



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Bluetooth Keypad

Test Model: DF003C

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Can Kun
Supervised by:	Nick Peng



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A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.953	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.96	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.018	N/A	Pass

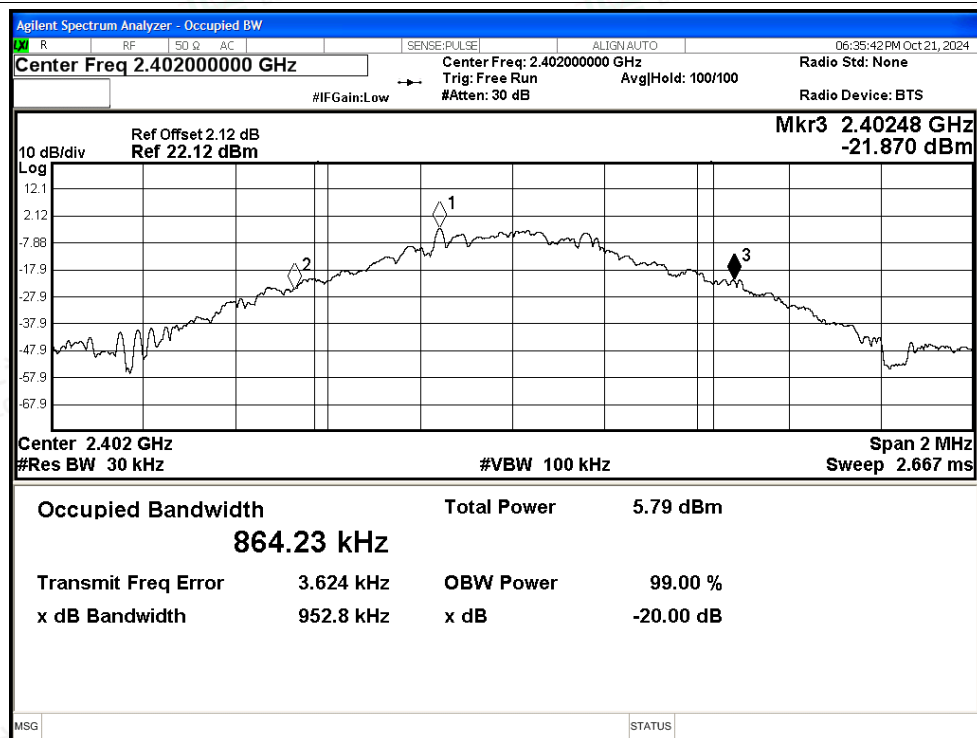


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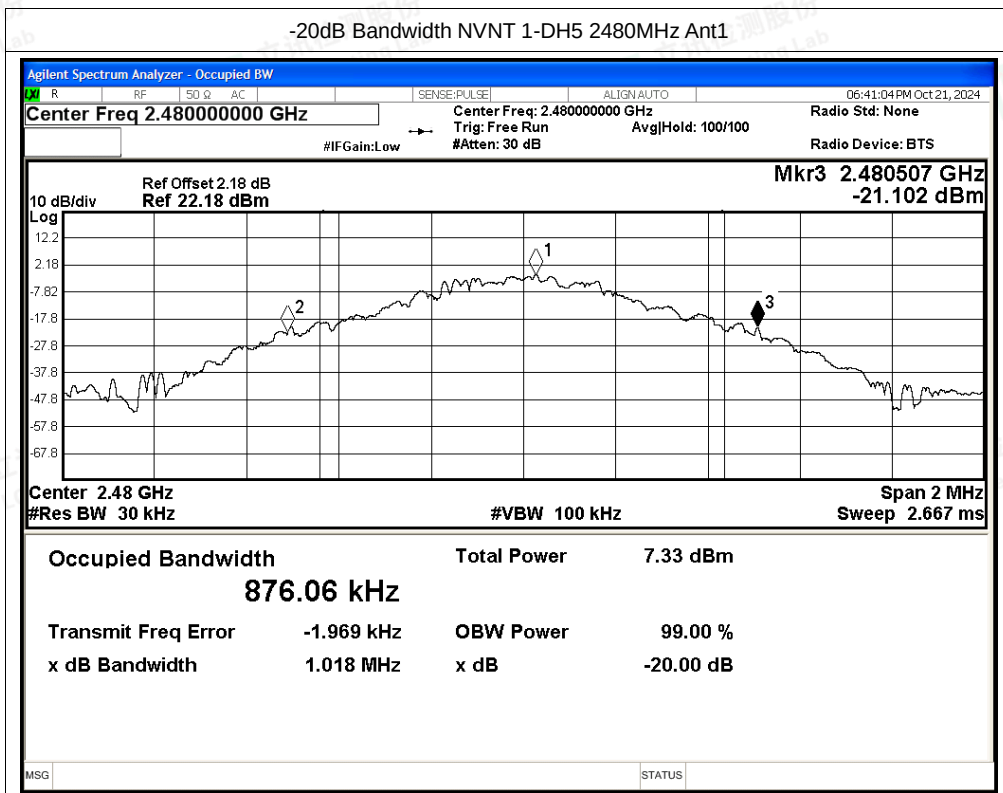
Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1







A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.86	21	Pass
NVNT	1-DH5	2441	Ant1	-0.25	21	Pass
NVNT	1-DH5	2480	Ant1	1.16	21	Pass

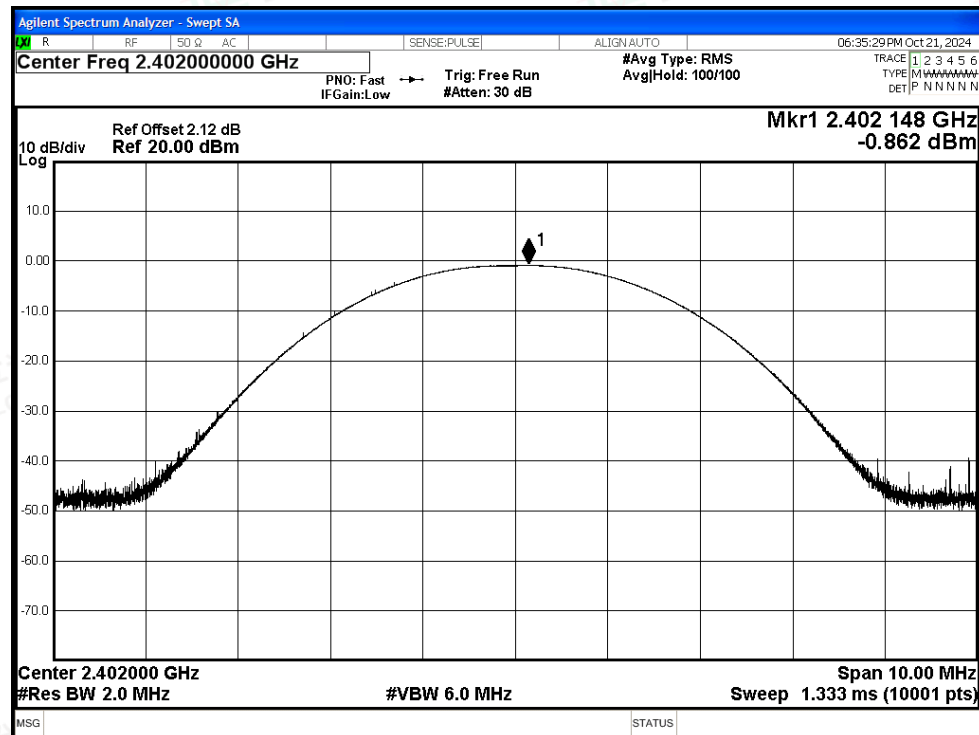


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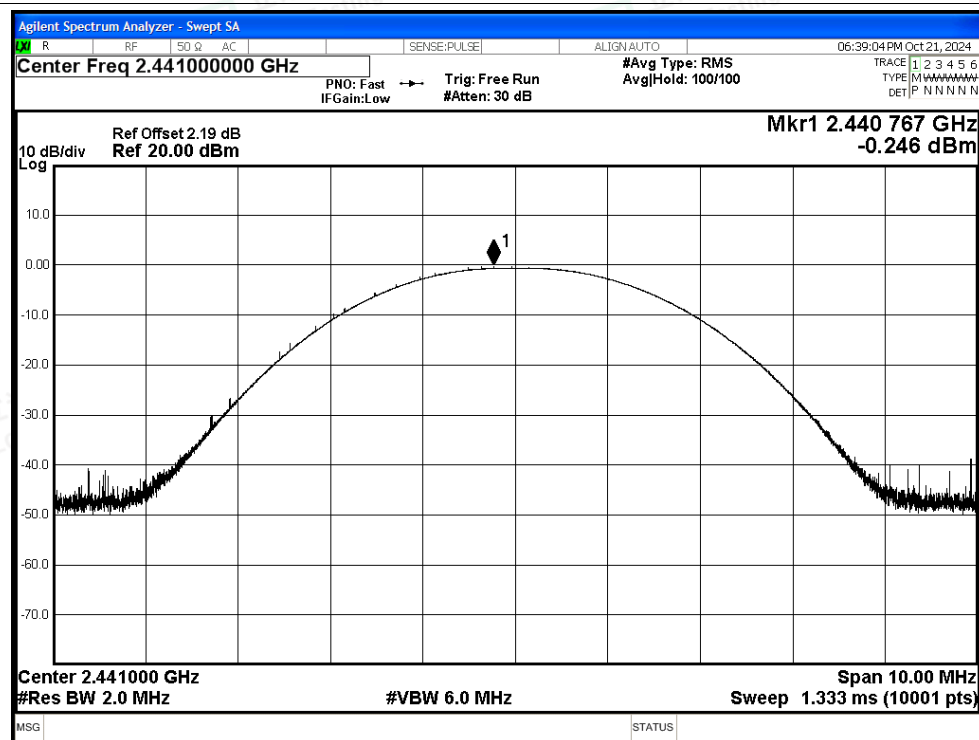


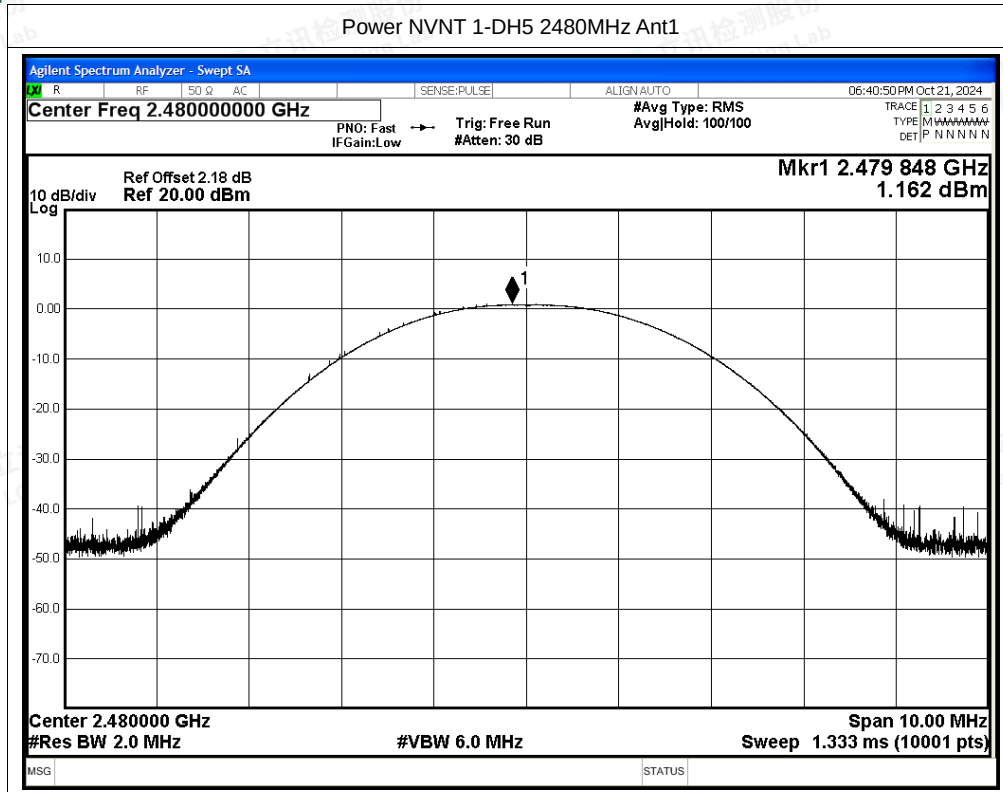
Test Graphs

Power NVNT 1-DH5 2402MHz Ant1



Power NVNT 1-DH5 2441MHz Ant1







A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.012	2402.974	0.962	0.679	Pass

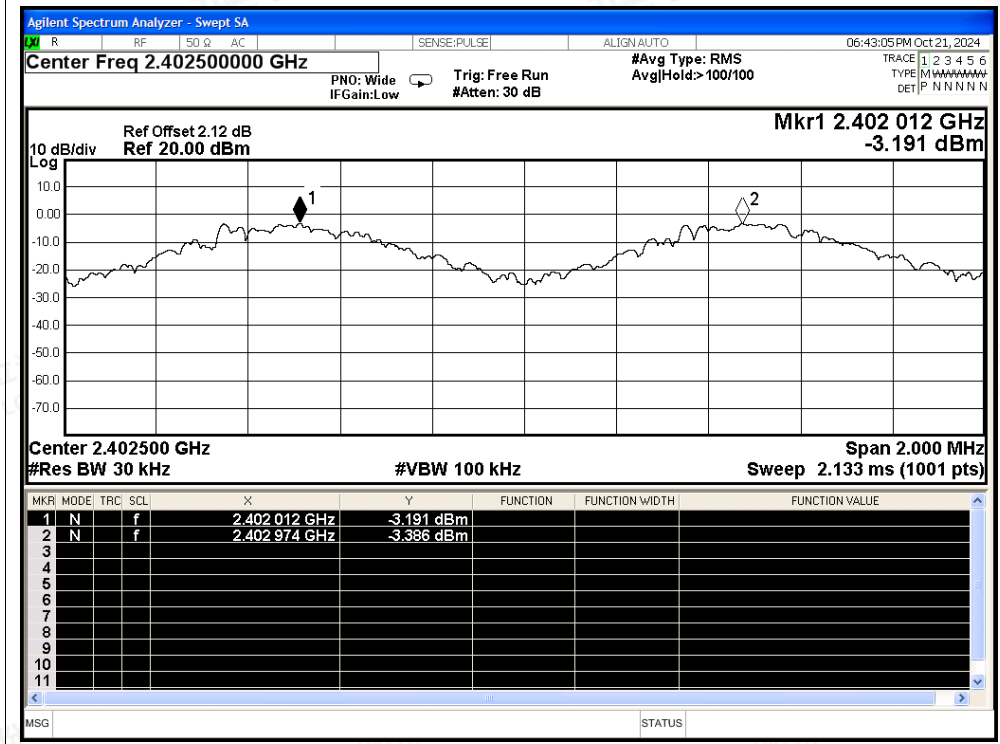


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Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1





A.4 Dwell Time

Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.91	308.46	106	31600	400	Pass

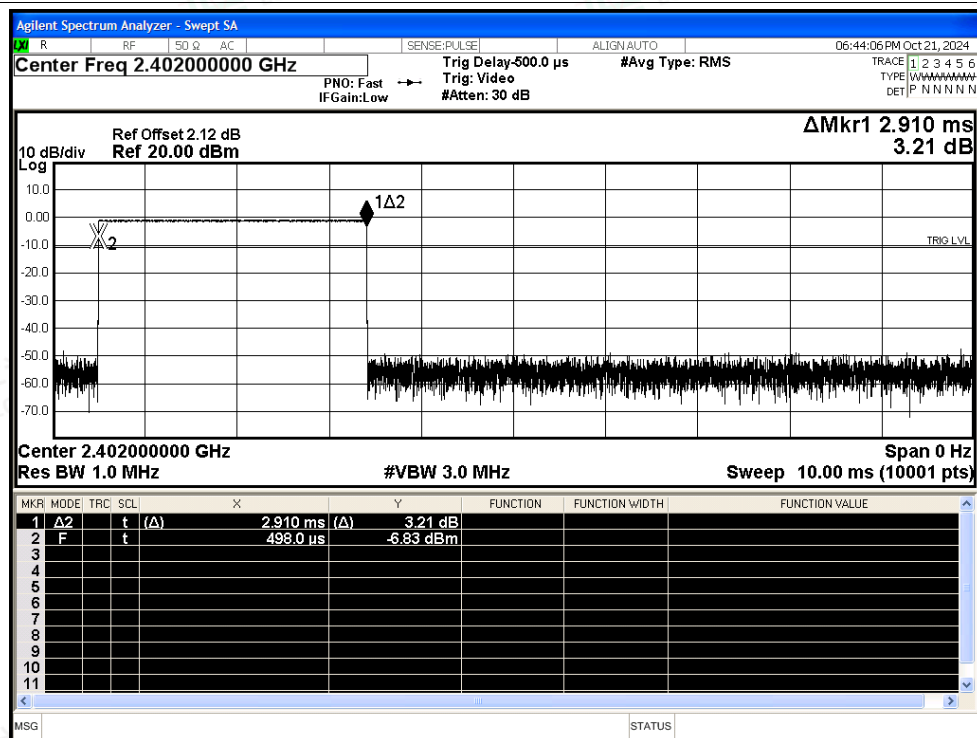


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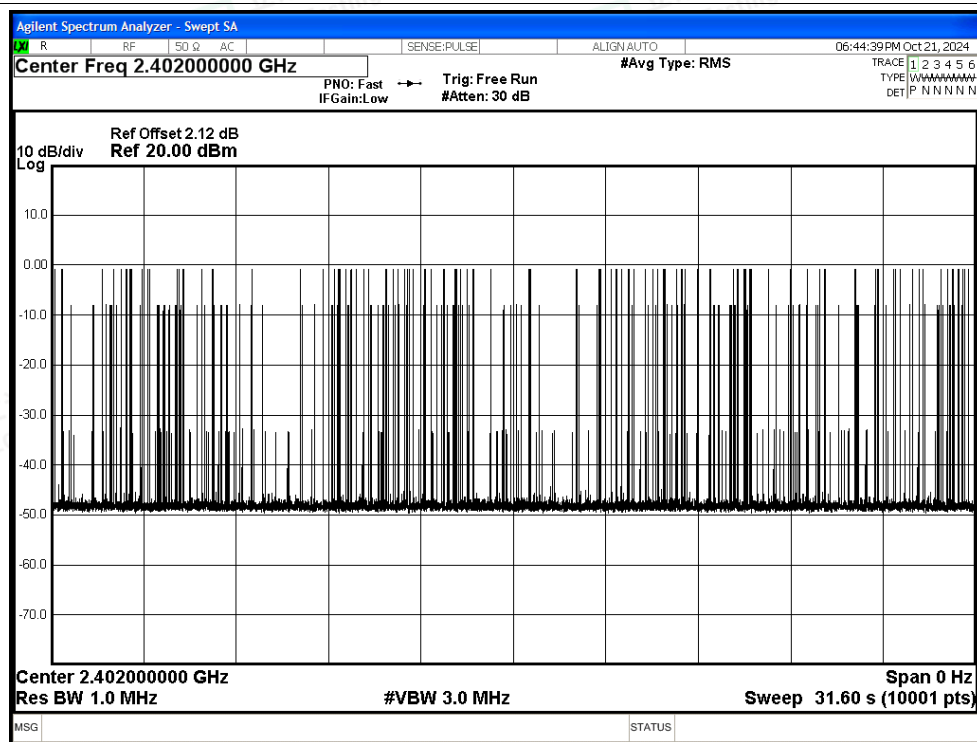


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated





A.5 Number of Hopping Channel

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

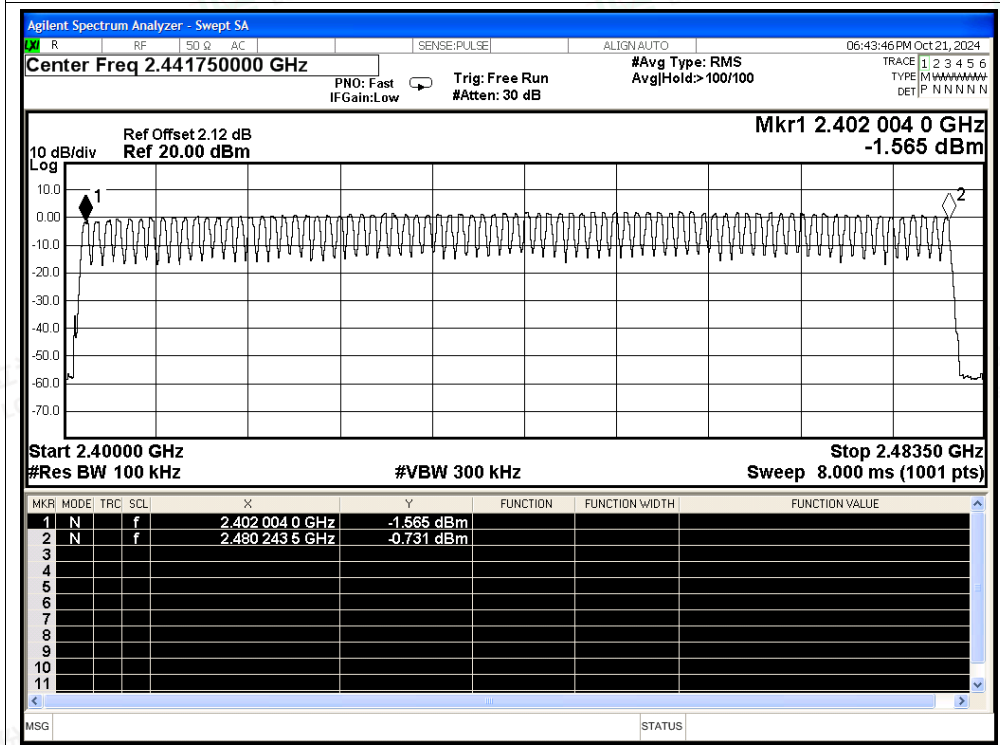


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Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



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A.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55.18	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.75	-20	Pass

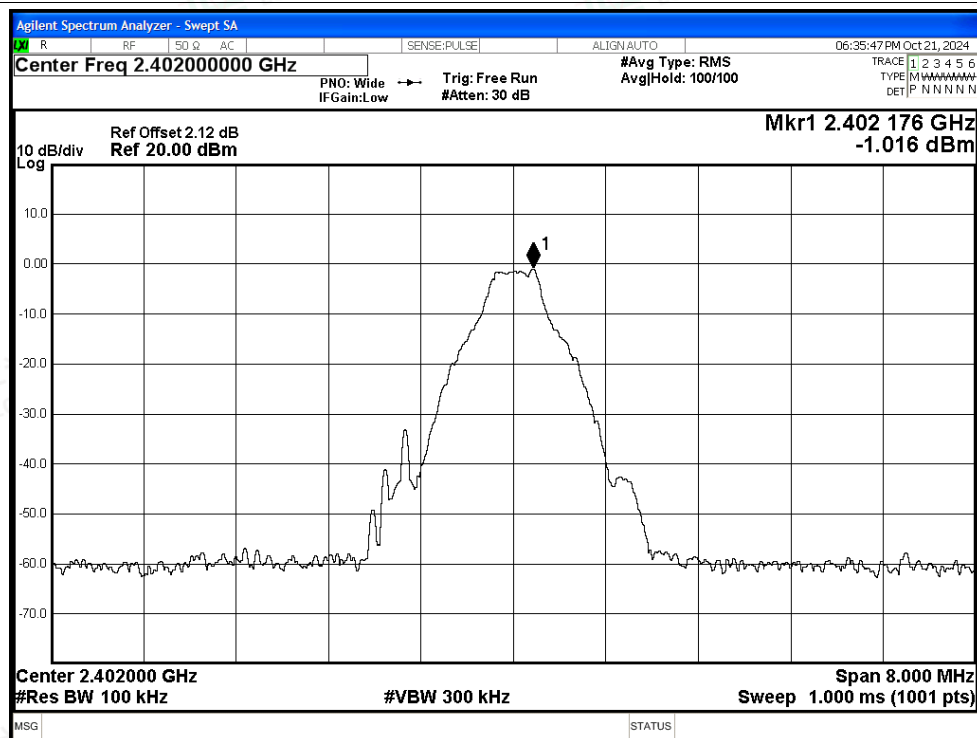


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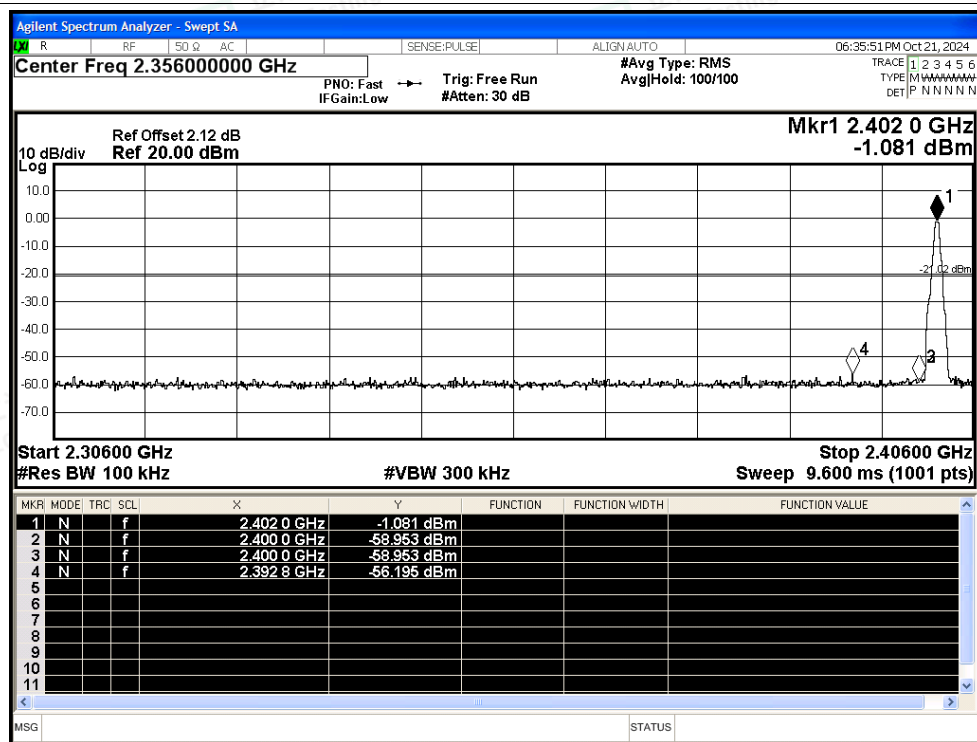


Test Graphs

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

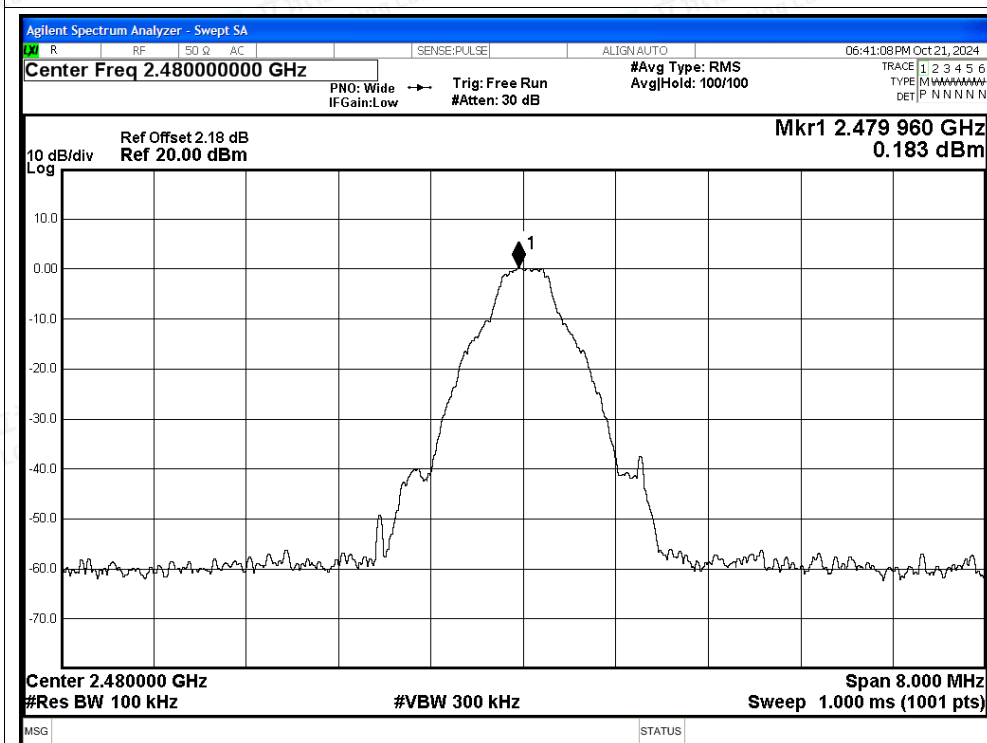


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

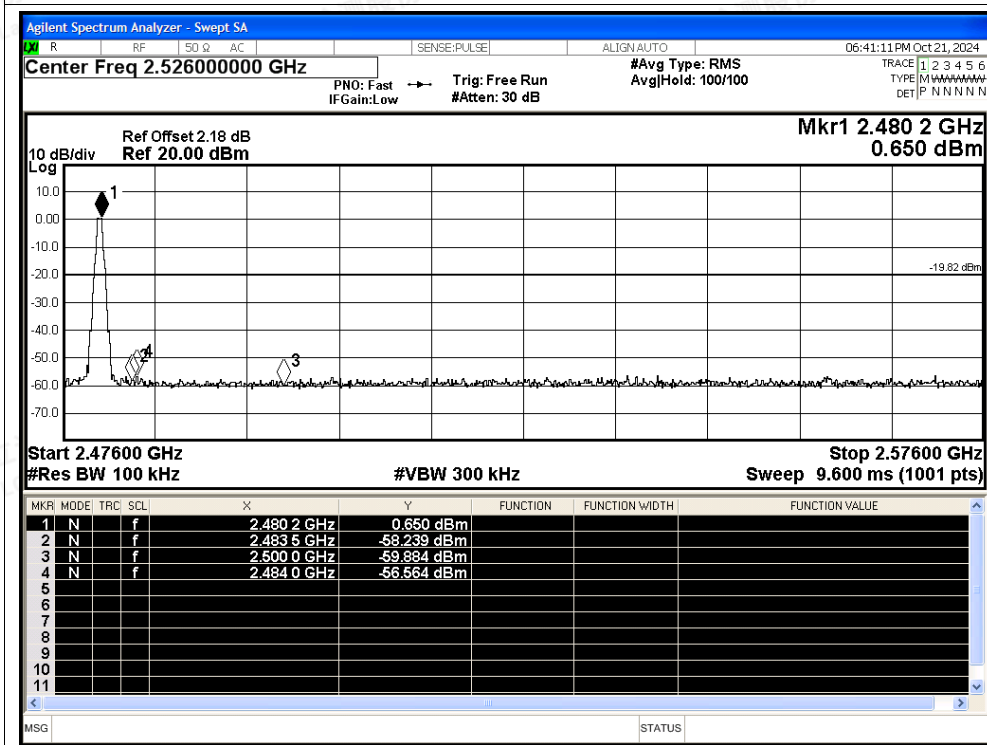




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



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





(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-55.38	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.86	-20	Pass

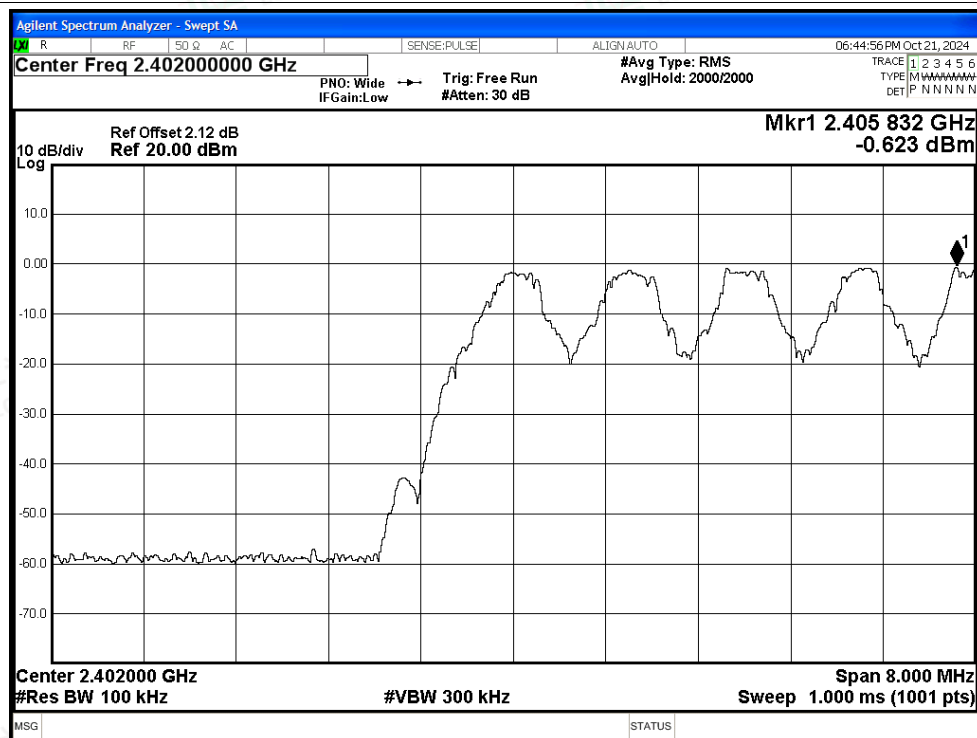


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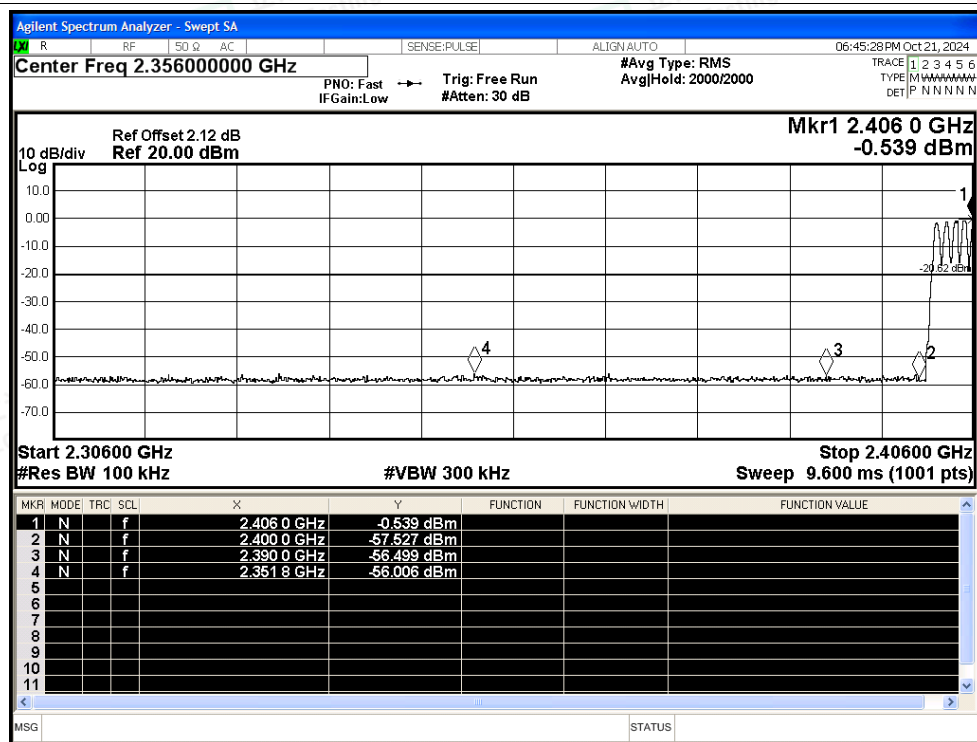


Test Graphs

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

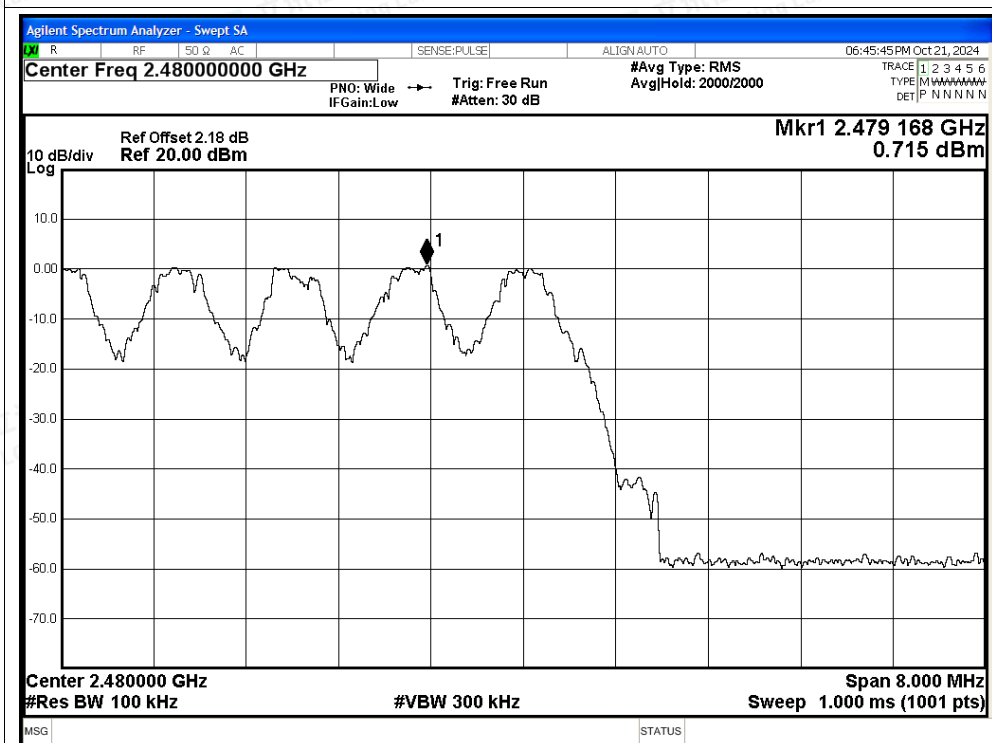


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

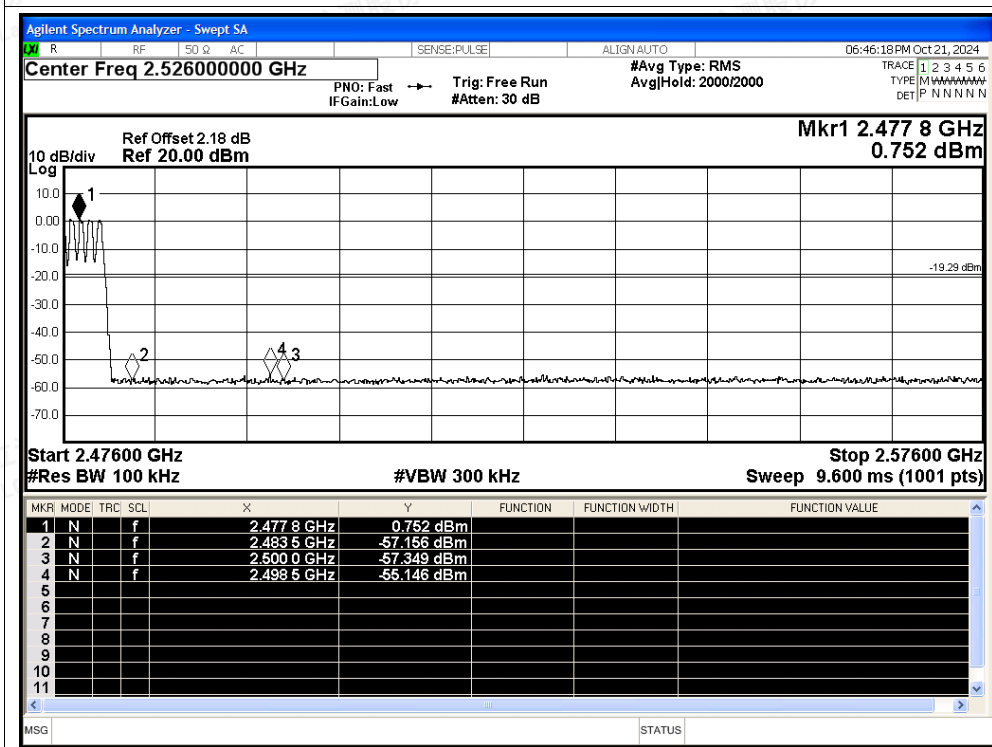




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



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





A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-52.99	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.24	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.82	-20	Pass

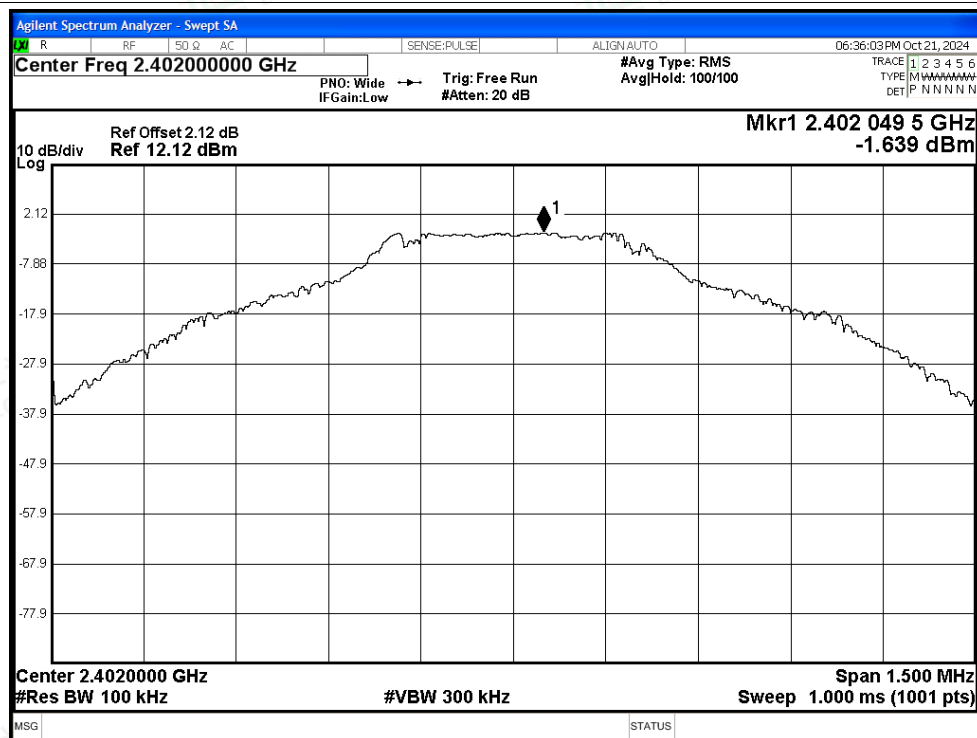


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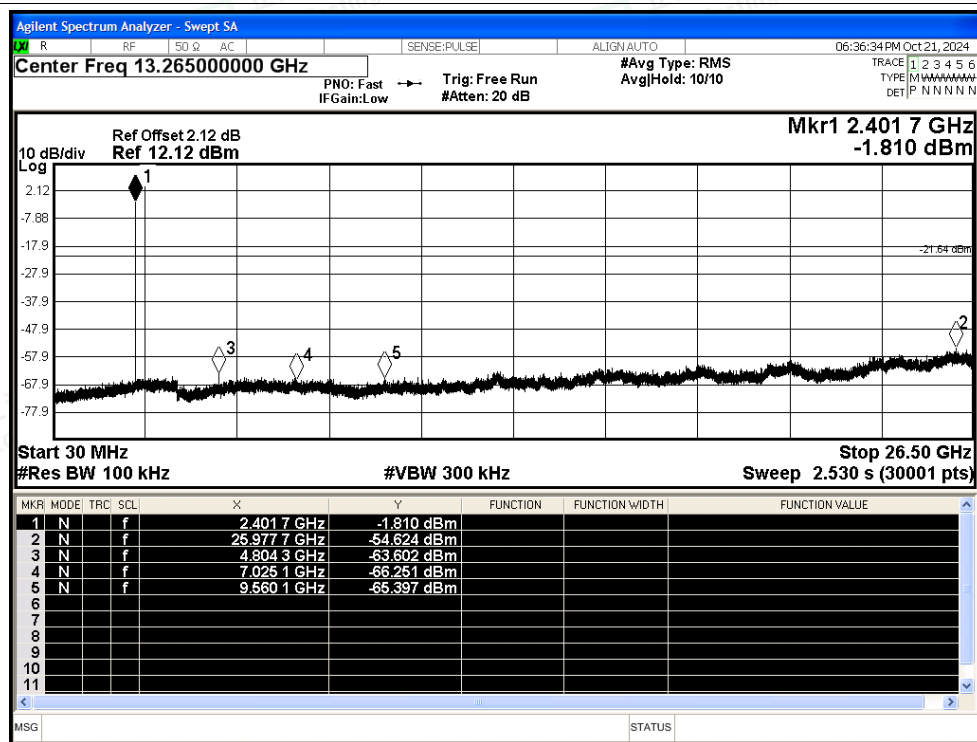


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

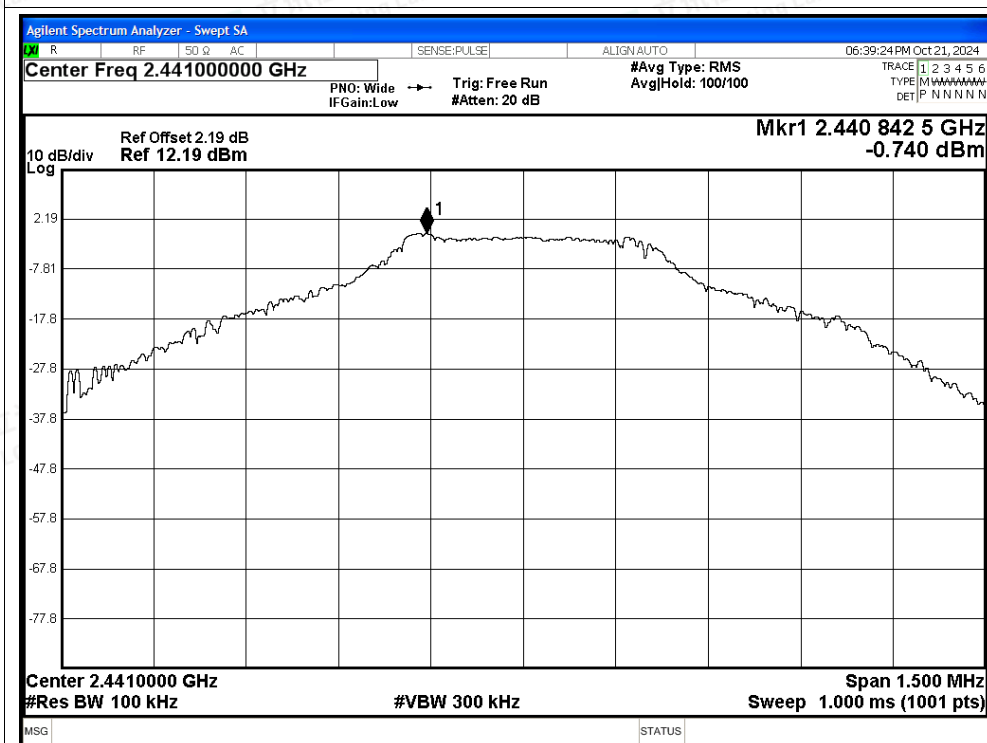


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

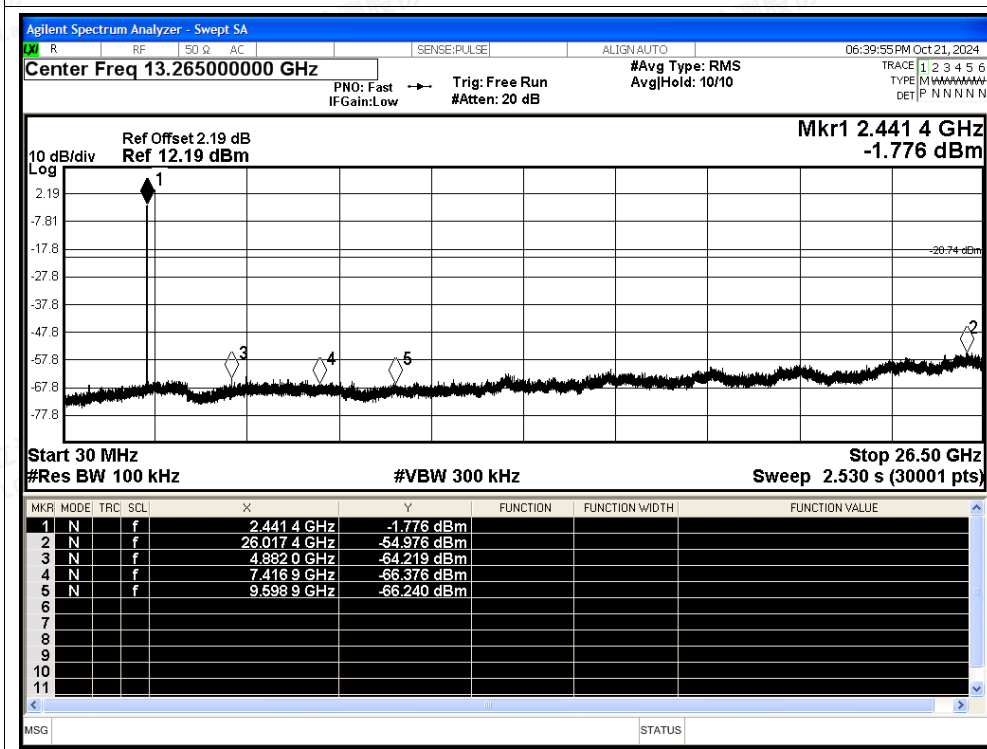




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

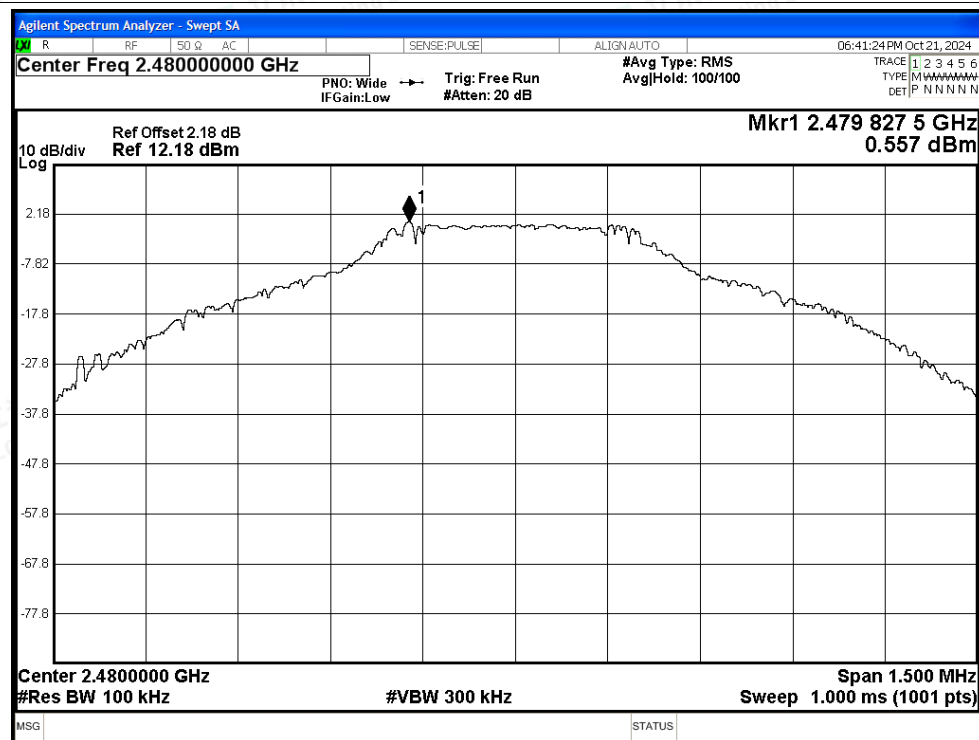


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

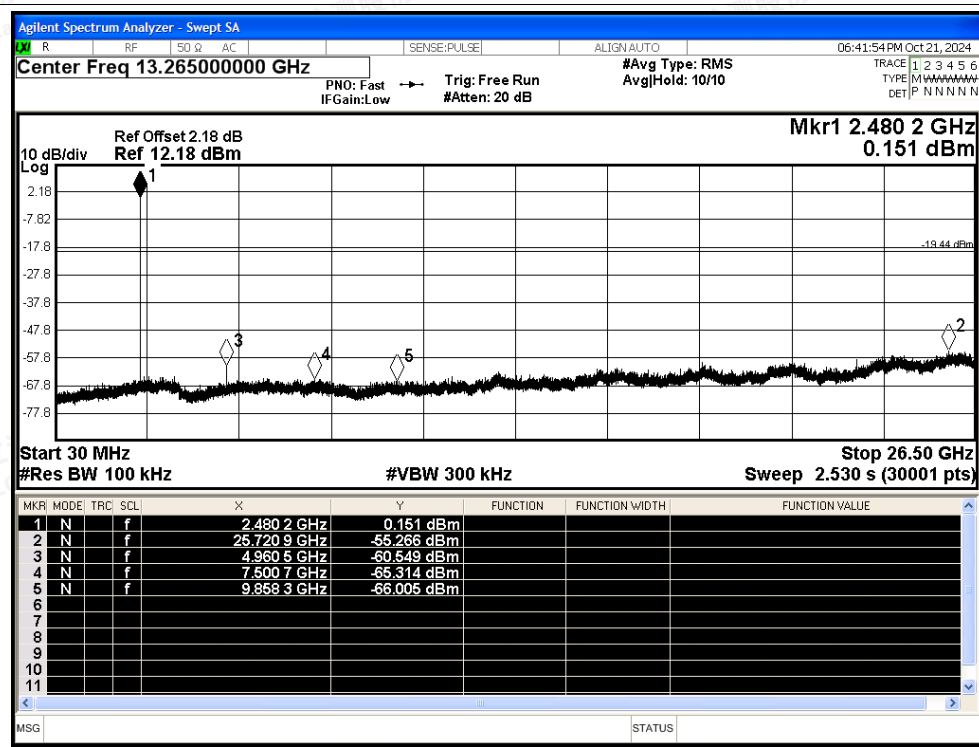




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission





A.8 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.63	1.1	0.34

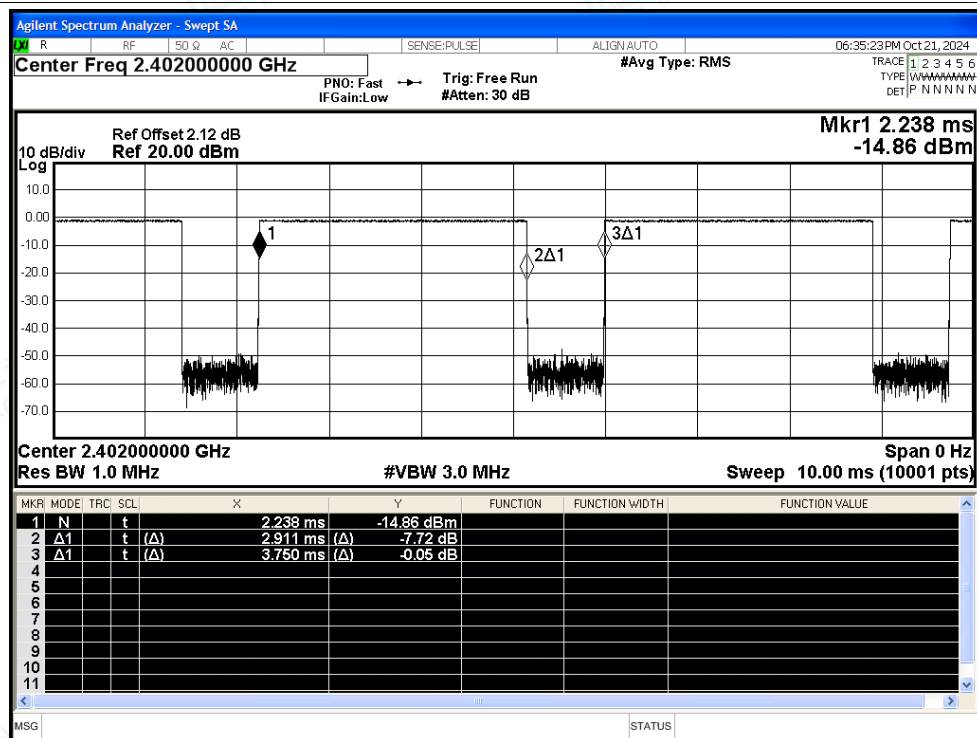


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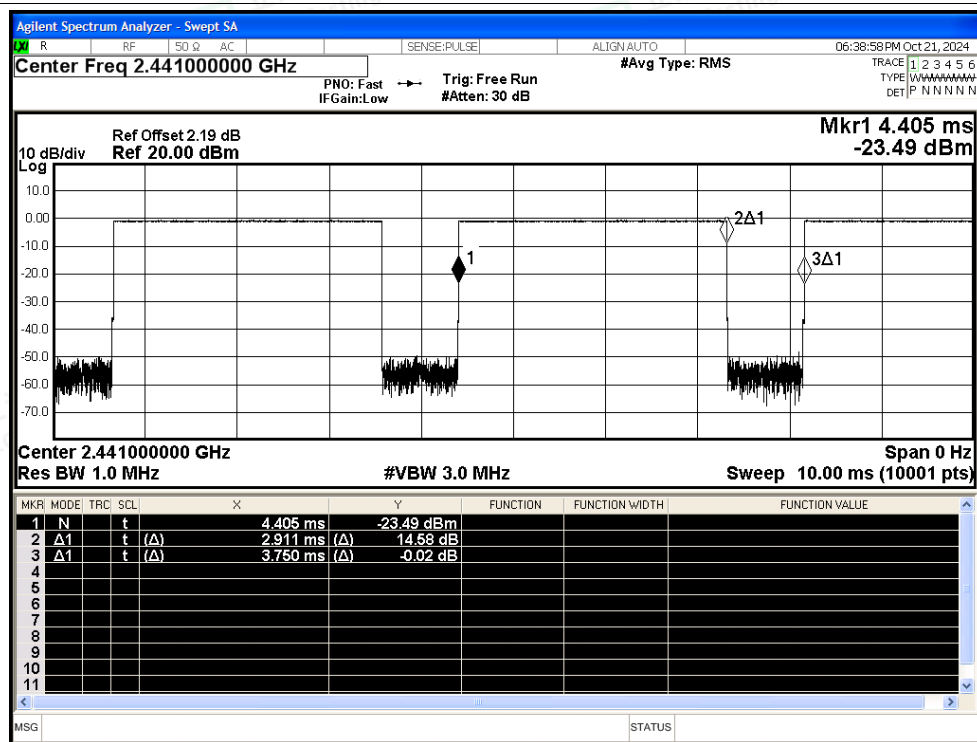


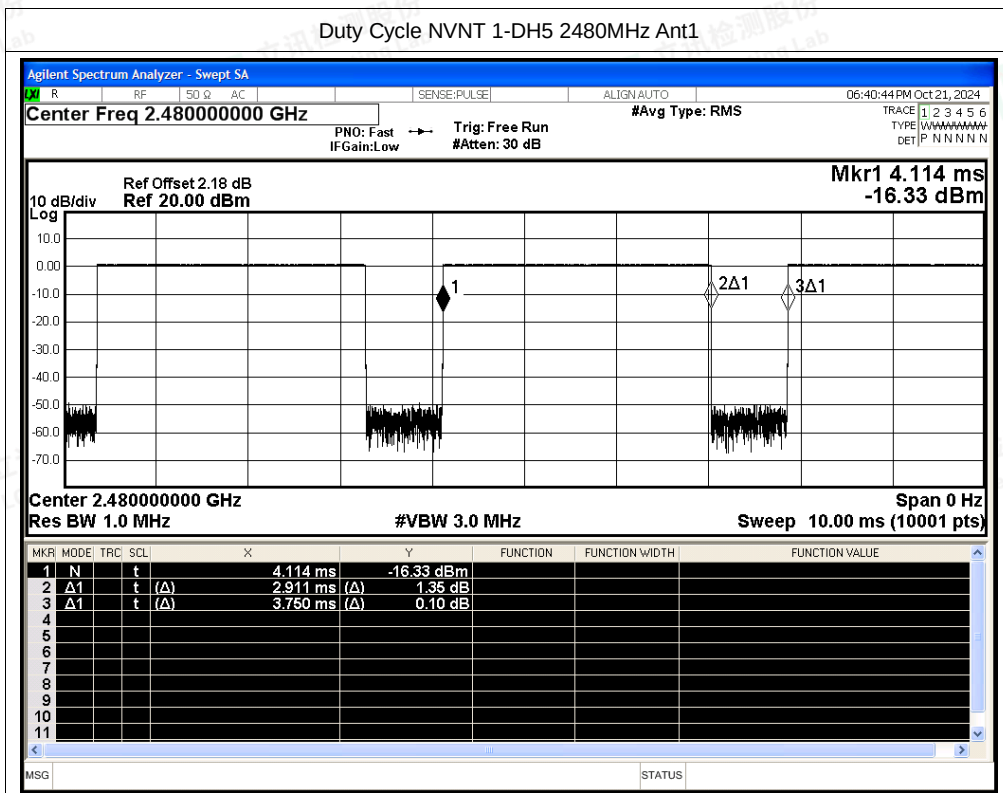
Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant1



Duty Cycle NVNT 1-DH5 2441MHz Ant1







A.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	-49.36	2	-	47.9	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.78	2	1.1	39.58	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2386.128	-47.48	2	-	49.78	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2385.648	-57.64	2	1.1	40.72	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-51.82	2	-	45.44	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-57.79	2	1.1	40.57	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-48.92	2	-	48.34	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.47	2	1.1	40.89	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.664	-43.26	2	-	54	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.8	-56.96	2	1.1	41.4	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.98	2	-	47.28	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.77	2	1.1	40.59	Average	54	Pass

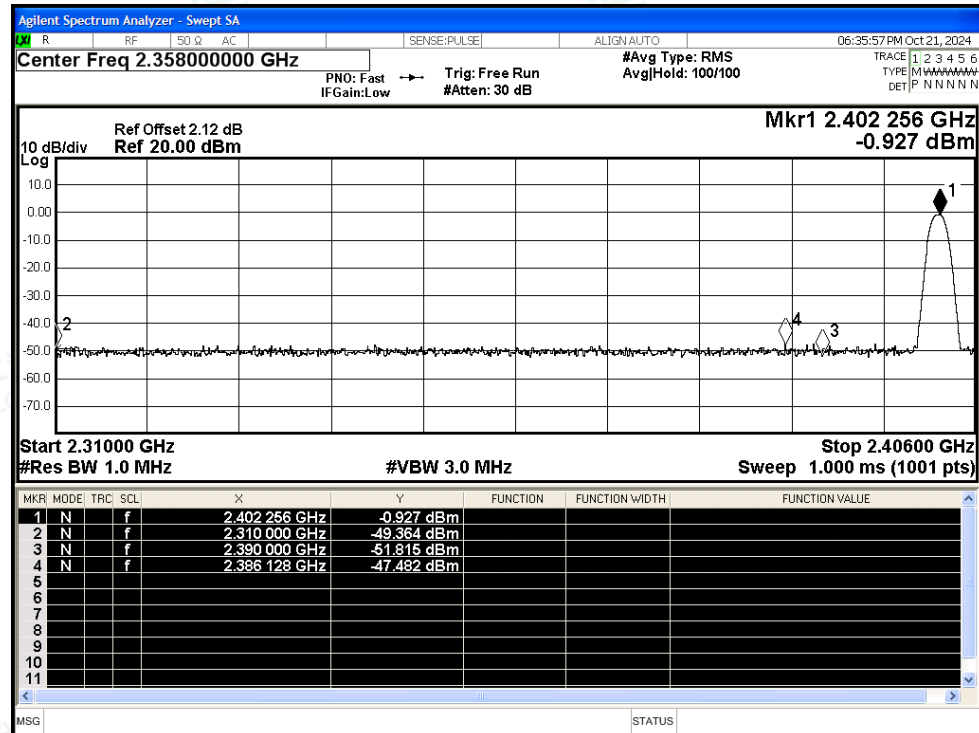


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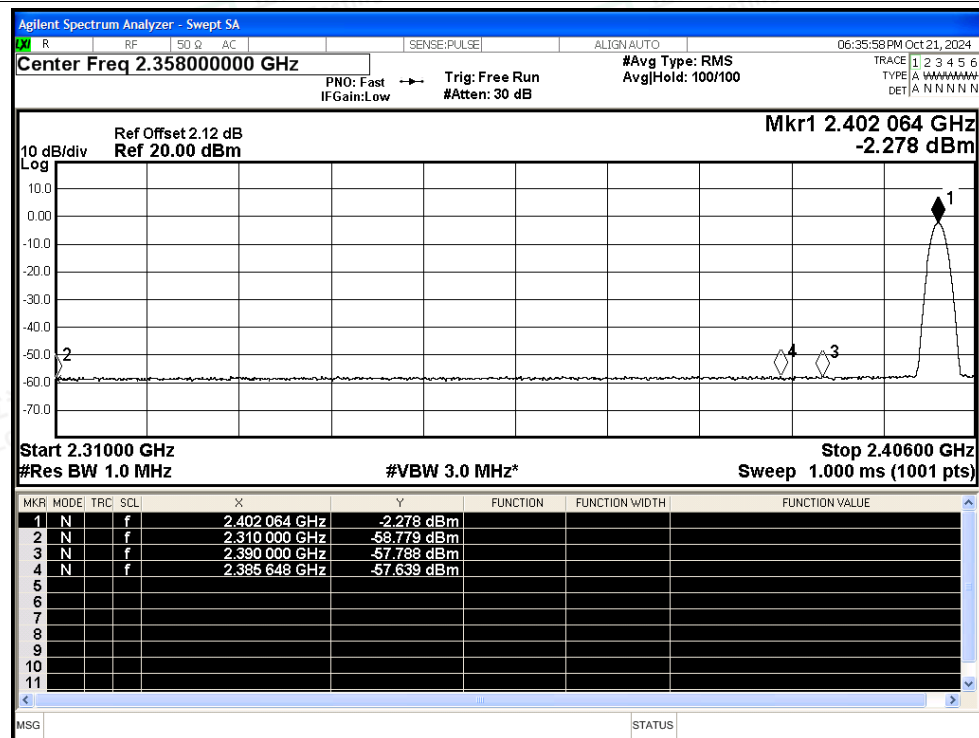


Test Graphs

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



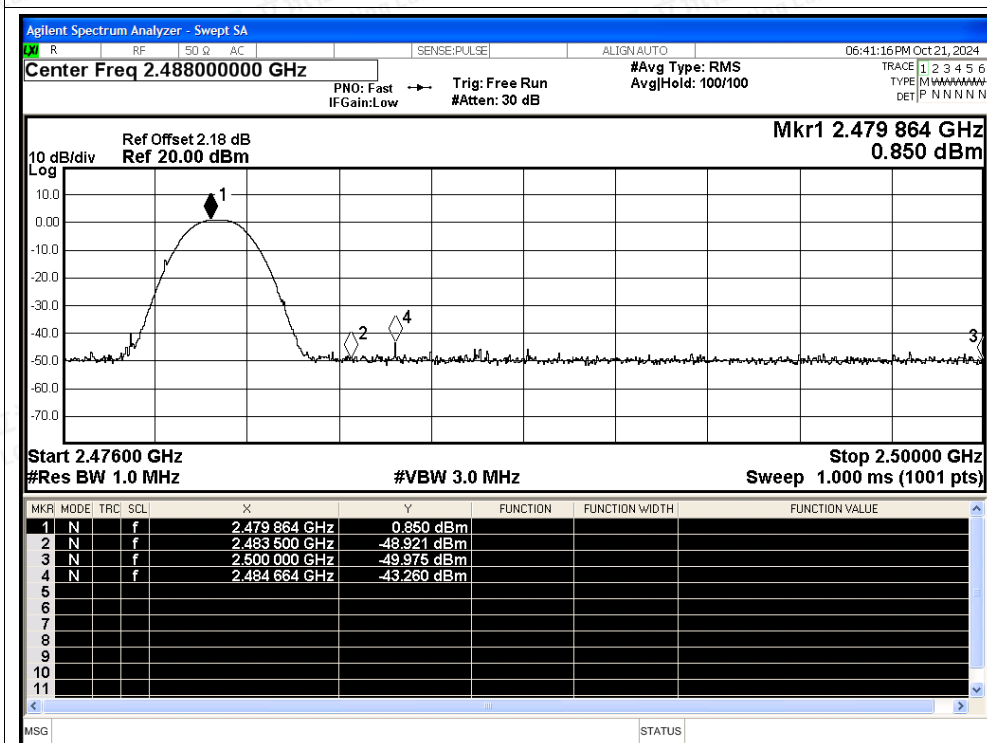
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



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



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

