



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: 7-inch Rugged Embedded Computer
Test Model: agroNave7

Environmental Conditions

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





A.1 -20dB Bandwidth

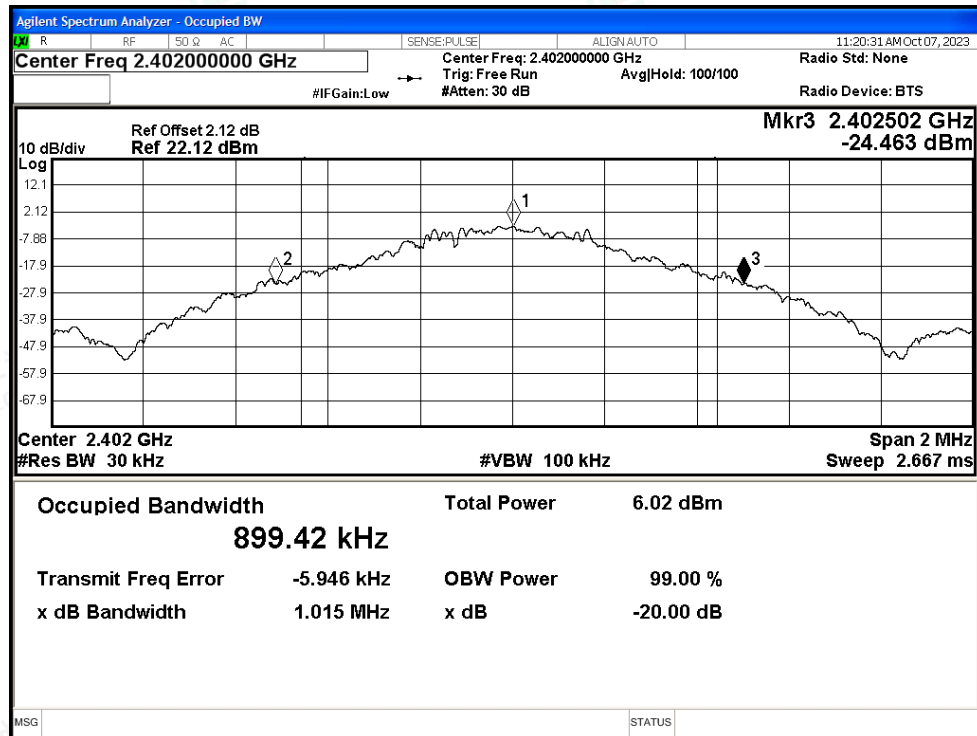
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.015	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.975	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.039	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.319	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.314	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.289	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.301	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.292	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.272	N/A	Pass



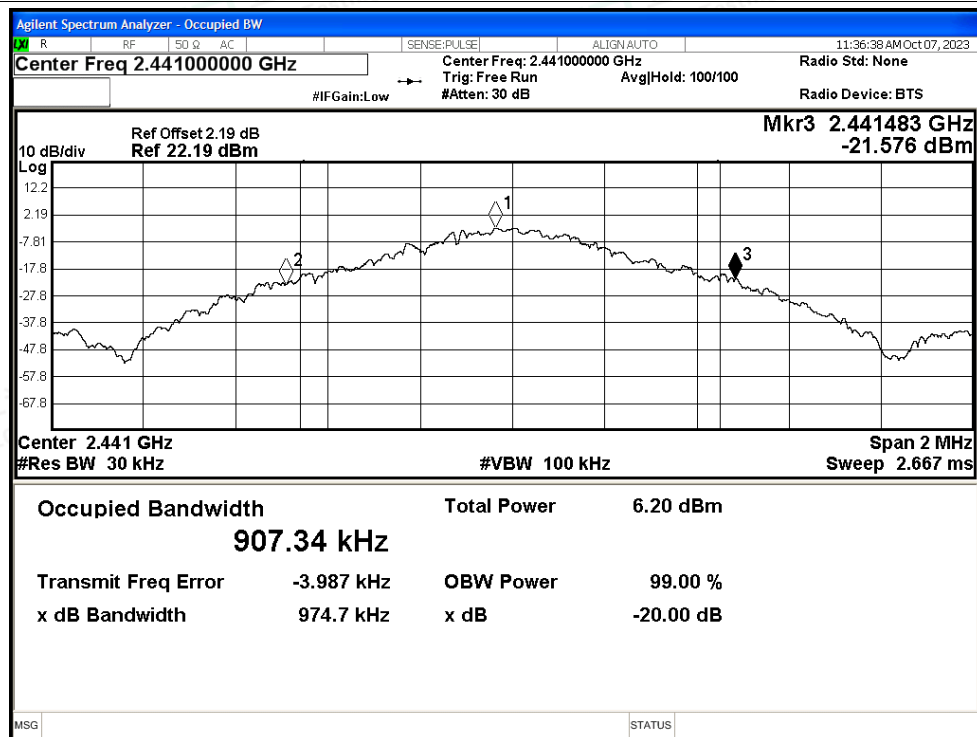


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



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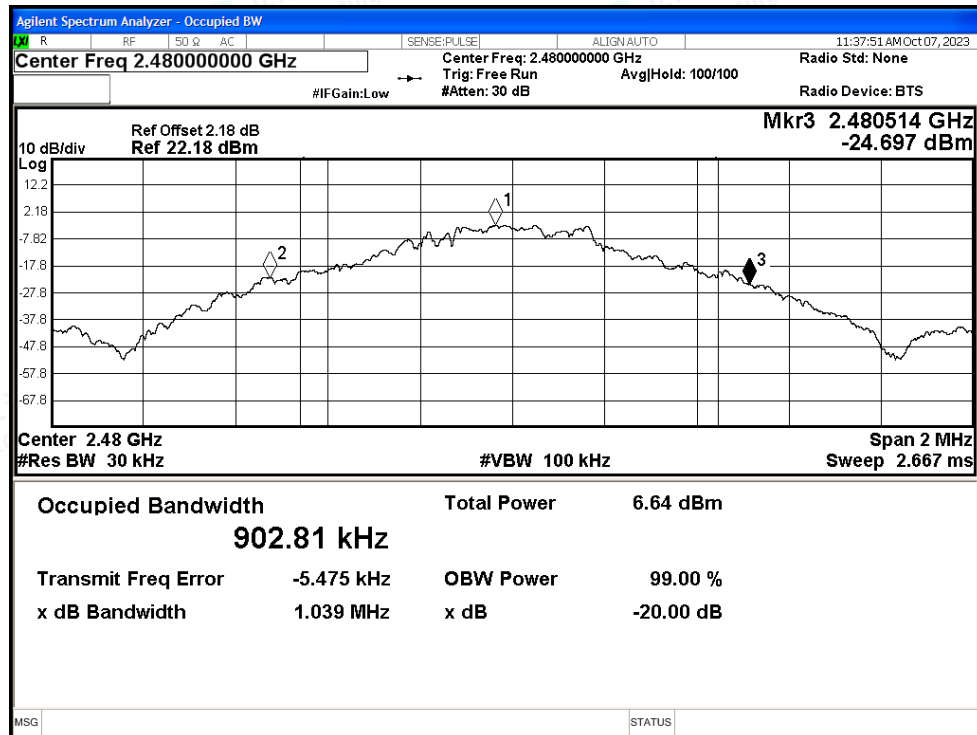
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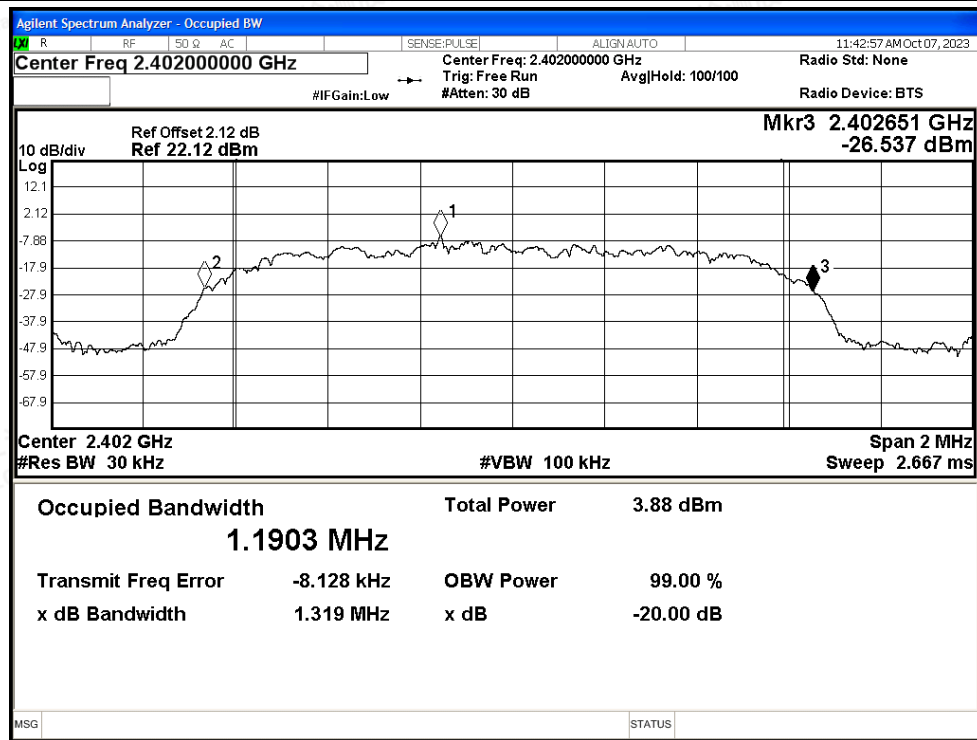
Scan code to check authenticity



-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

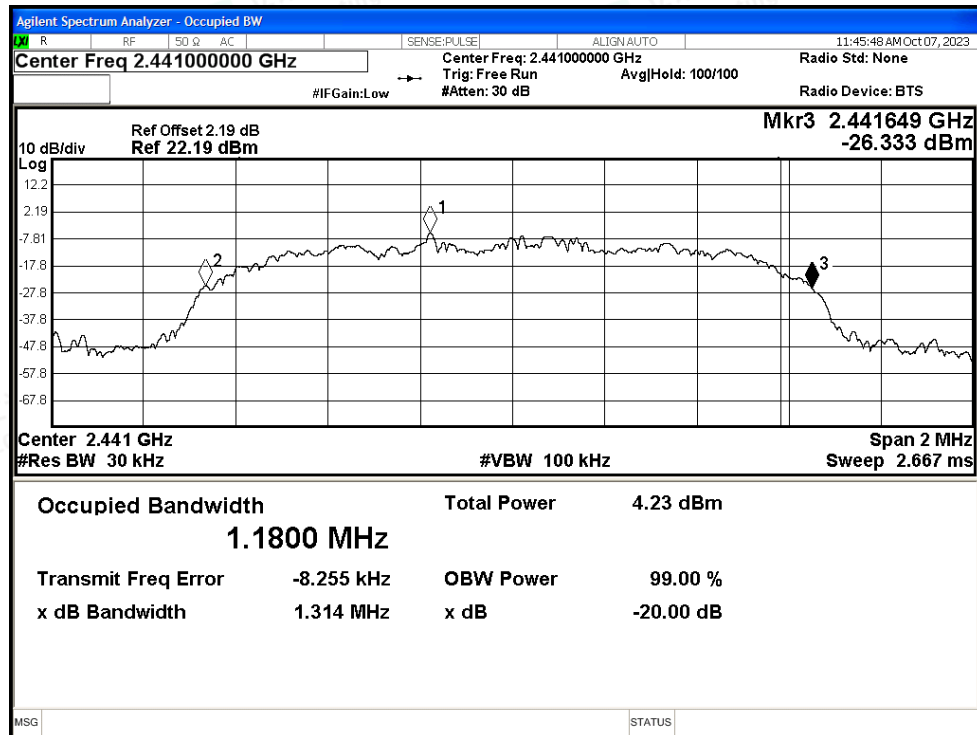


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

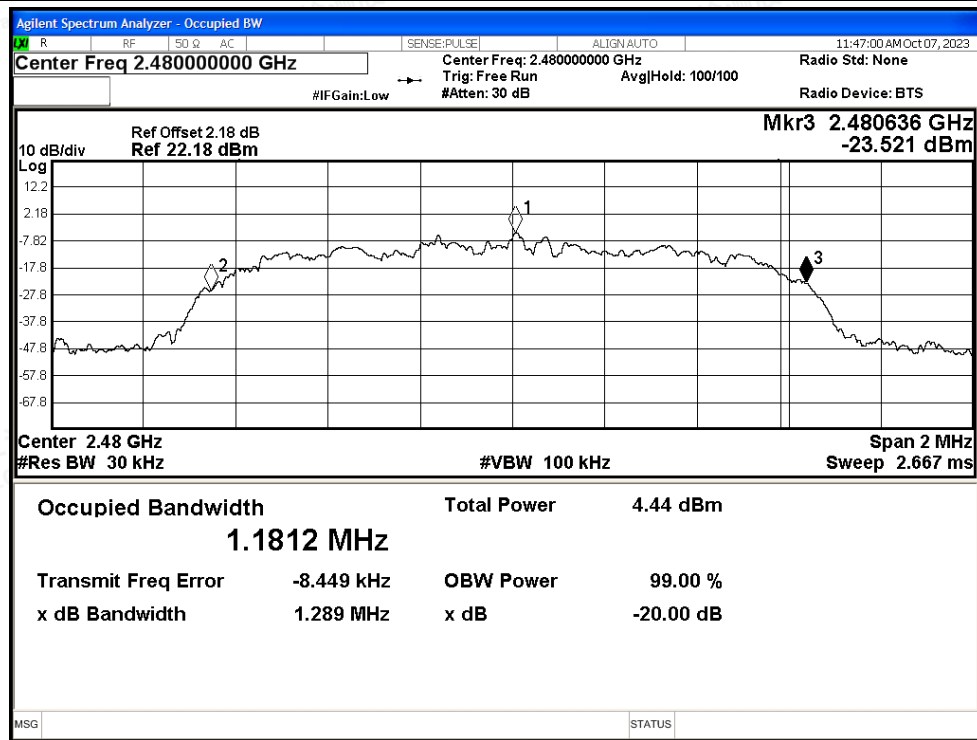




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

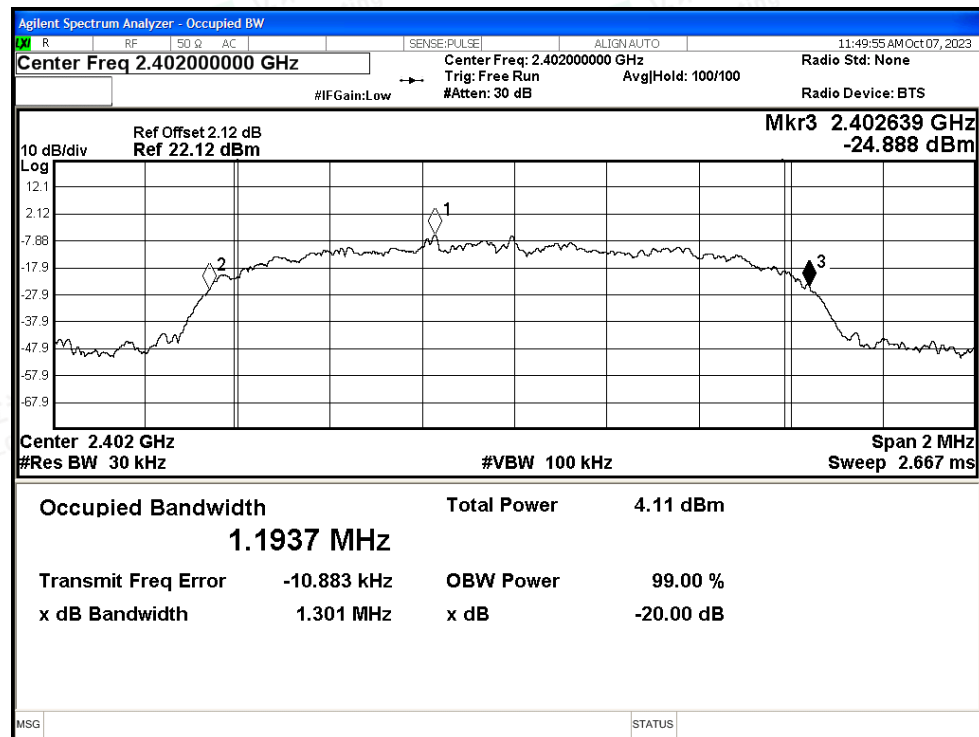


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

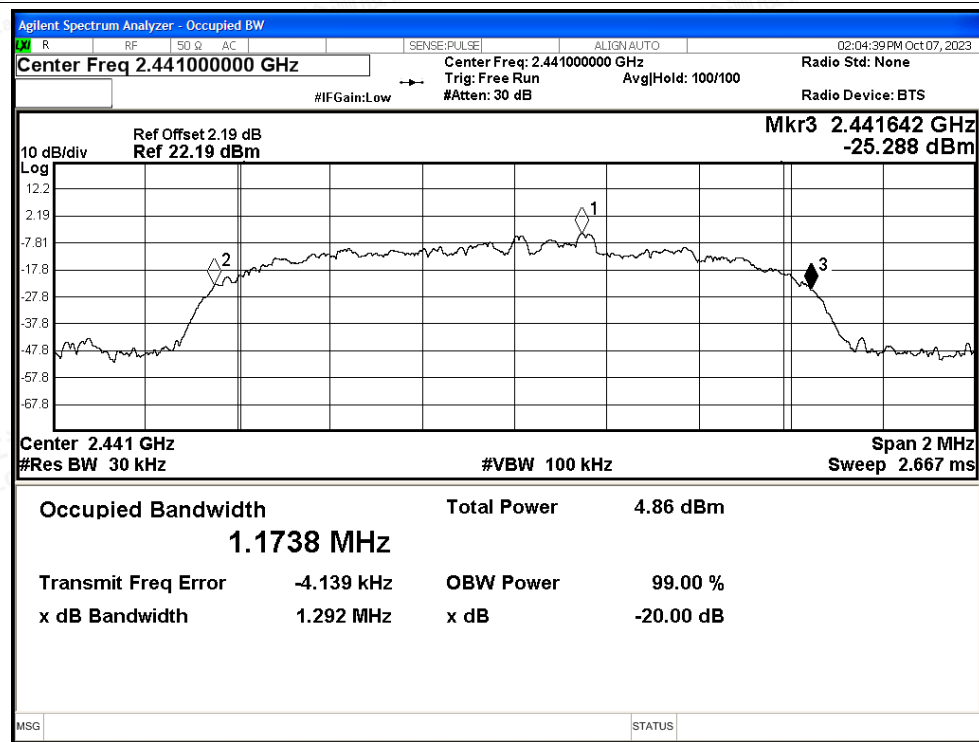


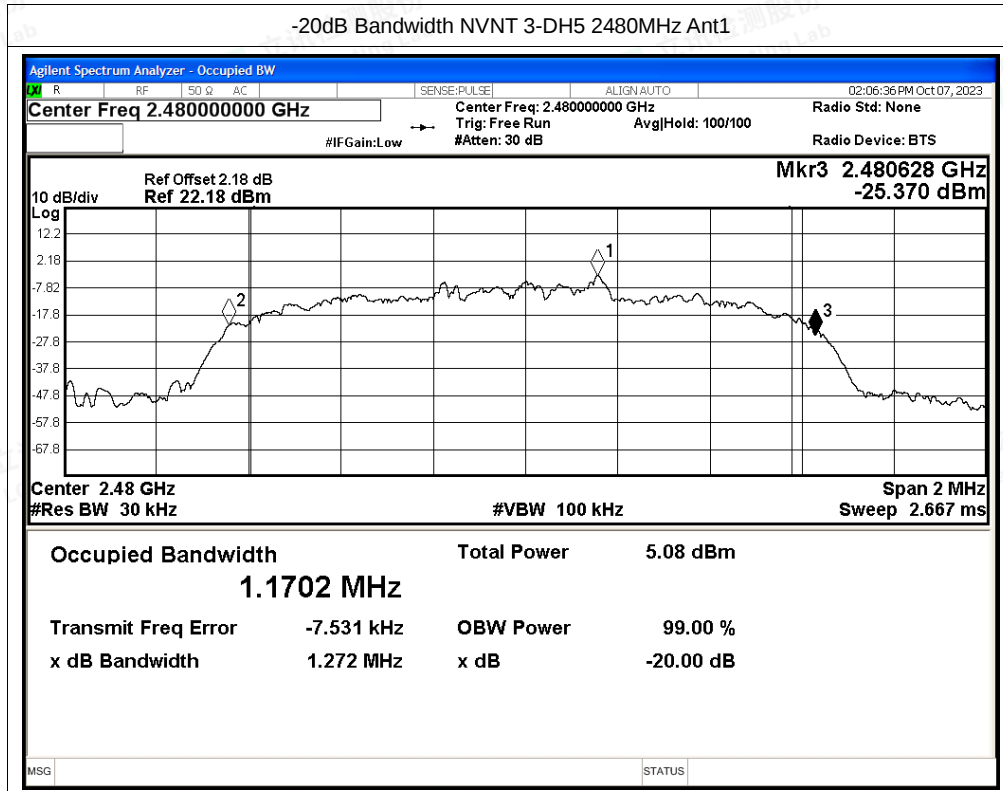


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1







A.2 Maximum Conducted Output Power

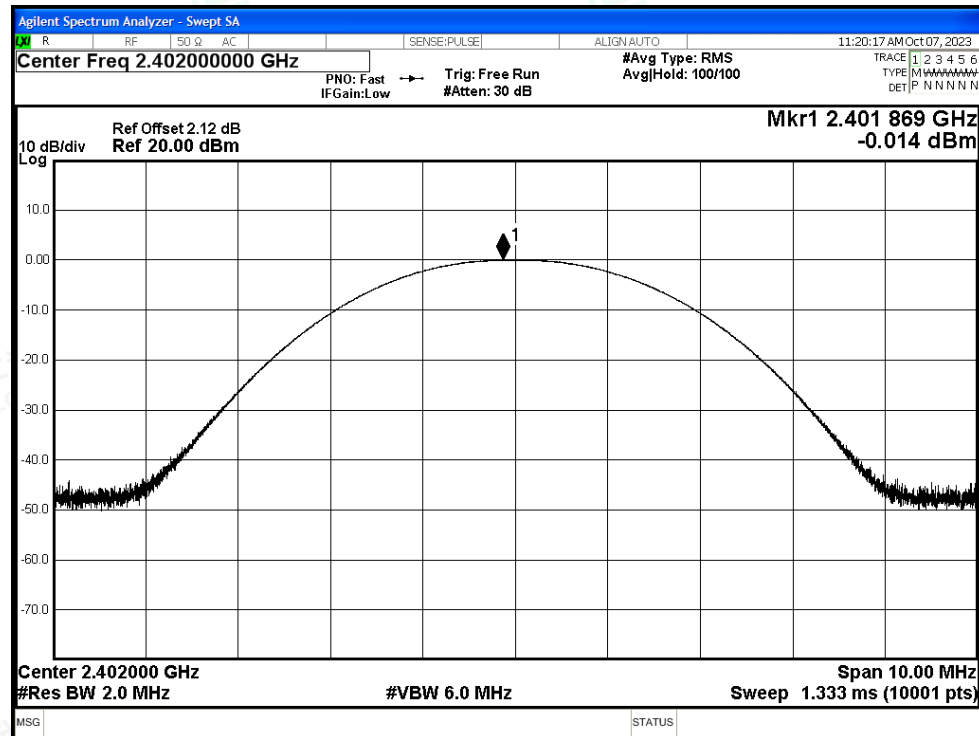
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.01	21	Pass
NVNT	1-DH5	2441	Ant1	0.27	21	Pass
NVNT	1-DH5	2480	Ant1	0.34	21	Pass
NVNT	2-DH5	2402	Ant1	-0.06	21	Pass
NVNT	2-DH5	2441	Ant1	0.02	21	Pass
NVNT	2-DH5	2480	Ant1	0.13	21	Pass
NVNT	3-DH5	2402	Ant1	0.02	21	Pass
NVNT	3-DH5	2441	Ant1	0.39	21	Pass
NVNT	3-DH5	2480	Ant1	0.10	21	Pass



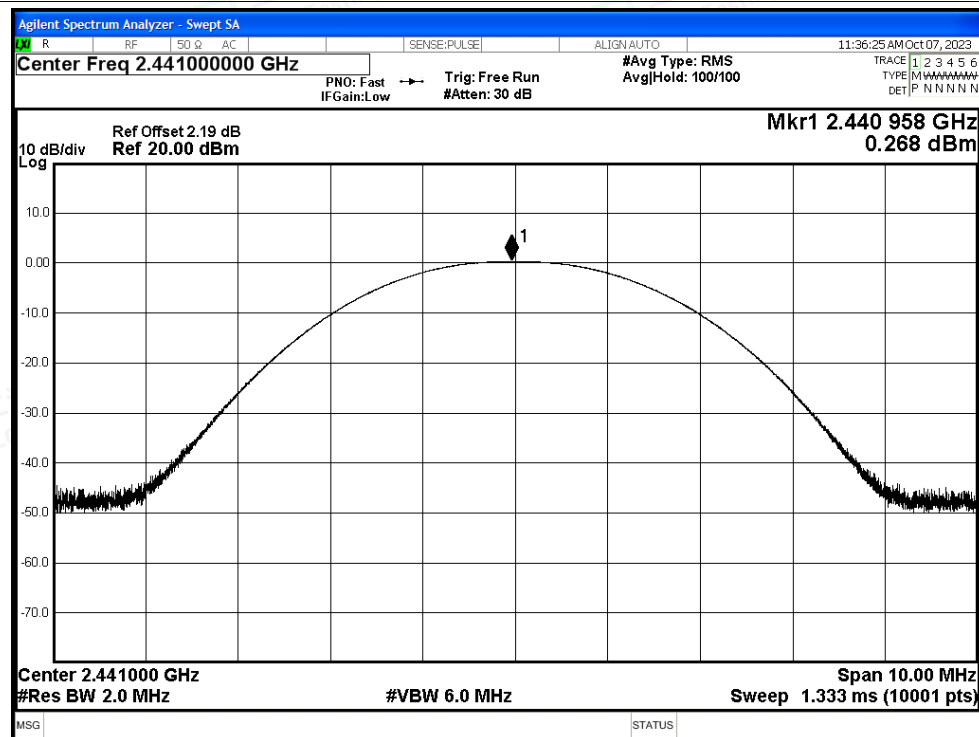


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

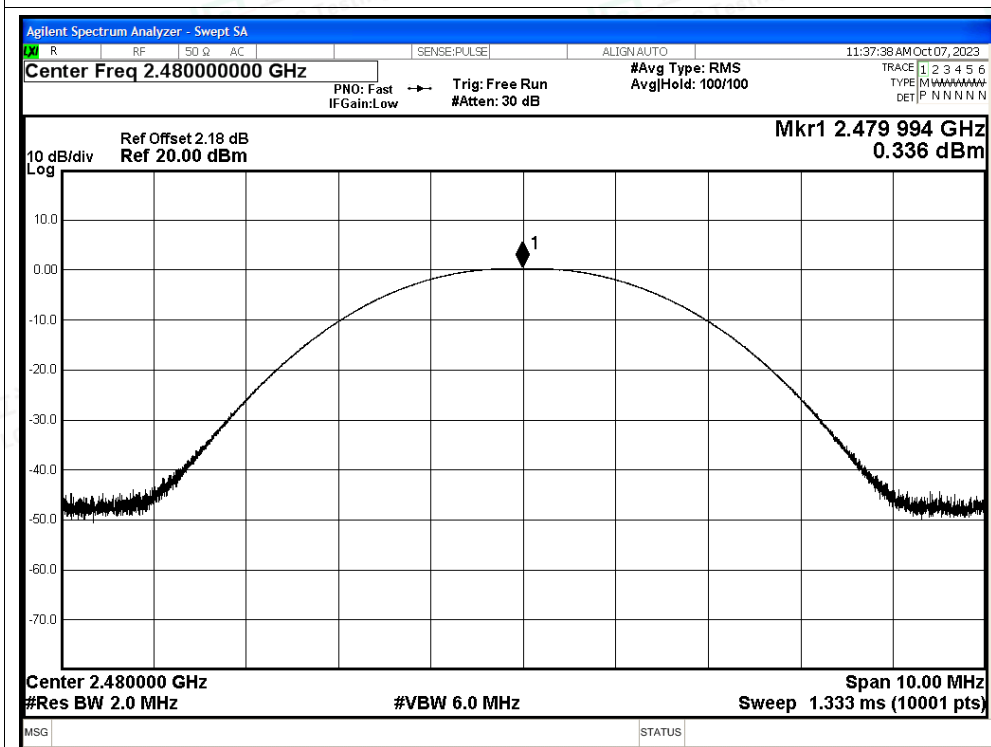


Power NVNT 1-DH5 2441MHz Ant1

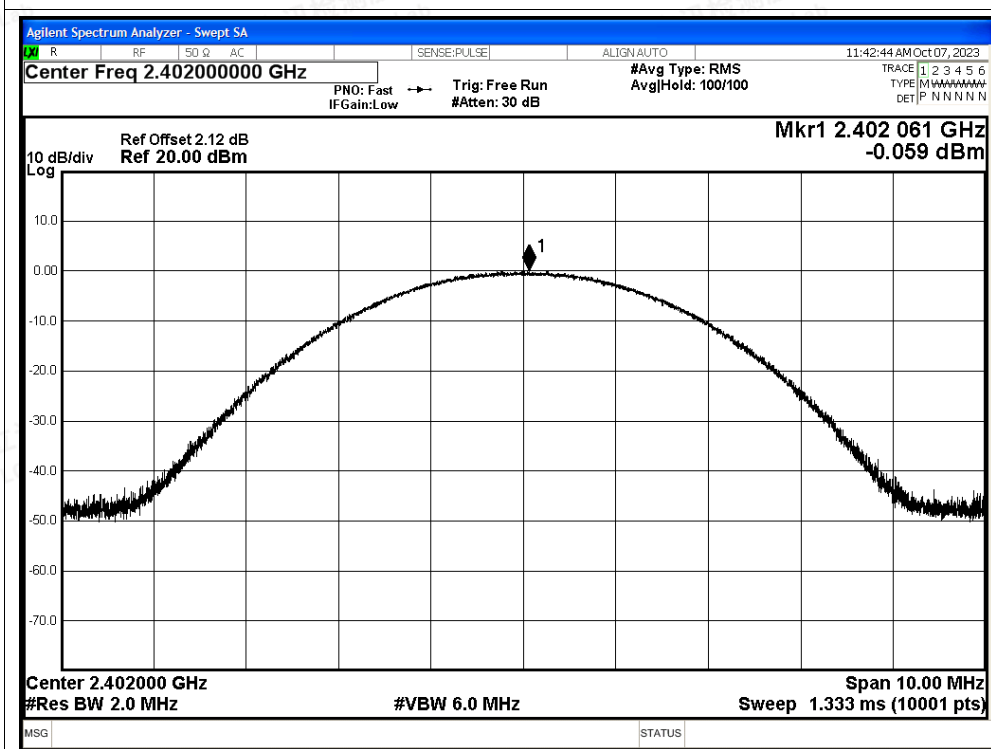




Power NVNT 1-DH5 2480MHz Ant1

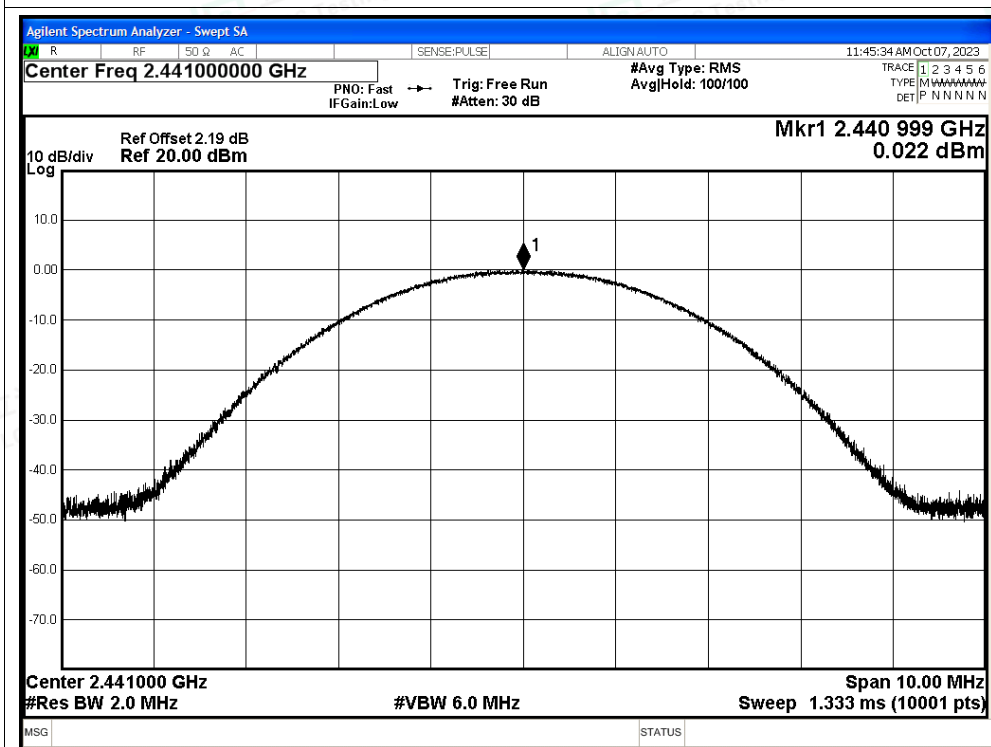


Power NVNT 2-DH5 2402MHz Ant1

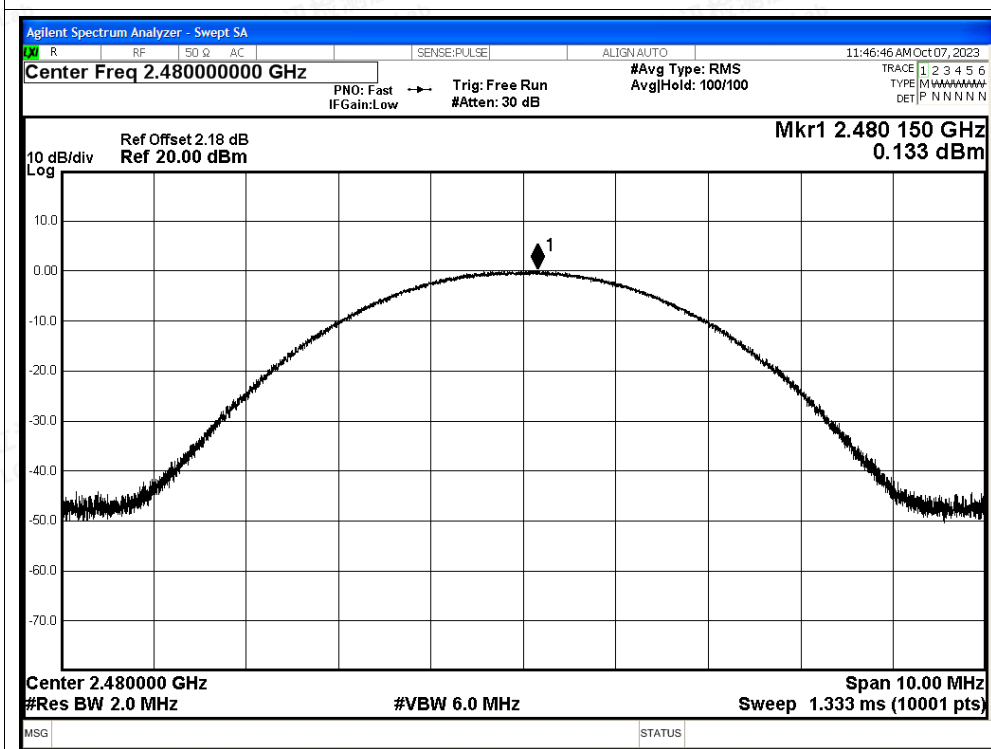




Power NVNT 2-DH5 2441MHz Ant1

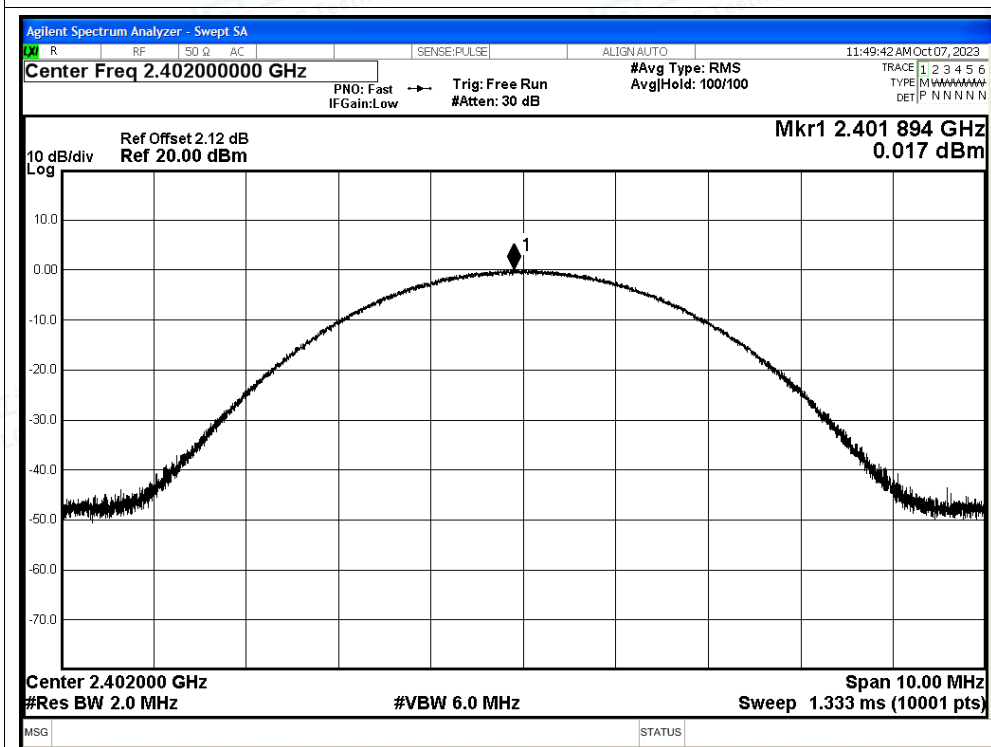


Power NVNT 2-DH5 2480MHz Ant1

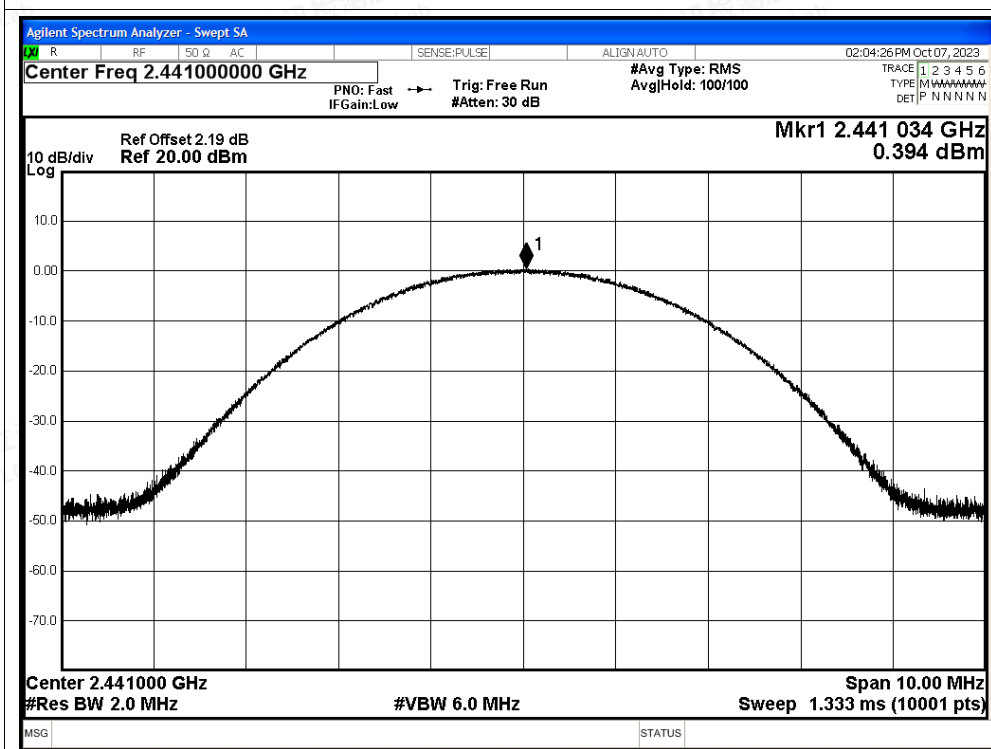


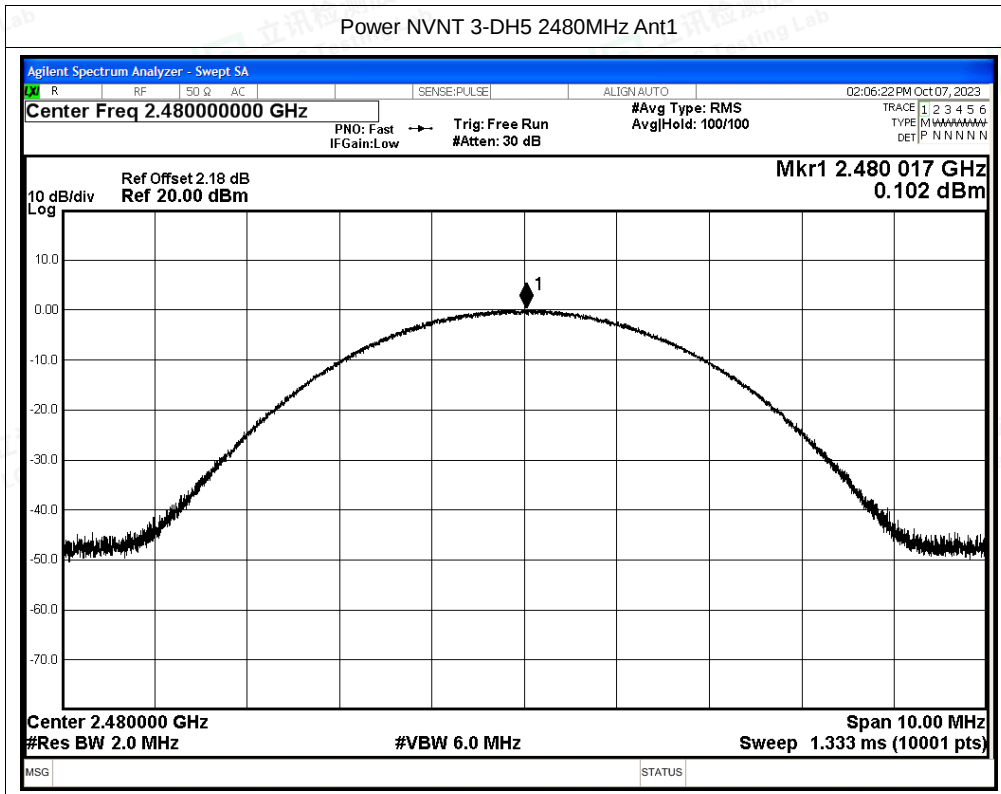


Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1







A.3 Carrier Frequencies Separation

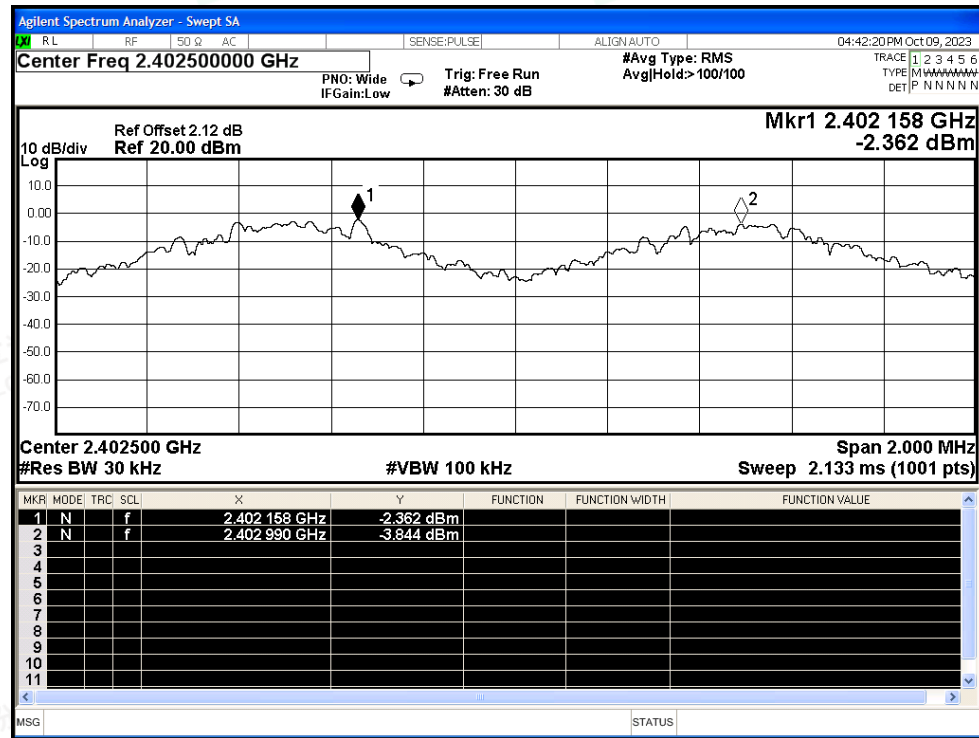
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.158	2402.99	0.832	0.693	Pass
NVNT	2-DH5	Ant1	2401.834	2403.154	1.32	0.879	Pass
NVNT	3-DH5	Ant1	2402.154	2403.15	0.996	0.867	Pass



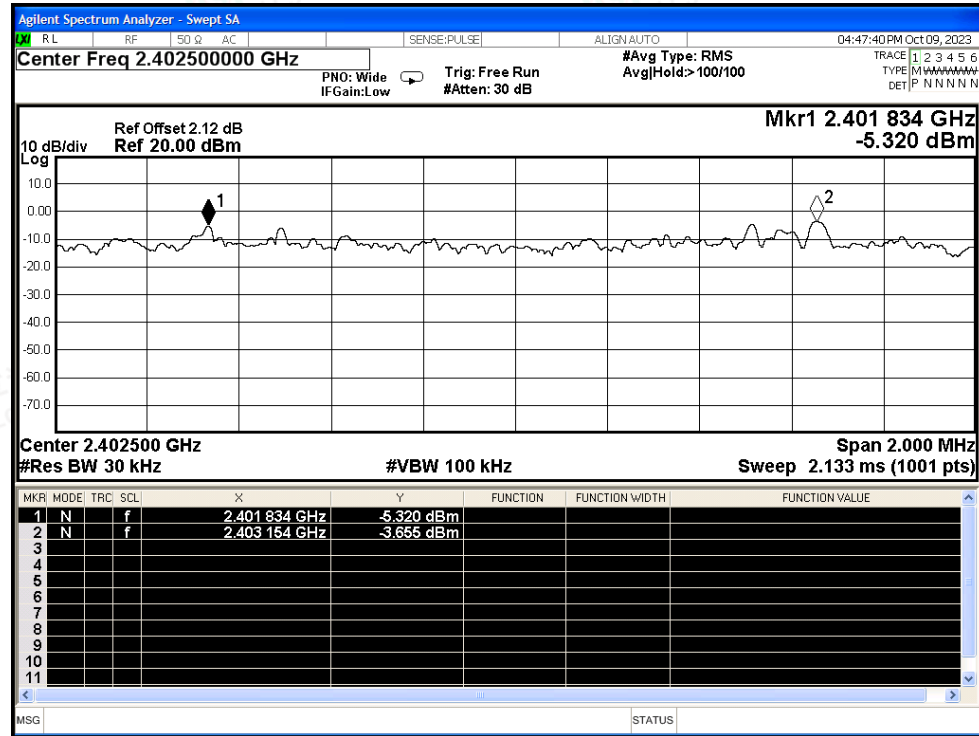


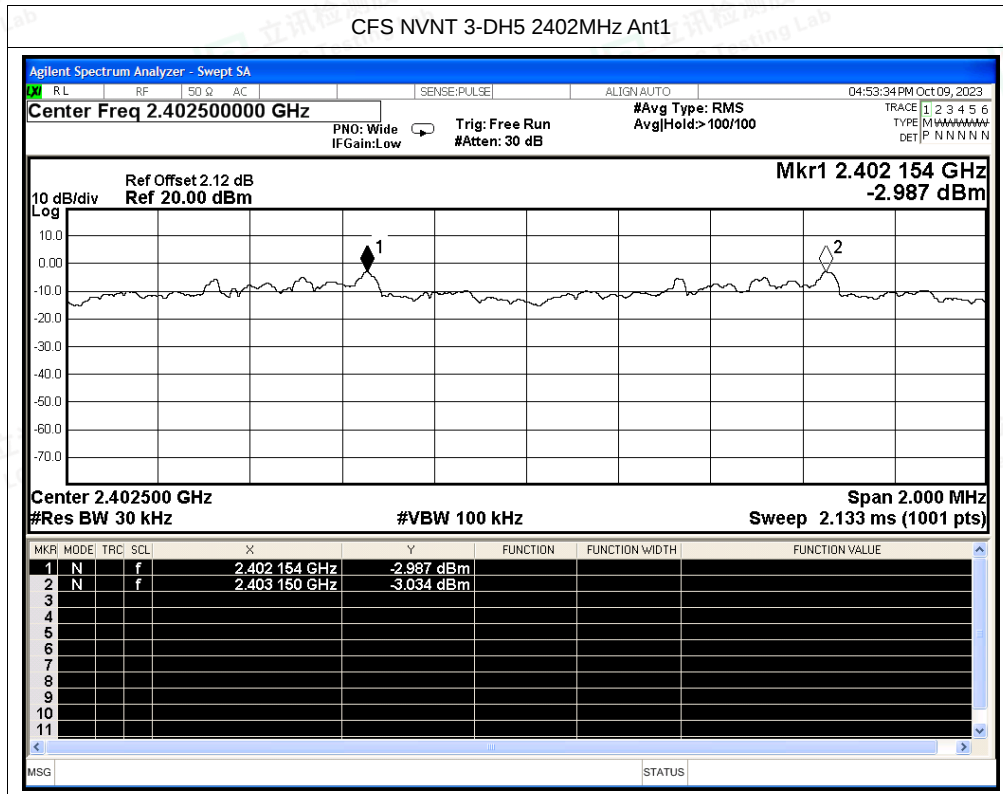
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-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	2.882	296.846	103	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	282.73	98	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.886	311.688	108	31600	400	Pass

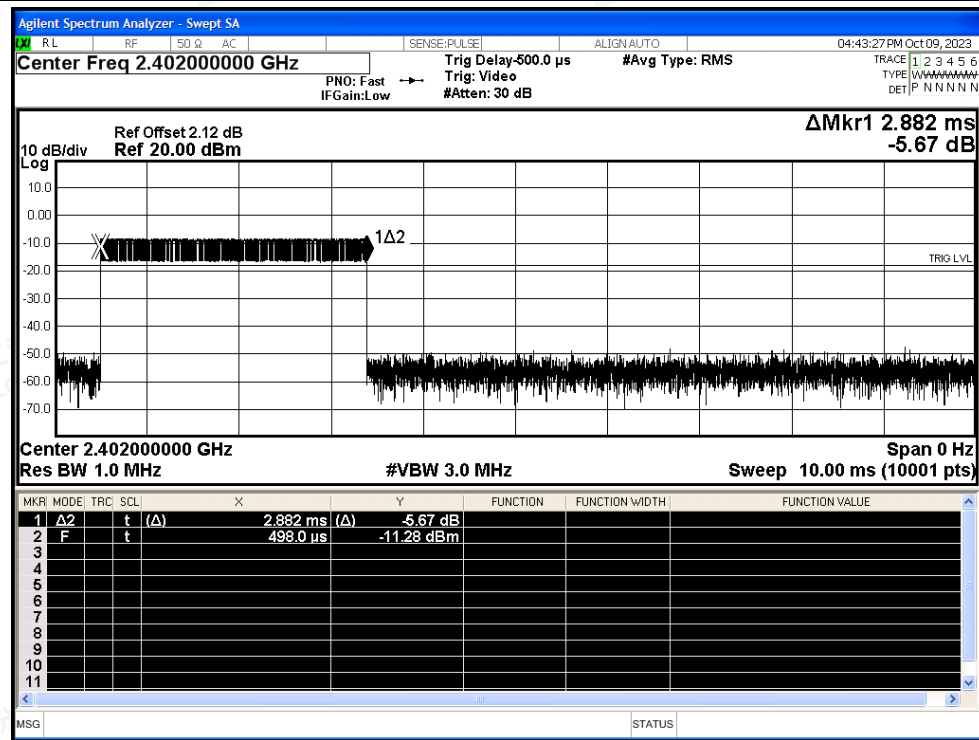


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518000, China
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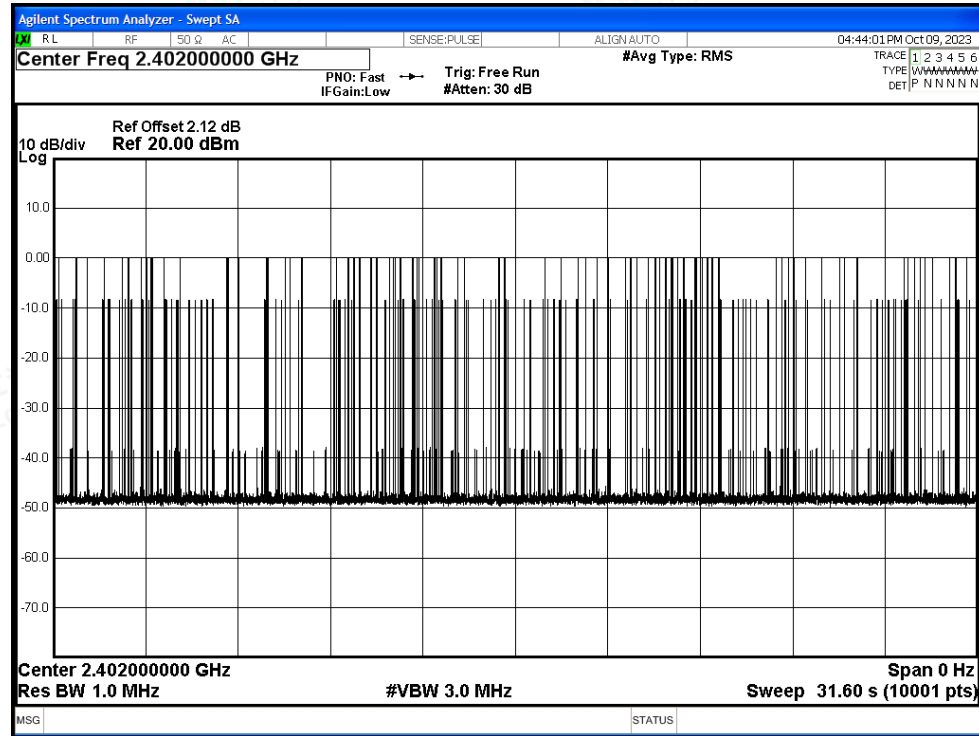


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

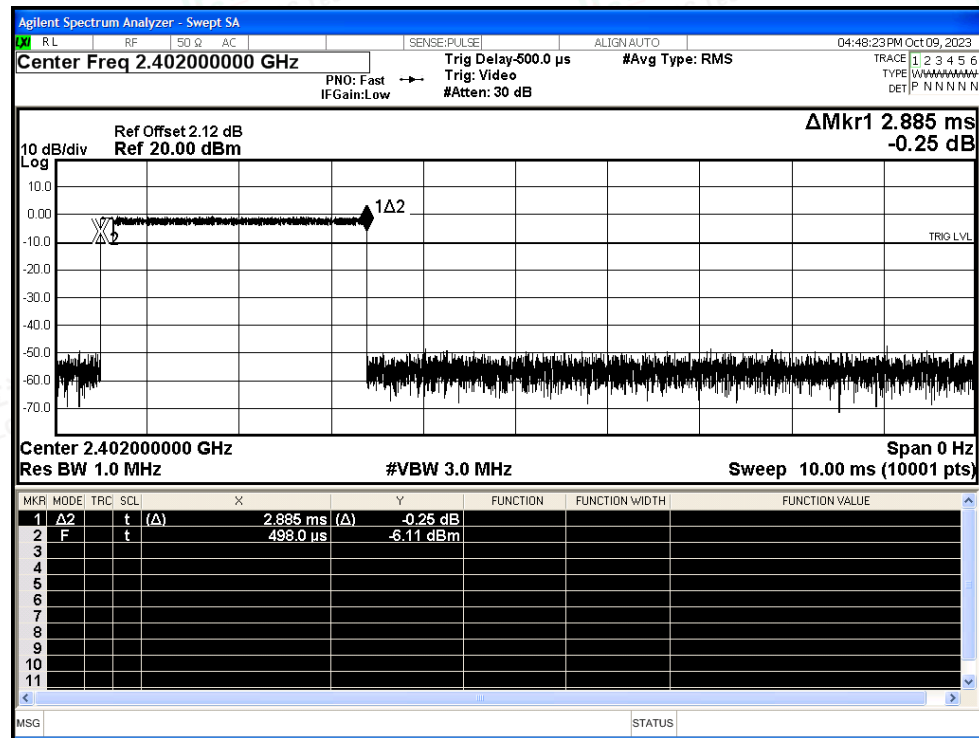


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

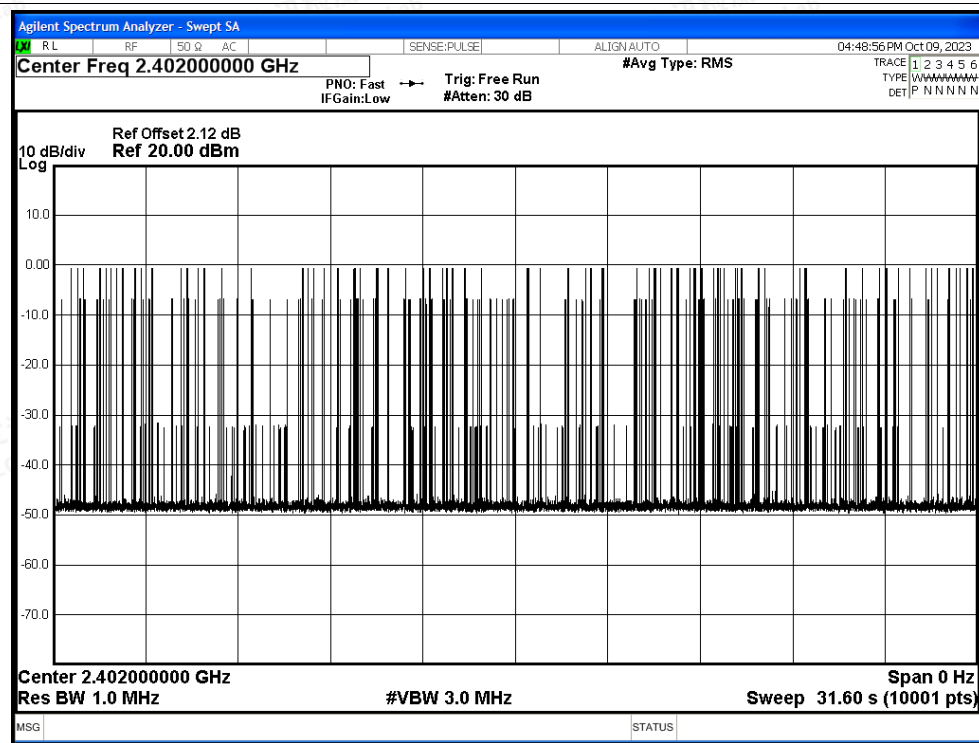




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

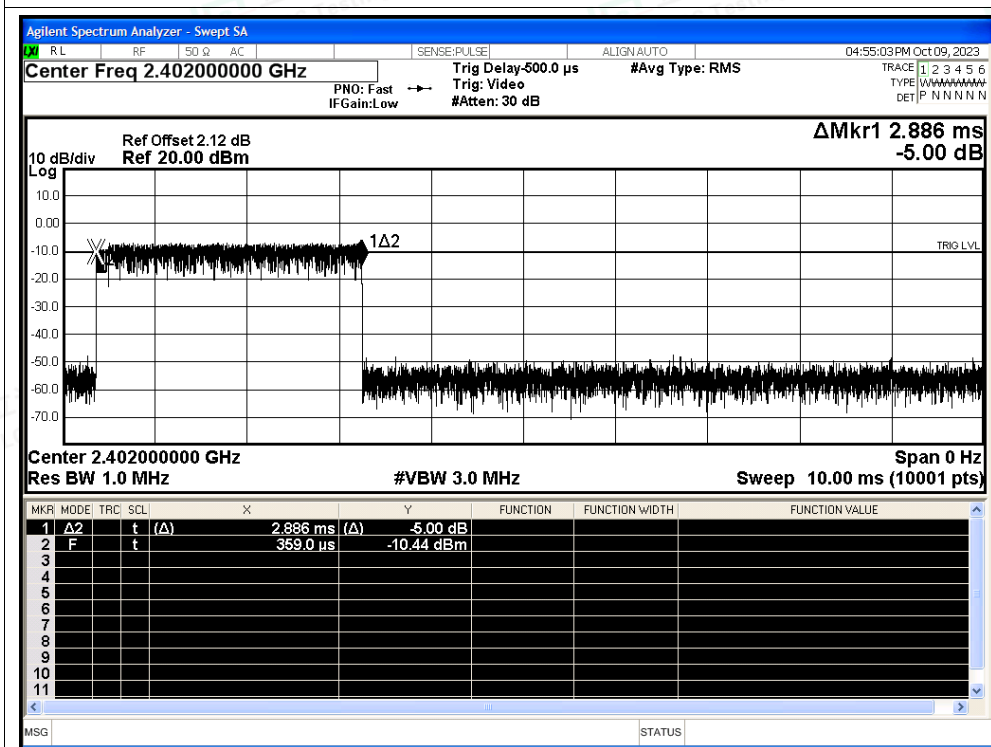


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

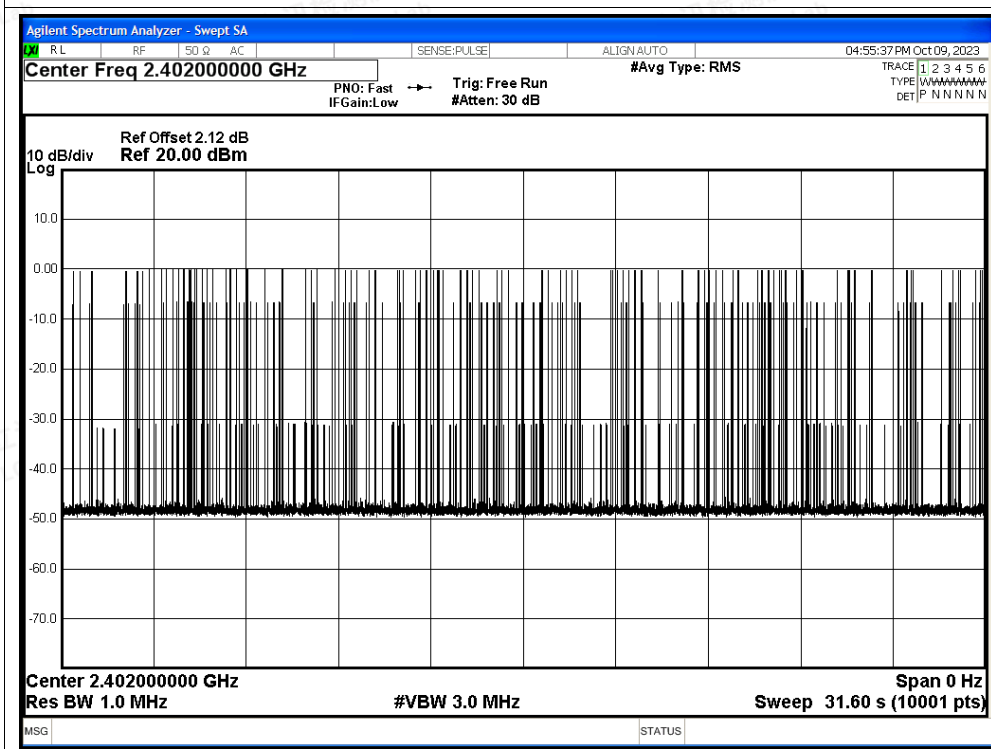




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



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

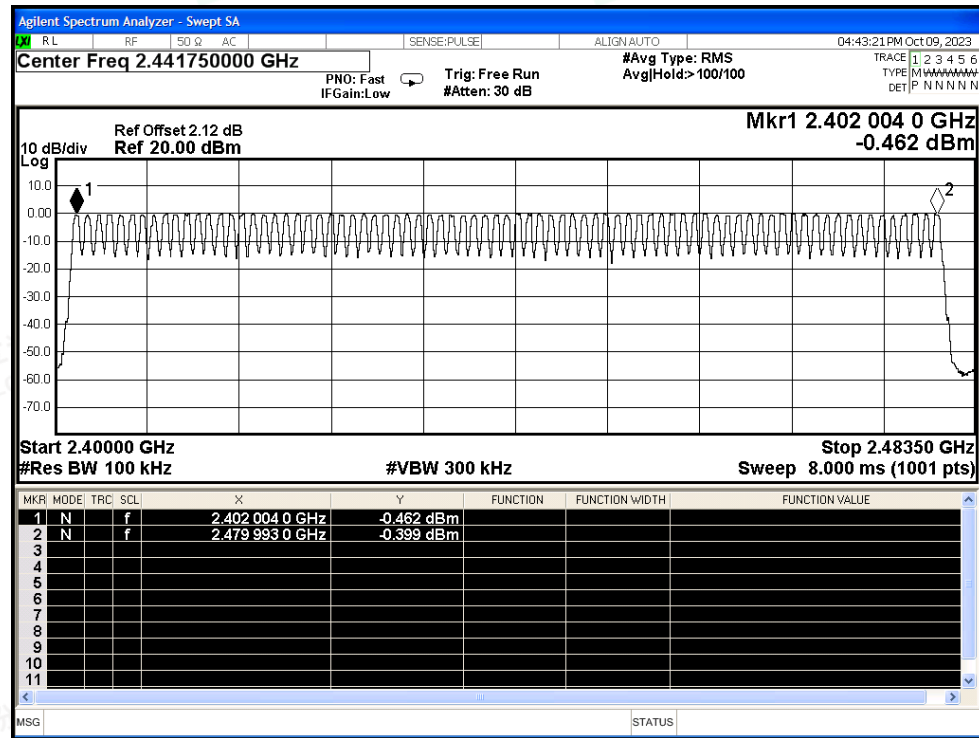


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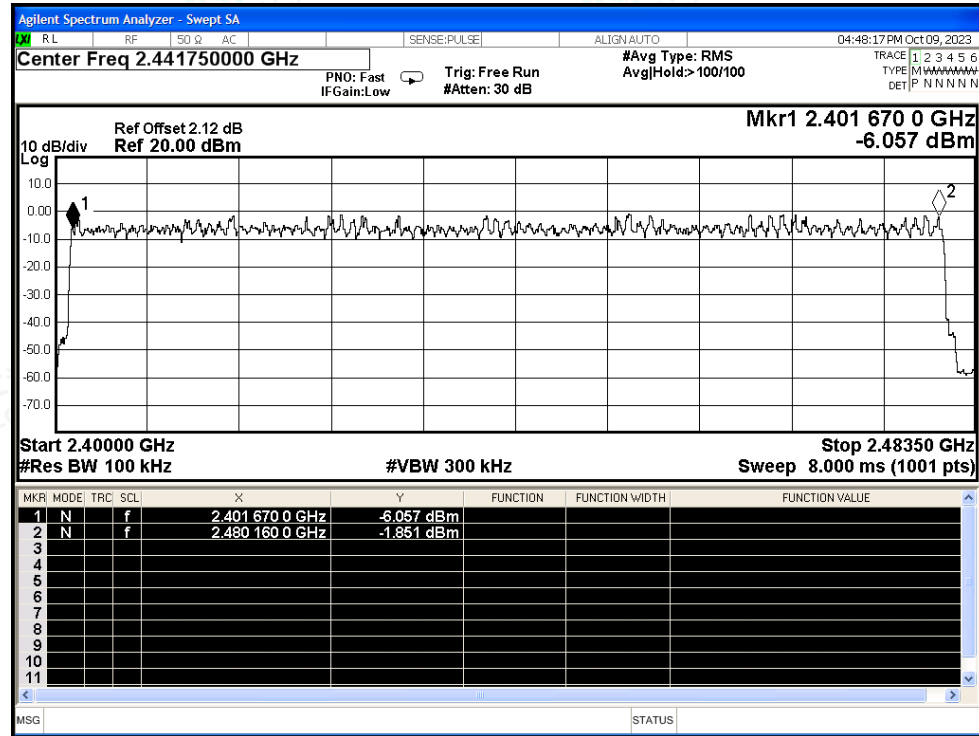


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

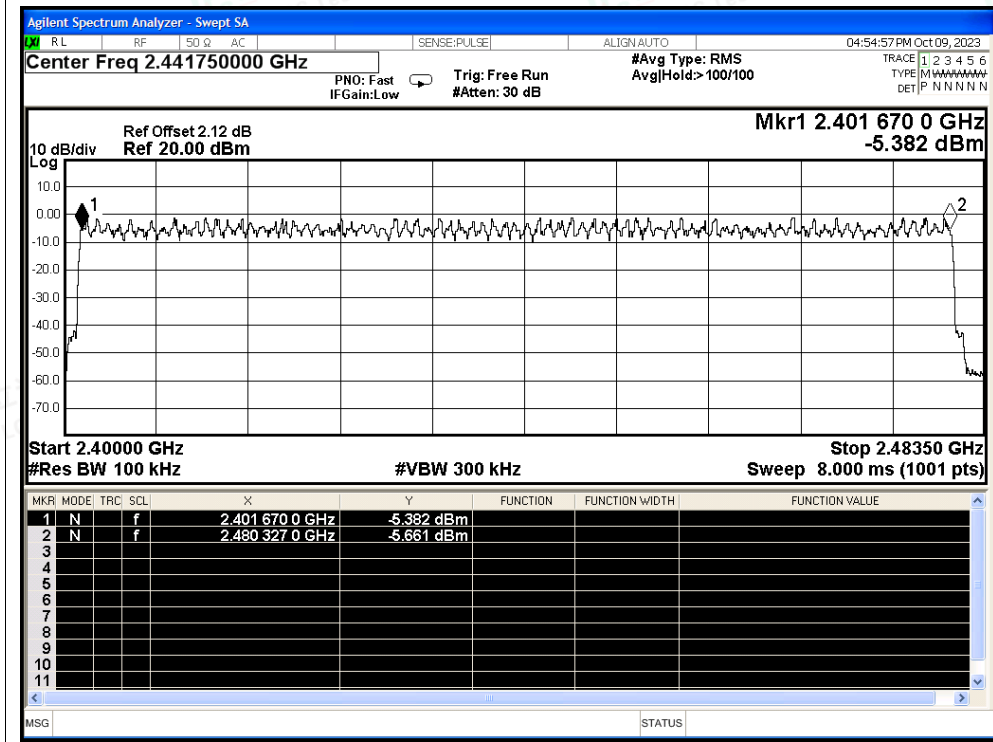


Hopping No. NVNT 2-DH5 2402MHz Ant1





Hopping No. NVNT 3-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	-56.5	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.33	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-55.54	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-56.05	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-52.54	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-53.31	-20	Pass

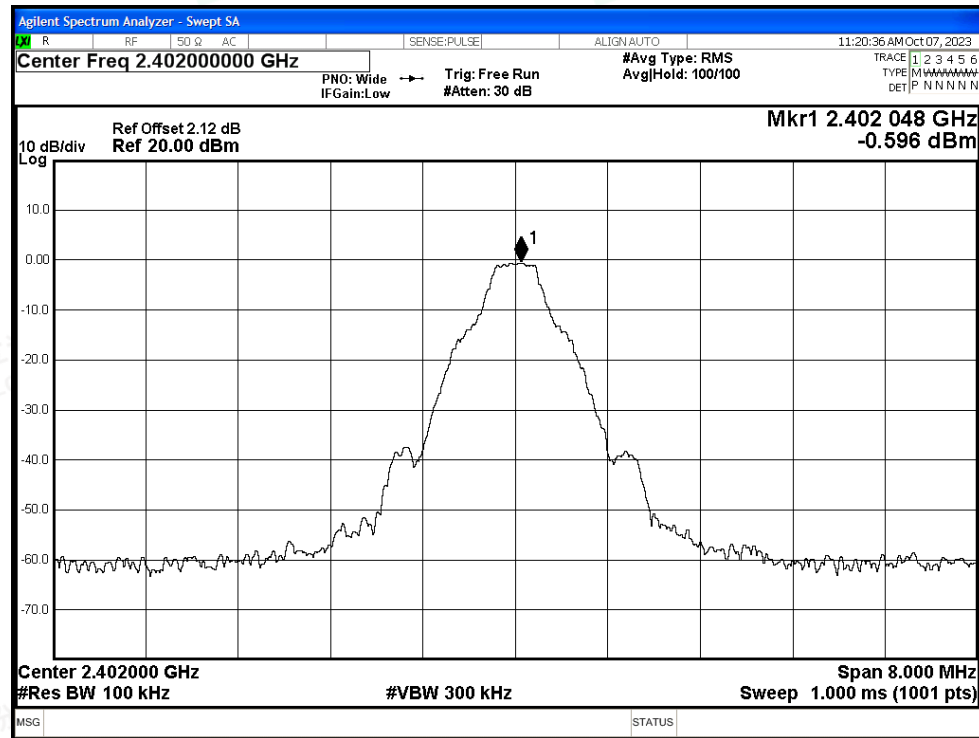


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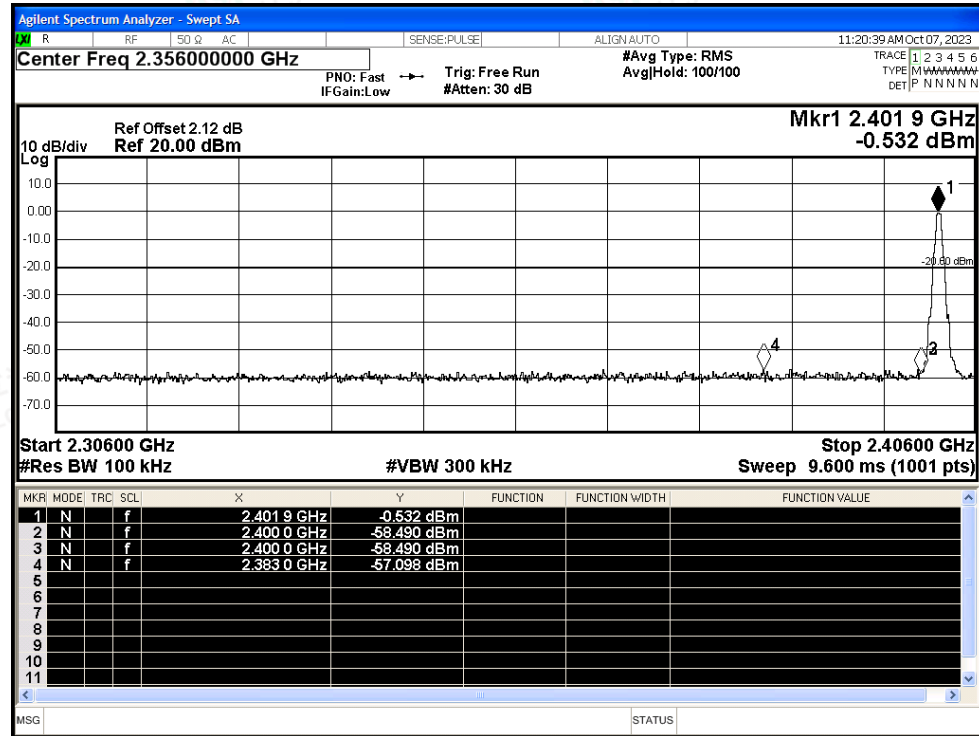


Test Graphs

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

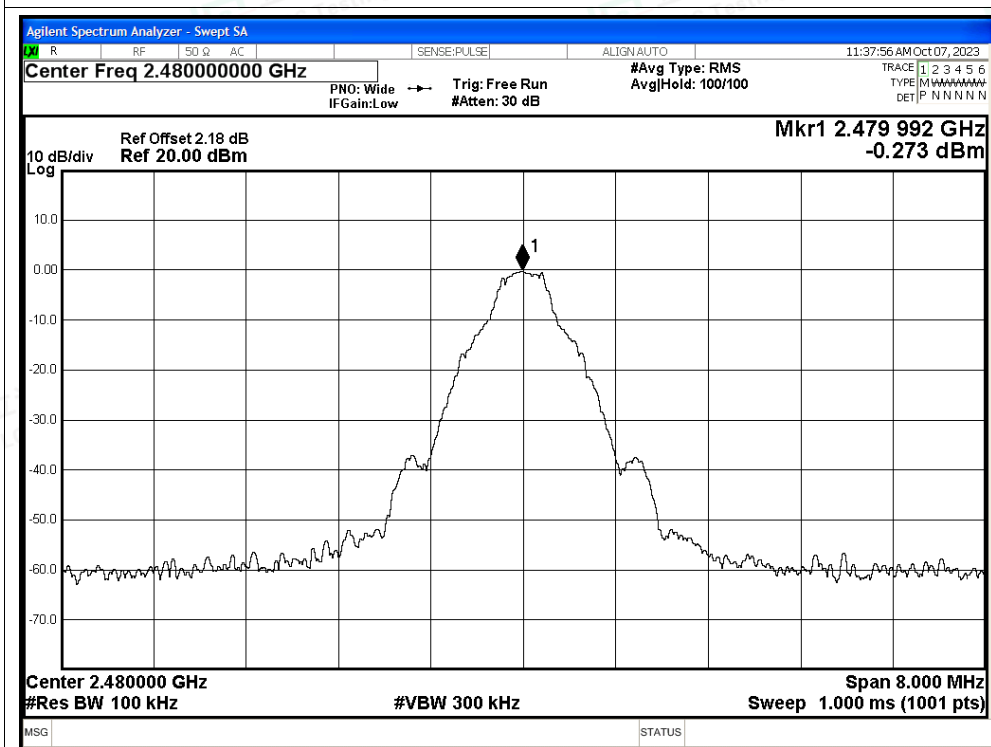


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

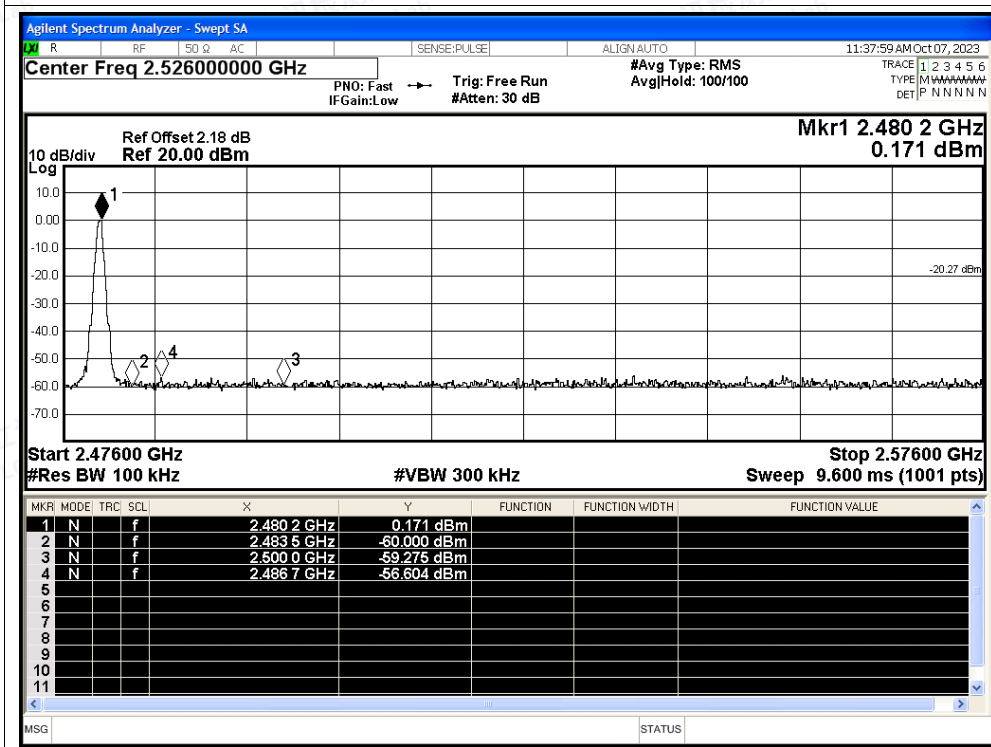




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

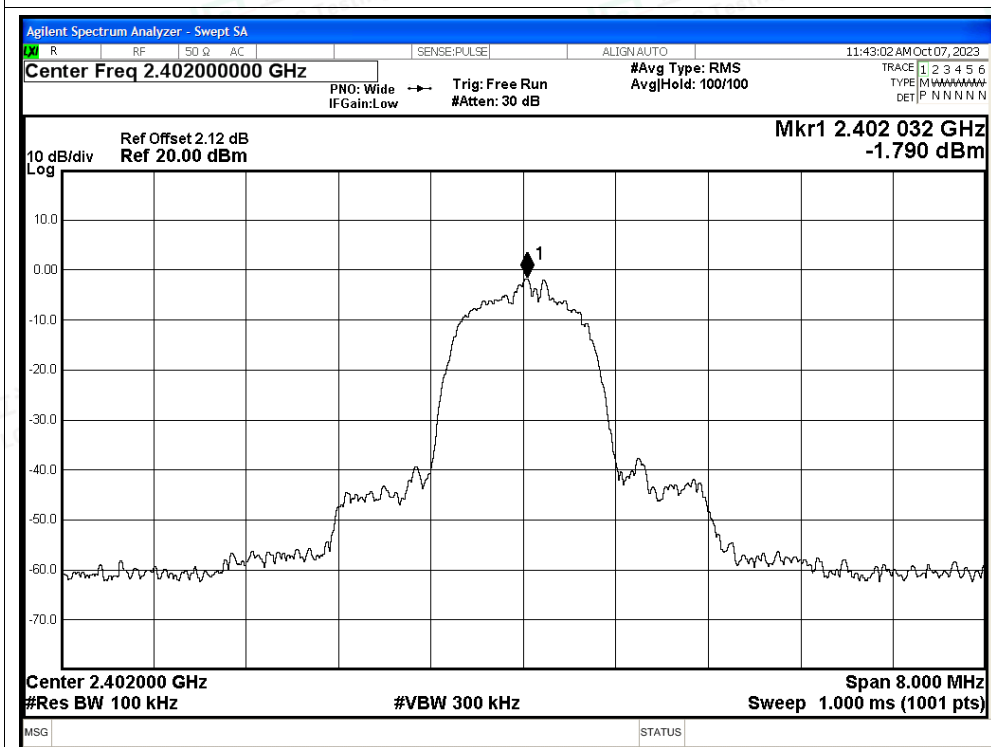


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

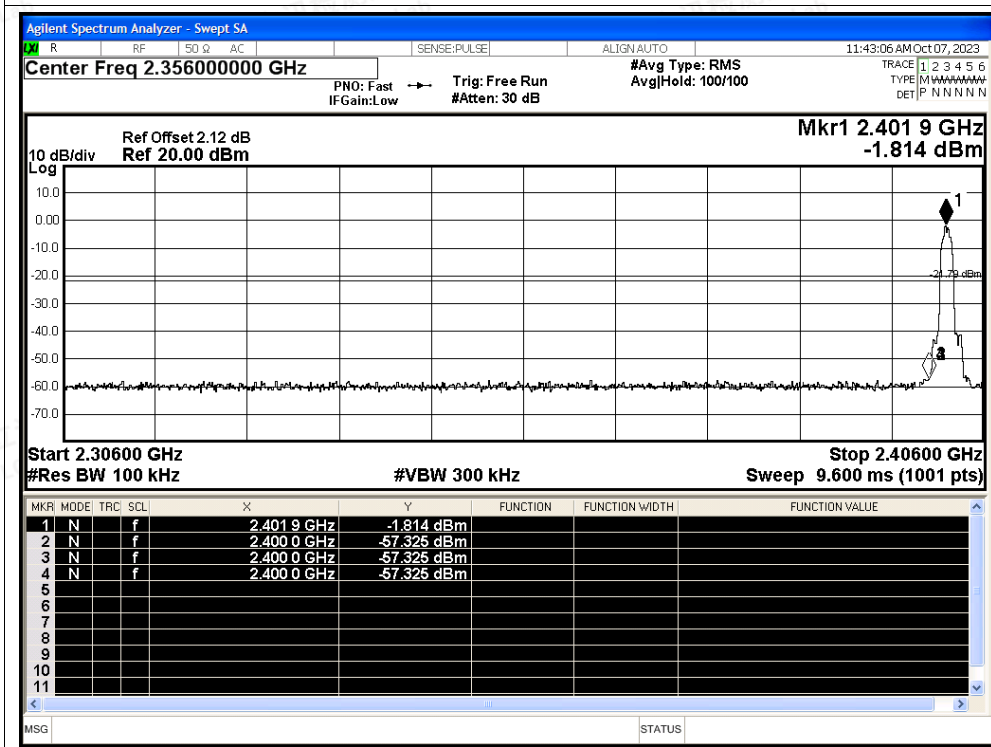




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

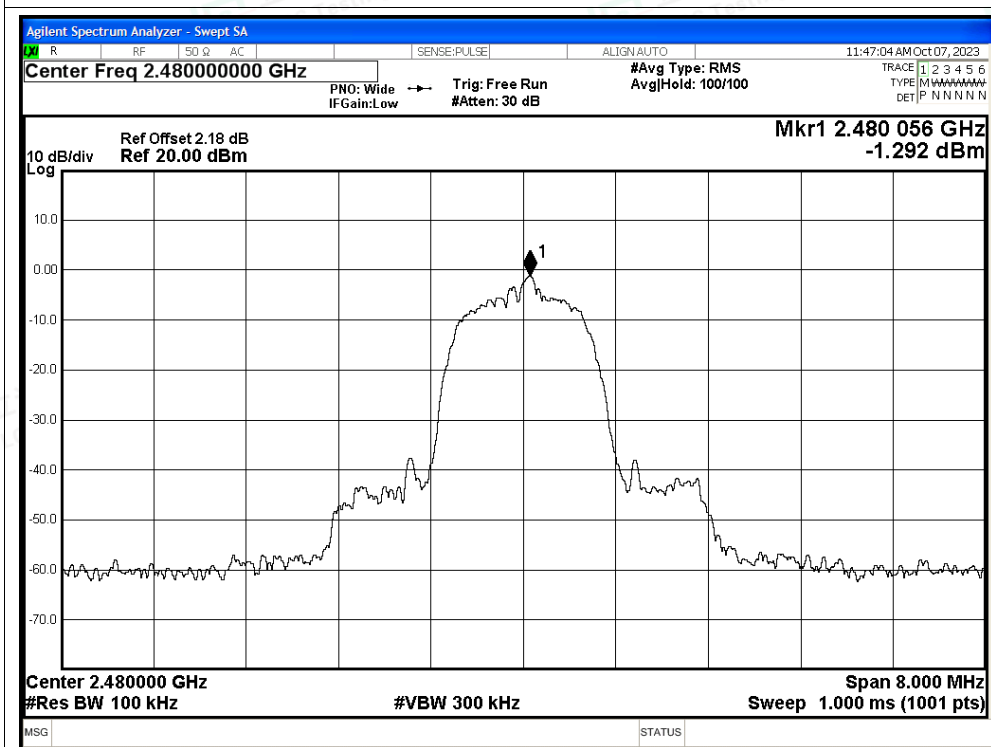


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

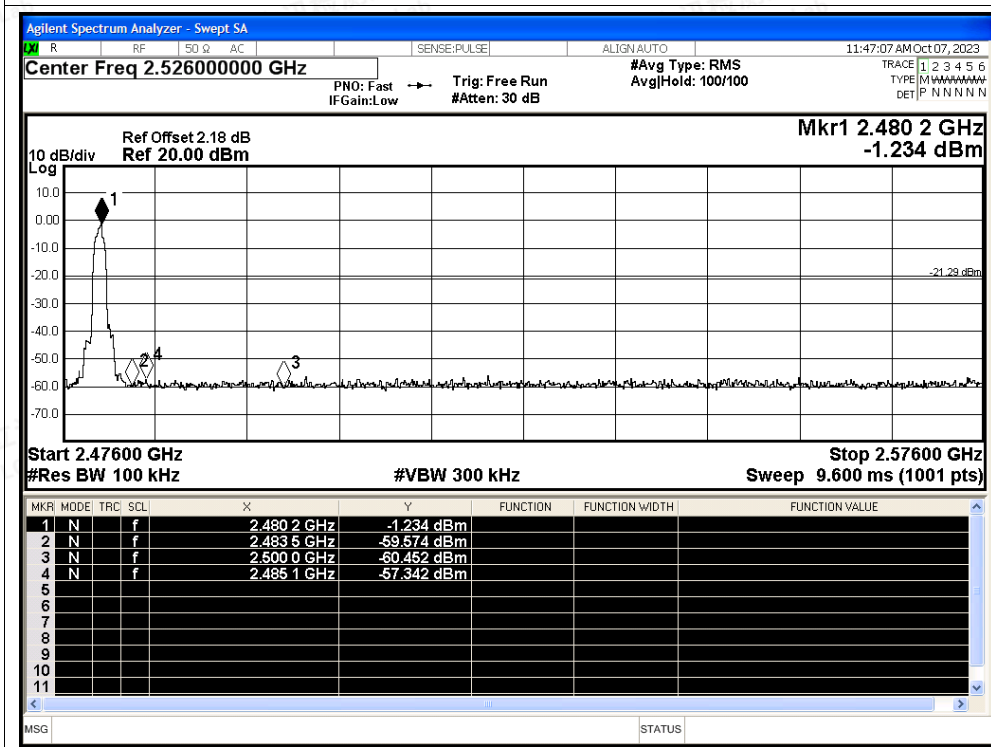




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref

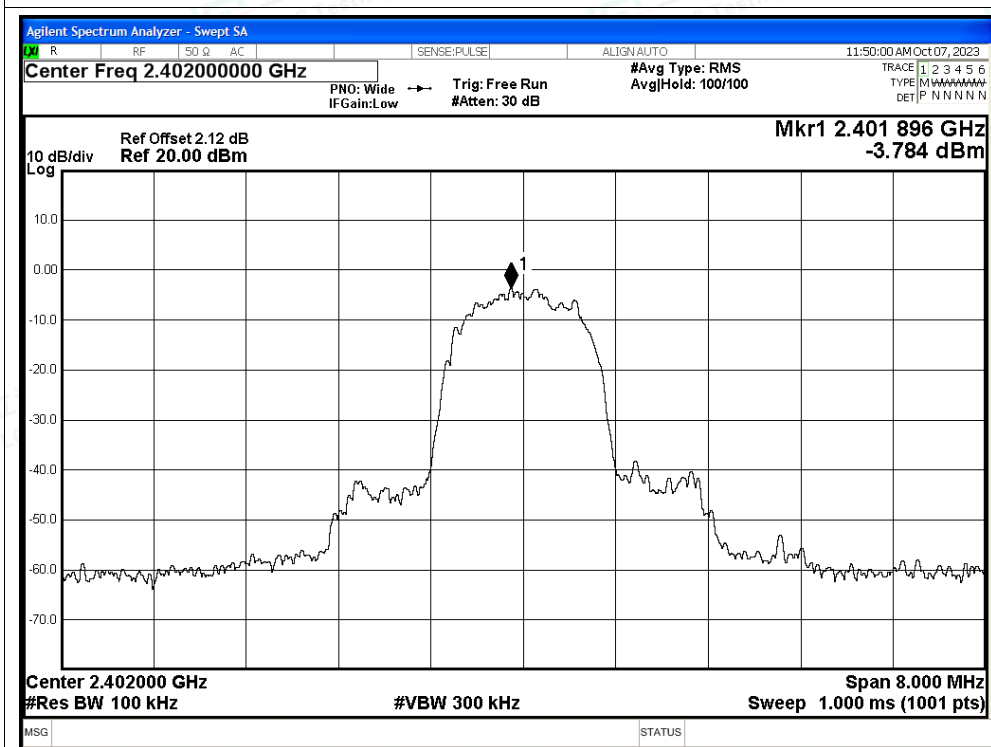


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

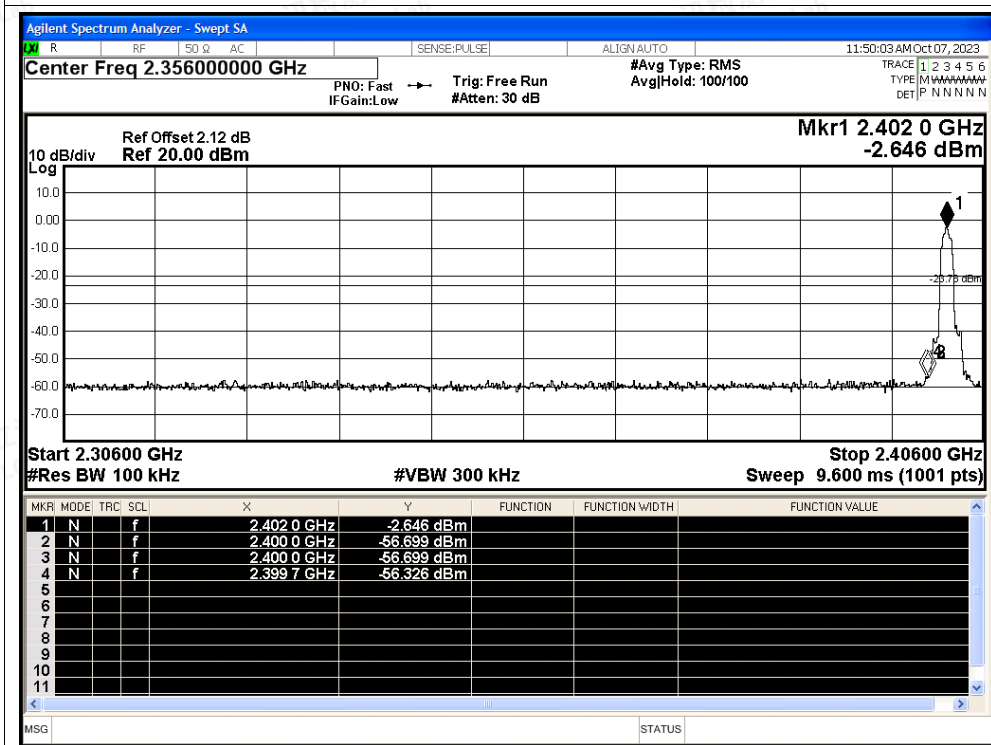




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

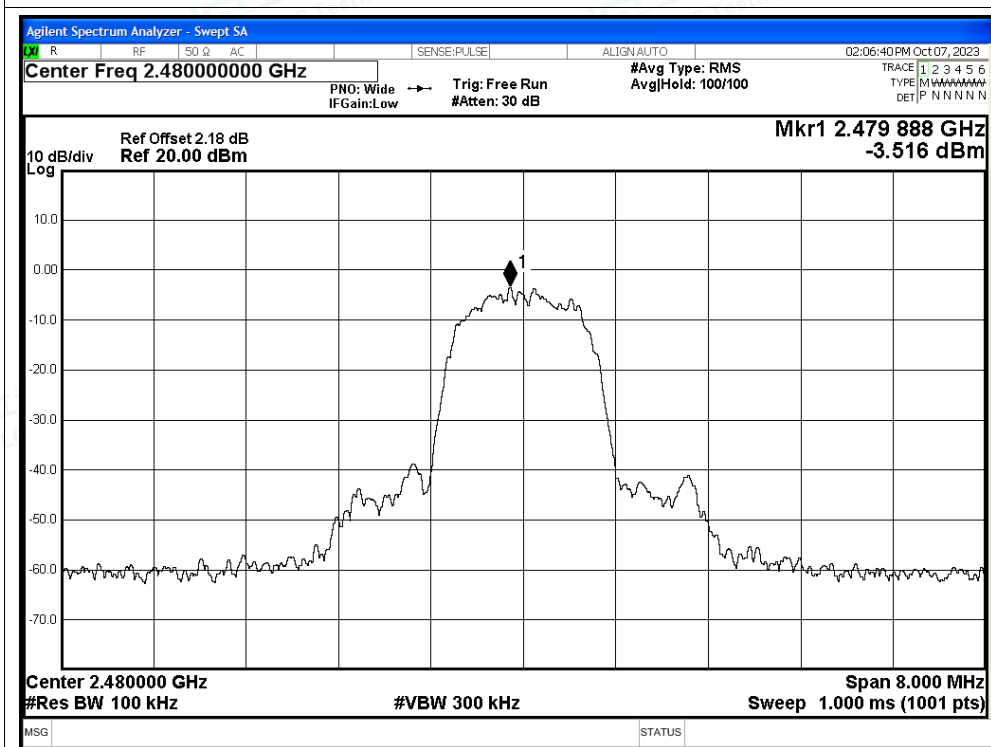


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

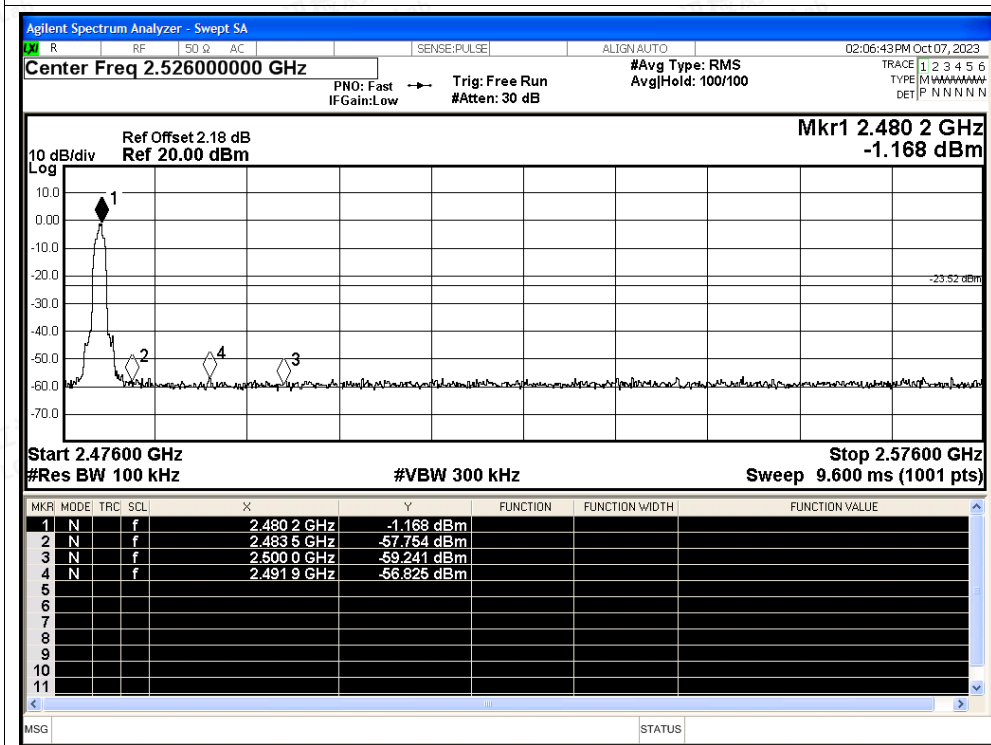




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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	-55.39	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.14	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-52.99	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-52.89	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-54.59	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-55.47	-20	Pass

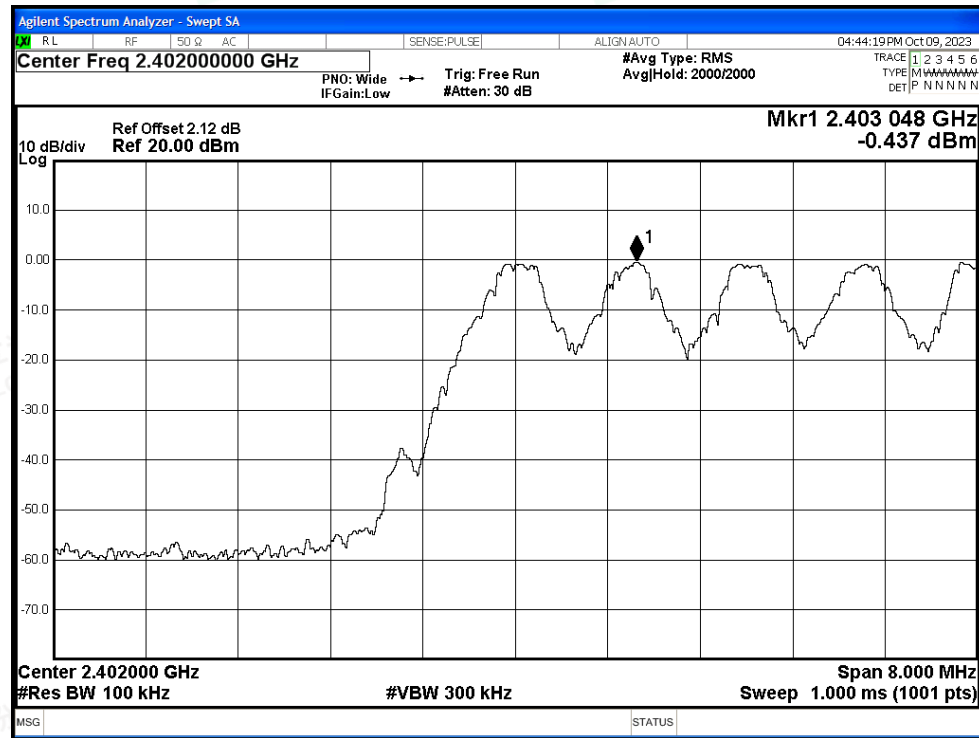


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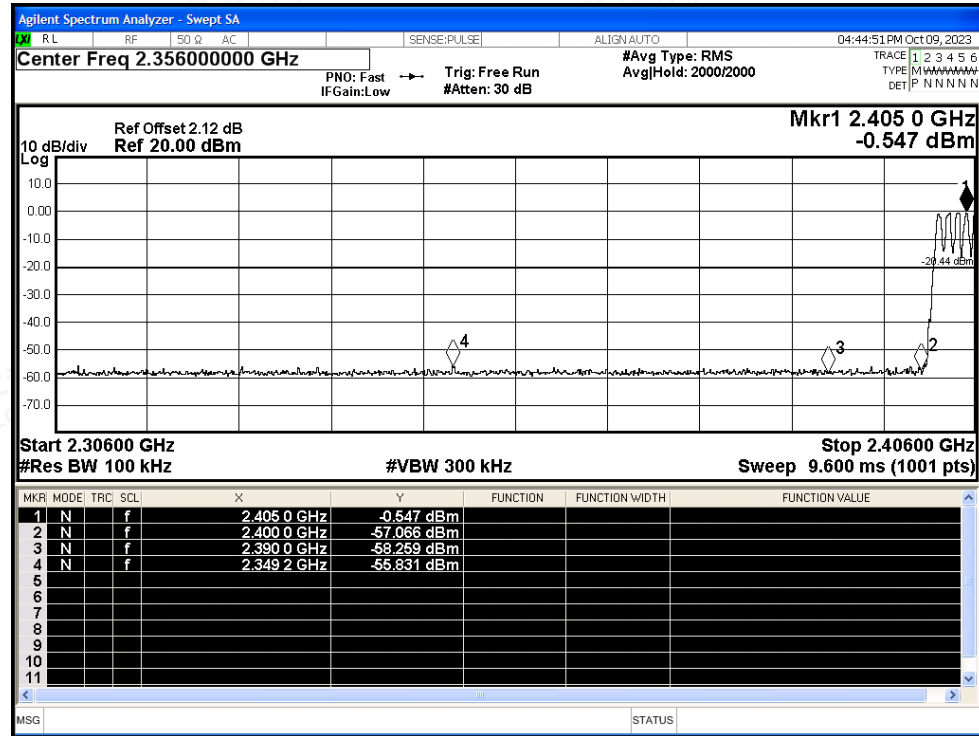


Test Graphs

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

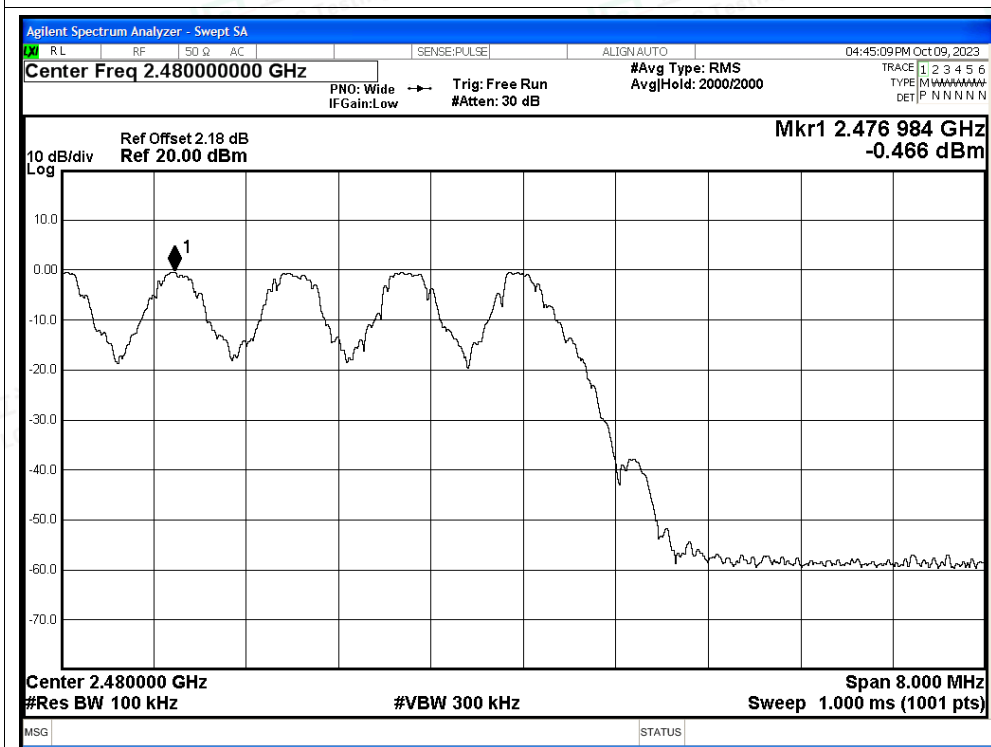


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

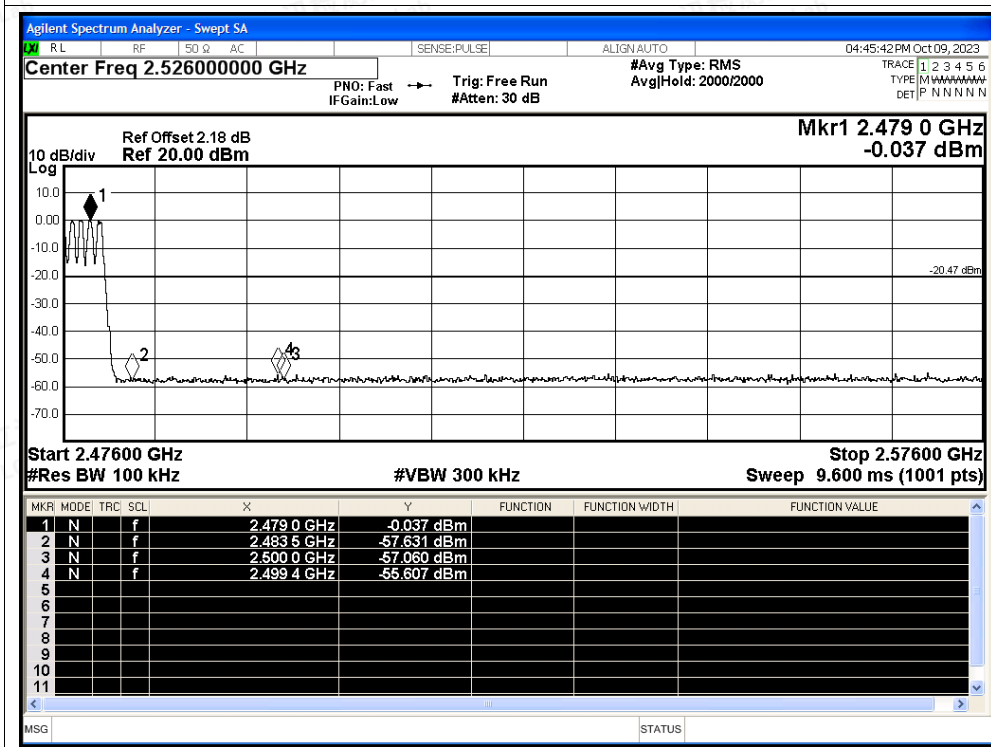




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

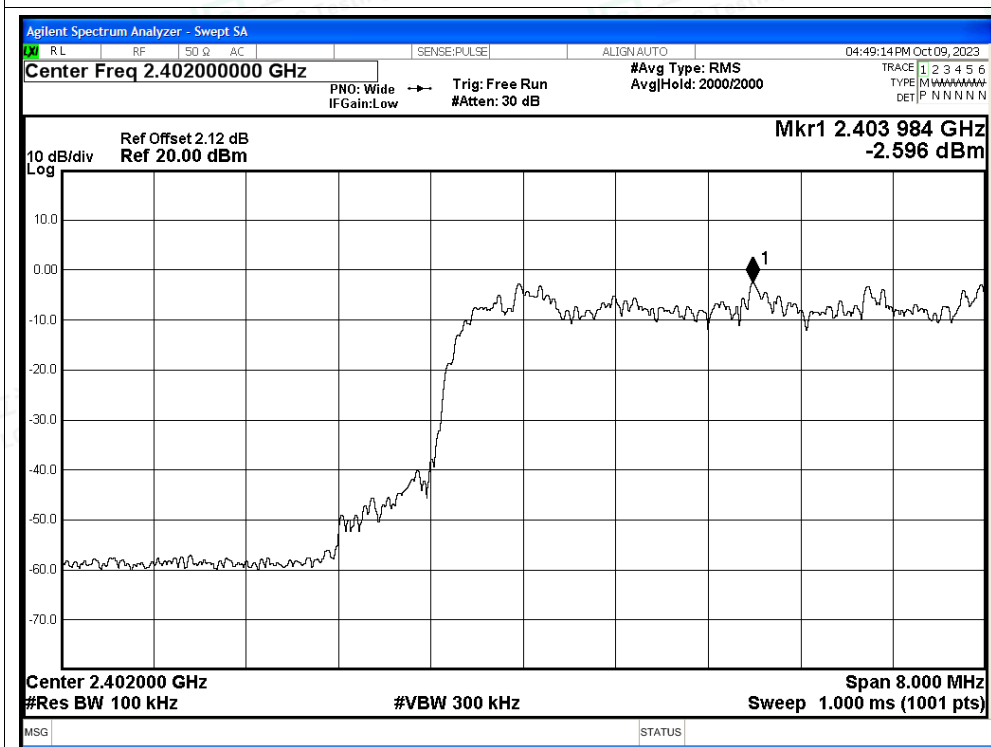


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

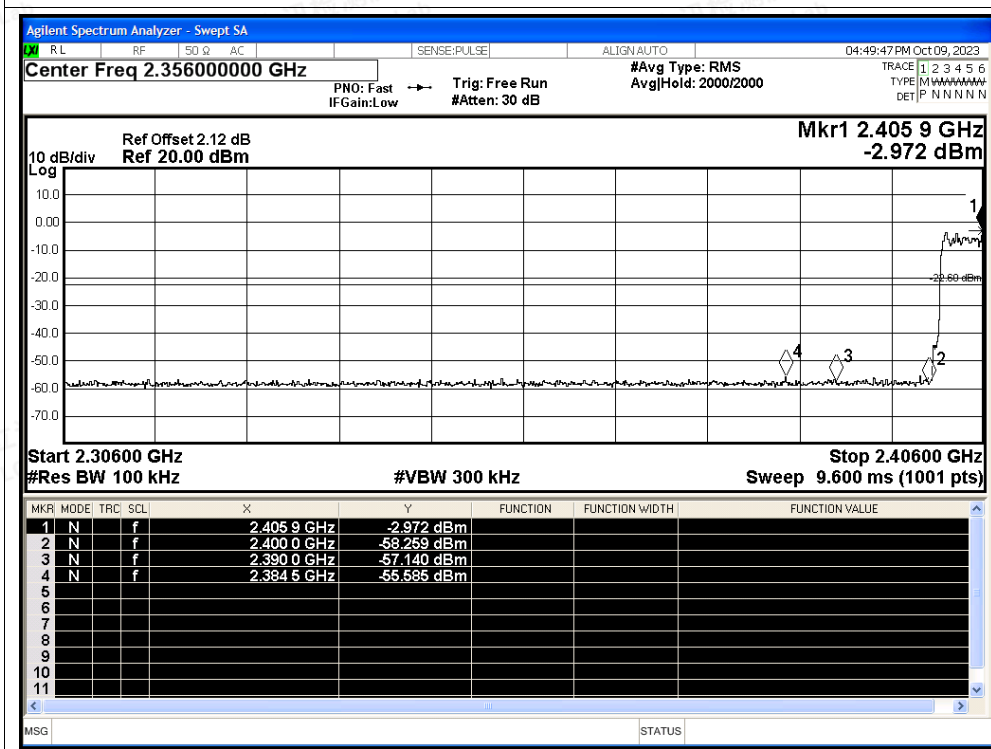




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

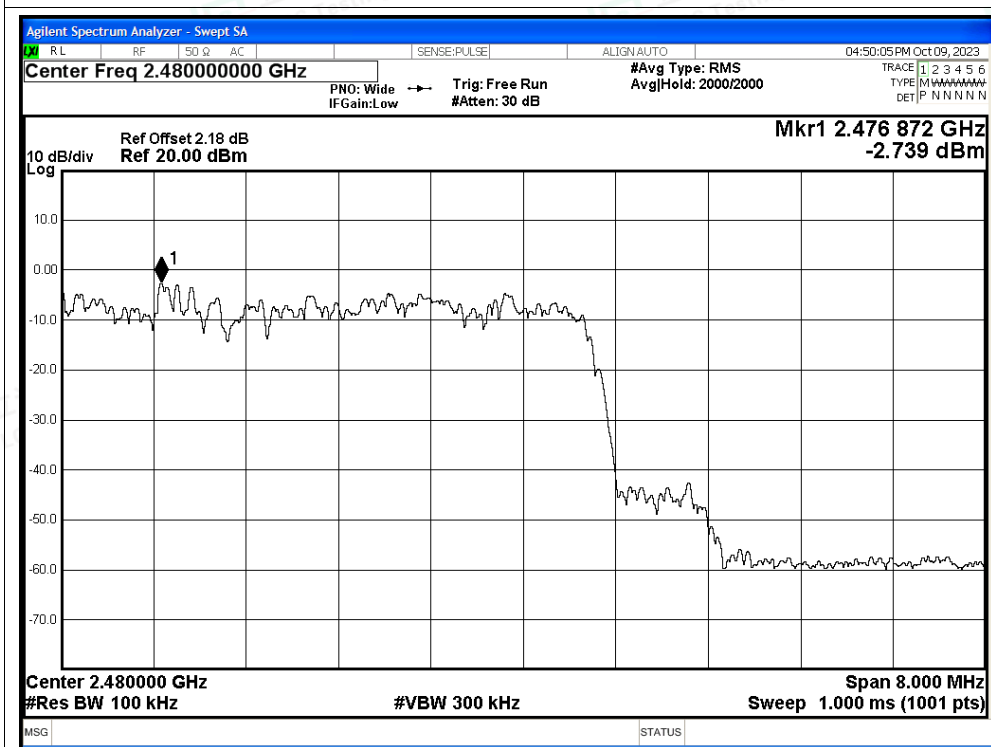


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

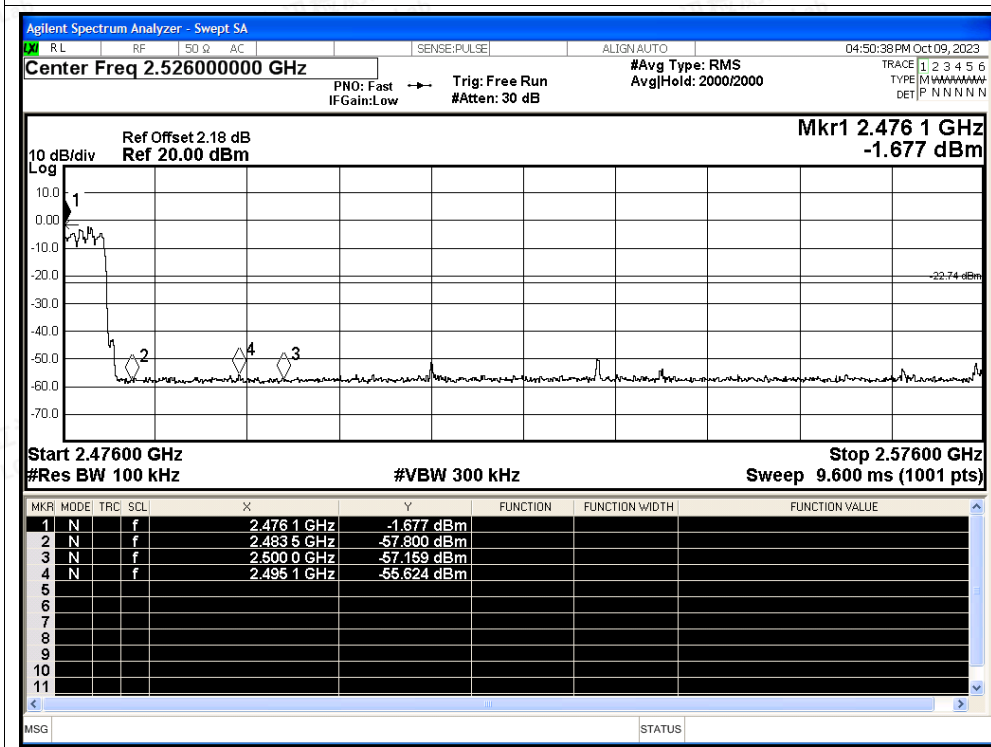




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref

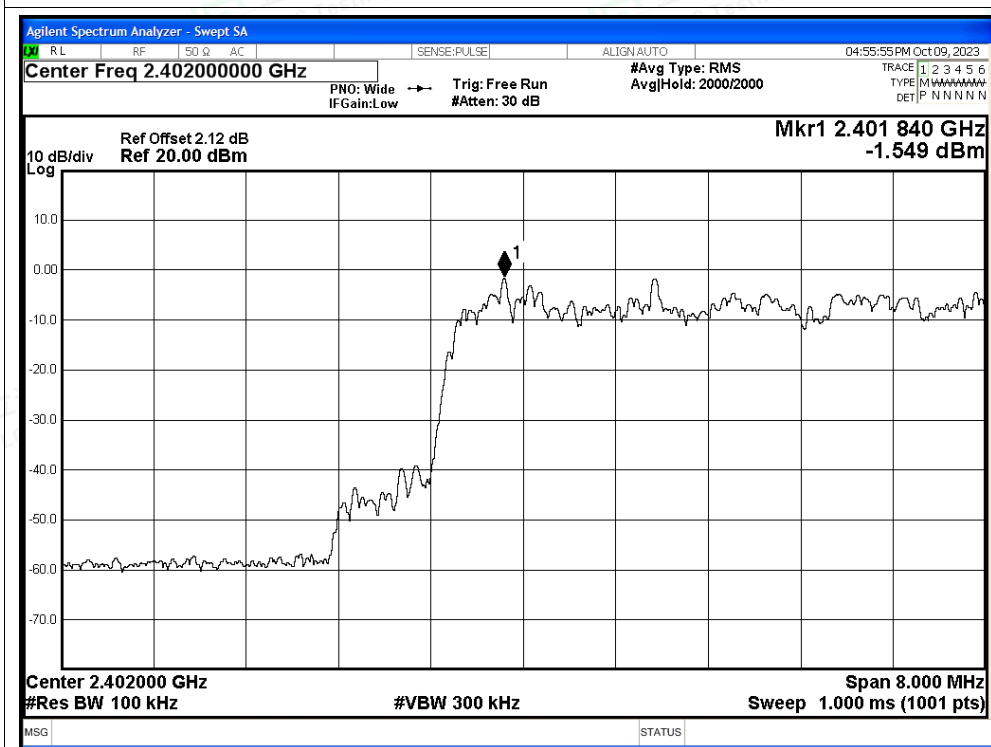


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

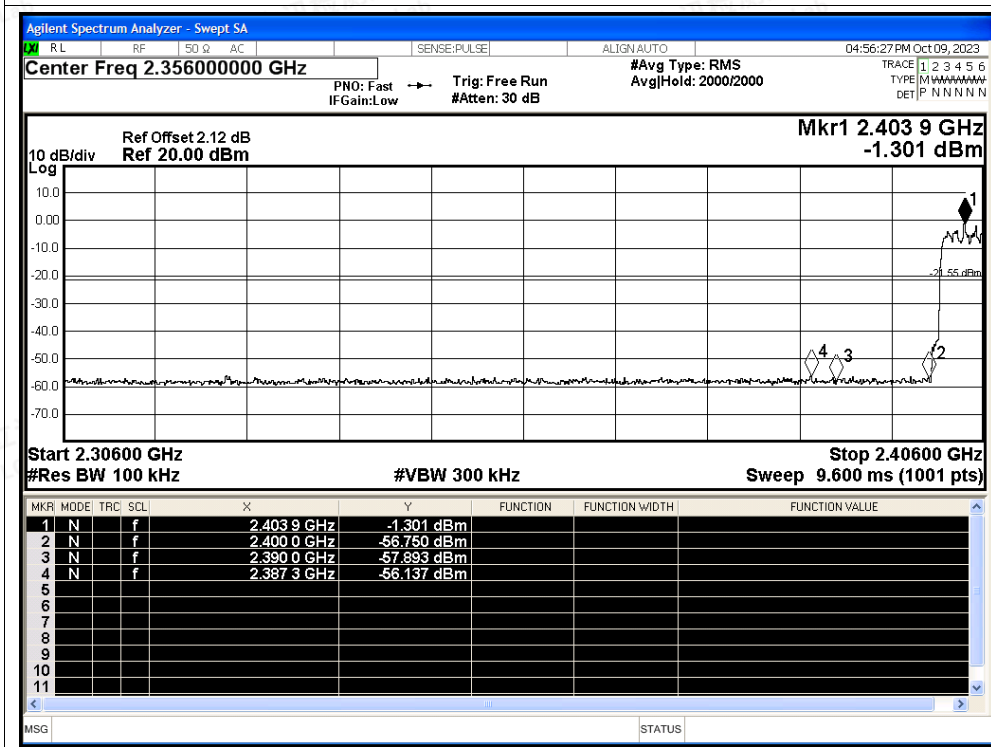




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

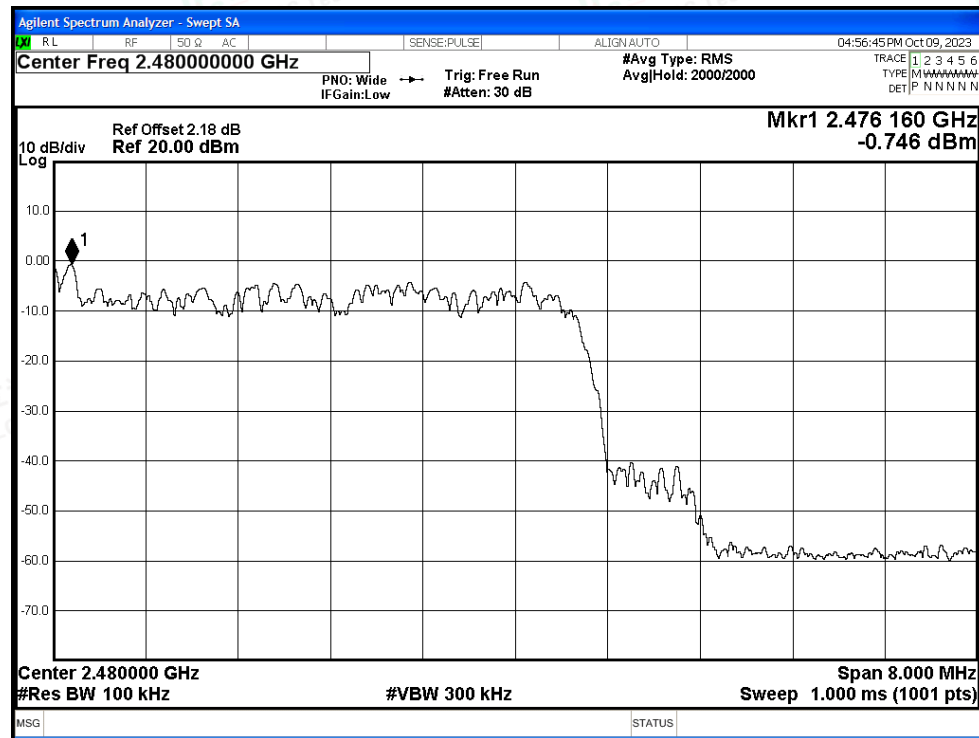


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission

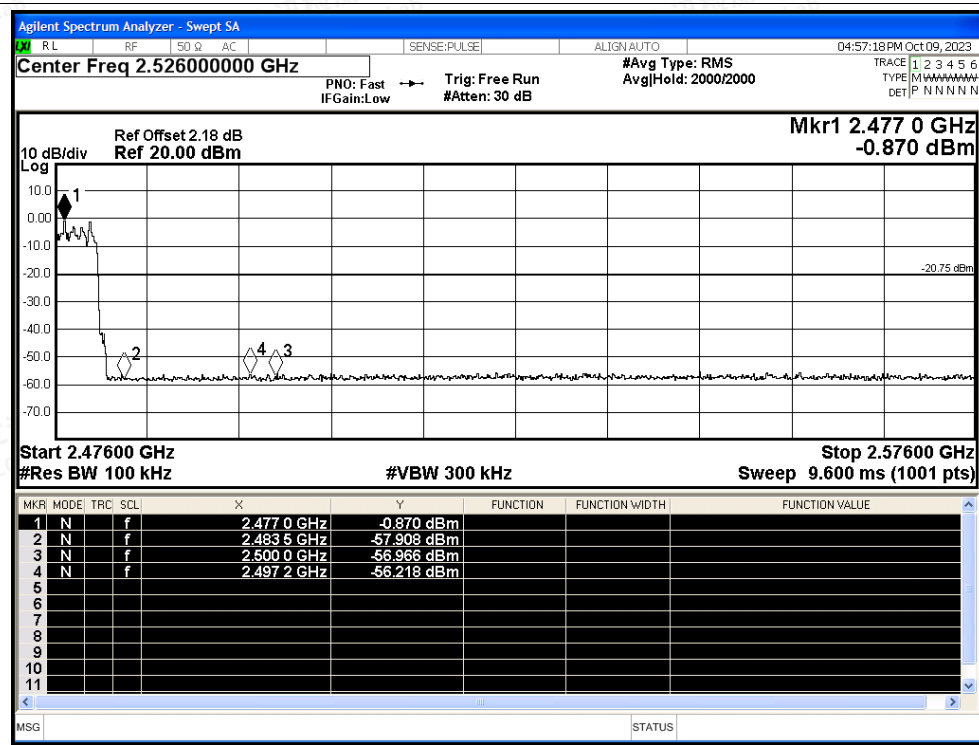




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



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	-54.64	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.39	-20	Pass
NVNT	1-DH5	2480	Ant1	-51.05	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.13	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.12	-20	Pass
NVNT	2-DH5	2480	Ant1	-54.19	-20	Pass
NVNT	3-DH5	2402	Ant1	-54.22	-20	Pass
NVNT	3-DH5	2441	Ant1	-53.18	-20	Pass
NVNT	3-DH5	2480	Ant1	-47.94	-20	Pass

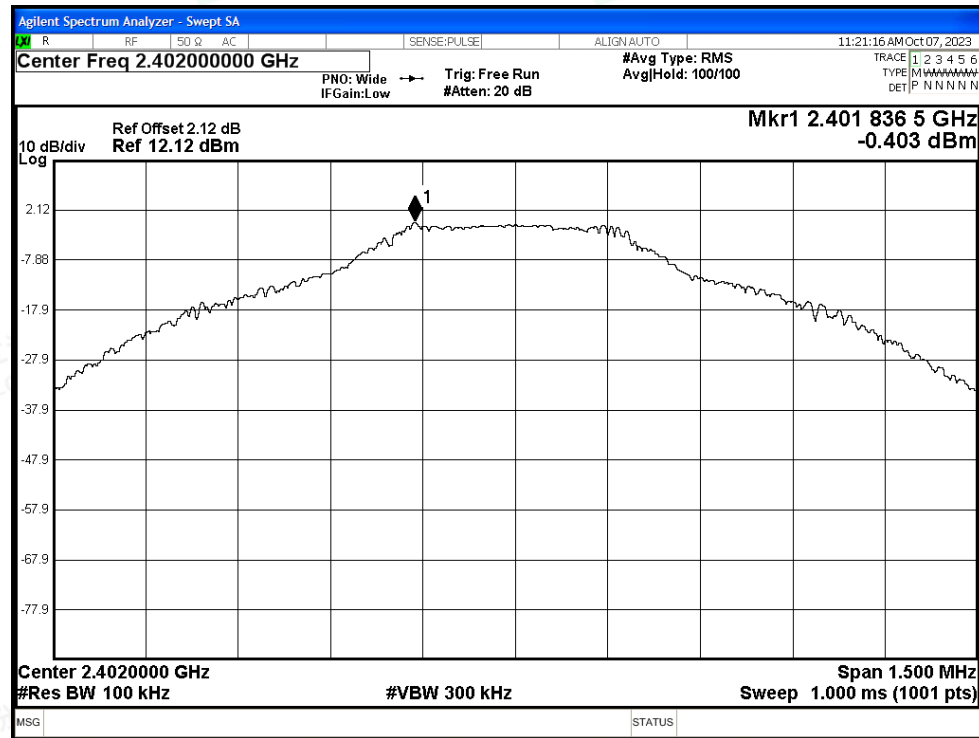


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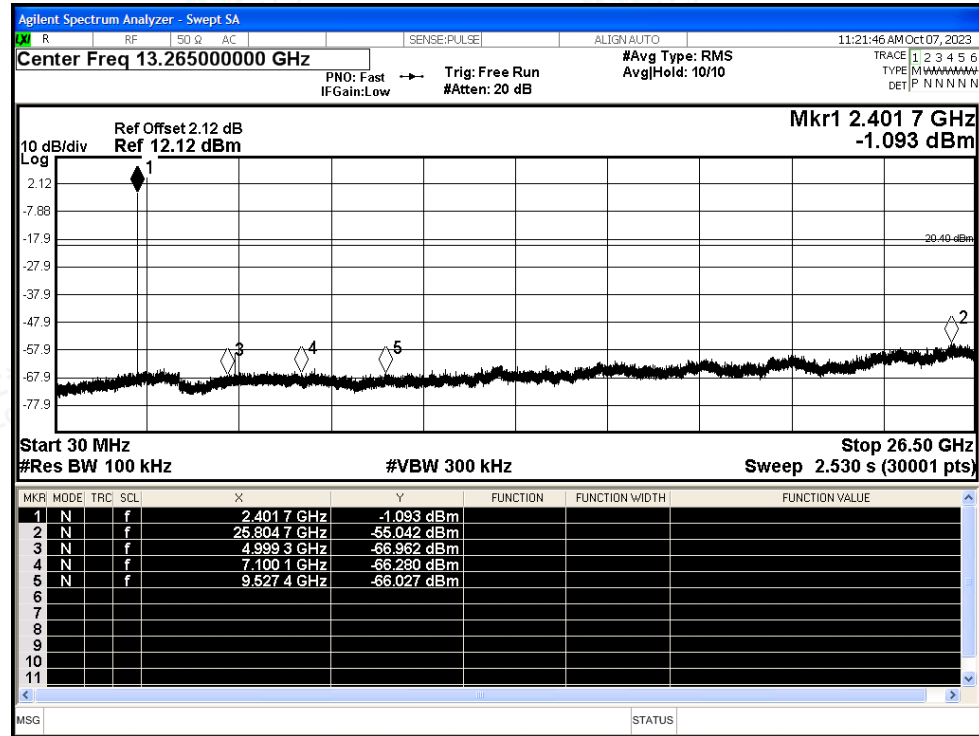


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

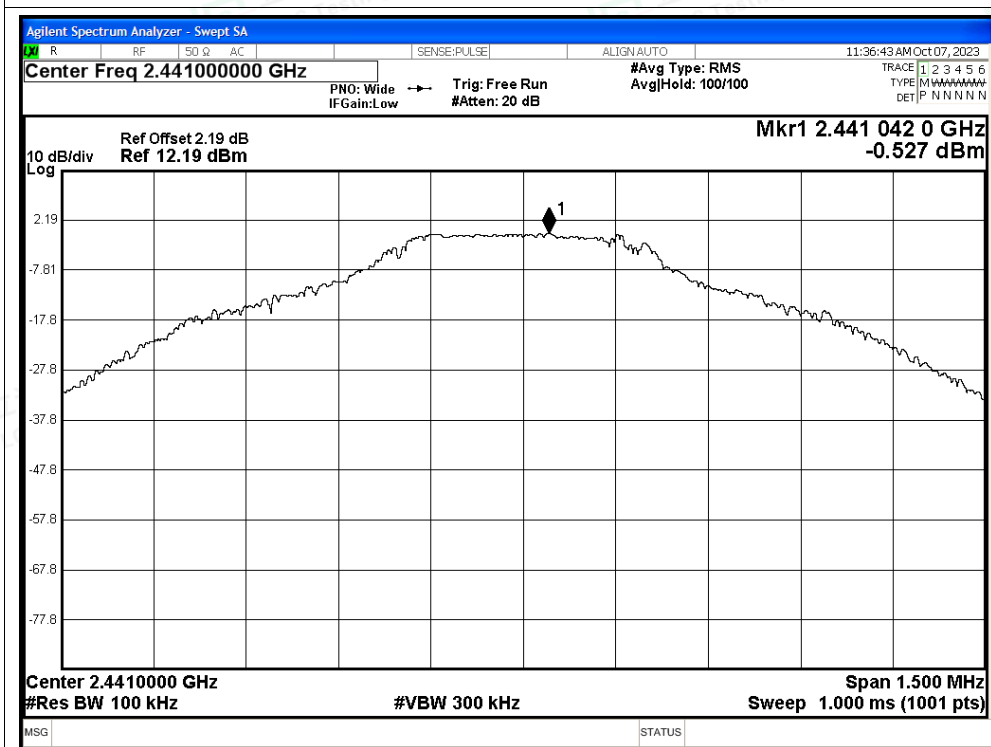


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

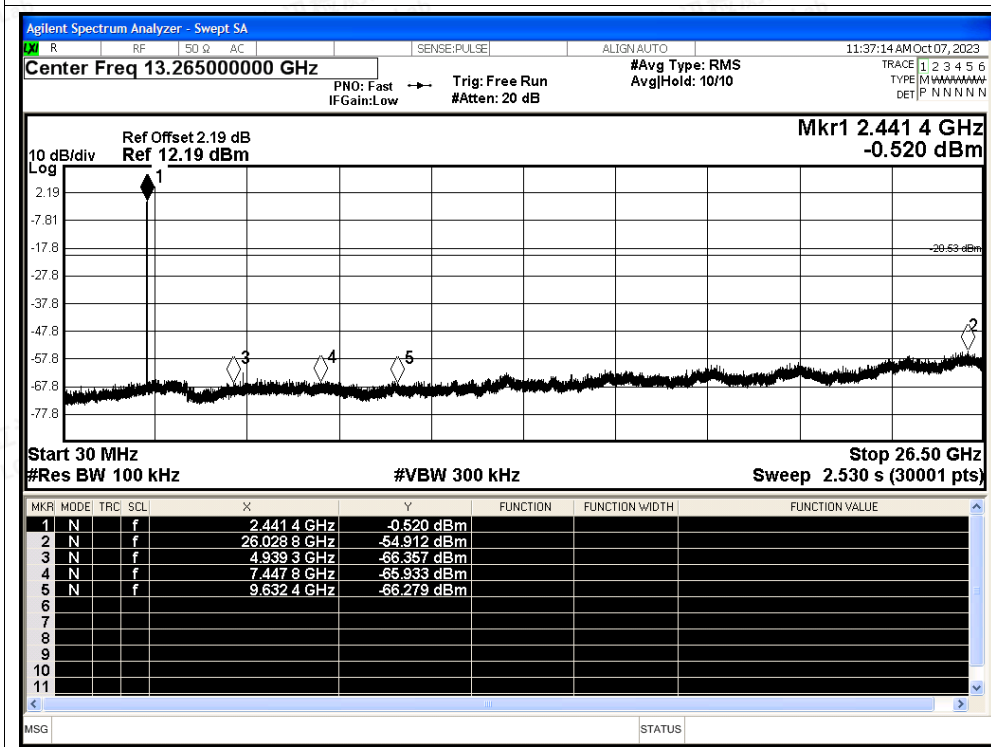




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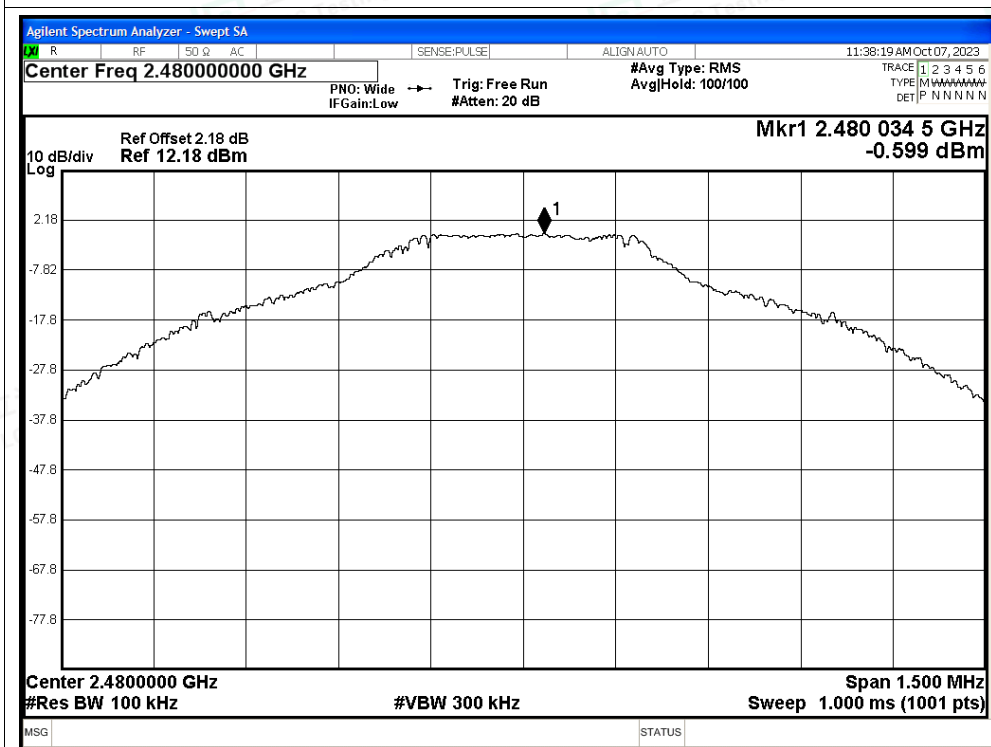


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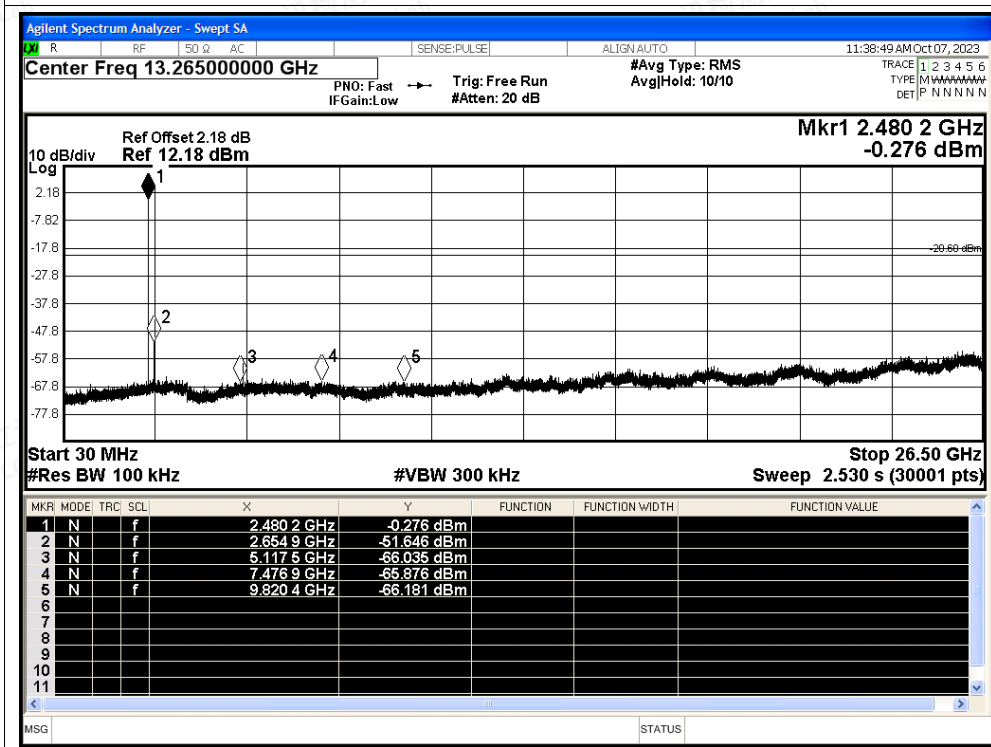




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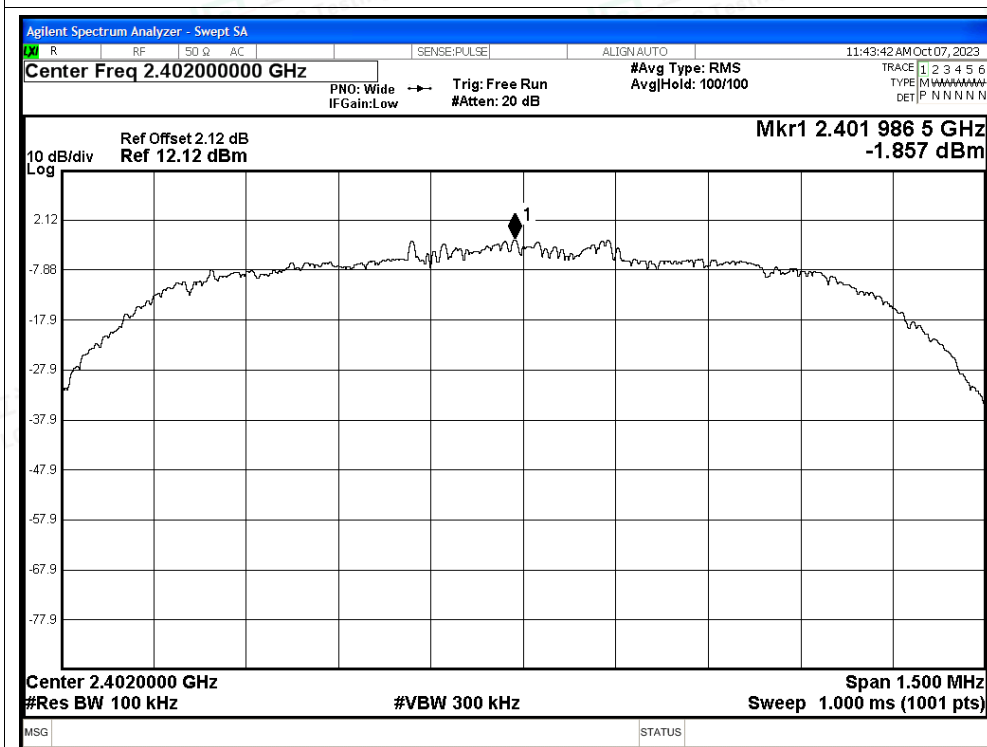


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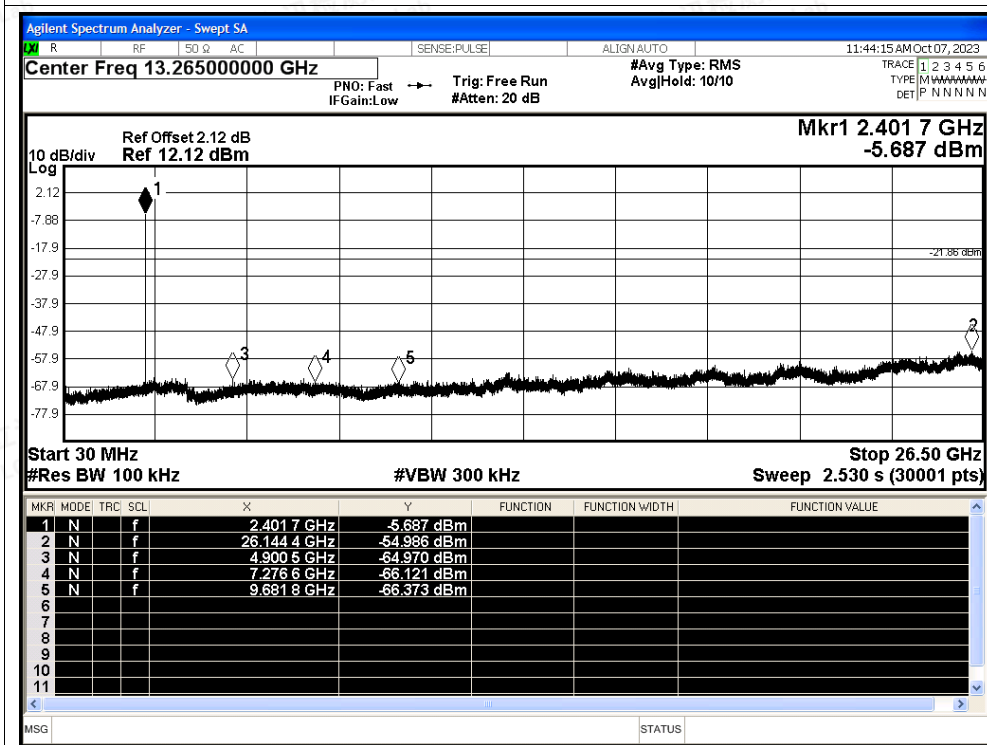




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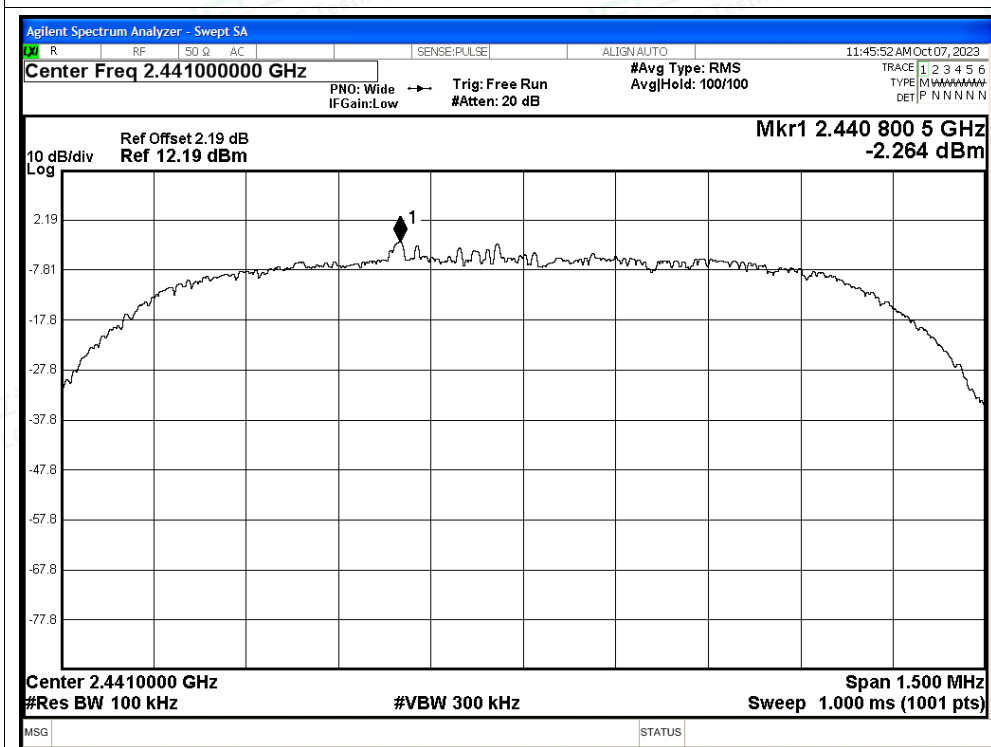


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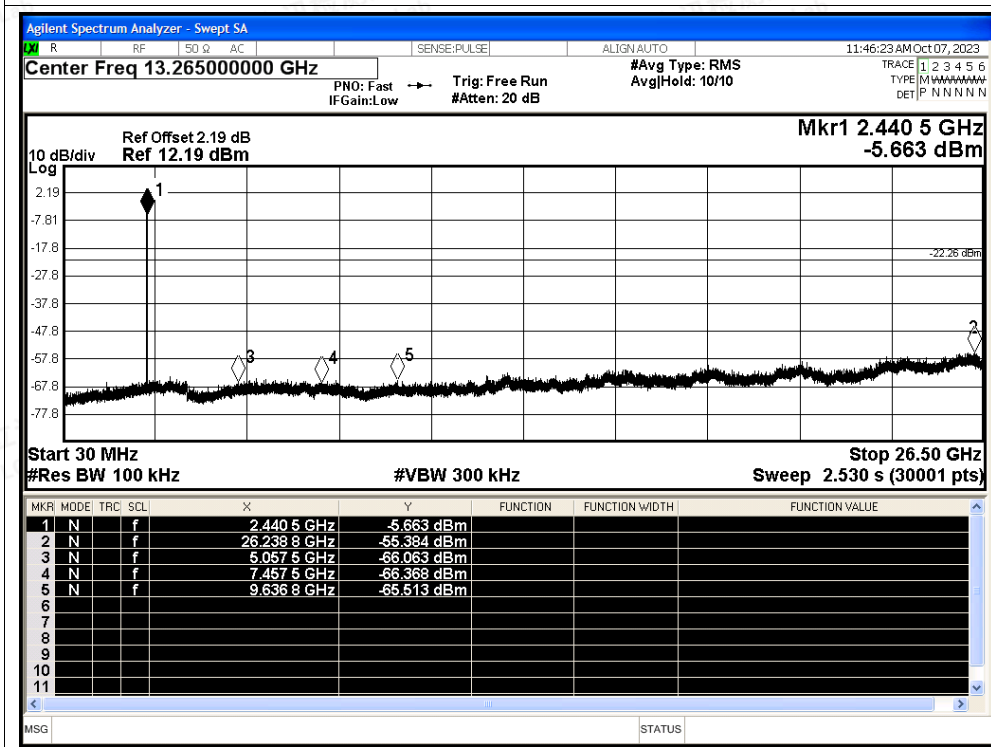




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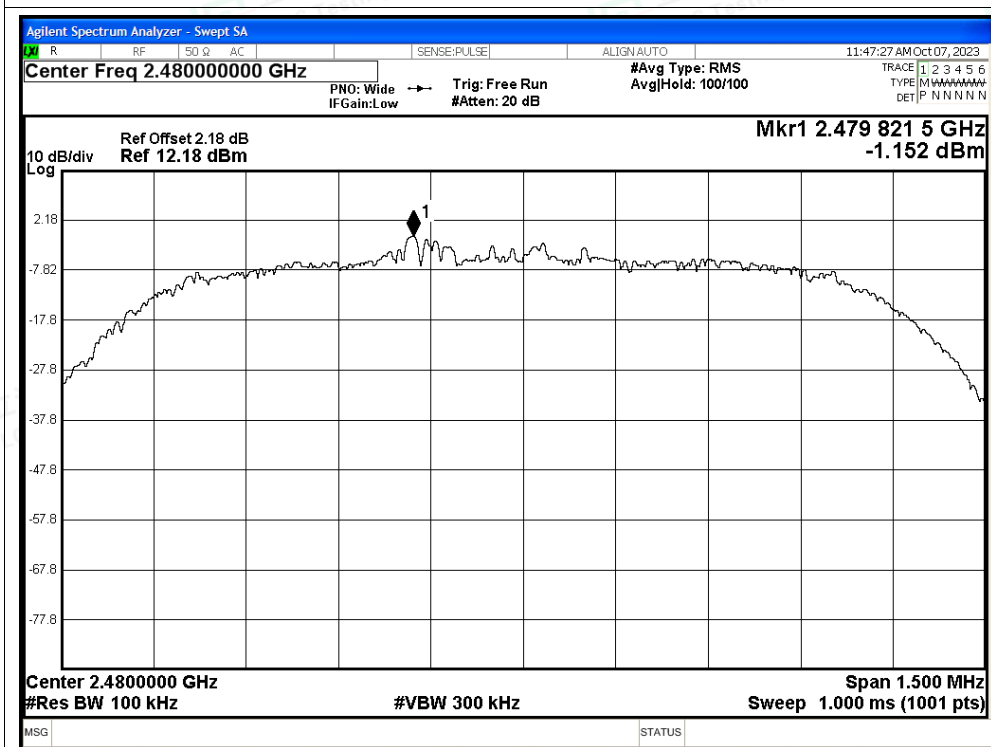


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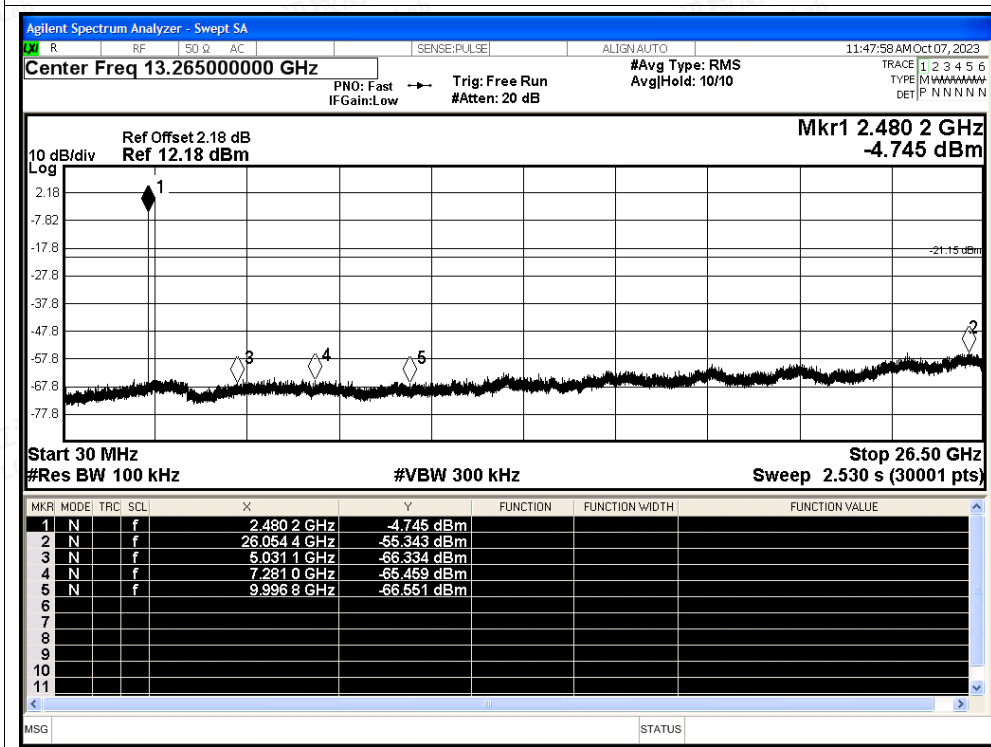




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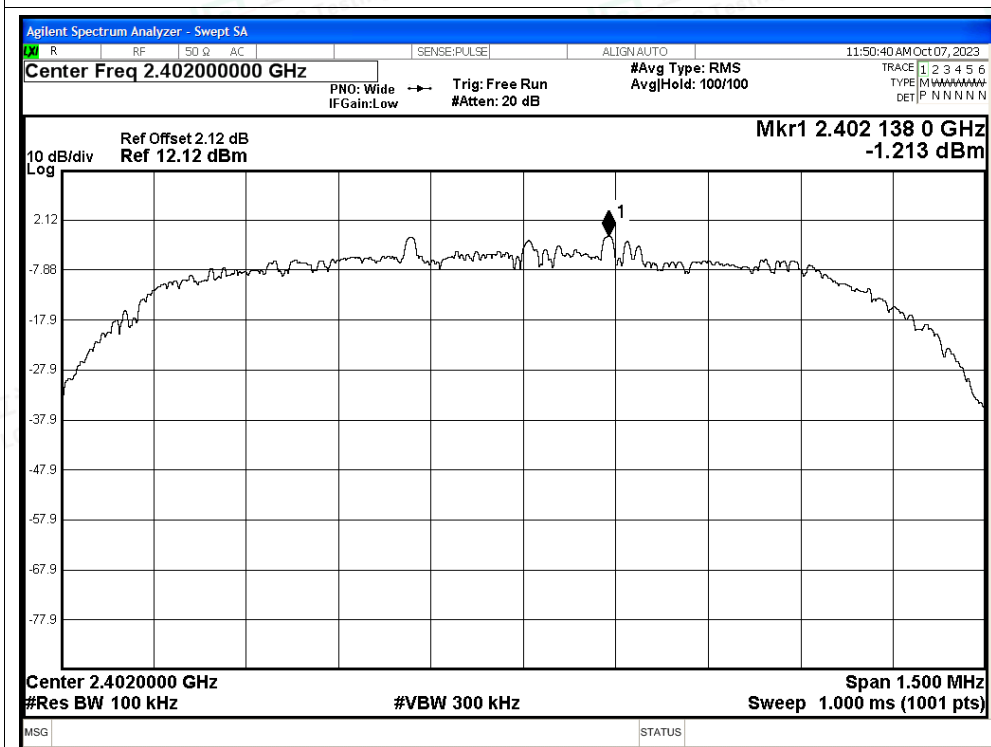


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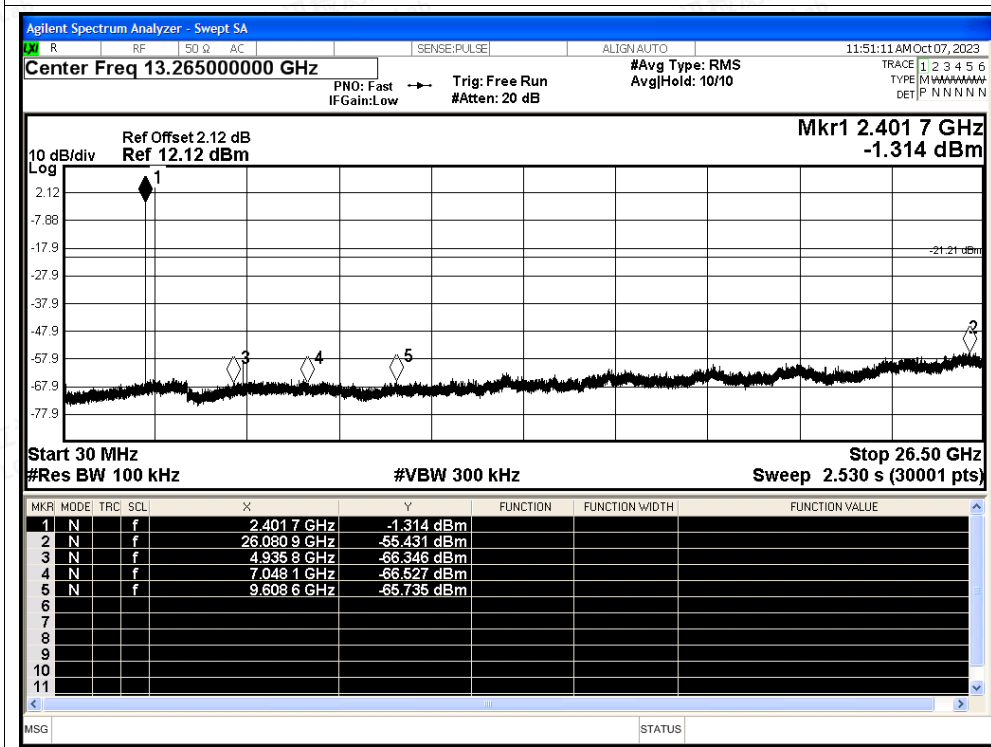




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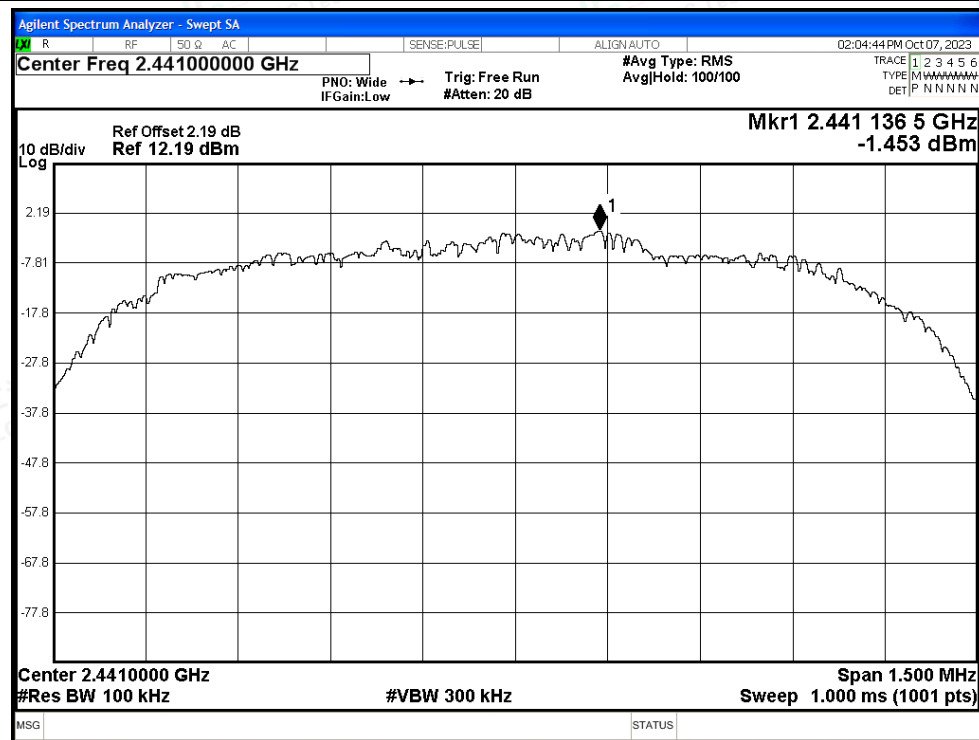


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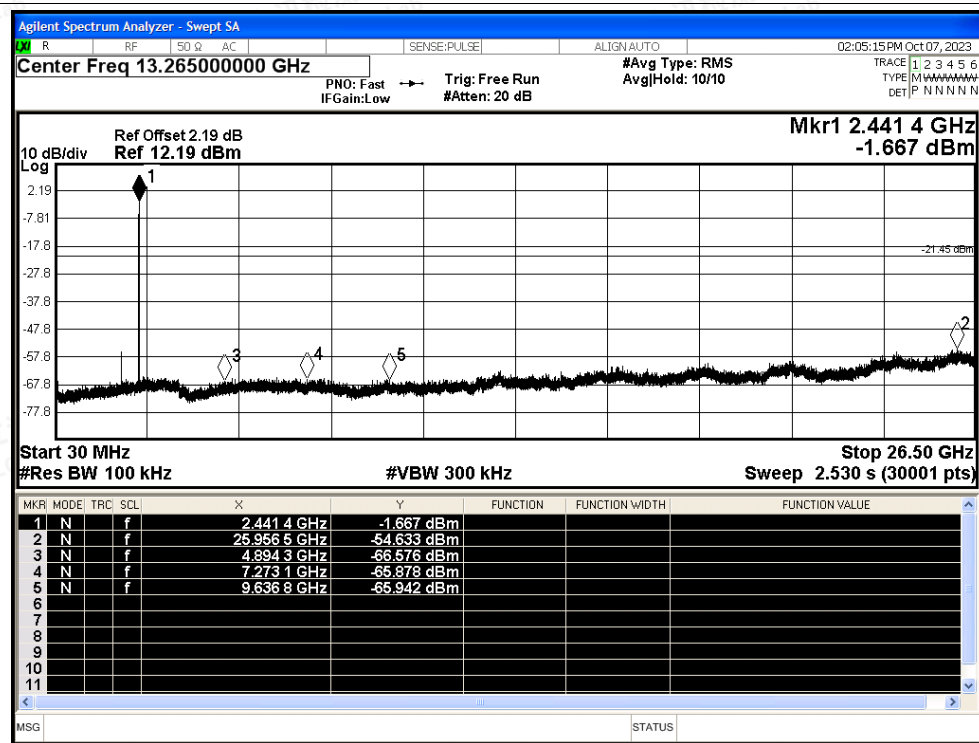




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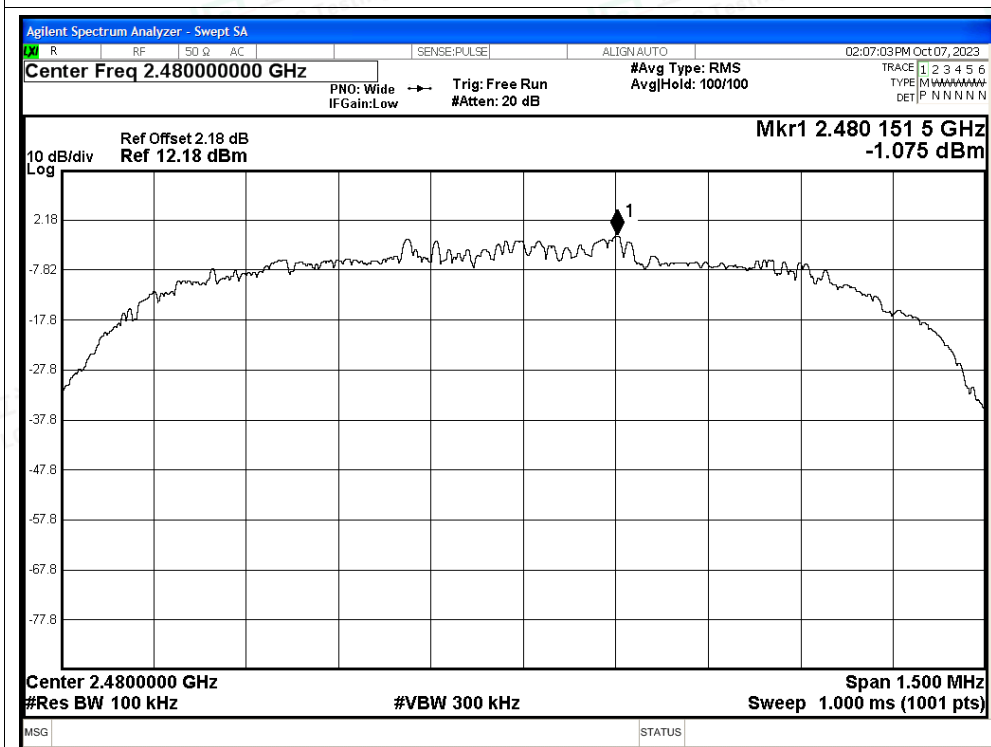


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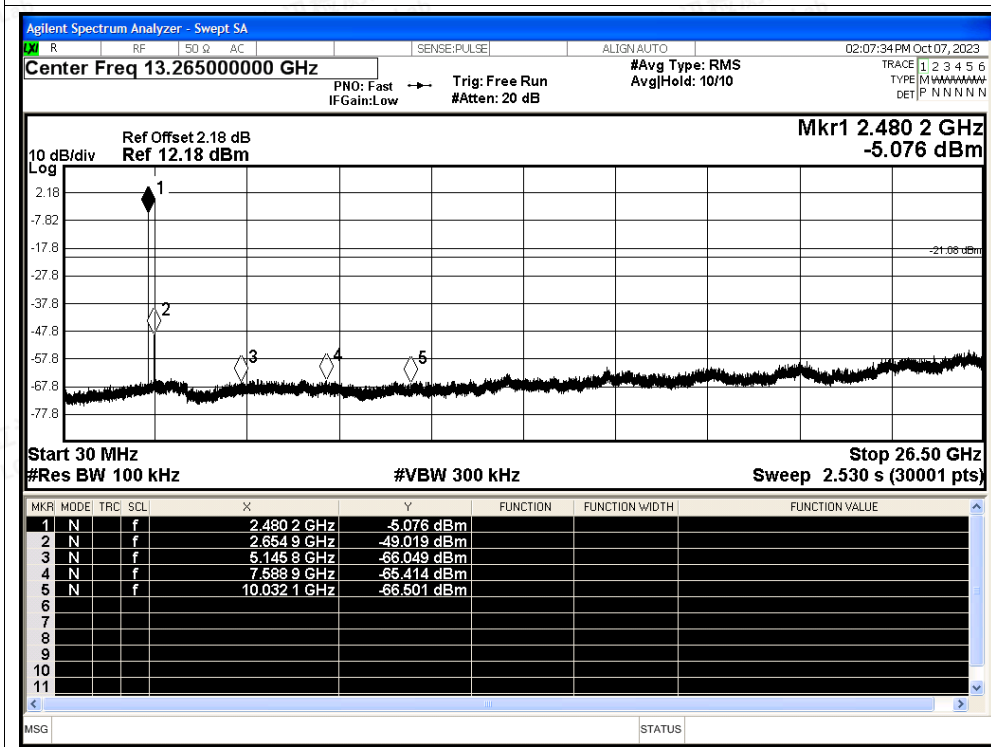




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



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	-51.05	4.0037	48.18	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-57.83	4.0037	41.40	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2347.152	-47.61	4.0037	51.62	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2381.904	-57.22	4.0037	42.01	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.83	4.0037	49.40	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-57.3	4.0037	41.93	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-50.72	4.0037	48.51	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-55.85	4.0037	43.38	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2490.568	-46.73	4.0037	52.50	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.512	-55.85	4.0037	43.38	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.53	4.0037	49.70	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.1	4.0037	42.13	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.48	4.0037	48.75	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-57.76	4.0037	41.47	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2311.92	-46.93	4.0037	52.30	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2382.48	-57.25	4.0037	41.98	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-50.8	4.0037	48.43	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.42	4.0037	41.81	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-48.56	4.0037	50.67	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-55.7	4.0037	43.53	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2495.128	-46.78	4.0037	52.45	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.512	-55.7	4.0037	43.53	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-50.53	4.0037	48.70	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.07	4.0037	42.16	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-49.62	4.0037	49.61	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-57.79	4.0037	41.44	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2366.544	-47.15	4.0037	52.08	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2383.248	-57.23	4.0037	42.00	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-51.36	4.0037	47.87	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-57.43	4.0037	41.80	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-48.63	4.0037	50.60	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-55.68	4.0037	43.55	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2488.192	-46.87	4.0037	52.36	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-55.68	4.0037	43.55	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-49.07	4.0037	50.16	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-56.92	4.0037	42.31	Average	54	Pass



Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
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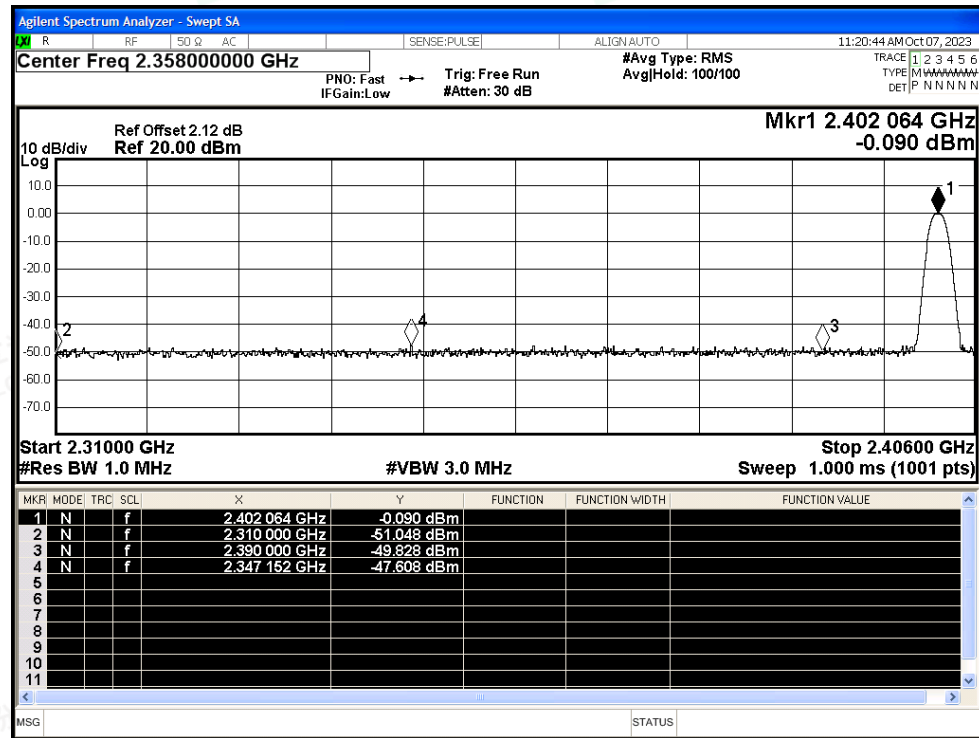


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518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
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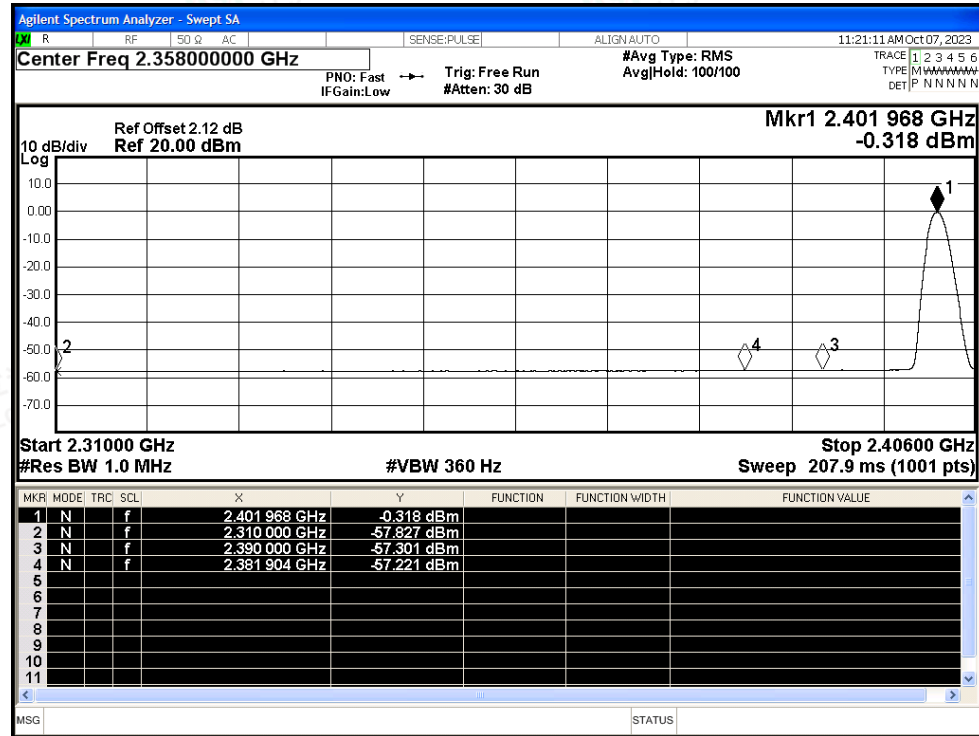


Test Graphs

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

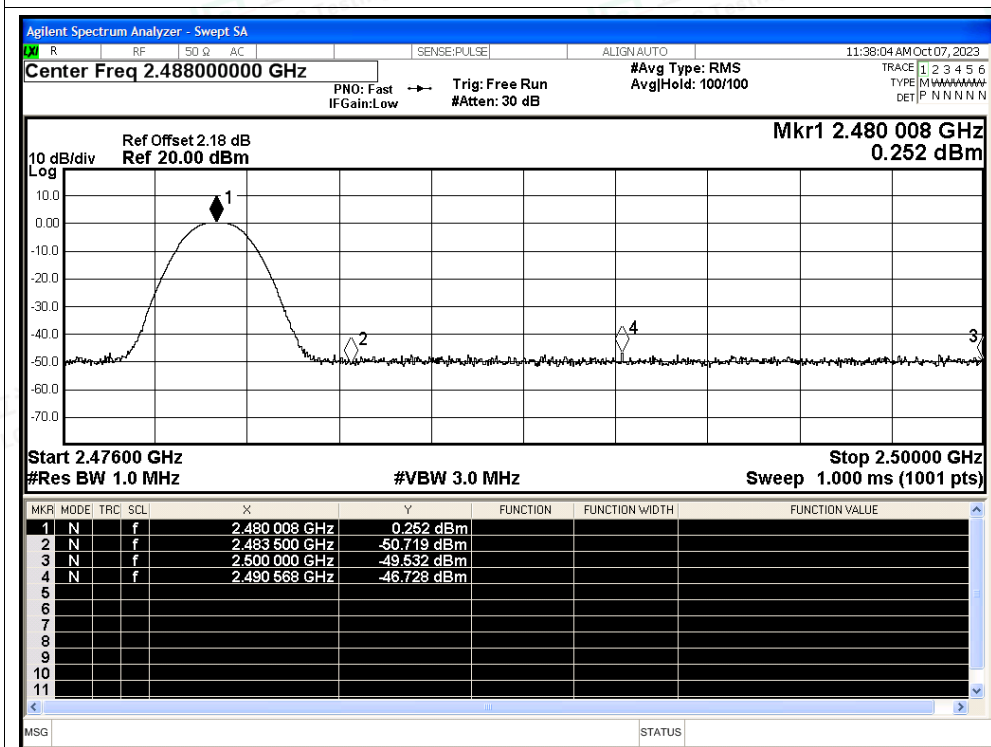


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

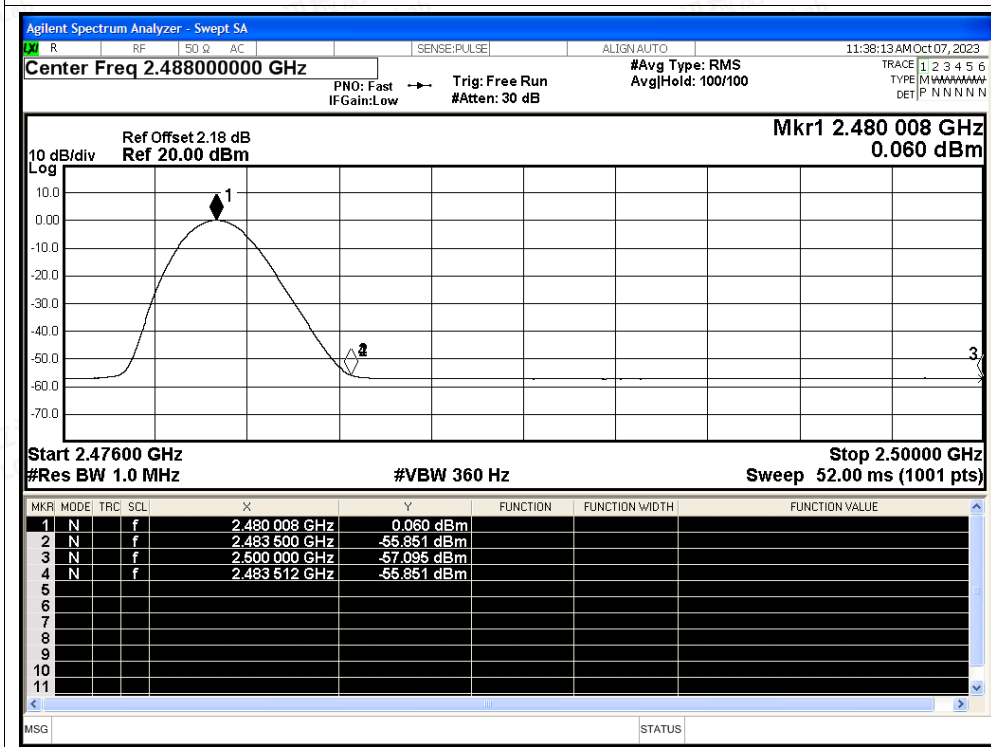




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

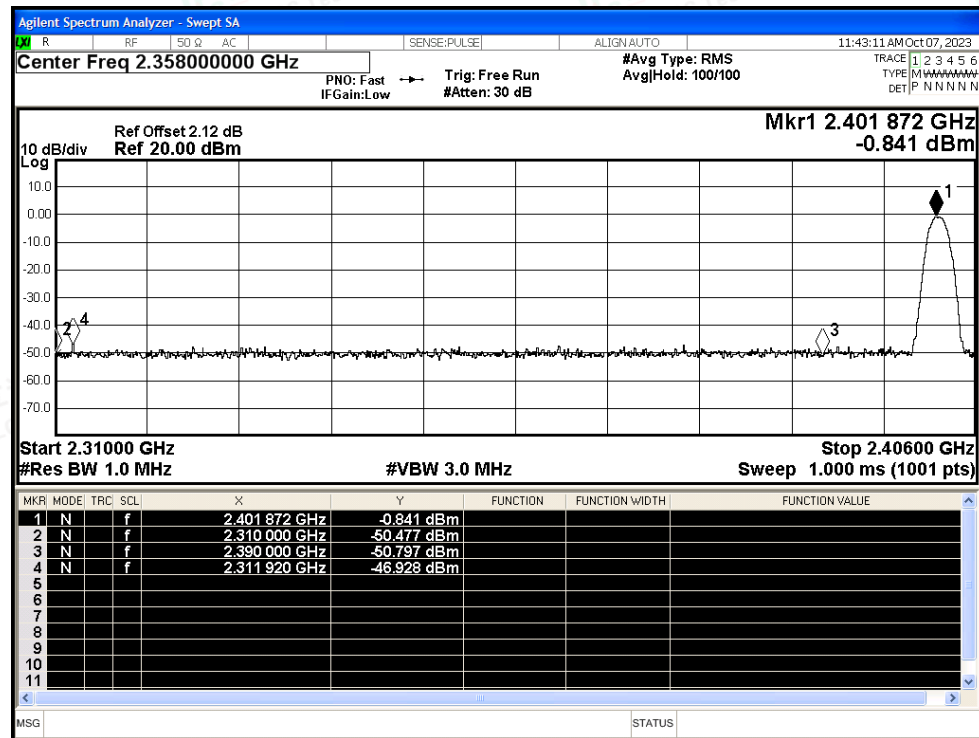


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

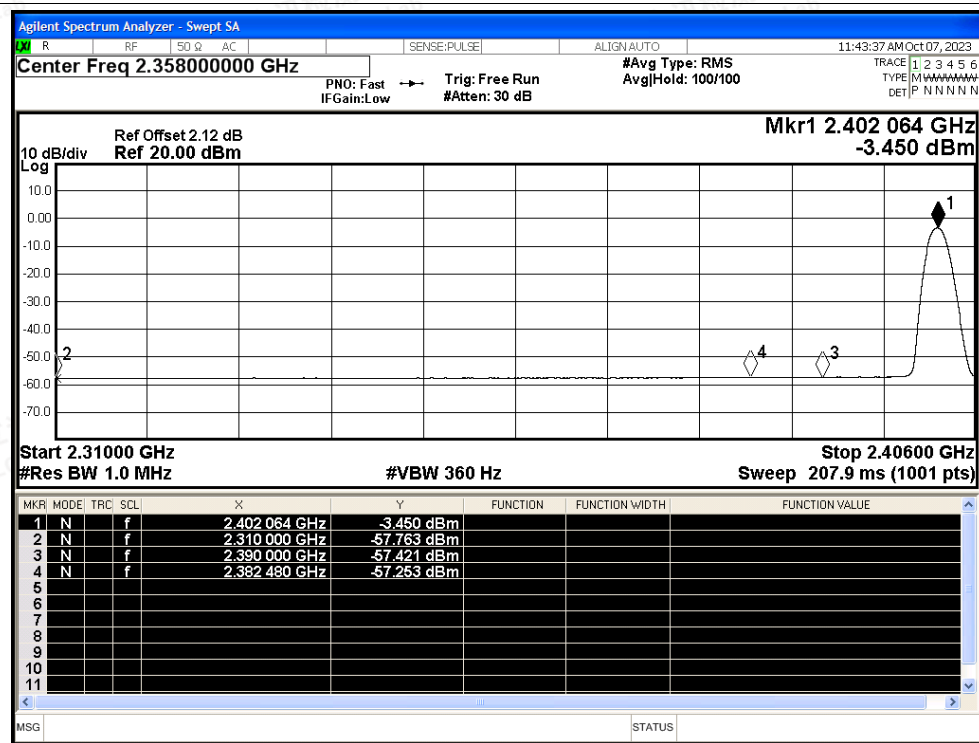




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

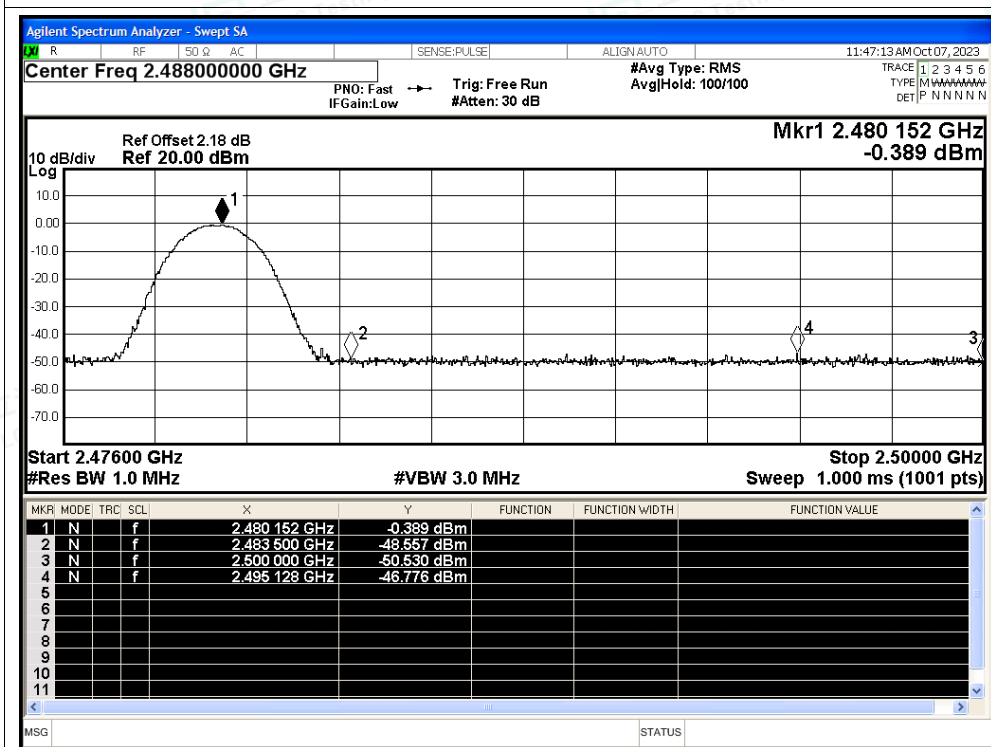


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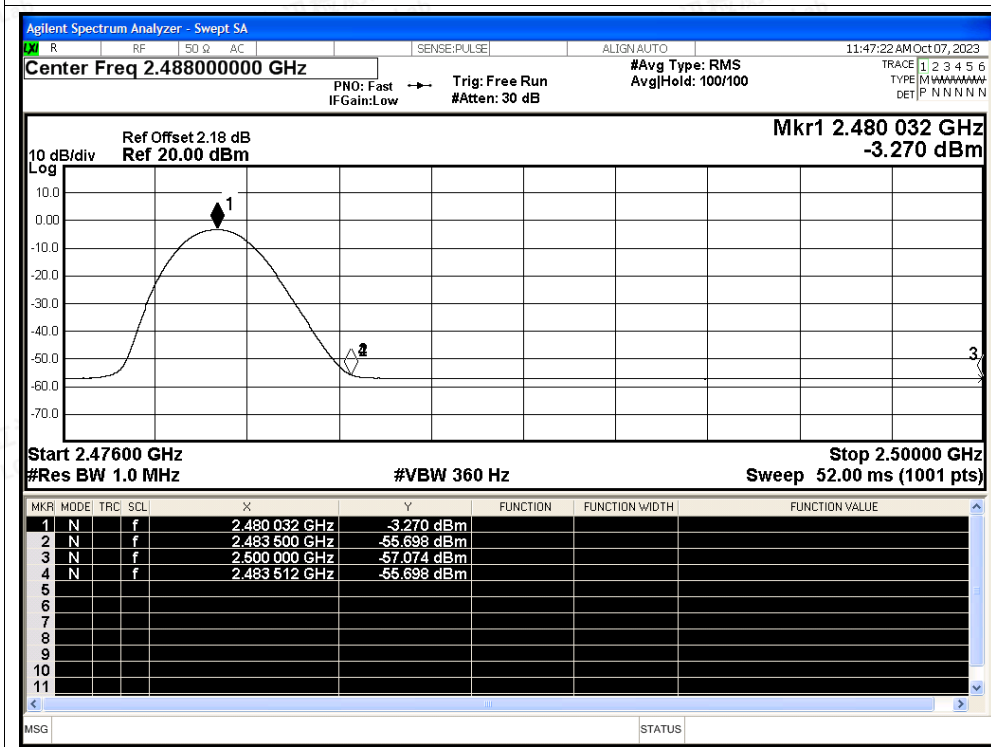




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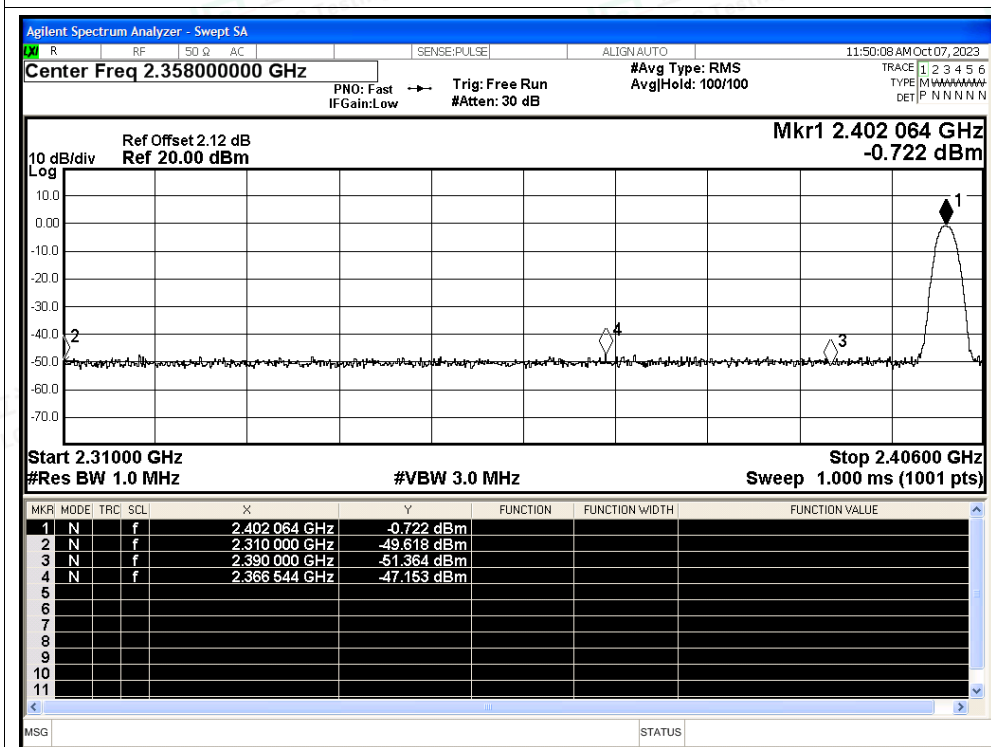


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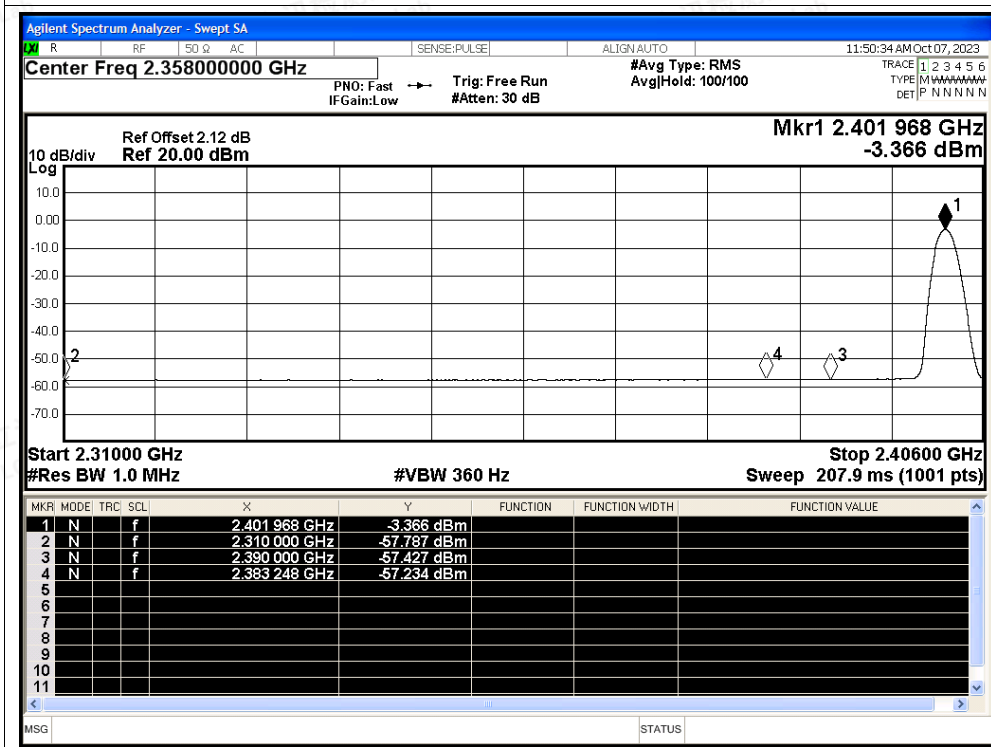




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

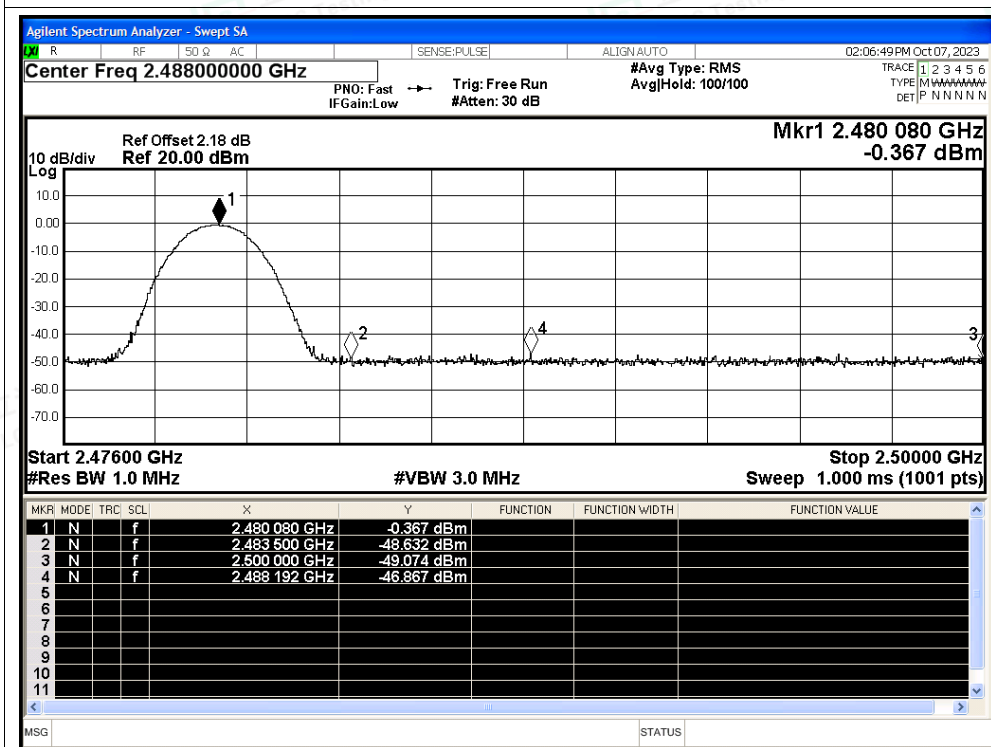


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





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



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

