



Appendix A

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Diagnostic Tool

Test Model: MD700

Environmental Conditions

Temperature:	23.1° C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Can Kun
Supervised by:	Nick Peng



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A.1 -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	8.094	≥ 0.5	Pass
NVNT	b	2437	Ant1	7.487	≥ 0.5	Pass
NVNT	b	2462	Ant1	8.043	≥ 0.5	Pass
NVNT	n20	2412	Ant1	16.874	≥ 0.5	Pass
NVNT	n20	2437	Ant1	17.154	≥ 0.5	Pass
NVNT	n20	2462	Ant1	16.717	≥ 0.5	Pass





Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1



-6dB Bandwidth NVNT b 2437MHz Ant1



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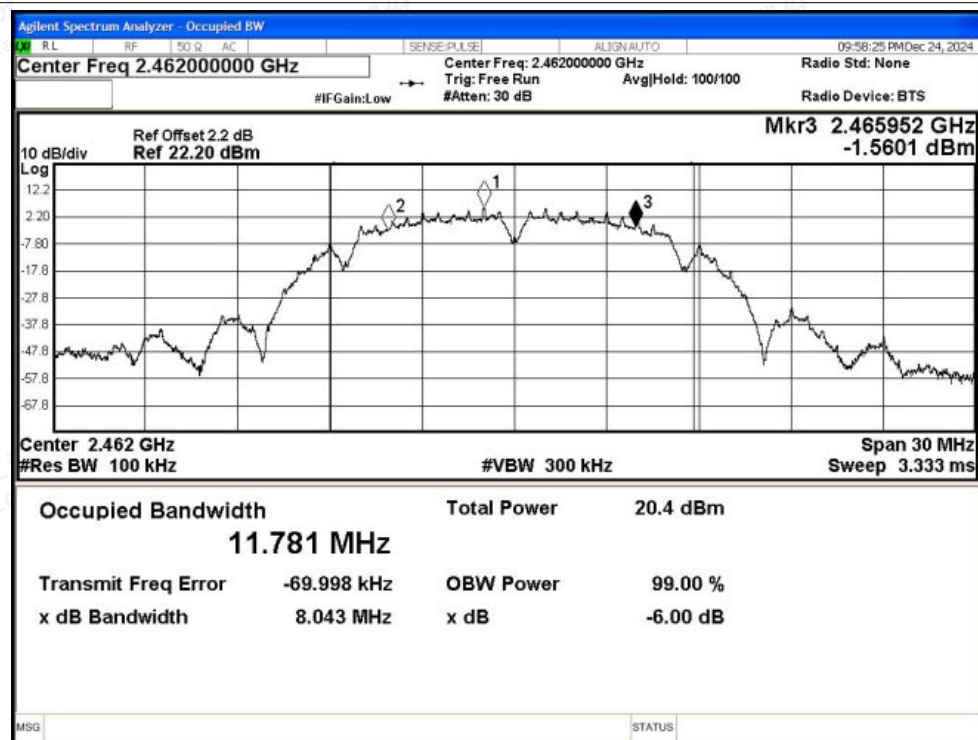
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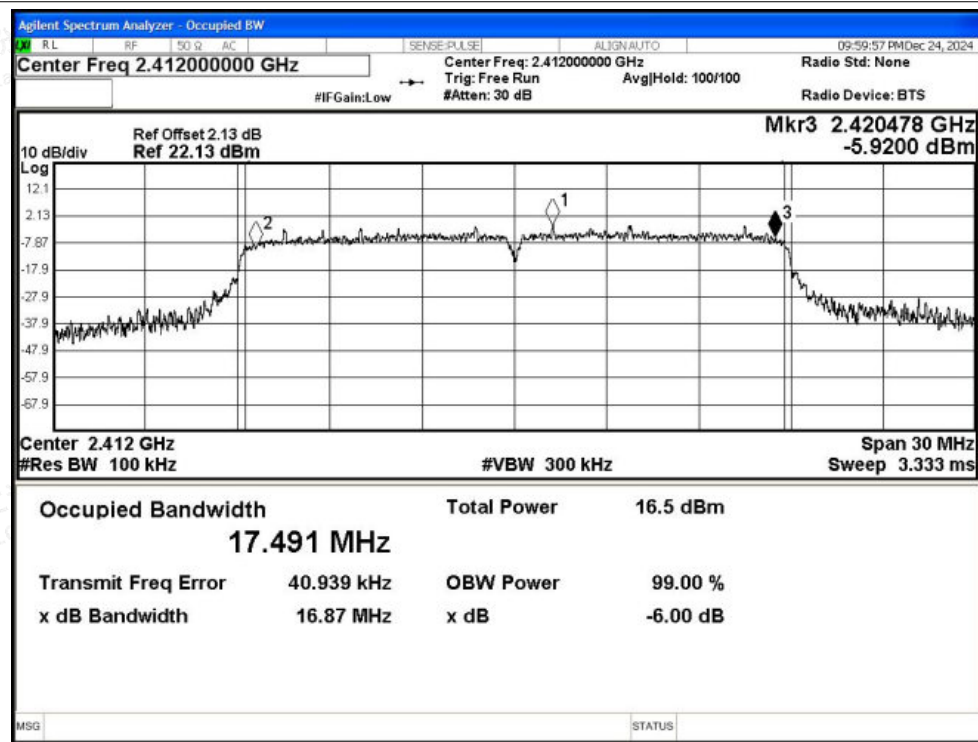
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-6dB Bandwidth NVNT b 2462MHz Ant1



-6dB Bandwidth NVNT n20 2412MHz Ant1



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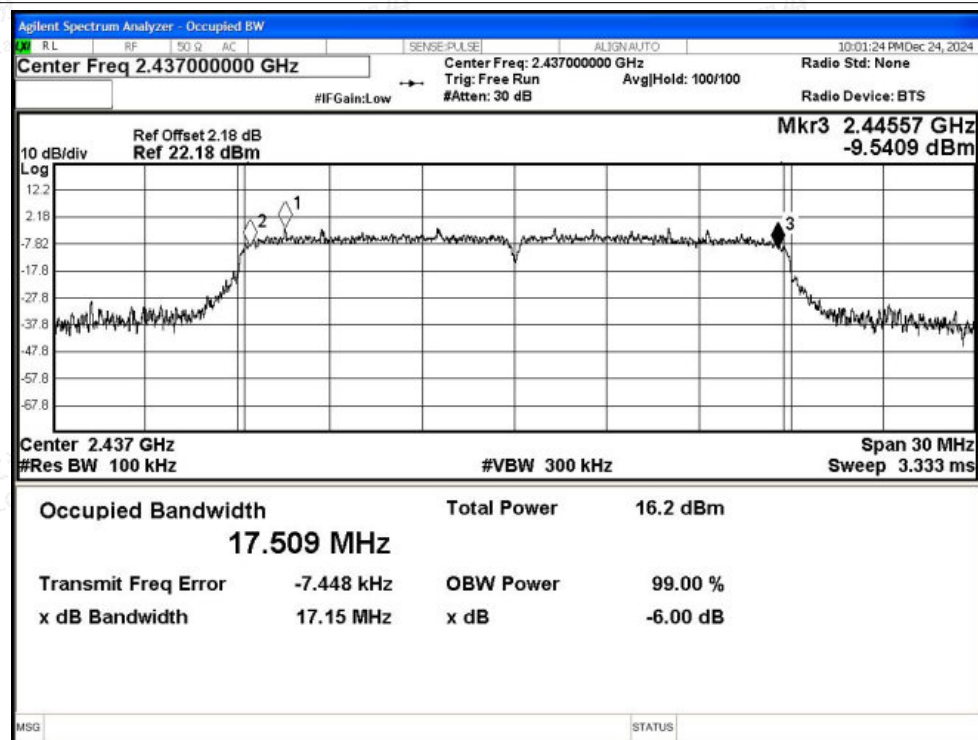
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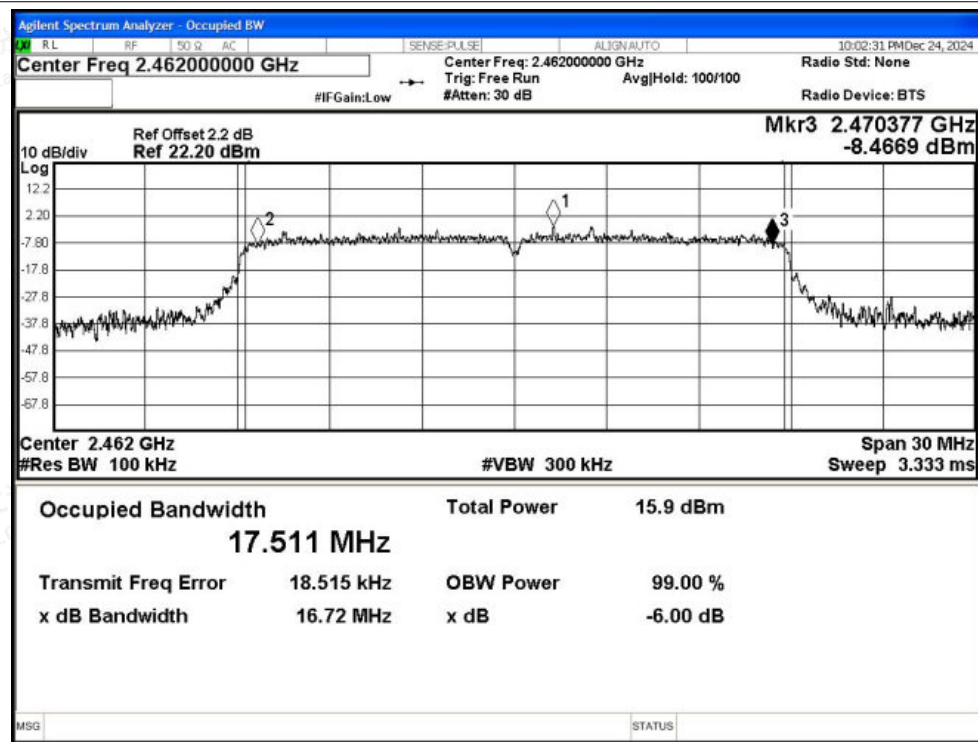
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-6dB Bandwidth NVNT n20 2437MHz Ant1



-6dB Bandwidth NVNT n20 2462MHz Ant1





A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	15.86	30	Pass
NVNT	b	2437	Ant1	15.84	30	Pass
NVNT	b	2462	Ant1	15.37	30	Pass
NVNT	n20	2412	Ant1	14.92	30	Pass
NVNT	n20	2437	Ant1	14.76	30	Pass
NVNT	n20	2462	Ant1	14.49	30	Pass



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A.3 Maximum Power Spectral Density Level

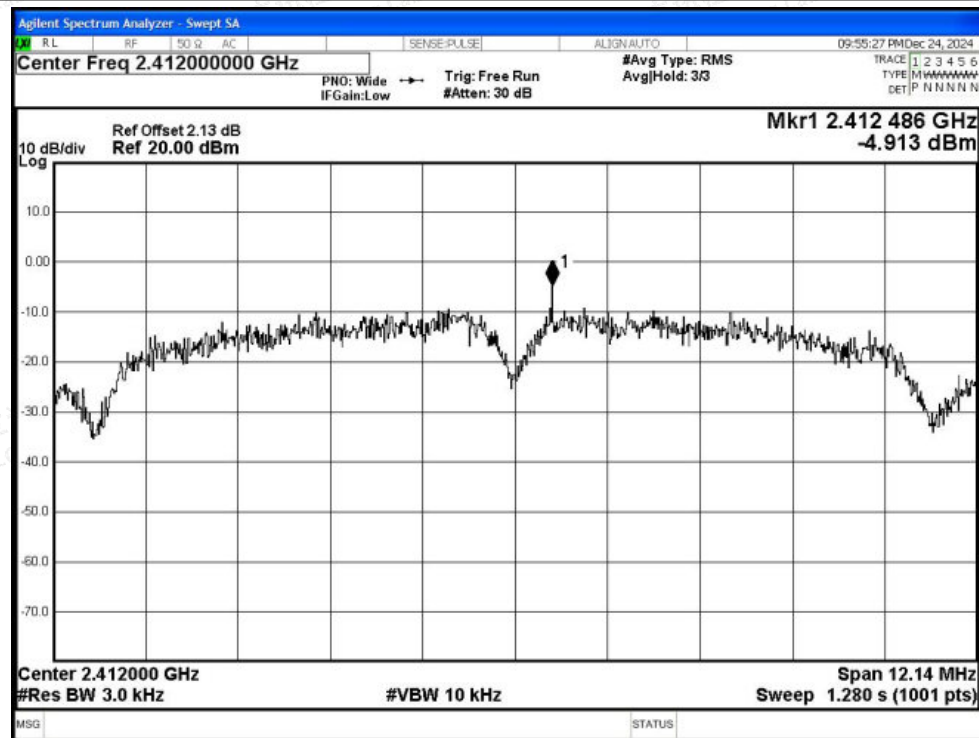
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-4.91	8	Pass
NVNT	b	2437	Ant1	-7.45	8	Pass
NVNT	b	2462	Ant1	-9.17	8	Pass
NVNT	n20	2412	Ant1	-15.04	8	Pass
NVNT	n20	2437	Ant1	-15.65	8	Pass
NVNT	n20	2462	Ant1	-16.37	8	Pass



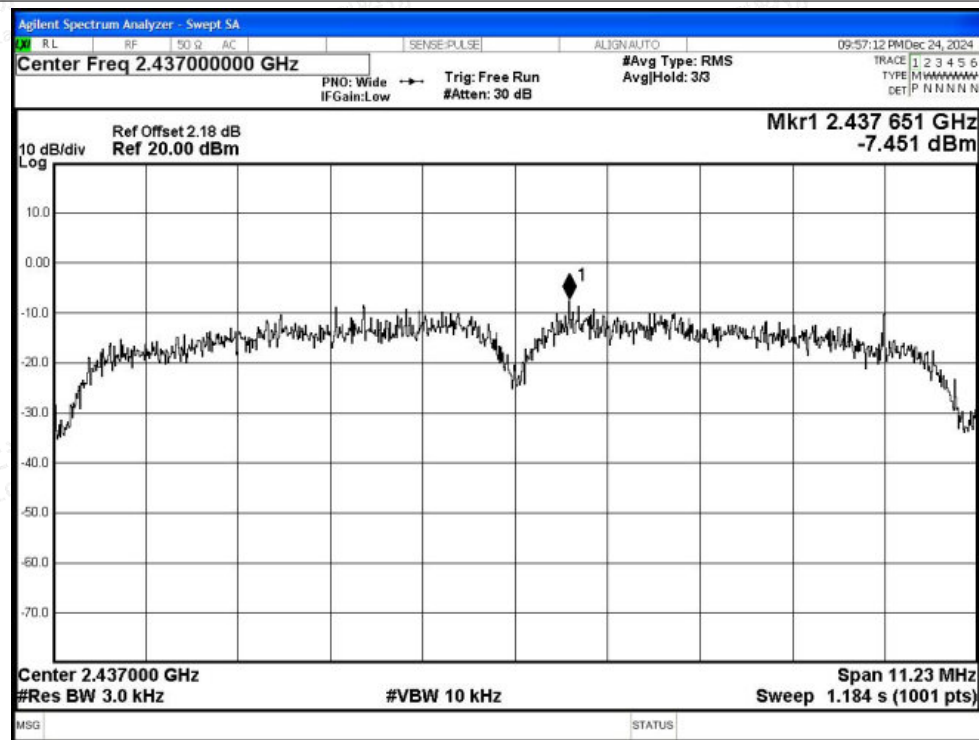


Test Graphs

PSD NVNT b 2412MHz Ant1



PSD NVNT b 2437MHz Ant1



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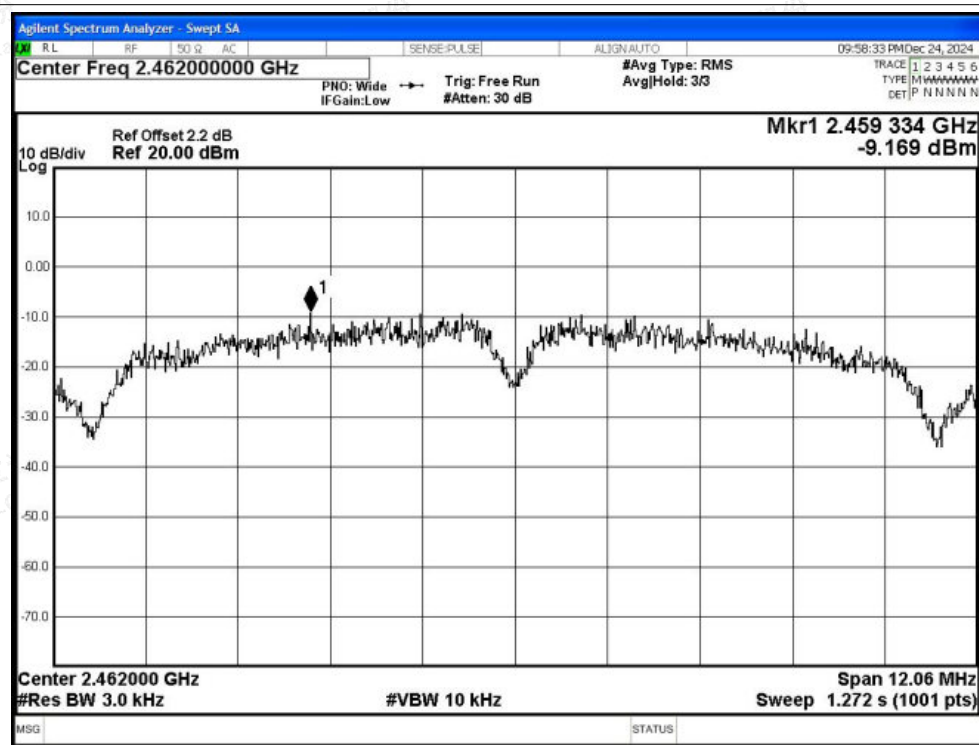
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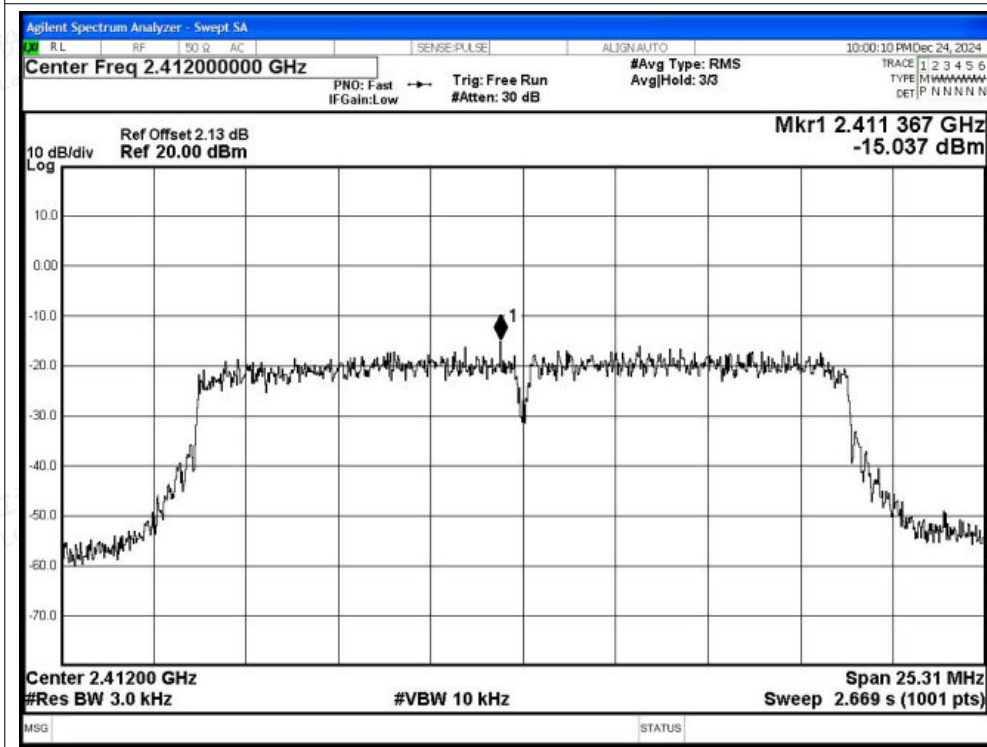
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PSD NVNT b 2462MHz Ant1



PSD NVNT n20 2412MHz Ant1



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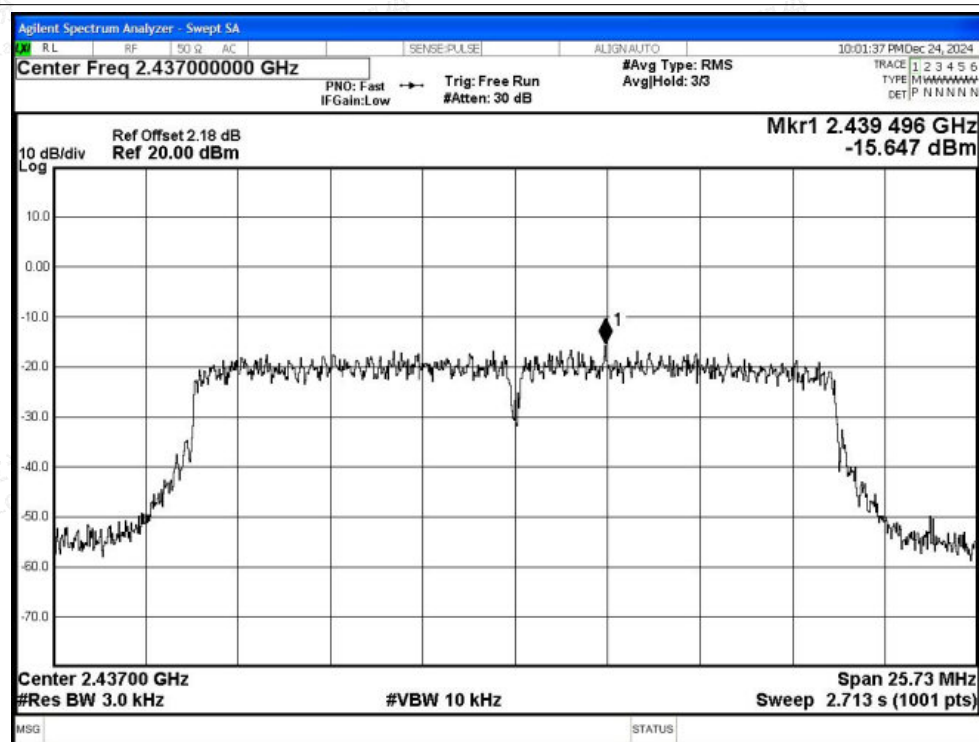
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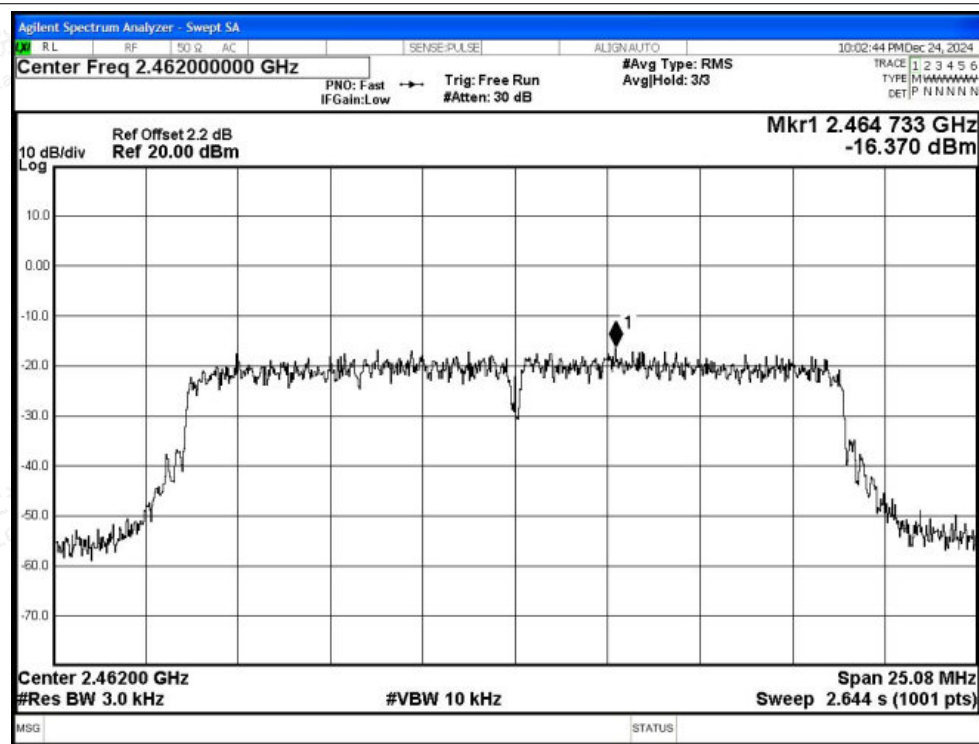
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PSD NVNT n20 2437MHz Ant1



PSD NVNT n20 2462MHz Ant1



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A.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-46.72	-20	Pass
NVNT	b	2462	Ant1	-59.85	-20	Pass
NVNT	n20	2412	Ant1	-29.14	-20	Pass
NVNT	n20	2462	Ant1	-42.15	-20	Pass



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Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



Band Edge NVNT b 2412MHz Ant1 Emission



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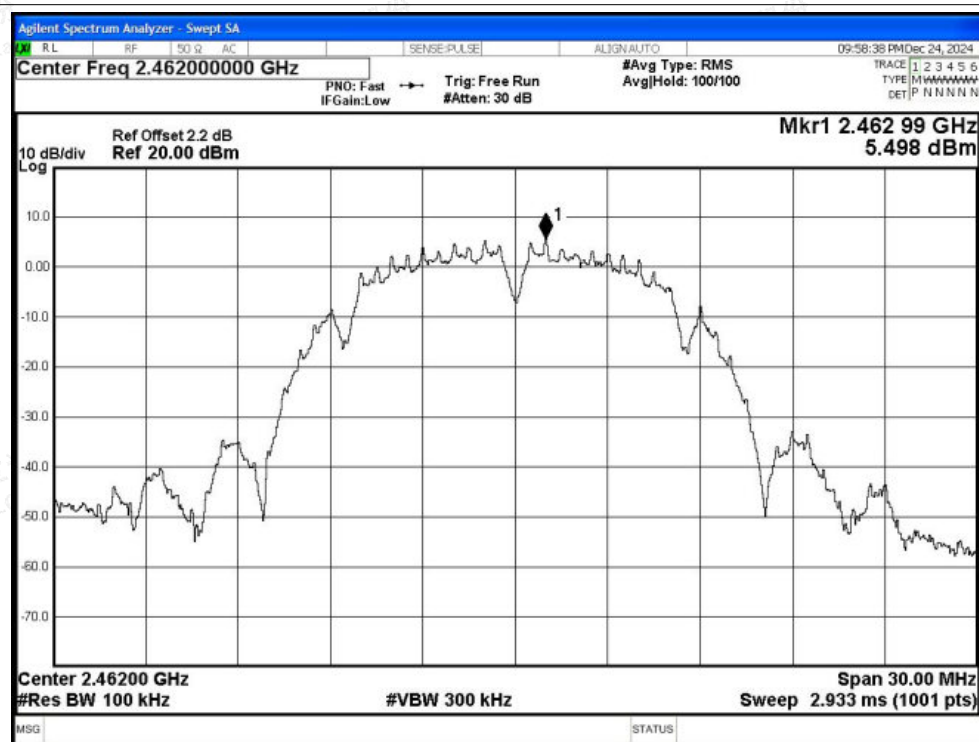
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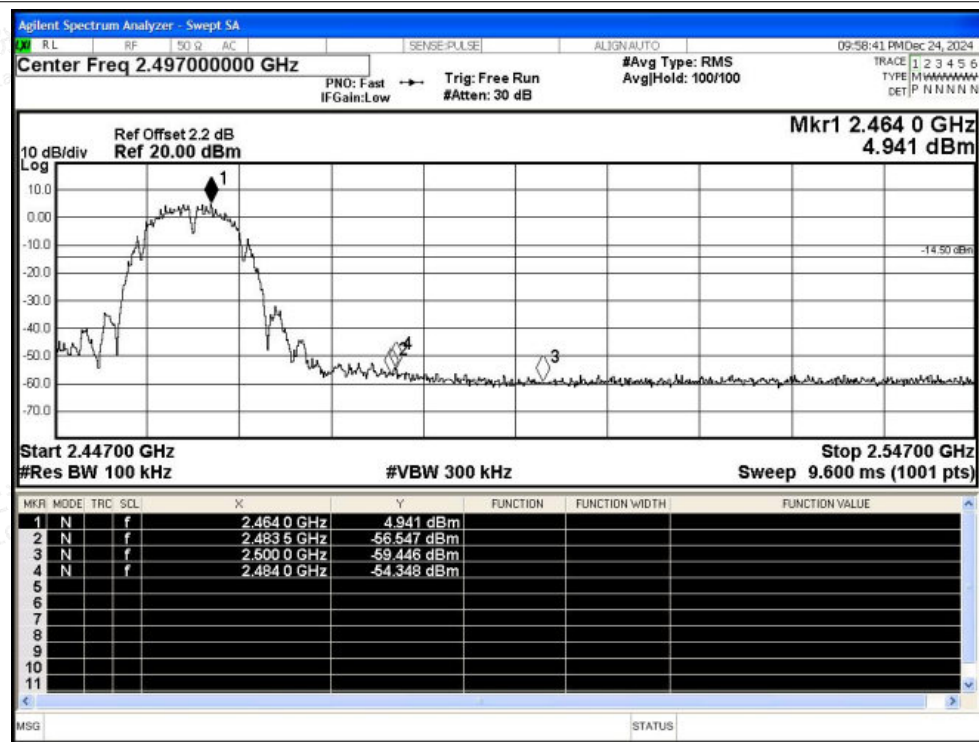
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Band Edge NVNT b 2462MHz Ant1 Ref

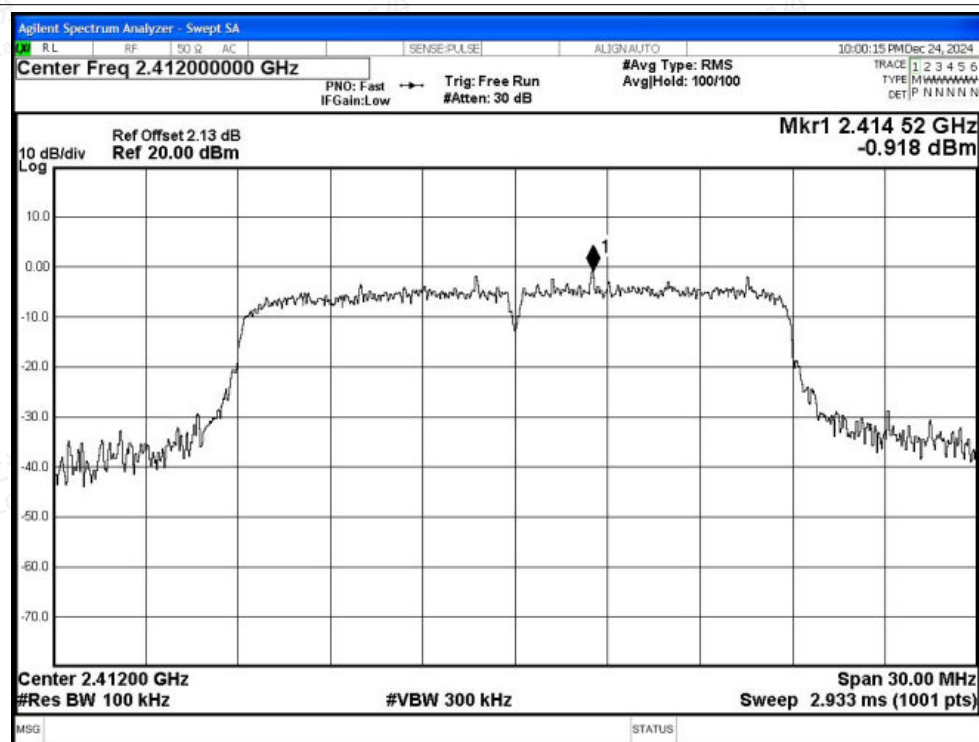


Band Edge NVNT b 2462MHz Ant1 Emission

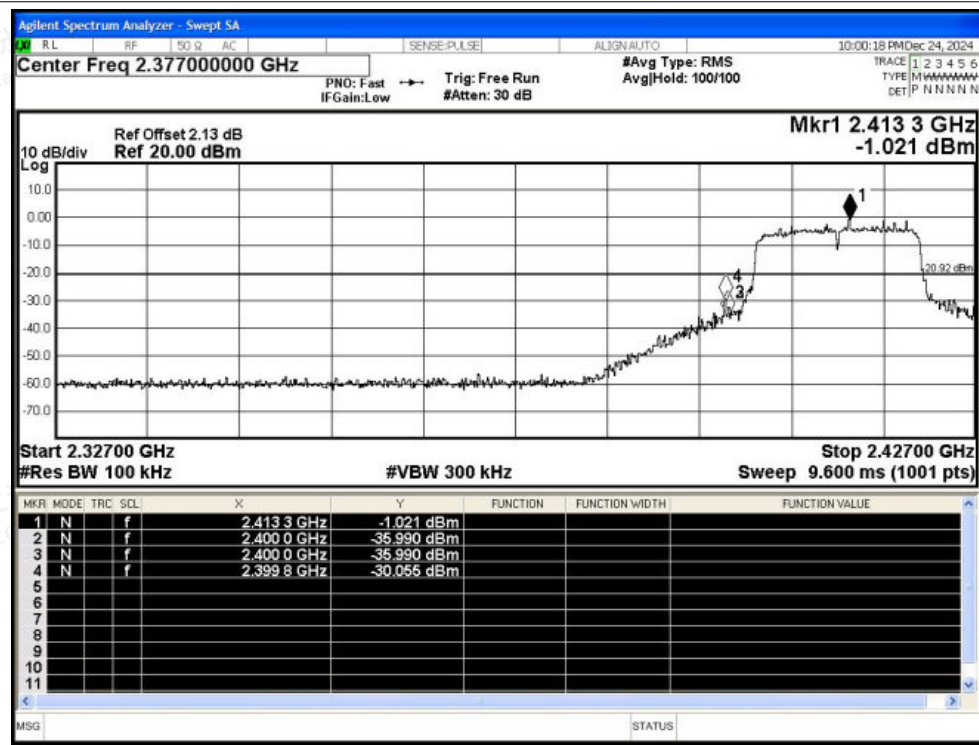




Band Edge NVNT n20 2412MHz Ant1 Ref



Band Edge NVNT n20 2412MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

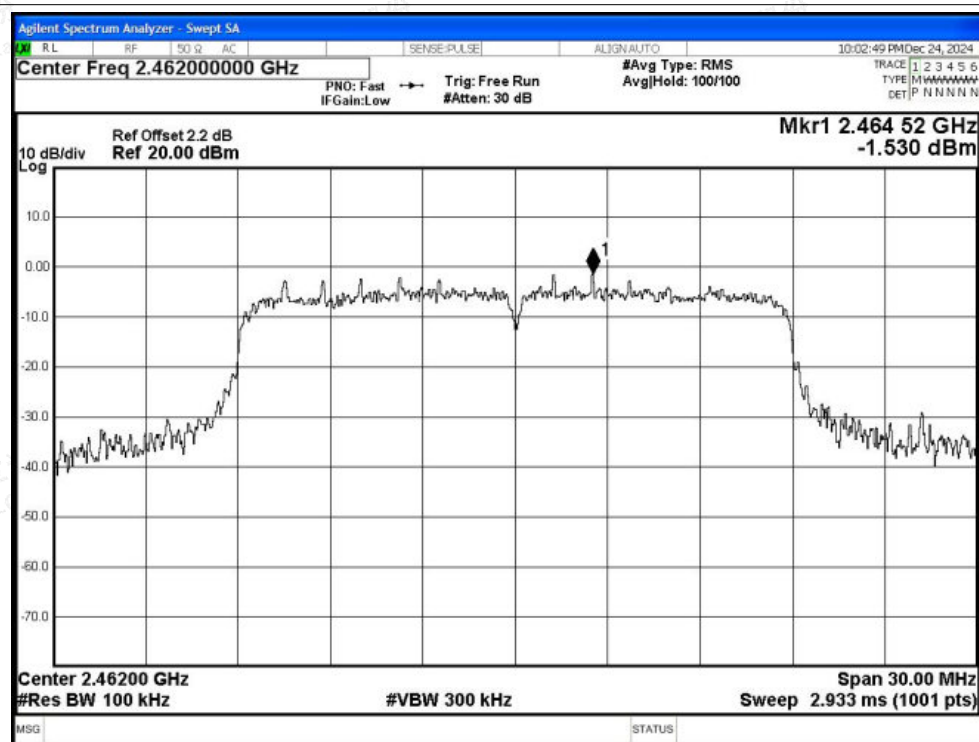
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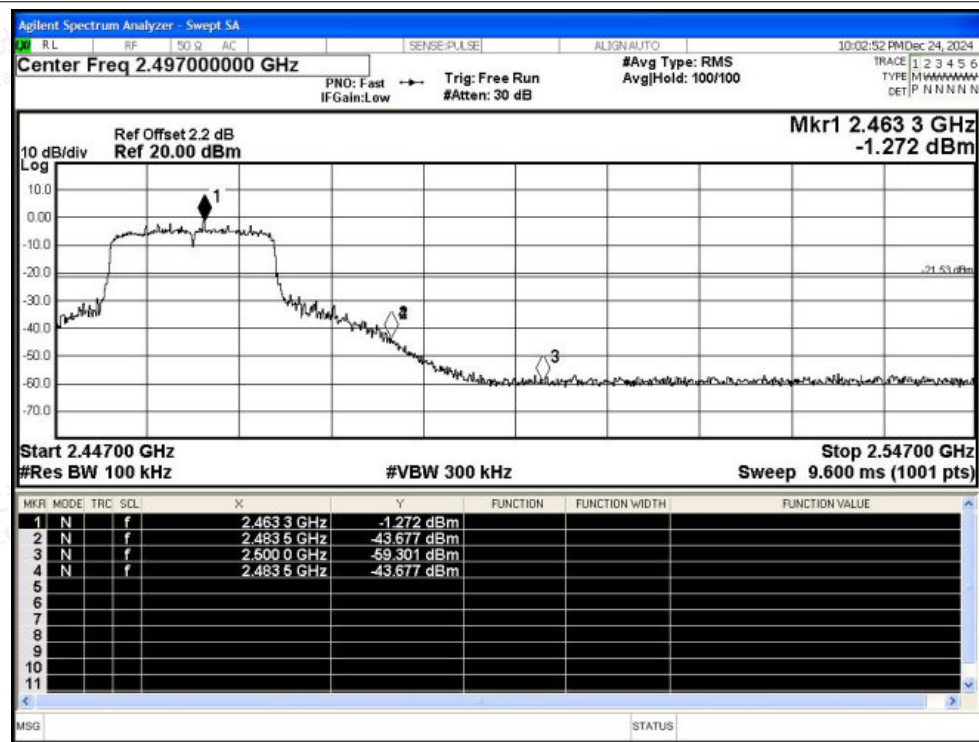
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Band Edge NVNT n20 2462MHz Ant1 Ref



Band Edge NVNT n20 2462MHz Ant1 Emission



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A.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-51.79	-20	Pass
NVNT	b	2437	Ant1	-52.37	-20	Pass
NVNT	b	2462	Ant1	-52.04	-20	Pass
NVNT	n20	2412	Ant1	-45.2	-20	Pass
NVNT	n20	2437	Ant1	-43.97	-20	Pass
NVNT	n20	2462	Ant1	-44.7	-20	Pass



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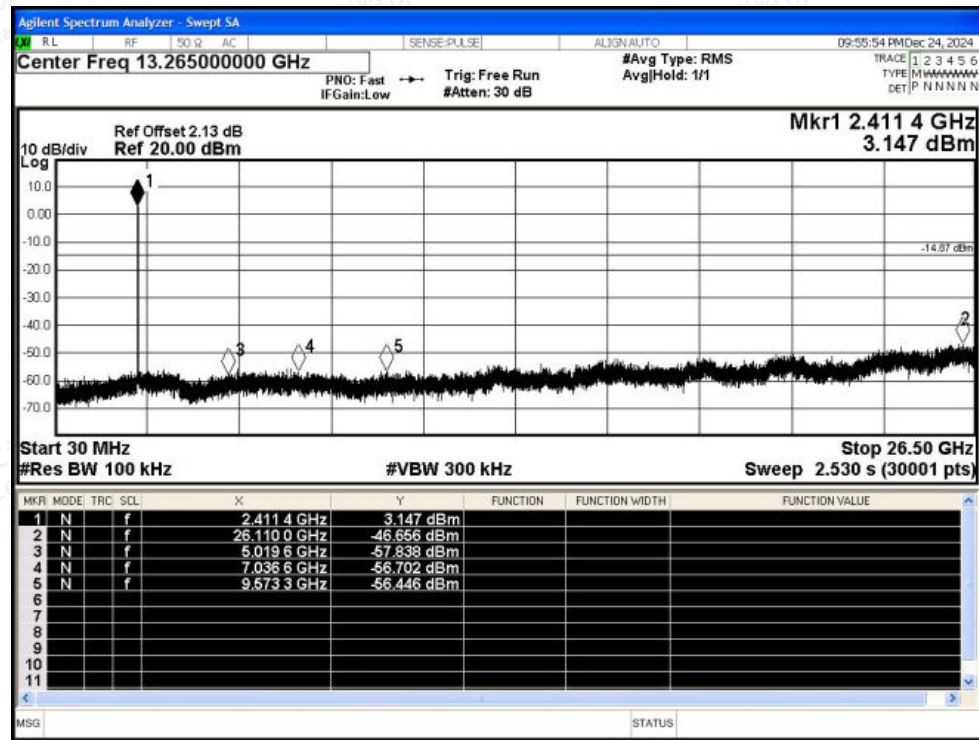


Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref



Tx. Spurious NVNT b 2412MHz Ant1 Emission



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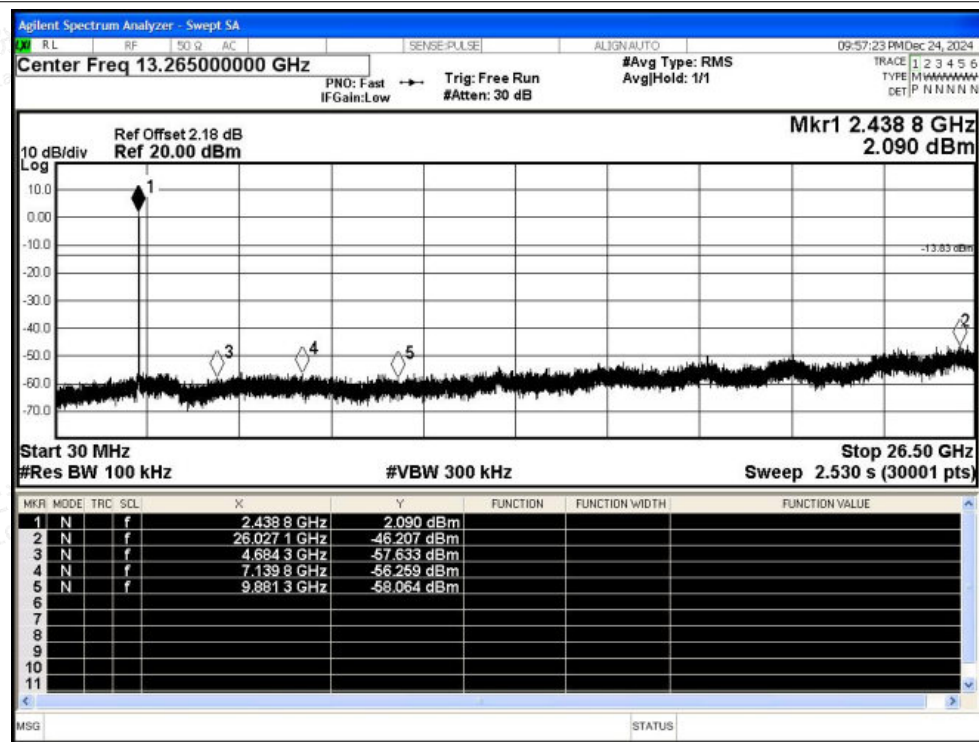
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Tx. Spurious NVNT b 2437MHz Ant1 Ref



Tx. Spurious NVNT b 2437MHz Ant1 Emission



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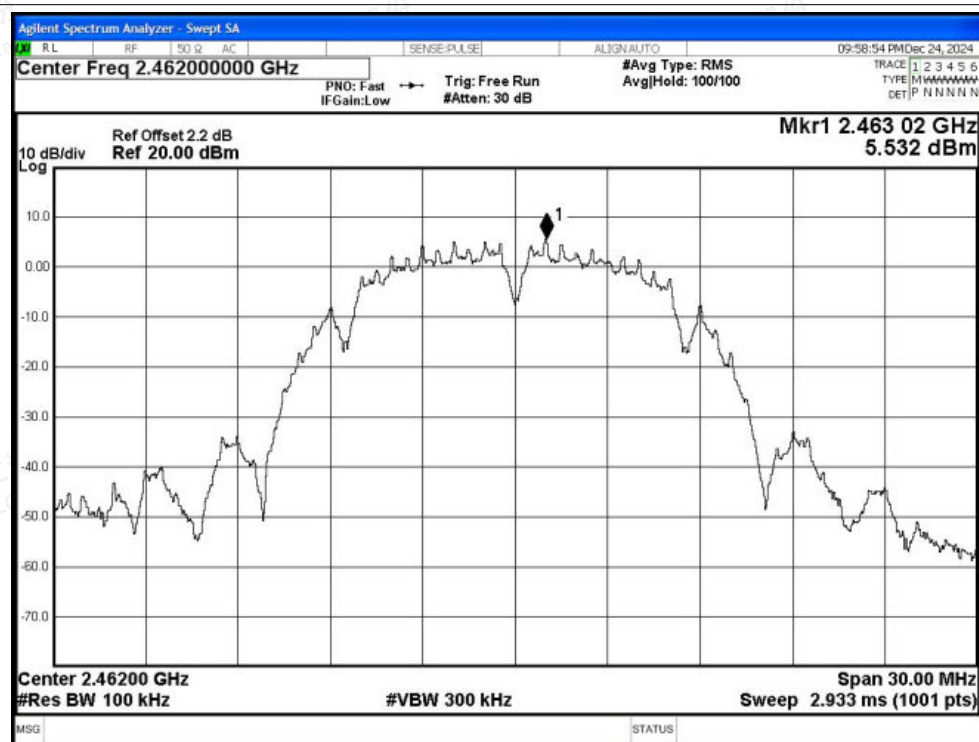
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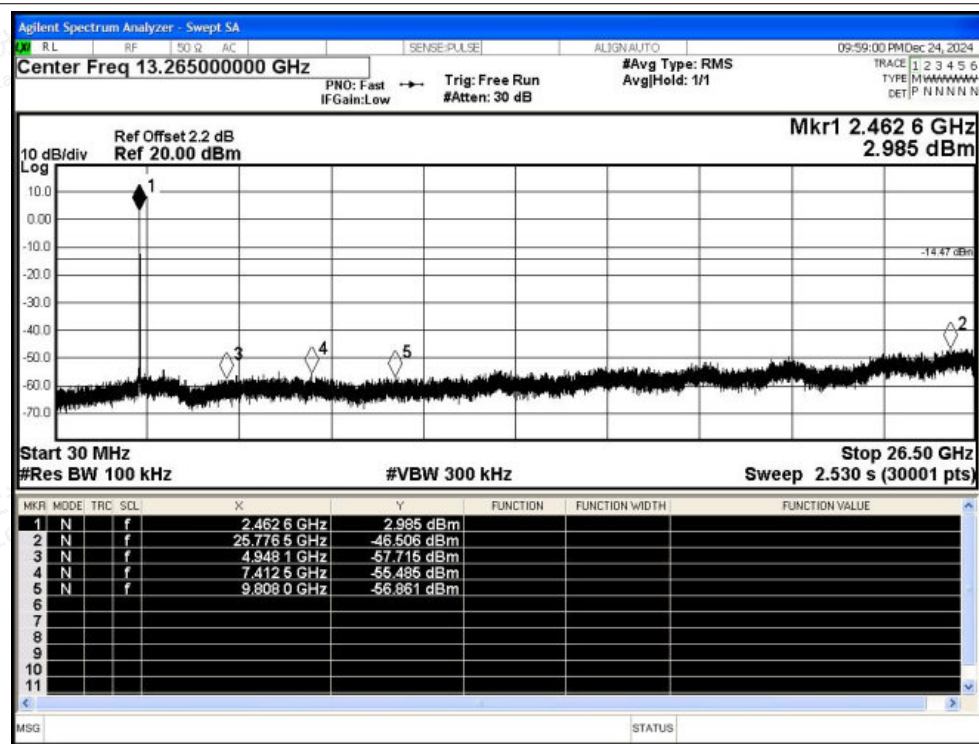
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Tx. Spurious NVNT b 2462MHz Ant1 Ref



Tx. Spurious NVNT b 2462MHz Ant1 Emission



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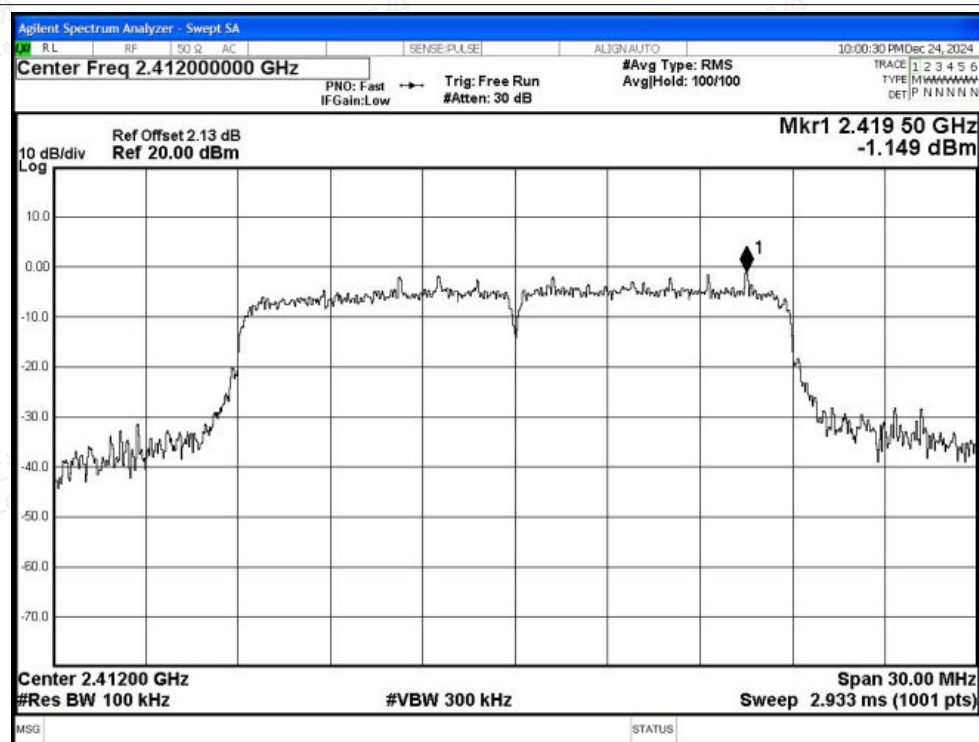
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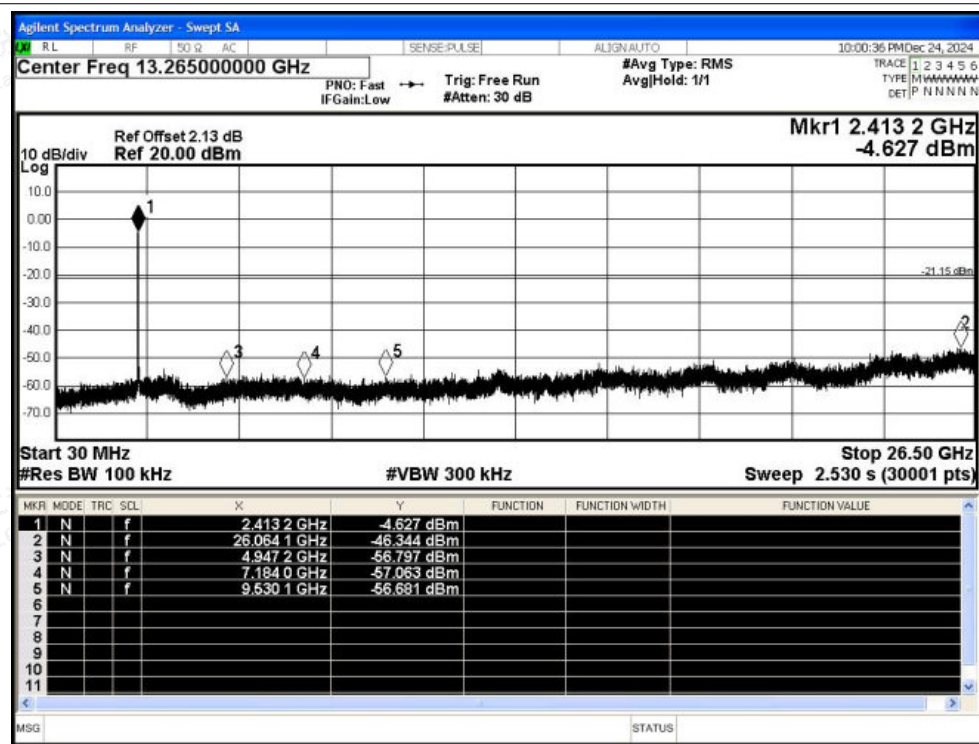
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Tx. Spurious NVNT n20 2412MHz Ant1 Ref



Tx. Spurious NVNT n20 2412MHz Ant1 Emission



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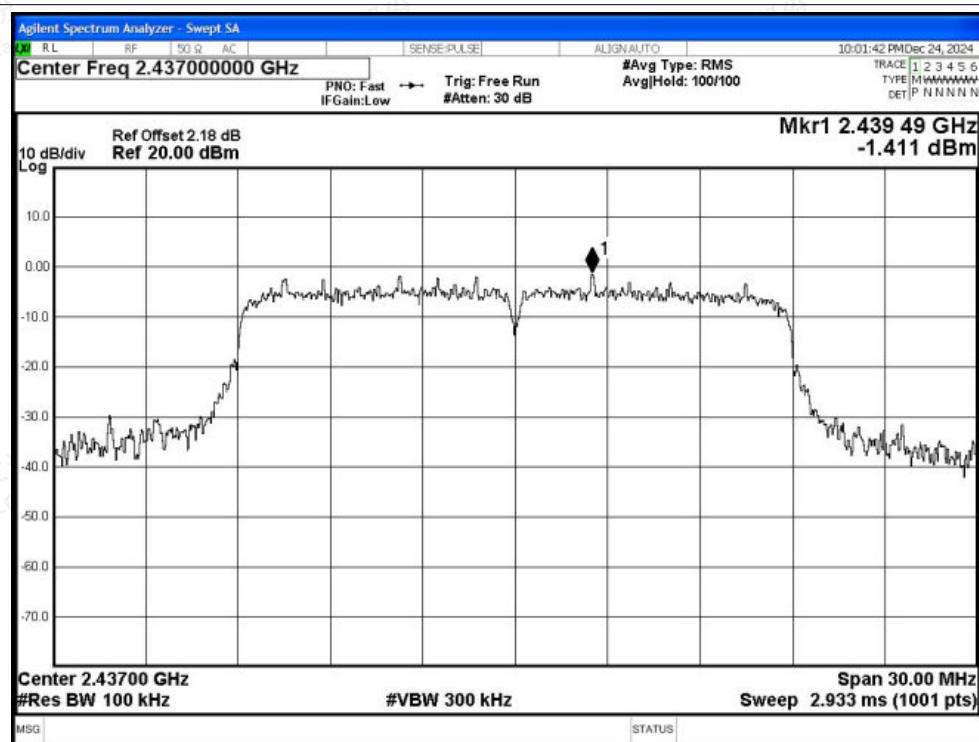
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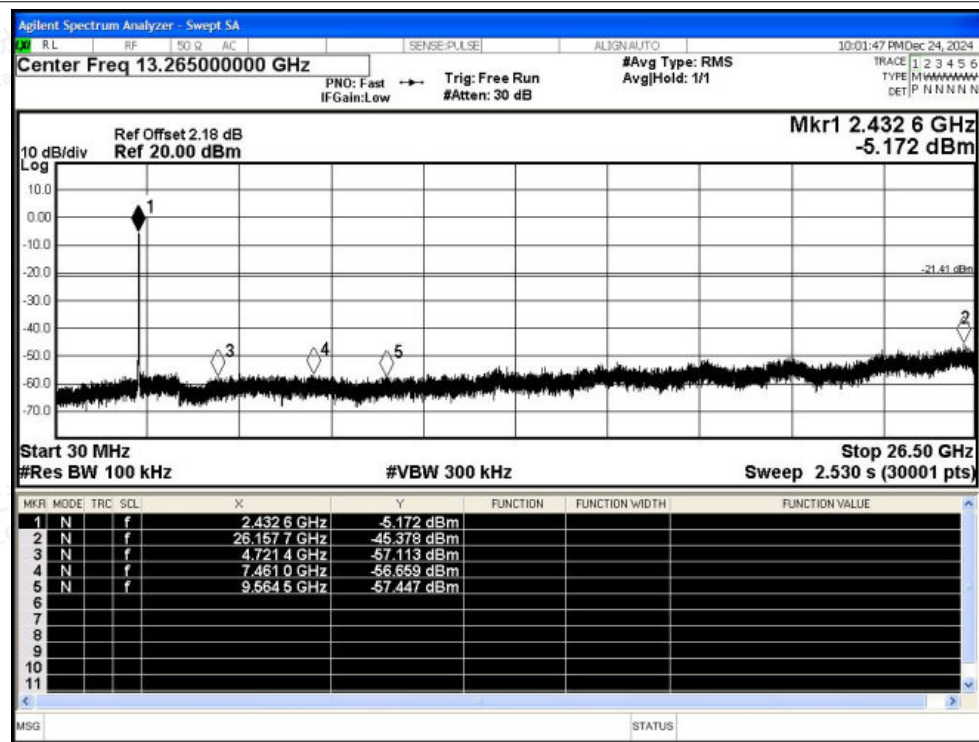
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Tx. Spurious NVNT n20 2437MHz Ant1 Ref

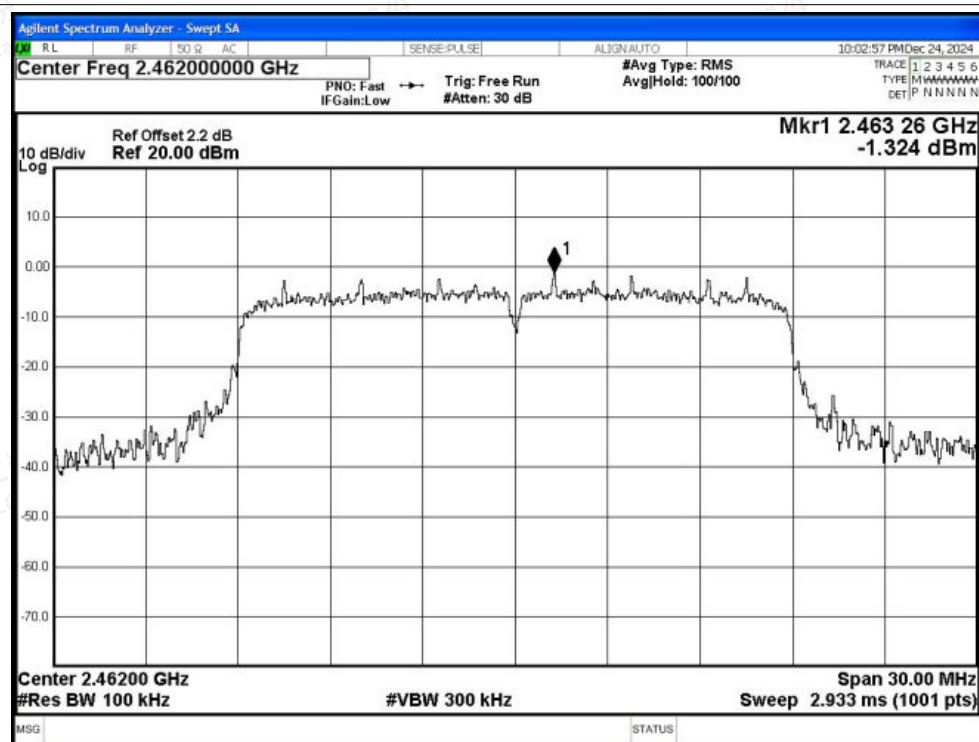


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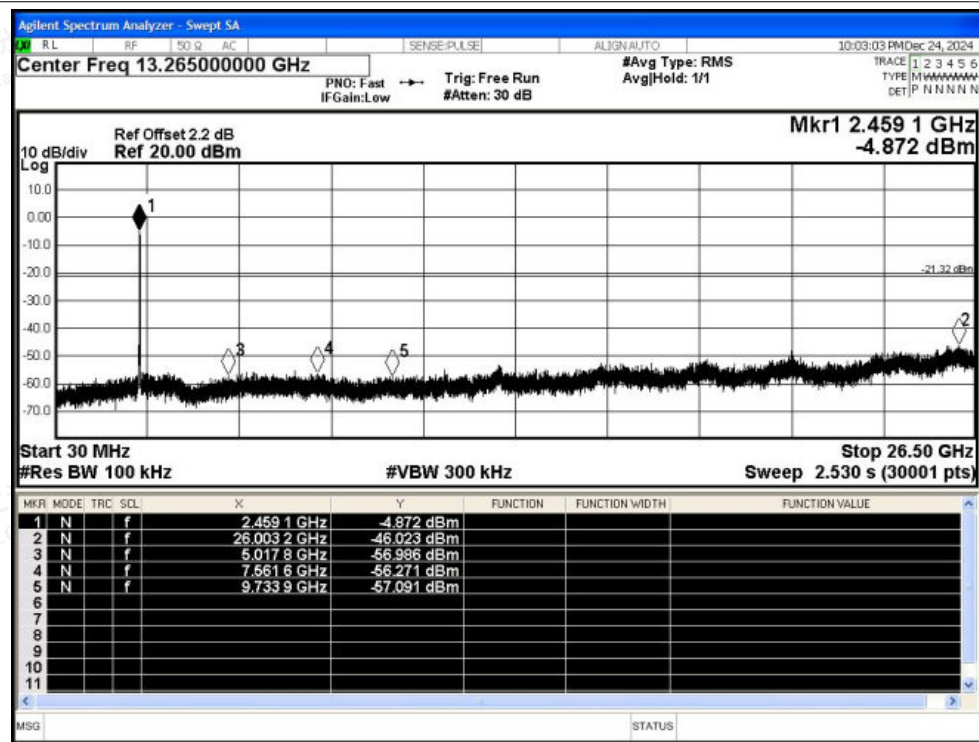




Tx. Spurious NVNT n20 2462MHz Ant1 Ref



Tx. Spurious NVNT n20 2462MHz Ant1 Emission



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A.6 Duty Cycle

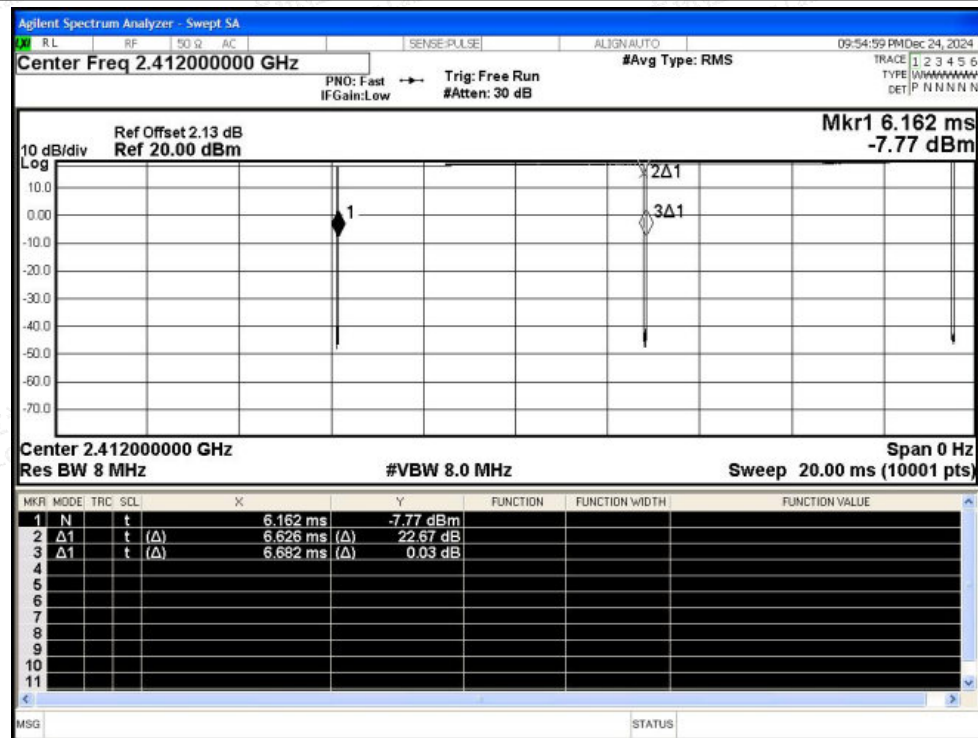
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	99.16	0	0.15
NVNT	b	2437	Ant1	99.13	0	0.15
NVNT	b	2462	Ant1	99.16	0	0.15
NVNT	n20	2412	Ant1	93.78	0.28	1.07
NVNT	n20	2437	Ant1	93.76	0.28	1.07
NVNT	n20	2462	Ant1	93.76	0.28	1.07



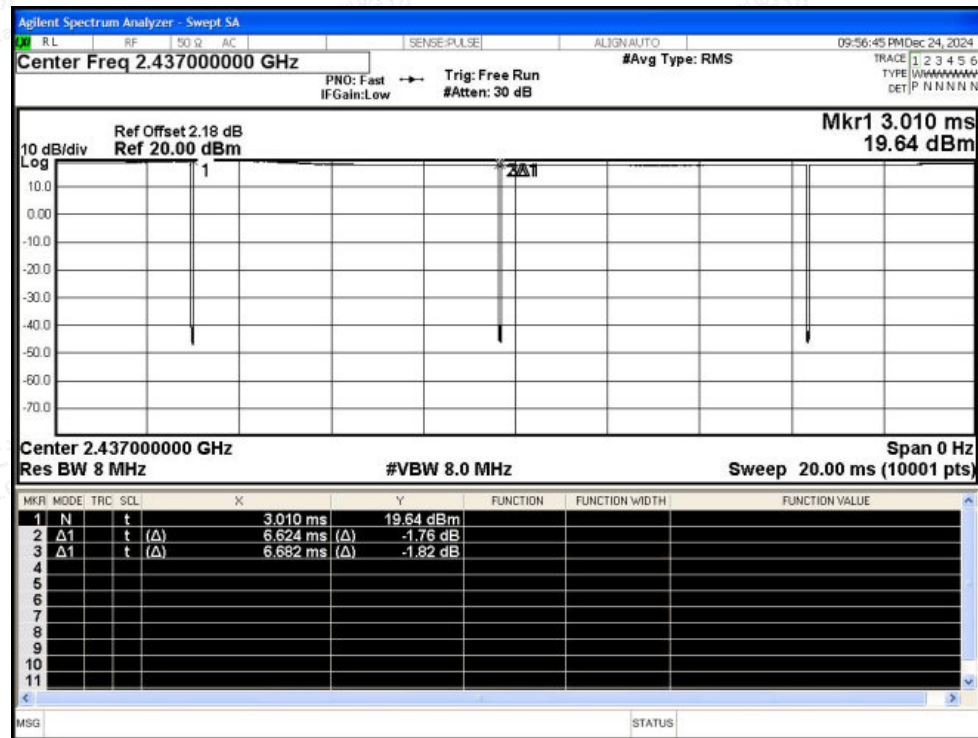


Test Graphs

Duty Cycle NVNT b 2412MHz Ant1



Duty Cycle NVNT b 2437MHz Ant1



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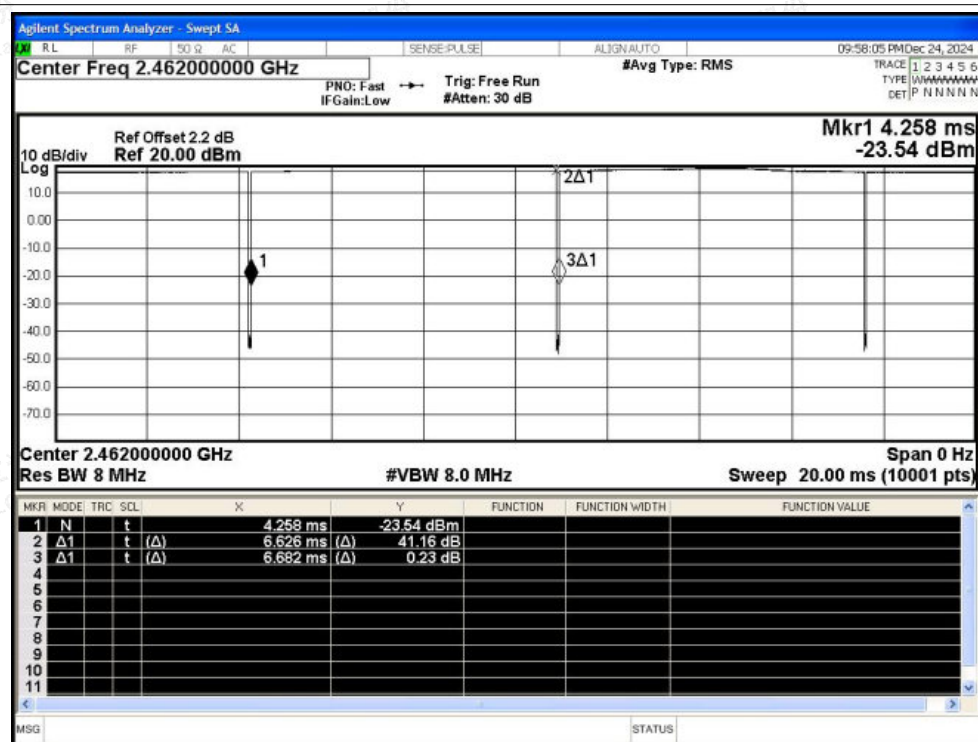
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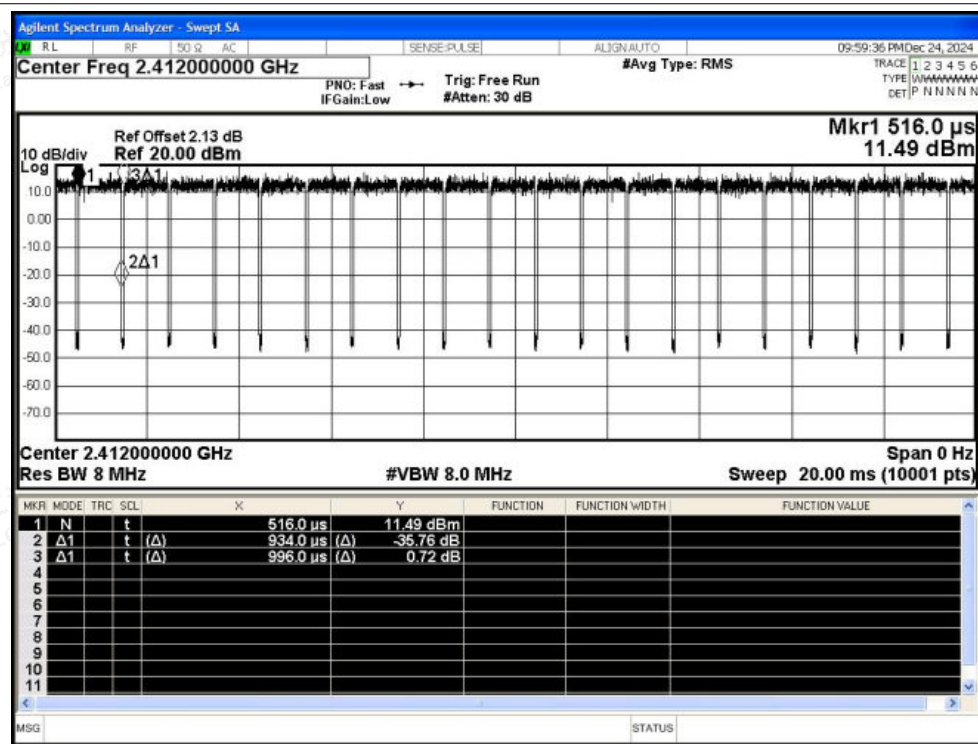
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Duty Cycle NVNT b 2462MHz Ant1



Duty Cycle NVNT n20 2412MHz Ant1



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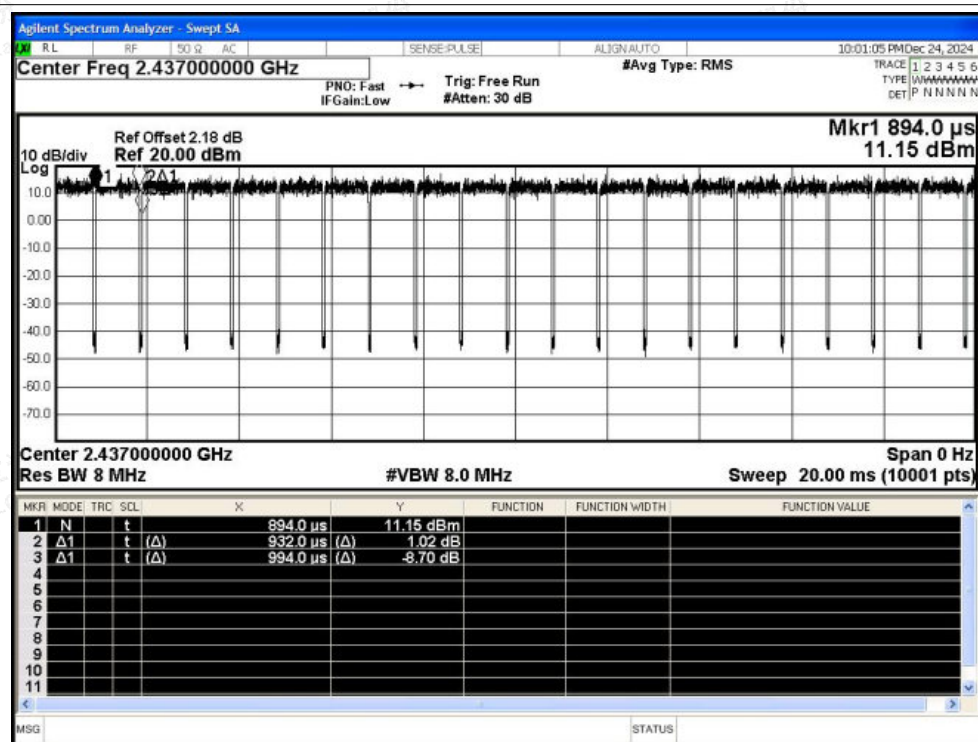
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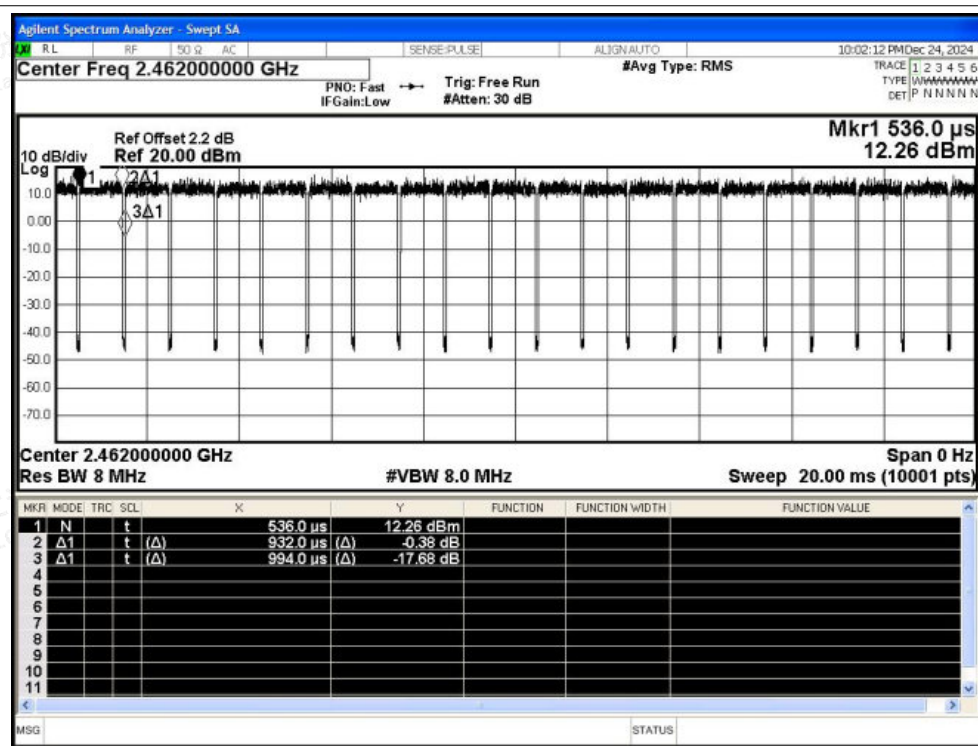
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Duty Cycle NVNT n20 2437MHz Ant1



Duty Cycle NVNT n20 2462MHz Ant1



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A.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	b	2412	Ant1	2310	-49.9	2	-	47.36	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-58.69	2	0	38.57	Average	54	Pass
NVNT	b	2412	Ant1	2388.975	-45.53	2	-	51.73	Peak	74	Pass
NVNT	b	2412	Ant1	2389.794	-55.82	2	0	41.44	Average	54	Pass
NVNT	b	2412	Ant1	2390	-46.96	2	-	50.3	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-55.51	2	0	41.75	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-47.03	2	-	50.23	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-54.33	2	0	42.93	Average	54	Pass
NVNT	b	2462	Ant1	2484.259	-45.11	2	-	52.15	Peak	74	Pass
NVNT	b	2462	Ant1	2483.729	-53.73	2	0	43.53	Average	54	Pass
NVNT	b	2462	Ant1	2500	-49.39	2	-	47.87	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-57.81	2	0	39.45	Average	54	Pass
NVNT	n20	2412	Ant1	2310	-50.95	2	-	46.31	Peak	74	Pass
NVNT	n20	2412	Ant1	2310	-59.51	2	0.28	38.03	Average	54	Pass
NVNT	n20	2412	Ant1	2389.56	-35.99	2	-	61.27	Peak	74	Pass
NVNT	n20	2412	Ant1	2389.56	-49.63	2	0.28	47.91	Average	54	Pass
NVNT	n20	2412	Ant1	2390	-37.13	2	-	60.13	Peak	74	Pass
NVNT	n20	2412	Ant1	2390	-51.63	2	0.28	45.91	Average	54	Pass
NVNT	n20	2462	Ant1	2483.5	-36.8	2	-	60.46	Peak	74	Pass
NVNT	n20	2462	Ant1	2483.5	-51.56	2	0.28	45.98	Average	54	Pass
NVNT	n20	2462	Ant1	2484.63	-35.69	2	-	61.57	Peak	74	Pass
NVNT	n20	2462	Ant1	2483.729	-51.28	2	0.28	46.26	Average	54	Pass
NVNT	n20	2462	Ant1	2500	-50.56	2	-	46.7	Peak	74	Pass
NVNT	n20	2462	Ant1	2500	-57.93	2	0.28	39.61	Average	54	Pass



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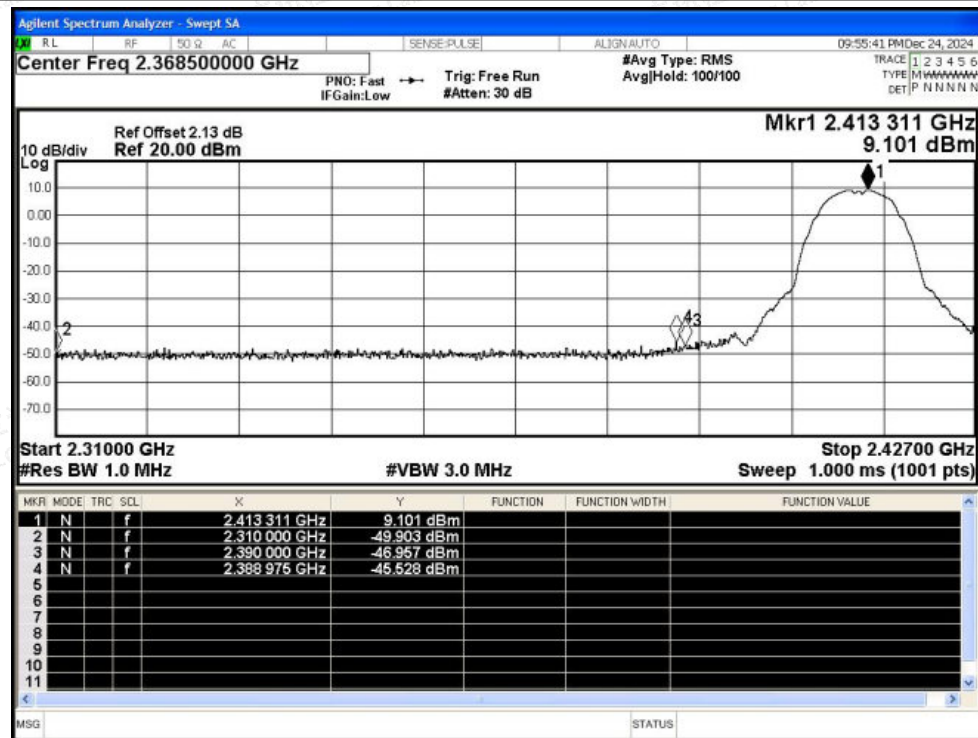
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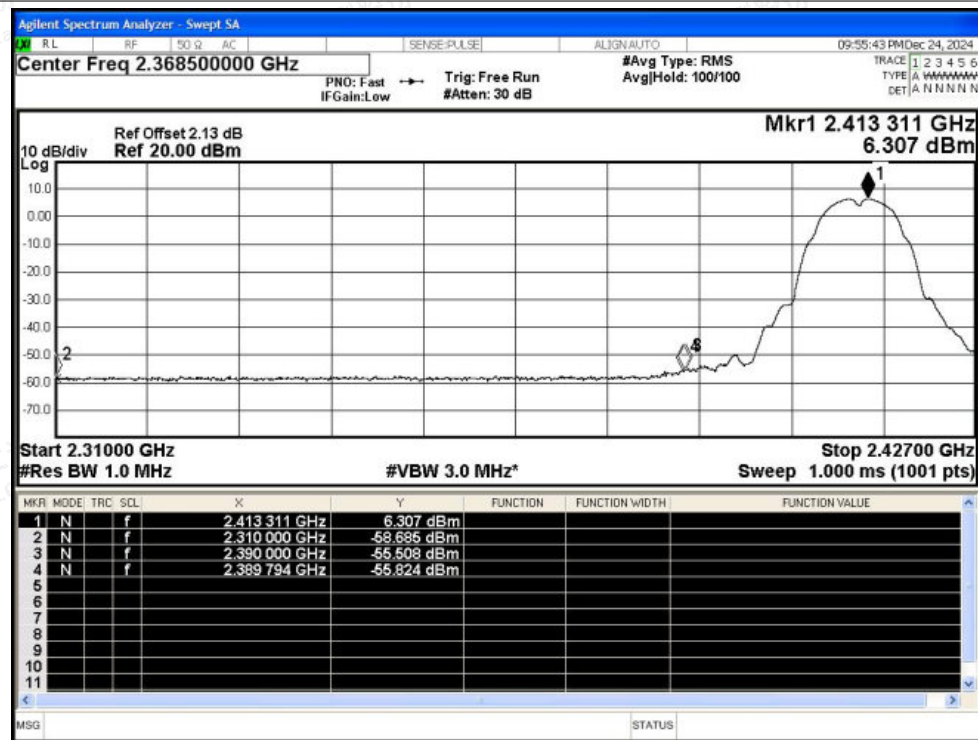


Test Graphs

Restrict Band NVNT b 2412MHz Ant1 Peak



Restrict Band NVNT b 2412MHz Ant1 Average



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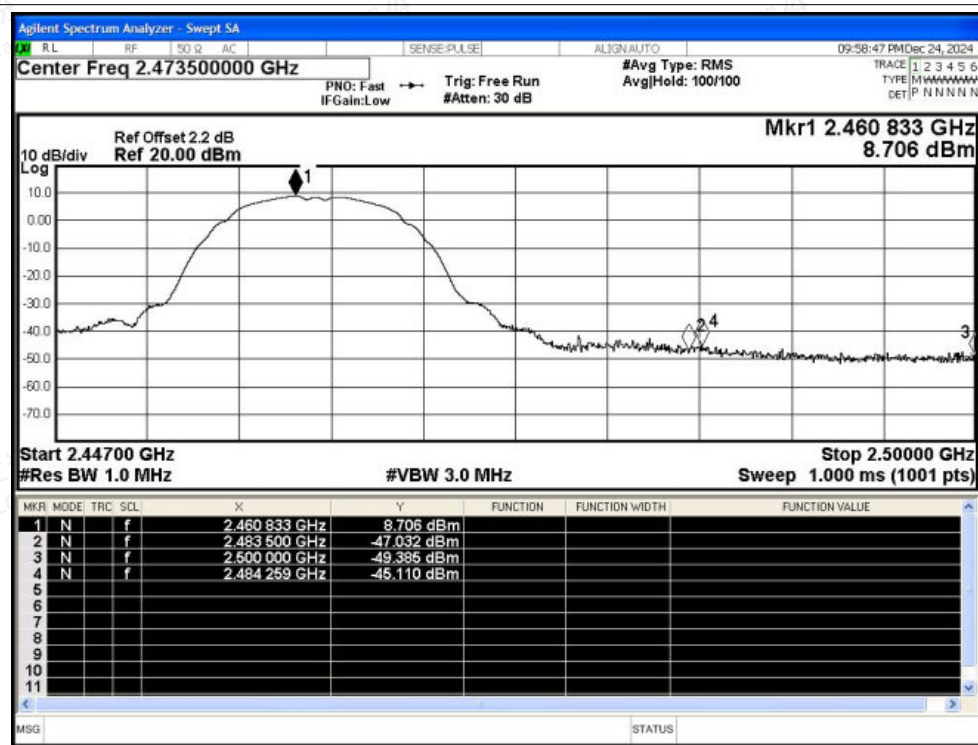
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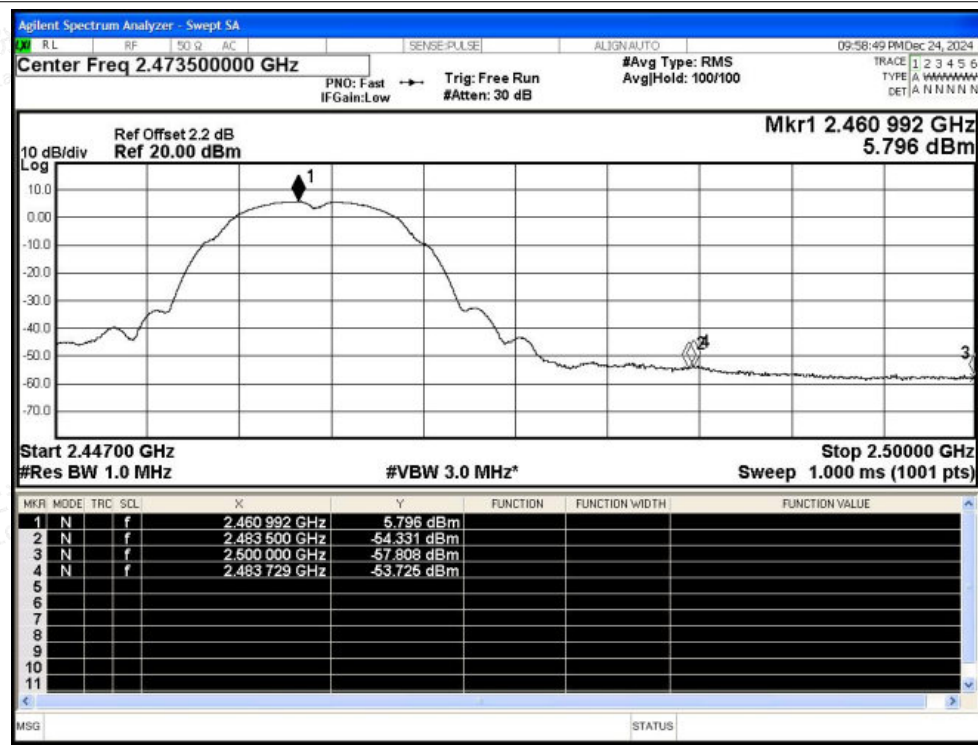
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Restrict Band NVNT b 2462MHz Ant1 Peak



Restrict Band NVNT b 2462MHz Ant1 Average



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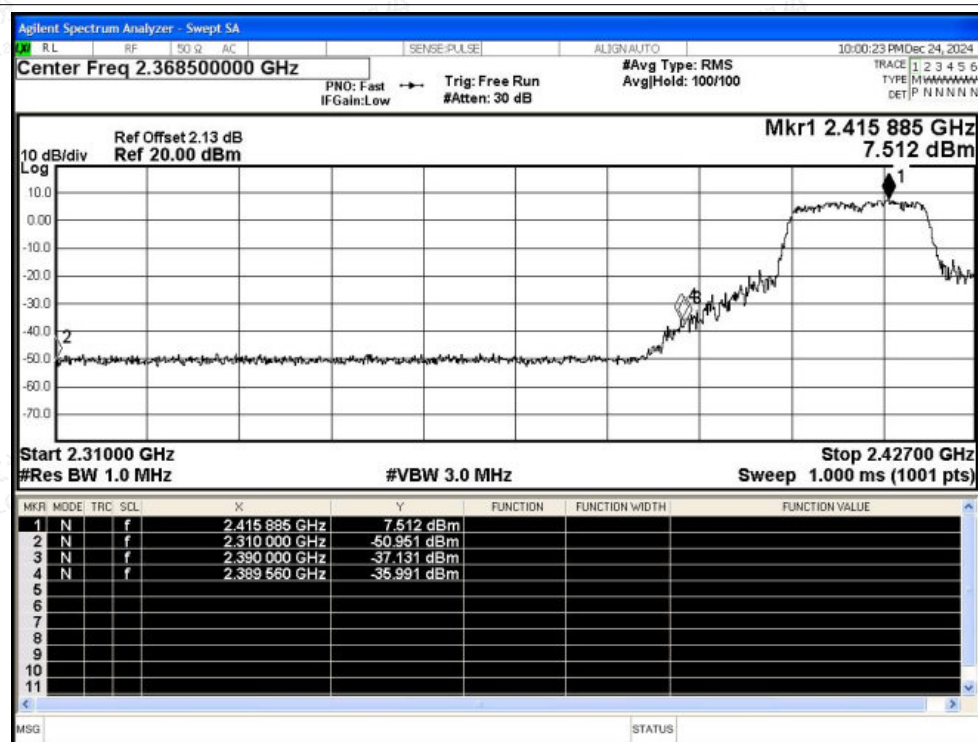
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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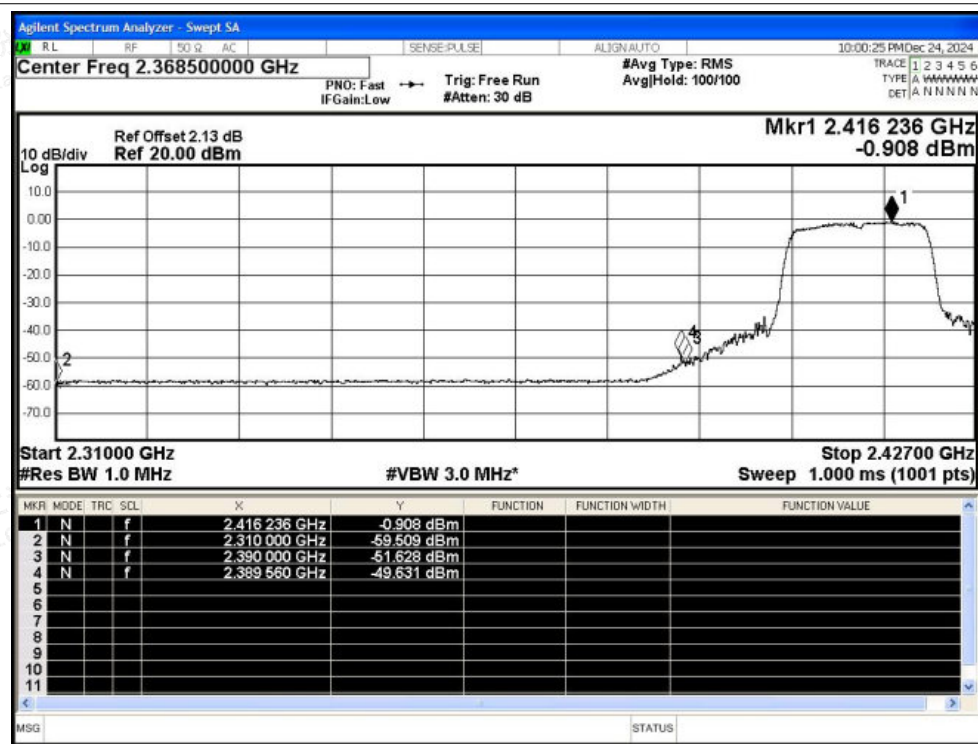
Scan code to check authenticity



Restrict Band NVNT n20 2412MHz Ant1 Peak



Restrict Band NVNT n20 2412MHz Ant1 Average



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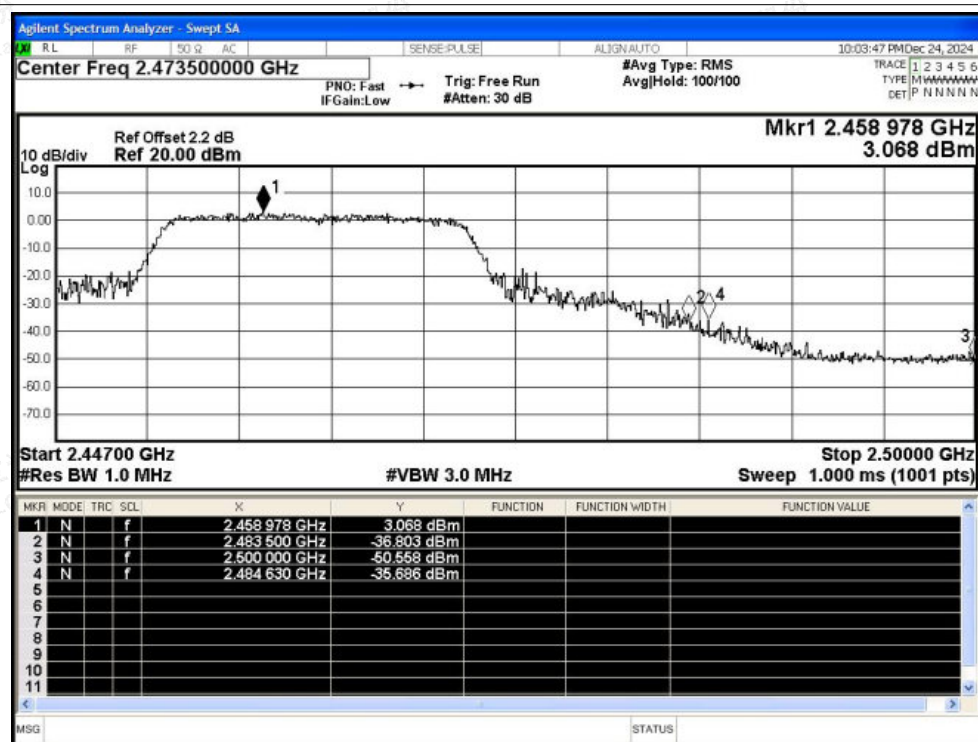
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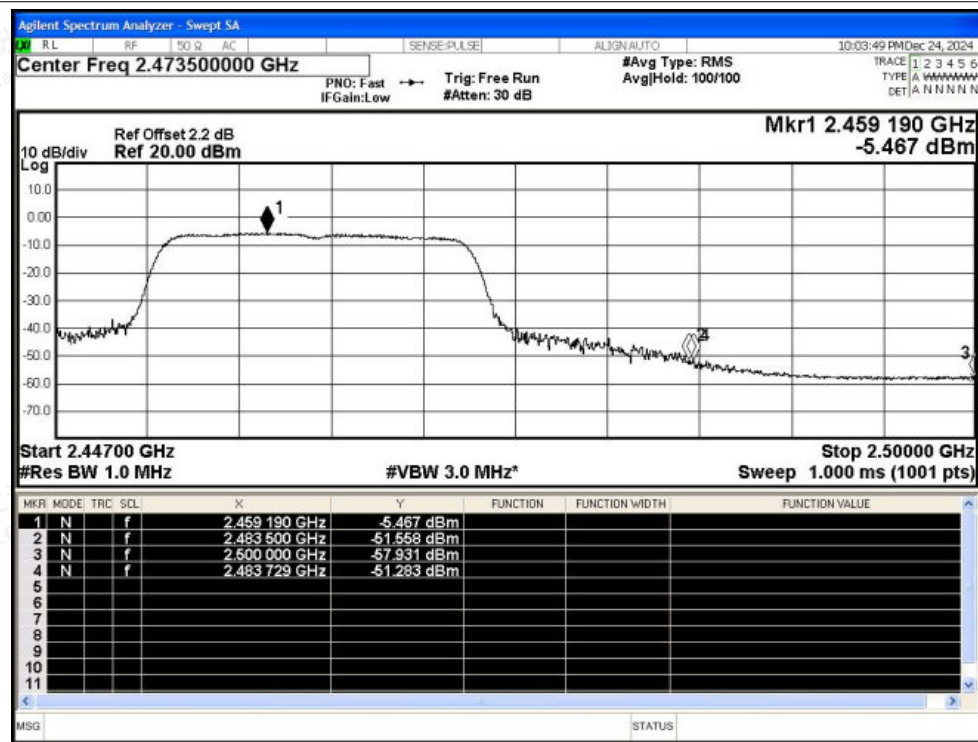
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Restrict Band NVNT n20 2462MHz Ant1 Peak



Restrict Band NVNT n20 2462MHz Ant1 Average



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