



FCC TEST REPORT

Report No: STS1811001W16

Issued for

Shenzhen LEAGOO Intelligence Co., Limited

2nd Floor of Building B, HongLianYing Technology Park,
No.286 of SiLi Road, DaBuXiang Community, Longhua New
District, Shenzhen, China

Product Name:	Smartphone
Brand Name:	LEAGOO
Model Name:	S10
Series Model:	N/A
FCC ID:	2AQMh-LEAGOO-S10
Test Standard:	FCC Part 15.407

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TEST RESULT CERTIFICATION

Applicant's name : Shenzhen LEAGOO Intelligence Co., Limited

Address : 2nd Floor of Building B, HongLianYing Technology Park, No.286 of SiLi Road, DaBuXiang Community, Longhua New District, Shenzhen, China

Manufacture's Name : Shenzhen LEAGOO Intelligence Co., Limited

Address : 2nd Floor of Building B, HongLianYing Technology Park, No.286 of SiLi Road, DaBuXiang Community, Longhua New District, Shenzhen, China

Product description

Product Name : Smartphone

Brand Name : LEAGOO

Model Name : S10

Series Model : N/A

Test Standards : FCC Part15.407

Test procedure ANSI C63.10-2013

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC 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 : 01 Nov. 2018 ~06 Dec. 2018

Date of Issue : 08 Dec. 2018

Test Result : **Pass**

Testing Engineer :

(Chris chen)

Technical Manager :

(Sunday Hu)

Authorized Signatory :

(Vita Li)





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**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	08 Dec. 2018	STS1811001W16	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 v02r01

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) & 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(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

FCC Registration No.: 625569

IC Registration No.: 12108A; A2LA Certificate No.: 4338.01;

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded 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	RF output power,conducted	$\pm 0.71\text{dB}$
2	Unwanted Emissions,conducted	$\pm 0.63\text{dB}$
3	All emissions,radiated 30-200MHz	$\pm 3.43\text{dB}$
4	All emissions,radiated 200MHz-1GHz	$\pm 3.57\text{dB}$
5	All emissions,radiated>1G	$\pm 4.13\text{dB}$
6	Conducted Emission(9KHz-150KHz)	$\pm 3.18\text{dB}$
7	Conducted Emission(150KHz-30MHz)	$\pm 2.70\text{dB}$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	Smartphone	
Trade Name	LEAGOO	
Model Name	S10	
Series Model	N/A	
Model Difference	N/A	
Product Description	The EUT is a Smartphone	
	Operation Frequency:	IEEE 802.11a/ n (HT20) 5.180GHz-5.240GHz
		IEEE 802.11n (HT40) 5.190GHz-5.230GHz
		IEEE 802.11a/ n (HT20)5.260GHz-5.320GHz
		IEEE 802.11n (HT40)5.270GHz-5.310GHz
		IEEE 802.11a/ n (HT20)5.500GHz-5.700GHz
		IEEE 802.11n (HT40)5.510GHz-5.670GHz
		IEEE 802.11a/ n (HT20)5.745GHz-5.825GHz
		IEEE 802.11a/ n (HT40)5.755GHz-5.795GHz
	Modulation Type:	802.11a(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK,QPSK,16-QAM,64-QAM
	Antenna Designation:	See Note 2
	Max.Output Power(Conducted):	16.84dBm
	Duty Cycle:	>98%
	More details of EUT technical specification, please refer to the User's Manual.	
Test Channel	Please refer to the Note 2.	
Adapter	Power supply and ADP(rating): Input: AC 100-240V, 0.5A, 50/60Hz Output: 5V/7V/9V ---2A,12V ---1.5A	
Battery	Battery(rating): Rated Voltage: 3.85V Charge Limit: 4.4V Capacity: 4050mAh	
Hardware version number	E906_MAIN_PCB_V1.2	
Software version number	LEAGOO_S10_OS5.0	
Connecting I/O Port(s)	Please refer to the User's Manual	

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
		120	5600
5.260GHz-5.320GHz		124	5620
Channel	Frequency	126	5630
52	5260	128	5640
54	5270	132	5660
56	5280	134	5670
58	5290	136	5680
60	5300	140	5700
62	5310		
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 (HT20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
36	5180	52	5260
40	5200	60	5300
48	5240	64	5320

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



For 802.11n (HT40)

Channel	Freq.(MHz)	Channel	Freq.(MHz)
38	5190	54	5270
46	5230	62	5310

For 802.11n (HT40)

Channel	Freq.(MHz)	Channel	Freq.(MHz)
102	5510	151	5755
110	5550	159	5795
134	5670		

2.	Ant.	Brand	Model Name	Ant Type	Connector	Gain (dBi)	NOTE
	A	LEAGOO	S10	PIFA Antenna	N/A	0.5	WLAN Ant.



2.2 DESCRIPTION OF THE TEST MODES

To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possibly 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 802.11n HT20 CH52&CH60&CH64	MCS 0
Mode 7	TX IEEE 802.11n HT20 CH100&CH116&CH140	MCS 0
Mode 8	TX IEEE 802.11n HT20 CH149&CH157&CH165	MCS 0
Mode 9	TX IEEE 802.11n HT40 CH38&CH46	MCS 0
Mode 10	TX IEEE 802.11n HT40 CH54 &CH62	MCS 0
Mode 11	TX IEEE 802.11n HT40 CH102&CH110&CH134	MCS 0
Mode 12	TX IEEE 802.11n HT40 CH151&CH159	MCS 0

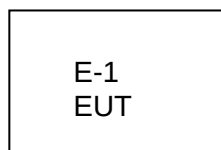
- Note: (1) The measurements are performed at the highest, middle, lowest available channels.
(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported
(3) We have been tested for all available U.S. voltage and frequencies (For 120V, 50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.

AC Conducted Emission

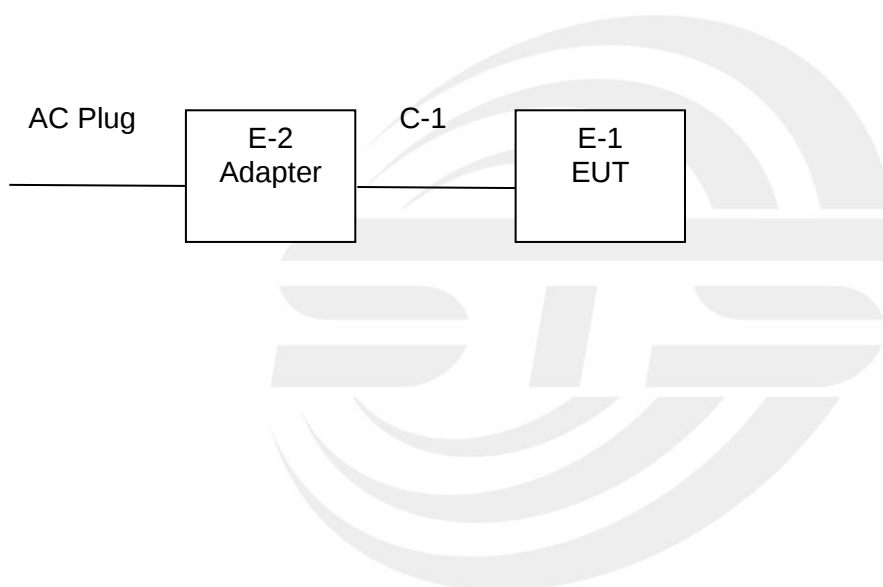
Test Case	
AC Conducted Emission	Mode 13: Keeping TX + WLAN Link

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



Conducted Emission Test





2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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.

Necessary accessories

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-2	Adapter	LEAGOO	APS-KI018WU-G	N/A	N/A
C-1	DC Cable	N/A	100 cm	N/A	N/A

Support units

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
N/A	N/A	N/A	N/A	N/A	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
Test Receiver	R&S	ESCI	101427	2018.10.13	2019.10.12
Signal Analyzer	Agilent	N9020A	MY51110105	2018.03.08	2019.03.07
Active loop Antenna	ZHINAN	ZN30900C	16035	2017.03.11	2020.03.10
Bilog Antenna	TESEQ	CBL6111D	34678	2017.11.02	2020.11.1
Horn Antenna	Schwarzbeck	BBHA 9120D(1201)	9120D-1343	2017.10.27	2020.10.26
SHF-EHF Horn Antenna (15G-40GHz)	A-INFO	LB-180400-KF	J211020657	2018.03.11	2019.03.10
Pre-mpifier (0.1M-3GHz)	EM	EM330	060665	2018.03.09	2019.03.08
PreAmplifier (1G-18GHz)	SKET	LNPA-01018G-4 5	SK2018080901	2018.10.13	2019.10.12
Temperature & Humitidy	HH660	Mieo	N/A	2018.10.11	2019.10.10
turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Highpass filter(7G-18G)	COM-MW	7GHz-18GHz	B2015073320	2018.10.13	2019.10.12

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2018.10.13	2019.10.12
LISN	R&S	ENV216	101242	2018.10.13	2019.10.12
LISN	EMCO	3810/2NM	23625	2018.10.13	2019.10.12
Temperature & Humitidy	HH660	Mieo	N/A	2018.10.11	2019.10.10

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
USB RF power sensor	DARE	RPR3006W	15I00041SNO03	2018.10.13	2019.10.12
Signal Analyzer	Agilent	N9020A	MY49100060	2018.10.13	2019.10.12
Temperature & Humitidy	HH660	Mieo	N/A	2018.10.11	2019.10.10



3. EMC EMISSION TEST

3.1 CONDUCTED 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

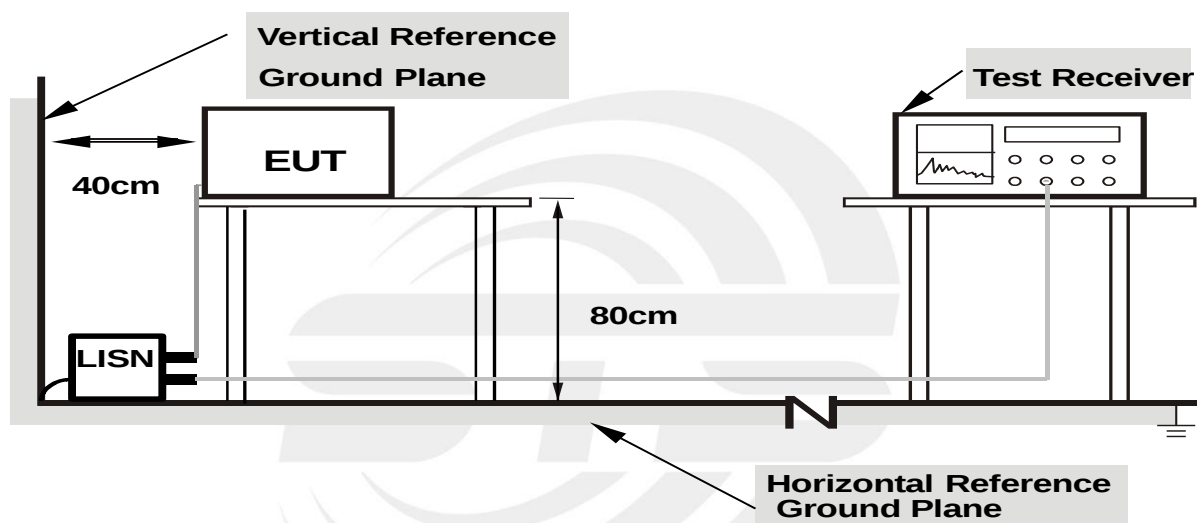
3.1.2 TEST PROCEDURE

- 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.
- 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.
- 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.
- LISN at least 80 cm from nearest part of EUT chassis.
- 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

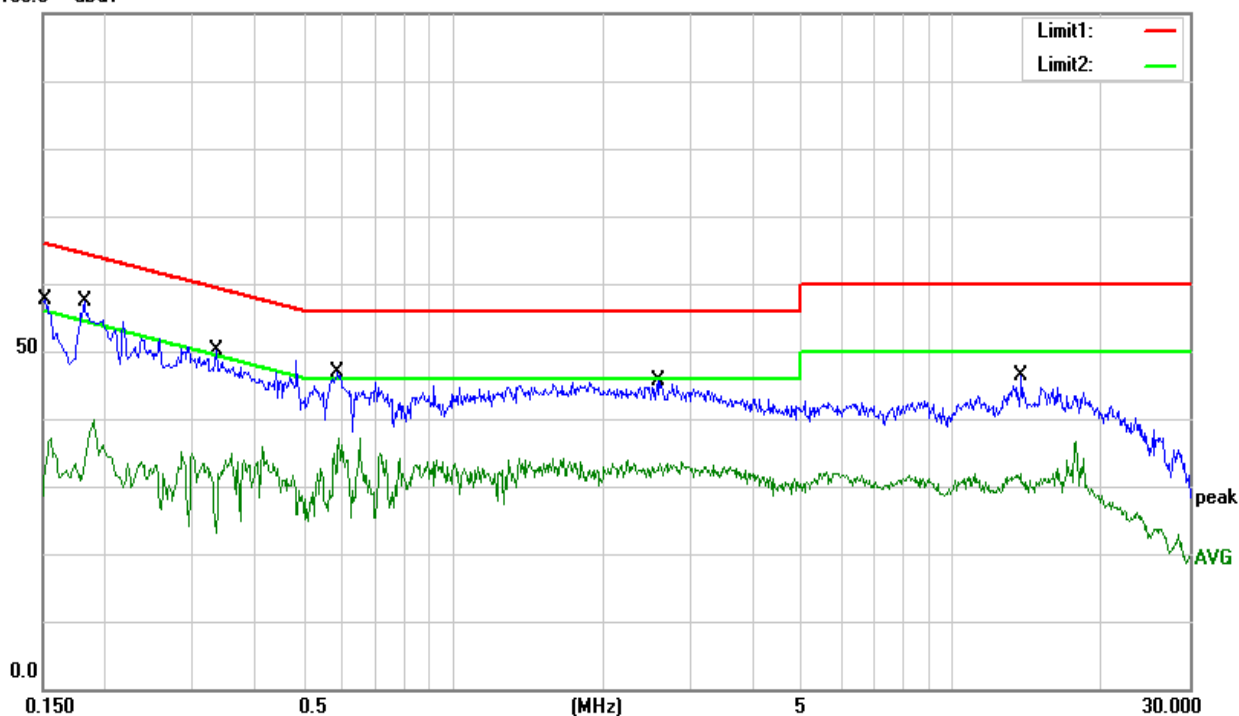
Temperature:	26.3 °C	Relative Humidity:	63%
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode :	Mode 13		

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.1516	37.43	20.23	57.66	65.91	-8.25	QP
0.1516	16.92	20.23	37.15	55.91	-18.76	AVG
0.1820	37.26	20.23	57.49	64.39	-6.90	QP
0.1820	19.55	20.23	39.78	54.39	-14.61	AVG
0.3340	29.44	20.64	50.08	59.35	-9.27	QP
0.3340	15.33	20.64	35.97	49.35	-13.38	AVG
0.5860	26.41	20.39	46.80	56.00	-9.20	QP
0.5860	16.78	20.39	37.17	46.00	-8.83	AVG
2.5700	25.64	20.01	45.65	56.00	-10.35	QP
2.5700	13.50	20.01	33.51	46.00	-12.49	AVG
13.8220	26.29	20.01	46.30	60.00	-13.70	QP
13.8220	16.58	20.01	36.59	50.00	-13.41	AVG

Remark:

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

100.0 dBuV





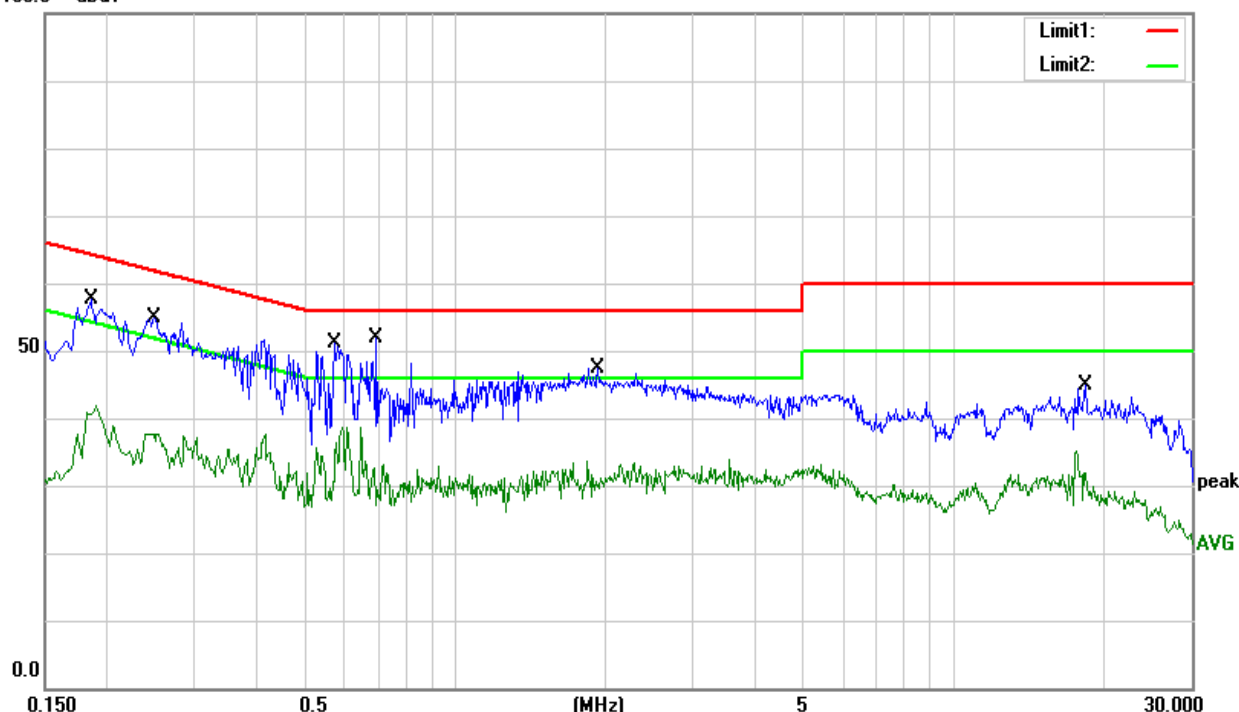
Temperature:	26.3 °C	Relative Humidity:	63%
Test Voltage	AC 120V/60Hz	Phase:	N
Test Mode	Mode 13		

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.1860	37.26	20.29	57.55	64.21	-6.66	QP
0.1860	21.63	20.29	41.92	54.21	-12.29	AVG
0.2480	34.35	20.53	54.88	61.82	-6.94	QP
0.2480	17.16	20.53	37.69	51.82	-14.13	AVG
0.5740	30.64	20.38	51.02	56.00	-4.98	QP
0.5740	18.28	20.38	38.66	46.00	-7.34	AVG
0.6940	31.61	20.28	51.89	56.00	-4.11	QP
0.6940	12.83	20.28	33.11	46.00	-12.89	AVG
1.9340	27.14	20.16	47.30	56.00	-8.70	QP
1.9340	13.21	20.16	33.37	46.00	-12.63	AVG
18.3460	24.91	19.90	44.81	60.00	-15.19	QP
18.3460	15.26	19.90	35.16	50.00	-14.84	AVG

Remark:

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

100.0 dBuV





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

- 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.
- 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.
- 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
- 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.
- 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.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

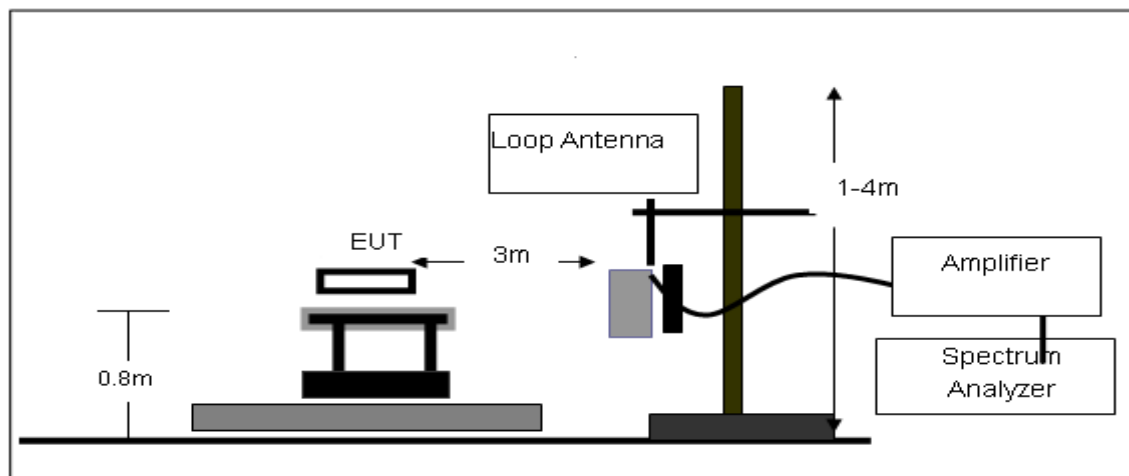
Both horizontal and vertical antenna polarities were tested and performed test to three orthogonal axis. The worst case emissions were reported

3.2.2 DEVIATION FROM TEST STANDARD

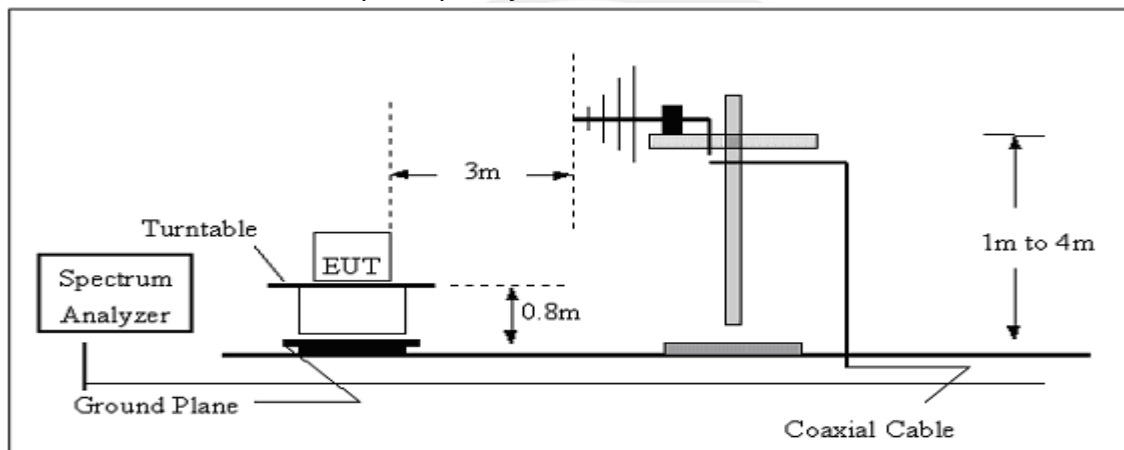
No deviation

3.2.3 TEST SETUP

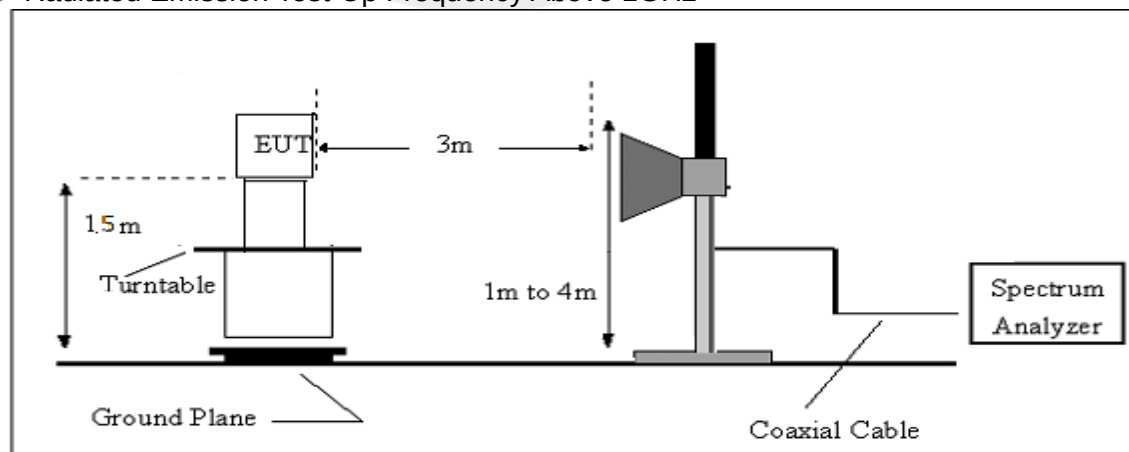
(A) Radiated Emission Test-Up Frequency Below 30MHz



(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 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

$$\text{Factor} = \text{AF} + \text{CL} - \text{AG}$$

**3.2.6 TEST RESULTS (Between 9KHz – 30 MHz)**

Temperature:	22.6 °C	Relative Humidity:	40%
Test Voltage :	DC 3.85V from Battery	Polarization :	--
Test Mode :	TX Mode		

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 = $40 \log (\text{specific distance/test distance})$ (dB);

Limit line = specific limits(dBuV) + distance extrapolation factor.



3.2.7 TEST RESULTS (Between 30MHz – 1GHz)

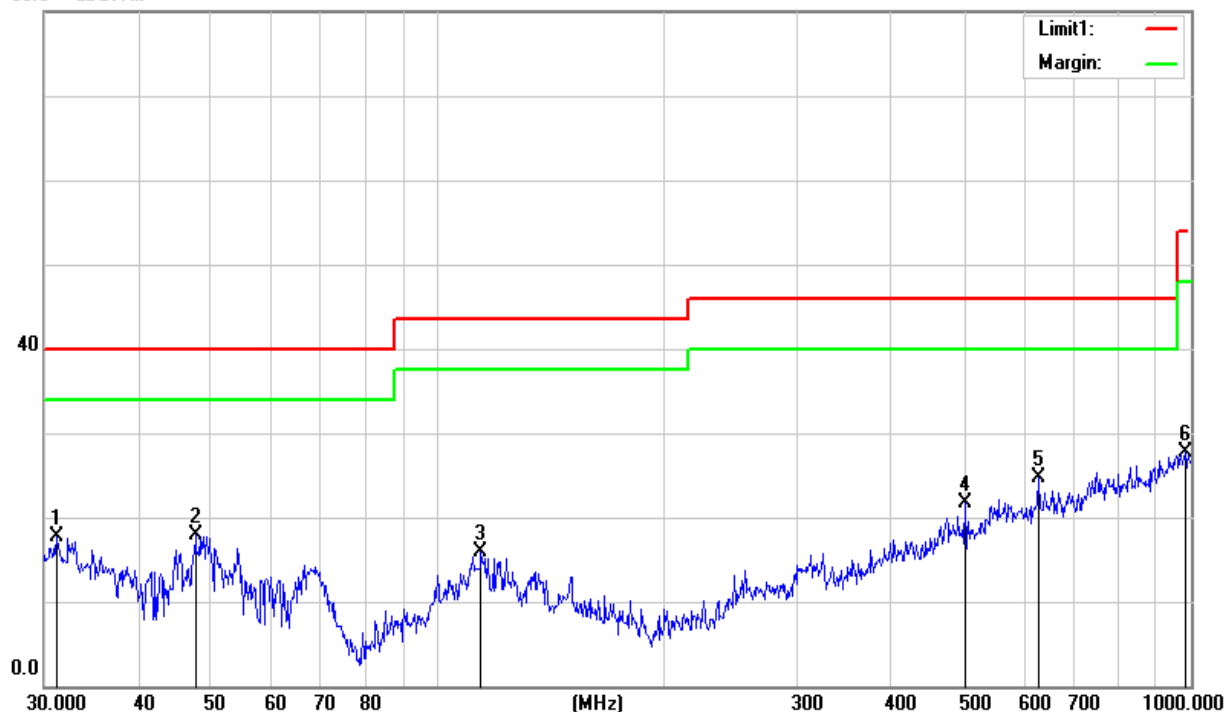
Temperature	22.6 °C	Relative Humidity:	40%
Test Voltage	DC 3.85V from Battery	Polarization	Horizontal
Test Mode	Mode 1-12(Mode 4-6M worst mode)		

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
31.1798	29.54	-11.79	17.75	40.00	-22.25	QP
47.6584	38.12	-20.27	17.85	40.00	-22.15	QP
114.1136	33.90	-18.07	15.83	43.50	-27.67	QP
501.1790	30.57	-8.90	21.67	46.00	-24.33	QP
627.2738	31.16	-6.42	24.74	46.00	-21.26	QP
982.6200	27.87	-0.14	27.73	54.00	-26.27	QP

Remark:

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

80.0 dBuV/m





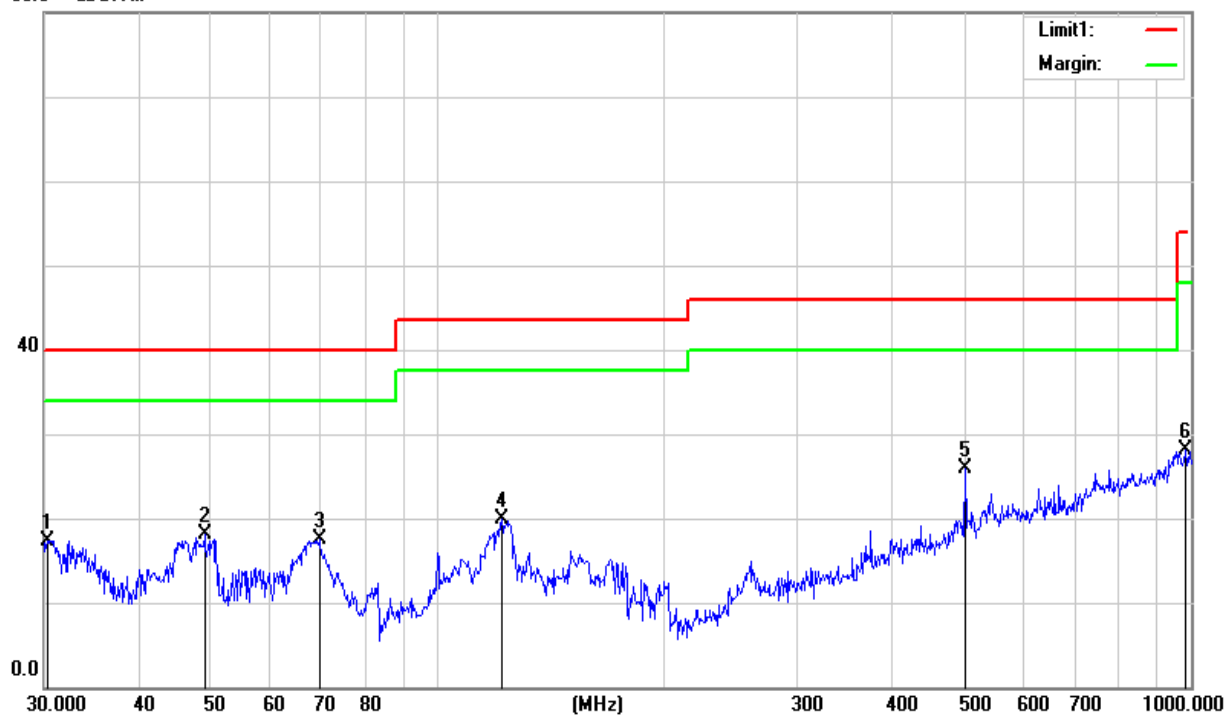
Temperature	22.6 °C	Relative Humidity:	40%
Test Voltage	DC 3.85V from Battery	Polarization	Vertical
Test Mode	Mode 1-12(Mode 4-6M worst mode)		

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
30.3170	28.73	-11.35	17.38	40.00	-22.62	QP
49.0144	39.03	-20.97	18.06	40.00	-21.94	QP
69.6003	41.66	-24.11	17.55	40.00	-22.45	QP
121.5485	37.59	-17.67	19.92	43.50	-23.58	QP
501.1790	34.90	-8.90	26.00	46.00	-20.00	QP
982.6200	28.28	-0.14	28.14	54.00	-25.86	QP

Remark:

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

80.0 dBuV/m





3.2.8 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)	Corrected Factor (dB)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11a/ 5180 MHz)										
3256.92	44.23	44.70	6.70	28.20	-9.80	34.43	74.00	-39.57	PK	Vertical
3256.92	41.60	44.70	6.70	28.20	-9.80	31.80	54.00	-22.20	AV	Vertical
3255.70	44.76	44.70	6.70	28.20	-9.80	34.96	74.00	-39.04	PK	Horizontal
3255.70	41.83	44.70	6.70	28.20	-9.80	32.03	54.00	-21.97	AV	Horizontal
3981.65	39.90	44.20	7.90	29.70	-6.60	33.30	74.00	-40.70	PK	Vertical
3981.65	36.18	44.20	7.90	29.70	-6.60	29.58	54.00	-24.42	AV	Vertical
3987.91	39.85	44.20	7.90	29.70	-6.60	33.25	74.00	-40.75	PK	Horizontal
3987.91	36.99	44.20	7.90	29.70	-6.60	30.39	54.00	-23.61	AV	Horizontal
7231.53	37.16	43.50	11.40	35.50	3.40	40.56	74.00	-33.44	PK	Vertical
7231.53	33.82	43.50	11.40	35.50	3.40	37.22	54.00	-16.78	AV	Vertical
7230.09	37.61	43.50	11.40	35.50	3.40	41.01	74.00	-32.99	PK	Horizontal
7230.09	34.60	43.50	11.40	35.50	3.40	38.00	54.00	-16.00	AV	Horizontal
10360.03	39.31	44.50	13.80	38.80	8.10	47.41	74.00	-26.59	PK	Vertical
10360.03	35.70	44.50	13.80	38.80	8.10	43.80	54.00	-10.20	AV	Vertical
10359.95	39.22	44.50	13.80	38.80	8.10	47.32	74.00	-26.68	PK	Horizontal
10359.95	36.06	44.50	13.80	38.80	8.10	44.16	54.00	-9.84	AV	Horizontal
11026.03	34.15	43.60	14.30	39.50	10.20	44.35	74.00	-29.65	PK	Vertical
11026.03	30.09	43.60	14.30	39.50	10.20	40.29	54.00	-13.71	AV	Vertical
11021.13	32.98	43.60	14.30	39.50	10.20	43.18	74.00	-30.82	PK	Horizontal
11021.13	30.65	43.60	14.30	39.50	10.20	40.85	54.00	-13.15	AV	Horizontal
13284.53	32.51	42.60	15.90	38.90	12.20	44.71	74.00	-29.29	PK	Vertical
13284.53	29.75	42.60	15.90	38.90	12.20	41.95	54.00	-12.05	AV	Vertical
13289.68	31.81	42.60	15.90	38.90	12.20	44.01	74.00	-29.99	PK	Horizontal
13289.68	28.55	42.60	15.90	38.90	12.20	40.75	54.00	-13.25	AV	Horizontal



Mid Channel (802.11 a/ 5200 MHz)										
3252.56	44.18	44.70	6.70	28.20	-9.80	34.38	74.00	-39.62	PK	Vertical
3252.56	41.84	44.70	6.70	28.20	-9.80	32.04	54.00	-21.96	AV	Vertical
3248.35	44.75	44.70	6.70	28.20	-9.80	34.95	74.00	-39.05	PK	Horizontal
3248.35	41.20	44.70	6.70	28.20	-9.80	31.40	54.00	-22.60	AV	Horizontal
3990.25	39.77	44.20	7.90	29.70	-6.60	33.17	74.00	-40.83	PK	Vertical
3990.25	36.66	44.20	7.90	29.70	-6.60	30.06	54.00	-23.94	AV	Vertical
3990.07	39.97	44.20	7.90	29.70	-6.60	33.37	74.00	-40.63	PK	Horizontal
3990.07	35.86	44.20	7.90	29.70	-6.60	29.26	54.00	-24.74	AV	Horizontal
7218.45	37.02	43.50	11.40	35.50	3.40	40.42	74.00	-33.58	PK	Vertical
7218.45	34.60	43.50	11.40	35.50	3.40	38.00	54.00	-16.00	AV	Vertical
7221.57	37.29	43.50	11.40	35.50	3.40	40.69	74.00	-33.31	PK	Horizontal
7221.57	34.13	43.50	11.40	35.50	3.40	37.53	54.00	-16.47	AV	Horizontal
10400.11	39.85	44.50	13.80	38.80	8.10	47.95	74.00	-26.05	PK	Vertical
10400.11	36.40	44.50	13.80	38.80	8.10	44.50	54.00	-9.50	AV	Vertical
10400.34	39.19	44.50	13.80	38.80	8.10	47.29	74.00	-26.71	PK	Horizontal
10400.34	35.89	44.50	13.80	38.80	8.10	43.99	54.00	-10.01	AV	Horizontal
11034.15	33.89	43.60	14.30	39.50	10.20	44.09	74.00	-29.91	PK	Vertical
11034.15	31.10	43.60	14.30	39.50	10.20	41.30	54.00	-12.70	AV	Vertical
11025.48	32.71	43.60	14.30	39.50	10.20	42.91	74.00	-31.09	PK	Horizontal
11025.48	29.74	43.60	14.30	39.50	10.20	39.94	54.00	-14.06	AV	Horizontal
13284.17	32.43	42.60	15.90	38.90	12.20	44.63	74.00	-29.37	PK	Vertical
13284.17	29.44	42.60	15.90	38.90	12.20	41.64	54.00	-12.36	AV	Vertical
13292.96	31.62	42.60	15.90	38.90	12.20	43.82	74.00	-30.18	PK	Horizontal
13292.96	29.57	42.60	15.90	38.90	12.20	41.77	54.00	-12.23	AV	Horizontal



Mid Channel (802.11 a/ 5240 MHz)										
3252.44	44.65	44.70	6.70	28.20	-9.80	34.85	74.00	-39.15	PK	Vertical
3252.44	41.09	44.70	6.70	28.20	-9.80	31.29	54.00	-22.71	AV	Vertical
3248.48	44.42	44.70	6.70	28.20	-9.80	34.62	74.00	-39.38	PK	Horizontal
3248.48	42.13	44.70	6.70	28.20	-9.80	32.33	54.00	-21.67	AV	Horizontal
3997.40	39.64	44.20	7.90	29.70	-6.60	33.04	74.00	-40.96	PK	Vertical
3997.40	36.46	44.20	7.90	29.70	-6.60	29.86	54.00	-24.14	AV	Vertical
4000.11	38.76	44.20	7.90	29.70	-6.60	32.16	74.00	-41.84	PK	Horizontal
4000.11	36.84	44.20	7.90	29.70	-6.60	30.24	54.00	-23.76	AV	Horizontal
7226.97	36.97	43.50	11.40	35.50	3.40	40.37	74.00	-33.63	PK	Vertical
7226.97	34.41	43.50	11.40	35.50	3.40	37.81	54.00	-16.19	AV	Vertical
7227.46	37.48	43.50	11.40	35.50	3.40	40.88	74.00	-33.12	PK	Horizontal
7227.46	34.72	43.50	11.40	35.50	3.40	38.12	54.00	-15.88	AV	Horizontal
10480.15	39.60	44.50	13.80	38.80	8.10	47.70	74.00	-26.30	PK	Vertical
10480.15	36.87	44.50	13.80	38.80	8.10	44.97	54.00	-9.03	AV	Vertical
10480.30	39.51	44.50	13.80	38.80	8.10	47.61	74.00	-26.39	PK	Horizontal
10480.30	36.93	44.50	13.80	38.80	8.10	45.03	54.00	-8.97	AV	Horizontal
11029.07	32.94	43.60	14.30	39.50	10.20	43.14	74.00	-30.86	PK	Vertical
11029.07	30.60	43.60	14.30	39.50	10.20	40.80	54.00	-13.20	AV	Vertical
11026.42	33.04	43.60	14.30	39.50	10.20	43.24	74.00	-30.76	PK	Horizontal
11026.42	30.79	43.60	14.30	39.50	10.20	40.99	54.00	-13.01	AV	Horizontal
13285.60	32.93	42.60	15.90	38.90	12.20	45.13	74.00	-28.87	PK	Vertical
13285.60	29.02	42.60	15.90	38.90	12.20	41.22	54.00	-12.78	AV	Vertical
13293.76	32.63	42.60	15.90	38.90	12.20	44.83	74.00	-29.17	PK	Horizontal
13293.76	28.57	42.60	15.90	38.90	12.20	40.77	54.00	-13.23	AV	Horizontal

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Scan with 802.11a, 802.11n (HT-20), 802.11n (HT-40), the worst case is 802.11a.
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.



Band II 5250-5350MHz

Band II(5.25-5.35) GHz										
Frequency (MHz)	Reading	Amplifier	Loss	Antenna Factor	Corrected Factor	Emission Level	Limit (dBuV/m)	Margin	Detector	Comment
	(dBuV)	(dB)	(dB)	(dB/m)	(dB)	(dBμV/m)		(dB)		
Low Channel (802.11 a/ 5260 MHz)										
3258.82	44.40	44.70	6.70	28.20	-9.80	34.60	74.00	-39.40	PK	Vertical
3258.82	41.02	44.70	6.70	28.20	-9.80	31.22	54.00	-22.78	AV	Vertical
3246.53	44.83	44.70	6.70	28.20	-9.80	35.03	74.00	-38.97	PK	Horizontal
3246.53	41.90	44.70	6.70	28.20	-9.80	32.10	54.00	-21.90	AV	Horizontal
3985.88	39.29	44.20	7.90	29.70	-6.60	32.69	74.00	-41.31	PK	Vertical
3985.88	36.09	44.20	7.90	29.70	-6.60	29.49	54.00	-24.51	AV	Vertical
3983.30	39.53	44.20	7.90	29.70	-6.60	32.93	74.00	-41.07	PK	Horizontal
3983.30	36.70	44.20	7.90	29.70	-6.60	30.10	54.00	-23.90	AV	Horizontal
7217.77	37.35	43.50	11.40	35.50	3.40	40.75	74.00	-33.25	PK	Vertical
7217.77	34.27	43.50	11.40	35.50	3.40	37.67	54.00	-16.33	AV	Vertical
7225.11	37.06	43.50	11.40	35.50	3.40	40.46	74.00	-33.54	PK	Horizontal
7225.11	34.35	43.50	11.40	35.50	3.40	37.75	54.00	-16.25	AV	Horizontal
10520.06	39.31	44.50	13.90	38.80	8.20	47.51	74.00	-26.49	PK	Vertical
10520.06	37.01	44.50	13.90	38.80	8.20	45.21	54.00	-8.79	AV	Vertical
10520.05	39.14	44.50	13.90	38.80	8.20	47.34	74.00	-26.66	PK	Horizontal
10520.05	35.83	44.50	13.90	38.80	8.20	44.03	54.00	-9.97	AV	Horizontal
11034.26	33.24	43.60	14.30	39.50	10.20	43.44	74.00	-30.56	PK	Vertical
11034.26	30.33	43.60	14.30	39.50	10.20	40.53	54.00	-13.47	AV	Vertical
11026.16	33.01	43.60	14.30	39.50	10.20	43.21	74.00	-30.79	PK	Horizontal
11026.16	29.95	43.60	14.30	39.50	10.20	40.15	54.00	-13.85	AV	Horizontal
13288.46	32.68	42.60	15.90	38.90	12.20	44.88	74.00	-29.12	PK	Vertical
13288.46	29.52	42.60	15.90	38.90	12.20	41.72	54.00	-12.28	AV	Vertical
13286.47	32.32	42.60	15.90	38.90	12.20	44.52	74.00	-29.48	PK	Horizontal
13286.47	28.95	42.60	15.90	38.90	12.20	41.15	54.00	-12.85	AV	Horizontal



Mid Channel (802.11 n20/ 5300 MHz)										
3258.16	44.48	44.70	6.70	28.20	-9.80	34.68	74.00	-39.32	PK	Vertical
3258.16	42.00	44.70	6.70	28.20	-9.80	32.20	54.00	-21.80	AV	Vertical
3249.52	45.19	44.70	6.70	28.20	-9.80	35.39	74.00	-38.61	PK	Horizontal
3249.52	42.22	44.70	6.70	28.20	-9.80	32.42	54.00	-21.58	AV	Horizontal
3997.16	39.98	44.20	7.90	29.70	-6.60	33.38	74.00	-40.62	PK	Vertical
3997.16	35.92	44.20	7.90	29.70	-6.60	29.32	54.00	-24.68	AV	Vertical
3999.05	39.62	44.20	7.90	29.70	-6.60	33.02	74.00	-40.98	PK	Horizontal
3999.05	37.02	44.20	7.90	29.70	-6.60	30.42	54.00	-23.58	AV	Horizontal
7218.31	37.54	43.50	11.40	35.50	3.40	40.94	74.00	-33.06	PK	Vertical
7218.31	34.21	43.50	11.40	35.50	3.40	37.61	54.00	-16.39	AV	Vertical
7227.77	37.07	43.50	11.40	35.50	3.40	40.47	74.00	-33.53	PK	Horizontal
7227.77	33.81	43.50	11.40	35.50	3.40	37.21	54.00	-16.79	AV	Horizontal
10600.33	38.85	44.50	13.80	38.80	8.10	46.95	74.00	-27.05	PK	Vertical
10600.33	37.15	44.50	13.80	38.80	8.10	45.25	54.00	-8.75	AV	Vertical
10600.24	39.32	44.50	13.80	38.80	8.10	47.42	74.00	-26.58	PK	Horizontal
10600.24	36.19	44.50	13.80	38.80	8.10	44.29	54.00	-9.71	AV	Horizontal
11026.57	33.59	43.60	14.30	39.50	10.20	43.79	74.00	-30.21	PK	Vertical
11026.57	29.92	43.60	14.30	39.50	10.20	40.12	54.00	-13.88	AV	Vertical
11022.79	32.91	43.60	14.30	39.50	10.20	43.11	74.00	-30.89	PK	Horizontal
11022.79	29.96	43.60	14.30	39.50	10.20	40.16	54.00	-13.84	AV	Horizontal
13291.44	31.97	42.60	15.90	38.90	12.20	44.17	74.00	-29.83	PK	Vertical
13291.44	29.02	42.60	15.90	38.90	12.20	41.22	54.00	-12.78	AV	Vertical
13289.20	32.77	42.60	15.90	38.90	12.20	44.97	74.00	-29.03	PK	Horizontal
13289.20	29.89	42.60	15.90	38.90	12.20	42.09	54.00	-11.91	AV	Horizontal



Mid Channel (802.11 a/ 5320 MHz)										
3259.48	45.02	44.70	6.70	28.20	-9.80	35.22	74.00	-38.78	PK	Vertical
3259.48	41.20	44.70	6.70	28.20	-9.80	31.40	54.00	-22.60	AV	Vertical
3252.25	44.13	44.70	6.70	28.20	-9.80	34.33	74.00	-39.67	PK	Horizontal
3252.25	41.92	44.70	6.70	28.20	-9.80	32.12	54.00	-21.88	AV	Horizontal
3991.24	39.83	44.20	7.90	29.70	-6.60	33.23	74.00	-40.77	PK	Vertical
3991.24	36.13	44.20	7.90	29.70	-6.60	29.53	54.00	-24.47	AV	Vertical
3999.67	39.18	44.20	7.90	29.70	-6.60	32.58	74.00	-41.42	PK	Horizontal
3999.67	36.43	44.20	7.90	29.70	-6.60	29.83	54.00	-24.17	AV	Horizontal
7228.08	37.85	43.50	11.40	35.50	3.40	41.25	74.00	-32.75	PK	Vertical
7228.08	33.89	43.50	11.40	35.50	3.40	37.29	54.00	-16.71	AV	Vertical
7217.81	37.58	43.50	11.40	35.50	3.40	40.98	74.00	-33.02	PK	Horizontal
7217.81	34.03	43.50	11.40	35.50	3.40	37.43	54.00	-16.57	AV	Horizontal
10639.97	39.72	44.50	13.80	38.80	8.10	47.82	74.00	-26.18	PK	Vertical
10639.97	36.44	44.50	13.80	38.80	8.10	44.54	54.00	-9.46	AV	Vertical
10640.19	39.04	44.50	13.80	38.80	8.10	47.14	74.00	-26.86	PK	Horizontal
10640.19	36.42	44.50	13.80	38.80	8.10	44.52	54.00	-9.48	AV	Horizontal
11027.08	34.07	43.60	14.30	39.50	10.20	44.27	74.00	-29.73	PK	Vertical
11027.08	30.42	43.60	14.30	39.50	10.20	40.62	54.00	-13.38	AV	Vertical
11021.53	32.68	43.60	14.30	39.50	10.20	42.88	74.00	-31.12	PK	Horizontal
11021.53	30.93	43.60	14.30	39.50	10.20	41.13	54.00	-12.87	AV	Horizontal
13294.93	32.91	42.70	18.00	37.10	12.40	45.31	74.00	-28.69	PK	Vertical
13294.93	28.89	42.70	18.00	37.10	12.40	41.29	54.00	-12.71	AV	Vertical
13291.31	32.86	42.70	18.00	37.10	12.40	45.26	74.00	-28.74	PK	Horizontal
13291.31	28.76	42.70	18.00	37.10	12.40	41.16	54.00	-12.84	AV	Horizontal

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Scan with 802.11a, 802.11n (HT-20), 802.11n (HT-40), the worst case is 802.11a.
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.

**Band III 5470-5725MHz**

Band III(5.47-5.725) GHz										
Frequency (MHz)	Reading	Amplifier	Loss	Antenna Factor	Corrected Factor	Emission Level	Limit (dBuV/m)	Margin	Detector	Comment
	(dBuV)	(dB)	(dB)	(dB/m)	(dB)	(dBuV/m)		(dB)		
Low Channel (802.11 n20/ 5500 MHz)										
3253.25	44.67	44.70	6.70	28.20	-9.80	34.87	74.00	-39.13	PK	Vertical
3253.25	40.97	44.70	6.70	28.20	-9.80	31.17	54.00	-22.83	AV	Vertical
3246.84	45.13	44.70	6.70	28.20	-9.80	35.33	74.00	-38.67	PK	Horizontal
3246.84	41.15	44.70	6.70	28.20	-9.80	31.35	54.00	-22.65	AV	Horizontal
3994.25	39.48	44.20	7.90	29.70	-6.60	32.88	74.00	-41.12	PK	Vertical
3994.25	36.56	44.20	7.90	29.70	-6.60	29.96	54.00	-24.04	AV	Vertical
3999.81	40.12	44.20	7.90	29.70	-6.60	33.52	74.00	-40.48	PK	Horizontal
3999.81	36.78	44.20	7.90	29.70	-6.60	30.18	54.00	-23.82	AV	Horizontal
7231.22	36.70	43.50	11.40	35.50	3.40	40.10	74.00	-33.90	PK	Vertical
7231.22	34.91	43.50	11.40	35.50	3.40	38.31	54.00	-15.69	AV	Vertical
7221.21	37.72	43.50	11.40	35.50	3.40	41.12	74.00	-32.88	PK	Horizontal
7221.21	33.79	43.50	11.40	35.50	3.40	37.19	54.00	-16.81	AV	Horizontal
10346.34	39.38	44.50	13.80	38.80	8.10	47.48	74.00	-26.52	PK	Vertical
10346.34	36.90	44.50	13.80	38.80	8.10	45.00	54.00	-9.00	AV	Vertical
10358.51	39.94	44.50	13.80	38.80	8.10	48.04	74.00	-25.96	PK	Horizontal
10358.51	36.28	44.50	13.80	38.80	8.10	44.38	54.00	-9.62	AV	Horizontal
11000.05	34.05	43.60	14.30	39.50	10.20	44.25	74.00	-29.75	PK	Vertical
11000.05	30.78	43.60	14.30	39.50	10.20	40.98	54.00	-13.02	AV	Vertical
11000.02	33.60	43.60	14.30	39.50	10.20	43.80	74.00	-30.20	PK	Horizontal
11000.02	30.75	43.60	14.30	39.50	10.20	40.95	54.00	-13.05	AV	Horizontal
13283.47	32.28	42.60	15.90	38.90	12.20	44.48	74.00	-29.52	PK	Vertical
13283.47	29.92	42.60	15.90	38.90	12.20	42.12	54.00	-11.88	AV	Vertical
13295.15	31.94	42.60	15.90	38.90	12.20	44.14	74.00	-29.86	PK	Horizontal
13295.15	29.46	42.60	15.90	38.90	12.20	41.66	54.00	-12.34	AV	Horizontal



Mid Channel (802.11 n20/ 5580 MHz)										
3255.98	44.50	44.70	6.70	28.20	-9.80	34.70	74.00	-39.30	PK	Vertical
3255.98	41.13	44.70	6.70	28.20	-9.80	31.33	54.00	-22.67	AV	Vertical
3251.68	44.70	44.70	6.70	28.20	-9.80	34.90	74.00	-39.10	PK	Horizontal
3251.68	41.09	44.70	6.70	28.20	-9.80	31.29	54.00	-22.71	AV	Horizontal
3980.79	39.28	44.20	7.90	29.70	-6.60	32.68	74.00	-41.32	PK	Vertical
3980.79	35.75	44.20	7.90	29.70	-6.60	29.15	54.00	-24.85	AV	Vertical
3988.70	38.95	44.20	7.90	29.70	-6.60	32.35	74.00	-41.65	PK	Horizontal
3988.70	36.06	44.20	7.90	29.70	-6.60	29.46	54.00	-24.54	AV	Horizontal
7231.03	36.56	43.50	11.40	35.50	3.40	39.96	74.00	-34.04	PK	Vertical
7231.03	34.59	43.50	11.40	35.50	3.40	37.99	54.00	-16.01	AV	Vertical
7231.10	37.26	43.50	11.40	35.50	3.40	40.66	74.00	-33.34	PK	Horizontal
7231.10	33.65	43.50	11.40	35.50	3.40	37.05	54.00	-16.95	AV	Horizontal
10387.16	39.40	44.50	13.80	38.80	8.10	47.50	74.00	-26.50	PK	Vertical
10387.16	35.70	44.50	13.80	38.80	8.10	43.80	54.00	-10.20	AV	Vertical
10399.14	40.09	44.50	13.80	38.80	8.10	48.19	74.00	-25.81	PK	Horizontal
10399.14	36.04	44.50	13.80	38.80	8.10	44.14	54.00	-9.86	AV	Horizontal
11160.38	33.28	43.60	14.30	39.50	10.20	43.48	74.00	-30.52	PK	Vertical
11160.38	30.83	43.60	14.30	39.50	10.20	41.03	54.00	-12.97	AV	Vertical
11160.19	33.40	43.60	14.30	39.50	10.20	43.60	74.00	-30.40	PK	Horizontal
11160.19	31.10	43.60	14.30	39.50	10.20	41.30	54.00	-12.70	AV	Horizontal
13293.74	32.21	42.60	15.90	38.90	12.20	44.41	74.00	-29.59	PK	Vertical
13293.74	28.80	42.60	15.90	38.90	12.20	41.00	54.00	-13.00	AV	Vertical
13294.24	32.90	42.60	15.90	38.90	12.20	45.10	74.00	-28.90	PK	Horizontal
13294.24	29.80	42.60	15.90	38.90	12.20	42.00	54.00	-12.00	AV	Horizontal



Mid Channel (802.11 n20/ 5700 MHz)										
3263.13	45.09	44.70	6.70	28.20	-9.80	35.29	74.00	-38.71	PK	Vertical
3263.13	41.73	44.70	6.70	28.20	-9.80	31.93	54.00	-22.07	AV	Vertical
3262.61	43.83	44.70	6.70	28.20	-9.80	34.03	74.00	-39.97	PK	Horizontal
3262.61	41.72	44.70	6.70	28.20	-9.80	31.92	54.00	-22.08	AV	Horizontal
4000.24	39.57	44.20	7.90	29.70	-6.60	32.97	74.00	-41.03	PK	Vertical
4000.24	36.42	44.20	7.90	29.70	-6.60	29.82	54.00	-24.18	AV	Vertical
3982.70	39.61	44.20	7.90	29.70	-6.60	33.01	74.00	-40.99	PK	Horizontal
3982.70	36.15	44.20	7.90	29.70	-6.60	29.55	54.00	-24.45	AV	Horizontal
7229.92	36.81	43.50	11.40	35.50	3.40	40.21	74.00	-33.79	PK	Vertical
7229.92	33.72	43.50	11.40	35.50	3.40	37.12	54.00	-16.88	AV	Vertical
7232.40	37.15	43.50	11.40	35.50	3.40	40.55	74.00	-33.45	PK	Horizontal
7232.40	33.63	43.50	11.40	35.50	3.40	37.03	54.00	-16.97	AV	Horizontal
10467.13	39.50	44.50	13.80	38.80	8.10	47.60	74.00	-26.40	PK	Vertical
10467.13	36.73	44.50	13.80	38.80	8.10	44.83	54.00	-9.17	AV	Vertical
10462.19	39.45	44.50	13.80	38.80	8.10	47.55	74.00	-26.45	PK	Horizontal
10462.19	36.92	44.50	13.80	38.80	8.10	45.02	54.00	-8.98	AV	Horizontal
11400.21	33.11	43.60	14.30	39.50	10.20	43.31	74.00	-30.69	PK	Vertical
11400.21	30.10	43.60	14.30	39.50	10.20	40.30	54.00	-13.70	AV	Vertical
11400.13	33.29	43.60	14.30	39.50	10.20	43.49	74.00	-30.51	PK	Horizontal
11400.13	30.20	43.60	14.30	39.50	10.20	40.40	54.00	-13.60	AV	Horizontal
13289.81	32.80	42.60	15.90	38.90	12.20	45.00	74.00	-29.00	PK	Vertical
13289.81	30.00	42.60	15.90	38.90	12.20	42.20	54.00	-11.80	AV	Vertical
13291.33	31.68	42.60	15.90	38.90	12.20	43.88	74.00	-30.12	PK	Horizontal
13291.33	28.65	42.60	15.90	38.90	12.20	40.85	54.00	-13.15	AV	Horizontal

Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Scan with 802.11a, 802.11n (HT-20), 802.11n (HT-40), 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.



Band IV(5.725-5.850) GHz

Band IV(5.725-5.85) GHz										
Frequency (MHz)	Reading	Amplifier	Loss	Antenna Factor	Corrected Factor	Emission Level	Limit (dBuV/m)	Margin	Detector	Comment
	(dBuV)	(dB)	(dB)	(dB/m)	(dB)	(dBμV/m)		(dB)		
Low Channel (802.11a/ 5745 MHz)										
3260.55	45.08	44.70	6.70	28.20	-9.80	35.28	74.00	-38.72	PK	Vertical
3260.55	40.97	44.70	6.70	28.20	-9.80	31.17	54.00	-22.83	AV	Vertical
3258.93	44.03	44.70	6.70	28.20	-9.80	34.23	74.00	-39.77	PK	Horizontal
3258.93	42.14	44.70	6.70	28.20	-9.80	32.34	54.00	-21.66	AV	Horizontal
3995.08	38.99	44.20	7.90	29.70	-6.60	32.39	74.00	-41.61	PK	Vertical
3995.08	35.71	44.20	7.90	29.70	-6.60	29.11	54.00	-24.89	AV	Vertical
3994.84	38.96	44.20	7.90	29.70	-6.60	32.36	74.00	-41.64	PK	Horizontal
3994.84	36.73	44.20	7.90	29.70	-6.60	30.13	54.00	-23.87	AV	Horizontal
7219.19	36.59	43.50	11.40	35.50	3.40	39.99	74.00	-34.01	PK	Vertical
7219.19	33.91	43.50	11.40	35.50	3.40	37.31	54.00	-16.69	AV	Vertical
7232.45	37.19	43.50	11.40	35.50	3.40	40.59	74.00	-33.41	PK	Horizontal
7232.45	33.96	43.50	11.40	35.50	3.40	37.36	54.00	-16.64	AV	Horizontal
10503.47	39.01	44.50	13.90	38.80	8.20	47.21	74.00	-26.79	PK	Vertical
10503.47	36.57	44.50	13.90	38.80	8.20	44.77	54.00	-9.23	AV	Vertical
10512.40	39.62	44.50	13.90	38.80	8.20	47.82	74.00	-26.18	PK	Horizontal
10512.40	36.33	44.50	13.90	38.80	8.20	44.53	54.00	-9.47	AV	Horizontal
11490.26	32.85	43.60	14.30	39.50	10.20	43.05	74.00	-30.95	PK	Vertical
11490.26	30.93	43.60	14.30	39.50	10.20	41.13	54.00	-12.87	AV	Vertical
11490.42	33.01	43.60	14.30	39.50	10.20	43.21	74.00	-30.79	PK	Horizontal
11490.42	29.80	43.60	14.30	39.50	10.20	40.00	54.00	-14.00	AV	Horizontal
13282.97	31.57	42.60	15.90	38.90	12.20	43.77	74.00	-30.23	PK	Vertical
13282.97	28.94	42.60	15.90	38.90	12.20	41.14	54.00	-12.86	AV	Vertical
13291.89	32.13	42.60	15.90	38.90	12.20	44.33	74.00	-29.67	PK	Horizontal
13291.89	28.80	42.60	15.90	38.90	12.20	41.00	54.00	-13.00	AV	Horizontal



Mid Channel (802.11 a/ 5785 MHz)										
3253.96	44.93	44.70	6.70	28.20	-9.80	35.13	74.00	-38.87	PK	Vertical
3253.96	41.44	44.70	6.70	28.20	-9.80	31.64	54.00	-22.36	AV	Vertical
3252.04	44.60	44.70	6.70	28.20	-9.80	34.80	74.00	-39.20	PK	Horizontal
3252.04	40.96	44.70	6.70	28.20	-9.80	31.16	54.00	-22.84	AV	Horizontal
3994.66	39.17	44.20	7.90	29.70	-6.60	32.57	74.00	-41.43	PK	Vertical
3994.66	36.37	44.20	7.90	29.70	-6.60	29.77	54.00	-24.23	AV	Vertical
3985.27	38.76	44.20	7.90	29.70	-6.60	32.16	74.00	-41.84	PK	Horizontal
3985.27	37.13	44.20	7.90	29.70	-6.60	30.53	54.00	-23.47	AV	Horizontal
7217.56	37.51	43.50	11.40	35.50	3.40	40.91	74.00	-33.09	PK	Vertical
7217.56	33.59	43.50	11.40	35.50	3.40	36.99	54.00	-17.01	AV	Vertical
7228.66	36.69	43.50	11.40	35.50	3.40	40.09	74.00	-33.91	PK	Horizontal
7228.66	34.88	43.50	11.40	35.50	3.40	38.28	54.00	-15.72	AV	Horizontal
10587.88	39.34	44.50	13.80	38.80	8.10	47.44	74.00	-26.56	PK	Vertical
10587.88	35.88	44.50	13.80	38.80	8.10	43.98	54.00	-10.02	AV	Vertical
10589.97	39.72	44.50	13.80	38.80	8.10	47.82	74.00	-26.18	PK	Horizontal
10589.97	36.78	44.50	13.80	38.80	8.10	44.88	54.00	-9.12	AV	Horizontal
11569.96	33.84	43.60	14.30	39.50	10.20	44.04	74.00	-29.96	PK	Vertical
11569.96	29.74	43.60	14.30	39.50	10.20	39.94	54.00	-14.06	AV	Vertical
11570.16	33.71	43.60	14.30	39.50	10.20	43.91	74.00	-30.09	PK	Horizontal
11570.16	30.61	43.60	14.30	39.50	10.20	40.81	54.00	-13.19	AV	Horizontal
13294.99	31.87	42.60	15.90	38.90	12.20	44.07	74.00	-29.93	PK	Vertical
13294.99	29.88	42.60	15.90	38.90	12.20	42.08	54.00	-11.92	AV	Vertical
13293.58	32.61	42.60	15.90	38.90	12.20	44.81	74.00	-29.19	PK	Horizontal
13293.58	29.90	42.60	15.90	38.90	12.20	42.10	54.00	-11.90	AV	Horizontal



Mid Channel (802.11 a/ 5825 MHz)										
3258.17	44.36	44.70	6.70	28.20	-9.80	34.56	74.00	-39.44	PK	Vertical
3258.17	41.80	44.70	6.70	28.20	-9.80	32.00	54.00	-22.00	AV	Vertical
3257.12	43.77	44.70	6.70	28.20	-9.80	33.97	74.00	-40.03	PK	Horizontal
3257.12	40.99	44.70	6.70	28.20	-9.80	31.19	54.00	-22.81	AV	Horizontal
3998.27	38.95	44.20	7.90	29.70	-6.60	32.35	74.00	-41.65	PK	Vertical
3998.27	35.74	44.20	7.90	29.70	-6.60	29.14	54.00	-24.86	AV	Vertical
3986.26	39.38	44.20	7.90	29.70	-6.60	32.78	74.00	-41.22	PK	Horizontal
3986.26	36.80	44.20	7.90	29.70	-6.60	30.20	54.00	-23.80	AV	Horizontal
7222.19	36.92	43.50	11.40	35.50	3.40	40.32	74.00	-33.68	PK	Vertical
7222.19	34.61	43.50	11.40	35.50	3.40	38.01	54.00	-15.99	AV	Vertical
7230.77	36.92	43.50	11.40	35.50	3.40	40.32	74.00	-33.68	PK	Horizontal
7230.77	34.43	43.50	11.40	35.50	3.40	37.83	54.00	-16.17	AV	Horizontal
10625.19	39.97	44.50	13.80	38.80	8.10	48.07	74.00	-25.93	PK	Vertical
10625.19	36.48	44.50	13.80	38.80	8.10	44.58	54.00	-9.42	AV	Vertical
10640.16	39.61	44.50	13.80	38.80	8.10	47.71	74.00	-26.29	PK	Horizontal
10640.16	36.53	44.50	13.80	38.80	8.10	44.63	54.00	-9.37	AV	Horizontal
11649.96	33.96	43.60	14.30	39.50	10.20	44.16	74.00	-29.84	PK	Vertical
11649.96	30.97	43.60	14.30	39.50	10.20	41.17	54.00	-12.83	AV	Vertical
11650.16	32.92	43.60	14.30	39.50	10.20	43.12	74.00	-30.88	PK	Horizontal
11650.16	30.48	43.60	14.30	39.50	10.20	40.68	54.00	-13.32	AV	Horizontal
13296.91	32.93	42.70	18.00	37.10	12.40	45.33	74.00	-28.67	PK	Vertical
13296.91	28.72	42.70	18.00	37.10	12.40	41.12	54.00	-12.88	AV	Vertical
13282.96	31.63	42.70	18.00	37.10	12.40	44.03	74.00	-29.97	PK	Horizontal
13282.96	29.51	42.70	18.00	37.10	12.40	41.91	54.00	-12.09	AV	Horizontal

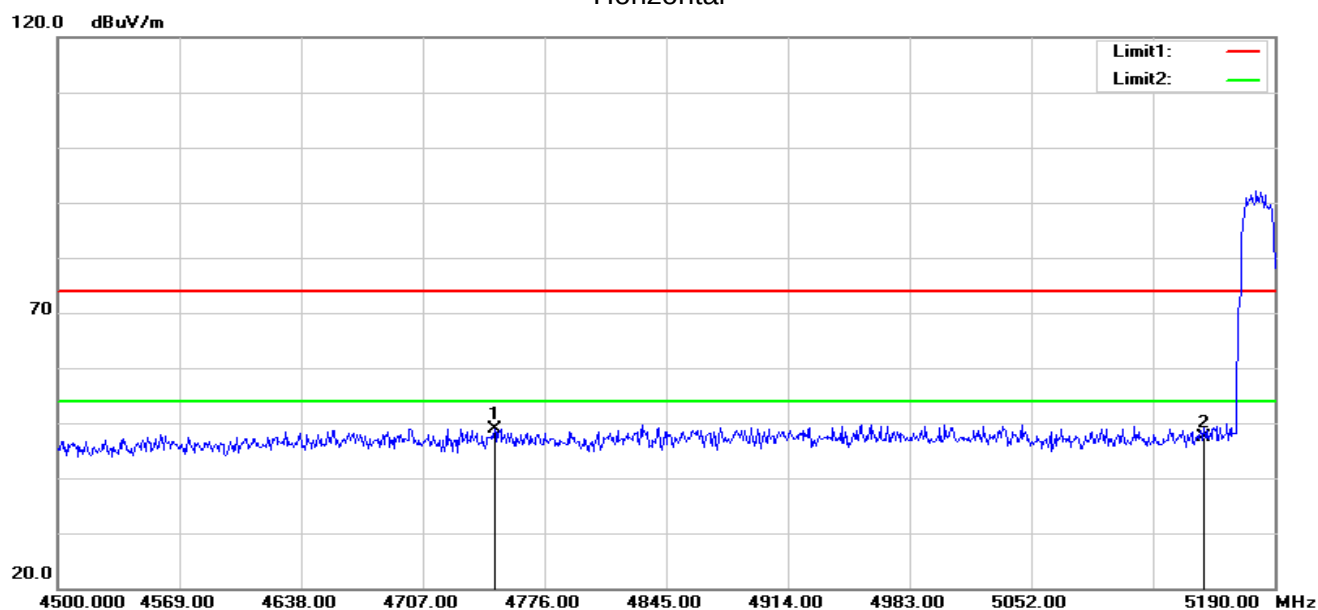
Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Scan with 802.11a, 802.11n (HT-20), 802.11n (HT-40), the worst case is 802.11a.
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.



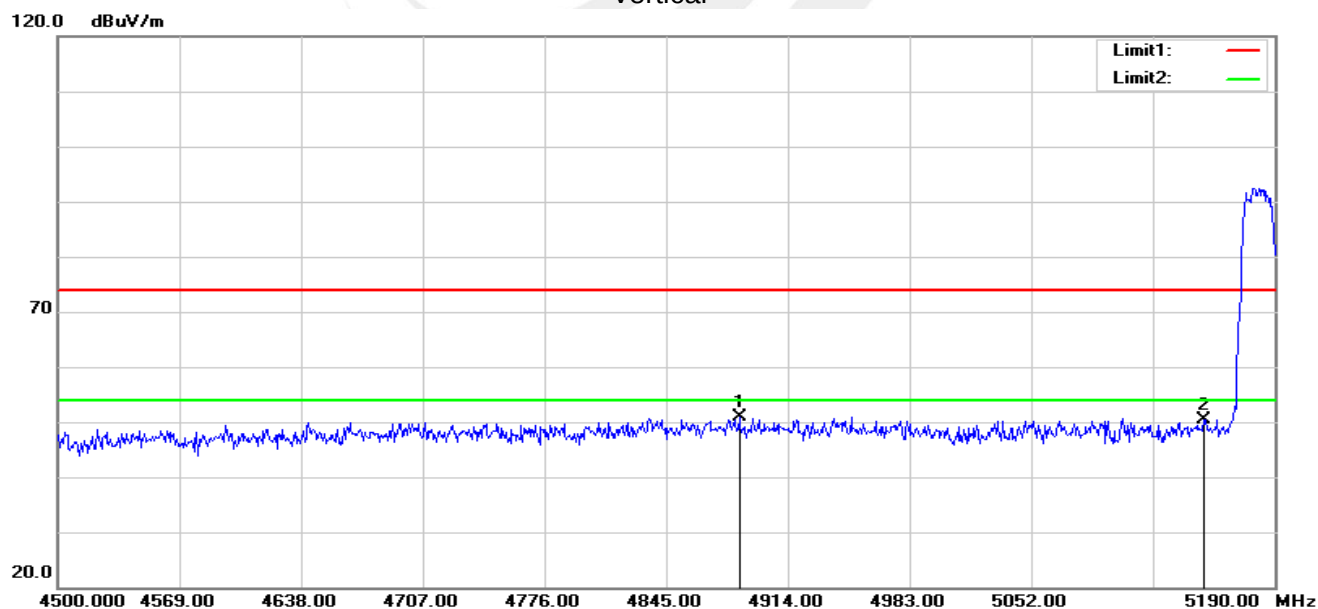
3.2.9 Band Edge

Band I 5150-5250MHz

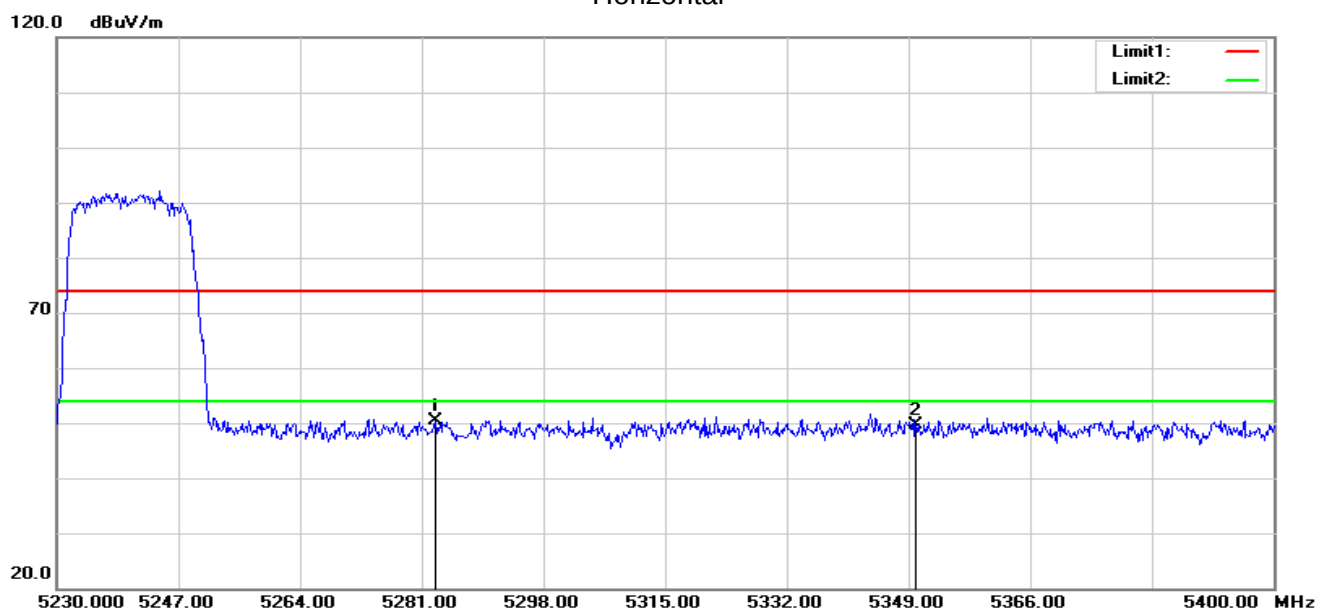
802.11a Low
Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4747.710	52.43	-3.49	48.94	74.00	-25.06	peak
2	5150.000	49.57	-2.22	47.35	74.00	-26.65	peak

Vertical

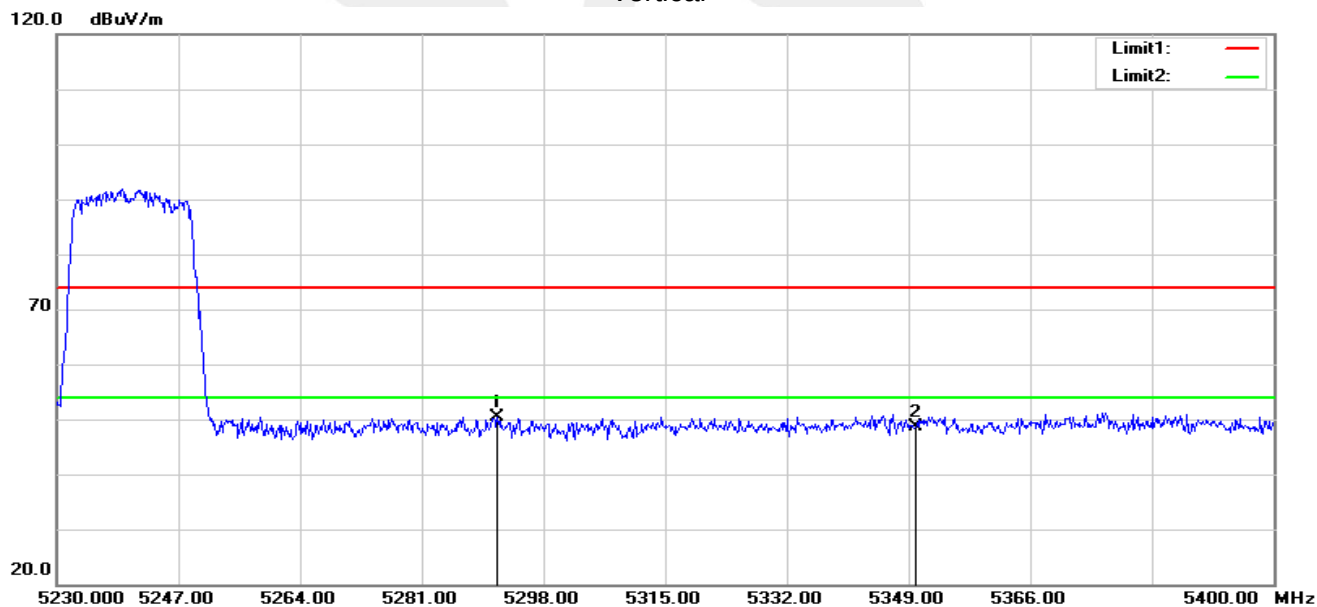


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4886.400	53.87	-3.05	50.82	74.00	-23.18	peak
2	5150.000	52.50	-2.22	50.28	74.00	-23.72	peak

**802.11a High**
Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5282.870	52.42	-1.93	50.49	74.00	-23.51	peak
2	5350.000	51.54	-1.84	49.70	74.00	-24.30	peak

Vertical

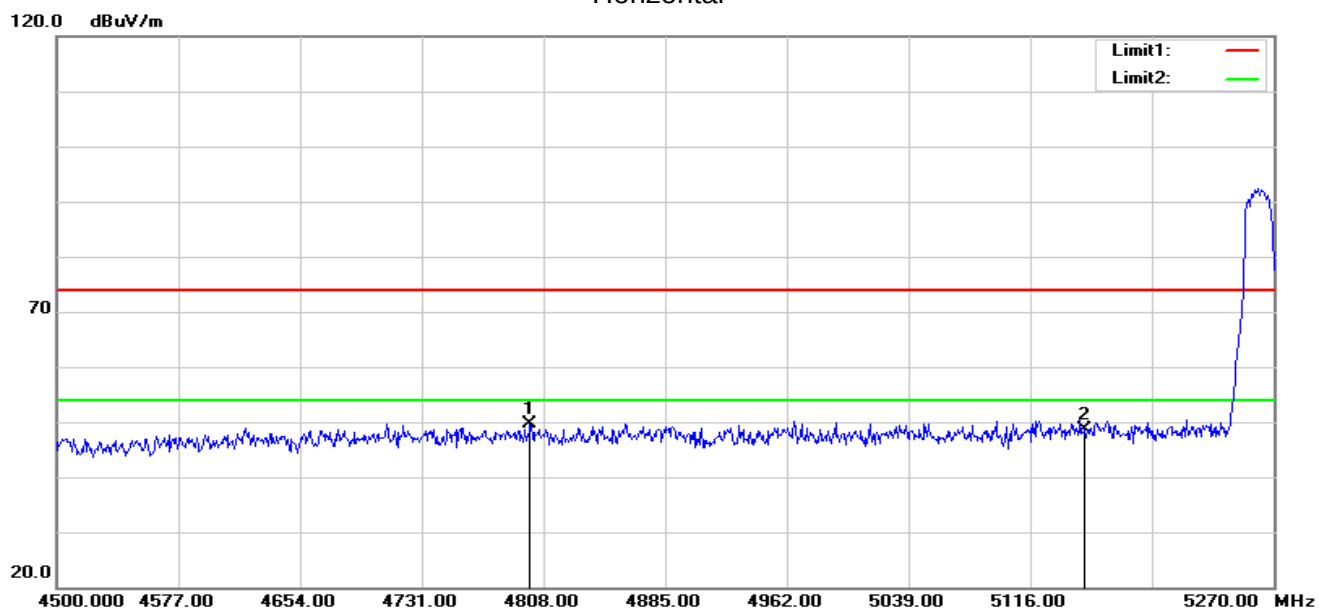


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5291.540	52.33	-1.92	50.41	74.00	-23.59	peak
2	5350.000	50.45	-1.84	48.61	74.00	-25.39	peak

Note: 802.11a,802.11n (HT-20),802.11n (HT-40) all has been tested, the worst case is 802.11a,only shown the worst case.

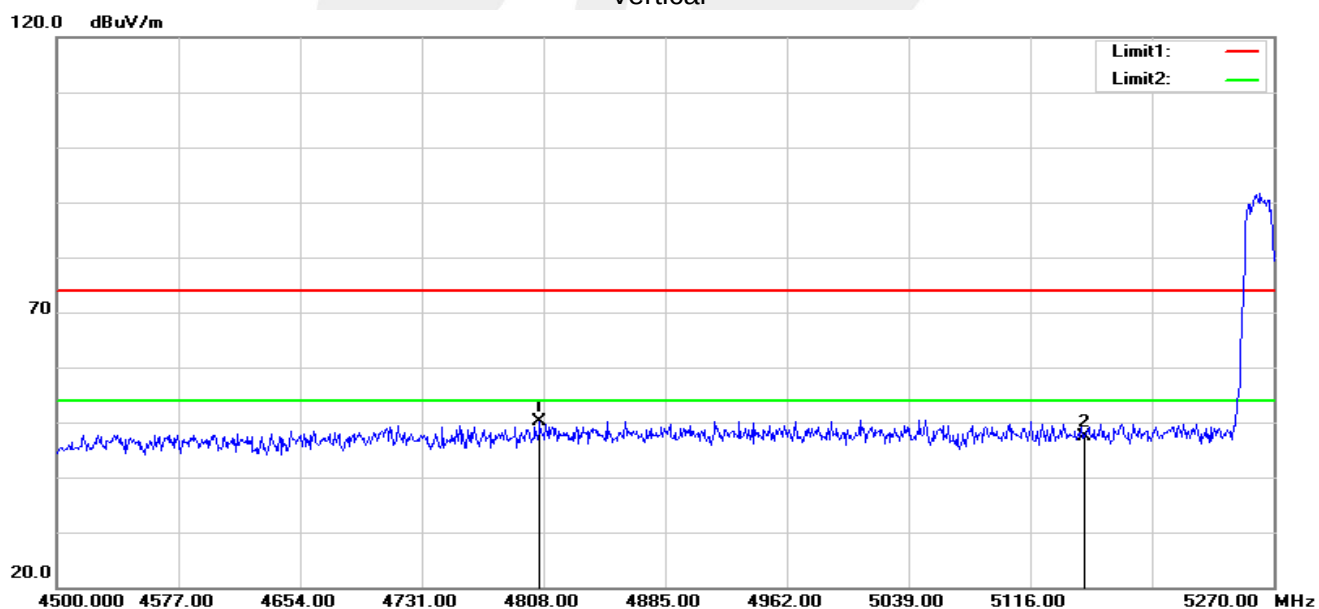


Band II 5250-5350MHz

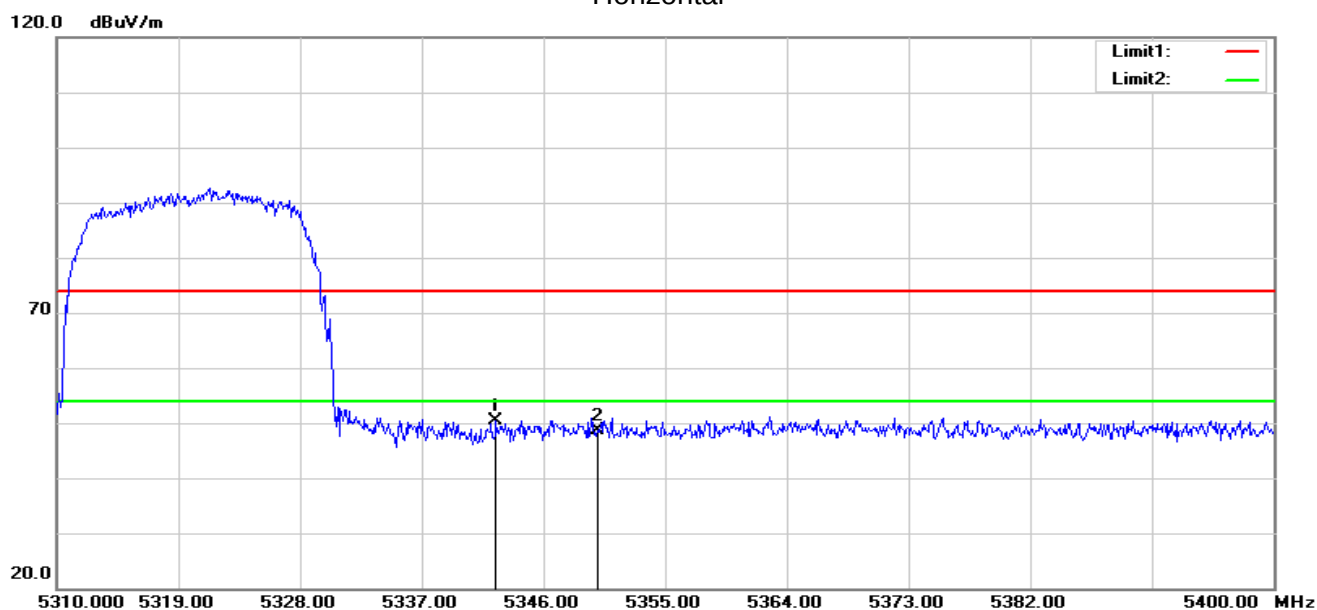
802.11a Low
Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4799.530	52.93	-3.27	49.66	74.00	-24.34	peak
2	5150.000	50.77	-2.22	48.55	74.00	-25.45	peak

Vertical

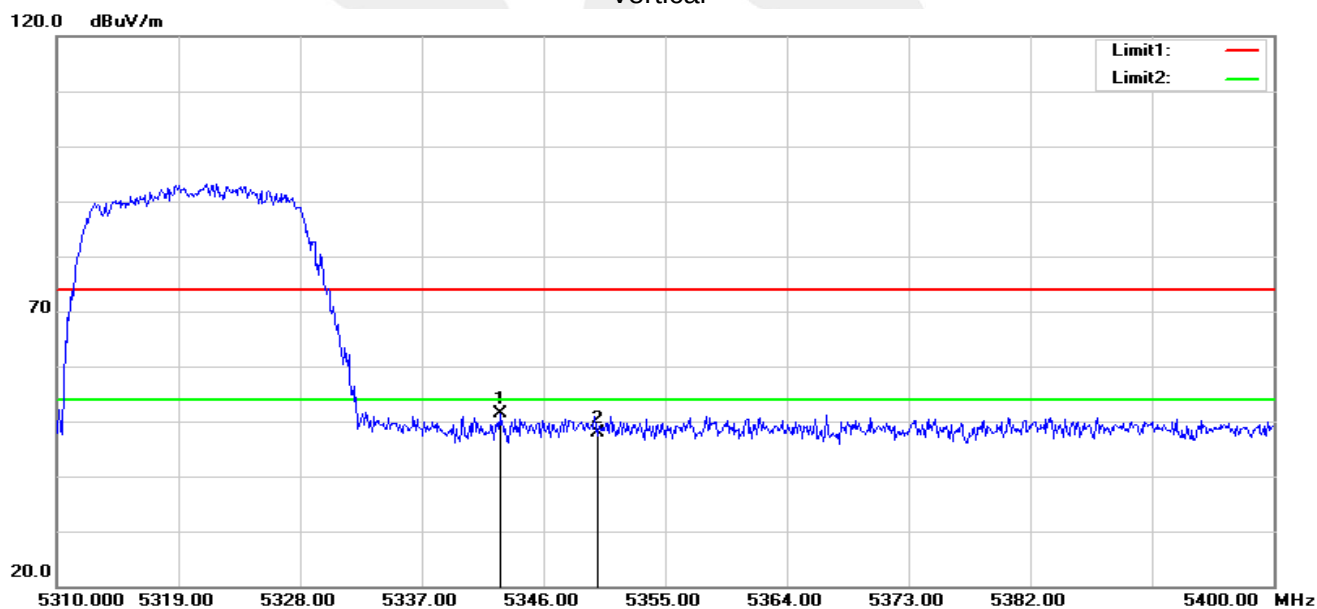


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4805.690	53.42	-3.25	50.17	74.00	-23.83	peak
2	5150.000	49.68	-2.22	47.46	74.00	-26.54	peak

**802.11a High**
Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5342.490	52.17	-1.85	50.32	74.00	-23.68	peak
2	5350.000	50.40	-1.84	48.56	74.00	-25.44	peak

Vertical

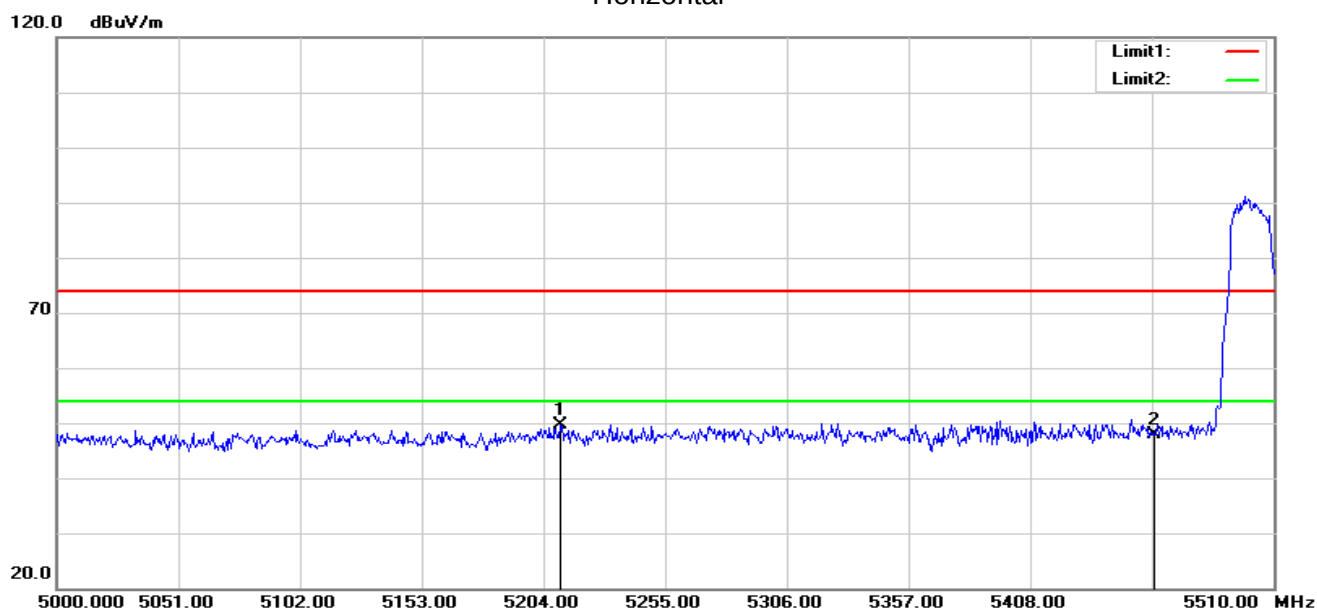


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5342.760	53.25	-1.85	51.40	74.00	-22.60	peak
2	5350.000	49.74	-1.84	47.90	74.00	-26.10	peak

Note: 802.11a,802.11n (HT-20),802.11n (HT-40) all has been tested, the worst case is 802.11a,only shown the worst case.

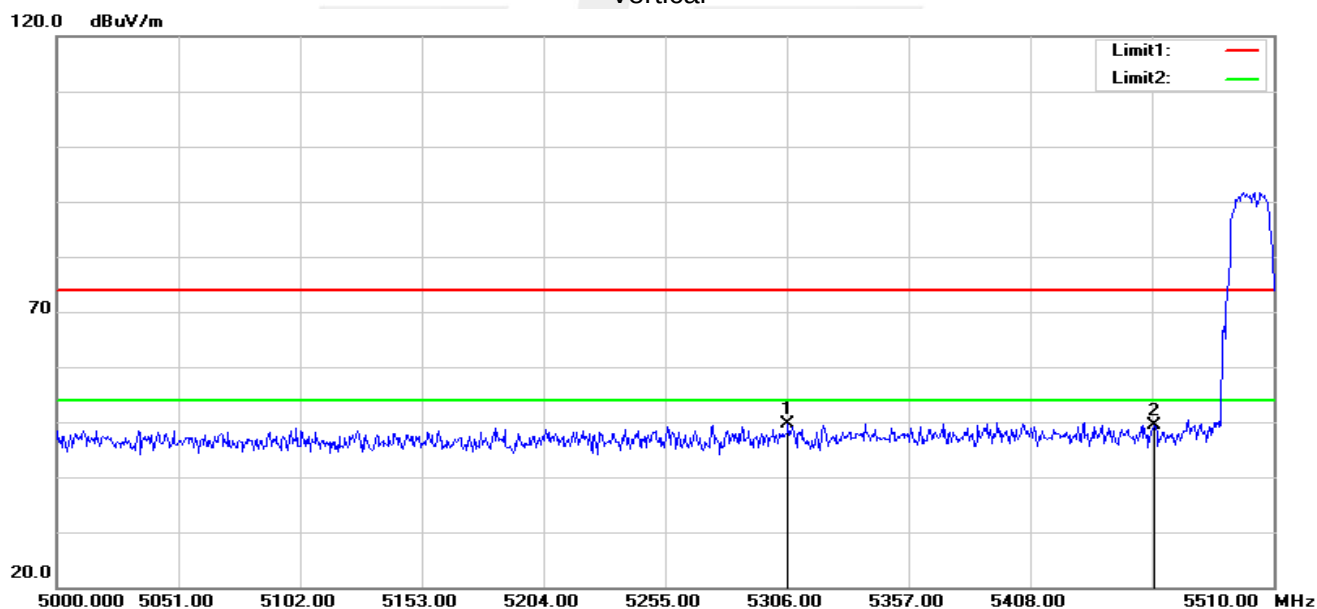


Band III 5470-5725MHz

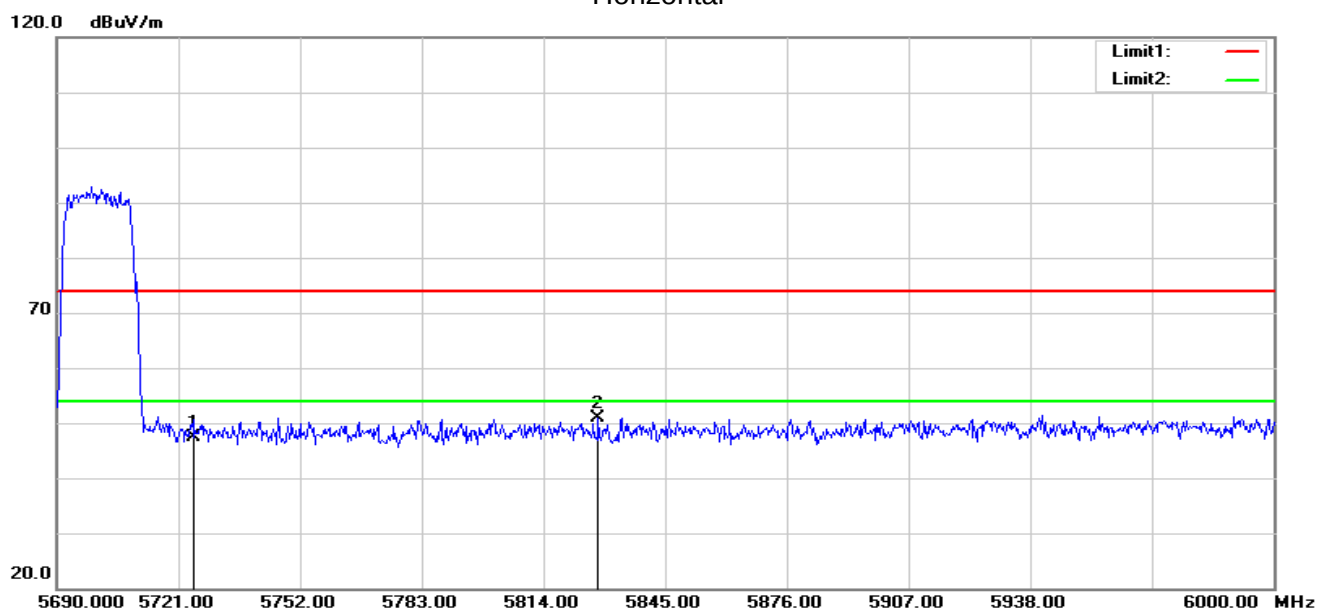
802.11a Low
Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5211.140	51.75	-2.03	49.72	74.00	-24.28	peak
2	5460.000	49.55	-1.56	47.99	74.00	-26.01	peak

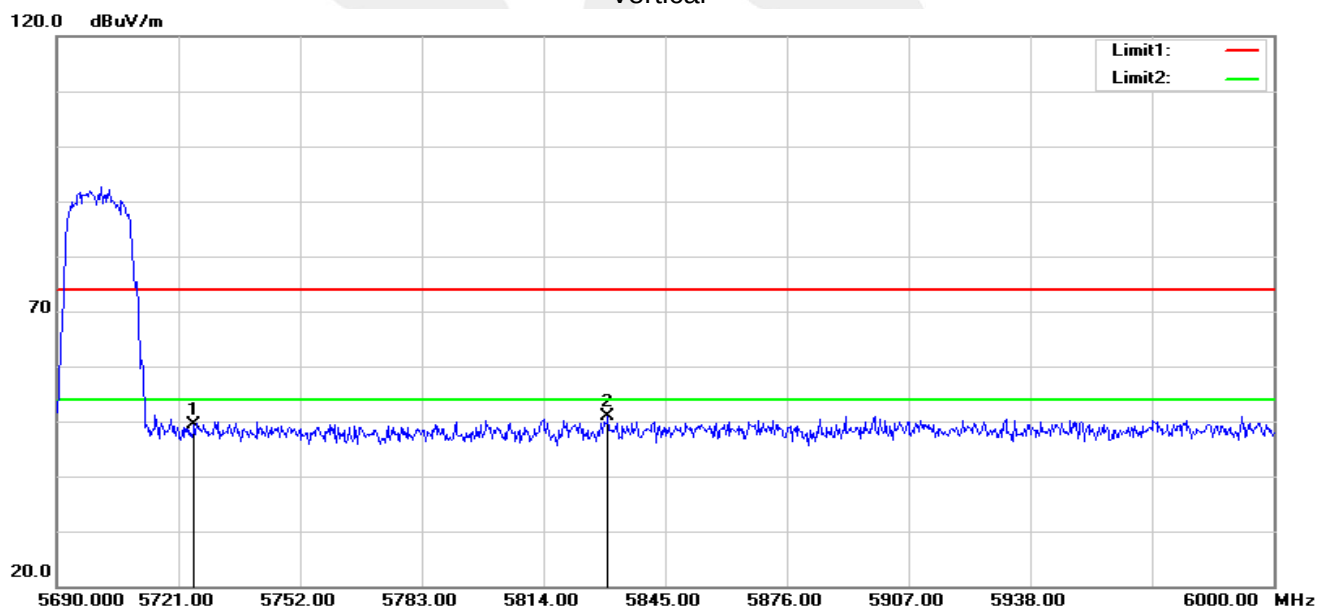
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5306.510	51.54	-1.89	49.65	74.00	-24.35	peak
2	5460.000	50.89	-1.56	49.33	74.00	-24.67	peak

**802.11a High
Horizontal**

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5725.000	48.14	-0.70	47.44	74.00	-26.56	peak
2	5827.950	51.43	-0.45	50.98	74.00	-23.02	peak

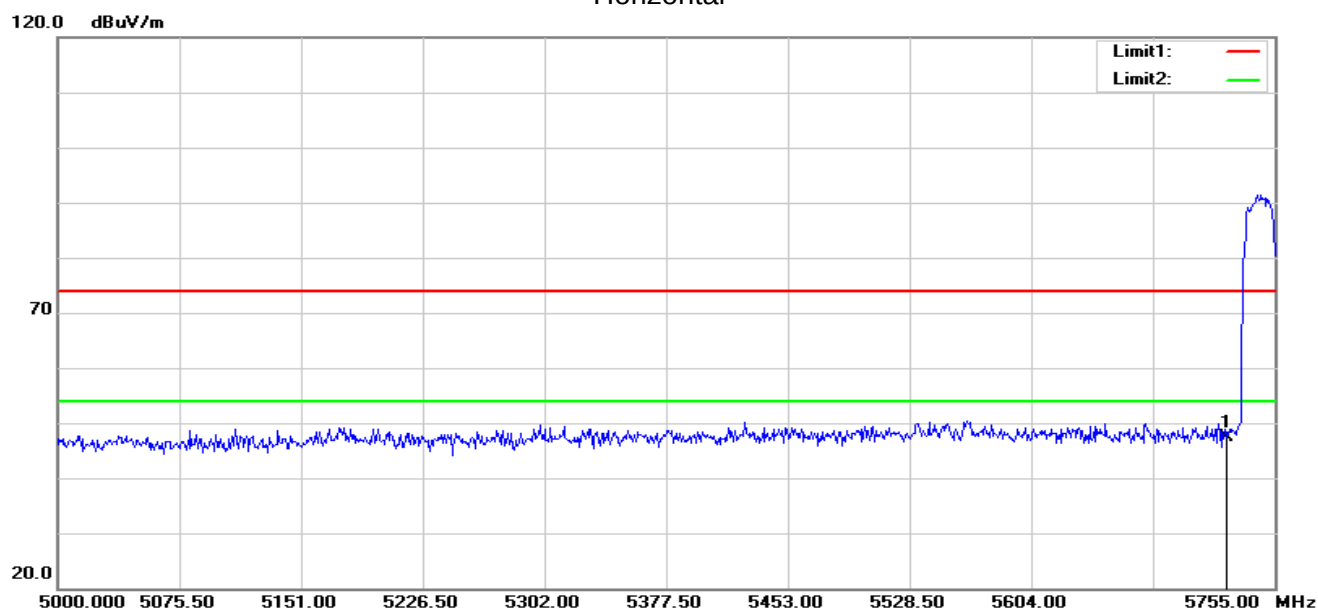
Vertical

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5725.000	50.03	-0.70	49.33	74.00	-24.67	peak
2	5830.430	51.38	-0.44	50.94	74.00	-23.06	peak

Note: 802.11a,802.11n (HT-20),802.11n (HT-40) all has been tested, the worst case is 802.11a,only shown the worst case.

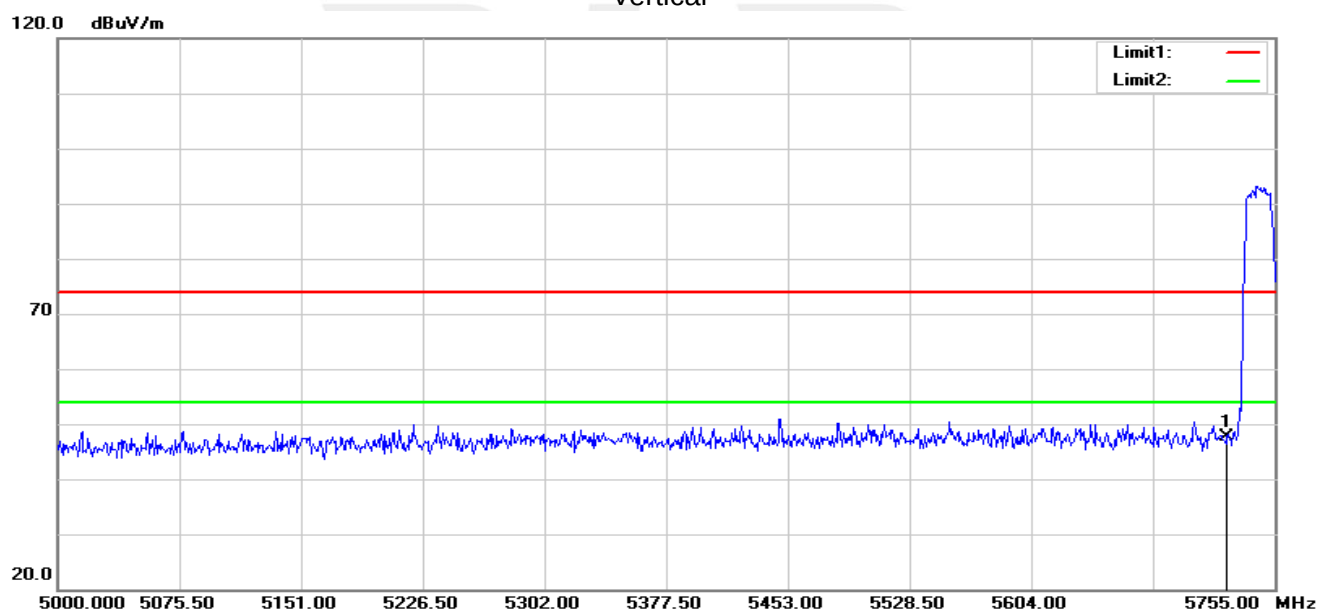


Band IV(5.725-5.85 GHz)

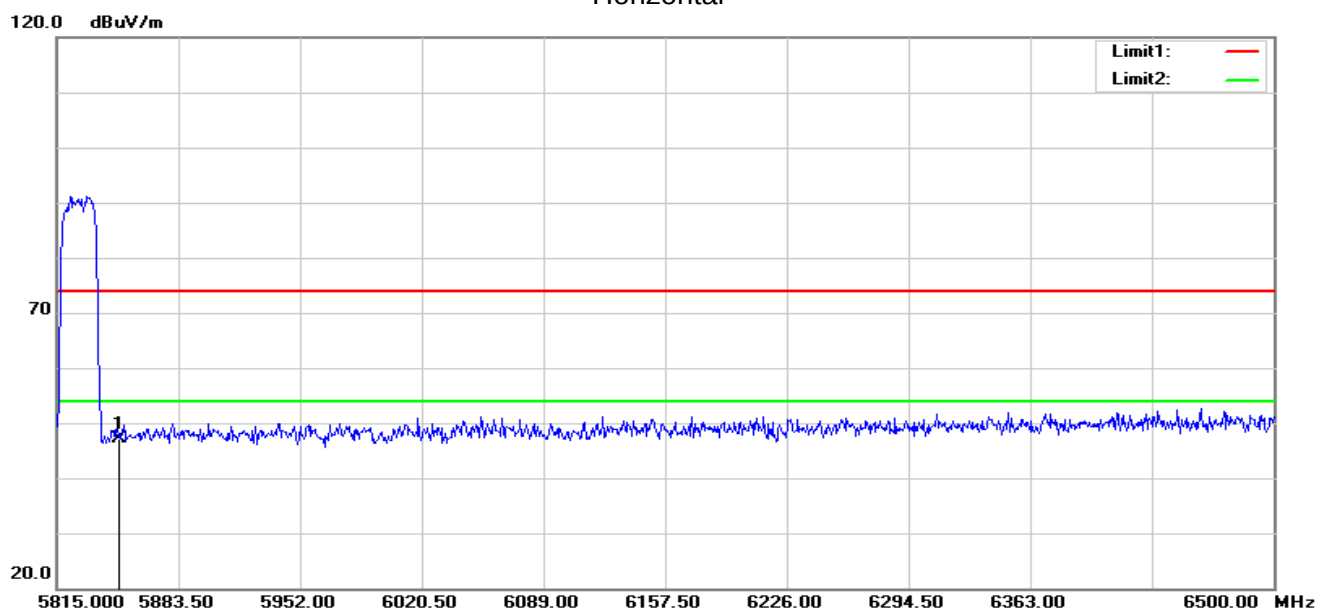
802.11a Low
Horizontal

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5725.000	48.63	-1.20	47.43	74.00	-26.57	peak

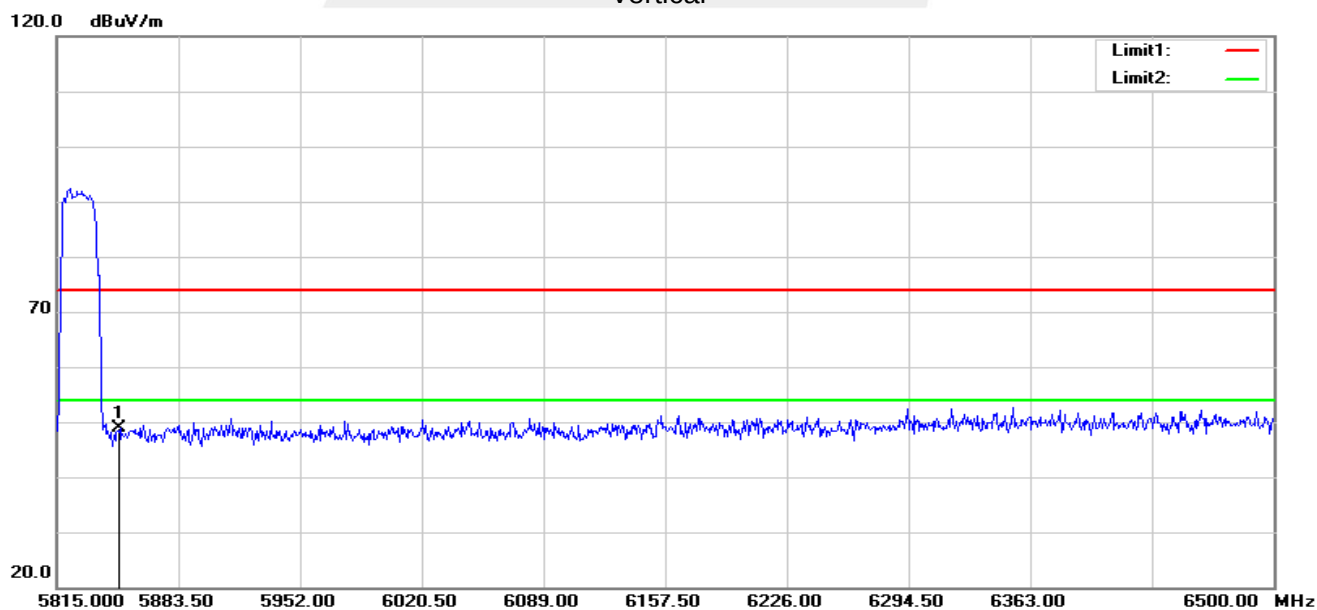
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5725.000	48.89	-1.20	47.69	74.00	-26.31	peak

**802.11a High
Horizontal**

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5850.000	48.26	-1.12	47.14	74.00	-26.86	peak

Vertical

No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	5850.000	49.89	-1.12	48.77	74.00	-25.23	peak

Note: 802.11a,802.11n (HT-20),802.11n (HT-40) all has been tested, the worst case is 802.11a,only shown the worst case.



4. CONDUCTED SPURIOUS EMISSIONS AND BANDEDGE

4.1 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 Attachment A

Note: EIRP test results contain power + antenna Gain.



5. POWER SPECTRAL DENSITY TEST

5.1 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 $RBW \geq 1/T$, where T is defined in section II.B.I.a).
- b) Set $VBW \geq 3$ RBW.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10 \log (500\text{kHz}/RBW)$ to the measured result, whereas $RBW (< 500 \text{ kHz})$ 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 $10 \log (1\text{MHz}/RBW)$ to the measured result, whereas $RBW (< 1 \text{ MHz})$ 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 sections 5.c) and 5.d) above, since $RBW=100 \text{ KHZ}$ 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 Attachment B





6. BANDWIDTH MEASUREMENT

6.1 EMISSION BANDWIDTH (EBW) 26 BANDWID PROCEDURES / LIMIT

See list of measuring instruments of this test report.

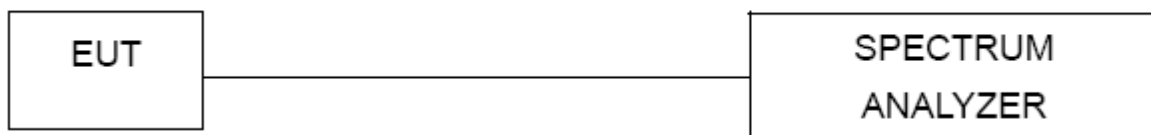
6.1.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW $\geq$ 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 Attachment 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 v02r01.

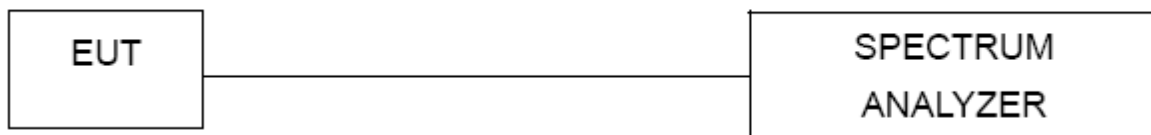
The following procedure shall be used for measuring (99 %) power bandwidth:

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 $\geq 3 \cdot$ 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 Attachment 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:

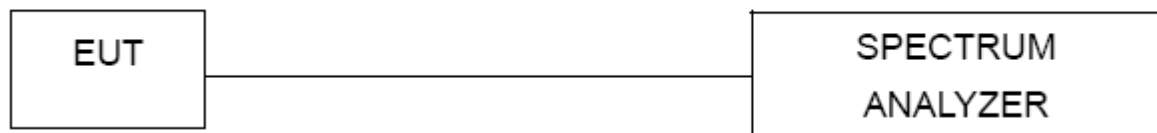
6.3.1 TEST PROCEDURE

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures v02r01.
 - a) Set RBW = 100 kHz.
 - b) Set the video bandwidth (VBW) $\geq 3 \times$ 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 Attachment D

7. MAXIMUM CONDUCTED OUTPUT POWER

7.1 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.

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

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

Band I (5.15-5.25GHz)

Band I (5.15-5.25GHz)				
Test Channel	Frequency (MHz)	PK Power (dBm)	AV Power (dBm)	LIMIT (dBm)
802.11a				
36	5180	15.13	13.45	15.13
40	5200	15.37	13.40	15.37
48	5240	14.61	12.13	14.61
802.11n(HT20)				
36	5180	15.24	13.41	23.98
40	5200	14.67	12.29	23.98
48	5240	14.35	12.23	23.98
802.11n(HT40)				
38	5190	14.03	12.38	23.98
46	5230	13.74	12.17	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 (dBm)	AV Power (dBm)	LIMIT (dBm)
802.11a				
52	5260	16.24	14.46	23.21
60	5300	15.57	13.18	23.21
64	5320	14.93	12.62	23.21
802.11n(HT20)				
52	5260	15.36	12.95	23.50
60	5300	15.21	13.44	23.50
64	5320	14.18	12.48	23.50
802.11n(HT40)				
54	5270	13.67	11.43	23.98
62	5310	13.31	11.09	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 (dBm)	AV Power (dBm)	LIMIT (dBm)
802.11a				
100	5500	14.31	12.51	23.21
116	5580	13.87	11.76	23.21
140	5700	14.86	12.59	23.21
802.11n(HT20)				
100	5500	14.03	12.03	23.49
116	5580	14.08	12.31	23.49
140	5700	15.17	13.37	23.49
802.11n(HT40)				
102	5510	12.64	10.86	23.98
110	5550	12.97	11.10	23.98
134	5670	13.72	11.88	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 (dBm)	AV Power (dBm)	LIMIT (dBm)
802.11a				
149	5745	16.84	14.43	30
157	5785	15.90	13.73	30
165	5825	15.67	13.28	30
802.11n(HT20)				
149	5745	16.24	14.190	30
157	5785	15.61	14.000	30
165	5825	14.57	12.810	30
802.11n(HT40)				
151	5755	14.67	12.260	30
159	5795	14.23	11.780	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. AUTOMATICALLY DISCONTINUE TRANSMISSION

8.1 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.

8.2 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





9. ANTENNA REQUIREMENT

9.1 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.

9.2 EUT ANTENNA

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





APPENDIX - PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※

