



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Bluetooth audio

Test Model: K12

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	0.961	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.955	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.994	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.282	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.283	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.286	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.305	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.298	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.296	N/A	Pass





Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



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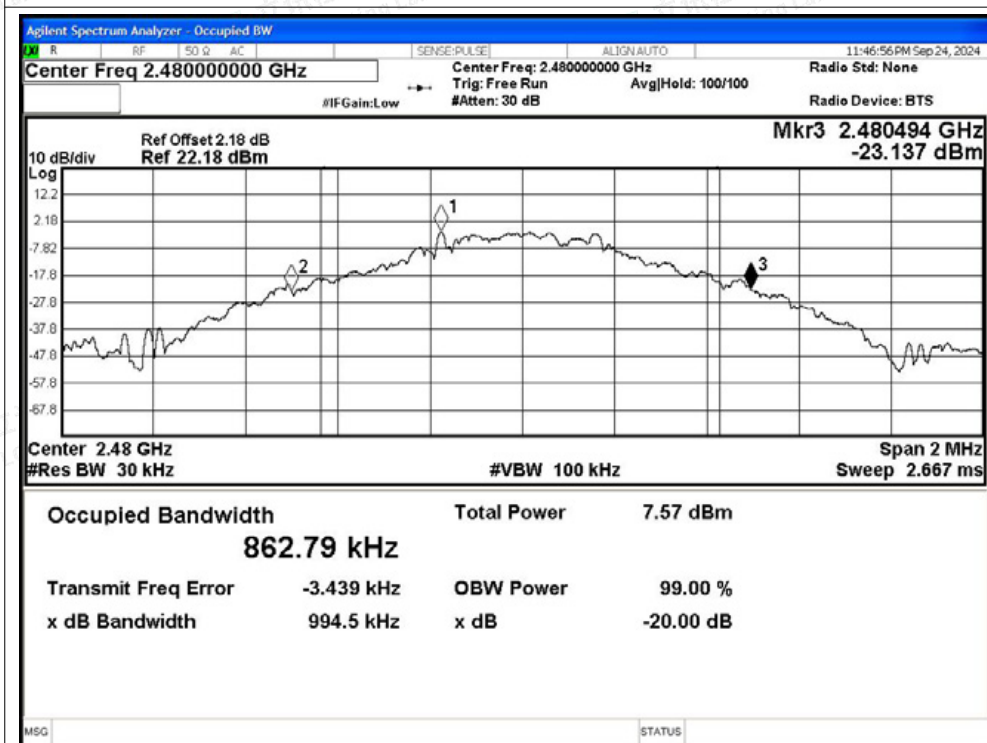
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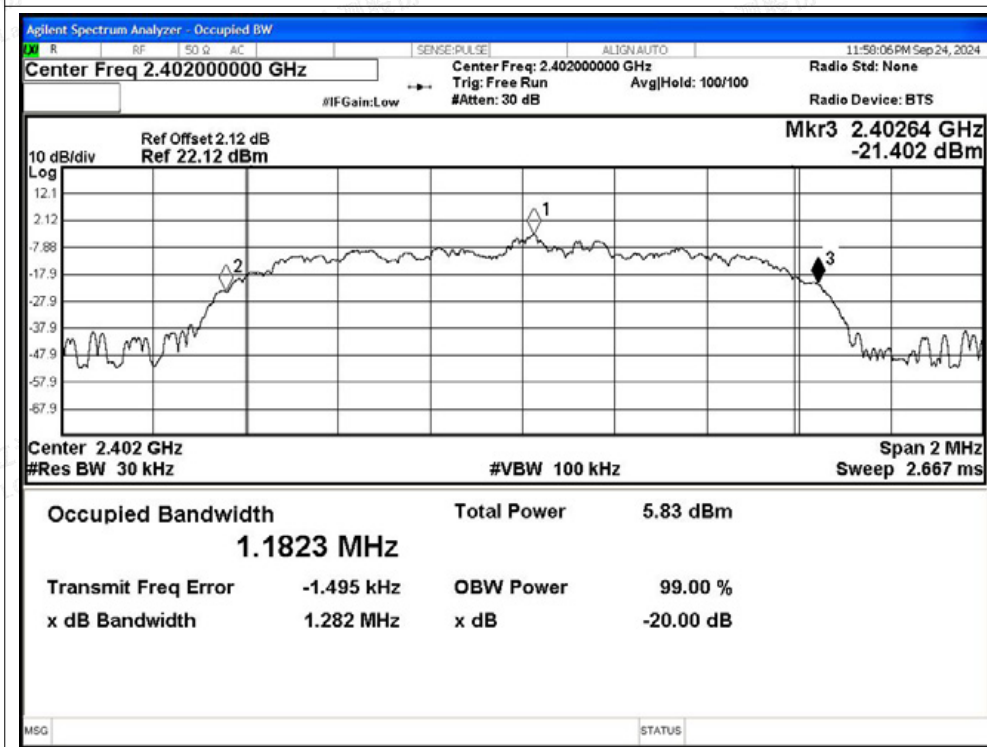
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-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



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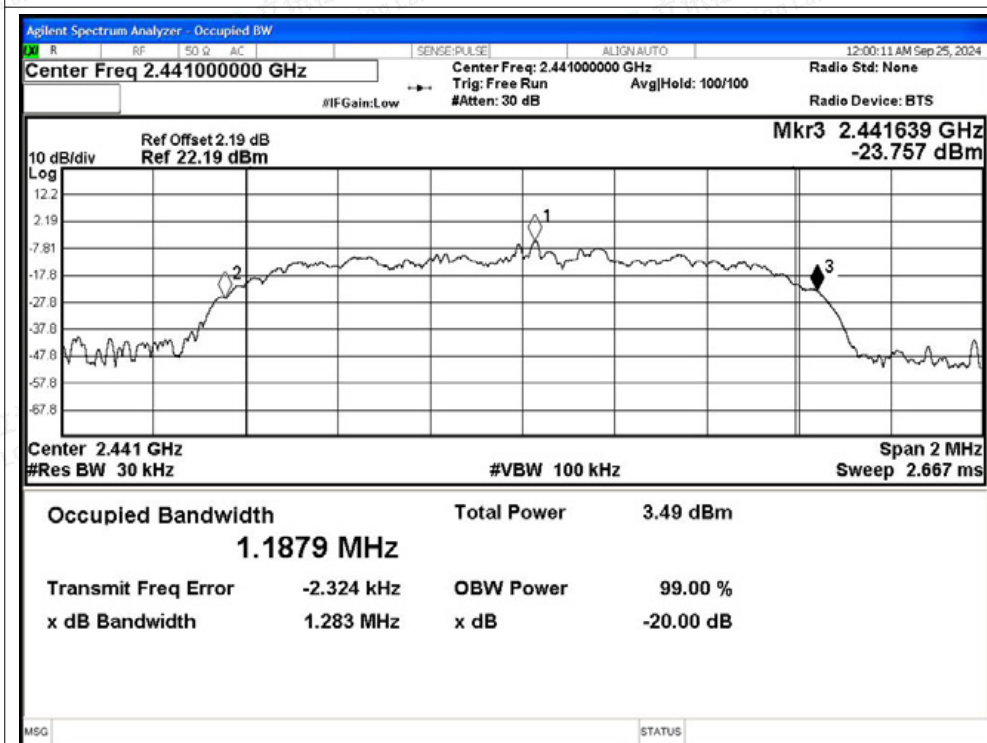
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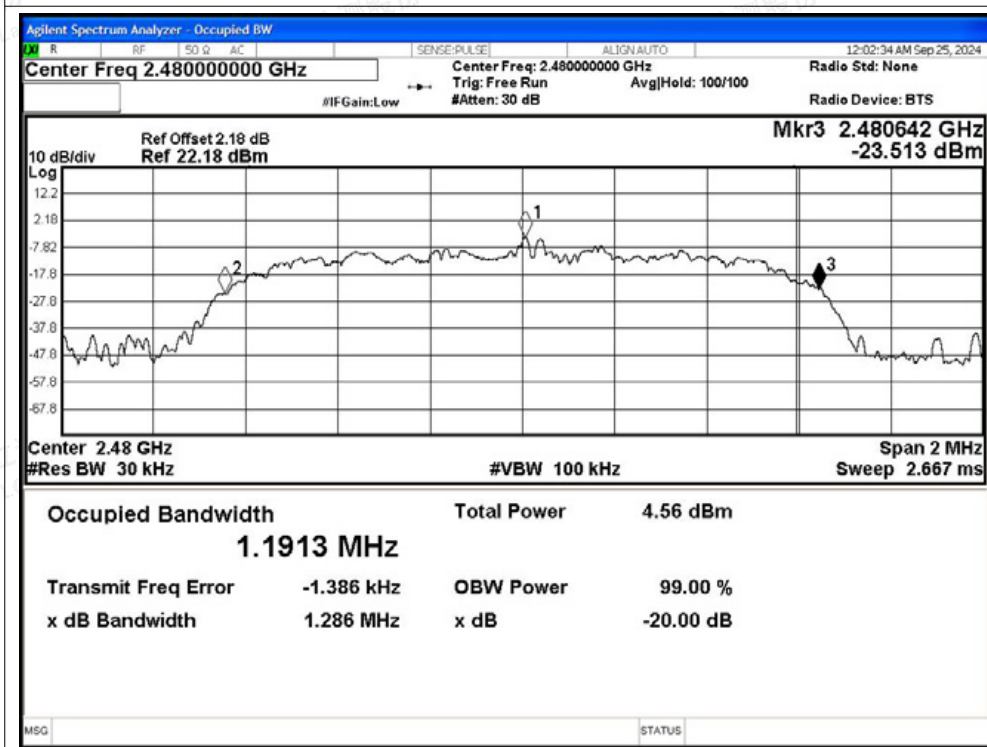
Scan code to check authenticity



-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



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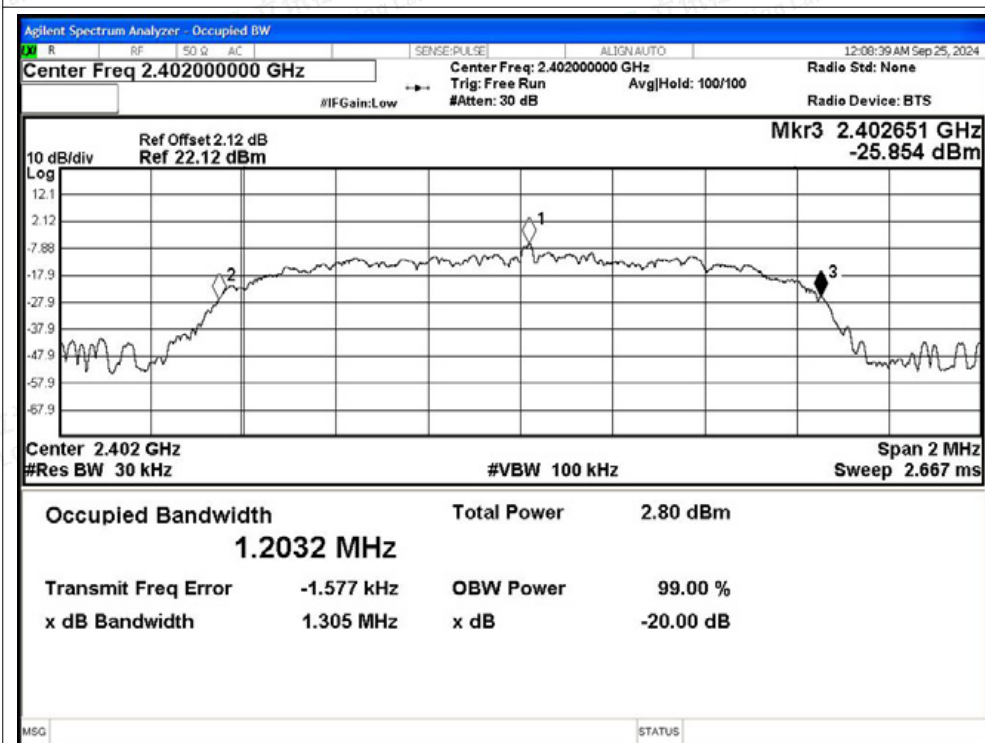
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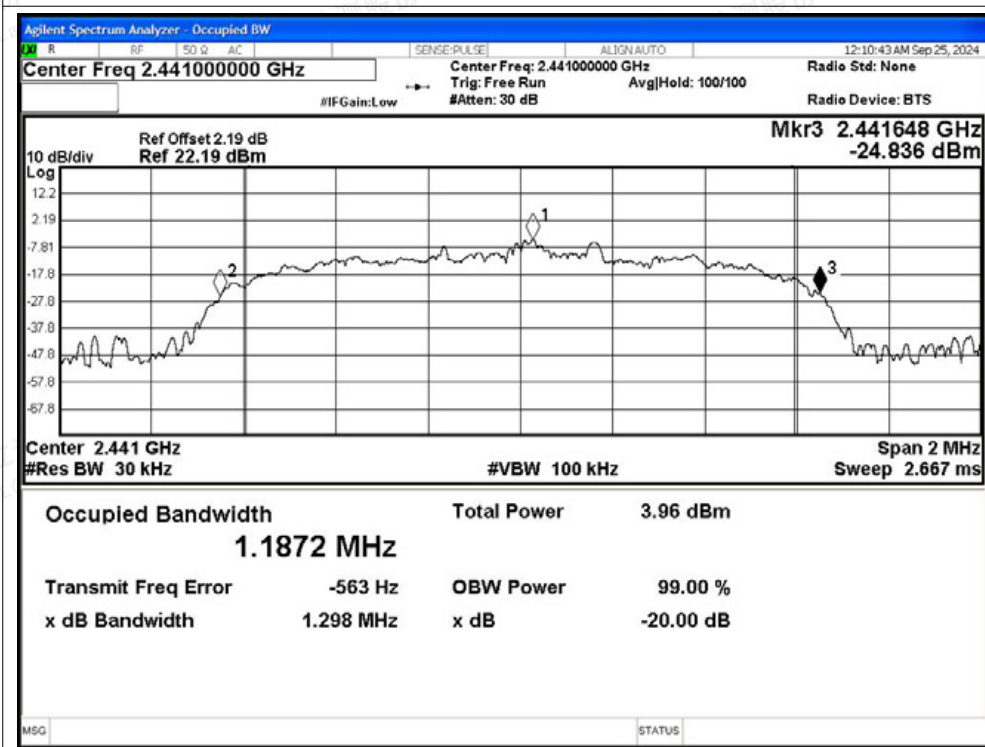
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-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1

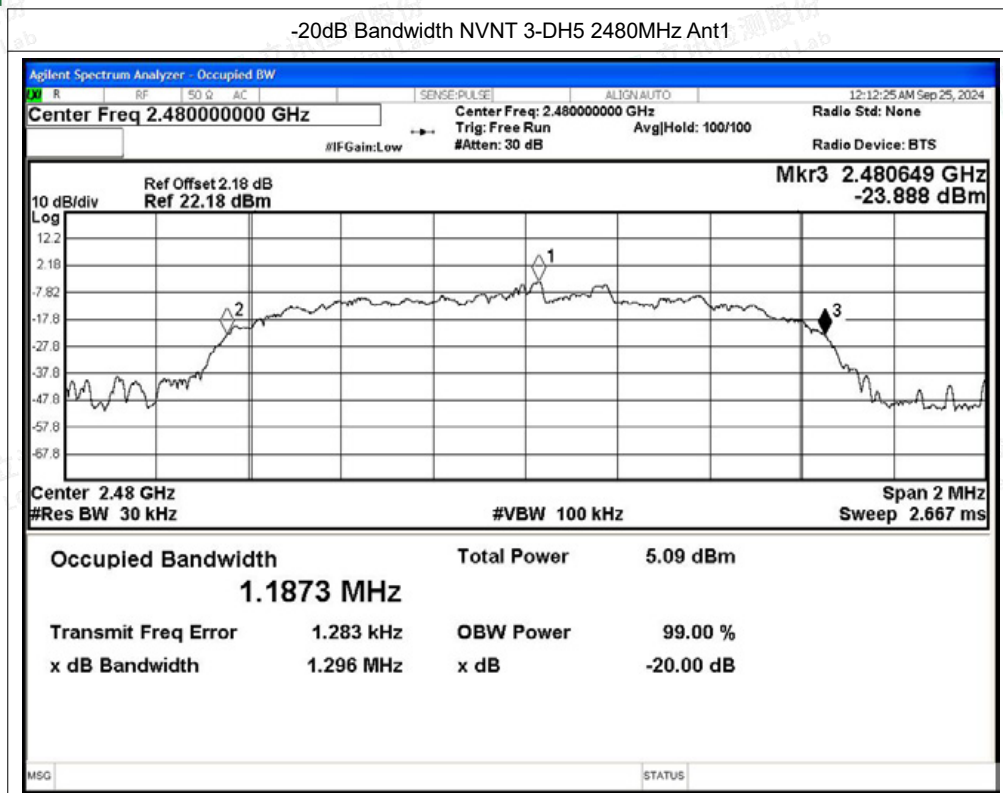


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A.2 Maximum Conducted Output Power

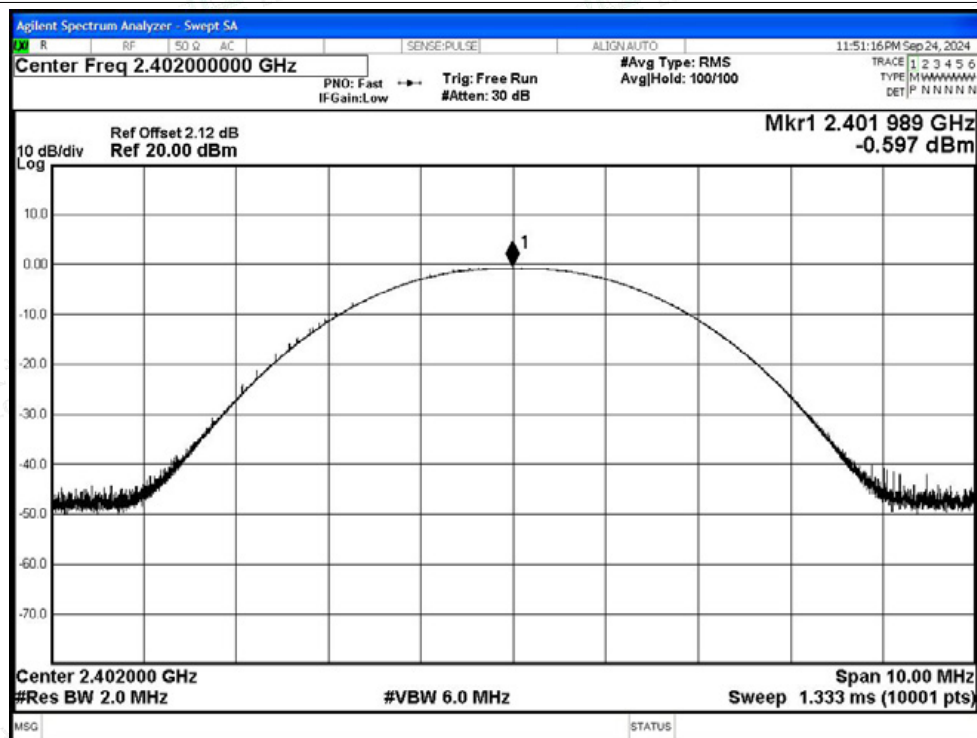
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.60	21	Pass
NVNT	1-DH5	2441	Ant1	-0.20	21	Pass
NVNT	1-DH5	2480	Ant1	1.13	21	Pass
NVNT	2-DH5	2402	Ant1	1.21	21	Pass
NVNT	2-DH5	2441	Ant1	-0.89	21	Pass
NVNT	2-DH5	2480	Ant1	0.45	21	Pass
NVNT	3-DH5	2402	Ant1	-0.93	21	Pass
NVNT	3-DH5	2441	Ant1	-0.54	21	Pass
NVNT	3-DH5	2480	Ant1	0.76	21	Pass



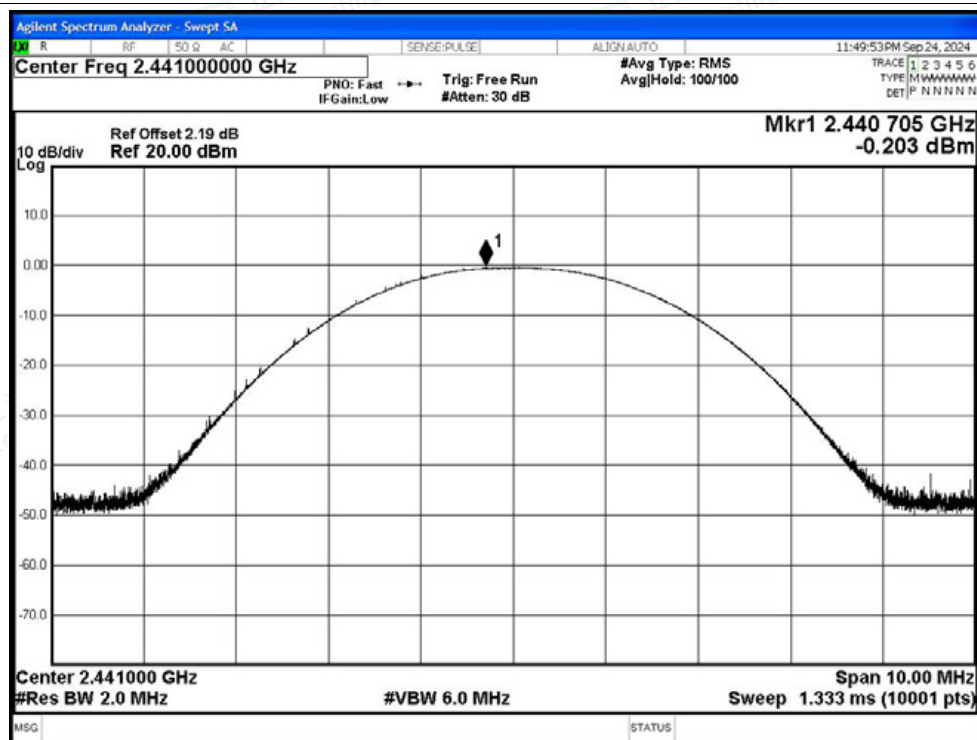


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

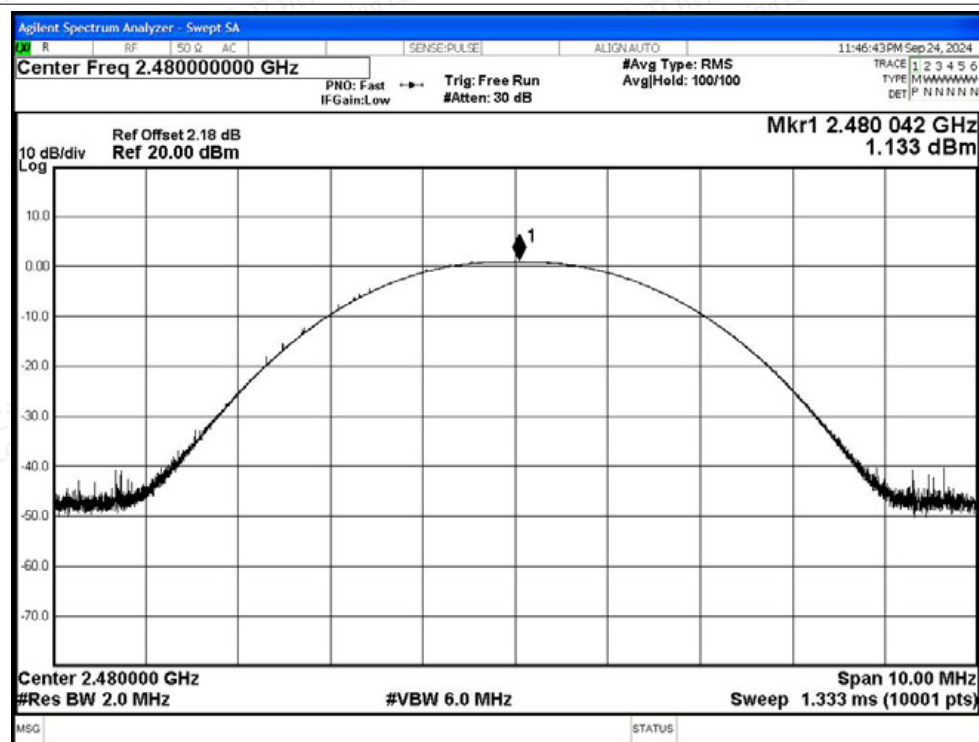


Power NVNT 1-DH5 2441MHz Ant1

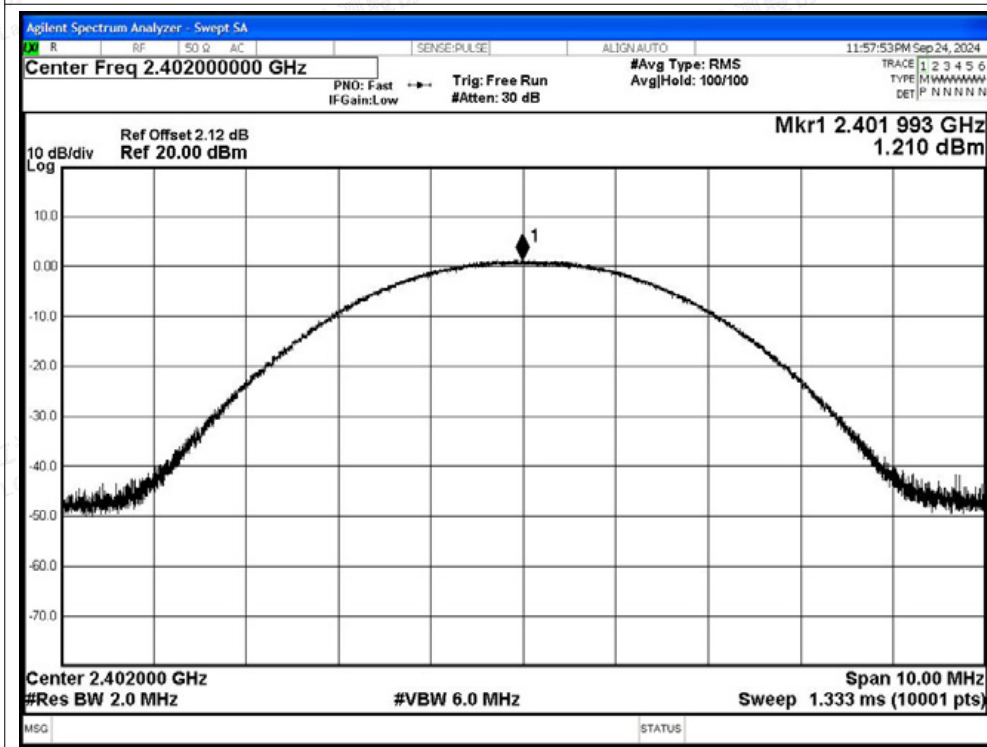




Power NVNT 1-DH5 2480MHz Ant1



Power NVNT 2-DH5 2402MHz Ant1



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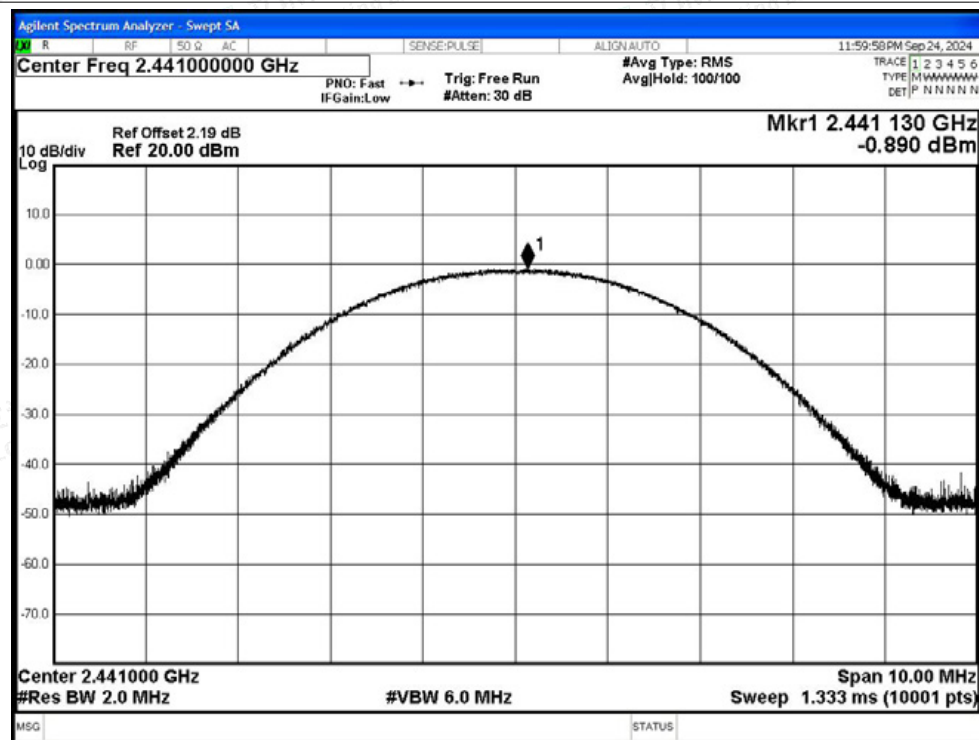
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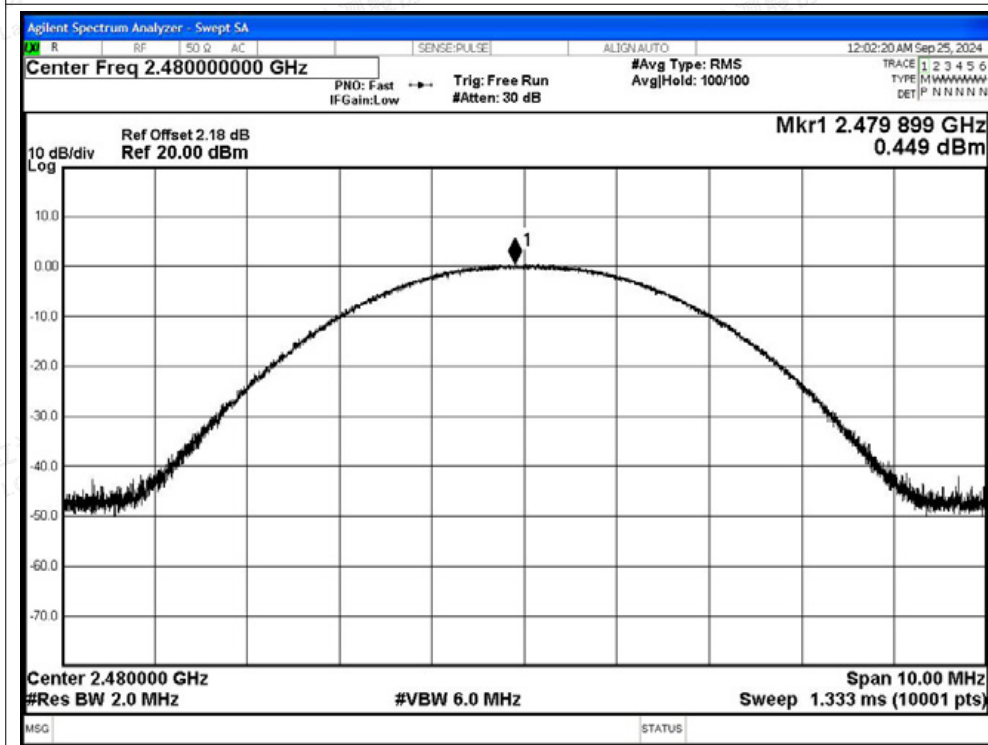
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Power NVNT 2-DH5 2441MHz Ant1

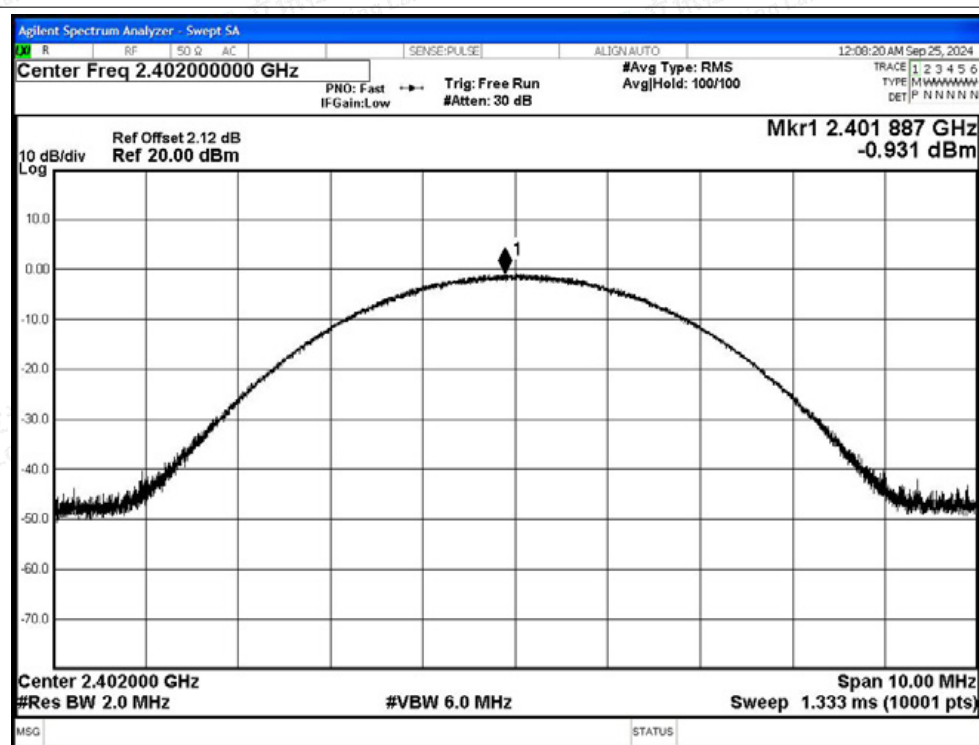


Power NVNT 2-DH5 2480MHz Ant1

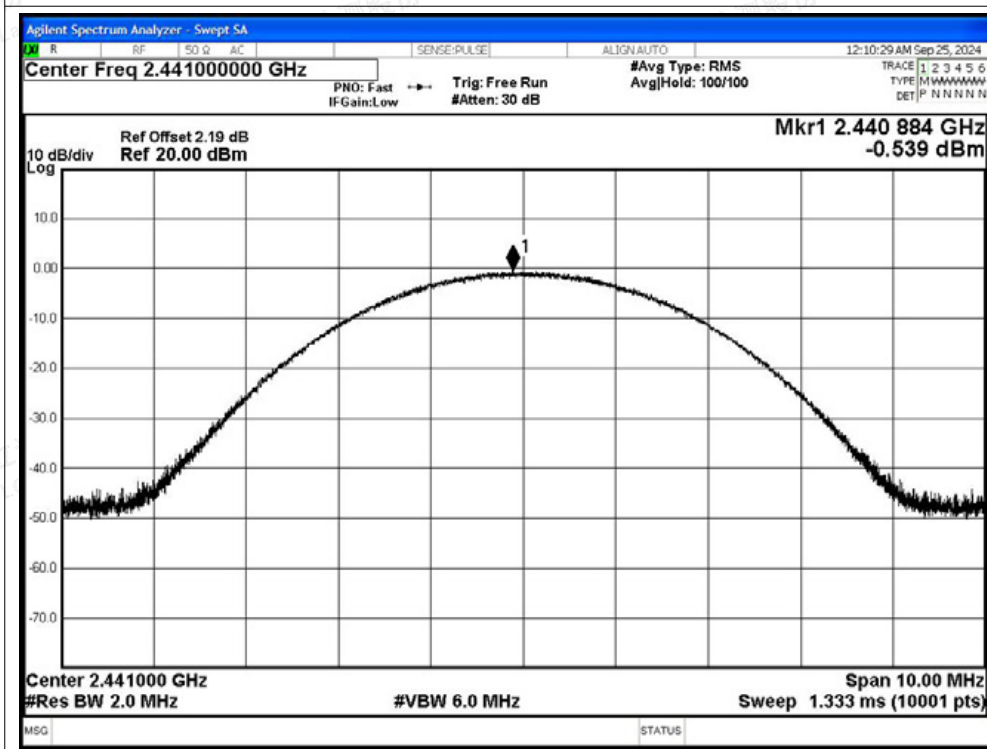




Power NVNT 3-DH5 2402MHz Ant1

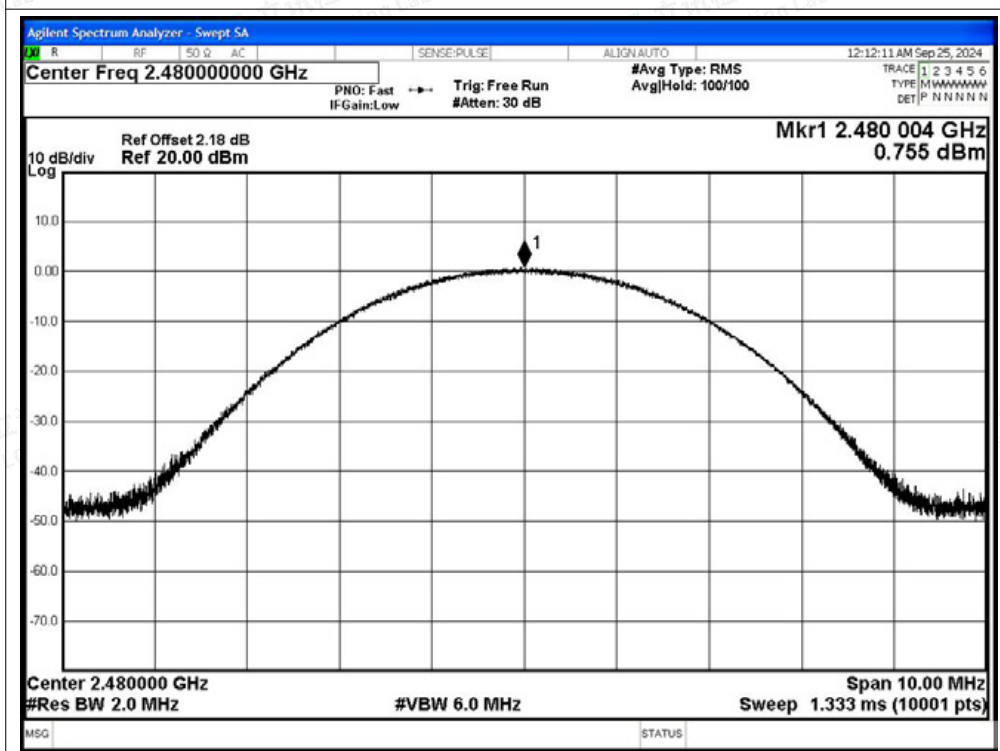


Power NVNT 3-DH5 2441MHz Ant1





Power NVNT 3-DH5 2480MHz Ant1



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A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.83	2402.846	1.016	0.663	Pass
NVNT	2-DH5	Ant1	2401.998	2403.012	1.014	0.857	Pass
NVNT	3-DH5	Ant1	2402.002	2403.03	1.028	0.870	Pass

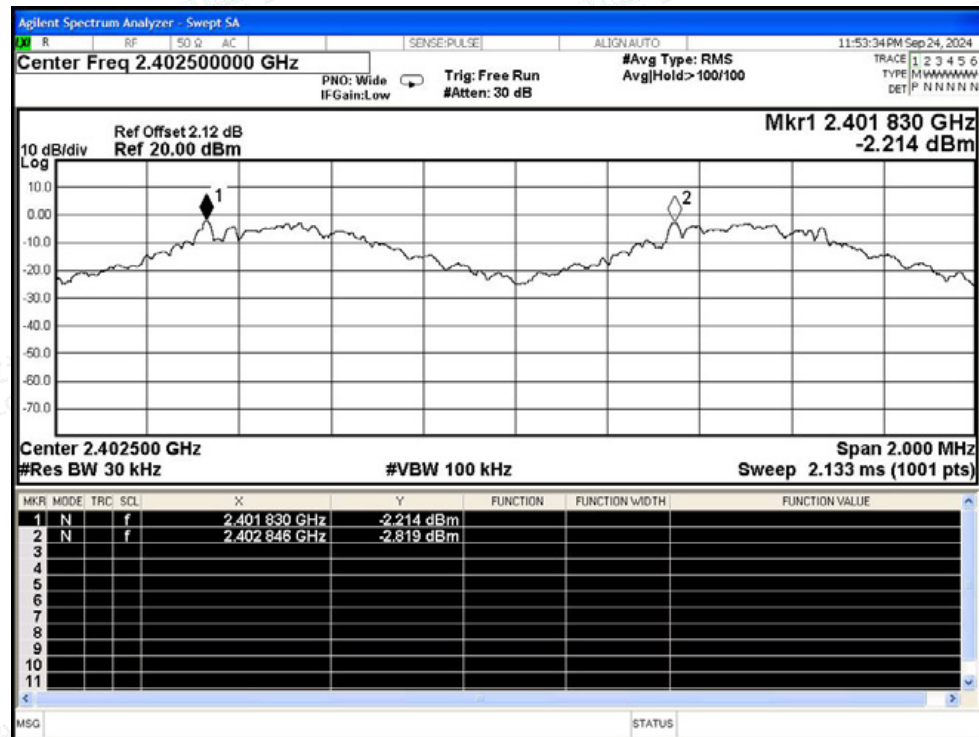


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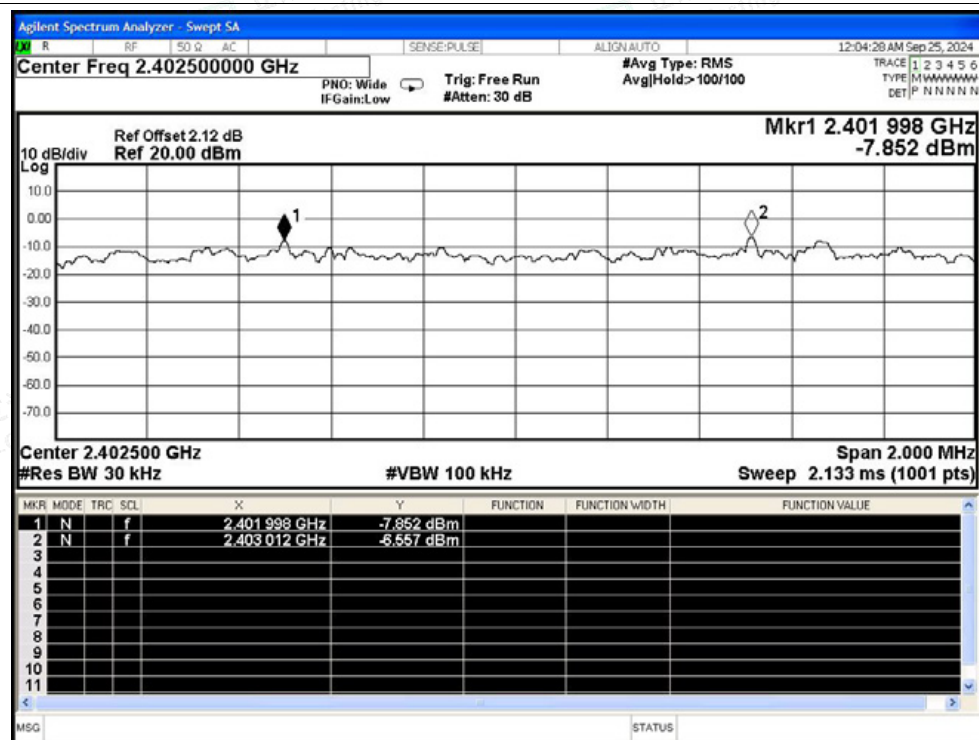


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1

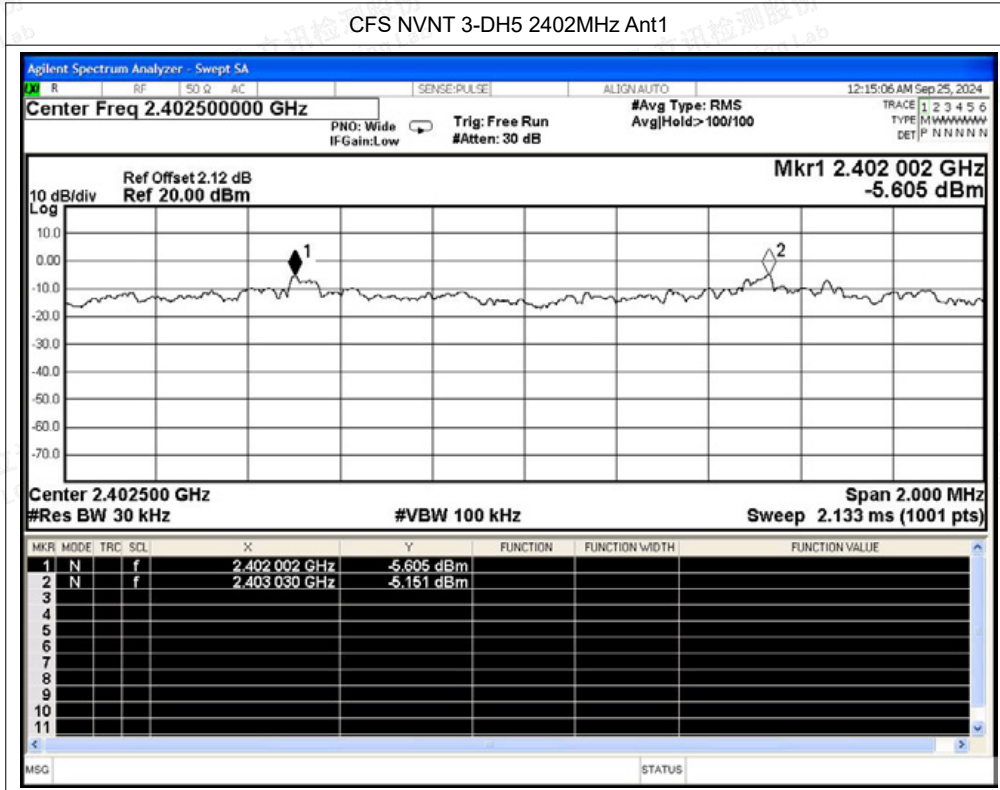


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A.4 Dwell Time

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	314.28	108	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	286.902	99	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.897	301.288	104	31600	400	Pass

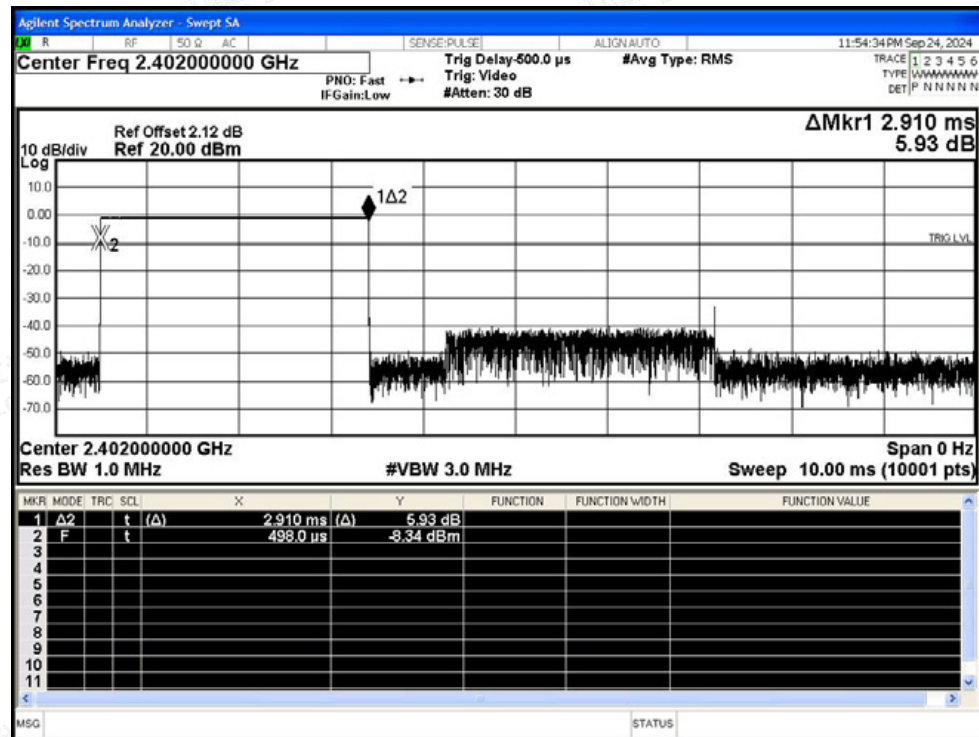


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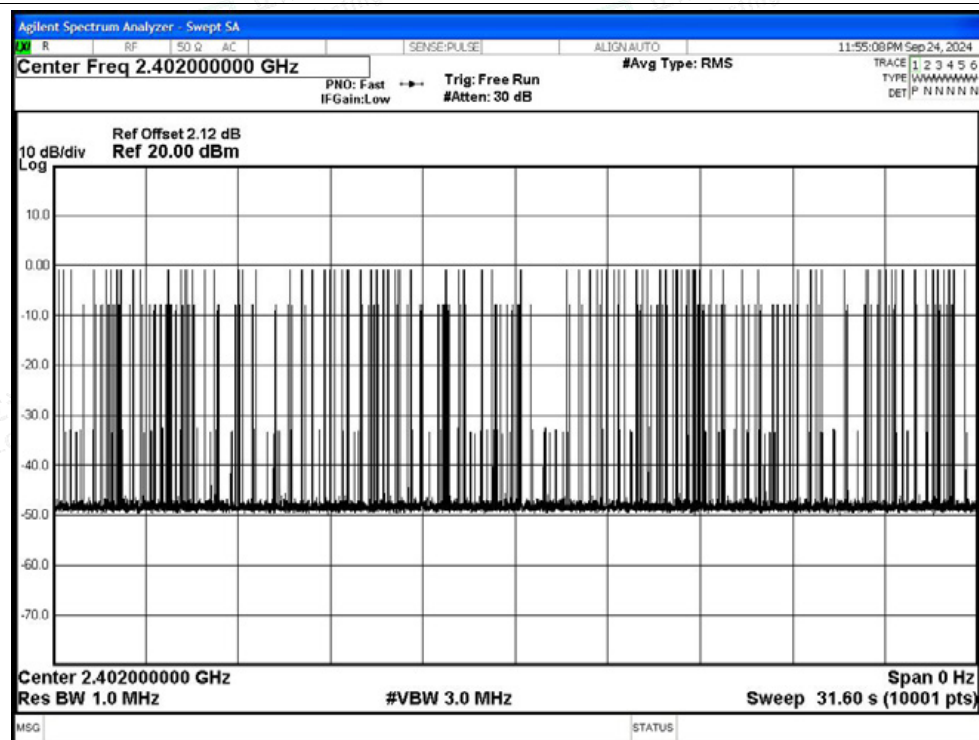


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



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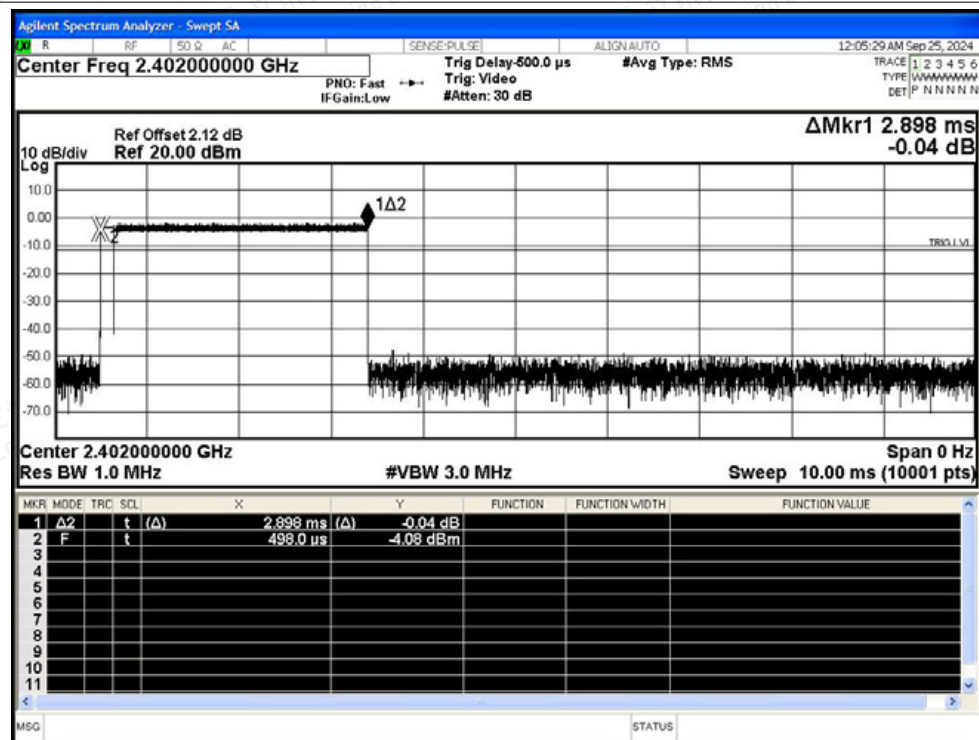
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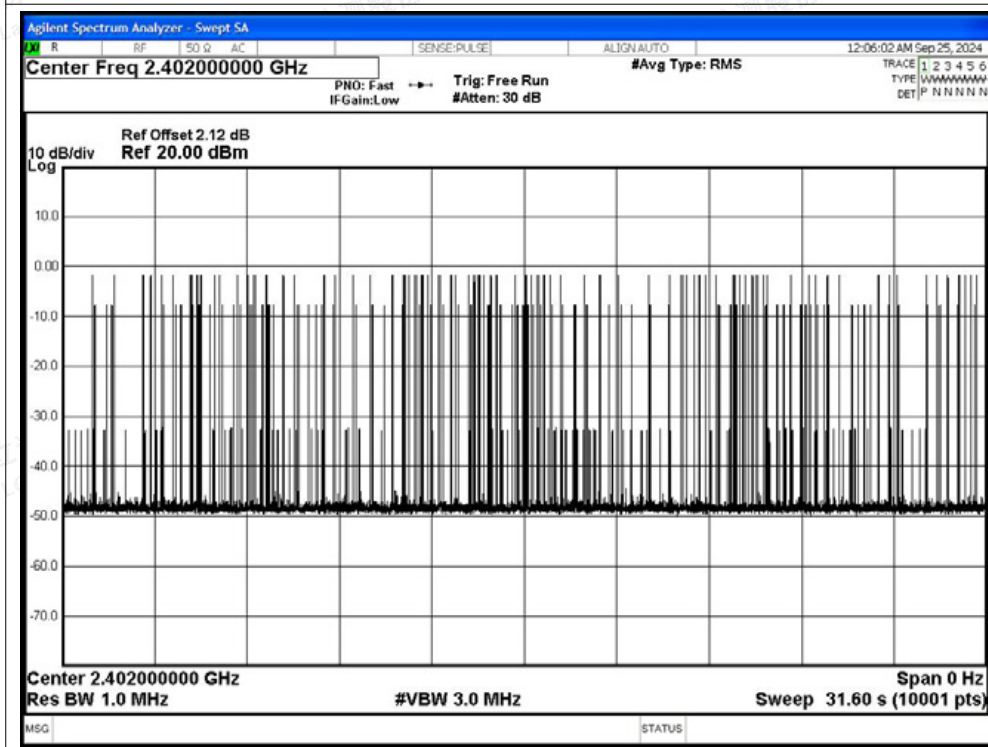
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Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

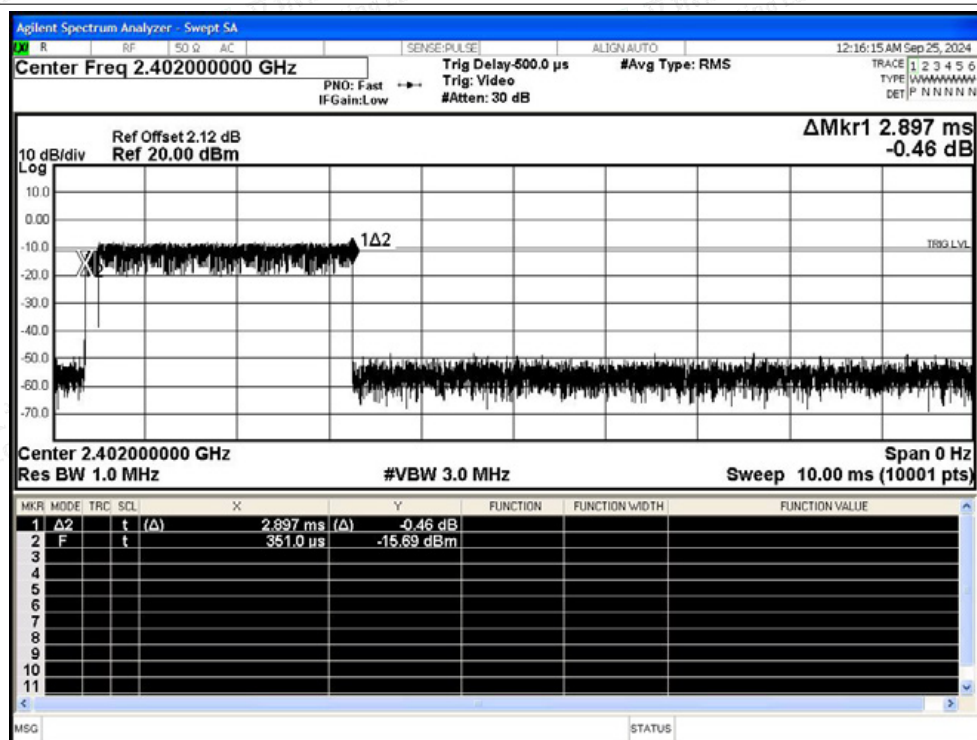


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

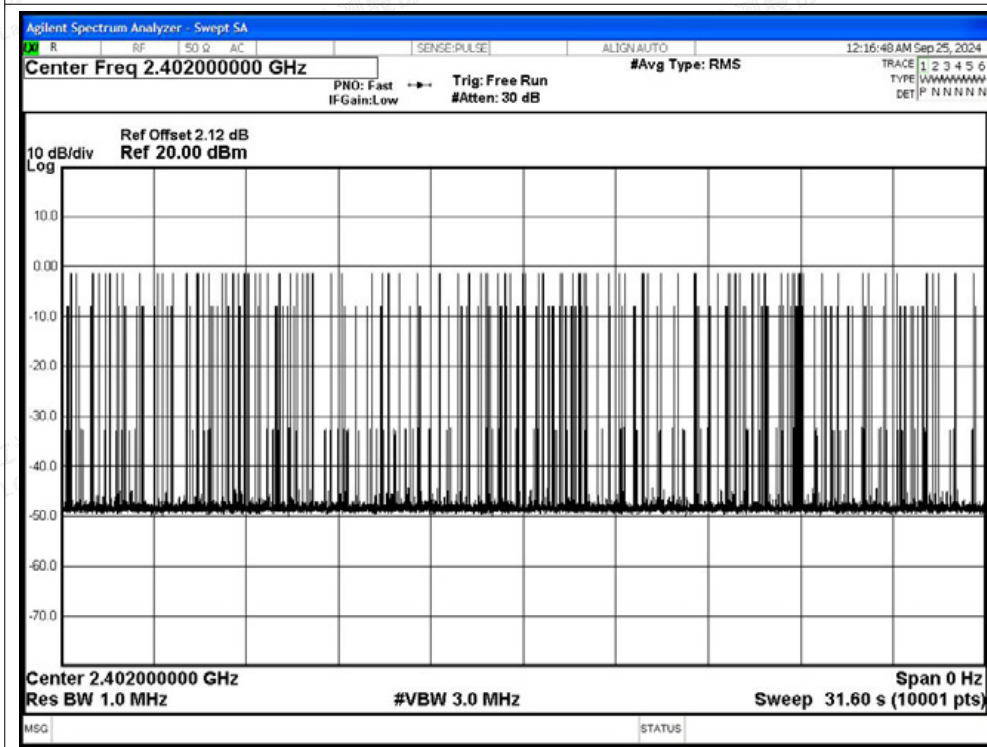




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated



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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

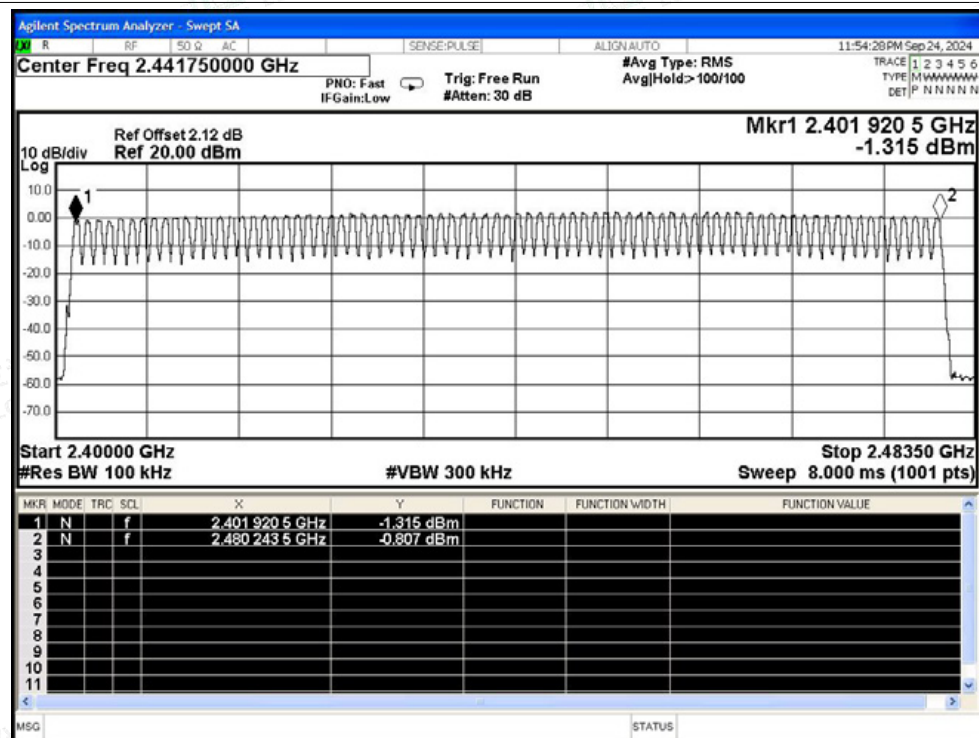


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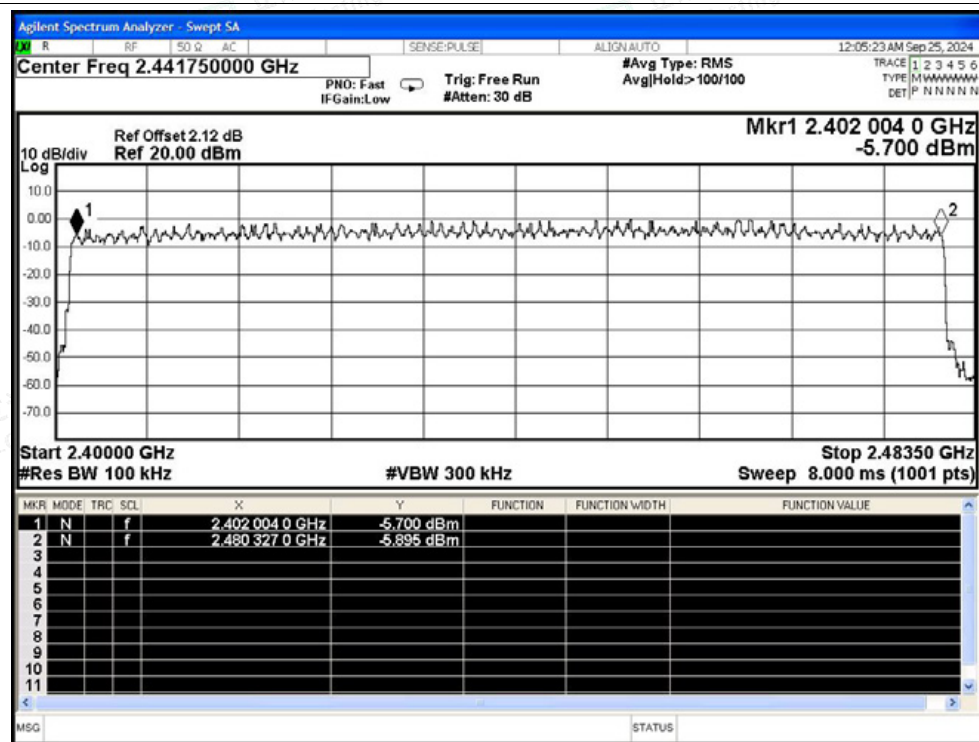


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



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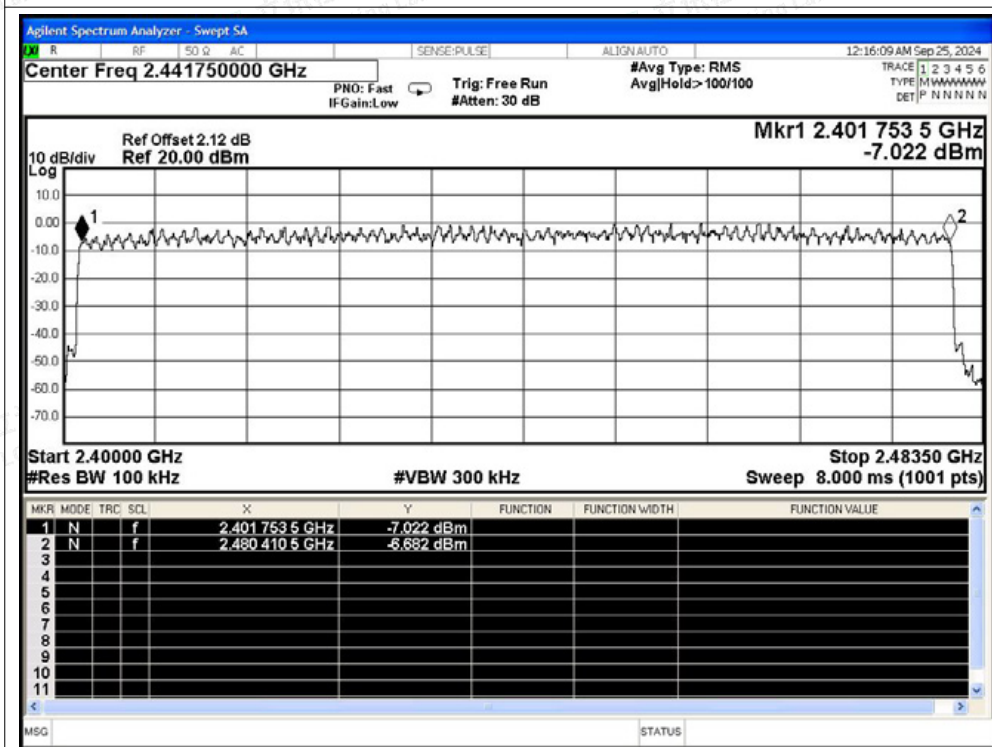
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Hopping No. NVNT 3-DH5 2402MHz Ant1



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A.6 Band Edge

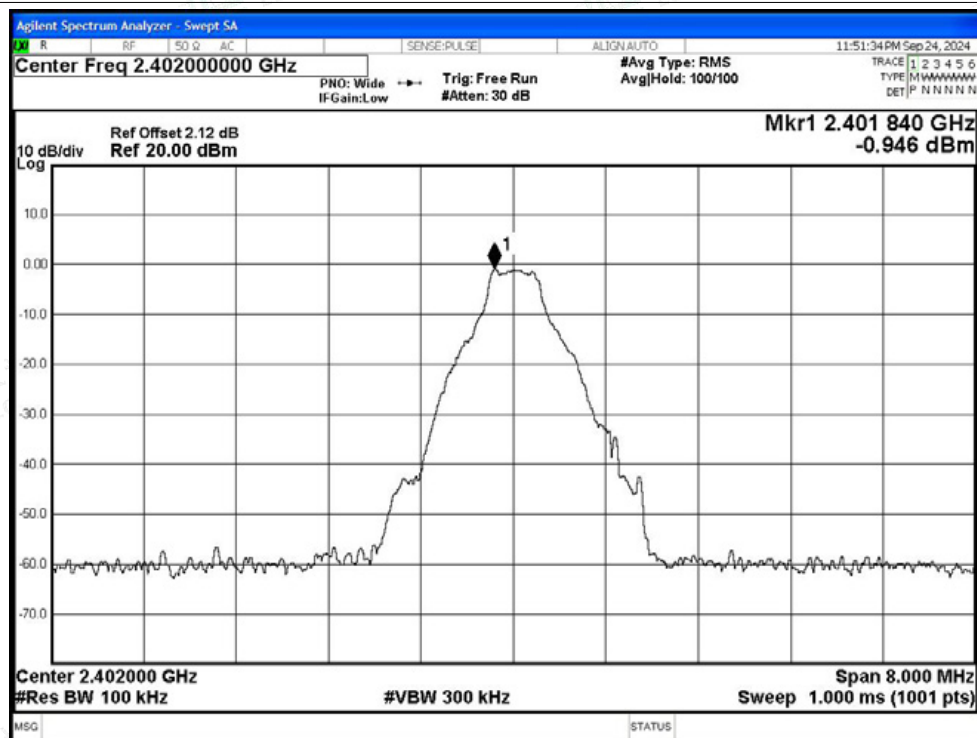
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55.79	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-57.48	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-51.56	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-54.97	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-49.74	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-53.45	-20	Pass



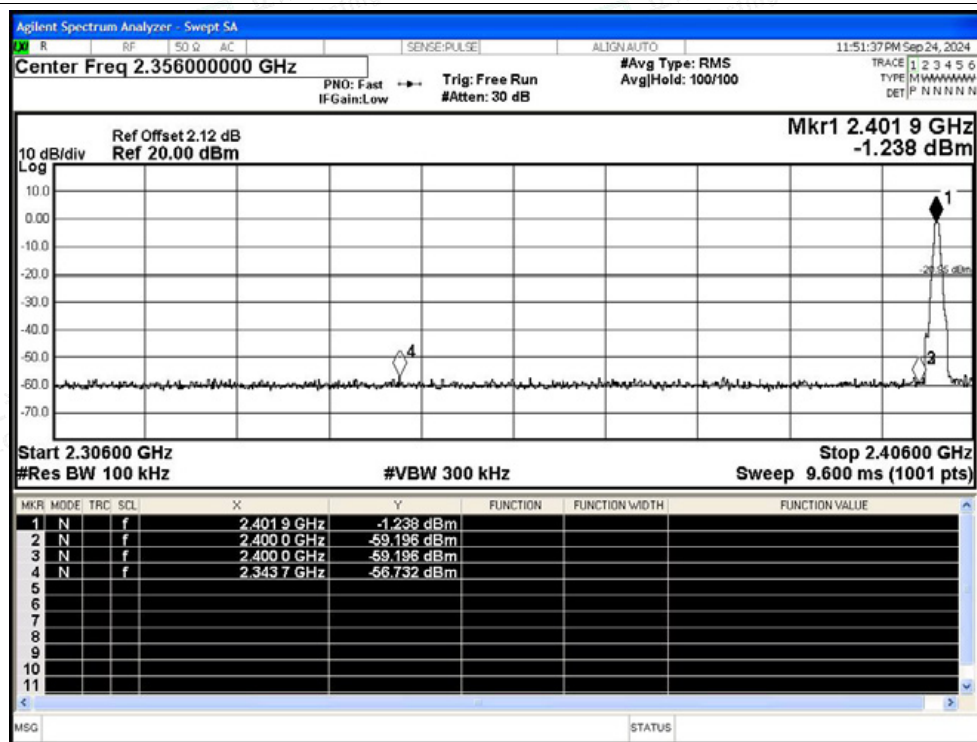


Test Graphs

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



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



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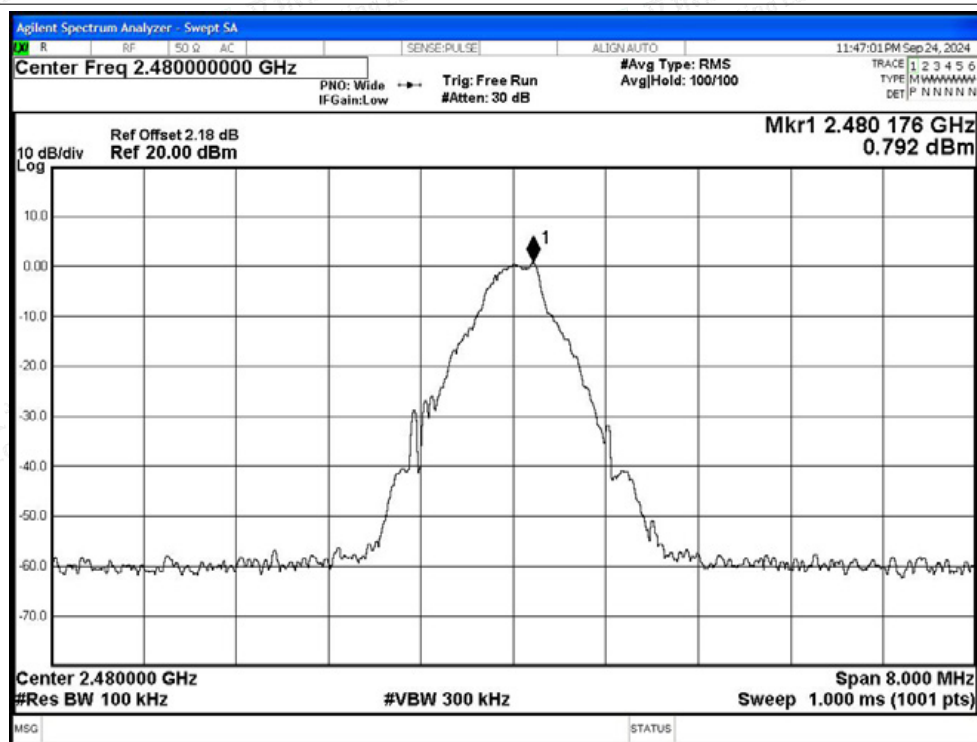
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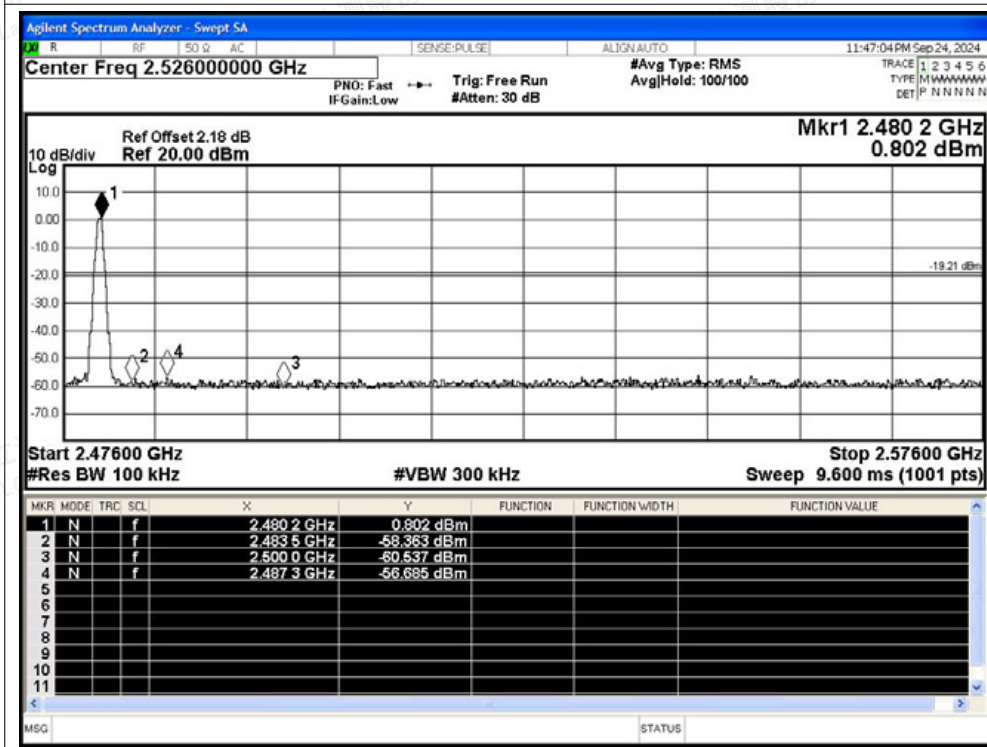
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Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



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



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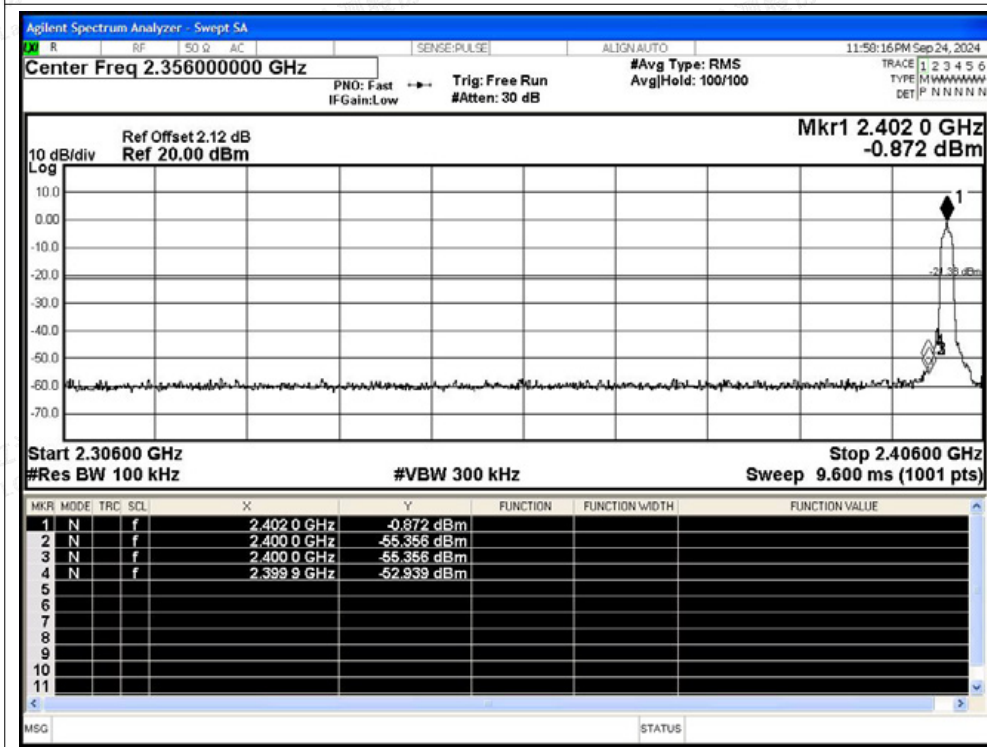
Scan code to check authenticity



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



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



Shenzhen LCS Compliance Testing Laboratory Ltd.

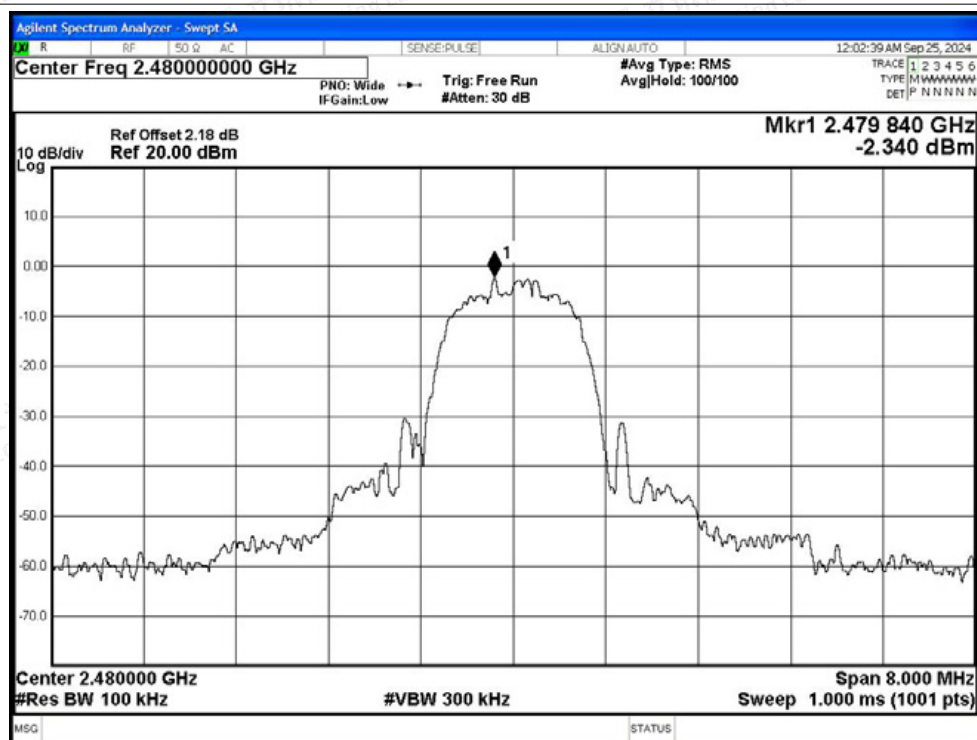
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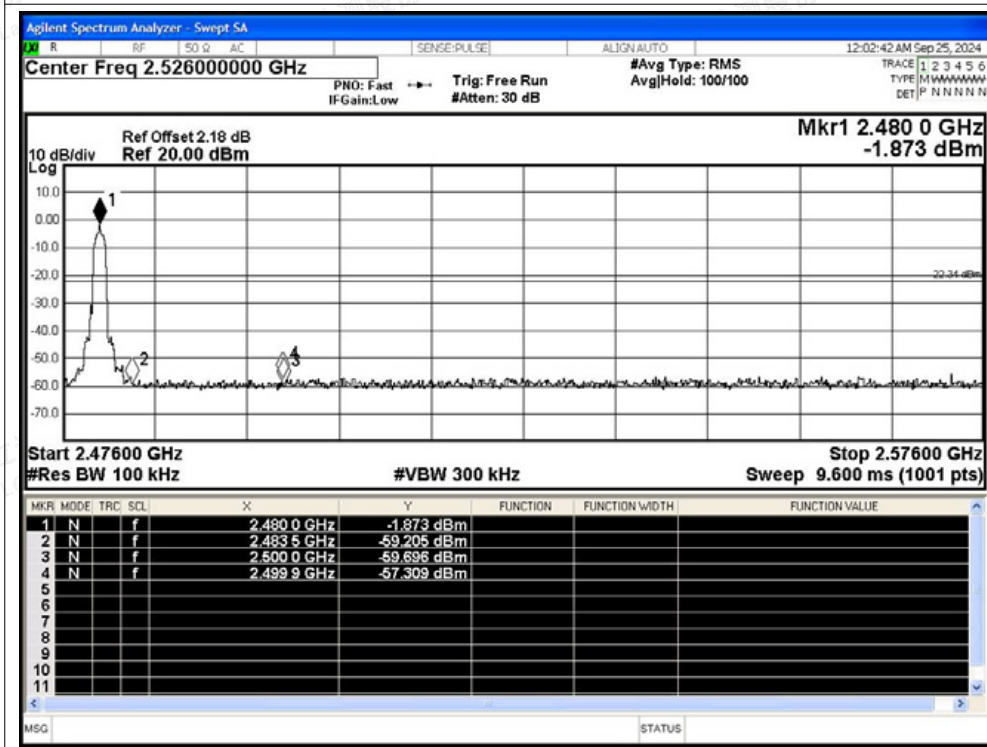
Scan code to check authenticity



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



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



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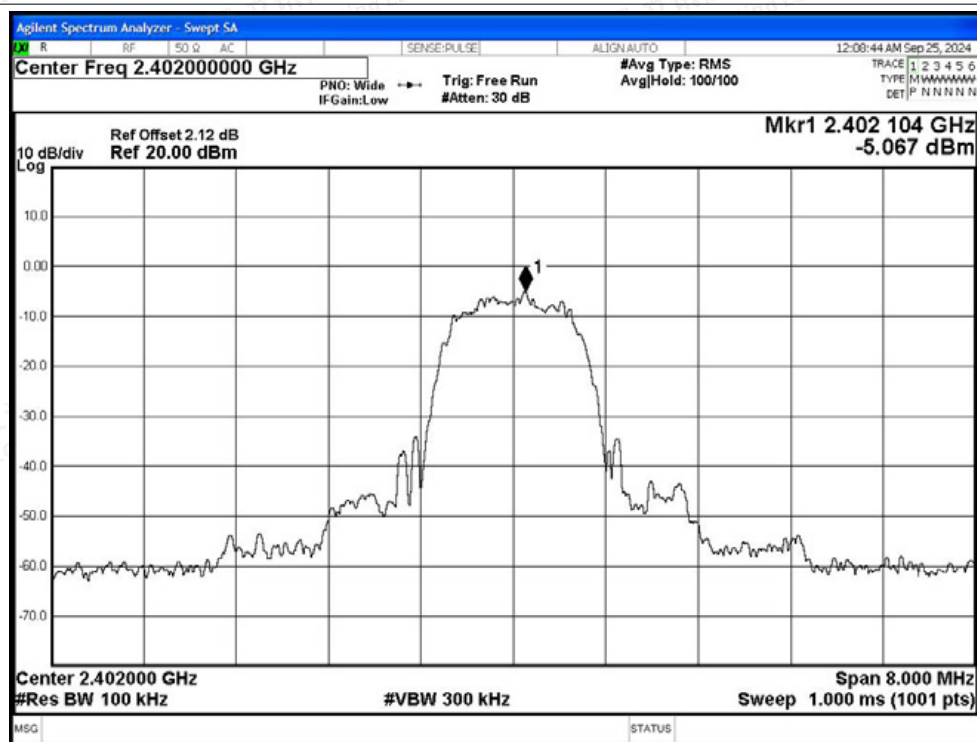
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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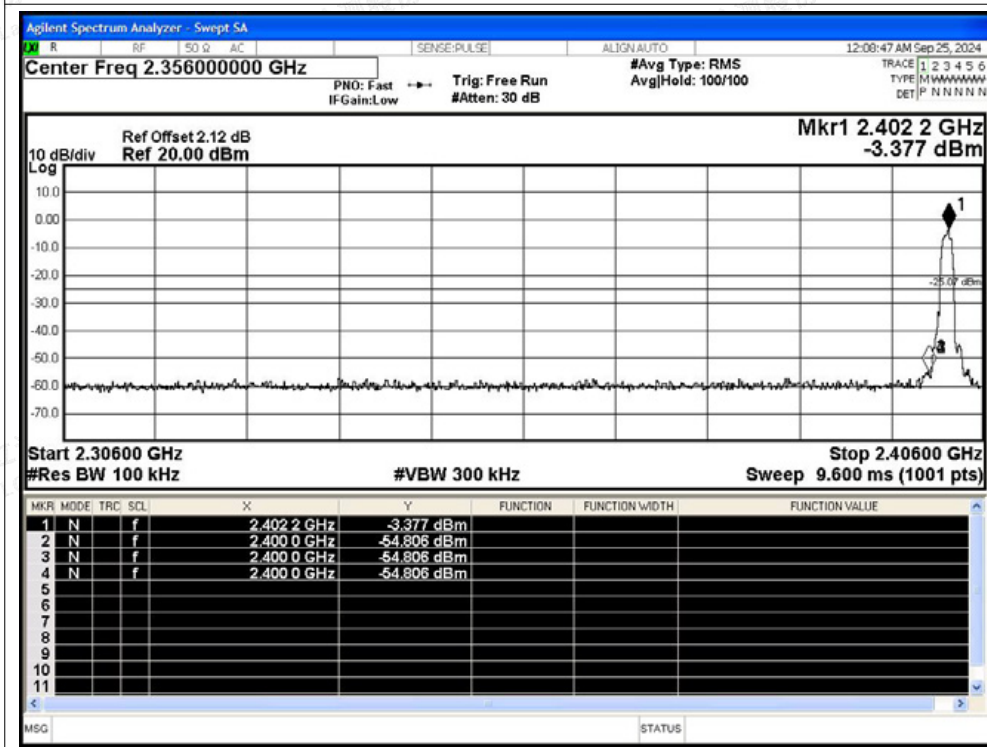
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Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



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



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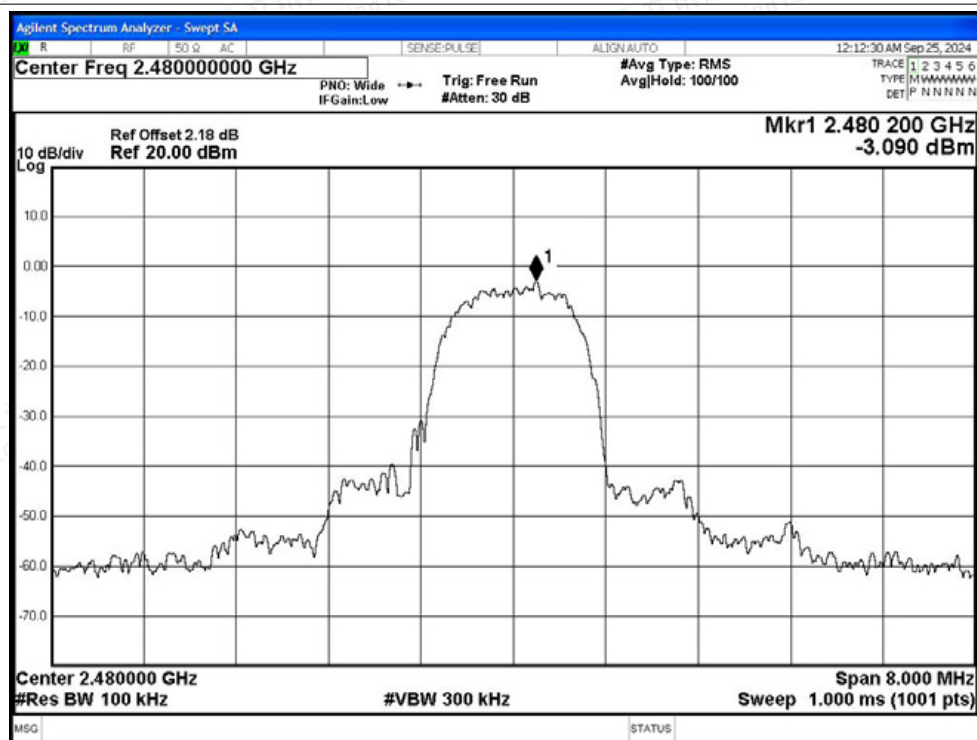
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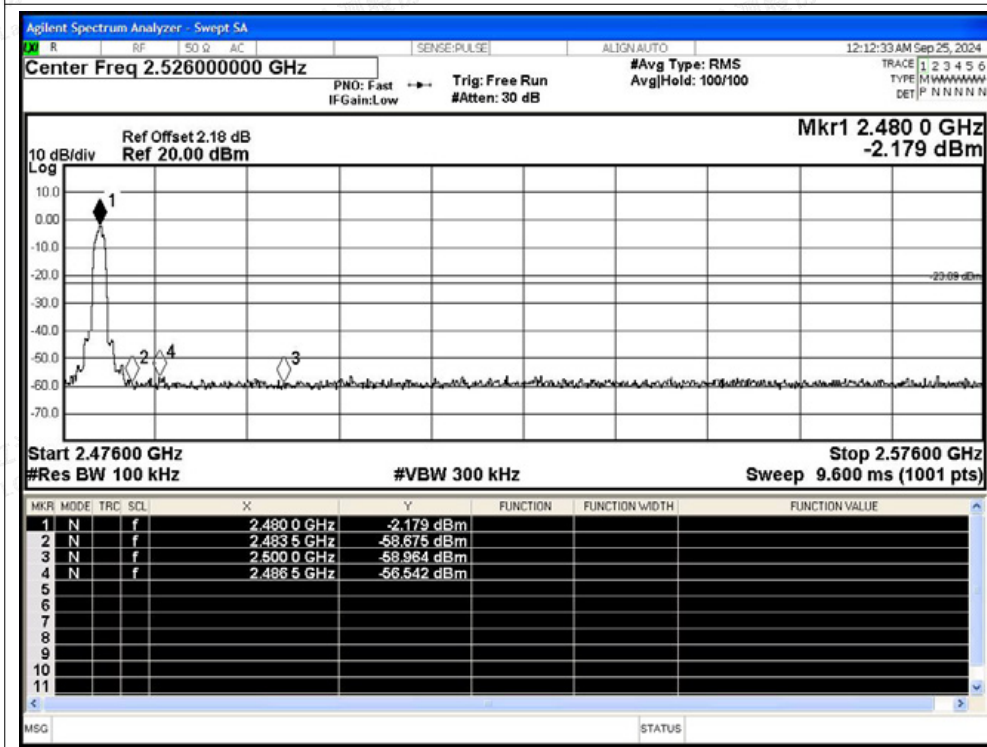
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Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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



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**(Hopping)**

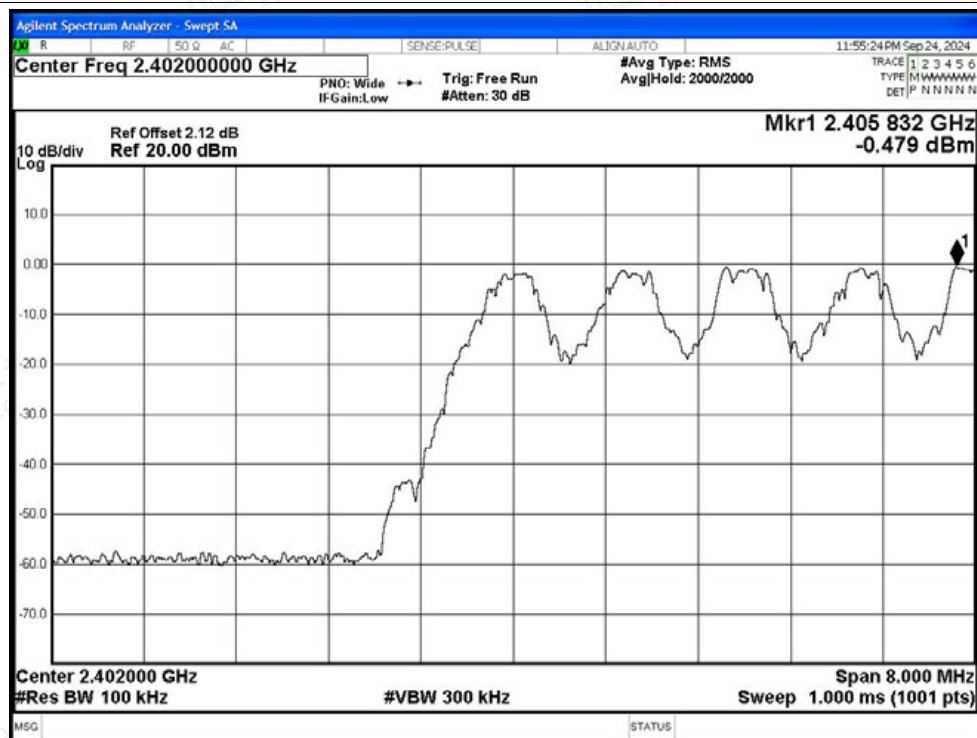
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-54.86	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-57.08	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-52.84	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-54.26	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-52.52	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-53.52	-20	Pass



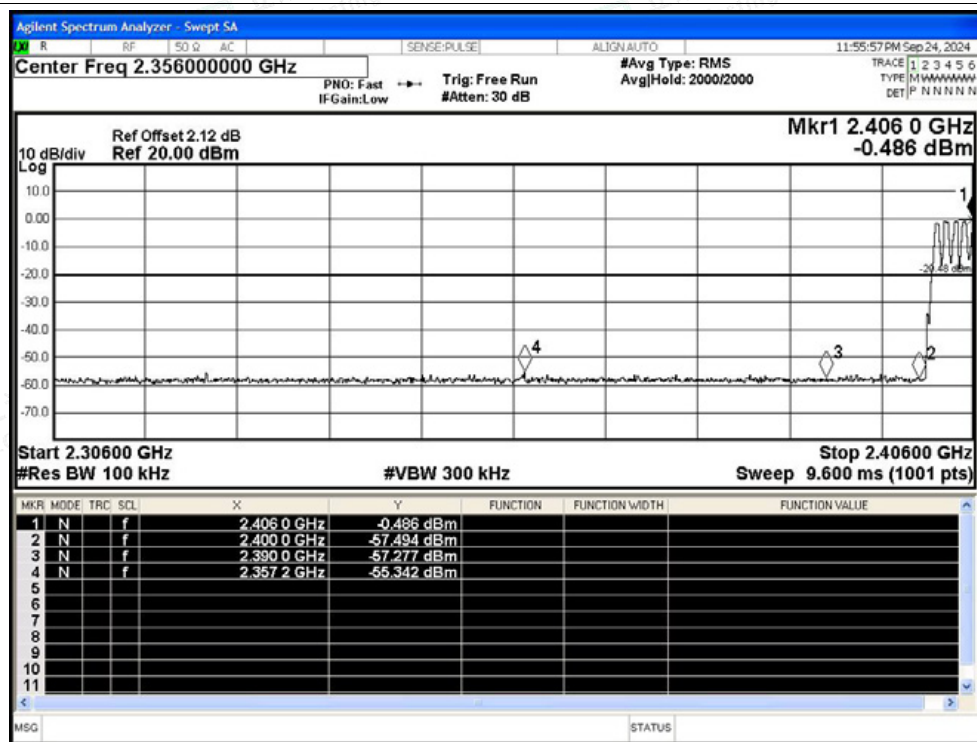


Test Graphs

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



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



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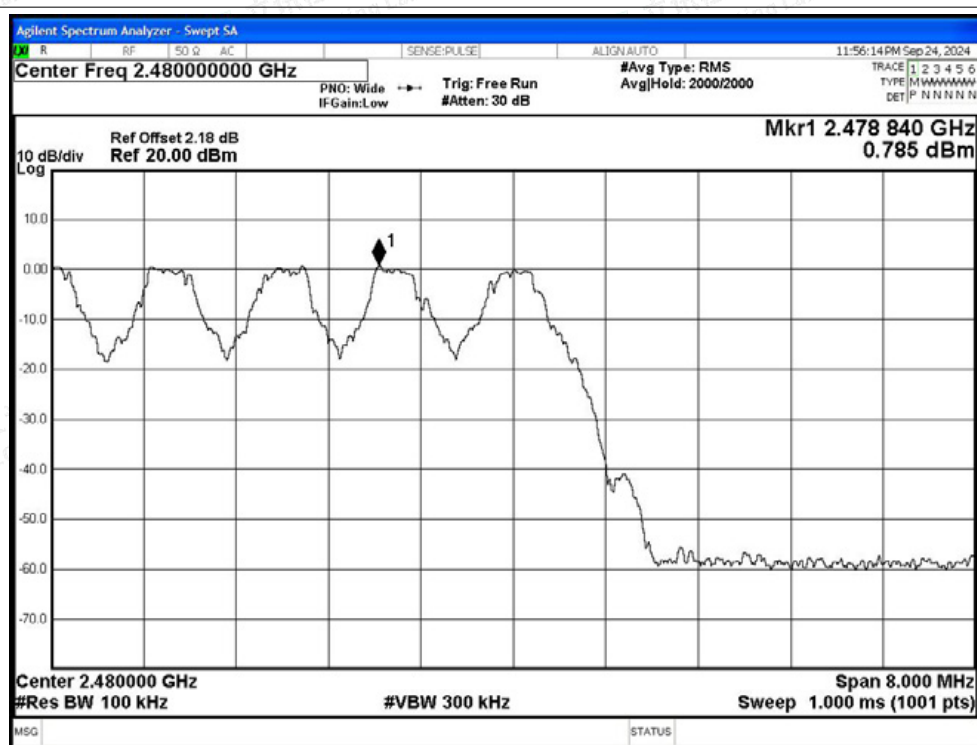
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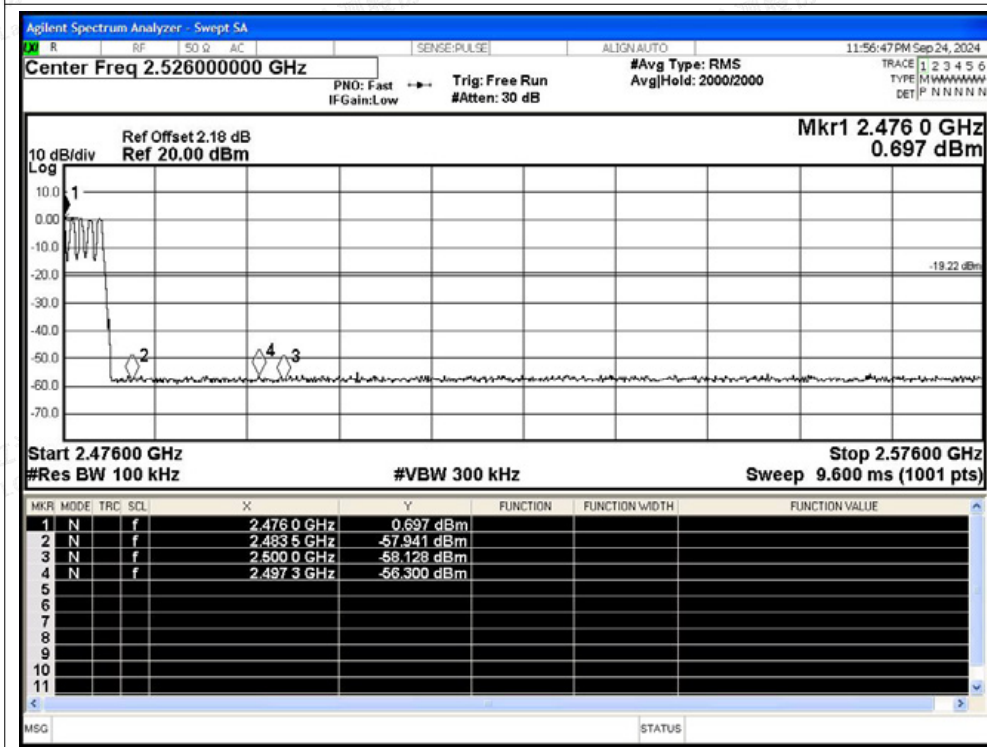
Scan code to check authenticity



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



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



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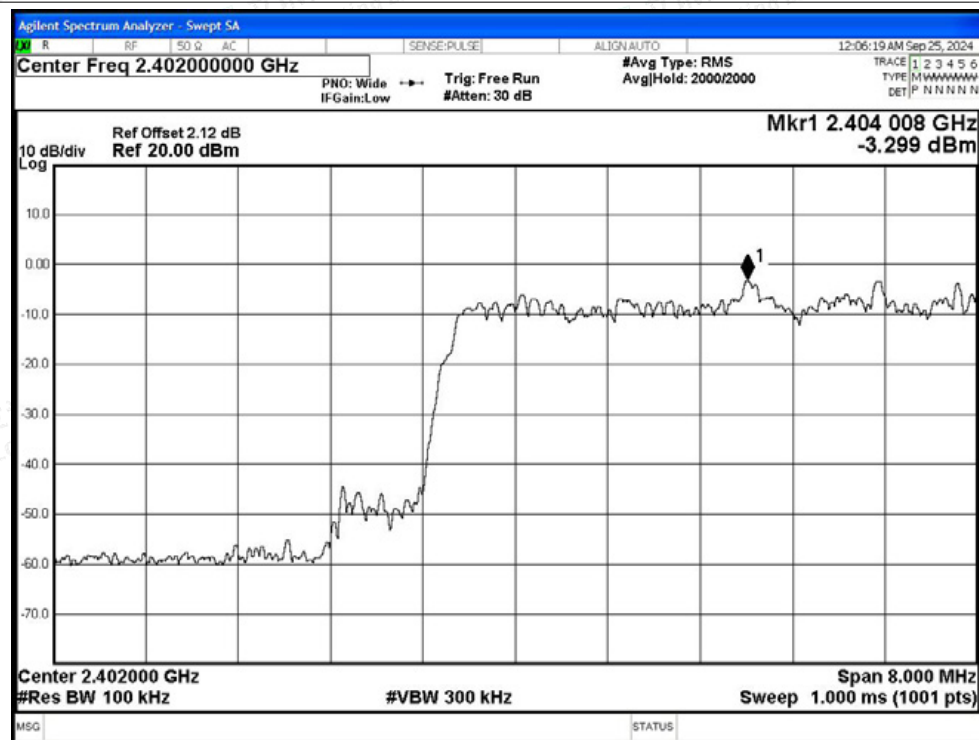
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

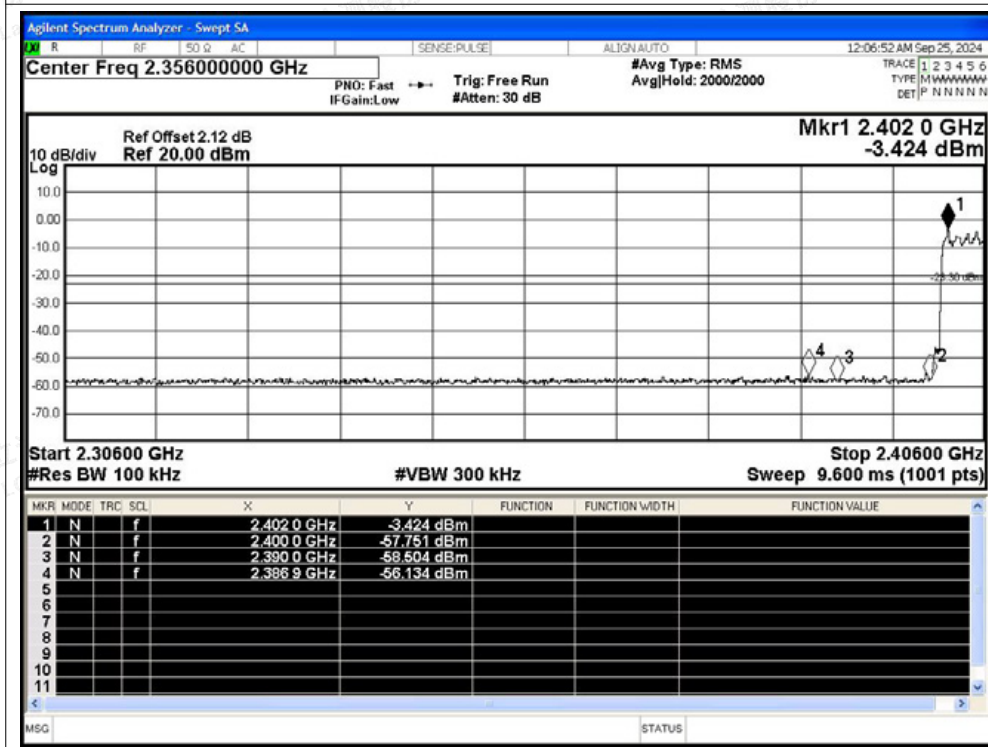
Scan code to check authenticity



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

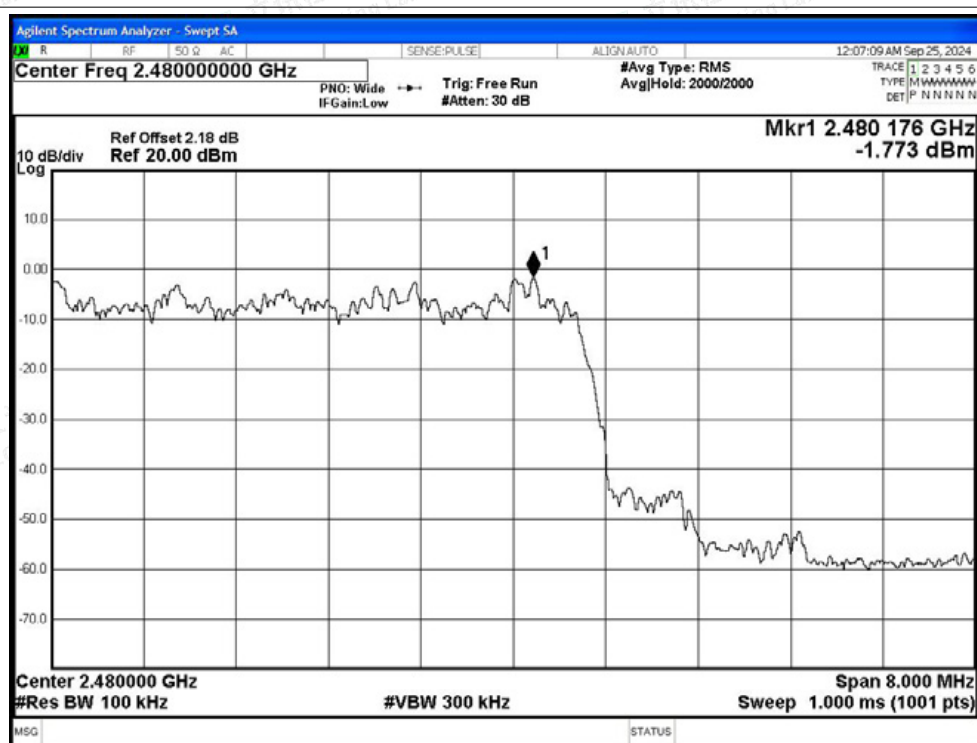


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

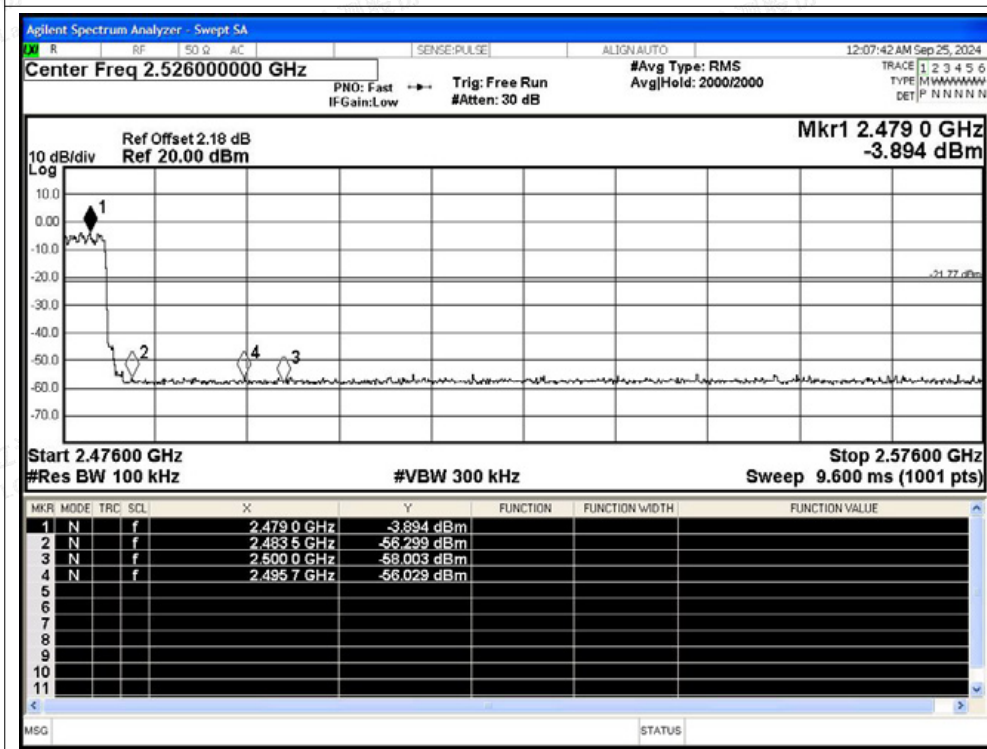




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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



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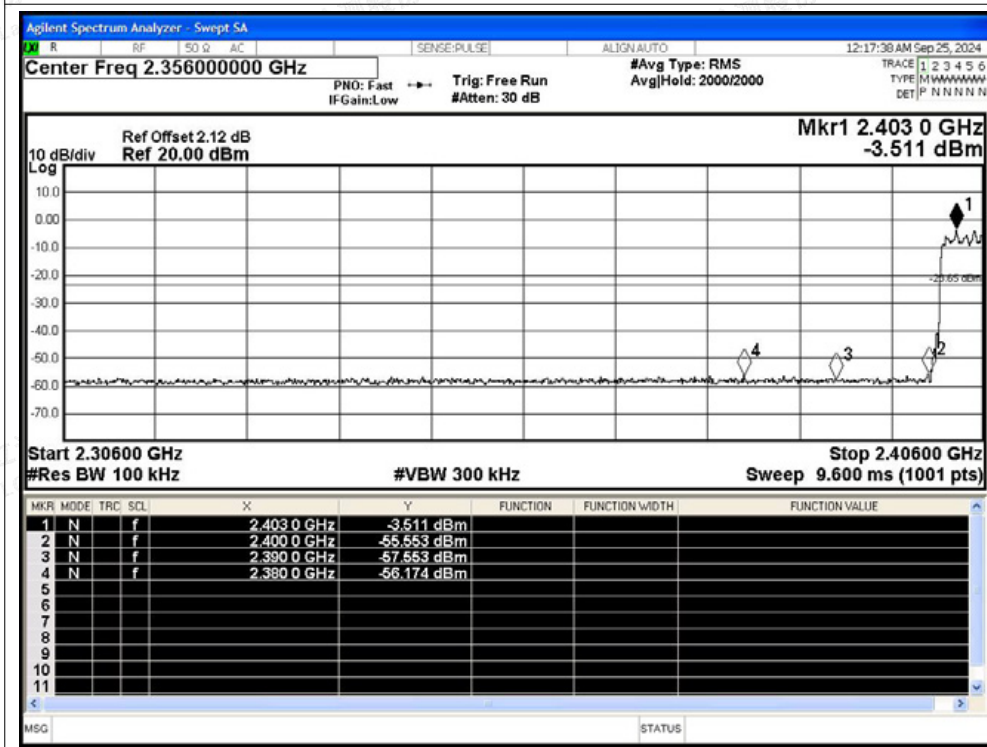
Scan code to check authenticity



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



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



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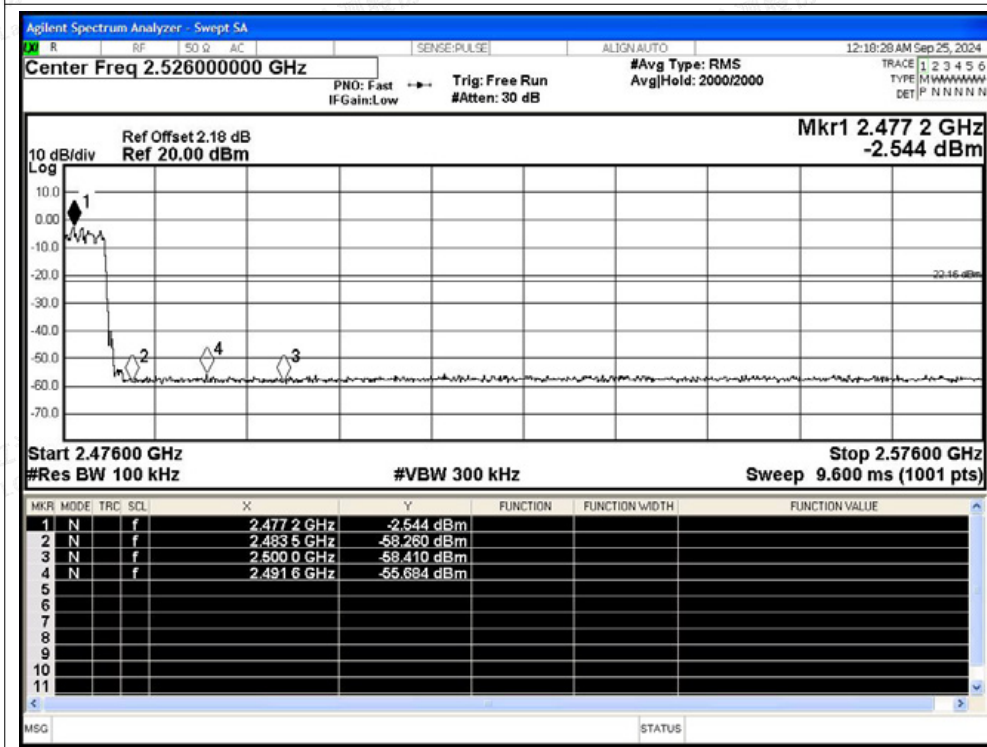
Scan code to check authenticity



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



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



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A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-53.67	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.97	-20	Pass
NVNT	1-DH5	2480	Ant1	-56.04	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.68	-20	Pass
NVNT	2-DH5	2441	Ant1	-52.11	-20	Pass
NVNT	2-DH5	2480	Ant1	-53.45	-20	Pass
NVNT	3-DH5	2402	Ant1	-51.33	-20	Pass
NVNT	3-DH5	2441	Ant1	-52.33	-20	Pass
NVNT	3-DH5	2480	Ant1	-52.14	-20	Pass

