



Appendix A

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: Permanent Outdoor lights

Test Model: S1040

Environmental Conditions

Temperature:	23.1 °C
Relative Humidity:	52.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Taylor Hu
Supervised by:	Ling Zhu



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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	7.389	>=0.5	Pass
NVNT	b	2437	Ant1	8.504	>=0.5	Pass
NVNT	b	2462	Ant1	8.036	>=0.5	Pass
NVNT	g	2412	Ant1	13.345	>=0.5	Pass
NVNT	g	2437	Ant1	15.437	>=0.5	Pass
NVNT	g	2462	Ant1	15.429	>=0.5	Pass
NVNT	n20	2412	Ant1	15.693	>=0.5	Pass
NVNT	n20	2437	Ant1	14.764	>=0.5	Pass
NVNT	n20	2462	Ant1	16.523	>=0.5	Pass
NVNT	n40	2422	Ant1	19.152	>=0.5	Pass
NVNT	n40	2437	Ant1	26.373	>=0.5	Pass
NVNT	n40	2452	Ant1	29.44	>=0.5	Pass

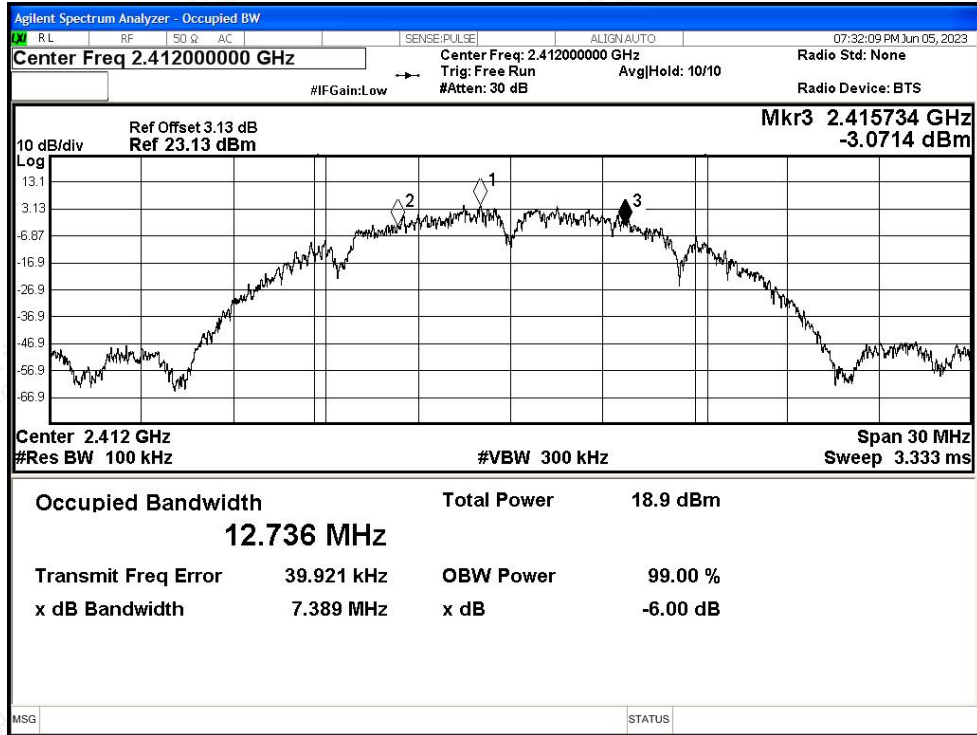


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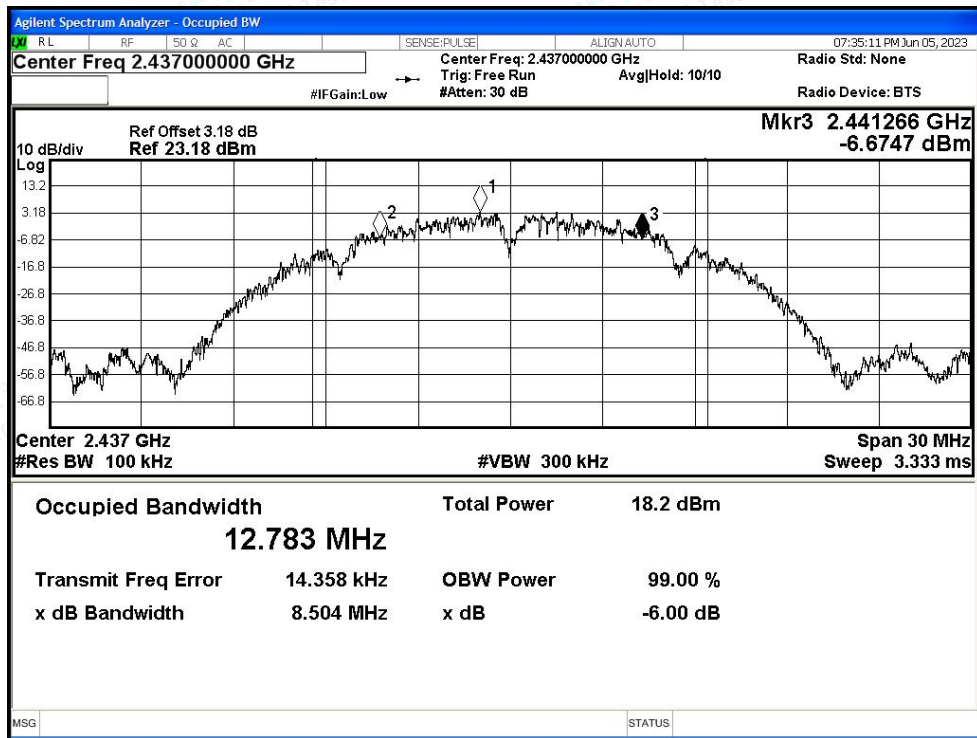


Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1



-6dB Bandwidth NVNT b 2437MHz Ant1



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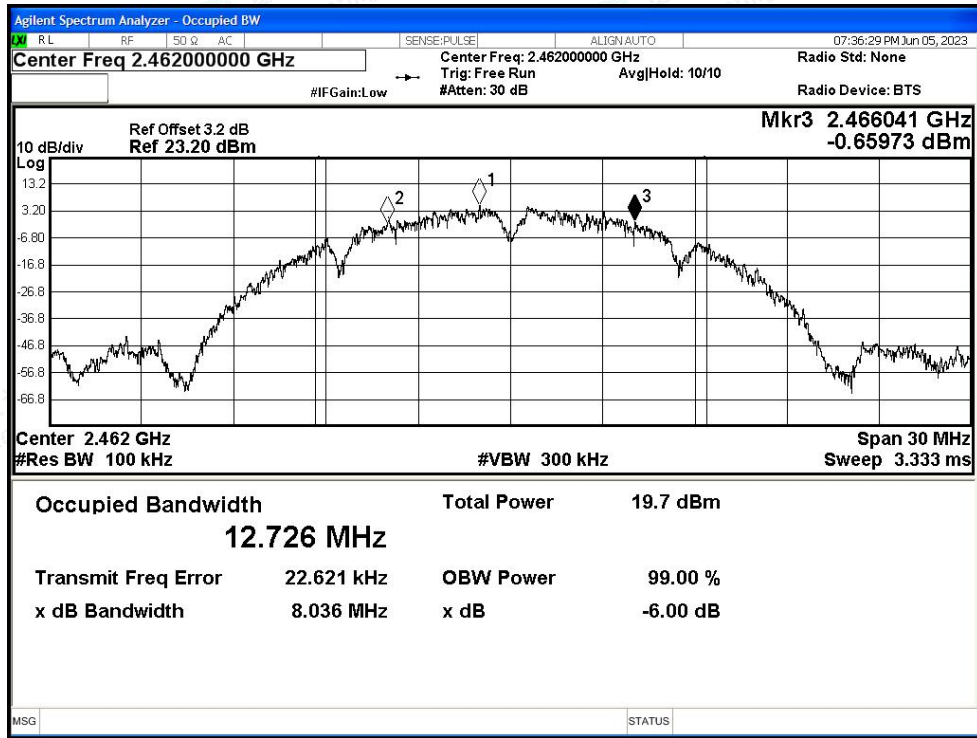
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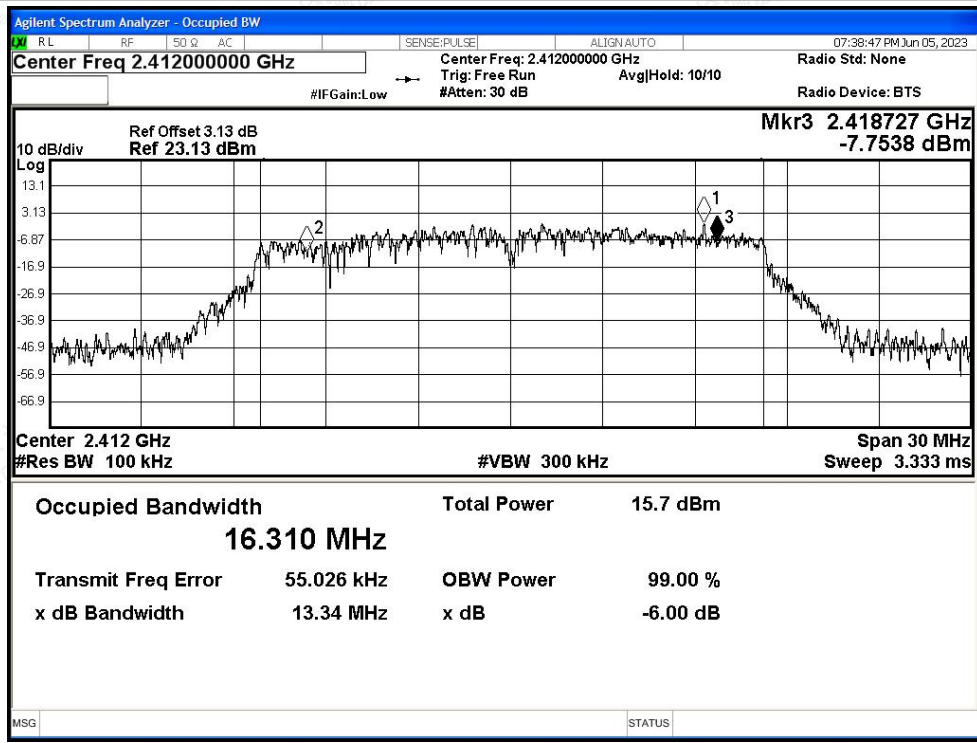
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-6dB Bandwidth NVNT b 2462MHz Ant1



-6dB Bandwidth NVNT g 2412MHz Ant1



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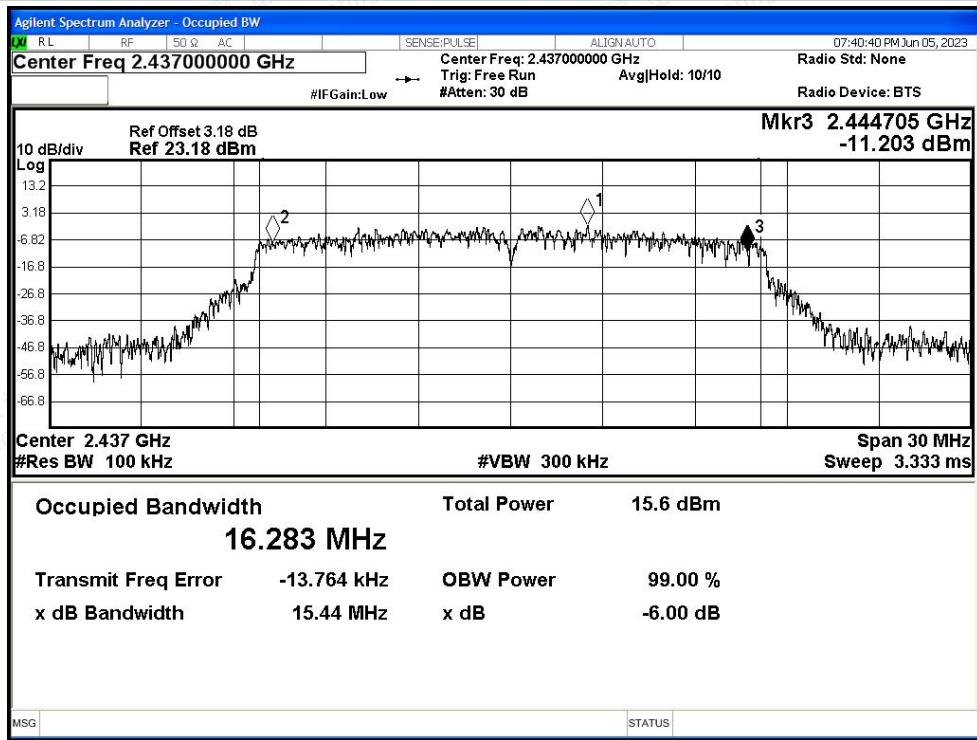
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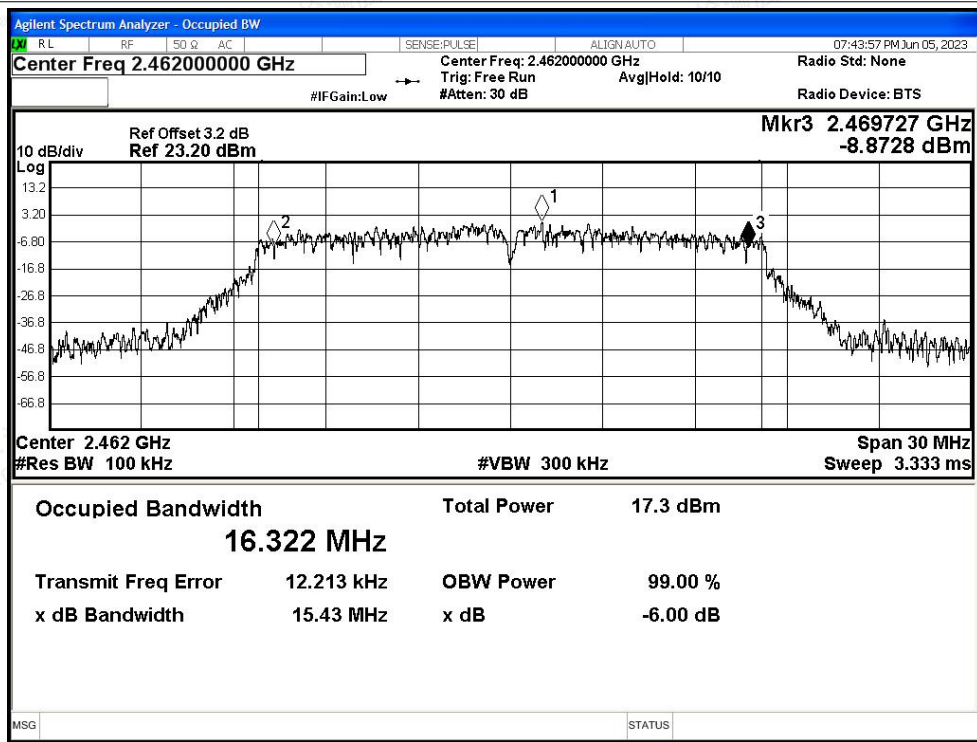
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-6dB Bandwidth NVNT g 2437MHz Ant1



-6dB Bandwidth NVNT g 2462MHz Ant1



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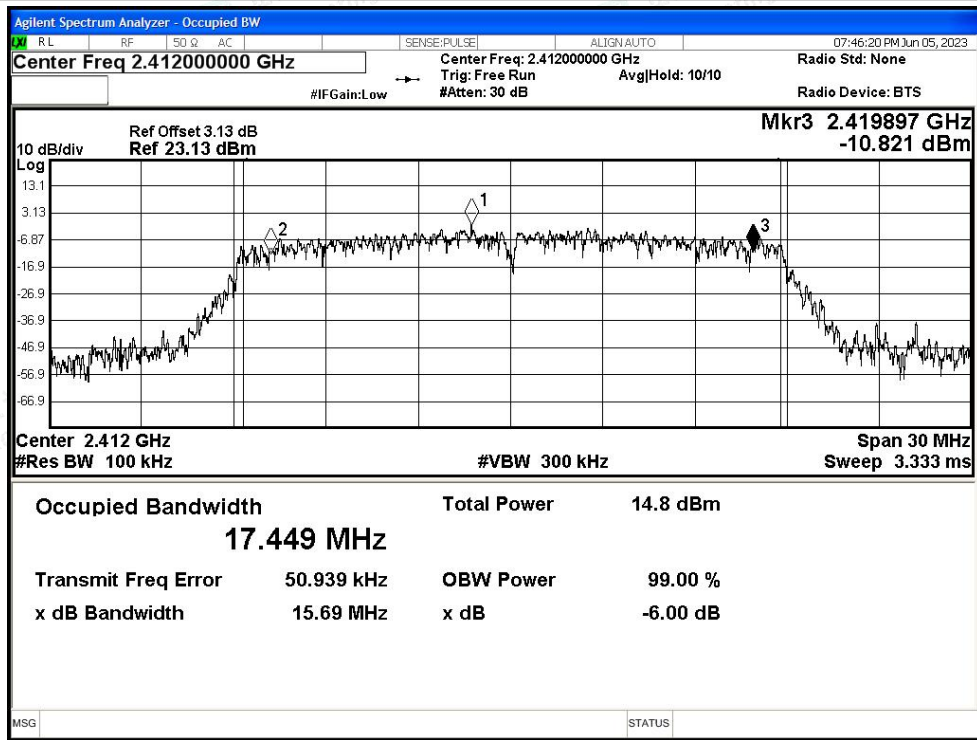
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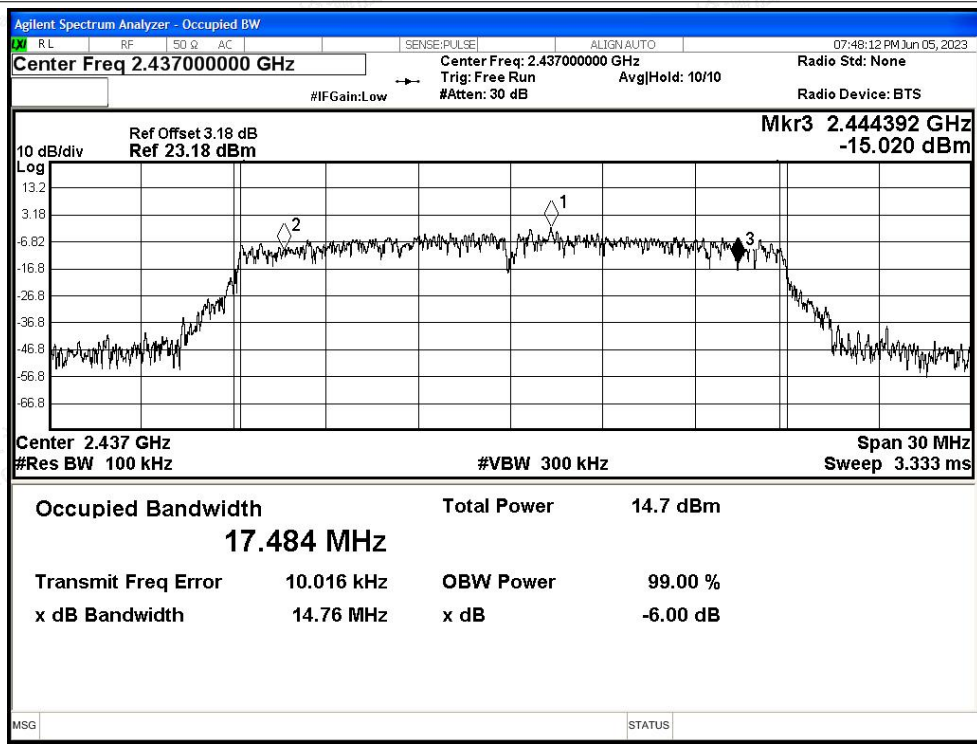
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-6dB Bandwidth NVNT n20 2412MHz Ant1



-6dB Bandwidth NVNT n20 2437MHz Ant1



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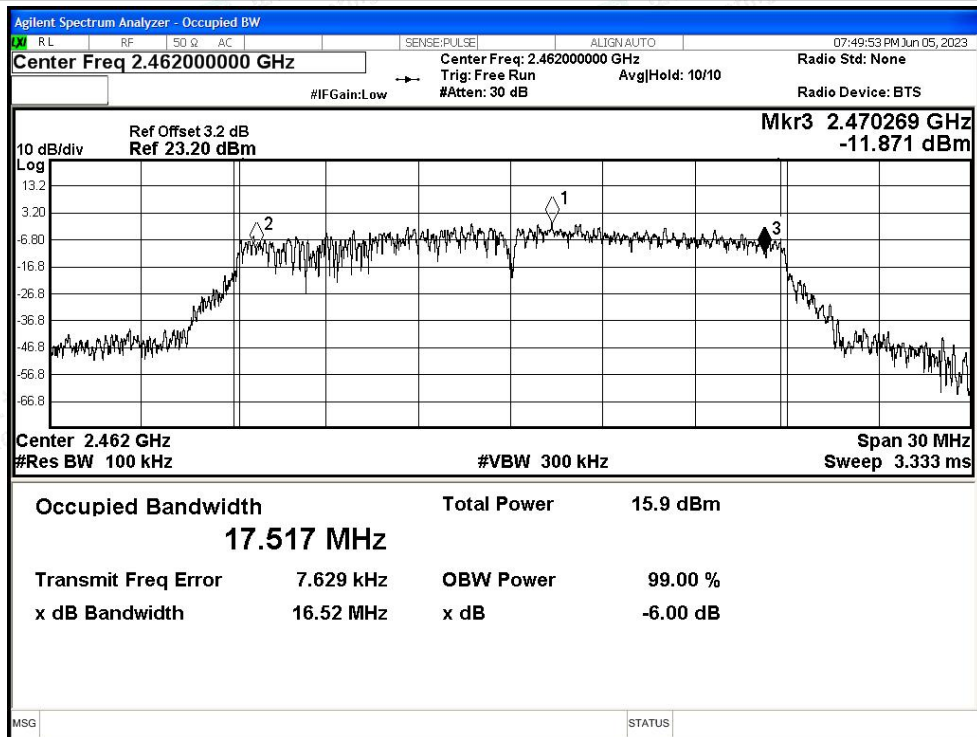
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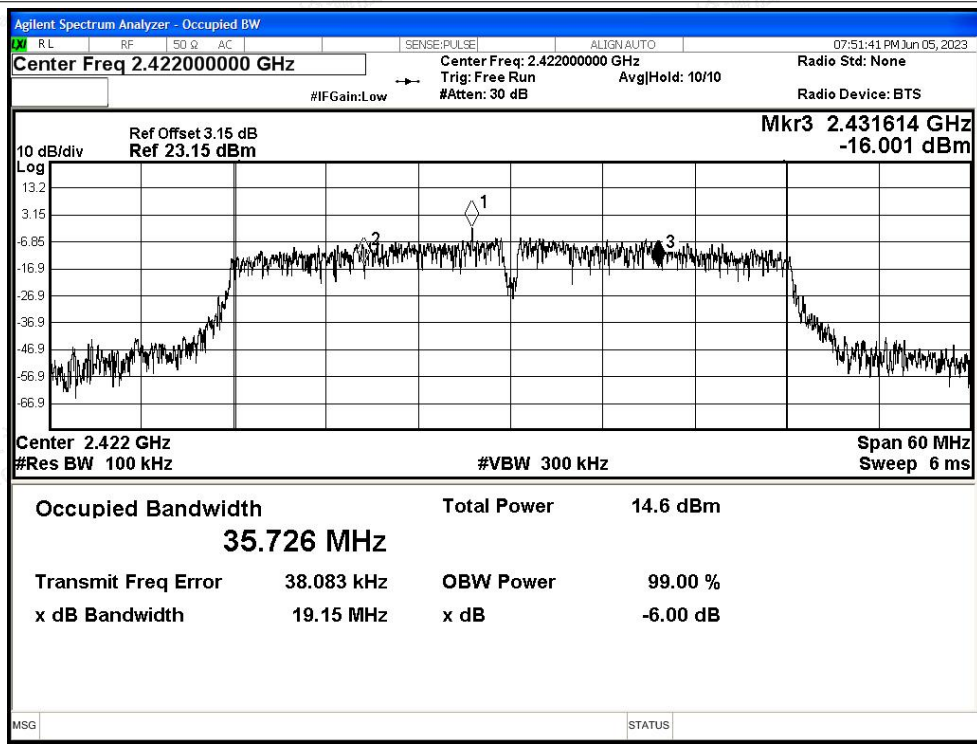
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-6dB Bandwidth NVNT n20 2462MHz Ant1



-6dB Bandwidth NVNT n40 2422MHz Ant1



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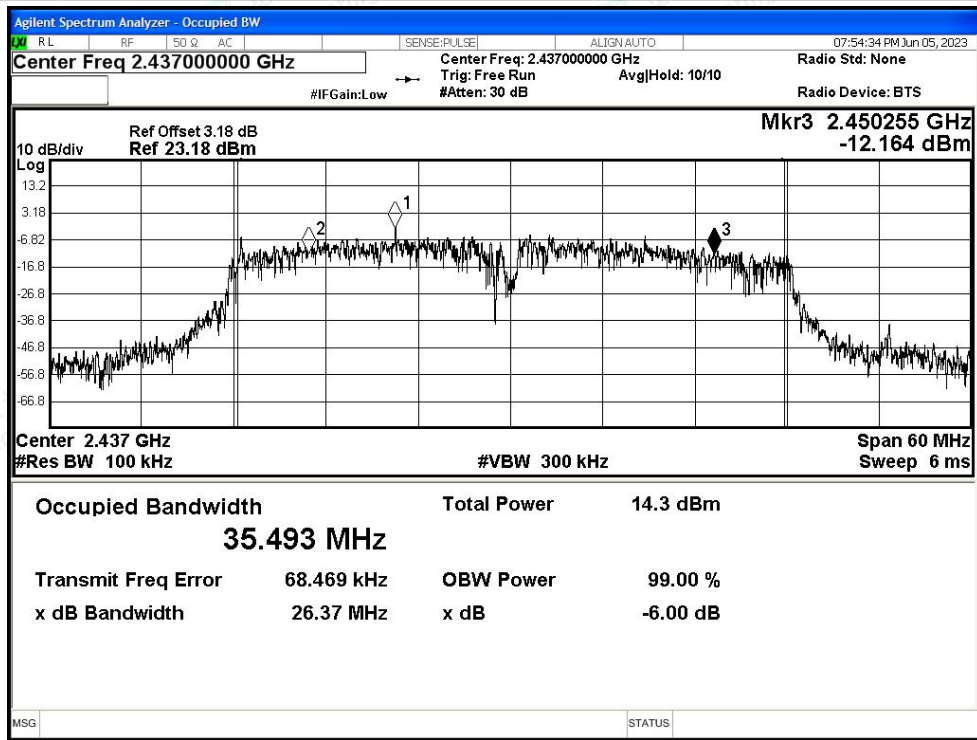
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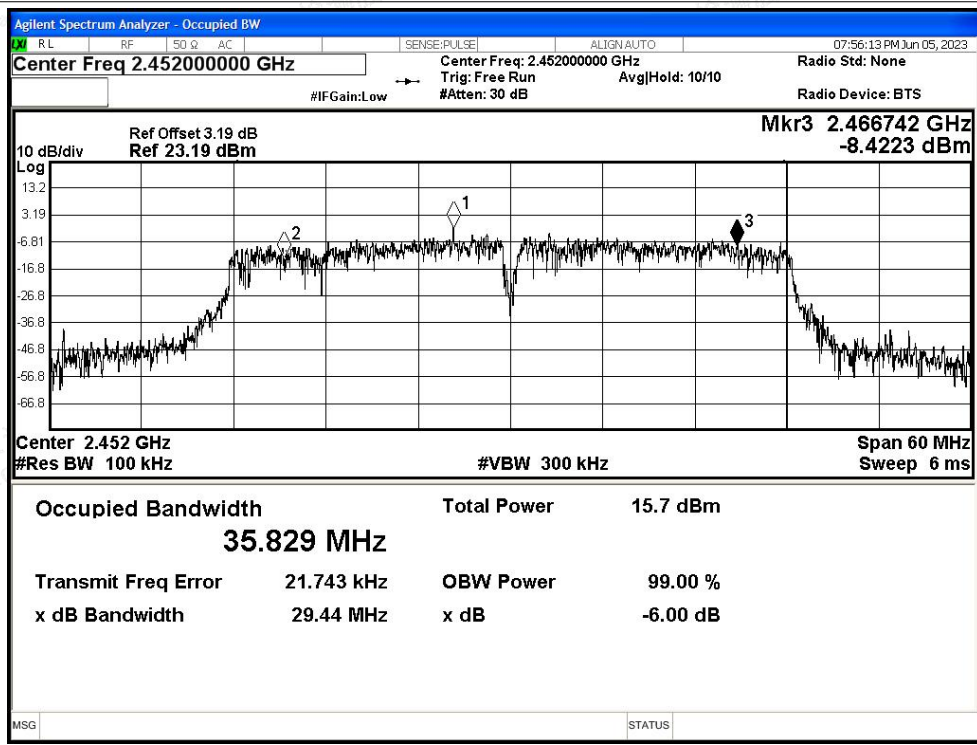
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-6dB Bandwidth NVNT n40 2437MHz Ant1



-6dB Bandwidth NVNT n40 2452MHz Ant1



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A.2 Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	12.744
NVNT	b	2437	Ant1	12.732
NVNT	b	2462	Ant1	12.766
NVNT	g	2412	Ant1	16.312
NVNT	g	2437	Ant1	16.297
NVNT	g	2462	Ant1	16.32
NVNT	n20	2412	Ant1	17.377
NVNT	n20	2437	Ant1	17.398
NVNT	n20	2462	Ant1	17.402
NVNT	n40	2422	Ant1	35.831
NVNT	n40	2437	Ant1	35.653
NVNT	n40	2452	Ant1	35.893



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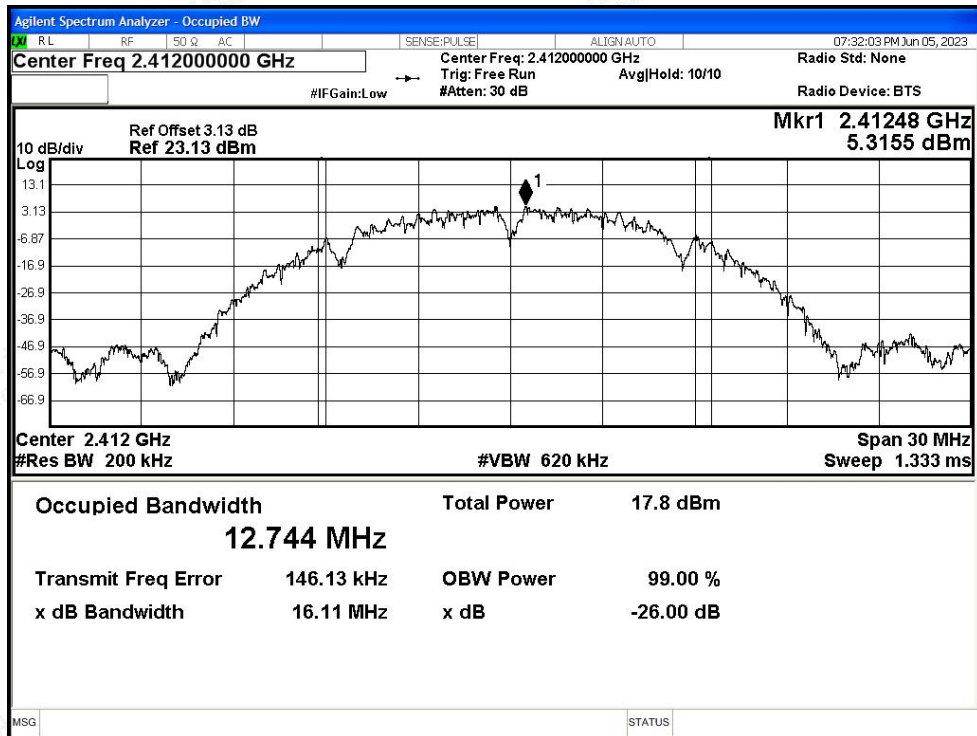
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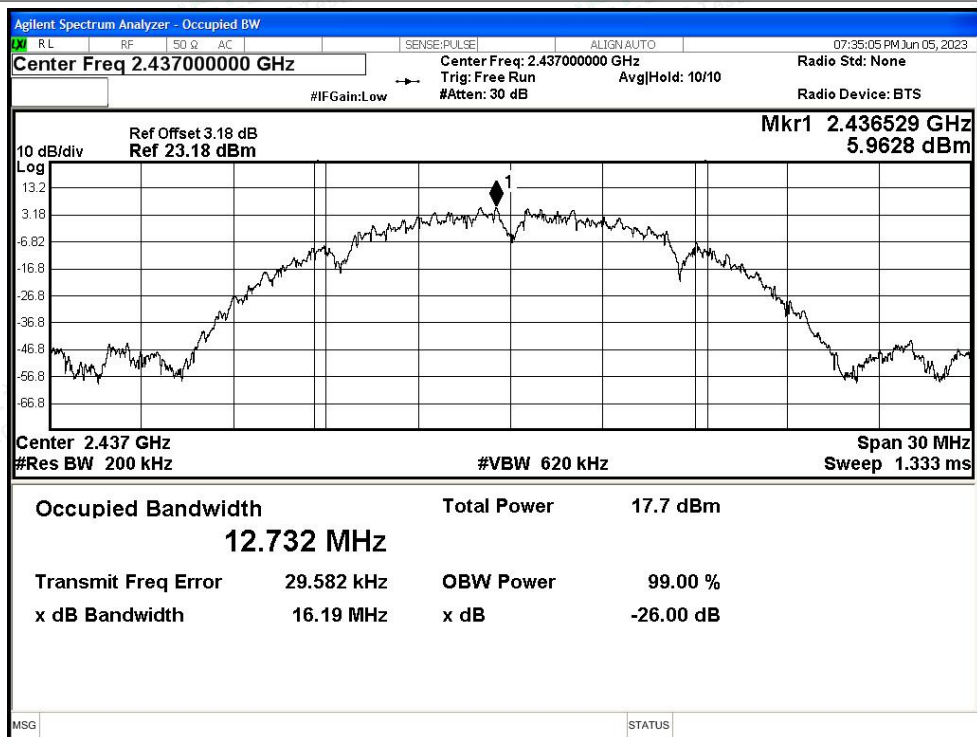


Test Graphs

OBW NVNT b 2412MHz Ant1



OBW NVNT b 2437MHz Ant1



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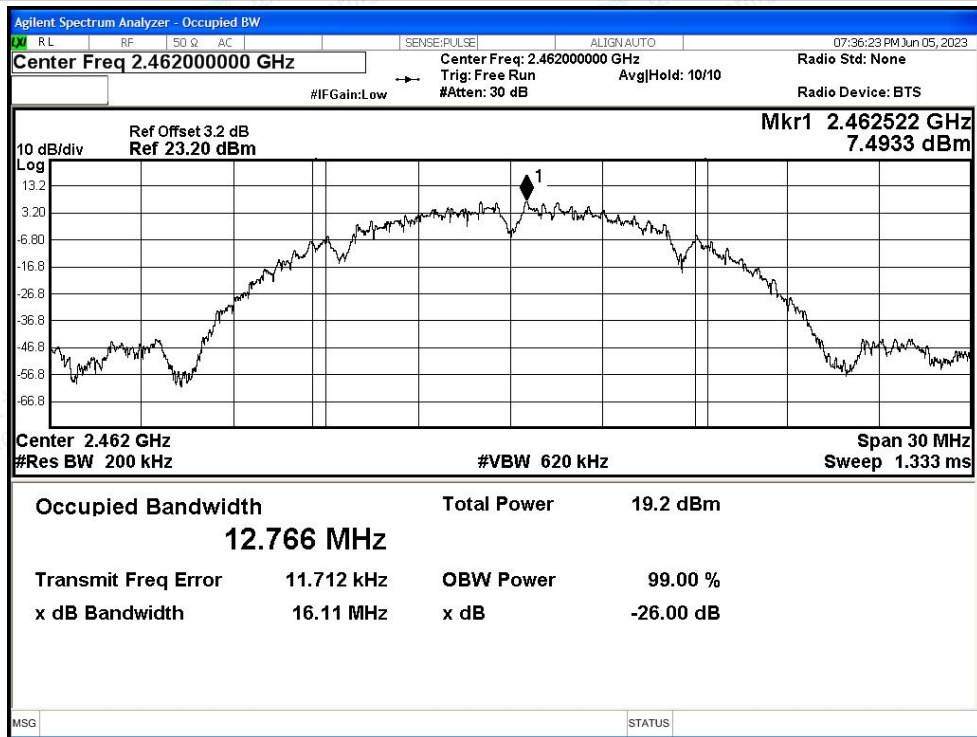
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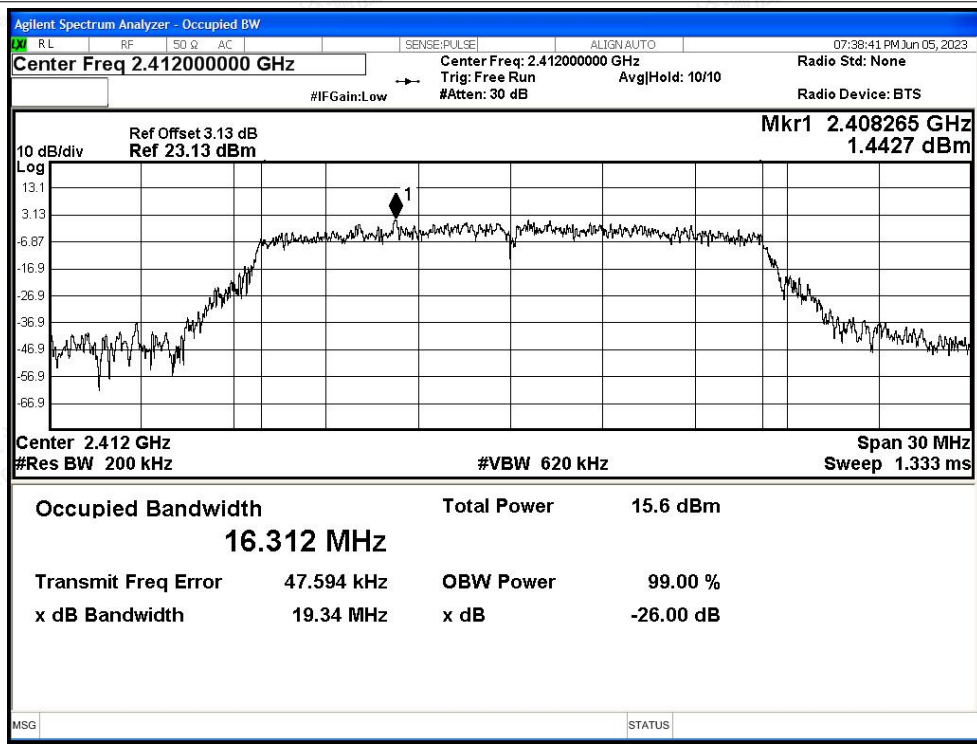
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OBW NVNT b 2462MHz Ant1



OBW NVNT g 2412MHz Ant1



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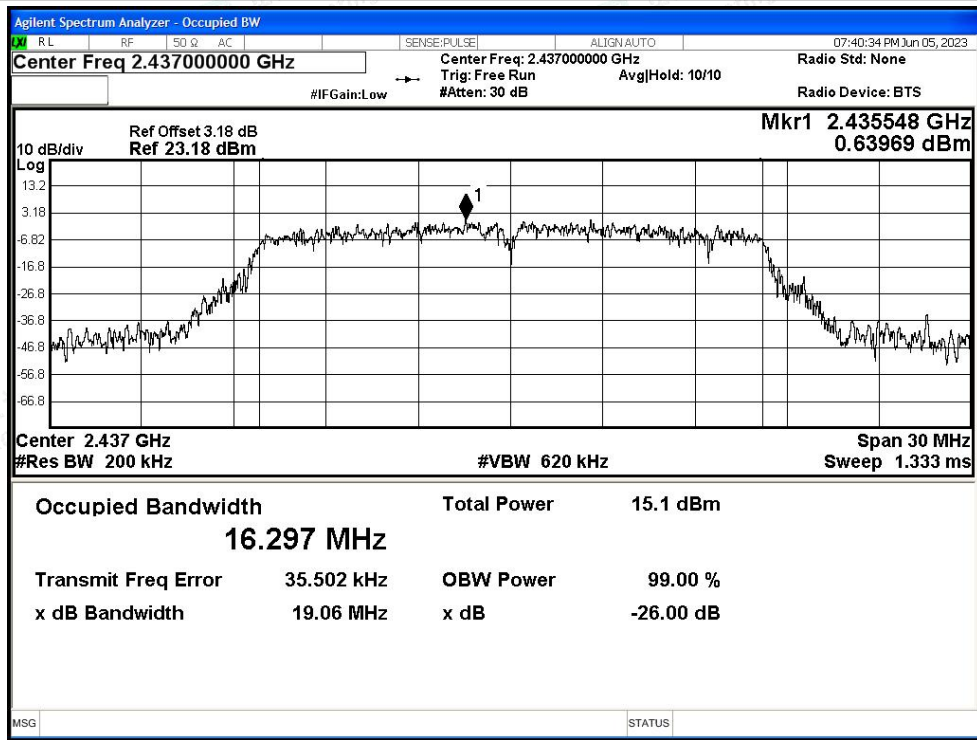
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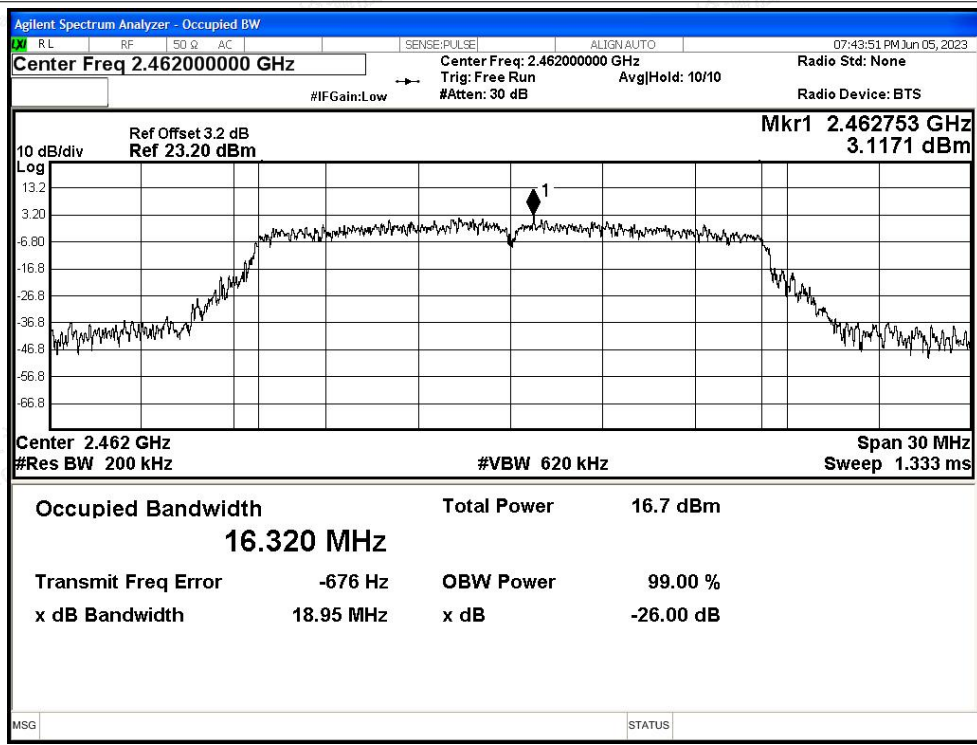
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OBW NVNT g 2437MHz Ant1



OBW NVNT g 2462MHz Ant1



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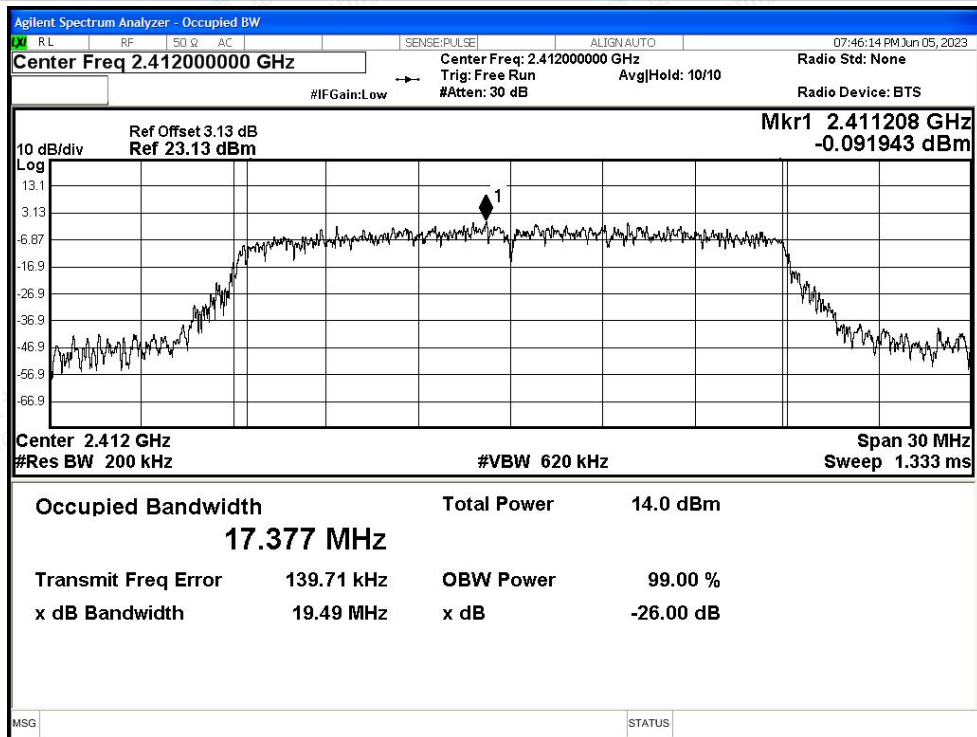
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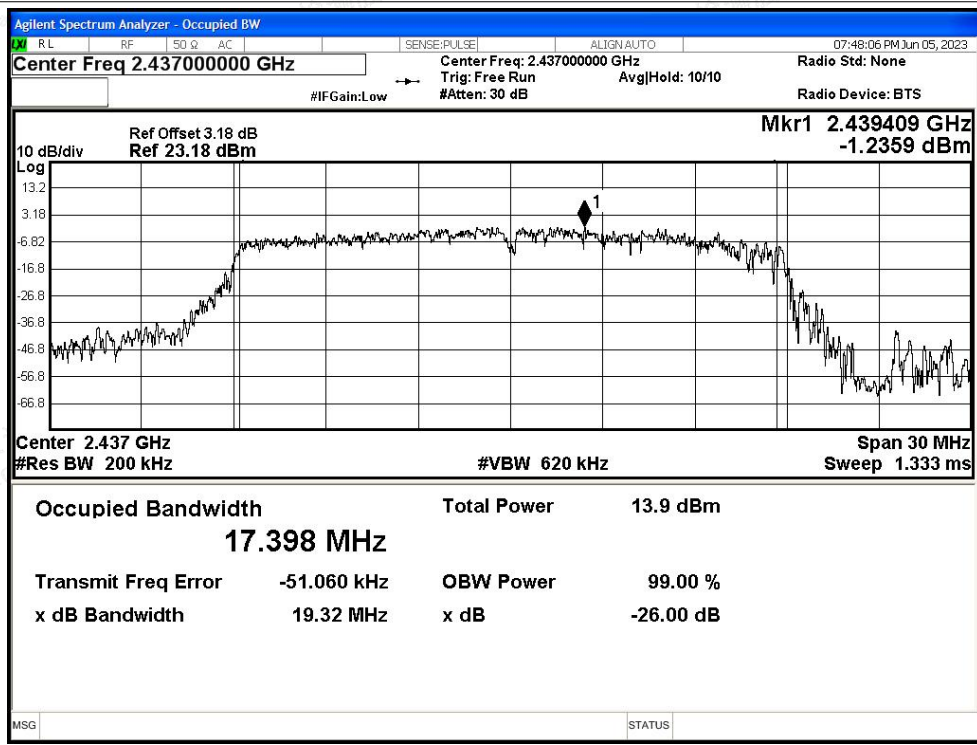
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OBW NVNT n20 2412MHz Ant1



OBW NVNT n20 2437MHz Ant1

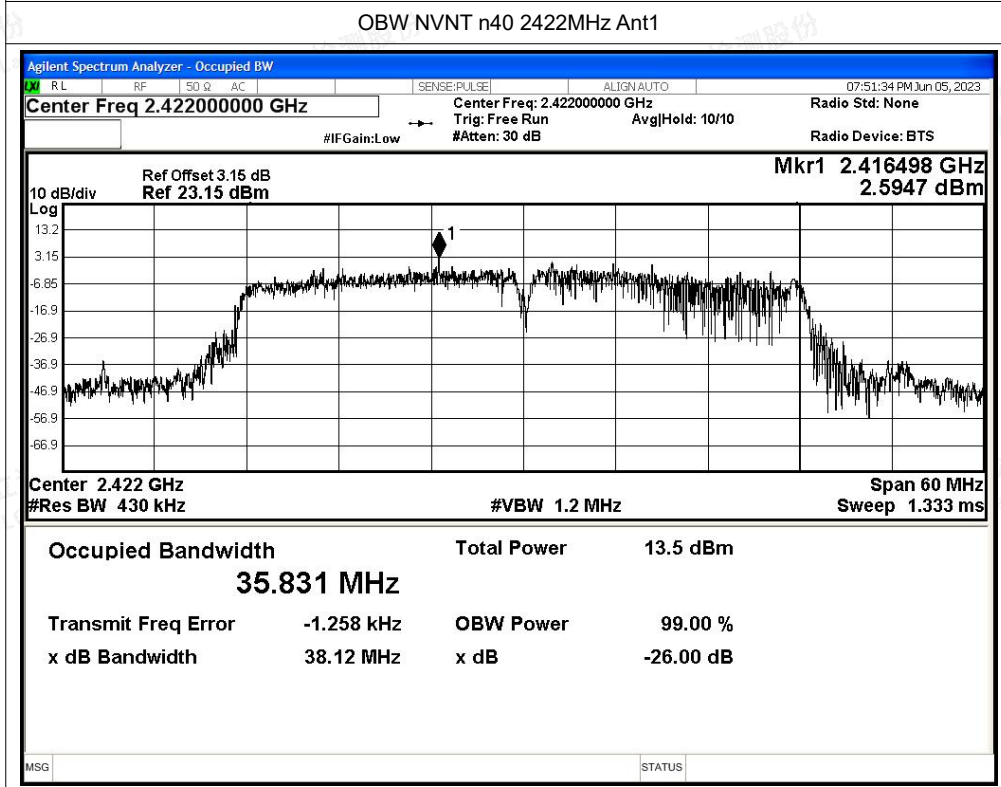
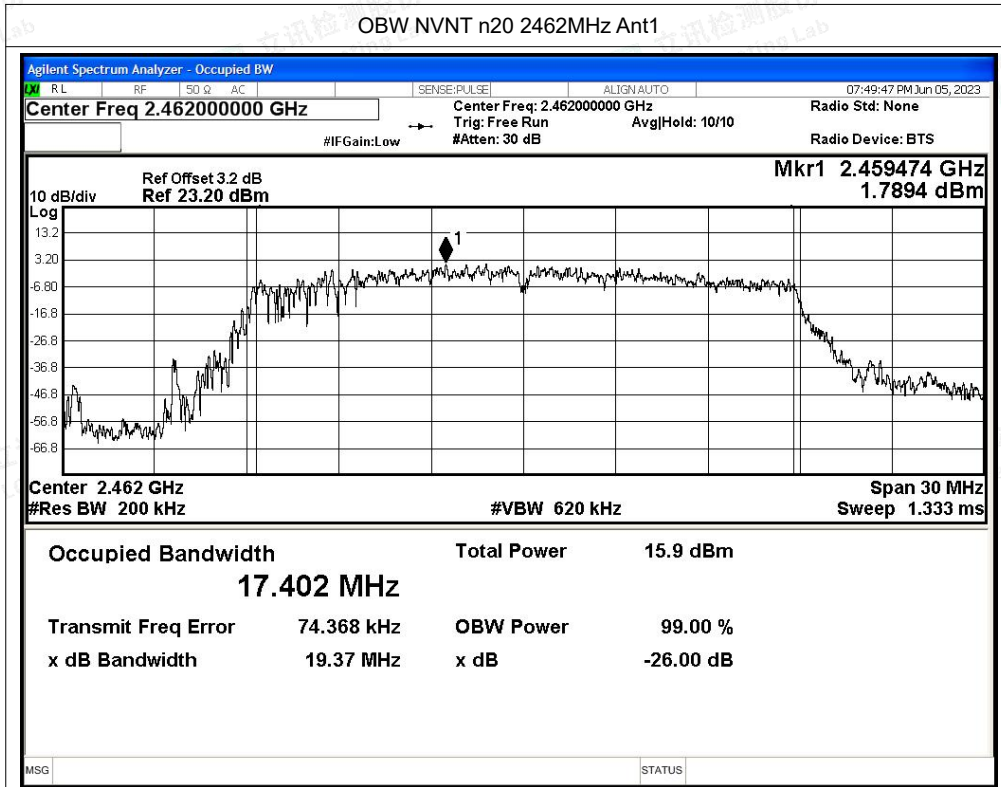


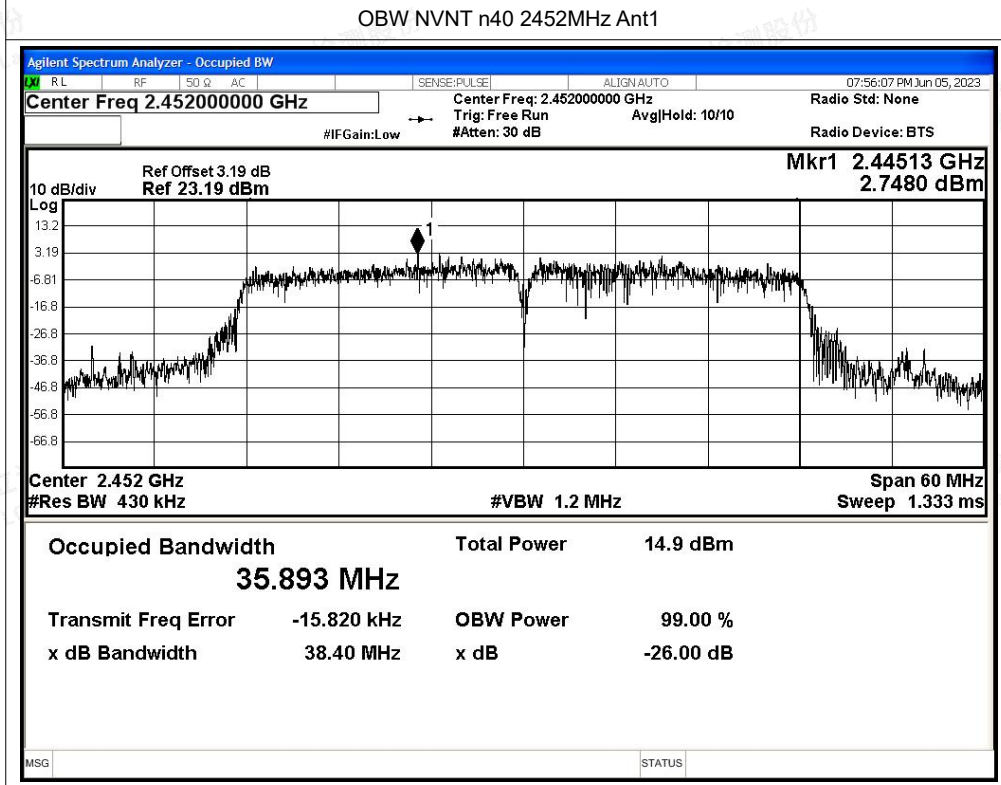
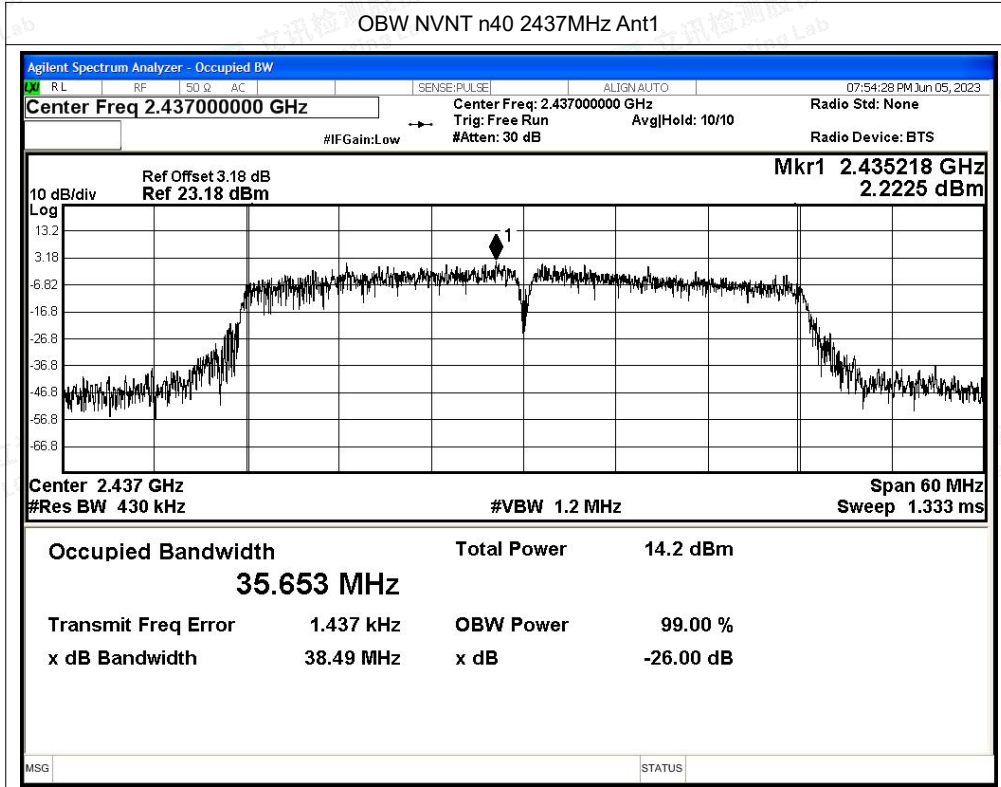
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A.3 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Antenna Gain	Report EIRP Power(dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	15.12	30	2.4	17.52	36	Pass
NVNT	b	2437	Ant1	14.95	30	2.4	17.35	36	Pass
NVNT	b	2462	Ant1	16.48	30	2.4	18.88	36	Pass
NVNT	g	2412	Ant1	14.24	30	2.4	16.64	36	Pass
NVNT	g	2437	Ant1	14.40	30	2.4	16.80	36	Pass
NVNT	g	2462	Ant1	15.61	30	2.4	18.01	36	Pass
NVNT	n20	2412	Ant1	13.53	30	2.4	15.93	36	Pass
NVNT	n20	2437	Ant1	13.11	30	2.4	15.51	36	Pass
NVNT	n20	2462	Ant1	17.21	30	2.4	19.61	36	Pass
NVNT	n40	2422	Ant1	13.21	30	2.4	15.61	36	Pass
NVNT	n40	2437	Ant1	13.19	30	2.4	15.59	36	Pass
NVNT	n40	2452	Ant1	14.61	30	2.4	17.01	36	Pass



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A.4 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-7.76	8	Pass
NVNT	b	2437	Ant1	-8.22	8	Pass
NVNT	b	2462	Ant1	-5.81	8	Pass
NVNT	g	2412	Ant1	-13.23	8	Pass
NVNT	g	2437	Ant1	-12.3	8	Pass
NVNT	g	2462	Ant1	-9.51	8	Pass
NVNT	n20	2412	Ant1	-13.97	8	Pass
NVNT	n20	2437	Ant1	-13.07	8	Pass
NVNT	n20	2462	Ant1	-12.76	8	Pass
NVNT	n40	2422	Ant1	-16.82	8	Pass
NVNT	n40	2437	Ant1	-14.79	8	Pass
NVNT	n40	2452	Ant1	-16.03	8	Pass

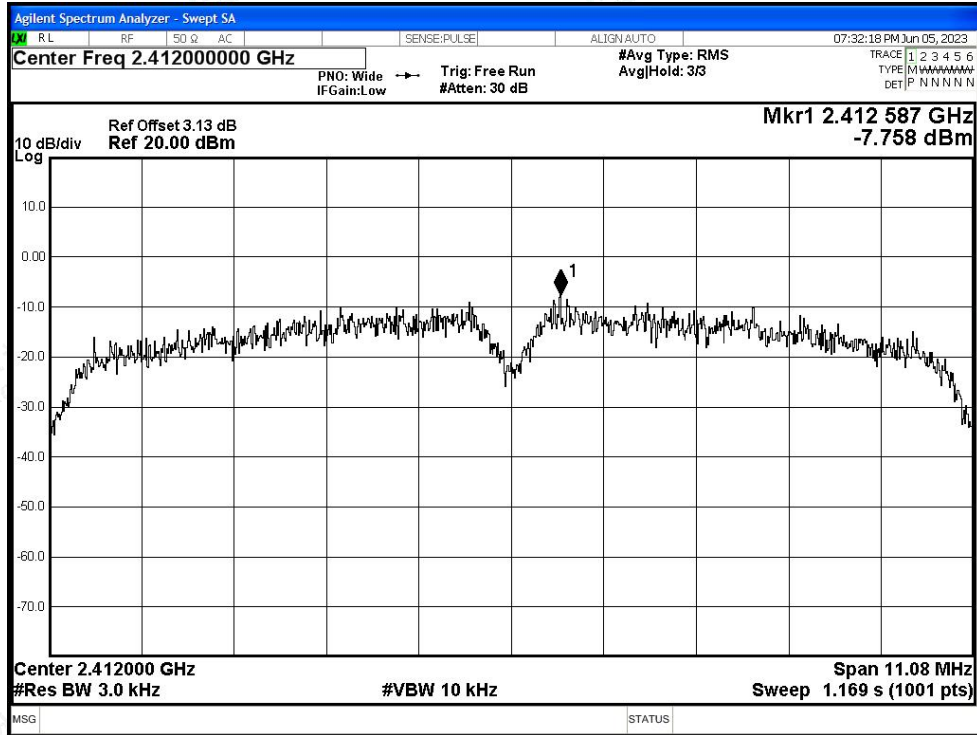


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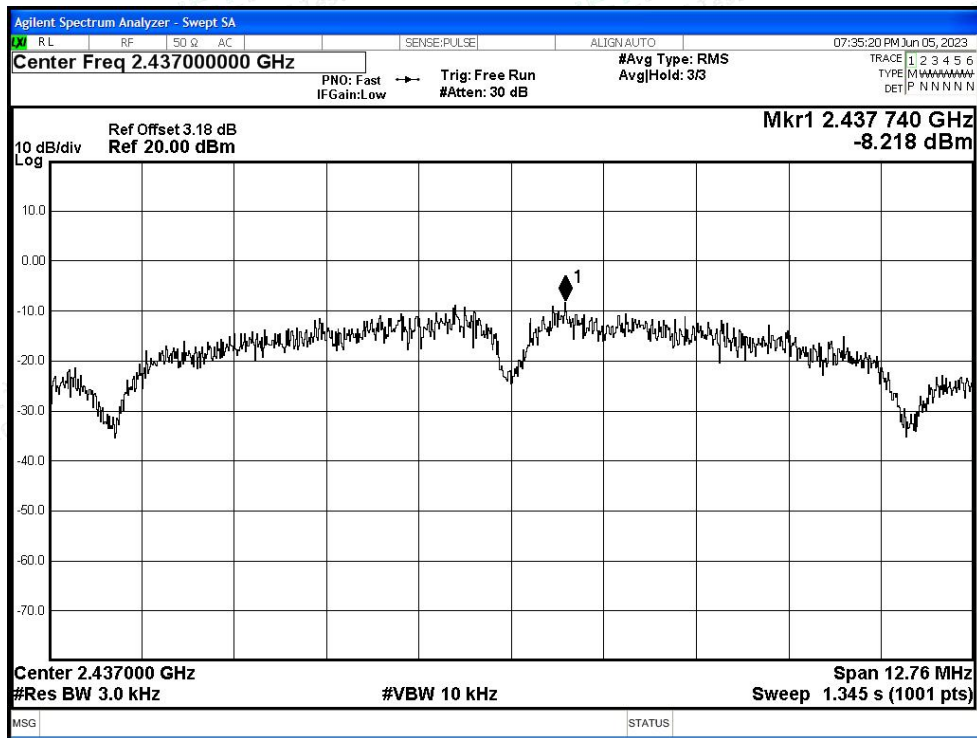


Test Graphs

PSD NVNT b 2412MHz Ant1



PSD NVNT b 2437MHz Ant1



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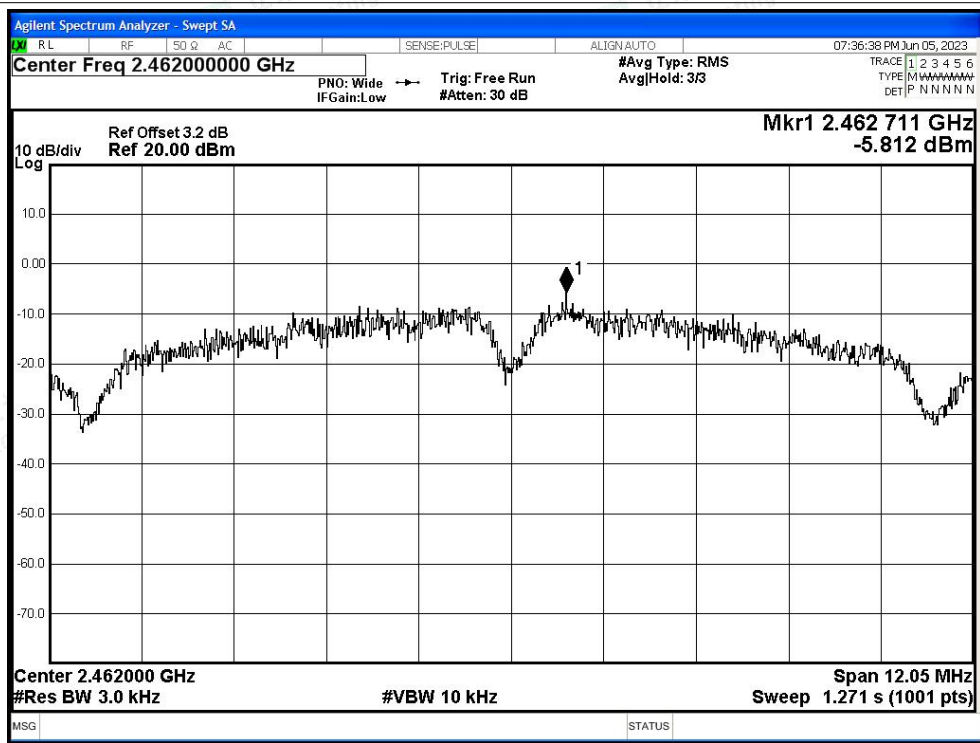
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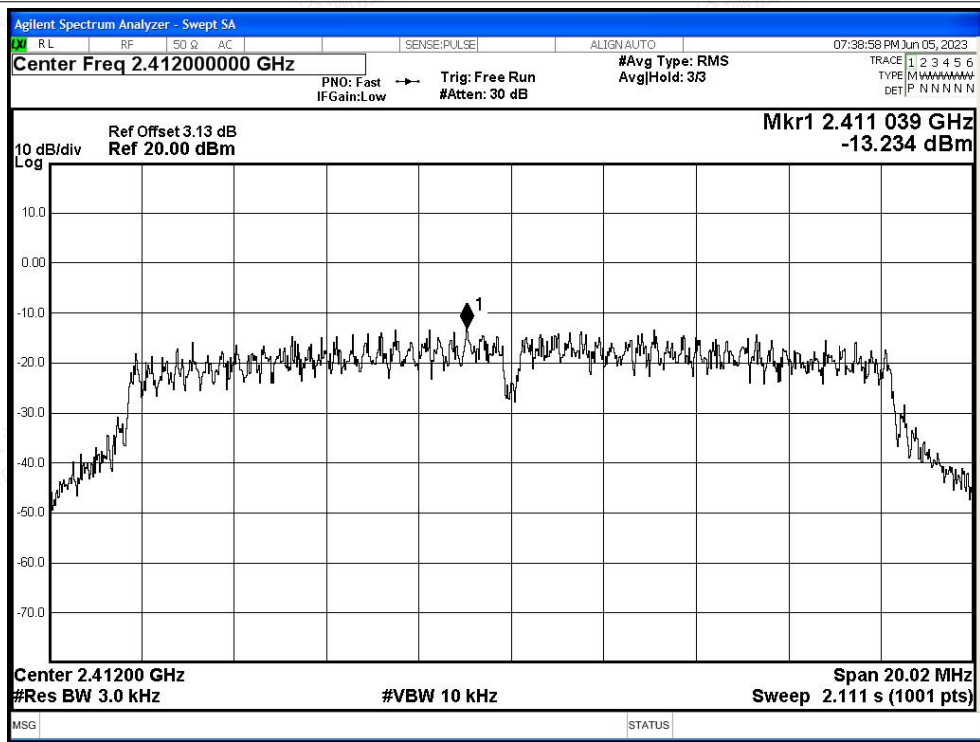
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PSD NVNT b 2462MHz Ant1



PSD NVNT g 2412MHz Ant1



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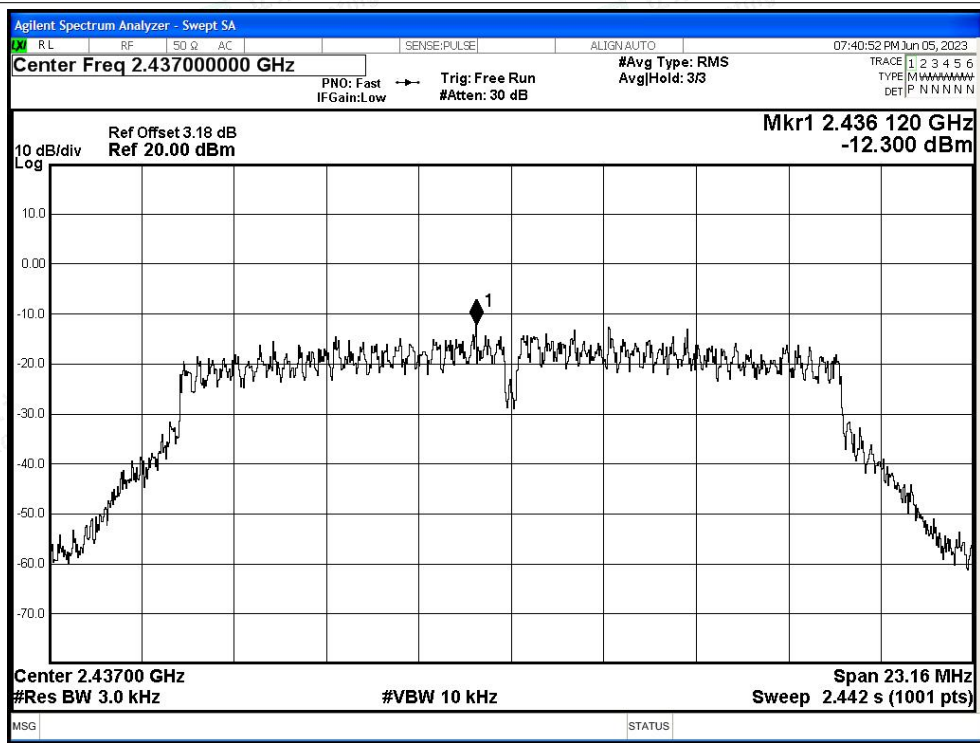
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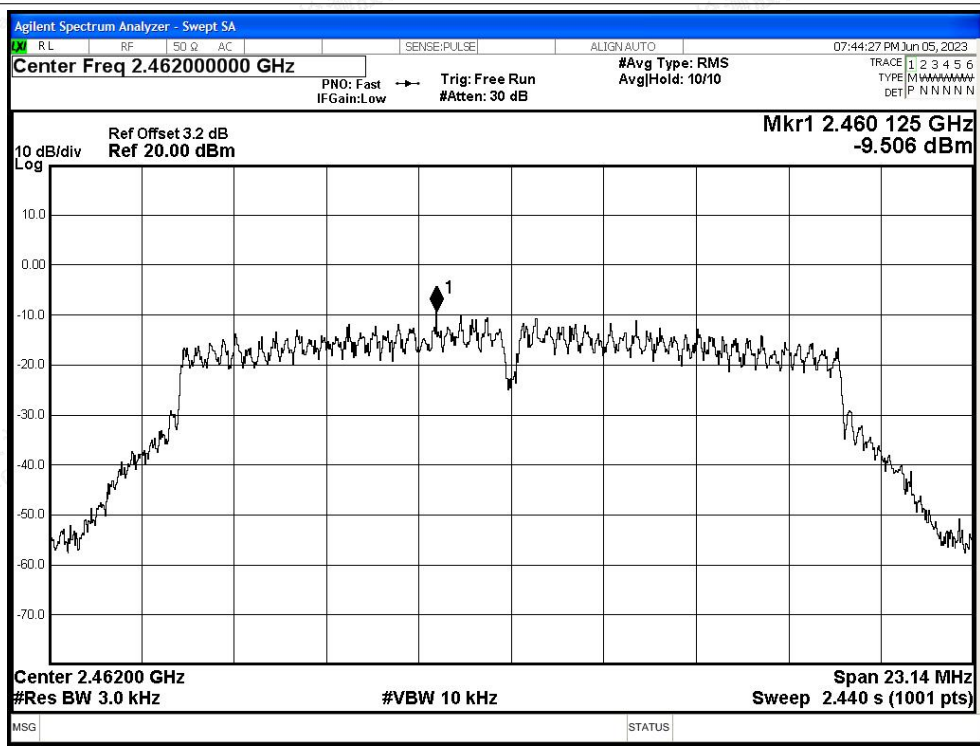
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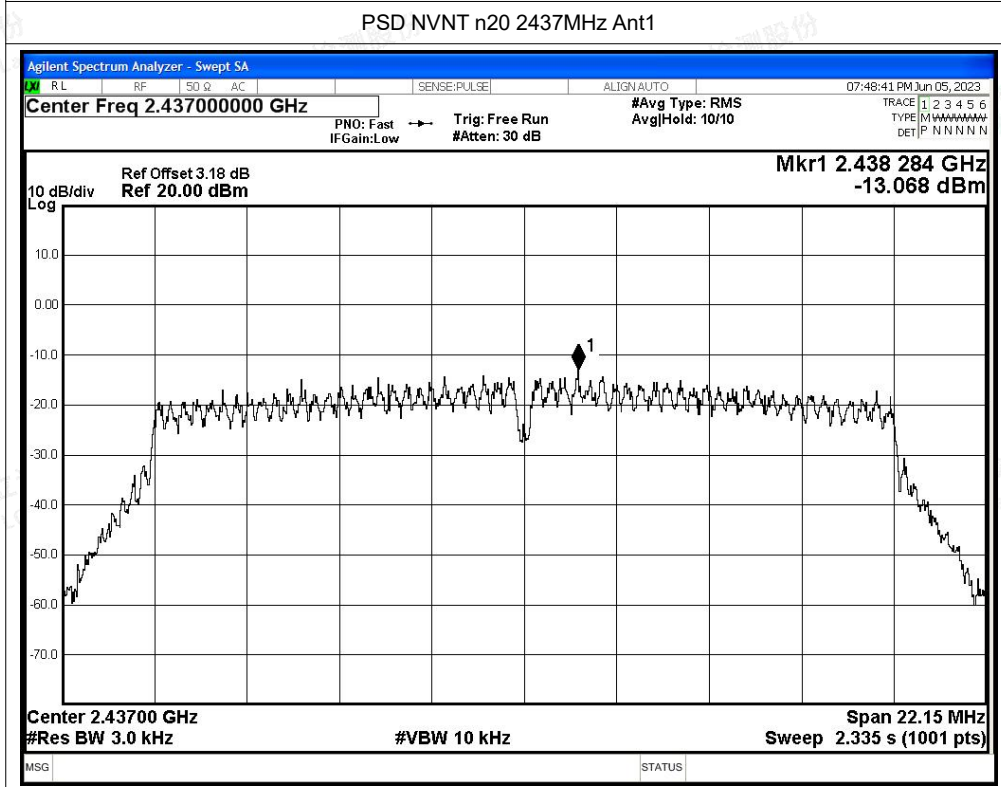
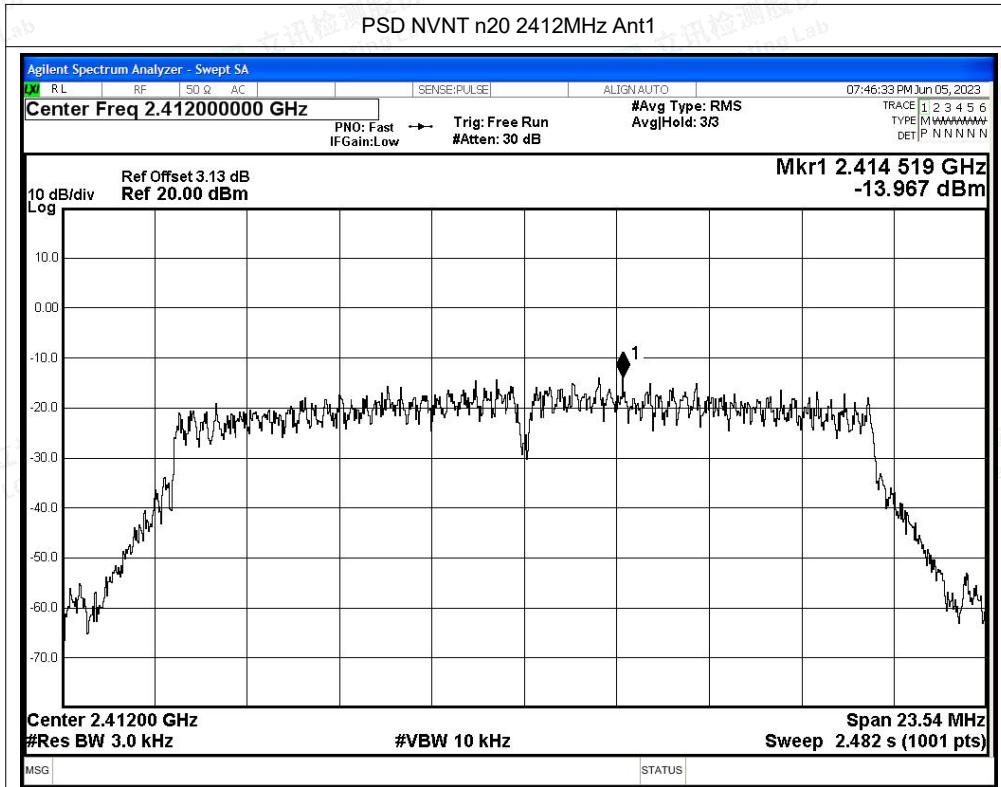


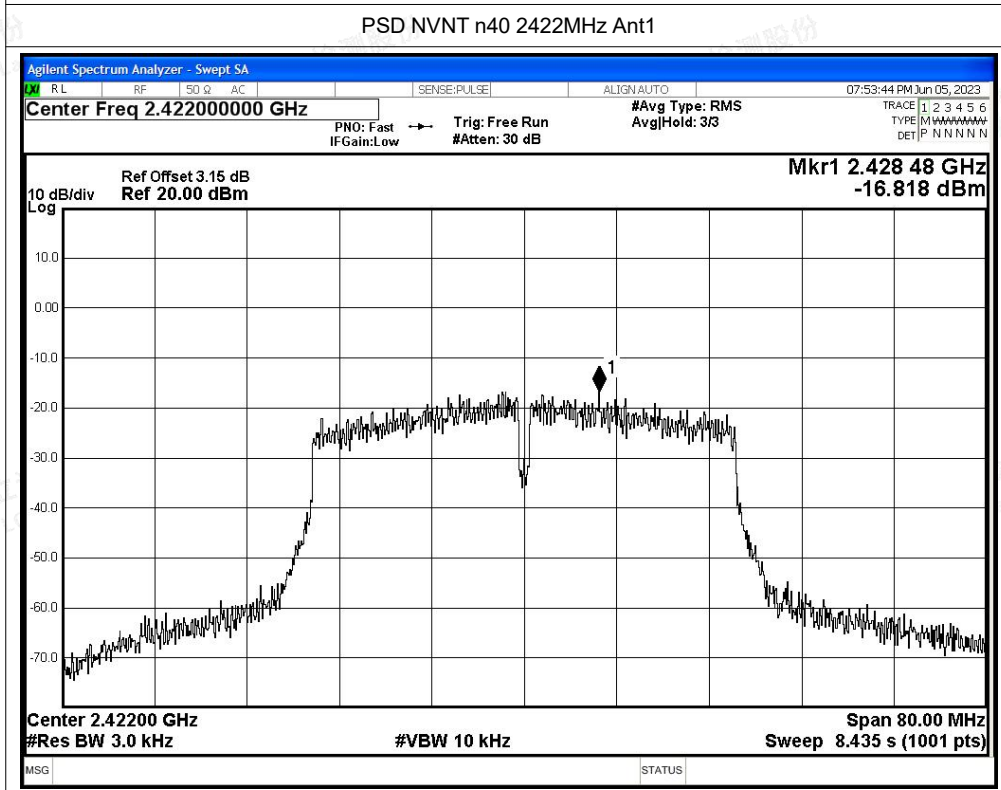
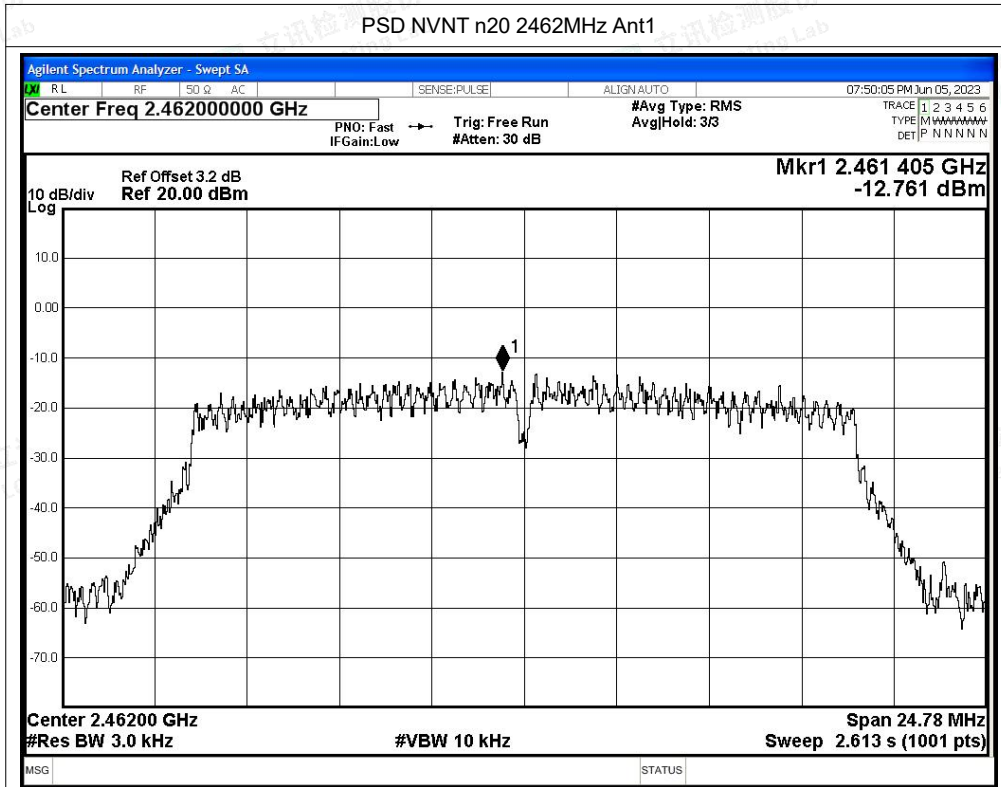
PSD NVNT g 2437MHz Ant1

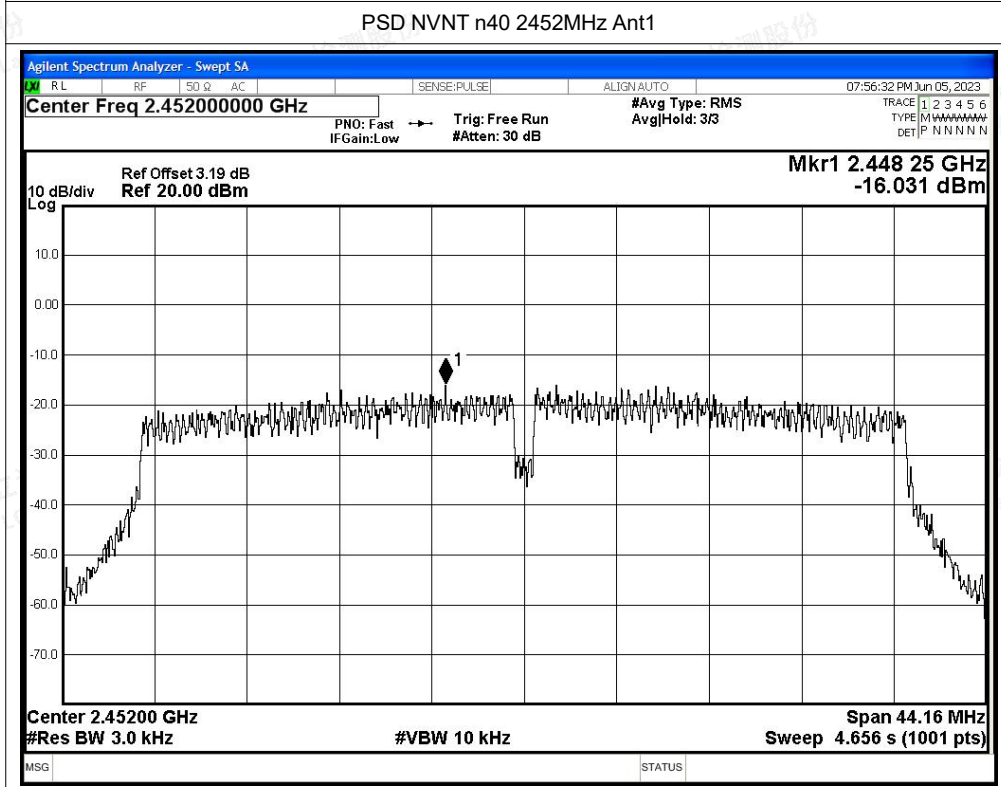
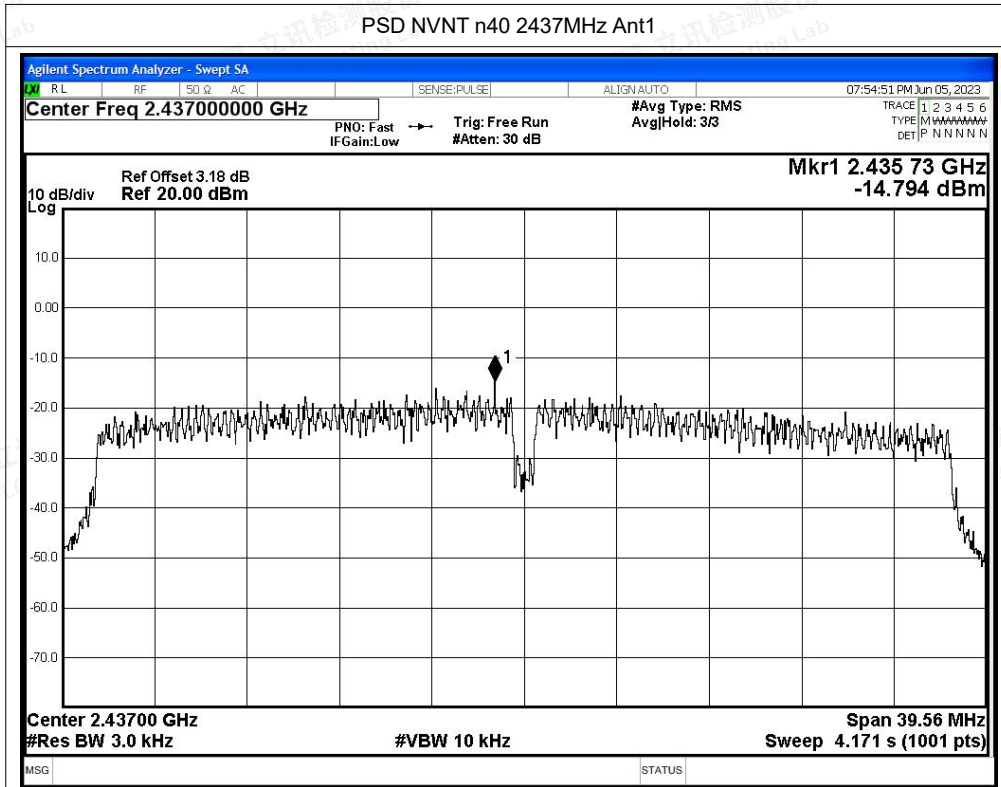


PSD NVNT g 2462MHz Ant1









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A.5 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-51.73	-20	Pass
NVNT	b	2462	Ant1	-63.53	-20	Pass
NVNT	g	2412	Ant1	-43.72	-20	Pass
NVNT	g	2462	Ant1	-52.47	-20	Pass
NVNT	n20	2412	Ant1	-39.92	-20	Pass
NVNT	n20	2462	Ant1	-54.42	-20	Pass
NVNT	n40	2422	Ant1	-39.53	-20	Pass
NVNT	n40	2452	Ant1	-44.32	-20	Pass

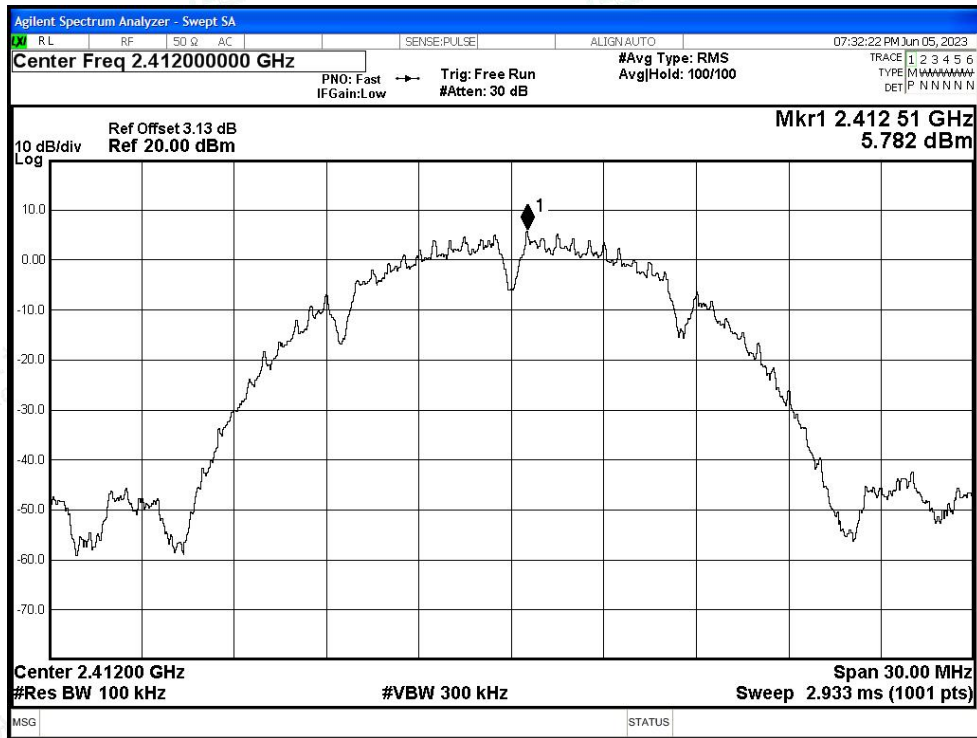


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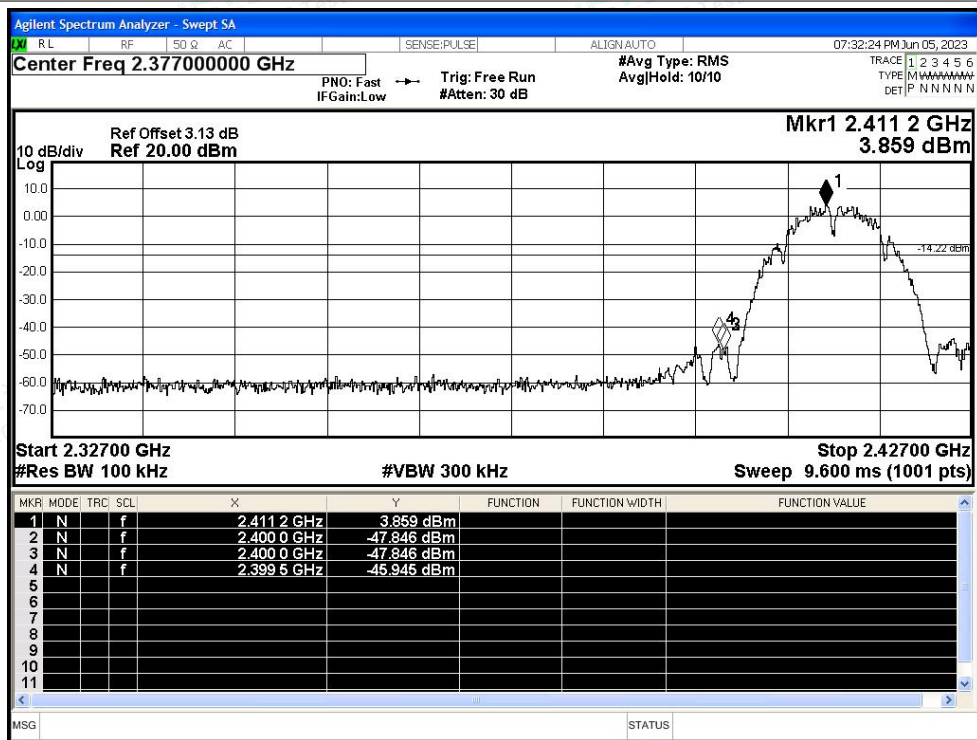


Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



Band Edge NVNT b 2412MHz Ant1 Emission



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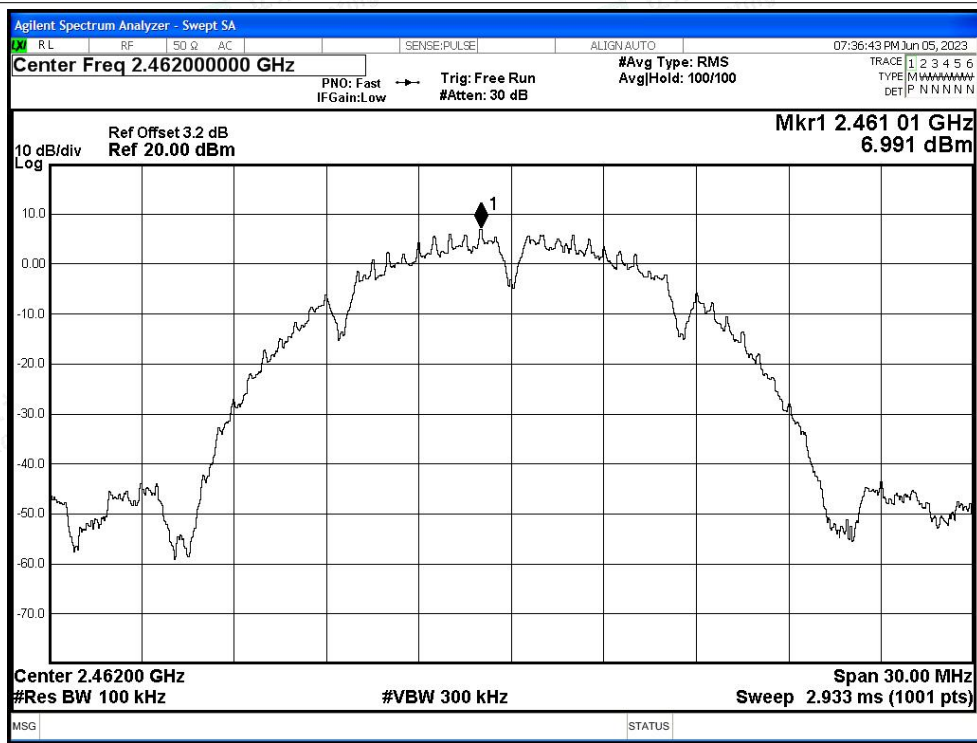
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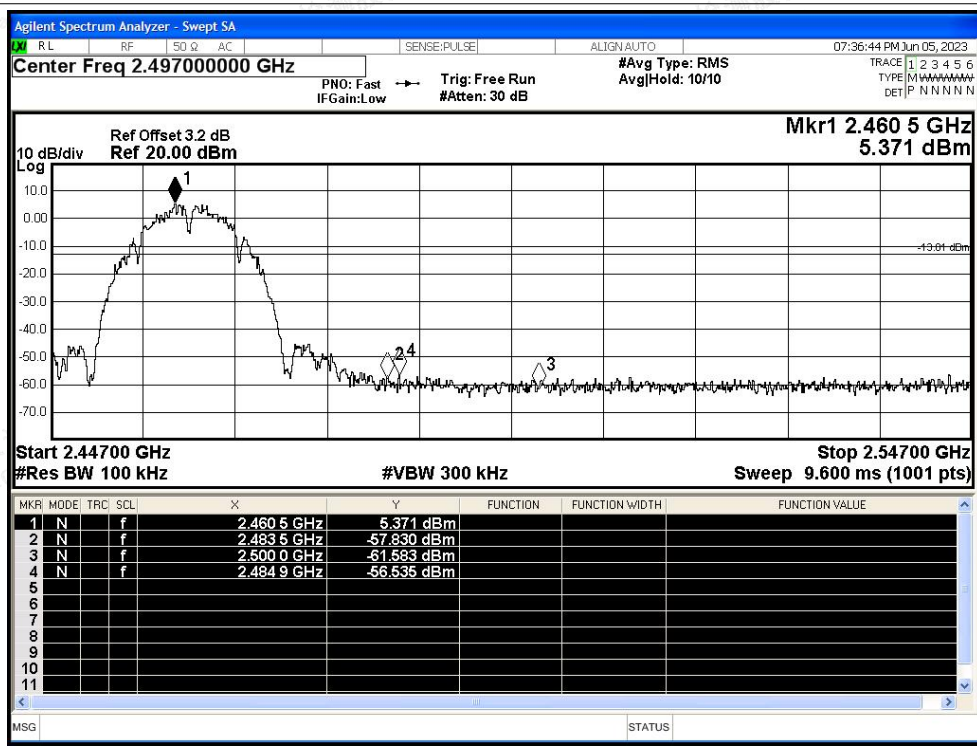
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Band Edge NVNT b 2462MHz Ant1 Ref



Band Edge NVNT b 2462MHz Ant1 Emission



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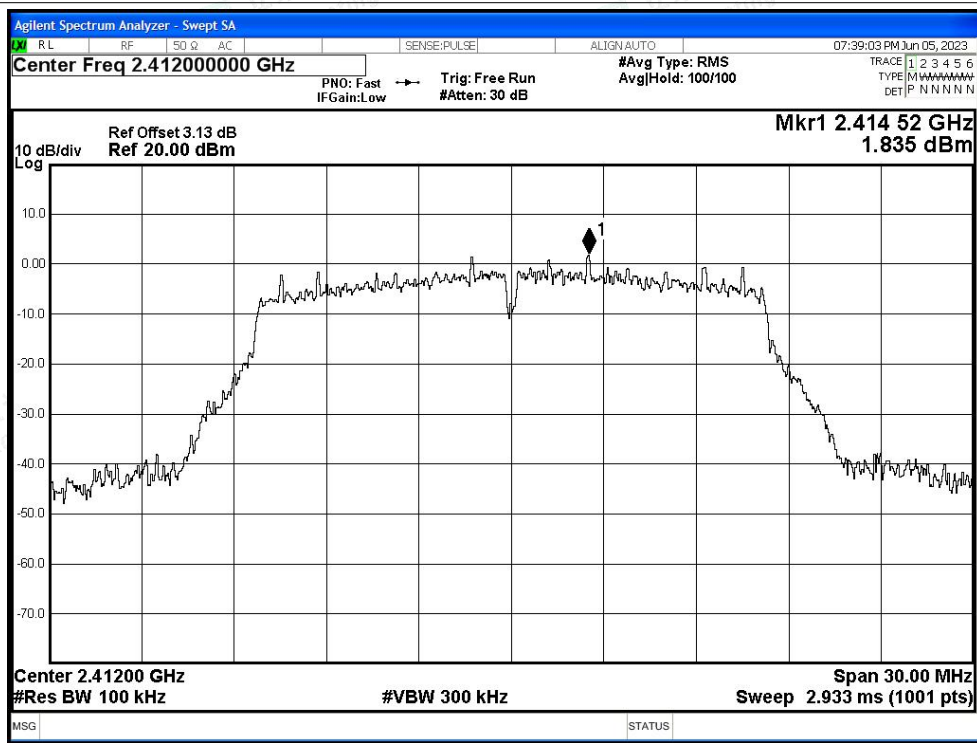
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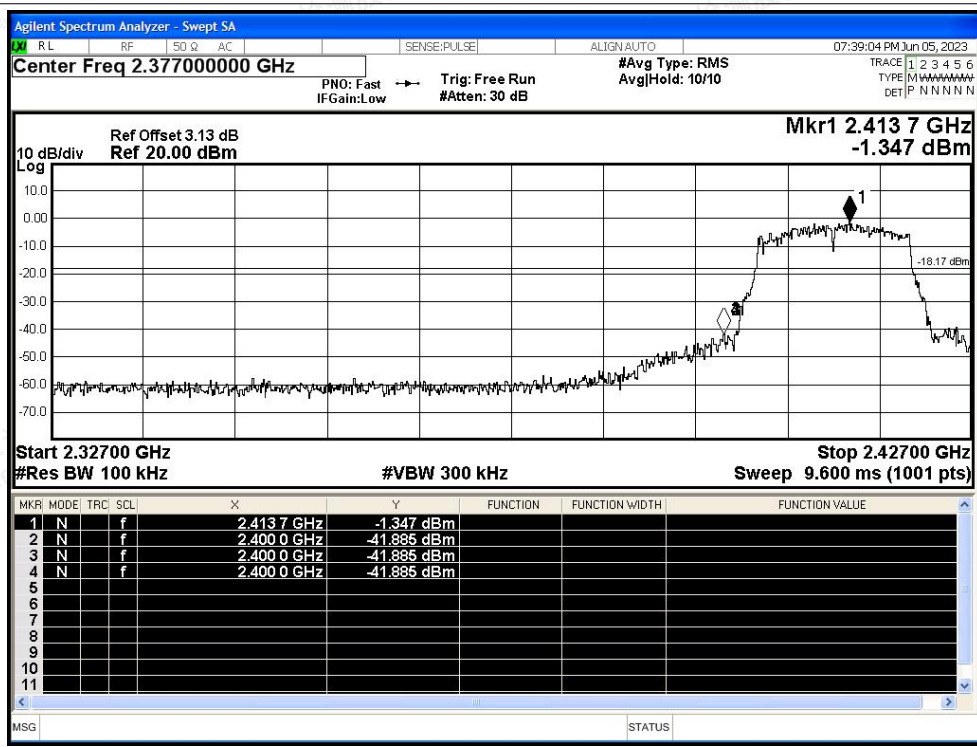
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Band Edge NVNT g 2412MHz Ant1 Ref



Band Edge NVNT g 2412MHz Ant1 Emission



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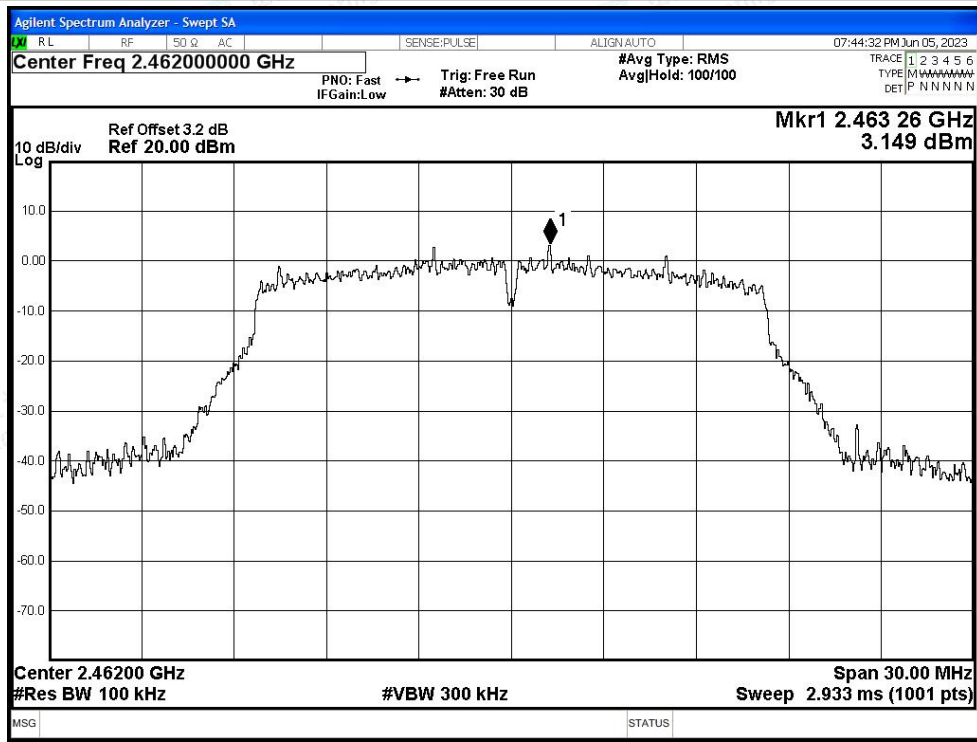
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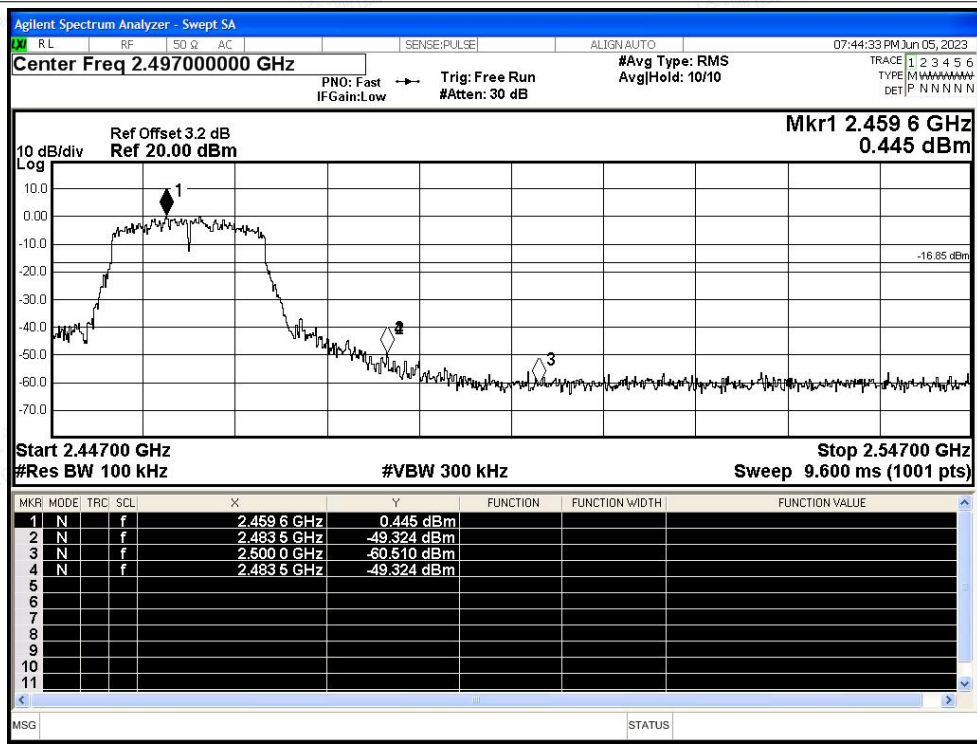
Scan code to check authenticity



Band Edge NVNT g 2462MHz Ant1 Ref



Band Edge NVNT g 2462MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

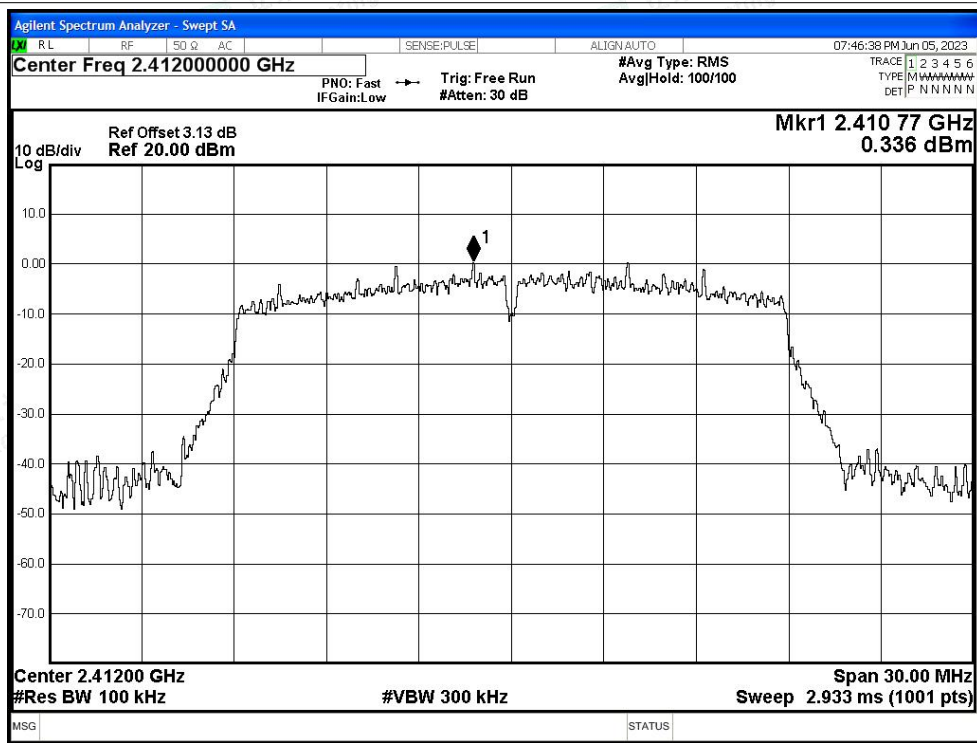
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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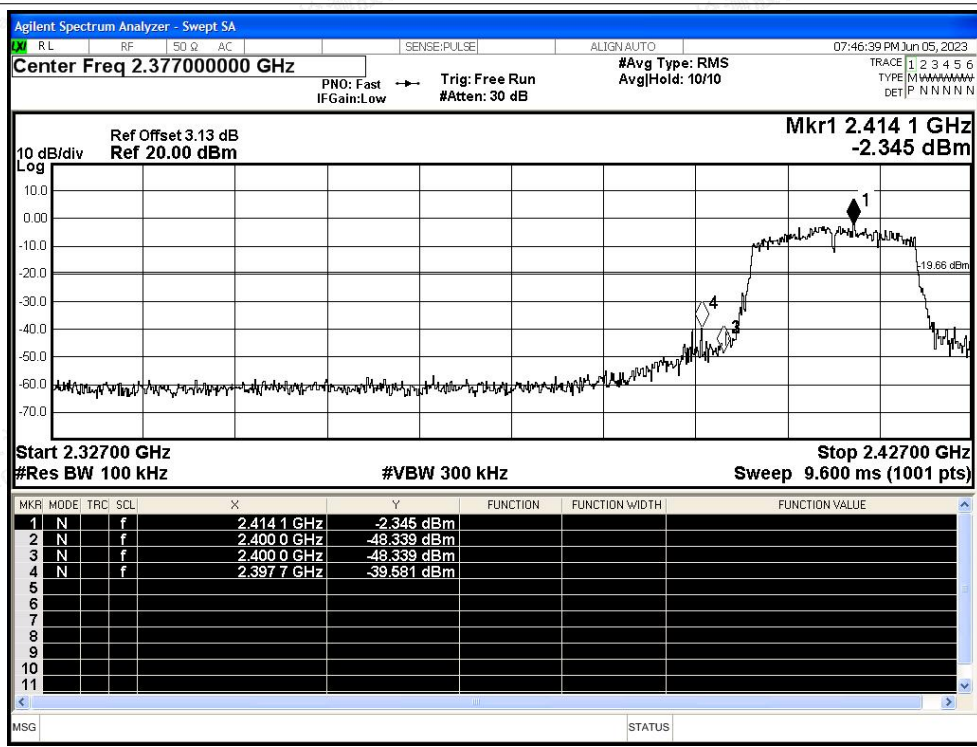
Scan code to check authenticity



Band Edge NVNT n20 2412MHz Ant1 Ref



Band Edge NVNT n20 2412MHz Ant1 Emission



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