



RF Test Data for BT (Conducted Measurement)

Product Name: WIRELESS SPEAKER

Test Model: WL-JELED

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
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	0.966	N/A	Pass
NVNT	1-DH5	2441	Ant1	0.939	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.946	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.322	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.282	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.286	N/A	Pass
NVNT	3-DH5	2402	Ant1	1.309	N/A	Pass
NVNT	3-DH5	2441	Ant1	1.298	N/A	Pass
NVNT	3-DH5	2480	Ant1	1.3	N/A	Pass



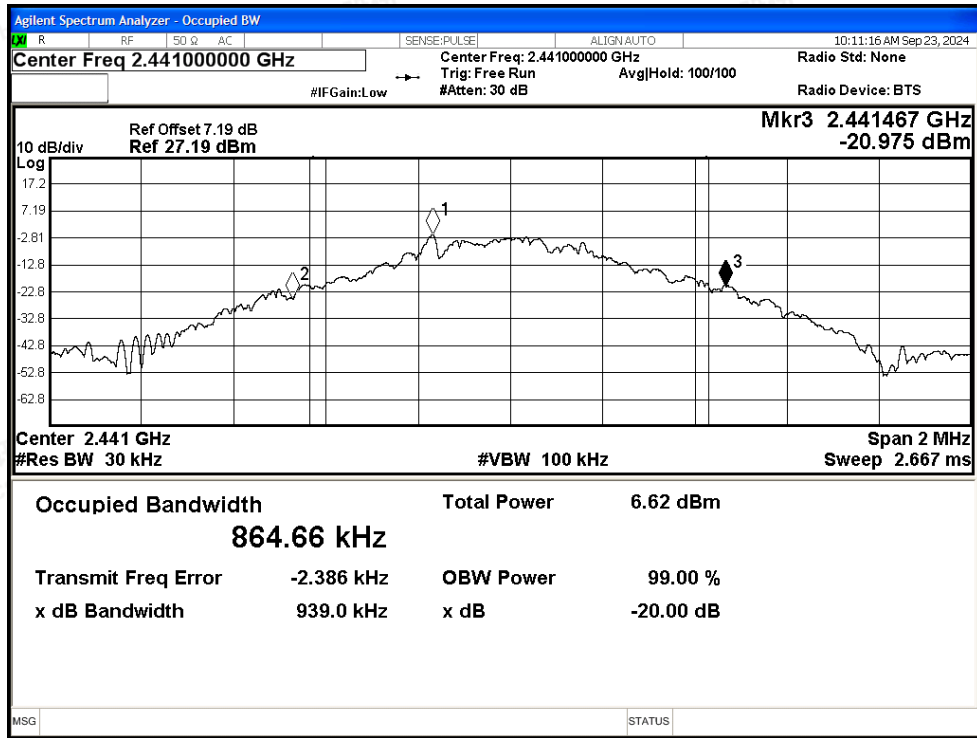


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

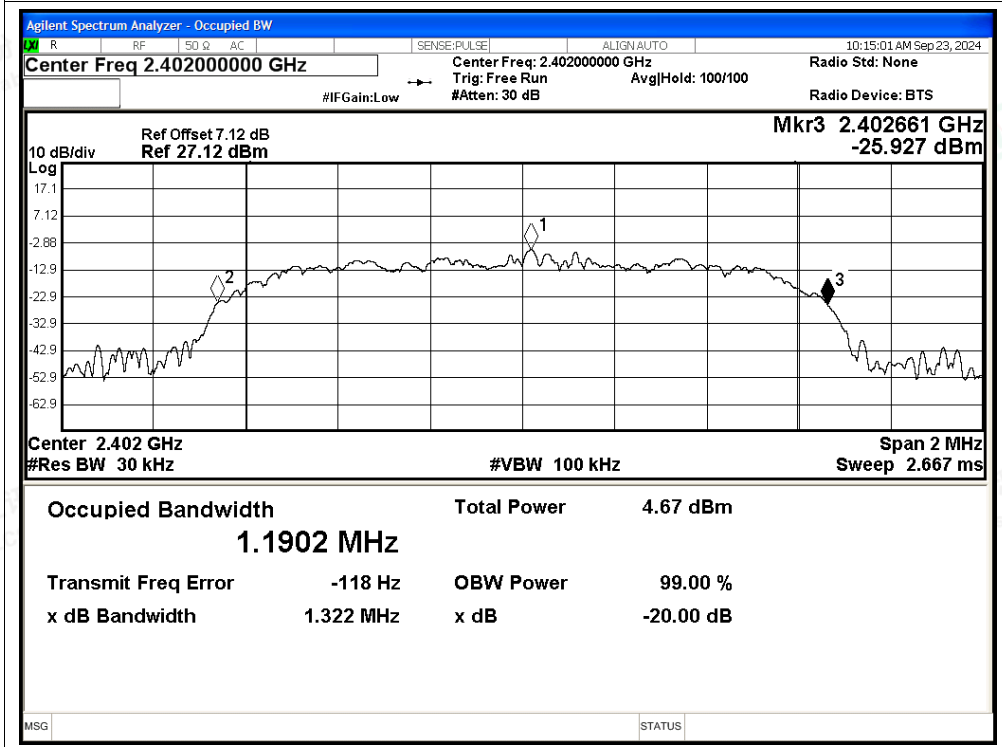




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

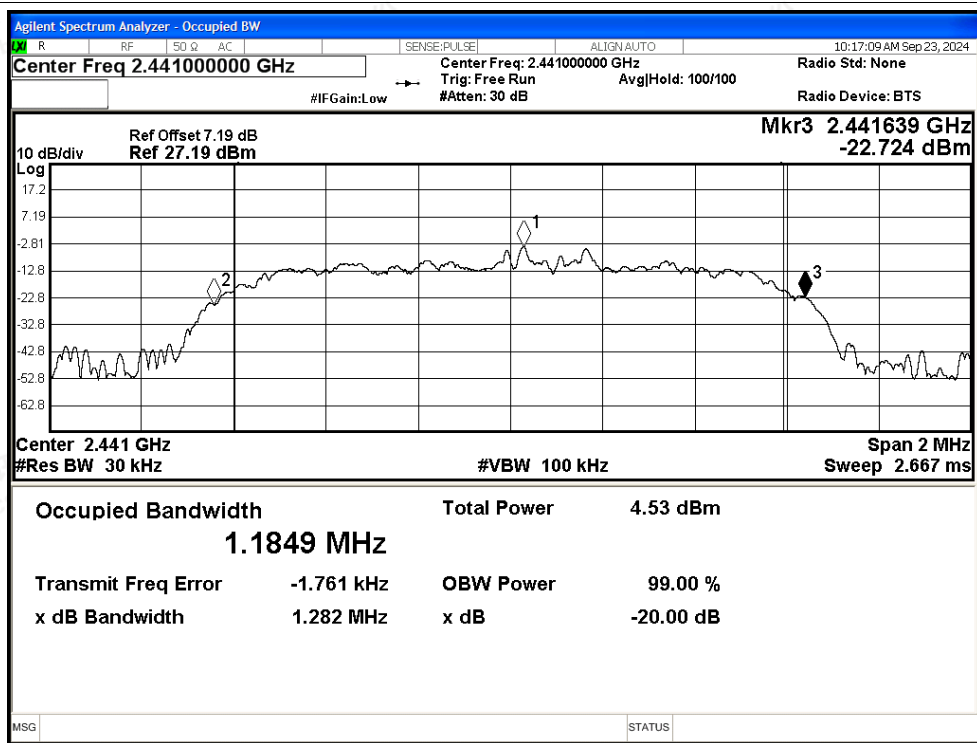


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

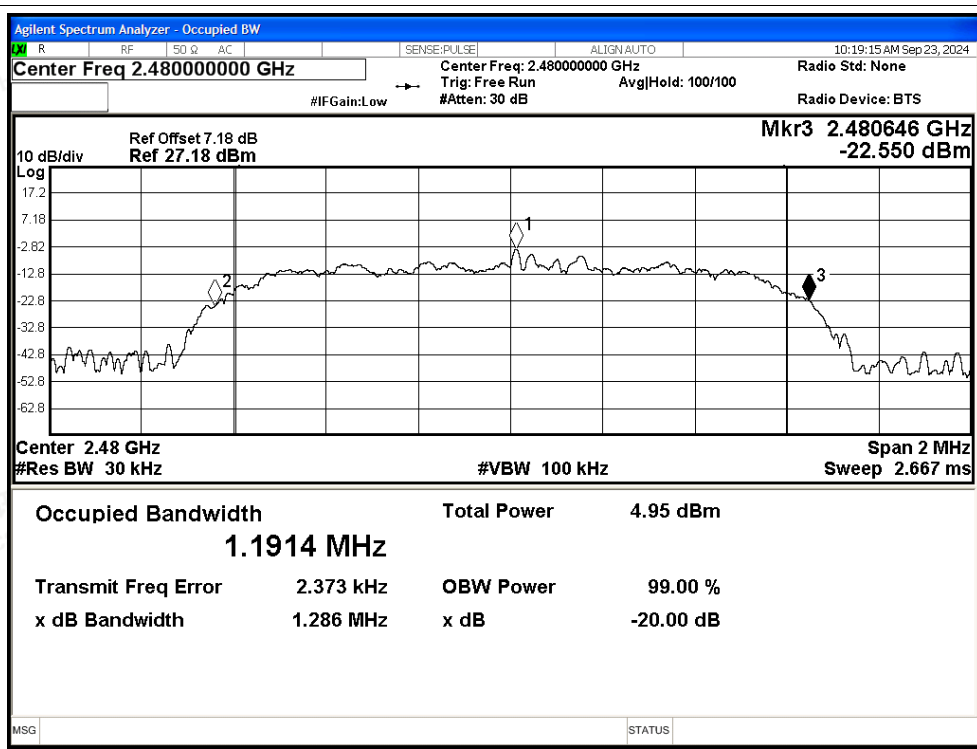




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

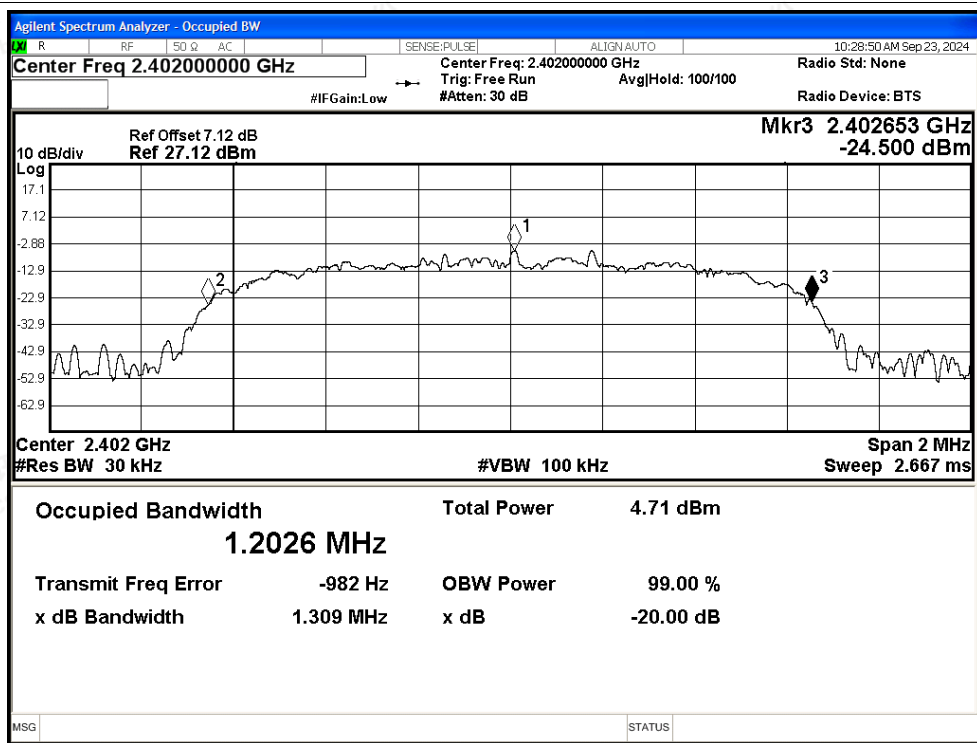


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

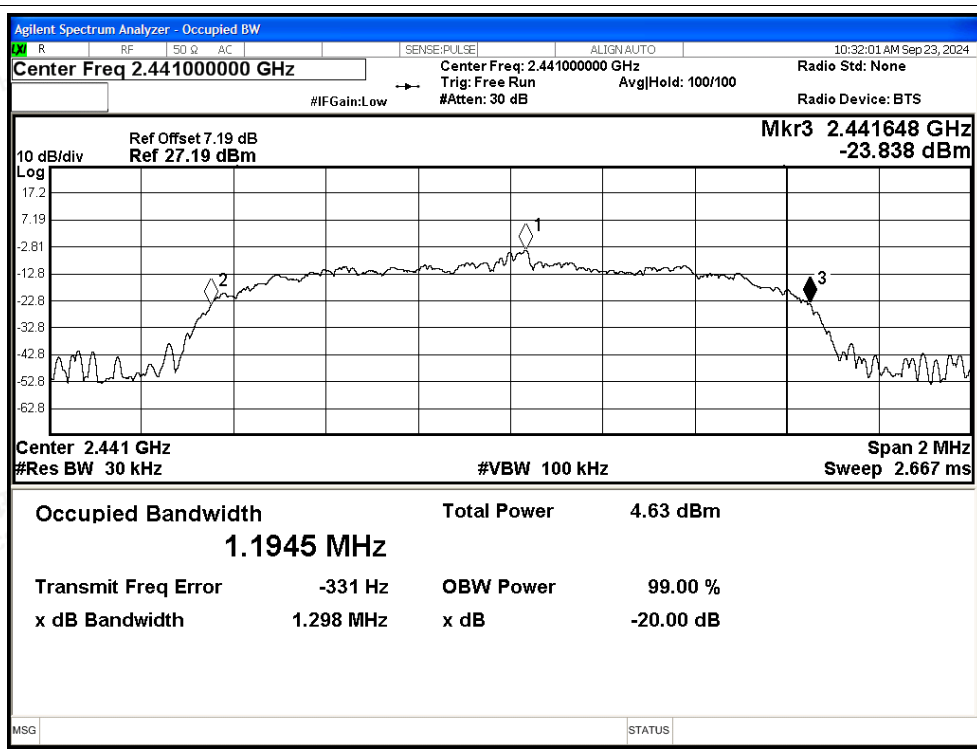


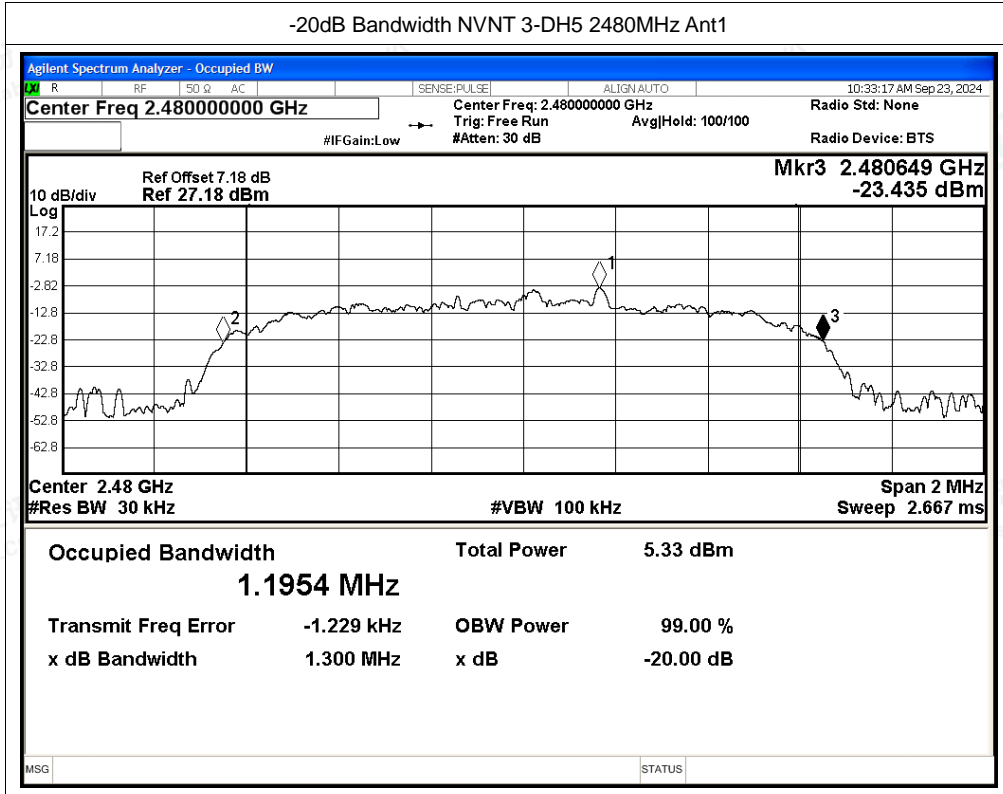


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1







A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.7	21	Pass
NVNT	1-DH5	2441	Ant1	0.08	21	Pass
NVNT	1-DH5	2480	Ant1	0.56	21	Pass
NVNT	2-DH5	2402	Ant1	0.75	21	Pass
NVNT	2-DH5	2441	Ant1	0.13	21	Pass
NVNT	2-DH5	2480	Ant1	0.85	21	Pass
NVNT	3-DH5	2402	Ant1	0.94	21	Pass
NVNT	3-DH5	2441	Ant1	0.38	21	Pass
NVNT	3-DH5	2480	Ant1	1.11	21	Pass



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A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.03	2403.012	0.982	0.644	Pass
NVNT	2-DH5	Ant1	2402.028	2403.142	1.114	0.881	Pass
NVNT	3-DH5	Ant1	2401.85	2403.178	1.328	0.873	Pass

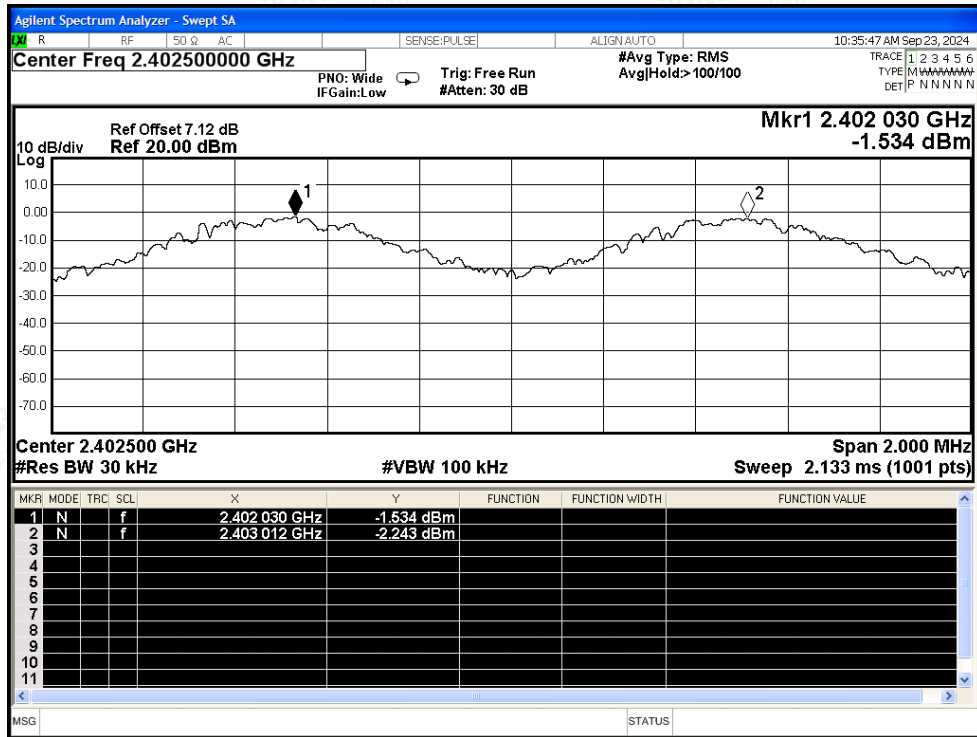


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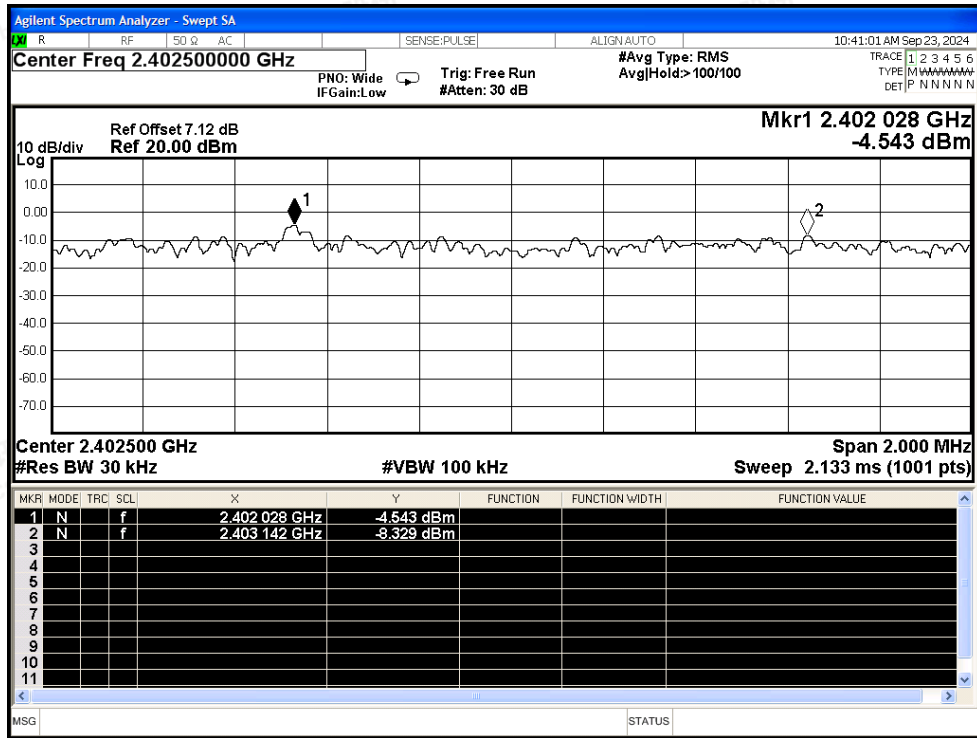


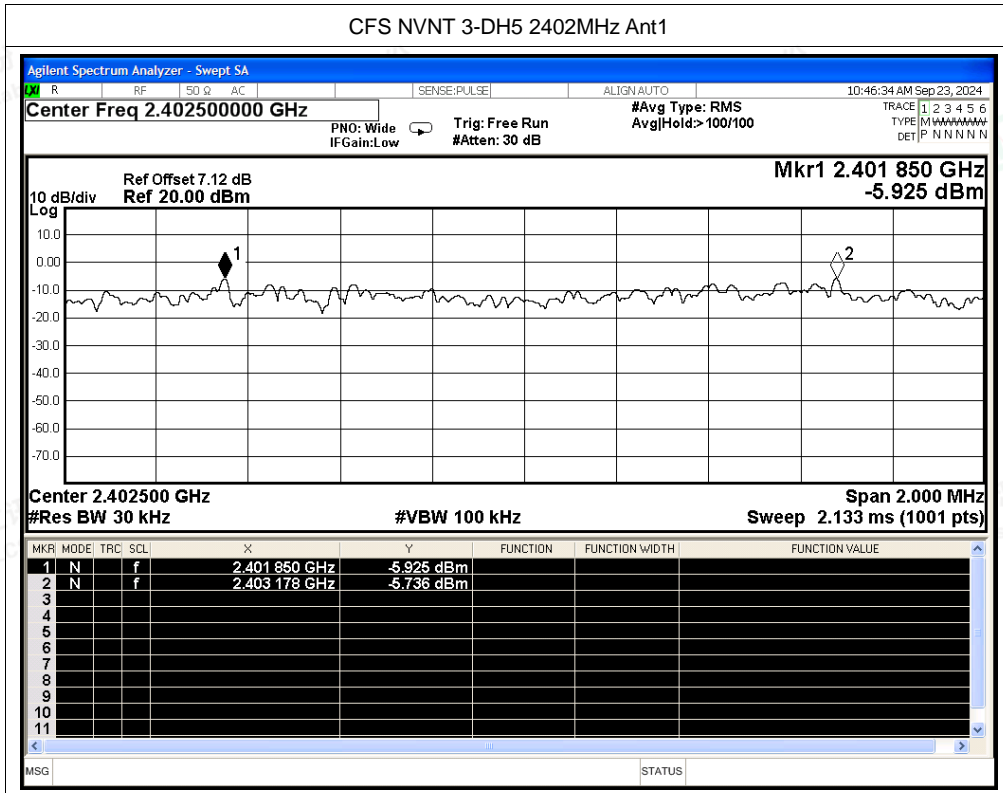
Test Graphs

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	308.46	106	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	330.372	114	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.898	339.066	117	31600	400	Pass

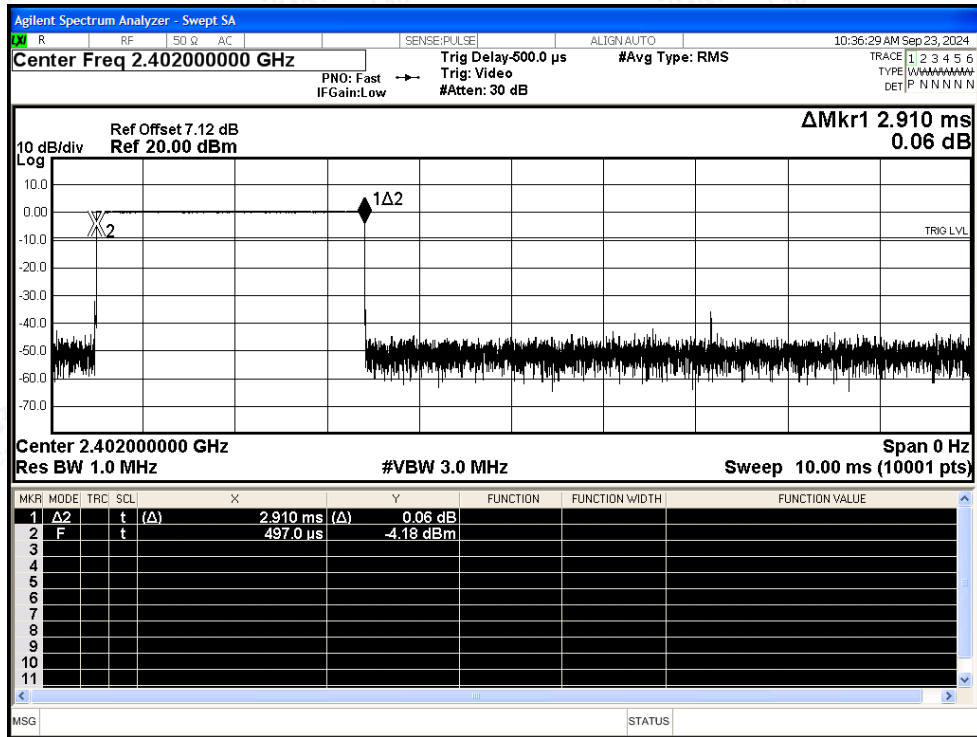


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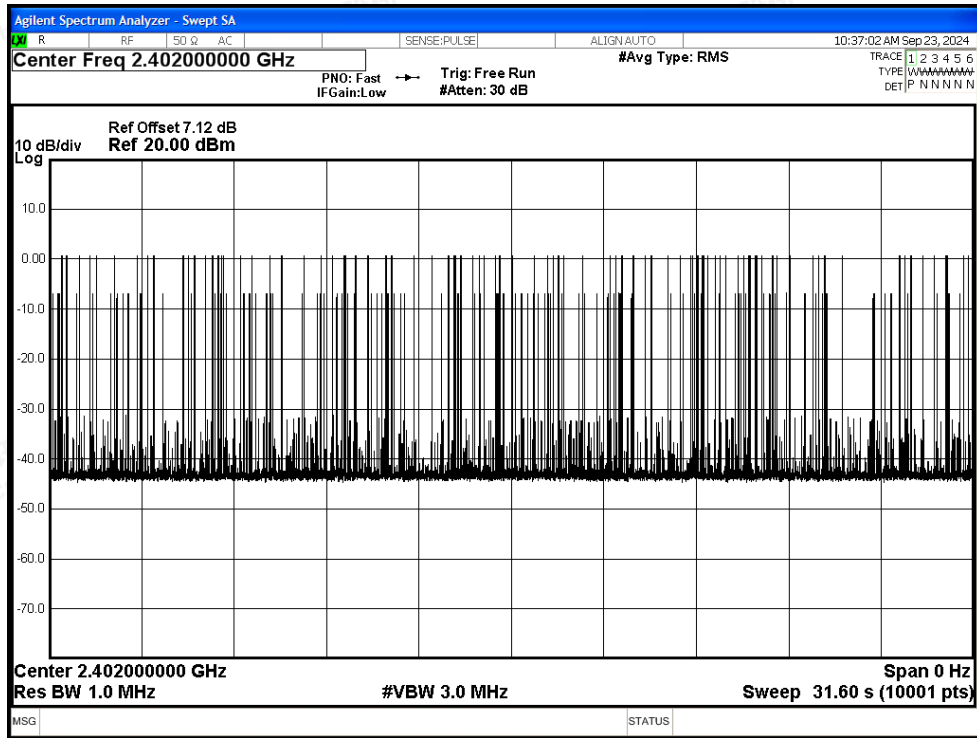


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

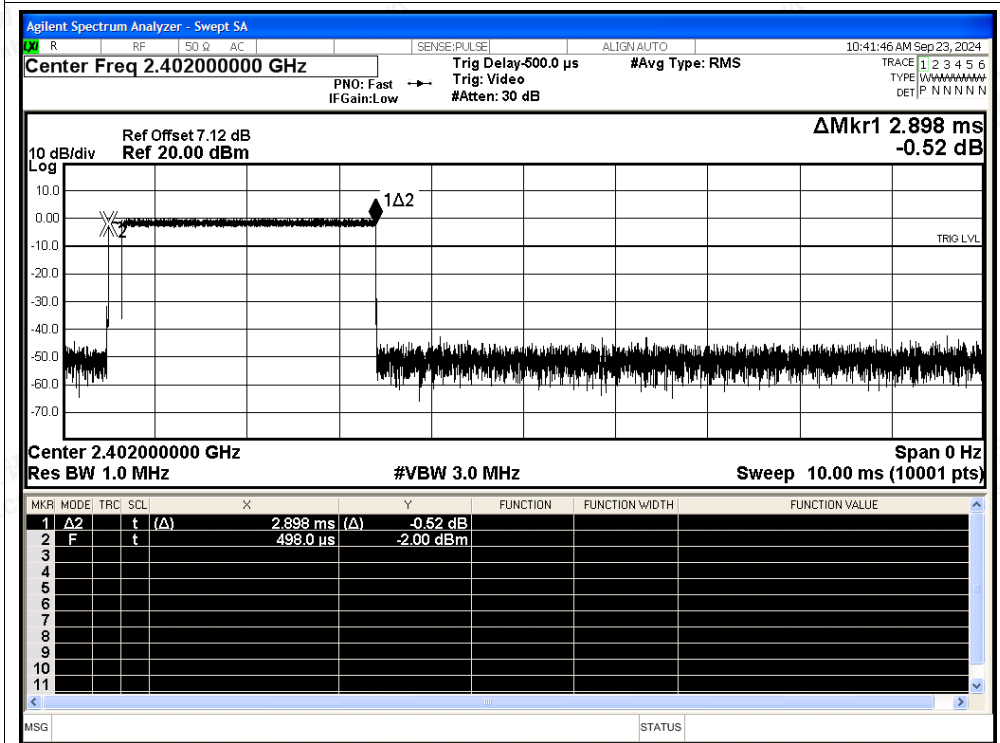


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

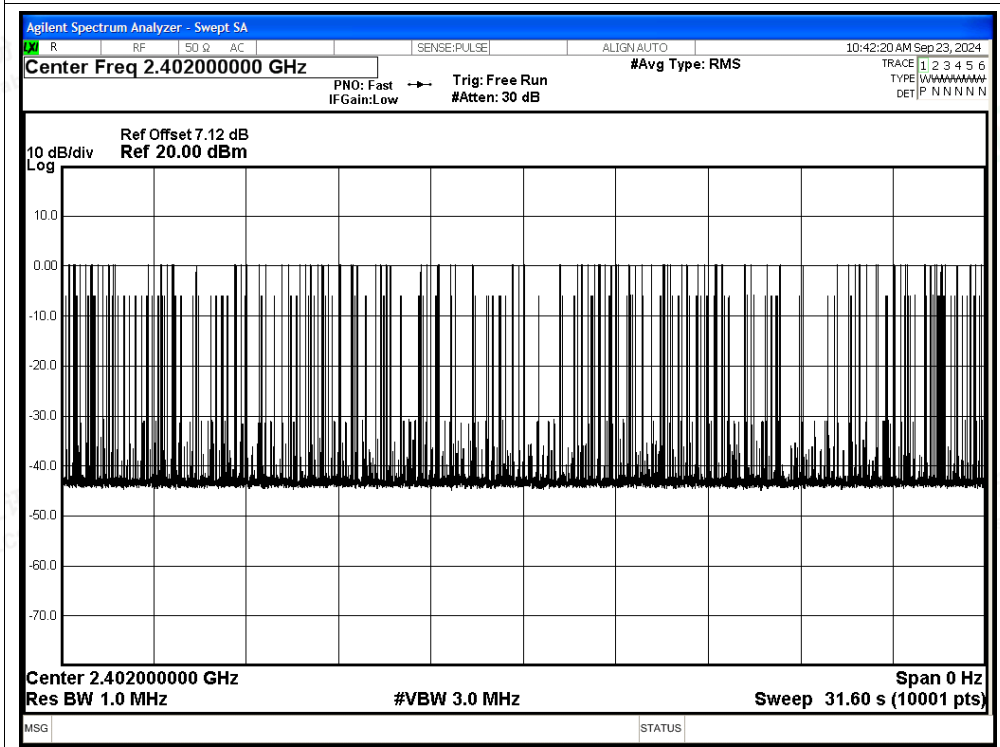




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

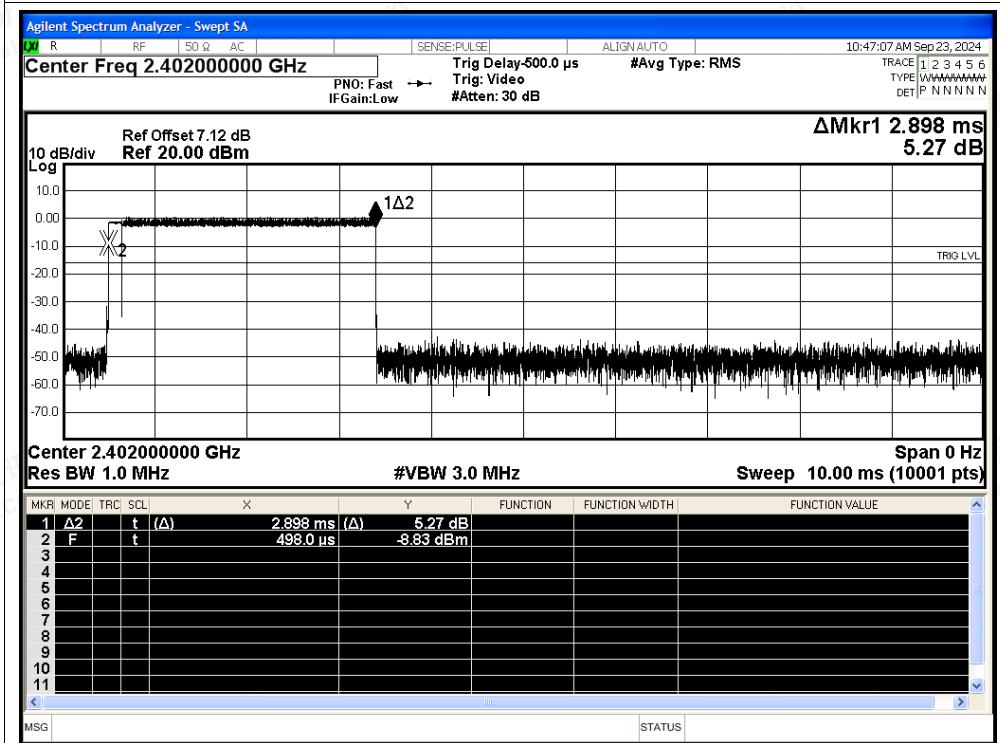


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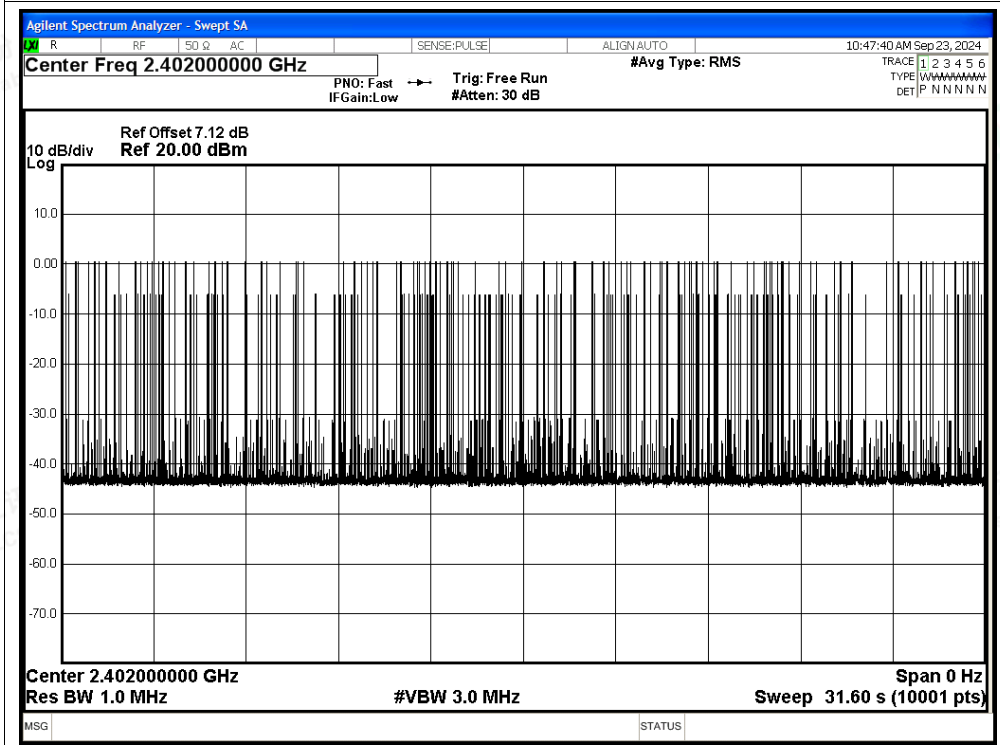




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



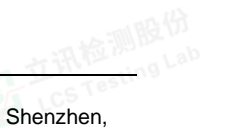
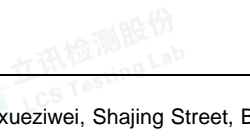
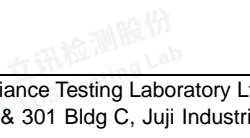
Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated





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

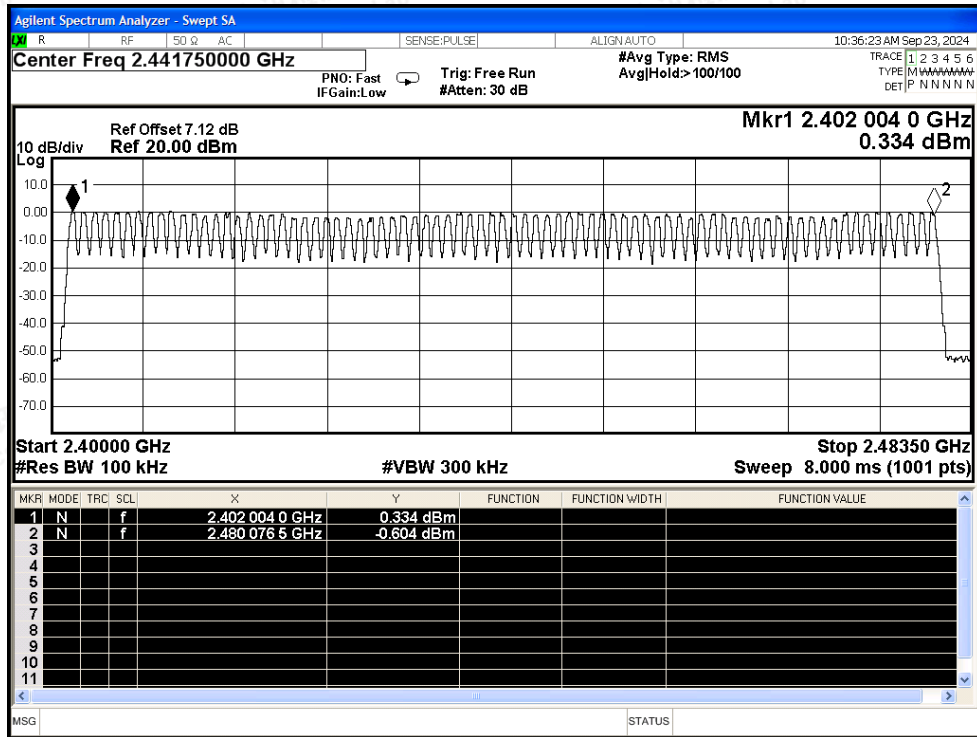


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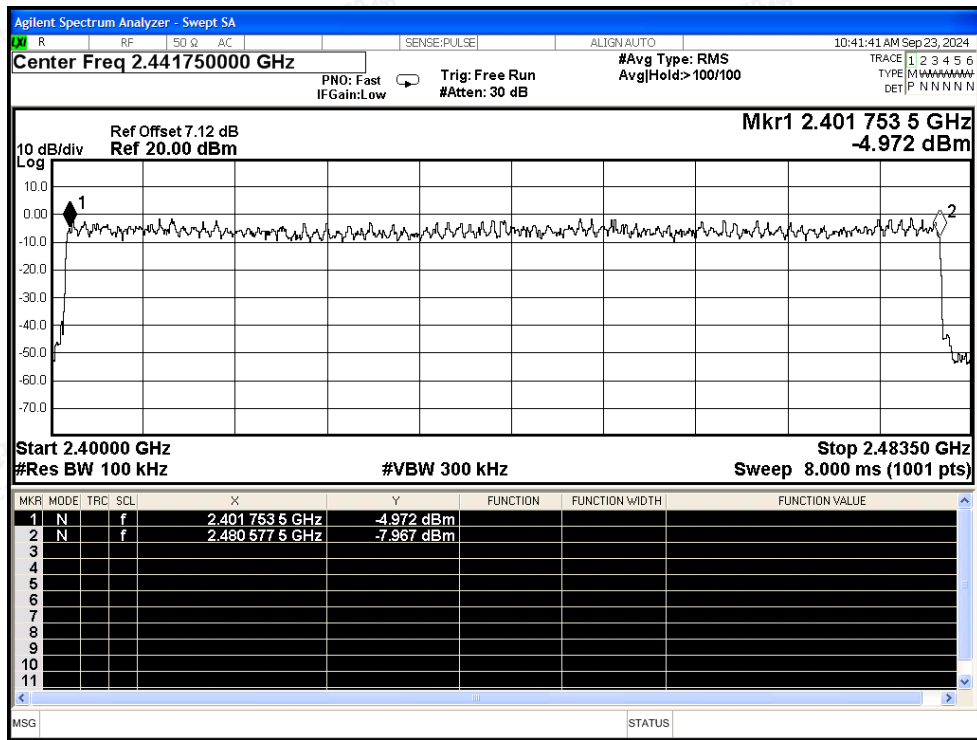


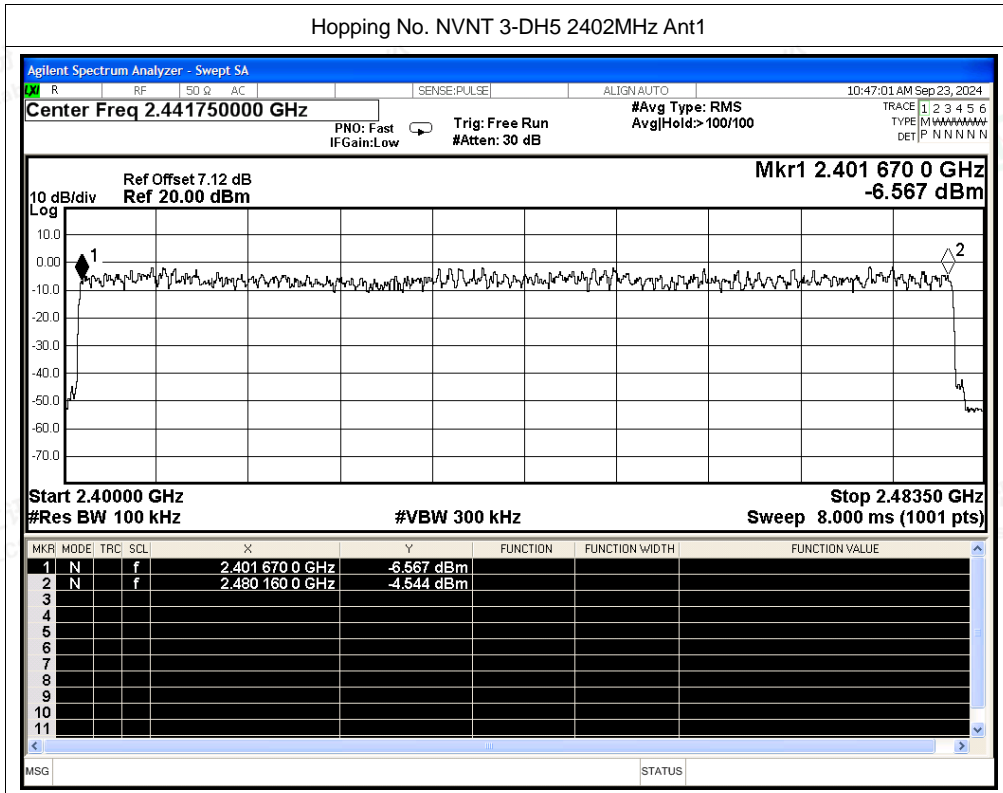
Test Graphs

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	-52.17	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-52.13	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-49.94	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-50.59	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-48.98	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-48.74	-20	Pass

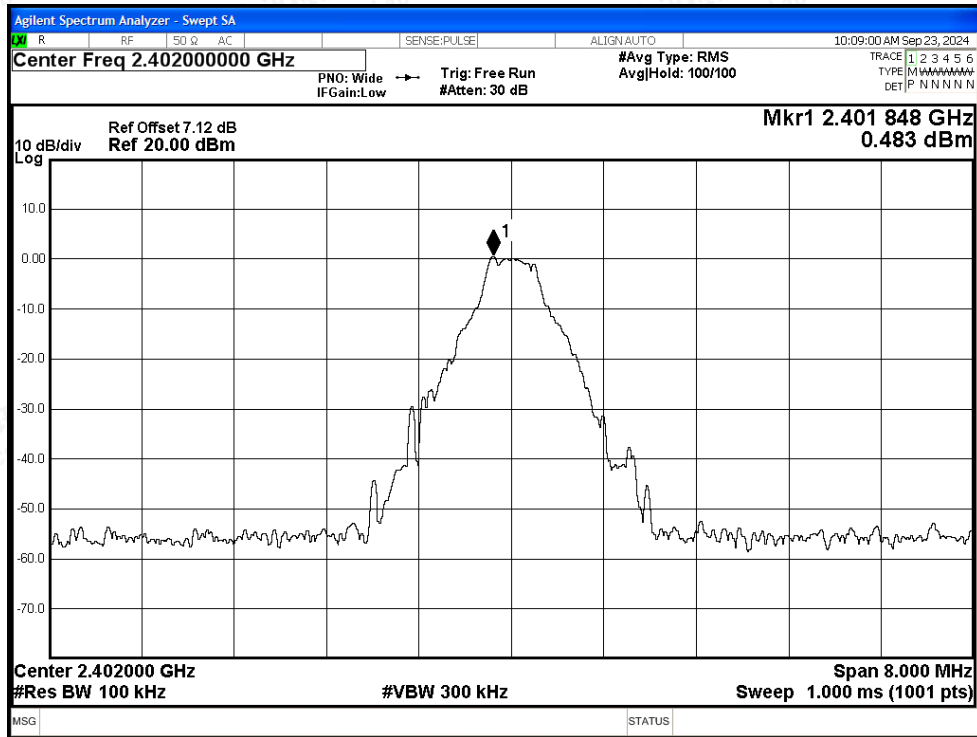


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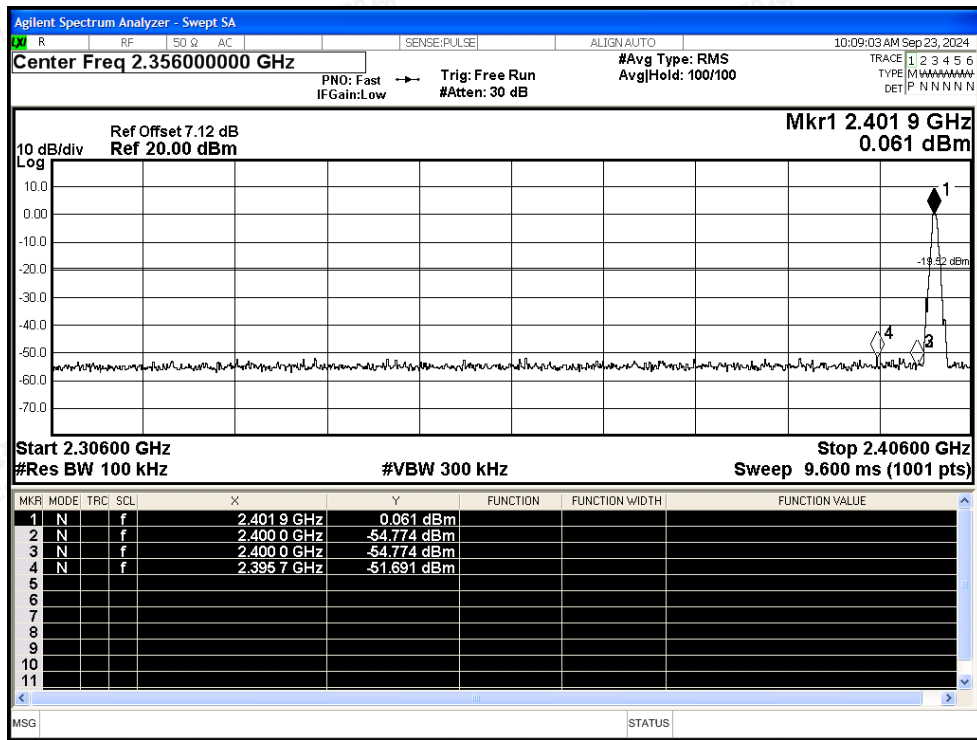


Test Graphs

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

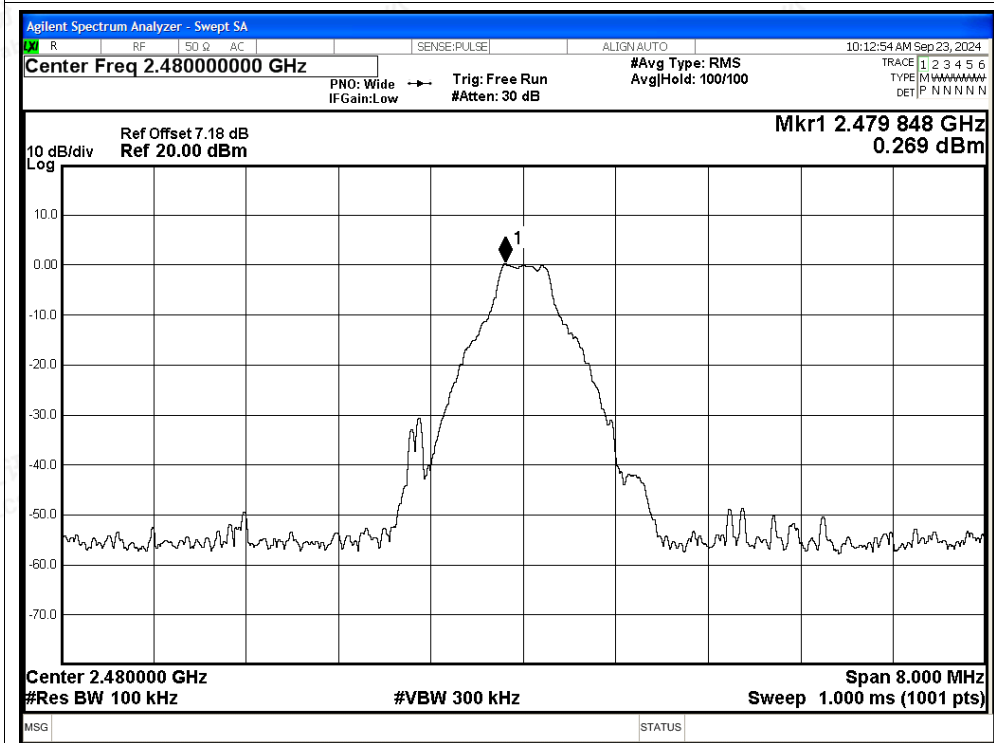


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

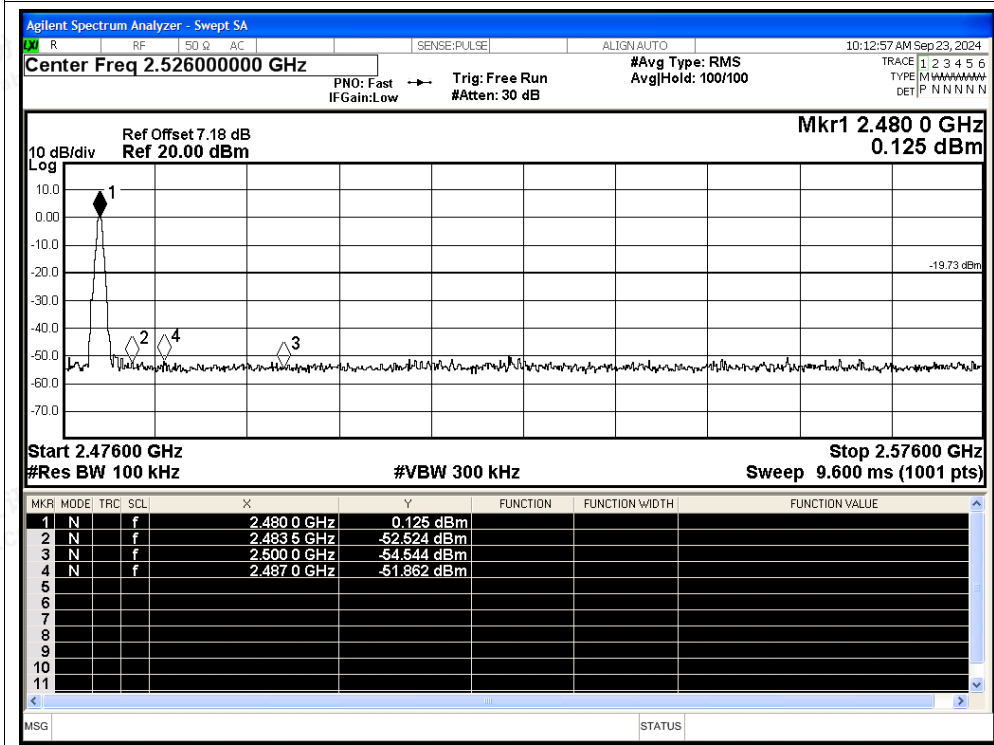




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

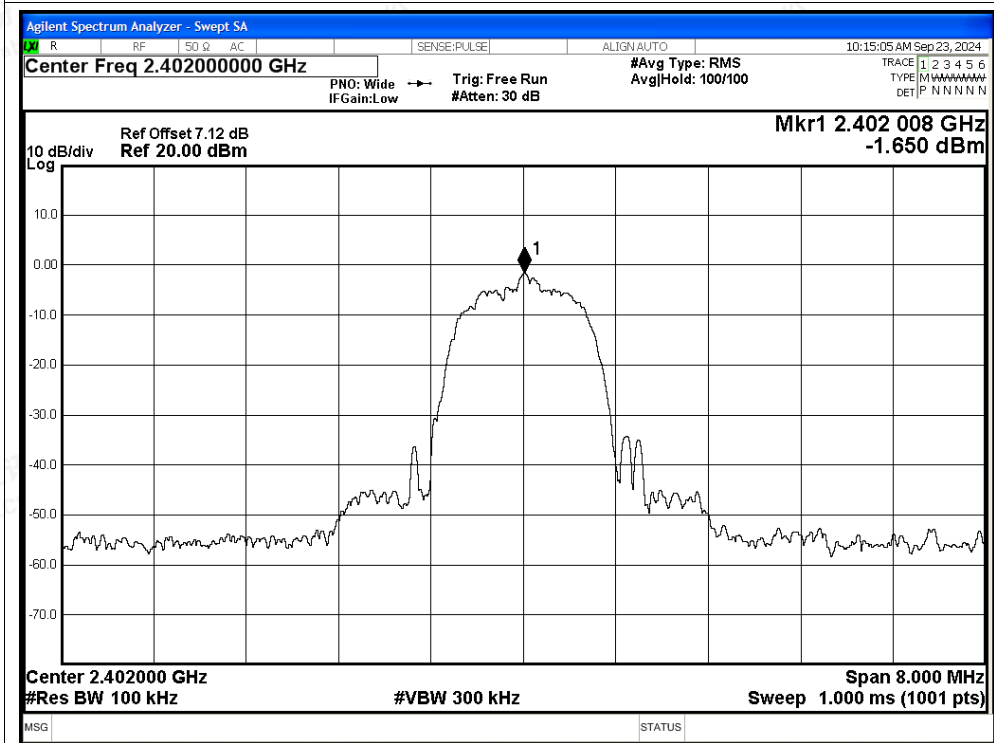


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

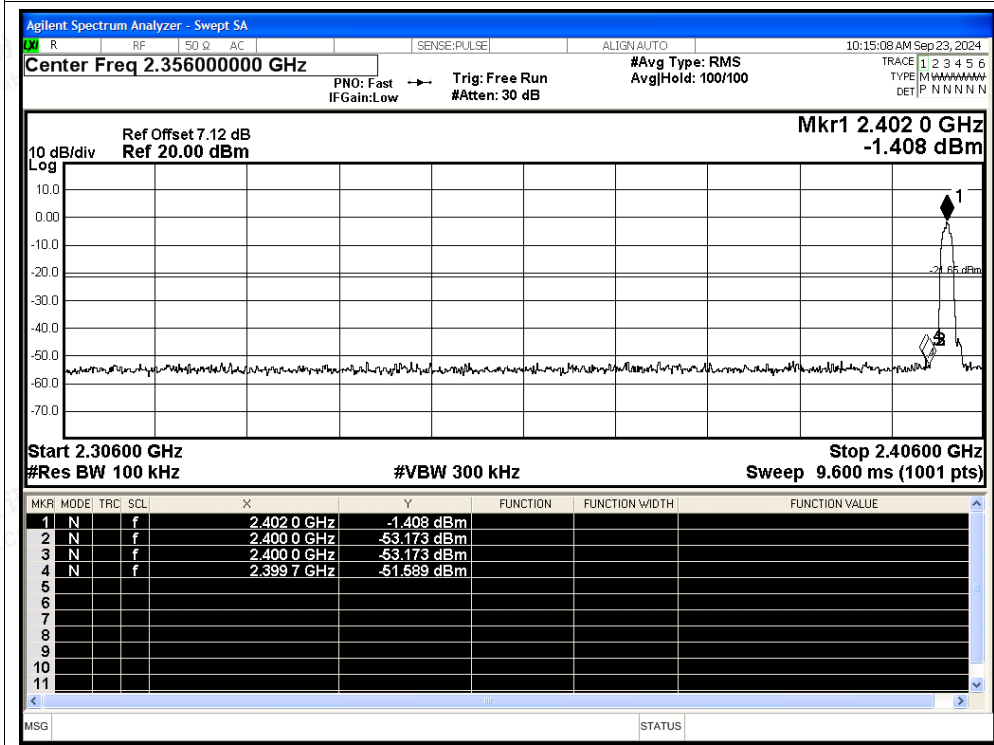




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

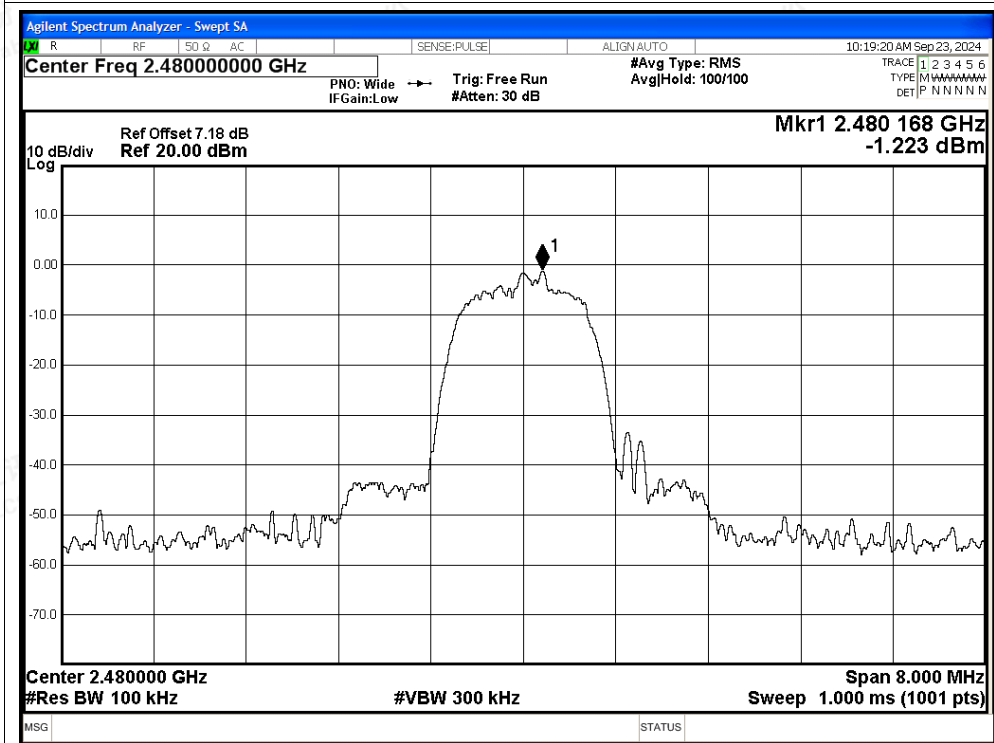


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

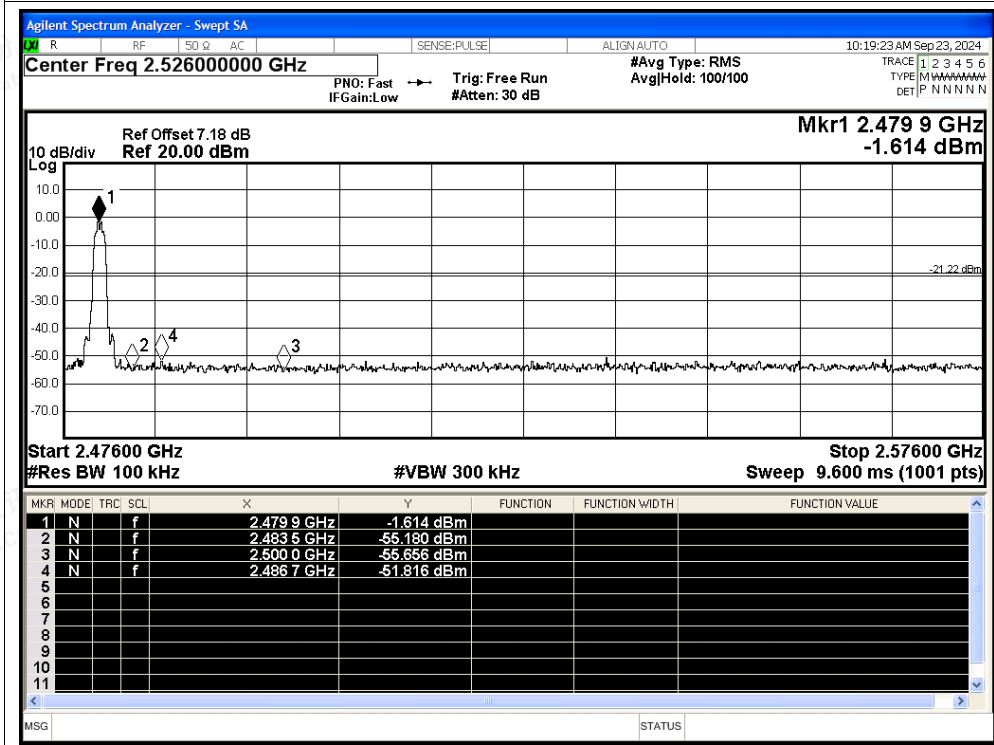




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref

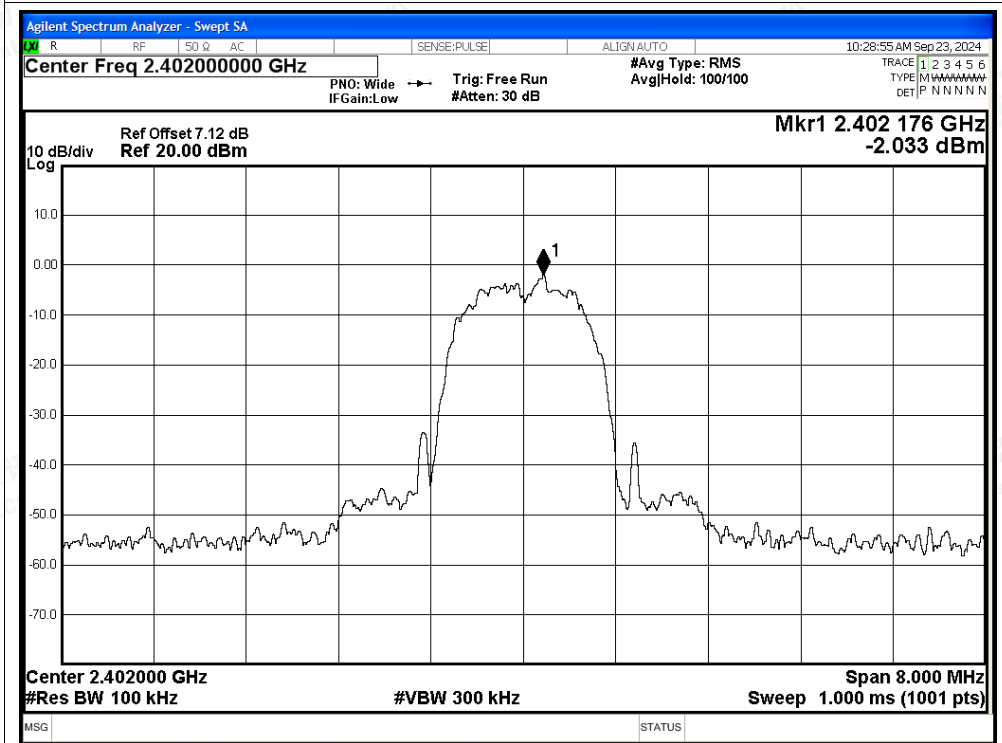


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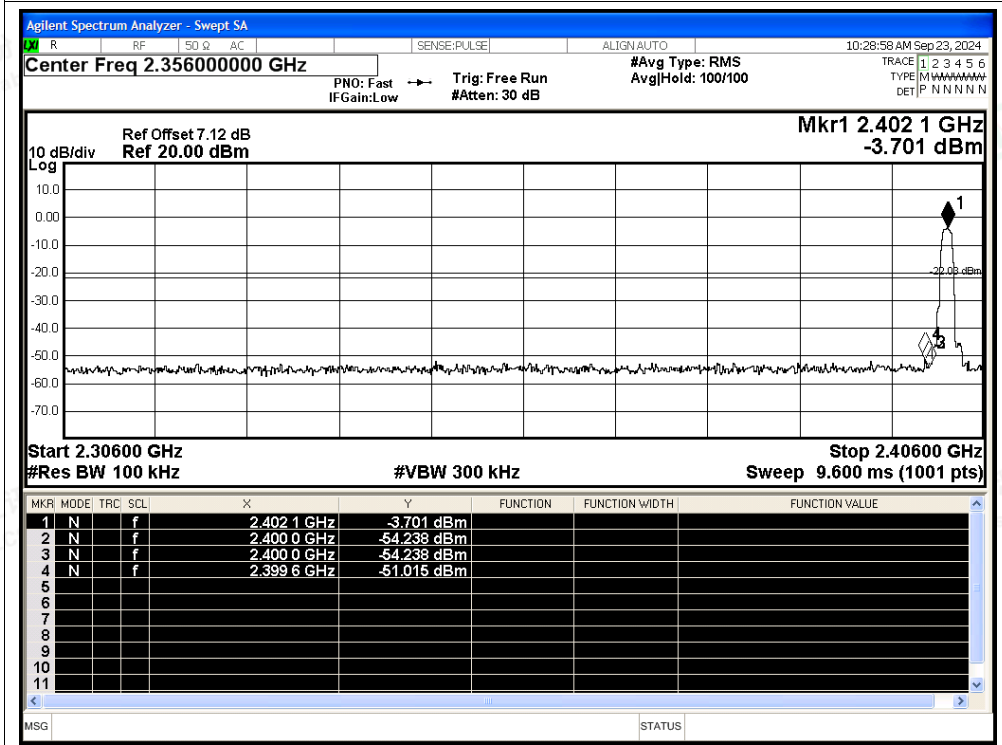




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

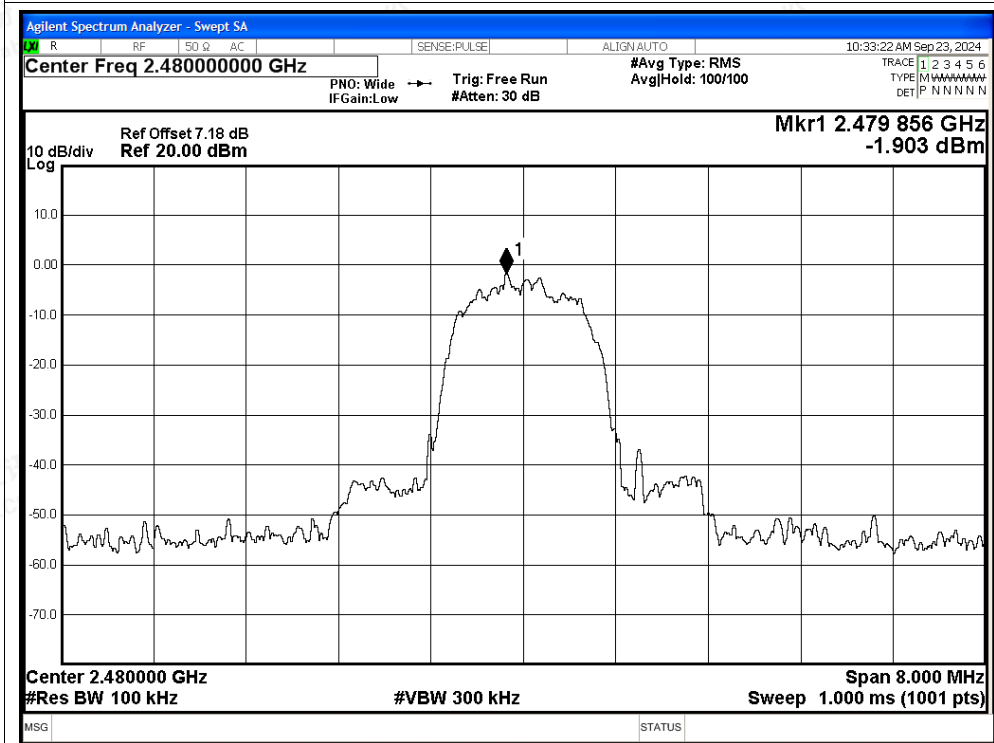


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

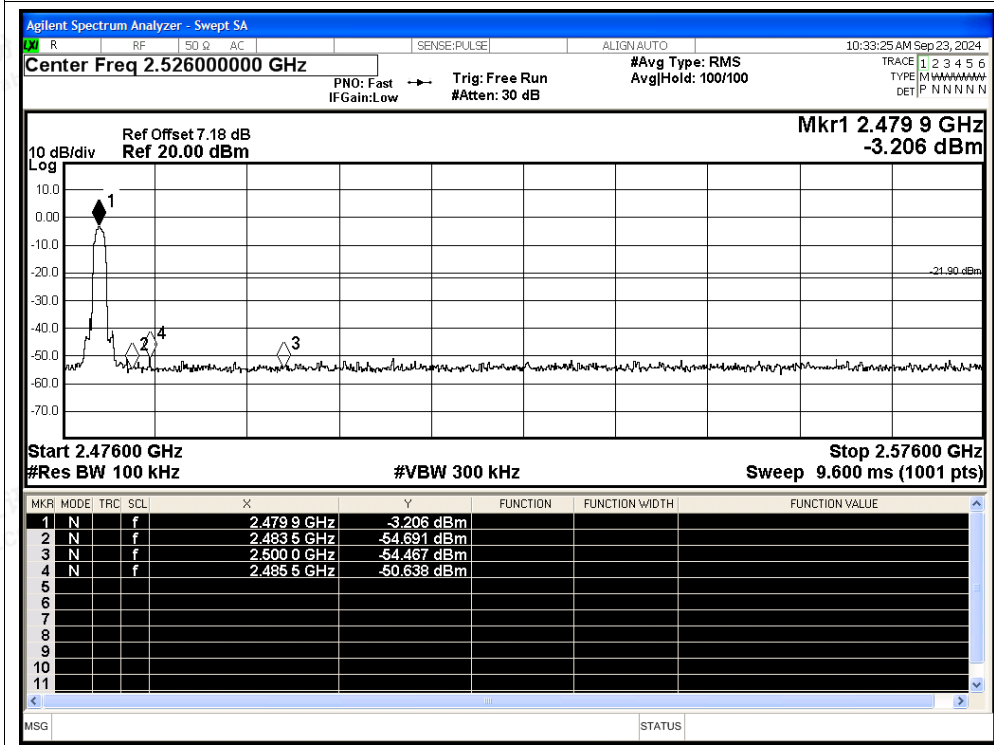




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



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	-51.44	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-51.13	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-49.94	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-47.84	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-49.42	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-49.29	-20	Pass

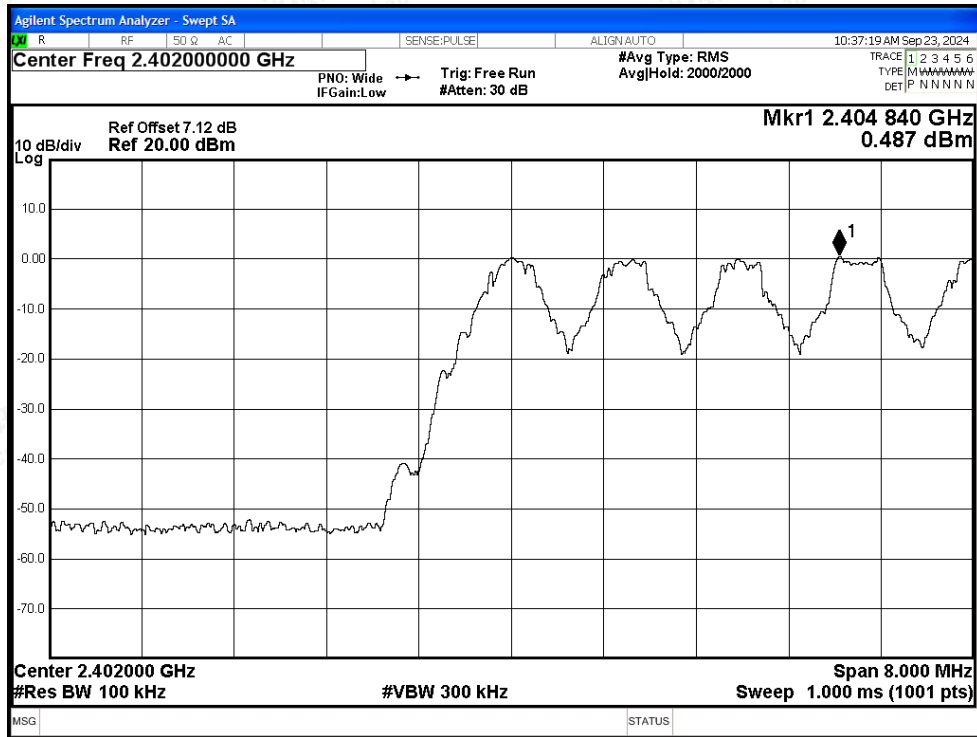


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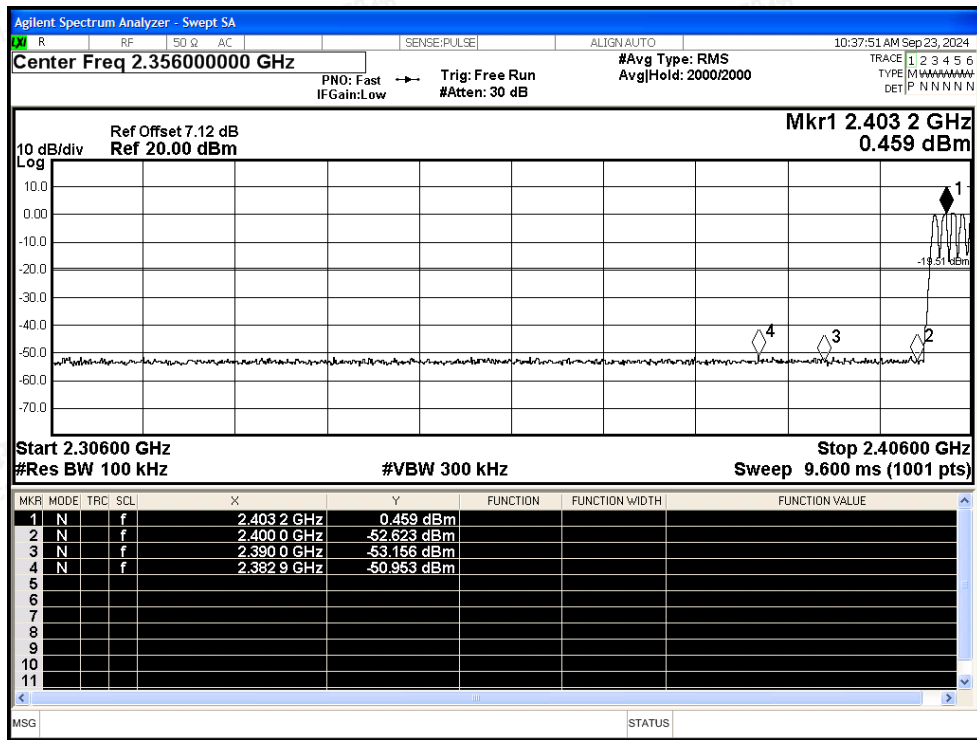


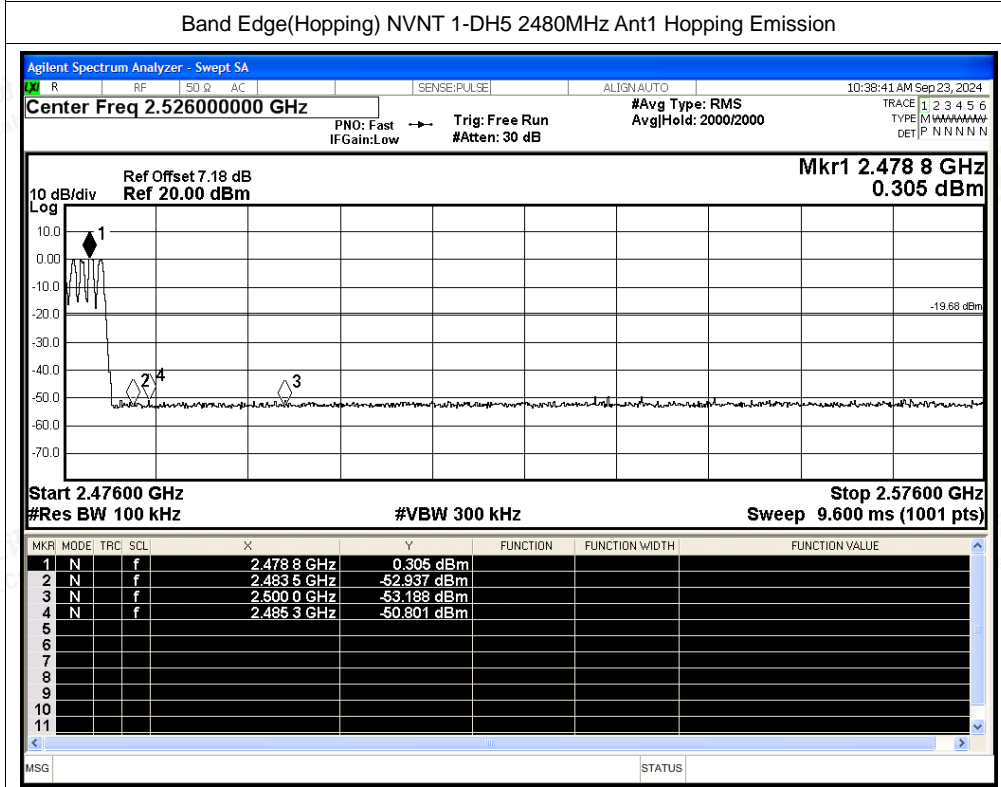
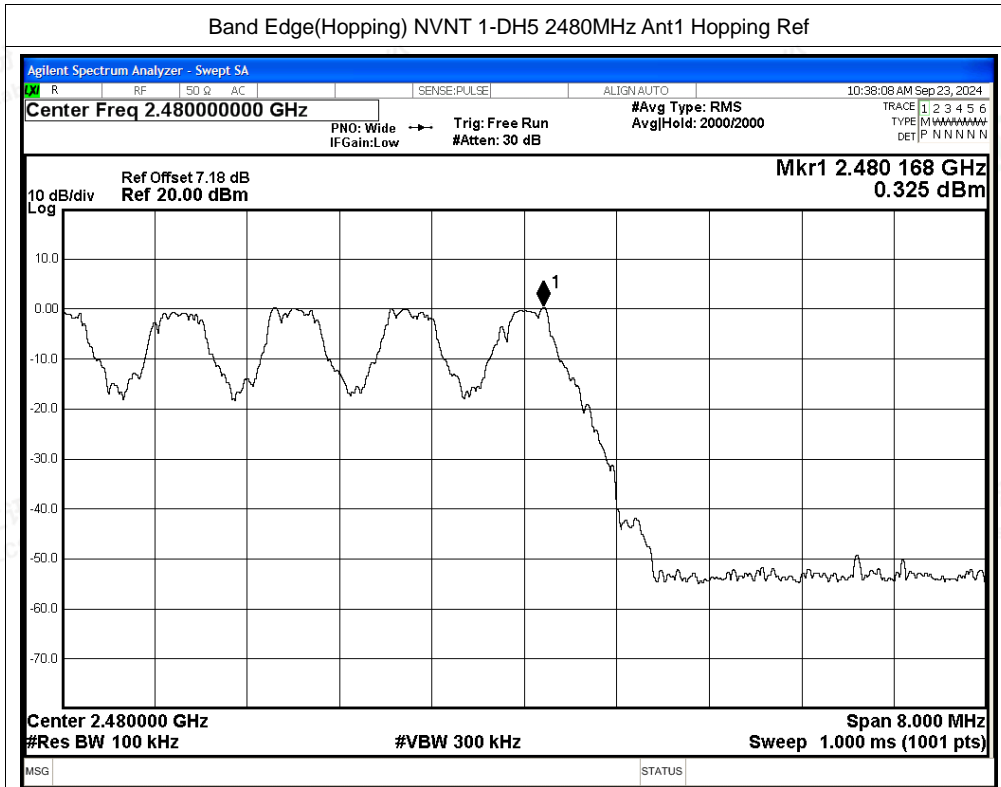
Test Graphs

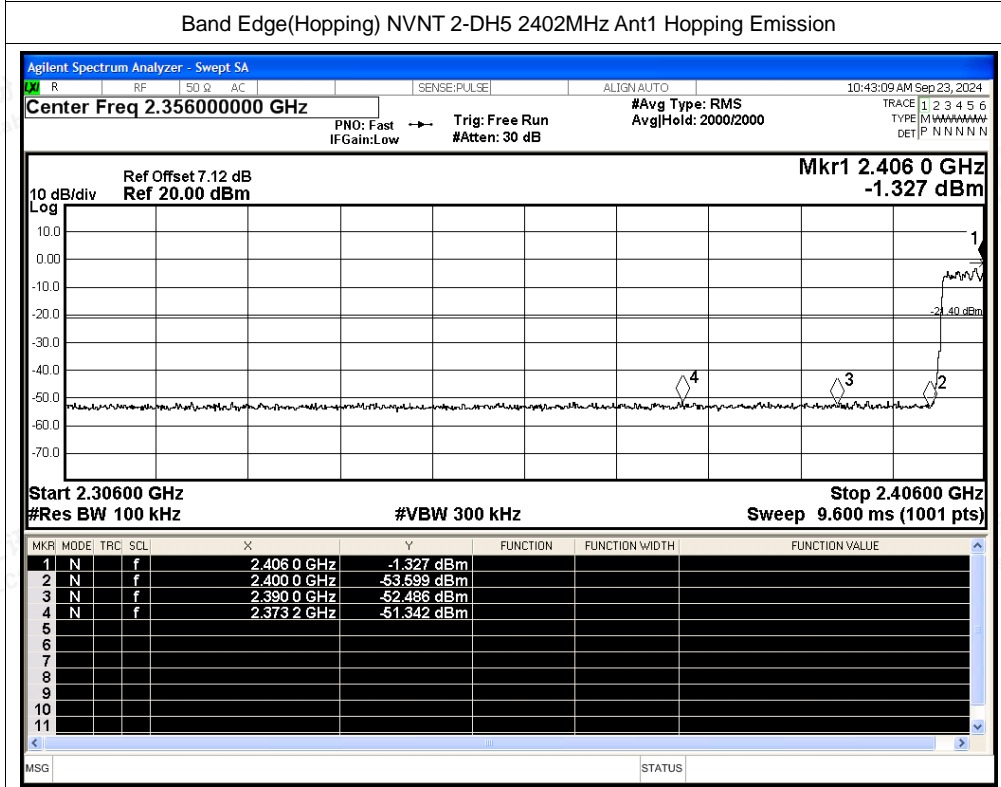
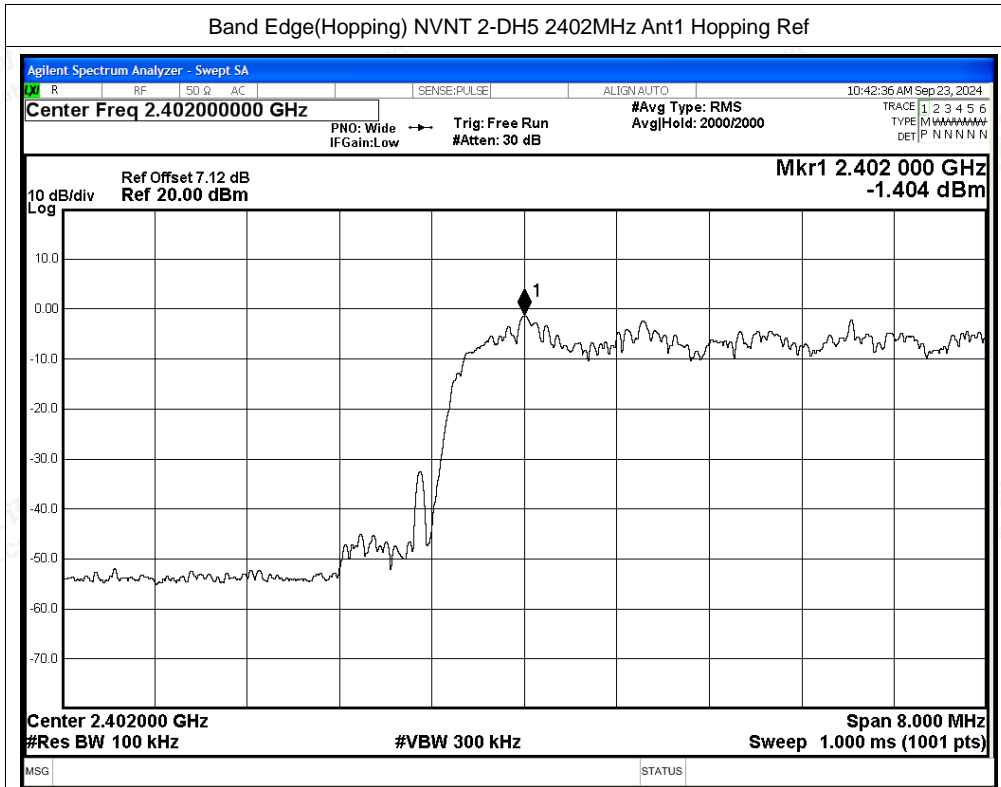
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref

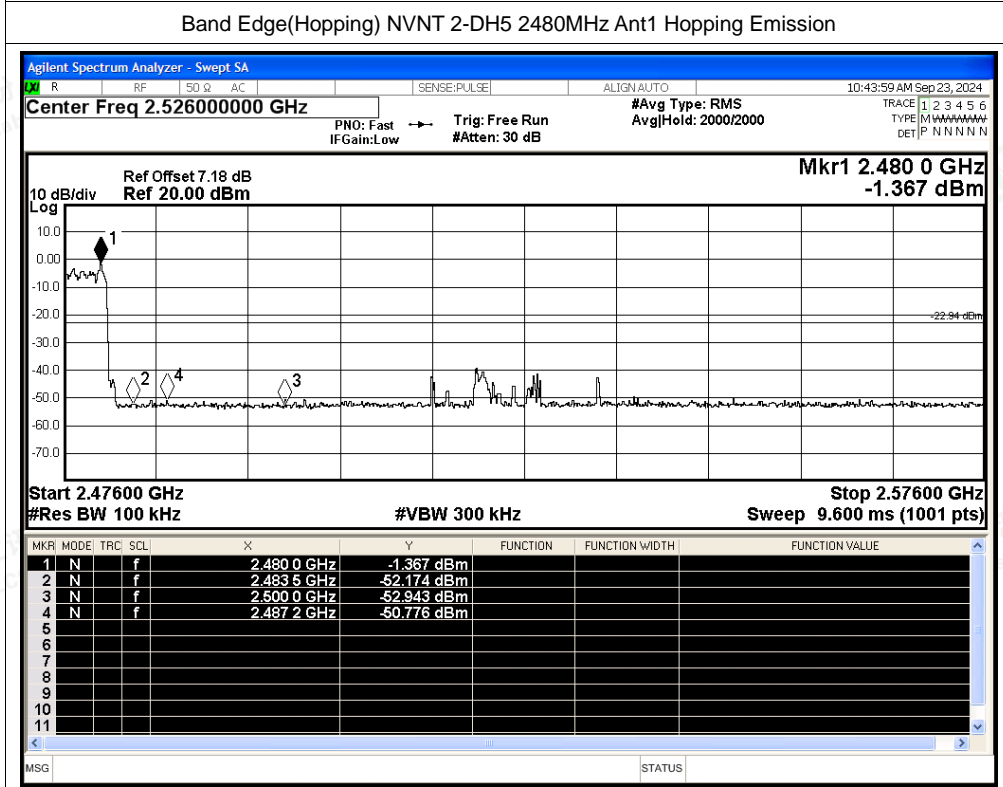
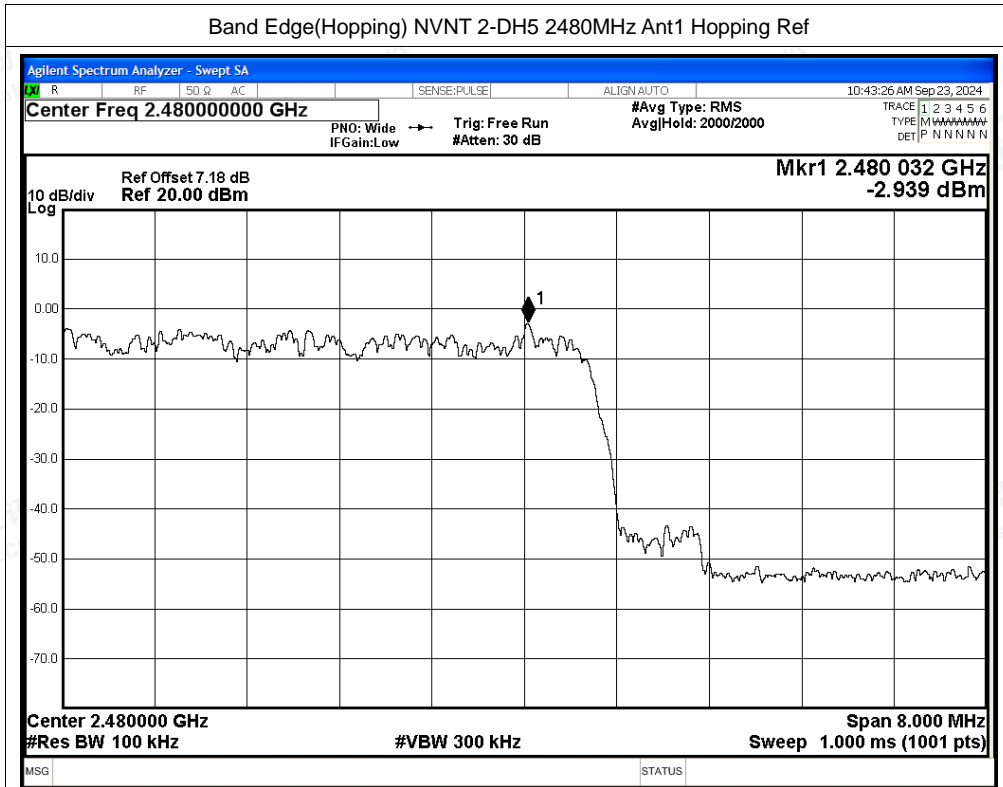


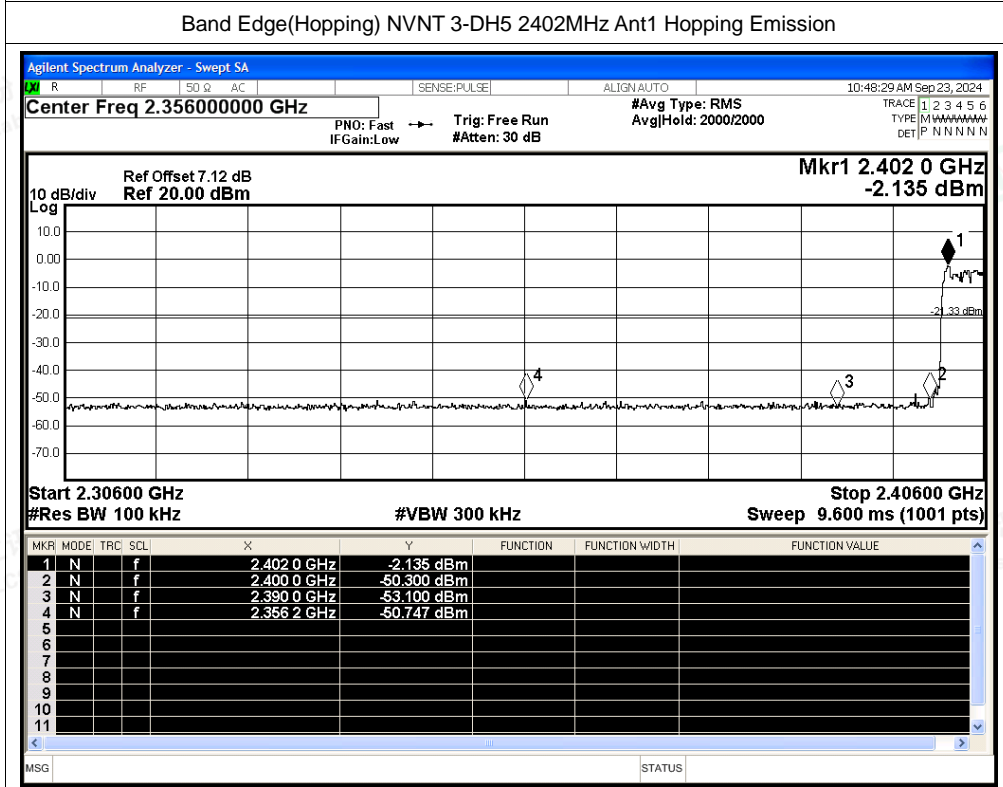
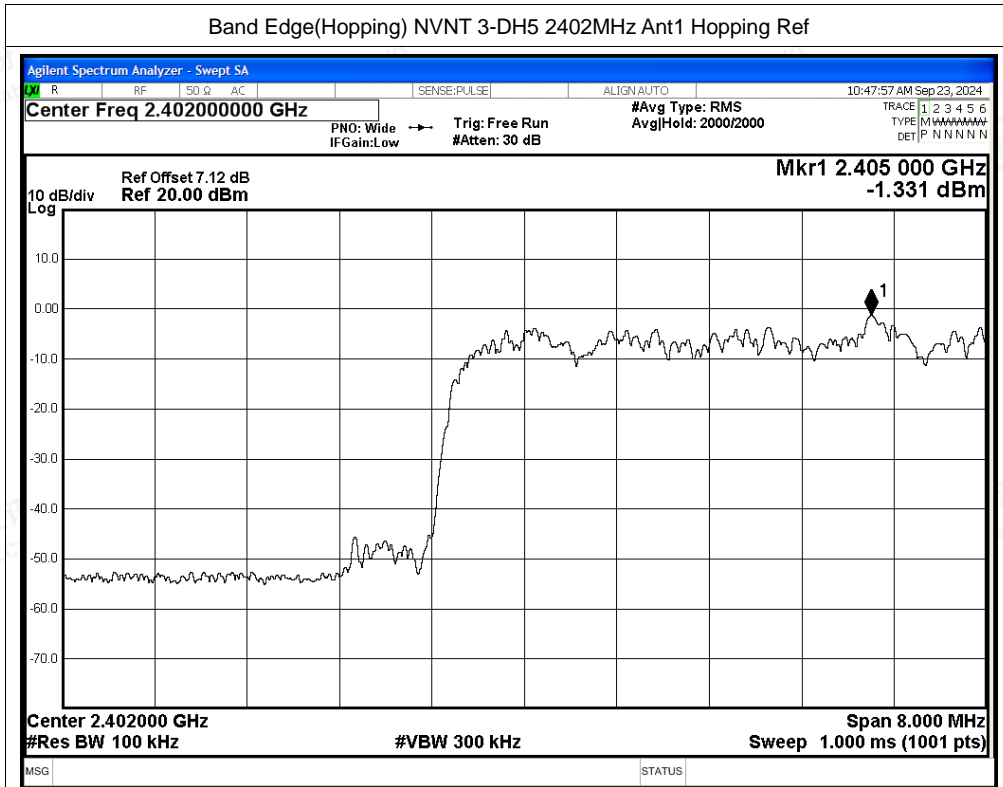
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

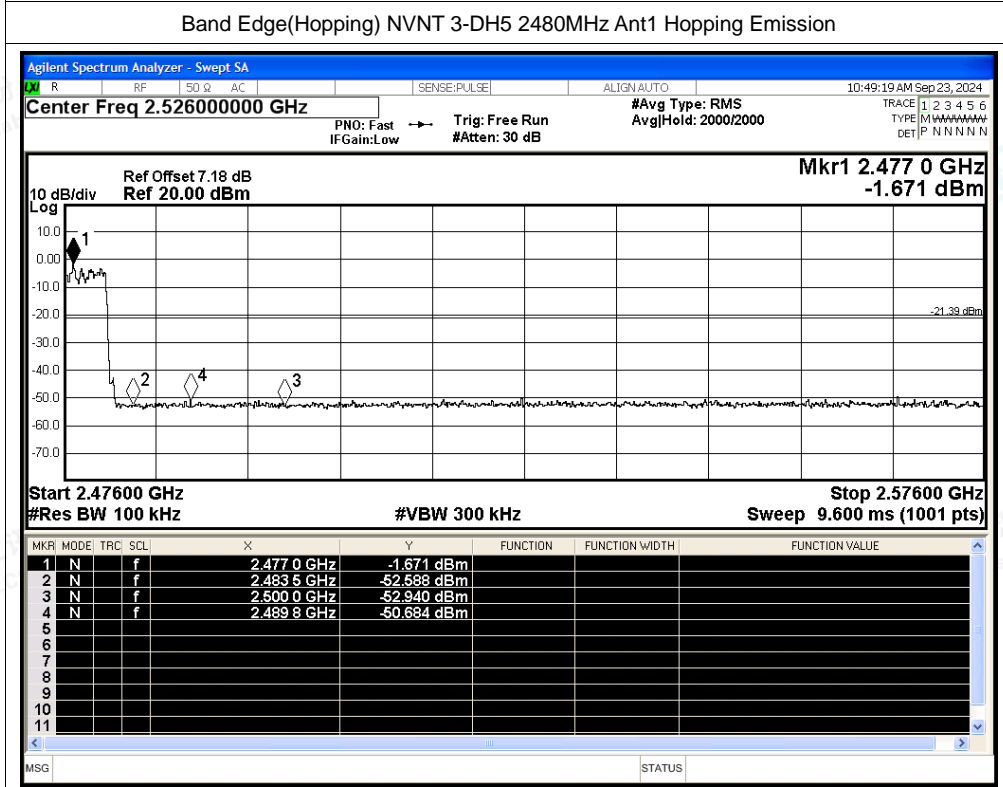
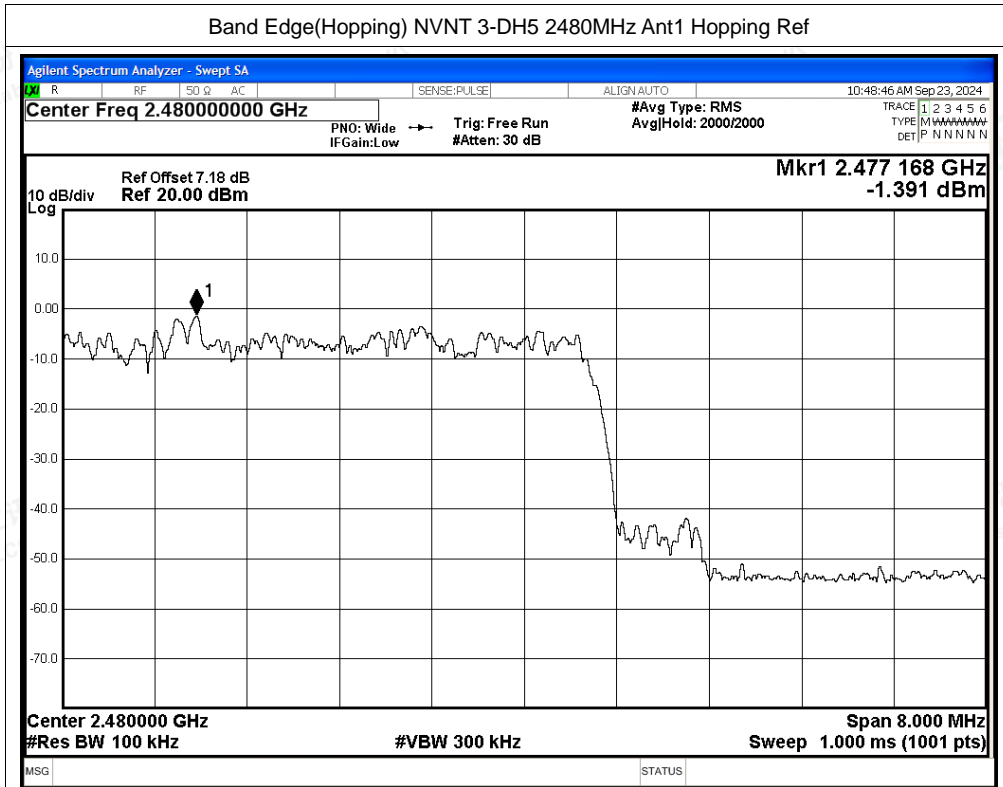














A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-50.17	-20	Pass
NVNT	1-DH5	2441	Ant1	-49.01	-20	Pass
NVNT	1-DH5	2480	Ant1	-51.09	-20	Pass
NVNT	2-DH5	2402	Ant1	-47.66	-20	Pass
NVNT	2-DH5	2441	Ant1	-47.32	-20	Pass
NVNT	2-DH5	2480	Ant1	-45.34	-20	Pass
NVNT	3-DH5	2402	Ant1	-48.84	-20	Pass
NVNT	3-DH5	2441	Ant1	-48.15	-20	Pass
NVNT	3-DH5	2480	Ant1	-49.2	-20	Pass

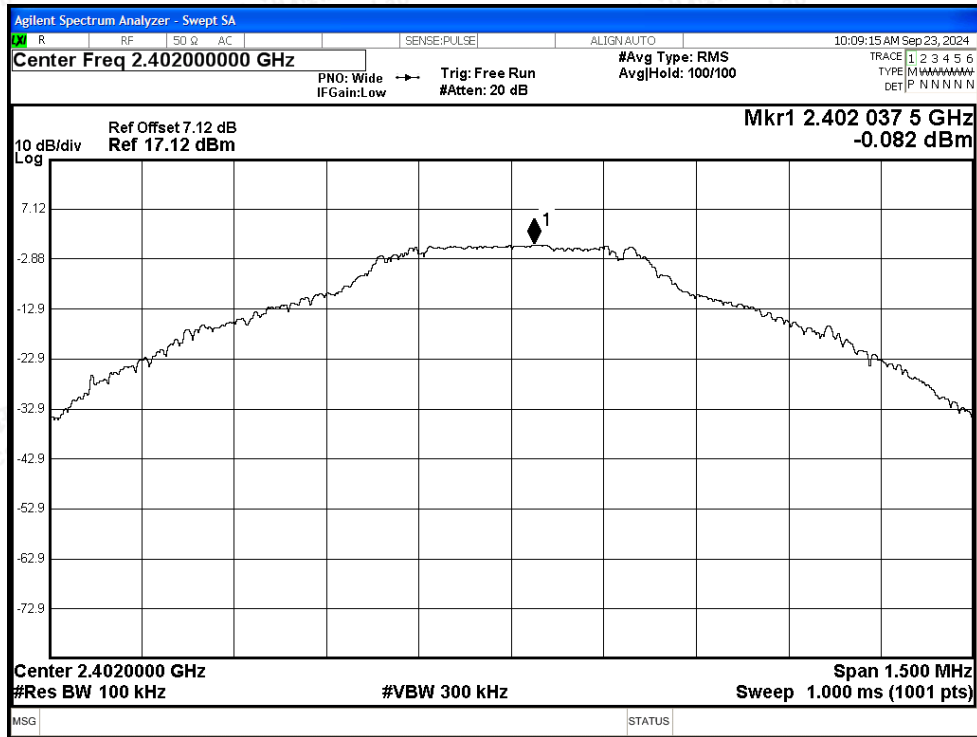


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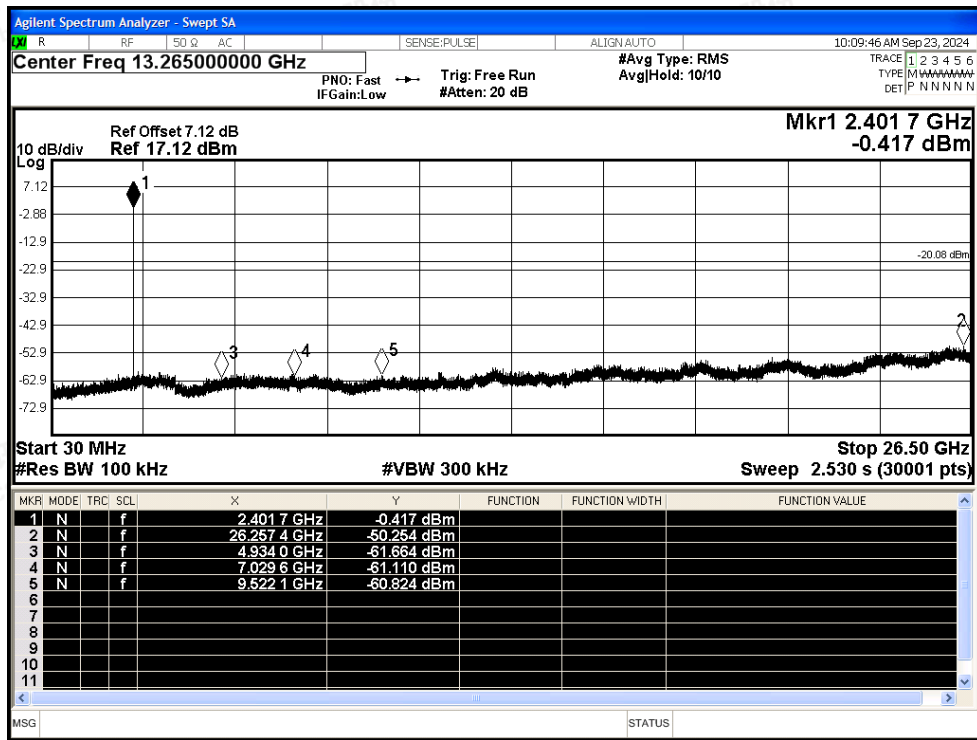


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

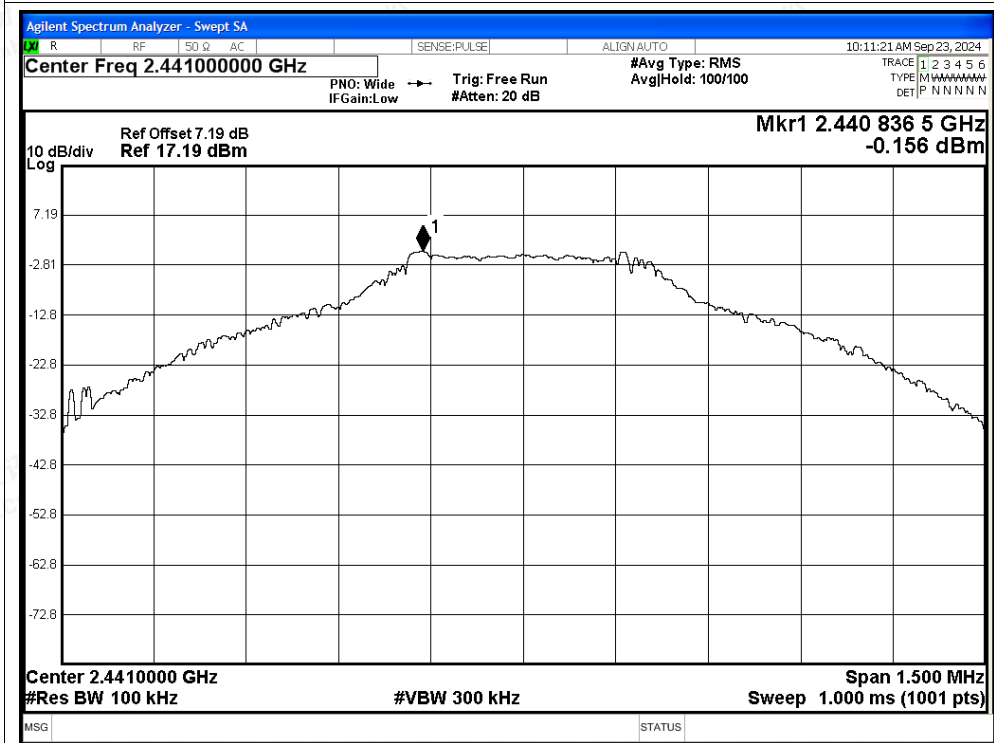


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

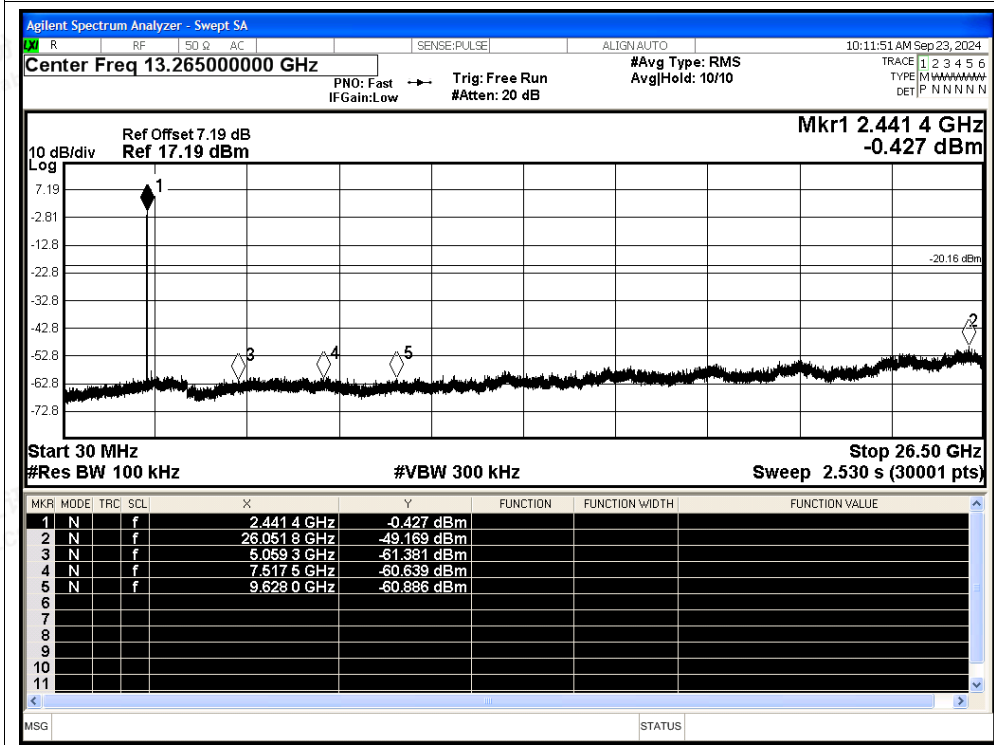




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

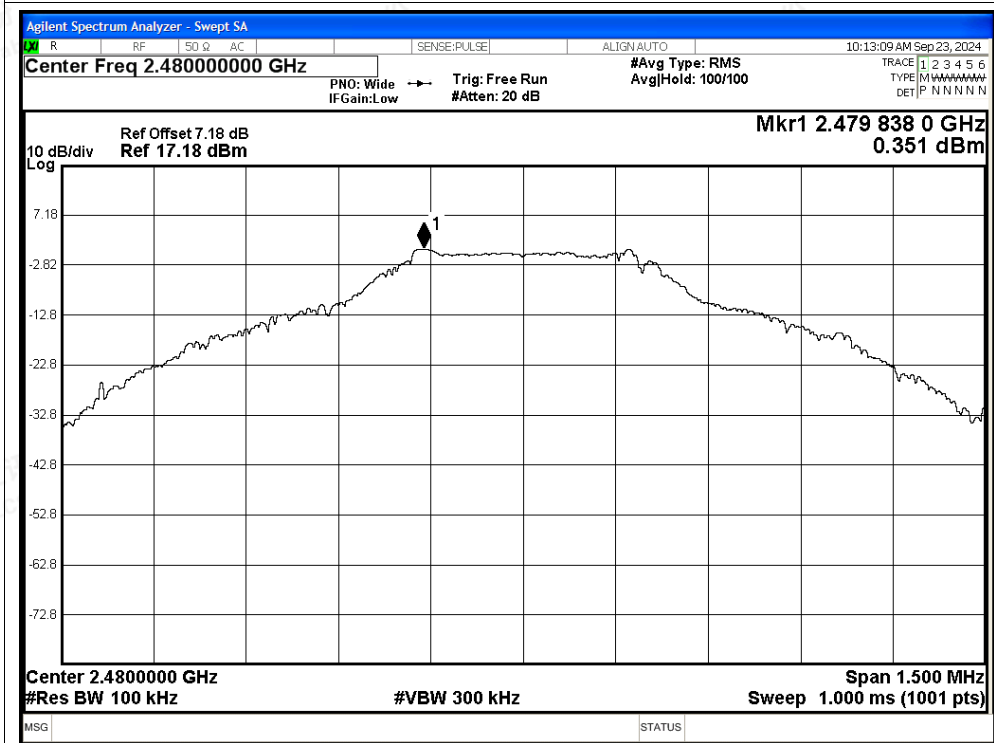


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

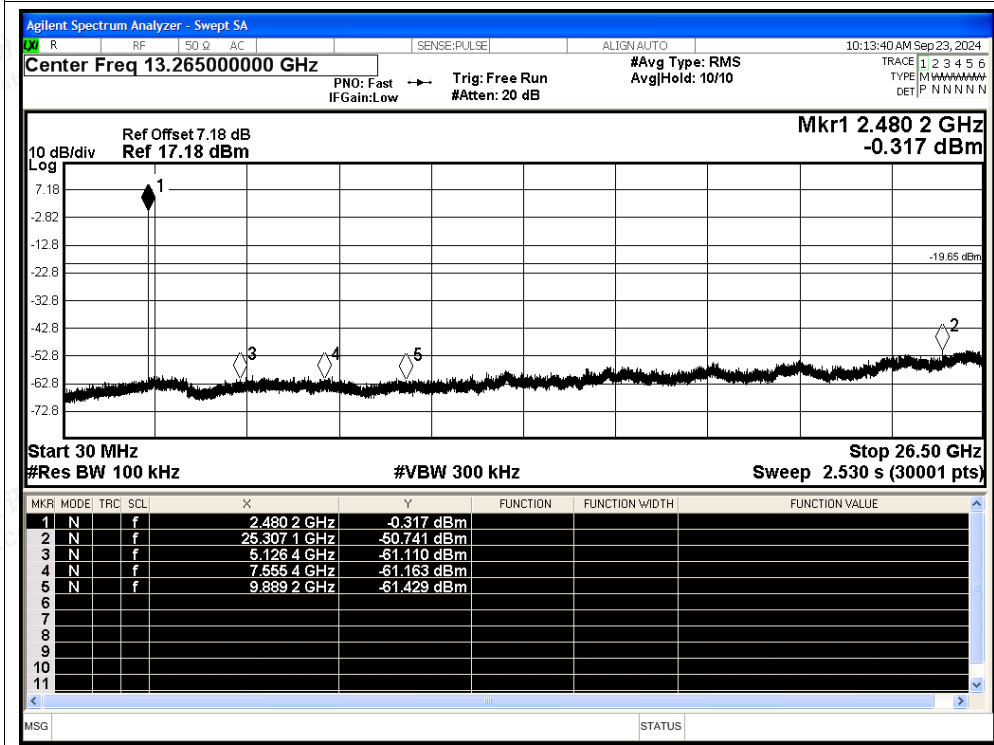




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

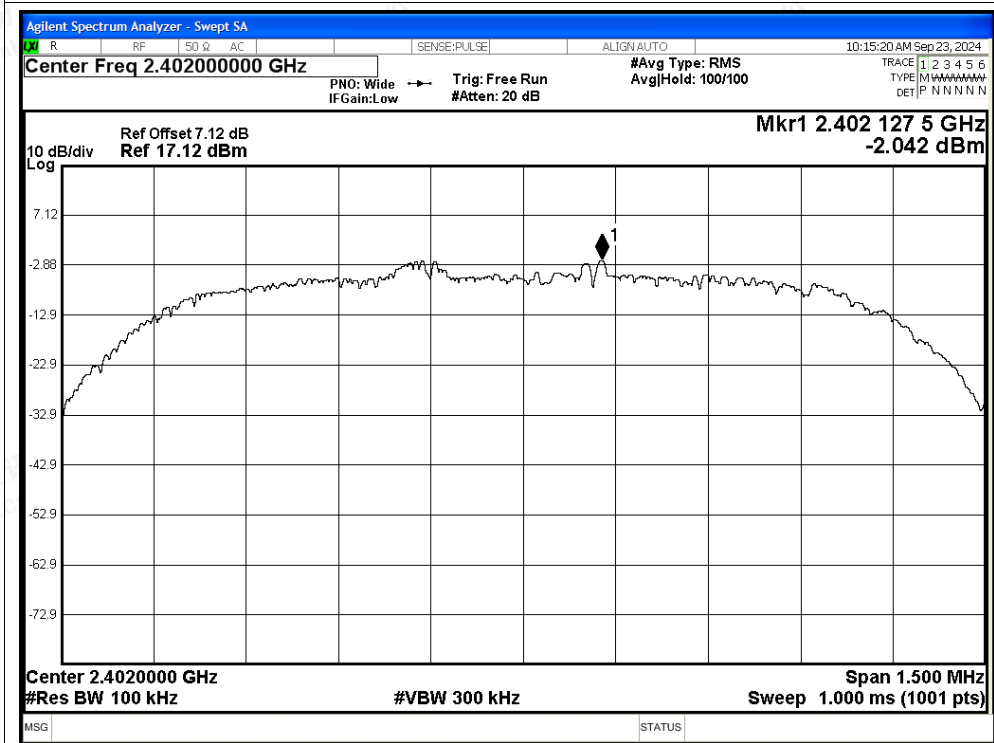


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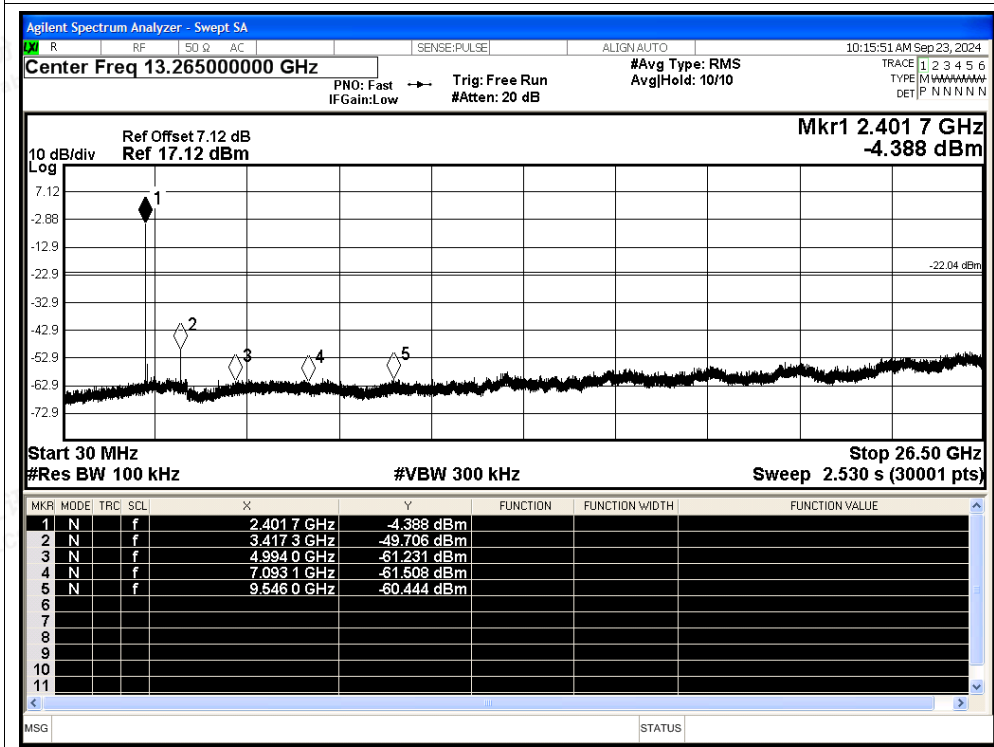




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



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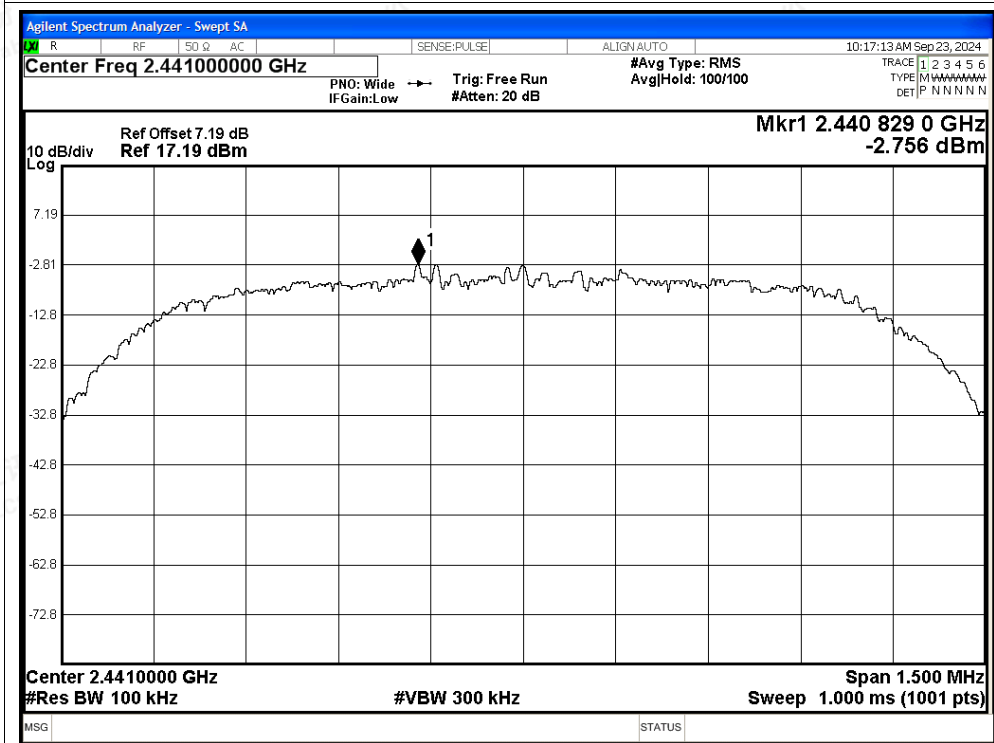
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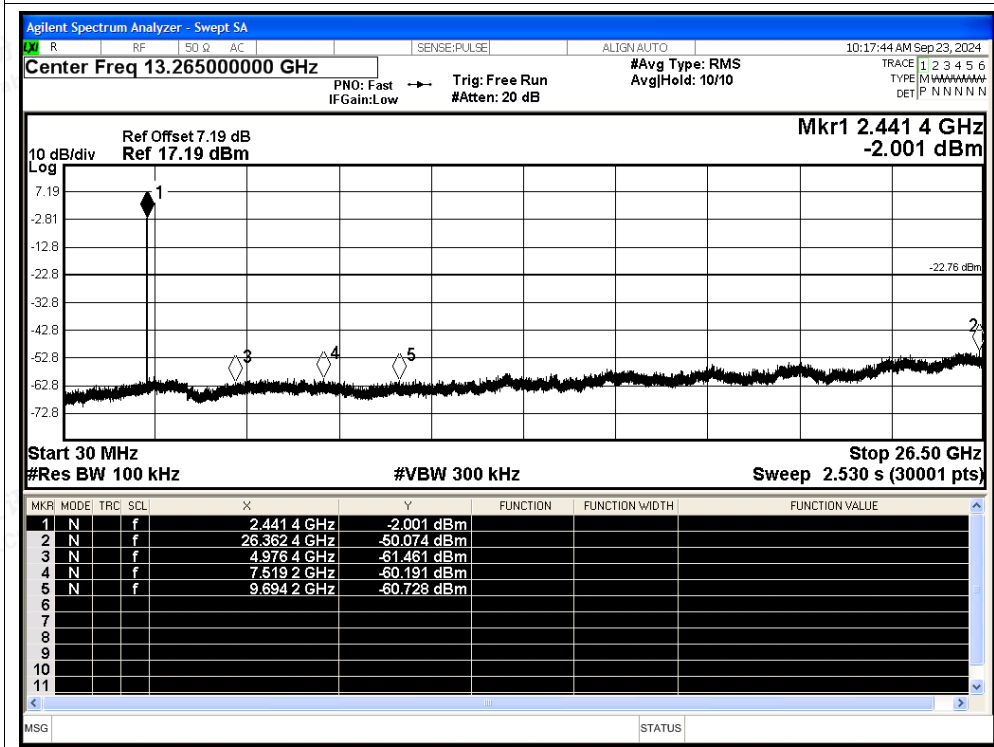
Scan code to check authenticity



Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref

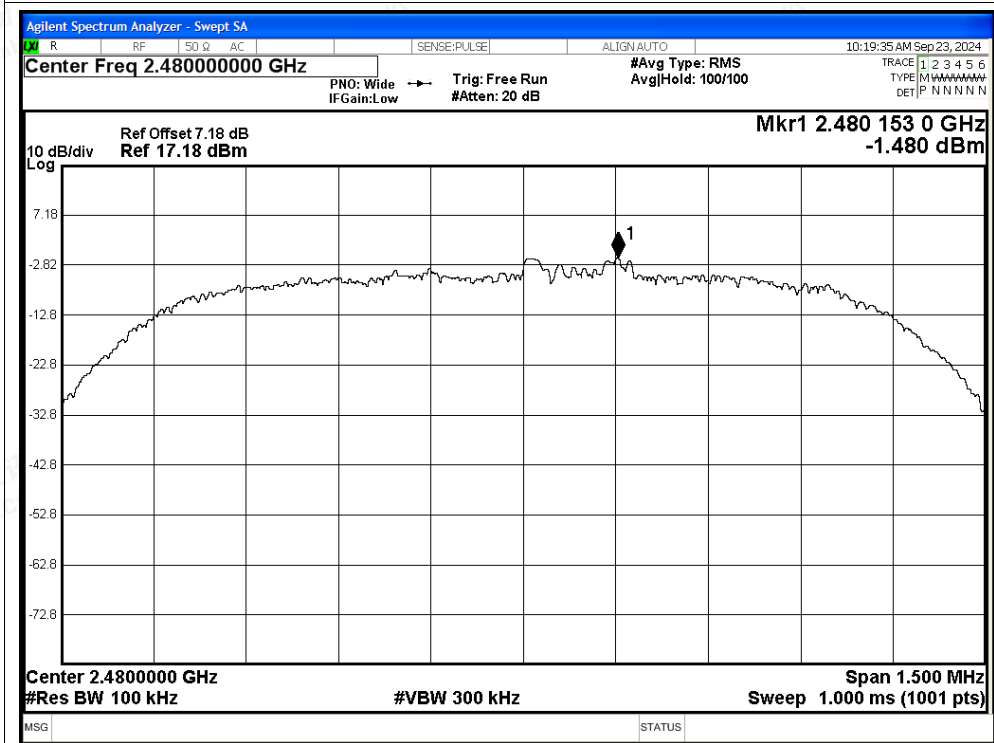


Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission

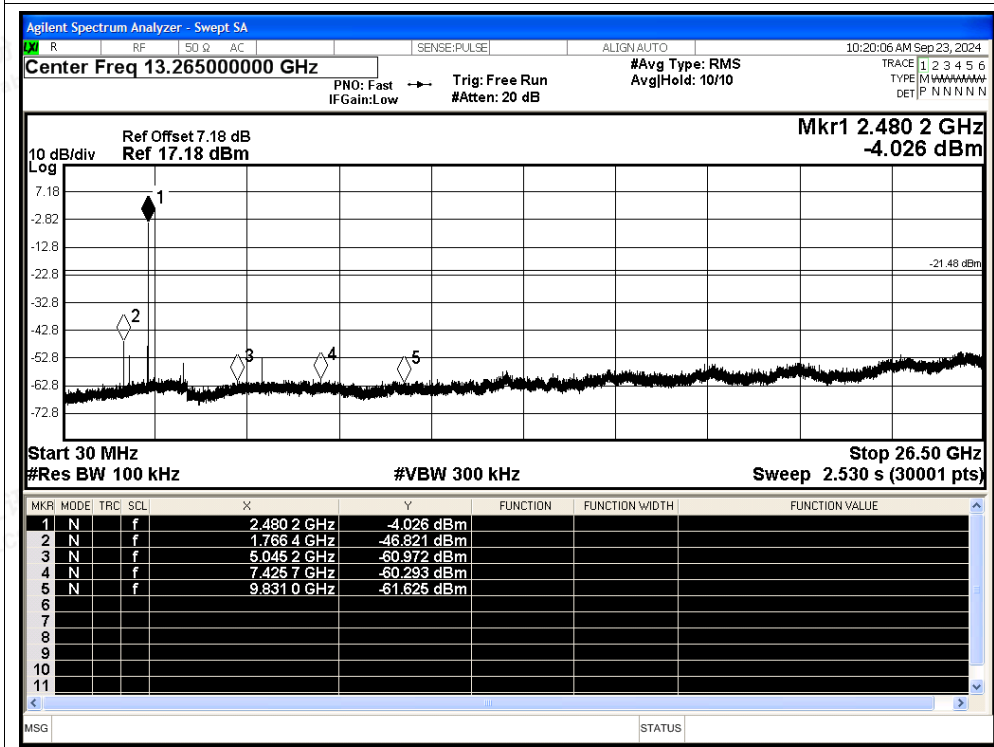




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref

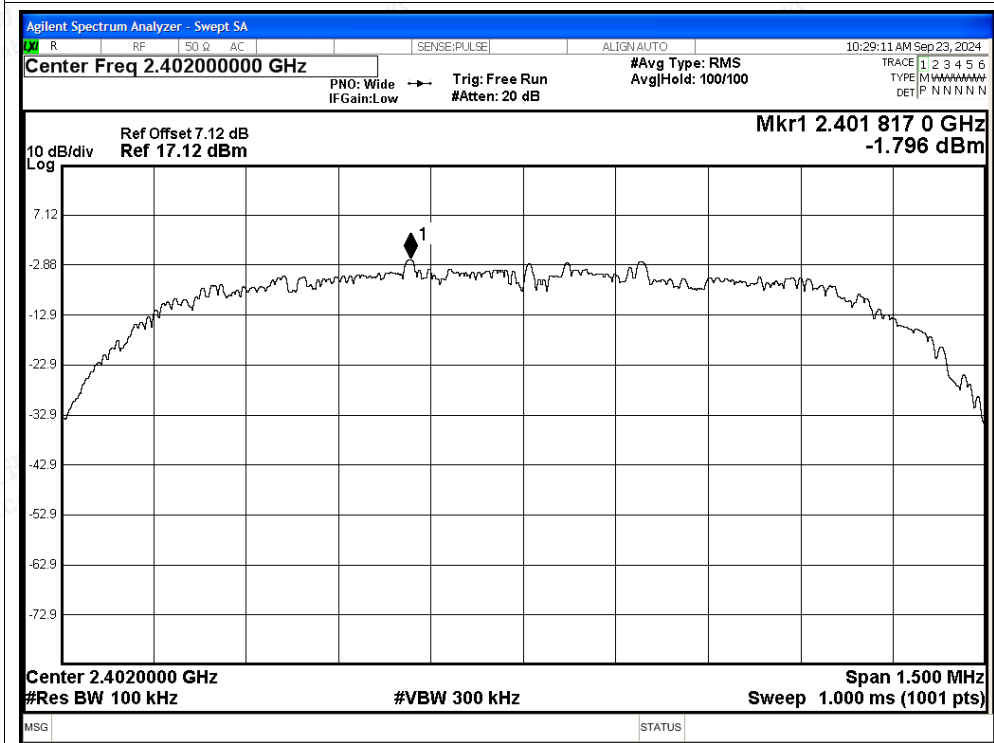


Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

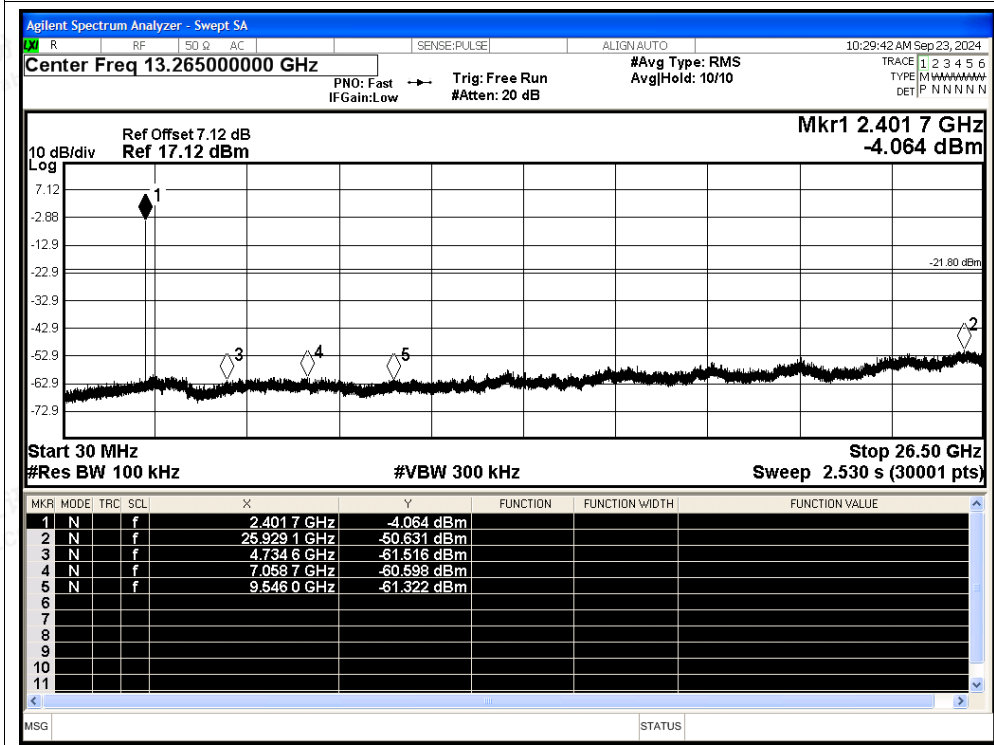




Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref

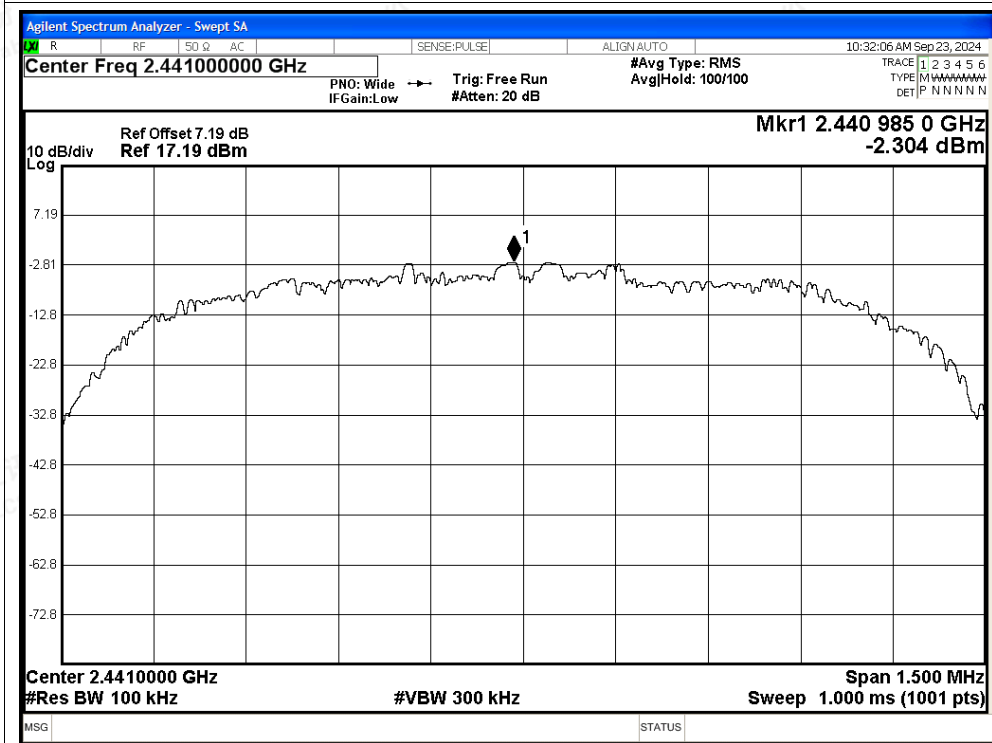


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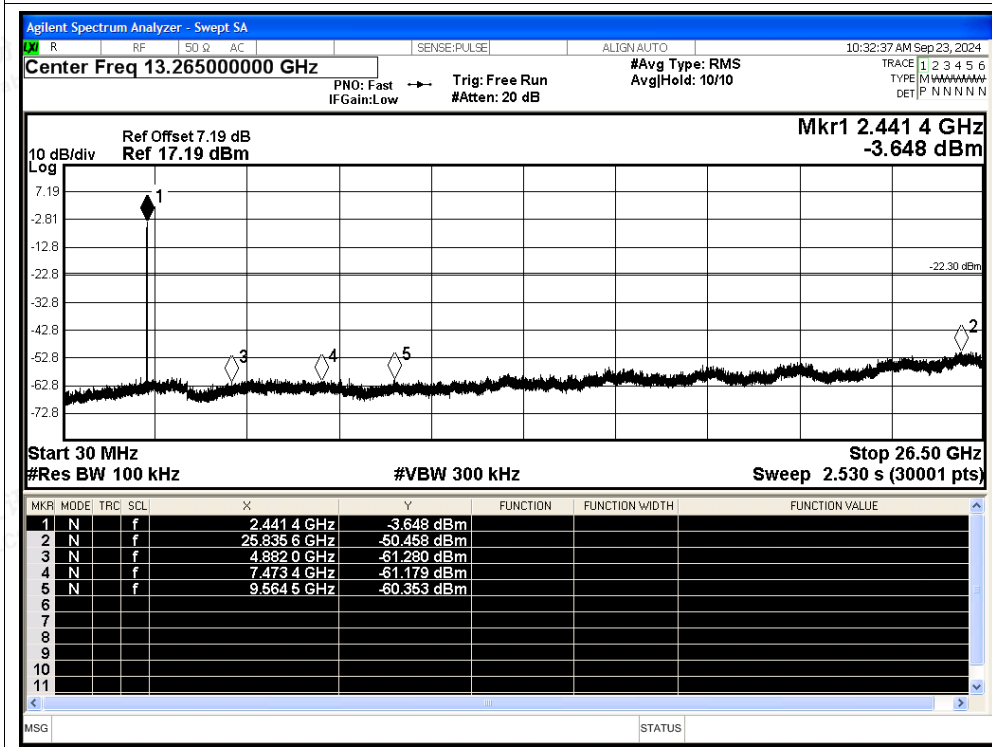




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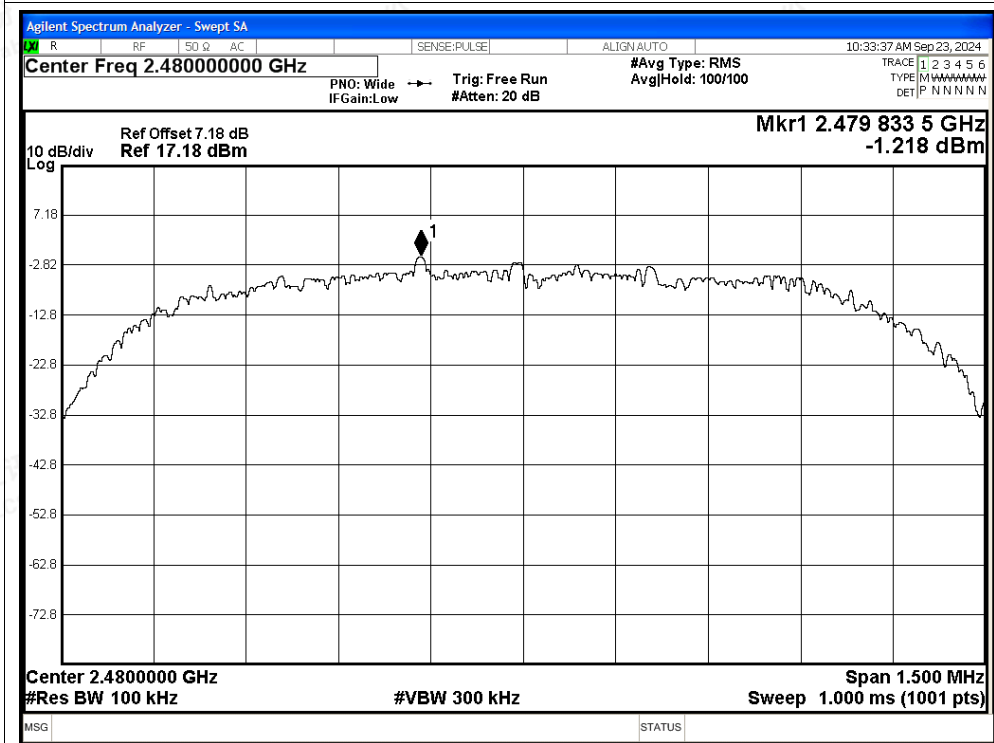


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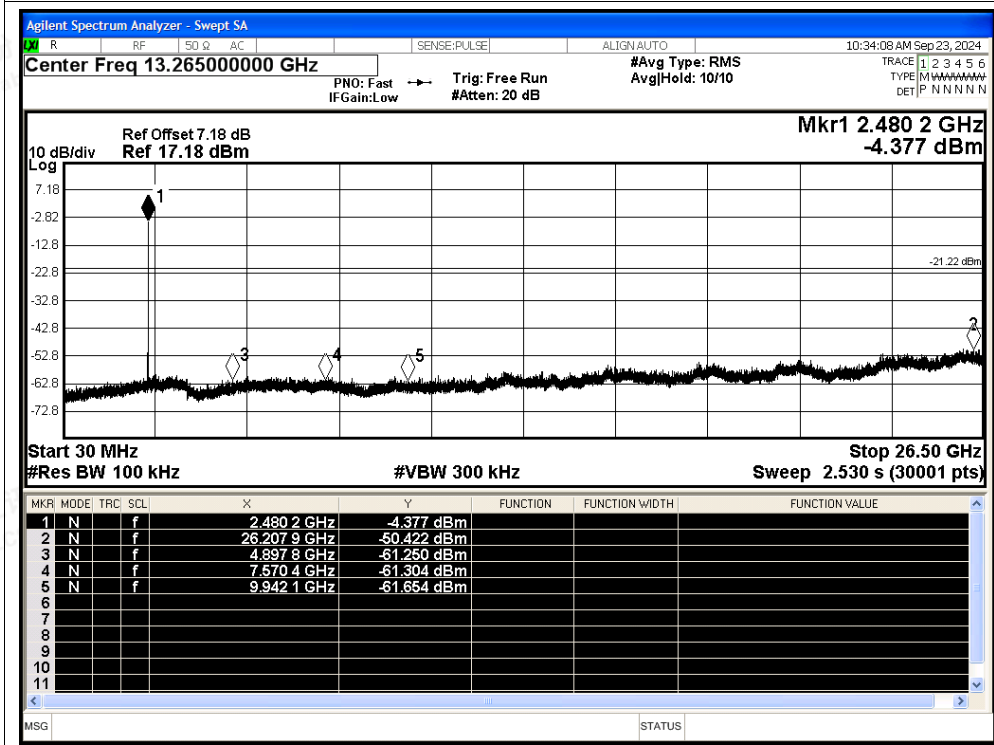




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



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	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.65	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.33	1.12	0.34
NVNT	2-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant1	77.36	1.11	0.34
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

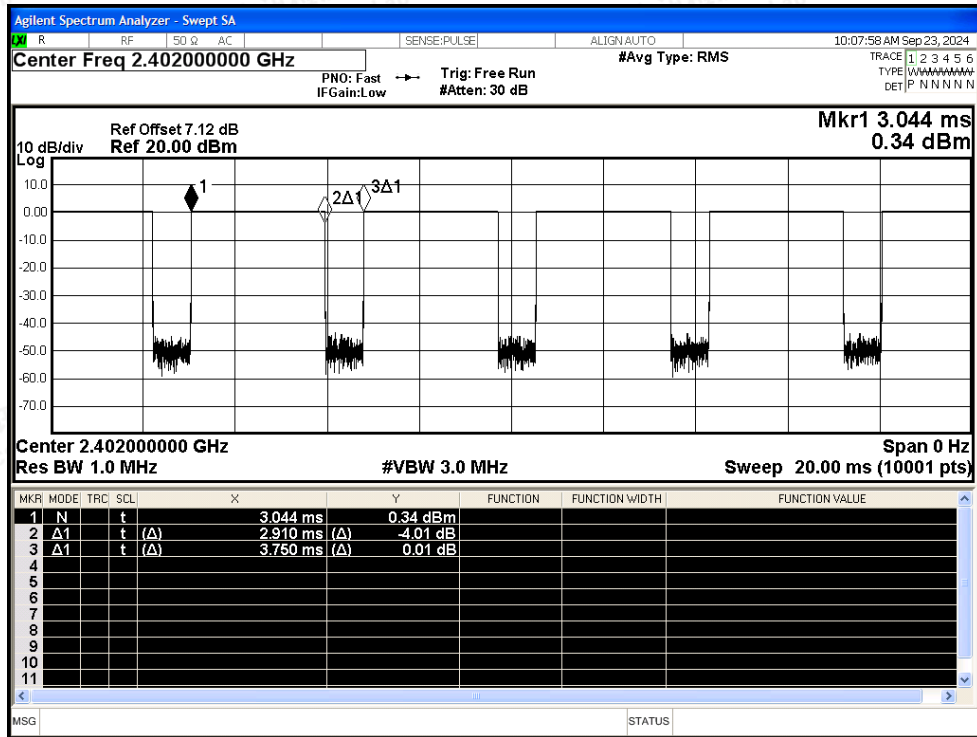


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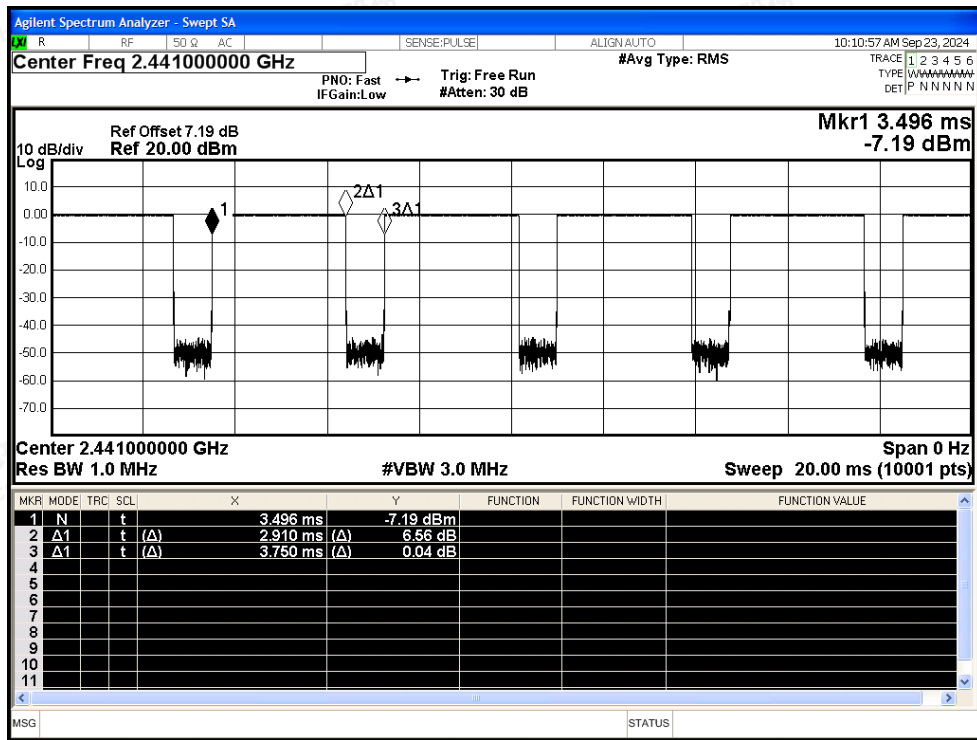


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant1

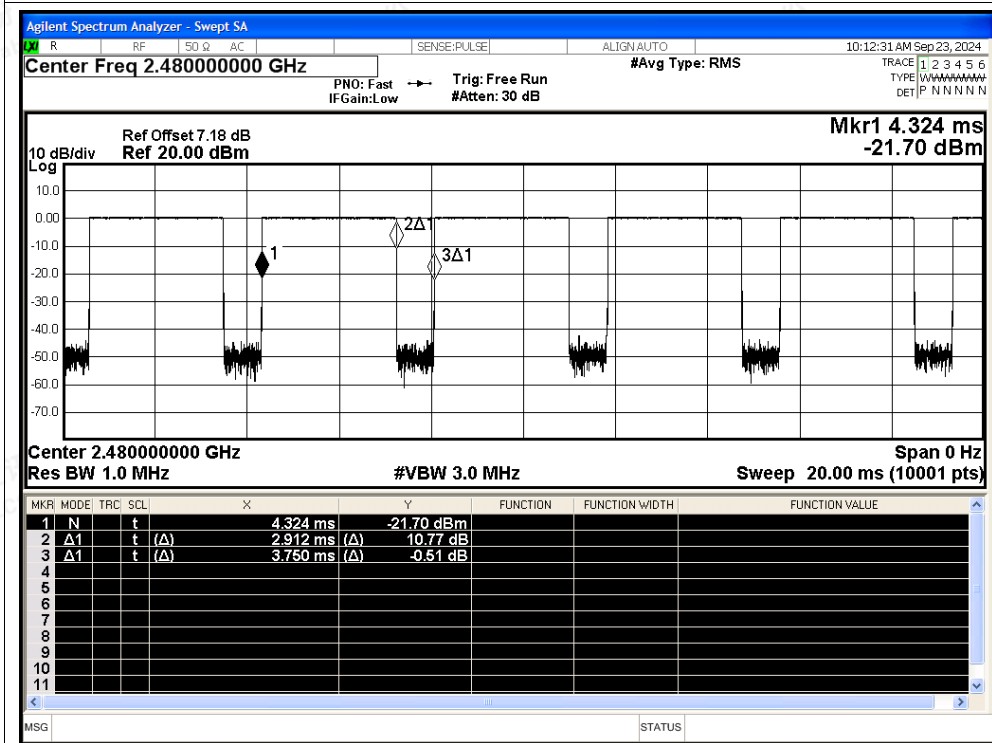


Duty Cycle NVNT 1-DH5 2441MHz Ant1

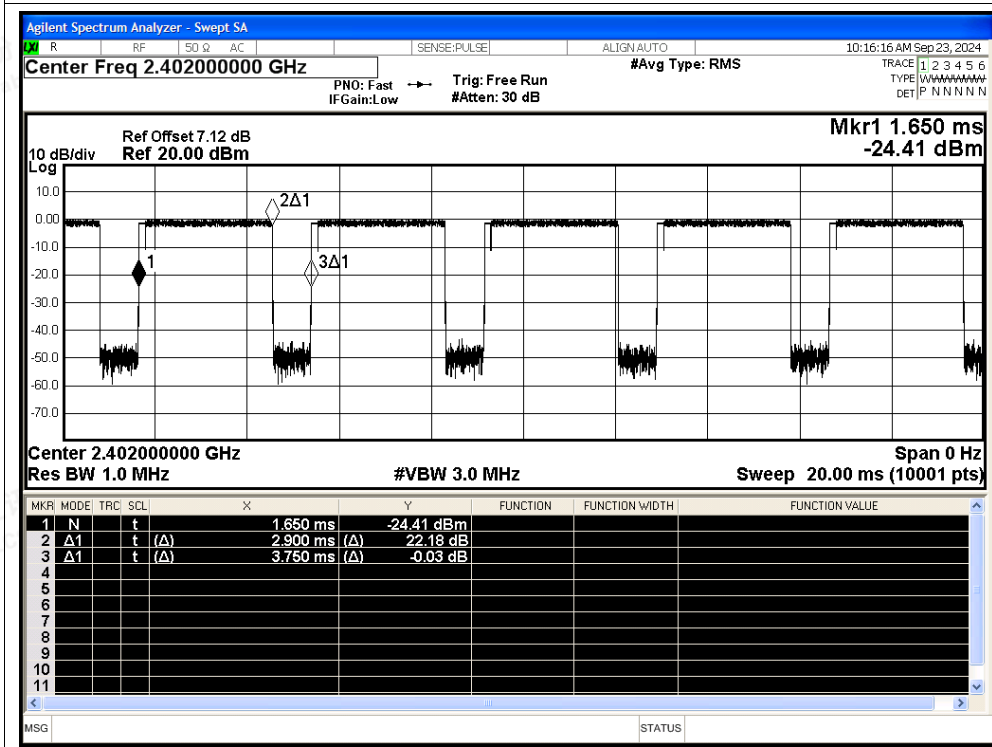




Duty Cycle NVNT 1-DH5 2480MHz Ant1

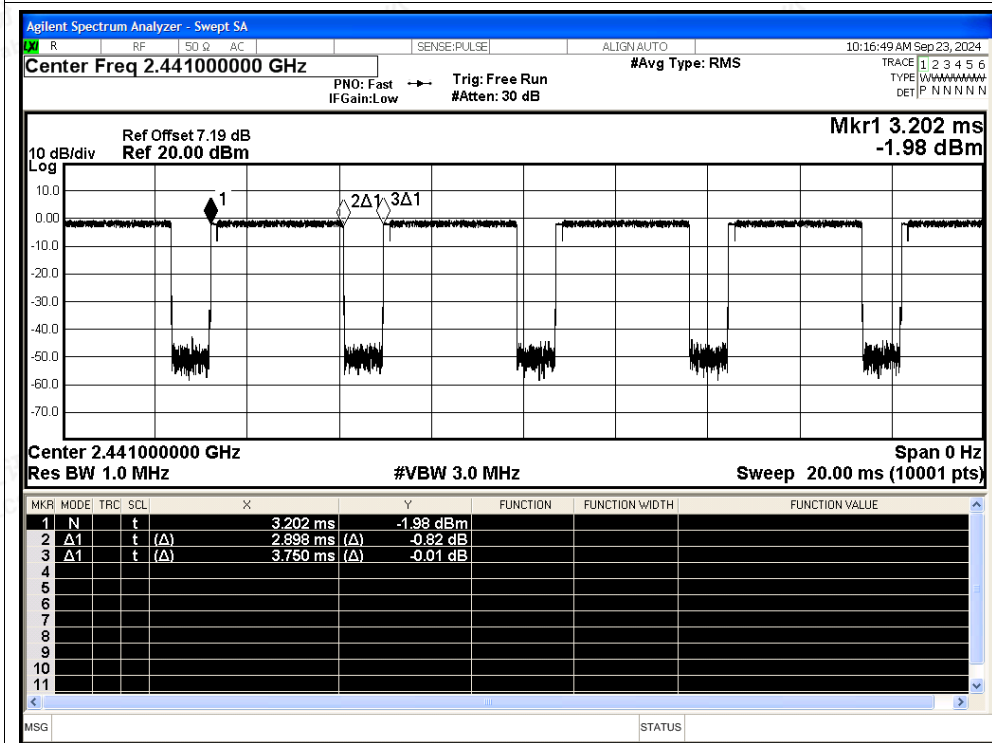


Duty Cycle NVNT 2-DH5 2402MHz Ant1

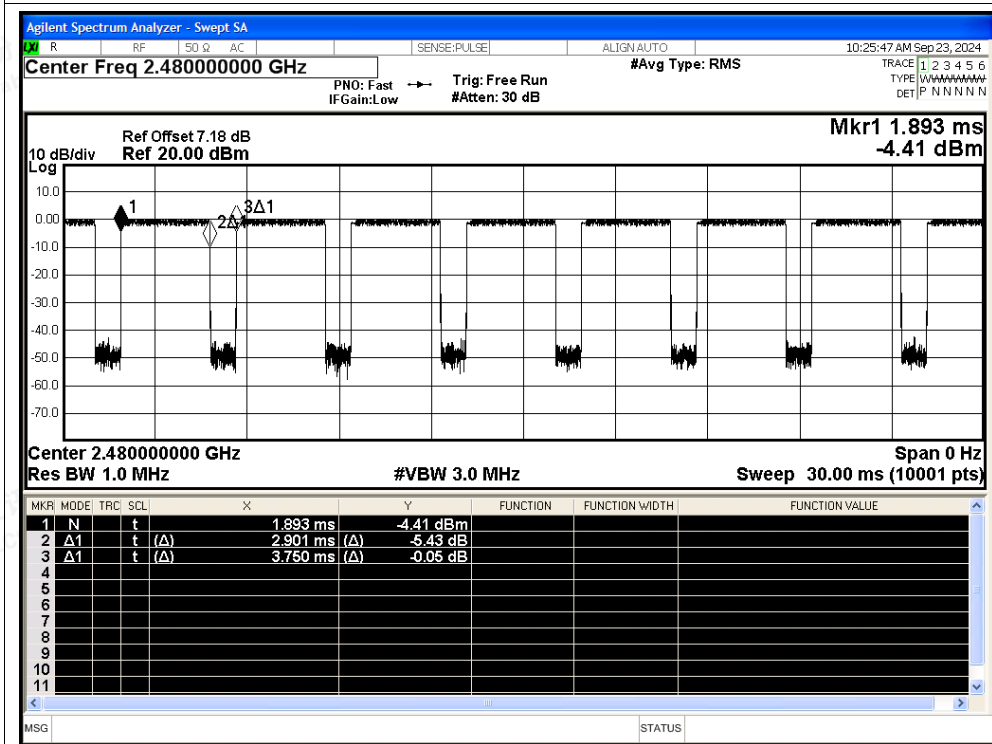




Duty Cycle NVNT 2-DH5 2441MHz Ant1

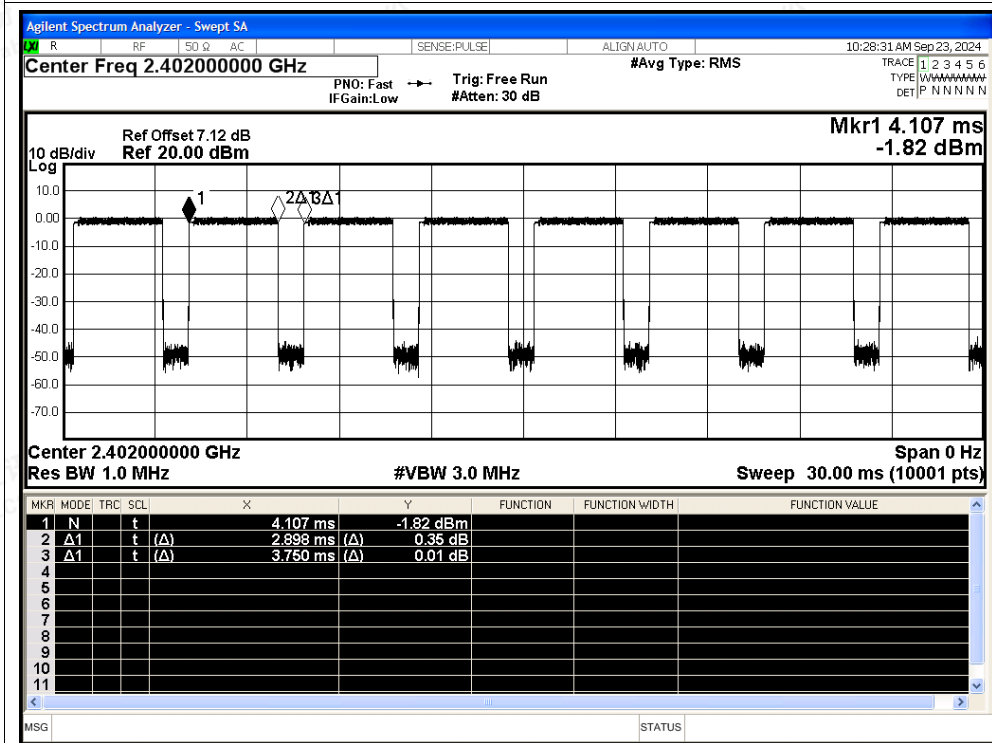


Duty Cycle NVNT 2-DH5 2480MHz Ant1

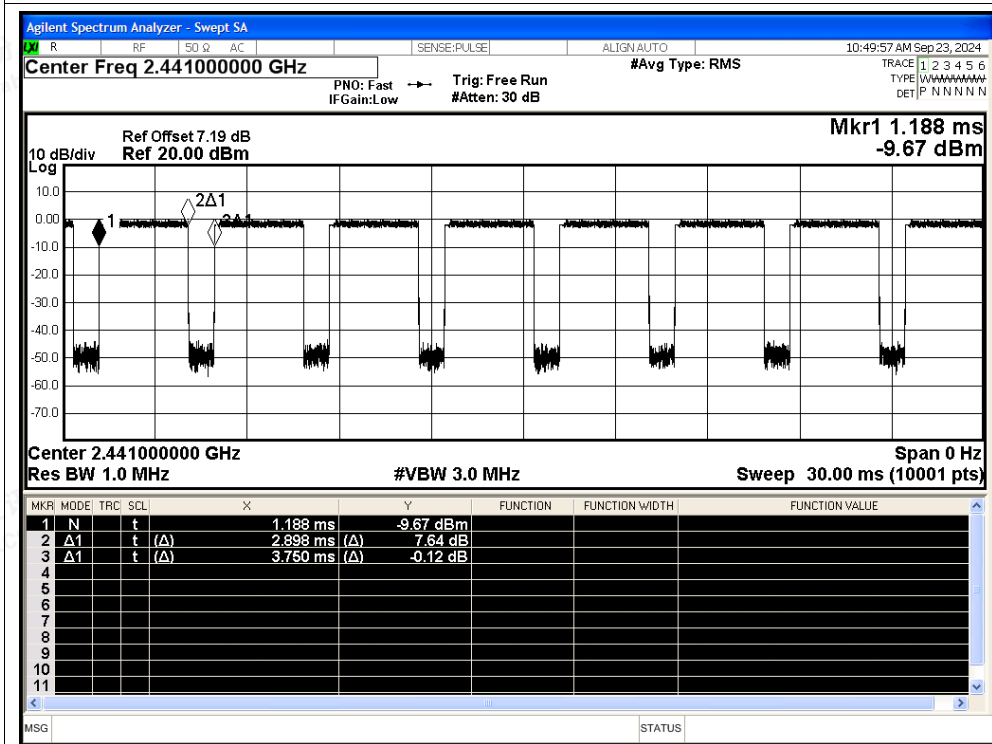


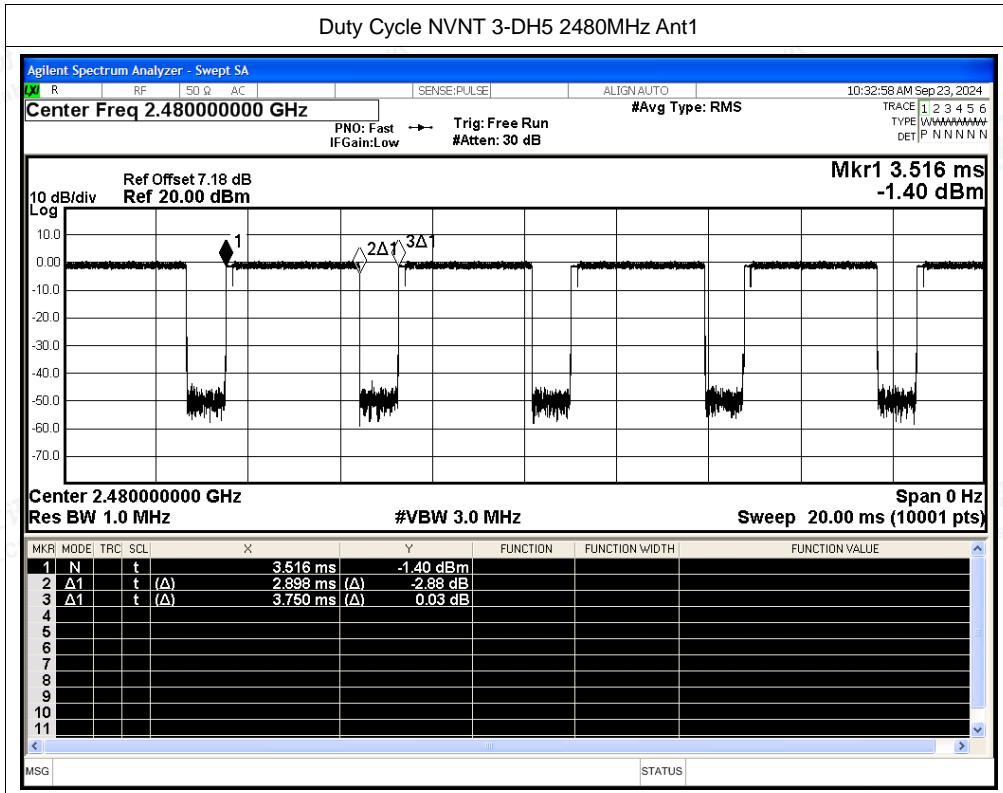


Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz 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	-46	2.00	-	51.26	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-53.64	2.00	1.1	44.72	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2333.328	-42.32	2.00	-	54.94	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2388.816	-52.27	2.00	1.1	46.09	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-46.17	2.00	-	51.09	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-53.4	2.00	1.1	44.96	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-45.91	2.00	-	51.35	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-53.33	2.00	1.1	45.03	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2486.104	-36.95	2.00	-	60.31	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.536	-51.78	2.00	1.1	46.58	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-44.43	2.00	-	52.83	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-52.81	2.00	1.1	45.55	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-46.29	2.00	-	50.97	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-53.73	2.00	0.12	43.65	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2389.296	-42.15	2.00	-	55.11	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2382.384	-52.54	2.00	0.12	44.84	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-45.5	2.00	-	51.76	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-53.33	2.00	0.12	44.05	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-44.83	2.00	-	52.43	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-53.26	2.00	0.12	44.12	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.584	-33.19	2.00	-	64.07	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.544	-51.83	2.00	0.12	45.55	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-44.21	2.00	-	53.05	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-53.11	2.00	0.12	44.27	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-46.44	2.00	-	50.82	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-53.36	2.00	1.12	45.02	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2378.736	-42.89	2.00	-	54.37	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2370.192	-52.56	2.00	1.12	45.82	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-45.11	2.00	-	52.15	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-53.75	2.00	1.12	44.63	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-45.11	2.00	-	52.15	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-52.82	2.00	1.12	45.56	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.656	-33.53	2.00	-	63.73	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2490.208	-52.09	2.00	1.12	46.29	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-46.19	2.00	-	51.07	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-53.09	2.00	1.12	45.29	Average	54	Pass



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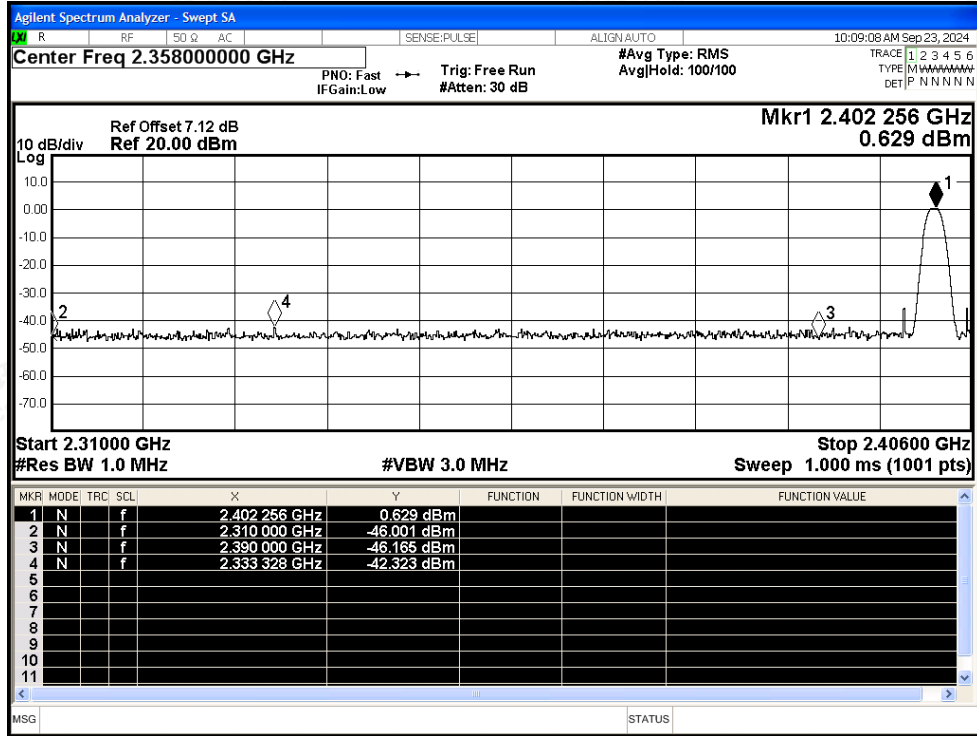
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Scan code to check authenticity

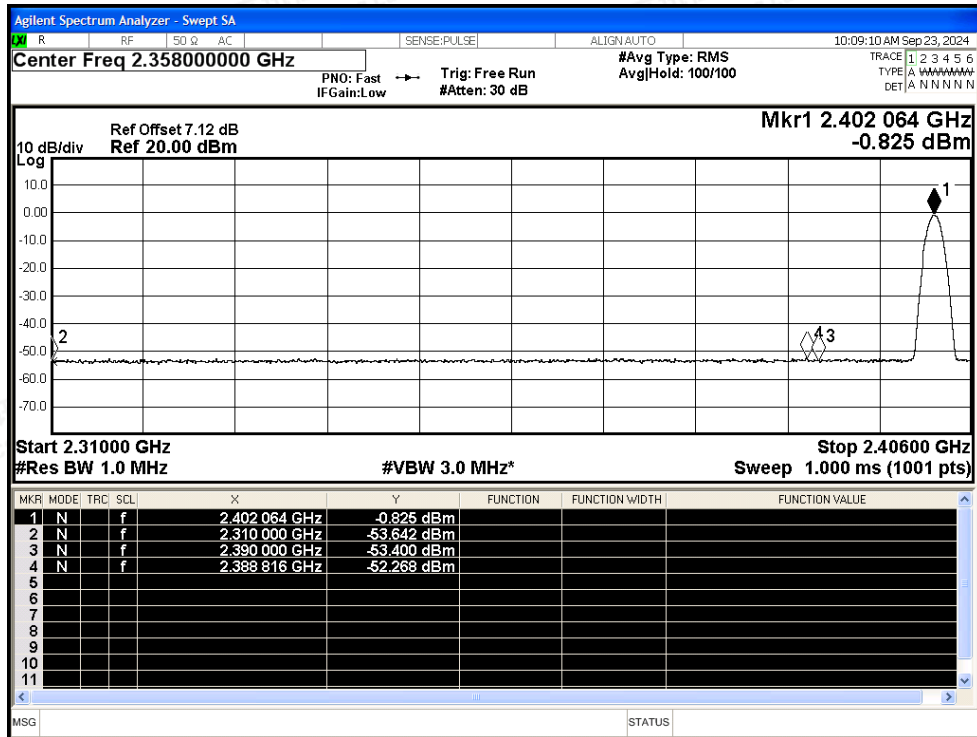


Test Graphs

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

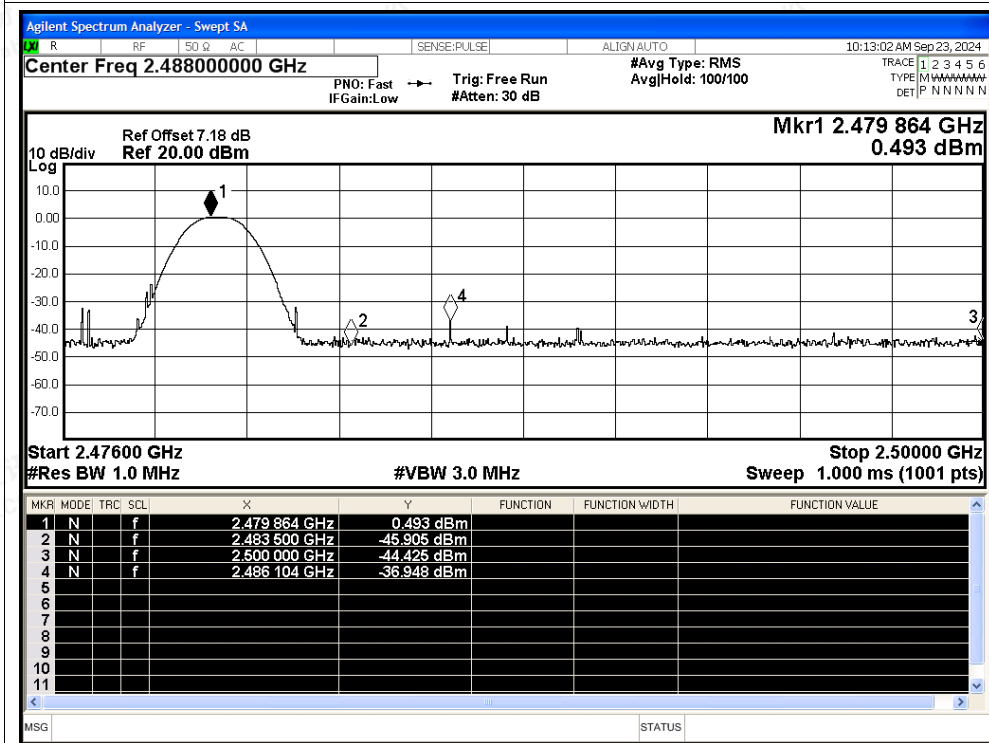


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

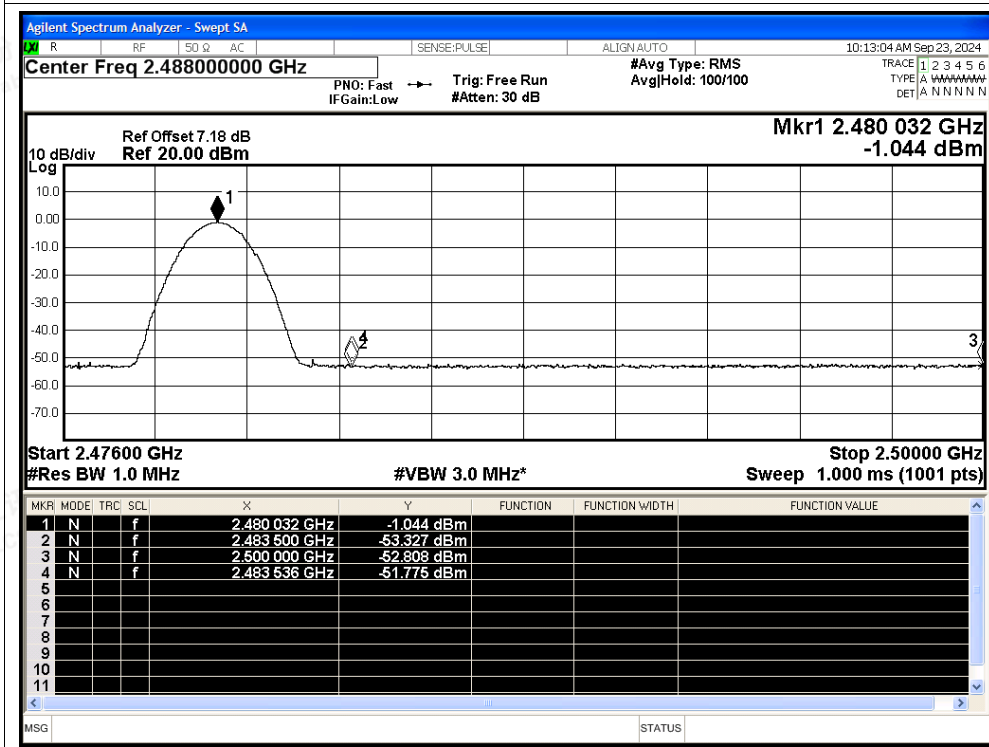


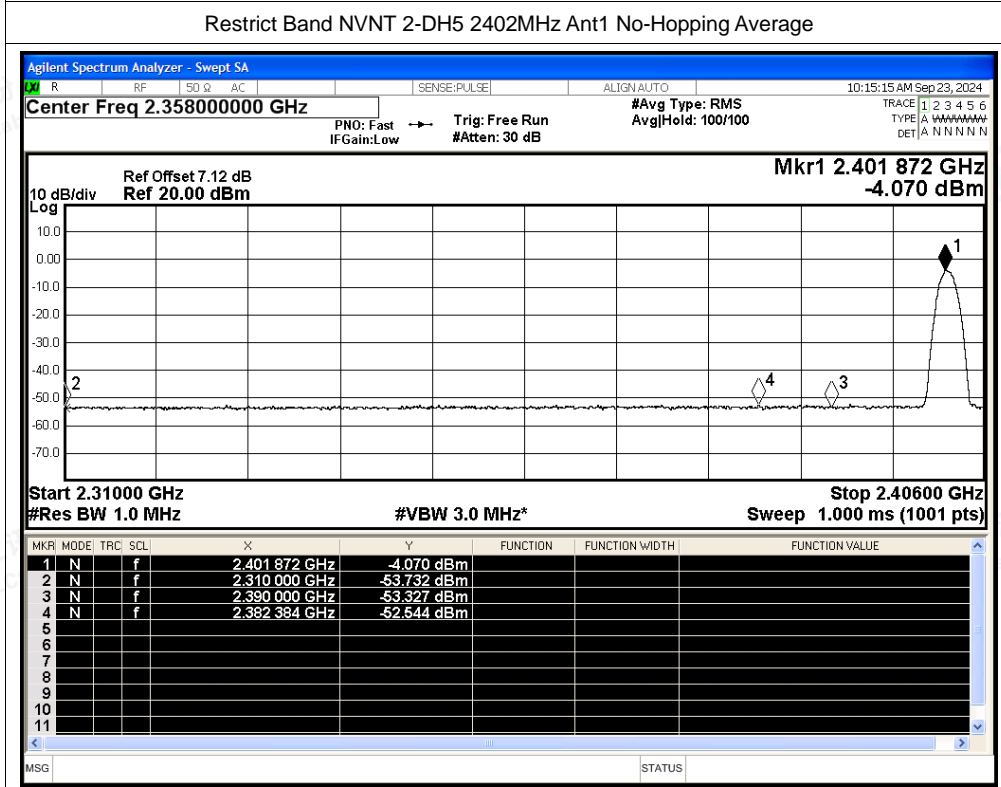
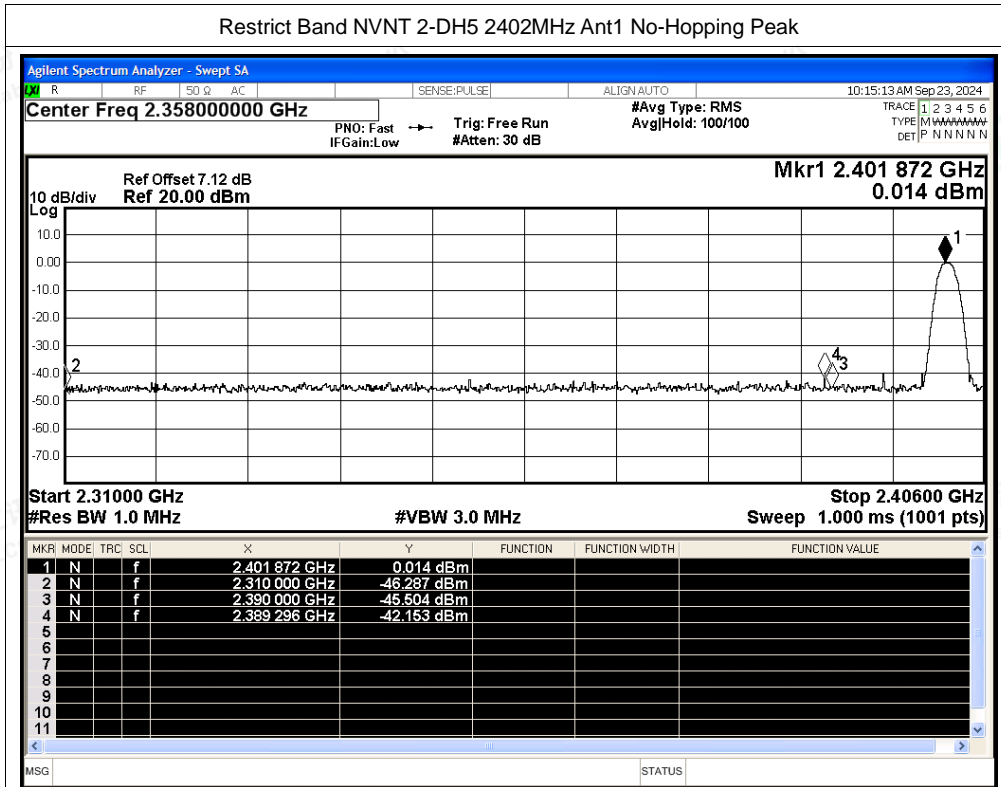


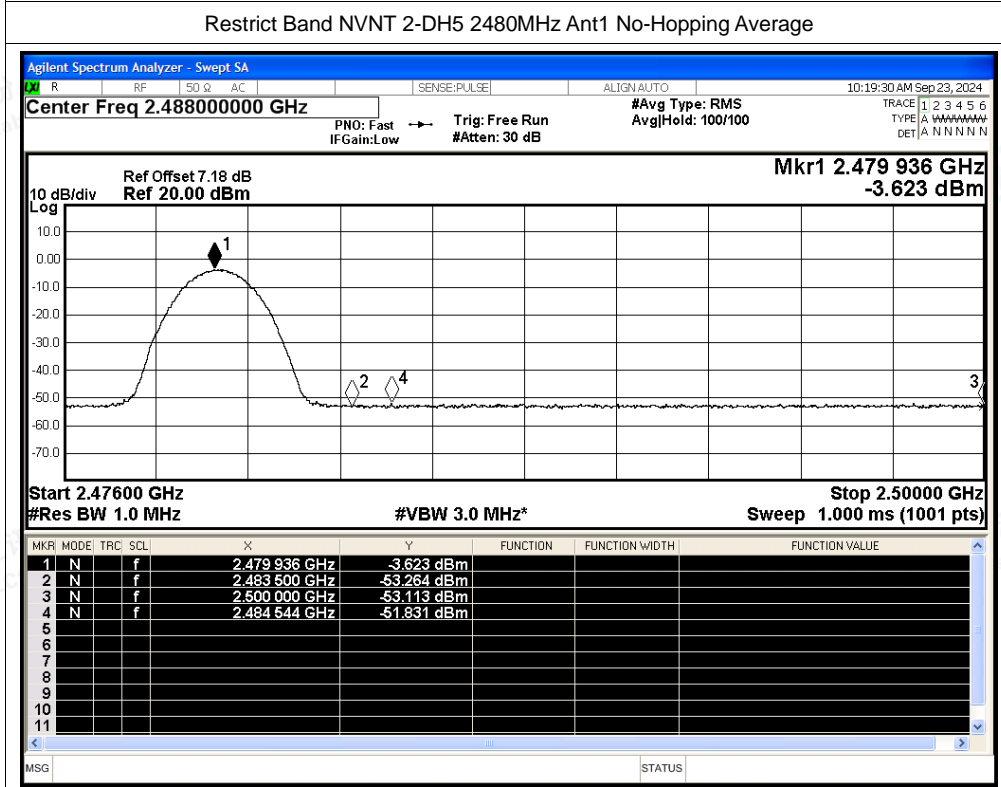
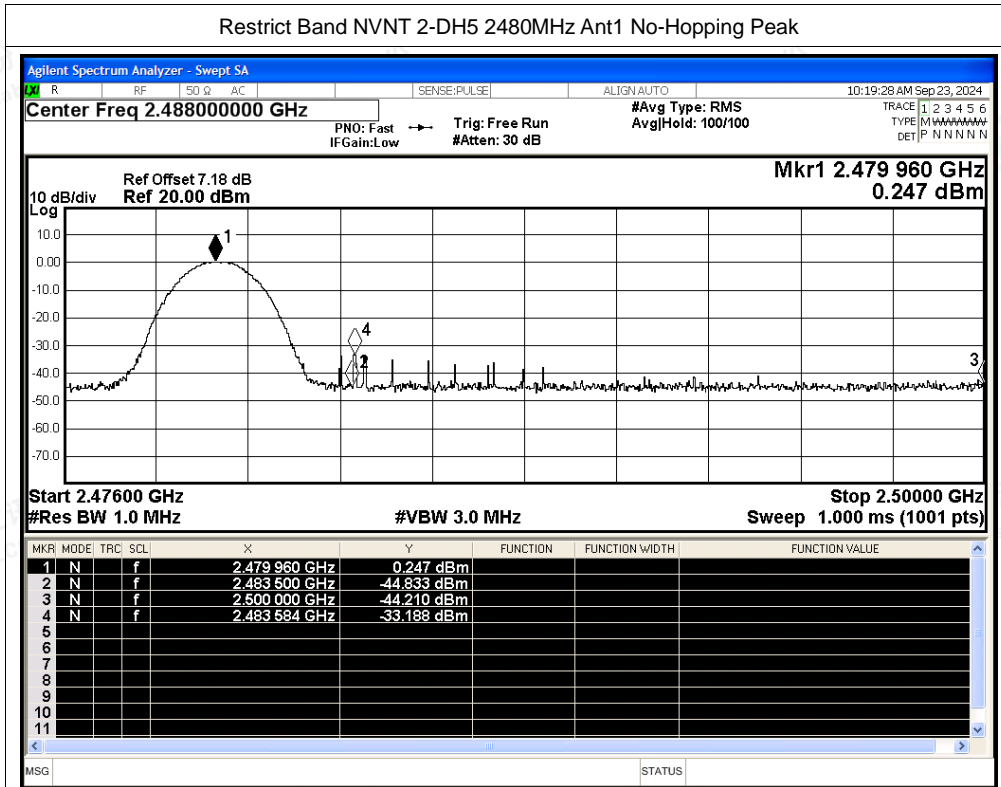
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

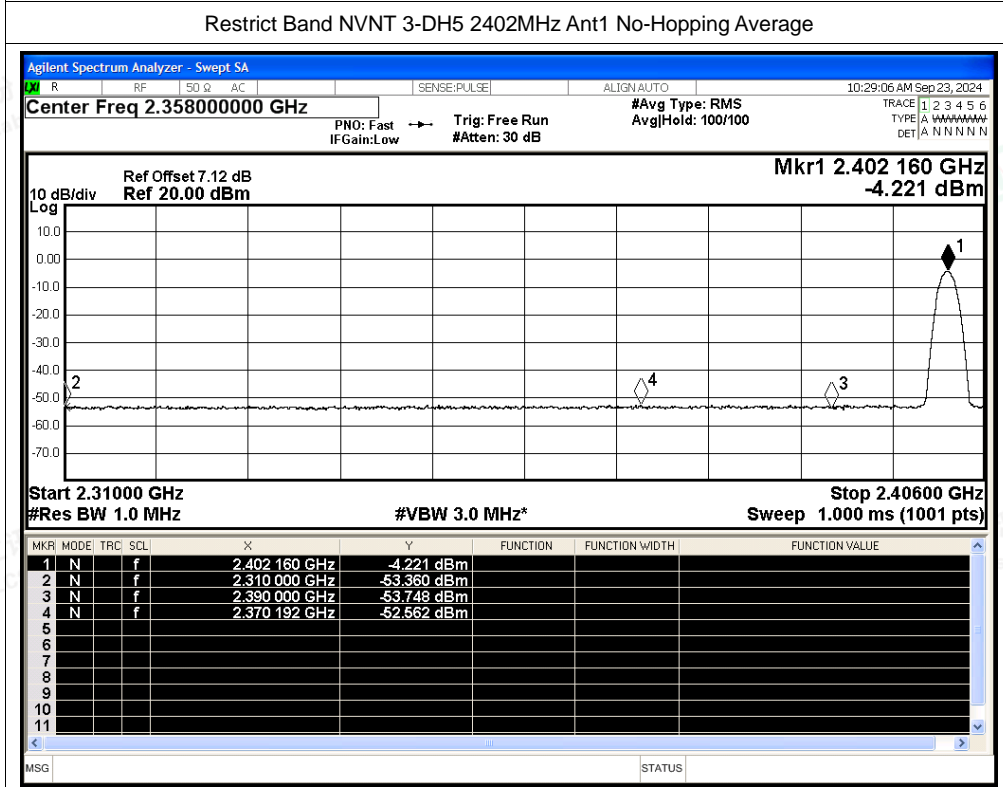
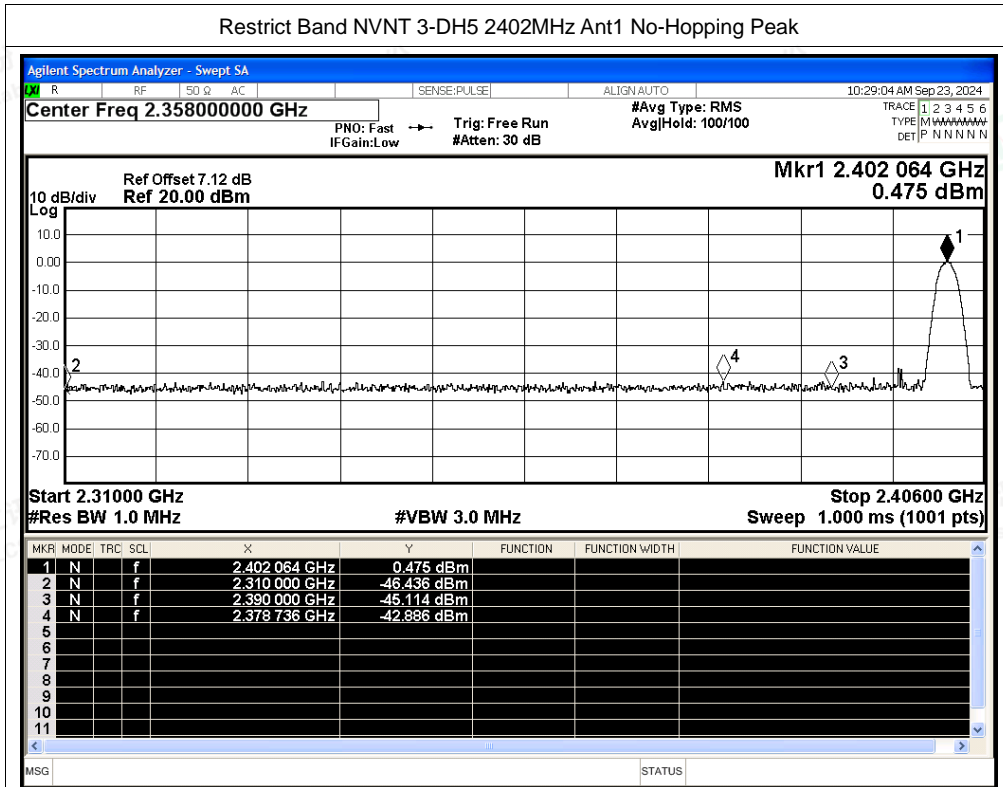


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



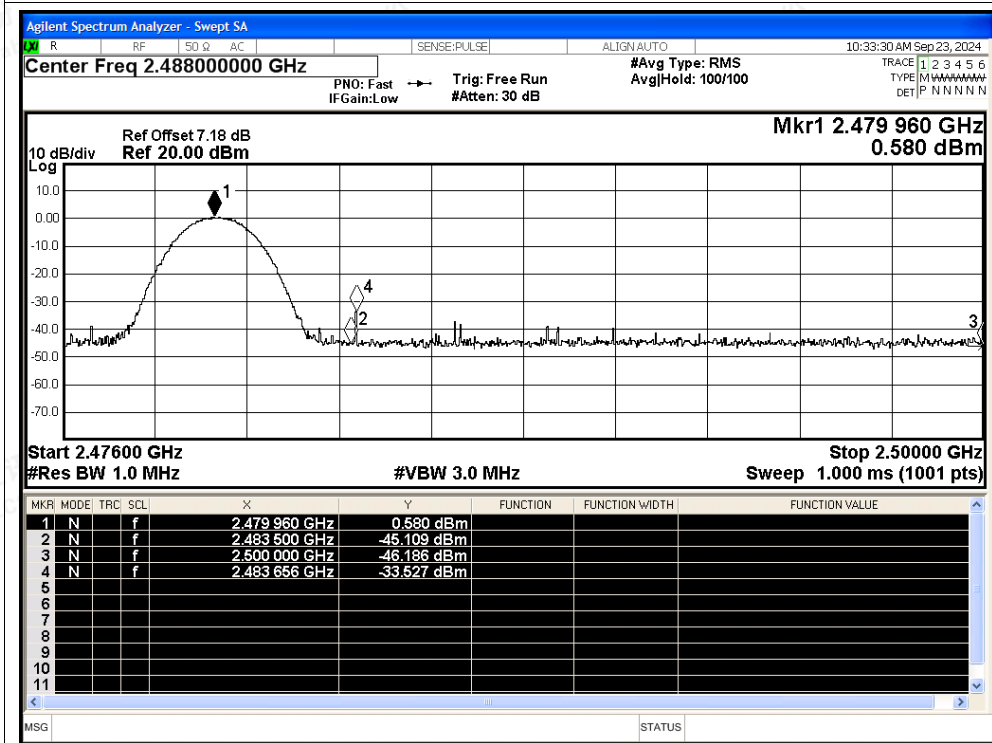








Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Peak



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

