



# FCC RF Test Report

**APPLICANT** : GENERAL MOBILE INC.  
**EQUIPMENT** : Mobile Phone  
**BRAND NAME** : GENERAL MOBILE  
**MODEL NAME** : GM 5 Plus  
**FCC ID** : XAPGM5PLUS  
**STANDARD** : FCC Part 15 Subpart E §15.407  
**CLASSIFICATION** : (NII) Unlicensed National Information Infrastructure

The product was received on Feb. 26, 2016 and testing was completed on Apr. 14, 2016. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (KUNSHAN) INC., the test report shall not be reproduced except in full.

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Prepared by: James Huang / Manager

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Approved by: Jones Tsai / Manager



**SPORTON INTERNATIONAL (KUNSHAN) INC.**  
**No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China**



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## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR611201-01D	Rev. 01	Initial issue of report	Apr. 27, 2016

## SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 15.403(i)	26dB & 99% Bandwidth	-	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	FCC ≤24 dBm (depend on band)	Pass	-
3.3	15.407(a)	Power Spectral Density	FCC ≤11 dBm (depend on band)	Pass	-
3.4	15.407(b)	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 2.46 dB at 11061.000 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 4.01 dB at 0.850 MHz
3.6	15.407(g)	Frequency Stability	Within Operation Band	Pass	-
3.7	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.8	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-



# 1 General Description

## 1.1 Applicant

**GENERAL MOBILE INC.**

363 7th Avenue 4th Floor New York NY 10001 New York - USA

## 1.2 Manufacturer

**GENERAL MOBILE INC.**

363 7th Avenue 4th Floor New York NY 10001 New York - USA

## 1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Mobile Phone
Brand Name	GENERAL MOBILE
Model Name	GM 5 Plus
FCC ID	XAPGM5PLUS
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ HSPA+(16QAM uplink is not supported)/LTE/ WLAN 2.4GHz 802.11b/g/n HT20/ WLAN 5GHz 802.11a/n HT20/HT40/ WLAN 5GHz 802.11ac VHT20/VHT40/VHT80/ Bluetooth v2.0+EDR/ Bluetooth v4.0 LE
IMEI Code	Conducted: 865843024471812 Radiation: 865843024472083/865843024472737 Conduction: 865843024471754
HW Version	LLDM024
SW Version	LLD4Z05
EUT Stage	Identical Prototype

**Remark:** The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.



## 1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
<b>Tx/Rx Frequency Range</b>	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz
<b>Maximum Output Power to Antenna</b>	<b>&lt;5180 MHz ~ 5240 MHz&gt;</b> 802.11a : 9.55 dBm / 0.0090 W 802.11n HT20 : 9.61 dBm / 0.0091 W 802.11n HT40 : 8.98 dBm / 0.0079 W 802.11ac VHT20 : 9.99 dBm / 0.0100 W 802.11ac VHT40 : 9.27 dBm / 0.0085 W 802.11ac VHT80 : 9.57 dBm / 0.0091 W <b>&lt;5260 MHz ~ 5320 MHz&gt;</b> 802.11a : 9.42 dBm / 0.0087 W 802.11n HT20 : 9.58 dBm / 0.0091 W 802.11n HT40 : 8.97 dBm / 0.0079 W 802.11ac VHT20 : 9.81 dBm / 0.0096 W 802.11ac VHT40 : 9.99 dBm / 0.0100 W 802.11ac VHT80 : 9.49 dBm / 0.0089 W <b>&lt;5500 MHz ~ 5580 MHz and 5660 MHz ~ 5700 MHz&gt;</b> 802.11a : 9.73 dBm / 0.0094 W 802.11n HT20 : 9.78 dBm / 0.0095 W 802.11n HT40 : 7.89 dBm / 0.0062 W 802.11ac VHT20 : 10.09 dBm / 0.0102 W 802.11ac VHT40 : 9.42 dBm / 0.0087 W 802.11ac VHT80 : 8.05 dBm / 0.0064 W
<b>99% Occupied Bandwidth</b>	<b>&lt;5180 MHz ~ 5240 MHz&gt;</b> 802.11a : 18.63 MHz 802.11n HT20 : 19.33 MHz 802.11n HT40 : 36.66 MHz 802.11ac VHT20 : 19.18 MHz 802.11ac VHT40 : 36.76 MHz 802.11ac VHT80 : 74.69 MHz <b>&lt;5260 MHz ~ 5320 MHz&gt;</b> 802.11a : 18.68 MHz 802.11n HT20 : 19.43 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT20 : 19.13 MHz 802.11ac VHT40 : 36.66 MHz 802.11ac VHT80 : 74.69 MHz <b>&lt;5470 MHz ~ 5600 MHz and 5650 MHz ~ 5725 MHz&gt;</b> 802.11a : 18.83 MHz 802.11n HT20 : 19.18 MHz 802.11n HT40 : 36.56 MHz 802.11ac VHT20 : 19.13 MHz 802.11ac VHT40 : 36.66 MHz 802.11ac VHT80 : 74.69 MHz

<b>Antenna Type</b>	PIFA Antenna
<b>Antenna Gain</b>	<b>&lt;5150 MHz ~ 5250 MHz&gt;:</b> -6.00 dBi <b>&lt;5250 MHz ~ 5350 MHz&gt;:</b> -6.00 dBi <b>&lt;5470 MHz ~ 5600 MHz and 5650 MHz ~ 5725 MHz&gt;:</b> -6.00 dBi
<b>Type of Modulation</b>	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

## 1.5 Modification of EUT

No modifications are made to the EUT during all test items.

## 1.6 Testing Location

<b>Test Site</b>	SPORTON INTERNATIONAL (KUNSHAN) INC.			
<b>Test Site Location</b>	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958			
<b>Test Site No.</b>	<b>Sporton Site No.</b>			<b>FCC Registration No.</b>
	TH01-KS	CO01-KS	03CH03-KS	306251

**Note:** The test site complies with ANSI C63.4 2014 requirement.

## 1.7 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02
- ♦ FCC KDB 644545 D03 Guidance for IEEE 802 11ac New Rules v01
- ♦ ANSI C63.10-2013

### Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



## **2 Test Configuration of Equipment Under Test**

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz) and radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X/Z plane) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.



## 2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150- 5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	<b>38</b>	<b>5190</b>	<b>46</b>	<b>5230</b>
	40	5200	48	5240
	42	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	<b>54</b>	<b>5270</b>	<b>62</b>	<b>5310</b>
	56	5280	64	5320
	58	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5600 MHz and 5650-5725 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	<b>102</b>	<b>5510</b>	116	5580
	104	5520	132	5660
	106	5530	<b>134</b>	<b>5670</b>
	108	5540	136	5680
	<b>110</b>	<b>5550</b>	140	5700

**Note:** The above Frequency and Channel in boldface were 802.11n HT40.



## 2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test in the following tables.

WLAN 5GHz 802.11a Average Power (dBm)										
Power vs. Channel			Power vs. Data Rate							
Channel	Frequency (MHz)	Data Rate 6Mbps	Channel	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
CH 36	5180	9.55	CH 36	9.29	9.41	9.31	9.54	9.46	9.52	9.49
CH 44	5220	9.03								
CH 48	5240	9.47								
CH 52	5260	9.17								
CH 60	5300	8.83	CH 64	9.20	9.38	9.36	8.71	8.42	9.25	8.62
CH 64	5320	9.42								
CH 100	5500	8.53								
CH 116	5580	8.83	CH 140	9.69	9.52	9.71	9.70	9.57	8.64	8.63
CH 140	5700	9.73								

WLAN 5GHz 802.11n-HT20 Average Power (dBm)										
Power vs. Channel			Power vs. Data Rate							
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 36	5180	9.61	CH 36	9.57	9.43	9.50	9.52	9.54	9.59	9.55
CH 44	5220	9.05								
CH 48	5240	9.39								
CH 52	5260	9.28								
CH 60	5300	8.76	CH 64	9.55	9.52	8.64	8.63	8.72	8.73	8.80
CH 64	5320	9.58								
CH 100	5500	8.56								
CH 116	5580	8.77	CH 140	9.71	9.74	9.62	9.44	9.51	8.73	8.76
CH 140	5700	9.78								

WLAN 5GHz 802.11n-HT40 Average Power (dBm)										
Power vs. Channel			Power vs. Data Rate							
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 38	5190	7.75	CH 46	8.23	7.05	7.04	7.21	7.47	7.39	7.22
CH 46	5230	8.98								
CH 54	5270	7.20	CH 62	8.95	7.85	7.73	7.72	8.01	7.26	7.13
CH 62	5310	8.97								
CH 102	5510	7.84	CH 134	7.87	7.70	7.60	7.61	7.57	7.81	7.74
CH 110	5550	7.71								
CH 134	5670	7.89								



WLAN 5GHz 802.11ac VHT20 Average Power (dBm)											
Power vs. Channel			Power vs. Data Rate								
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
CH 36	5180	9.99	CH 36	9.91	9.89	9.96	9.81	9.93	9.95	9.90	9.98
CH 44	5220	9.41									
CH 48	5240	9.52									
CH 52	5260	9.62	CH 64	9.58	9.80	9.76	9.16	9.10	9.15	9.17	9.13
CH 60	5300	9.06									
CH 64	5320	9.81									
CH 100	5500	8.78	CH 140	10.07	9.96	10.08	9.92	10.04	9.30	9.06	9.19
CH 116	5580	9.20									
CH 140	5700	10.09									

WLAN 5GHz 802.11ac VHT40 Average Power (dBm)												
Power vs. Channel			Power vs. Data Rate									
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
CH 38	5190	9.27	CH 38	9.03	9.14	9.01	9.18	9.19	9.23	9.25	9.17	9.26
CH 46	5230	9.06										
CH 54	5270	8.69	CH 62	9.94	9.96	9.26	9.52	9.36	9.35	9.47	9.50	9.61
CH 62	5310	9.99										
CH 102	5510	9.42	CH 102	9.23	9.37	9.30	9.36	9.35	9.31	9.41	9.40	9.39
CH 110	5550	9.24										
CH 134	5670	9.16										

WLAN 5GHz 802.11ac VHT80 Average Power (dBm)												
Power vs. Channel			Power vs. Data Rate									
Channel	Frequency (MHz)	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
CH 42	5210	9.57	CH 42	9.39	9.56	9.55	9.54	9.50	9.51	9.52	9.34	9.45
CH 58	5290	9.49	CH 58	9.38	9.47	9.41	9.40	9.46	9.41	9.42	9.48	9.43
CH 106	5530	8.05	CH 106	7.95	7.92	7.81	7.96	7.96	7.98	7.75	7.94	7.87

## 2.3 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates from the power table described in section 2.2.

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Battery1 + Earphone + USB Cable (Charging from Adapter) for Sample1
<b>Remark:</b>  1. For Radiated TCs, the tests were performed with adapter, earphone, battery1 and USB cable.	



Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11ac VHT20	802.11ac VHT20	802.11ac VHT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

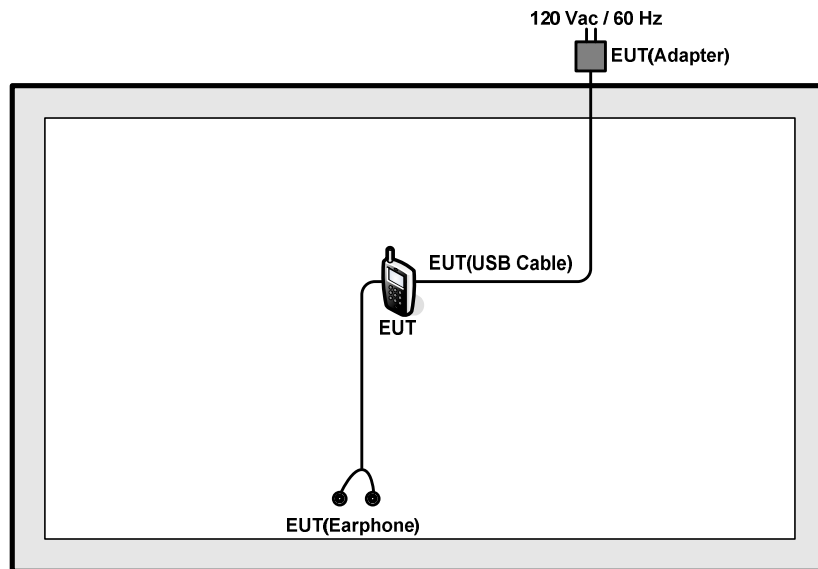


Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11ac VHT40	802.11ac VHT40	802.11ac VHT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134

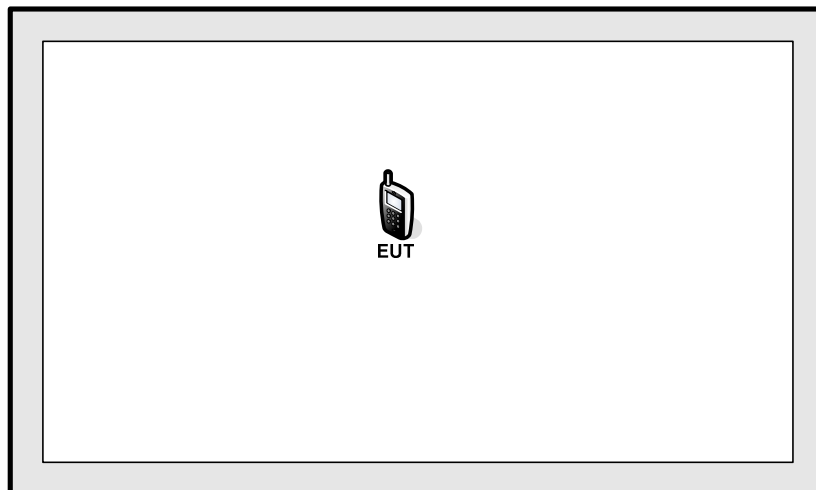
Ch. #		Band I : 5150-5250 MHz	Band II : 5250-5350 MHz	Band III : 5470-5600 MHz and 5650-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	-
M	Middle	42	58	106
H	High	-	-	-

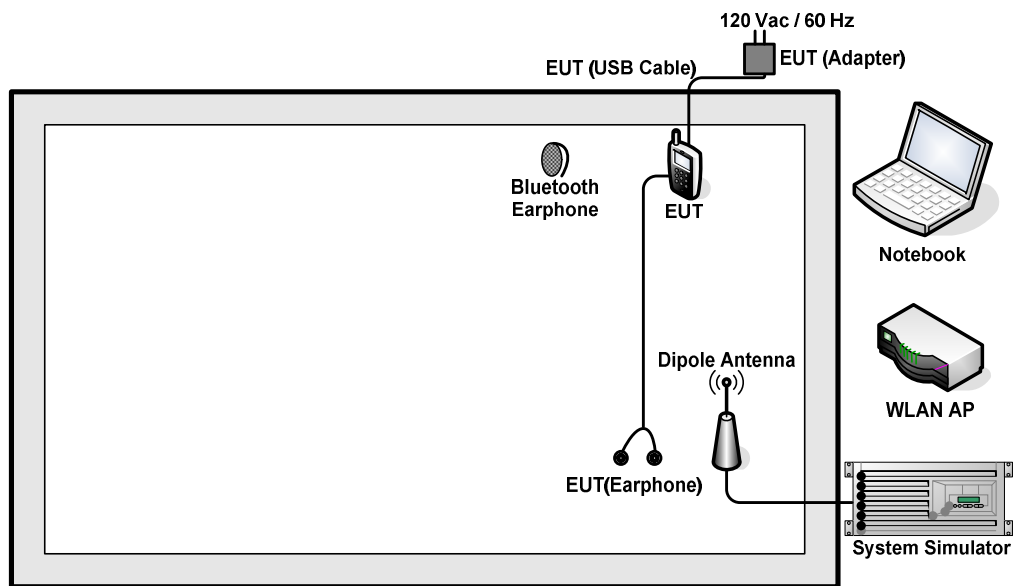
## 2.4 Connection Diagram of Test System

<WLAN5GHz 802.11a/n HT20/HT40/WLAN5GHz 802.11ac VHT40/VHT80 Tx Mode>



<WLAN5GHz 802.11ac VHT20 Tx Mode>



**<AC Conducted Emission Mode>**



## 2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	Lenovo	G480	PRC4	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
2.	WLAN AP	LINKSYS	WRT600N	Q87-WRT600NV11	N/A	Unshielded, 1.8 m
3.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
4.	Bluetooth Earphone	Nokia	BH-102	PYAHS-107W	N/A	N/A
5.	DC Power Supply	GW INSTEK	GPD-2303S	N/A	N/A	Unshielded, 1.8 m

## 2.6 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuously transmit/receive.

For AC power line conducted emissions, the EUT was set to connect with the Notebook under large package sizes transmission.

## 2.7 Measurement Results Explanation Example

**For all conducted test items:**

The offset level is set in the spectrum analyzer to compensate the RF cable loss between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss.

Offset = RF cable loss.

Following shows an offset computation example with cable loss 7.0 dB.

Offset (dB) = RF cable loss(dB).

= 7.0 (dB)

### 3 Test Result

#### 3.1 26dB & 99% Occupied Bandwidth Measurement

##### 3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

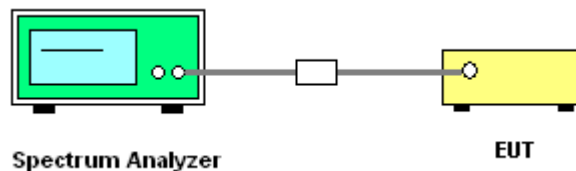
##### 3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

##### 3.1.3 Test Procedures

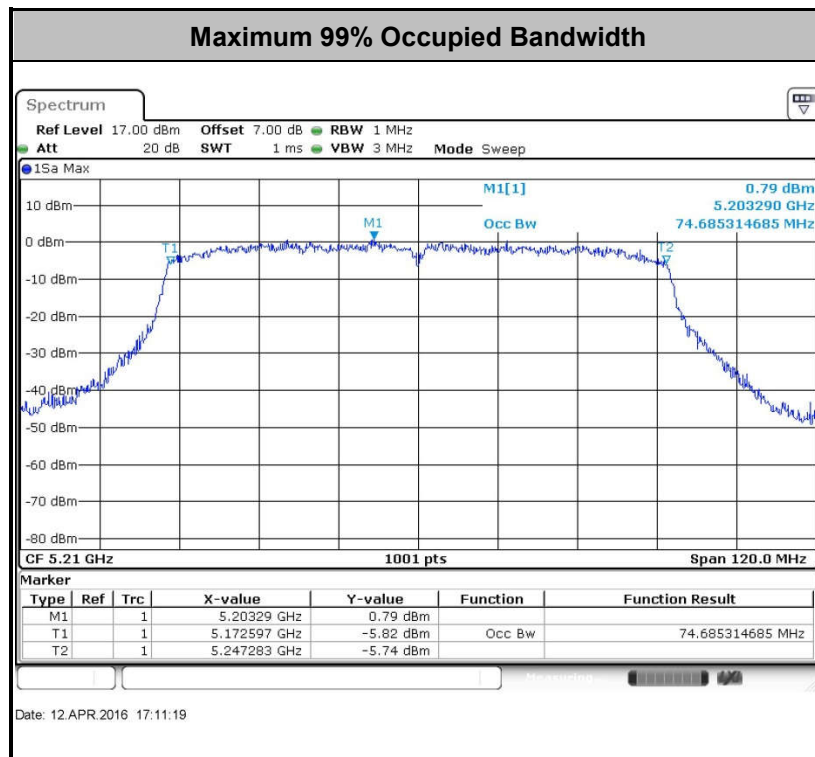
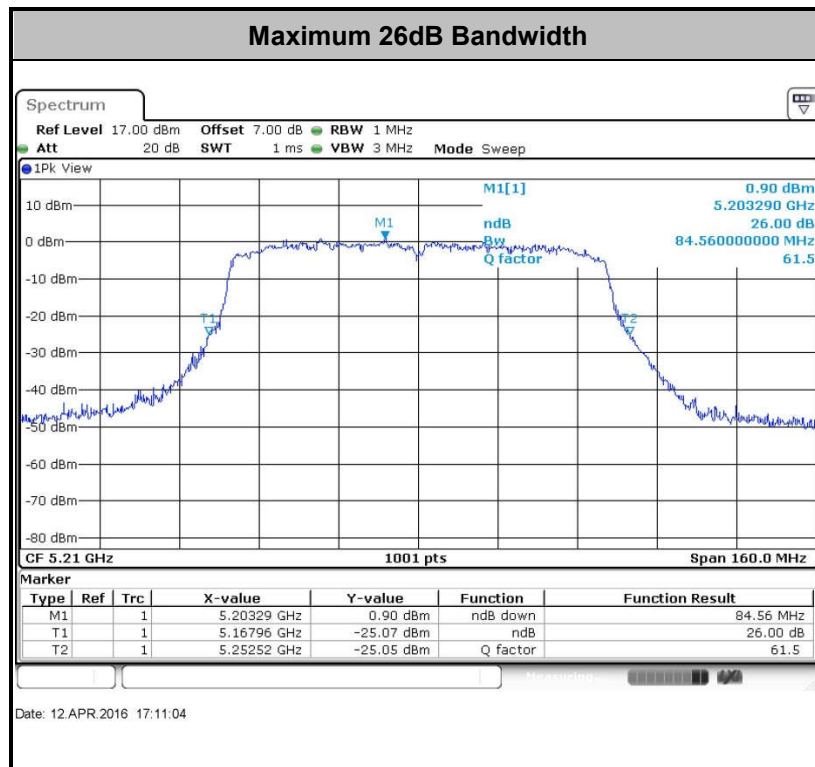
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.  
Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 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%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW)  $\geq 3 * RBW$ .
8. Measure and record the results in the test report.

##### 3.1.4 Test Setup



### 3.1.5 Test Result of 26dB & 99% Occupied Bandwidth Plots

Please refer to Appendix A.



Note : The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

## 3.2 Maximum Conducted Output Power Measurement

### 3.2.1 Limit of Maximum Conducted Output Power

#### <FCC 14-30 CFR 15.407>

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.

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, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Note that U-NII-2 band, devices with a maximum e.i.r.p. greater than 500 mW shall implement TPC in order to have the capability to operate at least 6 dB below the maximum permitted e.i.r.p. of 1 W.

### 3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.2.3 Test Procedures

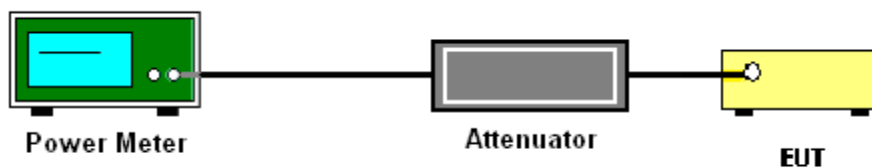
The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.

Method PM (Measurement using an RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor,  $10 \log(1/x)$ , where  $x$  is the duty cycle.

### 3.2.4 Test Setup

For normal channel:



### 3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



### **3.3 Power Spectral Density Measurement**

#### **3.3.1 Limit of Power Spectral Density**

##### **<FCC 14-30 CFR 15.407>**

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

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, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

#### **3.3.2 Measuring Instruments**

The measuring equipment is listed in the section 4 of this test report.

### 3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.

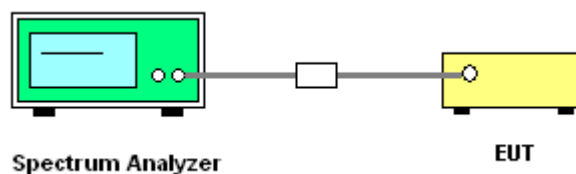
Section F) Maximum power spectral density.

#### # Method SA-2 #

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.
  - Measure the duty cycle.
  - Set span to encompass the entire emission bandwidth (EBW) of the signal.
  - Set RBW = 1 MHz.
  - Set VBW  $\geq$  3 MHz.
  - Number of points in sweep  $\geq$  2 Span / RBW.
  - Sweep time = auto.
  - Detector = RMS
  - Trace average at least 100 traces in power averaging mode.
  - Add  $10 \log(1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add  $10 \log(1/0.25) = 6$  dB if the duty cycle is 25 percent.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
3. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

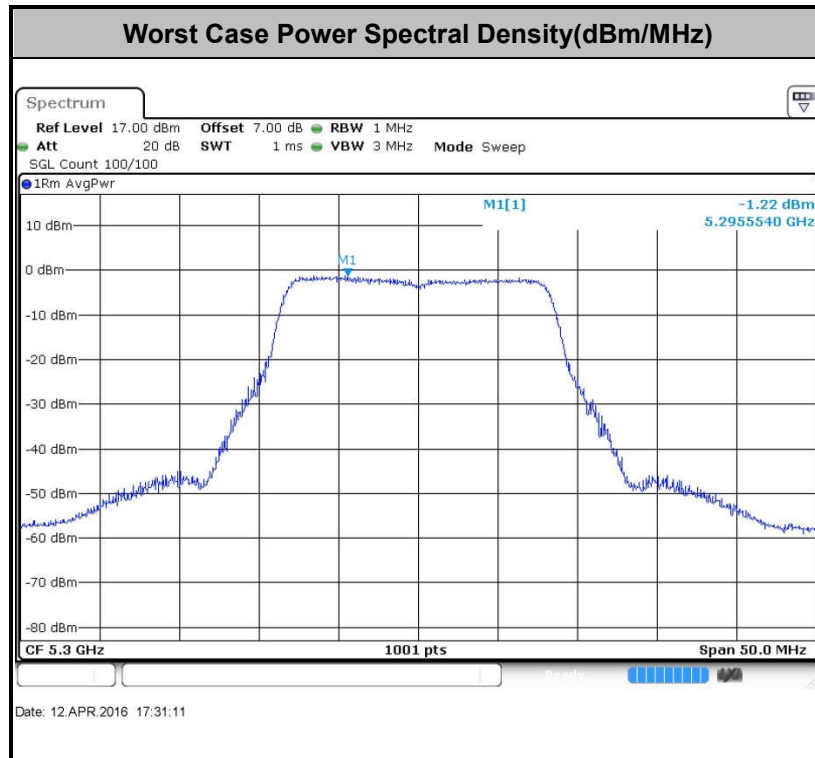
### 3.3.4 Test Setup





### 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



**Note:** Average Power Density (dB) = Measured value+ Duty Factor



### 3.4 Unwanted Radiated Emission Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part 15.205.

#### 3.4.1 Limit of Unwanted Emissions

- (1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27dBm/MHz.

For transmitters operating in the 5250-5350 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27 dBm/MHz. Devices operating in the 5250-5350 MHz band that generate emissions in the 5150-5250 MHz band must meet all applicable technical requirements for operation in the 5150-5250 MHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5150-5250 MHz band.

For transmitters operating in the 5470-5600 MHz and 5650-5725MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

- (2) Unwanted spurious emissions fallen in restricted bands per FCC Part 15.205 shall comply with the general field strength limits set forth in § 15.209 as below table

Frequency (MHz)	Field Strength (microvolts/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

**Note:** The following formula is used to convert the EIRP to field strength.

$$E = \frac{1000000\sqrt{30P}}{3} \text{ } \mu\text{V/m, where P is the eirp (Watts)}$$

EIRP (dBm)	Field Strength at 3m (dB $\mu$ V/m)
-17	78.3
- 27	68.3

- (3) KDB789033 D02 v01r02 G)2)c) As specified in 15.407(b), emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz (or -17 dBm/MHz as specified in 15.407(b)(4)). However, an out-of-band emission that complies with both the average and peak limits of 15.209 is not required to satisfy the -27 dBm/MHz or -17 dBm/MHz peak emission limit.

### 3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.4.3 Test Procedures

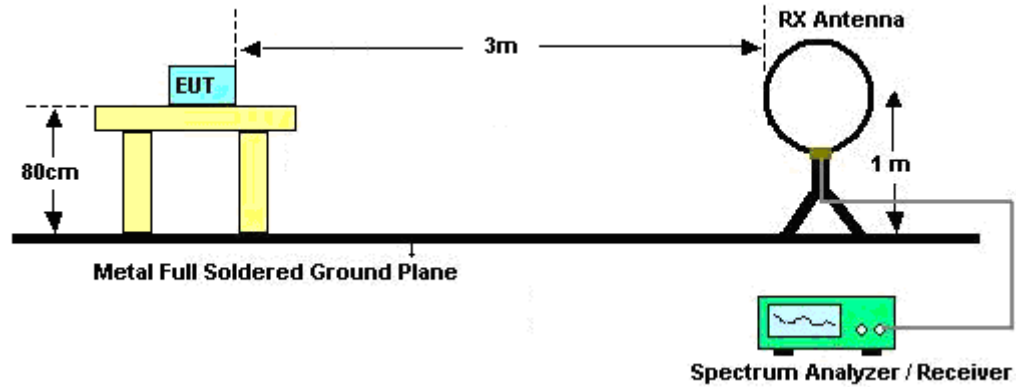
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02. Section G) Unwanted emissions measurement.
  - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
    - RBW = 120 kHz
    - VBW = 300 kHz
    - Detector = Peak
    - Trace mode = max hold
  - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
    - RBW = 1 MHz
    - VBW  $\geq$  3 MHz
    - Detector = Peak
    - Sweep time = auto
    - Trace mode = max hold
  - (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
    - RBW = 1 MHz
    - VBW = 10 Hz, when duty cycle is no less than 98 percent.
    - VBW  $\geq$  1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.



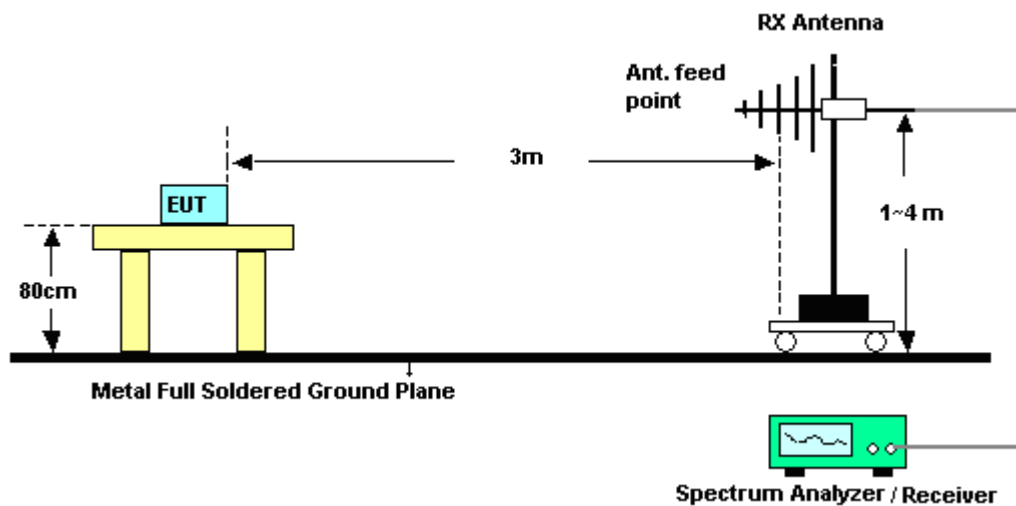
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

### 3.4.4 Test Setup

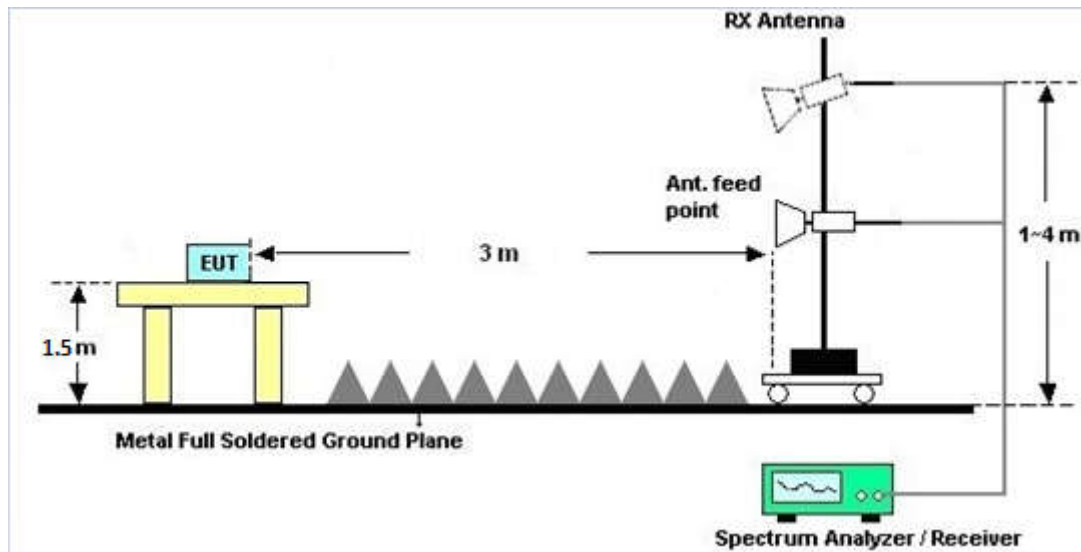
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



### 3.4.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

### 3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix B.

### 3.4.7 Duty Cycle

Please refer to Appendix D.

### 3.4.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix B.

### 3.5 AC Conducted Emission Measurement

#### 3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

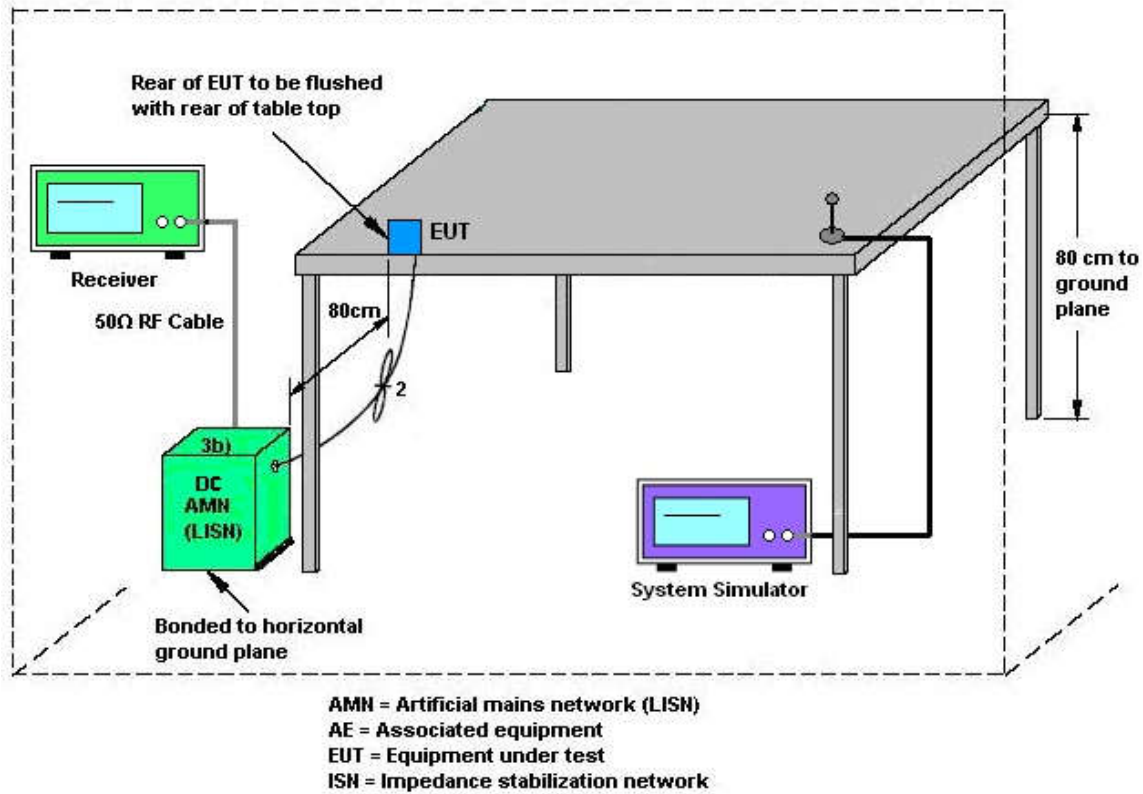
#### 3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

#### 3.5.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

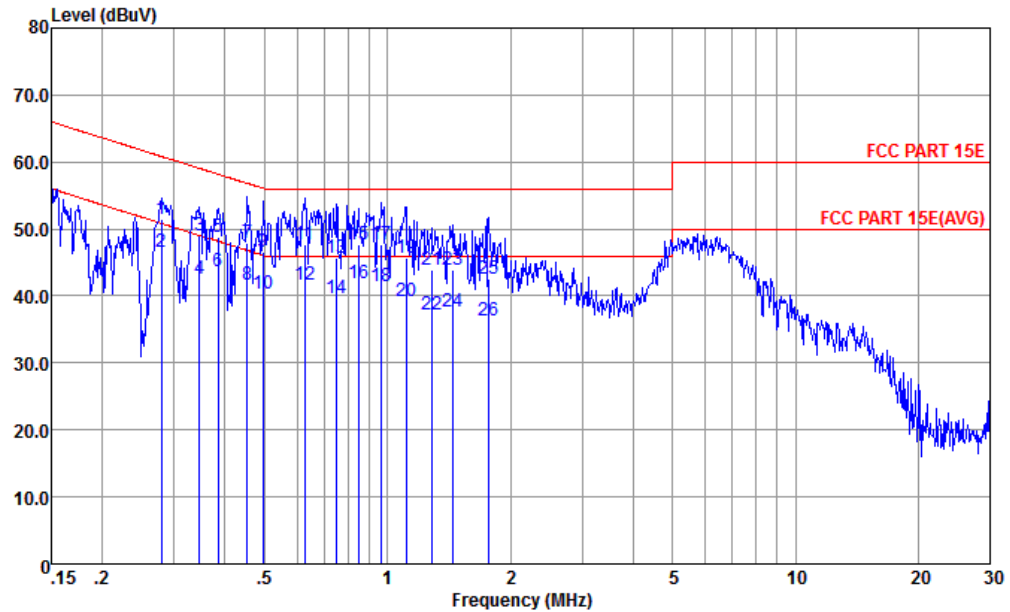
### 3.5.4 Test Setup





## 3.5.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	44~48%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Battery1 + Earphone + USB Cable (Charging from Adapter) for Sample1		



Site : CO01-KS  
Condition : FCC PART 15E LISN-L-20151024 LINE

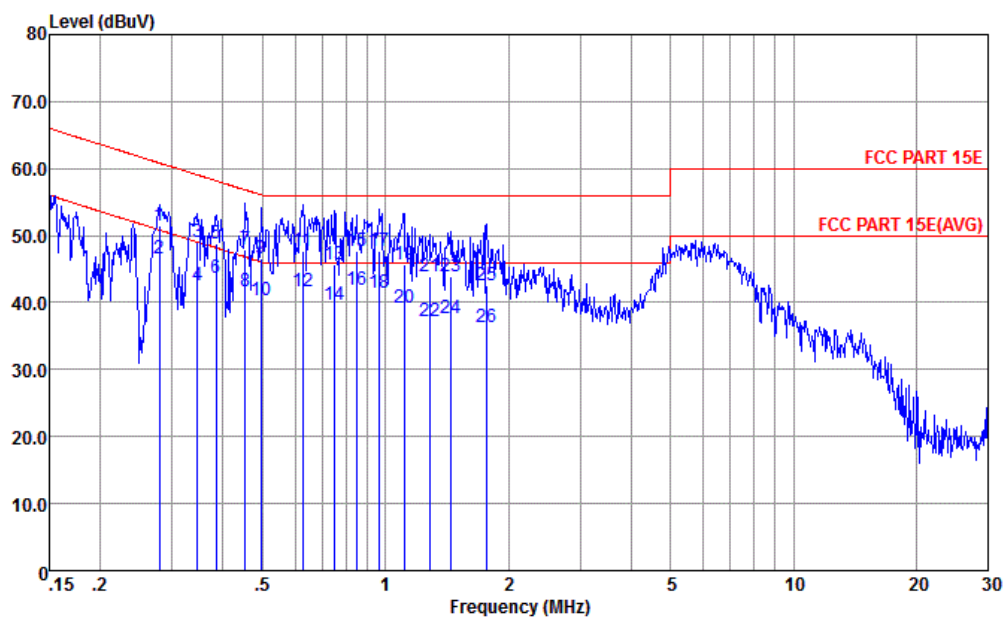
mode : Mode 1  
: 865843024471754

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.28	51.57	-9.28	60.85	41.21	0.22	10.14	QP
2	0.28	46.67	-4.18	50.85	36.31	0.22	10.14	Average
3	0.35	48.99	-10.06	59.05	38.60	0.23	10.16	QP
4	0.35	42.59	-6.46	49.05	32.20	0.23	10.16	Average
5	0.39	48.70	-9.47	58.17	38.30	0.23	10.17	QP
6	0.39	43.70	-4.47	48.17	33.30	0.23	10.17	Average
7	0.45	48.00	-8.80	56.80	37.60	0.23	10.17	QP
8	0.45	41.60	-5.20	46.80	31.20	0.23	10.17	Average
9	0.49	46.59	-9.51	56.10	36.20	0.23	10.16	QP
10	0.49	40.29	-5.81	46.10	29.90	0.23	10.16	Average
11	0.63	47.69	-8.31	56.00	37.29	0.24	10.16	QP
12	0.63	41.59	-4.41	46.00	31.19	0.24	10.16	Average
13	0.75	45.69	-10.31	56.00	35.30	0.24	10.15	QP
14	0.75	39.69	-6.31	46.00	29.30	0.24	10.15	Average
15	0.85	47.69	-8.31	56.00	37.30	0.25	10.14	QP
16 *	0.85	41.99	-4.01	46.00	31.60	0.25	10.14	Average
17	0.97	47.59	-8.41	56.00	37.20	0.25	10.14	QP





Test Mode :	Mode 1	Temperature :	22~24°C
Test Engineer :	Amos Zhang	Relative Humidity :	44~48%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Battery1 + Earphone + USB Cable (Charging from Adapter) for Sample1		



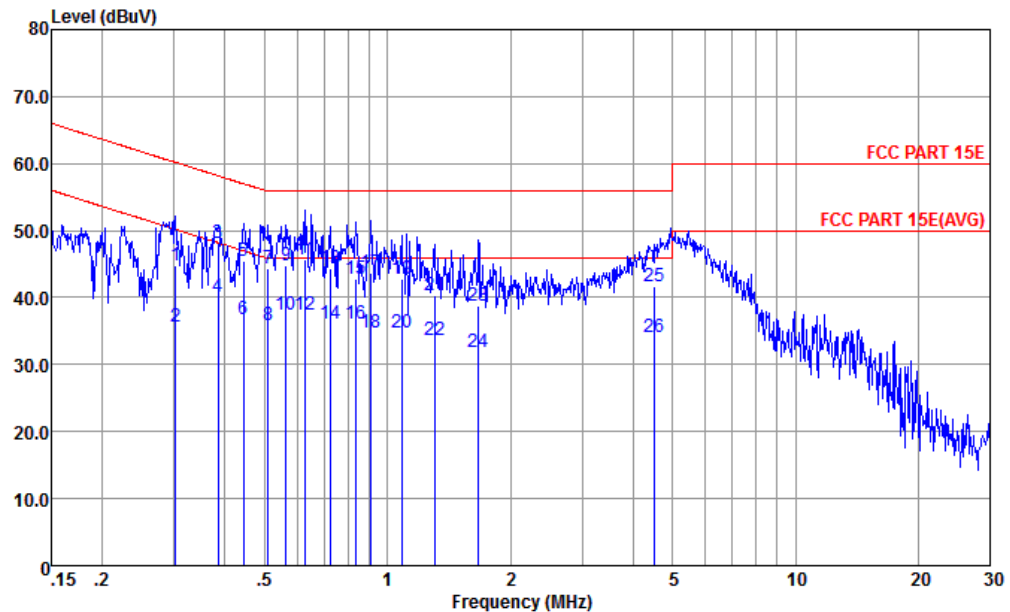
Site : CO01-KS  
Condition : FCC PART 15E LISN-L-20151024 LINE

mode : Mode 1  
: 865843024471754

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18	0.97	41.49	-4.51	46.00	31.10	0.25	10.14	Average
19	1.11	45.68	-10.32	56.00	35.30	0.24	10.14	QP
20	1.11	39.28	-6.72	46.00	28.90	0.24	10.14	Average
21	1.28	43.96	-12.04	56.00	33.59	0.23	10.14	QP
22	1.28	37.26	-8.74	46.00	26.89	0.23	10.14	Average
23	1.44	43.95	-12.05	56.00	33.60	0.21	10.14	QP
24	1.44	37.55	-8.45	46.00	27.20	0.21	10.14	Average
25	1.77	42.53	-13.47	56.00	32.20	0.19	10.14	QP
26	1.77	36.23	-9.77	46.00	25.90	0.19	10.14	Average



Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	44~48%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Battery1 + Earphone + USB Cable (Charging from Adapter) for Sample1		



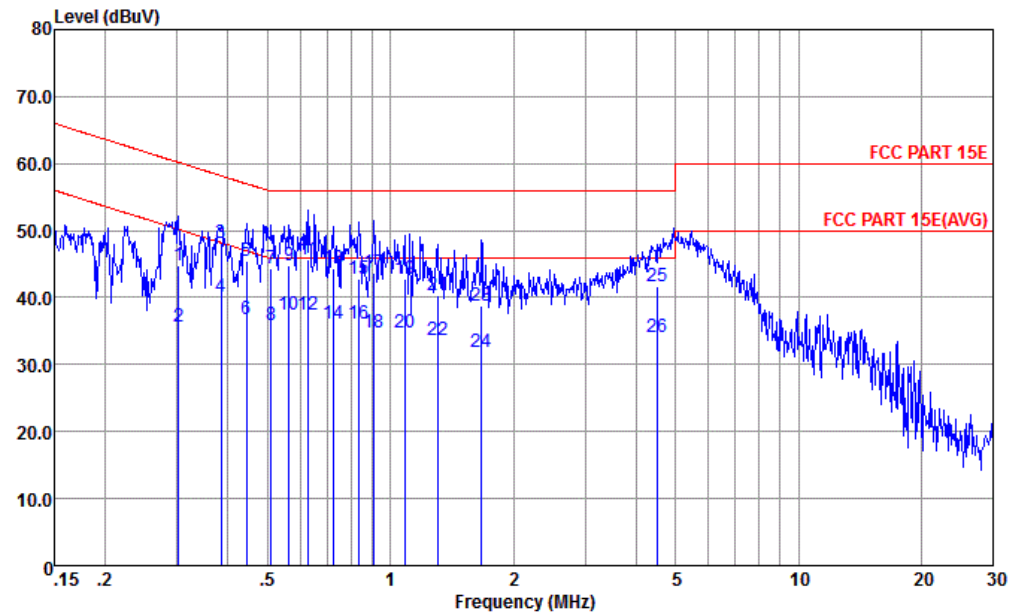
Site : CO01-KS  
Condition : FCC PART 15E LISN-N-20151024 NEUTRAL

mode : Mode 1  
: 865843024471754

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.30	44.76	-15.43	60.19	34.30	0.31	10.15	QP
2	0.30	35.66	-14.53	50.19	25.20	0.31	10.15	Average
3	0.39	48.09	-10.08	58.17	37.60	0.32	10.17	QP
4 *	0.39	40.09	-8.08	48.17	29.60	0.32	10.17	Average
5	0.44	45.39	-11.59	56.98	34.90	0.32	10.17	QP
6	0.44	36.79	-10.19	46.98	26.30	0.32	10.17	Average
7	0.51	44.38	-11.62	56.00	33.90	0.32	10.16	QP
8	0.51	35.98	-10.02	46.00	25.50	0.32	10.16	Average
9	0.56	44.69	-11.31	56.00	34.20	0.33	10.16	QP
10	0.56	37.39	-8.61	46.00	26.90	0.33	10.16	Average
11	0.63	45.69	-10.31	56.00	35.20	0.33	10.16	QP
12	0.63	37.39	-8.61	46.00	26.90	0.33	10.16	Average
13	0.72	44.39	-11.61	56.00	33.90	0.34	10.15	QP
14	0.72	36.09	-9.91	46.00	25.60	0.34	10.15	Average
15	0.84	42.80	-13.20	56.00	32.30	0.36	10.14	QP
16	0.84	36.10	-9.90	46.00	25.60	0.36	10.14	Average
17	0.91	43.70	-12.30	56.00	33.20	0.36	10.14	QP



<b>Test Mode :</b>	Mode 1	<b>Temperature :</b>	22~24°C
<b>Test Engineer :</b>	Amos Zhang	<b>Relative Humidity :</b>	44~48%
<b>Test Voltage :</b>	120Vac / 60Hz	<b>Phase :</b>	Neutral
<b>Function Type :</b>	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable (Charging from Adapter)		



Site : CO01-KS  
Condition : FCC PART 15E LISN-N-20151024 NEUTRAL

mode : Mode 1  
: 865843024471754

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18	0.91	34.70	-11.30	46.00	24.20	0.36	10.14	Average
19	1.08	42.81	-13.19	56.00	32.30	0.37	10.14	QP
20	1.08	34.81	-11.19	46.00	24.30	0.37	10.14	Average
21	1.30	40.41	-15.59	56.00	29.90	0.37	10.14	QP
22	1.30	33.71	-12.29	46.00	23.20	0.37	10.14	Average
23	1.67	38.82	-17.18	56.00	28.30	0.38	10.14	QP
24	1.67	31.82	-14.18	46.00	21.30	0.38	10.14	Average
25	4.53	41.64	-14.36	56.00	31.10	0.36	10.18	QP
26	4.53	34.14	-11.86	46.00	23.60	0.36	10.18	Average

## **3.6 Frequency Stability Measurement**

### **3.6.1 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.

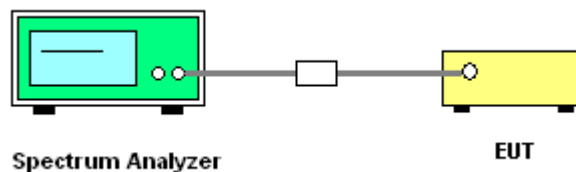
### **3.6.2 Measuring Instruments**

The measuring equipment is listed in the section 4 of this test report.

### **3.6.3 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.

### **3.6.4 Test Setup**



### **3.6.5 Test Result of Frequency Stability**

Please refer to Appendix A.



## **3.7 Automatically Discontinue Transmission**

### **3.7.1 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.

### **3.7.2 Measuring Instruments**

The measuring equipment is listed in the section 4 of this test report.

### **3.7.3 Test Result of Automatically Discontinue Transmission**

While the EUT is not transmitting any information, 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.



## **3.8 Antenna Requirements**

### **3.8.1 Standard Applicable**

According to FCC 47 CFR Section 15.407(a)(1)(2), if transmitting antenna directional gain is greater than 6 dBi, both the peak transmit 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.

### **3.8.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.

### **3.8.3 Antenna Gain**

The antenna gain is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV30	101338	9kHz~30GHz	May 04, 2015	Apr. 12, 2016	May 03, 2016	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	30MHz~40GHz	Jan. 20, 2016	Apr. 12, 2016	Jan. 19, 2017	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 20, 2016	Apr. 12, 2016	Jan. 19, 2017	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 24, 2015	Apr. 12, 2016	Oct. 23, 2016	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz; Max 30dBm	Sep. 10, 2015	Apr. 09, 2016	Sep. 09, 2016	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44GHz	Jun. 05, 2015	Apr. 09, 2016	Jun. 04, 2016	Radiation (03CH03-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 07, 2015	Apr. 09, 2016	Nov. 06, 2016	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	25MHz~2GHz	Mar. 12, 2016	Apr. 09, 2016	Mar. 11, 2017	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1356	1GHz~18GHz	Jun. 25, 2015	Apr. 09, 2016	Jun. 24, 2016	Radiation (03CH03-KS)
SHF-EHF Horn	com-power	AH-840	101070	18Ghz~40Ghz	Oct. 10, 2015	Apr. 09, 2016	Oct. 09, 2016	Radiation (03CH03-KS)
Amplifier	Burgeon	BPA-530	102212	0.01MHz~3000MHz	Aug. 10, 2015	Apr. 09, 2016	Aug. 09, 2016	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 24, 2015	Apr. 09, 2016	Oct. 23, 2016	Radiation (03CH03-KS)
Amplifier	MITEQ	TTA1840-35-HG	1887435	18GHz~40GHz	Aug. 27, 2015	Apr. 09, 2016	Aug. 26, 2016	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Apr. 09, 2016	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Apr. 09, 2016	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Apr. 09, 2016	NCR	Radiation (03CH03-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz	May 04, 2015	Apr. 14, 2016	May 03, 2016	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 24, 2015	Apr. 14, 2016	Oct. 23, 2016	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 24, 2015	Apr. 14, 2016	Oct. 23, 2016	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 24, 2015	Apr. 14, 2016	Oct. 23, 2016	Conduction (CO01-KS)

NCR: No Calibration Required



## 5 Uncertainty of Evaluation

### Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.3 dB
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	4.5 dB
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## **Appendix A. Conducted Test Results**

Test Engineer:	Issac Song	Temperature:	24~25	°C
Test Date:	2016/4/12	Relative Humidity:	49~51	%

**TEST RESULTS DATA**  
**26dB and 99% OBW**

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)		
11a	6Mbps	1	36	5180	18.63	23.73	-	22.70		
11a	6Mbps	1	44	5220	18.63	23.48	-	22.70		
11a	6Mbps	1	48	5240	18.63	23.23	-	22.70		
HT20	MCS0	1	36	5180	19.23	23.53	-	22.84		
HT20	MCS0	1	44	5220	19.08	23.58	-	22.81		
HT20	MCS0	1	48	5240	19.33	23.63	-	22.86		
HT40	MCS0	1	38	5190	36.66	44.69	-	23.01		
HT40	MCS0	1	46	5230	36.66	44.24	-	23.01		
VHT20	MCS0	1	36	5180	19.18	23.68	-	22.83		
VHT20	MCS0	1	44	5220	19.13	23.83	-	22.82		
VHT20	MCS0	1	48	5240	19.13	23.83	-	22.82		
VHT40	MCS0	1	38	5190	36.76	43.79	-	23.01		
VHT40	MCS0	1	46	5230	36.66	44.33	-	23.01		
VHT80	MCS0	1	42	5210	74.69	84.56	-	23.01		

**TEST RESULTS DATA**  
**Average Power Table**

FCC Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6Mbps	1	36	5180	10.00	9.55	24.00	-6.00		Pass
11a	6Mbps	1	44	5220	10.00	9.03	24.00	-6.00		Pass
11a	6Mbps	1	48	5240	10.00	9.47	24.00	-6.00		Pass
HT20	MCS0	1	36	5180	10.00	9.61	24.00	-6.00		Pass
HT20	MCS0	1	44	5220	10.00	9.05	24.00	-6.00		Pass
HT20	MCS0	1	48	5240	10.00	9.39	24.00	-6.00		Pass
HT40	MCS0	1	38	5190	9.00	7.75	24.00	-6.00		Pass
HT40	MCS0	1	46	5230	9.00	8.98	24.00	-6.00		Pass
VHT20	MCS0	1	36	5180	10.00	9.99	24.00	-6.00		Pass
VHT20	MCS0	1	44	5220	10.00	9.41	24.00	-6.00		Pass
VHT20	MCS0	1	48	5240	10.00	9.52	24.00	-6.00		Pass
VHT40	MCS0	1	38	5190	10.00	9.27	24.00	-6.00		Pass
VHT40	MCS0	1	46	5230	10.00	9.06	24.00	-6.00		Pass
VHT80	MCS0	1	42	5210	9.00	9.57	24.00	-6.00		Pass

**TEST RESULTS DATA**  
**Power Spectral Density**

FCC Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)	-	Pass/Fail
11a	6Mbps	1	36	5180	0.60	-2.41	11.00	-6.00		Pass
11a	6Mbps	1	44	5220	0.60	-1.00	11.00	-6.00		Pass
11a	6Mbps	1	48	5240	0.60	-1.64	11.00	-6.00		Pass
HT20	MCS0	1	36	5180	0.63	-2.69	11.00	-6.00		Pass
HT20	MCS0	1	44	5220	0.63	-1.45	11.00	-6.00		Pass
HT20	MCS0	1	48	5240	0.63	-1.80	11.00	-6.00		Pass
HT40	MCS0	1	38	5190	1.45	-5.21	11.00	-6.00		Pass
HT40	MCS0	1	46	5230	1.45	-6.02	11.00	-6.00		Pass
VHT20	MCS0	1	36	5180	0.83	-2.32	11.00	-6.00		Pass
VHT20	MCS0	1	44	5220	0.83	-1.65	11.00	-6.00		Pass
VHT20	MCS0	1	48	5240	0.83	-2.44	11.00	-6.00		Pass
VHT40	MCS0	1	38	5190	1.48	-5.33	11.00	-6.00		Pass
VHT40	MCS0	1	46	5230	1.48	-4.28	11.00	-6.00		Pass
VHT80	MCS0	1	42	5210	2.59	-7.70	11.00	-6.00		Pass

**TEST RESULTS DATA**  
**26dB and 99% OBW**

Band II										
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	52	5260	18.68	23.43	23.71	29.71	23.98	
11a	6M bps	1	60	5300	18.53	23.53	23.68	29.68	23.98	
11a	6M bps	1	64	5320	18.53	23.58	23.68	29.68	23.98	
HT20	MCS 0	1	52	5260	19.43	23.68	23.88	29.88	23.98	
HT20	MCS 0	1	60	5300	19.18	23.73	23.83	29.83	23.98	
HT20	MCS 0	1	64	5320	19.23	23.68	23.84	29.84	23.98	
HT40	MCS 0	1	54	5270	36.56	43.79	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.46	44.69	23.98	30.00	23.98	
VHT20	MCS 0	1	52	5260	19.08	23.83	23.81	29.81	23.98	
VHT20	MCS 0	1	60	5300	19.08	23.78	23.81	29.81	23.98	
VHT20	MCS 0	1	64	5320	19.13	23.93	23.82	29.82	23.98	
VHT40	MCS 0	1	54	5270	36.66	44.15	23.98	30.00	23.98	
VHT40	MCS 0	1	62	5310	36.56	44.15	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	74.69	83.12	23.98	30.00	23.98	

**TEST RESULTS DATA**  
**Average Power Table**

FCC Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6M bps	1	52	5260	10.00	9.17	23.98	-6.00		Pass
11a	6M bps	1	60	5300	10.00	8.83	23.98	-6.00		Pass
11a	6M bps	1	64	5320	10.00	9.42	23.98	-6.00		Pass
HT20	MCS 0	1	52	5260	10.00	9.28	23.98	-6.00		Pass
HT20	MCS 0	1	60	5300	10.00	8.76	23.98	-6.00		Pass
HT20	MCS 0	1	64	5320	10.00	9.58	23.98	-6.00		Pass
HT40	MCS 0	1	54	5270	9.00	7.20	23.98	-6.00		Pass
HT40	MCS 0	1	62	5310	9.00	8.97	23.98	-6.00		Pass
VHT20	MCS 0	1	52	5260	10.00	9.62	23.98	-6.00		Pass
VHT20	MCS 0	1	60	5300	10.00	9.06	23.98	-6.00		Pass
VHT20	MCS 0	1	64	5320	10.00	9.81	23.98	-6.00		Pass
VHT40	MCS 0	1	54	5270	10.00	8.69	23.98	-6.00		Pass
VHT40	MCS 0	1	62	5310	10.00	9.99	23.98	-6.00		Pass
VHT80	MCS 0	1	58	5290	9.00	9.49	23.98	-6.00		Pass

**TEST RESULTS DATA**  
**Power Spectral Density**

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	52	5260	0.60	-2.37	11.00	-6.00		Pass
11a	6M bps	1	60	5300	0.60	-0.62	11.00	-6.00		Pass
11a	6M bps	1	64	5320	0.60	-1.41	11.00	-6.00		Pass
HT20	MCS 0	1	52	5260	0.63	-2.60	11.00	-6.00		Pass
HT20	MCS 0	1	60	5300	0.63	-1.44	11.00	-6.00		Pass
HT20	MCS 0	1	64	5320	0.63	-1.58	11.00	-6.00		Pass
HT40	MCS 0	1	54	5270	1.45	-4.91	11.00	-6.00		Pass
HT40	MCS 0	1	62	5310	1.45	-5.93	11.00	-6.00		Pass
VHT20	MCS 0	1	52	5260	0.83	-2.29	11.00	-6.00		Pass
VHT20	MCS 0	1	60	5300	0.83	-1.44	11.00	-6.00		Pass
VHT20	MCS 0	1	64	5320	0.83	-1.61	11.00	-6.00		Pass
VHT40	MCS 0	1	54	5270	1.48	-4.17	11.00	-6.00		Pass
VHT40	MCS 0	1	62	5310	1.48	-4.77	11.00	-6.00		Pass
VHT80	MCS 0	1	58	5290	2.59	-8.42	11.00	-6.00		Pass



**TEST RESULTS DATA**  
**26dB and 99% OBW**

Band III										
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	100	5500	18.38	23.58	23.64	29.64	23.98	
11a	6M bps	1	116	5580	18.83	23.53	23.75	29.75	23.98	
11a	6M bps	1	140	5700	18.18	23.43	23.60	29.60	23.98	
HT20	MCS 0	1	100	5500	19.18	23.58	23.83	29.83	23.98	
HT20	MCS 0	1	116	5580	19.03	23.68	23.79	29.79	23.98	
HT20	MCS 0	1	140	5700	19.03	23.63	23.79	29.79	23.98	
HT40	MCS 0	1	102	5510	36.56	45.14	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.56	45.05	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.56	44.51	23.98	30.00	23.98	
VHT20	MCS 0	1	100	5500	19.13	23.88	23.82	29.82	23.98	
VHT20	MCS 0	1	116	5580	19.13	23.93	23.82	29.82	23.98	
VHT20	MCS 0	1	140	5700	19.13	23.83	23.82	29.82	23.98	
VHT40	MCS 0	1	102	5510	36.66	44.69	23.98	30.00	23.98	
VHT40	MCS 0	1	110	5550	36.66	44.51	23.98	30.00	23.98	
VHT40	MCS 0	1	134	5670	36.66	45.05	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	74.69	84.56	23.98	30.00	23.98	

**TEST RESULTS DATA**  
**Average Power Table**

FCC Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6M bps	1	100	5500	10.00	8.53	23.98	-6.00		Pass
11a	6M bps	1	116	5580	10.00	8.83	23.98	-6.00		Pass
11a	6M bps	1	140	5700	10.00	9.73	23.98	-6.00		Pass
HT20	MCS 0	1	100	5500	10.00	8.56	23.98	-6.00		Pass
HT20	MCS 0	1	116	5580	10.00	8.77	23.98	-6.00		Pass
HT20	MCS 0	1	140	5700	10.00	9.78	23.98	-6.00		Pass
HT40	MCS 0	1	102	5510	9.00	7.84	23.98	-6.00		Pass
HT40	MCS 0	1	110	5550	9.00	7.71	23.98	-6.00		Pass
HT40	MCS 0	1	134	5670	9.00	7.89	23.98	-6.00		Pass
VHT20	MCS 0	1	100	5500	10.00	8.78	23.98	-6.00		Pass
VHT20	MCS 0	1	116	5580	10.00	9.20	23.98	-6.00		Pass
VHT20	MCS 0	1	140	5700	10.00	10.09	23.98	-6.00		Pass
VHT40	MCS 0	1	102	5510	10.00	9.42	23.98	-6.00		Pass
VHT40	MCS 0	1	110	5550	10.00	9.24	23.98	-6.00		Pass
VHT40	MCS 0	1	134	5670	10.00	9.16	23.98	-6.00		Pass
VHT80	MCS 0	1	106	5530	9.00	8.05	23.98	-6.00		Pass

**TEST RESULTS DATA**  
**Power Spectral Density**

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	100	5500	0.60	-1.38	11.00	-6.00		Pass
11a	6M bps	1	116	5580	0.60	-1.72	11.00	-6.00		Pass
11a	6M bps	1	140	5700	0.60	-2.05	11.00	-6.00		Pass
HT20	MCS 0	1	100	5500	0.63	-2.26	11.00	-6.00		Pass
HT20	MCS 0	1	116	5580	0.63	-1.82	11.00	-6.00		Pass
HT20	MCS 0	1	140	5700	0.63	-2.20	11.00	-6.00		Pass
HT40	MCS 0	1	102	5510	1.45	-6.65	11.00	-6.00		Pass
HT40	MCS 0	1	110	5550	1.45	-6.71	11.00	-6.00		Pass
HT40	MCS 0	1	134	5670	1.45	-6.70	11.00	-6.00		Pass
VHT20	MCS 0	1	100	5500	0.83	-1.65	11.00	-6.00		Pass
VHT20	MCS 0	1	116	5580	0.83	-1.98	11.00	-6.00		Pass
VHT20	MCS 0	1	140	5700	0.83	-2.09	11.00	-6.00		Pass
VHT40	MCS 0	1	102	5510	1.48	-5.31	11.00	-6.00		Pass
VHT40	MCS 0	1	110	5550	1.48	-4.94	11.00	-6.00		Pass
VHT40	MCS 0	1	134	5670	1.48	-5.69	11.00	-6.00		Pass
VHT80	MCS 0	1	106	5530	2.59	-8.32	11.00	-6.00		Pass

**TEST RESULTS DATA**  
**Frequency Stability**

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	36	5180	5179.975	-0.025	-4.83	20	3.6	
11a	6Mbps	1	36	5180	5179.975	-0.025	-4.83	20	4.2	
11a	6Mbps	1	36	5180	5179.975	-0.025	-4.83	20	3.8	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	-30	3.8	
11a	6Mbps	1	36	5180	5179.950	-0.050	-9.65	50	3.8	

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	64	5320	5319.950	-0.050	-9.40	20	3.6	
11a	6Mbps	1	64	5320	5319.950	-0.050	-9.40	20	4.2	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	3.8	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	-30	3.8	
11a	6Mbps	1	64	5320	5319.950	-0.050	-9.40	50	3.8	

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stability (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	100	5500	5499.950	-0.050	-9.09	20	3.6	
11a	6Mbps	1	100	5500	5499.950	-0.050	-9.09	20	4.2	
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	20	3.8	
11a	6Mbps	1	100	5500	5500.000	0.000	0.00	-30	3.8	
11a	6Mbps	1	100	5500	5499.950	-0.050	-9.09	50	3.8	



## Appendix B. Radiated Test Results

### 15E Band 1 - 5150~5250MHz

#### WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11a CH 36 5180MHz		5127.4	48.38	-25.62	74	44.97	31.84	8.11	36.54	284	62	P	H
		5127.55	39.14	-14.86	54	35.73	31.84	8.11	36.54	284	62	A	H
	*	5178	95.76	-	-	92.25	31.85	8.17	36.51	284	62	P	H
	*	5176	88.65	-	-	85.14	31.85	8.17	36.51	284	62	A	H
		5108.55	46.64	-27.36	74	43.26	31.83	8.1	36.55	100	147	P	V
		5127.6	37.8	-16.2	54	34.39	31.84	8.11	36.54	100	147	A	V
	*	5186	93.17	-	-	89.66	31.85	8.17	36.51	100	147	P	V
	*	5186	86.05	-	-	82.54	31.85	8.17	36.51	100	147	A	V
802.11a CH 44 5220MHz	*	5216	95.1	-	-	91.54	31.86	8.2	36.5	294	61	P	H
	*	5214	88.09	-	-	84.53	31.86	8.2	36.5	294	61	A	H
	*	5214	94.35	-	-	90.79	31.86	8.2	36.5	100	292	P	V
	*	5214	87.5	-	-	83.94	31.86	8.2	36.5	100	292	A	V
802.11a CH 48 5240MHz	*	5236	94.33	-	-	90.75	31.87	8.21	36.5	277	64	P	H
	*	5234	87.37	-	-	83.79	31.87	8.21	36.5	277	64	A	H
		5359.3	45.69	-28.31	74	41.99	31.91	8.29	36.5	277	64	P	H
		5376.55	36.33	-17.67	54	32.61	31.91	8.31	36.5	277	64	A	H
	*	5234	93.67	-	-	90.09	31.87	8.21	36.5	100	100	P	V
	*	5236	86.2	-	-	82.62	31.87	8.21	36.5	100	100	A	V
		5386.8	45.59	-28.41	74	41.85	31.92	8.32	36.5	100	100	P	V
		5387.8	36.26	-17.74	54	32.52	31.92	8.32	36.5	100	100	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 1 5150~5250MHz**  
**WIFI 802.11a (Harmonic @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11a		10359	49.21	-24.79	74	58.75	38.02	13.54	61.1	100	0	P	H
CH 36		10359	47.26	-26.74	74	56.8	38.02	13.54	61.1	100	360	P	V
5180MHz													
802.11a		10440	48.73	-25.27	74	58.16	38.06	13.58	61.07	100	0	P	H
CH 44		10440	47.37	-26.63	74	56.8	38.06	13.58	61.07	100	360	P	V
5220MHz													
802.11a		10479	48.25	-25.75	74	57.59	38.09	13.61	61.04	100	0	P	H
CH 48		10479	47.56	-26.44	74	56.9	38.09	13.61	61.04	100	360	P	V
5240MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 1 5150~5250MHz**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11n HT20 CH 36 5180MHz		5128.7	47.77	-26.23	74	44.36	31.84	8.11	36.54	100	121	P	H
		5127.9	39.86	-14.14	54	36.45	31.84	8.11	36.54	100	121	A	H
	*	5176	95.68	-	-	92.17	31.85	8.17	36.51	100	121	P	H
	*	5174	88.83	-	-	85.32	31.85	8.17	36.51	100	121	A	H
		5134.55	47.46	-26.54	74	44.05	31.84	8.11	36.54	344	72	P	V
		5128.05	38.7	-15.3	54	35.29	31.84	8.11	36.54	344	72	A	V
	*	5174	94.01	-	-	90.5	31.85	8.17	36.51	344	72	P	V
	*	5174	87.03	-	-	83.52	31.85	8.17	36.51	344	72	A	V
802.11n HT20 CH 44 5220MHz	*	5216	95.17	-	-	91.61	31.86	8.2	36.5	100	118	P	H
	*	5214	88.64	-	-	85.08	31.86	8.2	36.5	100	118	A	H
	*	5218	92.97	-	-	89.41	31.86	8.2	36.5	356	70	P	V
	*	5214	86.35	-	-	82.79	31.86	8.2	36.5	356	70	A	V
802.11n HT20 CH 48 5240MHz	*	5232	95.35	-	-	91.77	31.87	8.21	36.5	100	121	P	H
	*	5234	88.12	-	-	84.54	31.87	8.21	36.5	100	121	A	H
		5362.15	46.03	-27.97	74	42.31	31.91	8.31	36.5	100	121	P	H
		5389.75	36.15	-17.85	54	32.41	31.92	8.32	36.5	100	121	A	H
	*	5232	93.39	-	-	89.81	31.87	8.21	36.5	380	70	P	V
	*	5232	86.51	-	-	82.93	31.87	8.21	36.5	380	70	A	V
		5389.4	46.25	-27.75	74	42.51	31.92	8.32	36.5	380	70	P	V
		5372	36.17	-17.83	54	32.45	31.91	8.31	36.5	380	70	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 1 5150~5250MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11n HT20 CH 36 5180MHz		10359	45.3	-28.7	74	54.84	38.02	13.54	61.1	100	0	P	H
		10359	48.04	-25.96	74	57.58	38.02	13.54	61.1	100	360	P	V
802.11n HT20 CH 44 5220MHz		10440	48.87	-25.13	74	58.3	38.06	13.58	61.07	100	0	P	H
		10437	50.28	-23.72	74	59.71	38.06	13.58	61.07	100	360	P	V
802.11n HT20 CH 48 5240MHz		10479	45.8	-28.2	74	55.14	38.09	13.61	61.04	100	0	P	H
		10479	48.12	-25.88	74	57.46	38.09	13.61	61.04	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												





**15E band 1 5150~5250MHz**  
**WIFI 802.11n HT40 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11n HT40 CH 38 5190MHz		5149.25	47.44	-26.56	74	44	31.84	8.13	36.53	339	113	P	H
		5148	38	-16	54	34.56	31.84	8.13	36.53	339	113	A	H
	*	5192	90.47	-	-	86.92	31.86	8.19	36.5	339	113	P	H
	*	5178	83.4	-	-	79.89	31.85	8.17	36.51	339	113	A	H
		5121.85	47.08	-26.92	74	43.7	31.83	8.1	36.55	378	76	P	V
		5149.45	37.58	-16.42	54	34.14	31.84	8.13	36.53	378	76	A	V
	*	5202	90.14	-	-	86.59	31.86	8.19	36.5	378	76	P	V
	*	5202	82.77	-	-	79.22	31.86	8.19	36.5	378	76	A	V
802.11n HT40 CH 46 5230MHz	*	5216	89.27	-	-	85.71	31.86	8.2	36.5	100	119	P	H
	*	5218	82.71	-	-	79.15	31.86	8.2	36.5	100	119	A	H
		5351.8	45.59	-28.41	74	41.89	31.91	8.29	36.5	100	119	P	H
		5392.55	36.67	-17.33	54	32.93	31.92	8.32	36.5	100	119	A	H
	*	5218	89.07	-	-	85.51	31.86	8.2	36.5	300	70	P	V
	*	5218	82.09	-	-	78.53	31.86	8.2	36.5	300	70	A	V
		5365.85	45.99	-28.01	74	42.27	31.91	8.31	36.5	300	70	P	V
		5395.65	36.72	-17.28	54	32.97	31.92	8.33	36.5	300	70	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 1 5150~5250MHz**  
**WIFI 802.11n HT40 (Harmonic @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11n HT40 CH 38 5190MHz		10380	45.34	-28.66	74	54.86	38.03	13.55	61.1	100	0	P	H
		10380	47.97	-26.03	74	57.49	38.03	13.55	61.1	100	360	P	V
802.11n HT40 CH 46 5230MHz		10461	44.9	-29.1	74	54.27	38.08	13.6	61.05	100	0	P	H
		10461	47	-27	74	56.37	38.08	13.6	61.05	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 1 5150~5250MHz**  
**WIFI 802.11ac VHT20 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac VHT20 CH 36 5180MHz		5127.95	48.43	-25.57	74	45.02	31.84	8.11	36.54	126	295	P	H
		5128.25	39.5	-14.5	54	36.09	31.84	8.11	36.54	126	295	A	H
	*	5176	94.26	-	-	90.75	31.85	8.17	36.51	126	295	P	H
	*	5174	87.51	-	-	84	31.85	8.17	36.51	126	295	A	H
		5128.6	48.2	-25.8	74	44.79	31.84	8.11	36.54	360	252	P	V
		5128.2	38.81	-15.19	54	35.4	31.84	8.11	36.54	360	252	A	V
	*	5186	94.91	-	-	91.4	31.85	8.17	36.51	360	252	P	V
	*	5174	87.51	-	-	84	31.85	8.17	36.51	360	252	A	V
802.11ac VHT20 CH 44 5220MHz	*	5216	93.28	-	-	89.72	31.86	8.2	36.5	130	297	P	H
	*	5212	86.3	-	-	82.74	31.86	8.2	36.5	130	297	A	H
	*	5212	94.31	-	-	90.75	31.86	8.2	36.5	360	254	P	V
	*	5214	87.26	-	-	83.7	31.86	8.2	36.5	360	254	A	V
802.11ac VHT20 CH 48 5240MHz	*	5234	93.63	-	-	90.05	31.87	8.21	36.5	108	309	P	H
	*	5232	86.43	-	-	82.85	31.87	8.21	36.5	108	309	A	H
		5357.05	45.39	-28.61	74	41.69	31.91	8.29	36.5	108	309	P	H
		5357.55	36.99	-17.01	54	33.29	31.91	8.29	36.5	108	309	A	H
	*	5234	94.14	-	-	90.56	31.87	8.21	36.5	355	78	P	V
	*	5234	86.98	-	-	83.4	31.87	8.21	36.5	355	78	A	V
		5390.75	45.74	-28.26	74	42	31.92	8.32	36.5	355	78	P	V
		5388.6	36.64	-17.36	54	32.9	31.92	8.32	36.5	355	78	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 1 5150~5250MHz

## WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac		10359	44.84	-29.16	74	54.38	38.02	13.54	61.1	100	0	P	H
VHT20													
CH 36		10359	45.92	-28.08	74	55.46	38.02	13.54	61.1	100	360	P	V
5180MHz													
802.11ac		10440	45.72	-28.28	74	55.15	38.06	13.58	61.07	100	0	P	H
VHT20													
CH 44		10440	45.52	-28.48	74	54.95	38.06	13.58	61.07	100	360	P	V
5220MHz													
802.11ac		10479	45.48	-28.52	74	54.82	38.09	13.61	61.04	100	0	P	H
VHT20													
CH 48		10479	45.45	-28.55	74	54.79	38.09	13.61	61.04	100	360	P	V
5240MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 1 5150~5250MHz**  
**WIFI 802.11ac VHT40 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11ac VHT40 CH 38 5190MHz		5145.9	48.74	-25.26	74	45.3	31.84	8.13	36.53	100	117	P	H
		5148.9	39.9	-14.1	54	36.46	31.84	8.13	36.53	100	117	A	H
	*	5188	95.23	-	-	91.72	31.85	8.17	36.51	100	117	P	H
	*	5178	87.1	-	-	83.59	31.85	8.17	36.51	100	117	A	H
		5126.5	47.33	-26.67	74	43.92	31.84	8.11	36.54	300	19	P	V
		5147.1	38.11	-15.89	54	34.67	31.84	8.13	36.53	300	19	A	V
	*	5202	90.8	-	-	87.25	31.86	8.19	36.5	300	19	P	V
	*	5202	83.44	-	-	79.89	31.86	8.19	36.5	300	19	A	V
802.11ac VHT40 CH 46 5230MHz	*	5216	93.91	-	-	90.35	31.86	8.2	36.5	100	123	P	H
	*	5218	86.68	-	-	83.12	31.86	8.2	36.5	100	123	A	H
		5354.05	45.54	-28.46	74	41.84	31.91	8.29	36.5	100	123	P	H
		5372	36.81	-17.19	54	33.09	31.91	8.31	36.5	100	123	A	H
	*	5240	90.45	-	-	86.87	31.87	8.21	36.5	332	71	P	V
	*	5218	83.35	-	-	79.79	31.86	8.2	36.5	332	71	A	V
		5355.55	45.59	-28.41	74	41.89	31.91	8.29	36.5	332	71	P	V
		5373.7	36.64	-17.36	54	32.92	31.91	8.31	36.5	332	71	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 1 5150~5250MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac VHT40 CH 38 5190MHz		10380	46.39	-27.61	74	55.91	38.03	13.55	61.1	100	0	P	H
		10380	47.7	-26.3	74	57.22	38.03	13.55	61.1	100	360	P	V
802.11ac VHT40 CH 46 5230MHz		10461	45.04	-28.96	74	54.41	38.08	13.6	61.05	100	0	P	H
		10461	46.27	-27.73	74	55.64	38.08	13.6	61.05	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 1 5150~5250MHz**  
**WIFI 802.11ac VHT80 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11ac VHT80 CH 42 5210MHz		5148.8	48	-26	74	44.56	31.84	8.13	36.53	100	122	P	H
		5145.25	39.77	-14.23	54	36.33	31.84	8.13	36.53	100	122	A	H
	*	5192	89.14	-	-	85.59	31.86	8.19	36.5	100	122	P	H
	*	5190	81.53	-	-	78.02	31.85	8.17	36.51	100	122	A	H
		5382.5	45.37	-28.63	74	41.63	31.92	8.32	36.5	100	122	P	H
		5374.65	38.53	-15.47	54	34.81	31.91	8.31	36.5	100	122	A	H
		5142.65	48.17	-25.83	74	44.73	31.84	8.13	36.53	336	75	P	V
		5148.45	39.65	-14.35	54	36.21	31.84	8.13	36.53	336	75	A	V
	*	5212	88.4	-	-	84.84	31.86	8.2	36.5	336	75	P	V
	*	5214	81.8	-	-	78.24	31.86	8.2	36.5	336	75	A	V
		5363.25	45.65	-28.35	74	41.93	31.91	8.31	36.5	336	75	P	V
		5380.4	37.78	-16.22	54	34.04	31.92	8.32	36.5	336	75	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 1 5150~5250MHz

## WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac		10419	44.25	-29.75	74	53.71	38.05	13.57	61.08	100	0	P	H
VHT80													
CH 42		10419	46.71	-27.29	74	56.17	38.05	13.57	61.08	100	360	P	V
5210MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												





## 15E Band 2 - 5250~5350MHz

## WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11a CH 52 5260MHz		5120.4	46.82	-27.18	74	43.44	31.83	8.1	36.55	280	60	P	H
		5113.55	37.25	-16.75	54	33.87	31.83	8.1	36.55	280	60	A	H
	*	5264	93.95	-	-	90.34	31.88	8.23	36.5	280	60	P	H
	*	5254	86.52	-	-	82.92	31.88	8.22	36.5	280	60	A	H
		5132.3	46.85	-27.15	74	43.44	31.84	8.11	36.54	100	152	P	V
		5105.4	36.97	-17.03	54	33.62	31.83	8.08	36.56	100	152	A	V
	*	5258	92.65	-	-	89.05	31.88	8.22	36.5	100	152	P	V
	*	5254	85.25	-	-	81.65	31.88	8.22	36.5	100	152	A	V
802.11a CH 60 5300MHz	*	5306	91.89	-	-	88.24	31.89	8.26	36.5	303	65	P	H
	*	5304	84.7	-	-	81.05	31.89	8.26	36.5	303	65	A	H
	*	5304	92.29	-	-	88.64	31.89	8.26	36.5	100	151	P	V
	*	5296	85.43	-	-	81.78	31.89	8.26	36.5	100	151	A	V
802.11a CH 64 5320MHz	*	5324	92.19	-	-	88.52	31.9	8.27	36.5	285	64	P	H
	*	5314	84.99	-	-	81.32	31.9	8.27	36.5	285	64	A	H
		5371.35	45.94	-28.06	74	42.22	31.91	8.31	36.5	285	64	P	H
		5372.85	36.86	-17.14	54	33.14	31.91	8.31	36.5	285	64	A	H
	*	5326	92.22	-	-	88.55	31.9	8.27	36.5	100	177	P	V
	*	5312	84.97	-	-	81.3	31.9	8.27	36.5	100	177	A	V
		5370.95	46.11	-27.89	74	42.39	31.91	8.31	36.5	100	177	P	V
		5372.05	36.94	-17.06	54	33.22	31.91	8.31	36.5	100	177	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 2 5250~5350MHz

## WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11a		10521	46.76	-27.24	74	56.05	38.11	13.63	61.03	100	0	P	H
CH 52		10521	47.75	-26.25	74	57.04	38.11	13.63	61.03	100	360	P	V
5260MHz													
802.11a		10599	46.16	-27.84	74	55.3	38.16	13.68	60.98	100	0	P	H
CH 60		10599	45.51	-28.49	74	54.65	38.16	13.68	60.98	100	360	P	V
5300MHz													
802.11a		10641	46.15	-27.85	74	55.24	38.18	13.7	60.97	100	0	P	H
CH 64		10641	45.37	-28.63	74	54.46	38.18	13.7	60.97	100	360	P	V
5320MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 2 5250~5350MHz**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11n HT20 CH 52 5260MHz		5108.35	47.21	-26.79	74	43.83	31.83	8.1	36.55	100	306	P	H
		5113.45	36.94	-17.06	54	33.56	31.83	8.1	36.55	100	306	A	H
	*	5256	94.09	-	-	90.49	31.88	8.22	36.5	100	306	P	H
	*	5256	86.61	-	-	83.01	31.88	8.22	36.5	100	306	A	H
		5125.6	46.91	-27.09	74	43.5	31.84	8.11	36.54	372	69	P	V
		5104.35	36.92	-17.08	54	33.57	31.83	8.08	36.56	372	69	A	V
	*	5252	93.32	-	-	89.72	31.88	8.22	36.5	372	69	P	V
	*	5254	86.15	-	-	82.55	31.88	8.22	36.5	372	69	A	V
802.11n HT20 CH 60 5300MHz	*	5298	93.51	-	-	89.86	31.89	8.26	36.5	100	119	P	H
	*	5294	86.45	-	-	82.8	31.89	8.26	36.5	100	119	A	H
	*	5298	92.04	-	-	88.39	31.89	8.26	36.5	386	72	P	V
	*	5294	85.22	-	-	81.57	31.89	8.26	36.5	386	72	A	V
802.11n HT20 CH 64 5320MHz	*	5312	92.8	-	-	89.13	31.9	8.27	36.5	100	302	P	H
	*	5316	85.53	-	-	81.86	31.9	8.27	36.5	100	302	A	H
		5371.85	46.07	-27.93	74	42.35	31.91	8.31	36.5	100	302	P	H
		5371.65	37.38	-16.62	54	33.66	31.91	8.31	36.5	100	302	A	H
	*	5312	92.19	-	-	88.52	31.9	8.27	36.5	394	70	P	V
	*	5314	84.74	-	-	81.07	31.9	8.27	36.5	394	70	A	V
		5377	46.82	-27.18	74	43.1	31.91	8.31	36.5	394	70	P	V
		5371.55	37.02	-16.98	54	33.3	31.91	8.31	36.5	394	70	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 2 5250~5350MHz**  
**WIFI 802.11n HT20 (Harmonic @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11n HT20 CH 52 5260MHz		10521	44.58	-29.42	74	53.87	38.11	13.63	61.03	100	0	P	H
		10521	47.43	-26.57	74	56.72	38.11	13.63	61.03	100	360	P	V
802.11n HT20 CH 60 5300MHz		10599	44.25	-29.75	74	53.39	38.16	13.68	60.98	100	0	P	H
		10599	46.13	-27.87	74	55.27	38.16	13.68	60.98	100	360	P	V
802.11n HT20 CH 64 5320MHz		10641	44.79	-29.21	74	53.88	38.18	13.7	60.97	100	0	P	H
		10641	47.63	-26.37	74	56.72	38.18	13.7	60.97	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 2 5250~5350MHz**  
**WIFI 802.11n HT40 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11n HT40 CH 54 5270MHz		5126.45	46.81	-27.19	74	43.4	31.84	8.11	36.54	100	304	P	H
		5113.65	37.54	-16.46	54	34.16	31.83	8.1	36.55	100	304	A	H
	*	5258	88.48	-	-	84.88	31.88	8.22	36.5	100	304	P	H
	*	5258	81.33	-	-	77.73	31.88	8.22	36.5	100	304	A	H
		5149.1	46.94	-27.06	74	43.5	31.84	8.13	36.53	300	66	P	V
		5106.1	37.26	-16.74	54	33.88	31.83	8.1	36.55	300	66	A	V
	*	5256	89.01	-	-	85.41	31.88	8.22	36.5	300	66	P	V
	*	5256	81.31	-	-	77.71	31.88	8.22	36.5	300	66	A	V
802.11n HT40 CH 62 5310MHz	*	5298	88.86	-	-	85.21	31.89	8.26	36.5	100	305	P	H
	*	5296	81.61	-	-	77.96	31.89	8.26	36.5	100	305	A	H
		5352.7	46.91	-27.09	74	43.21	31.91	8.29	36.5	100	305	P	H
		5354.85	36.78	-17.22	54	33.08	31.91	8.29	36.5	100	305	A	H
	*	5296	90.03	-	-	86.38	31.89	8.26	36.5	329	69	P	V
	*	5298	81.75	-	-	78.1	31.89	8.26	36.5	329	69	A	V
		5394.6	46.27	-27.73	74	42.52	31.92	8.33	36.5	329	69	P	V
		5352.1	36.9	-17.1	54	33.2	31.91	8.29	36.5	329	69	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 2 5250~5350MHz**  
**WIFI 802.11n HT40 (Harmonic @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11n HT40 CH 54 5270MHz		10539	44.38	-29.62	74	53.64	38.12	13.64	61.02	100	0	P	H
		10542	46.98	-27.02	74	56.24	38.12	13.64	61.02	100	360	P	V
802.11n HT40 CH 62 5310MHz		10620	43.84	-30.16	74	52.96	38.17	13.69	60.98	100	0	P	H
		10620	46.39	-27.61	74	55.51	38.17	13.69	60.98	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 2 5250~5350MHz**  
**WIFI 802.11ac VHT20 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11ac VHT20 CH 52 5260MHz		5102.95	46.82	-27.18	74	43.47	31.83	8.08	36.56	100	297	P	H
		5117.1	37.68	-16.32	54	34.3	31.83	8.1	36.55	100	297	A	H
	*	5254	92.79	-	-	89.19	31.88	8.22	36.5	100	297	P	H
	*	5252	86.05	-	-	82.45	31.88	8.22	36.5	100	297	A	H
		5106.4	48.04	-25.96	74	44.66	31.83	8.1	36.55	354	257	P	V
		5115.7	37.68	-16.32	54	34.3	31.83	8.1	36.55	354	257	A	V
	*	5252	94.06	-	-	90.46	31.88	8.22	36.5	354	257	P	V
	*	5254	86.99	-	-	83.39	31.88	8.22	36.5	354	257	A	V
802.11ac VHT20 CH 60 5300MHz	*	5294	92.09	-	-	88.44	31.89	8.26	36.5	113	308	P	H
	*	5292	84.86	-	-	81.22	31.89	8.25	36.5	113	308	A	H
	*	5306	92.56	-	-	88.91	31.89	8.26	36.5	366	71	P	V
	*	5304	85.48	-	-	81.83	31.89	8.26	36.5	366	71	A	V
802.11ac VHT20 CH 64 5320MHz	*	5314	91.81	-	-	88.14	31.9	8.27	36.5	130	304	P	H
	*	5314	84.87	-	-	81.2	31.9	8.27	36.5	130	304	A	H
		5373.4	45.71	-28.29	74	41.99	31.91	8.31	36.5	130	304	P	H
		5372	37.49	-16.51	54	33.77	31.91	8.31	36.5	130	304	A	H
	*	5314	92.92	-	-	89.25	31.9	8.27	36.5	347	78	P	V
	*	5314	85.8	-	-	82.13	31.9	8.27	36.5	347	78	A	V
		5740.52	47.14	-26.86	74	42.8	32.05	8.58	36.29	347	78	P	V
		5744.84	37.69	-16.31	54	33.35	32.05	8.58	36.29	347	78	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 2 5250~5350MHz

## WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac		10521	45.57	-28.43	74	54.86	38.11	13.63	61.03	100	0	P	H
VHT20													
CH 52		10521	45.42	-28.58	74	54.71	38.11	13.63	61.03	100	360	P	V
5260MHz													
802.11ac		10599	43.48	-30.52	74	52.62	38.16	13.68	60.98	100	0	P	H
VHT20													
CH 60		10599	44.45	-29.55	74	53.59	38.16	13.68	60.98	100	360	P	V
5300MHz													
802.11ac		10641	43.38	-30.62	74	52.47	38.18	13.7	60.97	100	0	P	H
VHT20													
CH 64		10641	44.73	-29.27	74	53.82	38.18	13.7	60.97	100	360	P	V
5320MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												





**15E band 2 5250~5350MHz**  
**WIFI 802.11ac VHT40 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11ac VHT40 CH 54 5270MHz		5115.1	47.81	-26.19	74	44.43	31.83	8.1	36.55	100	117	P	H
		5128.3	37.79	-16.21	54	34.38	31.84	8.11	36.54	100	117	A	H
	*	5260	90.73	-	-	87.12	31.88	8.23	36.5	100	117	P	H
	*	5258	83.71	-	-	80.11	31.88	8.22	36.5	100	117	A	H
		5112.85	46.77	-27.23	74	43.39	31.83	8.1	36.55	328	74	P	V
		5117.35	37.72	-16.28	54	34.34	31.83	8.1	36.55	328	74	A	V
	*	5262	89.91	-	-	86.3	31.88	8.23	36.5	328	74	P	V
	*	5258	82.69	-	-	79.09	31.88	8.22	36.5	328	74	A	V
802.11ac VHT40 CH 62 5310MHz	*	5320	90.65	-	-	86.98	31.9	8.27	36.5	100	121	P	H
	*	5298	82.82	-	-	79.17	31.89	8.26	36.5	100	121	A	H
		5363.3	46.38	-27.62	74	42.66	31.91	8.31	36.5	100	121	P	H
		5369.8	36.88	-17.12	54	33.16	31.91	8.31	36.5	100	121	A	H
	*	5320	88.06	-	-	84.39	31.9	8.27	36.5	300	72	P	V
	*	5298	81.11	-	-	77.46	31.89	8.26	36.5	300	72	A	V
		5354.35	45.86	-28.14	74	42.16	31.91	8.29	36.5	300	72	P	V
		5399.5	36.74	-17.26	54	32.99	31.92	8.33	36.5	300	72	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 2 5250~5350MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac VHT40 CH 54 5270MHz		10539	44.64	-29.36	74	53.9	38.12	13.64	61.02	100	0	P	H
		10539	48.5	-25.5	74	57.76	38.12	13.64	61.02	100	360	P	V
802.11ac VHT40 CH 62 5310MHz		10620	44.32	-29.68	74	53.44	38.17	13.69	60.98	100	0	P	H
		10620	47.93	-26.07	74	57.05	38.17	13.69	60.98	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 2 5250~5350MHz**  
**WIFI 802.11ac VHT80 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac VHT80 CH 58 5290MHz		5124.25	46.51	-27.49	74	43.1	31.84	8.11	36.54	115	119	P	H
		5138	39.06	-14.94	54	35.65	31.84	8.11	36.54	115	119	A	H
	*	5260	88.6	-	-	84.99	31.88	8.23	36.5	115	119	P	H
	*	5264	82.51	-	-	78.9	31.88	8.23	36.5	115	119	A	H
		5354.75	46.45	-27.55	74	42.75	31.91	8.29	36.5	115	119	P	H
		5350.75	38.12	-15.88	54	34.42	31.91	8.29	36.5	115	119	A	H
		5104.45	46.87	-27.13	74	43.52	31.83	8.08	36.56	332	76	P	V
		5100.35	39.3	-14.7	54	35.95	31.83	8.08	36.56	332	76	A	V
	*	5264	88.71	-	-	85.1	31.88	8.23	36.5	332	76	P	V
	*	5264	80.86	-	-	77.25	31.88	8.23	36.5	332	76	A	V
		5382.6	46.02	-27.98	74	42.28	31.92	8.32	36.5	332	76	P	V
		5386.65	38.15	-15.85	54	34.41	31.92	8.32	36.5	332	76	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 2 5250~5350MHz

## WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac		10581	45.15	-28.85	74	54.32	38.15	13.67	60.99	100	0	P	H
VHT80													
CH 58		10581	45.69	-28.31	74	54.86	38.15	13.67	60.99	100	360	P	V
5290MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E Band 3 - 5470~5725MHz

## WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11a CH 100 5500MHz		5428.72	46.53	-27.47	74	42.69	31.94	8.35	36.45	139	75	P	H
		5447.12	37.01	-16.99	54	33.12	31.94	8.37	36.42	139	75	A	H
	*	5494	89.7	-	-	85.74	31.95	8.39	36.38	139	75	P	H
	*	5506	82.37	-	-	78.36	31.96	8.4	36.35	139	75	A	H
		5402.16	46.78	-27.22	74	43.03	31.92	8.33	36.5	100	146	P	V
		5447.92	37.16	-16.84	54	33.27	31.94	8.37	36.42	100	146	A	V
	*	5496	89.77	-	-	85.81	31.95	8.39	36.38	100	146	P	V
	*	5496	82.41	-	-	78.45	31.95	8.39	36.38	100	146	A	V
802.11a CH 116 5580MHz	*	5584	91.68			87.46	31.98	8.47	36.23	300	76	P	H
	*	5584	84.61			80.39	31.98	8.47	36.23	300	76	A	H
	*	5586	91.11			86.89	31.98	8.47	36.23	300	139	P	V
	*	5586	83.67			79.45	31.98	8.47	36.23	300	139	A	V
802.11a CH 140 5700MHz	*	5694	91.36	-	-	87.05	32.02	8.54	36.25	300	119	P	H
	*	5694	84.18	-	-	79.87	32.02	8.54	36.25	300	119	A	H
		5753.32	46.7	-27.3	74	42.36	32.05	8.59	36.3	300	119	P	H
		5752.04	37.68	-16.32	54	33.34	32.05	8.59	36.3	300	119	A	H
	*	5698	91.28	-	-	86.97	32.02	8.54	36.25	320	141	P	V
	*	5704	84.11	-	-	79.8	32.03	8.55	36.27	320	141	A	V
		5762.36	46.79	-27.21	74	42.45	32.05	8.59	36.3	320	141	P	V
		5752.52	37.55	-16.45	54	33.21	32.05	8.59	36.3	320	141	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 3 - 5470~5725MHz

## WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11a CH 100 5500MHz		11001	48.92	-25.08	74	57.4	38.4	13.91	60.79	100	0	P	H
		11001	50.3	-23.7	74	58.78	38.4	13.91	60.79	100	360	P	V
802.11a CH 116 5580MHz		11160	47.1	-26.9	74	55.33	38.47	14.01	60.71	100	0	P	H
		11160	47.45	-26.55	74	55.68	38.47	14.01	60.71	100	360	P	V
802.11a CH 140 5700MHz		11400	44.96	-29.04	74	52.84	38.56	14.15	60.59	100	0	P	H
		11400	43.95	-30.05	74	51.83	38.56	14.15	60.59	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 3 - 5470~5725MHz**  
**WIFI 802.11n HT20 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11n HT20 CH 100 5500MHz		5460.08	46.54	-27.46	74	42.65	31.94	8.37	36.42	100	120	P	H
		5447.76	37.39	-16.61	54	33.5	31.94	8.37	36.42	100	120	A	H
	*	5496	89.51	-	-	85.55	31.95	8.39	36.38	100	120	P	H
	*	5492	82.5	-	-	78.54	31.95	8.39	36.38	100	120	A	H
		5439.6	46.98	-27.02	74	43.14	31.94	8.35	36.45	362	64	P	V
		5448.24	37.13	-16.87	54	33.24	31.94	8.37	36.42	362	64	A	V
	*	5496	89.53	-	-	85.57	31.95	8.39	36.38	362	64	P	V
	*	5496	82.21	-	-	78.25	31.95	8.39	36.38	362	64	A	V
802.11n HT20 CH 116 5580MHz	*	5584	93.15			88.93	31.98	8.47	36.23	100	210	P	H
	*	5586	85.75			81.53	31.98	8.47	36.23	100	210	A	H
	*	5584	89.72			85.5	31.98	8.47	36.23	392	73	P	V
	*	5588	82.94			78.72	31.98	8.47	36.23	392	73	A	V
802.11n HT20 CH 140 5700MHz	*	5694	91.71	-	-	87.4	32.02	8.54	36.25	100	327	P	H
	*	5692	84.6	-	-	80.29	32.02	8.54	36.25	100	327	A	H
		5753.08	47.46	-26.54	74	43.12	32.05	8.59	36.3	100	327	P	H
		5751.48	37.76	-16.24	54	33.42	32.05	8.58	36.29	100	327	A	H
	*	5706	89.36	-	-	85.05	32.03	8.55	36.27	335	76	P	V
	*	5708	82.33	-	-	78.02	32.03	8.55	36.27	335	76	A	V
		5752.84	47.63	-26.37	74	43.29	32.05	8.59	36.3	335	76	P	V
		5752.36	37.56	-16.44	54	33.22	32.05	8.59	36.3	335	76	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 3 - 5470~5725MHz

## WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11n HT20 CH 100 5500MHz		11001	45.89	-28.11	74	54.37	38.4	13.91	60.79	100	0	P	H
		11001	50.64	-23.36	74	59.12	38.4	13.91	60.79	100	360	P	V
802.11n HT20 CH 116 5580MHz		11160	47.04	-26.96	74	55.27	38.47	14.01	60.71	100	0	P	H
		11160	50.02	-23.98	74	58.25	38.47	14.01	60.71	100	360	P	V
802.11n HT20 CH 140 5700MHz		11400	46.23	-27.77	74	54.11	38.56	14.15	60.59	100	0	P	H
		11400	48.12	-25.88	74	56	38.56	14.15	60.59	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												





## 15E band 3 - 5470~5725MHz

## WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11n HT40 CH 102 5510MHz		5420.56	45.77	-28.23	74	41.97	31.93	8.34	36.47	100	115	P	H
		5439.76	37.33	-16.67	54	33.49	31.94	8.35	36.45	100	115	A	H
	*	5496	85.33	-	-	81.37	31.95	8.39	36.38	100	115	P	H
	*	5500	78.35	-	-	74.34	31.96	8.4	36.35	100	115	A	H
		5454.32	46.13	-27.87	74	42.24	31.94	8.37	36.42	340	63	P	V
		5468.4	37.16	-16.84	54	33.23	31.95	8.38	36.4	340	63	A	V
	*	5522	84.67	-	-	80.62	31.96	8.42	36.33	340	63	P	V
	*	5522	77.67	-	-	73.62	31.96	8.42	36.33	340	63	A	V
802.11n HT40 CH 110 5550MHz	*	5558	86.42			82.29	31.97	8.44	36.28	100	117	P	H
	*	5562	79.49			75.36	31.97	8.44	36.28	100	117	A	H
	*	5562	84.79			80.66	31.97	8.44	36.28	100	282	P	V
	*	5562	77.66			73.53	31.97	8.44	36.28	100	282	A	V
802.11n HT40 CH 134 5670MHz	*	5660	85.73	-	-	81.43	32.01	8.52	36.23	100	206	P	H
	*	5660	79.3	-	-	75	32.01	8.52	36.23	100	206	A	H
		5741.08	47.31	-26.69	74	42.97	32.05	8.58	36.29	100	206	P	H
		5741.72	37.58	-16.42	54	33.24	32.05	8.58	36.29	100	206	A	H
	*	5658	87.08	-	-	82.78	32.01	8.52	36.23	341	70	P	V
	*	5662	80.09	-	-	75.79	32.01	8.52	36.23	341	70	A	V
		5737.64	46.95	-27.05	74	42.61	32.05	8.58	36.29	341	70	P	V
		5745.96	37.72	-16.28	54	33.38	32.05	8.58	36.29	341	70	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 3 - 5470~5725MHz

## WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11n HT40 CH 102 5510MHz		11019	46.14	-27.86	74	54.59	38.41	13.92	60.78	100	0	P	H
		11019	53.06	-20.94	74	61.51	38.41	13.92	60.78	100	225	P	V
	!	11019	50.66	-3.34	54	59.11	38.41	13.92	60.78	100	225	A	V
802.11n HT40 CH 110 5550MHz		11100	47.58	-26.42	74	55.91	38.44	13.97	60.74	100	0	P	H
		11100	53.79	-20.21	74	62.12	38.44	13.97	60.74	100	236	P	V
		11100	50.71	-3.29	54	59.04	38.44	13.97	60.74	100	236	A	V
802.11n HT40 CH 134 5670MHz		11340	44.9	-29.1	74	52.88	38.53	14.11	60.62	100	0	P	H
		11340	48.2	-25.8	74	56.18	38.53	14.11	60.62	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 3 - 5470~5725MHz

## WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11ac VHT20 CH 100 5500MHz		5441.28	47.15	-26.85	74	43.31	31.94	8.35	36.45	126	120	P	H
		5448.32	37.68	-16.32	54	33.79	31.94	8.37	36.42	126	120	A	H
	*	5492	90.05	-	-	86.09	31.95	8.39	36.38	126	120	P	H
	*	5496	83.11	-	-	79.15	31.95	8.39	36.38	126	120	A	H
		5448	46.59	-27.41	74	42.7	31.94	8.37	36.42	343	55	P	V
		5447.44	37.61	-16.39	54	33.72	31.94	8.37	36.42	343	55	A	V
	*	5494	90	-	-	86.04	31.95	8.39	36.38	343	55	P	V
	*	5494	83.02	-	-	79.06	31.95	8.39	36.38	343	55	A	V
802.11ac VHT20 CH 116 5580MHz	*	5586	92.21	-	-	87.99	31.98	8.47	36.23	100	301	P	H
	*	5588	84.86	-	-	80.64	31.98	8.47	36.23	100	301	A	H
	*	5588	91.05	-	-	86.83	31.98	8.47	36.23	348	244	P	V
	*	5588	84.06	-	-	79.84	31.98	8.47	36.23	348	244	A	V
802.11ac VHT20 CH 140 5700MHz	*	5692	90.84	-	-	86.53	32.02	8.54	36.25	100	117	P	H
	*	5692	84.25	-	-	79.94	32.02	8.54	36.25	100	117	A	H
		5731	46.76	-27.24	74	42.43	32.04	8.57	36.28	100	117	P	H
		5752.28	38.14	-15.86	54	33.8	32.05	8.59	36.3	100	117	A	H
	*	5706	89.63	-	-	85.32	32.03	8.55	36.27	320	72	P	V
	*	5708	82.87	-	-	78.56	32.03	8.55	36.27	320	72	A	V
		5754.76	47.29	-26.71	74	42.95	32.05	8.59	36.3	320	72	P	V
		5751.56	38.06	-15.94	54	33.72	32.05	8.59	36.3	320	72	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 3 - 5470~5725MHz

## WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac		11001	46.21	-27.79	74	54.69	38.4	13.91	60.79	100	0	P	H
VHT20		11001	53.42	-20.58	74	61.9	38.4	13.91	60.79	100	237	P	V
CH 100	!	11001	49.6	-4.4	54	58.08	38.4	13.91	60.79	100	237	A	V
5500MHz													
802.11ac		11160	46.51	-27.49	74	54.74	38.47	14.01	60.71	100	0	P	H
VHT20		11160	50.36	-23.64	74	58.59	38.47	14.01	60.71	100	360	P	V
CH 116													
5580MHz													
802.11ac		11400	44.82	-29.18	74	52.7	38.56	14.15	60.59	100	0	P	H
VHT20		11400	47.44	-26.56	74	55.32	38.56	14.15	60.59	100	360	P	V
CH 140													
5700MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 3 - 5470~5725MHz**  
**WIFI 802.11ac VHT40 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11ac VHT40 CH 102 5510MHz		5452.88	46.65	-27.35	74	42.76	31.94	8.37	36.42	100	116	P	H
		5466.32	37.64	-16.36	54	33.71	31.95	8.38	36.4	100	116	A	H
	*	5496	88.6	-	-	84.64	31.95	8.39	36.38	100	116	P	H
	*	5522	81.66	-	-	77.61	31.96	8.42	36.33	100	116	A	H
		5460.24	45.94	-28.06	74	42.05	31.94	8.37	36.42	327	58	P	V
		5465.36	37.46	-16.54	54	33.53	31.95	8.38	36.4	327	58	A	V
	*	5520	86.15	-	-	82.1	31.96	8.42	36.33	327	58	P	V
	*	5522	79.13	-	-	75.08	31.96	8.42	36.33	327	58	A	V
802.11ac VHT40 CH 110 5550MHz	*	5562	89.35	-	-	85.22	31.97	8.44	36.28	100	119	P	H
	*	5562	81.9	-	-	77.77	31.97	8.44	36.28	100	119	A	H
	*	5562	87.59	-	-	83.46	31.97	8.44	36.28	340	66	P	V
	*	5562	80.42	-	-	76.29	31.97	8.44	36.28	340	66	A	V
802.11ac VHT40 CH 134 5670MHz	*	5682	88.41	-	-	84.1	32.02	8.53	36.24	101	117	P	H
	*	5682	81.5	-	-	77.19	32.02	8.53	36.24	101	117	A	H
		5742.72	46.77	-27.23	74	42.43	32.05	8.58	36.29	101	117	P	H
		5746	37.63	-16.37	54	33.29	32.05	8.58	36.29	101	117	A	H
	*	5660	86.1	-	-	81.8	32.01	8.52	36.23	104	266	P	V
	*	5658	79.51	-	-	75.21	32.01	8.52	36.23	104	266	A	V
		5729.32	46.96	-27.04	74	42.63	32.04	8.57	36.28	104	266	P	V
		5745.48	37.72	-16.28	54	33.38	32.05	8.58	36.29	104	266	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 3 - 5470~5725MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac		11019	45.54	-28.46	74	53.99	38.41	13.92	60.78	100	0	P	H
VHT40		11019	52.76	-21.24	74	61.21	38.41	13.92	60.78	100	360	P	V
CH 102	!	11019	50.2	-3.8	54	58.65	38.41	13.92	60.78	100	360	A	V
5510MHz													
802.11ac		11100	46.59	-27.41	74	54.92	38.44	13.97	60.74	100	0	P	H
VHT40		11100	52.66	-21.34	74	60.99	38.44	13.97	60.74	100	0	P	V
CH 110													
5550MHz													
802.11ac		11340	46.34	-27.66	74	54.32	38.53	14.11	60.62	100	0	P	H
VHT40		11340	50.36	-23.64	74	58.34	38.53	14.11	60.62	100	0	P	V
CH 134													
5670MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**15E band 3 5470~5725MHz**  
**WIFI 802.11ac VHT80 (Band Edge @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac VHT80 CH 106 5530MHz		5431.6	46.68	-27.32	74	42.84	31.94	8.35	36.45	105	123	P	H
		5437.68	38.55	-15.45	54	34.71	31.94	8.35	36.45	105	123	A	H
	*	5544	86.14	-	-	82.04	31.97	8.43	36.3	105	123	P	H
	*	5534	79.35	-	-	75.25	31.97	8.43	36.3	105	123	A	H
		5732.36	46.29	-27.71	74	41.96	32.04	8.57	36.28	105	123	P	H
		5763.64	38.88	-15.12	54	34.54	32.05	8.59	36.3	105	123	A	H
		5468.08	45.92	-28.08	74	41.99	31.95	8.38	36.4	100	272	P	V
		5455.44	38.66	-15.34	54	34.77	31.94	8.37	36.42	100	272	A	V
	*	5524	83.71	-	-	79.66	31.96	8.42	36.33	100	272	P	V
	*	5524	77.17	-	-	73.12	31.96	8.42	36.33	100	272	A	V
		5727.88	46.33	-27.67	74	42	32.04	8.57	36.28	100	272	P	V
		5749.4	38.58	-15.42	54	34.24	32.05	8.58	36.29	100	272	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



## 15E band 3 5470~5725MHz

## WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac VHT80 CH 106 5530MHz		11061	46.53	-27.47	74	54.91	38.43	13.95	60.76	100	0	P	H
		11061	55.67	-18.33	74	64.05	38.43	13.95	60.76	100	233	P	V
	!	11061	51.54	-2.46	54	59.92	38.43	13.95	60.76	100	233	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												





## 15E Emission below 1GHz

## WIFI 802.11n VHT80 (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	(dBμV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11n VHT80 LF		42.61	20.83	-19.17	40	37.51	13.36	0.8	30.84	-	-	P	H
		86.26	25.21	-14.79	40	44.04	10.54	1.13	30.5	-	-	P	H
		168.71	25.32	-18.18	43.5	41.5	12.65	1.57	30.4	-	-	P	H
		240.49	25	-21	46	41.03	12.72	1.73	30.48	-	-	P	H
		326.82	33.08	-12.92	46	46.03	15.38	2.22	30.55	155	139	P	H
		435.46	27.7	-18.3	46	38.39	17.28	2.59	30.56	-	-	P	H
		40.67	36.86	-3.14	40	53.05	13.92	0.77	30.88	251	342	P	V
		86.26	33.62	-6.38	40	52.45	10.54	1.13	30.5	-	-	P	V
		151.25	22.12	-21.38	43.5	37.29	13.74	1.49	30.4	-	-	P	V
		323.91	27.28	-18.72	46	40.29	15.33	2.21	30.55	-	-	P	V
		459.71	33.91	-12.09	46	44.15	17.57	2.67	30.48	-	-	P	V
		601.33	26.66	-19.34	46	36.54	17.25	3.07	30.2	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

**Note symbol**

*	<b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency per 15.209(c).
!	Test result is <b>over limit</b> line.
P/A	<b>P</b> eak or <b>A</b> verage
H/V	<b>H</b> orizontal or <b>V</b> ertical



A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBμV/m )	( dB )	( dBμV/m )	( dBμV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

**For Peak Limit @ 2390MHz:**

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

**For Average Limit @ 2390MHz:**

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

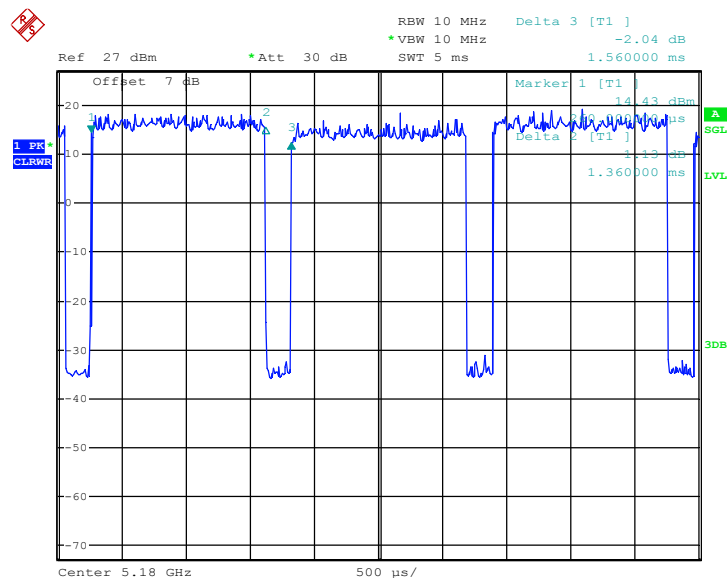
= -10.46(dB)

**Both peak and average measured complies with the limit line, so test result is “PASS”.**

## Appendix D. Duty Cycle Plots

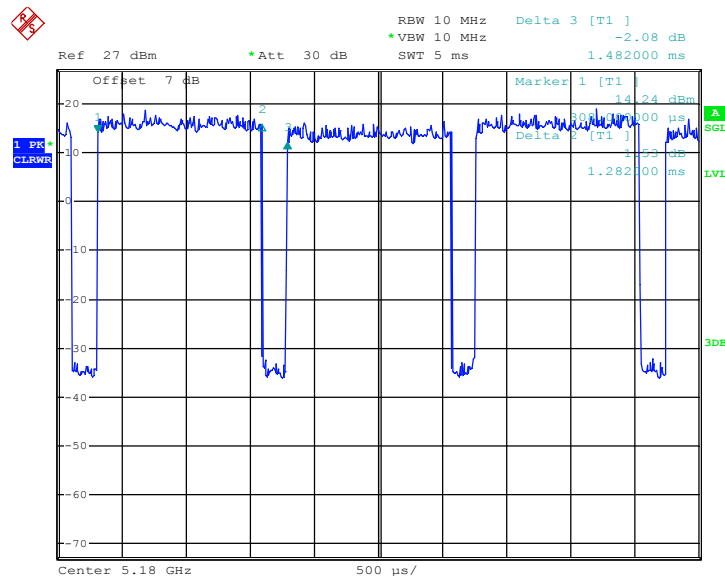
Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	87.179	1.360	0.735	1kHz
802.11n HT20	86.505	1.282	0.780	1kHz
802.11n HT40	71.594	0.494	2.024	3kHz
802.11ac VHT20	82.572	0.976	1.025	3kHz
802.11ac VHT40	71.060	0.496	2.016	3kHz
802.11ac VHT80	55.111	0.248	4.032	10kHz

802.11a

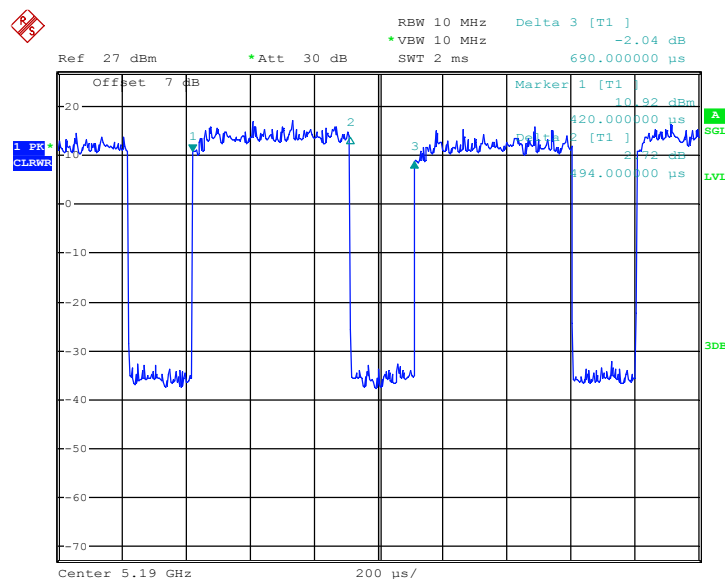




802.11n HT20

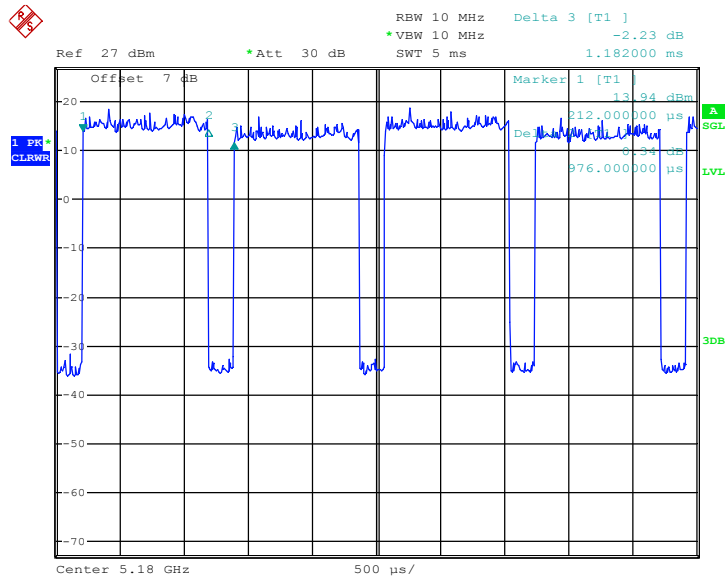


802.11n HT40

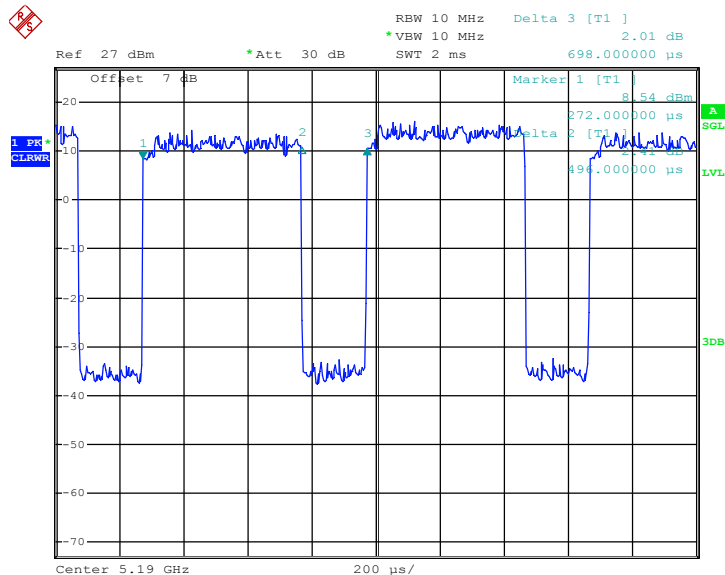




802.11ac VHT20



802.11ac VHT40





802.11ac VHT80

