



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Orca Core

Test Model: 0000002F140F4D11

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.0%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
Supervised by:	Li Huan





A.1-20dB Bandwidth

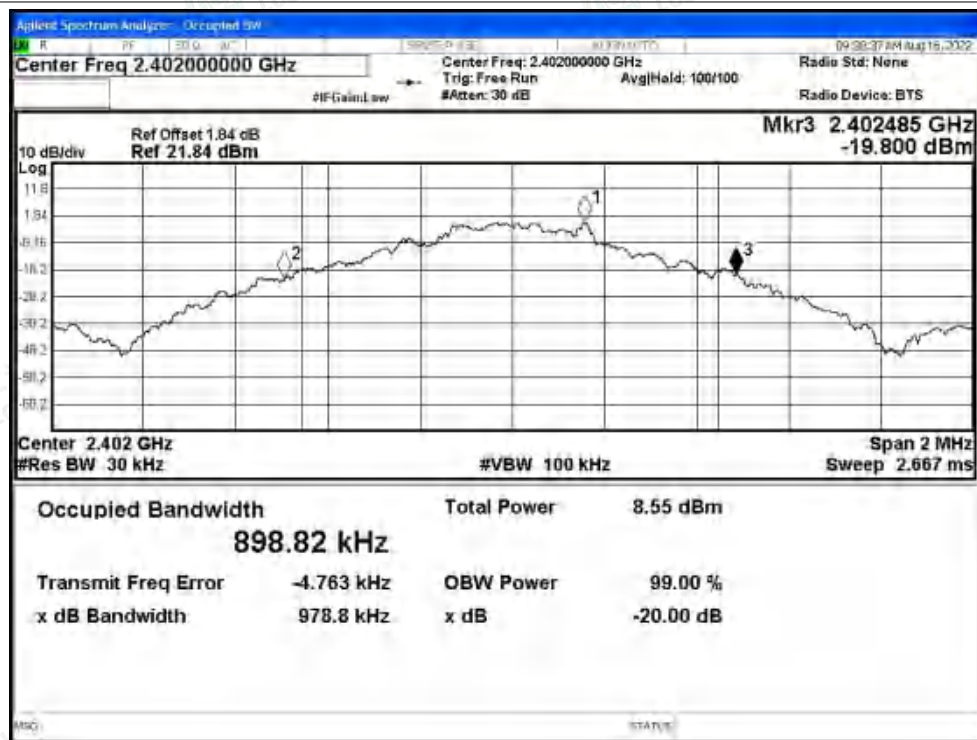
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.979	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.018	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.957	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.306	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.311	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.288	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.296	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.293	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.288	N/A	Pass



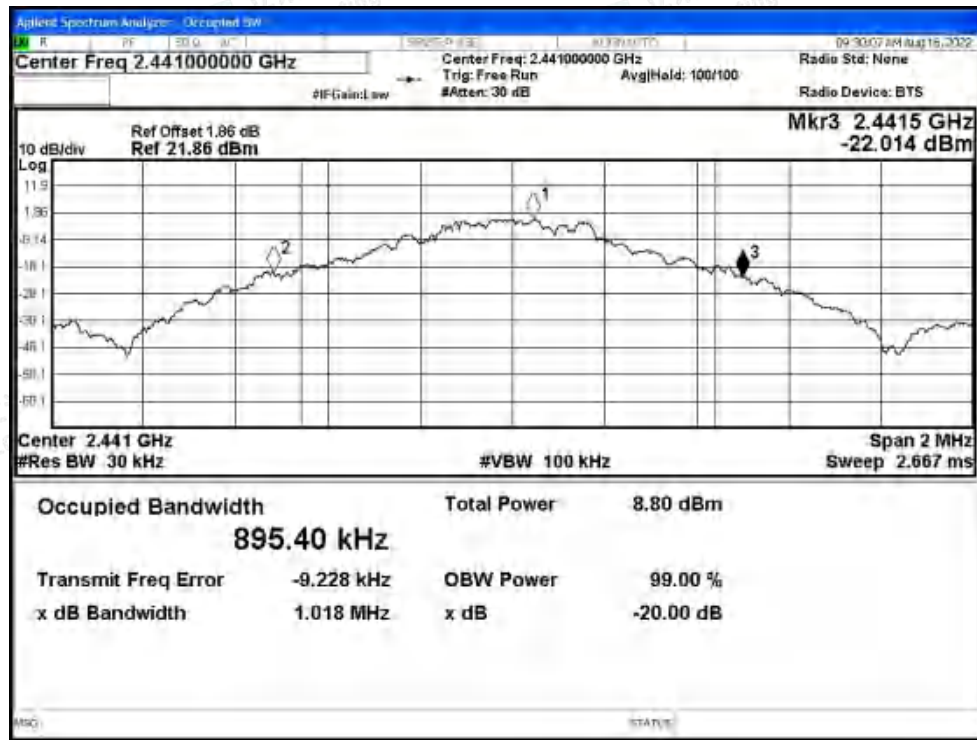


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

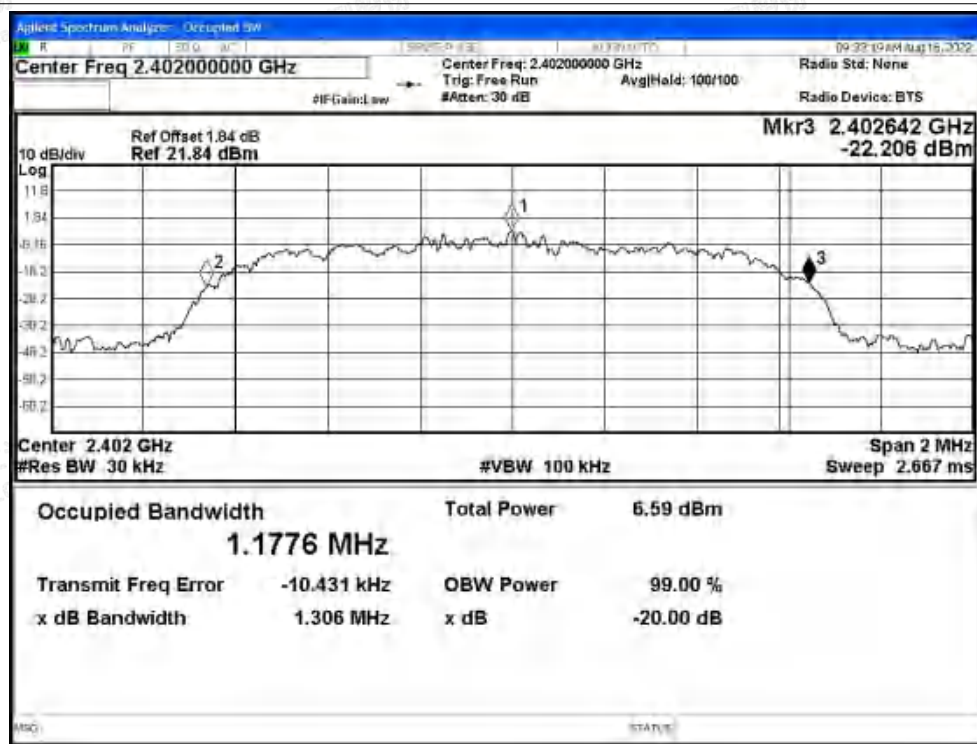




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1





-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

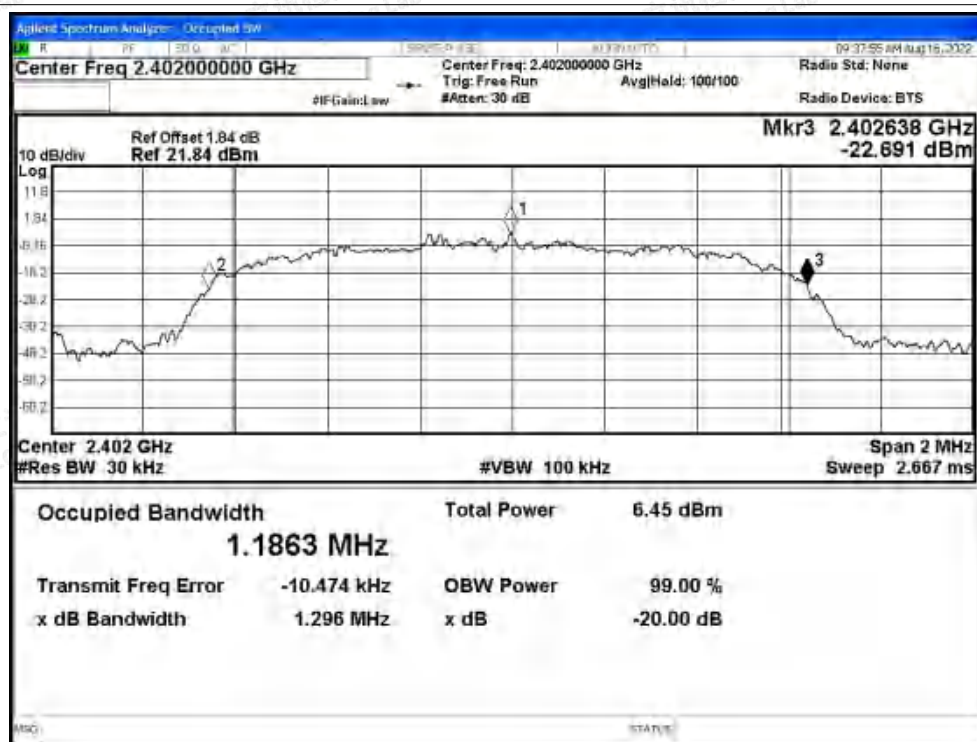


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

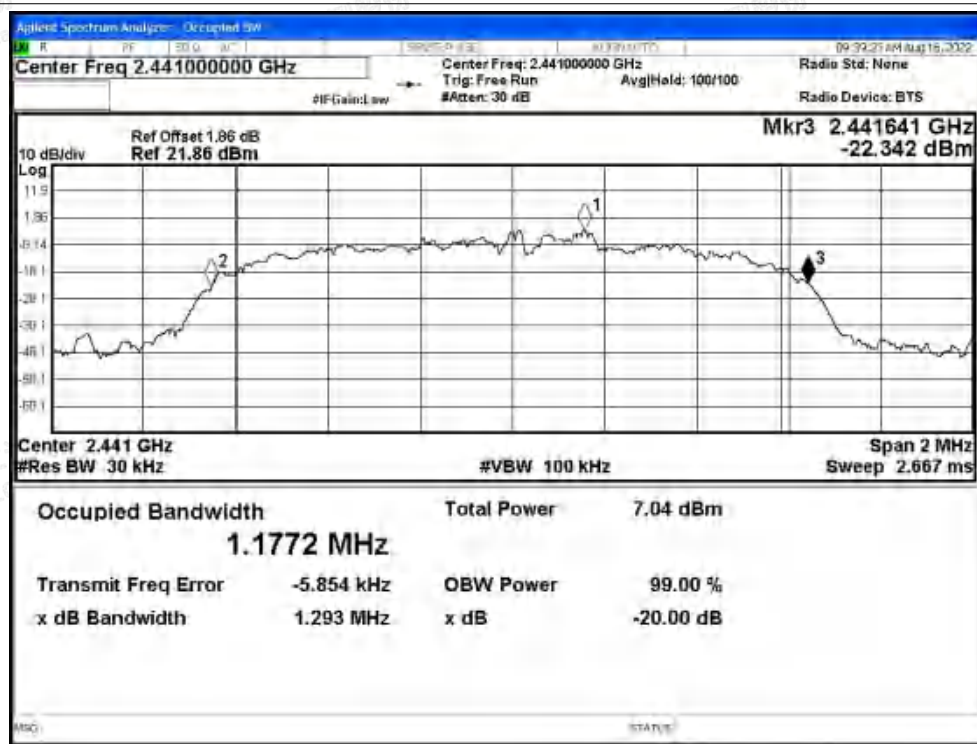




-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



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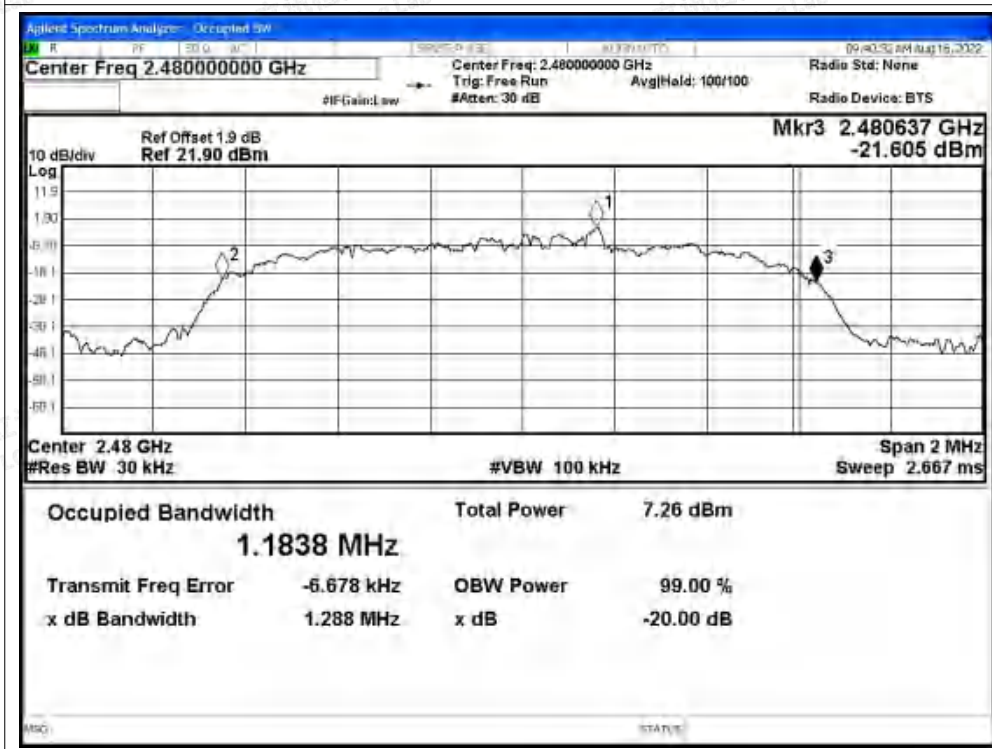
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-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1





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	2.24	0	2.24	21	Pass
NVNT	1-DH5	2441	Ant1	2.51	0	2.51	21	Pass
NVNT	1-DH5	2480	Ant1	2.69	0	2.69	21	Pass
NVNT	2-DH5	2402	Ant1	2.13	0	2.13	21	Pass
NVNT	2-DH5	2441	Ant1	2.37	0	2.37	21	Pass
NVNT	2-DH5	2480	Ant1	2.55	0	2.55	21	Pass
NVNT	3-DH5	2402	Ant1	2.25	0	2.25	21	Pass
NVNT	3-DH5	2441	Ant1	2.48	0	2.48	21	Pass
NVNT	3-DH5	2480	Ant1	2.66	0	2.66	21	Pass

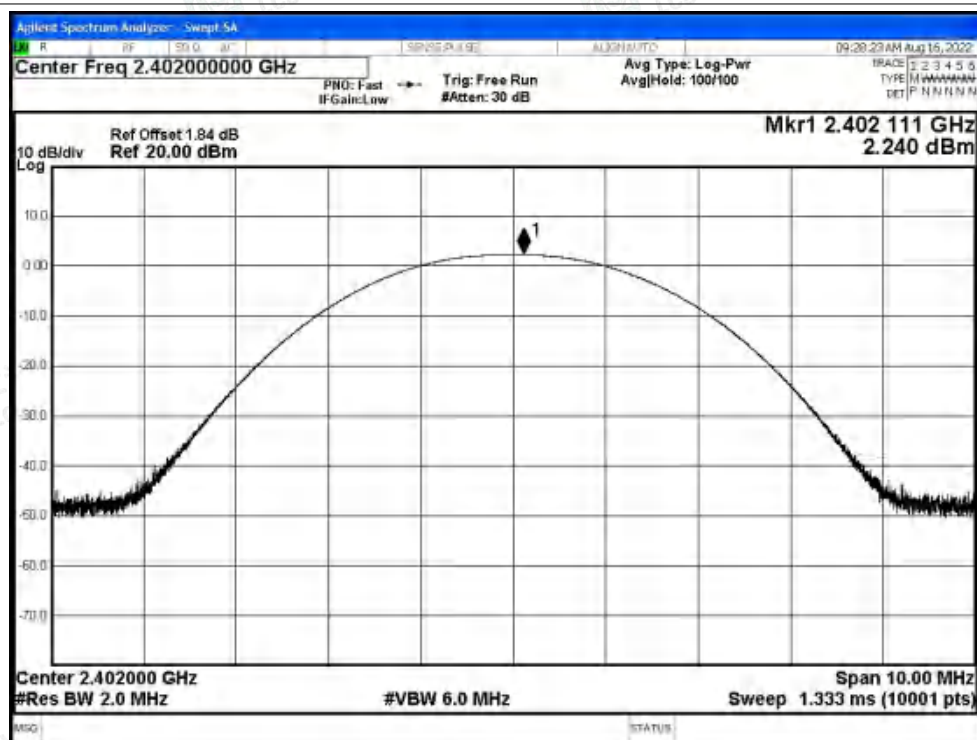


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518000, China
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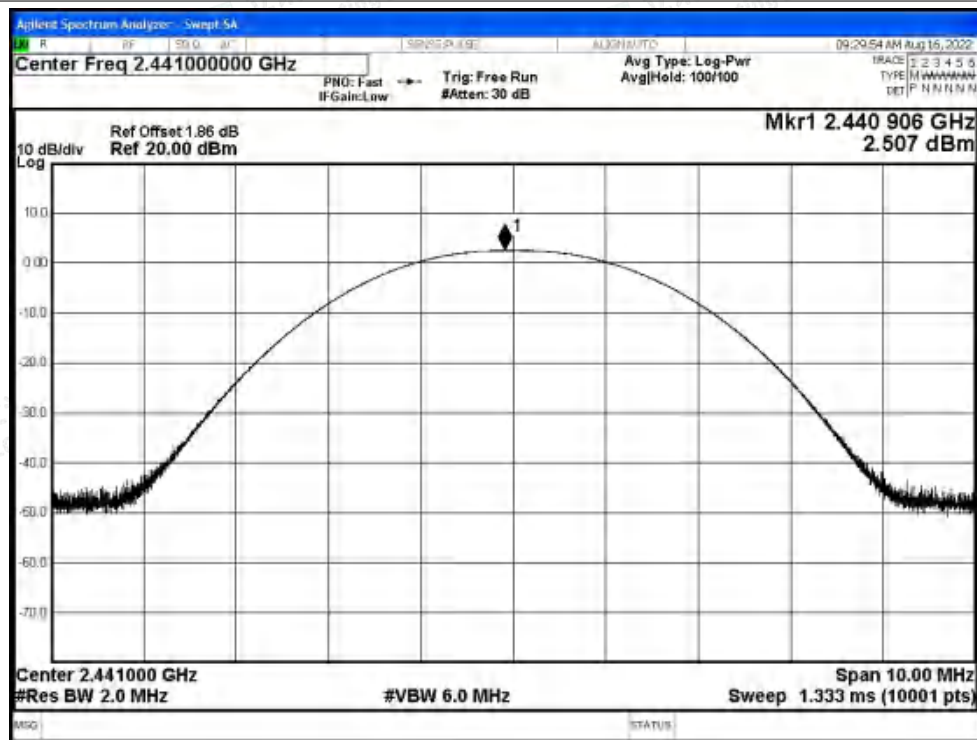


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

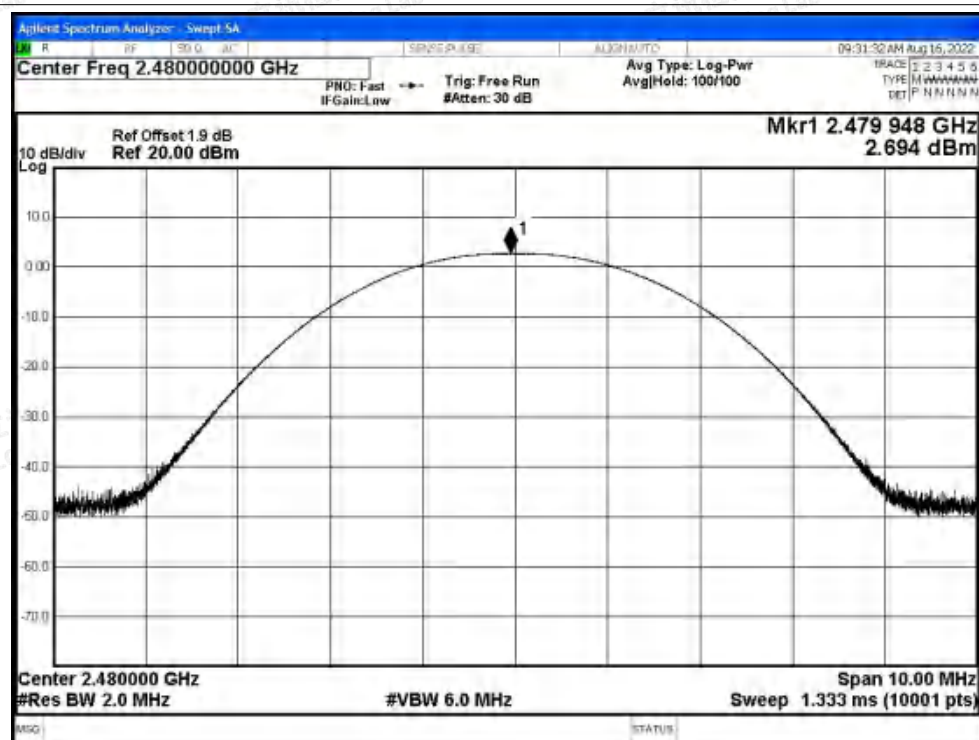


Power NVNT 1-DH5 2441MHz Ant1

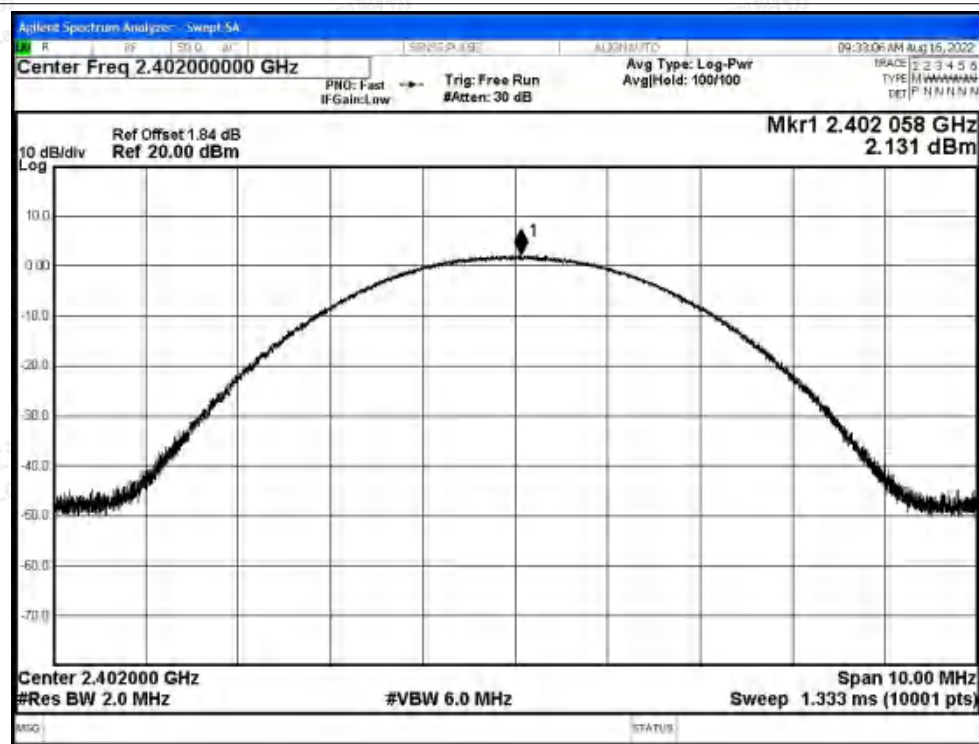




Power NVNT 1-DH5 2480MHz Ant1

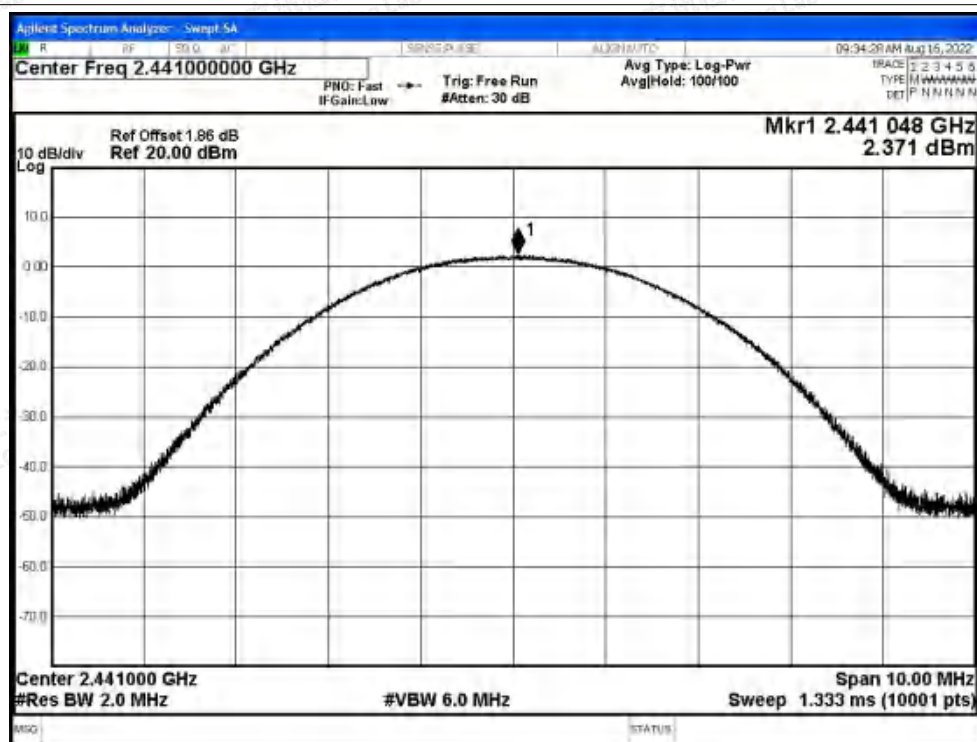


Power NVNT 2-DH5 2402MHz Ant1

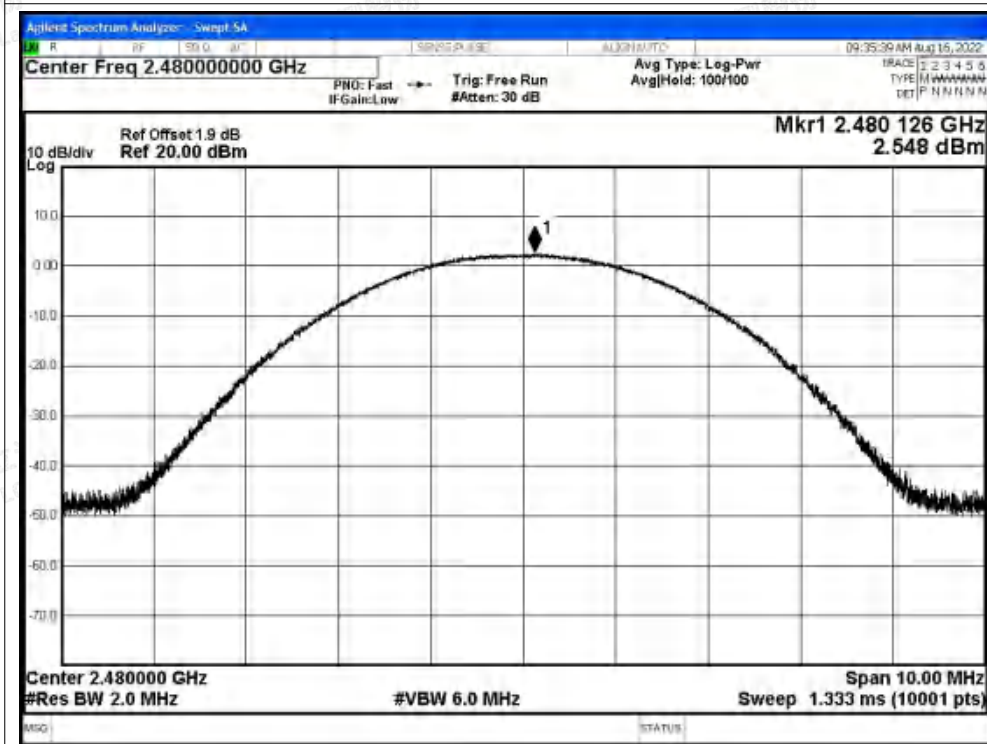




Power NVNT 2-DH5 2441MHz Ant1

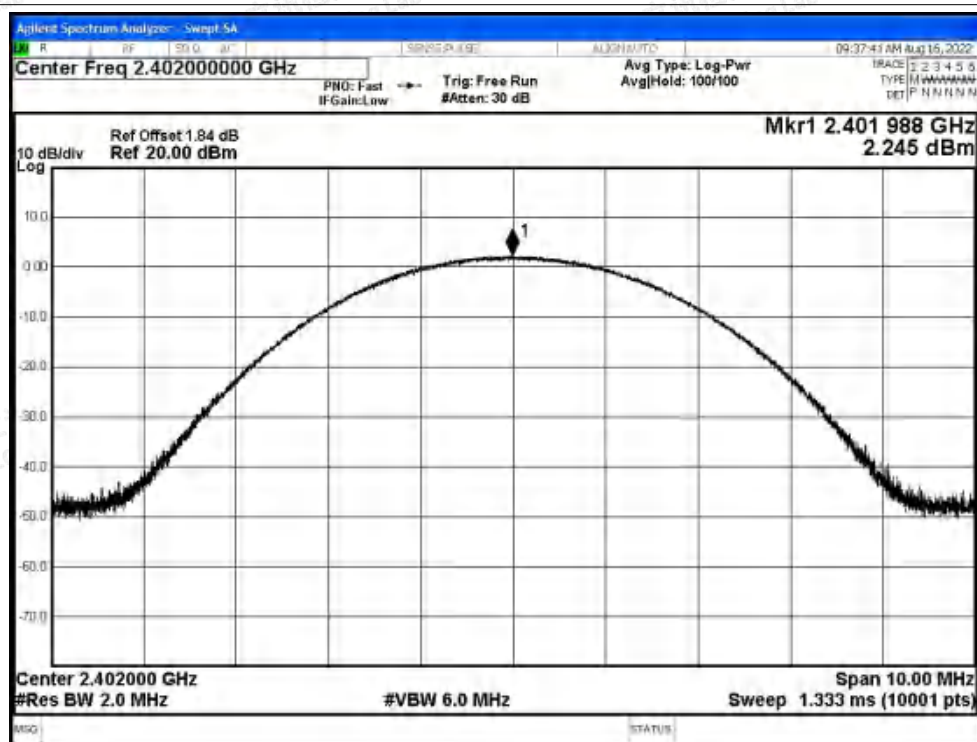


Power NVNT 2-DH5 2480MHz Ant1

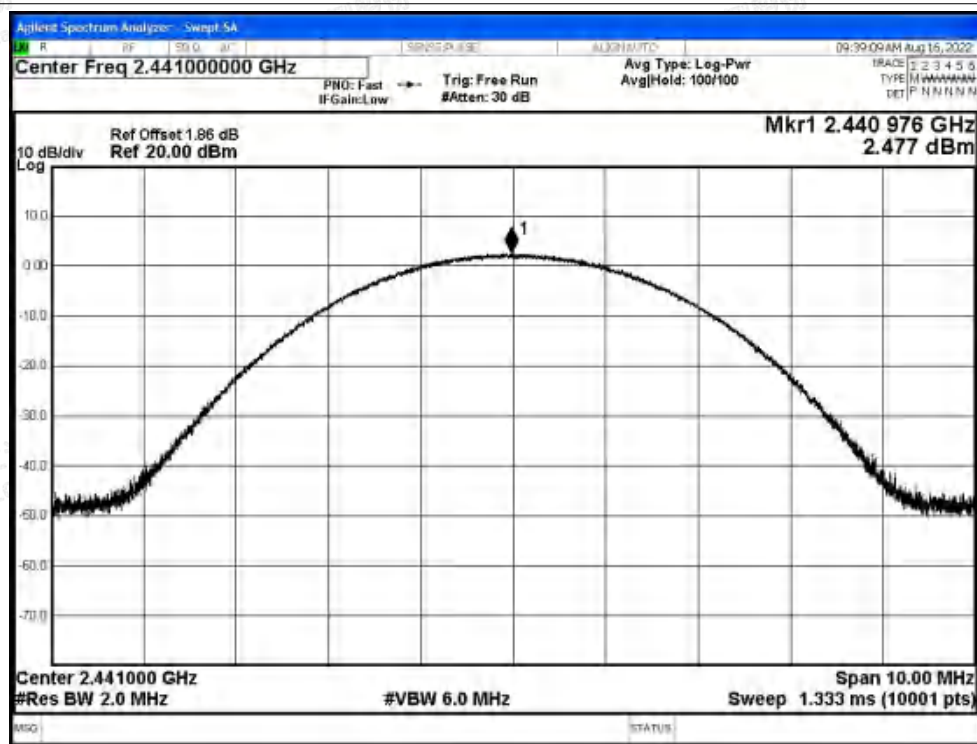




Power NVNT 3-DH5 2402MHz Ant1

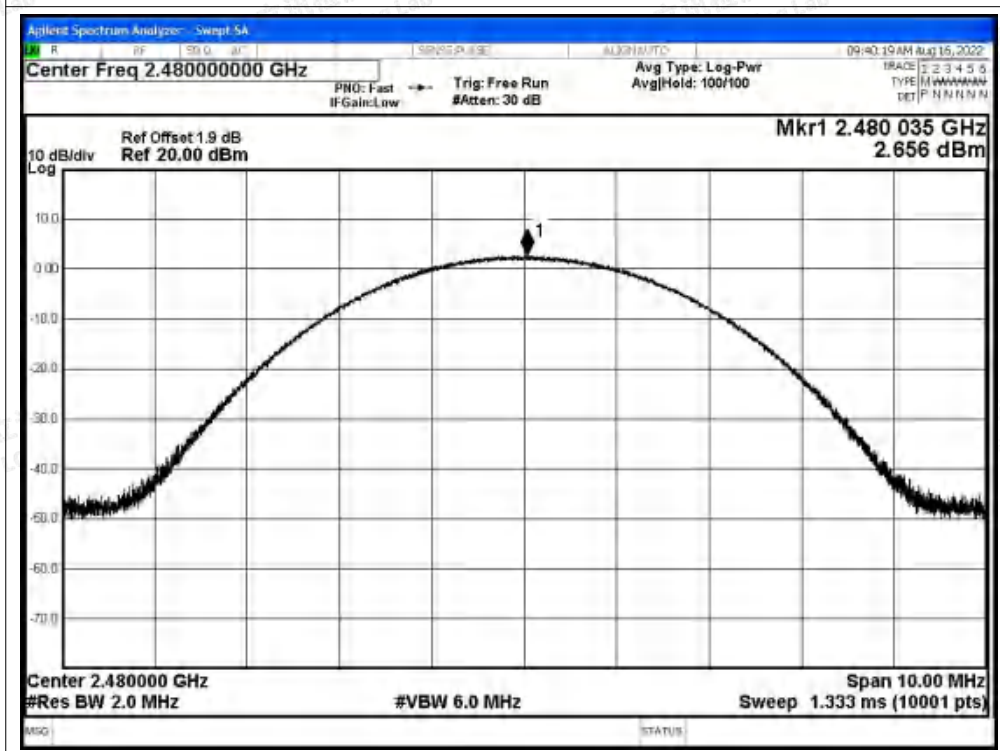


Power NVNT 3-DH5 2441MHz Ant1





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	2401.984	2402.96	0.976	0.653	Pass
NVNT	2-DH5	Ant1	2402.018	2403.156	1.138	0.871	Pass
NVNT	3-DH5	Ant1	2402.16	2403.168	1.008	0.864	Pass



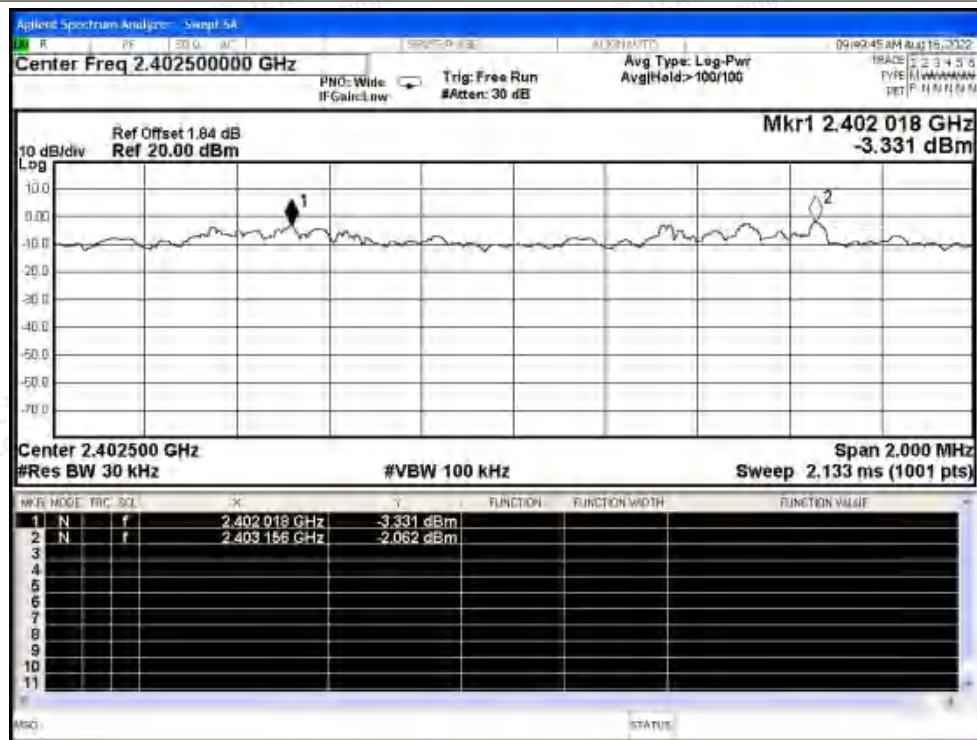


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1

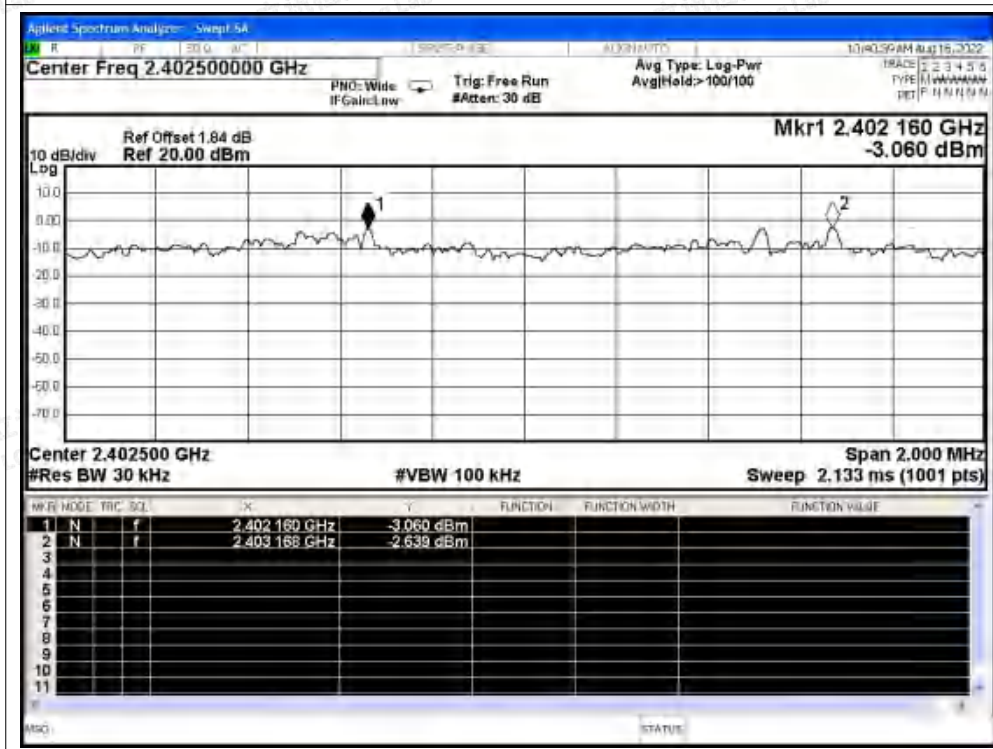


CFS NVNT 2-DH5 2402MHz Ant1





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	265.144	92	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	302.925	105	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.886	282.828	98	31600	400	Pass

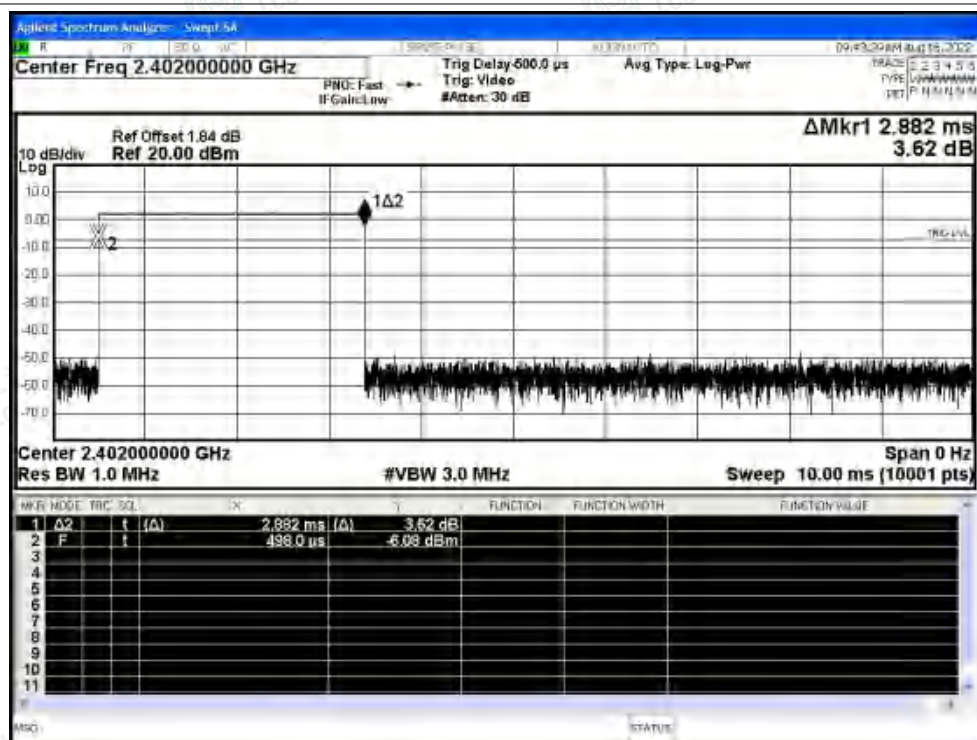


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518000, China
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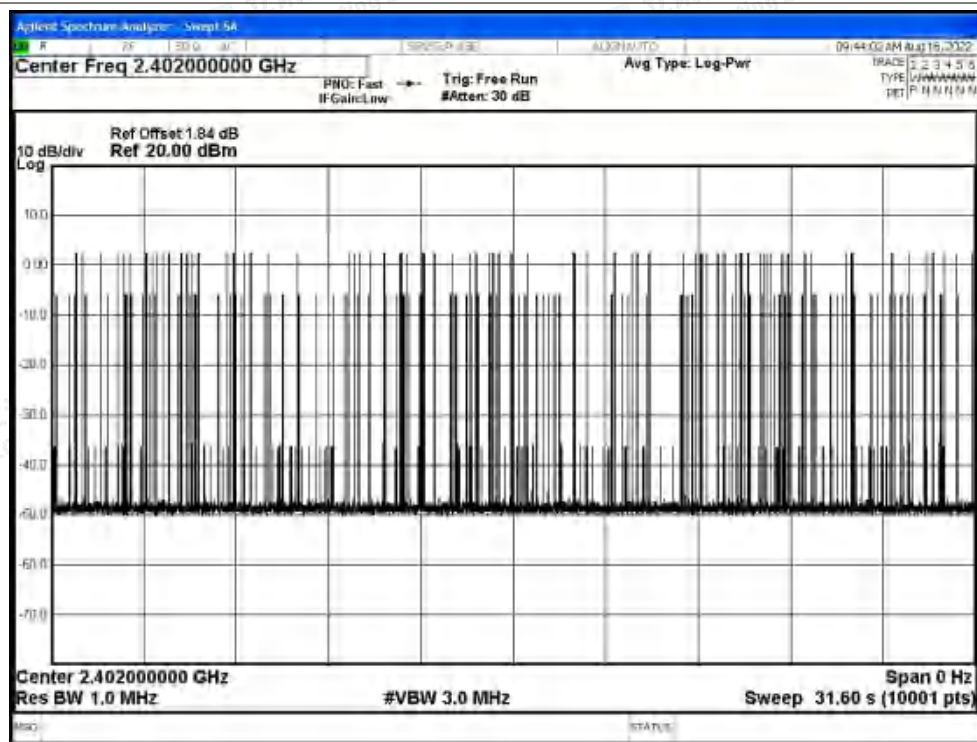


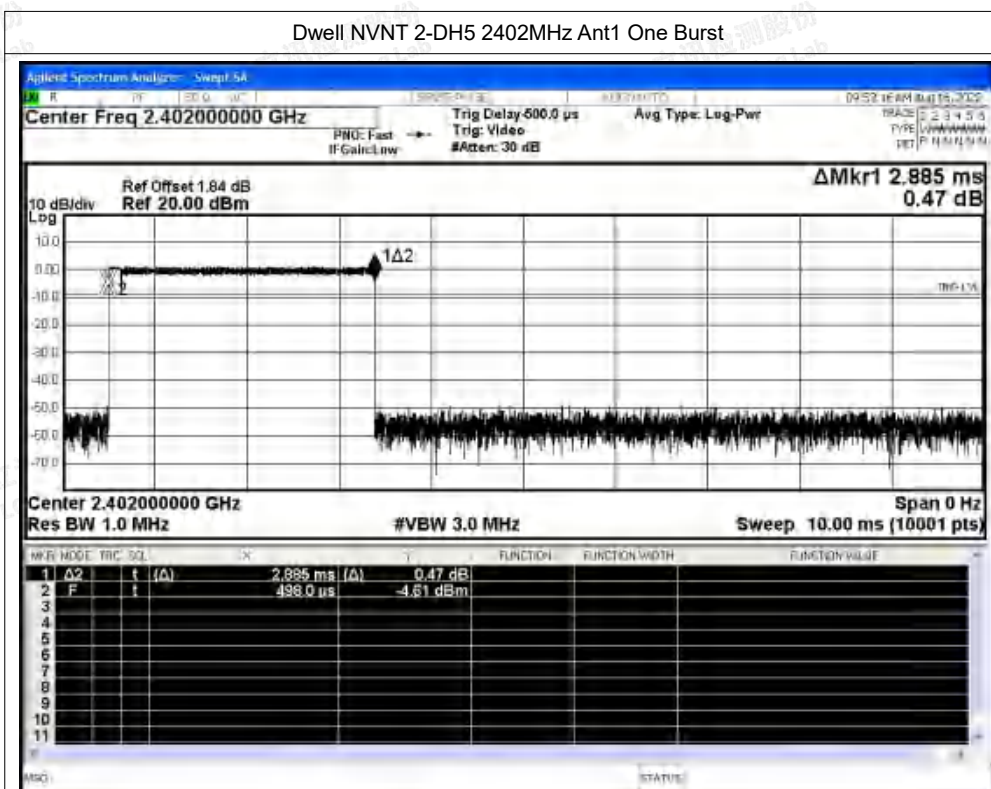
Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

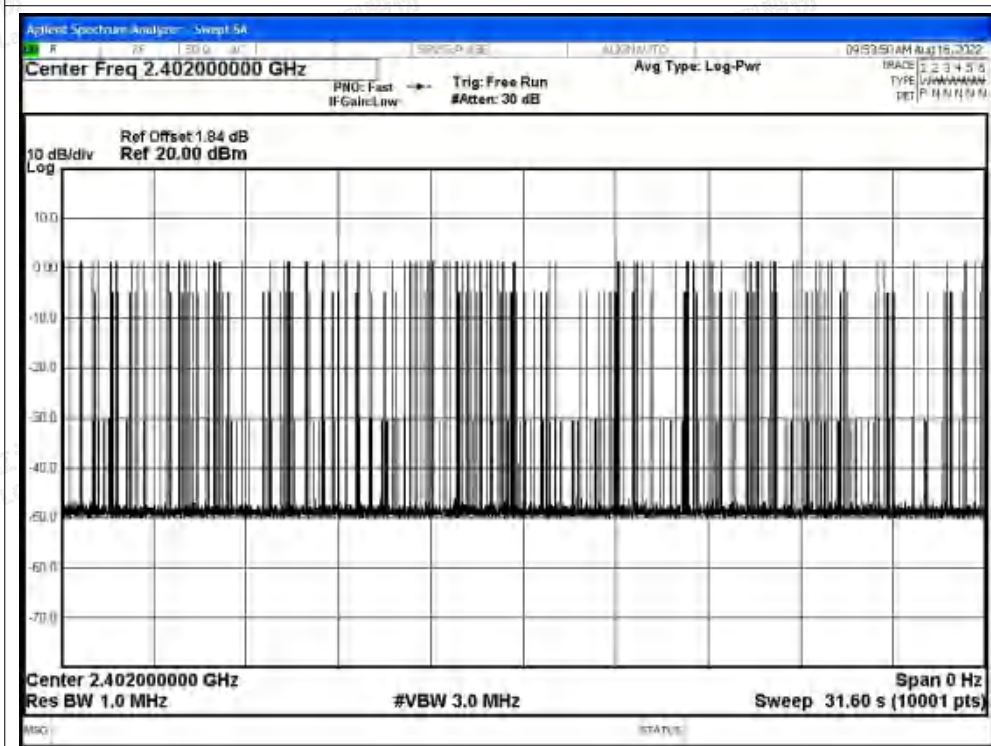


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



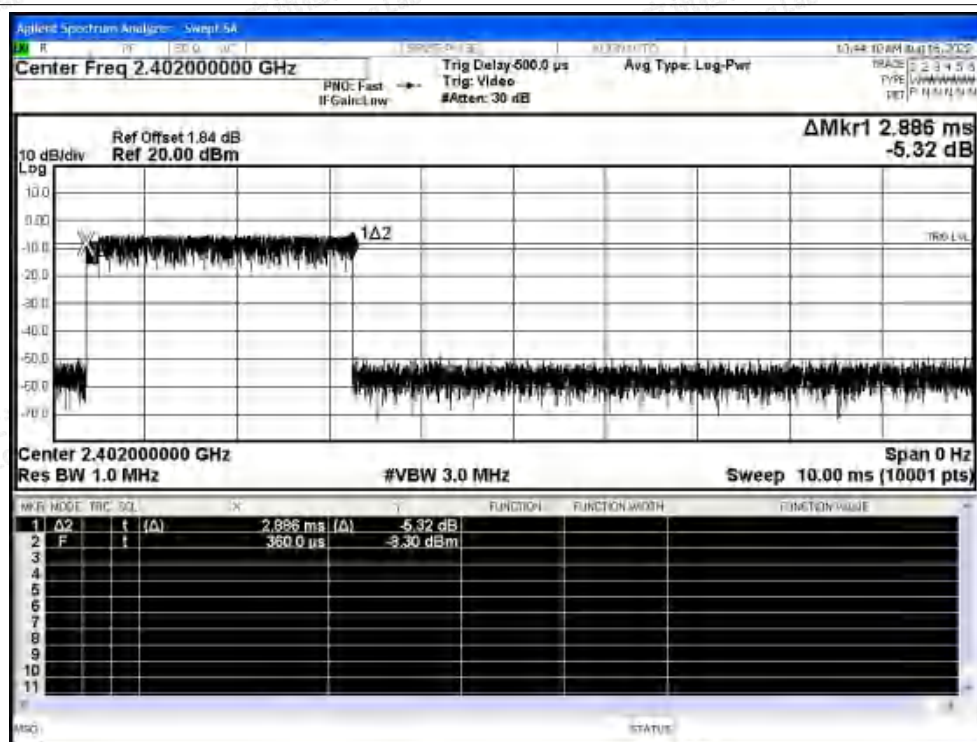


Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated

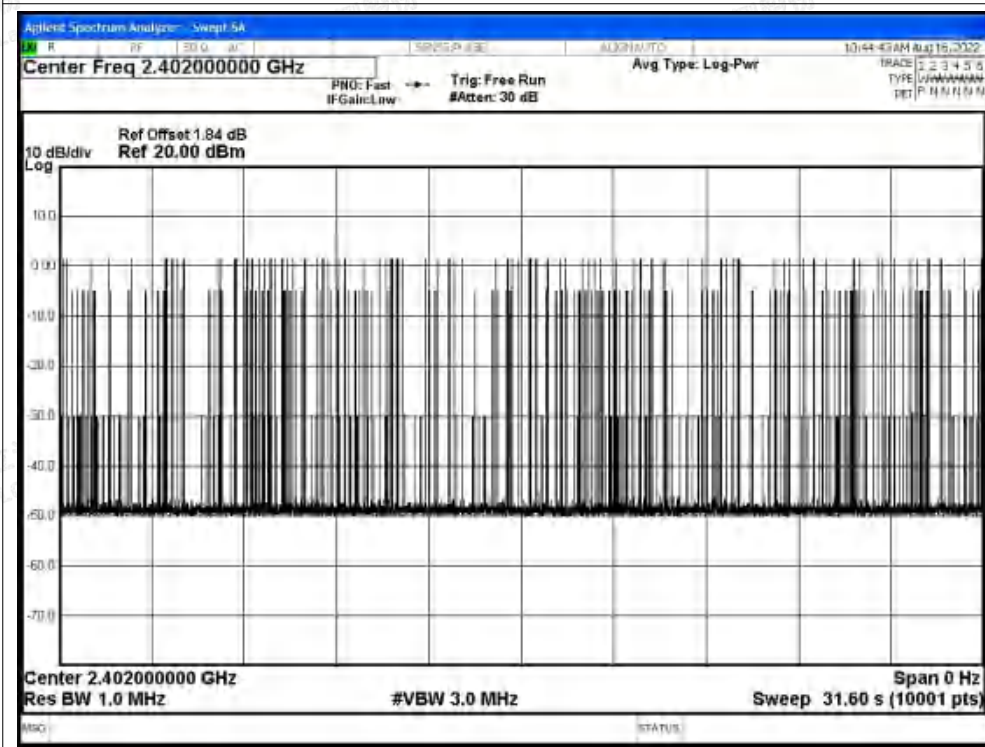




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated





A.5 Number of Hopping Channel

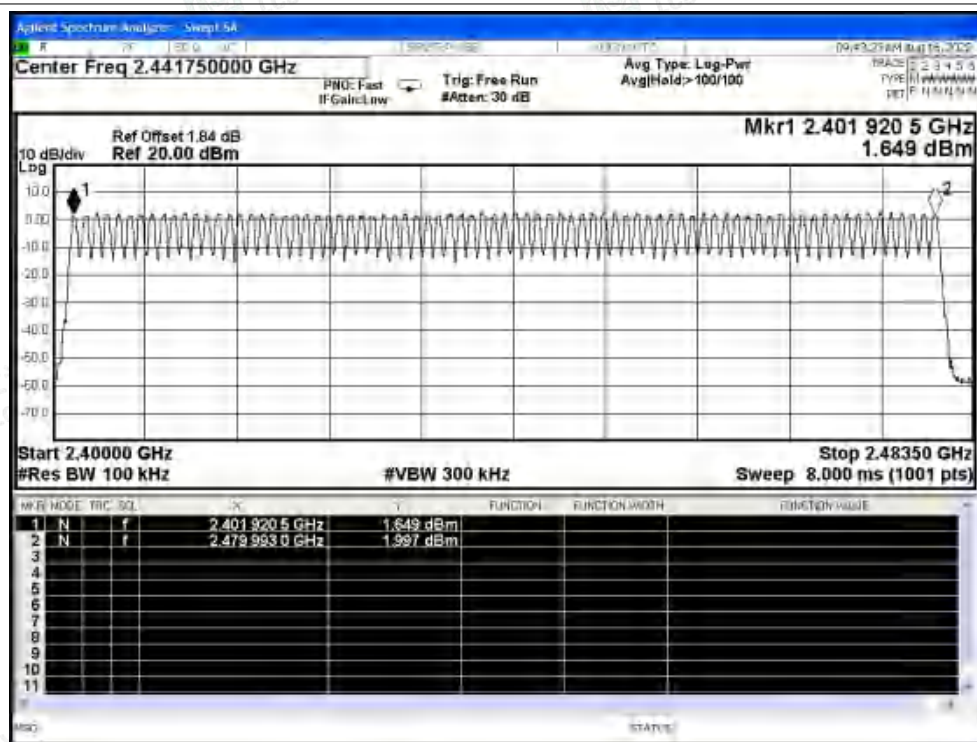
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



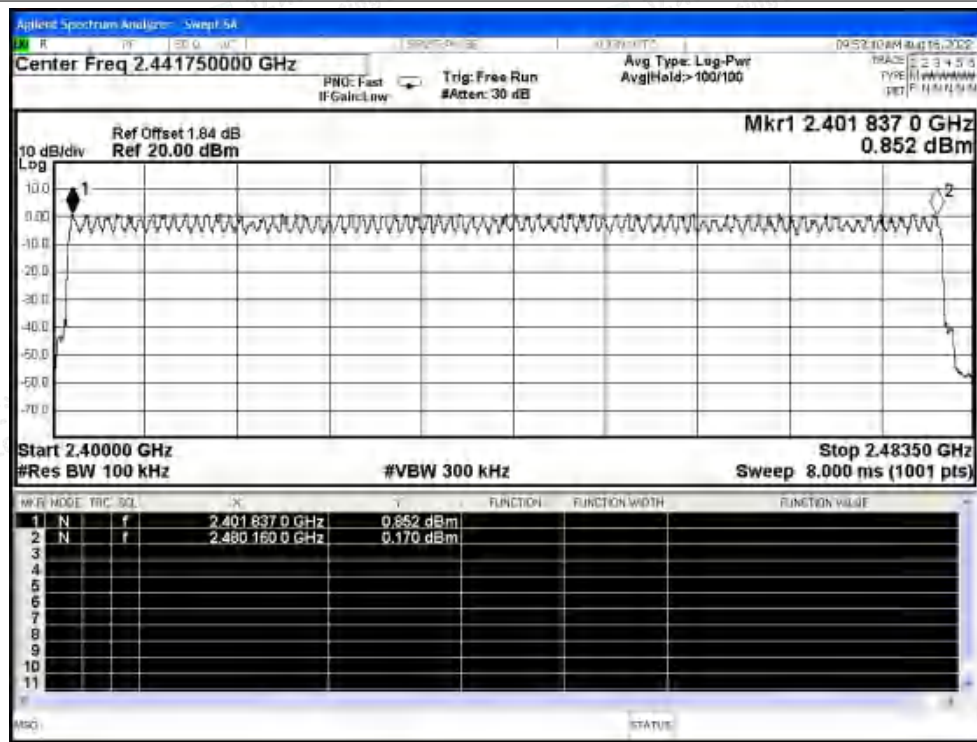


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1

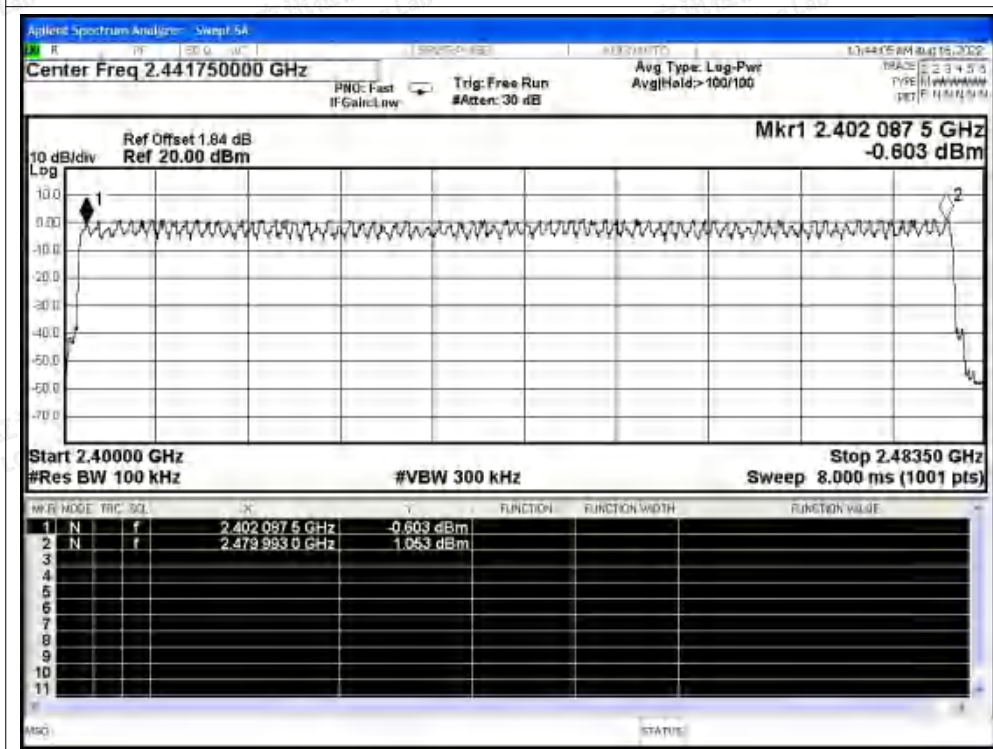


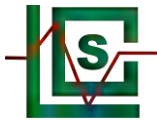
Hopping No. NVNT 2-DH5 2402MHz Ant1





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	-58.86	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-59.08	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-53.3	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-58.12	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-49.6	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-58.17	-20	Pass

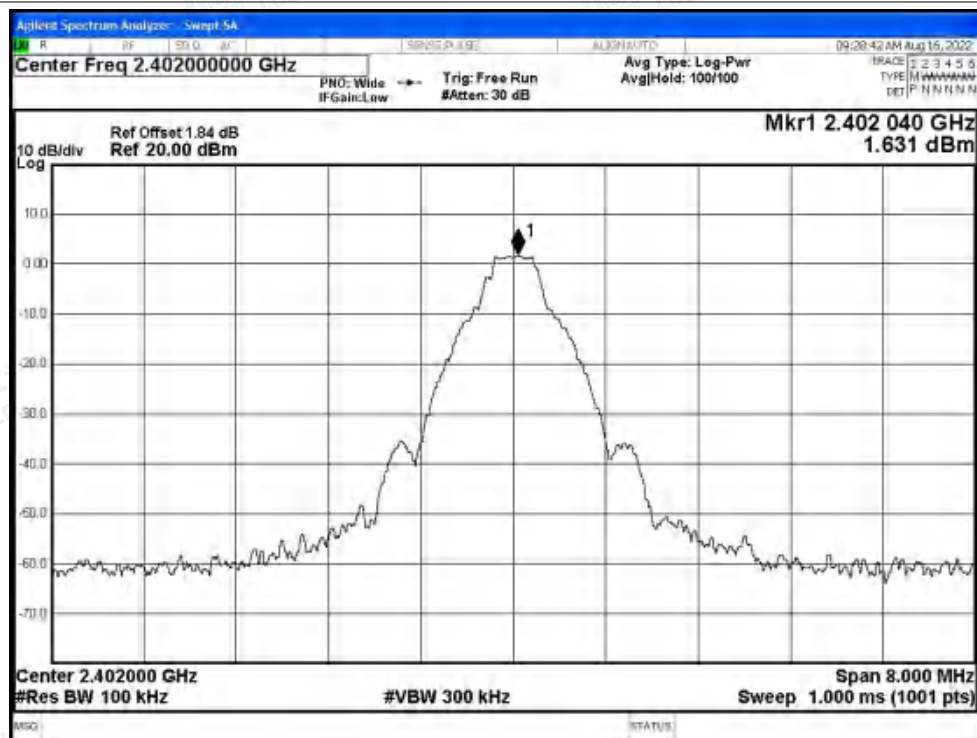


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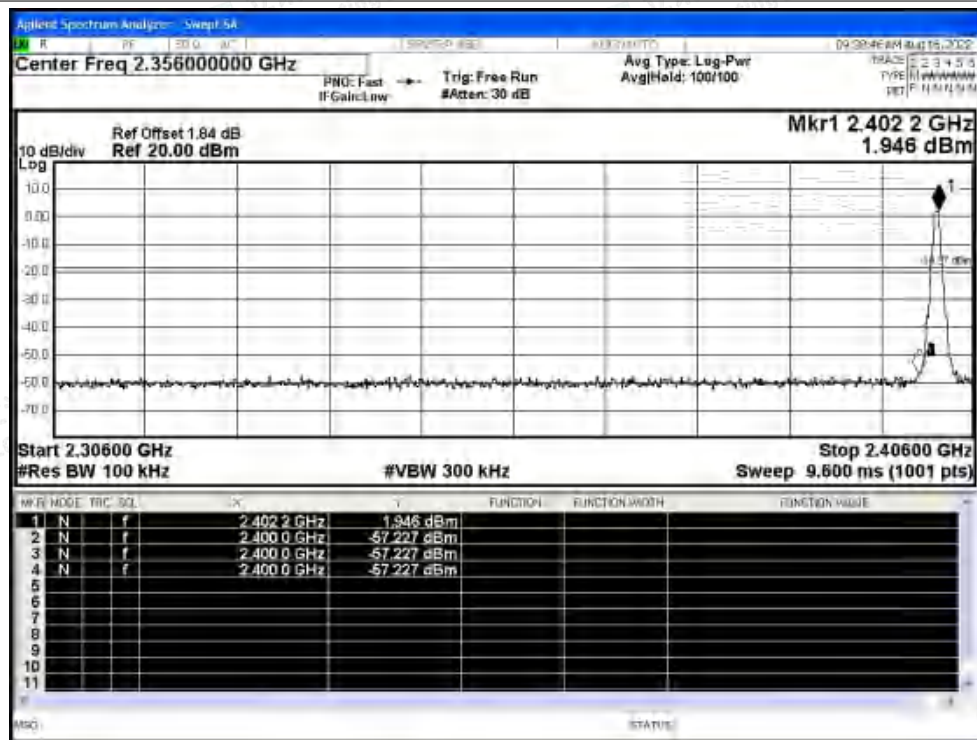


Test Graphs

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

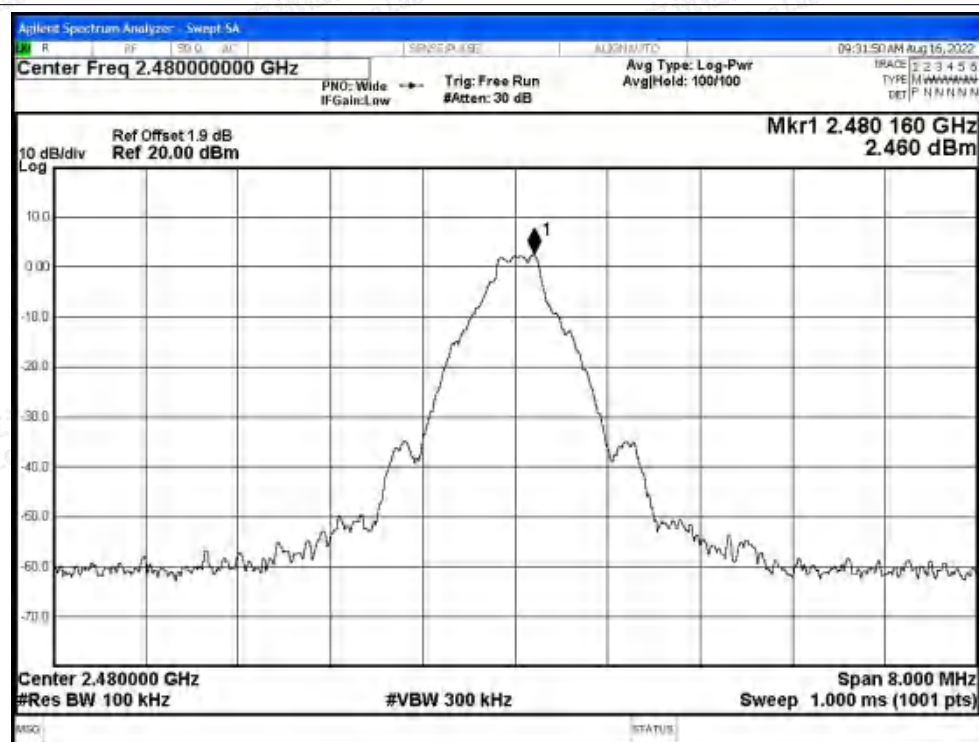


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

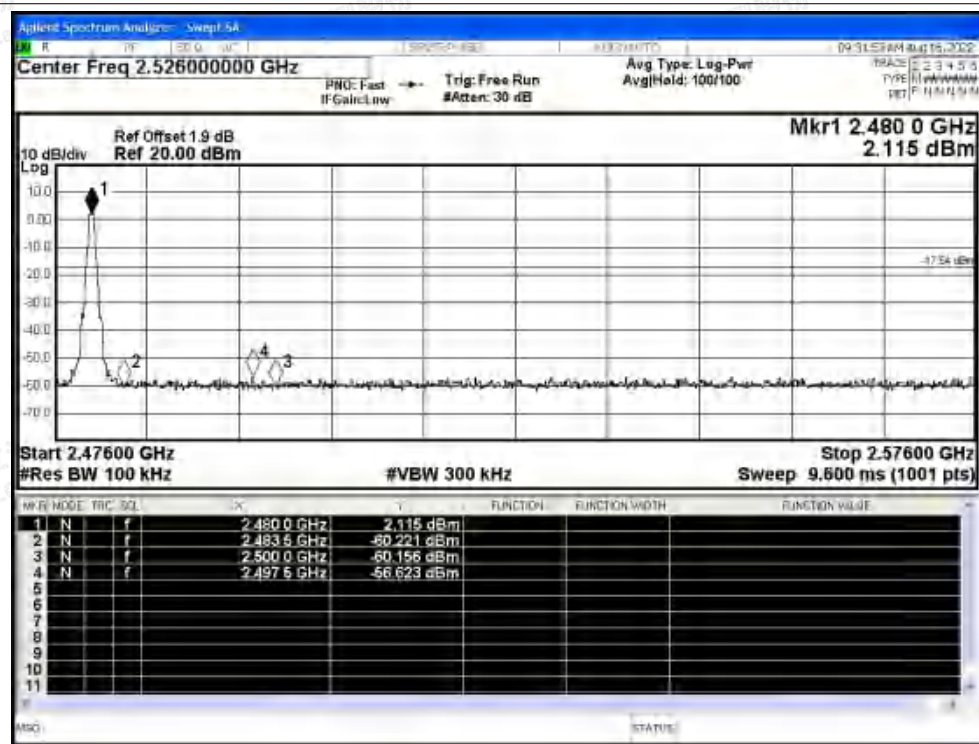




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

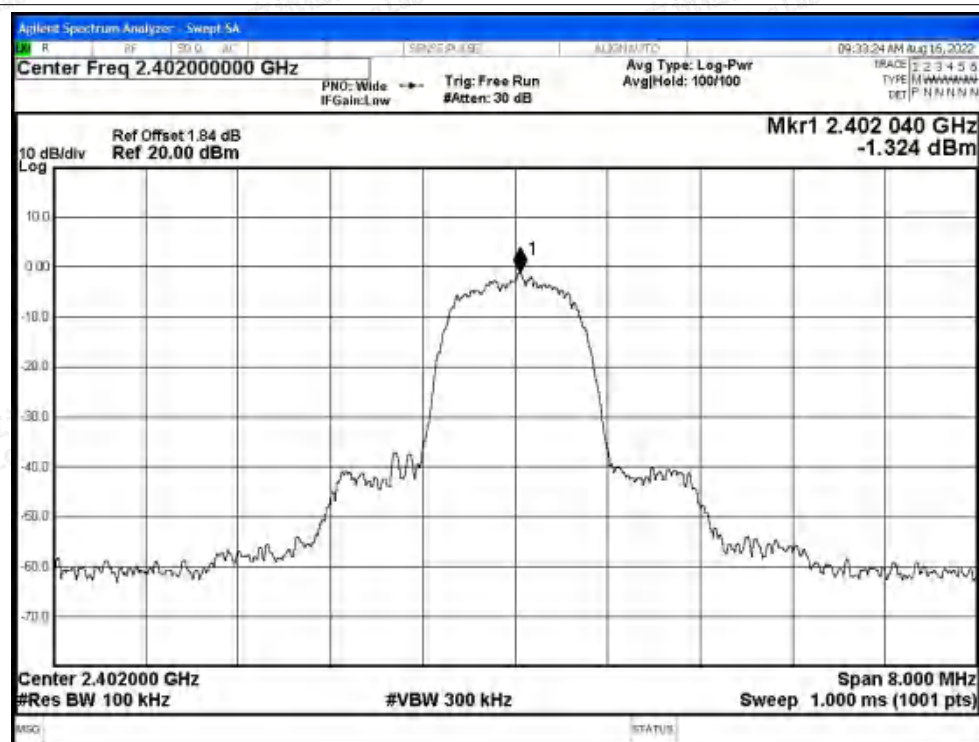


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

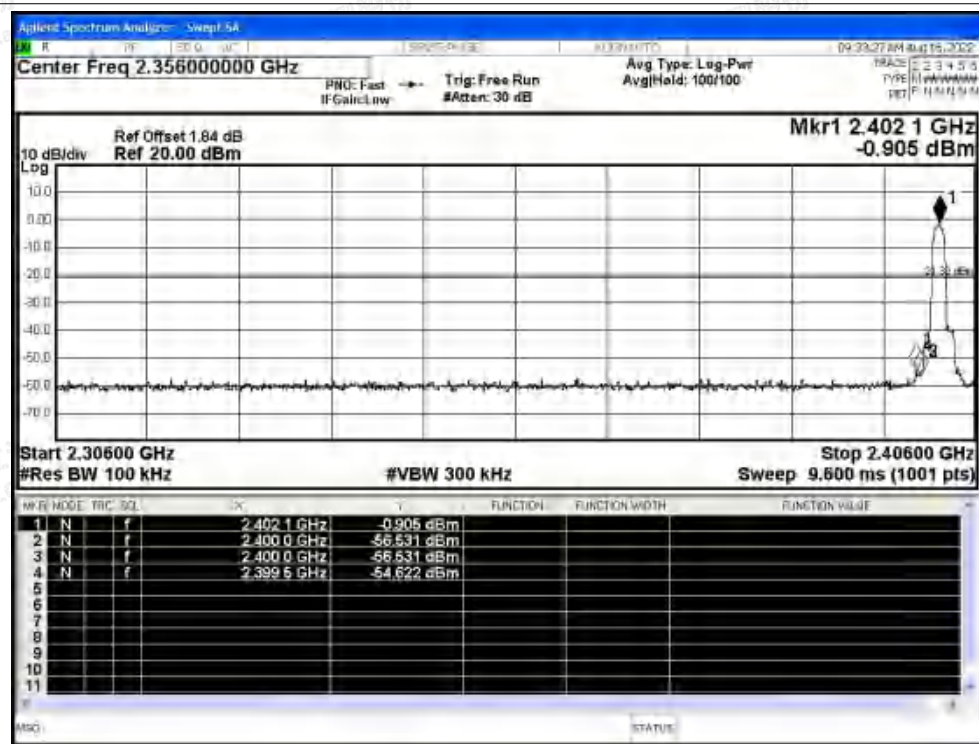




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

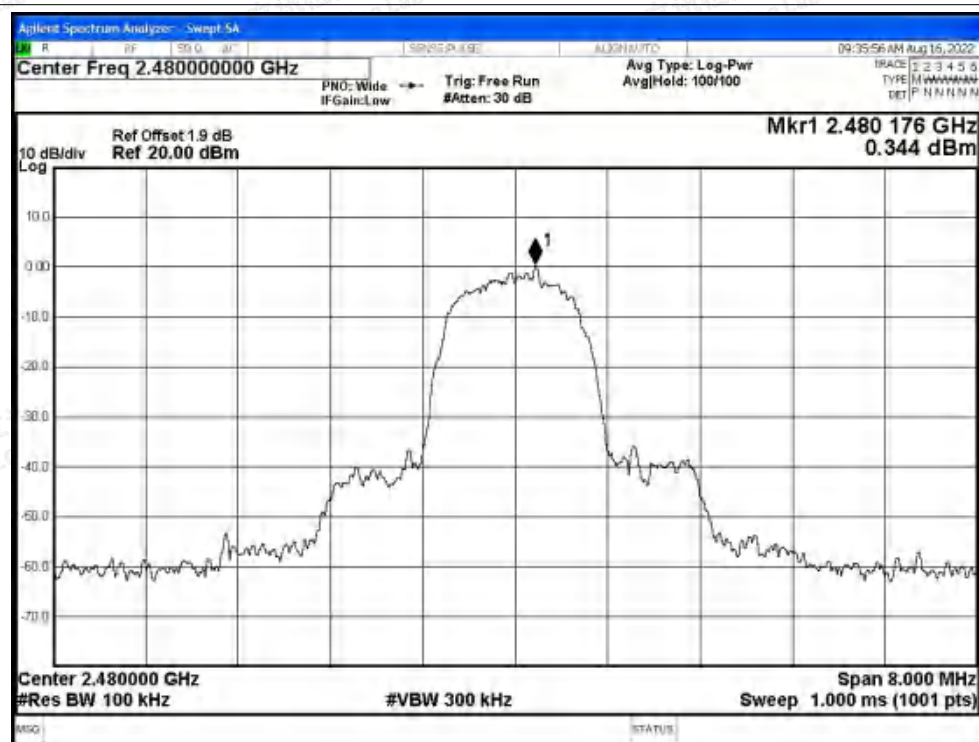


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

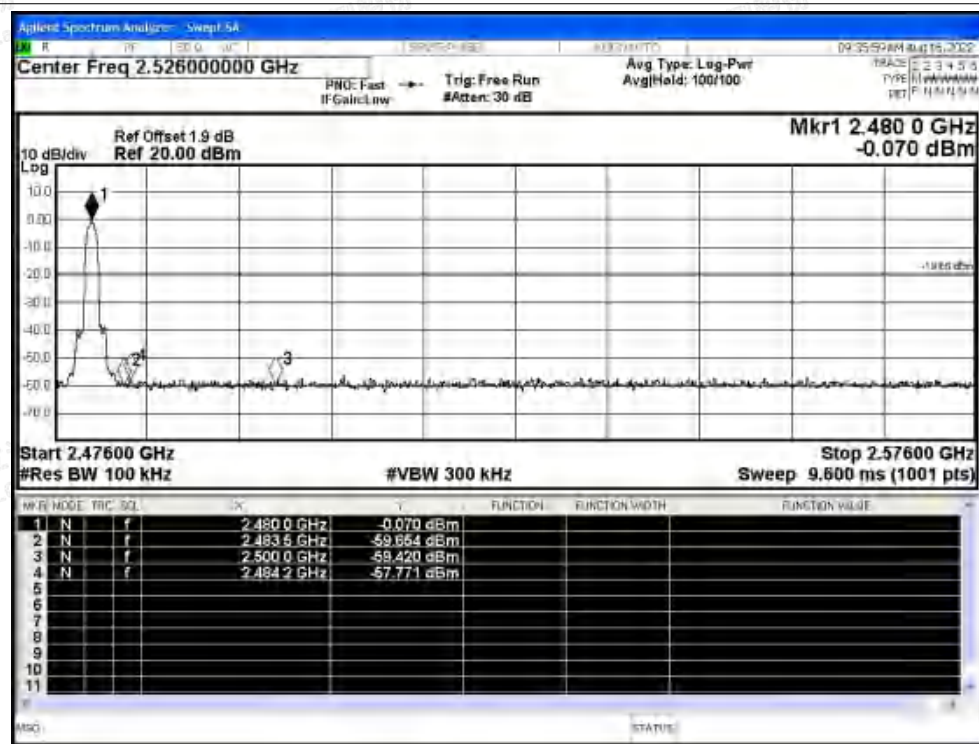




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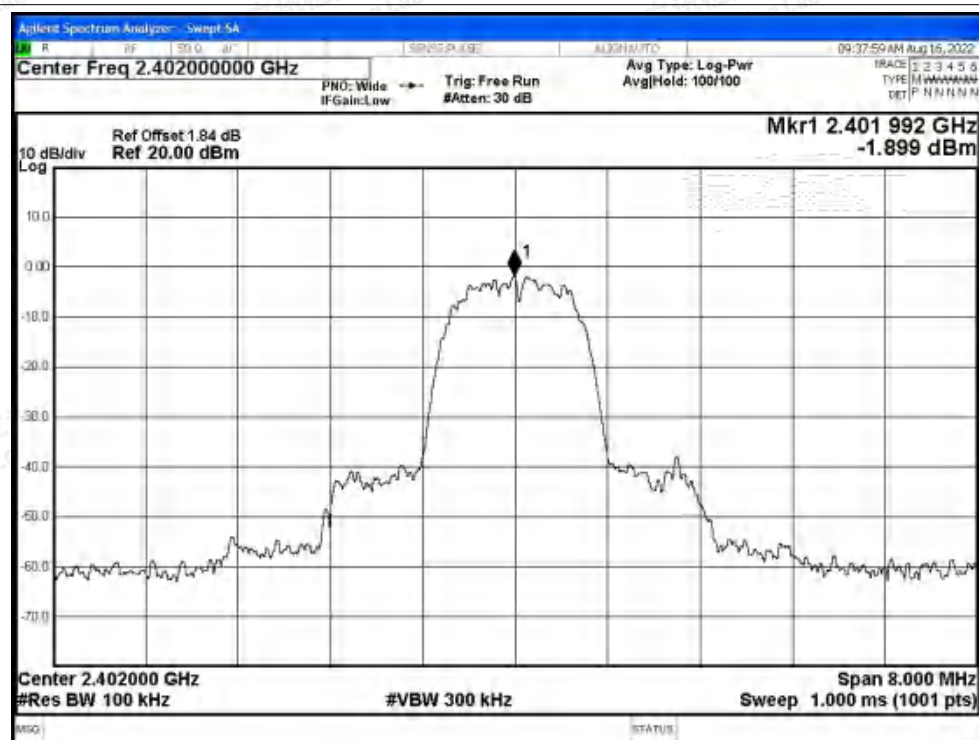


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

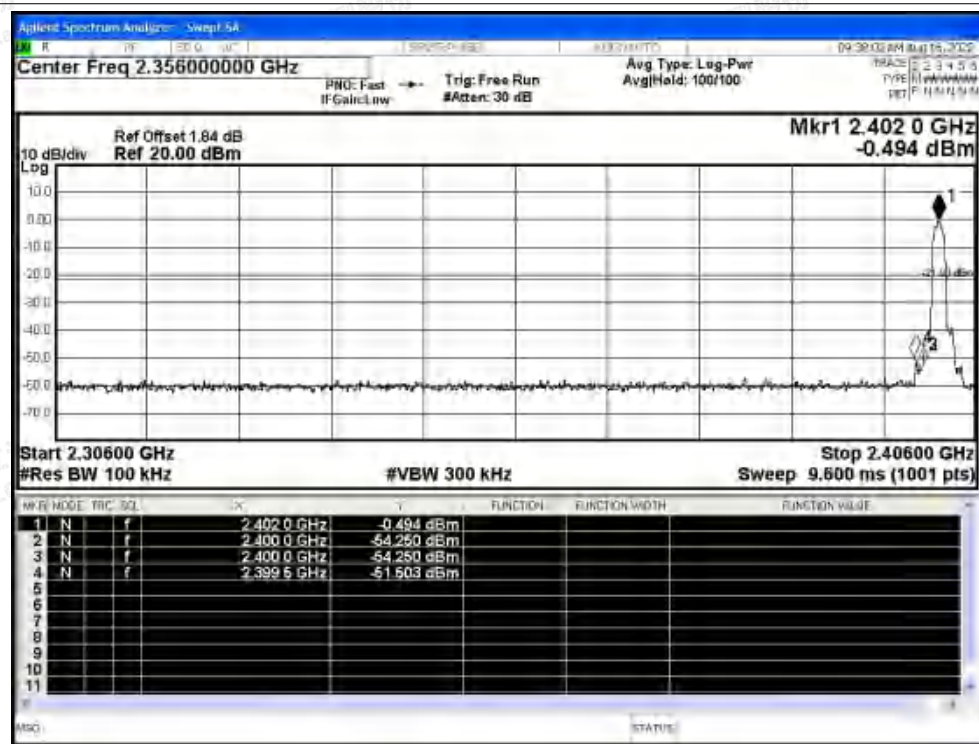




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

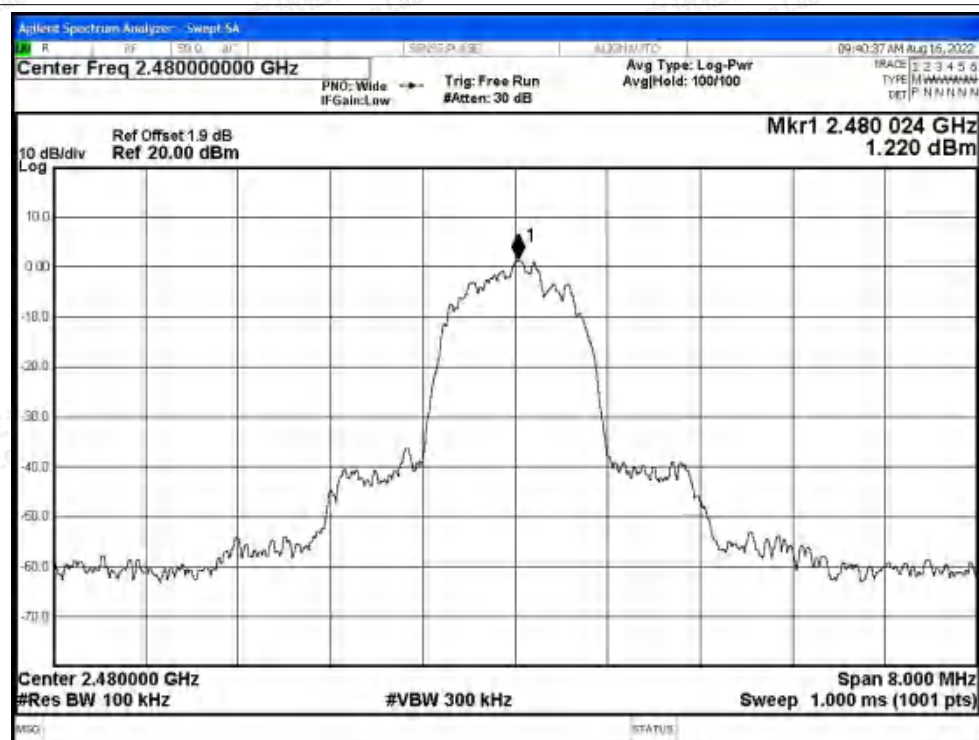


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

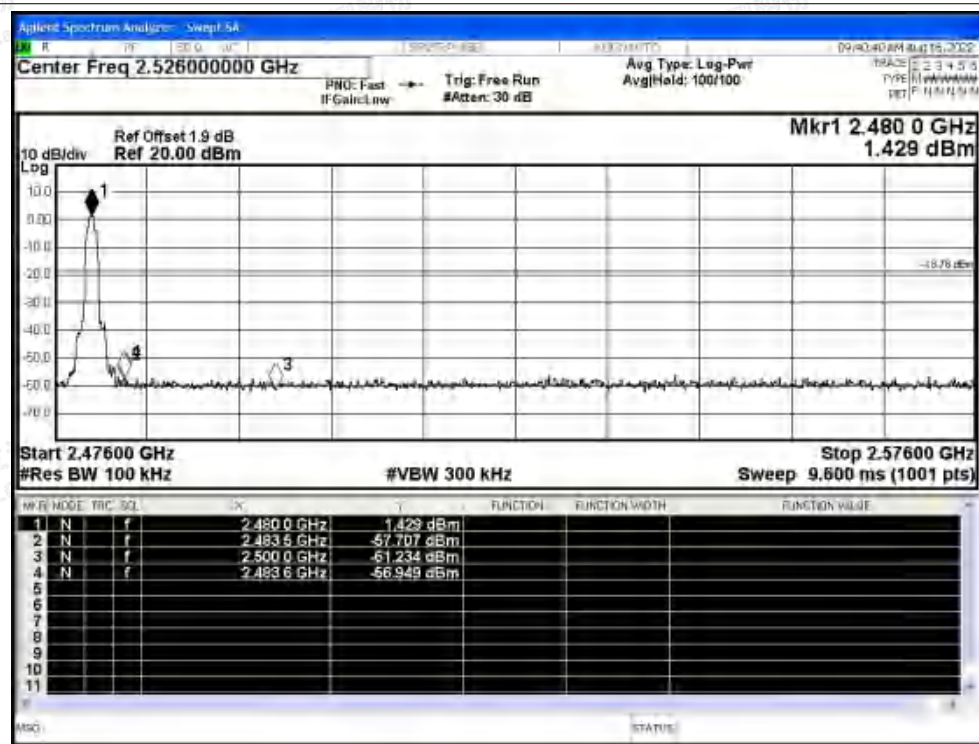


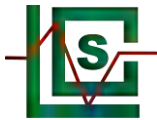


Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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	-58.05	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-57.9	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-57.04	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-57.36	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-55.79	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-56.22	-20	Pass

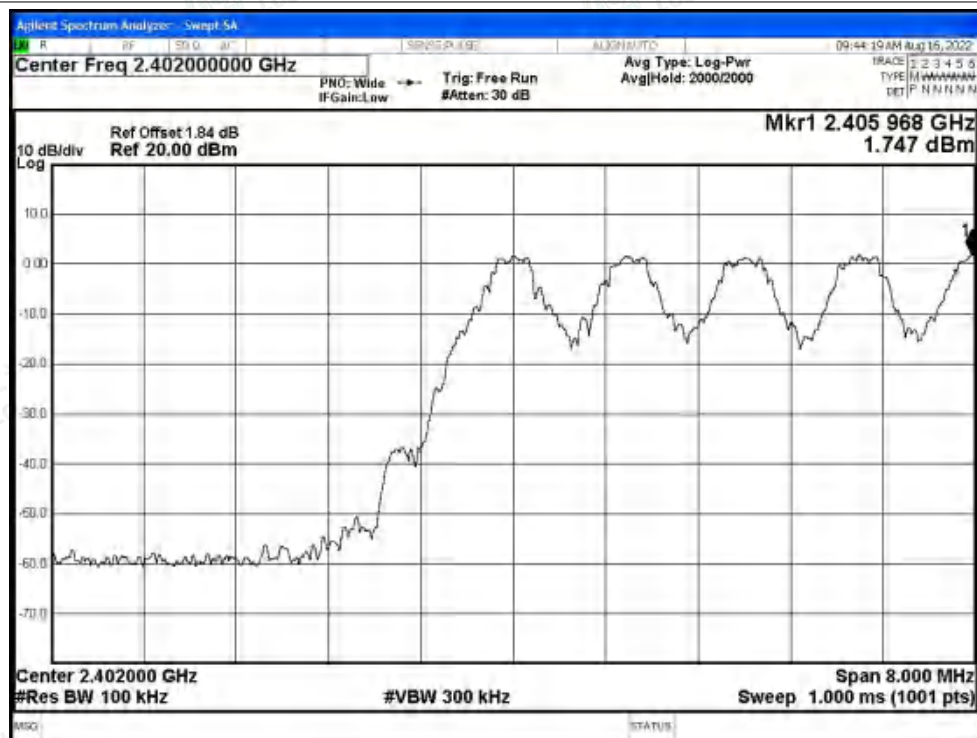


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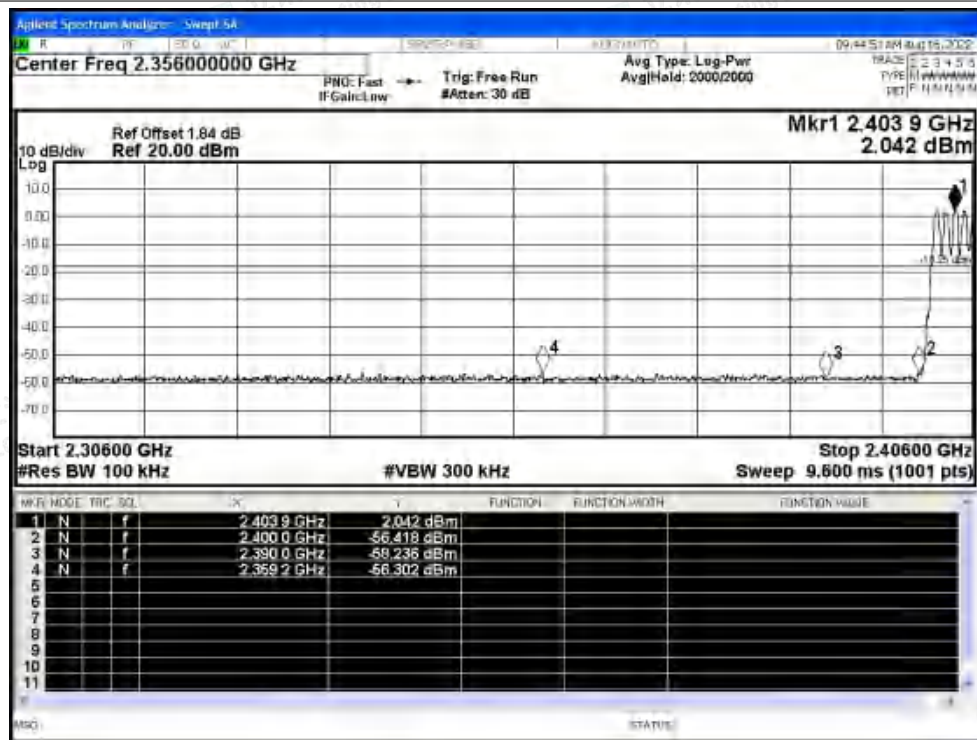


Test Graphs

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

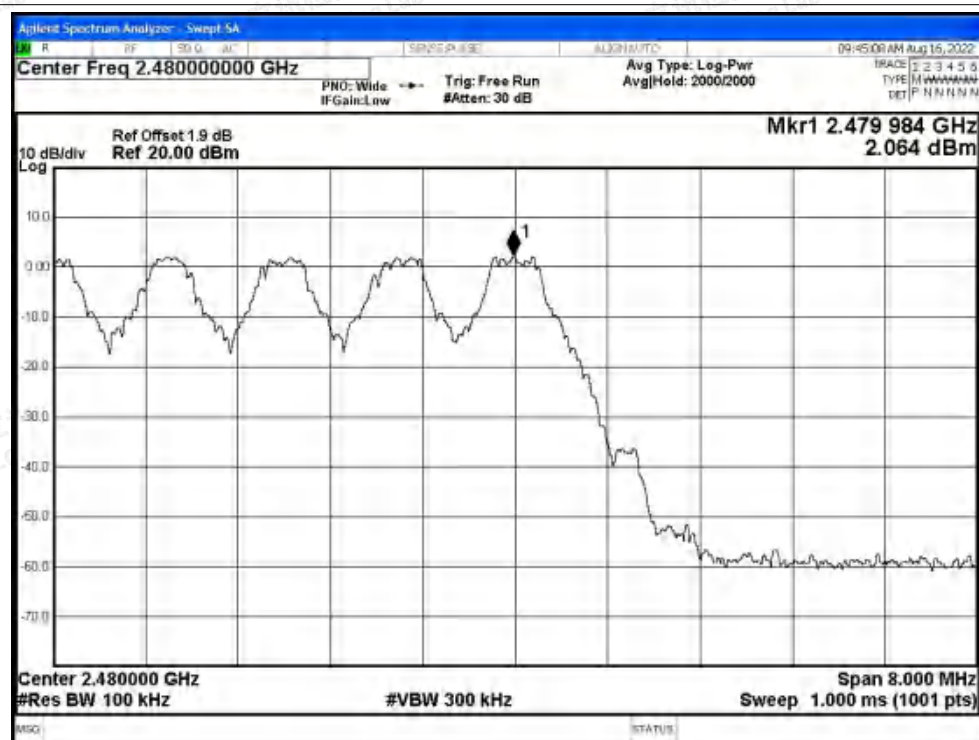


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

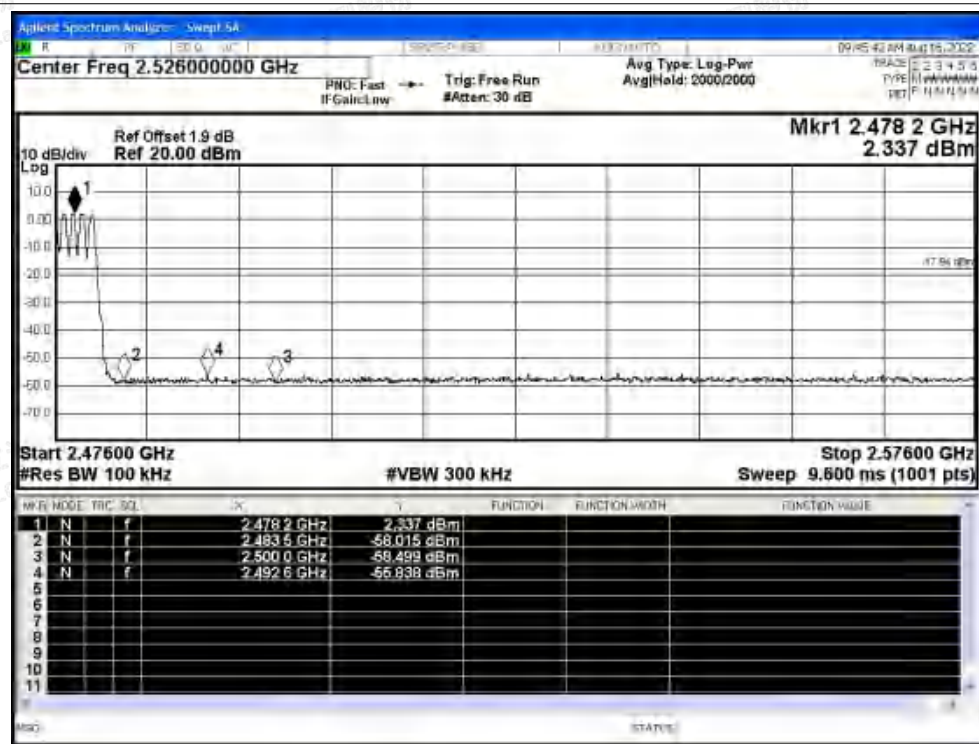




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref

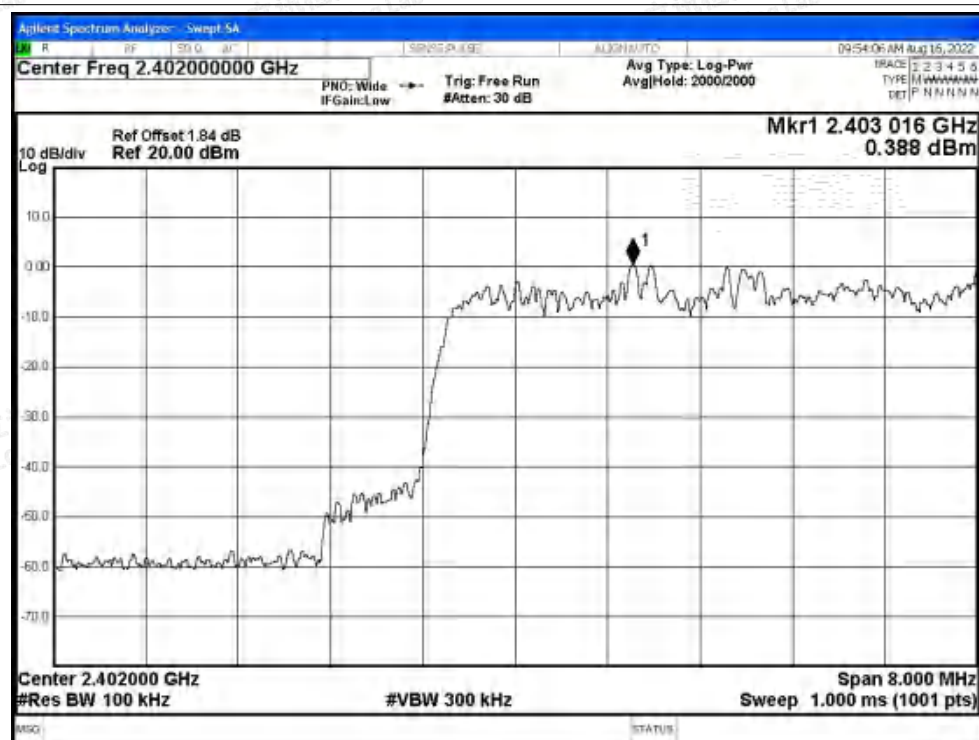


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

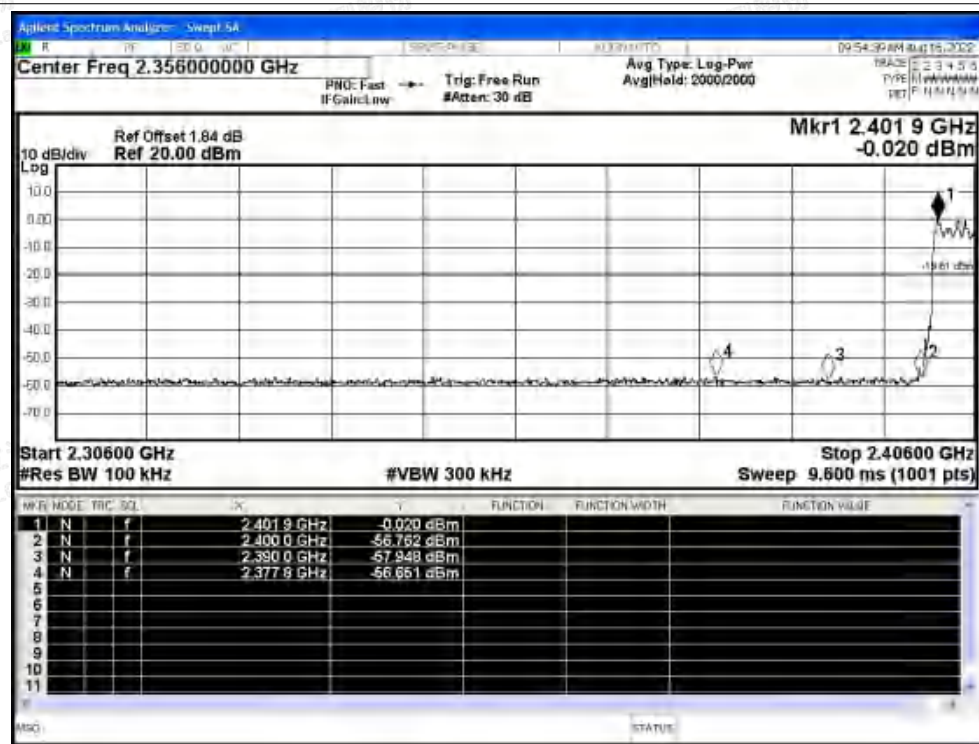




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



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

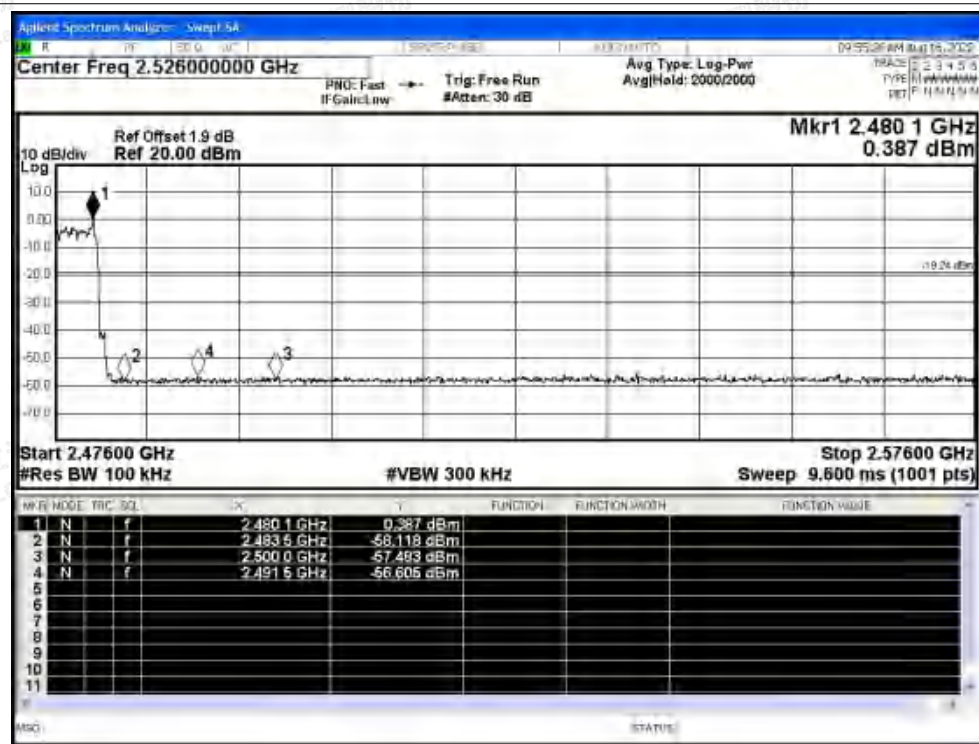




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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

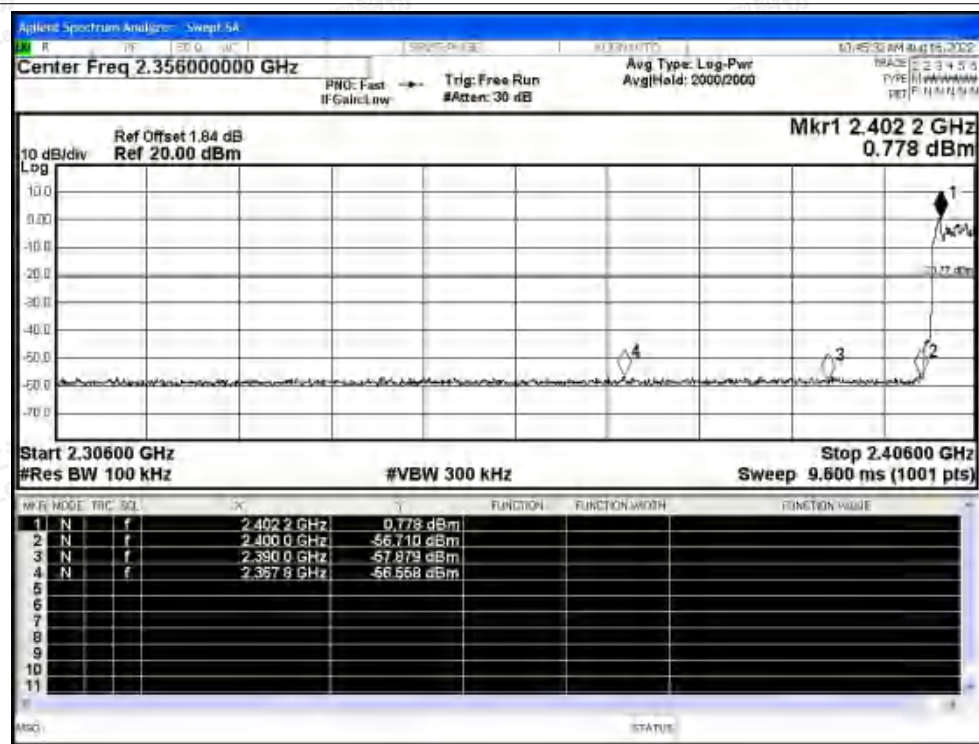




Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



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

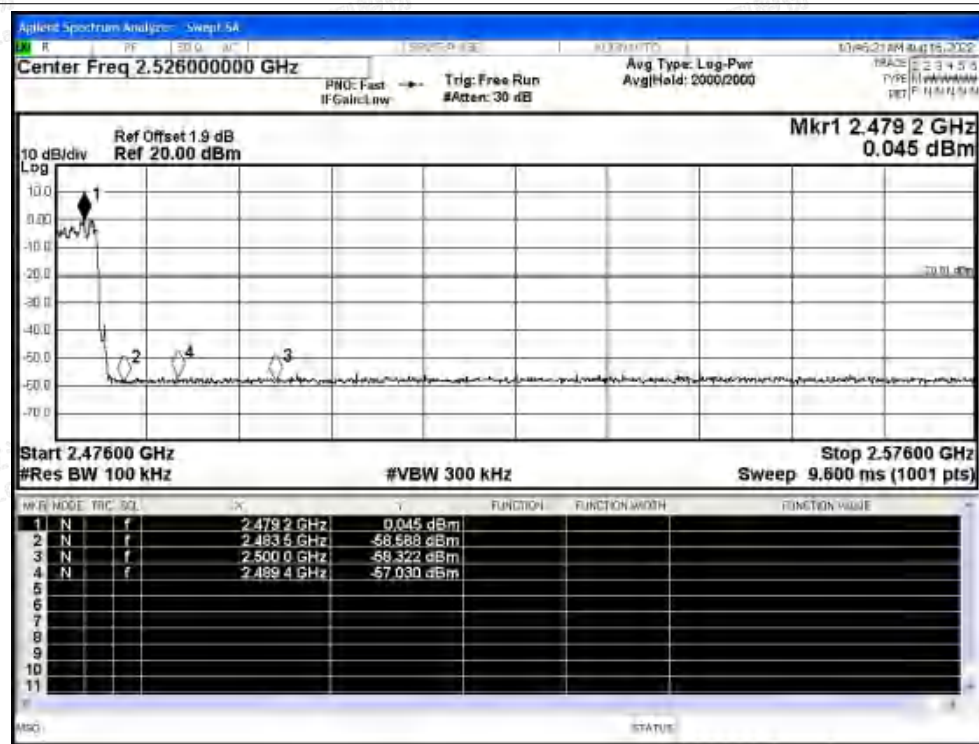




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



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



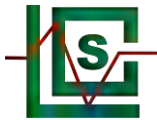


A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-58.21	-20	Pass
NVNT	1-DH5	2441	Ant1	-57.15	-20	Pass
NVNT	1-DH5	2480	Ant1	-57.61	-20	Pass
NVNT	2-DH5	2402	Ant1	-57.07	-20	Pass
NVNT	2-DH5	2441	Ant1	-55.93	-20	Pass
NVNT	2-DH5	2480	Ant1	-56.91	-20	Pass
NVNT	3-DH5	2402	Ant1	-55.9	-20	Pass
NVNT	3-DH5	2441	Ant1	-56.83	-20	Pass
NVNT	3-DH5	2480	Ant1	-57.07	-20	Pass

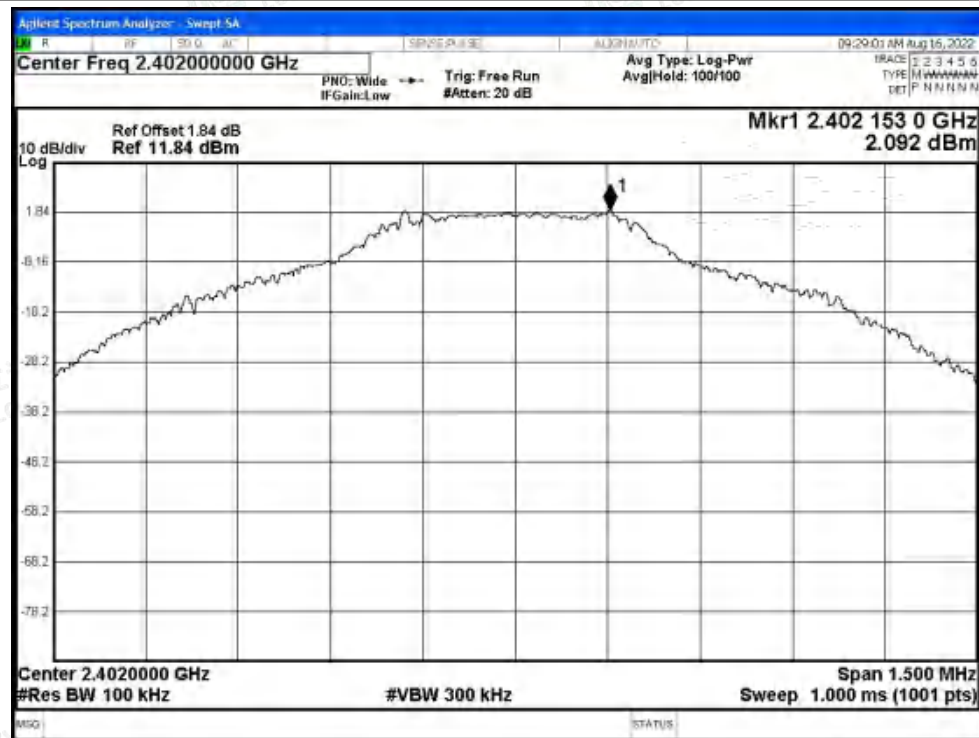


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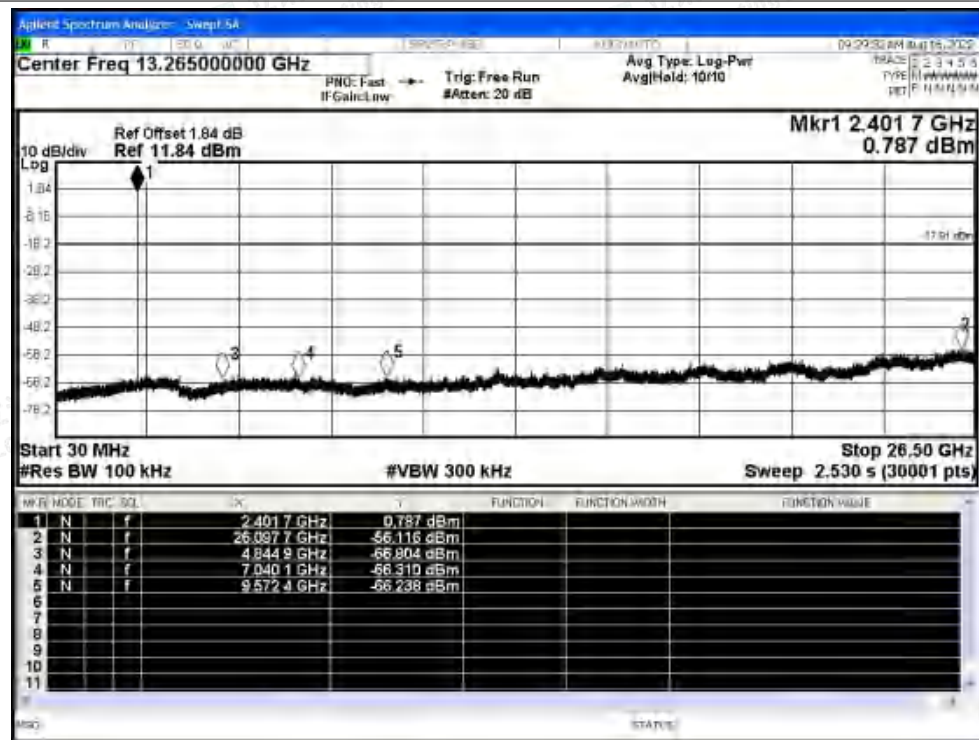


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

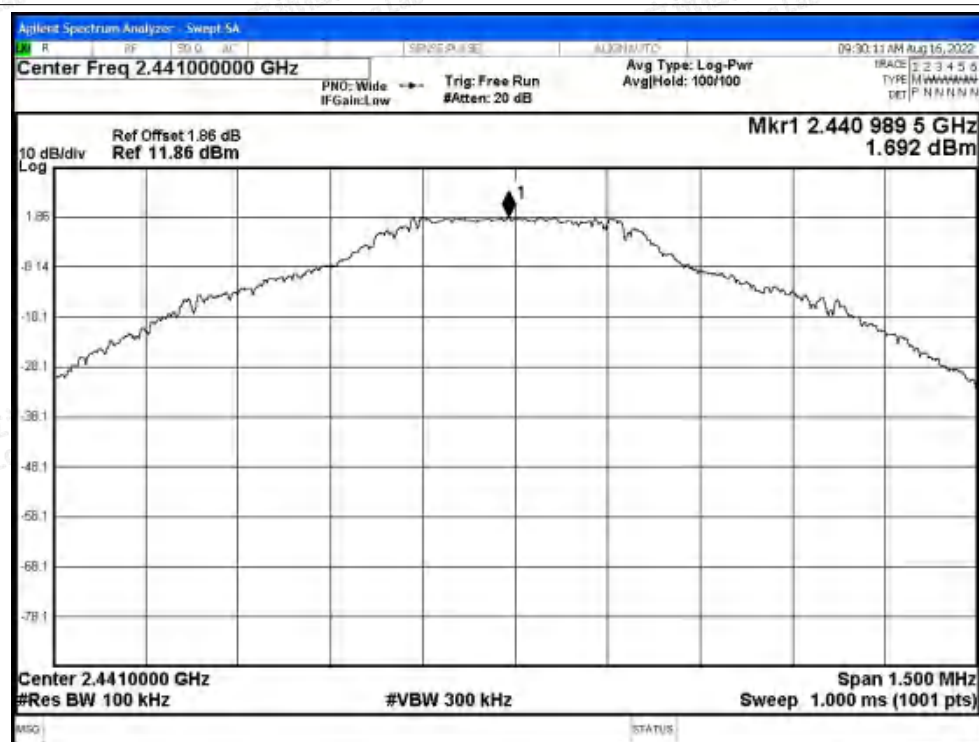


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

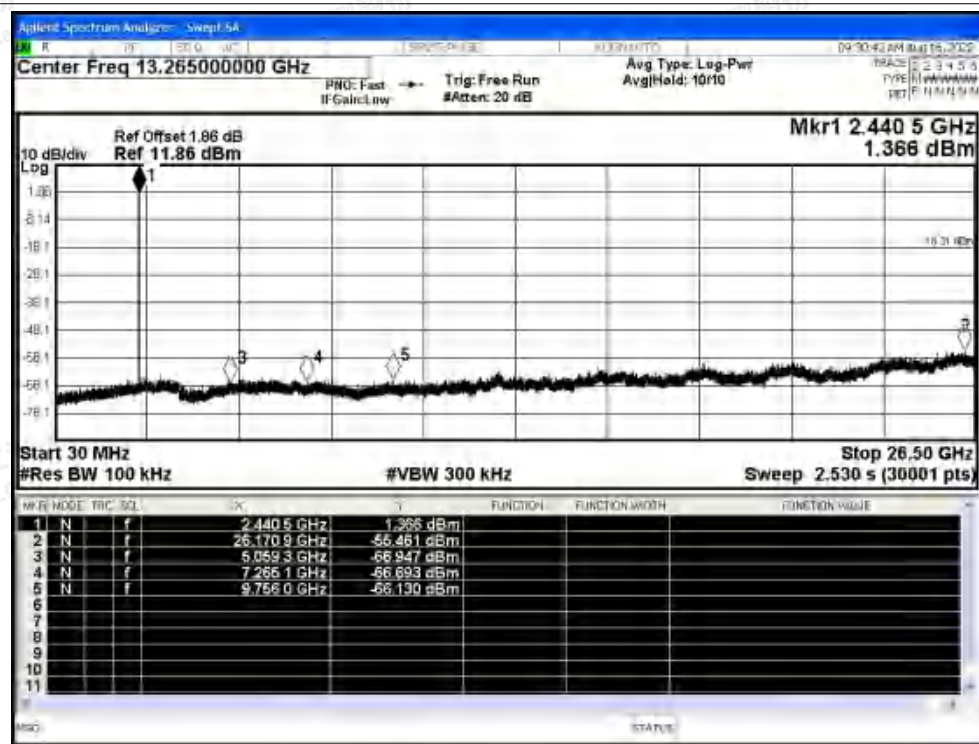




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

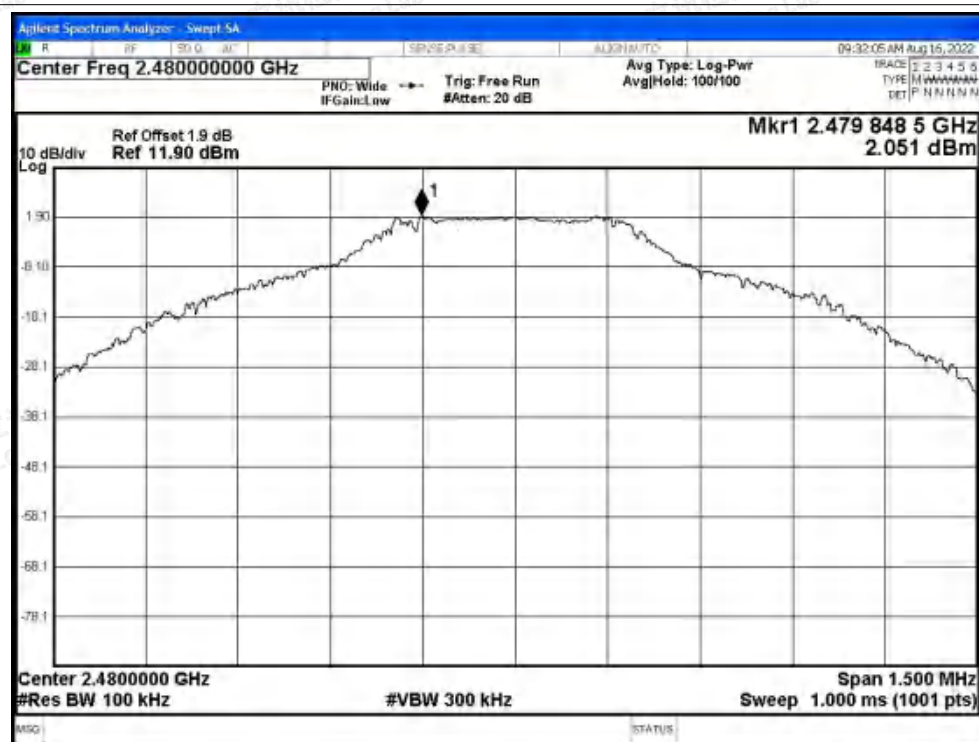


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

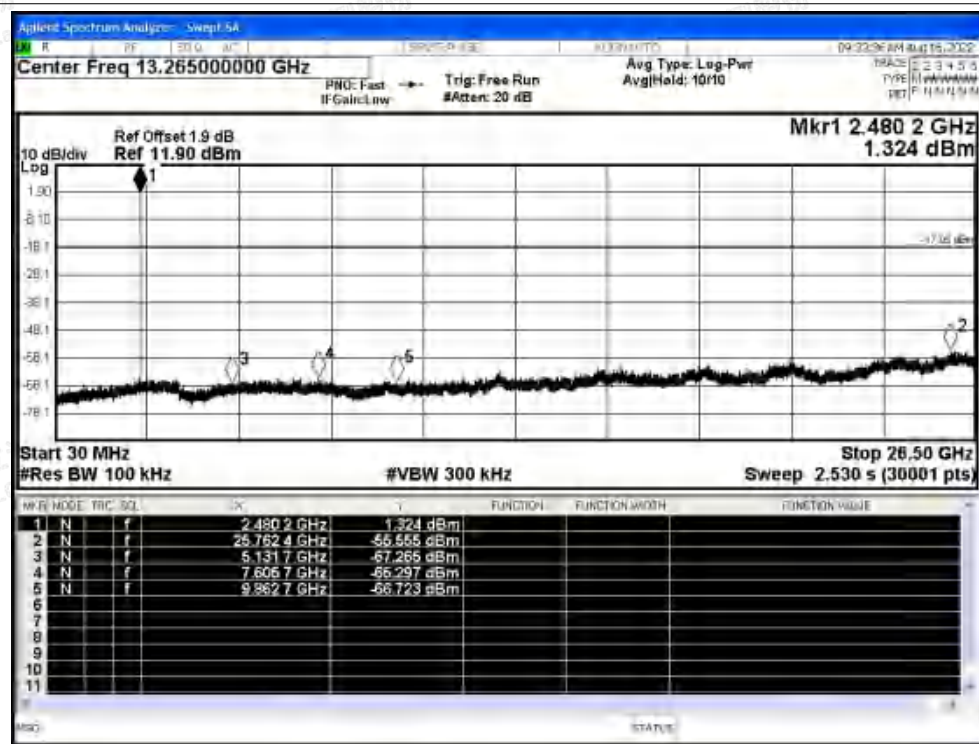




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

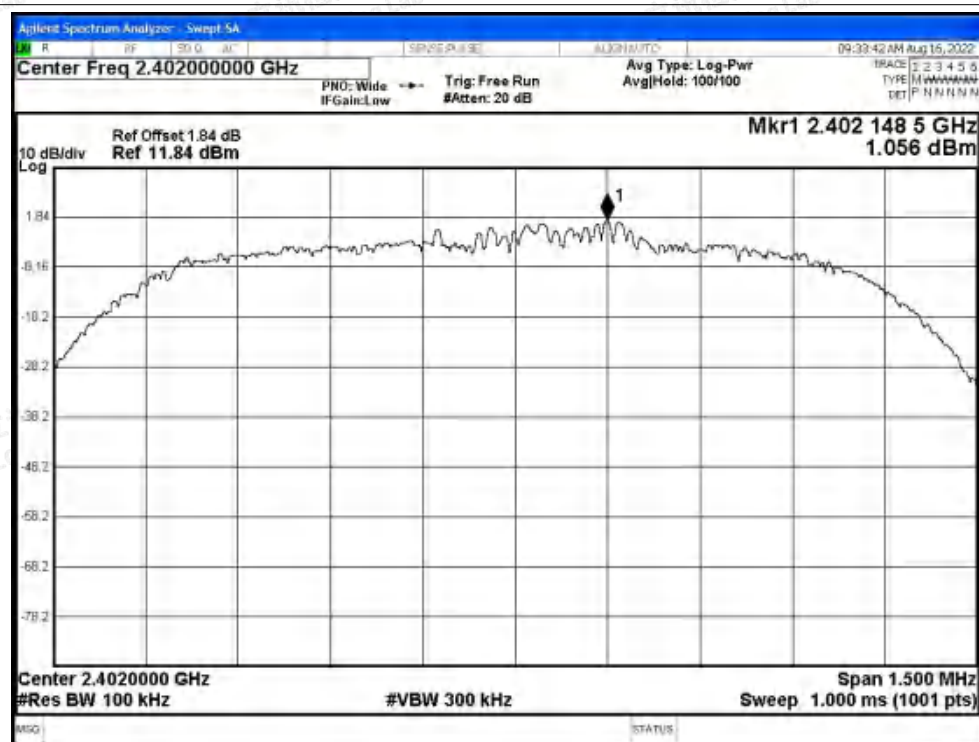


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

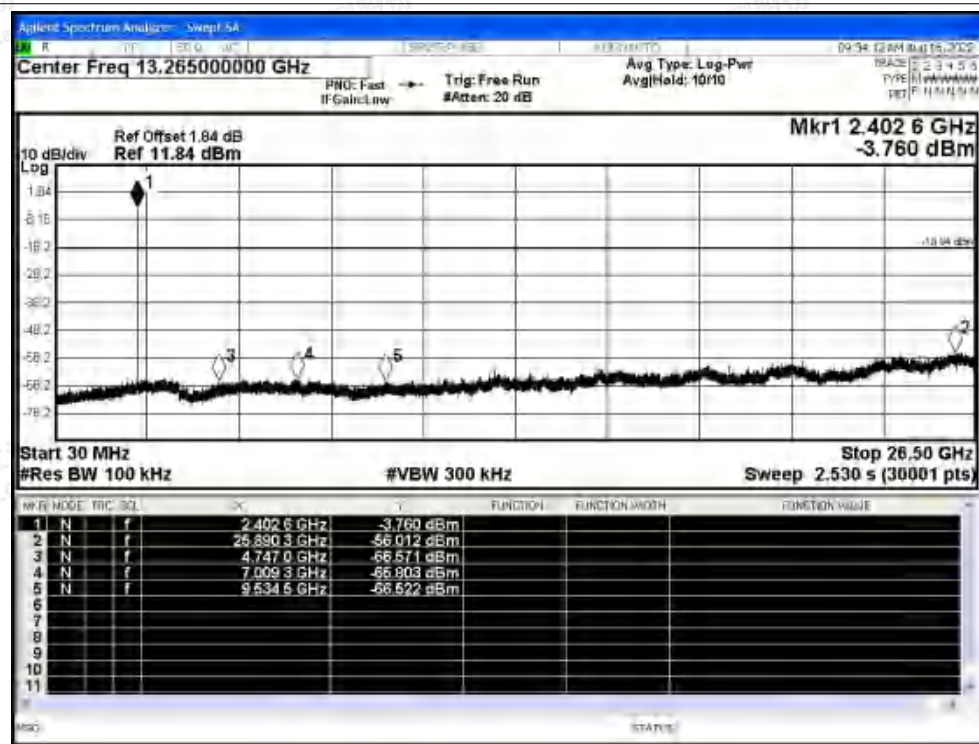




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

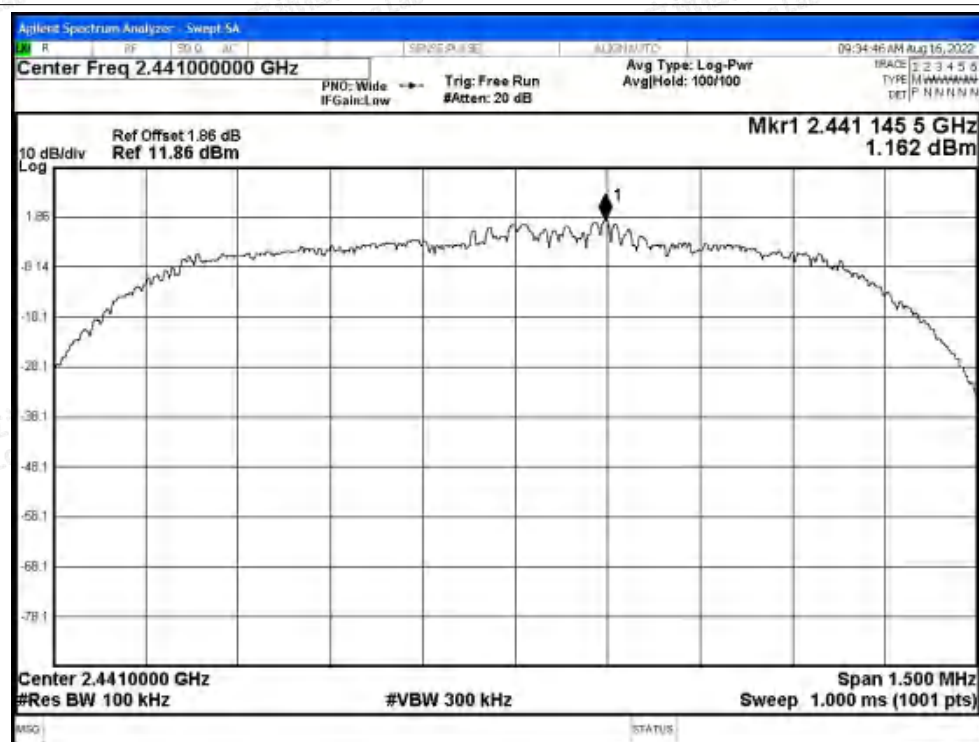


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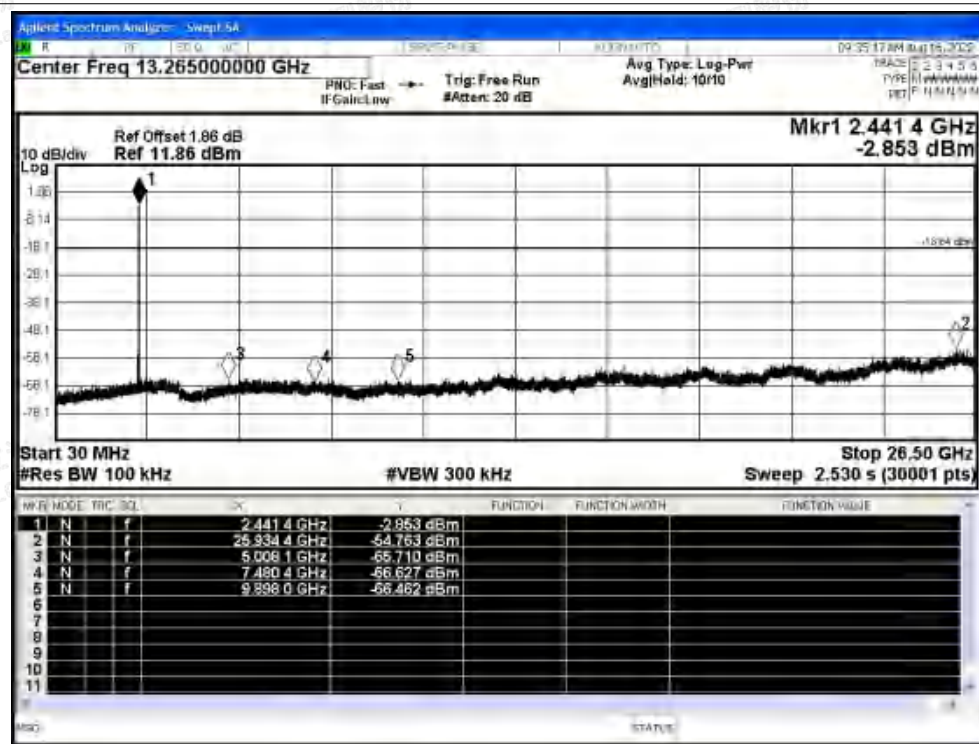




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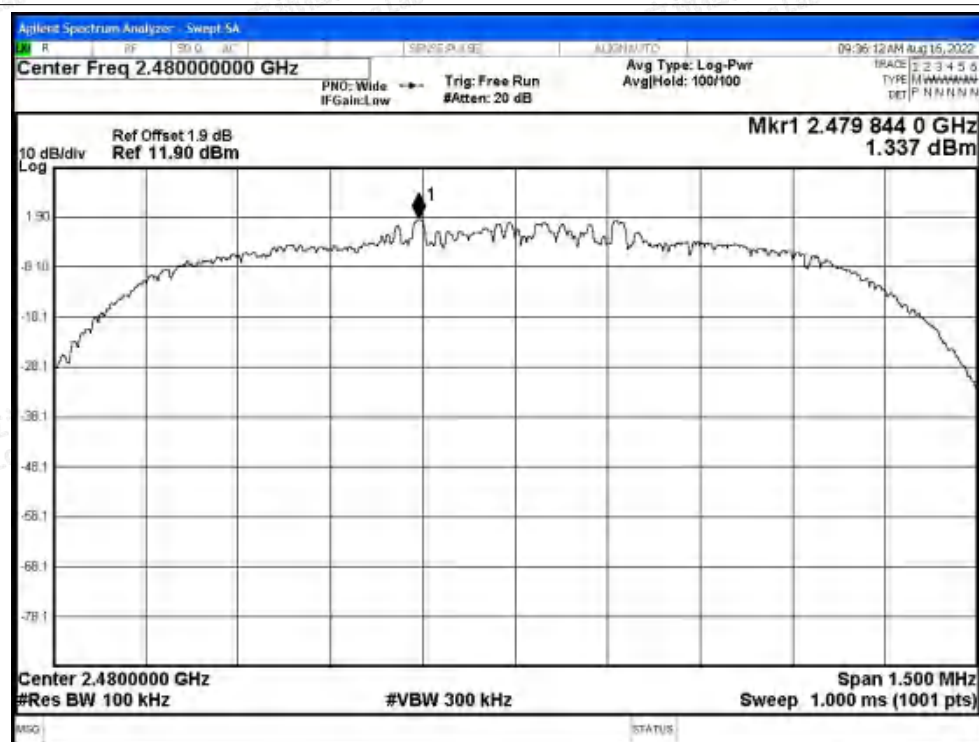


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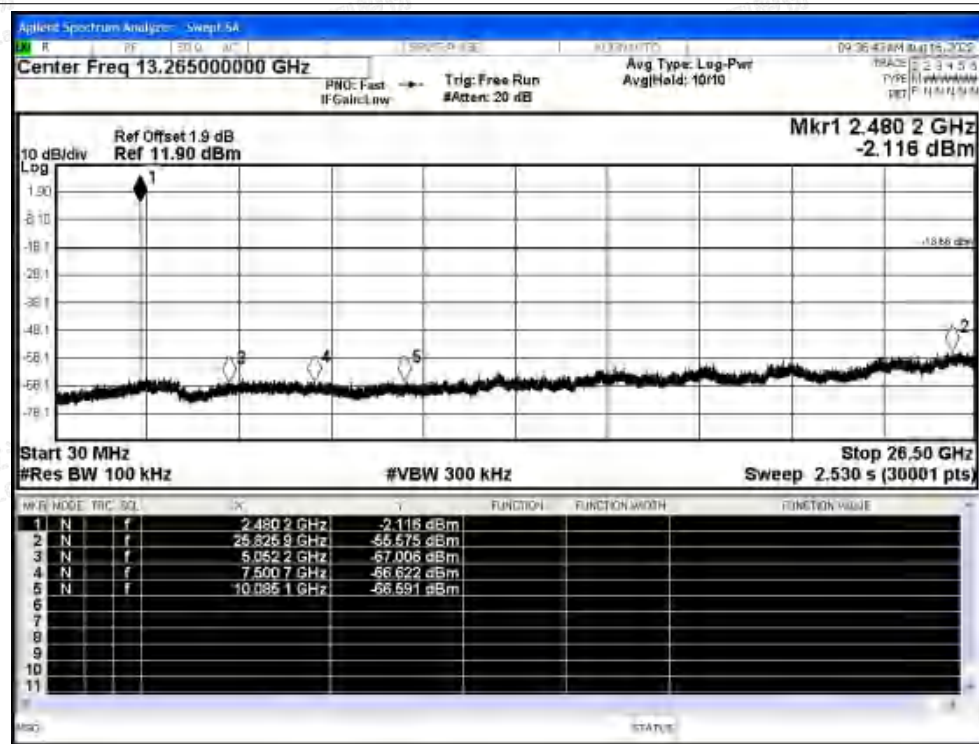




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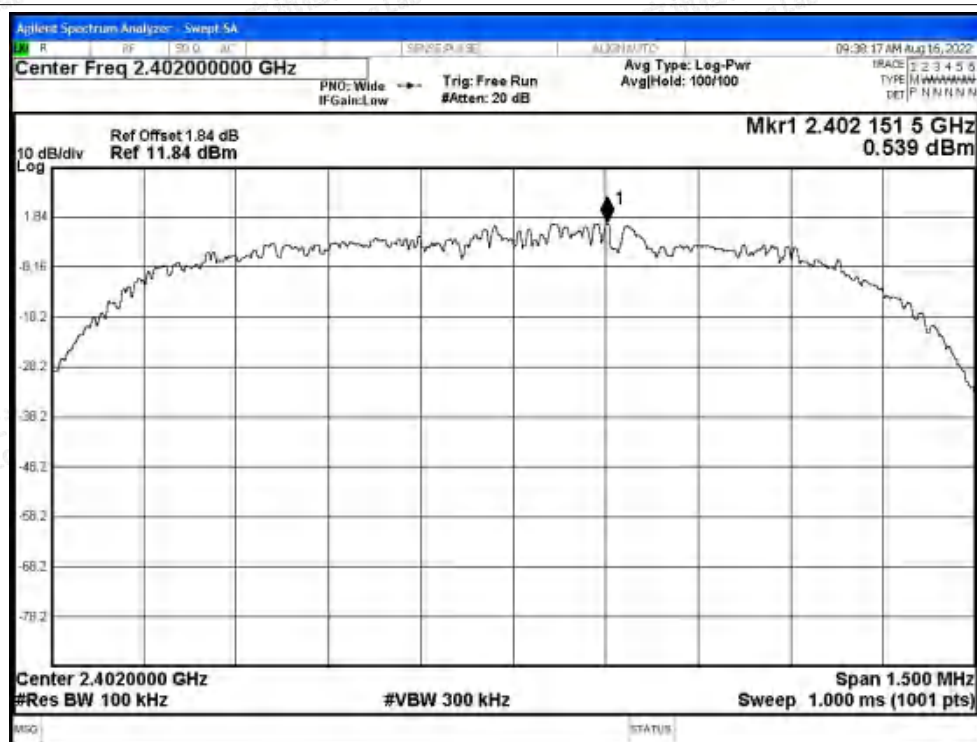


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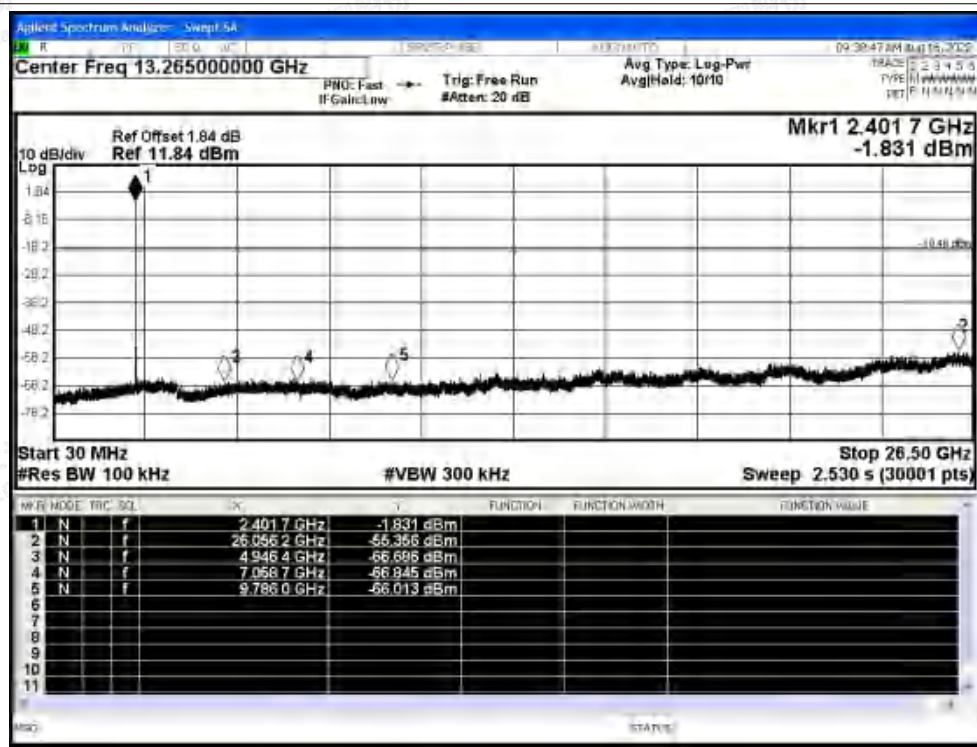




Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission

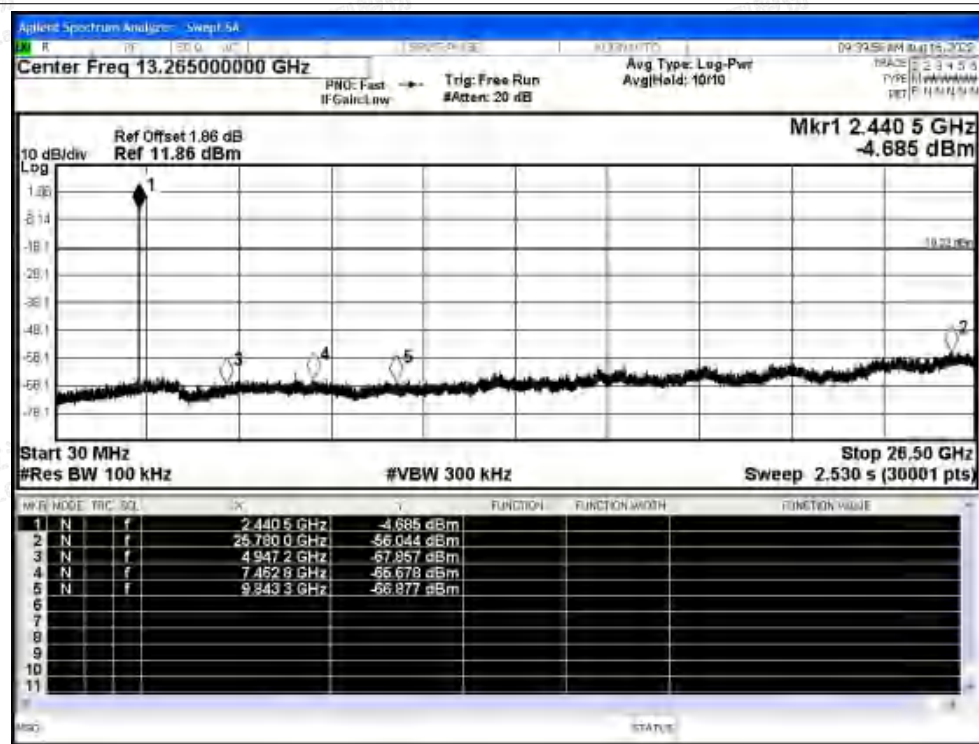




Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref

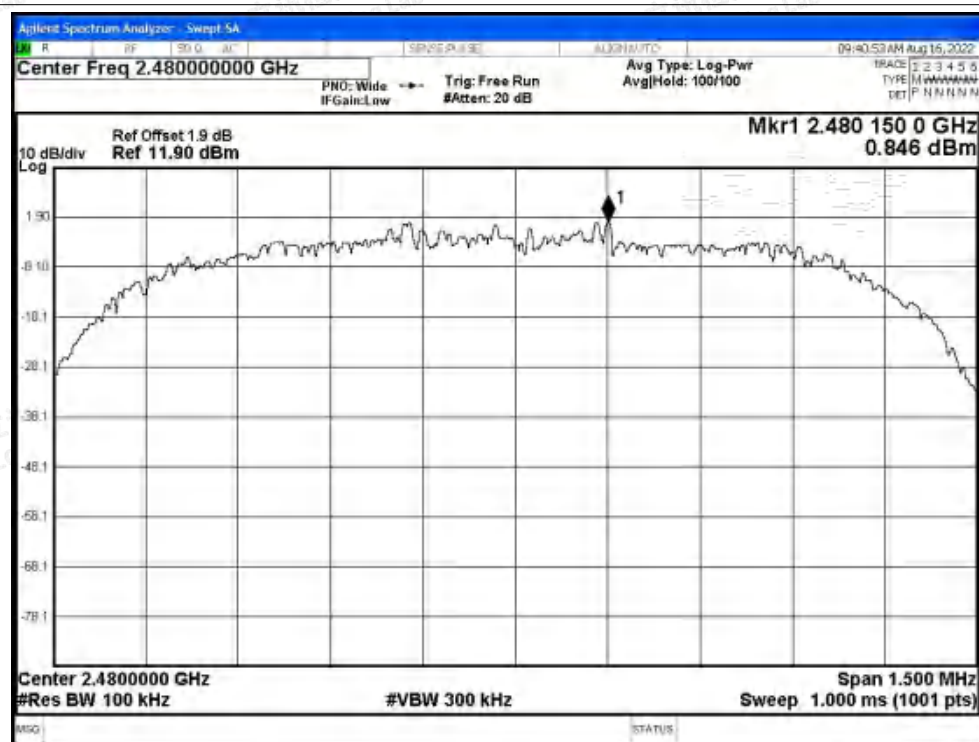


Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission

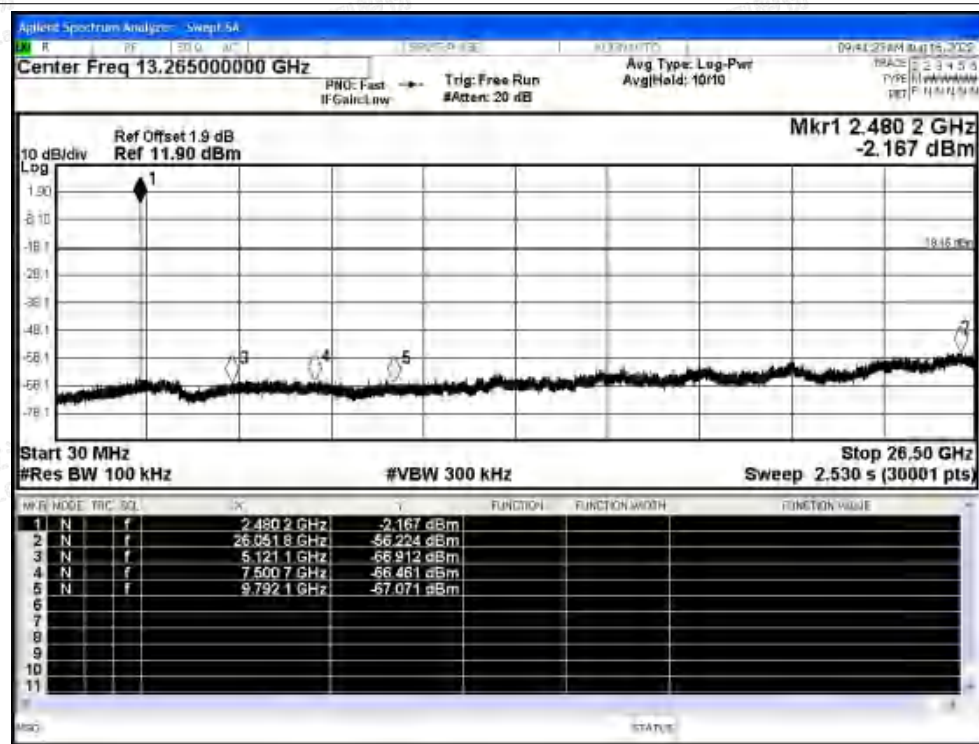




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



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	-50.6	2	46.66	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	2357.328	-47.16	2	50.1	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2388.336	-60.21	2	37.05	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-50.61	2	46.65	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-60.37	2	36.89	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.75	2	47.51	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-59.65	2	37.61	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2485.024	-47.22	2	50.04	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.656	-59.61	2	37.65	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.54	2	47.72	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-60.06	2	37.2	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.28	2	46.98	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-60.78	2	36.48	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2317.008	-48.04	2	49.22	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2384.592	-60.23	2	37.03	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-50.37	2	46.89	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-60.42	2	36.84	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.12	2	48.14	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-59.46	2	37.8	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2490.16	-47.14	2	50.12	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.512	-59.46	2	37.8	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-47.65	2	49.61	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-60.1	2	37.16	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-48.69	2	48.57	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-60.79	2	36.47	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2357.712	-47.72	2	49.54	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2378.448	-60.18	2	37.08	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.93	2	46.33	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-60.43	2	36.83	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-50.49	2	46.77	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-59.64	2	37.62	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2494.528	-47.52	2	49.74	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2484.472	-59.62	2	37.64	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-51.22	2	46.04	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-60.26	2	37	Average	54	Pass

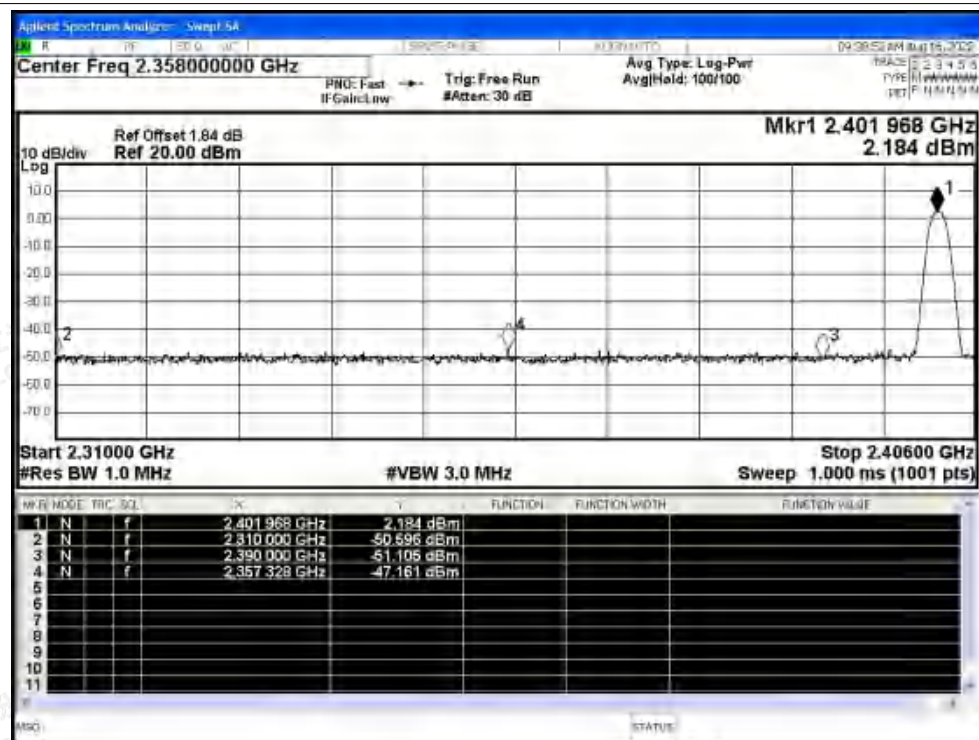


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Scan code to check authenticity

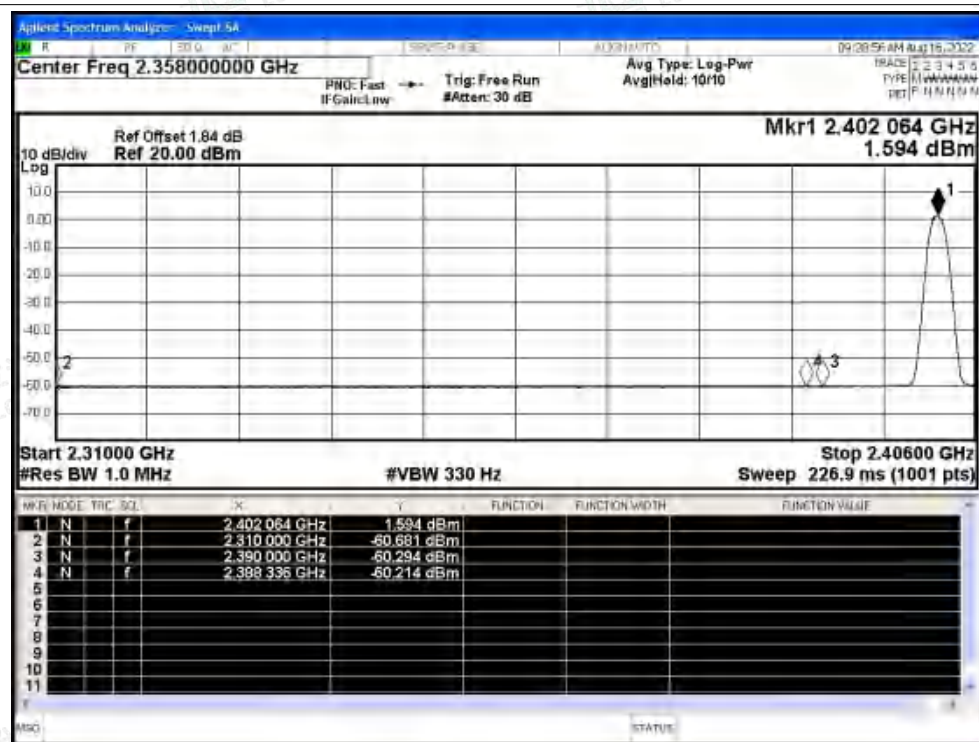


Test Graphs

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

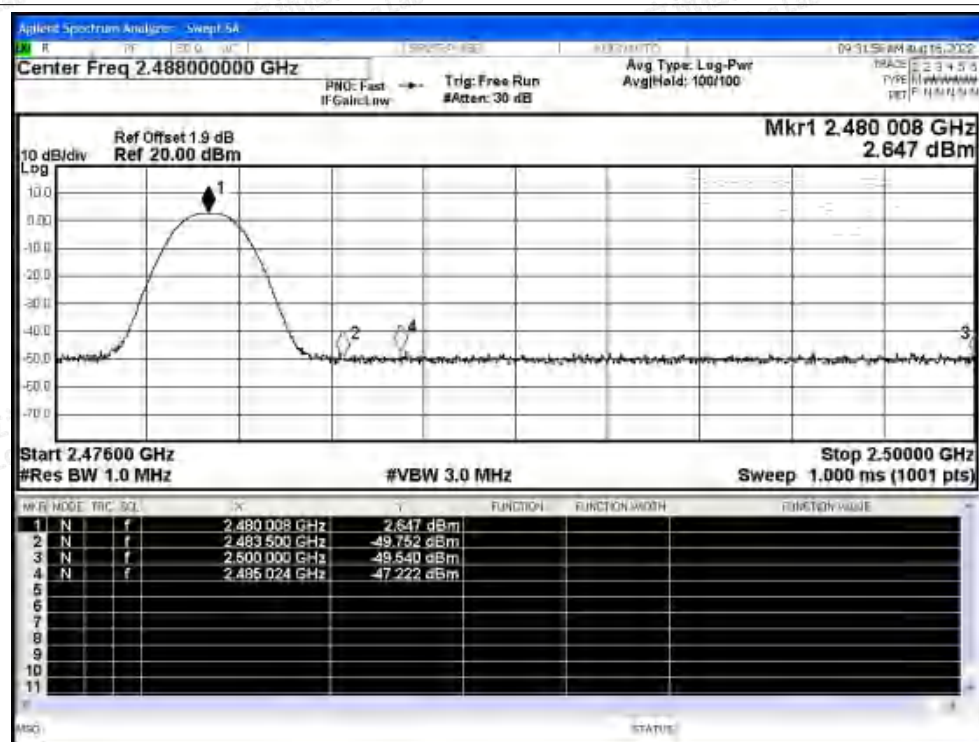


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

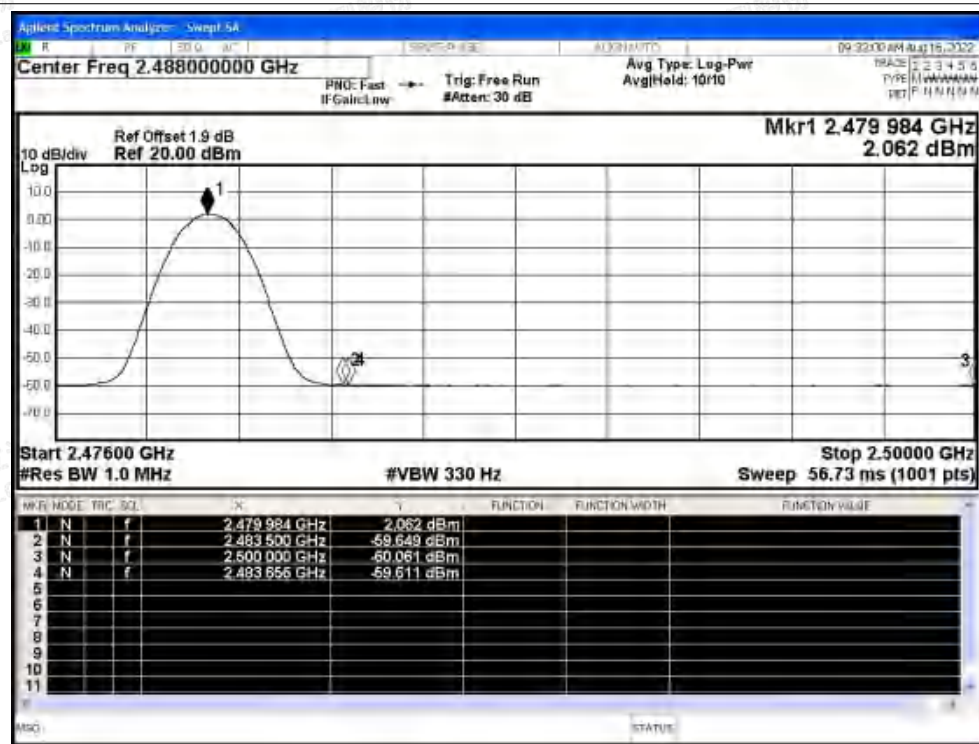




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

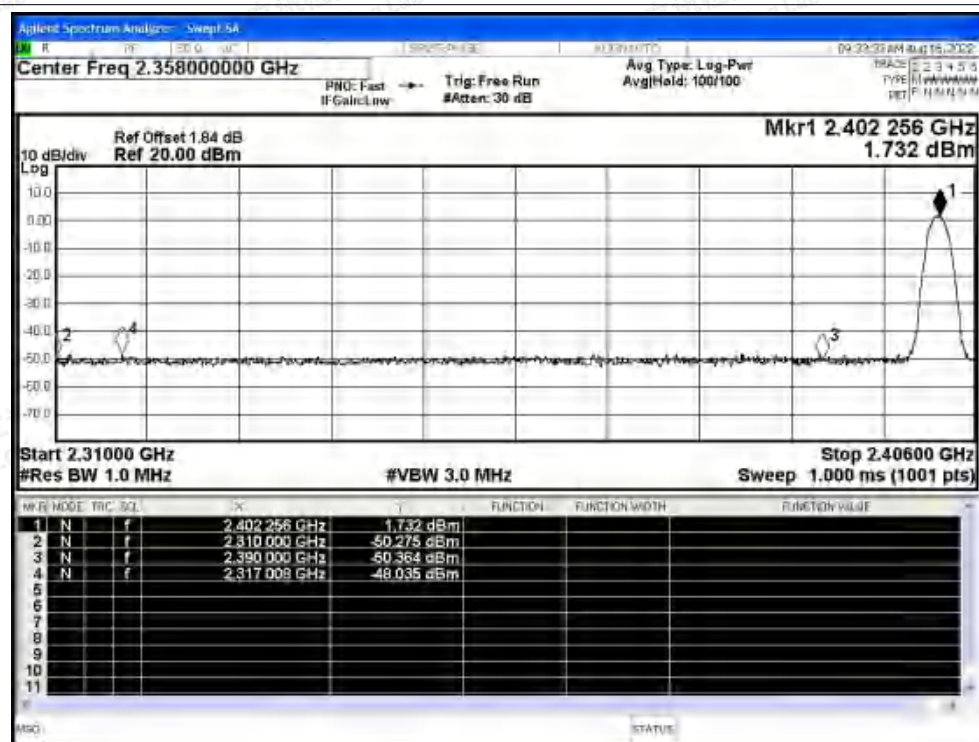


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

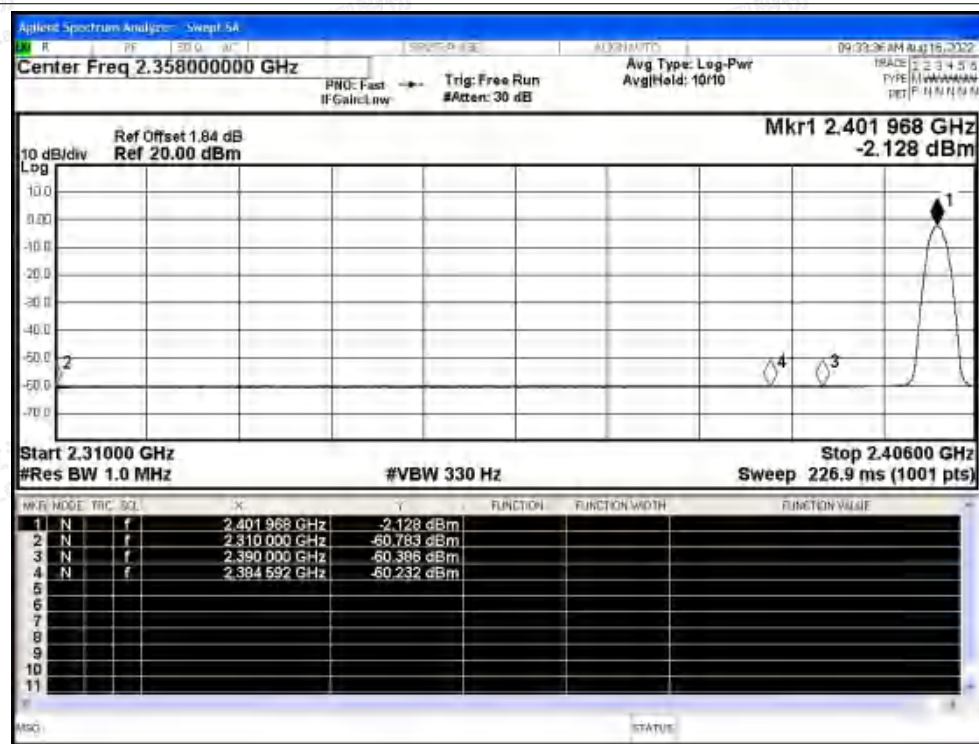




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

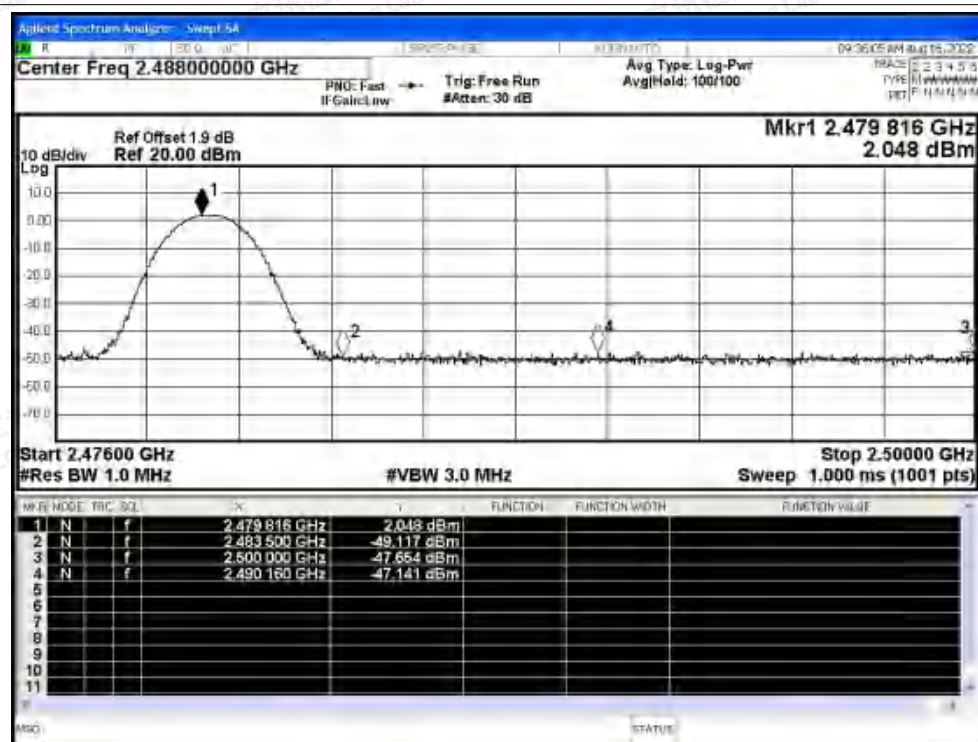


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average

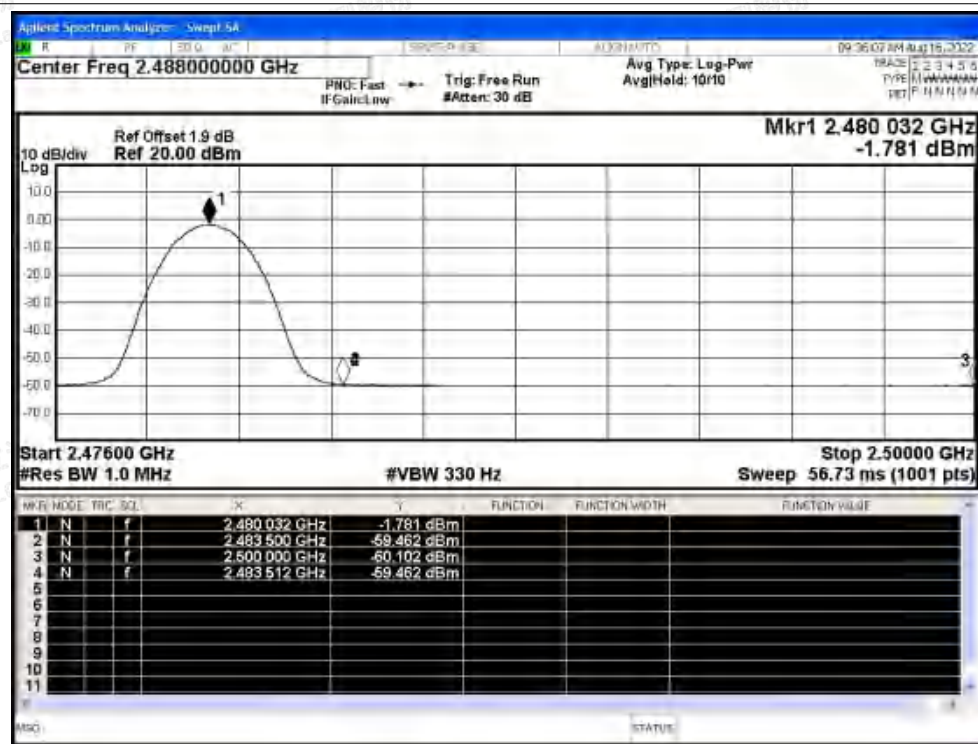




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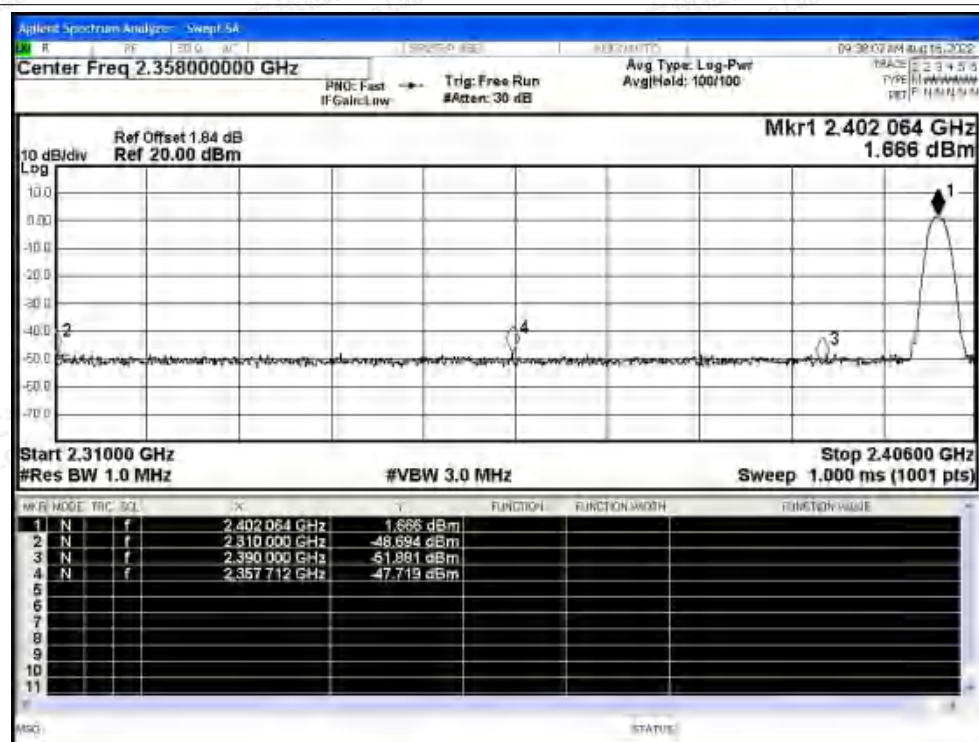


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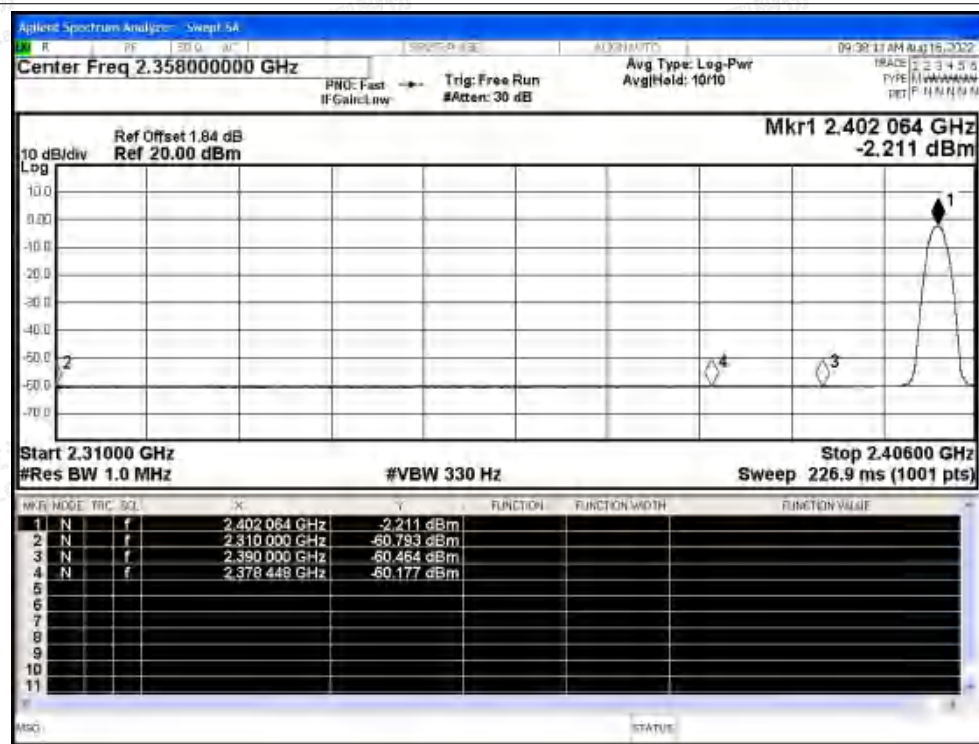




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

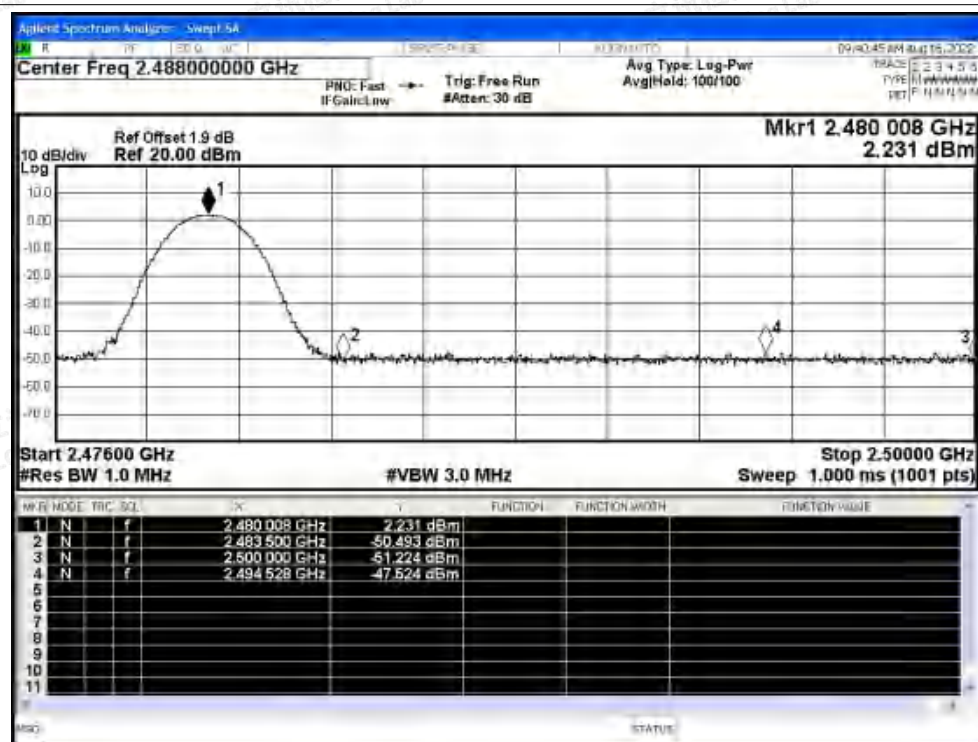


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





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



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

