

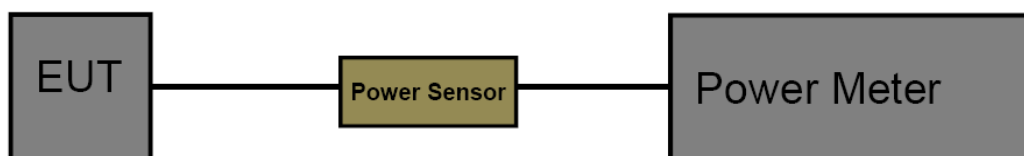
3.6. Output Power

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3)

Section	Test Item	Limit	Frequency Range(MHz)
CFR 47 FCC 15.247(b)(3)	Maximum conducted output power	1 Watt or 30dBm	2400~2483.5

Test Configuration



Test Procedure

1. The maximum conducted output power may be measured using a broadband RF power meter.
2. Power measurements were performed only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor.
3. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.
4. Record the measurement data.

Test Mode

Please refer to the clause 2.3

Test Result



Mode	Channel	Ant. 0 (dBm)	Ant. 1 (dBm)	Total (dBm)	Limit (dBm)	Result
IEEE 802.11b	1	19.45	19.52	N/A	30	PASS
	6	19.32	18.95	N/A	30	PASS
	11	18.92	19.44	N/A	30	PASS
IEEE 802.11g	1	16.13	15.8	N/A	30	PASS
	6	15.99	15.79	N/A	30	PASS
	11	15.51	15.49	N/A	30	PASS
IEEE 802.11n_20	1	15.22	15.62	18.43	30	PASS
	6	14.78	14.65	17.73	30	PASS
	11	14.37	14.7	17.55	30	PASS
IEEE 802.11n_40	3	13.84	14.03	16.95	30	PASS
	6	14.47	13.97	17.24	30	PASS
	9	14.14	13.0	16.62	30	PASS

Note:

1. Test results increased RF cable loss by 0.5dB.



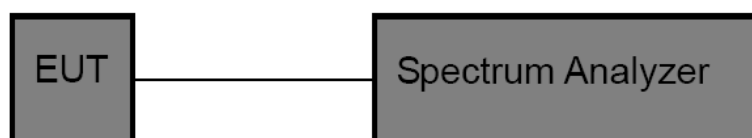
3.7. Power Spectral Density

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e)

Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5

Test Configuration



Test Procedure

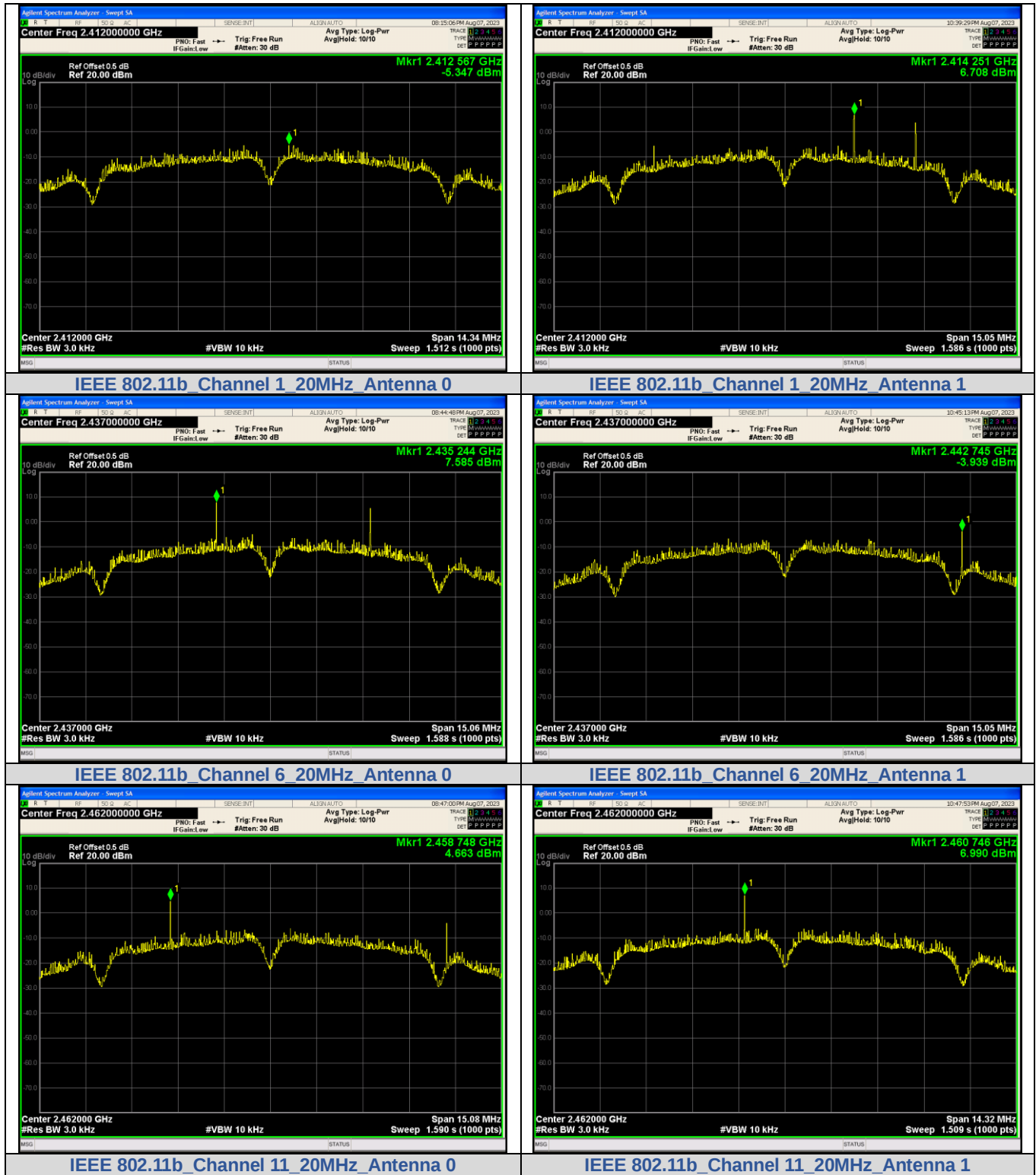
1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:
Set analyzer center frequency to DTS channel center frequency.
Set the span to 1.5 times the DTS bandwidth.
Set the RBW to: 3 kHz
Set the VBW to: 10 kHz
Detector: peak
Sweep time: auto
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

Test Mode

Please refer to the clause 2.3

Test Result

Mode	Channel	PSD (dBm/3kHz) Ant. 0	PSD (dBm/3kHz) Ant. 1	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
IEEE 802.11b	1	-5.347	6.708	N/A	8	PASS
	6	7.585	-3.939	N/A		PASS
	11	4.663	6.990	N/A		PASS
IEEE 802.11g	1	-10.473	-9.758	N/A		PASS
	6	-10.607	-10.684	N/A		PASS
	11	-11.413	-11.227	N/A		PASS
IEEE 802.11n_20	1	-11.187	-10.700	-7.93		PASS
	6	-12.252	-10.327	-8.17		PASS
	11	-12.057	-10.907	-8.43		PASS
IEEE 802.11n_40	3	-14.544	-15.332	-11.91		PASS
	6	-15.765	-15.941	-12.84		PASS
	9	-14.829	-15.285	-12.04		PASS



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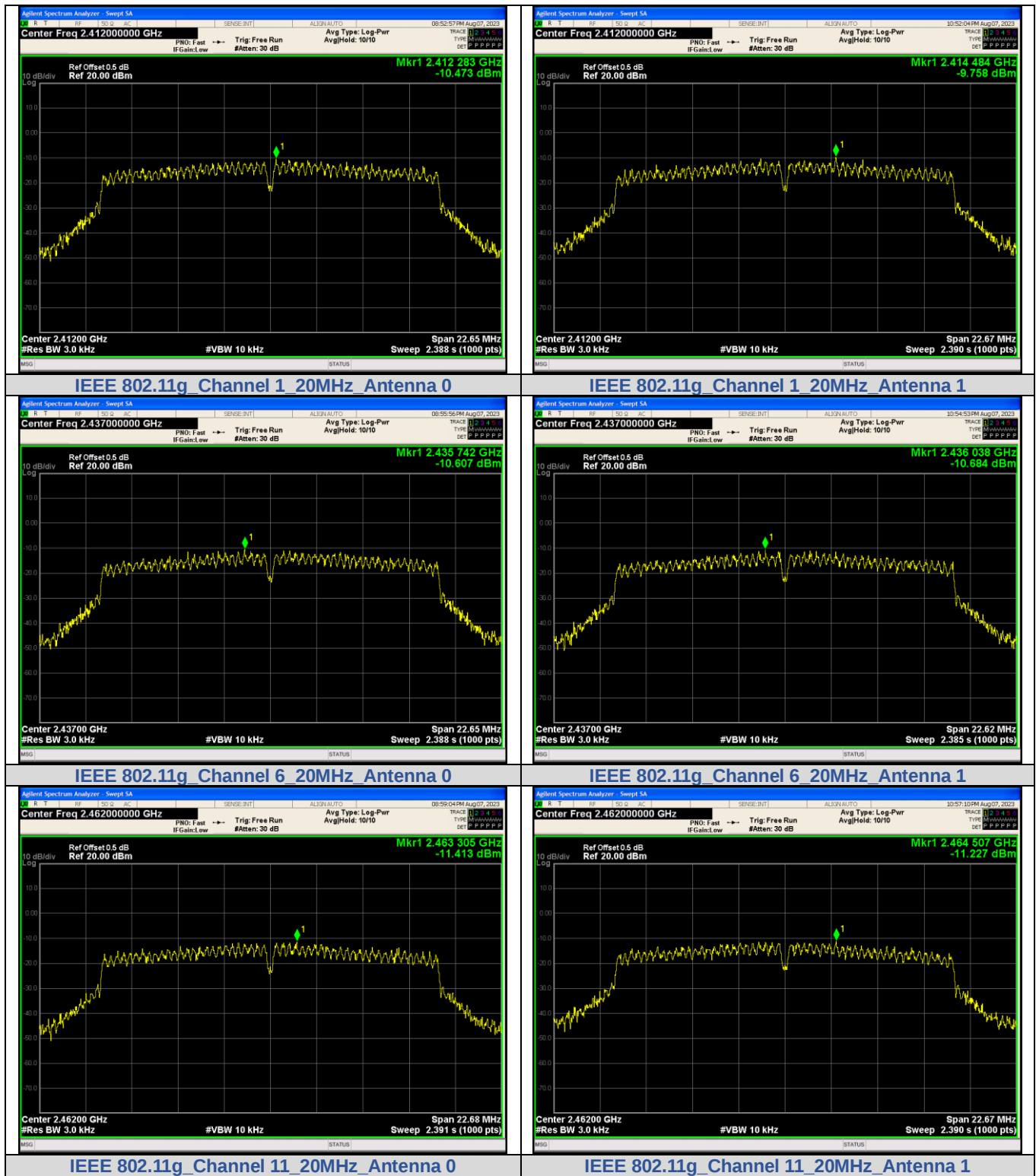
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

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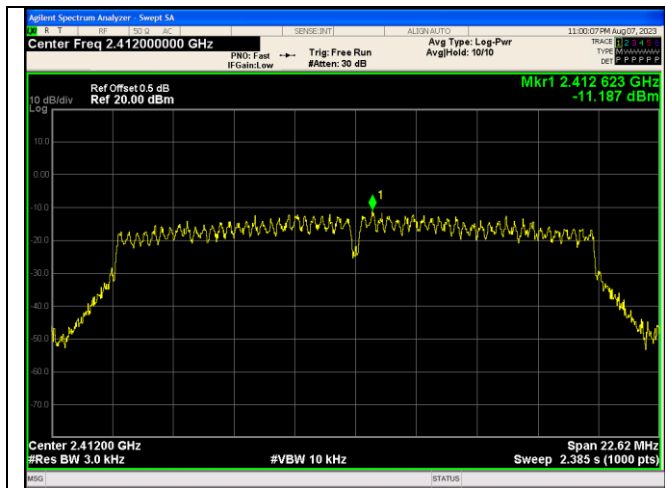
1-2/F, Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

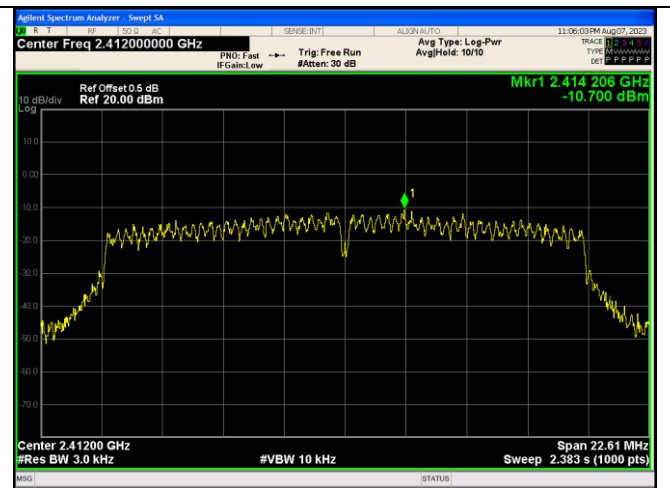
Fax: (86)755-27521011

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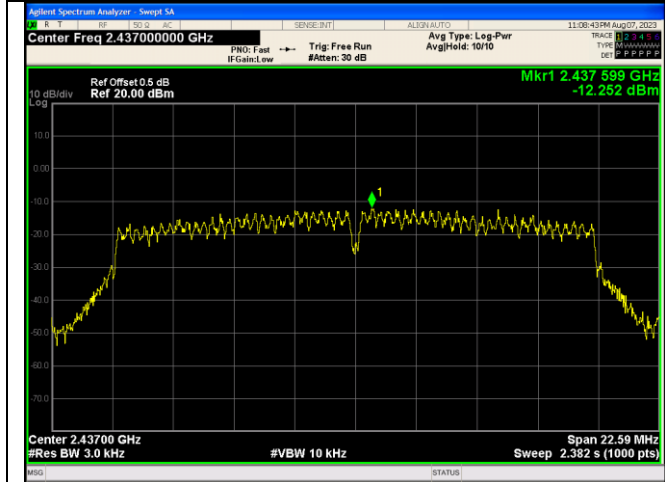
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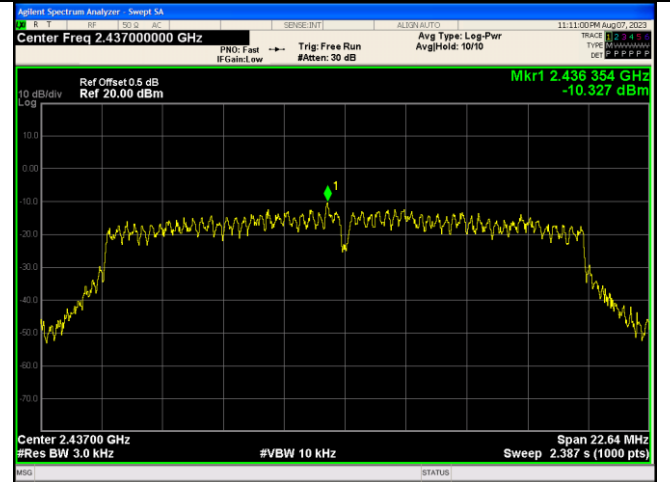
IEEE 802.11n Channel 1 20MHz Antenna 0



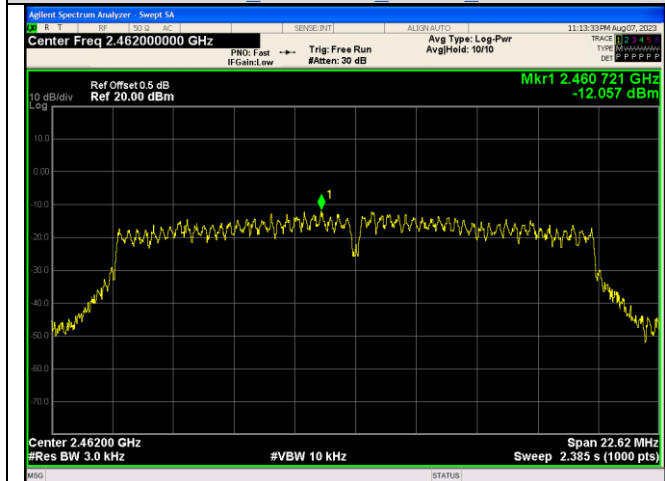
IEEE 802.11n Channel 1 20MHz Antenna 1



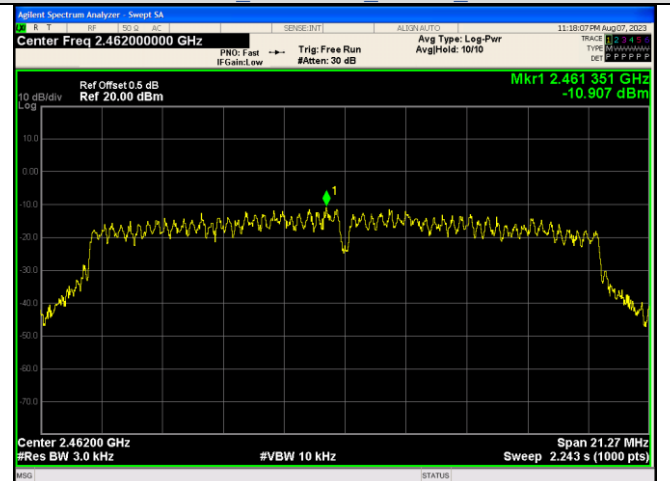
IEEE 802.11n Channel 6 20MHz Antenna 0



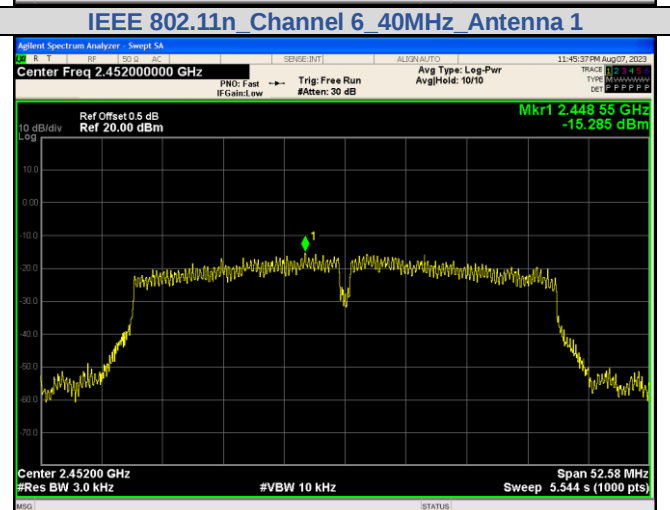
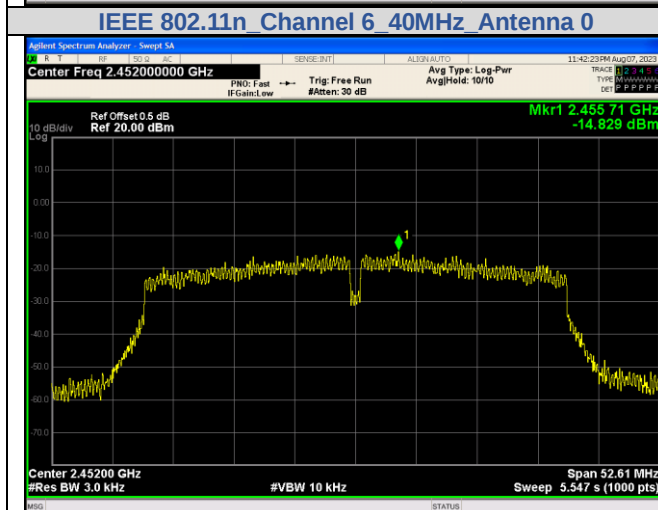
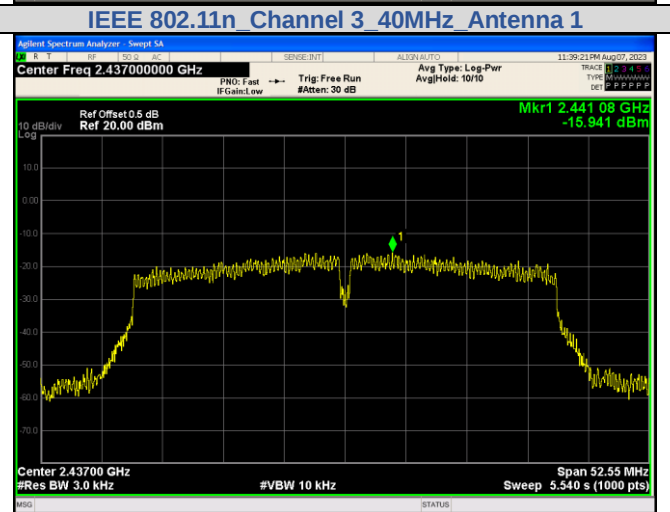
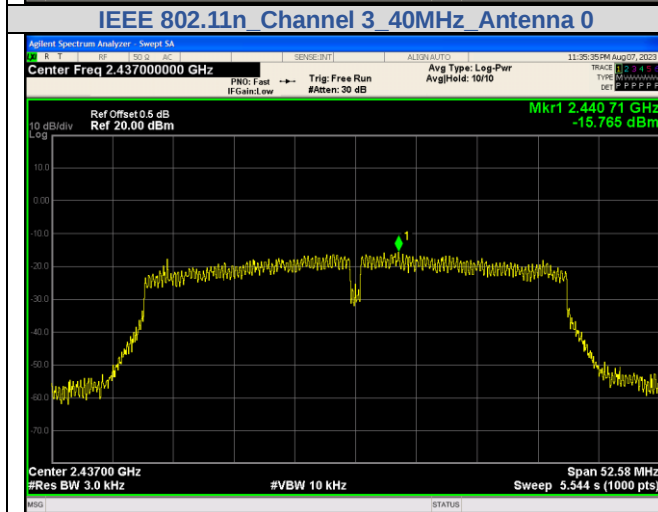
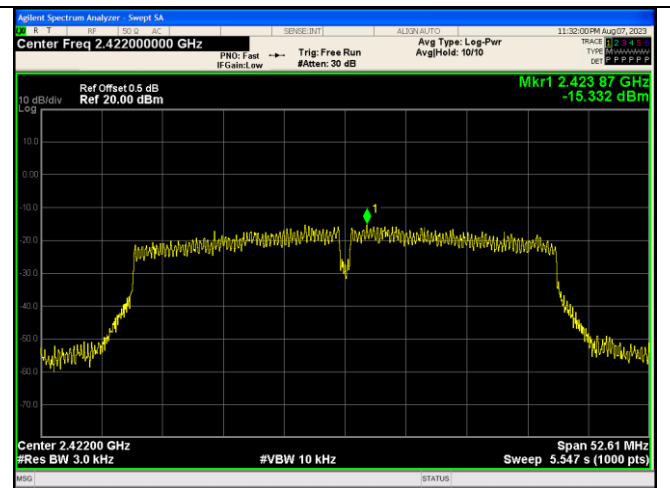
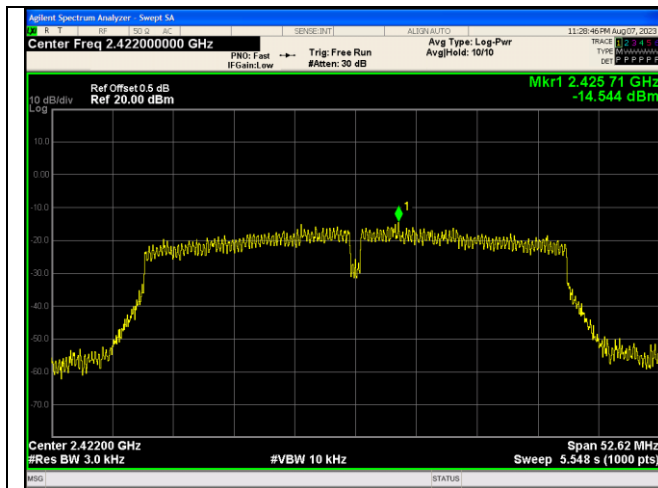
IEEE 802.11n Channel 6 20MHz Antenna 1



IEEE 802.11n Channel 11 20MHz Antenna 0



IEEE 802.11n Channel 11 20MHz Antenna 1



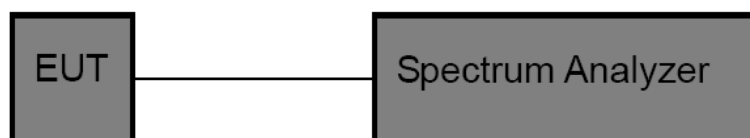


3.8. Duty Cycle

Limit

None, for report purposes only.

Test Configuration



Test Procedure

1. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
2. The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v05r02.
3. Spectrum Setting:
Set analyzer center frequency to test channel center frequency.
Set the span to 0Hz.
Set the RBW to 10MHz.
Set the VBW to 10MHz.
Detector: Peak.
Sweep time: Auto.
Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

Test Mode

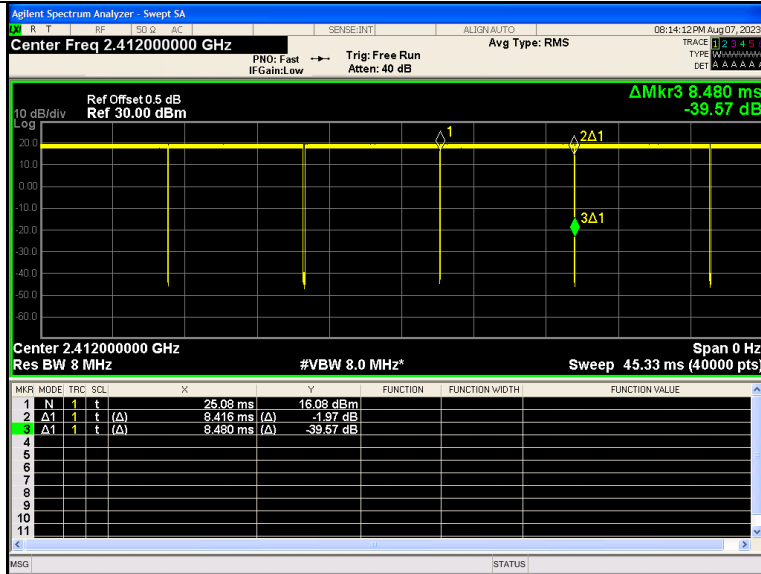
Please refer to the clause 2.4.

**Test Result**

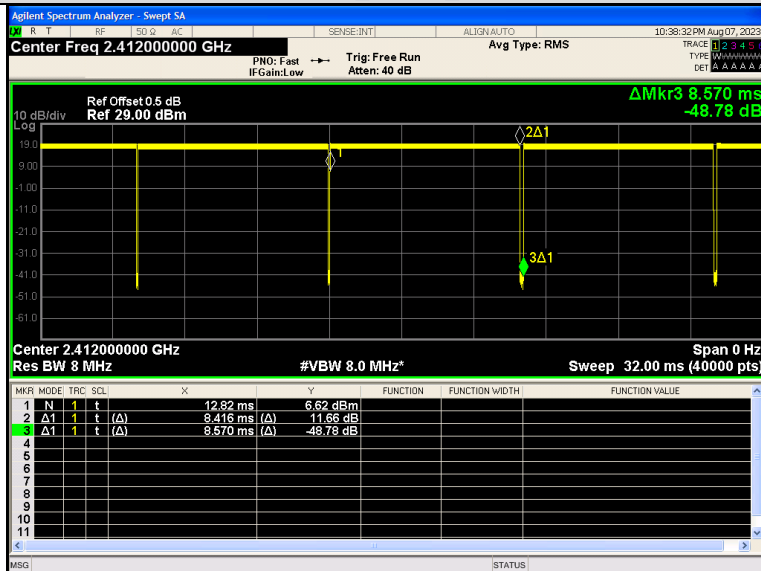
Mode	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)	1/T Minimum VBW (kHz)	Final Setting for VBW (kHz)
IEEE 802.11b	1	1	8.416	8.480	99.25	0.0327	0.12	1
		2	8.416	8.570	98.21	0.0784	0.12	1
	6	1	8.416	8.480	99.25	0.0327	0.12	1
		2	8.417	8.525	98.73	0.0555	0.12	1
	11	1	8.416	8.561	98.31	0.074	0.12	1
		2	8.416	8.551	98.42	0.0692	0.12	1
IEEE 802.11g	1	1	1.397	1.521	91.86	0.3687	0.72	1
		2	1.397	1.449	96.43	0.1579	0.72	1
	6	1	1.397	1.521	91.86	0.3687	0.72	1
		2	1.397	1.539	90.79	0.4196	0.72	1
	11	1	1.397	1.548	90.26	0.445	0.72	1
		2	1.397	1.440	97.05	0.13	0.72	1
IEEE 802.11n_20	1	1	1.297	1.439	90.15	0.4503	0.77	1
		2	1.297	1.439	90.15	0.4503	0.77	1
	6	1	1.297	1.403	92.44	0.3414	0.77	1
		2	1.297	1.394	93.06	0.3124	0.77	1
	11	1	1.297	1.412	91.87	0.3683	0.77	1
		2	1.297	1.340	96.80	0.1412	0.77	1
IEEE 802.11n_40	3	1	0.637	0.715	89.00	0.5061	1.57	2
		2	0.637	0.724	87.90	0.5601	1.57	2
	6	1	0.637	0.787	80.86	0.9227	1.57	2
		2	0.637	0.760	83.74	0.7707	1.57	2
	9	1	0.637	0.760	83.74	0.7707	1.57	2
		2	0.637	0.679	93.72	0.2817	1.57	2



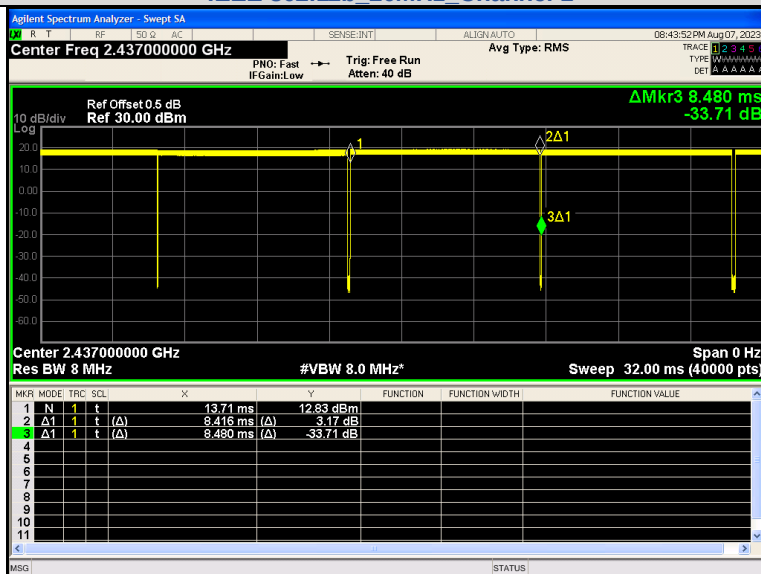
Test plot as follows:



IEEE 802.11b 20MHz Channel 1



IEEE 802.11b 20MHz Channel 1



IEEE 802.11b 20MHz Channel 6

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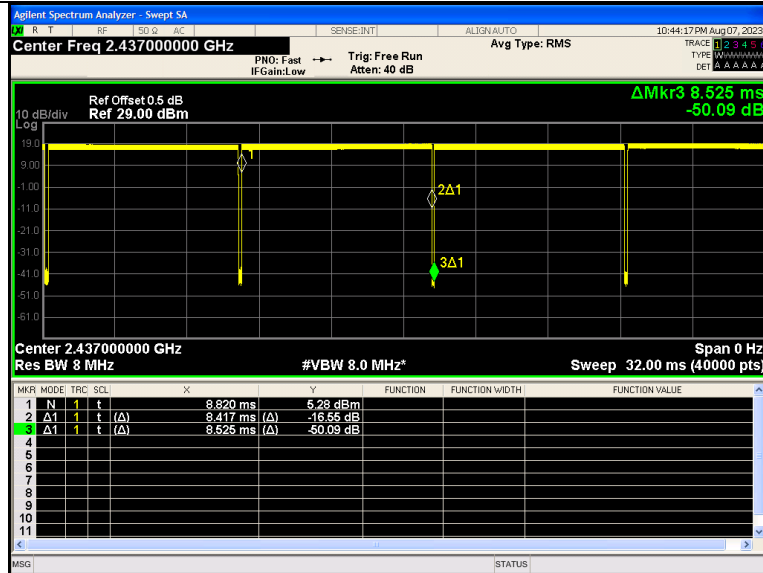
1-2/F, Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

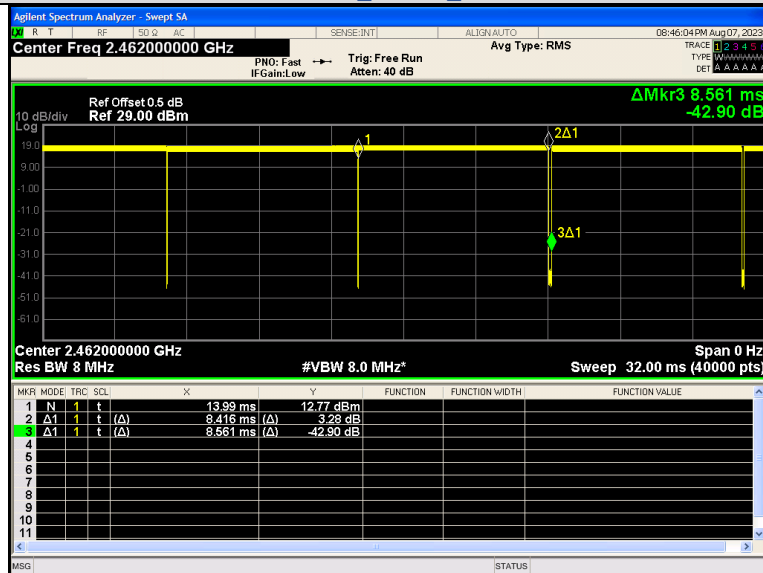
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

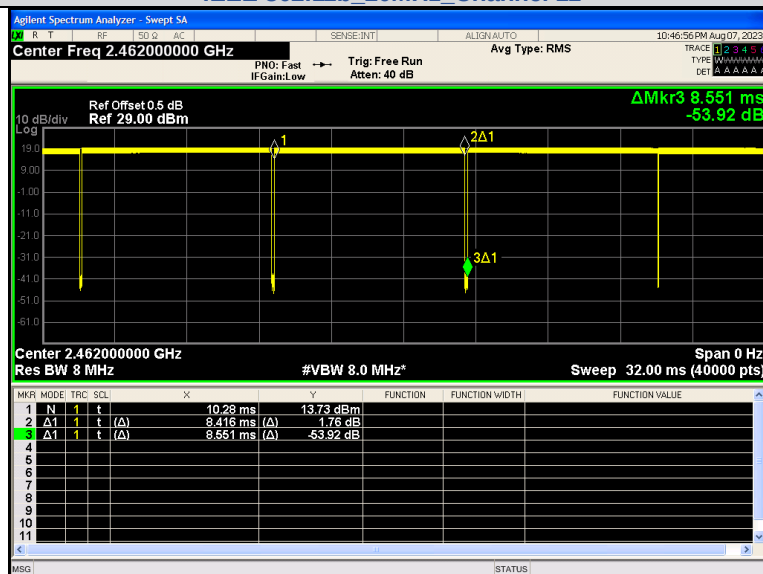
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IEEE 802.11b 20MHz Channel 6



IEEE 802.11b 20MHz Channel 11



IEEE 802.11b 20MHz Channel 11

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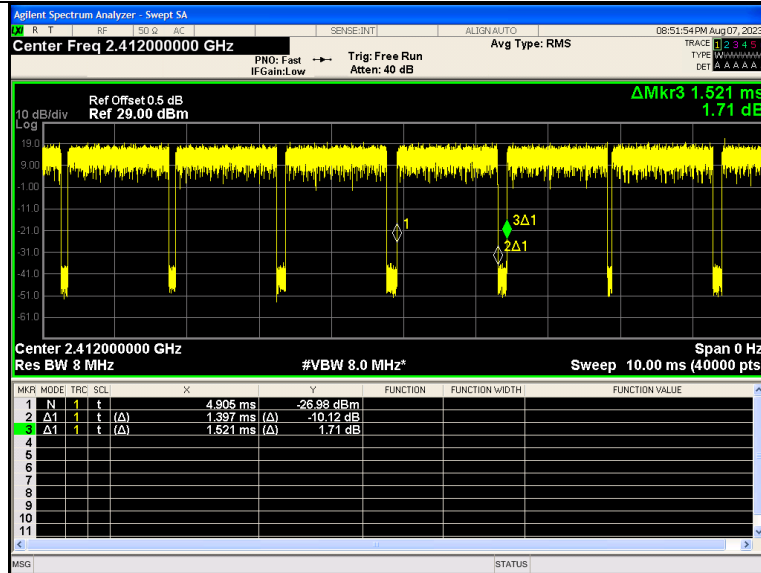
1-2/F, Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

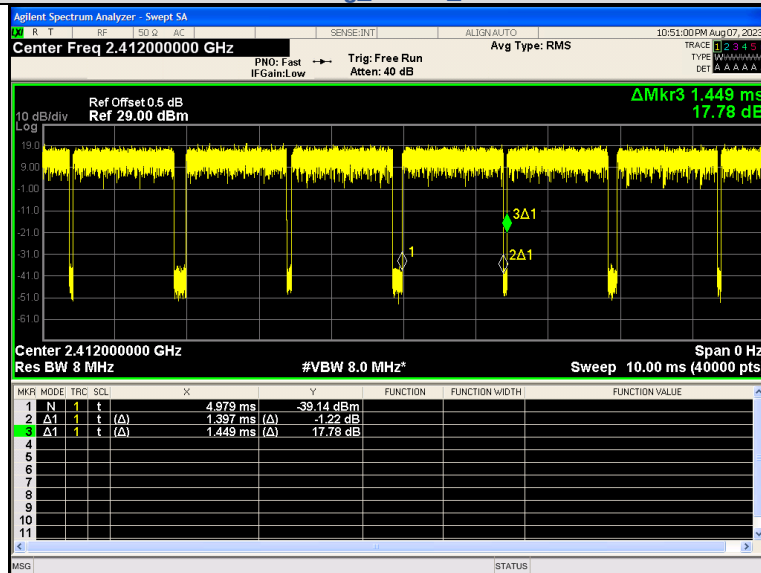
Fax: (86)755-27521011

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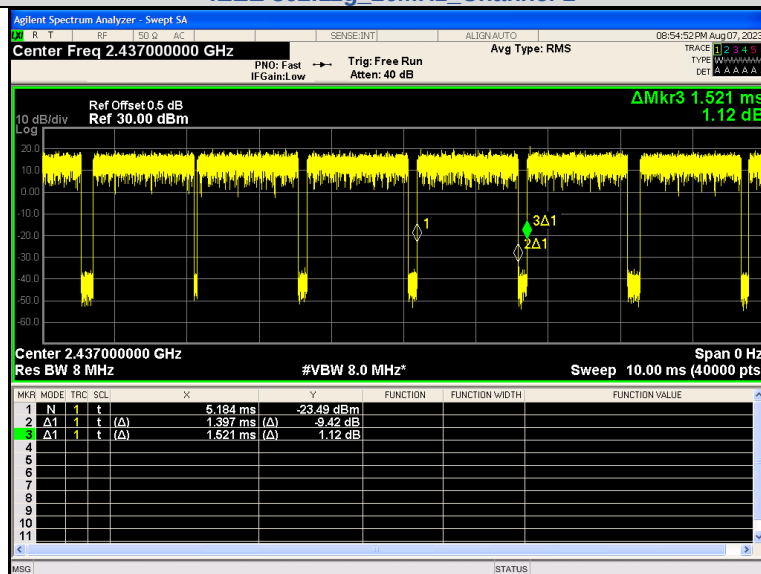
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IEEE 802.11g 20MHz Channel 1



IEEE 802.11g 20MHz Channel 1



IEEE 802.11g 20MHz Channel 6

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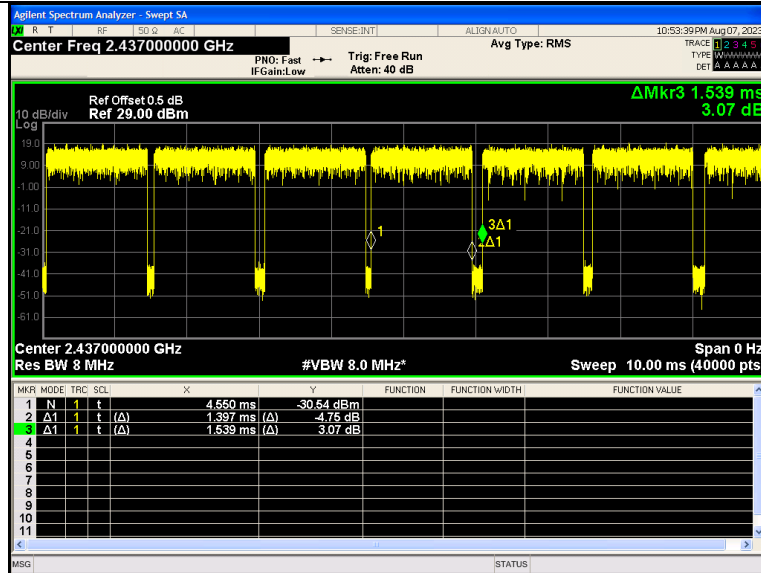
1-2/F, Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

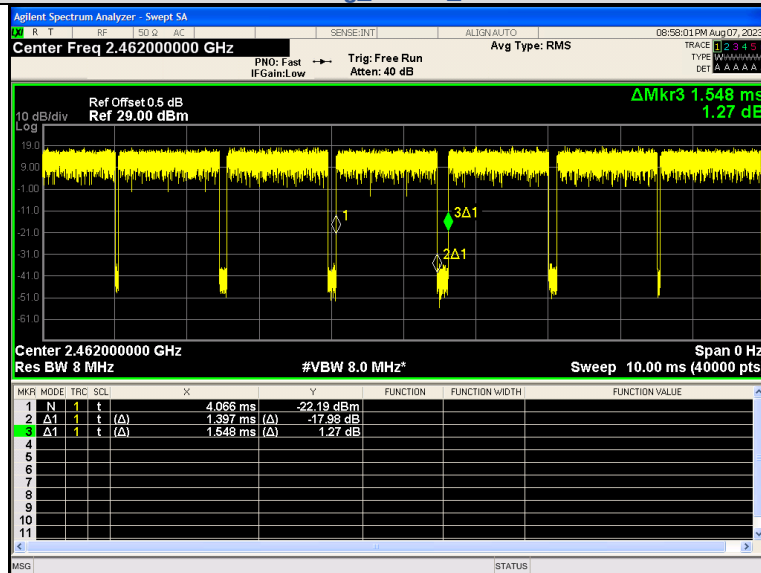
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

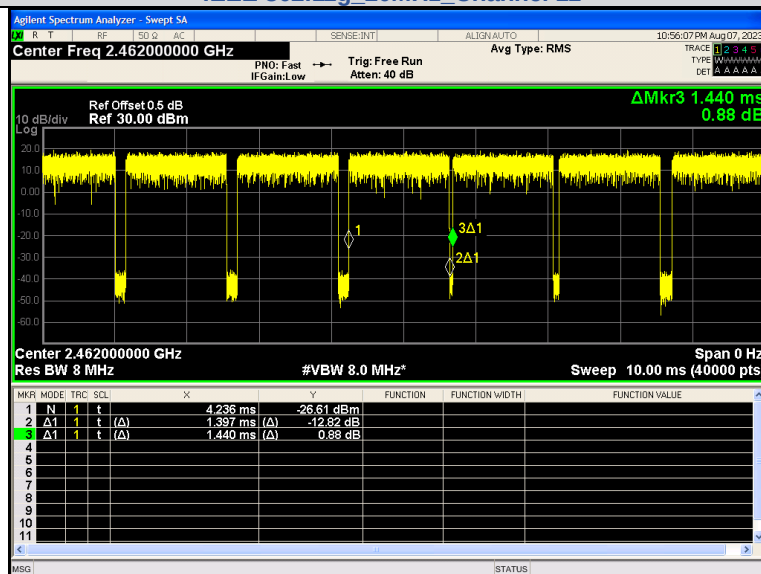
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IEEE 802.11g 20MHz Channel 6



IEEE 802.11g 20MHz Channel 11



IEEE 802.11g 20MHz Channel 11

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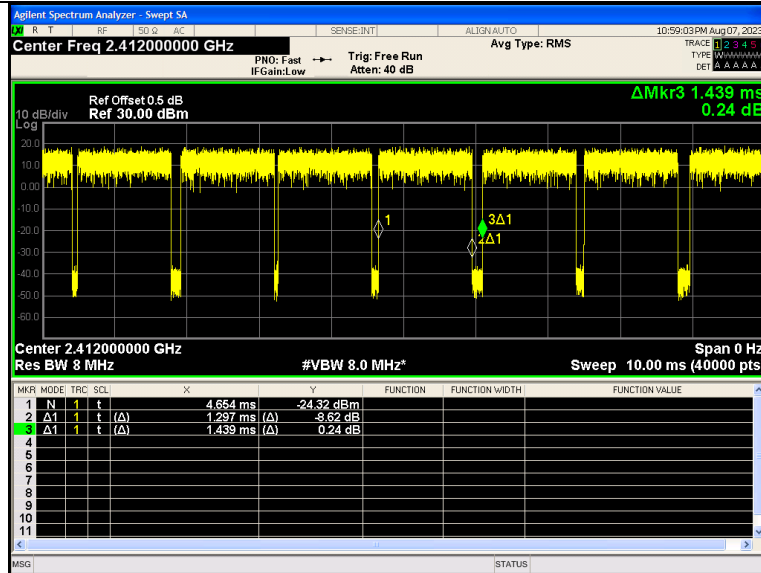
1-2/F, Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

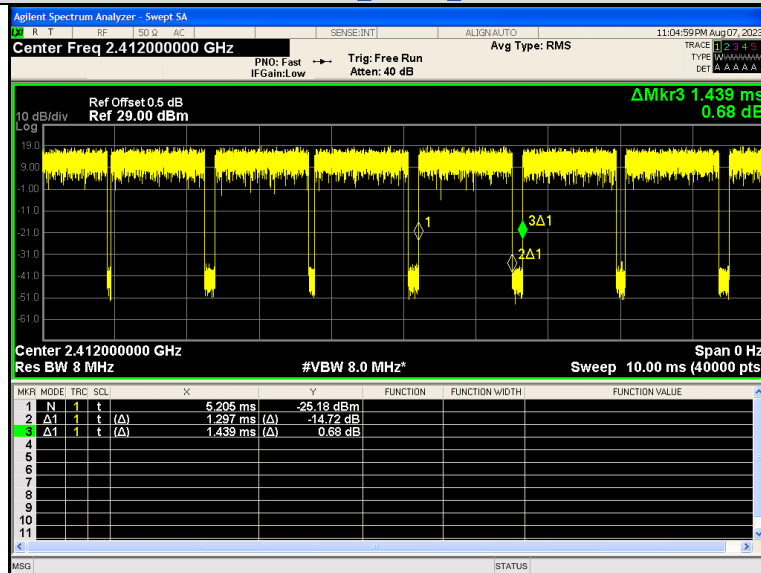
Fax: (86)755-27521011

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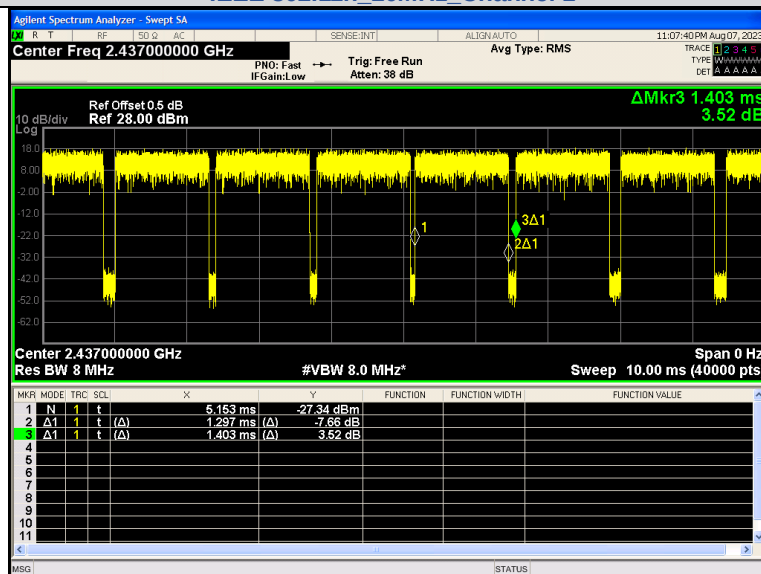
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IEEE 802.11n 20MHz Channel 1



IEEE 802.11n 20MHz Channel 1



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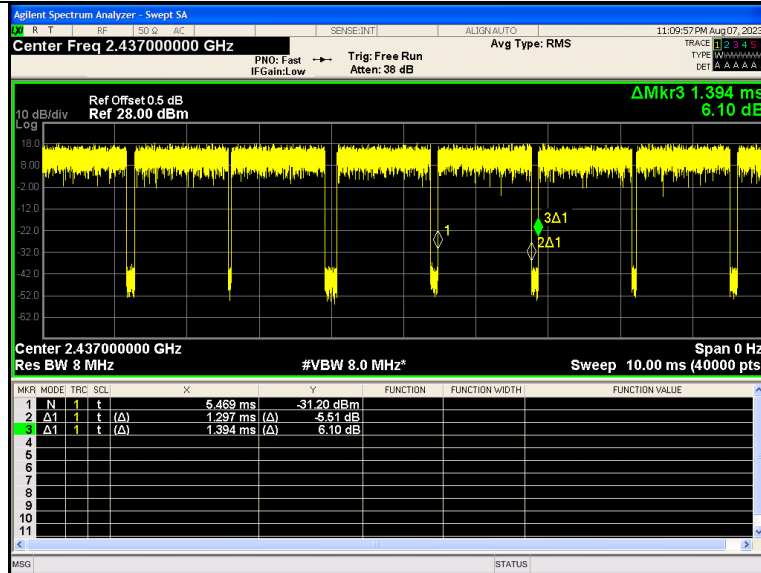
1-2/F, Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

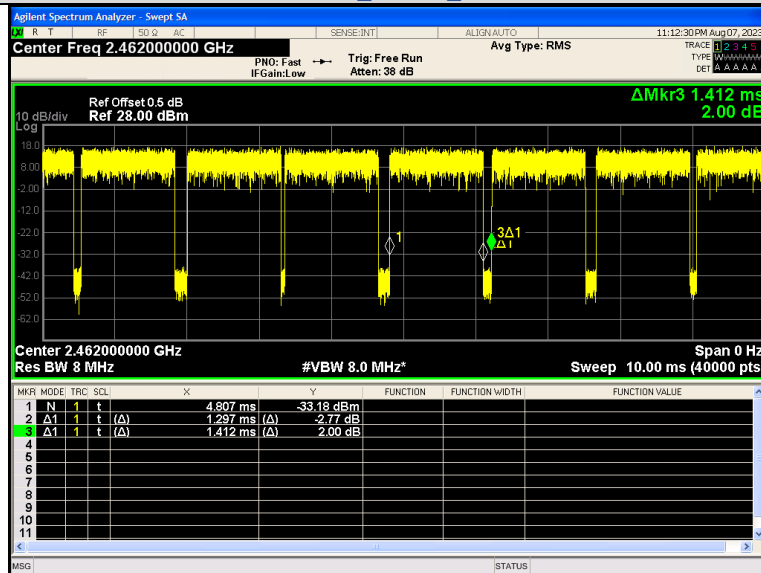
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Http://www.sz-ctc.org.cn

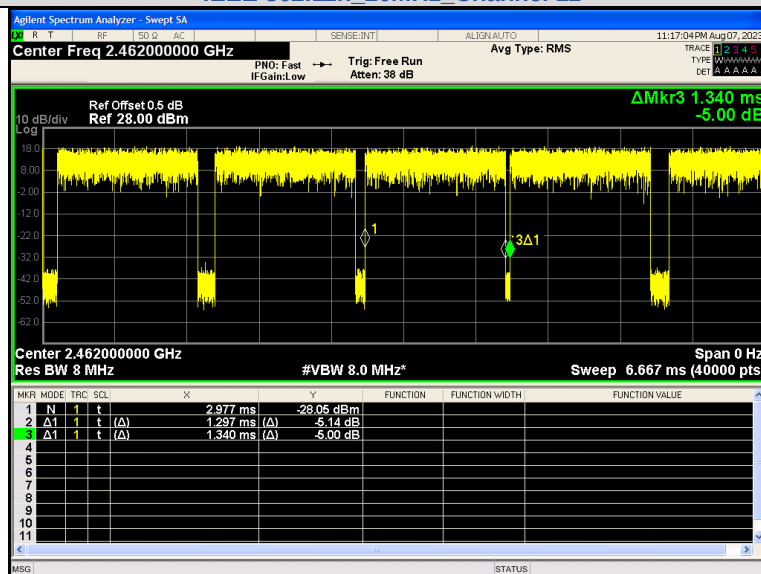
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IEEE 802.11n 20MHz Channel 6



IEEE 802.11n 20MHz Channel 11



IEEE 802.11n 20MHz Channel 11

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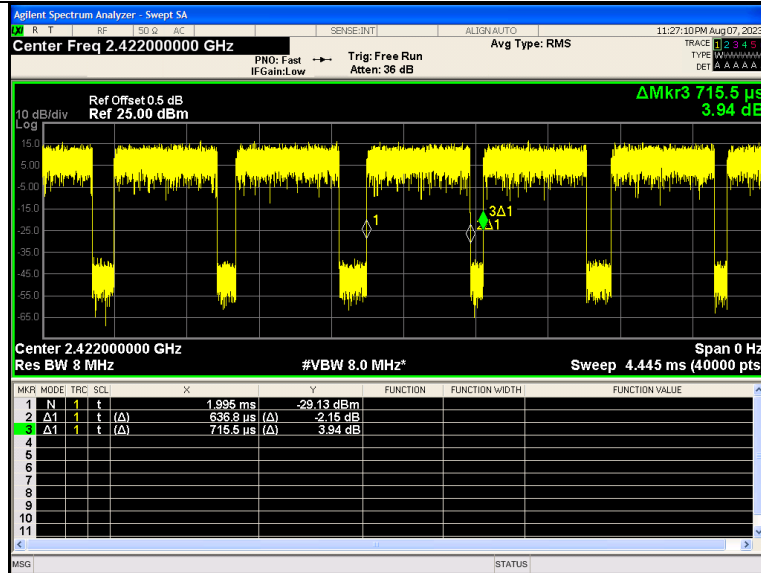
1-2/F, Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

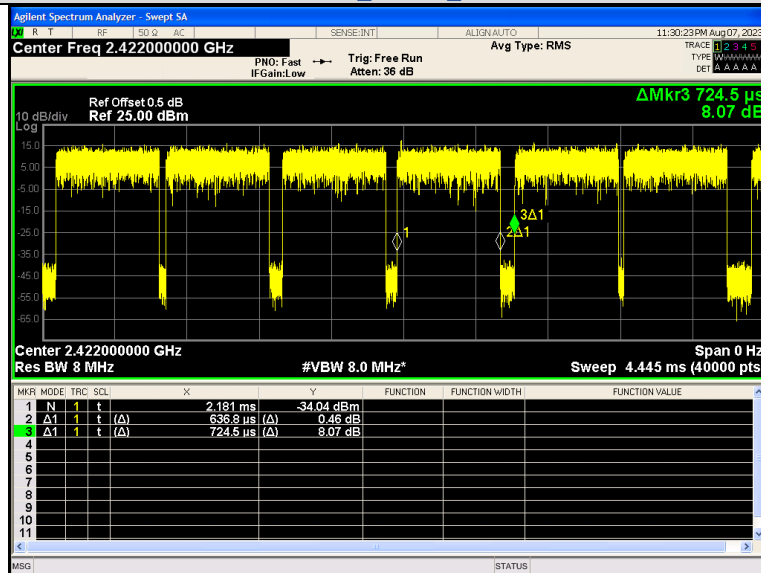
Fax: (86)755-27521011

Http://www.sz-ctc.org.cn

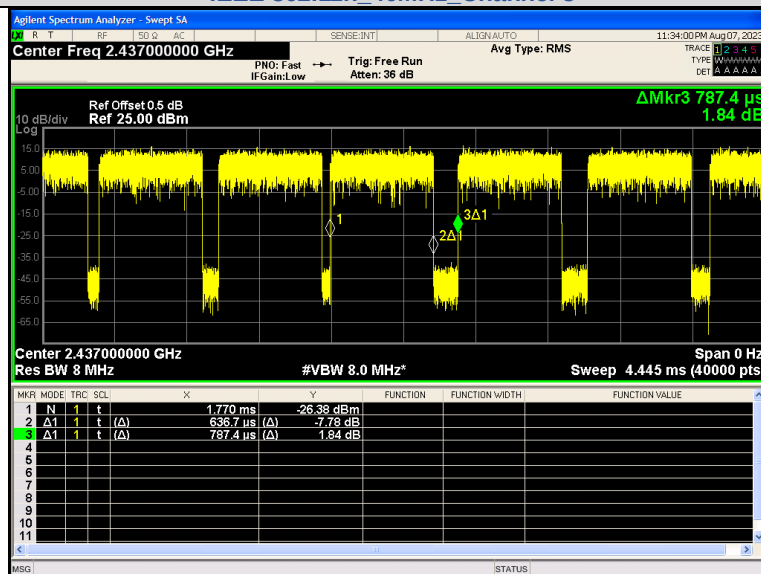
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IEEE 802.11n 40MHz Channel 3



IEEE 802.11n 40MHz Channel 3



IEEE 802.11n 40MHz Channel 6

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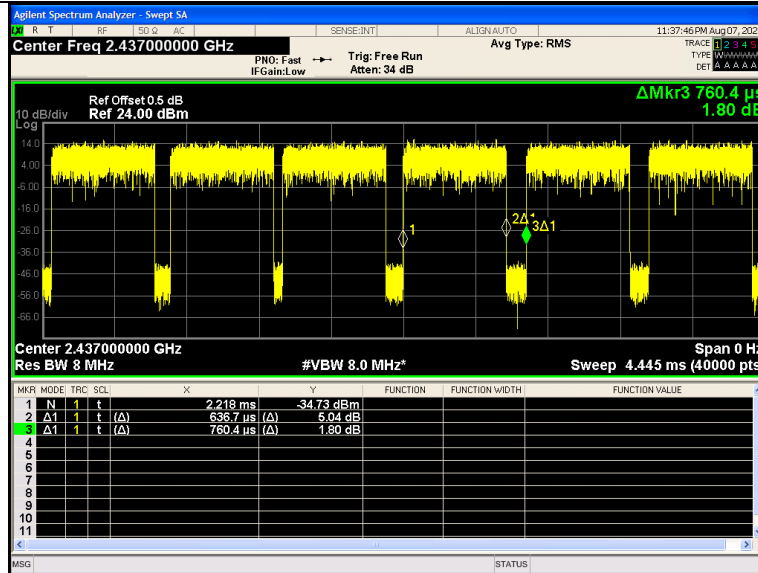
1-2/F, Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China

Tel.: (86)755-27521059

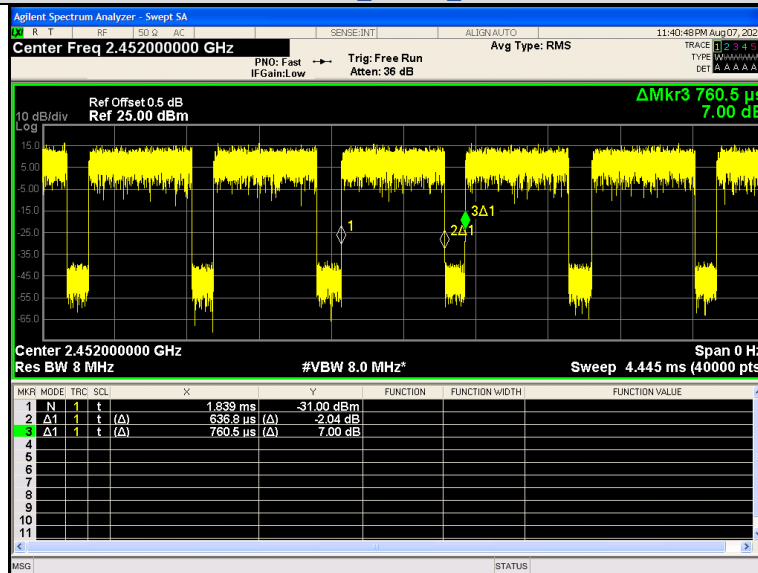
Fax: (86)755-27521011

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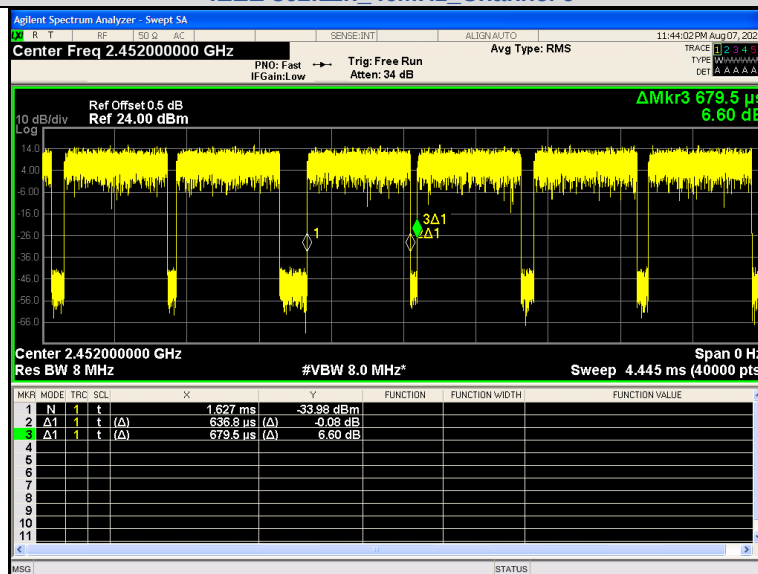
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IEEE 802.11n 40MHz Channel 6



IEEE 802.11n 40MHz Channel 9



IEEE 802.11n 40MHz Channel 9

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3.9. Antenna requirement

Requirement

FCC CFR Title 47 Part 15 Subpart C Section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):

(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

Test Result

Complies