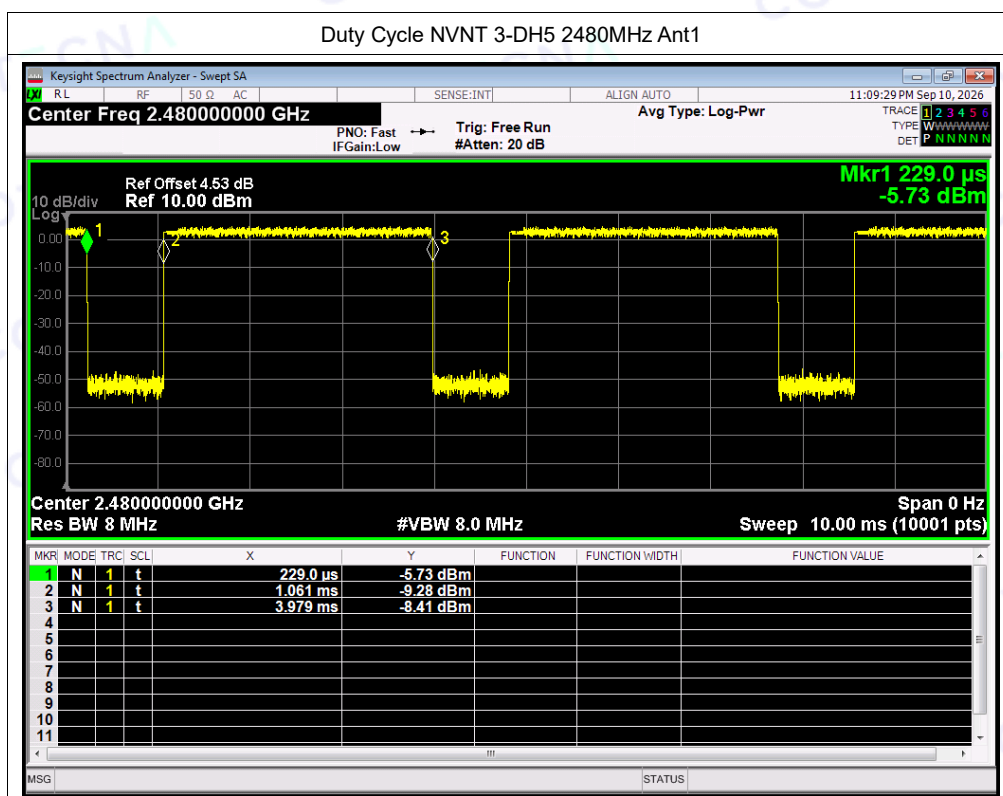


Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1



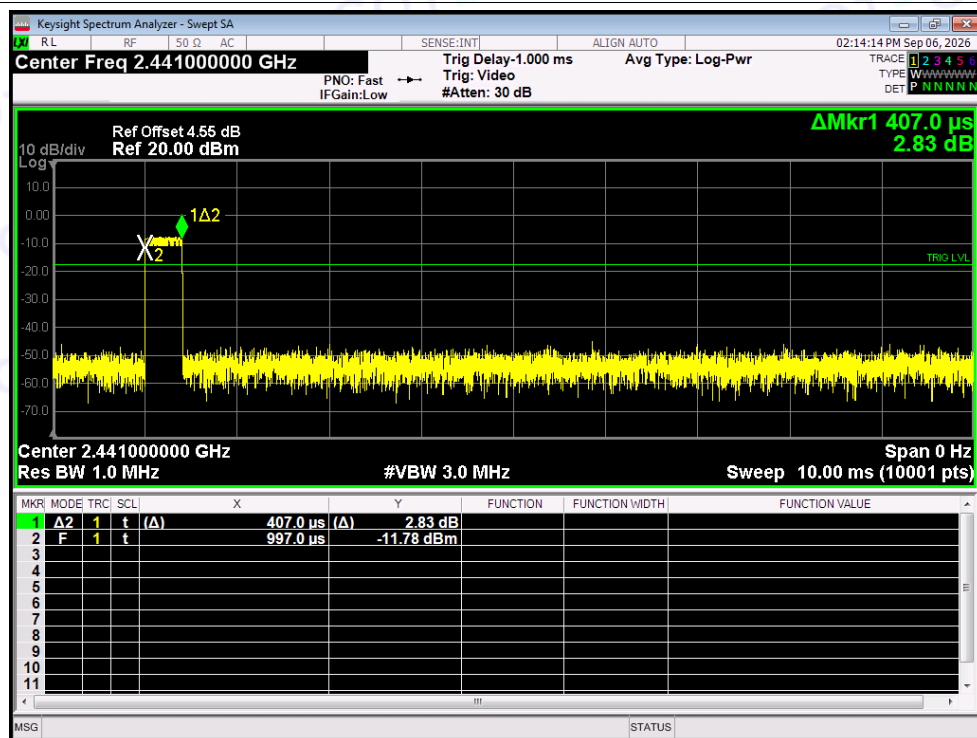


2. Dwell Time

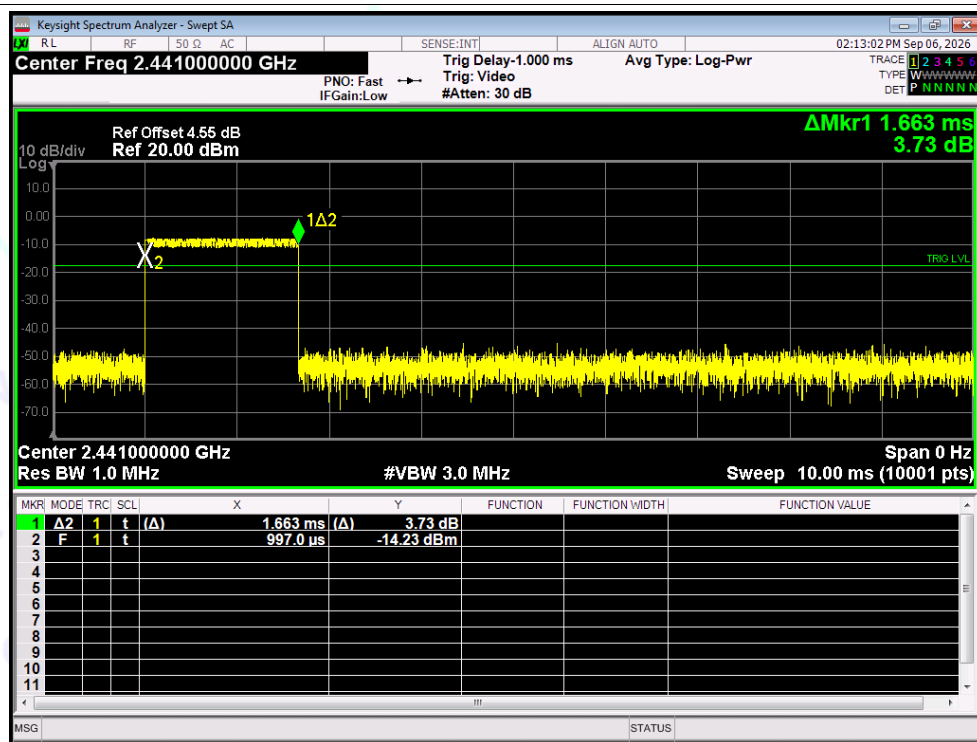
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.407	130.24	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.663	266.08	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.909	310.293	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.417	133.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.669	267.04	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.915	310.933	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.417	133.44	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.667	266.72	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.916	311.04	31600	400	Pass

Test Graphs

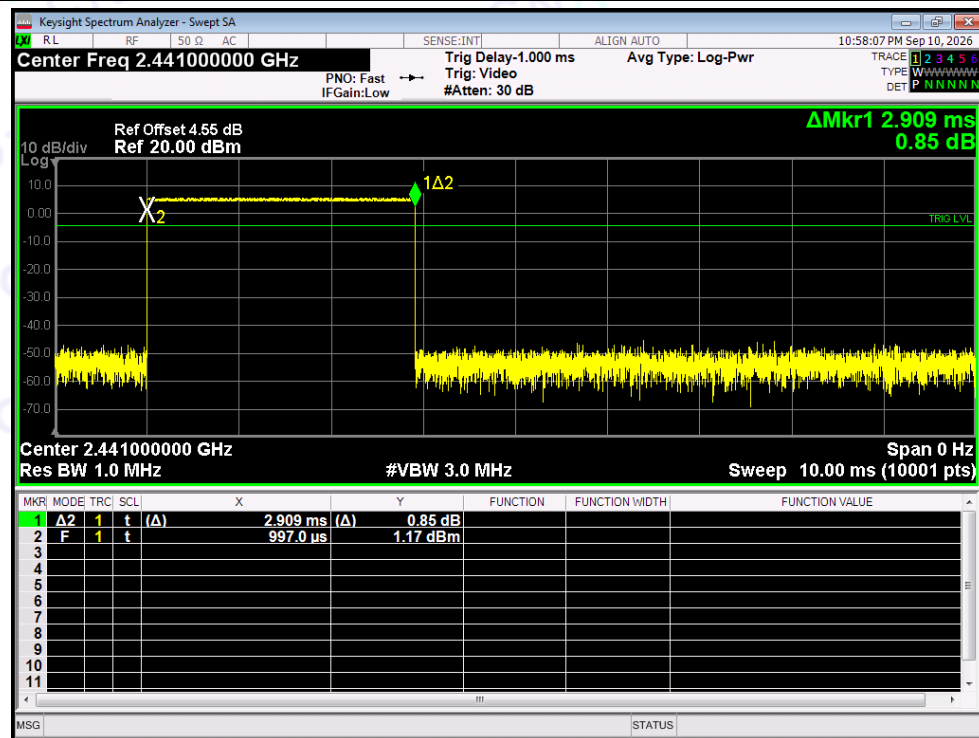
Dwell NVNT 1-DH1 2441MHz Ant1



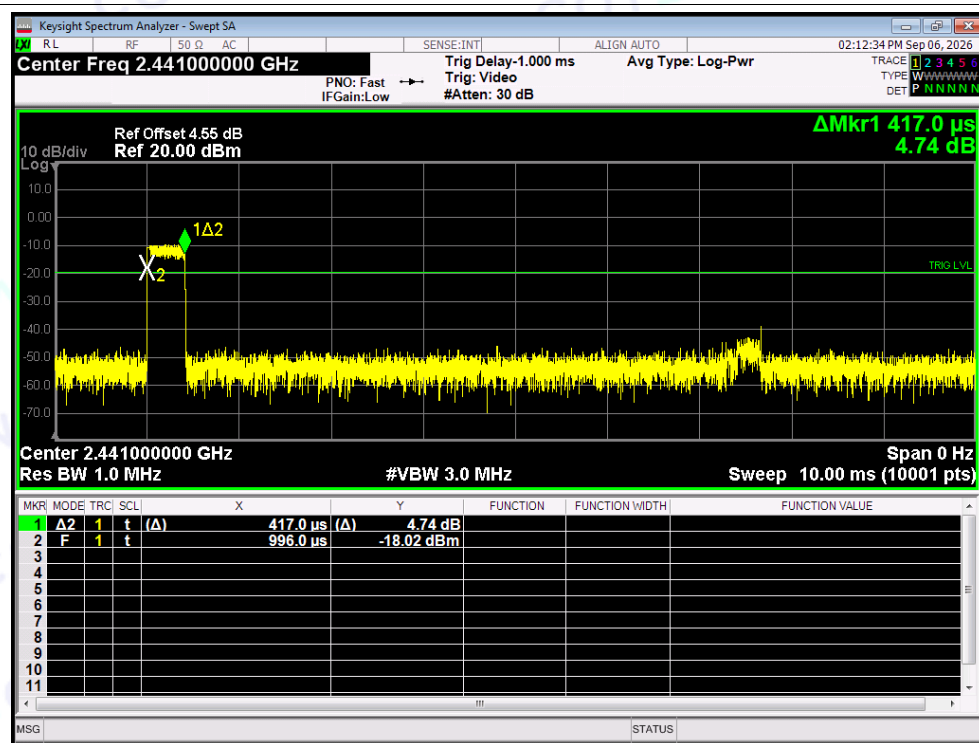
Dwell NVNT 1-DH3 2441MHz Ant1



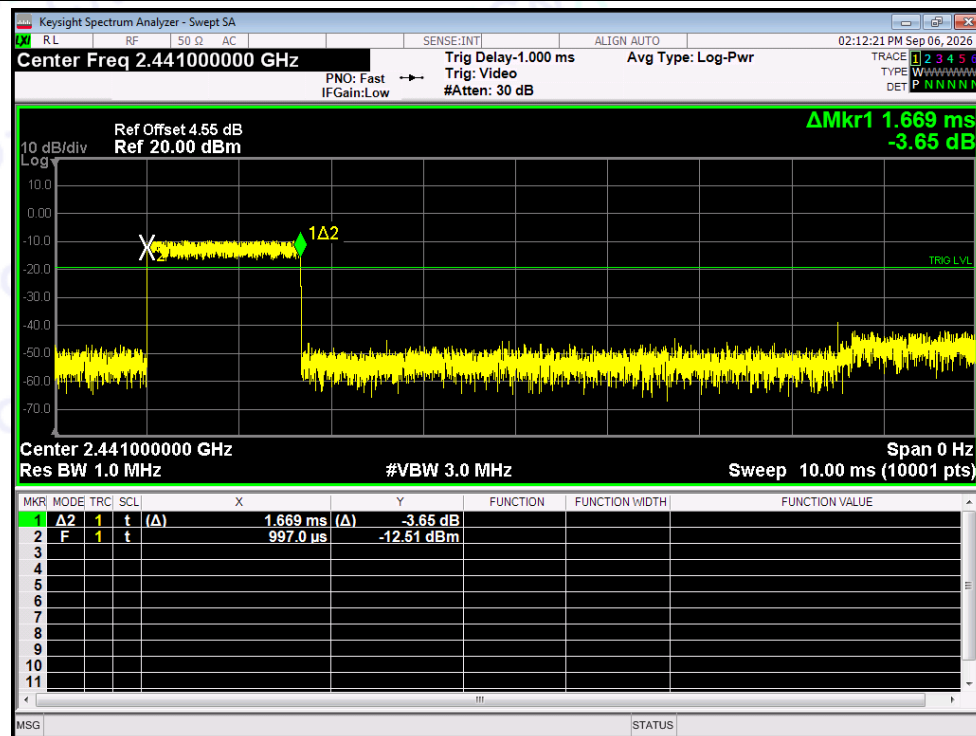
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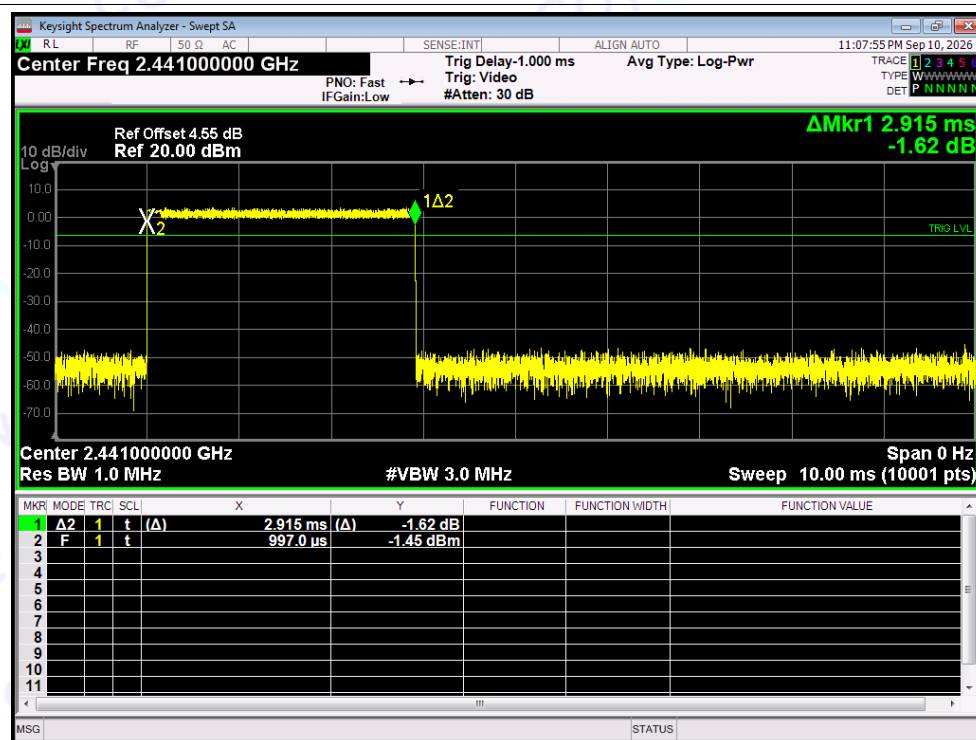
Dwell NVNT 2-DH1 2441MHz Ant1



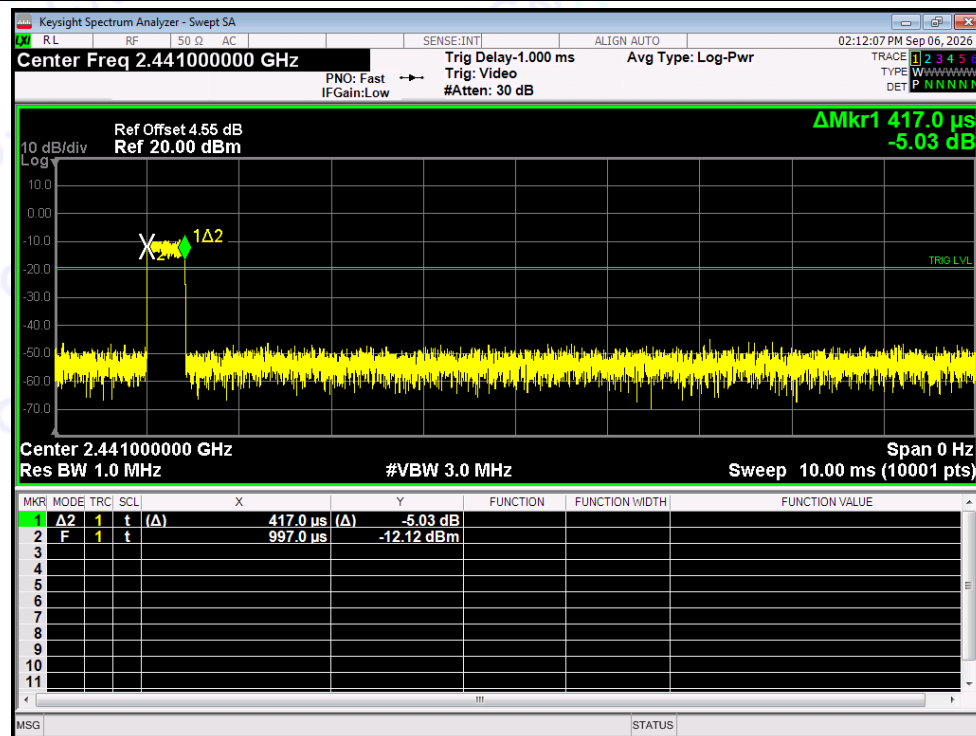
Dwell NVNT 2-DH3 2441MHz Ant1



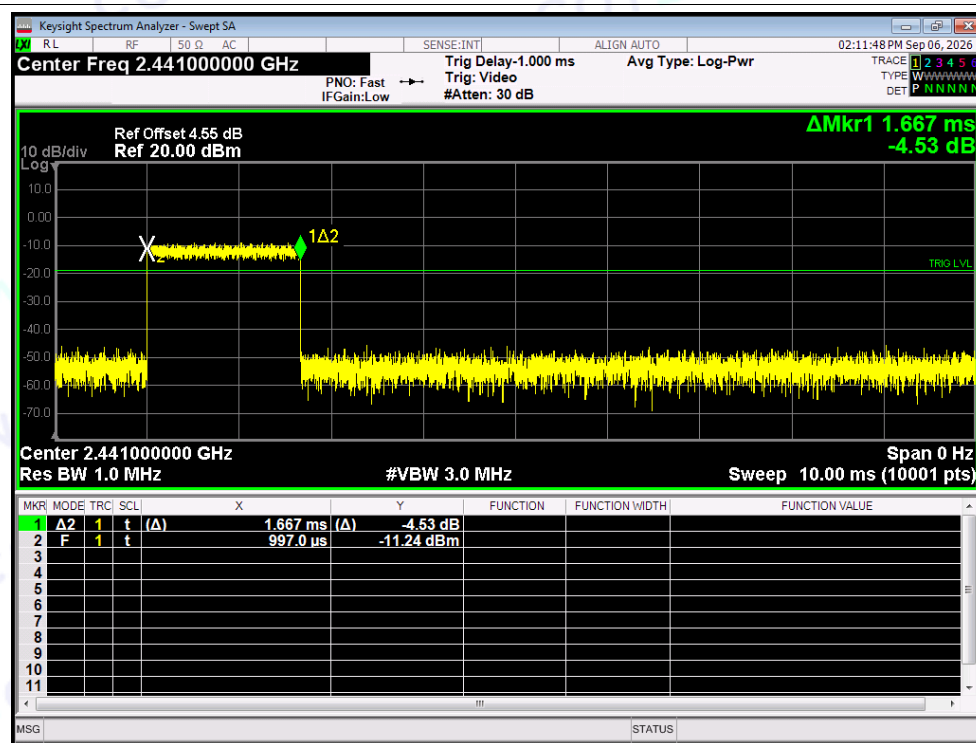
Dwell NVNT 2-DH5 2441MHz Ant1

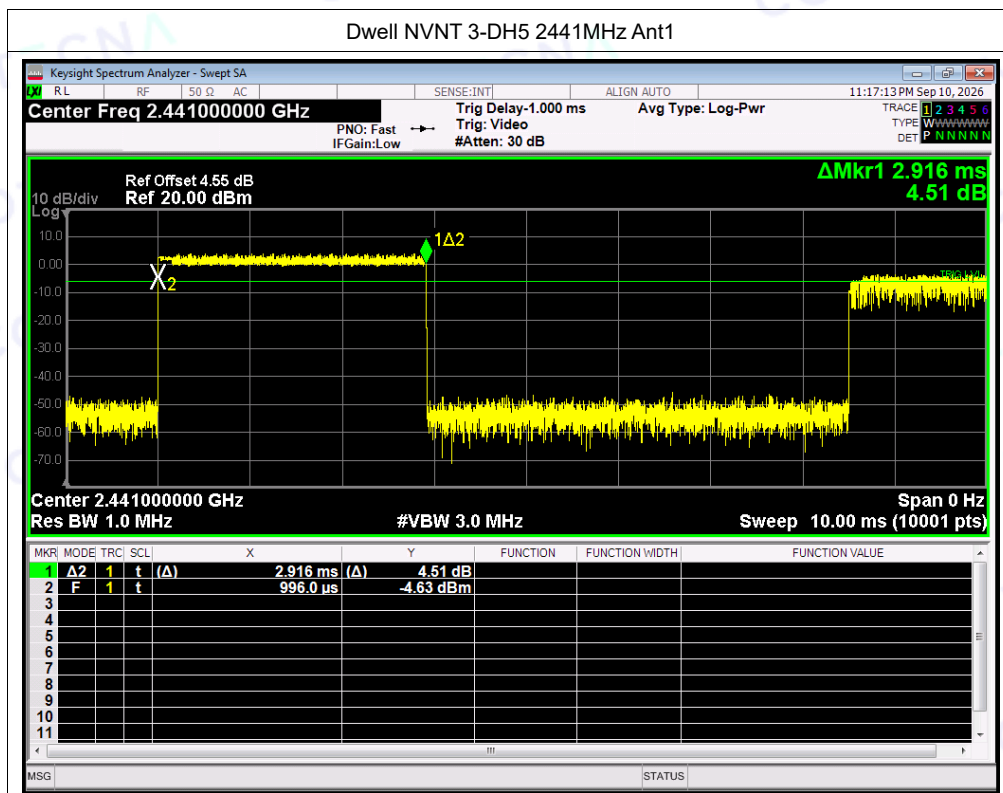


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1



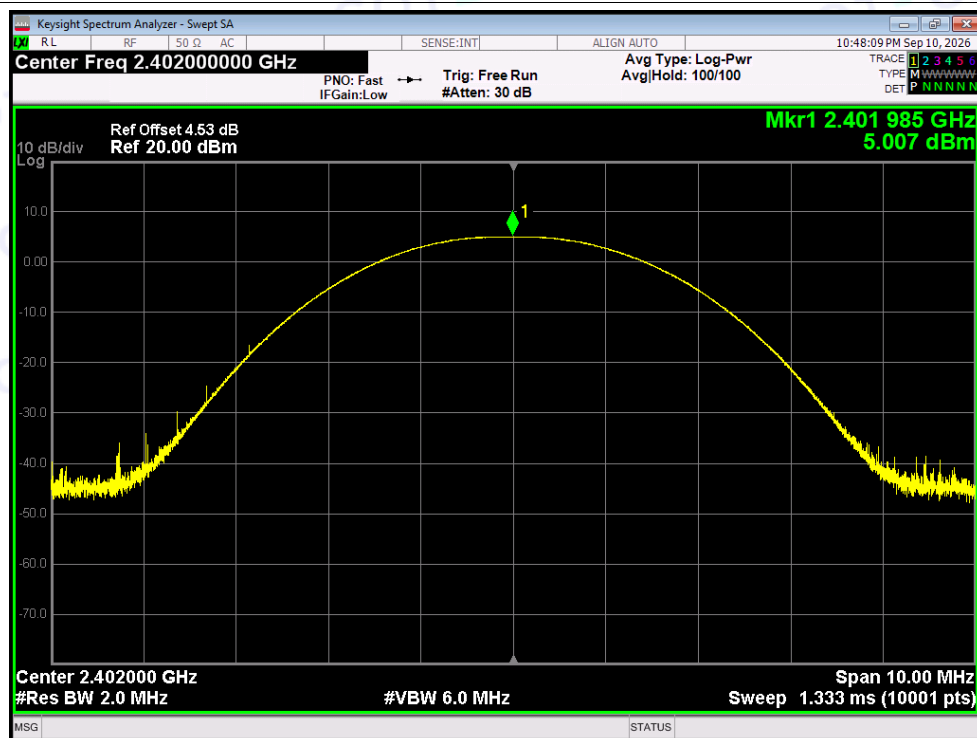


3. Maximum Conducted Output Power

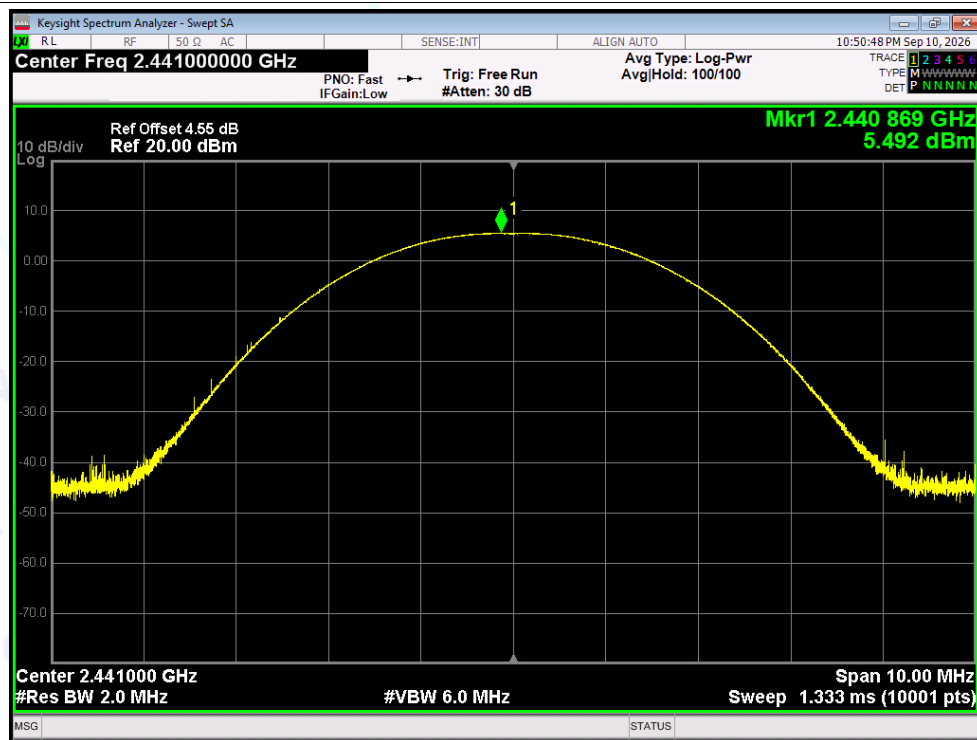
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	5.007	30	Pass
NVNT	1-DH5	2441	Ant1	5.492	30	Pass
NVNT	1-DH5	2480	Ant1	5.678	30	Pass
NVNT	2-DH5	2402	Ant1	3.463	30	Pass
NVNT	2-DH5	2441	Ant1	3.951	30	Pass
NVNT	2-DH5	2480	Ant1	4.079	30	Pass
NVNT	3-DH5	2402	Ant1	3.744	30	Pass
NVNT	3-DH5	2441	Ant1	4.208	30	Pass
NVNT	3-DH5	2480	Ant1	4.345	30	Pass

Test Graphs

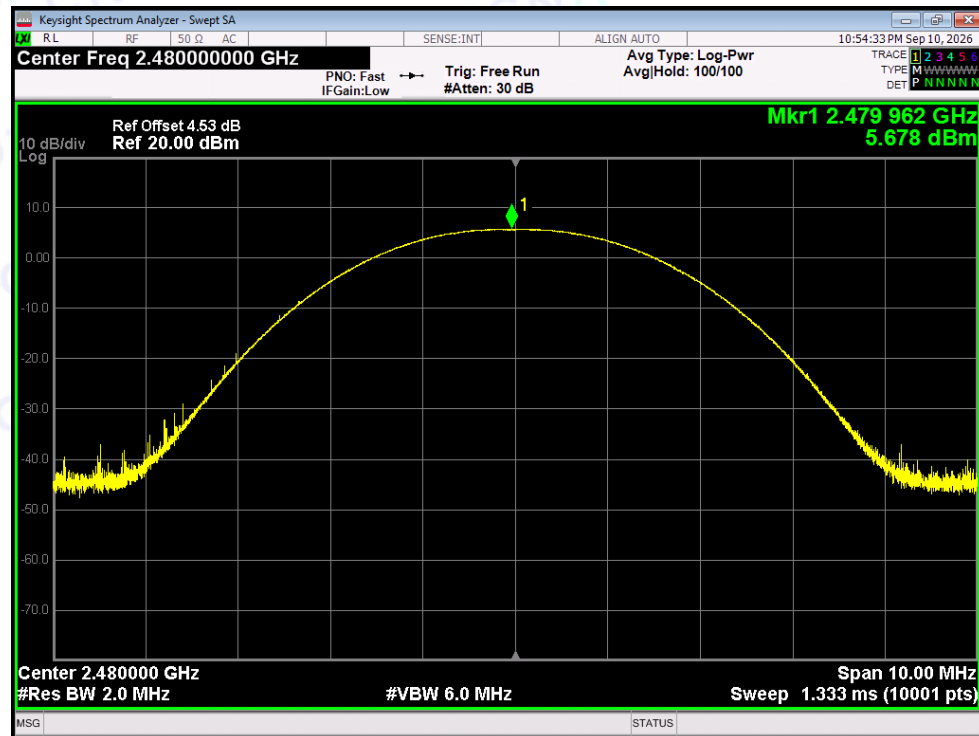
Power NVNT 1-DH5 2402MHz Ant1



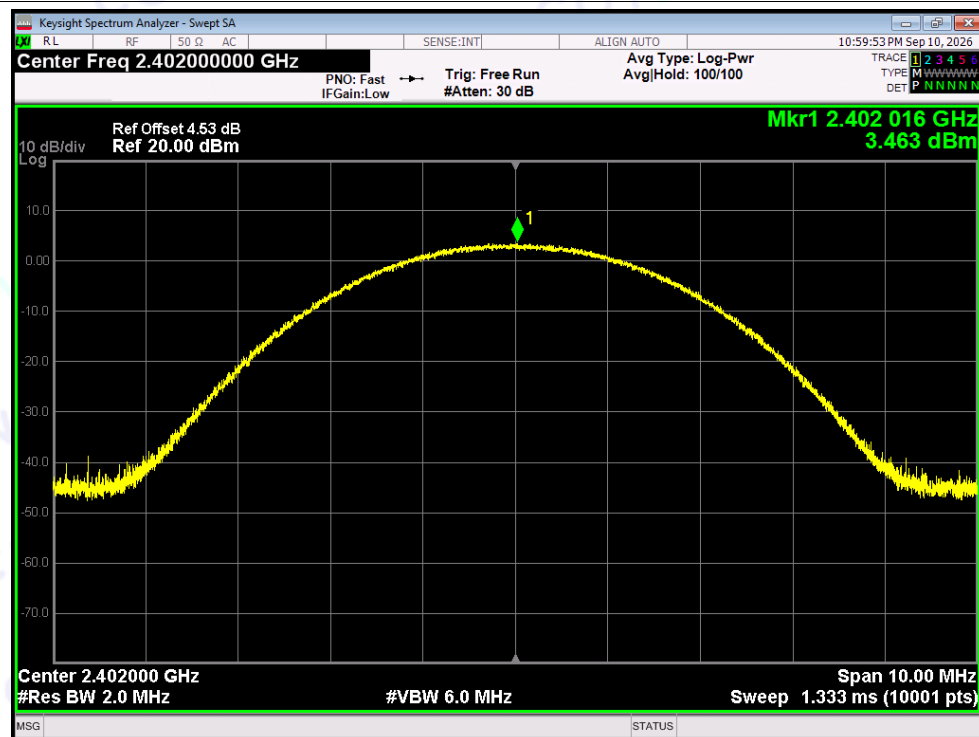
Power NVNT 1-DH5 2441MHz Ant1



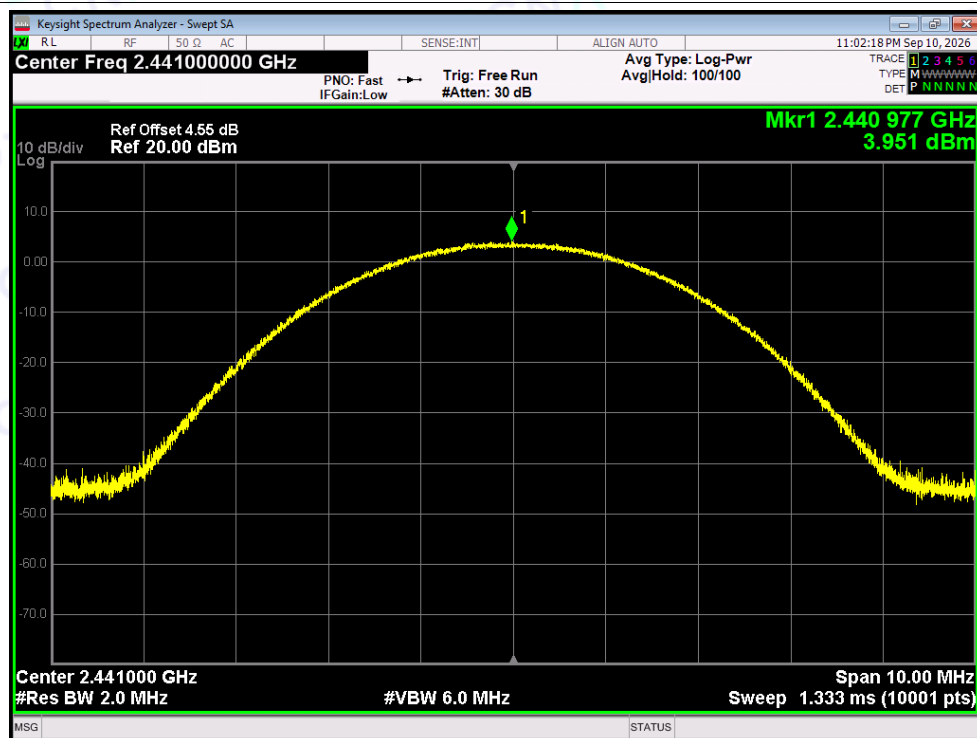
Power NVNT 1-DH5 2480MHz Ant1



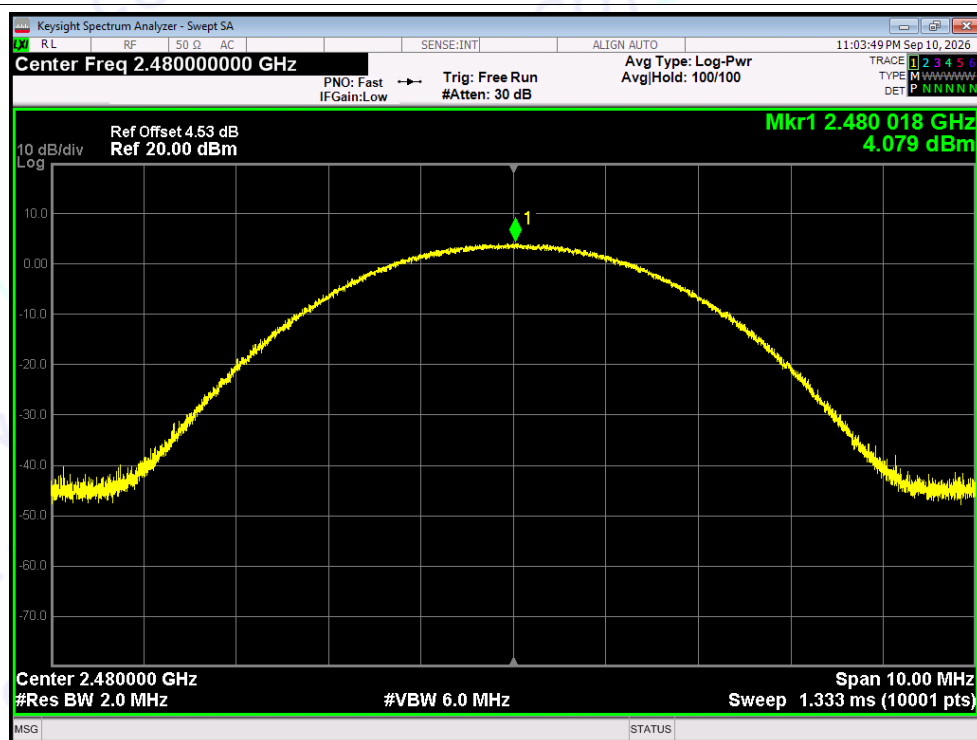
Power NVNT 2-DH5 2402MHz Ant1



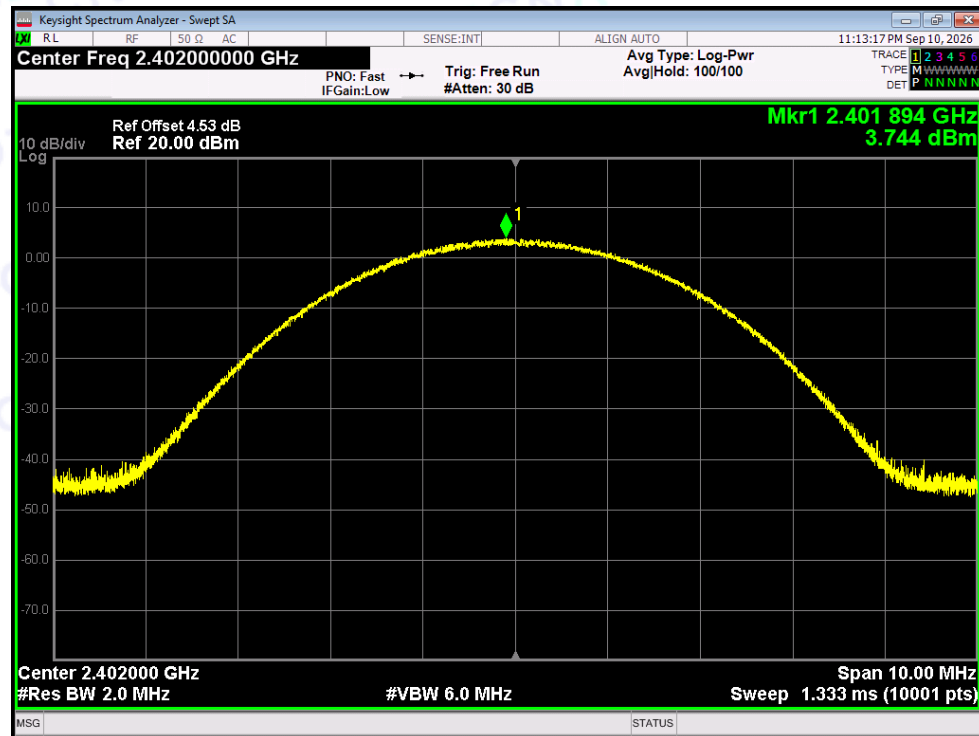
Power NVNT 2-DH5 2441MHz Ant1



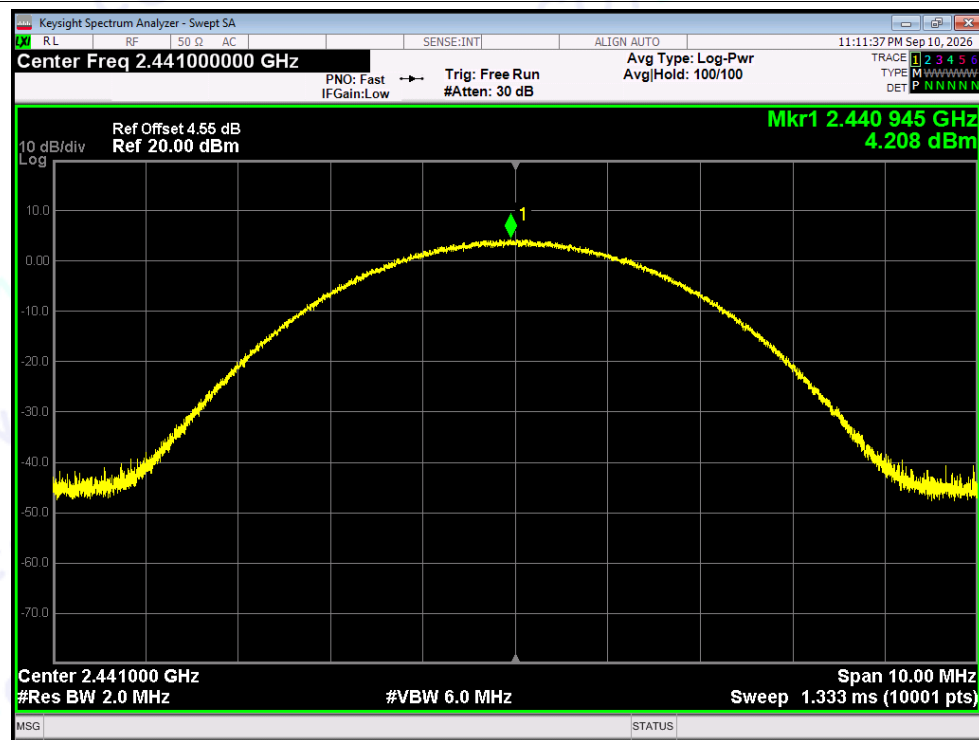
Power NVNT 2-DH5 2480MHz Ant1

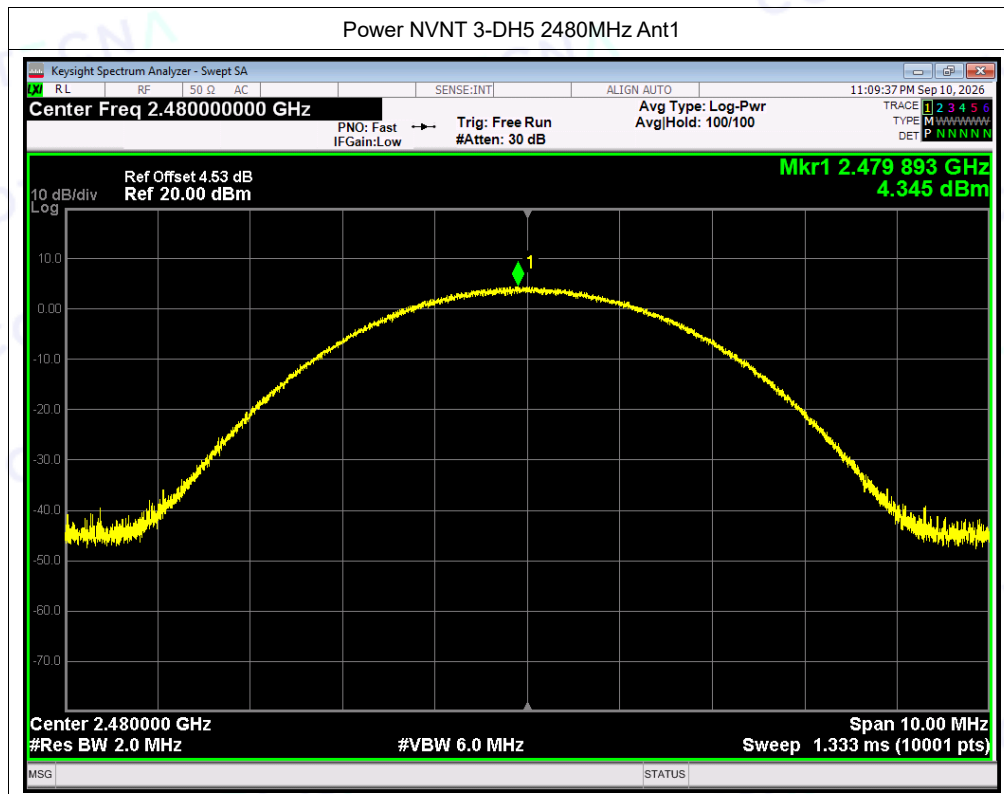


Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



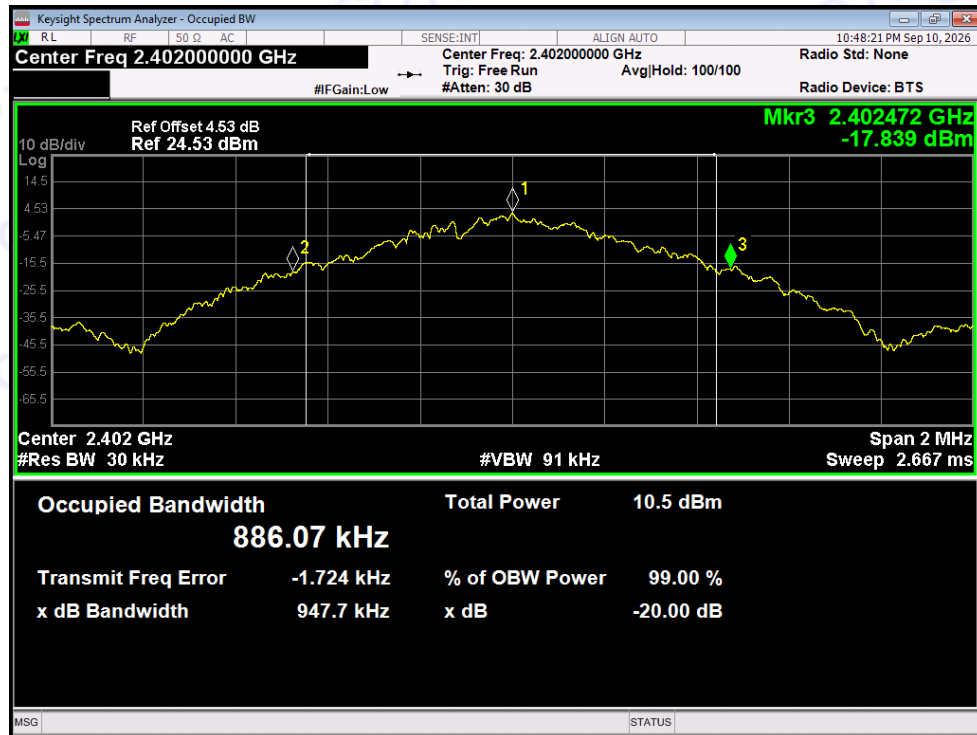


4. -20dB Bandwidth

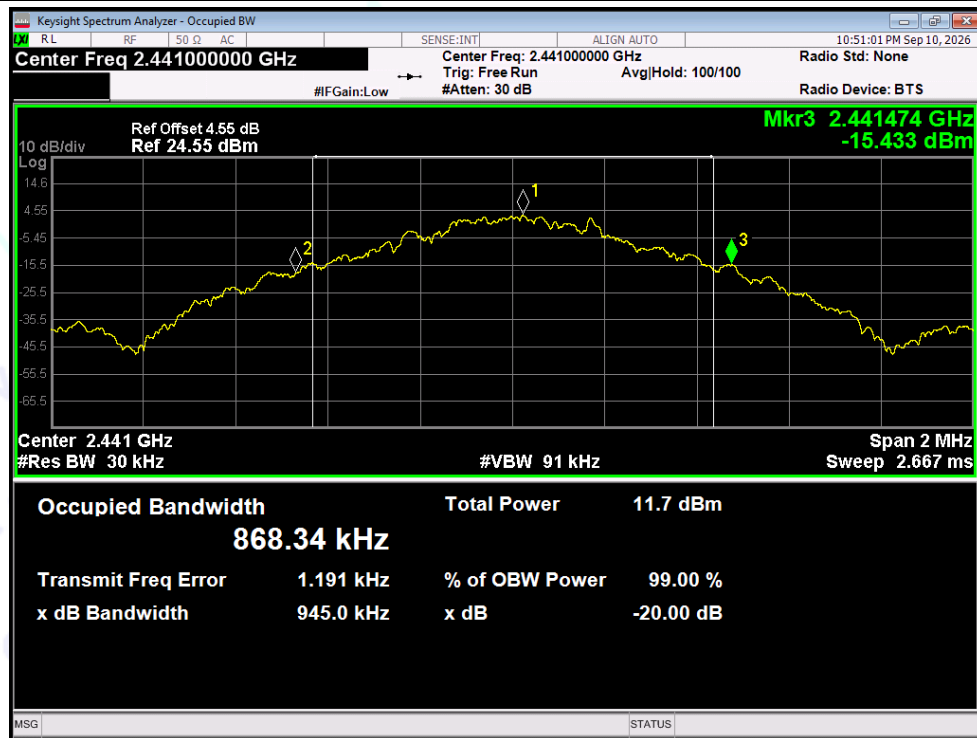
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.95	\	Pass
NVNT	1-DH5	2441	Ant1	0.94	\	Pass
NVNT	1-DH5	2480	Ant1	0.94	\	Pass
NVNT	2-DH5	2402	Ant1	1.32	\	Pass
NVNT	2-DH5	2441	Ant1	1.32	\	Pass
NVNT	2-DH5	2480	Ant1	1.26	\	Pass
NVNT	3-DH5	2402	Ant1	1.29	\	Pass
NVNT	3-DH5	2441	Ant1	1.31	\	Pass
NVNT	3-DH5	2480	Ant1	1.26	\	Pass

Test Graphs

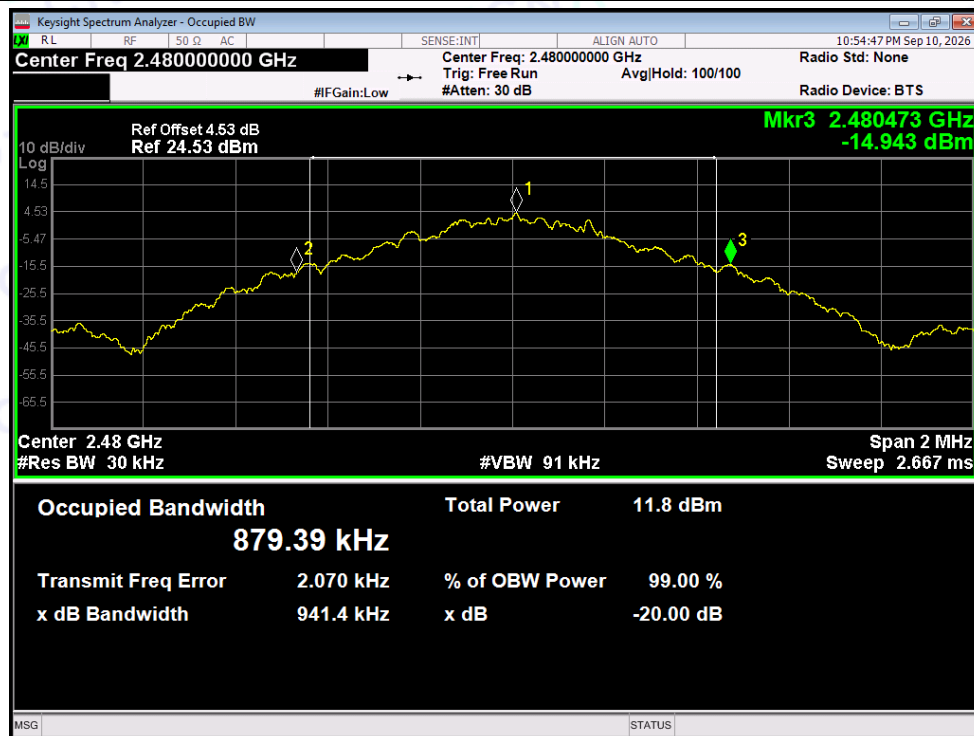
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



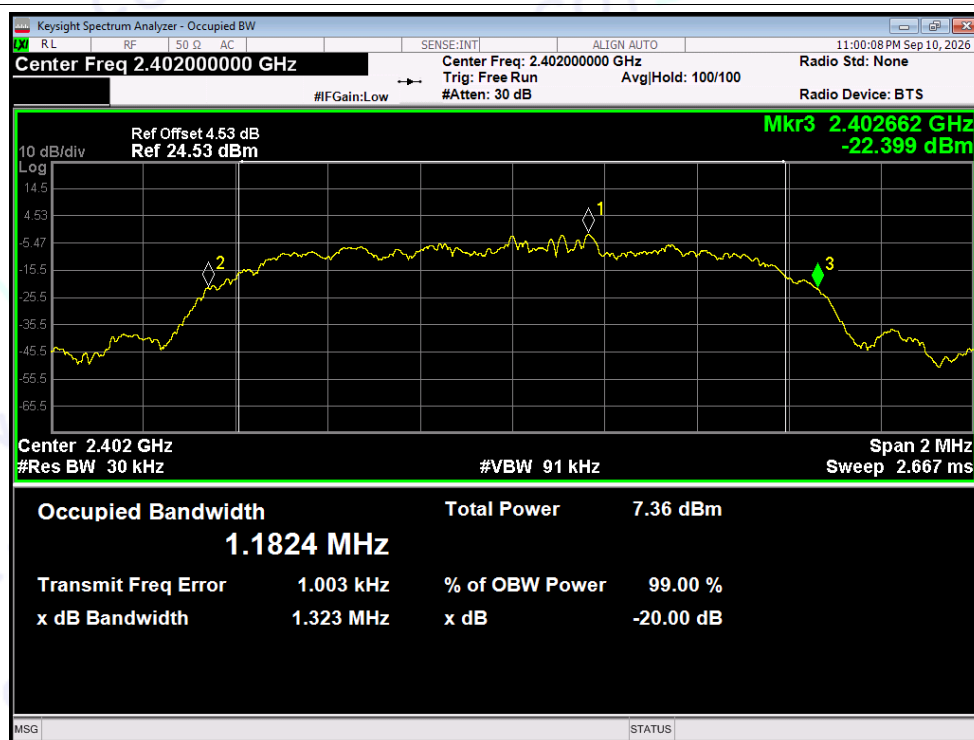
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



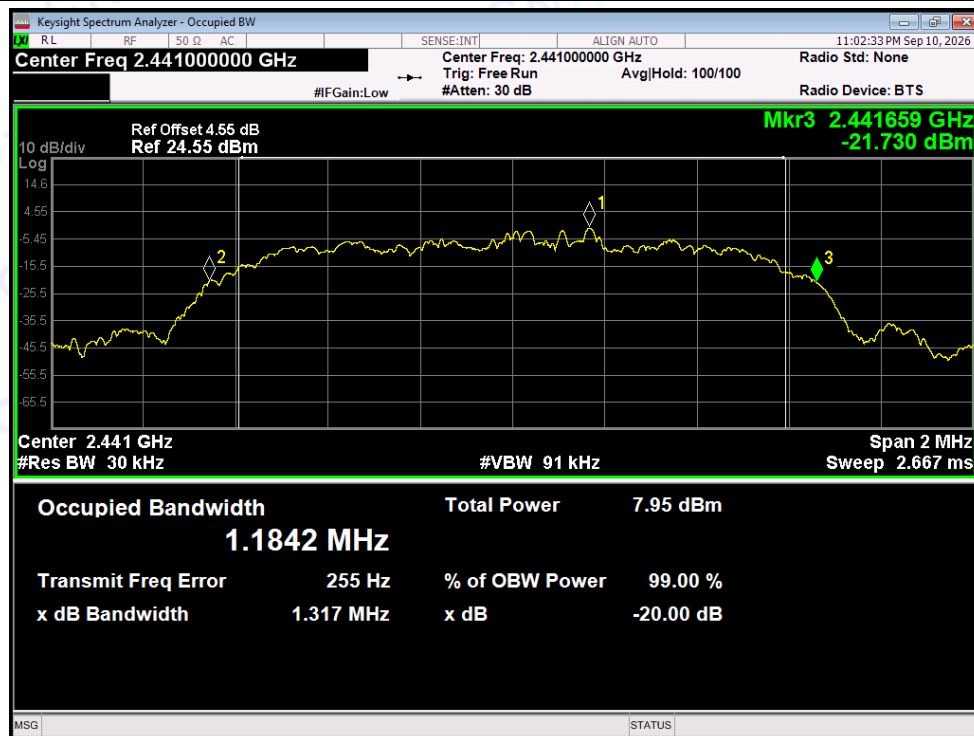
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



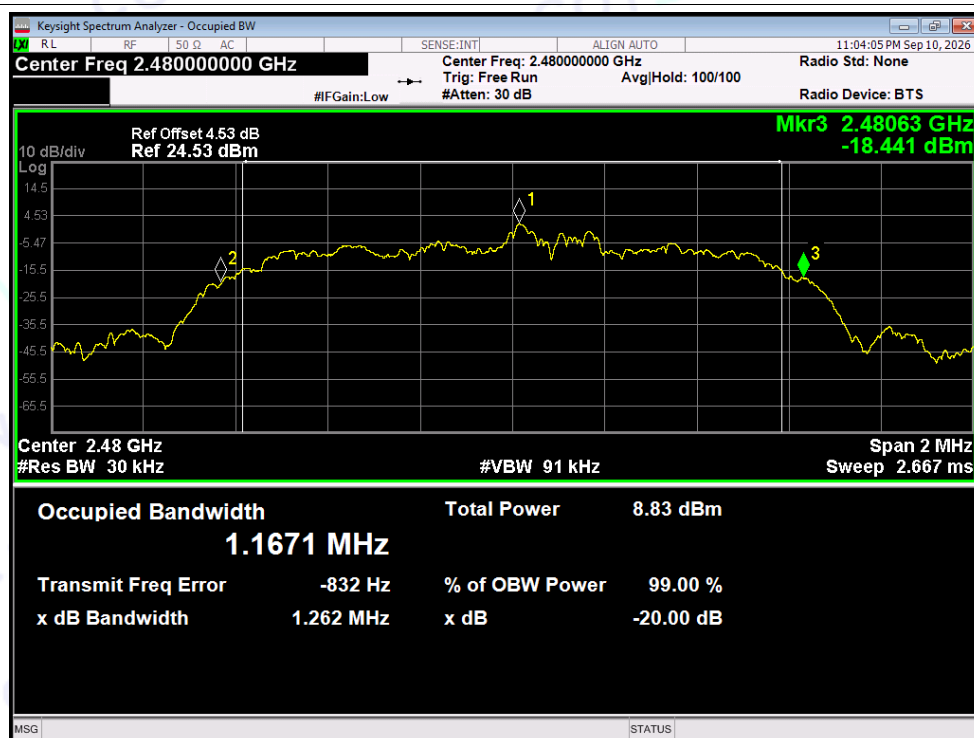
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



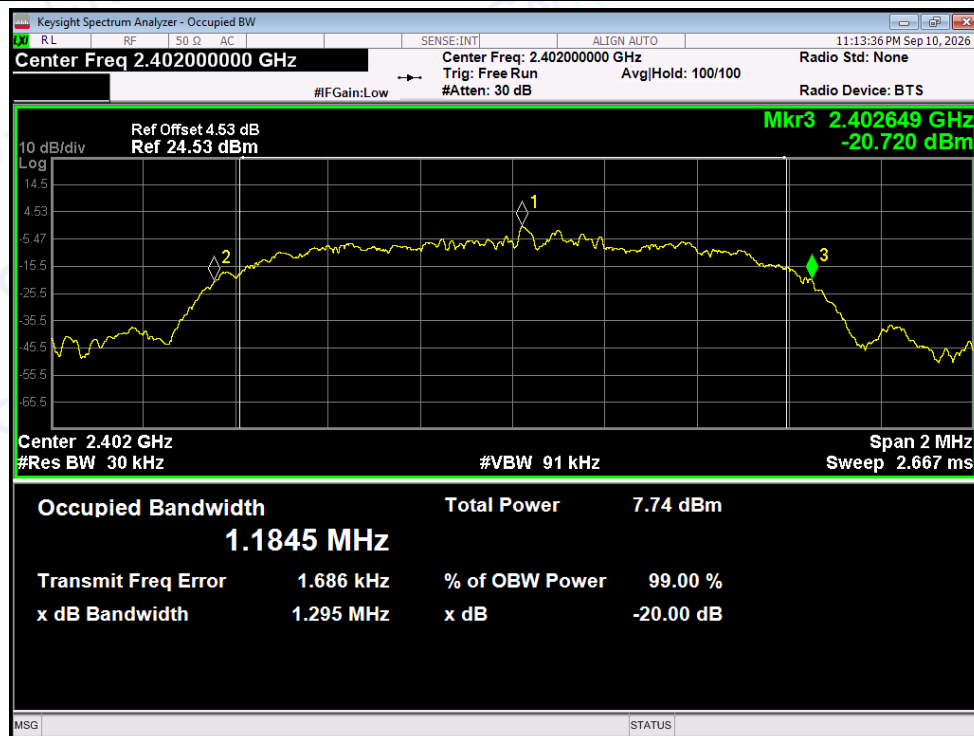
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



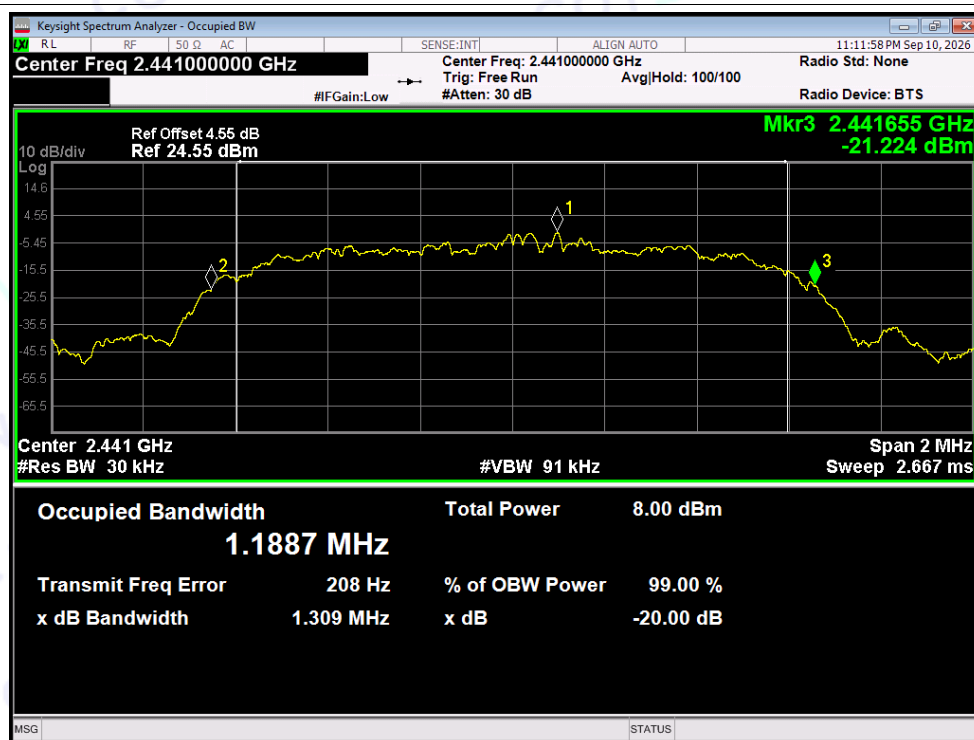
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

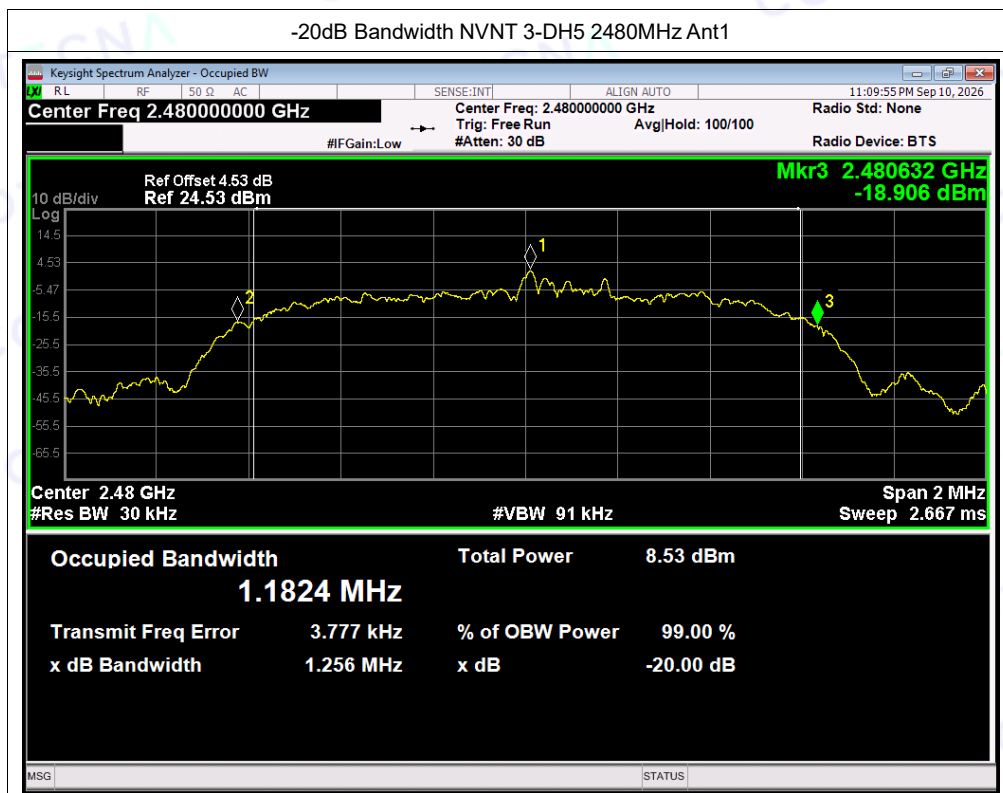


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



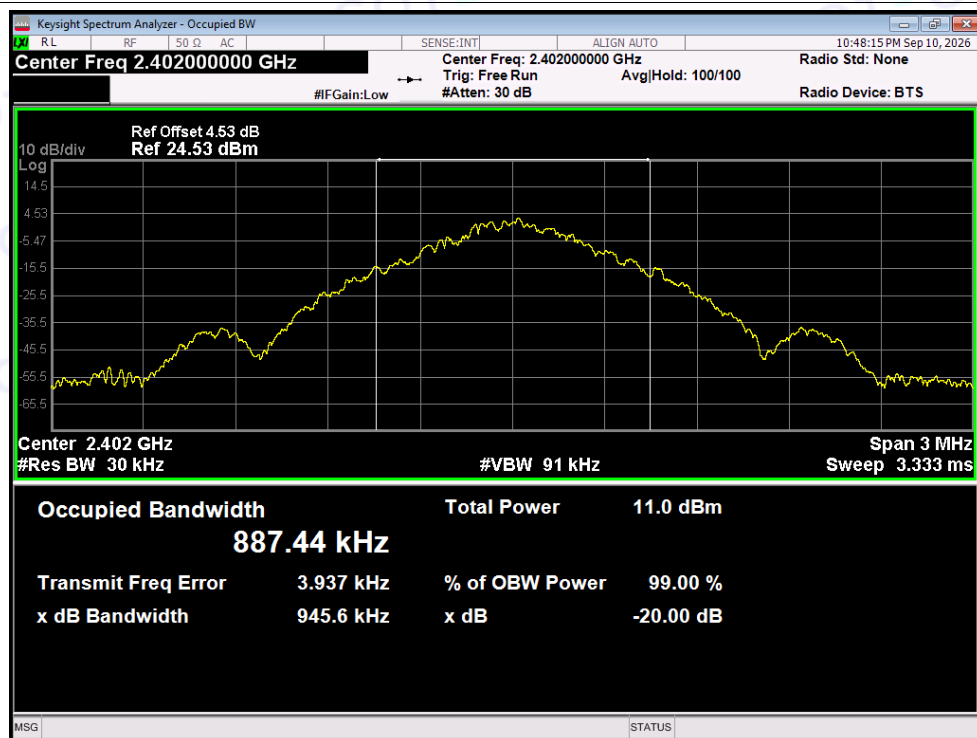


5. Occupied Channel Bandwidth

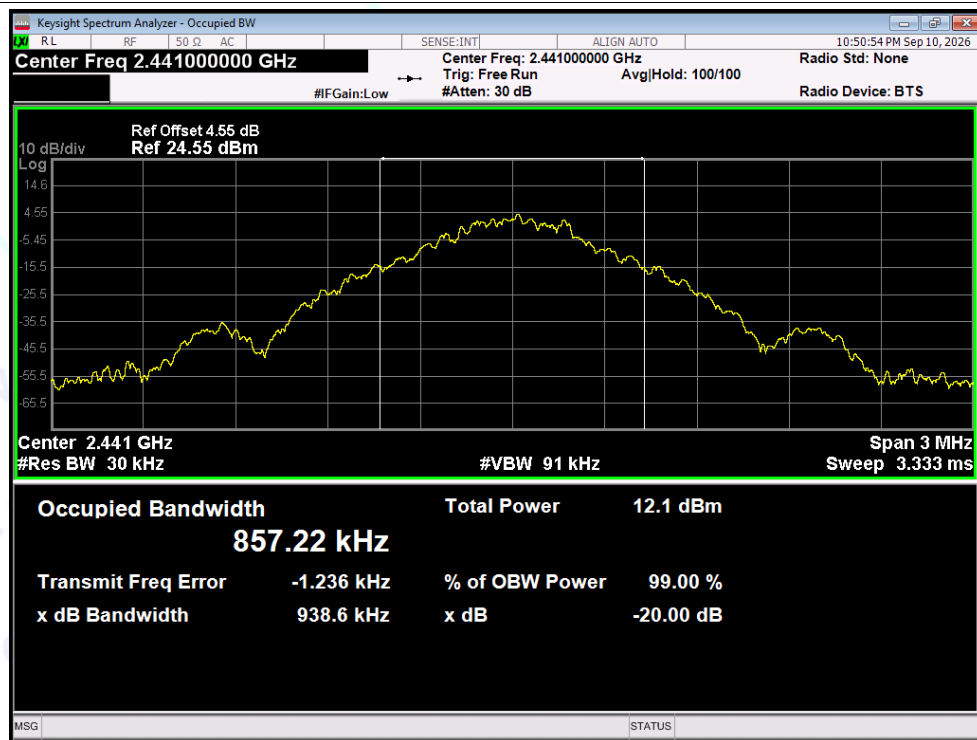
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH5	2402	Ant1	0.887
NVNT	1-DH5	2441	Ant1	0.857
NVNT	1-DH5	2480	Ant1	0.872
NVNT	2-DH5	2402	Ant1	1.18
NVNT	2-DH5	2441	Ant1	1.17
NVNT	2-DH5	2480	Ant1	1.178
NVNT	3-DH5	2402	Ant1	1.177
NVNT	3-DH5	2441	Ant1	1.181
NVNT	3-DH5	2480	Ant1	1.166

Test Graphs

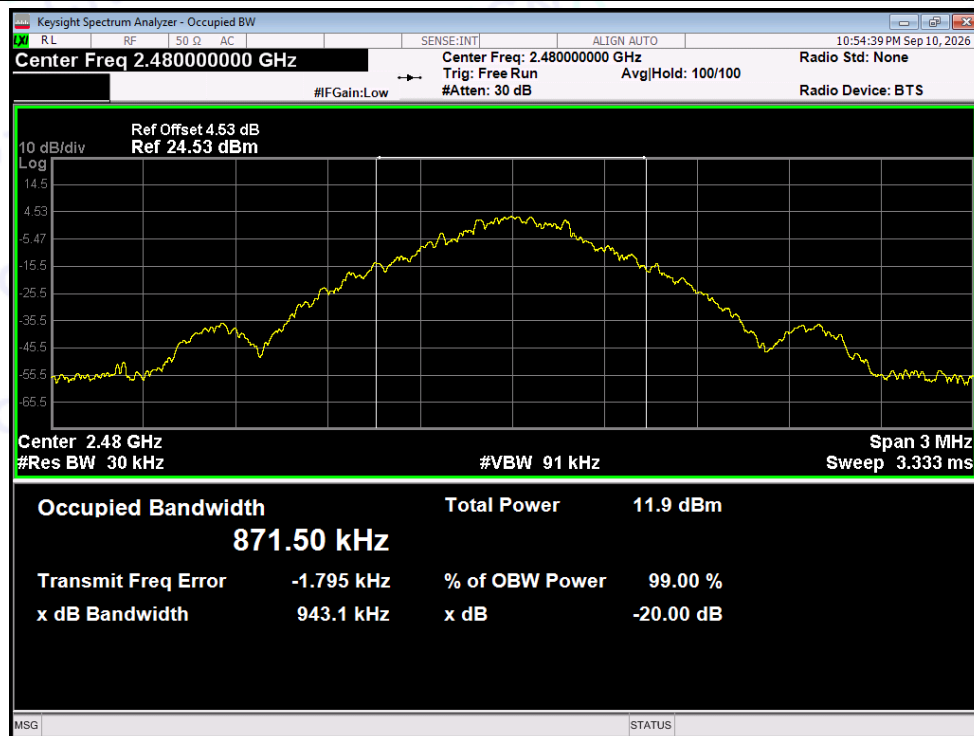
OBW NVNT 1-DH5 2402MHz Ant1



OBW NVNT 1-DH5 2441MHz Ant1



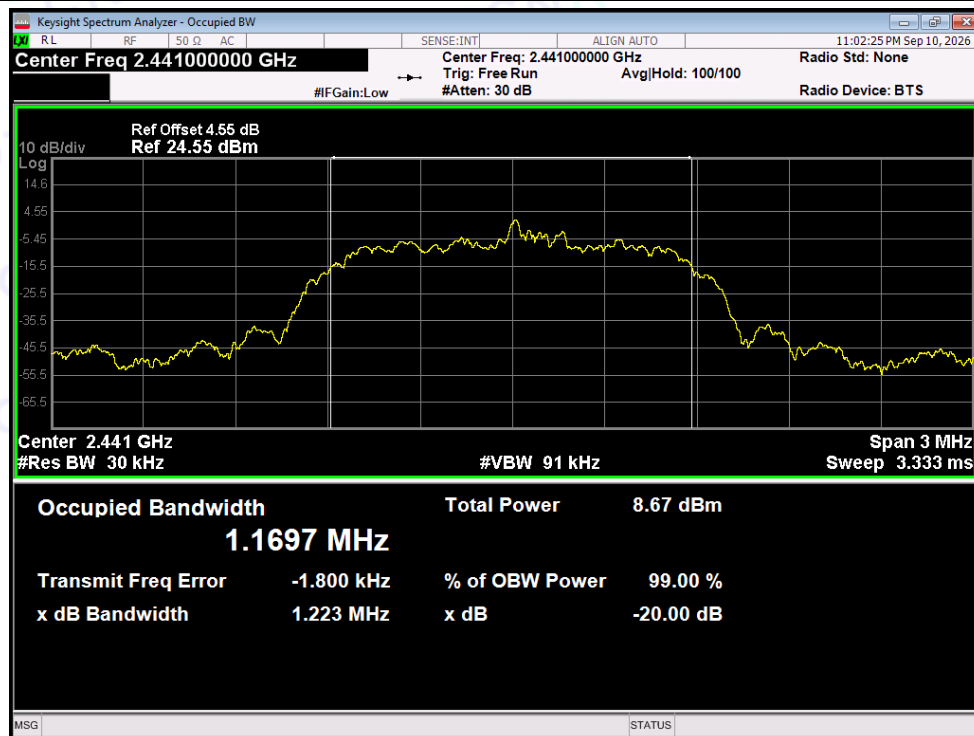
OBW NVNT 1-DH5 2480MHz Ant1



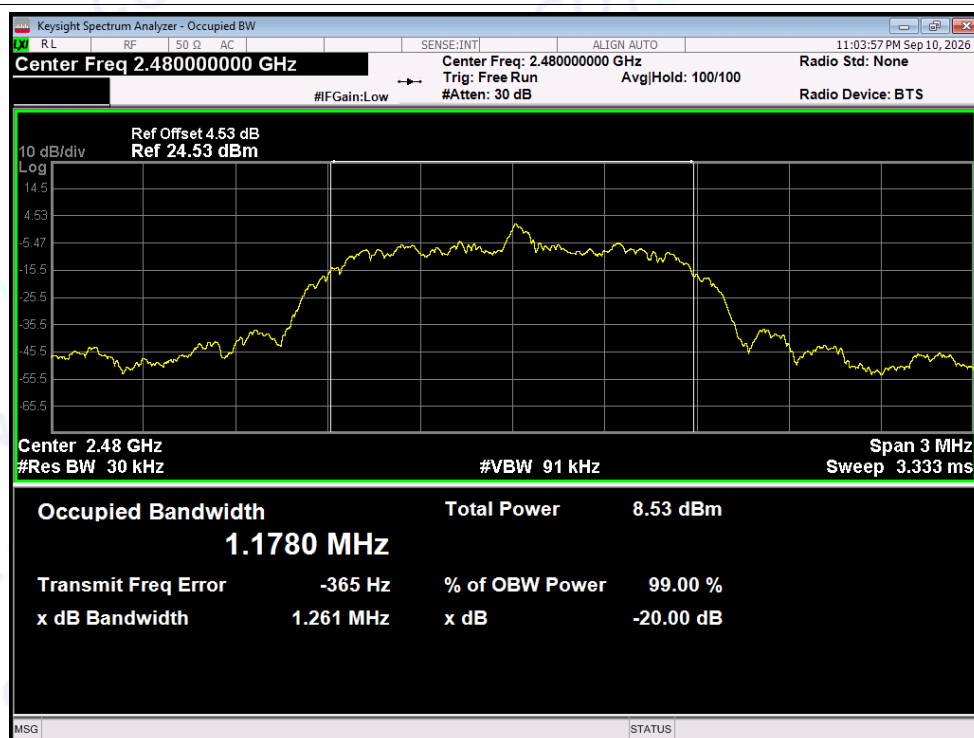
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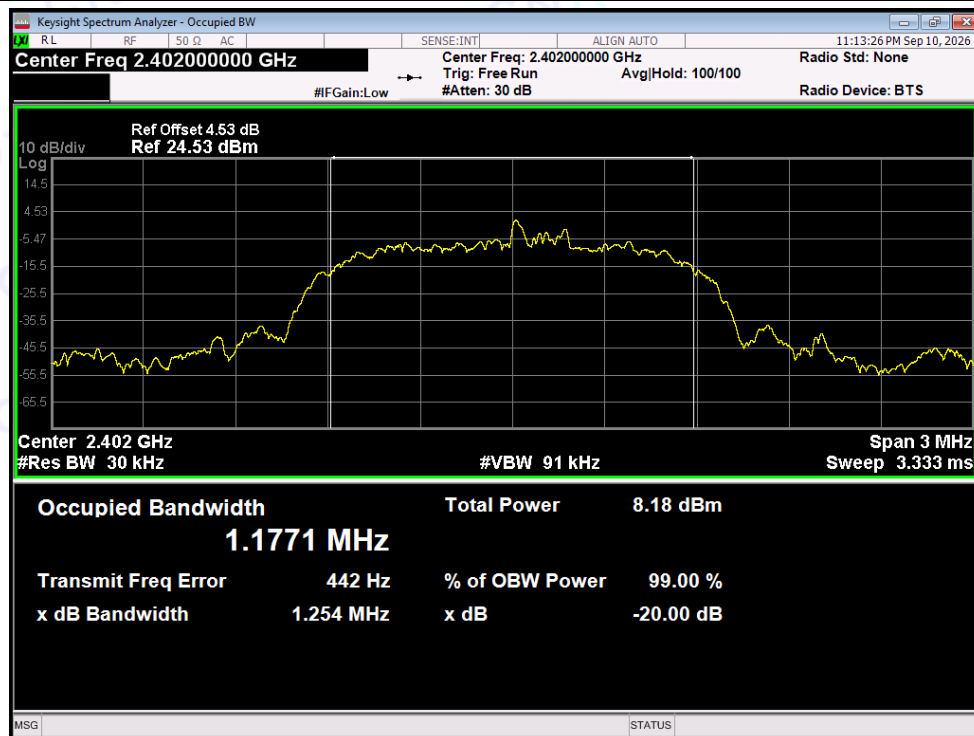
OBW NVNT 2-DH5 2441MHz Ant1



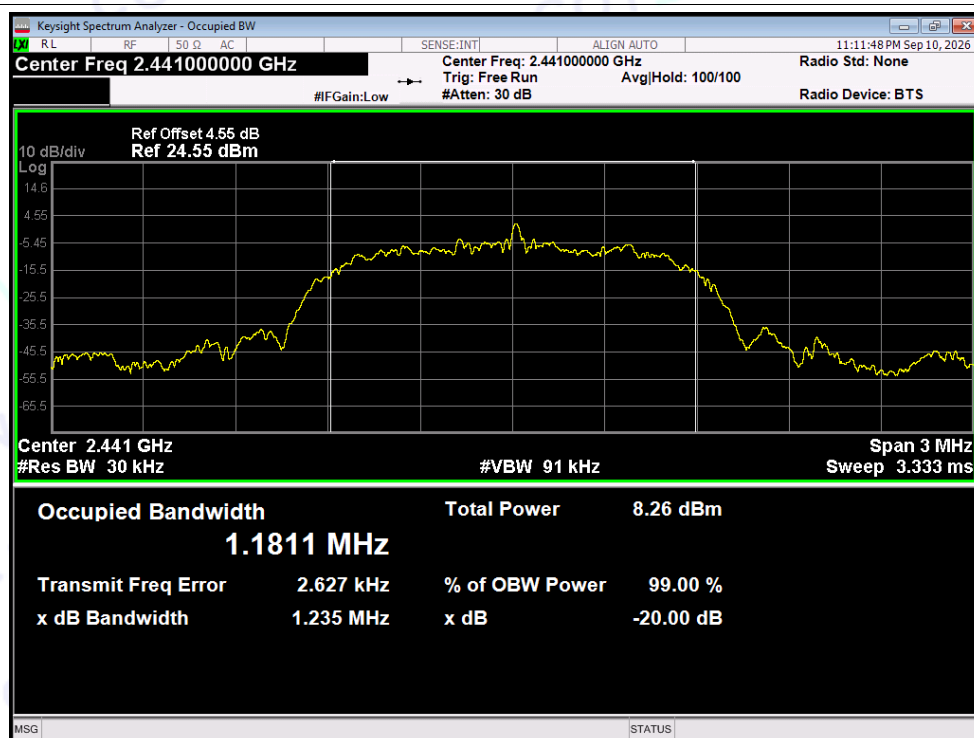
OBW NVNT 2-DH5 2480MHz Ant1

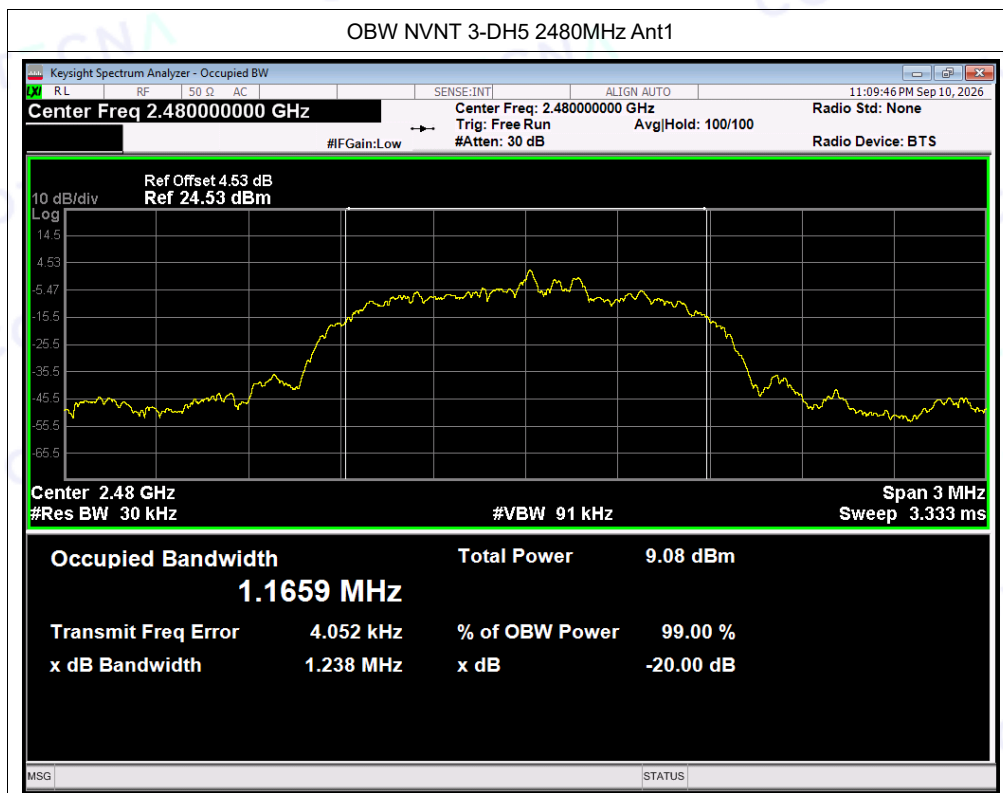


OBW NVNT 3-DH5 2402MHz Ant1



OBW NVNT 3-DH5 2441MHz Ant1



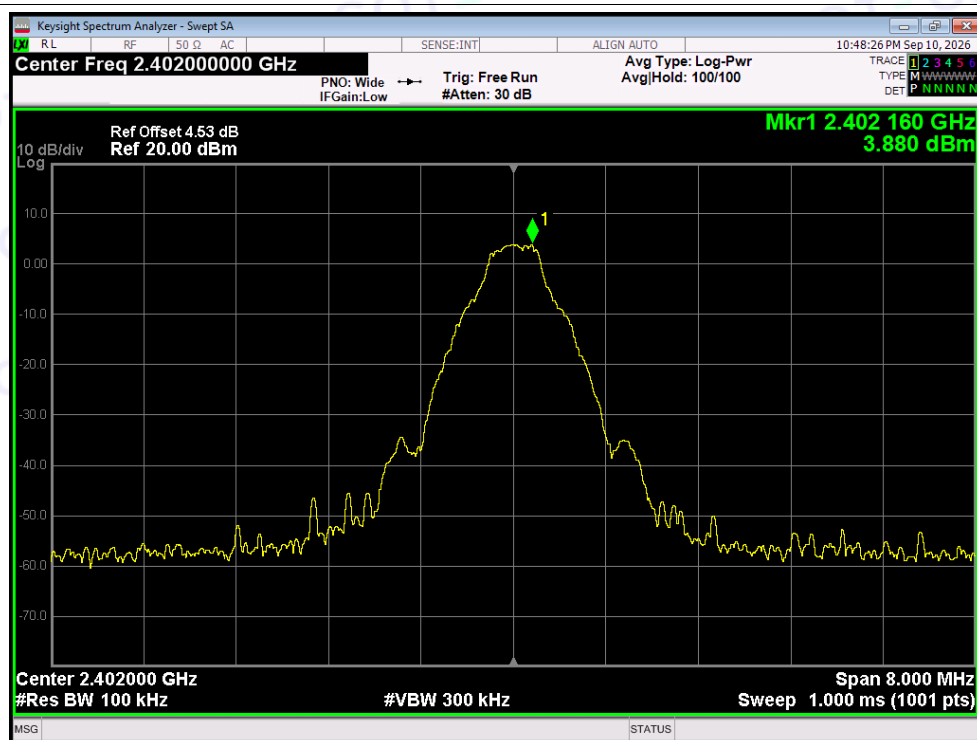


6. Band Edge

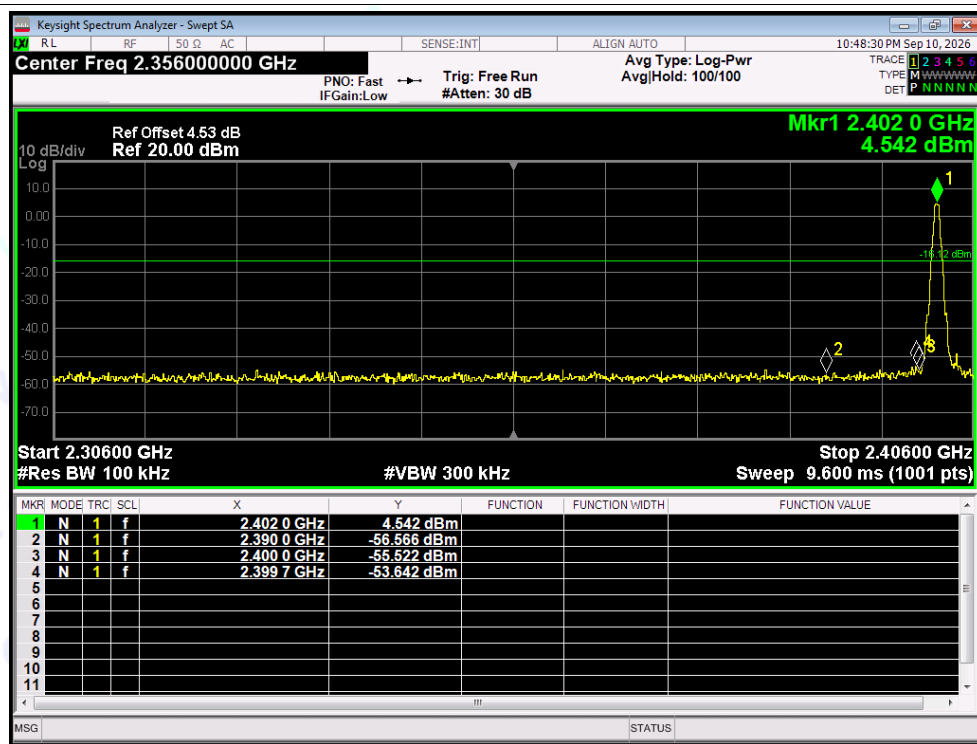
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-57.52	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-59.94	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-55.62	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-57.19	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-55.29	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-54.61	-20	Pass

Test Graphs

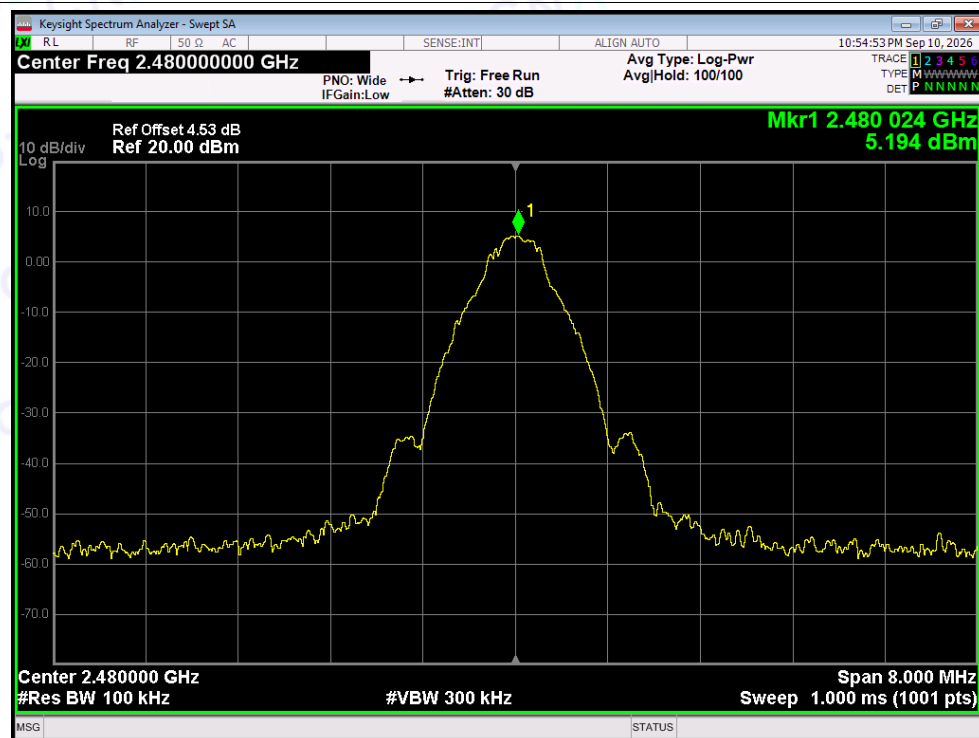
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



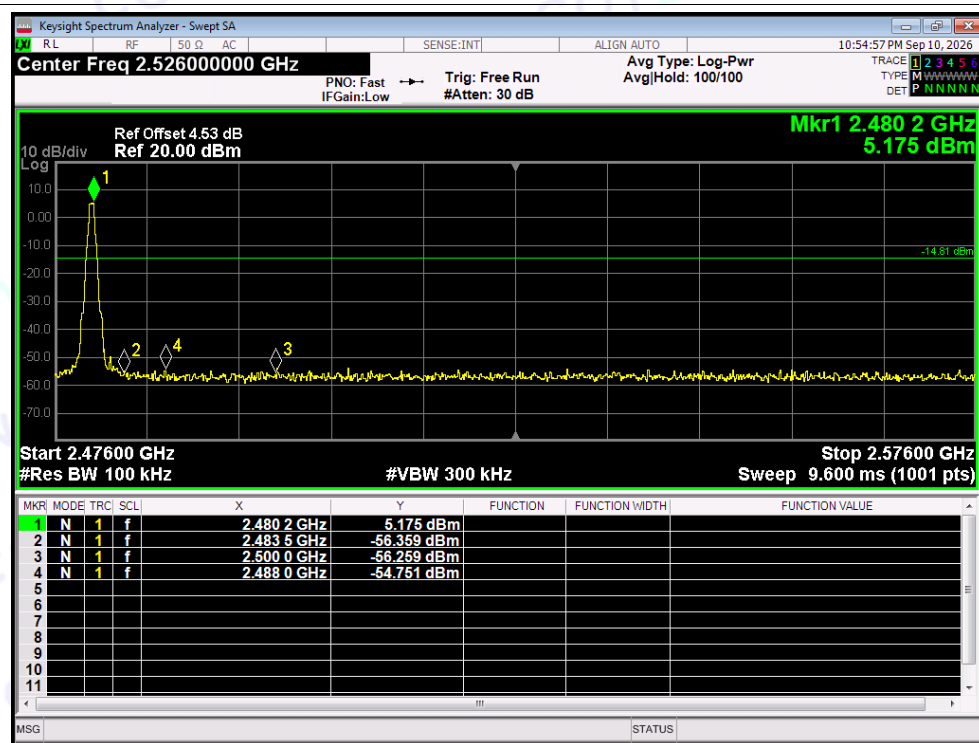
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



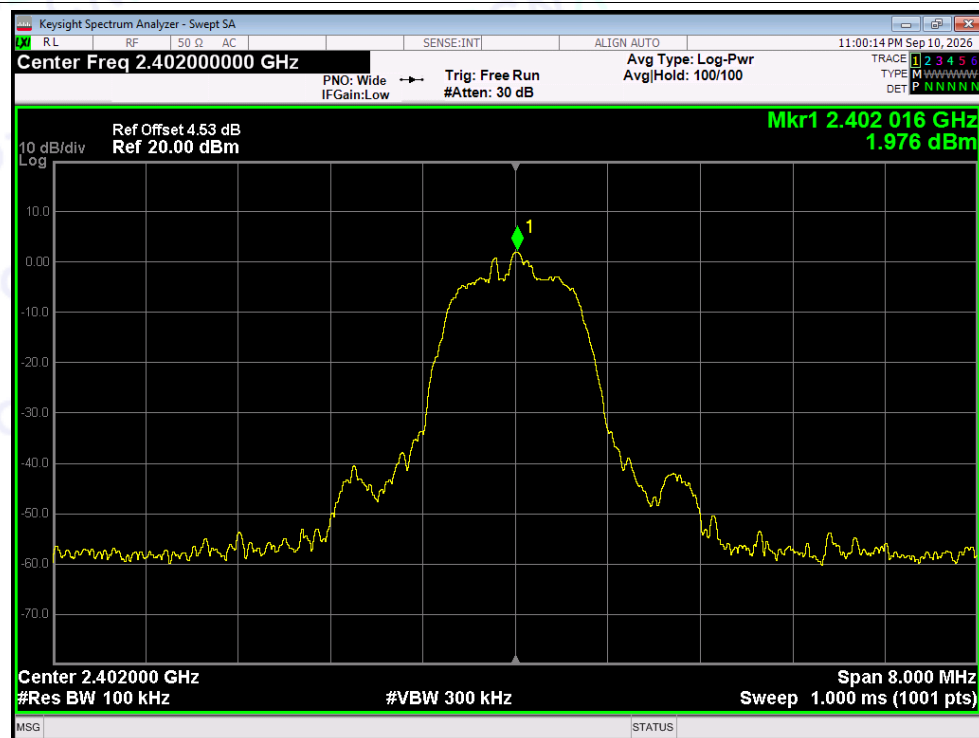
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



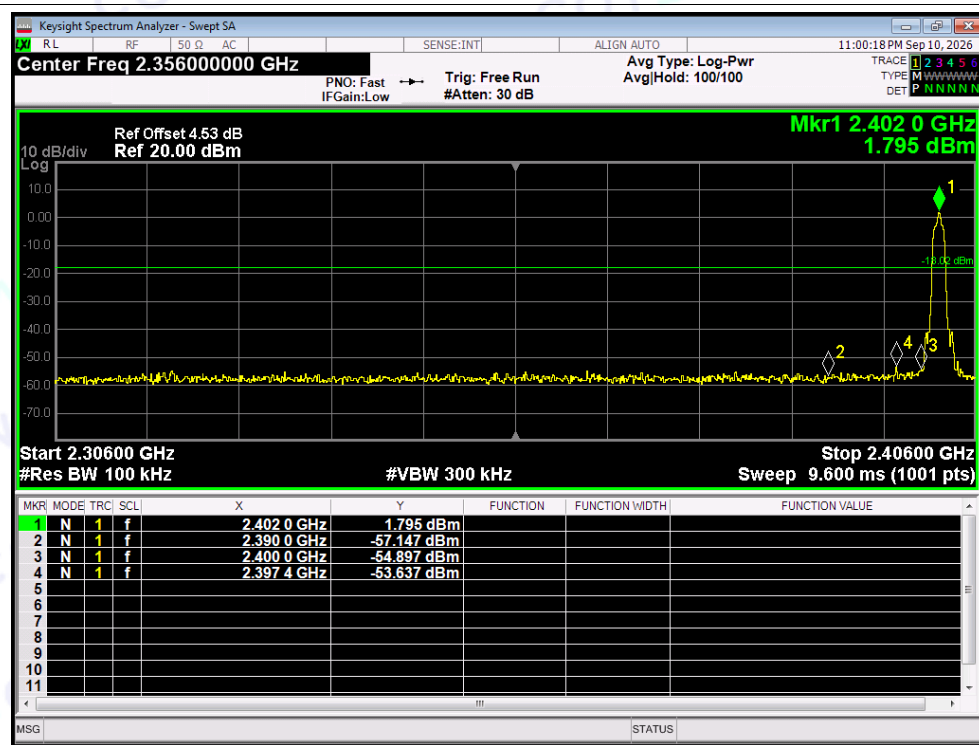
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



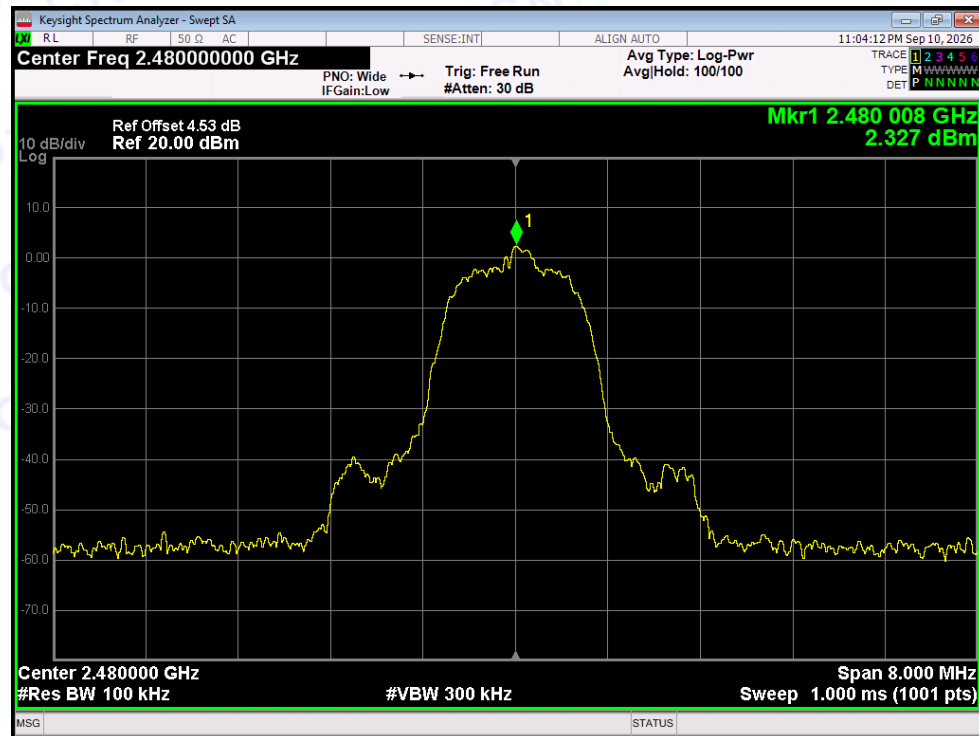
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



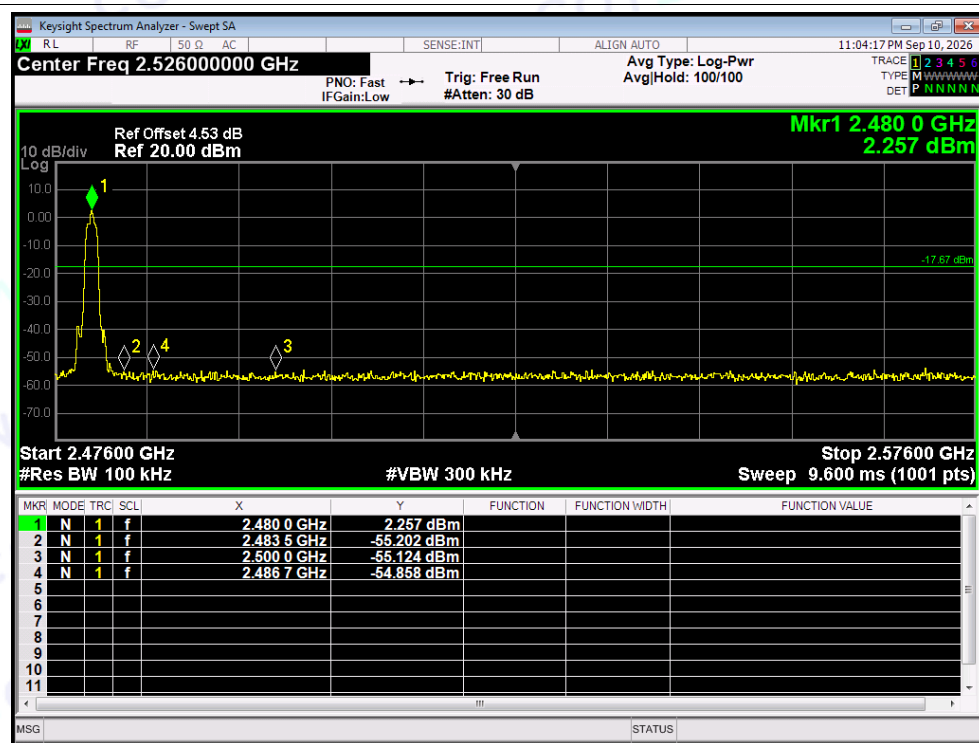
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



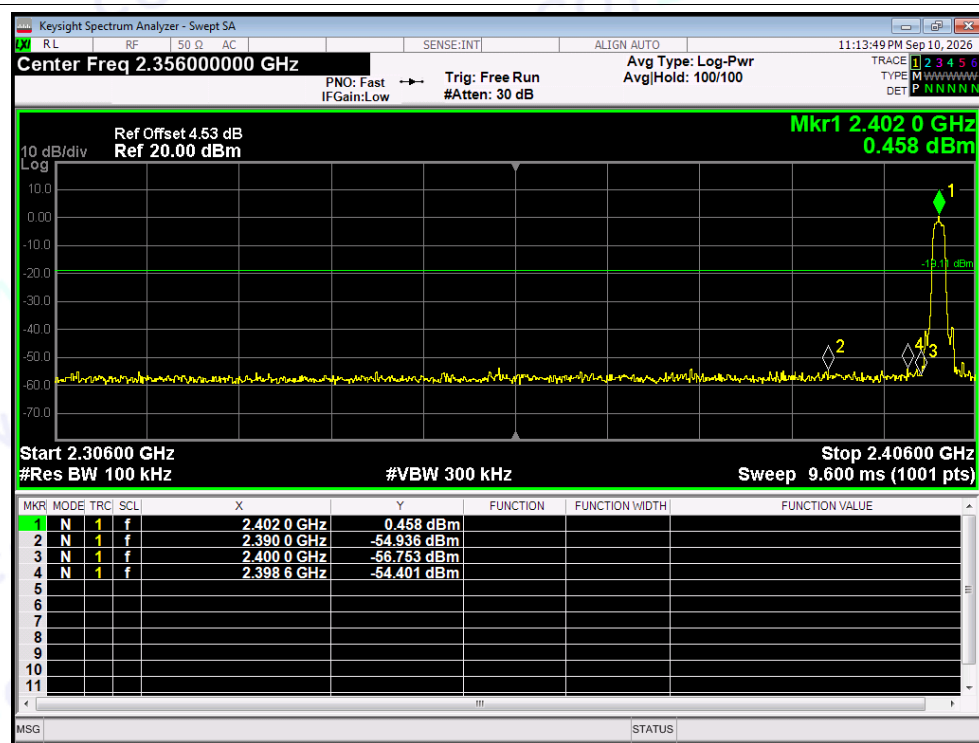
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



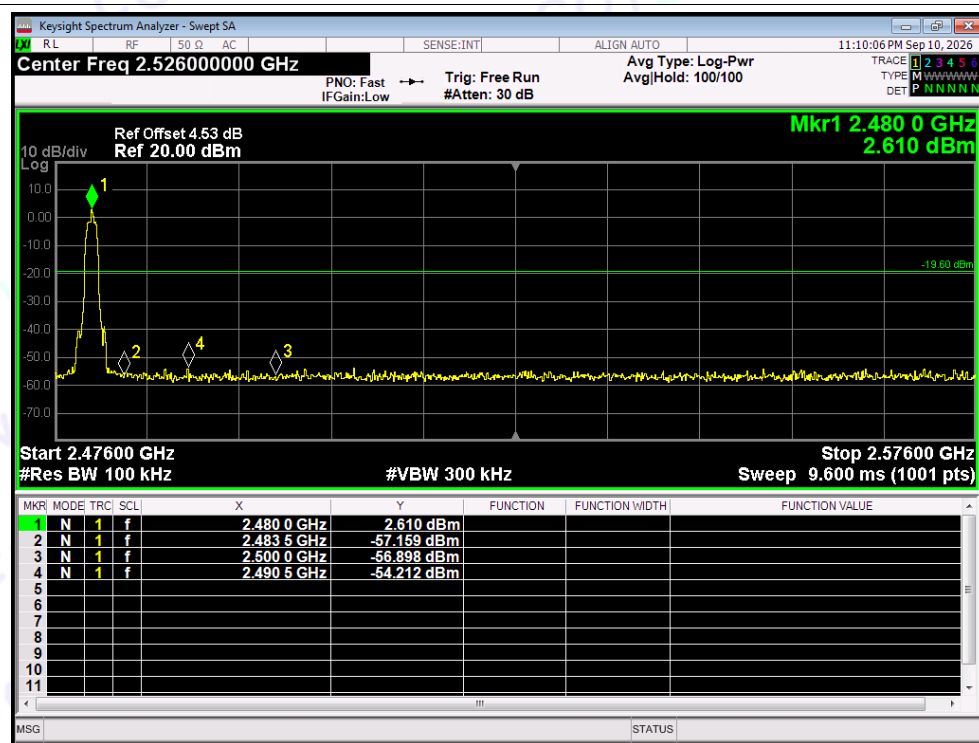
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission

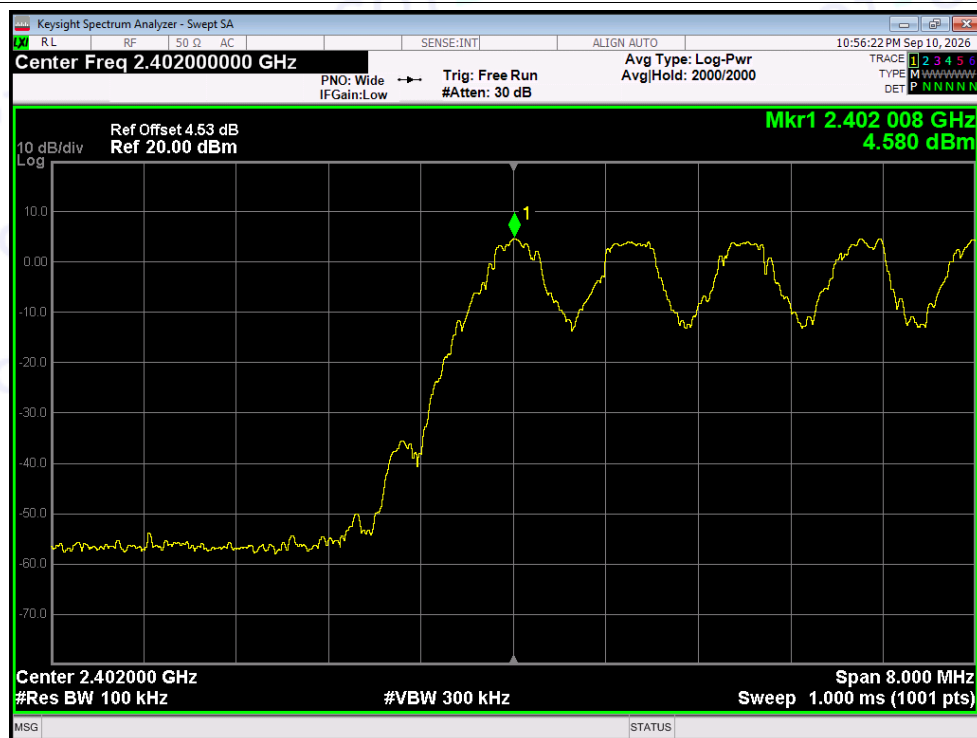


7. Band Edge(Hopping)

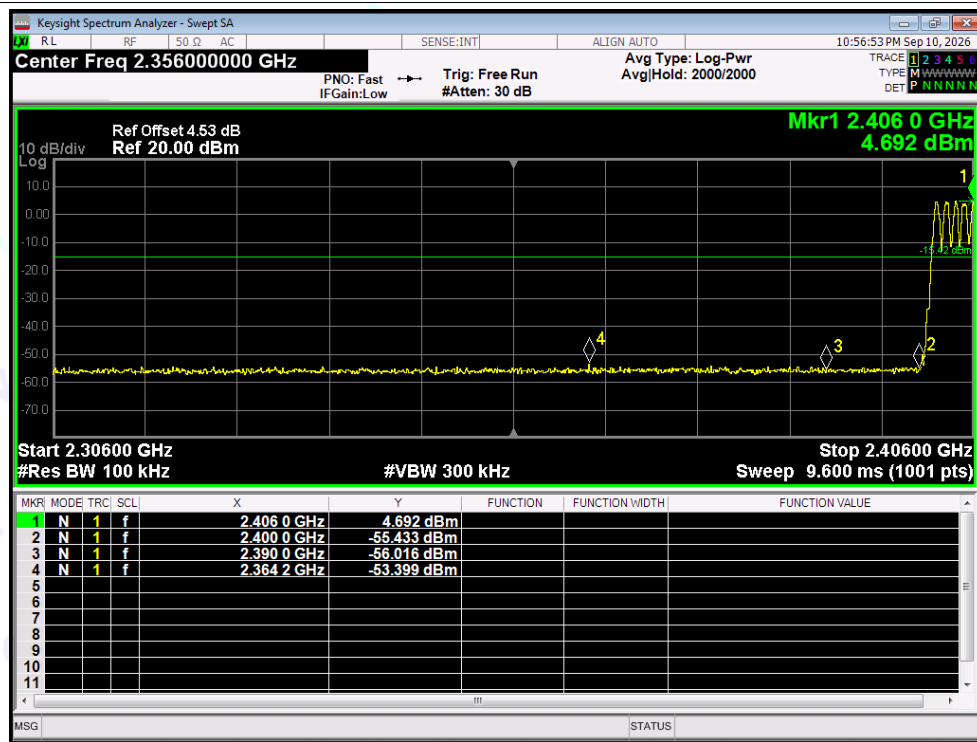
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-57.98	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-58.58	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-54.51	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-56.03	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-55.88	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-55.82	-20	Pass

Test Graphs

Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



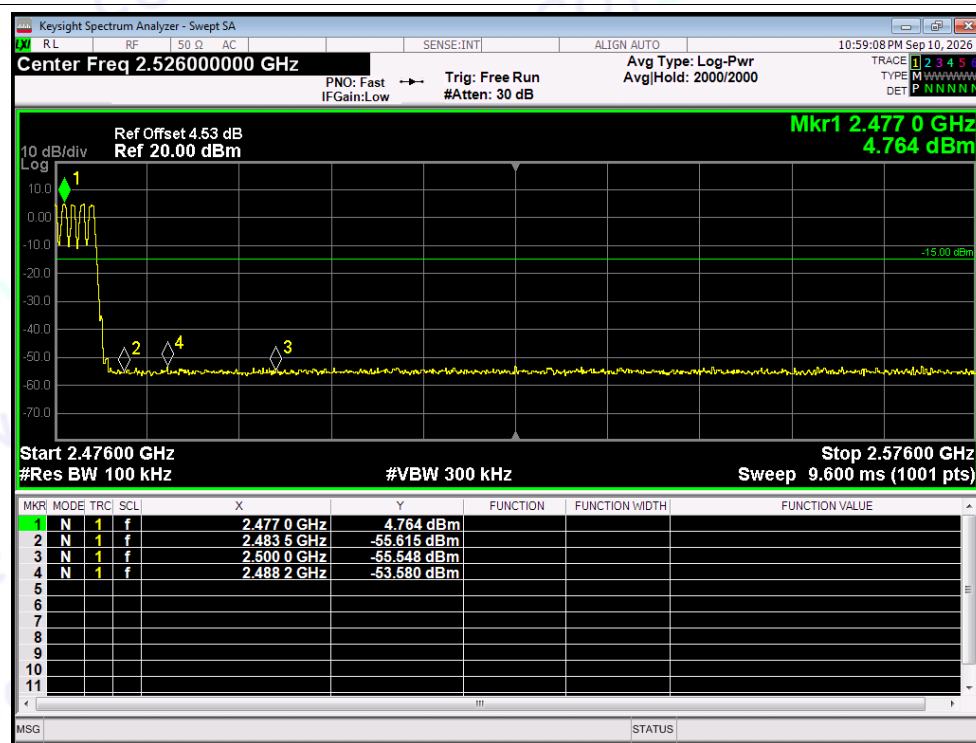
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



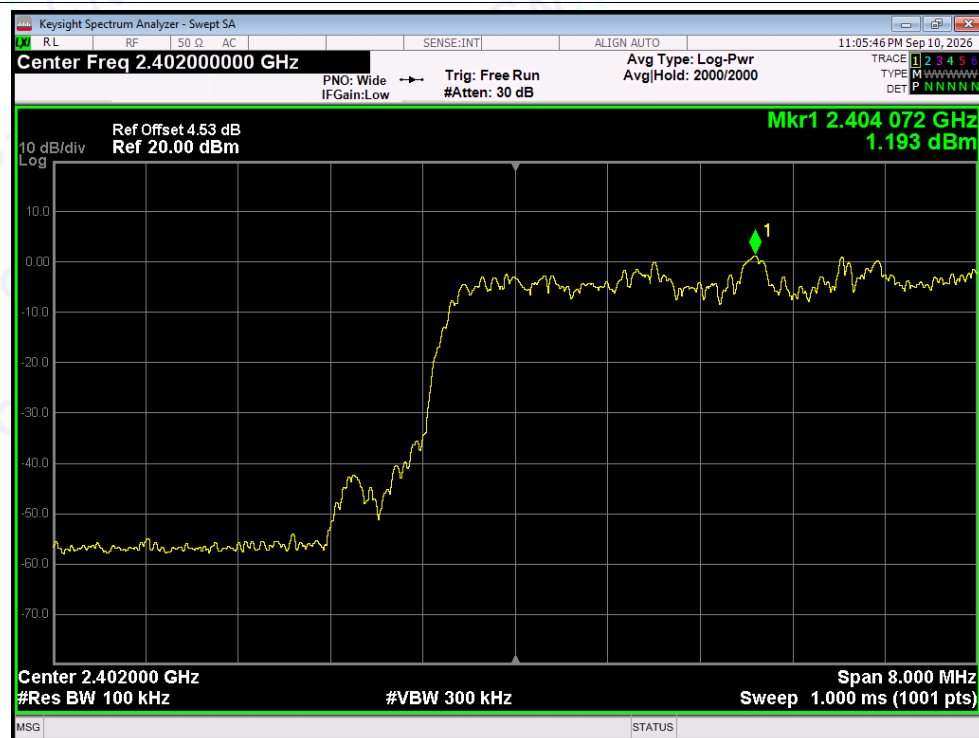
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



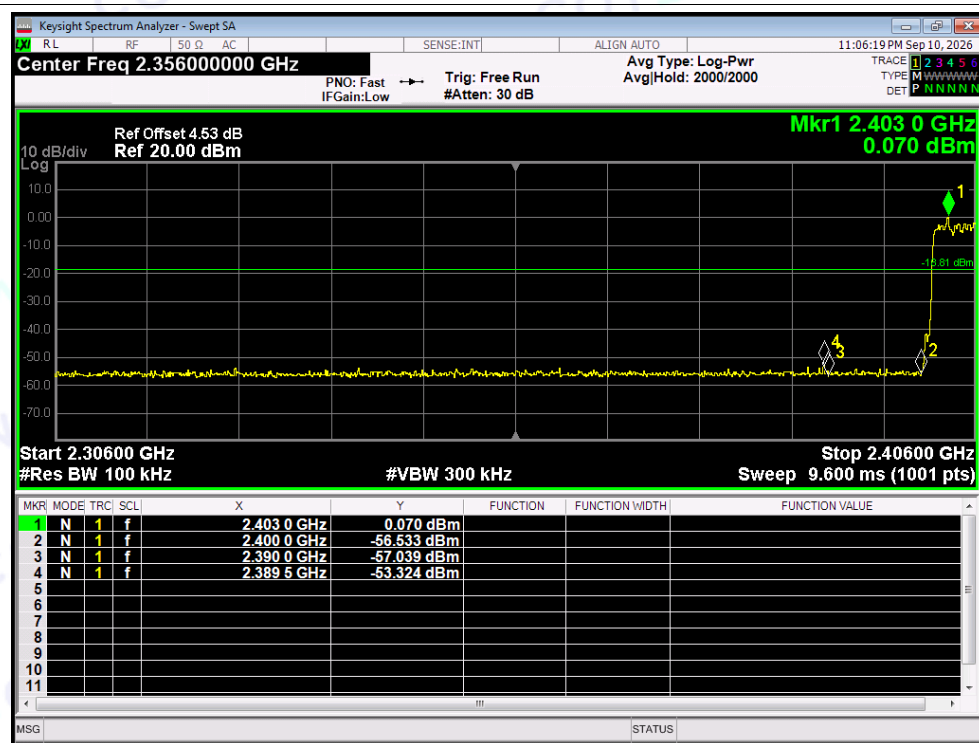
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



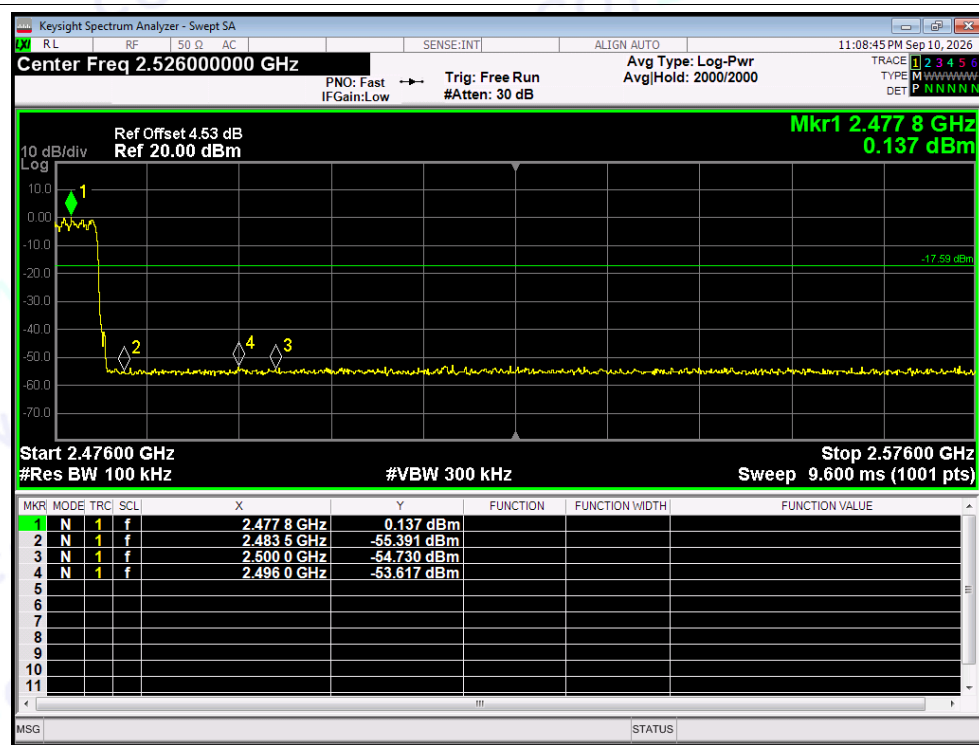
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



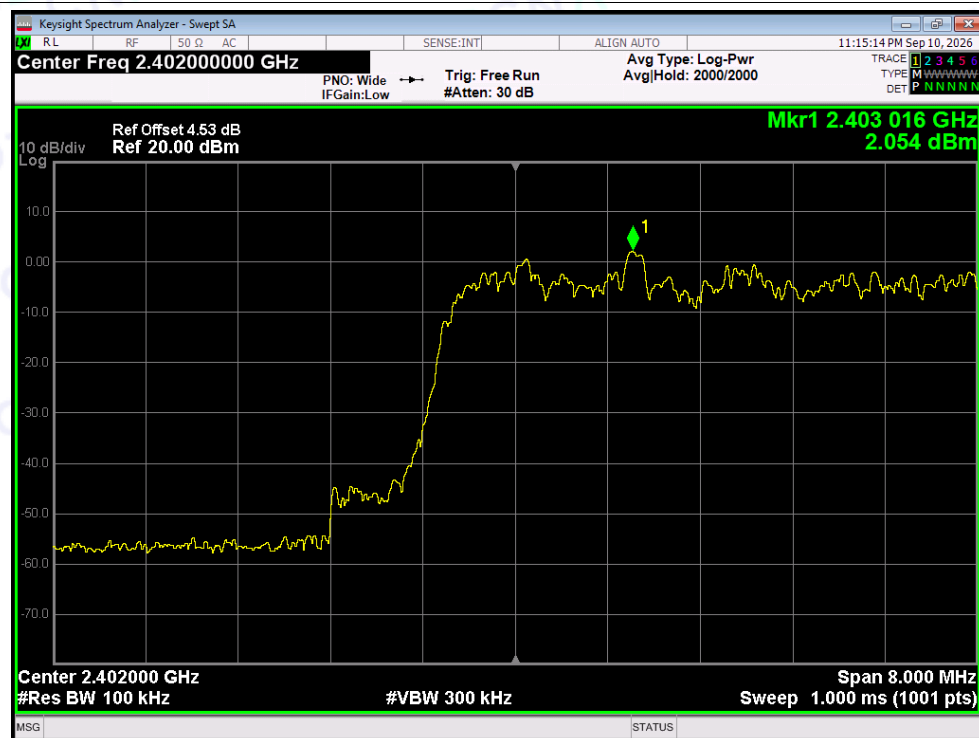
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



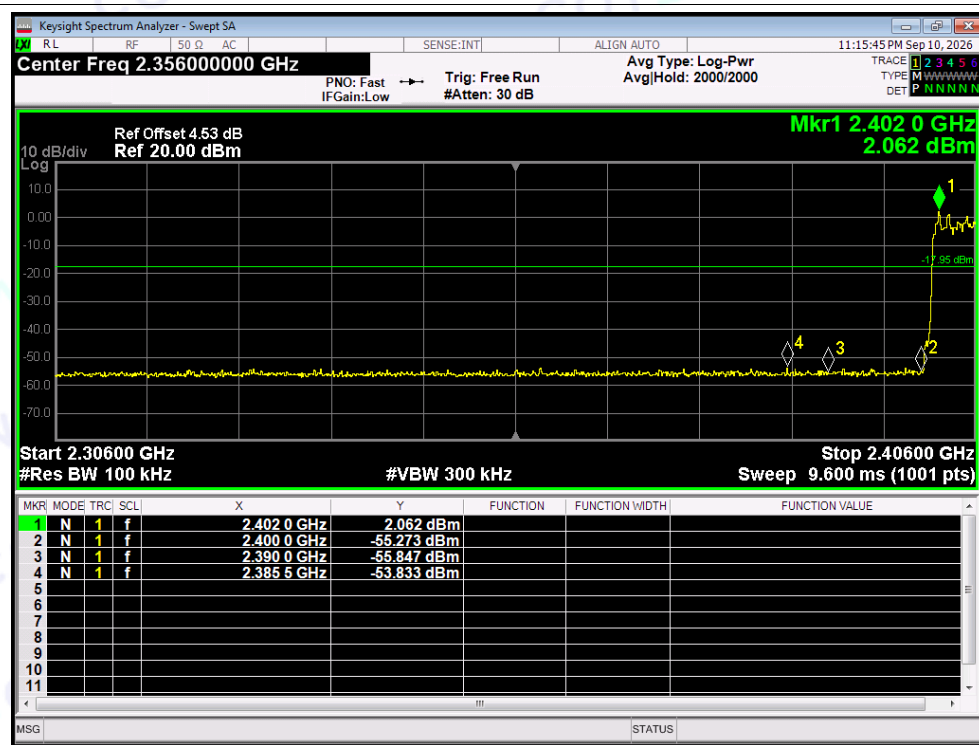
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



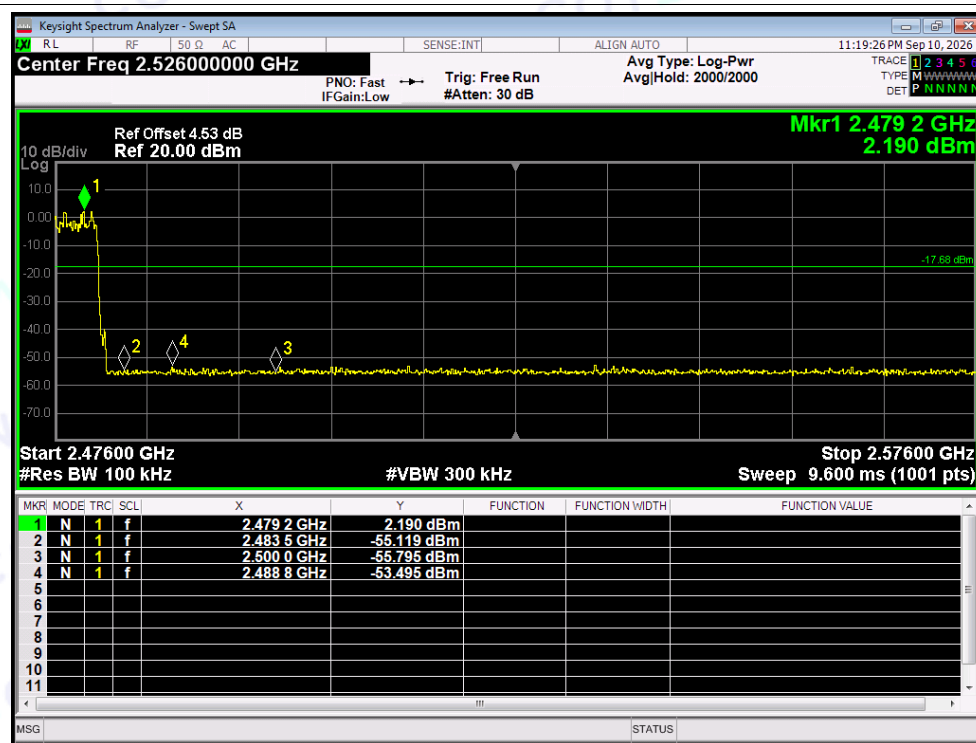
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission

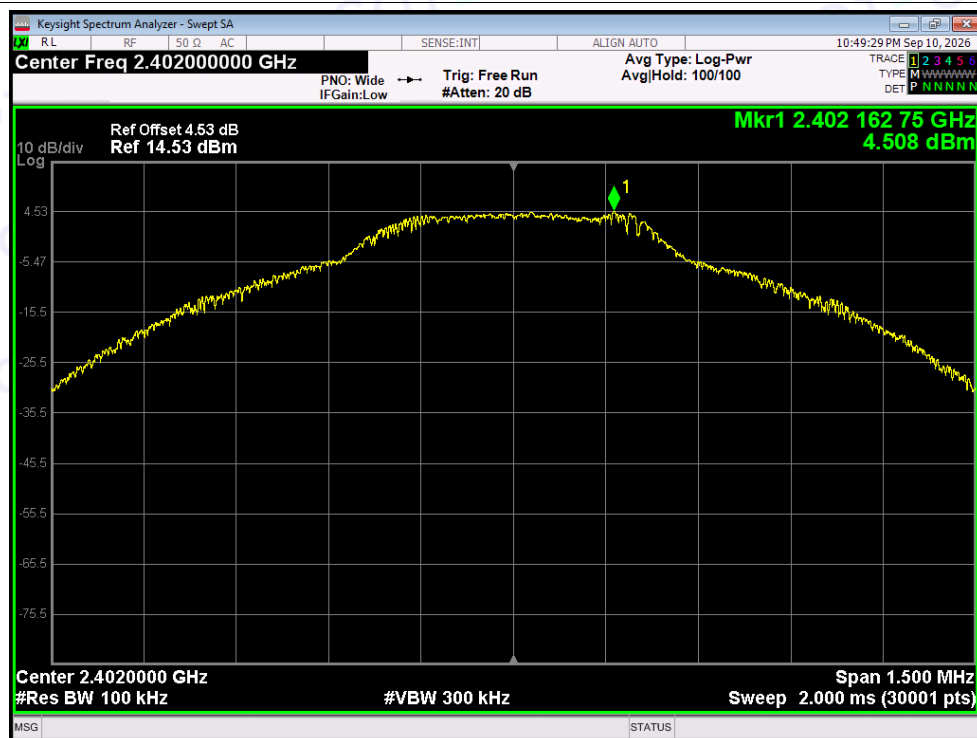


8. Conducted RF Spurious Emission

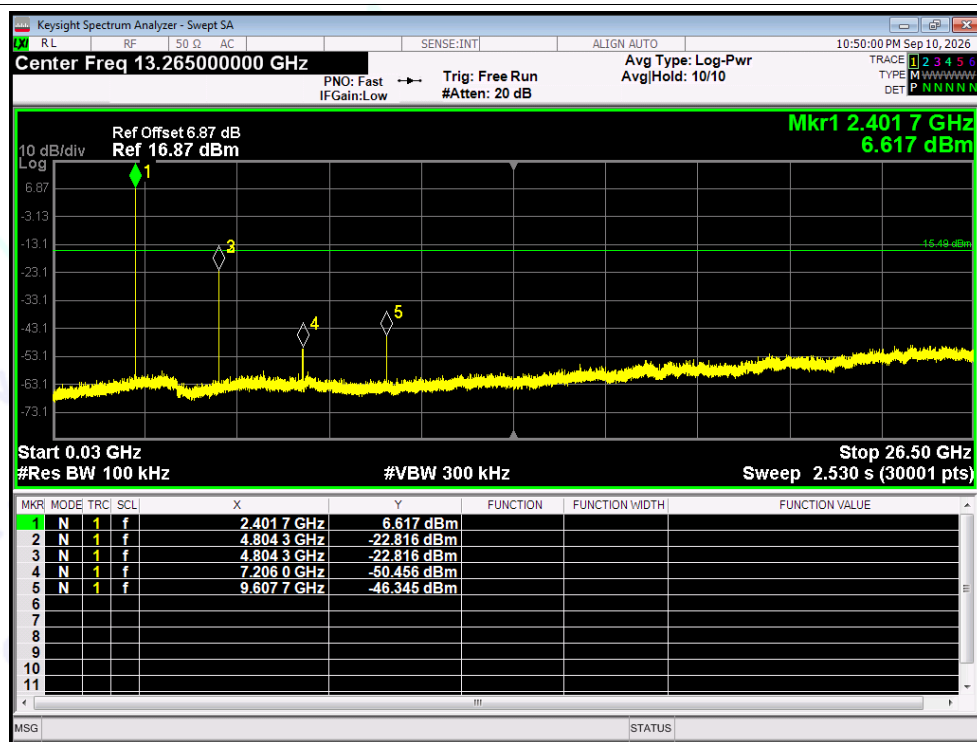
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-27.33	-20	Pass
NVNT	1-DH5	2441	Ant1	-27.55	-20	Pass
NVNT	1-DH5	2480	Ant1	-26.55	-20	Pass
NVNT	2-DH5	2402	Ant1	-30.68	-20	Pass
NVNT	2-DH5	2441	Ant1	-30.47	-20	Pass
NVNT	2-DH5	2480	Ant1	-32.3	-20	Pass
NVNT	3-DH5	2402	Ant1	-28.52	-20	Pass
NVNT	3-DH5	2441	Ant1	-32.05	-20	Pass
NVNT	3-DH5	2480	Ant1	-27.18	-20	Pass

Test Graphs

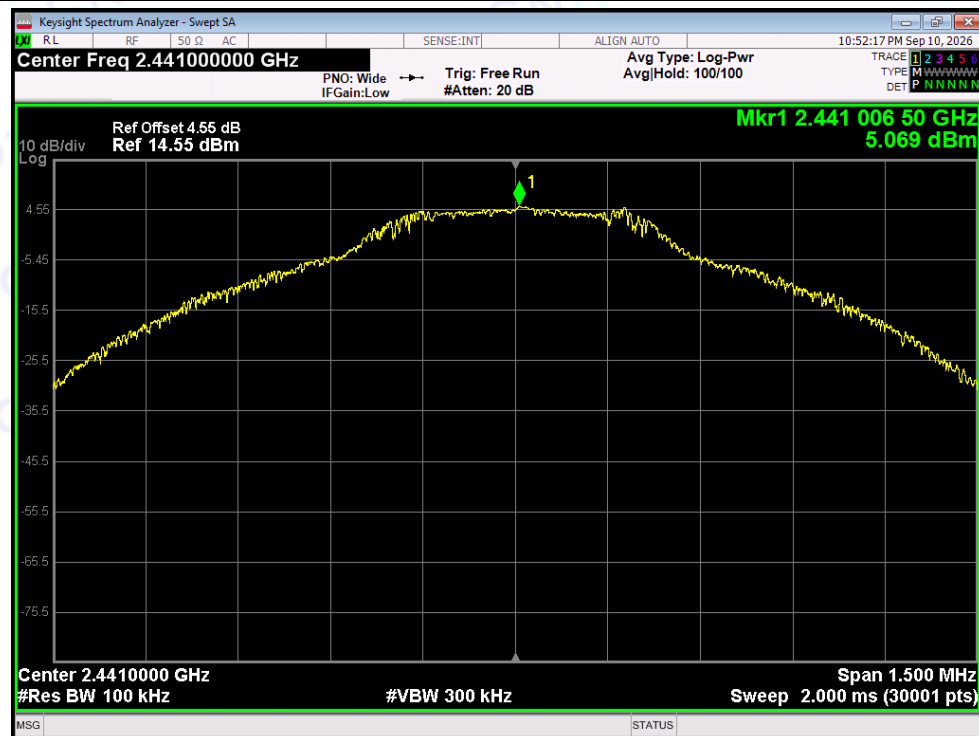
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



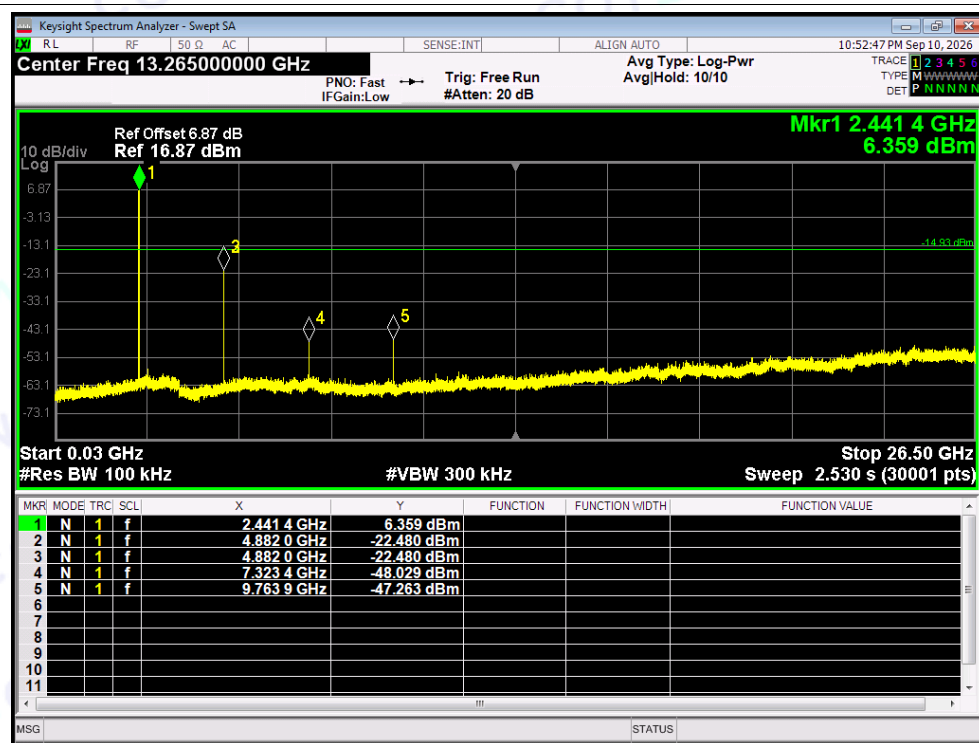
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



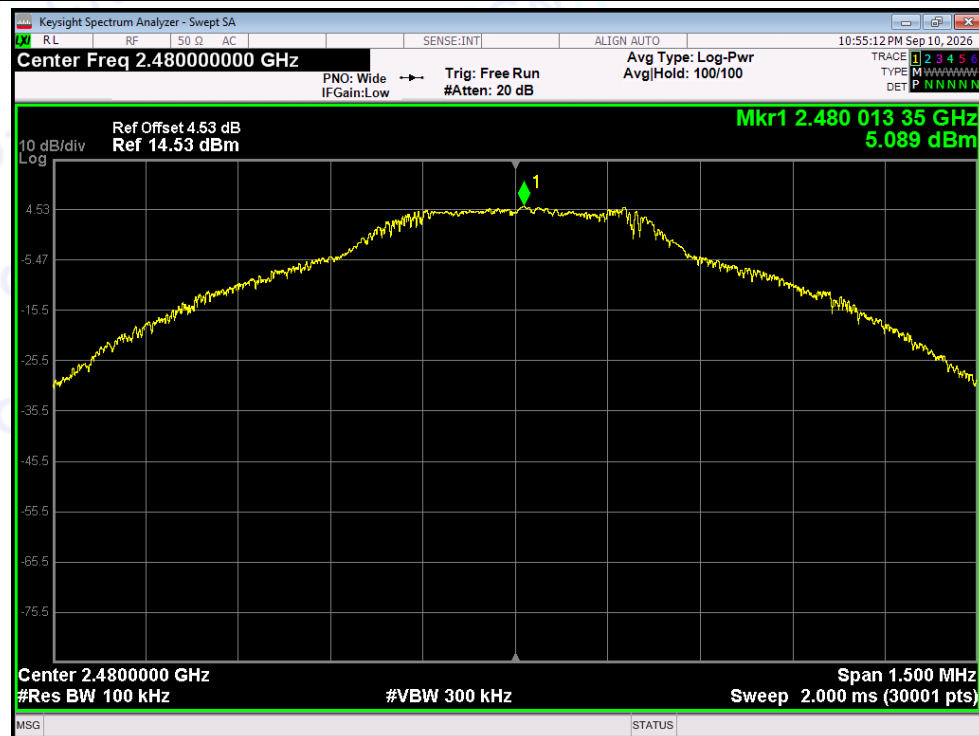
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



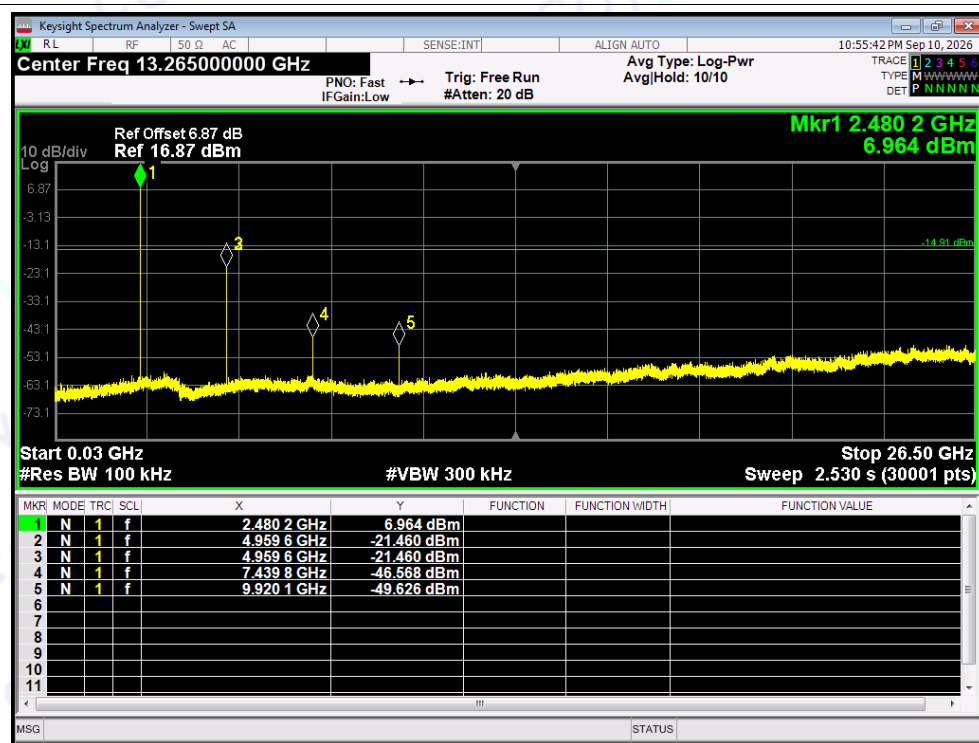
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



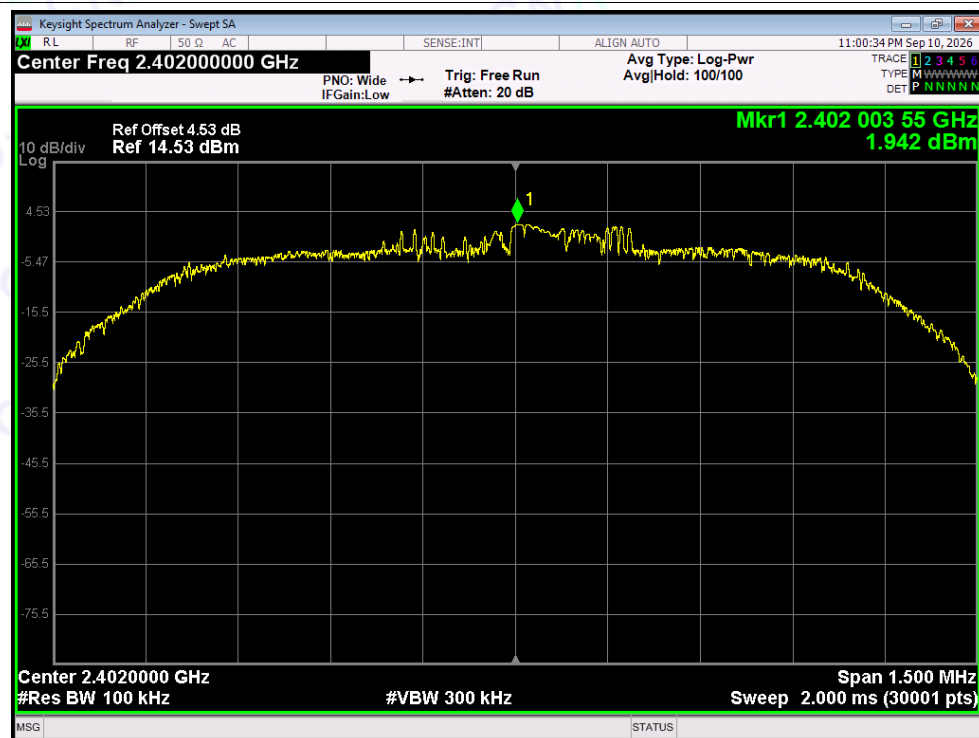
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



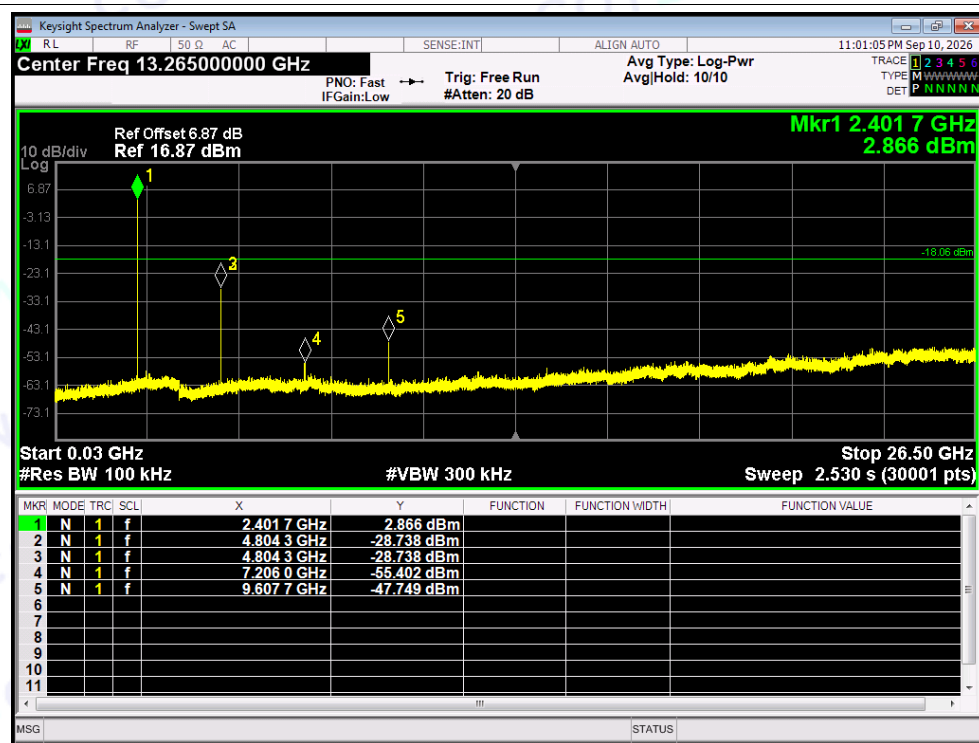
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



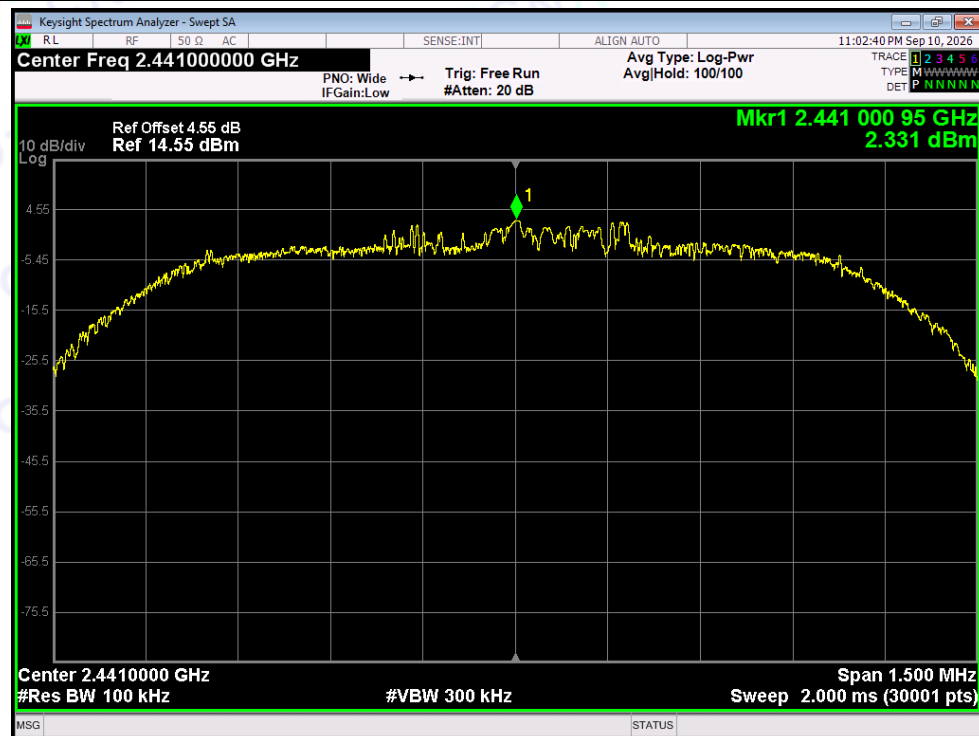
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



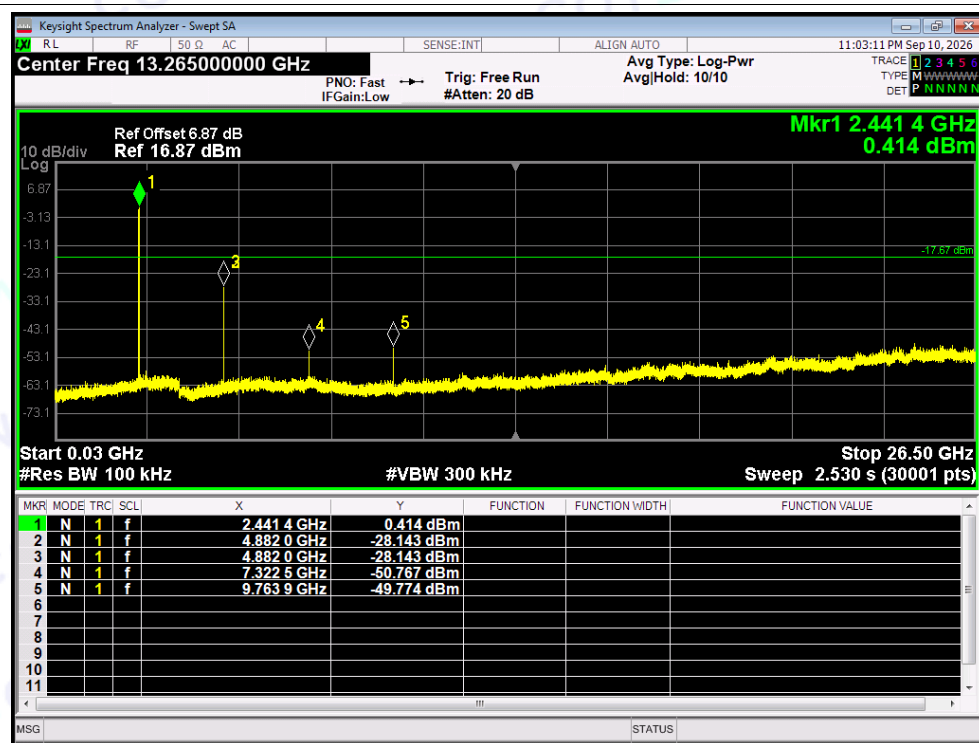
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



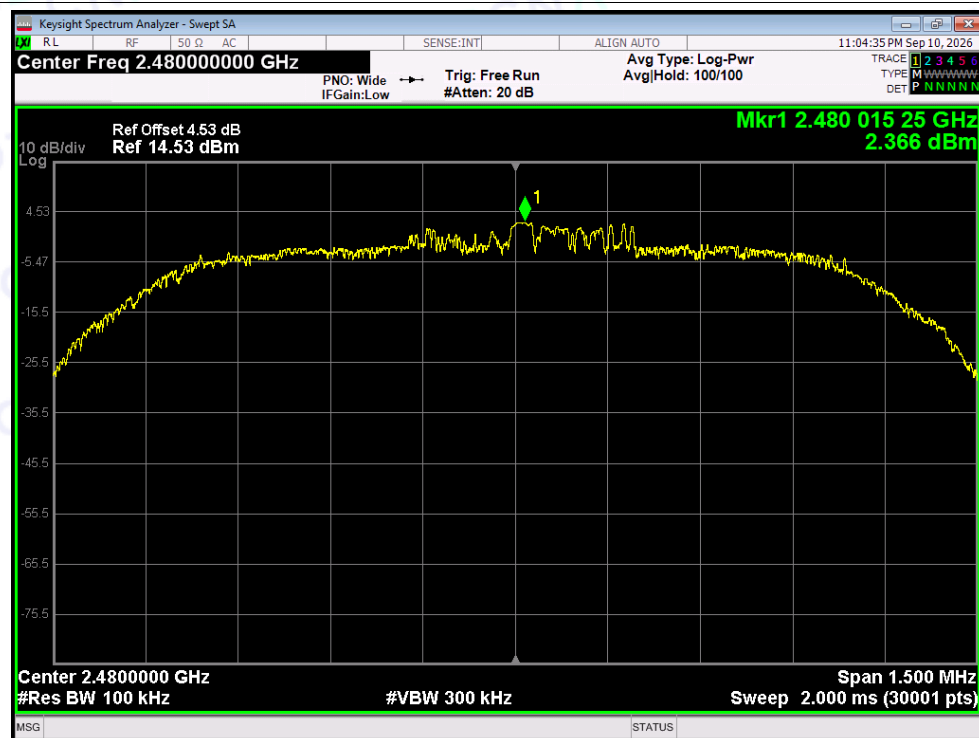
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



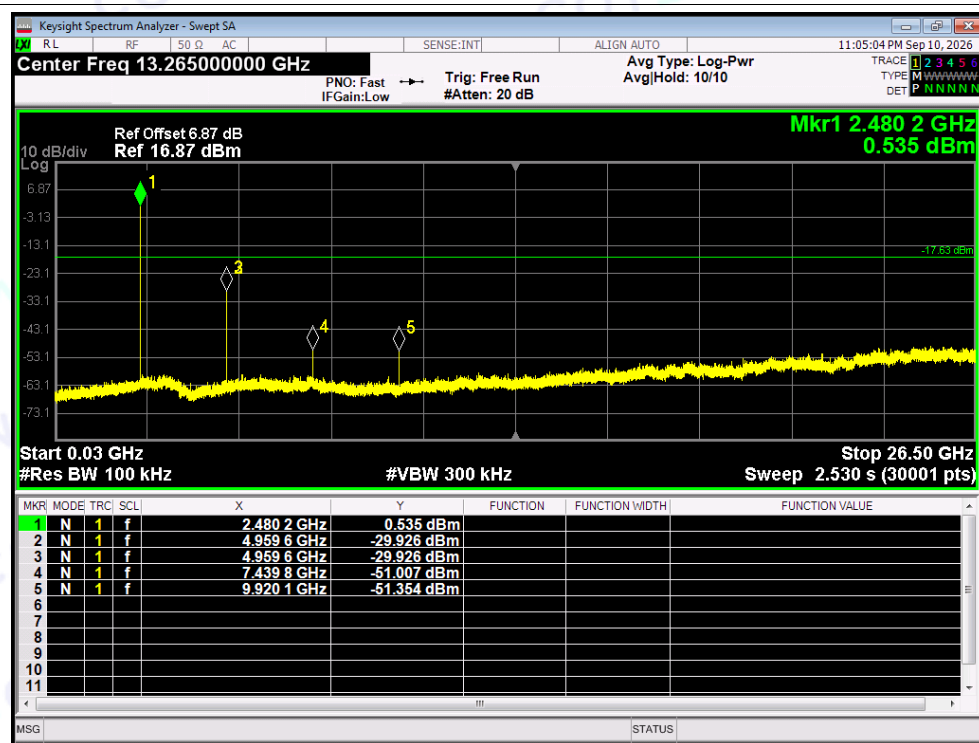
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



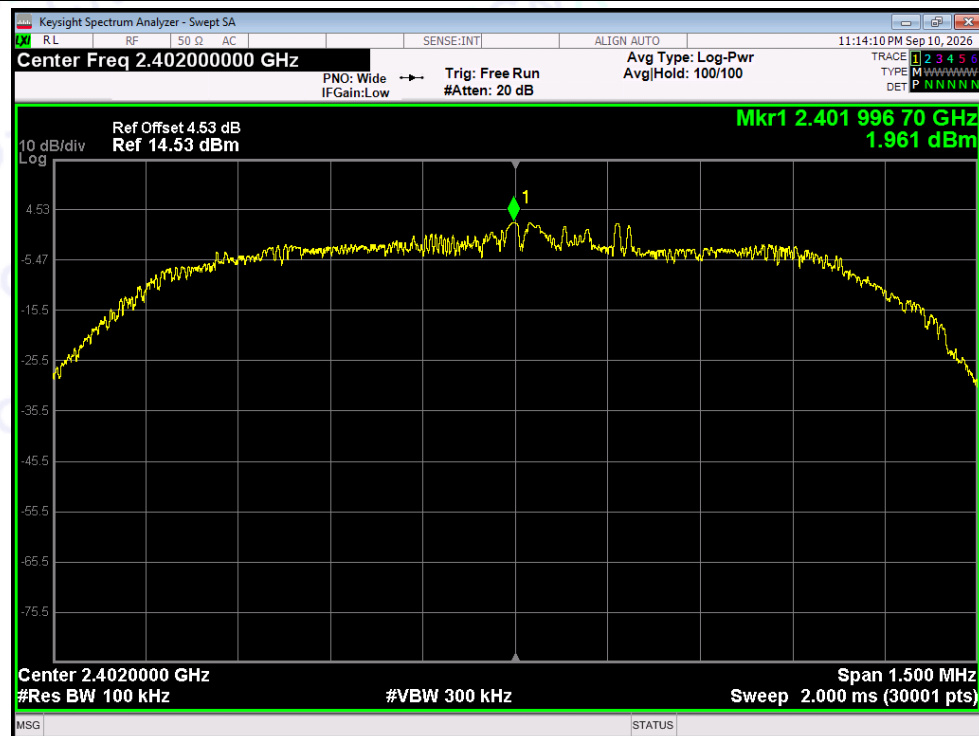
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



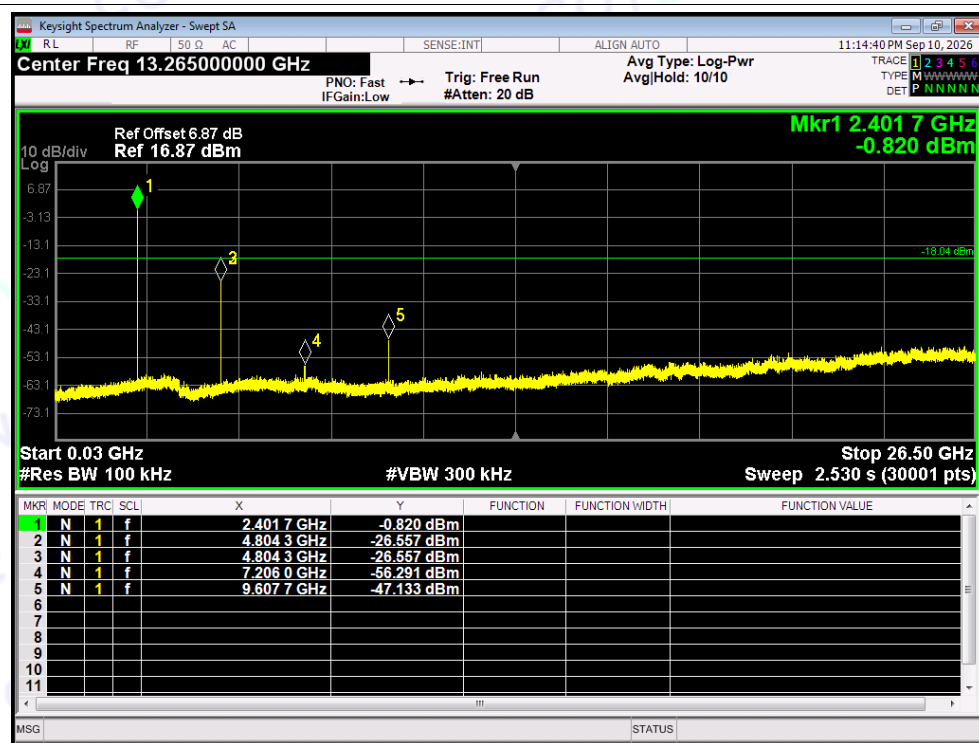
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



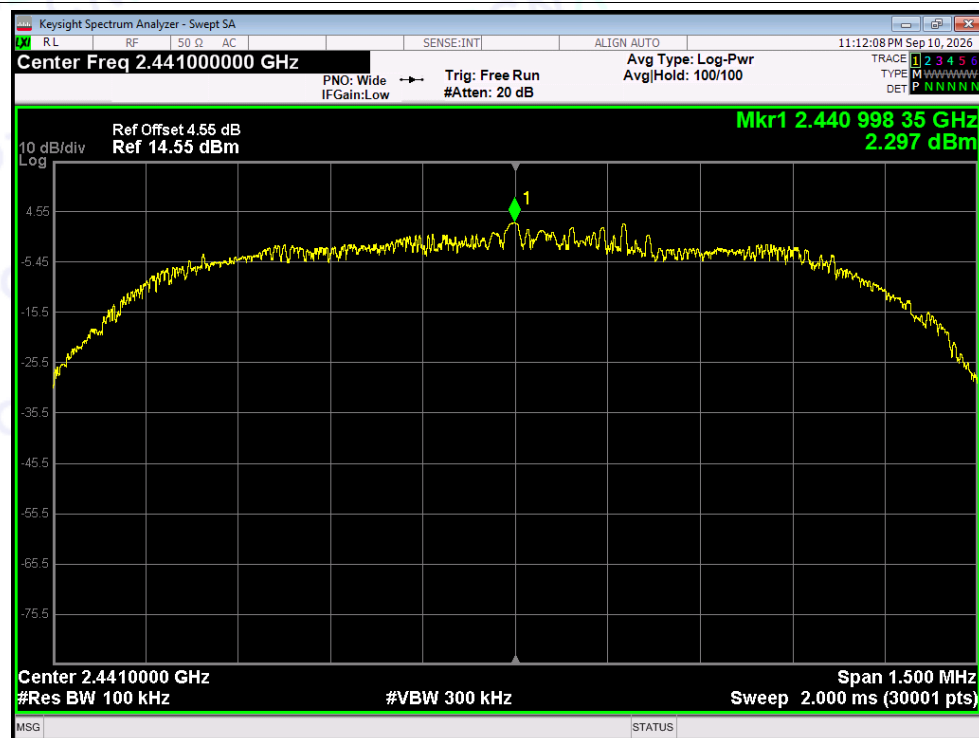
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



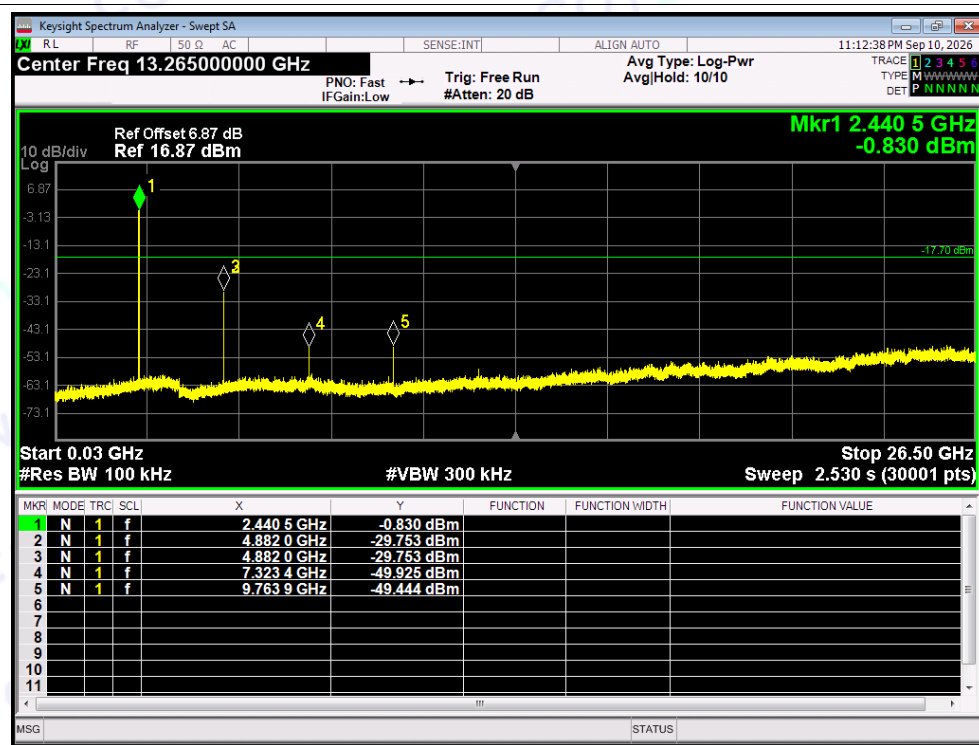
Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission



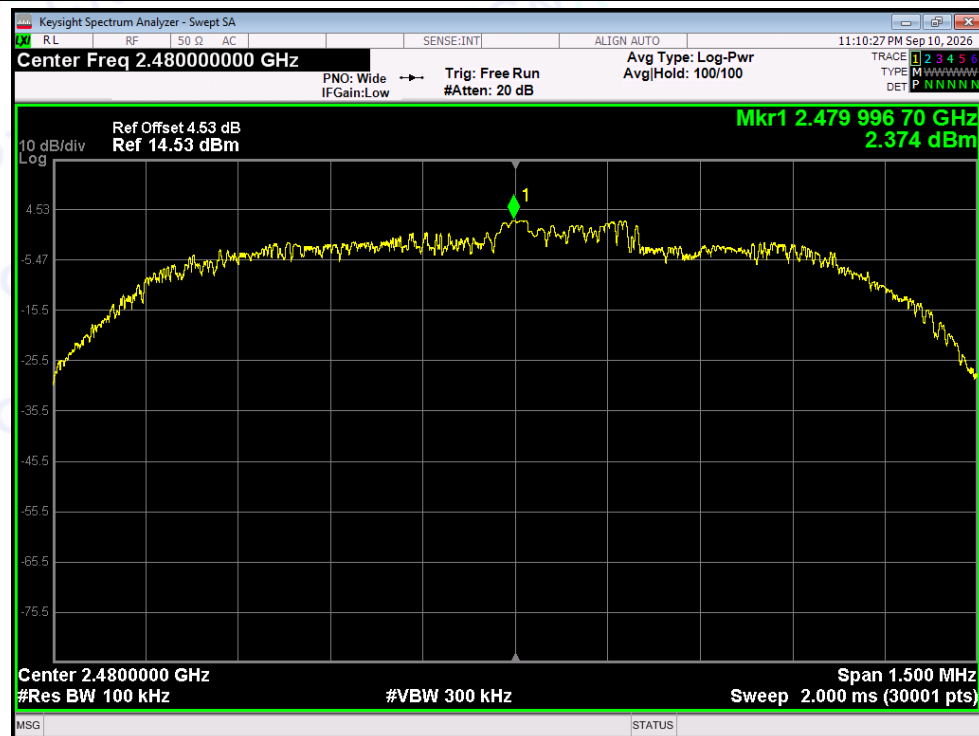
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



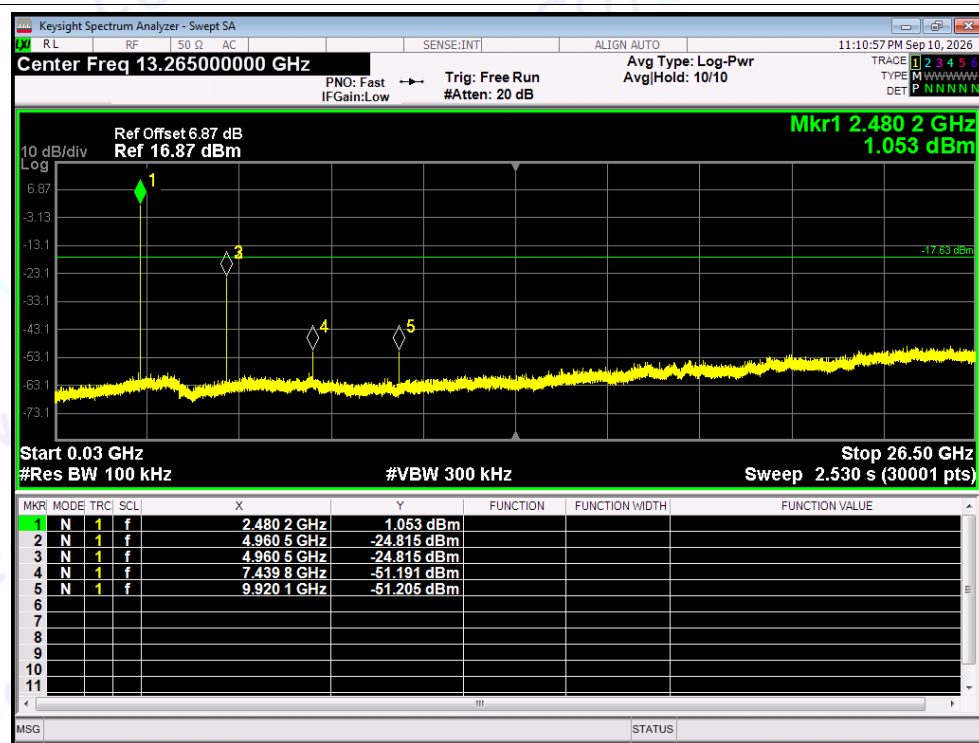
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

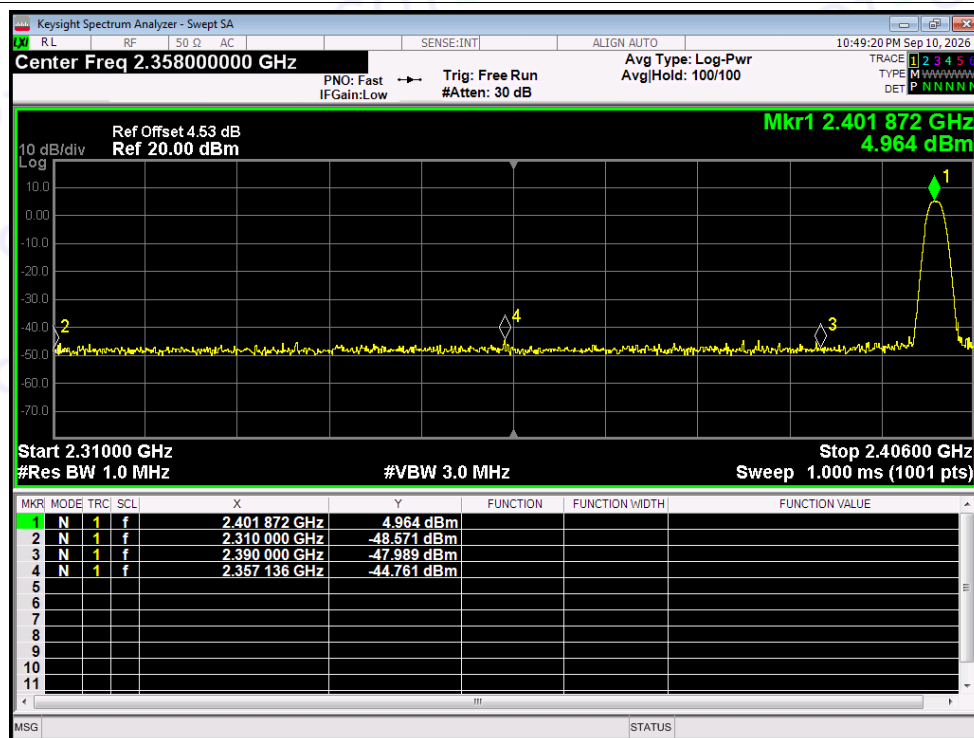


9. Restrict Band

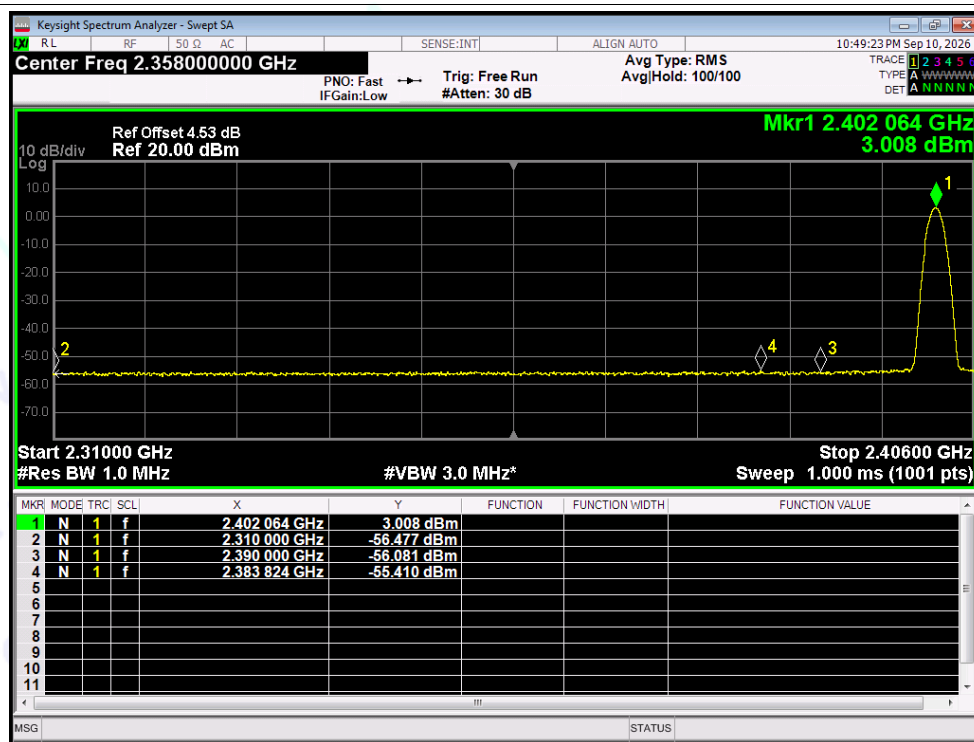
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-48.57	2	-	48.69	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-56.48	2	1.09	41.87	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2357.136	-44.76	2	-	52.5	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2383.824	-55.41	2	1.09	42.94	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-47.99	2	-	49.27	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-56.08	2	1.09	42.27	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-40.84	2	-	56.42	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-54.52	2	1.1	43.84	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.512	-40.84	2	-	56.42	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.656	-54.16	2	1.1	44.2	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-47.59	2	-	49.67	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-54.81	2	1.1	43.55	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-48.86	2	-	48.4	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-55.65	2	1.09	42.7	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2353.392	-45.05	2	-	52.21	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2378.352	-55.26	2	1.09	43.09	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-48.13	2	-	49.13	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-56.32	2	1.09	42.03	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-46.19	2	-	51.07	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-55.03	2	1.09	43.32	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2492.272	-43.92	2	-	53.34	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.656	-54.56	2	1.09	43.79	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-46.29	2	-	50.97	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-55.24	2	1.09	43.11	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-48.57	2	-	48.69	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-56.35	2	1.09	42	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2346.384	-44.67	2	-	52.59	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2324.496	-55.24	2	1.09	43.11	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-48.19	2	-	49.07	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-55.84	2	1.09	42.51	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-47.85	2	-	49.41	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-54.91	2	1.09	43.44	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2486.704	-44.3	2	-	52.96	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.56	-54.55	2	1.09	43.8	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-48.58	2	-	48.68	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-55.29	2	1.09	43.06	Average	54	Pass

Test Graphs

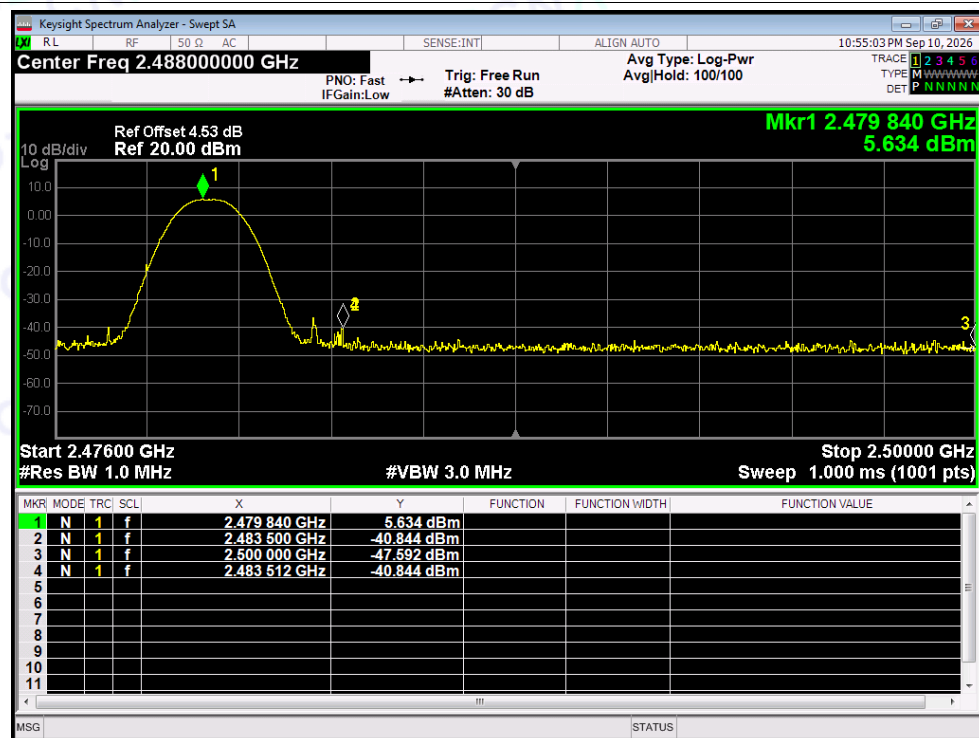
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



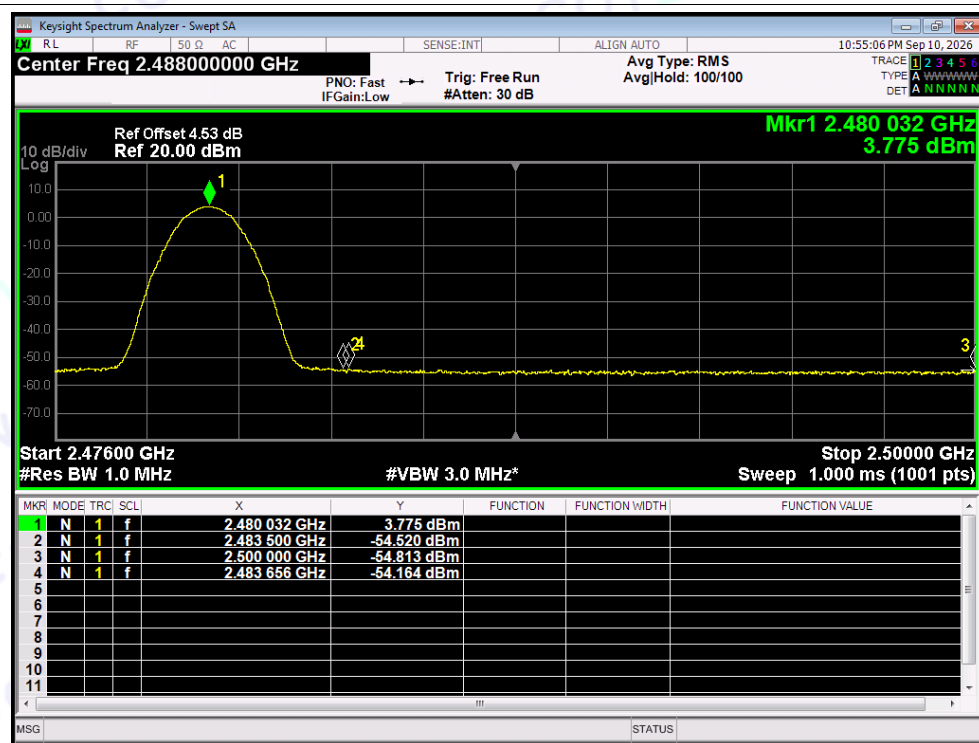
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



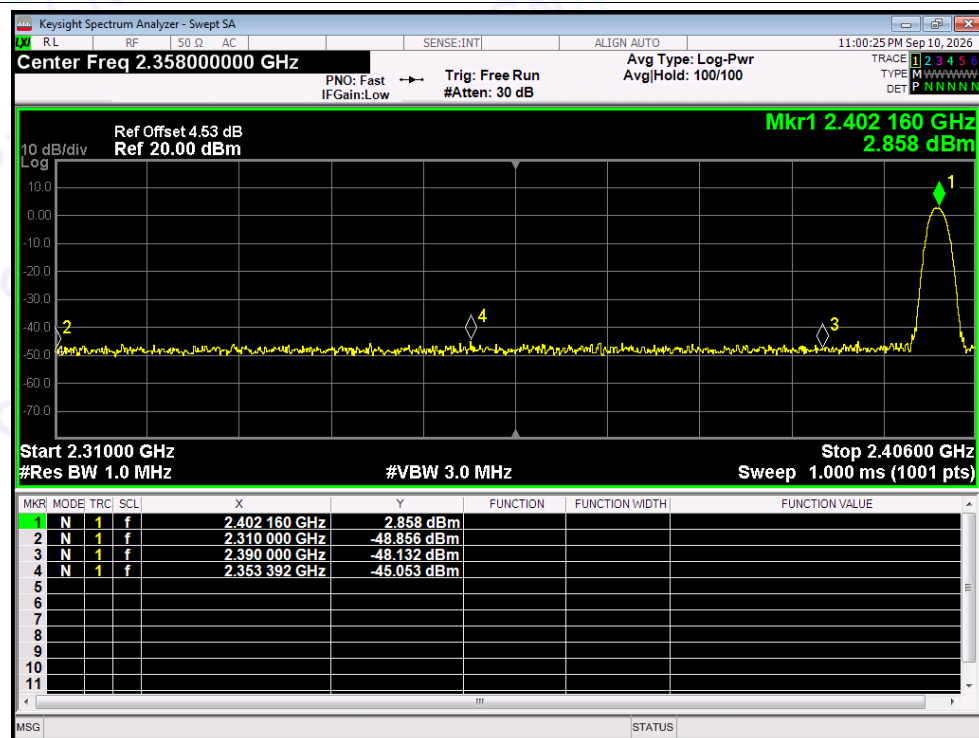
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



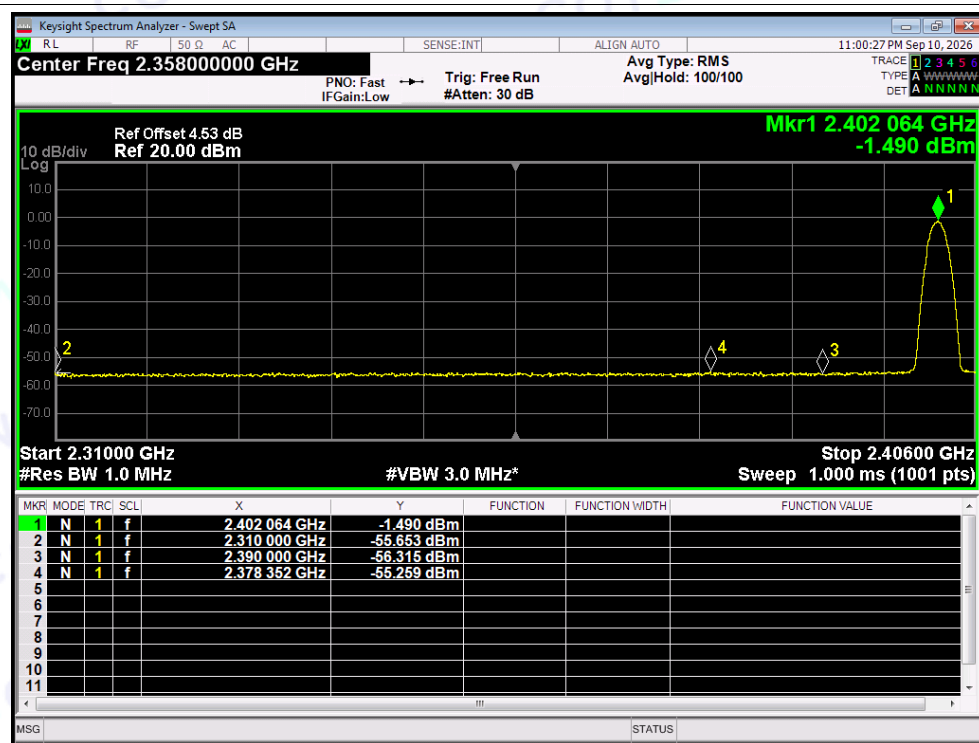
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



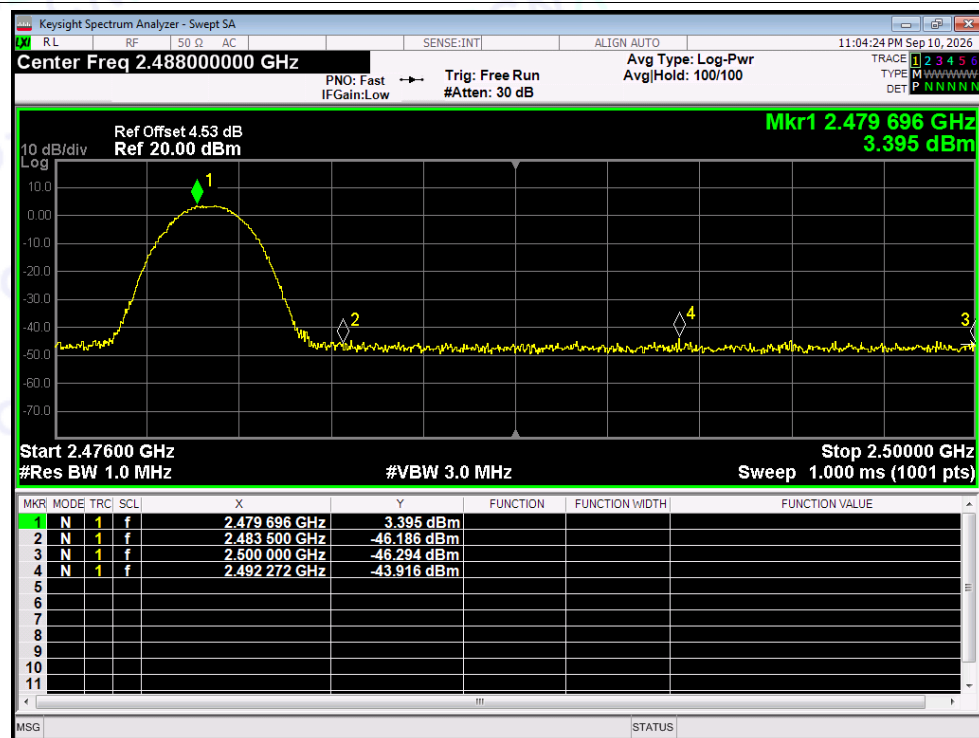
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



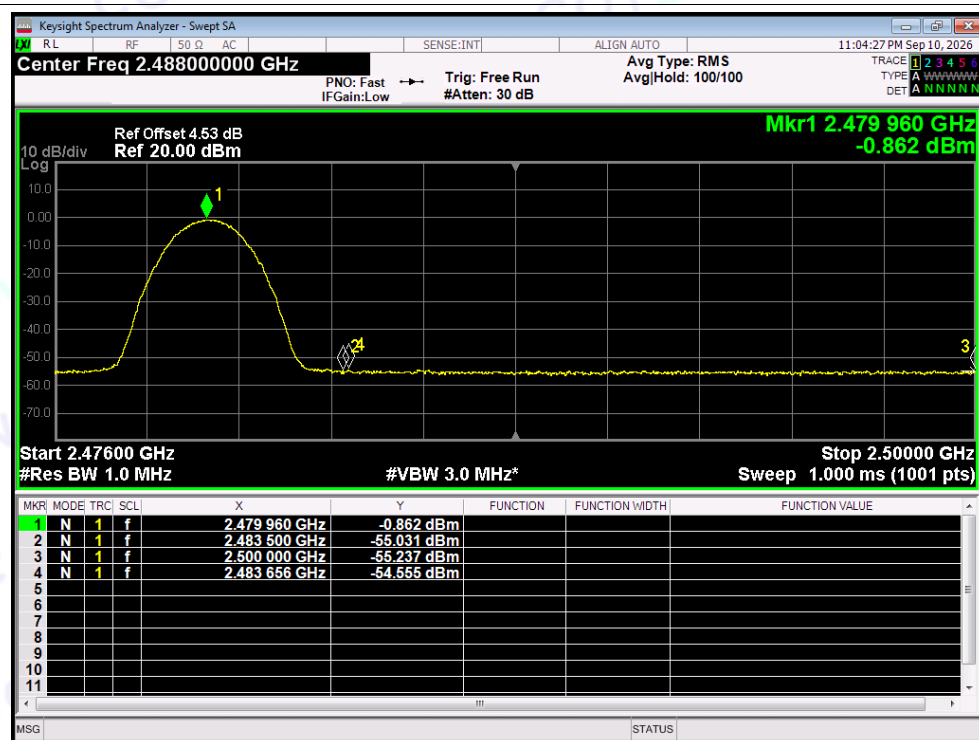
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average



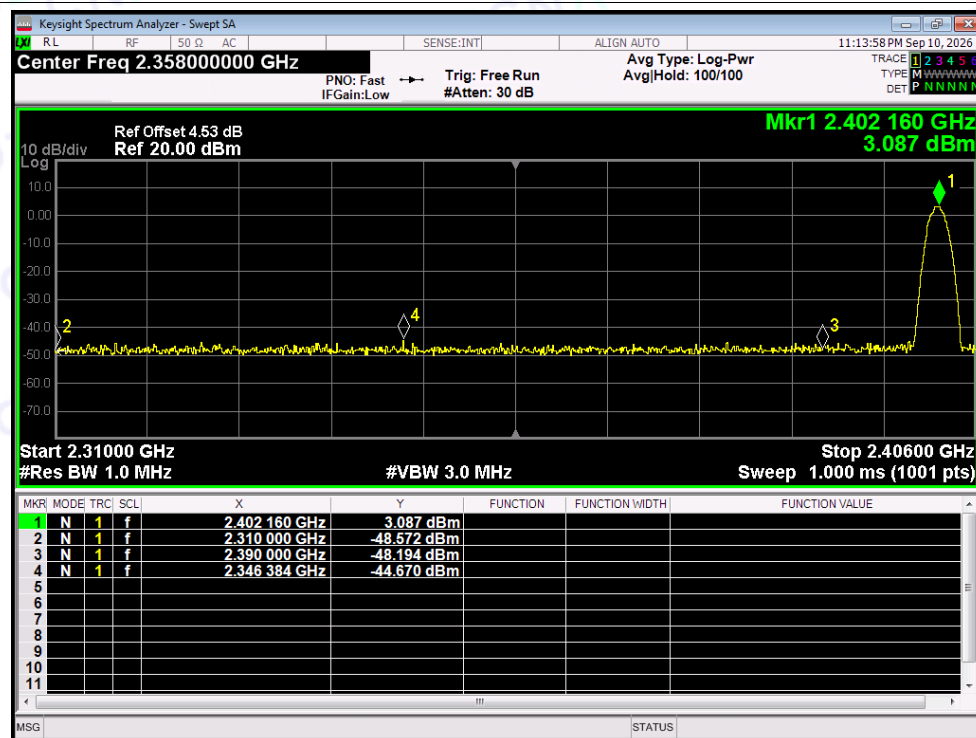
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



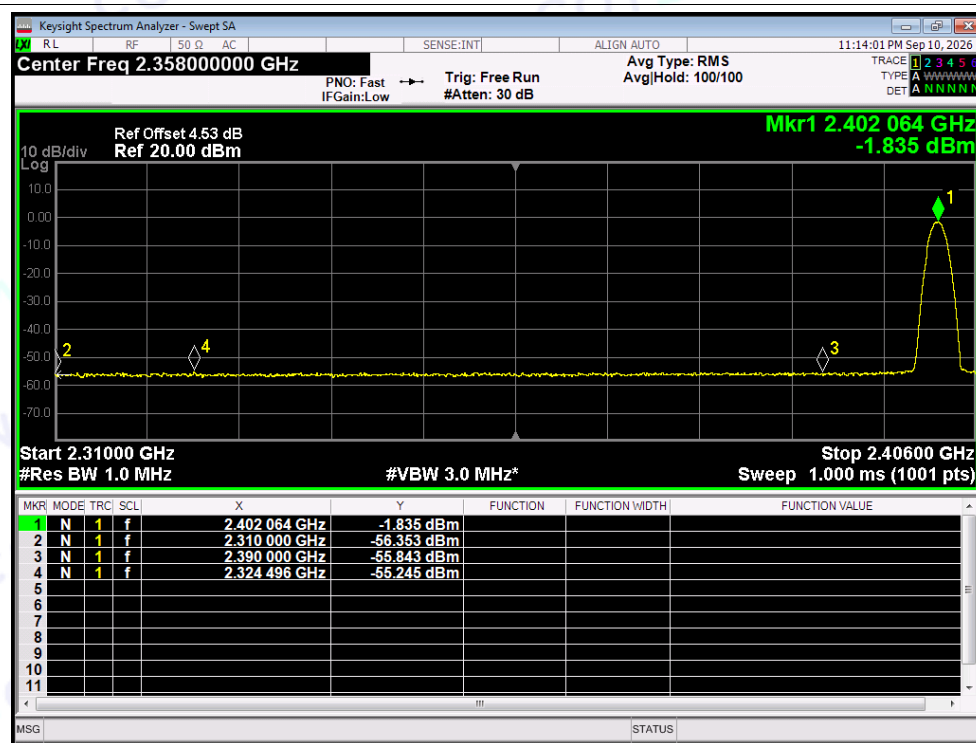
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average



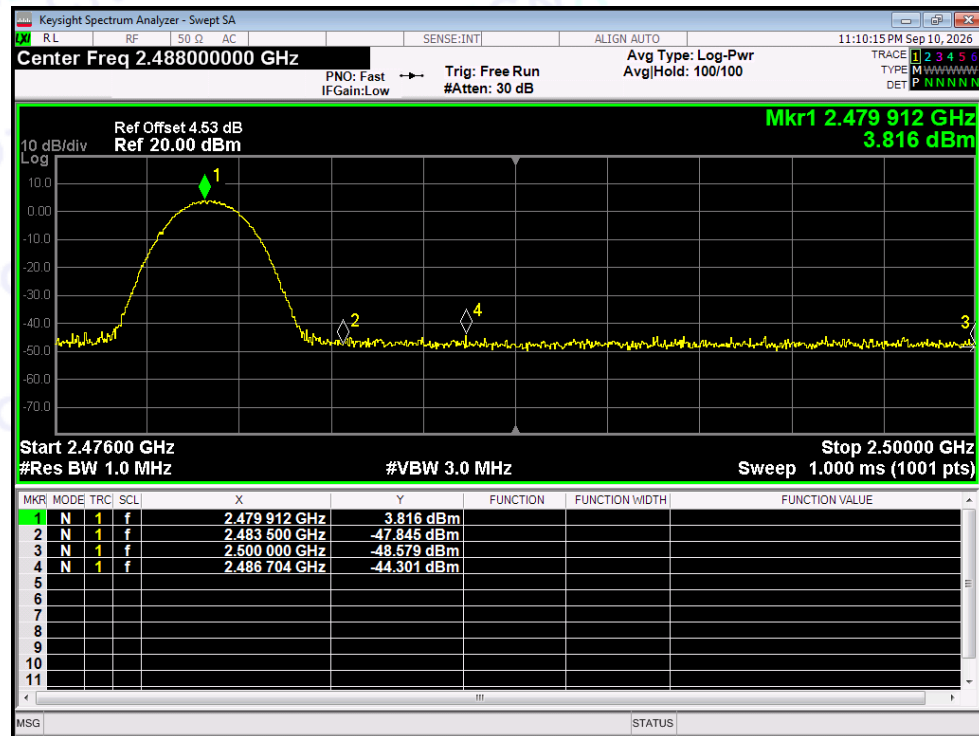
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



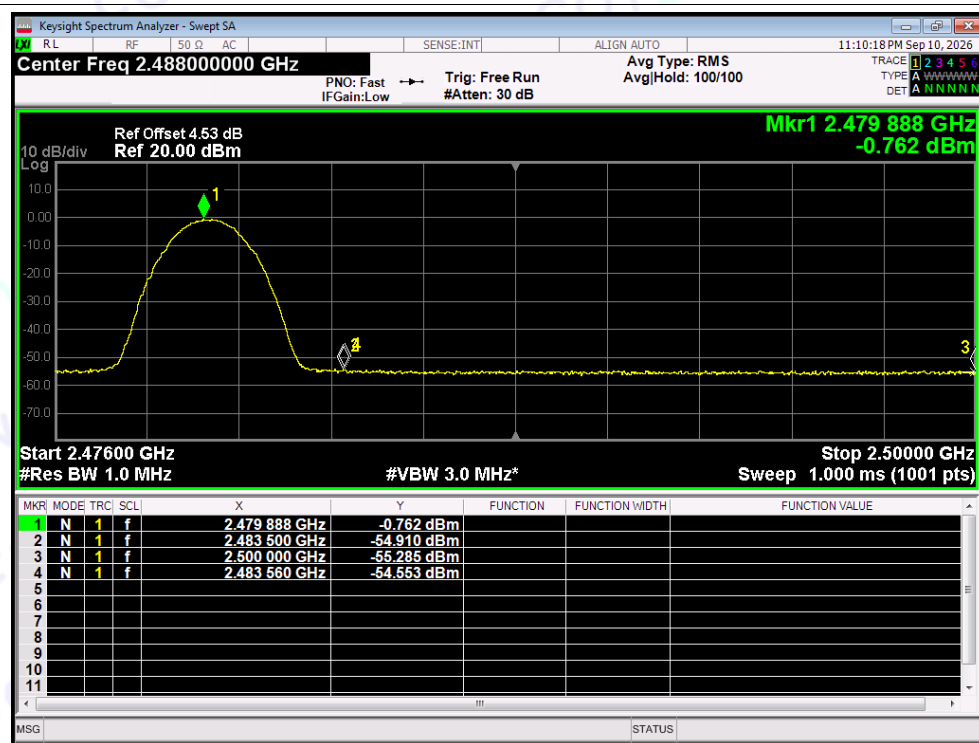
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average



Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Average

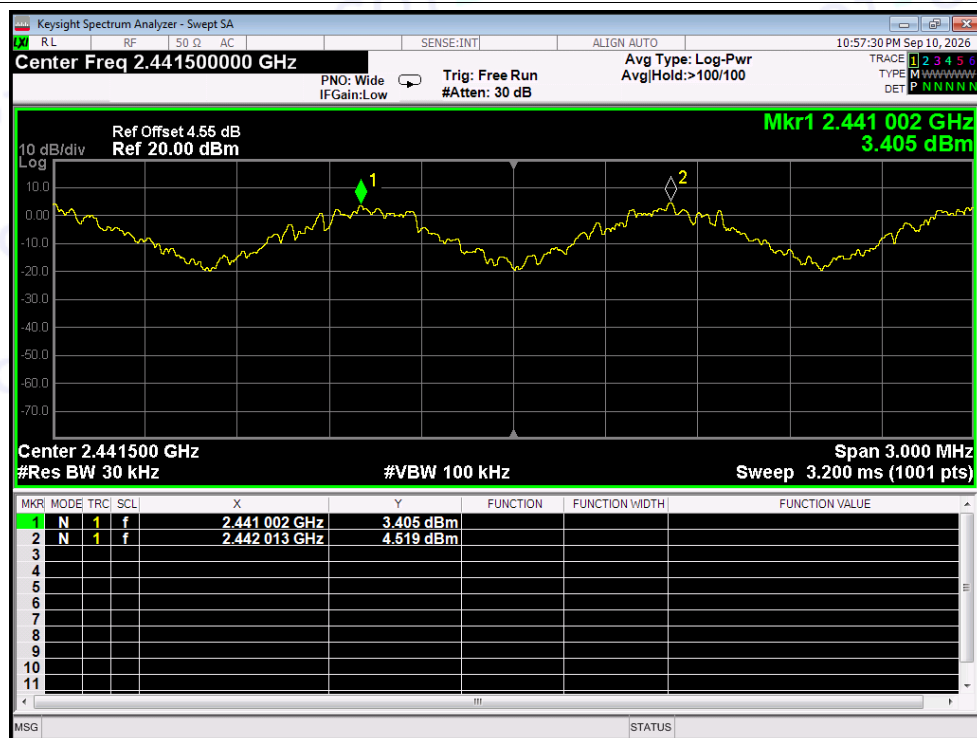


10. Carrier Frequencies Separation

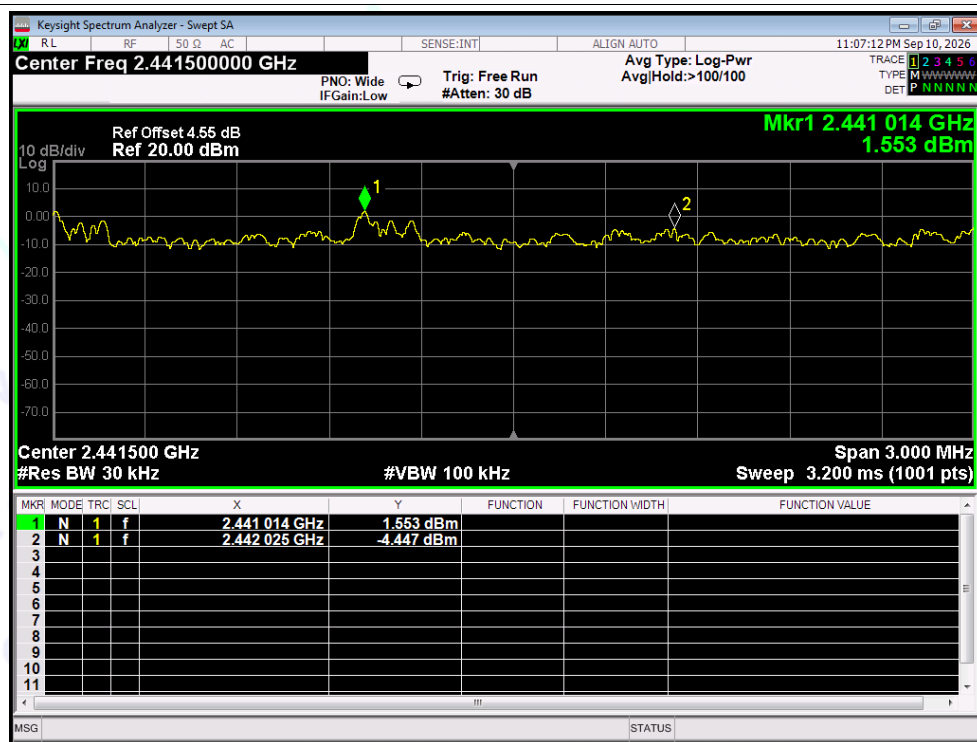
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2441.002	2442.013	1.011	0.627	Pass
NVNT	2-DH5	Ant1	2441.014	2442.025	1.011	0.88	Pass
NVNT	3-DH5	Ant1	2441.023	2442.172	1.149	0.873	Pass

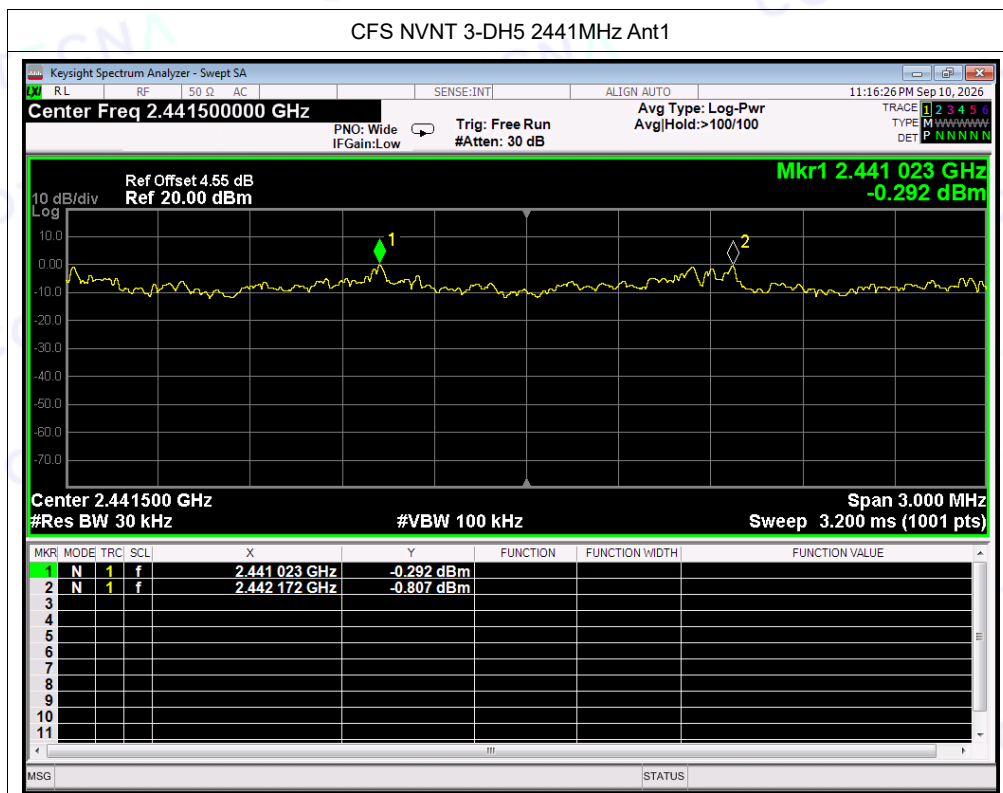
Test Graphs

CFS NVNT 1-DH5 2441MHz Ant1



CFS NVNT 2-DH5 2441MHz Ant1



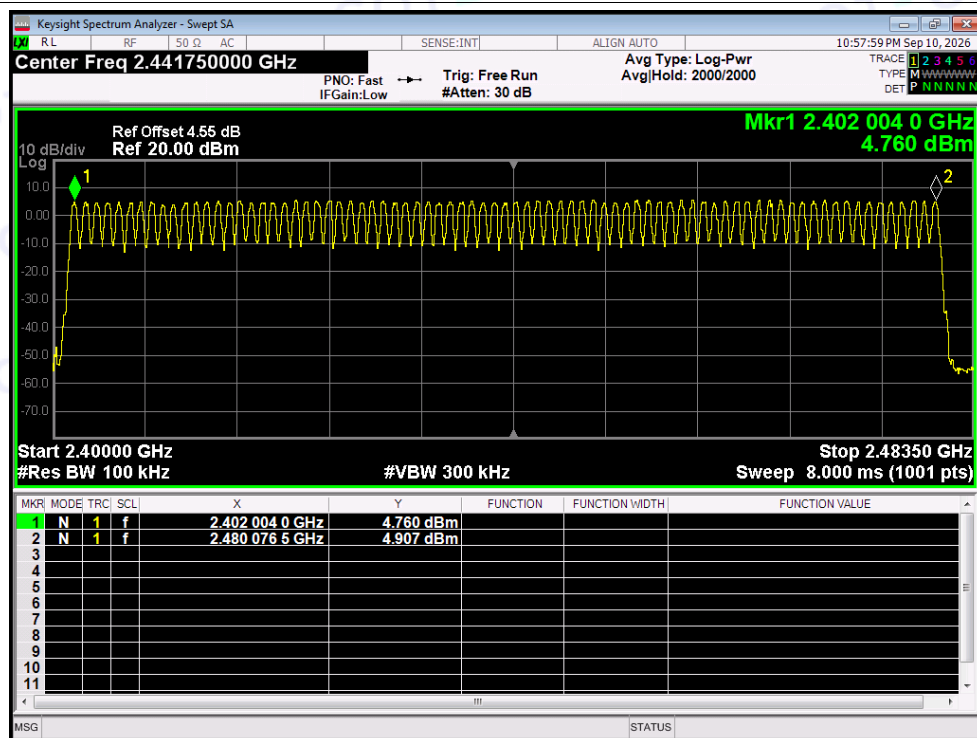


11. Number of Hopping Channel

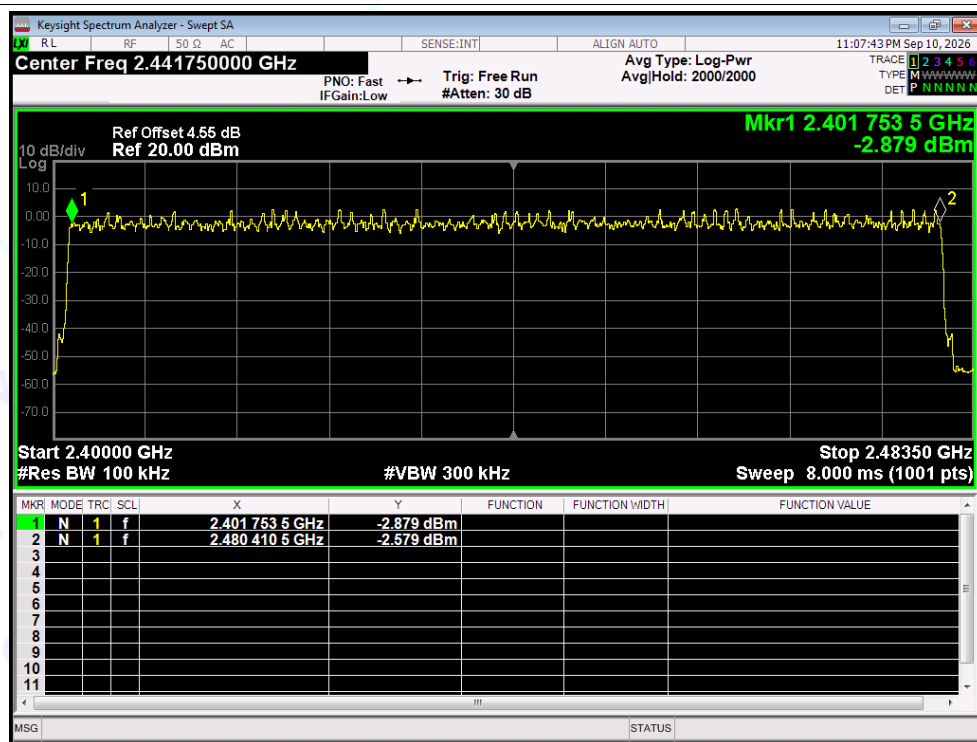
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

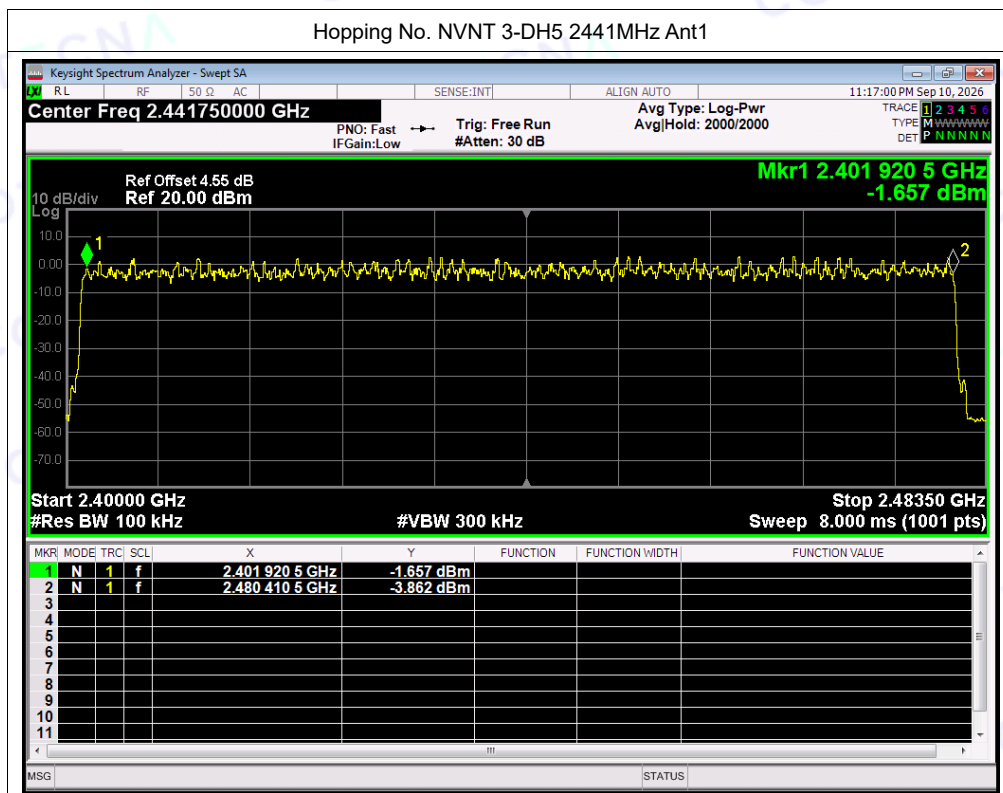
Test Graphs

Hopping No. NVNT 1-DH5 2441MHz Ant1



Hopping No. NVNT 2-DH5 2441MHz Ant1





--- END OF REPORT ---