



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Portable Wireless Speaker

Test Model: R12

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Ling Zhu





A.1 -20dB Bandwidth

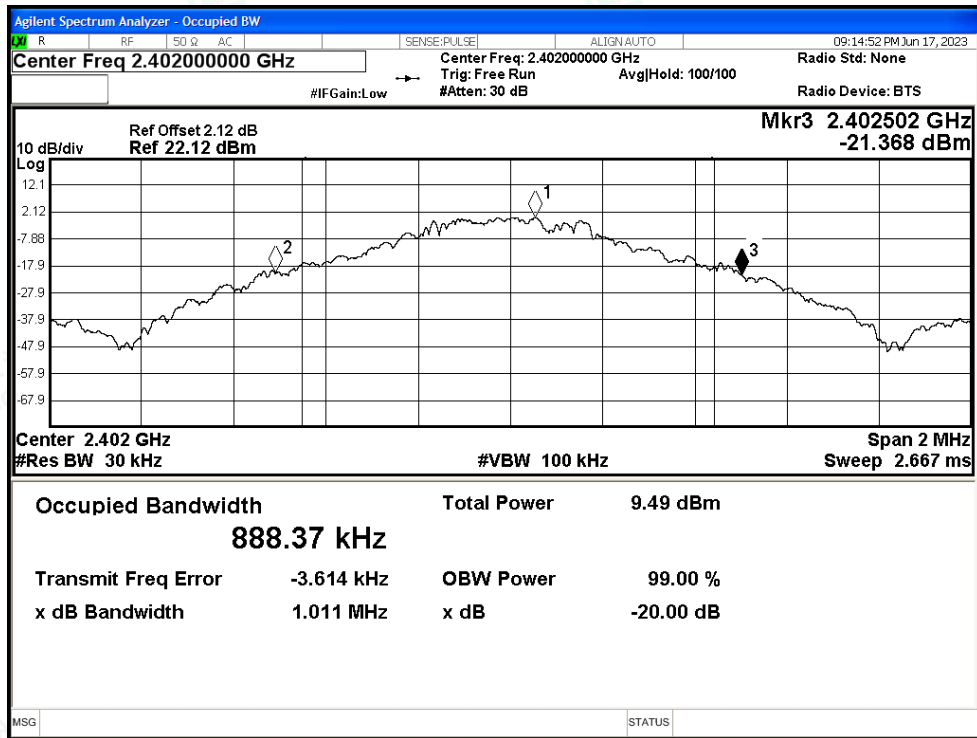
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.011	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.973	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.027	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.278	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.301	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.315	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.302	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.314	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.282	N/A	Pass



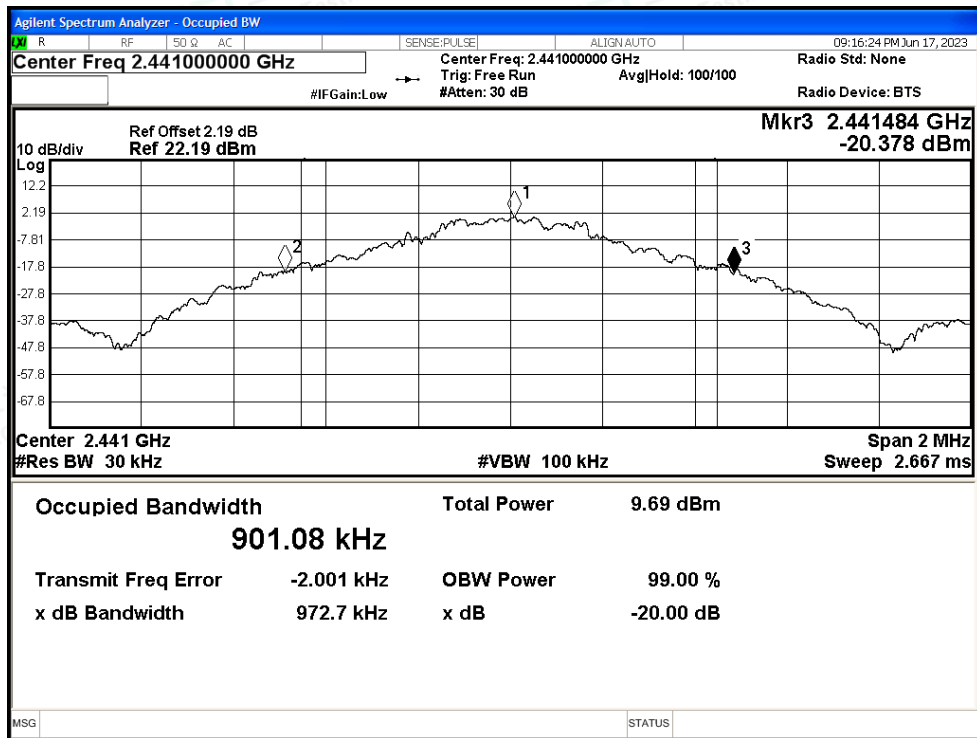


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

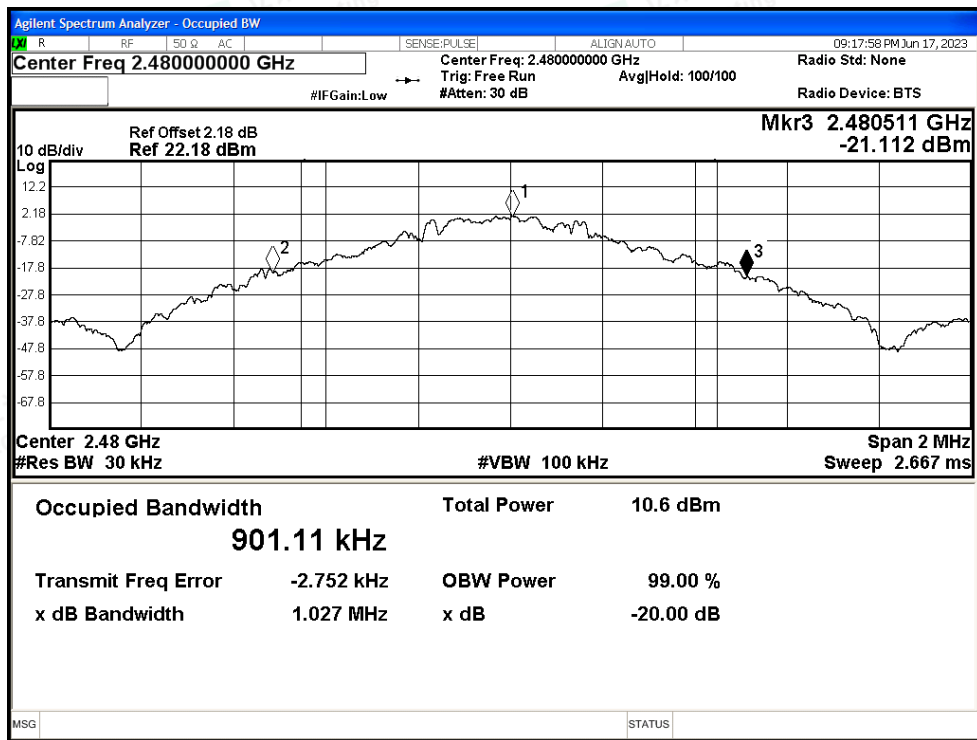


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

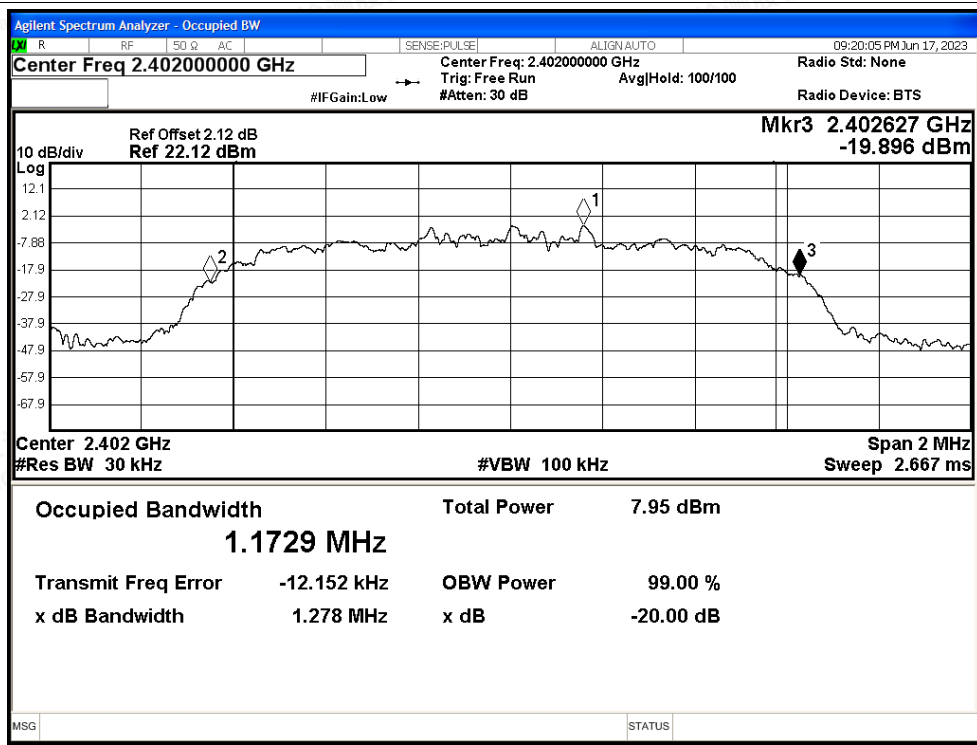




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

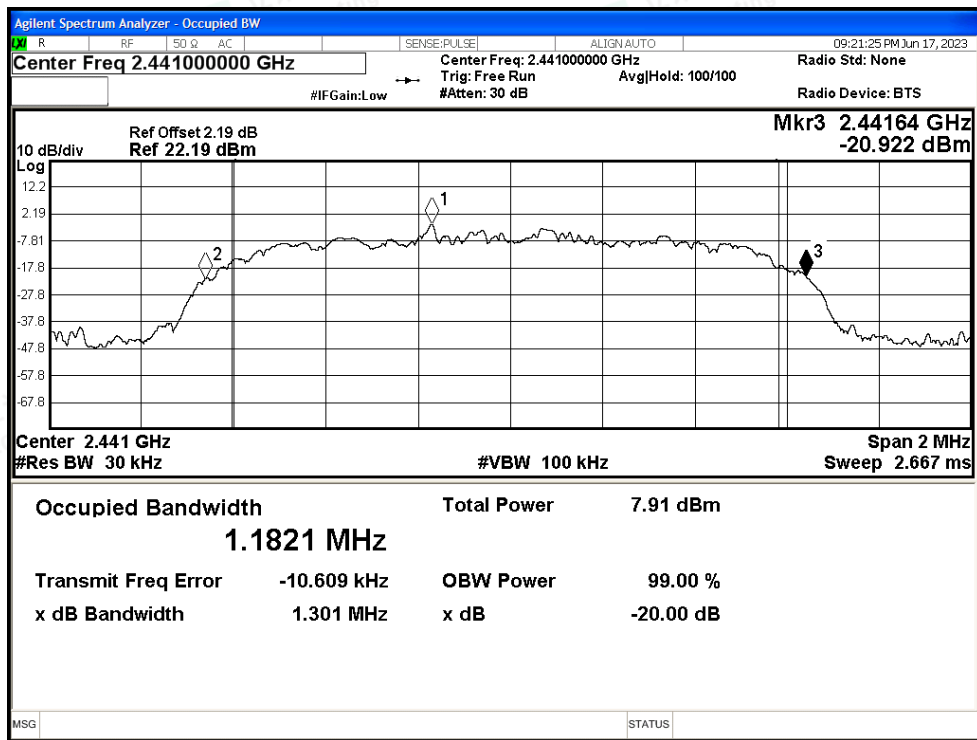


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

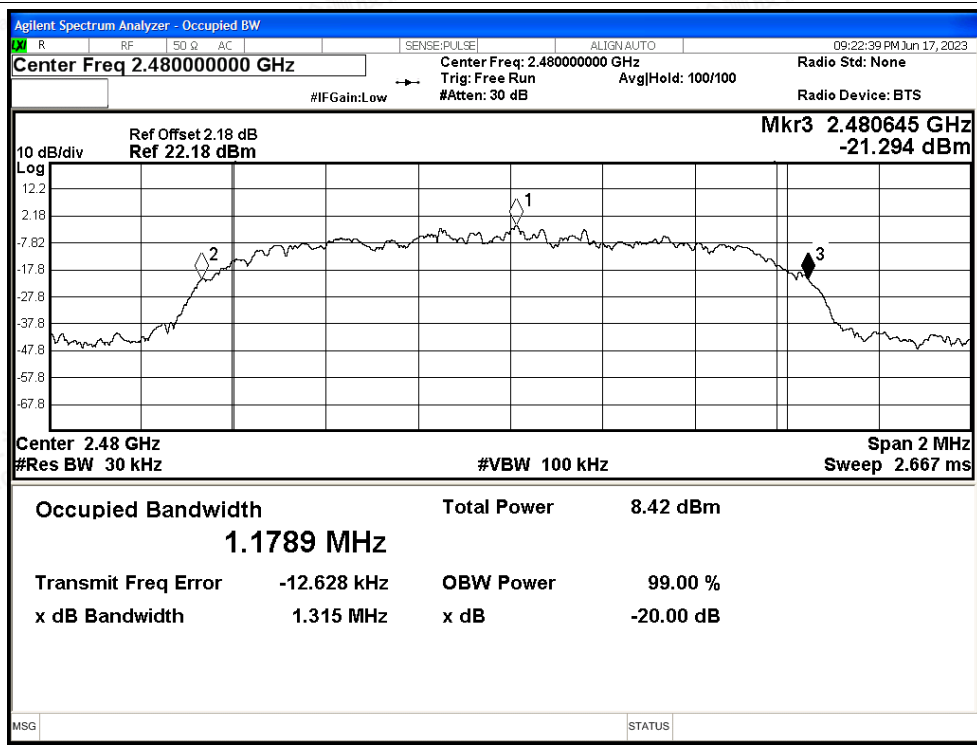




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

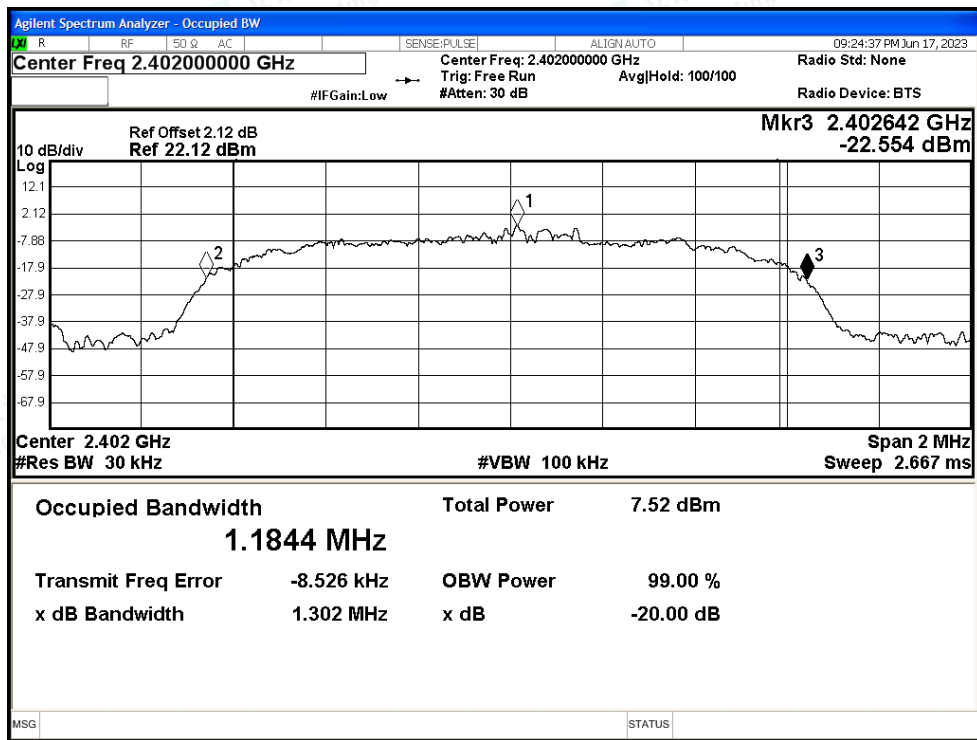


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

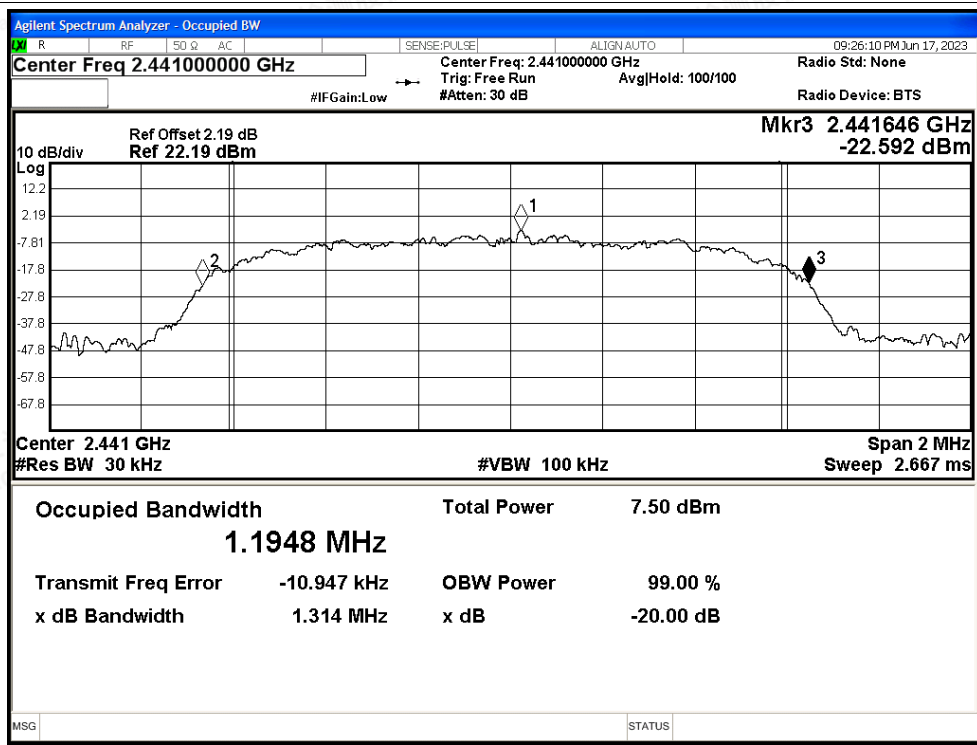


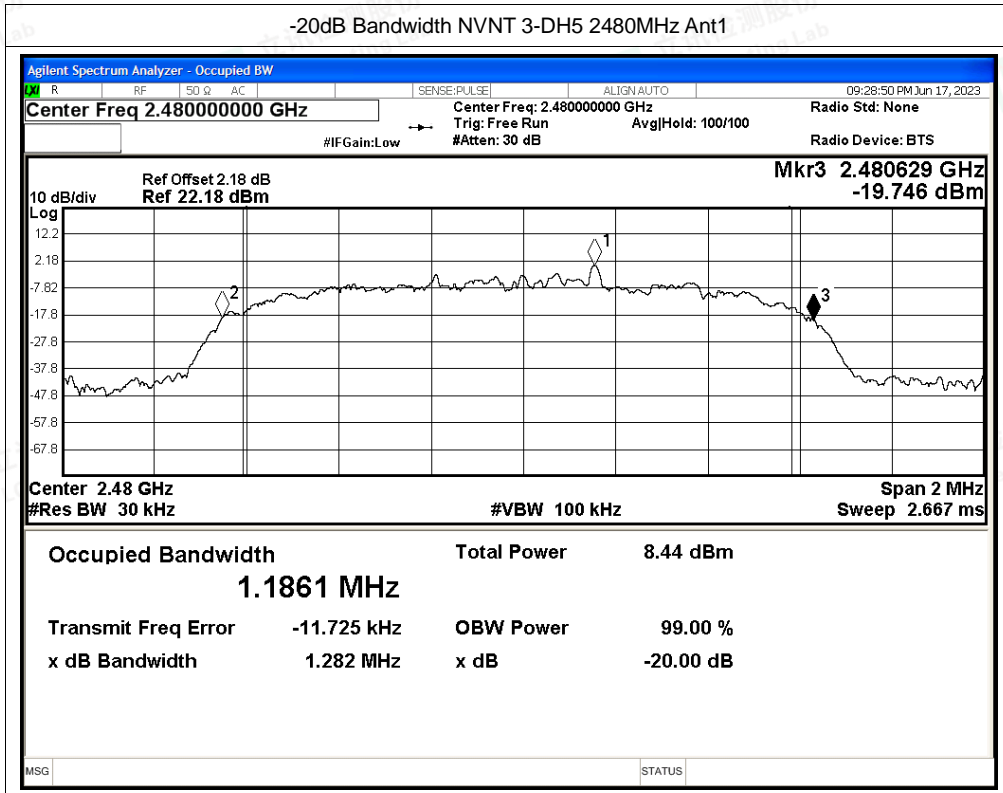


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1







A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	3.13	21	Pass
NVNT	1-DH5	2441	Ant1	3.58	21	Pass
NVNT	1-DH5	2480	Ant1	4.26	21	Pass
NVNT	2-DH5	2402	Ant1	3.02	21	Pass
NVNT	2-DH5	2441	Ant1	3.59	21	Pass
NVNT	2-DH5	2480	Ant1	3.93	21	Pass
NVNT	3-DH5	2402	Ant1	3.14	21	Pass
NVNT	3-DH5	2441	Ant1	3.64	21	Pass
NVNT	3-DH5	2480	Ant1	4.02	21	Pass

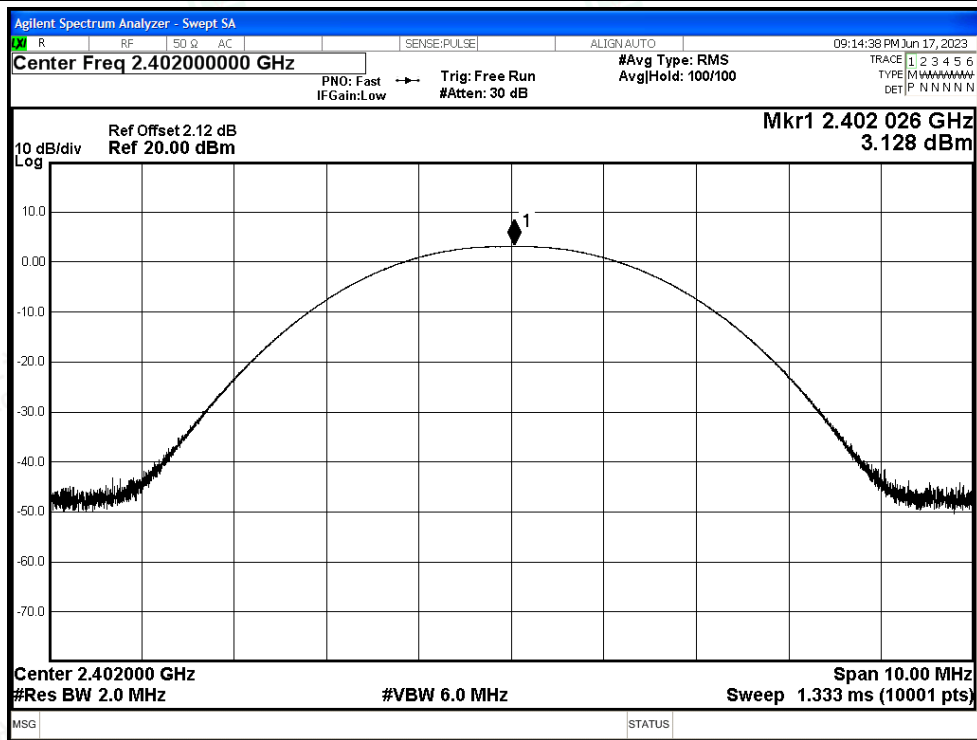


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Scan code to check authenticity

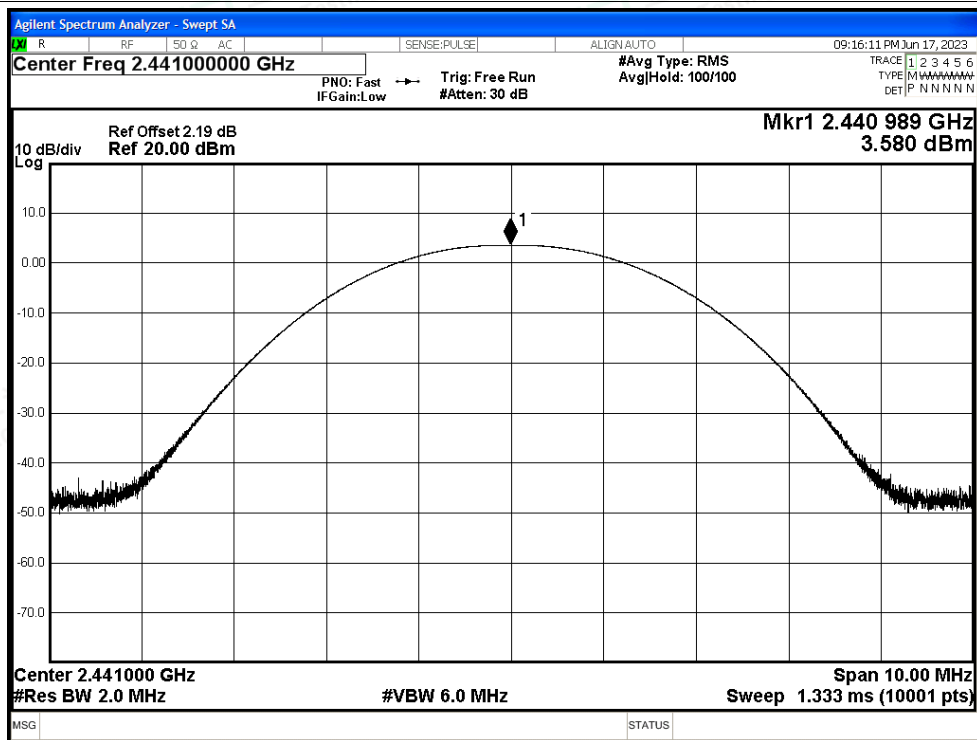


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

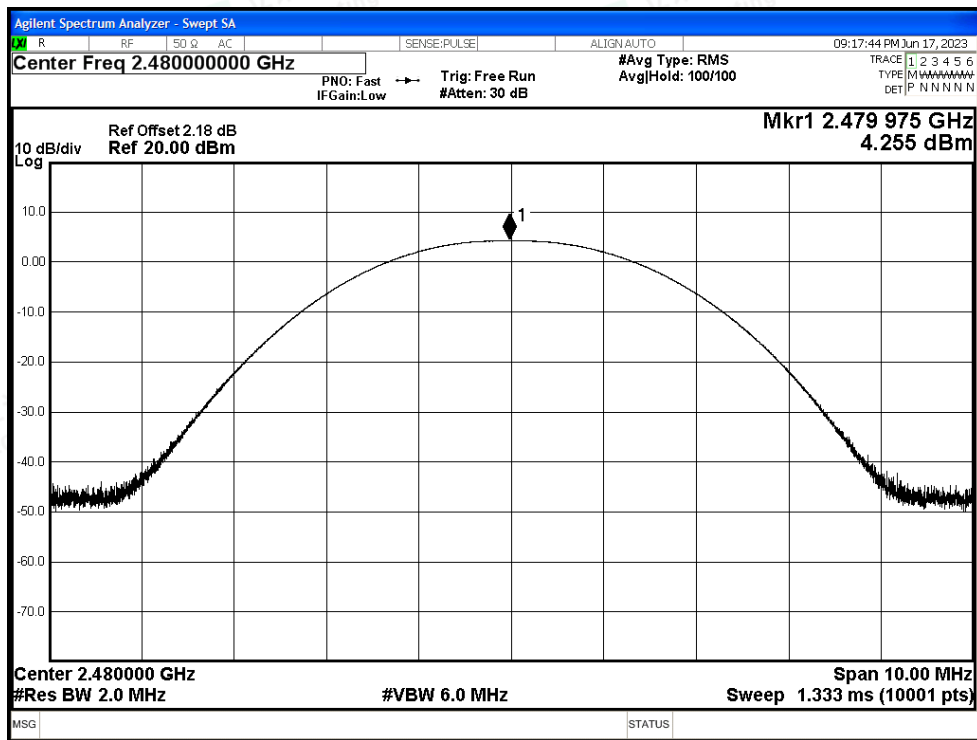


Power NVNT 1-DH5 2441MHz Ant1

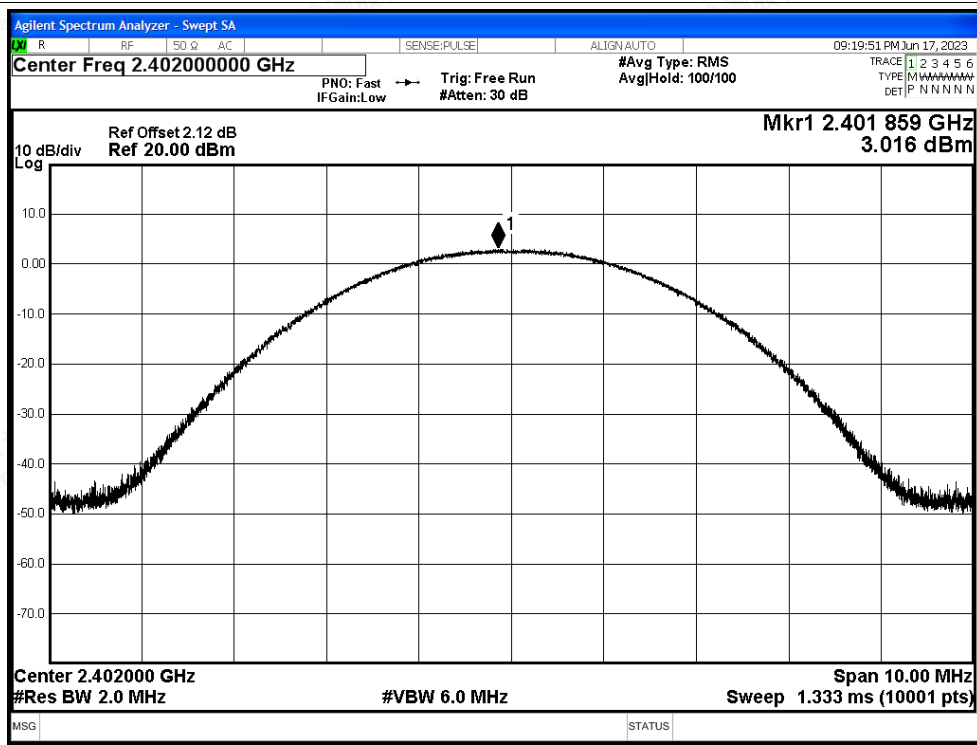




Power NVNT 1-DH5 2480MHz Ant1

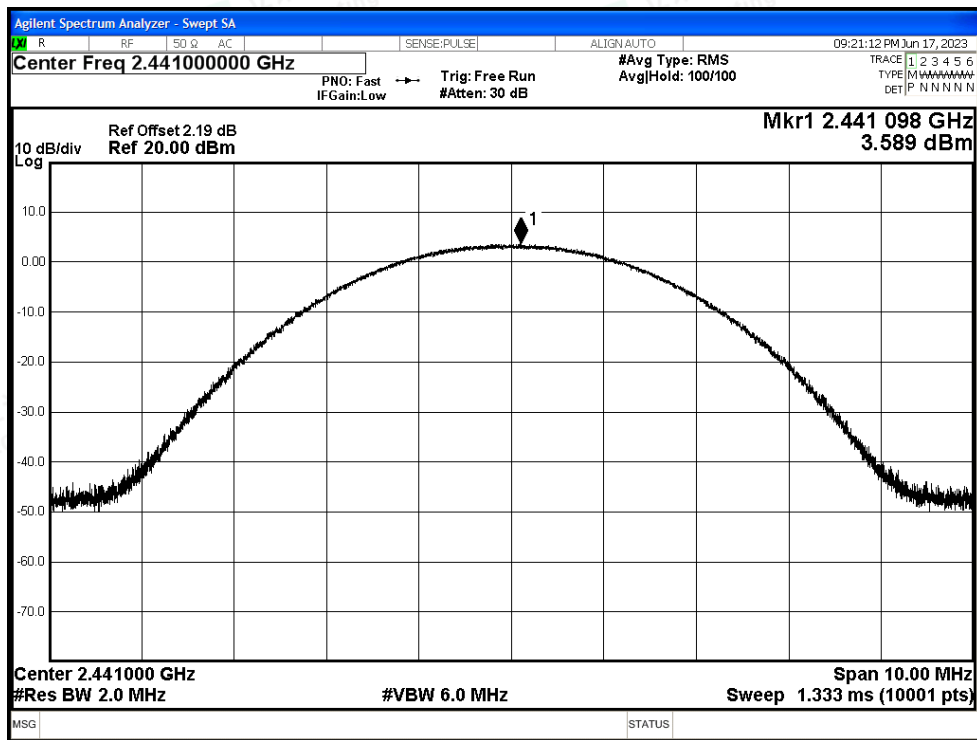


Power NVNT 2-DH5 2402MHz Ant1

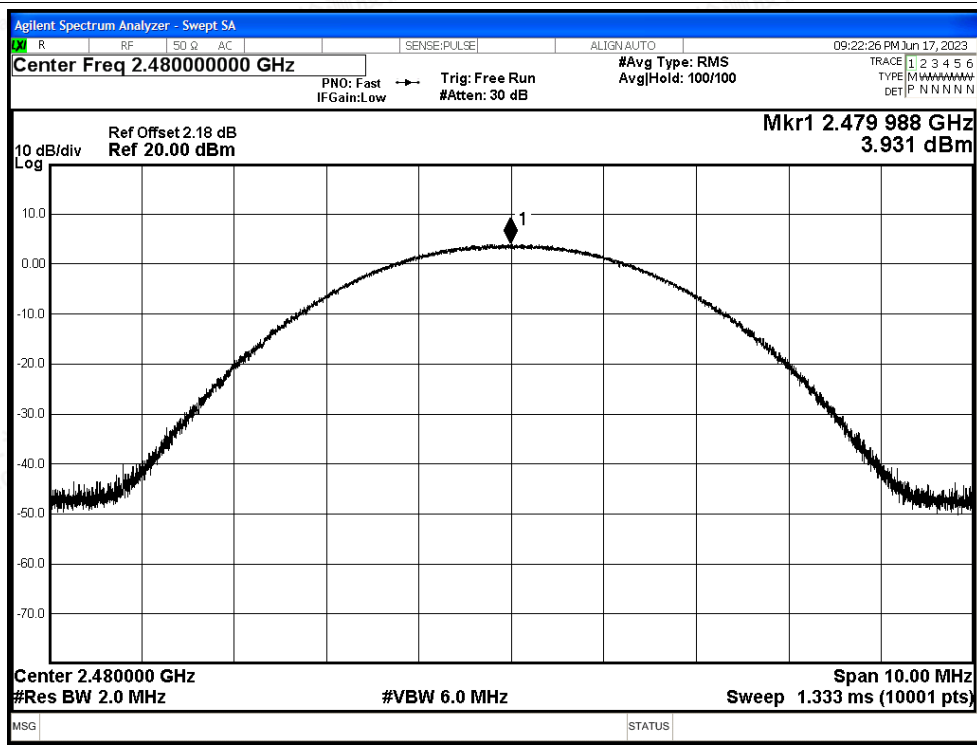




Power NVNT 2-DH5 2441MHz Ant1

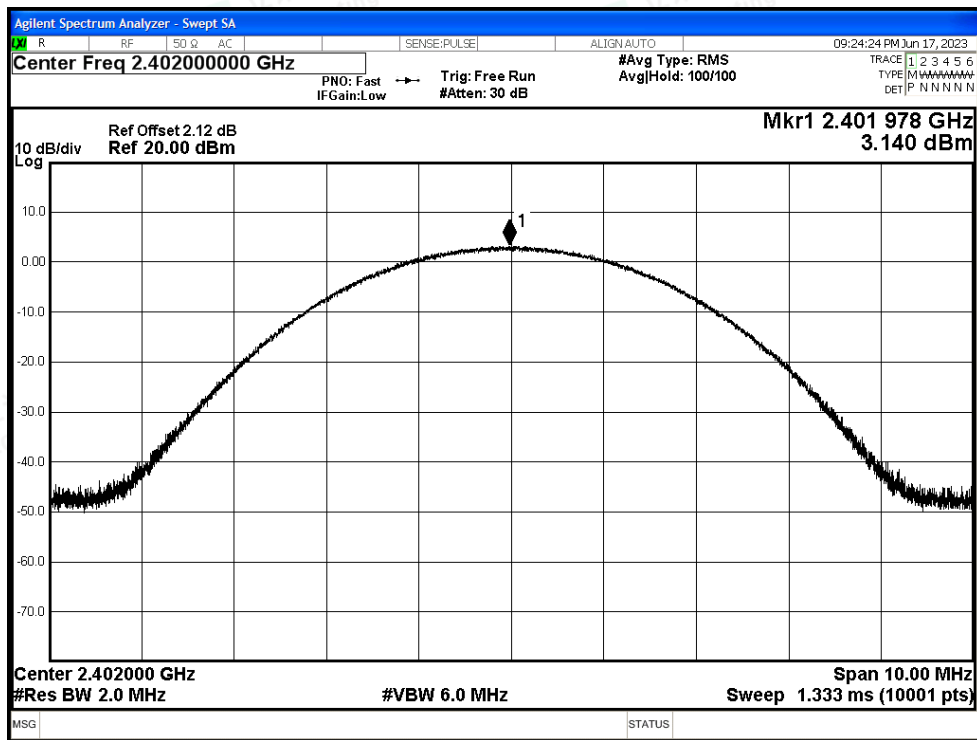


Power NVNT 2-DH5 2480MHz Ant1

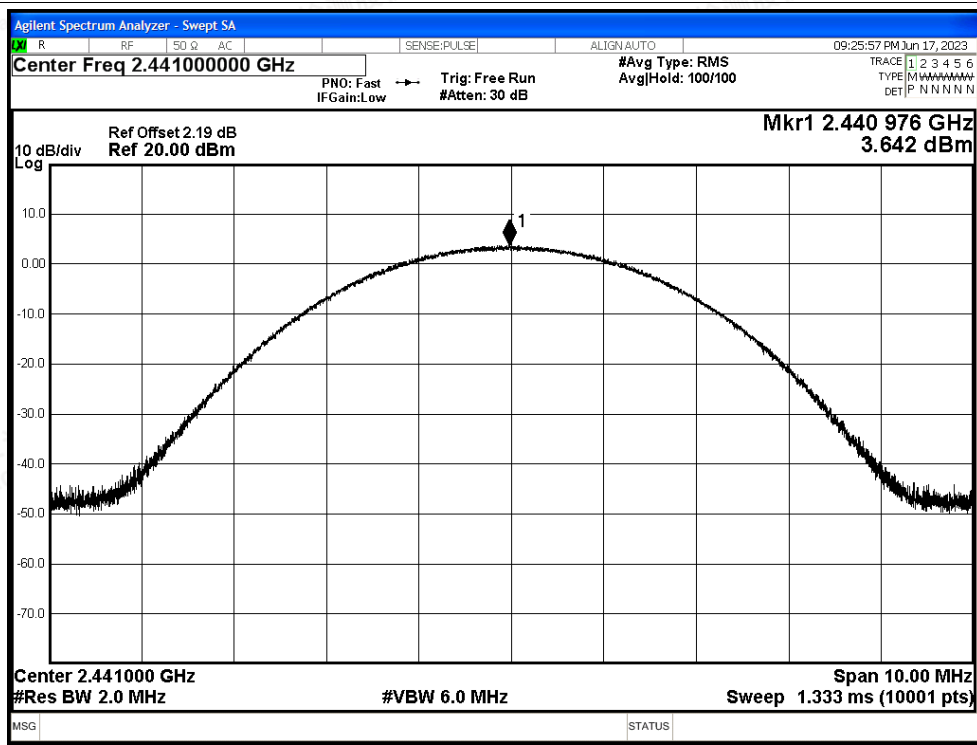


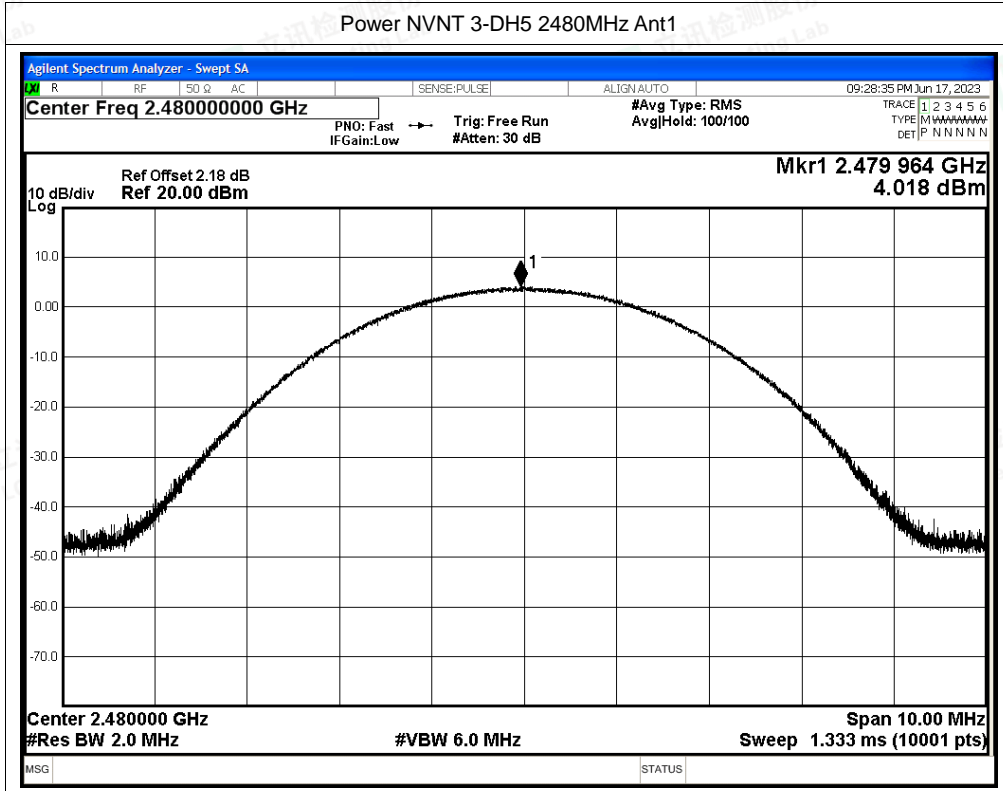


Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



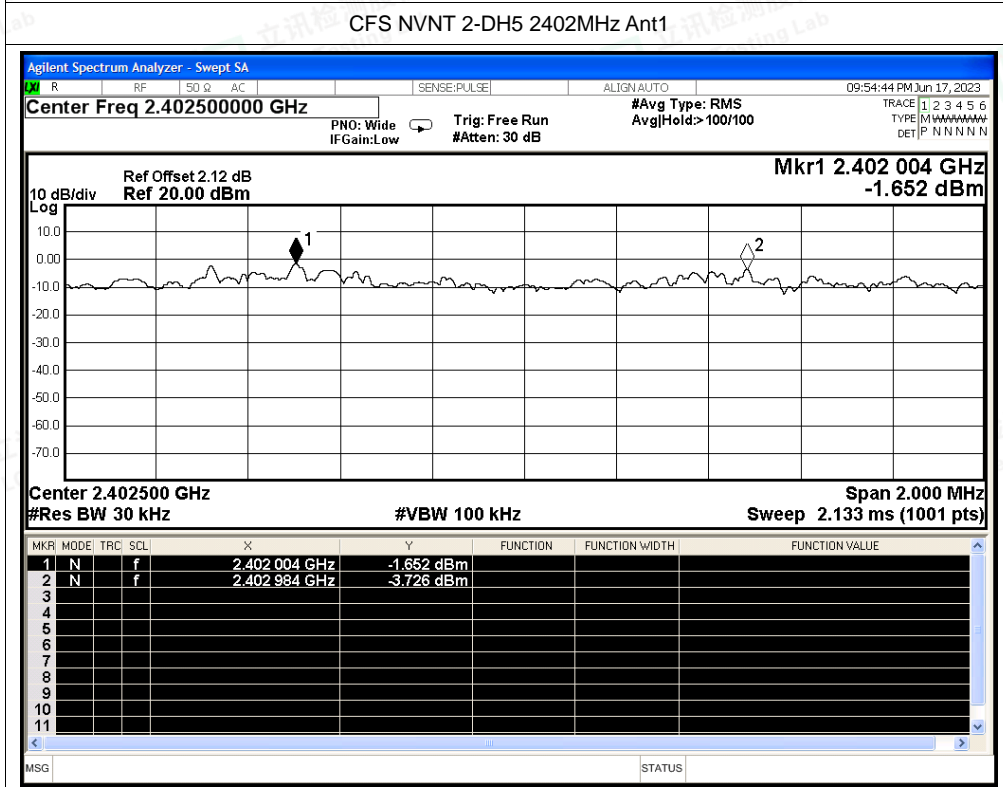
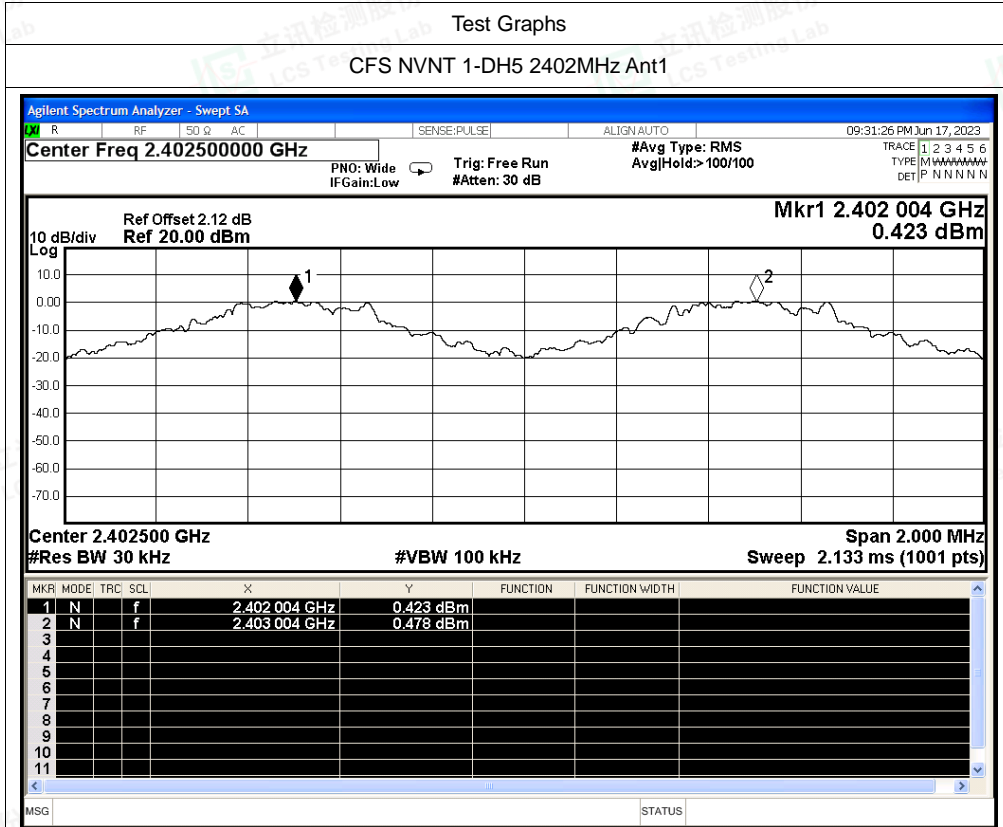


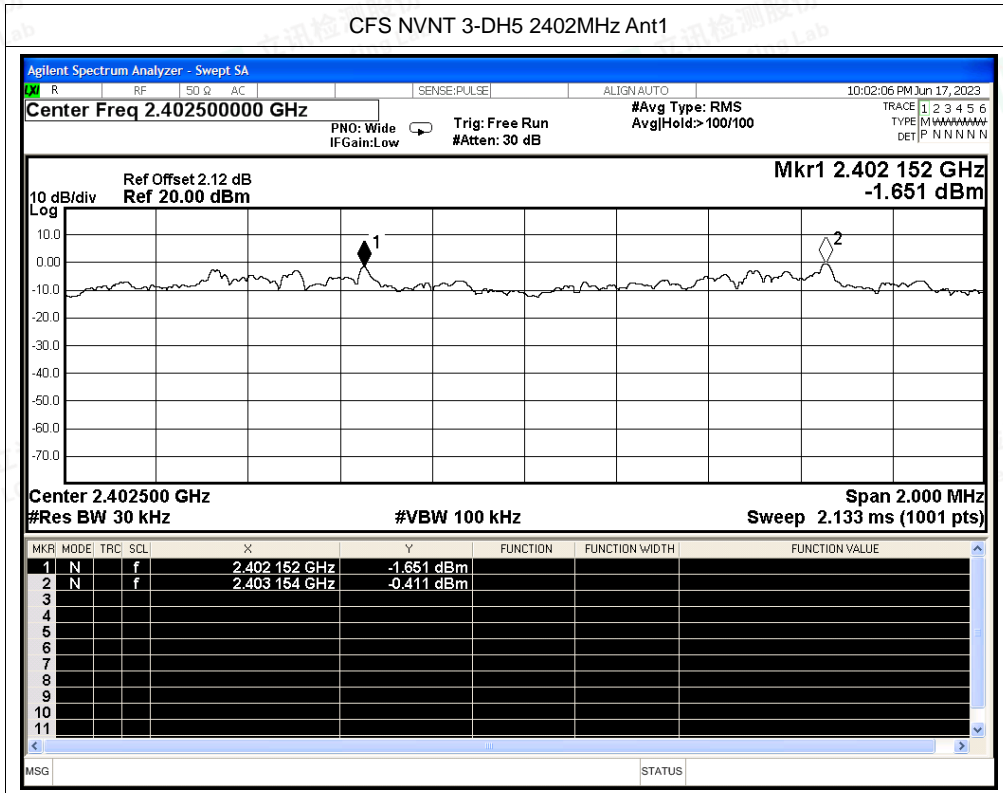


A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.004	2403.004	1	0.685	Pass
NVNT	2-DH5	Ant1	2402.004	2402.984	0.98	0.877	Pass
NVNT	3-DH5	Ant1	2402.152	2403.154	1.002	0.876	Pass









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	2.882	319.902	111	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	288.5	100	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.886	314.574	109	31600	400	Pass

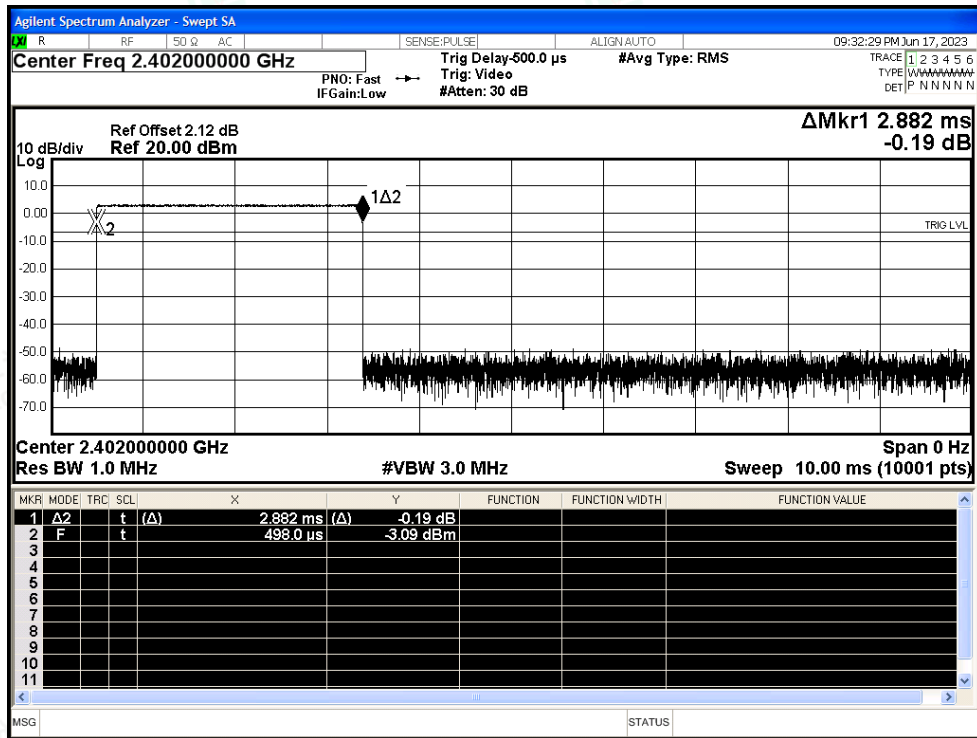


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Scan code to check authenticity

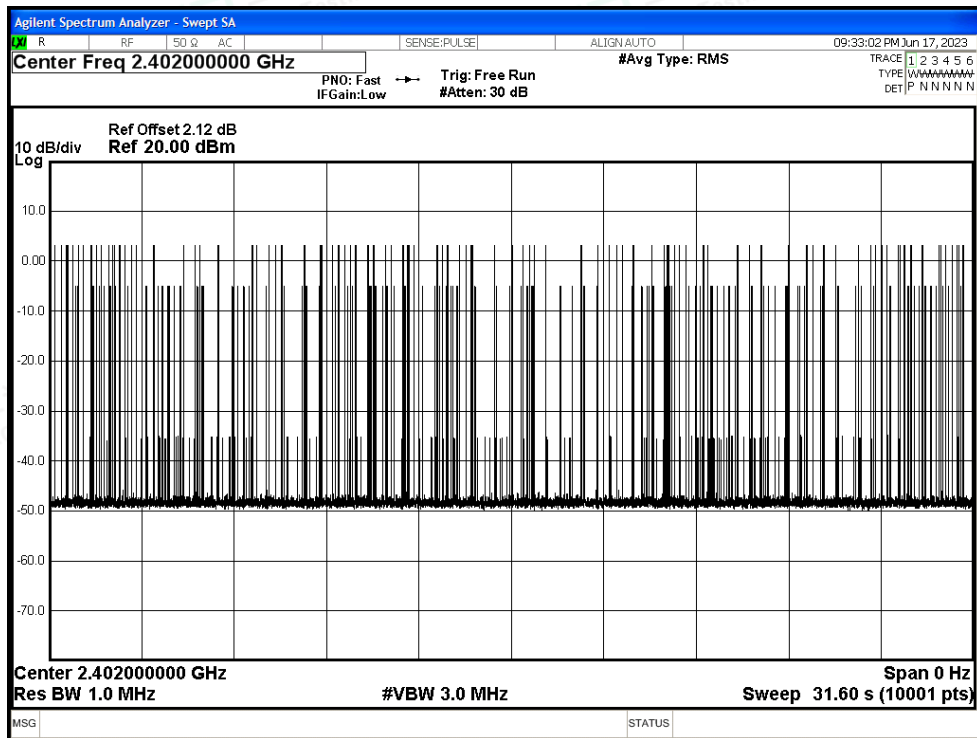


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

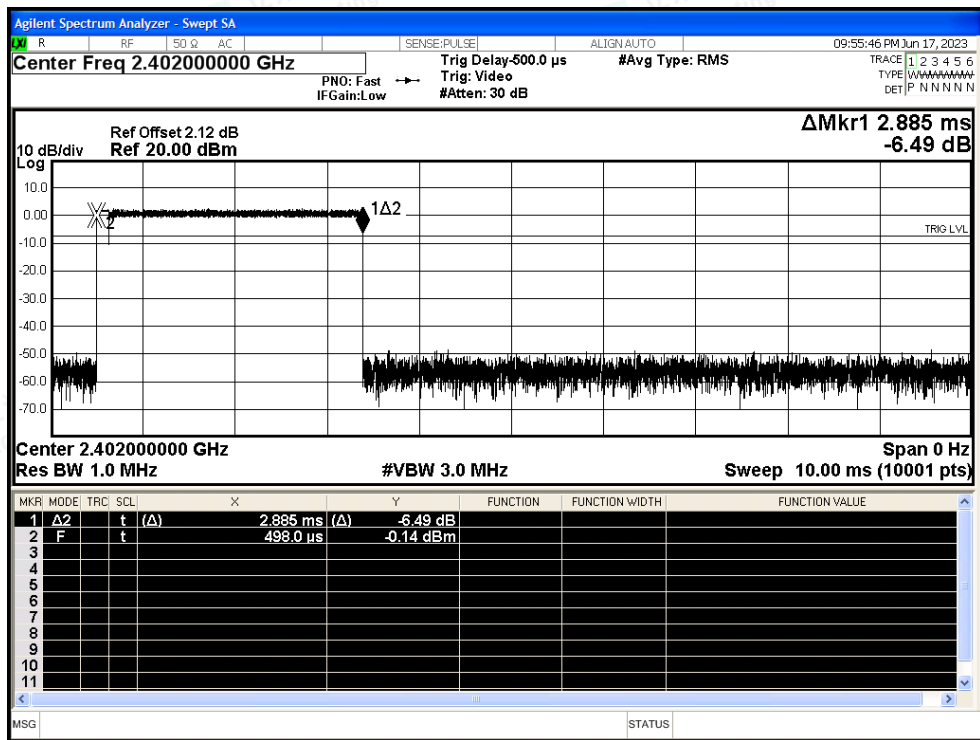


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

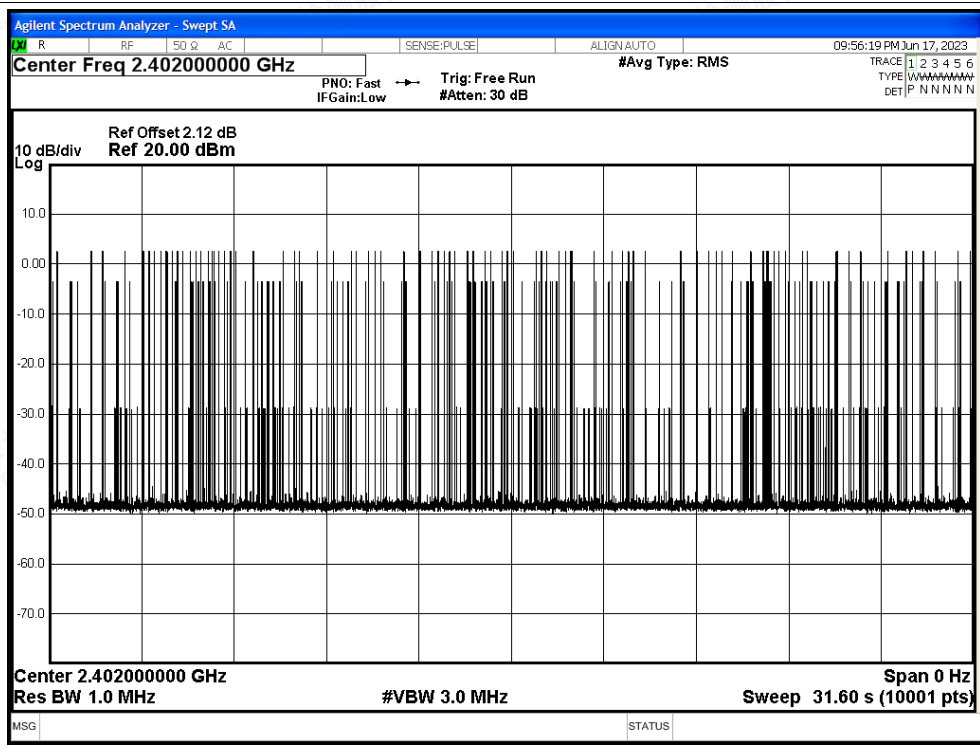




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

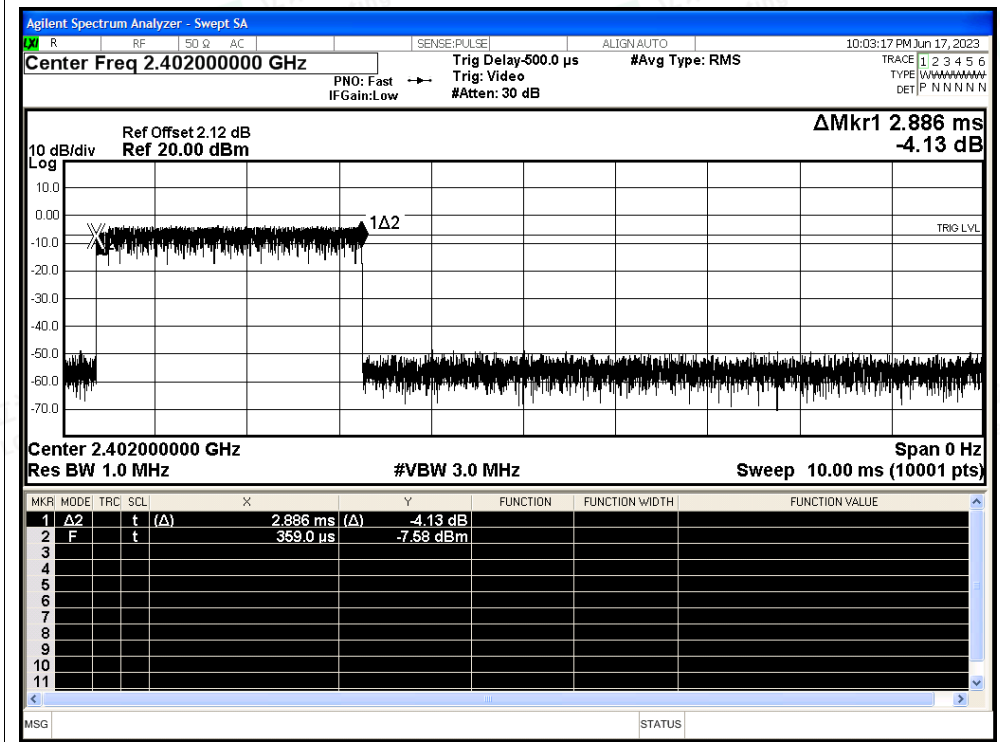


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

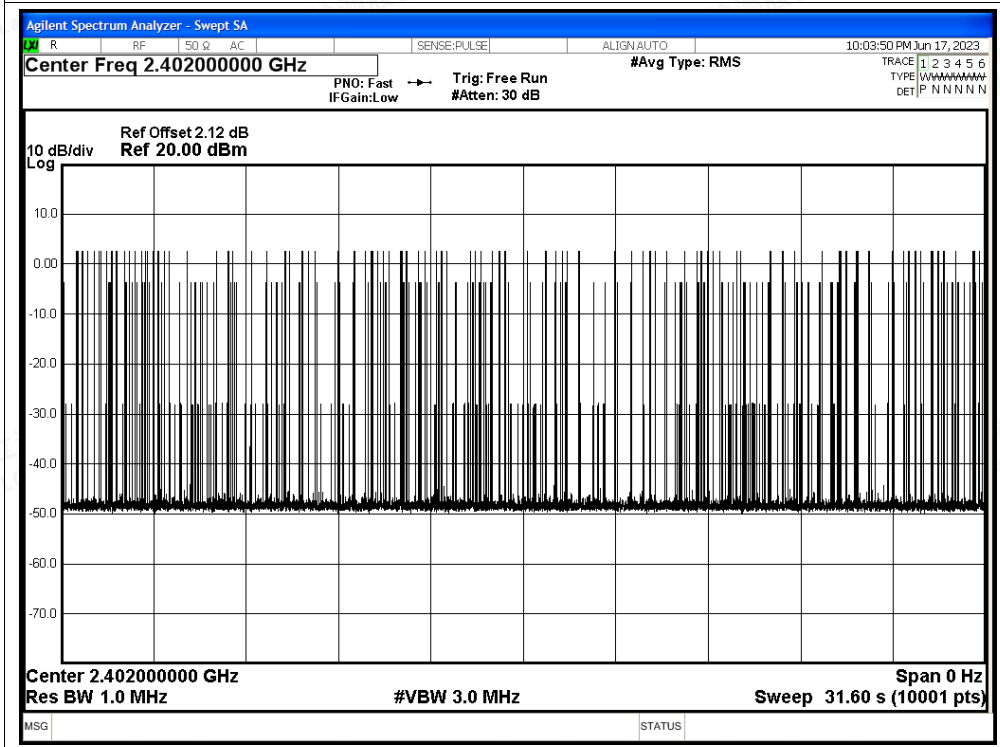




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated





A.5 Number of Hopping Channel

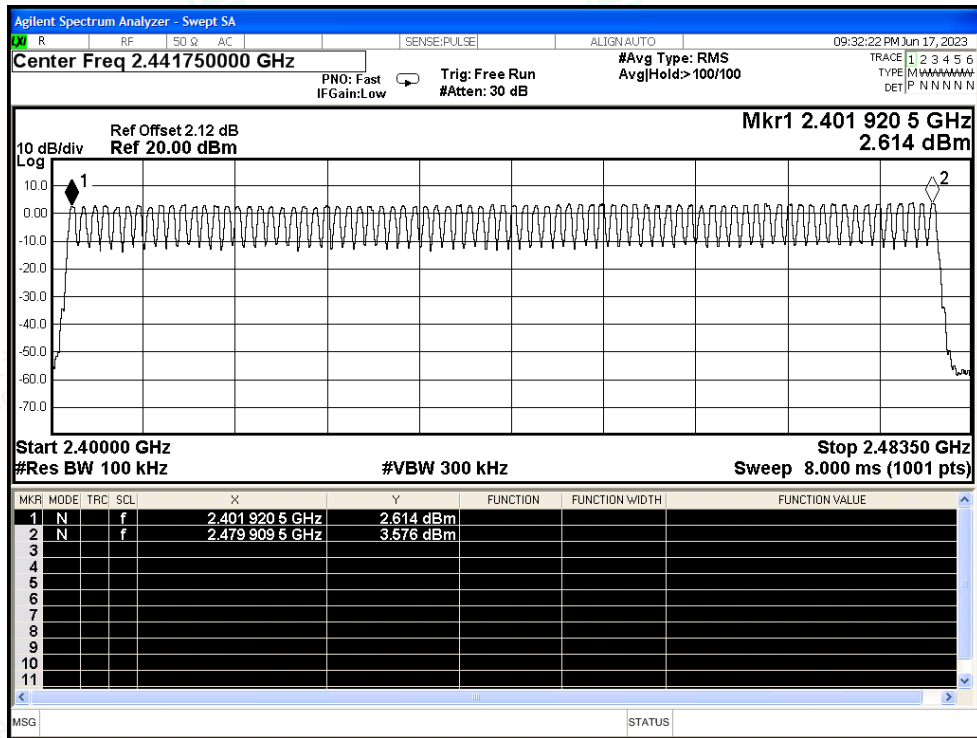
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



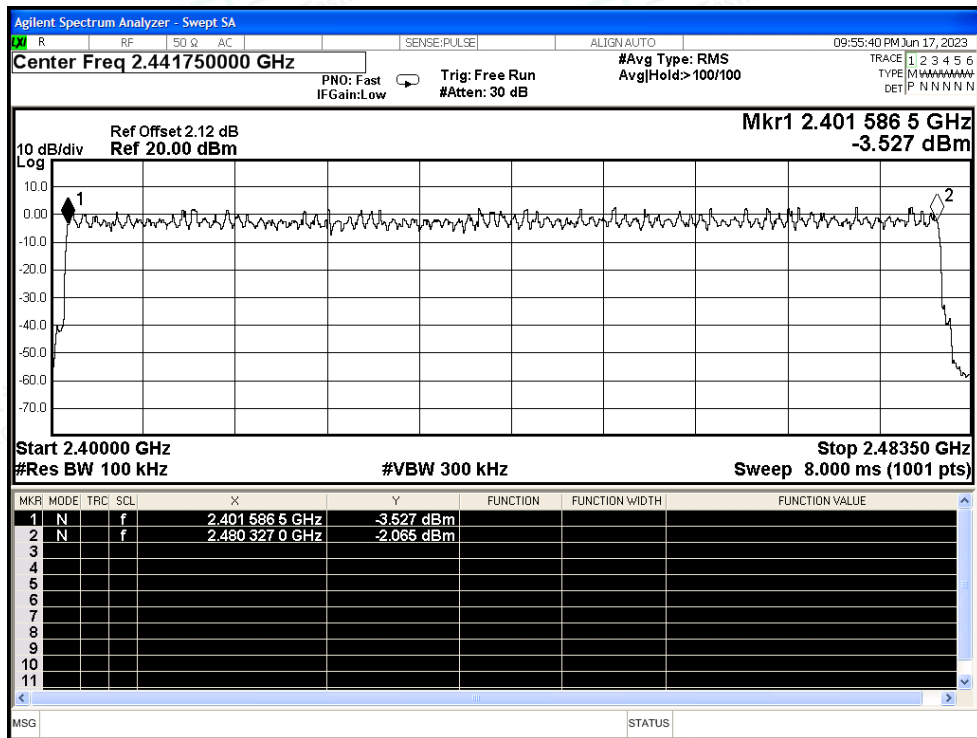


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

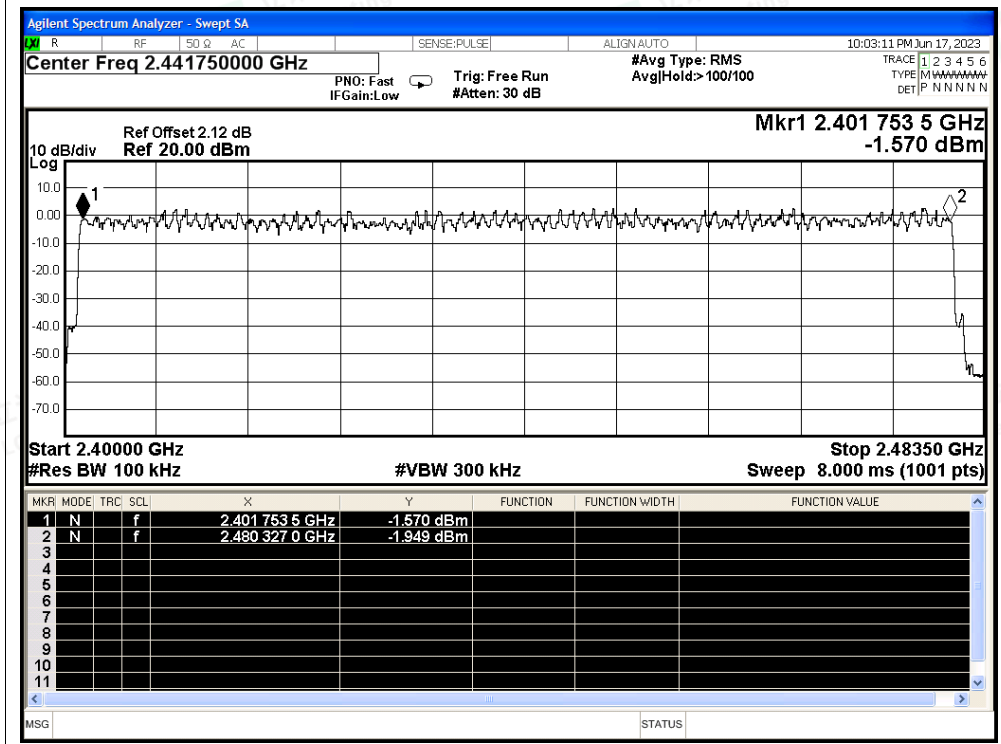


Hopping No. NVNT 2-DH5 2402MHz Ant1





Hopping No. NVNT 3-DH5 2402MHz Ant1





A.6 Band Edge

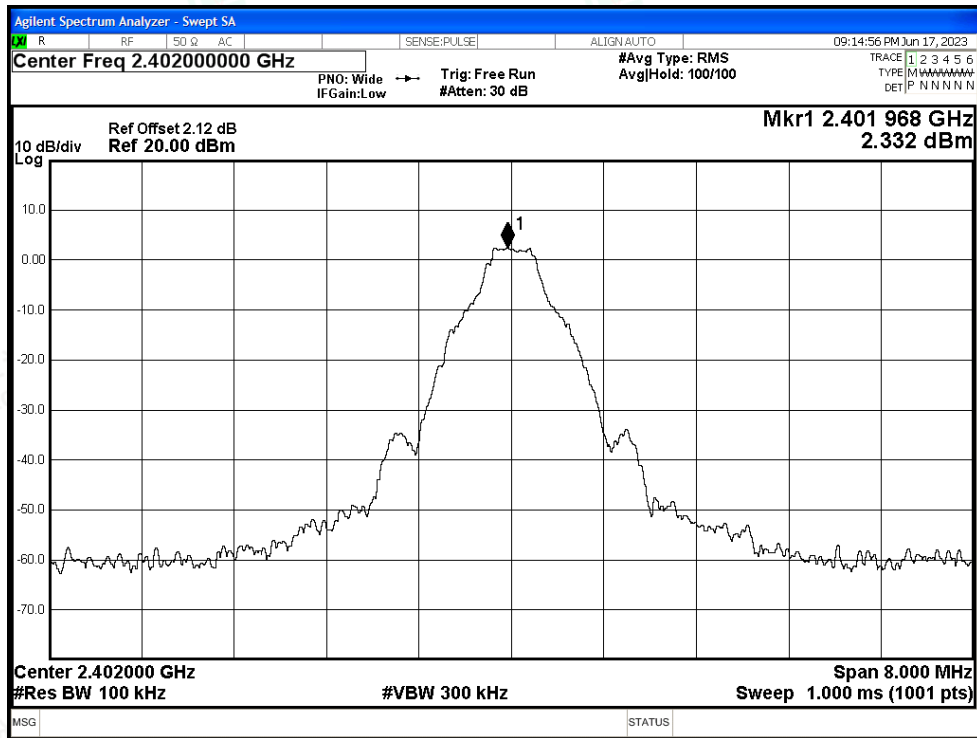
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55.08	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-60.23	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-56.27	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-58.34	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-55.88	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-58.97	-20	Pass



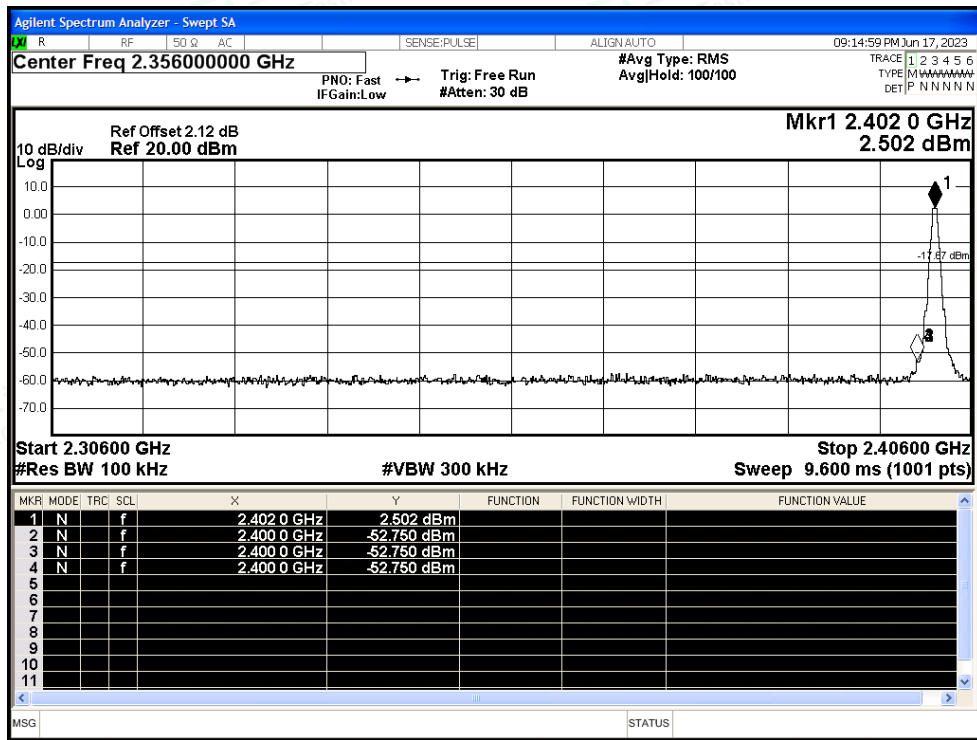


Test Graphs

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

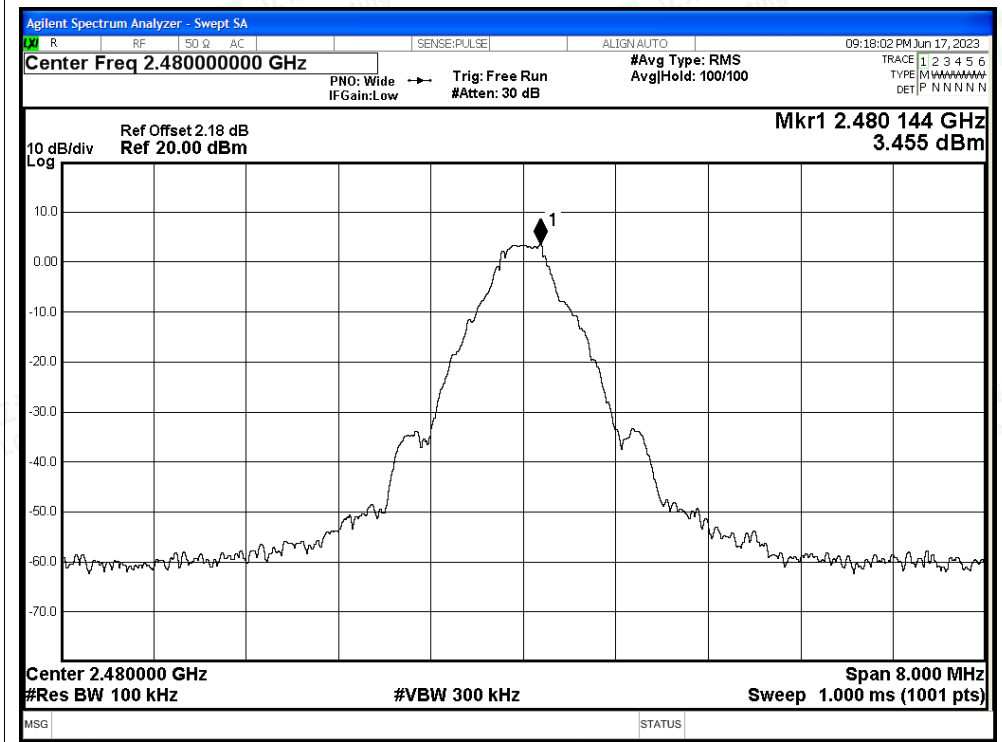


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

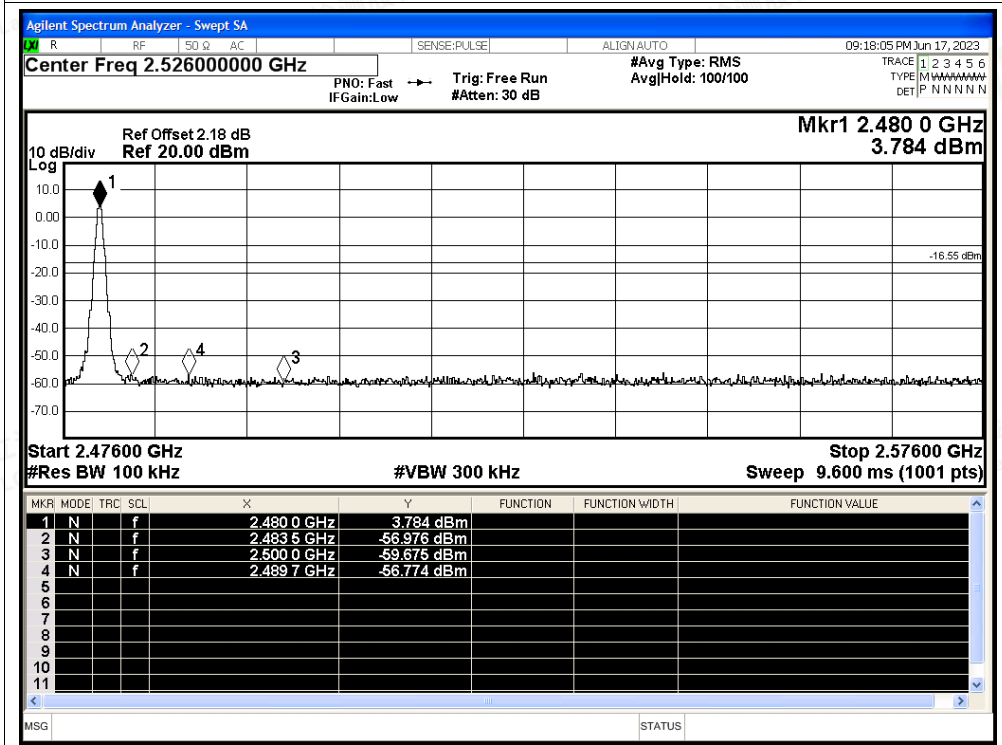




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

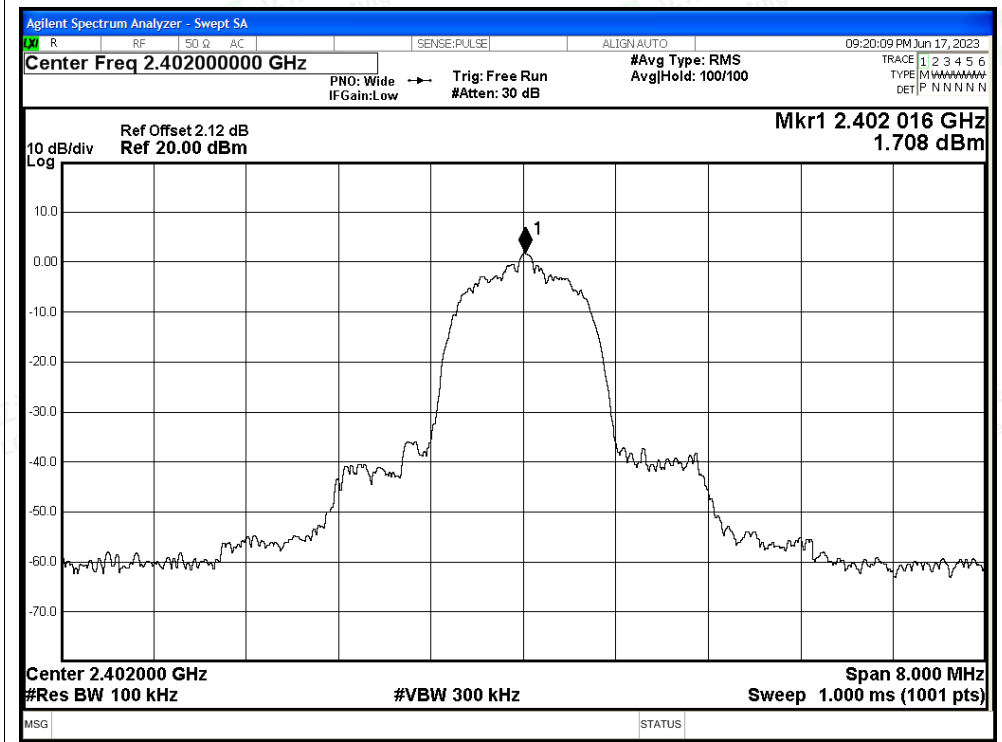


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

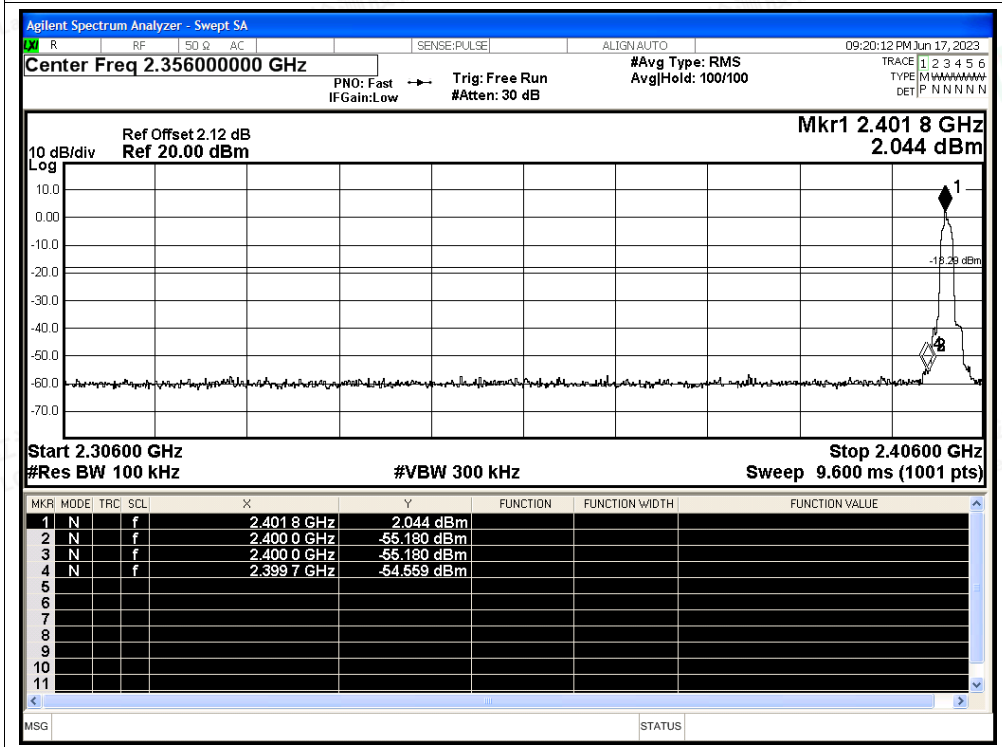




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

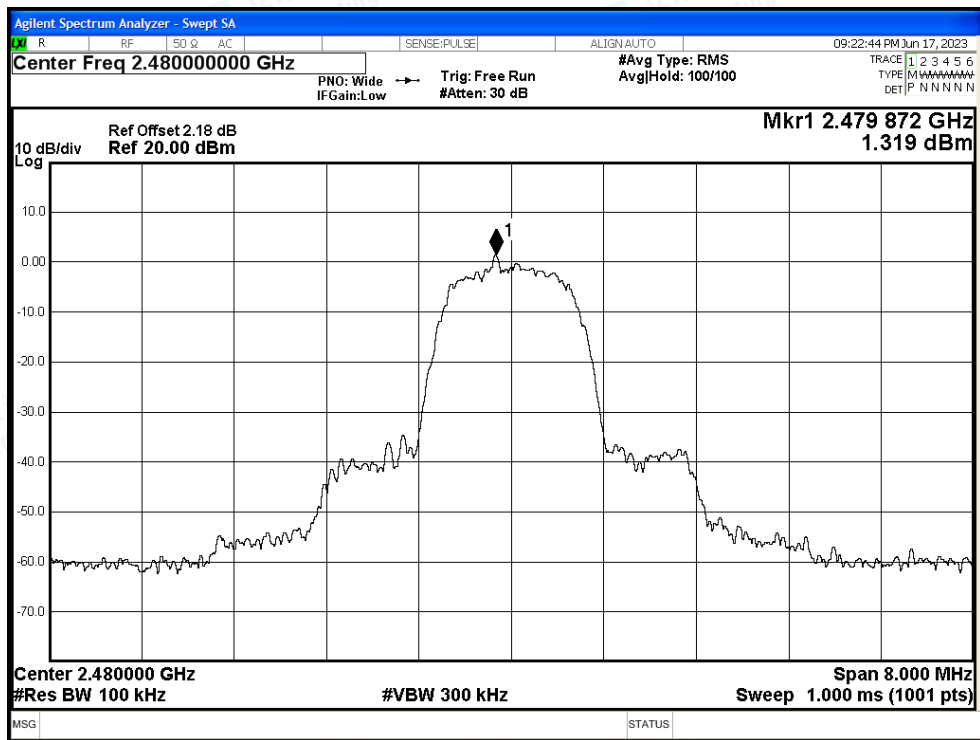


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

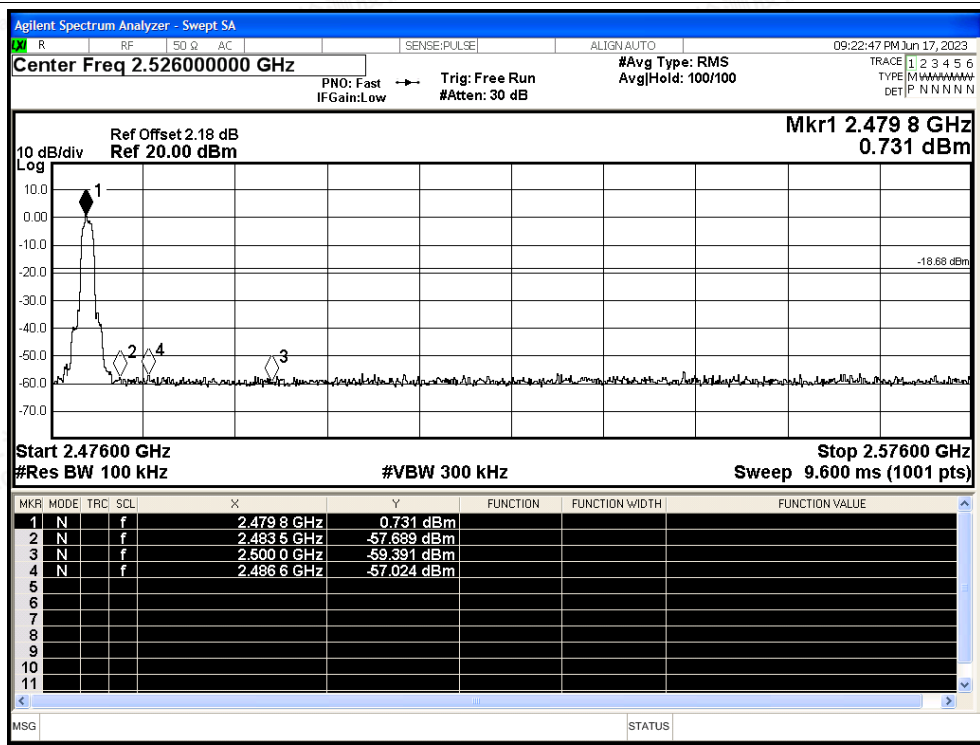




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref

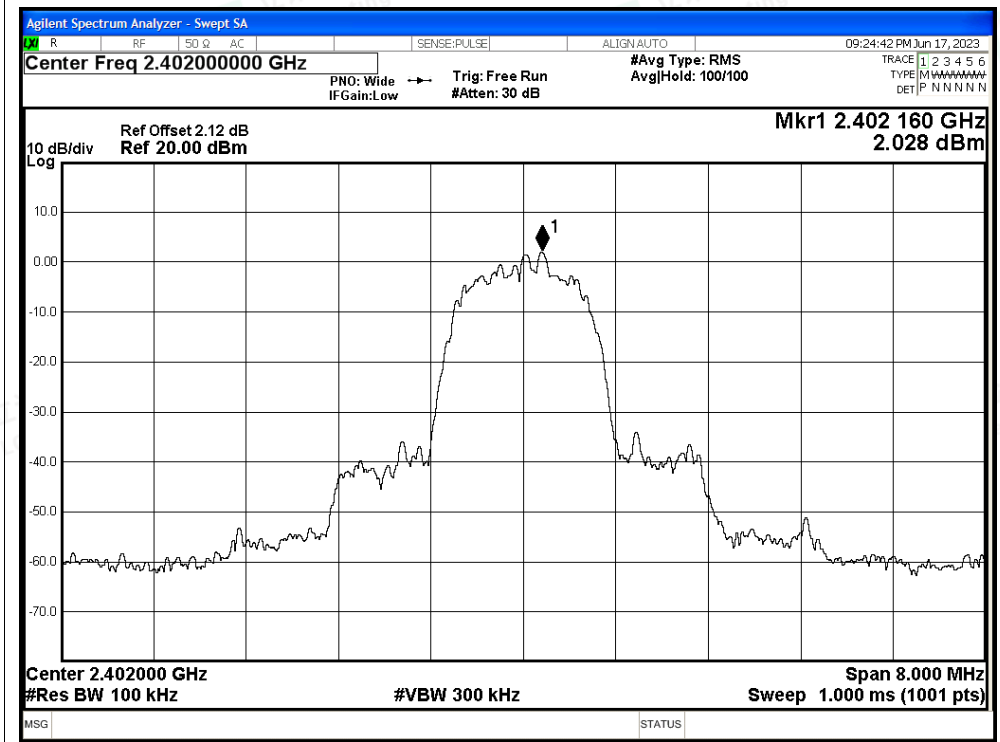


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

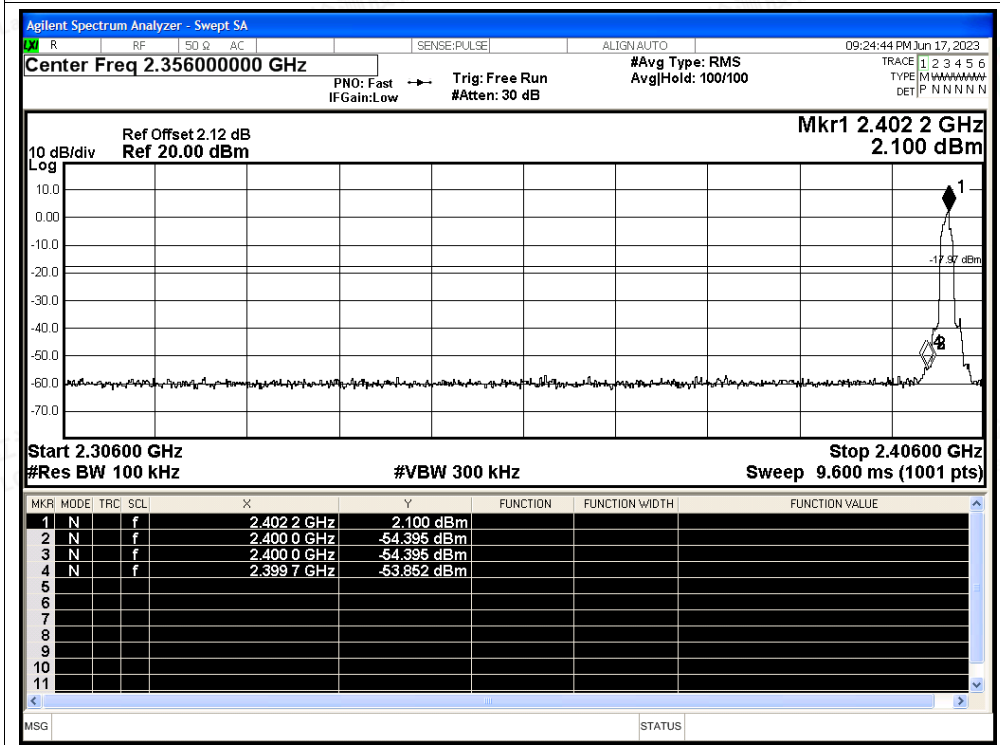




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



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

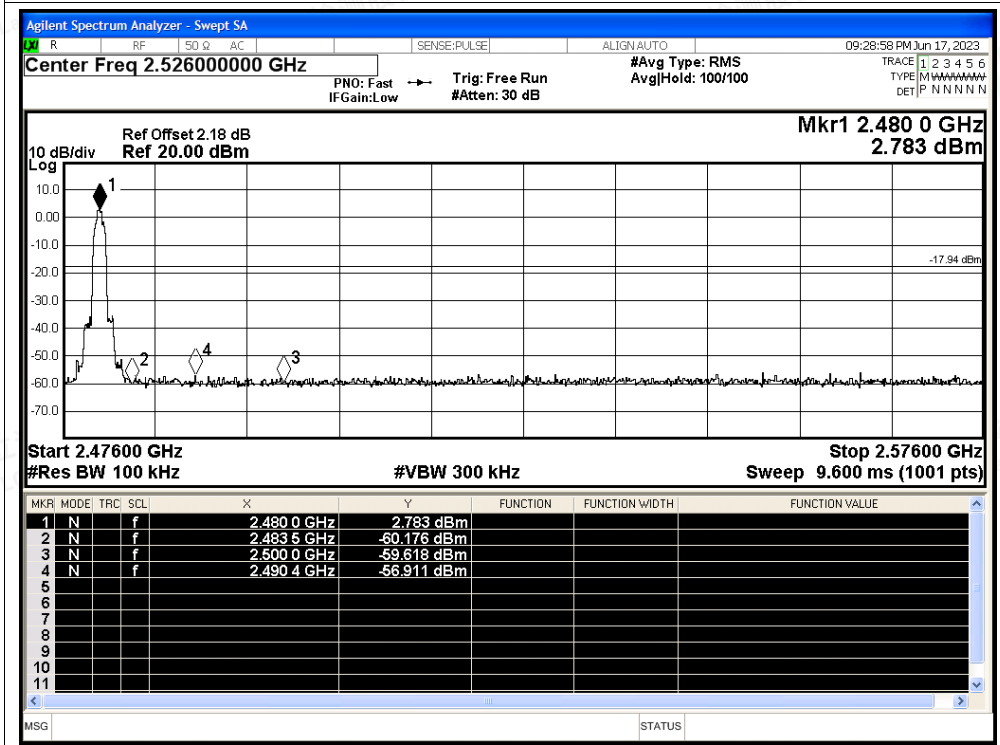




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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





(Hopping)

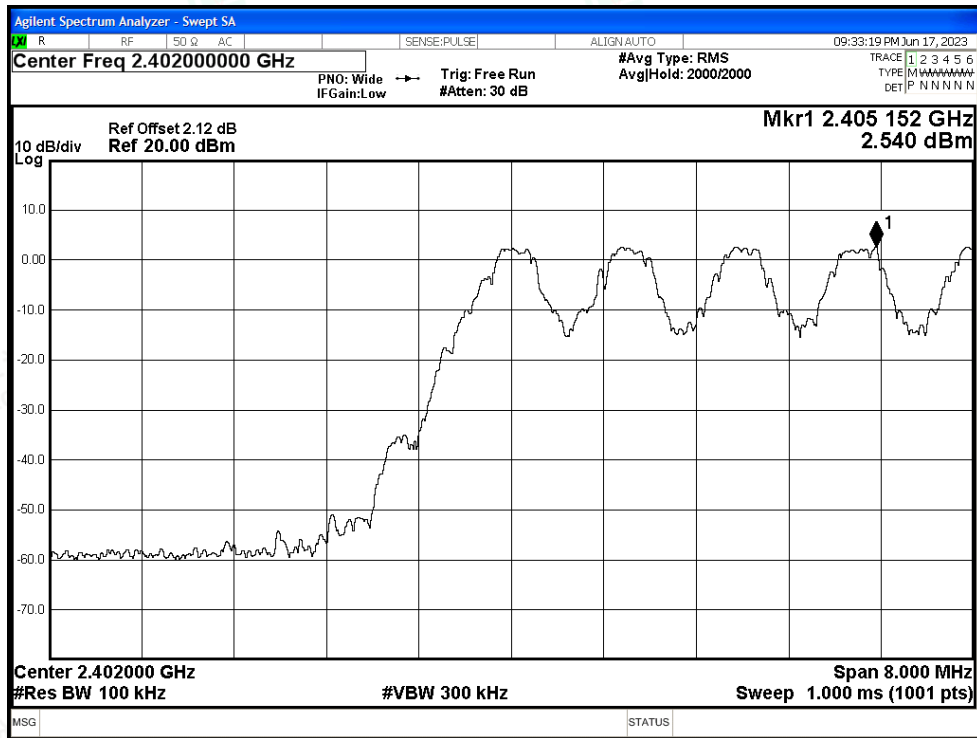
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-58.26	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-59.75	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-56.74	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-58.63	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-57.98	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-57.48	-20	Pass



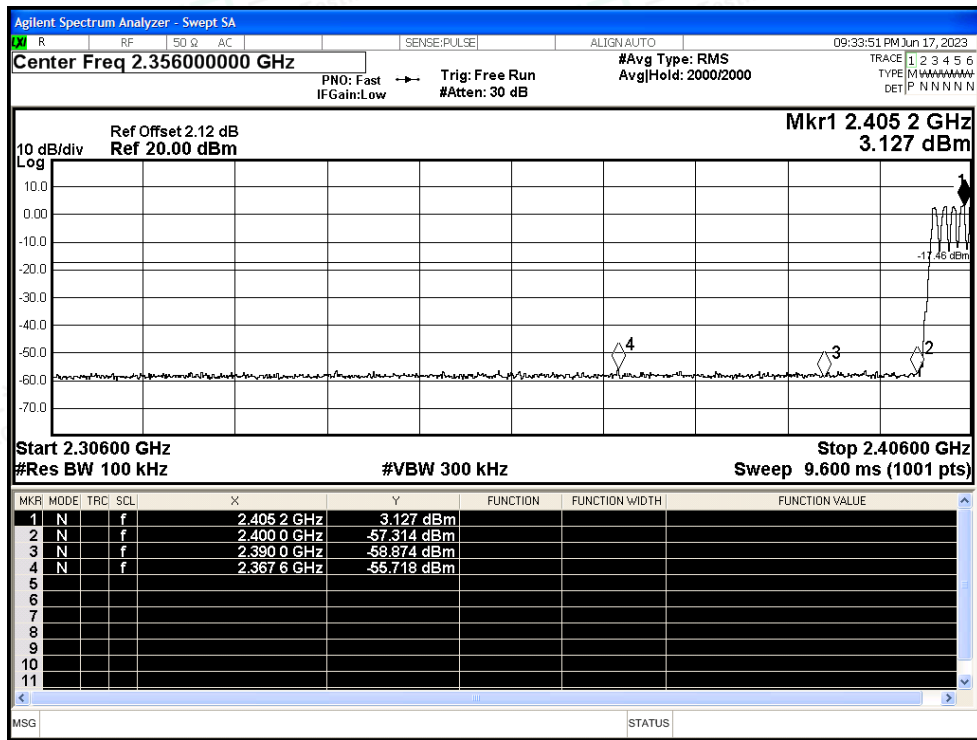


Test Graphs

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

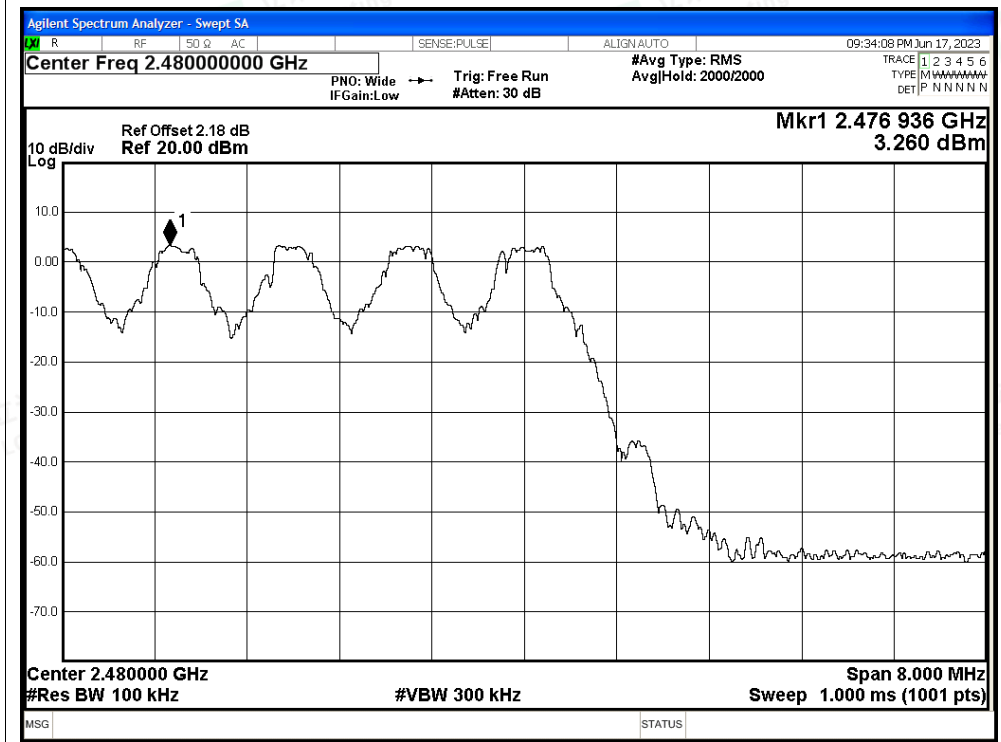


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

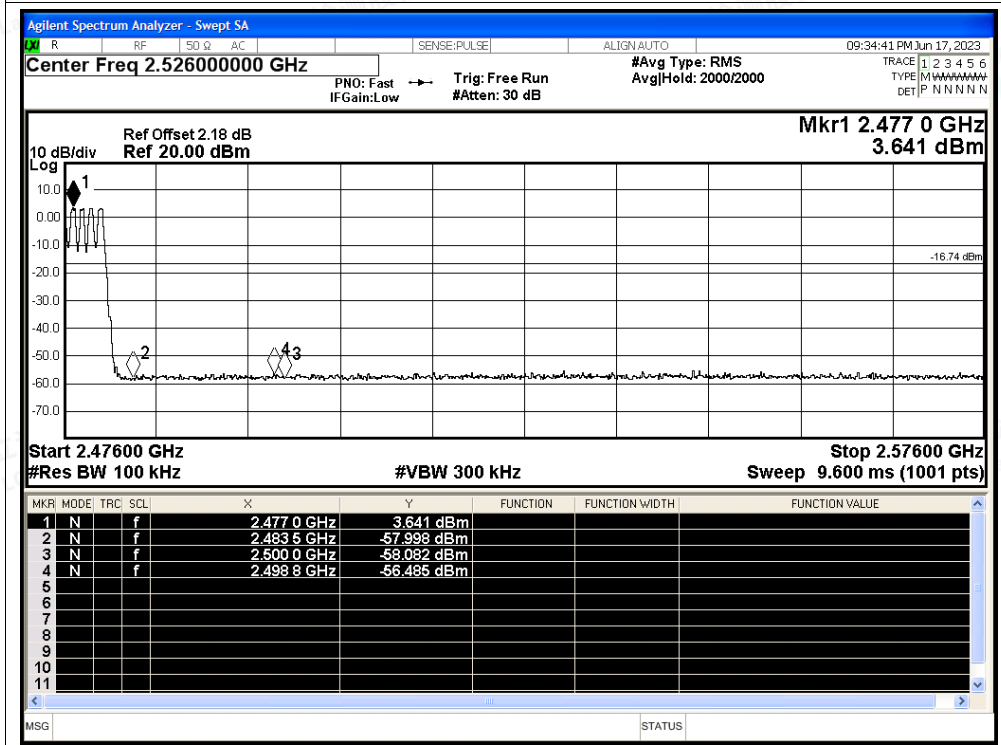




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

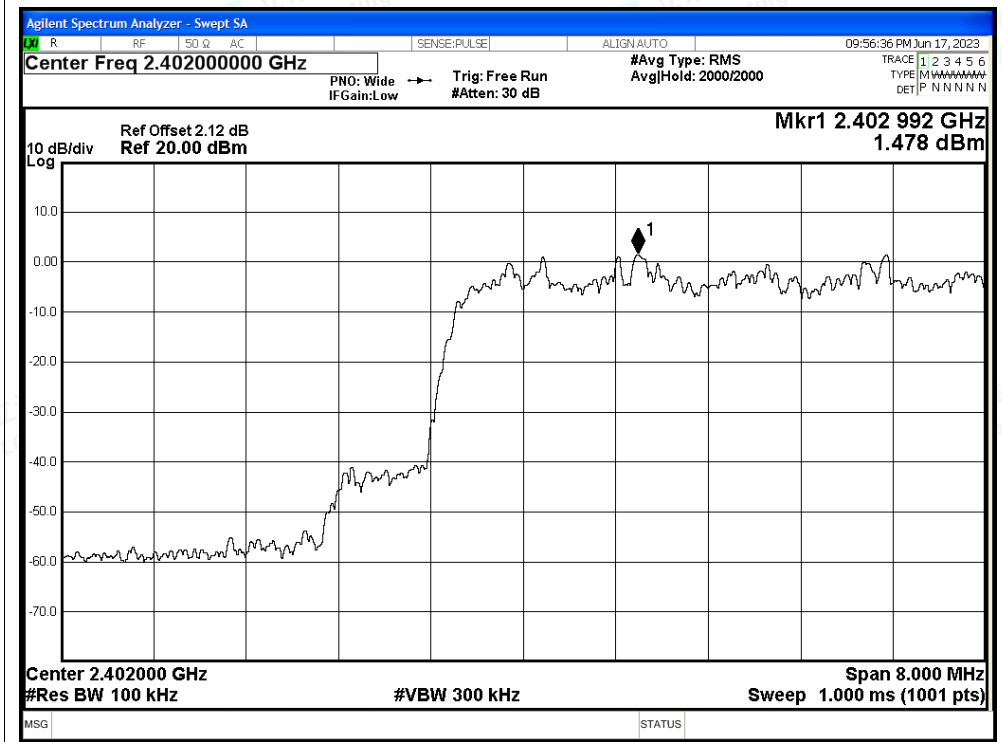


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

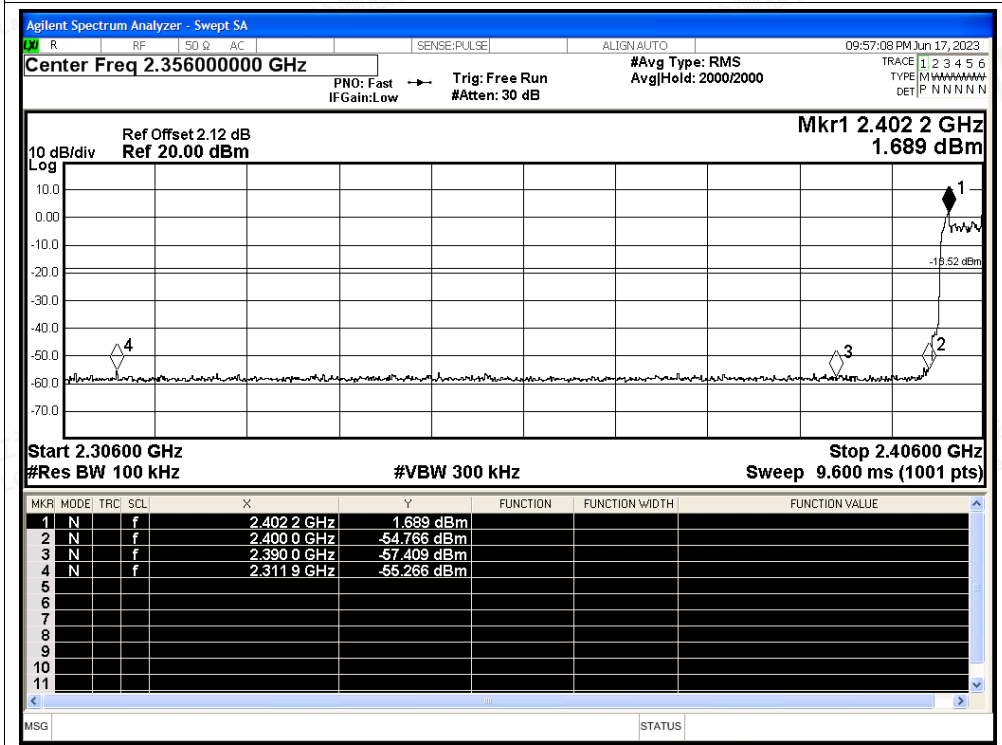




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

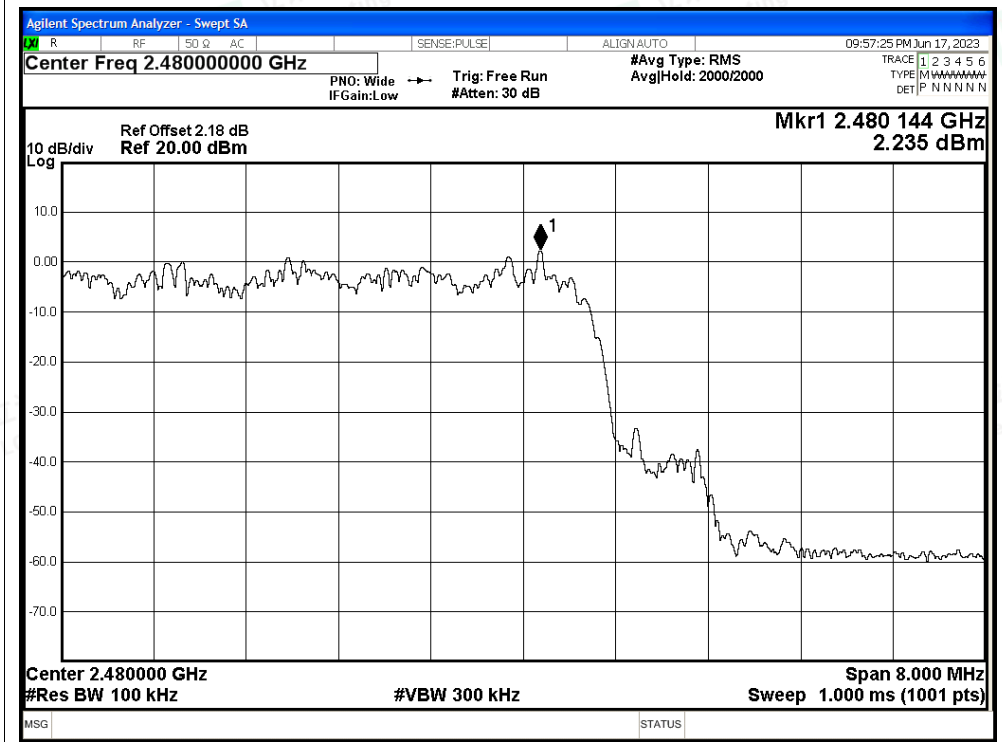


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

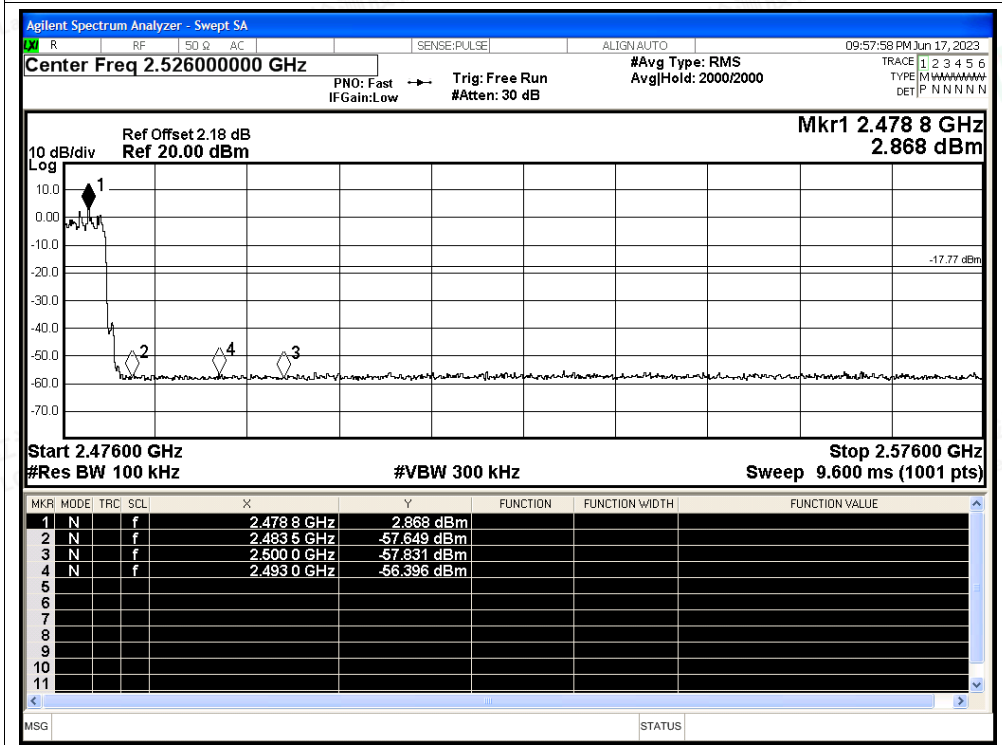




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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

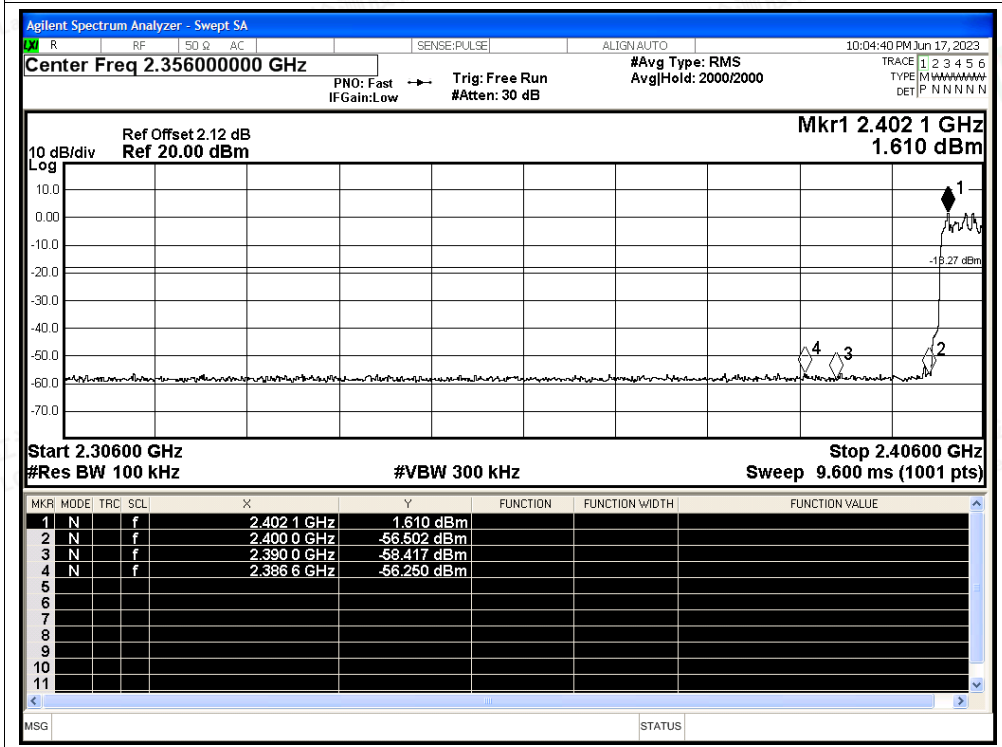




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

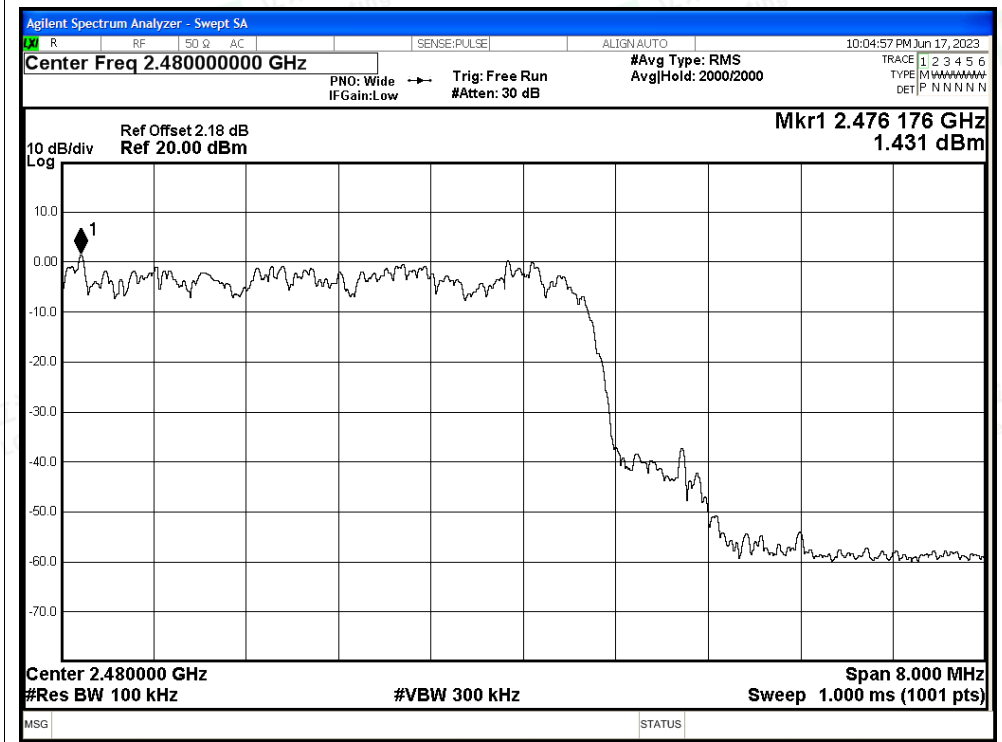


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission

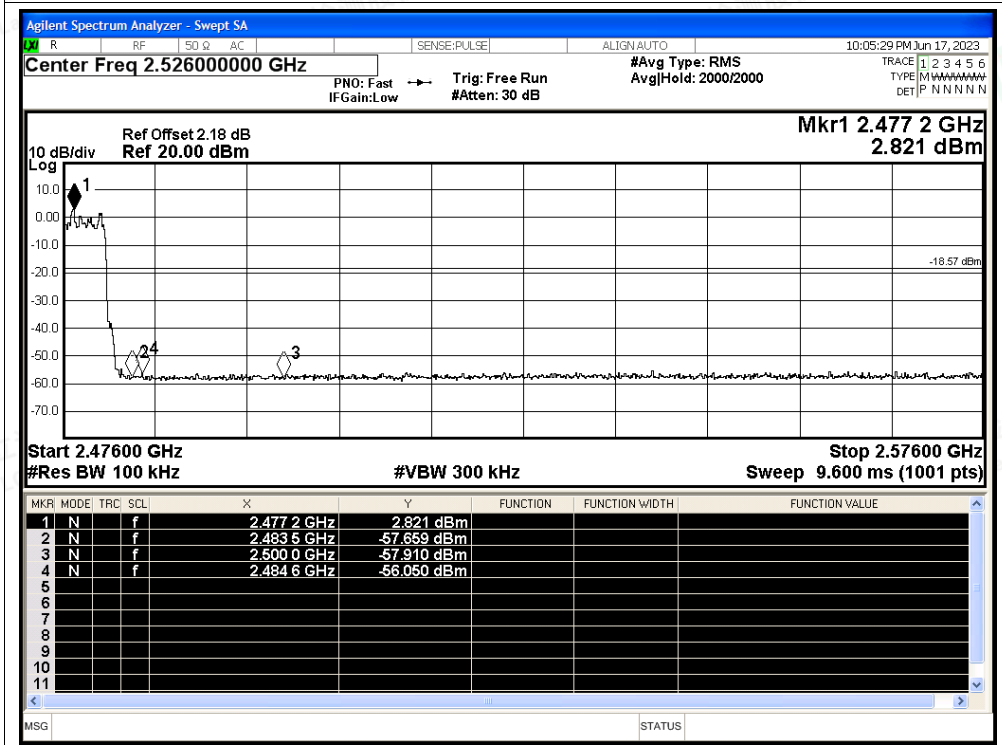




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



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





A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-58.4	-20	Pass
NVNT	1-DH5	2441	Ant1	-58.25	-20	Pass
NVNT	1-DH5	2480	Ant1	-57.39	-20	Pass
NVNT	2-DH5	2402	Ant1	-57.51	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.17	-20	Pass
NVNT	2-DH5	2480	Ant1	-57.16	-20	Pass
NVNT	3-DH5	2402	Ant1	-55.01	-20	Pass
NVNT	3-DH5	2441	Ant1	-57.28	-20	Pass
NVNT	3-DH5	2480	Ant1	-55.97	-20	Pass

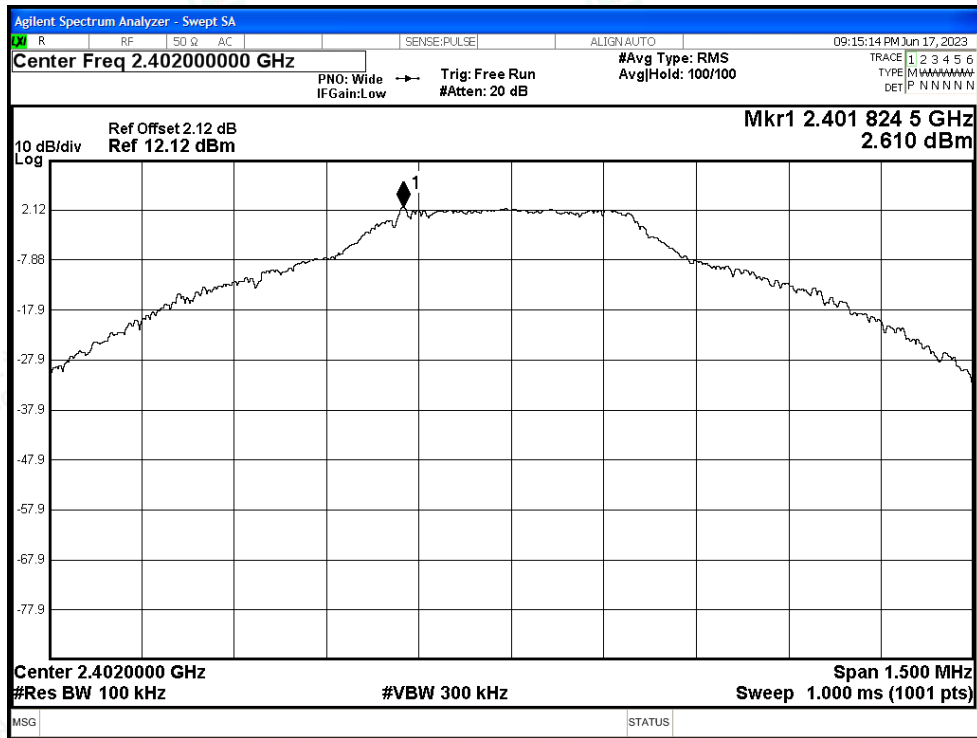


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Scan code to check authenticity

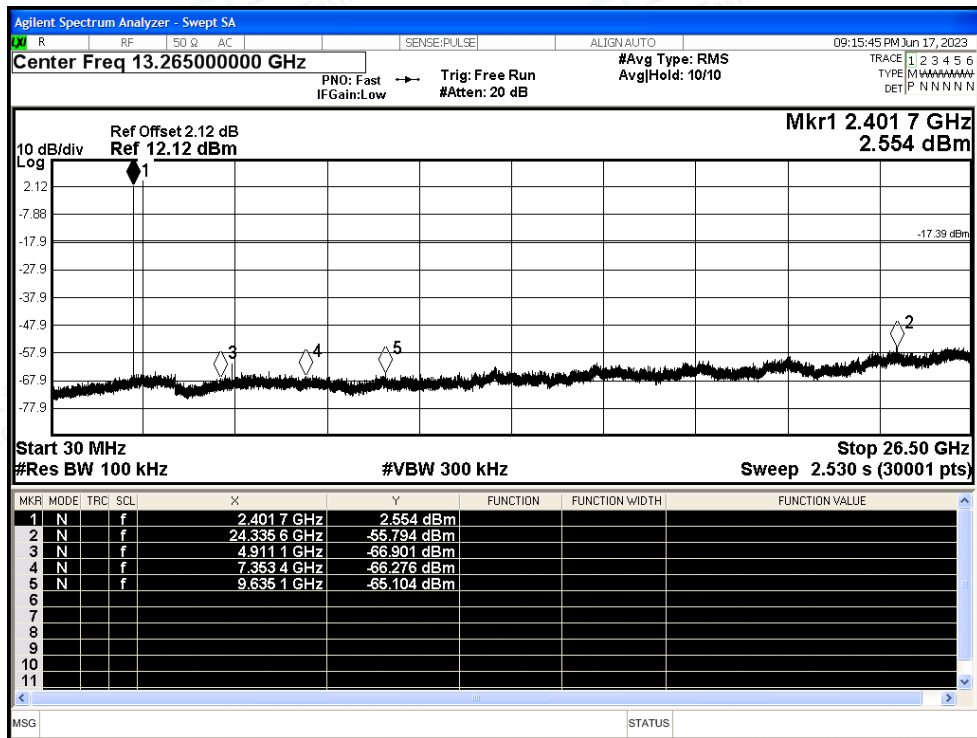


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

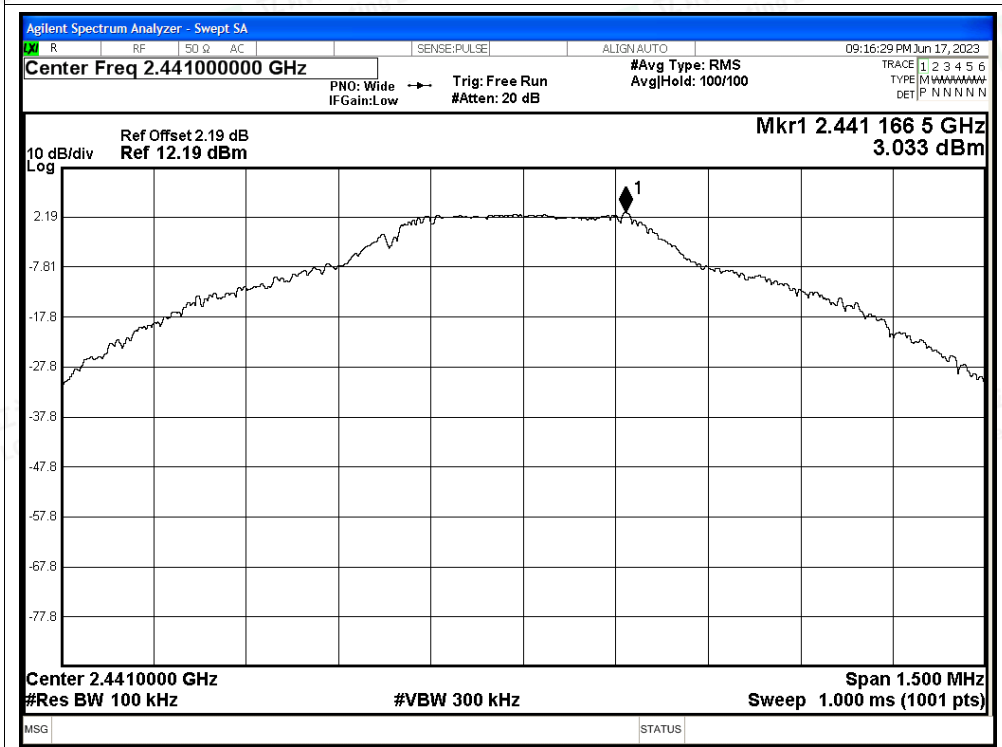


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

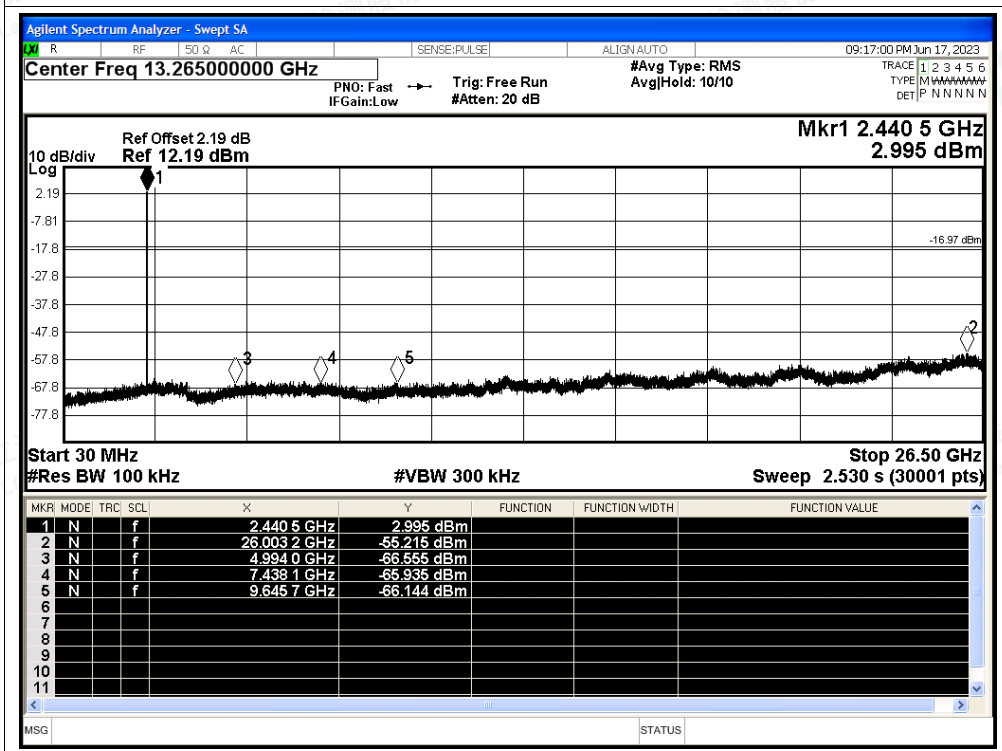




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

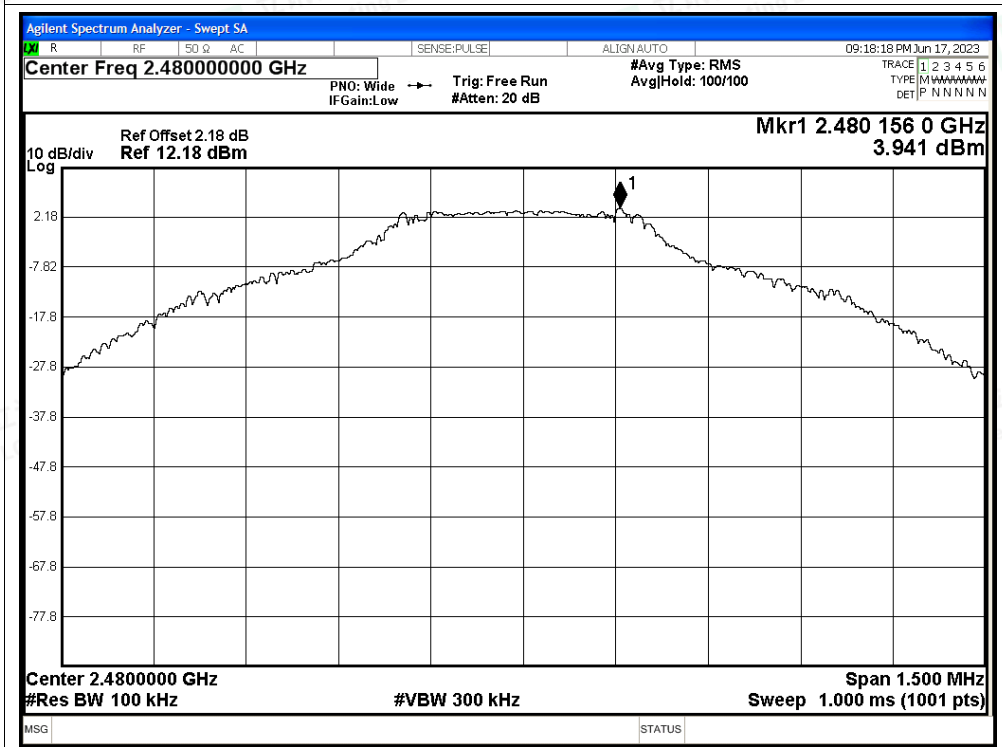


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

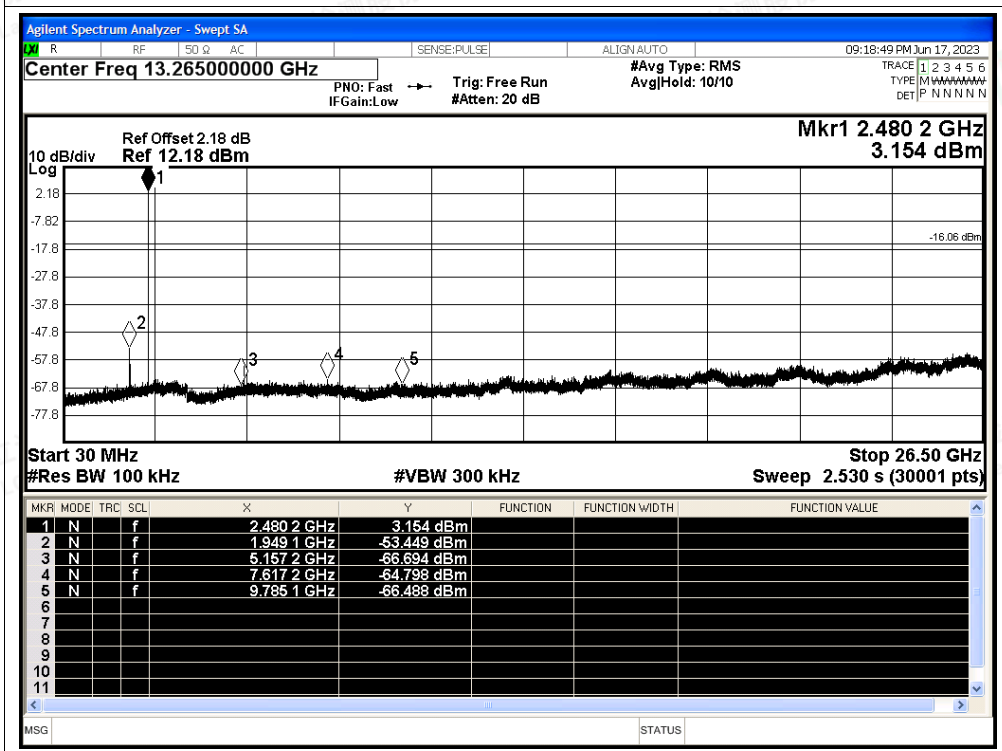




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

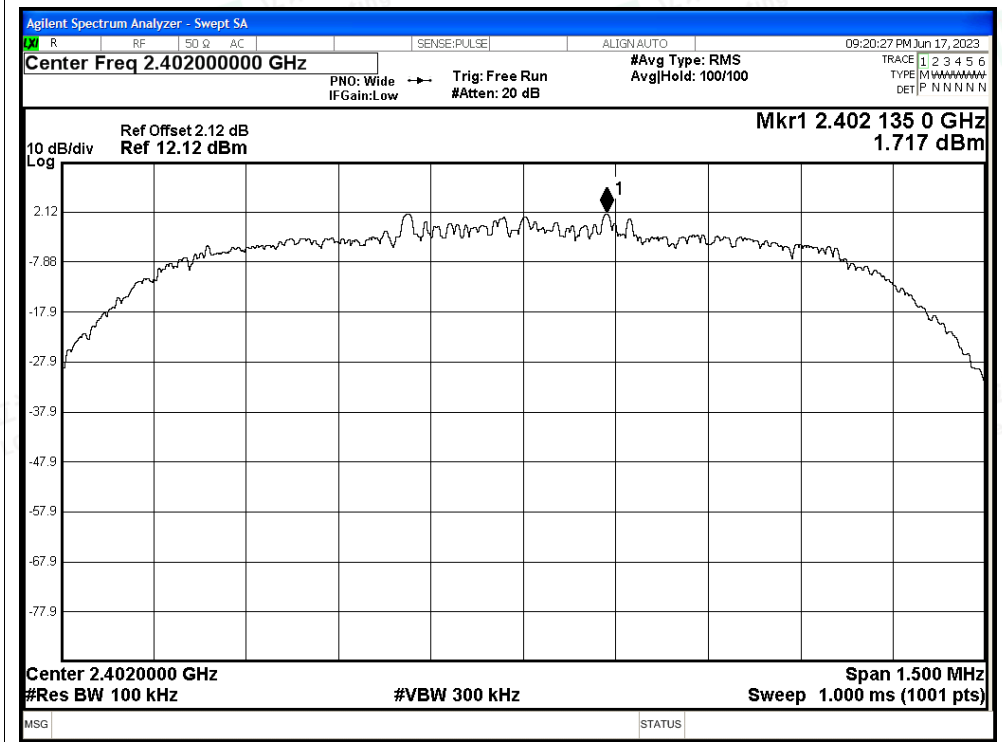


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

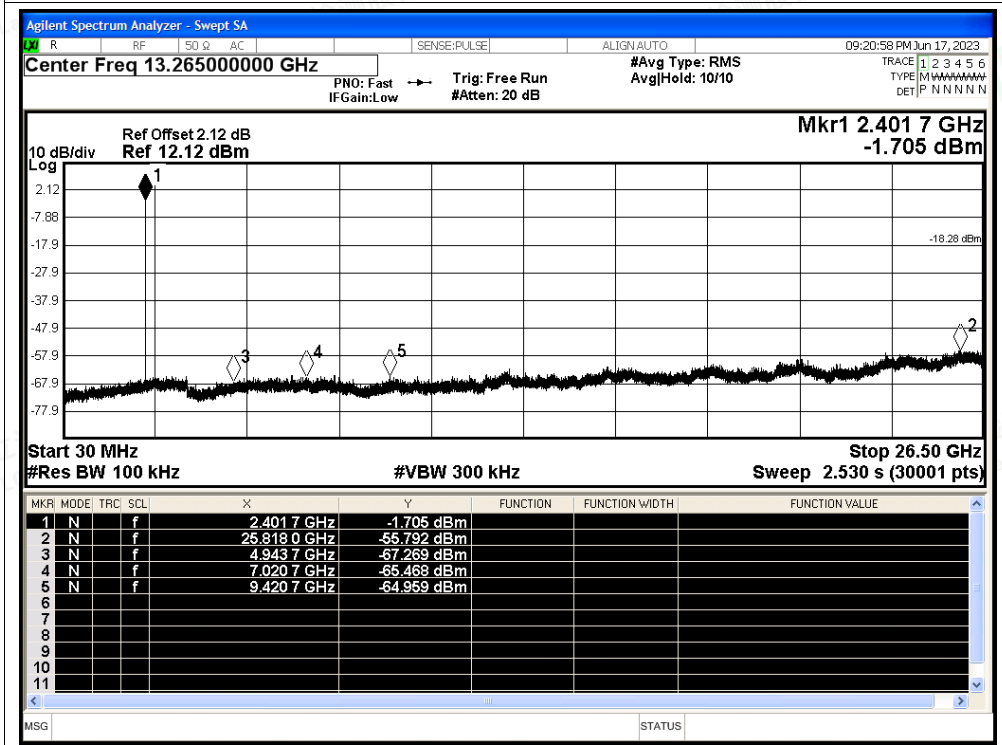




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

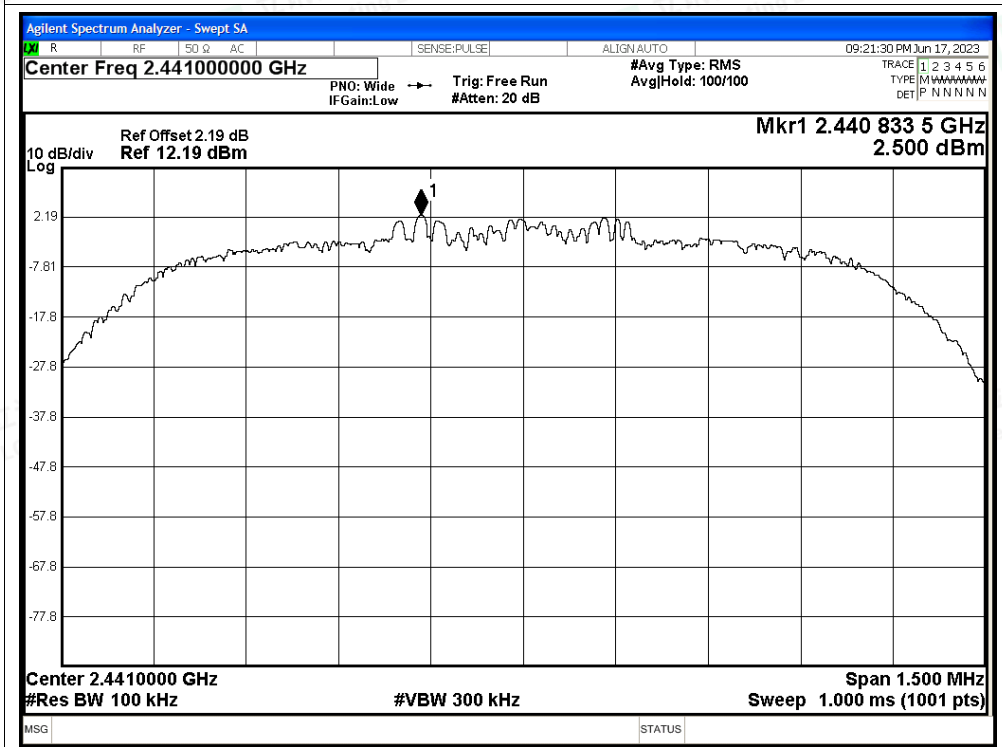


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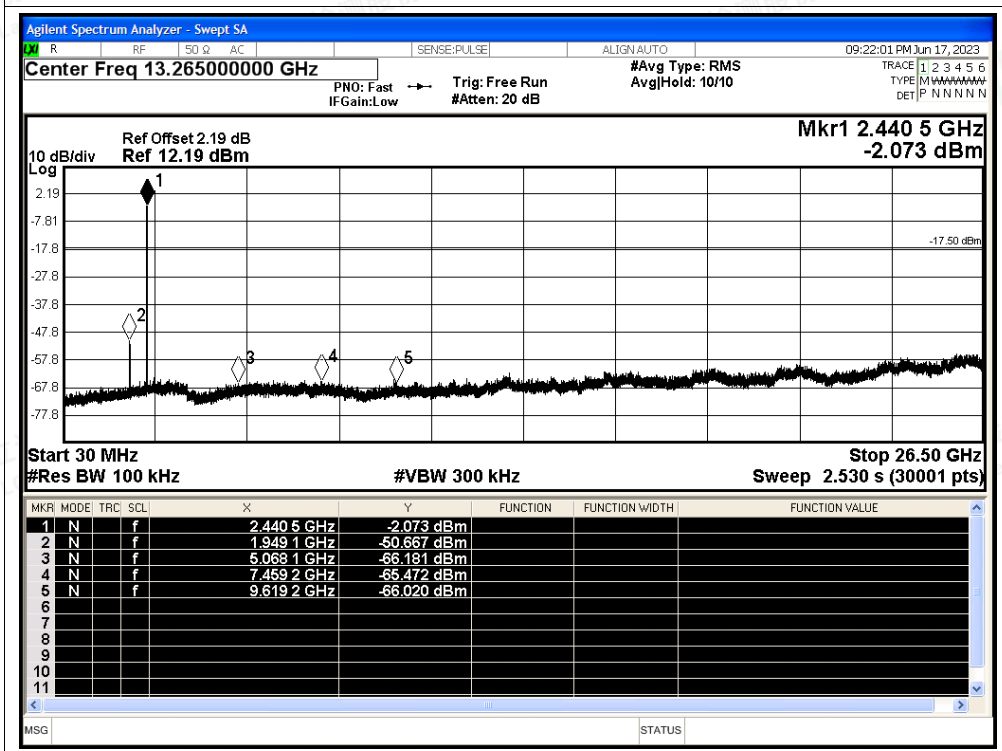




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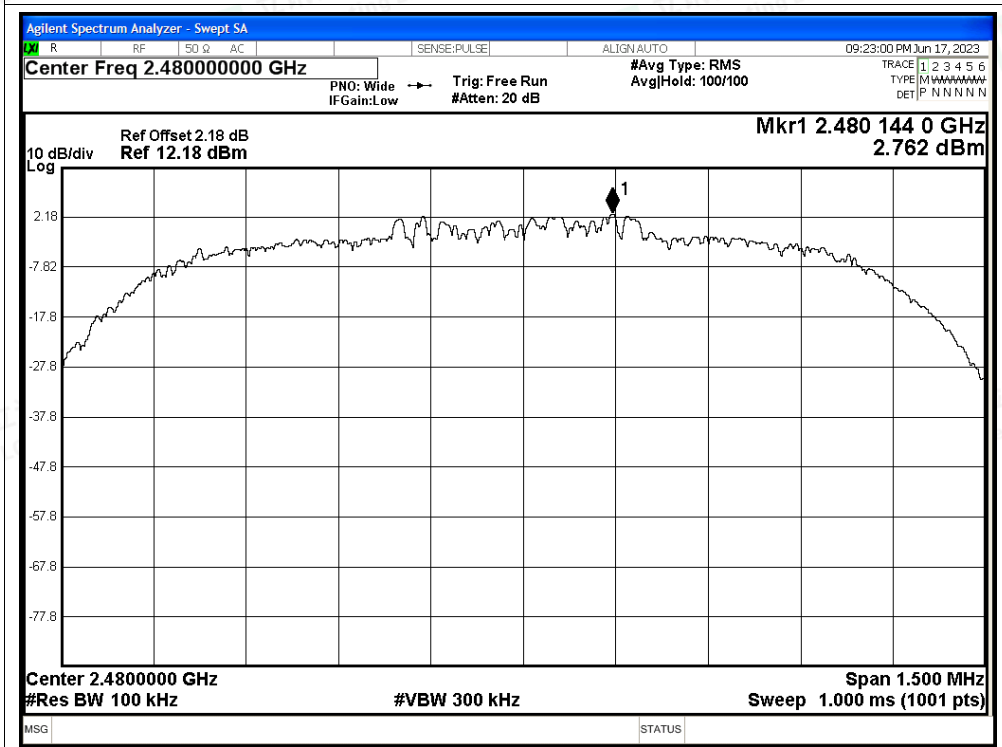


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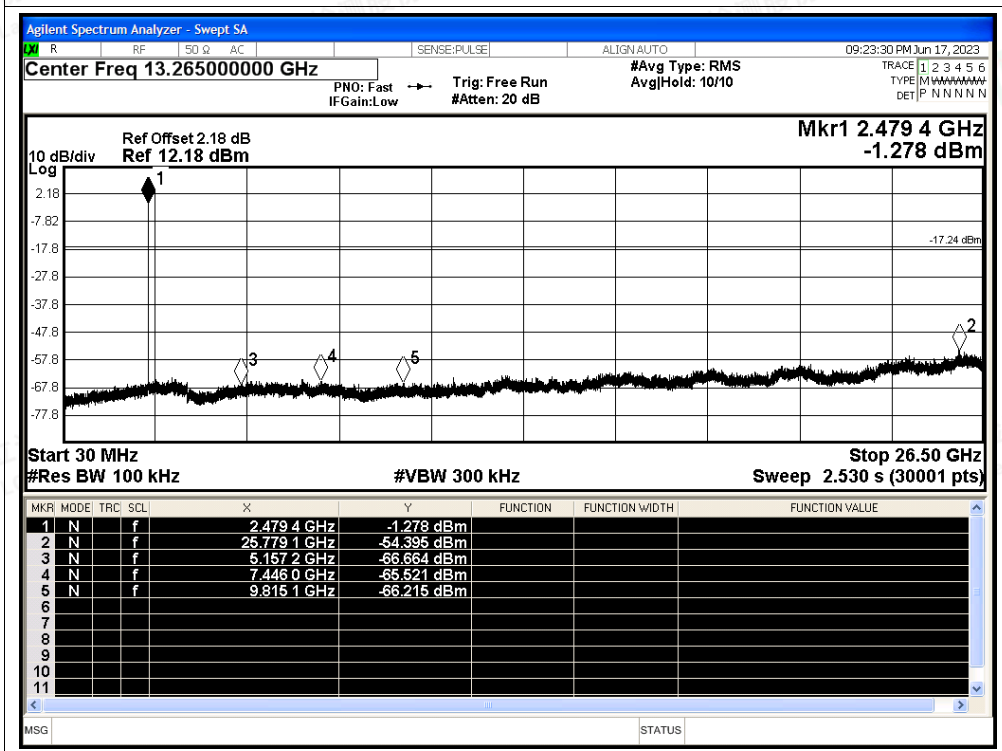




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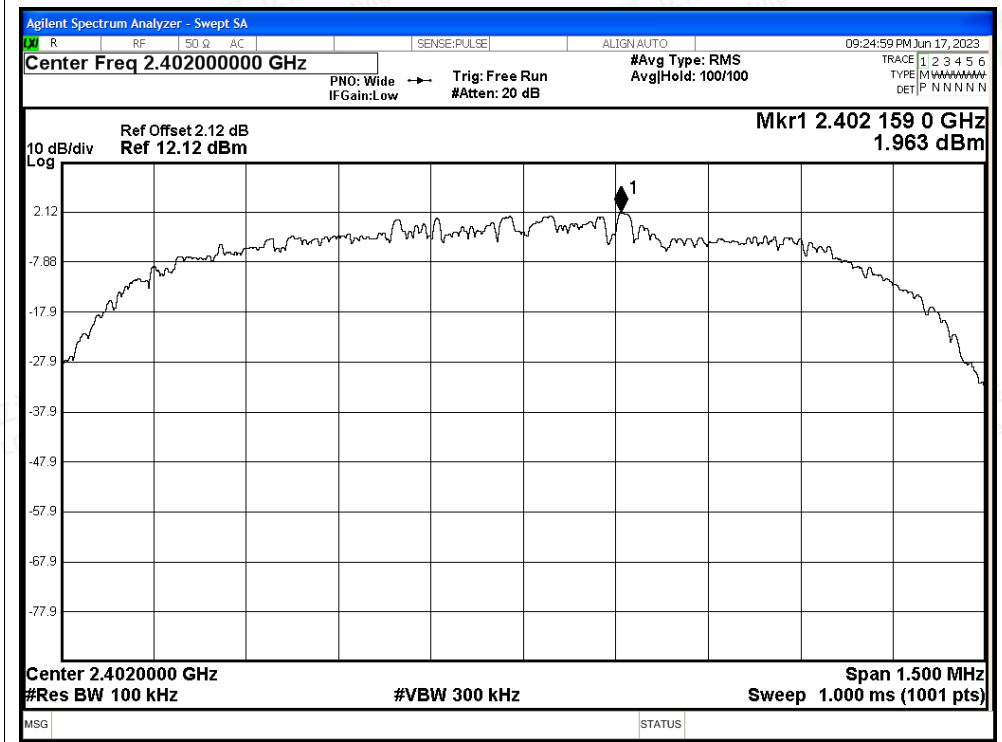


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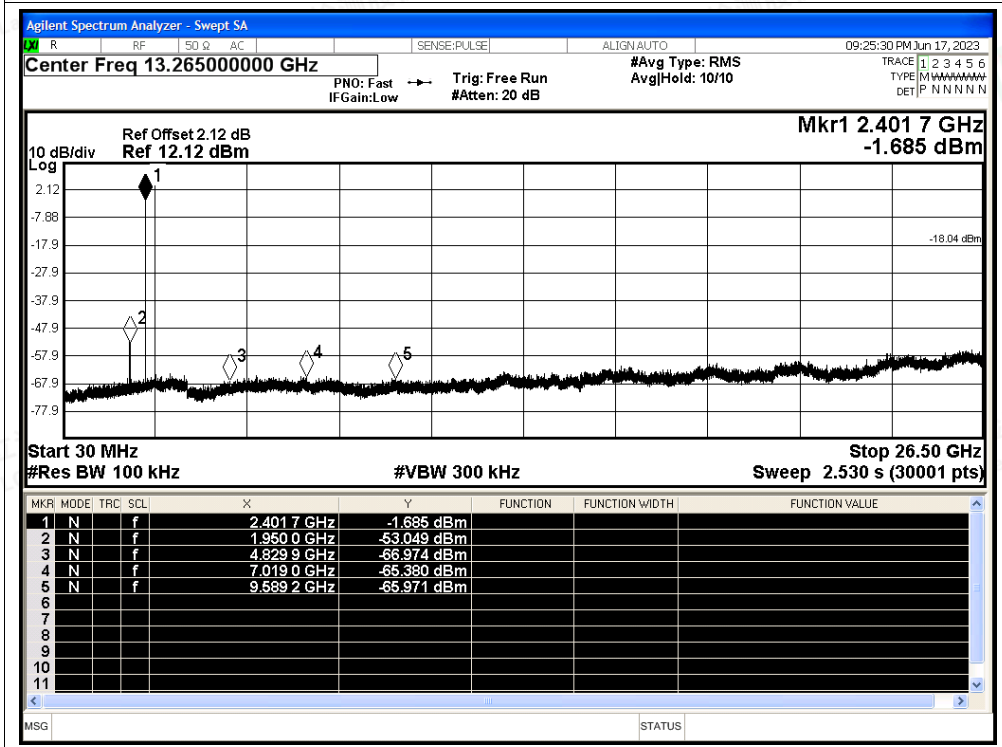




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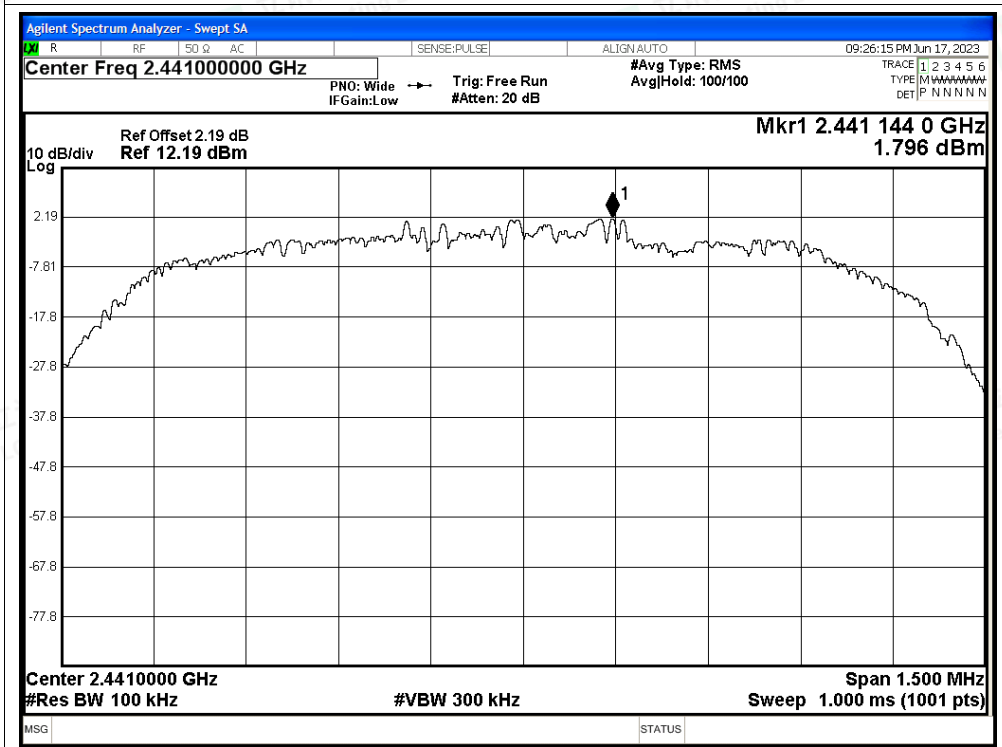


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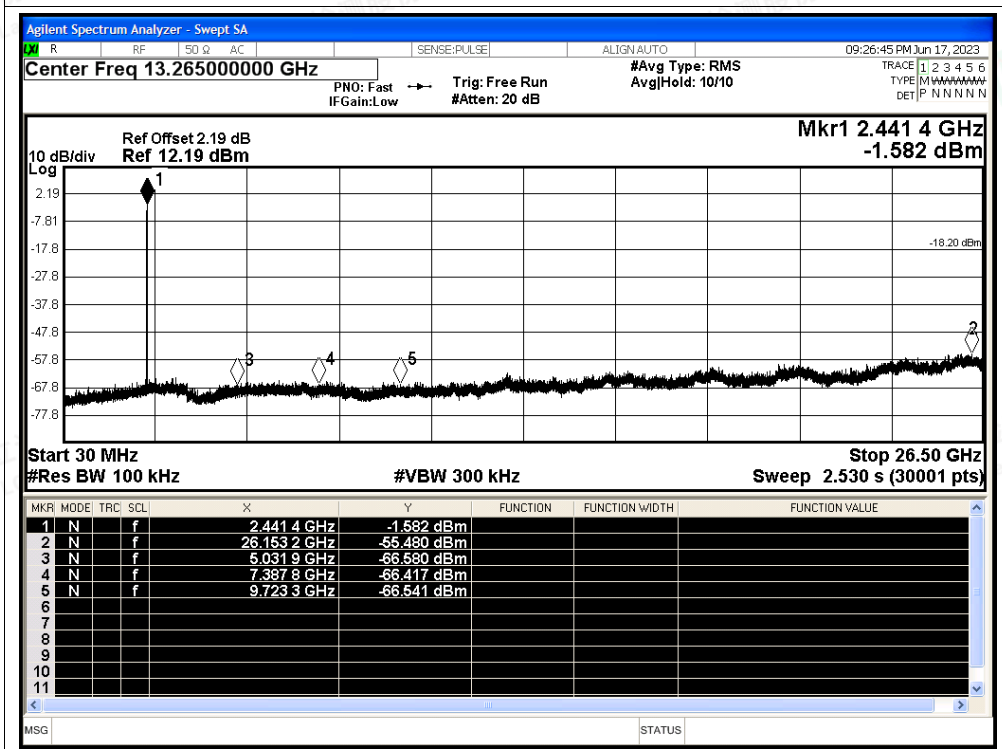




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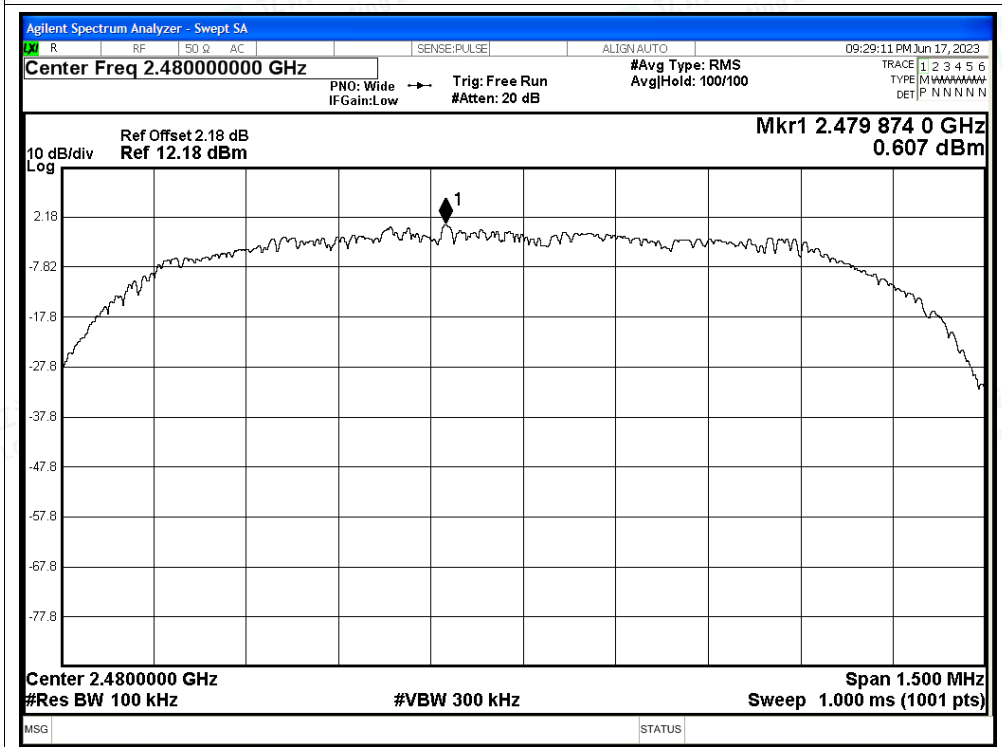


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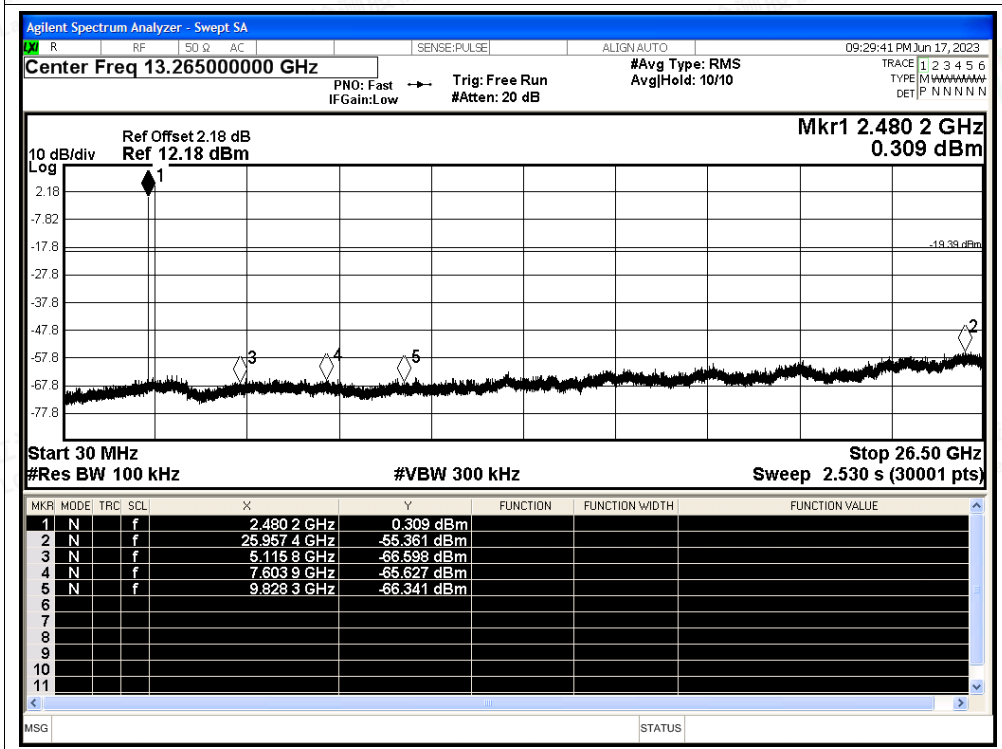




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission





A.8 Restrict Band

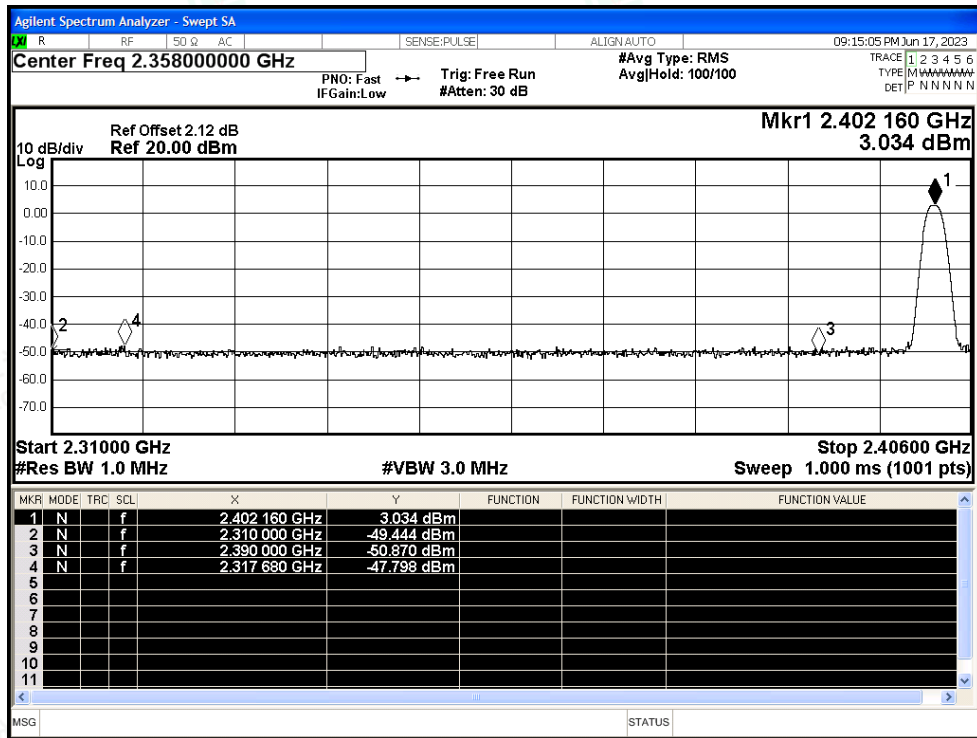
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-49.44	2	47.82	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-57.92	2	39.34	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2317.68	-47.8	2	49.46	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2386.896	-57.36	2	39.9	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-50.87	2	46.39	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-57.54	2	39.72	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-48.2	2	49.06	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-54.13	2	43.13	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2491.792	-46.94	2	50.32	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.512	-54.13	2	43.13	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-50.54	2	46.72	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.26	2	40	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.11	2	47.15	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.05	2	39.21	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2353.008	-46.96	2	50.3	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2382.48	-57.4	2	39.86	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.6	2	47.66	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.51	2	39.75	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.34	2	47.92	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-53.82	2	43.44	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2487.28	-46.22	2	51.04	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.512	-53.82	2	43.44	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.06	2	48.2	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.27	2	39.99	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-48.48	2	48.78	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-57.94	2	39.32	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2364.432	-45.54	2	51.72	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2383.344	-57.36	2	39.9	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-49.8	2	47.46	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-57.57	2	39.69	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-48.44	2	48.82	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-53.95	2	43.31	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2485.048	-46.89	2	50.37	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-53.95	2	43.31	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-49.69	2	47.57	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-57.3	2	39.96	Average	54	Pass



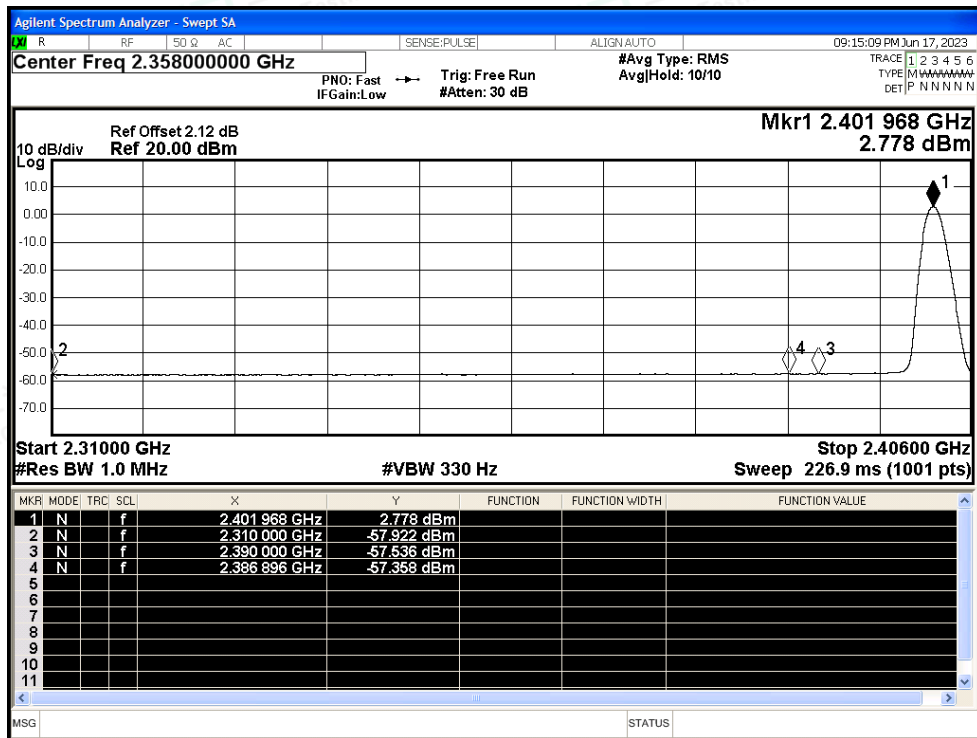


Test Graphs

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

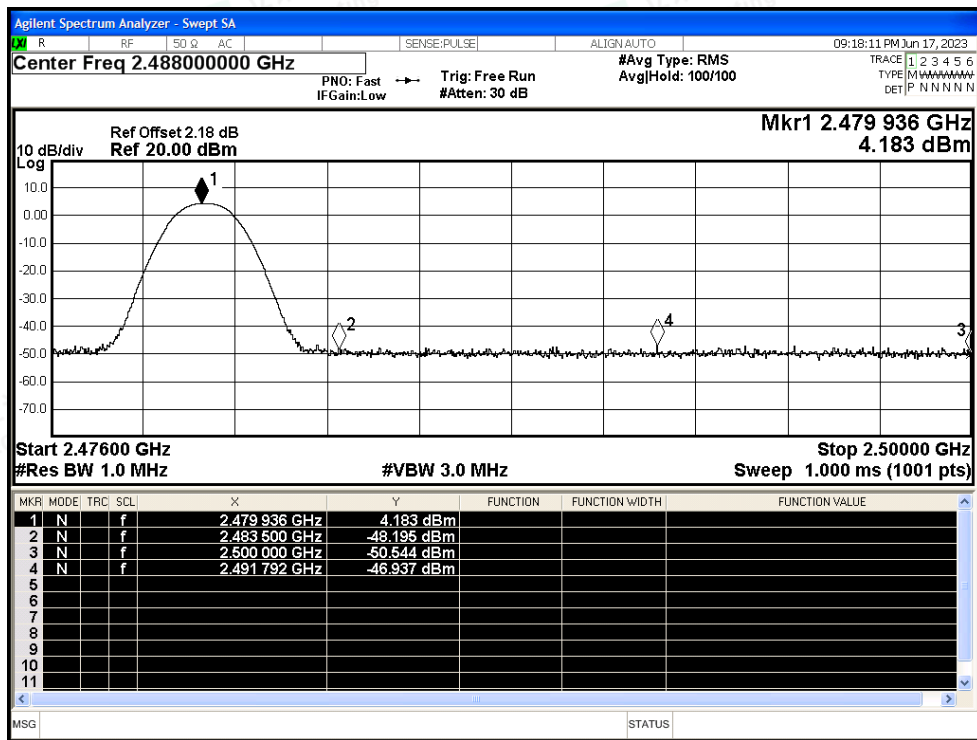


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

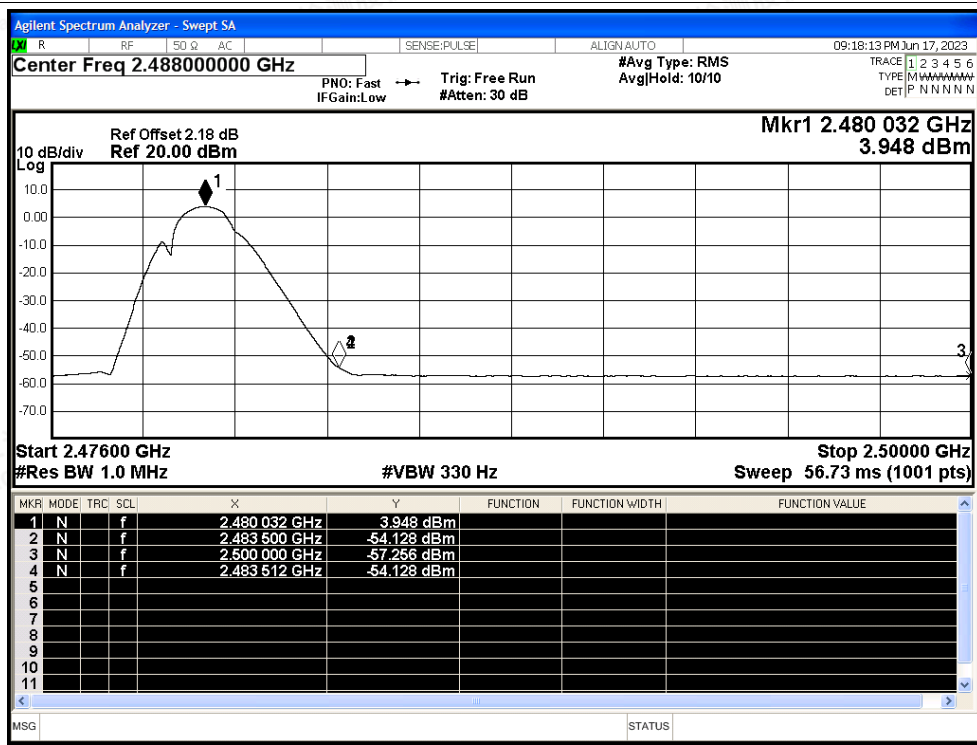




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

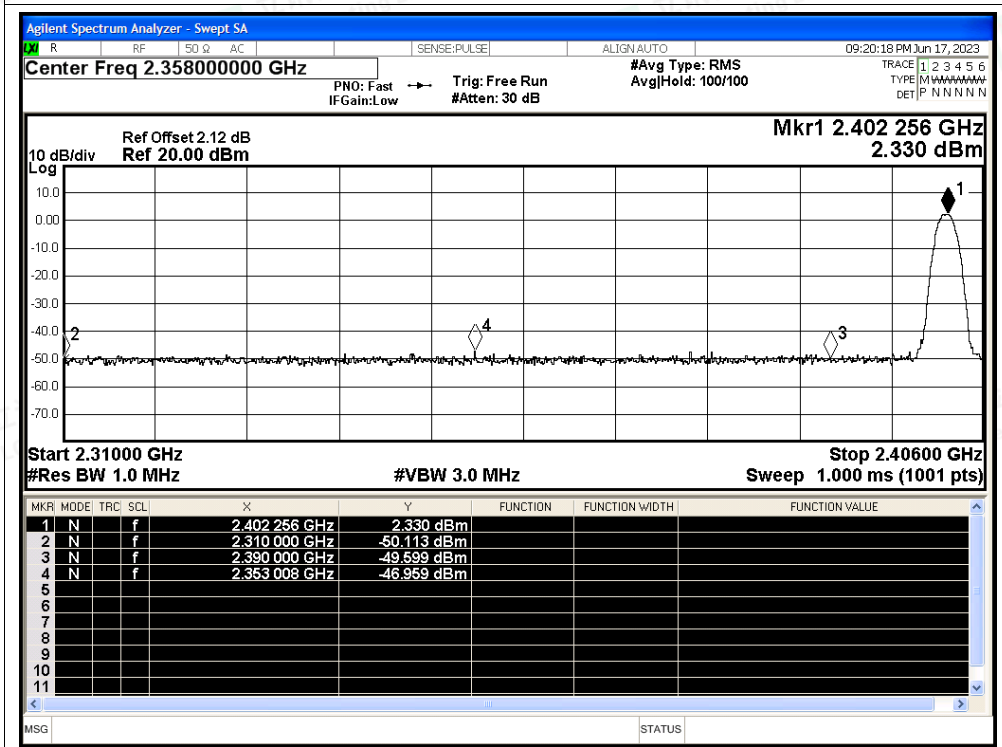


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

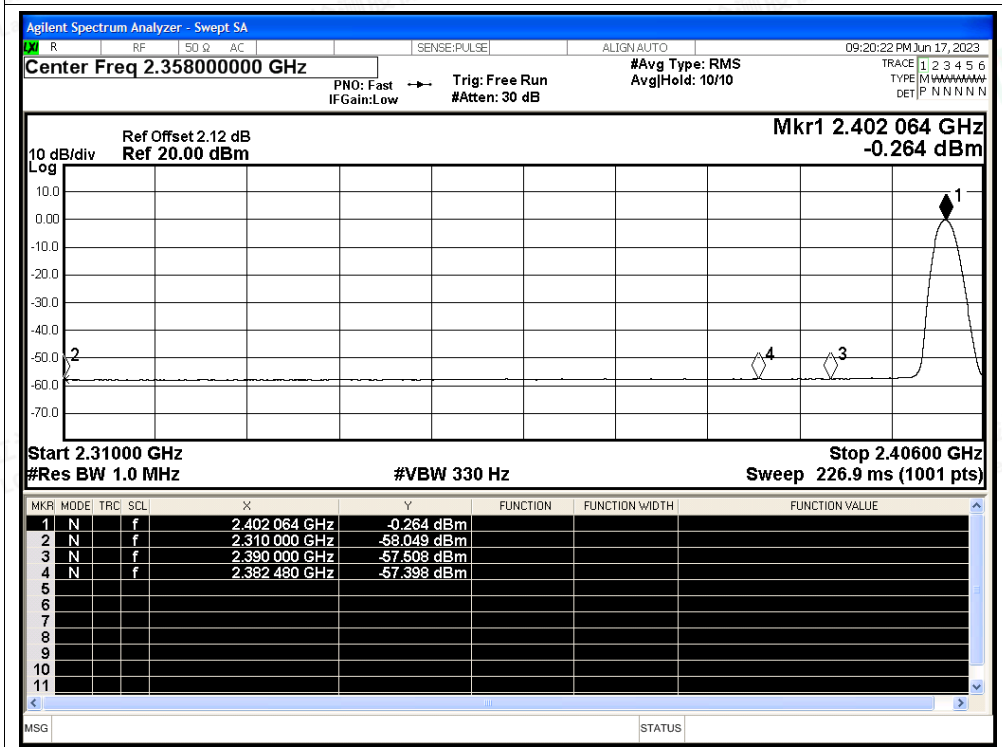




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

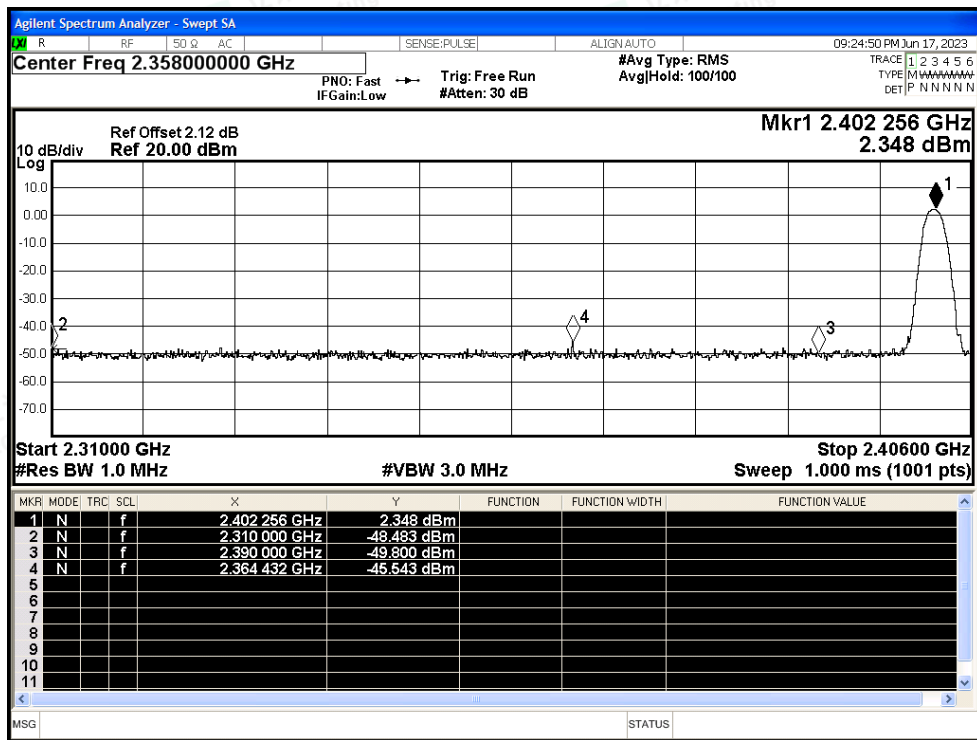


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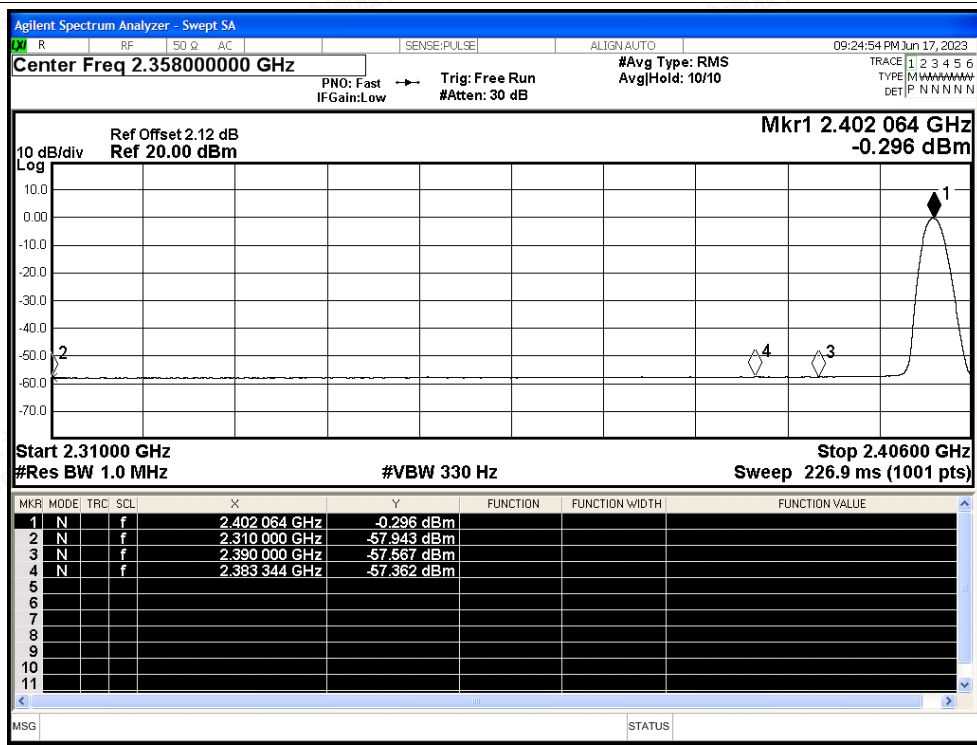




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

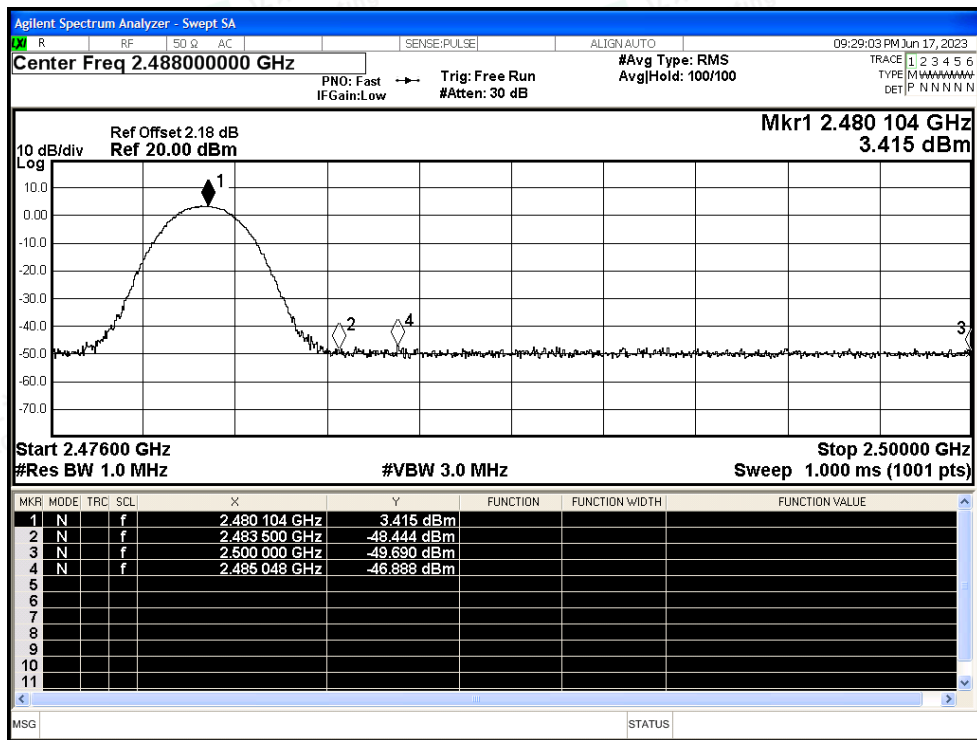


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





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



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

