



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Bluetooth transmitter and receiver 2-in-1

Test Model: B03Pro

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Monkey Li
Supervised by:	Li Huan





A.1 -20dB Bandwidth

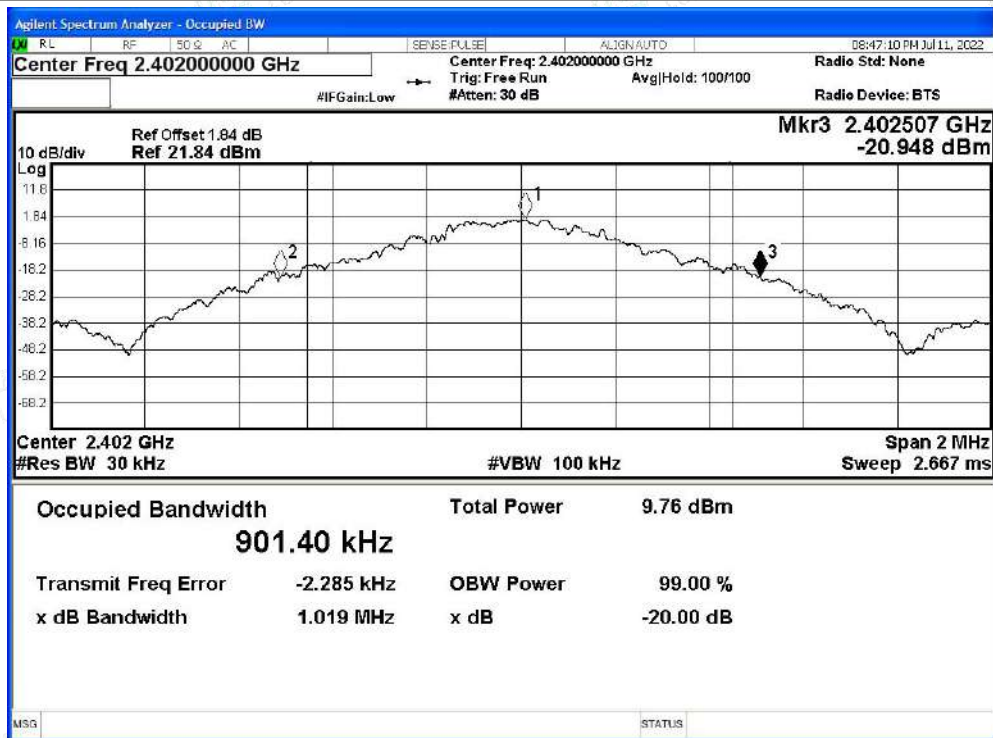
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.019	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.953	N/A	Pass
NVNT	1-DH5	2480	Ant1	1.025	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.266	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.318	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.285	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.294	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.282	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.29	N/A	Pass



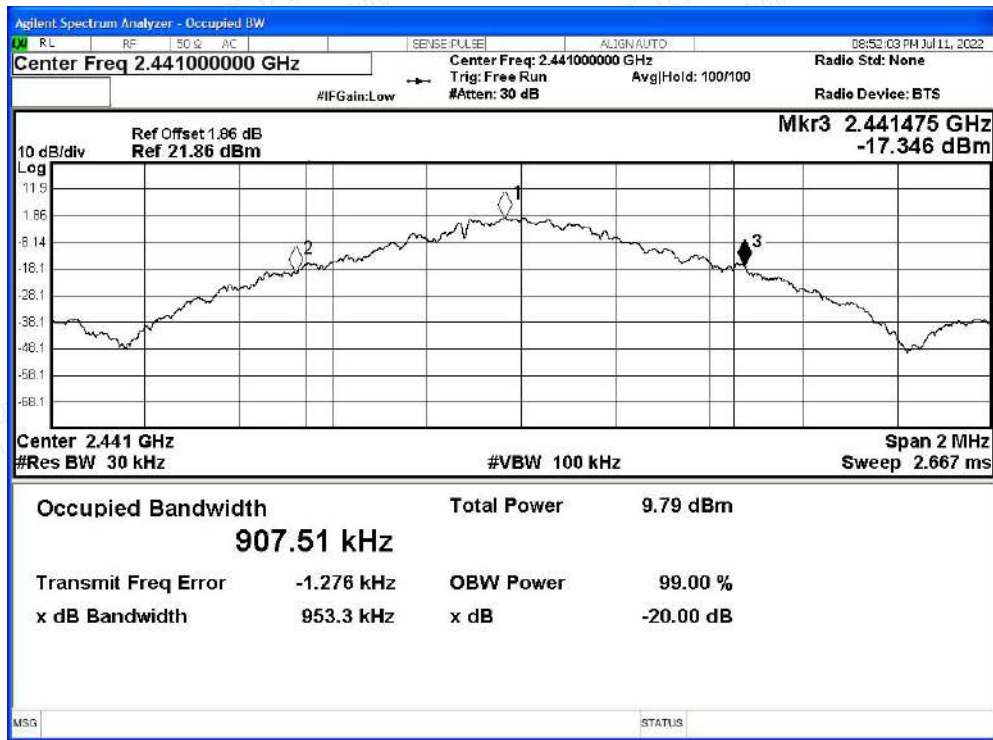


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

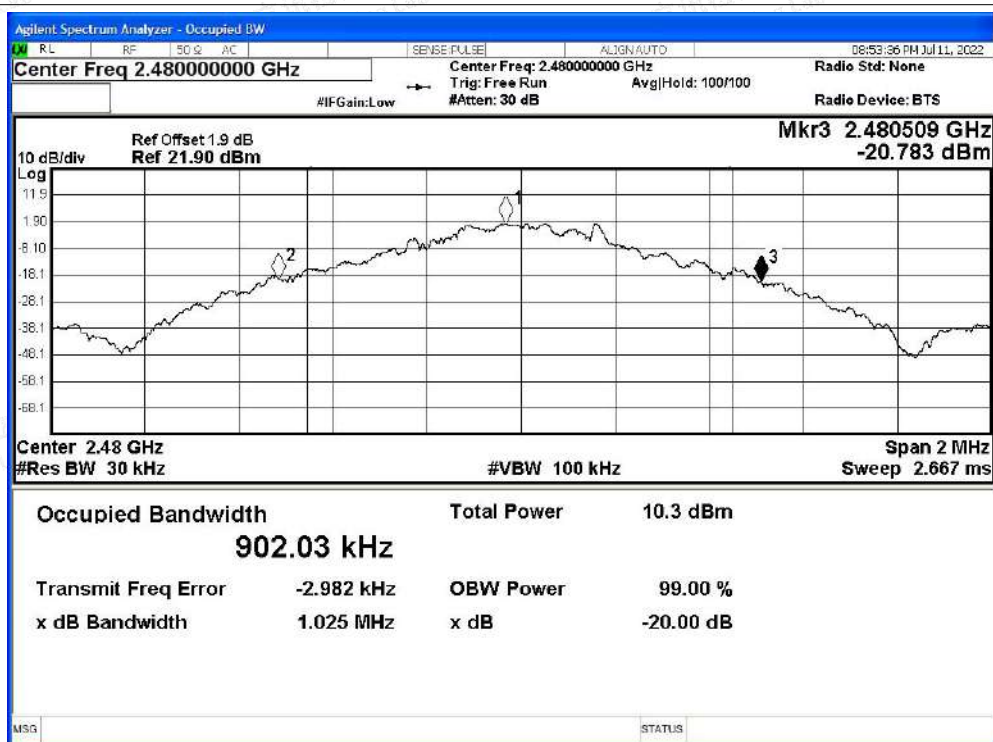


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

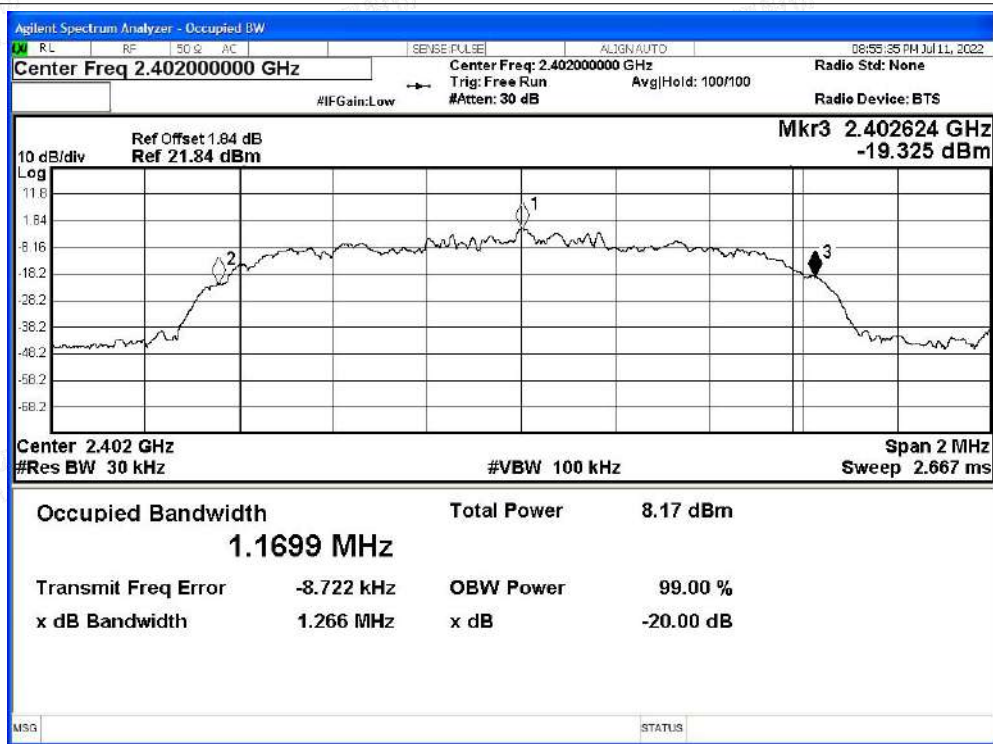




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

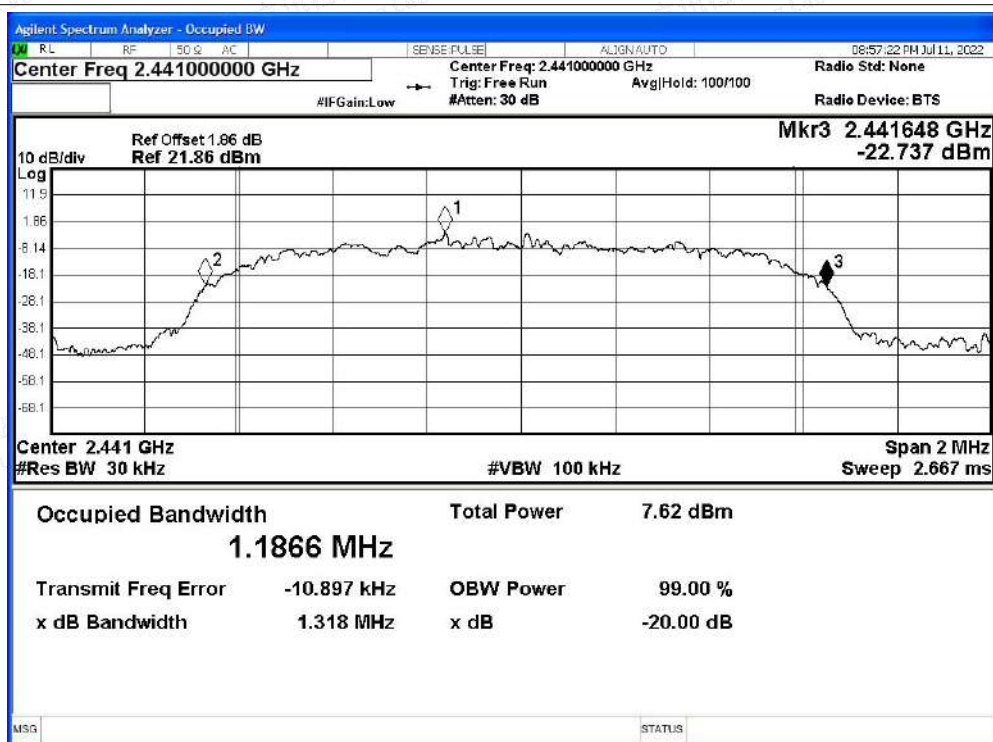


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

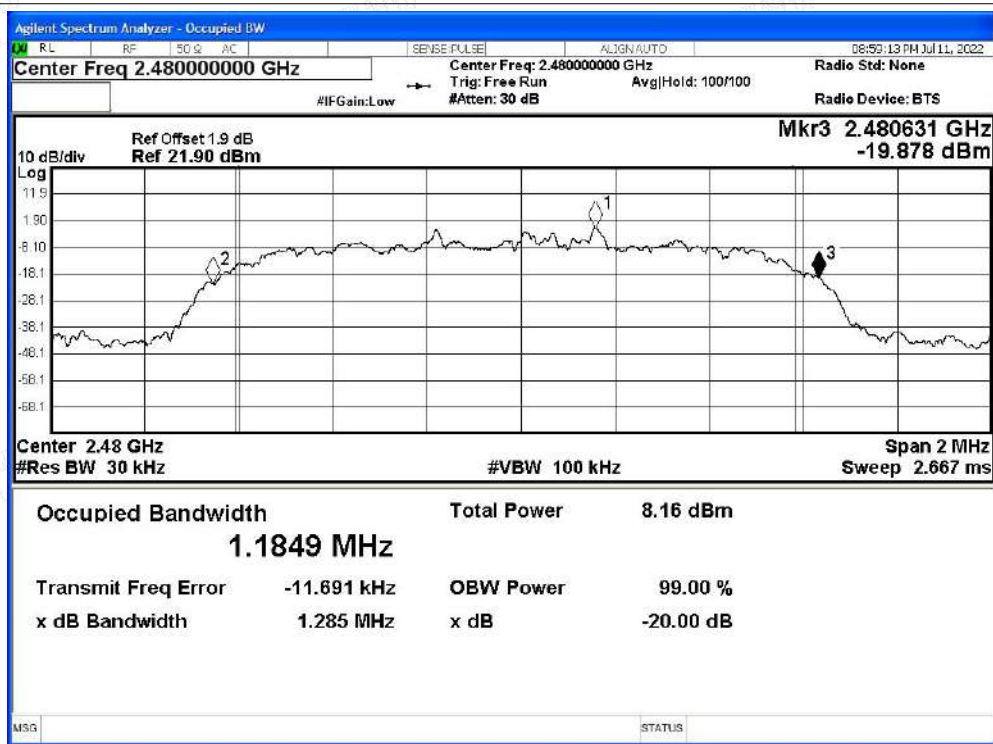




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

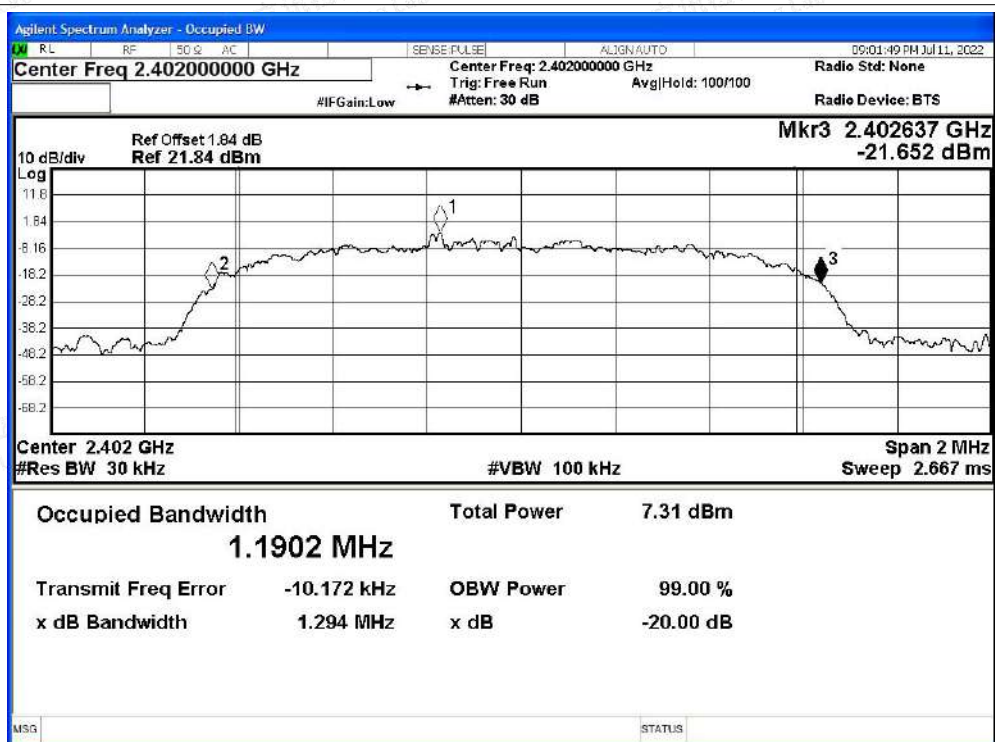


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

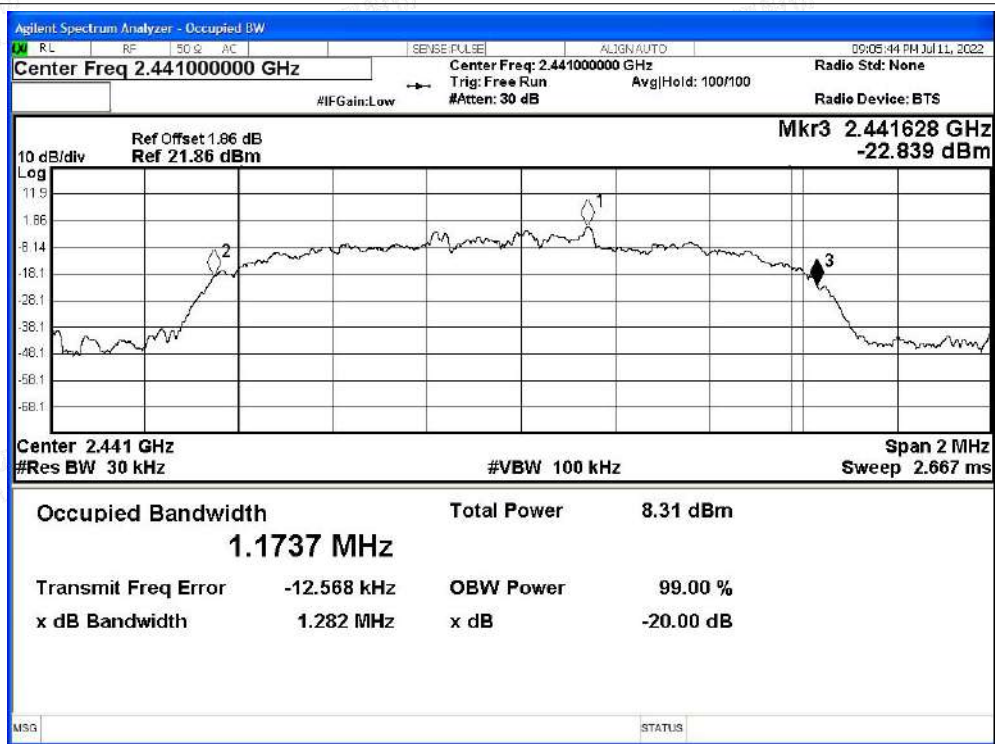




-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1

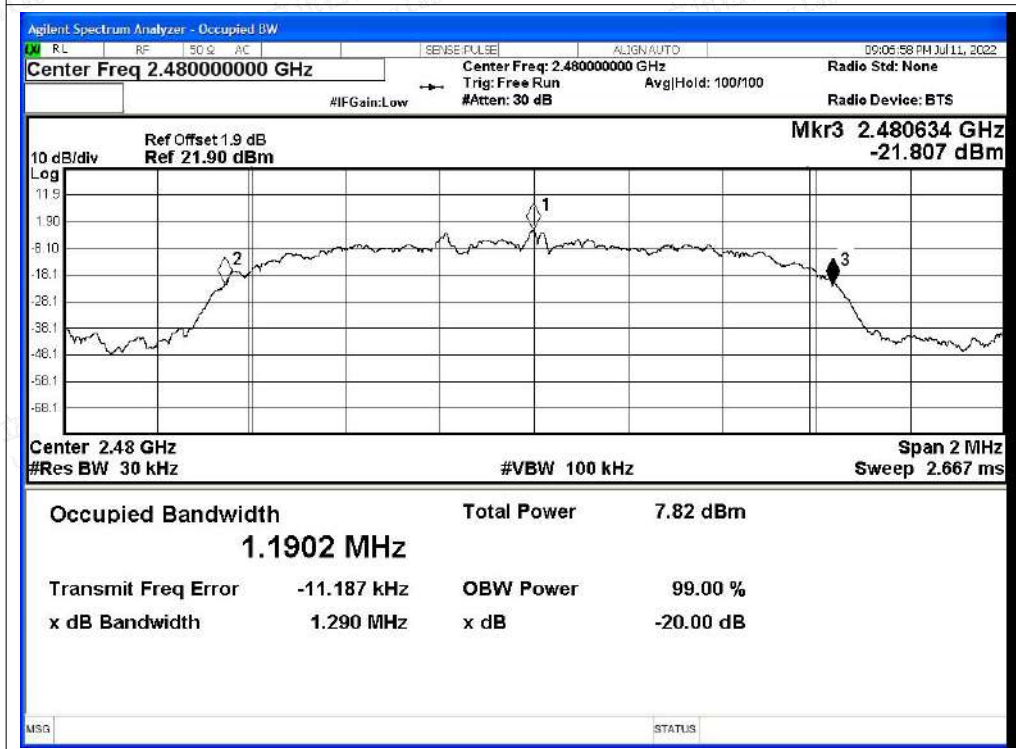


-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1





-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1





A.2 Maximum Conducted Output Power

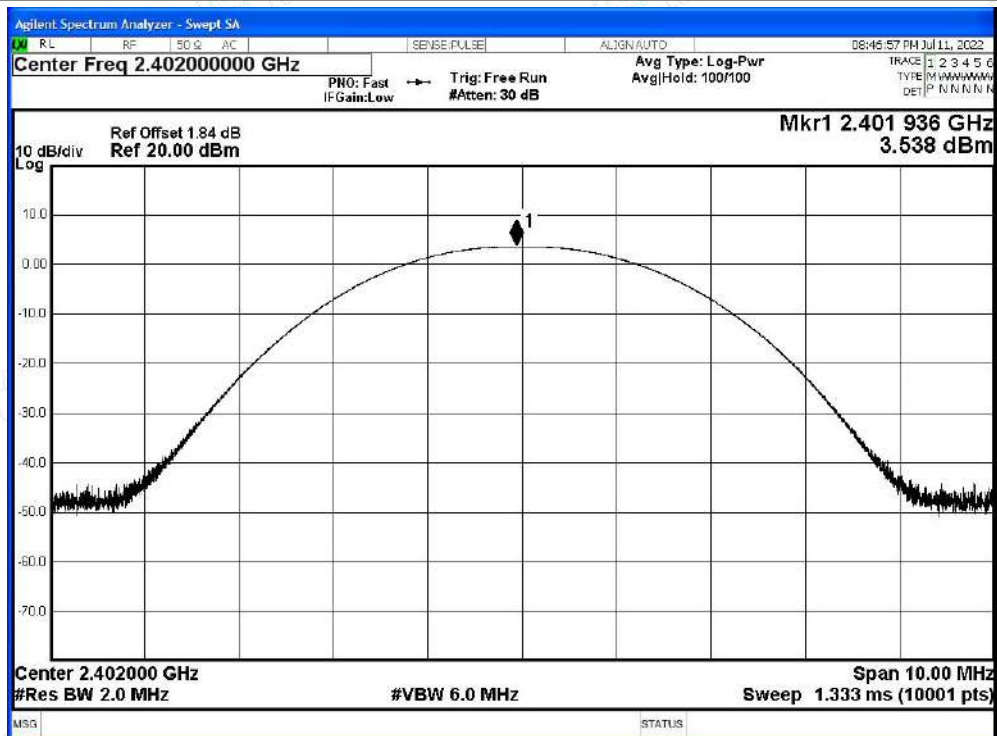
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	3.54	0	3.54	21	Pass
NVNT	1-DH5	2441	Ant1	3.78	0	3.78	21	Pass
NVNT	1-DH5	2480	Ant1	4.05	0	4.05	21	Pass
NVNT	2-DH5	2402	Ant1	3.35	0	3.35	21	Pass
NVNT	2-DH5	2441	Ant1	3.53	0	3.53	21	Pass
NVNT	2-DH5	2480	Ant1	3.72	0	3.72	21	Pass
NVNT	3-DH5	2402	Ant1	3.33	0	3.33	21	Pass
NVNT	3-DH5	2441	Ant1	3.49	0	3.49	21	Pass
NVNT	3-DH5	2480	Ant1	3.68	0	3.68	21	Pass



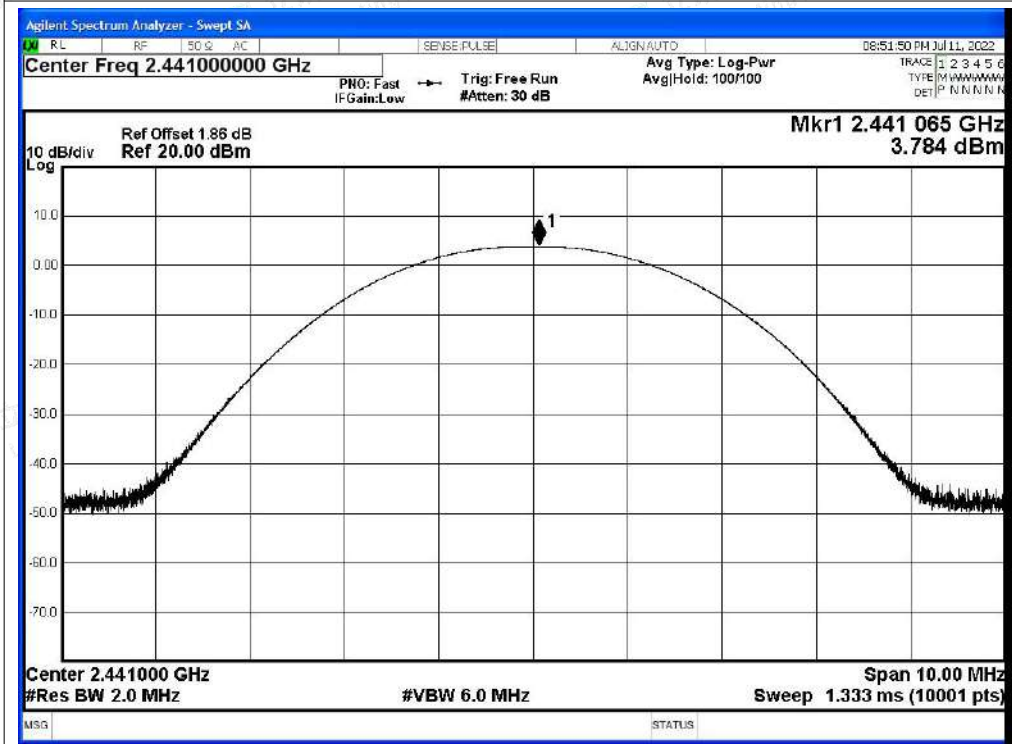


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

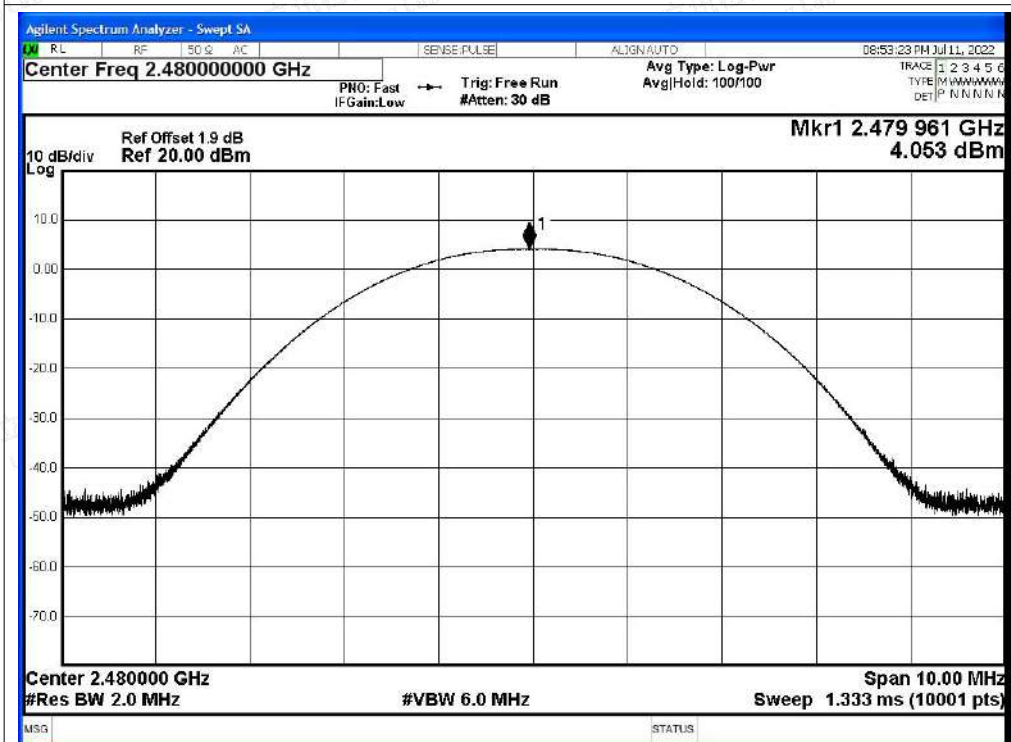


Power NVNT 1-DH5 2441MHz Ant1

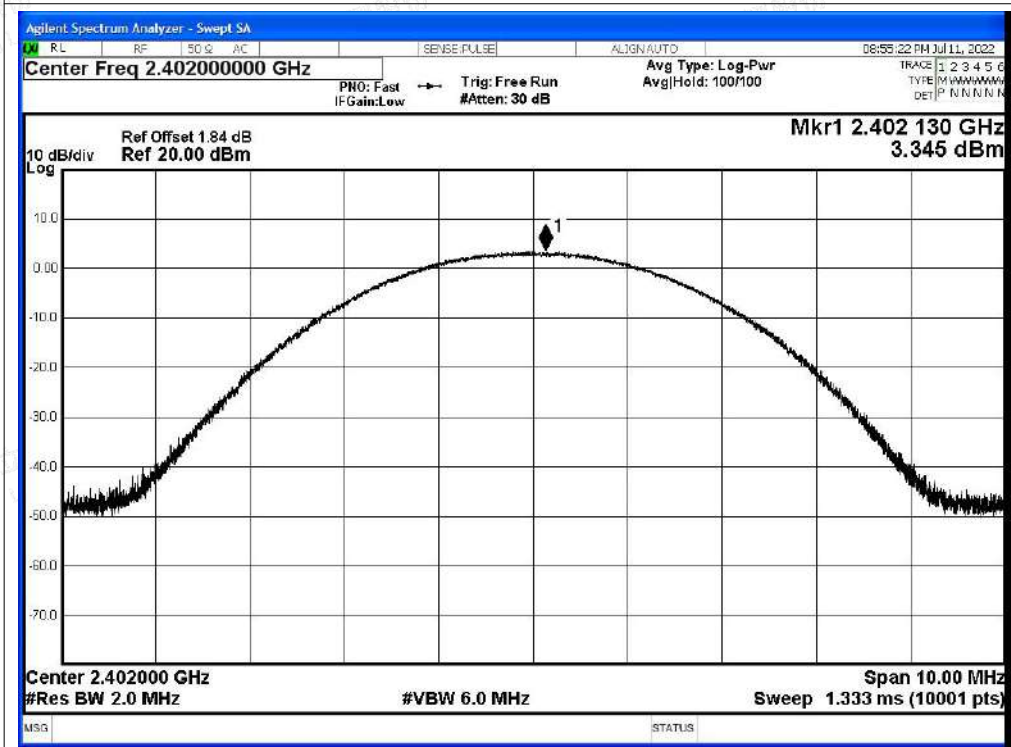




Power NVNT 1-DH5 2480MHz Ant1

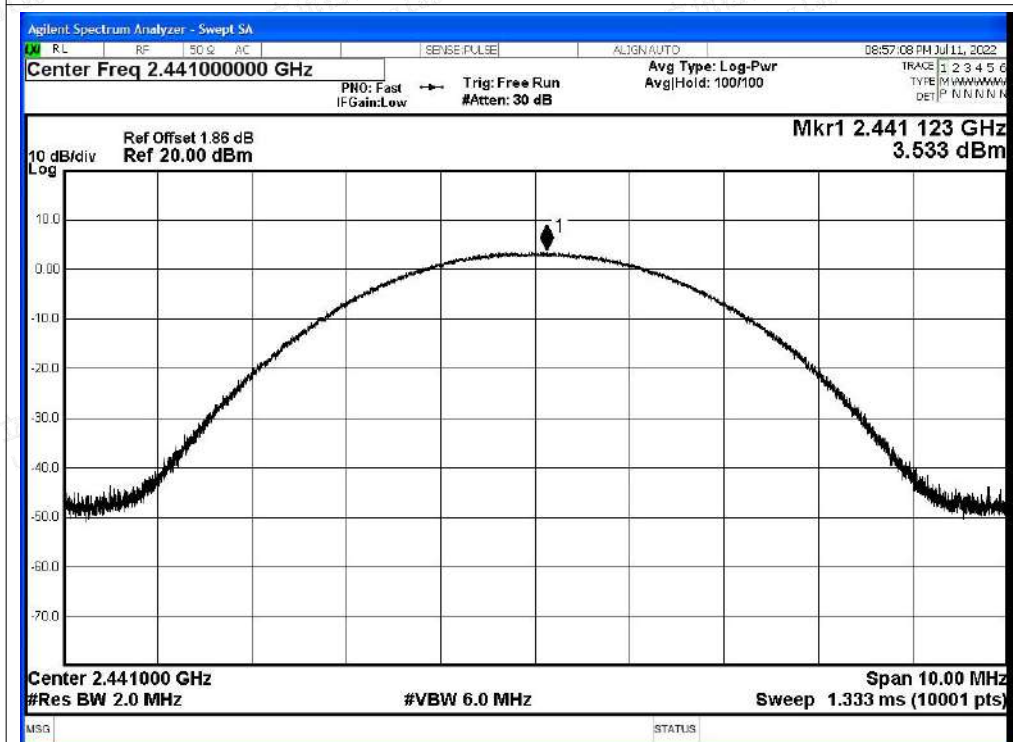


Power NVNT 2-DH5 2402MHz Ant1

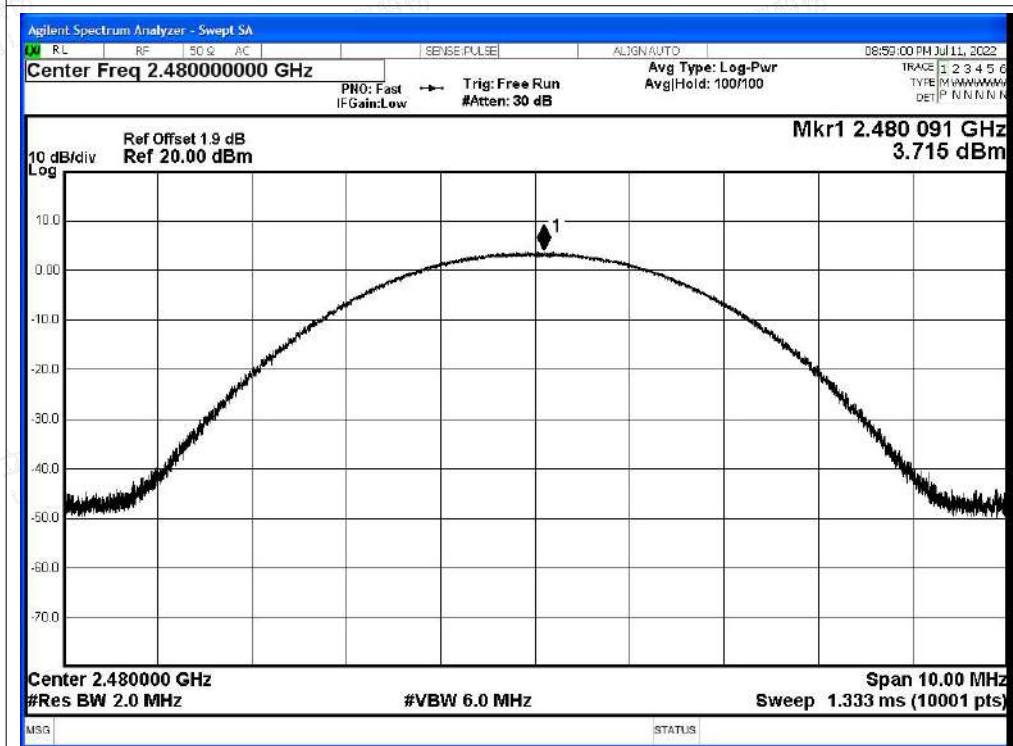




Power NVNT 2-DH5 2441MHz Ant1

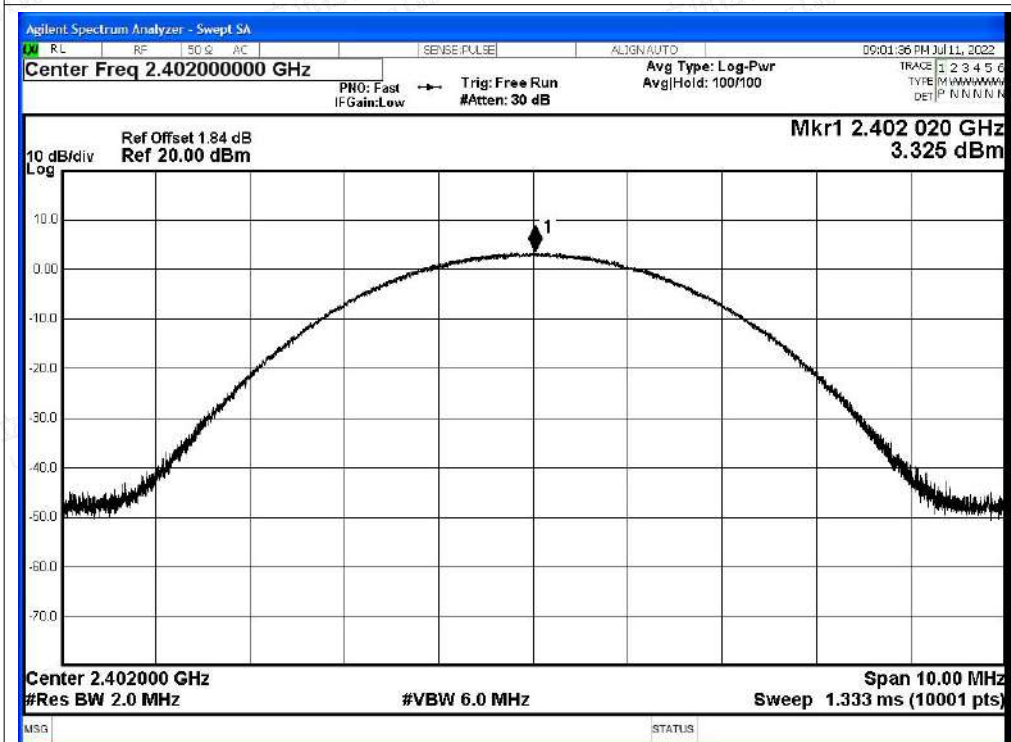


Power NVNT 2-DH5 2480MHz Ant1

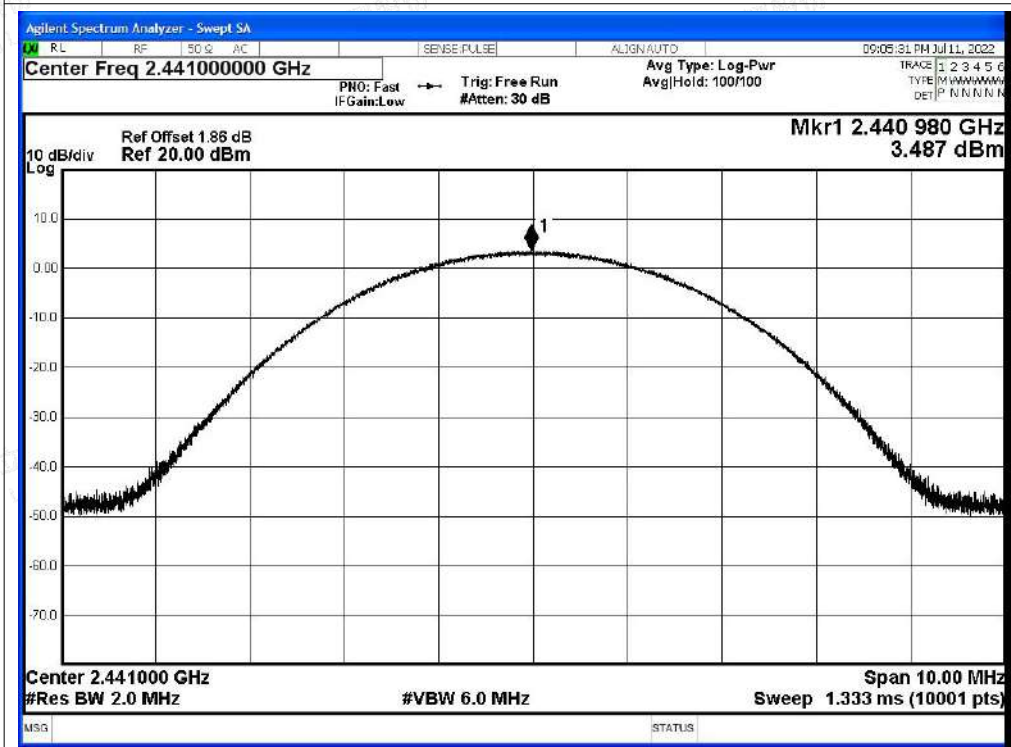




Power NVNT 3-DH5 2402MHz Ant1

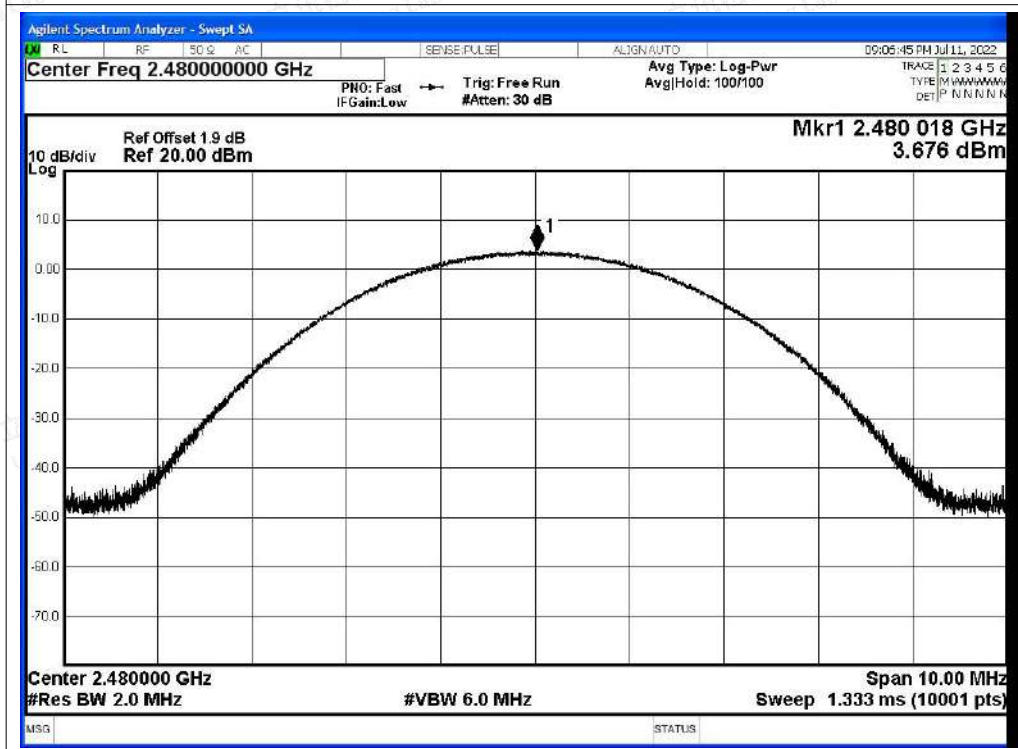


Power NVNT 3-DH5 2441MHz Ant1





Power NVNT 3-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	2402.148	2402.96	0.812	0.679	Pass
NVNT	2-DH5	Ant1	2401.816	2403	1.184	0.844	Pass
NVNT	3-DH5	Ant1	2402.15	2403.154	1.004	0.863	Pass

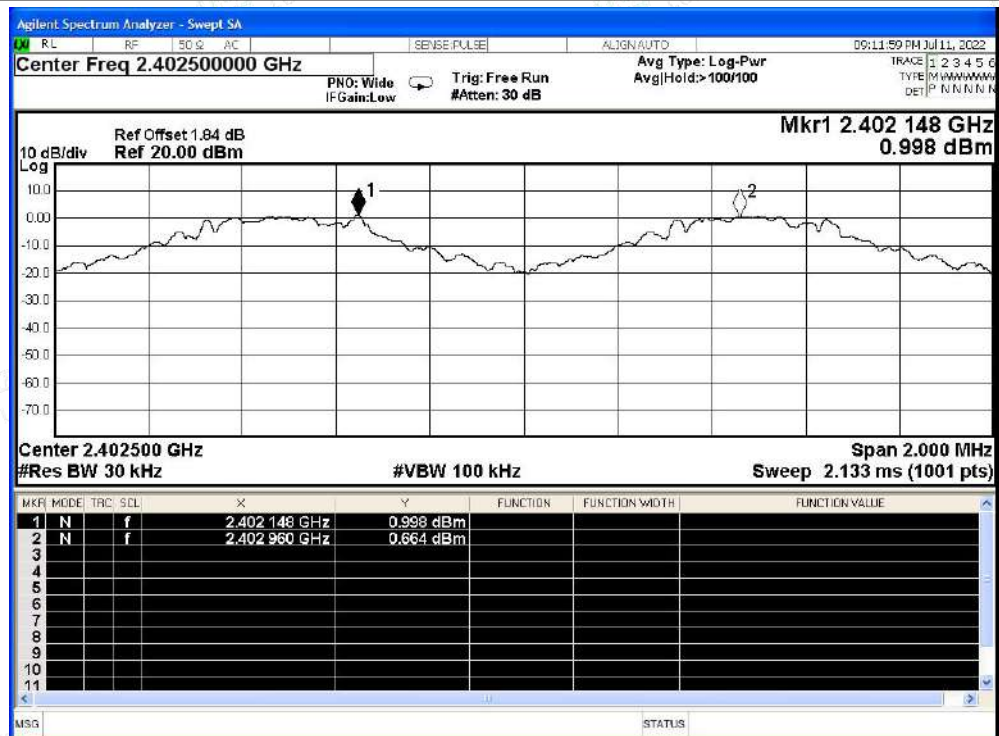


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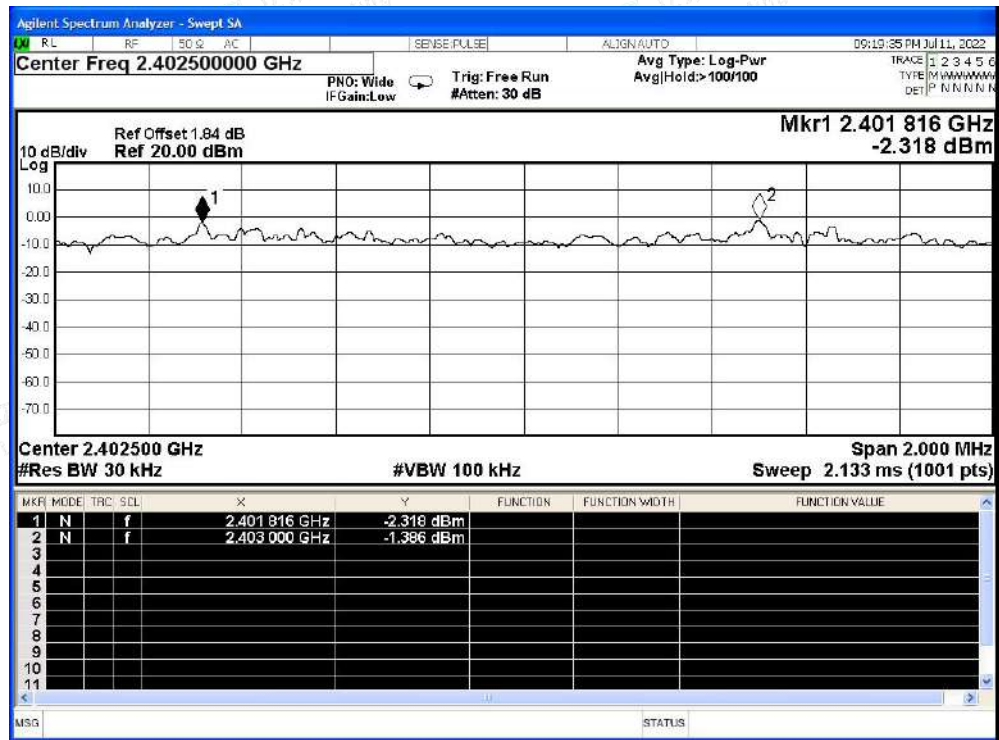


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1

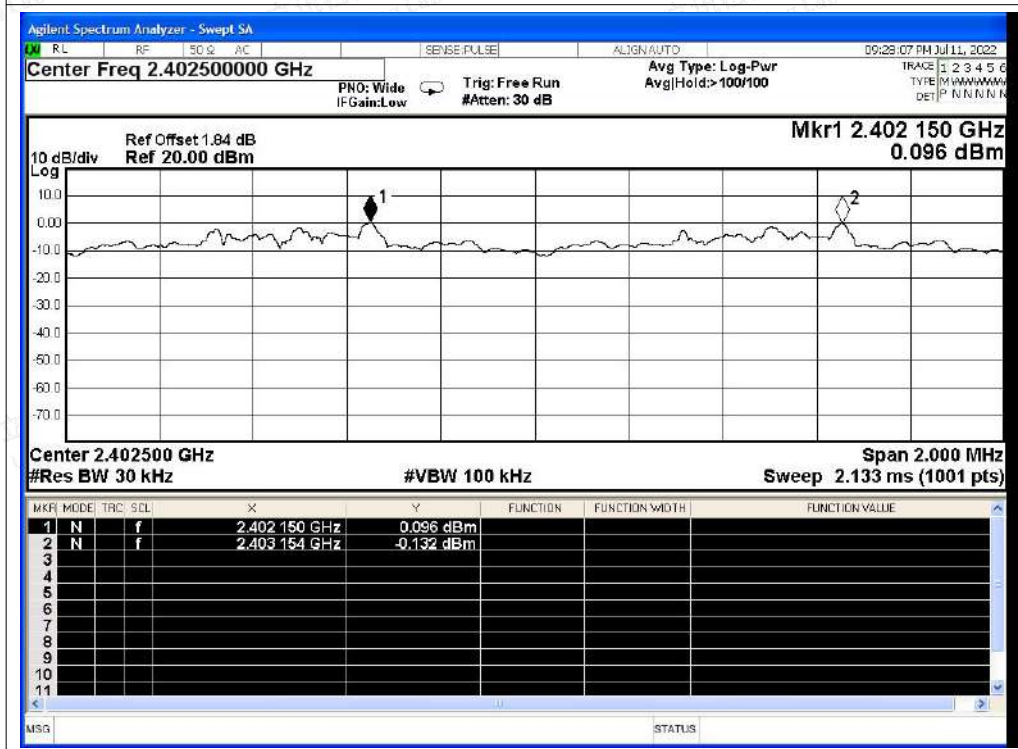


CFS NVNT 2-DH5 2402MHz Ant1





CFS NVNT 3-DH5 2402MHz Ant1





A.4 Dwell Time

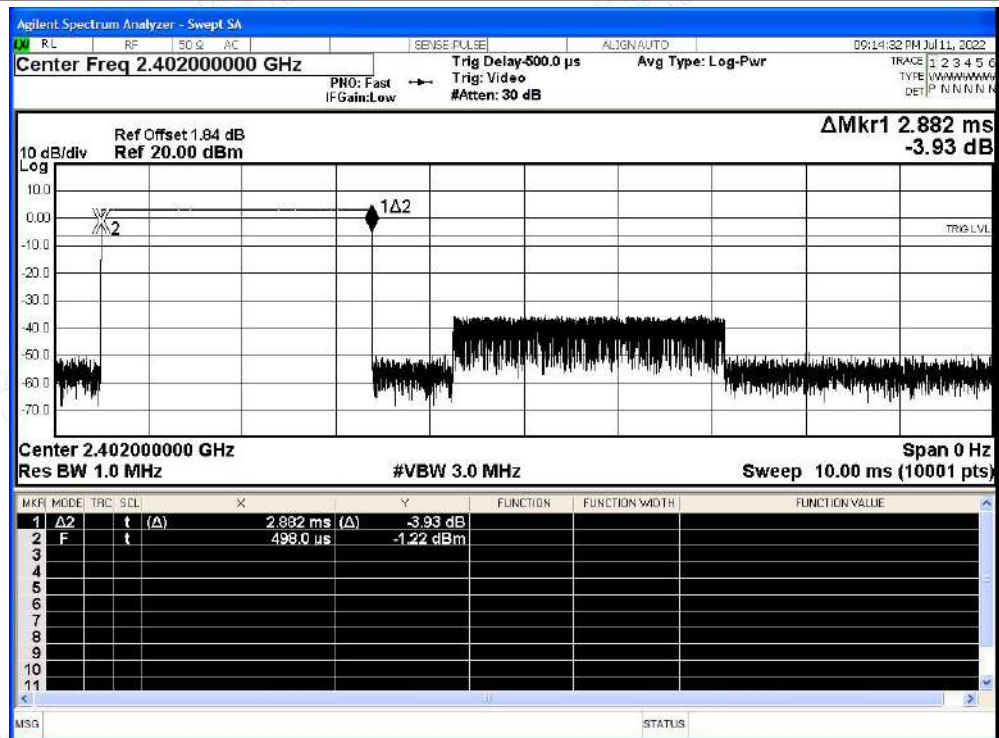
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	262.262	91	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	320.235	111	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.887	256.943	89	31600	400	Pass



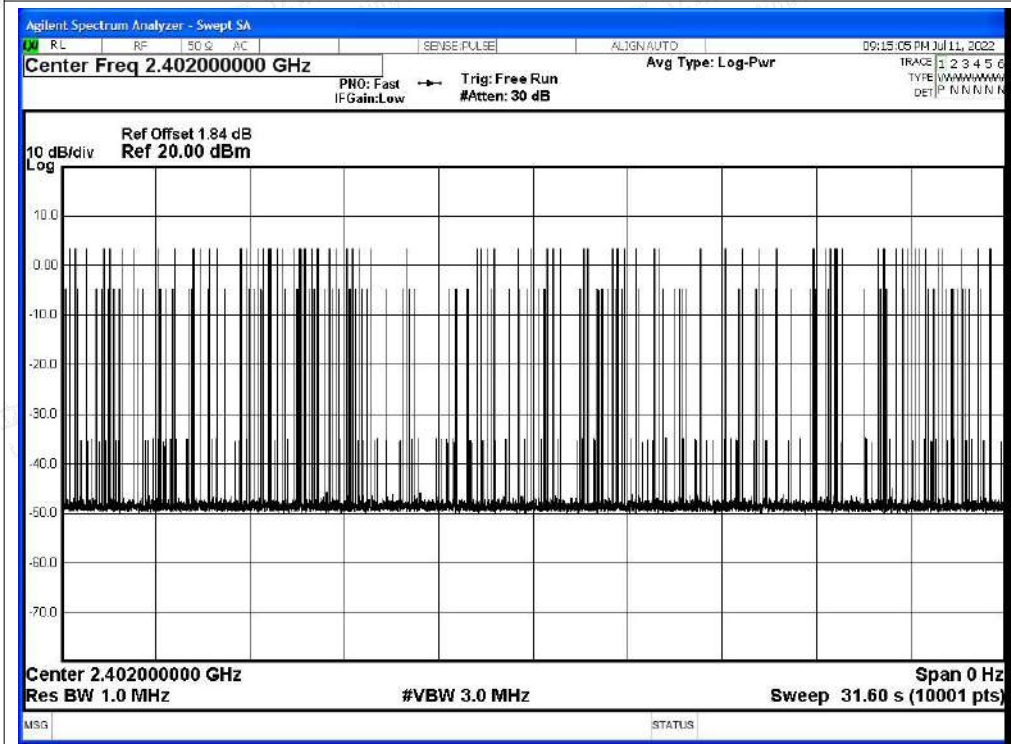


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

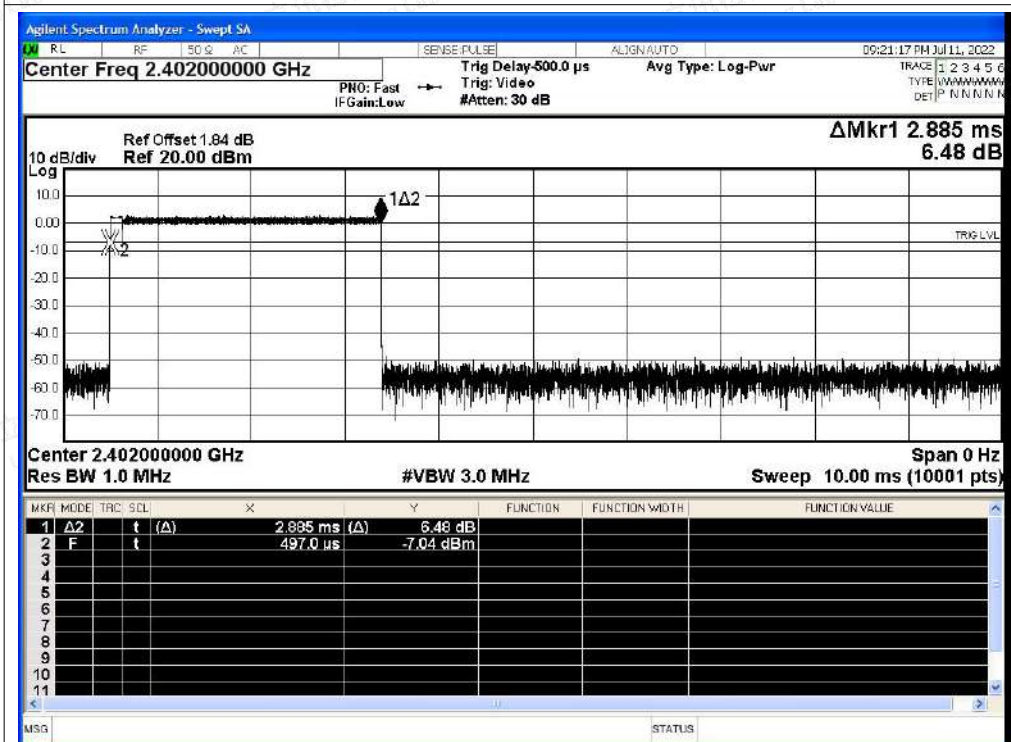


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

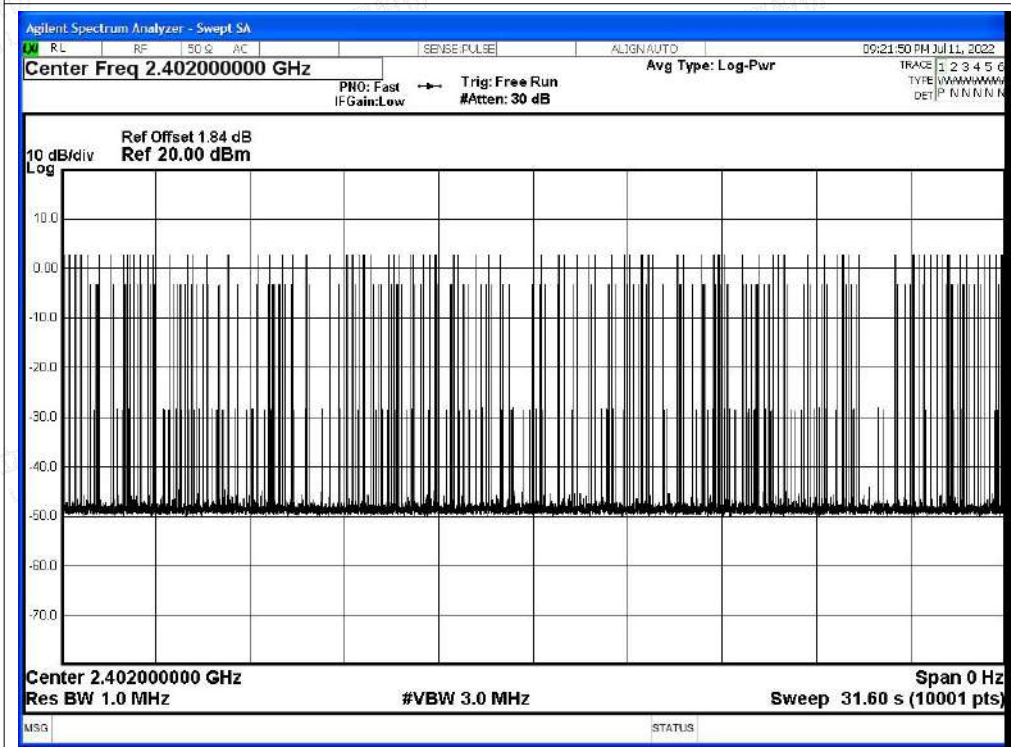




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

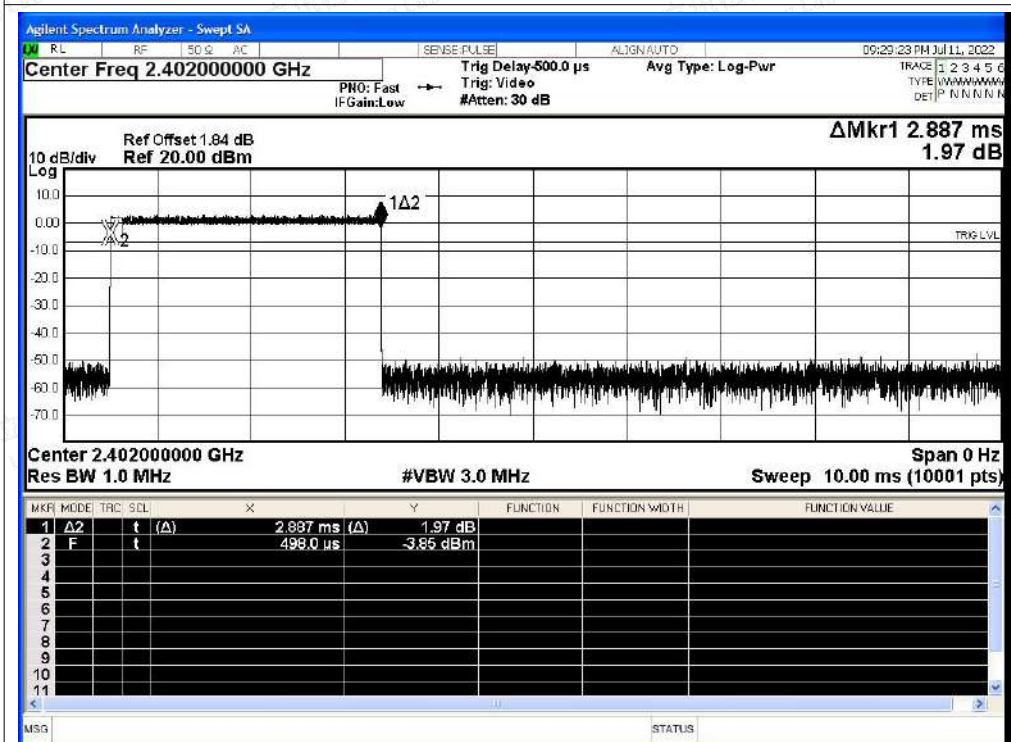


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

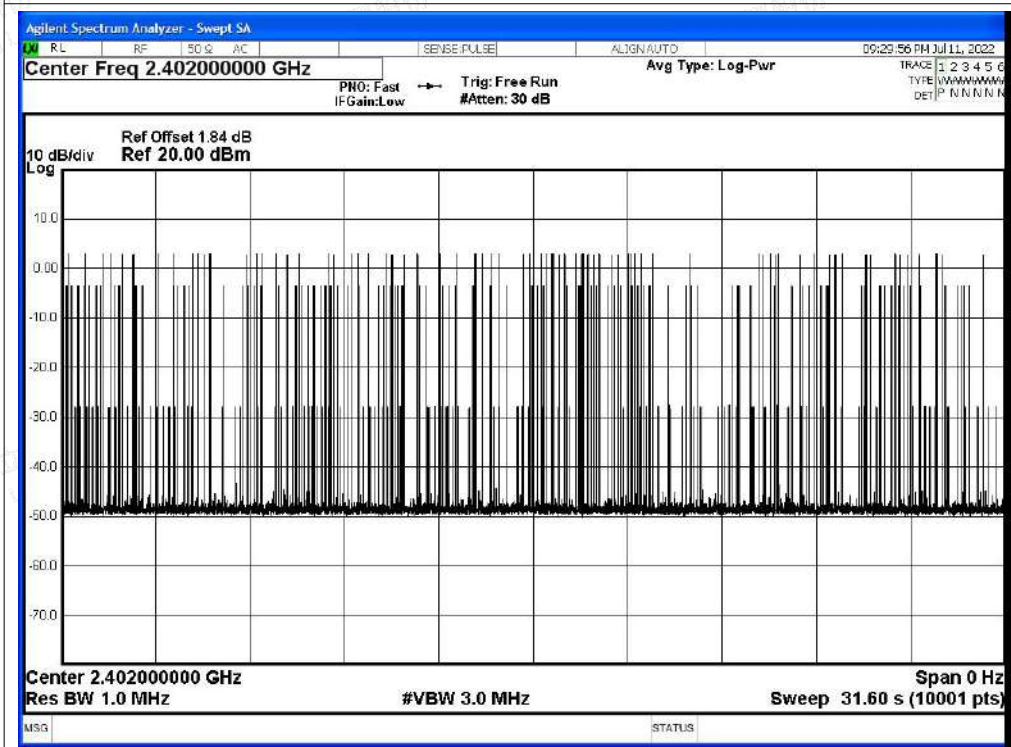




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated



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A.5 Number of Hopping Channel

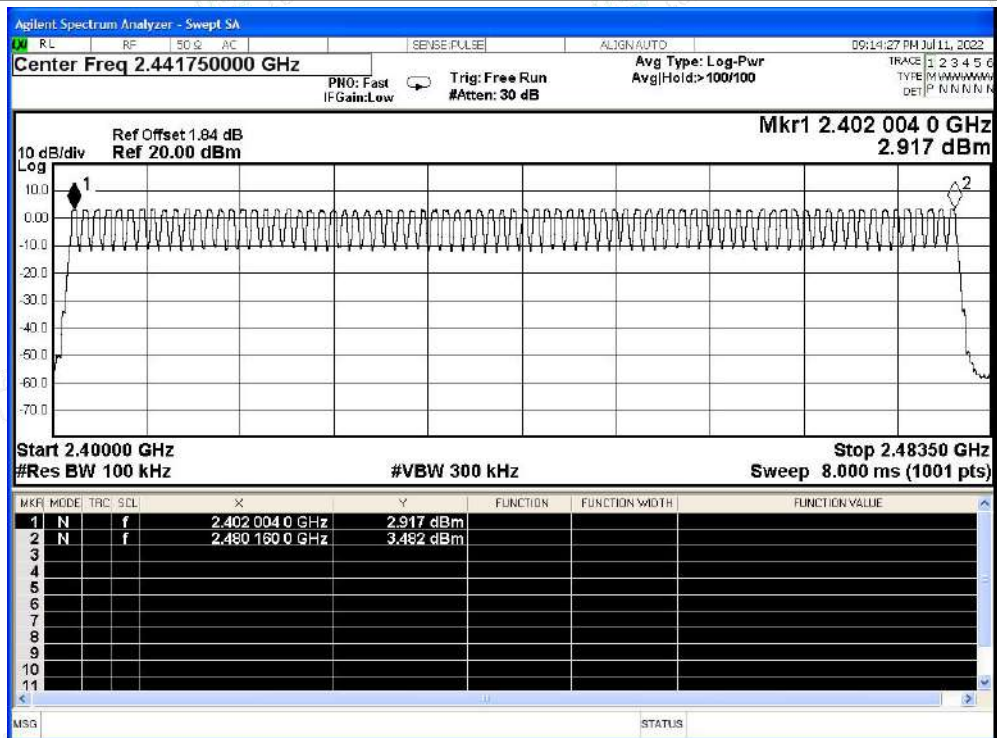
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



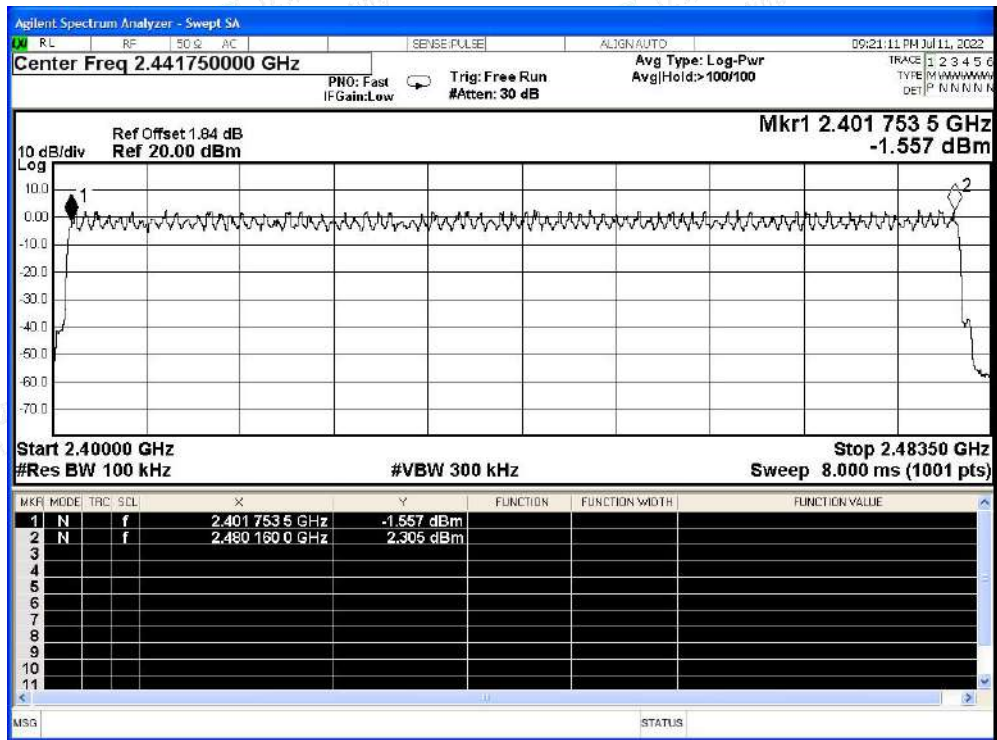


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

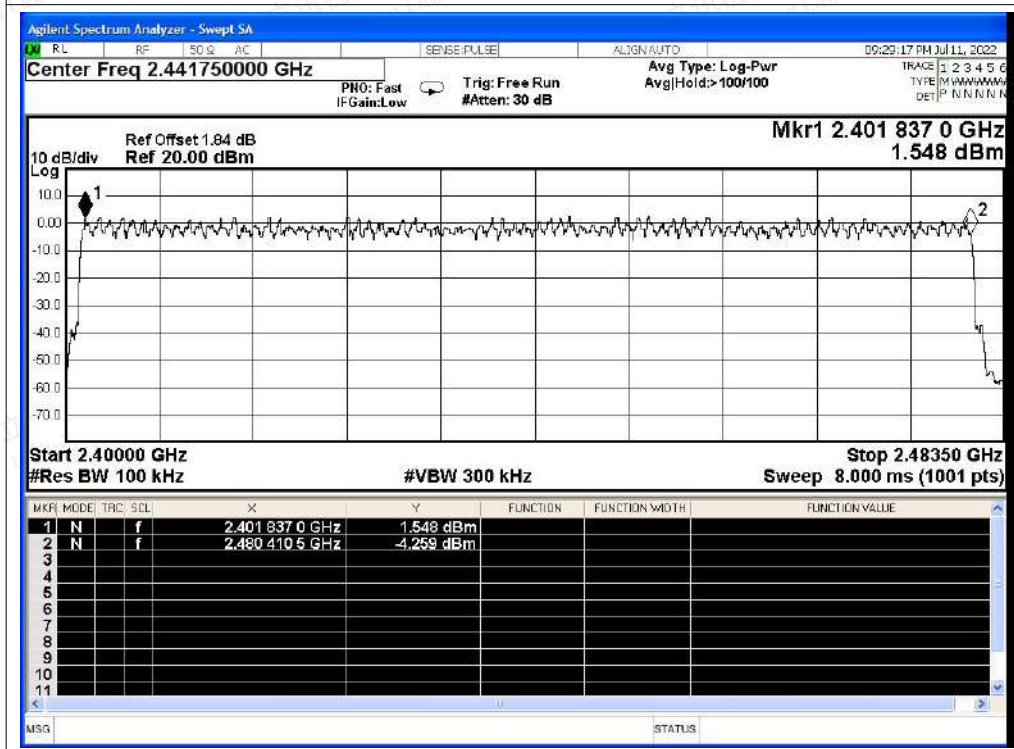


Hopping No. NVNT 2-DH5 2402MHz Ant1





Hopping No. NVNT 3-DH5 2402MHz Ant1





A.6 Band Edge

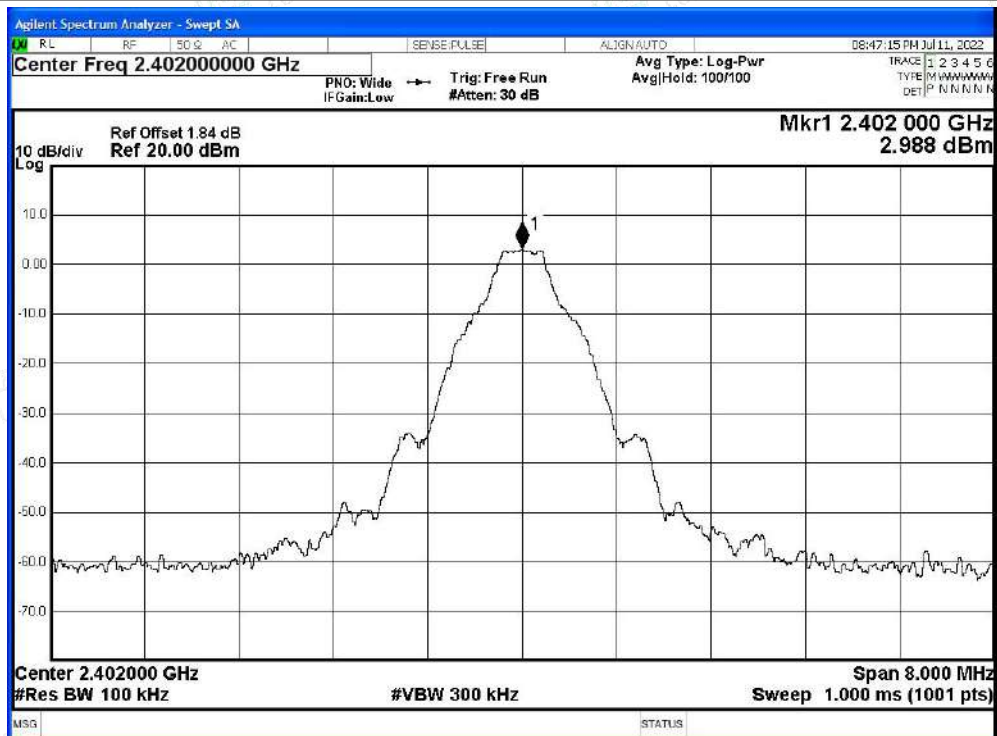
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-58.59	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-61.23	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-54.04	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-57.33	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-53.56	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-59.69	-20	Pass



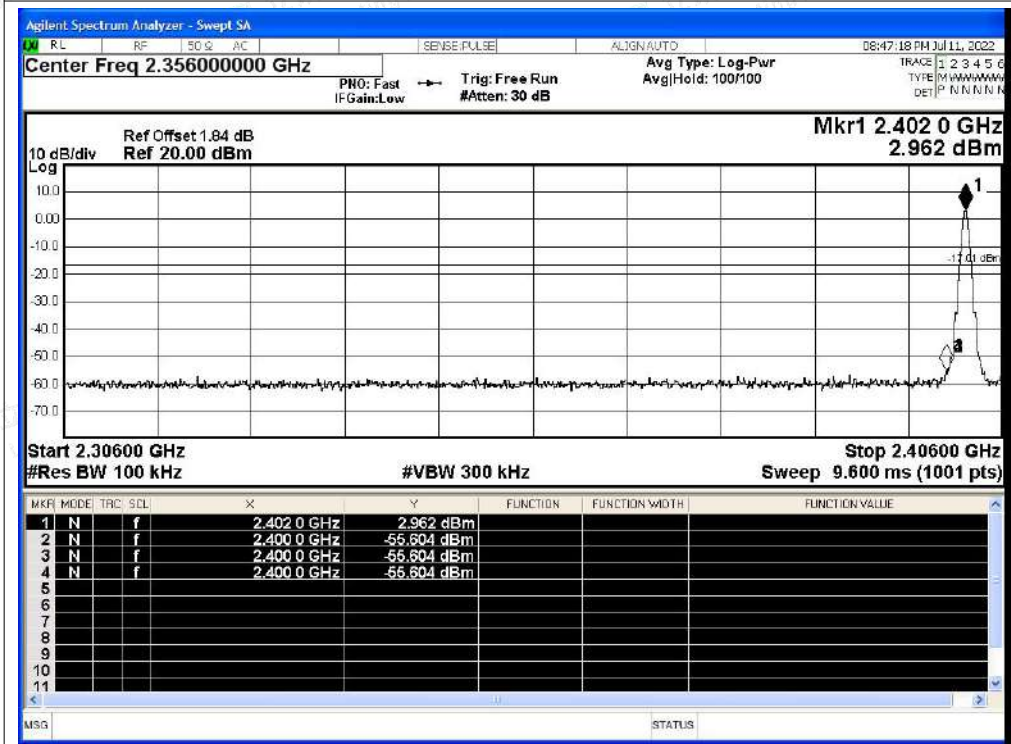


Test Graphs

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

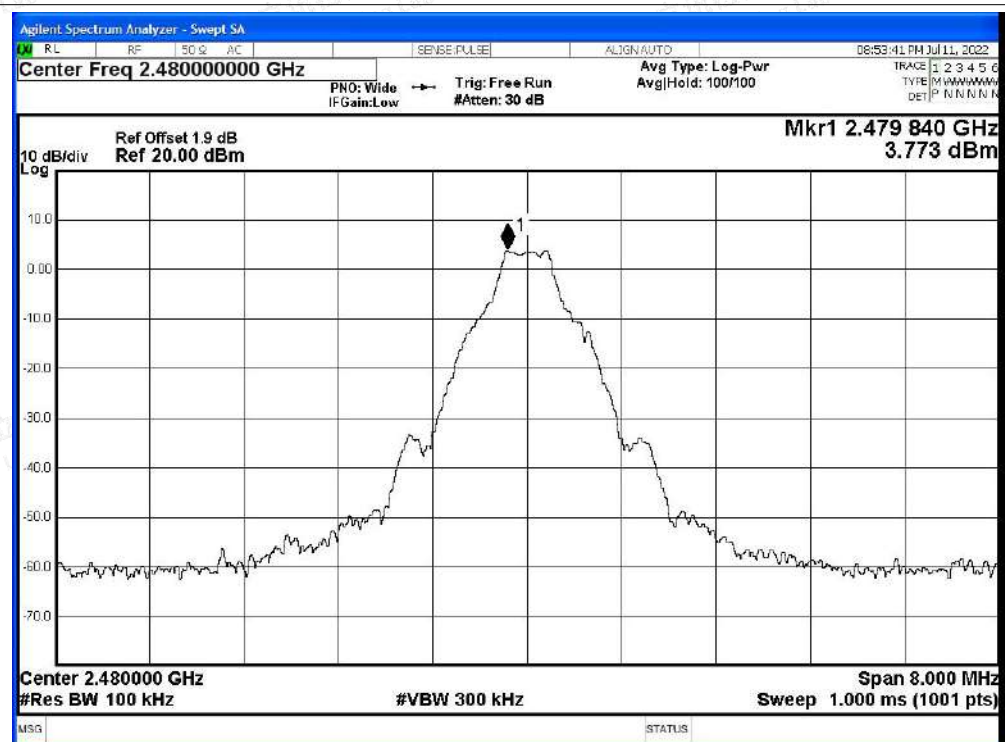


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

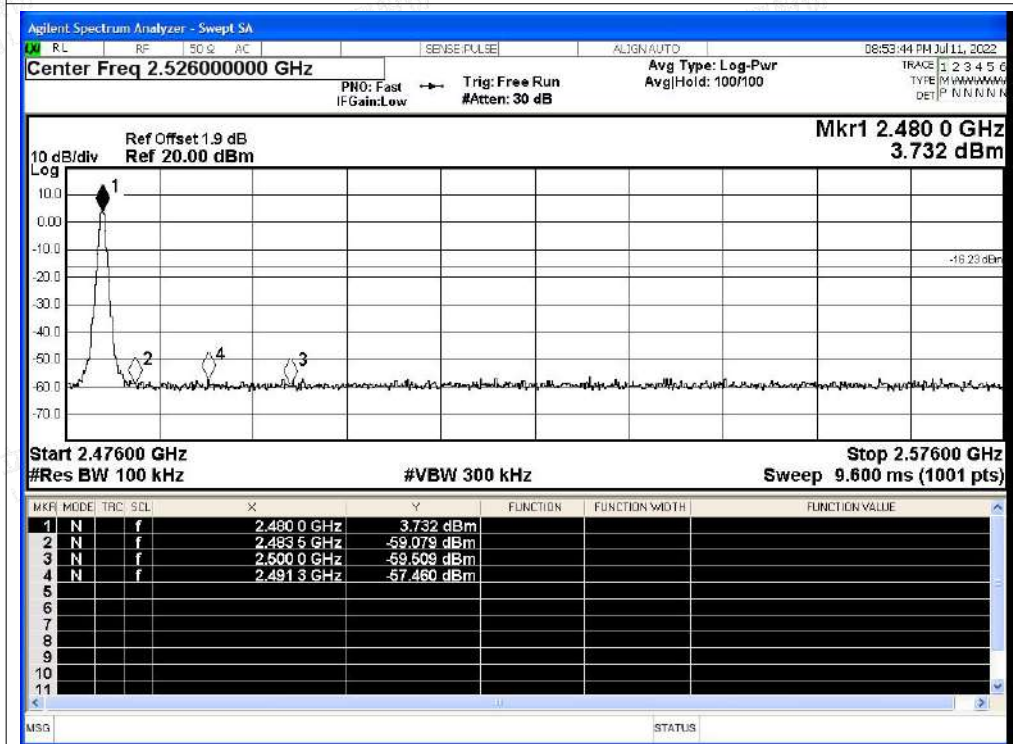




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

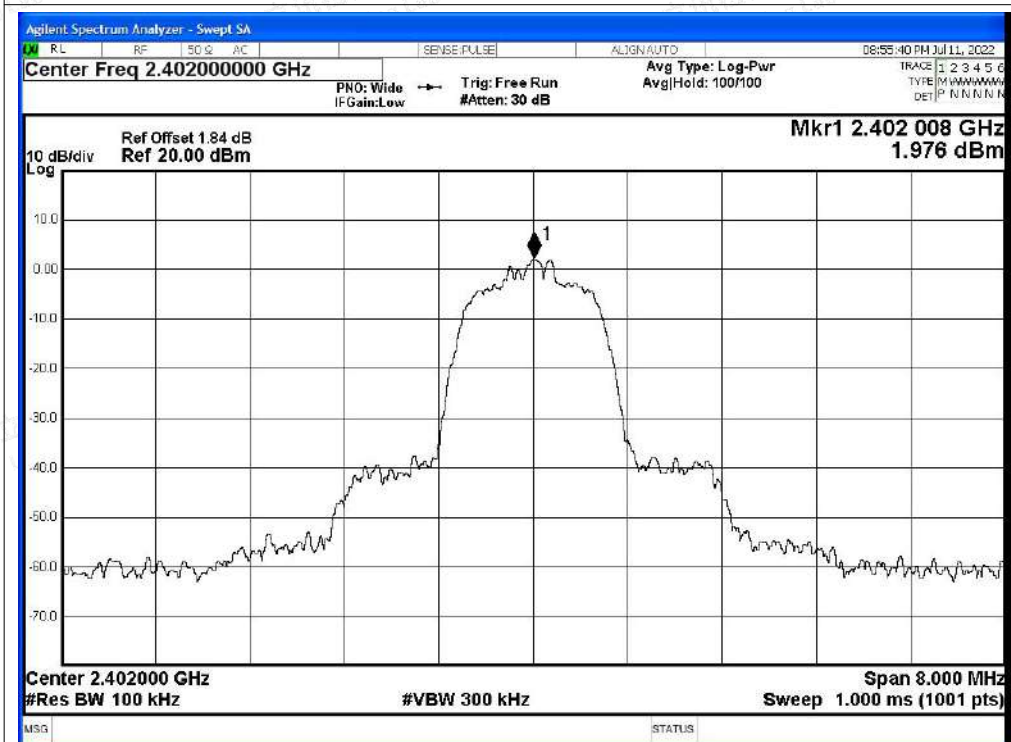


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

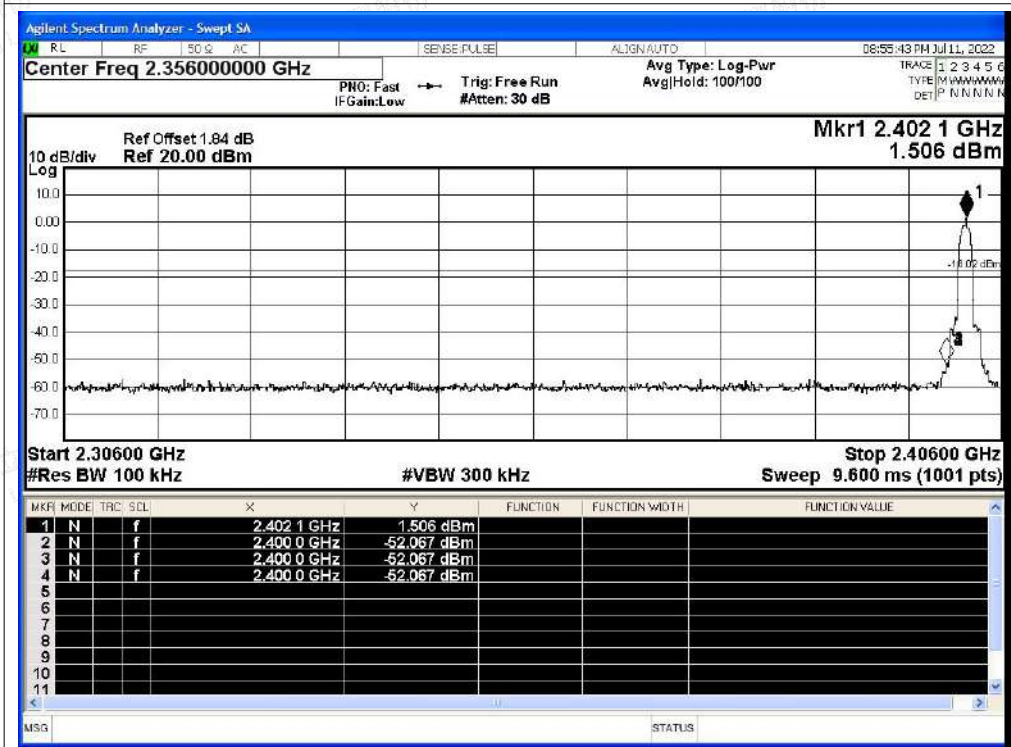




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

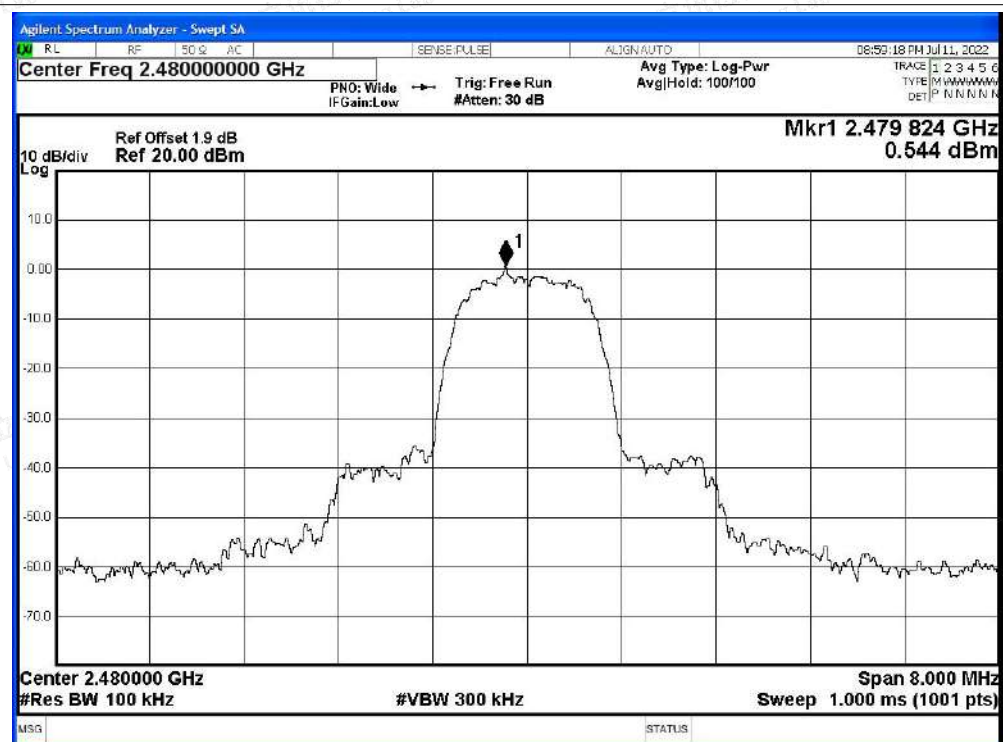


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

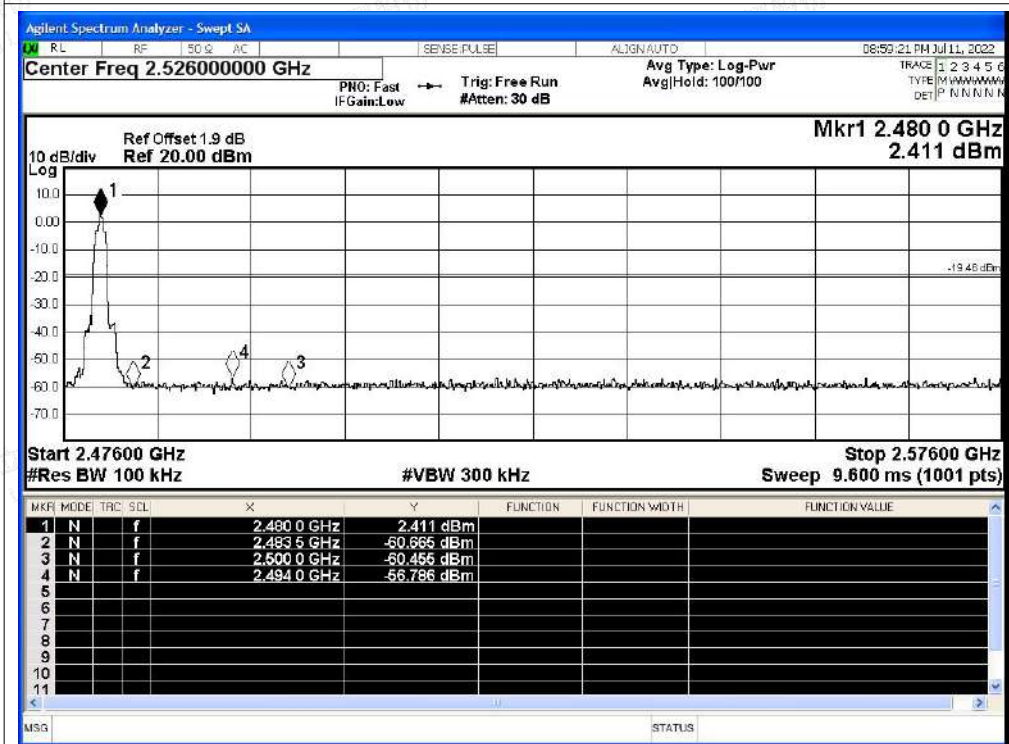




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref

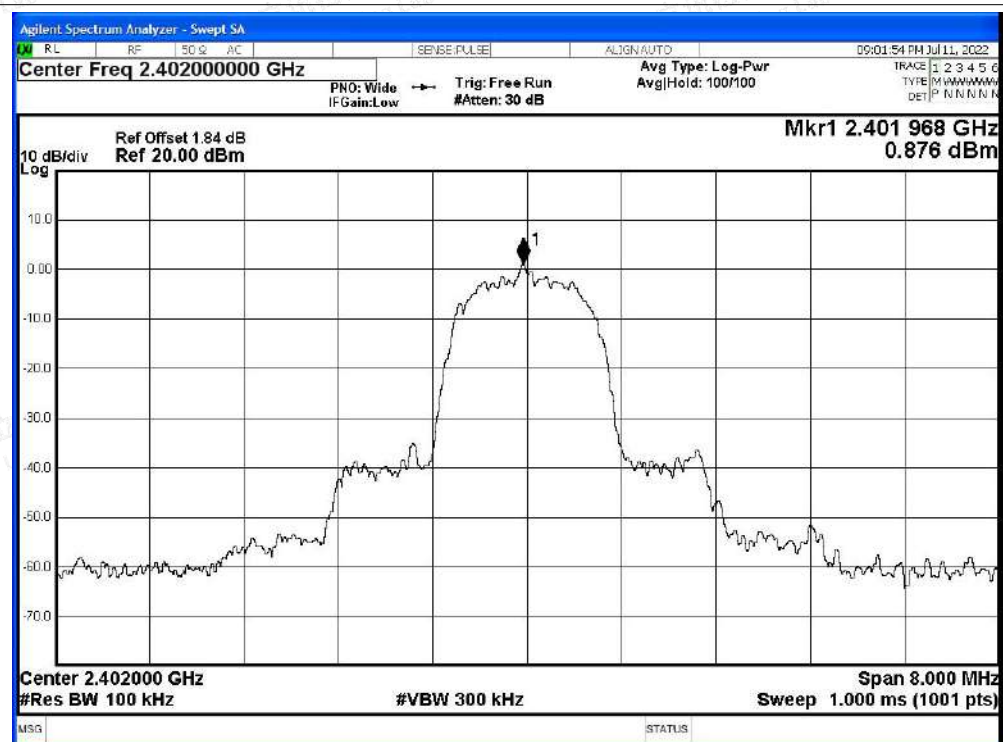


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

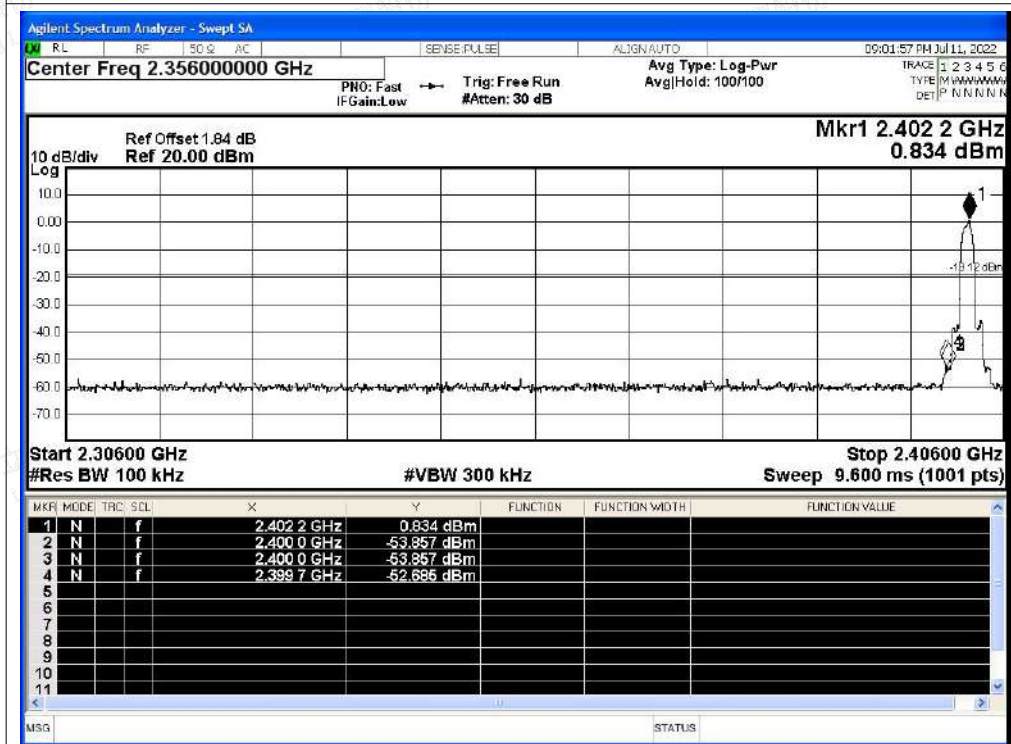




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

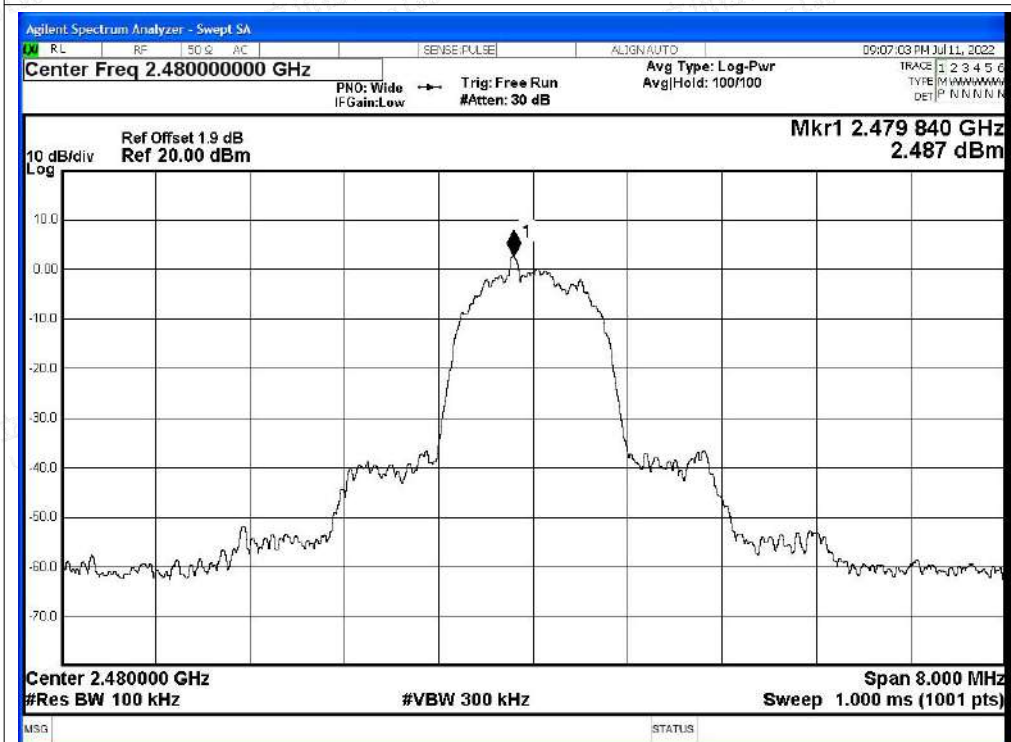


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

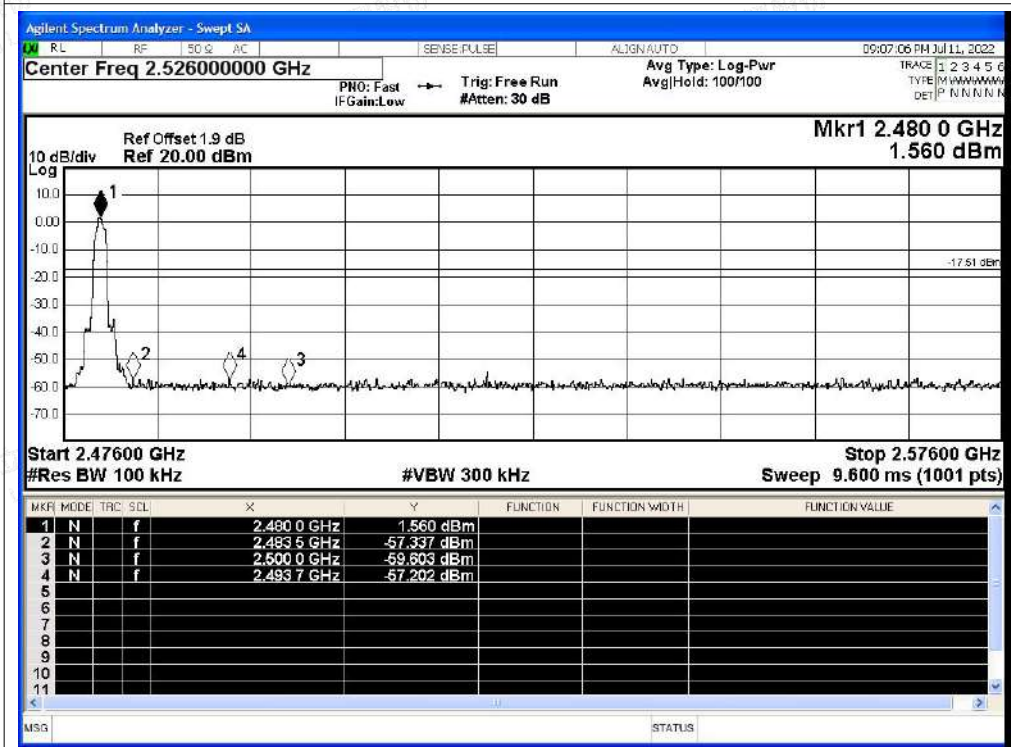




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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



**(Hopping)**

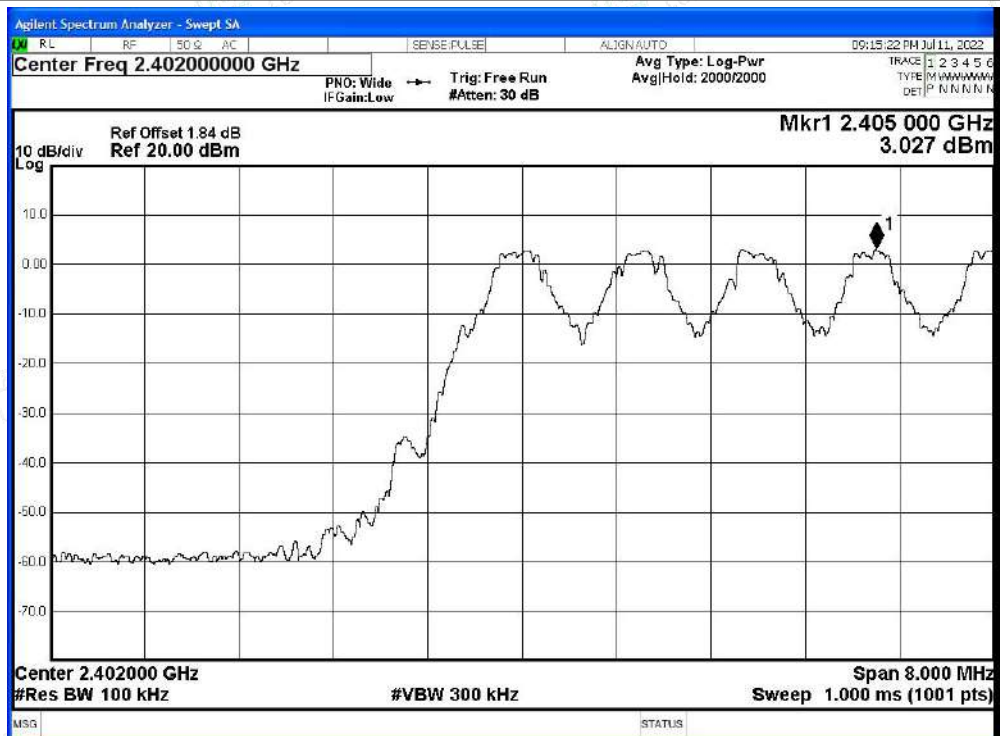
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-59.54	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-59.88	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-56.67	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-58.4	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-57.48	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-58.34	-20	Pass



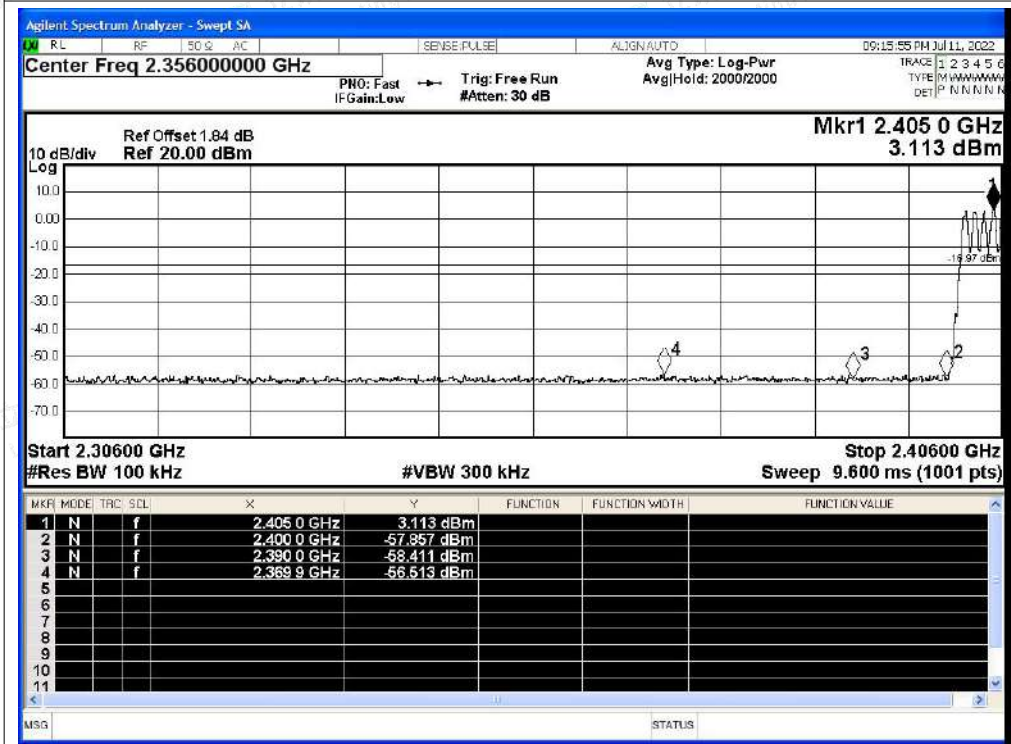


Test Graphs

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

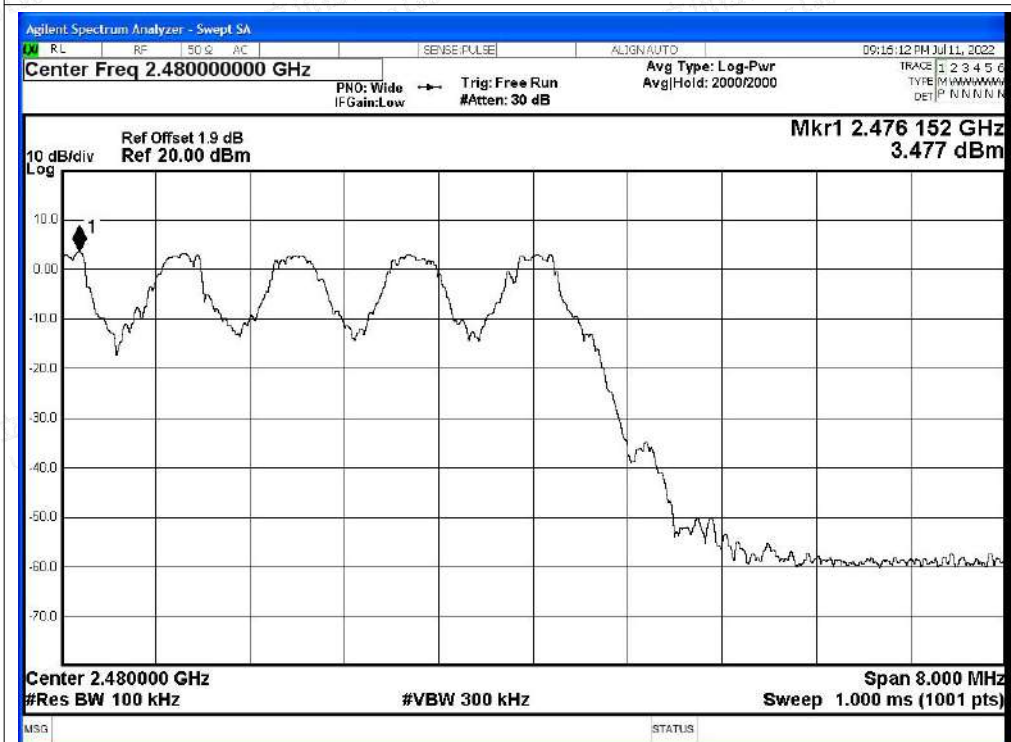


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

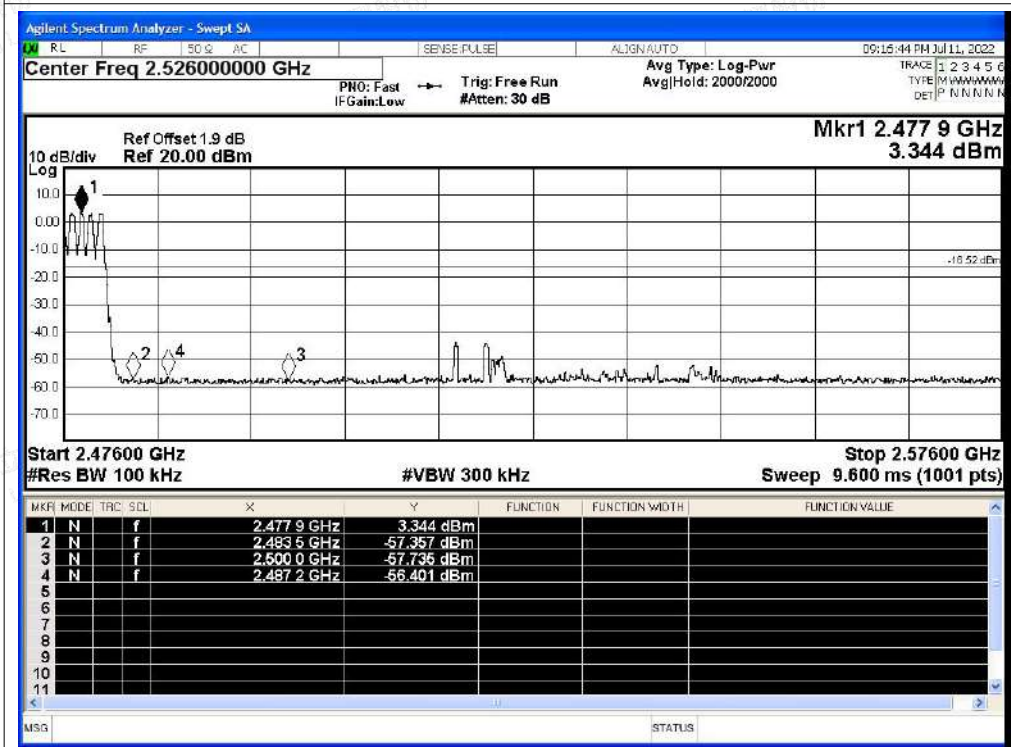




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



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



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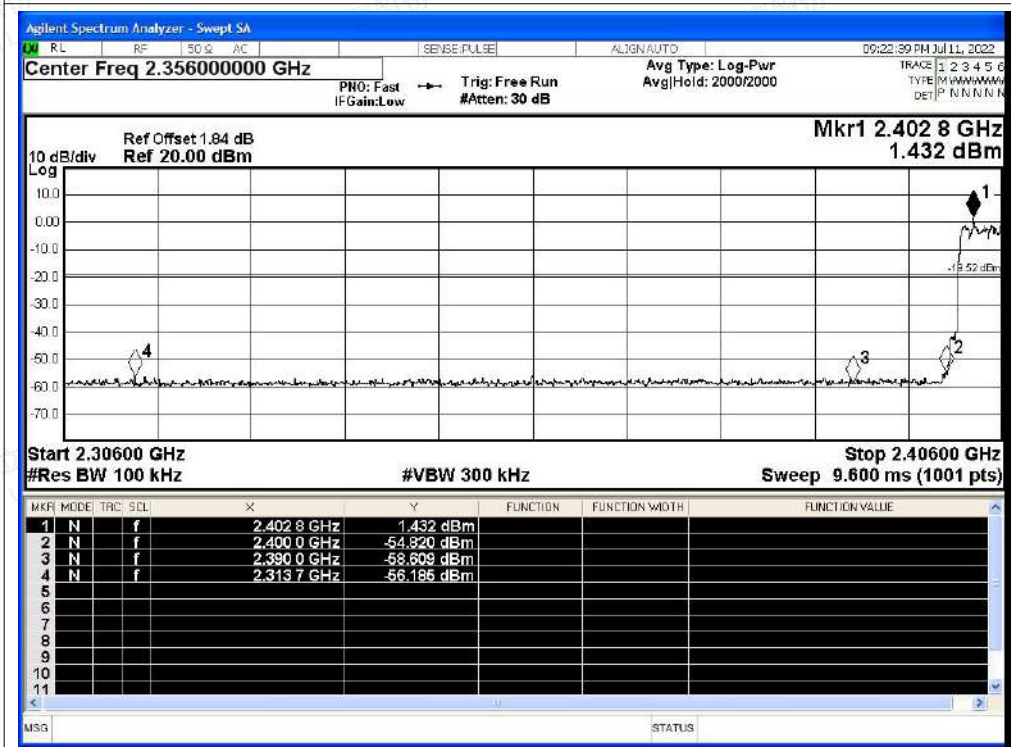
Scan code to check authenticity



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



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

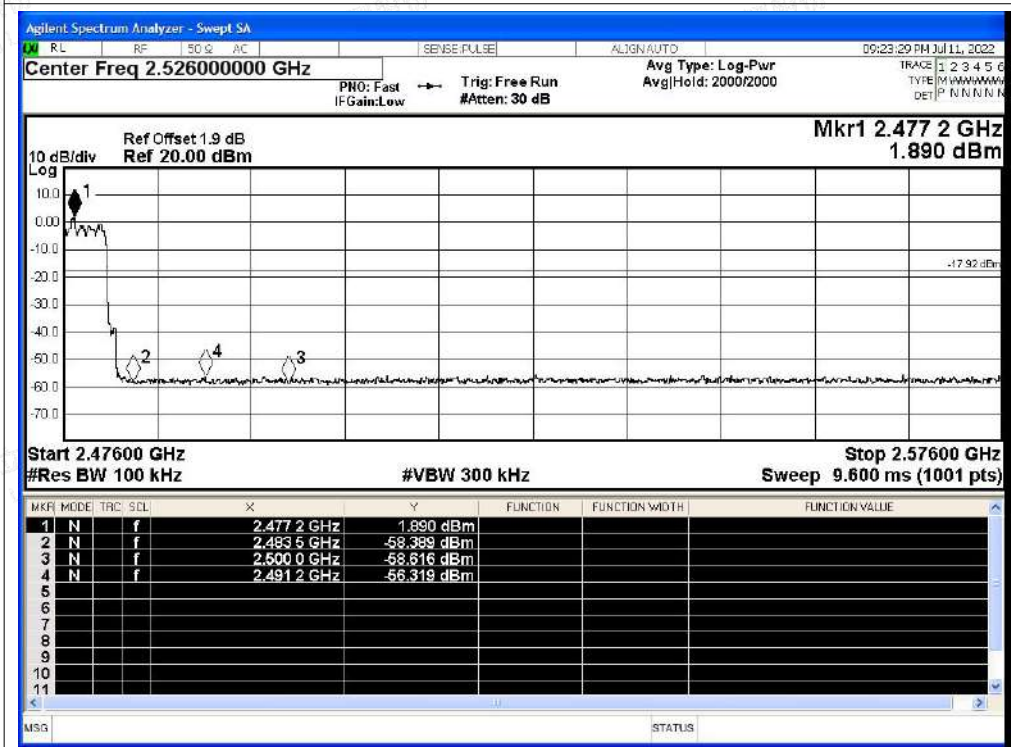




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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

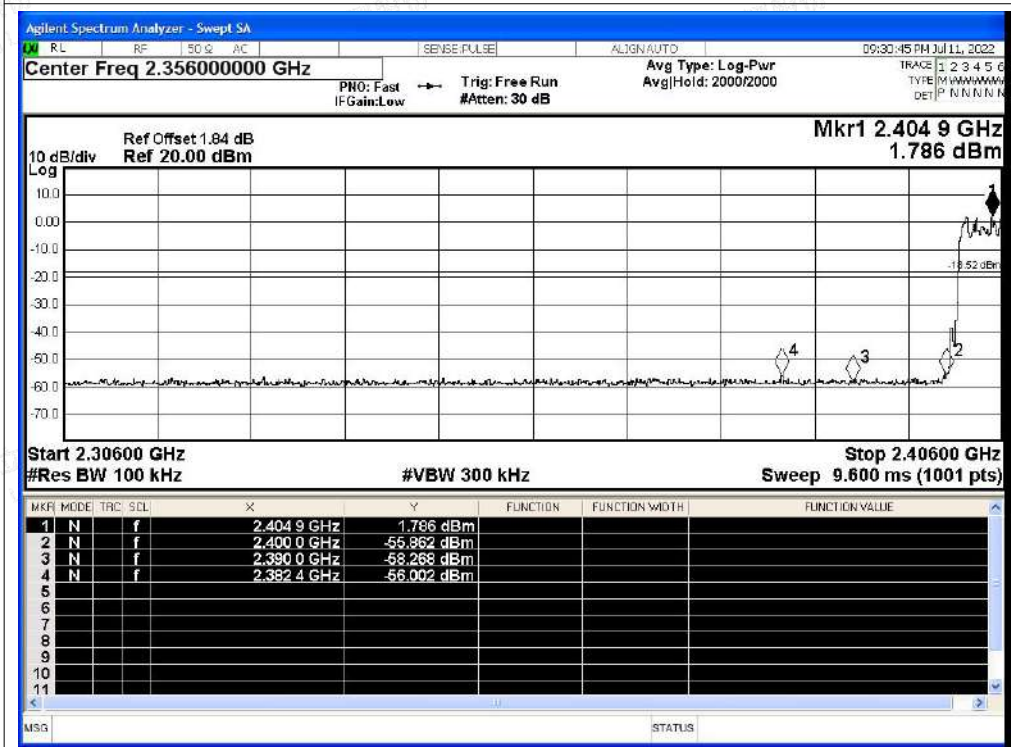




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



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

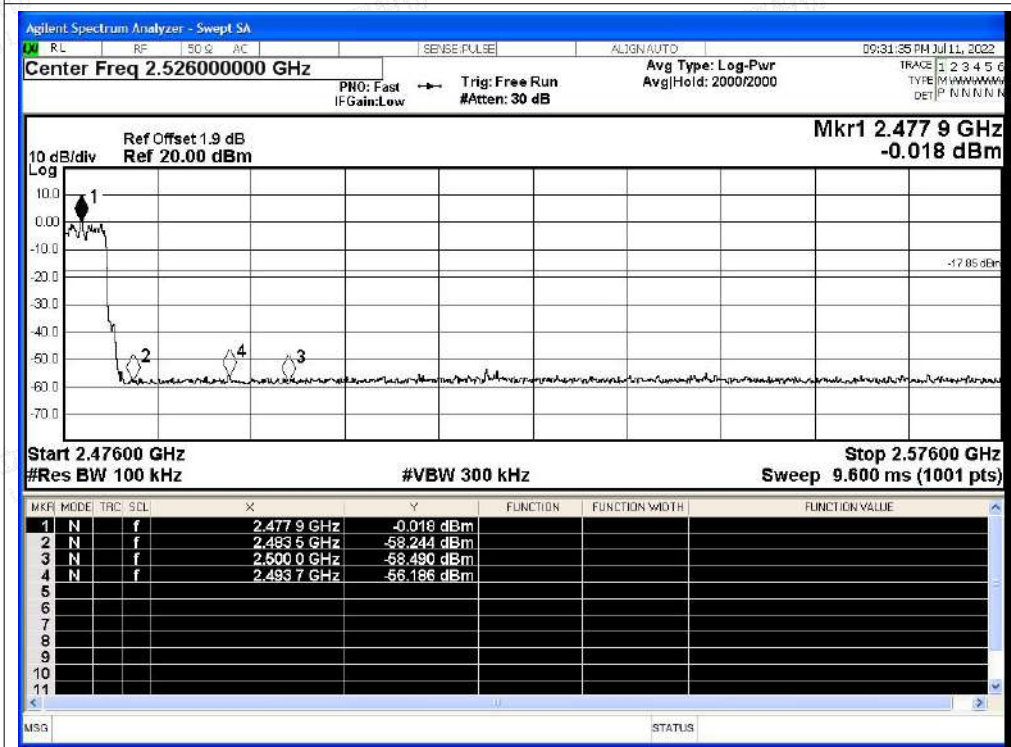




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



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	-58.68	-20	Pass
NVNT	1-DH5	2441	Ant1	-59.1	-20	Pass
NVNT	1-DH5	2480	Ant1	-58.6	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.31	-20	Pass
NVNT	2-DH5	2441	Ant1	-57.81	-20	Pass
NVNT	2-DH5	2480	Ant1	-58.05	-20	Pass
NVNT	3-DH5	2402	Ant1	-57.87	-20	Pass
NVNT	3-DH5	2441	Ant1	-57.39	-20	Pass
NVNT	3-DH5	2480	Ant1	-57.84	-20	Pass

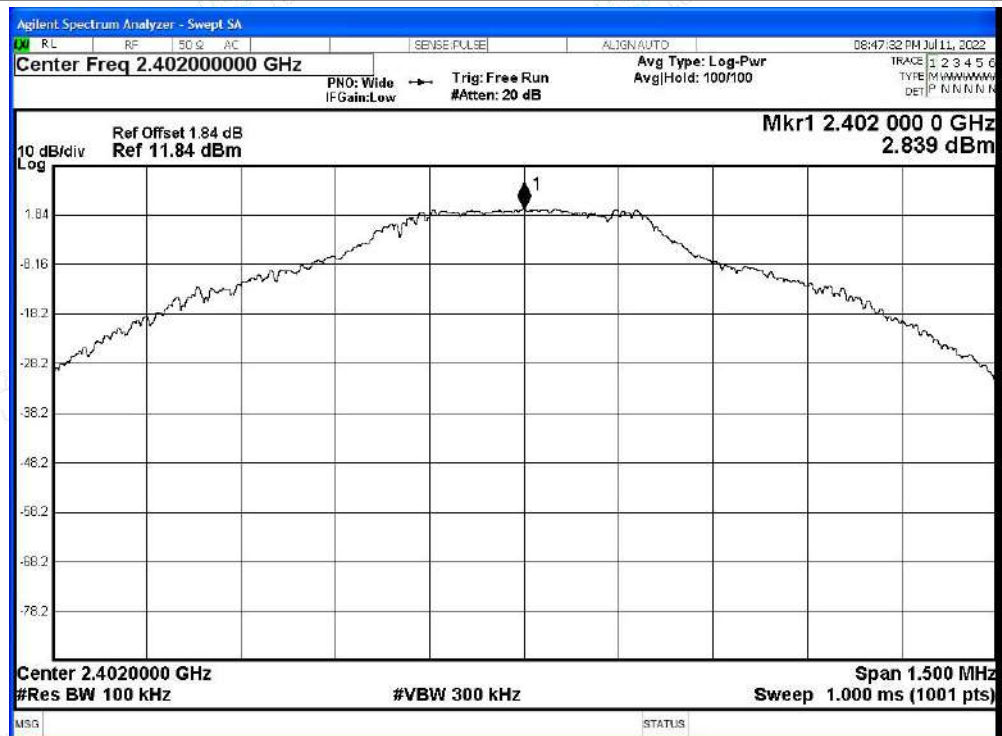


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518000, China
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Scan code to check authenticity

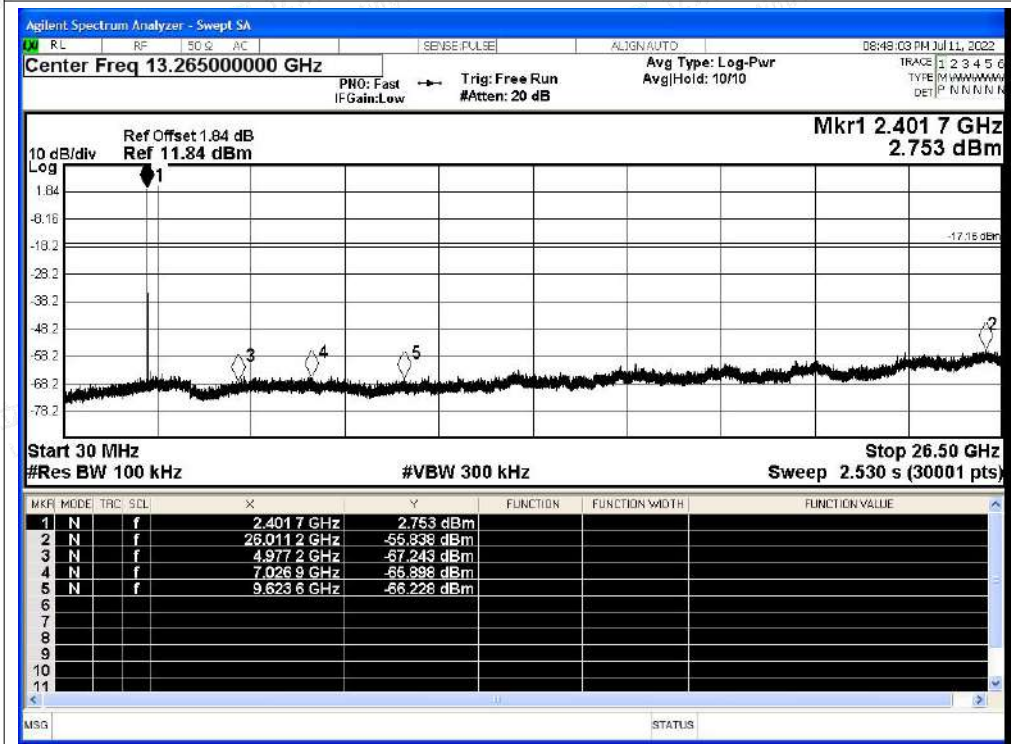


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

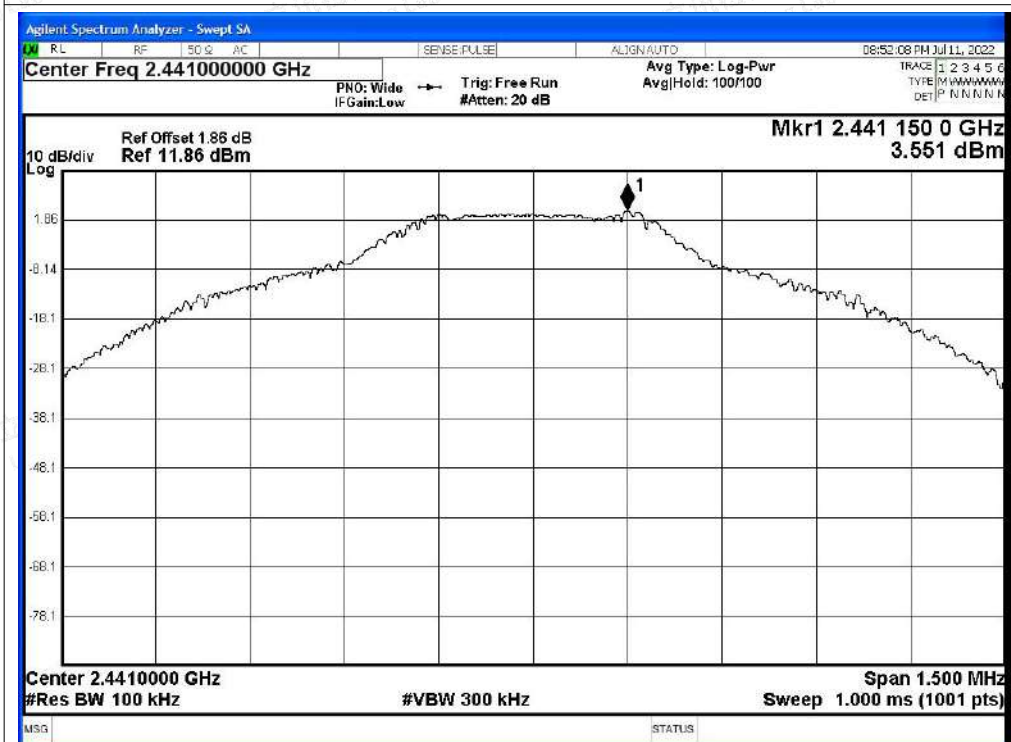


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

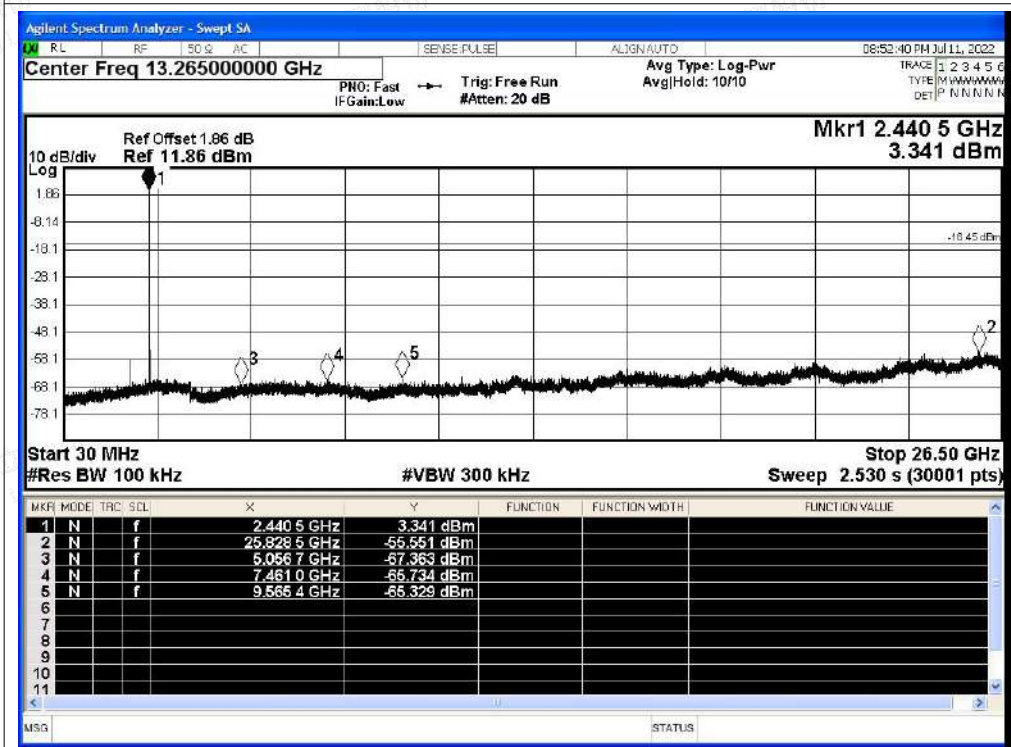




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

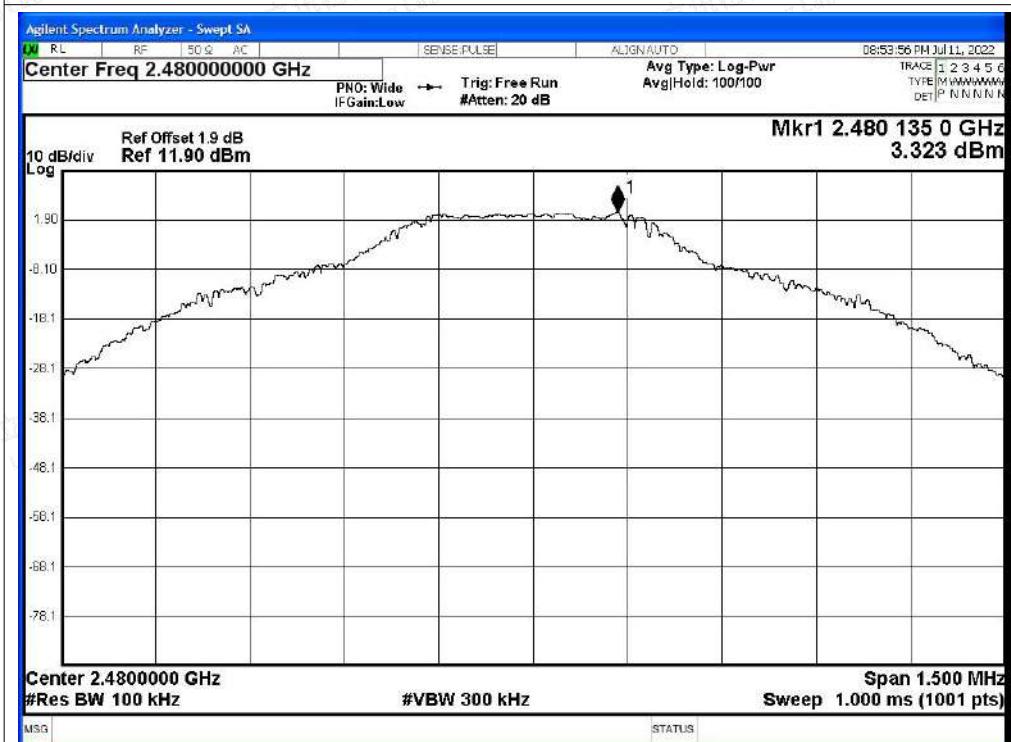


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

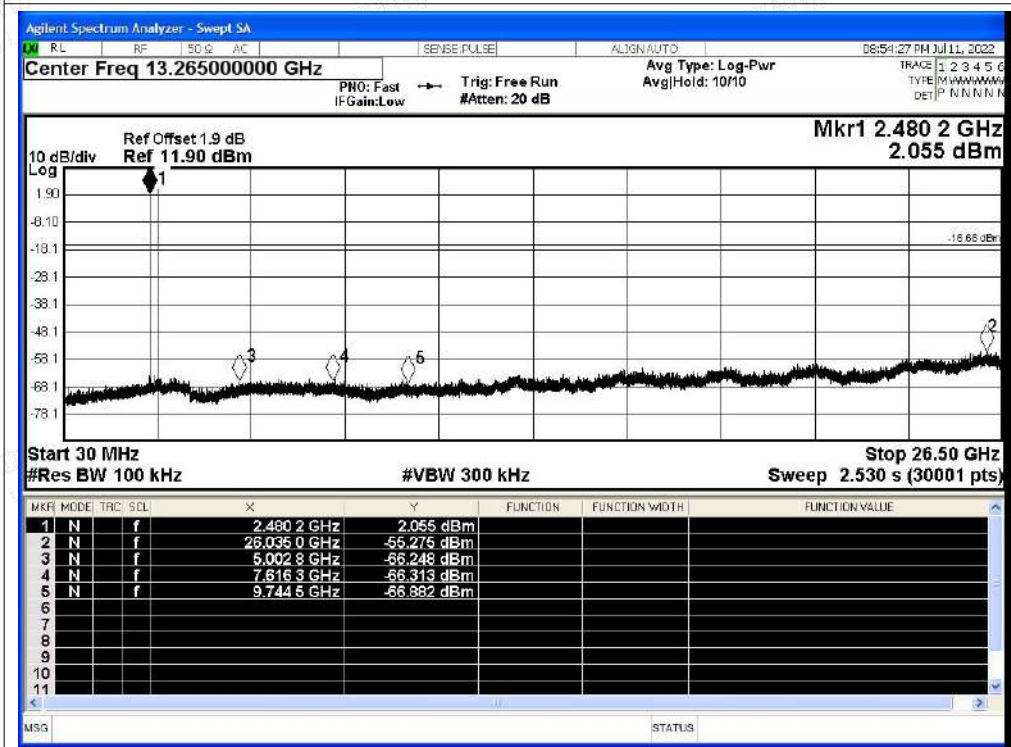




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

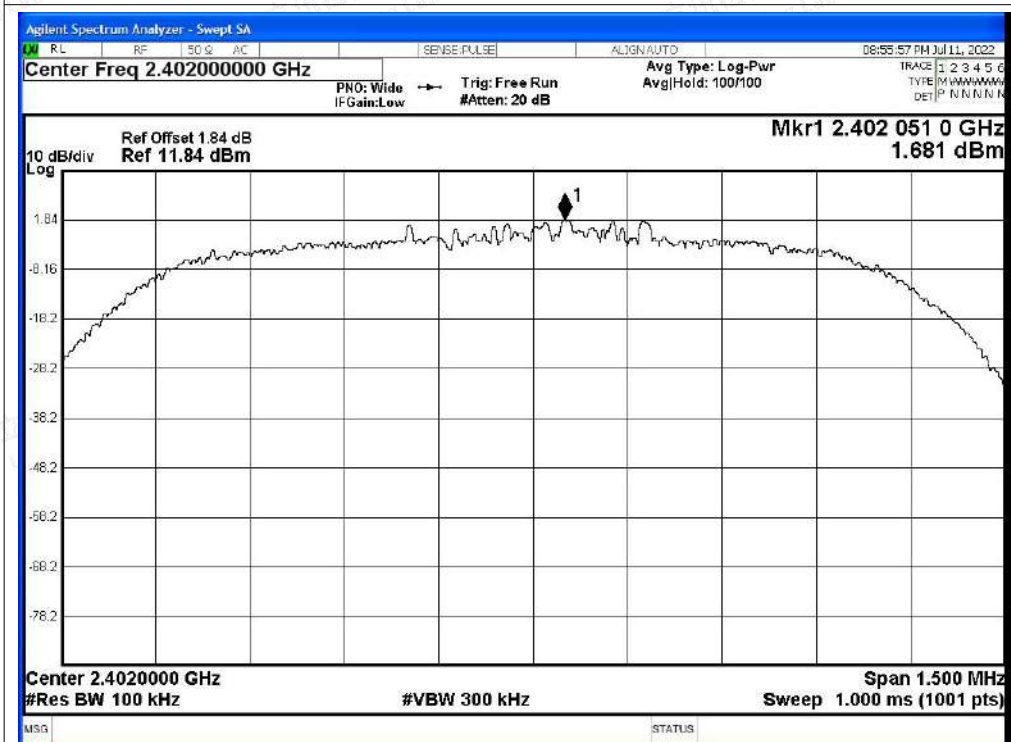


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

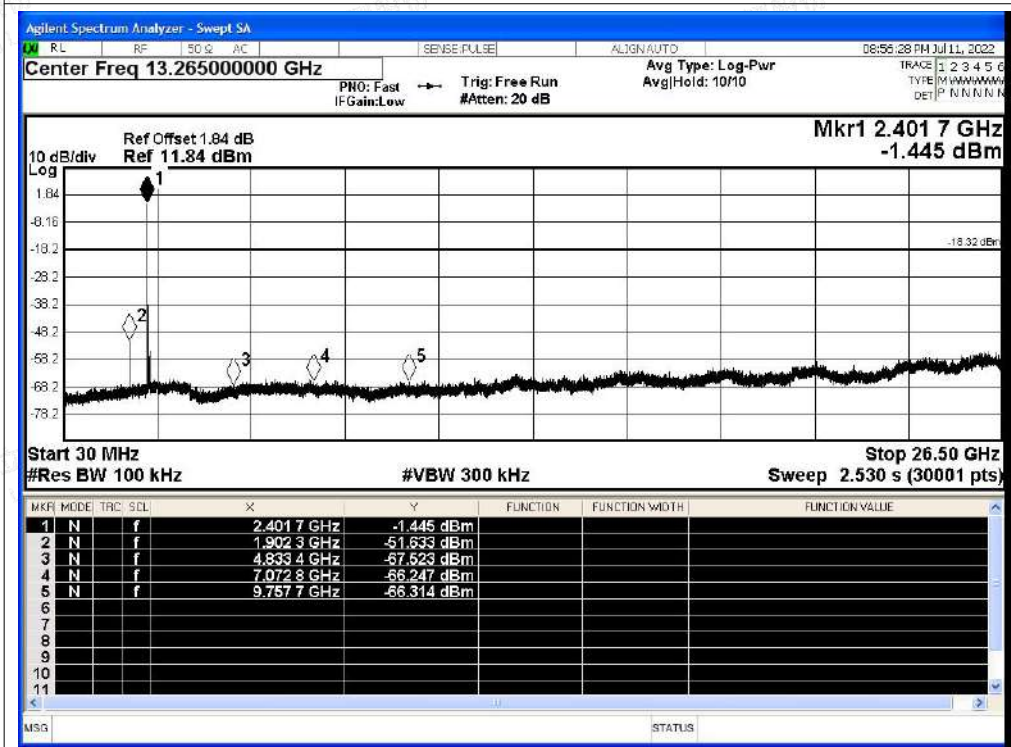




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

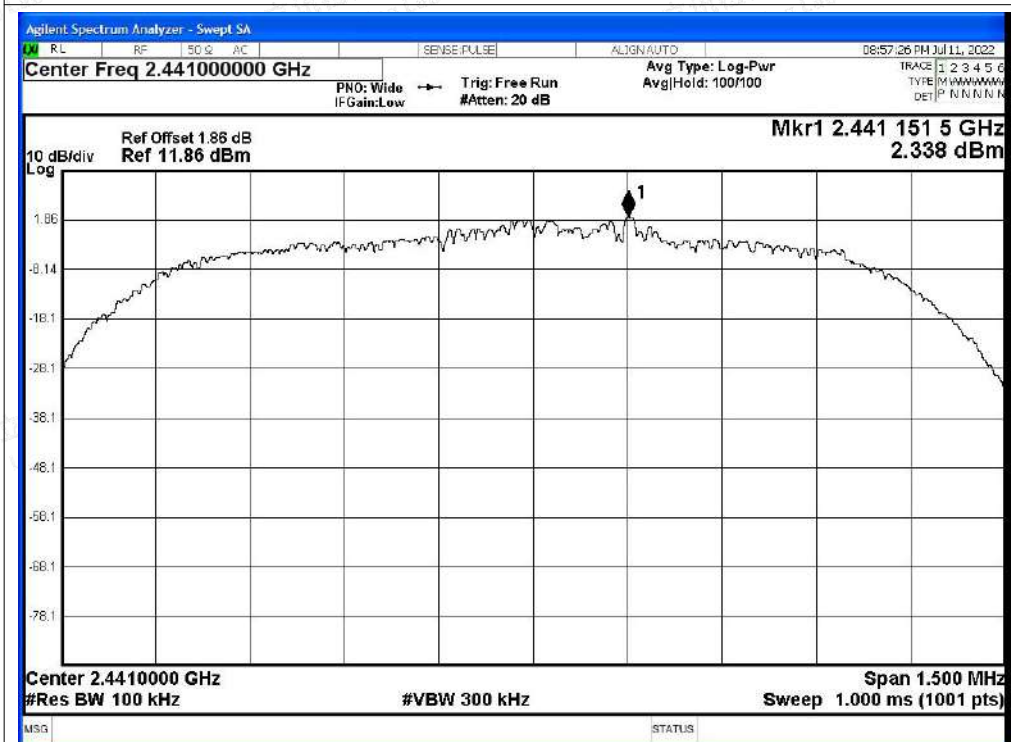


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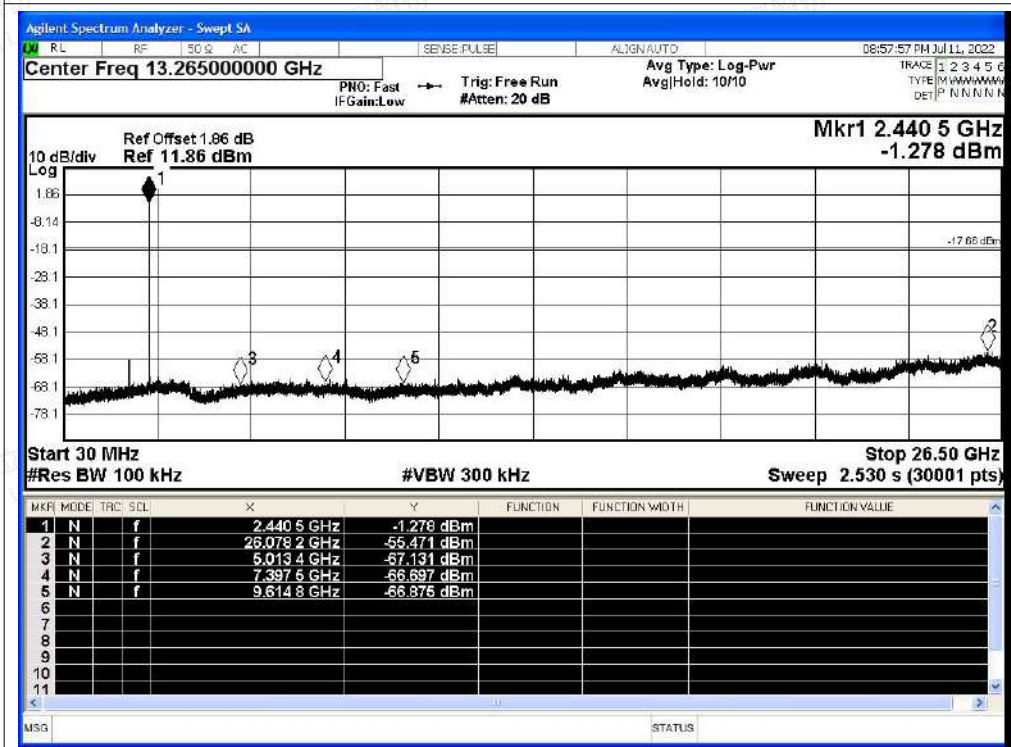




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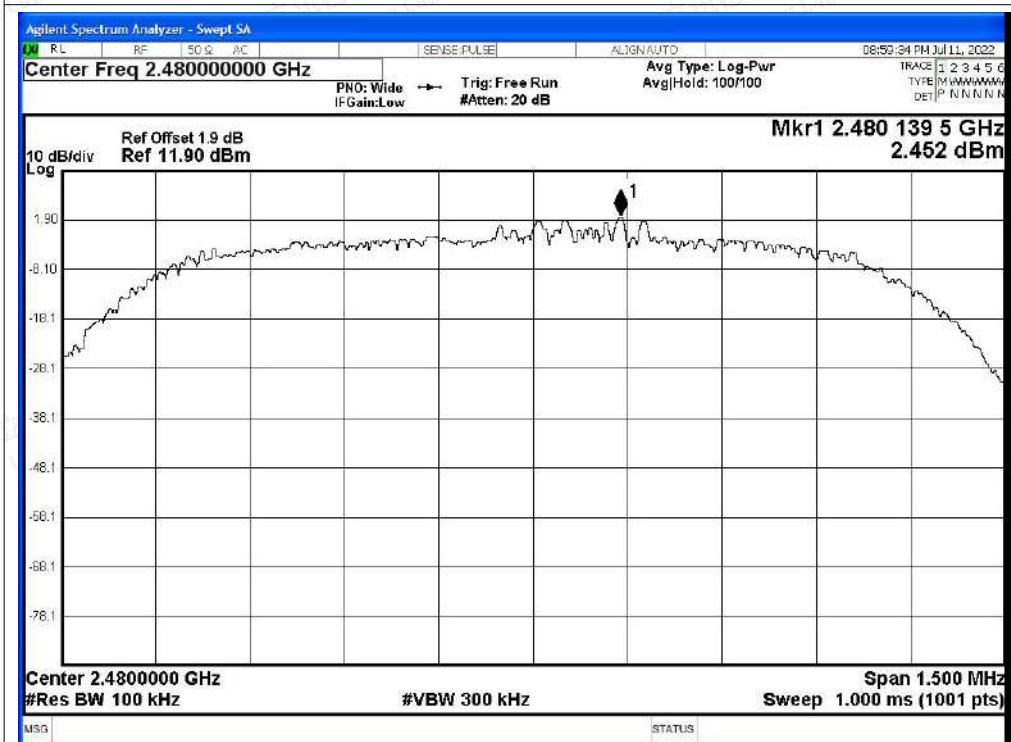


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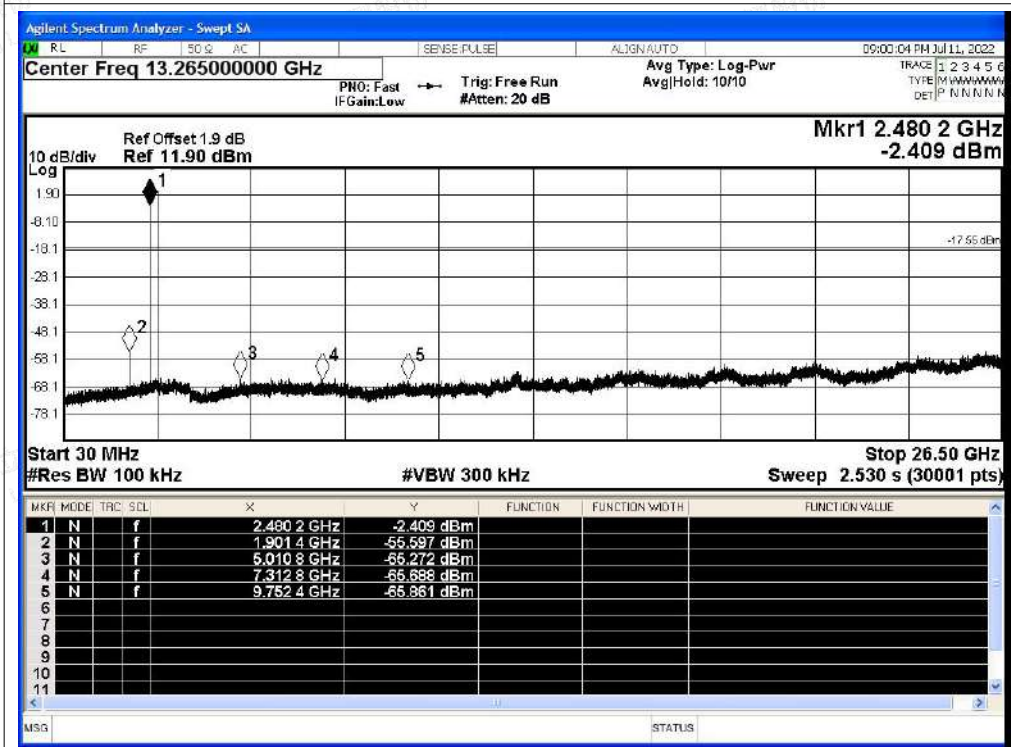




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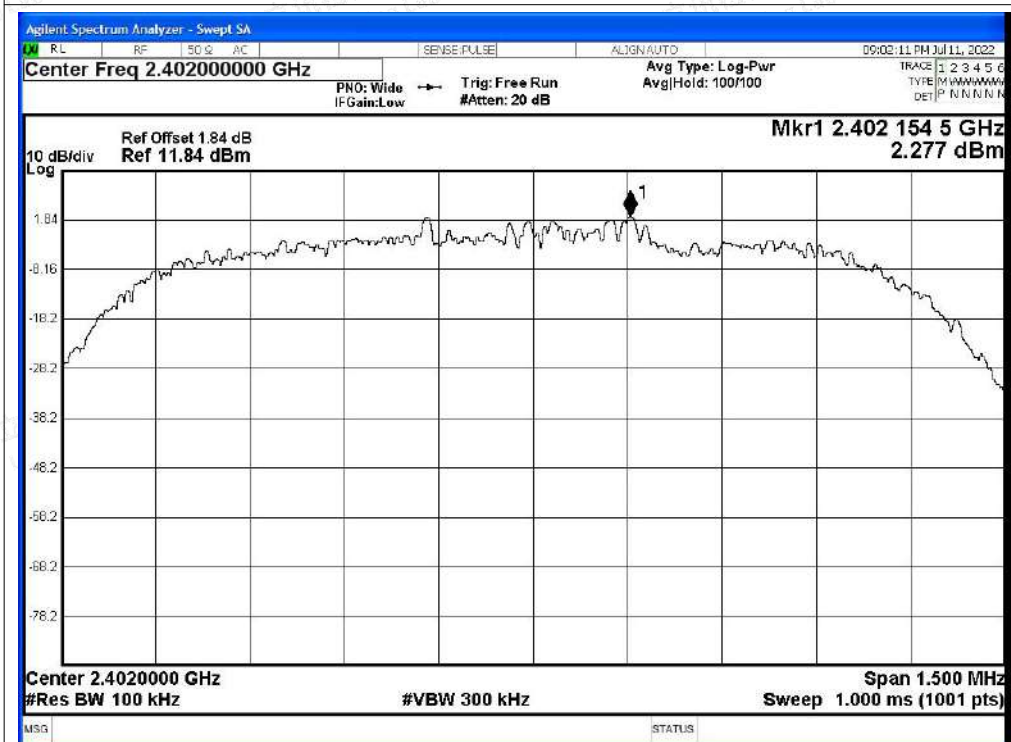


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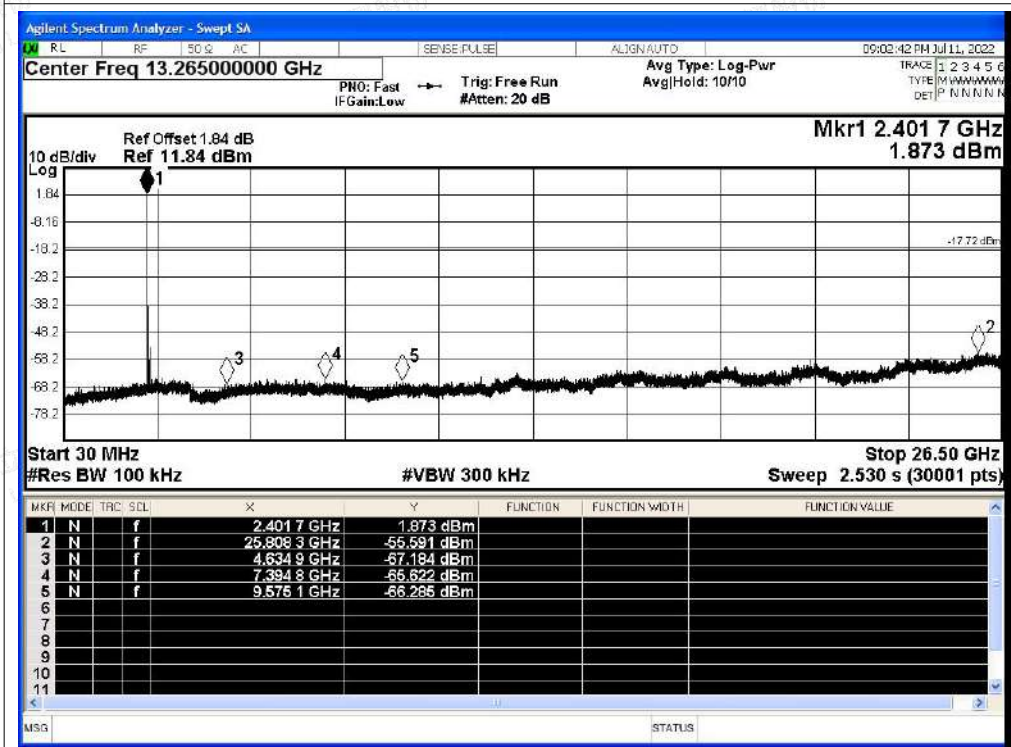




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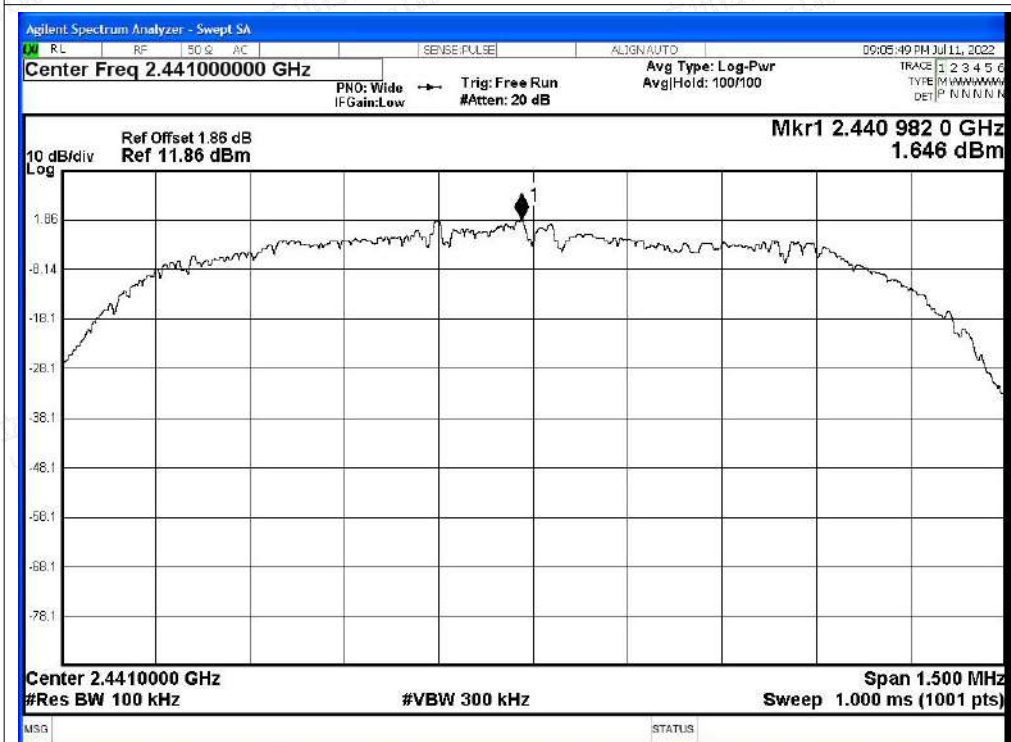


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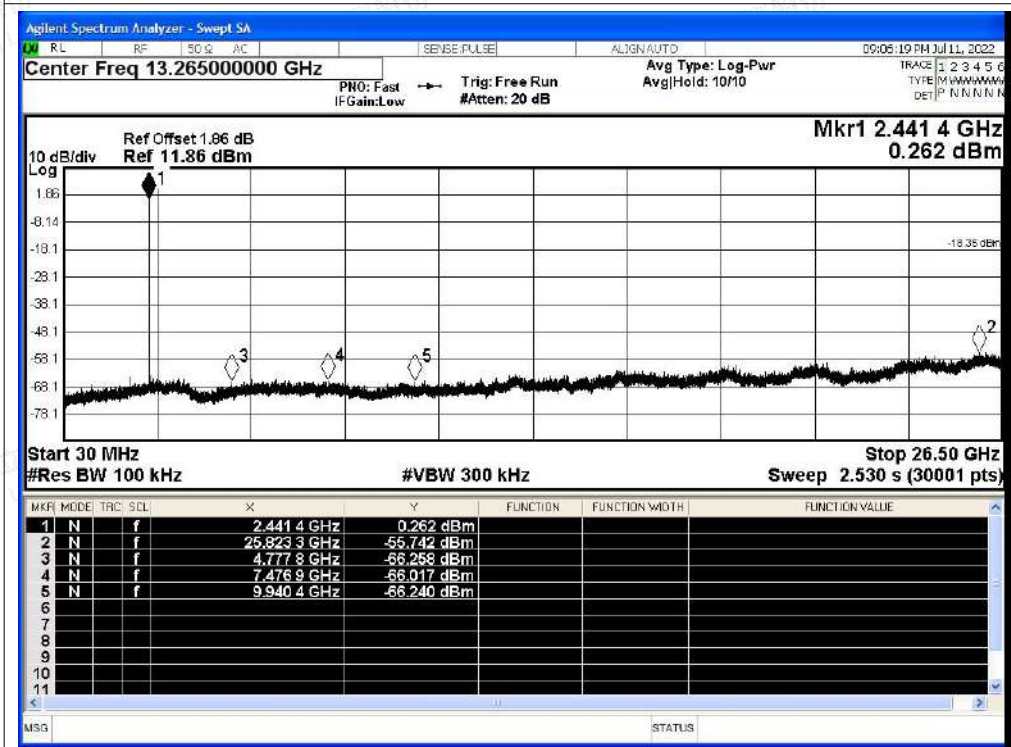




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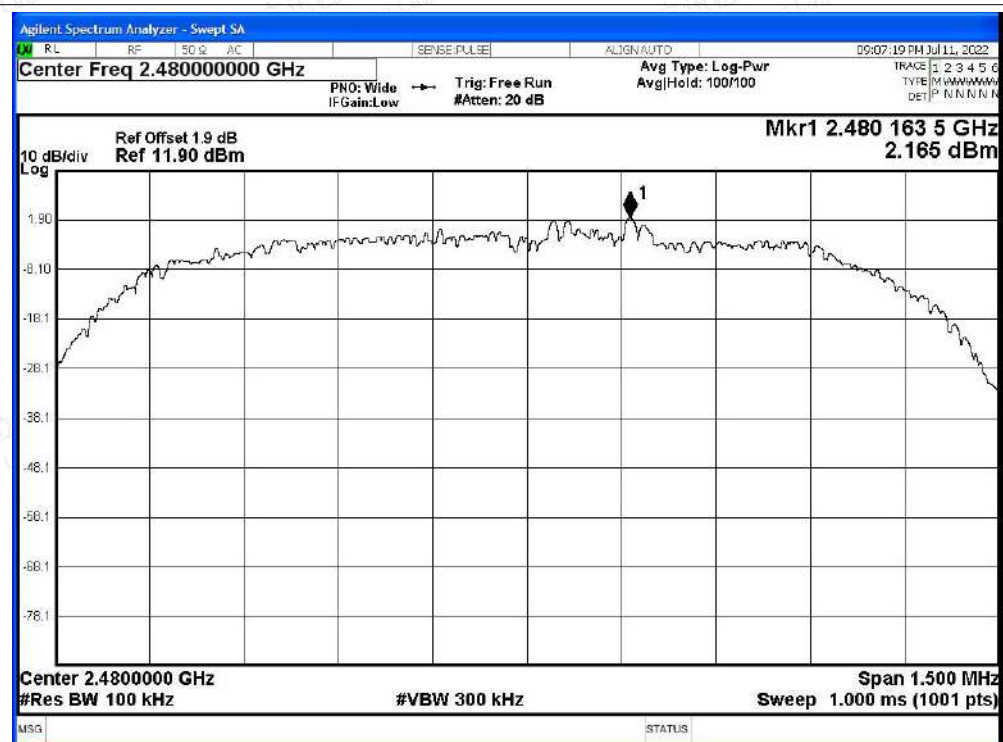


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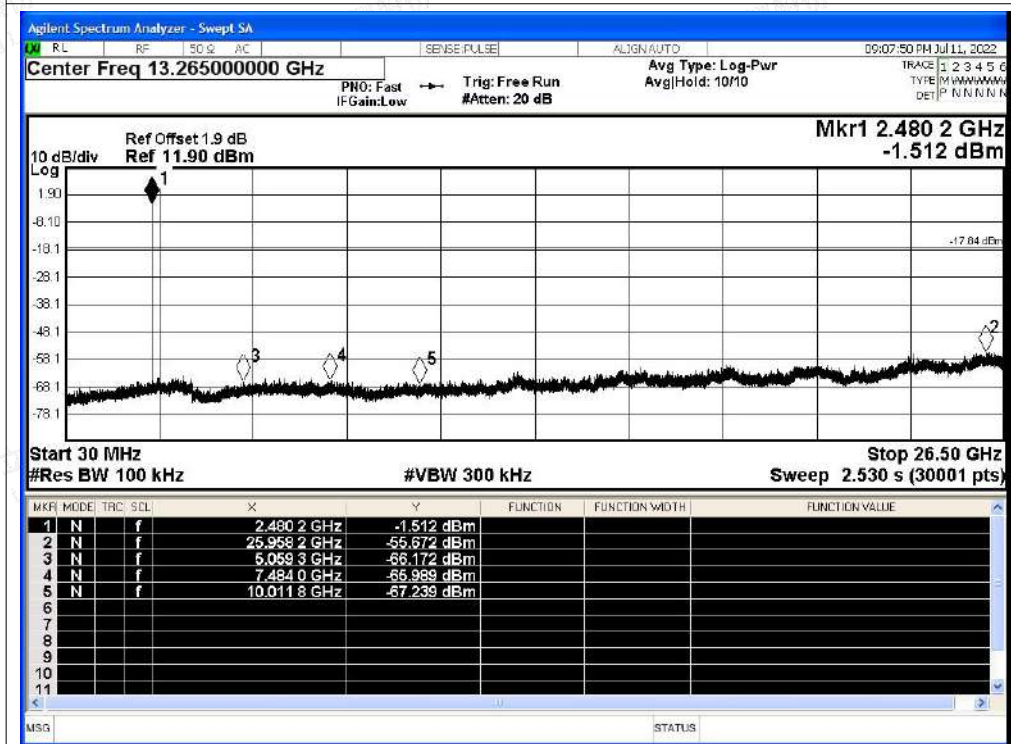




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



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	-50.16	2	47.1	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-60.58	2	36.68	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2389.584	-47.93	2	49.33	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2382.864	-60.18	2	37.08	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-50.74	2	46.52	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-60.29	2	36.97	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-50.21	2	47.05	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-59.42	2	37.84	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.68	-47.06	2	50.2	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.656	-59.39	2	37.87	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-51.25	2	46.01	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-59.89	2	37.37	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-49.95	2	47.31	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-60.71	2	36.55	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2361.456	-47.99	2	49.27	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2381.04	-60.13	2	37.13	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-50.67	2	46.59	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-60.38	2	36.88	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-50.18	2	47.08	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-59.44	2	37.82	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.704	-46.72	2	50.54	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.848	-59.39	2	37.87	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-48.75	2	48.51	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-60.02	2	37.24	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-51.14	2	46.12	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-60.66	2	36.6	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2348.208	-47.4	2	49.86	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2378.928	-60.13	2	37.13	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.87	2	46.39	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-60.2	2	37.06	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-50.52	2	46.74	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-59.32	2	37.94	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2484.28	-47.07	2	50.19	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.536	-59.28	2	37.98	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-51.13	2	46.13	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-59.93	2	37.33	Average	54	Pass

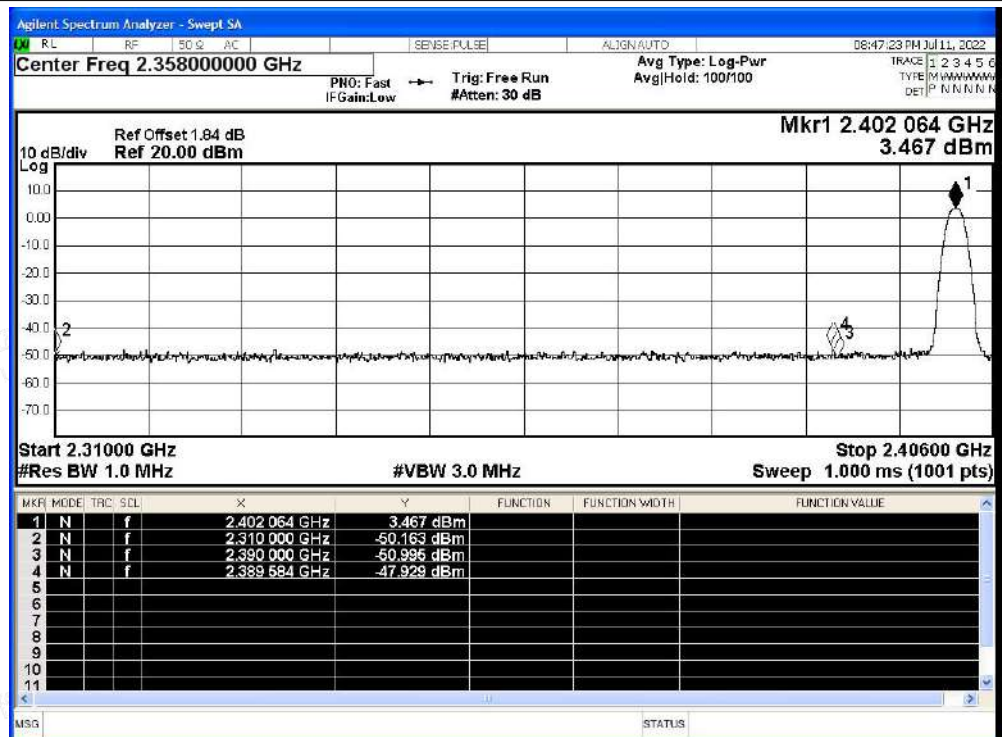


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

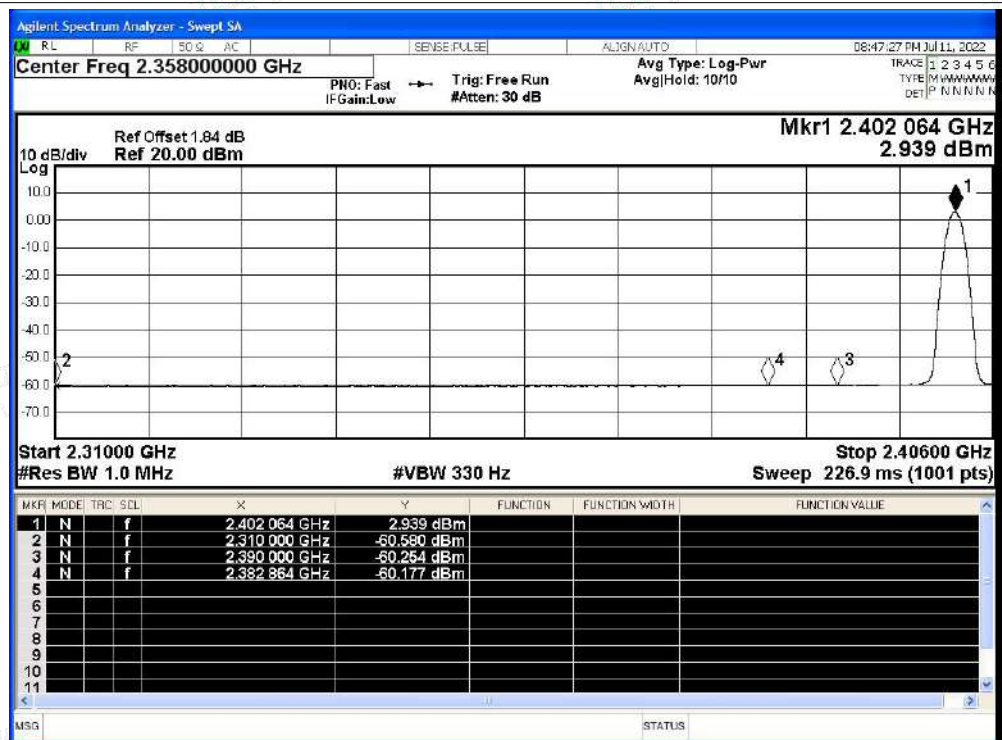


Test Graphs

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

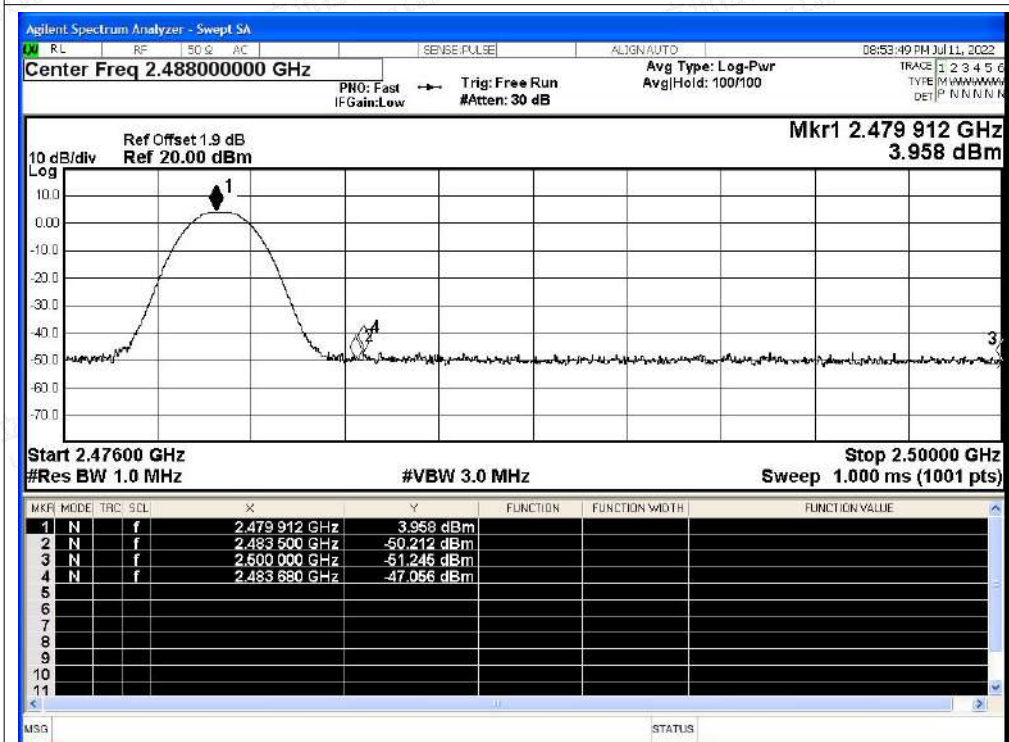


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

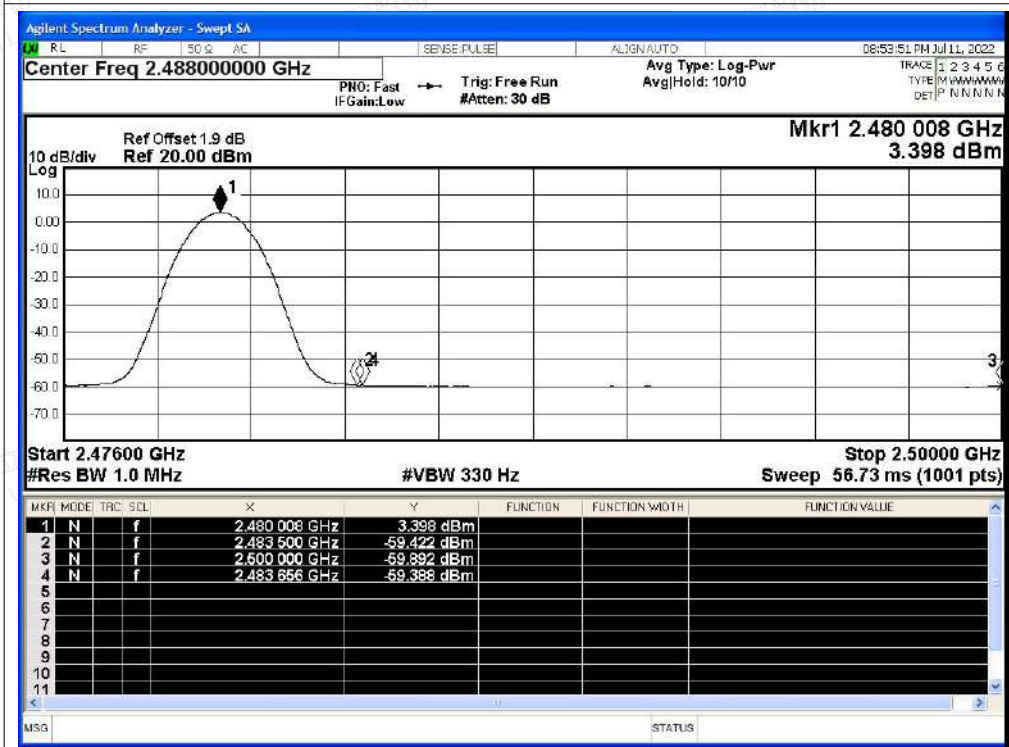




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

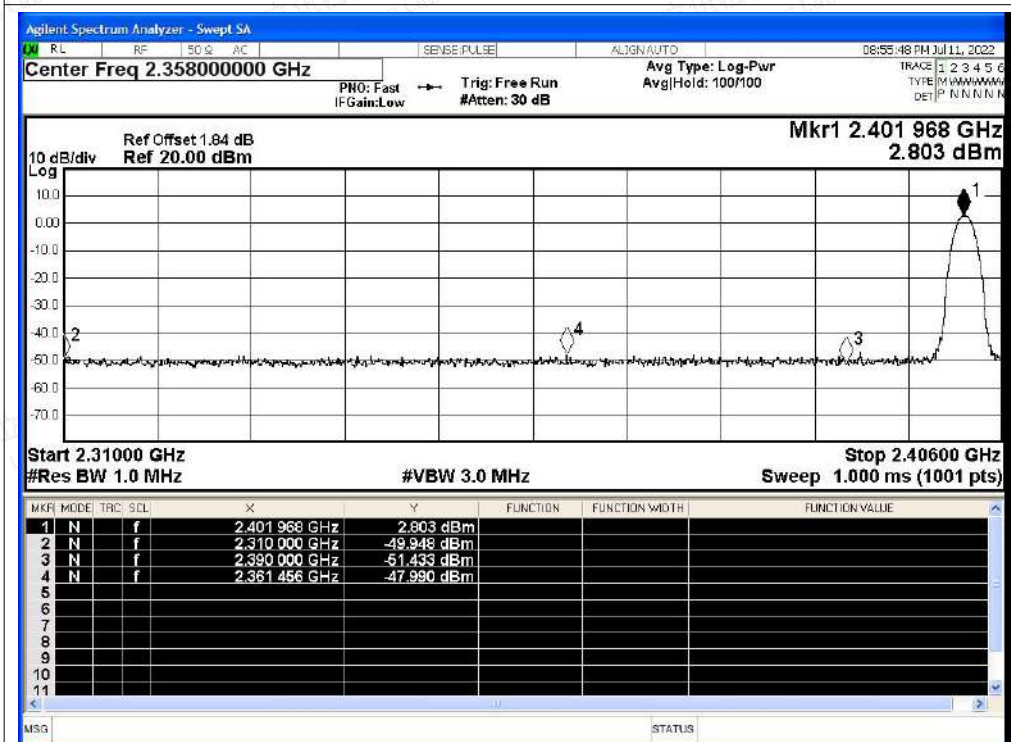


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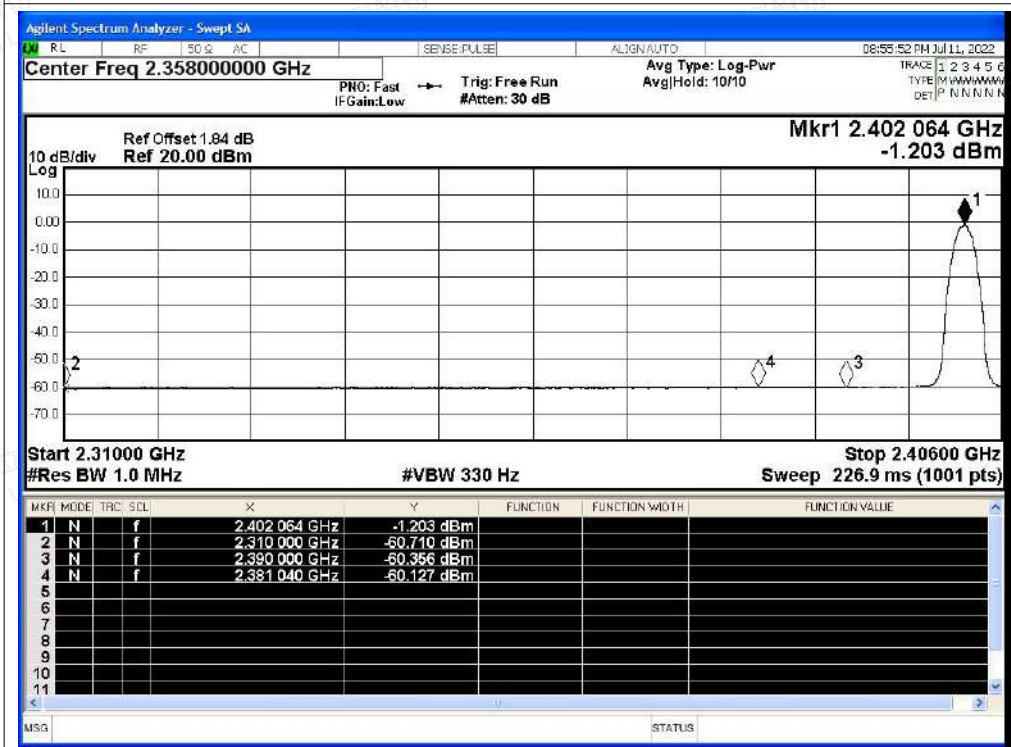




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

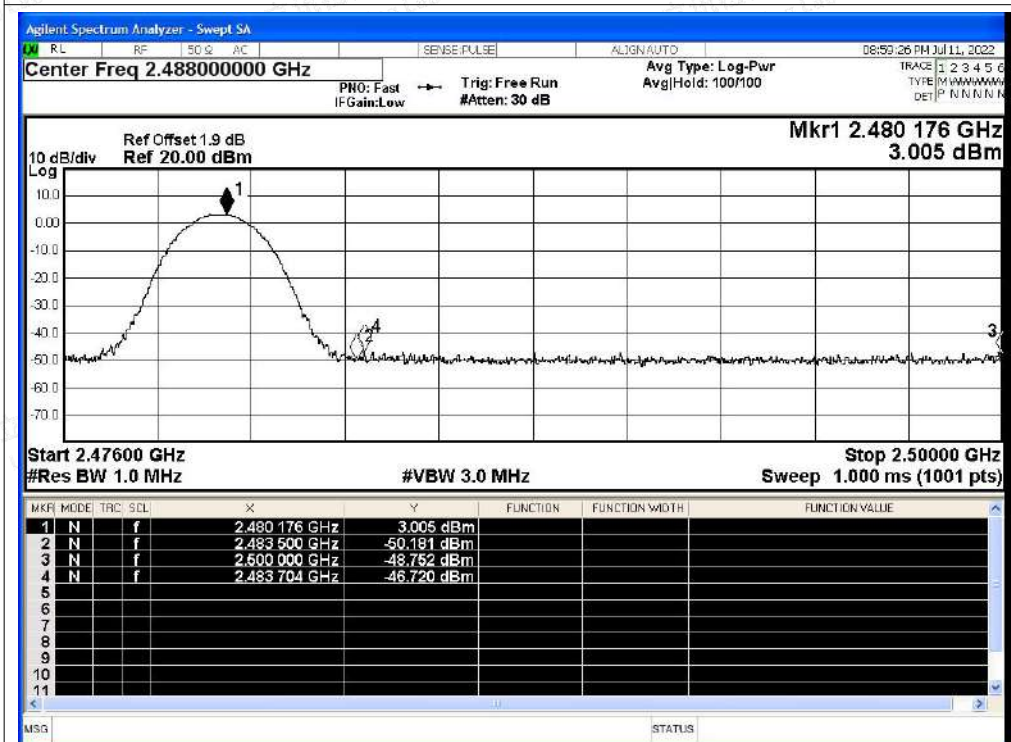


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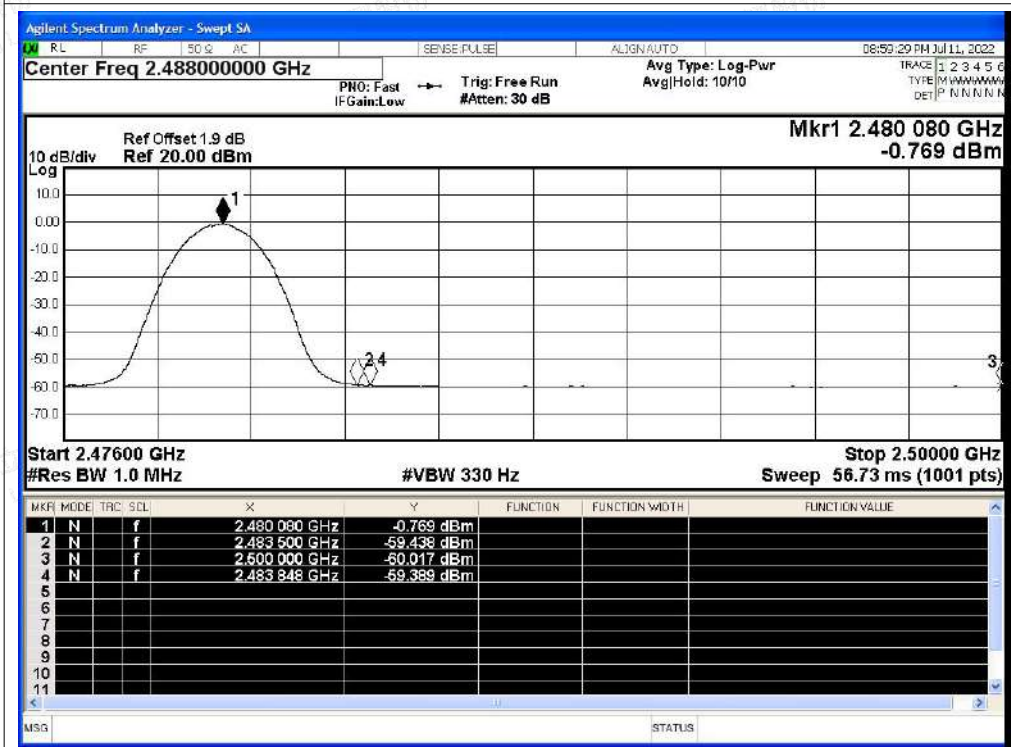




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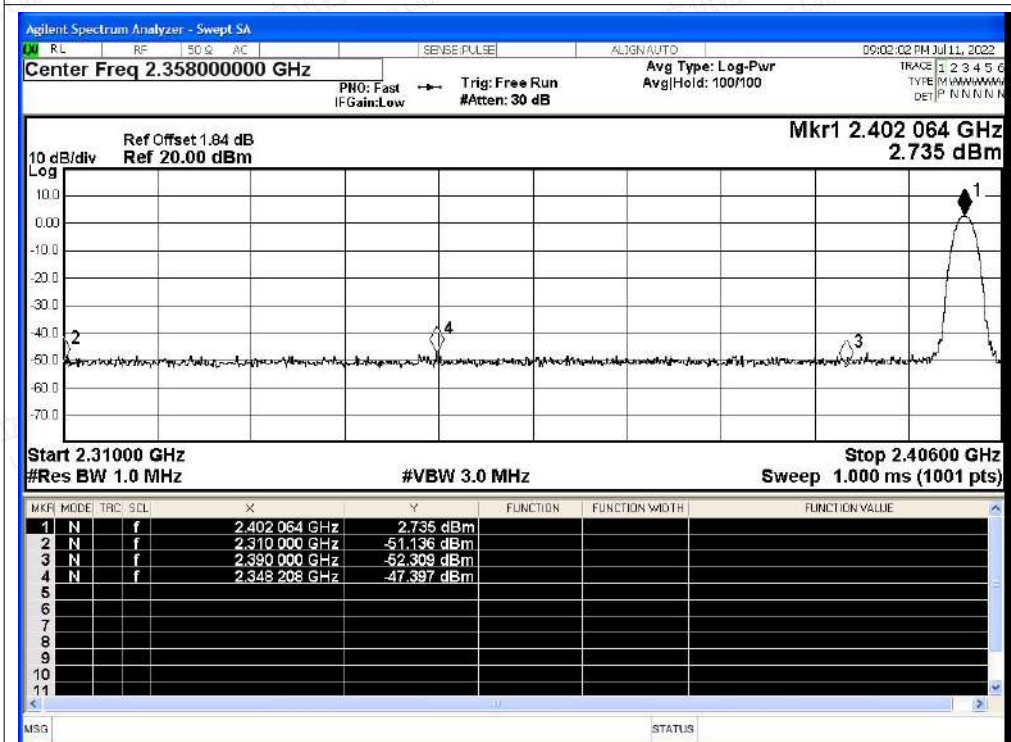


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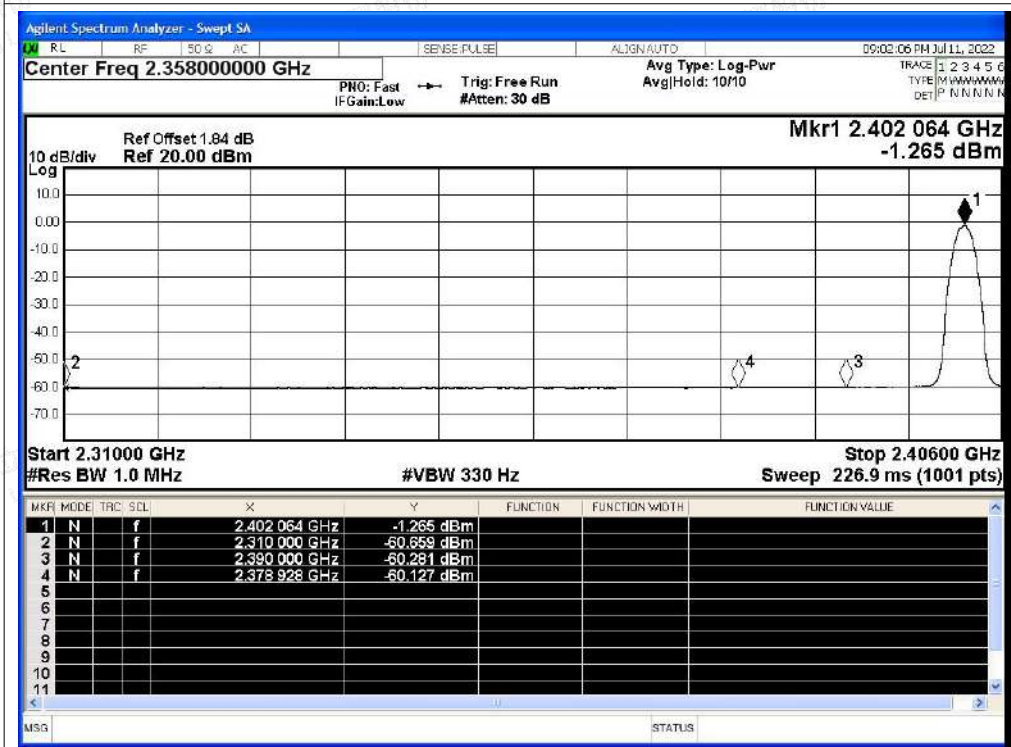




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

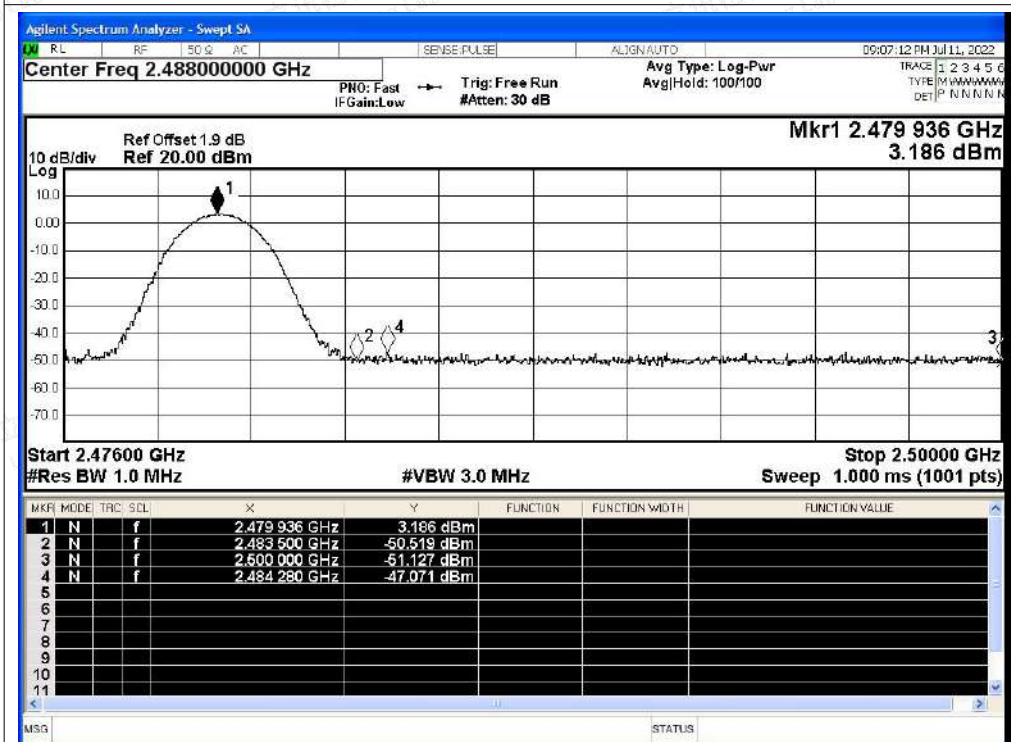


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





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



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

