



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Bluetooth Speaker

Test Model: X8

Environmental Conditions

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





A.1 -20dB Bandwidth

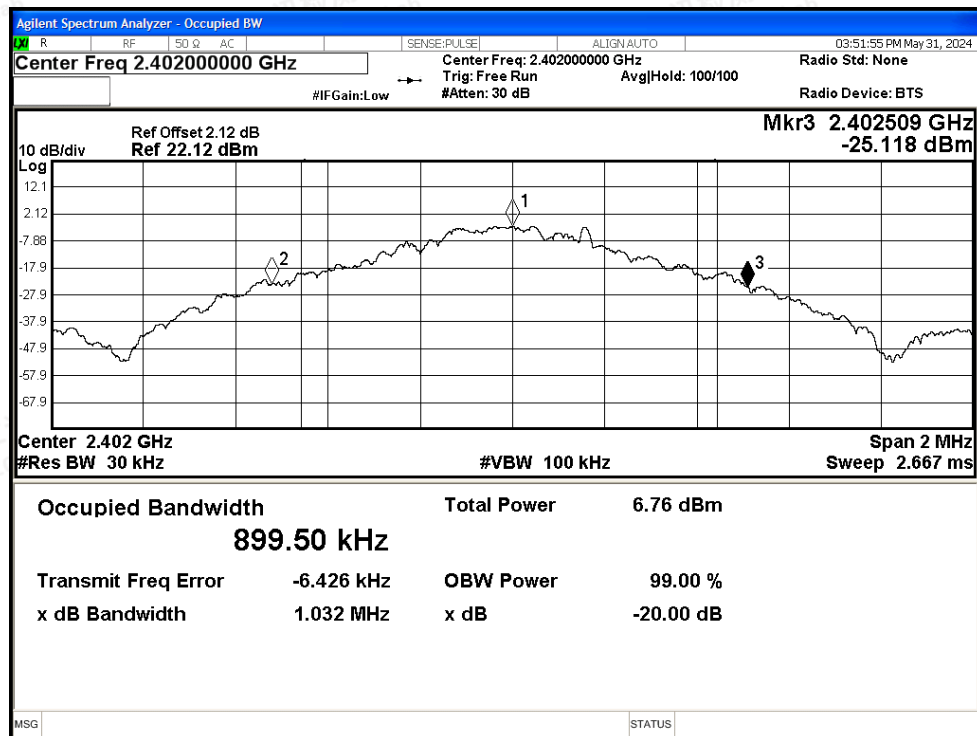
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.032	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.032	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.014	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.316	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.288	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.284	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.293	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.285	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.287	N/A	Pass



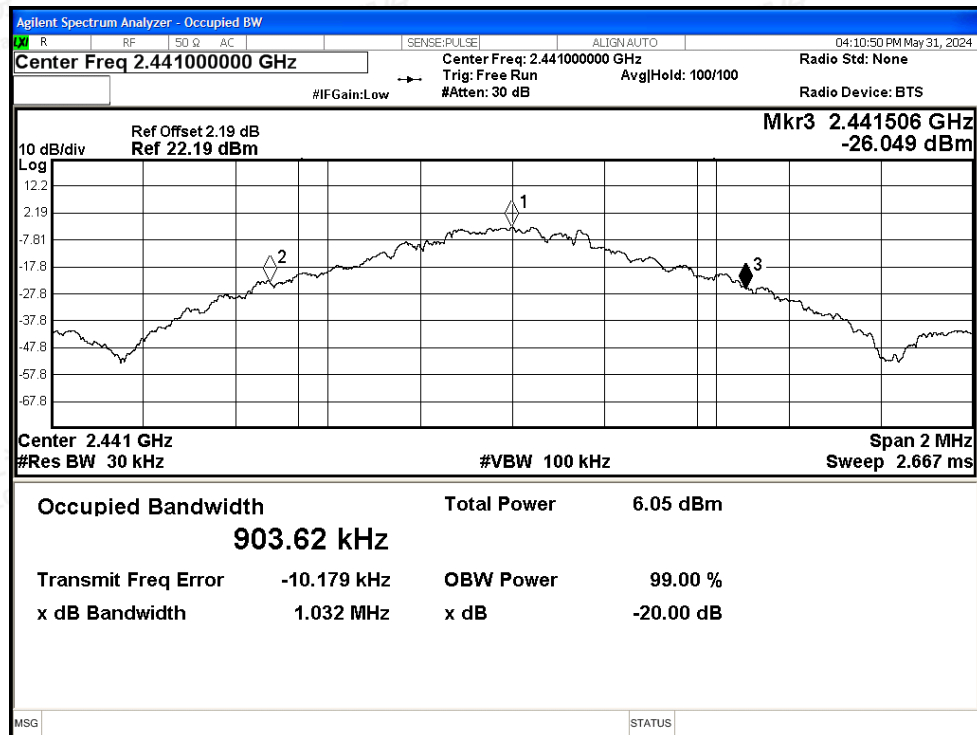


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

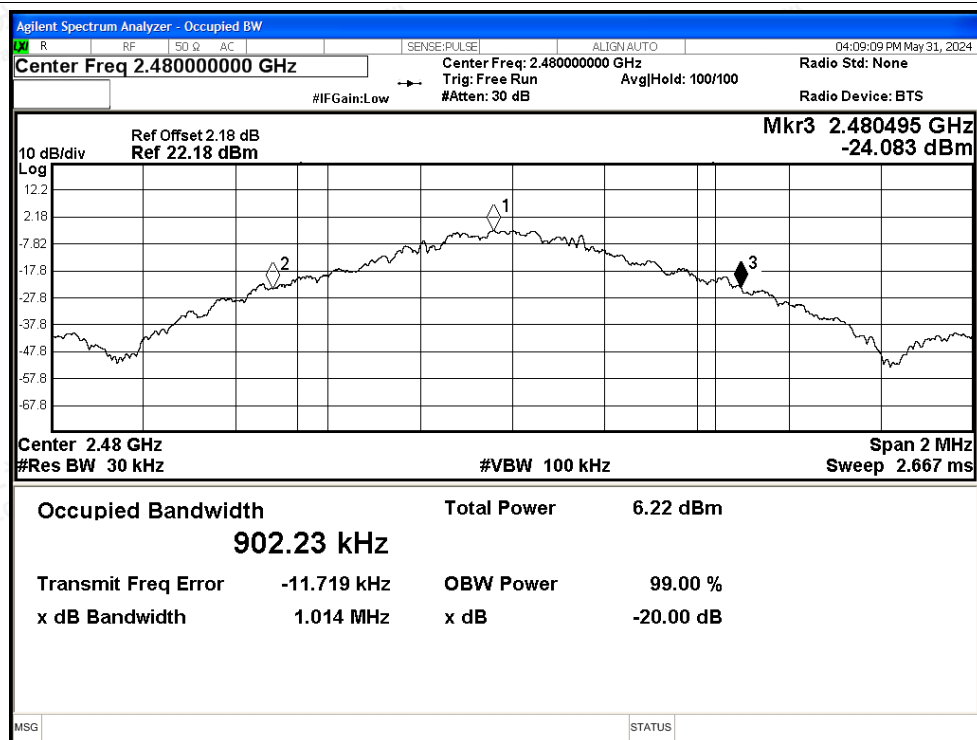


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

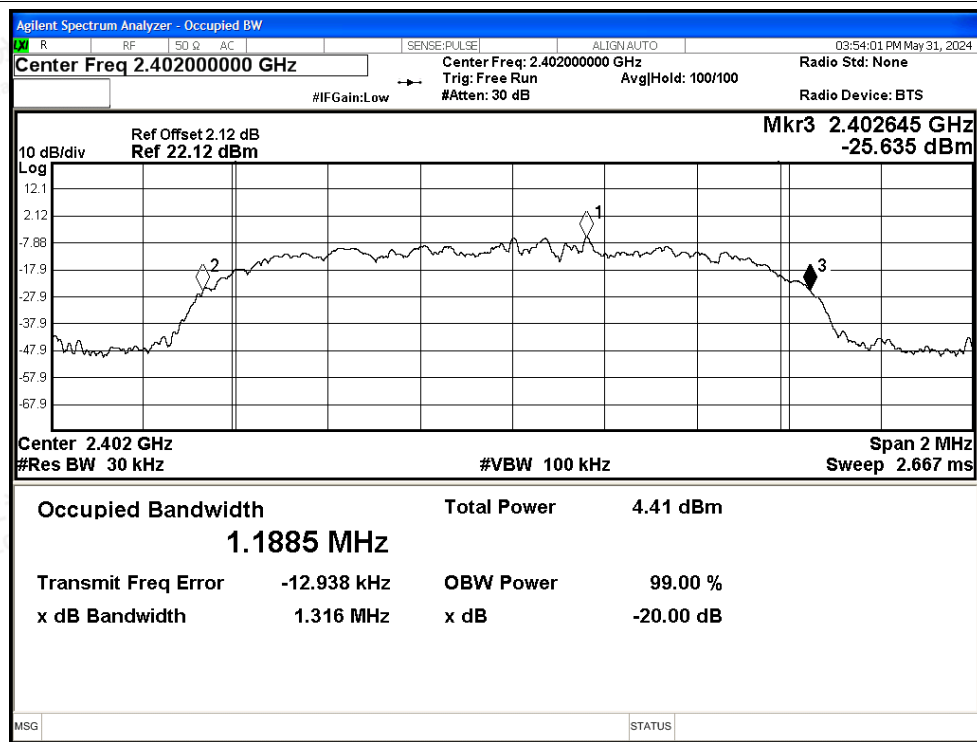




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

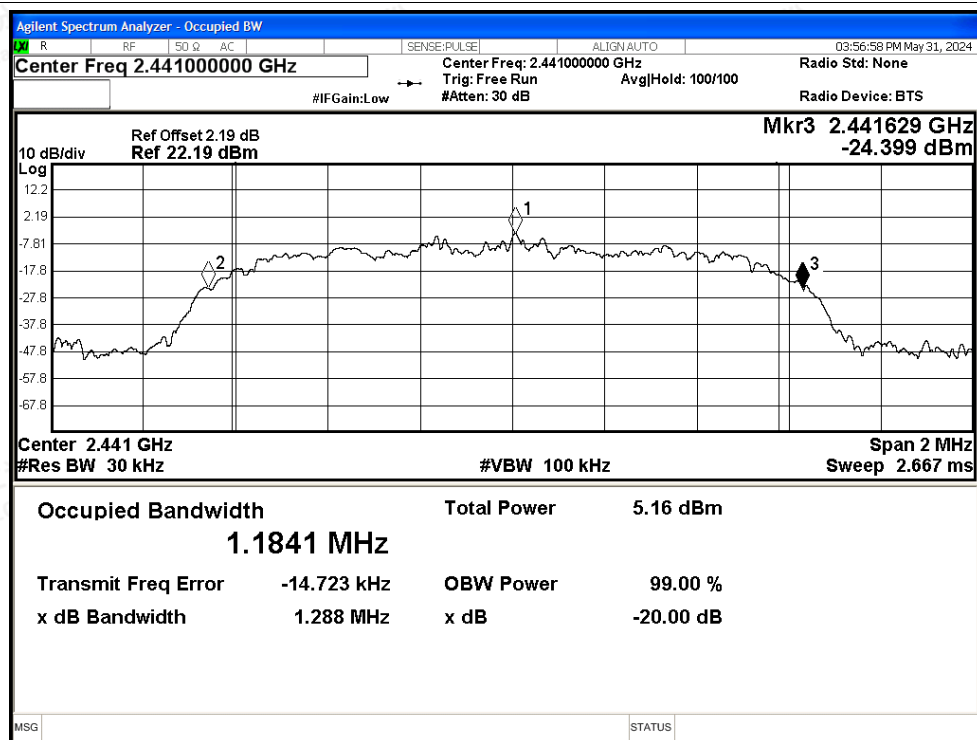


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

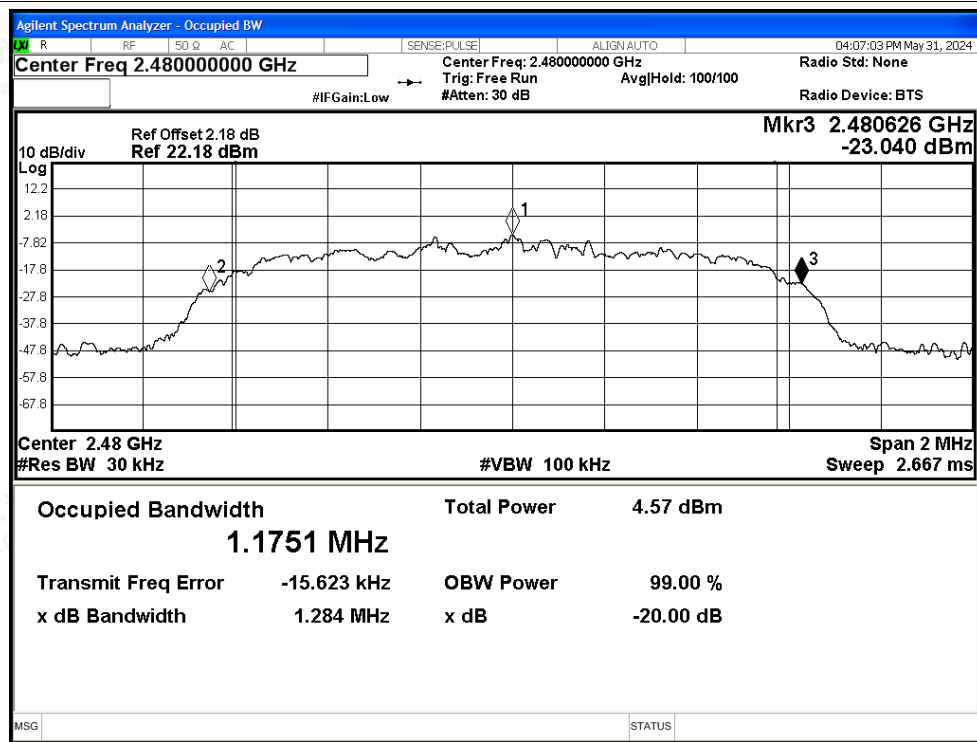




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

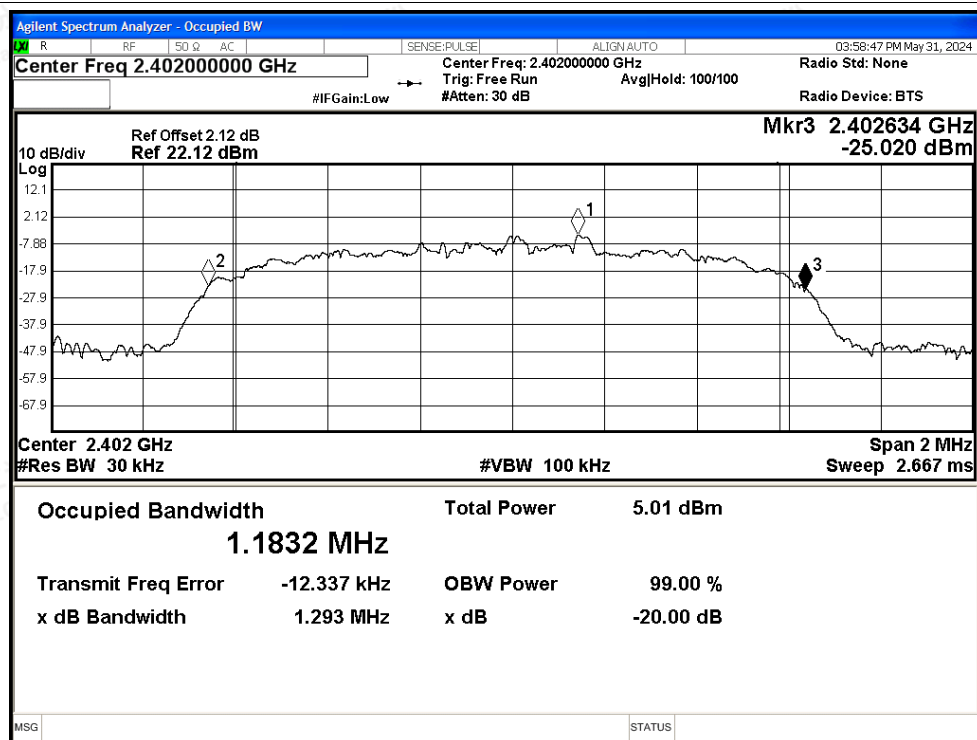


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

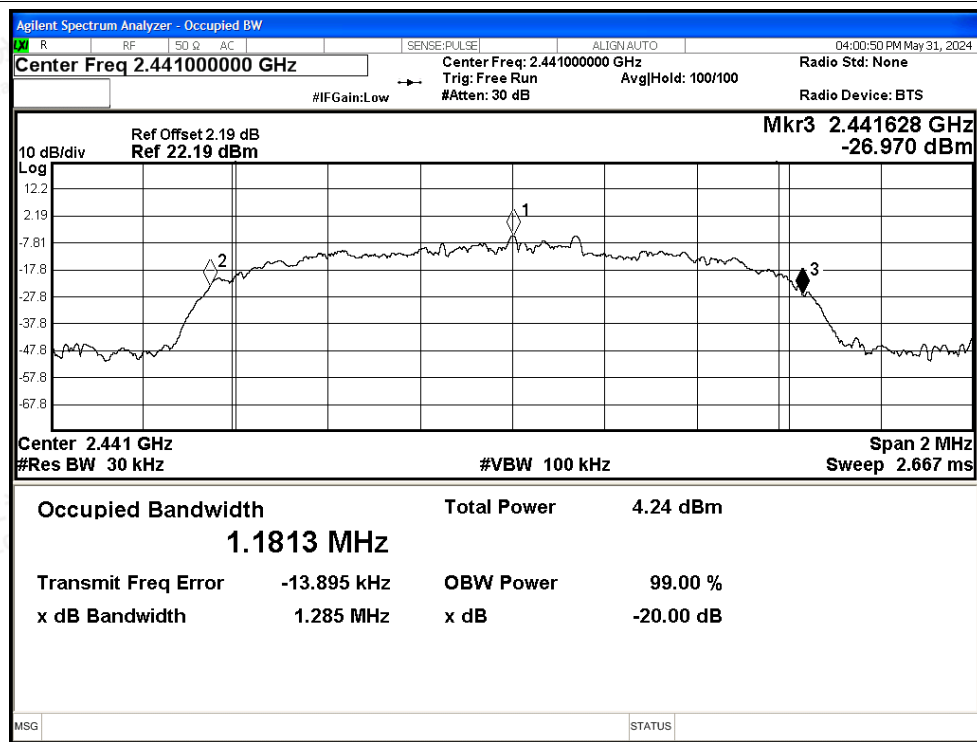


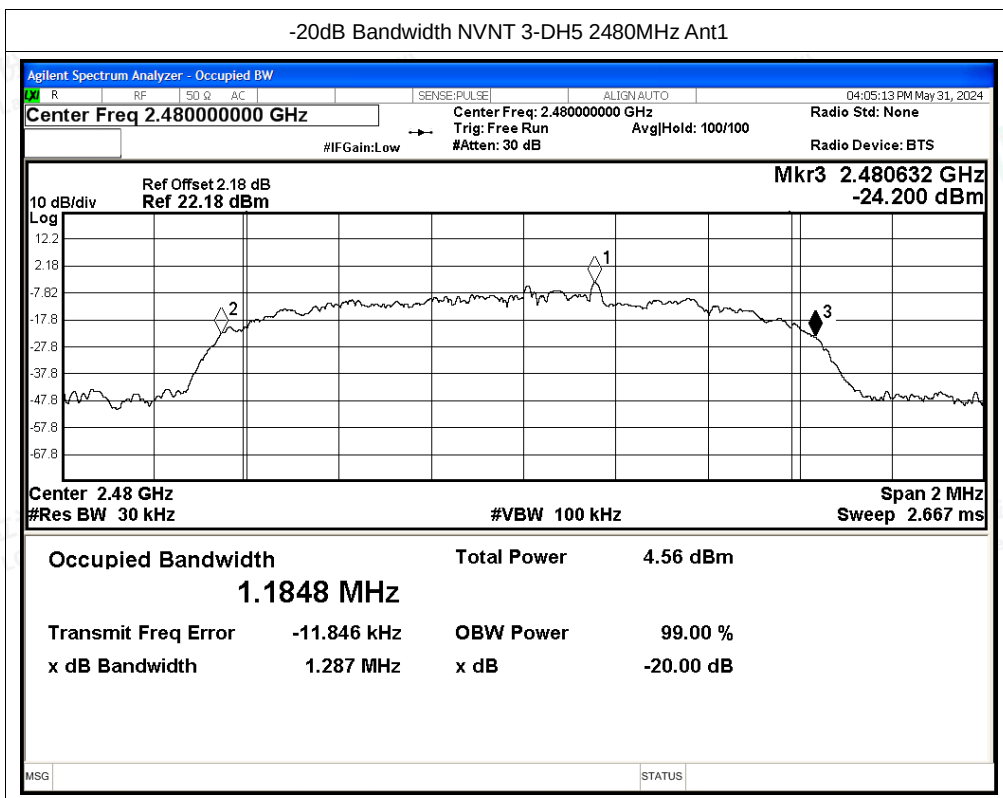


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1







A.2 Maximum Peak Conducted Output Power

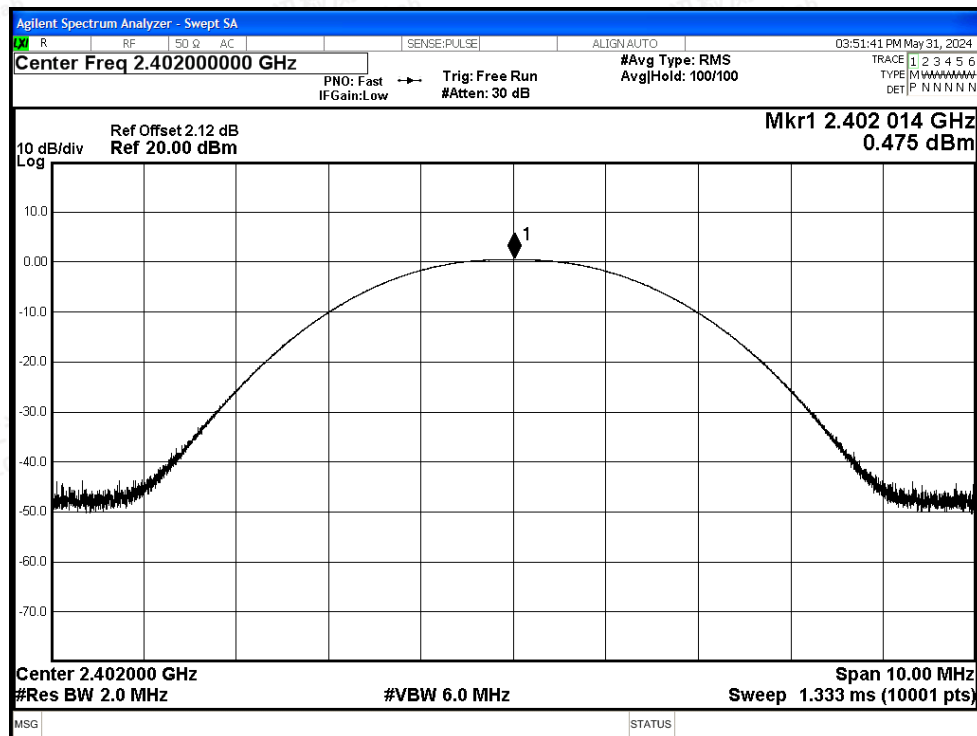
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.48	21	Pass
NVNT	1-DH5	2441	Ant1	-0.21	21	Pass
NVNT	1-DH5	2480	Ant1	0.04	21	Pass
NVNT	2-DH5	2402	Ant1	0.31	21	Pass
NVNT	2-DH5	2441	Ant1	0.94	21	Pass
NVNT	2-DH5	2480	Ant1	-0.13	21	Pass
NVNT	3-DH5	2402	Ant1	0.35	21	Pass
NVNT	3-DH5	2441	Ant1	-0.3	21	Pass
NVNT	3-DH5	2480	Ant1	-0.05	21	Pass



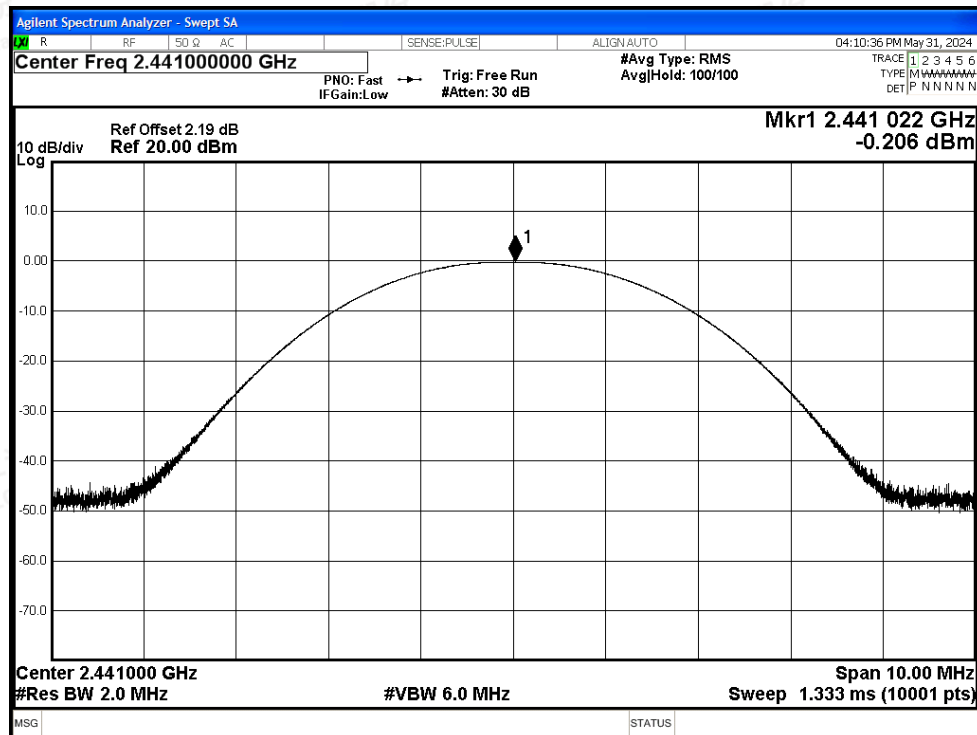


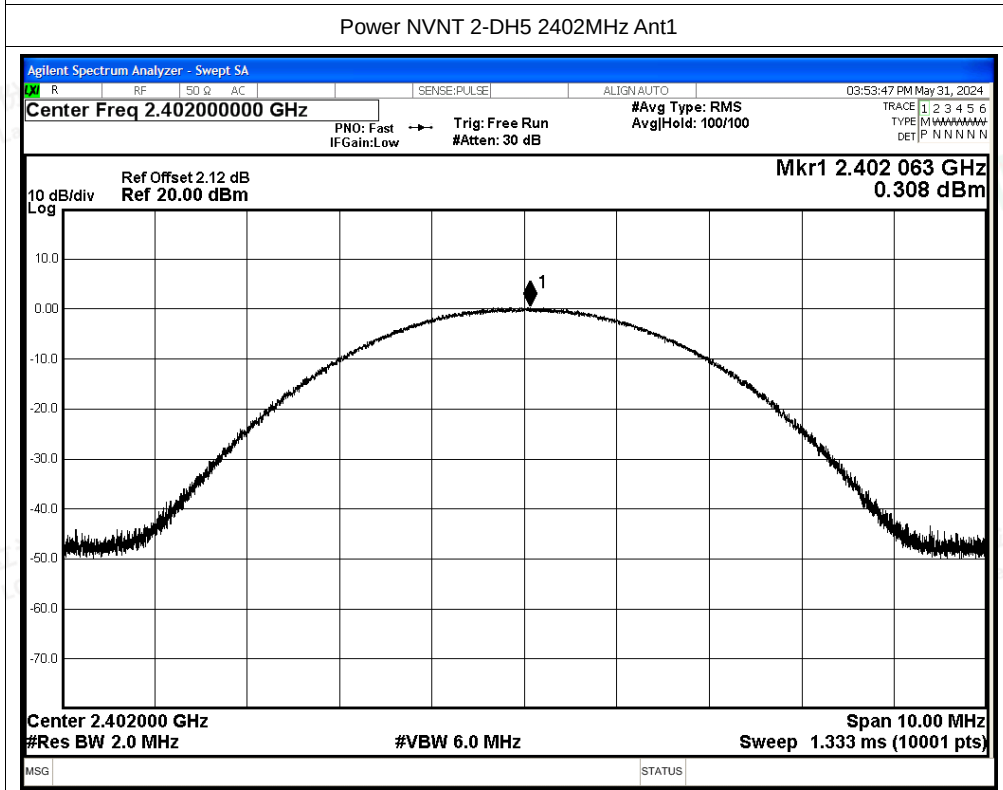
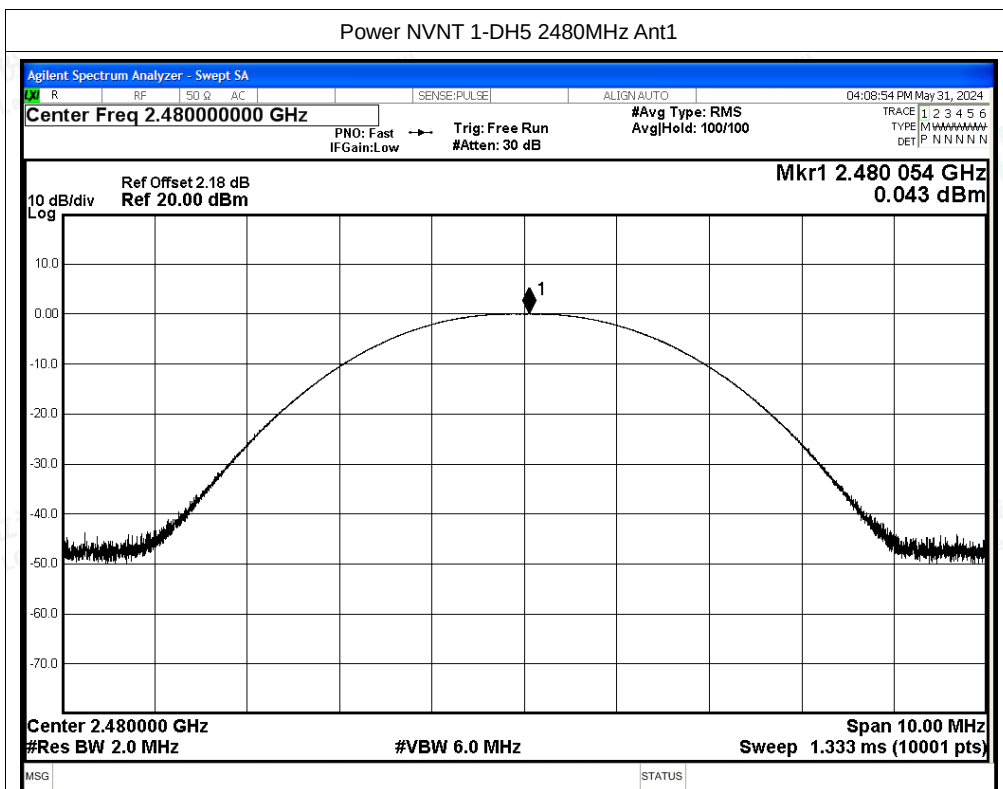
Test Graphs

Power NVNT 1-DH5 2402MHz Ant1



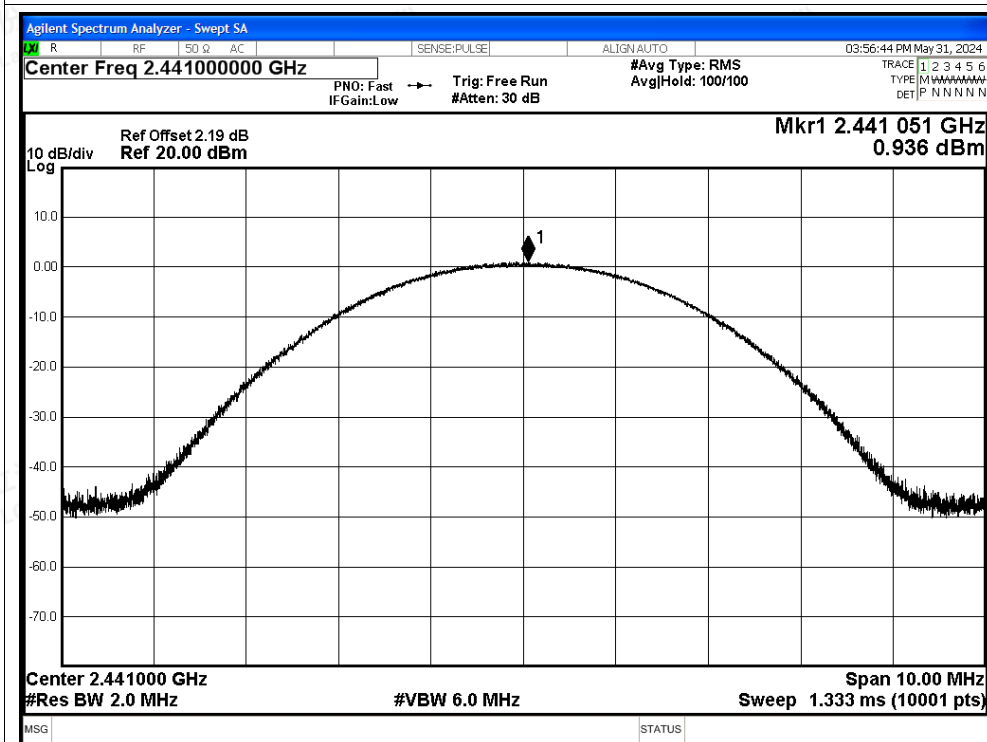
Power NVNT 1-DH5 2441MHz Ant1



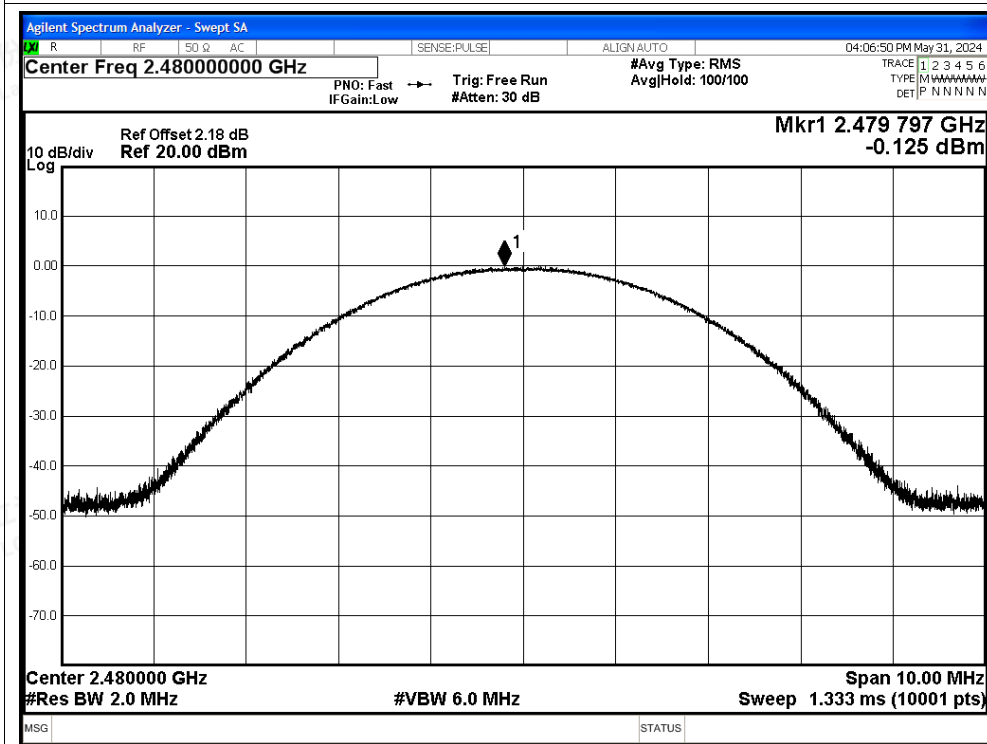


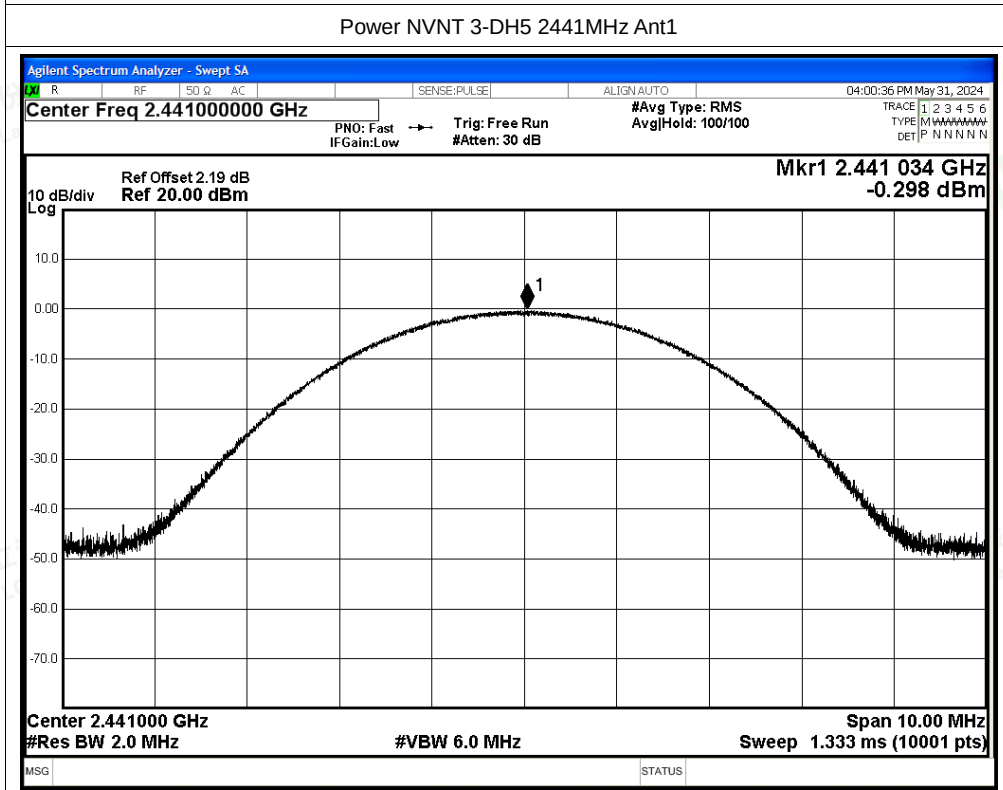
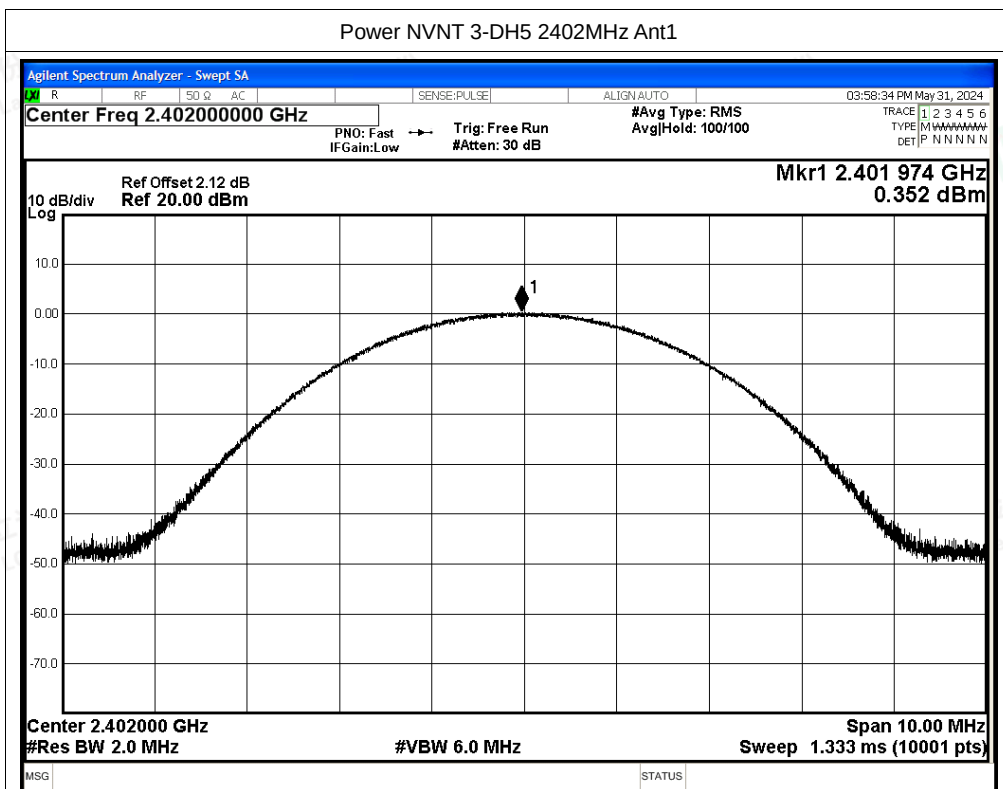


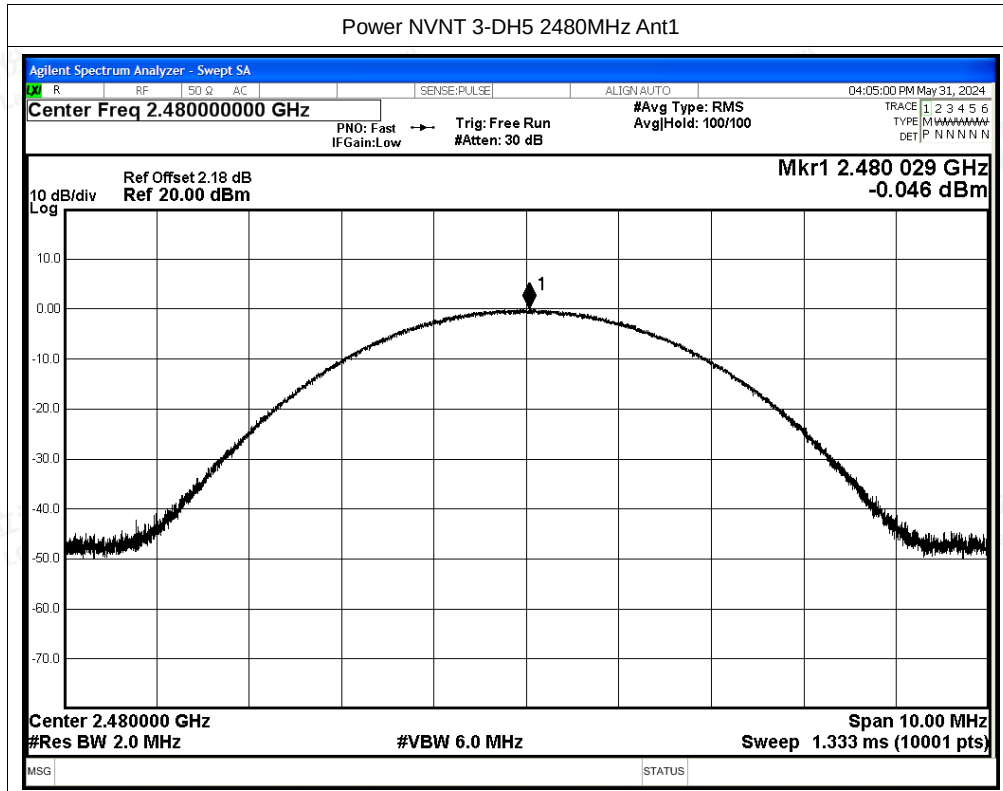
Power NVNT 2-DH5 2441MHz Ant1



Power NVNT 2-DH5 2480MHz Ant1









A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.96	2403.004	1.044	0.688	Pass
NVNT	2-DH5	Ant1	2402.15	2403.148	0.998	0.877	Pass
NVNT	3-DH5	Ant1	2402.018	2402.98	0.962	0.862	Pass

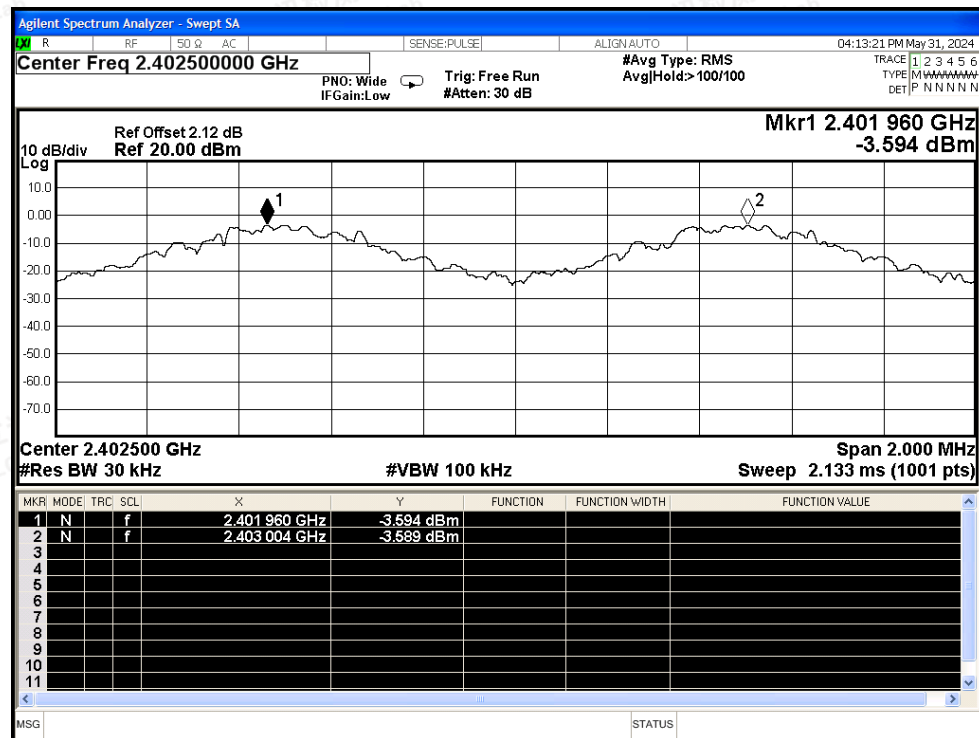


Shenzhen LCS Compliance Testing Laboratory Ltd.
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Scan code to check authenticity

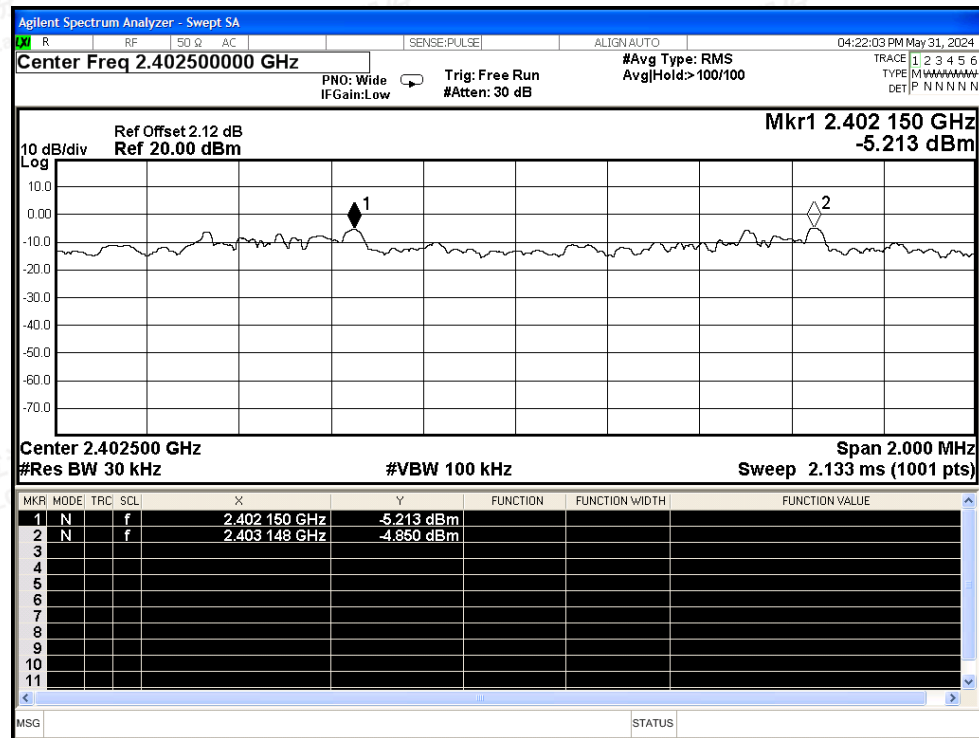


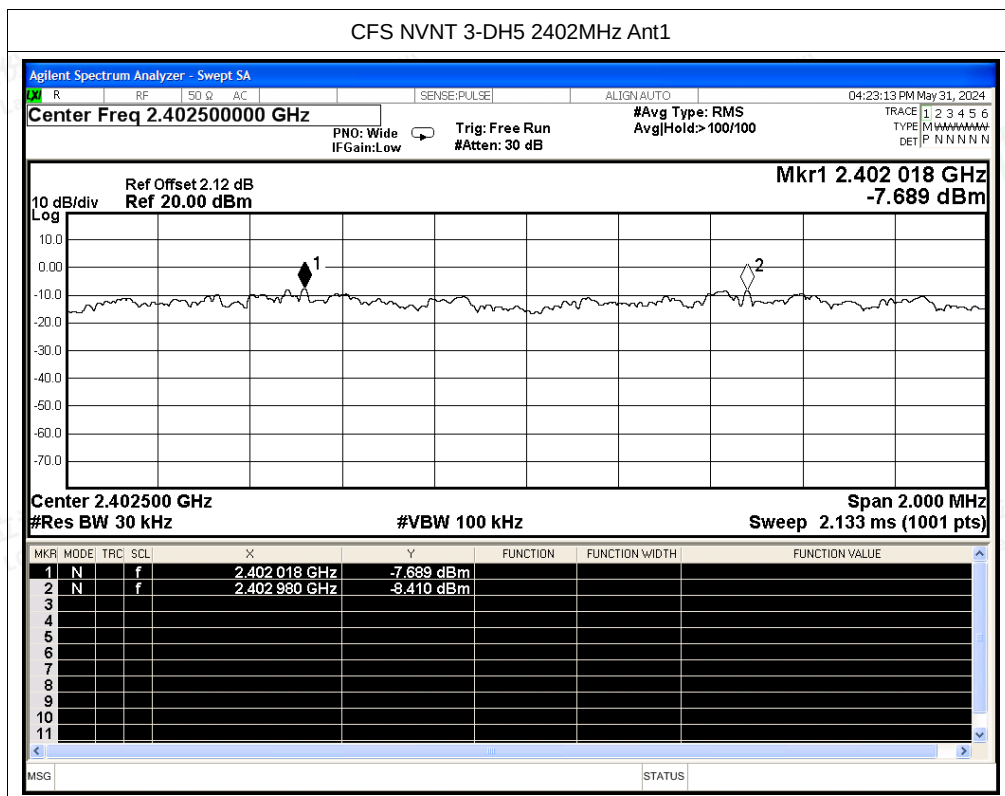
Test Graphs

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	2.881	331.315	115	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	317.35	110	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.886	323.232	112	31600	400	Pass

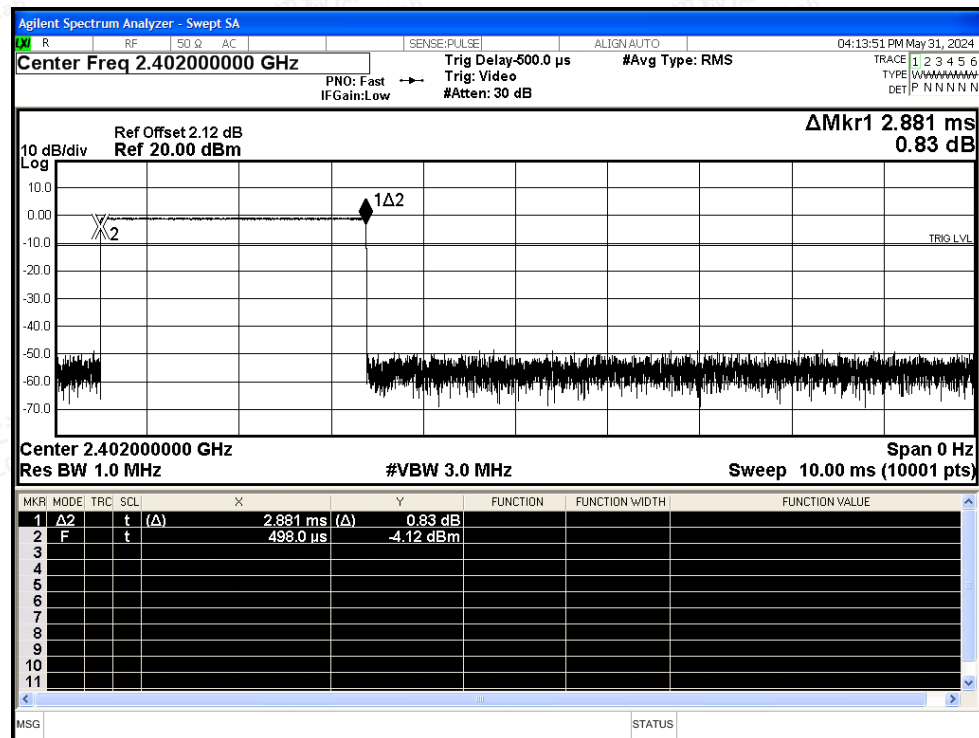


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Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen,
518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

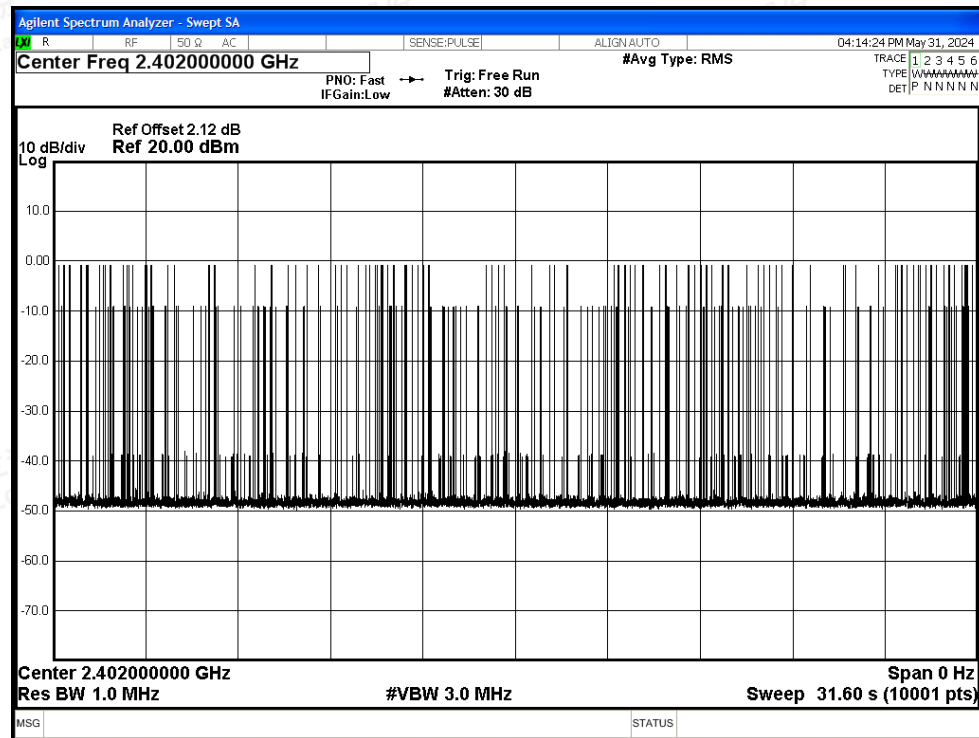


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

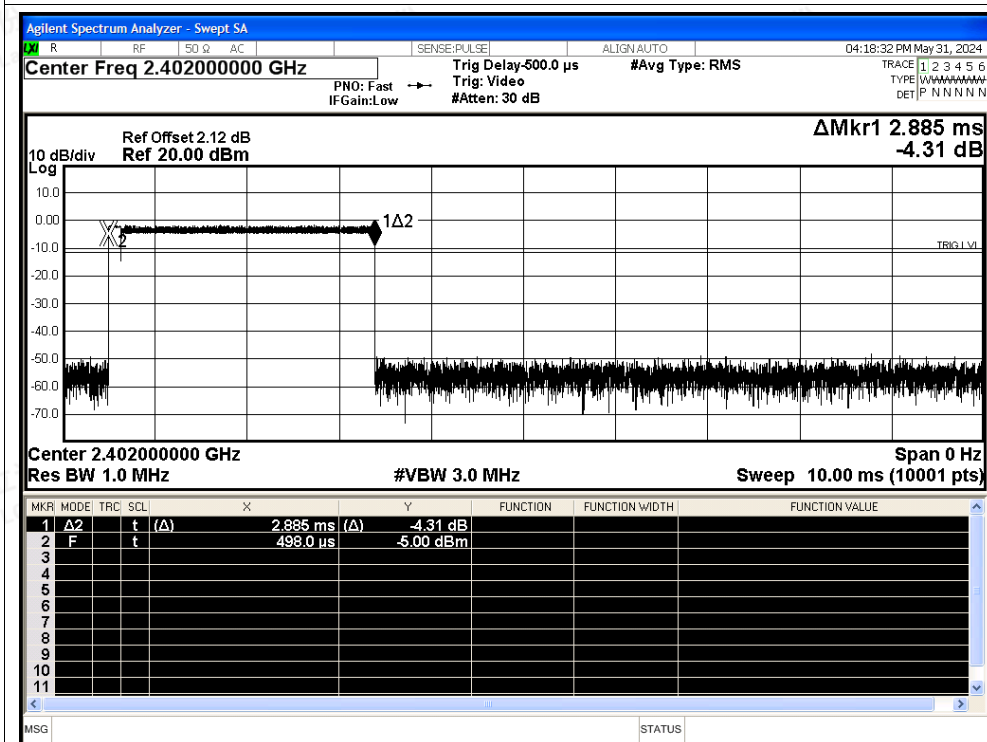


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

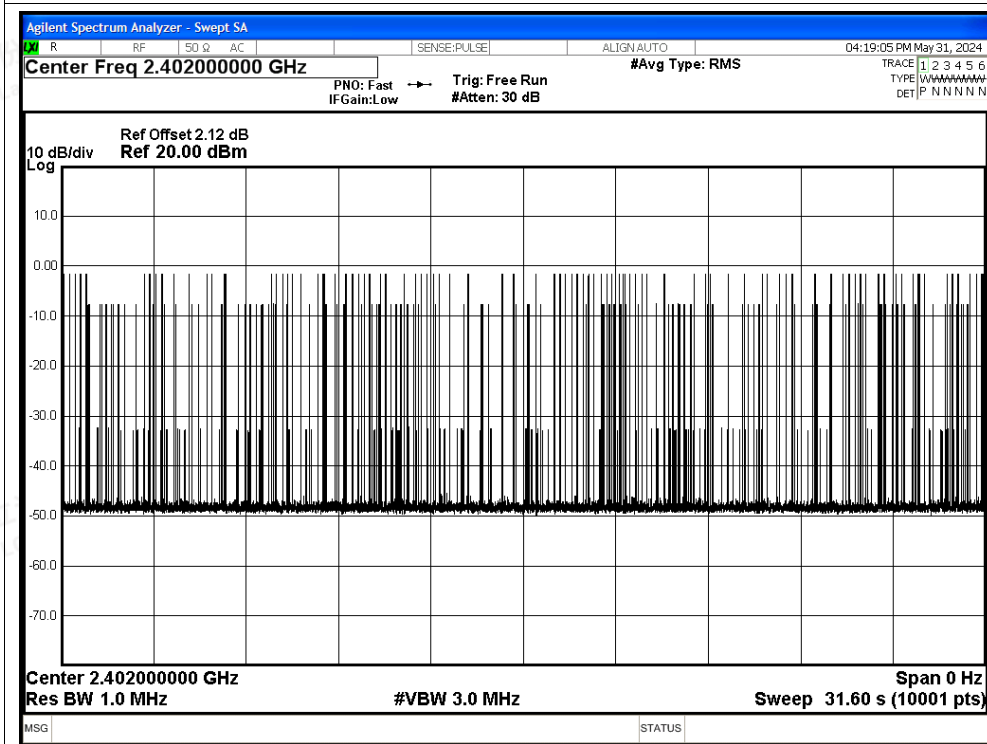




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

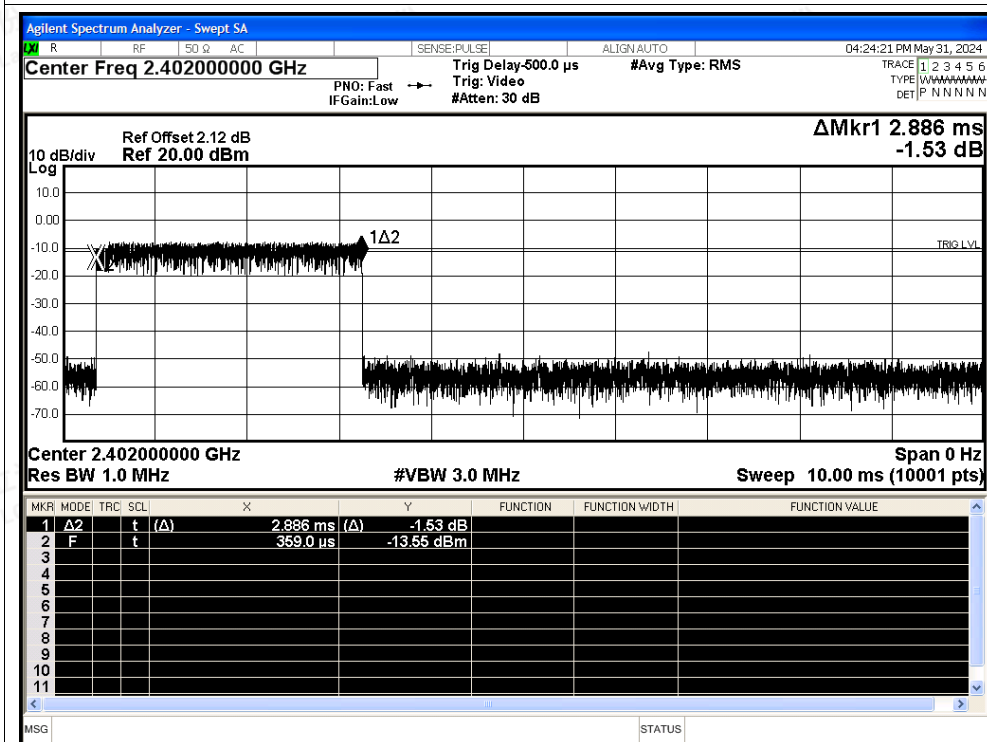


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

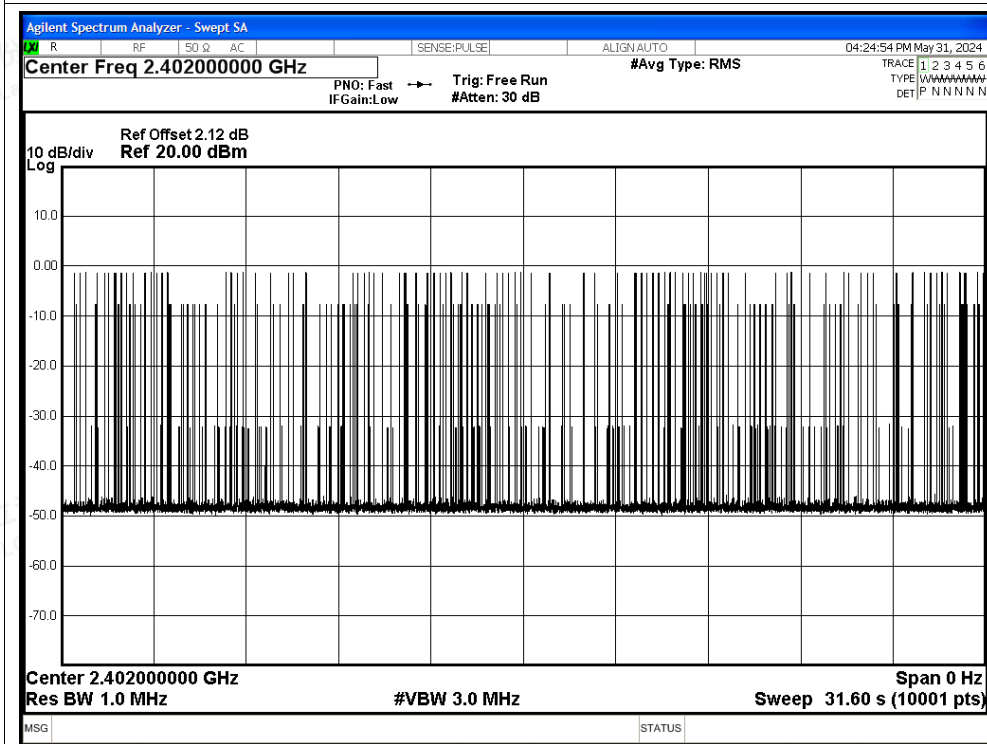




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated





A.5 Number of Hopping Channel

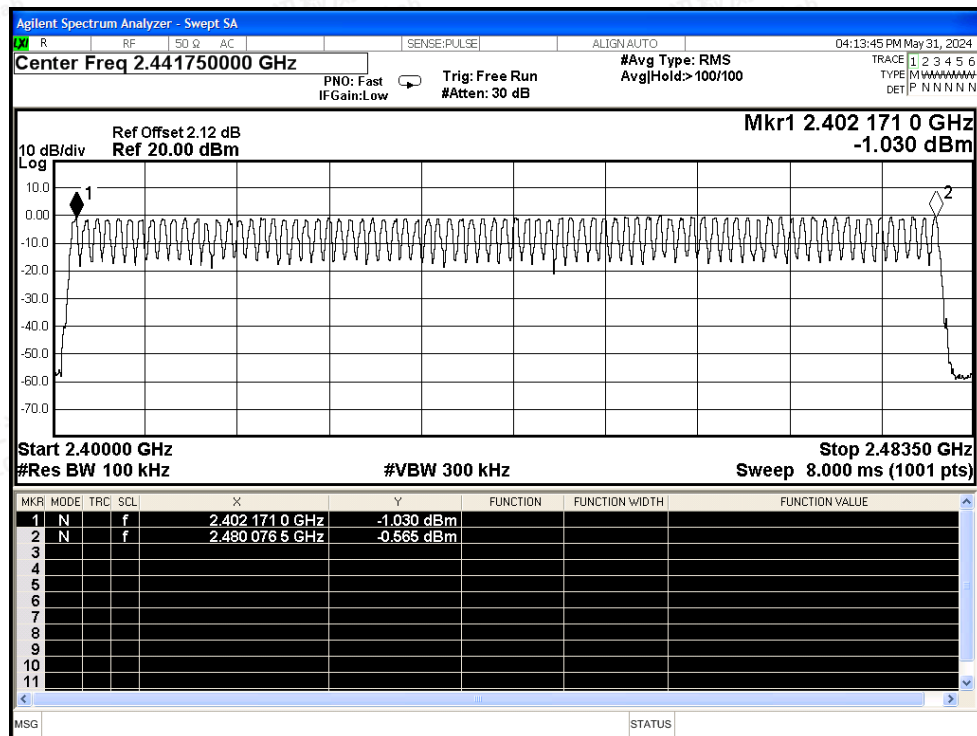
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



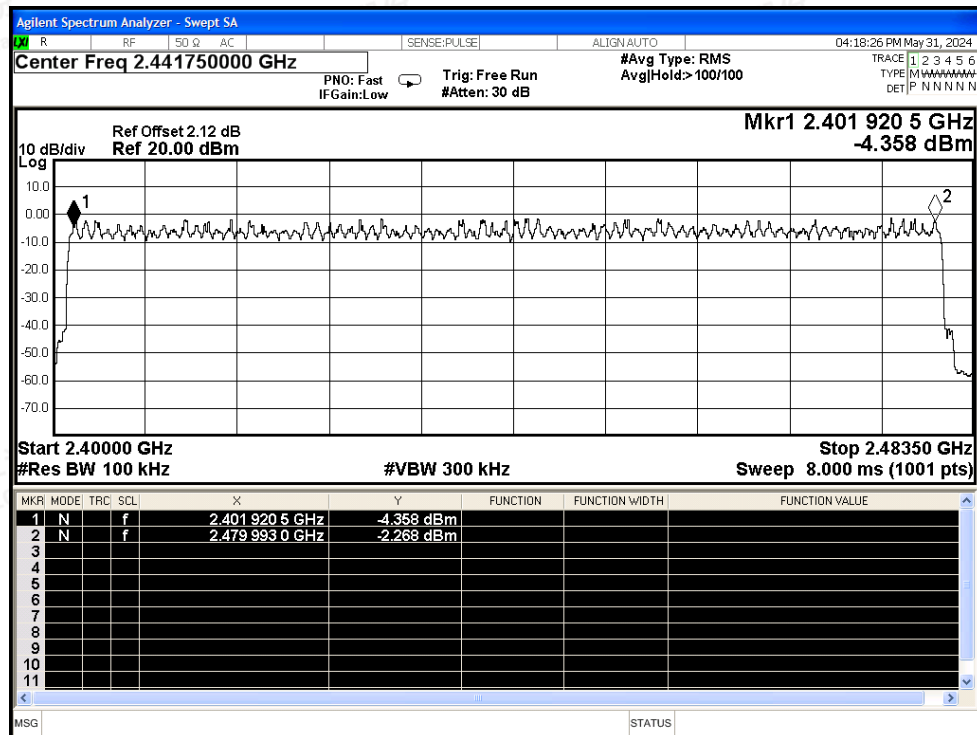


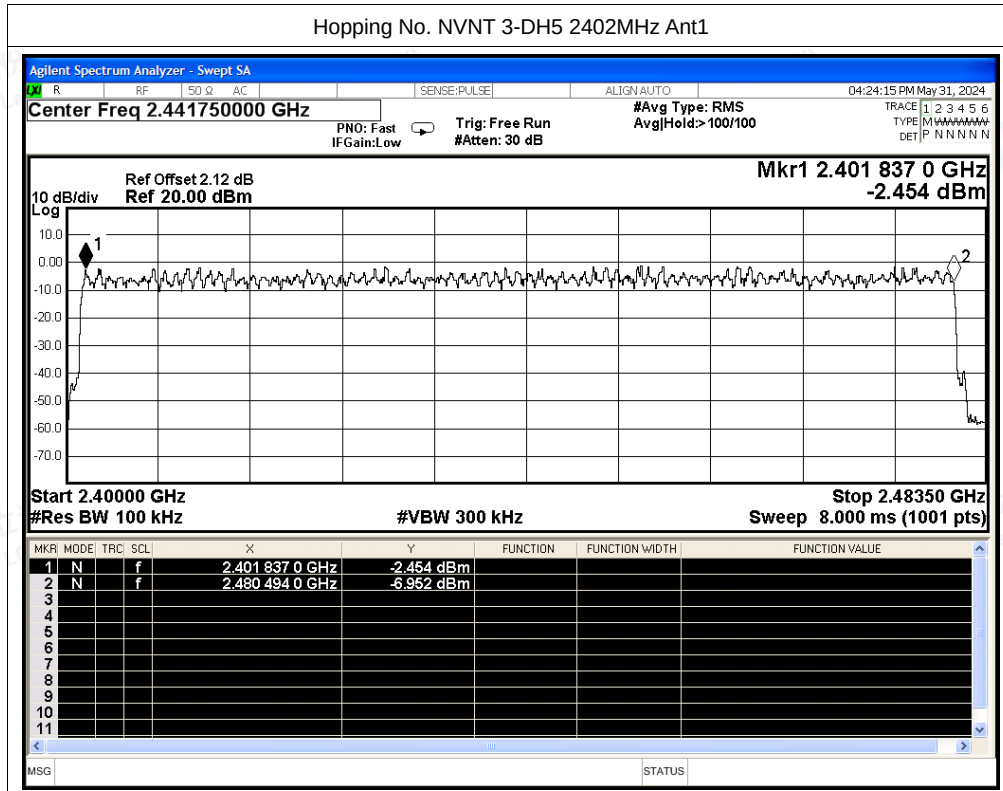
Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



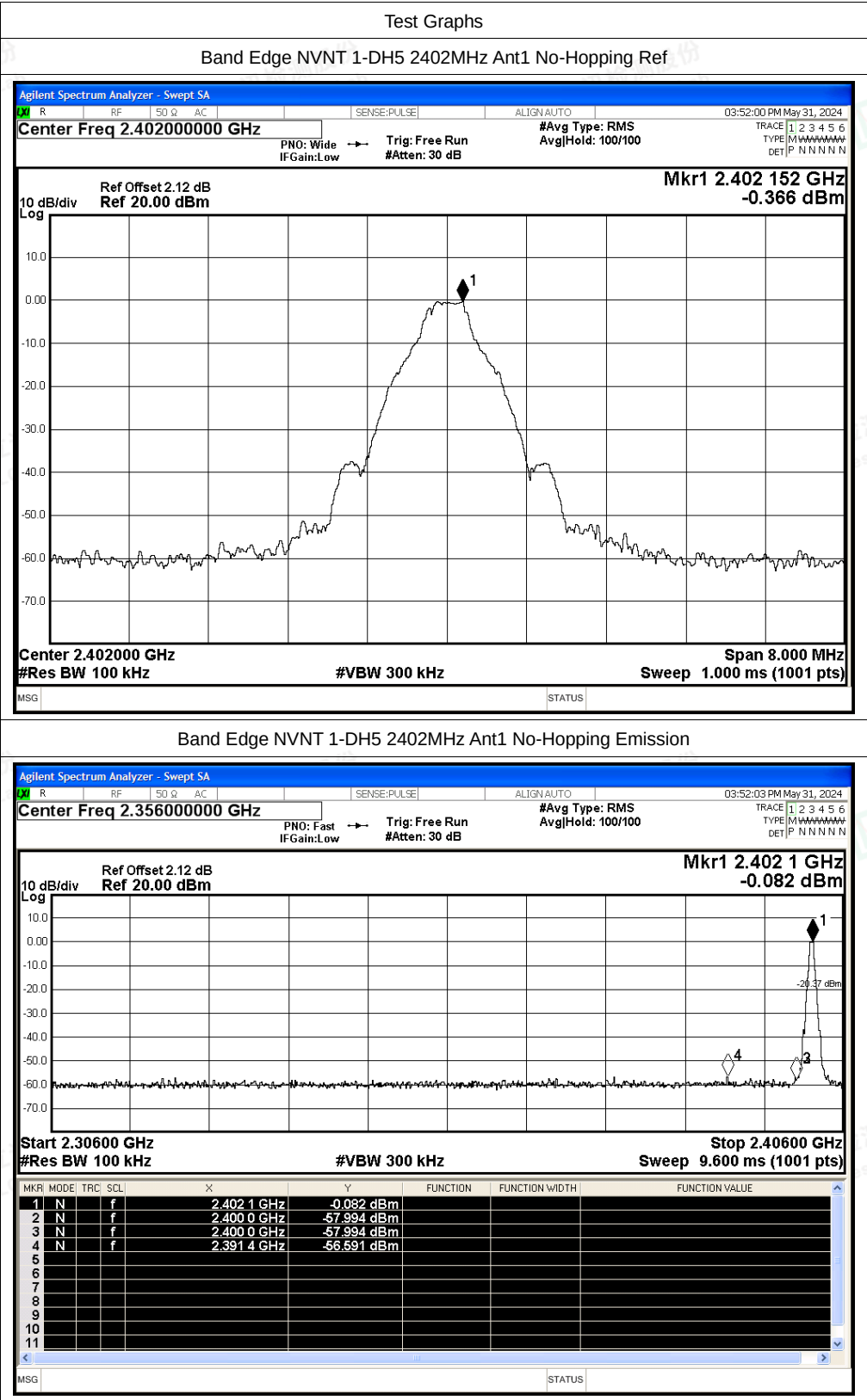




A.6 Band Edge

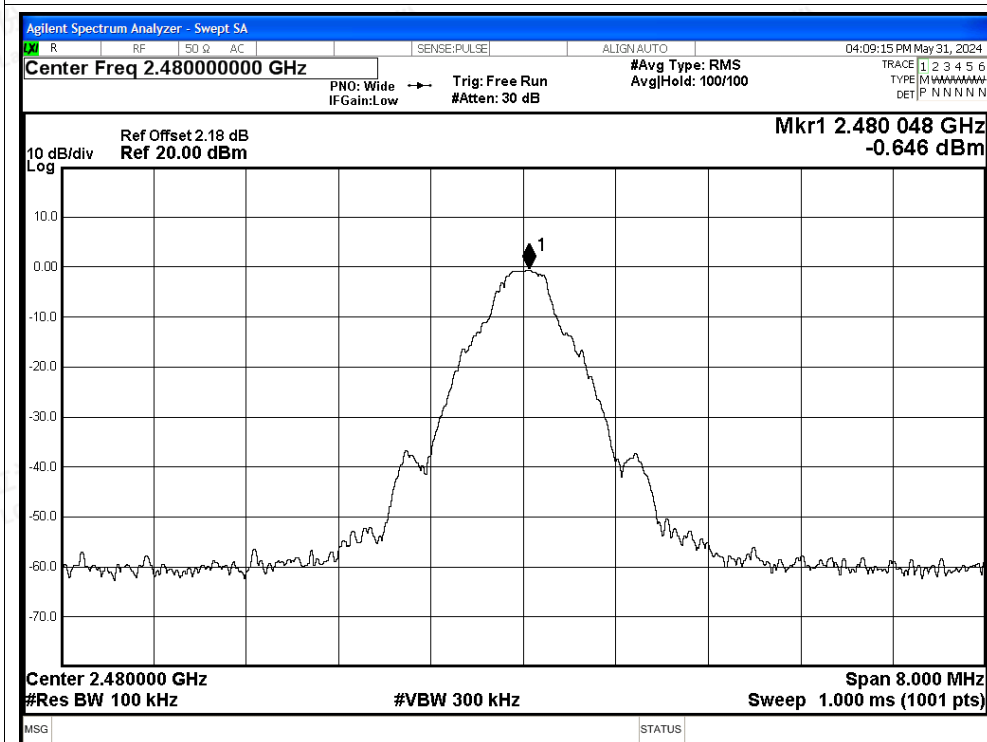
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-56.23	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.3	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-53.94	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-53.41	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-51.21	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-54.62	-20	Pass



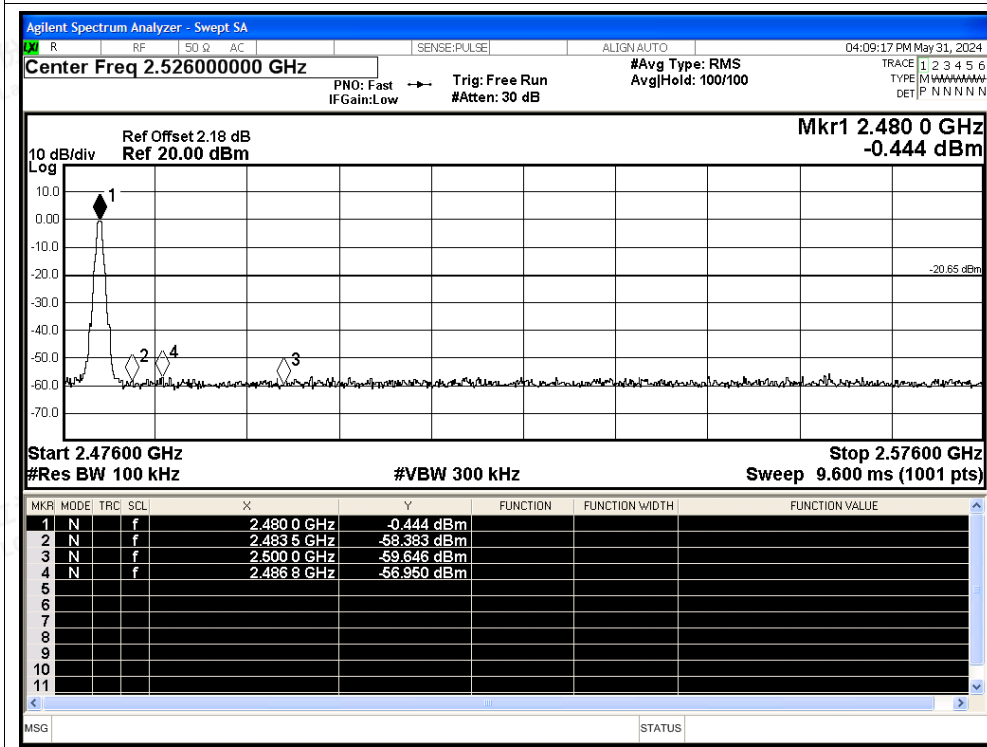


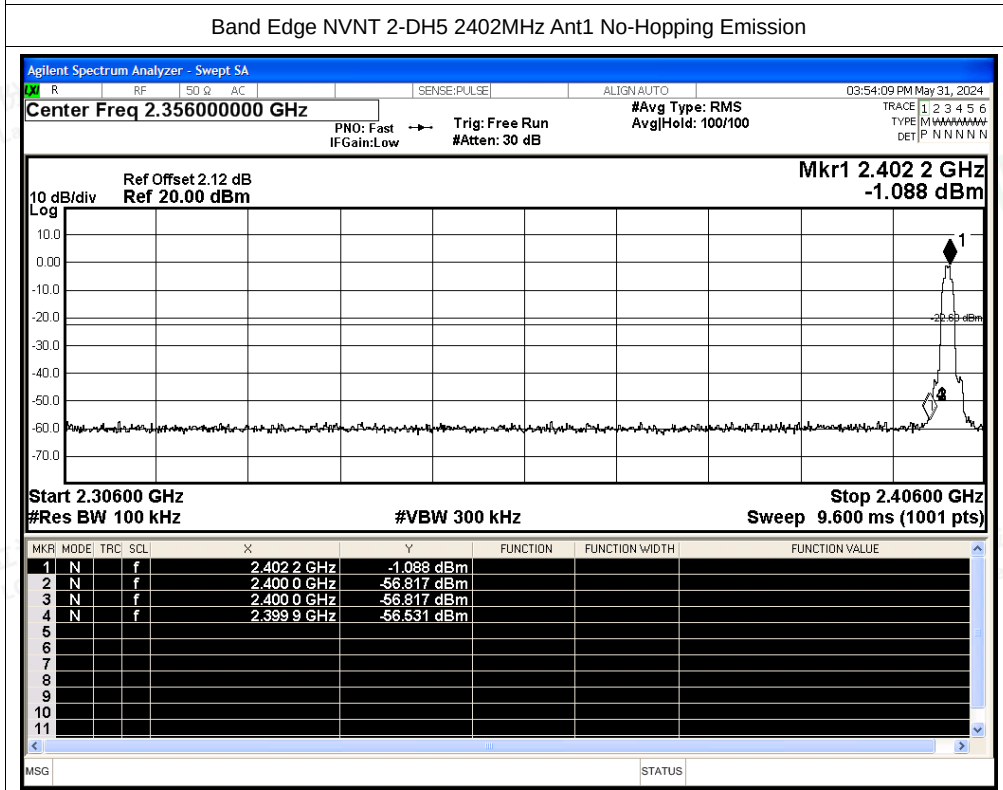
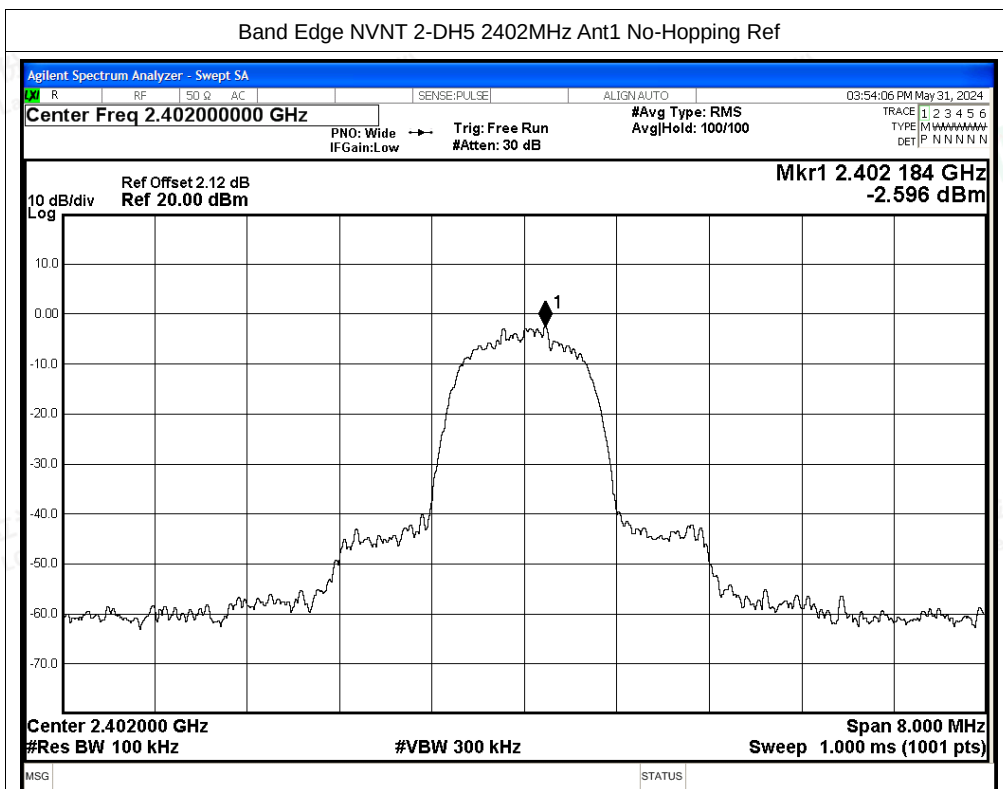


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



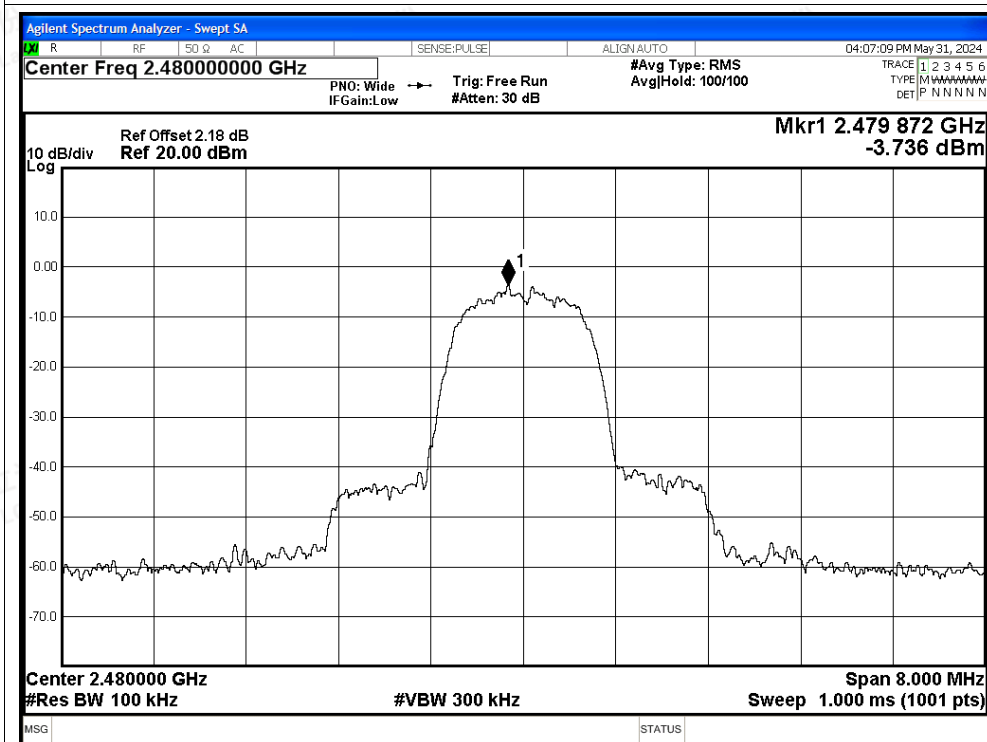
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



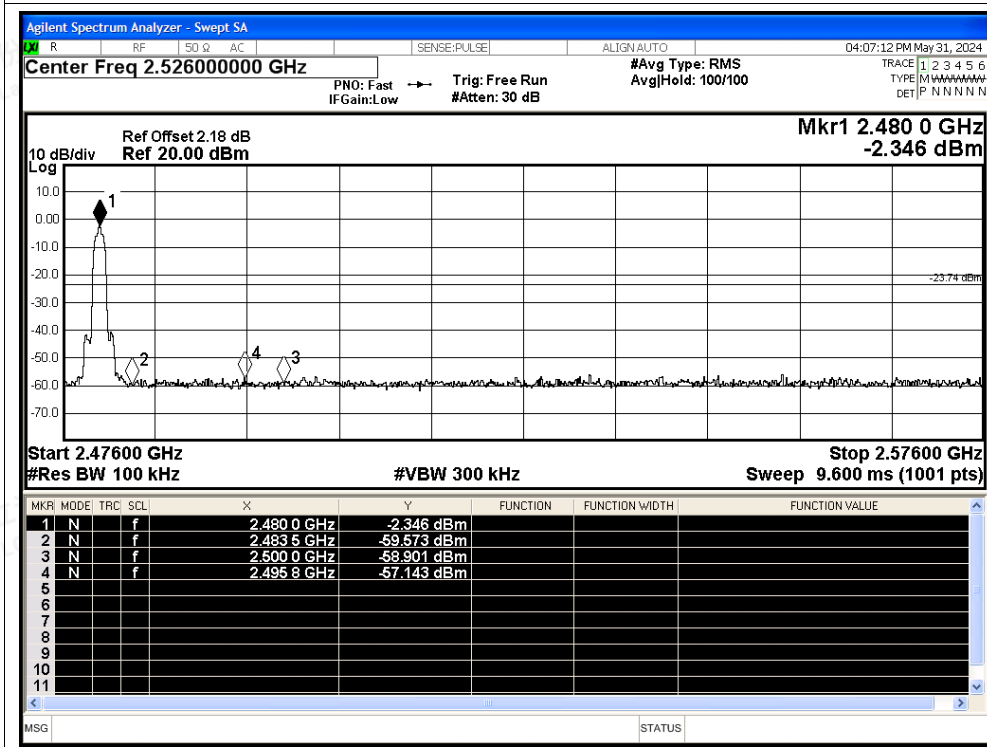


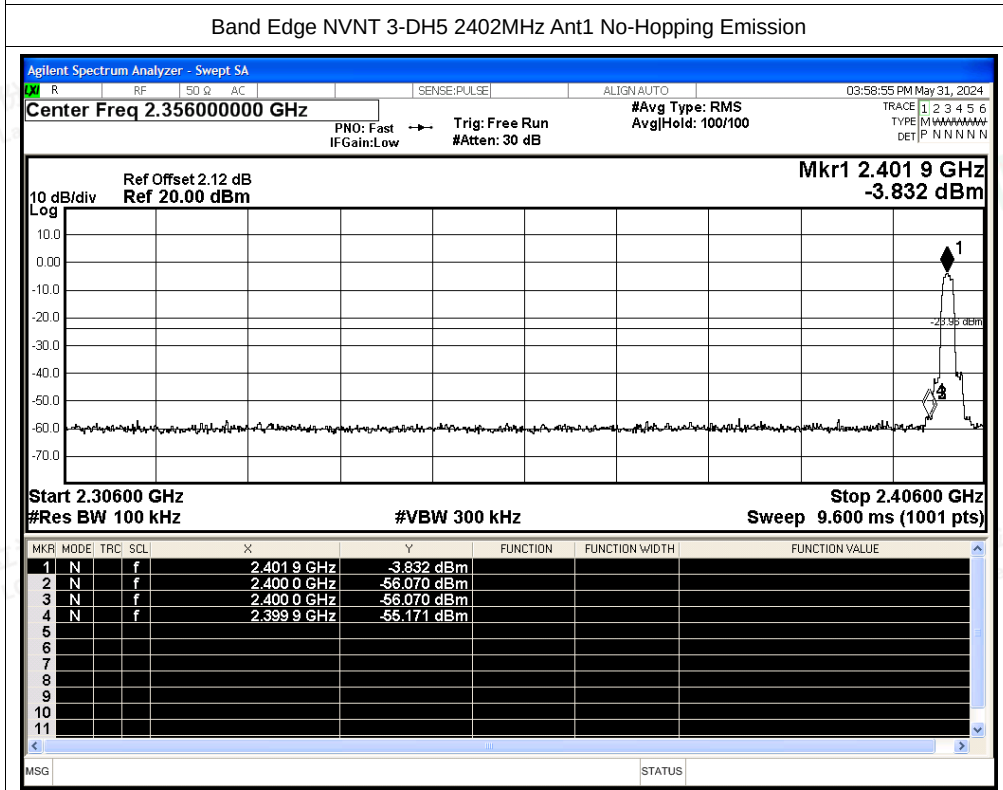
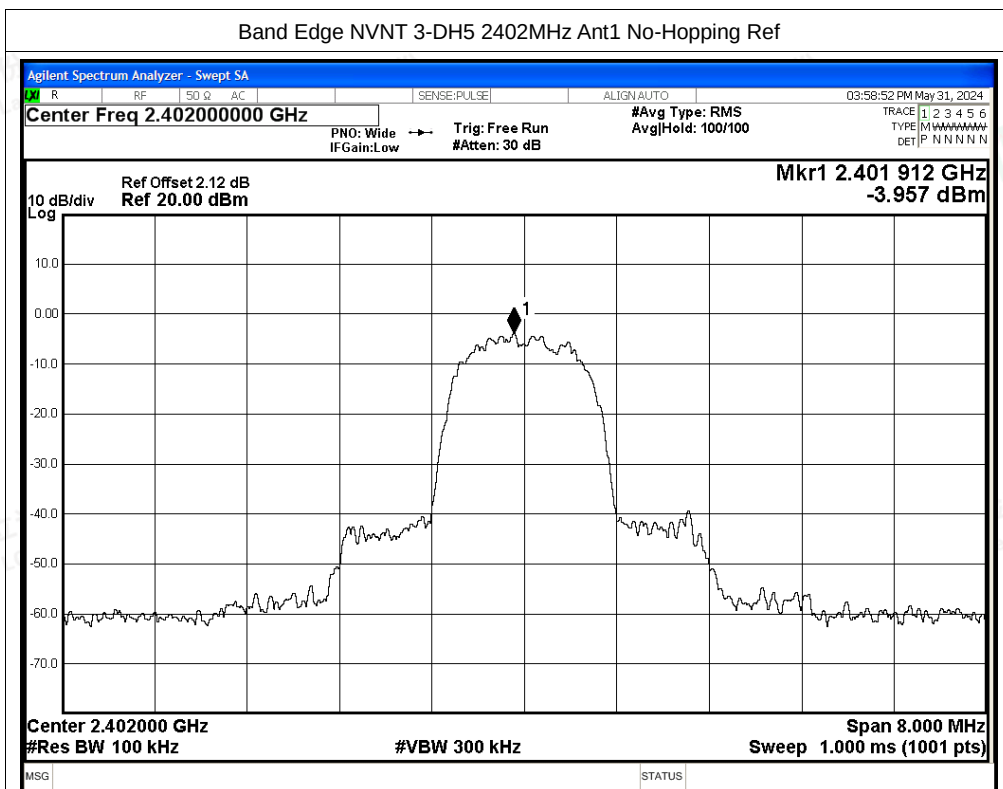


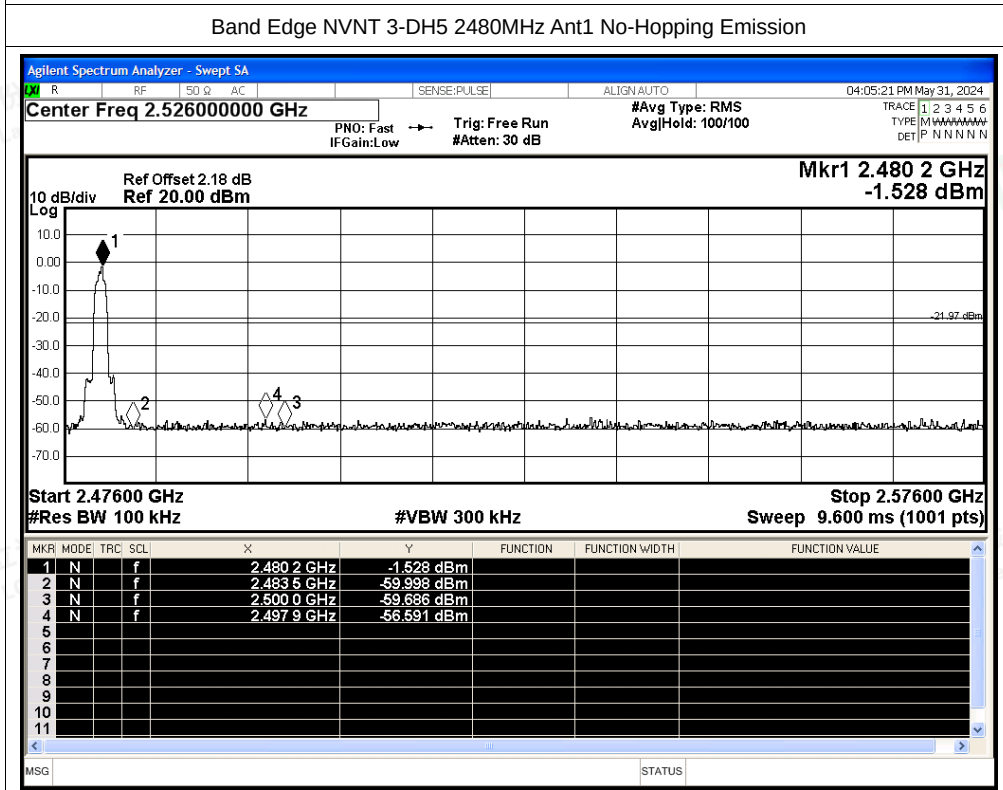
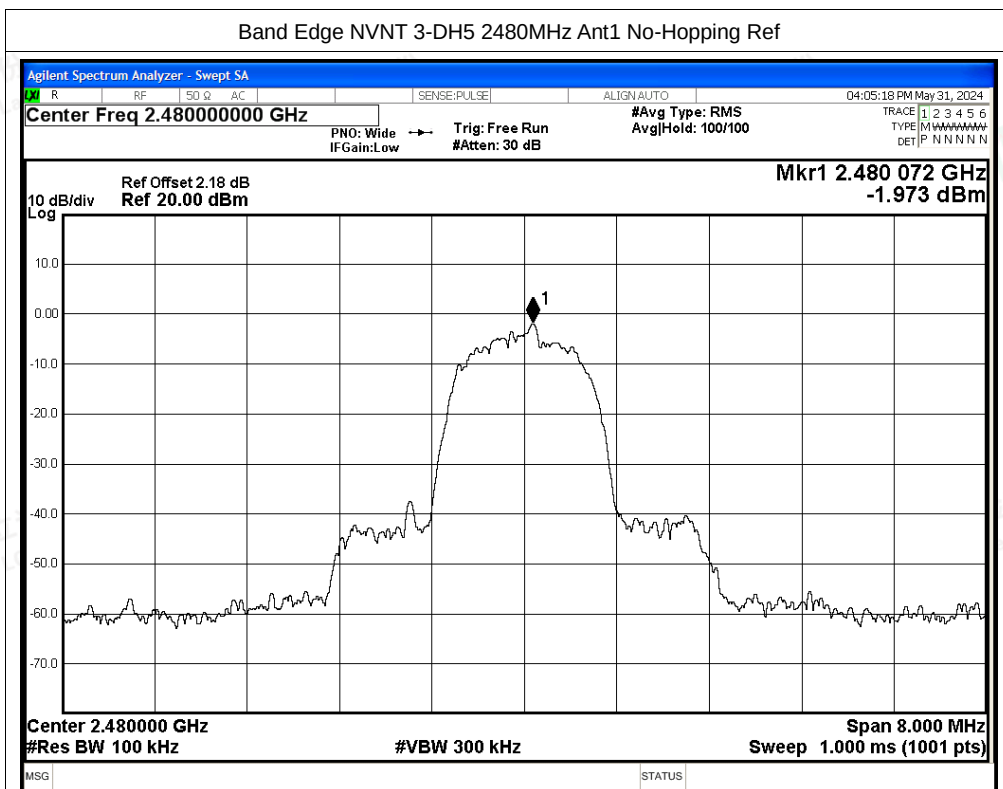
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



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









(Hopping)

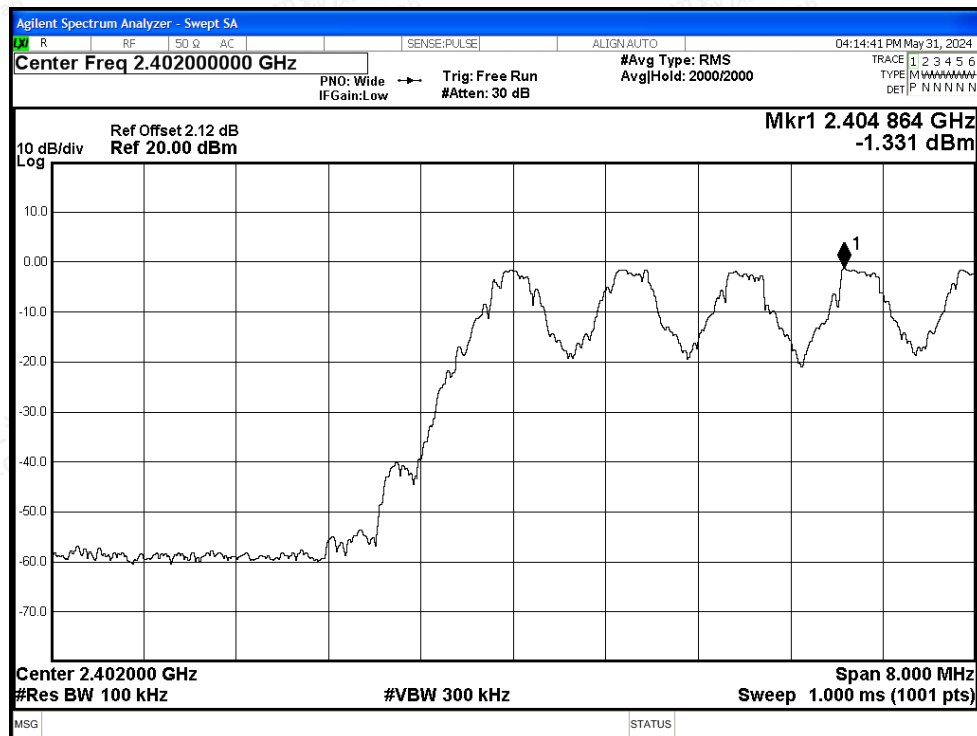
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-54.81	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.79	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-52.94	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-54.34	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-53.11	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-54.08	-20	Pass



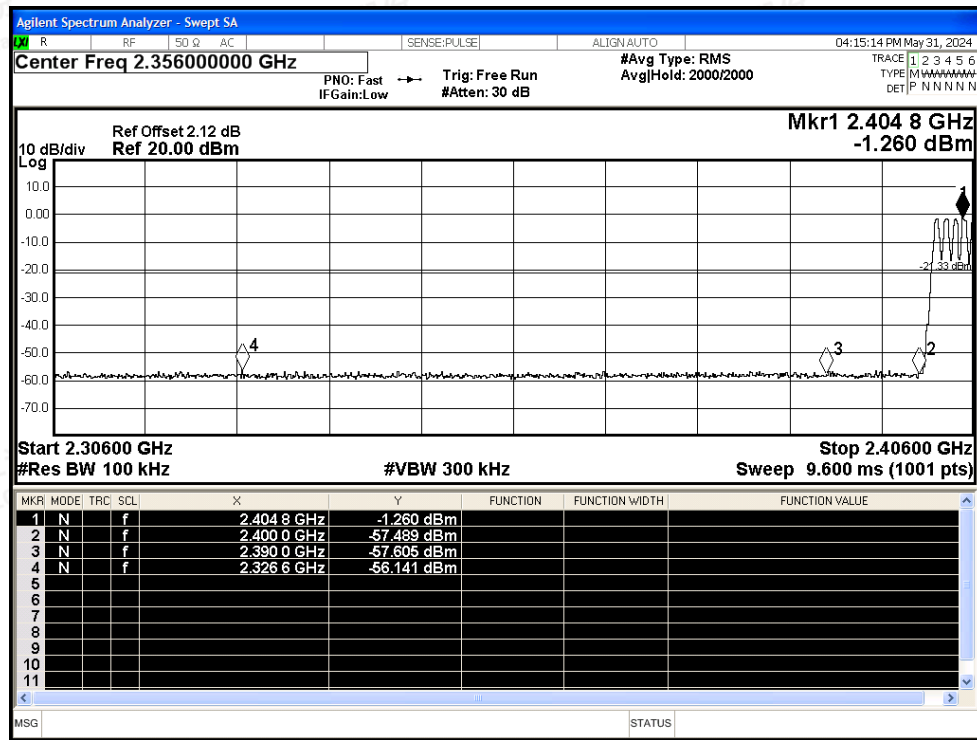


Test Graphs

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

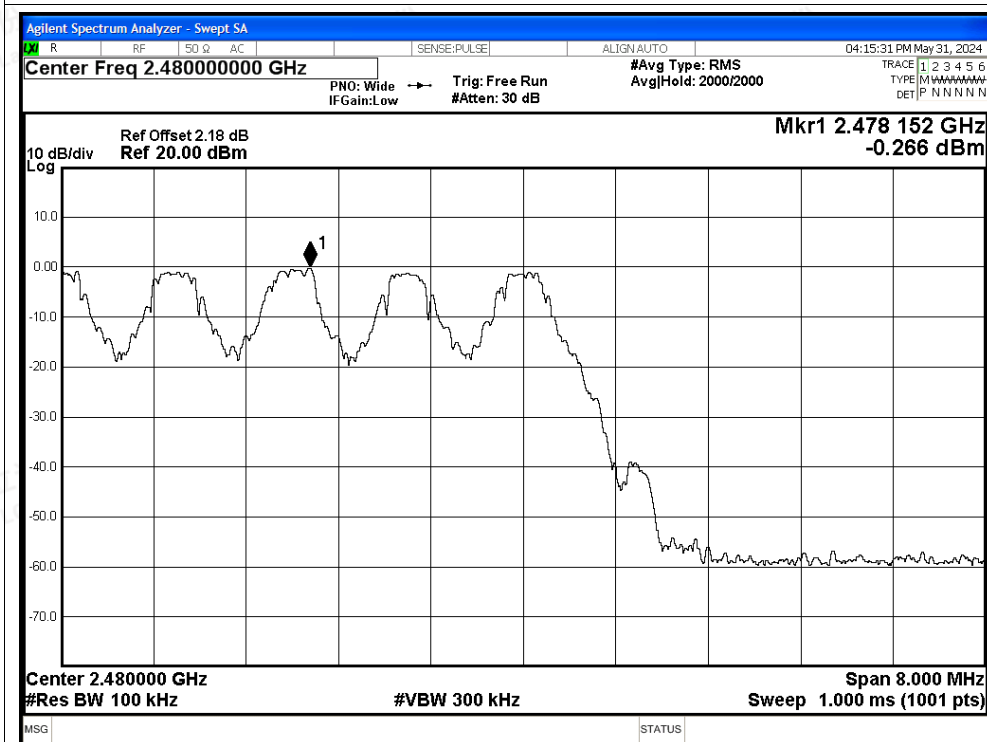


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

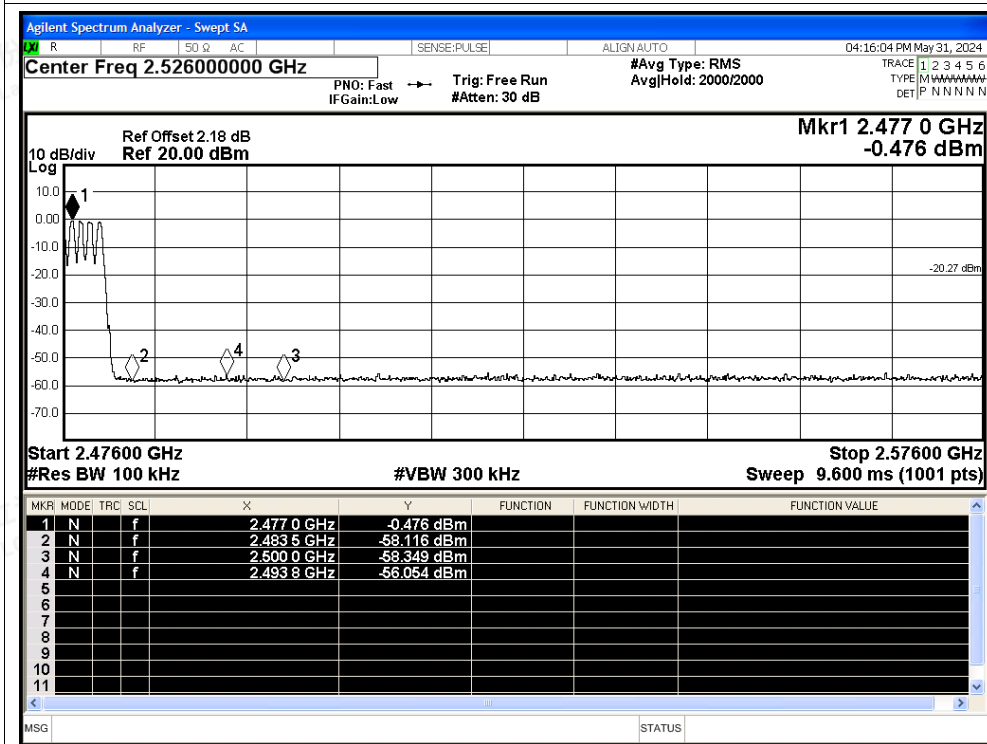


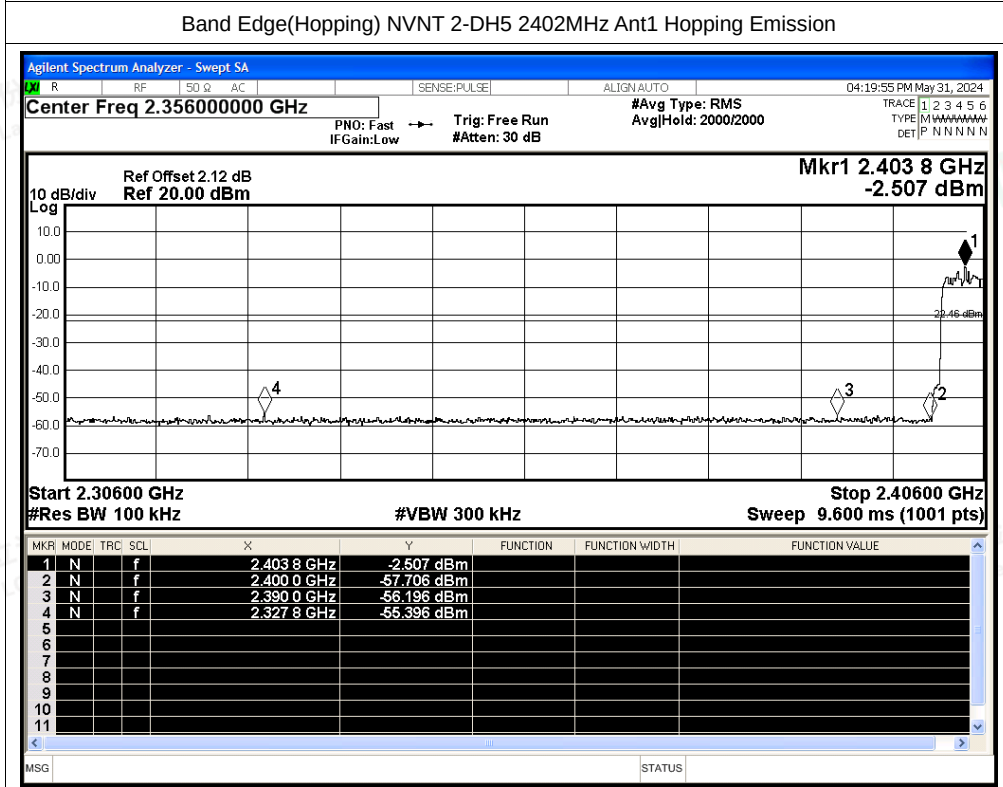
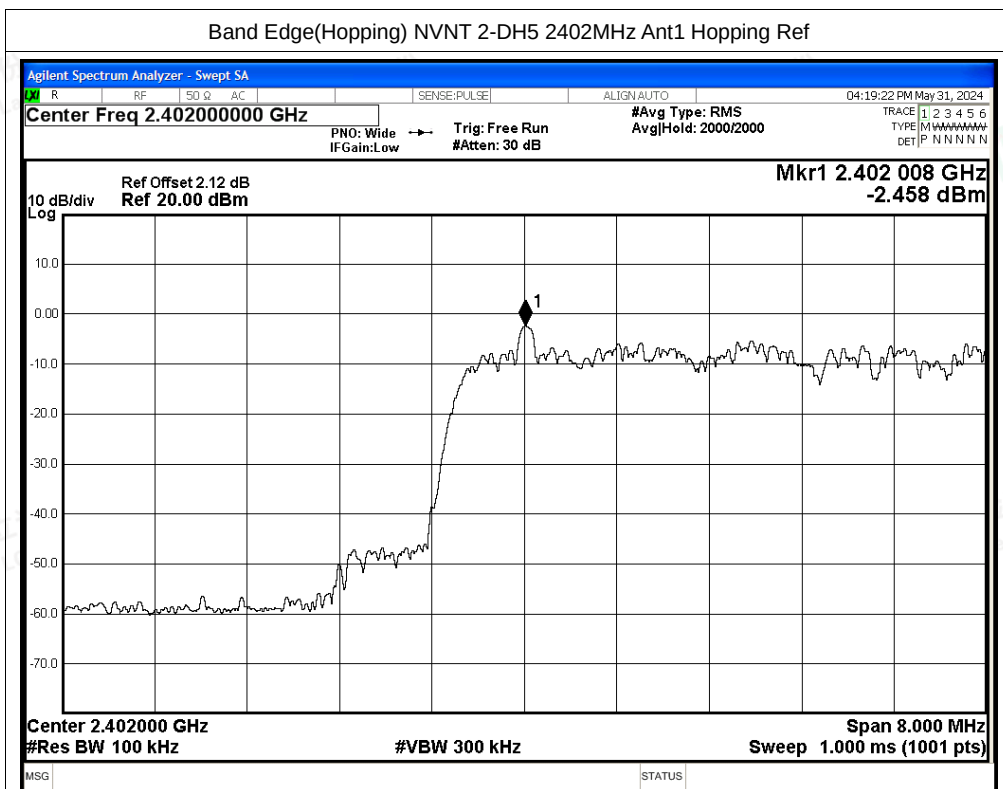


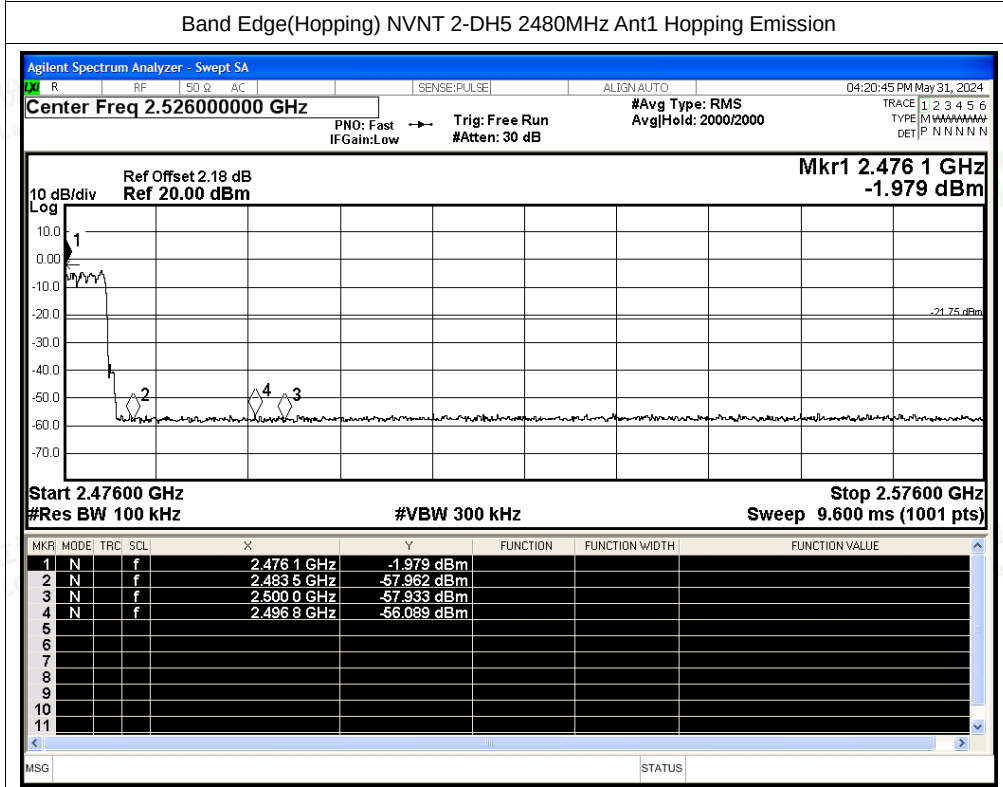
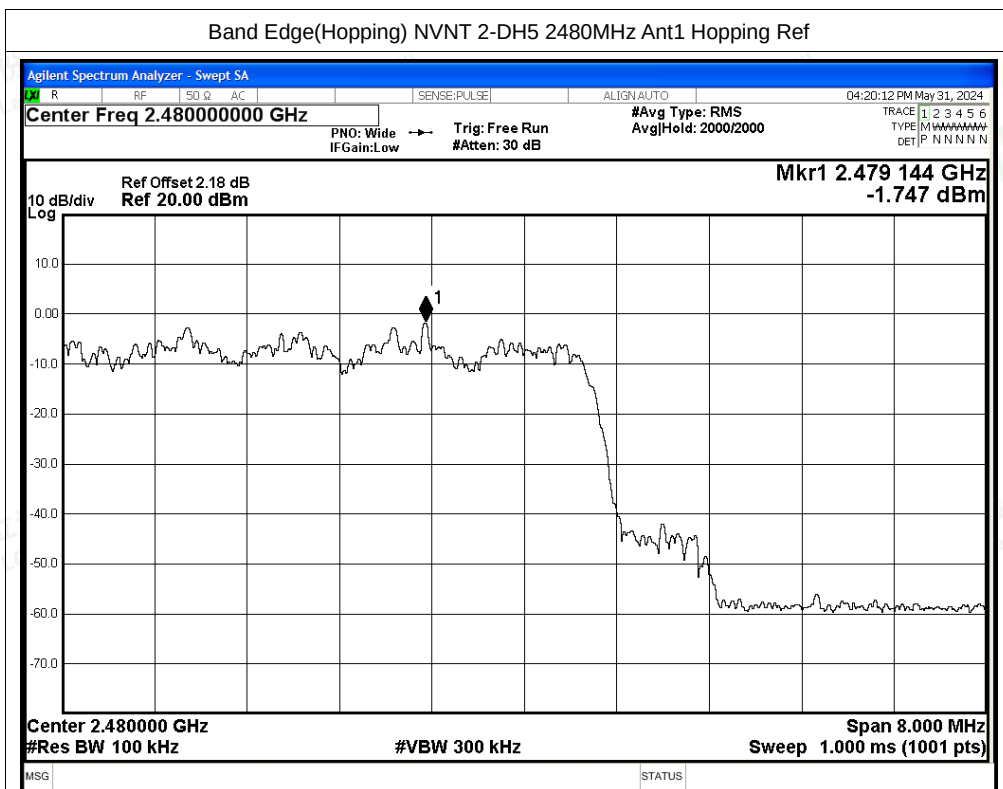
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

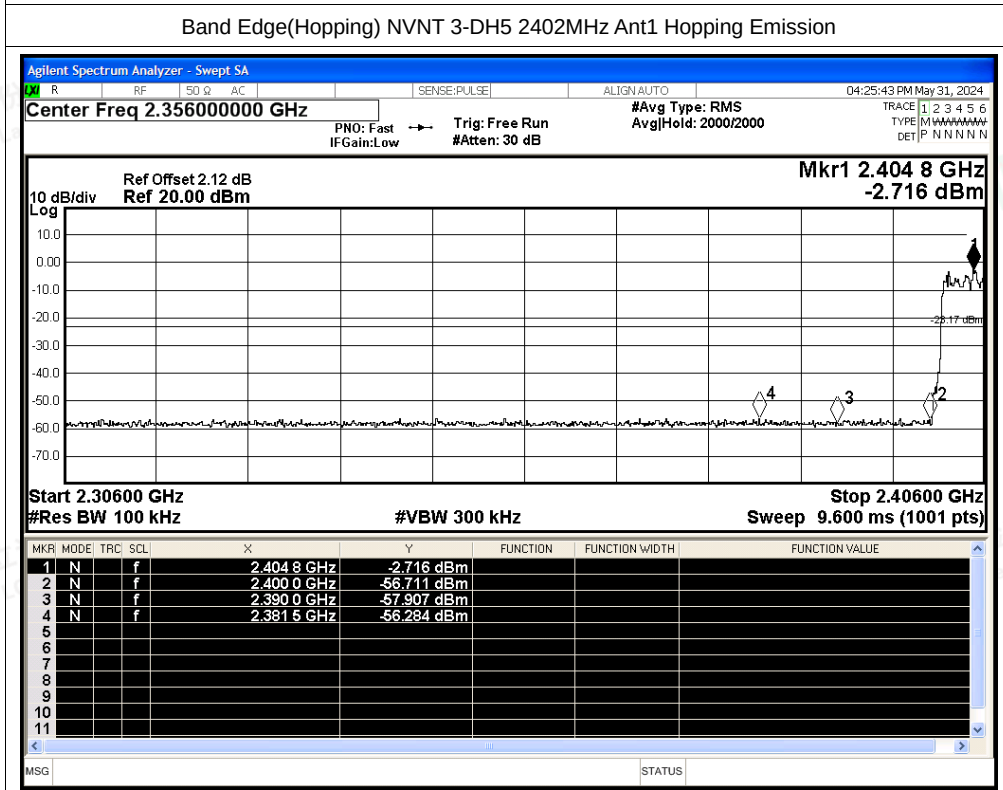
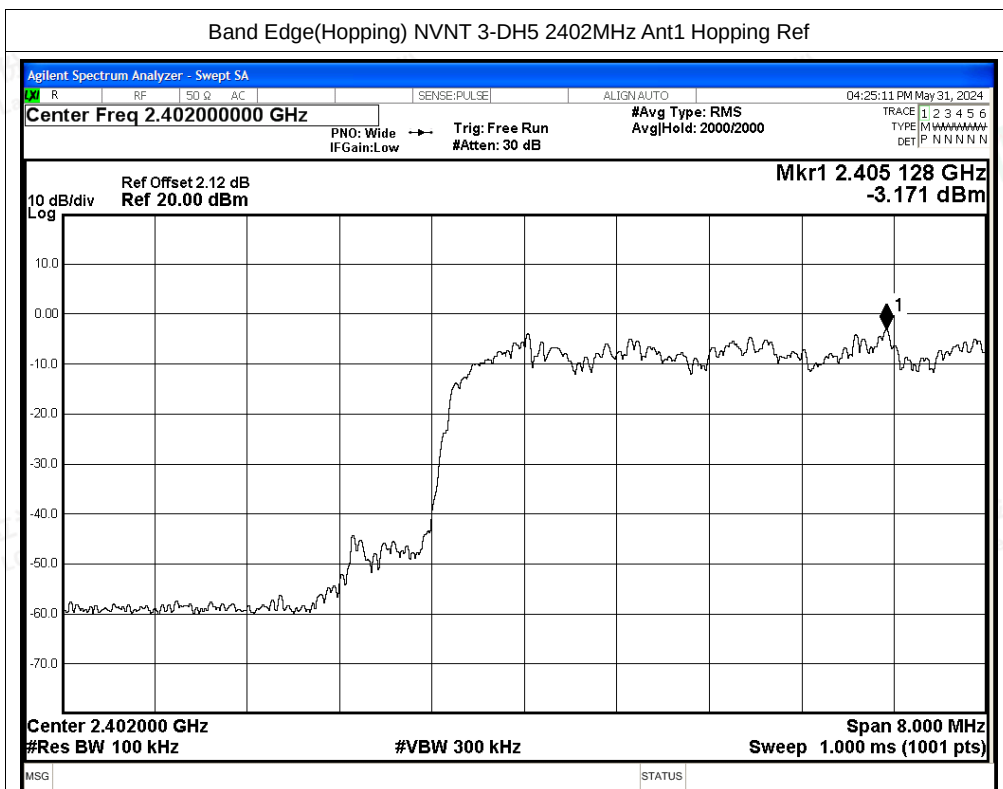


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



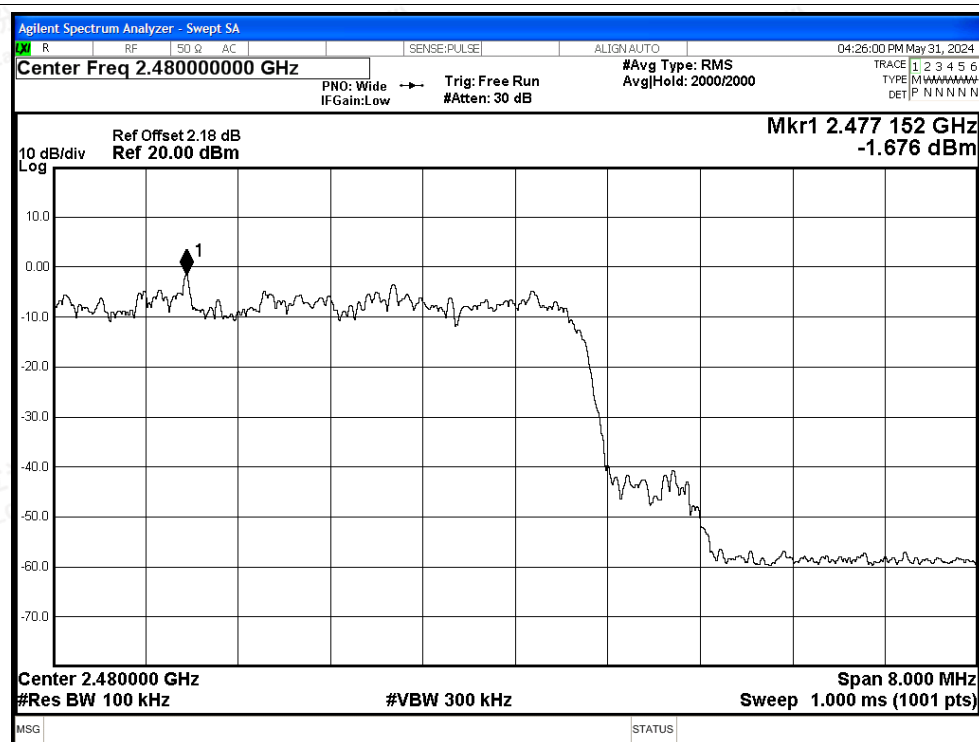




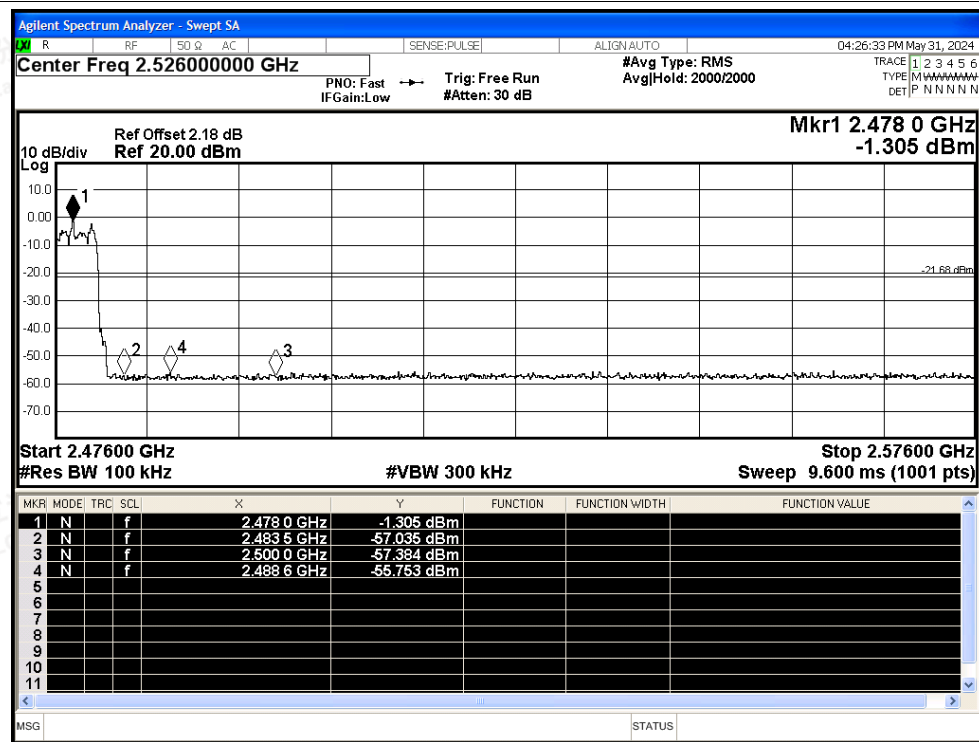




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



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	-54.9	-20	Pass
NVNT	1-DH5	2441	Ant1	-53.9	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.51	-20	Pass
NVNT	2-DH5	2402	Ant1	-55.01	-20	Pass
NVNT	2-DH5	2441	Ant1	-54.87	-20	Pass
NVNT	2-DH5	2480	Ant1	-54.08	-20	Pass
NVNT	3-DH5	2402	Ant1	-54.68	-20	Pass
NVNT	3-DH5	2441	Ant1	-52.83	-20	Pass
NVNT	3-DH5	2480	Ant1	-53.46	-20	Pass

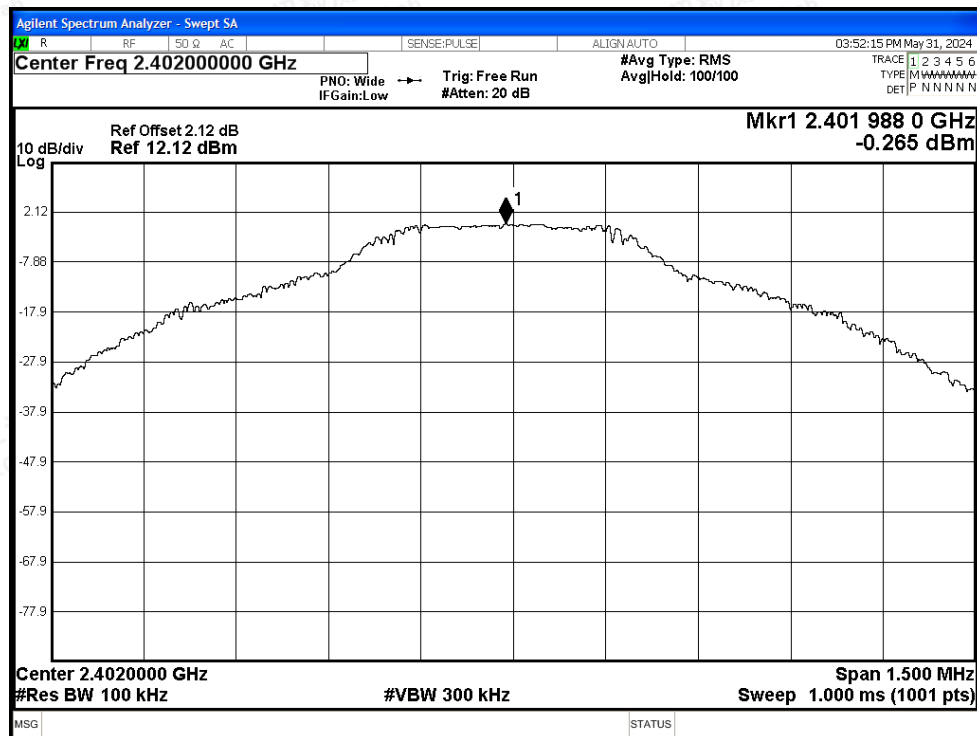


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
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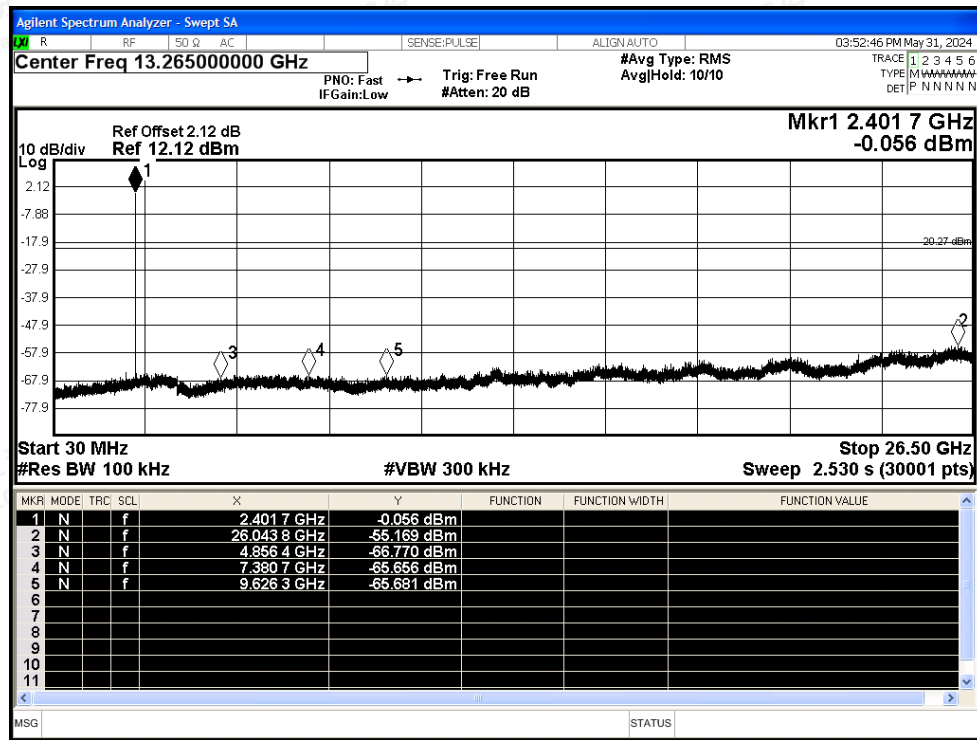


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

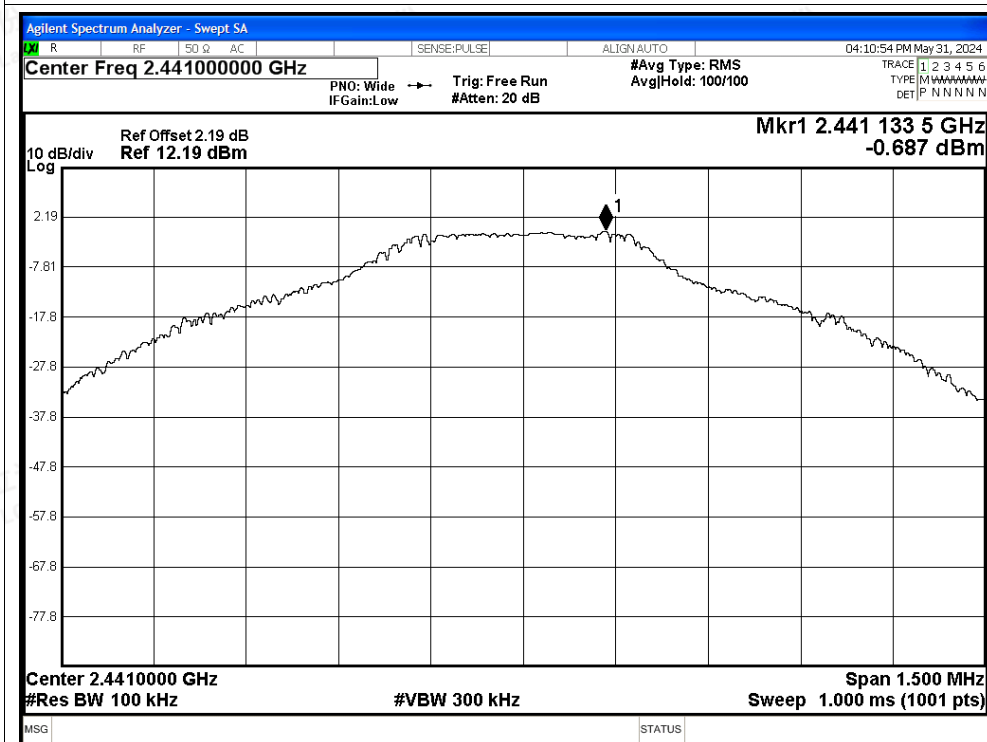


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission





Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

