



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Pepper C1 MUX RFID Reader

Test Model: v2

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
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	0.968	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.02	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.034	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.281	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.328	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.307	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.306	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.295	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.279	N/A	Pass



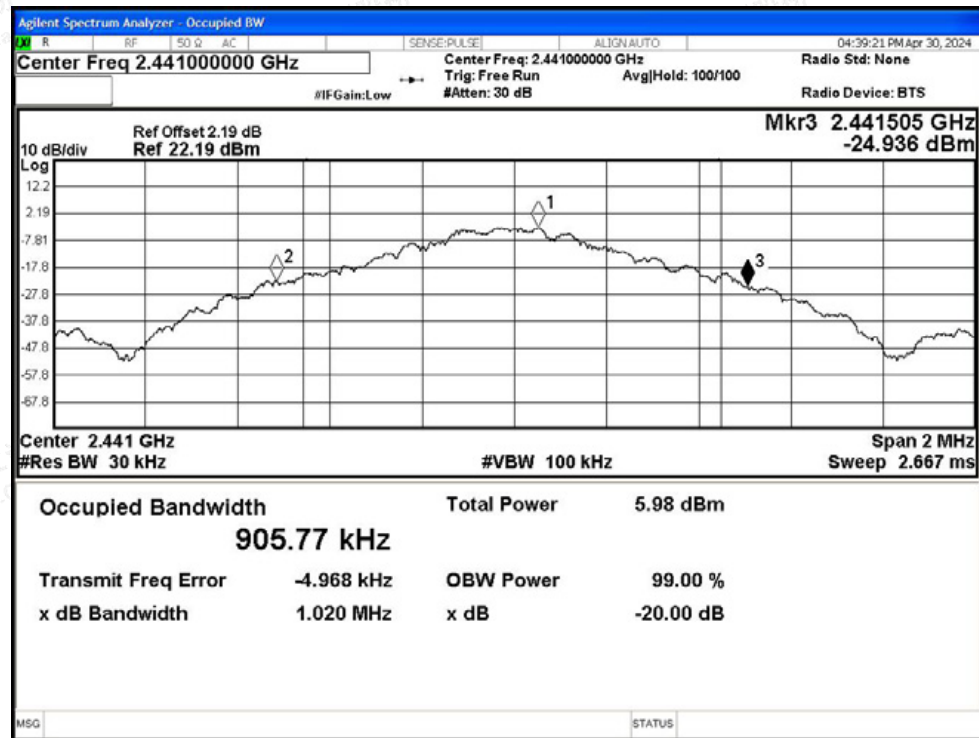


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

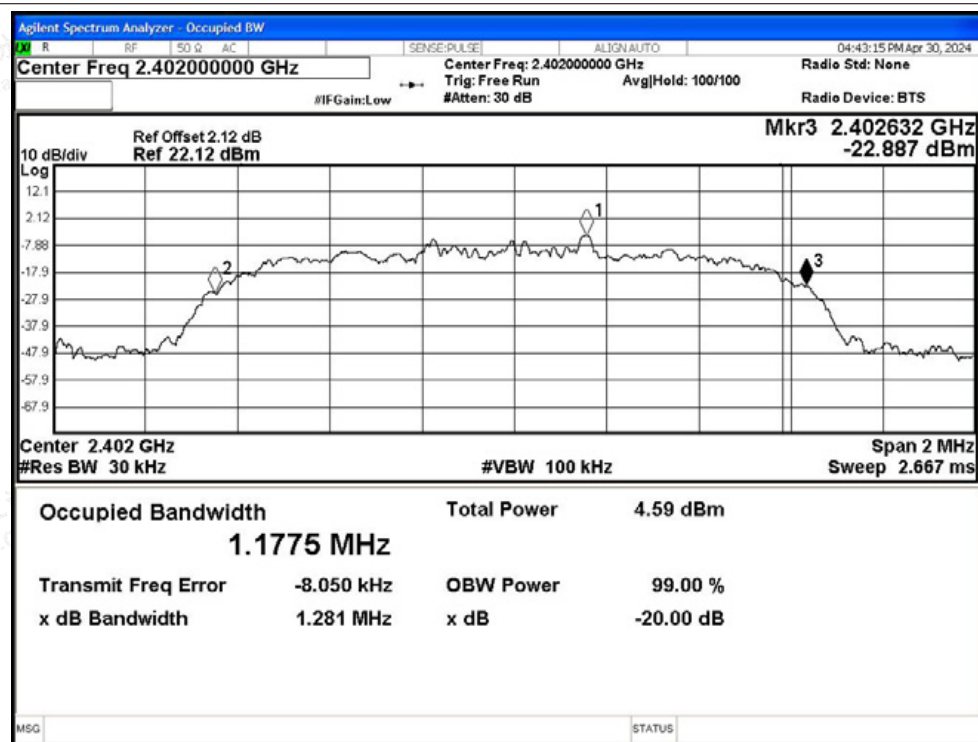




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

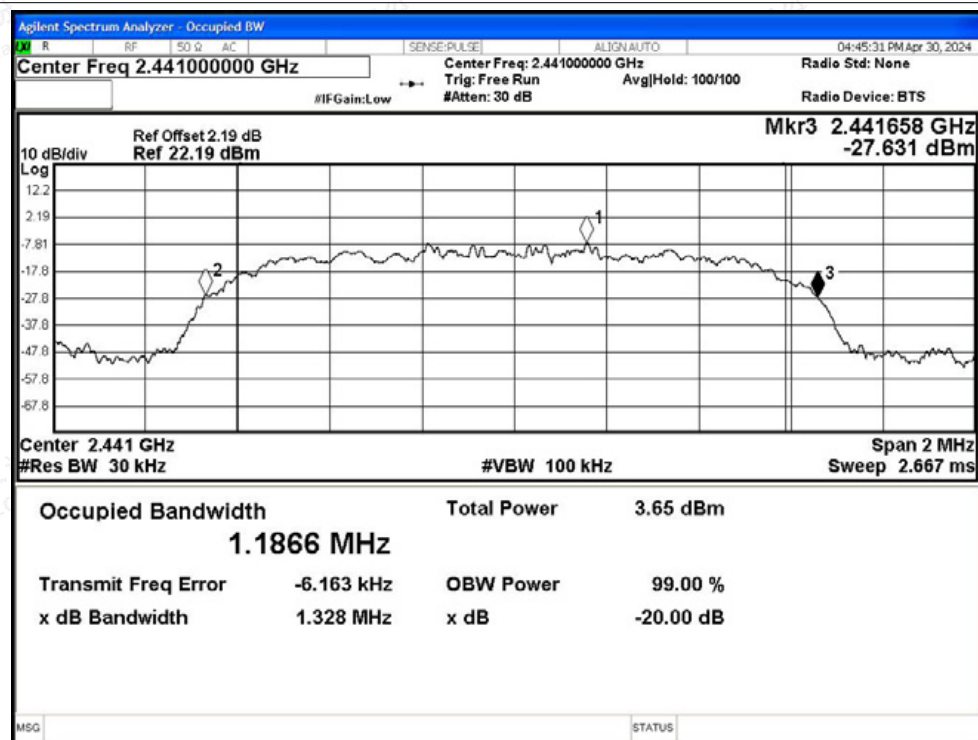


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

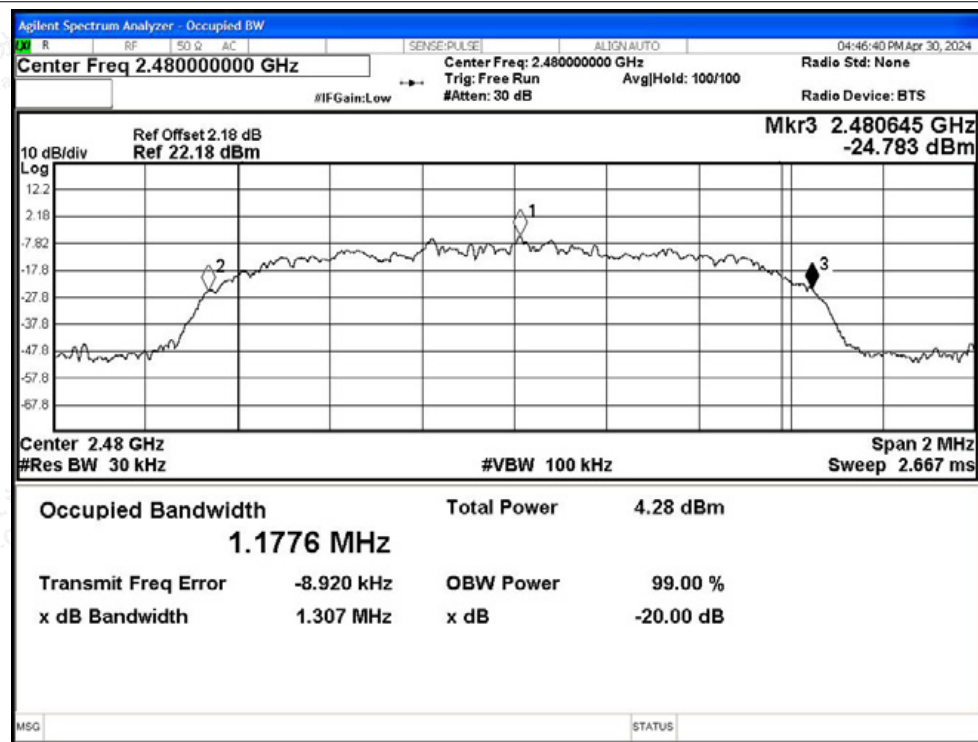




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



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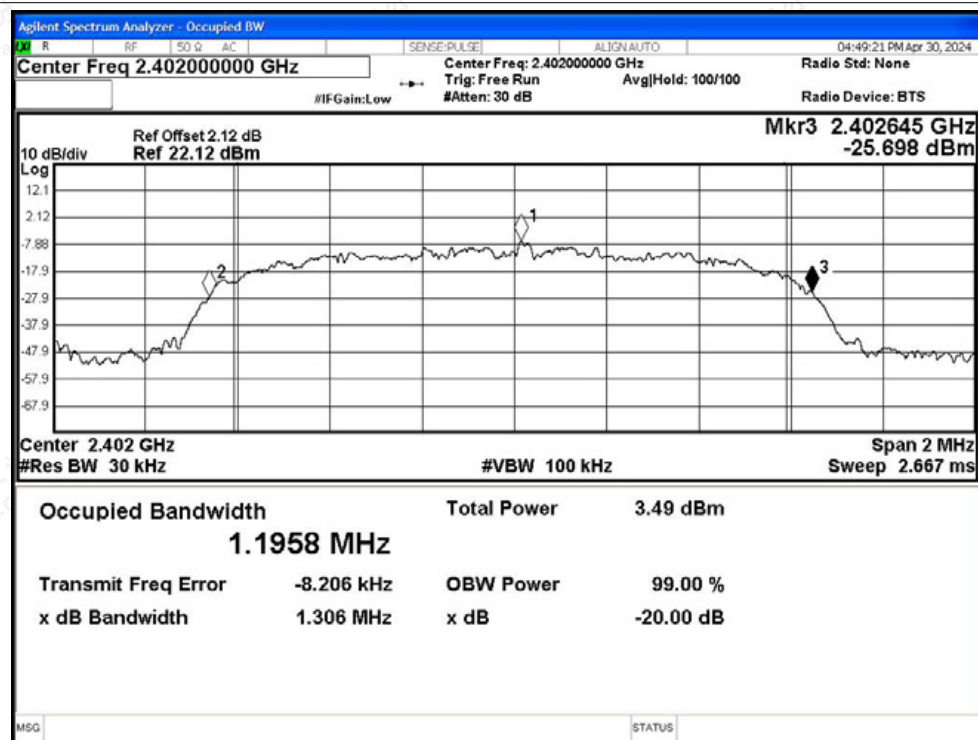
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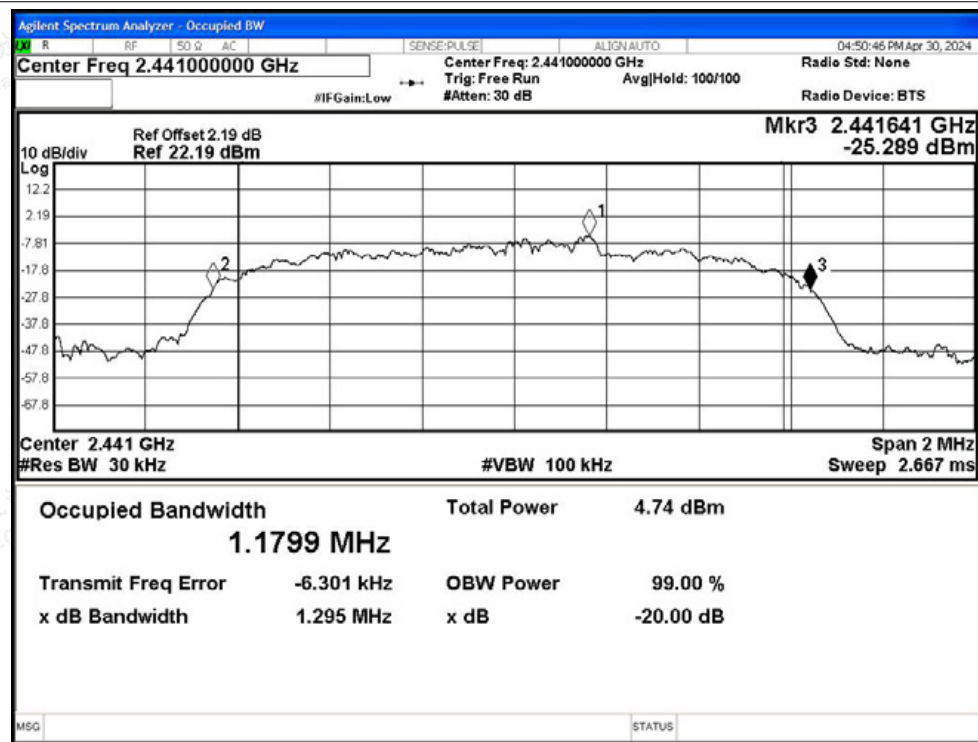
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-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1

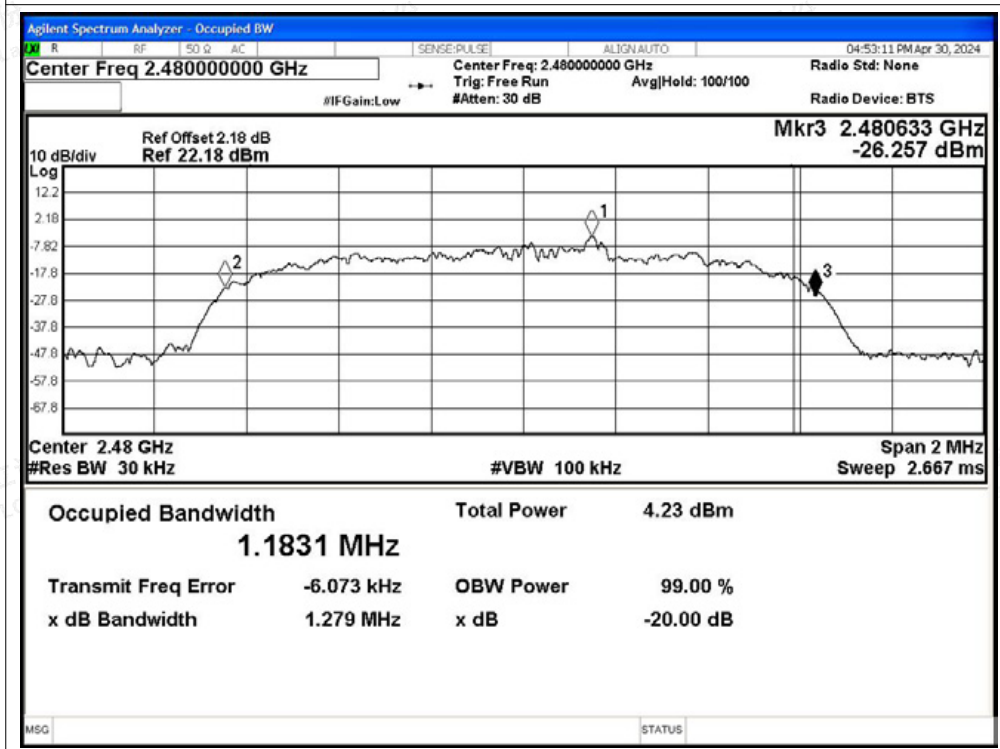


-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1





-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1





A.2 Maximum Peak Conducted Output Power

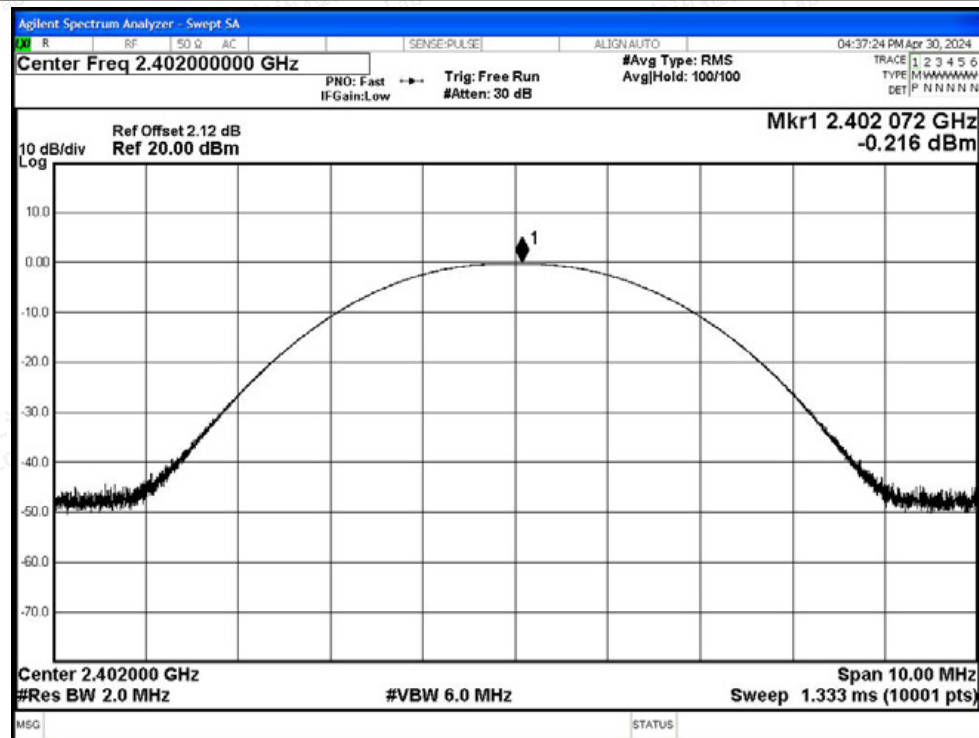
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.22	21	Pass
NVNT	1-DH5	2441	Ant1	0.24	21	Pass
NVNT	1-DH5	2480	Ant1	0.31	21	Pass
NVNT	2-DH5	2402	Ant1	-0.18	21	Pass
NVNT	2-DH5	2441	Ant1	-0.37	21	Pass
NVNT	2-DH5	2480	Ant1	-0.29	21	Pass
NVNT	3-DH5	2402	Ant1	-0.01	21	Pass
NVNT	3-DH5	2441	Ant1	-0.24	21	Pass
NVNT	3-DH5	2480	Ant1	-0.18	21	Pass



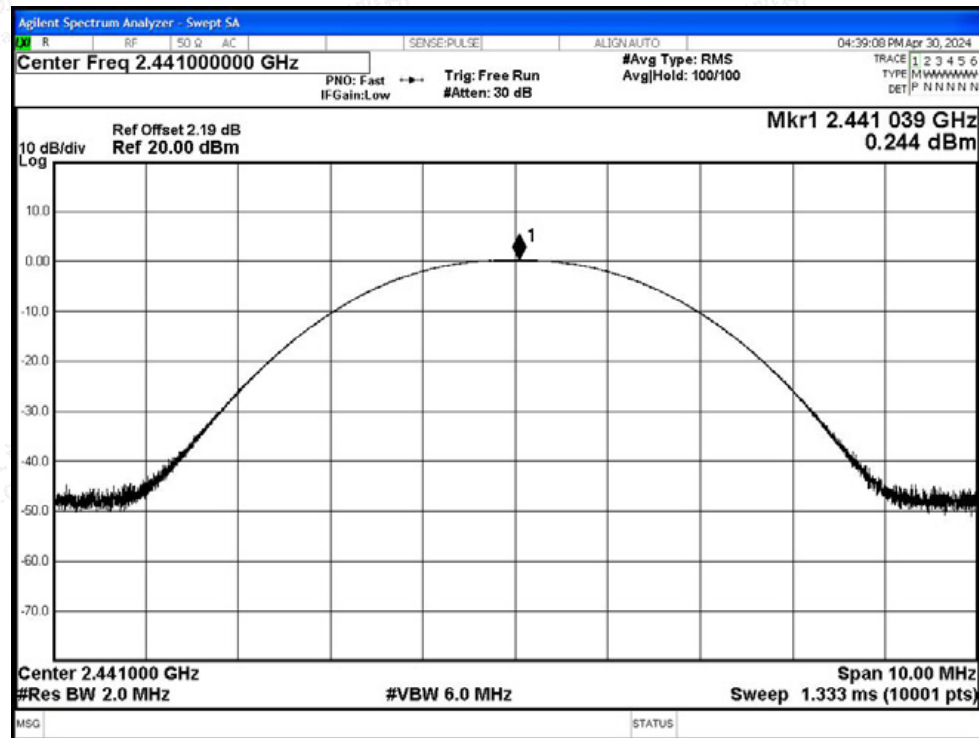


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

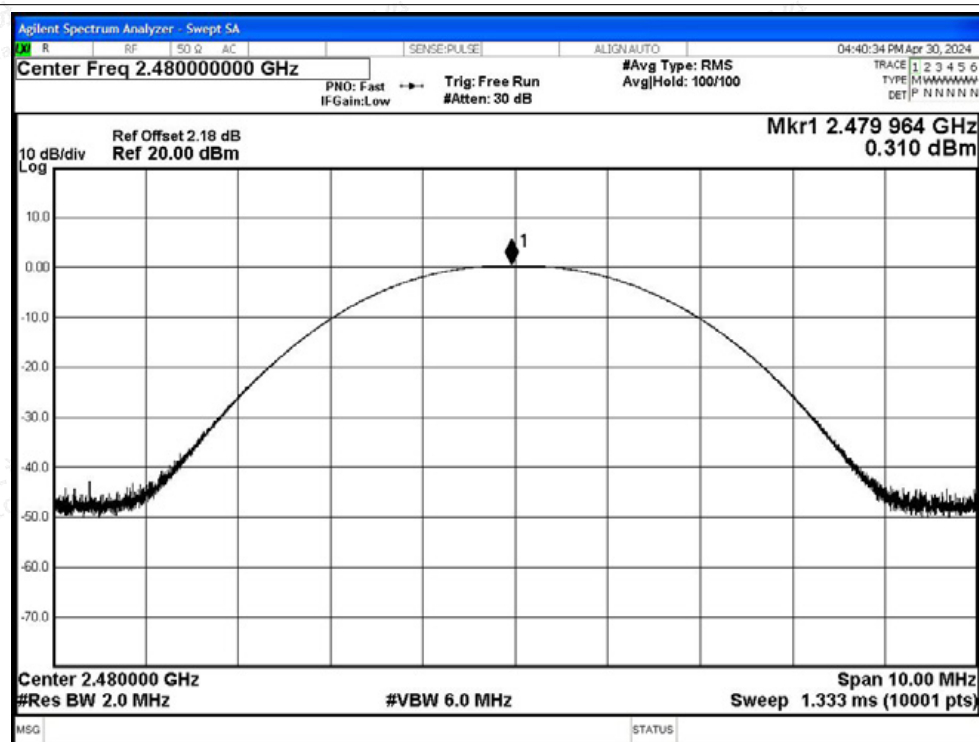


Power NVNT 1-DH5 2441MHz Ant1

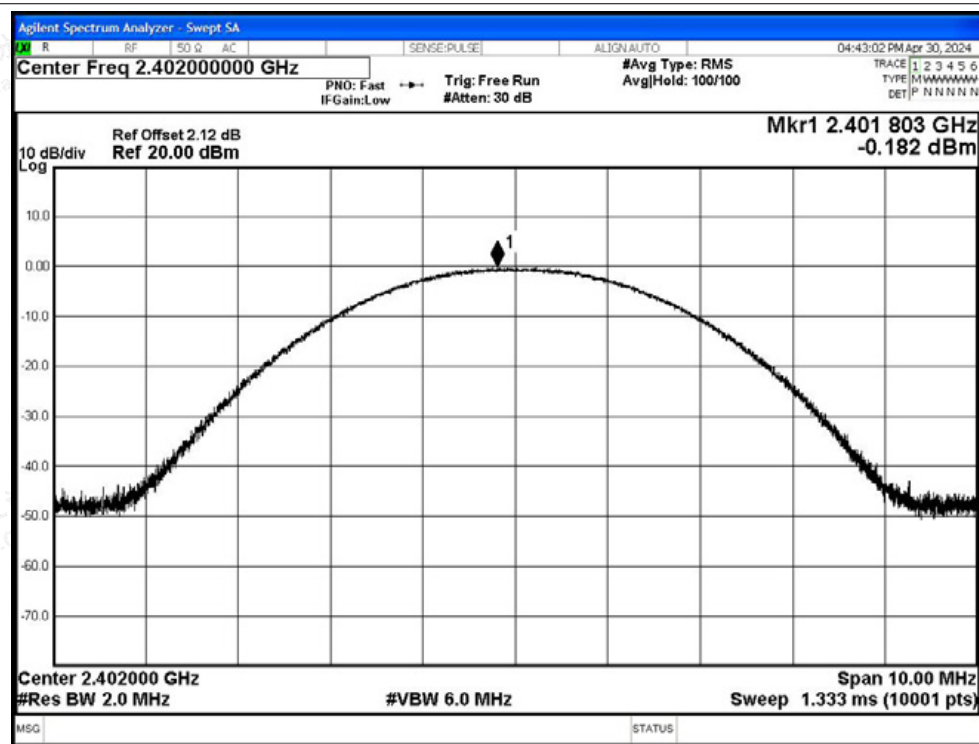




Power NVNT 1-DH5 2480MHz Ant1

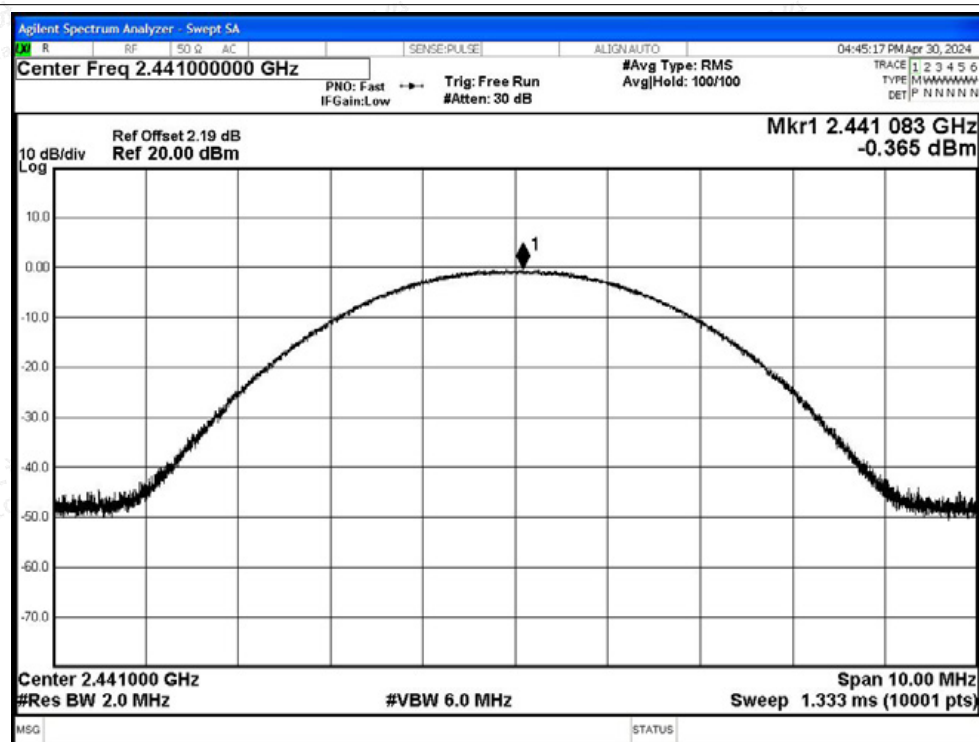


Power NVNT 2-DH5 2402MHz Ant1

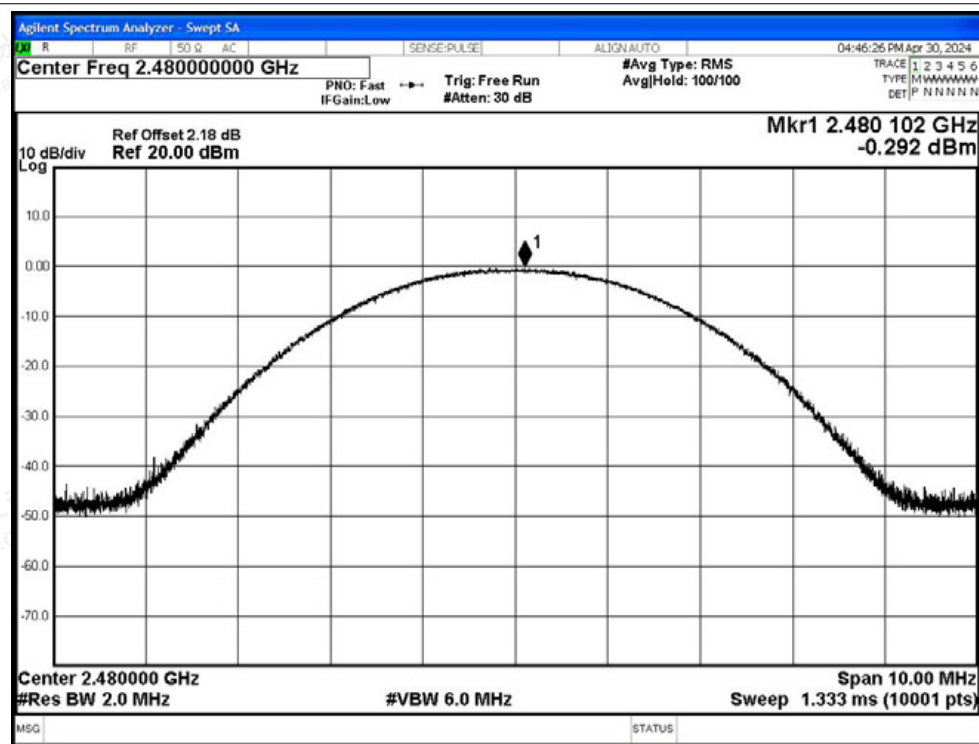




Power NVNT 2-DH5 2441MHz Ant1

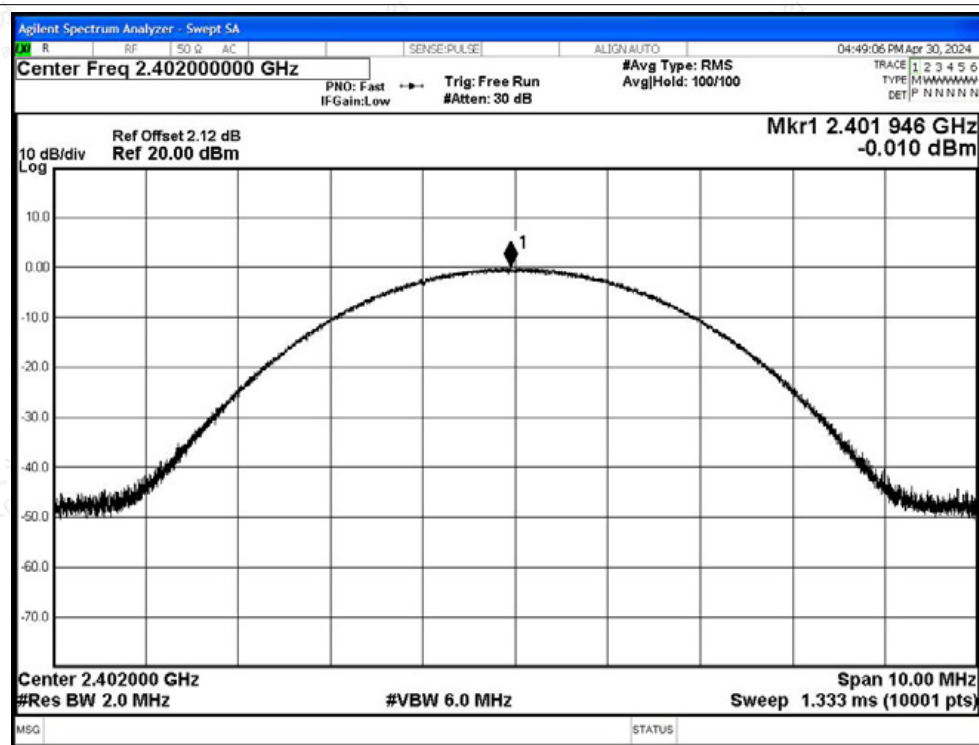


Power NVNT 2-DH5 2480MHz Ant1

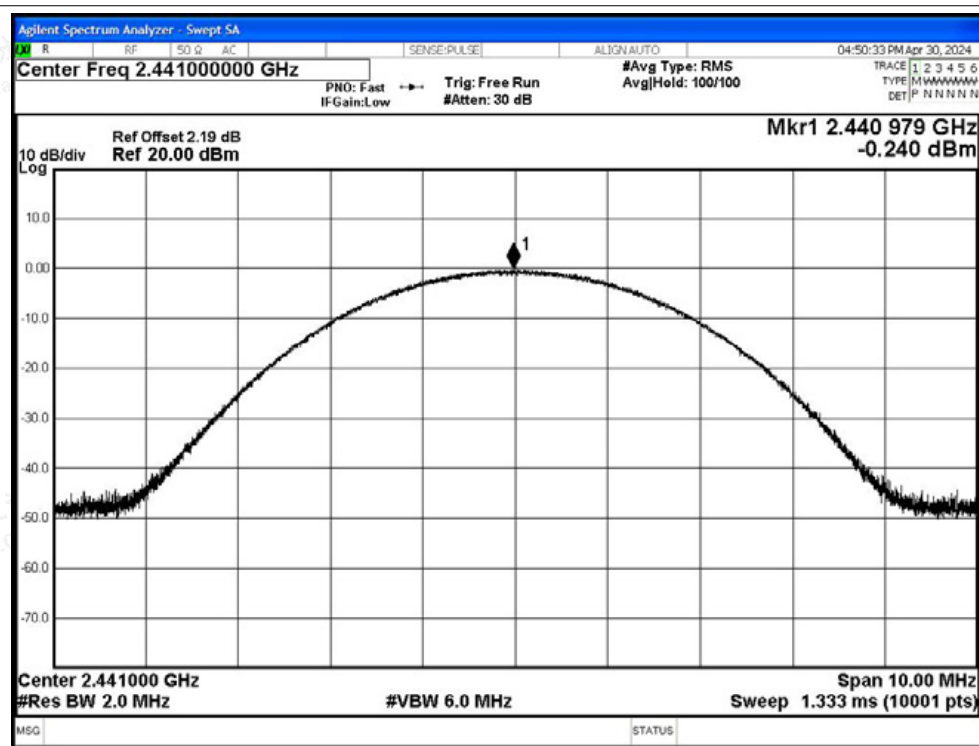


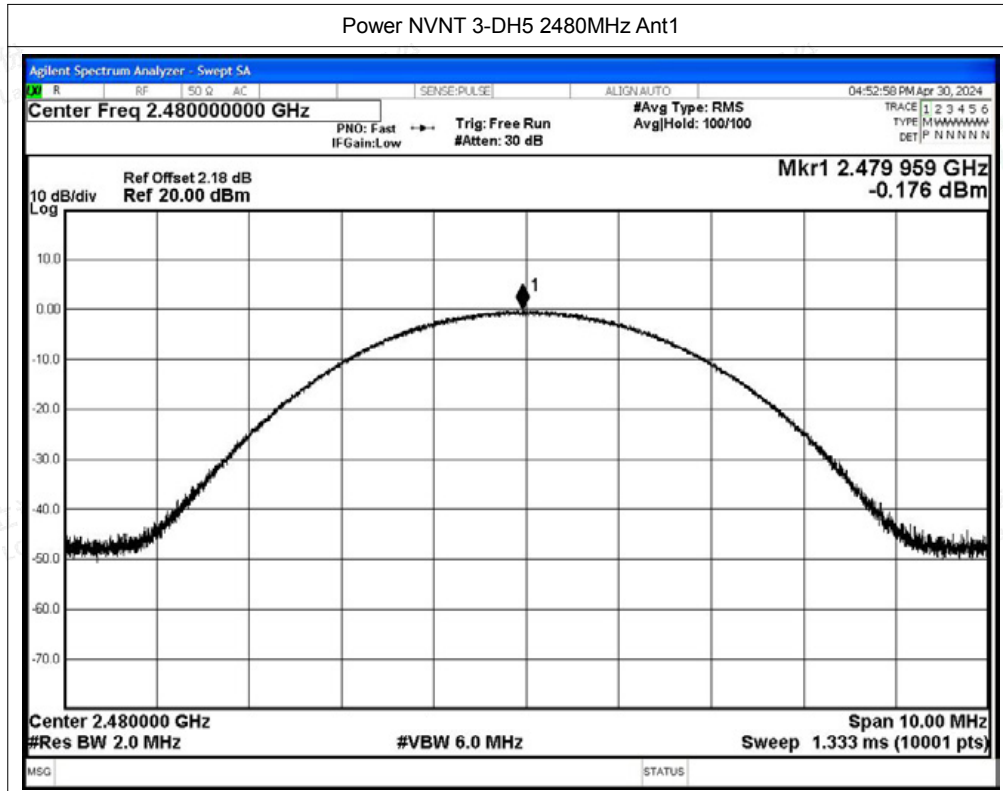


Power NVNT 3-DH5 2402MHz Ant1



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	2401.968	2403.156	1.188	0.689	Pass
NVNT	2-DH5	Ant1	2402.154	2403.012	0.858	0.885	Pass
NVNT	3-DH5	Ant1	2401.844	2403.16	1.316	0.871	Pass

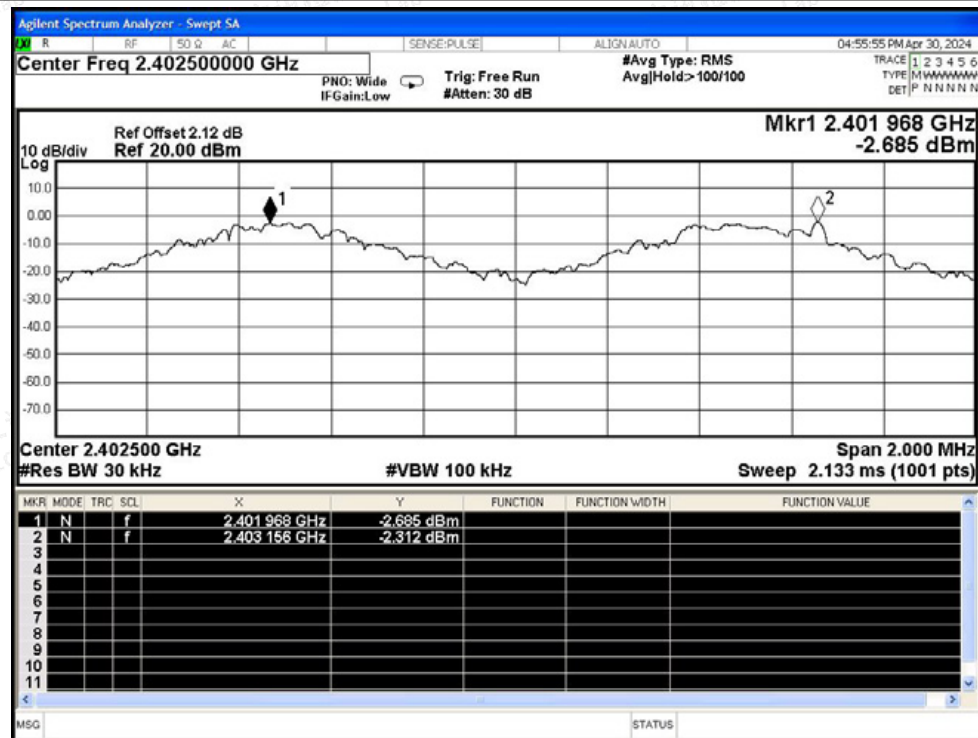


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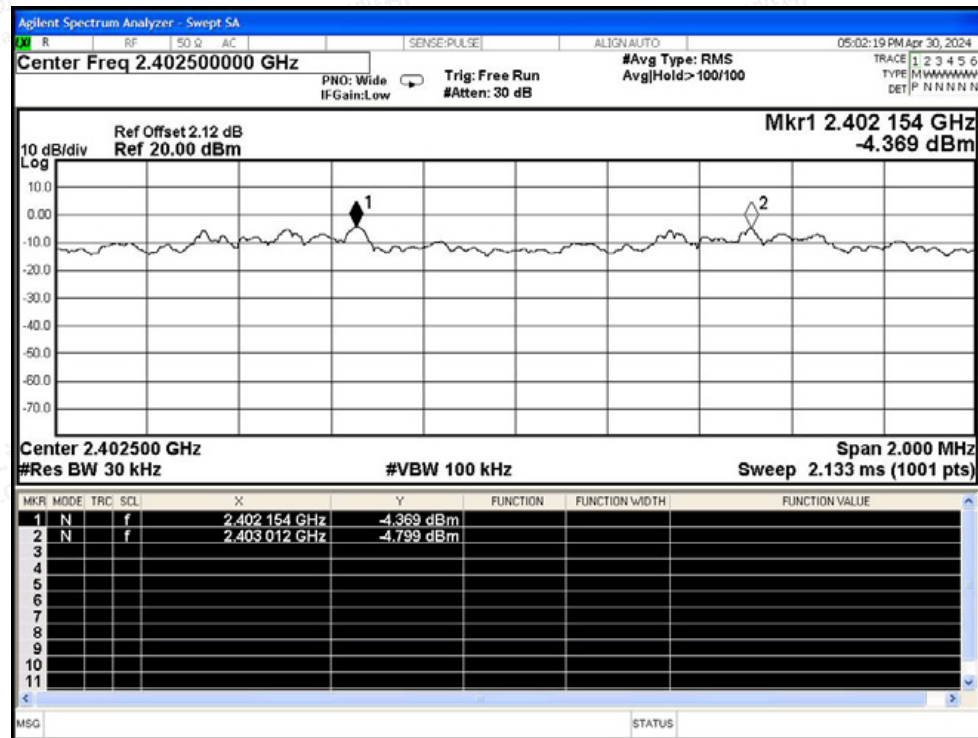


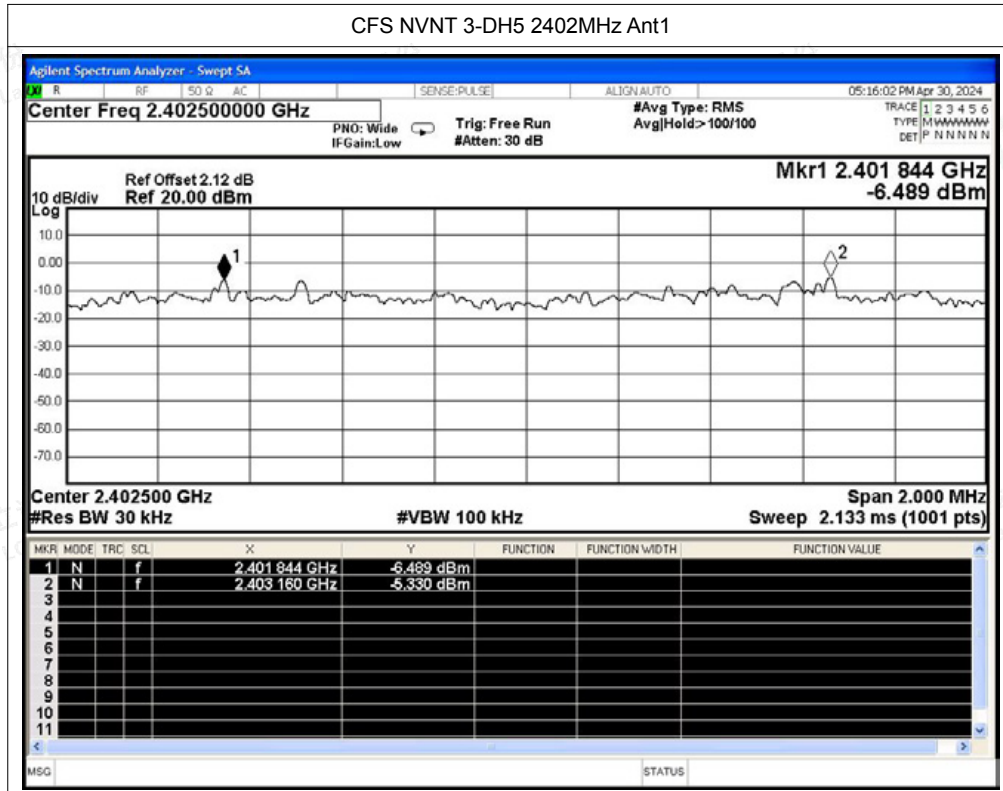
Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1







A.4 Dwell Time

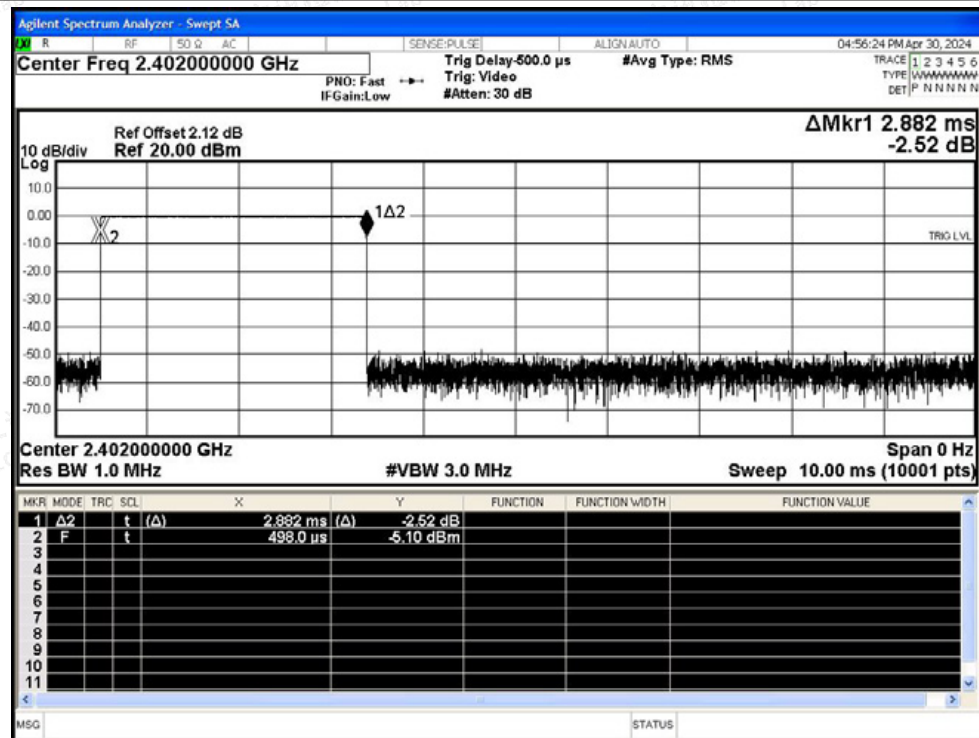
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	299.728	104	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.88	296.64	103	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.886	291.486	101	31600	400	Pass



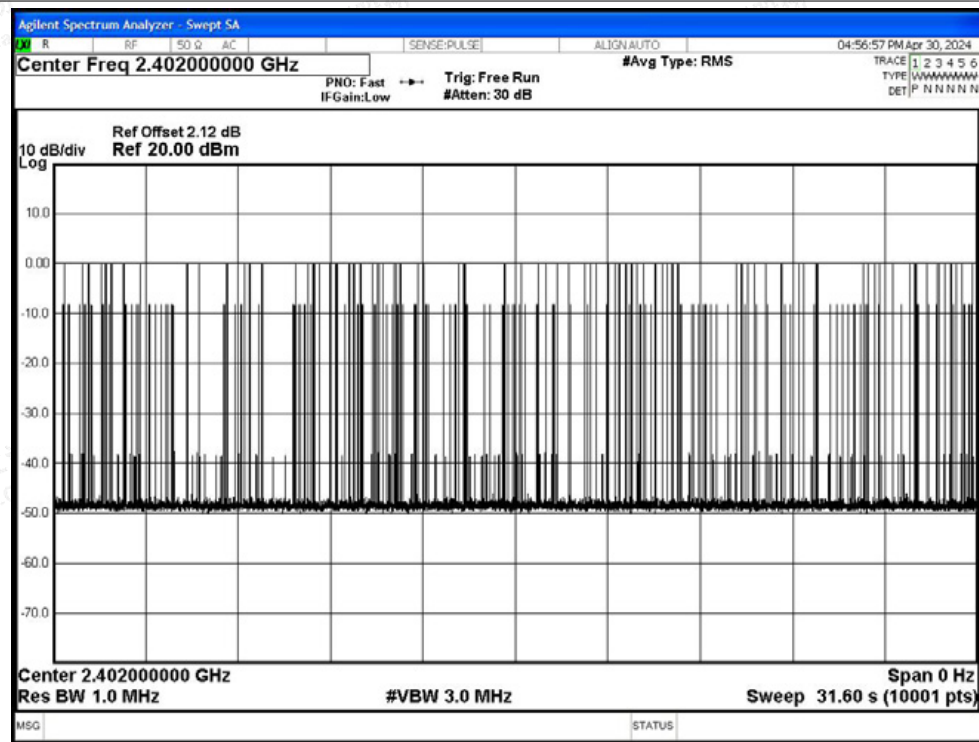


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

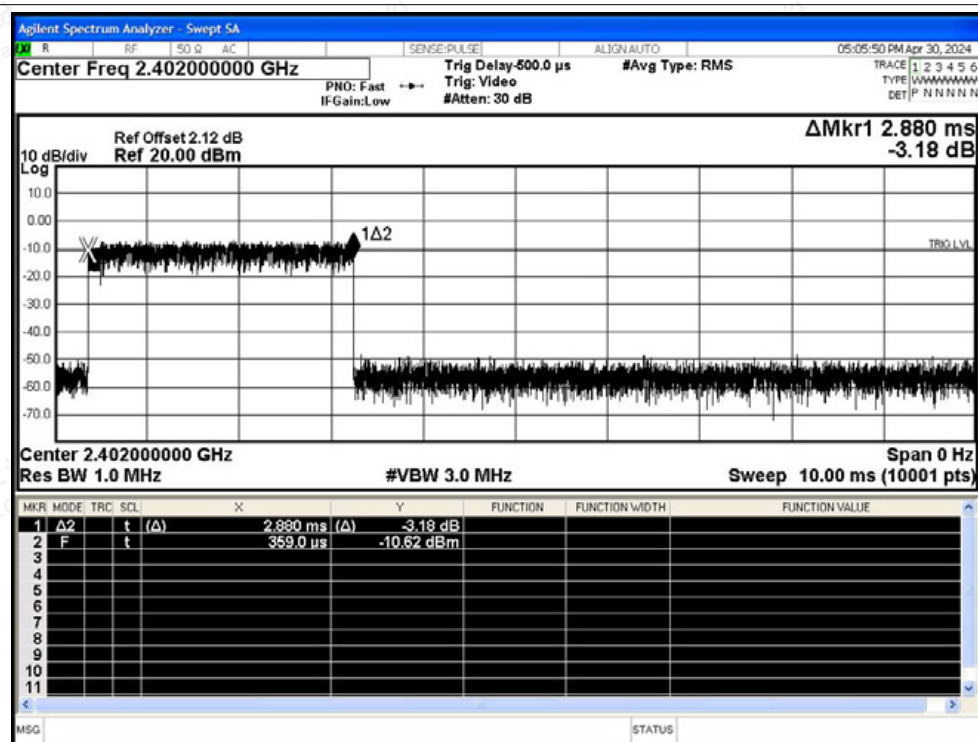


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

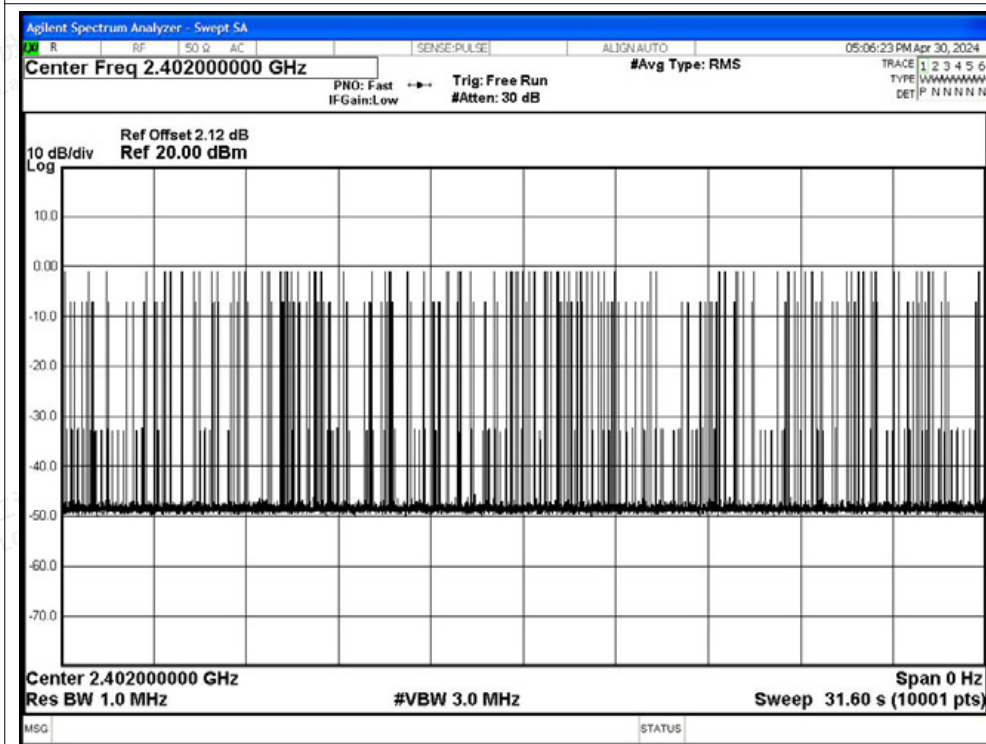




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

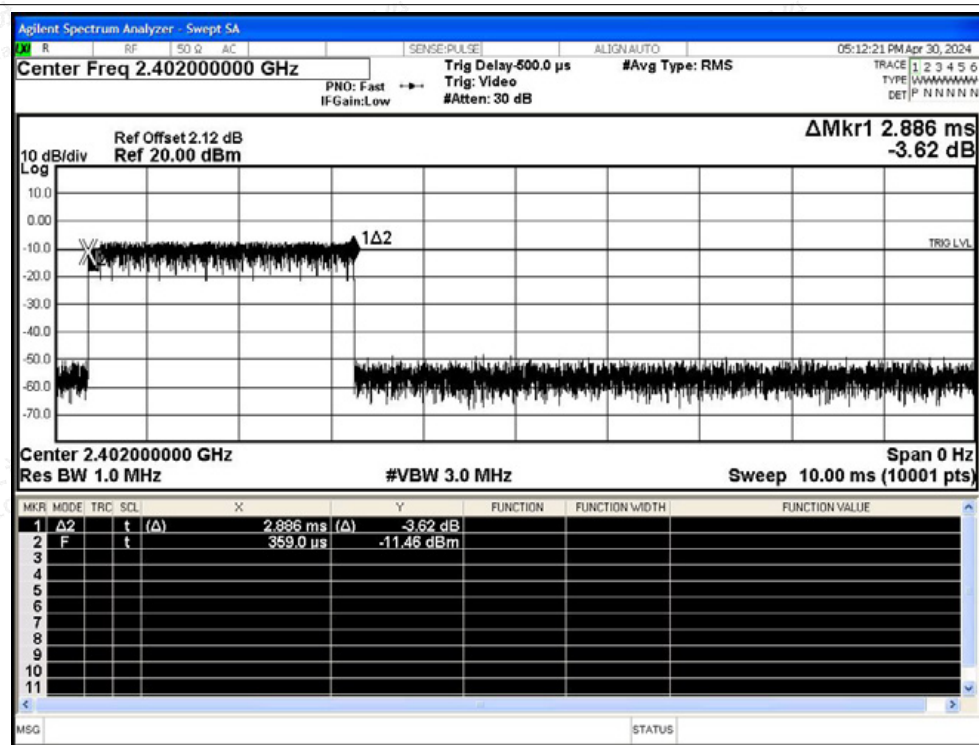


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

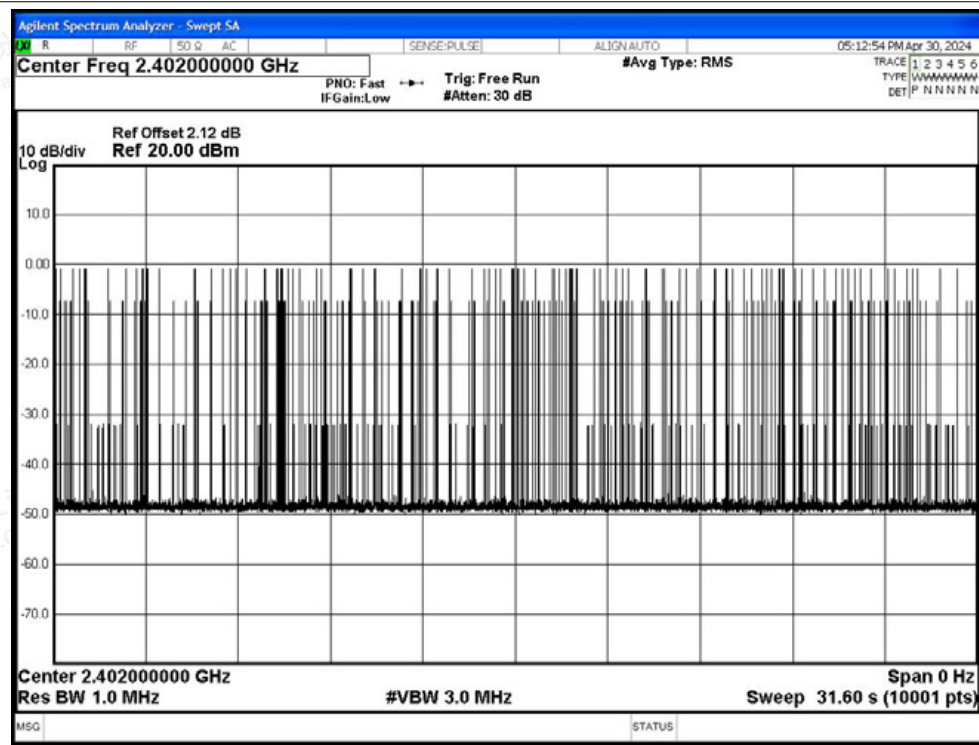




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated



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A.5 Number of Hopping Channel

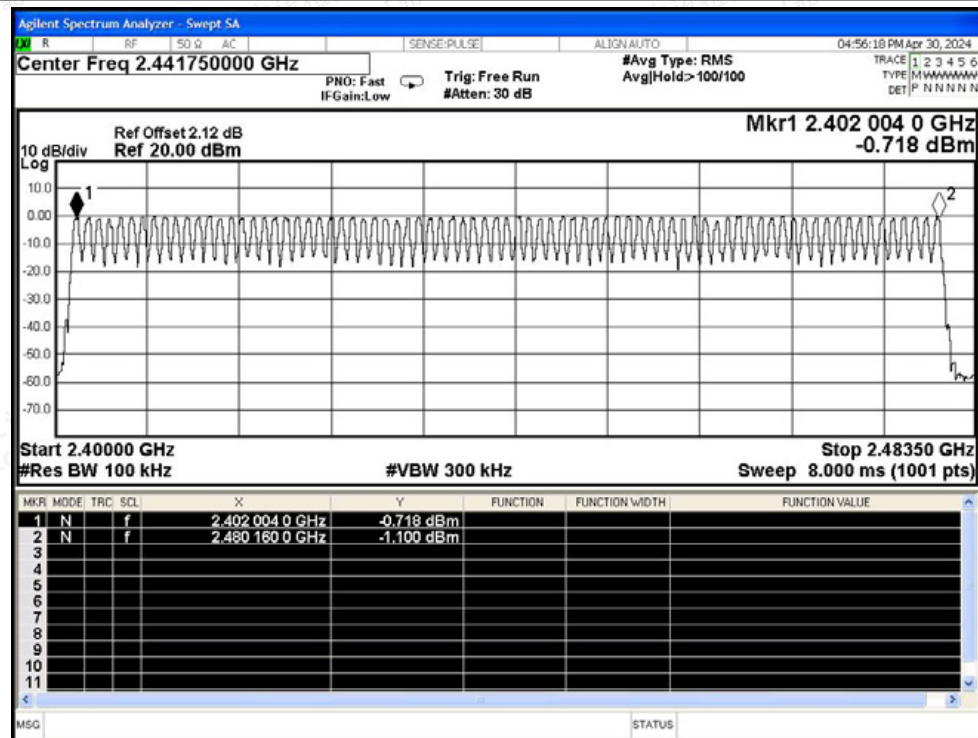
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



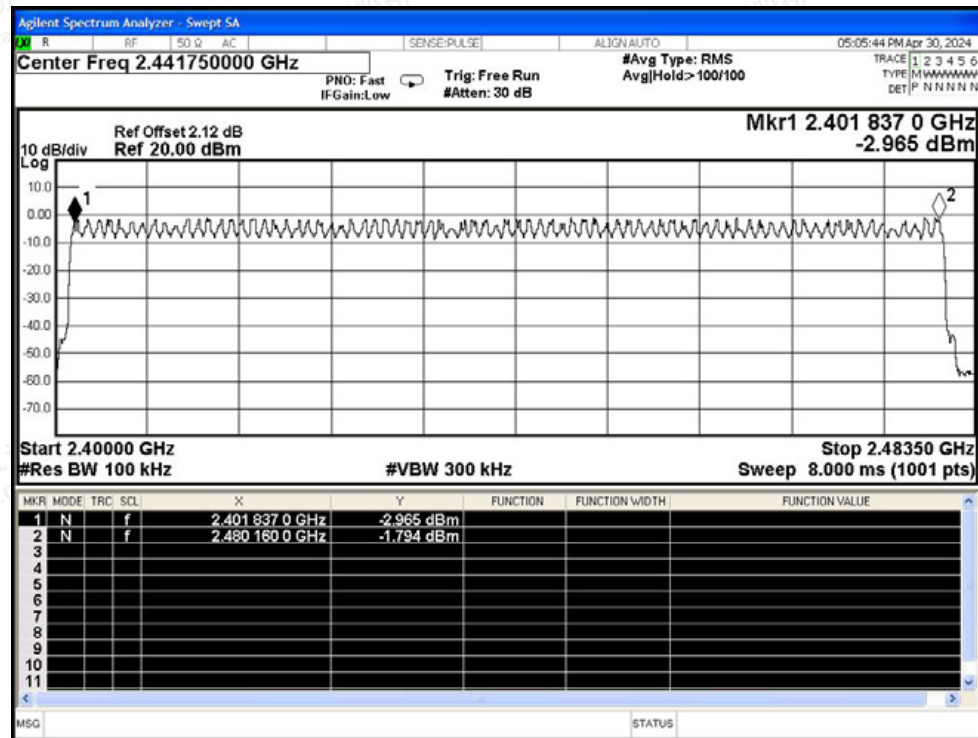


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

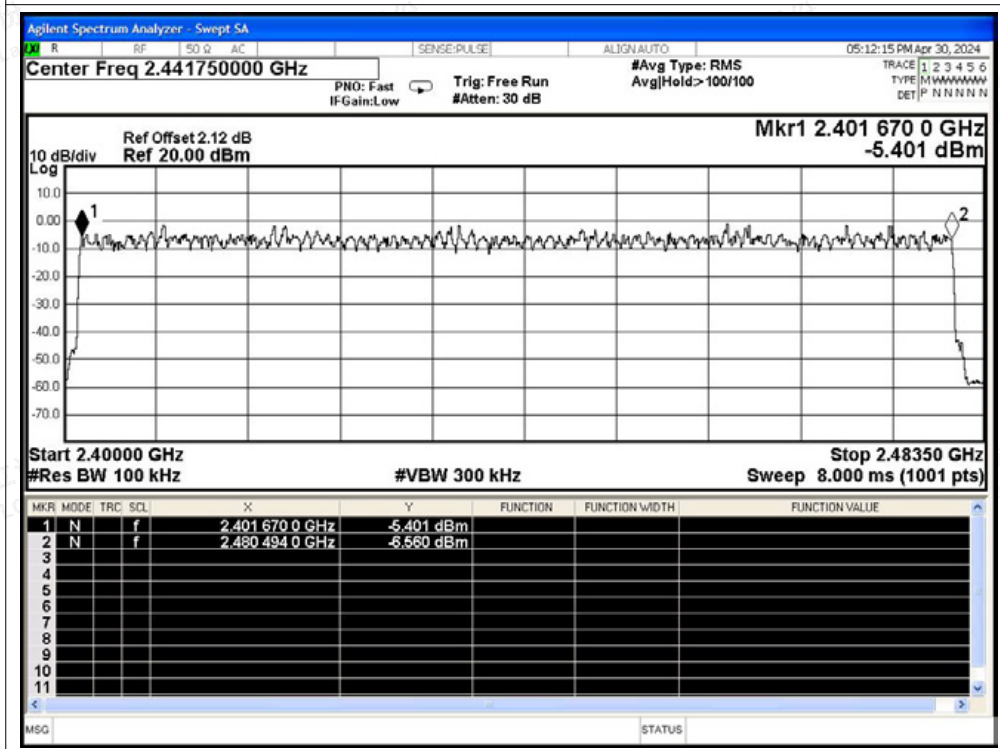


Hopping No. NVNT 2-DH5 2402MHz Ant1





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	-55.91	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.18	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-55.23	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-53.8	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-52.28	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-55.01	-20	Pass

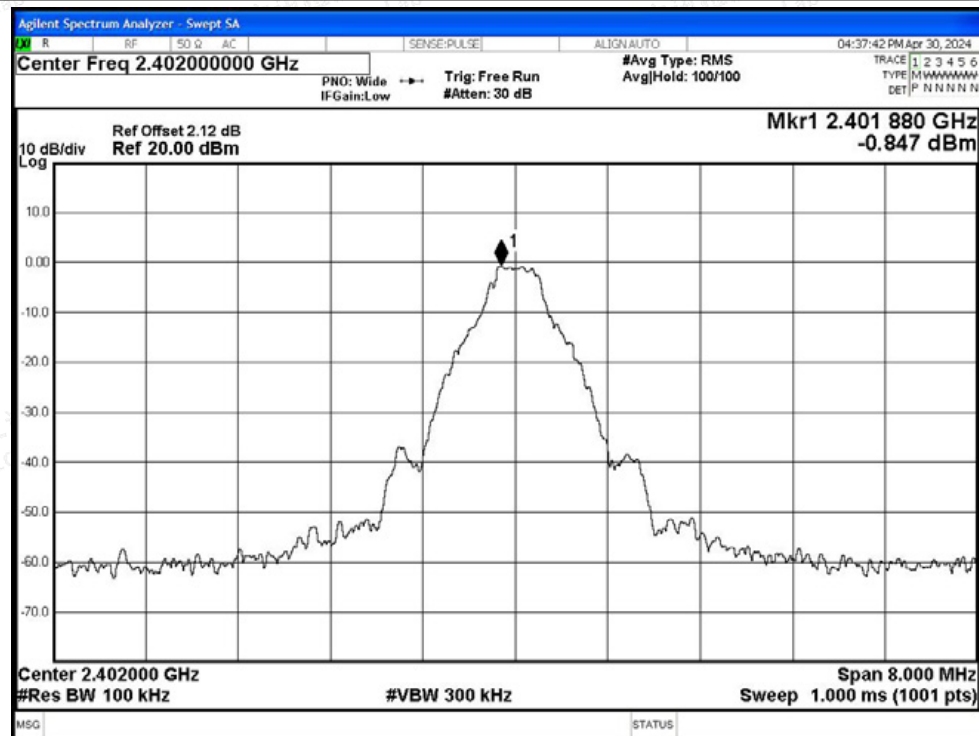


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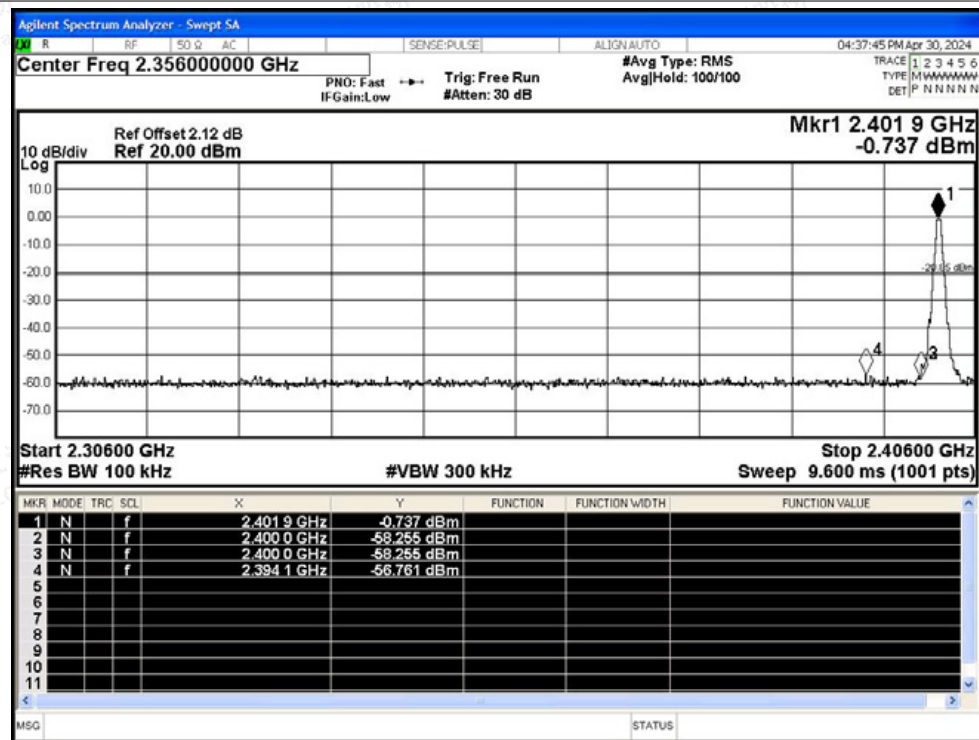


Test Graphs

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



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



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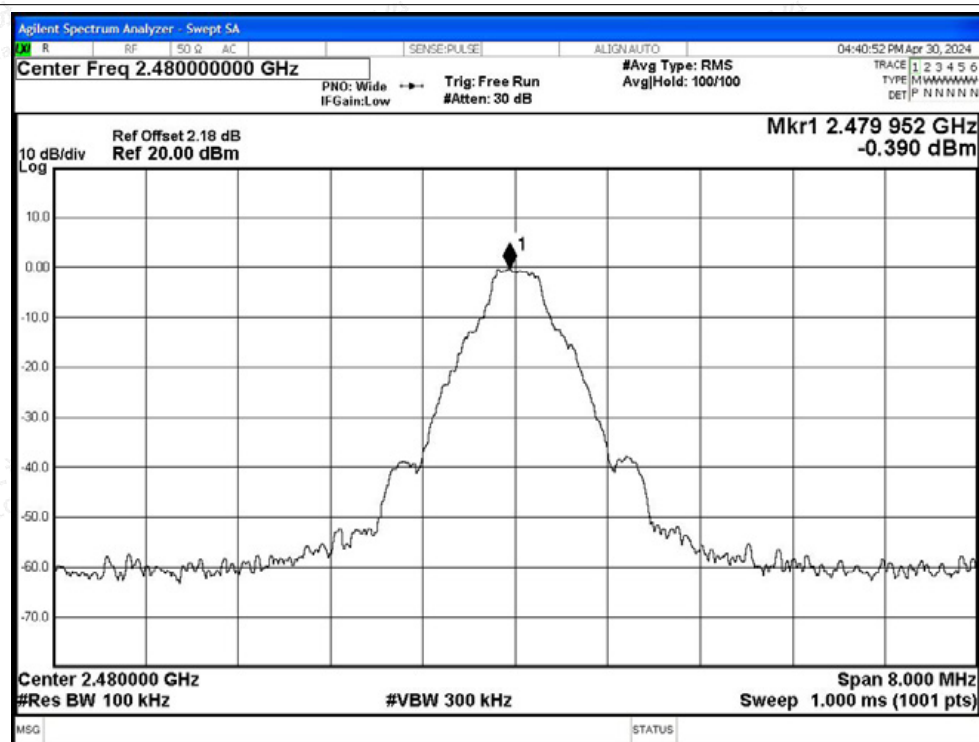
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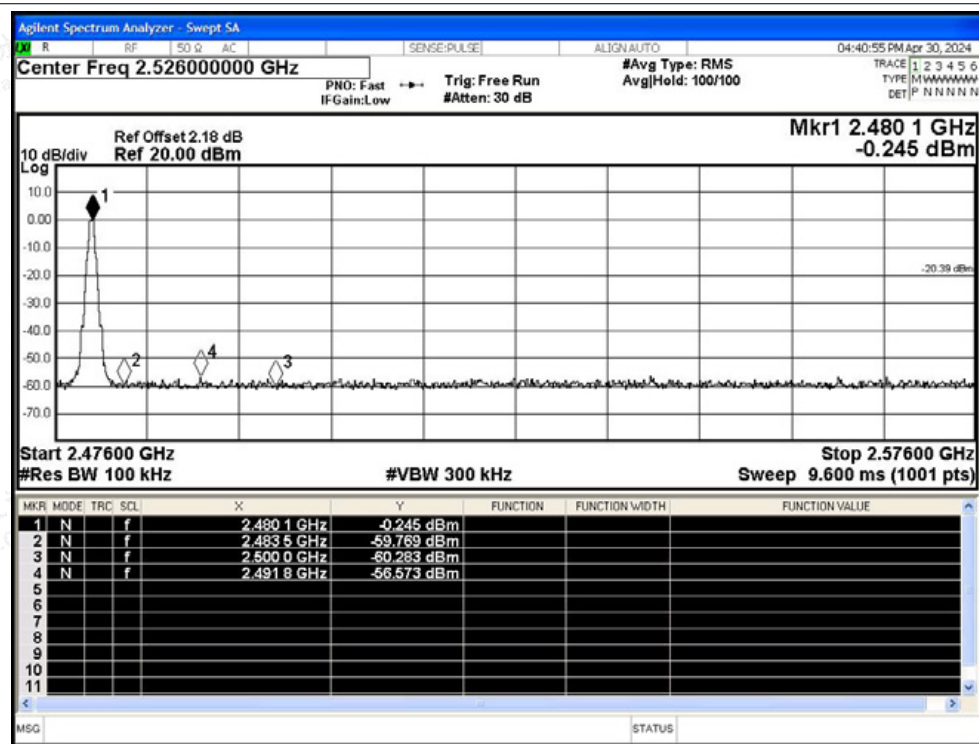
Scan code to check authenticity



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

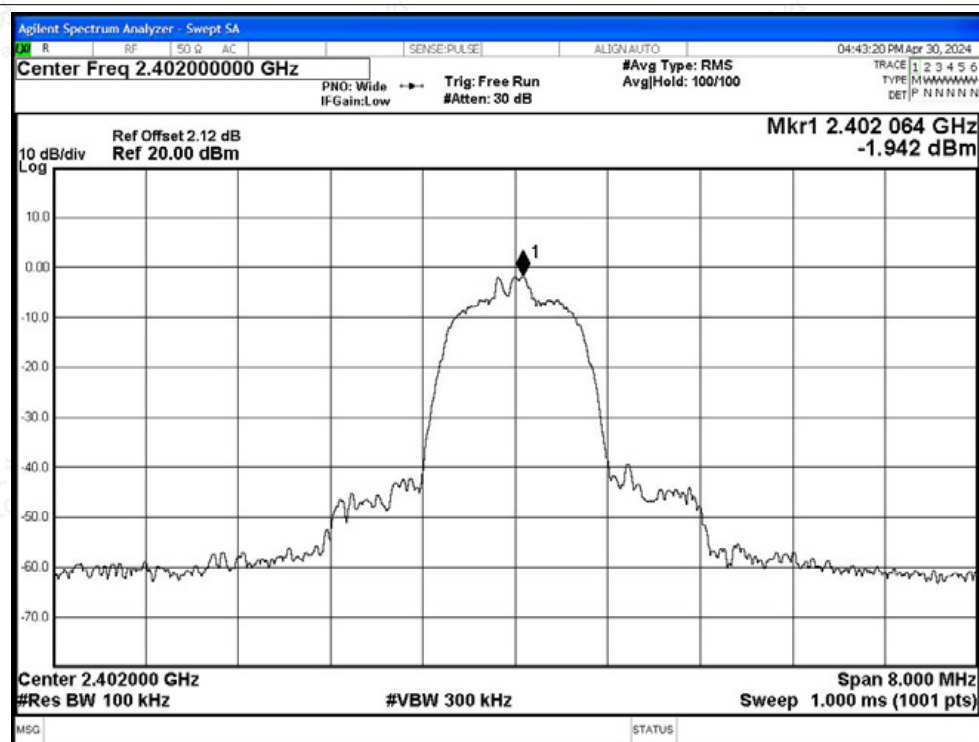


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

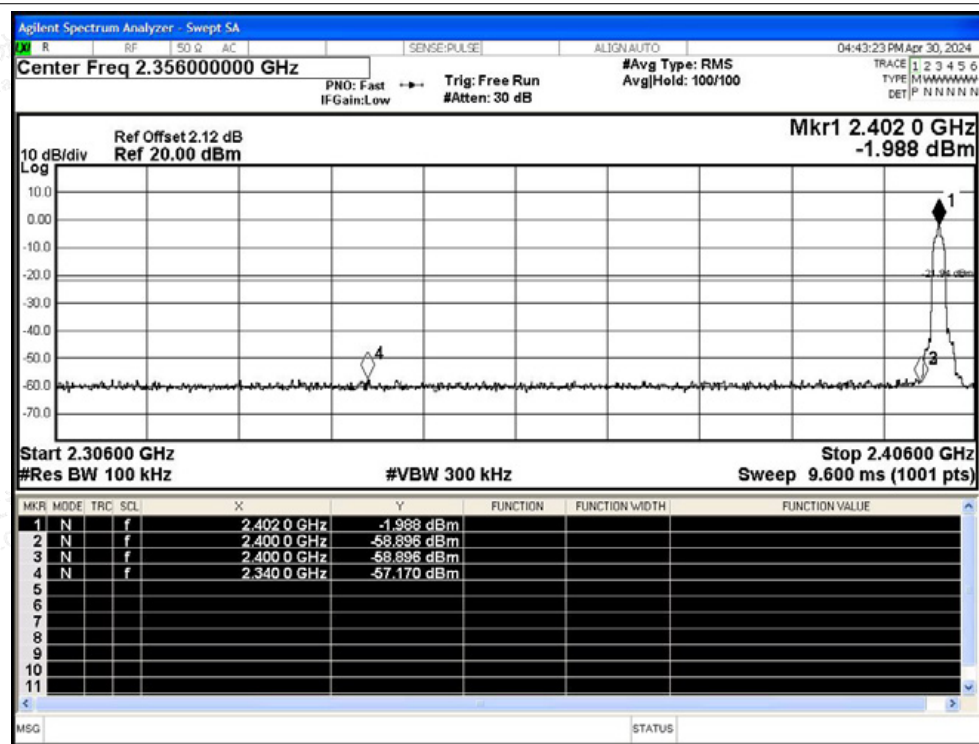




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



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



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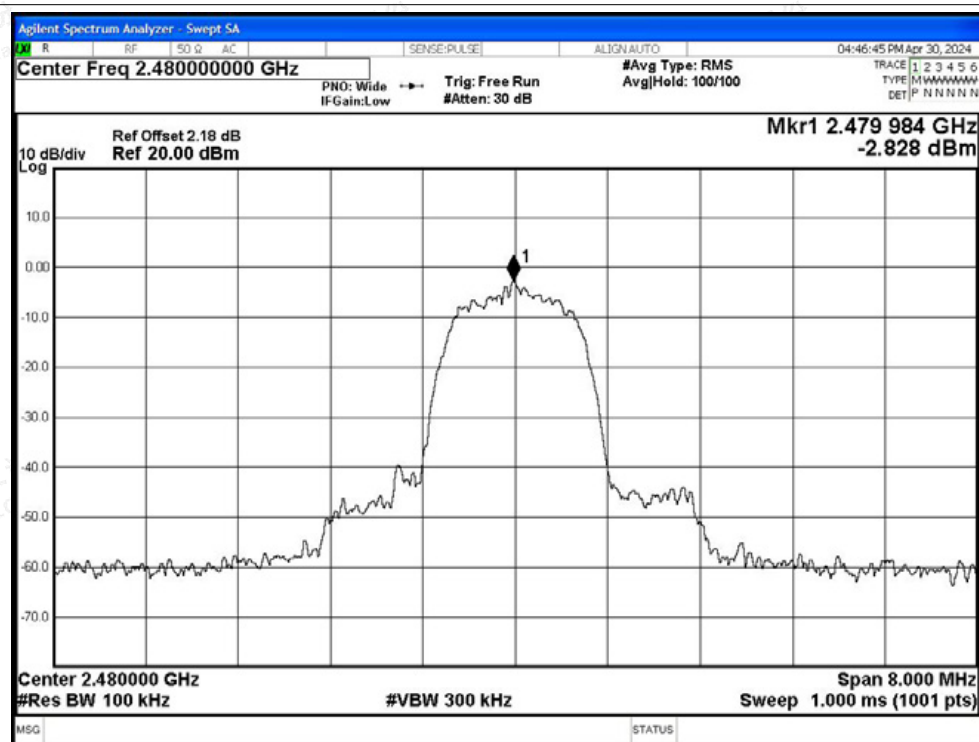
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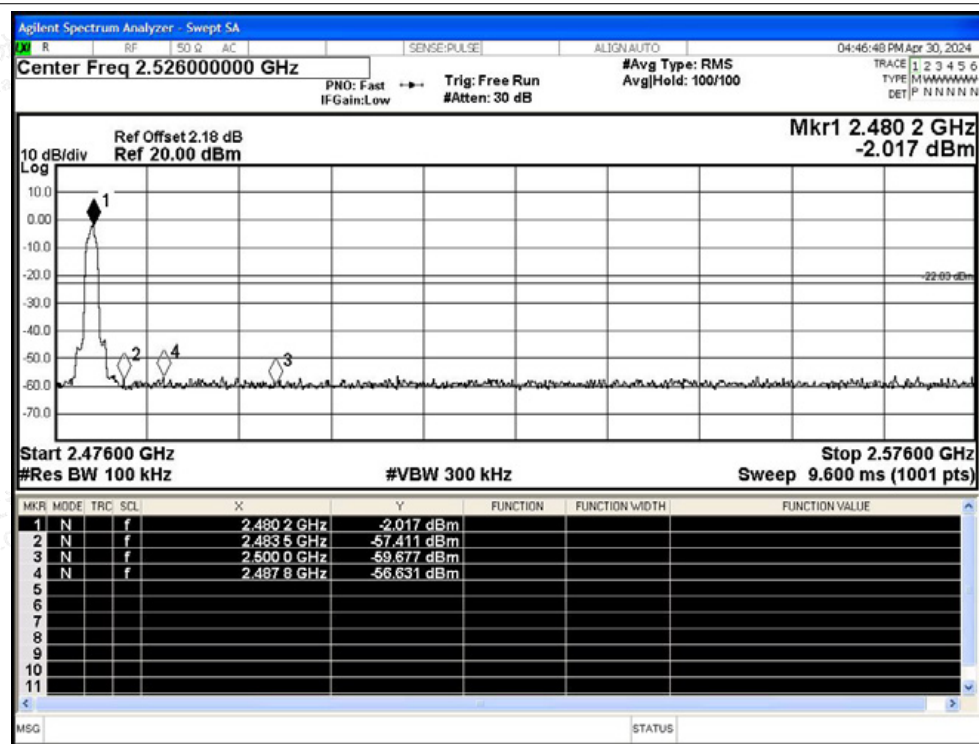
Scan code to check authenticity



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

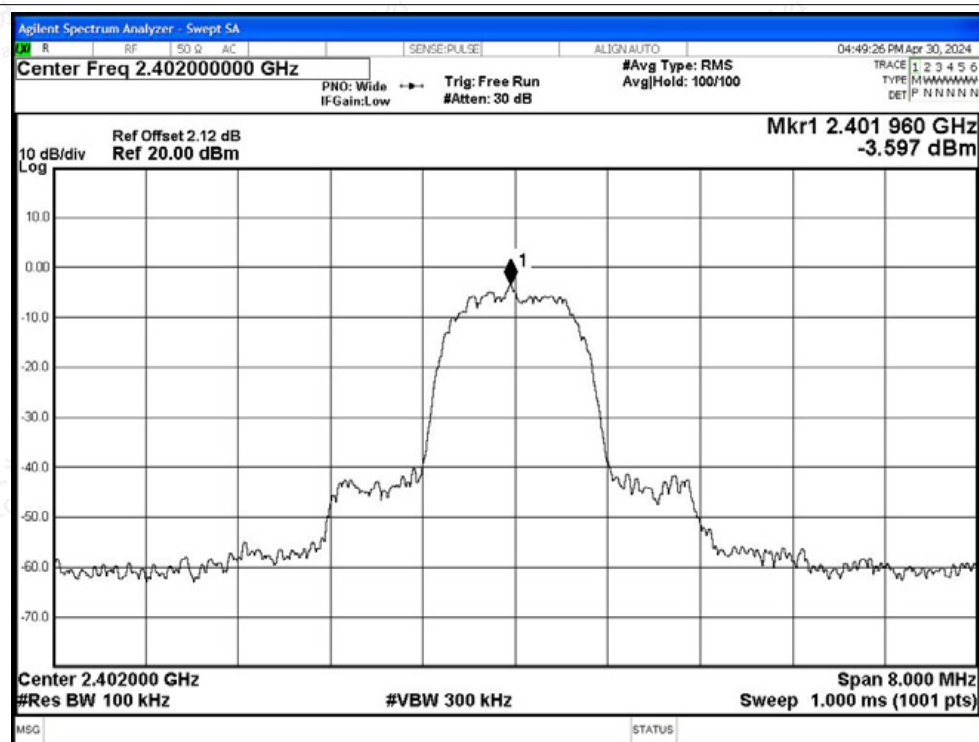


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

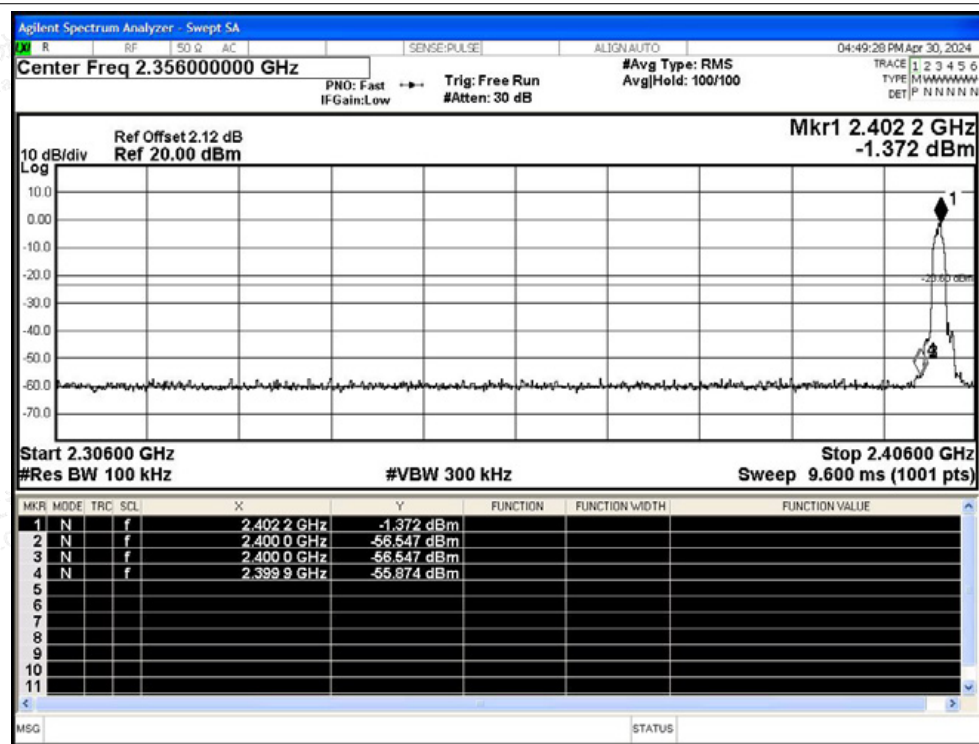




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

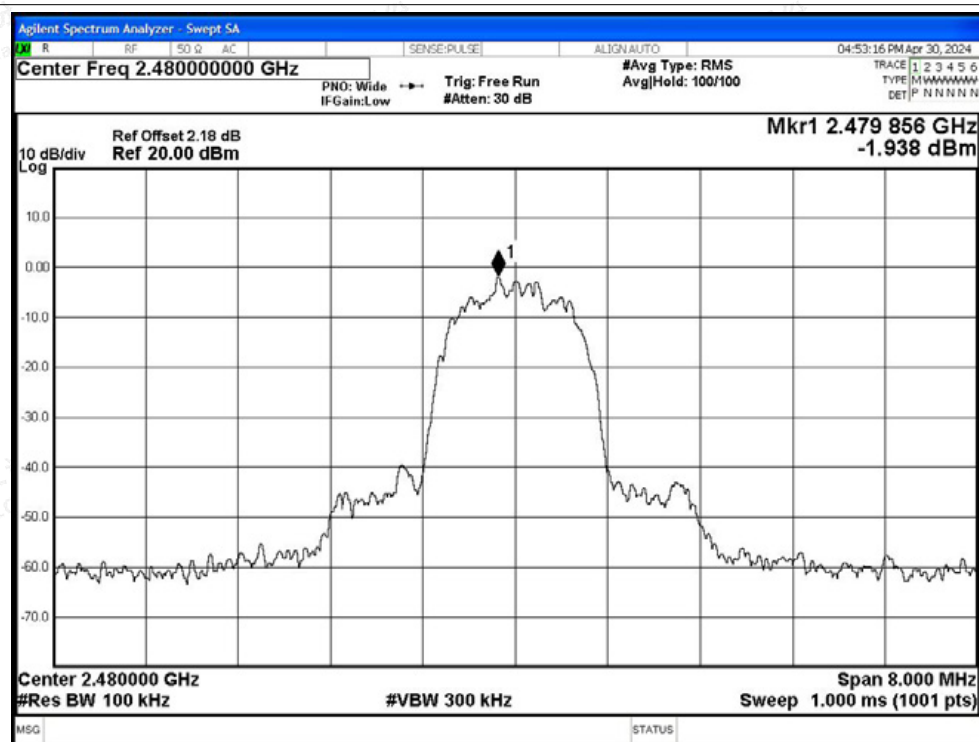


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

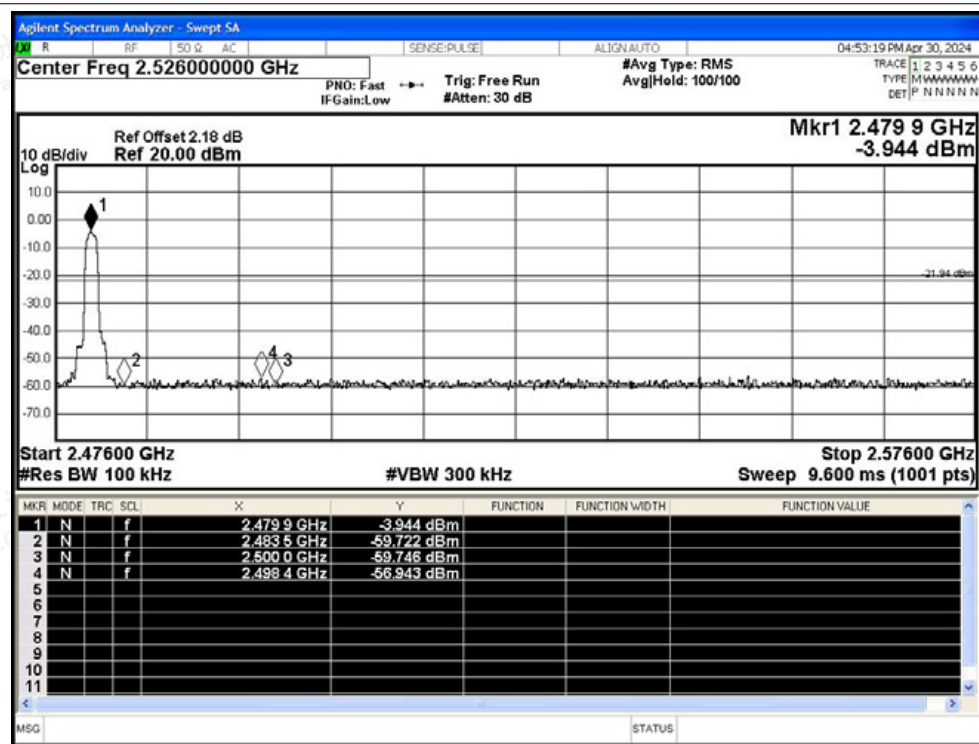




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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



MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		2.479 9 GHz	-3.944 dBm			
2	N	f		2.483 5 GHz	-59.722 dBm			
3	N	f		2.500 0 GHz	-59.746 dBm			
4	N	f		2.498 4 GHz	-56.943 dBm			
5								
6								
7								
8								
9								
10								
11								





(Hopping)

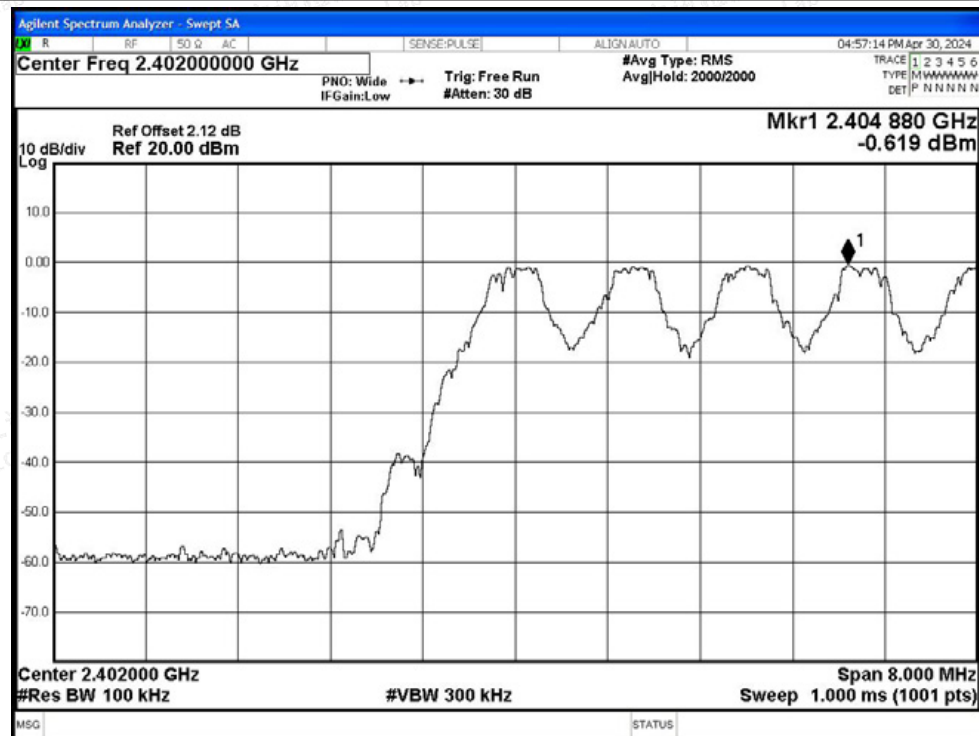
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-55.85	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.44	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-53.24	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-54.16	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-53.89	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-52.24	-20	Pass



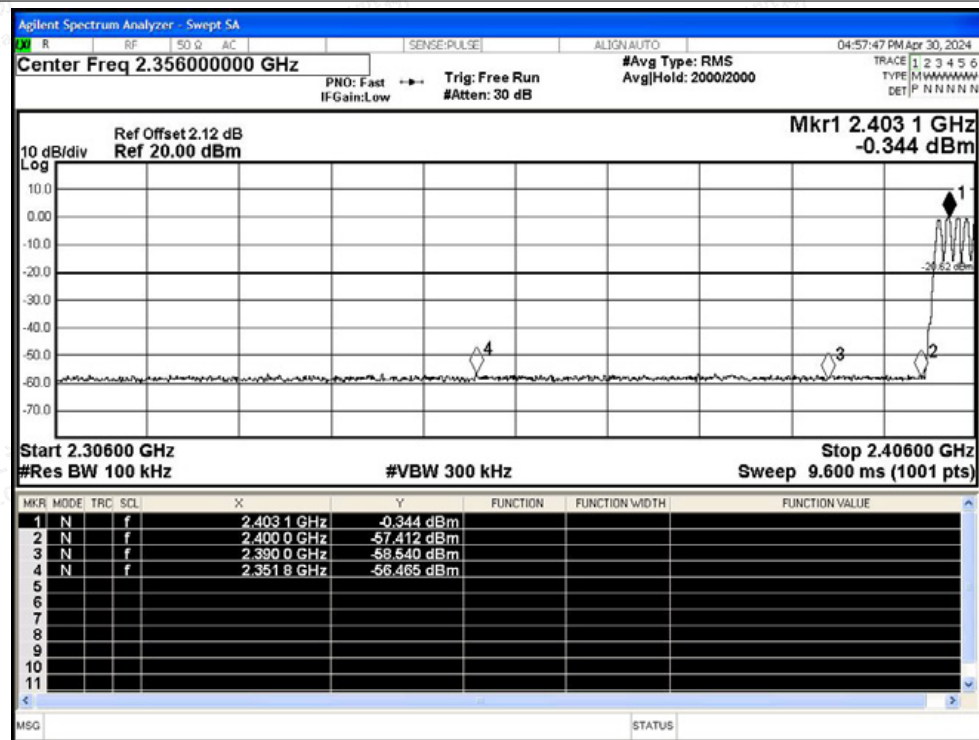


Test Graphs

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



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



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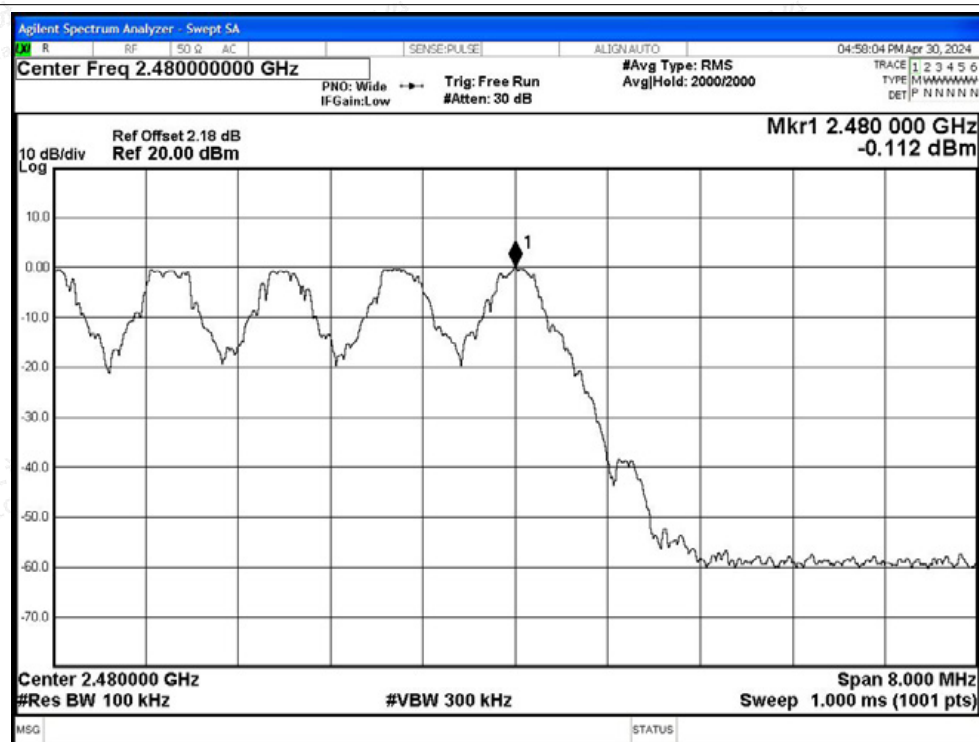
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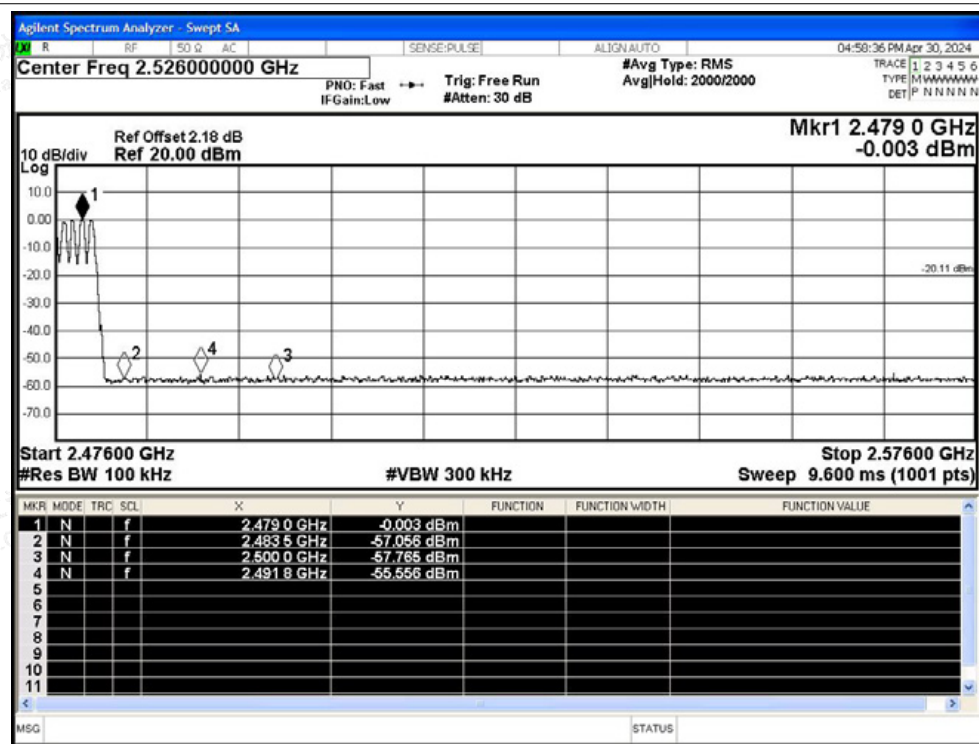
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Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



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



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