



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Karaoke Machine

Test Model: KA220

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
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	1.002	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.943	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.012	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.327	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.32	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.281	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.3	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.297	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.305	N/A	Pass





Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



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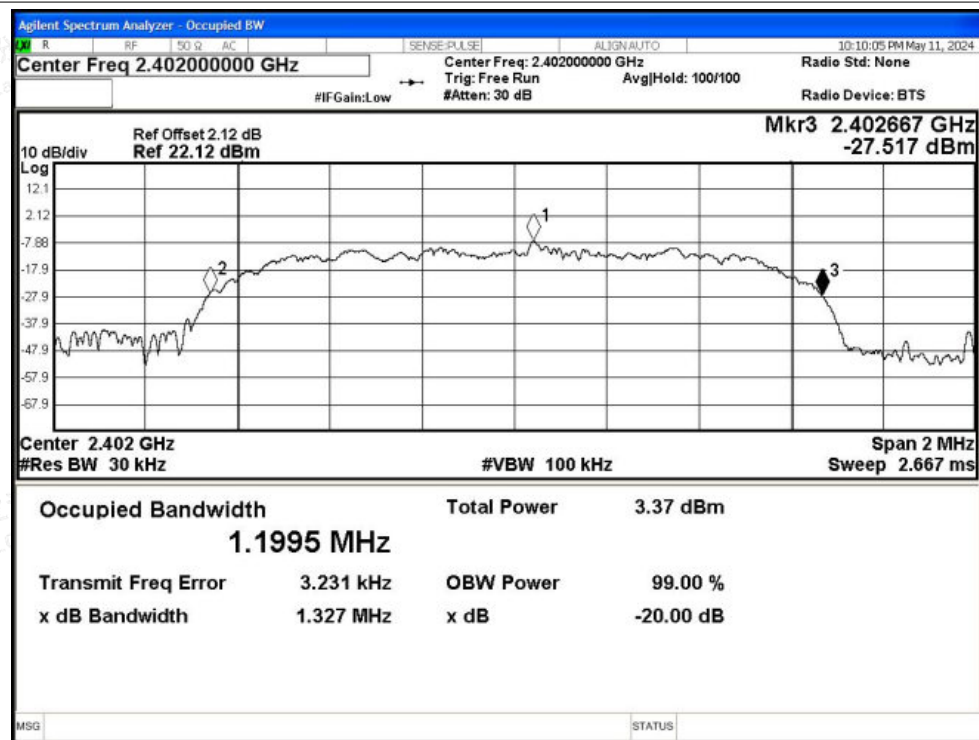
Scan code to check authenticity



-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



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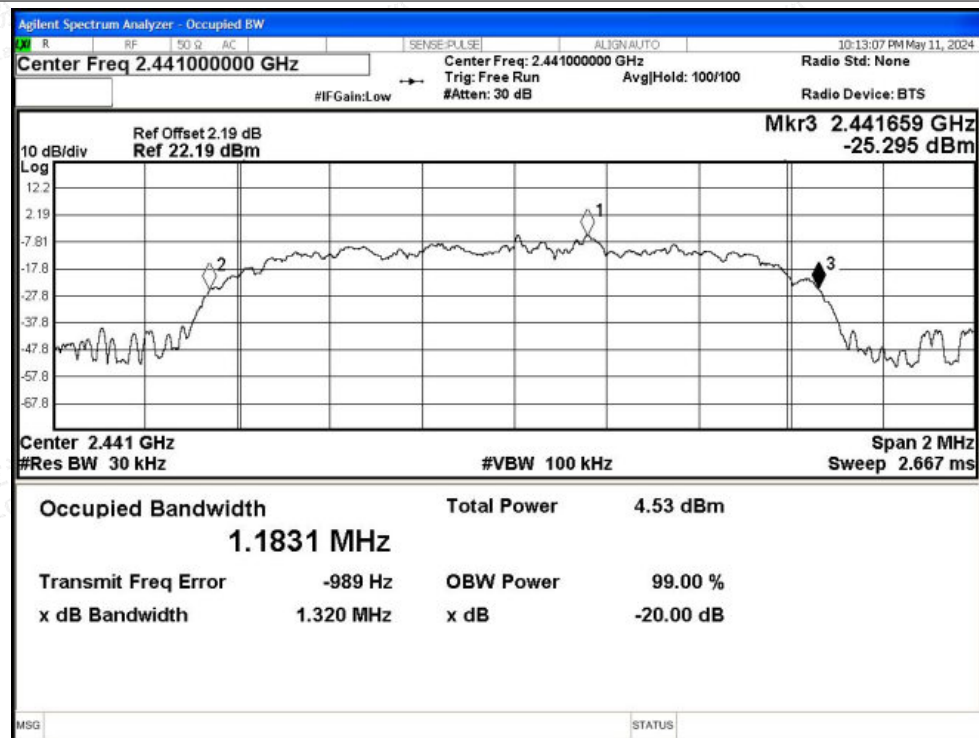
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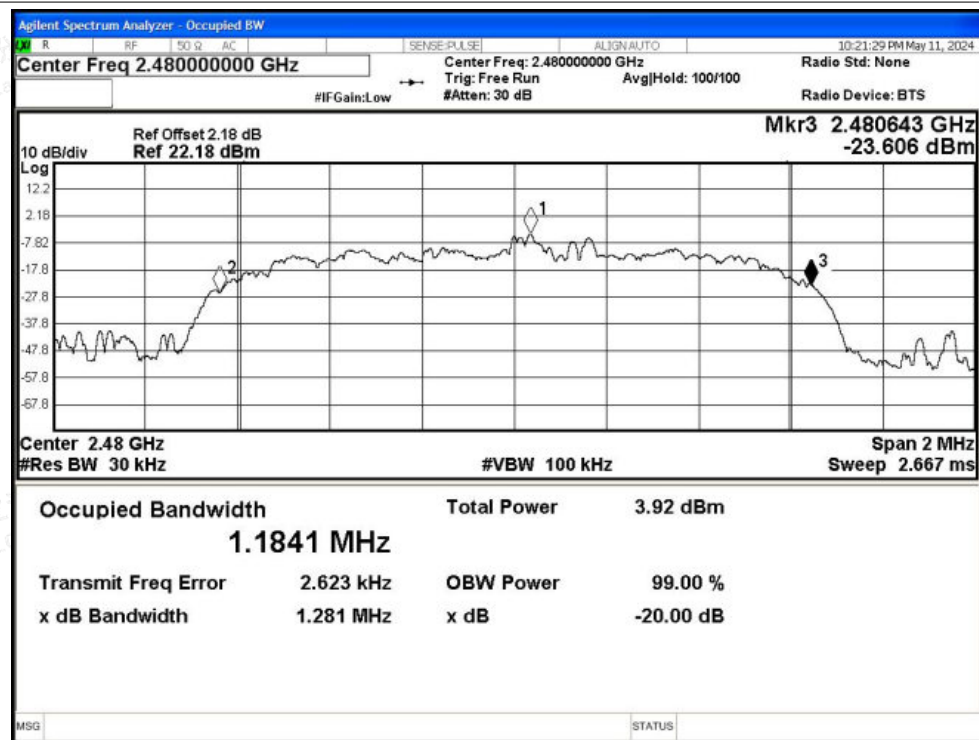
Scan code to check authenticity



-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



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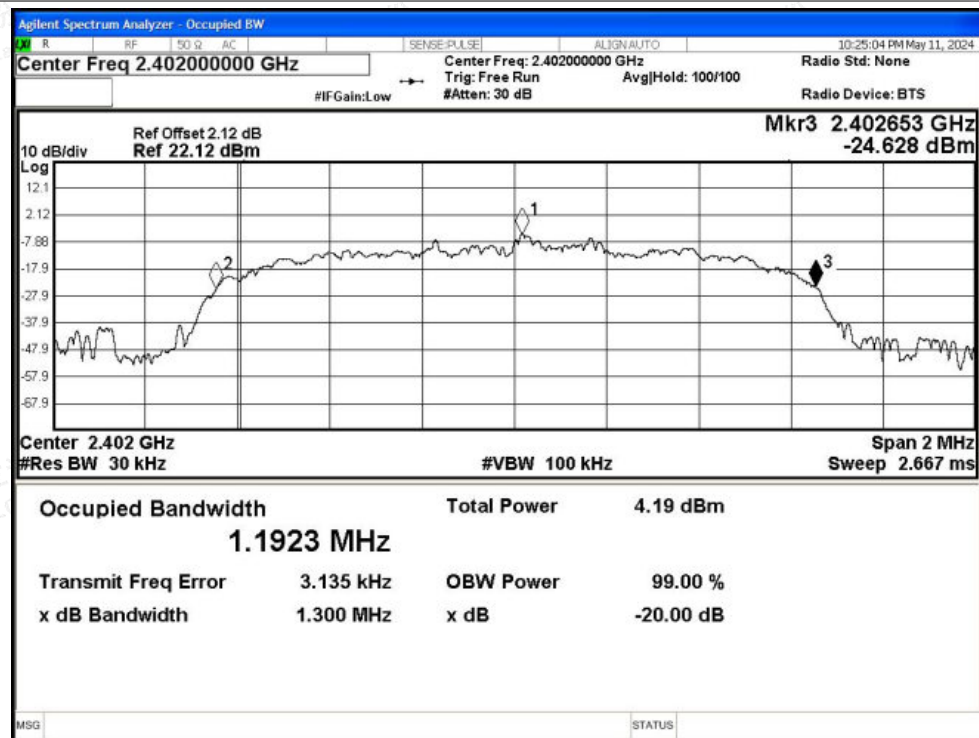
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

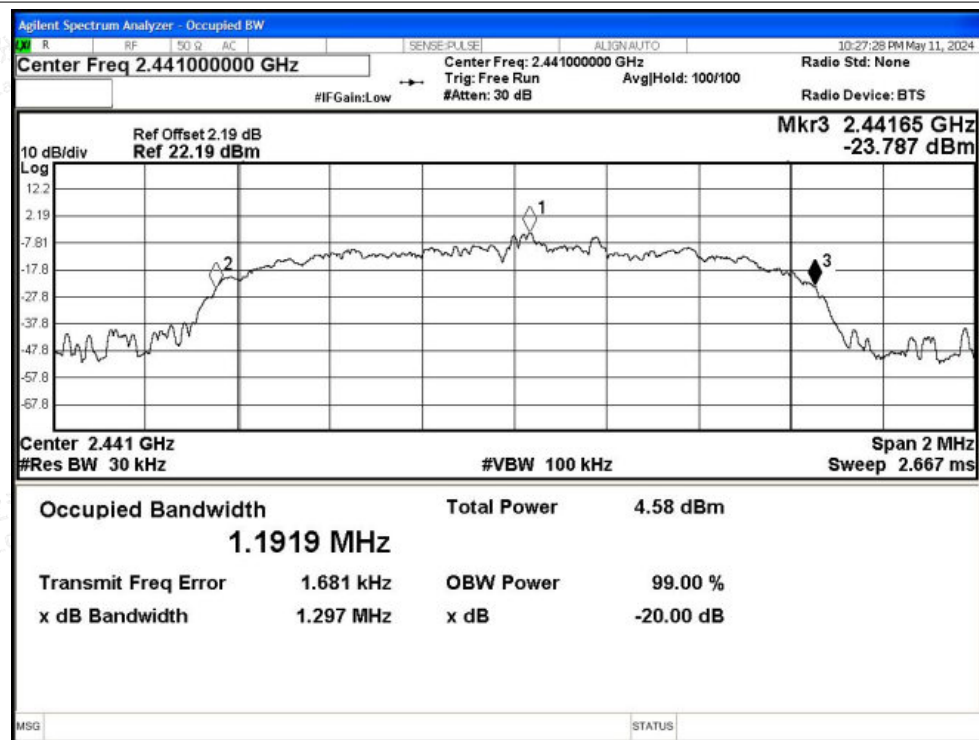
Scan code to check authenticity



-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1

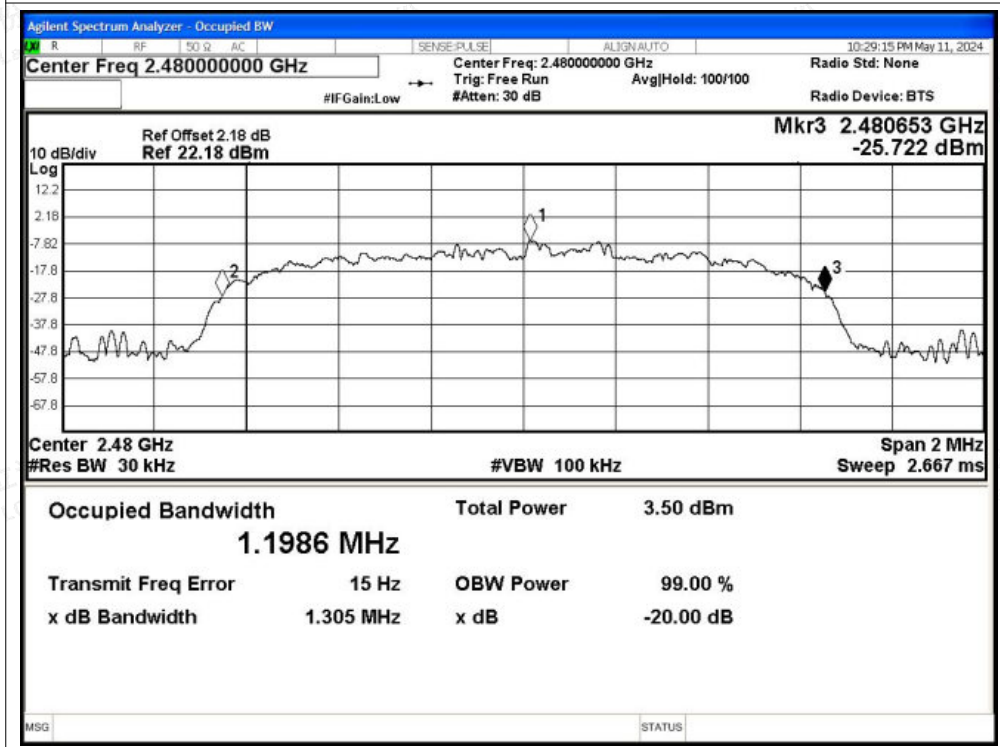


-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1





-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1





A.2 Maximum Conducted Output Power

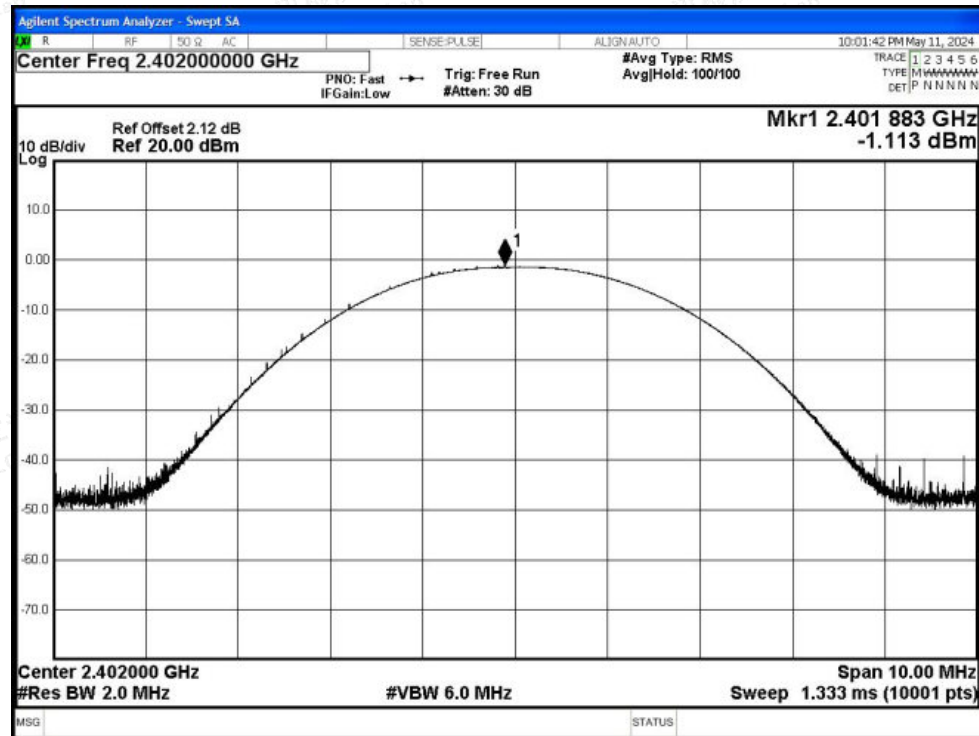
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-1.11	21	Pass
NVNT	1-DH5	2441	Ant1	0.45	21	Pass
NVNT	1-DH5	2480	Ant1	-0.26	21	Pass
NVNT	2-DH5	2402	Ant1	-0.36	21	Pass
NVNT	2-DH5	2441	Ant1	0.34	21	Pass
NVNT	2-DH5	2480	Ant1	-0.7	21	Pass
NVNT	3-DH5	2402	Ant1	0.1	21	Pass
NVNT	3-DH5	2441	Ant1	0.41	21	Pass
NVNT	3-DH5	2480	Ant1	-0.44	21	Pass



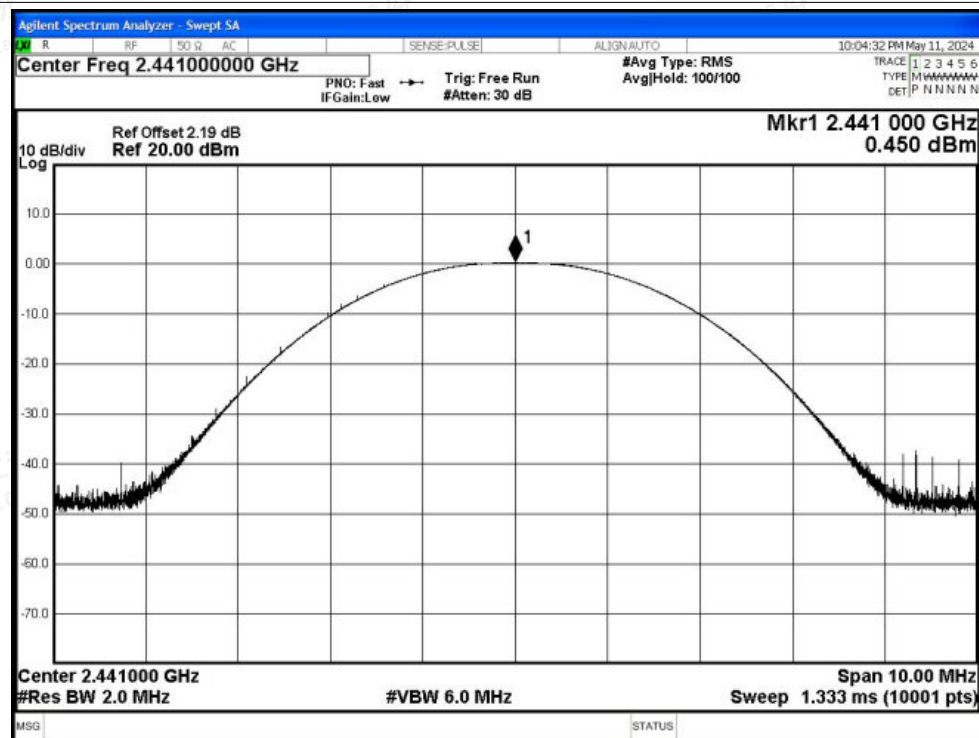


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

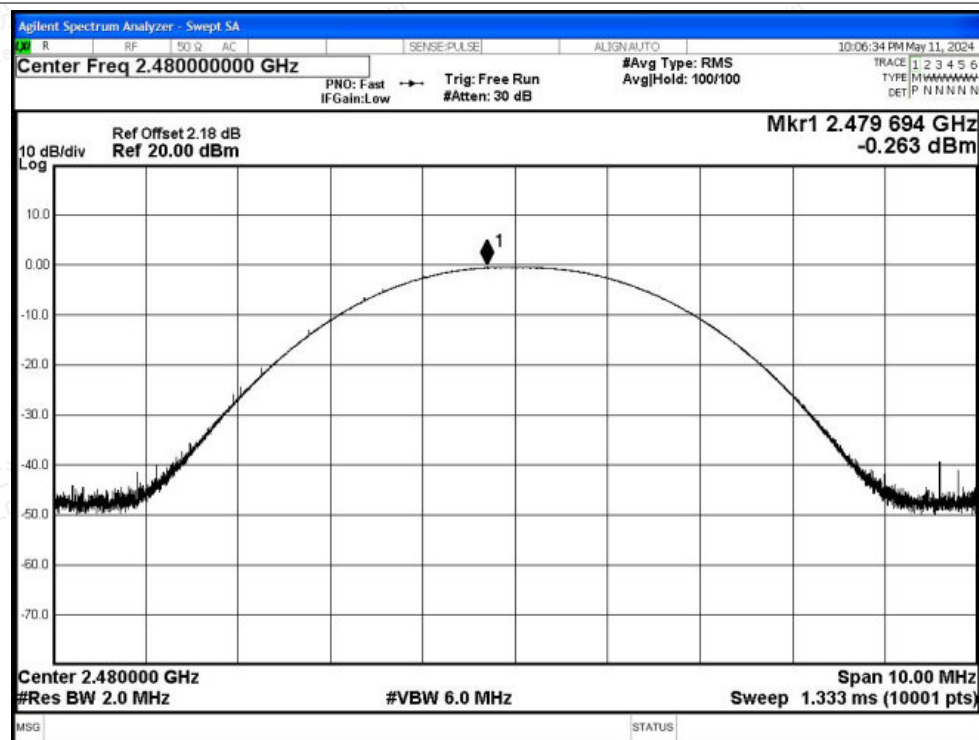


Power NVNT 1-DH5 2441MHz Ant1

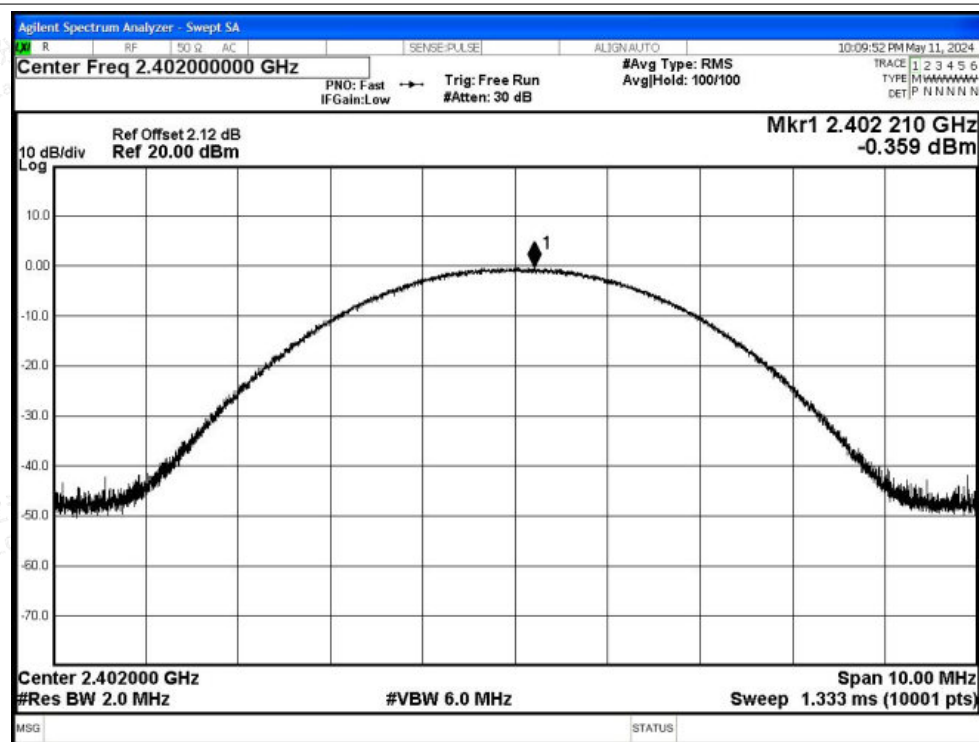




Power NVNT 1-DH5 2480MHz Ant1

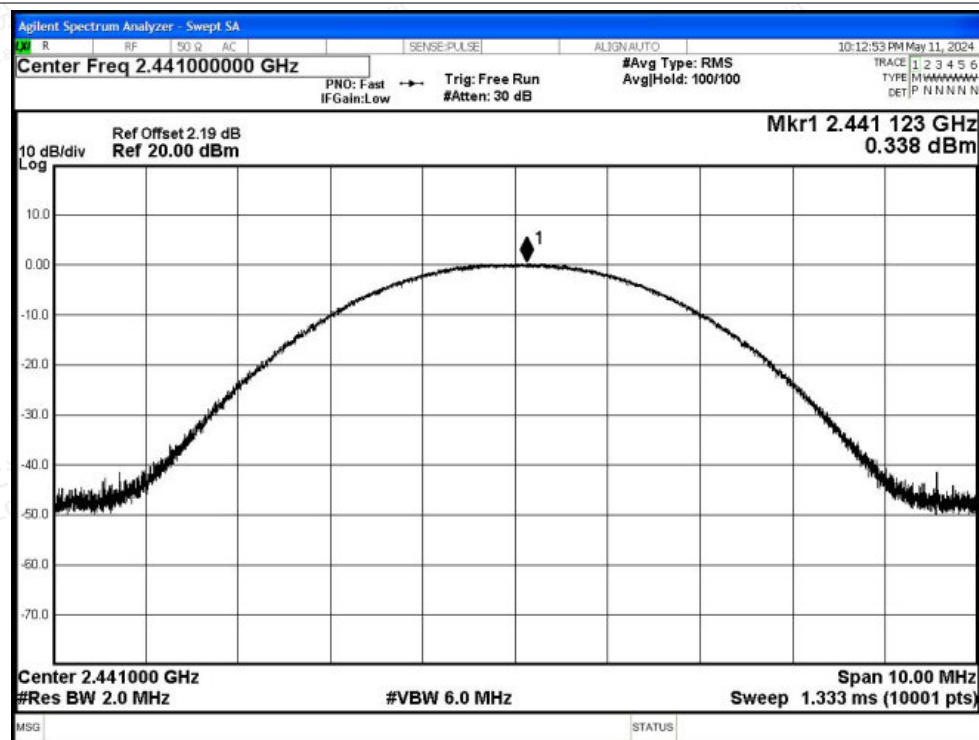


Power NVNT 2-DH5 2402MHz Ant1

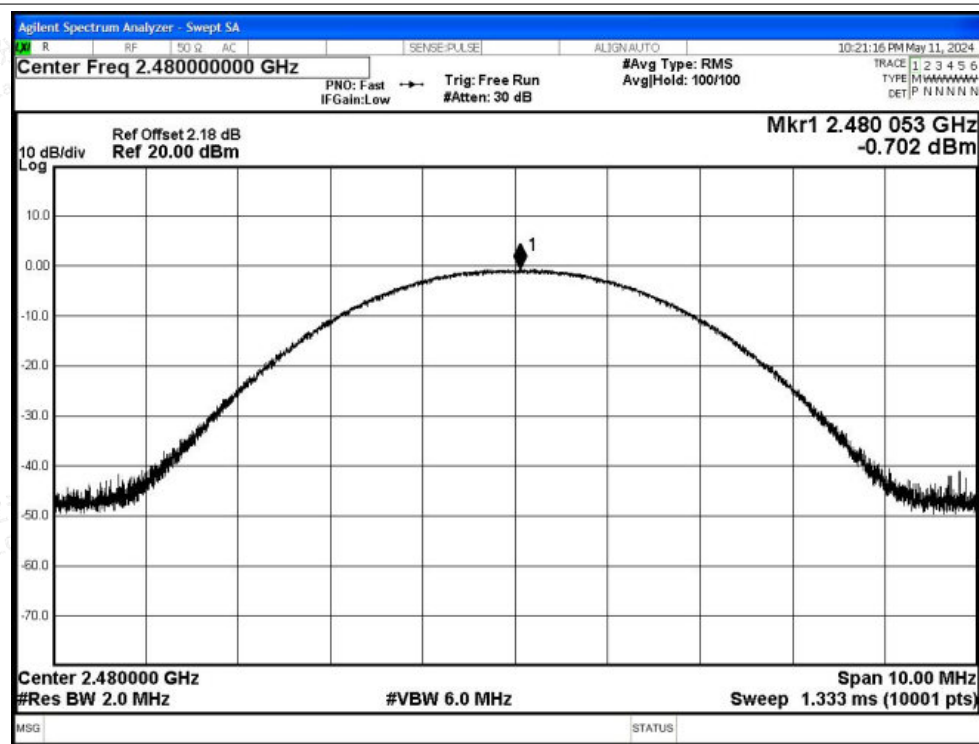




Power NVNT 2-DH5 2441MHz Ant1

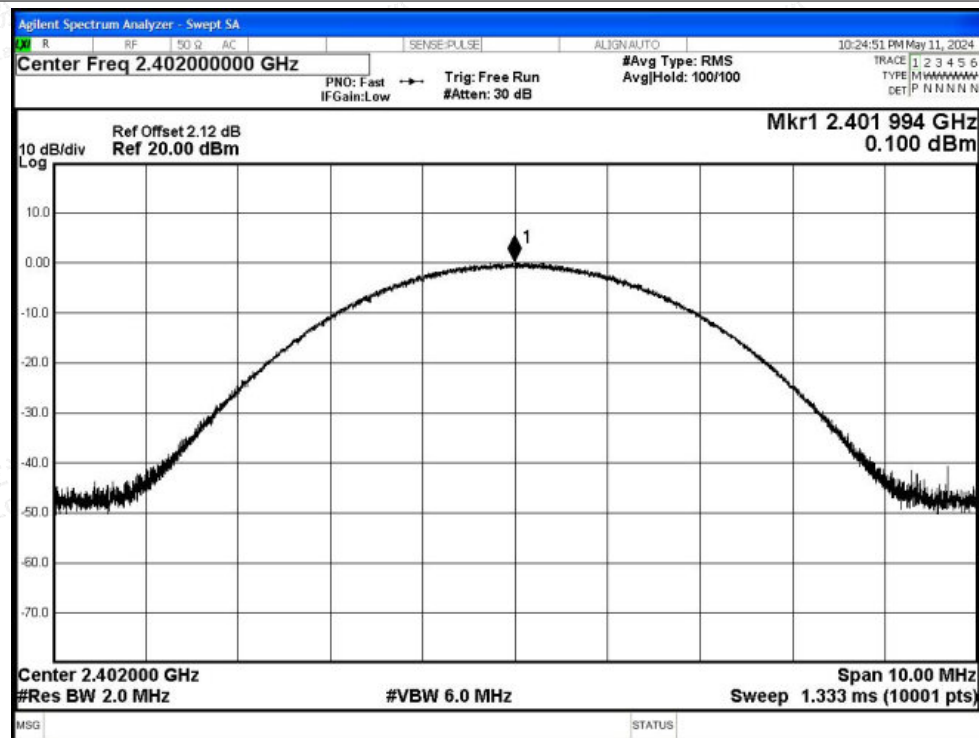


Power NVNT 2-DH5 2480MHz Ant1

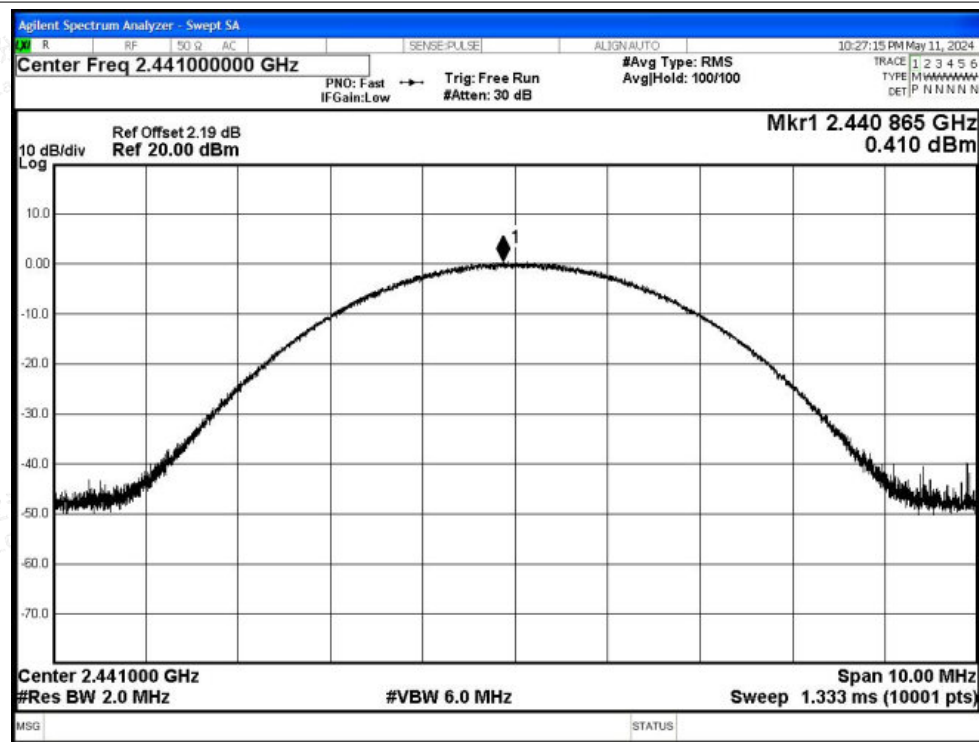


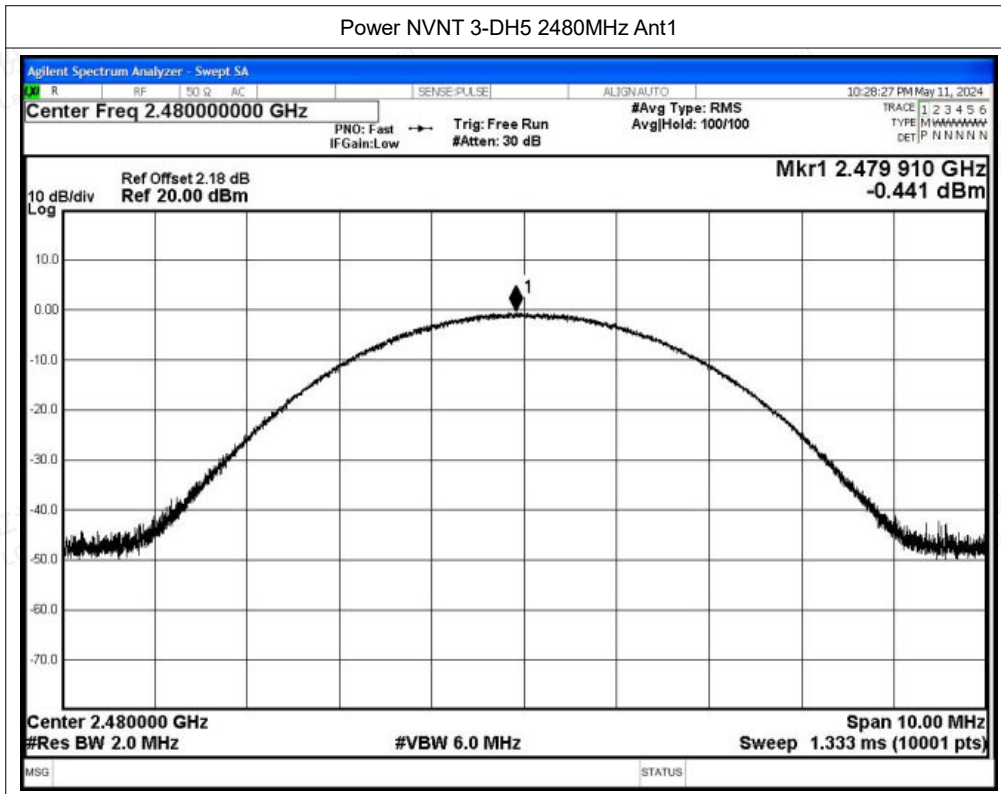


Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1







A.3 Carrier Frequencies Separation

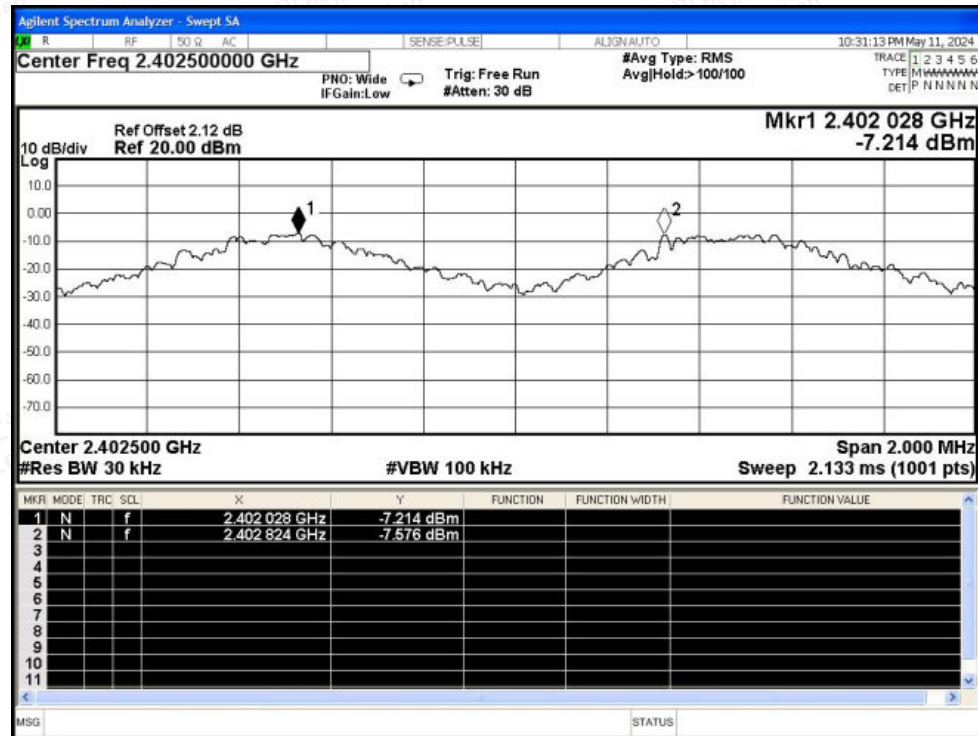
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.028	2402.824	0.796	0.675	Pass
NVNT	2-DH5	Ant1	2402.022	2403.172	1.15	0.885	Pass
NVNT	3-DH5	Ant1	2402.018	2403.036	1.018	0.870	Pass



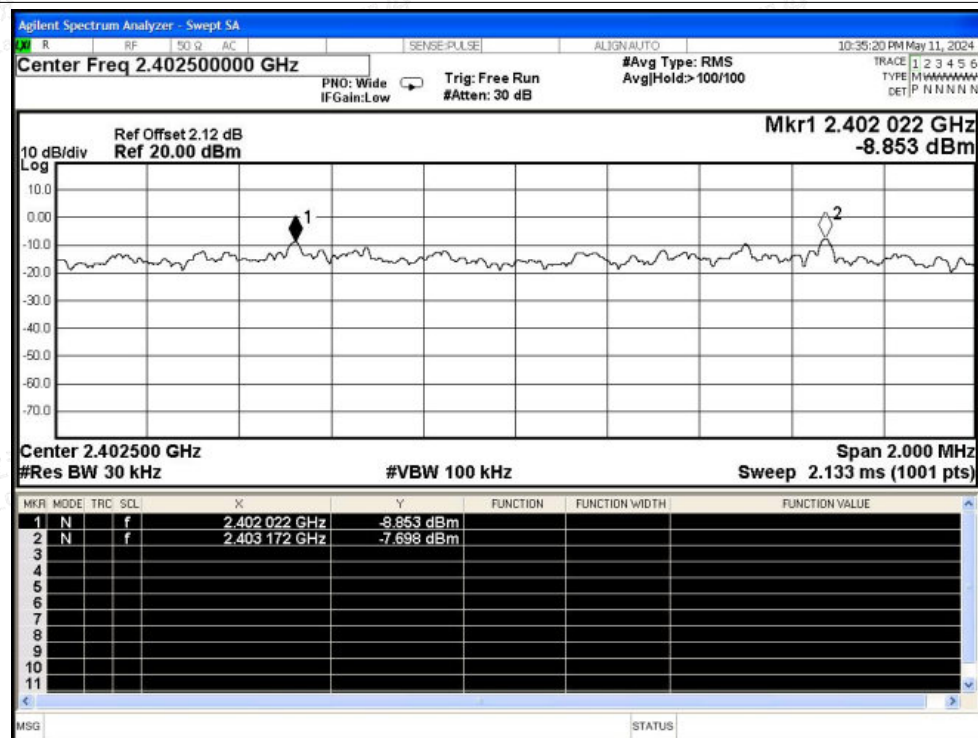


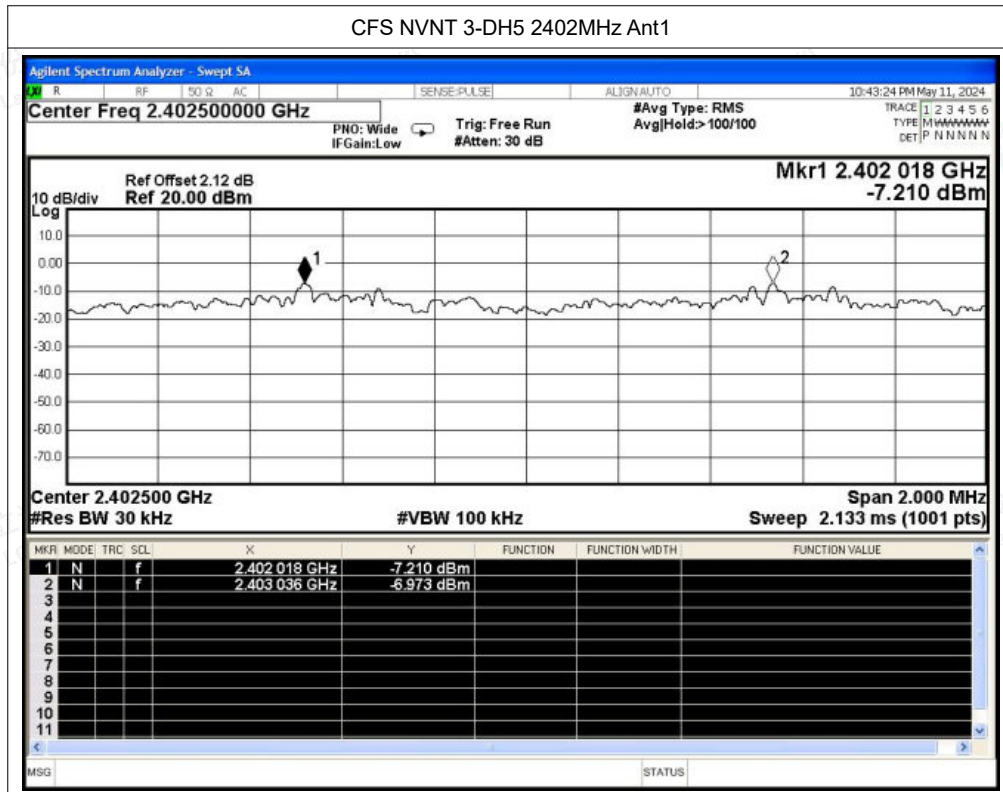
Test Graphs

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	0.499	54.89	110	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	292.698	101	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.897	278.112	96	31600	400	Pass

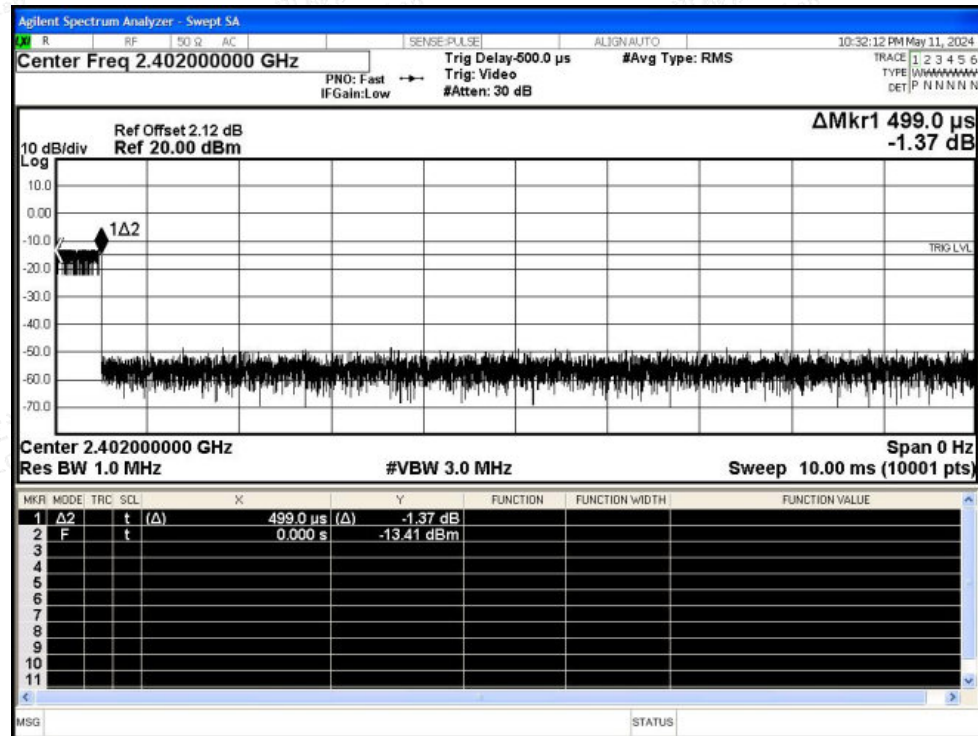


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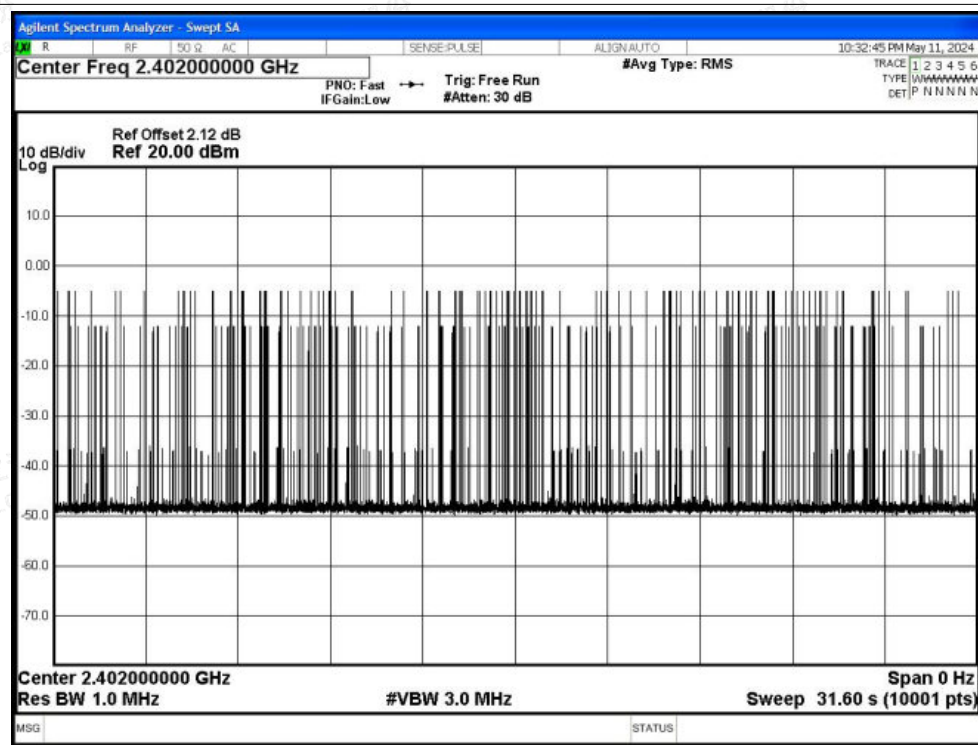


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

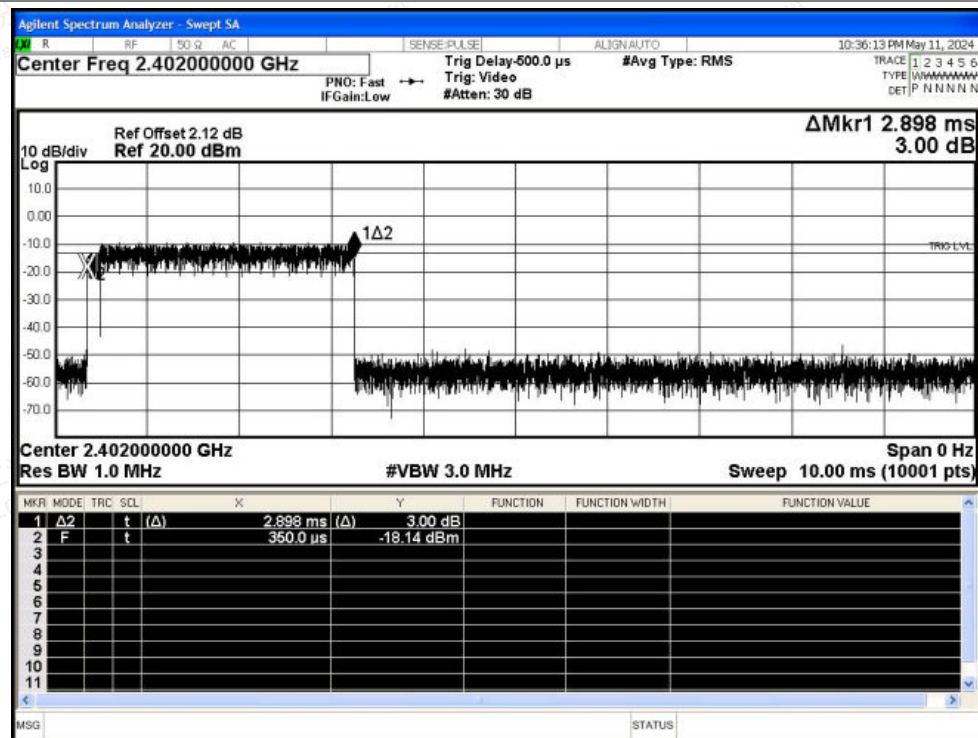


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

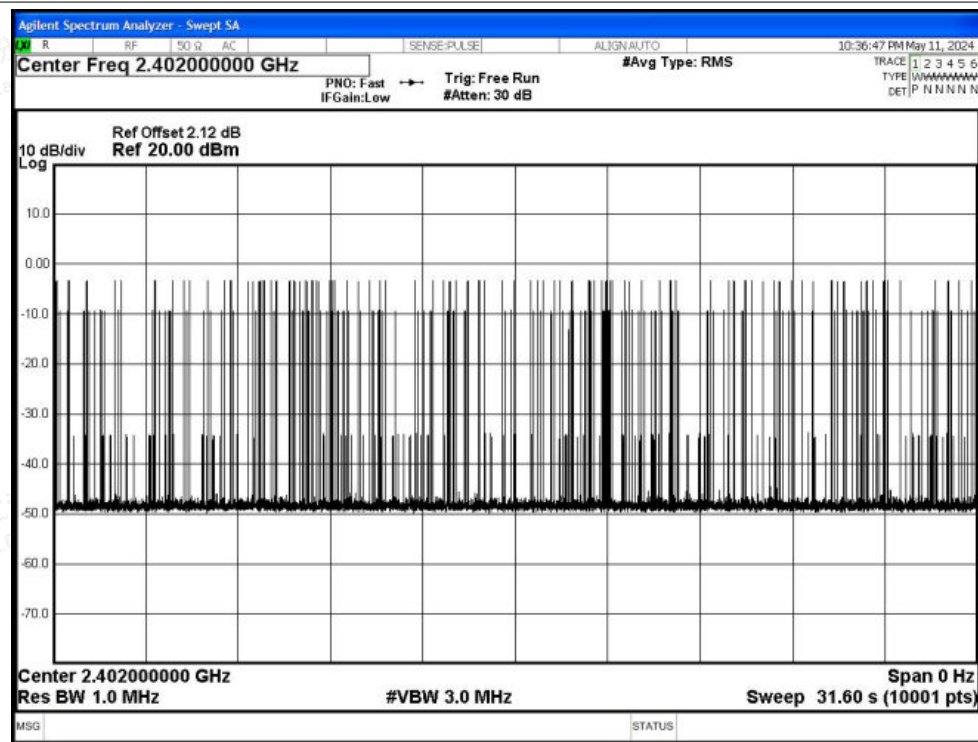




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

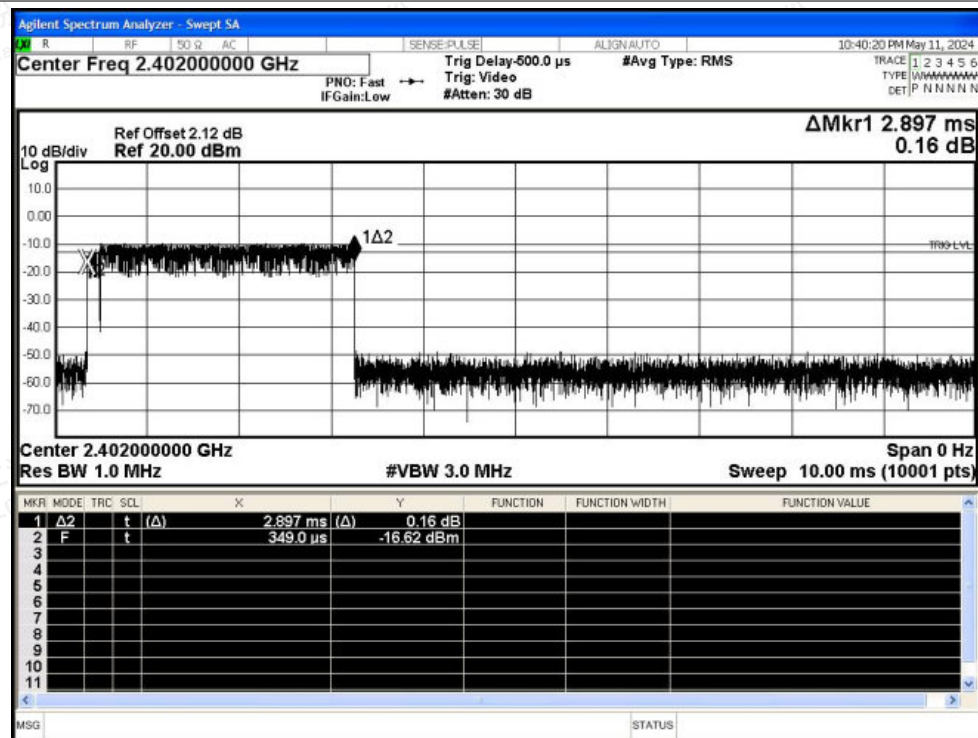


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

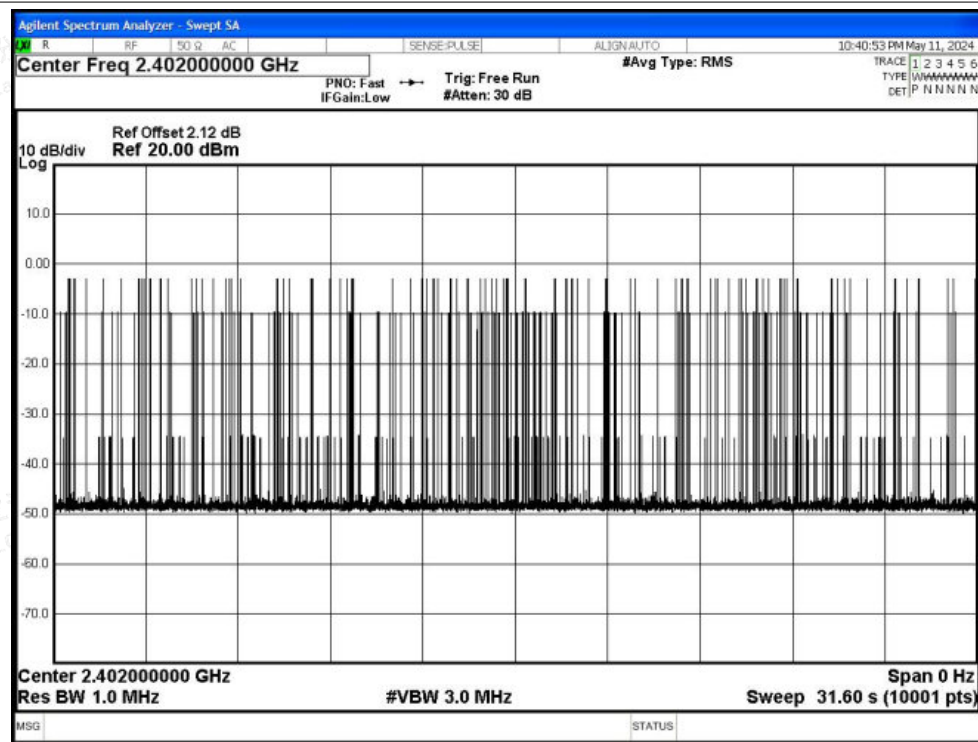




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



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

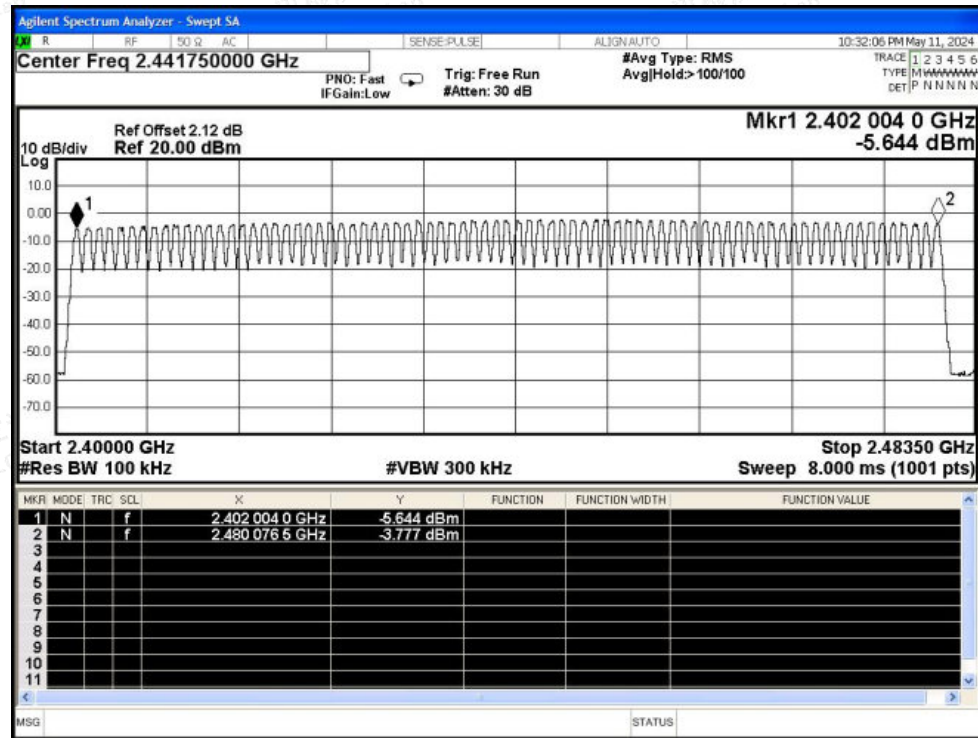


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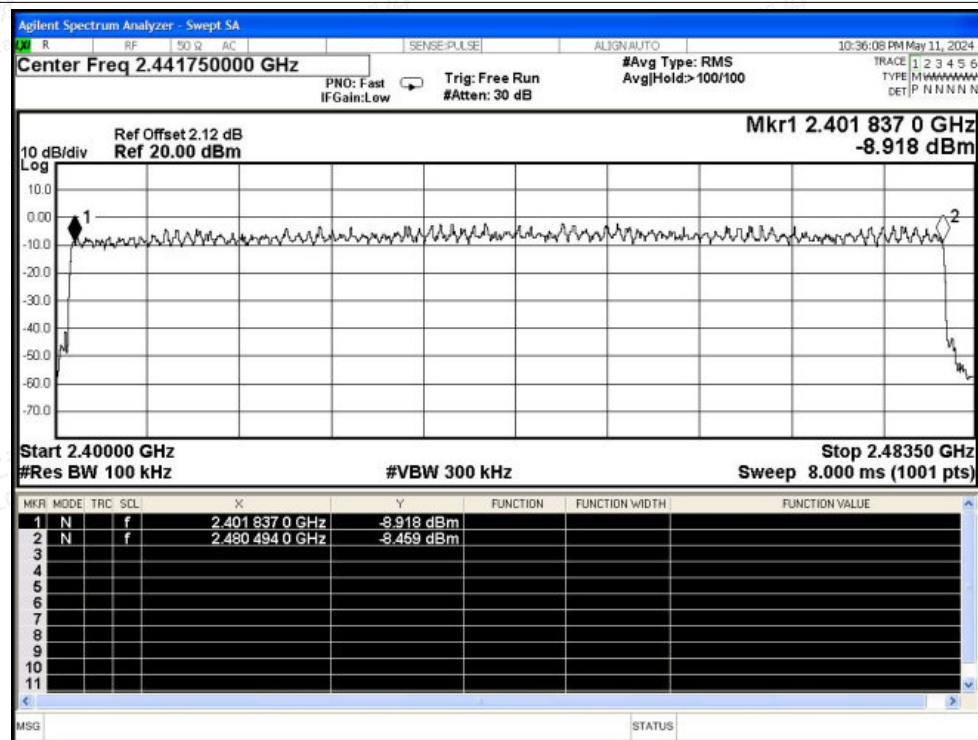


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

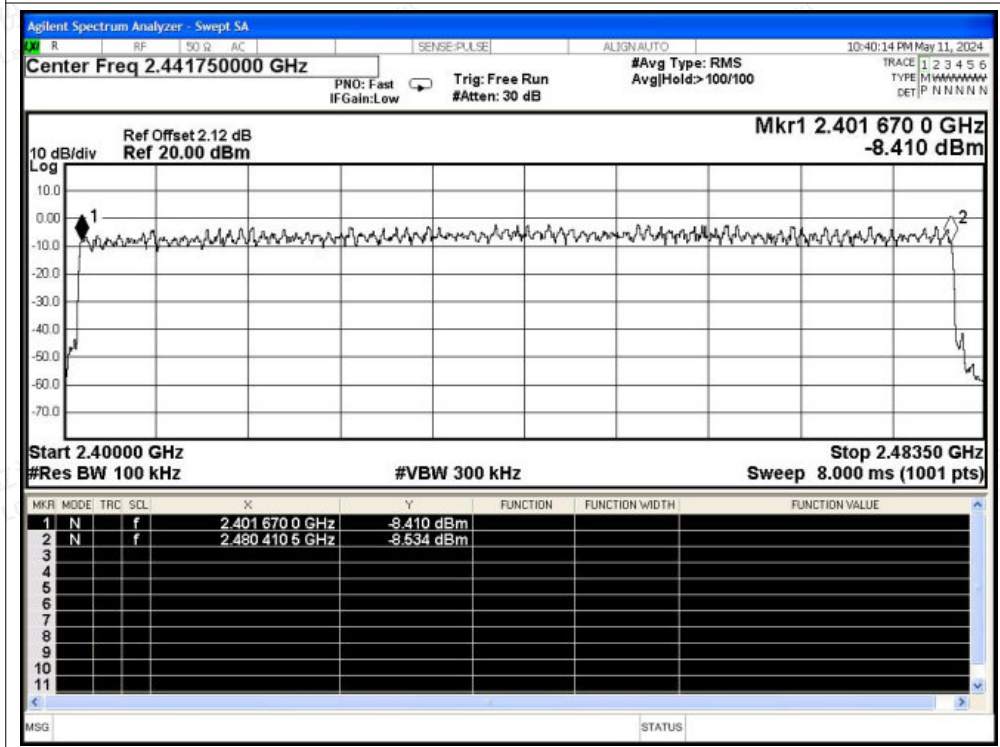


Hopping No. NVNT 2-DH5 2402MHz Ant1





Hopping No. NVNT 3-DH5 2402MHz Ant1





A.6 Band Edge

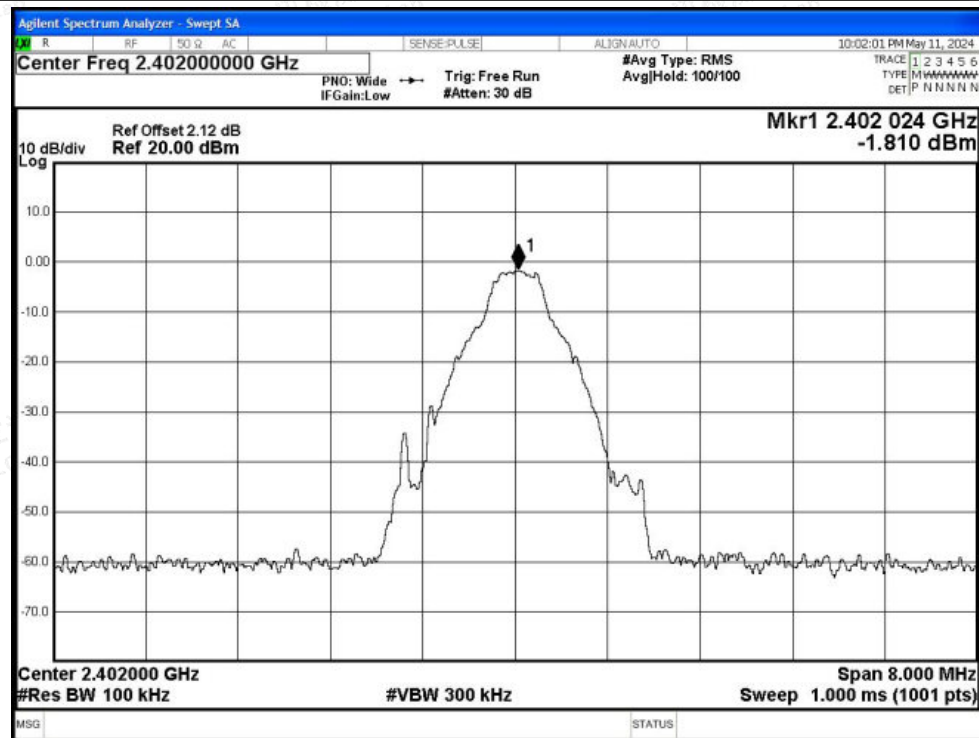
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-54.93	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-55.93	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-49.57	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-53.4	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-52.82	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-53.4	-20	Pass



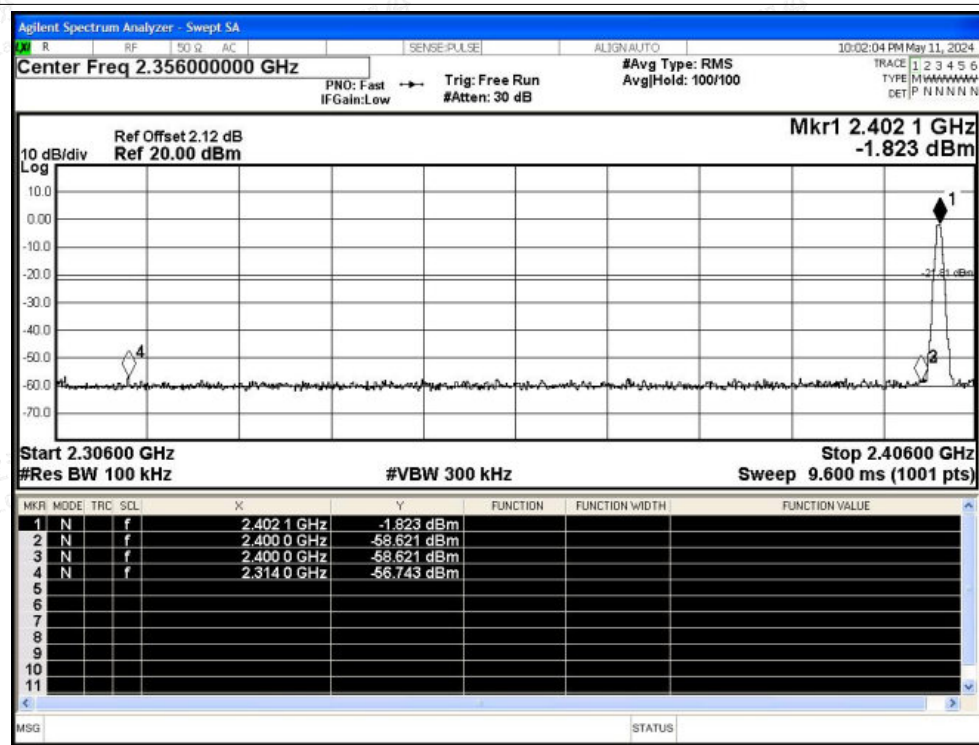


Test Graphs

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



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



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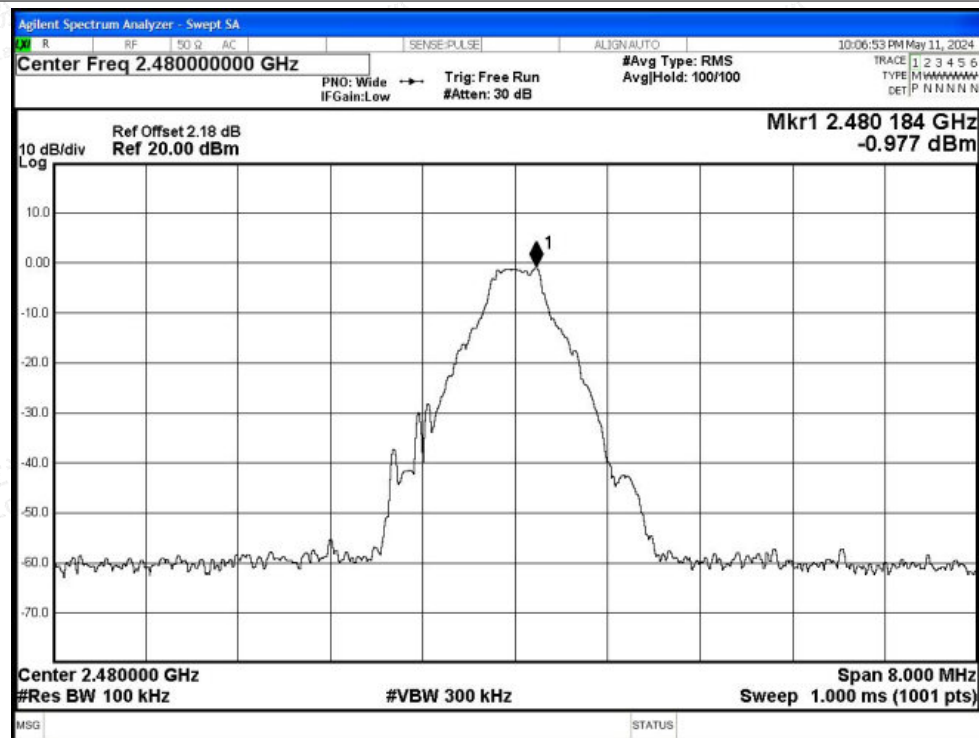
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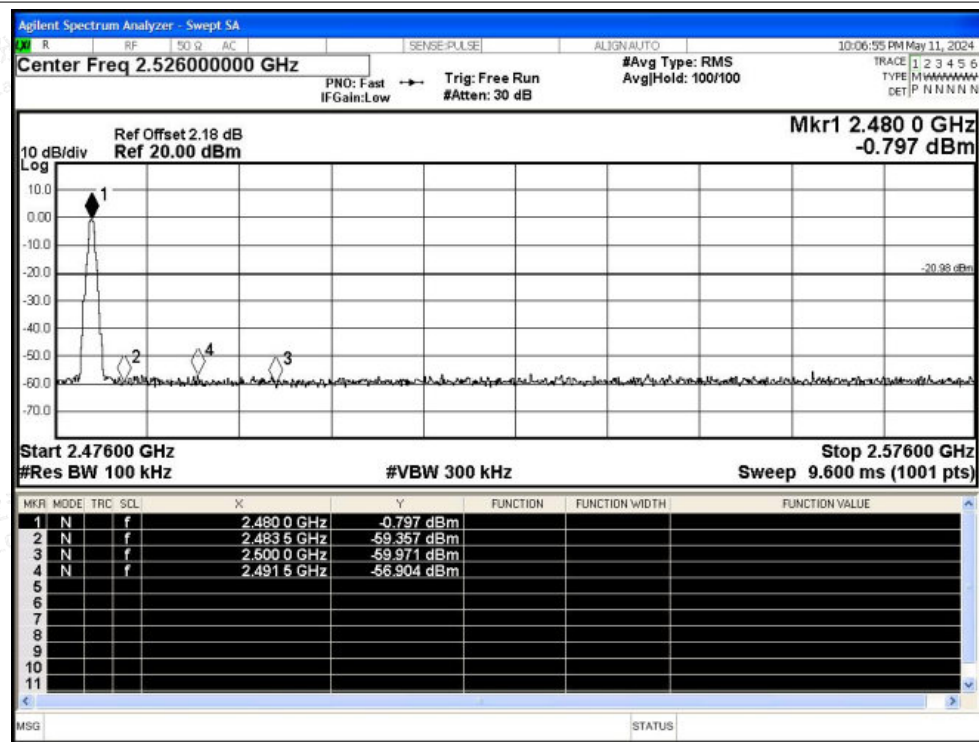
Scan code to check authenticity



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



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



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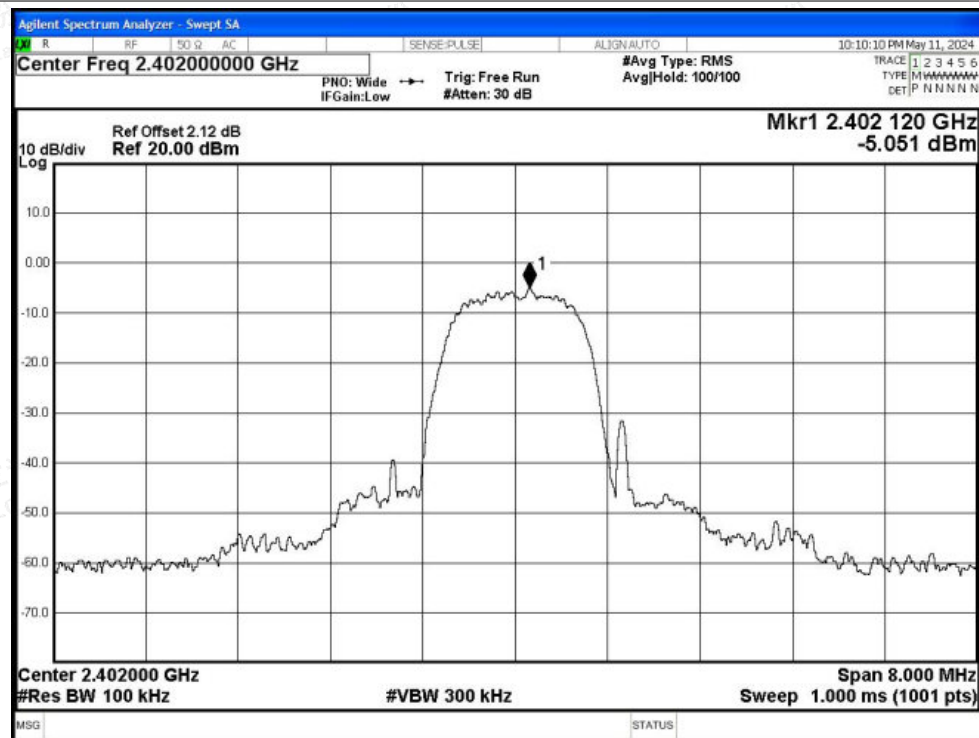
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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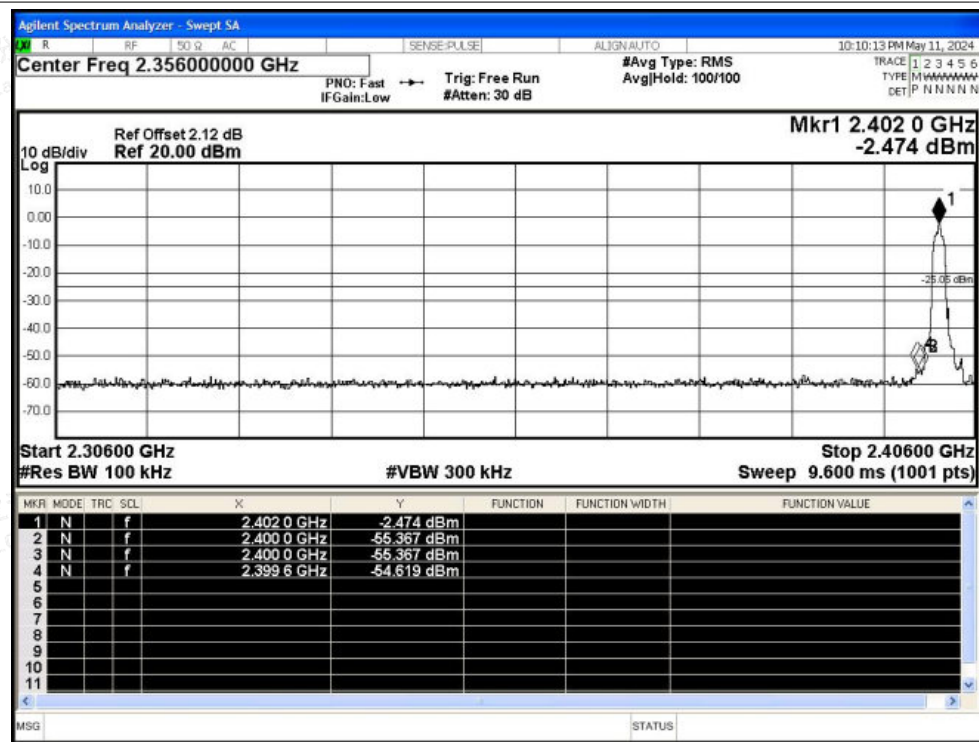
Scan code to check authenticity



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



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



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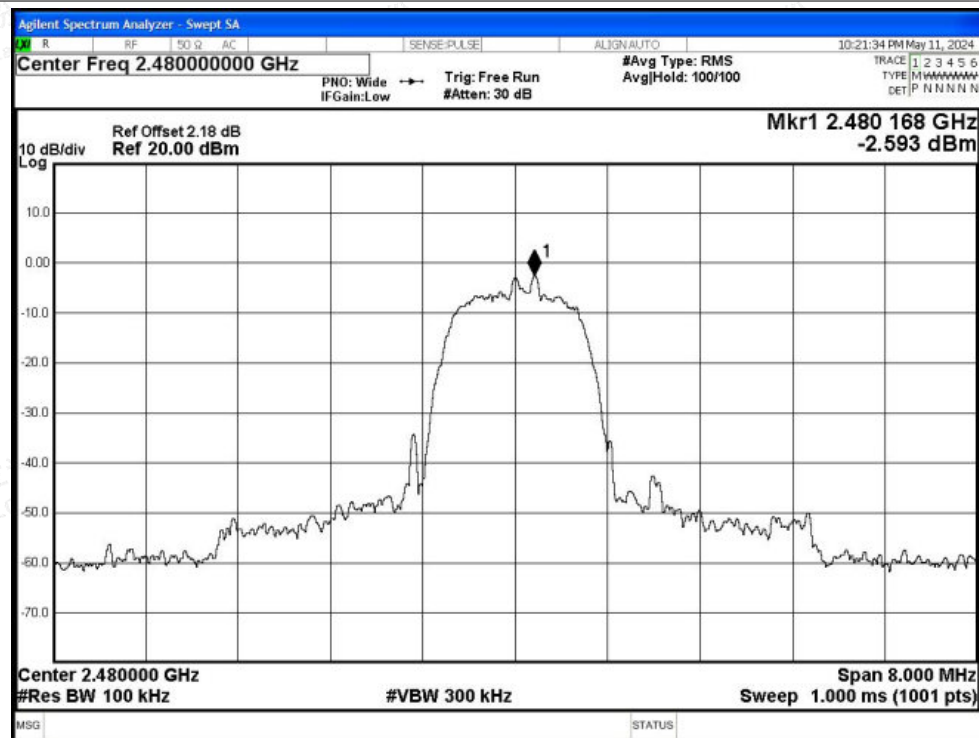
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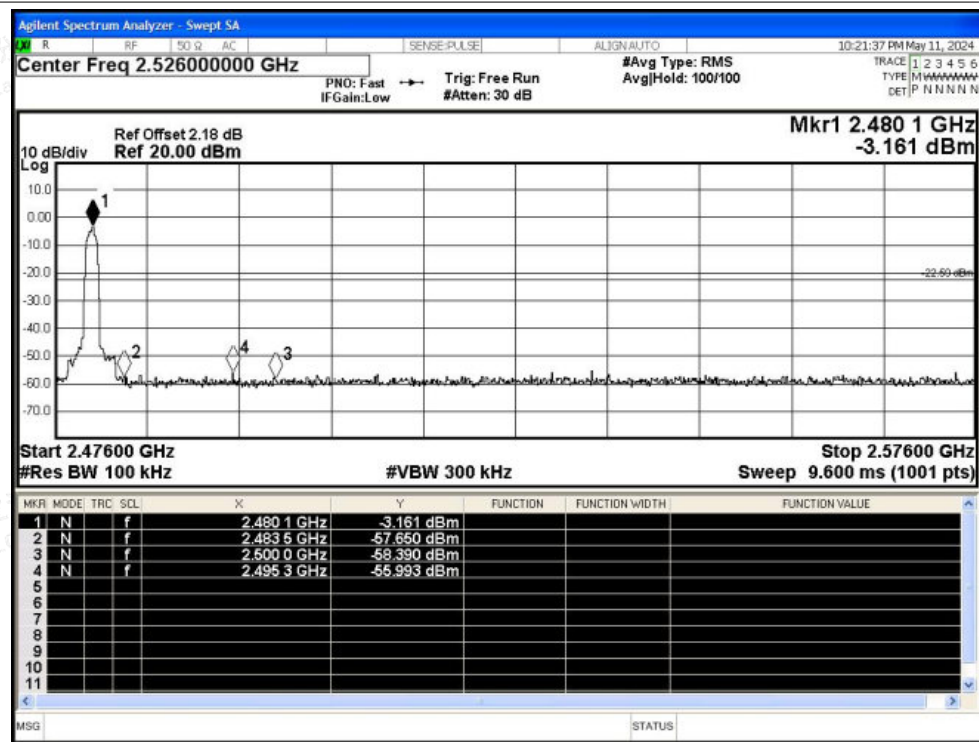
Scan code to check authenticity



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

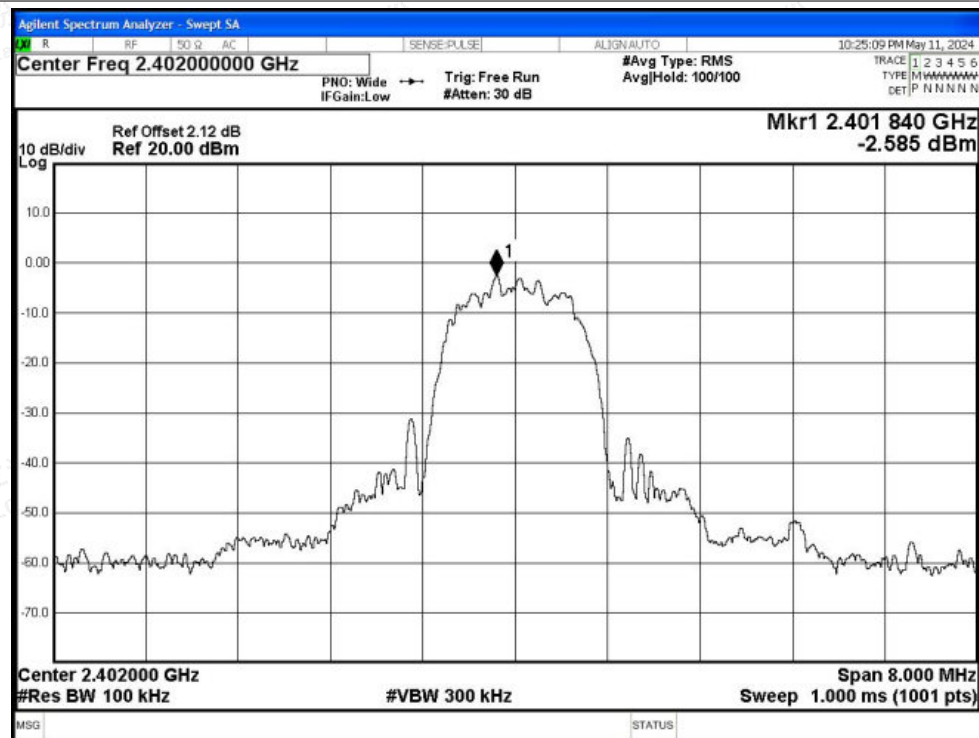


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

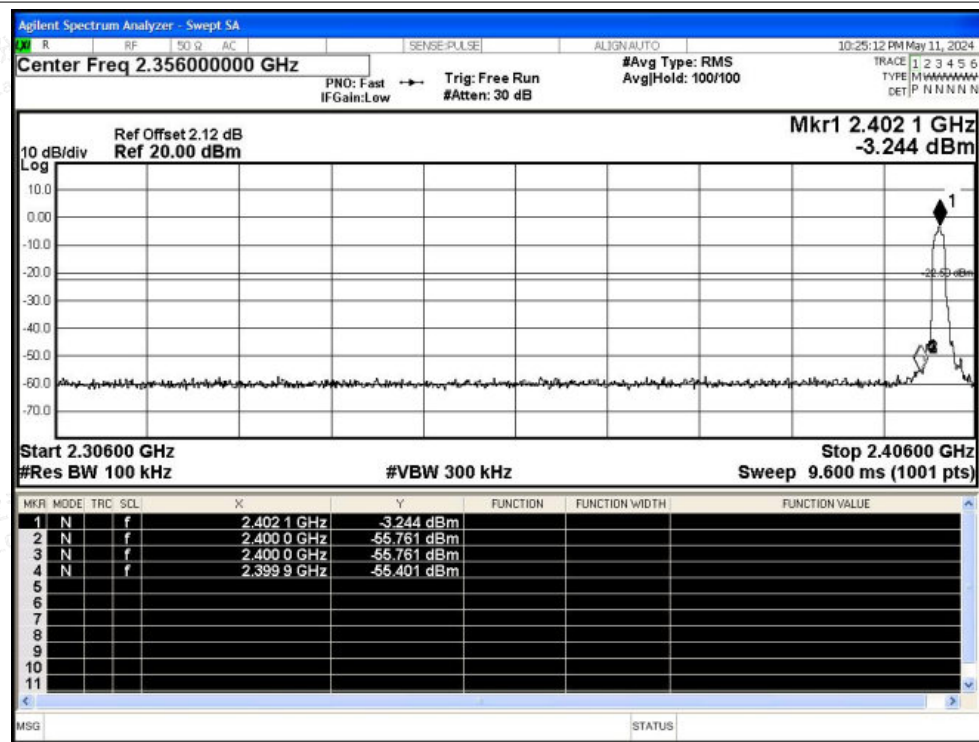




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

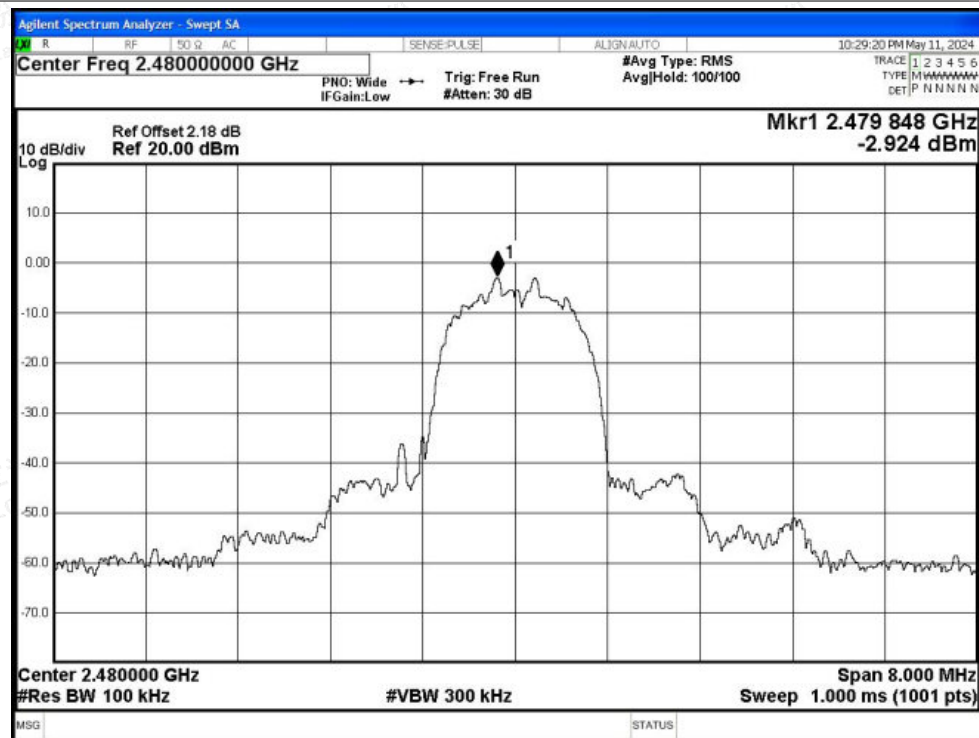


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

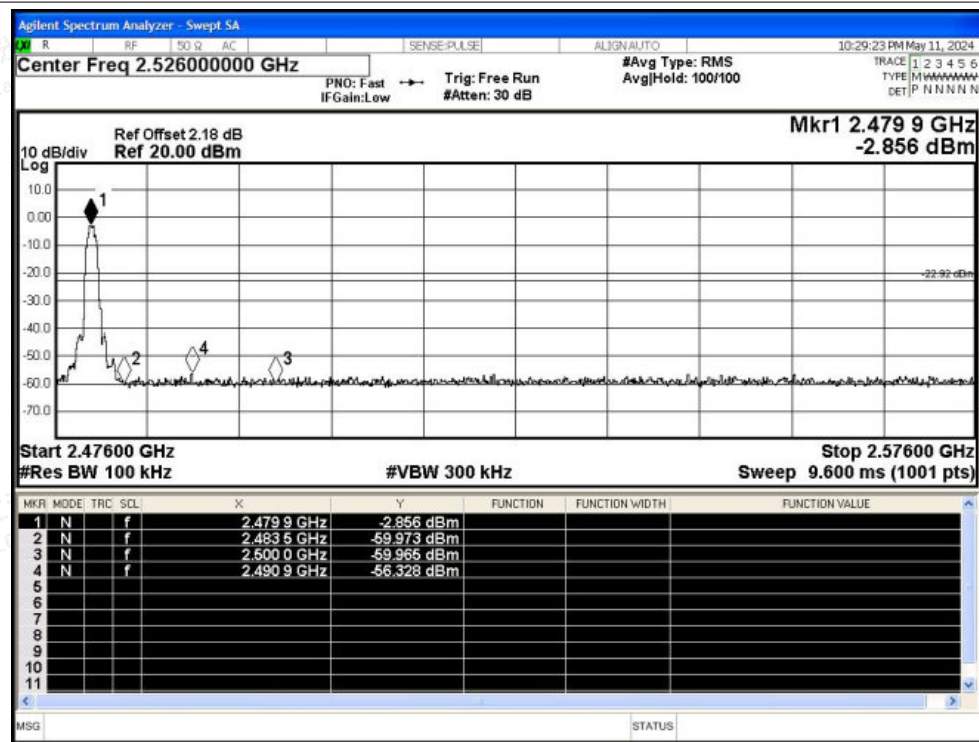




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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





(Hopping)

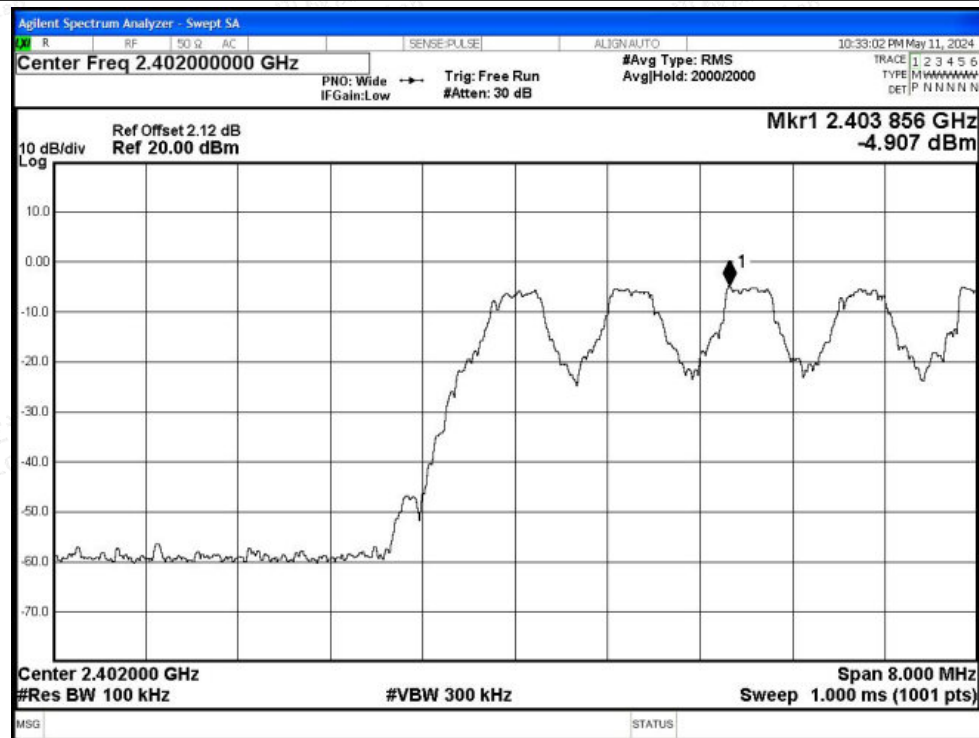
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-50.99	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-53.05	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-51.3	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-52.45	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-50.71	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-52.48	-20	Pass



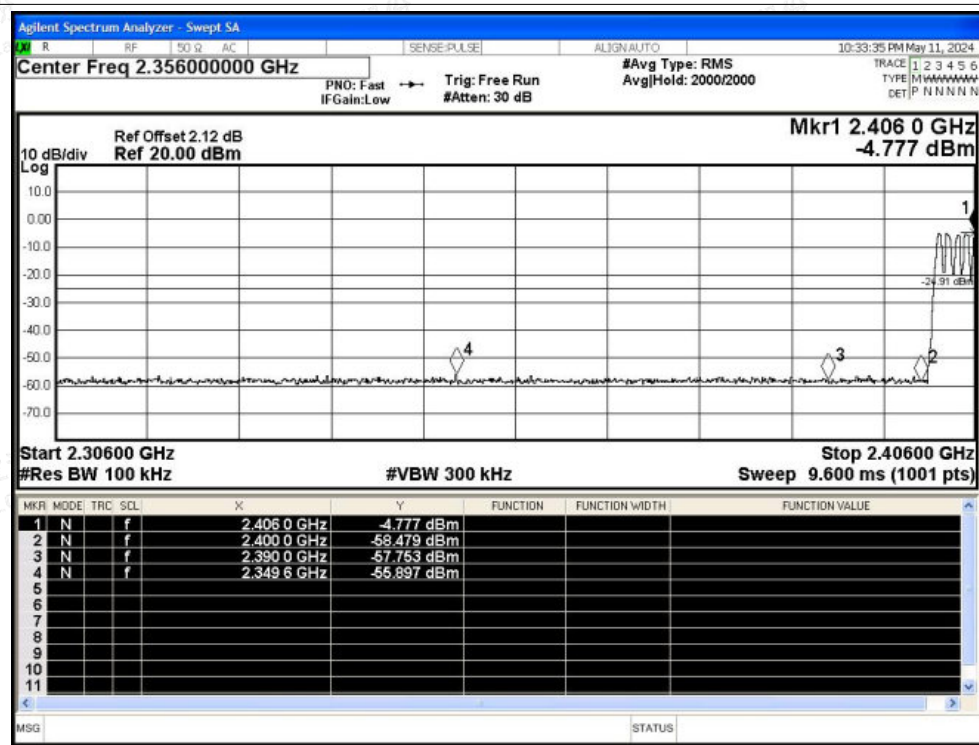


Test Graphs

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

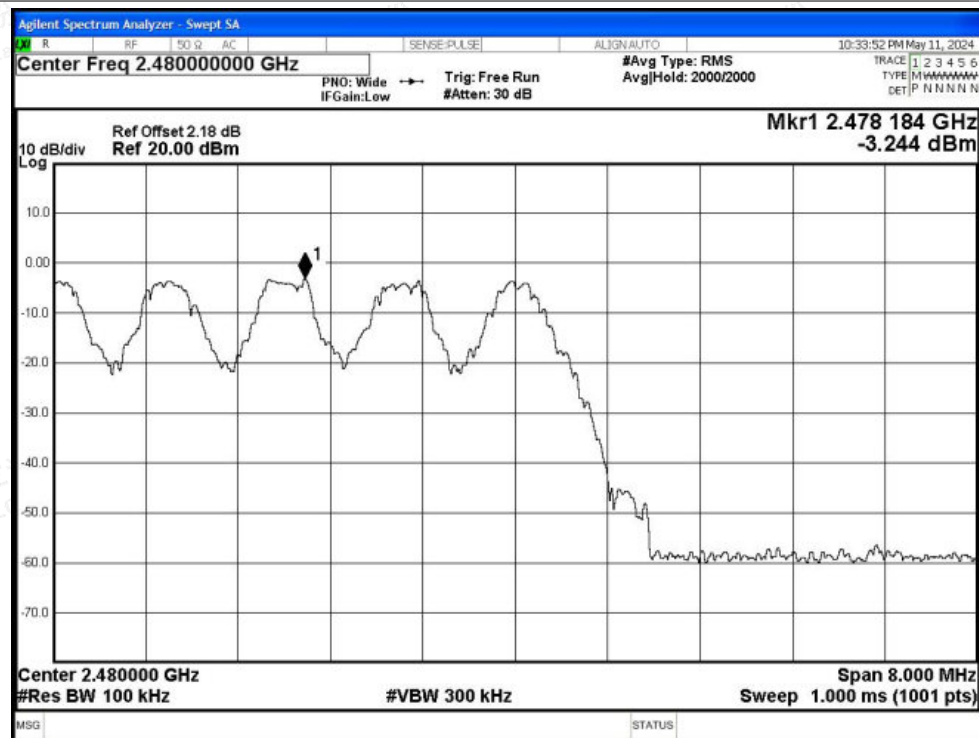


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

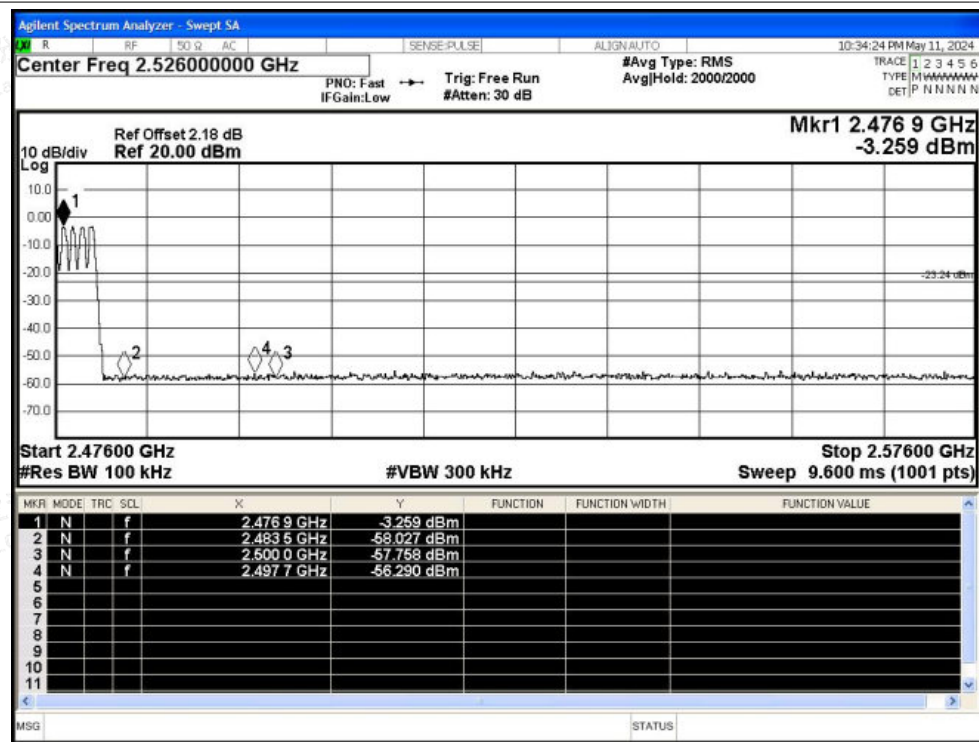




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



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



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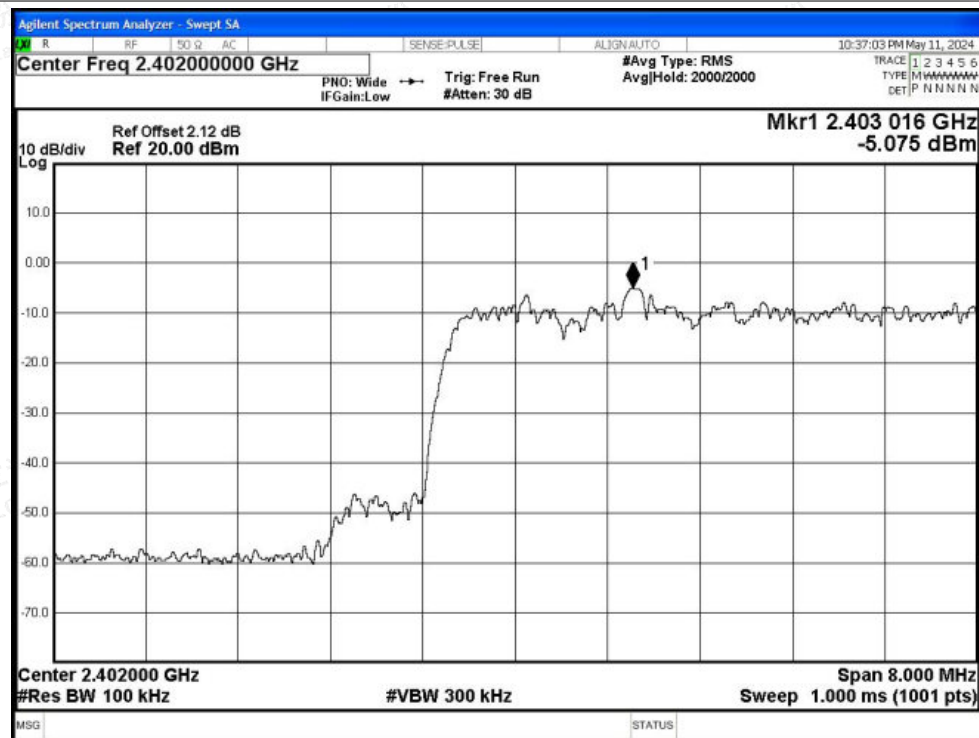
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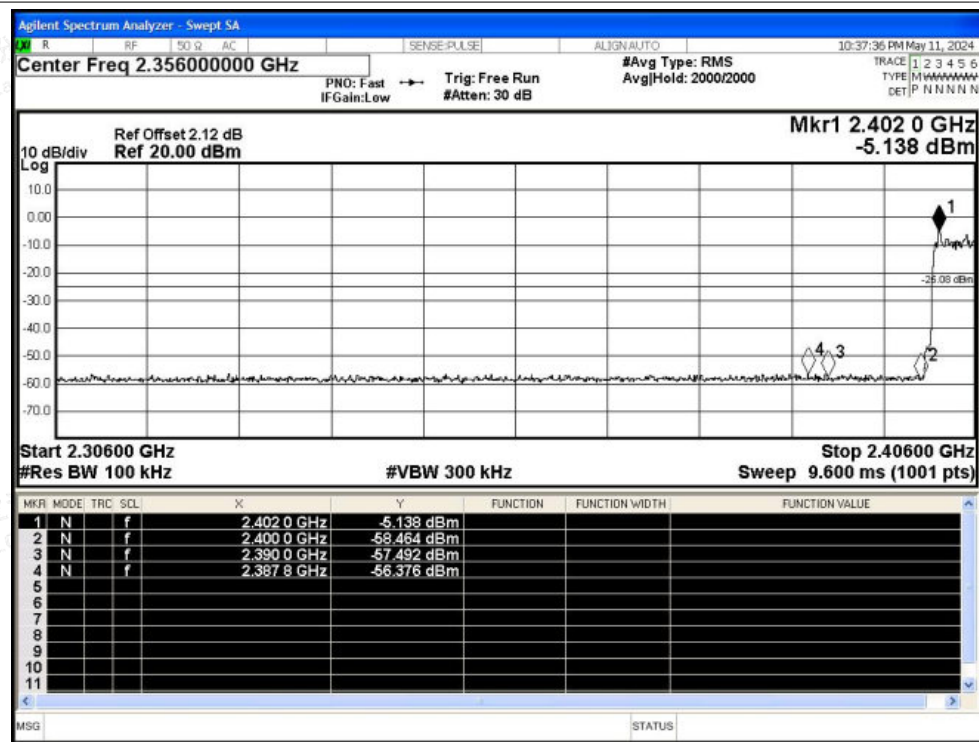
Scan code to check authenticity



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



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



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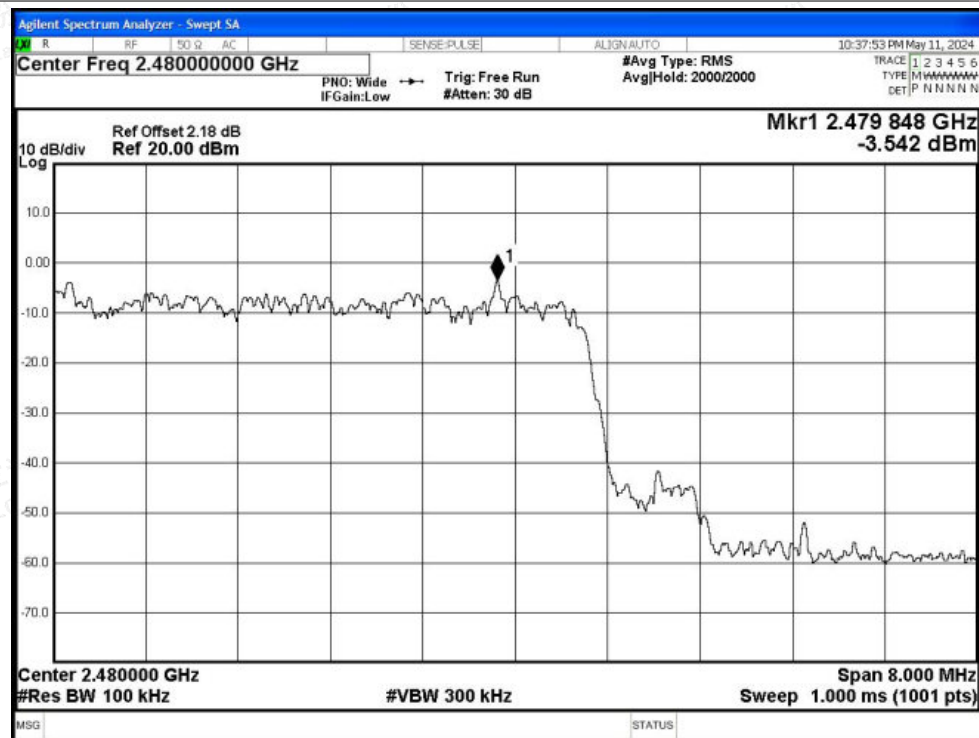
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Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

