



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Smart Phone

Test Model: HLTE241E

Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
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	0.844	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.831	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.912	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.278	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.271	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.315	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.269	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.271	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.305	N/A	Pass



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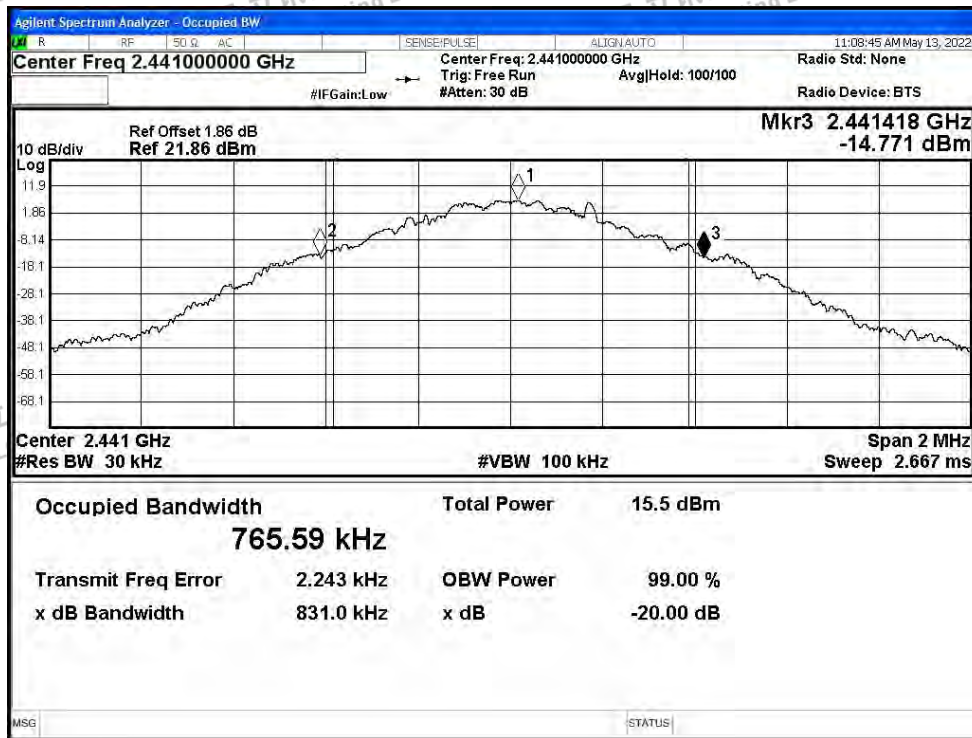


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

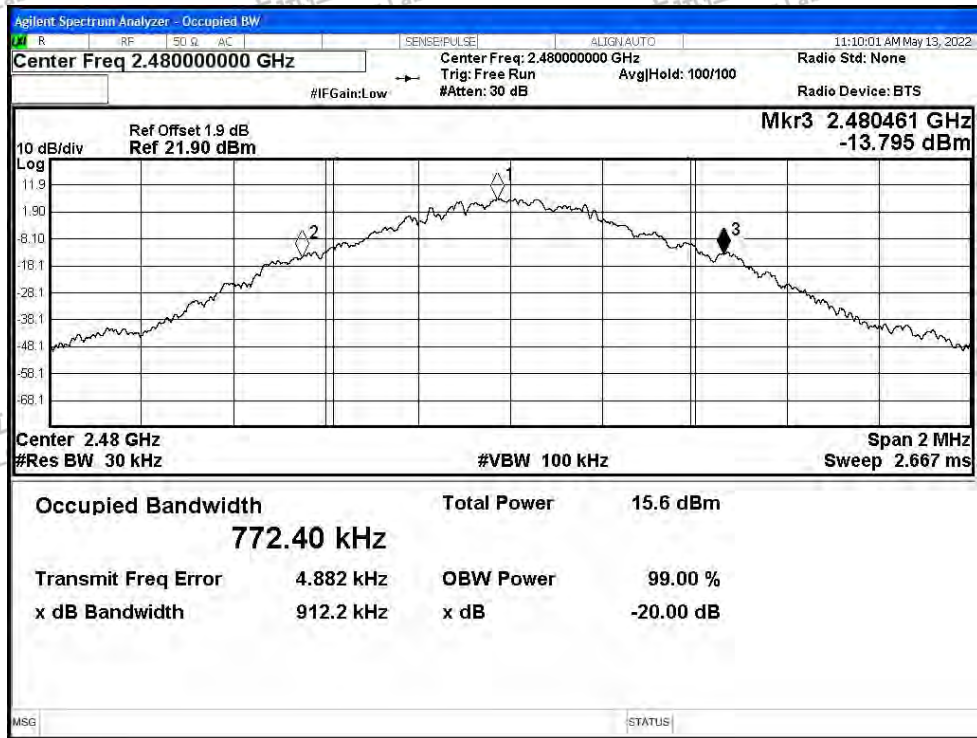


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

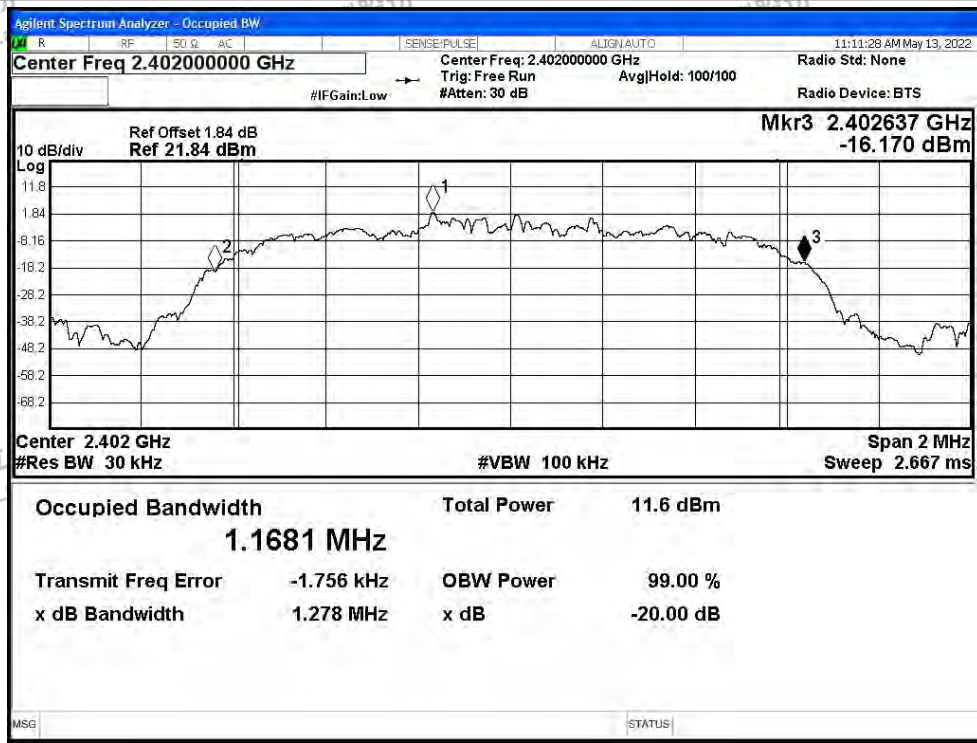




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

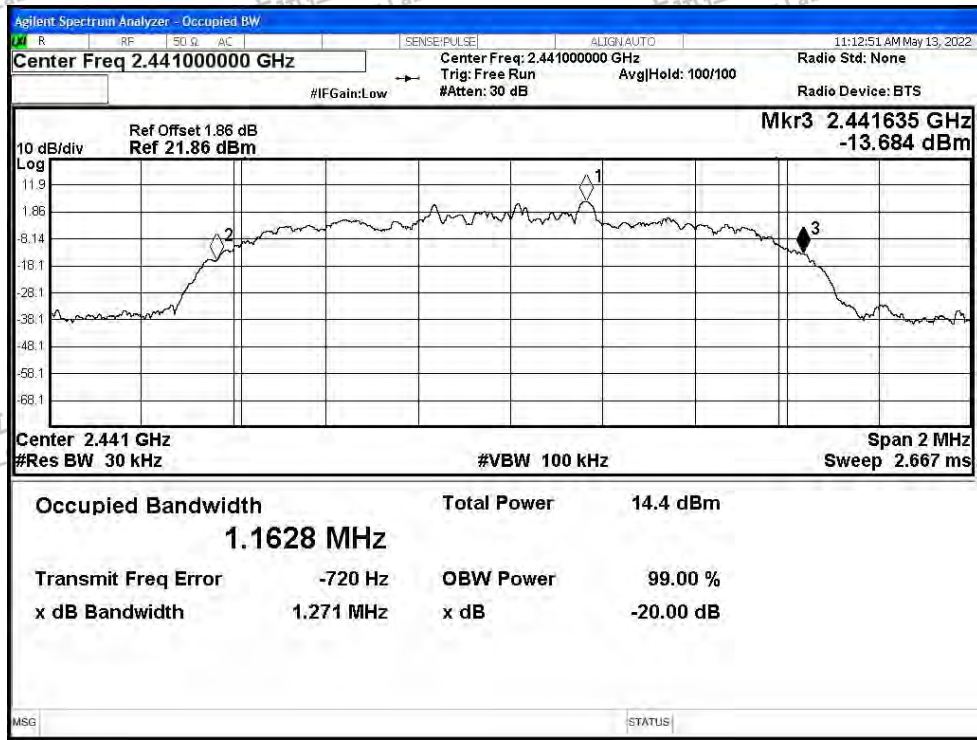


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

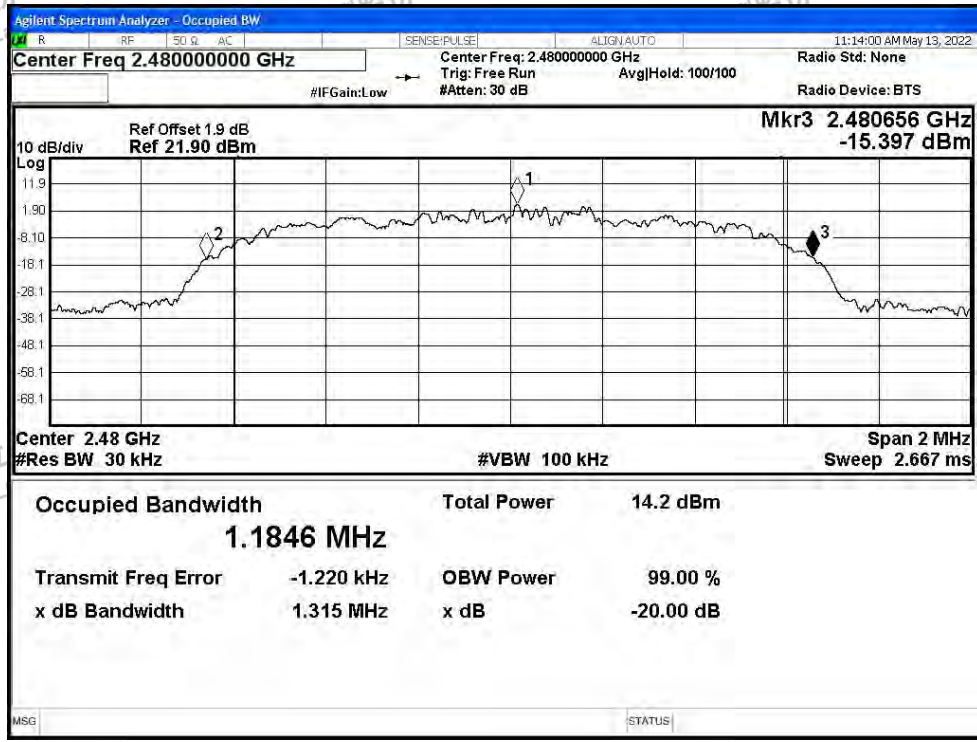




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

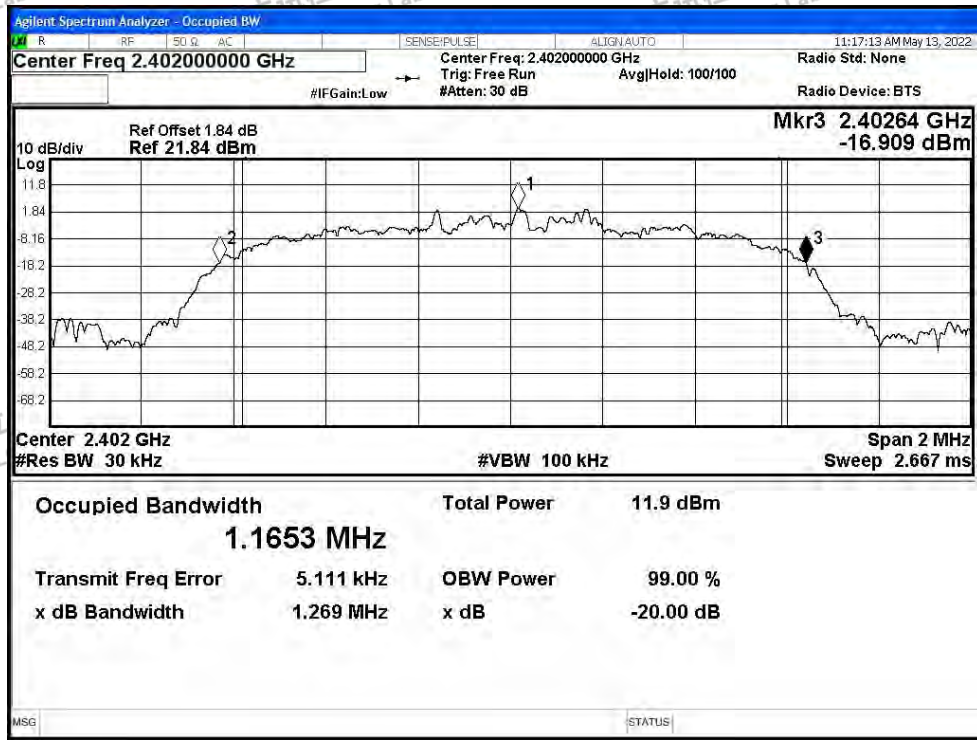


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

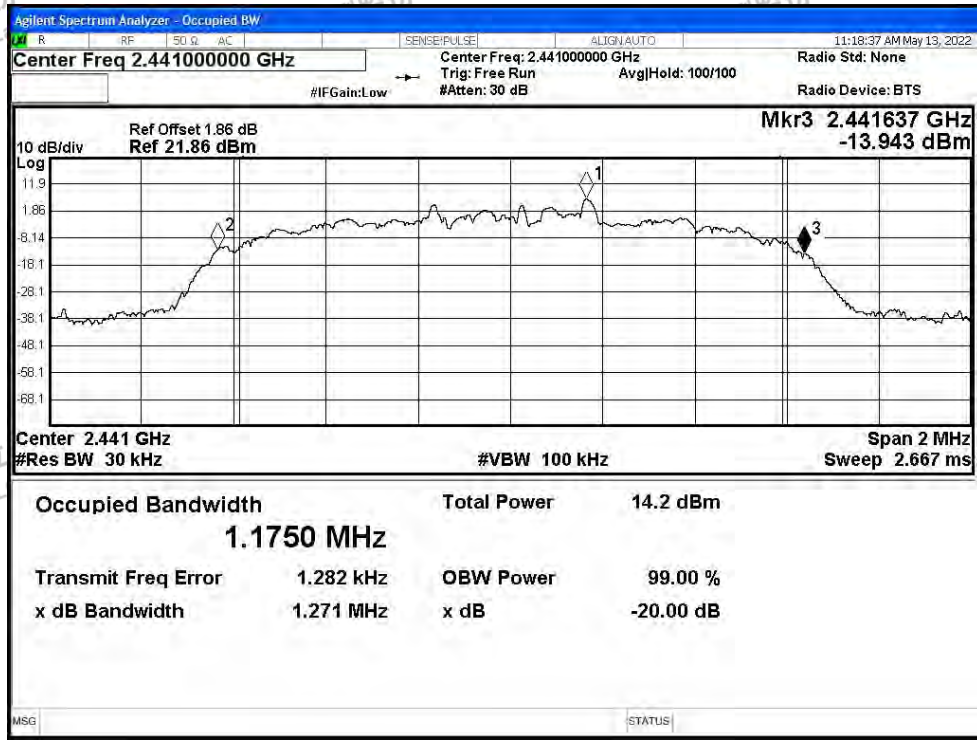




-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1

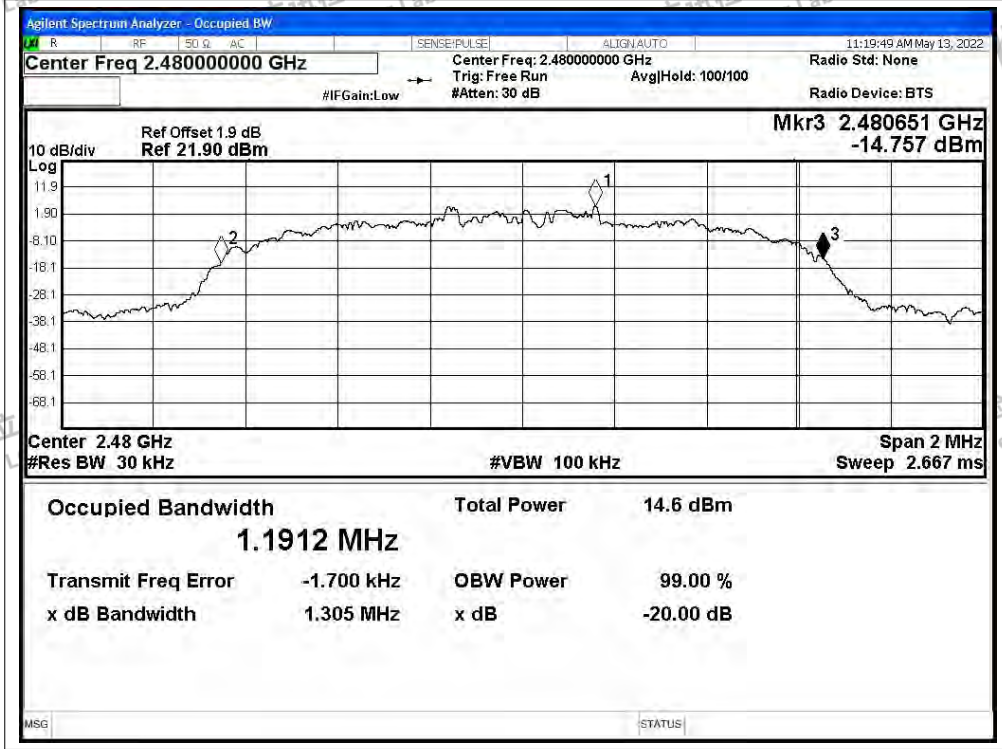


-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1





-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1





A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	7.25	21	Pass
NVNT	1-DH5	2441	Ant1	9.56	21	Pass
NVNT	1-DH5	2480	Ant1	9.78	21	Pass
NVNT	2-DH5	2402	Ant1	7.1	21	Pass
NVNT	2-DH5	2441	Ant1	9.14	21	Pass
NVNT	2-DH5	2480	Ant1	9.85	21	Pass
NVNT	3-DH5	2402	Ant1	7.1	21	Pass
NVNT	3-DH5	2441	Ant1	9.12	21	Pass
NVNT	3-DH5	2480	Ant1	9.84	21	Pass

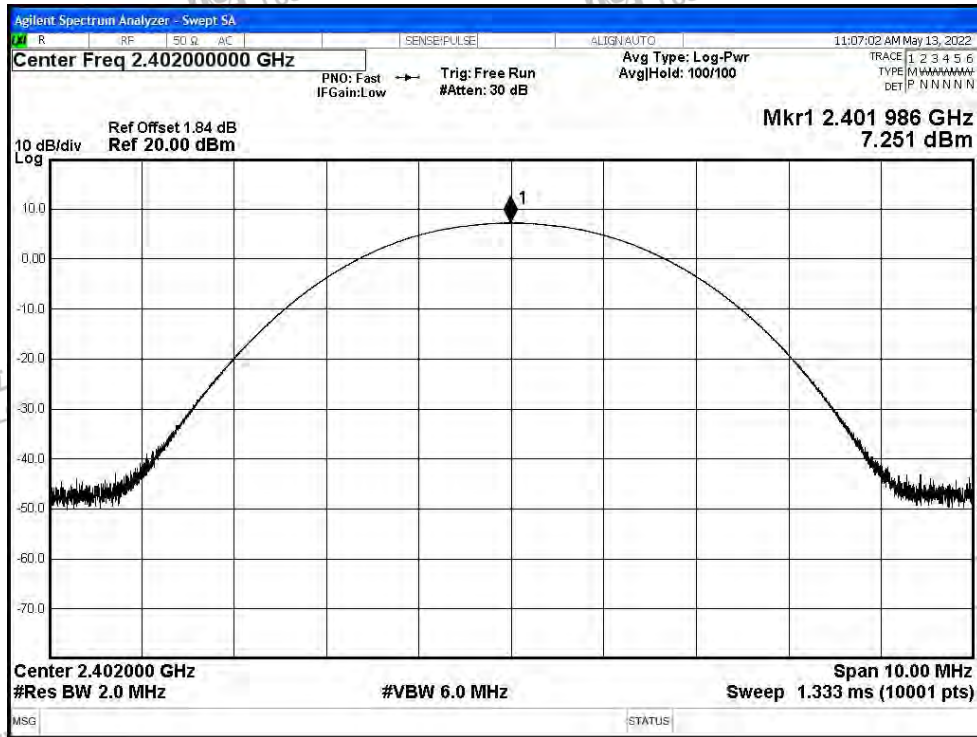


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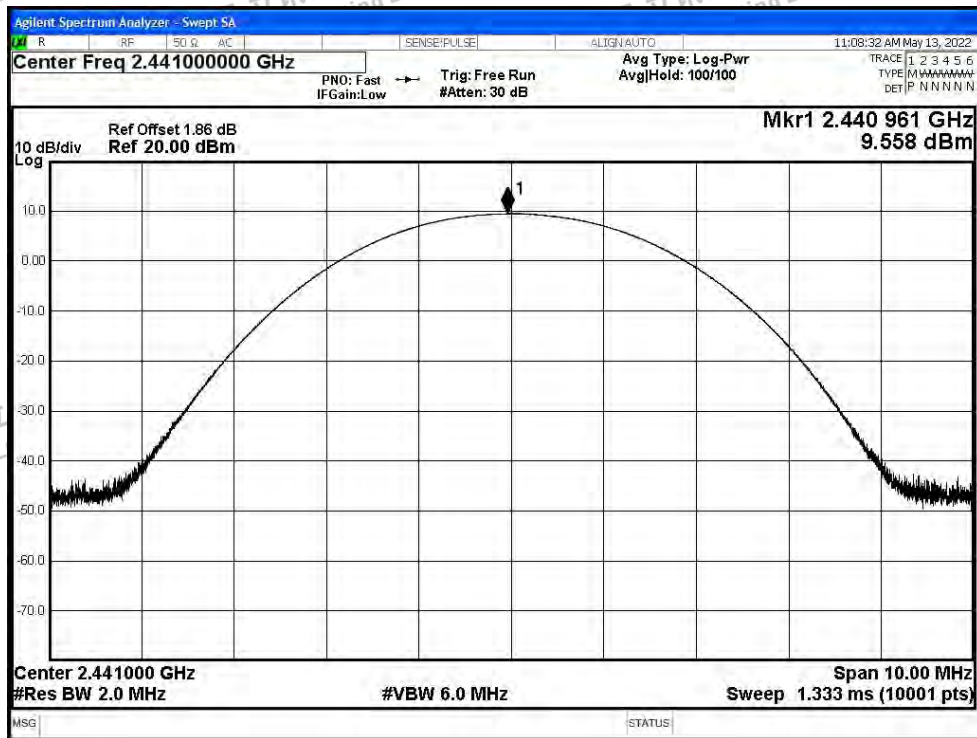


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

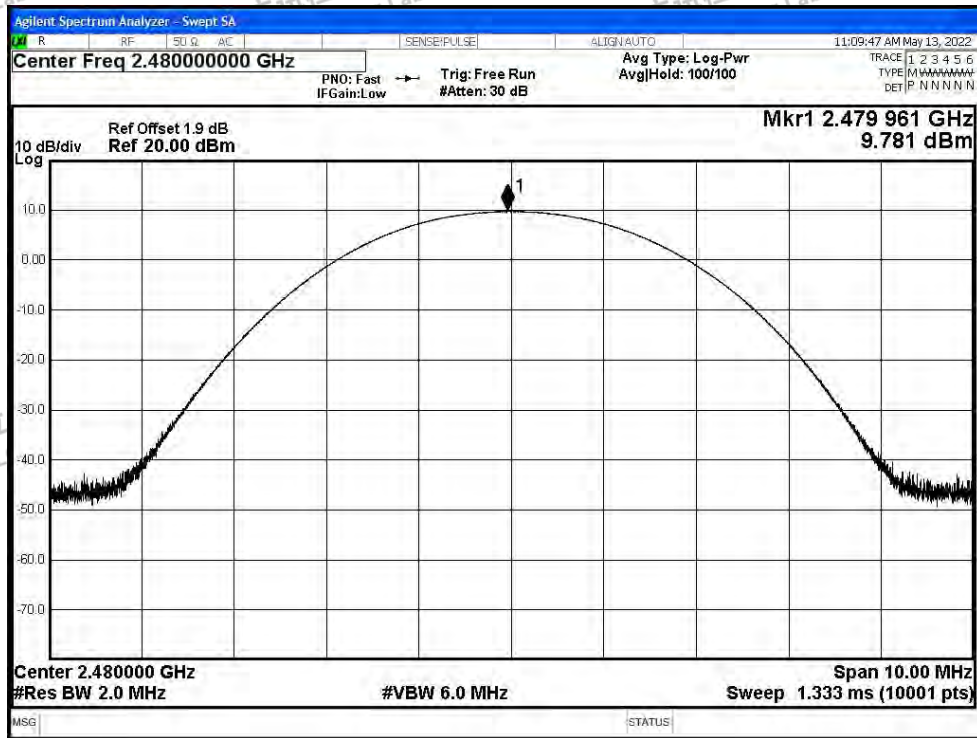


Power NVNT 1-DH5 2441MHz Ant1

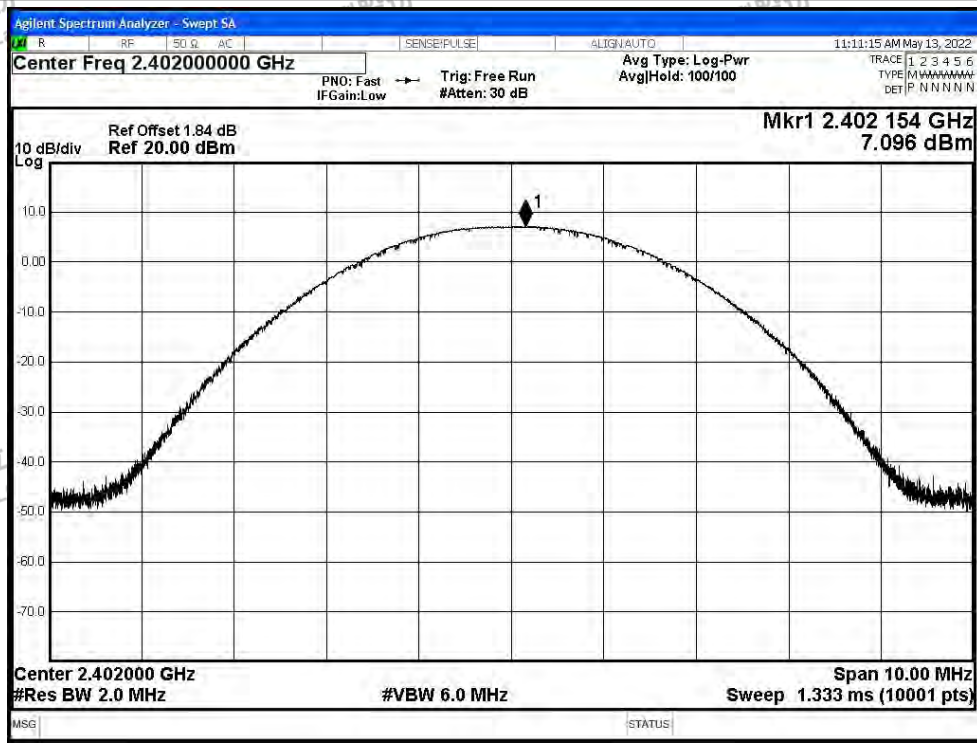




Power NVNT 1-DH5 2480MHz Ant1

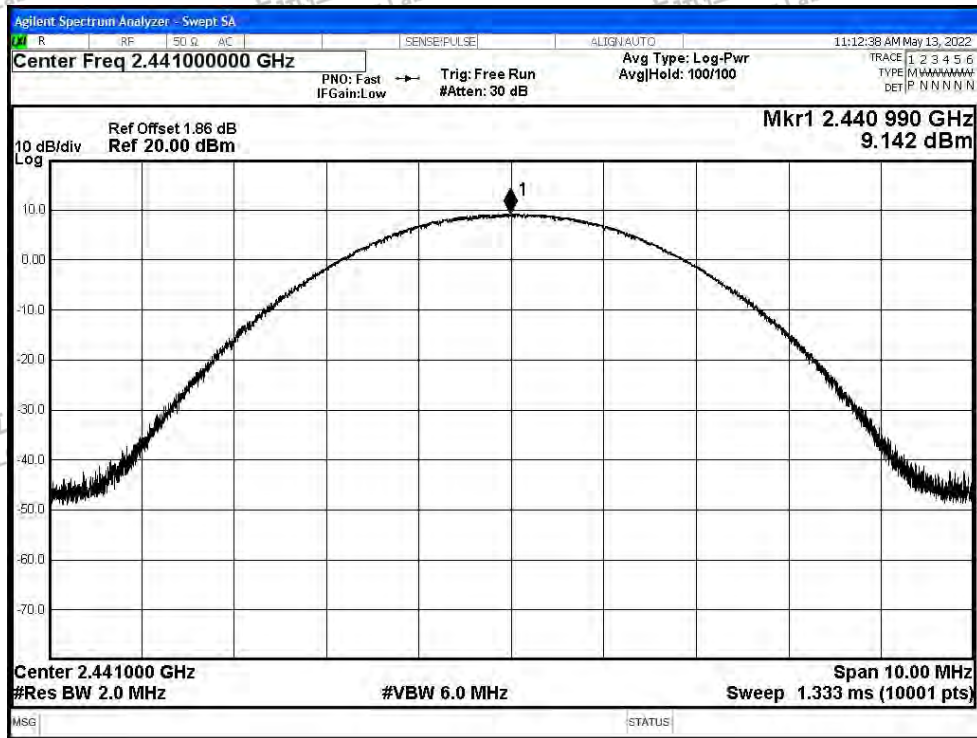


Power NVNT 2-DH5 2402MHz Ant1

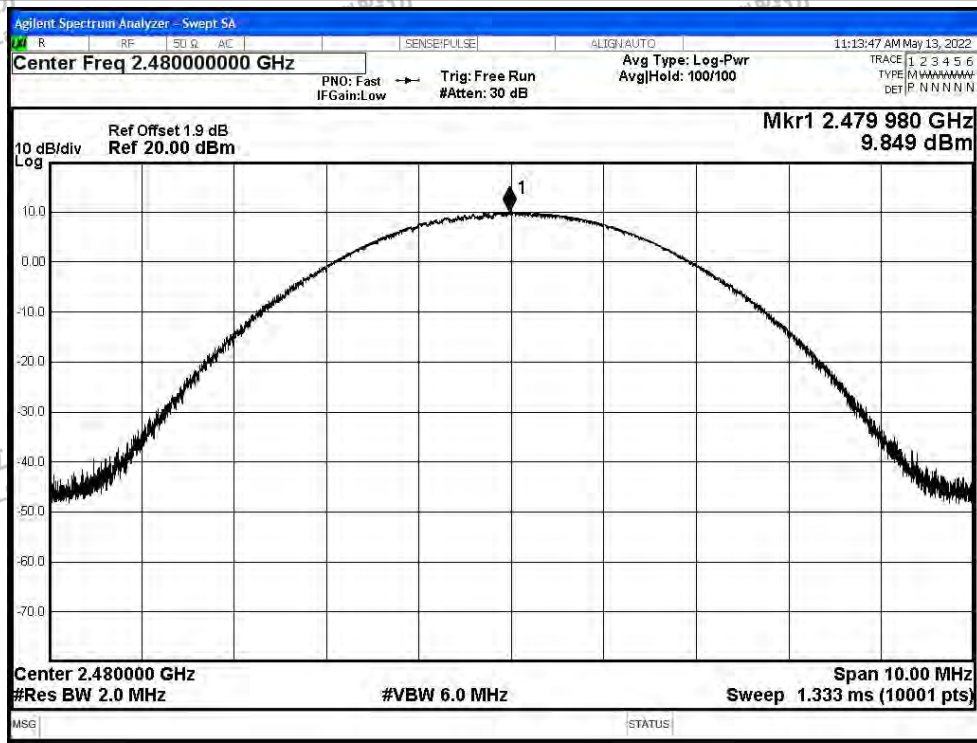




Power NVNT 2-DH5 2441MHz Ant1

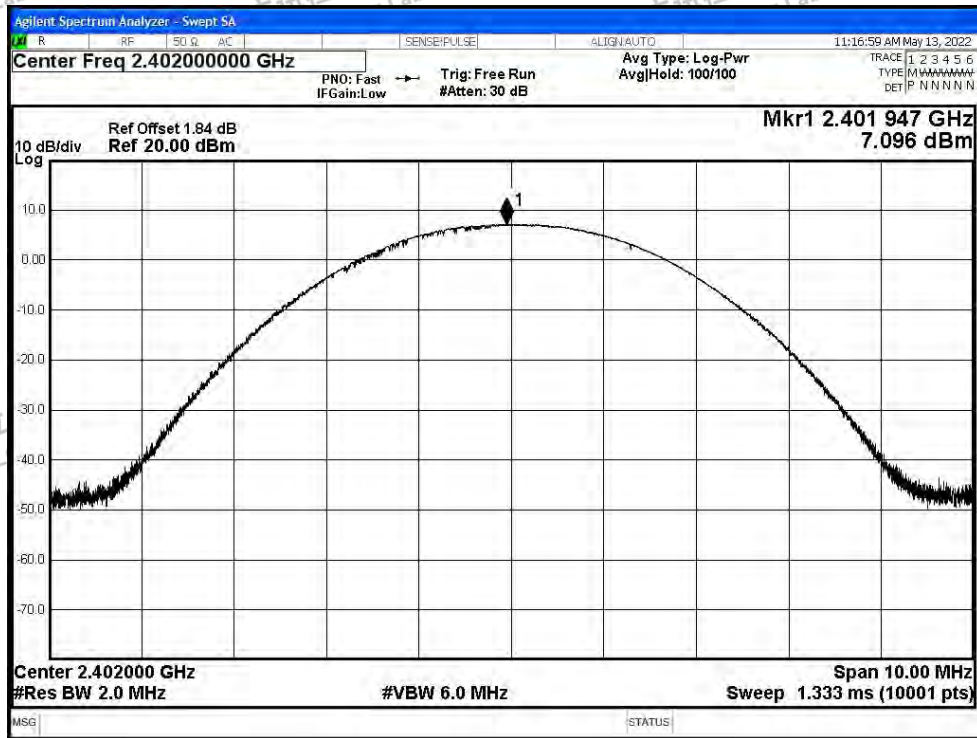


Power NVNT 2-DH5 2480MHz Ant1

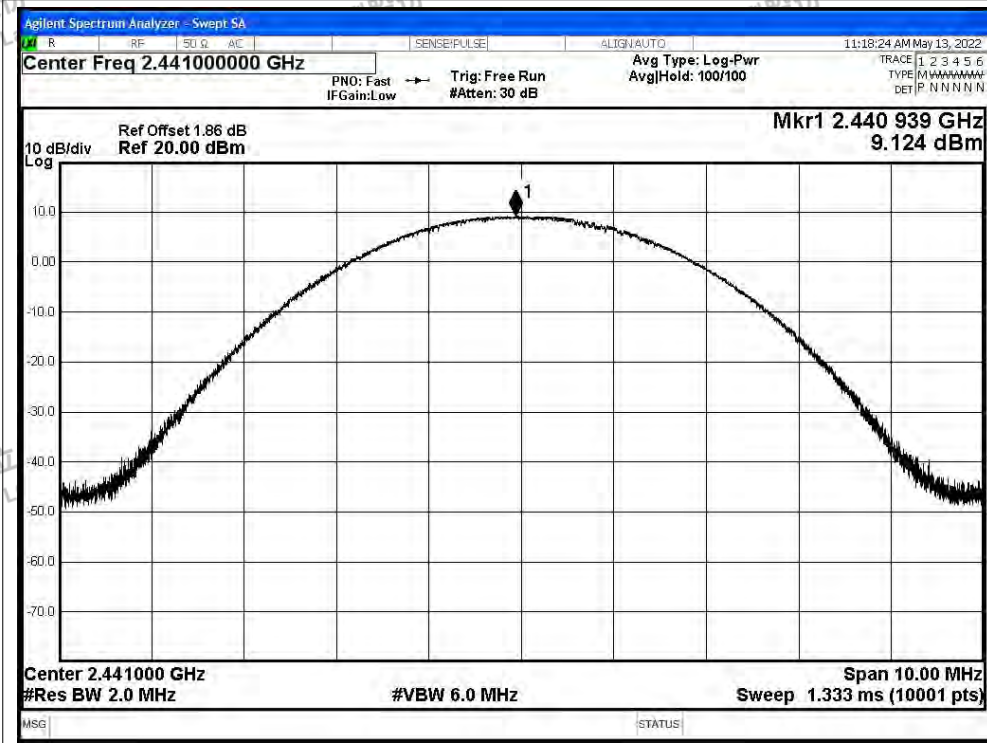




Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1





A.3 Carrier Frequencies Separation

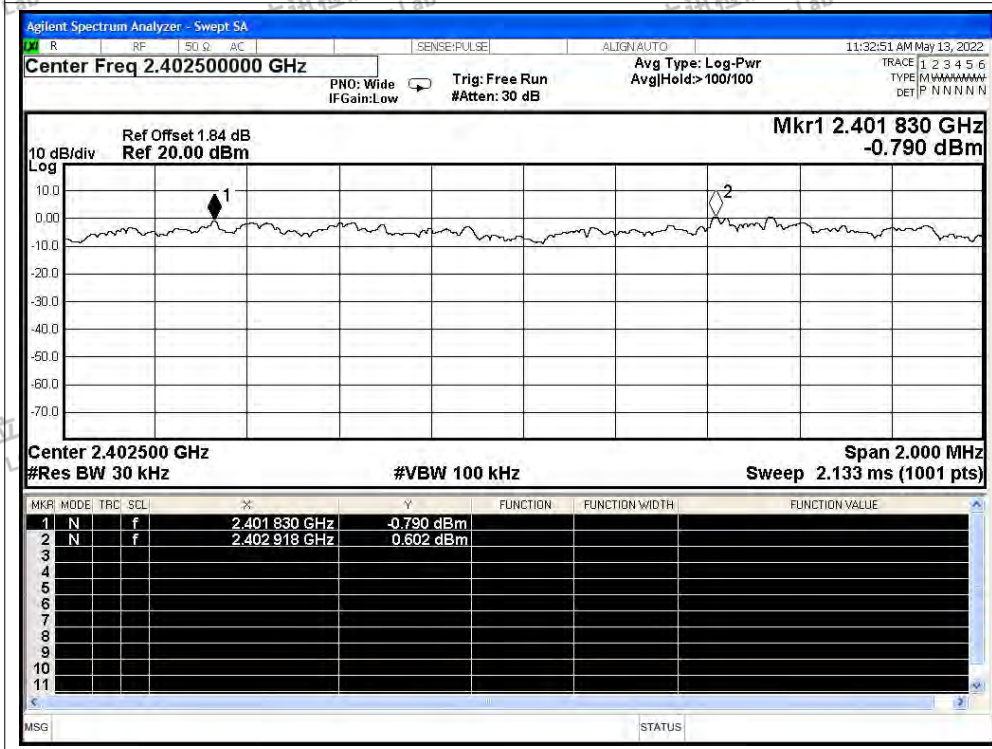
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.01	2402.994	0.984	0.563	Pass
NVNT	2-DH5	Ant1	2402.022	2403.018	0.996	0.852	Pass
NVNT	3-DH5	Ant1	2401.83	2402.918	1.088	0.846	Pass



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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	293.964	102	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.882	288.2	100	31600	400	Pass
NVNT	1-DH5	2480	Ant1	2.882	282.436	98	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	285.615	99	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.885	291.385	101	31600	400	Pass
NVNT	2-DH5	2480	Ant1	2.884	271.096	94	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.886	317.46	110	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.886	317.46	110	31600	400	Pass
NVNT	3-DH5	2480	Ant1	2.887	323.344	112	31600	400	Pass

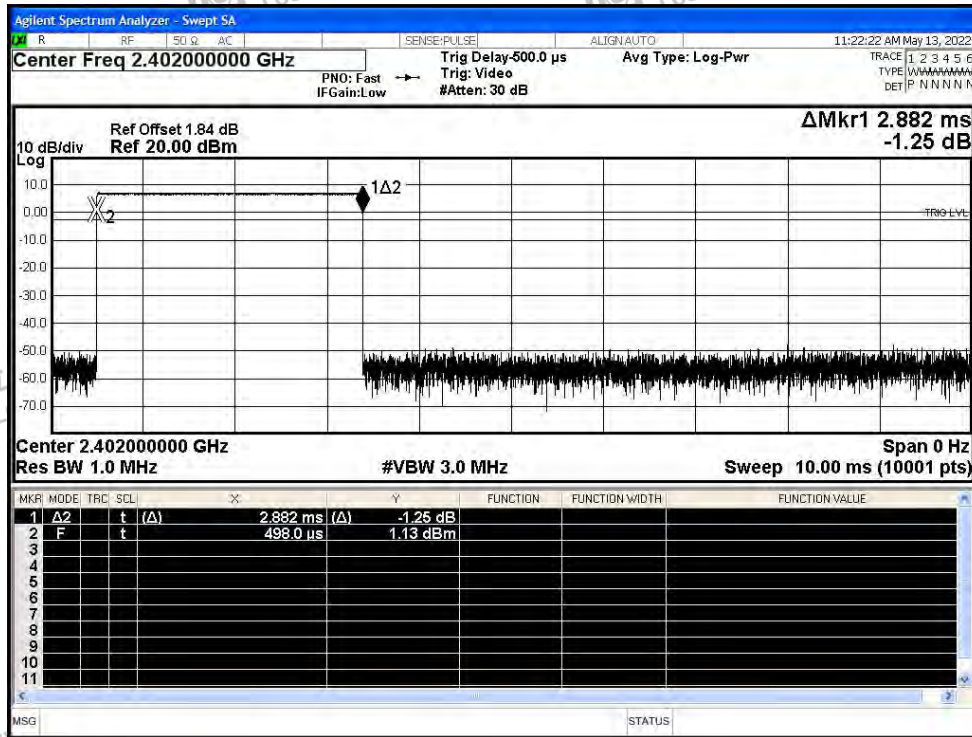


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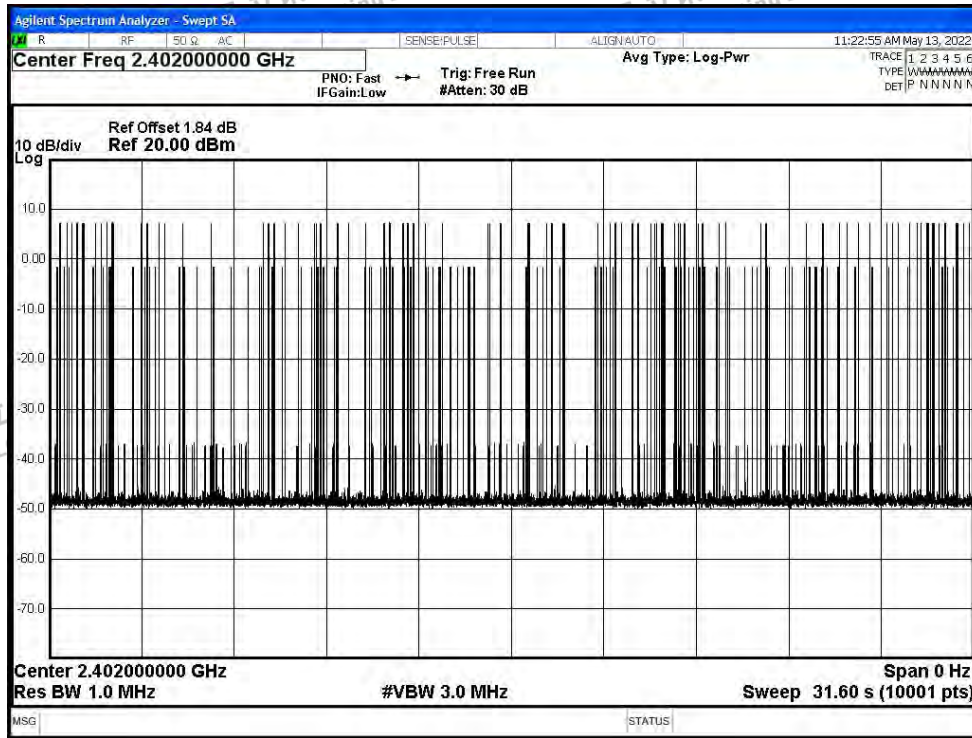


Test Graphs

Dwell-NVNT 1-DH5 2402MHz Ant1 One Burst

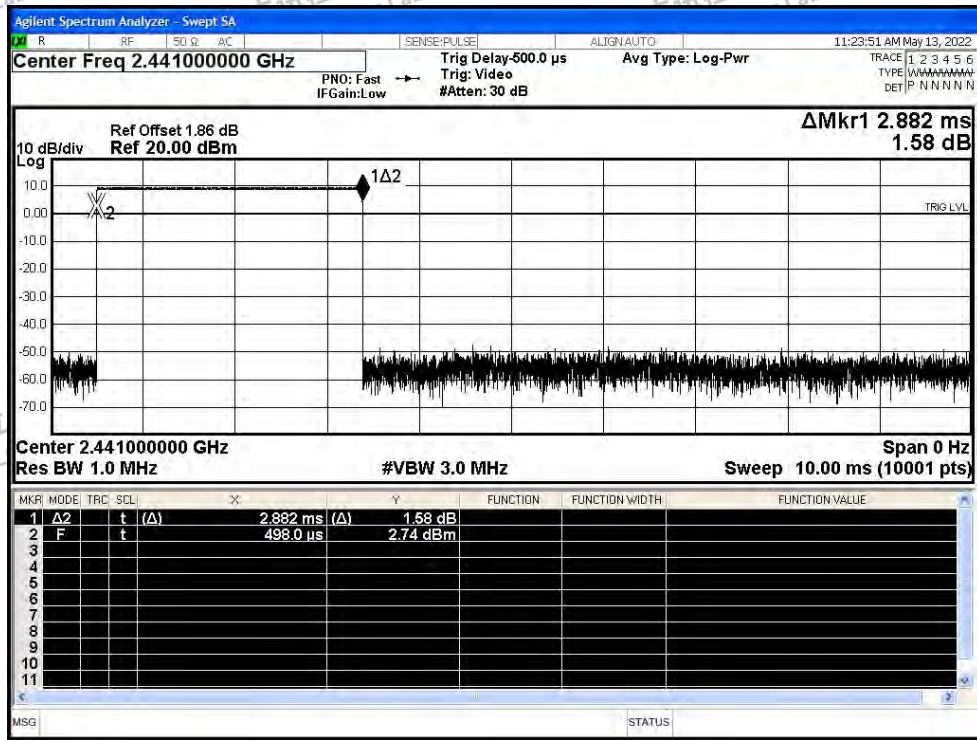


Dwell-NVNT 1-DH5 2402MHz Ant1 Accumulated

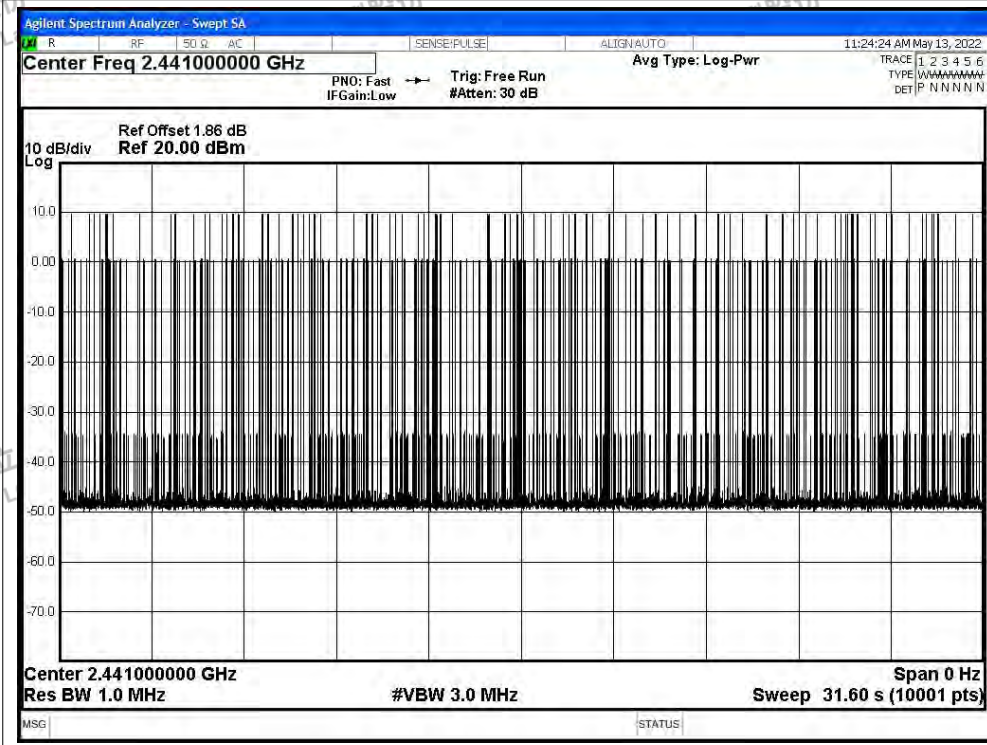




Dwell NVNT 1-DH5 2441MHz Ant1 One Burst

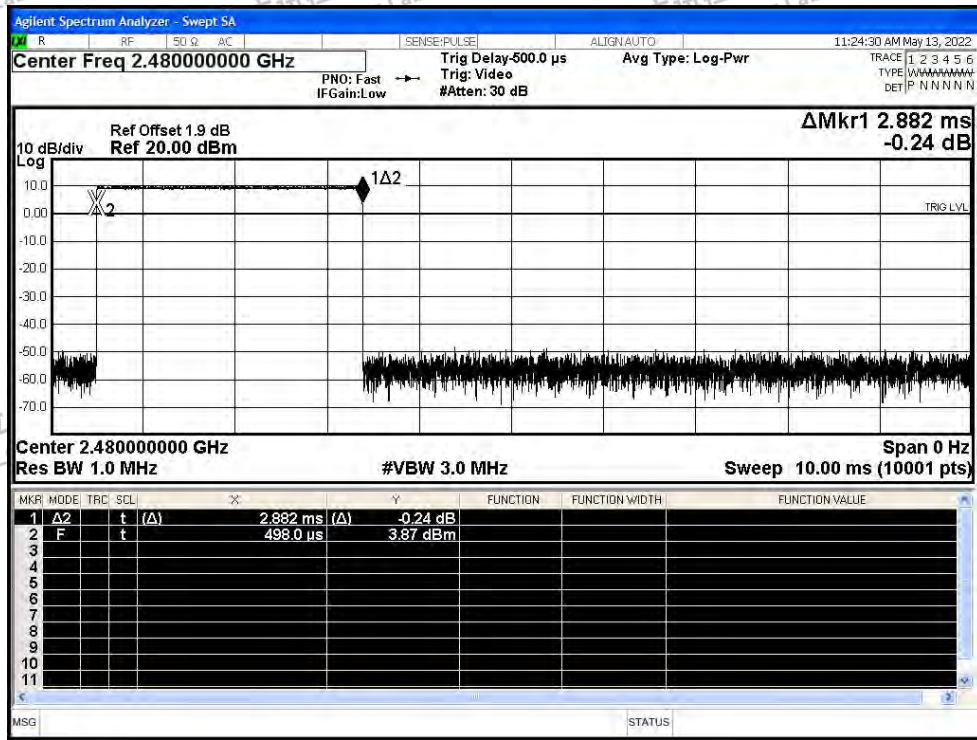


Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated

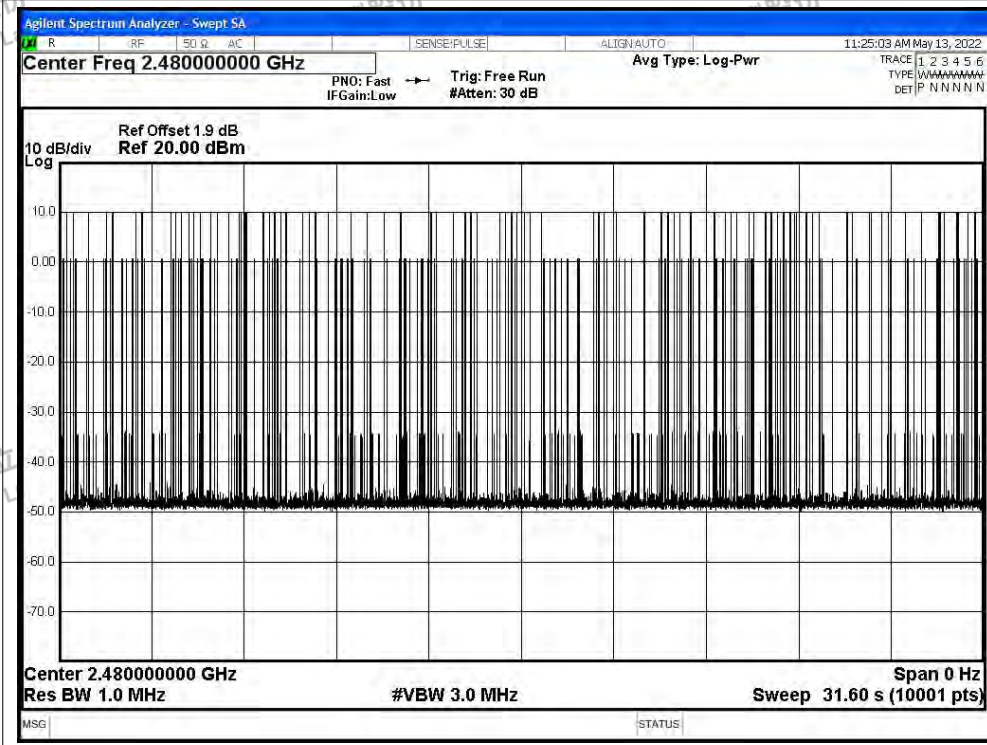




Dwell NVNT 1-DH5 2480MHz Ant1 One Burst

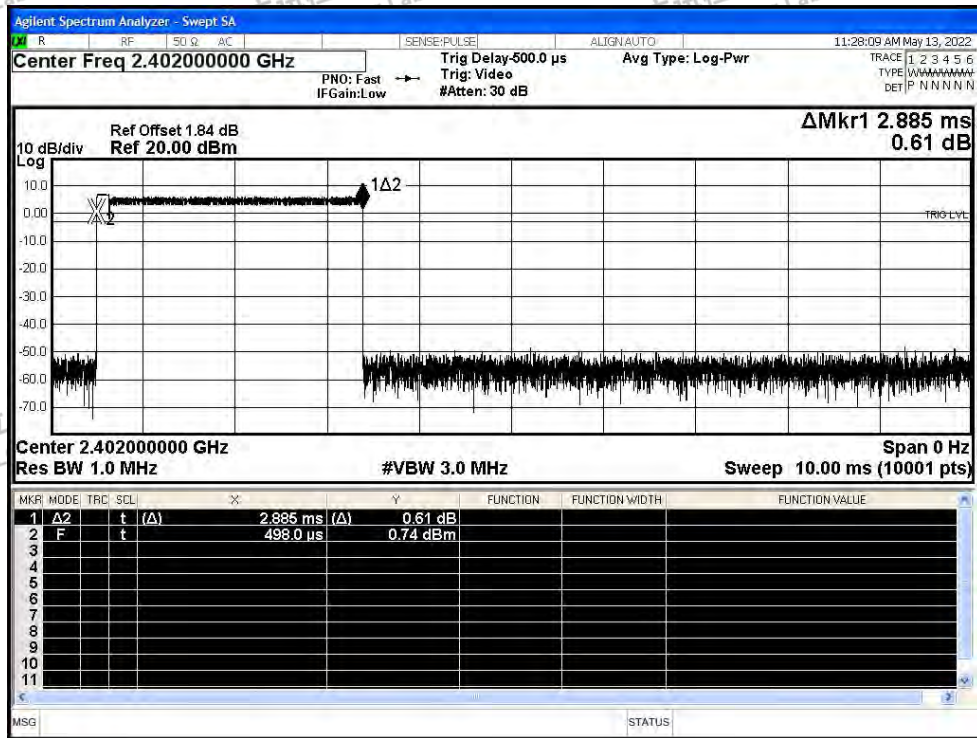


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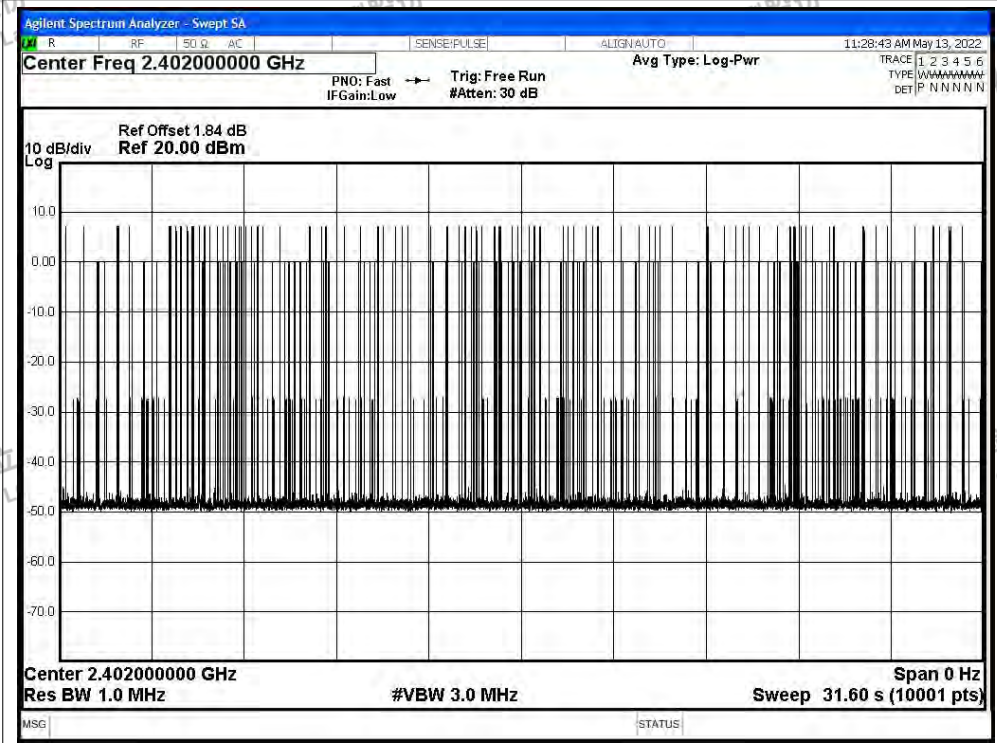




Dwell-NVNT 2-DH5 2402MHz Ant1 One Burst

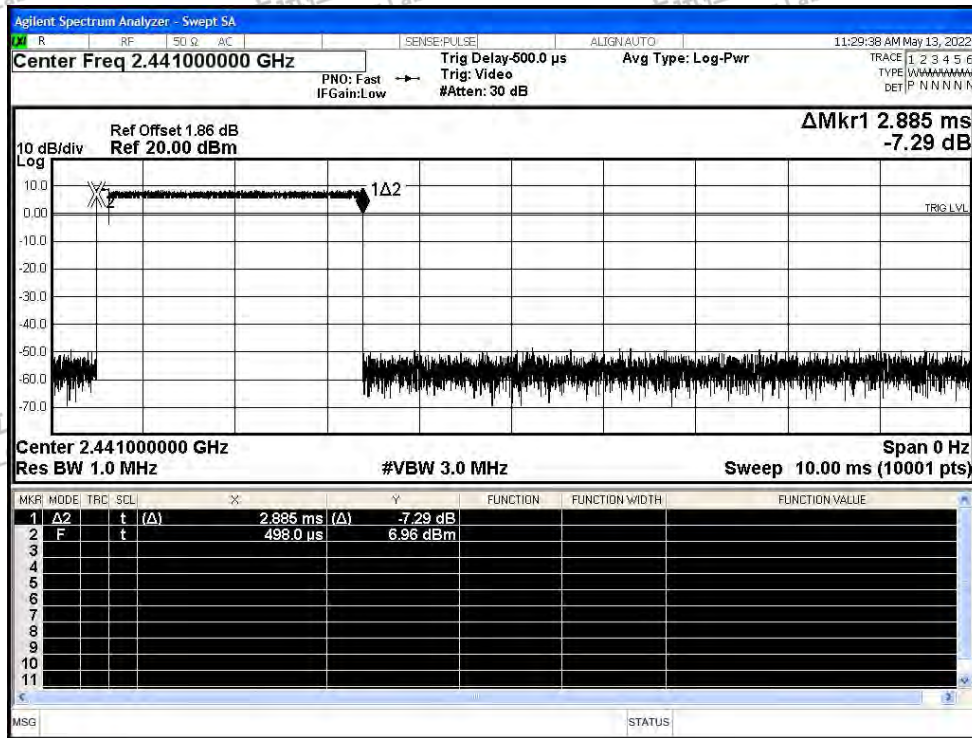


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

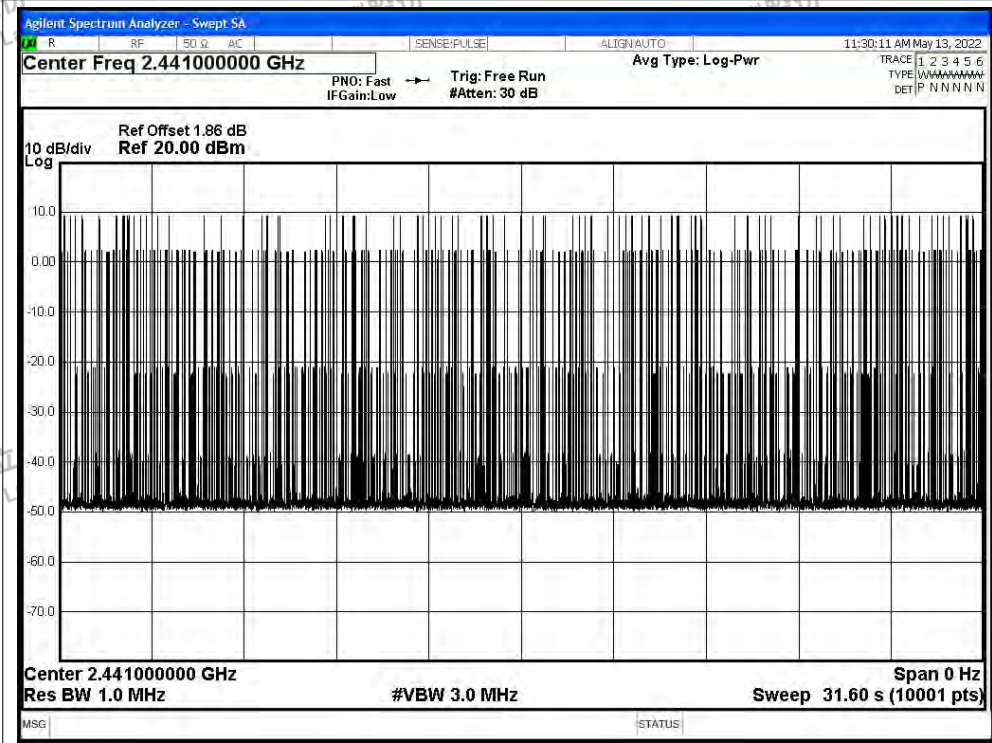




Dwell NVNT 2-DH5 2441MHz Ant1 One Burst

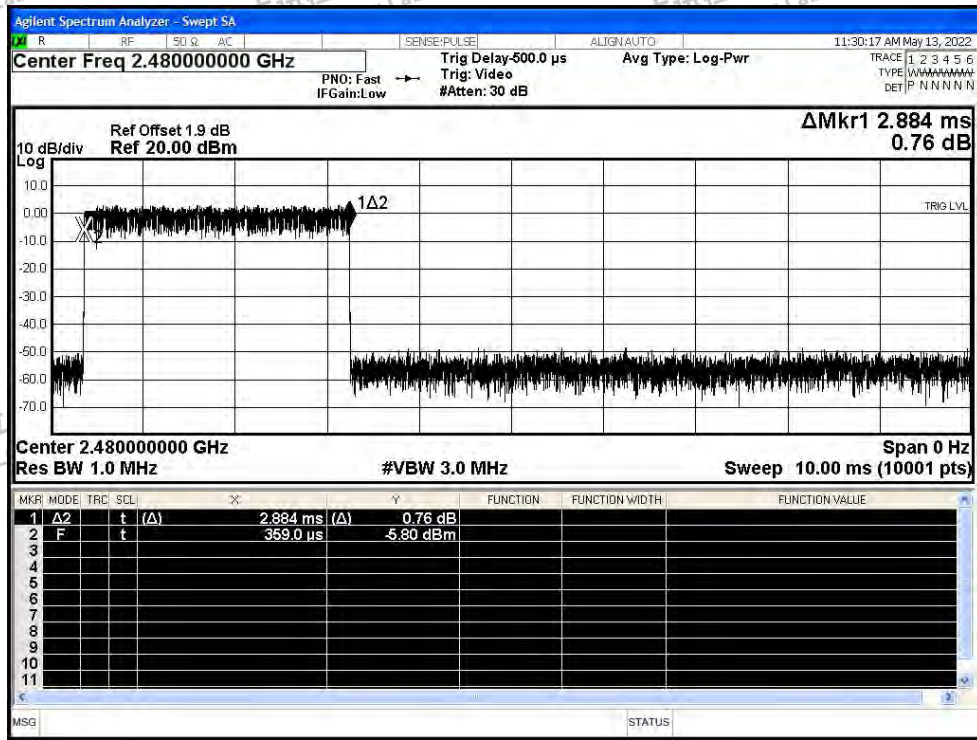


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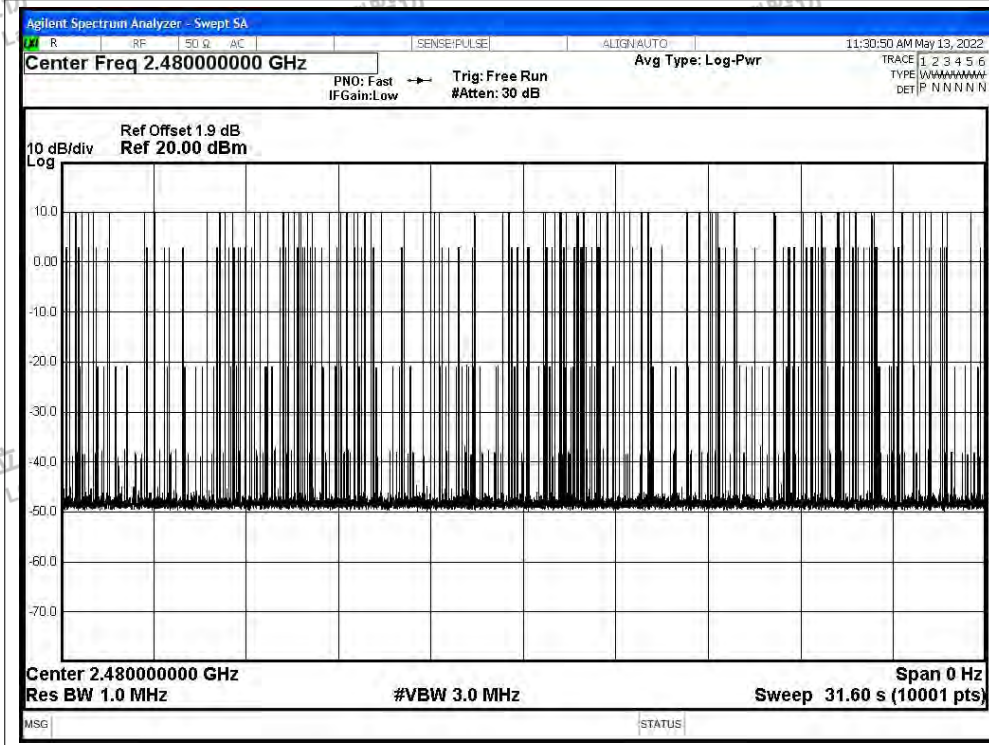




Dwell NVNT 2-DH5 2480MHz Ant1 One Burst

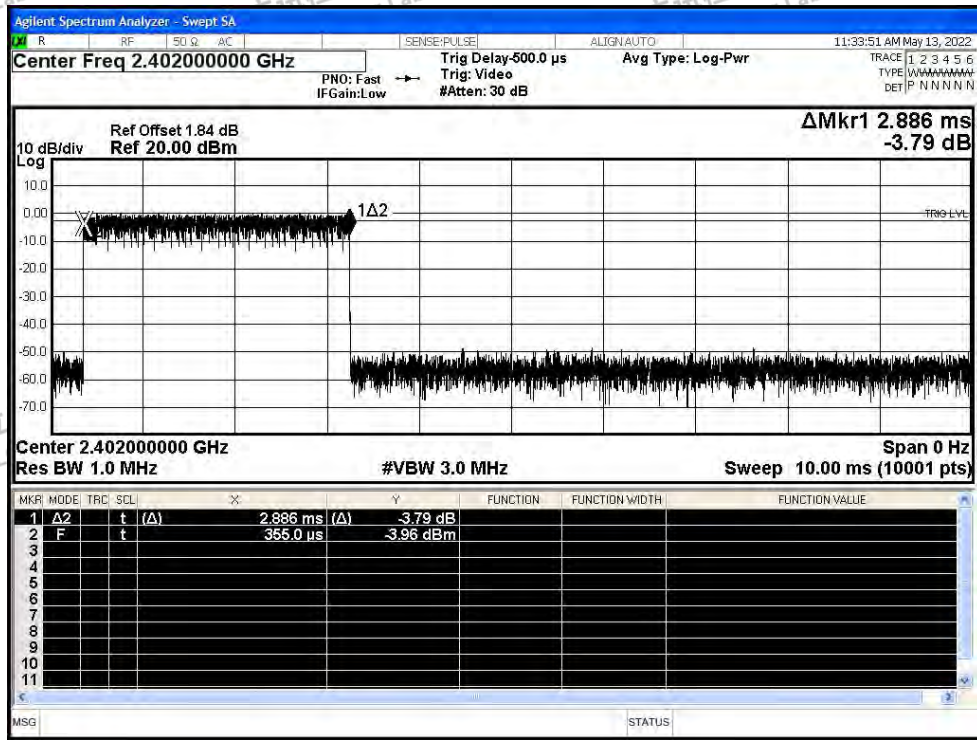


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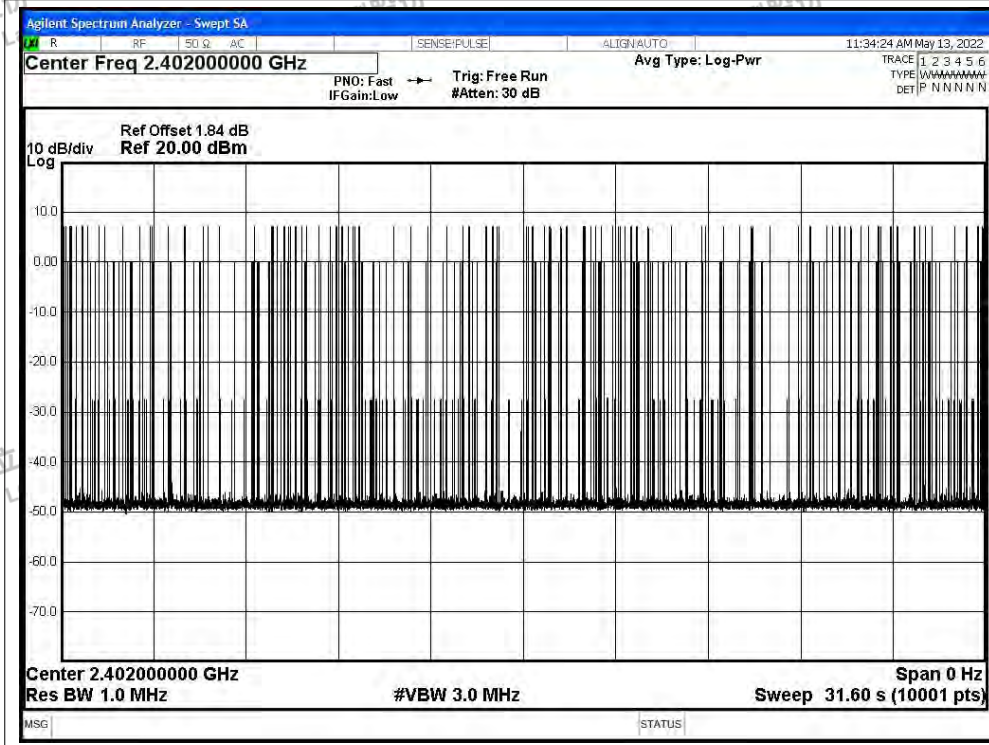




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst

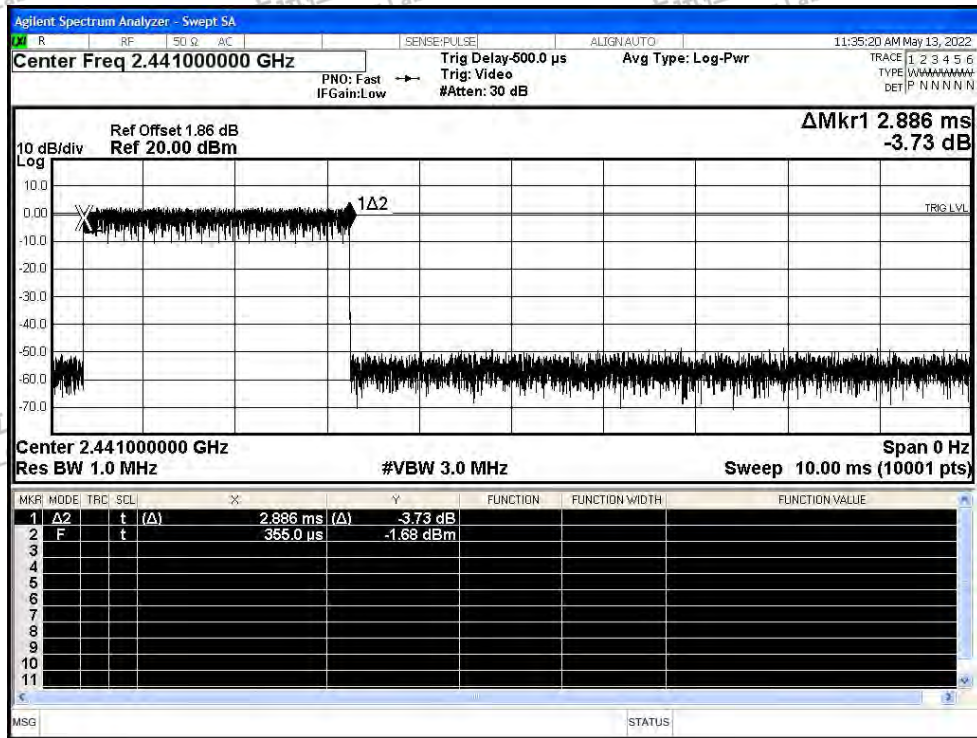


Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

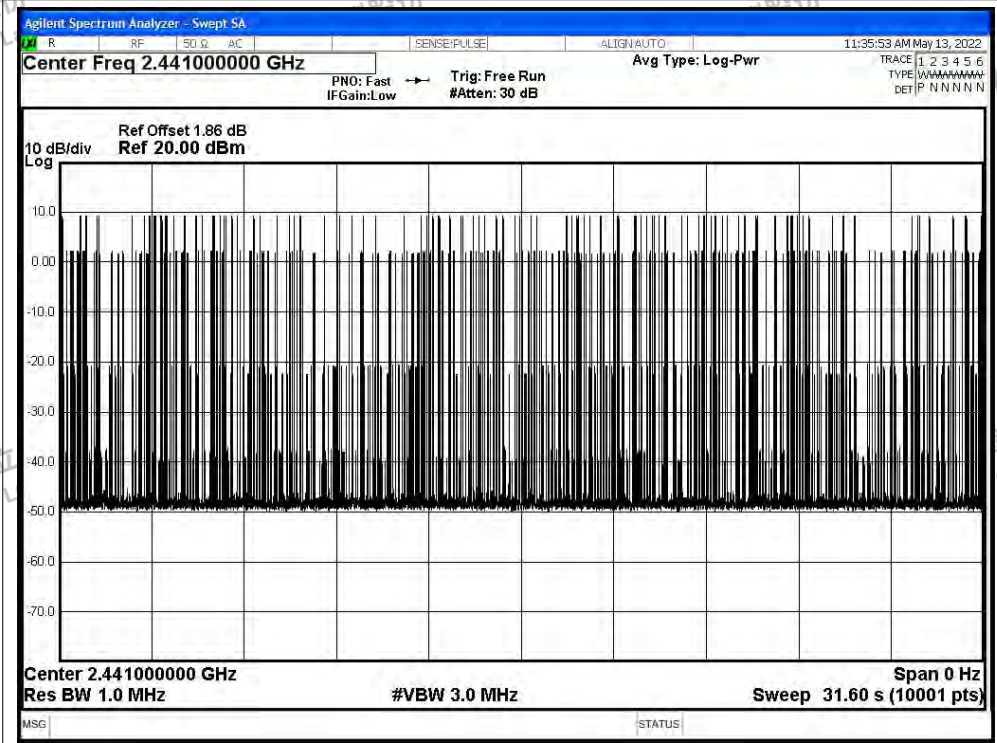




Dwell NVNT 3-DH5 2441MHz Ant1 One Burst

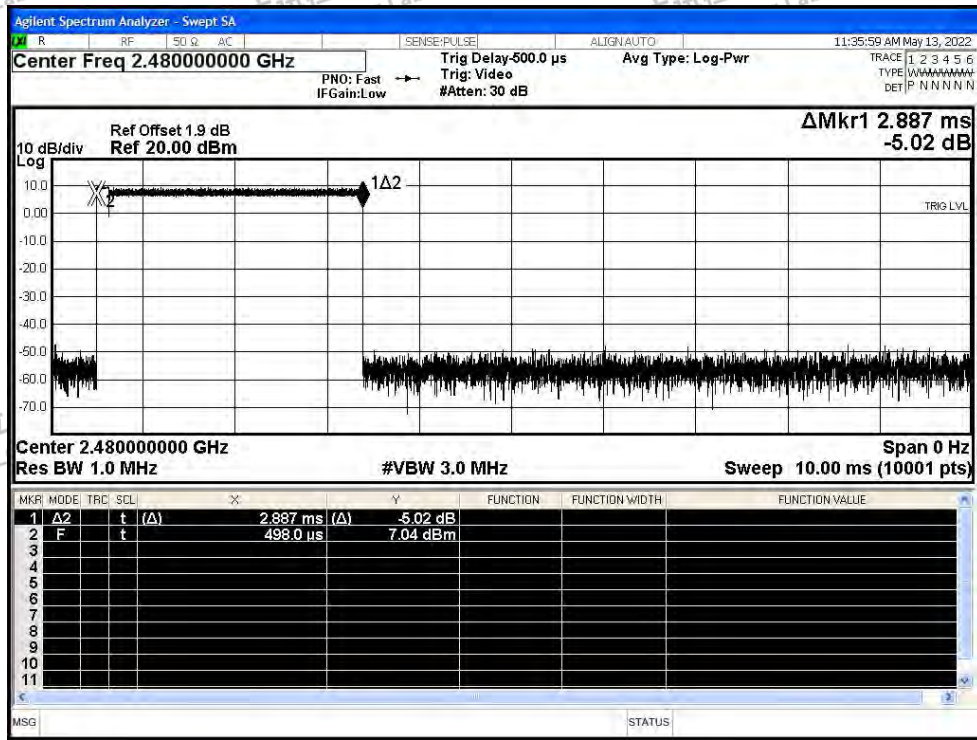


Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated

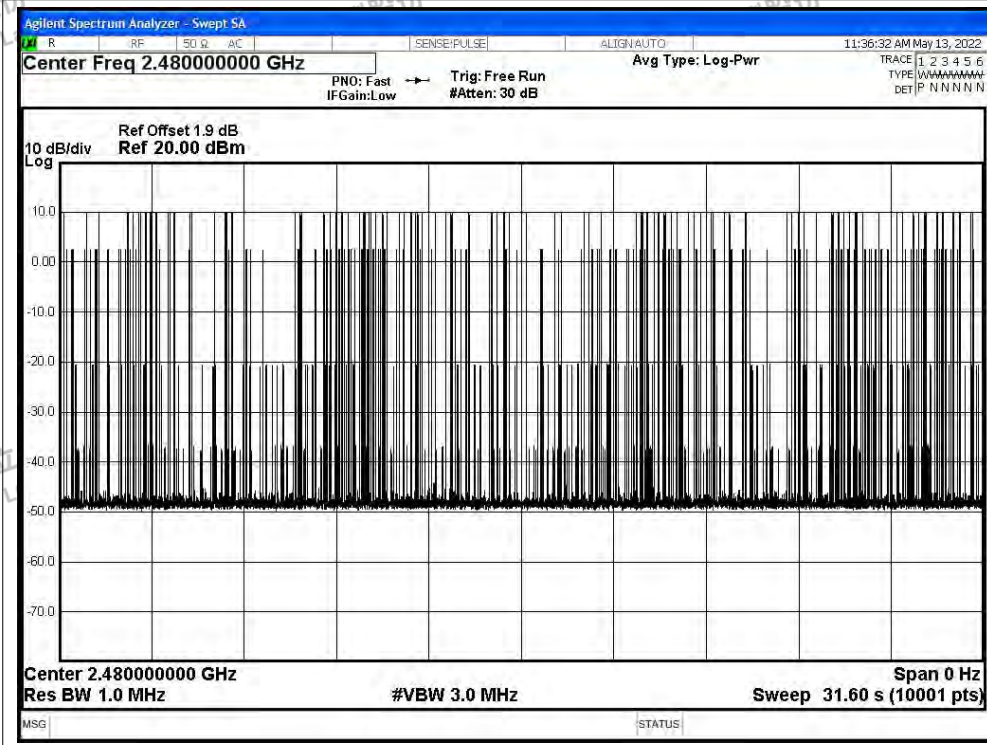




Dwell NVNT 3-DH5 2480MHz Ant1 One Burst



Dwell NVNT 3-DH5 2480MHz 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

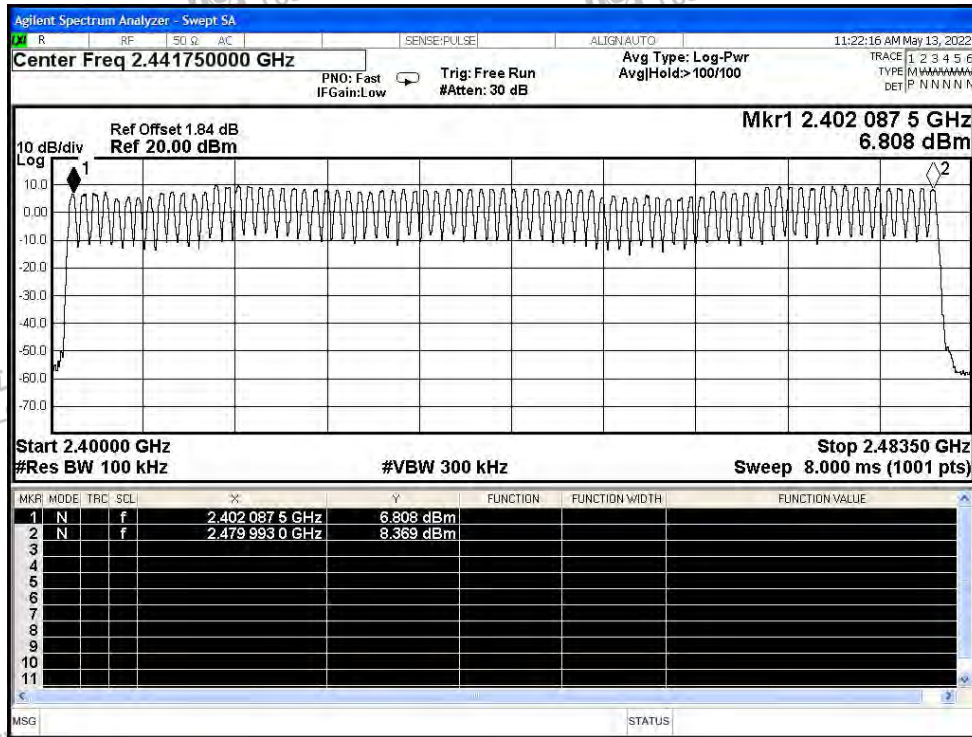


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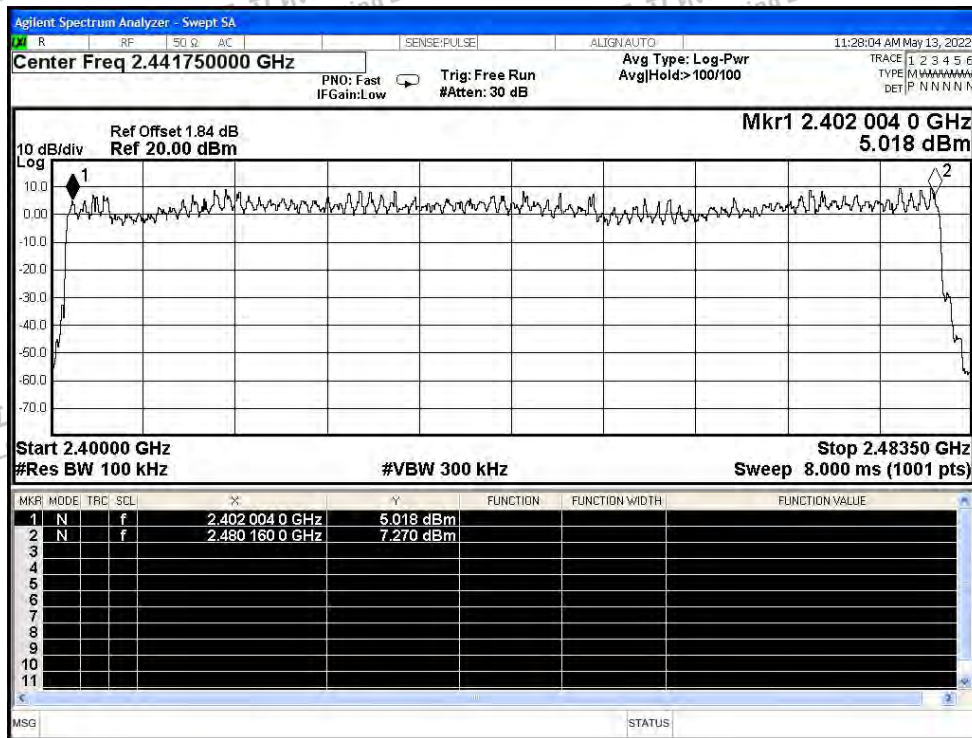


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

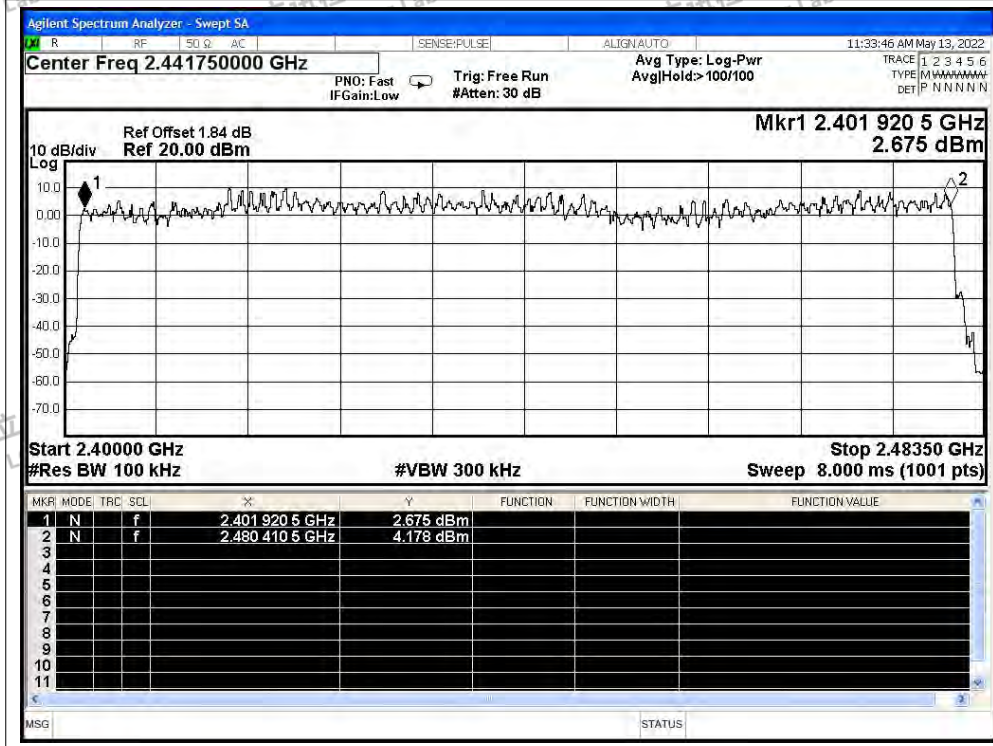


Hopping No. NVNT 2-DH5 2402MHz Ant1





Hopping No. NVNT 3-DH5 2402MHz Ant1





A.6 Band Edge

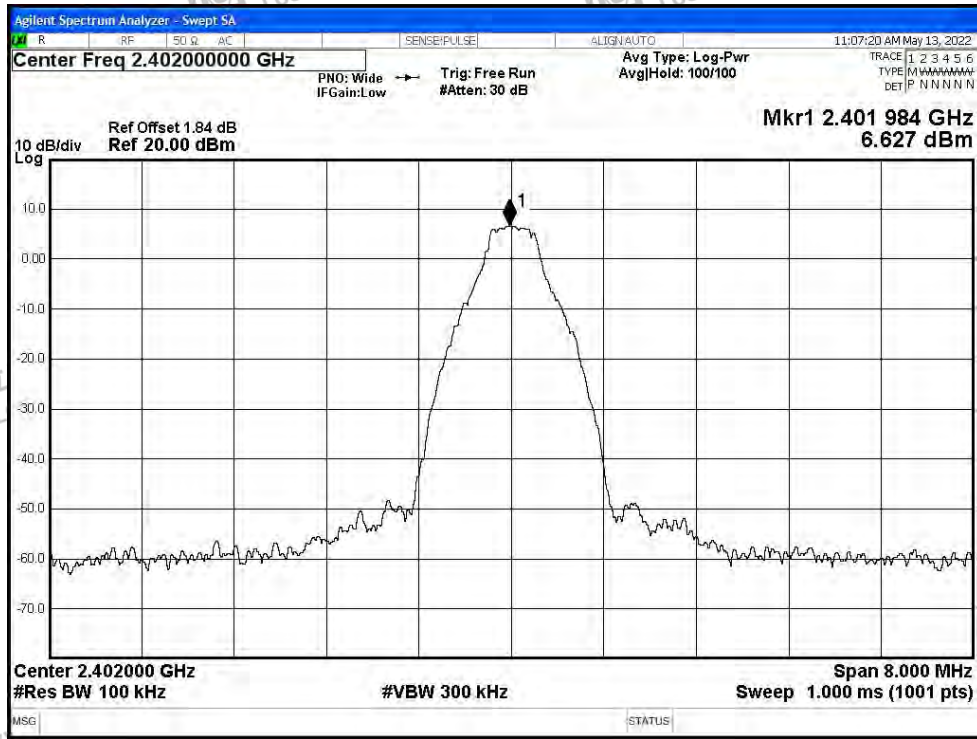
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-63.07	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-65.19	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-61.3	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-64.6	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-57.64	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-64.65	-20	Pass



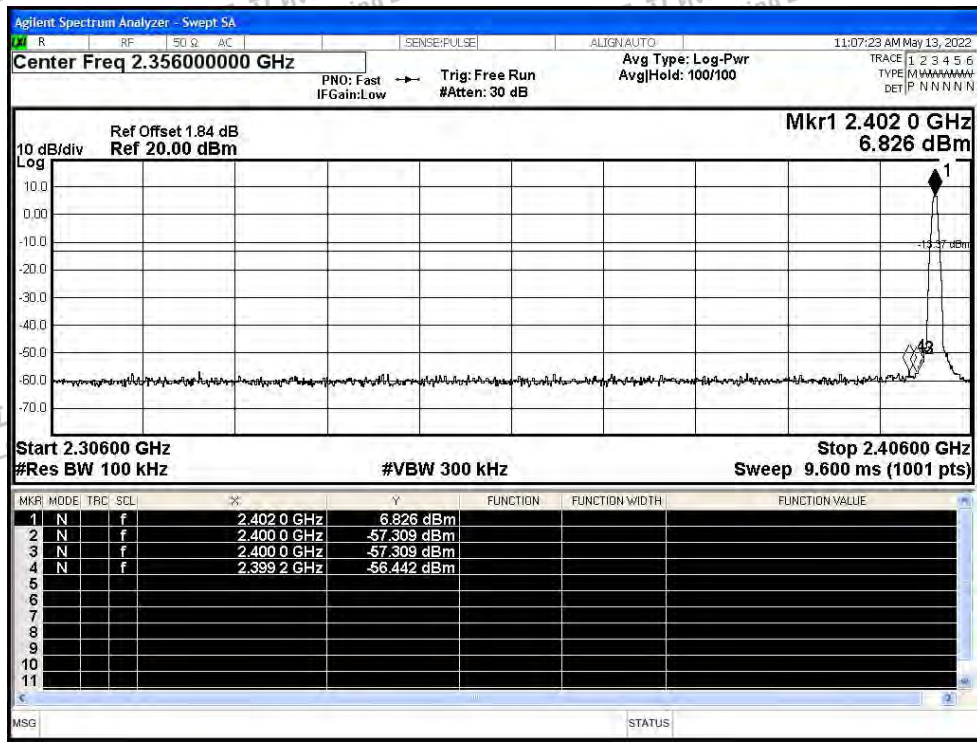


Test Graphs

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

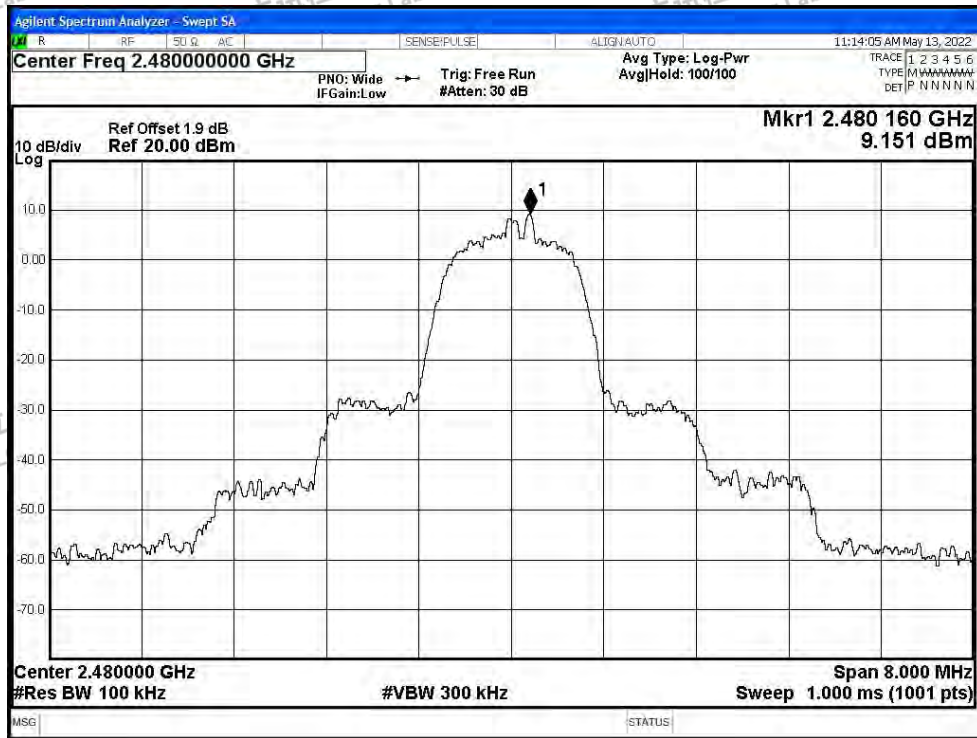


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

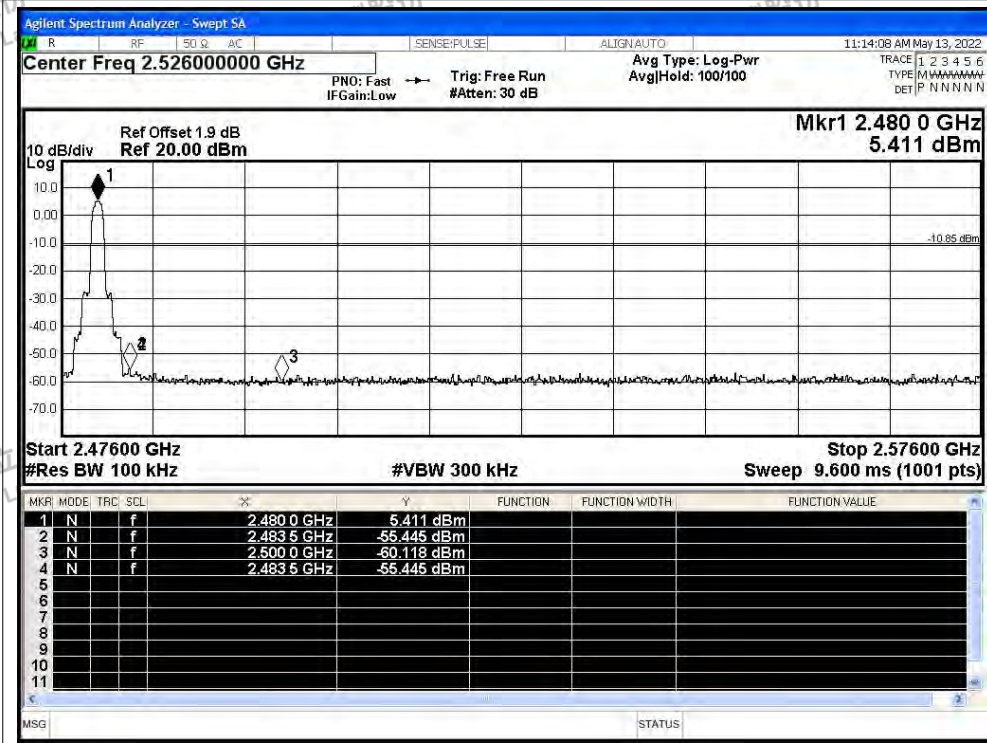




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



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

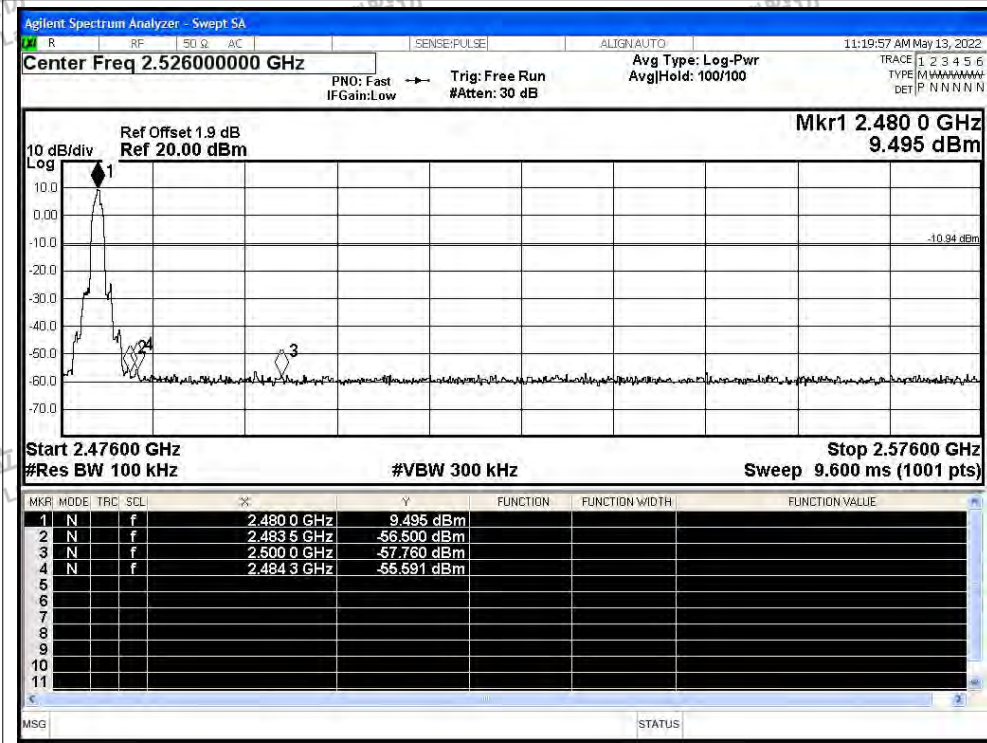




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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	-63.7	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-65.54	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-60.78	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-64.69	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-62.71	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-64.94	-20	Pass

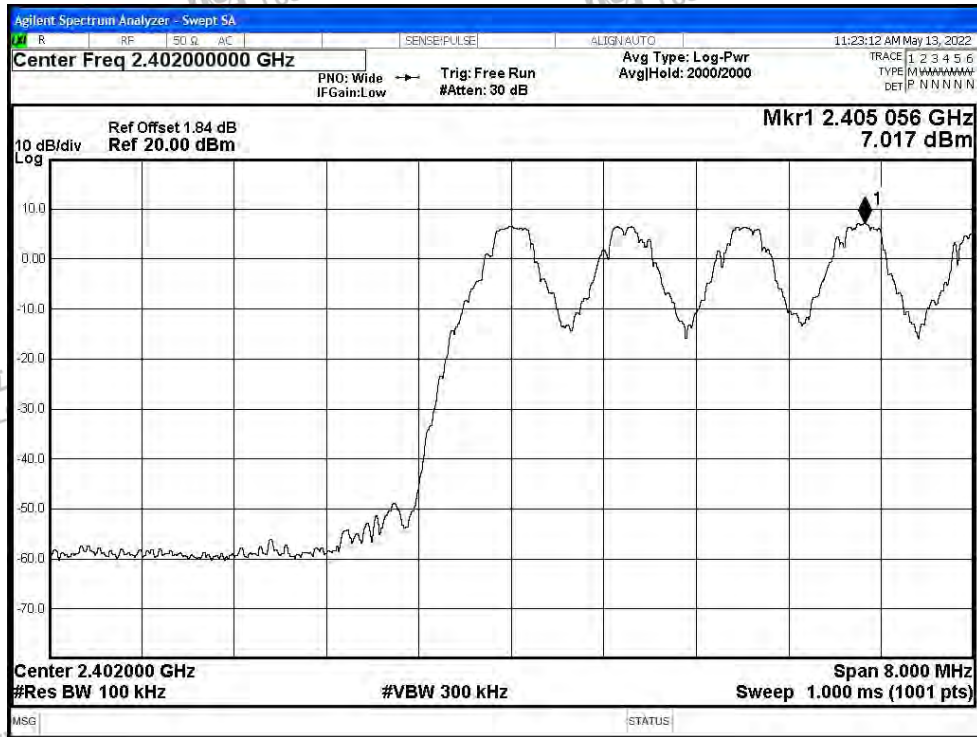


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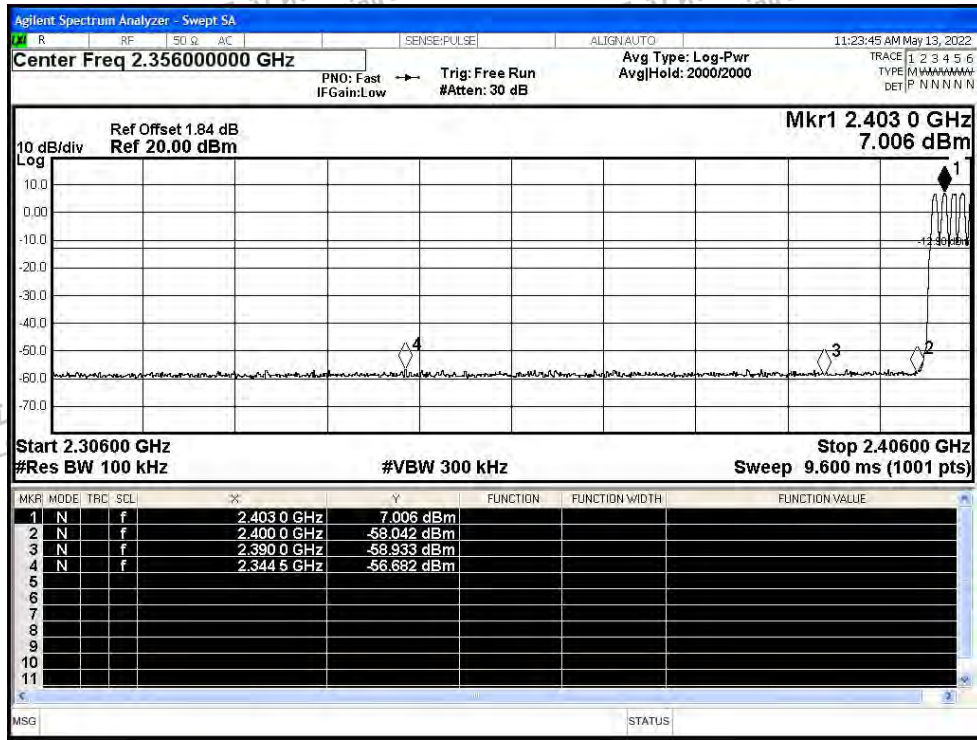


Test Graphs

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

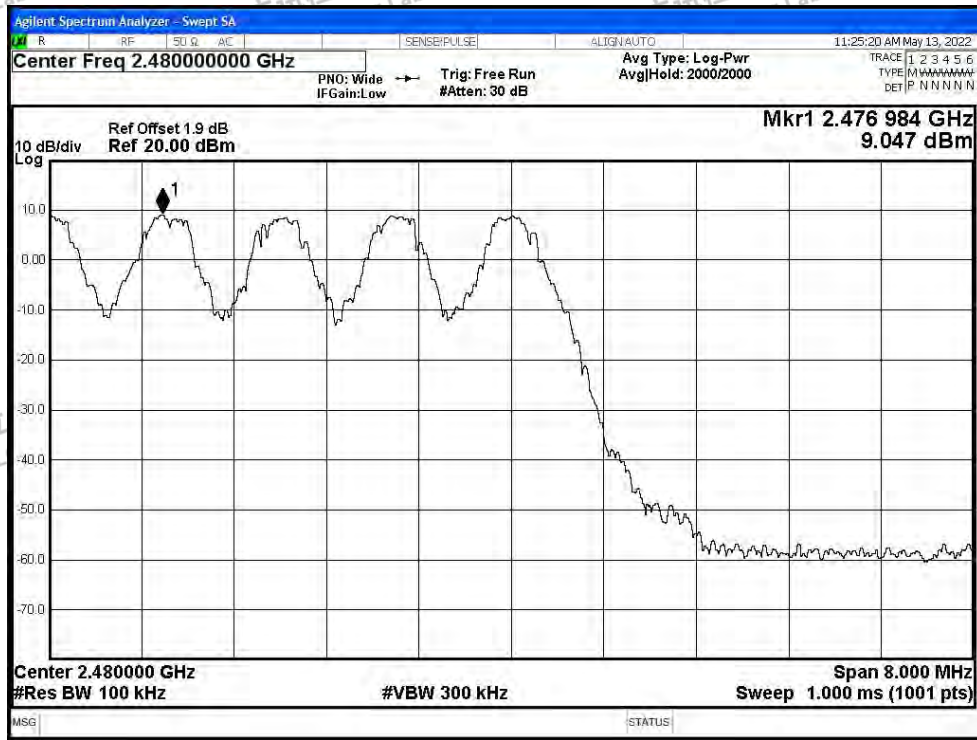


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

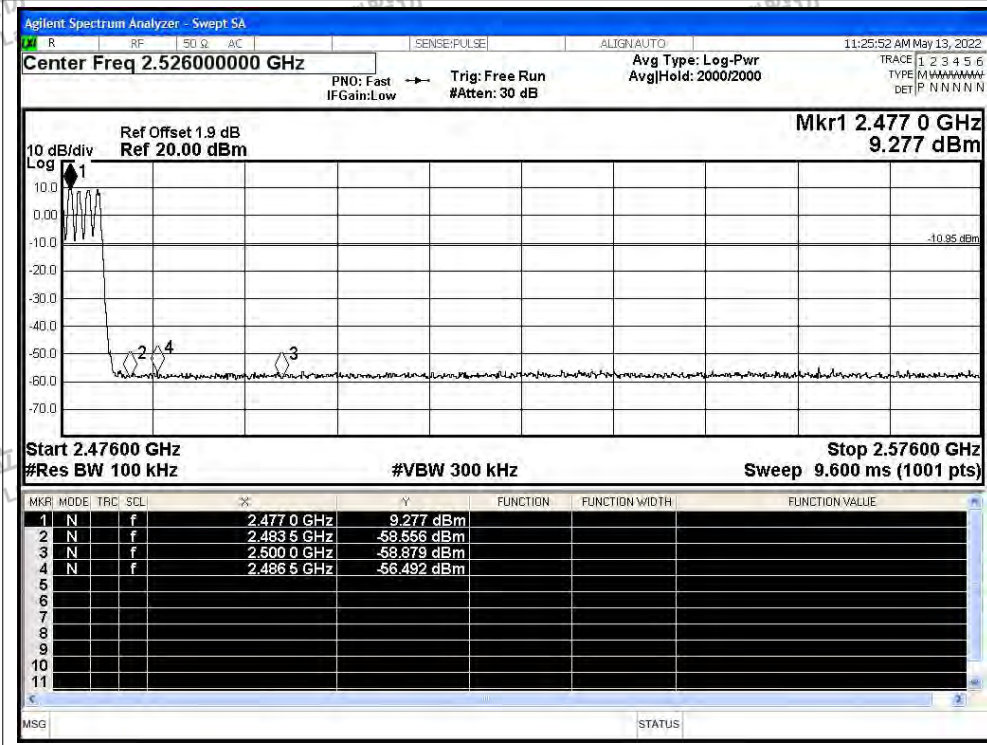




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

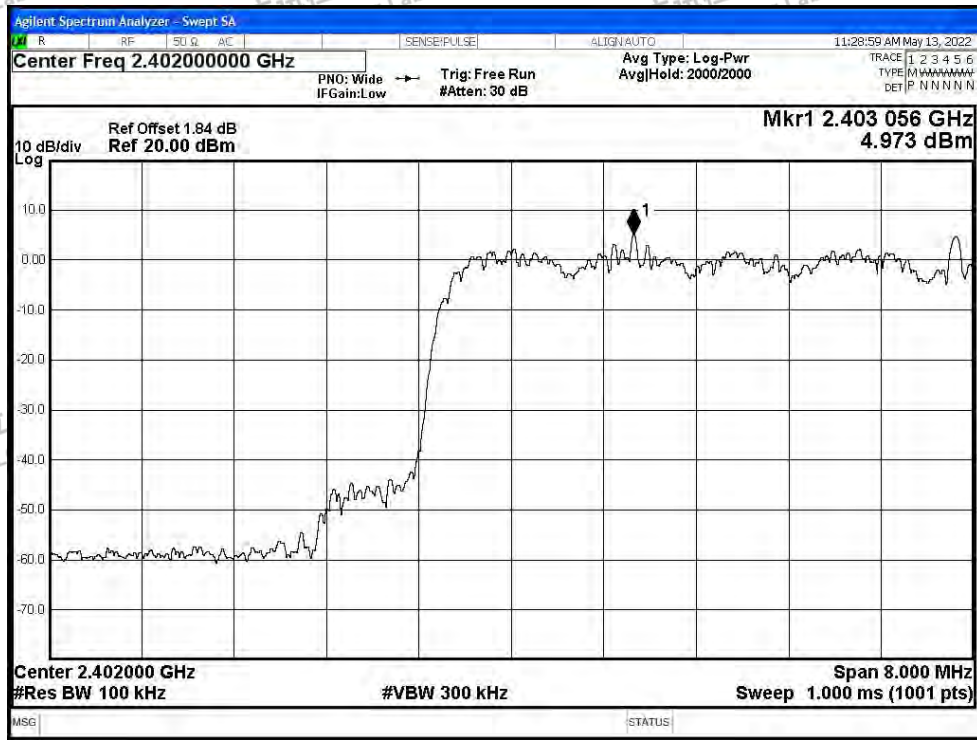


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

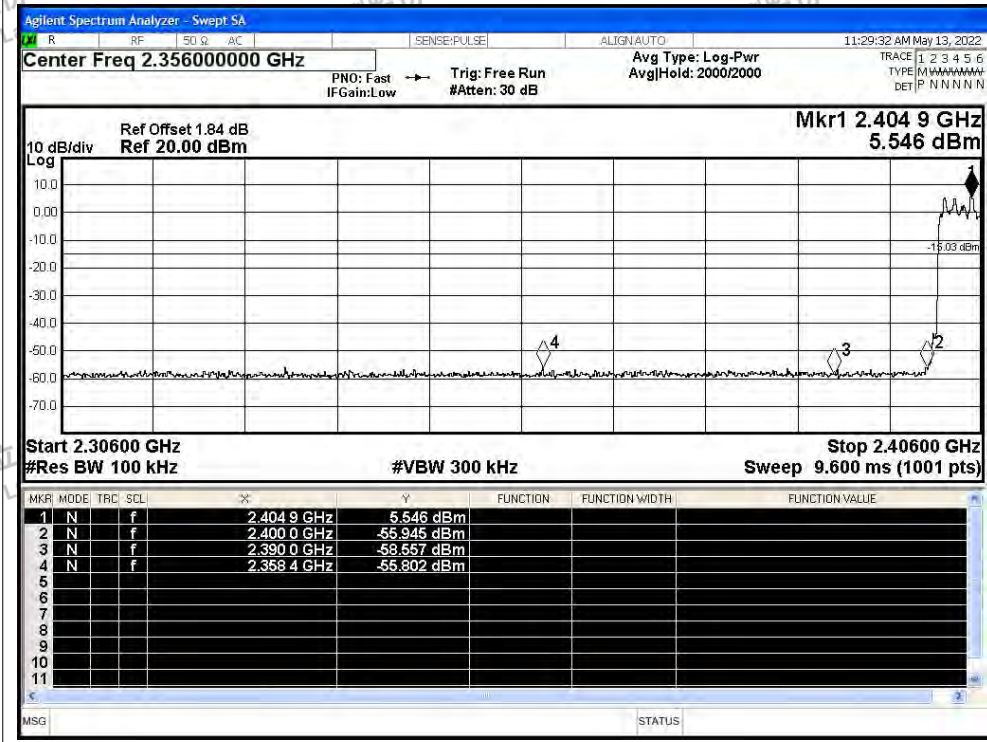




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

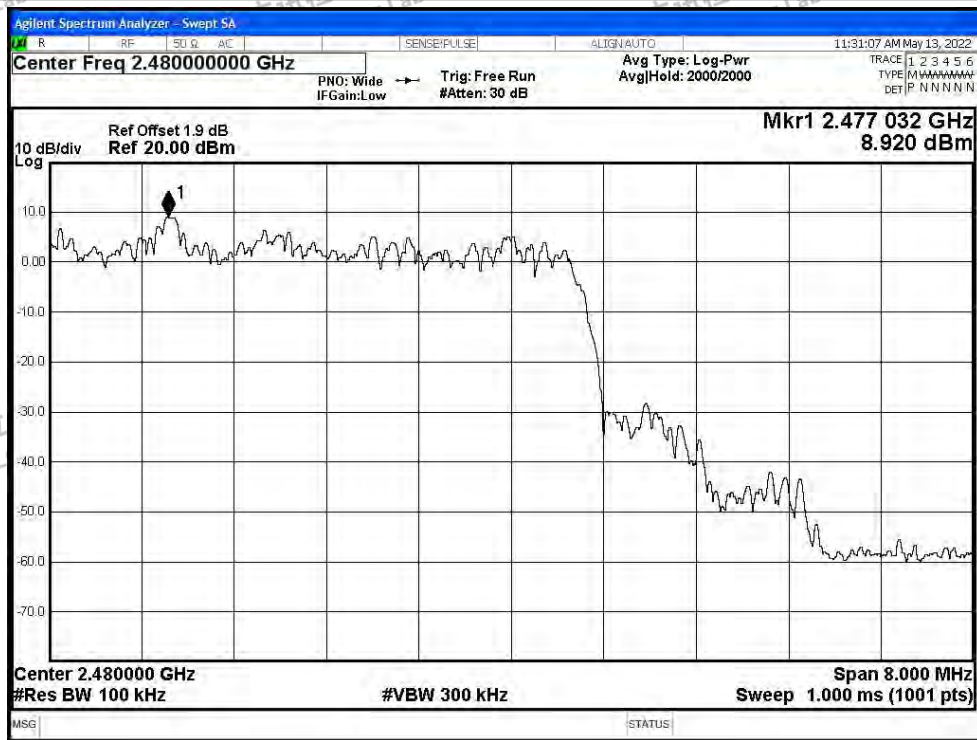


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

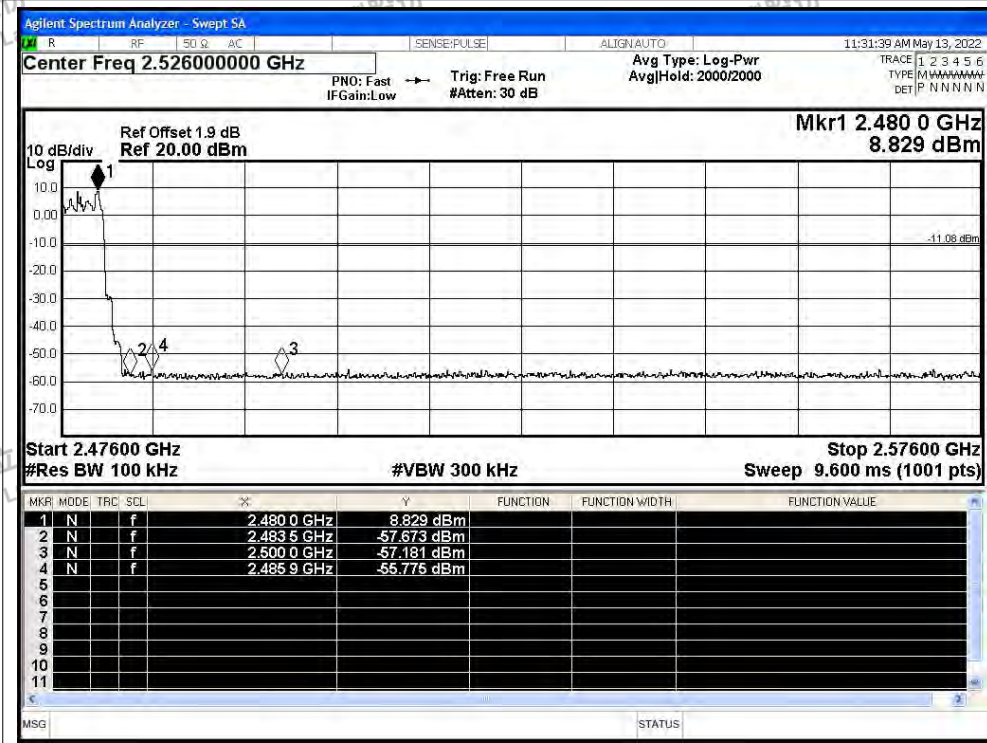




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref

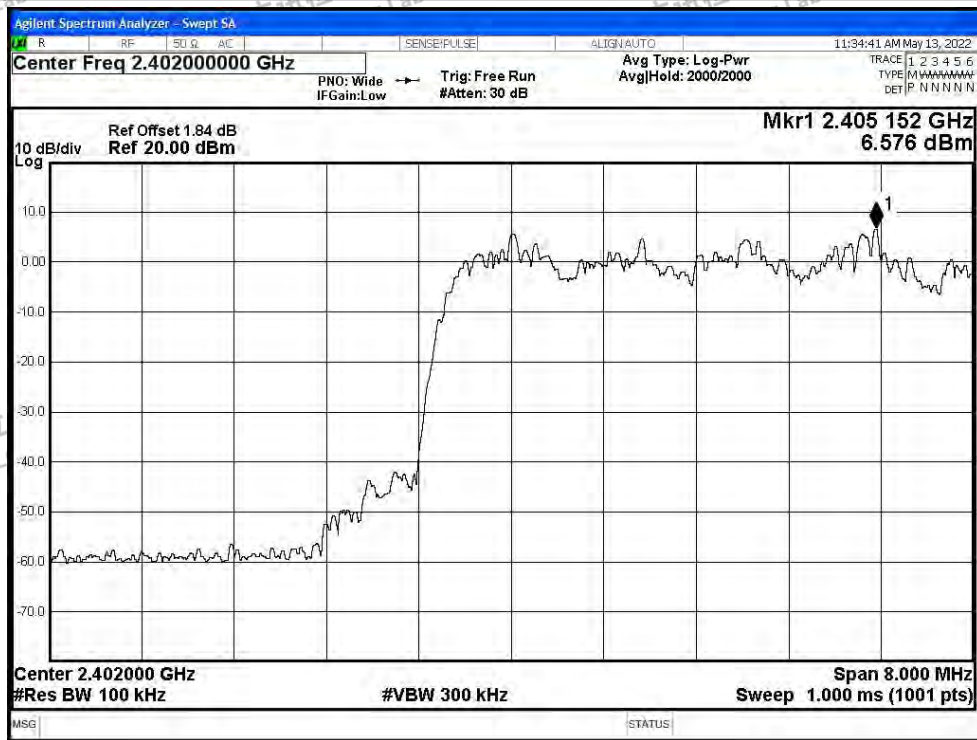


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

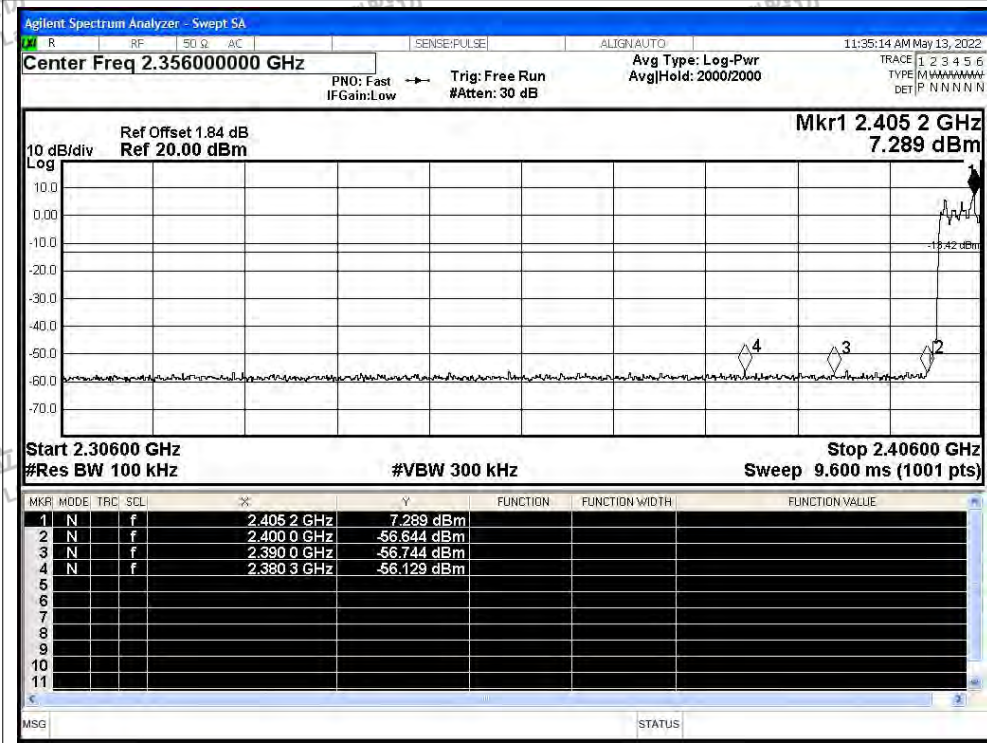




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

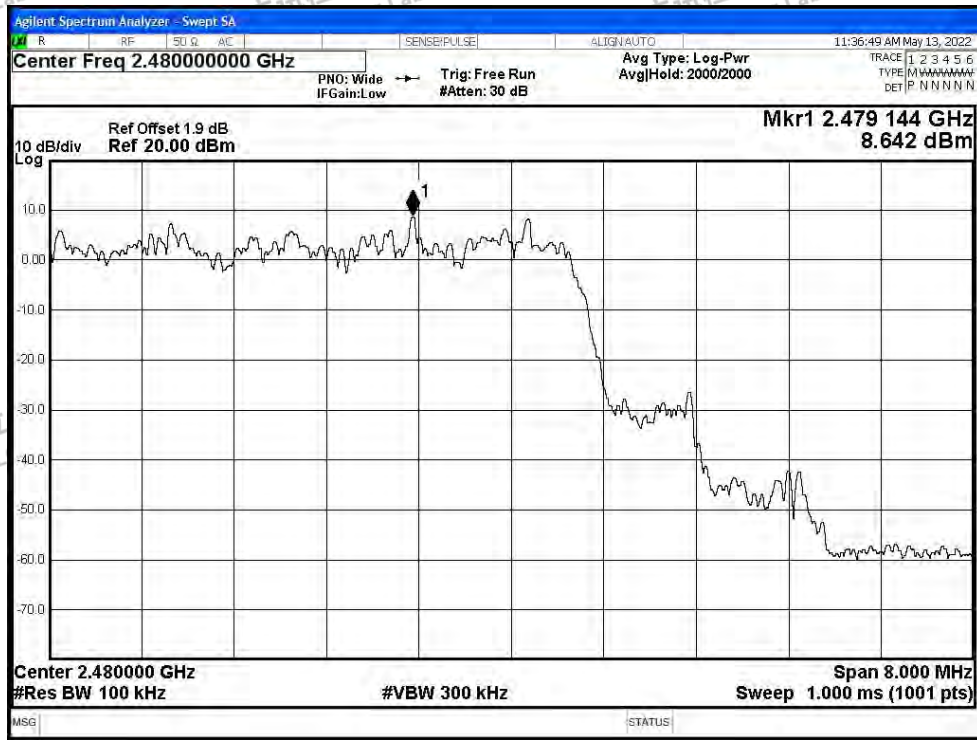


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission

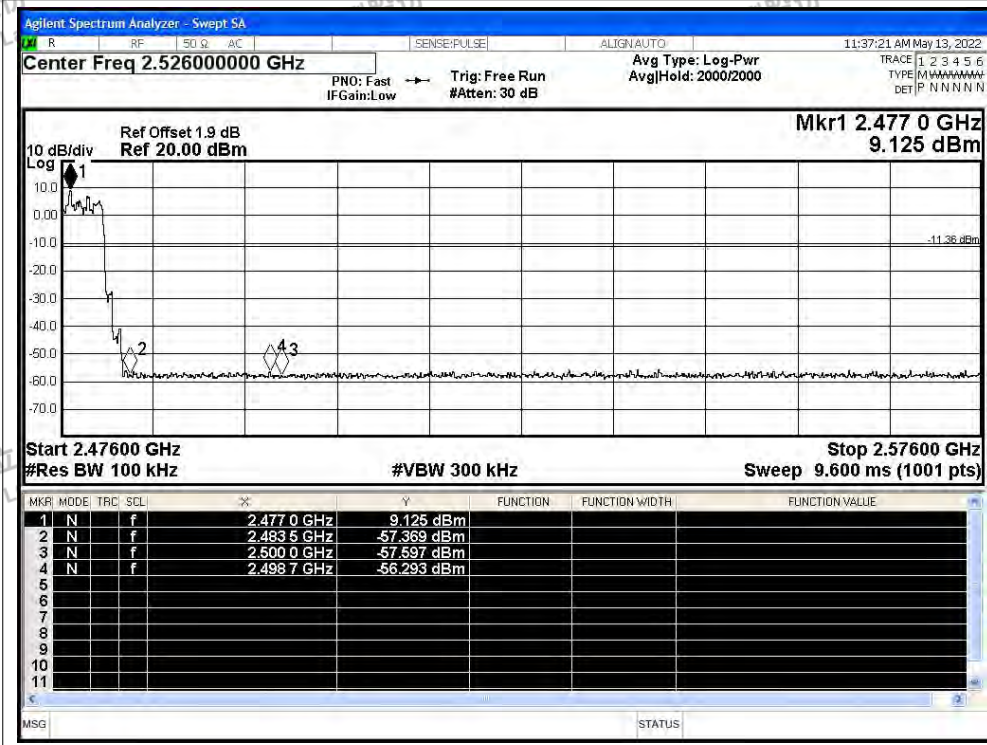




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



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	-60.45	-20	Pass
NVNT	1-DH5	2441	Ant1	-59	-20	Pass
NVNT	1-DH5	2480	Ant1	-61.27	-20	Pass
NVNT	2-DH5	2402	Ant1	-61.83	-20	Pass
NVNT	2-DH5	2441	Ant1	-62.34	-20	Pass
NVNT	2-DH5	2480	Ant1	-64.63	-20	Pass
NVNT	3-DH5	2402	Ant1	-62.07	-20	Pass
NVNT	3-DH5	2441	Ant1	-57.89	-20	Pass
NVNT	3-DH5	2480	Ant1	-59.65	-20	Pass

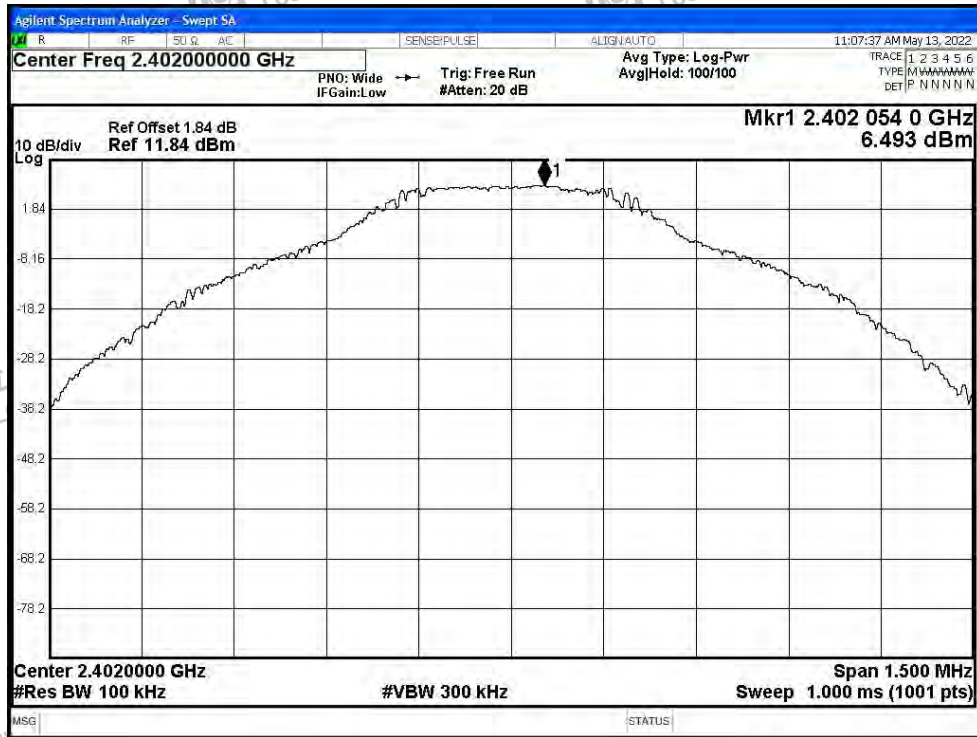


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

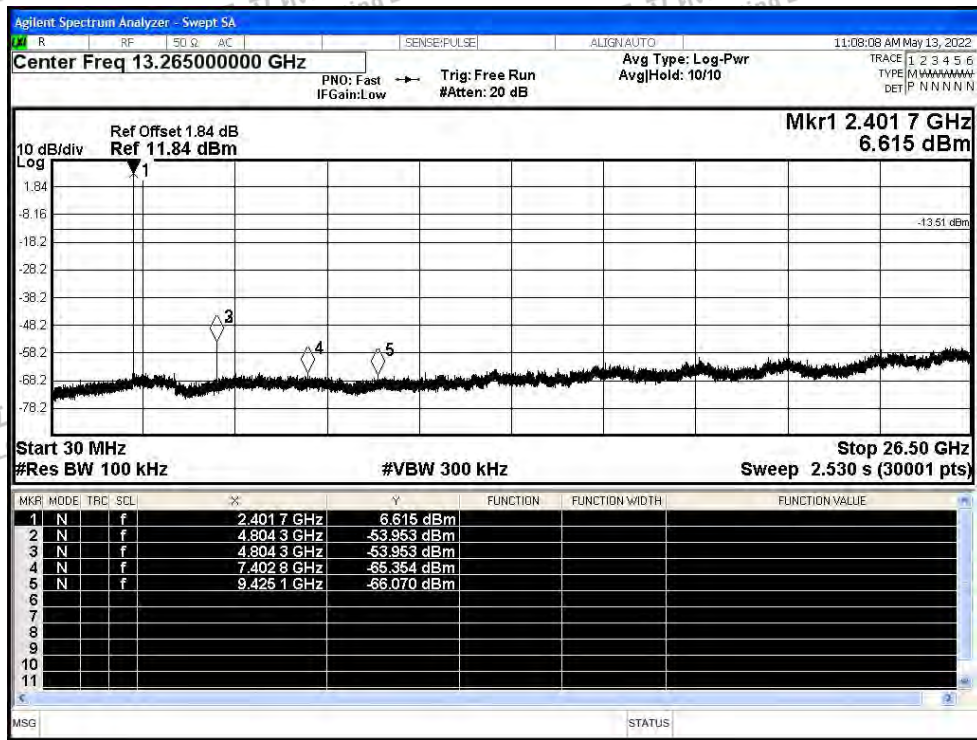


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

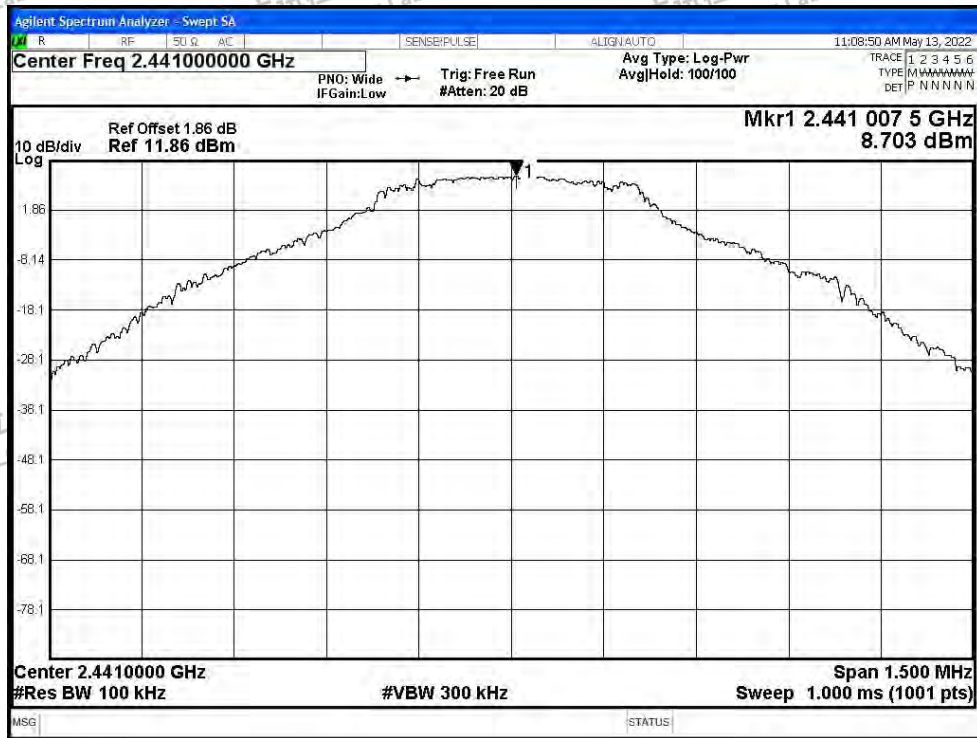


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

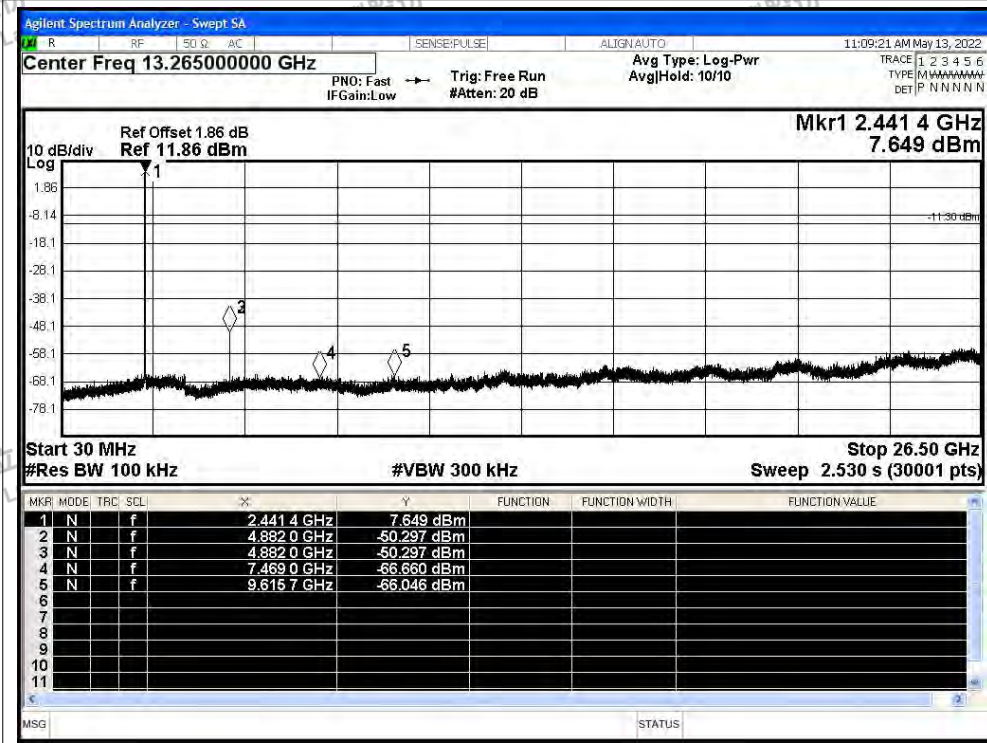




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

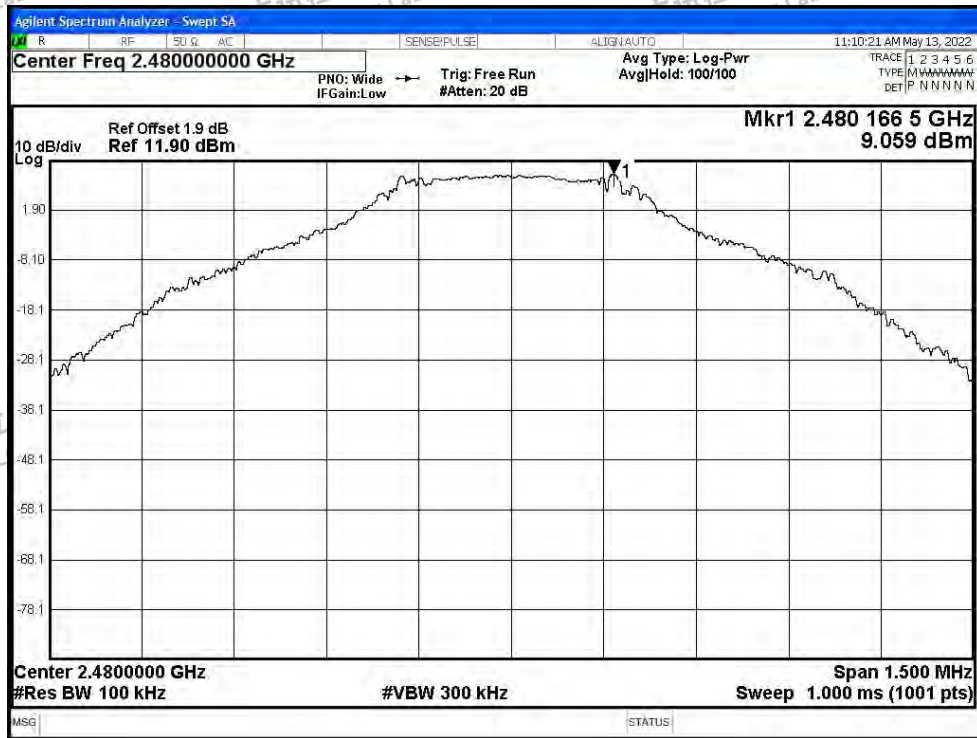


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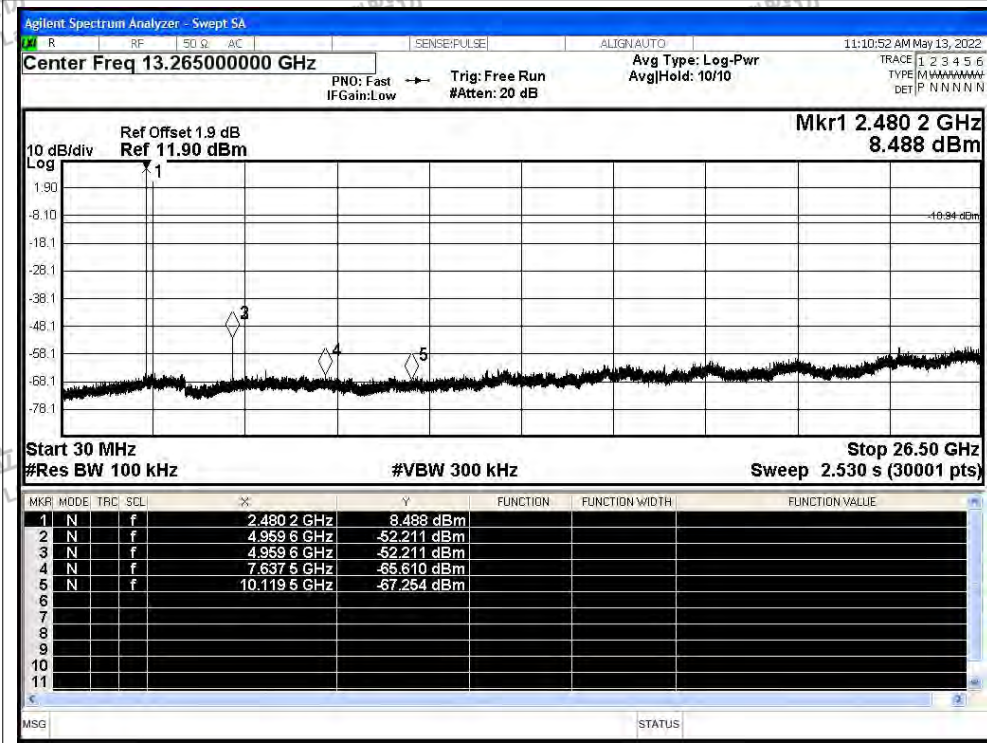




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

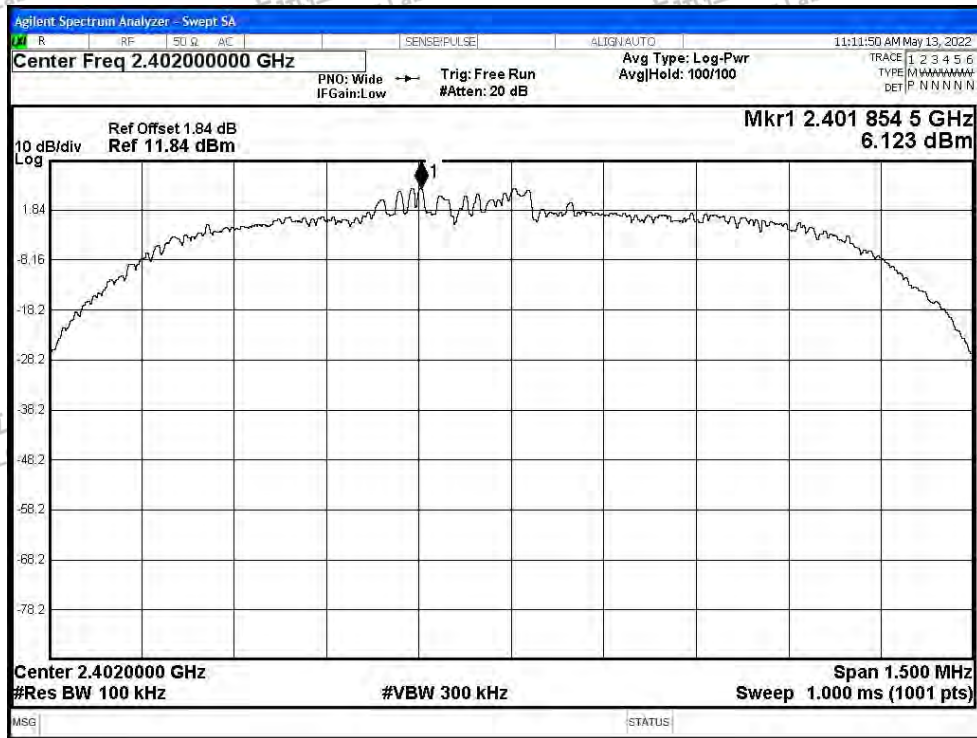


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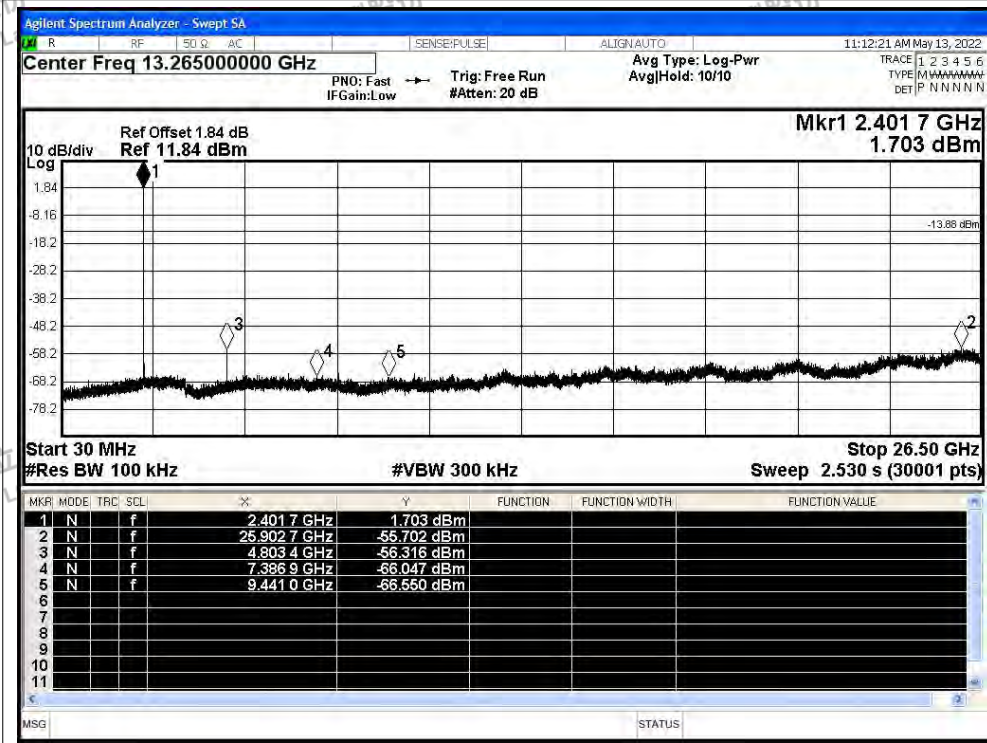




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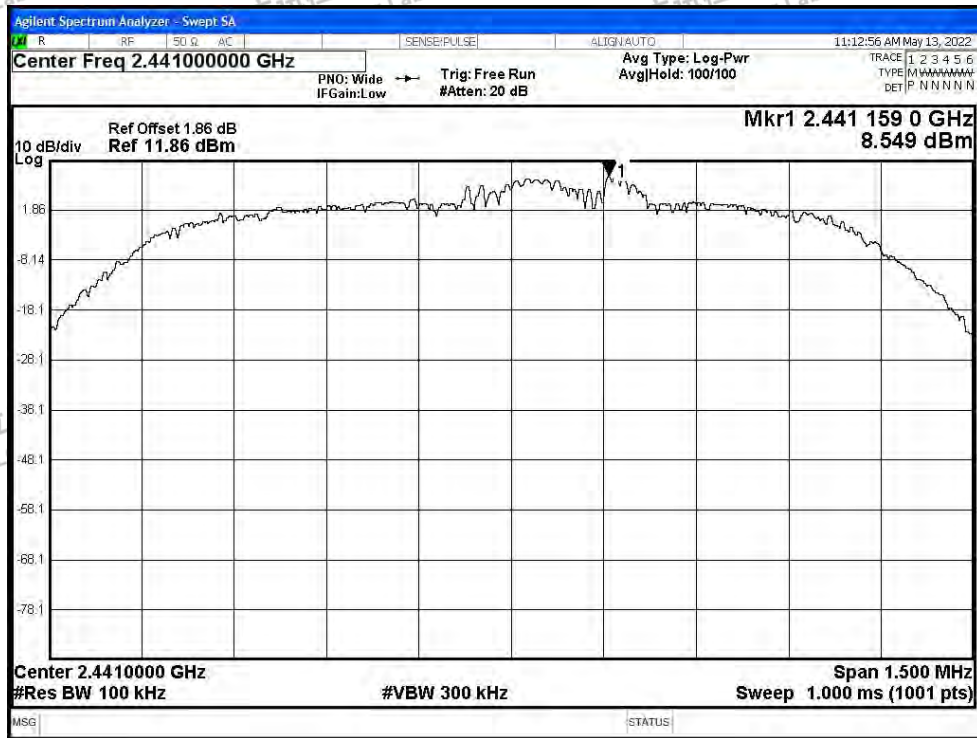


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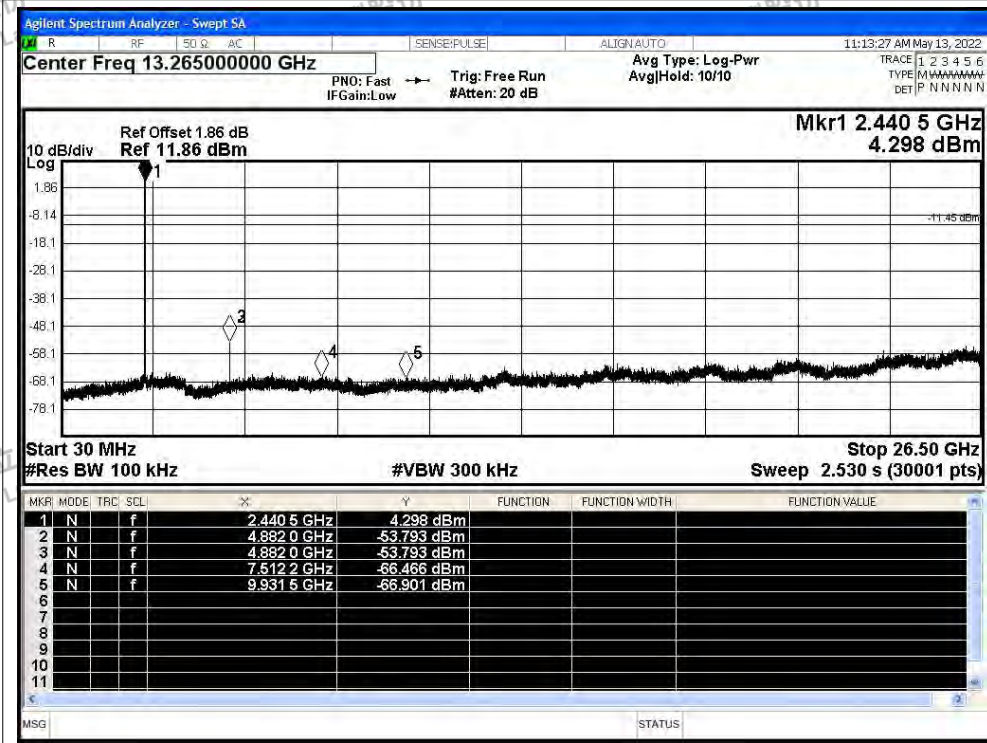




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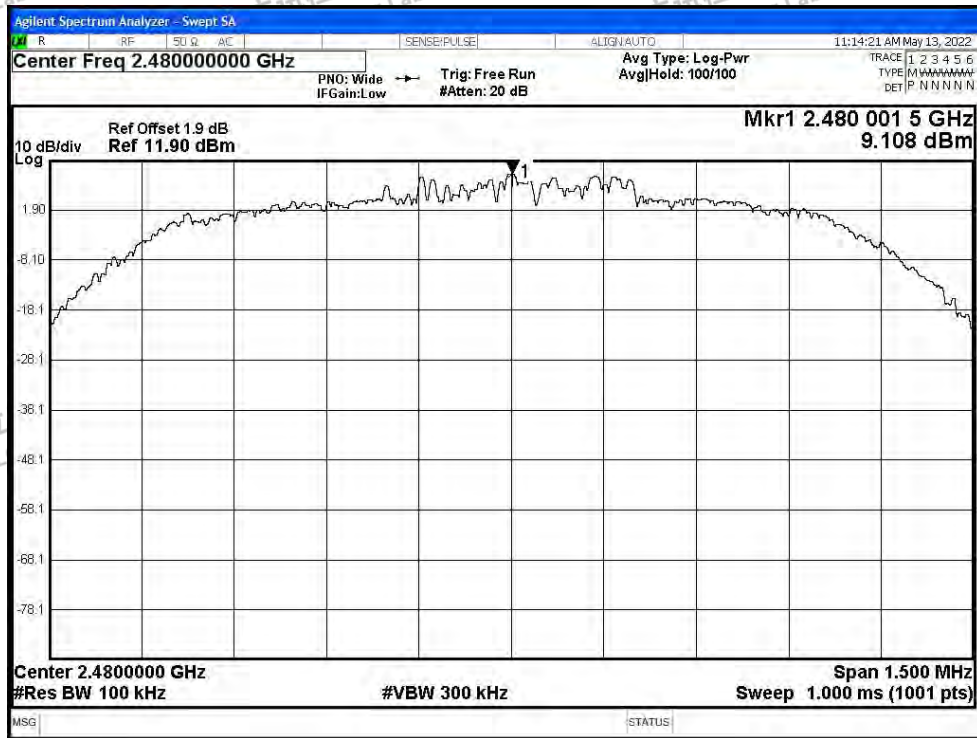


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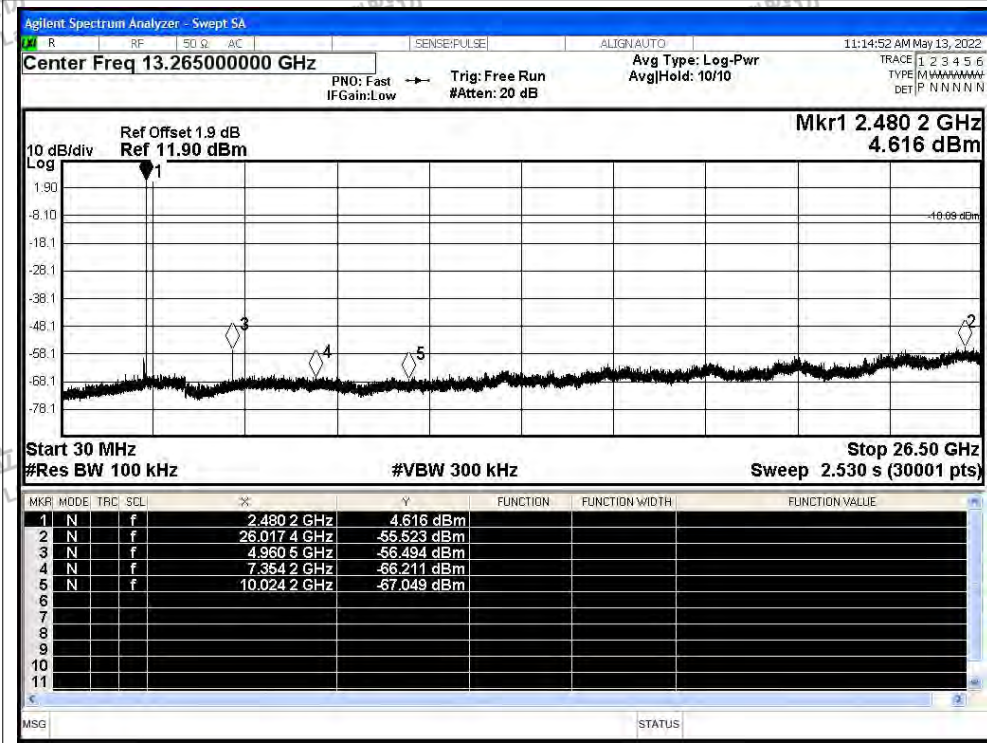




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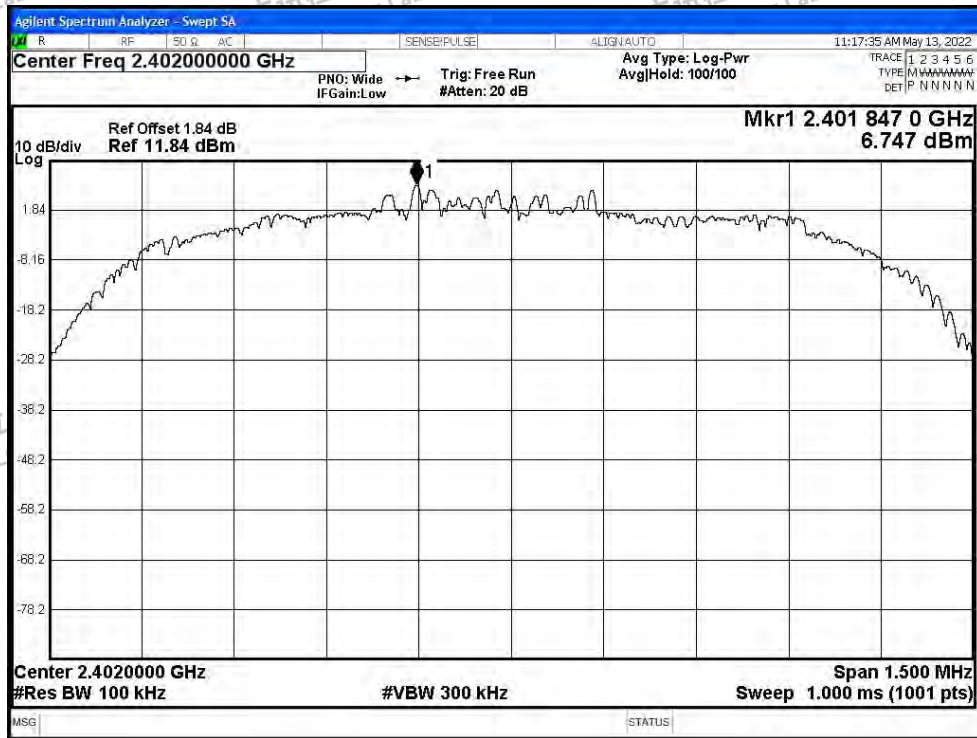


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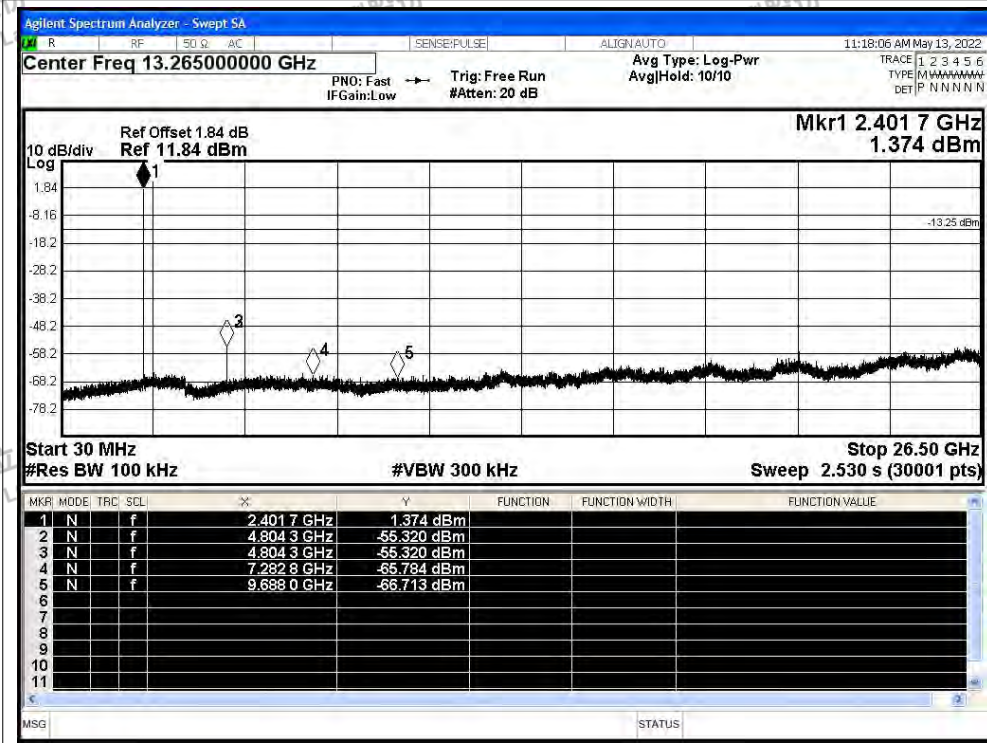




Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission

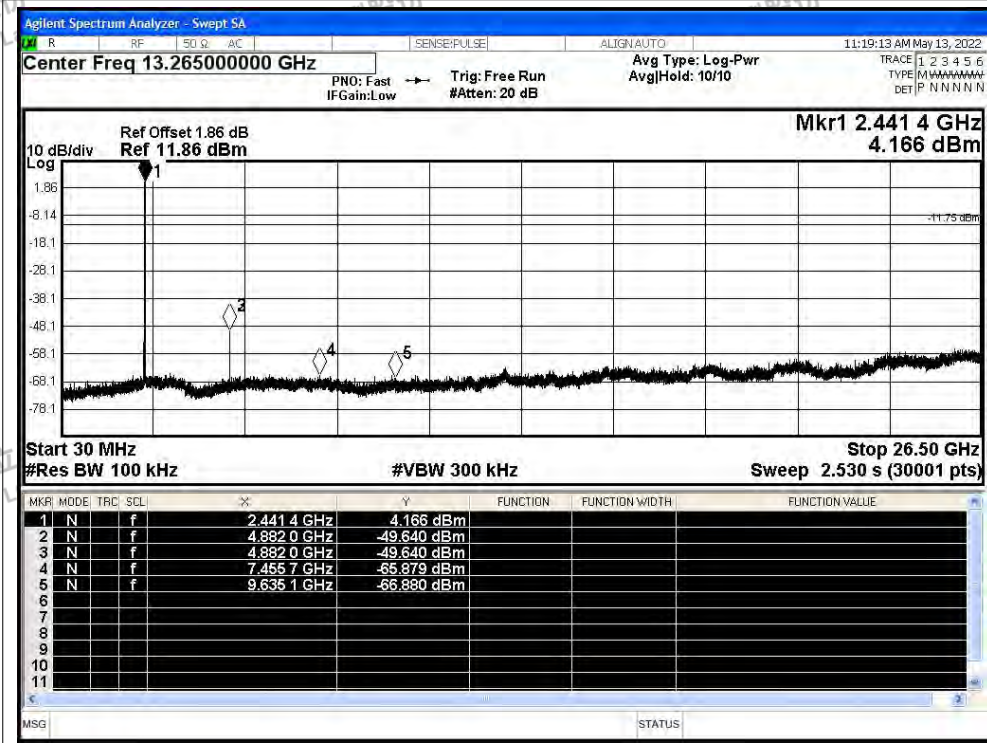




Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission

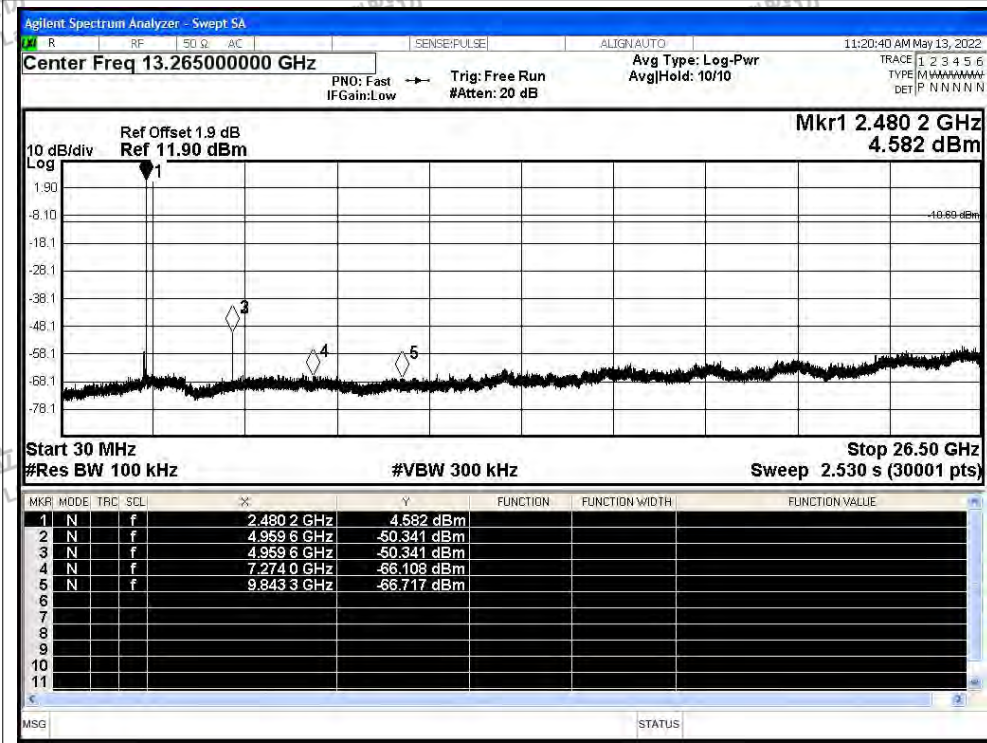




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



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	-49.51	2	47.75	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-60.68	2	36.58	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2357.232	-47.91	2	49.35	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2387.664	-60.12	2	37.14	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-51.13	2	46.13	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-60.14	2	37.12	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-47.35	2	49.91	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-58.07	2	39.19	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.016	-46.25	2	51.01	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.536	-58.07	2	39.19	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.75	2	47.51	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-60	2	37.26	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-51.69	2	45.57	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-60.73	2	36.53	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2320.08	-47.46	2	49.8	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2387.664	-60.11	2	37.15	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-51.73	2	45.53	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-60.25	2	37.01	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-48.5	2	48.76	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-56.79	2	40.47	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.752	-45.47	2	51.79	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.512	-56.79	2	40.47	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-51.08	2	46.18	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	-50.18	2	47.08	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-60.58	2	36.68	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2389.008	-47.82	2	49.44	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2387.376	-60.1	2	37.16	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.88	2	46.38	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-60.18	2	37.08	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-44.2	2	53.06	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-56.75	2	40.51	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-44.2	2	53.06	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-56.75	2	40.51	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-50.23	2	47.03	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-60.05	2	37.21	Average	54	Pass

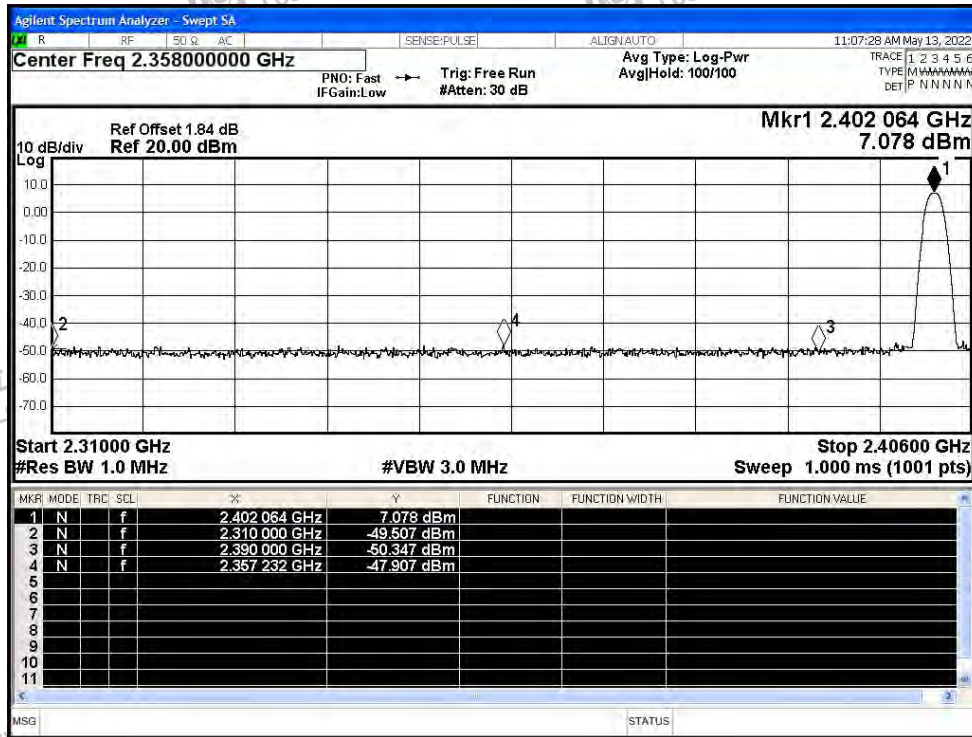


Shenzhen LCS Compliance Testing Laboratory Ltd.
 Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
 Scan code to check authenticity

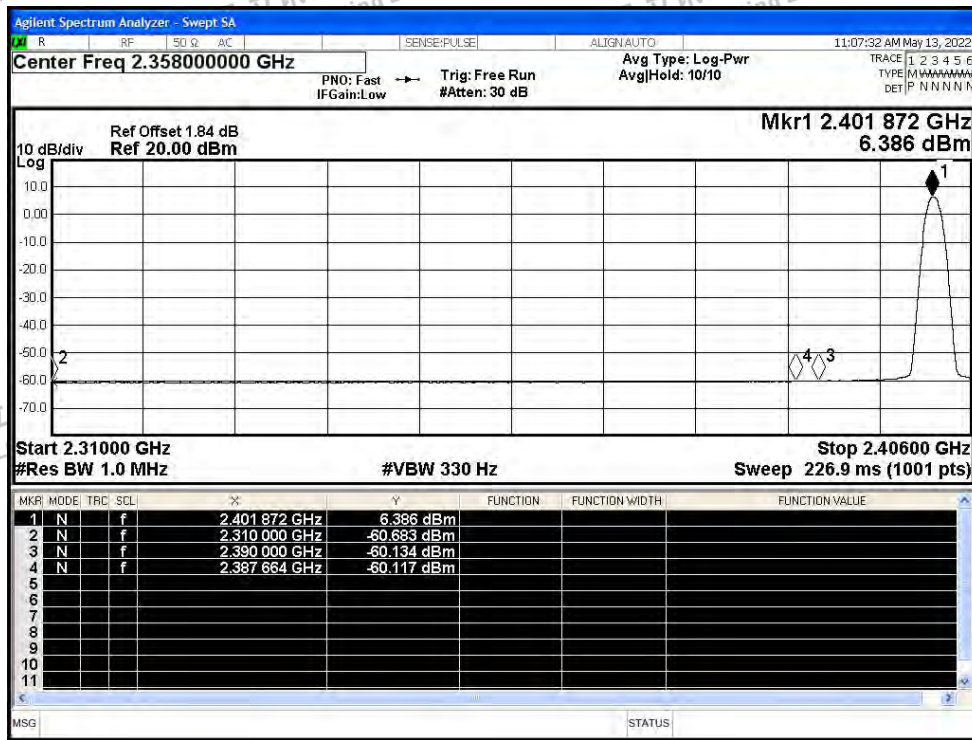


Test Graphs

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

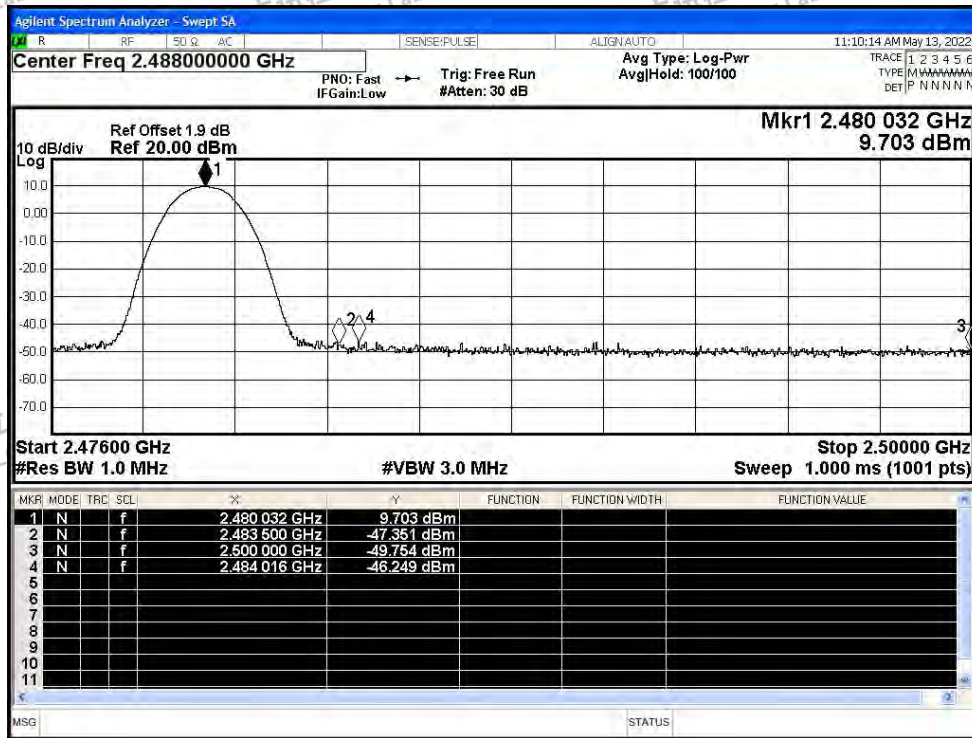


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

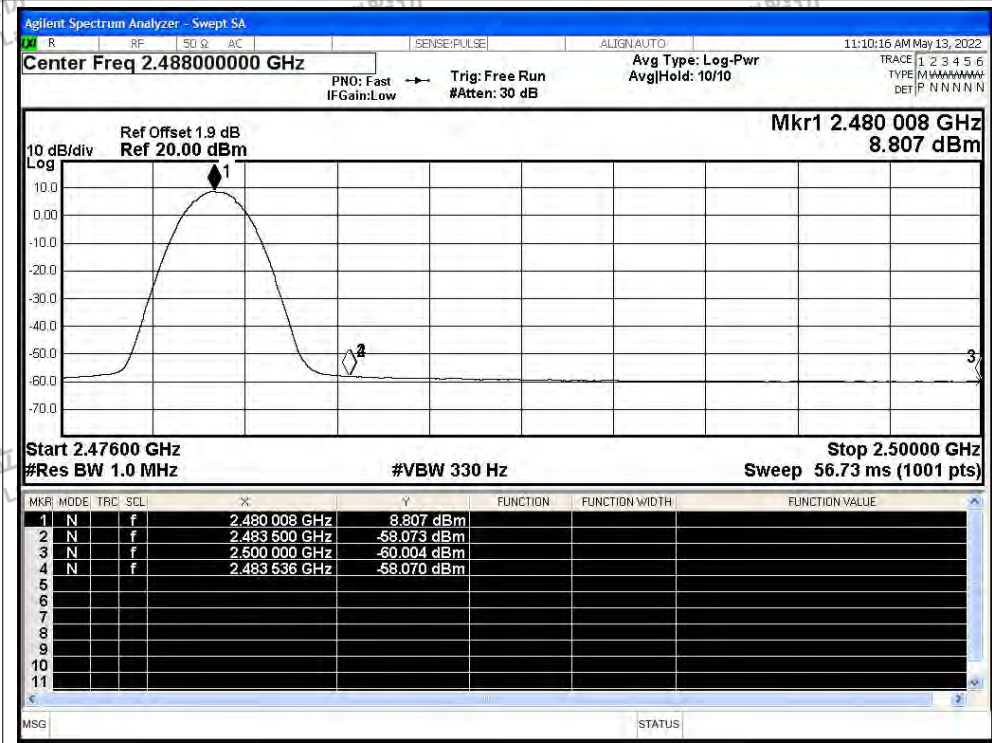




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

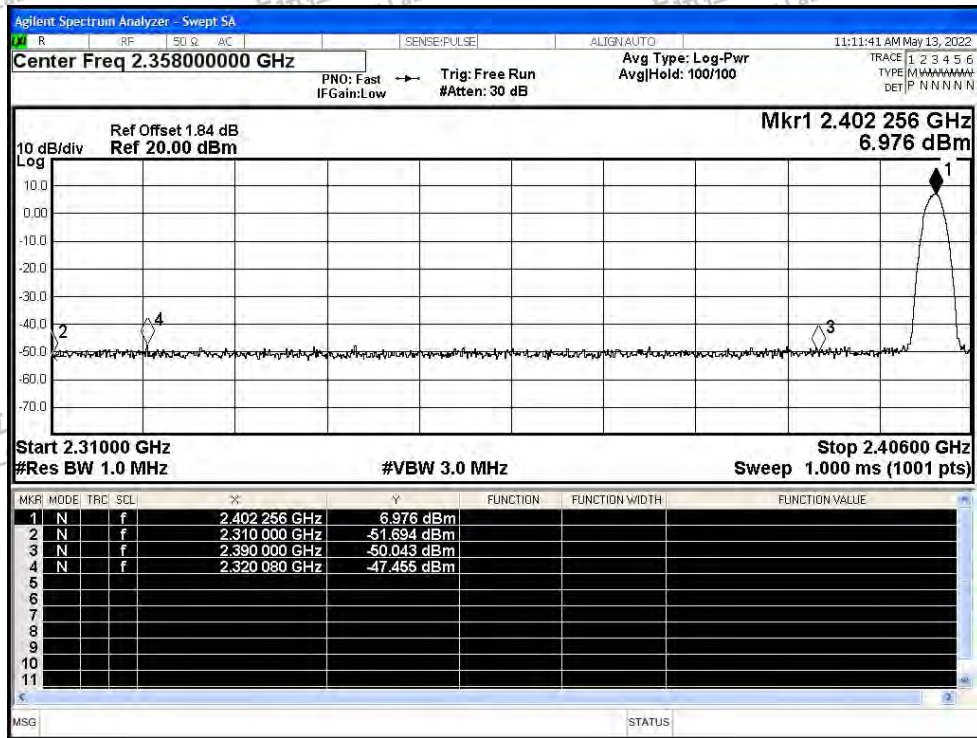


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

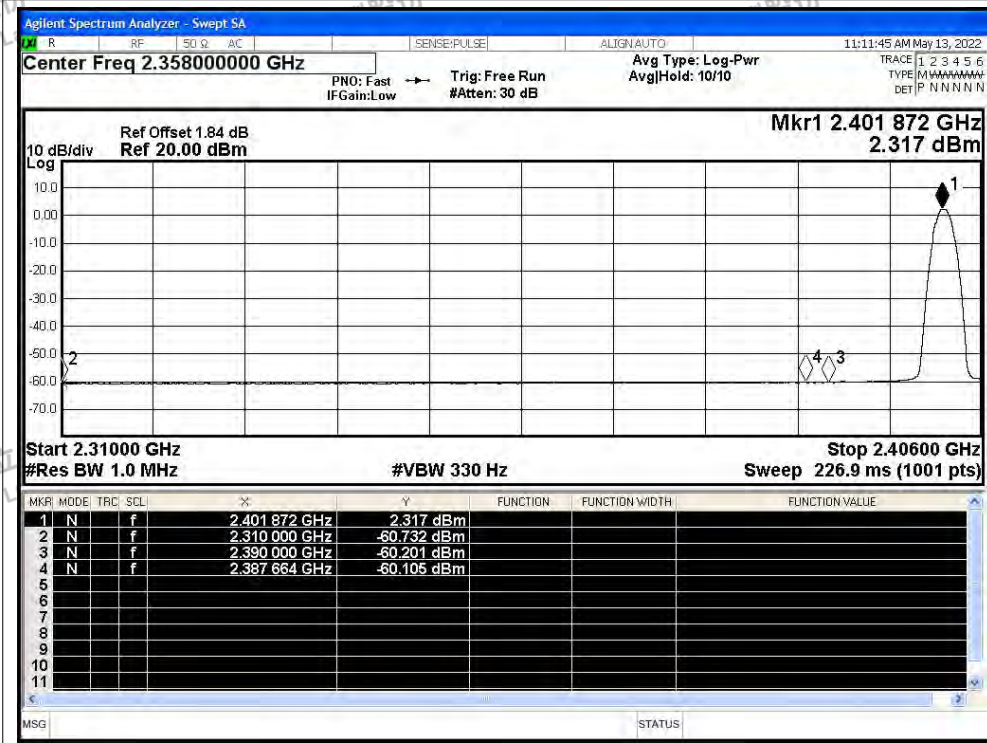




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

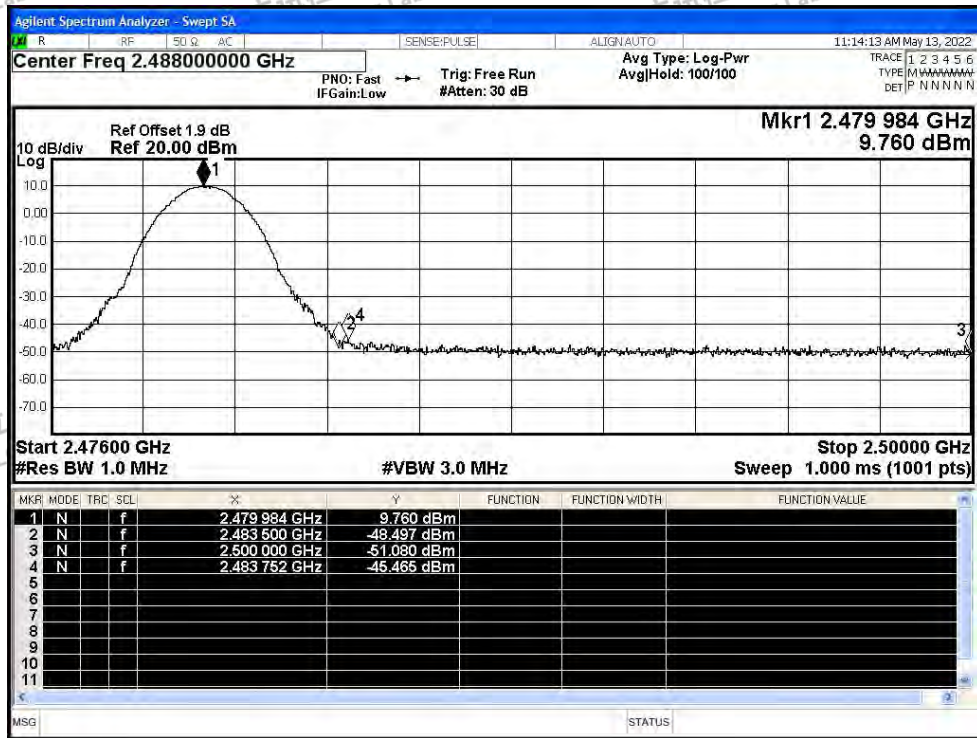


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average

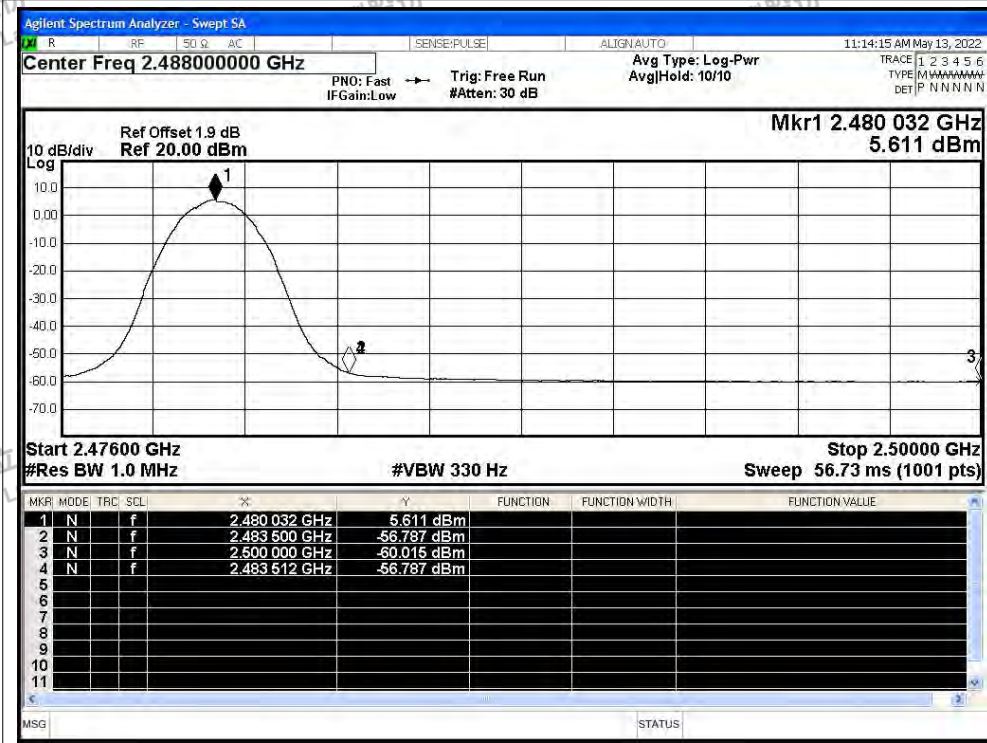




Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak

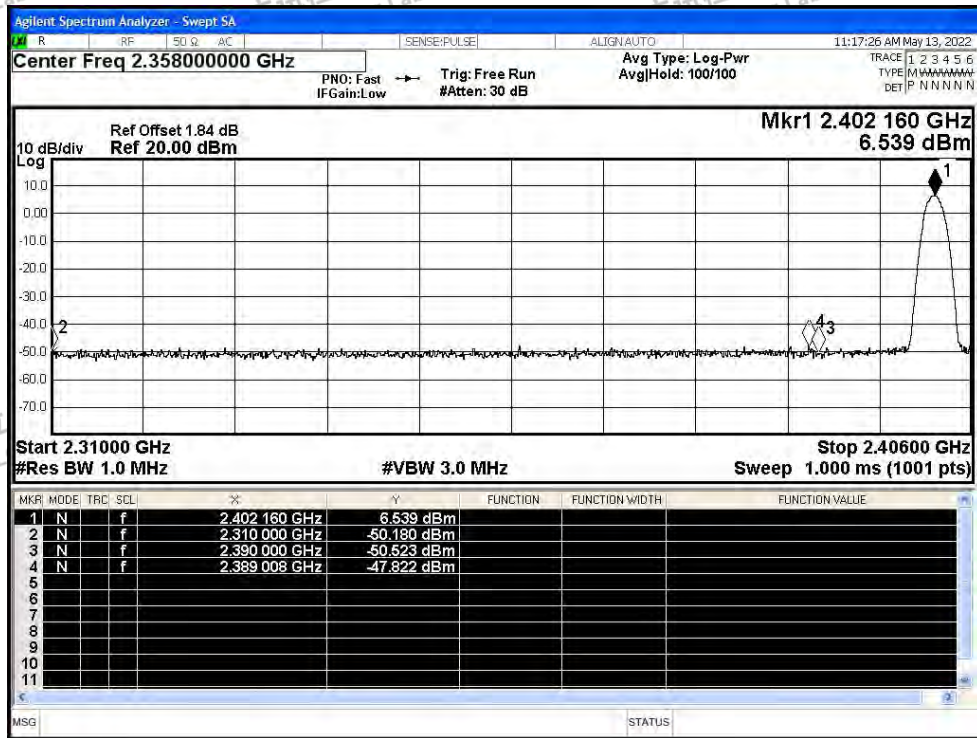


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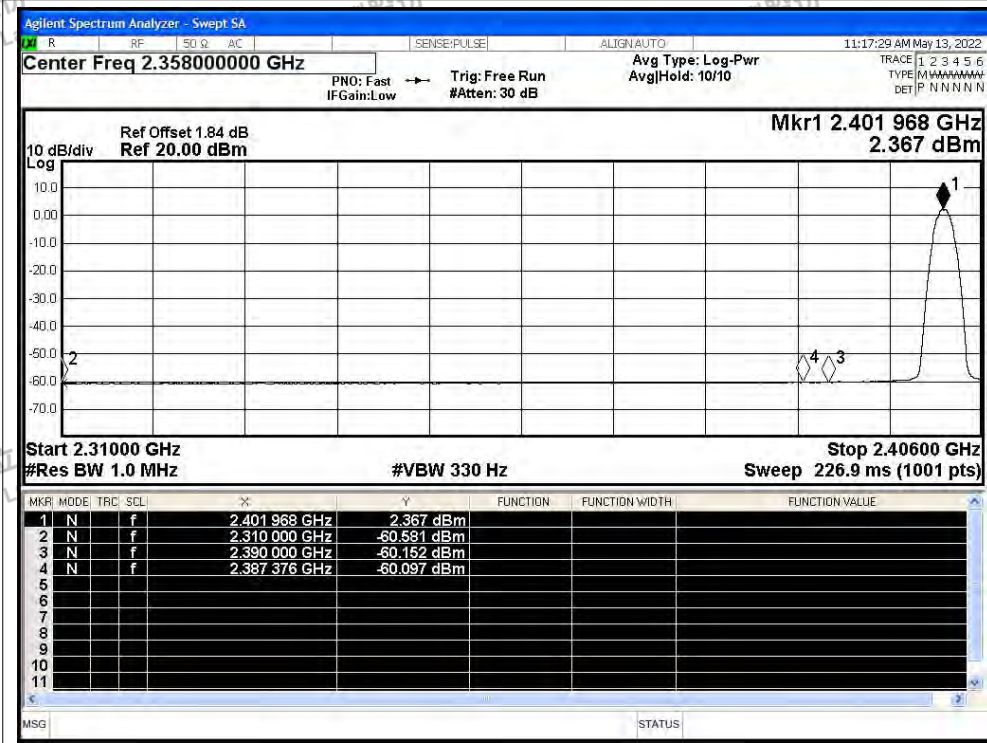




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

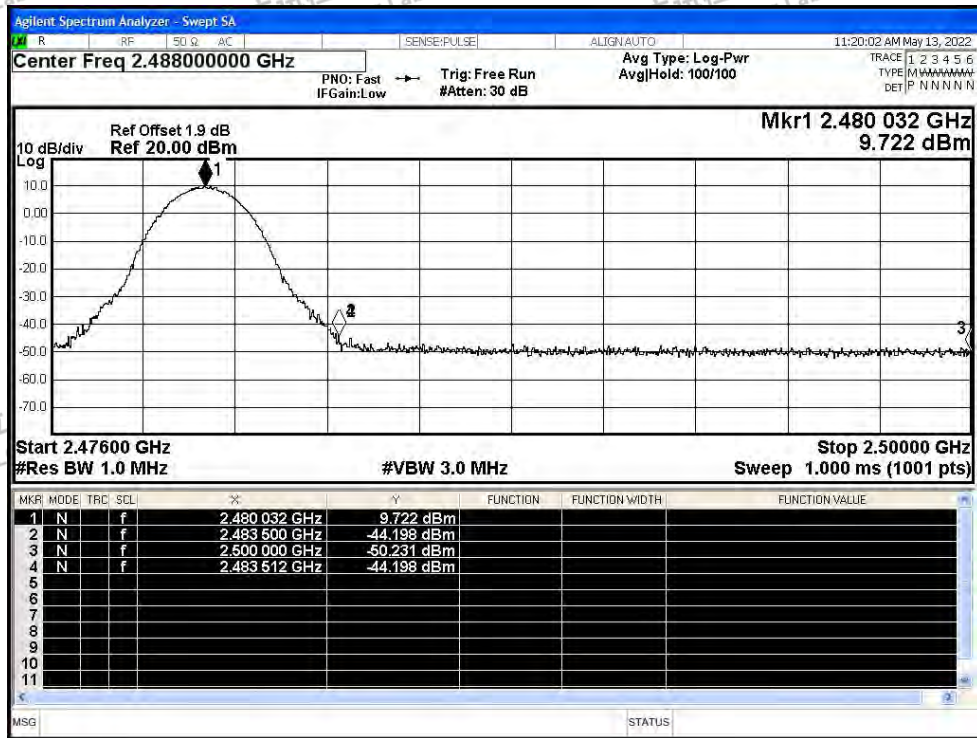


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





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



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

