



## Appendix A

### RF Test Data for BT (Conducted Measurement)

Product Name: Karaoke machine

Test Model: V1-C

#### Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
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	0.95	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.95	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.95	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.299	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.268	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.285	N/A	Pass



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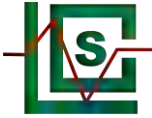
Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

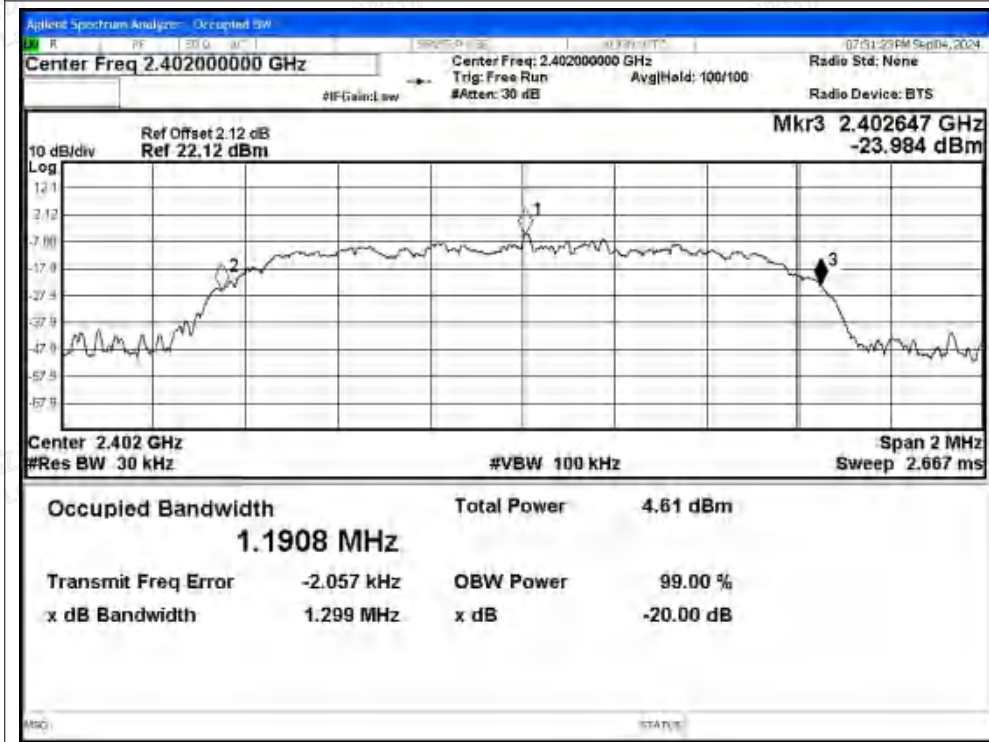




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

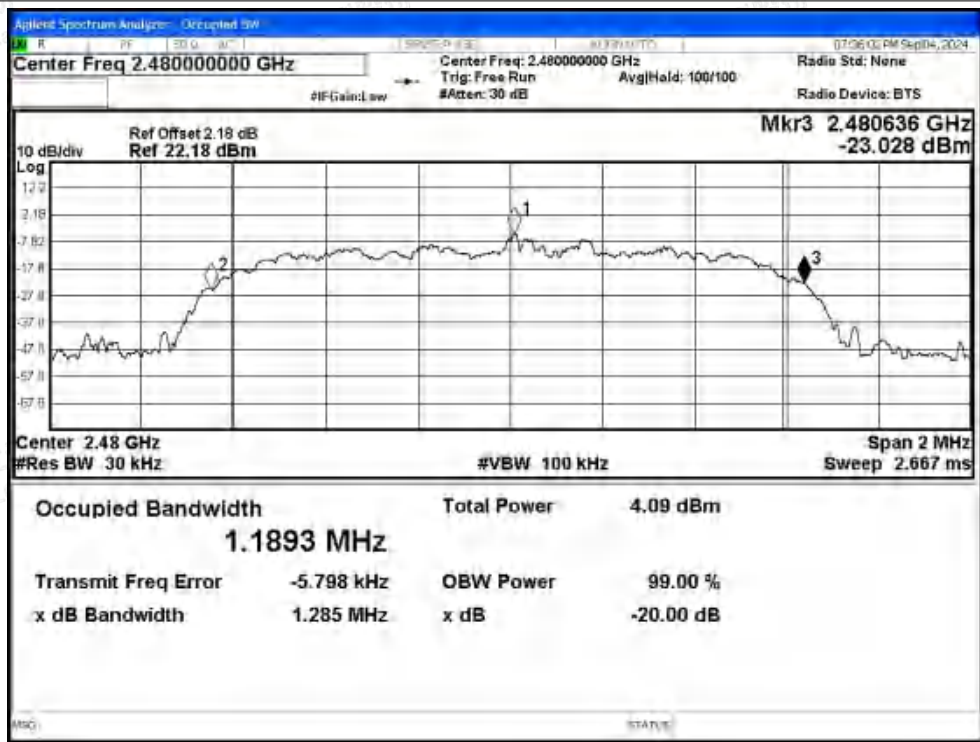




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1







## A.2 Maximum Peak Conducted Output Power

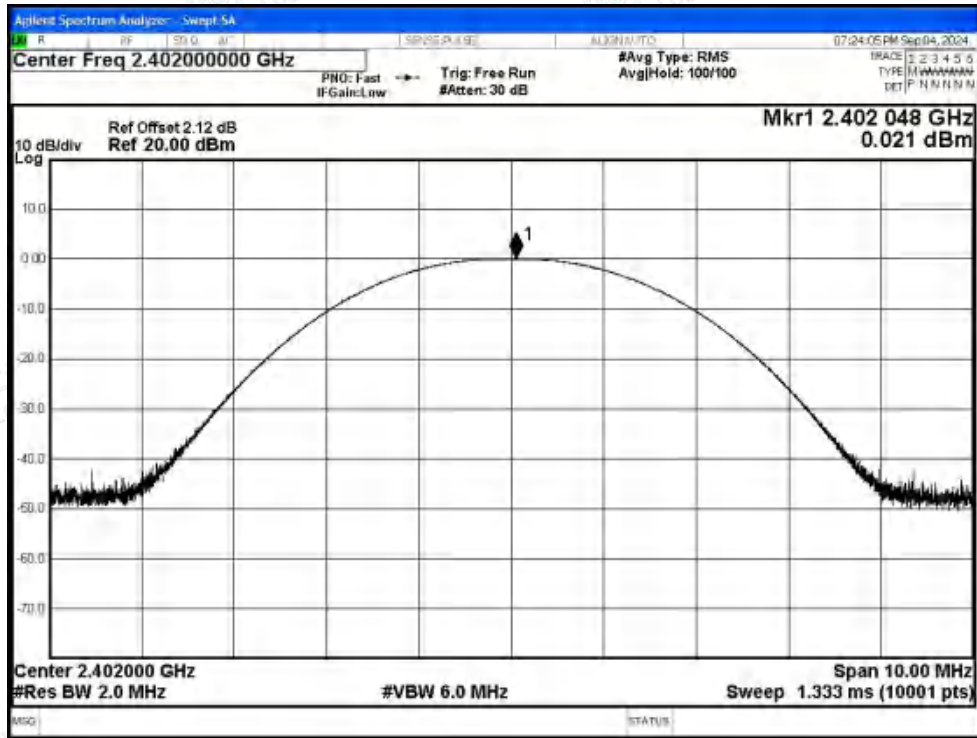
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.02	21	Pass
NVNT	1-DH5	2441	Ant1	-0.1	21	Pass
NVNT	1-DH5	2480	Ant1	-0.88	21	Pass
NVNT	2-DH5	2402	Ant1	0.56	21	Pass
NVNT	2-DH5	2441	Ant1	0.87	21	Pass
NVNT	2-DH5	2480	Ant1	-0.28	21	Pass



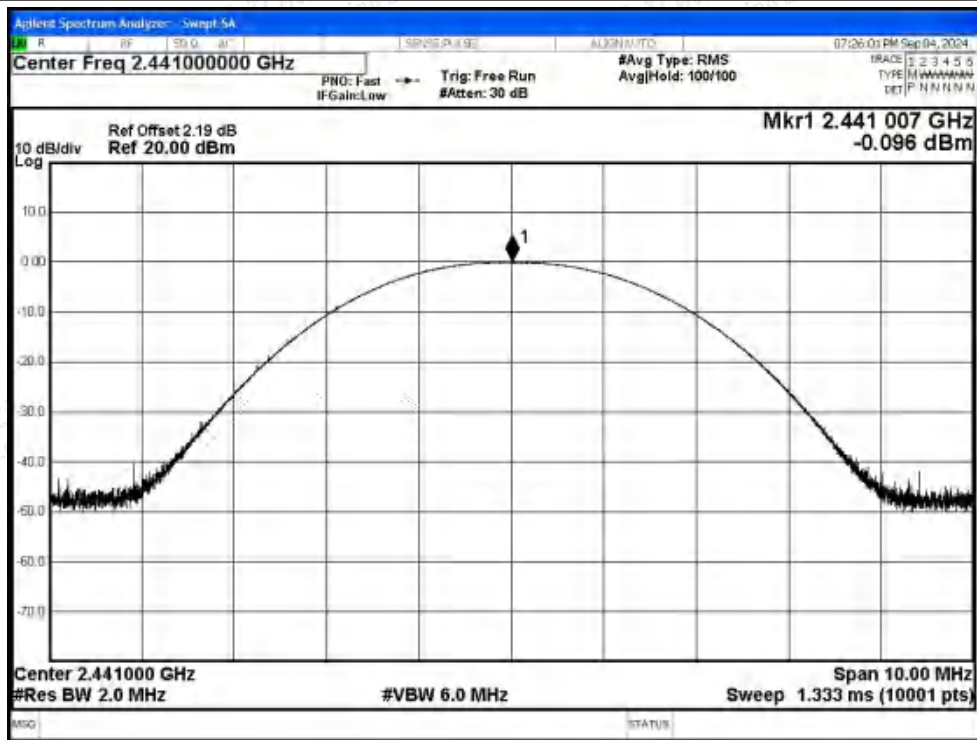


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

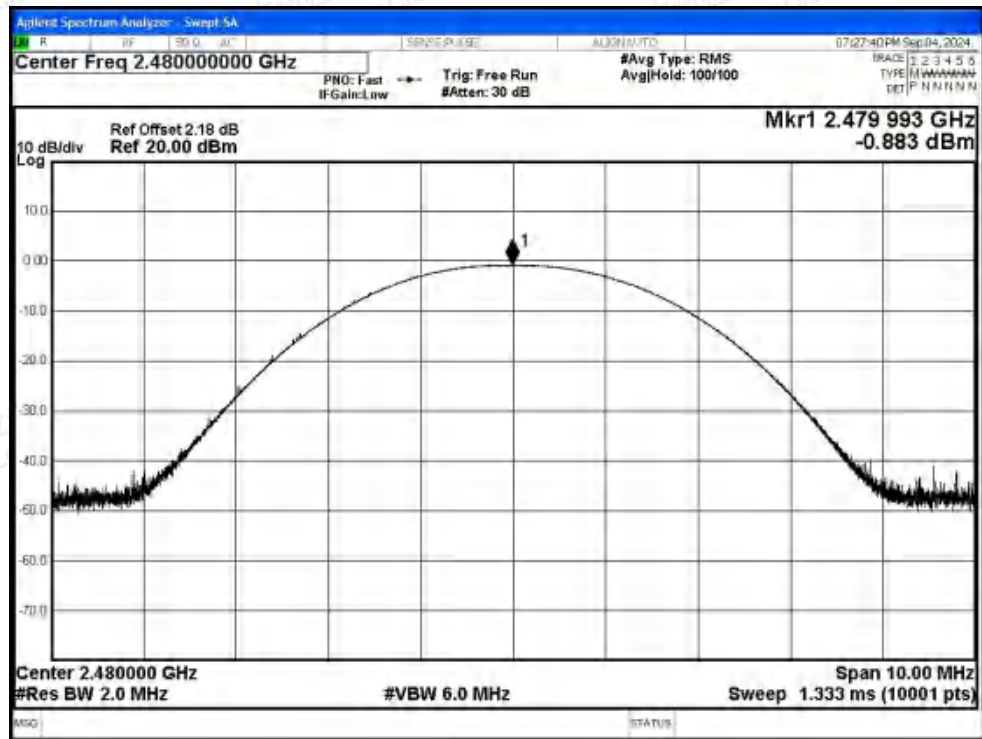


Power NVNT 1-DH5 2441MHz Ant1

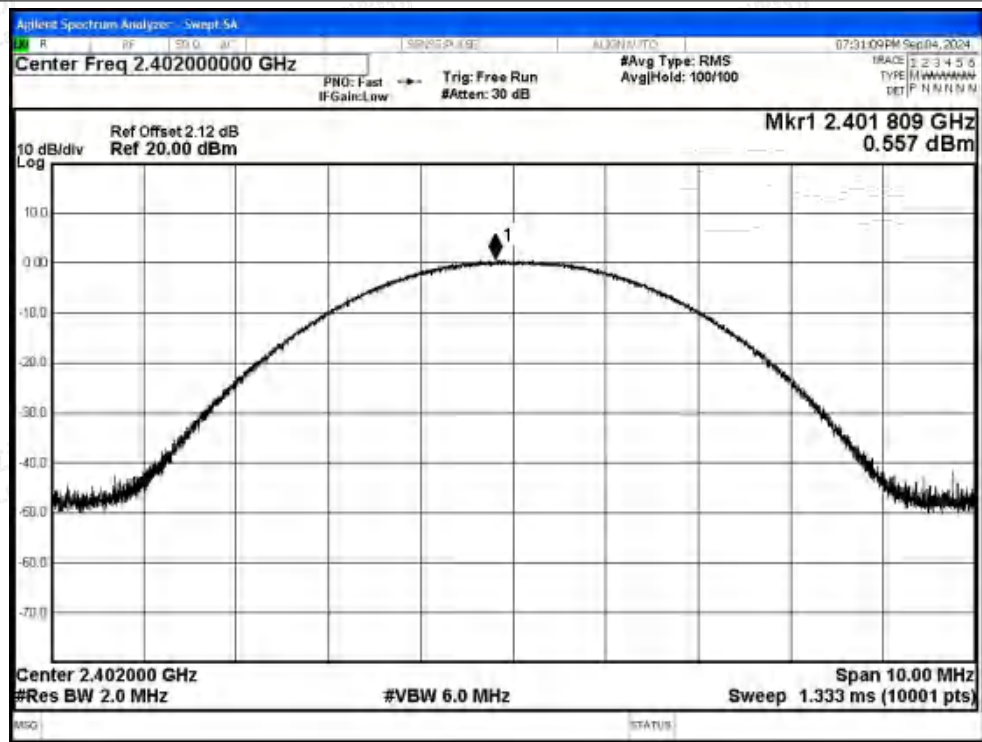




Power NVNT 1-DH5 2480MHz Ant1



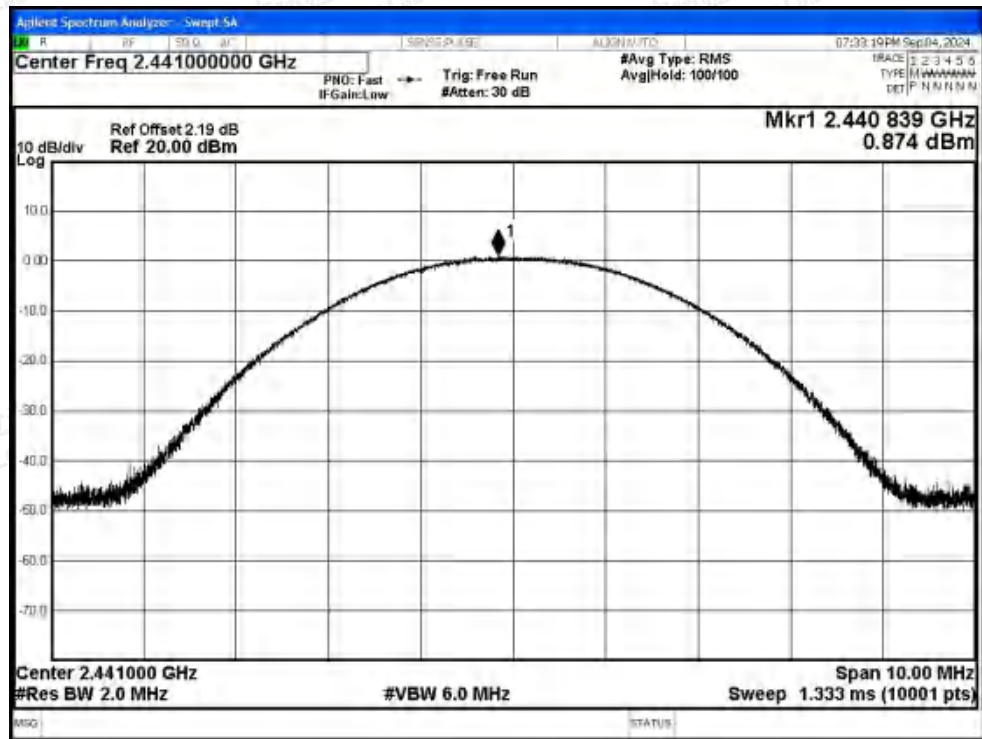
Power NVNT 2-DH5 2402MHz Ant1



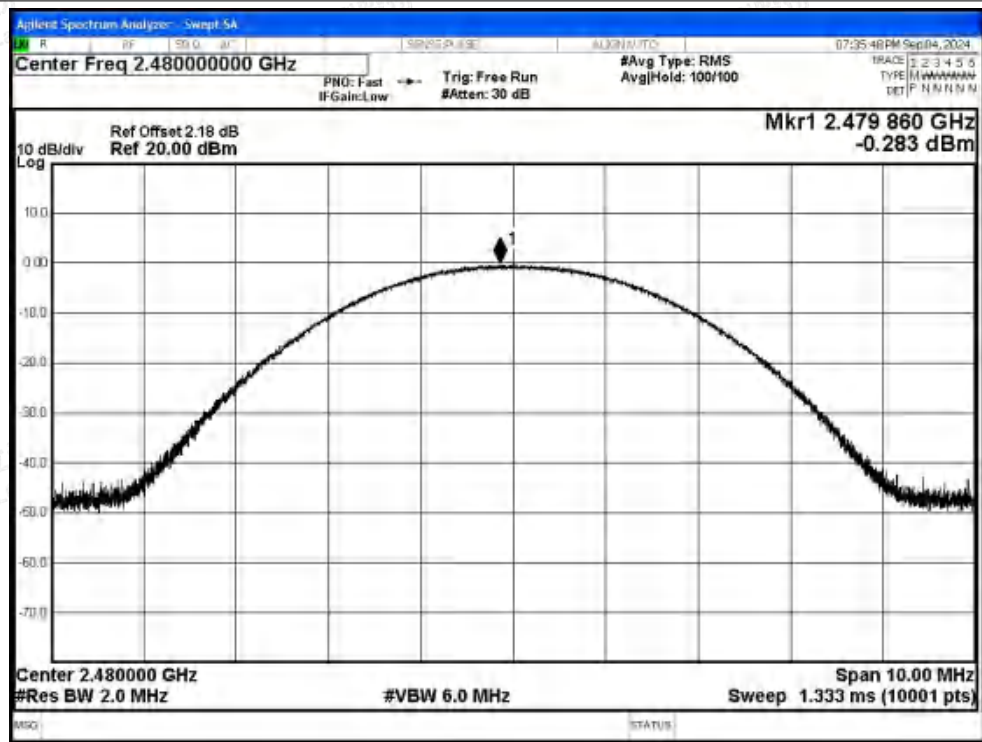




Power NVNT 2-DH5 2441MHz Ant1



Power NVNT 2-DH5 2480MHz Ant1





### A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.834	2402.834	1	0.633	Pass
NVNT	2-DH5	Ant1	2402.014	2403.03	1.016	0.866	Pass



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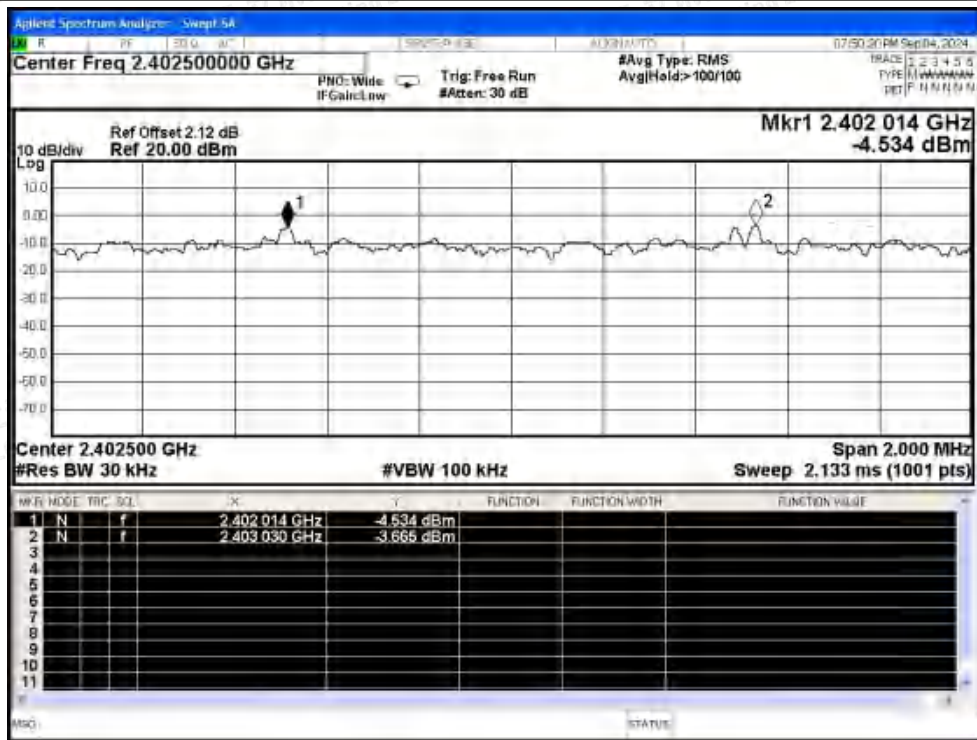


Test Graphs

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	2.91	325.92	112	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	284.004	98	31600	400	Pass

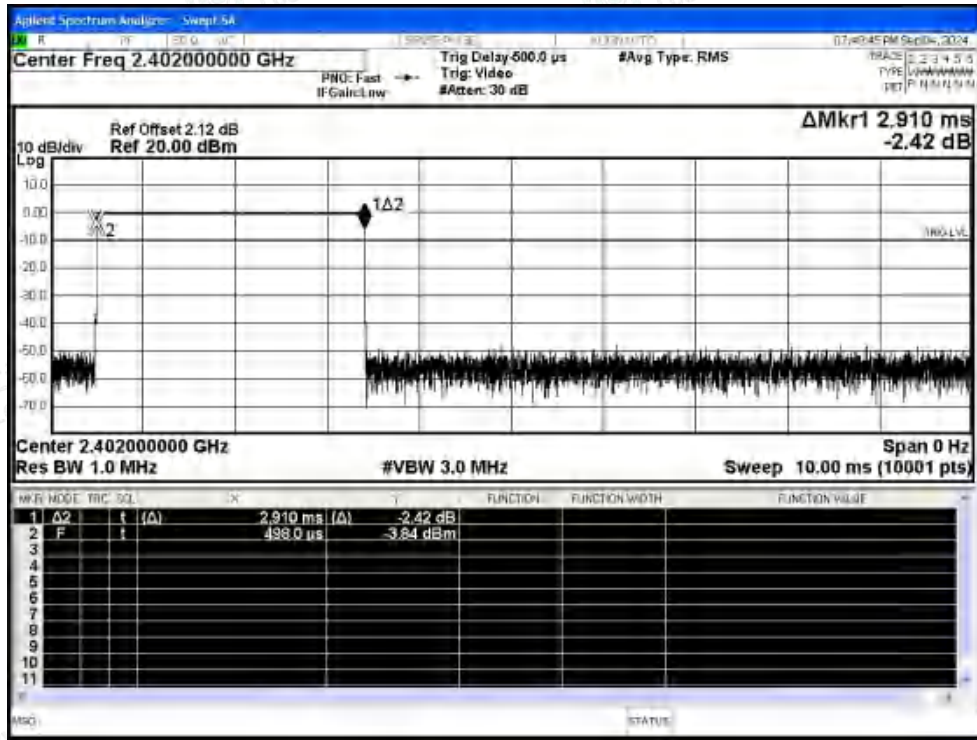


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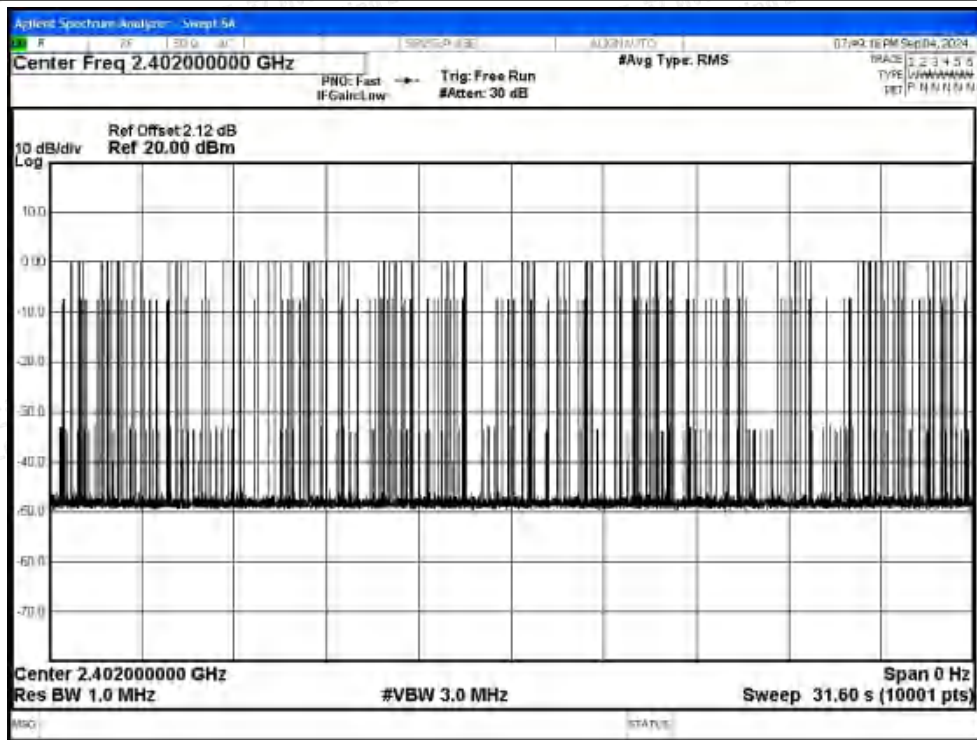


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



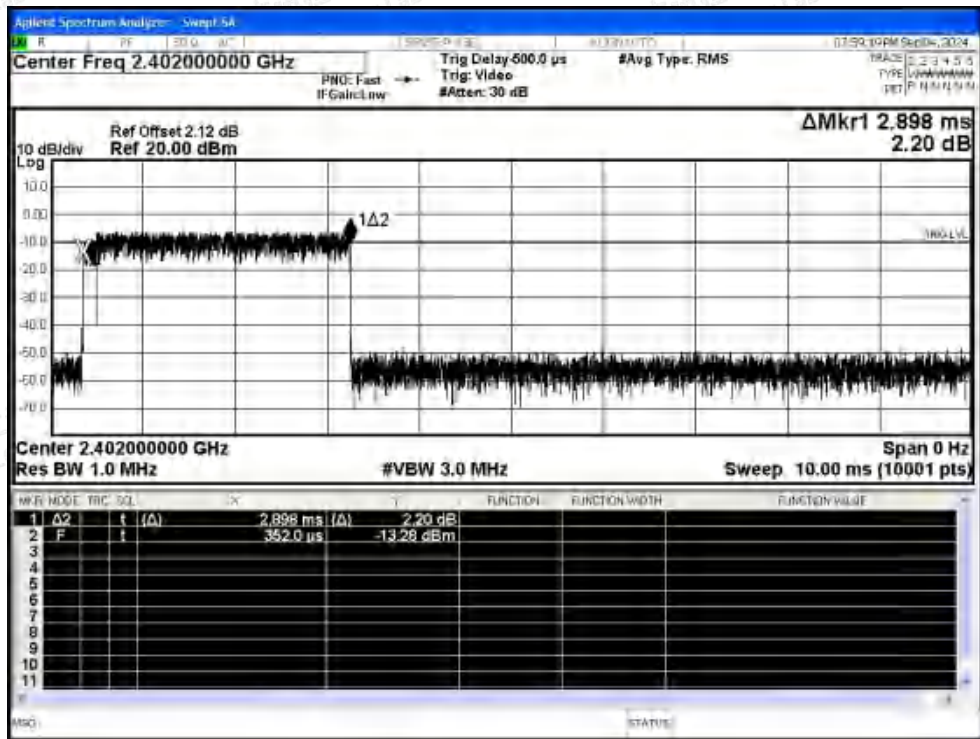
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



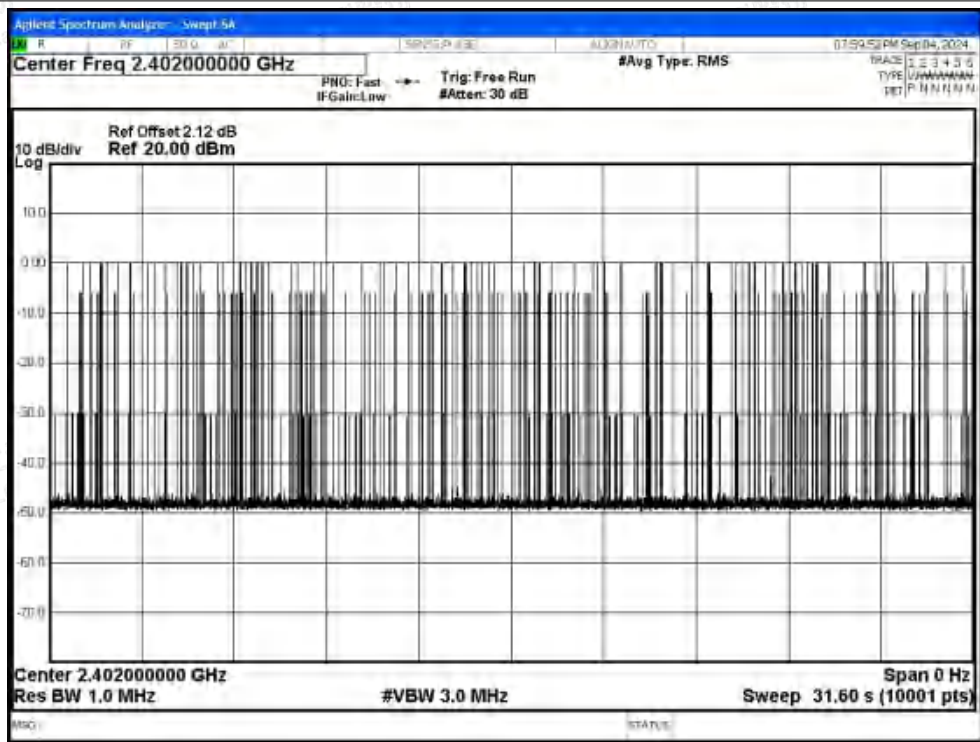




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated





## 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

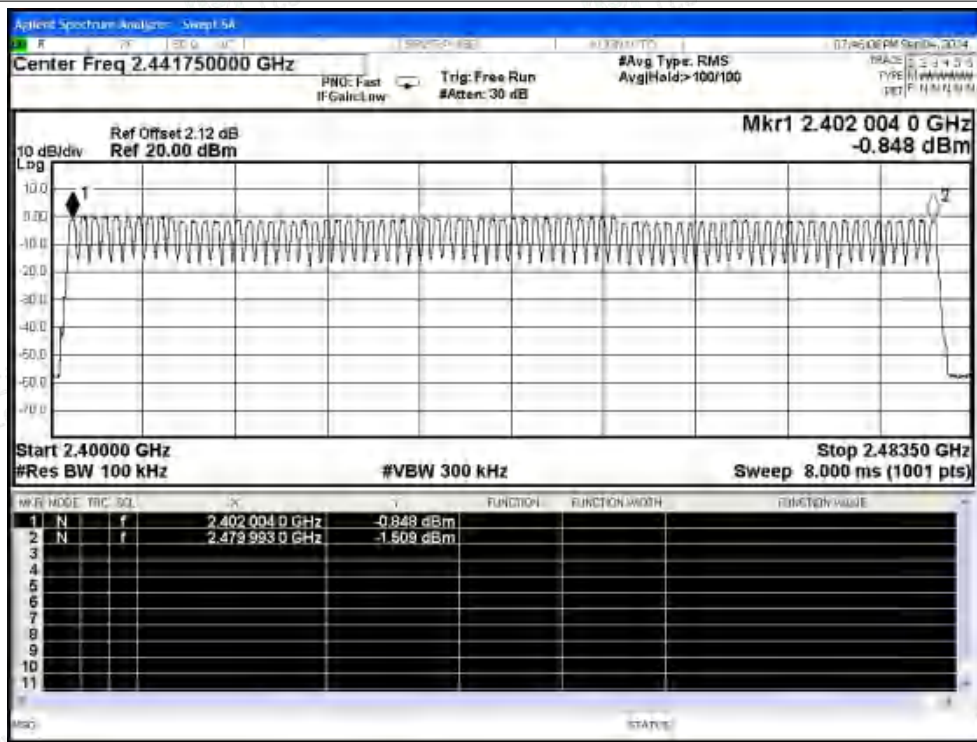


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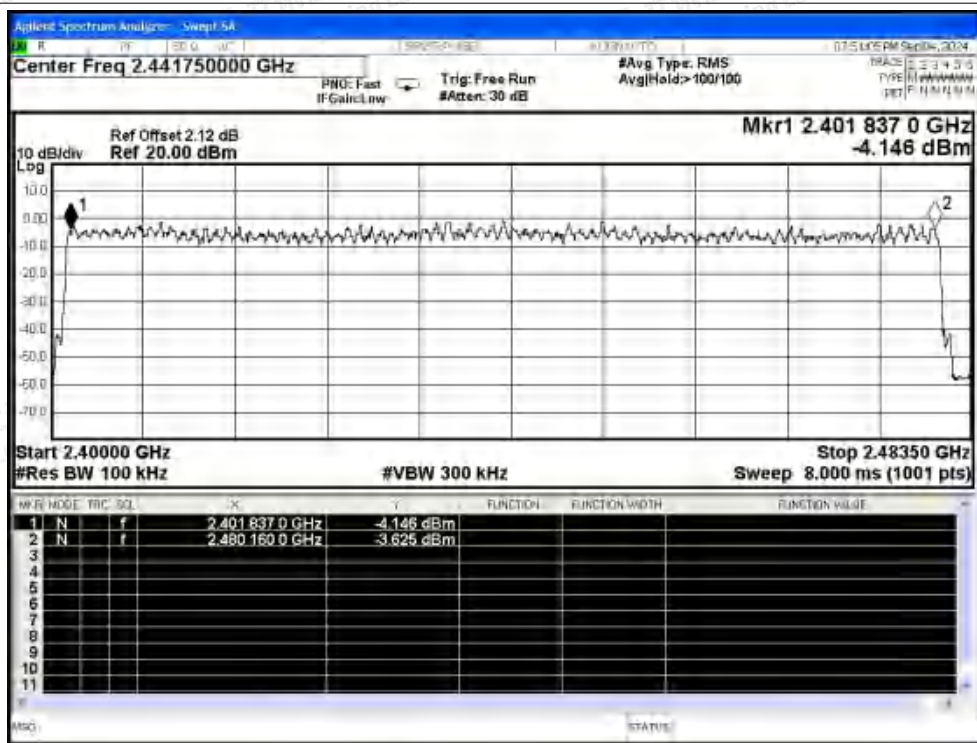


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-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	-56.63	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-55.79	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-54.98	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-54.85	-20	Pass

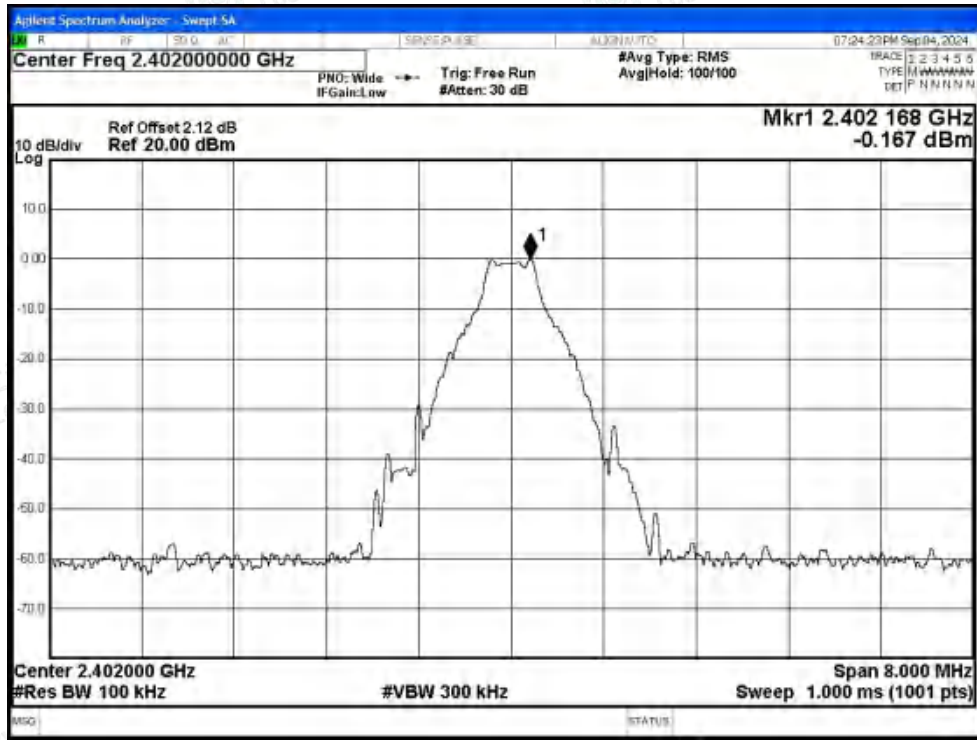


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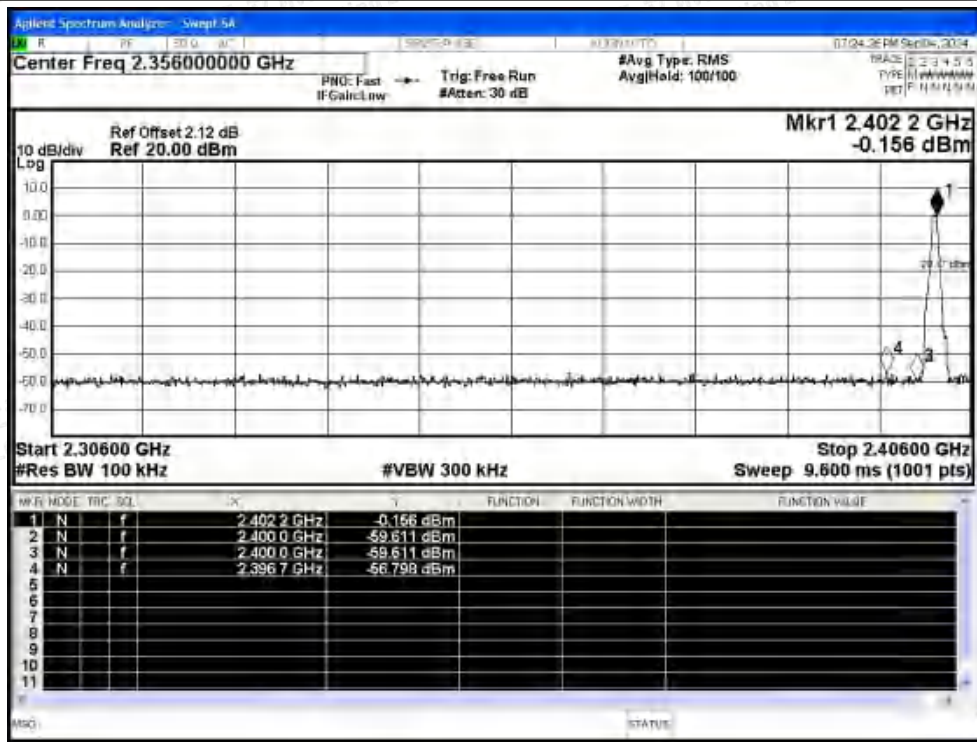


Test Graphs

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



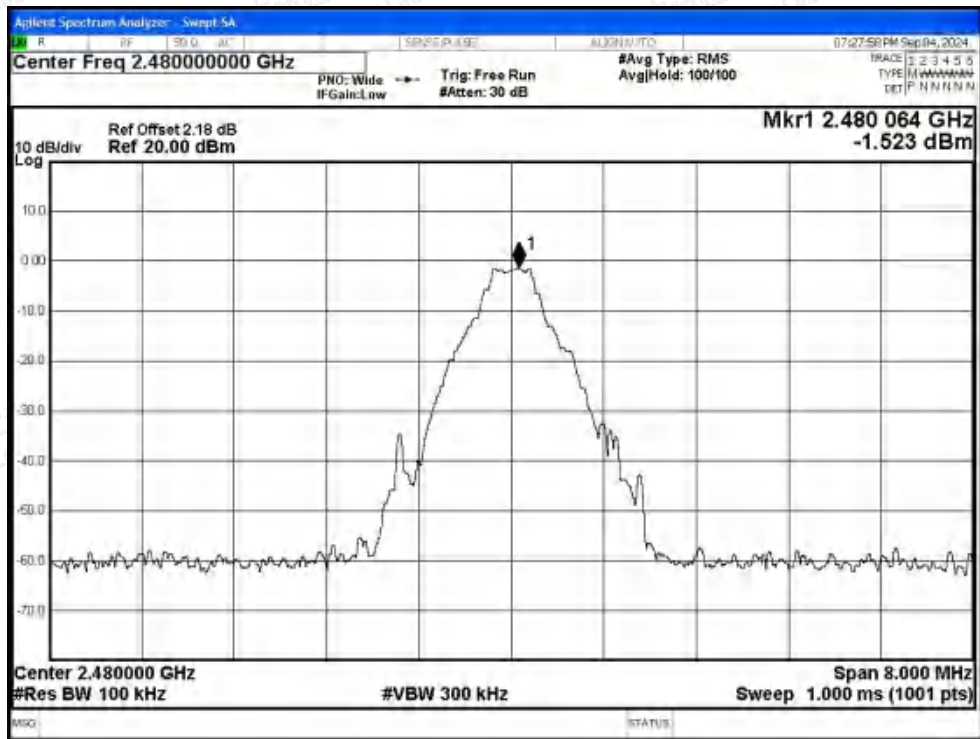
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



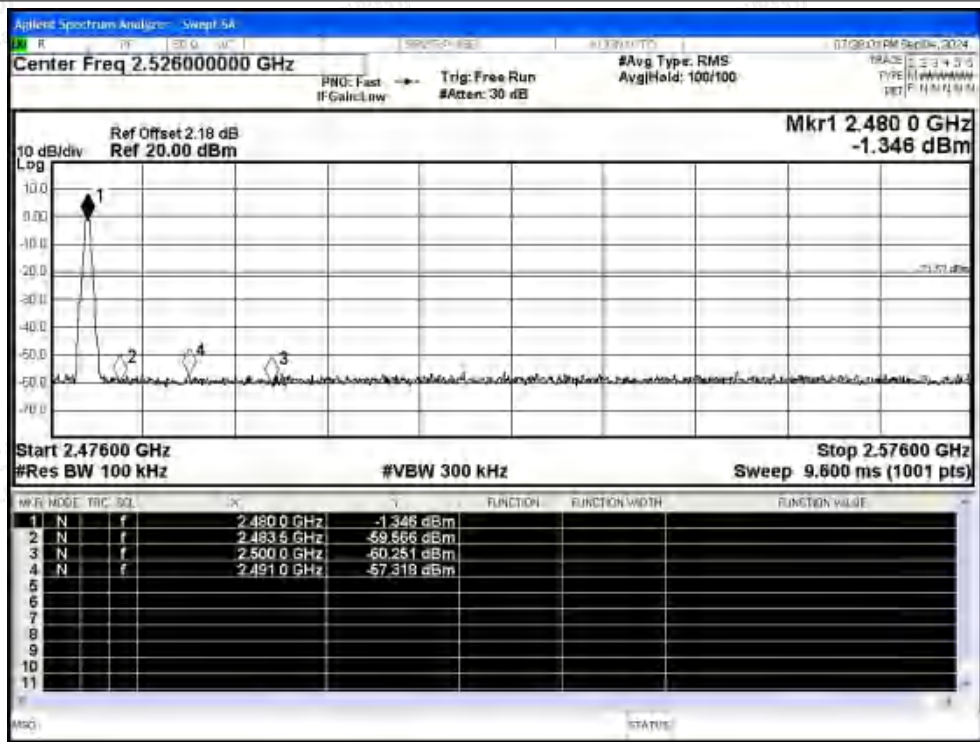




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

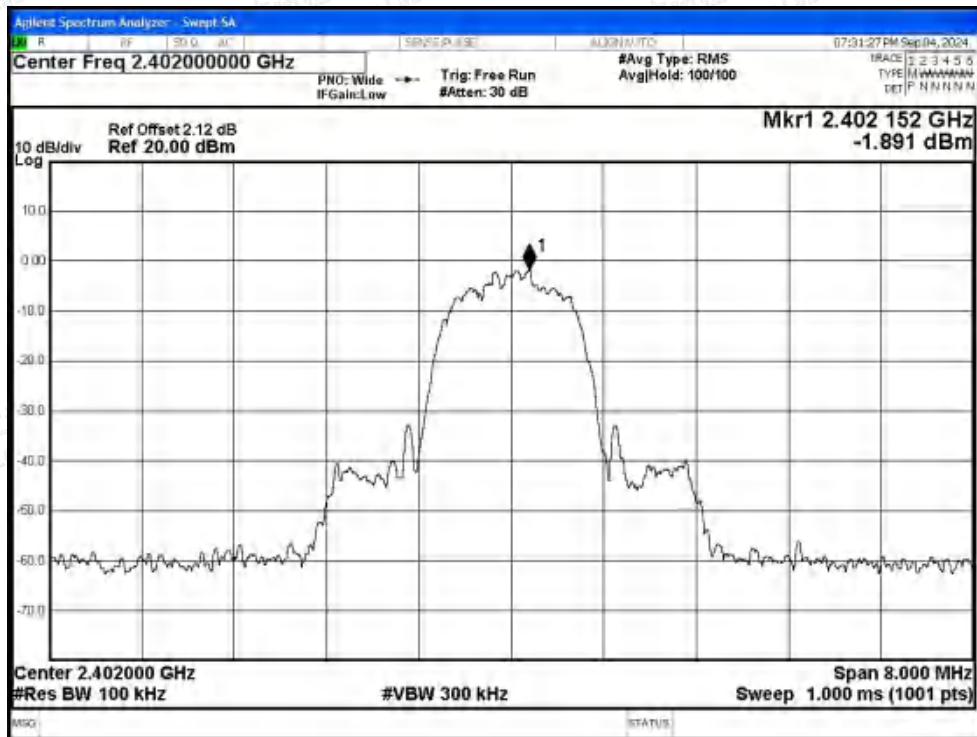


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

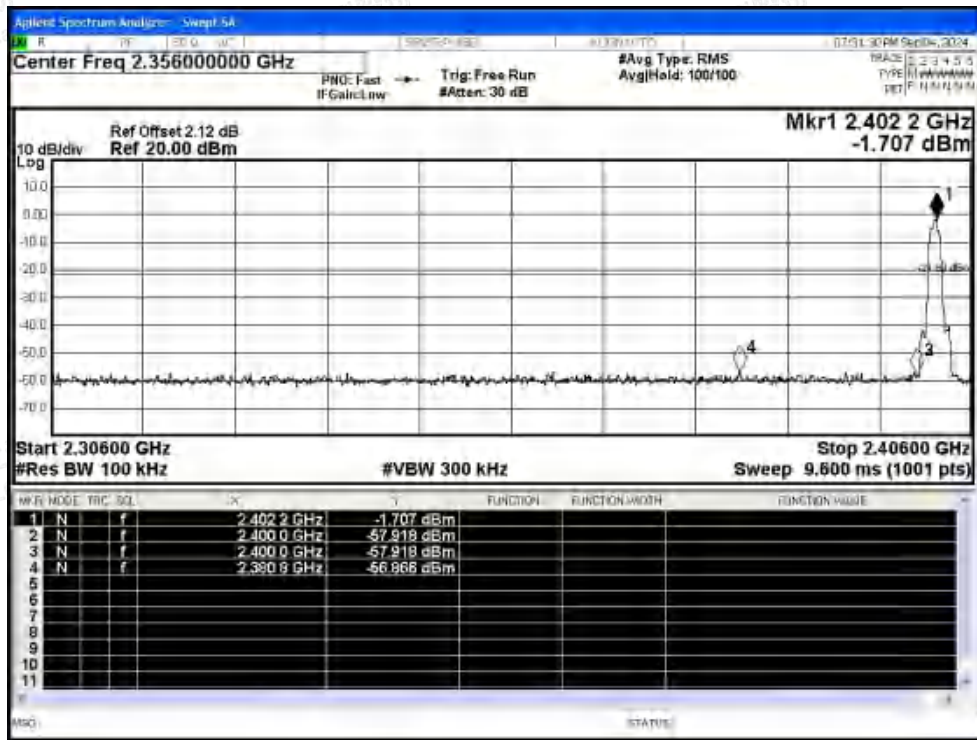




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

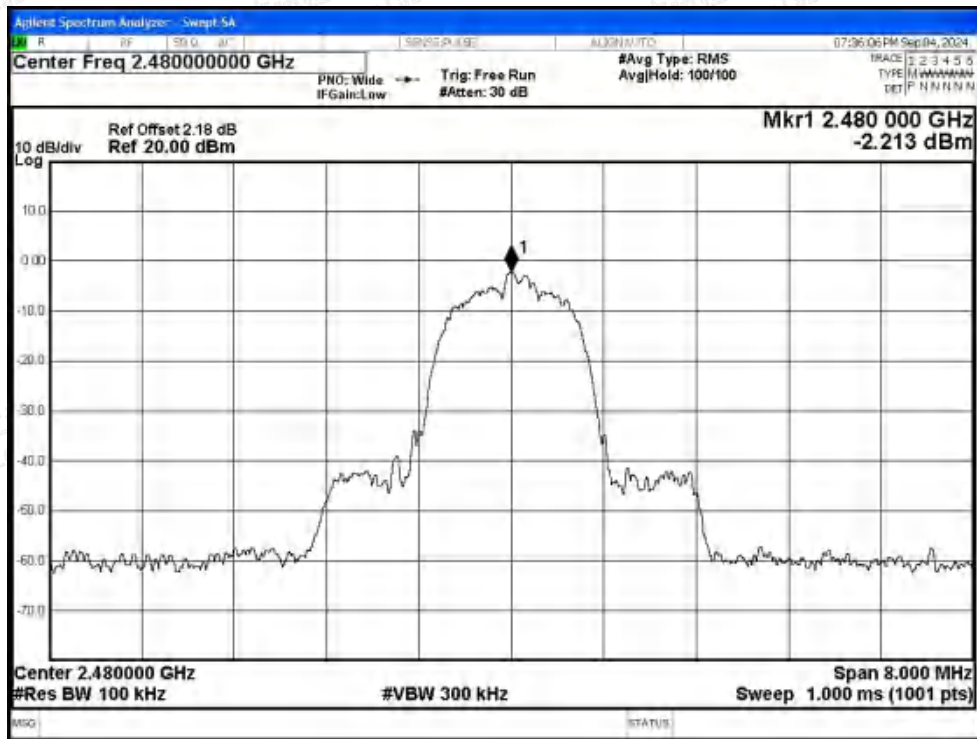


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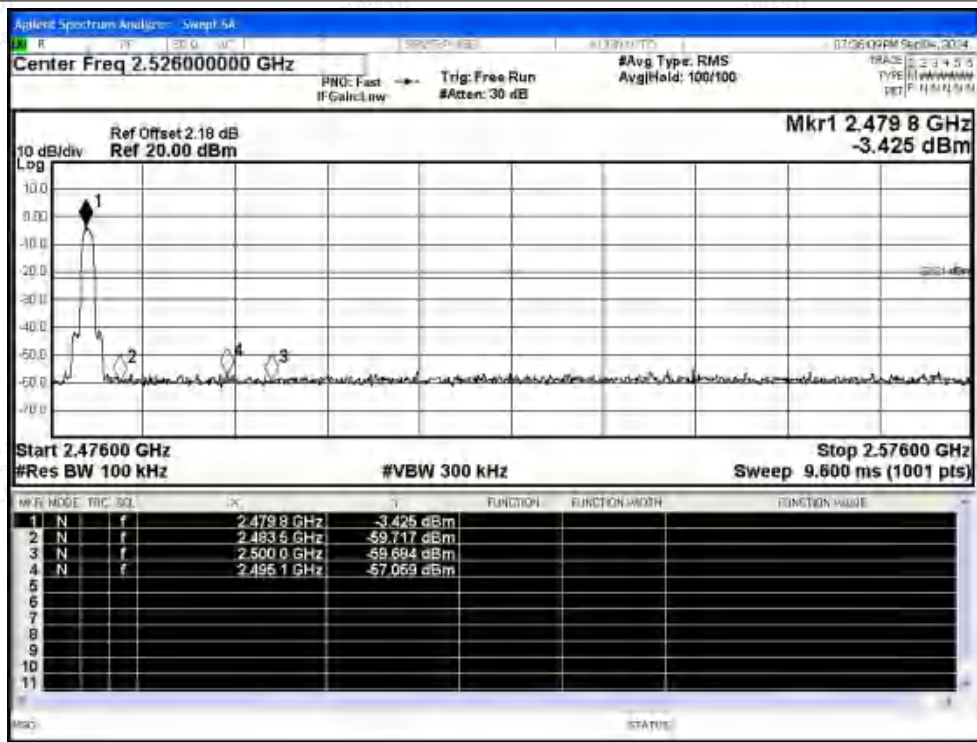




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 2-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	-55.82	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-54.31	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-54.78	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-51.88	-20	Pass



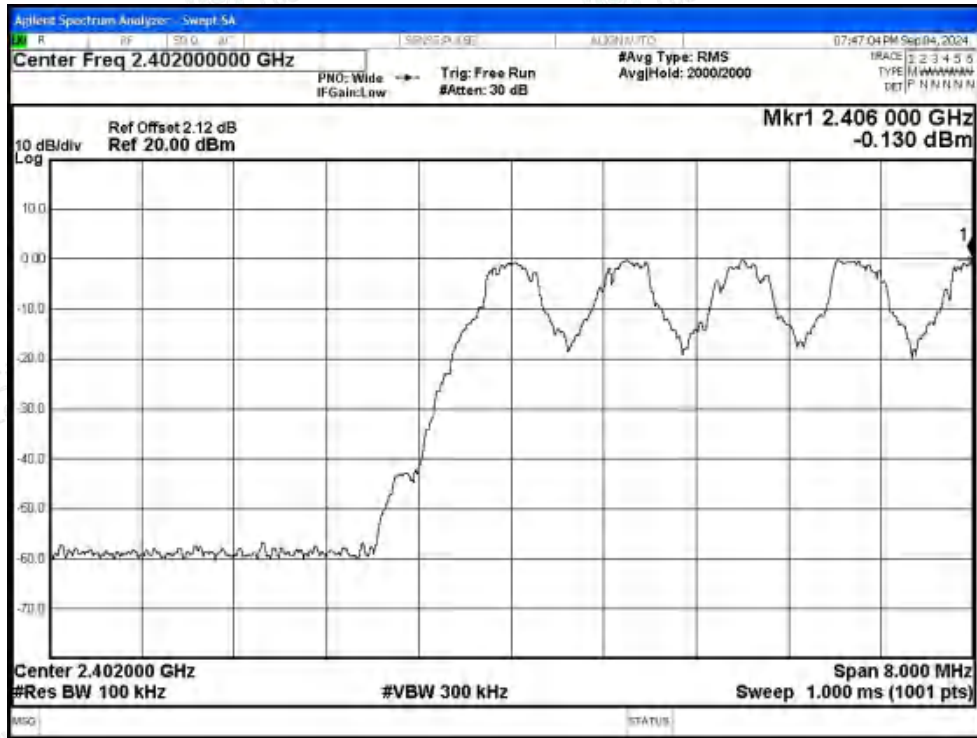
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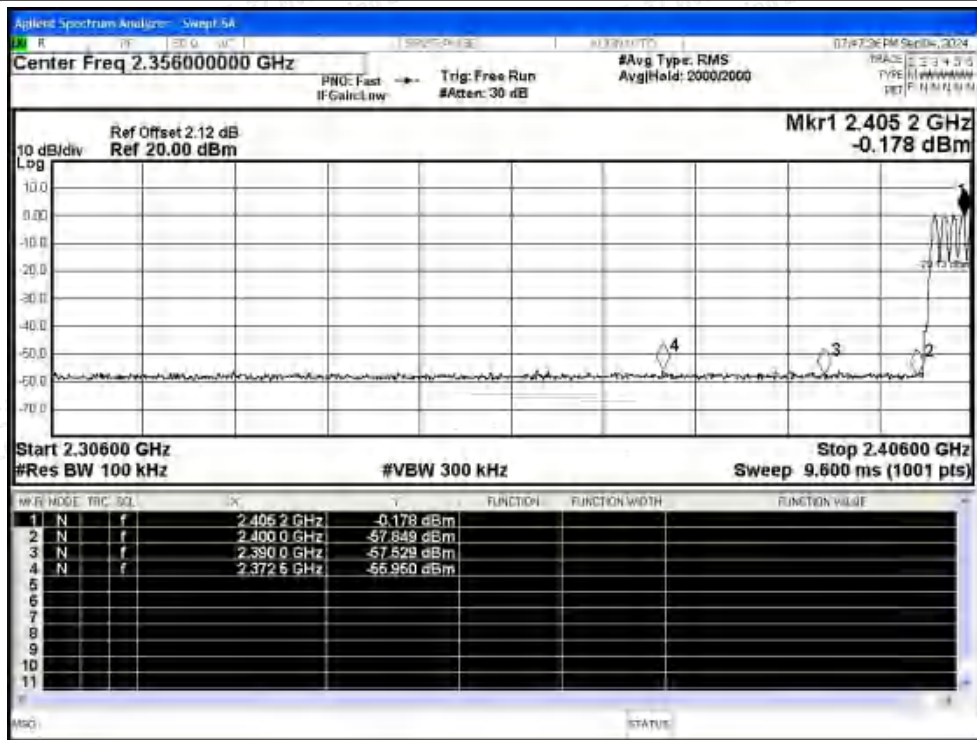


Test Graphs

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



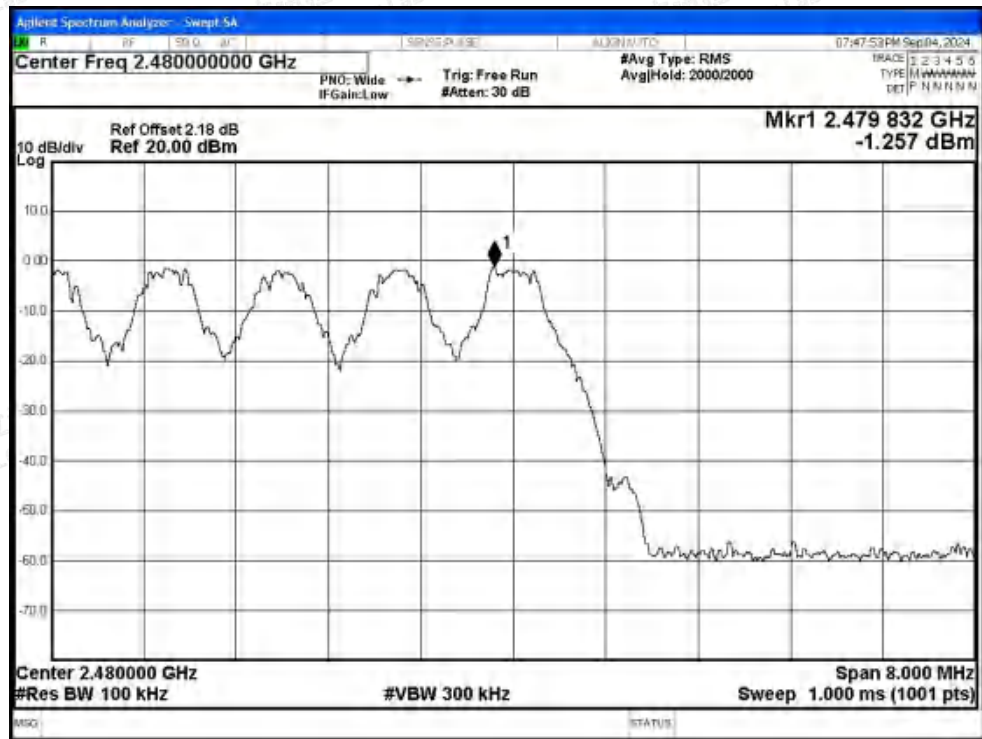
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



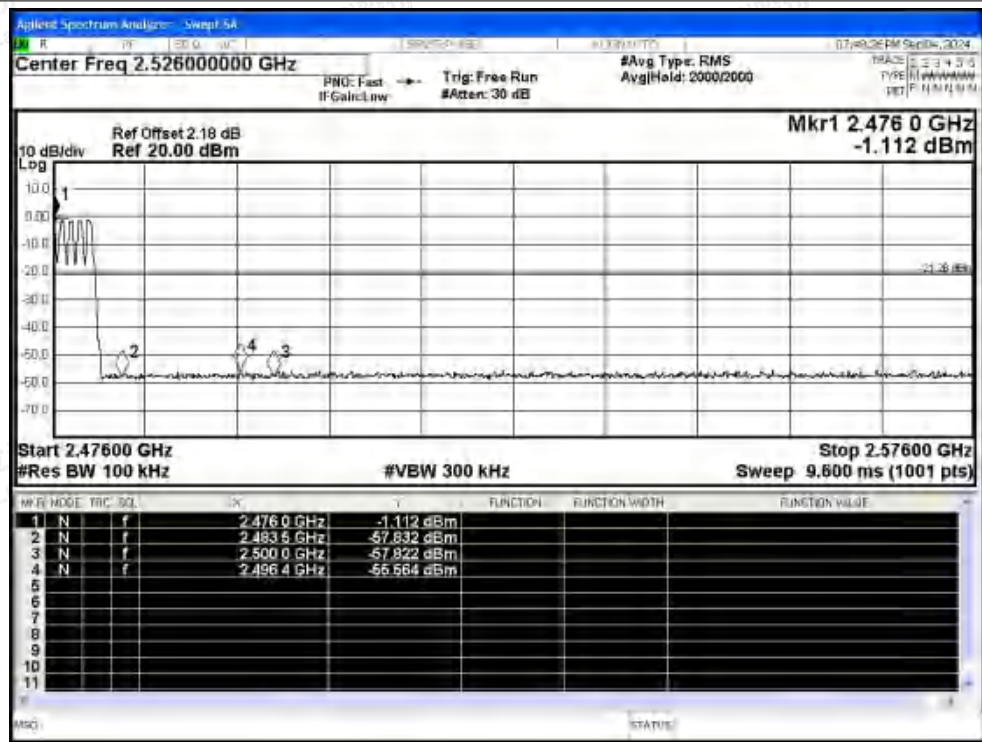




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



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

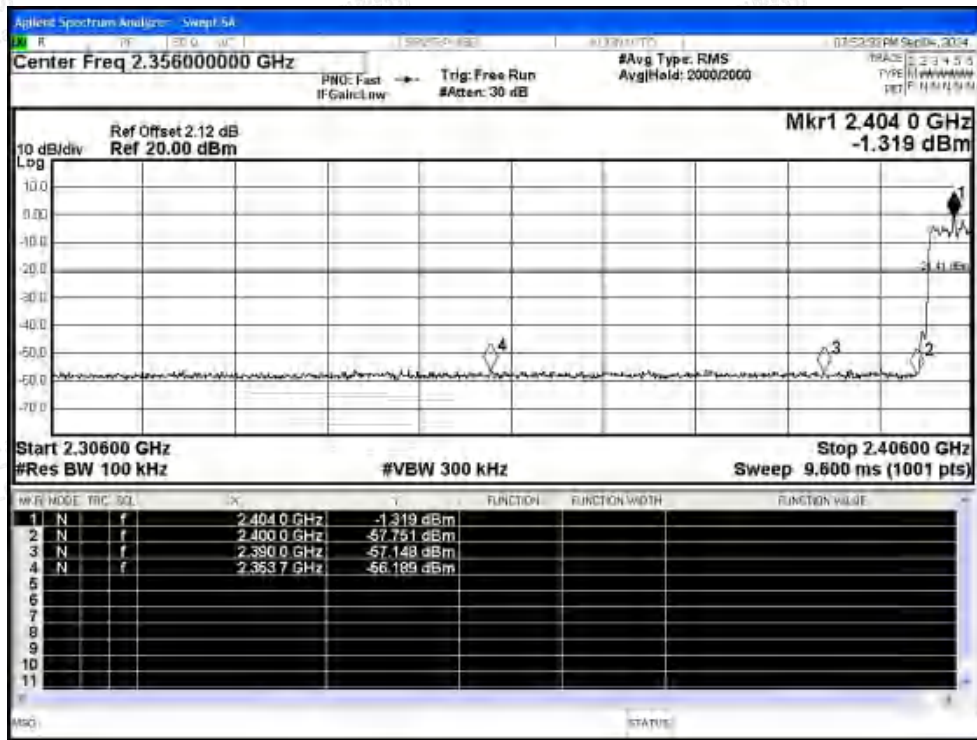




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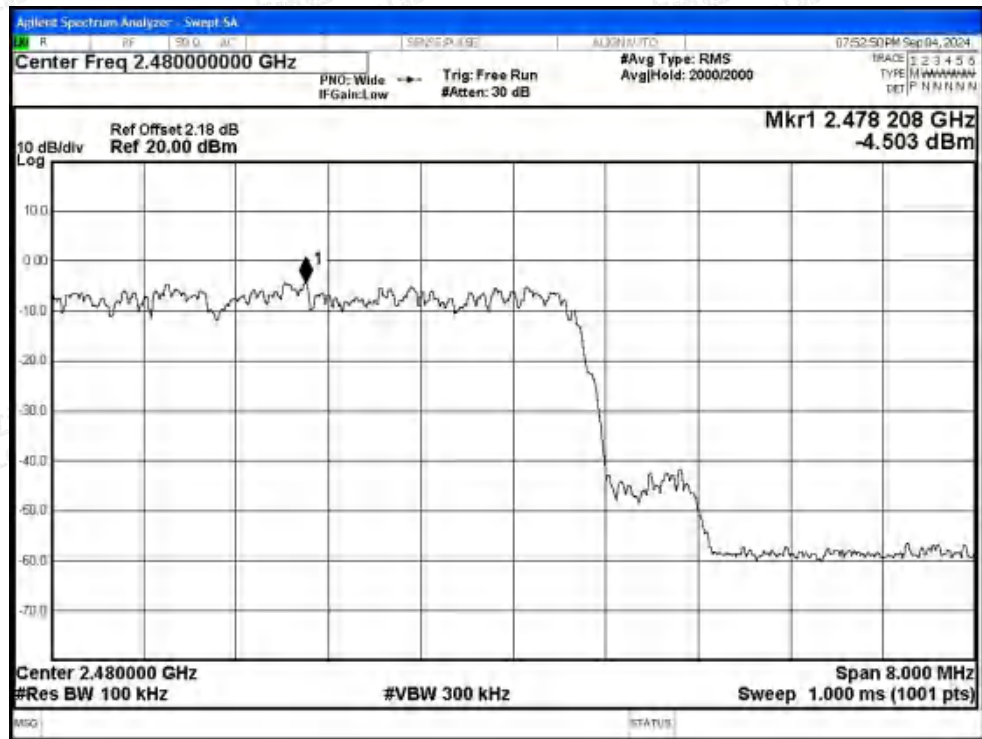


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

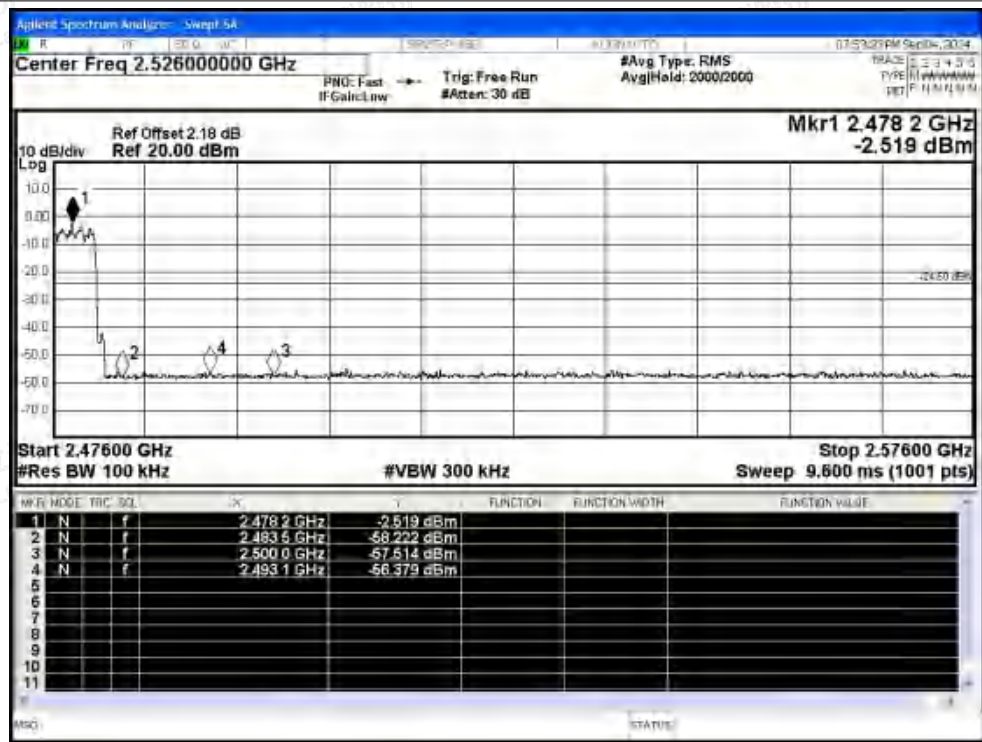




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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





## A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-55	-20	Pass
NVNT	1-DH5	2441	Ant1	-55.2	-20	Pass
NVNT	1-DH5	2480	Ant1	-54.21	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.67	-20	Pass
NVNT	2-DH5	2441	Ant1	-54.31	-20	Pass
NVNT	2-DH5	2480	Ant1	-51.34	-20	Pass



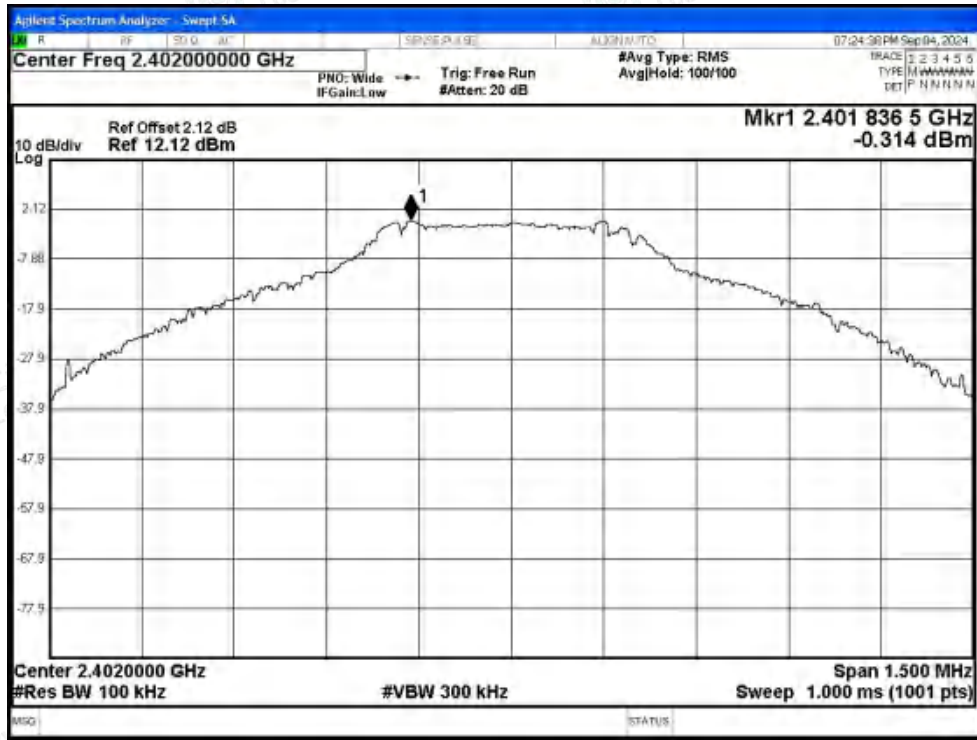
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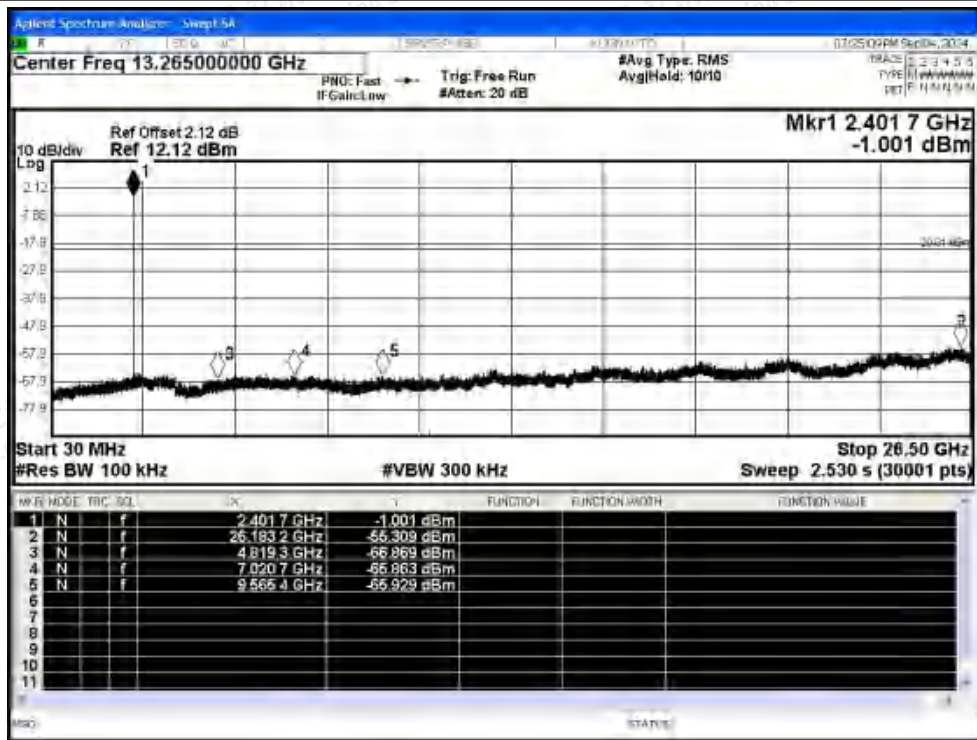


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



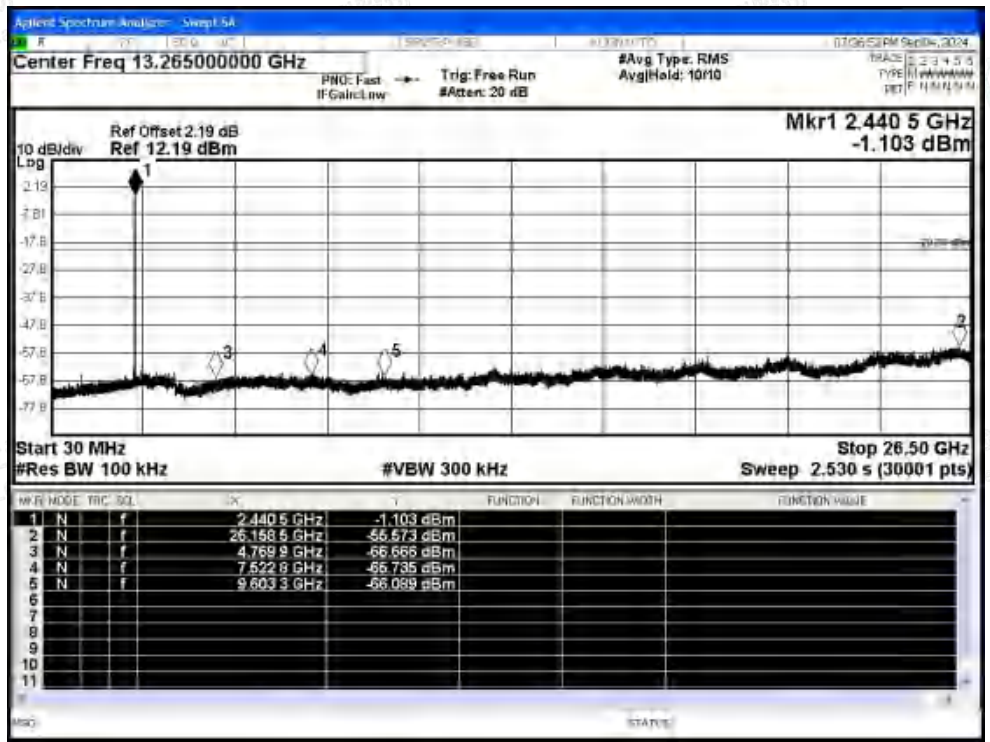


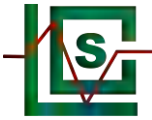


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

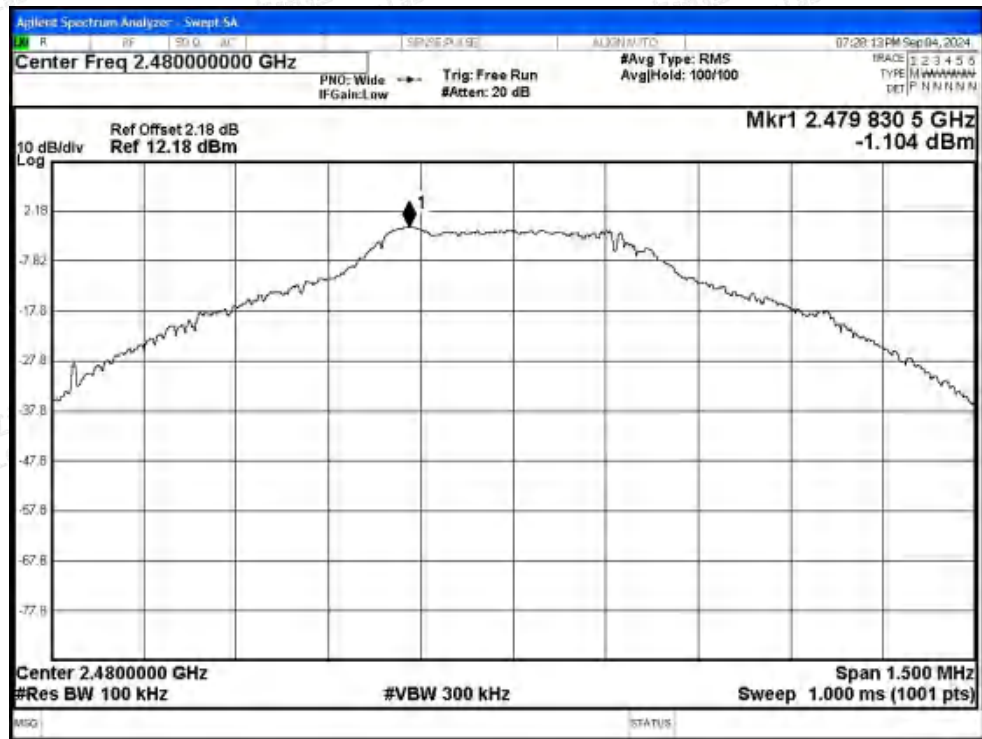


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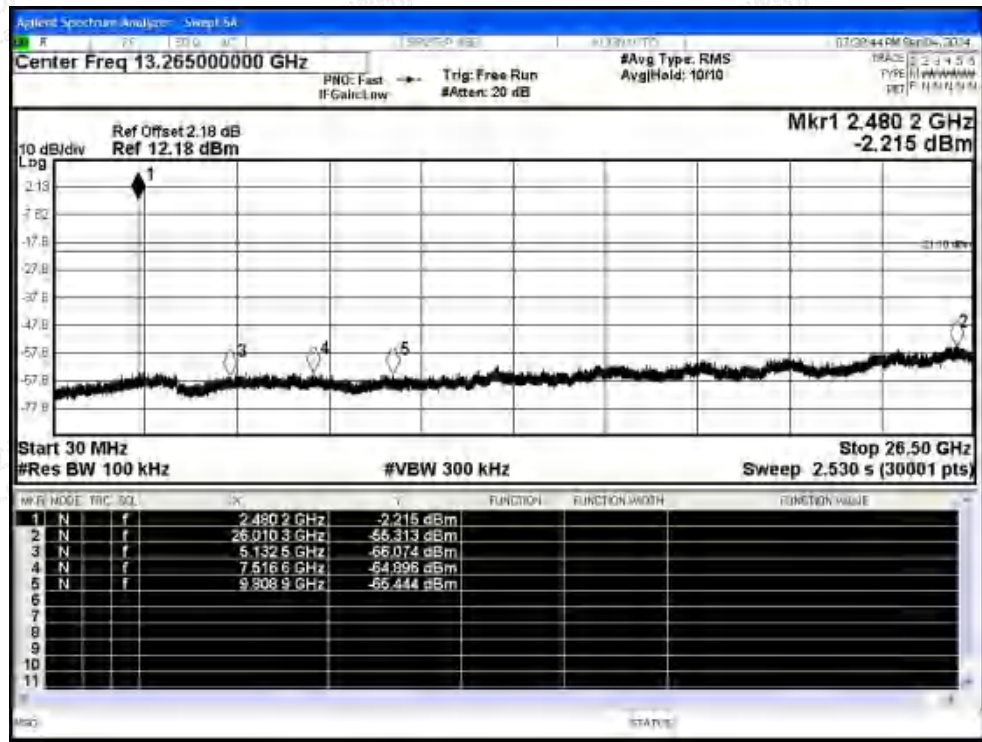




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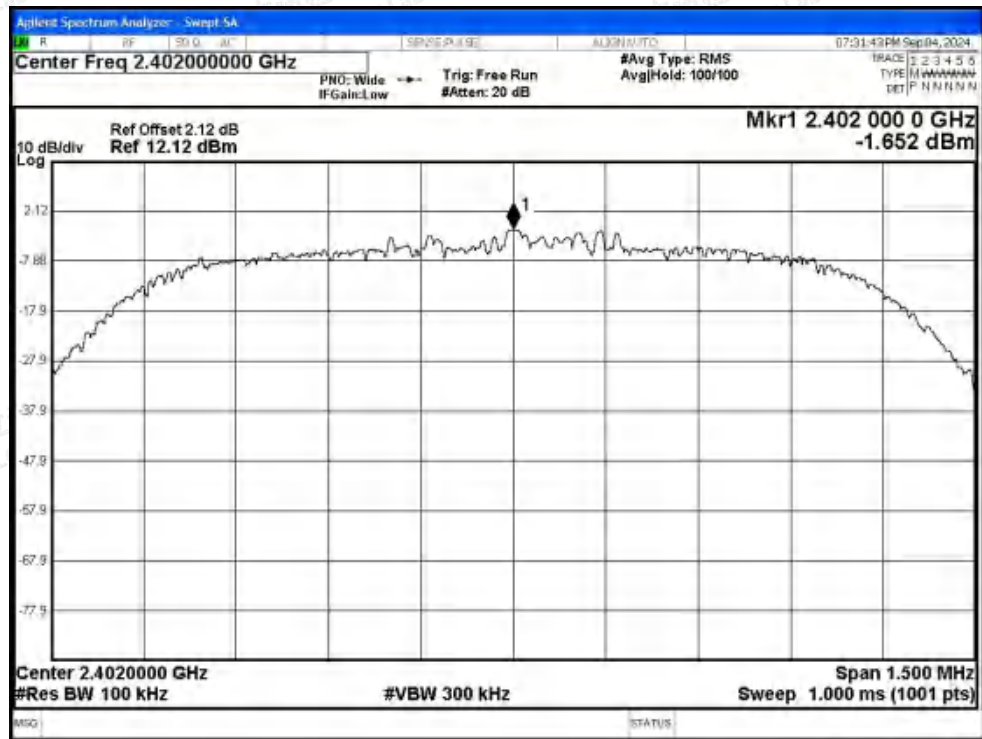


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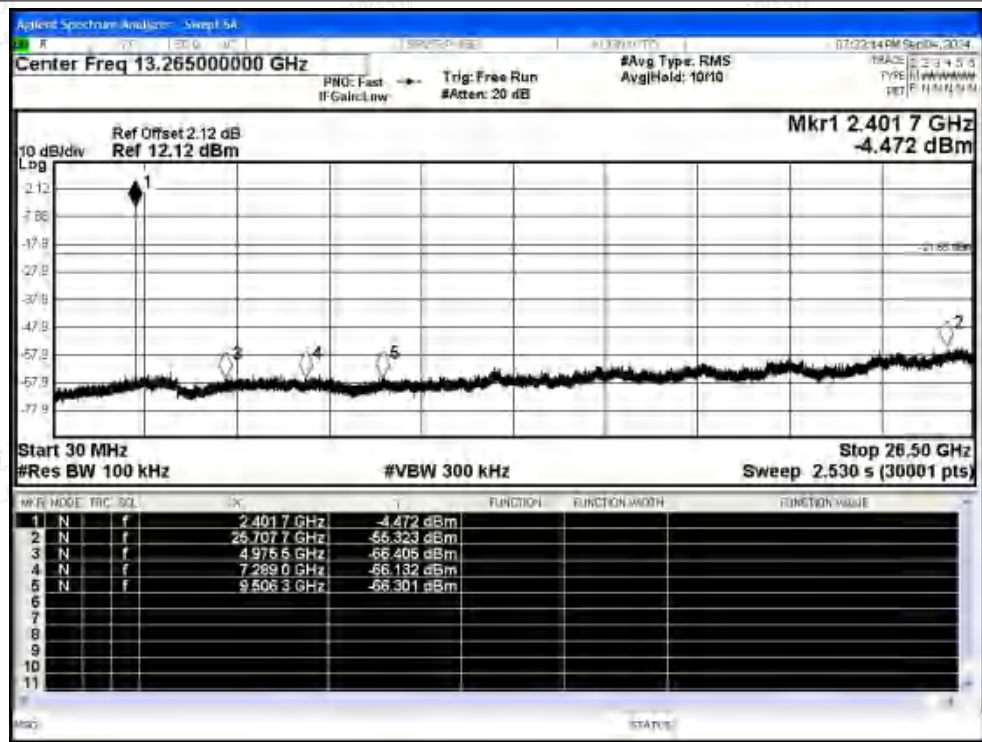




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

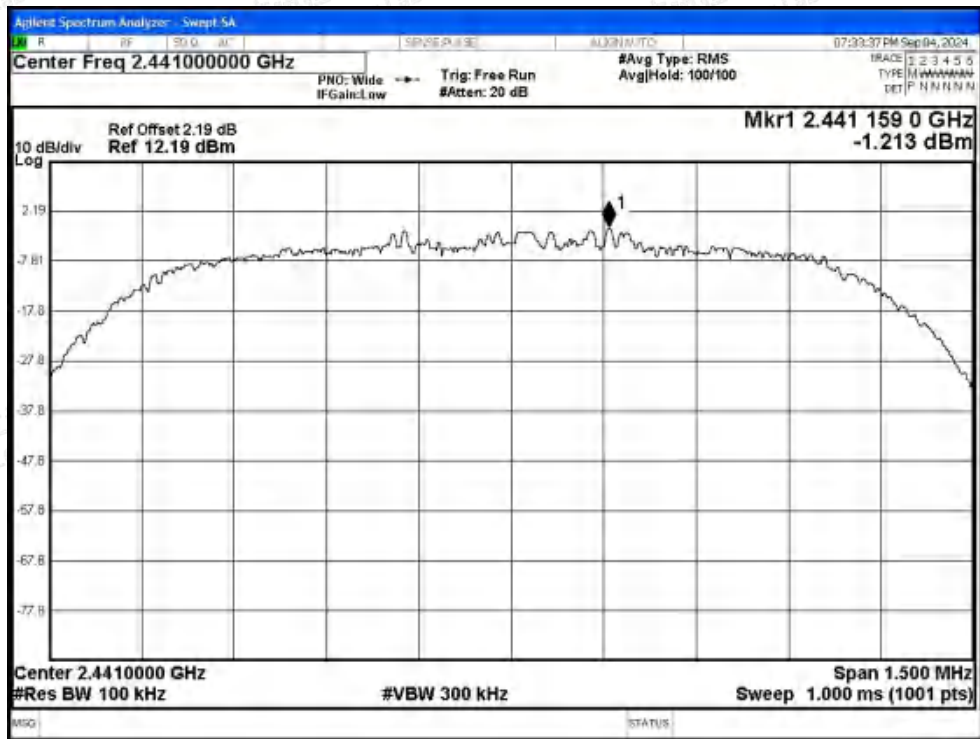


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

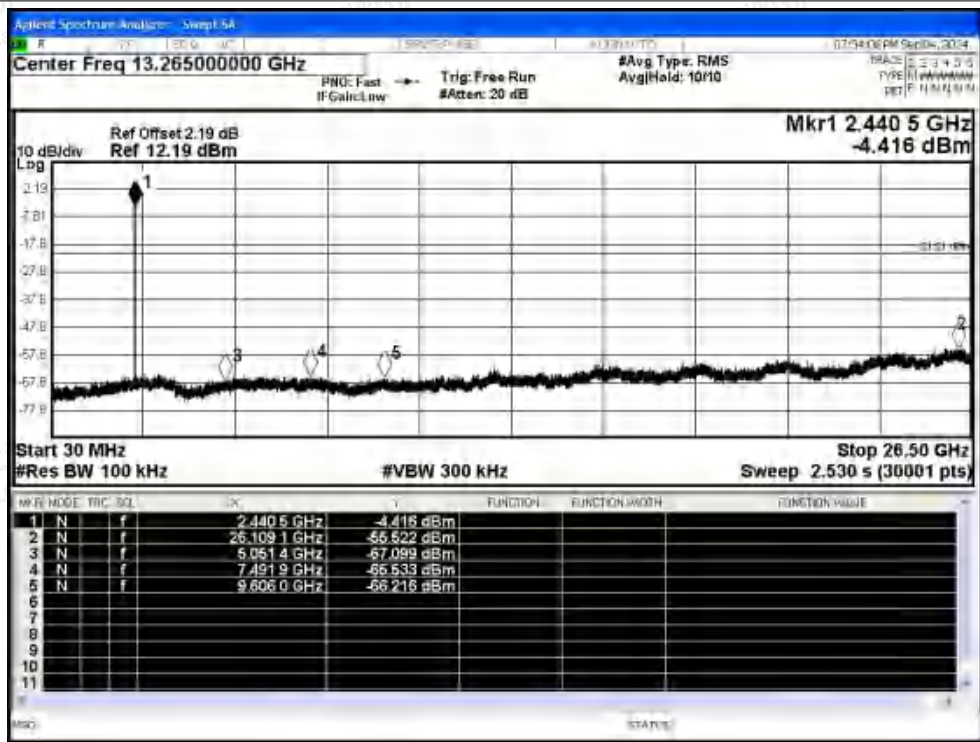




Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



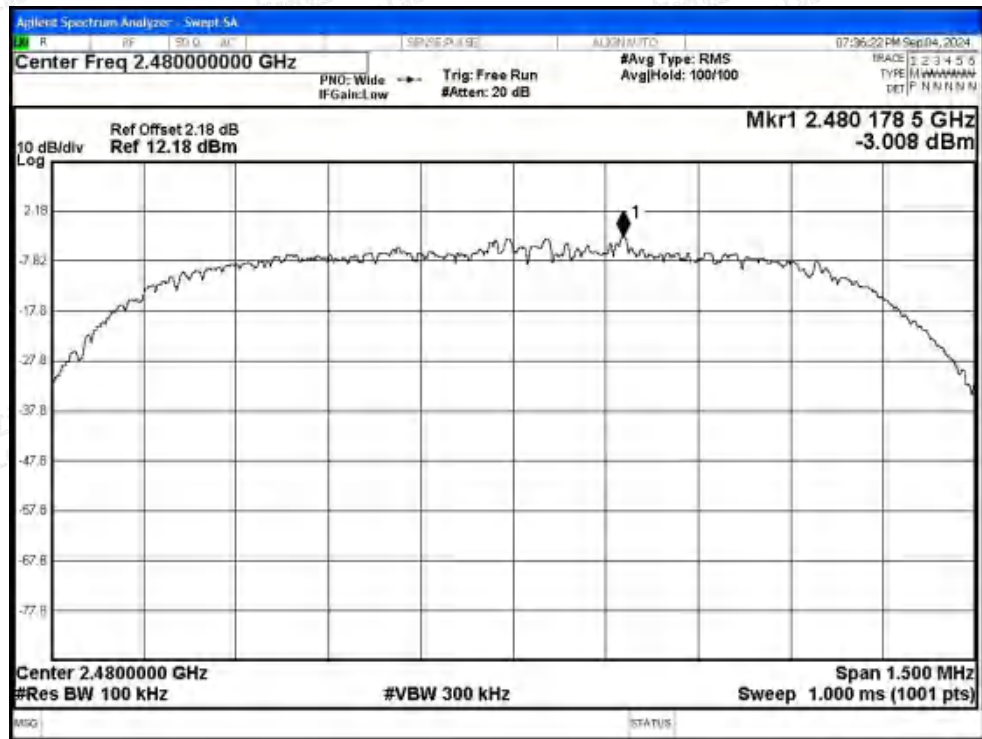
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



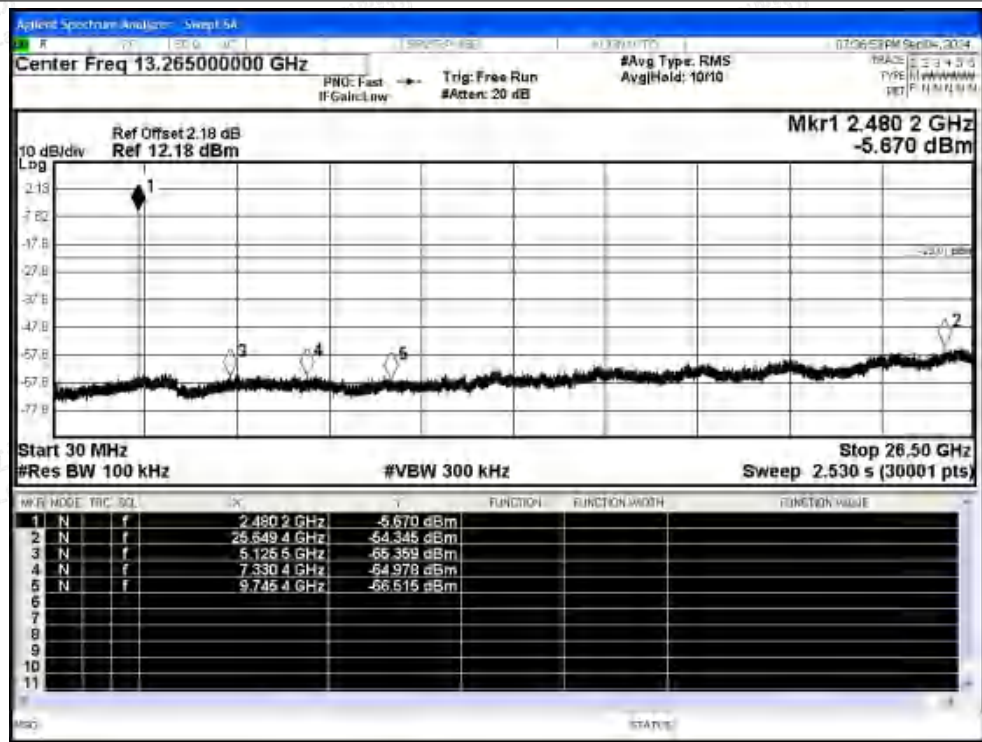




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-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	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35

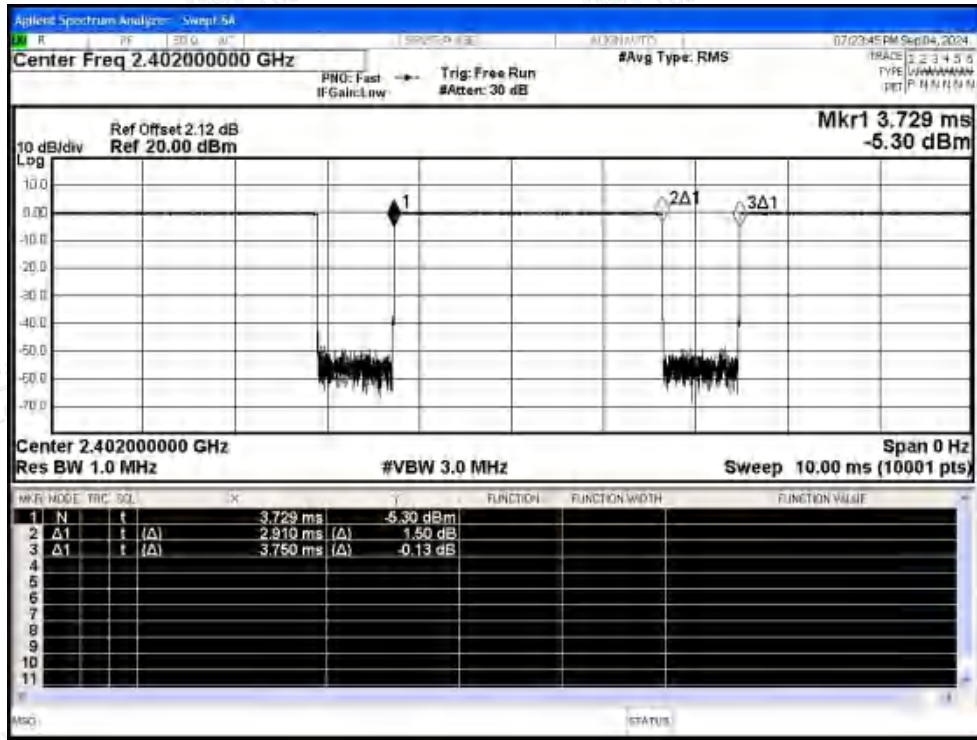


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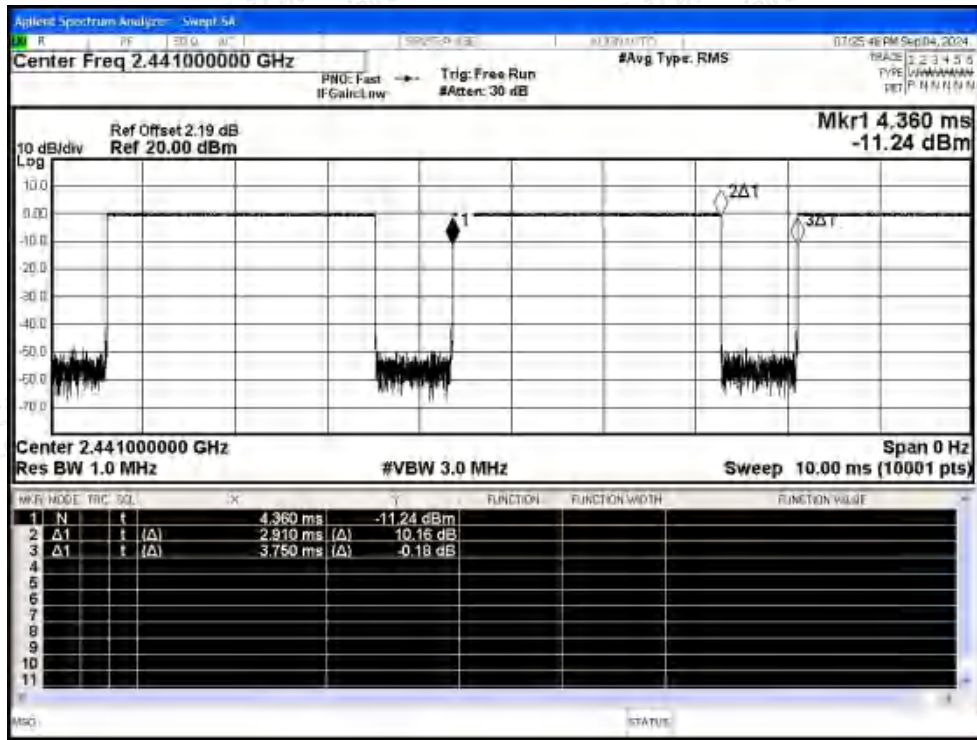


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant1

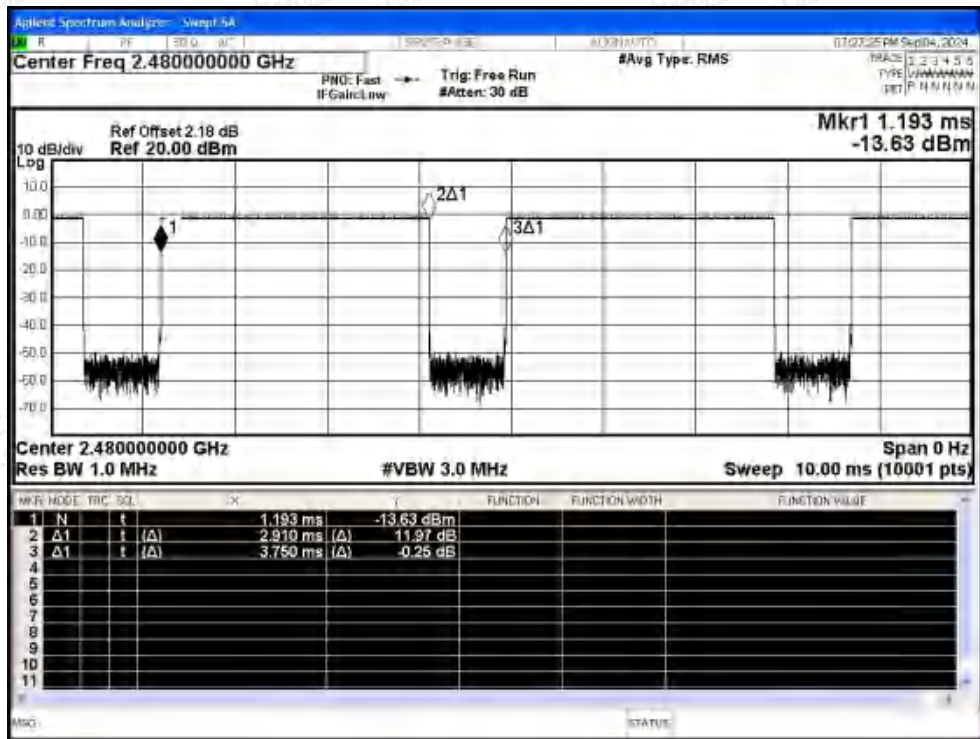


Duty Cycle NVNT 1-DH5 2441MHz Ant1

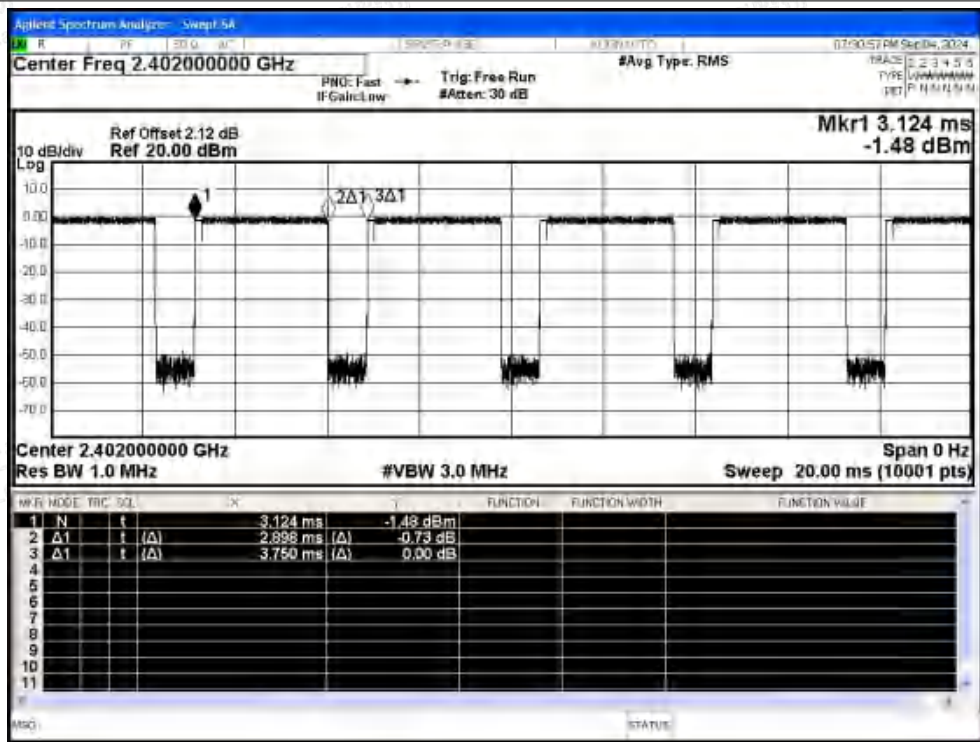




Duty Cycle NVNT 1-DH5 2480MHz Ant1

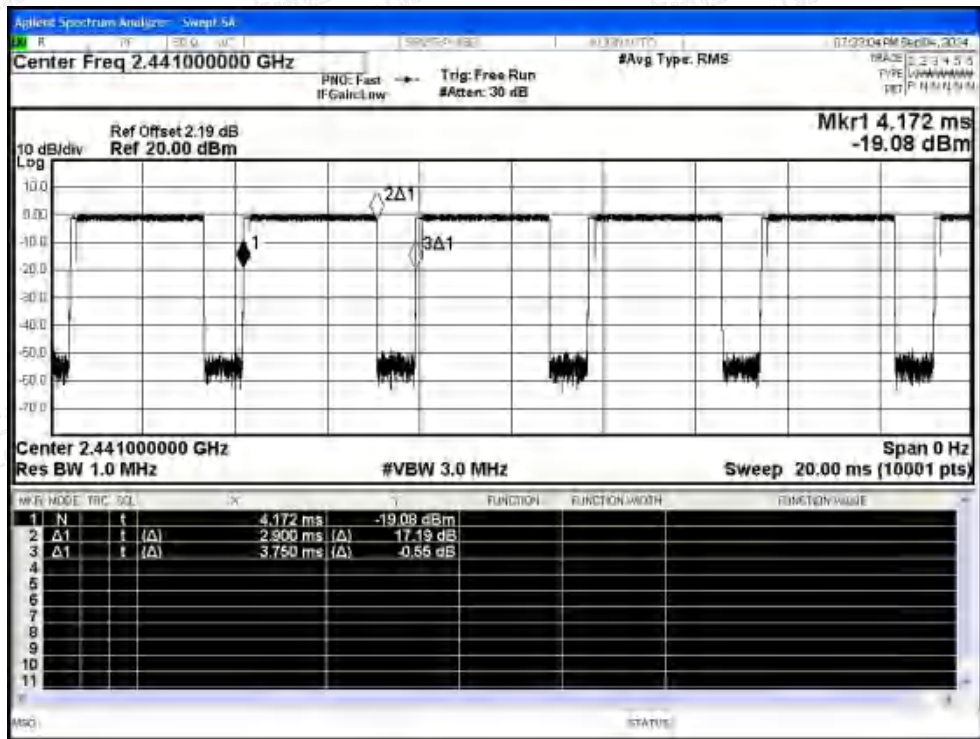


Duty Cycle NVNT 2-DH5 2402MHz Ant1

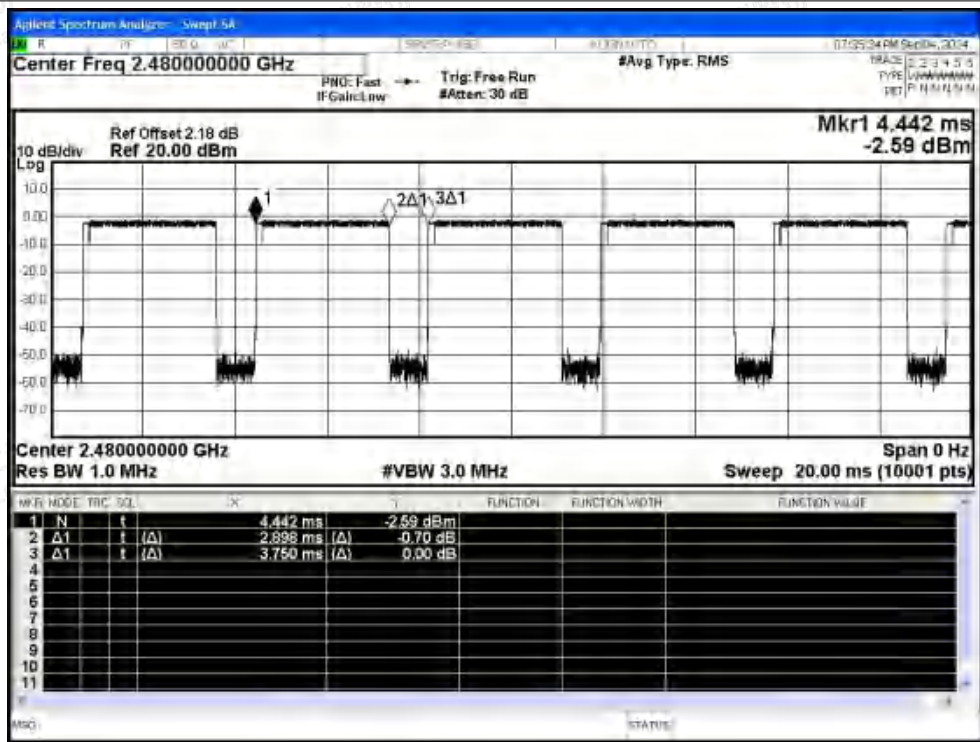




Duty Cycle NVNT 2-DH5 2441MHz Ant1



Duty Cycle NVNT 2-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	-50.55	2	-	46.71	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.48	2	1.1	39.88	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2379.984	-47.67	2	-	49.59	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2387.568	-57.56	2	1.1	40.8	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-51.21	2	-	46.05	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.7	2	1.1	39.66	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.92	2	-	47.34	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.75	2	1.1	40.61	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2487.352	-47.12	2	-	50.14	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2496.784	-57.1	2	1.1	41.26	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-50.75	2	-	46.51	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-58.13	2	1.1	40.23	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-49.06	2	-	48.2	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58	2	1.12	40.38	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2328.624	-47.61	2	-	49.65	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2376.912	-57.58	2	1.12	40.8	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.51	2	-	47.75	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-58.61	2	1.12	39.77	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.53	2	-	47.73	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.5	2	1.12	40.88	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2487.184	-47.23	2	-	50.03	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.136	-56.79	2	1.12	41.59	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-50.01	2	-	47.25	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.87	2	1.12	40.51	Average	54	Pass



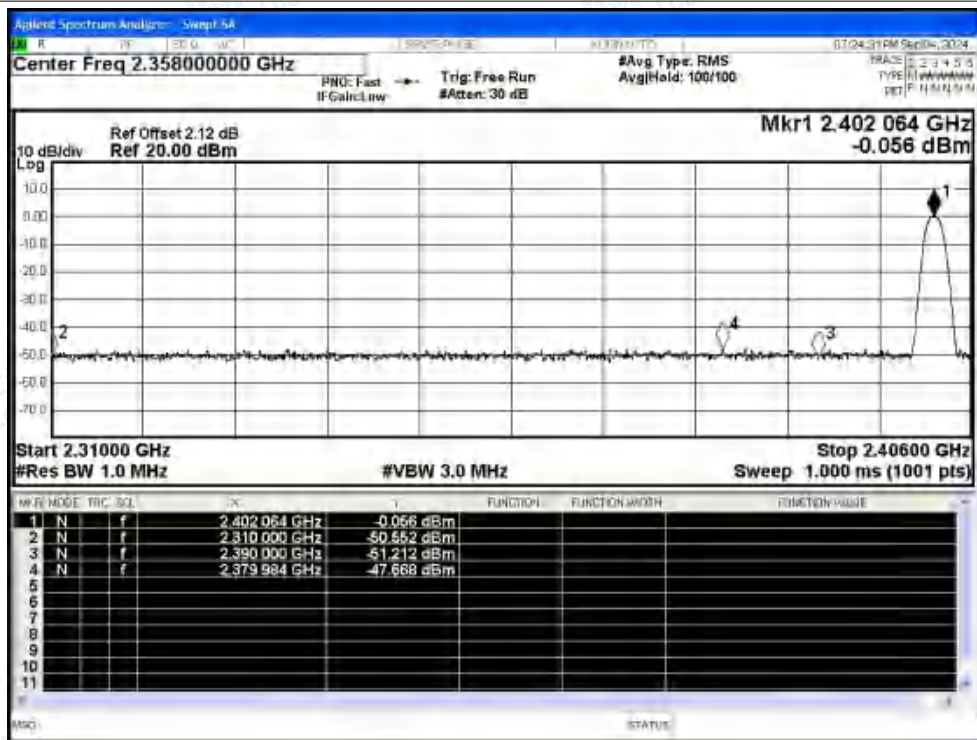
Shenzhen LCS Compliance Testing Laboratory Ltd.  
 Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China  
 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com  
 Scan code to check authenticity



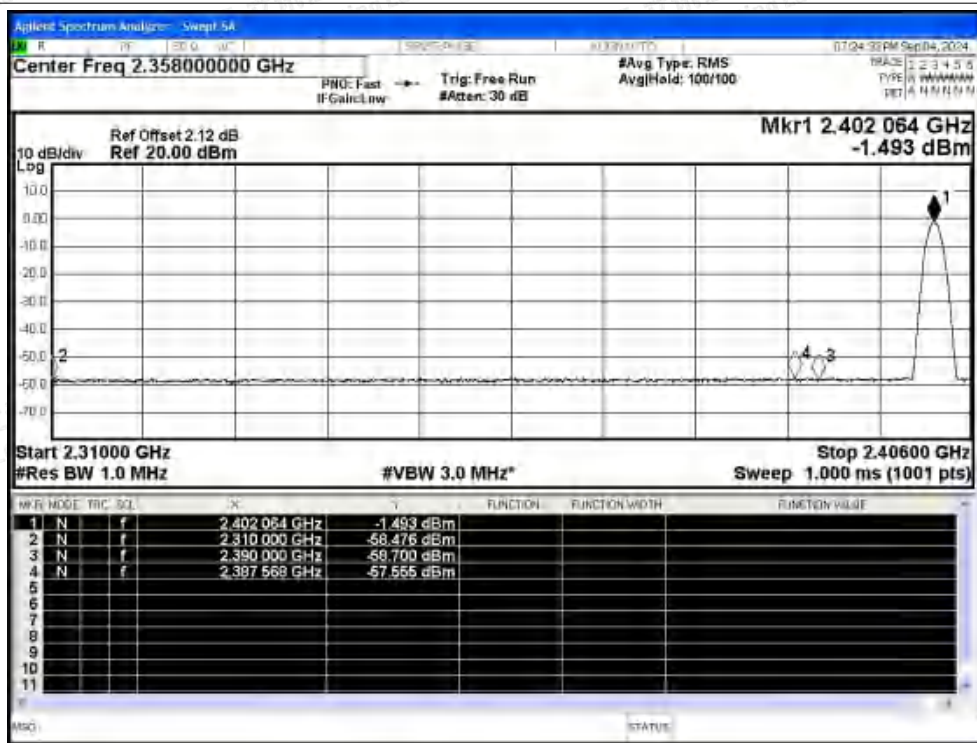


Test Graphs

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

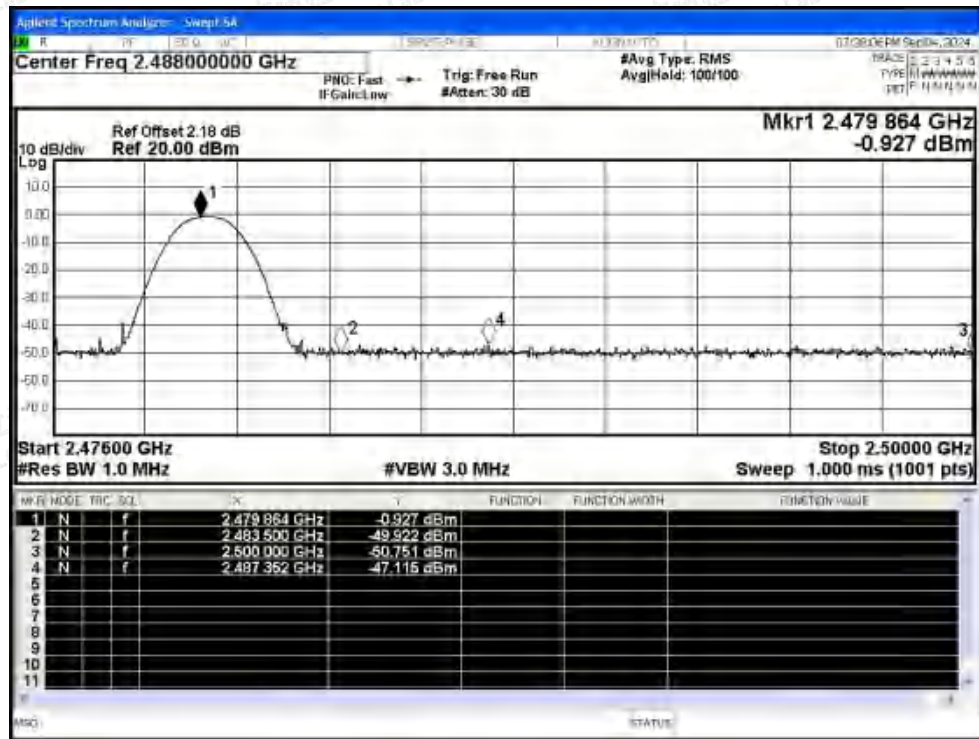


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

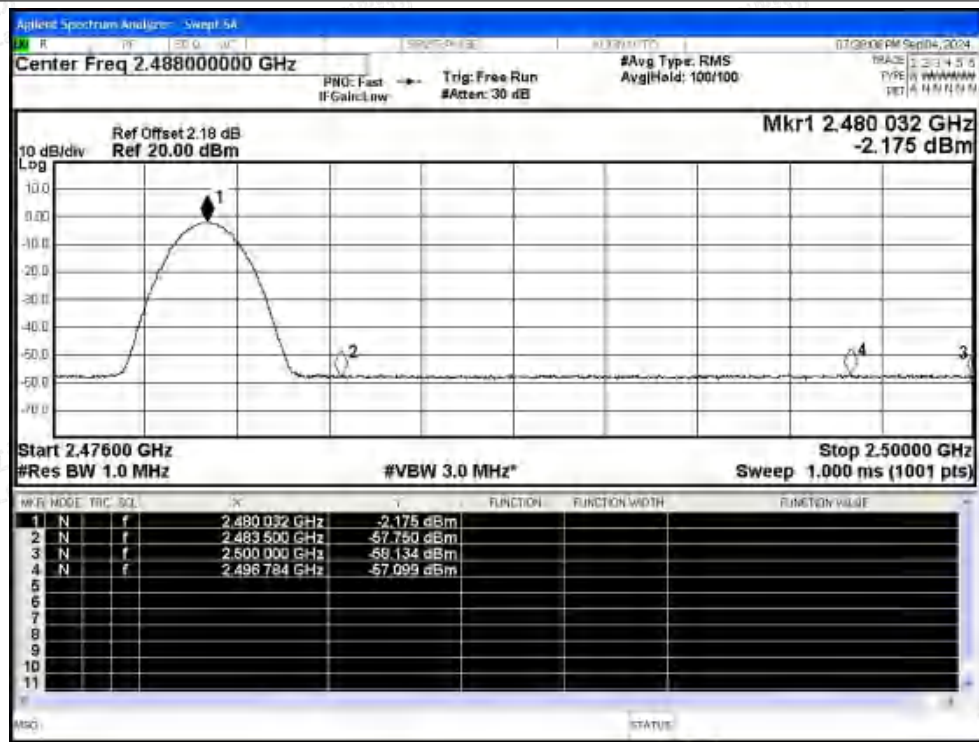




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

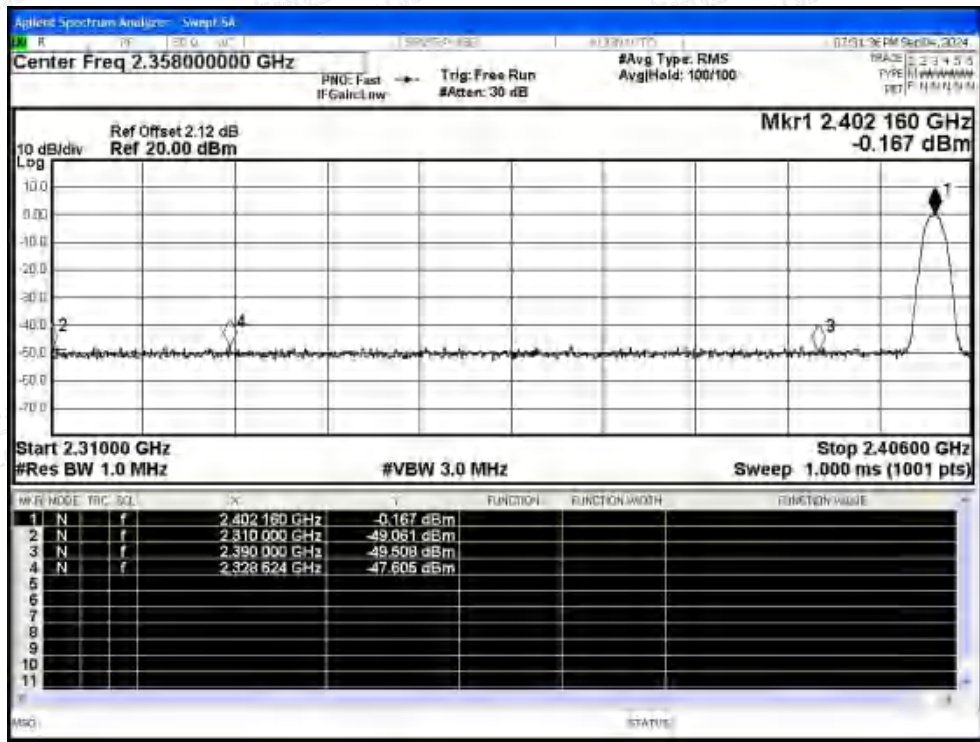


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

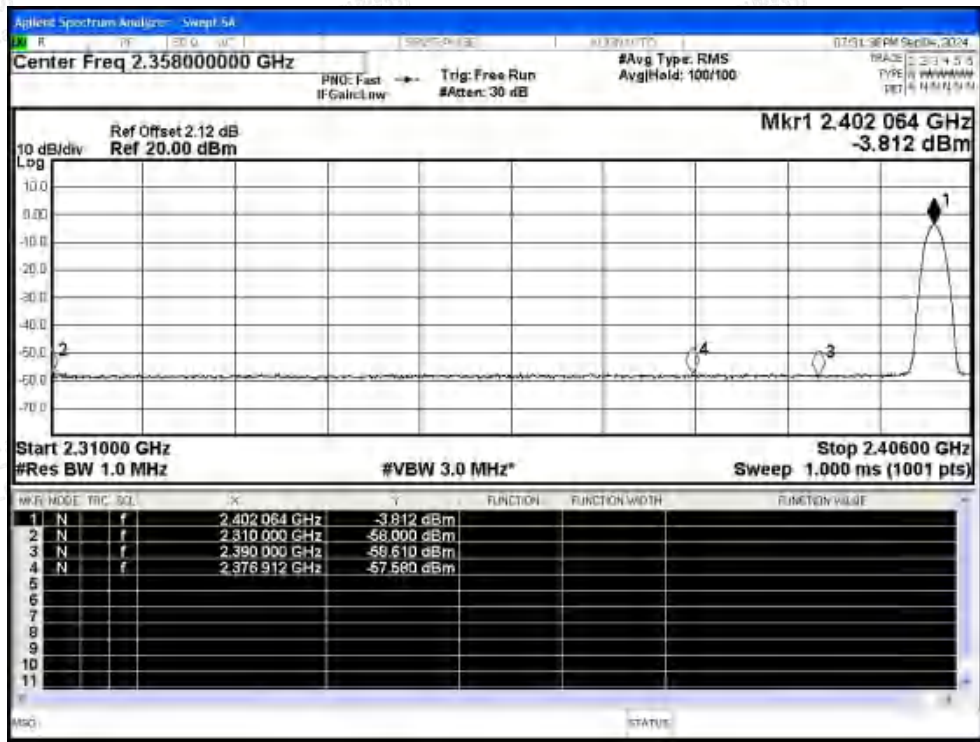




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



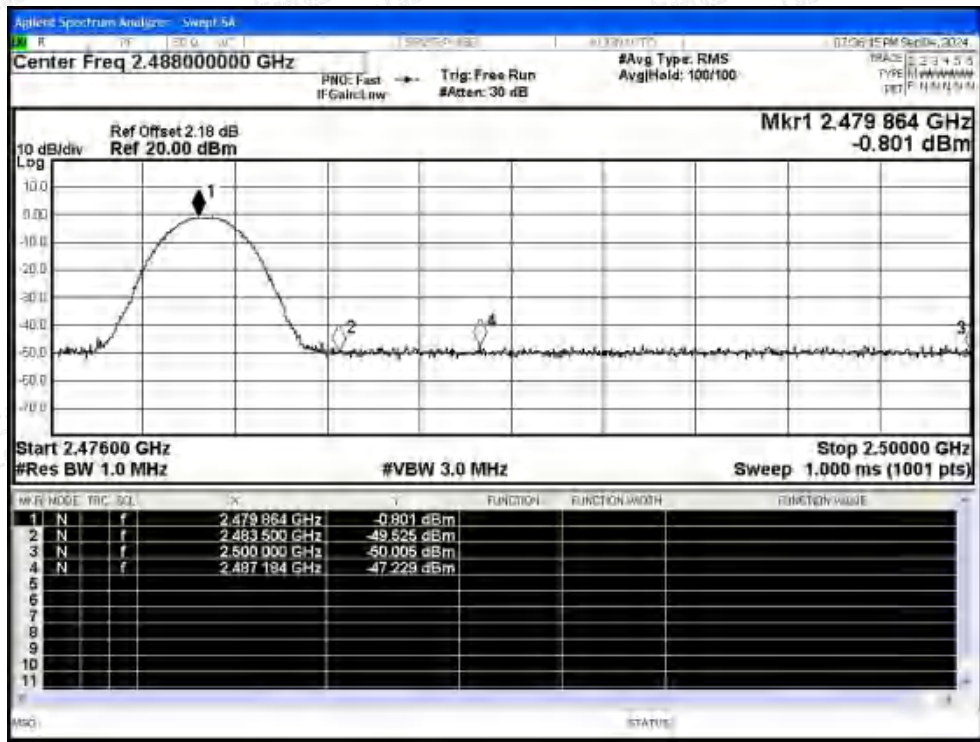
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average







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



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

