



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Open-Ear Headphones

Test Model: QS01

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Can Kun
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	1.018	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.003	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.96	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.344	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.306	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.33	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.293	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.289	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.298	N/A	Pass

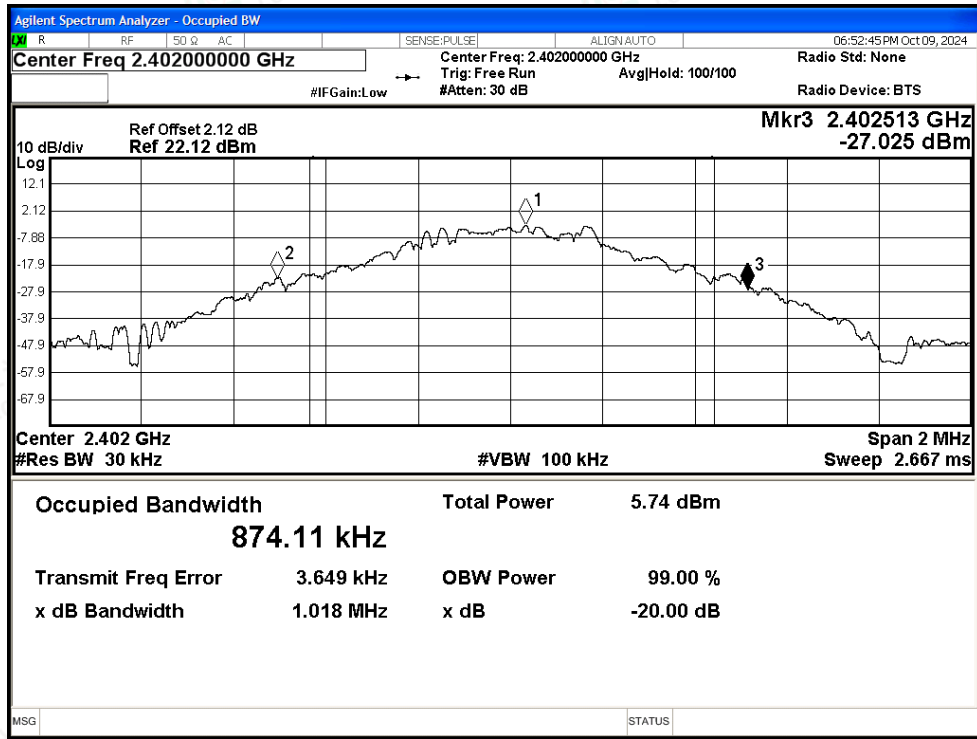


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 Scan code to check authenticity



Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

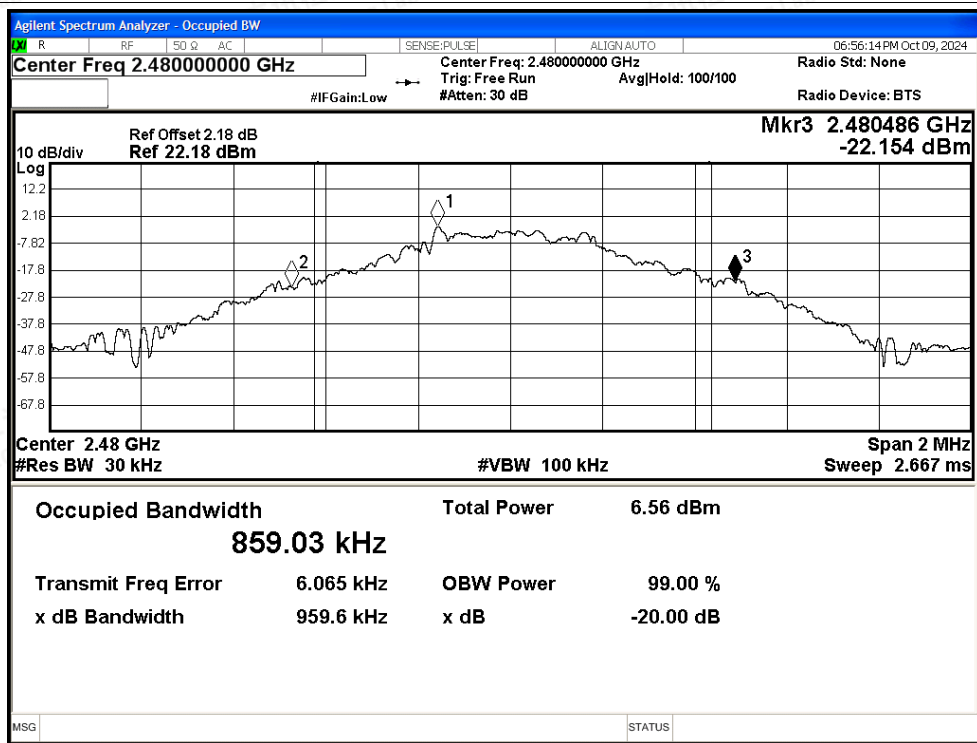


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

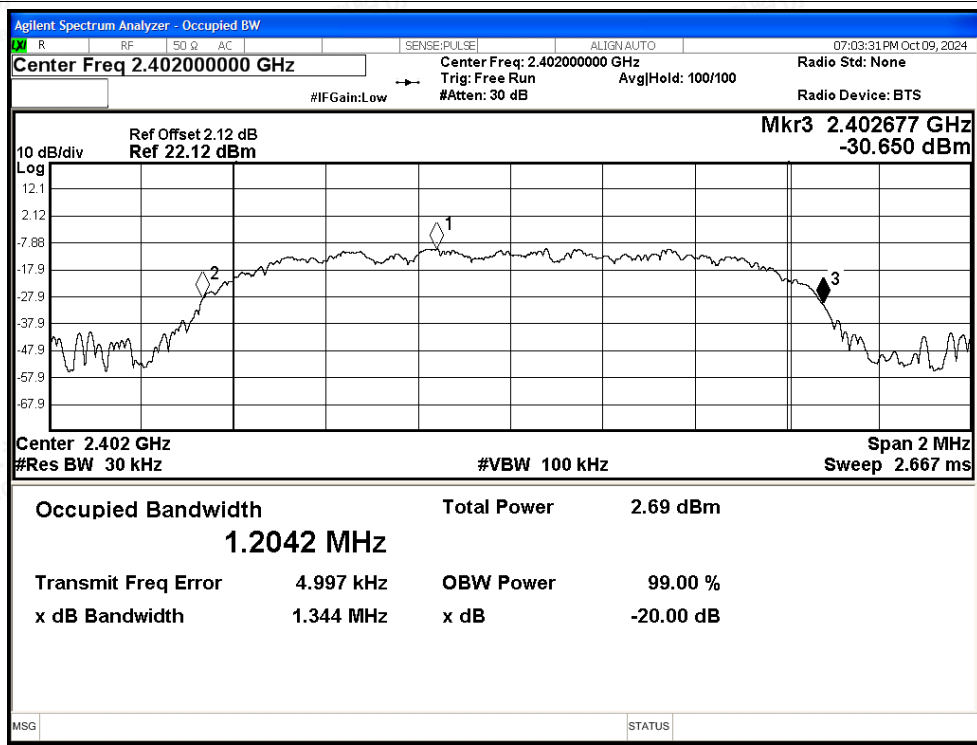




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

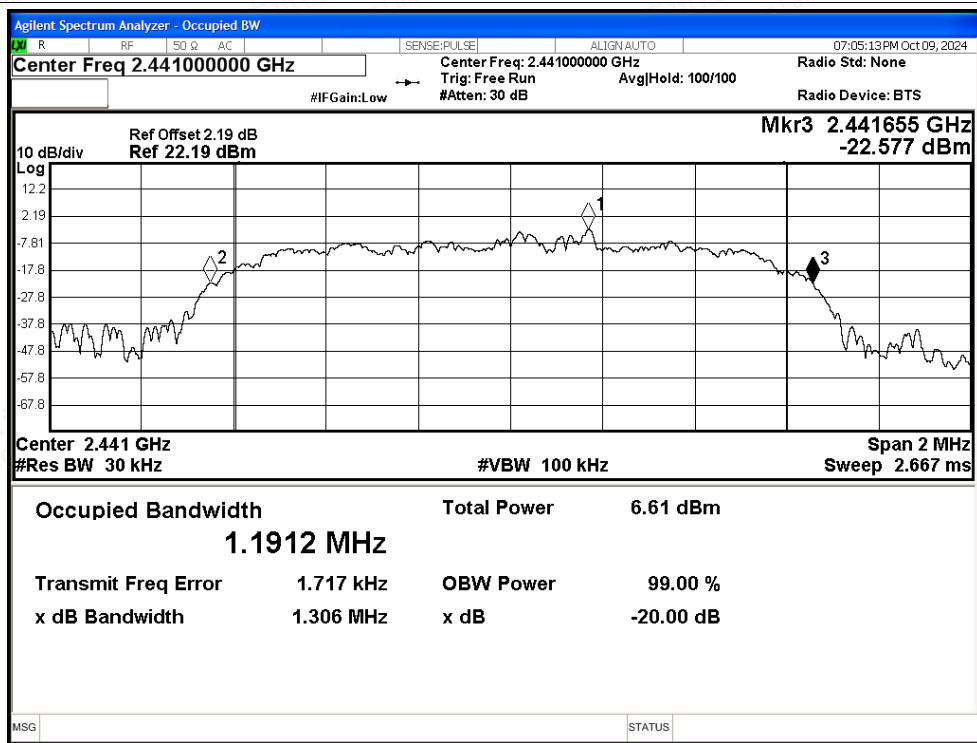


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

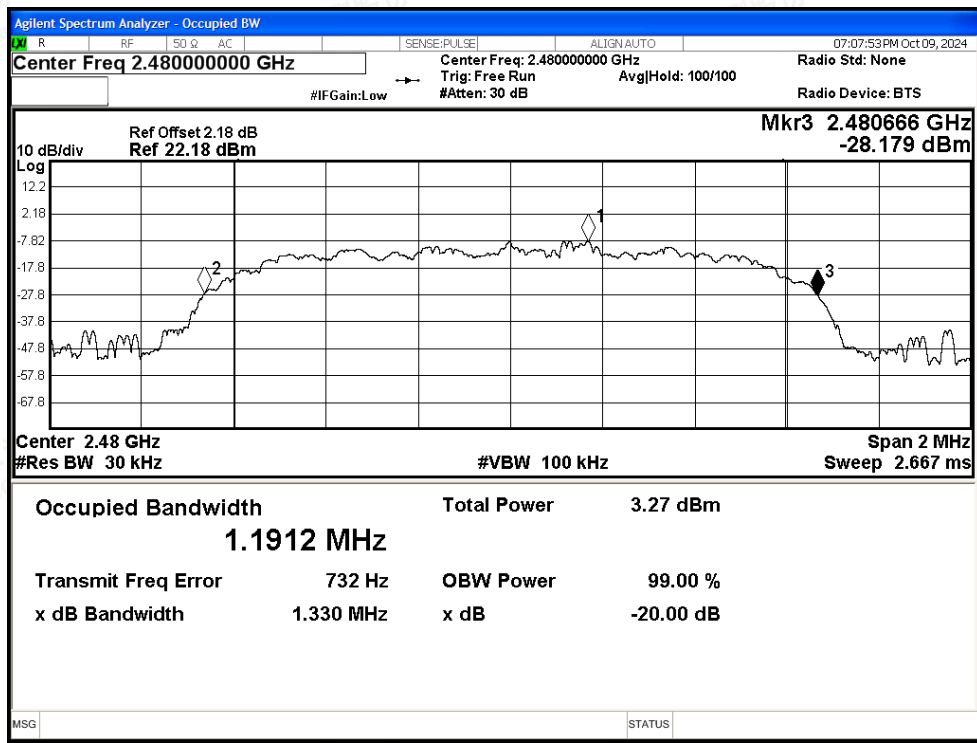




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

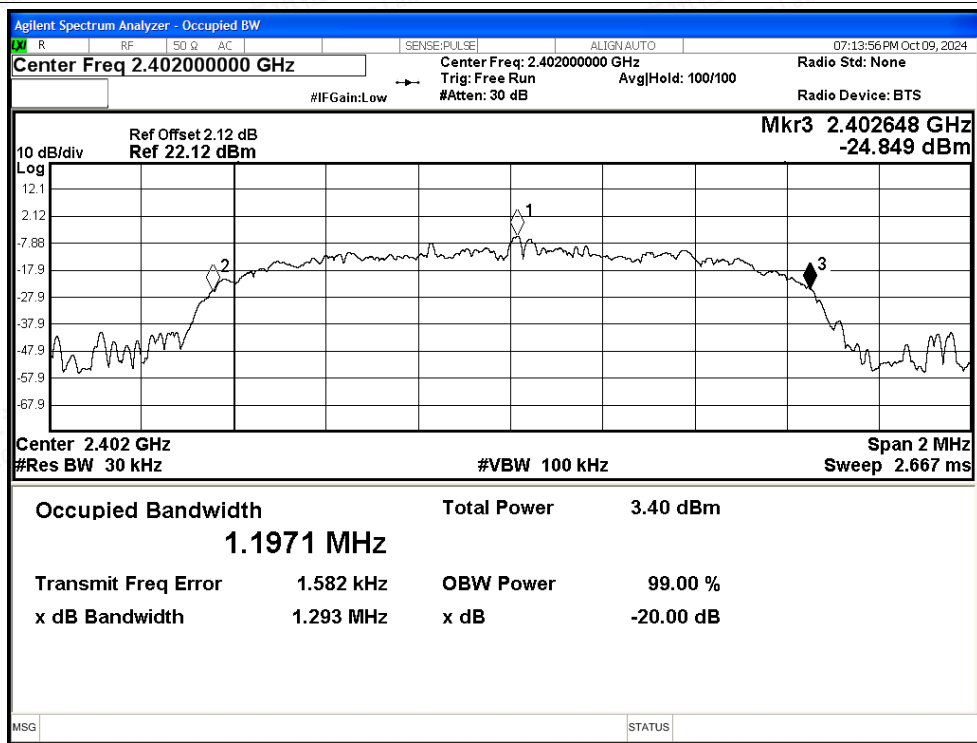


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

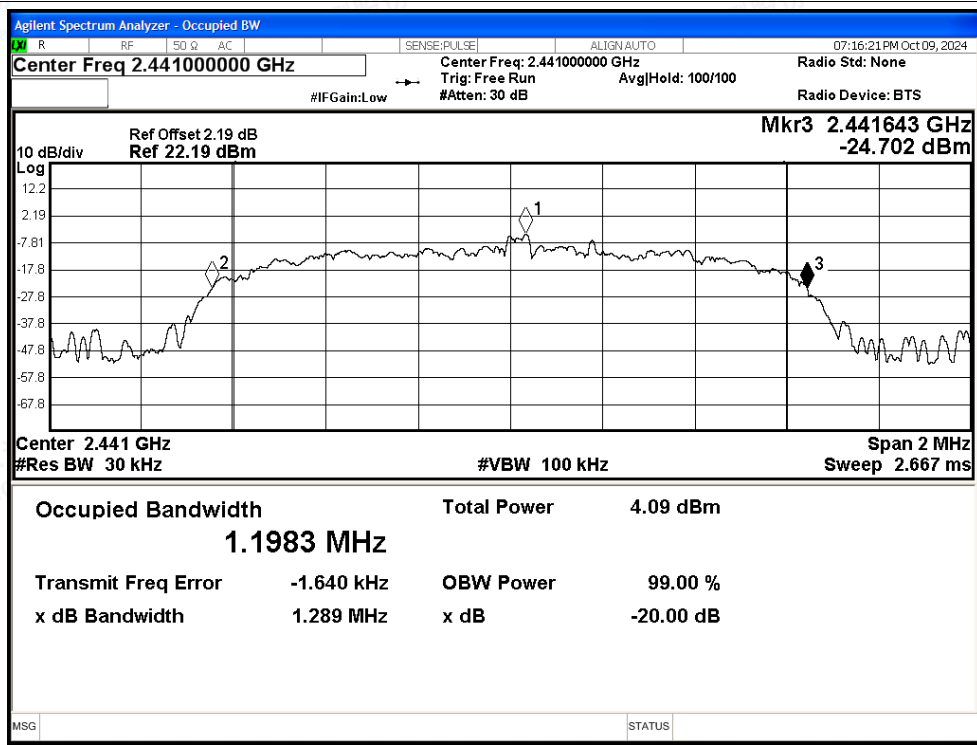




-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1

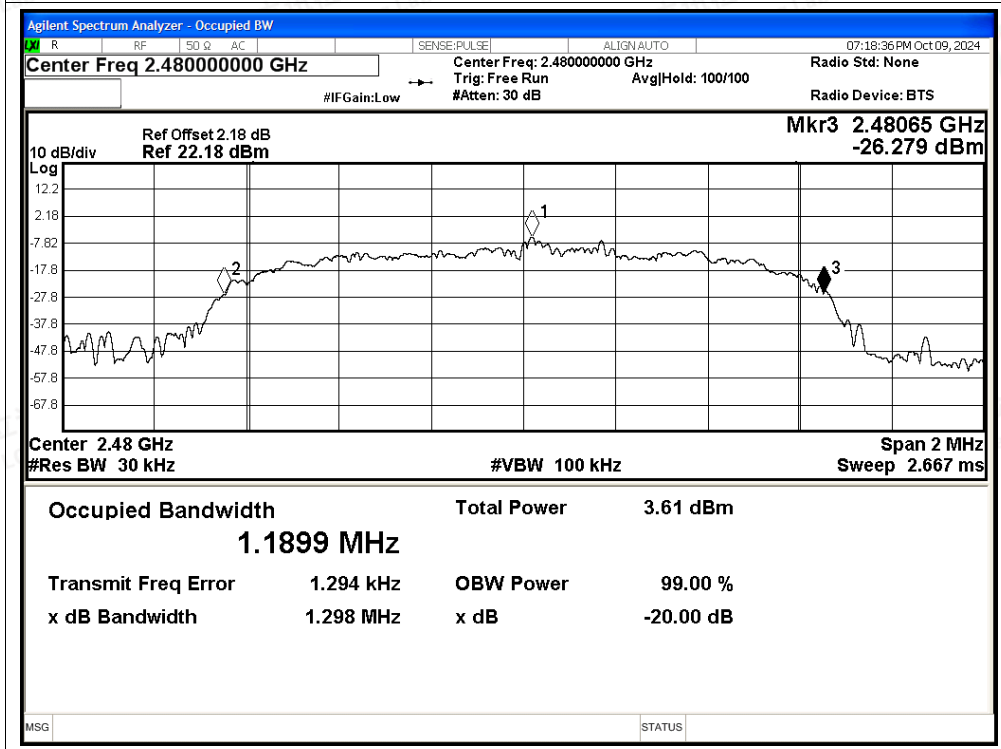


-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1





-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1





A.2 Maximum Peak Conducted Output Power

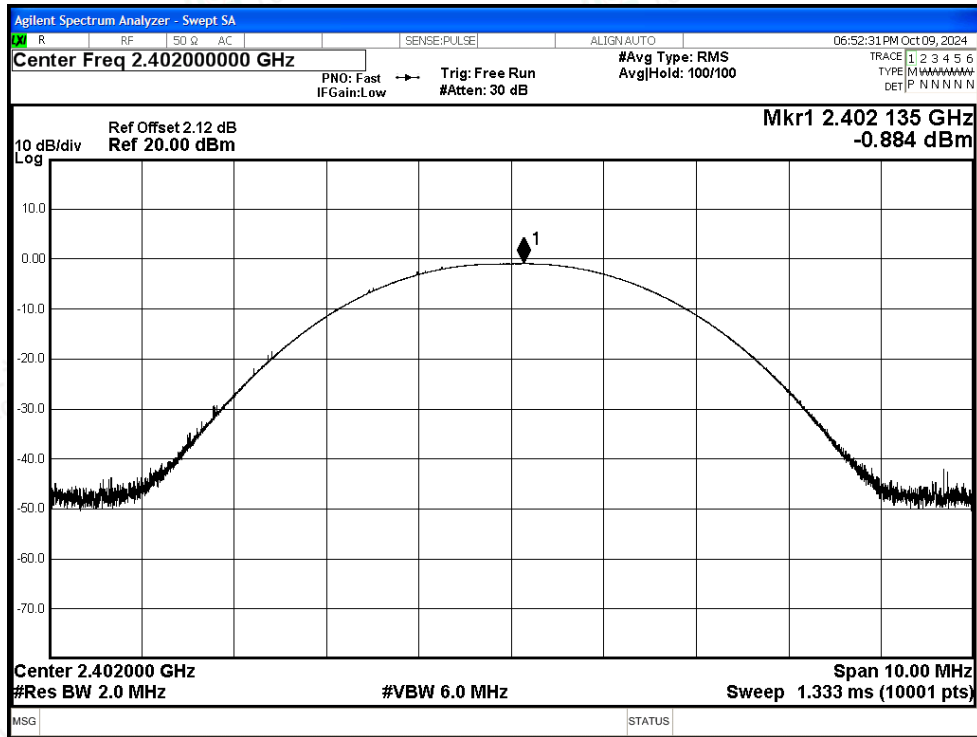
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.88	21	Pass
NVNT	1-DH5	2441	Ant1	-0.23	21	Pass
NVNT	1-DH5	2480	Ant1	-0.07	21	Pass
NVNT	2-DH5	2402	Ant1	-0.86	21	Pass
NVNT	2-DH5	2441	Ant1	2.27	21	Pass
NVNT	2-DH5	2480	Ant1	-0.82	21	Pass
NVNT	3-DH5	2402	Ant1	-0.54	21	Pass
NVNT	3-DH5	2441	Ant1	0.06	21	Pass
NVNT	3-DH5	2480	Ant1	-0.49	21	Pass



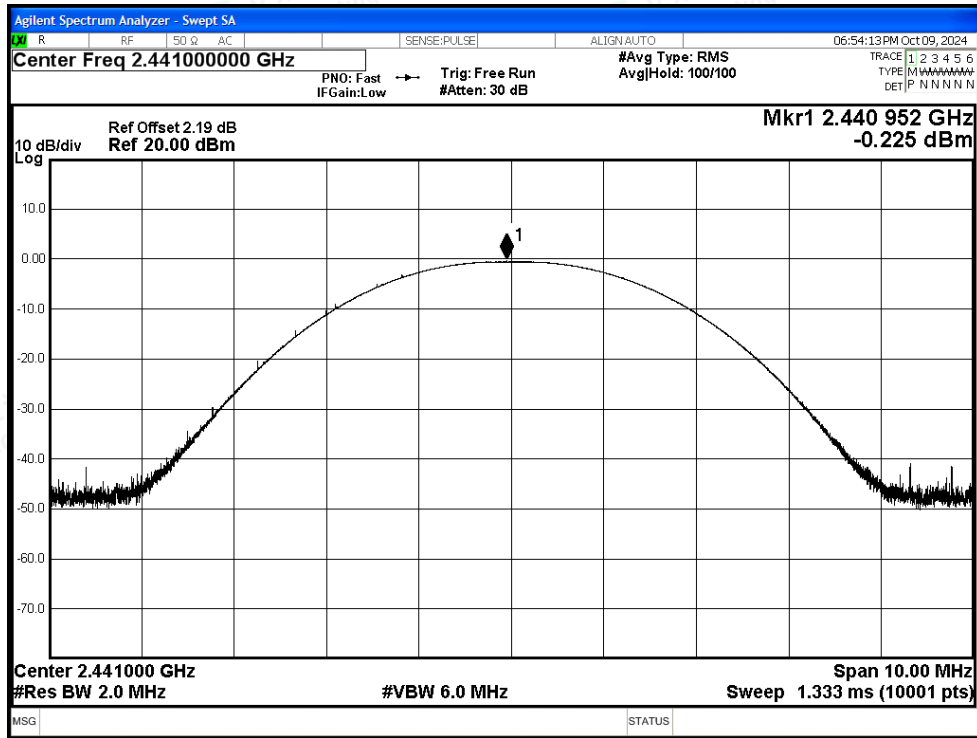


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

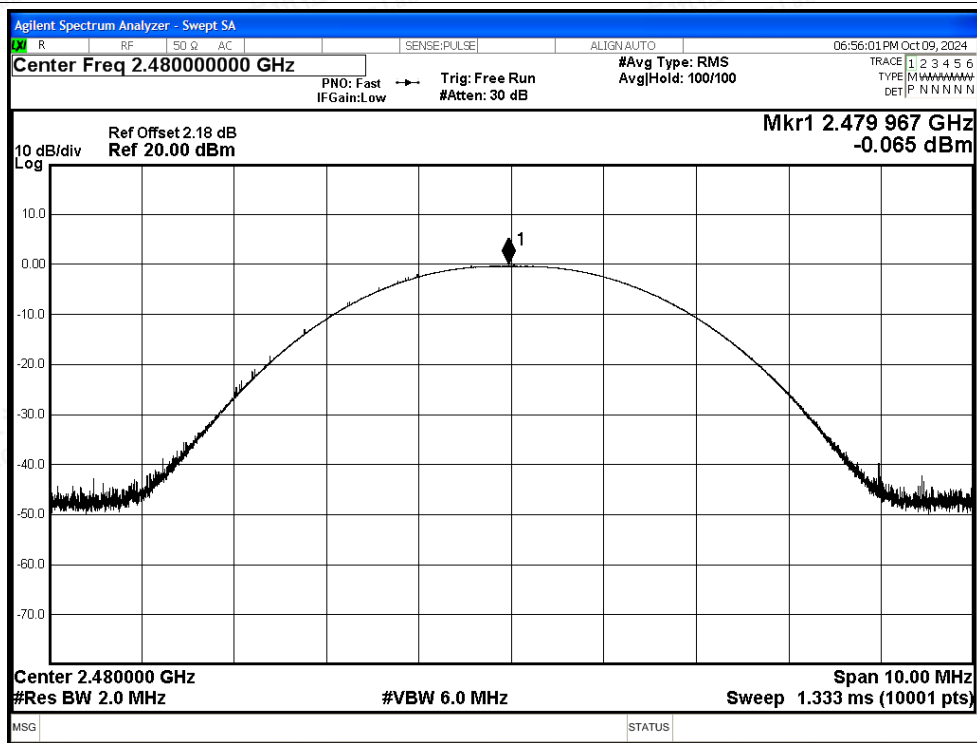


Power NVNT 1-DH5 2441MHz Ant1

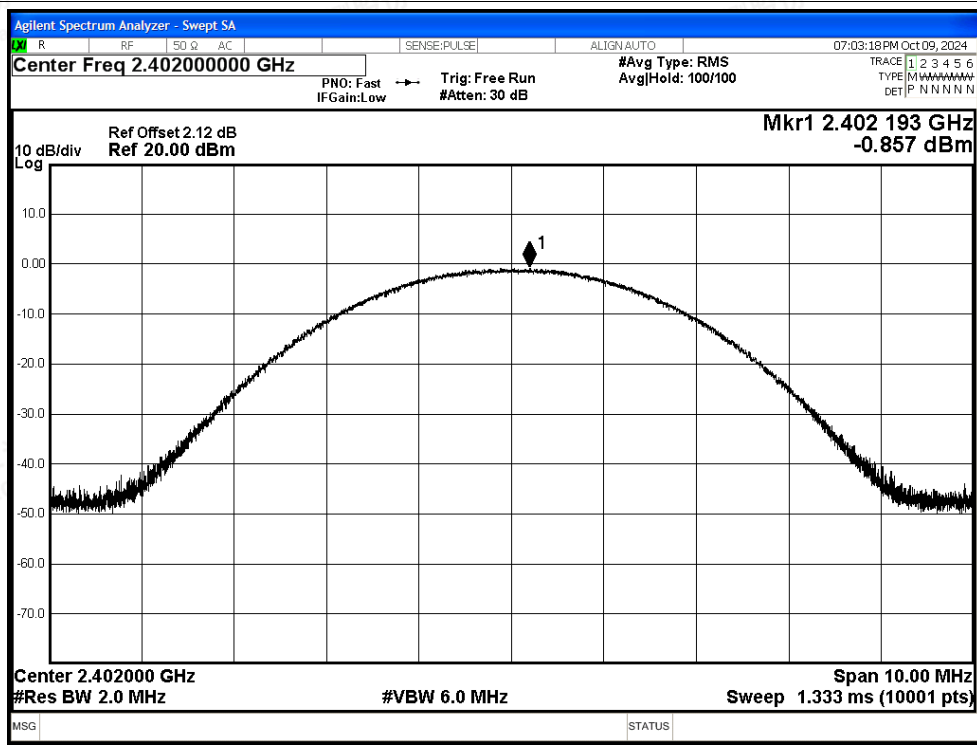




Power NVNT 1-DH5 2480MHz Ant1

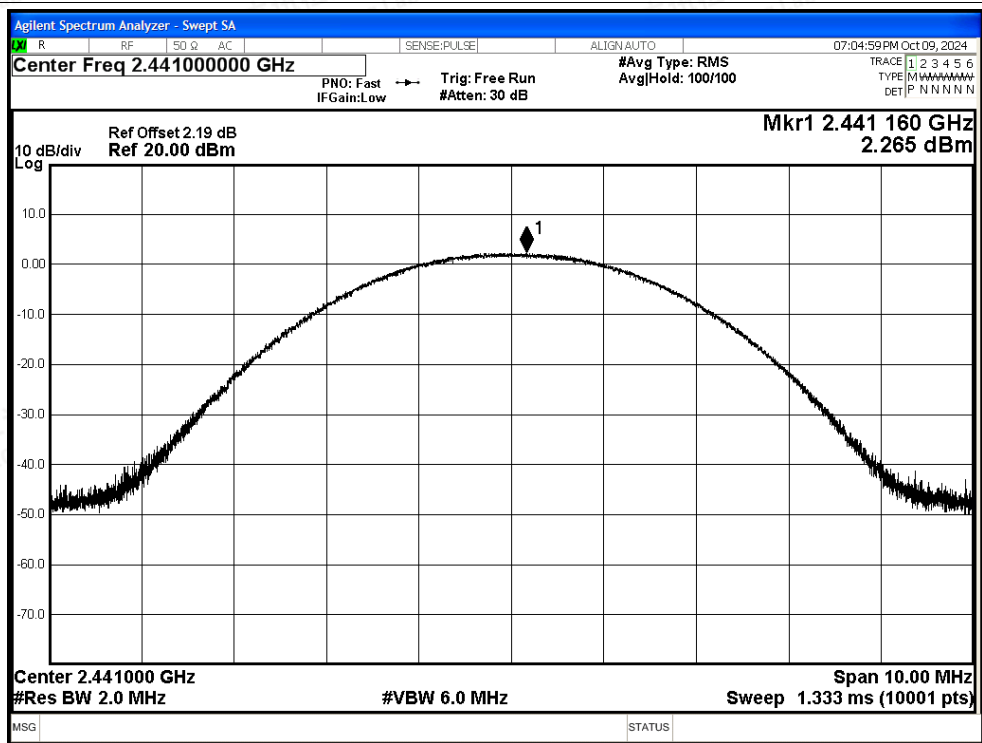


Power NVNT 2-DH5 2402MHz Ant1

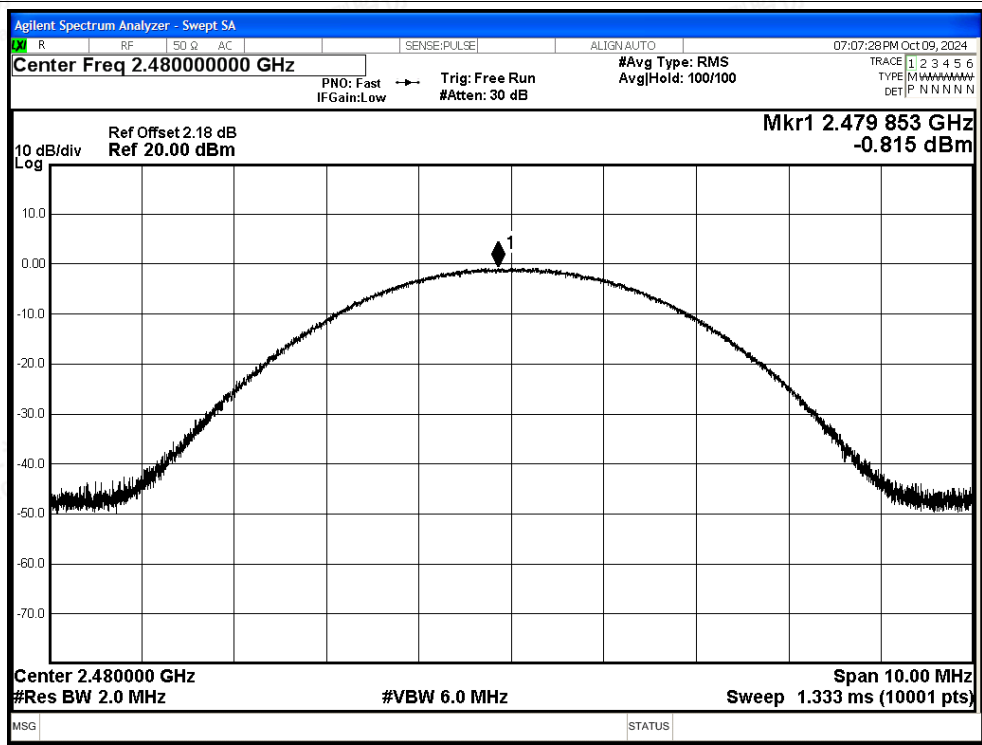




Power NVNT 2-DH5 2441MHz Ant1

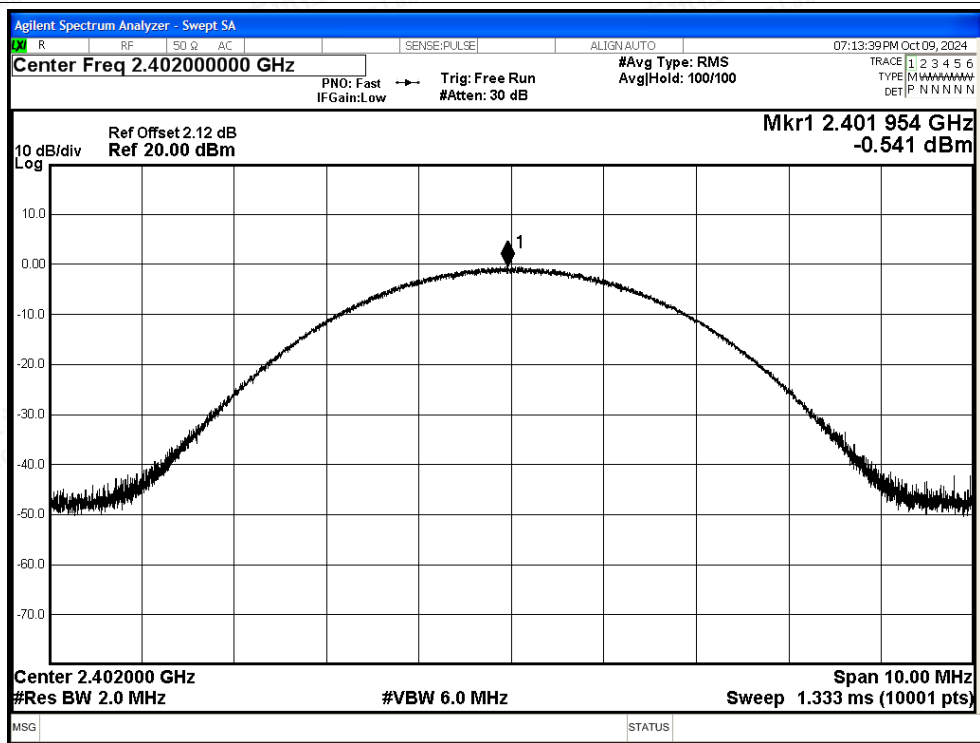


Power NVNT 2-DH5 2480MHz Ant1

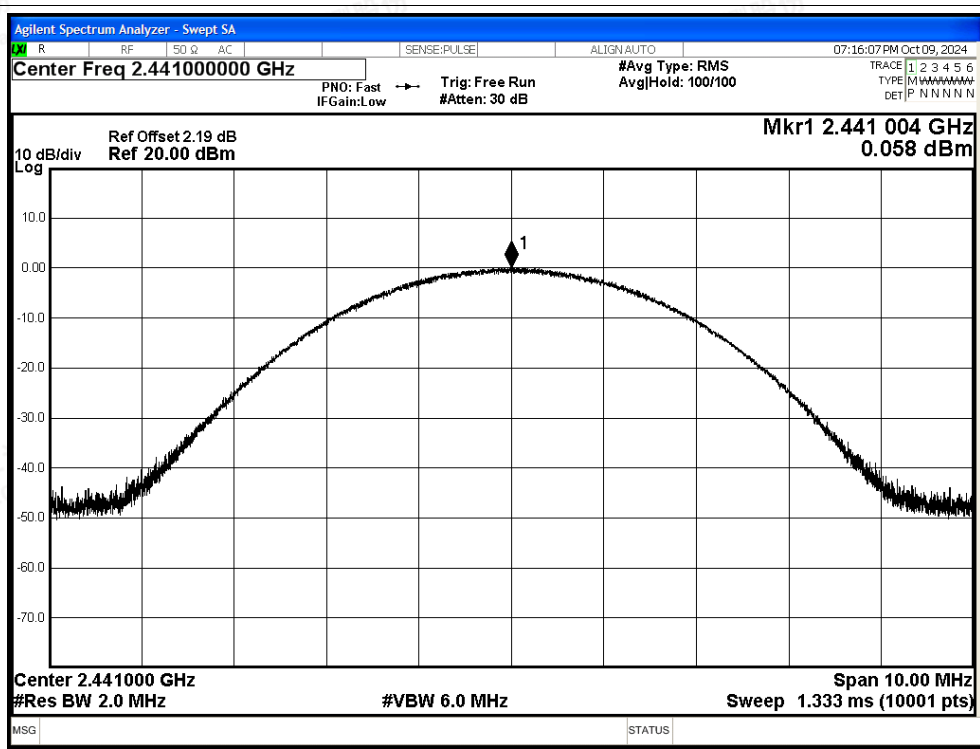


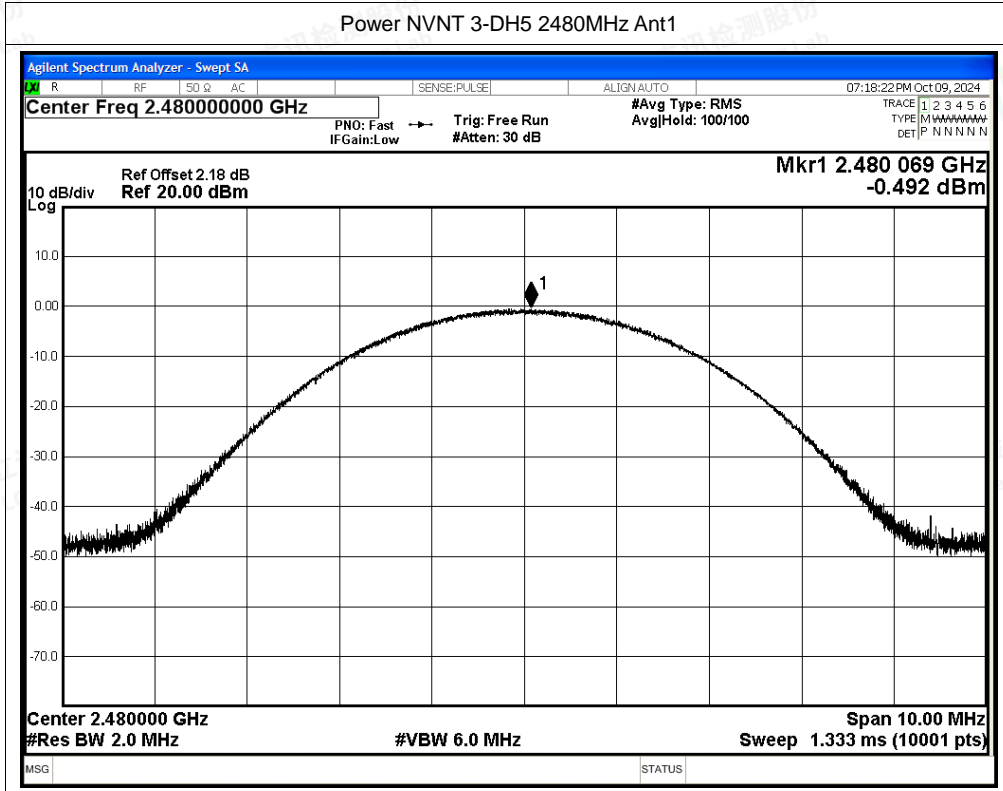


Power NVNT 3-DH5 2402MHz Ant1



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	2402.02	2403.17	1.15	0.679	Pass
NVNT	2-DH5	Ant1	2402.016	2403.008	0.992	0.896	Pass
NVNT	3-DH5	Ant1	2402.006	2403.164	1.158	0.865	Pass

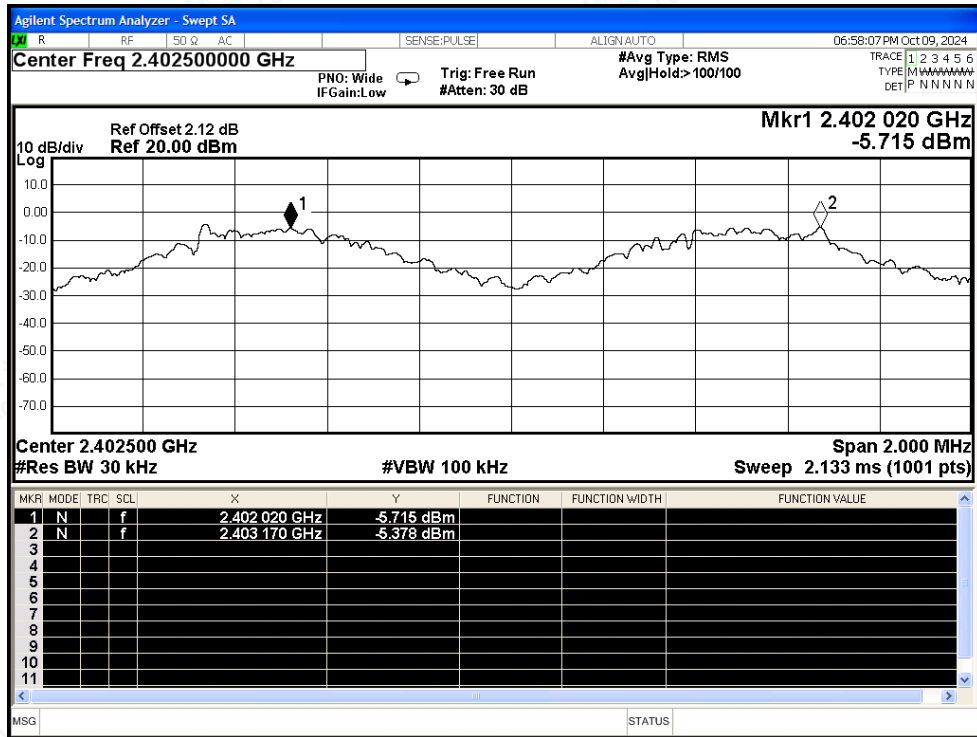


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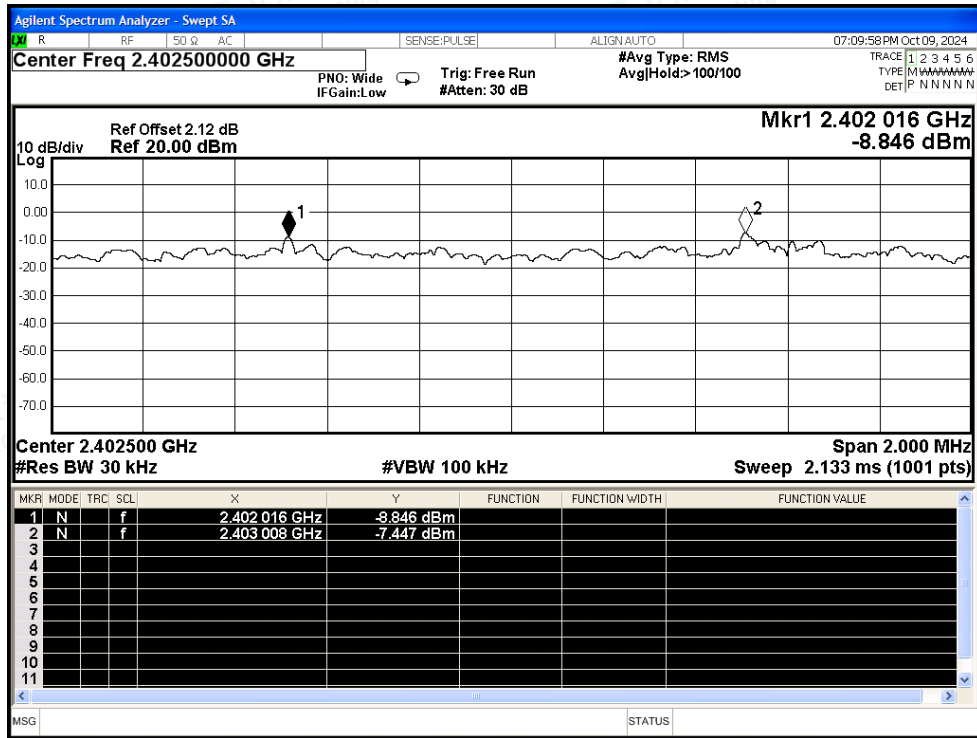


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1

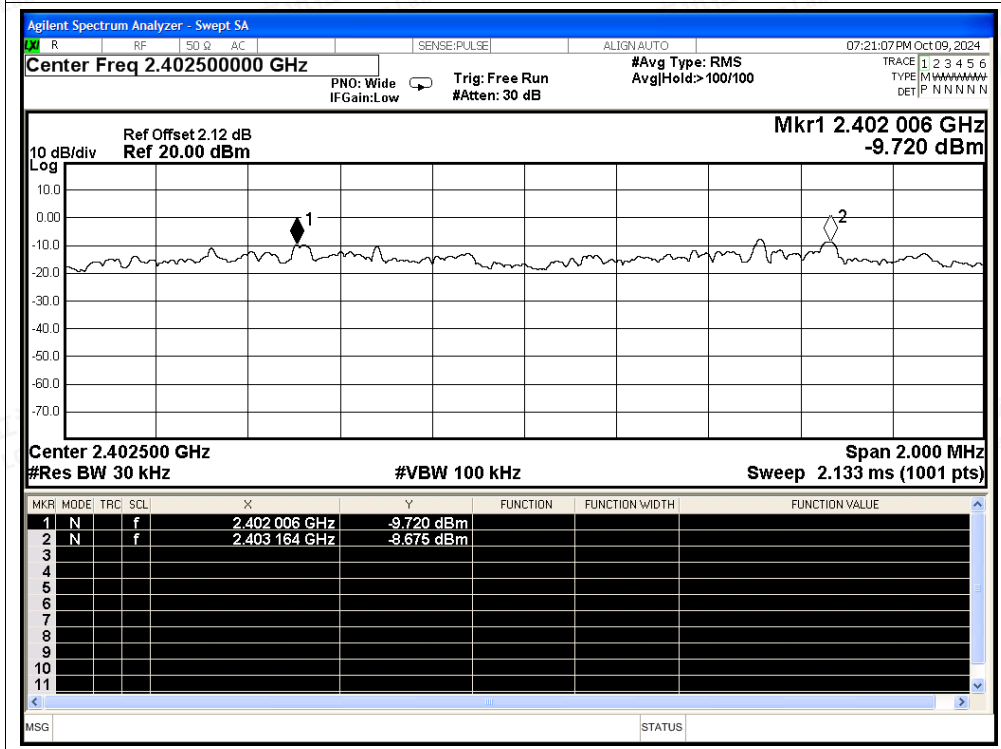


CFS NVNT 2-DH5 2402MHz Ant1





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	2.909	311.263	107	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	301.392	104	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.897	275.215	95	31600	400	Pass

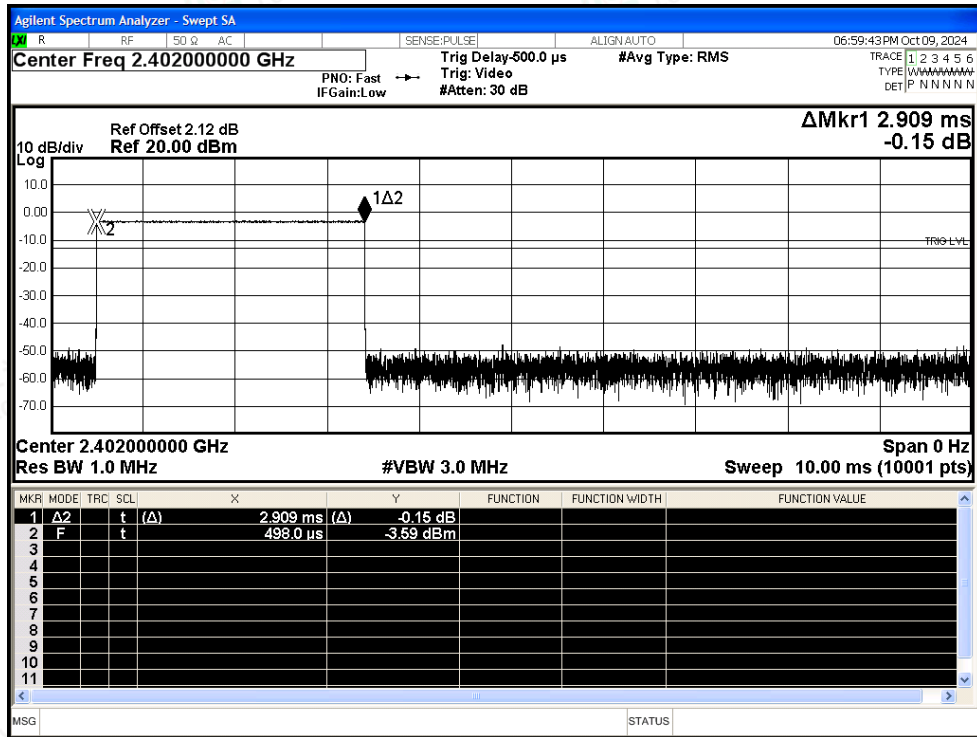


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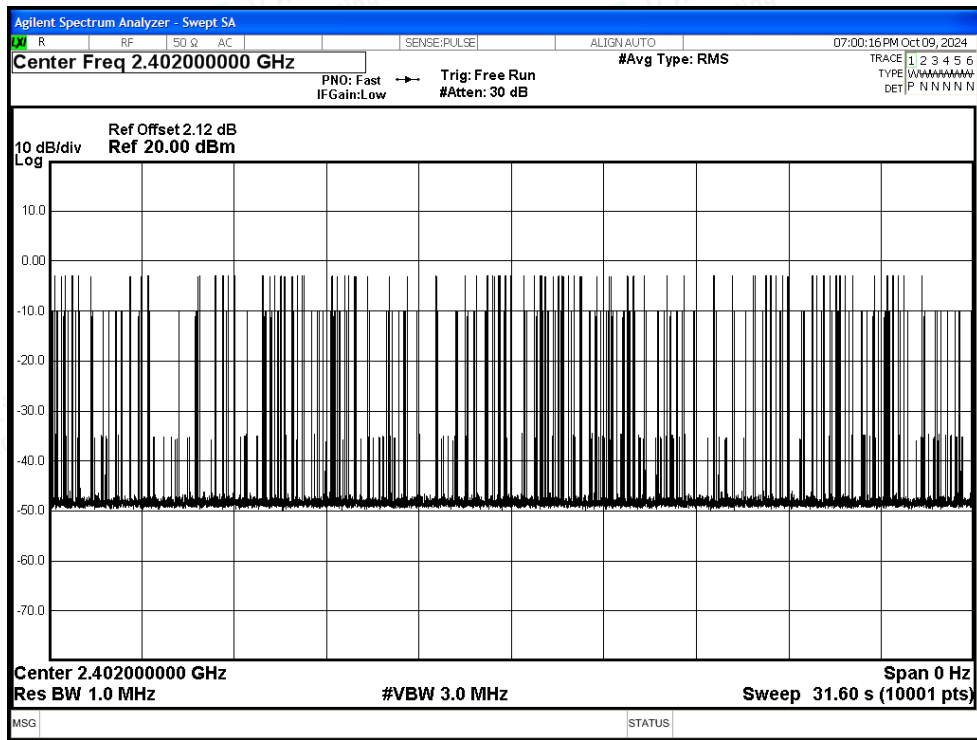


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

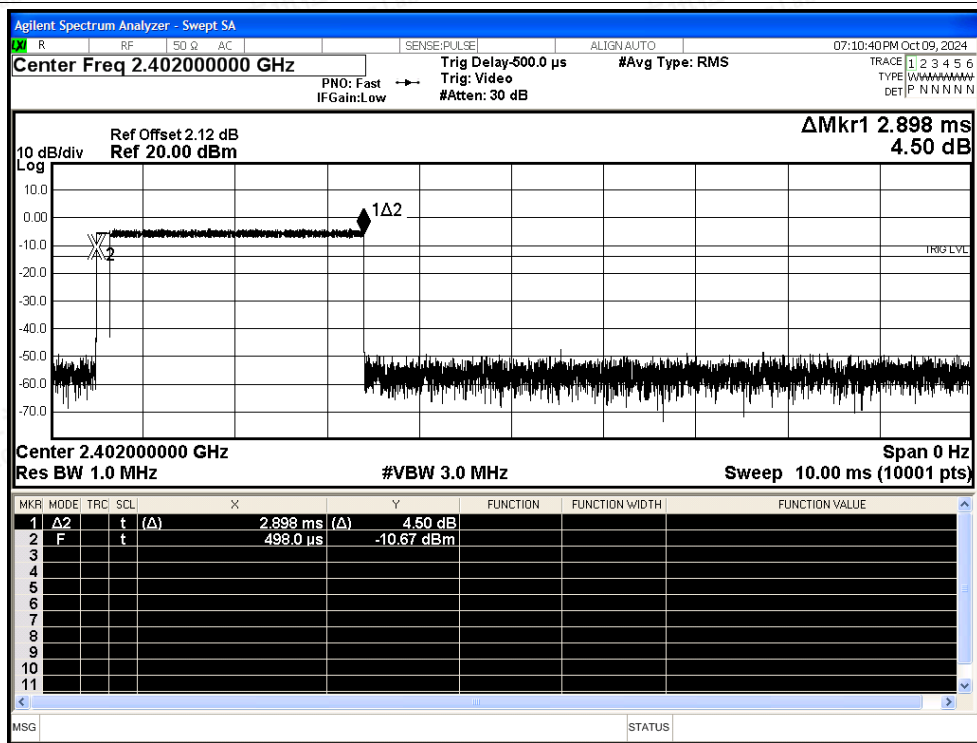


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

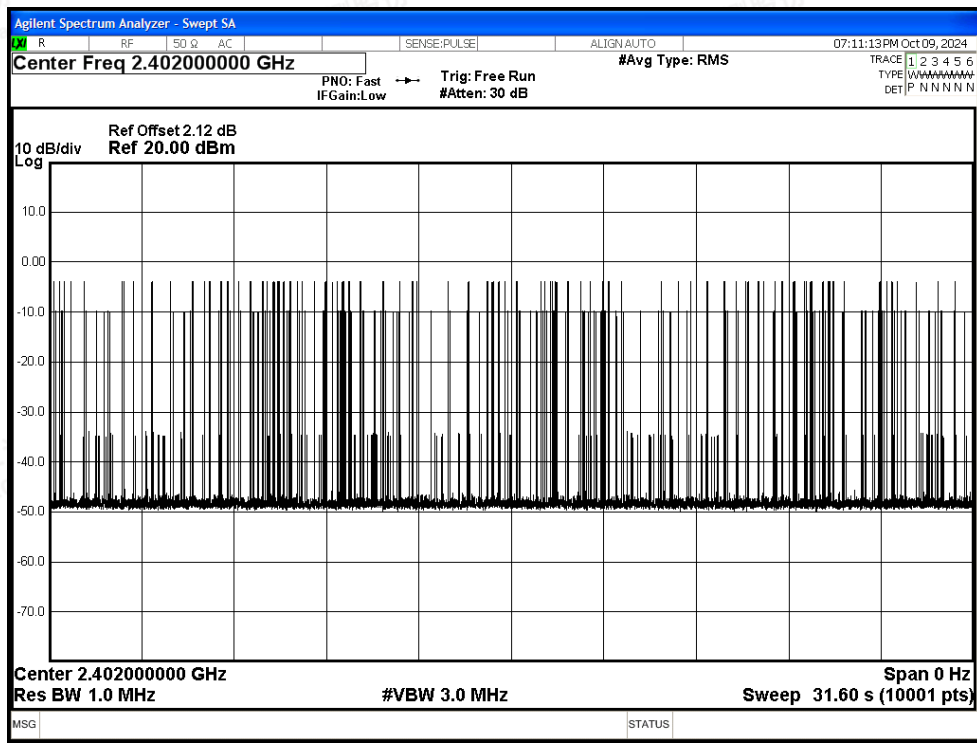




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

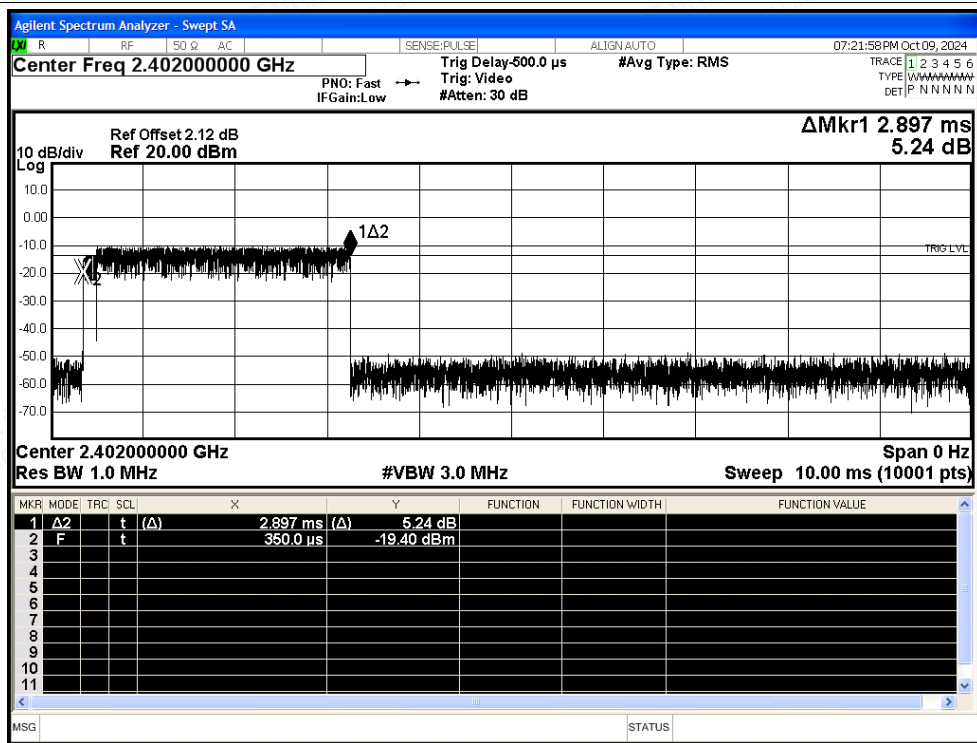


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

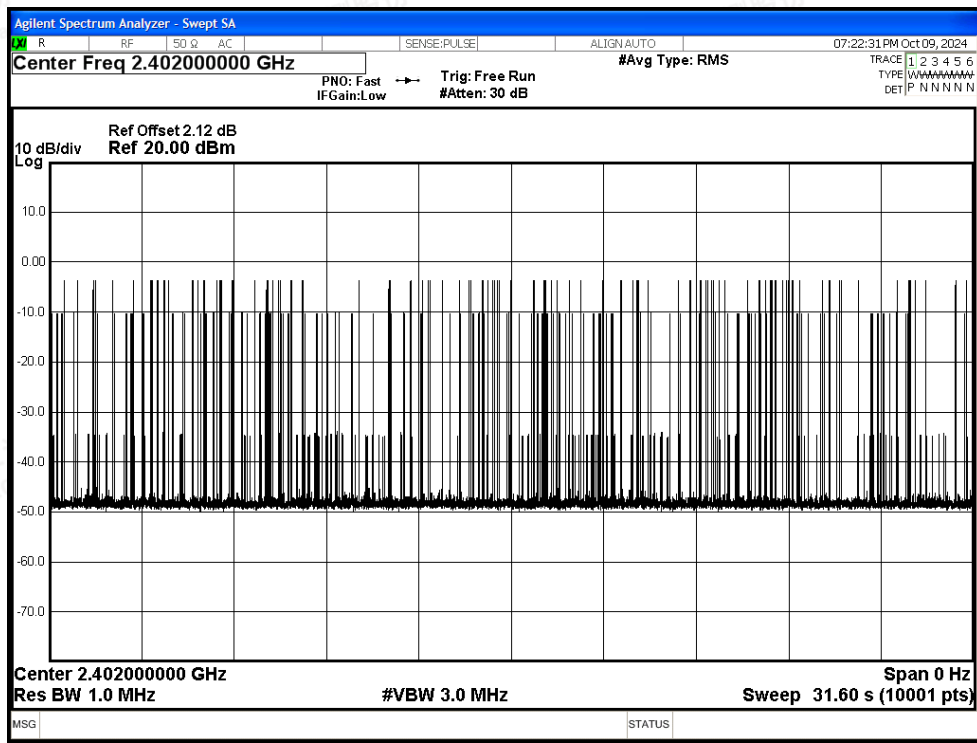




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated





A.5 Number of Hopping Channel

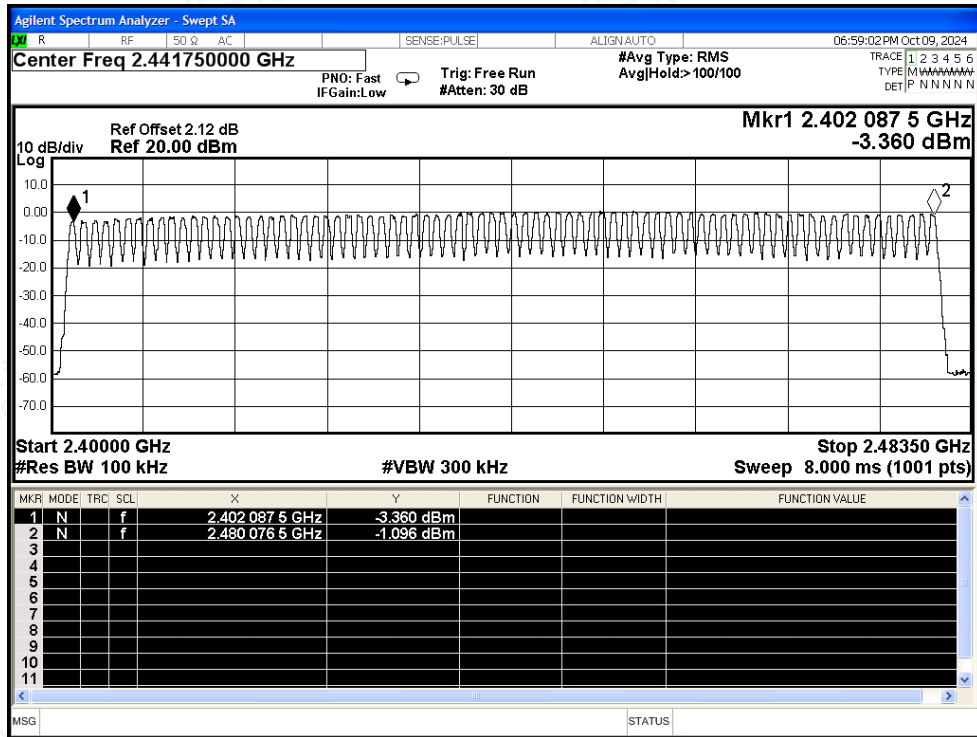
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



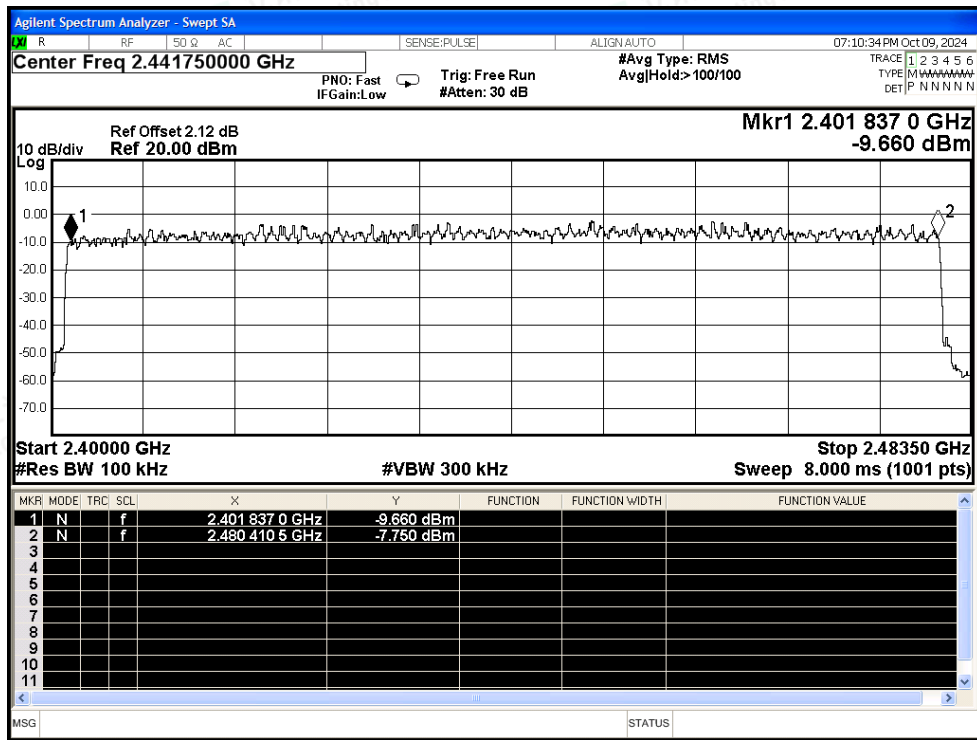


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

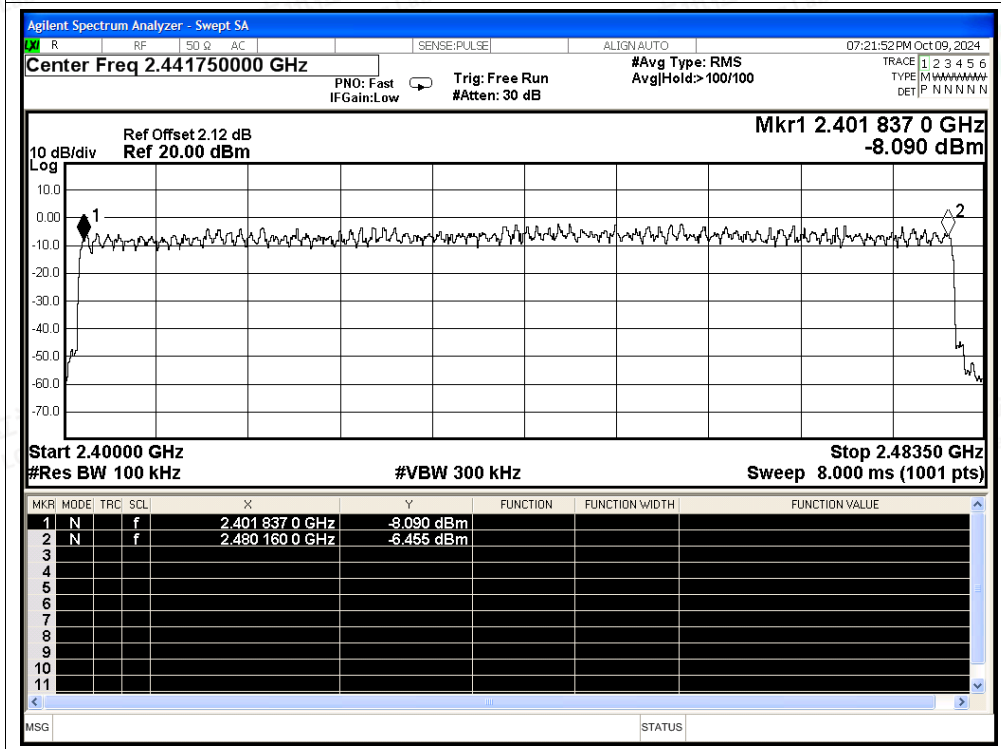


Hopping No. NVNT 2-DH5 2402MHz Ant1





Hopping No. NVNT 3-DH5 2402MHz Ant1





A.6 Band Edge

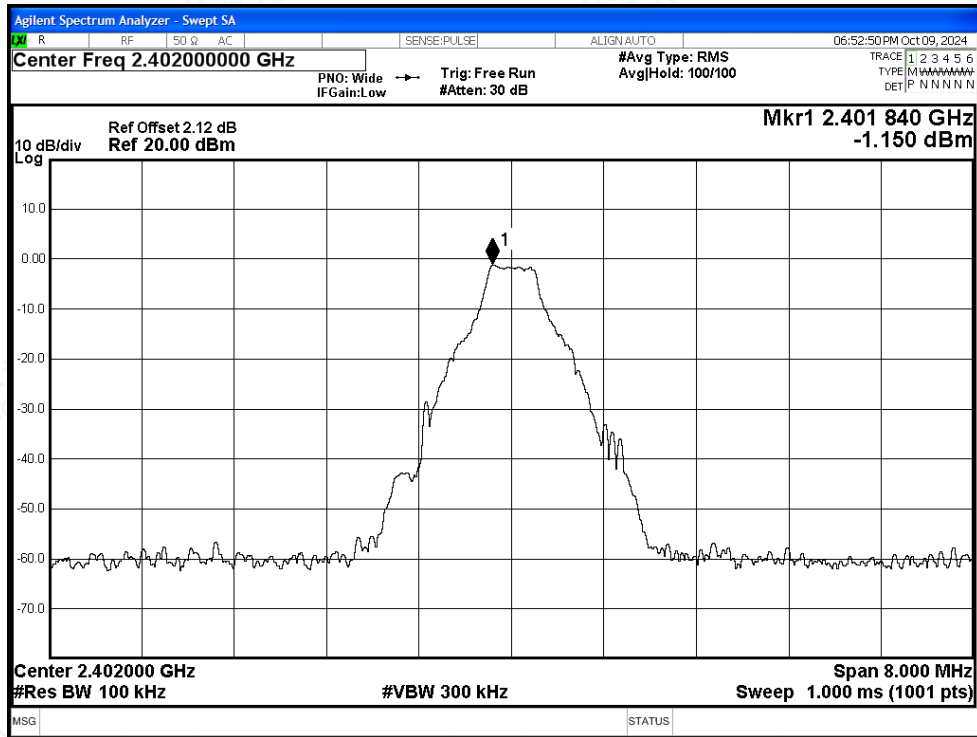
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55.67	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.36	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-50.57	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-52.24	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-50.14	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-53.16	-20	Pass



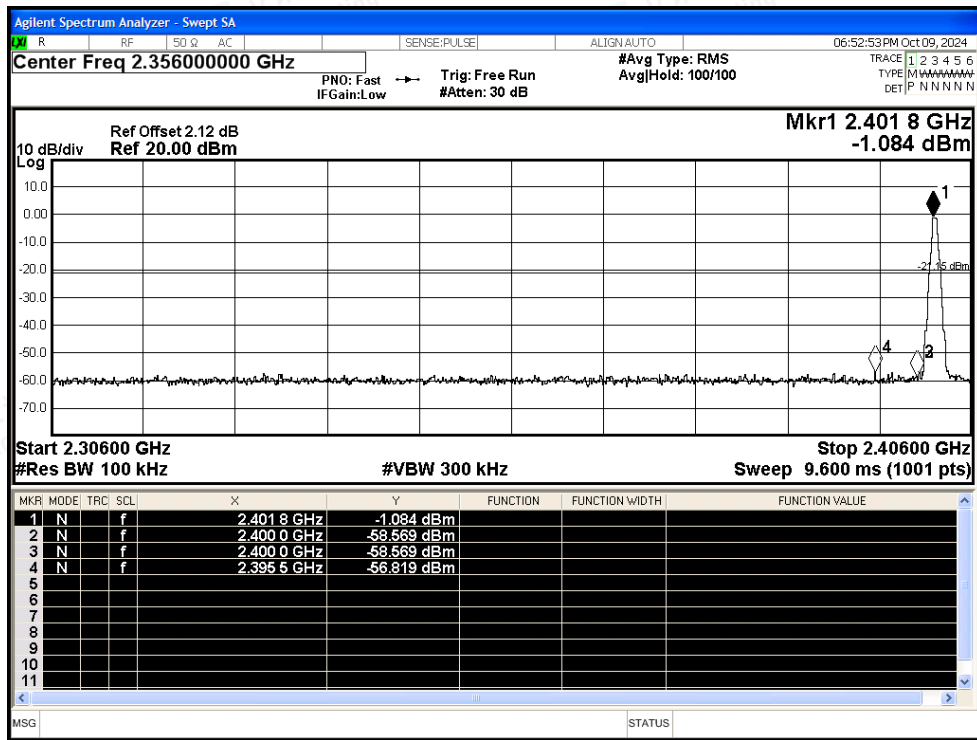


Test Graphs

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

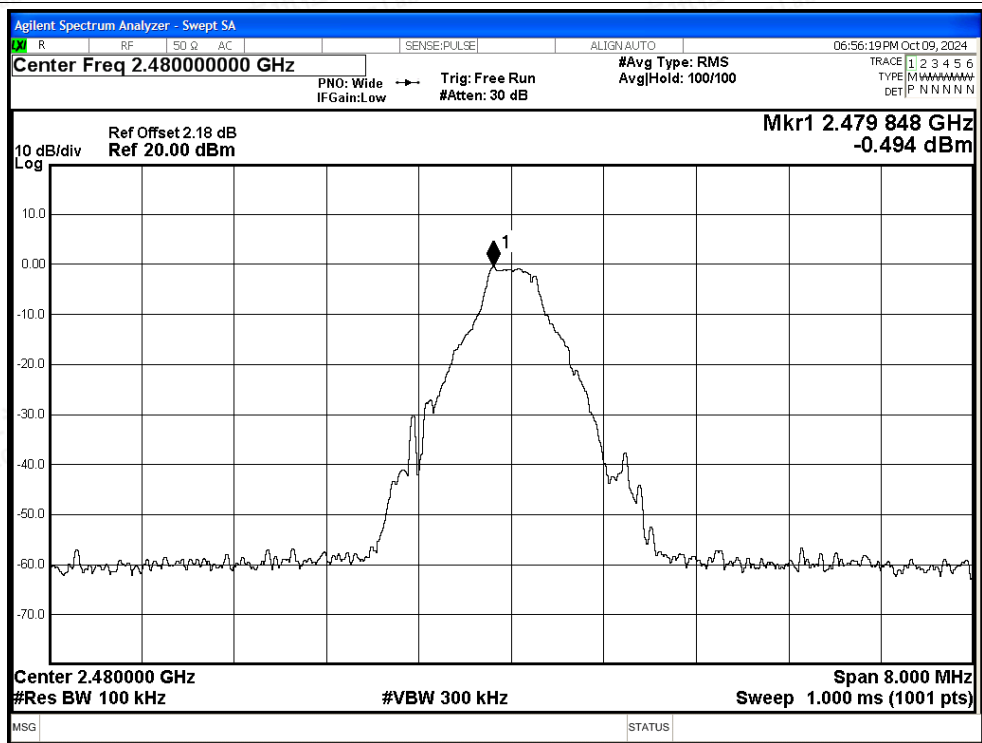


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

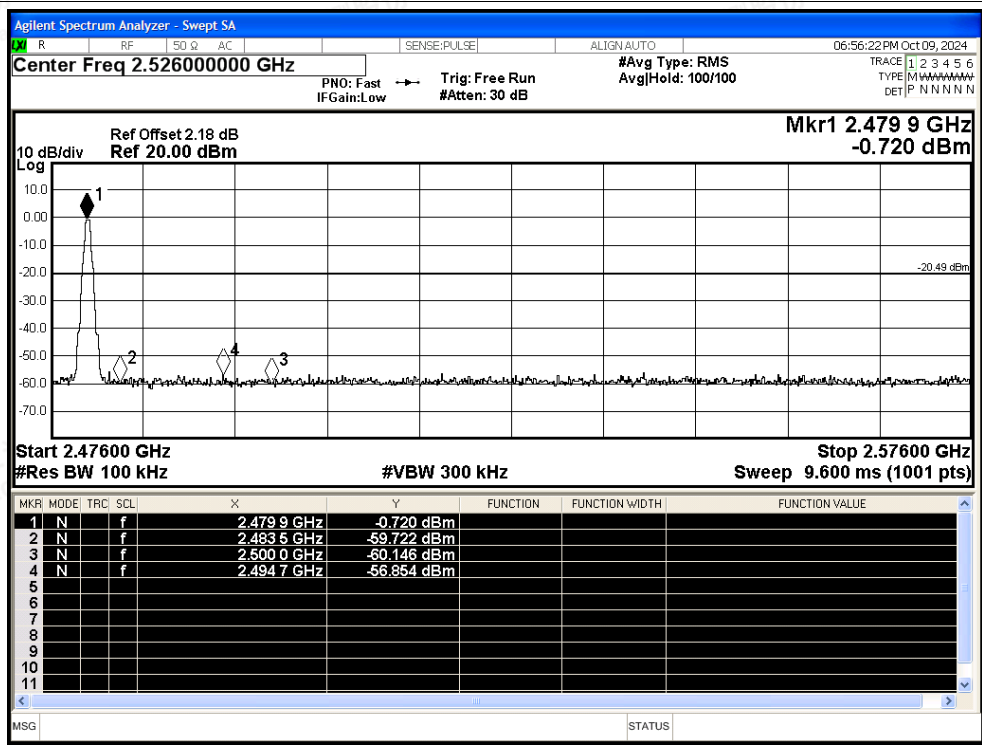




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

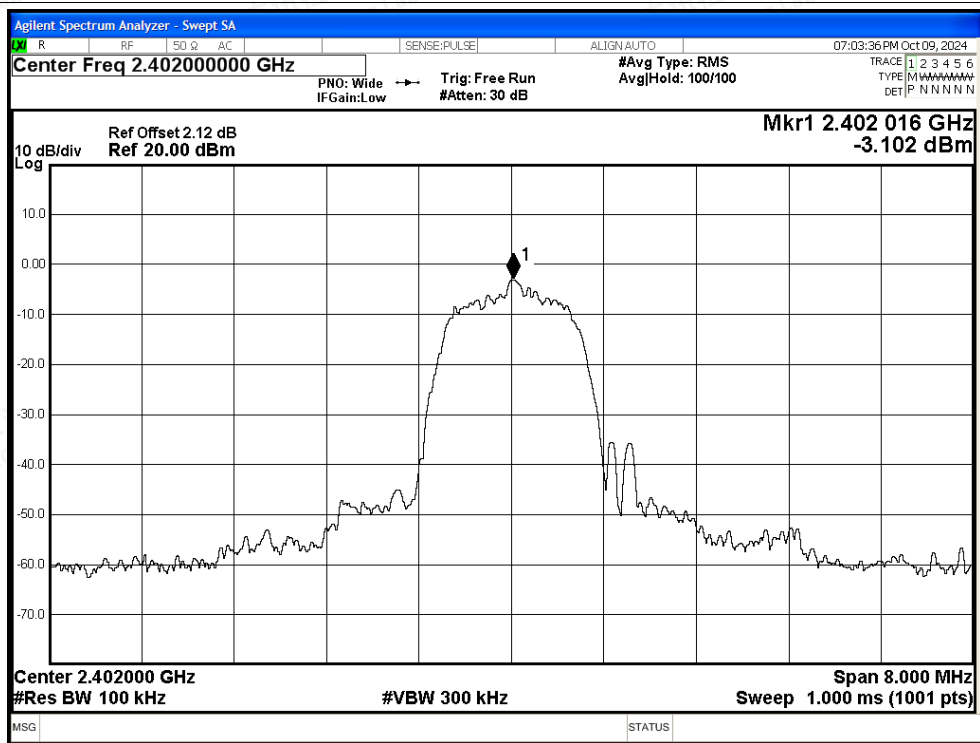


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

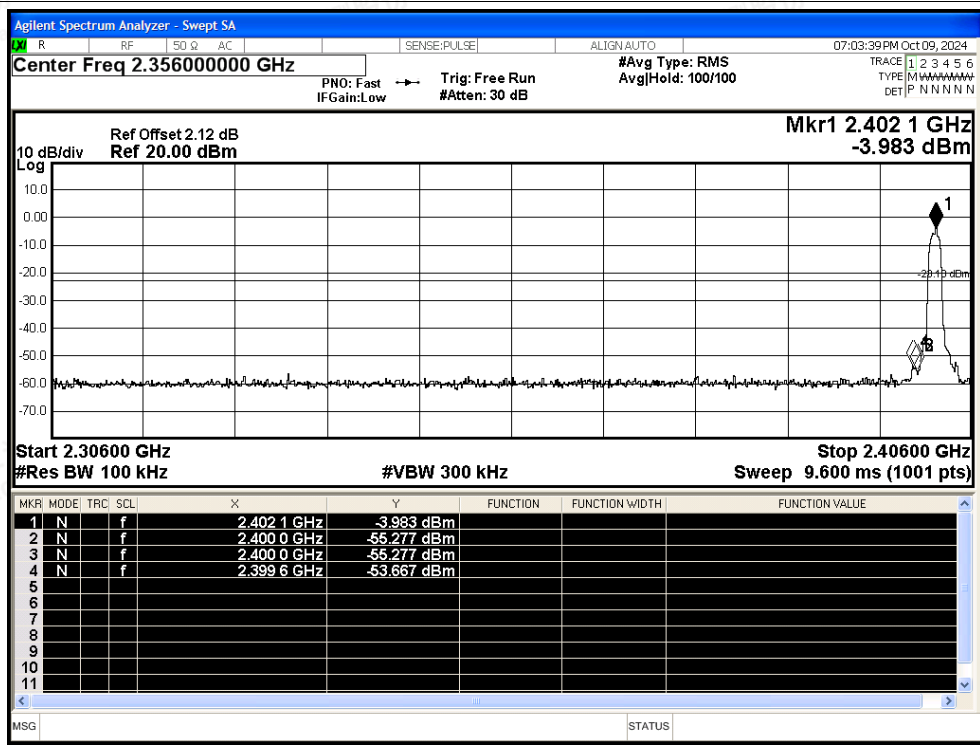




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

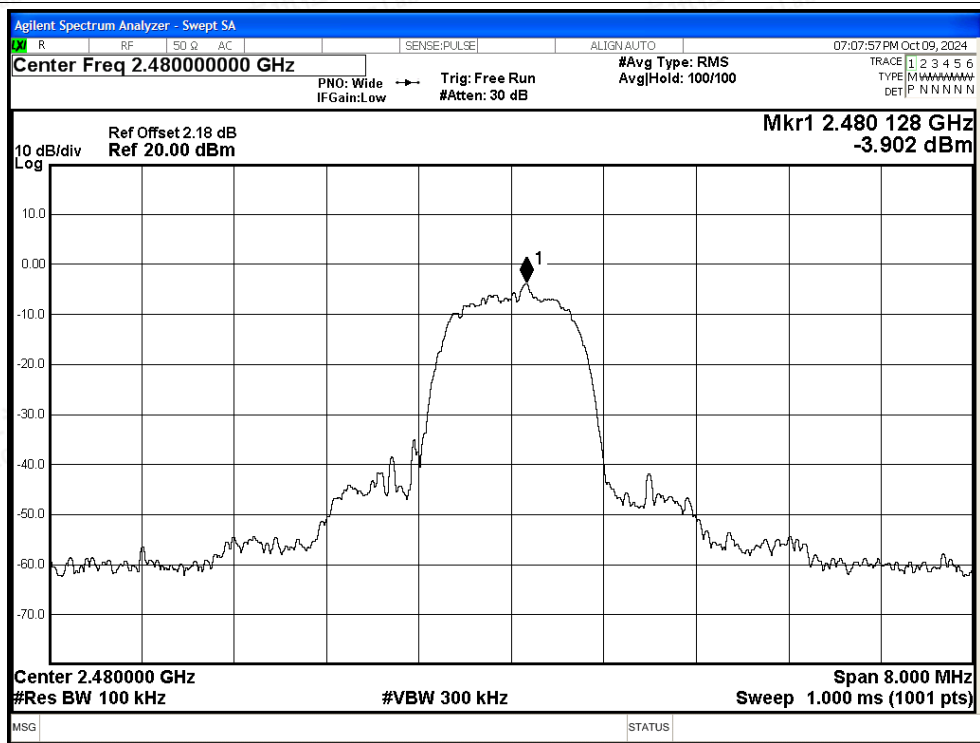


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

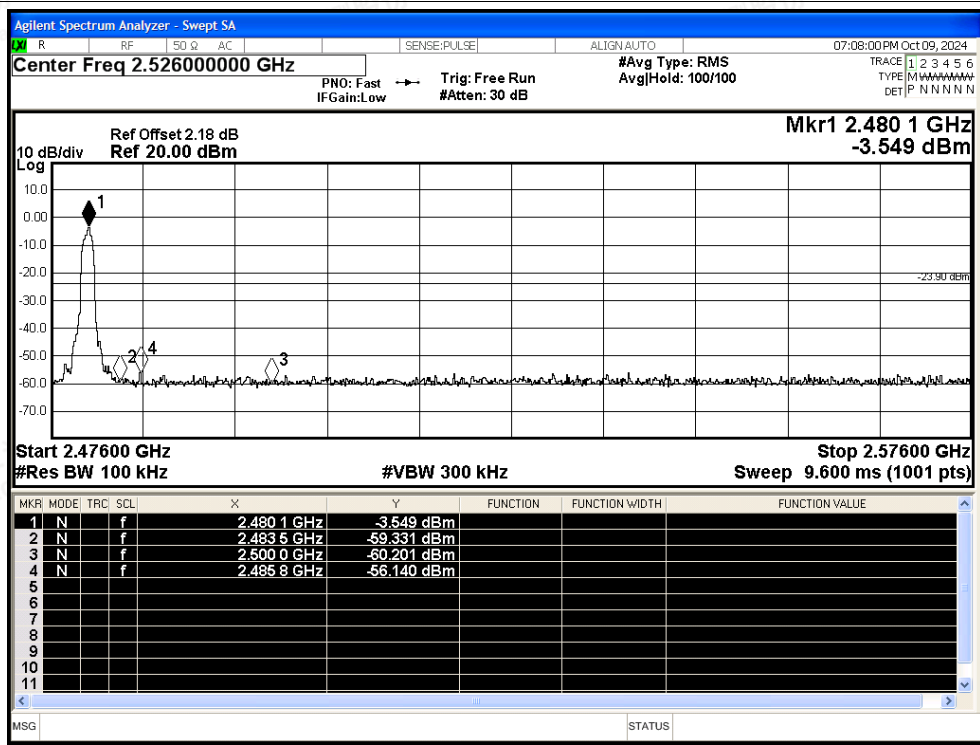




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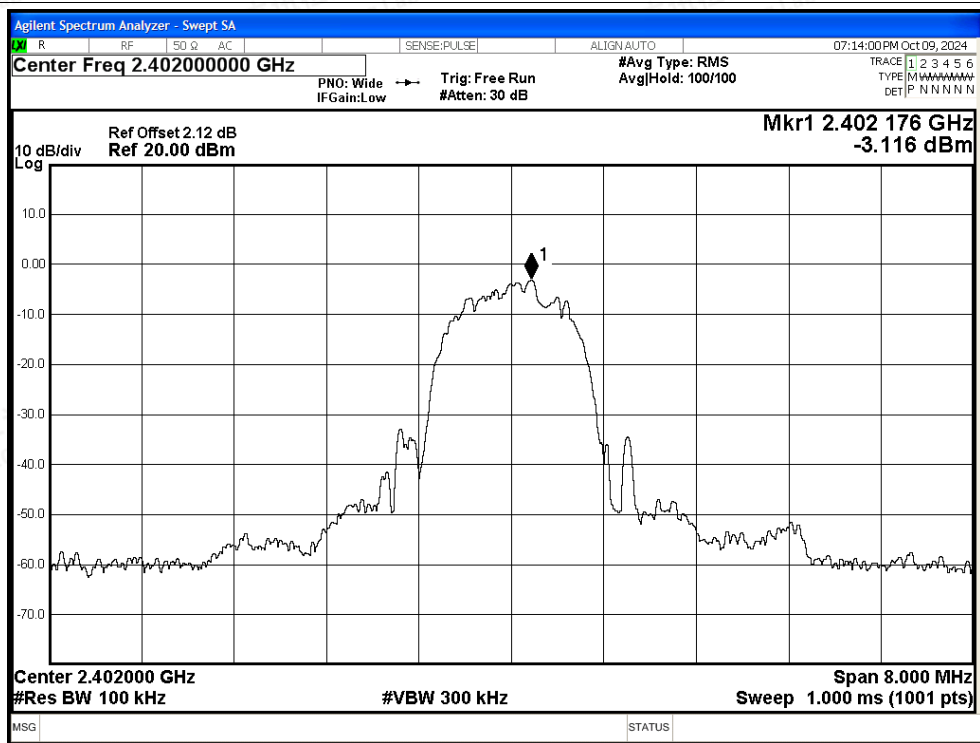


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

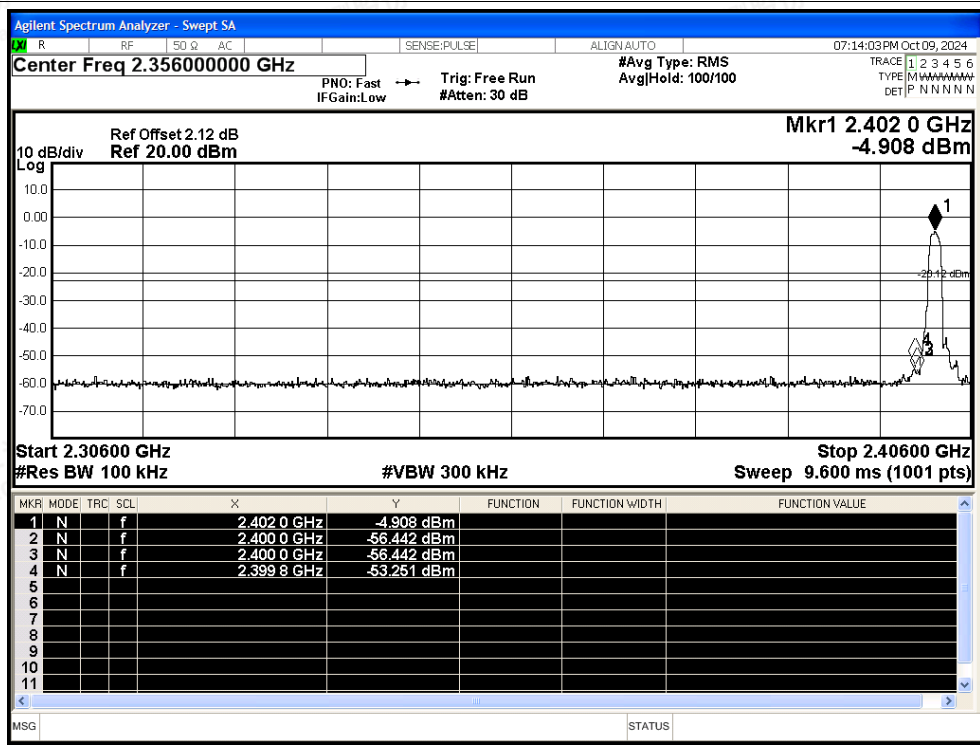




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

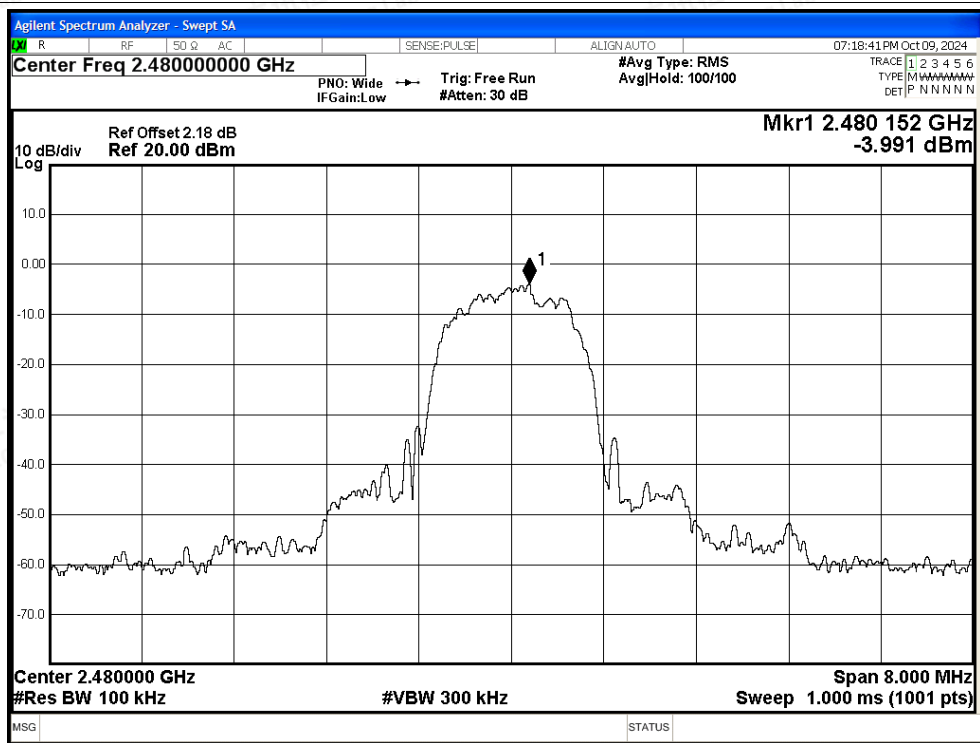


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

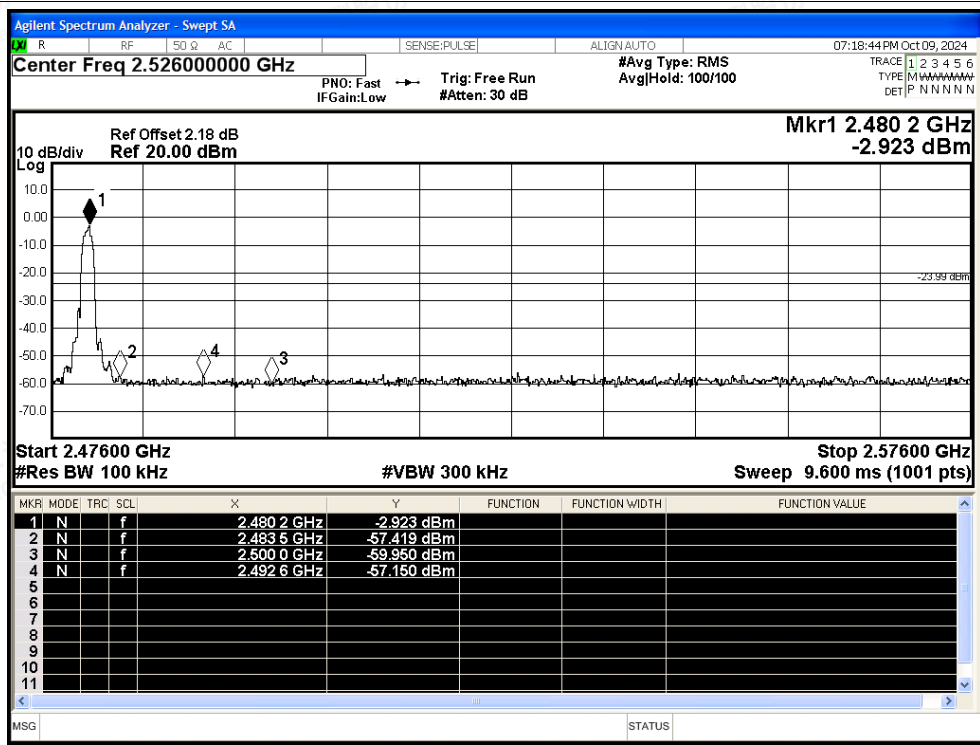




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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





(Hopping)

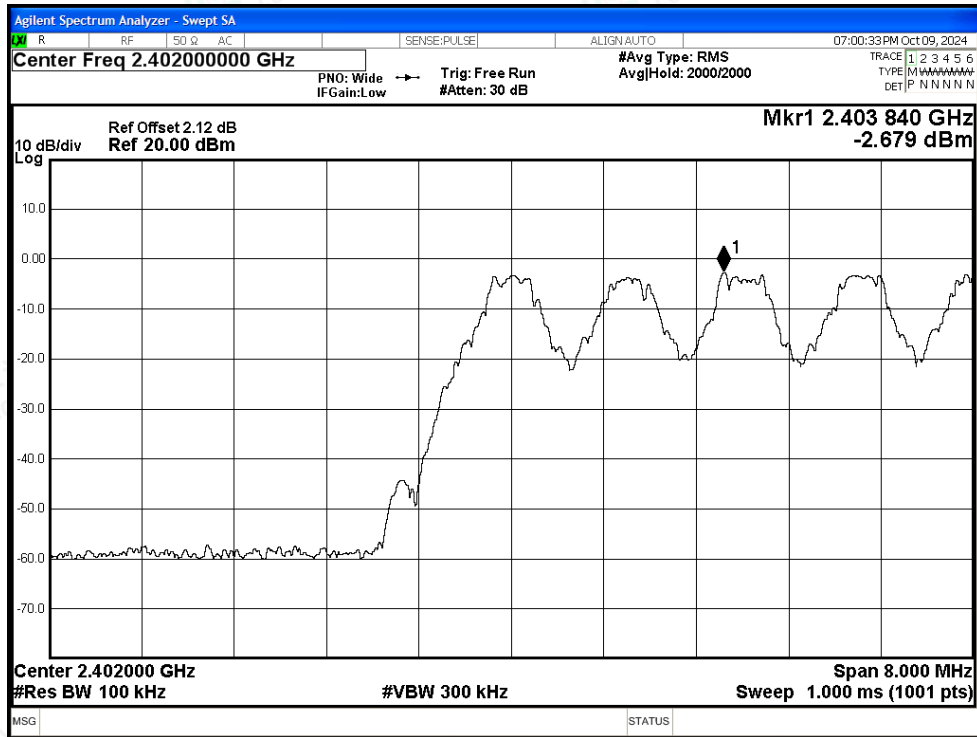
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-52.7	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.07	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-50.64	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-52.97	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-50.24	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-52.98	-20	Pass



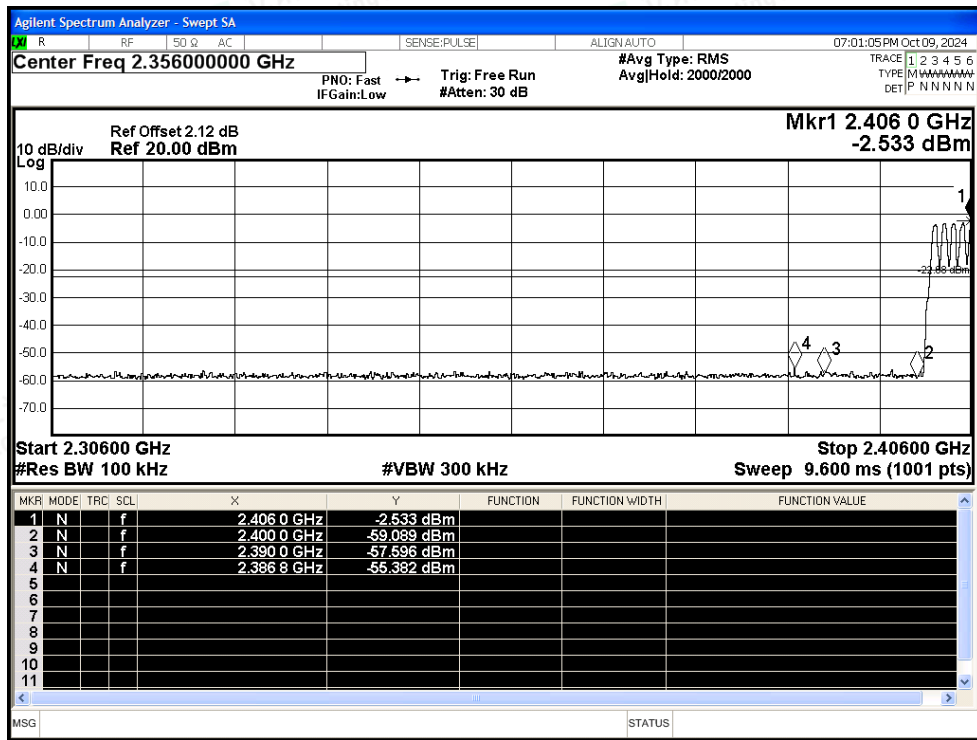


Test Graphs

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

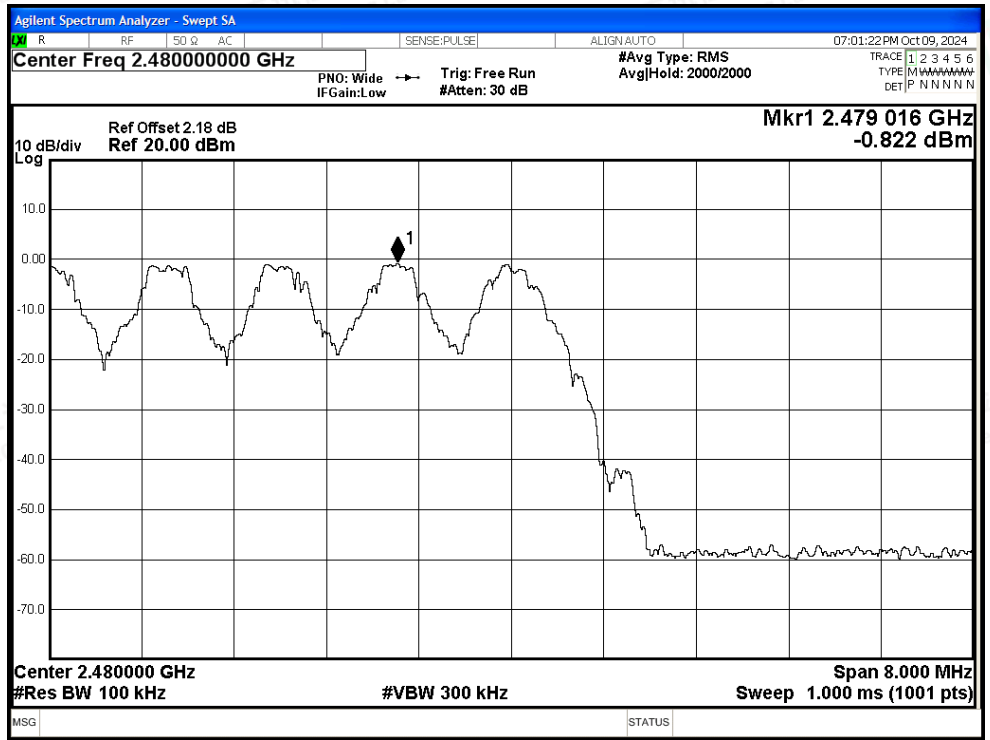


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

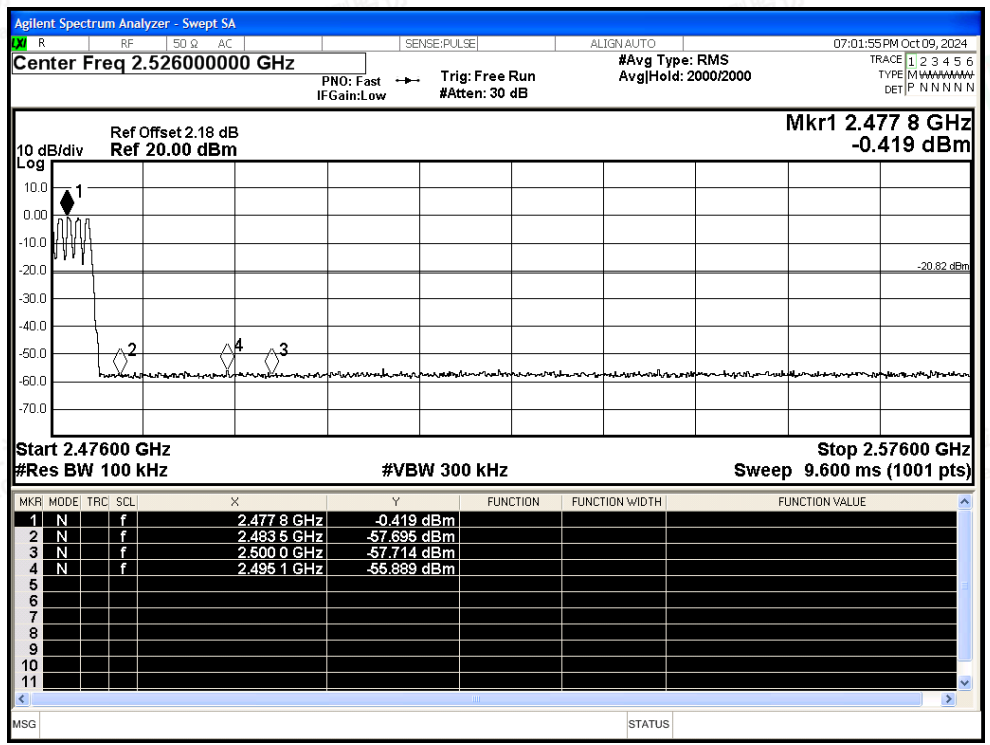




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

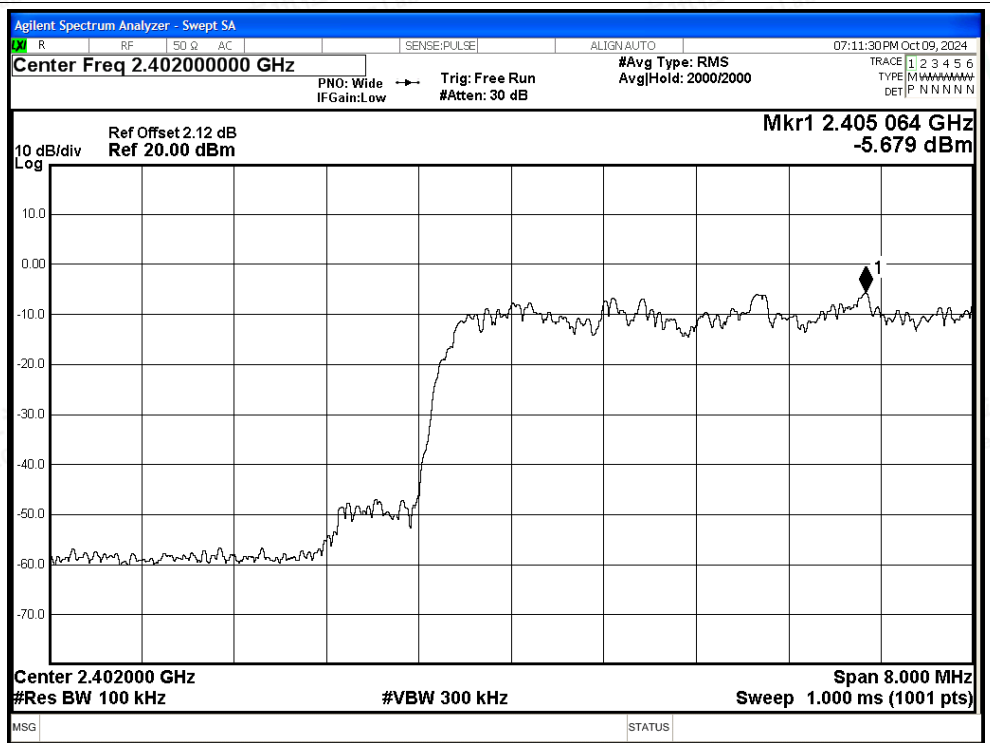


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

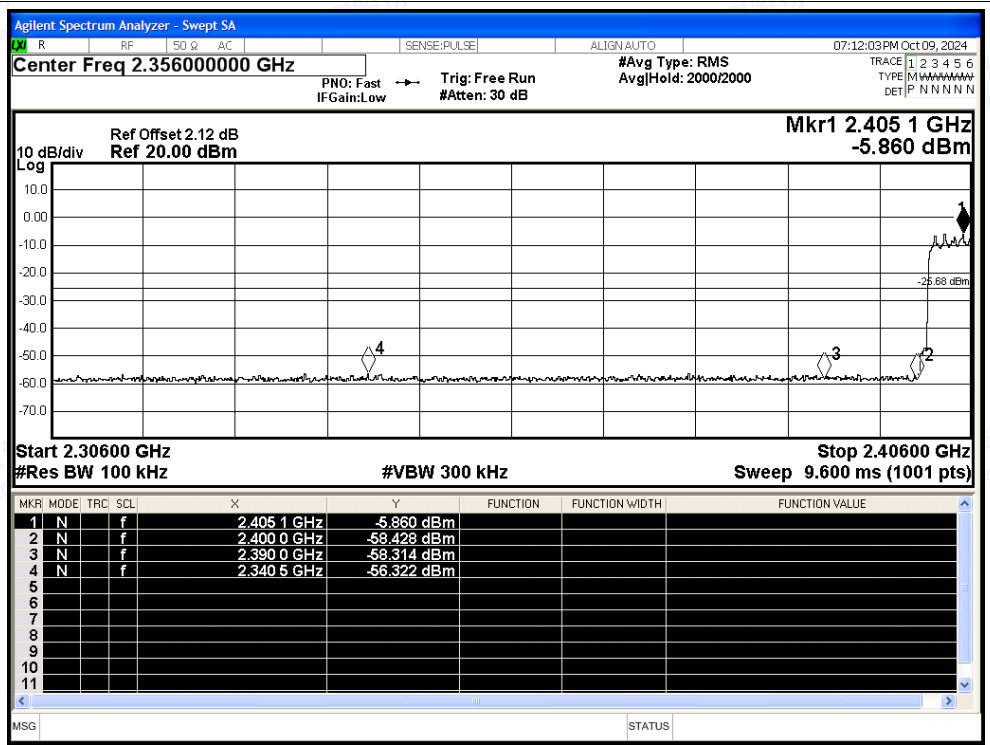




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

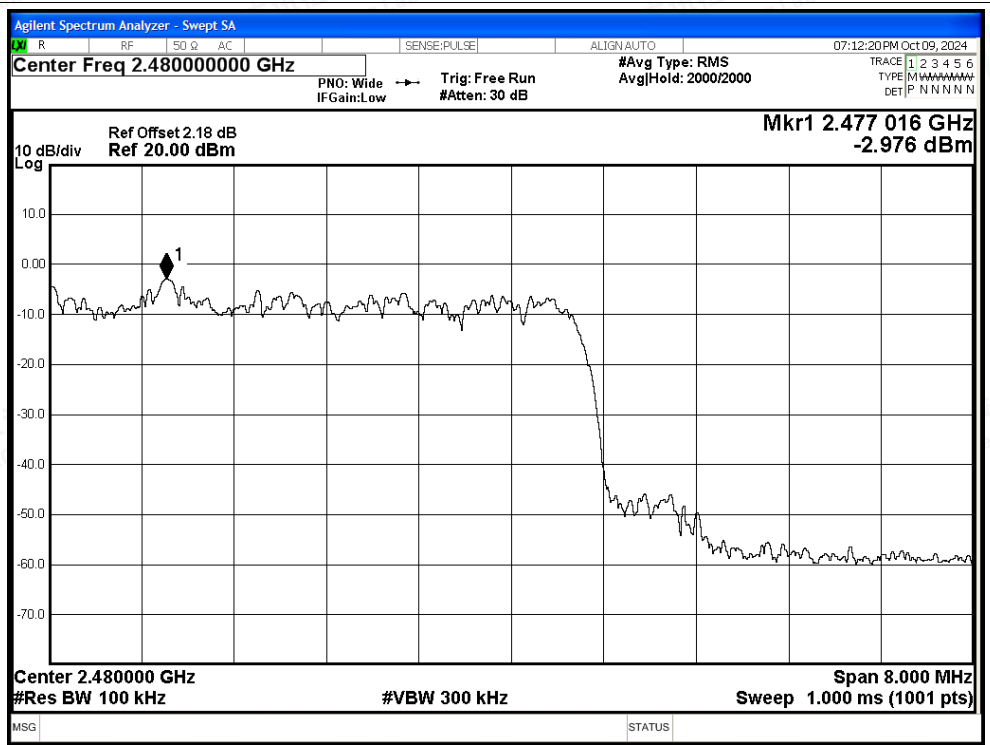


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

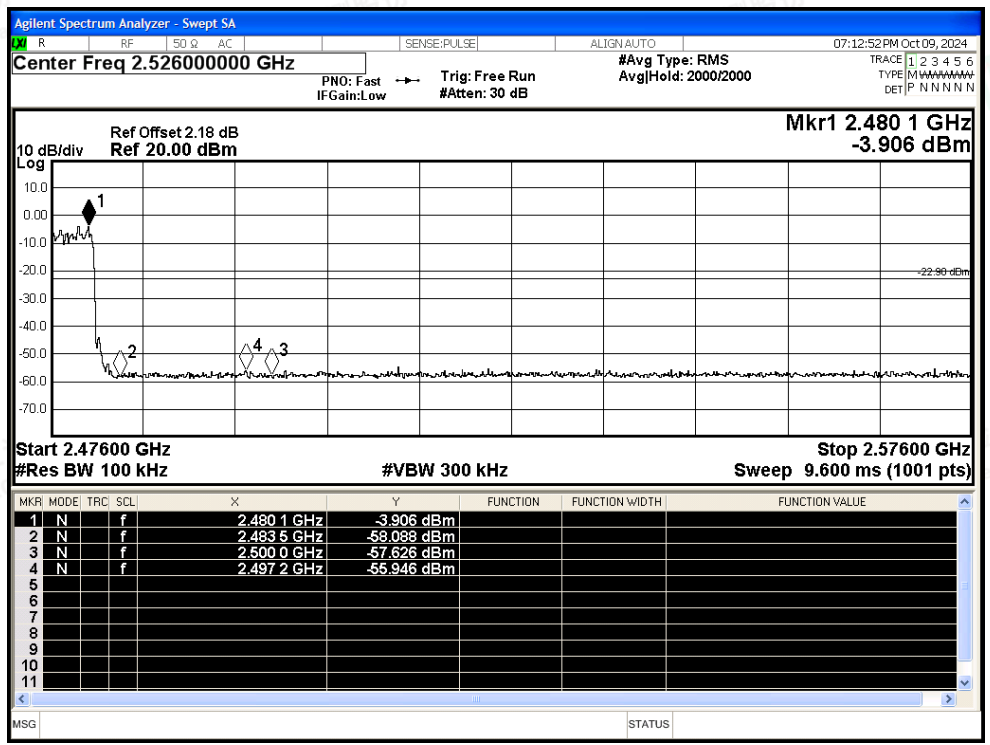




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref

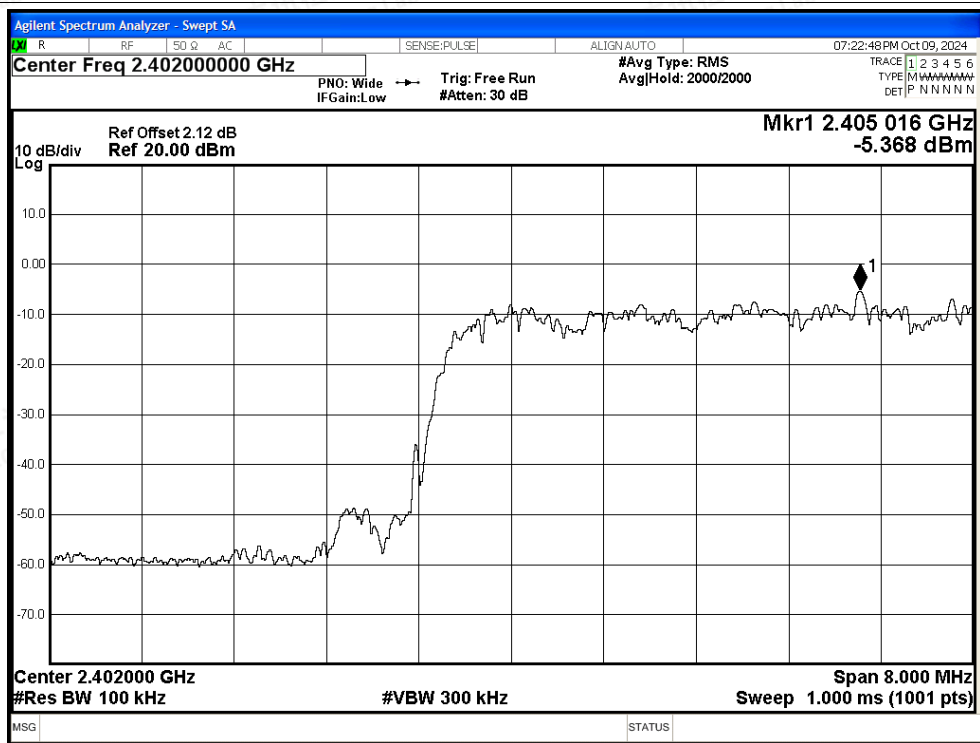


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission

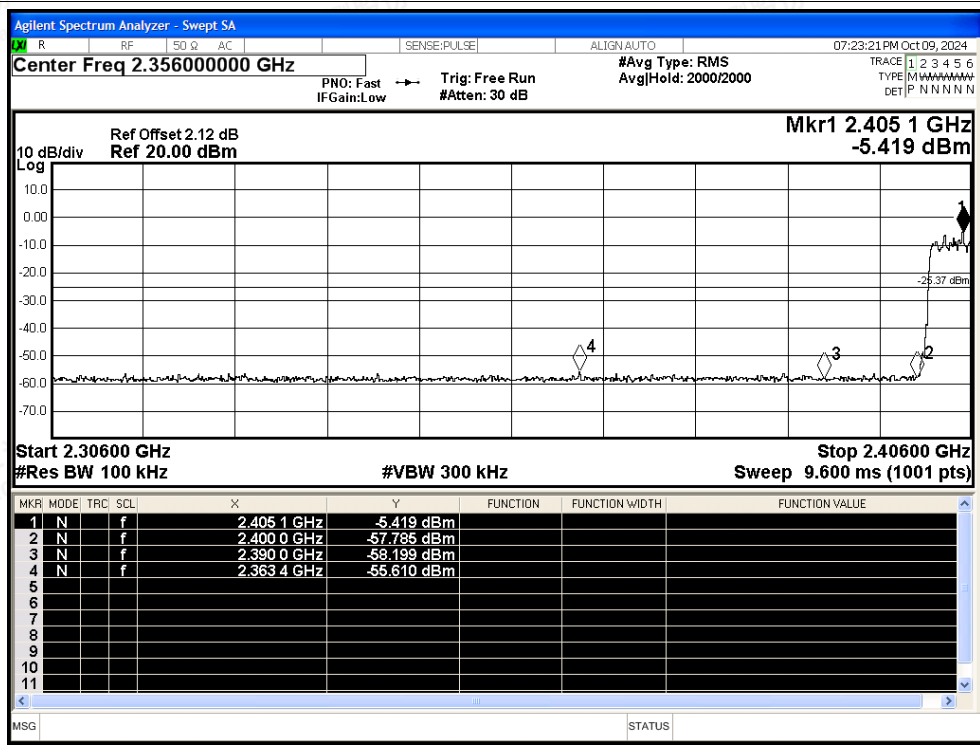




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref

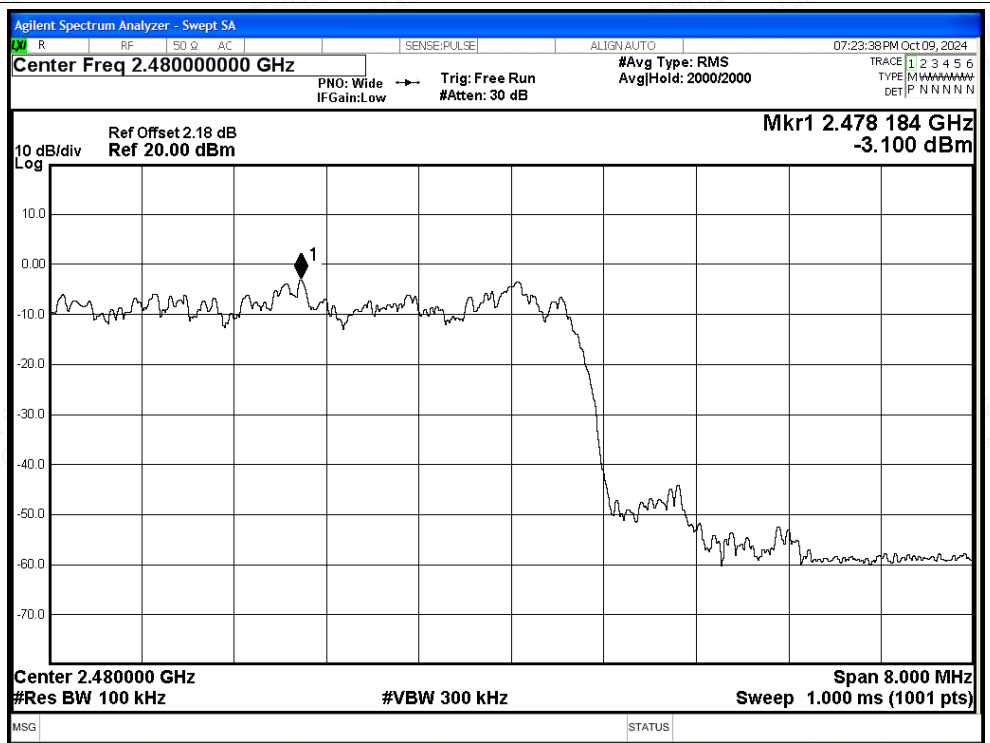


Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission

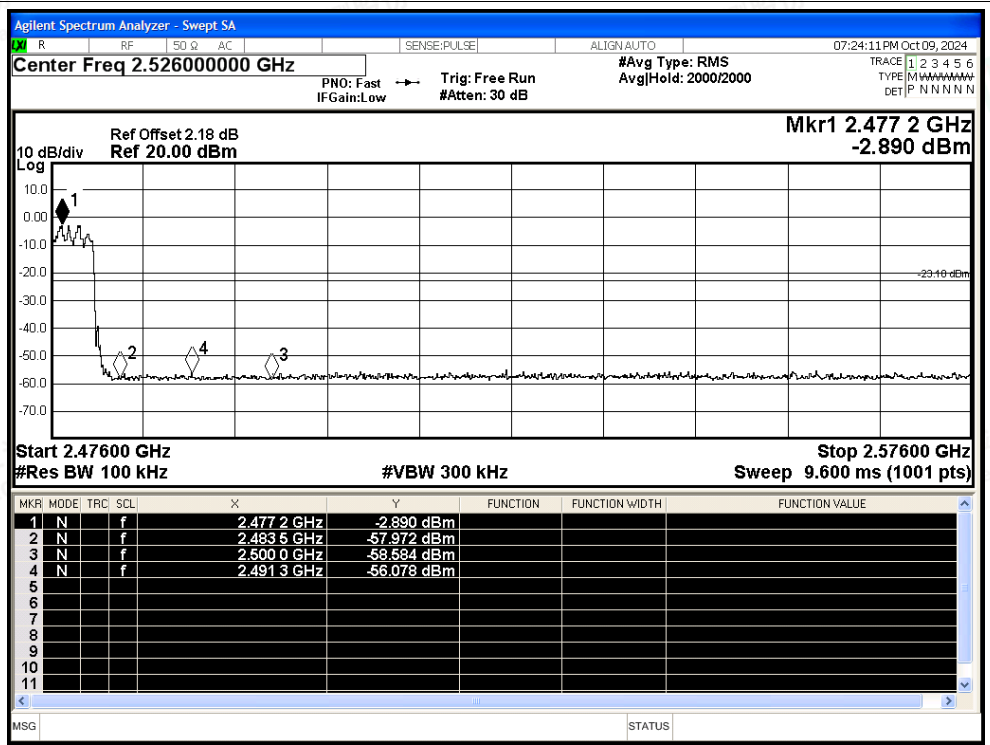




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



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	-54.7	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.04	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.02	-20	Pass
NVNT	2-DH5	2402	Ant1	-52.65	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.96	-20	Pass
NVNT	2-DH5	2480	Ant1	-51.77	-20	Pass
NVNT	3-DH5	2402	Ant1	-51.66	-20	Pass
NVNT	3-DH5	2441	Ant1	-53.22	-20	Pass
NVNT	3-DH5	2480	Ant1	-52.56	-20	Pass

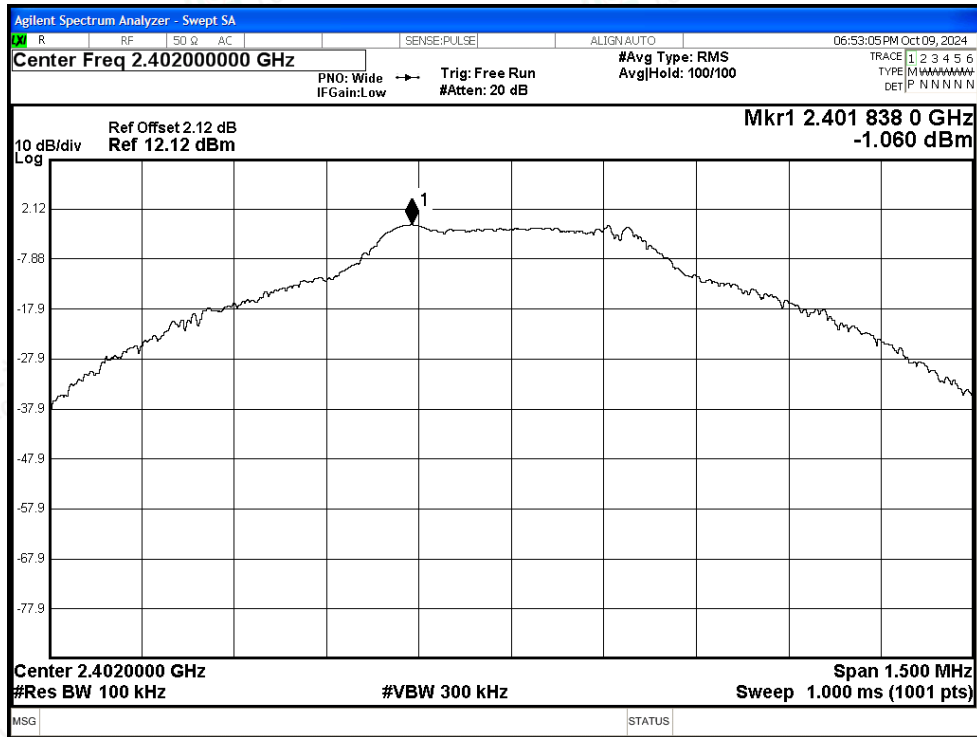


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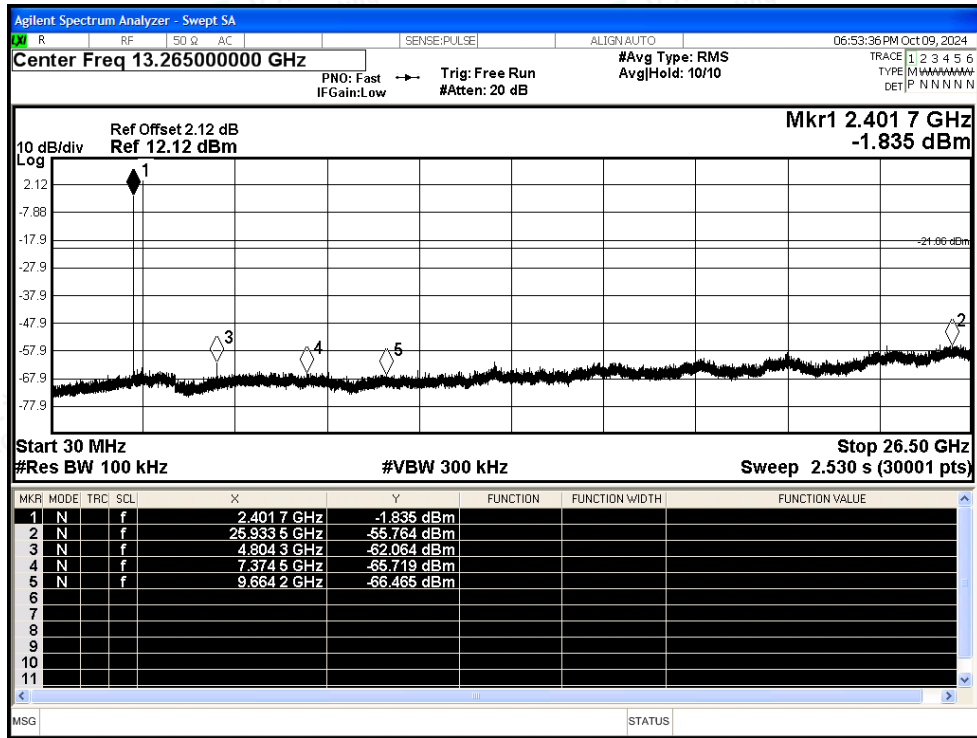


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

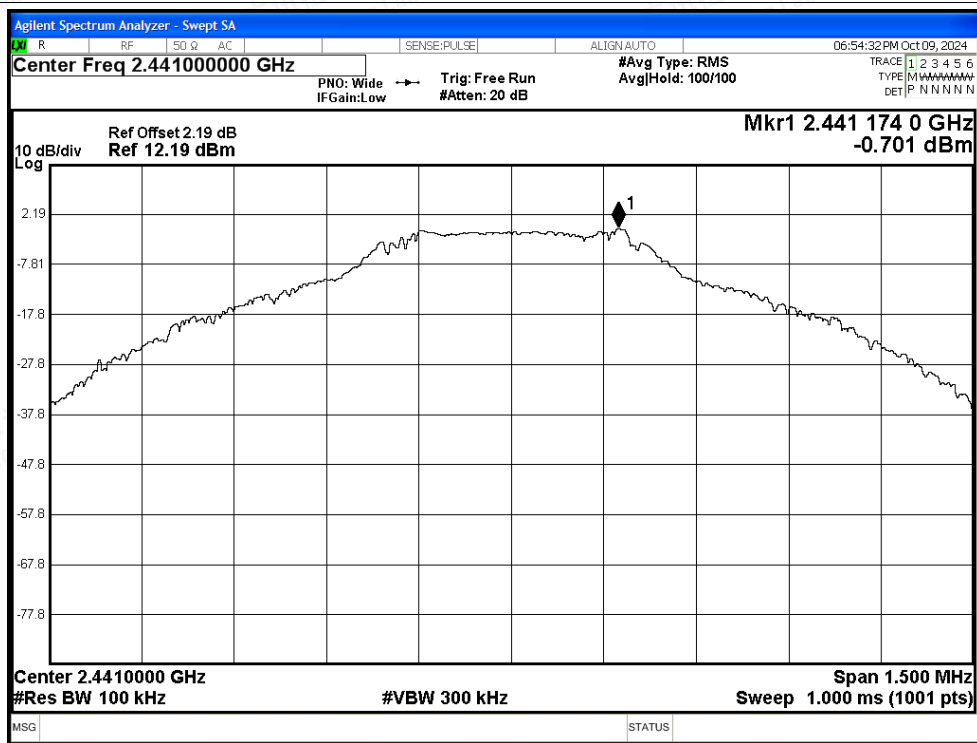


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

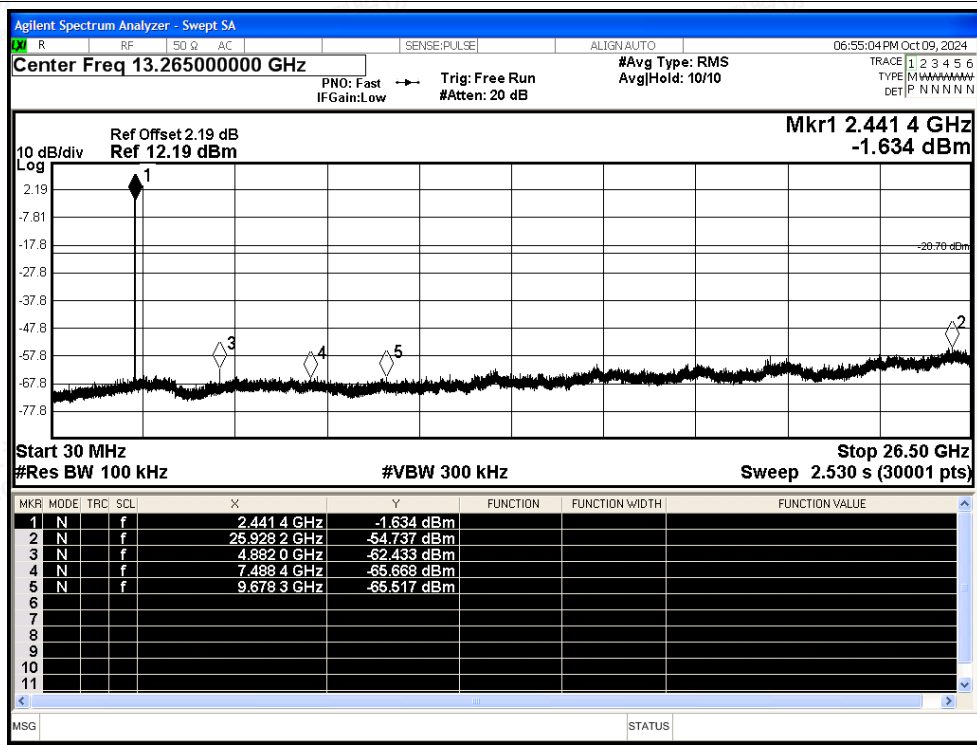




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

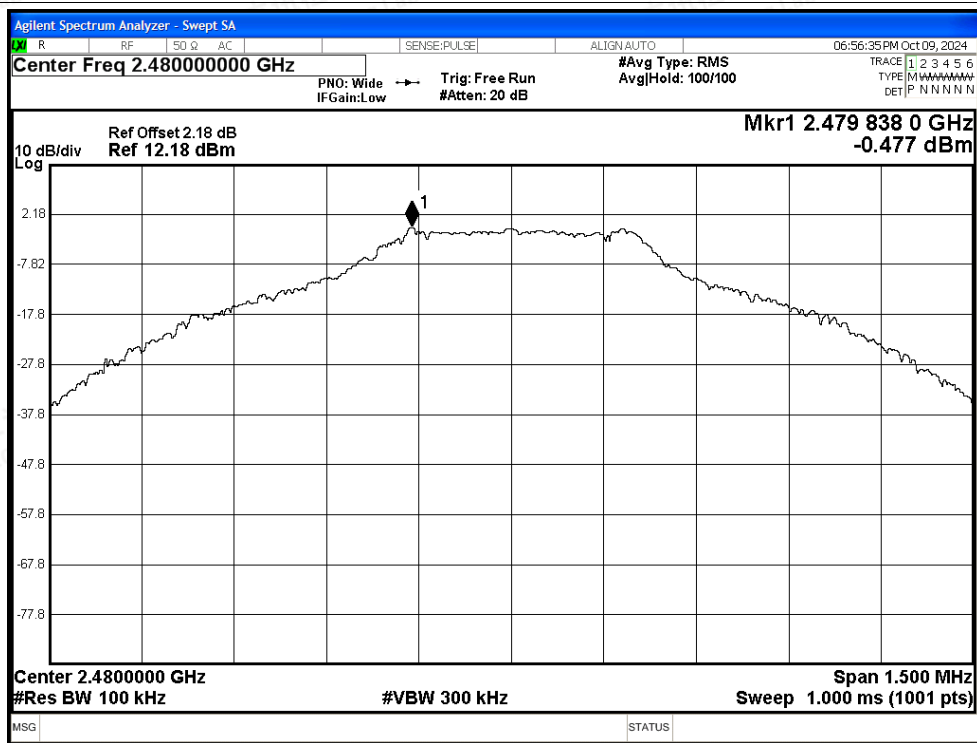


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

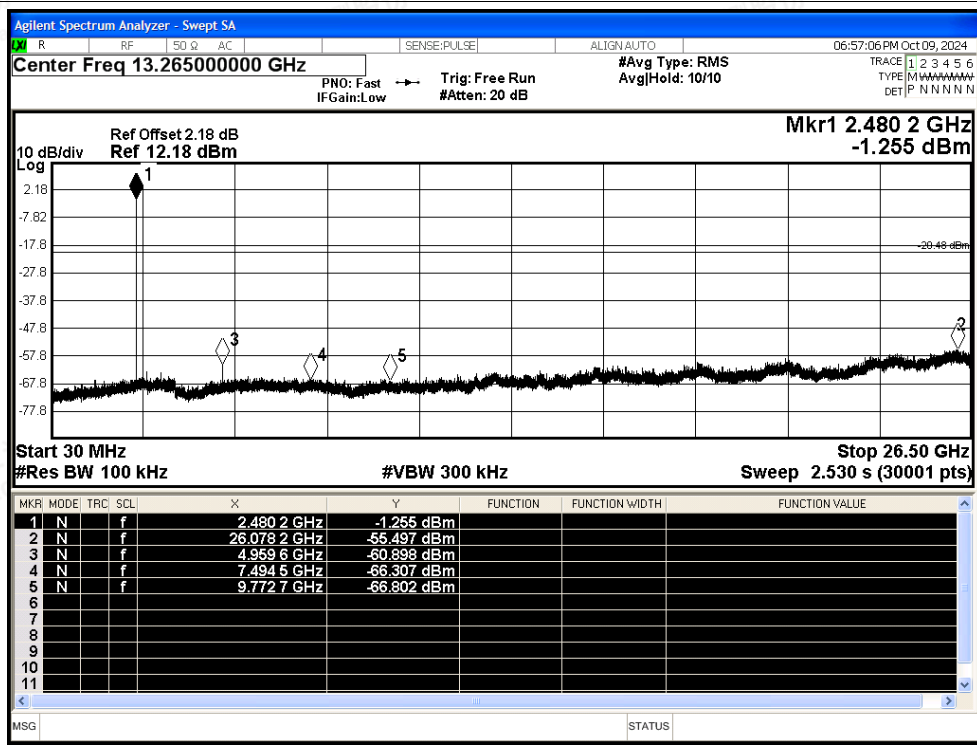




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

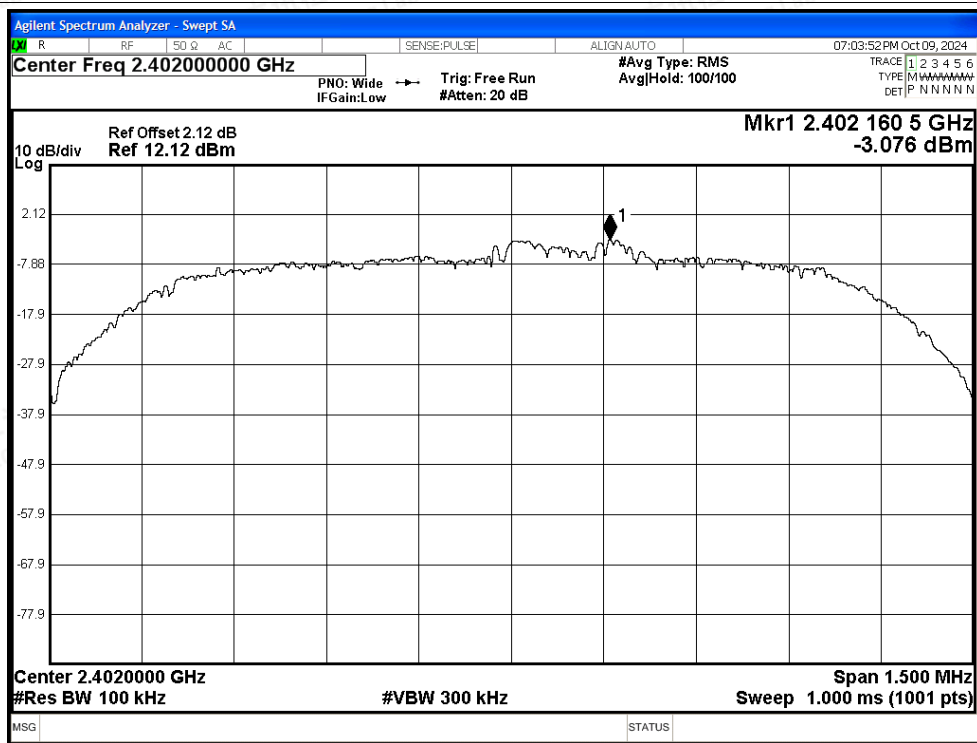


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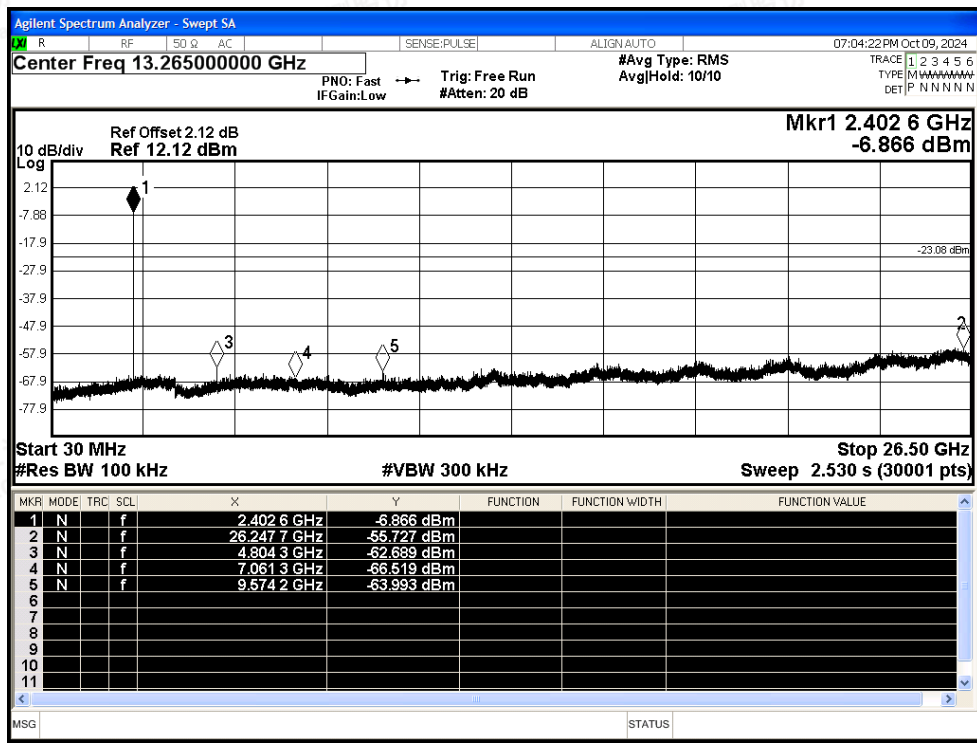




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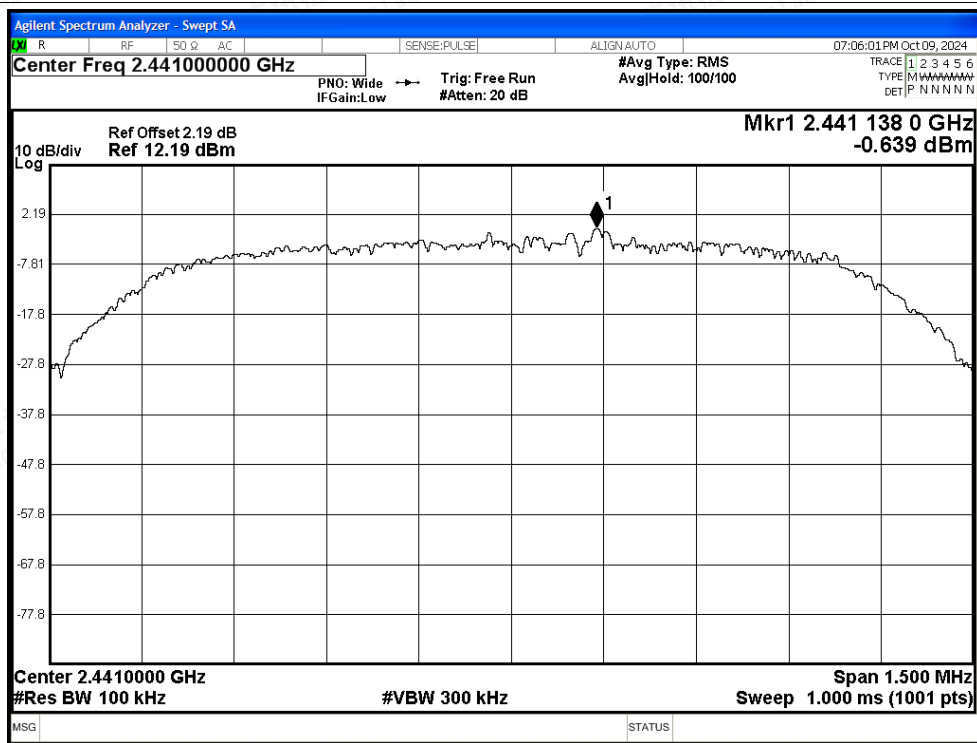


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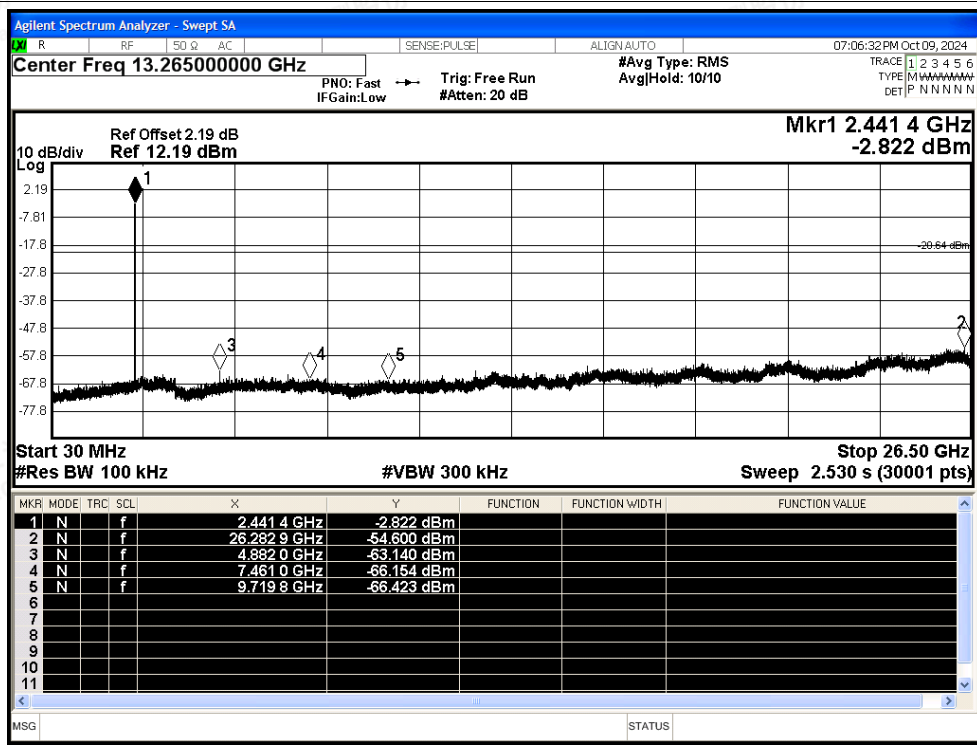




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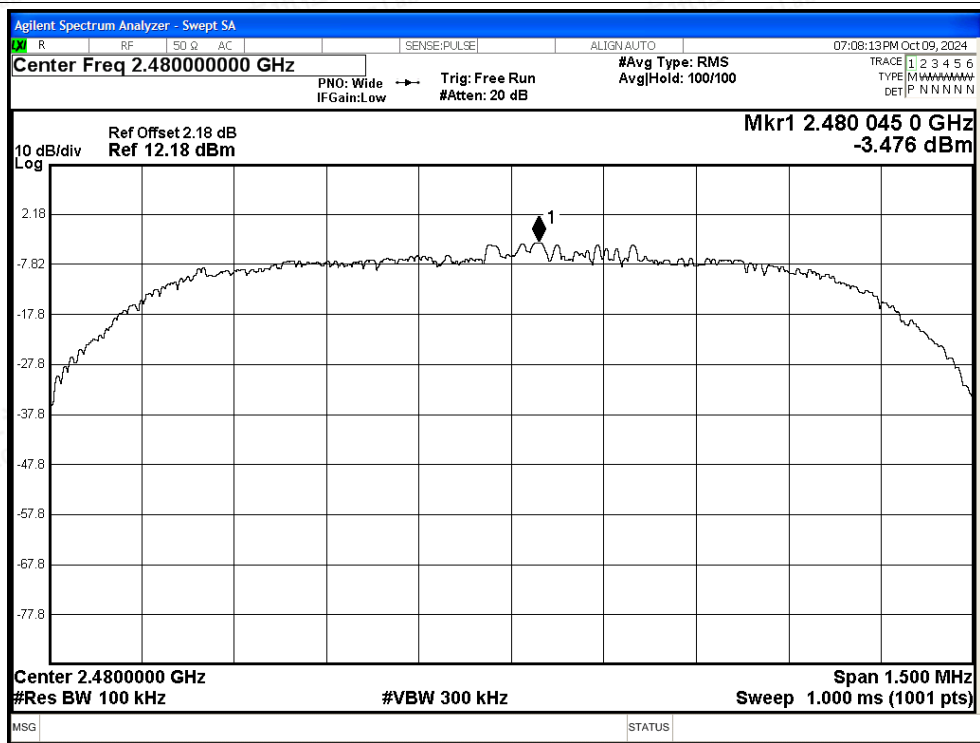


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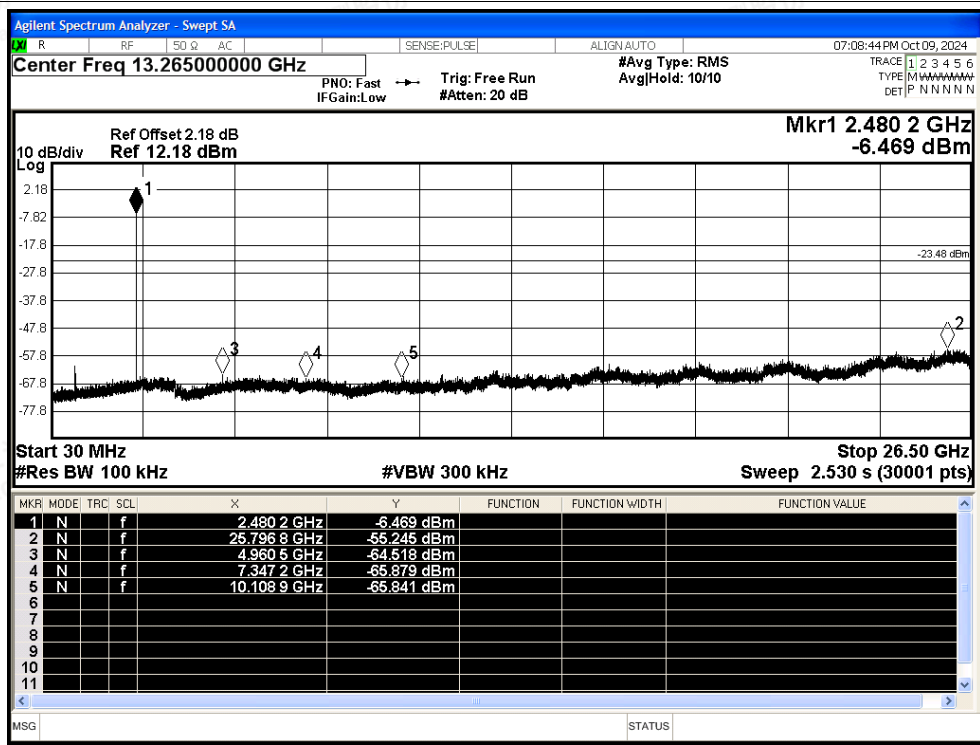




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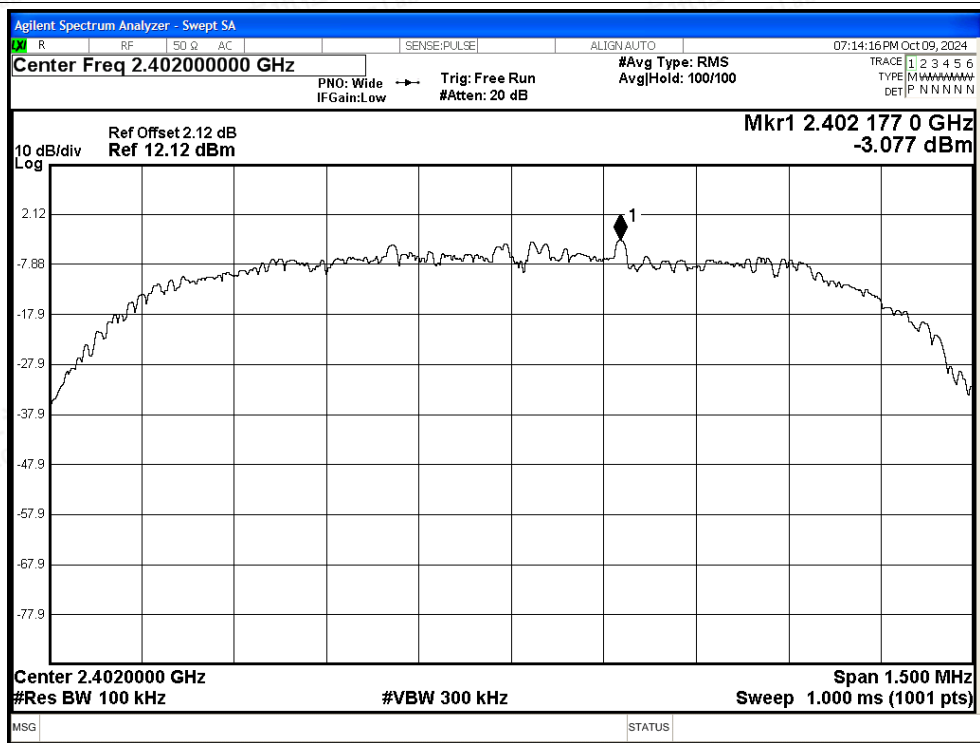


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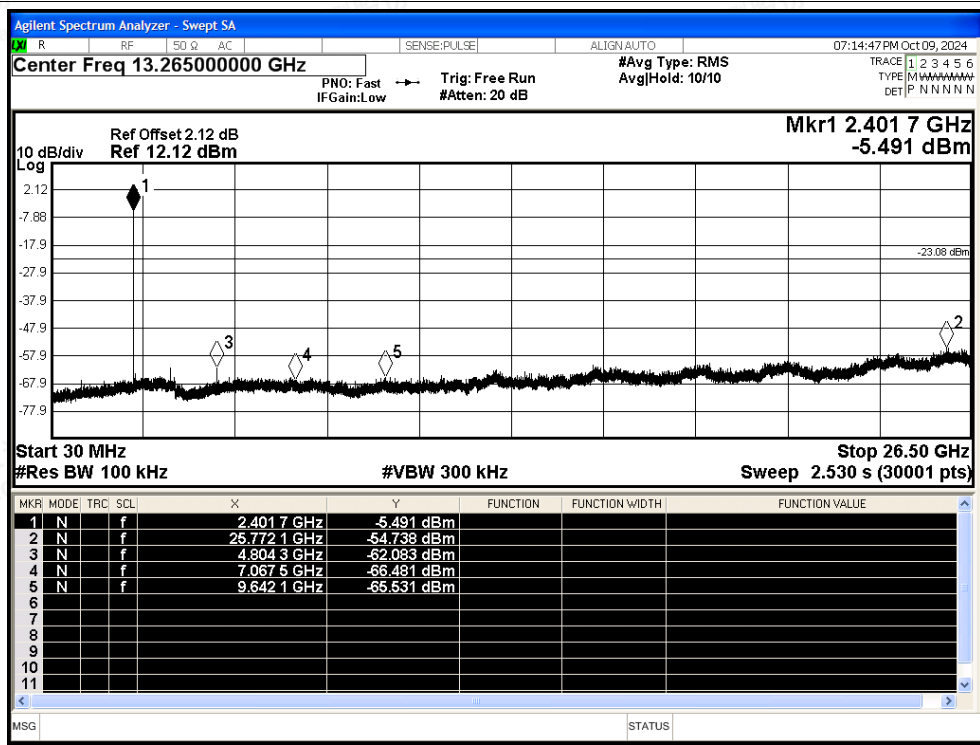




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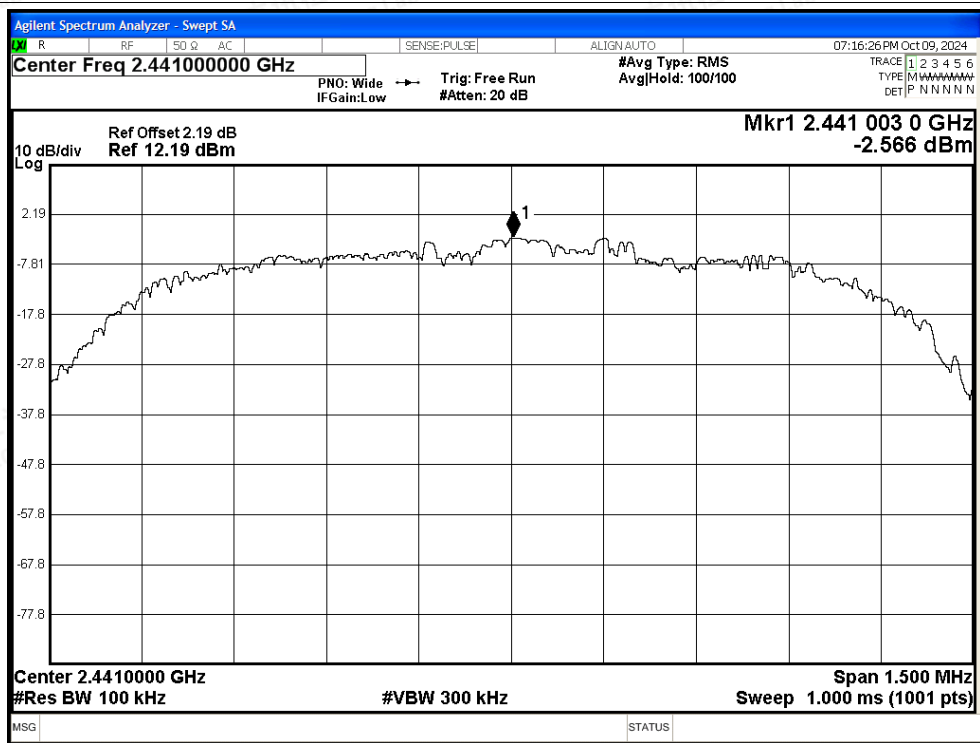


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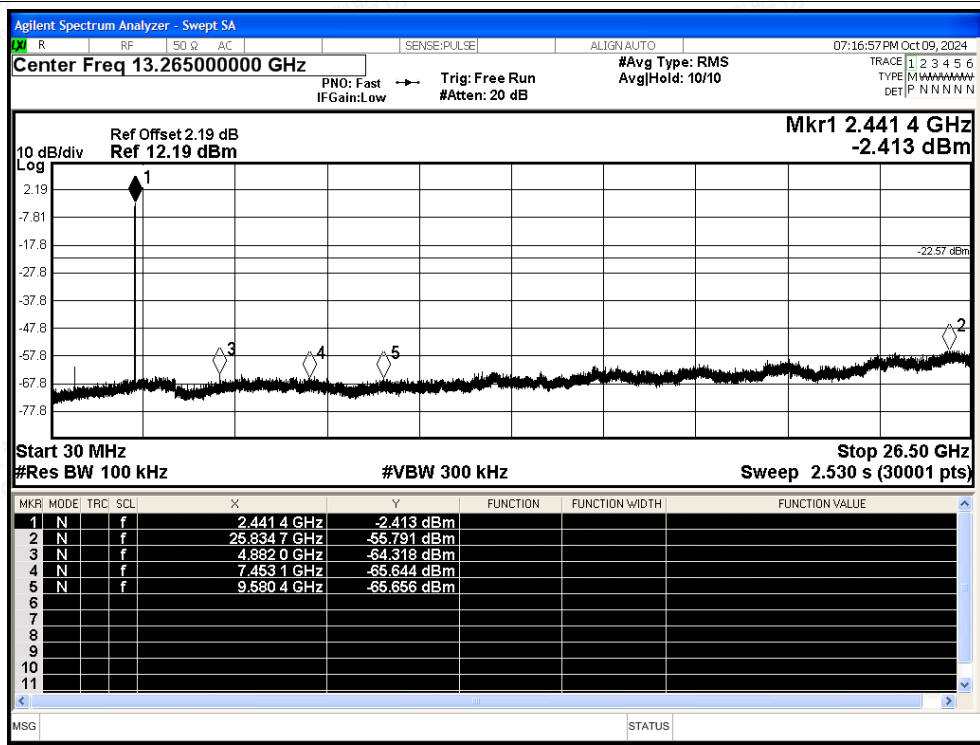




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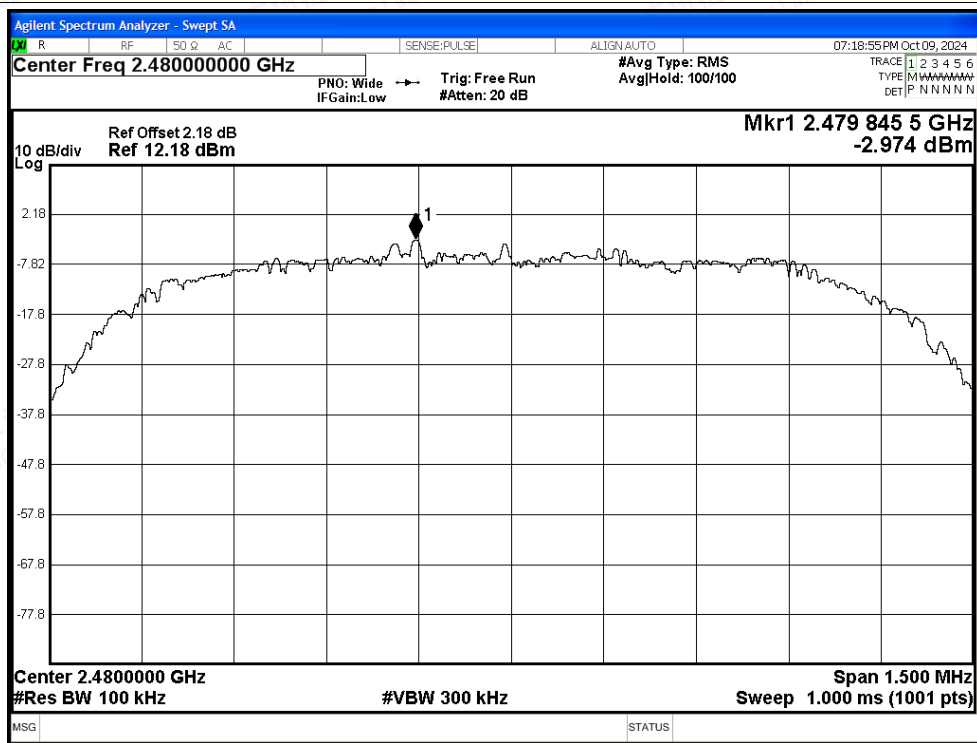


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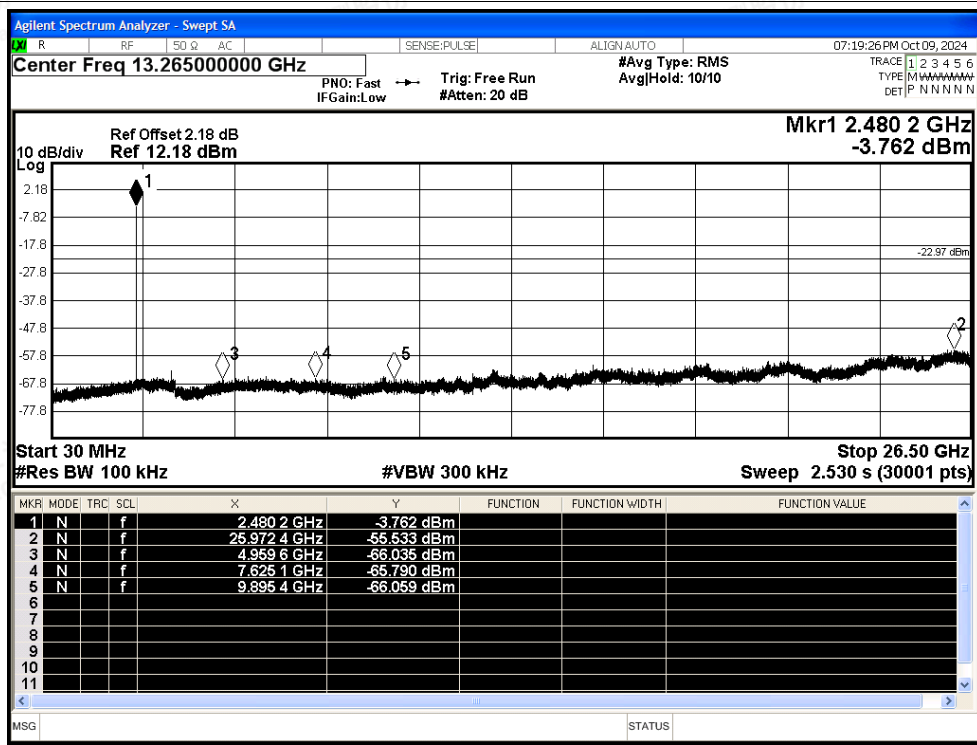




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission





A.8 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.63	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.63	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2480	Ant1	77.28	1.12	0.35

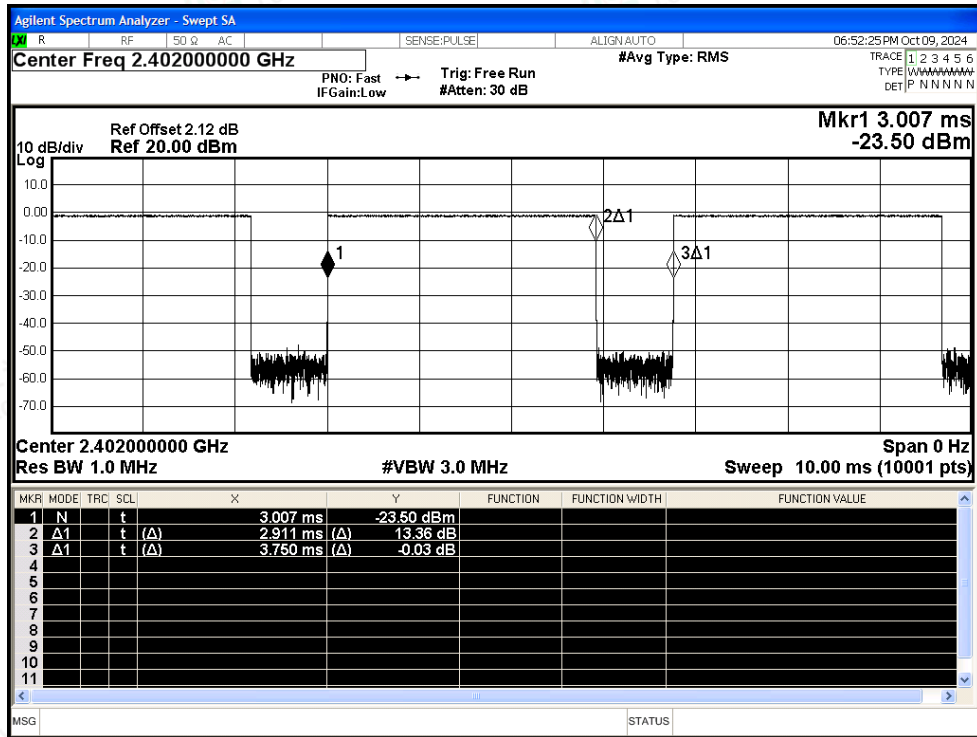


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Scan code to check authenticity

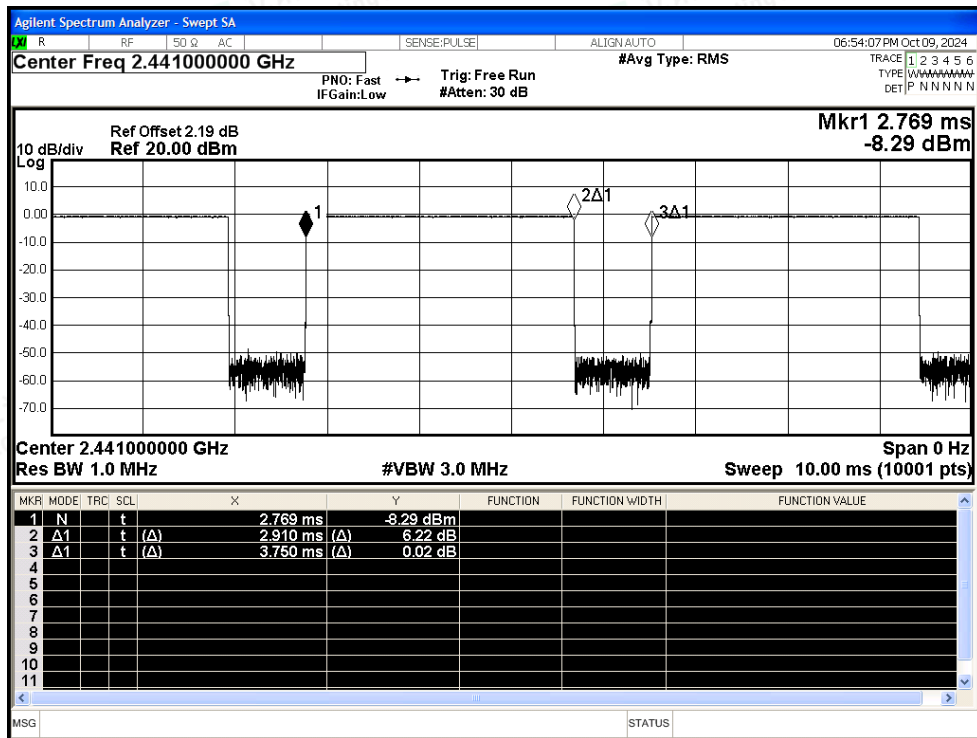


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant1

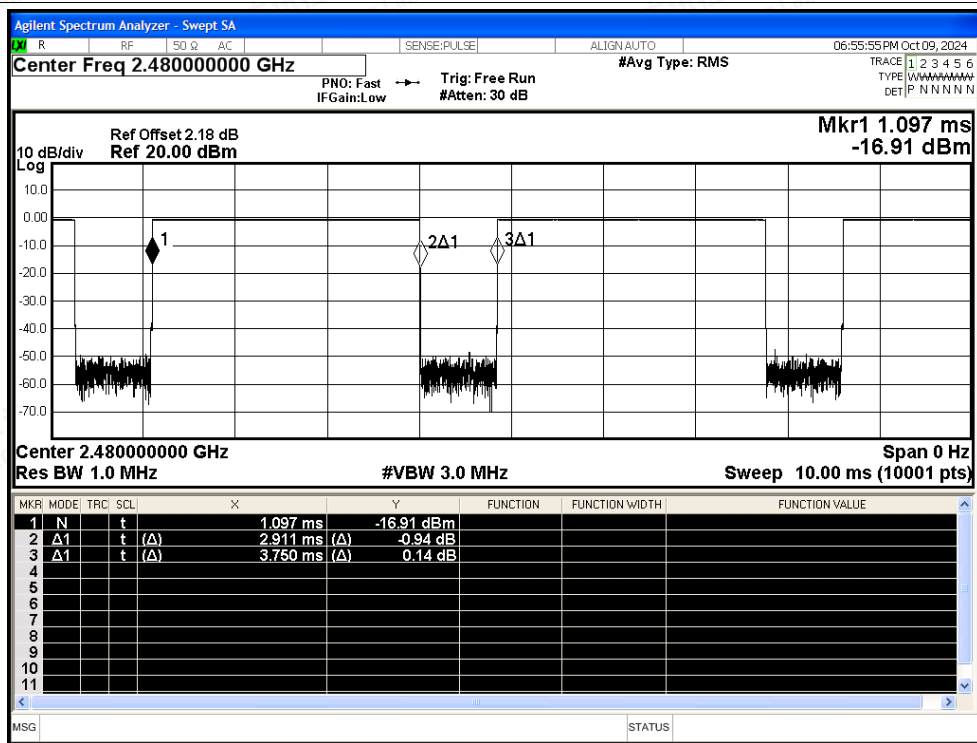


Duty Cycle NVNT 1-DH5 2441MHz Ant1

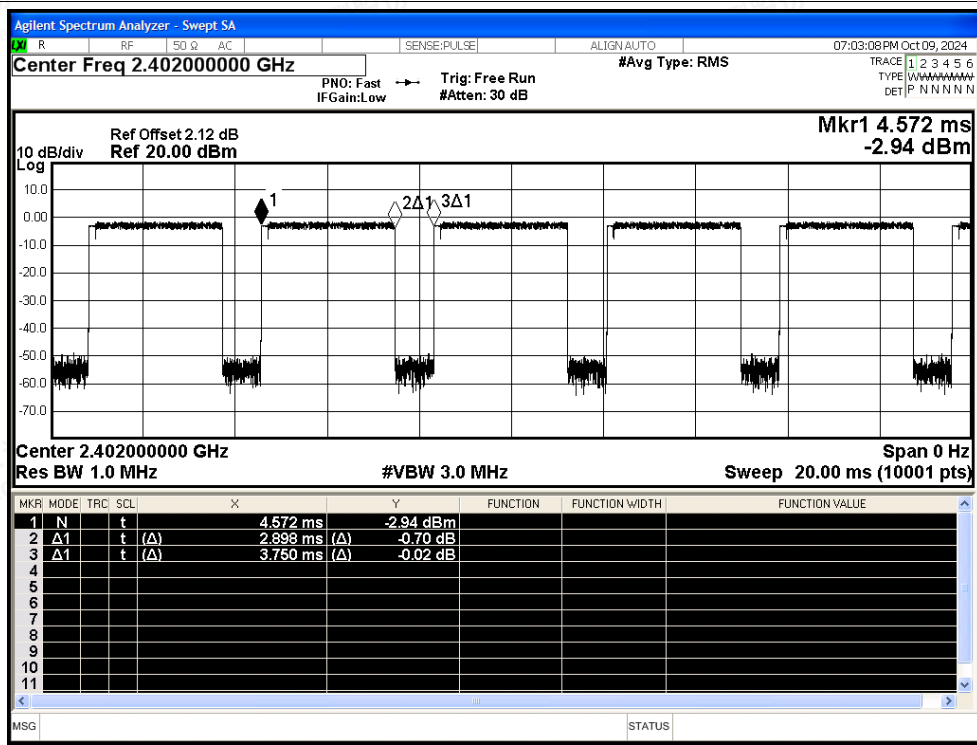




Duty Cycle NVNT 1-DH5 2480MHz Ant1

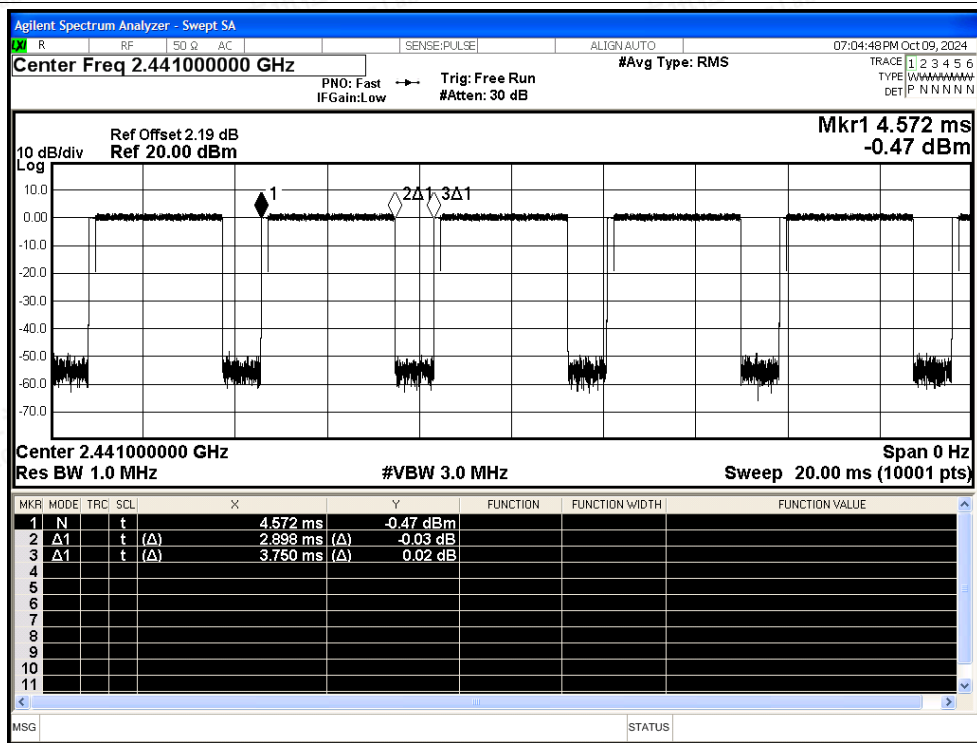


Duty Cycle NVNT 2-DH5 2402MHz Ant1

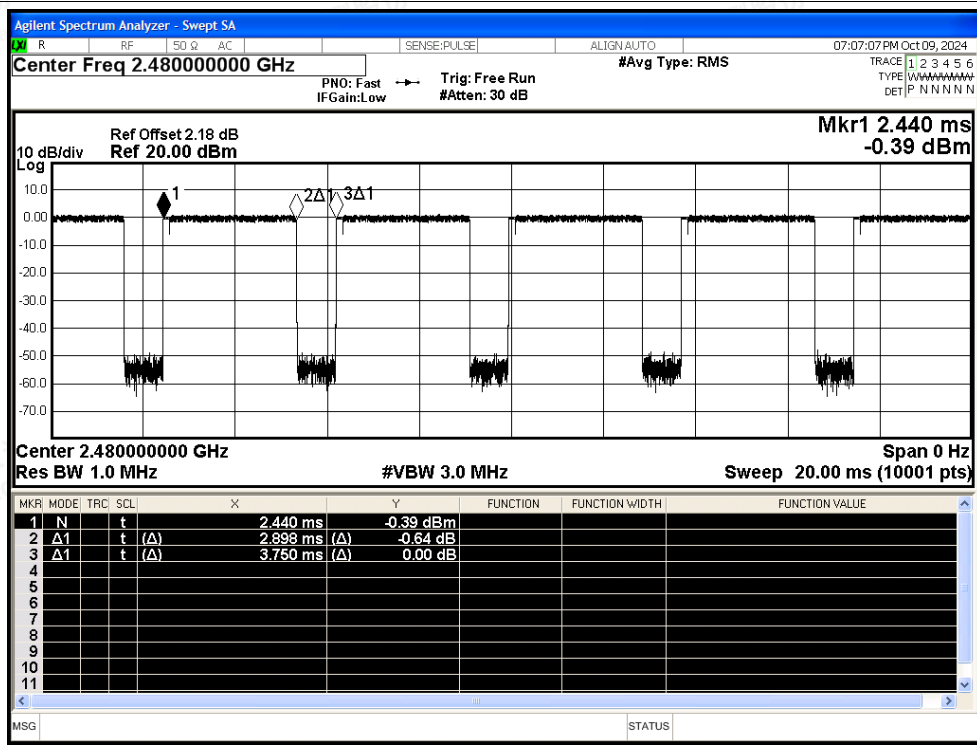




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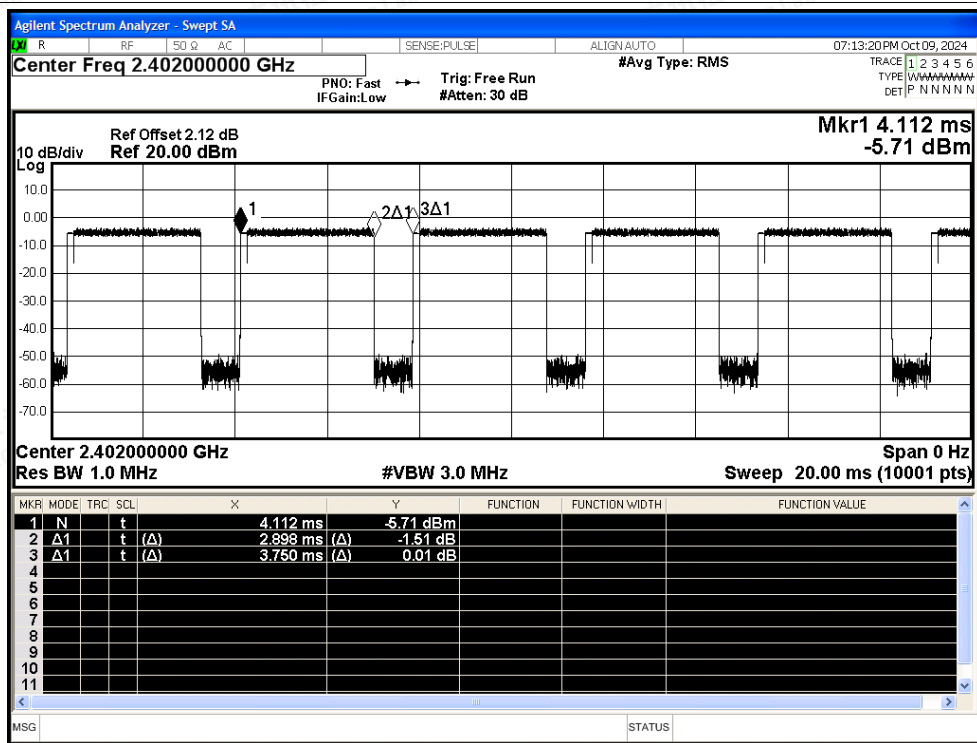


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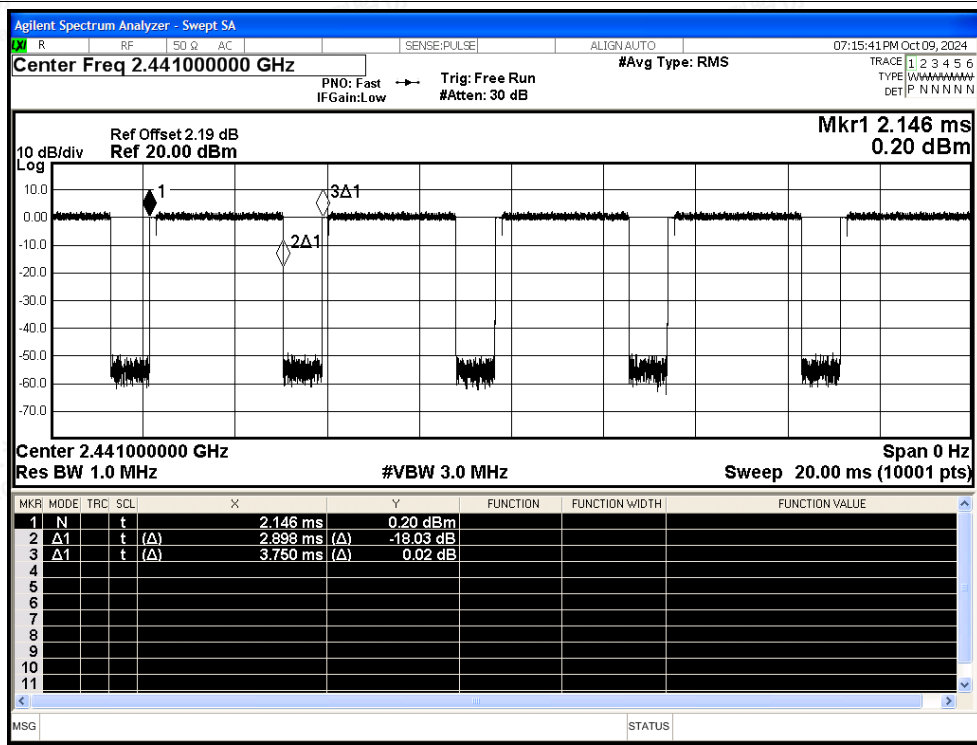




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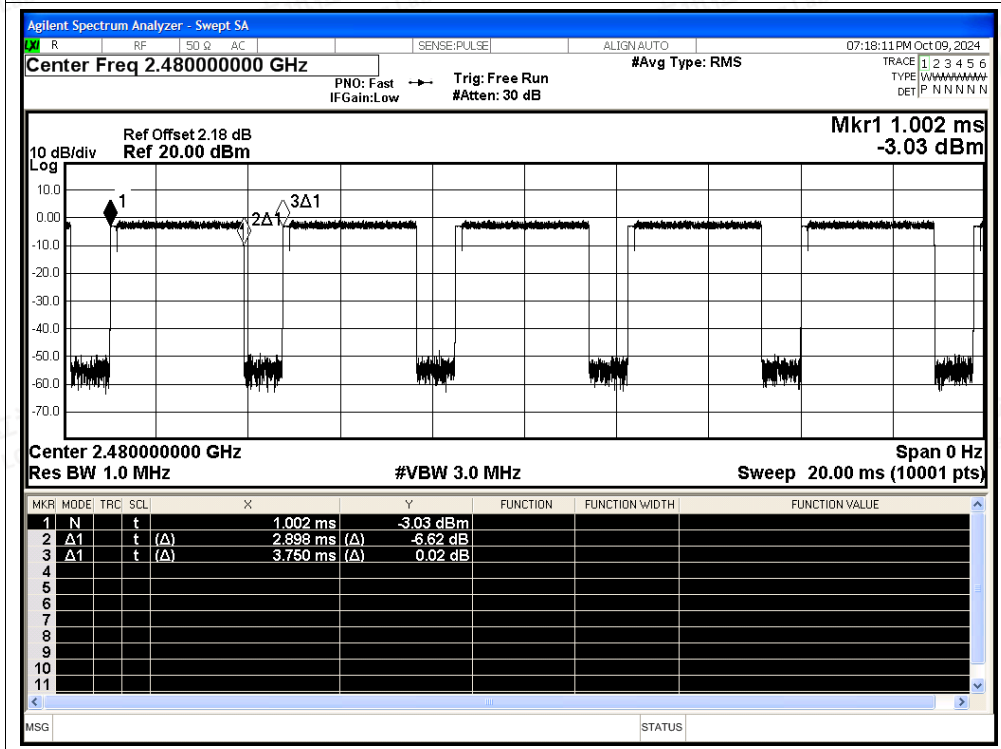


Duty Cycle NVNT 3-DH5 2441MHz Ant1





Duty Cycle NVNT 3-DH5 2480MHz Ant1

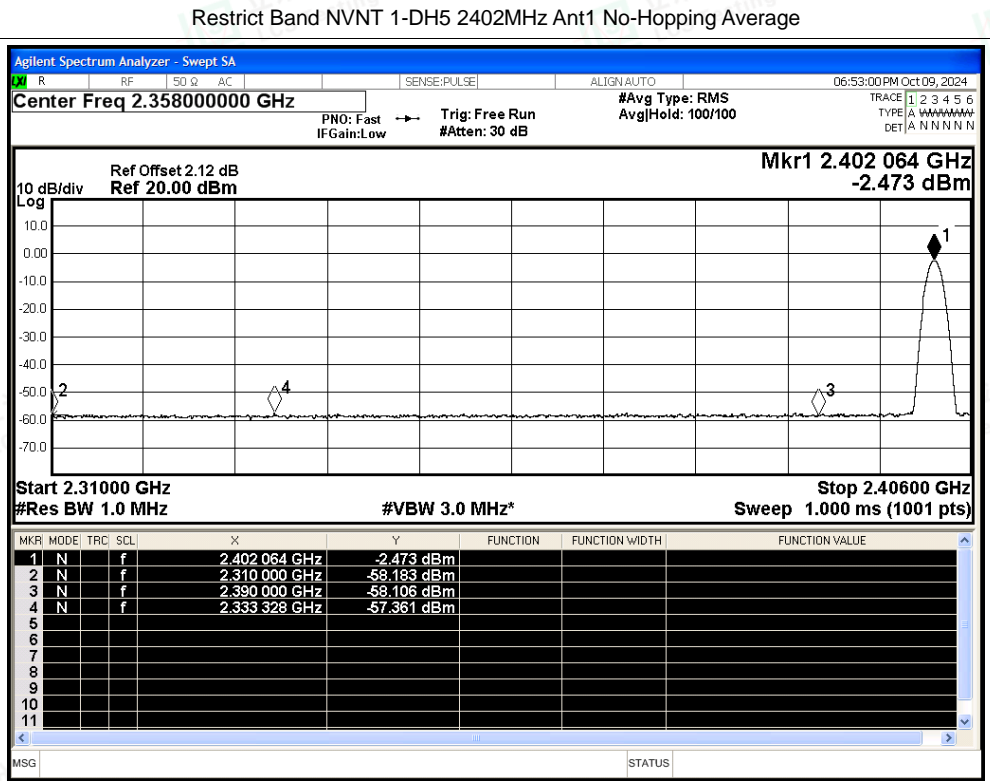
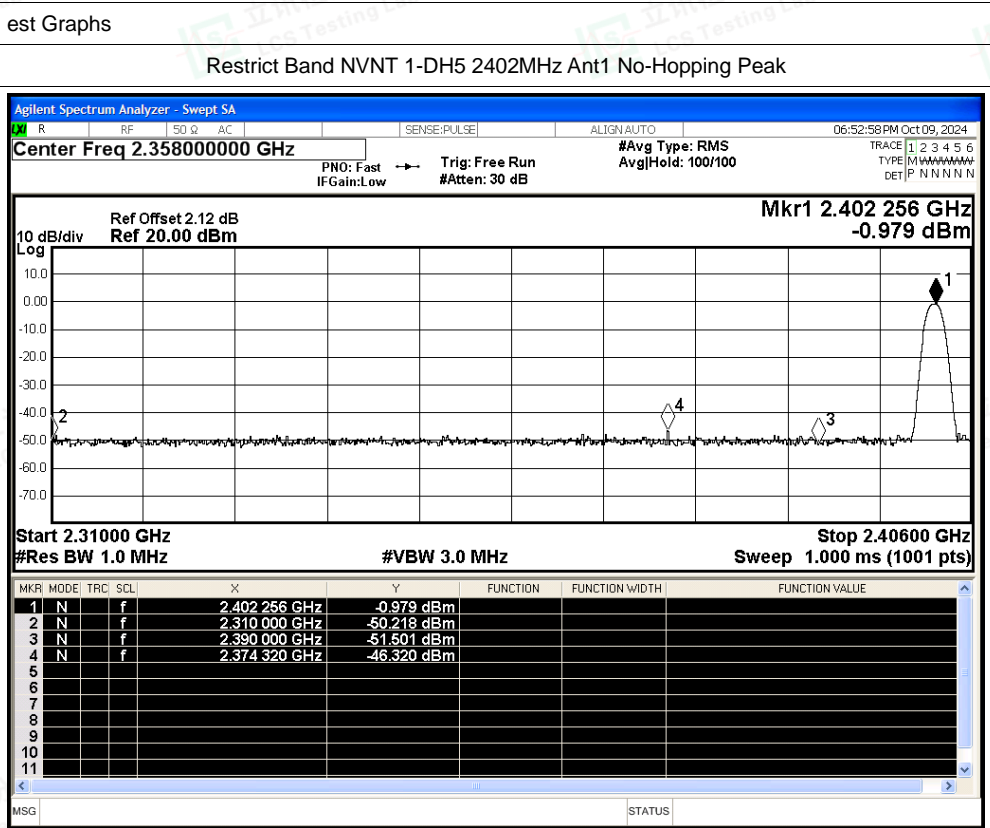




A.9 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.22	2	-	47.04	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.18	2	1.1	40.18	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2374.32	-46.32	2	-	50.94	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2333.328	-57.36	2	1.1	41	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-51.5	2	-	45.76	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.11	2	1.1	40.25	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.13	2	-	48.13	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.44	2	1.1	40.92	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2494.624	-46.1	2	-	51.16	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.704	-57.03	2	1.1	41.33	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-48.66	2	-	48.6	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-58.21	2	1.1	40.15	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-52.16	2	-	45.1	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.05	2	1.12	40.33	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2323.152	-47.07	2	-	50.19	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2334.288	-57.52	2	1.12	40.86	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-51.21	2	-	46.05	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.75	2	1.12	40.63	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-46.95	2	-	50.31	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.36	2	1.12	41.02	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.536	-46.87	2	-	50.39	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.536	-57.1	2	1.12	41.28	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.3	2	-	47.96	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-58.61	2	1.12	39.77	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-51.59	2	-	45.67	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-59.02	2	1.12	39.36	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2382.864	-47.64	2	-	49.62	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2385.936	-57.61	2	1.12	40.77	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-48.68	2	-	48.58	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-58.42	2	1.12	39.96	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-49.3	2	-	47.96	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-57.81	2	1.12	40.57	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2495.824	-46.95	2	-	50.31	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2484.064	-56.84	2	1.12	41.54	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-50.27	2	-	46.99	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-58.46	2	1.12	39.92	Average	54	Pass

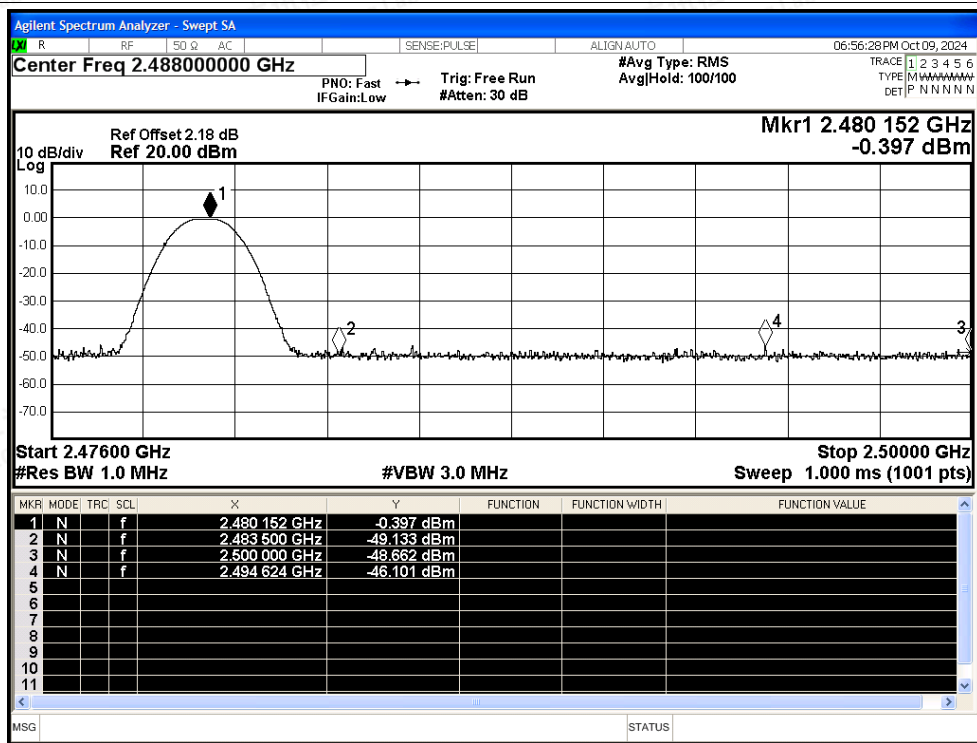




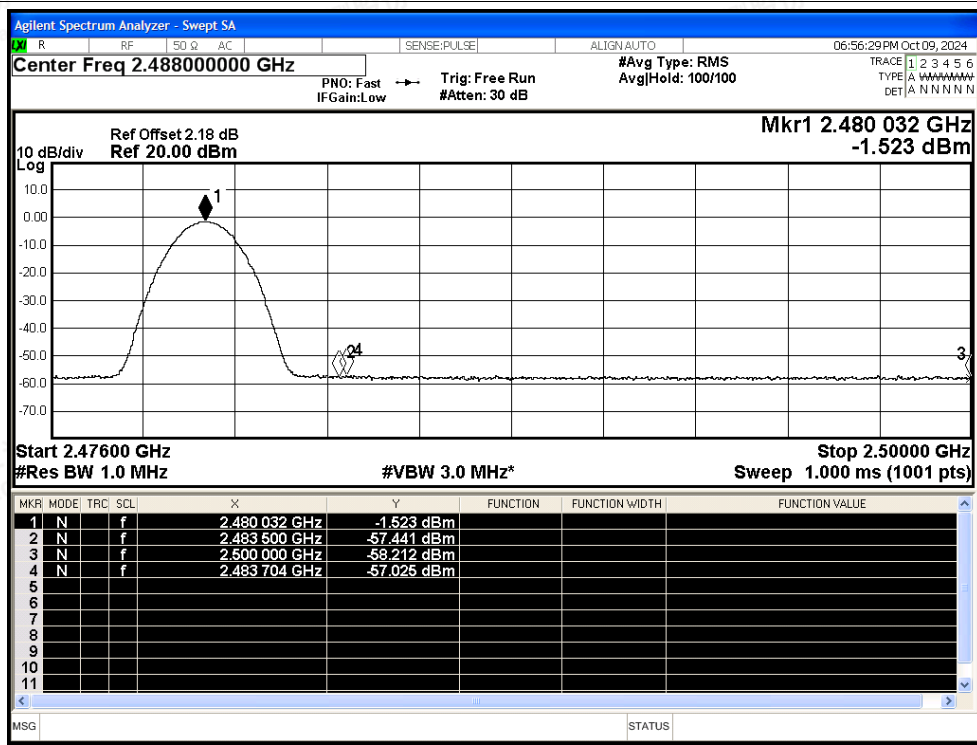
Shenzhen LCS Compliance Testing Laboratory Ltd.
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 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
 Scan code to check authenticity



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

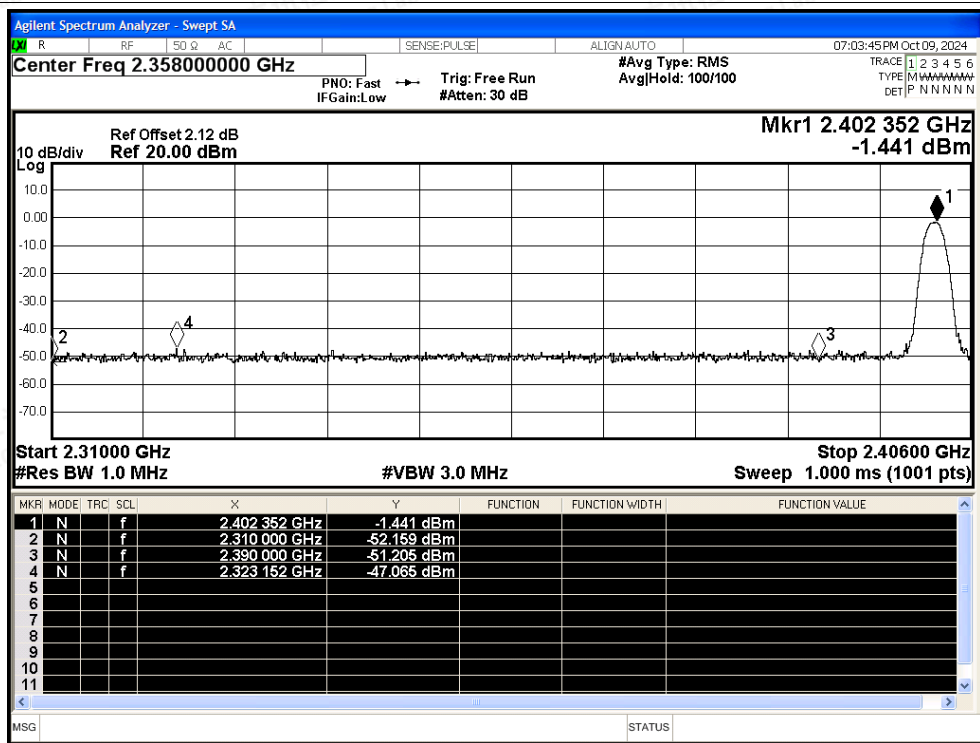


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

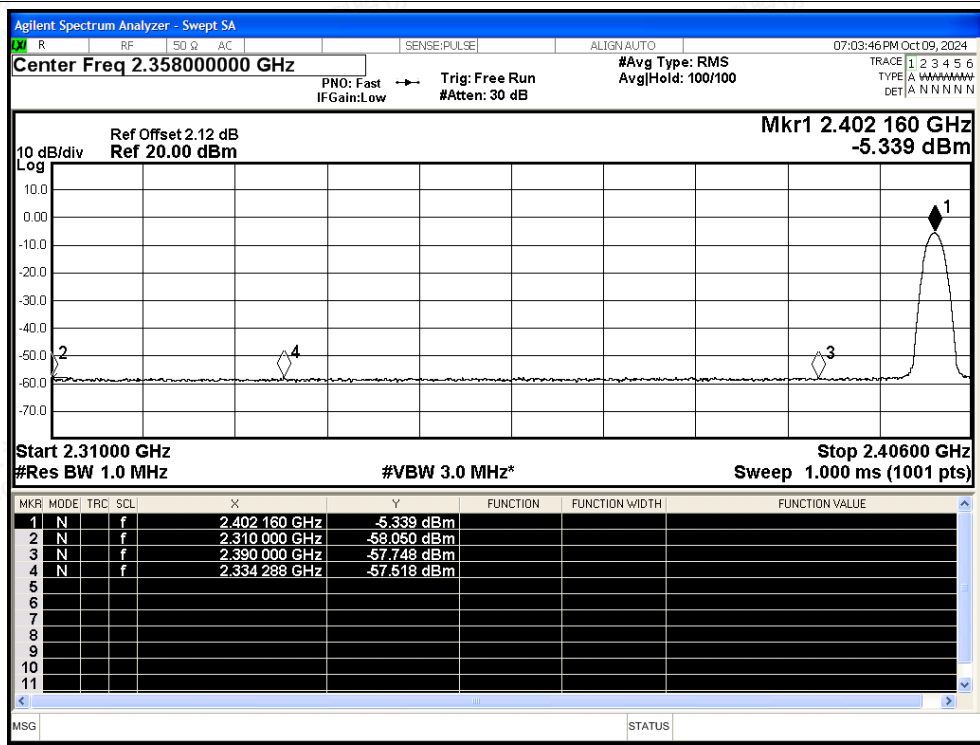




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

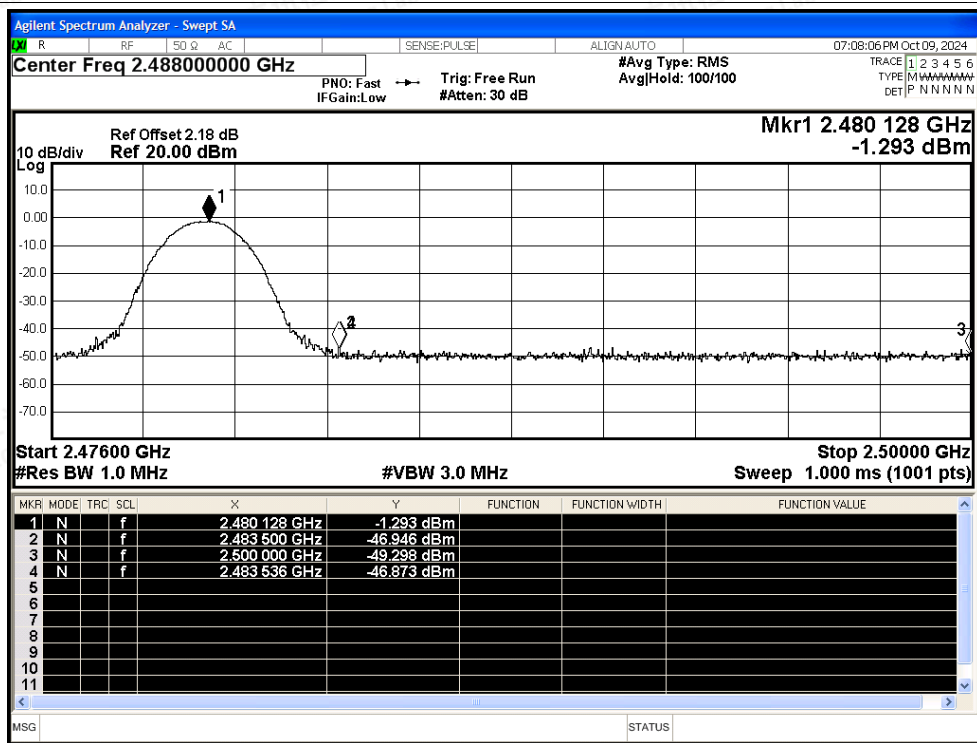


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average

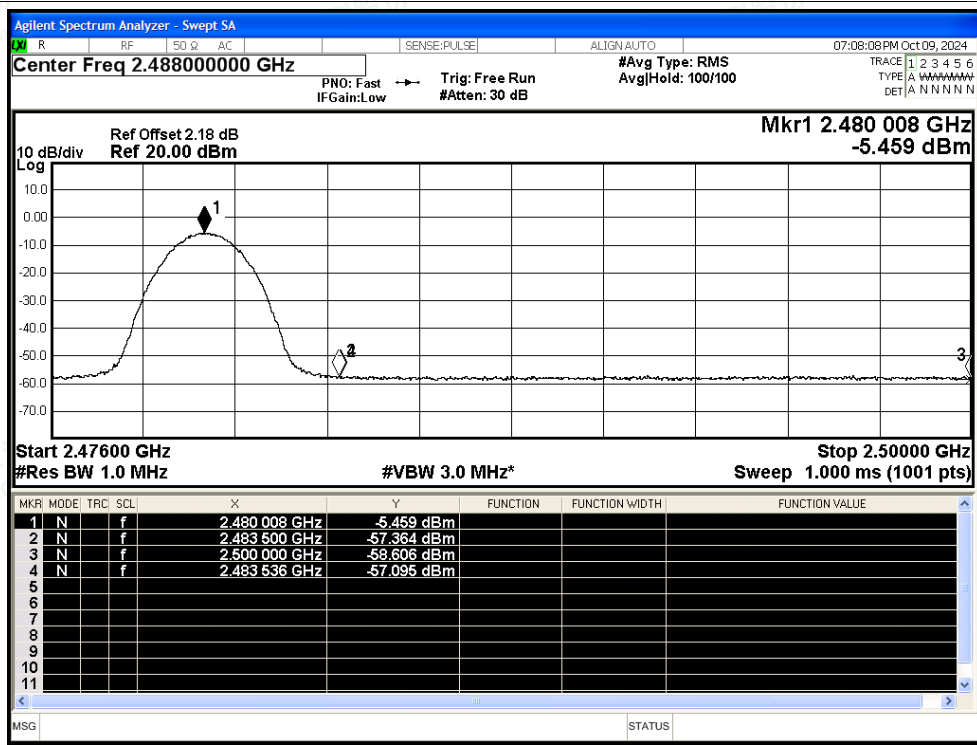




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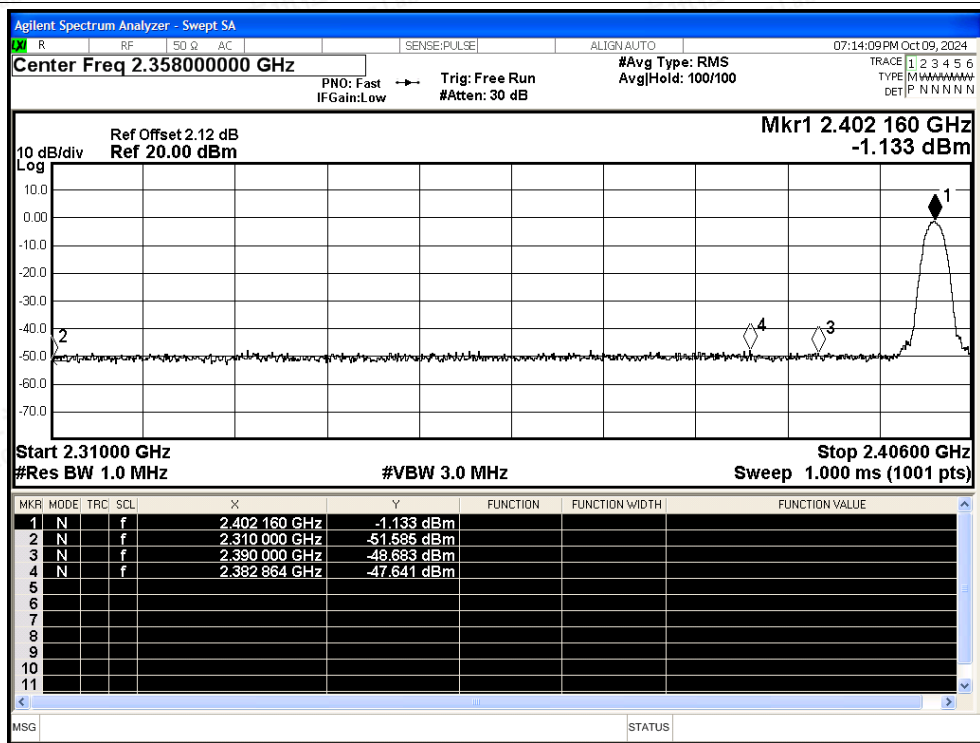


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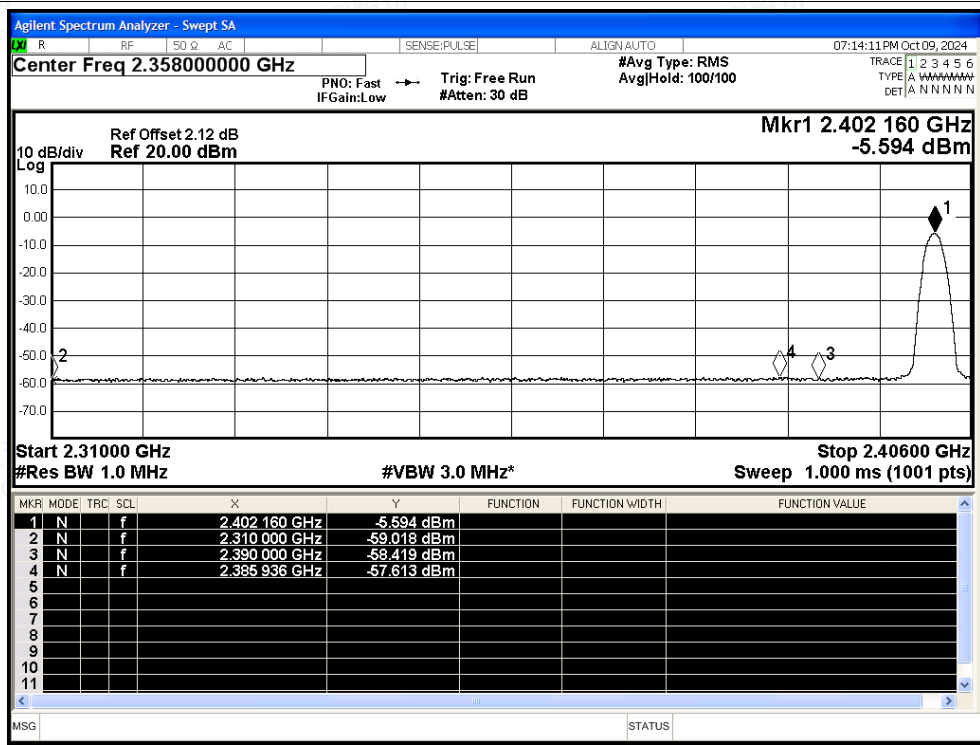




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

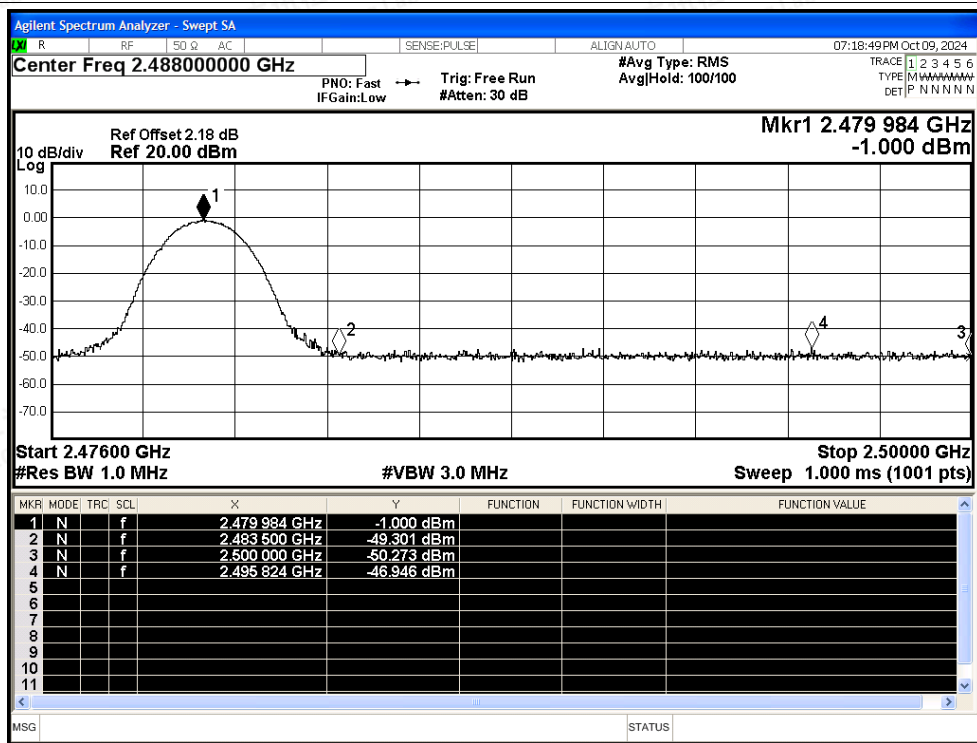


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





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



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

