



Appendix B

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: VIDEO PROJECTOR

Test Model: SHP-K4A

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
Supervised by:	Ling Zhu





B.1 -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant0	9.084	≥ 0.5	Pass
NVNT	b	2437	Ant0	8.646	≥ 0.5	Pass
NVNT	b	2462	Ant0	9.567	≥ 0.5	Pass
NVNT	g	2412	Ant0	16.312	≥ 0.5	Pass
NVNT	g	2437	Ant0	16.022	≥ 0.5	Pass
NVNT	g	2462	Ant0	16.283	≥ 0.5	Pass
NVNT	n20	2412	Ant0	17.07	≥ 0.5	Pass
NVNT	n20	2437	Ant0	16.825	≥ 0.5	Pass
NVNT	n20	2462	Ant0	15.807	≥ 0.5	Pass





Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant0



-6dB Bandwidth NVNT b 2437MHz Ant0



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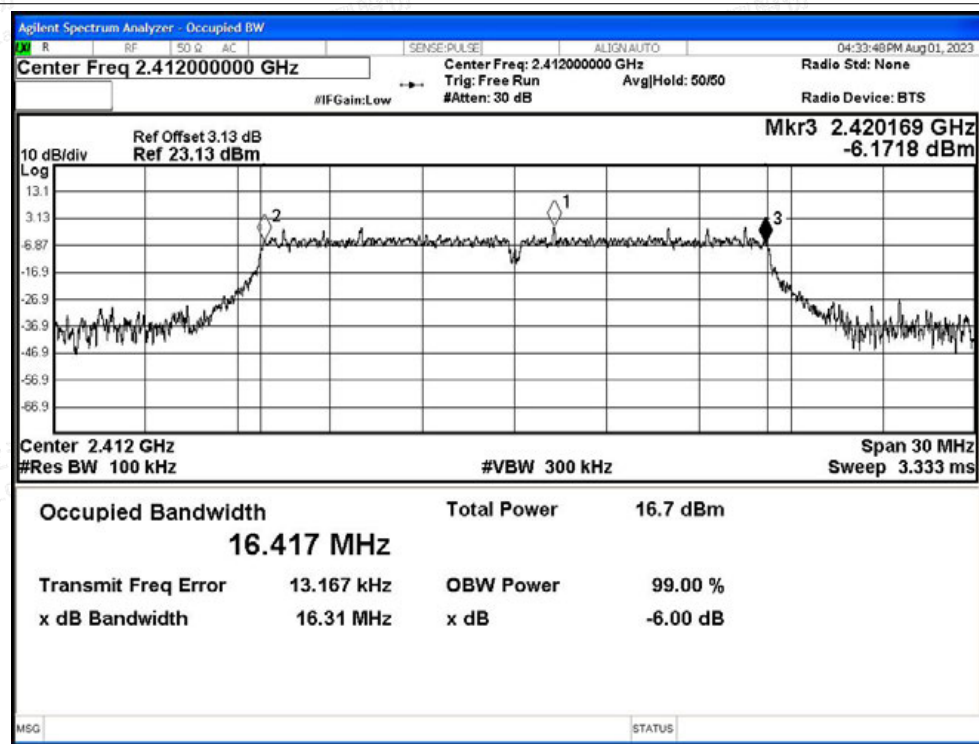
Scan code to check authenticity



-6dB Bandwidth NVNT b 2462MHz Ant0



-6dB Bandwidth NVNT g 2412MHz Ant0



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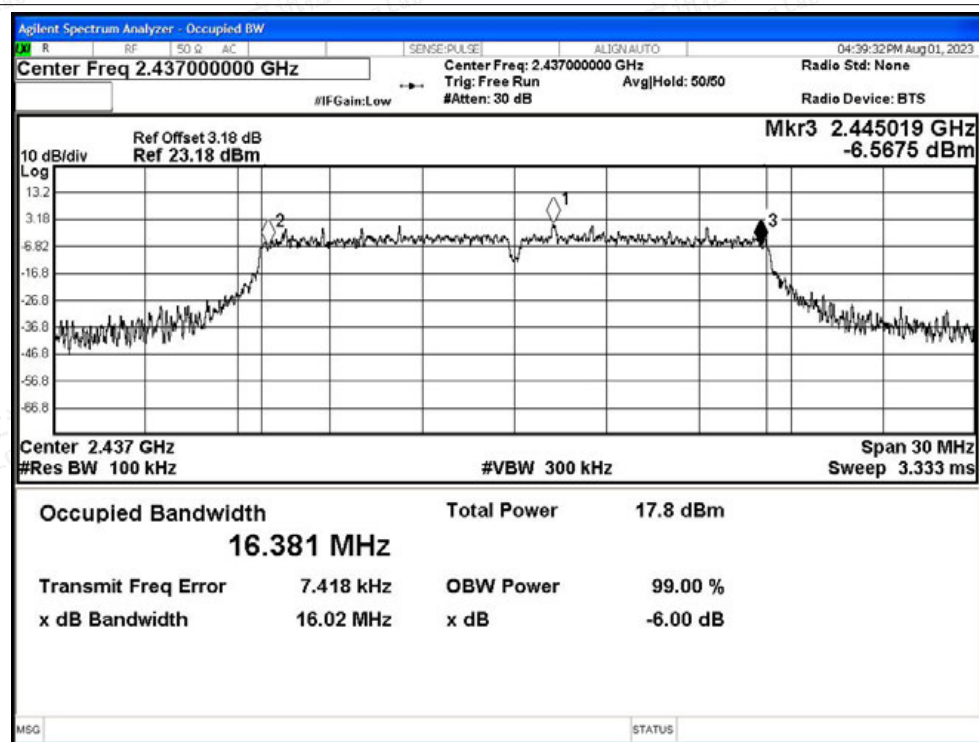
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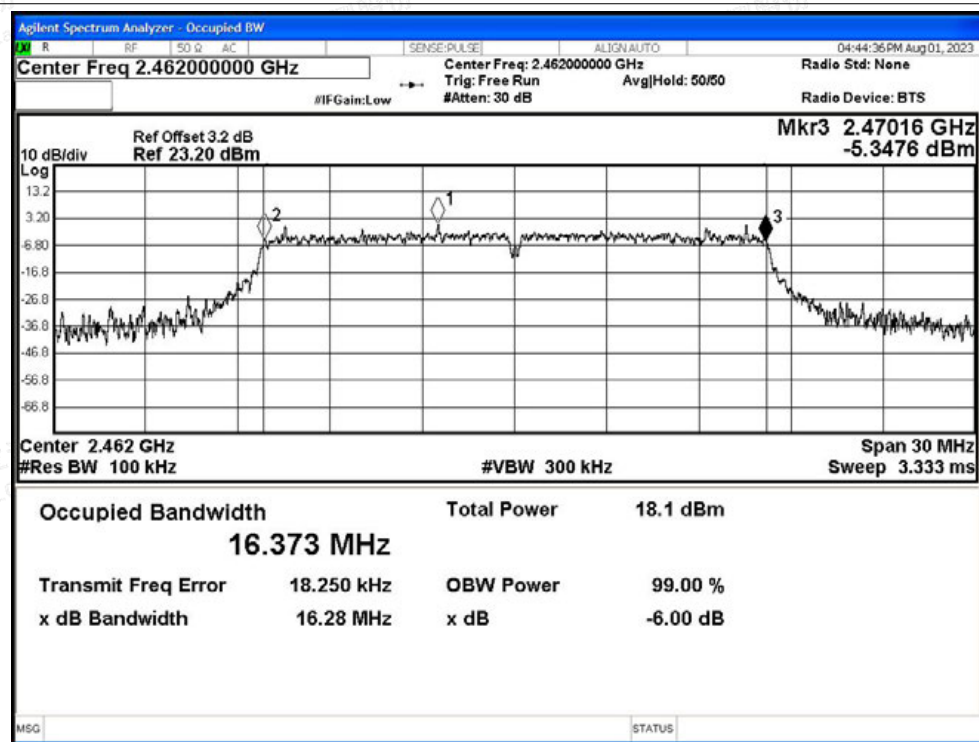
Scan code to check authenticity



-6dB Bandwidth NVNT g 2437MHz Ant0



-6dB Bandwidth NVNT g 2462MHz Ant0



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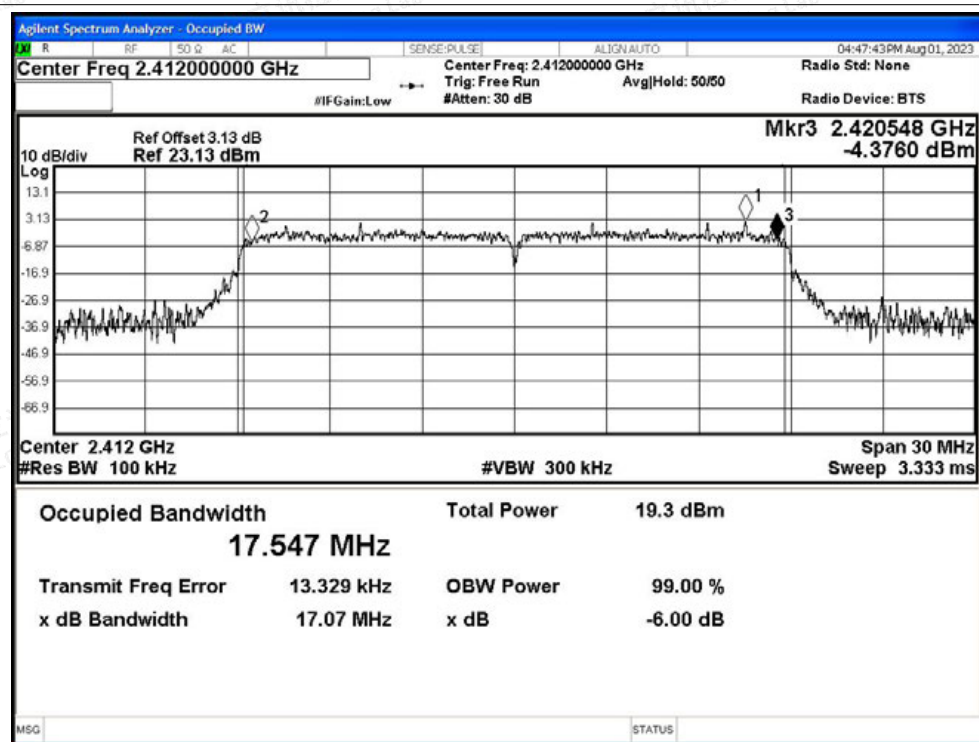
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Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

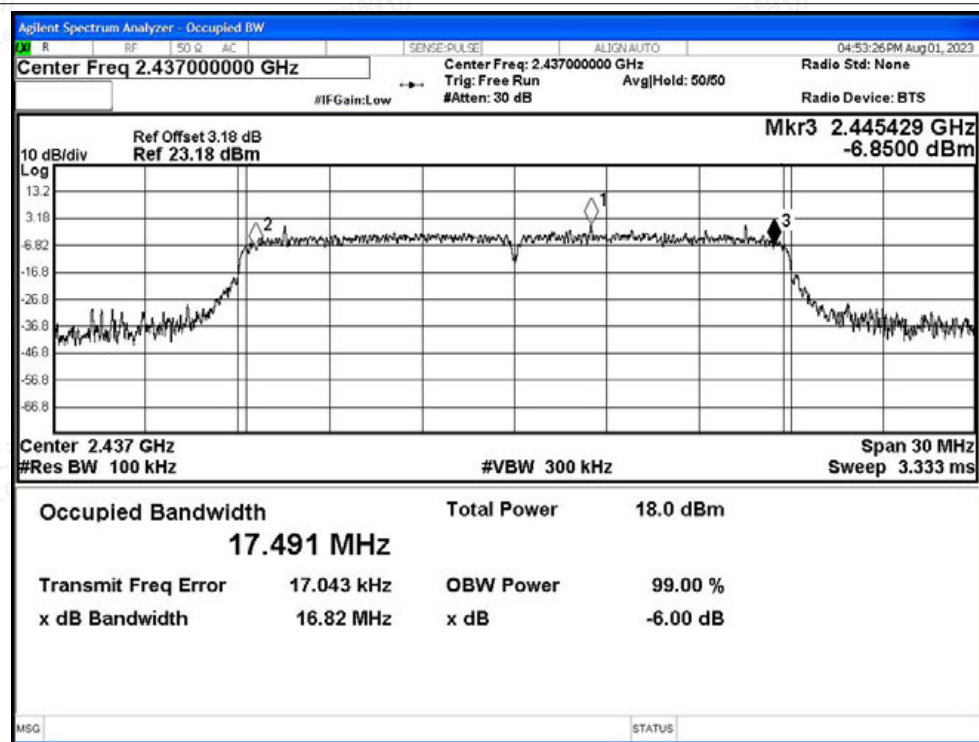
Scan code to check authenticity



-6dB Bandwidth NVNT n20 2412MHz Ant0



-6dB Bandwidth NVNT n20 2437MHz Ant0



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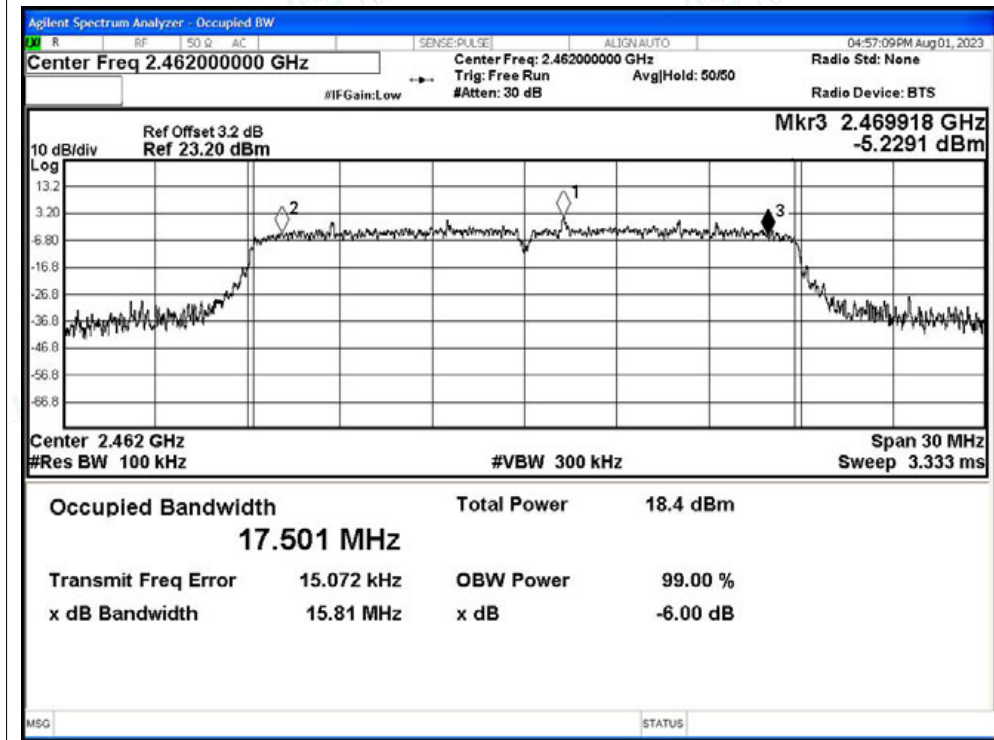
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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-6dB Bandwidth NVNT n20 2462MHz Ant0



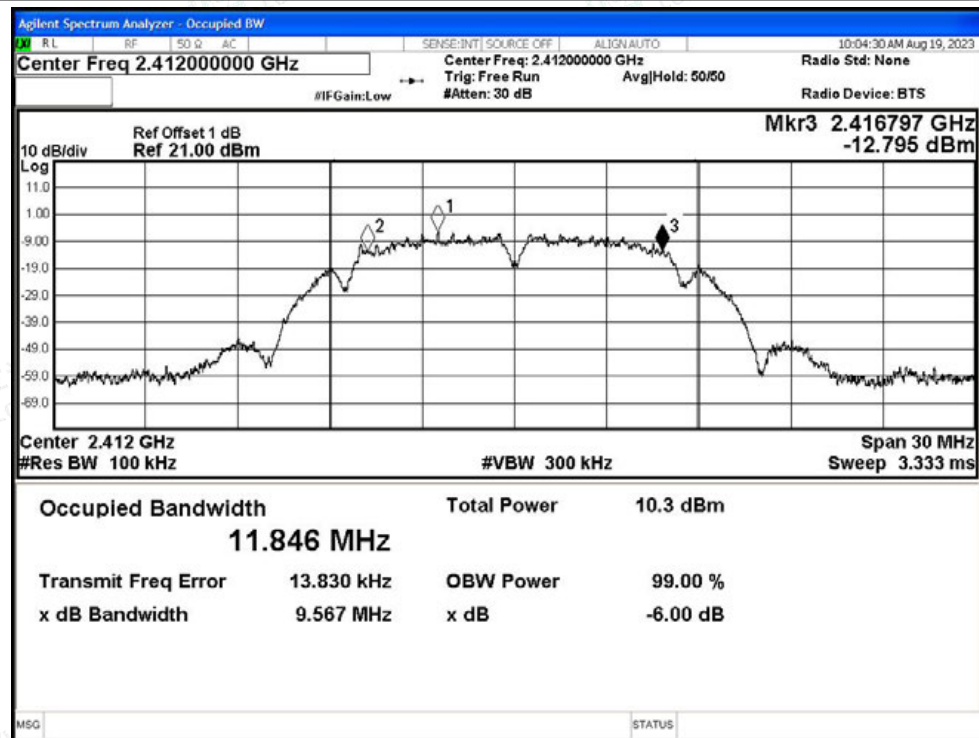
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.567	0.5	Pass
NVNT	b	2437	Ant1	7.879	0.5	Pass
NVNT	b	2462	Ant1	9.577	0.5	Pass
NVNT	g	2412	Ant1	15.588	0.5	Pass
NVNT	g	2437	Ant1	16.071	0.5	Pass
NVNT	g	2462	Ant1	16.03	0.5	Pass
NVNT	n20	2412	Ant1	16.681	0.5	Pass
NVNT	n20	2437	Ant1	16.169	0.5	Pass
NVNT	n20	2462	Ant1	15.323	0.5	Pass





Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1

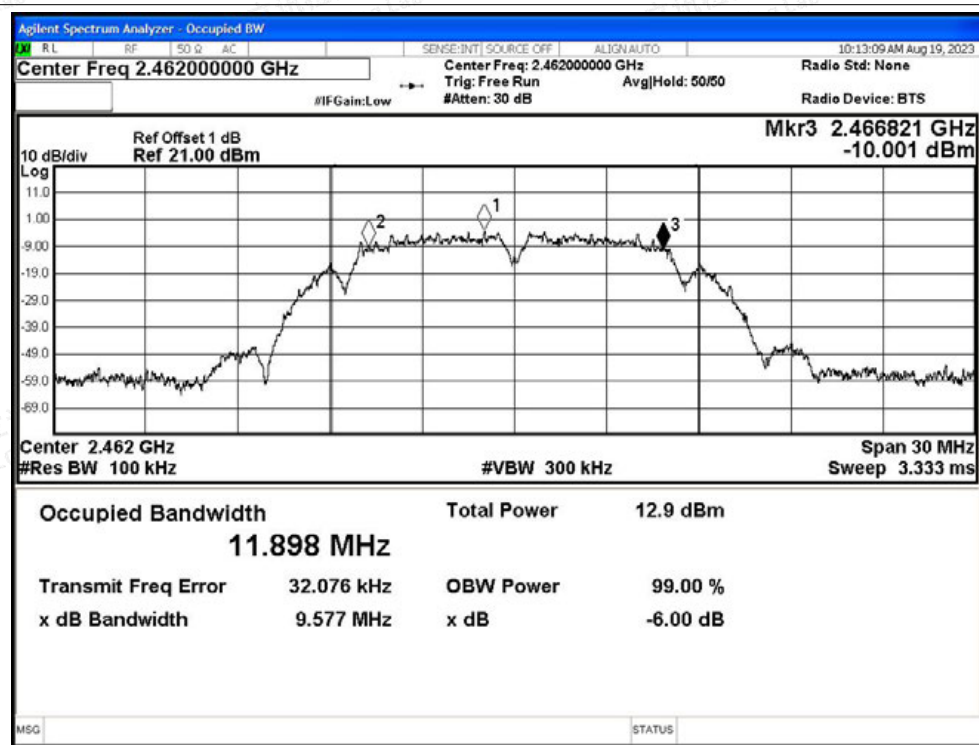


-6dB Bandwidth NVNT b 2437MHz Ant1

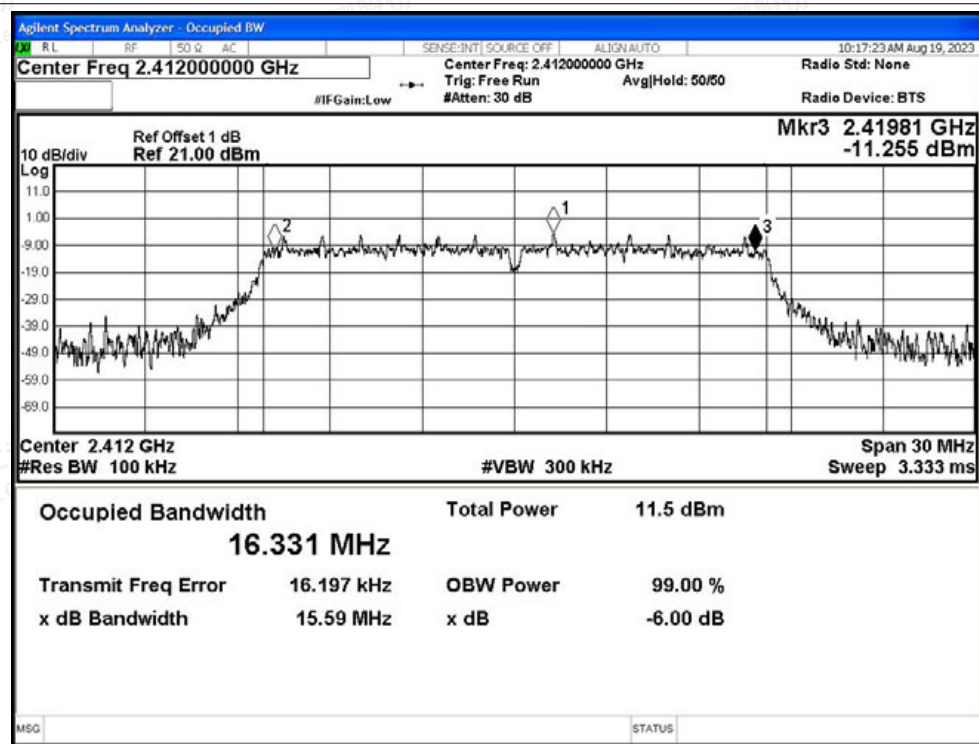




-6dB Bandwidth NVNT b 2462MHz Ant1



-6dB Bandwidth NVNT g 2412MHz Ant1



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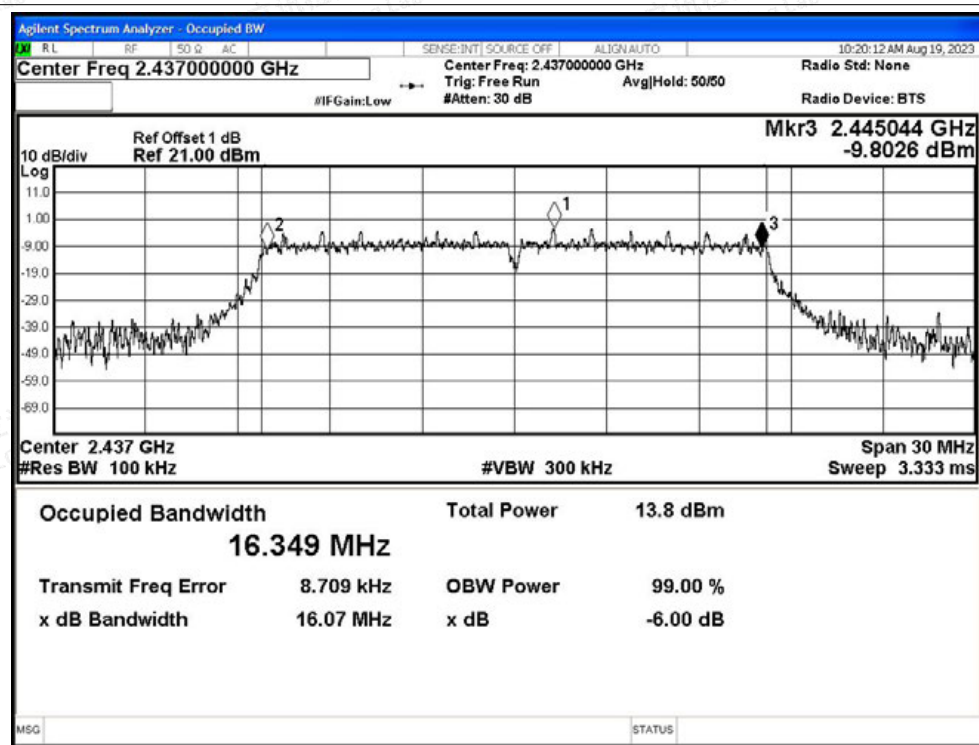
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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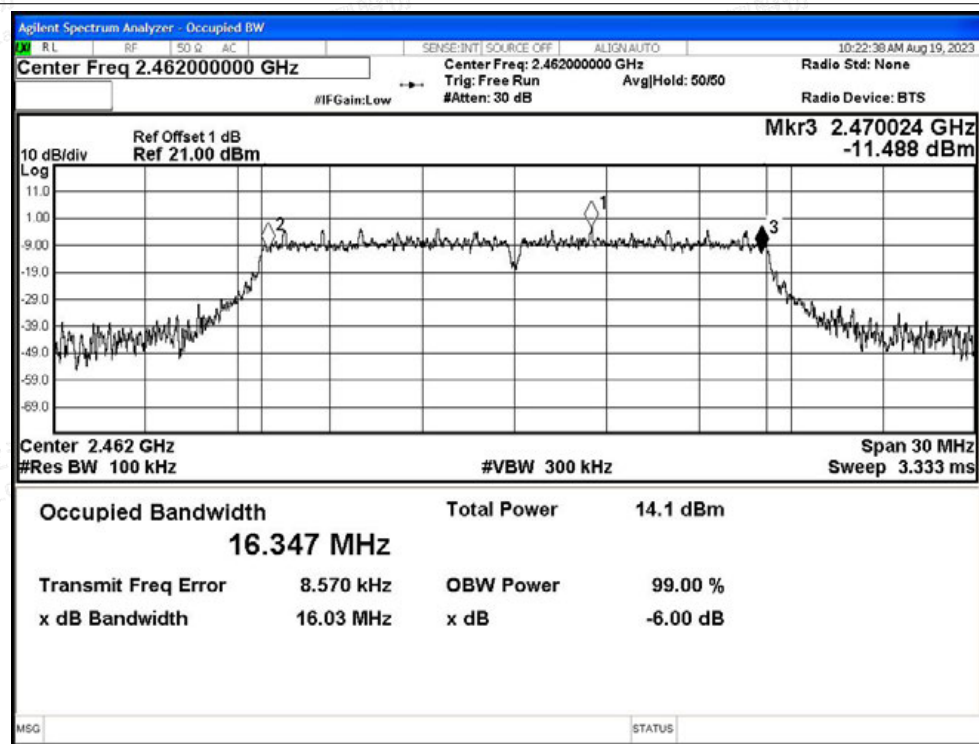
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-6dB Bandwidth NVNT g 2437MHz Ant1



-6dB Bandwidth NVNT g 2462MHz Ant1



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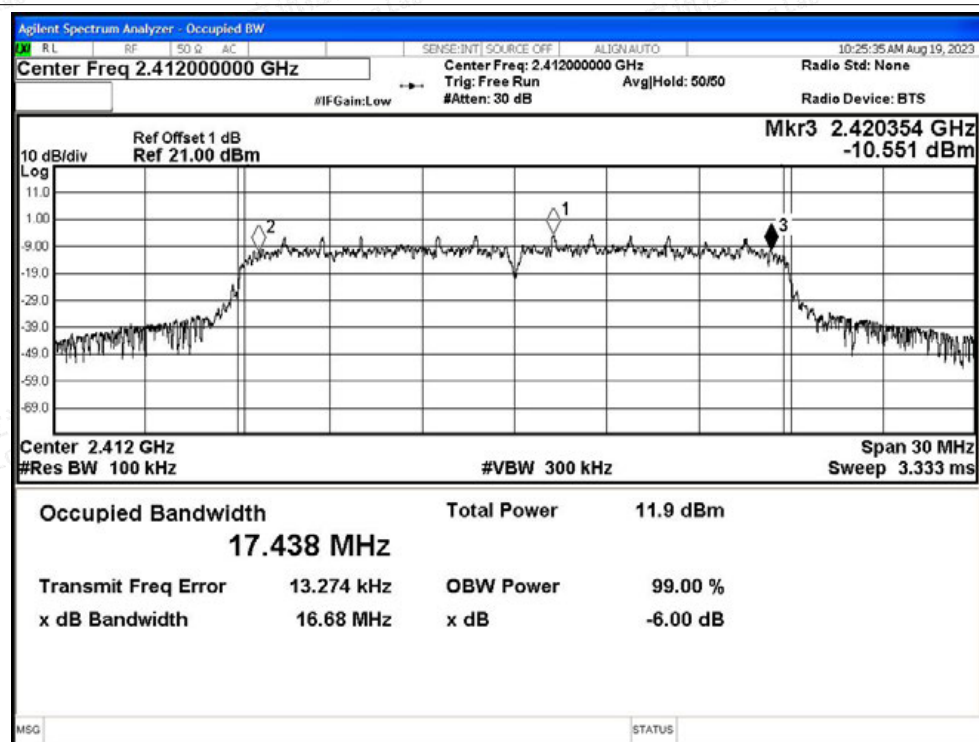
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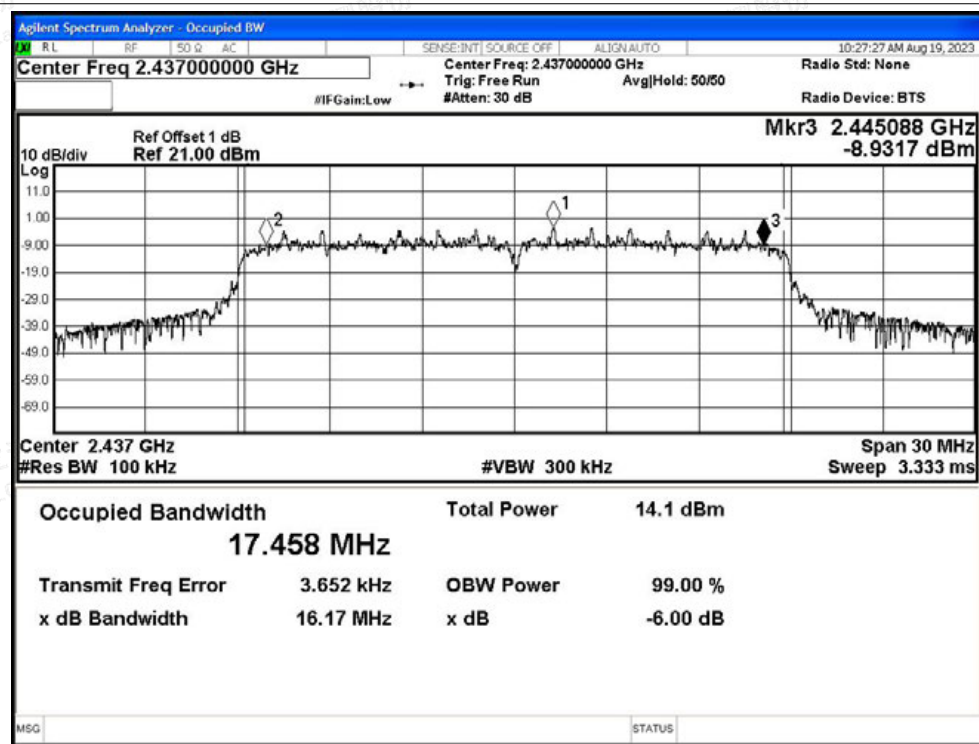
Scan code to check authenticity



-6dB Bandwidth NVNT n20 2412MHz Ant1



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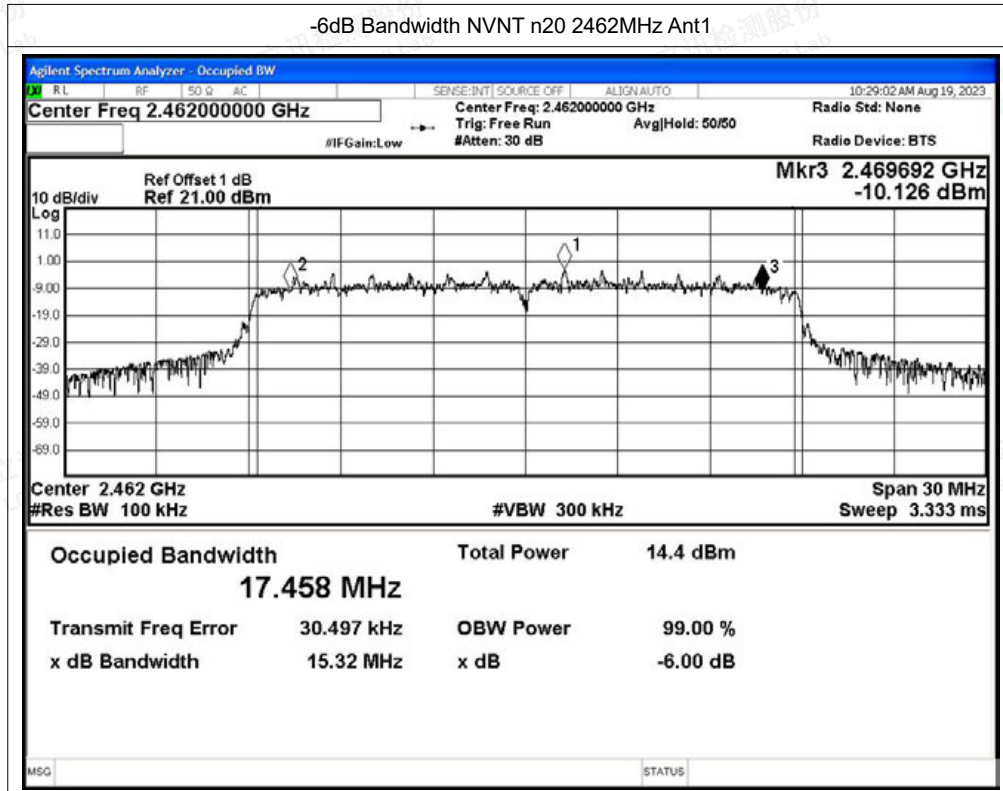


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B.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant0	15.61	30	Pass
NVNT	b	2437	Ant0	15.41	30	Pass
NVNT	b	2462	Ant0	15.5	30	Pass
NVNT	g	2412	Ant0	14.06	30	Pass
NVNT	g	2437	Ant0	15.18	30	Pass
NVNT	g	2462	Ant0	15.41	30	Pass
NVNT	n20	2412	Ant0	16.38	30	Pass
NVNT	n20	2437	Ant0	15.12	30	Pass
NVNT	n20	2462	Ant0	17.4	30	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	14.34	30	Pass
NVNT	b	2437	Ant1	14.58	30	Pass
NVNT	b	2462	Ant1	14.62	30	Pass
NVNT	g	2412	Ant1	14.76	30	Pass
NVNT	g	2437	Ant1	14.96	30	Pass
NVNT	g	2462	Ant1	14.21	30	Pass
NVNT	n20	2412	Ant1	14.9	30	Pass
NVNT	n20	2437	Ant1	13.79	30	Pass
NVNT	n20	2462	Ant1	13.91	30	Pass

MIMO

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)			Limit (dBm)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	n20	2412	16.38	14.9	18.71	30	Pass
NVNT	n20	2437	15.12	13.79	17.52	30	Pass
NVNT	n20	2462	17.4	13.91	19.01	30	Pass





B.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant0	-5.7	8	Pass
NVNT	b	2437	Ant0	-8.77	8	Pass
NVNT	b	2462	Ant0	-8.77	8	Pass
NVNT	g	2412	Ant0	-15.17	8	Pass
NVNT	g	2437	Ant0	-13.74	8	Pass
NVNT	g	2462	Ant0	-12.28	8	Pass
NVNT	n20	2412	Ant0	-12.05	8	Pass
NVNT	n20	2437	Ant0	-13.56	8	Pass
NVNT	n20	2462	Ant0	-13.1	8	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-18.36	8	Pass
NVNT	b	2437	Ant1	-16.7	8	Pass
NVNT	b	2462	Ant1	-16.75	8	Pass
NVNT	g	2412	Ant1	-21.31	8	Pass
NVNT	g	2437	Ant1	-19.02	8	Pass
NVNT	g	2462	Ant1	-17.24	8	Pass
NVNT	n20	2412	Ant1	-21.81	8	Pass
NVNT	n20	2437	Ant1	-16.29	8	Pass
NVNT	n20	2462	Ant1	-18.83	8	Pass

MIMO

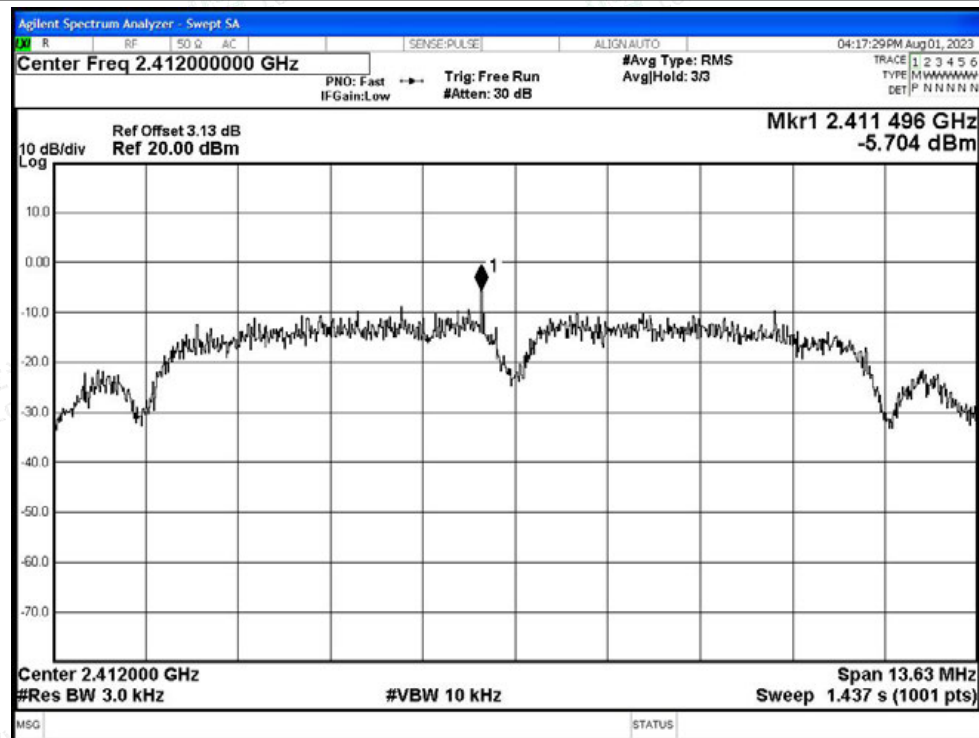
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/3kHz)			Limit (dBm)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	n20	2412	-12.05	-21.81	-11.61	8	Pass
NVNT	n20	2437	-13.56	-16.29	-11.70	8	Pass
NVNT	n20	2462	-13.1	-18.83	-12.07	8	Pass



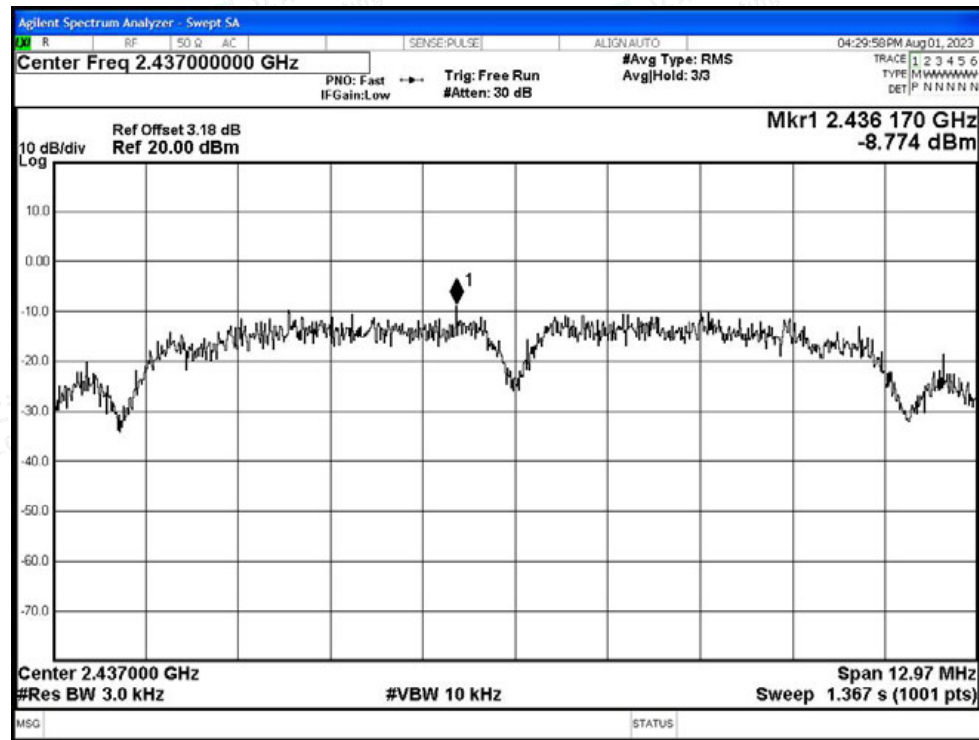


Test Graphs

PSD NVNT b 2412MHz Ant0

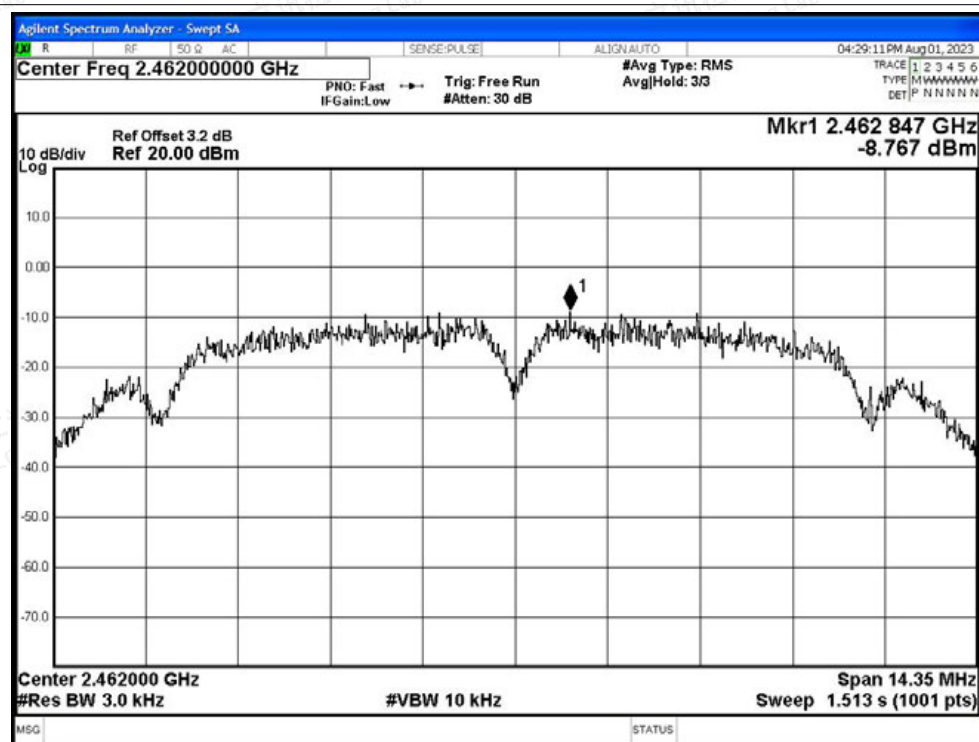


PSD NVNT b 2437MHz Ant0

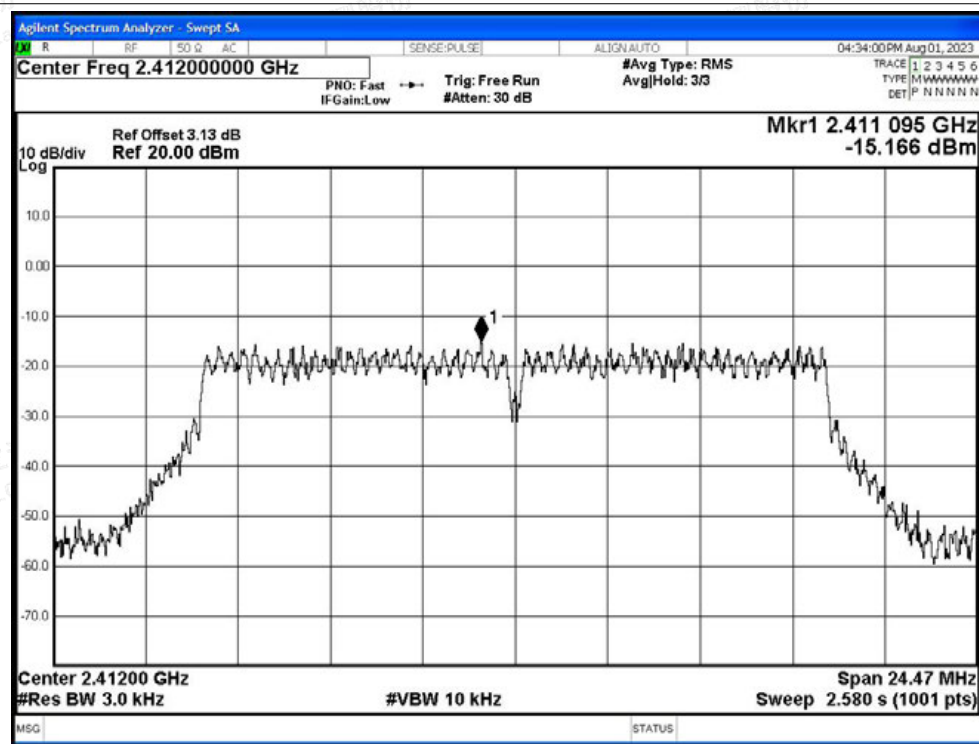




PSD NVNT b 2462MHz Ant0

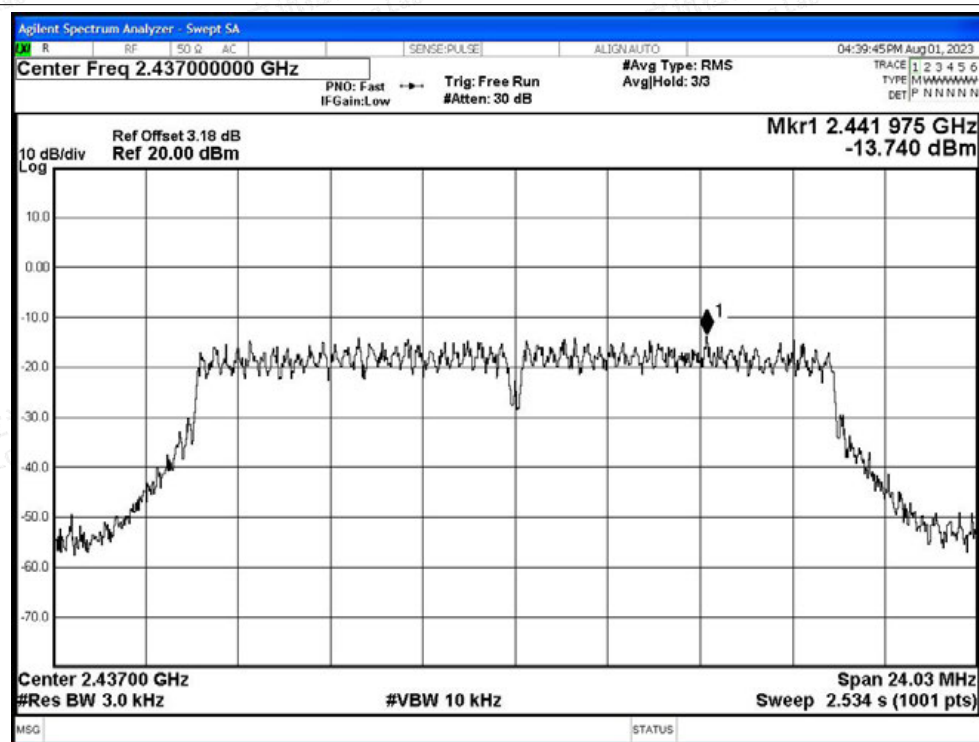


PSD NVNT g 2412MHz Ant0

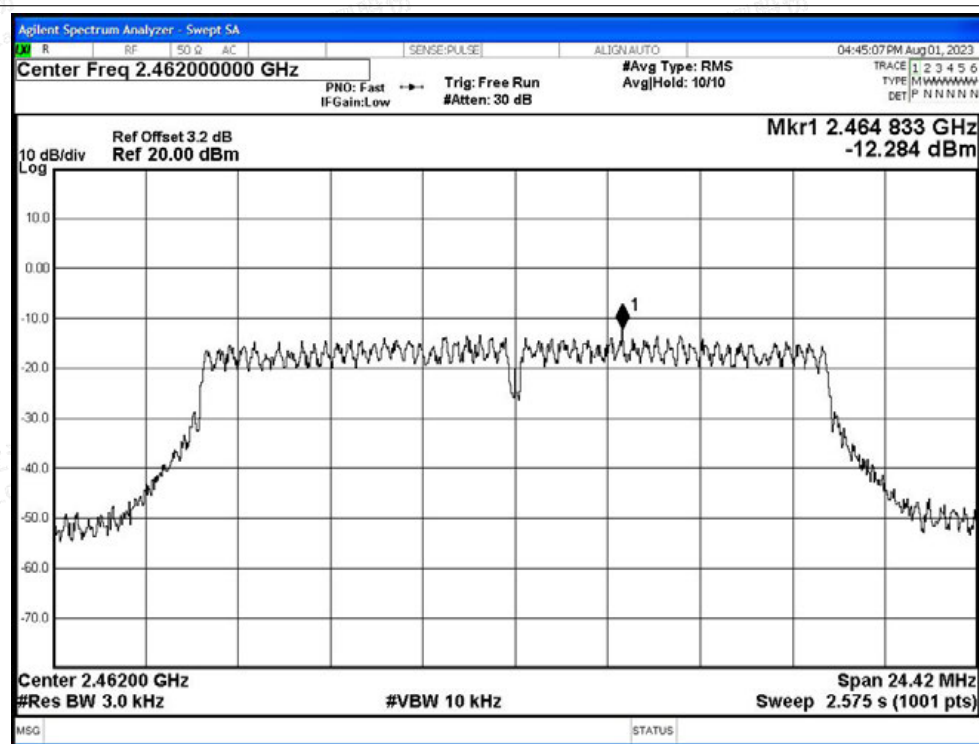




PSD NVNT g 2437MHz Ant0

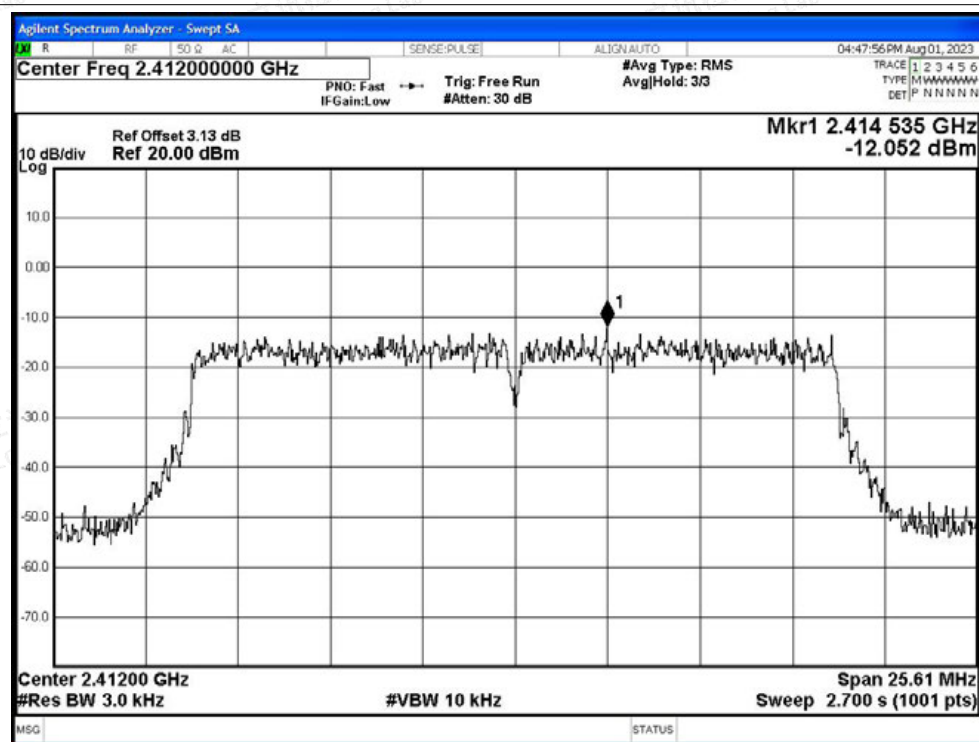


PSD NVNT g 2462MHz Ant0

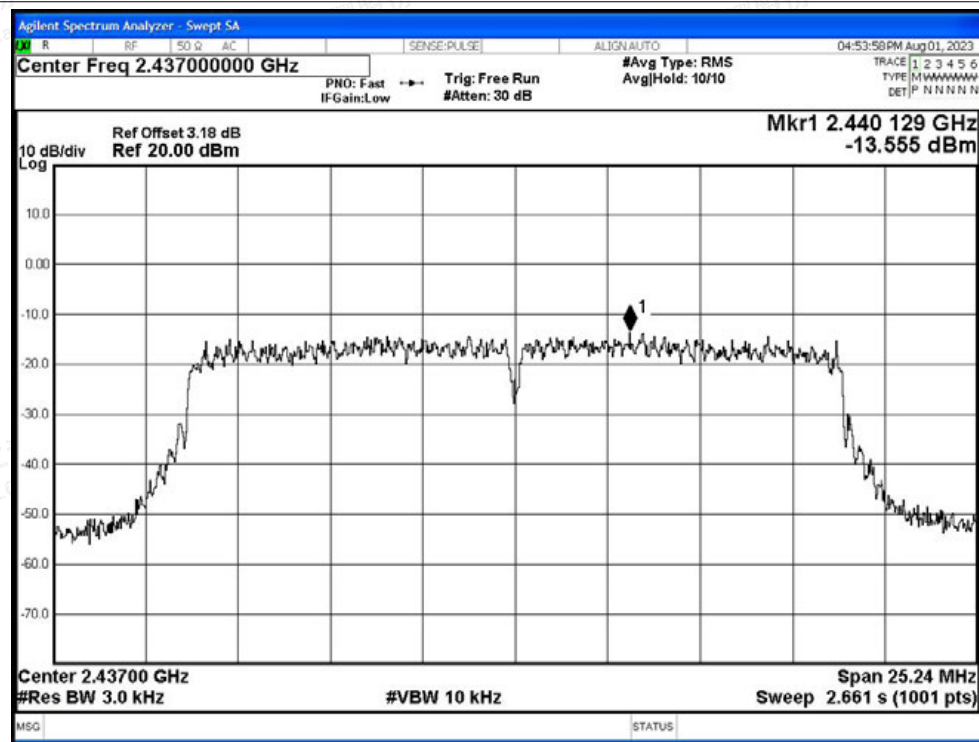




PSD NVNT n20 2412MHz Ant0



PSD NVNT n20 2437MHz Ant0



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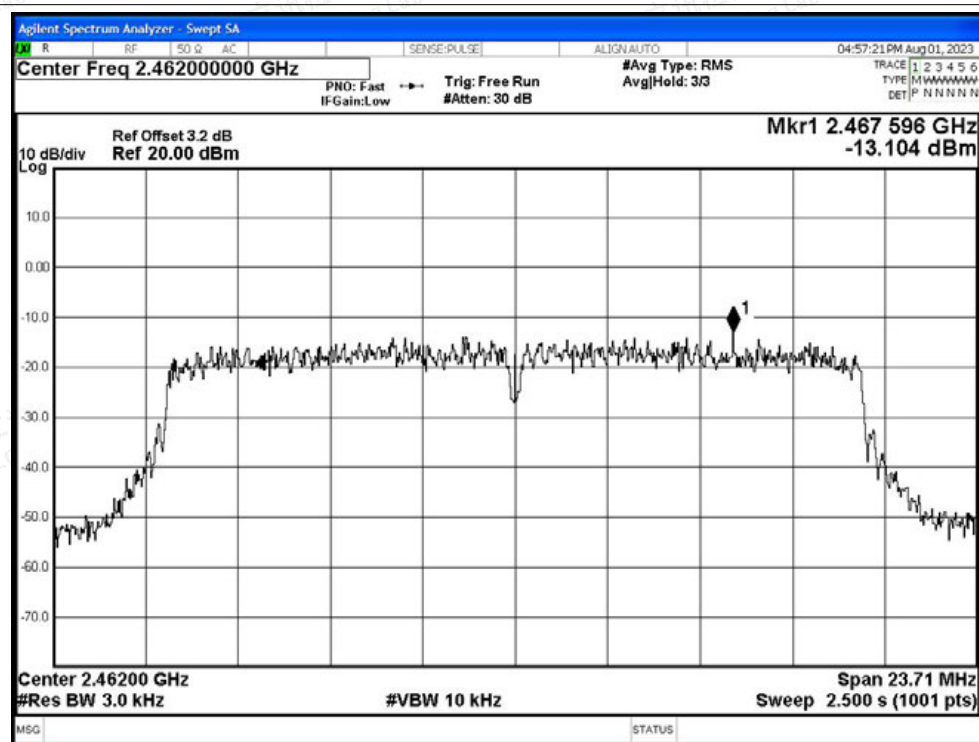
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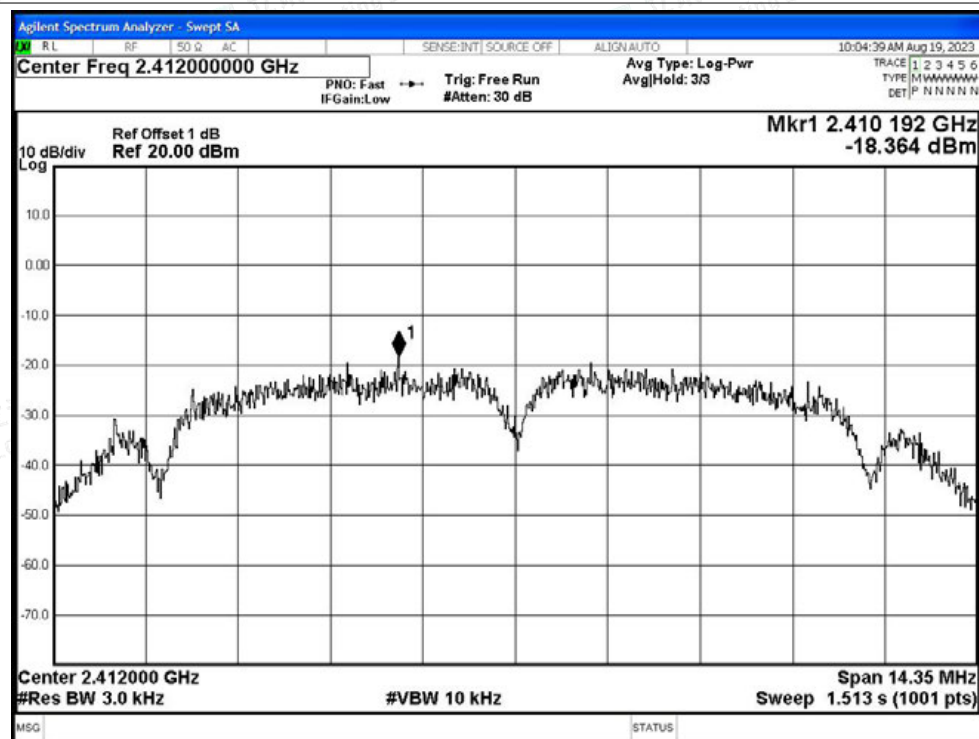


PSD NVNT n20 2462MHz Ant0



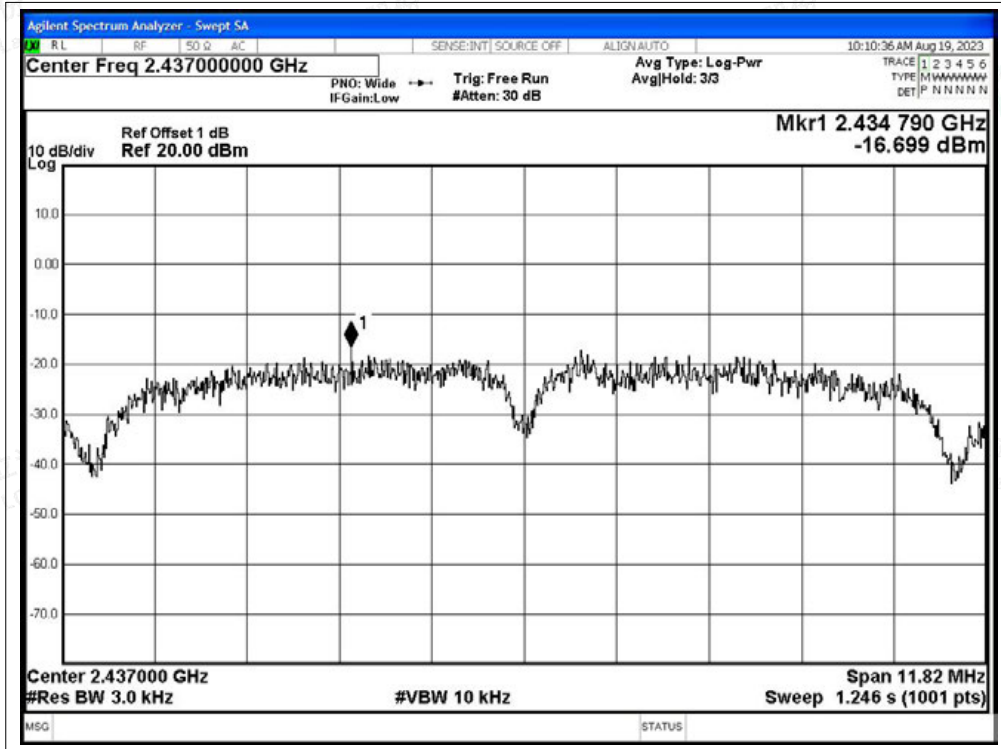
Test Graphs

PSD NVNT b 2412MHz Ant1



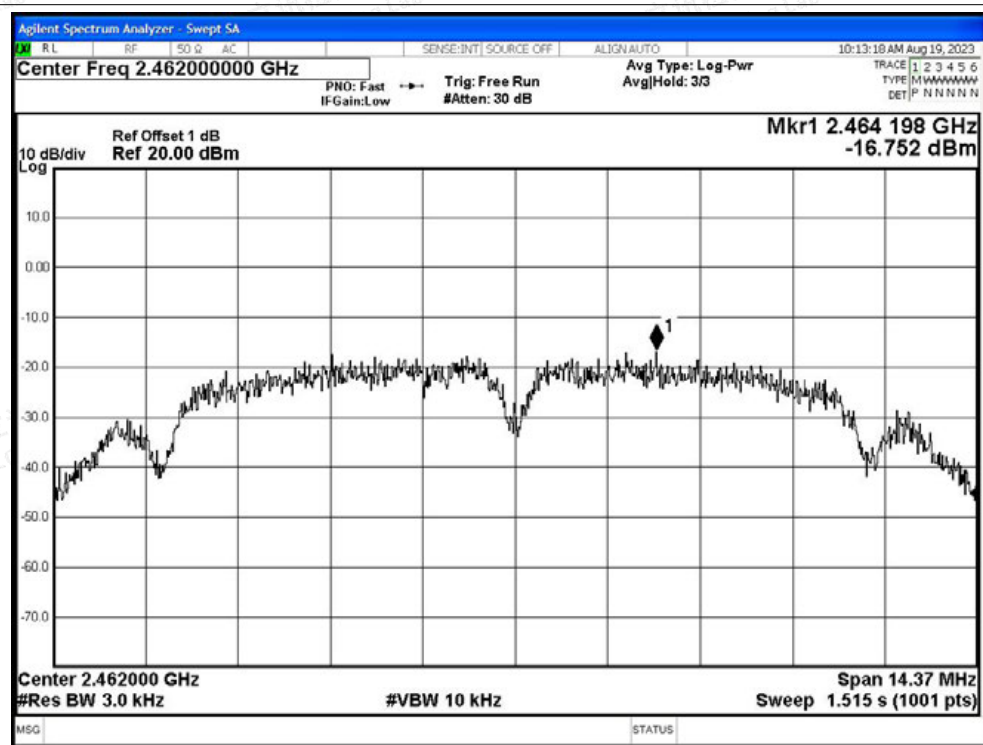
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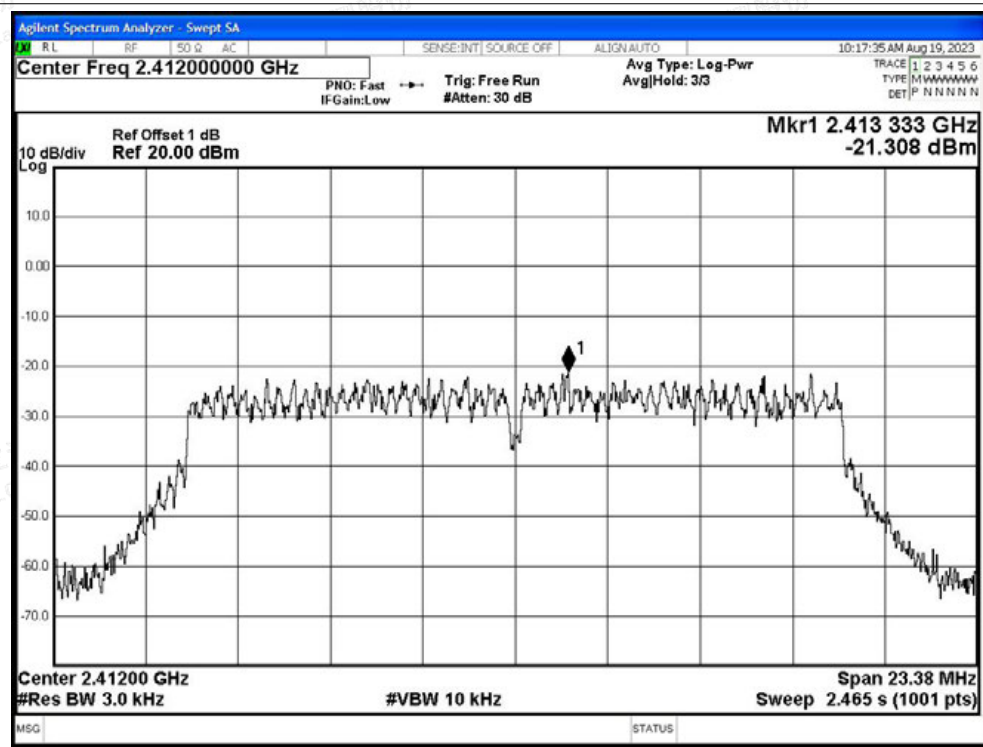




PSD NVNT b 2462MHz Ant1

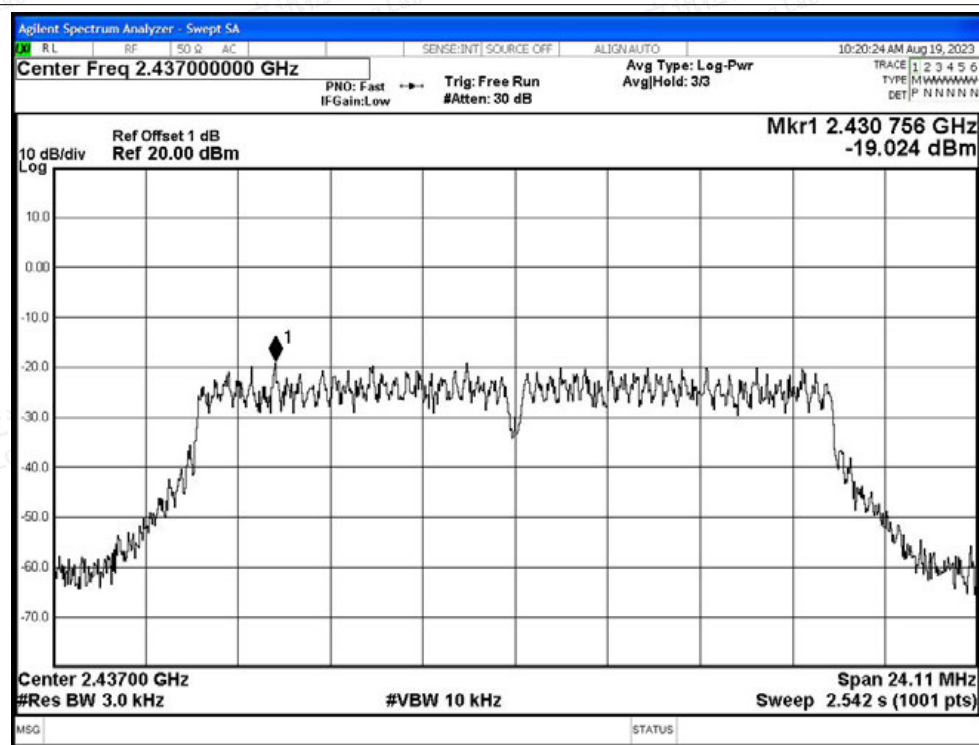


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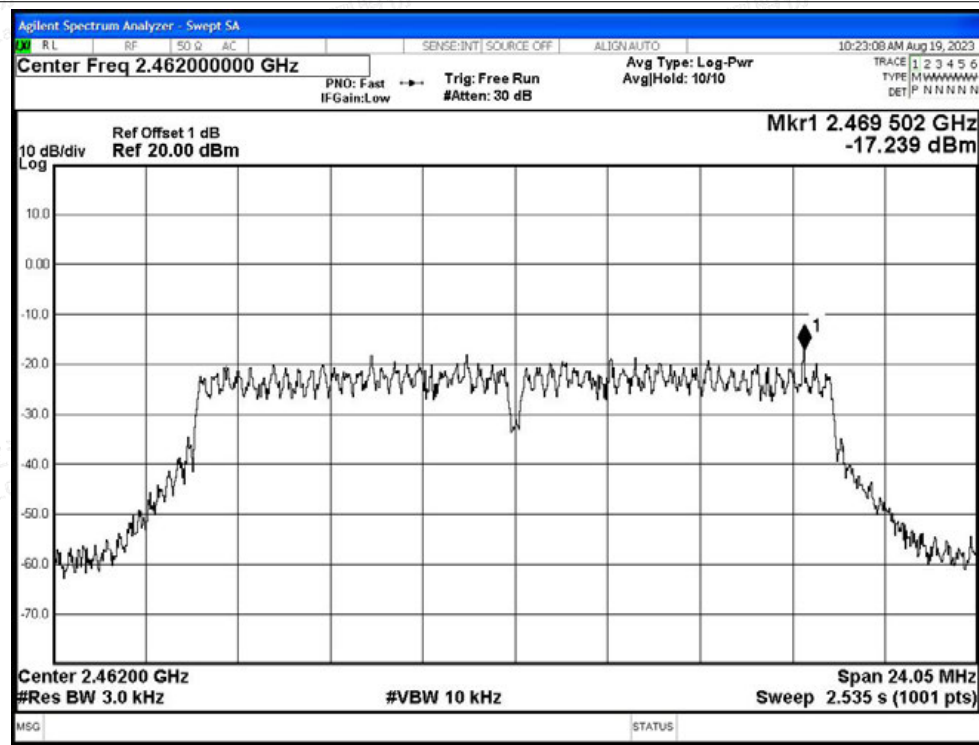




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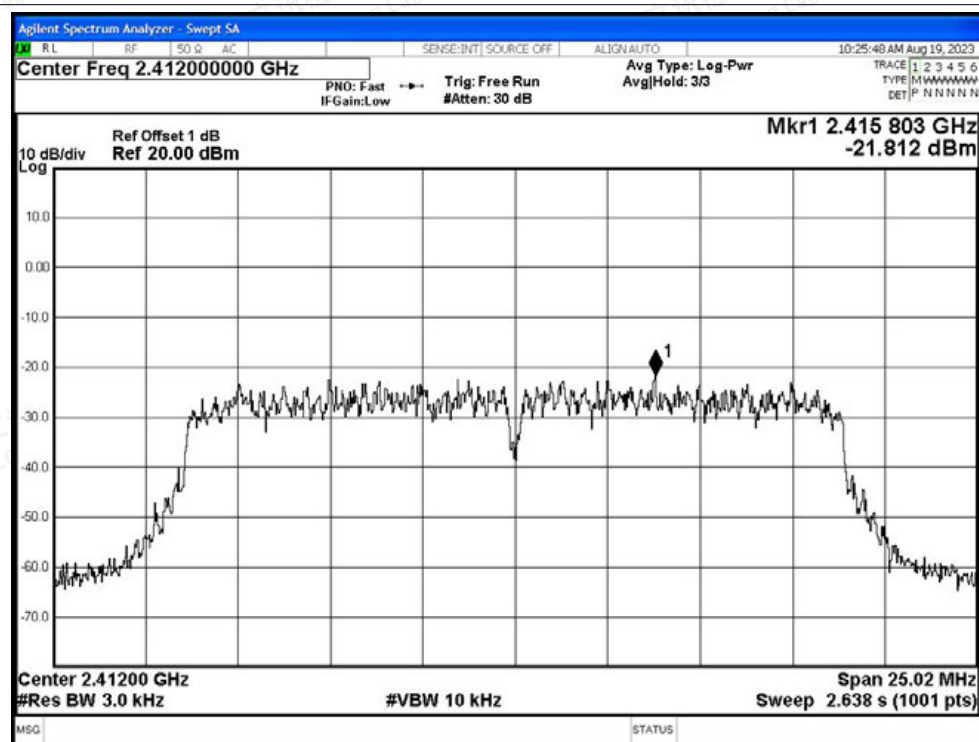


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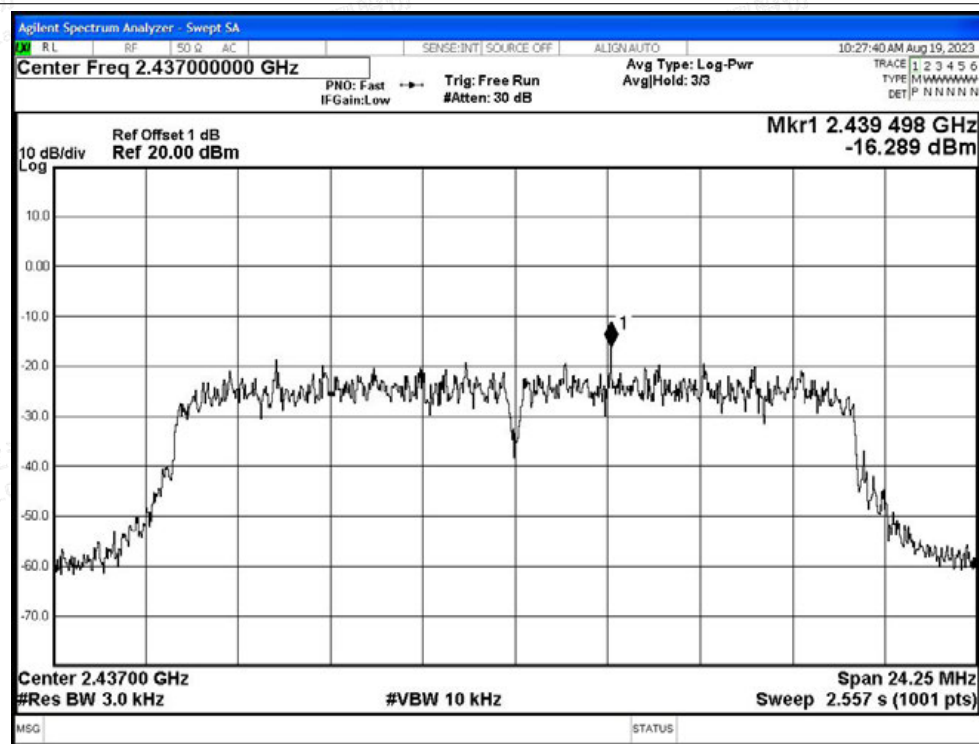


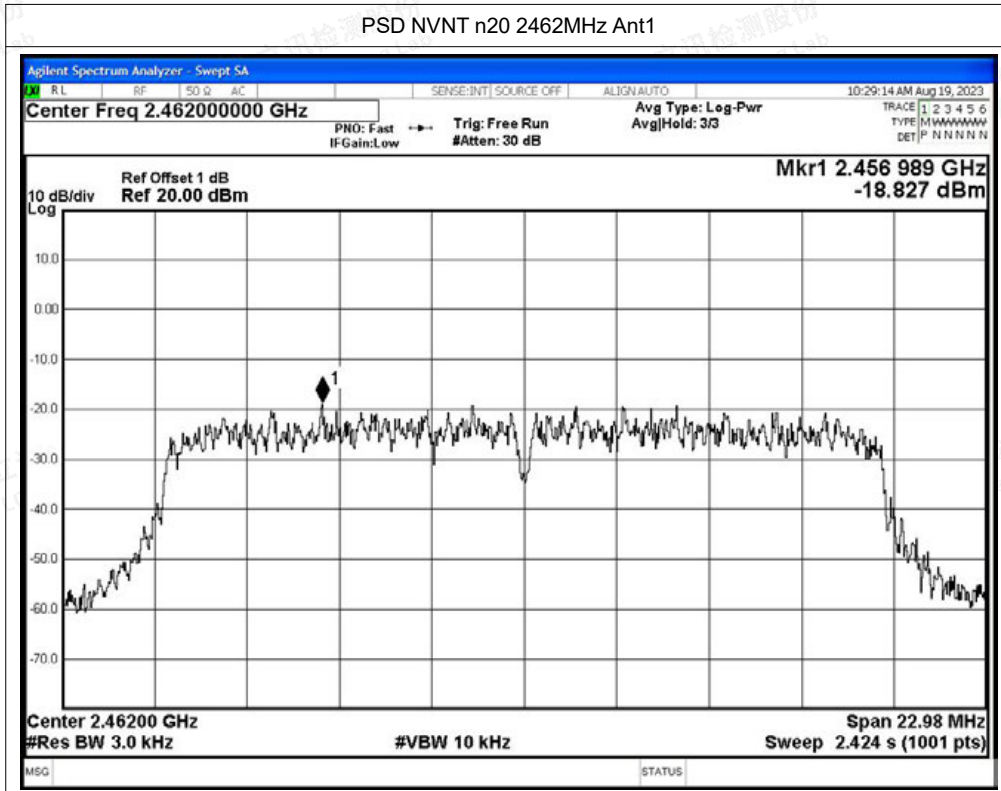


PSD NVNT n20 2412MHz Ant1



PSD NVNT n20 2437MHz Ant1







B.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant0	-52.02	-20	Pass
NVNT	b	2462	Ant0	-51.1	-20	Pass
NVNT	g	2412	Ant0	-32.59	-20	Pass
NVNT	g	2462	Ant0	-43.33	-20	Pass
NVNT	n20	2412	Ant0	-33.78	-20	Pass
NVNT	n20	2462	Ant0	-45.76	-20	Pass

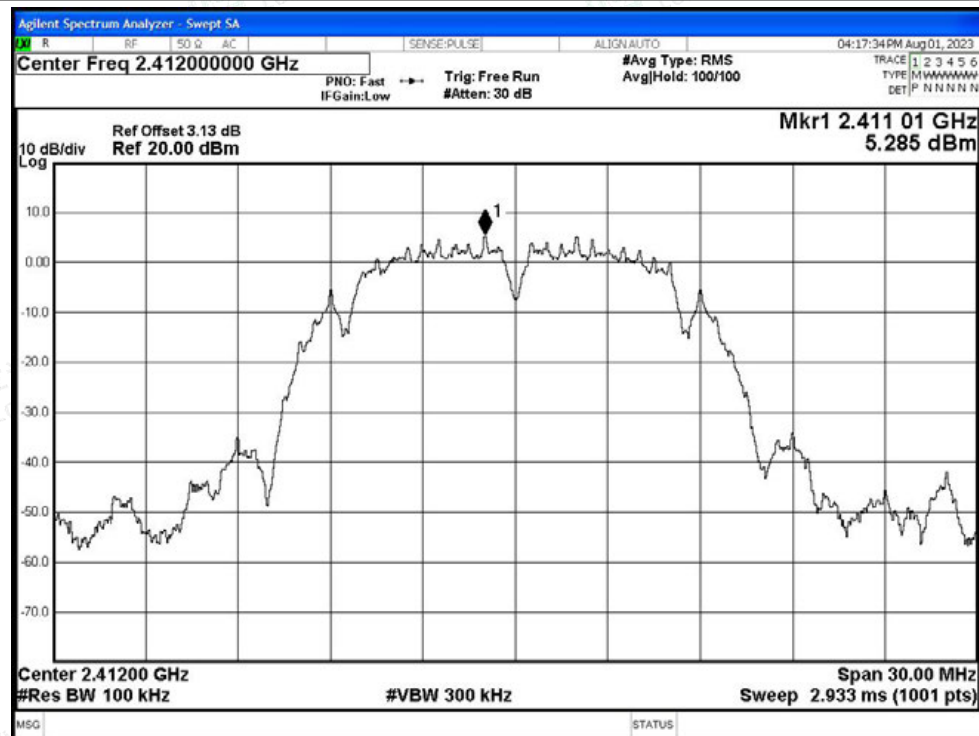


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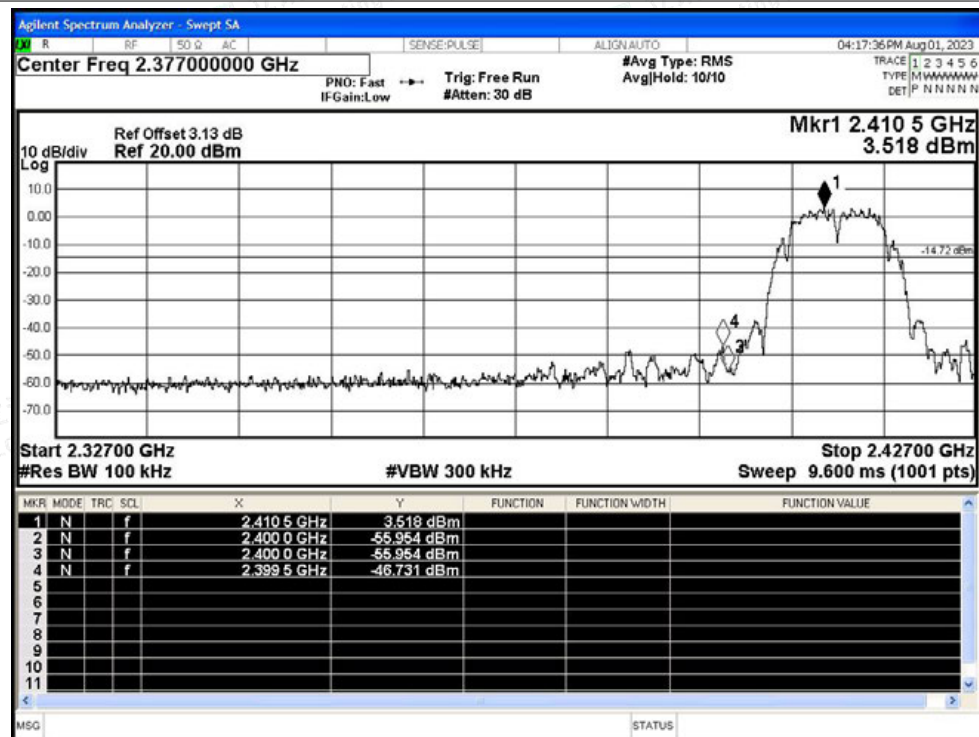


Test Graphs

Band Edge NVNT b 2412MHz Ant0 Ref



Band Edge NVNT b 2412MHz Ant0 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

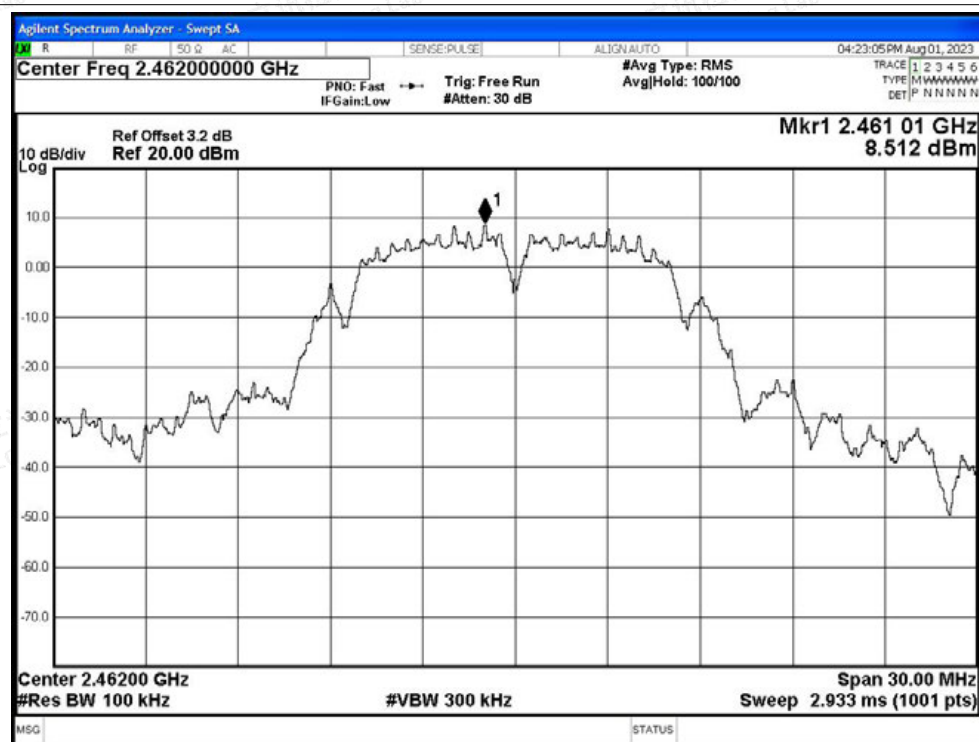
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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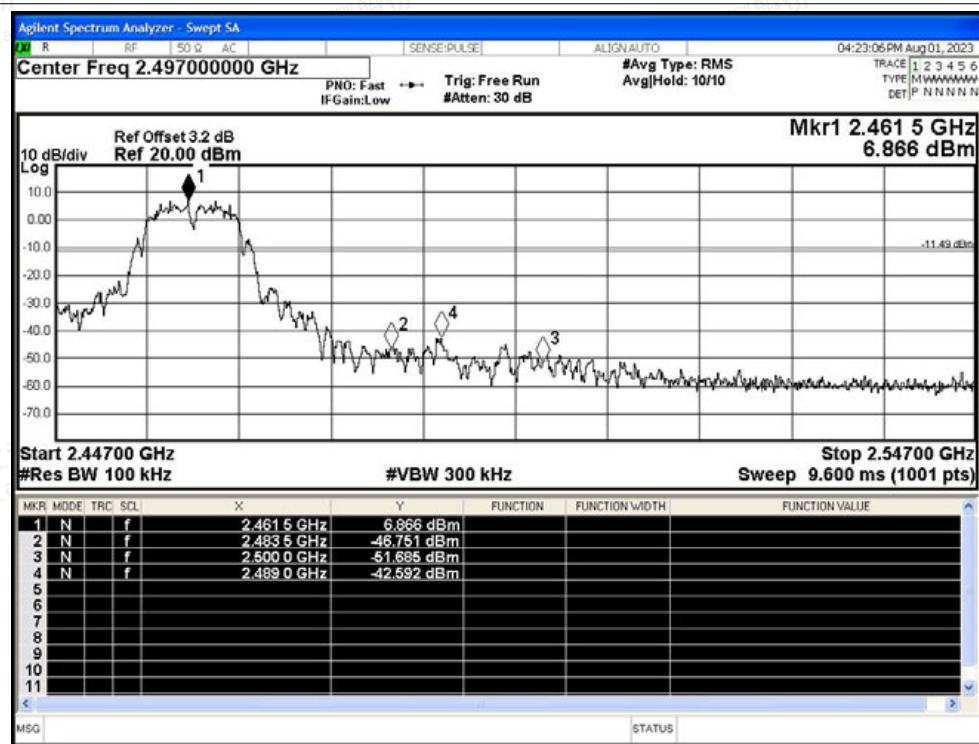
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Band Edge NVNT b 2462MHz Ant0 Ref



Band Edge NVNT b 2462MHz Ant0 Emission



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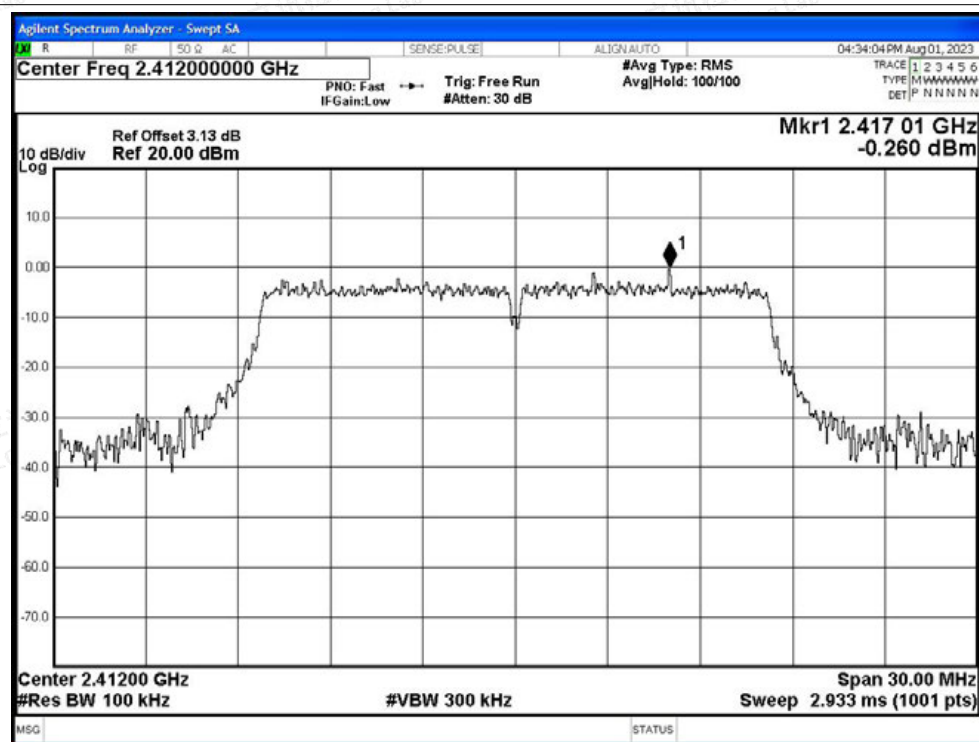
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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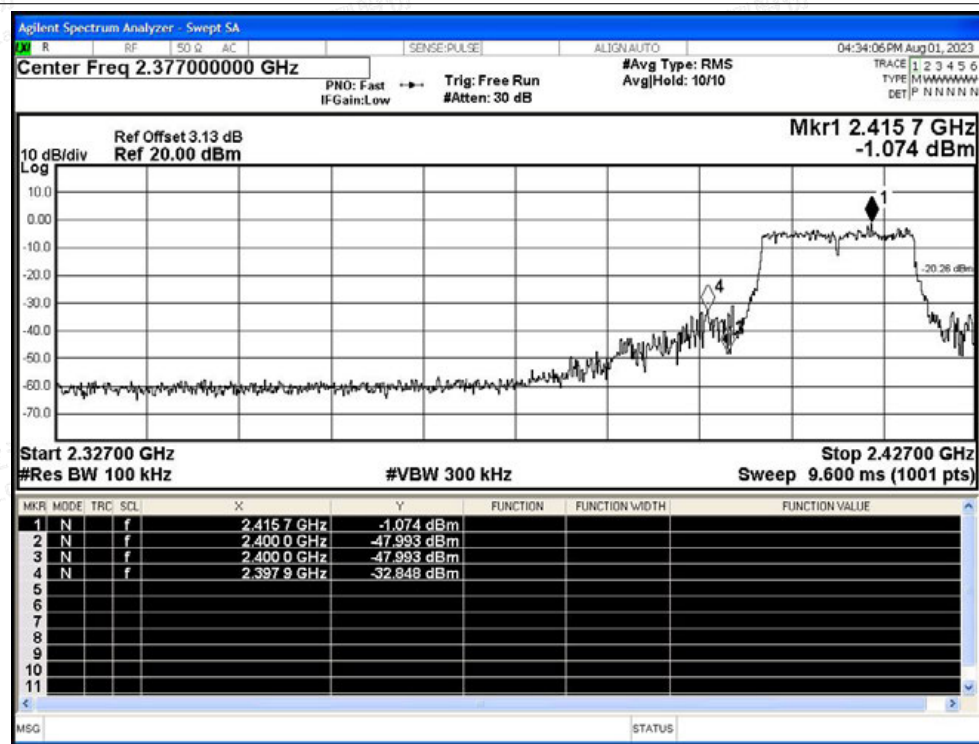
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Band Edge NVNT g 2412MHz Ant0 Ref



Band Edge NVNT g 2412MHz Ant0 Emission



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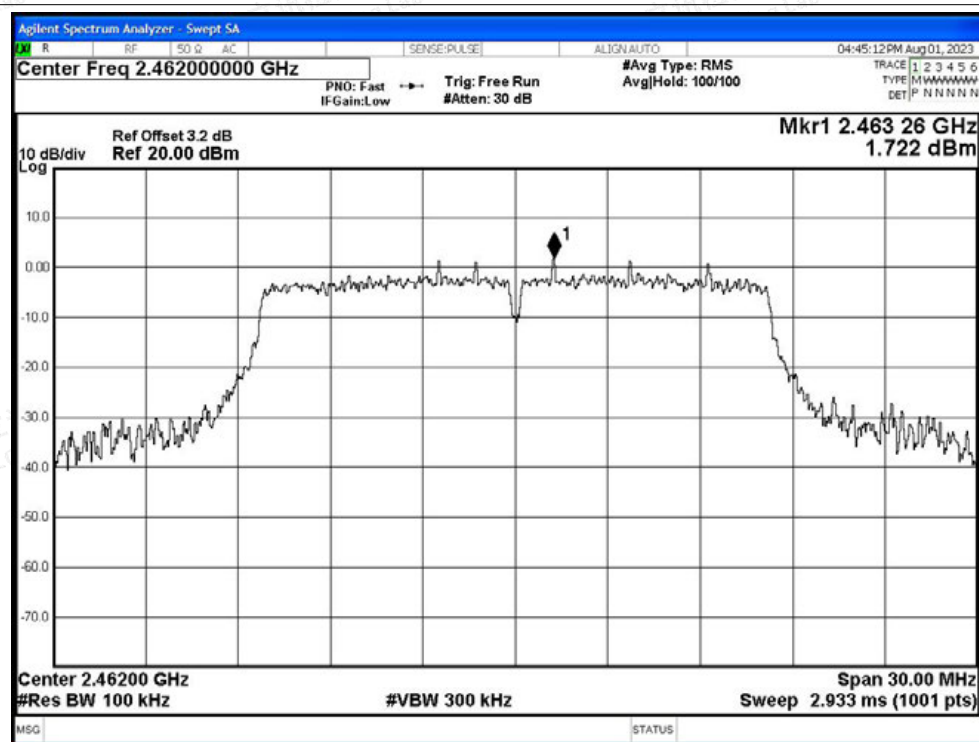
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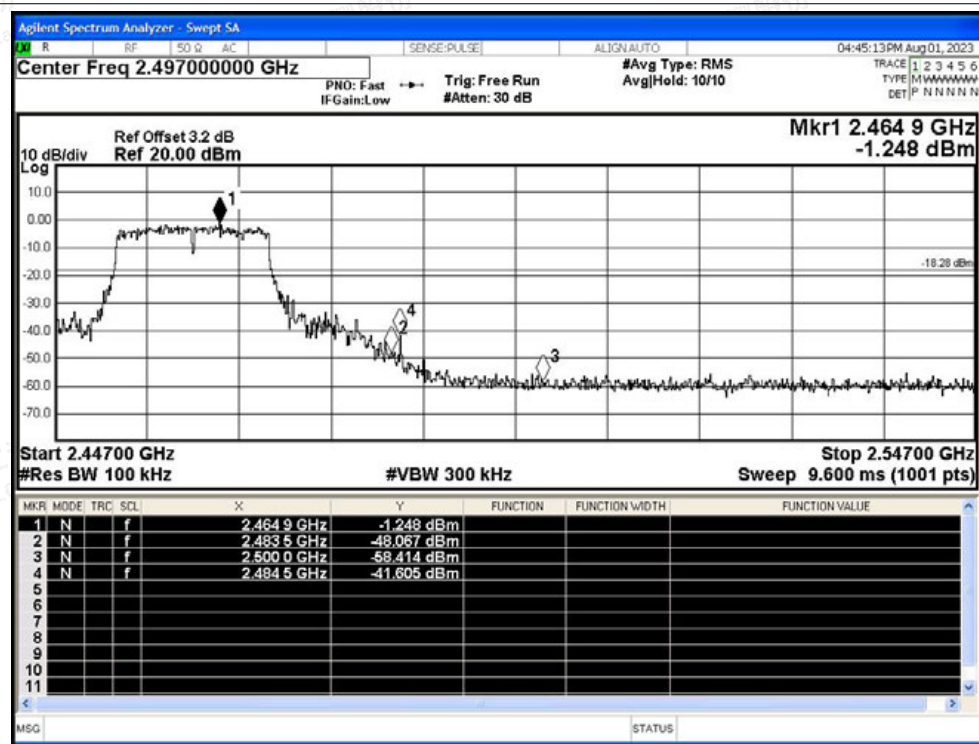
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Band Edge NVNT g 2462MHz Ant0 Ref



Band Edge NVNT g 2462MHz Ant0 Emission



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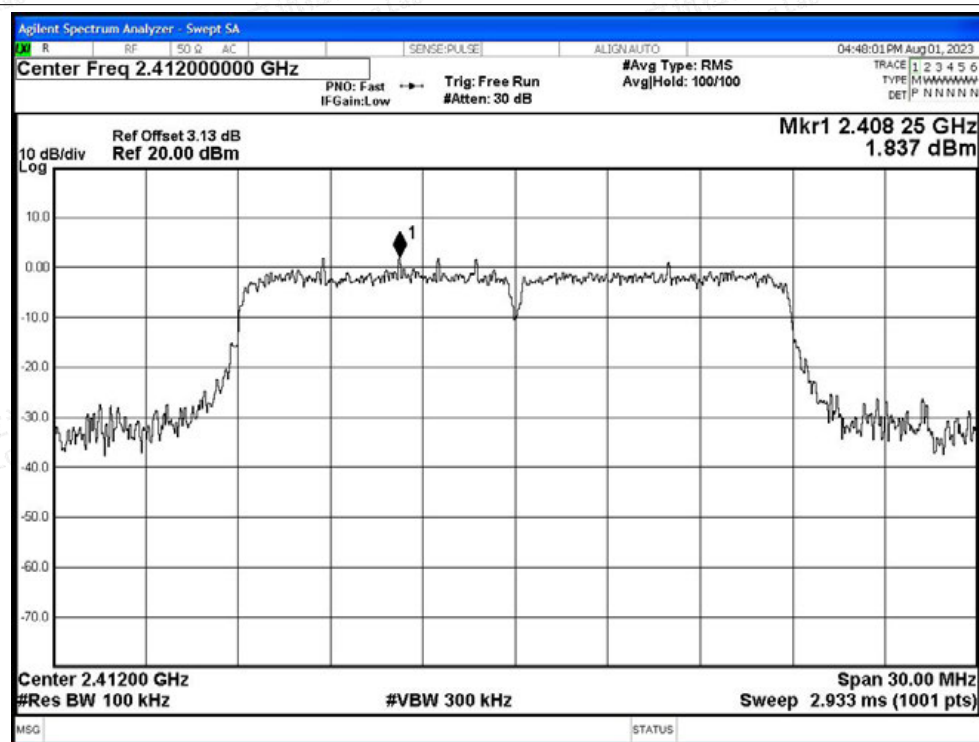
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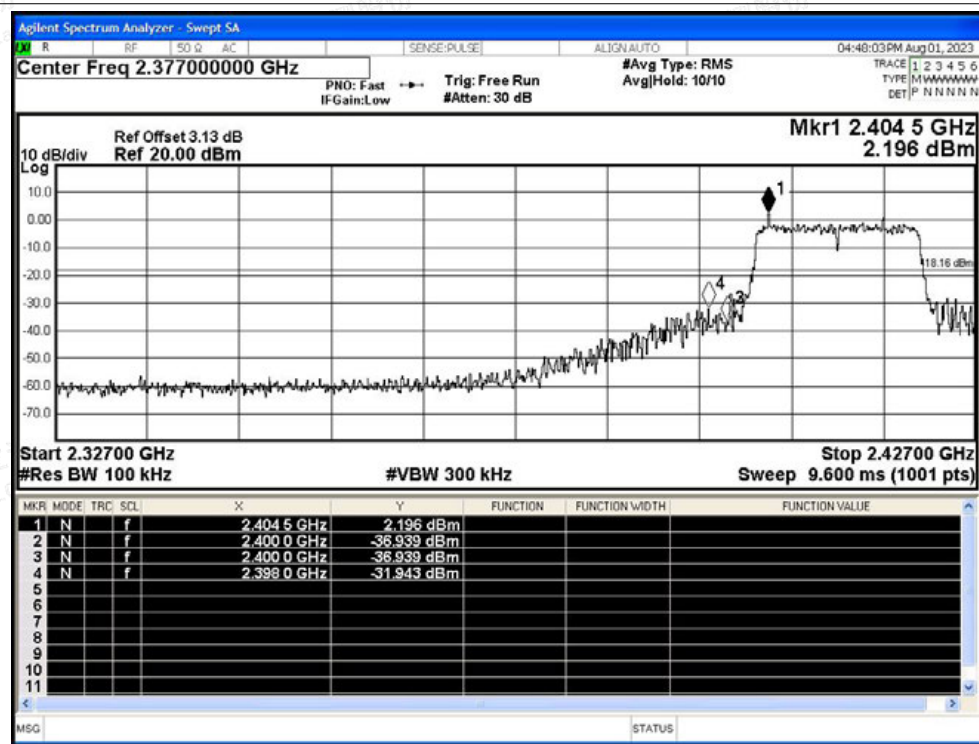
Scan code to check authenticity



Band Edge NVNT n20 2412MHz Ant0 Ref



Band Edge NVNT n20 2412MHz Ant0 Emission



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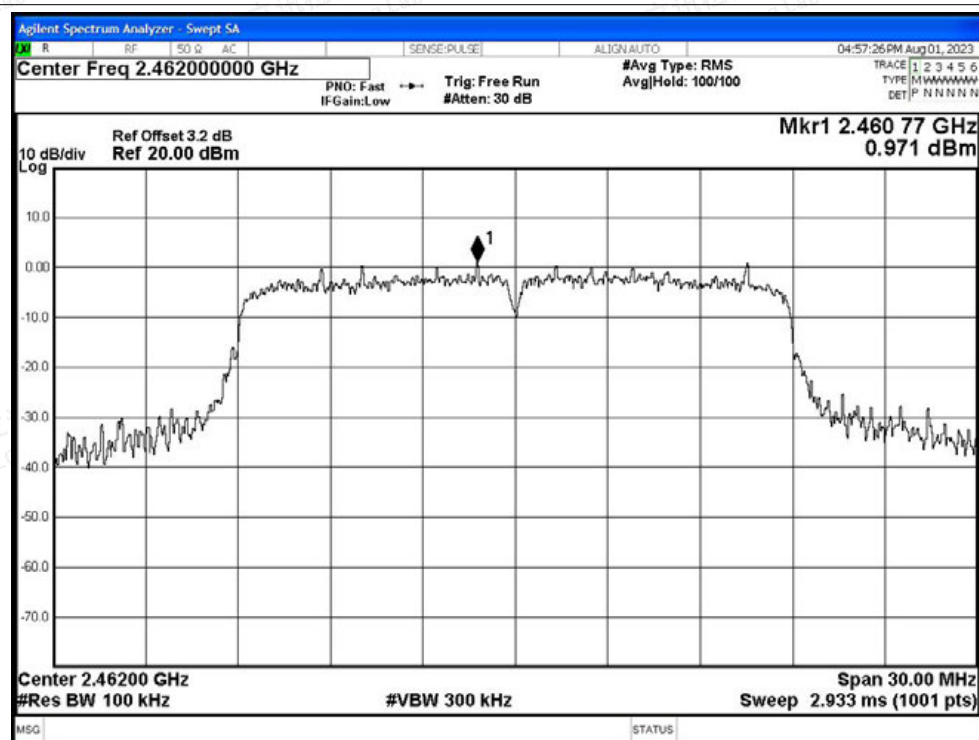
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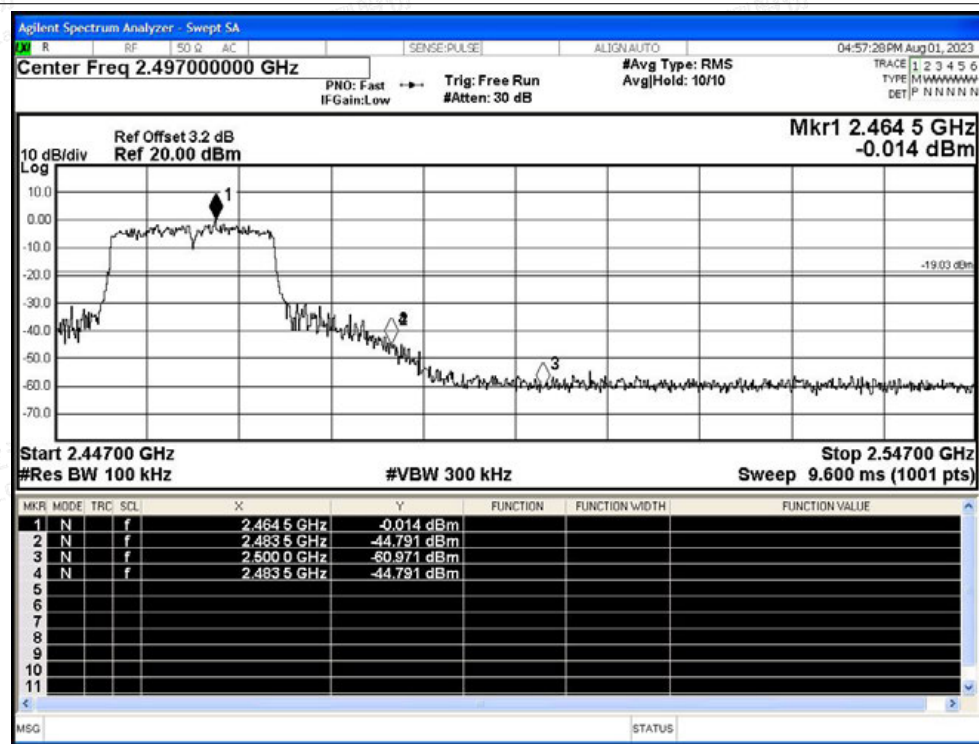
Scan code to check authenticity



Band Edge NVNT n20 2462MHz Ant0 Ref



Band Edge NVNT n20 2462MHz Ant0 Emission



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Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-53.01	-20	Pass
NVNT	b	2462	Ant1	-54.61	-20	Pass
NVNT	g	2412	Ant1	-36.21	-20	Pass
NVNT	g	2462	Ant1	-46.59	-20	Pass
NVNT	n20	2412	Ant1	-34.04	-20	Pass
NVNT	n20	2462	Ant1	-46.76	-20	Pass

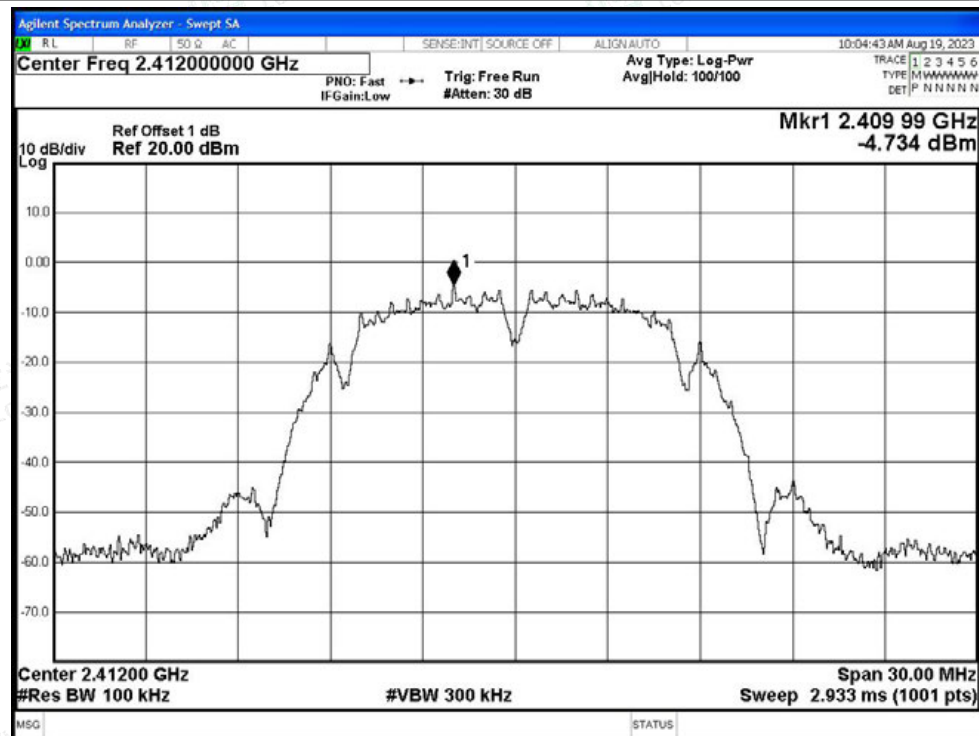


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518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

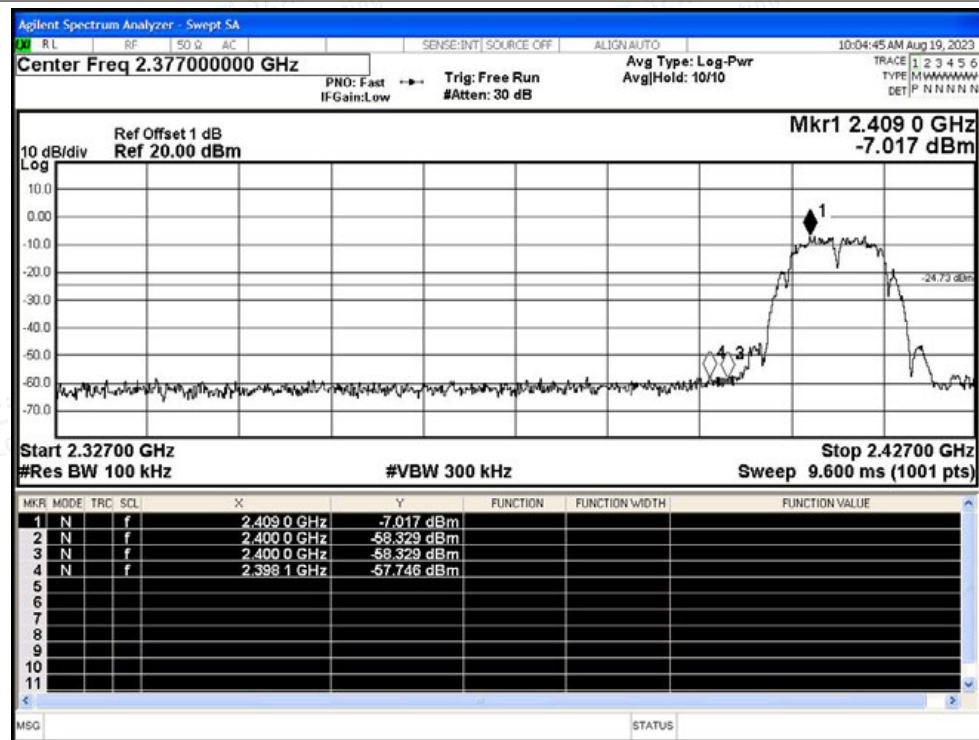


Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



Band Edge NVNT b 2412MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

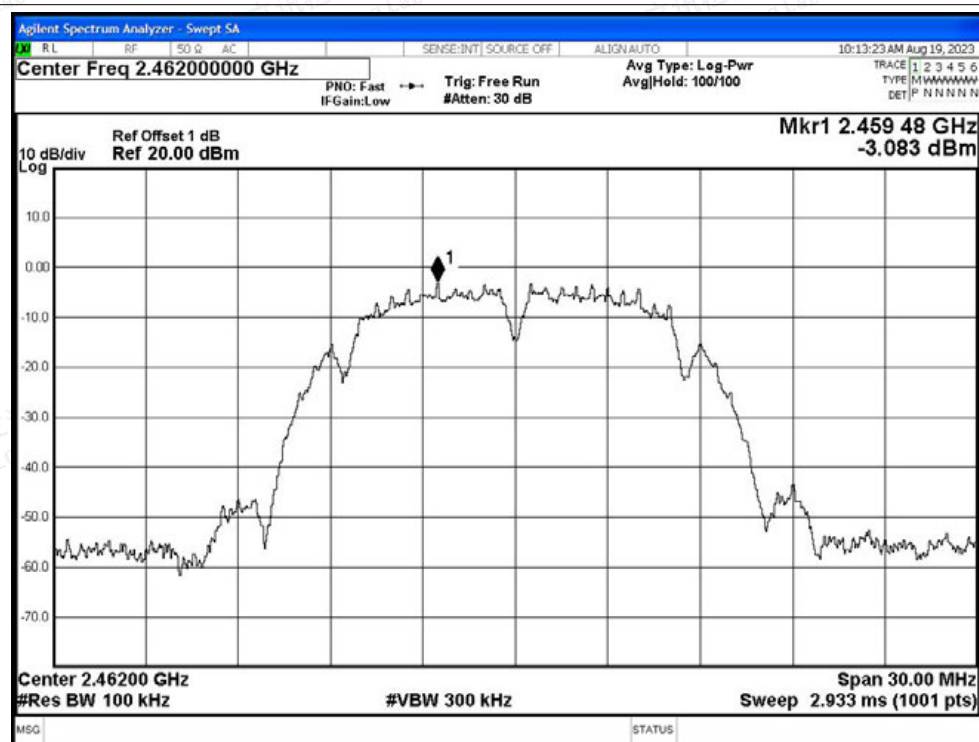
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

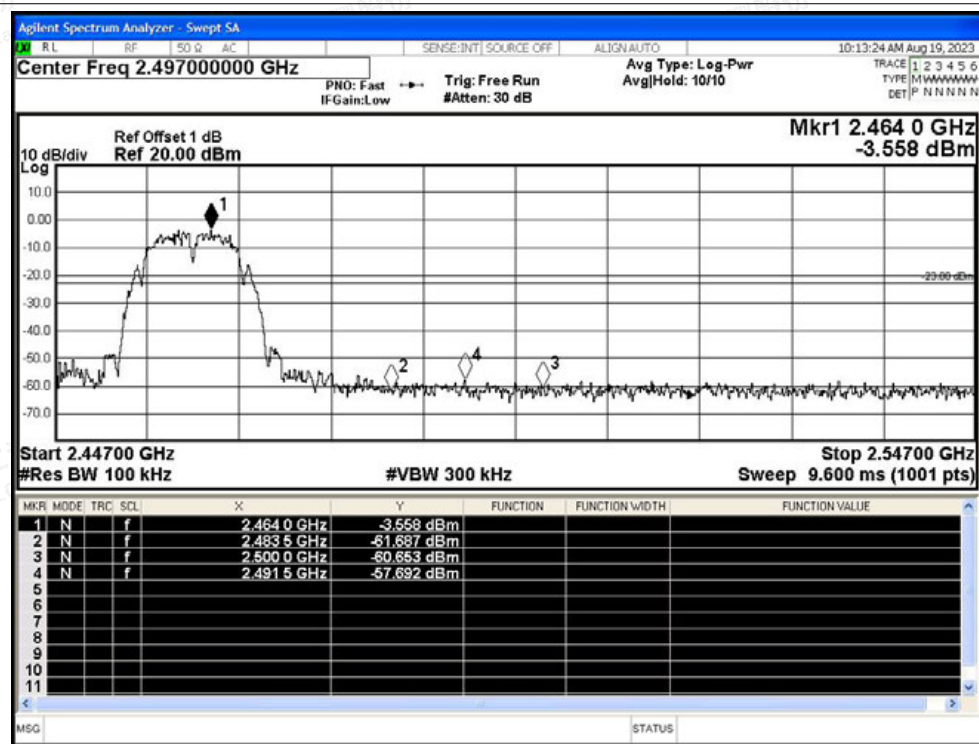
Scan code to check authenticity



Band Edge NVNT b 2462MHz Ant1 Ref

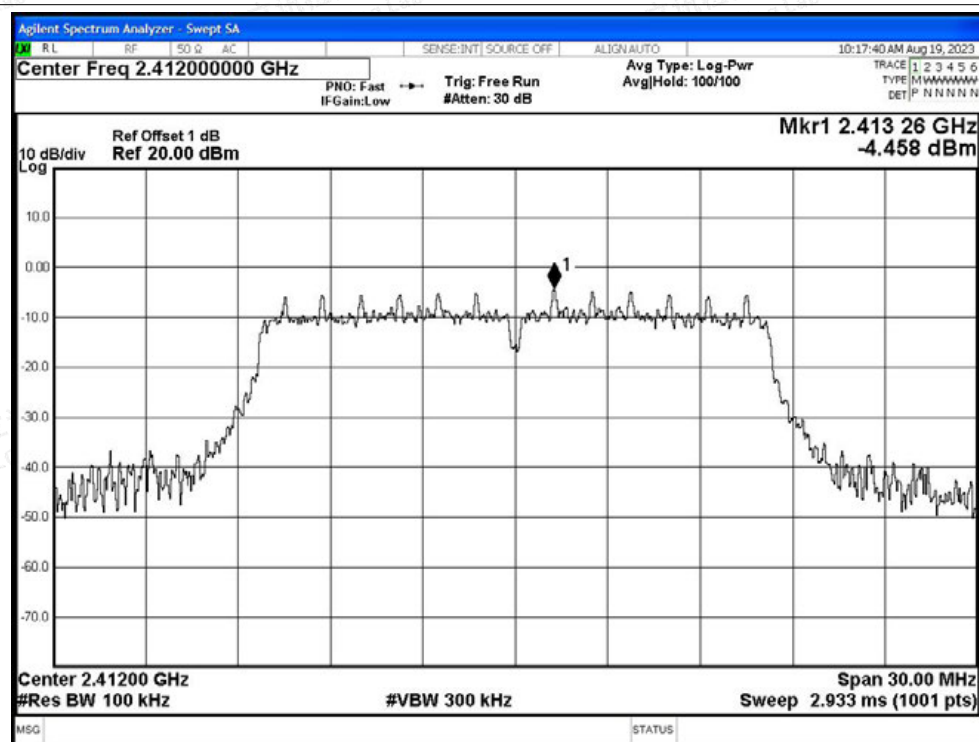


Band Edge NVNT b 2462MHz Ant1 Emission

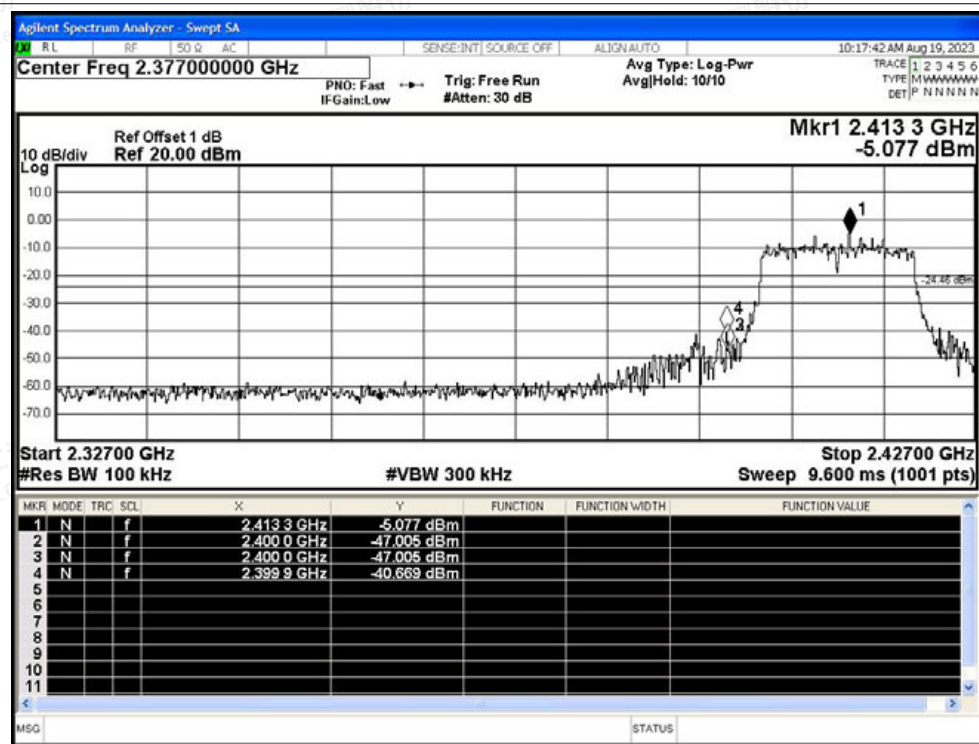




Band Edge NVNT g 2412MHz Ant1 Ref



Band Edge NVNT g 2412MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

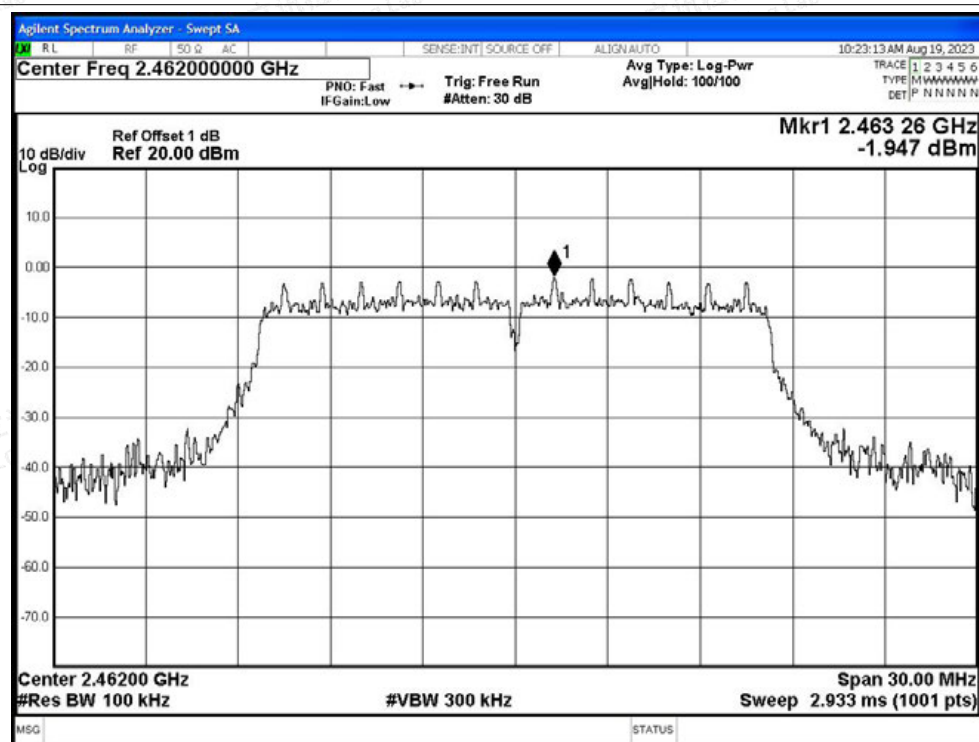
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

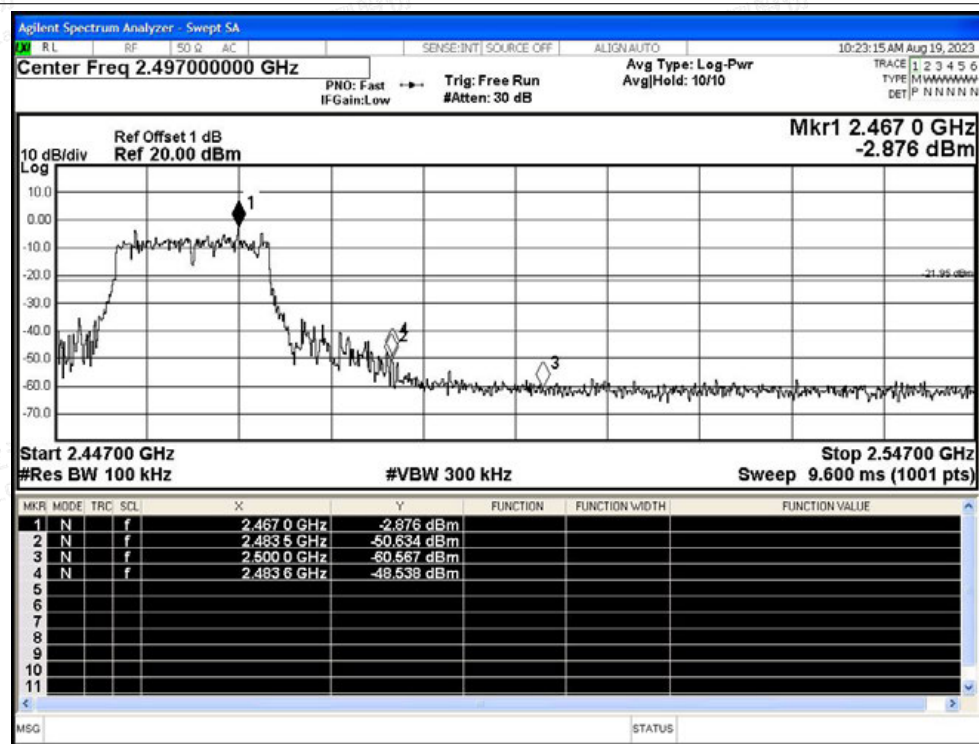
Scan code to check authenticity



Band Edge NVNT g 2462MHz Ant1 Ref



Band Edge NVNT g 2462MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

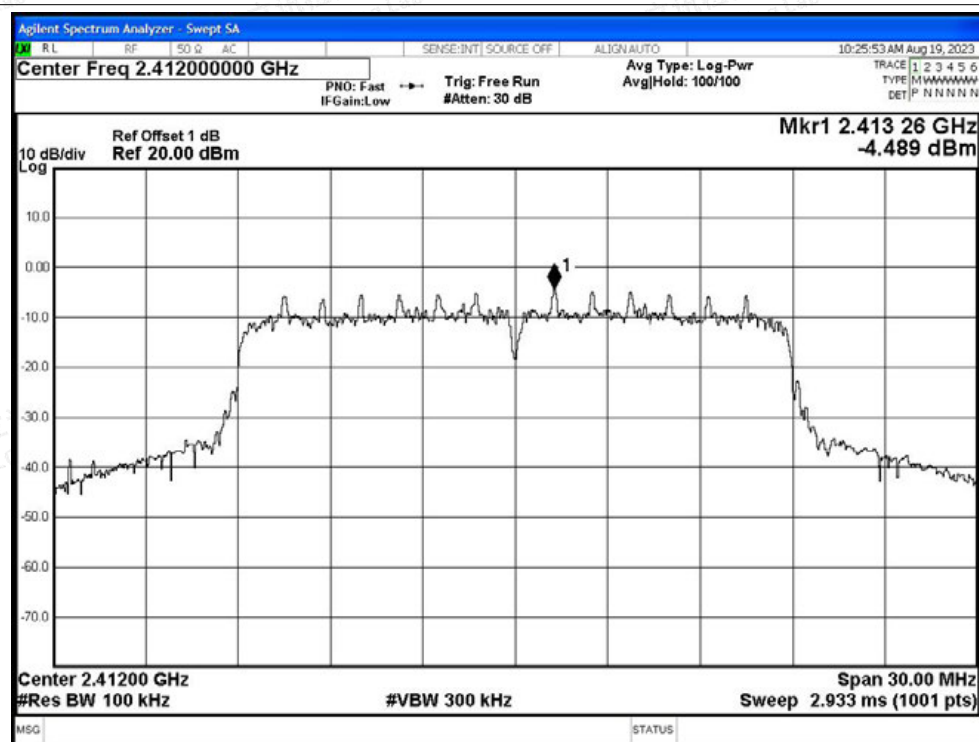
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Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

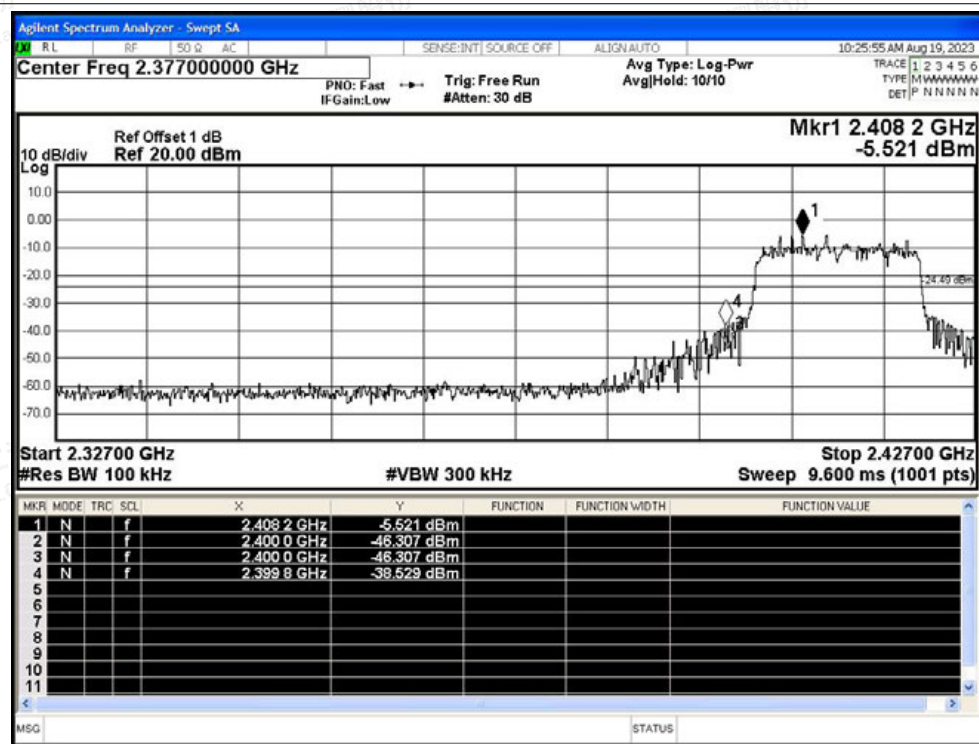
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Band Edge NVNT n20 2412MHz Ant1 Ref



Band Edge NVNT n20 2412MHz Ant1 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

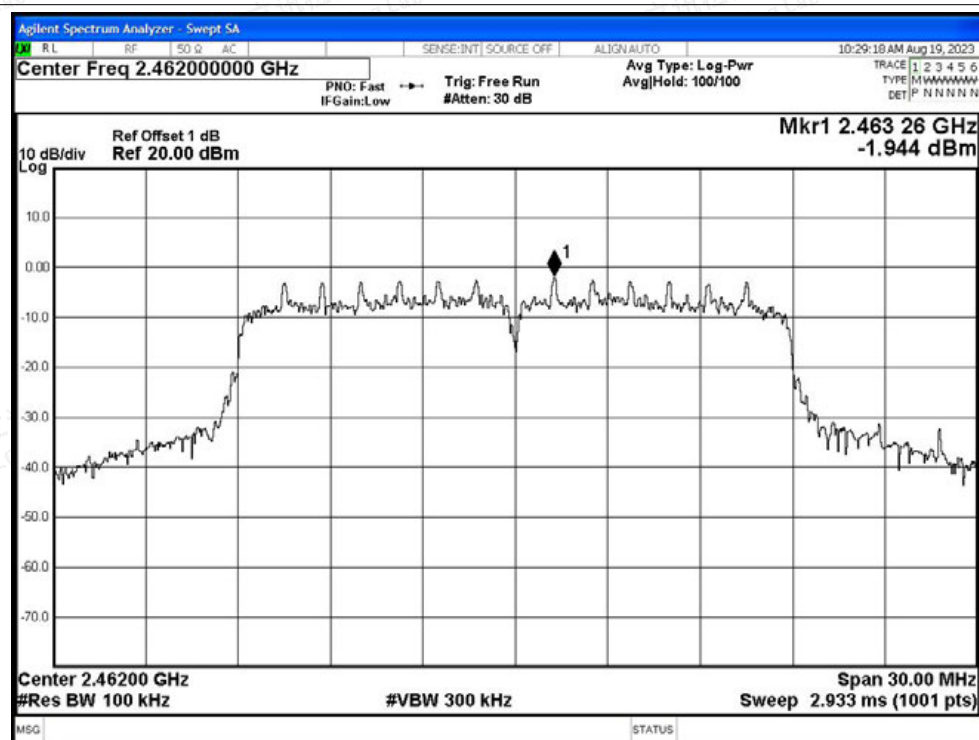
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Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

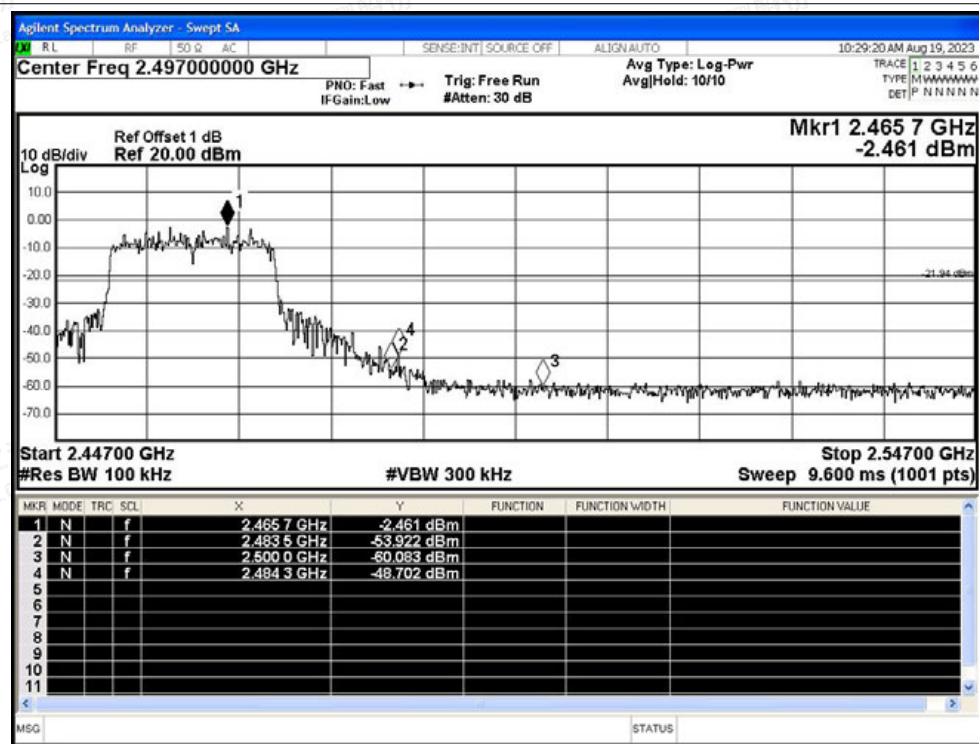
Scan code to check authenticity



Band Edge NVNT n20 2462MHz Ant1 Ref



Band Edge NVNT n20 2462MHz Ant1 Emission



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B.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant0	-48.66	-20	Pass
NVNT	b	2437	Ant0	-53.08	-20	Pass
NVNT	b	2462	Ant0	-52.89	-20	Pass
NVNT	g	2412	Ant0	-44.42	-20	Pass
NVNT	g	2437	Ant0	-46.72	-20	Pass
NVNT	g	2462	Ant0	-45.76	-20	Pass
NVNT	n20	2412	Ant0	-46.67	-20	Pass
NVNT	n20	2437	Ant0	-45.23	-20	Pass
NVNT	n20	2462	Ant0	-45.8	-20	Pass



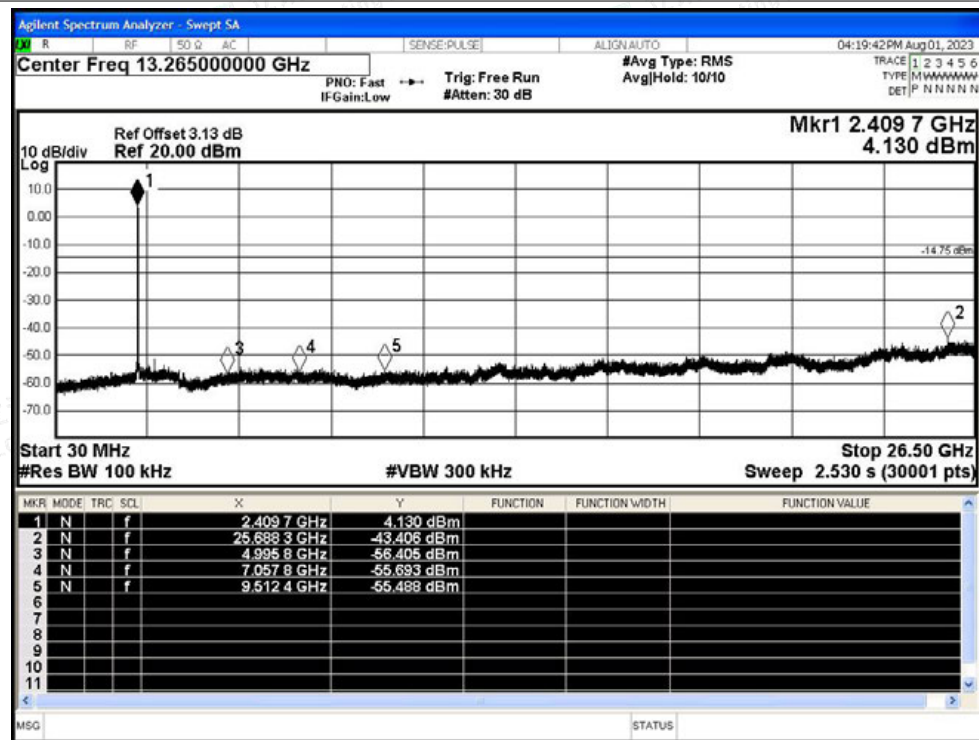


Test Graphs

Tx. Spurious NVNT b 2412MHz Ant0 Ref



Tx. Spurious NVNT b 2412MHz Ant0 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

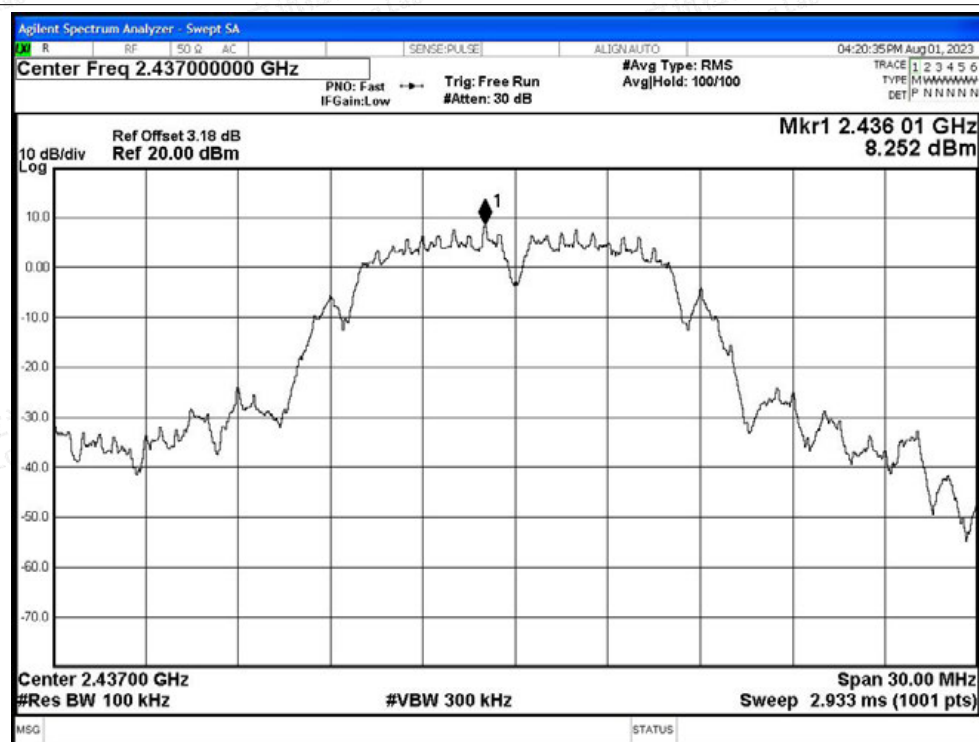
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

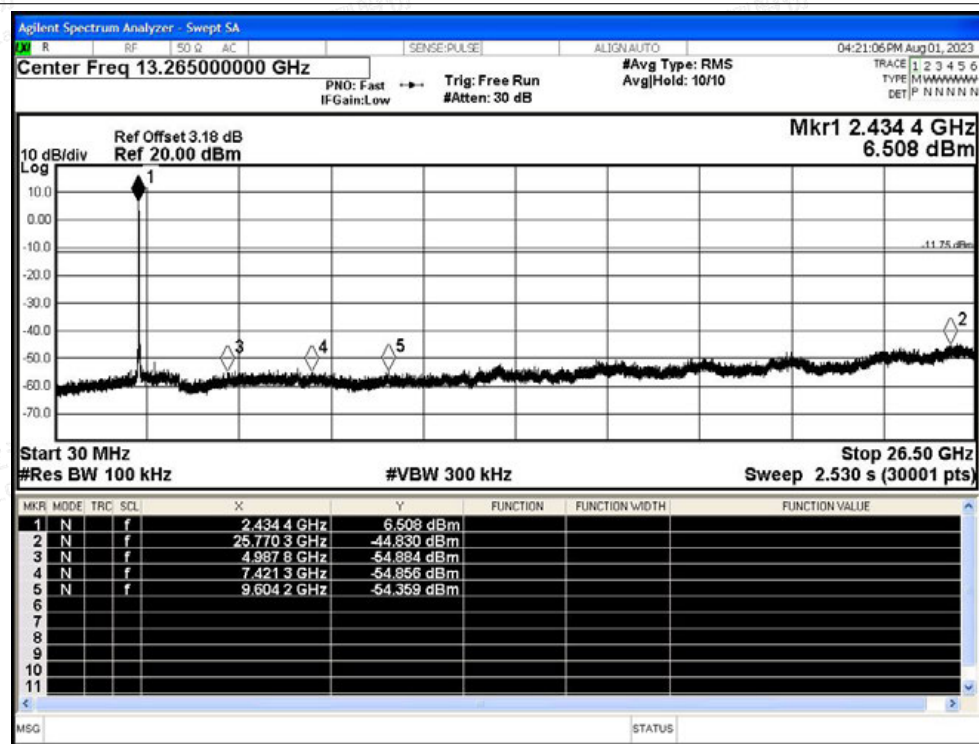
Scan code to check authenticity



Tx. Spurious NVNT b 2437MHz Ant0 Ref



Tx. Spurious NVNT b 2437MHz Ant0 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

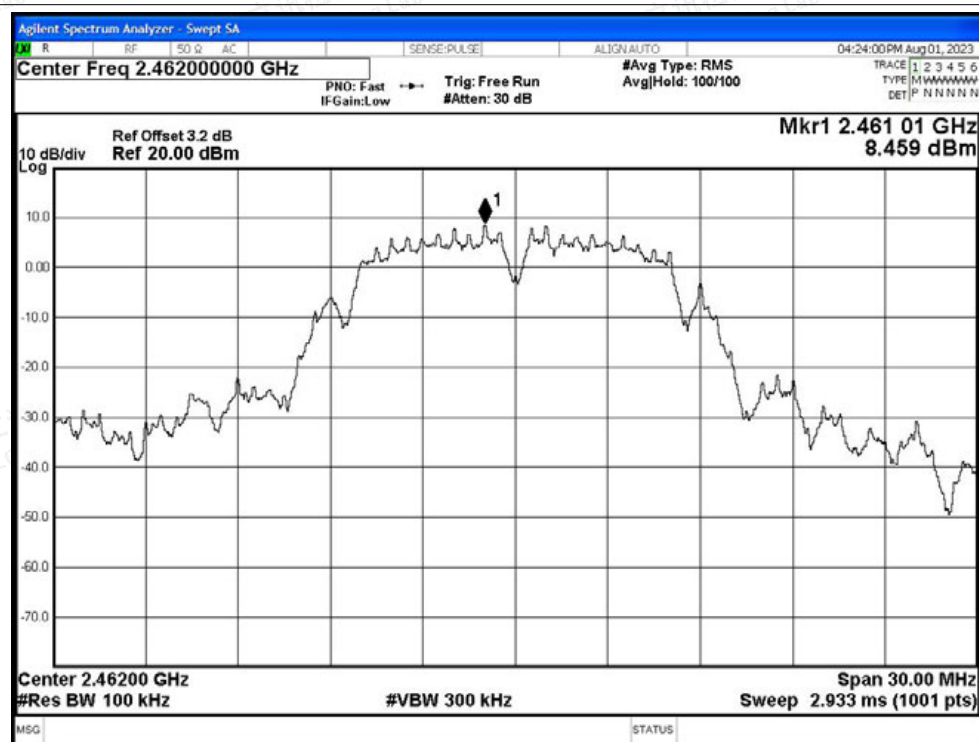
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

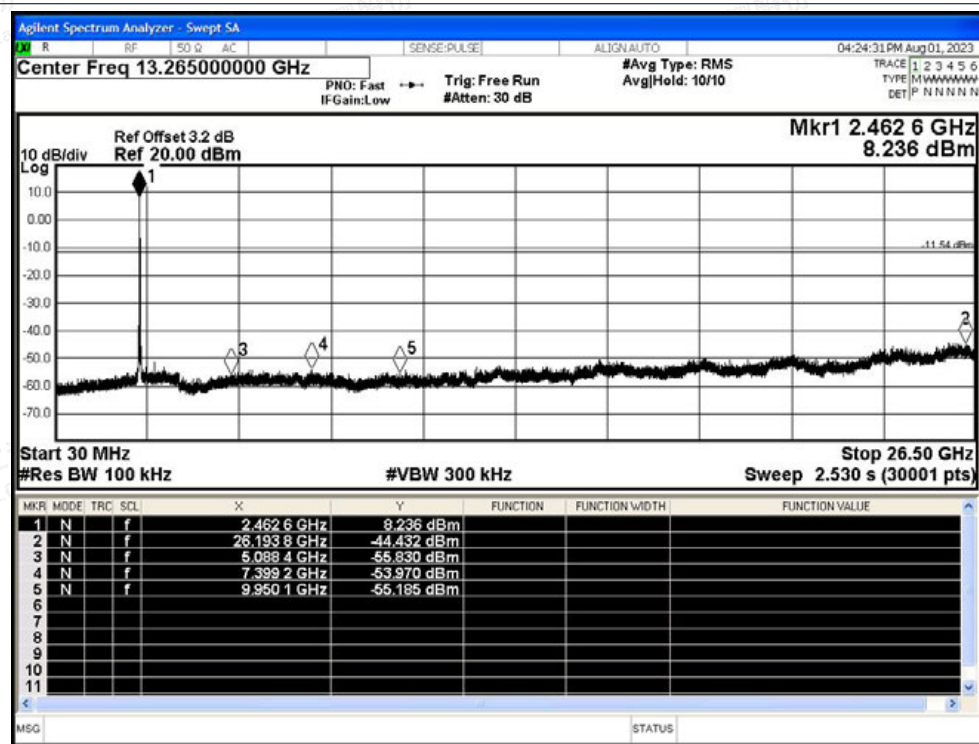
Scan code to check authenticity



Tx. Spurious NVNT b 2462MHz Ant0 Ref



Tx. Spurious NVNT b 2462MHz Ant0 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

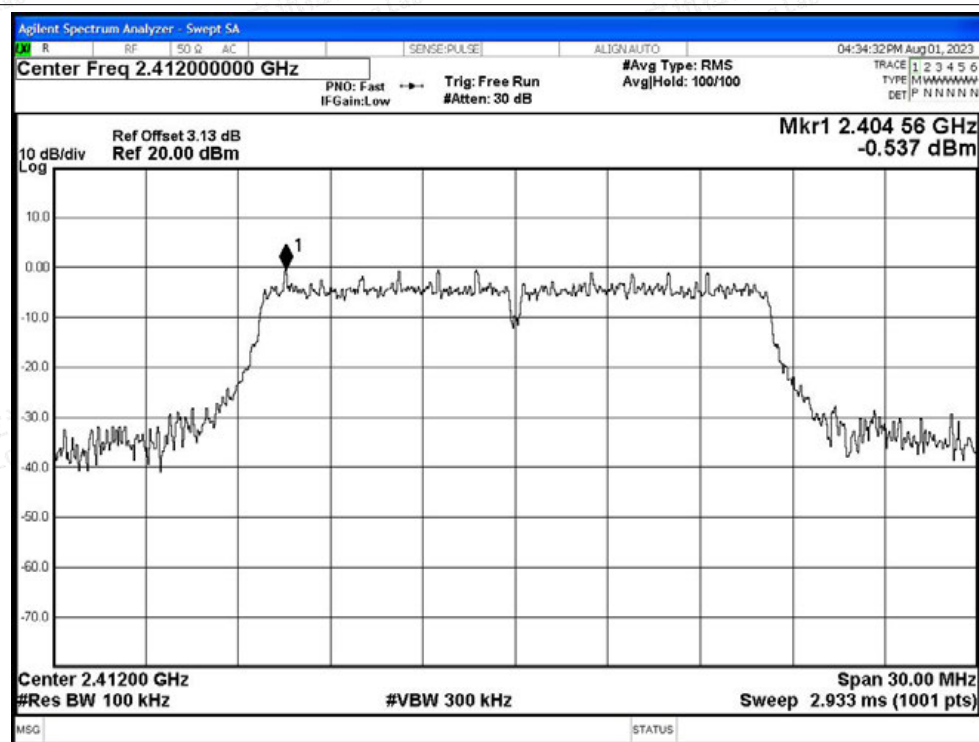
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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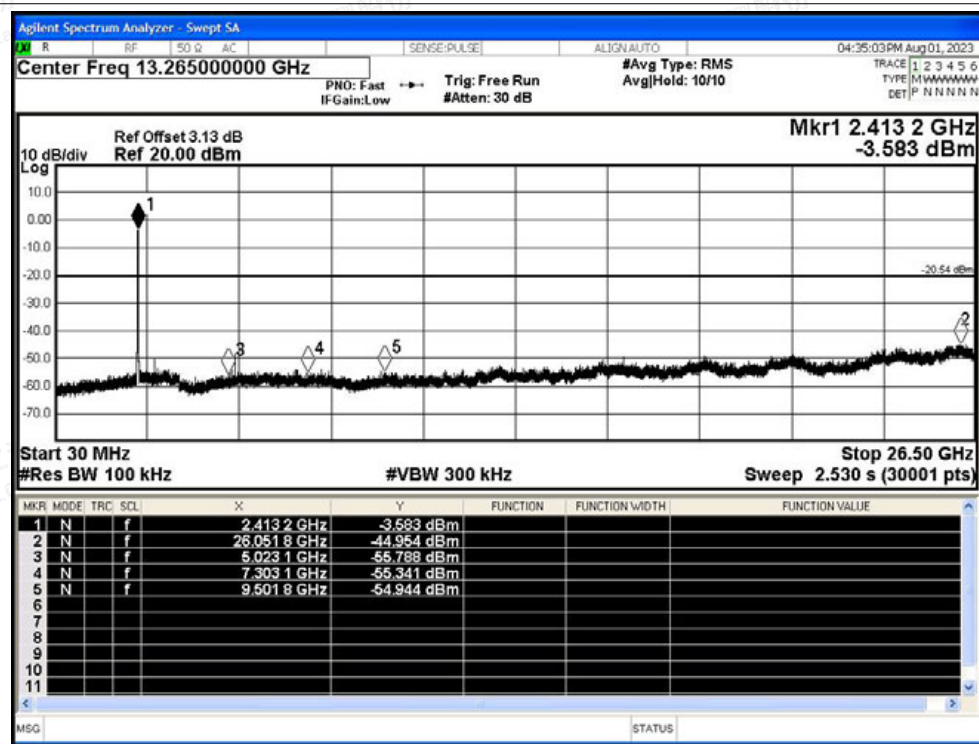
Scan code to check authenticity



Tx. Spurious NVNT g 2412MHz Ant0 Ref



Tx. Spurious NVNT g 2412MHz Ant0 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

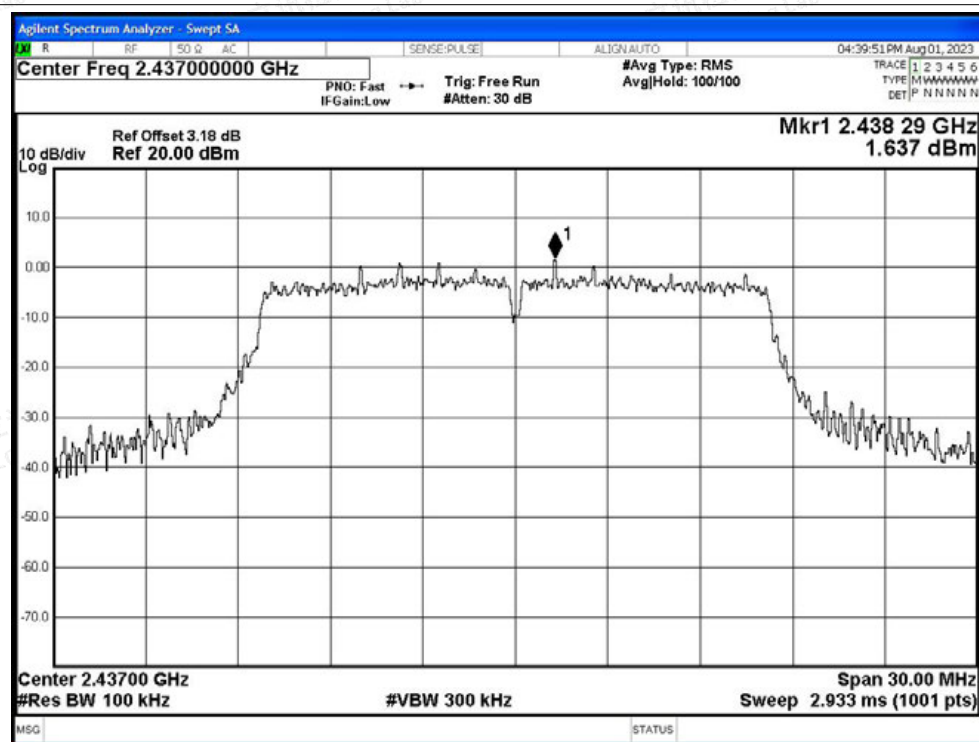
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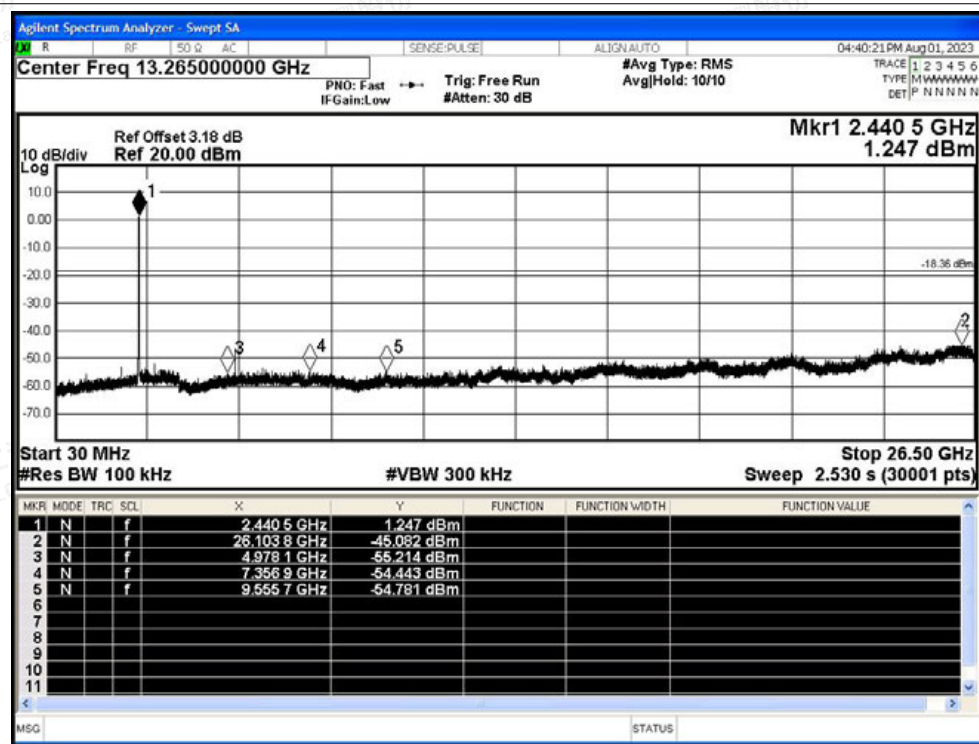
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Tx. Spurious NVNT g 2437MHz Ant0 Ref



Tx. Spurious NVNT g 2437MHz Ant0 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

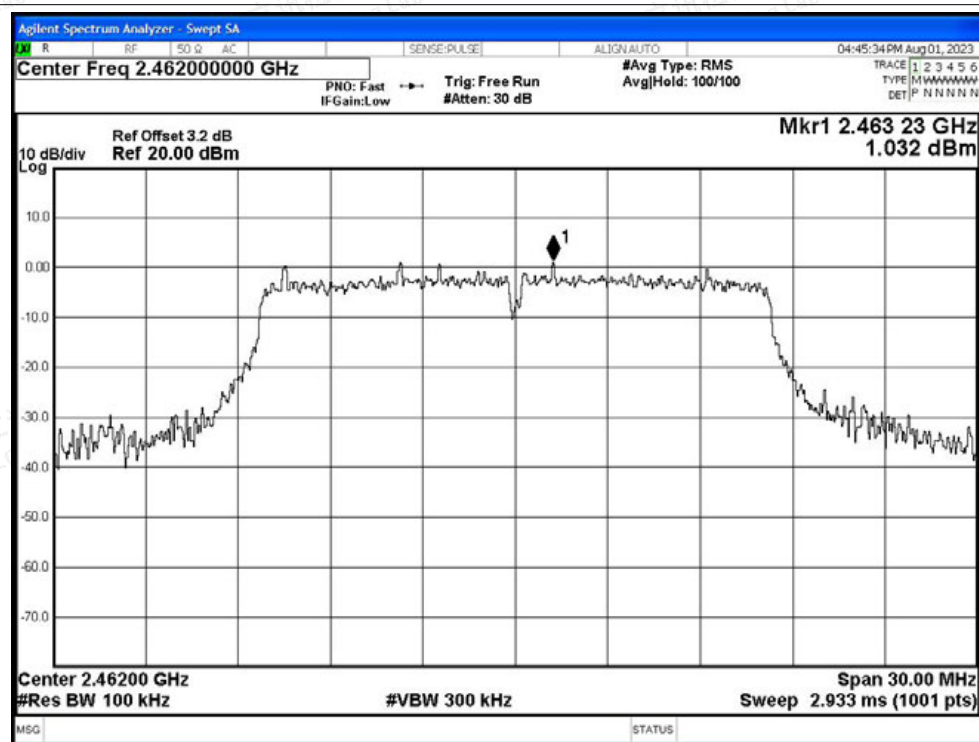
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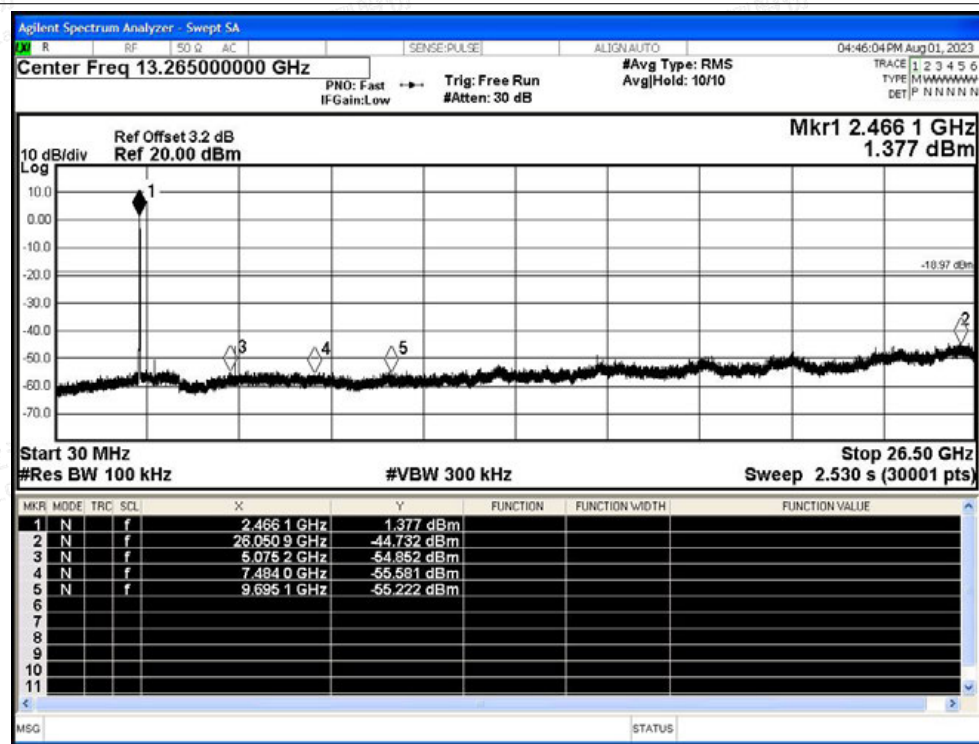
Scan code to check authenticity



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Tx. Spurious NVNT g 2462MHz Ant0 Emission



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