



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Wake Up Light alarm clock

Test Model: FZ05-S

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	1.013	N/A	Pass
NVNT	1-DH5	2441	Ant1	1.013	N/A	Pass
NVNT	1-DH5	2480	Ant1	0.966	N/A	Pass
NVNT	2-DH5	2402	Ant1	1.312	N/A	Pass
NVNT	2-DH5	2441	Ant1	1.291	N/A	Pass
NVNT	2-DH5	2480	Ant1	1.287	N/A	Pass



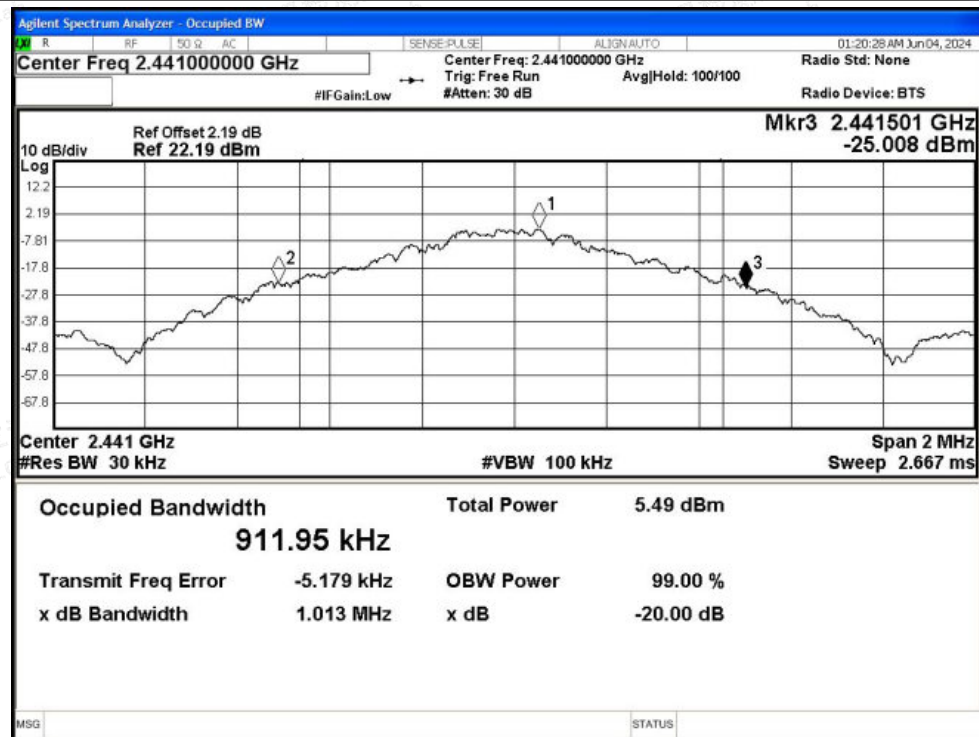


Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



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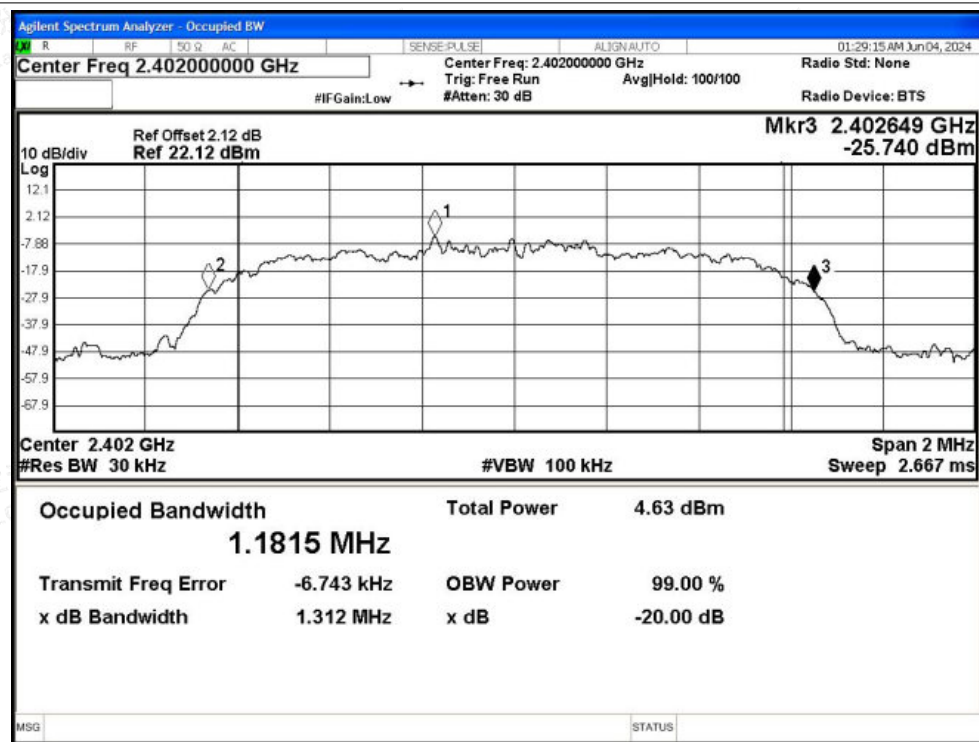
Scan code to check authenticity



-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

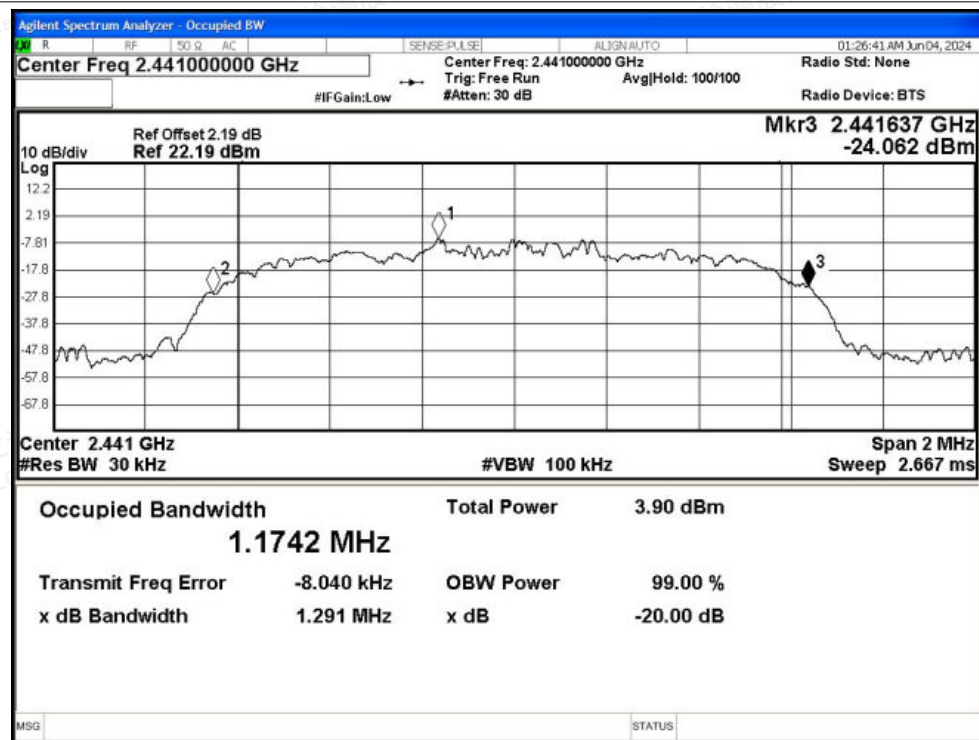


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1





-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



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A.2 Maximum Conducted Output Power

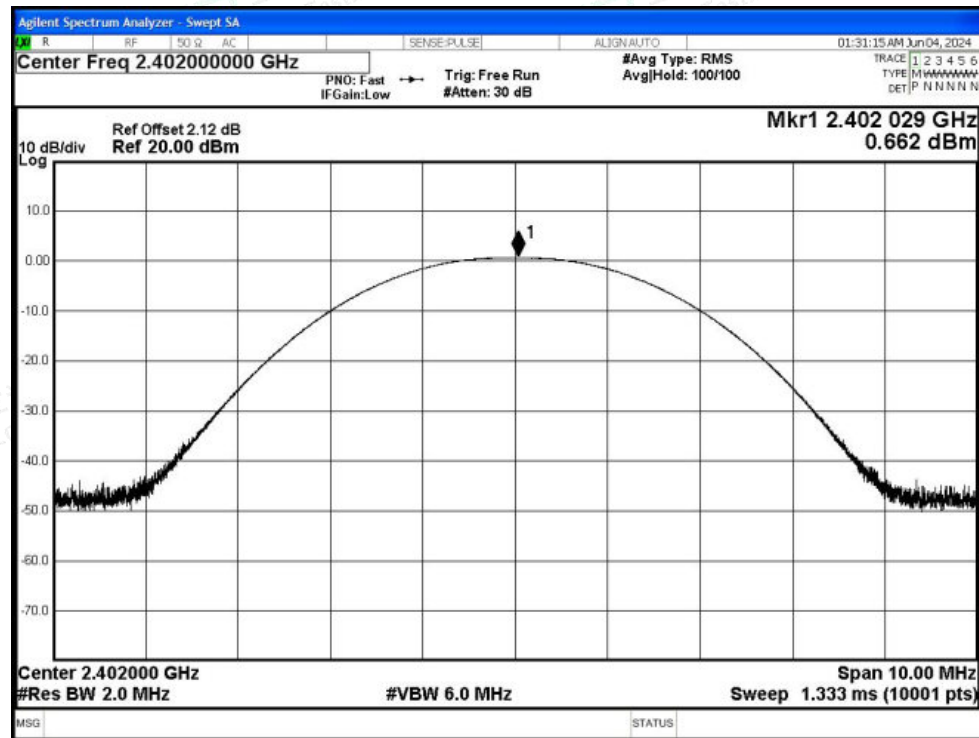
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.66	21	Pass
NVNT	1-DH5	2441	Ant1	-0.42	21	Pass
NVNT	1-DH5	2480	Ant1	-0.12	21	Pass
NVNT	2-DH5	2402	Ant1	0.07	21	Pass
NVNT	2-DH5	2441	Ant1	-0.72	21	Pass
NVNT	2-DH5	2480	Ant1	-0.38	21	Pass



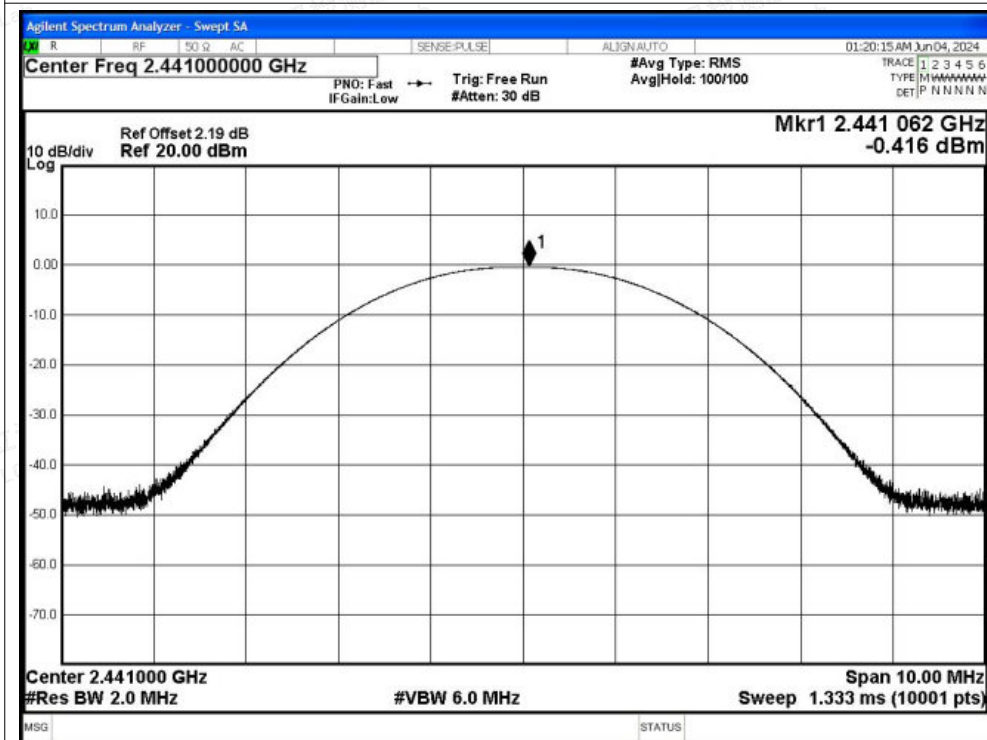


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

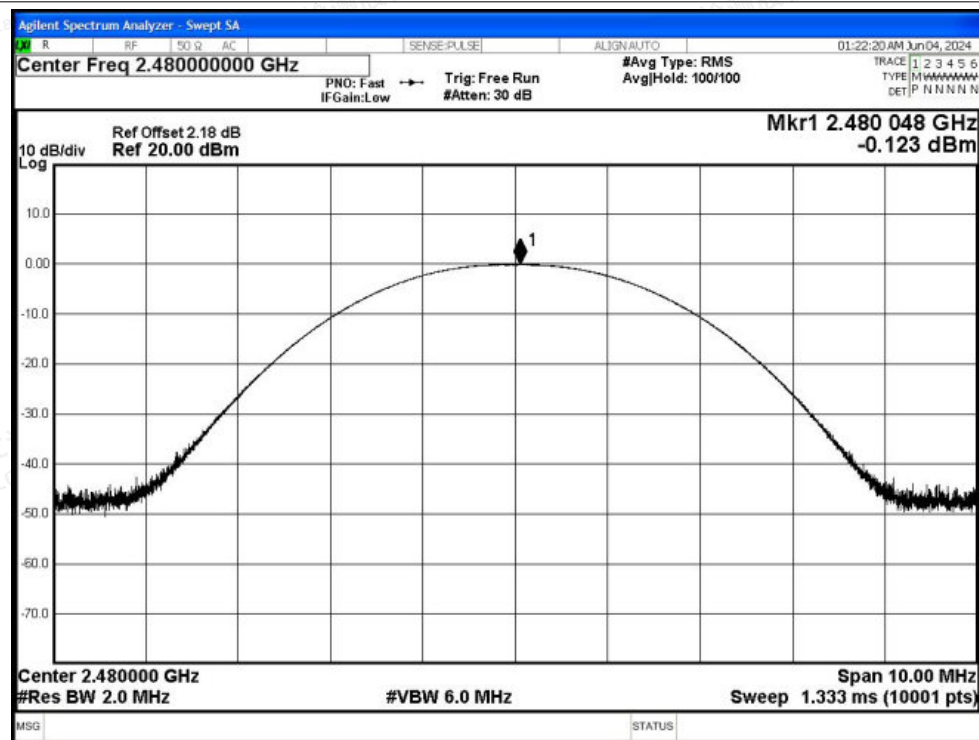


Power NVNT 1-DH5 2441MHz Ant1

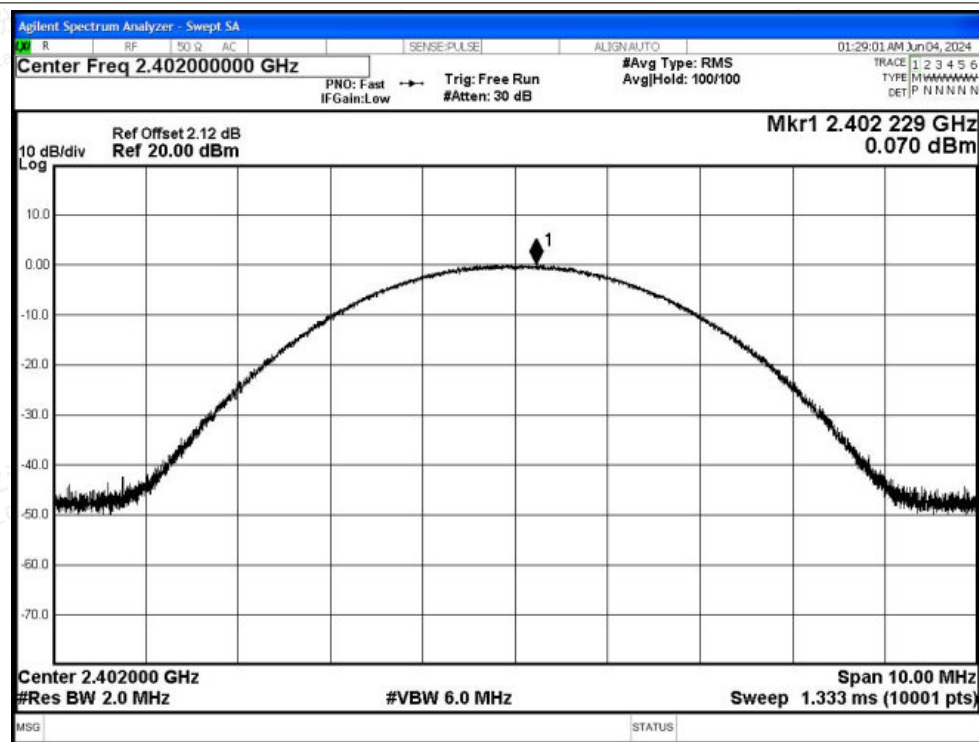




Power NVNT 1-DH5 2480MHz Ant1

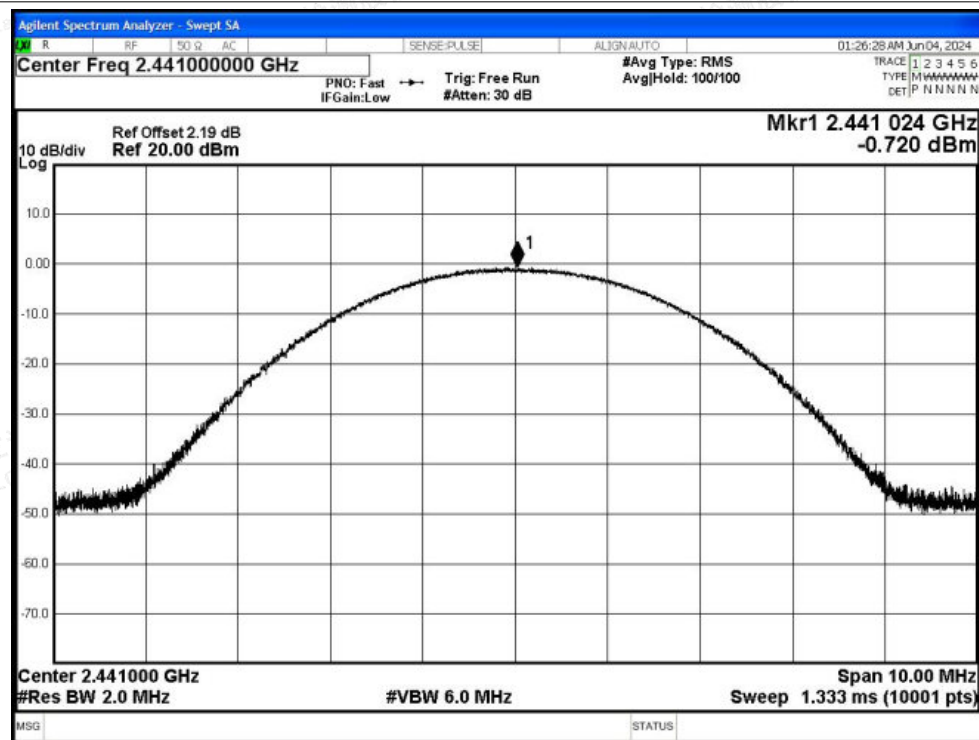


Power NVNT 2-DH5 2402MHz Ant1

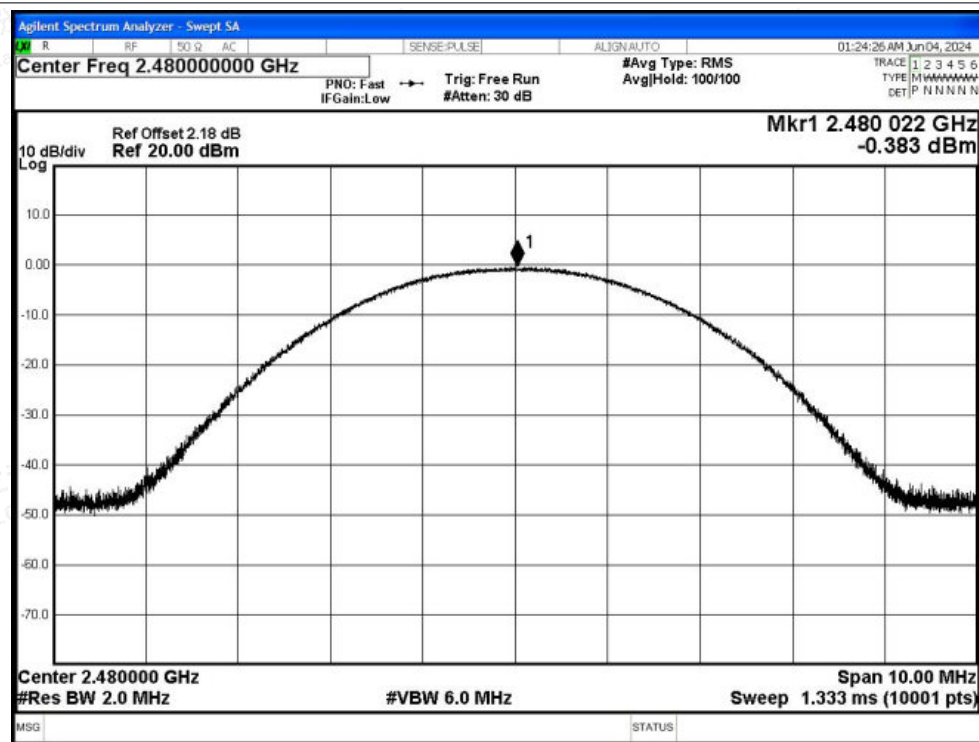




Power NVNT 2-DH5 2441MHz Ant1



Power NVNT 2-DH5 2480MHz Ant1





A.3 Carrier Frequencies Separation

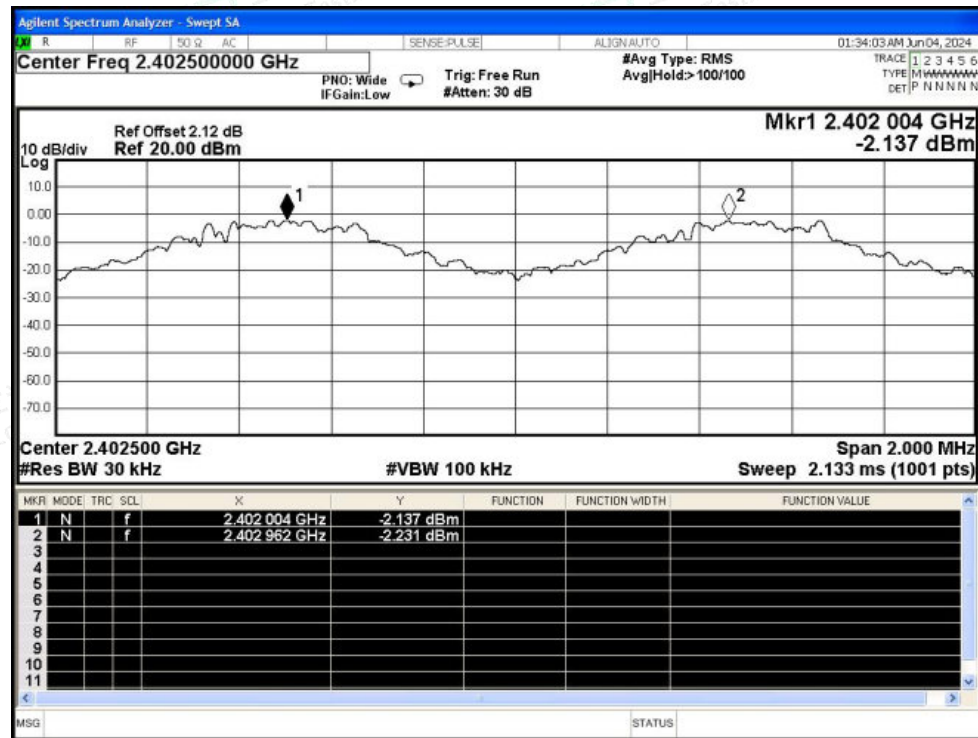
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.004	2402.962	0.958	0.675	Pass
NVNT	2-DH5	Ant1	2402.006	2403.002	0.996	0.875	Pass



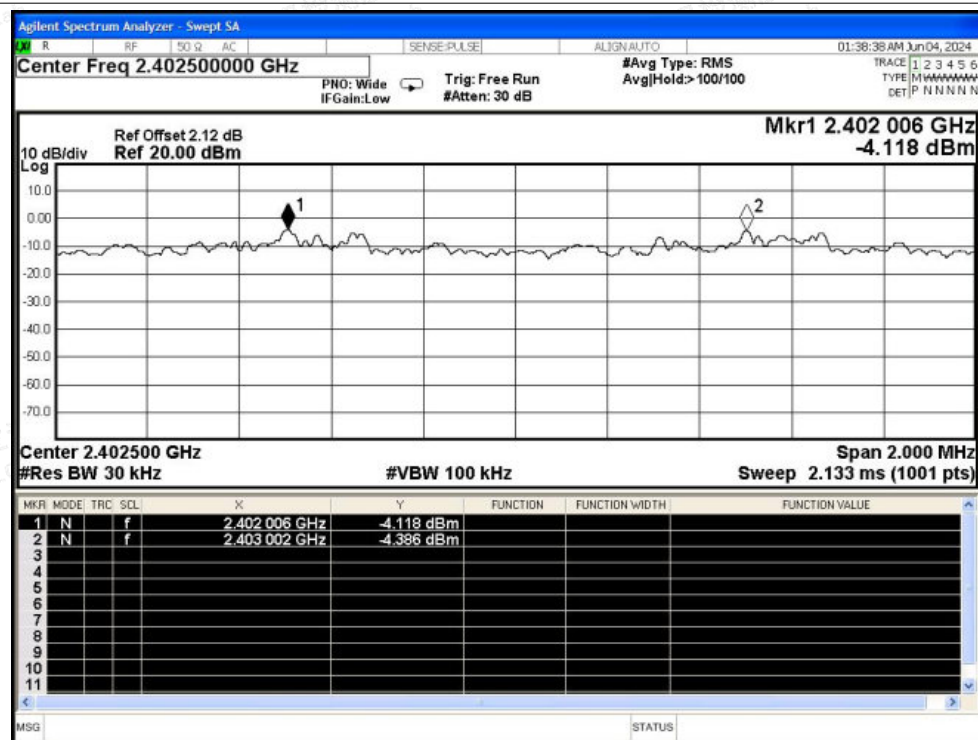


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1





A.4 Dwell Time

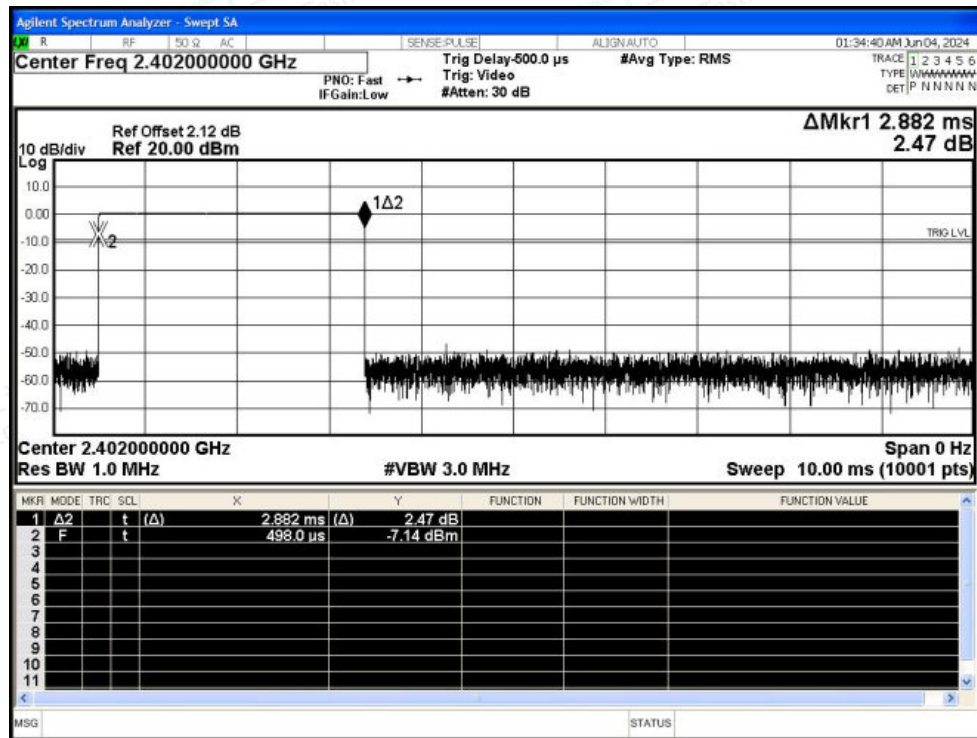
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.882	308.374	107	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.88	290.88	101	31600	400	Pass



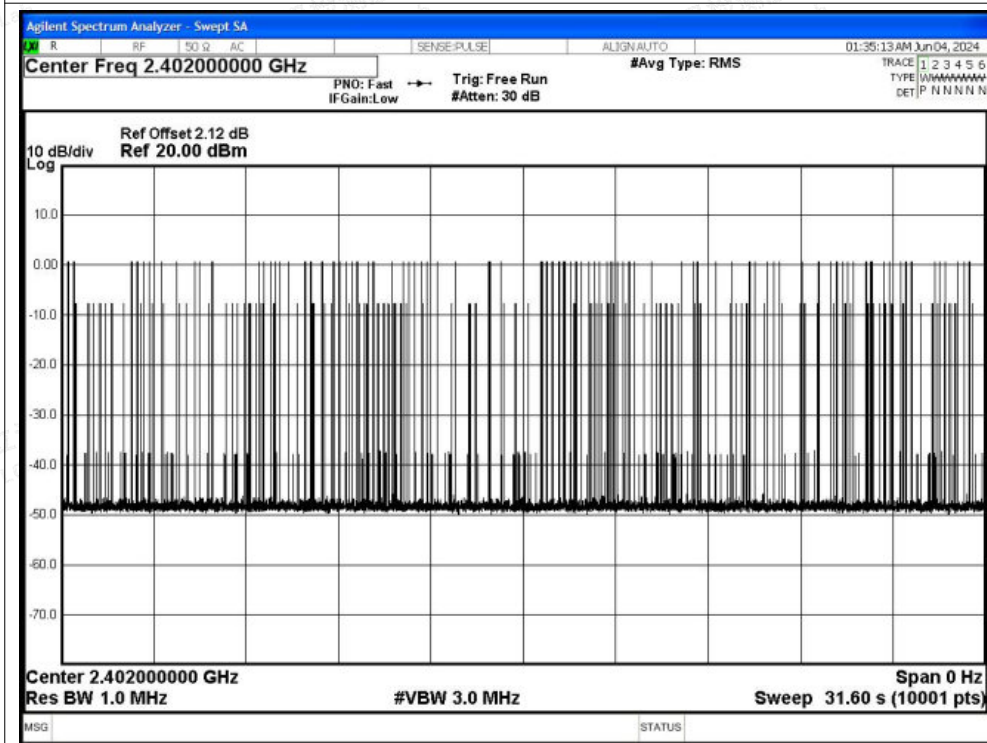


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

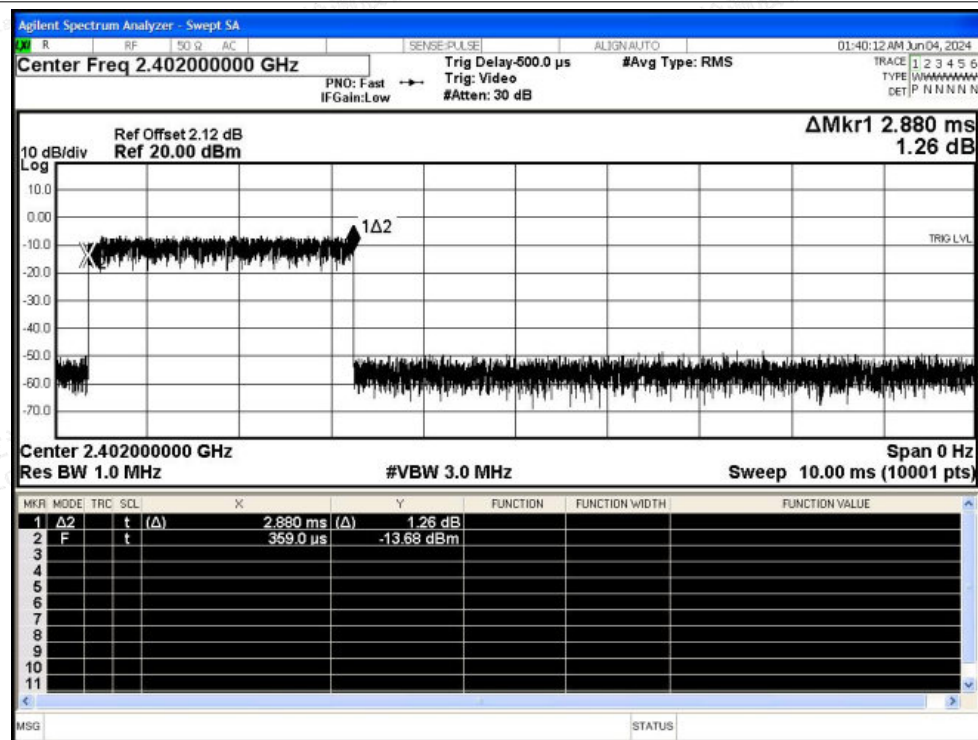


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

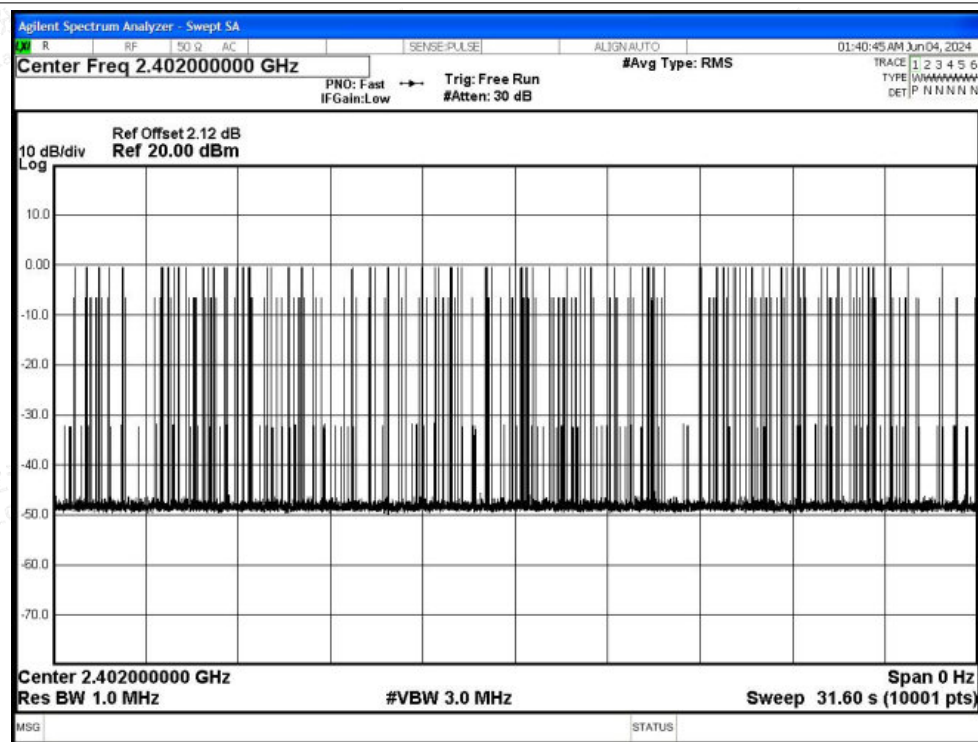




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated





A.5 Number of Hopping Channel

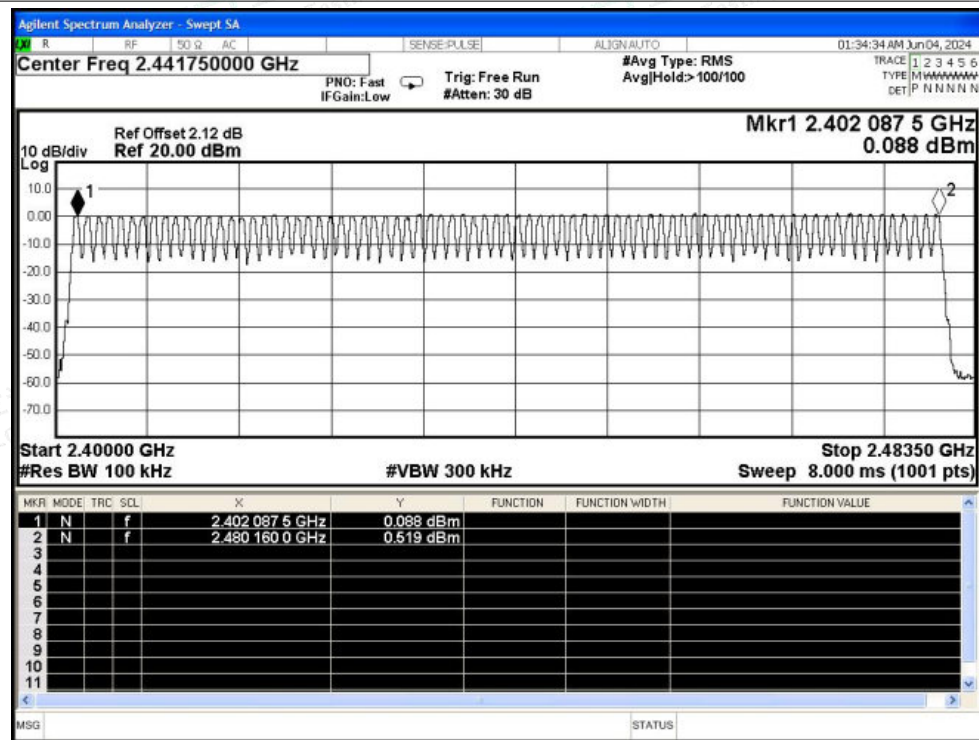
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass



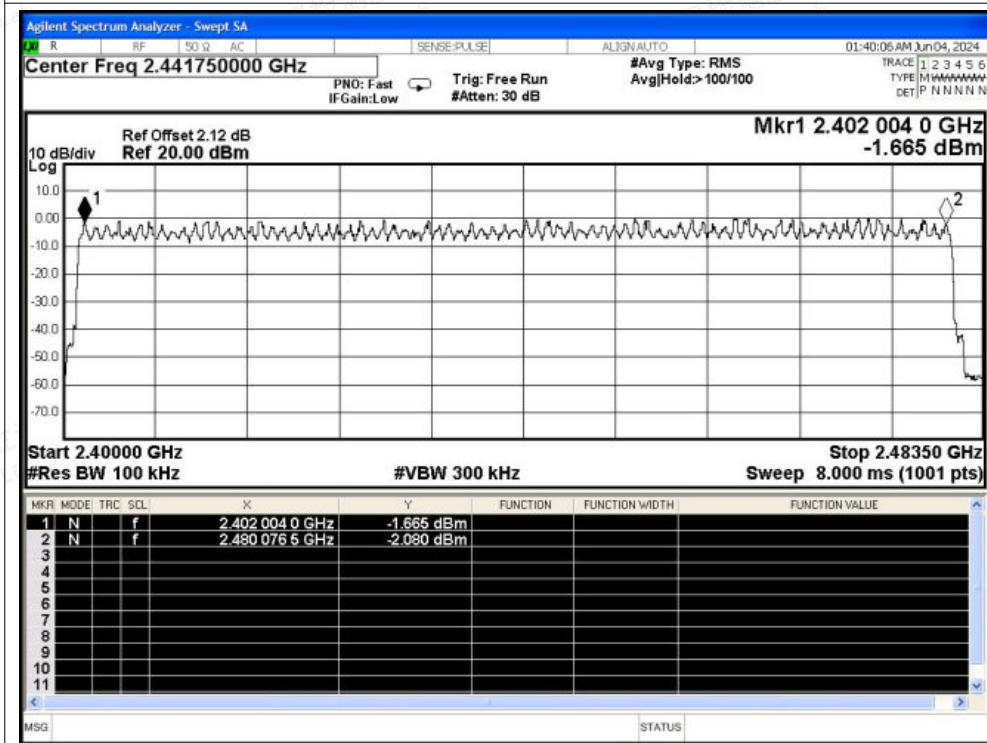


Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1





A.6 Band Edge

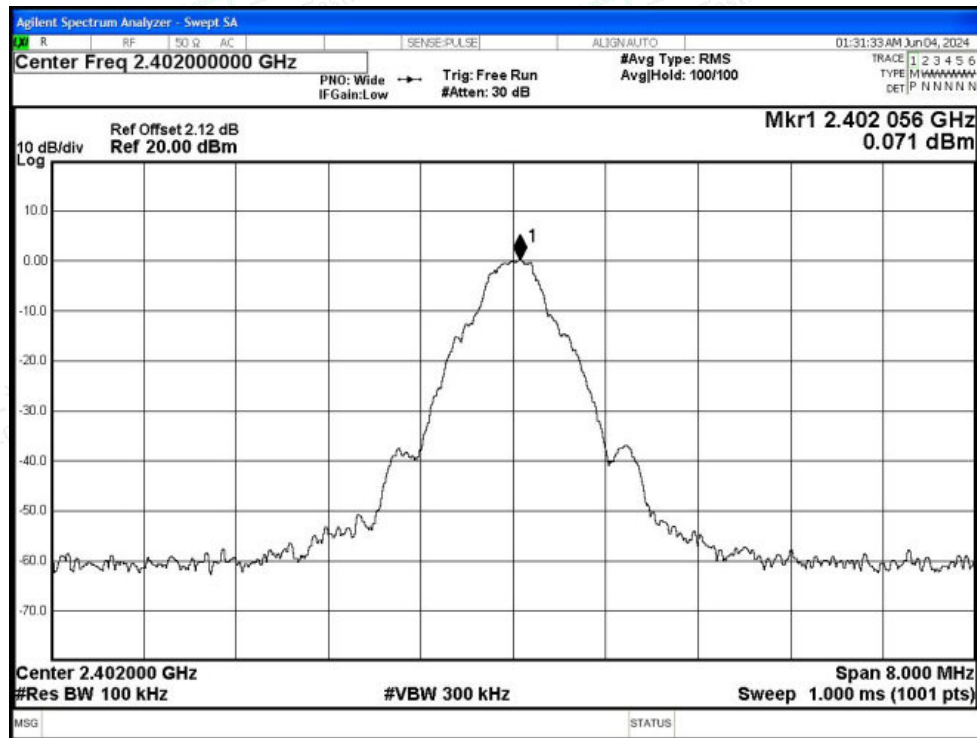
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-55.96	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-56.08	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-54.21	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-55.02	-20	Pass



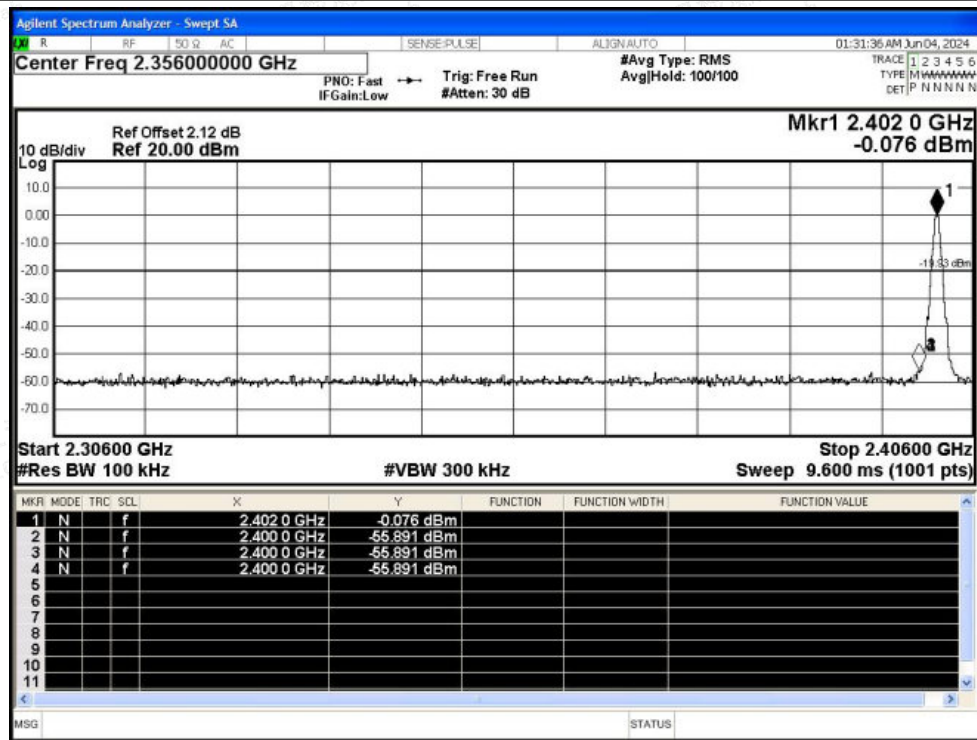


Test Graphs

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

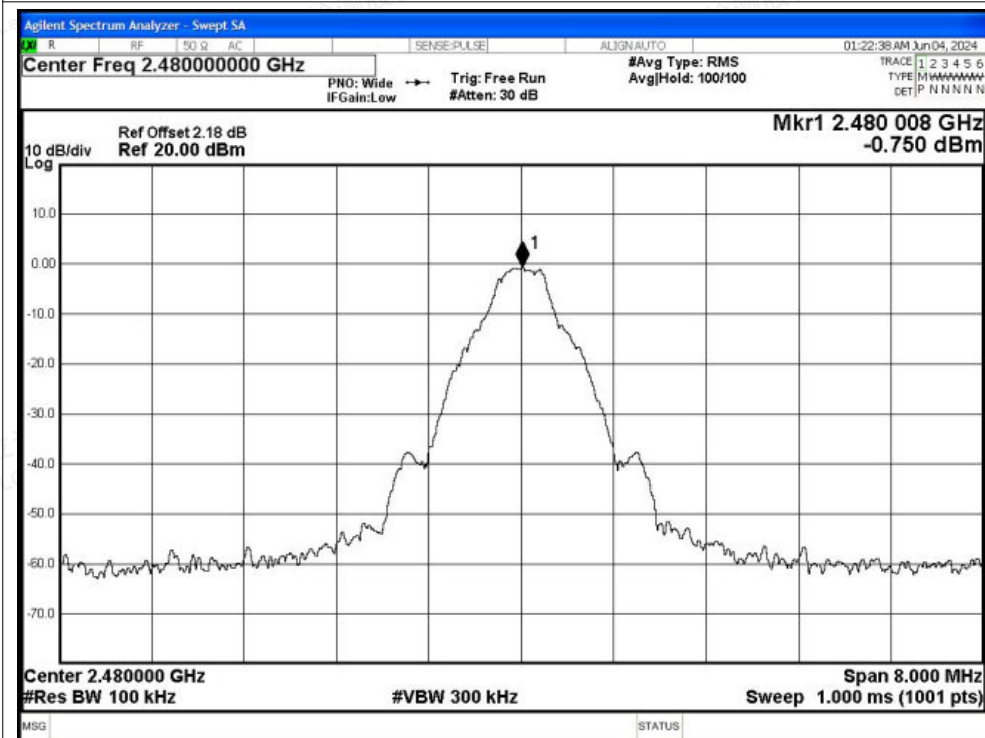


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

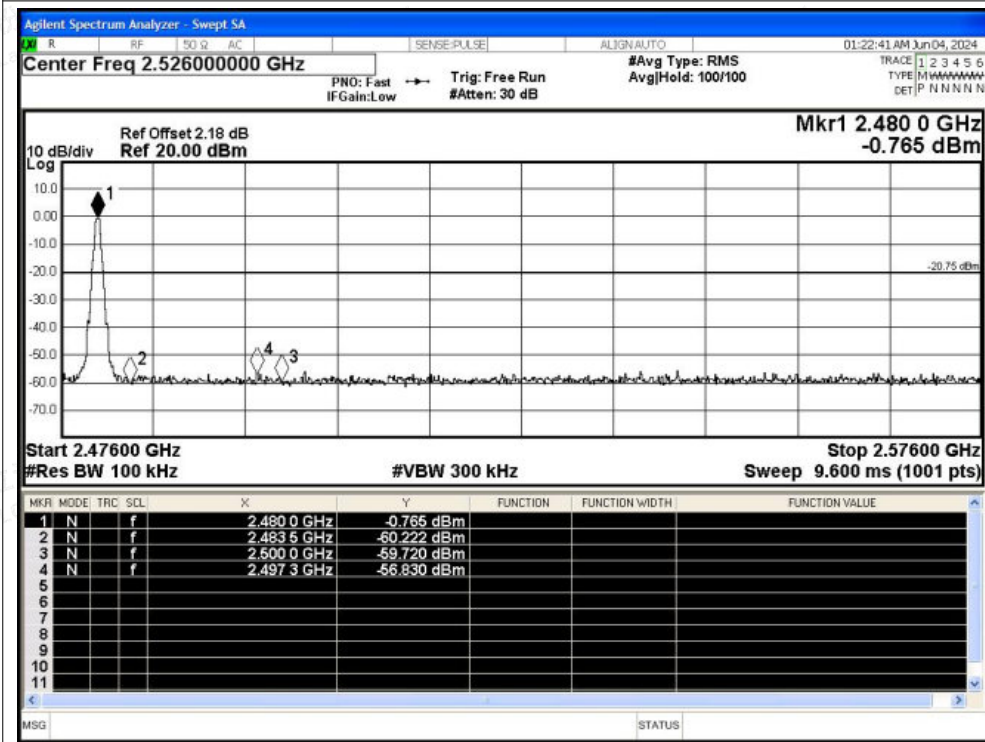




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

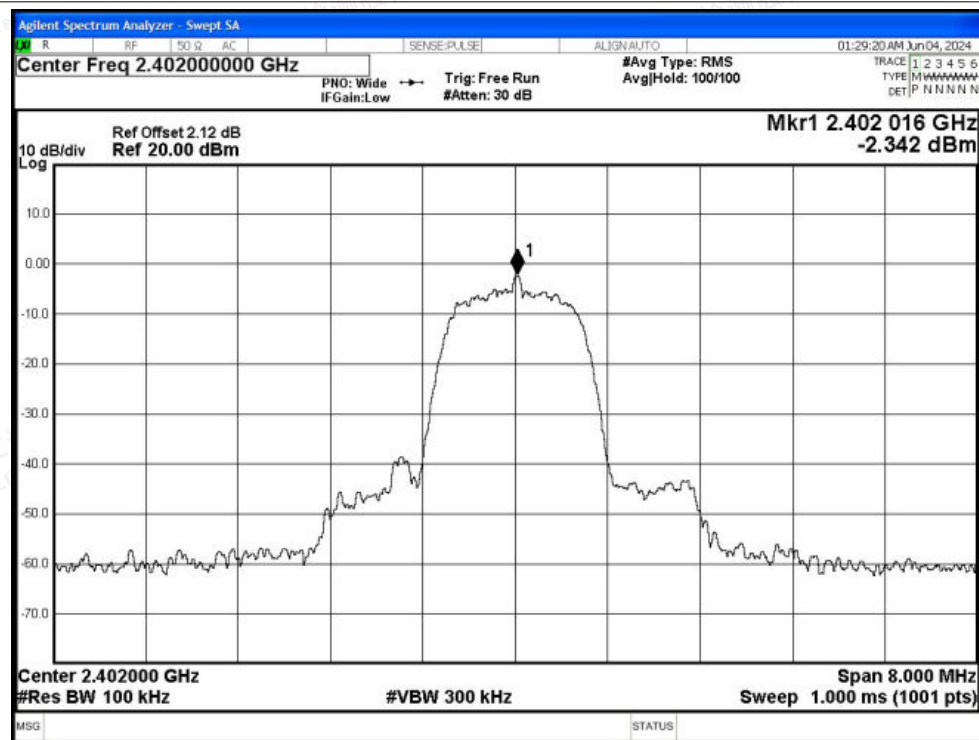


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

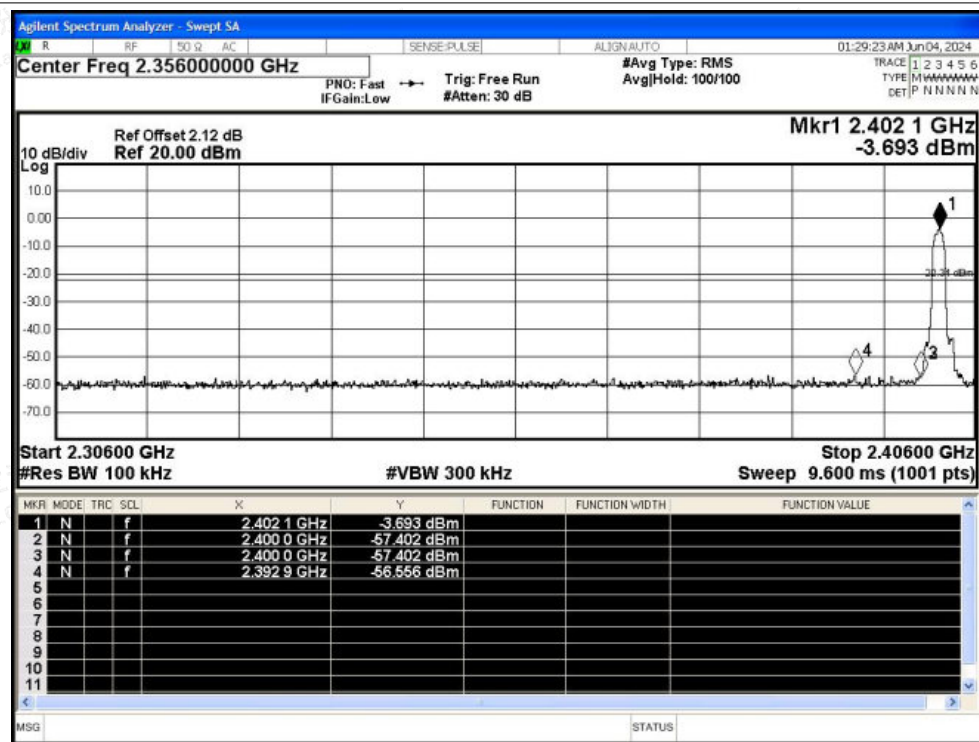




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



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



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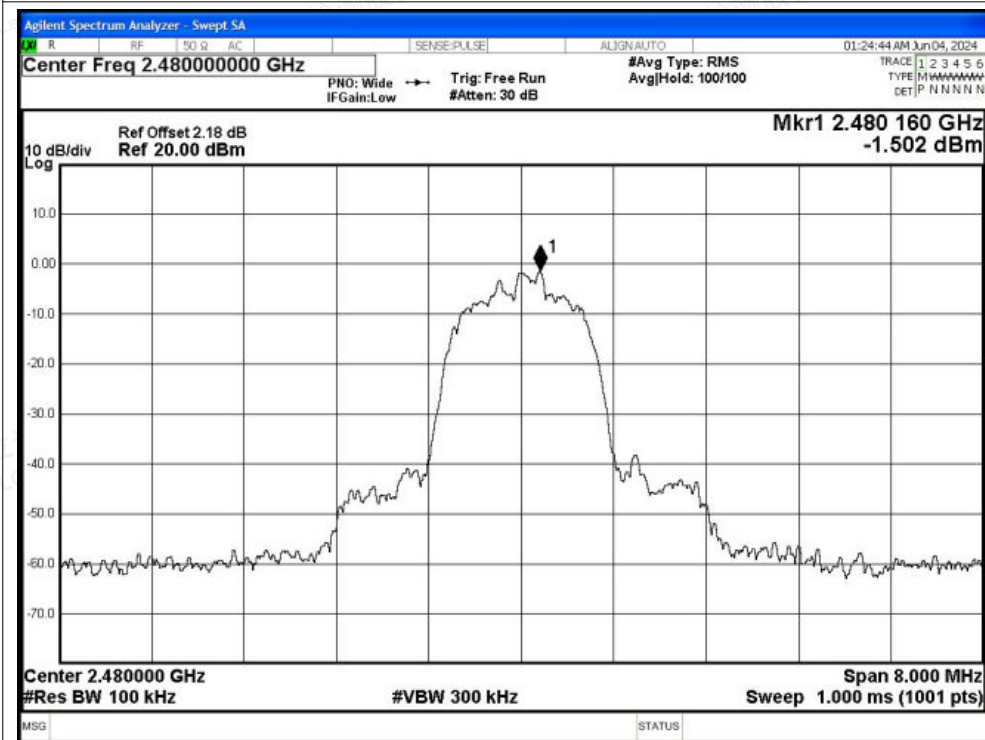
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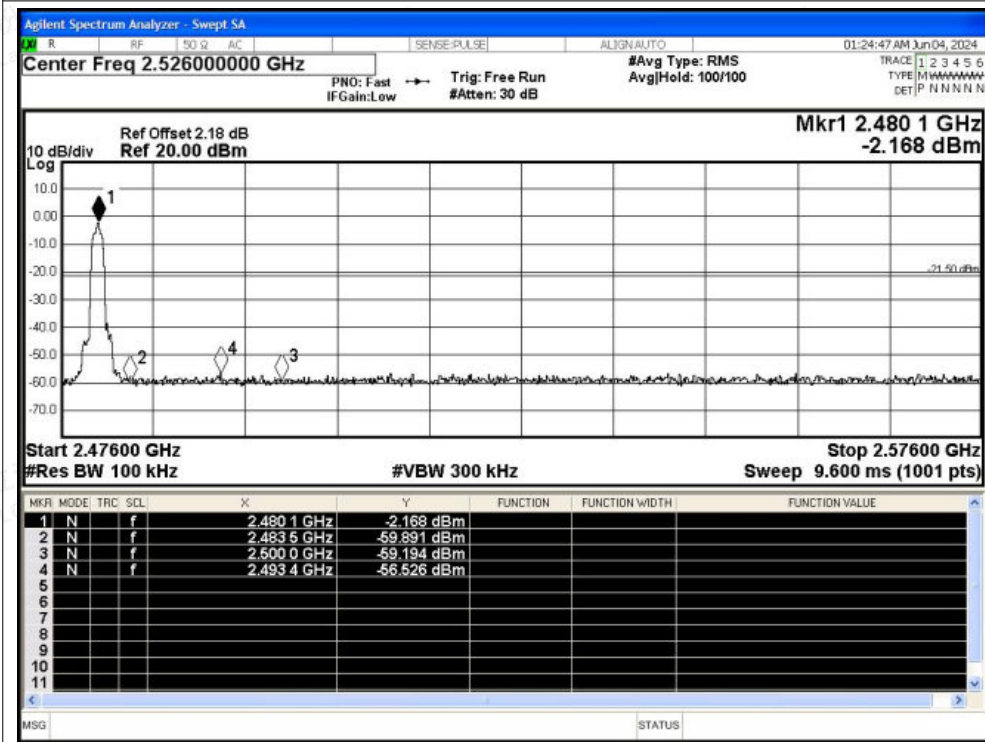
Scan code to check authenticity



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



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





(Hopping)

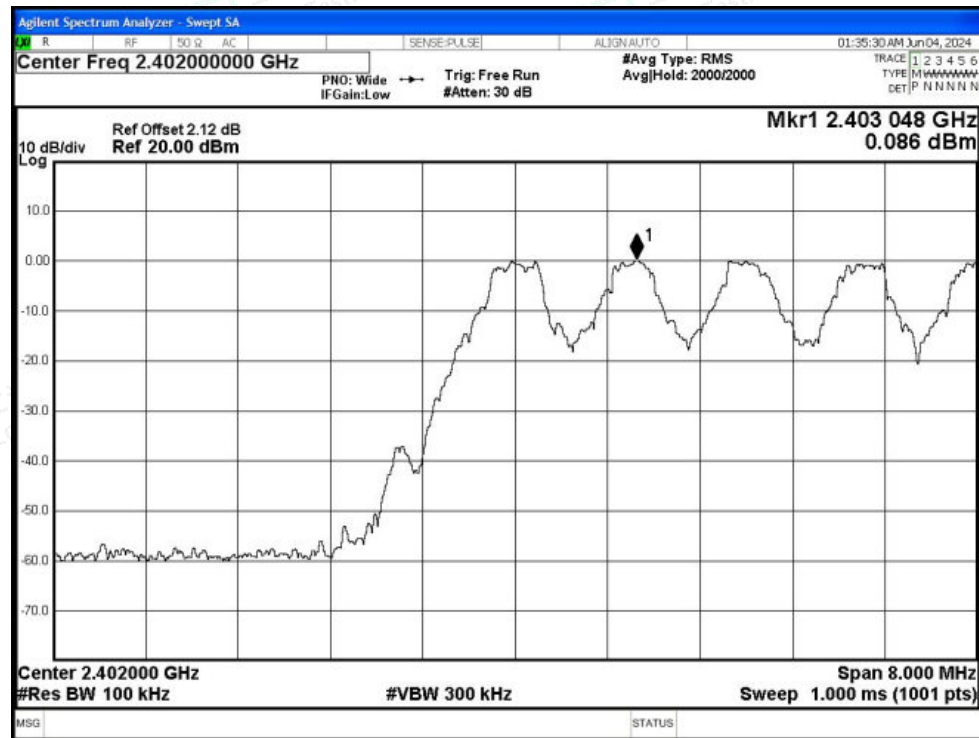
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-55.83	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-56.16	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-54.34	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-54.42	-20	Pass



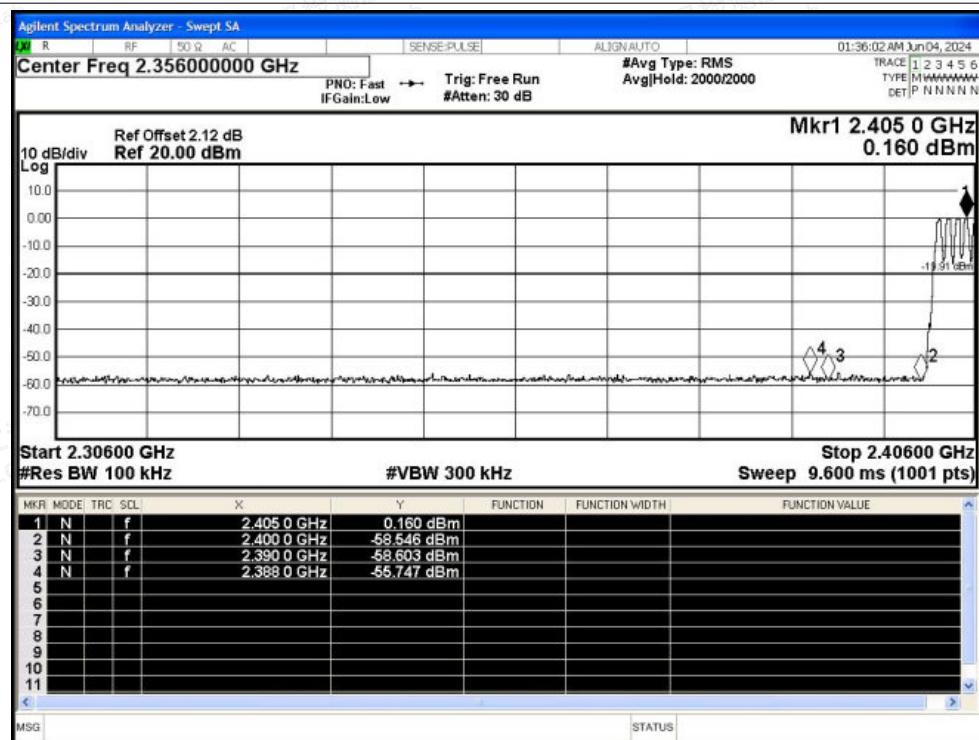


Test Graphs

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

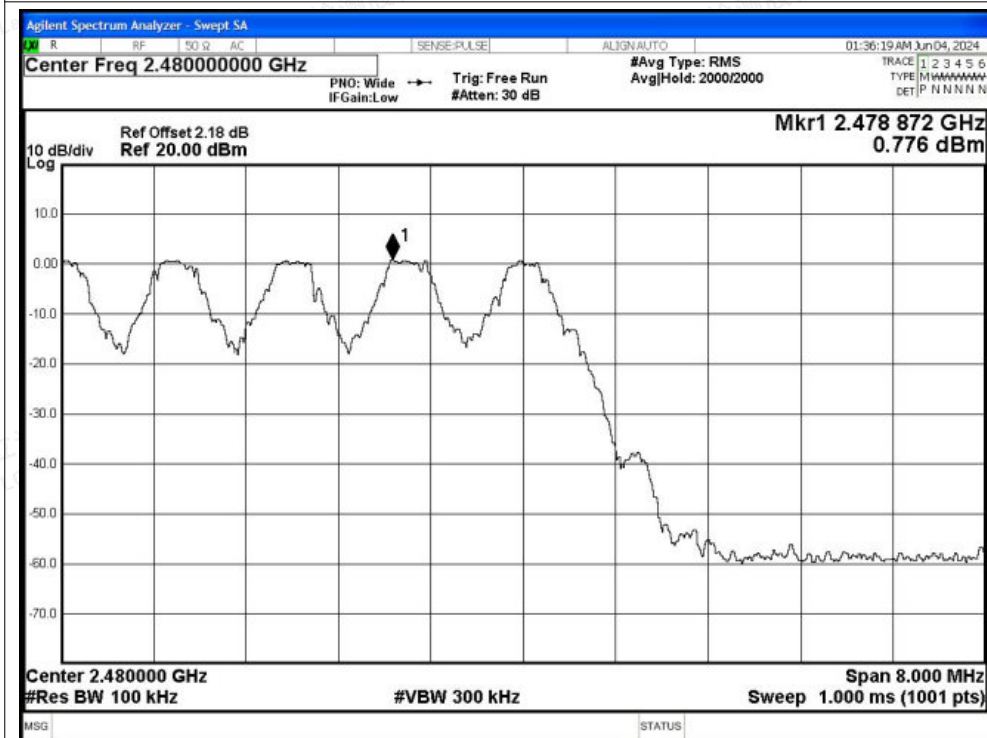


Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

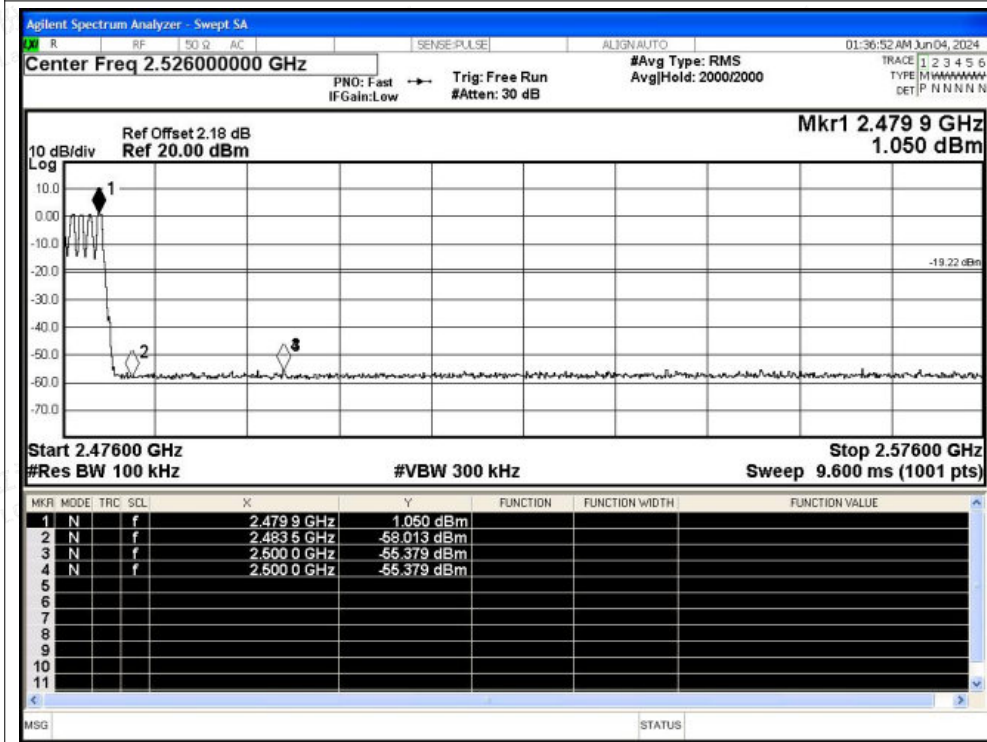




Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



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

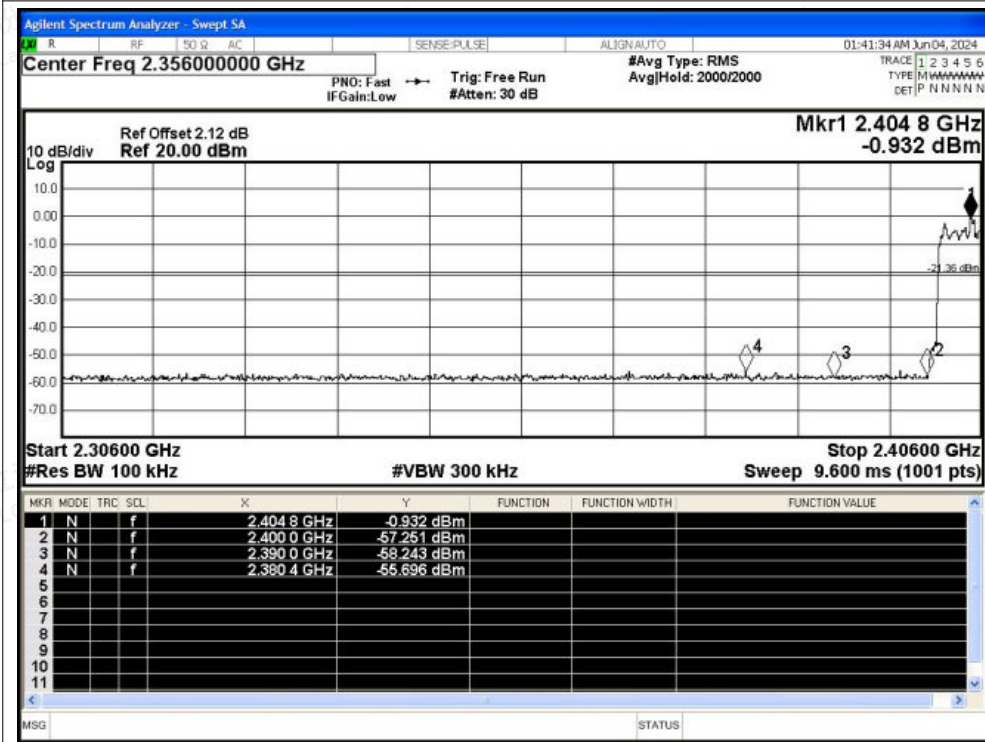




Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref

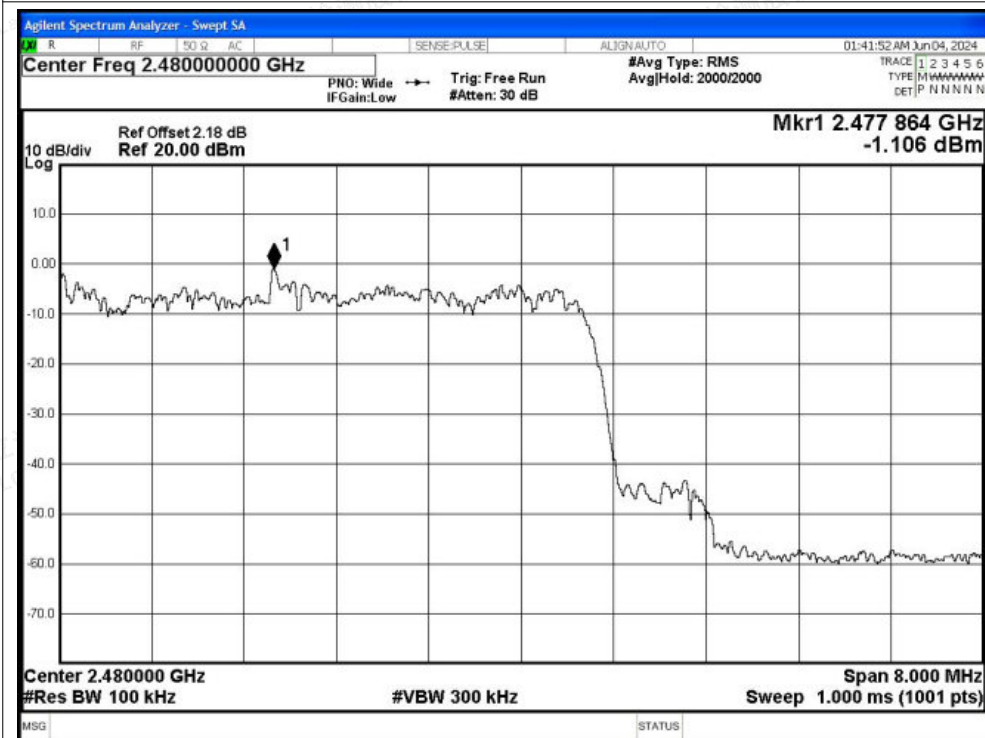


Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission

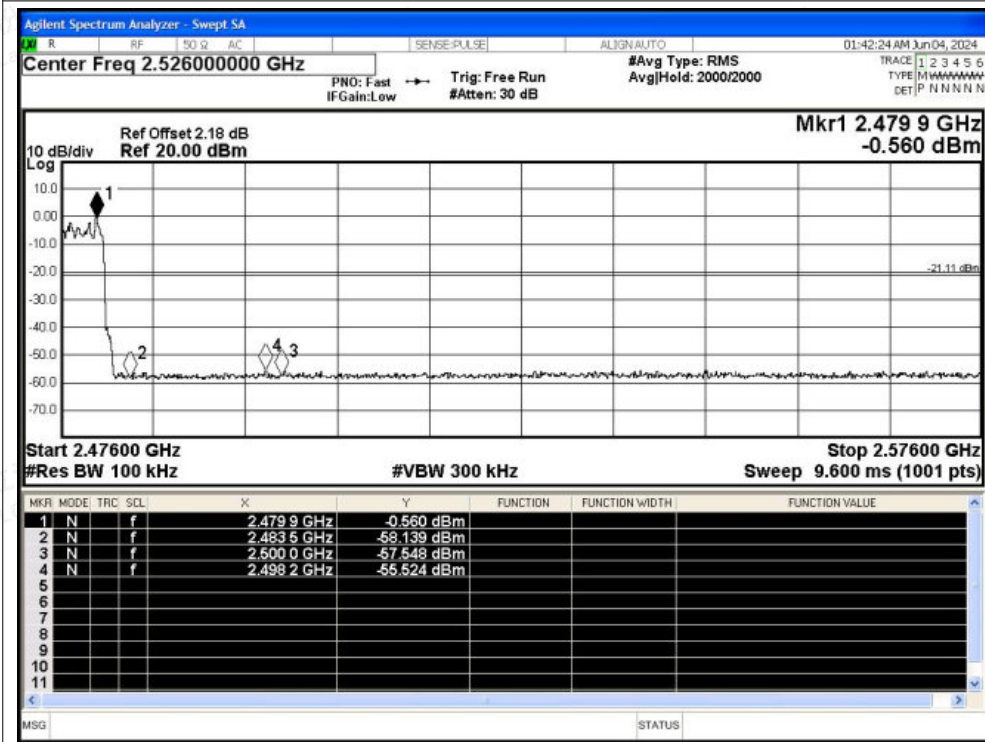




Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



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





A.7 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-55.82	-20	Pass
NVNT	1-DH5	2441	Ant1	-54.35	-20	Pass
NVNT	1-DH5	2480	Ant1	-55.05	-20	Pass
NVNT	2-DH5	2402	Ant1	-53.03	-20	Pass
NVNT	2-DH5	2441	Ant1	-53.5	-20	Pass
NVNT	2-DH5	2480	Ant1	-49.65	-20	Pass



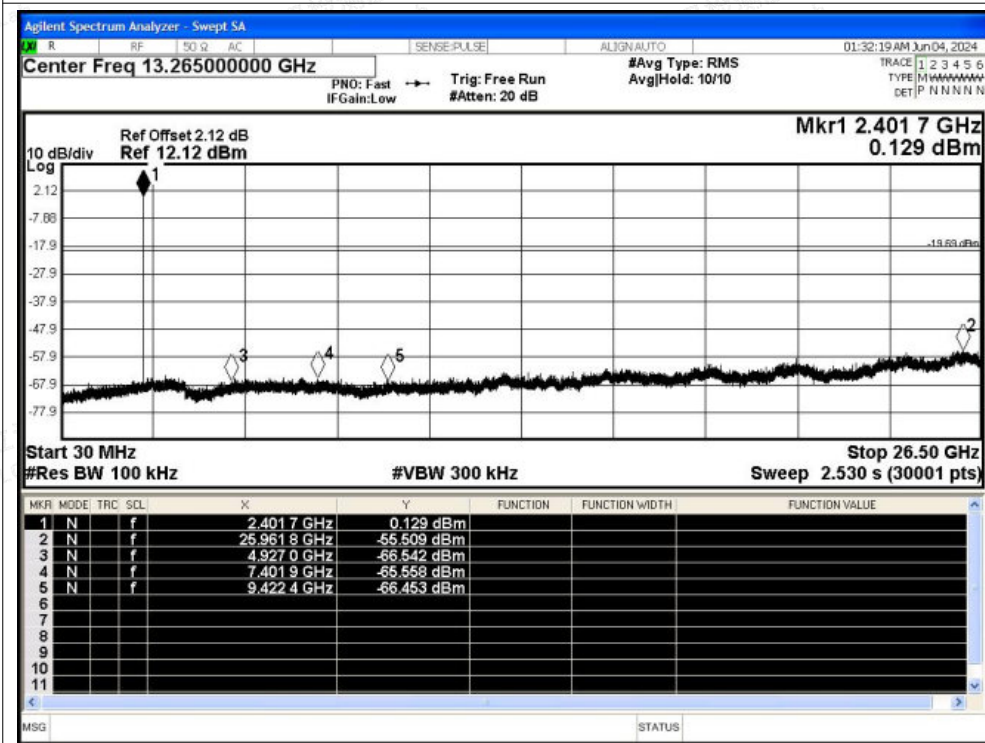


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

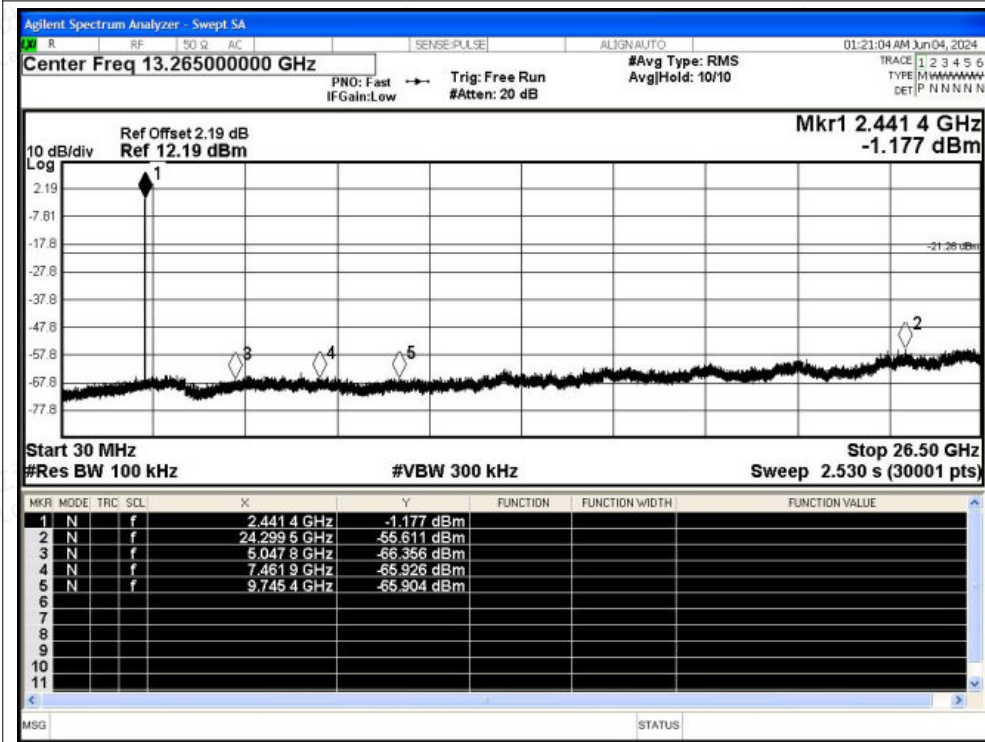




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

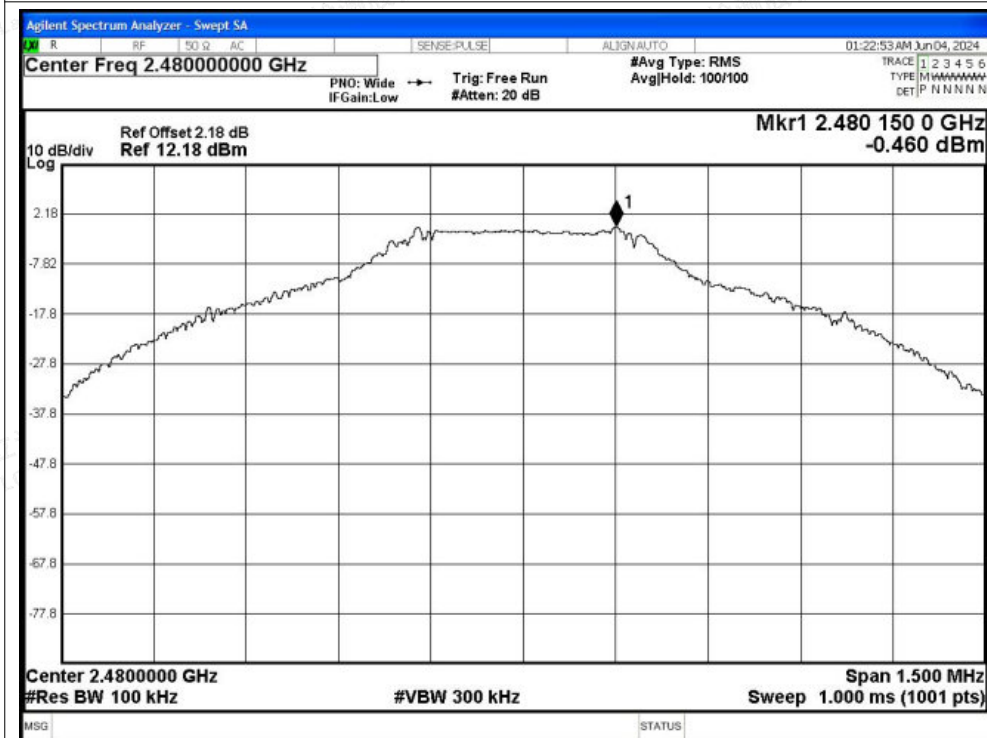


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

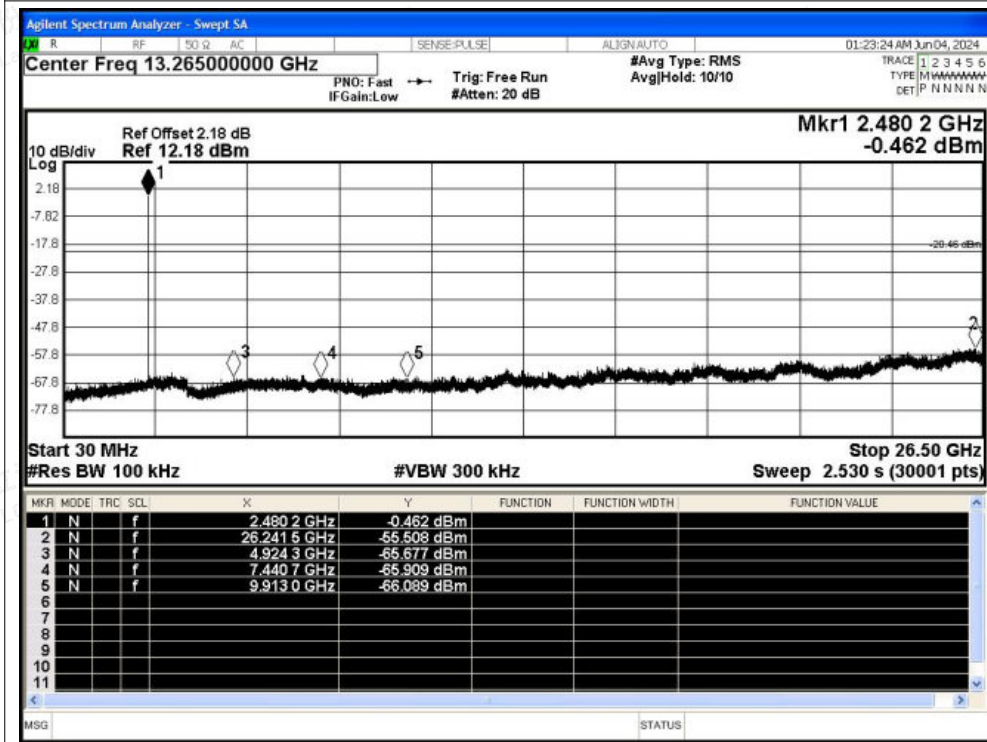




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

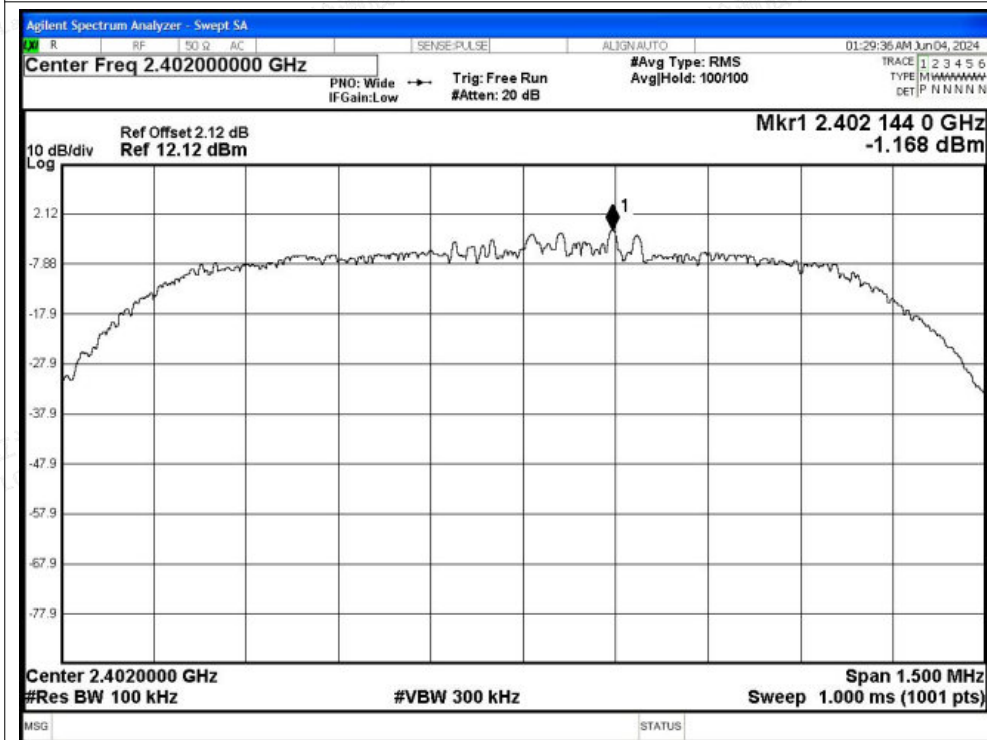


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

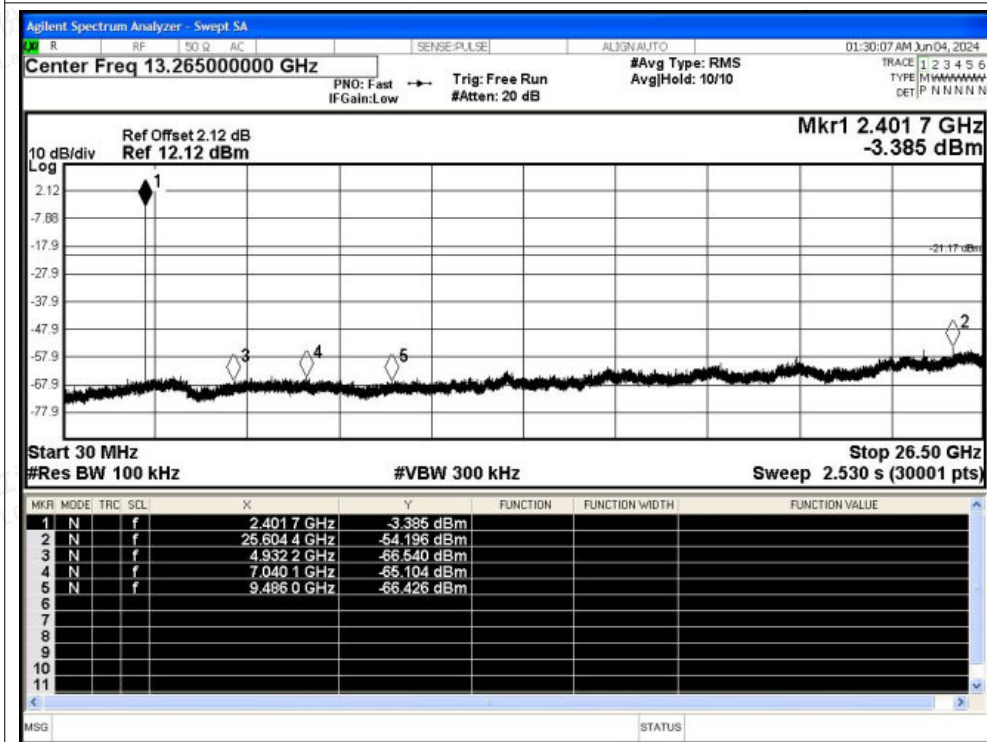




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



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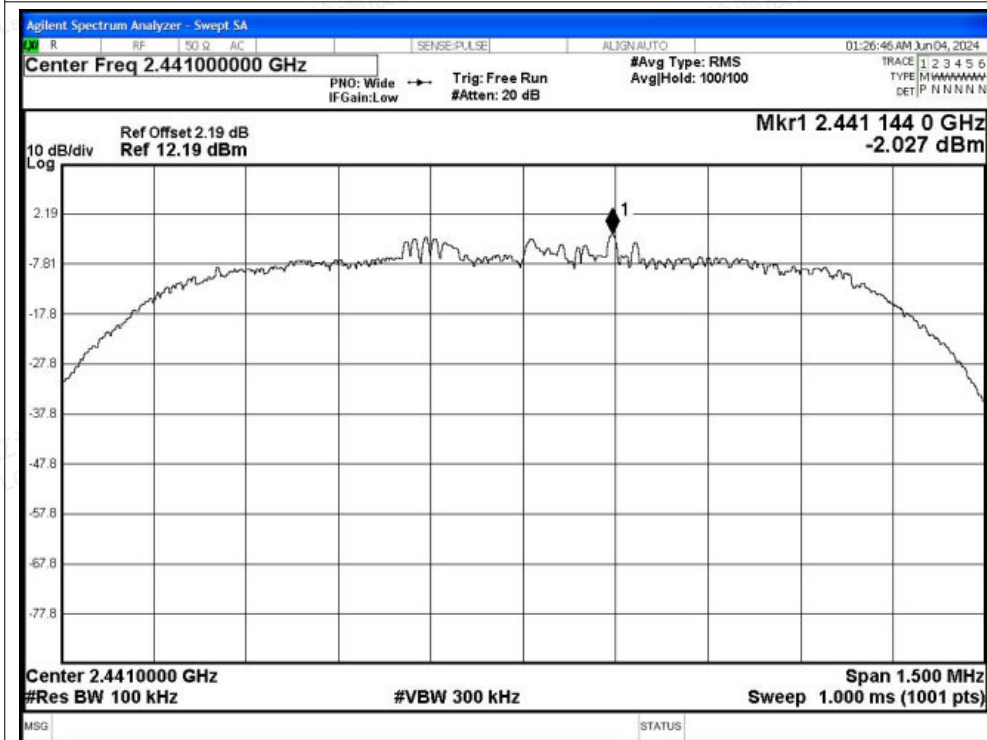
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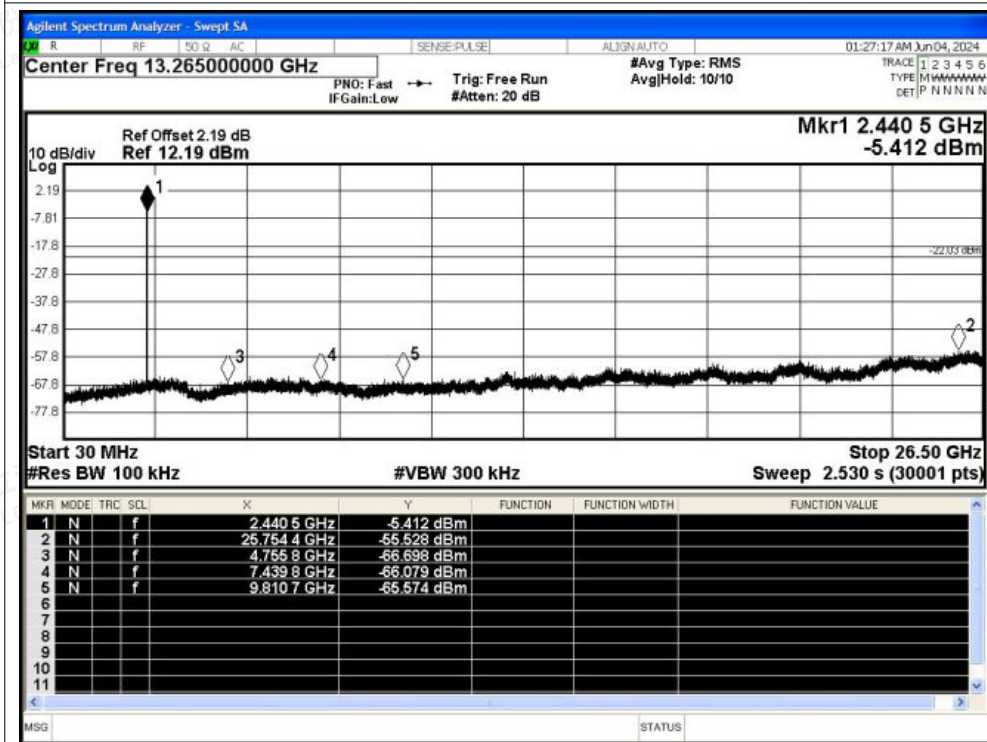
Scan code to check authenticity



Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



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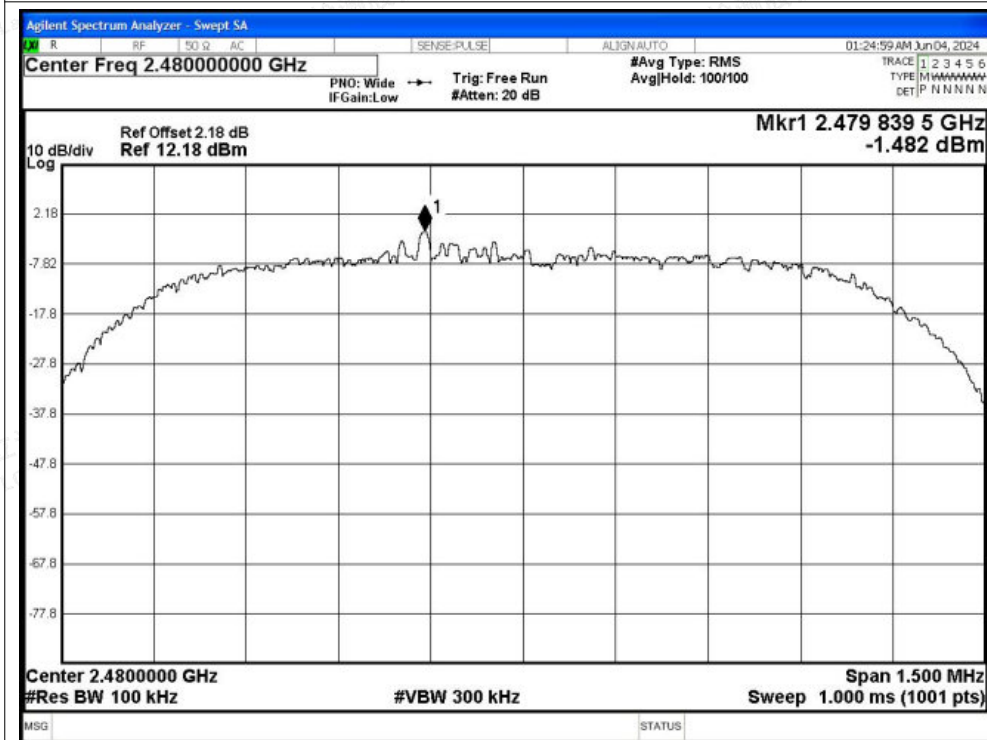
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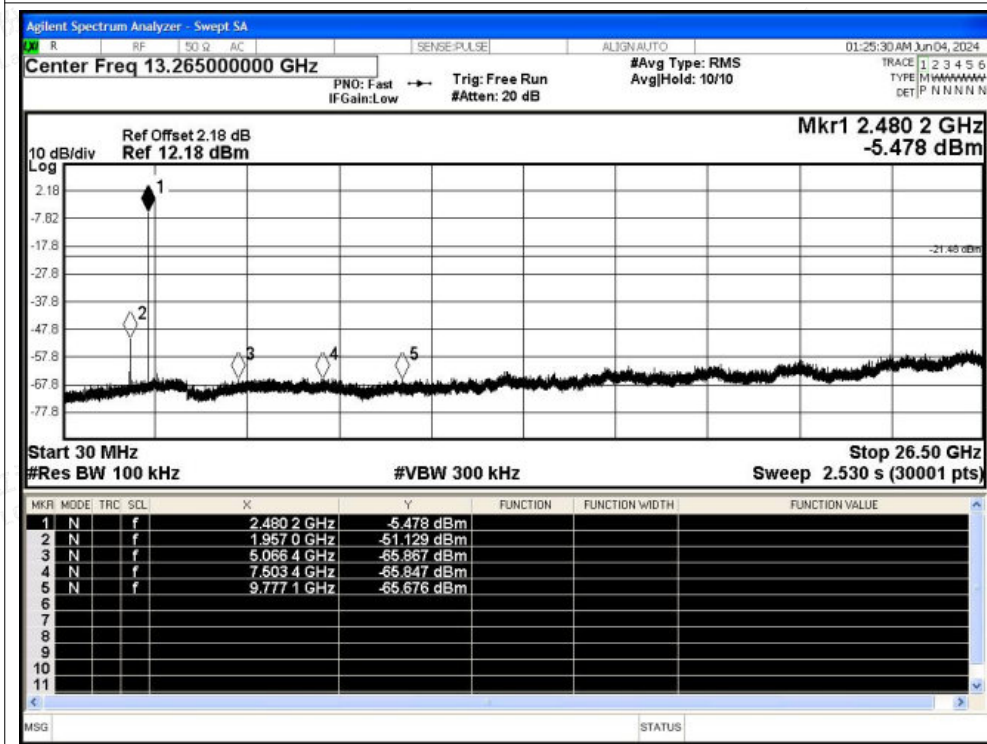
Scan code to check authenticity



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



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Scan code to check authenticity



A.8 Duty Cycle

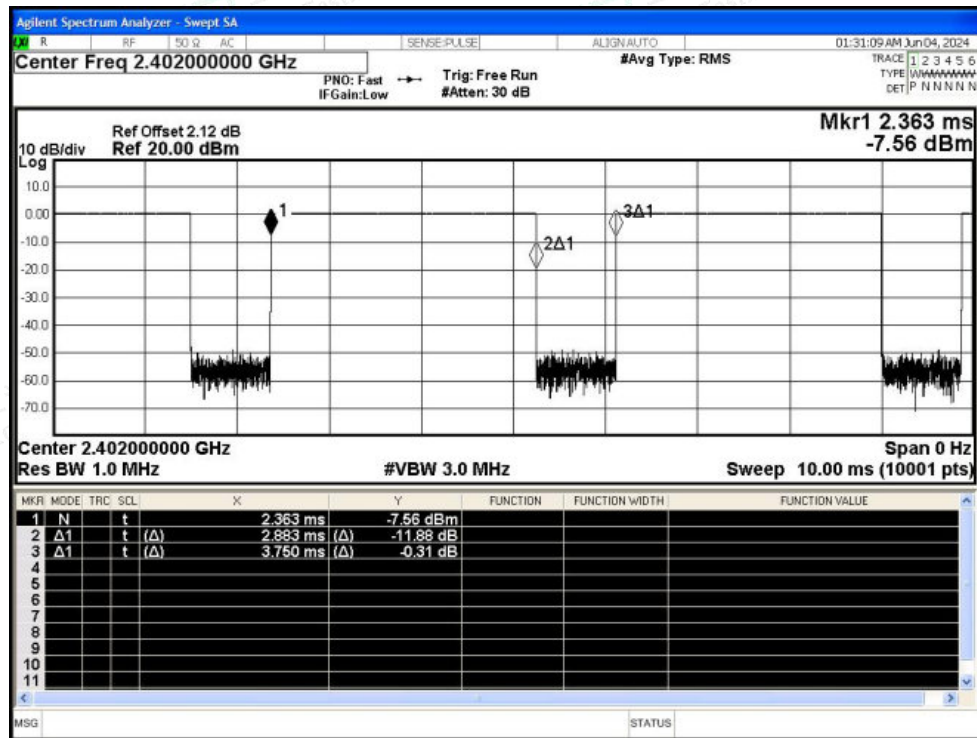
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	76.88	1.14	0.35
NVNT	1-DH5	2441	Ant1	76.88	1.14	0.35
NVNT	1-DH5	2480	Ant1	76.85	1.14	0.35
NVNT	2-DH5	2402	Ant1	76.99	1.14	0.35
NVNT	2-DH5	2441	Ant1	76.99	1.14	0.35
NVNT	2-DH5	2480	Ant1	76.99	1.14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



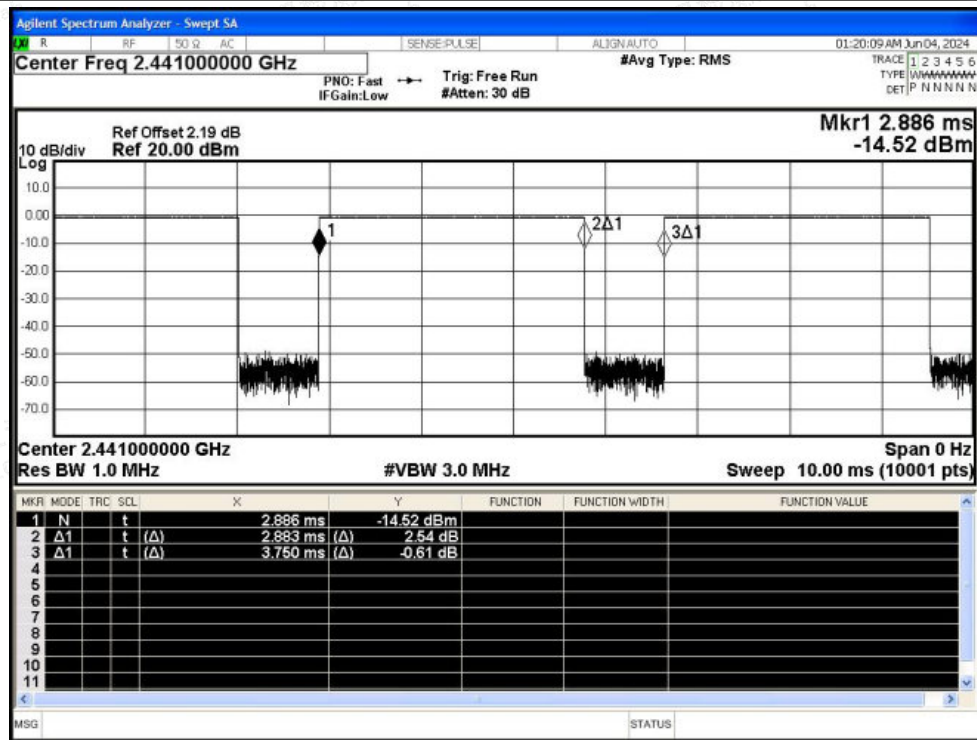


Test Graphs

Duty Cycle NVNT 1-DH5 2402MHz Ant1

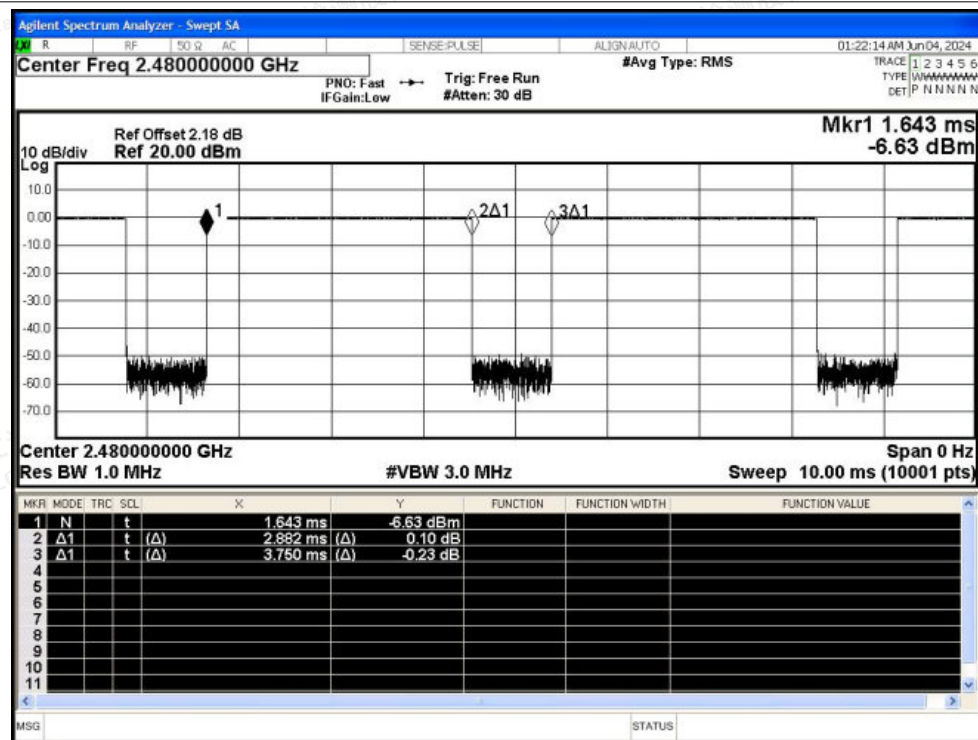


Duty Cycle NVNT 1-DH5 2441MHz Ant1

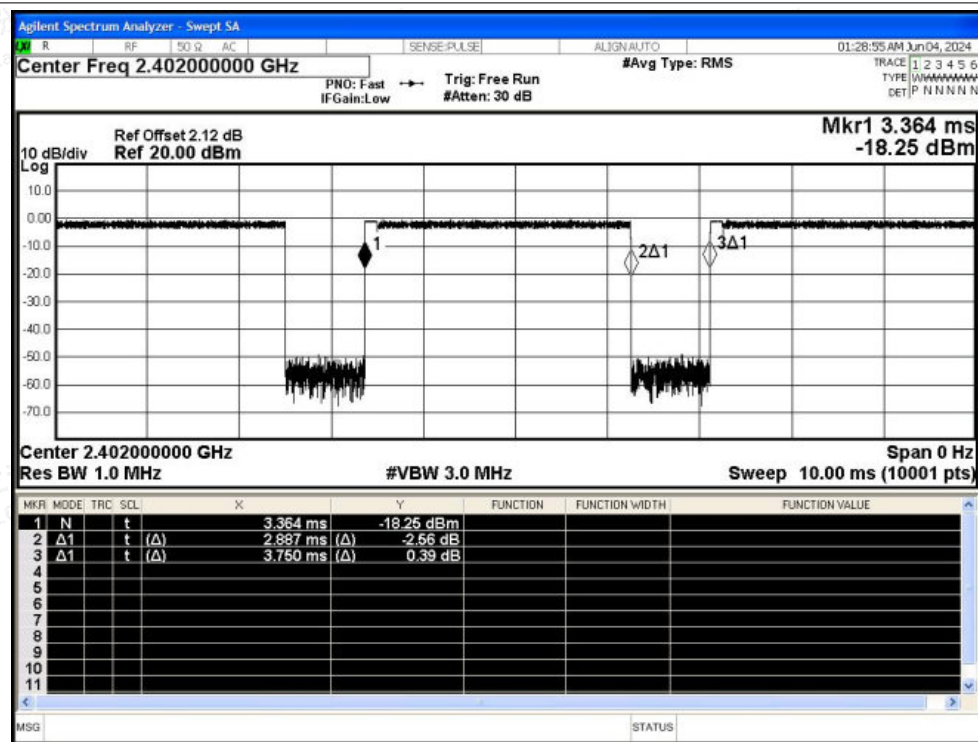




Duty Cycle NVNT 1-DH5 2480MHz Ant1

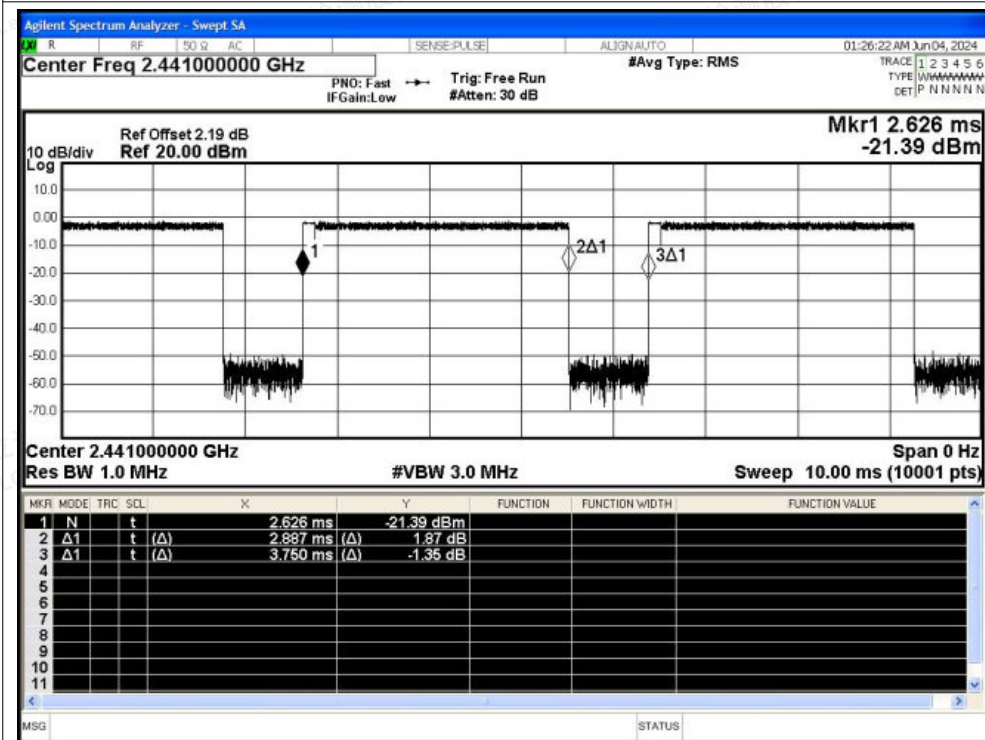


Duty Cycle NVNT 2-DH5 2402MHz Ant1

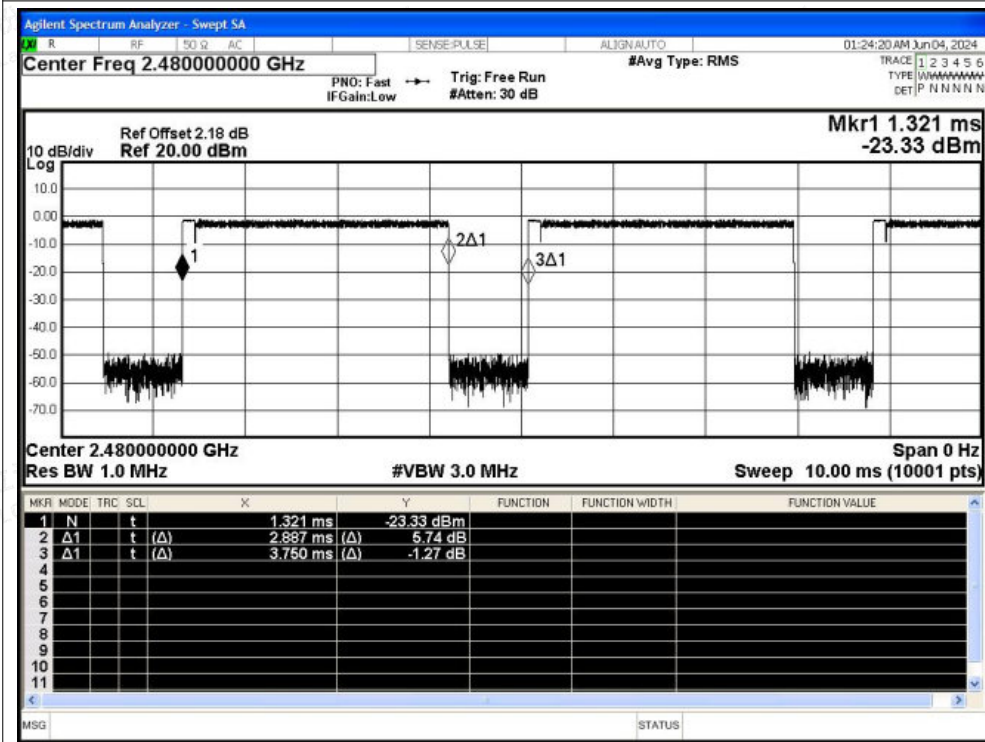




Duty Cycle NVNT 2-DH5 2441MHz Ant1



Duty Cycle NVNT 2-DH5 2480MHz Ant1





A.9 Restrict Band

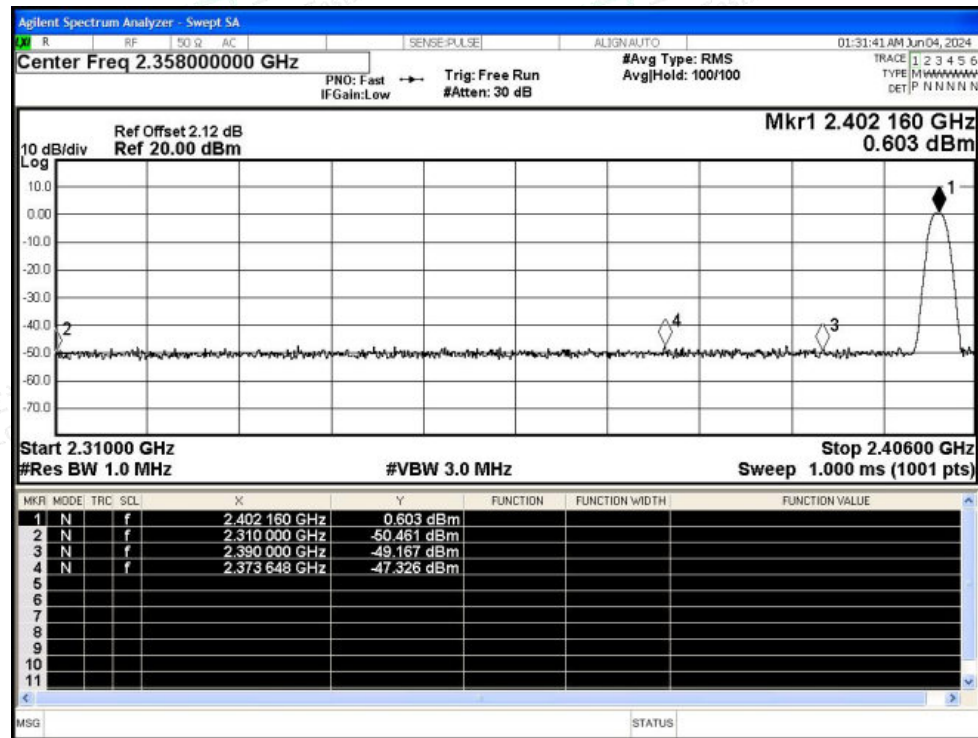
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.46	2	-	46.8	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-58.72	2	1.14	39.68	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2373.648	-47.33	2	-	49.93	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2386.704	-57.48	2	1.14	40.92	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.17	2	-	48.09	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-58.41	2	1.14	39.99	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-49.62	2	-	47.64	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-57.72	2	1.14	40.68	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2490.04	-47.23	2	-	50.03	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2498.464	-57.1	2	1.14	41.3	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.92	2	-	47.34	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-57.96	2	1.14	40.44	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-51.01	2	-	46.25	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-58.76	2	1.14	39.64	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2384.208	-46.54	2	-	50.72	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2338.032	-57.31	2	1.14	41.09	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-51.08	2	-	46.18	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.89	2	1.14	40.51	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-50.49	2	-	46.77	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-57.52	2	1.14	40.88	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2488.336	-46.32	2	-	50.94	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2488.648	-57.21	2	1.14	41.19	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-50.09	2	-	47.17	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-57.84	2	1.14	40.56	Average	54	Pass



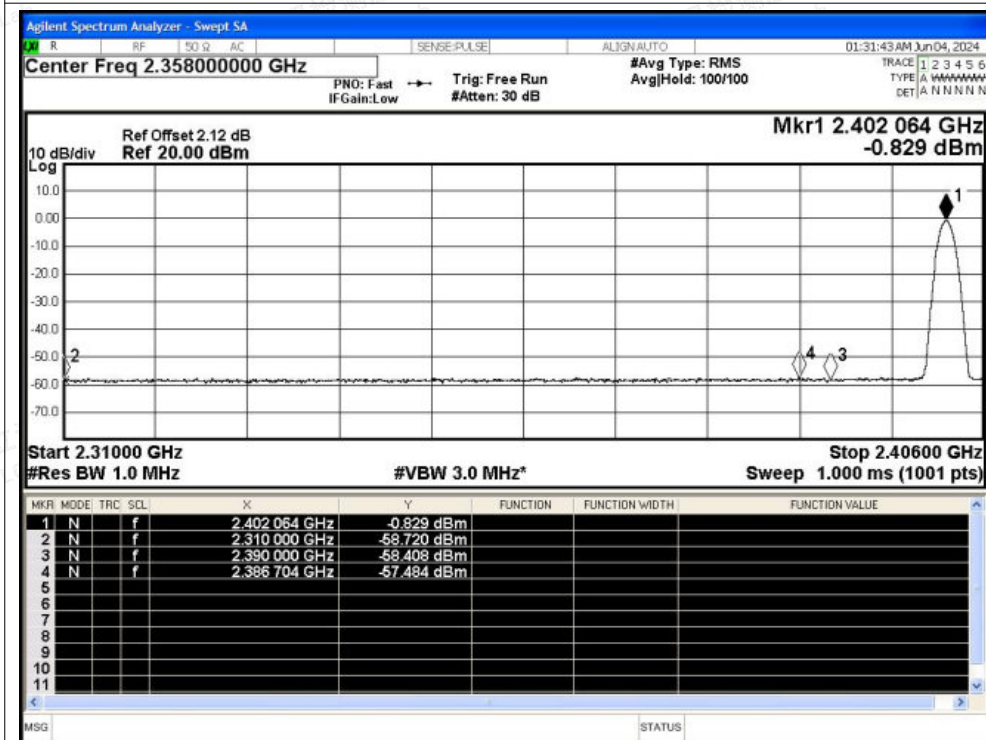


Test Graphs

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

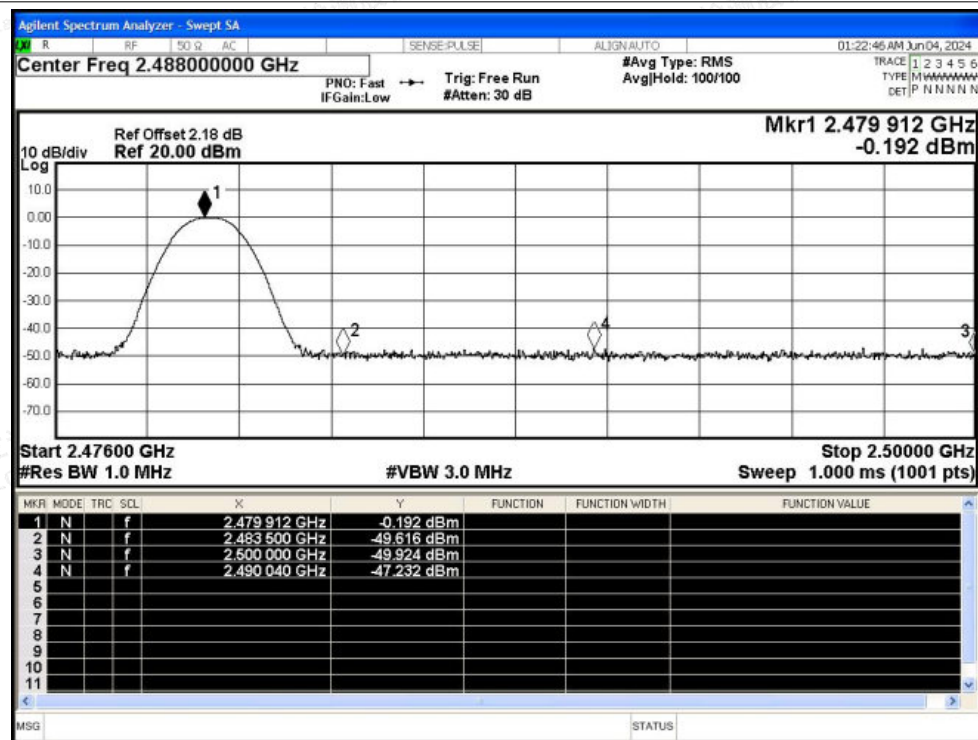


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

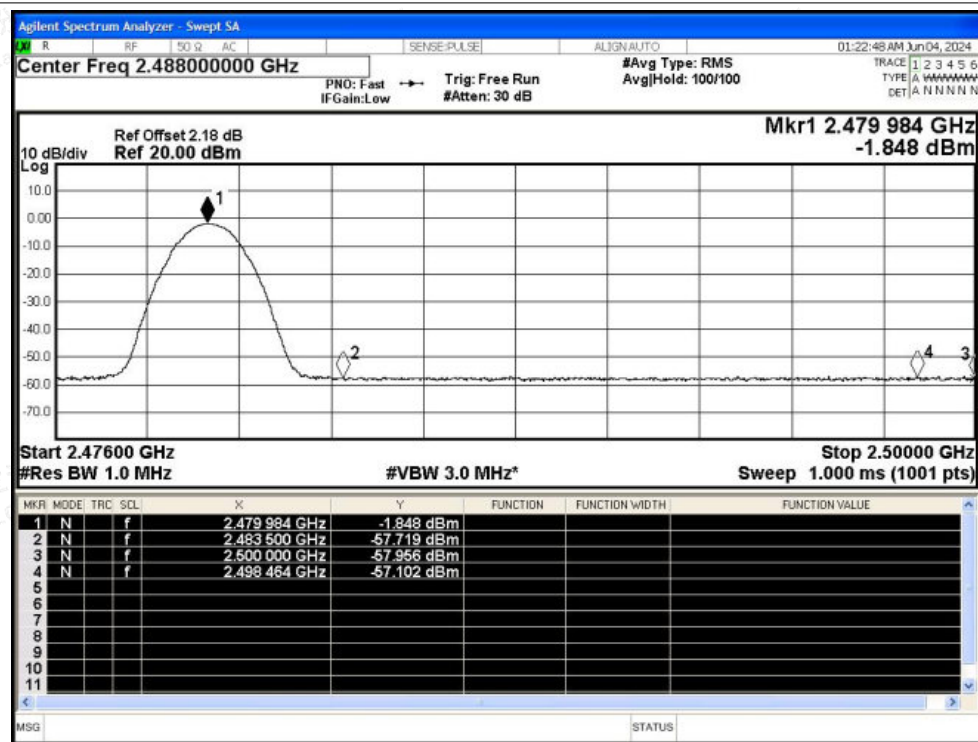




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



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



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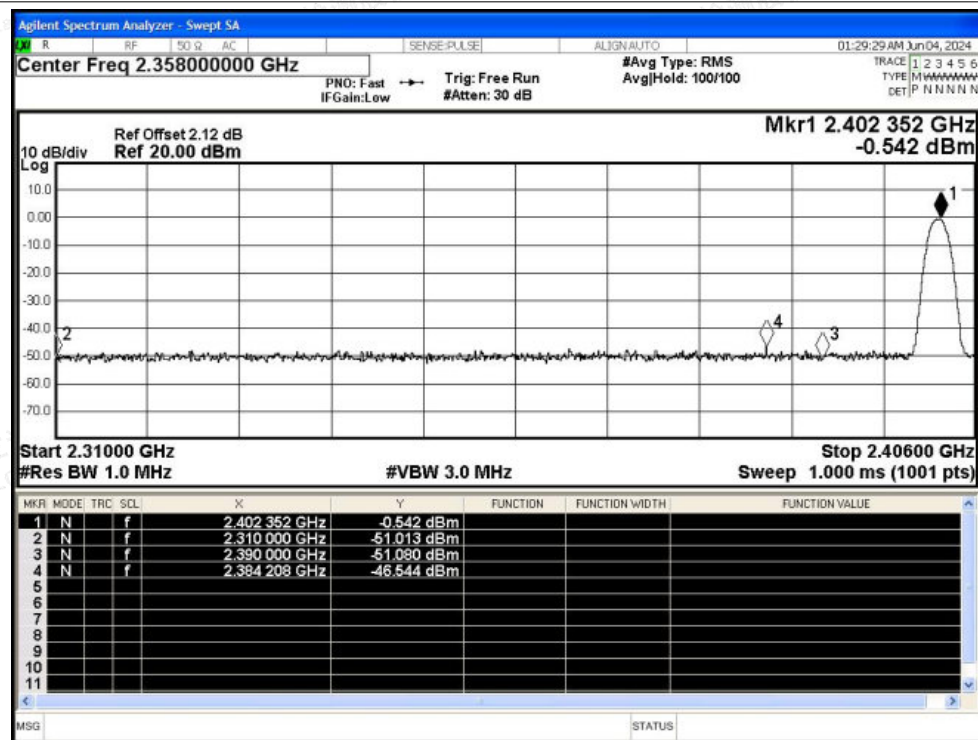
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

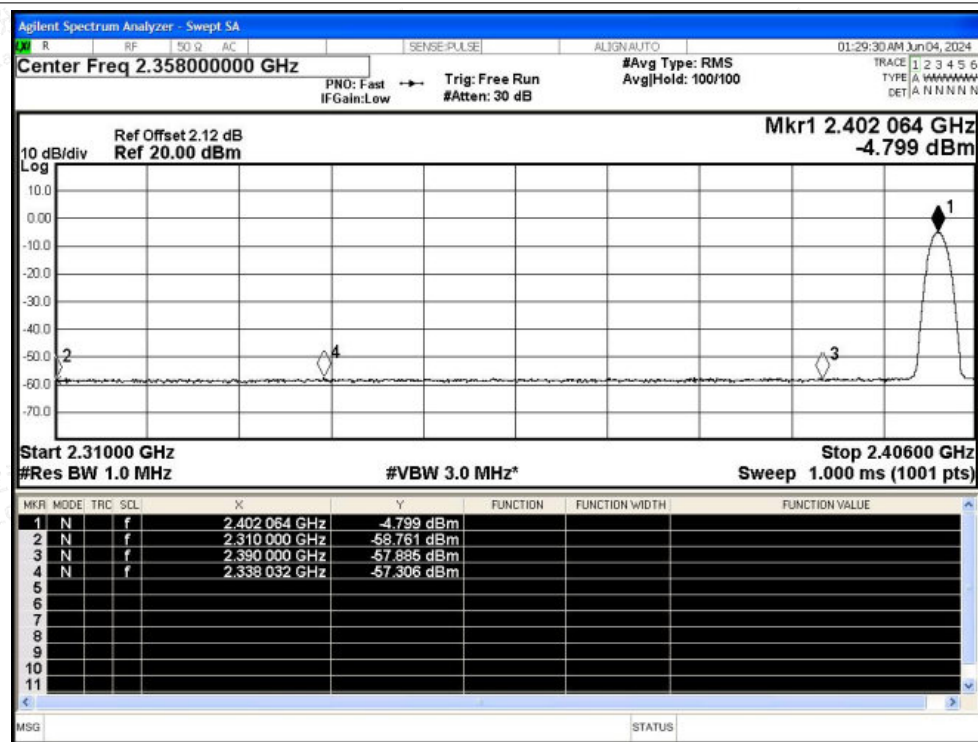
Scan code to check authenticity



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



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



Shenzhen LCS Compliance Testing Laboratory Ltd.

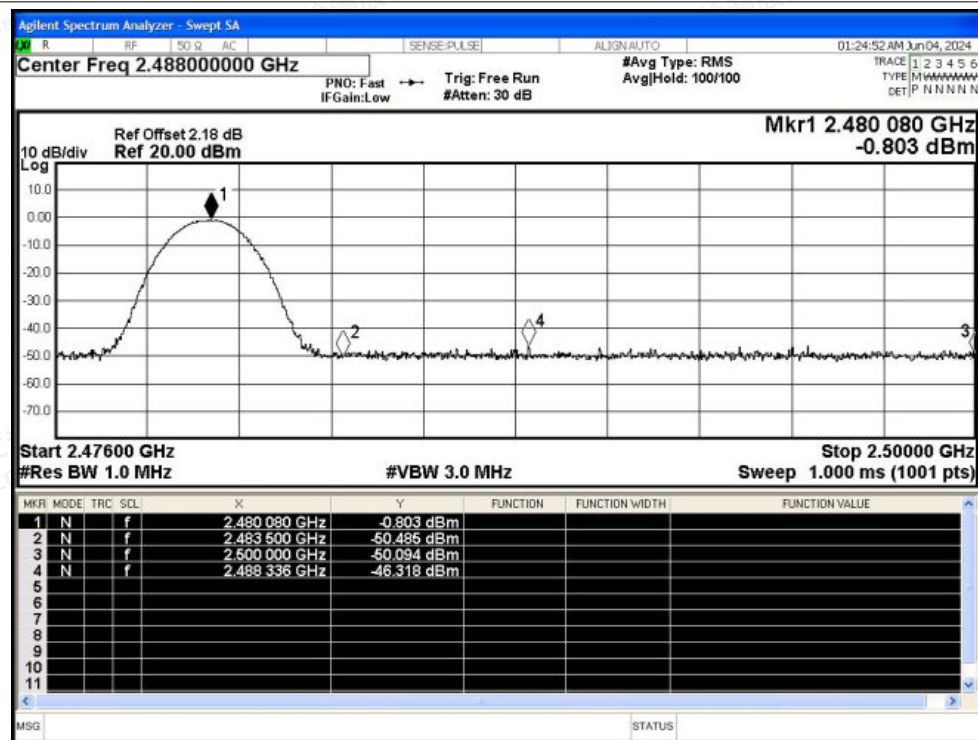
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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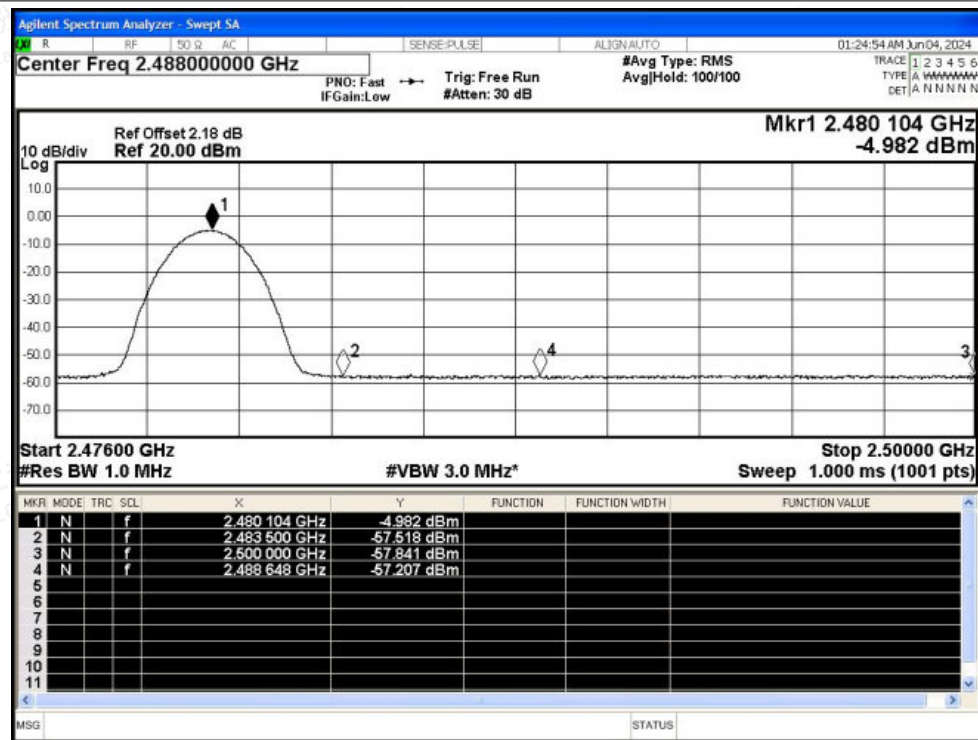
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Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



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



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