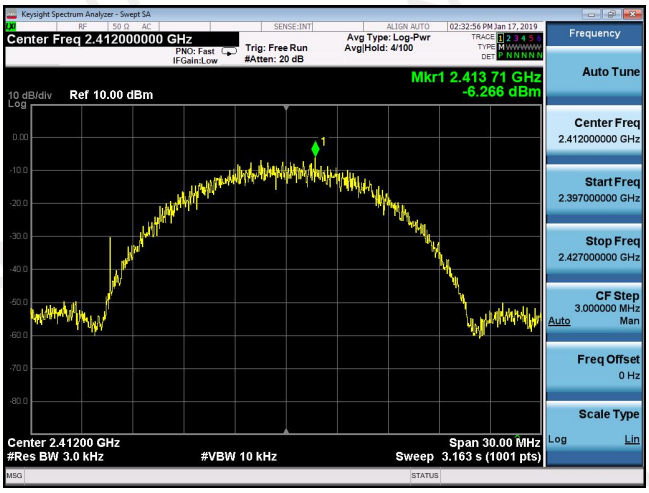
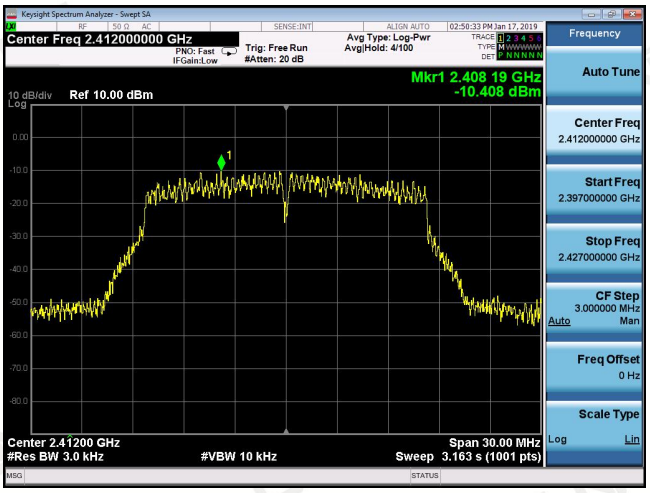
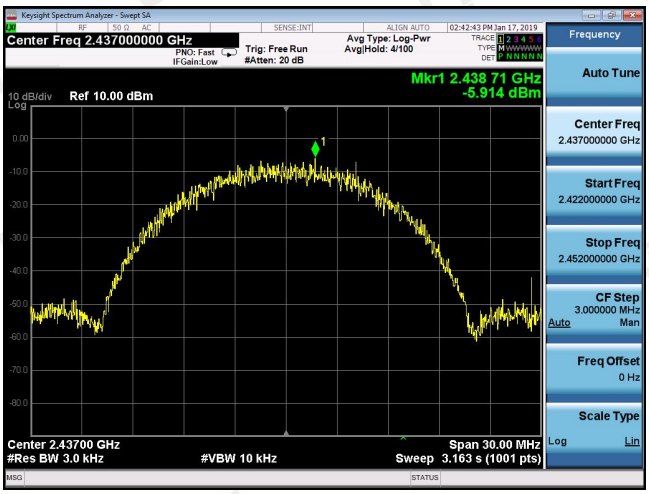
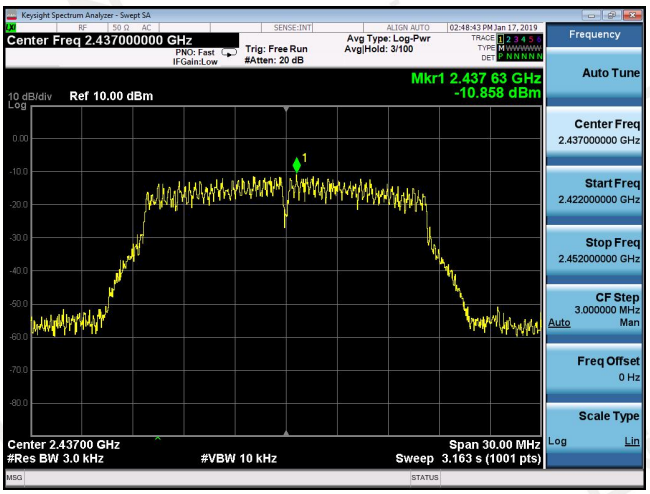
ANT B 802.11b	ANT B 802.11g
	
CH01	CH01
	
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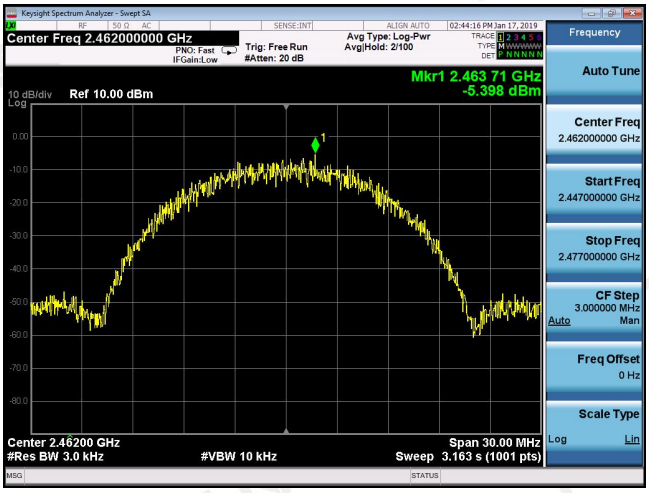
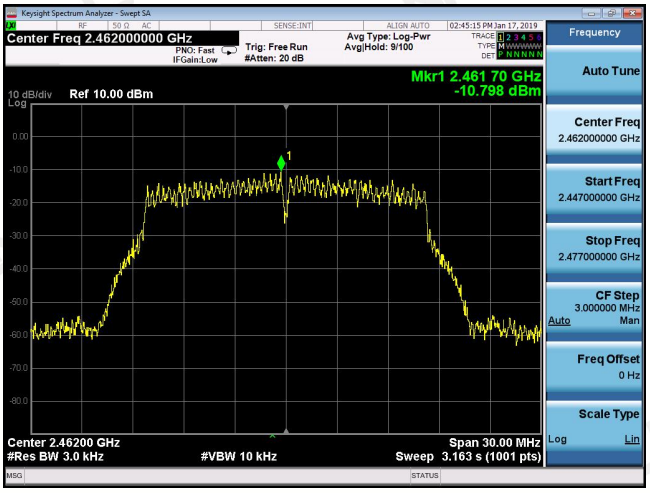
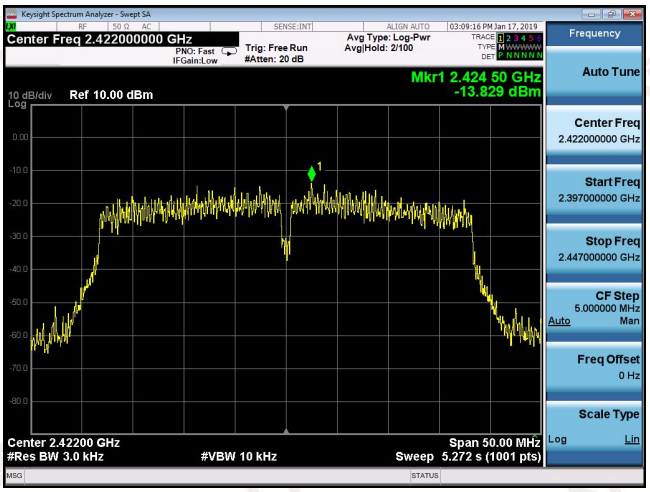
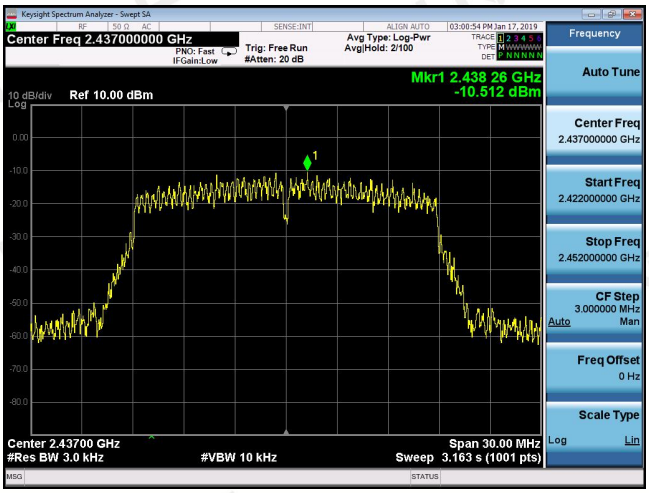
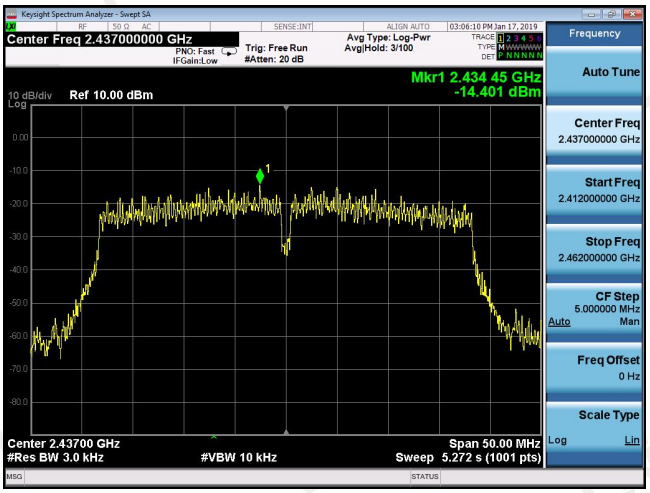
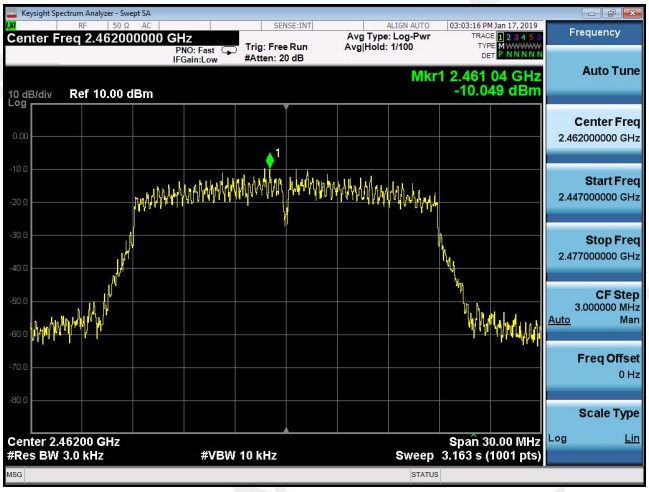
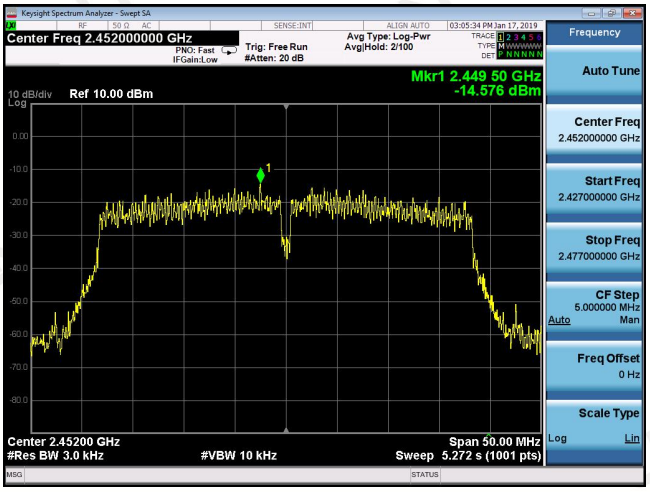
	
CH11	CH11

ANT B 802.11n HT20	ANT B 802.11n HT40
	
CH01	CH03
	
CH06	CH06
	
CH11	CH09

8. PEAK OUTPUT POWER TEST

8.1 Test Limit

FCC Part15(15.247), Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

8.2 Test Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The EUT was directly connected to the Power meter.

8.3 Measurement Equipment Used

Used a Power meter.

8.4 Test Result

PASS

All the test modes completed for test.

Type	Channel	Output power PK (dBm)	Output power PK (dBm)	Output power Total (dBm)	Limit (dBm)	Result
		ANT A	ANT B			
802.11b	01	17.32	17.35	/	30.00	Pass
	06	16.57	16.67	/		
	11	16.34	16.54	/		
802.11g	01	15.87	15.21	/	30.00	Pass
	06	15.69	15.60	/		
	11	16.14	15.99	/		
802.11n(HT20)	01	14.66	14.68	17.68	30.00	Pass
	06	14.05	14.36	17.22		
	11	14.39	14.29	17.35		
802.11n(HT40)	03	14.65	14.28	17.48	30.00	Pass
	06	13.99	13.55	16.79		
	09	14.08	14.11	17.11		

Note:
1) Measured output power at difference data rate for each mode and recorded worst case for each mode.
2). Test results including cable loss;
3). 802.11b ,802.11g mode the ANT A and ANT B can not TX and RX at the same time;
4). 802.11n(20)/802.11(40)mode the ANT A and ANT B can TX and RX at the same time;
5). Directional gain=GANT +10log(N)dbi =2.0+10log2=5.01dbi;
6). For power test the duty cycle is 100% in continous transmitting mode.
7).TX means Transmitter; RX means Receive.

9. OUT OF BAND EMISSIONS TEST

9.1 Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20dB.

9.2 Test Procedure

1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. Set EUT as TX operation and connect directly to the spectrum analyzer.
3. Based on FCC Part15 C Section 15.247: RBW=100KHz, VBW=300KHz.
4. Set detected by the spectrum analyzer with peak detector.

9.3 Test Setup

9.4 Test Result

PASS

ANT A

802.11b			
Frequency (MHz)	Delta Peak to Band emission (dBc)	Limit (dBc)	Verdict
2400.00	32.96	20	PASS
2483.50	62.50	20	PASS

2412

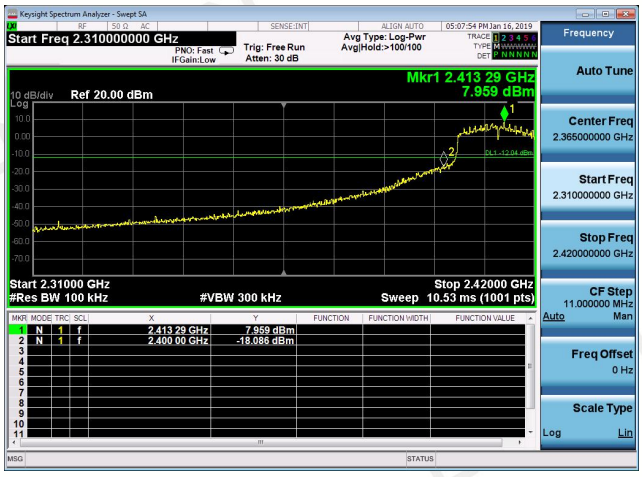
2462

802.11g			
Frequency (MHz)	Delta Peak to Band emission (dBc)	Limit (dBc)	Verdict
2400.00	26.89	20	PASS
2483.05	37.53	20	PASS

2412

2462

802.11n HT20			
Frequency (MHz)	Delta Peak to Band emission (dBc)	Limit (dBc)	Verdict
2400.00	25.68	20	PASS
2483.50	36.43	20	PASS



2412

2462

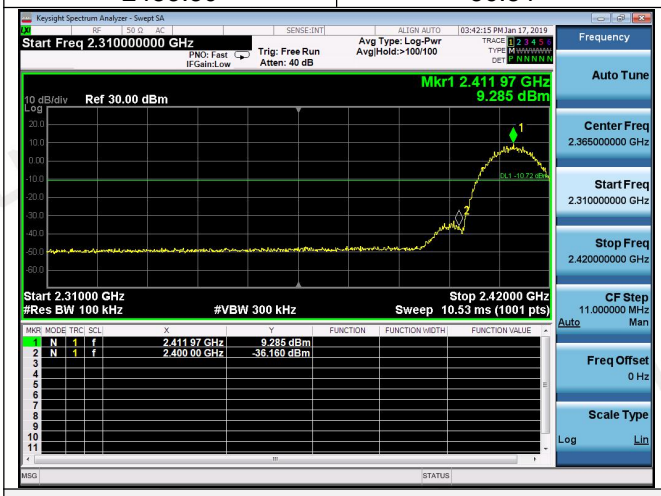
802.11n HT40			
Frequency (MHz)	Delta Peak to Band emission (dBc)	Limit (dBc)	Verdict
2400.00	22.29	20	PASS
2483.50	42.24	20	PASS

2422

2452

ANT B

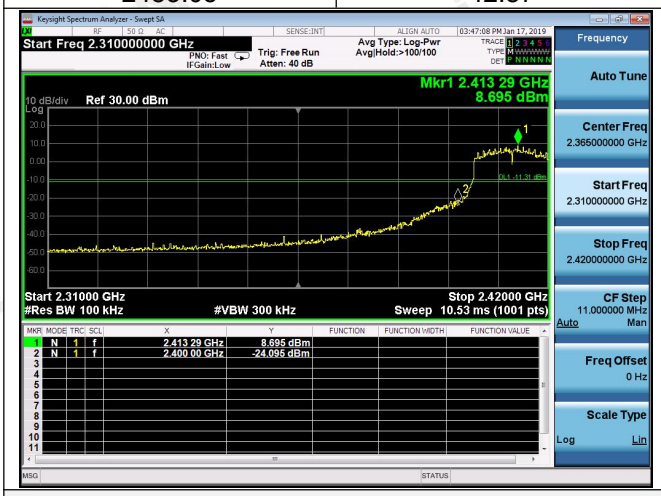
802.11b			
Frequency (MHz)	Delta Peak to Band emission (dBc)	Limit (dBc)	Verdict
2400.00	45.45	20	PASS
2483.50	56.84	20	PASS



2412

2462

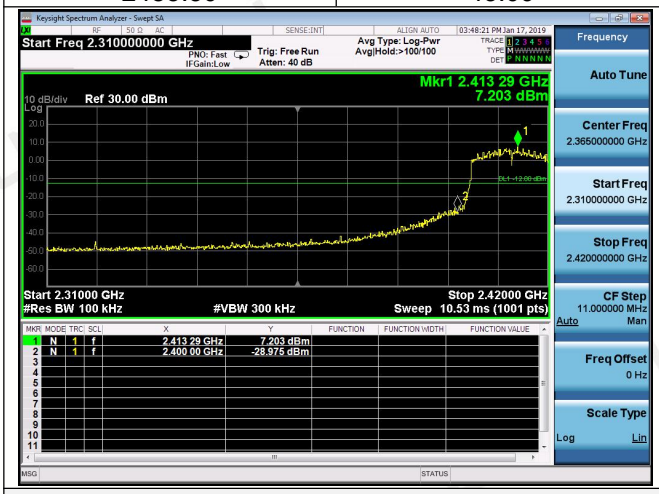
802.11g			
Frequency (MHz)	Delta Peak to Band emission (dBc)	Limit (dBc)	Verdict
2400.00	32.79	20	PASS
2483.05	42.87	20	PASS



2412

2462

802.11n HT20			
Frequency (MHz)	Delta Peak to Band emission (dBc)	Limit (dBc)	Verdict
2400.00	36.18	20	PASS
2483.50	43.09	20	PASS



2412

2462

802.11n HT40			
Frequency (MHz)	Delta Peak to Band emission (dBc)	Limit (dBc)	Verdict
2400.00	27.20	20	PASS
2483.50	30.61	20	PASS

2422

2452

10. SPURIOUS RF CONDUCTED EMISSION

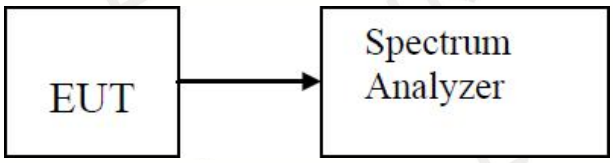
10.1 Test Limit

1. Below -20dB of the highest emission level in operating band.
2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.
3. For below 30MHz,For 9KHz-150kHz,150K-10MHz,We use the RBW 1KHz,10KHz, So the limit need to calculated by "10lg(BW1/BW2)". for example For9KHz-150kHz,RBW 1KHz, The Limit= the highest emission level-20-10log(100/1)= the highest emission level-40.

10.2 Test Procedure

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2013, For 9KHz-150kHz, Set RBW=1kHz and VBW= 3KHz; For 150KHz-10MHz, Set RBW=10kHz and VBW= 30KHz:For 10MHz-25GHz ,Set RBW=100kHz and VBW= 300KHz in order to measure the peak field strength, and mwasure frequeny range from 9KHz to 25GHz.

10.3 Test Setup



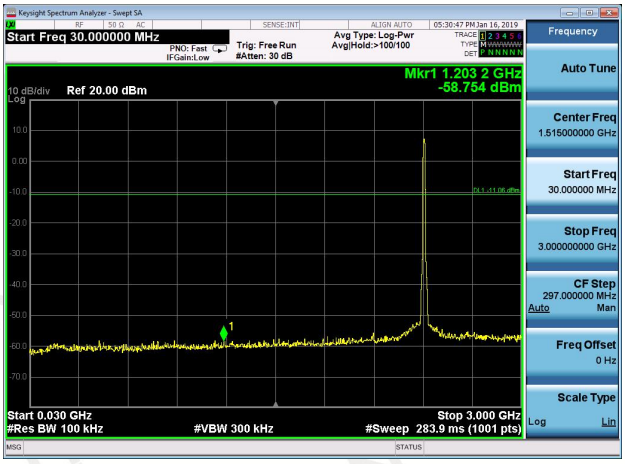
10.4 Test Result

PASS

Remark: The measurement frequency range is from 9KHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions and bandege measurement data.and record the worstest data for Antenna B in report .

Test Mode:	802.11b	Test channel :	01

Channel 01

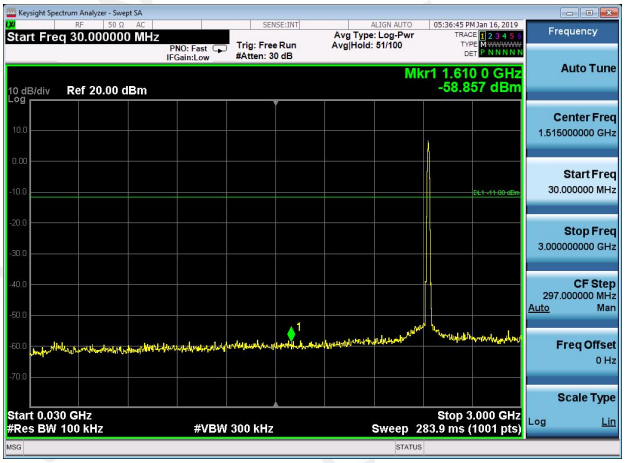


30MHz ~3GHz

3GHz~25GHz

Test Mode:	802.11b	Test channel :	06

Channel 06



30MHz ~3GHz

3GHz~25GHz

Test Mode:	802.11b	Test channel :	11

Channel 11

30MHz ~3GHz

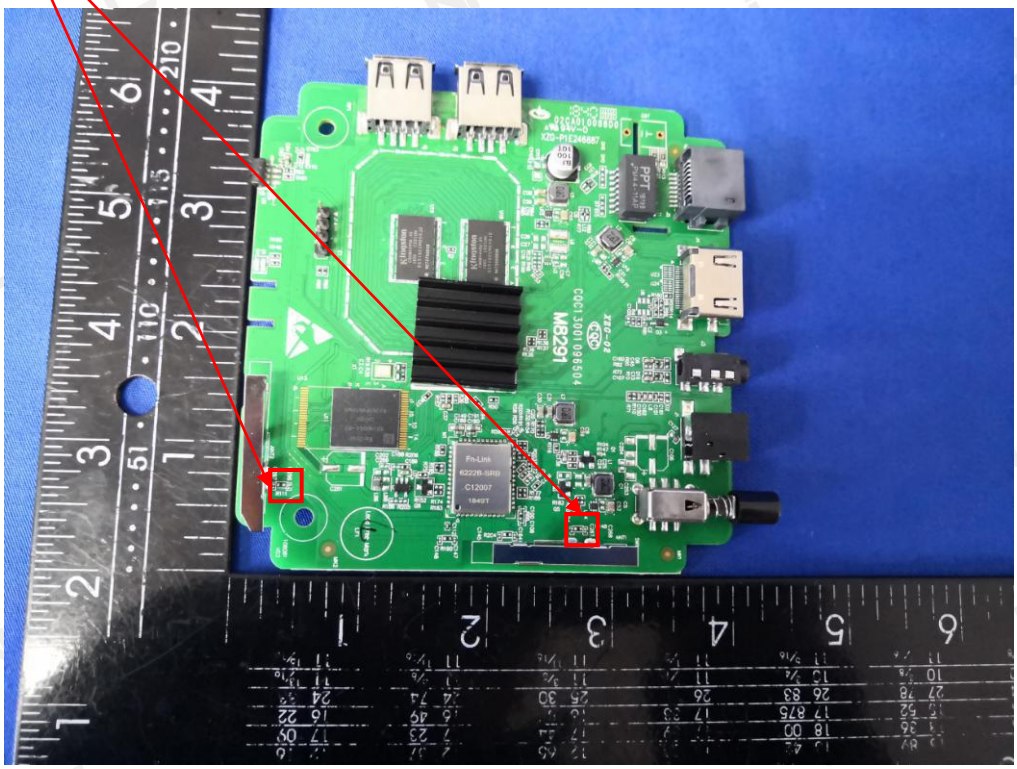
3GHz~25GHz

11. ANTENNA REQUIREMENT

Standard Applicable:
For intentional device, according to FCC 47 CFR 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.

Antenna Connected Construction
The antenna used in this product is an External Antenna, The directional gains of antenna used for transmitting is 2dBi.

WIFI ANTENNA:



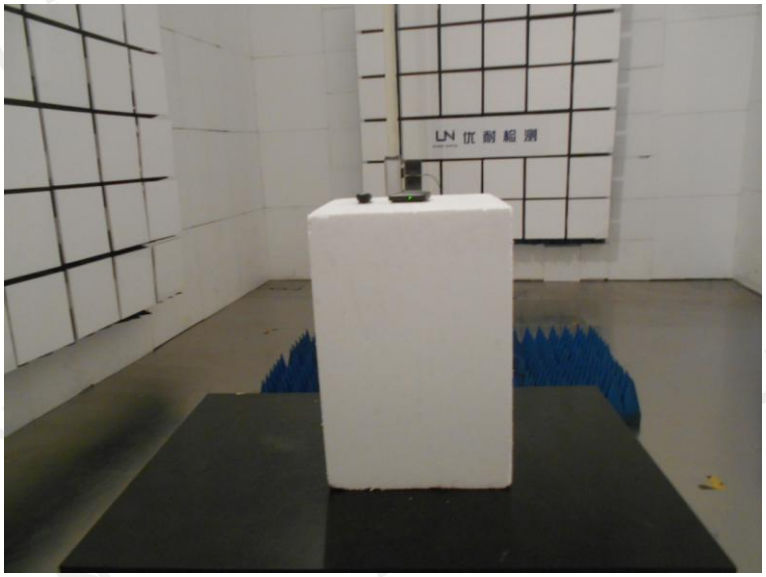
12. PHOTOGRAPH OF TEST

Radiated Emission

(Below 1G)

Radiated Emission

(Above 1G)



Conducted Emission

End of Report