



# Appendix A

## RF Test Data for BT(Conducted Measurement)

Product Name: Smartphone

Test Model: ZG65 Pro

### Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
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	0.961	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.003	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.961	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.307	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.279	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.286	N/A	Pass



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Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

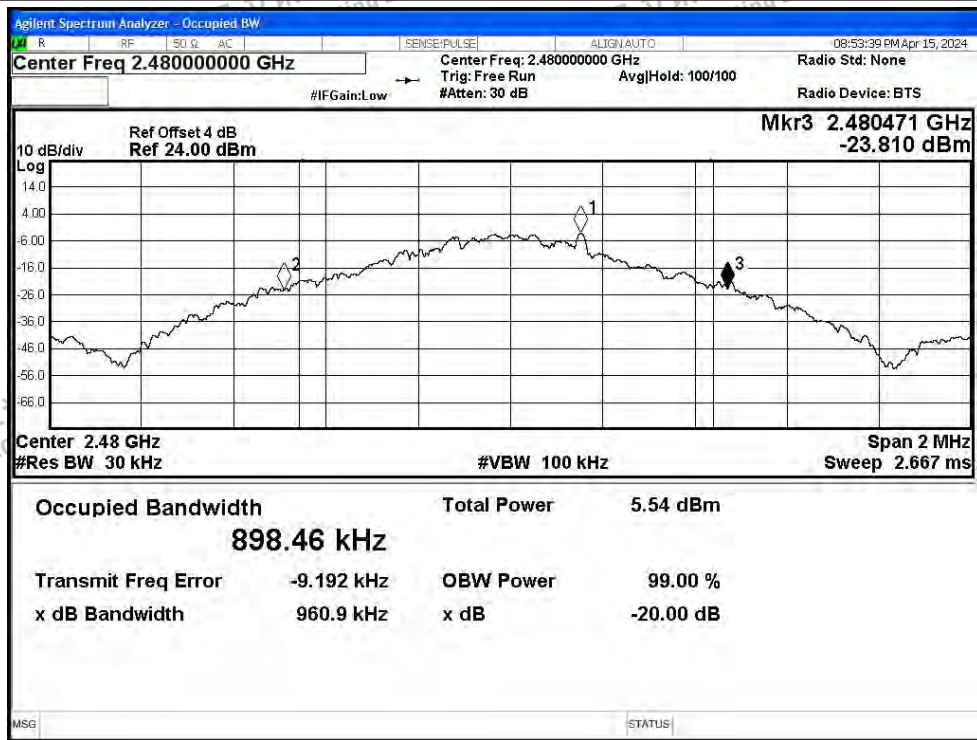


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

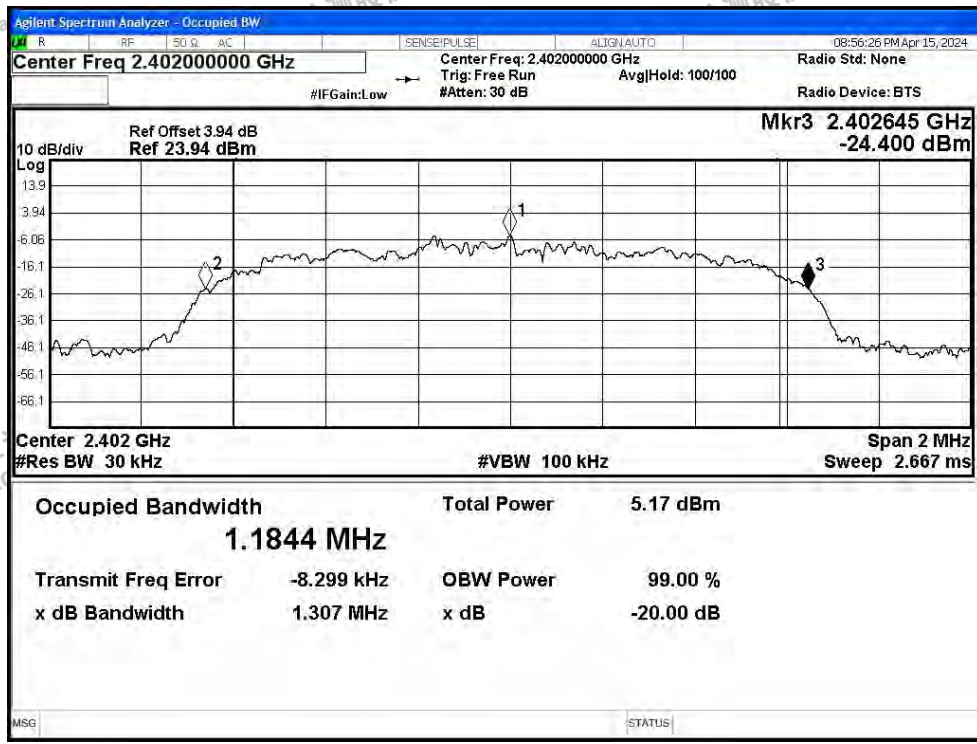




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

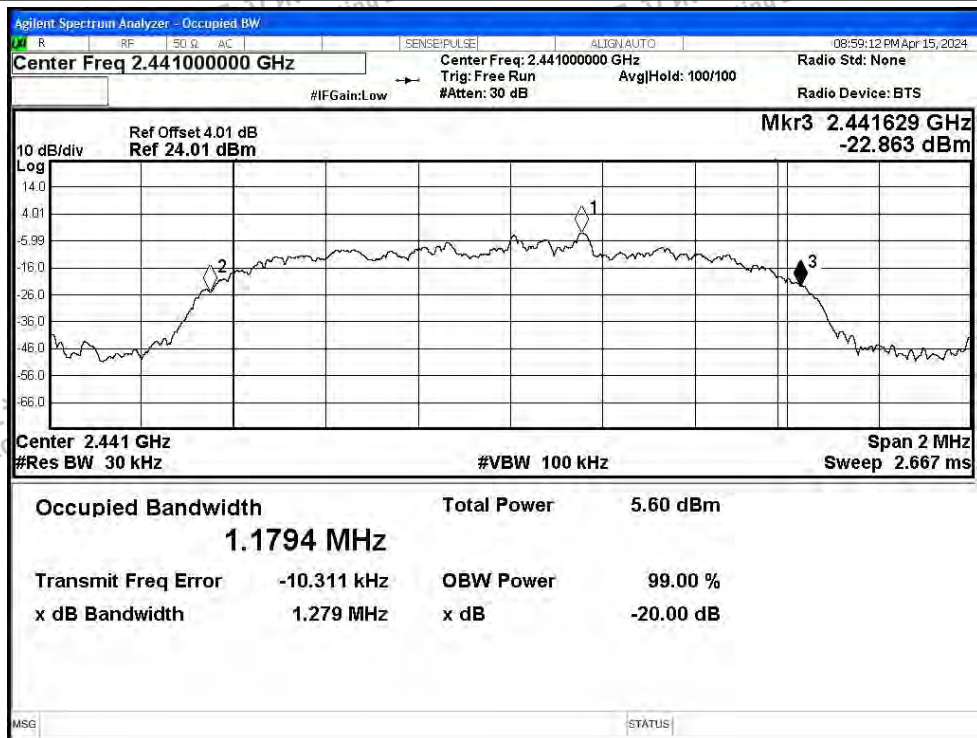


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

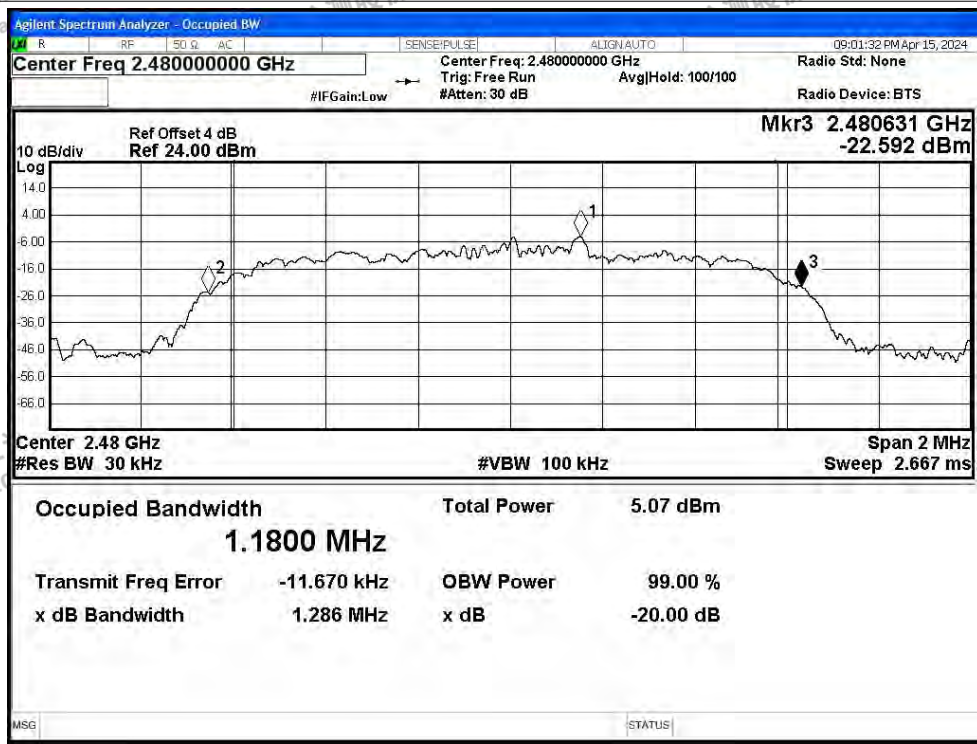




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1





## A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	-0.93	21	Pass
NVNT	1-DH5	2441	Ant1	-0.68	21	Pass
NVNT	1-DH5	2480	Ant1	-0.68	21	Pass
NVNT	2-DH5	2402	Ant1	0.64	21	Pass
NVNT	2-DH5	2441	Ant1	0.94	21	Pass
NVNT	2-DH5	2480	Ant1	0.46	21	Pass

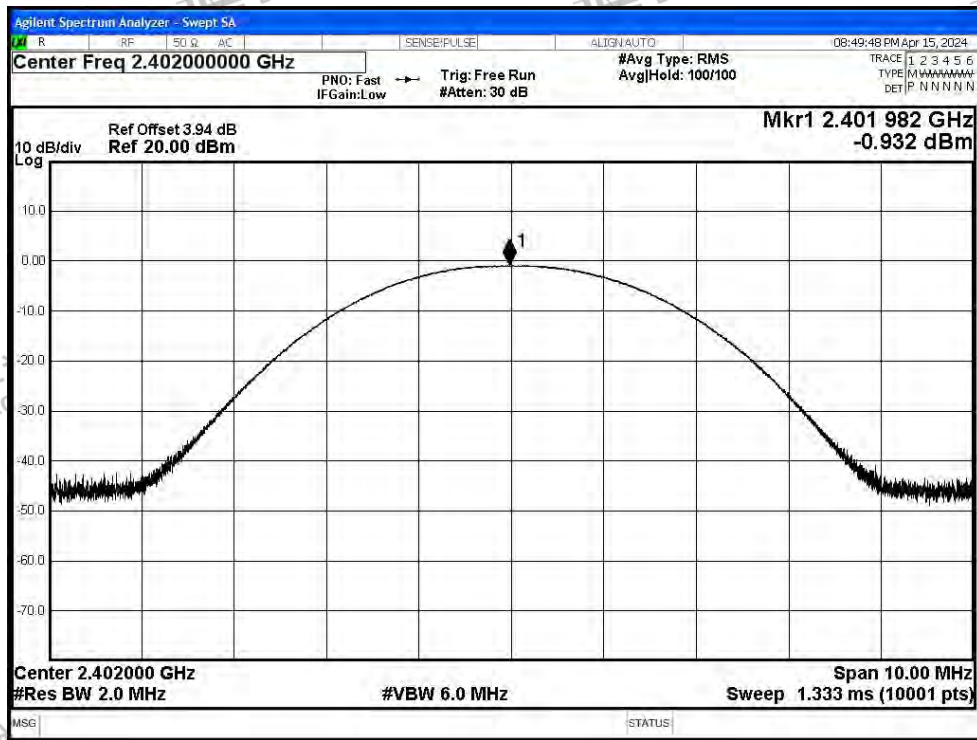


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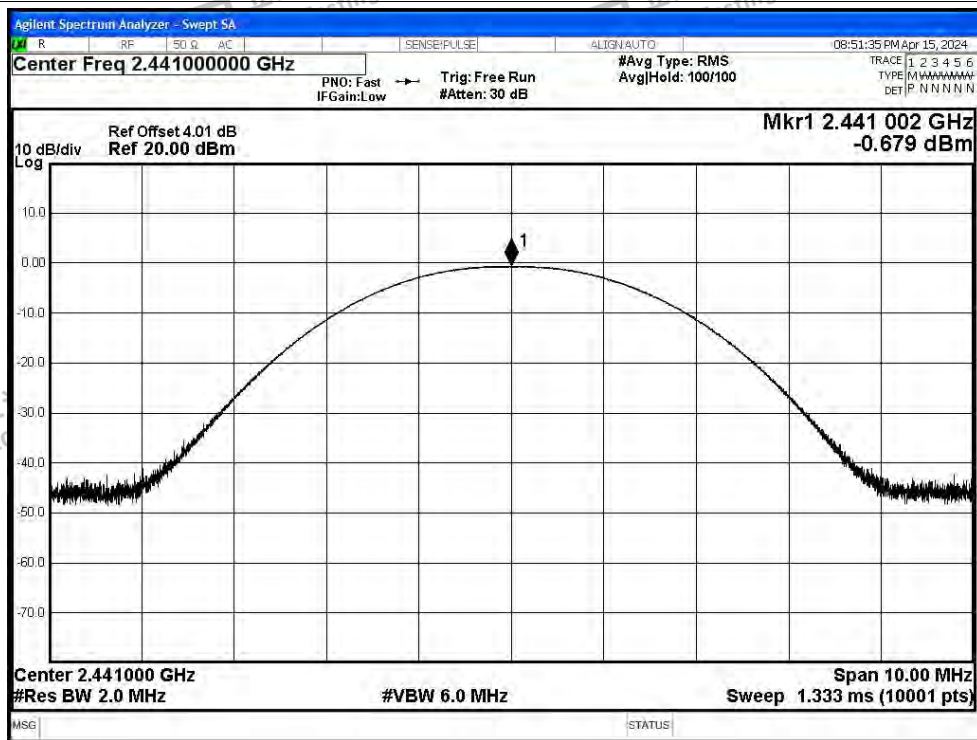


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

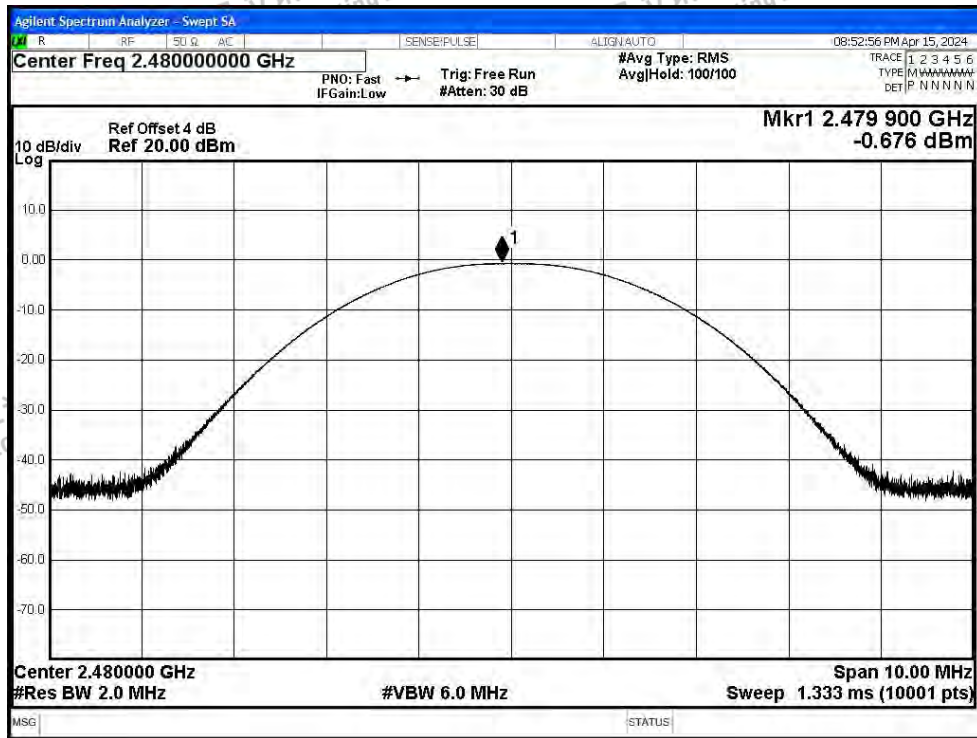


Power NVNT 1-DH5 2441MHz Ant1

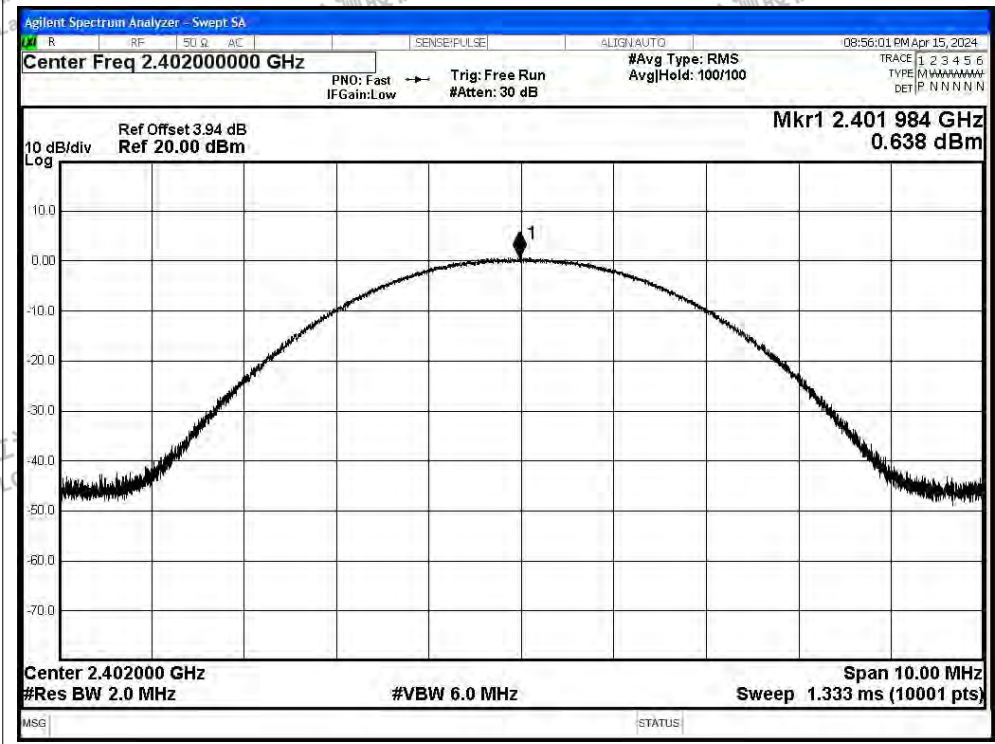




Power NVNT 1-DH5 2480MHz Ant1



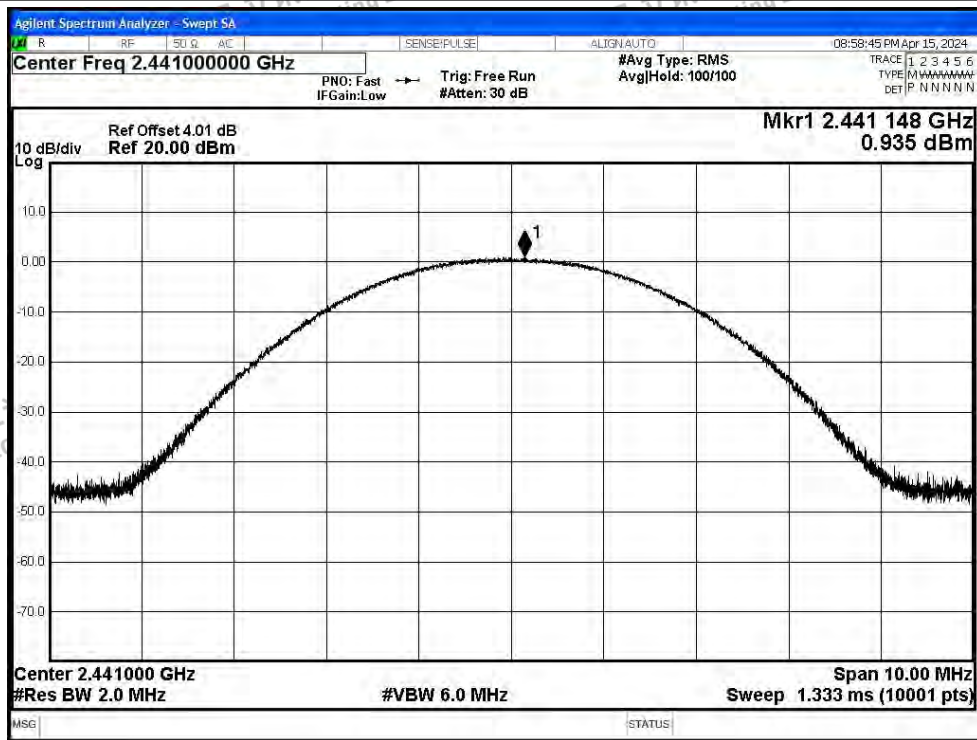
Power NVNT 2-DH5 2402MHz Ant1



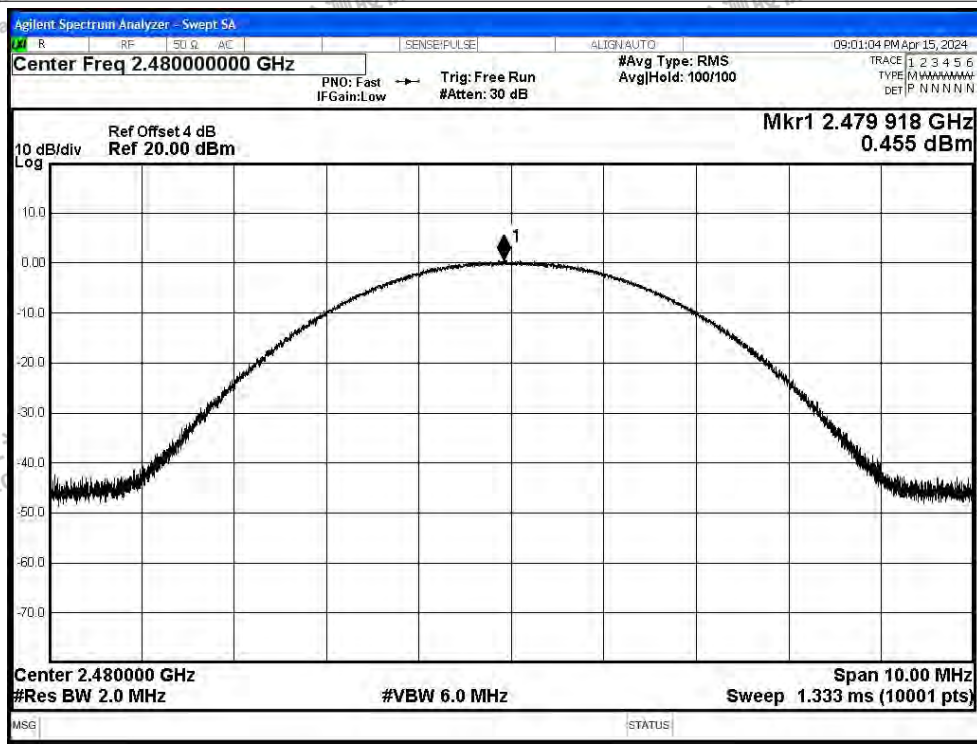




Power NVNT 2-DH5 2441MHz Ant1



Power NVNT 2-DH5 2480MHz Ant1





### A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.048	2403	0.952	0.669	Pass
NVNT	2-DH5	Ant1	2402.156	2403.152	0.996	0.871	Pass

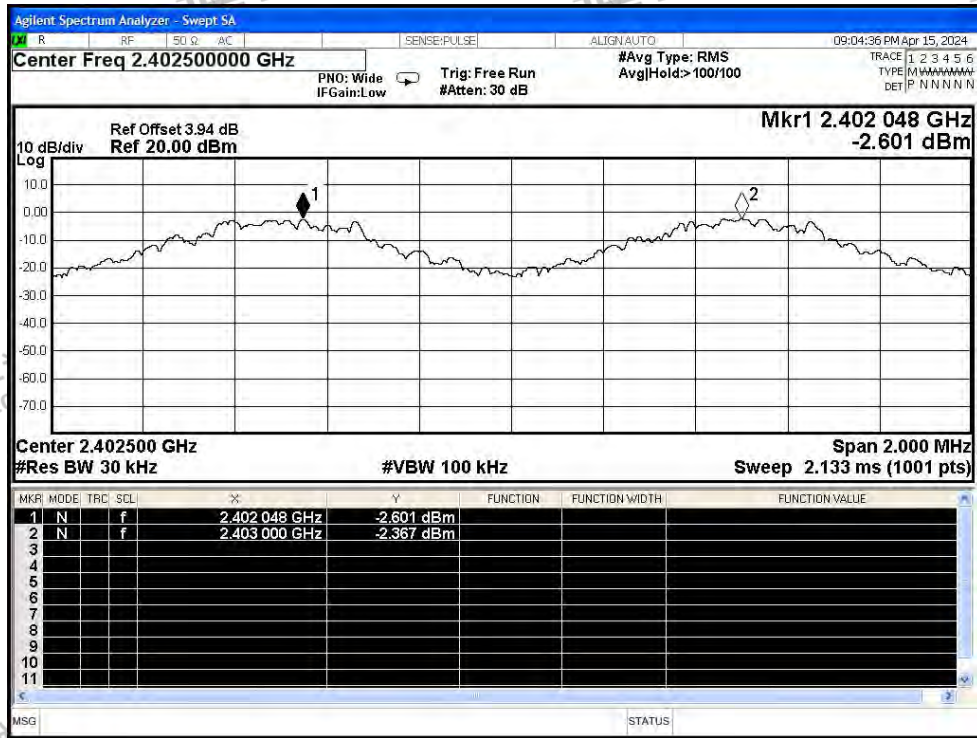


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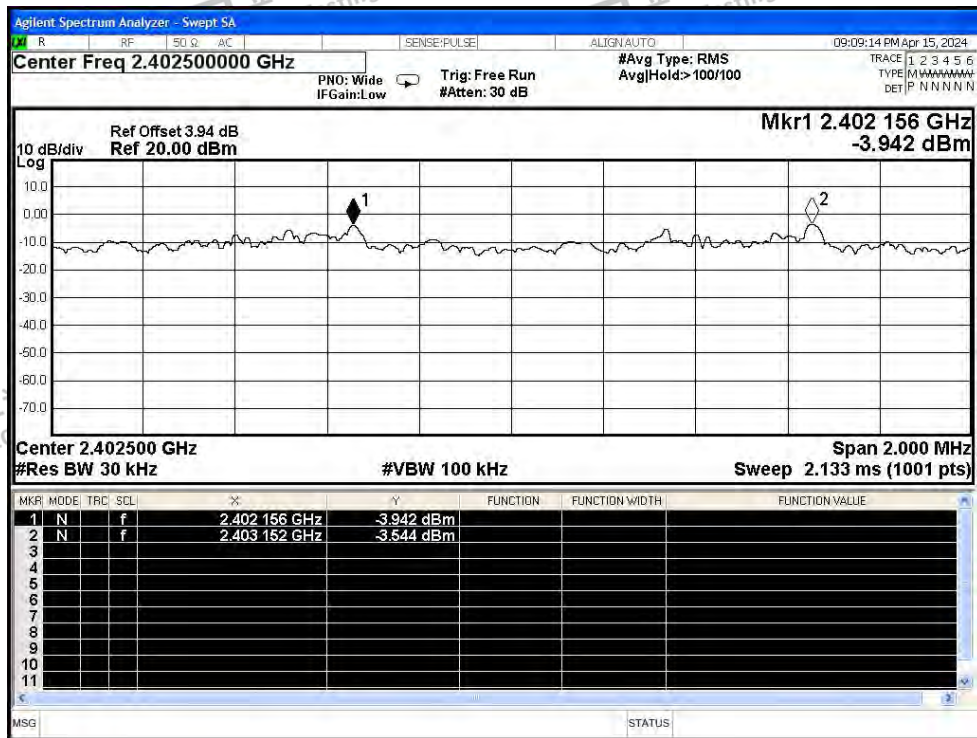


Test Graphs

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	2.882	308.374	107	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	314.465	109	31600	400	Pass

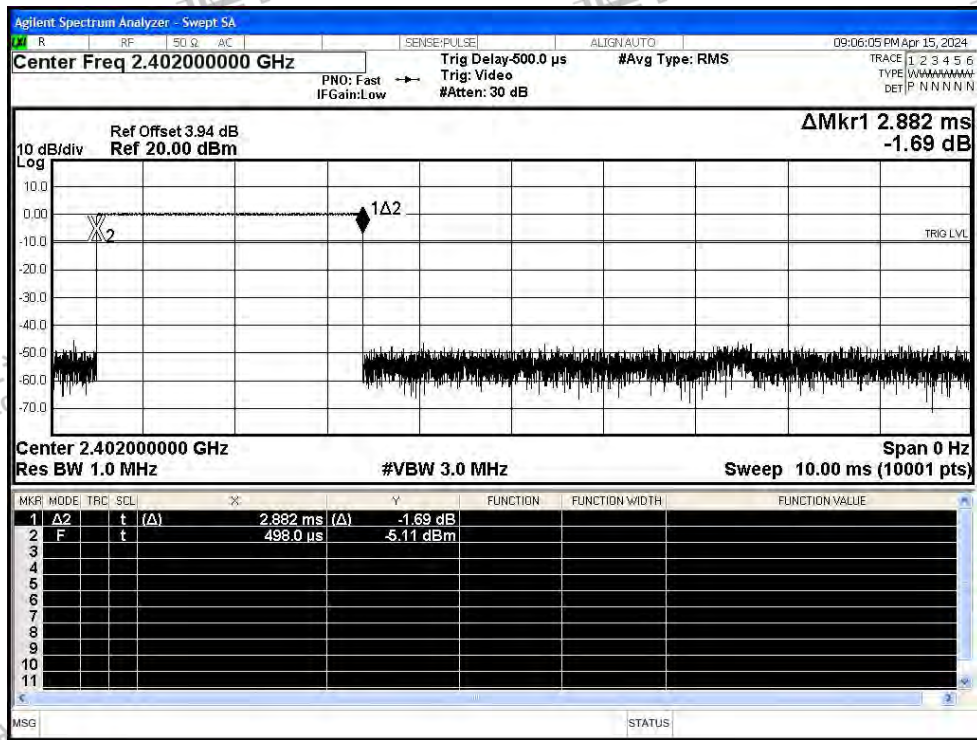


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Scan code to check authenticity

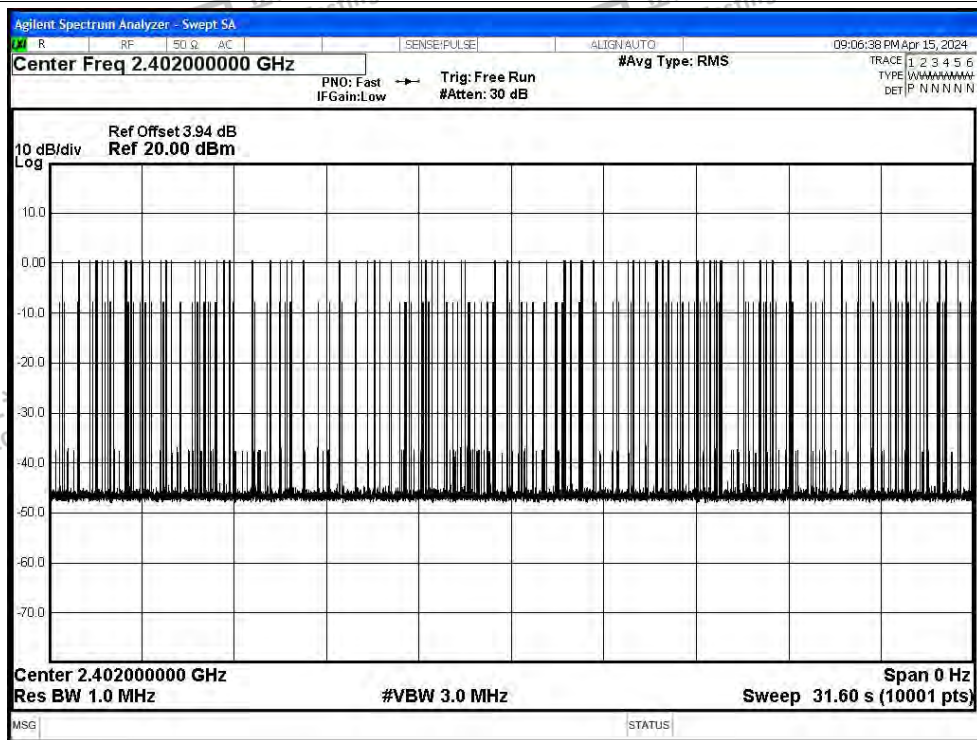


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

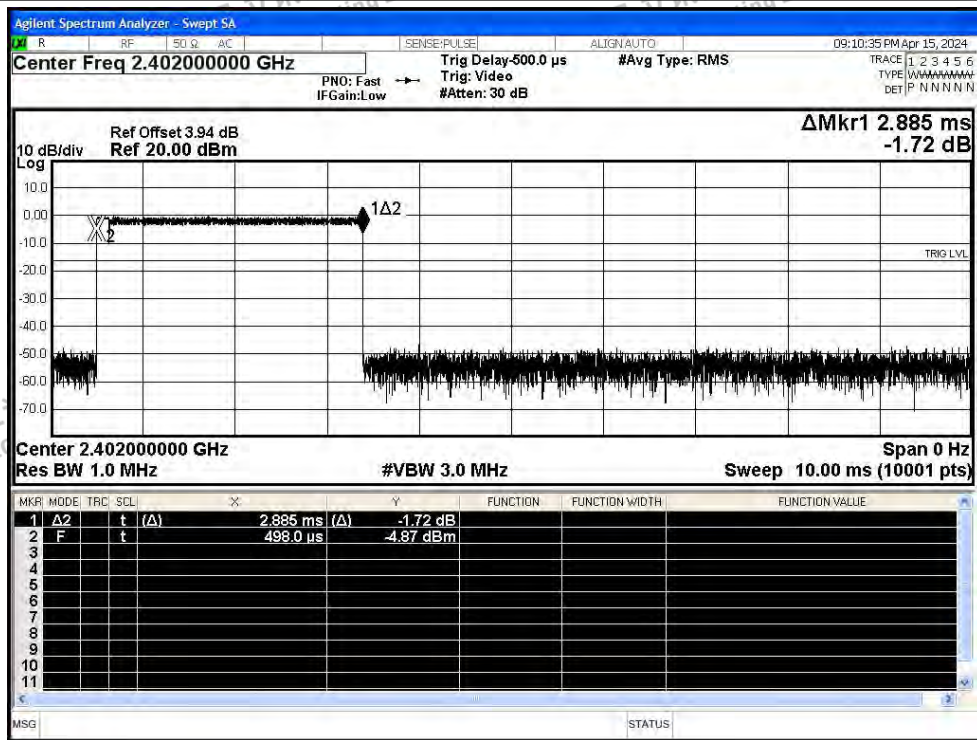


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

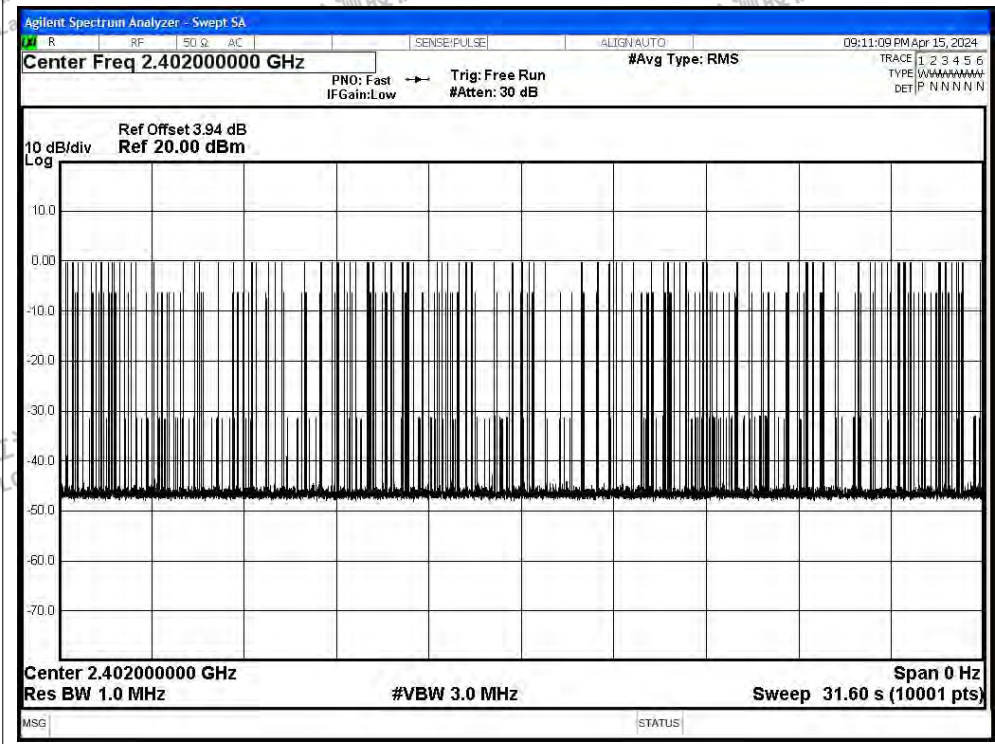




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



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

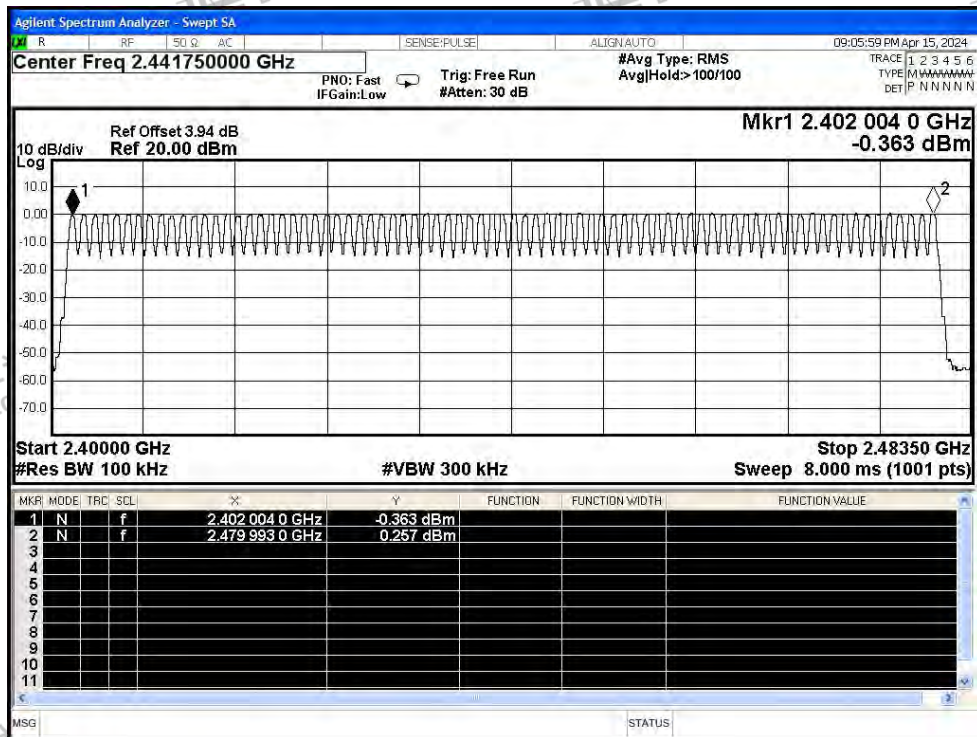


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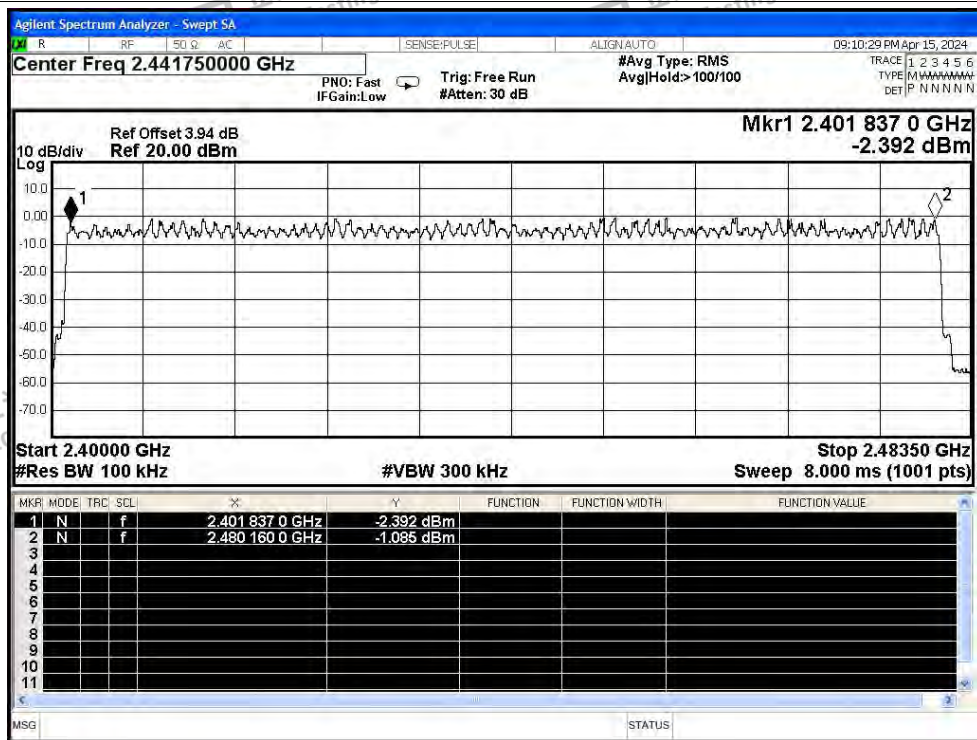


Test Graphs

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	-53.03	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-53.99	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-52.63	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-53.49	-20	Pass

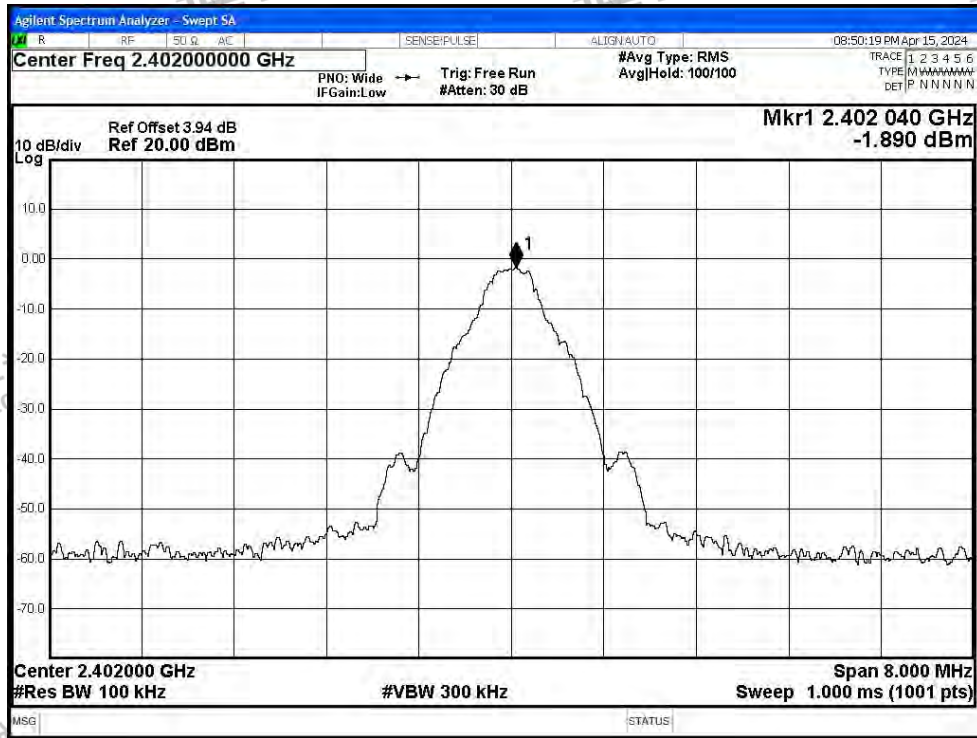


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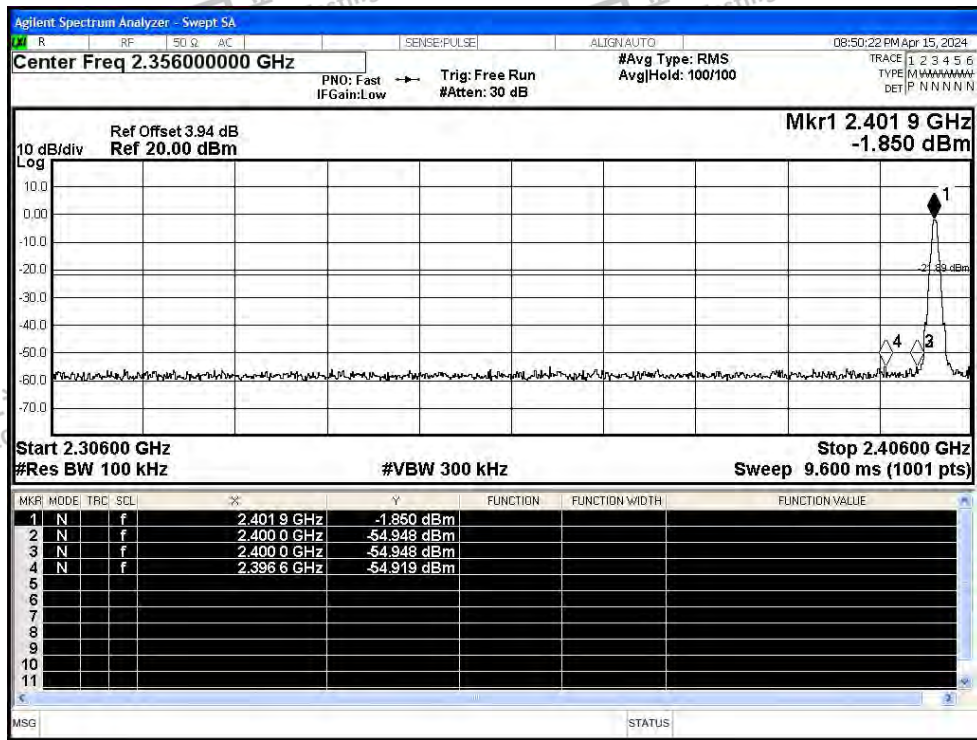


Test Graphs

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

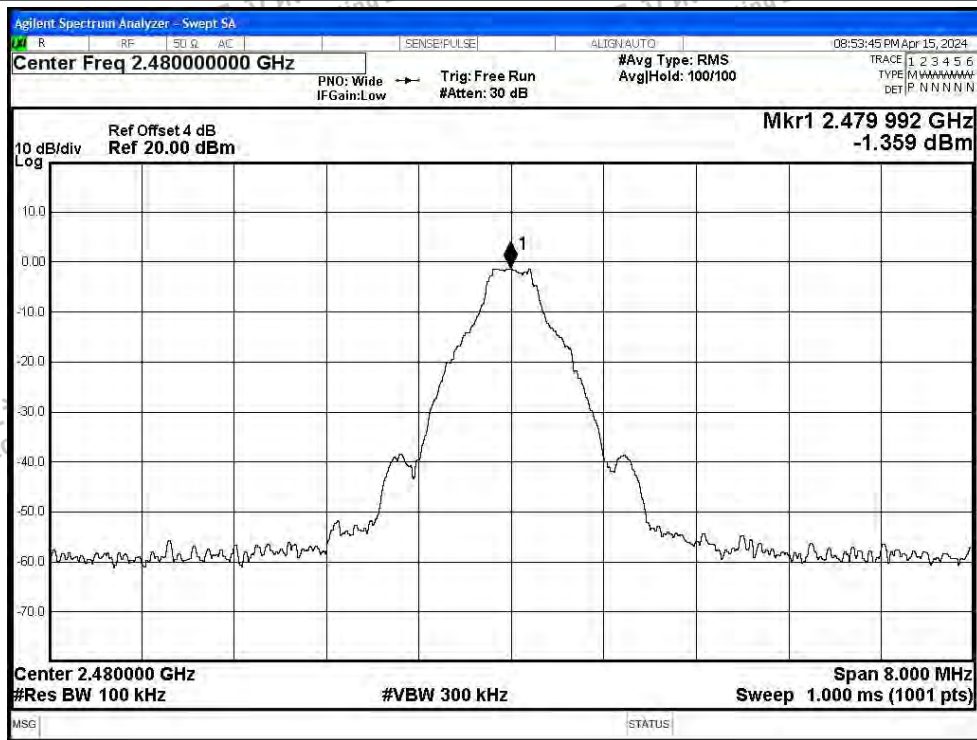


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

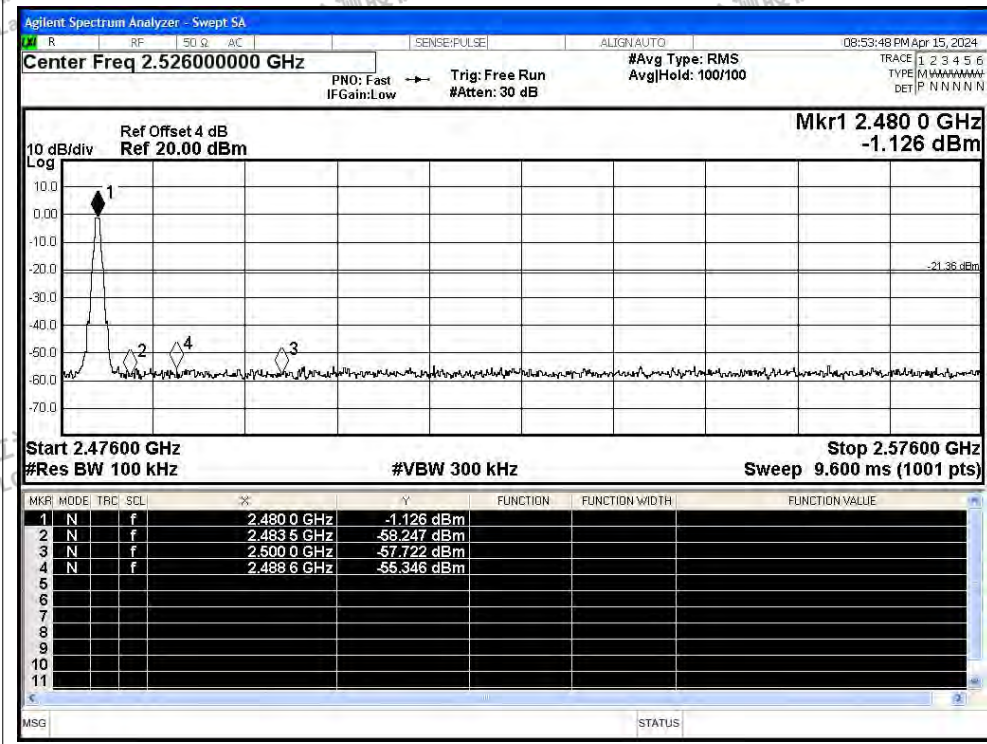




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

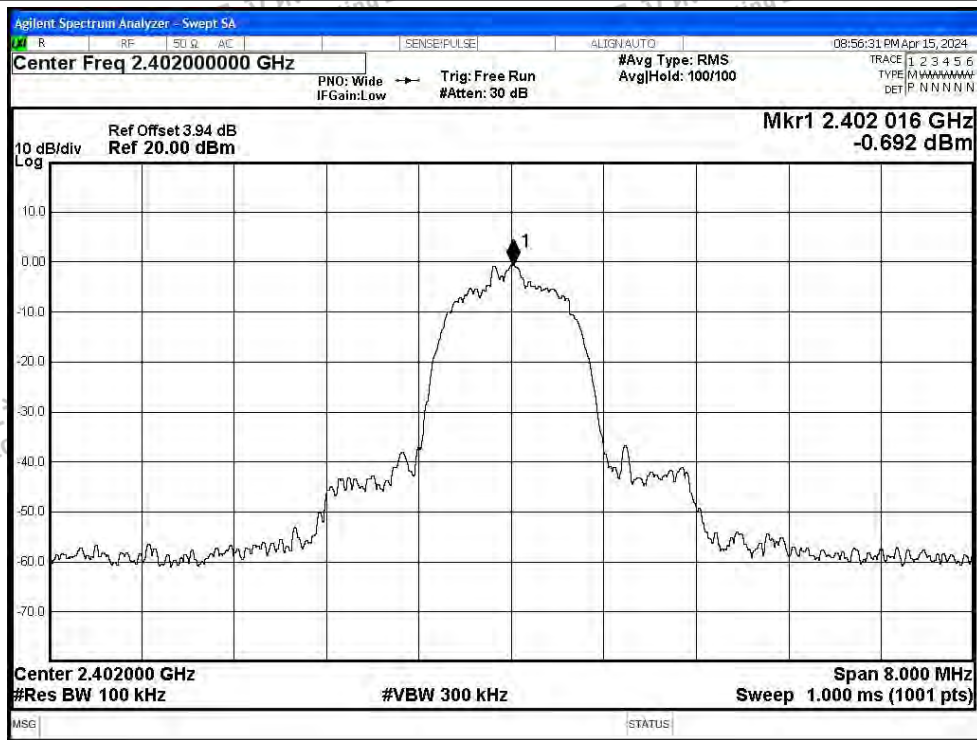


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

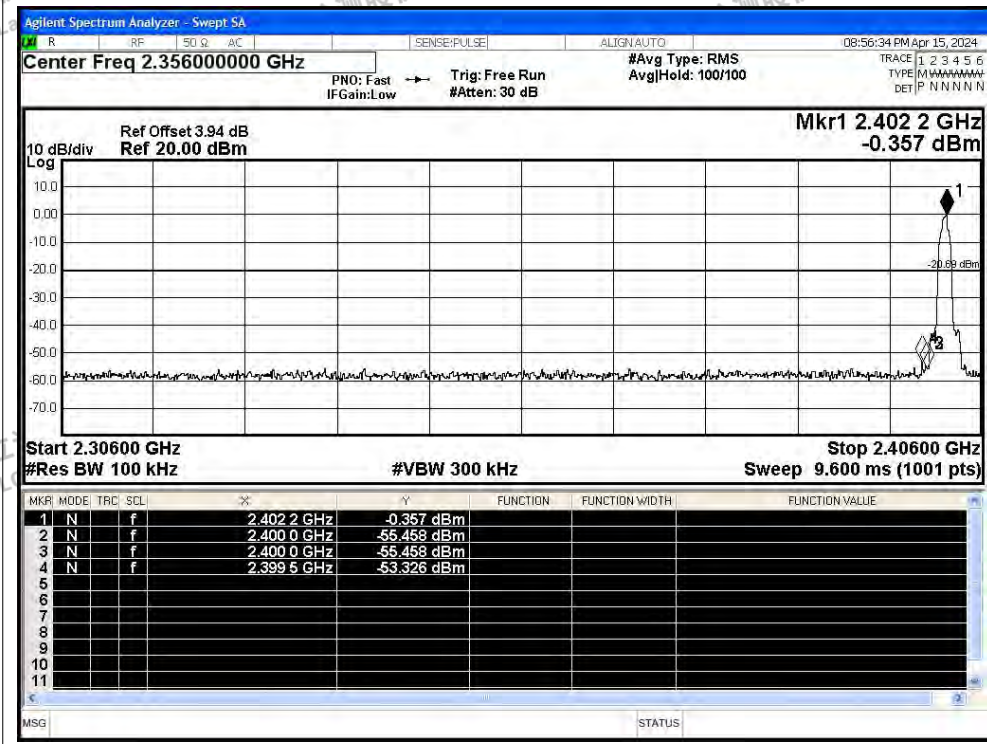




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

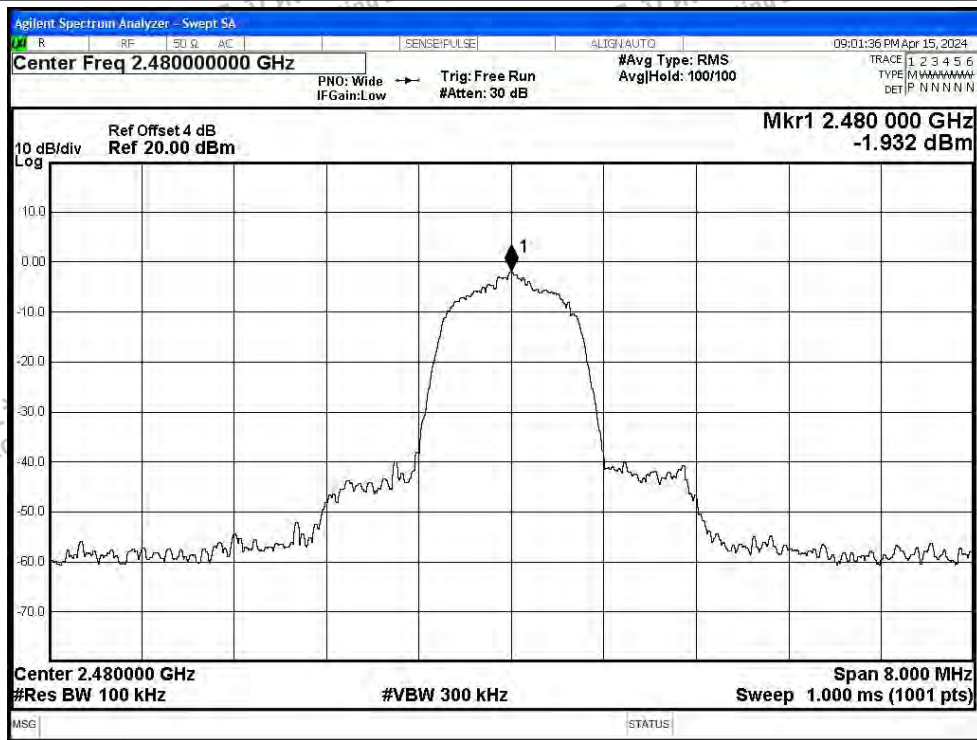


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

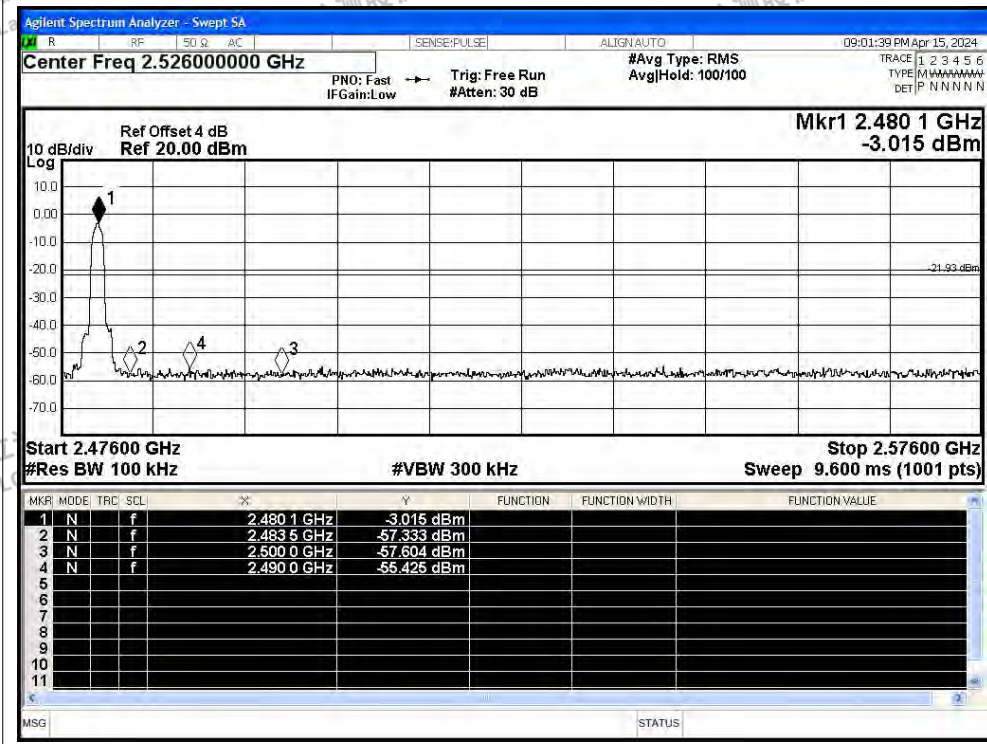




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



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	-53.64	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-54.23	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-53.04	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-52.24	-20	Pass

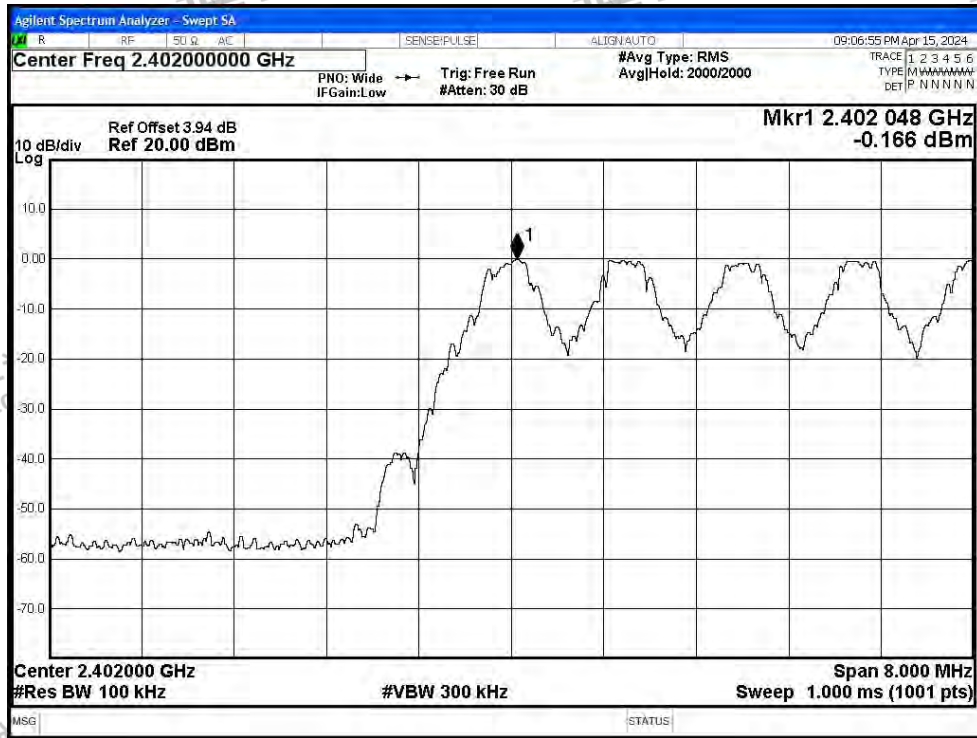


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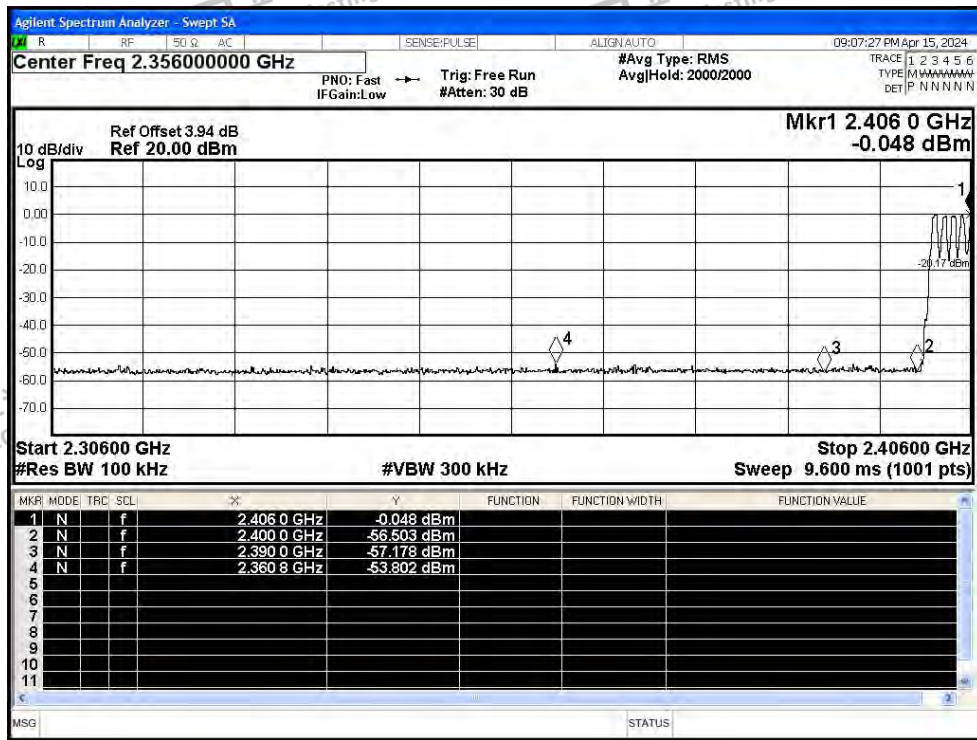


Test Graphs

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

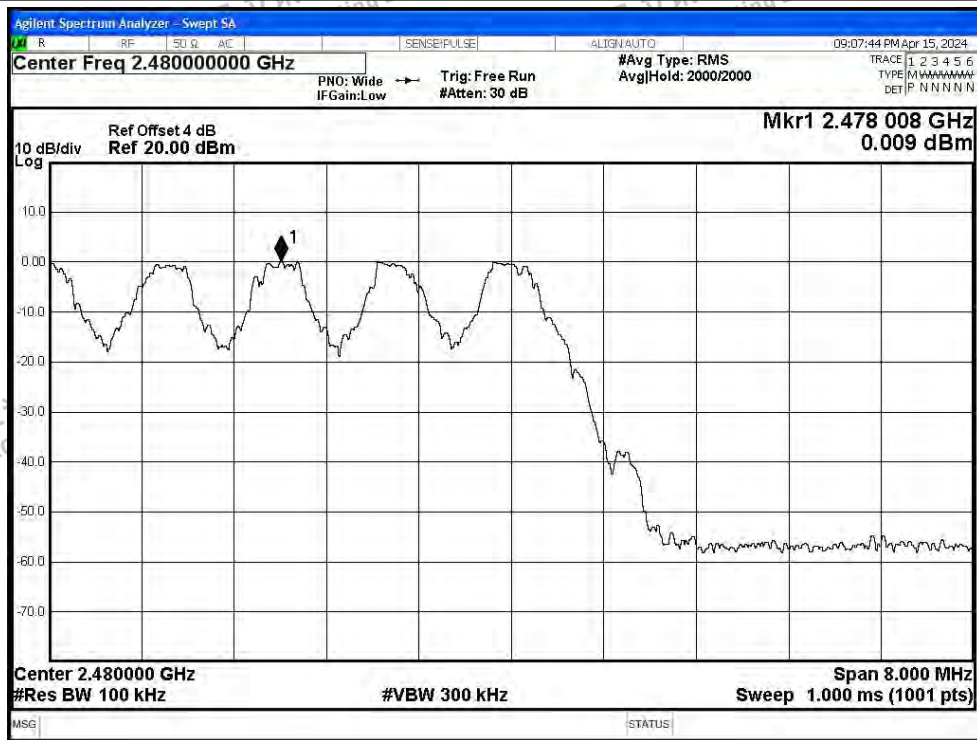


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

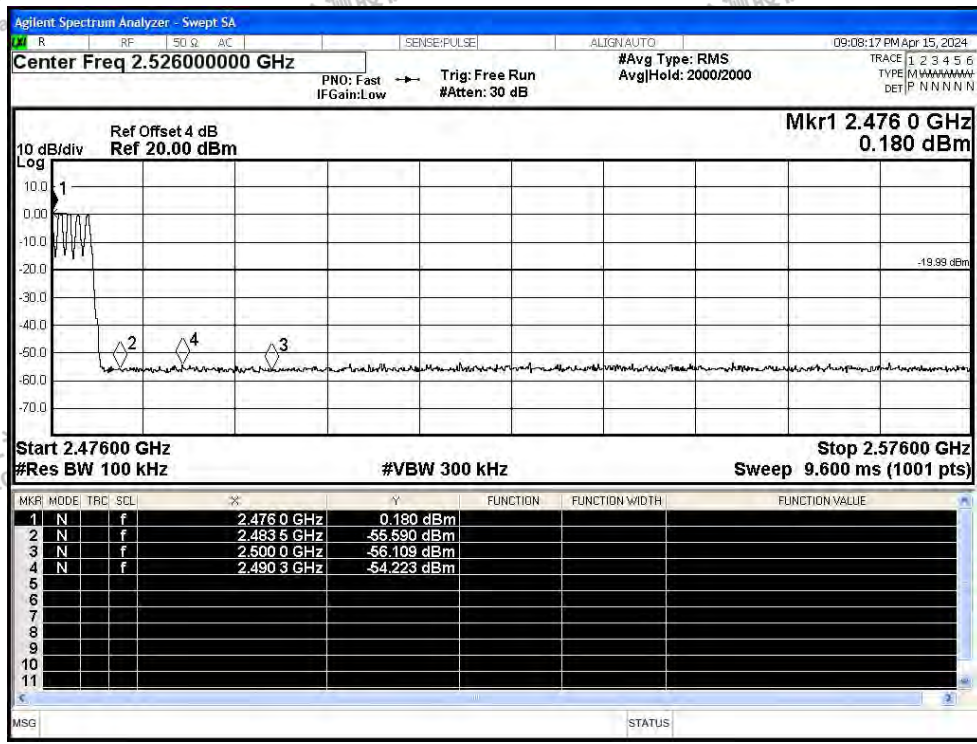




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



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



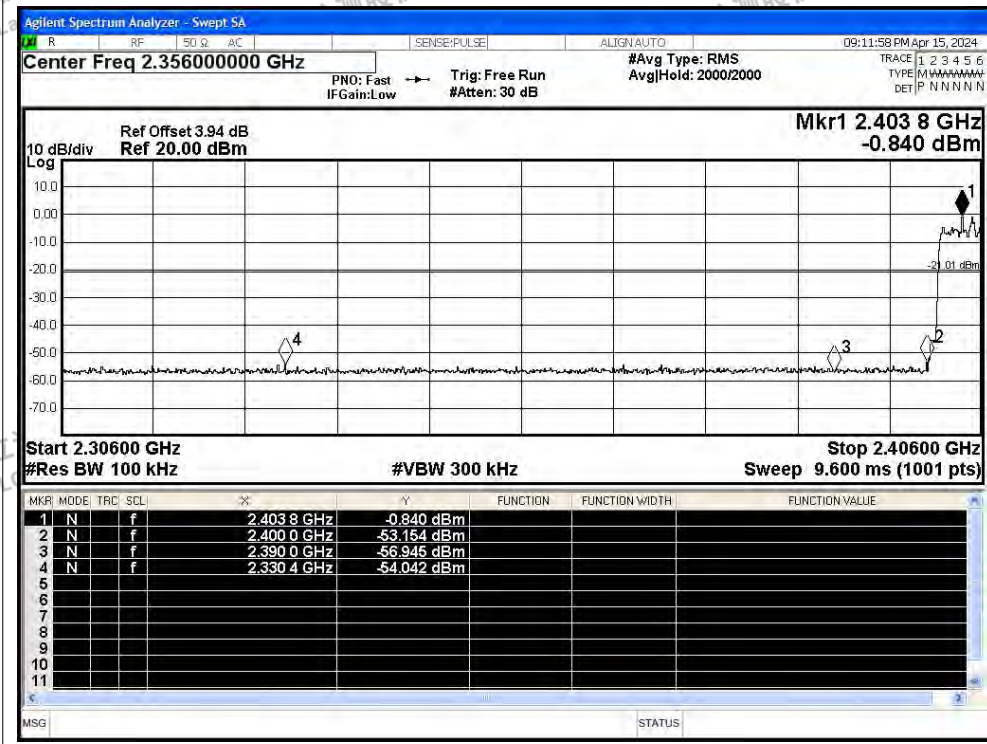




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

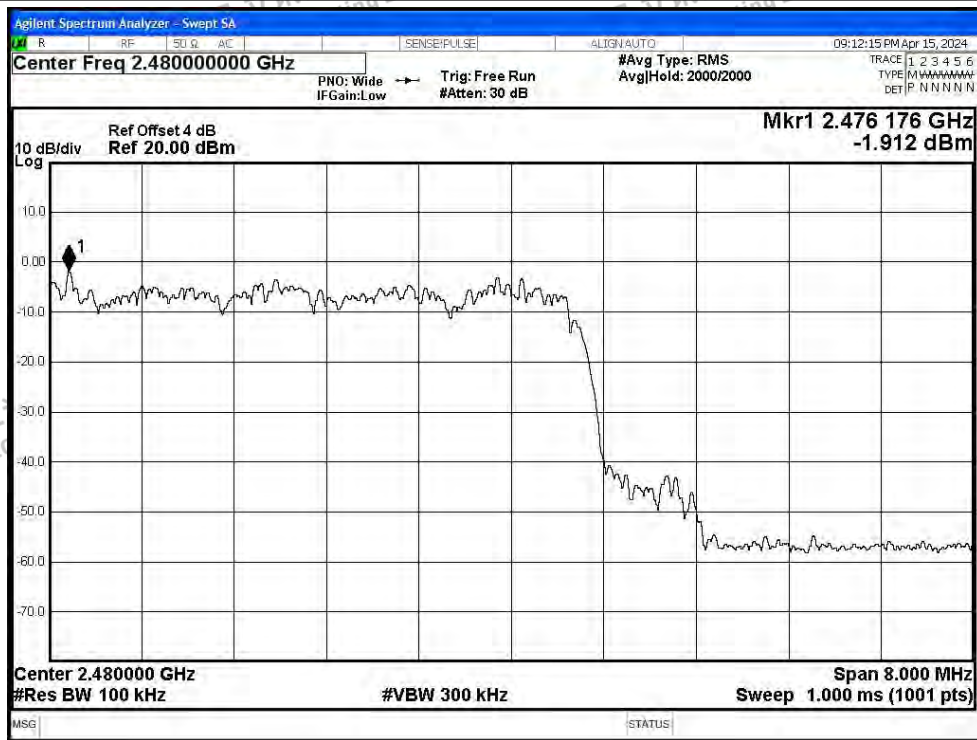


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

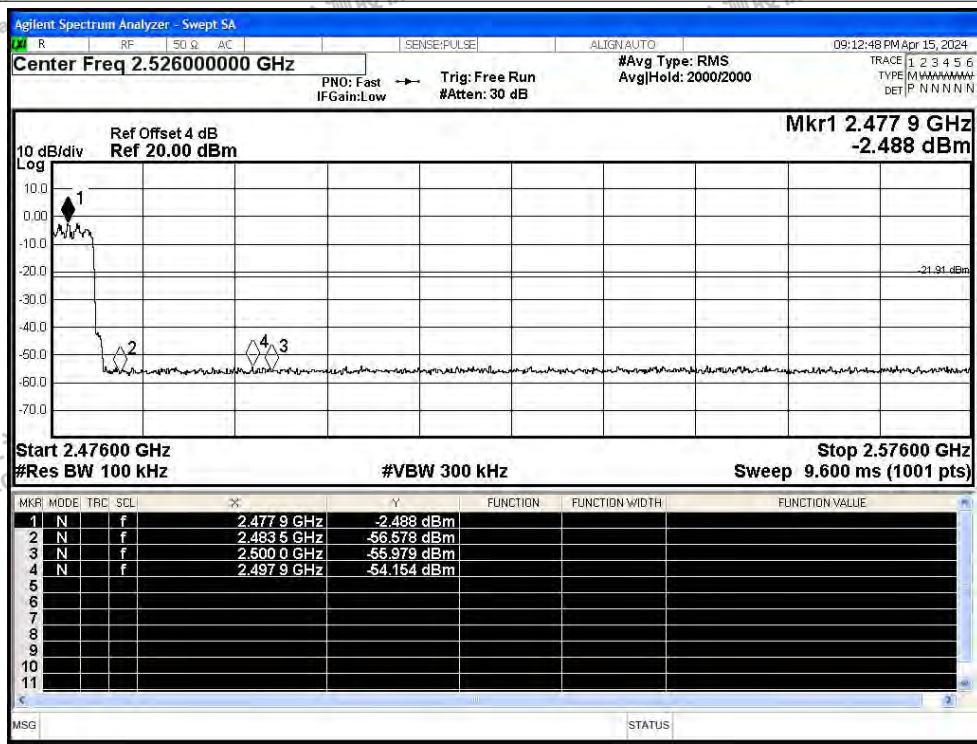




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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





### A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-52.48	-20	Pass
NVNT	1-DH5	2441	Ant1	-53.25	-20	Pass
NVNT	1-DH5	2480	Ant1	-52.6	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.2	-20	Pass
NVNT	2-DH5	2441	Ant1	-50.2	-20	Pass
NVNT	2-DH5	2480	Ant1	-51.94	-20	Pass

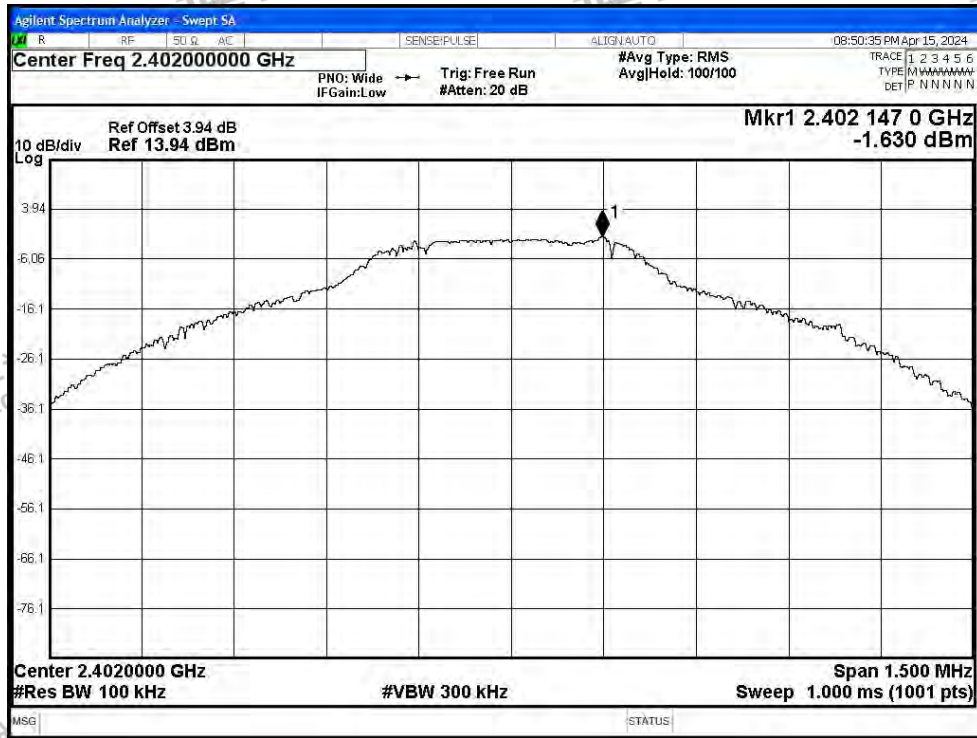


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Scan code to check authenticity

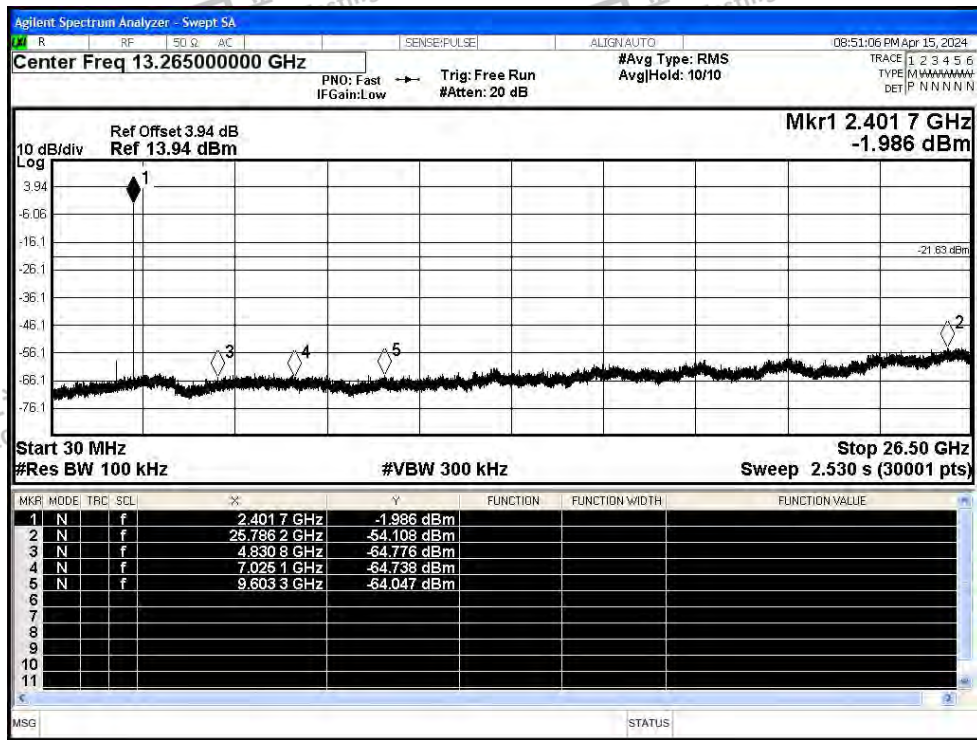


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

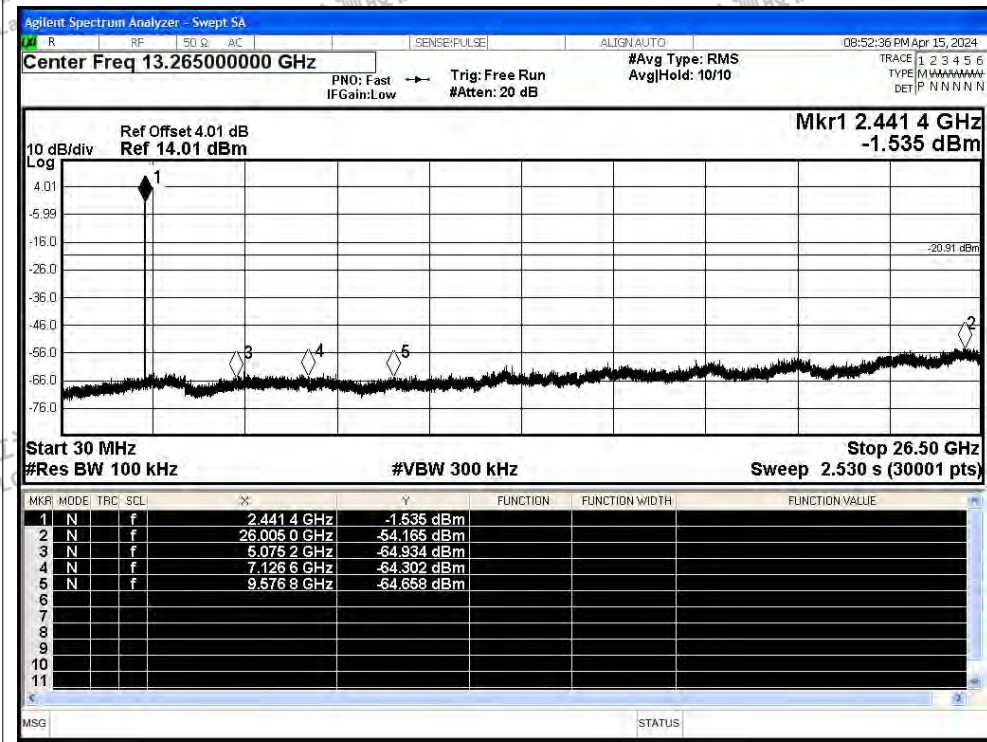




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

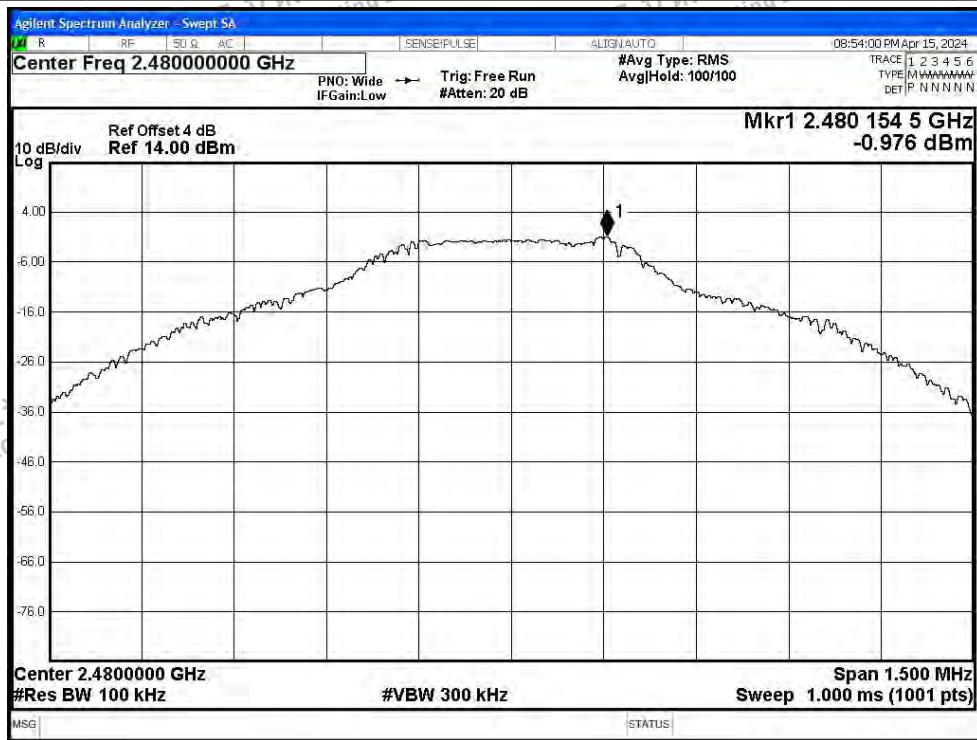


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

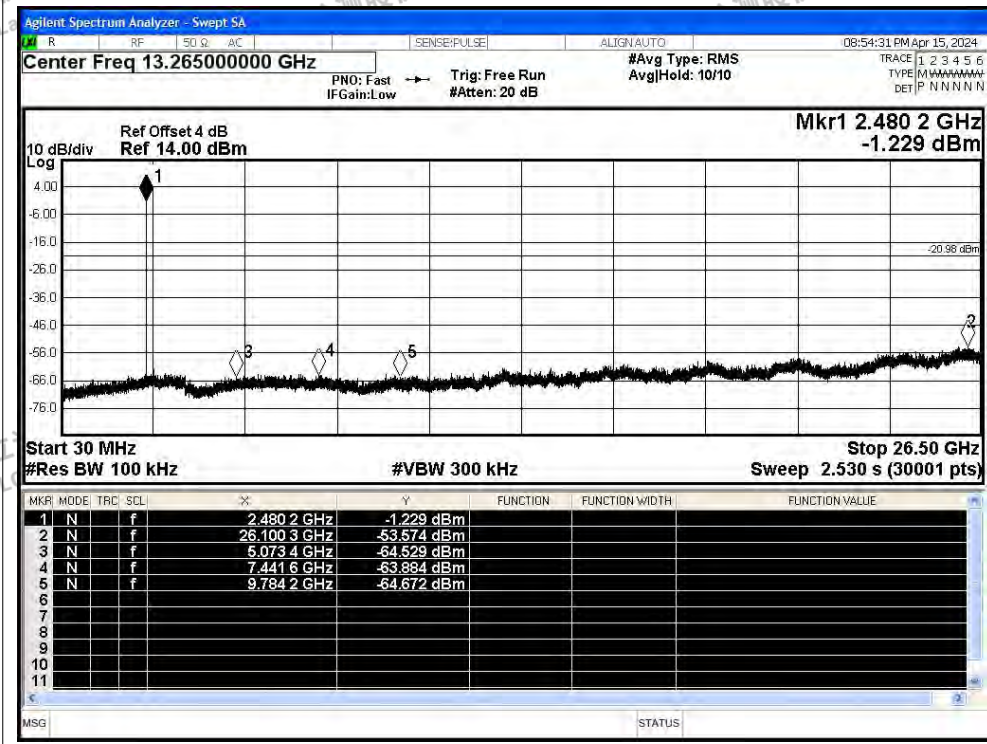




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

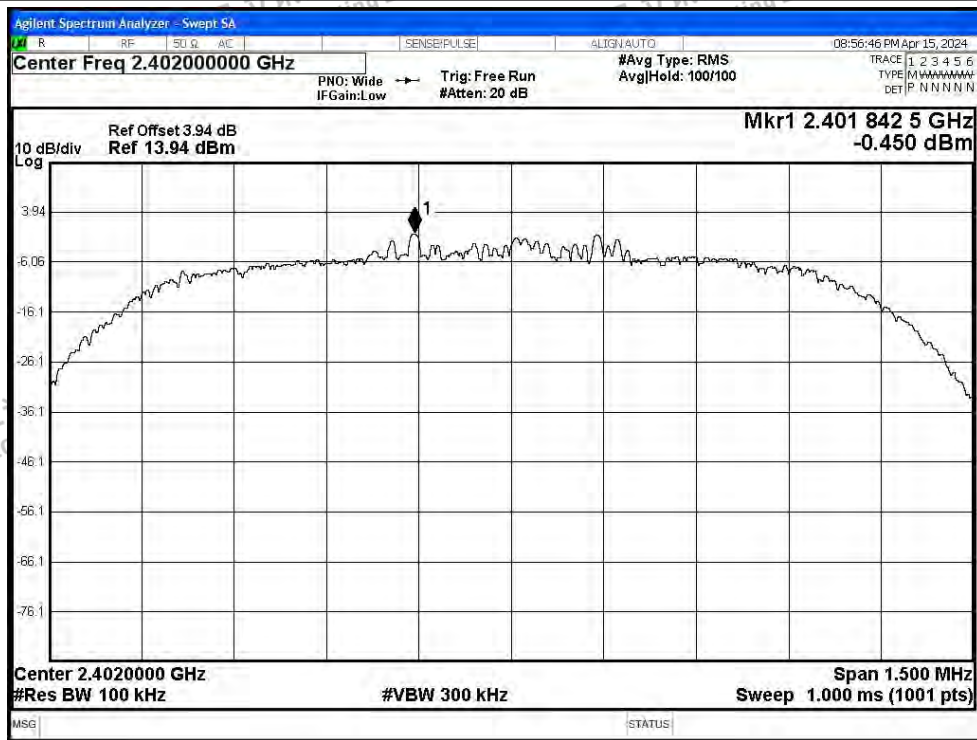


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

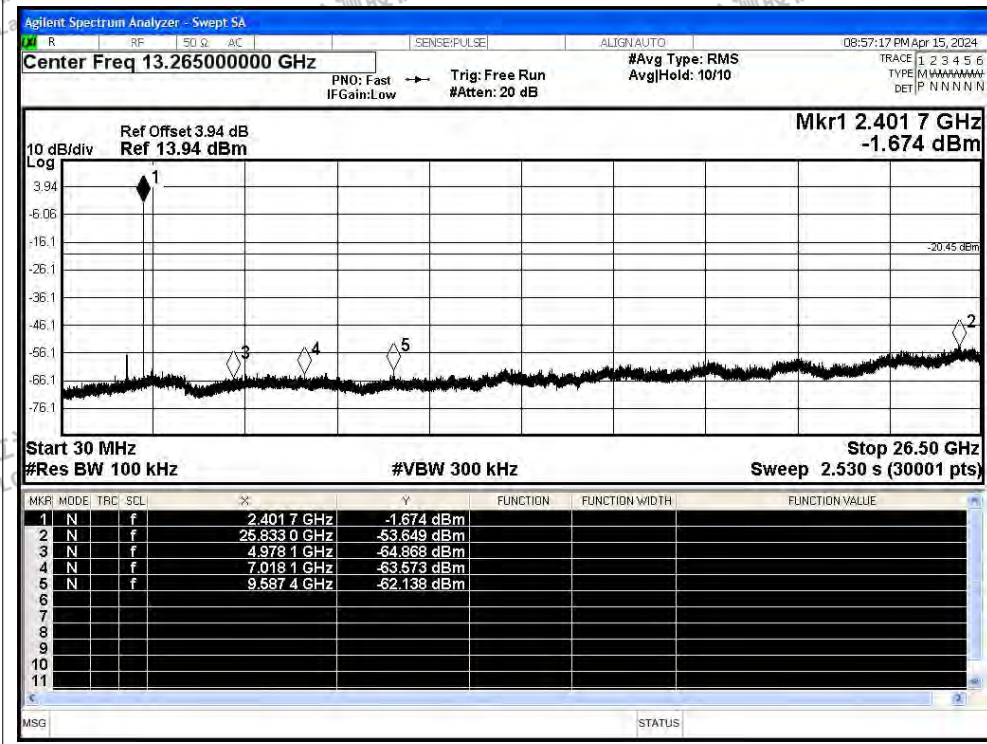




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

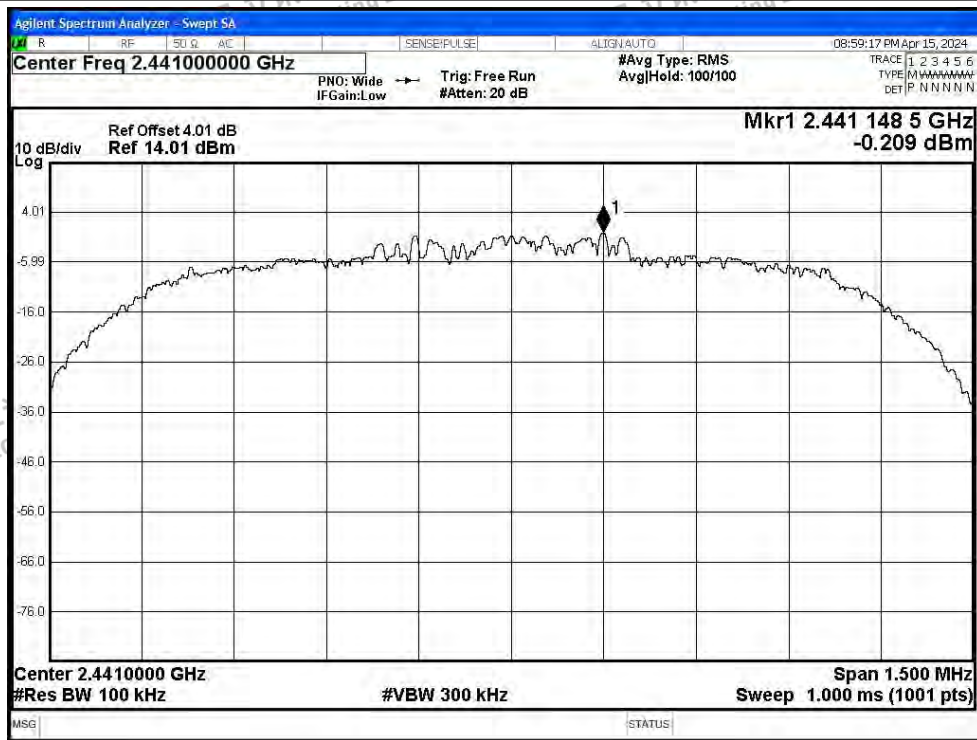


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

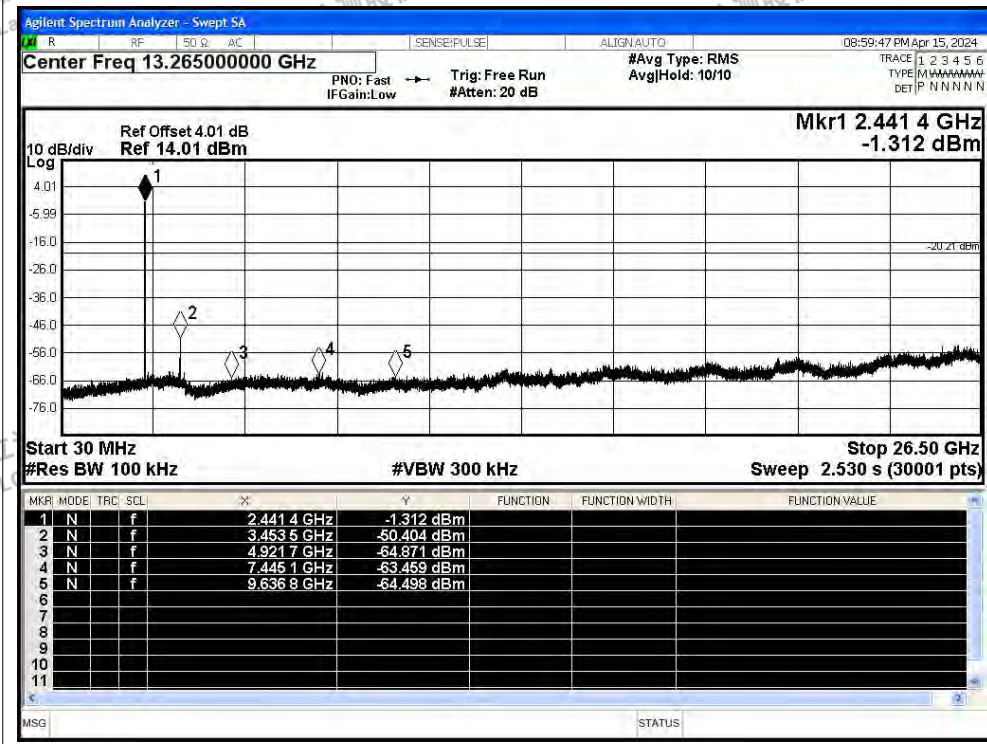




Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



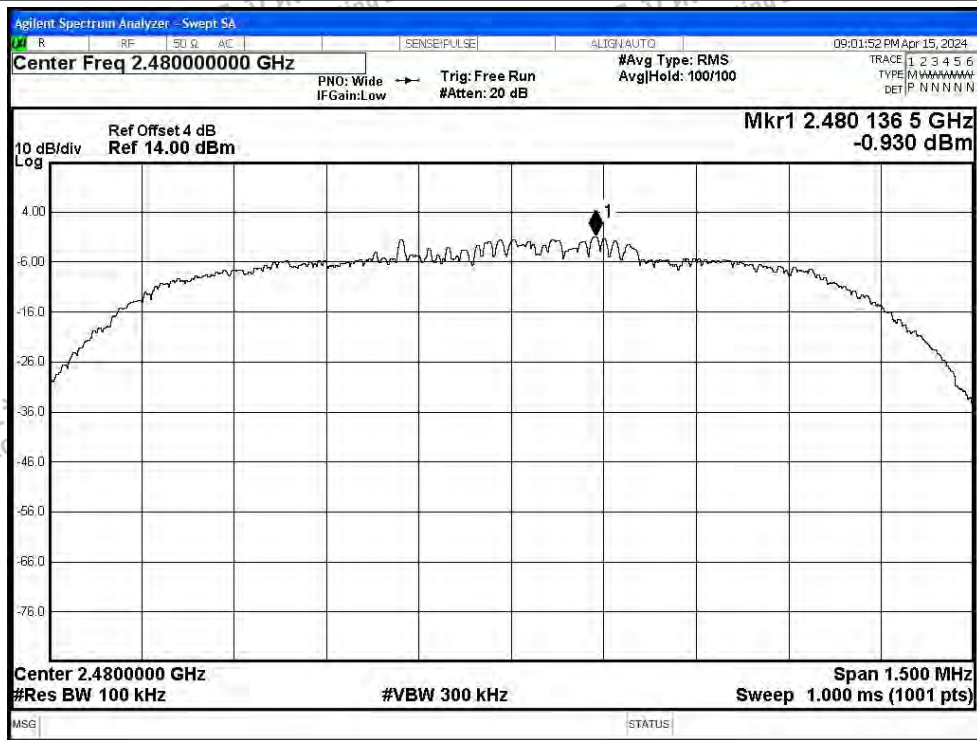
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



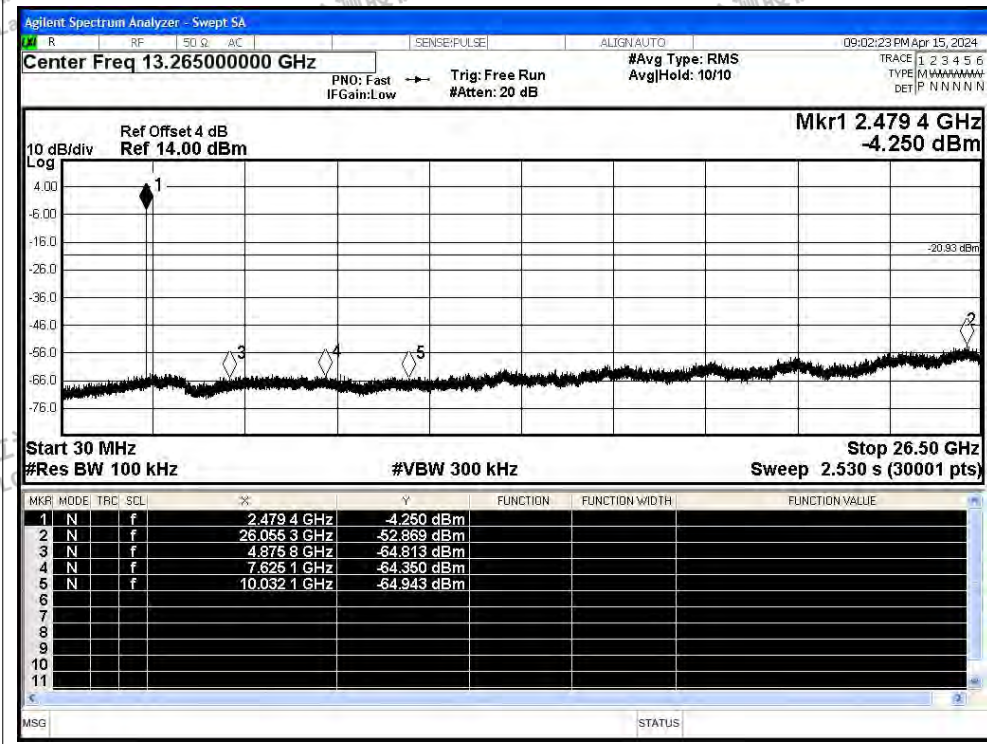




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission





## A.8 Duty Cycle

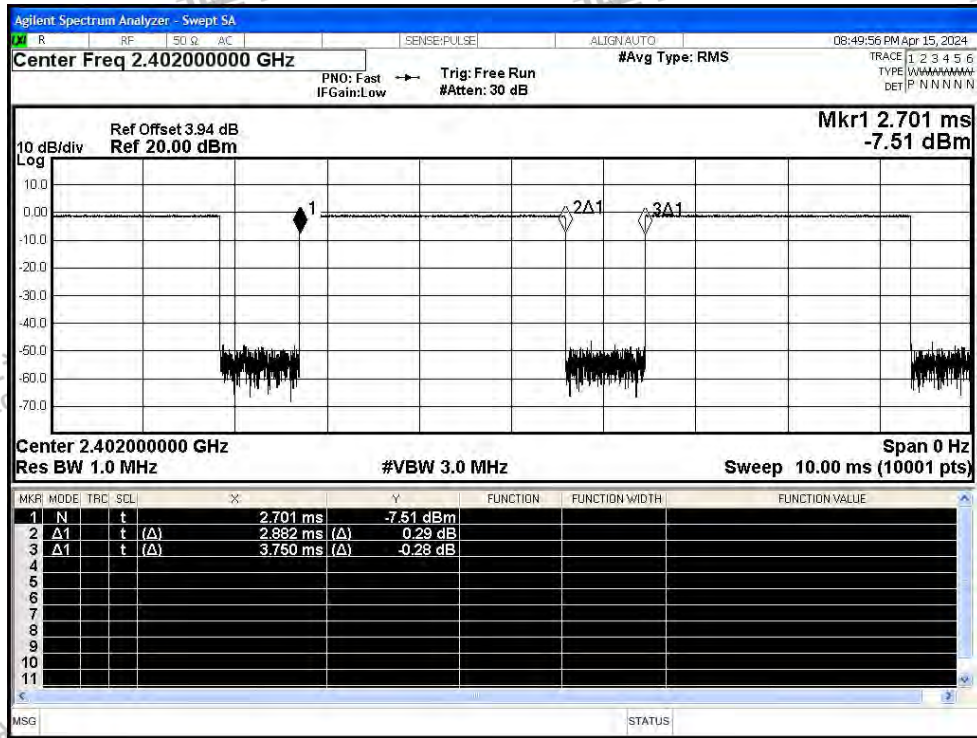
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	76.85	1.14	0.35
NVNT	1-DH5	2441	Ant1	76.85	1.14	0.35
NVNT	1-DH5	2480	Ant1	76.88	1.14	0.35
NVNT	2-DH5	2402	Ant1	76.99	1.14	0.35
NVNT	2-DH5	2441	Ant1	76.99	1.14	0.35
NVNT	2-DH5	2480	Ant1	76.99	1.14	0.35



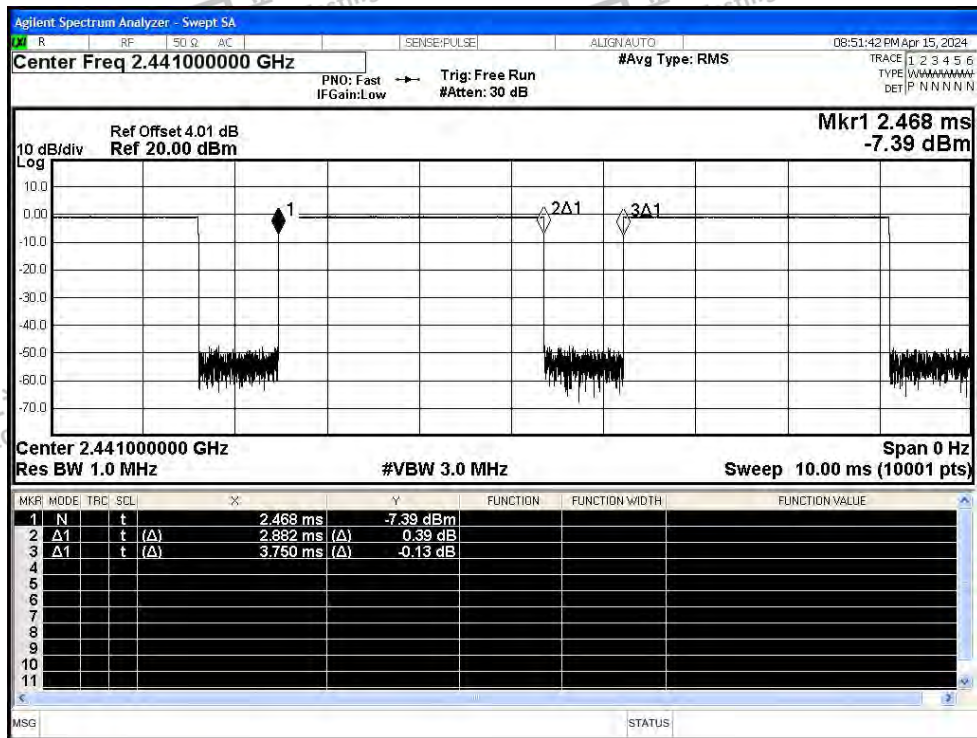


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant1

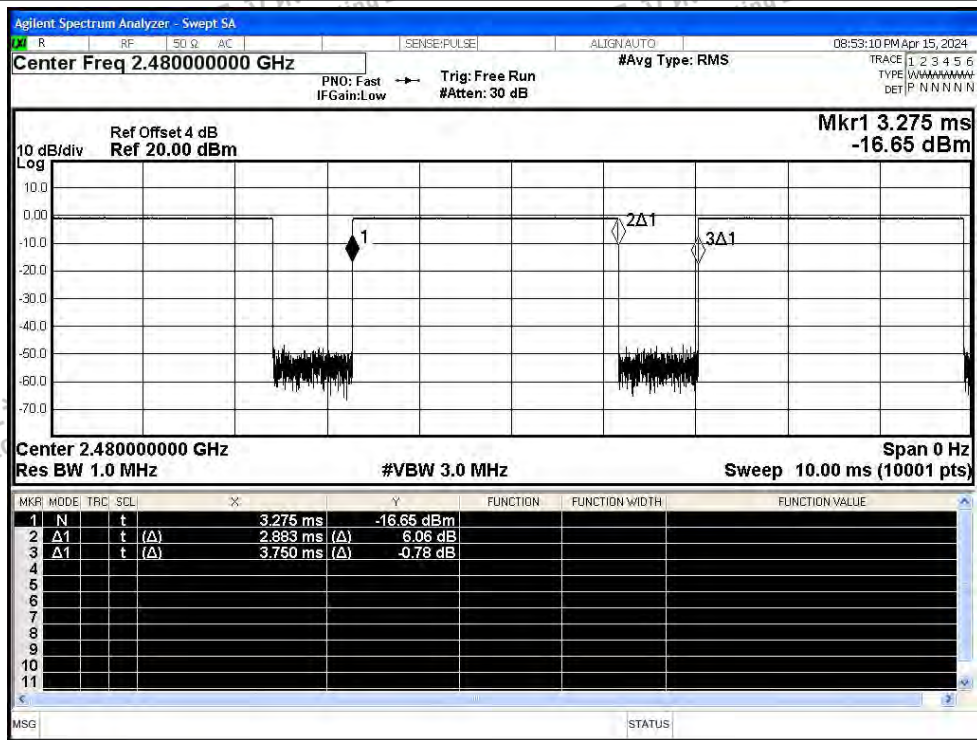


Duty Cycle NVNT 1-DH5 2441MHz Ant1

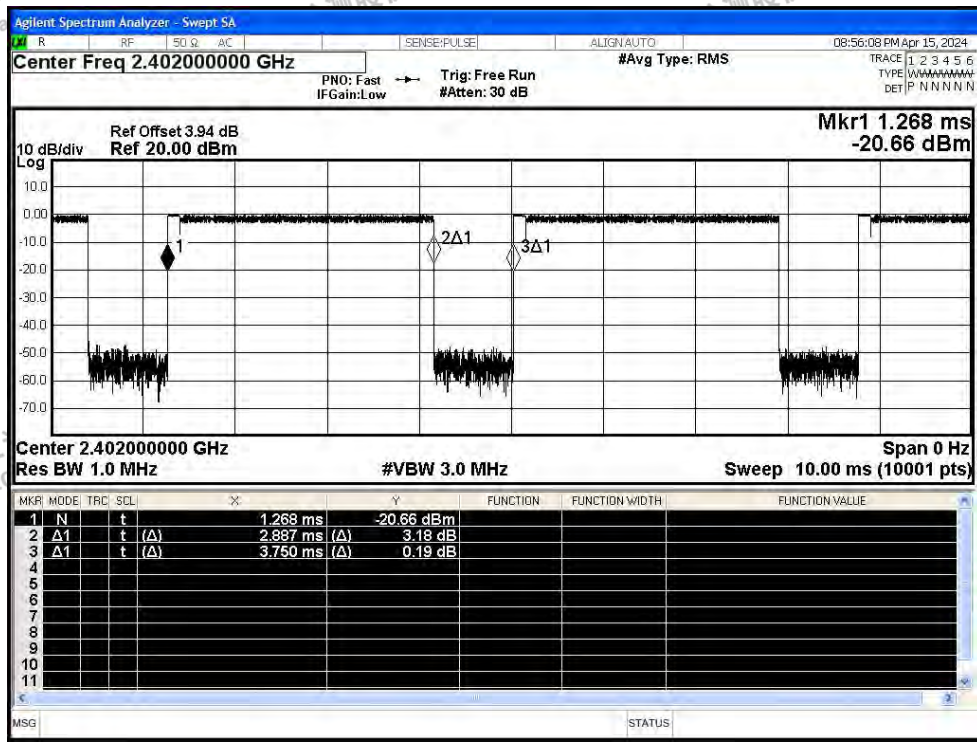




Duty Cycle NVNT 1-DH5 2480MHz Ant1

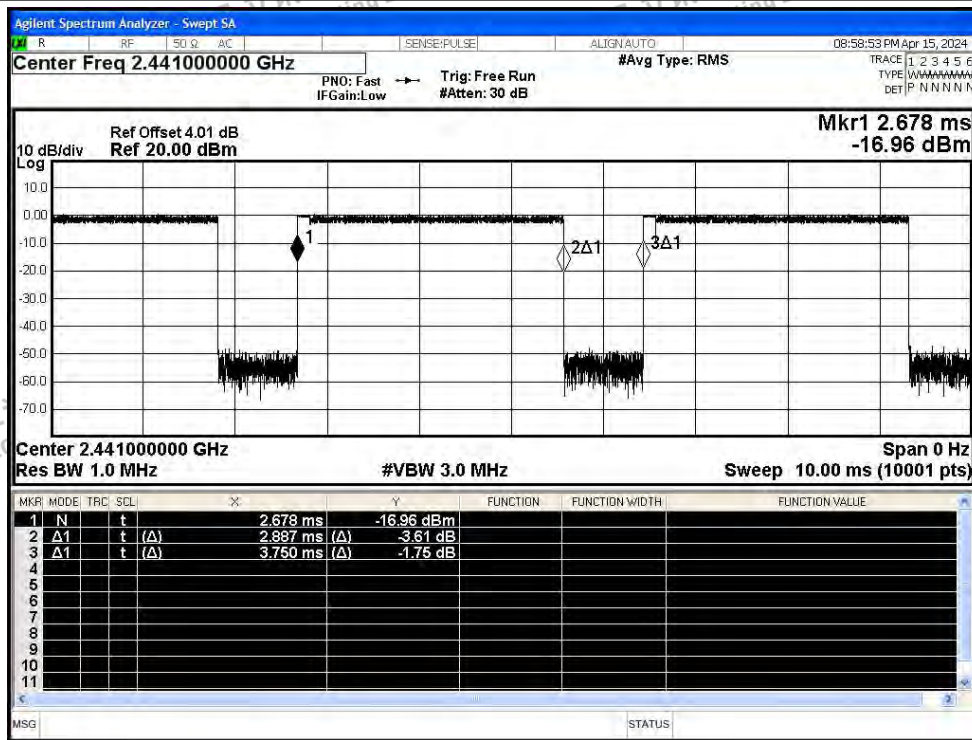


Duty Cycle NVNT 2-DH5 2402MHz Ant1

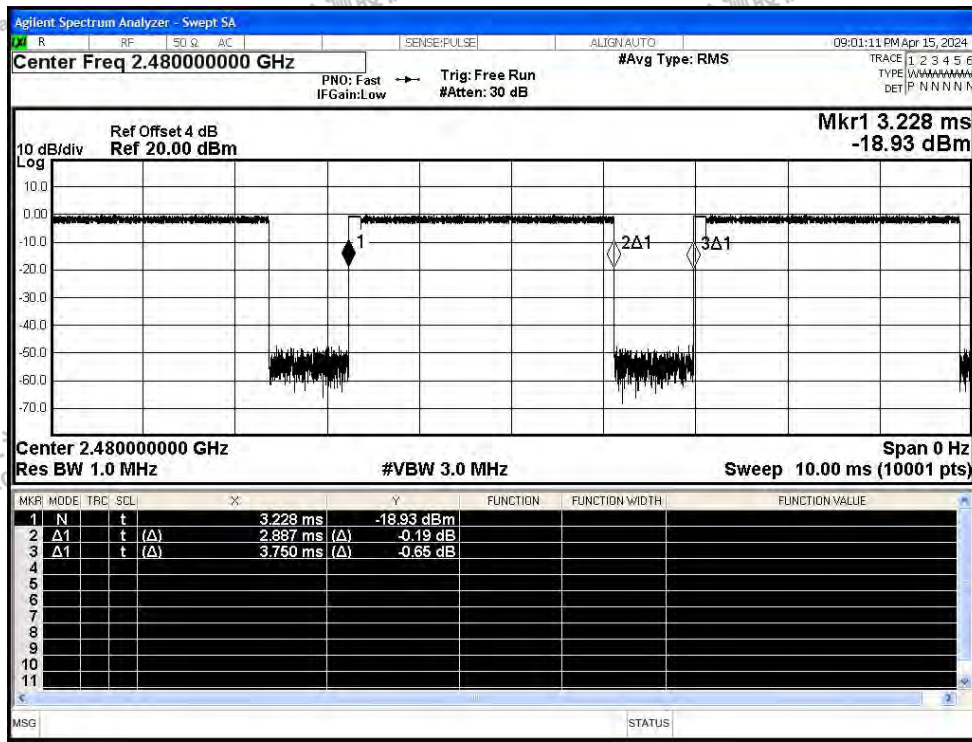




Duty Cycle NVNT 2-DH5 2441MHz Ant1



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	-47.73	2	-	49.53	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-57.36	2	1.14	41.04	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2328.72	-45.96	2	-	51.3	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2386.416	-55.75	2	1.14	42.65	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-47.76	2	-	49.5	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-56.61	2	1.14	41.79	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-46.99	2	-	50.27	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-56.45	2	1.14	41.95	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2490.328	-45.39	2	-	51.87	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2488.6	-55.24	2	1.14	43.16	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-48.45	2	-	48.81	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-56.46	2	1.14	41.94	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.17	2	-	47.09	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-56.76	2	1.14	41.64	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2341.296	-44.82	2	-	52.44	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2376.816	-55.84	2	1.14	42.56	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.58	2	-	47.68	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-56.84	2	1.14	41.56	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-49.46	2	-	47.8	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-56.01	2	1.14	42.39	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2494.744	-44.95	2	-	52.31	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2494.384	-55.44	2	1.14	42.96	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-48.84	2	-	48.42	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-55.58	2	1.14	42.82	Average	54	Pass

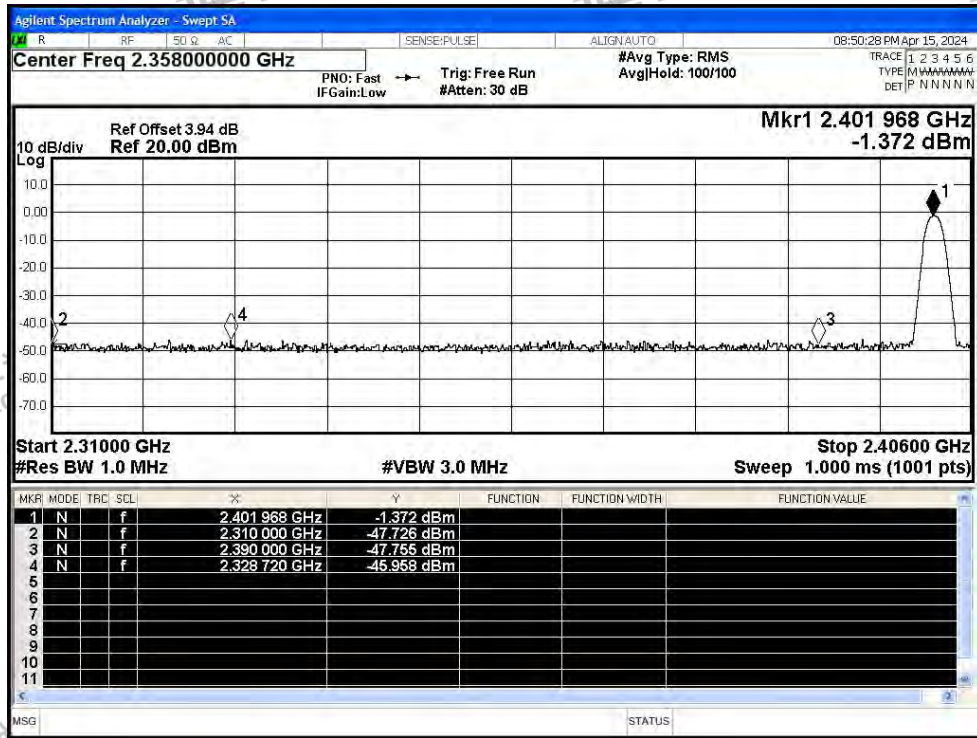


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 Scan code to check authenticity

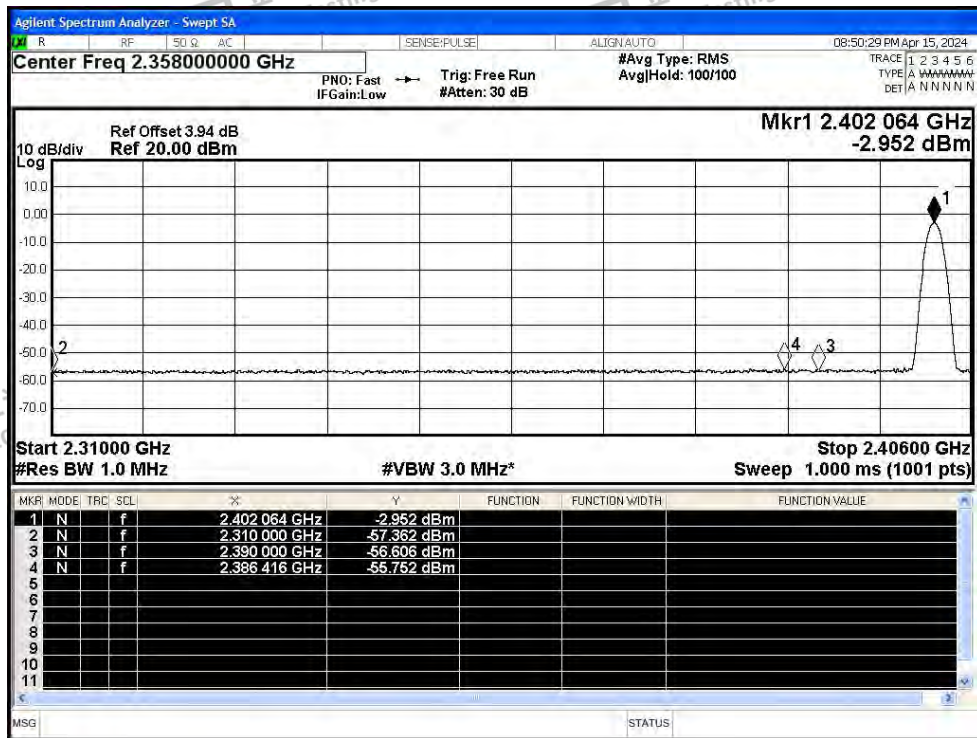


Test Graphs

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

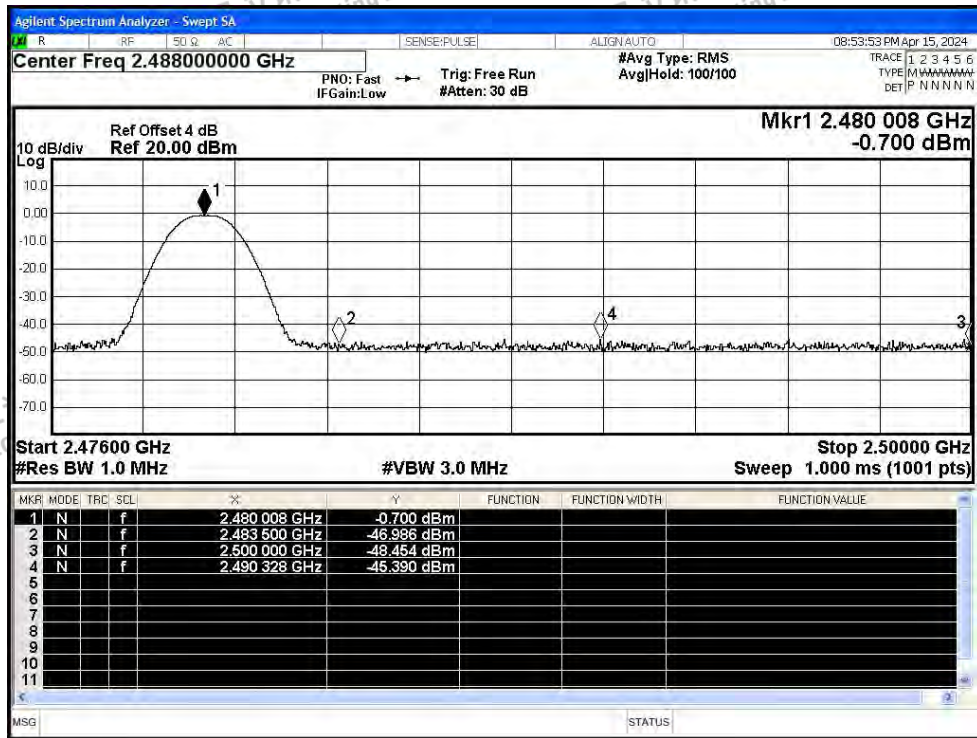


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

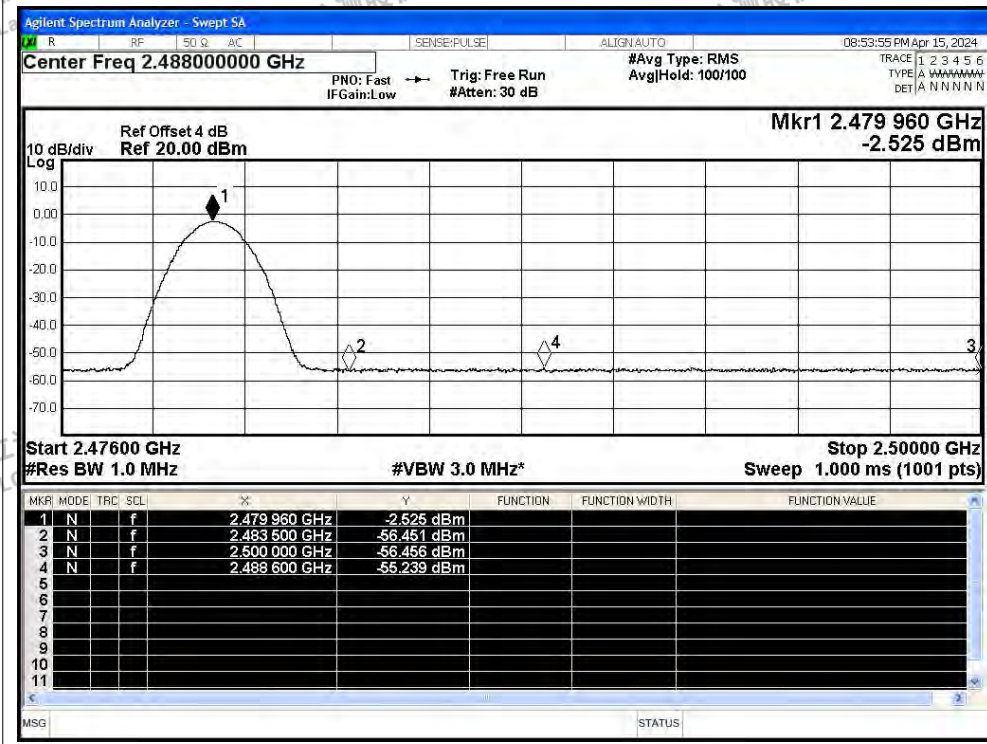




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



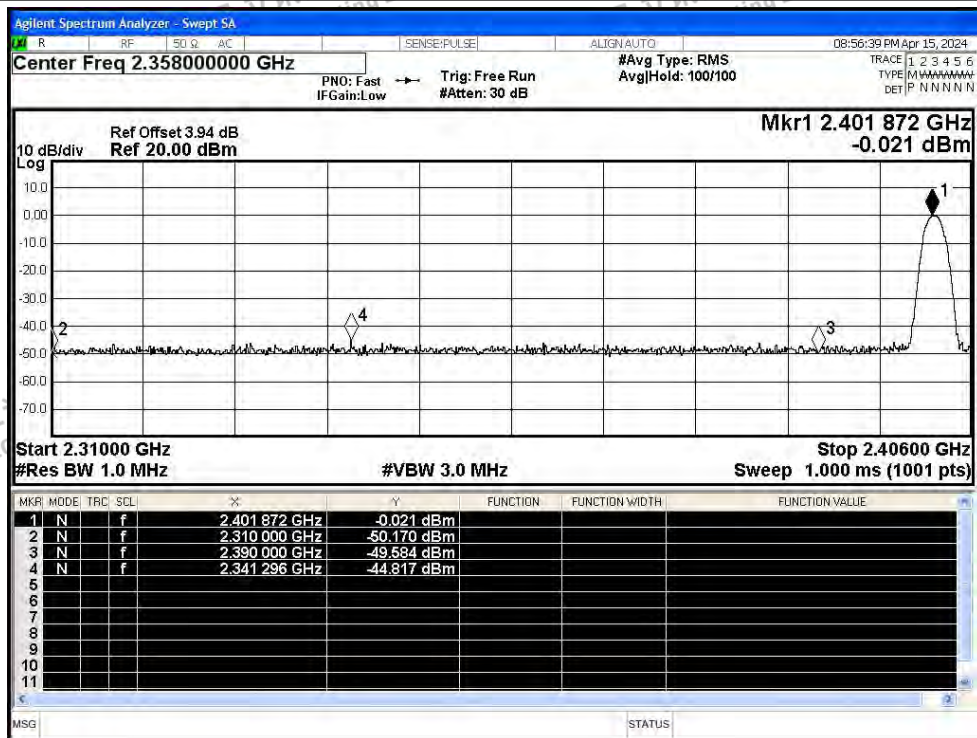
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



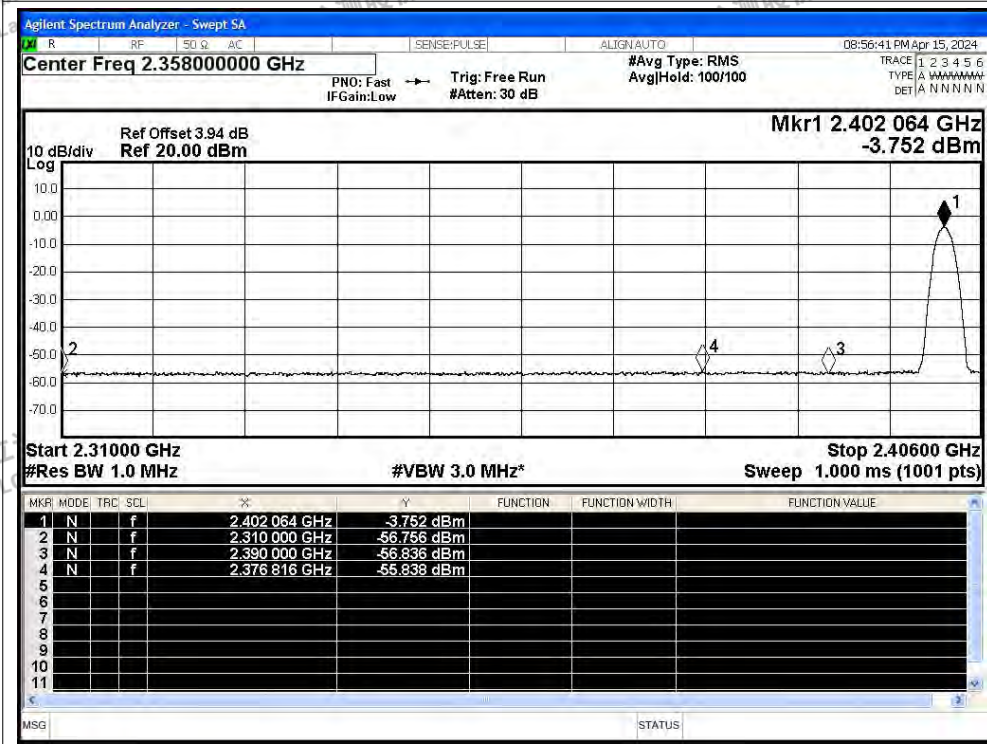




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

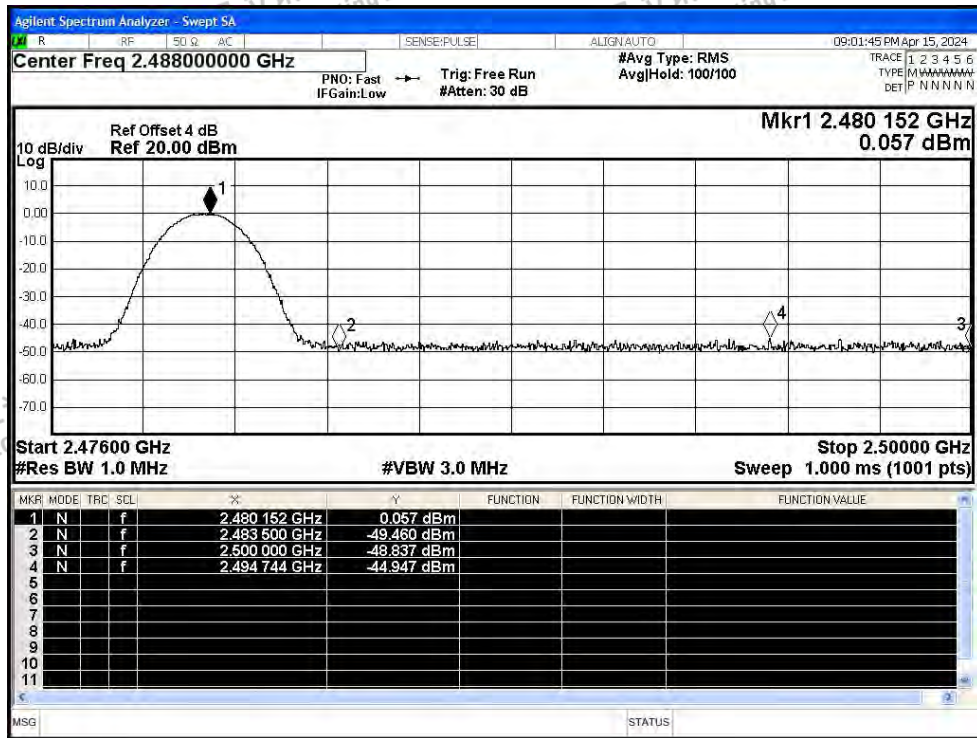


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average





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



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

