FCC TEST REPORT

Report No: STS1608093F04

Issued for

Multilaser Industrial S.A.

Av. Brigadeiro Faria Lima, 1811 - 15andar.- Jardim Paulistano, Brazil

Product Name:	Chromebook
Brand Name:	Multilaser
Model Name:	M11C
Series Model:	N/A
FCC ID:	2AAVQ0025852203
Test Standard:	FCC Part 15.407

Shenzhen STS Test Services Co., Ltd.
1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road,
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TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com

TEST RESULT CERTIFICATION

Applicant's name	:	Multilaser Industrial S.A.
Address	:	Av. Brigadeiro Faria Lima, 1811 - 15andar.- Jardim Paulistano, Brazil
Manufacture's Name	:	DongGuan HuaBel Electronic Technology Co.,Ltd
Address	:	No.9 North of Industry-Road, Songshan-Lake, Dongguan,China

Product description

Product name	:	Chromebook
Model and/or type reference	:	M11C
Series Model	:	N/A
Standards	:	FCC Part15.407
Test procedure		ANSI C63.10-2013

This device described above has been tested by STS, and the test results show that the equipment under test (EUT) is in compliance with the FCC&IC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test	:	
Date (s) of performance of tests	:	10 Aug. 2016~30 Sep. 2016
Date of Issue	:	01 Oct. 2016
Test Result	:	**Pass**

Testing Engineer **:** (Tony Liu)

Technical Manager **:** (Vita Li)

Authorized Signatory **:** (Bovey Yang)

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	01 Oct. 2016	STS1608093F04	ALL	Initial Issue

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
§ 15.407,KDB 789033 D02 General U-NII Test Procedures New Rules v01r03

FCC Part 15.407		
FCC standard	Test Item	Results
15.207	AC Conducted Emission	PASS
§ 15.407 (2) (26 dB) / § 15.407 (e) (6 dB)/ § 15.407 (a) (99%)	26dB/6dB &99% Bandwidth	PASS
15.407(a) (1).(2).(3).(4).(5)	Maximum Conducted Output Power	PASS
15.407(b)	Peak Excursion Ratio	PASS
15.407(b)& 15.209	Radiated Emission And (bandedge Emissions) Measurement	PASS
15.407(b)7	Conducted Emission And (bandedge Emissions) Measurement	PASS
15.407(a) (1).(2).(3).(4).(5)	Power Spectral Density	PASS
15.407(g)	Frequency Stability	PASS
15.407(c)	Automatically Discontinue Transmission	PASS
15.203/15.204	Antenna Requirement	PASS

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

(2)all tests are according to ANSI C63.10-2013

1.1 TEST FACTORY

Shenzhen STS Test Services Co., Ltd.
Add. : 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road,
Fuyong Street, Bao'an District, Shenzhen, Guangdong, China
CNAS Registration No.: L7649;
FCC Registration No.: 842334; IC Registration No.: 12108A-1

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ± U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission (9KHz-150KHz)	±2.88dB
2	Conducted Emission (150KHz-30MHz)	±2.67dB
3	RF power,conducted	±0.70dB
4	Spurious emissions,conducted	±1.19dB
5	All emissions,radiated(<1G) 30MHz-200MHz	±2.83dB
6	All emissions,radiated(<1G) 200MHz-1000MHz	±2.94dB
7	All emissions,radiated(>1G)	±3.03dB
8	Temperature	±0.5°C
9	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td colspan="2">Chromebook</td></tr>
<tr><td>Trade Name</td><td colspan="2">Multilaser</td></tr>
<tr><td>Model Name</td><td colspan="2">M11C</td></tr>
<tr><td>Series Model</td><td colspan="2">N/A</td></tr>
<tr><td>Model Difference</td><td colspan="2">N/A</td></tr>
<tr><td rowspan="7">Product Description</td><td colspan="2">The EUT is a Chromebook</td></tr>
<tr><td rowspan="4">Operation Frequency:</td><td>IEEE 802.11a/ n/ac(HT20) 5.180GHz-5.240GHz
IEEE 802.11n/ac(HT40) 5.190GHz-5.310GHz
IEEE 802.11ac(HT80) 5.210GHz</td></tr>
<tr><td>IEEE 802.11a/ n/ac(HT20)5.260GHz-5.320GHz
IEEE 802.11n/ac(HT40)5.270GHz-5.310GHz
IEEE 802.11ac(HT80) 5.290GHz</td></tr>
<tr><td>IEEE 802.11a/ n/ac(HT20)5.500GHz-5.700GHz
IEEE 802.11n/ac(HT40)5.510GHz-5.670GHz
IEEE 802.11ac(HT80) 5.530GHz-5.610GHz</td></tr>
<tr><td>IEEE 802.11a/ n/ac(HT20)5.745GHz-5.825GHz
IEEE 802.11a/ n/ac(HT40)5.755GHz-5.795GHz
IEEE 802.11ac(HT80) 5.775GHz</td></tr>
<tr><td>Modulation Type:</td><td>IEEE for 802.11a/n/ac: OFDM(BPSK/QPSK/ 16QAM)</td></tr>
<tr><td>Antenna Designation:</td><td>See Note 3</td></tr>
<tr><td>Max.Output Power(Conducted):</td><td>17.82dBm</td></tr>
<tr><td colspan="2">The duty cycle of WLAN 802.11a/n were 98 %</td></tr>
<tr><td colspan="3">More details of EUT technical specification, please refer to the User's Manual.</td></tr>
<tr><td>Test Channel</td><td colspan="2">Please refer to the Note 2.</td></tr>
<tr><td>Adapter</td><td colspan="2">Input: AC 100-240V, 1A, 50/60 Hz
Output: DC 19V, 2.1A</td></tr>
<tr><td>Battery</td><td colspan="2">Rated Voltage: 7.6V
Capacity: 4800mAh</td></tr>
<tr><td>Hardware version number</td><td colspan="2">CB1100_MB_PCB_V1.0</td></tr>
<tr><td>Software version number</td><td colspan="2">7262.54</td></tr>
<tr><td>Connecting I/O Port(s)</td><td colspan="2">Please refer to the User's Manual</td></tr>
</table>

Note:For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

1.

Operation Frequency of channel			
5.180GHz-5.240GHz		5.500GHz-5.700GHz	
Channel	Frequency	Channel	Frequency
36	5180	100	5500
38	5190	102	5510
40	5200	104	5520
42	5210	108	5540
44	5220	110	5550
46	5230	112	5560
48	5240	116	5580
		118	5590
5.260GHz-5.320GHz		120	5600
Channel	Frequency	124	5620
52	5260	126	5630
54	5270	128	5640
56	5280	132	5660
58	5290	134	5670
60	5300	136	5680
62	5310	140	5700
64	5320		
5.745GHz-5.825GHz			
Channel	Frequency		
149	5745		
151	5755		
153	5765		
157	5785		
159	5795		
161	5805		
165	5825		

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:
Carrier Frequency Channel

5GHz:

For 802.11a/n/ac (HT20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
36	5180	52	5260
40	5200	60	5300
48	5240	64	5320

For 802.11a/n/ac (HT20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
100	5500	149	5745
116	5580	157	5785
140	5700	165	5825

For 802.11n/ac (HT40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
38	5190	54	5270
46	5230	62	5310

For 802.11n/ac (HT40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
102	5510	151	5755
110	5550	159	5795
134	5670		

For 802.11ac (HT80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
42	5210	58	5290

For 802.11ac (HT80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
106	5530	155	5775
122	5610		

2. Emissions Testing of Transmitters with Multiple Outputs in the Same Band.
For devices having two outputs driving a cross-polarized pair of antennas, see Attachment 662911 D02 of this publication for additional guidance.
d) *Unequal antenna gains, with equal transmit powers.* For antenna gains given by G1, G2, …, GN dBi
(i) If transmit signals are *correlated*, then Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2$ /NANT] dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]
(ii) If all transmit signals are *completely uncorrelated*, then Directional gain = 10 log[$(10^{G1/10} + 10^{G2/10} + \ldots + 10G^{N/10}$)/NANT] dBi

Not: If transmit signals are *correlated*, then Directional gain.
ANT-A=1 dBi
ANT-B=1 dBi
Total gain=10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2$ /NANT] dBi
110*LOG10(10^(1/20))+(10^(1/20))^2/2=1.13

Ant	Brand	Model Name	Ant Type	Connector	Gain (dBi)	NOTE
A	Multilaser	M11C	PIFA Ant	N/A	(5 150 -5 350)MHz: 1.13dBi (5 470-5 725)MHz: 1.13dBi (5 725 -5 850)MHz: 1.13dBi	WIFI Ant

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11a HT20 CH36&CH40&CH48	6 Mbps
Mode 2	TX IEEE 802.11a HT20 CH52&CH60&CH64	6 Mbps
Mode 3	TX IEEE 802.11a HT20 CH100&CH116&CH140	6 Mbps
Mode 4	TX IEEE 802.11a HT20 CH149&CH157&CH165	6 Mbps
Mode 5	TX IEEE 802.11n HT20 CH36&CH40&CH48	MCS 0
Mode 6	TX IEEE 802.11ac HT20 CH36&CH40&CH48	NSS1 MCS0
Mode 7	TX IEEE 802.11n HT20 CH52&CH60&CH64	MCS 0
Mode 8	TX IEEE 802.11ac HT20 CH52&CH60&CH64	NSS1 MCS0
Mode 9	TX IEEE 802.11n HT20 CH100&CH116&CH140	MCS 0
Mode 10	TX IEEE 802.11ac HT20 CH100&CH116&CH140	NSS1 MCS0
Mode 11	TX IEEE 802.11n HT20 CH149&CH157&CH165	MCS 0
Mode 12	TX IEEE 802.11n HT20 CH149&CH157&CH165	NSS1 MCS0
Mode 13	TX IEEE 802.11n HT40 CH38&CH46	MCS 0
Mode 14	TX IEEE 802.11ac HT40 CH38&CH46	NSS1 MCS0
Mode 15	TX IEEE 802.11n HT40 CH54 &CH62	MCS 0
Mode 16	TX IEEE 802.11ac HT40 CH54 &CH62	NSS1 MCS0
Mode 17	TX IEEE 802.11n HT40 CH102&CH110&CH134	MCS 0
Mode 18	TX IEEE 802.11ac HT40 CH102&CH110&CH134	NSS1 MCS0
Mode 19	TX IEEE 802.11n HT40 CH151&CH159	MCS 0
Mode 20	TX IEEE 802.11ac HT40 CH151&CH159	NSS1 MCS0
Mode 21	TX IEEE 802.11ac HT80 CH42	NSS1 MCS0
Mode 22	TX IEEE 802.11ac HT80 CH58	NSS1 MCS0
Mode 23	TX IEEE 802.11ac HT80 CH106&122	NSS1 MCS0
Mode 24	TX IEEE 802.11ac HT80 CH155	NSS1 MCS0

Note: (1) The measurements are performed at the highest, middle, lowest available channels.

(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

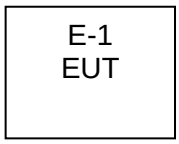
(3) We have be tested for all avaiable U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.

AC Conducted Emission

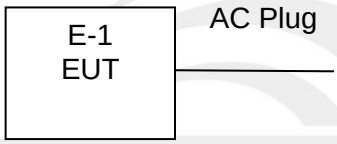
Test Case	
AC Conducted Emission	Mode 25: Keeping TX + WLAN Link

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious EmissionTest



Conducted Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Chromebook	Multilaser	M11C	N/A	EUT
	AC (PC Adapter)	LITEON	PA-1650-86	3X06399004	N/A

Item	Shielded Type	Ferrite Core	Length	Note
	AC (PC Cable) (FTP)	NO	120cm	N/A

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

(3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Spectrum Analyzer	Agilent	E4407B	MY50140340	2015.10.25	2016.10.24
Test Receiver	R&S	ESCI	101427	2015.10.25	2016.10.24
Bilog Antenna	TESEQ	CBL6111D	34678	2015.11.25	2016.11.24
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1343	2016.03.06	2017.03.05
Horn Antenna	Schwarzbeck	BBHA 9170	9170-0741	2016.03.06	2017.03.05
50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2016.06.06	2017.06.05
PreAmplifier	Agilent	8449B	60538	2015.10.25	2016.10.24
Loop Antenna	ARA	PLA-1030/B	1029	2016.06.08	2017.06.07
Low frequency cable	EM	R01	N/A	N/A	N/A
High frequency cable	SCHWARZBECK	AK9515H	SN-96286/96287	N/A	N/A

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESPI	102086	2015.11.20	2016.11.19
LISN	R&S	ENV216	101242	2015.10.25	2016.10.24
LISN	EMCO	3810/2NM	000-23625	2015.10.25	2016.10.24
Conduction Cable	EM	C01	N/A	N/A	N/A

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
USB RF power sensor	DARE	RPR3006W	15I00041SNO03	2015.10.25	2016.10.24
Spectrum Analyzer	Agilent	E4407B	MY50140340	2015.10.25	2016.10.24
Signal Analyzer	Agilent	N9020A	MY49100060	2015.11.18	2016.11.17

3. EMC EMISSION TEST

3.1CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class B (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	56.00	46.00	CISPR
5.0 -30.0	60.00	50.00	CISPR

0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

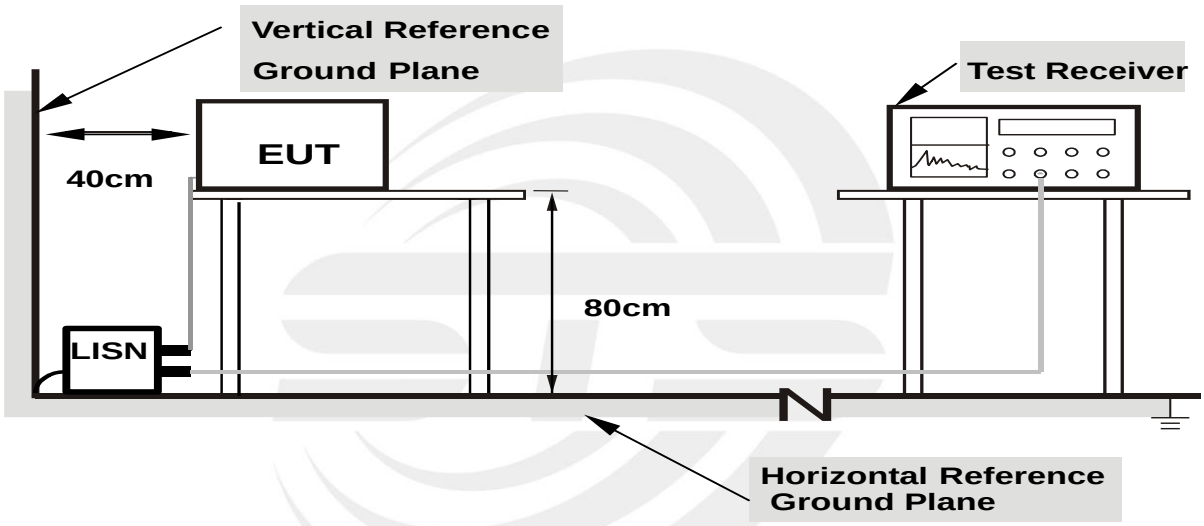
3.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

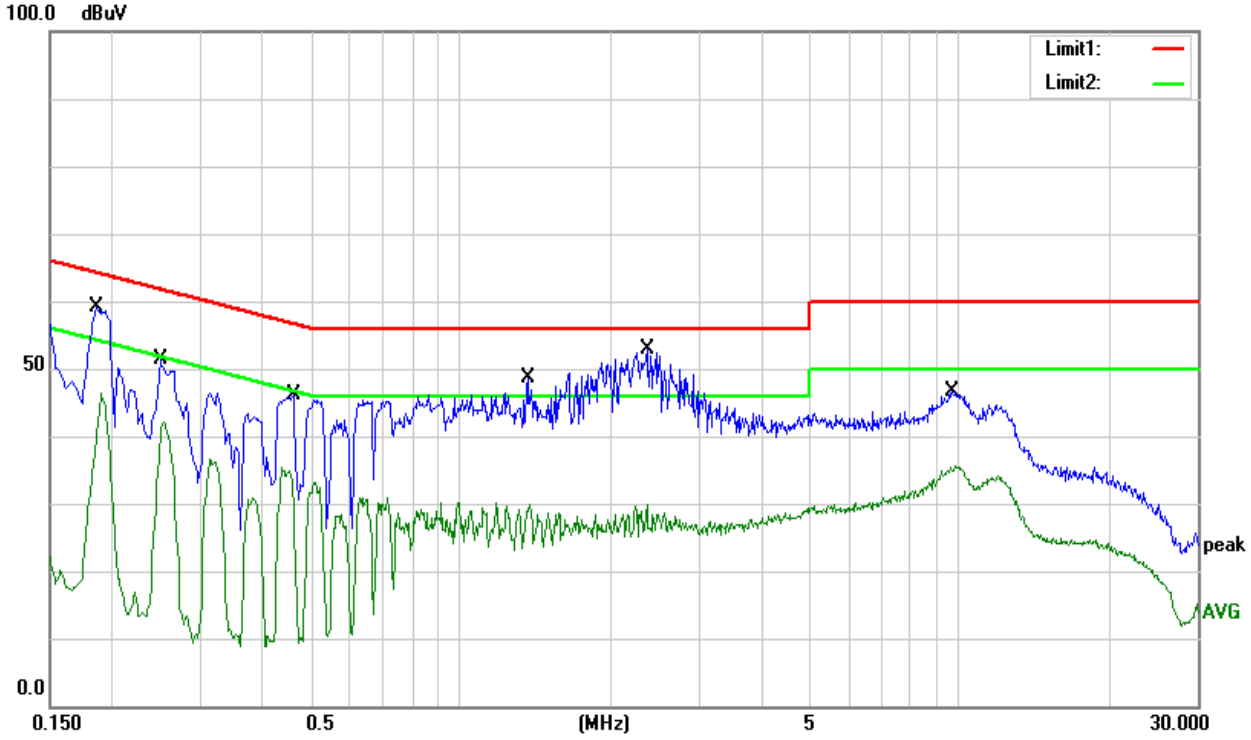
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	L
Test Voltage :	AC 120V/60Hz	Test Mode :	Mode 25

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.1860	49.91	9.23	59.14	64.21	-5.07	QP
0.1860	31.19	9.23	40.42	54.21	-13.79	AVG
0.2500	42.15	9.18	51.33	61.76	-10.43	QP
0.2500	31.91	9.18	41.09	51.76	-10.67	AVG
0.4620	36.97	9.25	46.22	56.66	-10.44	QP
0.4620	14.06	9.25	23.31	46.66	-23.35	AVG
1.3660	39.45	9.19	48.64	56.00	-7.36	QP
1.3660	19.86	9.19	29.05	46.00	-16.95	AVG
2.3660	43.66	9.26	52.92	56.00	-3.08	QP
2.3660	17.10	9.26	26.36	46.00	-19.64	AVG
9.6900	37.21	9.48	46.69	60.00	-13.31	QP
9.6900	25.46	9.48	34.94	50.00	-15.06	AVG

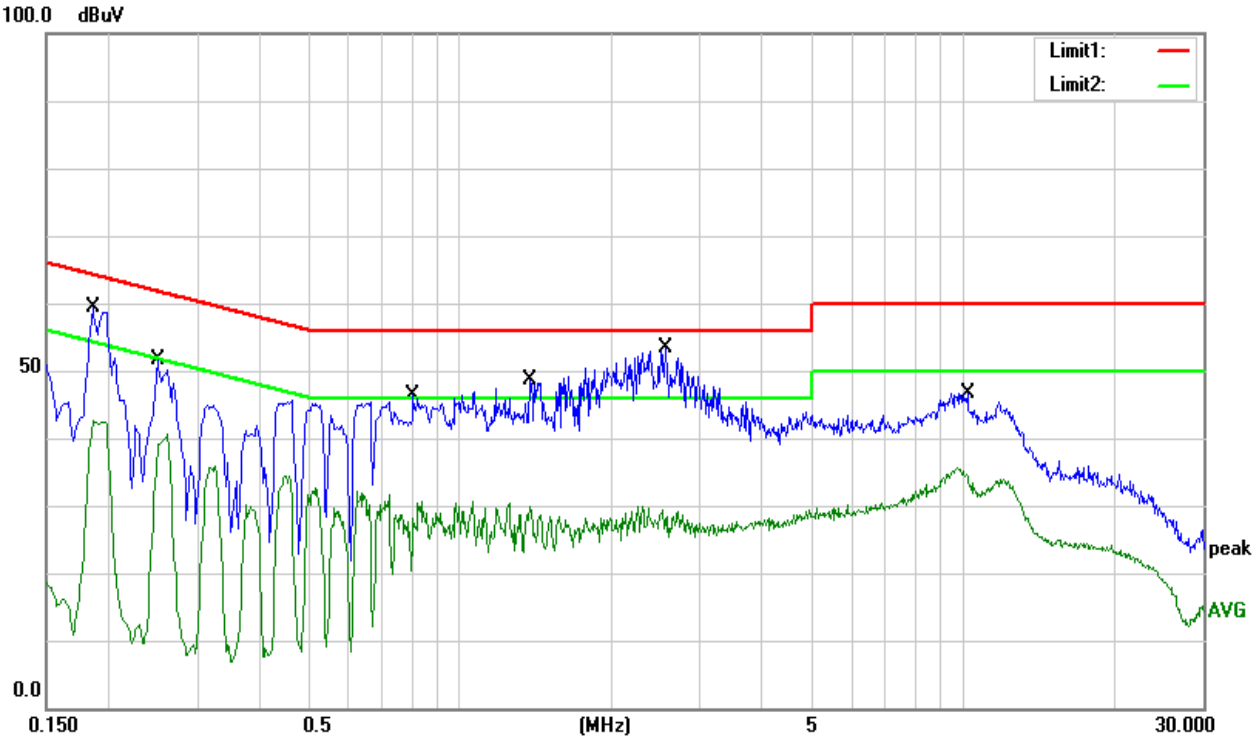
Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	N
Test Voltage	AC 120V/60Hz	Test Mode	Mode 25

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.1860	50.07	9.23	59.30	64.21	-4.91	QP
0.1860	33.37	9.23	42.60	54.21	-11.61	AVG
0.2500	42.57	9.18	51.75	61.76	-10.01	QP
0.2500	30.27	9.18	39.45	51.76	-12.31	AVG
0.8060	37.07	9.25	46.32	56.00	-9.68	QP
0.8060	18.94	9.25	28.19	46.00	-17.81	AVG
1.3740	39.39	9.25	48.64	56.00	-7.36	QP
1.3740	20.53	9.25	29.78	46.00	-16.22	AVG
2.5660	34.90	9.26	44.16	56.00	-11.84	QP
2.5660	17.01	9.26	26.27	46.00	-19.73	AVG
10.2260	37.22	9.40	46.62	60.00	-13.38	QP
10.2260	24.19	9.40	33.59	50.00	-16.41	AVG

Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit



3.2 RADIATED EMISSION AND (BANDEDGE) MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

In case the emission fall within the restricted band specified on 15.407(b)7& 15.205/209(a), then the (a); limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15E.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier harmonic(Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

For Band edge

Spectrum Parameter	Setting
Detector	Peak
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters(above 1GHz is 1.5 m) above the ground at a 3 meter anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment shall be 0.8 m(above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarizations of the antenna are set to make the measurement
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

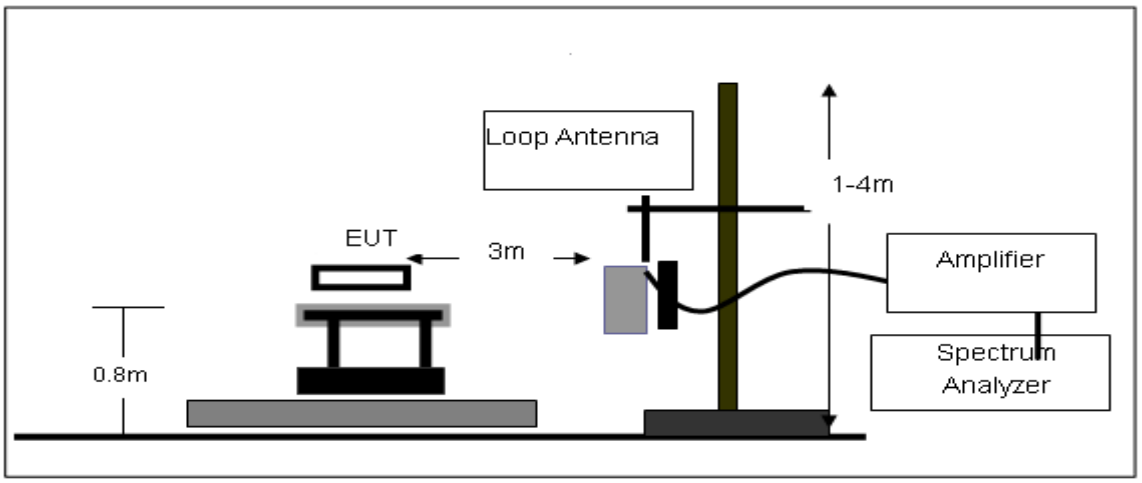
Both horizontal and vertical antenna polarities were tested and performed test to three orthogonal axis. The worst case emissions were reported

3.2.2 DEVIATION FROM TEST STANDARD

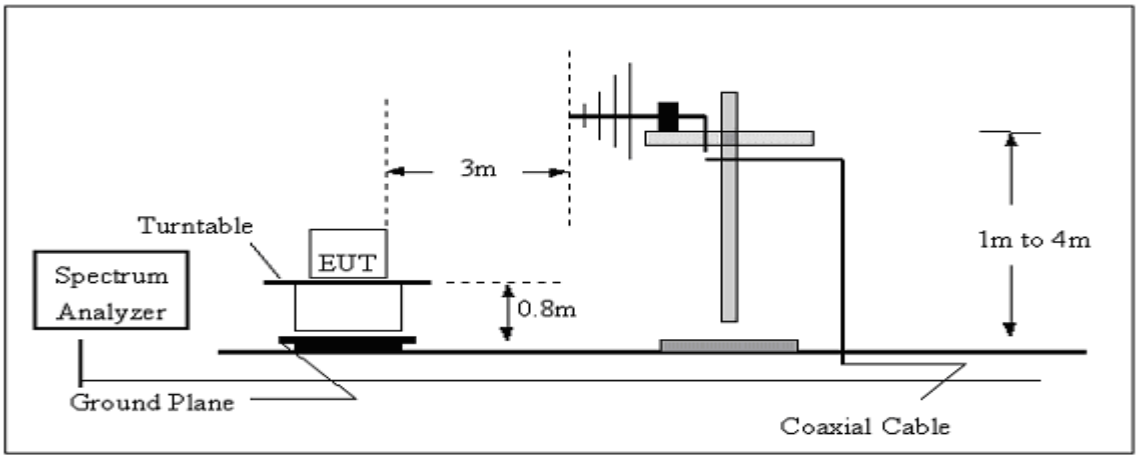
No deviation

3.2.3 TEST SETUP

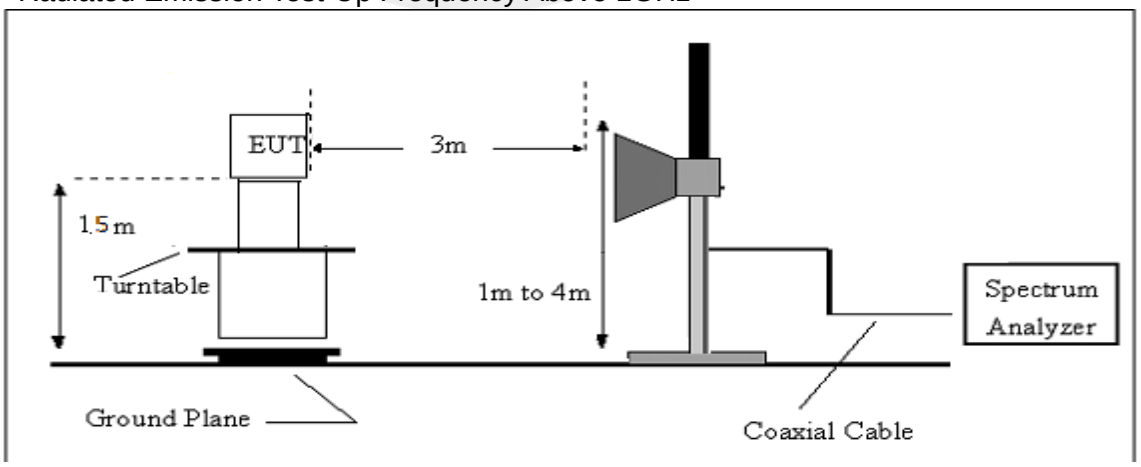
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



3.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.5 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)

Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 7.6V from Battery
Test Mode ：	TX Mode	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

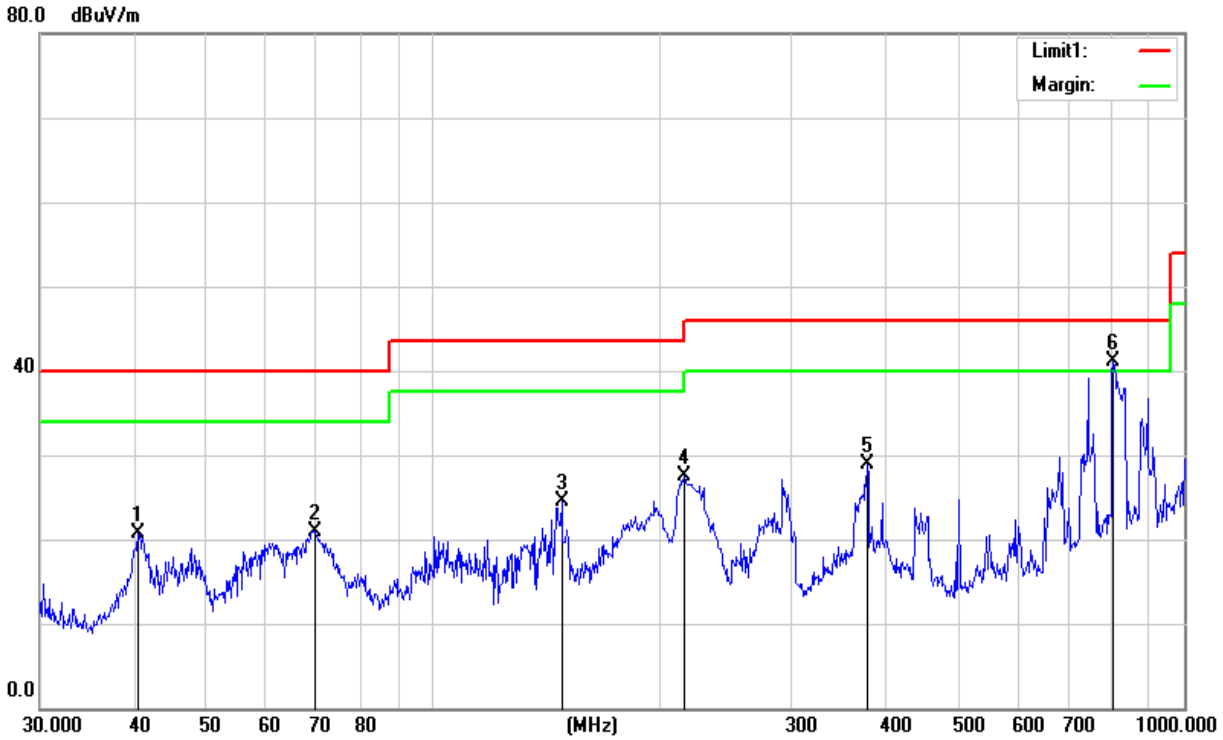
3.2.6 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

Temperature	26 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Voltage	DC 7.6V from Battery
Test Mode	Mode 1-24(Mode 4-6M worst mode)	Polarization	Horizontal

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
40.5591	41.51	-20.82	20.69	40.00	-19.31	QP
69.6005	49.13	-28.14	20.99	40.00	-19.01	QP
148.4410	46.40	-21.97	24.43	43.50	-19.07	QP
216.0240	50.87	-23.43	27.44	46.00	-18.56	QP
378.5843	45.76	-16.85	28.91	46.00	-17.09	QP
804.6028	48.05	-6.90	41.15	46.00	-4.85	QP

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit

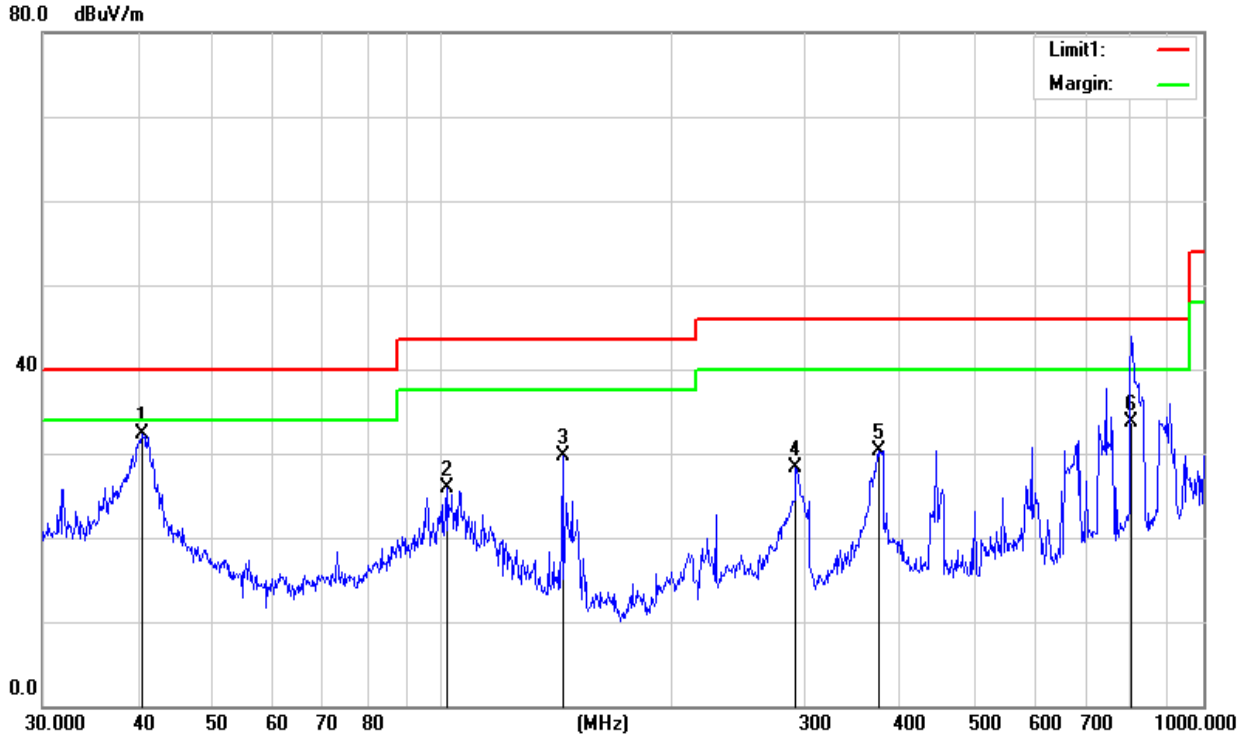


Temperature	26 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Voltage	DC 7.6V from Battery
Test Mode	Mode 1-24(Mode 4-6M worst mode)	Polarization	Vertical

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
40.5591	53.20	-20.82	32.38	40.00	-7.62	QP
101.6443	49.34	-23.36	25.98	43.50	-17.52	QP
144.3348	51.62	-21.82	29.80	43.50	-13.70	QP
292.0583	47.56	-19.31	28.25	46.00	-17.75	QP
374.6225	47.30	-16.94	30.36	46.00	-15.64	QP
804.6028	40.54	-6.90	33.64	46.00	-12.36	QP

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit



3.2.7 TEST RESULTS (ABOVE 1000 MHZ)

Band I 5150-5250MHz

Band I(5.15-5.25) GHz										
Frequency (MHz)	Reading (dBuV)	Amplifier （dB）	Loss （dB）	Antenna Factor （dB/m）	Orrected Factor （dB）	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11n20/ 5180 MHz)										
3255.84	44.79	44.70	6.70	28.20	-9.80	34.99	74.00	-39.01	PK	Vertical
3255.84	41.77	44.70	6.70	28.20	-9.80	31.97	54.00	-22.03	AV	Vertical
3257.68	44.38	44.70	6.70	28.20	-9.80	34.58	74.00	-39.42	PK	Horizontal
3257.68	41.31	44.70	6.70	28.20	-9.80	31.51	54.00	-22.49	AV	Horizontal
3990.82	39.78	44.20	7.90	29.70	-6.60	33.18	74.00	-40.82	PK	Vertical
3990.82	36.59	44.20	7.90	29.70	-6.60	29.99	54.00	-24.01	AV	Vertical
3994.91	38.79	44.20	7.90	29.70	-6.60	32.19	74.00	-41.81	PK	Horizontal
3994.91	36.69	44.20	7.90	29.70	-6.60	30.09	54.00	-23.91	AV	Horizontal
7219.65	36.83	43.50	11.40	35.50	3.40	40.23	74.00	-33.77	PK	Vertical
7219.65	34.57	43.50	11.40	35.50	3.40	37.97	54.00	-16.03	AV	Vertical
7229.70	37.24	43.50	11.40	35.50	3.40	40.64	74.00	-33.36	PK	Horizontal
7229.70	33.57	43.50	11.40	35.50	3.40	36.97	54.00	-17.03	AV	Horizontal
10359.97	39.11	44.50	13.80	38.80	8.10	47.21	74.00	-26.79	PK	Vertical
10359.97	35.68	44.50	13.80	38.80	-30.70	4.98	54.00	-49.02	AV	Vertical
10360.00	40.02	44.50	13.80	38.80	8.10	48.12	74.00	-25.88	PK	Horizontal
10360.00	36.96	44.50	13.80	38.80	8.10	45.06	54.00	-8.94	AV	Horizontal
11023.87	33.95	43.60	14.30	39.50	10.20	44.15	74.00	-29.85	PK	Vertical
11023.87	30.96	43.60	14.30	39.50	10.20	41.16	54.00	-12.84	AV	Vertical
11029.79	34.10	43.60	14.30	39.50	10.20	44.30	74.00	-29.70	PK	Horizontal
11029.79	30.76	43.60	14.30	39.50	10.20	40.96	54.00	-13.04	AV	Horizontal
13291.65	31.67	42.60	15.90	38.90	12.20	43.87	74.00	-30.13	PK	Vertical
13291.65	29.43	42.60	15.90	38.90	12.20	41.63	54.00	-12.37	AV	Vertical
13294.71	33.01	42.60	15.90	38.90	12.20	45.21	74.00	-28.79	PK	Horizontal
13294.71	29.91	42.60	15.90	38.90	12.20	42.11	54.00	-11.89	AV	Horizontal
15539.90	31.09	44.10	17.81	39.20	12.91	44.00	74.00	-30.00	PK	Vertical
15539.90	27.17	44.10	17.81	39.20	12.91	40.08	54.00	-13.92	AV	Vertical
15539.83	30.71	44.10	17.81	39.20	12.91	43.62	74.00	-30.38	PK	Horizontal
15539.83	27.12	44.10	17.81	39.20	12.91	40.03	54.00	-13.97	AV	Horizontal
17986.54	28.25	42.70	19.40	46.50	23.20	51.45	74.00	-22.55	PK	Vertical
17986.54	25.91	42.70	19.40	46.50	23.20	49.11	54.00	-4.89	AV	Vertical
17998.24	27.35	42.70	19.40	46.50	23.20	50.55	74.00	-23.45	PK	Horizontal
17998.24	19.02	42.70	19.40	46.50	23.20	42.22	54.00	-11.78	AV	Horizontal

Mid Channel (802.11 n20/ 5200 MHz)										
3251.14	44.55	44.70	6.70	28.20	-9.80	34.75	74.00	-39.25	PK	Vertical
3251.14	41.73	44.70	6.70	28.20	-9.80	31.93	54.00	-22.07	AV	Vertical
3251.56	44.42	44.70	6.70	28.20	-9.80	34.62	74.00	-39.38	PK	Horizontal
3251.56	40.85	44.70	6.70	28.20	-9.80	31.05	54.00	-22.95	AV	Horizontal
3999.84	39.11	44.20	7.90	29.70	-6.60	32.51	74.00	-41.49	PK	Vertical
3999.84	37.05	44.20	7.90	29.70	-6.60	30.45	54.00	-23.55	AV	Vertical
3988.05	40.00	44.20	7.90	29.70	-6.60	33.40	74.00	-40.60	PK	Horizontal
3988.05	36.31	44.20	7.90	29.70	-6.60	29.71	54.00	-24.29	AV	Horizontal
7226.06	36.55	43.50	11.40	35.50	3.40	39.95	74.00	-34.05	PK	Vertical
7226.06	33.70	43.50	11.40	35.50	3.40	37.10	54.00	-16.90	AV	Vertical
7216.97	37.62	43.50	11.40	35.50	3.40	41.02	74.00	-32.98	PK	Horizontal
7216.97	33.95	43.50	11.40	35.50	3.40	37.35	54.00	-16.65	AV	Horizontal
10400.36	39.73	44.50	13.80	38.80	8.10	47.83	74.00	-26.17	PK	Vertical
10400.36	36.52	44.50	13.80	38.80	8.10	44.62	54.00	-9.38	AV	Vertical
10400.34	39.25	44.50	13.80	38.80	8.10	47.35	74.00	-26.65	PK	Horizontal
10400.34	36.34	44.50	13.80	38.80	8.10	44.44	54.00	-9.56	AV	Horizontal
11018.09	34.01	43.60	14.30	39.50	10.20	44.21	74.00	-29.79	PK	Vertical
11018.09	30.65	43.60	14.30	39.50	10.20	40.85	54.00	-13.15	AV	Vertical
11028.79	33.96	43.60	14.30	39.50	10.20	44.16	74.00	-29.84	PK	Horizontal
11028.79	31.11	43.60	14.30	39.50	10.20	41.31	54.00	-12.69	AV	Horizontal
13282.54	32.36	42.60	15.90	38.90	12.20	44.56	74.00	-29.44	PK	Vertical
13282.54	29.04	42.60	15.90	38.90	12.20	41.24	54.00	-12.76	AV	Vertical
13284.35	32.78	42.60	15.90	38.90	12.20	44.98	74.00	-29.02	PK	Horizontal
13284.35	28.80	42.60	15.90	38.90	12.20	41.00	54.00	-13.00	AV	Horizontal
15600.24	31.09	42.70	18.00	37.10	12.40	43.49	74.00	-30.51	PK	Vertical
15600.24	27.78	42.70	18.00	37.10	12.40	40.18	54.00	-13.82	AV	Vertical
15600.21	30.54	42.70	18.00	37.10	12.40	42.94	74.00	-31.06	PK	Horizontal
15600.21	27.46	42.70	18.00	37.10	12.40	39.86	54.00	-14.14	AV	Horizontal
17997.28	27.68	42.70	19.40	46.50	23.20	50.88	74.00	-23.12	PK	Vertical
17997.28	25.44	42.70	19.40	46.50	23.20	48.64	54.00	-5.36	AV	Vertical
17998.24	27.62	42.70	19.40	46.50	23.20	50.82	74.00	-23.18	PK	Horizontal
17998.24	19.16	42.70	19.40	46.50	23.20	42.36	54.00	-11.64	AV	Horizontal

Mid Channel (802.11 n20/ 5240 MHz)										
3248.48	45.18	44.70	6.70	28.20	-9.80	35.38	74.00	-38.62	PK	Vertical
3248.48	40.92	44.70	6.70	28.20	-9.80	31.12	54.00	-22.88	AV	Vertical
3252.12	44.02	44.70	6.70	28.20	-9.80	34.22	74.00	-39.78	PK	Horizontal
3252.12	41.38	44.70	6.70	28.20	-9.80	31.58	54.00	-22.42	AV	Horizontal
3987.72	39.35	44.20	7.90	29.70	-6.60	32.75	74.00	-41.25	PK	Vertical
3987.72	36.93	44.20	7.90	29.70	-6.60	30.33	54.00	-23.67	AV	Vertical
3985.80	38.90	44.20	7.90	29.70	-6.60	32.30	74.00	-41.70	PK	Horizontal
3985.80	36.54	44.20	7.90	29.70	-6.60	29.94	54.00	-24.06	AV	Horizontal
7231.09	37.35	43.50	11.40	35.50	3.40	40.75	74.00	-33.25	PK	Vertical
7231.09	33.74	43.50	11.40	35.50	3.40	37.14	54.00	-16.86	AV	Vertical
7234.01	36.76	43.50	11.40	35.50	3.40	40.16	74.00	-33.84	PK	Horizontal
7234.01	34.07	43.50	11.40	35.50	3.40	37.47	54.00	-16.53	AV	Horizontal
10480.06	39.59	44.50	13.80	38.80	8.10	47.69	74.00	-26.31	PK	Vertical
10480.06	36.23	44.50	13.80	38.80	8.10	44.33	54.00	-9.67	AV	Vertical
10480.22	39.02	44.50	13.80	38.80	8.10	47.12	74.00	-26.88	PK	Horizontal
10480.22	36.91	44.50	13.80	38.80	8.10	45.01	54.00	-8.99	AV	Horizontal
11021.87	33.72	43.60	14.30	39.50	10.20	43.92	74.00	-30.08	PK	Vertical
11021.87	30.16	43.60	14.30	39.50	10.20	40.36	54.00	-13.64	AV	Vertical
11023.36	32.74	43.60	14.30	39.50	10.20	42.94	74.00	-31.06	PK	Horizontal
11023.36	30.74	43.60	14.30	39.50	10.20	40.94	54.00	-13.06	AV	Horizontal
13294.46	32.49	42.60	15.90	38.90	12.20	44.69	74.00	-29.31	PK	Vertical
13294.46	28.82	42.60	15.90	38.90	12.20	41.02	54.00	-12.98	AV	Vertical
13299.68	32.53	42.60	15.90	38.90	12.20	44.73	74.00	-29.27	PK	Horizontal
13299.68	29.76	42.60	15.90	38.90	12.20	41.96	54.00	-12.04	AV	Horizontal
15719.89	31.09	42.70	19.40	46.50	23.20	54.29	74.00	-19.71	PK	Vertical
15719.89	27.30	42.70	19.40	46.50	23.20	50.50	54.00	-3.50	AV	Vertical
15719.96	30.24	42.70	19.40	46.50	23.20	53.44	74.00	-20.56	PK	Horizontal
15719.96	27.33	42.70	19.40	46.50	23.20	50.53	54.00	-3.47	AV	Horizontal

Band II 5250-5350MHz

Band II(5.25-5.35) GHz										
Frequency (MHz)	Reading (dBuV)	Amplifier （dB）	Loss （dB）	Antenna Factor （dB/m）	Orrected Factor （dB）	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11 n20/ 5260 MHz)										
3248.78	44.42	44.70	6.70	28.20	-9.80	34.62	74.00	-39.38	PK	Vertical
3248.78	41.46	44.70	6.70	28.20	-9.80	31.66	54.00	-22.34	AV	Vertical
3262.89	44.51	44.70	6.70	28.20	-9.80	34.71	74.00	-39.29	PK	Horizontal
3262.89	41.26	44.70	6.70	28.20	-9.80	31.46	54.00	-22.54	AV	Horizontal
3986.76	39.15	44.20	7.90	29.70	-6.60	32.55	74.00	-41.45	PK	Vertical
3986.76	36.69	44.20	7.90	29.70	-6.60	30.09	54.00	-23.91	AV	Vertical
3990.49	39.34	44.20	7.90	29.70	-6.60	32.74	74.00	-41.26	PK	Horizontal
3990.49	35.78	44.20	7.90	29.70	-6.60	29.18	54.00	-24.82	AV	Horizontal
7228.78	36.84	43.50	11.40	35.50	3.40	40.24	74.00	-33.76	PK	Vertical
7228.78	34.67	43.50	11.40	35.50	3.40	38.07	54.00	-15.93	AV	Vertical
7229.79	36.71	43.50	11.40	35.50	3.40	40.11	74.00	-33.89	PK	Horizontal
7229.79	34.32	43.50	11.40	35.50	3.40	37.72	54.00	-16.28	AV	Horizontal
10520.06	38.92	44.50	13.90	38.80	8.20	47.12	74.00	-26.88	PK	Vertical
10520.06	36.42	44.50	13.90	38.80	8.20	44.62	54.00	-9.38	AV	Vertical
10520.24	38.76	44.50	13.90	38.80	8.20	46.96	74.00	-27.04	PK	Horizontal
10520.24	36.08	44.50	13.90	38.80	8.20	44.28	54.00	-9.72	AV	Horizontal
11020.00	33.40	43.60	14.30	39.50	10.20	43.60	74.00	-30.40	PK	Vertical
11020.00	29.78	43.60	14.30	39.50	10.20	39.98	54.00	-14.02	AV	Vertical
11035.03	32.88	43.60	14.30	39.50	10.20	43.08	74.00	-30.92	PK	Horizontal
11035.03	30.76	43.60	14.30	39.50	10.20	40.96	54.00	-13.04	AV	Horizontal
13286.76	31.84	42.60	15.90	38.90	12.20	44.04	74.00	-29.96	PK	Vertical
13286.76	28.91	42.60	15.90	38.90	12.20	41.11	54.00	-12.89	AV	Vertical
13286.64	32.88	42.60	15.90	38.90	12.20	45.08	74.00	-28.92	PK	Horizontal
13286.64	29.34	42.60	15.90	38.90	12.20	41.54	54.00	-12.46	AV	Horizontal
15779.86	31.09	42.70	18.00	37.10	12.40	43.49	74.00	-30.51	PK	Vertical
15779.86	28.03	42.70	18.00	37.10	12.40	40.43	54.00	-13.57	AV	Vertical
15779.84	29.59	42.70	18.00	37.10	12.40	41.99	74.00	-32.01	PK	Horizontal
15779.84	26.79	42.70	18.00	37.10	12.40	39.19	54.00	-14.81	AV	Horizontal
17994.62	28.15	42.70	19.40	46.50	23.20	51.35	74.00	-22.65	PK	Vertical
17994.62	26.10	42.70	19.40	46.50	23.20	49.30	54.00	-4.70	AV	Vertical
17998.24	27.99	42.70	19.40	46.50	23.20	51.19	74.00	-22.81	PK	Horizontal
17998.24	19.01	42.70	19.40	46.50	23.20	42.21	54.00	-11.79	AV	Horizontal

Mid Channel (802.11 n20/ 5300 MHz)										
3253.35	44.82	44.70	6.70	28.20	-9.80	35.02	74.00	-38.98	PK	Vertical
3253.35	40.96	44.70	6.70	28.20	-9.80	31.16	54.00	-22.84	AV	Vertical
3254.55	43.95	44.70	6.70	28.20	-9.80	34.15	74.00	-39.85	PK	Horizontal
3254.55	41.37	44.70	6.70	28.20	-9.80	31.57	54.00	-22.43	AV	Horizontal
3995.57	39.36	44.20	7.90	29.70	-6.60	32.76	74.00	-41.24	PK	Vertical
3995.57	36.69	44.20	7.90	29.70	-6.60	30.09	54.00	-23.91	AV	Vertical
3998.09	38.73	44.20	7.90	29.70	-6.60	32.13	74.00	-41.87	PK	Horizontal
3998.09	36.15	44.20	7.90	29.70	-6.60	29.55	54.00	-24.45	AV	Horizontal
7223.99	36.81	43.50	11.40	35.50	3.40	40.21	74.00	-33.79	PK	Vertical
7223.99	33.74	43.50	11.40	35.50	3.40	37.14	54.00	-16.86	AV	Vertical
7230.58	36.45	43.50	11.40	35.50	3.40	39.85	74.00	-34.15	PK	Horizontal
7230.58	33.98	43.50	11.40	35.50	3.40	37.38	54.00	-16.62	AV	Horizontal
10600.12	39.04	44.50	13.80	38.80	8.10	47.14	74.00	-26.86	PK	Vertical
10600.12	36.82	44.50	13.80	38.80	8.10	44.92	54.00	-9.08	AV	Vertical
10600.22	40.04	44.50	13.80	38.80	8.10	48.14	74.00	-25.86	PK	Horizontal
10600.22	37.07	44.50	13.80	38.80	8.10	45.17	54.00	-8.83	AV	Horizontal
11024.78	33.39	43.60	14.30	39.50	10.20	43.59	74.00	-30.41	PK	Vertical
11024.78	29.73	43.60	14.30	39.50	10.20	39.93	54.00	-14.07	AV	Vertical
11020.45	33.66	43.60	14.30	39.50	10.20	43.86	74.00	-30.14	PK	Horizontal
11020.45	30.04	43.60	14.30	39.50	10.20	40.24	54.00	-13.76	AV	Horizontal
13290.65	32.10	42.60	15.90	38.90	12.20	44.30	74.00	-29.70	PK	Vertical
13290.65	29.15	42.60	15.90	38.90	12.20	41.35	54.00	-12.65	AV	Vertical
13283.36	32.81	42.60	15.90	38.90	12.20	45.01	74.00	-28.99	PK	Horizontal
13283.36	28.94	42.60	15.90	38.90	12.20	41.14	54.00	-12.86	AV	Horizontal
15900.00	31.09	42.70	18.00	37.10	12.40	43.49	74.00	-30.51	PK	Vertical
15900.00	27.59	42.70	18.00	37.10	12.40	39.99	54.00	-14.01	AV	Vertical
15600.15	30.63	42.70	18.00	37.10	12.40	43.03	74.00	-30.97	PK	Horizontal
15600.15	27.03	42.70	18.00	37.10	12.40	39.43	54.00	-14.57	AV	Horizontal
17995.59	27.54	42.70	19.40	46.50	23.20	50.74	74.00	-23.26	PK	Vertical
17995.59	25.01	42.70	19.40	46.50	23.20	48.21	54.00	-5.79	AV	Vertical
17998.24	27.26	42.70	19.40	46.50	23.20	50.46	74.00	-23.54	PK	Horizontal
17998.24	19.56	42.70	19.40	46.50	23.20	42.76	54.00	-11.24	AV	Horizontal

Mid Channel (802.11 n20/ 5320 MHz)										
3259.94	43.97	44.70	6.70	28.20	-9.80	34.17	74.00	-39.83	PK	Vertical
3259.94	42.22	44.70	6.70	28.20	-9.80	32.42	54.00	-21.58	AV	Vertical
3264.74	44.35	44.70	6.70	28.20	-9.80	34.55	74.00	-39.45	PK	Horizontal
3264.74	40.81	44.70	6.70	28.20	-9.80	31.01	54.00	-22.99	AV	Horizontal
3992.11	39.51	44.20	7.90	29.70	-6.60	32.91	74.00	-41.09	PK	Vertical
3992.11	35.85	44.20	7.90	29.70	-6.60	29.25	54.00	-24.75	AV	Vertical
3991.27	40.07	44.20	7.90	29.70	-6.60	33.47	74.00	-40.53	PK	Horizontal
3991.27	36.79	44.20	7.90	29.70	-6.60	30.19	54.00	-23.81	AV	Horizontal
7228.16	37.01	43.50	11.40	35.50	3.40	40.41	74.00	-33.59	PK	Vertical
7228.16	33.57	43.50	11.40	35.50	3.40	36.97	54.00	-17.03	AV	Vertical
7231.82	36.90	43.50	11.40	35.50	3.40	40.30	74.00	-33.70	PK	Horizontal
7231.82	34.34	43.50	11.40	35.50	3.40	37.74	54.00	-16.26	AV	Horizontal
10640.11	39.83	44.50	13.80	38.80	8.10	47.93	74.00	-26.07	PK	Vertical
10640.11	36.16	44.50	13.80	38.80	8.10	44.26	54.00	-9.74	AV	Vertical
10640.01	40.14	44.50	13.80	38.80	8.10	48.24	74.00	-25.76	PK	Horizontal
10640.01	36.23	44.50	13.80	38.80	8.10	44.33	54.00	-9.67	AV	Horizontal
11035.12	33.16	43.60	14.30	39.50	10.20	43.36	74.00	-30.64	PK	Vertical
11035.12	31.00	43.60	14.30	39.50	10.20	41.20	54.00	-12.80	AV	Vertical
11030.74	33.74	43.60	14.30	39.50	10.20	43.94	74.00	-30.06	PK	Horizontal
11030.74	30.83	43.60	14.30	39.50	10.20	41.03	54.00	-12.97	AV	Horizontal
13288.23	32.12	42.70	18.00	37.10	12.40	44.52	74.00	-29.48	PK	Vertical
13288.23	29.38	42.70	18.00	37.10	12.40	41.78	54.00	-12.22	AV	Vertical
13289.86	31.75	42.70	18.00	37.10	12.40	44.15	74.00	-29.85	PK	Horizontal
13289.86	28.88	42.70	18.00	37.10	12.40	41.28	54.00	-12.72	AV	Horizontal
15959.81	31.09	42.70	19.40	46.50	23.20	54.29	74.00	-19.71	PK	Vertical
15959.81	27.01	42.70	19.40	46.50	23.20	50.21	54.00	-3.79	AV	Vertical
15960.06	30.16	42.70	19.40	46.50	23.20	53.36	74.00	-20.64	PK	Horizontal
15960.06	27.47	42.70	19.40	46.50	23.20	50.67	54.00	-3.33	AV	Horizontal

Band III 5470-5725MHz

Band III(5.47-5.725) GHz										
Frequency (MHz)	Reading (dBuV)	Amplifier （dB）	Loss （dB）	Antenna Factor （dB/m）	Orrected Factor （dB）	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11 n20/ 5500 MHz)										
3259.69	44.48	44.70	6.70	28.20	-9.80	34.68	74.00	-39.32	PK	Vertical
3259.69	41.94	44.70	6.70	28.20	-9.80	32.14	54.00	-21.86	AV	Vertical
3257.64	45.21	44.70	6.70	28.20	-9.80	35.41	74.00	-38.59	PK	Horizontal
3257.64	41.33	44.70	6.70	28.20	-9.80	31.53	54.00	-22.47	AV	Horizontal
3981.28	40.10	44.20	7.90	29.70	-6.60	33.50	74.00	-40.50	PK	Vertical
3981.28	35.81	44.20	7.90	29.70	-6.60	29.21	54.00	-24.79	AV	Vertical
3984.83	39.42	44.20	7.90	29.70	-6.60	32.82	74.00	-41.18	PK	Horizontal
3984.83	35.96	44.20	7.90	29.70	-6.60	29.36	54.00	-24.64	AV	Horizontal
7225.44	37.16	43.50	11.40	35.50	3.40	40.56	74.00	-33.44	PK	Vertical
7225.44	34.89	43.50	11.40	35.50	3.40	38.29	54.00	-15.71	AV	Vertical
7234.14	37.30	43.50	11.40	35.50	3.40	40.70	74.00	-33.30	PK	Horizontal
7234.14	33.77	43.50	11.40	35.50	3.40	37.17	54.00	-16.83	AV	Horizontal
10352.65	39.53	44.50	13.80	38.80	8.10	47.63	74.00	-26.37	PK	Vertical
10352.65	36.92	44.50	13.80	38.80	-30.70	6.22	54.00	-47.78	AV	Vertical
10358.63	39.52	44.50	13.80	38.80	8.10	47.62	74.00	-26.38	PK	Horizontal
10358.63	36.27	44.50	13.80	38.80	8.10	44.37	54.00	-9.63	AV	Horizontal
11000.12	32.70	43.60	14.30	39.50	10.20	42.90	74.00	-31.10	PK	Vertical
11000.12	30.54	43.60	14.30	39.50	10.20	40.74	54.00	-13.26	AV	Vertical
11000.31	34.06	43.60	14.30	39.50	10.20	44.26	74.00	-29.74	PK	Horizontal
11000.31	30.74	43.60	14.30	39.50	10.20	40.94	54.00	-13.06	AV	Horizontal
13297.93	32.53	42.60	15.90	38.90	12.20	44.73	74.00	-29.27	PK	Vertical
13297.93	29.21	42.60	15.90	38.90	12.20	41.41	54.00	-12.59	AV	Vertical
13299.38	32.72	42.60	15.90	38.90	12.20	44.92	74.00	-29.08	PK	Horizontal
13299.38	29.34	42.60	15.90	38.90	12.20	41.54	54.00	-12.46	AV	Horizontal
16499.99	31.09	42.50	18.43	38.50	14.43	45.52	74.00	-28.48	PK	Vertical
16499.99	27.52	42.50	18.43	38.50	14.43	41.95	54.00	-12.05	AV	Vertical
16500.04	30.61	42.50	18.43	38.50	14.43	45.04	74.00	-28.96	PK	Horizontal
16500.04	26.87	42.50	18.43	38.50	14.43	41.30	54.00	-12.70	AV	Horizontal
17996.44	27.35	42.70	19.40	46.50	23.20	50.55	74.00	-23.45	PK	Vertical
17996.44	25.29	42.70	19.40	46.50	23.20	48.49	54.00	-5.51	AV	Vertical
17987.72	28.06	42.70	19.40	46.50	23.20	51.26	74.00	-22.74	PK	Horizontal
17987.72	18.84	42.70	19.40	46.50	23.20	42.04	54.00	-11.96	AV	Horizontal

Mid Channel (802.11 n20/ 5580 MHz)										
3246.95	45.17	44.70	6.70	28.20	-9.80	35.37	74.00	-38.63	PK	Vertical
3246.95	40.95	44.70	6.70	28.20	-9.80	31.15	54.00	-22.85	AV	Vertical
3245.94	44.46	44.70	6.70	28.20	-9.80	34.66	74.00	-39.34	PK	Horizontal
3245.94	41.39	44.70	6.70	28.20	-9.80	31.59	54.00	-22.41	AV	Horizontal
3993.42	39.09	44.20	7.90	29.70	-6.60	32.49	74.00	-41.51	PK	Vertical
3993.42	36.22	44.20	7.90	29.70	-6.60	29.62	54.00	-24.38	AV	Vertical
3983.16	39.77	44.20	7.90	29.70	-6.60	33.17	74.00	-40.83	PK	Horizontal
3983.16	36.39	44.20	7.90	29.70	-6.60	29.79	54.00	-24.21	AV	Horizontal
7224.84	37.73	43.50	11.40	35.50	3.40	41.13	74.00	-32.87	PK	Vertical
7224.84	34.91	43.50	11.40	35.50	3.40	38.31	54.00	-15.69	AV	Vertical
7217.93	37.24	43.50	11.40	35.50	3.40	40.64	74.00	-33.36	PK	Horizontal
7217.93	33.90	43.50	11.40	35.50	3.40	37.30	54.00	-16.70	AV	Horizontal
10389.81	39.47	44.50	13.80	38.80	8.10	47.57	74.00	-26.43	PK	Vertical
10389.81	36.63	44.50	13.80	38.80	8.10	44.73	54.00	-9.27	AV	Vertical
10391.59	39.01	44.50	13.80	38.80	8.10	47.11	74.00	-26.89	PK	Horizontal
10391.59	37.11	44.50	13.80	38.80	8.10	45.21	54.00	-8.79	AV	Horizontal
11160.35	33.05	43.60	14.30	39.50	10.20	43.25	74.00	-30.75	PK	Vertical
11160.35	30.80	43.60	14.30	39.50	10.20	41.00	54.00	-13.00	AV	Vertical
11160.10	33.61	43.60	14.30	39.50	10.20	43.81	74.00	-30.19	PK	Horizontal
11160.10	29.79	43.60	14.30	39.50	10.20	39.99	54.00	-14.01	AV	Horizontal
13282.53	31.62	42.60	15.90	38.90	12.20	43.82	74.00	-30.18	PK	Vertical
13282.53	29.33	42.60	15.90	38.90	12.20	41.53	54.00	-12.47	AV	Vertical
13285.00	32.81	42.60	15.90	38.90	12.20	45.01	74.00	-28.99	PK	Horizontal
13285.00	29.90	42.60	15.90	38.90	12.20	42.10	54.00	-11.90	AV	Horizontal
16739.97	31.09	42.50	18.43	38.50	14.43	45.52	74.00	-28.48	PK	Vertical
16739.97	27.42	42.50	18.43	38.50	14.43	41.85	54.00	-12.15	AV	Vertical
16739.88	29.70	42.50	18.43	38.50	14.43	44.13	74.00	-29.87	PK	Horizontal
16739.88	27.64	42.50	18.43	38.50	14.43	42.07	54.00	-11.93	AV	Horizontal
17983.13	27.92	42.70	19.40	46.50	23.20	51.12	74.00	-22.88	PK	Vertical
17983.13	25.22	42.70	19.40	46.50	23.20	48.42	54.00	-5.58	AV	Vertical
17978.97	27.00	42.70	19.40	46.50	23.20	50.20	74.00	-23.80	PK	Horizontal
17978.97	20.07	42.70	19.40	46.50	23.20	43.27	54.00	-10.73	AV	Horizontal

Mid Channel (802.11 n20/ 5700 MHz)										
3251.49	44.50	44.70	6.70	28.20	-9.80	34.70	74.00	-39.30	PK	Vertical
3251.49	41.65	44.70	6.70	28.20	-9.80	31.85	54.00	-22.15	AV	Vertical
3252.02	43.83	44.70	6.70	28.20	-9.80	34.03	74.00	-39.97	PK	Horizontal
3252.02	41.07	44.70	6.70	28.20	-9.80	31.27	54.00	-22.73	AV	Horizontal
3995.33	38.72	44.20	7.90	29.70	-6.60	32.12	74.00	-41.88	PK	Vertical
3995.33	36.38	44.20	7.90	29.70	-6.60	29.78	54.00	-24.22	AV	Vertical
3987.87	38.79	44.20	7.90	29.70	-6.60	32.19	74.00	-41.81	PK	Horizontal
3987.87	35.76	44.20	7.90	29.70	-6.60	29.16	54.00	-24.84	AV	Horizontal
7225.04	37.66	43.50	11.40	35.50	3.40	41.06	74.00	-32.94	PK	Vertical
7225.04	34.91	43.50	11.40	35.50	3.40	38.31	54.00	-15.69	AV	Vertical
7216.82	37.05	43.50	11.40	35.50	3.40	40.45	74.00	-33.55	PK	Horizontal
7216.82	33.77	43.50	11.40	35.50	3.40	37.17	54.00	-16.83	AV	Horizontal
10475.98	39.66	44.50	13.80	38.80	8.10	47.76	74.00	-26.24	PK	Vertical
10475.98	36.78	44.50	13.80	38.80	8.10	44.88	54.00	-9.12	AV	Vertical
10468.48	39.57	44.50	13.80	38.80	8.10	47.67	74.00	-26.33	PK	Horizontal
10468.48	35.98	44.50	13.80	38.80	8.10	44.08	54.00	-9.92	AV	Horizontal
11399.95	33.77	43.60	14.30	39.50	10.20	43.97	74.00	-30.03	PK	Vertical
11399.95	29.68	43.60	14.30	39.50	10.20	39.88	54.00	-14.12	AV	Vertical
11400.14	33.19	43.60	14.30	39.50	10.20	43.39	74.00	-30.61	PK	Horizontal
11400.14	30.98	43.60	14.30	39.50	10.20	41.18	54.00	-12.82	AV	Horizontal
13289.36	32.90	42.60	15.90	38.90	12.20	45.10	74.00	-28.90	PK	Vertical
13289.36	29.93	42.60	15.90	38.90	12.20	42.13	54.00	-11.87	AV	Vertical
13296.08	32.10	42.60	15.90	38.90	12.20	44.30	74.00	-29.70	PK	Horizontal
13296.08	28.68	42.60	15.90	38.90	12.20	40.88	54.00	-13.12	AV	Horizontal
17100.23	31.09	41.70	19.10	39.80	17.20	48.29	74.00	-25.71	PK	Vertical
17100.23	28.04	41.70	19.10	39.80	17.20	45.24	54.00	-8.76	AV	Vertical
17099.82	31.04	41.70	19.10	39.80	17.20	48.24	74.00	-25.76	PK	Horizontal
17099.82	27.33	41.70	19.10	39.80	17.20	44.53	54.00	-9.47	AV	Horizontal

Band IV(5.725-5.850) GHz

Band IV(5.725-5.85) GHz										
Frequency (MHz)	Reading (dBuV)	Amplifier （dB）	Loss （dB）	Antenna Factor （dB/m）	Orrected Factor （dB）	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11 n20/ 5745 MHz)										
3255.24	44.86	44.70	6.70	28.20	-9.80	35.06	74.00	-38.94	PK	Vertical
3255.24	41.13	44.70	6.70	28.20	-9.80	31.33	54.00	-22.67	AV	Vertical
3255.83	44.31	44.70	6.70	28.20	-9.80	34.51	74.00	-39.49	PK	Horizontal
3255.83	40.87	44.70	6.70	28.20	-9.80	31.07	54.00	-22.93	AV	Horizontal
3990.02	39.19	44.20	7.90	29.70	-6.60	32.59	74.00	-41.41	PK	Vertical
3990.02	36.48	44.20	7.90	29.70	-6.60	29.88	54.00	-24.12	AV	Vertical
3995.41	40.01	44.20	7.90	29.70	-6.60	33.41	74.00	-40.59	PK	Horizontal
3995.41	35.87	44.20	7.90	29.70	-6.60	29.27	54.00	-24.73	AV	Horizontal
7235.88	37.79	43.50	11.40	35.50	3.40	41.19	74.00	-32.81	PK	Vertical
7235.88	34.77	43.50	11.40	35.50	3.40	38.17	54.00	-15.83	AV	Vertical
7230.95	37.82	43.50	11.40	35.50	3.40	41.22	74.00	-32.78	PK	Horizontal
7230.95	34.79	43.50	11.40	35.50	3.40	38.19	54.00	-15.81	AV	Horizontal
10513.25	39.24	44.50	13.90	38.80	8.20	47.44	74.00	-26.56	PK	Vertical
10513.25	36.95	44.50	13.90	38.80	8.20	45.15	54.00	-8.85	AV	Vertical
10507.13	39.59	44.50	13.90	38.80	8.20	47.79	74.00	-26.21	PK	Horizontal
10507.13	36.89	44.50	13.90	38.80	8.20	45.09	54.00	-8.91	AV	Horizontal
11400.19	32.88	43.60	14.30	39.50	10.20	43.08	74.00	-30.92	PK	Vertical
11400.19	30.97	43.60	14.30	39.50	10.20	41.17	54.00	-12.83	AV	Vertical
11399.97	33.77	43.60	14.30	39.50	10.20	43.97	74.00	-30.03	PK	Horizontal
11399.97	30.06	43.60	14.30	39.50	10.20	40.26	54.00	-13.74	AV	Horizontal
13299.32	31.98	42.60	15.90	38.90	12.20	44.18	74.00	-29.82	PK	Vertical
13299.32	28.95	42.60	15.90	38.90	12.20	41.15	54.00	-12.85	AV	Vertical
13280.63	32.82	42.60	15.90	38.90	12.20	45.02	74.00	-28.98	PK	Horizontal
13280.63	29.14	42.60	15.90	38.90	12.20	41.34	54.00	-12.66	AV	Horizontal
15779.99	31.09	42.70	18.00	37.10	12.40	43.49	74.00	-30.51	PK	Vertical
15779.99	27.18	42.70	18.00	37.10	12.40	39.58	54.00	-14.42	AV	Vertical
15779.84	29.78	42.70	18.00	37.10	12.40	42.18	74.00	-31.82	PK	Horizontal
15779.84	27.83	42.70	18.00	37.10	12.40	40.23	54.00	-13.77	AV	Horizontal
17235.04	27.64	42.70	19.40	46.50	23.20	50.84	74.00	-23.16	PK	Vertical
17235.04	25.50	42.70	19.40	46.50	23.20	48.70	54.00	-5.30	AV	Vertical
17235.02	27.90	42.70	19.40	46.50	23.20	51.10	74.00	-22.90	PK	Horizontal
17235.02	18.76	42.70	19.40	46.50	23.20	41.96	54.00	-12.04	AV	Horizontal

Mid Channel (802.11 n20/ 5785 MHz)										
3263.96	44.15	44.70	6.70	28.20	-9.80	34.35	74.00	-39.65	PK	Vertical
3263.96	41.38	44.70	6.70	28.20	-9.80	31.58	54.00	-22.42	AV	Vertical
3250.43	44.41	44.70	6.70	28.20	-9.80	34.61	74.00	-39.39	PK	Horizontal
3250.43	41.34	44.70	6.70	28.20	-9.80	31.54	54.00	-22.46	AV	Horizontal
3990.94	39.05	44.20	7.90	29.70	-6.60	32.45	74.00	-41.55	PK	Vertical
3990.94	36.19	44.20	7.90	29.70	-6.60	29.59	54.00	-24.41	AV	Vertical
3989.42	39.87	44.20	7.90	29.70	-6.60	33.27	74.00	-40.73	PK	Horizontal
3989.42	36.22	44.20	7.90	29.70	-6.60	29.62	54.00	-24.38	AV	Horizontal
7228.19	36.78	43.50	11.40	35.50	3.40	40.18	74.00	-33.82	PK	Vertical
7228.19	34.12	43.50	11.40	35.50	3.40	37.52	54.00	-16.48	AV	Vertical
7223.87	37.11	43.50	11.40	35.50	3.40	40.51	74.00	-33.49	PK	Horizontal
7223.87	34.39	43.50	11.40	35.50	3.40	37.79	54.00	-16.21	AV	Horizontal
10585.05	39.15	44.50	13.80	38.80	8.10	47.25	74.00	-26.75	PK	Vertical
10585.05	37.01	44.50	13.80	38.80	8.10	45.11	54.00	-8.89	AV	Vertical
10594.80	39.46	44.50	13.80	38.80	8.10	47.56	74.00	-26.44	PK	Horizontal
10594.80	36.49	44.50	13.80	38.80	8.10	44.59	54.00	-9.41	AV	Horizontal
11570.11	32.90	43.60	14.30	39.50	10.20	43.10	74.00	-30.90	PK	Vertical
11570.11	30.50	43.60	14.30	39.50	10.20	40.70	54.00	-13.30	AV	Vertical
11570.15	33.25	43.60	14.30	39.50	10.20	43.45	74.00	-30.55	PK	Horizontal
11570.15	29.83	43.60	14.30	39.50	10.20	40.03	54.00	-13.97	AV	Horizontal
13293.46	32.02	42.60	15.90	38.90	12.20	44.22	74.00	-29.78	PK	Vertical
13293.46	28.77	42.60	15.90	38.90	12.20	40.97	54.00	-13.03	AV	Vertical
13287.08	31.97	42.60	15.90	38.90	12.20	44.17	74.00	-29.83	PK	Horizontal
13287.08	28.72	42.60	15.90	38.90	12.20	40.92	54.00	-13.08	AV	Horizontal
15899.04	31.09	42.70	18.00	37.10	12.40	43.49	74.00	-30.51	PK	Vertical
15899.04	27.09	42.70	18.00	37.10	12.40	39.49	54.00	-14.51	AV	Vertical
15594.70	30.05	42.70	18.00	37.10	12.40	42.45	74.00	-31.55	PK	Horizontal
15594.70	27.60	42.70	18.00	37.10	12.40	40.00	54.00	-14.00	AV	Horizontal
17355.34	27.18	41.80	19.20	42.80	20.20	47.38	74.00	-26.62	PK	Vertical
17355.34	25.52	41.80	19.20	42.80	20.20	45.72	54.00	-8.28	AV	Vertical
17355.05	27.57	41.80	19.20	42.80	20.20	47.77	74.00	-26.23	PK	Horizontal
17355.05	19.14	41.80	19.20	42.80	20.20	39.34	54.00	-14.66	AV	Horizontal

Mid Channel (802.11 n20/ 5825 MHz)										
3247.69	44.17	44.70	6.70	28.20	-9.80	34.37	74.00	-39.63	PK	Vertical
3247.69	41.56	44.70	6.70	28.20	-9.80	31.76	54.00	-22.24	AV	Vertical
3245.48	44.46	44.70	6.70	28.20	-9.80	34.66	74.00	-39.34	PK	Horizontal
3245.48	42.22	44.70	6.70	28.20	-9.80	32.42	54.00	-21.58	AV	Horizontal
3980.98	40.01	44.20	7.90	29.70	-6.60	33.41	74.00	-40.59	PK	Vertical
3980.98	37.00	44.20	7.90	29.70	-6.60	30.40	54.00	-23.60	AV	Vertical
3991.37	39.12	44.20	7.90	29.70	-6.60	32.52	74.00	-41.48	PK	Horizontal
3991.37	36.61	44.20	7.90	29.70	-6.60	30.01	54.00	-23.99	AV	Horizontal
7228.97	37.58	43.50	11.40	35.50	3.40	40.98	74.00	-33.02	PK	Vertical
7228.97	33.86	43.50	11.40	35.50	3.40	37.26	54.00	-16.74	AV	Vertical
7234.82	36.63	43.50	11.40	35.50	3.40	40.03	74.00	-33.97	PK	Horizontal
7234.82	33.78	43.50	11.40	35.50	3.40	37.18	54.00	-16.82	AV	Horizontal
10621.48	39.82	44.50	13.80	38.80	8.10	47.92	74.00	-26.08	PK	Vertical
10621.48	36.02	44.50	13.80	38.80	8.10	44.12	54.00	-9.88	AV	Vertical
10640.33	39.02	44.50	13.80	38.80	8.10	47.12	74.00	-26.88	PK	Horizontal
10640.33	36.41	44.50	13.80	38.80	8.10	44.51	54.00	-9.49	AV	Horizontal
11650.39	32.89	43.60	14.30	39.50	10.20	43.09	74.00	-30.91	PK	Vertical
11650.39	30.37	43.60	14.30	39.50	10.20	40.57	54.00	-13.43	AV	Vertical
11650.04	32.91	43.60	14.30	39.50	10.20	43.11	74.00	-30.89	PK	Horizontal
11650.04	30.36	43.60	14.30	39.50	10.20	40.56	54.00	-13.44	AV	Horizontal
13280.78	32.45	42.70	18.00	37.10	12.40	44.85	74.00	-29.15	PK	Vertical
13280.78	29.56	42.70	18.00	37.10	12.40	41.96	54.00	-12.04	AV	Vertical
13299.24	32.12	42.70	18.00	37.10	12.40	44.52	74.00	-29.48	PK	Horizontal
13299.24	28.66	42.70	18.00	37.10	12.40	41.06	54.00	-12.94	AV	Horizontal
17475.11	31.09	41.80	19.20	42.80	20.20	51.29	74.00	-22.71	PK	Vertical
17475.11	27.23	41.80	19.20	42.80	20.20	47.43	54.00	-6.57	AV	Vertical
17475.17	30.31	41.80	19.20	42.80	20.20	50.51	74.00	-23.49	PK	Horizontal
17475.17	27.36	41.80	19.20	42.80	20.20	47.56	54.00	-6.44	AV	Horizontal

Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Scan with 802.11a,802.11n (HT-20),802.11n (HT-40), 802.11ac (HT-20),802.11ac (HT-40), 802.11ac (HT-80) the worst case is 802.11n (HT-20).
3. The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

3.2.8 BAND EDGE

Band I&II(5.15-5.35)GHz

Band I(5.15-5.35) GHz										
Frequency	Meter Reading	Amplifier	Loss	Antenna Factor	Orrected Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBμV)	（dB）	（dB）	（dB/m）	（dB）	(dBμV/m)	(dBμV/m)	(dB)	Type	
802.11a BW20MHz										
5150	39.66	44.20	8.98	31.60	-3.62	36.04	74	-37.96	Peak	Vertical
5150	30.44	44.20	8.98	31.60	-3.62	26.82	54	-27.18	AVG	Vertical
5150	41.38	44.20	8.98	31.60	-3.62	37.76	74	-36.24	Peak	Horizontal
5150	31.35	44.20	8.98	31.60	-3.62	27.73	54	-26.27	AVG	Horizontal
5350	46.50	44.20	9.35	31.60	-3.25	43.25	74	-30.75	Peak	Vertical
5350	28.52	44.20	9.35	31.60	-3.25	25.27	54	-28.73	AVG	Vertical
5350	41.14	44.20	9.35	31.60	-3.25	37.89	74	-36.11	Peak	Horizontal
5350	28.82	44.20	9.35	31.60	-3.25	25.57	54	-28.43	AVG	Horizontal
802.11n BW20MHz										
5150	39.00	44.20	8.98	31.60	-3.62	35.38	74	-38.62	Peak	Vertical
5150	27.67	44.20	8.98	31.60	-3.62	24.05	54	-29.95	AVG	Vertical
5150	41.89	44.20	8.98	31.60	-3.62	38.27	74	-35.73	Peak	Horizontal
5150	30.78	44.20	8.98	31.60	-3.62	27.16	54	-26.84	AVG	Horizontal
5350	44.16	44.20	9.35	31.60	-3.25	40.91	74	-33.09	Peak	Vertical
5350	28.90	44.20	9.35	31.60	-3.25	25.65	54	-28.35	AVG	Vertical
5350	39.82	44.20	9.35	31.60	-3.25	36.57	74	-37.43	Peak	Horizontal
5350	31.39	44.20	9.35	31.60	-3.25	28.14	54	-25.86	AVG	Horizontal
802.11n BW40MHz										
5150	39.99	44.20	8.98	31.60	-3.62	36.37	74	-37.63	Peak	Vertical
5150	30.28	44.20	8.98	31.60	-3.62	26.66	54	-27.34	AVG	Vertical
5150	38.51	44.20	8.98	31.60	-3.62	34.89	74	-39.11	Peak	Horizontal
5150	27.41	44.20	8.98	31.60	-3.62	23.79	54	-30.21	AVG	Horizontal
5350	42.64	44.20	9.35	31.60	-3.25	39.39	74	-34.61	Peak	Vertical
5350	27.78	44.20	9.35	31.60	-3.25	24.53	54	-29.47	AVG	Vertical
5350	39.29	44.20	9.35	31.60	-3.25	36.04	74	-37.96	Peak	Horizontal
5350	31.42	44.20	9.35	31.60	-3.25	28.17	54	-25.83	AVG	Horizontal

802.11ac BW20MHz										
5150	40.67	44.20	8.98	31.60	-3.62	37.05	74	-36.95	Peak	Vertical
5150	29.07	44.20	8.98	31.60	-3.62	25.45	54	-28.55	AVG	Vertical
5150	41.93	44.20	8.98	31.60	-3.62	38.31	74	-35.69	Peak	Horizontal
5150	31.86	44.20	8.98	31.60	-3.62	28.24	54	-25.76	AVG	Horizontal
5350	43.68	44.20	9.35	31.60	-3.25	40.43	74	-33.57	Peak	Vertical
5350	31.30	44.20	9.35	31.60	-3.25	28.05	54	-25.95	AVG	Vertical
5350	41.56	44.20	9.35	31.60	-3.25	38.31	74	-35.69	Peak	Horizontal
5350	31.40	44.20	9.35	31.60	-3.25	28.15	54	-25.85	AVG	Horizontal
802.11ac BW40MHz										
5150	40.69	44.20	8.98	31.60	-3.62	37.07	74	-36.93	Peak	Vertical
5150	27.71	44.20	8.98	31.60	-3.62	24.09	54	-29.91	AVG	Vertical
5150	40.84	44.20	8.98	31.60	-3.62	37.22	74	-36.78	Peak	Horizontal
5150	28.67	44.20	8.98	31.60	-3.62	25.05	54	-28.95	AVG	Horizontal
5350	42.54	44.20	9.35	31.60	-3.25	39.29	74	-34.71	Peak	Vertical
5350	31.68	44.20	9.35	31.60	-3.25	28.43	54	-25.57	AVG	Vertical
5350	38.69	44.20	9.35	31.60	-3.25	35.44	74	-38.56	Peak	Horizontal
5350	27.79	44.20	9.35	31.60	-3.25	24.54	54	-29.46	AVG	Horizontal
802.11ac BW80MHz										
5150	39.25	44.20	8.98	31.60	-3.62	35.63	74	-38.37	Peak	Vertical
5150	31.81	44.20	8.98	31.60	-3.62	28.19	54	-25.81	AVG	Vertical
5150	40.87	44.20	8.98	31.60	-3.62	37.25	74	-36.75	Peak	Horizontal
5150	31.10	44.20	8.98	31.60	-3.62	27.48	54	-26.52	AVG	Horizontal
5350	43.80	44.20	9.35	31.60	-3.25	40.55	74	-33.45	Peak	Vertical
5350	31.32	44.20	9.35	31.60	-3.25	28.07	54	-25.93	AVG	Vertical
5350	38.57	44.20	9.35	31.60	-3.25	35.32	74	-38.68	Peak	Horizontal
5350	29.91	44.20	9.35	31.60	-3.25	26.66	54	-27.34	AVG	Horizontal

Band III 5470-5725MHz

Band III(5.47-5.725 GHz)										
Frequency	Meter Reading	Amplifier	Loss	Antenna Factor	Orrected Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBμV)	（dB）	（dB）	（dB/m）	（dB）	(dBμV/m)	(dBμV/m)	(dB)	Type	
802.11a BW20MHz										
5470	40.75	44.20	9.67	32.00	-2.53	38.22	74	-35.78	Peak	Vertical
5470	31.66	44.20	9.67	32.00	-2.53	29.13	54	-24.87	AVG	Vertical
5470	39.11	44.20	9.67	32.00	-2.53	36.58	74	-37.42	Peak	Horizontal
5470	27.63	44.20	9.67	32.00	-2.53	25.10	54	-28.90	AVG	Horizontal
5725	44.18	44.20	10.00	32.00	-2.20	41.98	74	-32.02	Peak	Vertical
5725	29.90	44.20	10.00	32.00	-2.20	27.70	54	-26.30	AVG	Vertical
5725	38.64	44.20	10.00	32.00	-2.20	36.44	74	-37.56	Peak	Horizontal
5725	30.06	44.20	10.00	32.00	-2.20	27.86	54	-26.14	AVG	Horizontal
802.11n BW20MHz										
5470	39.02	44.20	9.67	32.00	-2.53	36.49	74	-37.51	Peak	Vertical
5470	31.23	44.20	9.67	32.00	-2.53	28.70	54	-25.30	AVG	Vertical
5470	42.06	44.20	9.67	32.00	-2.53	39.53	74	-34.47	Peak	Horizontal
5470	31.25	44.20	9.67	32.00	-2.53	28.72	54	-25.28	AVG	Horizontal
5725	44.32	44.20	10.00	32.00	-2.20	42.12	74	-31.88	Peak	Vertical
5725	30.32	44.20	10.00	32.00	-2.20	28.12	54	-25.88	AVG	Vertical
5725	40.87	44.20	10.00	32.00	-2.20	38.67	74	-35.33	Peak	Horizontal
5725	30.88	44.20	10.00	32.00	-2.20	28.68	54	-25.32	AVG	Horizontal
802.11n BW40MHz										
5470	40.71	44.20	9.67	32.00	-2.53	38.18	74	-35.82	Peak	Vertical
5470	27.71	44.20	9.67	32.00	-2.53	25.18	54	-28.82	AVG	Vertical
5470	40.34	44.20	9.67	32.00	-2.53	37.81	74	-36.19	Peak	Horizontal
5470	31.49	44.20	9.67	32.00	-2.53	28.96	54	-25.04	AVG	Horizontal
5725	43.07	44.20	10.00	32.00	-2.20	40.87	74	-33.13	Peak	Vertical
5725	27.72	44.20	10.00	32.00	-2.20	25.52	54	-28.48	AVG	Vertical
5725	39.40	44.20	10.00	32.00	-2.20	37.20	74	-36.80	Peak	Horizontal
5725	27.97	44.20	10.00	32.00	-2.20	25.77	54	-28.23	AVG	Horizontal

802.11ac BW20MHz										
5470	40.06	44.20	9.67	32.00	-2.53	37.53	74	-36.47	Peak	Vertical
5470	28.07	44.20	9.67	32.00	-2.53	25.54	54	-28.46	AVG	Vertical
5470	38.21	44.20	9.67	32.00	-2.53	35.68	74	-38.32	Peak	Horizontal
5470	28.35	44.20	9.67	32.00	-2.53	25.82	54	-28.18	AVG	Horizontal
5725	42.99	44.20	10.00	32.00	-2.20	40.79	74	-33.21	Peak	Vertical
5725	31.61	44.20	10.00	32.00	-2.20	29.41	54	-24.59	AVG	Vertical
5725	42.01	44.20	10.00	32.00	-2.20	39.81	74	-34.19	Peak	Horizontal
5725	29.45	44.20	10.00	32.00	-2.20	27.25	54	-26.75	AVG	Horizontal
802.11ac BW40MHz										
5470	41.54	44.20	9.67	32.00	-2.53	39.01	74	-34.99	Peak	Vertical
5470	28.80	44.20	9.67	32.00	-2.53	26.27	54	-27.73	AVG	Vertical
5470	39.69	44.20	9.67	32.00	-2.53	37.16	74	-36.84	Peak	Horizontal
5470	28.65	44.20	9.67	32.00	-2.53	26.12	54	-27.88	AVG	Horizontal
5725	42.74	44.20	10.00	32.00	-2.20	40.54	74	-33.46	Peak	Vertical
5725	29.30	44.20	10.00	32.00	-2.20	27.10	54	-26.90	AVG	Vertical
5725	40.39	44.20	10.00	32.00	-2.20	38.19	74	-35.81	Peak	Horizontal
5725	30.23	44.20	10.00	32.00	-2.20	28.03	54	-25.97	AVG	Horizontal
802.11ac BW80MHz										
5470	40.80	44.20	9.67	32.00	-2.53	38.27	74	-35.73	Peak	Vertical
5470	27.82	44.20	9.67	32.00	-2.53	25.29	54	-28.71	AVG	Vertical
5470	40.75	44.20	9.67	32.00	-2.53	38.22	74	-35.78	Peak	Horizontal
5470	31.70	44.20	9.67	32.00	-2.53	29.17	54	-24.83	AVG	Horizontal
5725	45.59	44.20	10.00	32.00	-2.20	43.39	74	-30.61	Peak	Vertical
5725	29.33	44.20	10.00	32.00	-2.20	27.13	54	-26.87	AVG	Vertical
5725	39.85	44.20	10.00	32.00	-2.20	37.65	74	-36.35	Peak	Horizontal
5725	30.05	44.20	10.00	32.00	-2.20	27.85	54	-26.15	AVG	Horizontal

Band IV(5.725-5.85 GHz)

Band IV(5.725-5.85 GHz)										
Frequency	Meter Reading	Amplifier	Loss	Antenna Factor	Orrected Factor	Emission Level	Limits	Margin	Detector	Comment
(MHz)	(dBμV)	（dB）	（dB）	（dB/m）	（dB）	(dBμV/m)	(dBμV/m)	(dB)	Type	
802.11a BW20MHz										
5725	39.05	44.20	10.00	32.00	-2.20	36.85	74	-37.15	Peak	Vertical
5725	28.45	44.20	10.00	32.00	-2.20	26.25	54	-27.75	AVG	Vertical
5725	39.17	44.20	10.00	32.00	-2.20	36.97	74	-37.03	Peak	Horizontal
5725	28.44	44.20	10.00	32.00	-2.20	26.24	54	-27.76	AVG	Horizontal
5850	46.07	44.20	10.20	32.00	-2.00	44.07	74	-29.93	Peak	Vertical
5850	29.54	44.20	10.20	32.00	-2.00	27.54	54	-26.46	AVG	Vertical
5850	41.97	44.20	10.20	32.00	-2.00	39.97	74	-34.03	Peak	Horizontal
5850	31.01	44.20	10.20	32.00	-2.00	29.01	54	-24.99	AVG	Horizontal
802.11n BW20MHz										
5725	40.72	44.20	10.00	32.00	-2.20	38.52	74	-35.48	Peak	Vertical
5725	28.45	44.20	10.00	32.00	-2.20	26.25	54	-27.75	AVG	Vertical
5725	41.32	44.20	10.00	32.00	-2.20	39.12	74	-34.88	Peak	Horizontal
5725	29.29	44.20	10.00	32.00	-2.20	27.09	54	-26.91	AVG	Horizontal
5850	46.06	44.20	10.20	32.00	-2.00	44.06	74	-29.94	Peak	Vertical
5850	29.95	44.20	10.20	32.00	-2.00	27.95	54	-26.05	AVG	Vertical
5850	37.94	44.20	10.20	32.00	-2.00	35.94	74	-38.06	Peak	Horizontal
5850	32.03	44.20	10.20	32.00	-2.00	30.03	54	-23.97	AVG	Horizontal
802.11n BW40MHz										
5725	39.09	44.20	10.00	32.00	-2.20	36.89	74	-37.11	Peak	Vertical
5725	29.52	44.20	10.00	32.00	-2.20	27.32	54	-26.68	AVG	Vertical
5725	42.01	44.20	10.00	32.00	-2.20	39.81	74	-34.19	Peak	Horizontal
5725	27.68	44.20	10.00	32.00	-2.20	25.48	54	-28.52	AVG	Horizontal
5850	45.99	44.20	10.20	32.00	-2.00	43.99	74	-30.01	Peak	Vertical
5850	29.18	44.20	10.20	32.00	-2.00	27.18	54	-26.82	AVG	Vertical
5850	40.49	44.20	10.20	32.00	-2.00	38.49	74	-35.51	Peak	Horizontal
5850	31.53	44.20	10.20	32.00	-2.00	29.53	54	-24.47	AVG	Horizontal

802.11ac BW20MHz										
5725	41.20	44.20	10.00	32.00	-2.20	39.00	74	-35.00	Peak	Vertical
5725	30.43	44.20	10.00	32.00	-2.20	28.23	54	-25.77	AVG	Vertical
5725	39.97	44.20	10.00	32.00	-2.20	37.77	74	-36.23	Peak	Horizontal
5725	28.87	44.20	10.00	32.00	-2.20	26.67	54	-27.33	AVG	Horizontal
5850	46.22	44.20	10.20	32.00	-2.00	44.22	74	-29.78	Peak	Vertical
5850	28.54	44.20	10.20	32.00	-2.00	26.54	54	-27.46	AVG	Vertical
5850	37.96	44.20	10.20	32.00	-2.00	35.96	74	-38.04	Peak	Horizontal
5850	28.73	44.20	10.20	32.00	-2.00	26.73	54	-27.27	AVG	Horizontal
802.11ac BW40MHz										
5725	39.80	44.20	10.00	32.00	-2.20	37.60	74	-36.40	Peak	Vertical
5725	30.85	44.20	10.00	32.00	-2.20	28.65	54	-25.35	AVG	Vertical
5725	40.94	44.20	10.00	32.00	-2.20	38.74	74	-35.26	Peak	Horizontal
5725	27.64	44.20	10.00	32.00	-2.20	25.44	54	-28.56	AVG	Horizontal
5850	43.02	44.20	10.20	32.00	-2.00	41.02	74	-32.98	Peak	Vertical
5850	29.55	44.20	10.20	32.00	-2.00	27.55	54	-26.45	AVG	Vertical
5850	40.57	44.20	10.20	32.00	-2.00	38.57	74	-35.43	Peak	Horizontal
5850	27.82	44.20	10.20	32.00	-2.00	25.82	54	-28.18	AVG	Horizontal
802.11ac BW80MHz										
5725	40.94	44.20	10.00	32.00	-2.20	38.74	74	-35.26	Peak	Vertical
5725	29.50	44.20	10.00	32.00	-2.20	27.30	54	-26.70	AVG	Vertical
5725	38.12	44.20	10.00	32.00	-2.20	35.92	74	-38.08	Peak	Horizontal
5725	29.95	44.20	10.00	32.00	-2.20	27.75	54	-26.25	AVG	Horizontal
5850	42.49	44.20	10.20	32.00	-2.00	40.49	74	-33.51	Peak	Vertical
5850	30.59	44.20	10.20	32.00	-2.00	28.59	54	-25.41	AVG	Vertical
5850	40.82	44.20	10.20	32.00	-2.00	38.82	74	-35.18	Peak	Horizontal
5850	27.99	44.20	10.20	32.00	-2.00	25.99	54	-28.01	AVG	Horizontal

4. CONDUCTED SPURIOUS EMISSIONS AND BANDEDGE

4.1 APPLIED PROCEDURES / LIMIT

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

4.1.1 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	1000 KHz/3000 KHz
Trace-Mode:	Max hold

.

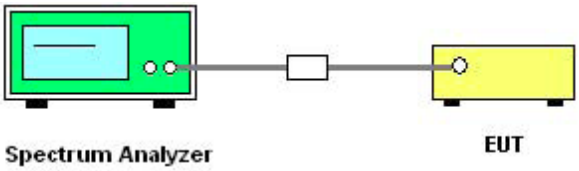
For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 5700 to 5725 MHz Upper Band Edge: 5850 to 5870 MHz
RB / VB (emission in restricted band)	1000 KHz/3000 KHz
Trace-Mode:	Max hold

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.
Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 1000 kHz. In order to make an accurate measurement, set the span greater than RBW.

4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.5 TEST RESULTS

Data See Appendix A

5. POWER SPECTRAL DENSITY TEST

5.1 APPLIED PROCEDURES / LIMIT

1. For mobile and portable client devices in the 5.15-5.25 GHz band, , the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
3. For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm in any 500KHz band. If transmitting antenna directional gain is greater than 6 dBi, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.1.1 TEST PROCEDURE

1. The setting follows Method SA-1 of FCC KDB D02 General UNII Test Procedures New Rules v01r03.

For devices operating in the band, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (*i.e.,* 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

a) Set RBW ≥ 1/*T*, where *T* is defined in section II.B.I.a).

b) Set VBW ≥ 3 RBW.

c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10 log (500kHz/RBW) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.

d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10 log (1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.

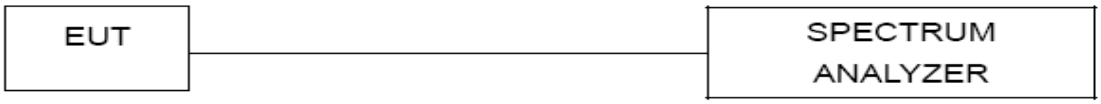
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

Data see Appendix B

6. BANDWIDTH MEASUREMENT

6.1 EMISSION BANDWIDTH (EBW) 26 BANDWID PROCEDURES / LIMIT

See list of measuring instruments of this test report.

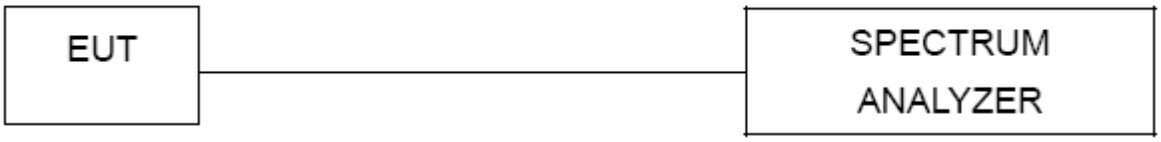
6.1.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > =RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

Data see Appendix C

6.2 OCCUPIED BANDWIDTH (99%) TEST APPLIED PROCEDURES / LIMIT

The following procedure shall be used for measuring (99 %) power bandwidth:

6.2.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v01r03.
The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.

2. Set span = 1.5 times to 5.0 times the OBW.

3. Set RBW = 1 % to 5 % of the OBW

4. Set VBW ≥ 3 · RBW

5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

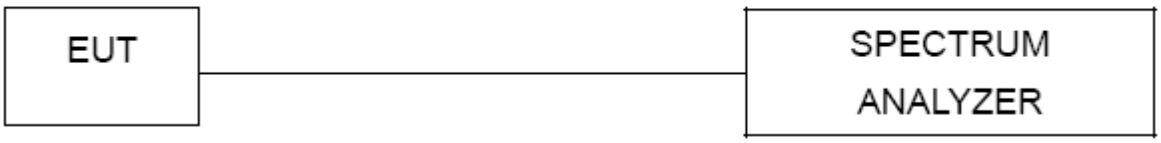
6. Use the 99 % power bandwidth function of the instrument (if available).

7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

6.2.2 DEVIATION FROM STANDARD

No deviation.

6.2.3 TEST SETUP



6.2.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.2.5 TEST RESULTS

Data See Appendix C

6.3 MINIMUM EMISSION BANDWIDTH(6 DB) PROCEDURES / LIMIT

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

6.3.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v01r03.

a) Set RBW = 100 kHz.

b) Set the video bandwidth (VBW) ≥ 3 × RBW.

c) Detector = Peak.

d) Trace mode = max hold.

e) Sweep = auto couple.

f) Allow the trace to stabilize.

g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.3.2 DEVIATION FROM STANDARD

No deviation.

6.3.3 TEST SETUP

6.3.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.3.5 TEST RESULTS

Data see Appendix C

6.4 BANDWIDTH TEST POLT

Data see Appendix C

7. MAXIMUM CONDUCTED OUTPUT POWER

7.1 APPLIED PROCEDURES / LIMIT

For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz,If transmitting antennas of directional gain greater than 6 dBi are used.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. If transmitting antennas of directional gain greater than 6 dBi are used.

<table>
<tr><td colspan="5">FCC Part15 (15.407) , Subpart E</td></tr>
<tr><td>Section</td><td>Test Item</td><td>Limit</td><td>Frequency Range (MHz)</td><td>Result</td></tr>
<tr><td rowspan="2">15.407(a) (1) (iv)</td><td rowspan="3">Peak Output Power</td><td>0.25 watt</td><td>5150-5250</td><td rowspan="3">PASS</td></tr>
<tr><td>The lesser of 250 mW or 11 dBm + 10 log (26 dB emission bandwidth)</td><td>5250-5350
5470-5725</td></tr>
<tr><td>15.407(a) (3)</td><td>1 watt</td><td>5725-5825</td></tr>
</table>

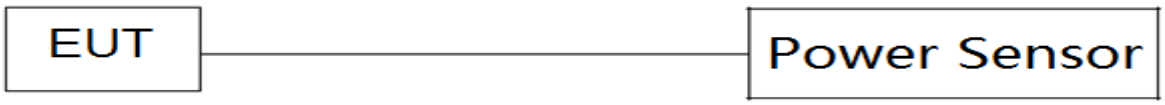
7.1.1 TEST PROCEDURE

The EUT was directly connected to the Power Sensor&PC

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 5 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.5 TEST RESULTS

NOTE: 1. Antenna A Power> Antenna B Power, Both antenna A and B have been test

2. 802.11a model cannot output Power at the same time.

Band I (5.15-5.25GHz)

Band I (5.15-5.25GHz)								
Test Channel	Frequency (MHz)	PK Power A(dBm)	PK Power B(dBm)	PK Power Total(dBm)	AV Power (dBm)	AV Power B(dBm)	AV Power Total(dBm)	LIMIT (dBm)
802.11a								
36	5180	17.79	17.23	--	15.46	14.79	--	23.98
40	5200	17.76	17.14	--	15.29	15.25	--	23.98
48	5240	17.70	17.23	--	15.97	15.59	--	23.98
802.11n(HT20)								
36	5180	17.92	17.54	20.74	15.77	15.24	18.52	23.98
40	5200	17.54	17.36	20.46	15.59	15.12	18.37	23.98
48	5240	17.40	17.25	20.34	15.04	15.14	18.10	23.98
802.11n(HT40)								
38	5190	17.58	17.32	20.46	15.70	14.84	18.30	23.98
46	5230	17.02	16.76	19.90	14.73	15.02	17.89	23.98
802.11ac(HT20)								
36	5180	14.70	14.32	17.52	12.74	12.30	15.54	23.98
40	5200	13.94	13.23	16.61	12.04	10.99	14.56	23.98
48	5240	14.10	14.13	17.13	11.68	11.67	14.69	23.98
802.11ac(HT40)								
38	5190	14.76	14.32	17.56	12.95	11.97	15.50	23.98
46	5230	14.00	14.13	17.08	12.12	12.42	15.28	23.98
802.11ac(HT80)								
42	5210	13.86	13.23	16.57	11.51	11.46	14.50	23.98

Note:

1. For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 0.25 W.

Band II (5.25-5.35GHz)

Band II(5.25-5.35GHz)								
Test Channel	Frequency (MHz)	PK Power A(dBm)	PK Power B(dBm)	PK Power Total(dBm)	AV Power (dBm)	AV Power B(dBm)	AV Power Total(dBm)	LIMIT (dBm)
802.11a								
52	5260	17.60	17.34	--	15.44	15.15	--	23.21
60	5300	17.73	17.24	--	15.89	15.40	--	23.21
64	5320	17.44	17.12	--	15.79	14.79	--	23.21
802.11n(HT20)								
52	5260	17.44	17.21	20.34	15.88	15.27	18.60	23.50
60	5300	16.74	16.32	19.55	15.16	14.08	17.66	23.50
64	5320	13.89	13.14	16.54	11.44	11.00	14.24	23.50
802.11n(HT40)								
54	5270	12.74	12.32	15.55	11.21	10.31	13.79	23.98
62	5310	13.58	13.14	16.38	11.40	11.58	14.50	23.98
802.11ac(HT20)								
52	5260	13.00	12.87	15.95	10.61	10.97	13.80	23.49
60	5300	12.15	12.11	15.14	10.21	10.56	13.40	23.49
64	5320	12.43	12.35	15.40	10.59	9.96	13.30	23.49
802.11ac(HT40)								
54	5270	12.99	12.13	15.59	10.55	9.91	13.25	23.98
62	5310	11.56	11.32	14.45	9.85	9.55	12.71	23.98
802.11ac(HT80)								
58	5290	12.83	12.14	15.51	11.19	10.36	13.81	23.98

Note:

1. For mobile and portable client devices in the 5.25-5.35 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 0.25 W.

Band III (5.47-5.725GHz)

Band9 III(5.47-5.725GHz)								
Test Channel	Frequency (MHz)	PK Power A(dBm)	PK Power B(dBm)	PK Power Total(dBm)	AV Power (dBm)	AV Power B(dBm)	AV Power Total(dBm)	LIMIT (dBm)
802.11a								
100	5500	16.05	15.43	--	14.45	13.79	--	23.21
116	5580	16.16	15.23	--	14.13	13.51	--	23.21
140	5700	16.12	15.65	--	13.88	13.30	--	23.21
802.11n(HT20)								
100	5500	15.93	15.64	18.80	13.99	13.60	16.81	23.49
116	5580	16.32	15.76	19.06	14.24	13.87	17.07	23.49
140	5700	15.85	15.43	18.66	14.07	13.09	16.62	23.49
802.11n(HT40)								
102	5510	15.40	15.32	18.37	13.32	13.51	16.43	23.98
110	5550	15.64	15.34	18.50	13.92	13.20	16.59	23.98
134	5670	16.92	16.45	19.70	14.70	14.23	17.48	23.98
802.11ac(HT20)								
100	5500	11.66	11.32	14.50	9.60	9.16	12.40	23.51
116	5580	11.29	11.21	14.26	9.47	9.55	12.52	23.51
140	5700	12.51	12.34	15.44	10.82	10.44	13.64	23.51
802.11ac(HT40)								
102	5510	11.11	11.04	14.09	9.20	8.90	12.06	23.98
110	5550	11.65	11.32	14.50	9.86	9.74	12.81	23.98
134	5670	12.19	12.07	15.14	10.45	9.65	13.08	23.98
802.11ac(HT80)								
106	5530	11.51	11.21	14.37	9.05	9.41	12.24	23.98
122	5610	12.12	12.34	15.24	9.93	10.25	13.10	23.98

Note:

1. For mobile and portable client devices in the 5.47-5.725 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 0.25 W.

Band IV (5.725-5.85GHz)

Band IV (5.725-5.85GHz)								
Test Channel	Frequency (MHz)	PK Power A(dBm)	PK Power B(dBm)	PK Power Total(dBm)	AV Power (dBm)	AV Power B(dBm)	AV Power Total(dBm)	LIMIT (dBm)
802.11a								
149	5745	19.85	19.65	--	18.13	17.63	--	30
157	5785	19.57	19.54	--	17.13	17.46	--	30
165	5825	19.65	19.62	--	17.84	17.83	--	30
802.11n(HT20)								
149	5745	19.50	19.32	22.421	17.21	17.06	20.146	30
157	5785	19.37	19.23	22.311	17.06	16.86	19.971	30
165	5825	19.10	19.23	22.176	17.55	16.94	20.266	30
802.11n(HT40)								
151	5755	19.84	19.45	22.660	17.72	17.18	20.469	30
159	5795	19.53	19.43	22.491	17.87	17.18	20.549	30
802.11ac(HT20)								
149	5745	14.76	14.43	17.608	12.58	12.53	15.565	30
157	5785	14.29	14.21	17.260	12.27	12.07	15.181	30
165	5825	14.03	14.01	17.030	12.08	11.58	14.847	30
802.11ac(HT40)								
151	5755	14.26	14.23	17.255	12.21	12.68	15.462	30
159	5795	14.57	14.12	17.361	12.43	12.47	15.460	30
802.11ac(HT80)								
155	5775	15.60	15.23	18.429	13.37	13.34	16.365	30

Note:

1. For the band 5.745-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W.

8. FREQUENCY STABILITY MEASUREMENT

8.1 LIMIT OF FREQUENCY STABILITY

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an Emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

8.1.1 MEASURING INSTRUMENTS

See list of measuring instruments of this test report.

8.1.2 TEST PROCEDURES

1. To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
2. The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10dB lower than the measured peak value.
3. The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

8.1.3 TEST SETUP

8.1.4 TEST RESULTS

NOTE: 1. Antenna A Power> Antenna B Power, Both antenna A and B have all bandwidth and mode been test, Only the worst data

Voltage	Band I (5.15-5.25GHz)Measurement Frequency(MHz)
AC (V)	5200
MAX	5199.9243
Nom	5199.9260
MIN	5199.9240
Max.Deviation(MHz)	0.0760
Max.Deviation(ppm)	14.62

Temperature Vs. Frequency Stabilty:

Temperature	Measurement Frequency(MHz)
(^{o}C)	5200
-30	5199.9312
-20	5199.9281
-10	5199.9259
0	5199.9253
10	5199.9244
20	5199.9277
30	5199.9241
40	5199.9248
50	5199.9234
Max.Deviation(MHz)	0.0766
Max.Deviation(ppm)	14.73

Voltage	Band I (5.25-5.35GHz)Measurement Frequency(MHz)
AC (V)	5300
MAX	5299.9556
Nom	5299.9544
MIN	5299.9541
Max.Deviation(MHz)	0.0459
Max.Deviation(ppm)	8.83

Temperature Vs. Frequency Stabilty:

Temperature	Measurement Frequency(MHz)
(^{o}C)	5300
-30	5299.9607
-20	5299.9592
-10	5299.9572
0	5299.9569
10	5299.9572
20	5299.9579
30	5299.9567
40	5299.9581
50	5299.9558
Max.Deviation(MHz)	0.0442
Max.Deviation(ppm)	8.34

Voltage	Band I (5.47-5.725GHz)Measurement Frequency(MHz)
AC (V)	5580
MAX	5579.9248
Nom	5579.9235
MIN	5579.9255

Max.Deviation(MHz)	0.0765
Max.Deviation(ppm)	14.71

Temperature Vs. Frequency Stabilty:

Temperature	**Measurement Frequency(MHz)**
(^{o}C)	5580
-30	5579.9307
-20	5579.9258
-10	5579.9224
0	5579.9242
10	5579.9214
20	5579.9246
30	5579.9246
40	5579.9231
50	5579.9215
Max.Deviation(MHz)	0.0786
Max.Deviation(ppm)	14.09

Voltage	Band IV (5.725-5.85GHz) Measurement Frequency(MHz)
AC (V)	5785
MAX	5784.9258
Nom	5784.9253
MIN	5784.9243
Max.Deviation(MHz)	0.0757
Max.Deviation(ppm)	14.56

Temperature Vs. Frequency Stabilty:

Temperature	Measurement Frequency(MHz)
(^{o}C)	5785
-30	5784.9307
-20	5784.9282
-10	5784.9263
0	5784.9242
10	5784.9278
20	5784.9249
30	5784.9272
40	5784.9262
50	5784.9274
Max.Deviation(MHz)	0.0758
Max.Deviation(ppm)	13.10

9. AUTOMATICALLY DISCONTINUE TRANSMISSION

9.1 LIMIT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

9.2 TEST RESULT OF AUTOMATICALLY DISCONTINUE TRANSMISSION

During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission

10. ANTENNA REQUIREMENT

10.1 STANDARD REQUIREMENT

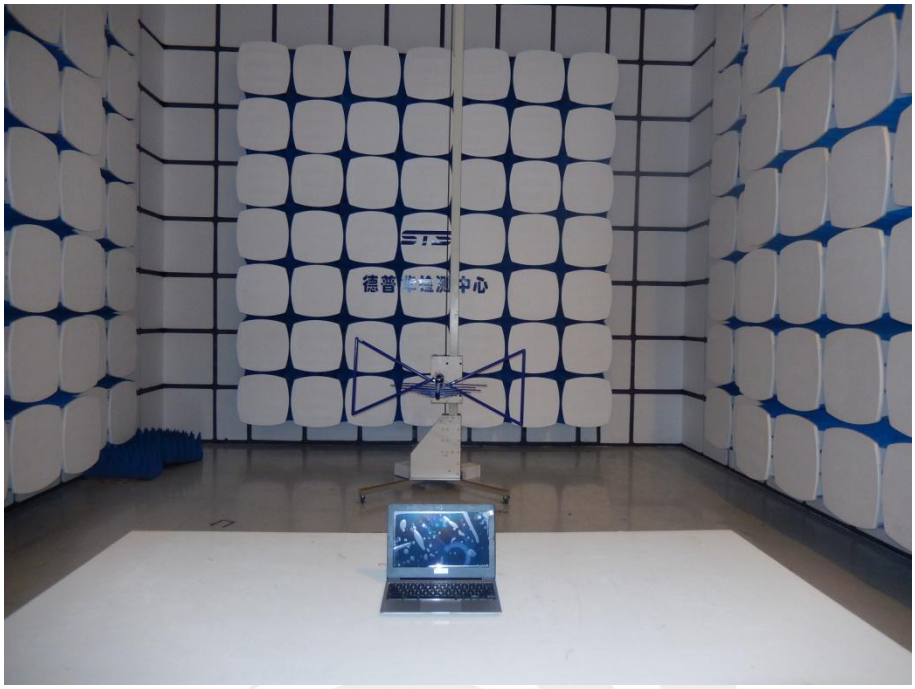
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

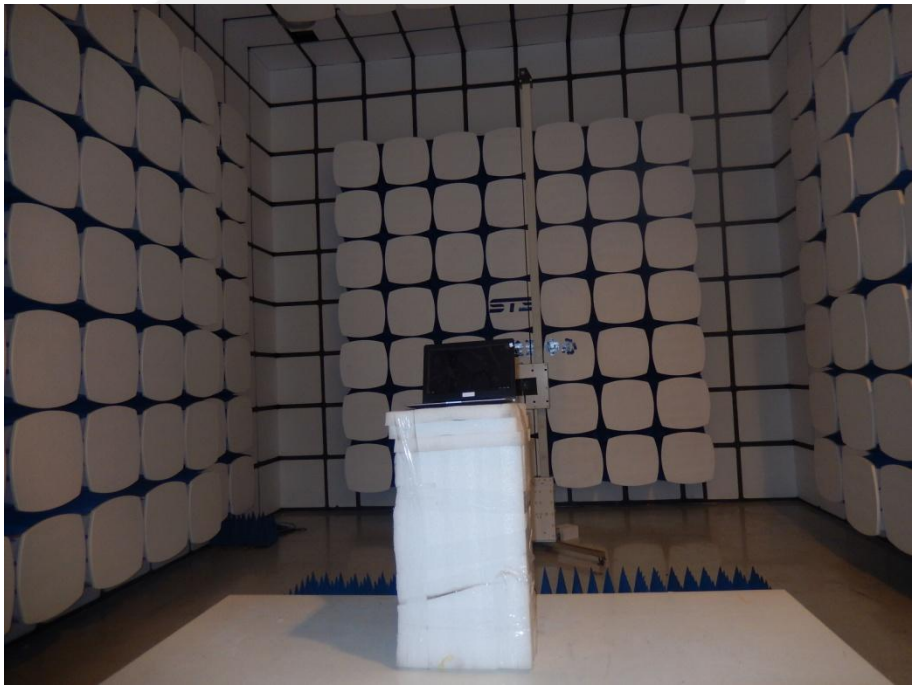
10.2 EUT ANTENNA

The EUT antenna is PIFA Antenna. It comply with the standard requirement.

APPENDIX - PHOTOS OF TEST SETUP

Radiated Measurement Photos





Conducted Measurement Photos

※※※※※END OF THE REPORT※※※※※