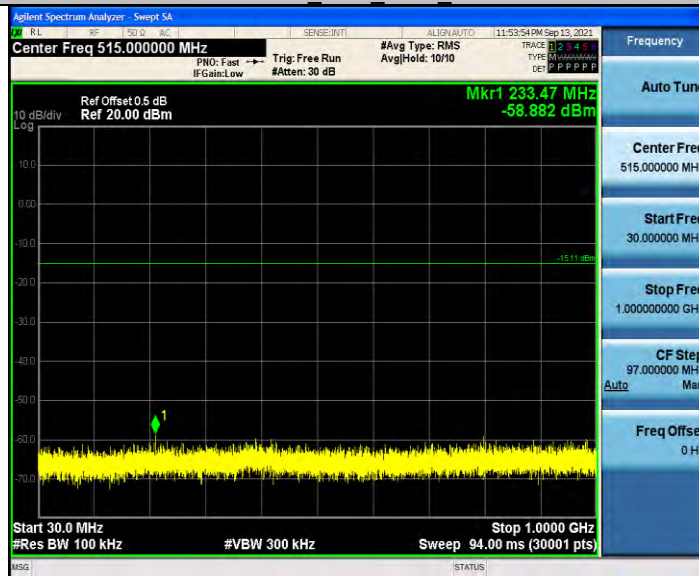
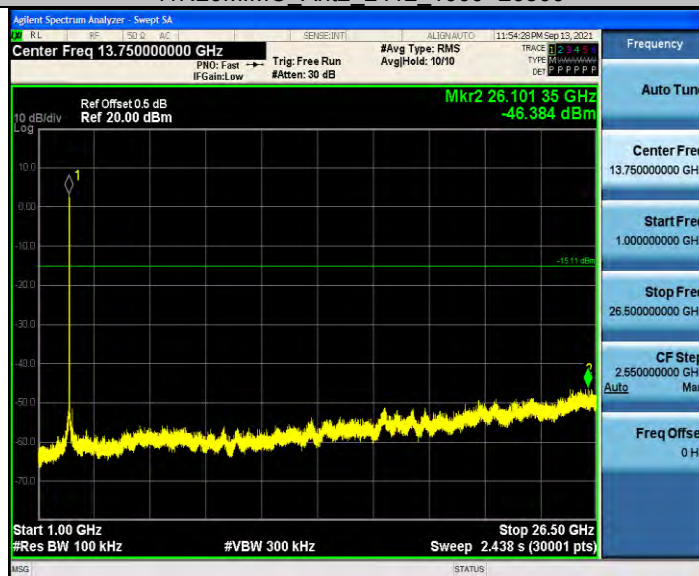




11N20MIMO Ant2 2412 30~1000



11N20MIMO Ant2 2412 1000~26500



11N20MIMO Ant1 2437 0~Reference

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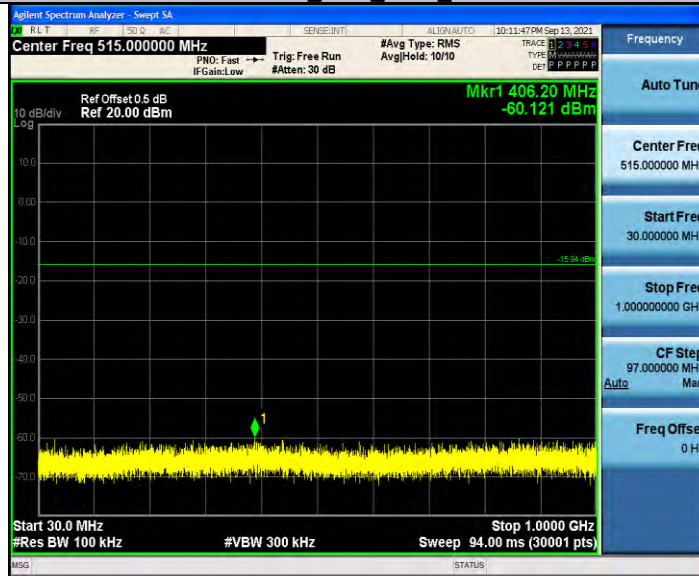
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China
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11N20MIMO Ant1 2437 30~1000



11N20MIMO Ant1 2437 1000~26500



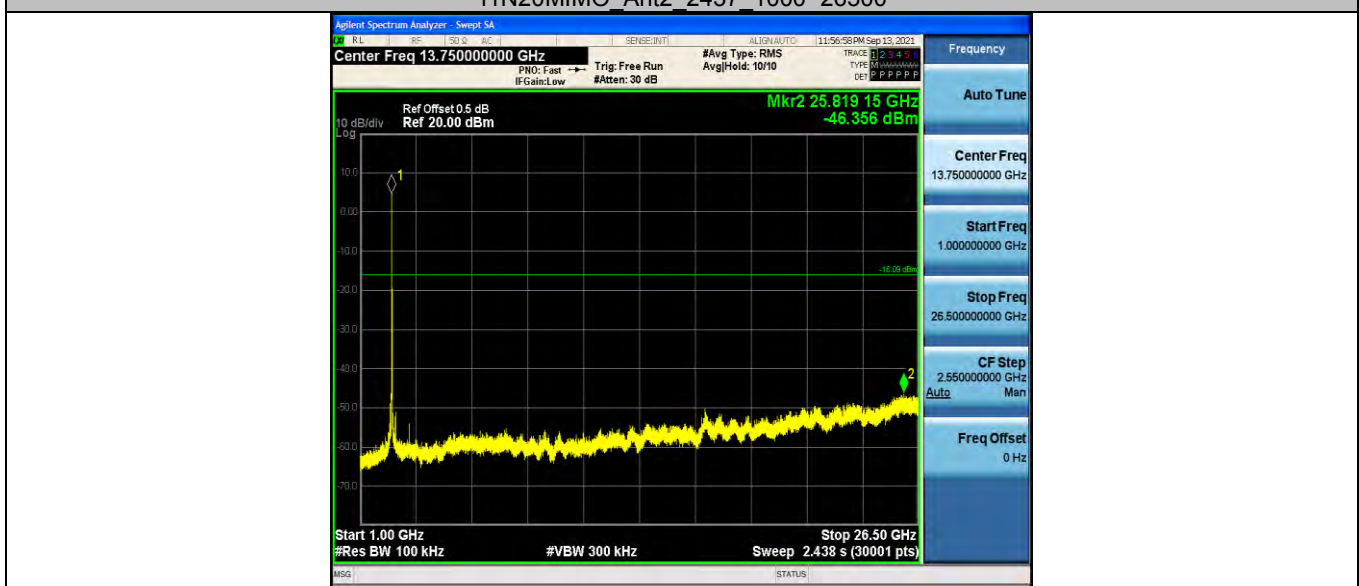
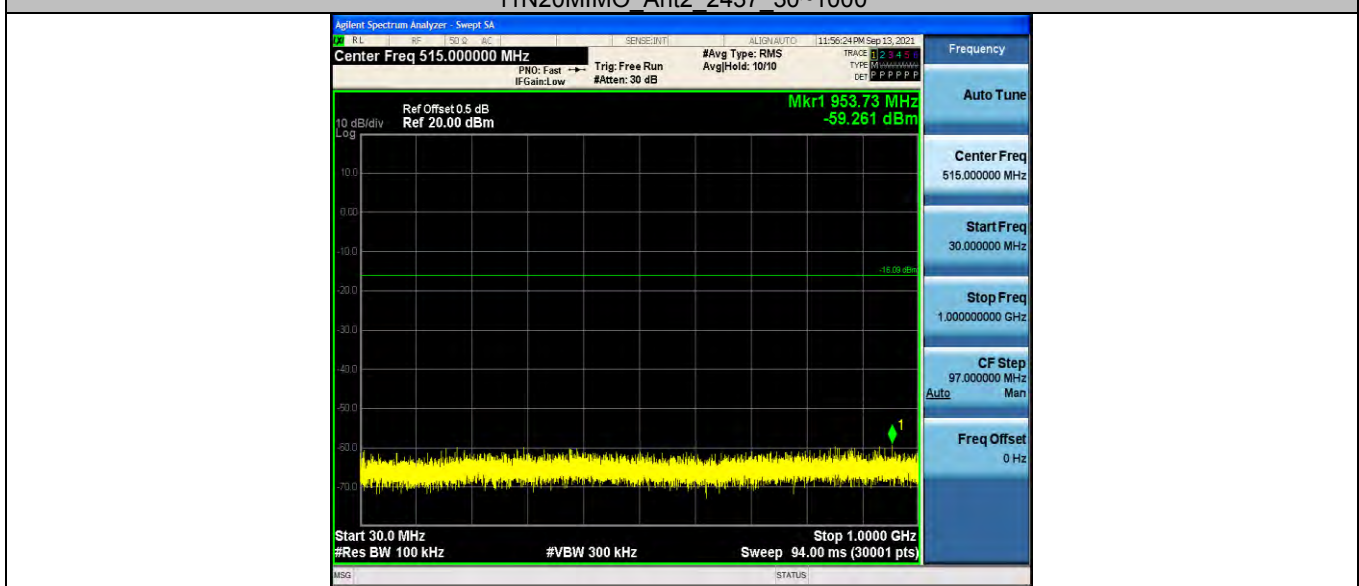
11N20MIMO Ant2 2437 0~Reference

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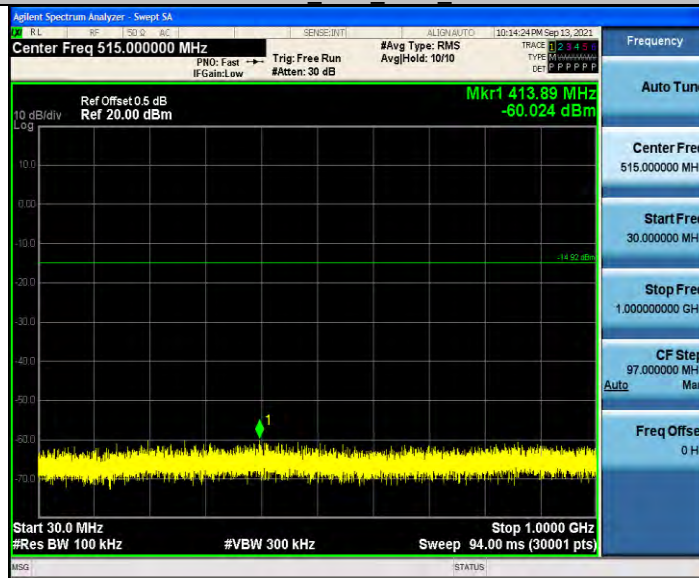
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11N20MIMO Ant1 2462 30~1000



11N20MIMO Ant1 2462 1000~26500



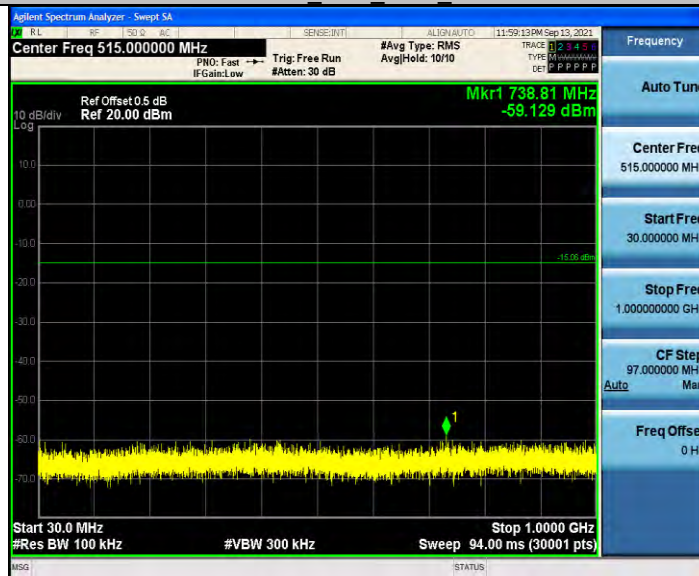
11N20MIMO Ant2 2462 0~Reference

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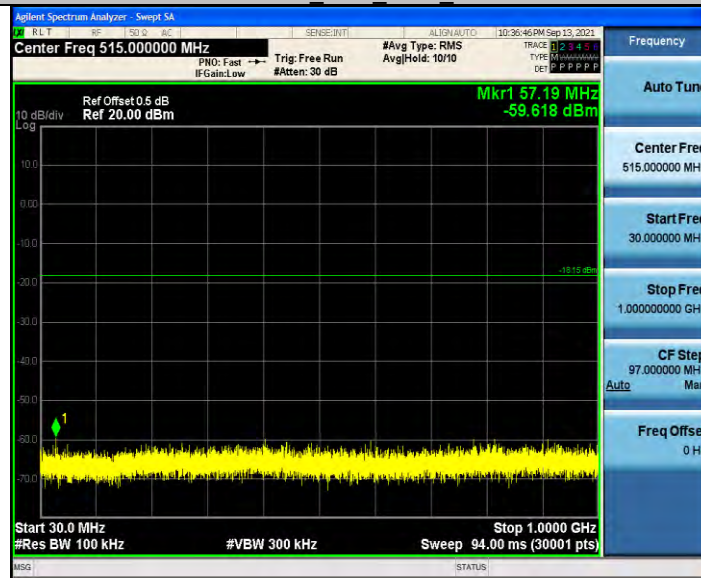
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Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



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11N40MIMO Ant1 2422 30~1000



11N40MIMO Ant1 2422 1000~26500



11N40MIMO Ant2 2422 0~Reference

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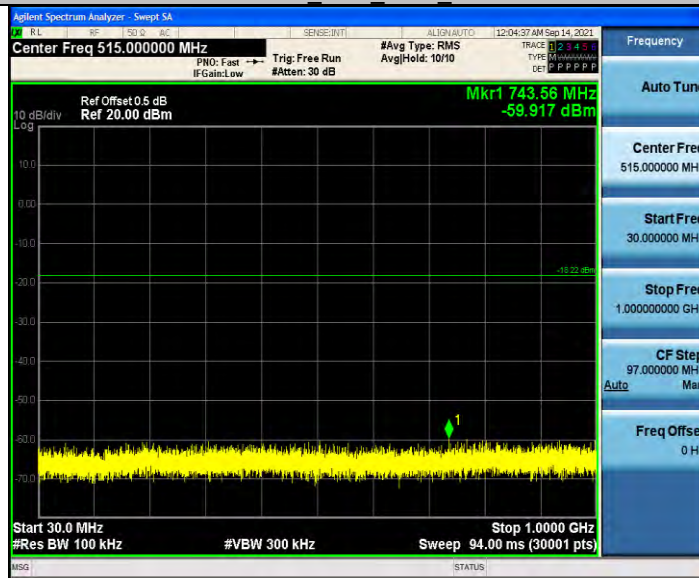
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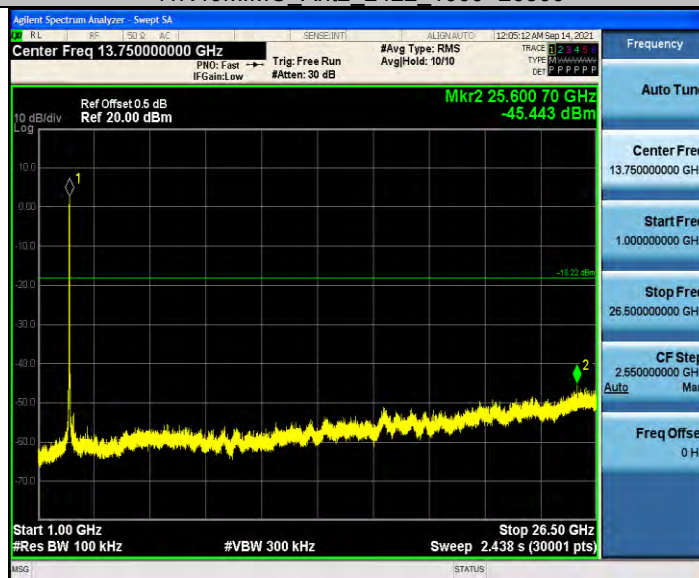
For anti-fake verification, please visit the official website of Certification and Accreditation Administration of the People's Republic of China : yz.cnca.cn



11N40MIMO_Ant2_2422_30~1000



11N40MIMO_Ant2_2422_1000~26500



11N40MIMO_Ant1_2437_0~Reference

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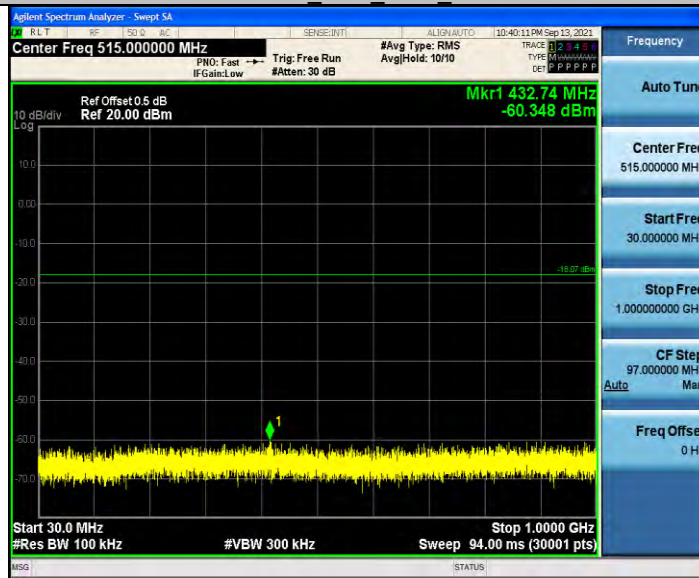
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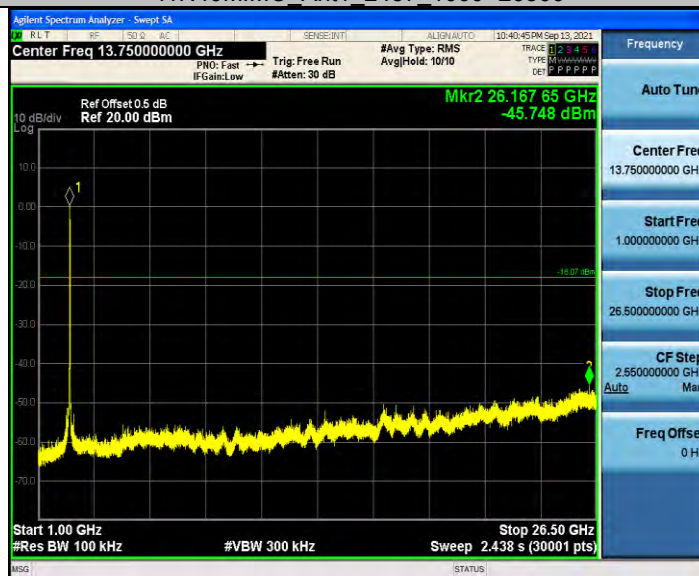
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11N40MIMO Ant1 2437 30~1000



11N40MIMO Ant1 2437 1000~26500



11N40MIMO Ant2 2437 0~Reference

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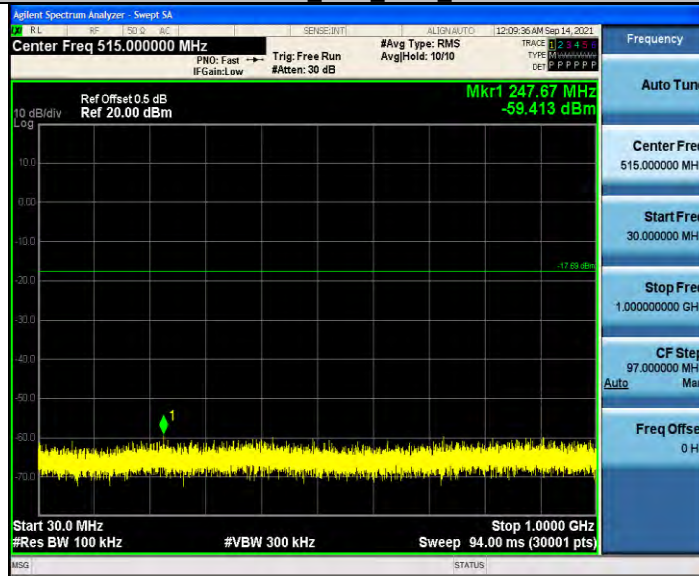
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11N40MIMO Ant2 2437 30~1000



11N40MIMO Ant2 2437 1000~26500



11N40MIMO Ant1 2452 0~Reference

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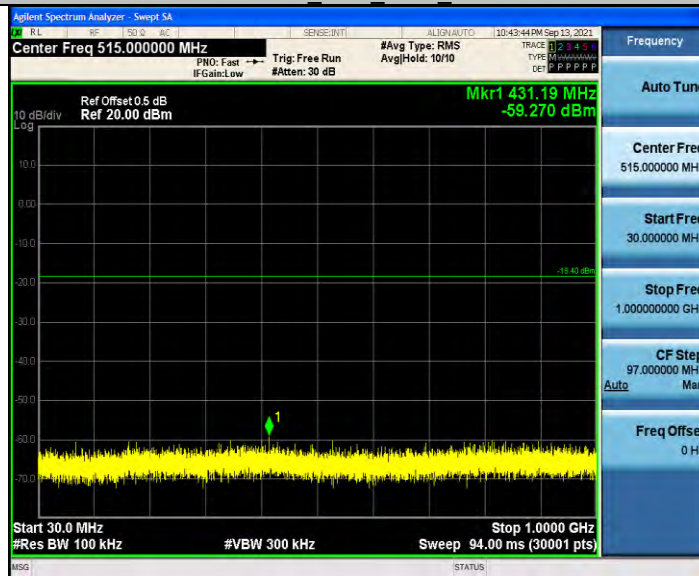
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China
Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



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11N40MIMO Ant1 2452 30~1000



11N40MIMO Ant1 2452 1000~26500



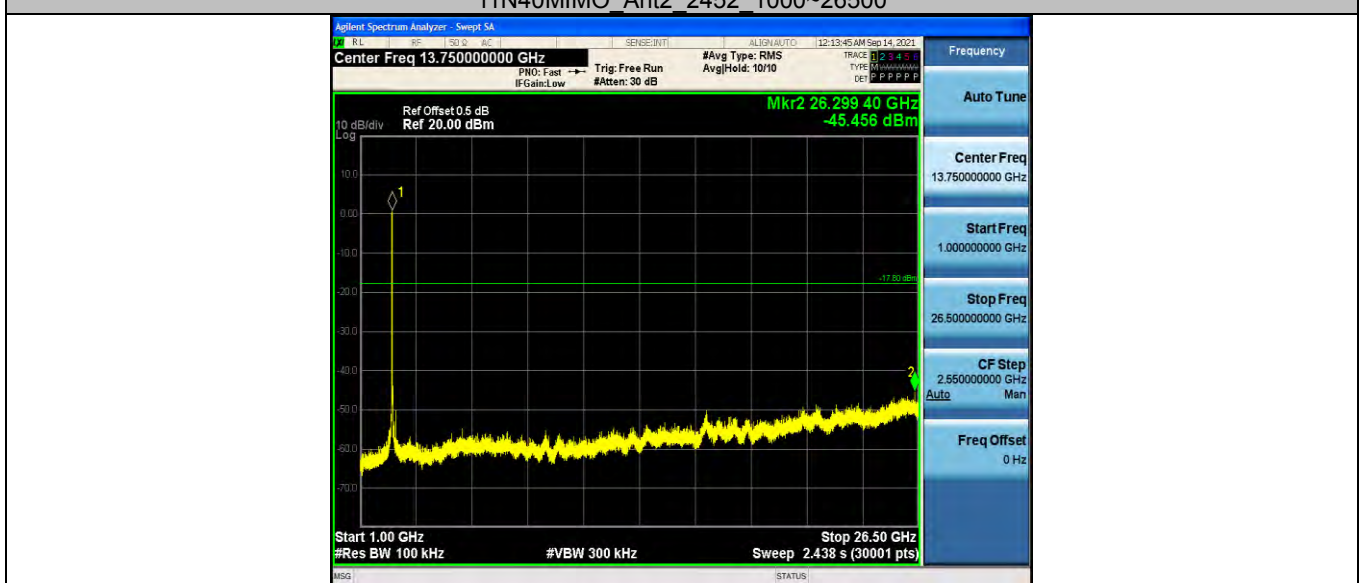
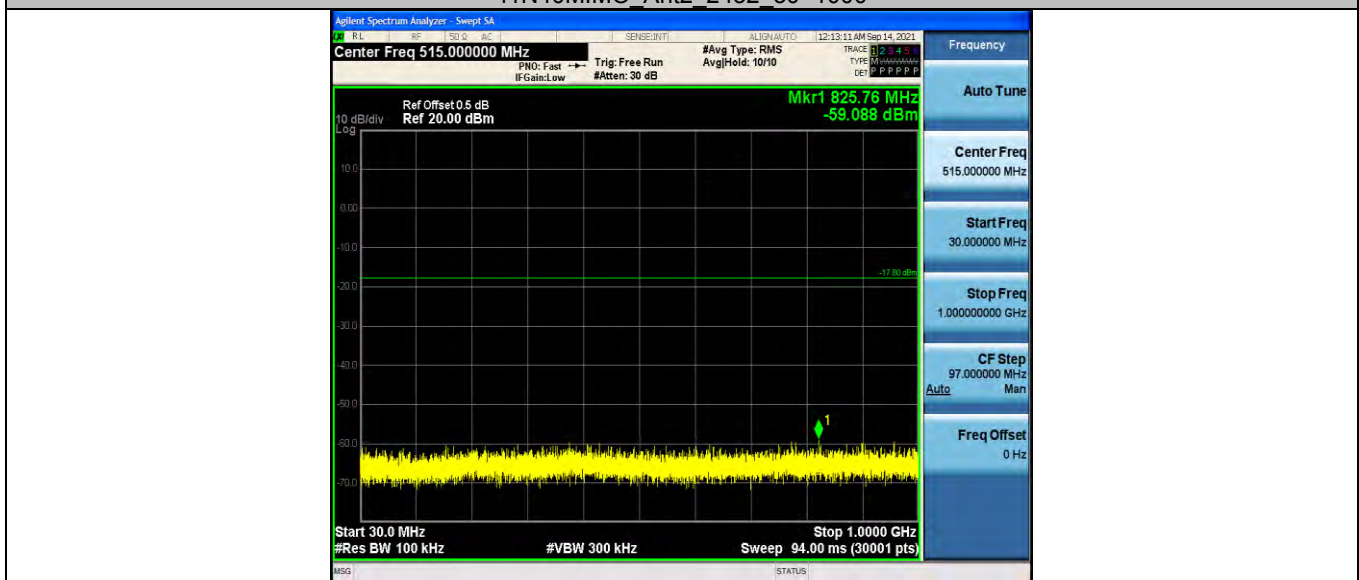
11N40MIMO Ant2 2452 0~Reference

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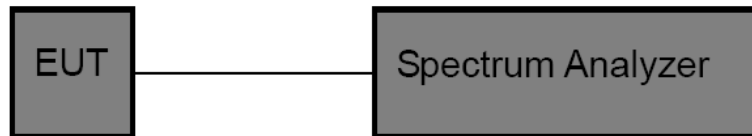
3.5. Bandwidth

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(2)/ RSS-247 5.2 a:

Test Item	Limit	Frequency Range(MHz)
DTS Bandwidth	≥ 500 KHz (6dB bandwidth)	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. DTS Spectrum Setting:
 - (1) Set RBW = 100 kHz.
 - (2) Set the video bandwidth (VBW) ≥ 3 RBW.
 - (3) Detector = Peak.
 - (4) Trace mode = Max hold.
 - (5) Sweep = Auto couple.OCB Spectrum Setting:
 - (1) Set RBW = 1% ~ 5% occupied bandwidth.
 - (2) Set the video bandwidth (VBW) ≥ 3 RBW.
 - (3) Detector = Peak.
 - (4) Trace mode = Max hold.
 - (5) Sweep = Auto couple.

NOTE: The EUT was set to continuously transmitting in each mode and low, Middle and high channel for the test.

Test Mode

Please refer to the clause 2.4.

**Test Results**

Test Mode	Antenna	Frequency (MHz)	OCB [MHz]	DTS BW [MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.650	8.160	0.5	PASS
	Ant2	2412	13.419	9.120	0.5	PASS
	Ant1	2437	13.650	9.080	0.5	PASS
	Ant2	2437	13.445	9.120	0.5	PASS
	Ant1	2462	13.595	9.080	0.5	PASS
	Ant2	2462	13.416	8.520	0.5	PASS
11G	Ant1	2412	16.890	15.120	0.5	PASS
	Ant2	2412	16.761	15.120	0.5	PASS
	Ant1	2437	16.852	15.160	0.5	PASS
	Ant2	2437	16.880	15.160	0.5	PASS
	Ant1	2462	16.800	15.160	0.5	PASS
	Ant2	2462	16.887	15.160	0.5	PASS
11N20MIMO	Ant1	2412	17.756	15.360	0.5	PASS
	Ant2	2412	17.595	15.160	0.5	PASS
	Ant1	2437	17.786	15.160	0.5	PASS
	Ant2	2437	17.623	15.160	0.5	PASS
	Ant1	2462	17.751	15.200	0.5	PASS
	Ant2	2462	17.575	16.400	0.5	PASS
11N40MIMO	Ant1	2422	35.926	35.200	0.5	PASS
	Ant2	2422	36.184	35.200	0.5	PASS
	Ant1	2437	35.983	32.640	0.5	PASS
	Ant2	2437	36.228	34.000	0.5	PASS
	Ant1	2452	36.055	34.000	0.5	PASS
	Ant2	2452	36.151	35.200	0.5	PASS



DTS Bandwidth:

11B Ant1 2412



11B Ant2 2412



11B Ant1 2437



11B Ant2 2437

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11B Ant1 2462



11B Ant2 2462



11G Ant1 2412

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11G Ant2 2412



11G Ant1 2437



11G Ant2 2437

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11G Ant1_2462



11G Ant2_2462



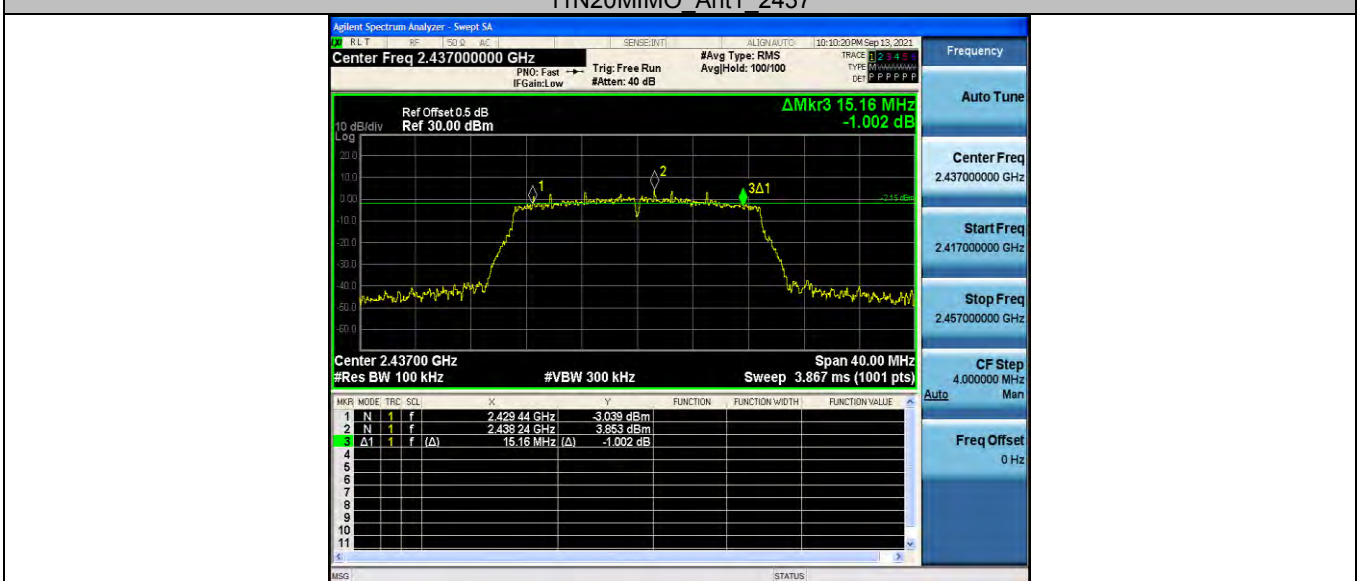
11N20MIMO_Ant1_2412

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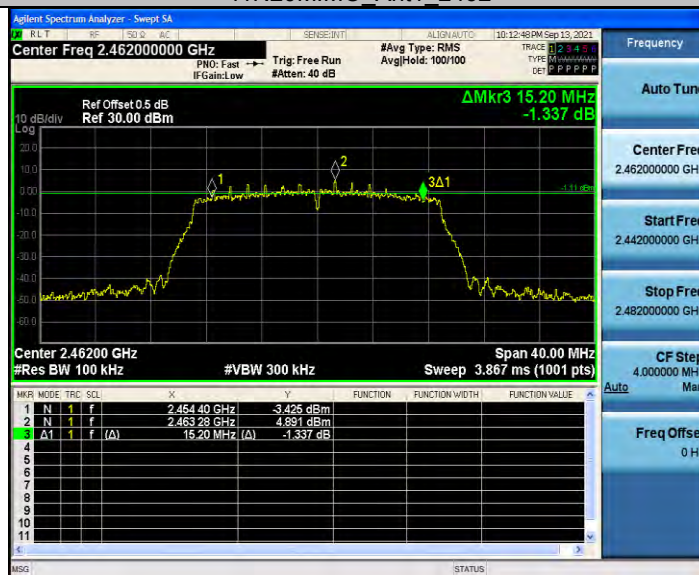


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11N20MIMO Ant1 2462



11N20MIMO Ant2 2462



11N40MIMO Ant1 2422

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11N40MIMO Ant2 2422



11N40MIMO Ant1 2437



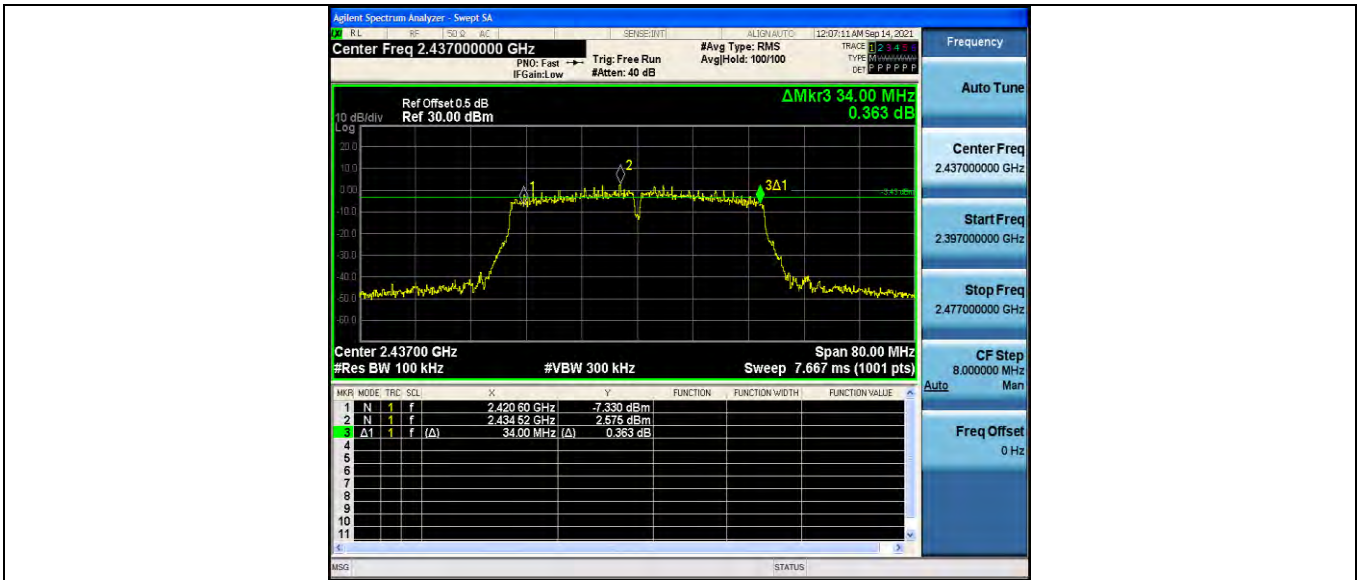
11N40MIMO Ant2 2437

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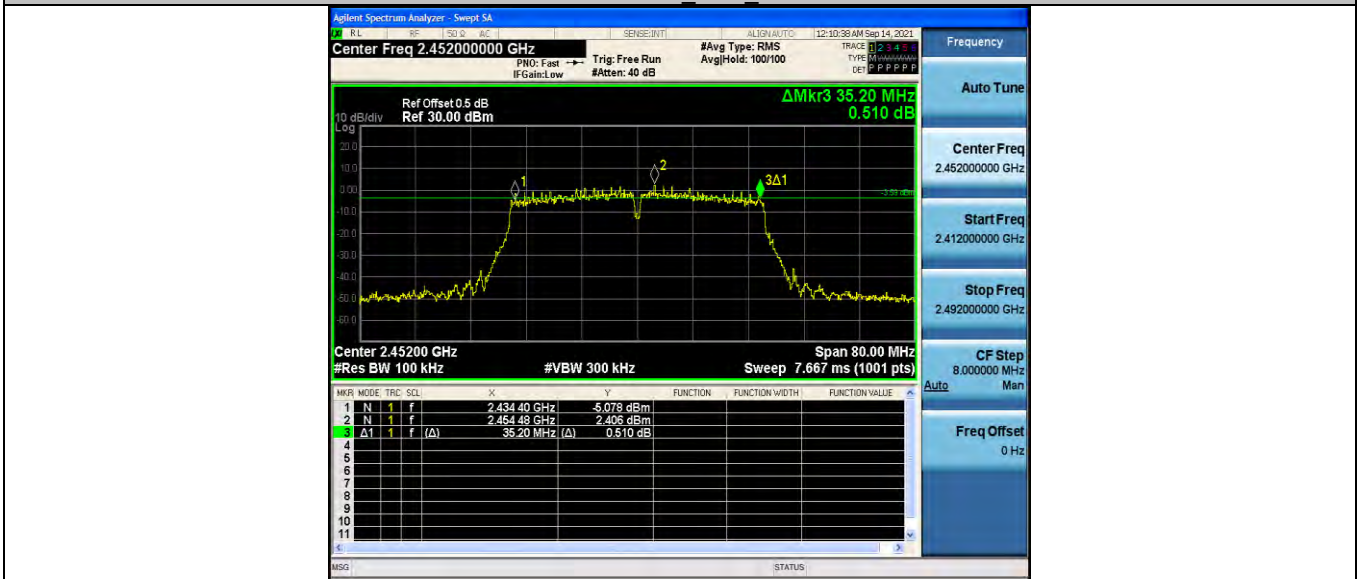
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11N40MIMO Ant1 2452



11N40MIMO Ant2 2452



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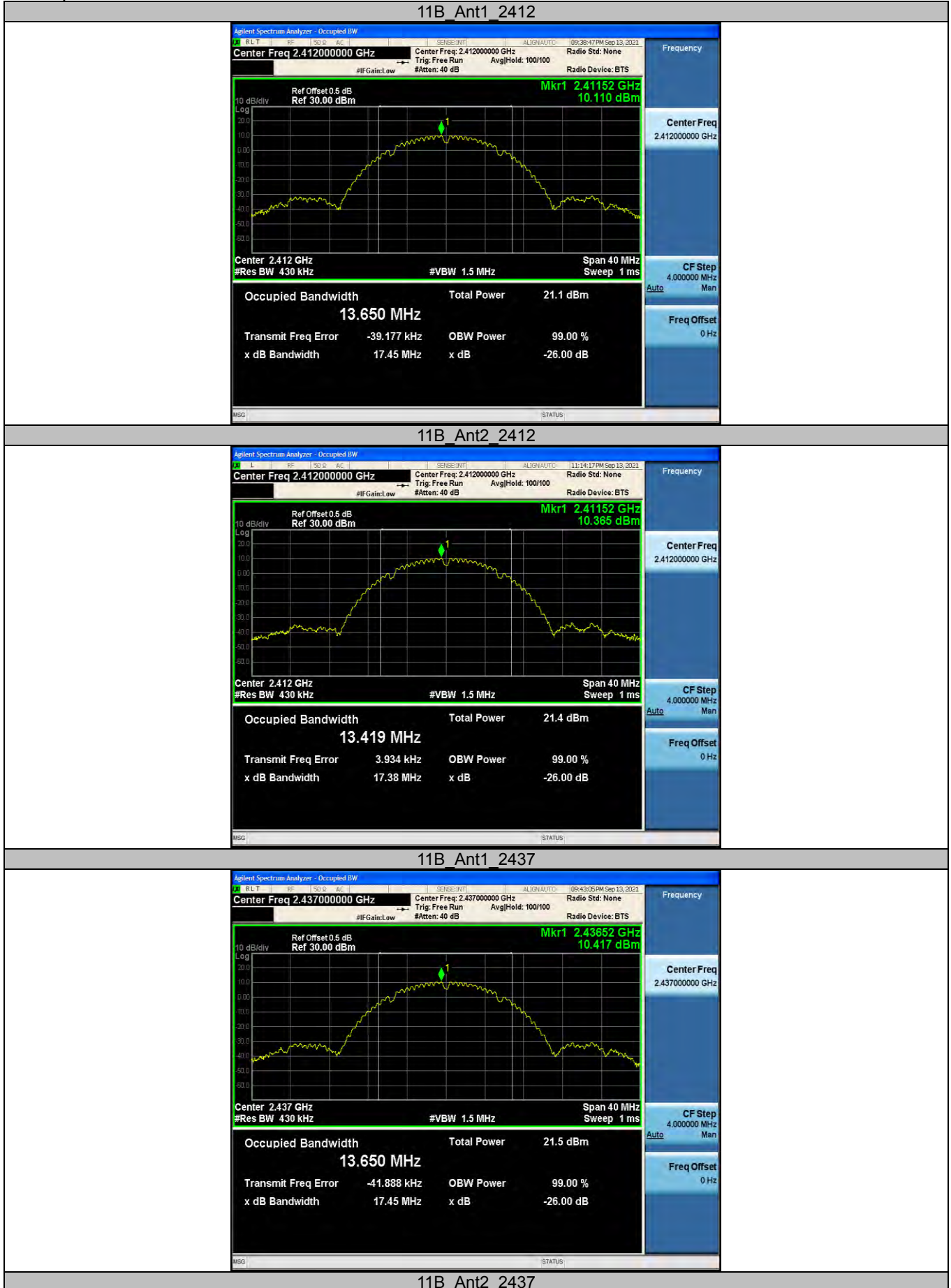
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Occupied Channel Bandwidth:



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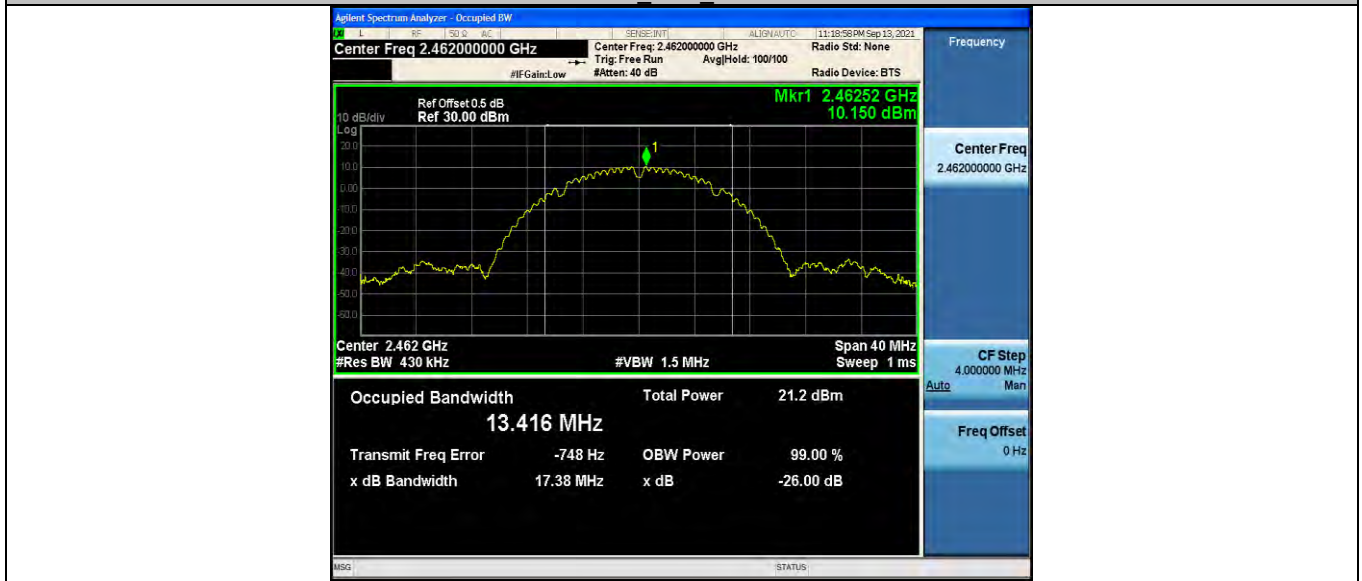
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11B Ant1_2462



11B Ant2_2462



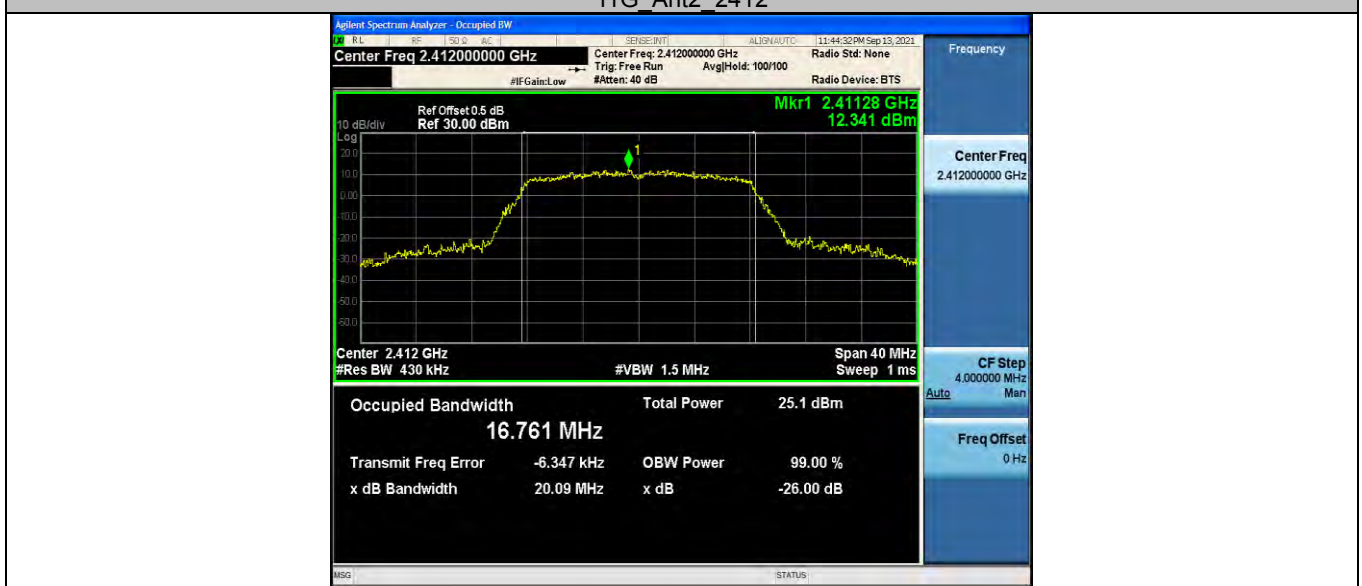
11G Ant1_2412

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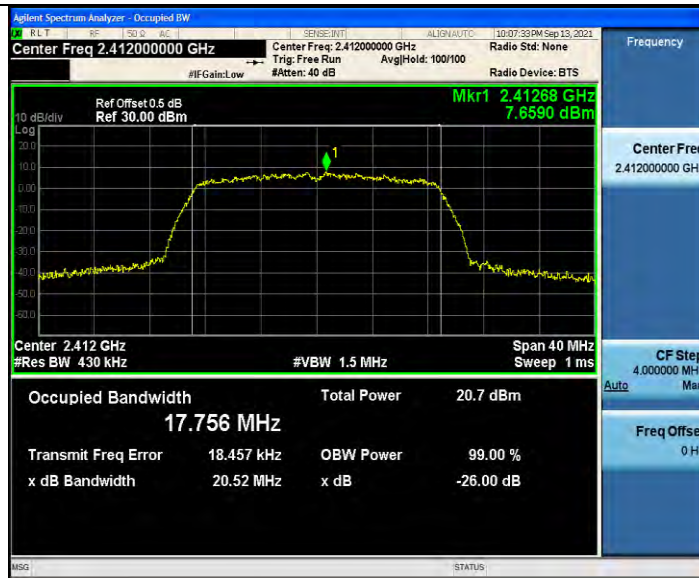
11G Ant1_2462



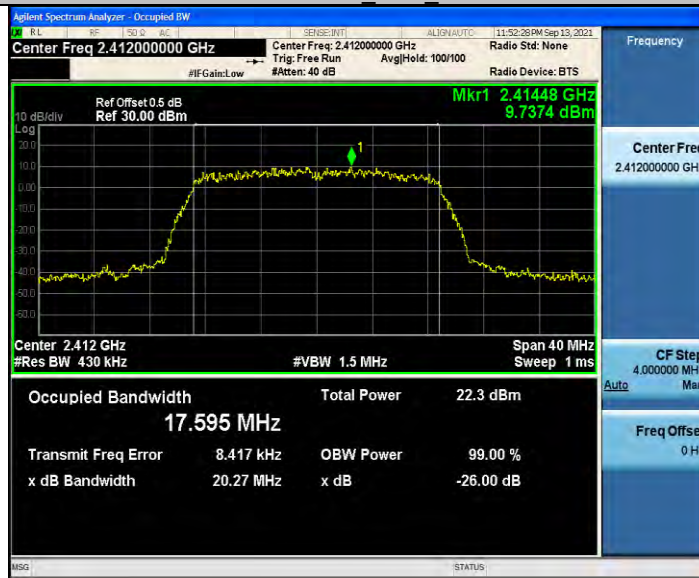
11G Ant2_2462



11N20MIMO_Ant1_2412



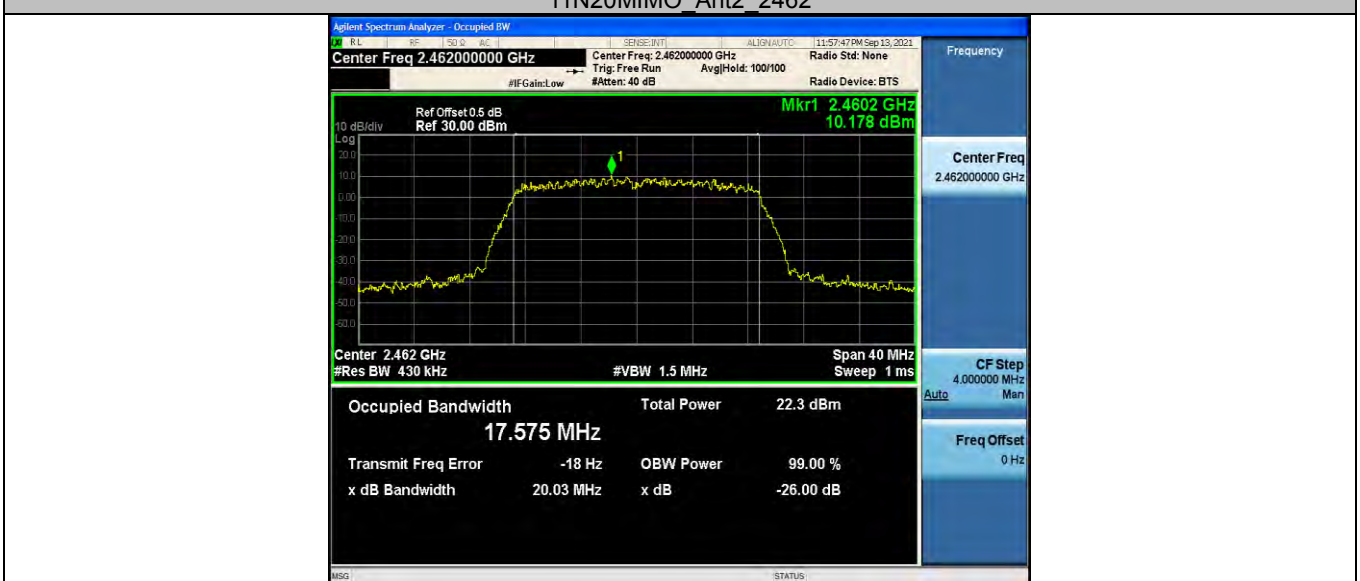
11N20MIMO Ant2 2412



11N20MIMO Ant1 2437



11N20MIMO Ant2 2437





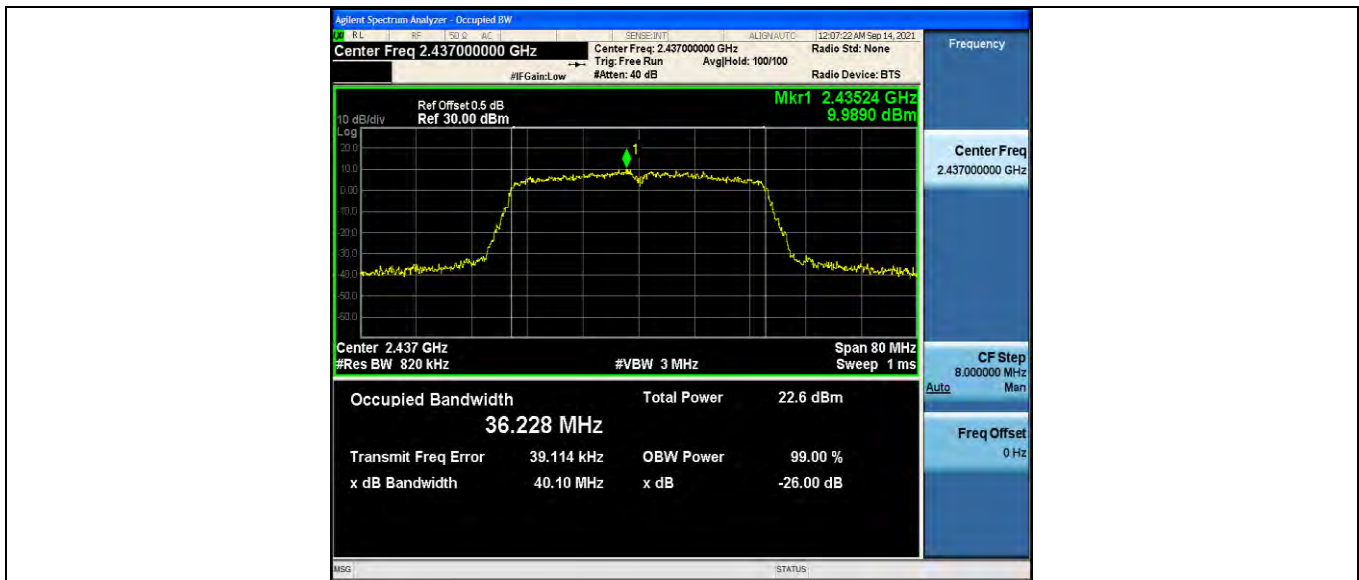
11N40MIMO Ant2 2422



11N40MIMO Ant1 2437



11N40MIMO Ant2 2437



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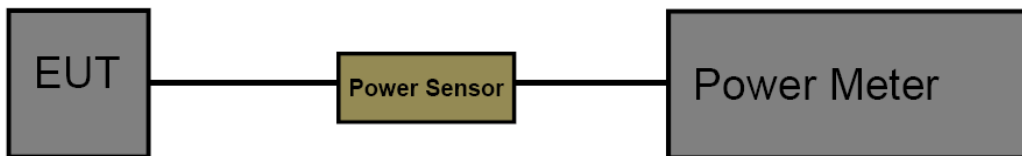
3.6. Peak Output Power

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3)/ RSS-247 5.4:

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
ISED RSS-247 5.4 d	EIRP	4 Watt or 36dBm	2400~2483.5

Test Configuration



Test Procedure

1. The maximum conducted output power may be measured using a broadband Peak RF power meter.
2. Peak 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.
Record the measurement data.

Test Mode

Please refer to the clause 2.4.

Test Result



Test Mode	Antenna	Frequency (MHz)	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	18.20	<=30	PASS
	Ant2	2412	18.43	<=30	PASS
	Ant1	2437	18.53	<=30	PASS
	Ant2	2437	18.72	<=30	PASS
	Ant1	2462	18.38	<=30	PASS
	Ant2	2462	18.63	<=30	PASS
11G	Ant1	2412	18.39	<=30	PASS
	Ant2	2412	18.92	<=30	PASS
	Ant1	2437	18.48	<=30	PASS
	Ant2	2437	19.02	<=30	PASS
	Ant1	2462	18.46	<=30	PASS
	Ant2	2462	18.86	<=30	PASS
11N20MIMO	Ant1	2412	14.51	<=30	PASS
	Ant2	2412	15.21	<=30	PASS
	total	2412	17.90	<=30	PASS
	Ant1	2437	14.54	<=30	PASS
	Ant2	2437	15.11	<=30	PASS
	total	2437	17.80	<=30	PASS
	Ant1	2462	14.54	<=30	PASS
	Ant2	2462	15.11	<=30	PASS
	total	2462	17.80	<=30	PASS
11N40MIMO	Ant1	2422	14.49	<=30	PASS
	Ant2	2422	15.17	<=30	PASS
	total	2422	17.90	<=30	PASS
	Ant1	2437	14.85	<=30	PASS
	Ant2	2437	15.17	<=30	PASS
	total	2437	18.02	<=30	PASS
	Ant1	2452	14.74	<=30	PASS
	Ant2	2452	15.18	<=30	PASS
	total	2452	17.98	<=30	PASS

Note: Test results increased RF cable loss by 0.5dB.

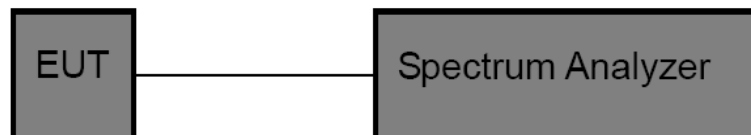
3.7. Power Spectral Density

Limit

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e)/ RSS-247 5.2 b:

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: Avg
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.

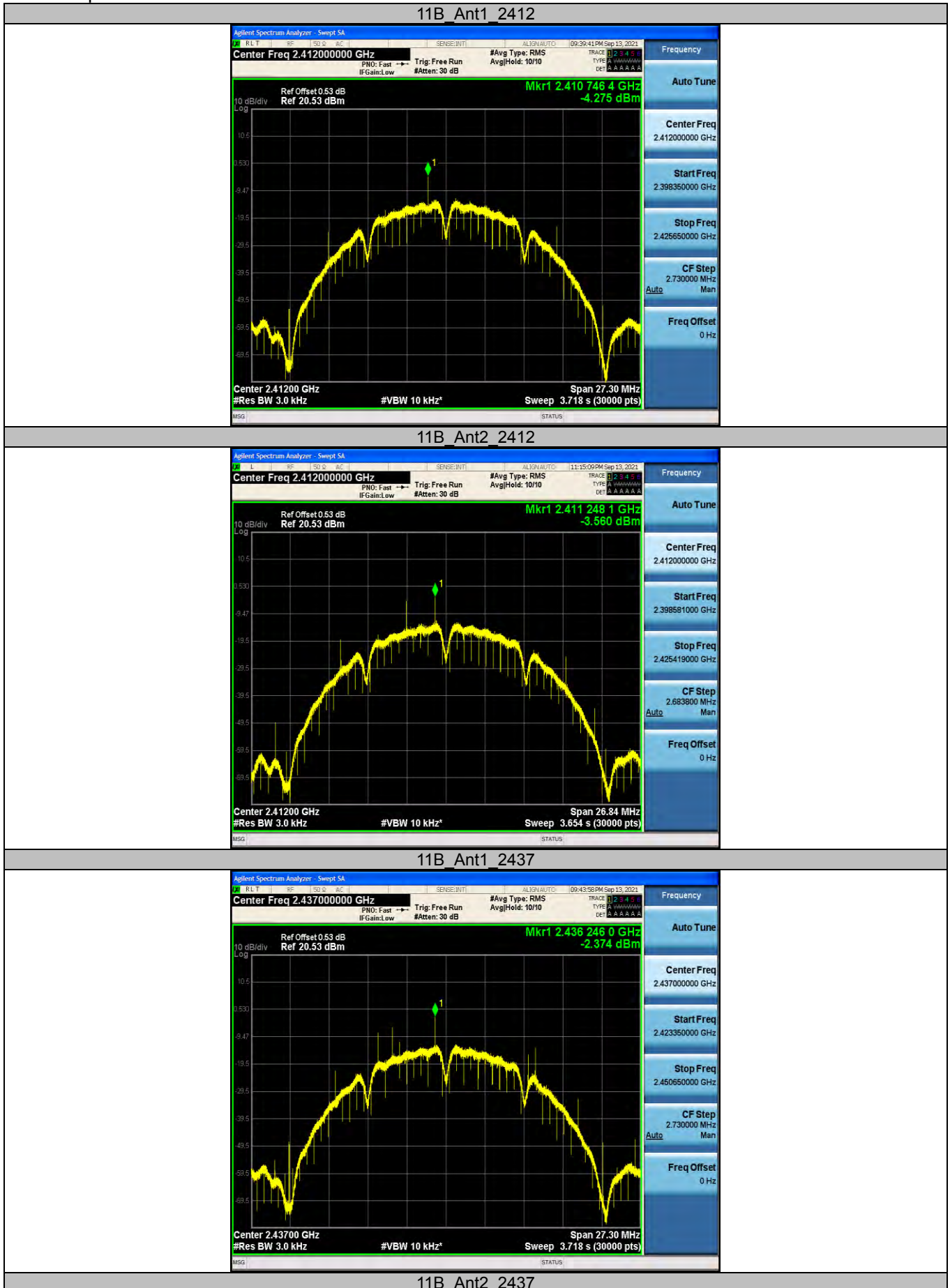
**Test Result**

Test Mode	Antenna	Frequency (MHz)	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-4.28	<=8	PASS
	Ant2	2412	-3.56	<=8	PASS
	Ant1	2437	-2.37	<=8	PASS
	Ant2	2437	-6.22	<=8	PASS
	Ant1	2462	-11.89	<=8	PASS
	Ant2	2462	-6.25	<=8	PASS
11G	Ant1	2412	-12.20	<=8	PASS
	Ant2	2412	-12.23	<=8	PASS
	Ant1	2437	-12.13	<=8	PASS
	Ant2	2437	-11.65	<=8	PASS
	Ant1	2462	-12.08	<=8	PASS
	Ant2	2462	-12.28	<=8	PASS
11N20MIMO	Ant1	2412	-16.45	<=8	PASS
	Ant2	2412	-15.35	<=8	PASS
	total	2412	-12.85	<=8	PASS
	Ant1	2437	-17.08	<=8	PASS
	Ant2	2437	-15.33	<=8	PASS
	total	2437	-13.11	<=8	PASS
	Ant1	2462	-16.57	<=8	PASS
	Ant2	2462	-15.68	<=8	PASS
	total	2462	-13.09	<=8	PASS
11N40MIMO	Ant1	2422	-19.42	<=8	PASS
	Ant2	2422	-19.56	<=8	PASS
	total	2422	-16.48	<=8	PASS
	Ant1	2437	-18.70	<=8	PASS
	Ant2	2437	-17.80	<=8	PASS
	total	2437	-15.22	<=8	PASS
	Ant1	2452	-19.28	<=8	PASS
	Ant2	2452	-18.18	<=8	PASS
total	2452	-15.68	<=8	PASS	

Note: Duty Cycle Correction Factor = $10 \cdot \log(1/\text{duty cycle})$
The Duty Cycle Correction Factor is compensated in the graph.
MIMO = (Ant1 + Ant2)/2



Test Graphs:



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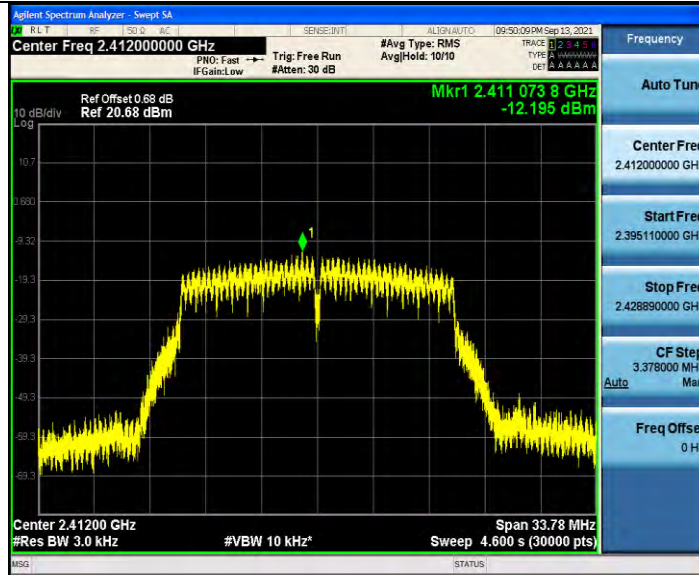


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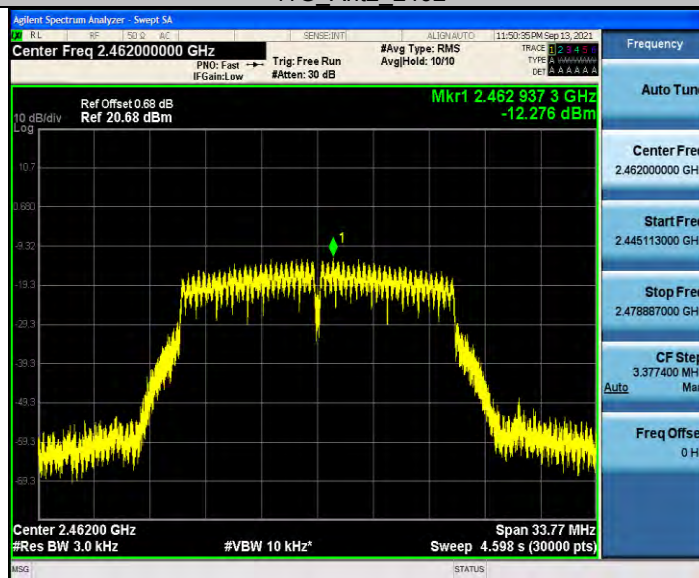


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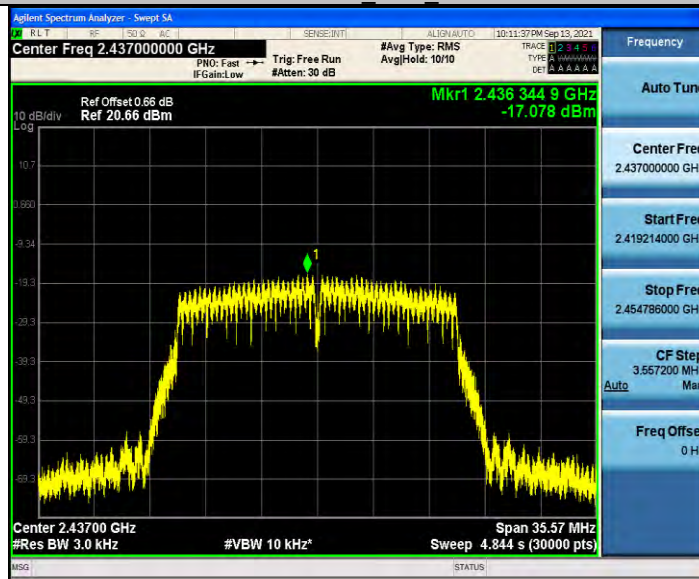
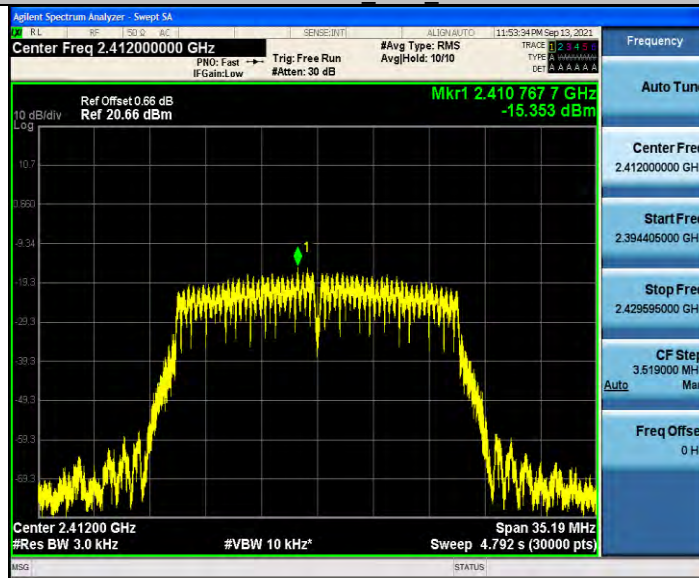


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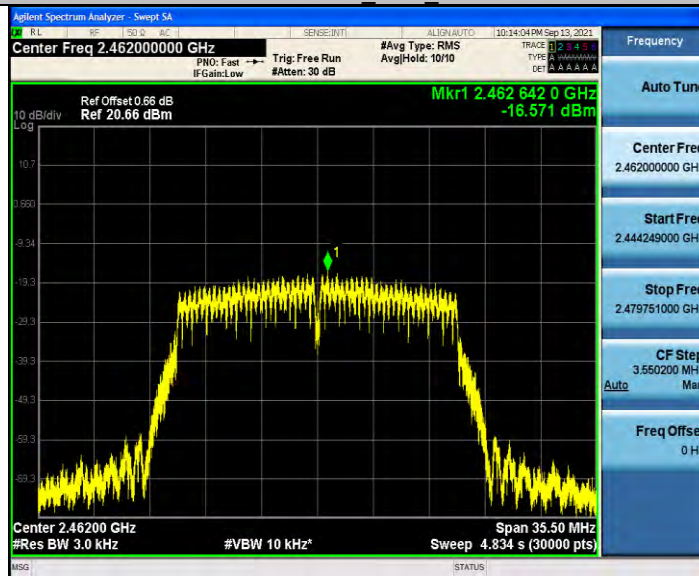
1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China
Tel.: (86)755-27521059 Fax: (86)755-27521011 Http://www.sz-ctc.org.cn



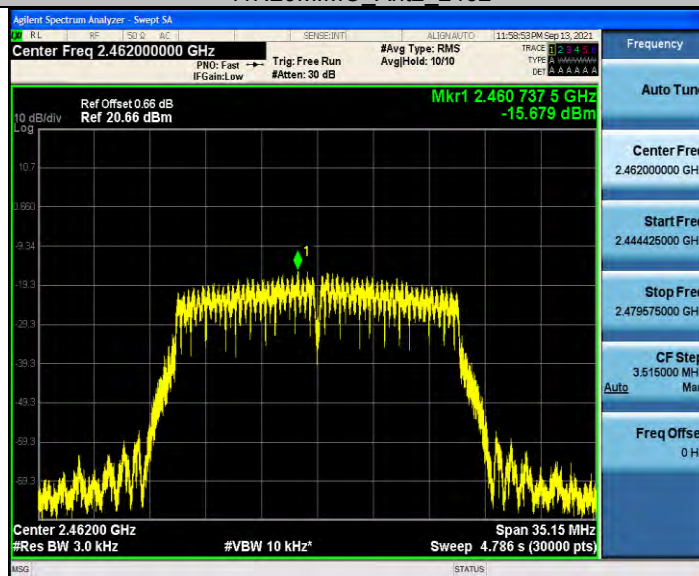
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11N20MIMO Ant1 2462



11N20MIMO Ant2 2462



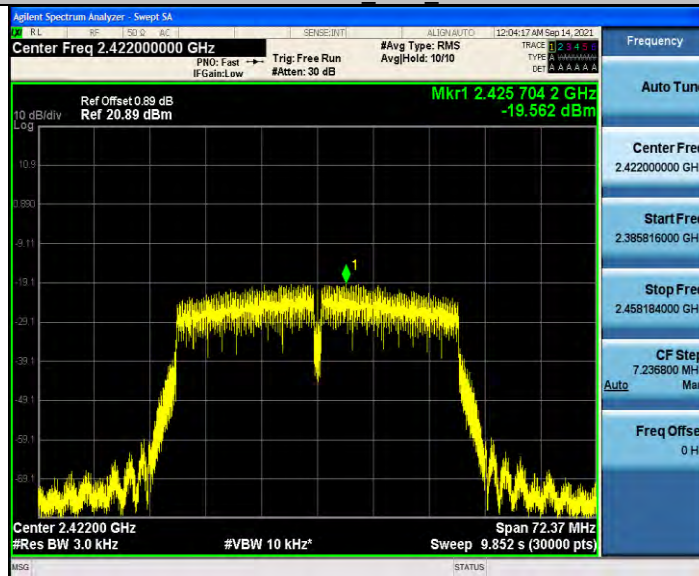
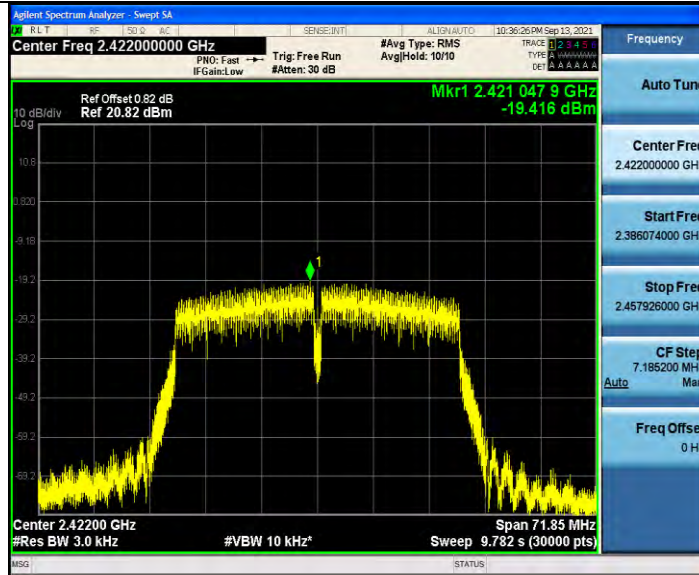
11N40MIMO Ant1 2422

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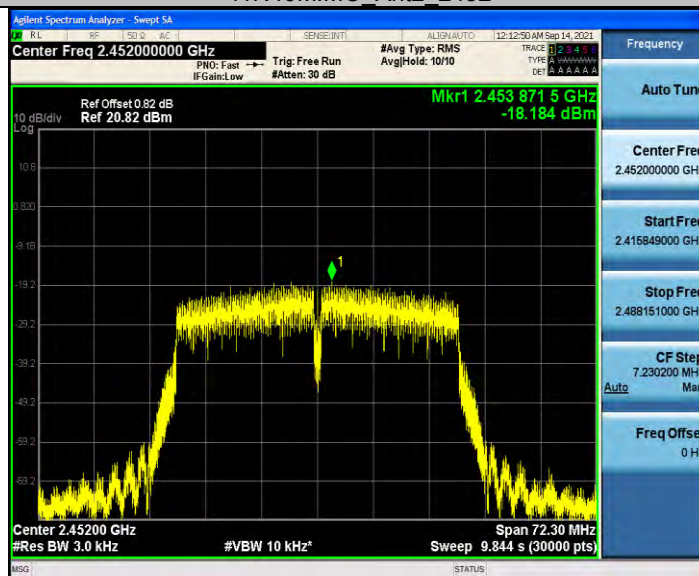
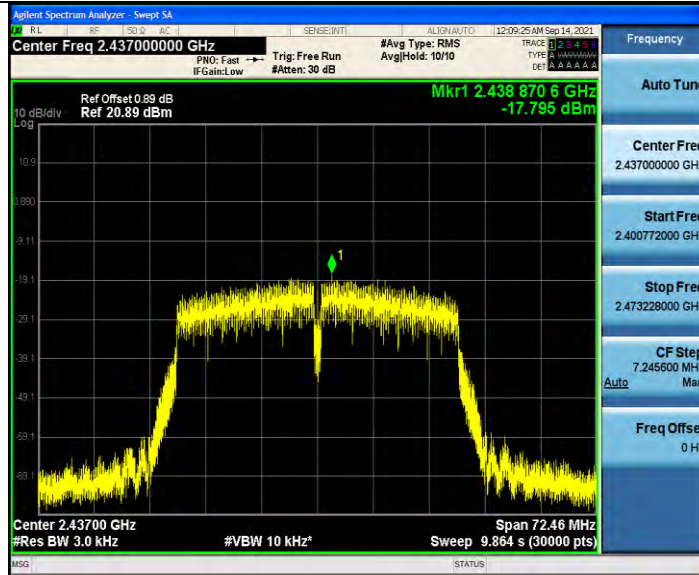


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3.8. Antenna Requirement

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

The directional gain of the antenna less than 6dBi, please refer to the EUT internal photographs antenna photo.

*****THE END*****