

FCC RF Test Report

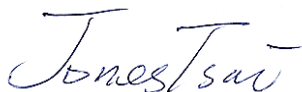
APPLICANT : TCL Communication Ltd.
EQUIPMENT : GSM Quad-band / UMTS Quad-band / LTE
hepta-band mobile phone
BRAND NAME : alcatel
MODEL NAME : 6055A
MARKETING NAME : IDOL 4
FCC ID : 2ACCJA018
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product testing was completed on Jul. 18, 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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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR670106E	Rev. 01	This report is for 6055A which is the variant product of 6055U. According to the product equality declaration as Appendix E which is provided by applicant, all test cases were leveraged from original Sporton Report Number FR642504E. Based on the original test report, only the AC Conducted Emission was verified for the differences, and verification results are presented in section 3.5.6.	Aug. 09, 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	$\leq -17, -27$ dBm (depend on band)&15.209(a)	Pass	Under limit 0.13 dB at 5462.800 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 7.55 dB at 1.460 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

TCL Communication Ltd.

5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R.
China. 201203

1.2. Manufacturer

TCL Communication Ltd.

5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R.
China. 201203

1.3. Feature of Equipment Under Test

Product Feature & Specification	
Equipment	GSM Quad-band / UMTS Quad-band / LTE hepta-band mobile phone
Brand Name	alcatel
Model Name	6055A
Marketing Name	IDOL 4
FCC ID	2ACCJA018
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/ HSPA+(16QAM uplink is not supported)/LTE/NFC/ WLAN 2.4GHz 802.11b/g/n HT20/HT40/ WLAN 5GHz 802.11a/n HT20/HT40/ WLAN 5GHz 802.11ac VHT20/VHT40/VHT80/ Bluetooth v3.0+EDR/ Bluetooth v4.0 LE/ Bluetooth v4.2 LE
IMEI Code	Conducted: 014658000006832 Radiation: 014658000006832 Conduction(6055U): 014658000003722 Conduction(6055A): 014727000002313
HW Version	PIO
SW Version	4D26
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	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5700 MHz
Maximum Output Power to Antenna	<5180 MHz ~ 5240 MHz> 802.11a : 12.45 dBm / 0.0176 W 802.11n HT20 : 12.42 dBm / 0.0175 W 802.11n HT40 : 12.44 dBm / 0.0175 W 802.11ac VHT20 : 12.39 dBm / 0.0173 W 802.11ac VHT40 : 12.42 dBm / 0.0175 W 802.11ac VHT80 : 12.41 dBm / 0.0174 W <5260 MHz ~ 5320 MHz> 802.11a : 12.43 dBm / 0.0175 W 802.11n HT20 : 12.30 dBm / 0.0170 W 802.11n HT40 : 12.41 dBm / 0.0174 W 802.11ac VHT20 : 12.40 dBm / 0.0174 W 802.11ac VHT40 : 12.27 dBm / 0.0169 W 802.11ac VHT80 : 12.42 dBm / 0.0175 W <5500 MHz ~ 5700 MHz> 802.11a : 11.33 dBm / 0.0136 W 802.11n HT20 : 11.00 dBm / 0.0126 W 802.11n HT40 : 11.11 dBm / 0.0129 W 802.11ac VHT20 : 11.12 dBm / 0.0129 W 802.11ac VHT40 : 11.12 dBm / 0.0129 W 802.11ac VHT80 : 11.07 dBm / 0.0128 W

Product Specification subjective to this standard	
99% Occupied Bandwidth	<5180 MHz ~ 5240 MHz> 802.11a : 18.53 MHz 802.11n HT20 : 19.58 MHz 802.11n HT40 : 36.76 MHz 802.11ac VHT20: 19.33 MHz 802.11ac VHT40 : 36.96 MHz 802.11ac VHT80 : 74.93 MHz <5260 MHz ~ 5320 MHz> 802.11a : 18.63 MHz 802.11n HT20 : 19.38 MHz 802.11n HT40 : 36.86 MHz 802.11ac VHT20: 19.38 MHz 802.11ac VHT40 : 36.86 MHz 802.11ac VHT80 : 74.93 MHz <5500 MHz ~ 5700 MHz> 802.11a : 18.68 MHz 802.11n HT20 : 19.33 MHz 802.11n HT40 : 36.86 MHz 802.11ac VHT20: 19.33 MHz 802.11ac VHT40 : 37.06 MHz 802.11ac VHT80 : 74.93 MHz
Antenna Type	IFA Antenna
Antenna Gain	<5180 MHz ~ 5240 MHz> : -3.70 dBi <5260 MHz ~ 5320 MHz> : -3.70 dBi <5500 MHz ~ 5700 MHz> : -3.70 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

1.5. Specification of Accessory

Specification of Accessory for 6055U				
AC Adapter	Brand Name	alcatel	Model Name	UC13US
	Power Rating	I/P: 100-240Vac, 500mA, O/P: 5Vdc, 2000mA		
	P/N	CBA0059AG8C1		
Battery 1	Brand Name	ALCATEL onetouch	Model Name	TLp026EJ
	Power Rating	3.85Vdc, 2610mAh		
Battery 2	Brand Name	ALCATEL onetouch	Model Name	TLp026E2
	Power Rating	3.84Vdc, 2610mAh		
USB Cable	Brand Name	N/A	Model Name	CDA0000049C2
	Signal Line Type	1.0m shielded without core		

Specification of Accessory for 6055A				
AC Adapter 1	Brand Name	alcatel	Model Name	UC13US
	Power Rating	I/P: 100-240Vac, 500mA, O/P: 5.0Vdc, 2A		
	Manufacturer	Aohai	P/N	CBA0059AGAC4
AC Adapter 2	Brand Name	alcatel	Model Name	UC13US
	Power Rating	I/P: 100-240Vac, 500mA, O/P: 5.0Vdc, 2A		
	Manufacturer	TENPAO	P/N	CBA0059AGAC2 CBA0059AG4C2
Battery	Brand Name	ALCATEL onetouch	Model Name	TLp026E2
	Power Rating	3.84Vdc, 2610mAh		
	Manufacturer	SCUD	P/N	CAC2610002C2
USB Cable 1	Brand Name	N/A	Model Name	CDA0000043C8
	Signal Line Type	1.01m shielded without core		
	Manufacturer	PUAN	P/N	N/A
USB Cable 2	Brand Name	N/A	Model Name	CDA0000043C2
	Signal Line Type	1.00m shielded without core		
	Manufacturer	Shenghua	P/N	N/A



1.6. Modification of EUT

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

1.7. Testing Location

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

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

1.8. 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 (Y/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)
5180- 5240 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38	5190	46	5230
	40	5200	48	5240
	42	5210		

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

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5500-5700 MHz Band 3 (U-NII-2C)	100	5500	120	5600
	102	5510	122	5610
	104	5520	124	5620
	106	5530	126	5630
	108	5540	128	5640
	110	5550	132	5660
	112	5560	134	5670
	116	5580	136	5680
	118	5590	140	5700

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	144	5720	142	5710
	138	5690		

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	Channel	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
		6Mbps								
CH 36	5180	12.14	CH 48	12.34	12.41	12.40	12.33	12.39	12.42	12.37
CH 44	5220	12.21								
CH 48	5240	12.45								
CH 52	5260	12.43	CH 52	12.39	12.40	12.41	12.34	12.42	12.38	12.36
CH 60	5300	12.04								
CH 64	5320	11.53								
CH 100	5500	11.33	CH 100	10.96	11.04	11.02	10.97	11.00	11.07	11.08
CH 116	5580	10.88								
CH 140	5700	10.11								

WLAN 5GHz 802.11n-HT20 Average Power (dBm)										
Power vs. Channel			Power vs. Data Rate							
Channel	Frequency (MHz)	MCS Index	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
		MCS0								
CH 36	5180	12.41	CH 44	12.37	12.39	12.35	12.36	12.38	12.34	12.33
CH 44	5220	12.42								
CH 48	5240	11.96								
CH 52	5260	12.30	CH 52	12.18	12.23	12.28	12.18	12.27	12.23	12.26
CH 60	5300	11.91								
CH 64	5320	11.43								
CH 100	5500	11.00	CH 100	10.90	10.95	10.91	10.86	10.92	10.96	10.93
CH 116	5580	10.77								
CH 140	5700	9.97								

WLAN 5GHz 802.11n-HT40 Average Power (dBm)										
Power vs. Channel			Power vs. Data Rate							
Channel	Frequency (MHz)	MCS Index	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
		MCS0								
CH 38	5190	12.44	CH 38	12.37	12.33	12.39	12.34	12.35	12.36	12.41
CH 46	5230	11.88								
CH 54	5270	12.41	CH 54	12.31	12.29	12.39	12.34	12.33	12.35	12.32
CH 62	5310	11.85								
CH 102	5510	11.11	CH 102	11.00	11.06	11.04	11.03	11.09	11.08	11.10
CH 110	5550	11.04								
CH 134	5670	10.94								



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	12.39	CH 36	12.37	12.30	12.32	12.29	12.36	12.31	12.33	12.34
CH 44	5220	12.34									
CH 48	5240	11.83									
CH 52	5260	12.40	CH 52	12.31	12.34	12.38	12.37	12.30	12.39	12.35	12.33
CH 60	5300	12.10									
CH 64	5320	11.59									
CH 100	5500	11.12	CH 100	11.05	10.99	10.98	11.01	11.09	11.10	11.02	11.08
CH 116	5580	10.85									
CH 140	5700	10.20									

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	12.42	CH 38	12.32	12.35	12.34	12.30	12.39	12.31	12.40	12.35	12.38
CH 46	5230	12.05										
CH 54	5270	12.27	CH 54	12.16	12.10	12.14	12.07	12.15	12.20	12.24	12.17	12.25
CH 62	5310	11.97										
CH 102	5510	11.12	CH 102	11.01	11.03	10.97	11.05	11.09	11.04	11.08	11.10	11.11
CH 110	5550	11.07										
CH 134	5670	10.74										

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	12.41	CH 42	12.36	12.30	12.37	12.35	12.39	12.40	12.38	12.31	12.32
CH 58	5290	12.42	CH 58	12.32	12.41	12.37	12.34	12.39	12.36	12.40	12.38	12.41
CH 106	5530	11.07	CH 106	10.96	10.98	10.99	10.97	11.05	11.06	11.04	11.02	11.01
CH 122	5610	10.71										

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 for Model 6055U	
AC Conducted Emission	<p>Mode 1 : GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable (Charging from Adapter) + Battery 1</p> <p>Mode 2 : GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable (Charging from Adapter) + Battery 2</p>
<p>Remark:</p> <ol style="list-style-type: none"> For Radiated TCs, the tests were performed with Adapter, Earphone, Battery 1 and USB Cable, only the worst mode need to verify Battery 2. The worst case of conducted emission is mode 1; only the test data of it was reported. 	

Test Cases for Model 6055A	
AC Conducted Emission	<p>Mode 3 : GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable 1(Charging from Adapter 1) + Battery</p> <p>Mode 4 : GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable 2(Charging from Adapter 2) + Battery</p>
<p>Remark: The worst case of conducted emission is mode 2; only the test data of it was reported.</p>	



Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5700MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle Channel		-	-	144

Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5700MHz
		802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle Channel		-	-	144

Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5700MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle Channel		-	-	142

Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5700MHz
		802.11ac VHT20	802.11ac VHT20	802.11ac VHT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle Channel		-	-	144



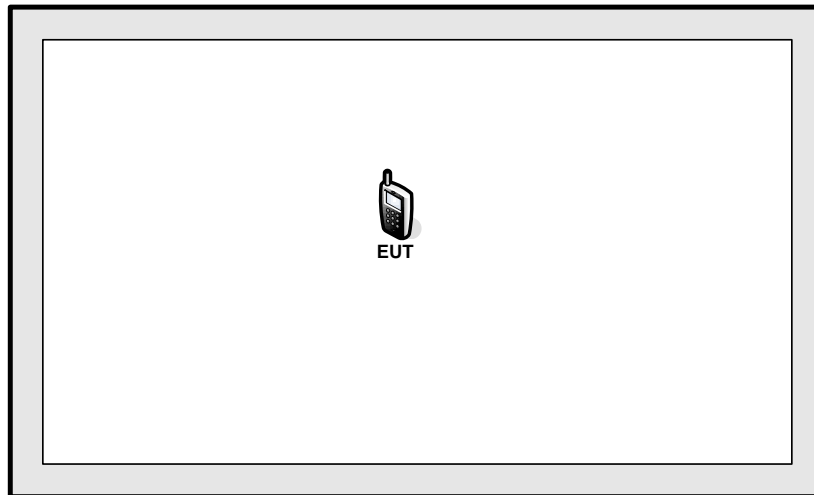
Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5700MHz
		802.11ac VHT40	802.11ac VHT40	802.11ac VHT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle Channel		-	-	142

Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5700MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	122
Straddle Channel		-	-	138

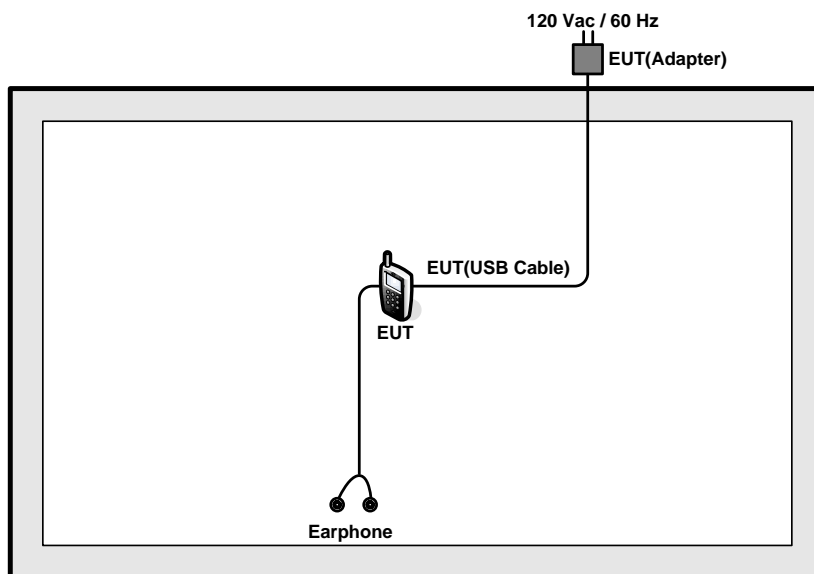
2.4 Connection Diagram of Test System

<WLAN Tx Mode>

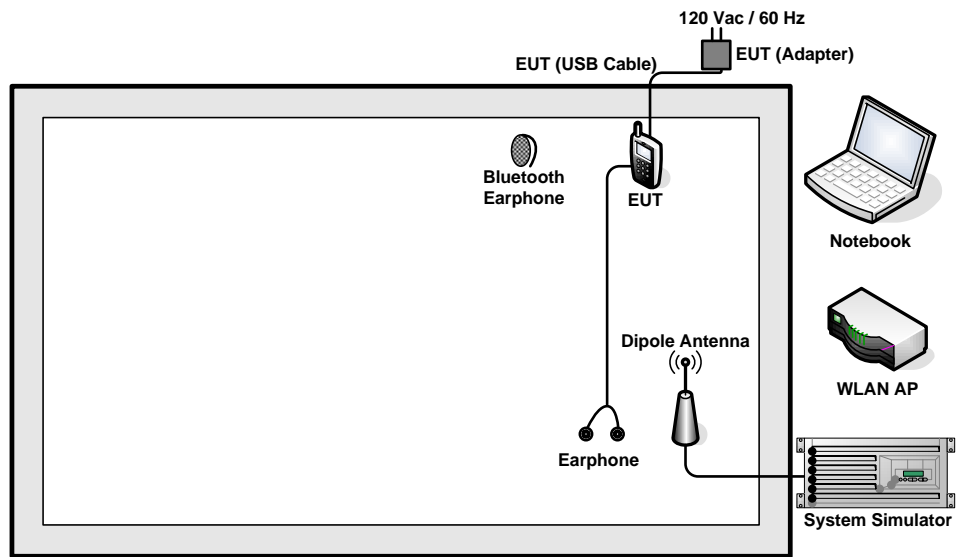
For WLAN 5GHz 802.11n HT40/802.11ac VHT20/VHT80



For WLAN 5GHz 802.11a/802.11n HT20/802.11ac VHT40



<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	N/A	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
6.	Earphone	Lenovo	SH100	N/A	Unshielded,1.0m	N/A

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.

For Straddle Channel, U-NII procedures were applied for operations in the frequency band in accordance with FCC KDB 644545 D03.

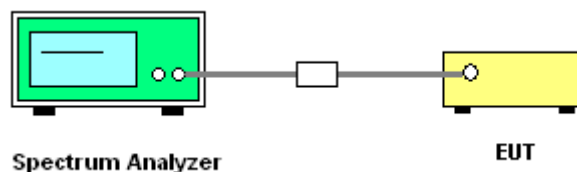
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

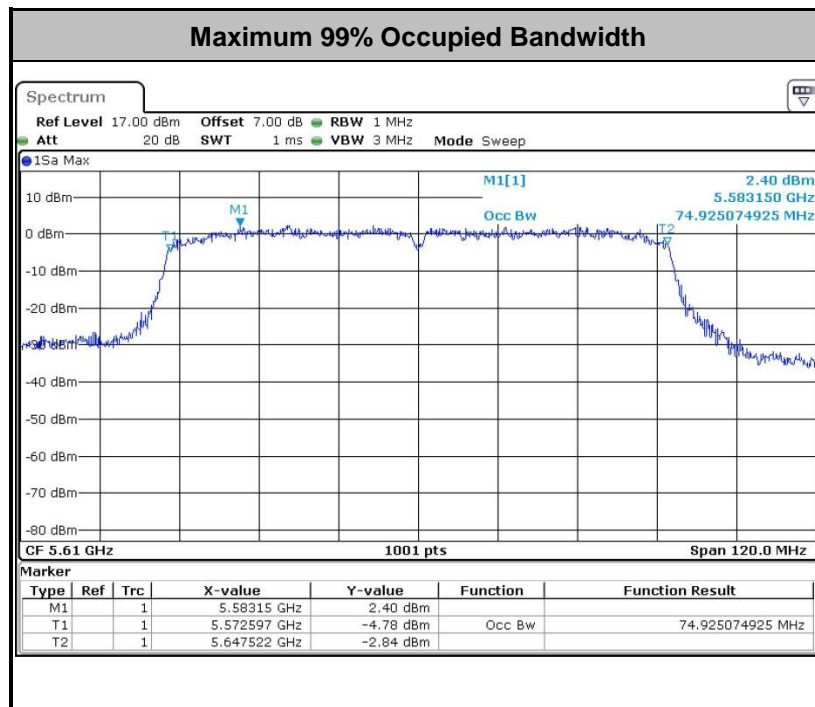
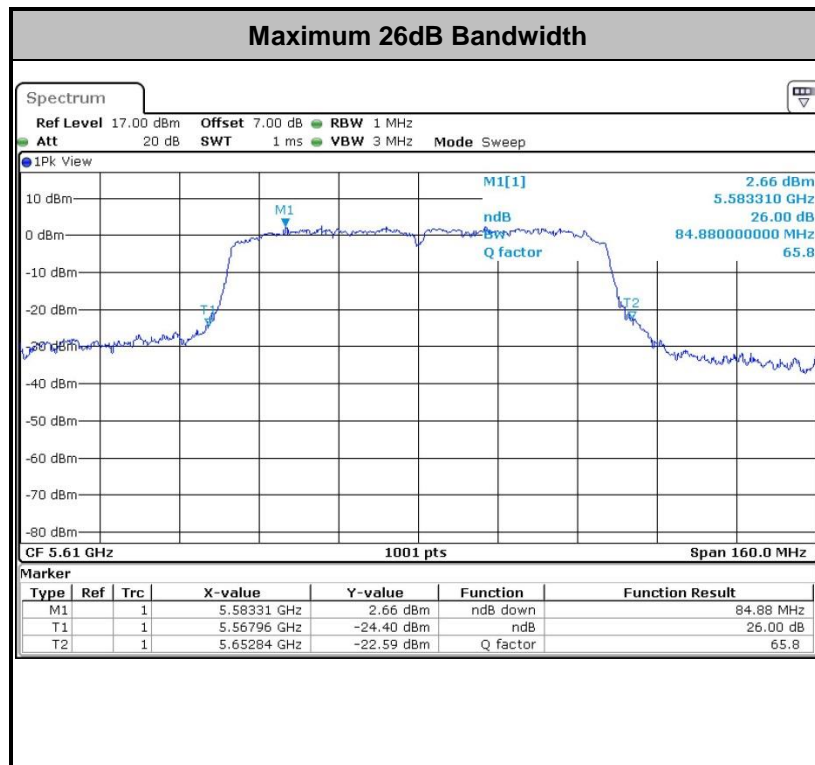
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB 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) $\geq 3 * \text{RBW}$.
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 $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.

For Straddle Channel, U-NII procedures and limits were applied for operations in the frequency band in accordance with FCC KDB 644545 D03.

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):

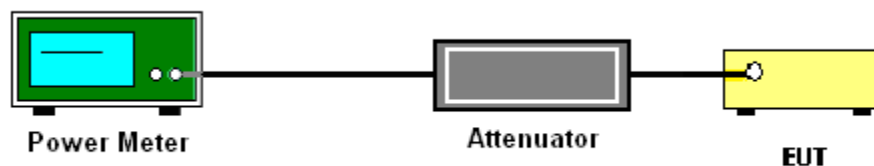
1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, $10 \log(1/x)$, where x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

For straddle channel, the testing follows Method SA-3 (RMS detection with max hold) of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.

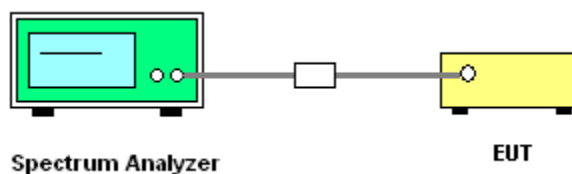
Compute power by integrating the spectrum across the 99% occupied bandwidth of the signal using the instrument's band power measurement function.

3.2.4 Test Setup

For normal channel:



For straddle channel:



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



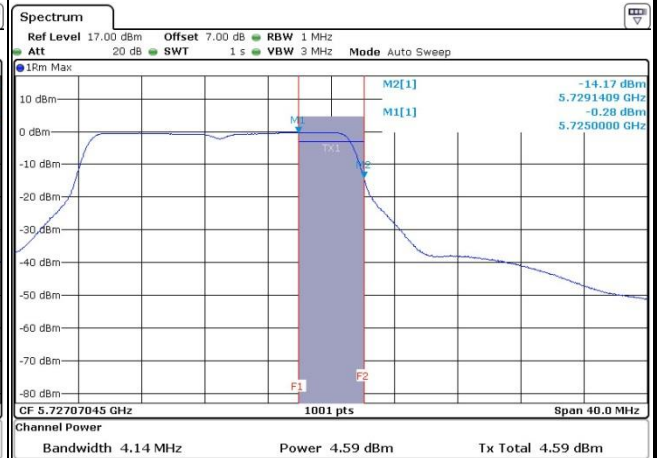
Maximum Straddle Channel Power

802.11a

NII-2C Band

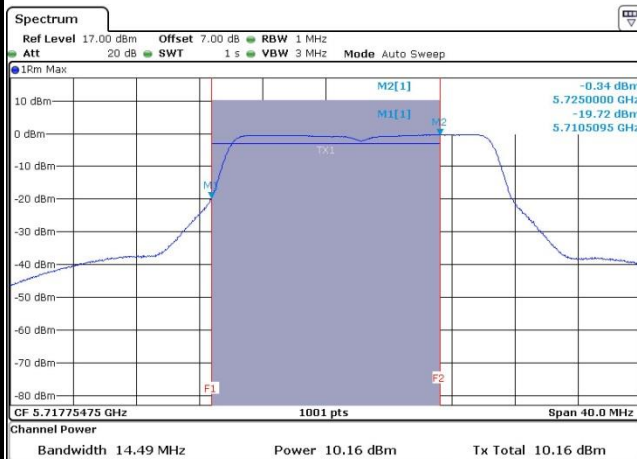


NII-3 Band

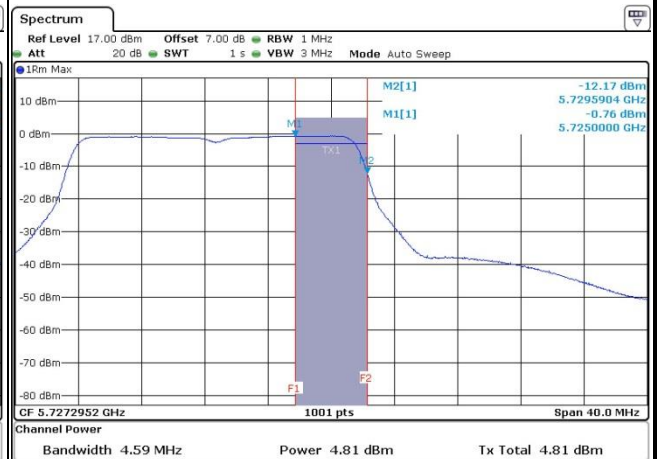


802.11n-HT20

NII-2C Band



NII-3 Band

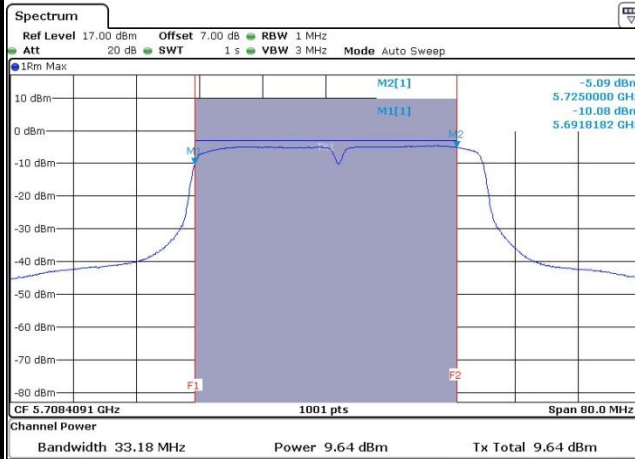




Maximum Straddle Channel Power

802.11n-HT40

NII-2C Band

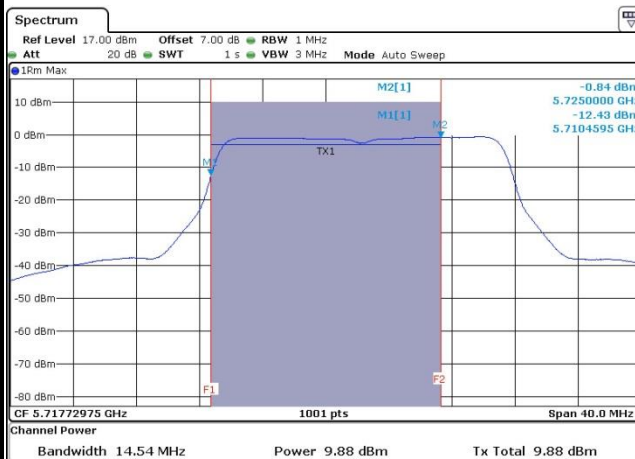


NII-3 Band

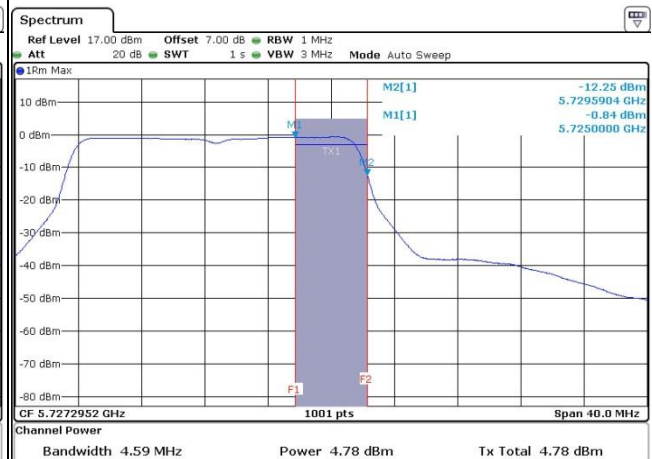


802.11ac VHT20

NII-2C Band



NII-3 Band

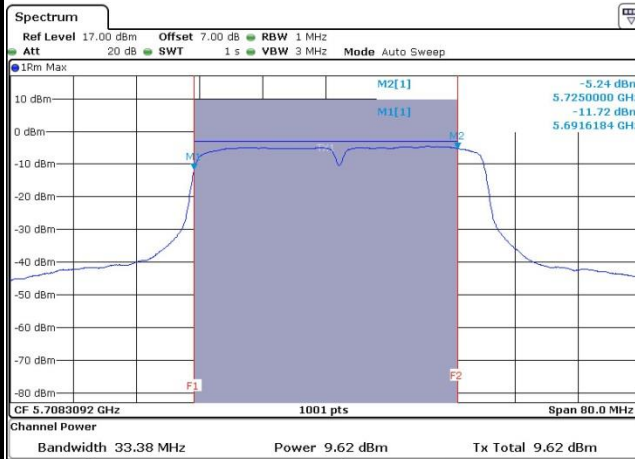




Maximum Straddle Channel Power

802.11ac VHT40

NII-2C Band

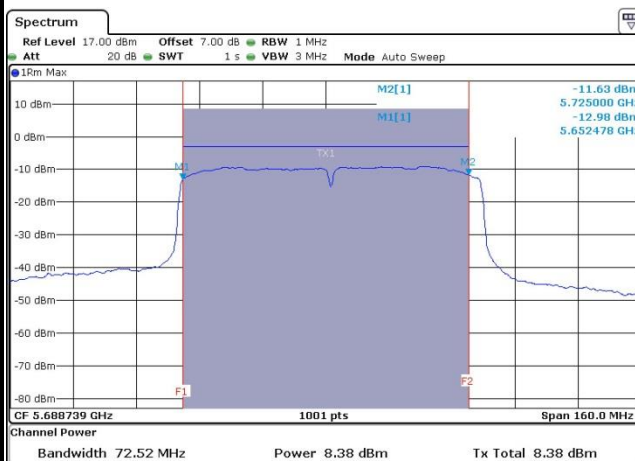


NII-3 Band

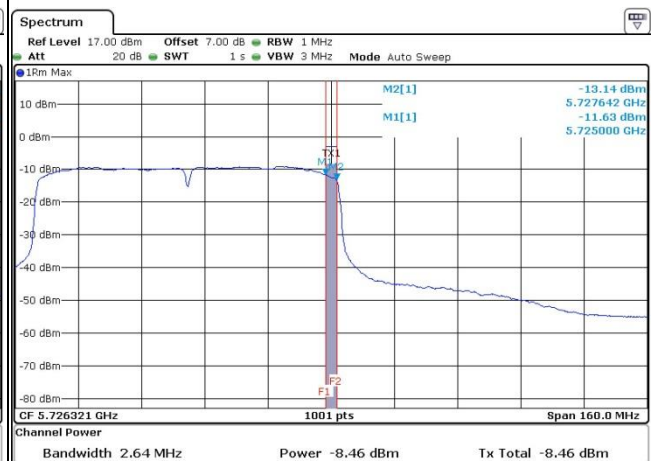


802.11ac VHT80

NII-2C Band



NII-3 Band





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.

For Straddle Channel, U-NII procedures and limits were applied for operations in the frequency band in accordance with FCC KDB 644545 D03.

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.

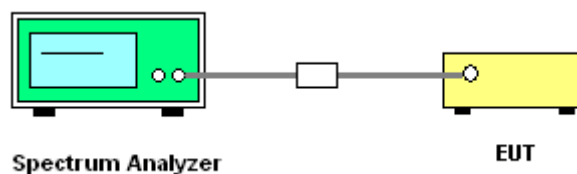
Section F) Maximum power spectral density.

Method SA-2

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

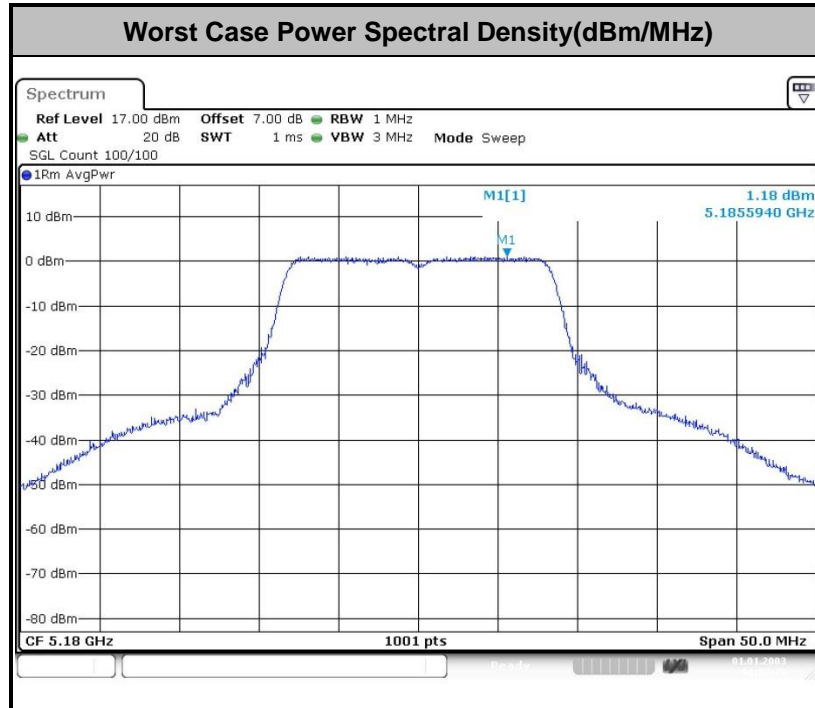
1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.
 - Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 1 MHz.
 - Set VBW \geq 3 MHz.
 - Number of points in sweep \geq 2 Span / RBW.
 - 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 Part15.205.

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--5725MHz band: all emissions outside of the 5470-5725MHz band shall not exceed an EIRP of -27 dBm/MHz.

- (2) Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 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.

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

EIRP (dBm)	Field Strength at 3m (dBμV/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

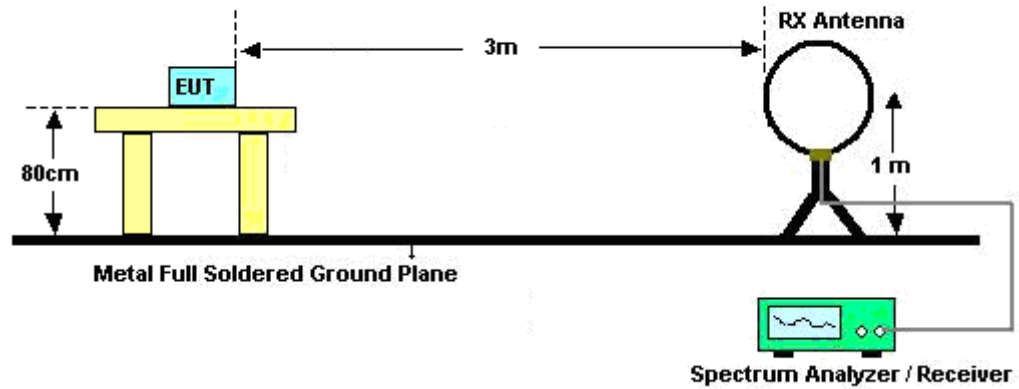
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02. Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak 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.



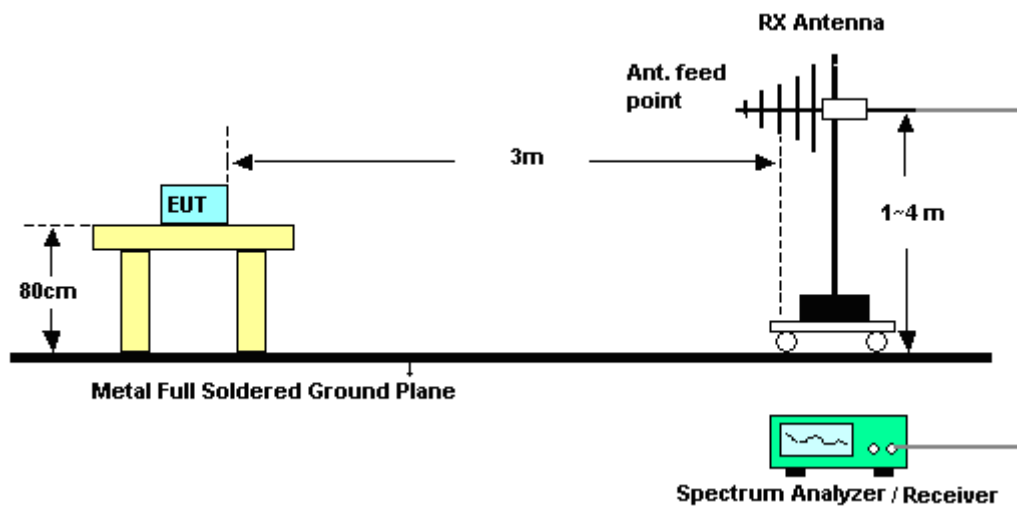
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband 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

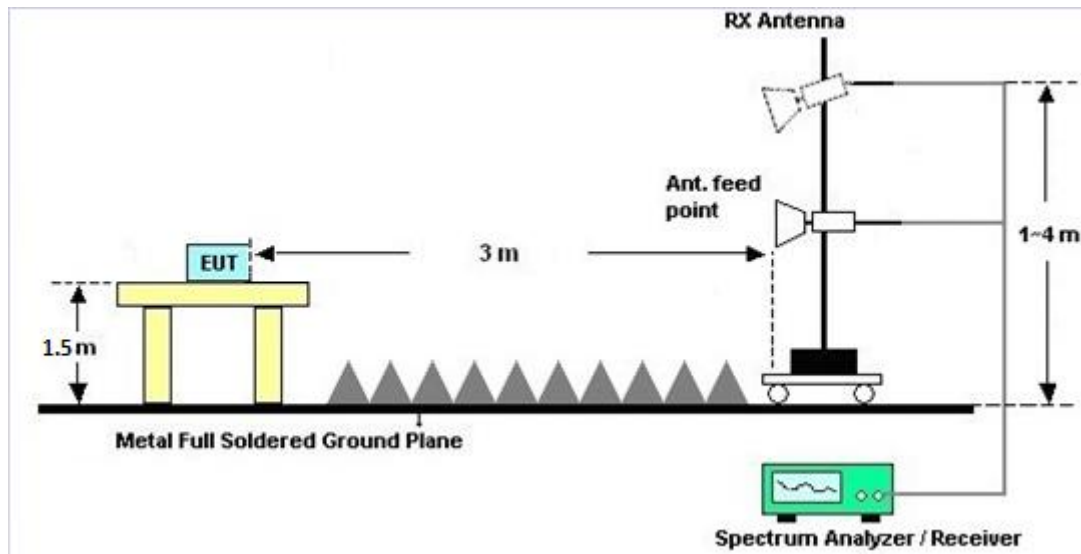
For radiated emissions below 30MHz



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 C.

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 μ 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.

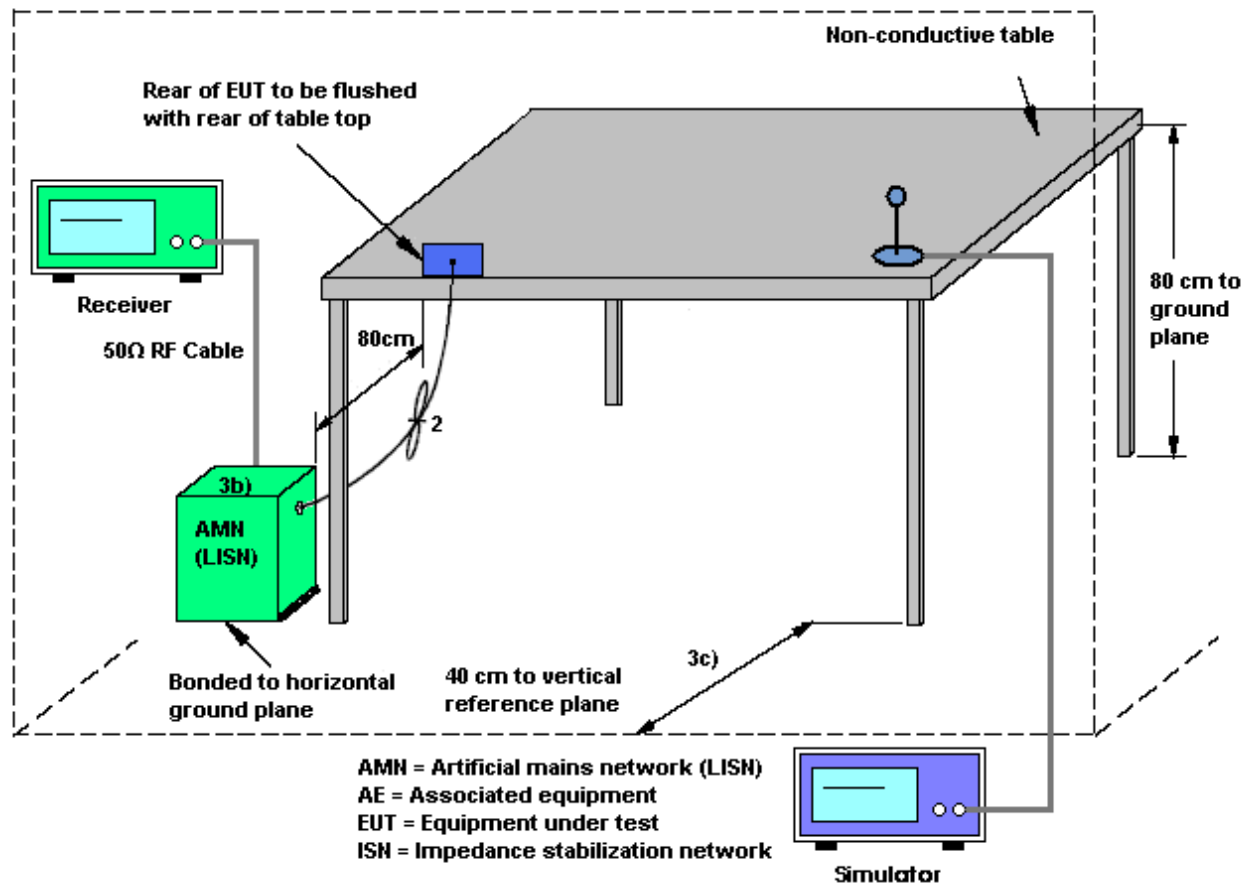
3.5.2 Measuring Instruments

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.

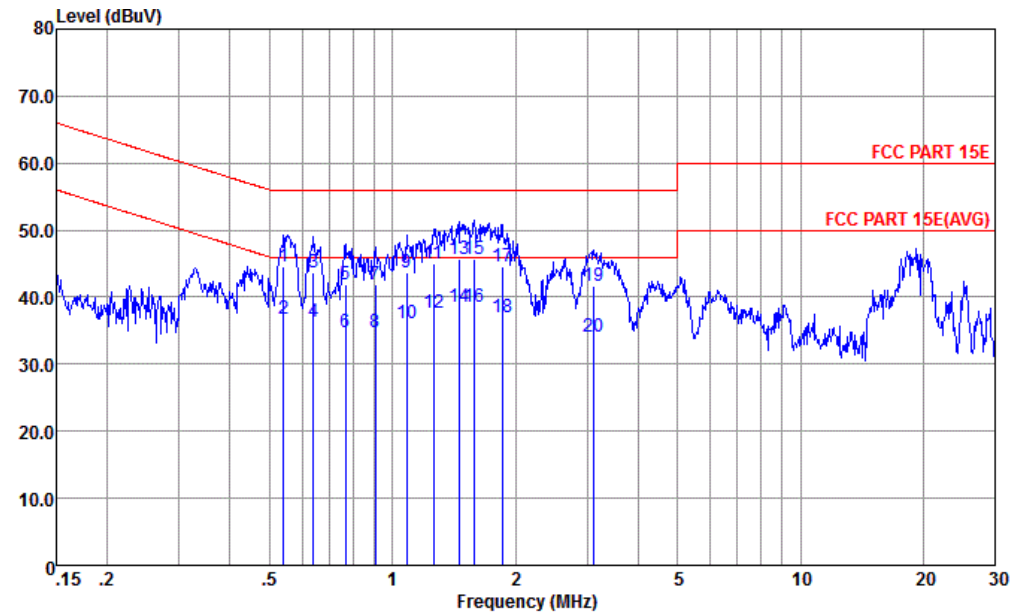
3.5.4 Test Setup





3.5.5 Test Result of AC Conducted Emission for Model 6055U

Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable (Charging from Adapter) + Battery 1		

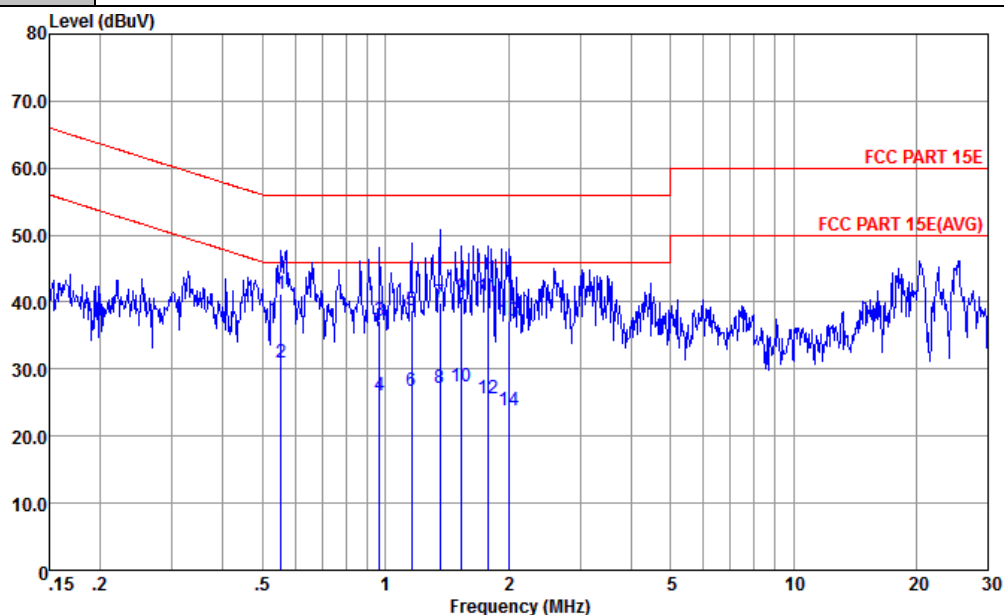


Site : CO01-KS
Condition : FCC PART 15E LISN-L-20151024 LINE

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.54	44.59	-11.41	56.00	34.20	0.23	10.16	QP
2	0.54	36.69	-9.31	46.00	26.30	0.23	10.16	Average
3	0.64	43.59	-12.41	56.00	33.19	0.24	10.16	QP
4	0.64	36.29	-9.71	46.00	25.89	0.24	10.16	Average
5	0.77	41.99	-14.01	56.00	31.60	0.24	10.15	QP
6	0.77	34.69	-11.31	46.00	24.30	0.24	10.15	Average
7	0.91	41.89	-14.11	56.00	31.50	0.25	10.14	QP
8	0.91	34.69	-11.31	46.00	24.30	0.25	10.14	Average
9	1.08	43.58	-12.42	56.00	33.20	0.24	10.14	QP
10	1.08	36.18	-9.82	46.00	25.80	0.24	10.14	Average
11	1.26	44.96	-11.04	56.00	34.59	0.23	10.14	QP
12	1.26	37.56	-8.44	46.00	27.19	0.23	10.14	Average
13	1.46	45.65	-10.35	56.00	35.30	0.21	10.14	QP
14 *	1.46	38.45	-7.55	46.00	28.10	0.21	10.14	Average
15	1.59	45.64	-10.36	56.00	35.30	0.20	10.14	QP
16	1.59	38.44	-7.56	46.00	28.10	0.20	10.14	Average
17	1.86	44.53	-11.47	56.00	34.20	0.19	10.14	QP
18	1.86	36.93	-9.07	46.00	26.60	0.19	10.14	Average
19	3.11	41.64	-14.36	56.00	31.30	0.18	10.16	QP
20	3.11	34.14	-11.86	46.00	23.80	0.18	10.16	Average



Test Mode :	Mode 1	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable (Charging from Adapter) + Battery 1		



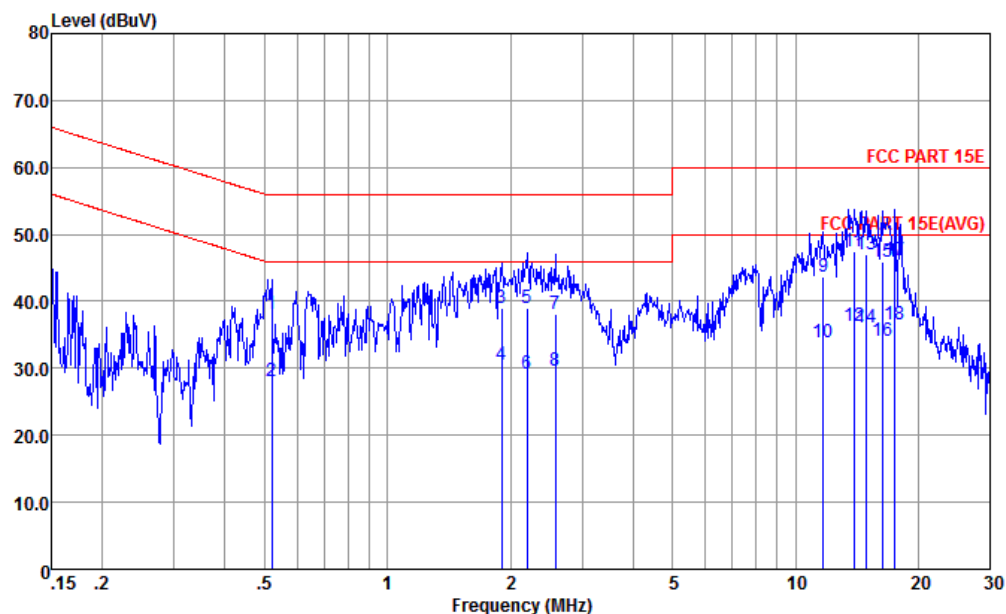
Site : CO01-KS
Condition : FCC PART 15E LISN-N-20151024 NEUTRAL

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1 *	0.56	41.29	-14.71	56.00	30.80	0.33	10.16	QP
2	0.56	31.09	-14.91	46.00	20.60	0.33	10.16	Average
3	0.97	37.10	-18.90	56.00	26.59	0.37	10.14	QP
4	0.97	26.10	-19.90	46.00	15.59	0.37	10.14	Average
5	1.16	38.71	-17.29	56.00	28.20	0.37	10.14	QP
6	1.16	26.81	-19.19	46.00	16.30	0.37	10.14	Average
7	1.36	39.81	-16.19	56.00	29.30	0.37	10.14	QP
8	1.36	27.11	-18.89	46.00	16.60	0.37	10.14	Average
9	1.54	40.82	-15.18	56.00	30.30	0.38	10.14	QP
10	1.54	27.32	-18.68	46.00	16.80	0.38	10.14	Average
11	1.78	40.82	-15.18	56.00	30.30	0.38	10.14	QP
12	1.78	25.72	-20.28	46.00	15.20	0.38	10.14	Average
13	2.01	37.12	-18.88	56.00	26.60	0.38	10.14	QP
14	2.01	23.82	-22.18	46.00	13.30	0.38	10.14	Average



3.5.6 Test Result of AC Conducted Emission for Model 6055A

Test Mode :	Mode 2	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable 2(Charging from Adapter 2) + Battery		



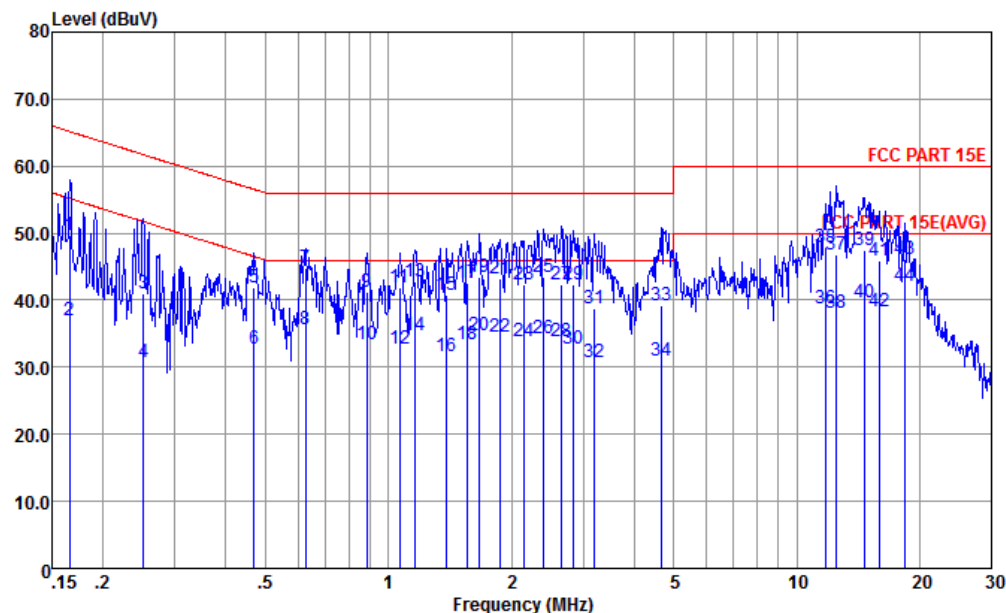
Site : CO01-KS
Condition : FCC PART 15E LISN-L-20151024 LINE

: 014727000002313 #6

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.52	38.19	-17.81	56.00	27.80	0.23	10.16	QP
2	0.52	27.99	-18.01	46.00	17.60	0.23	10.16	Average
3	1.91	38.93	-17.07	56.00	28.61	0.18	10.14	QP
4	1.91	30.63	-15.37	46.00	20.31	0.18	10.14	Average
5	2.20	38.93	-17.07	56.00	28.61	0.18	10.14	QP
6	2.20	29.13	-16.87	46.00	18.81	0.18	10.14	Average
7	2.58	38.13	-17.87	56.00	27.80	0.18	10.15	QP
8	2.58	29.63	-16.37	46.00	19.30	0.18	10.15	Average
9	11.68	43.76	-16.24	60.00	33.20	0.25	10.31	QP
10	11.68	33.86	-16.14	50.00	23.30	0.25	10.31	Average
11 *	13.91	47.52	-12.48	60.00	36.90	0.26	10.36	QP
12	13.91	36.42	-13.58	50.00	25.80	0.26	10.36	Average
13	14.91	46.94	-13.06	60.00	36.30	0.26	10.38	QP
14	14.91	36.14	-13.86	50.00	25.50	0.26	10.38	Average
15	16.31	45.89	-14.11	60.00	35.20	0.26	10.43	QP
16	16.31	33.99	-16.01	50.00	23.30	0.26	10.43	Average
17	17.57	46.03	-13.97	60.00	35.30	0.27	10.46	QP
18	17.57	36.53	-13.47	50.00	25.80	0.27	10.46	Average



Test Mode :	Mode 2	Temperature :	22~24°C
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable 2(Charging from Adapter 2) + Battery		



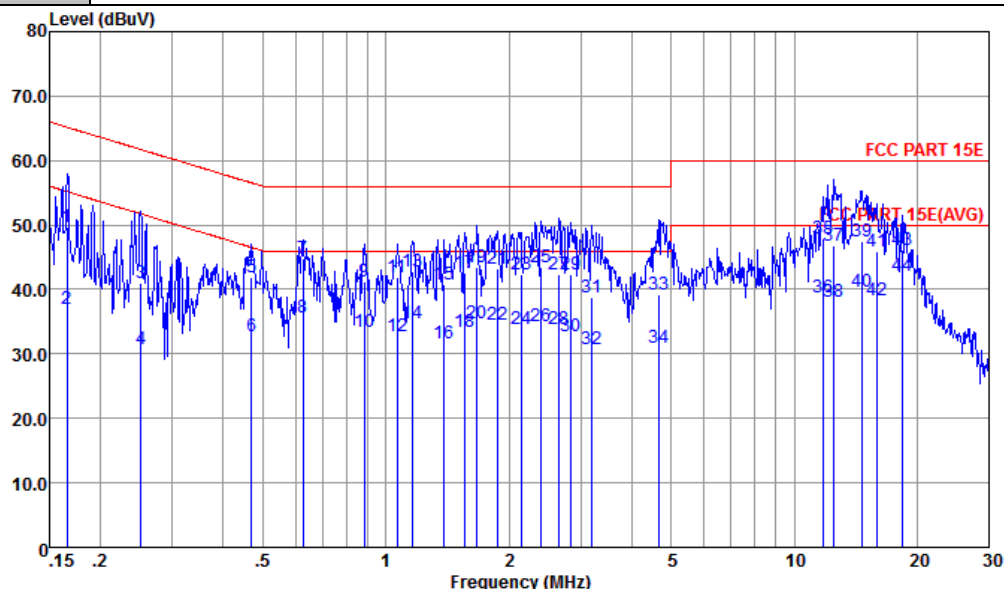
Site : CO01-KS
Condition : FCC PART 15E LISN-N-20151024 NEUTRAL

: 014727000002313 #6

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.17	49.72	-15.44	65.16	39.30	0.30	10.12	QP
2	0.17	37.02	-18.14	55.16	26.60	0.30	10.12	Average
3	0.25	41.05	-20.68	61.73	30.60	0.31	10.14	QP
4	0.25	30.75	-20.98	51.73	20.30	0.31	10.14	Average
5	0.47	41.78	-14.76	56.54	31.30	0.32	10.16	QP
6	0.47	32.78	-13.76	46.54	22.30	0.32	10.16	Average
7	0.63	44.69	-11.31	56.00	34.20	0.33	10.16	QP
8	0.63	35.69	-10.31	46.00	25.20	0.33	10.16	Average
9	0.88	41.30	-14.70	56.00	30.80	0.36	10.14	QP
10	0.88	33.40	-12.60	46.00	22.90	0.36	10.14	Average
11	1.07	41.81	-14.19	56.00	31.30	0.37	10.14	QP
12	1.07	32.81	-13.19	46.00	22.30	0.37	10.14	Average
13	1.16	42.81	-13.19	56.00	32.30	0.37	10.14	QP
14	1.16	34.81	-11.19	46.00	24.30	0.37	10.14	Average
15	1.39	40.71	-15.29	56.00	30.20	0.37	10.14	QP
16	1.39	31.71	-14.29	46.00	21.20	0.37	10.14	Average
17	1.56	42.62	-13.38	56.00	32.10	0.38	10.14	QP



Test Mode :	Mode 2	Temperature :	22~24℃
Test Engineer :	Amos Zhang	Relative Humidity :	43~46%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + Earphone + USB Cable 2(Charging from Adapter 2) + Battery		



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

: 014727000002313 #6

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
18	1.56	33.42	-12.58	46.00	22.90	0.38	10.14	Average
19	1.67	43.42	-12.58	56.00	32.90	0.38	10.14	QP
20	1.67	34.82	-11.18	46.00	24.30	0.38	10.14	Average
21	1.88	43.32	-12.68	56.00	32.80	0.38	10.14	QP
22	1.88	34.62	-11.38	46.00	24.10	0.38	10.14	Average
23	2.14	42.42	-13.58	56.00	31.90	0.38	10.14	QP
24	2.14	33.82	-12.18	46.00	23.30	0.38	10.14	Average
25	2.40	43.42	-12.58	56.00	32.89	0.38	10.15	QP
26	2.40	34.32	-11.68	46.00	23.79	0.38	10.15	Average
27	2.65	42.42	-13.58	56.00	31.90	0.37	10.15	QP
28	2.65	33.82	-12.18	46.00	23.30	0.37	10.15	Average
29	2.84	42.32	-13.68	56.00	31.80	0.37	10.15	QP
30	2.84	32.82	-13.18	46.00	22.30	0.37	10.15	Average
31	3.19	38.83	-17.17	56.00	28.30	0.37	10.16	QP
32	3.19	30.83	-15.17	46.00	20.30	0.37	10.16	Average
33	4.65	39.14	-16.86	56.00	28.60	0.36	10.18	QP
34	4.65	31.04	-14.96	46.00	20.50	0.36	10.18	Average
35	11.74	47.89	-12.11	60.00	37.30	0.28	10.31	QP
36	11.74	38.79	-11.21	50.00	28.20	0.28	10.31	Average
37	12.45	46.70	-13.30	60.00	36.10	0.27	10.33	QP
38	12.45	38.20	-11.80	50.00	27.60	0.27	10.33	Average
39	14.67	47.55	-12.45	60.00	36.90	0.27	10.38	QP
40	14.67	39.75	-10.25	50.00	29.10	0.27	10.38	Average
41	15.89	45.88	-14.12	60.00	35.20	0.27	10.41	QP
42	15.89	38.28	-11.72	50.00	27.60	0.27	10.41	Average
43	18.33	46.04	-13.96	60.00	35.29	0.26	10.49	QP
44 *	18.33	42.04	-7.96	50.00	31.29	0.26	10.49	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.

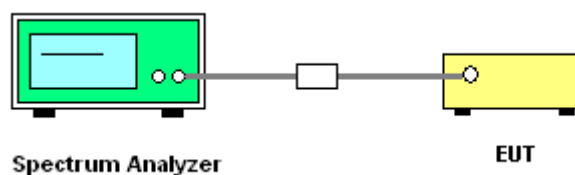
3.6.2 Measuring Instruments

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	FSV40	101040	10Hz~40GHz	Sep. 10, 2015	Apr. 22, 2016~ May 24, 2016	Sep. 09, 2016	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	30MHz~40GHz	Jan. 20, 2016	Apr. 22, 2016~ May 24, 2016	Jan. 19, 2017	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 20, 2016	Apr. 22, 2016~ May 24, 2016	Jan. 19, 2017	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 24, 2015	Apr. 22, 2016~ May 24, 2016	Oct. 23, 2016	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz; Max 30dBm	Sep. 10, 2015	Apr. 22, 2016~ May 19, 2016	Sep. 09, 2016	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44GHz	Apr. 22, 2016	Apr. 22, 2016~ May 19, 2016	Apr. 21, 2017	Radiation (03CH03-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 07, 2015	Apr. 22, 2016~ May 19, 2016	Nov. 06, 2016	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	25MHz~2GHz	Mar. 12, 2016	Apr. 22, 2016~ May 19, 2016	Mar. 11, 2017	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1356	1GHz~18GHz	Apr. 16, 2016	Apr. 22, 2016~ May 19, 2016	Apr. 15, 2017	Radiation (03CH03-KS)
SHF-EHF Horn	com-power	AH-840	101070	18GHz~40GHz	Oct. 10, 2015	Apr. 22, 2016~ May 19, 2016	Oct. 09, 2016	Radiation (03CH03-KS)
Amplifier	Burgeon	BPA-530	102212	0.01MHz~3000MHz	Aug. 10, 2015	Apr. 22, 2016~ May 19, 2016	Aug. 09, 2016	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 24, 2015	Apr. 22, 2016~ May 19, 2016	Oct. 23, 2016	Radiation (03CH03-KS)
Amplifier	MITEQ	TTA1840-35-HG	1887435	18GHz~40GHz	Aug. 27, 2015	Apr. 22, 2016~ May 19, 2016	Aug. 26, 2016	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Apr. 22, 2016~ May 19, 2016	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Apr. 22, 2016~ May 19, 2016	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Apr. 22, 2016~ May 19, 2016	NCR	Radiation (03CH03-KS)
EMI Receiver	R&S	ESC17	100768	9kHz~7GHz;	Apr. 29, 2016	May 12, 2016~ Jul. 18, 2016	Apr. 28, 2017	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 24, 2015	May 12, 2016~ Jul. 18, 2016	Oct. 23, 2016	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 24, 2015	May 12, 2016~ Jul. 18, 2016	Oct. 23, 2016	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 24, 2015	May 12, 2016~ Jul. 18, 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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Uncertainty of Radiated Emission Measurement (1GHz~18GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5 dB
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Uncertainty of Radiated Emission Measurement (18GHz~40GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.6 dB
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Appendix A. Conducted Test Results

Test Engineer:	Issac Song	Temperature:	24~25	°C
Test Date:	2016/4/22~2016/5/24	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	18.53	23.03	-	22.68		
11a	6Mbps	1	44	5220	18.43	23.83	-	22.66		
11a	6Mbps	1	48	5240	18.48	23.63	-	22.67		
HT20	MCS0	1	36	5180	19.08	23.73	-	22.81		
HT20	MCS0	1	44	5220	19.58	23.93	-	22.92		
HT20	MCS0	1	48	5240	19.08	24.48	-	22.81		
HT40	MCS0	1	38	5190	36.66	45.94	-	23.01		
HT40	MCS0	1	46	5230	36.76	44.96	-	23.01		
VHT20	MCS0	1	36	5180	19.23	24.18	-	22.84		
VHT20	MCS0	1	44	5220	19.33	24.23	-	22.86		
VHT20	MCS0	1	48	5240	19.33	24.18	-	22.86		
VHT40	MCS0	1	38	5190	36.86	45.05	-	23.01		
VHT40	MCS0	1	46	5230	36.96	44.69	-	23.01		
VHT80	MCS0	1	42	5210	74.93	83.60	-	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	0.58	12.14	24.00	-3.70		Pass
11a	6Mbps	1	44	5220	0.58	12.21	24.00	-3.70		Pass
11a	6Mbps	1	48	5240	0.58	12.45	24.00	-3.70		Pass
HT20	MCS0	1	36	5180	0.63	12.41	24.00	-3.70		Pass
HT20	MCS0	1	44	5220	0.63	12.42	24.00	-3.70		Pass
HT20	MCS0	1	48	5240	0.63	11.96	24.00	-3.70		Pass
HT40	MCS0	1	38	5190	1.19	12.44	24.00	-3.70		Pass
HT40	MCS0	1	46	5230	1.19	11.88	24.00	-3.70		Pass
VHT20	MCS0	1	36	5180	0.78	12.39	24.00	-3.70		Pass
VHT20	MCS0	1	44	5220	0.78	12.34	24.00	-3.70		Pass
VHT20	MCS0	1	48	5240	0.78	11.83	24.00	-3.70		Pass
VHT40	MCS0	1	38	5190	1.47	12.42	24.00	-3.70		Pass
VHT40	MCS0	1	46	5230	1.47	12.05	24.00	-3.70		Pass
VHT80	MCS0	1	42	5210	2.58	12.41	24.00	-3.70		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	0.58	1.76	11.00	-3.70		Pass
11a	6Mbps	1	44	5220	0.58	1.37	11.00	-3.70		Pass
11a	6Mbps	1	48	5240	0.58	1.32	11.00	-3.70		Pass
HT20	MCS0	1	36	5180	0.63	1.45	11.00	-3.70		Pass
HT20	MCS0	1	44	5220	0.63	1.60	11.00	-3.70		Pass
HT20	MCS0	1	48	5240	0.63	1.34	11.00	-3.70		Pass
HT40	MCS0	1	38	5190	1.19	-0.27	11.00	-3.70		Pass
HT40	MCS0	1	46	5230	1.19	-1.08	11.00	-3.70		Pass
VHT20	MCS0	1	36	5180	0.78	1.74	11.00	-3.70		Pass
VHT20	MCS0	1	44	5220	0.78	1.25	11.00	-3.70		Pass
VHT20	MCS0	1	48	5240	0.78	1.32	11.00	-3.70		Pass
VHT40	MCS0	1	38	5190	1.47	-0.19	11.00	-3.70		Pass
VHT40	MCS0	1	46	5230	1.47	-0.35	11.00	-3.70		Pass
VHT80	MCS0	1	42	5210	2.58	-3.56	11.00	-3.70		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band II										
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)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	52	5260	18.53	23.73	23.68	29.68	23.98	
11a	6M bps	1	60	5300	18.63	24.08	23.70	29.70	23.98	
11a	6M bps	1	64	5320	18.58	23.93	23.69	29.69	23.98	
HT20	MCS 0	1	52	5260	19.33	24.03	23.86	29.86	23.98	
HT20	MCS 0	1	60	5300	19.38	24.03	23.87	29.87	23.98	
HT20	MCS 0	1	64	5320	19.18	24.18	23.83	29.83	23.98	
HT40	MCS 0	1	54	5270	36.66	45.32	23.98	30.00	23.98	
HT40	MCS 0	1	62	5310	36.86	45.41	23.98	30.00	23.98	
VHT20	MCS 0	1	52	5260	19.28	24.23	23.85	29.85	23.98	
VHT20	MCS 0	1	60	5300	19.38	24.18	23.87	29.87	23.98	
VHT20	MCS 0	1	64	5320	19.28	24.08	23.85	29.85	23.98	
VHT40	MCS 0	1	54	5270	36.76	45.41	23.98	30.00	23.98	
VHT40	MCS 0	1	62	5310	36.86	45.58	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	74.93	83.92	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	0.58	12.43	23.98	-3.70		Pass
11a	6M bps	1	60	5300	0.58	12.04	23.98	-3.70		Pass
11a	6M bps	1	64	5320	0.58	11.53	23.98	-3.70		Pass
HT20	MCS 0	1	52	5260	0.63	12.30	23.98	-3.70		Pass
HT20	MCS 0	1	60	5300	0.63	11.91	23.98	-3.70		Pass
HT20	MCS 0	1	64	5320	0.63	11.43	23.98	-3.70		Pass
HT40	MCS 0	1	54	5270	1.19	12.41	23.98	-3.70		Pass
HT40	MCS 0	1	62	5310	1.19	11.85	23.98	-3.70		Pass
VHT20	MCS 0	1	52	5260	0.78	12.40	23.98	-3.70		Pass
VHT20	MCS 0	1	60	5300	0.78	12.10	23.98	-3.70		Pass
VHT20	MCS 0	1	64	5320	0.78	11.59	23.98	-3.70		Pass
VHT40	MCS 0	1	54	5270	1.47	12.27	23.98	-3.70		Pass
VHT40	MCS 0	1	62	5310	1.47	11.97	23.98	-3.70		Pass
VHT80	MCS 0	1	58	5290	2.58	12.42	23.98	-3.70		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	0.58	1.33	11.00	-3.70		Pass
11a	6M bps	1	60	5300	0.58	0.98	11.00	-3.70		Pass
11a	6M bps	1	64	5320	0.58	0.94	11.00	-3.70		Pass
HT20	MCS 0	1	52	5260	0.63	1.08	11.00	-3.70		Pass
HT20	MCS 0	1	60	5300	0.63	0.70	11.00	-3.70		Pass
HT20	MCS 0	1	64	5320	0.63	0.74	11.00	-3.70		Pass
HT40	MCS 0	1	54	5270	1.19	-0.71	11.00	-3.70		Pass
HT40	MCS 0	1	62	5310	1.19	-1.69	11.00	-3.70		Pass
VHT20	MCS 0	1	52	5260	0.78	1.34	11.00	-3.70		Pass
VHT20	MCS 0	1	60	5300	0.78	0.79	11.00	-3.70		Pass
VHT20	MCS 0	1	64	5320	0.78	0.88	11.00	-3.70		Pass
VHT40	MCS 0	1	54	5270	1.47	-0.67	11.00	-3.70		Pass
VHT40	MCS 0	1	62	5310	1.47	-1.01	11.00	-3.70		Pass
VHT80	MCS 0	1	58	5290	2.58	-3.83	11.00	-3.70		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band III										
Mod.	Data Rate	N _{TX}	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	18.48	23.73	23.67	29.67	23.98	
11a	6M bps	1	116	5580	18.68	23.48	23.71	29.71	23.98	
11a	6M bps	1	140	5700	18.43	23.48	23.66	29.66	23.98	
HT20	MCS 0	1	100	5500	19.33	24.13	23.86	29.86	23.98	
HT20	MCS 0	1	116	5580	19.28	23.98	23.85	29.85	23.98	
HT20	MCS 0	1	140	5700	19.18	23.58	23.83	29.83	23.98	
HT40	MCS 0	1	102	5510	36.66	44.51	23.98	30.00	23.98	
HT40	MCS 0	1	110	5550	36.56	44.69	23.98	30.00	23.98	
HT40	MCS 0	1	134	5670	36.86	45.05	23.98	30.00	23.98	
VHT20	MCS 0	1	100	5500	19.23	23.98	23.84	29.84	23.98	
VHT20	MCS 0	1	116	5580	19.33	23.83	23.86	29.86	23.98	
VHT20	MCS 0	1	140	5700	19.23	23.93	23.84	29.84	23.98	
VHT40	MCS 0	1	102	5510	36.76	44.96	23.98	30.00	23.98	
VHT40	MCS 0	1	110	5550	36.76	44.96	23.98	30.00	23.98	
VHT40	MCS 0	1	134	5670	37.06	44.87	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	74.81	83.92	23.98	30.00	23.98	
VHT80	MCS 0	1	122	5610	74.93	84.88	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	0.58	11.33	23.98	-3.70		Pass
11a	6M bps	1	116	5580	0.58	10.88	23.98	-3.70		Pass
11a	6M bps	1	140	5700	0.58	10.11	23.98	-3.70		Pass
HT20	MCS 0	1	100	5500	14.00	11.00	23.98	-3.70		Pass
HT20	MCS 0	1	116	5580	14.00	10.77	23.98	-3.70		Pass
HT20	MCS 0	1	140	5700	14.00	9.97	23.98	-3.70		Pass
HT40	MCS 0	1	102	5510	1.19	11.11	23.98	-3.70		Pass
HT40	MCS 0	1	110	5550	1.19	11.04	23.98	-3.70		Pass
HT40	MCS 0	1	134	5670	1.19	10.94	23.98	-3.70		Pass
VHT20	MCS 0	1	100	5500	0.78	11.12	23.98	-3.70		Pass
VHT20	MCS 0	1	116	5580	0.78	10.85	23.98	-3.70		Pass
VHT20	MCS 0	1	140	5700	0.78	10.20	23.98	-3.70		Pass
VHT40	MCS 0	1	102	5510	1.47	11.12	23.98	-3.70		Pass
VHT40	MCS 0	1	110	5550	1.47	11.07	23.98	-3.70		Pass
VHT40	MCS 0	1	134	5670	1.47	10.74	23.98	-3.70		Pass
VHT80	MCS 0	1	106	5530	2.58	11.07	23.98	-3.70		Pass
VHT80	MCS 0	1	122	5610	2.58	10.71	23.98	-3.70		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	0.58	0.23	11.00	-3.70		Pass
11a	6M bps	1	116	5580	0.58	-0.09	11.00	-3.70		Pass
11a	6M bps	1	140	5700	0.58	-0.39	11.00	-3.70		Pass
HT20	MCS 0	1	100	5500	0.63	0.08	11.00	-3.70		Pass
HT20	MCS 0	1	116	5580	0.63	-0.34	11.00	-3.70		Pass
HT20	MCS 0	1	140	5700	0.63	-0.90	11.00	-3.70		Pass
HT40	MCS 0	1	102	5510	1.19	-2.29	11.00	-3.70		Pass
HT40	MCS 0	1	110	5550	1.19	-2.42	11.00	-3.70		Pass
HT40	MCS 0	1	134	5670	1.19	-2.32	11.00	-3.70		Pass
VHT20	MCS 0	1	100	5500	0.78	0.55	11.00	-3.70		Pass
VHT20	MCS 0	1	116	5580	0.78	-0.33	11.00	-3.70		Pass
VHT20	MCS 0	1	140	5700	0.78	-0.65	11.00	-3.70		Pass
VHT40	MCS 0	1	102	5510	1.47	-1.74	11.00	-3.70		Pass
VHT40	MCS 0	1	110	5550	1.47	-2.08	11.00	-3.70		Pass
VHT40	MCS 0	1	134	5670	1.47	-2.01	11.00	-3.70		Pass
VHT80	MCS 0	1	106	5530	2.58	-4.45	11.00	-3.70		Pass
VHT80	MCS 0	1	122	5610	2.58	-5.44	11.00	-3.70		Pass

TEST RESULTS DATA
26dB and 99% OBW

Straddle Channel											
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	99% Bandwidth (MHz)	6DB Bandwidth (MHz)	Emission Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6Mbps	1	144	5720	18.23	16.34	23.28	-	-	-	
				NII-2C	14.0909	13.152	16.638	22.49	28.49	23.21	
				NII-3	4.1409	3.192	6.638	23.17	29.17	-	
HT20	MCS0	1	144	5720	19.08	17.58	23.93	-	-	-	
				NII-2C	14.4905	13.771	16.938	22.61	28.61	23.29	
				NII-3	4.5904	3.811	6.988	23.62	29.62	-	
HT40	MCS0	1	142	5710	36.56	35.29	44.51	-	-	-	
				NII-2C	33.1818	32.502	37.298	23.98	30.00	23.98	
				NII-3	3.3816	2.783	7.208	22.29	28.29	-	
VHT20	MCS0	1	144	5720	19.13	17.56	23.88	-	-	-	
				NII-2C	14.5405	13.751	16.938	22.63	28.63	23.29	
				NII-3	4.5904	3.811	6.938	23.62	29.62	-	
VHT40	MCS0	1	142	5710	36.76	35.13	45.14	-	-	-	
				NII-2C	33.3816	32.502	37.657	23.98	30.00	23.98	
				NII-3	3.3816	2.623	7.478	22.29	28.29	-	
VHT80	MCS0	1	138	5690	75.16	75.05	86.15	-	-	-	
				NII-2C	72.522	72.483	77.35	23.98	30.00	23.98	
				NII-3	2.642	2.562	8.8	21.22	27.22	-	

TEST RESULTS DATA
Average Power Table

FCC Straddle Channel										
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	144	5720	0.58	11.28	-	-3.70		Pass
				NII-2C	0.58	10.23	23.21	-3.70		Pass
				NII-3	0.58	4.59	30.00	-3.70		Pass
HT20	MCS0	1	144	5720	0.63	11.27	-	-3.70		Pass
				NII-2C	0.63	10.16	23.29	-3.70		Pass
				NII-3	0.63	4.81	30.00	-3.70		Pass
HT40	MCS0	1	142	5710	1.19	9.98	-	-3.70		Pass
				NII-2C	1.19	9.64	23.98	-3.70		Pass
				NII-3	1.19	-1.21	30.00	-3.70		Pass
VHT20	MCS0	1	144	5720	0.78	11.05	-	-3.70		Pass
				NII-2C	0.78	9.88	23.29	-3.70		Pass
				NII-3	0.78	4.78	30.00	-3.70		Pass
VHT40	MCS0	1	142	5710	1.47	9.96	-	-3.70		Pass
				NII-2C	1.47	9.62	23.98	-3.70		Pass
				NII-3	1.47	-1.27	30.00	-3.70		Pass
VHT80	MCS0	1	138	5690	2.58	8.47	-	-3.70		Pass
				NII-2C	2.58	8.38	23.98	-3.70		Pass
				NII-3	2.58	-8.46	30.00	-3.70		Pass

TEST RESULTS DATA
Power Spectral Density

Straddle Channel										
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	144	NII-2C	0.58	0.01	11.00	-3.70		Pass
				NII-3	0.58	0.01	30.00	-3.70		Pass
HT20	MCS0	1	144	NII-2C	0.63	-0.23	11.00	-3.70		Pass
				NII-3	0.63	-0.23	30.00	-3.70		Pass
HT40	MCS0	1	142	NII-2C	1.19	-2.19	11.00	-3.70		Pass
				NII-3	1.19	-2.19	30.00	-3.70		Pass
VHT20	MCS0	1	144	NII-2C	0.78	-0.37	11.00	-3.70		Pass
				NII-3	0.78	-0.37	30.00	-3.70		Pass
VHT40	MCS0	1	142	NII-2C	1.47	-2.38	11.00	-3.70		Pass
				NII-3	1.47	-2.38	30.00	-3.70		Pass
VHT80	MCS0	1	138	NII-2C	2.58	-5.35	11.00	-3.70		Pass
				NII-3	2.58	-5.35	30.00	-3.70		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	5180.050	0.050	9.65	20	3.55	
11a	6Mbps	1	36	5180	5180.050	0.050	9.65	20	4.35	
11a	6Mbps	1	36	5180	5180.050	0.050	9.65	20	3.9	
11a	6Mbps	1	36	5180	5180.050	0.050	9.65	-30	3.9	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	50	3.9	

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	5320.050	0.050	9.40	20	3.55	
11a	6Mbps	1	64	5320	5320.050	0.050	9.40	20	4.35	
11a	6Mbps	1	64	5320	5320.050	0.050	9.40	20	3.9	
11a	6Mbps	1	64	5320	5320.050	0.050	9.40	-30	3.9	
11a	6Mbps	1	64	5320	5320.050	0.050	9.40	50	3.9	

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	5500.050	0.050	9.09	20	3.55	
11a	6Mbps	1	100	5500	5500.050	0.050	9.09	20	4.35	
11a	6Mbps	1	100	5500	5500.050	0.050	9.09	20	3.9	
11a	6Mbps	1	100	5500	5500.050	0.050	9.09	-30	3.9	
11a	6Mbps	1	100	5500	5500.025	0.025	4.55	50	3.9	



Appendix B. Radiated Spurious Emission

Battery 1

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5149.1	49.91	-24.09	74	46.47	31.84	8.13	36.53	326	344	P	H
		5149.85	38.8	-15.2	54	35.36	31.84	8.13	36.53	326	344	A	H
	*	5188	97	-	-	93.49	31.85	8.17	36.51	326	344	P	H
	*	5188	89.92	-	-	86.41	31.85	8.17	36.51	326	344	A	H
		5147.15	48.68	-25.32	74	45.24	31.84	8.13	36.53	279	4	P	V
		5149.55	37.8	-16.2	54	34.36	31.84	8.13	36.53	279	4	A	V
	*	5184	93.83	-	-	90.32	31.85	8.17	36.51	279	4	P	V
	*	5186	86.99	-	-	83.48	31.85	8.17	36.51	279	4	A	V
802.11a CH 44 5220MHz	*	5224	97.43	-	-	93.87	31.86	8.2	36.5	337	348	P	H
	*	5224	90.61	-	-	87.05	31.86	8.2	36.5	337	348	A	H
	*	5226	94.56	-	-	90.98	31.87	8.21	36.5	202	0	P	V
	*	5224	86.66	-	-	83.1	31.86	8.2	36.5	202	0	A	V
802.11a CH 48 5240MHz	*	5244	99.16	-	-	95.56	31.88	8.22	36.5	123	314	P	H
	*	5244	91.73	-	-	88.13	31.88	8.22	36.5	123	314	A	H
		5383.05	45.67	-28.33	74	41.93	31.92	8.32	36.5	123	314	P	H
		5382.75	36.28	-17.72	54	32.54	31.92	8.32	36.5	123	314	A	H
	*	5236	95.12	-	-	91.54	31.87	8.21	36.5	270	1	P	V
	*	5248	87.98	-	-	84.38	31.88	8.22	36.5	270	1	A	V
		5381.6	45.78	-28.22	74	42.04	31.92	8.32	36.5	270	1	P	V
		5370.45	36.19	-17.81	54	32.47	31.91	8.31	36.5	270	1	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		10359	47.59	-26.41	74	57.13	38.02	13.54	61.1	100	0	P	H
CH 36 5180MHz		10359	50.69	-23.31	74	60.23	38.02	13.54	61.1	100	360	P	V
802.11a		10440	46.05	-27.95	74	55.48	38.06	13.58	61.07	100	0	P	H
CH 44 5220MHz		10440	49.52	-24.48	74	58.95	38.06	13.58	61.07	100	360	P	V
802.11a		10479	46.66	-27.34	74	56	38.09	13.61	61.04	100	0	P	H
CH 48 5240MHz		10479	47.82	-26.18	74	57.16	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.												



Band 1 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		5148.9	48.53	-25.47	74	45.09	31.84	8.13	36.53	315	332	P	H
		5149.35	38.46	-15.54	54	35.02	31.84	8.13	36.53	315	332	A	H
	*	5184	96.13	-	-	92.62	31.85	8.17	36.51	315	332	P	H
	*	5184	88.71	-	-	85.2	31.85	8.17	36.51	315	332	A	H
		5127.55	48.16	-25.84	74	44.75	31.84	8.11	36.54	111	344	P	V
		5128.5	38.06	-15.94	54	34.65	31.84	8.11	36.54	111	344	A	V
	*	5176	94.6	-	-	91.09	31.85	8.17	36.51	111	344	P	V
	*	5186	87.38	-	-	83.87	31.85	8.17	36.51	111	344	A	V
802.11n HT20 CH 44 5220MHz	*	5216	96.58	-	-	93.02	31.86	8.2	36.5	364	326	P	H
	*	5226	89.59	-	-	86.01	31.87	8.21	36.5	364	326	A	H
	*	5228	95.23	-	-	91.65	31.87	8.21	36.5	100	343	P	V
	*	5224	88.77	-	-	85.21	31.86	8.2	36.5	100	343	A	V
802.11n HT20 CH 48 5240MHz	*	5248	97.21	-	-	93.61	31.88	8.22	36.5	308	332	P	H
	*	5244	89.83	-	-	86.23	31.88	8.22	36.5	308	332	A	H
		5389.3	45.97	-28.03	74	42.23	31.92	8.32	36.5	308	332	P	H
		5372.25	36.28	-17.72	54	32.56	31.91	8.31	36.5	308	332	A	H
	*	5234	96.83	-	-	93.25	31.87	8.21	36.5	100	348	P	V
	*	5234	89.44	-	-	85.86	31.87	8.21	36.5	100	348	A	V
		5386.2	45.81	-28.19	74	42.07	31.92	8.32	36.5	100	348	P	V
		5369.1	36.28	-17.72	54	32.56	31.91	8.31	36.5	100	348	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		10359	46.61	-27.39	74	56.15	38.02	13.54	61.1	100	0	P	H
		10359	50.35	-23.65	74	59.89	38.02	13.54	61.1	100	360	P	V
802.11n HT20 CH 44 5220MHz		10440	46.3	-27.7	74	55.73	38.06	13.58	61.07	100	0	P	H
		10440	50.12	-23.88	74	59.55	38.06	13.58	61.07	100	360	P	V
802.11n HT20 CH 48 5240MHz		10479	45.53	-28.47	74	54.87	38.09	13.61	61.04	100	0	P	H
		10479	49.13	-24.87	74	58.47	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.												



Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5147.7	56.43	-17.57	74	52.99	31.84	8.13	36.53	326	331	P	H
		5149.65	46.35	-7.65	54	42.91	31.84	8.13	36.53	326	331	A	H
	*	5200	93.64	-	-	90.09	31.86	8.19	36.5	326	331	P	H
	*	5202	86.49	-	-	82.94	31.86	8.19	36.5	326	331	A	H
		5146.95	55.71	-18.29	74	52.27	31.84	8.13	36.53	100	336	P	V
		5148.9	45.65	-8.35	54	42.21	31.84	8.13	36.53	100	336	A	V
	*	5204	92.67	-	-	89.12	31.86	8.19	36.5	100	336	P	V
	*	5202	85.83	-	-	82.28	31.86	8.19	36.5	100	336	A	V
802.11n HT40 CH 46 5230MHz	*	5234	95.1	-	-	91.52	31.87	8.21	36.5	334	327	P	H
	*	5244	87.69	-	-	84.09	31.88	8.22	36.5	334	327	A	H
		5352.6	46	-28	74	42.3	31.91	8.29	36.5	334	327	P	H
		5361.45	36.8	-17.2	54	33.08	31.91	8.31	36.5	334	327	A	H
	*	5234	92.88	-	-	89.3	31.87	8.21	36.5	106	346	P	V
	*	5240	86.04	-	-	82.46	31.87	8.21	36.5	106	346	A	V
		5359.65	46.62	-27.38	74	42.92	31.91	8.29	36.5	106	346	P	V
		5397.05	36.78	-17.22	54	33.03	31.92	8.33	36.5	106	346	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		10380	46.15	-27.85	74	55.67	38.03	13.55	61.1	100	0	P	H
		10380	48.39	-25.61	74	57.91	38.03	13.55	61.1	100	360	P	V
802.11n HT40 CH 46 5230MHz		10461	44.63	-29.37	74	54	38.08	13.6	61.05	100	18	P	H
		10461	47.91	-26.09	74	57.28	38.08	13.6	61.05	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 36 5180MHz		5144.15	51.07	-22.93	74	47.63	31.84	8.13	36.53	298	2	P	H
		5149.85	39.35	-14.65	54	35.91	31.84	8.13	36.53	298	2	A	H
	*	5188	95.64	-	-	92.13	31.85	8.17	36.51	298	2	P	H
	*	5188	88.05	-	-	84.54	31.85	8.17	36.51	298	2	A	H
		5144.35	51.64	-22.36	74	48.2	31.84	8.13	36.53	112	346	P	V
		5149.95	38.9	-15.1	54	35.46	31.84	8.13	36.53	112	346	A	V
	*	5188	94.48	-	-	90.97	31.85	8.17	36.51	112	346	P	V
	*	5188	87.41	-	-	83.9	31.85	8.17	36.51	112	346	A	V
802.11ac VHT20 CH 44 5220MHz	*	5212	95.87	-	-	92.31	31.86	8.2	36.5	382	1	P	H
	*	5224	89.08	-	-	85.52	31.86	8.2	36.5	382	1	A	H
	*	5224	95.98	-	-	92.42	31.86	8.2	36.5	100	349	P	V
	*	5228	89.11	-	-	85.53	31.87	8.21	36.5	100	349	A	V
802.11ac VHT20 CH 48 5240MHz	*	5246	97.04	-	-	93.44	31.88	8.22	36.5	324	360	P	H
	*	5234	89.34	-	-	85.76	31.87	8.21	36.5	324	360	A	H
		5356.25	45.76	-28.24	74	42.06	31.91	8.29	36.5	324	360	P	H
		5357.75	36.87	-17.13	54	33.17	31.91	8.29	36.5	324	360	A	H
	*	5248	96.48	-	-	92.88	31.88	8.22	36.5	100	350	P	V
	*	5248	89.5	-	-	85.9	31.88	8.22	36.5	100	350	A	V
		5383.7	46.11	-27.89	74	42.37	31.92	8.32	36.5	100	350	P	V
		5352.5	37.04	-16.96	54	33.34	31.91	8.29	36.5	100	350	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 36 5180MHz		10359	46.73	-27.27	74	56.27	38.02	13.54	61.1	100	0	P	H
		10359	49.46	-24.54	74	59	38.02	13.54	61.1	100	360	P	V
802.11ac VHT20 CH 44 5220MHz		10440	48.27	-25.73	74	57.7	38.06	13.58	61.07	100	0	P	H
		10440	48.83	-25.17	74	58.26	38.06	13.58	61.07	100	360	P	V
802.11ac VHT20 CH 48 5240MHz		10479	45.8	-28.2	74	55.14	38.09	13.61	61.04	100	0	P	H
		10479	47.84	-26.16	74	57.18	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.												



Band 1 5150~5250MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 38 5190MHz		5146.8	54.99	-19.01	74	51.55	31.84	8.13	36.53	335	357	P	H
		5150	46.04	-7.96	54	42.6	31.84	8.13	36.53	335	357	A	H
	*	5204	93.61	-	-	90.06	31.86	8.19	36.5	335	357	P	H
	*	5198	86.47	-	-	82.92	31.86	8.19	36.5	335	357	A	H
		5146.05	55.49	-18.51	74	52.05	31.84	8.13	36.53	100	348	P	V
		5149	45.09	-8.91	54	41.65	31.84	8.13	36.53	100	348	A	V
	*	5198	93.74	-	-	90.19	31.86	8.19	36.5	100	348	P	V
	*	5198	86.8	-	-	83.25	31.86	8.19	36.5	100	348	A	V
802.11ac VHT40 CH 46 5230MHz	*	5226	94.41	-	-	90.83	31.87	8.21	36.5	314	330	P	H
	*	5228	87.27	-	-	83.69	31.87	8.21	36.5	314	330	A	H
		5386.35	45.69	-28.31	74	41.95	31.92	8.32	36.5	314	330	P	H
		5371.1	36.82	-17.18	54	33.1	31.91	8.31	36.5	314	330	A	H
	*	5242	94.97	-	-	91.37	31.88	8.22	36.5	100	339	P	V
	*	5242	87.66	-	-	84.06	31.88	8.22	36.5	100	339	A	V
		5360.65	46.23	-27.77	74	42.51	31.91	8.31	36.5	100	339	P	V
		5357.1	36.83	-17.17	54	33.13	31.91	8.29	36.5	100	339	A	V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												

**Band 1 5150~5250MHz****WIFI 802.11ac VHT40 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 38 5190MHz		10380	46.78	-27.22	74	56.3	38.03	13.55	61.1	100	0	P	H
		10380	50.18	-23.82	74	59.7	38.03	13.55	61.1	100	360	P	V
802.11ac VHT40 CH 46 5230MHz		10461	47.43	-26.57	74	56.8	38.08	13.6	61.05	100	0	P	H
		10461	46.71	-27.29	74	56.08	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.												



Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5144.2	56.72	-17.28	74	53.28	31.84	8.13	36.53	154	351	P	H
	!	5147.85	49.16	-4.84	54	45.72	31.84	8.13	36.53	154	351	A	H
	*	5234	89.07	-	-	85.49	31.87	8.21	36.5	154	351	P	H
	*	5214	82.46	-	-	78.9	31.86	8.2	36.5	154	351	A	H
		5388.55	45.98	-28.02	74	42.24	31.92	8.32	36.5	154	351	P	H
		5354.8	38.16	-15.84	54	34.46	31.91	8.29	36.5	154	351	A	H
		5139.4	57.17	-16.83	74	53.76	31.84	8.11	36.54	334	346	P	V
	!	5142.85	48.41	-5.59	54	44.97	31.84	8.13	36.53	334	346	A	V
	*	5218	88.64	-	-	85.08	31.86	8.2	36.5	334	346	P	V
	*	5214	82.25	-	-	78.69	31.86	8.2	36.5	334	346	A	V
		5369	46.03	-27.97	74	42.31	31.91	8.31	36.5	334	346	P	V
		5352.9	38.35	-15.65	54	34.65	31.91	8.29	36.5	334	346	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 1 5150~5250MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10419	44.91	-29.09	74	54.37	38.05	13.57	61.08	100	0	P	H
VHT80													
CH 42		10419	44.07	-29.93	74	53.53	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.												



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		5146.15	47.11	-26.89	74	43.67	31.84	8.13	36.53	334	330	P	H
		5113	36.92	-17.08	54	33.54	31.83	8.1	36.55	334	330	A	H
	*	5264	98.87	-	-	95.26	31.88	8.23	36.5	334	330	P	H
	*	5256	91.56	-	-	87.96	31.88	8.22	36.5	334	330	A	H
		5100.35	46.47	-27.53	74	43.12	31.83	8.08	36.56	244	360	P	V
		5108.9	36.78	-17.22	54	33.4	31.83	8.1	36.55	244	360	A	V
	*	5262	95.65	-	-	92.04	31.88	8.23	36.5	244	360	P	V
	*	5264	87.79	-	-	84.18	31.88	8.23	36.5	244	360	A	V
802.11a CH 60 5300MHz	*	5306	99.3	-	-	95.65	31.89	8.26	36.5	325	327	P	H
	*	5306	91.94	-	-	88.29	31.89	8.26	36.5	325	327	A	H
	*	5304	96.1	-	-	92.45	31.89	8.26	36.5	237	360	P	V
	*	5306	87.74	-	-	84.09	31.89	8.26	36.5	237	360	A	V
802.11a CH 64 5320MHz	*	5314	99.8	-	-	96.13	31.9	8.27	36.5	326	330	P	H
	*	5316	92.23	-	-	88.56	31.9	8.27	36.5	326	330	A	H
		5350	49.37	-24.63	74	45.67	31.91	8.29	36.5	326	330	P	H
		5372.4	40.63	-13.37	54	36.91	31.91	8.31	36.5	326	330	A	H
	*	5324	96.29	-	-	92.62	31.9	8.27	36.5	156	356	P	V
	*	5326	88.57	-	-	84.9	31.9	8.27	36.5	156	356	A	V
		5351.3	47.47	-26.53	74	43.77	31.91	8.29	36.5	156	356	P	V
		5372.45	38.67	-15.33	54	34.95	31.91	8.31	36.5	156	356	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		10521	45.04	-28.96	74	54.33	38.11	13.63	61.03	100	0	P	H
CH 52 5260MHz		10521	48.67	-25.33	74	57.96	38.11	13.63	61.03	100	360	P	V
802.11a		10599	45.63	-28.37	74	54.77	38.16	13.68	60.98	100	0	P	H
CH 60 5300MHz		10599	48.59	-25.41	74	57.73	38.16	13.68	60.98	100	360	P	V
802.11a		10641	47.64	-26.36	74	56.73	38.18	13.7	60.97	100	0	P	H
CH 64 5320MHz		10641	48.3	-25.7	74	57.39	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.												



Band 2 5250~5350MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		5121.1	46.87	-27.13	74	43.49	31.83	8.1	36.55	285	322	P	H
		5111.65	36.92	-17.08	54	33.54	31.83	8.1	36.55	285	322	A	H
	*	5254	97.24	-	-	93.64	31.88	8.22	36.5	285	322	P	H
	*	5256	90.03	-	-	86.43	31.88	8.22	36.5	285	322	A	H
		5100.05	46.4	-27.6	74	43.05	31.83	8.08	36.56	100	331	P	V
		5100.8	36.93	-17.07	54	33.58	31.83	8.08	36.56	100	331	A	V
	*	5260	98.1	-	-	94.49	31.88	8.23	36.5	100	331	P	V
	*	5264	89.39	-	-	85.78	31.88	8.23	36.5	100	331	A	V
802.11n HT20 CH 60 5300MHz	*	5298	97.33	-	-	93.68	31.89	8.26	36.5	299	331	P	H
	*	5304	90.12	-	-	86.47	31.89	8.26	36.5	299	331	A	H
	*	5306	96.39	-	-	92.74	31.89	8.26	36.5	100	319	P	V
	*	5306	89.5	-	-	85.85	31.89	8.26	36.5	100	319	A	V
802.11n HT20 CH 64 5320MHz	*	5326	98.33	-	-	94.66	31.9	8.27	36.5	330	329	P	H
	*	5324	90.84	-	-	87.17	31.9	8.27	36.5	330	329	A	H
		5353.8	49.76	-24.24	74	46.06	31.91	8.29	36.5	330	329	P	H
		5371.85	39.76	-14.24	54	36.04	31.91	8.31	36.5	330	329	A	H
	*	5324	97.29	-	-	93.62	31.9	8.27	36.5	116	326	P	V
	*	5324	89.95	-	-	86.28	31.9	8.27	36.5	116	326	A	V
		5371.6	48.91	-25.09	74	45.19	31.91	8.31	36.5	116	326	P	V
		5371.7	39.78	-14.22	54	36.06	31.91	8.31	36.5	116	326	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		10521	44.94	-29.06	74	54.23	38.11	13.63	61.03	100	0	P	H
		10521	48.33	-25.67	74	57.62	38.11	13.63	61.03	100	360	P	V
802.11n HT20 CH 60 5300MHz		10599	43.99	-30.01	74	53.13	38.16	13.68	60.98	100	0	P	H
		10599	49.38	-24.62	74	58.52	38.16	13.68	60.98	100	360	P	V
802.11n HT20 CH 64 5320MHz		10641	45.45	-28.55	74	54.54	38.18	13.7	60.97	100	0	P	H
		10641	49.75	-24.25	74	58.84	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.												



Band 2 5250~5350MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		5106.9	47.2	-26.8	74	43.82	31.83	8.1	36.55	341	330	P	H
		5105.45	37.82	-16.18	54	34.47	31.83	8.08	36.56	341	330	A	H
	*	5256	94.37	-	-	90.77	31.88	8.22	36.5	341	330	P	H
	*	5258	87.4	-	-	83.8	31.88	8.22	36.5	341	330	A	H
		5125.95	46.63	-27.37	74	43.22	31.84	8.11	36.54	100	338	P	V
		5109.2	37.57	-16.43	54	34.19	31.83	8.1	36.55	100	338	A	V
	*	5258	94.1	-	-	90.5	31.88	8.22	36.5	100	338	P	V
	*	5282	87.16	-	-	83.52	31.89	8.25	36.5	100	338	A	V
802.11n HT40 CH 62 5310MHz	*	5326	96.2	-	-	92.53	31.9	8.27	36.5	361	325	P	H
	*	5322	88.75	-	-	85.08	31.9	8.27	36.5	361	325	A	H
		5354.75	61.29	-12.71	74	57.59	31.91	8.29	36.5	361	325	P	H
	!	5350.45	48.11	-5.89	54	44.41	31.91	8.29	36.5	361	325	A	H
	*	5322	95.89	-	-	92.22	31.9	8.27	36.5	120	349	P	V
	*	5322	88.57	-	-	84.9	31.9	8.27	36.5	120	349	A	V
		5352.4	60.09	-13.91	74	56.39	31.91	8.29	36.5	120	349	P	V
		5350.1	41.85	-12.15	54	38.15	31.91	8.29	36.5	120	349	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		10539	46.3	-27.7	74	55.56	38.12	13.64	61.02	100	360	P	H
		10539	47.59	-26.41	74	56.85	38.12	13.64	61.02	100	360	P	V
802.11n HT40 CH 62 5310MHz		10620	44.82	-29.18	74	53.94	38.17	13.69	60.98	100	0	P	H
		10620	49.38	-24.62	74	58.5	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.												



Band 2 5250~5350MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 52 5260MHz		5105.5	48.39	-25.61	74	45.01	31.83	8.1	36.55	333	4	P	H
		5110.9	37.77	-16.23	54	34.39	31.83	8.1	36.55	333	4	A	H
	*	5268	96.88	-	-	93.27	31.88	8.23	36.5	333	4	P	H
	*	5268	89.73	-	-	86.12	31.88	8.23	36.5	333	4	A	H
		5123.45	47.52	-26.48	74	44.11	31.84	8.11	36.54	100	348	P	V
		5103	37.7	-16.3	54	34.35	31.83	8.08	36.56	100	348	A	V
	*	5256	97.19	-	-	93.59	31.88	8.22	36.5	100	348	P	V
	*	5264	90.25	-	-	86.64	31.88	8.23	36.5	100	348	A	V
802.11ac VHT20 CH 60 5300MHz	*	5308	97.02	-	-	93.37	31.89	8.26	36.5	337	360	P	H
	*	5292	89.51	-	-	85.87	31.89	8.25	36.5	337	360	A	H
	*	5308	97.03	-	-	93.38	31.89	8.26	36.5	100	0	P	V
	*	5308	89.84	-	-	86.19	31.89	8.26	36.5	100	0	A	V
802.11ac VHT20 CH 64 5320MHz	*	5328	97.76	-	-	94.08	31.9	8.28	36.5	369	328	P	H
	*	5324	90.13	-	-	86.46	31.9	8.27	36.5	369	328	A	H
		5350.05	47.42	-26.58	74	43.72	31.91	8.29	36.5	369	328	P	H
		5372	39.41	-14.59	54	35.69	31.91	8.31	36.5	369	328	A	H
	*	5316	97.92	-	-	94.25	31.9	8.27	36.5	100	345	P	V
	*	5316	90.64	-	-	86.97	31.9	8.27	36.5	100	345	A	V
		5372.4	49.56	-24.44	74	45.84	31.91	8.31	36.5	100	345	P	V
		5371.9	39.88	-14.12	54	36.16	31.91	8.31	36.5	100	345	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 52 5260MHz		10521	44.36	-29.64	74	53.65	38.11	13.63	61.03	100	0	P	H
		10521	47.95	-26.05	74	57.24	38.11	13.63	61.03	100	360	P	V
802.11ac VHT20 CH 60 5300MHz		10599	46.05	-27.95	74	55.19	38.16	13.68	60.98	100	0	P	H
		10599	47.55	-26.45	74	56.69	38.16	13.68	60.98	100	360	P	V
802.11ac VHT20 CH 64 5320MHz		10641	46.53	-27.47	74	55.62	38.18	13.7	60.97	100	0	P	H
		10641	49.76	-24.24	74	58.85	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.												



Band 2 5250~5350MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 54 5270MHz		5114.15	46.68	-27.32	74	43.3	31.83	8.1	36.55	103	346	P	H
		5109.25	37.9	-16.1	54	34.52	31.83	8.1	36.55	103	346	A	H
	*	5282	93.69	-	-	90.05	31.89	8.25	36.5	103	346	P	H
	*	5282	86.46	-	-	82.82	31.89	8.25	36.5	103	346	A	H
		5109.2	46.66	-27.34	74	43.28	31.83	8.1	36.55	335	328	P	V
		5105.35	37.44	-16.56	54	34.09	31.83	8.08	36.56	335	328	A	V
	*	5258	84.51	-	-	80.91	31.88	8.22	36.5	335	328	P	V
	*	5256	77.72	-	-	74.12	31.88	8.22	36.5	335	328	A	V
802.11ac VHT40 CH 62 5310MHz	*	5320	95.59	-	-	91.92	31.9	8.27	36.5	316	328	P	H
	*	5322	88.09	-	-	84.42	31.9	8.27	36.5	316	328	A	H
		5351.75	58.71	-15.29	74	55.01	31.91	8.29	36.5	316	328	P	H
		5350.25	46.38	-7.62	54	42.68	31.91	8.29	36.5	316	328	A	H
	*	5324	95.35	-	-	91.68	31.9	8.27	36.5	110	337	P	V
	*	5322	87.96	-	-	84.29	31.9	8.27	36.5	110	337	A	V
		5352.35	58.76	-15.24	74	55.06	31.91	8.29	36.5	110	337	P	V
		5350.25	47.07	-6.93	54	43.37	31.91	8.29	36.5	110	337	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 2 5250~5350MHz****WIFI 802.11ac VHT40 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 54 5270MHz		10539	44.54	-29.46	74	53.8	38.12	13.64	61.02	100	0	P	H
		10539	47.51	-26.49	74	56.77	38.12	13.64	61.02	100	360	P	V
802.11ac VHT40 CH 62 5310MHz		10620	45.71	-28.29	74	54.83	38.17	13.69	60.98	100	0	P	H
		10620	48.4	-25.6	74	57.52	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.												



Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5125.8	46.94	-27.06	74	43.53	31.84	8.11	36.54	176	350	P	H
		5139.55	38.65	-15.35	54	35.21	31.84	8.13	36.53	176	350	A	H
	*	5318	91.61	-	-	87.94	31.9	8.27	36.5	176	350	P	H
	*	5310	84.63	-	-	80.96	31.9	8.27	36.5	176	350	A	H
		5369.65	56.07	-17.93	74	52.35	31.91	8.31	36.5	176	350	P	H
	!	5353.15	48.78	-5.22	54	45.08	31.91	8.29	36.5	176	350	A	H
		5144.45	47.13	-26.87	74	43.69	31.84	8.13	36.53	100	290	P	V
		5144.3	39	-15	54	35.56	31.84	8.13	36.53	100	290	A	V
	*	5314	91.48	-	-	87.81	31.9	8.27	36.5	100	290	P	V
	*	5312	84.3	-	-	80.63	31.9	8.27	36.5	100	290	A	V
		5354.55	55.44	-18.56	74	51.74	31.91	8.29	36.5	100	290	P	V
	!	5353.4	48.71	-5.29	54	45.01	31.91	8.29	36.5	100	290	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 2 5250~5350MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10581	44.4	-29.6	74	53.57	38.15	13.67	60.99	100	0	P	H
VHT80 CH 58 5290MHz		10581	43.31	-30.69	74	52.48	38.15	13.67	60.99	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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		5447.28	49.32	-24.68	74	45.43	31.94	8.37	36.42	322	334	P	H
		5447.6	39.9	-14.1	54	36.01	31.94	8.37	36.42	322	334	A	H
	*	5494	97.57	-	-	93.61	31.95	8.39	36.38	322	334	P	H
	*	5494	90.64	-	-	86.68	31.95	8.39	36.38	322	334	A	H
		5463.92	47.57	-26.43	74	43.64	31.95	8.38	36.4	105	336	P	V
		5447.28	38.54	-15.46	54	34.65	31.94	8.37	36.42	105	336	A	V
	*	5496	94.3	-	-	90.34	31.95	8.39	36.38	105	336	P	V
	*	5492	87.42	-	-	83.46	31.95	8.39	36.38	105	336	A	V
802.11a CH 116 5580MHz	*	5576	95.58	-	-	91.4	31.98	8.45	36.25	342	334	P	H
	*	5584	88.21	-	-	83.99	31.98	8.47	36.23	342	334	A	H
	*	5584	93.65	-	-	89.43	31.98	8.47	36.23	105	344	P	V
	*	5586	86.75	-	-	82.53	31.98	8.47	36.23	105	344	A	V
802.11a CH 140 5700MHz	*	5698	90.2	-	-	85.89	32.02	8.54	36.25	121	64	P	H
	*	5694	83.21	-	-	78.9	32.02	8.54	36.25	121	64	A	H
		5726.68	47.46	-26.54	74	43.13	32.04	8.57	36.28	121	64	P	H
		5725	37.96	-16.04	54	33.63	32.04	8.57	36.28	121	64	A	H
	*	5696	92.44	-	-	88.13	32.02	8.54	36.25	123	339	P	V
	*	5696	84.74	-	-	80.43	32.02	8.54	36.25	123	339	A	V
		5728.44	49.23	-24.77	74	44.9	32.04	8.57	36.28	123	339	P	V
		5725.56	38.78	-15.22	54	34.45	32.04	8.57	36.28	123	339	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		11001	47.9	-26.1	74	56.38	38.4	13.91	60.79	100	0	P	H
CH 100		11001	50.19	-23.81	74	58.67	38.4	13.91	60.79	100	360	P	V
5500MHz													
802.11a		11160	47.02	-26.98	74	55.25	38.47	14.01	60.71	100	0	P	H
CH 116		11160	49.19	-24.81	74	57.42	38.47	14.01	60.71	100	0	P	V
5580MHz													
802.11a		11400	48.22	-25.78	74	56.1	38.56	14.15	60.59	100	0	P	H
CH 140		11400	48.26	-25.74	74	56.14	38.56	14.15	60.59	100	360	P	V
5700MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz	*	5496	95.51	-	-	91.55	31.95	8.39	36.38	348	332	P	H
	*	5494	88.14	-	-	84.18	31.95	8.39	36.38	348	332	A	H
		5469.76	51	-23	74	47.07	31.95	8.38	36.4	348	332	P	H
		5448.24	39.72	-14.28	54	35.83	31.94	8.37	36.42	348	332	A	H
	*	5496	96.27	-	-	92.31	31.95	8.39	36.38	123	330	P	V
	*	5492	87.92	-	-	83.96	31.95	8.39	36.38	123	330	A	V
		5447.44	48.47	-25.53	74	44.58	31.94	8.37	36.42	123	330	P	V
		5448.24	39.47	-14.53	54	35.58	31.94	8.37	36.42	123	330	A	V
802.11n HT20 CH 116 5580MHz	*	5574	94.91	-	-	90.73	31.98	8.45	36.25	111	8	P	H
	*	5588	88	-	-	83.78	31.98	8.47	36.23	111	8	A	H
	*	5586	94.21	-	-	89.99	31.98	8.47	36.23	114	331	P	V
	*	5588	86.89	-	-	82.67	31.98	8.47	36.23	114	331	A	V
802.11n HT20 CH 140 5700MHz	*	5706	93.16	-	-	88.85	32.03	8.55	36.27	126	314	P	H
	*	5694	85.74	-	-	81.43	32.02	8.54	36.25	126	314	A	H
		5727.32	51.29	-22.71	74	46.96	32.04	8.57	36.28	126	314	P	H
		5725.08	40.51	-13.49	54	36.18	32.04	8.57	36.28	126	314	A	H
	*	5706	92.6	-	-	88.29	32.03	8.55	36.27	108	320	P	V
	*	5704	85.41	-	-	81.1	32.03	8.55	36.27	108	320	A	V
		5726.84	51.19	-22.81	74	46.86	32.04	8.57	36.28	108	320	P	V
		5725.24	40.09	-13.91	54	35.76	32.04	8.57	36.28	108	320	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		11001	47.32	-26.68	74	55.8	38.4	13.91	60.79	100	0	P	H
		11001	50.73	-23.27	74	59.21	38.4	13.91	60.79	100	360	P	V
802.11n HT20 CH 116 5580MHz		11160	47.33	-26.67	74	55.56	38.47	14.01	60.71	100	360	P	H
		11160	49.9	-24.1	74	58.13	38.47	14.01	60.71	100	360	P	V
802.11n HT20 CH 140 5700MHz		11400	47.75	-26.25	74	55.63	38.56	14.15	60.59	100	360	P	H
		11400	48.97	-25.03	74	56.85	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.												



Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		5469.2	58.06	-15.94	74	54.13	31.95	8.38	36.4	106	345	P	H
		5469.84	46.84	-7.16	54	42.91	31.95	8.38	36.4	106	345	A	H
	*	5500	93.37	-	-	89.36	31.96	8.4	36.35	106	345	P	H
	*	5498	86.08	-	-	82.07	31.96	8.4	36.35	106	345	A	H
		5464.96	59.84	-14.16	74	55.91	31.95	8.38	36.4	127	339	P	V
		5469.68	47.47	-6.53	54	43.54	31.95	8.38	36.4	127	339	A	V
	*	5500	93.92	-	-	89.91	31.96	8.4	36.35	127	339	P	V
	*	5498	86.86	-	-	82.85	31.96	8.4	36.35	127	339	A	V
802.11n HT40 CH 110 5550MHz	*	5542	93.96	-	-	89.86	31.97	8.43	36.3	104	344	P	H
	*	5548	86.94	-	-	82.81	31.97	8.44	36.28	104	344	A	H
	*	5552	93.53	-	-	89.4	31.97	8.44	36.28	122	334	P	V
	*	5546	86.15	-	-	82.05	31.97	8.43	36.3	122	334	A	V
802.11n HT40 CH 134 5670MHz	*	5658	92.22	-	-	87.92	32.01	8.52	36.23	153	344	P	H
	*	5658	85.36	-	-	81.06	32.01	8.52	36.23	153	344	A	H
		5726.12	49.23	-24.77	74	44.9	32.04	8.57	36.28	153	344	P	H
		5727.24	39.25	-14.75	54	34.92	32.04	8.57	36.28	153	344	A	H
	*	5664	92.26	-	-	87.96	32.01	8.52	36.23	119	340	P	V
	*	5658	84.83	-	-	80.53	32.01	8.52	36.23	119	340	A	V
		5730.52	47.69	-26.31	74	43.36	32.04	8.57	36.28	119	340	P	V
		5725.24	38.69	-15.31	54	34.36	32.04	8.57	36.28	119	340	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		11019	45.98	-28.02	74	54.43	38.41	13.92	60.78	100	360	P	H
		11019	50.69	-23.31	74	59.14	38.41	13.92	60.78	100	360	P	V
802.11n HT40 CH 110 5550MHz		11100	46.99	-27.01	74	55.32	38.44	13.97	60.74	100	0	P	H
		11100	50.21	-23.79	74	58.54	38.44	13.97	60.74	100	360	P	V
802.11n HT40 CH 134 5670MHz		11340	46.13	-27.87	74	54.11	38.53	14.11	60.62	100	0	P	H
		11340	48.42	-25.58	74	56.4	38.53	14.11	60.62	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz
WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 100 5500MHz	*	5506	93.48	-	-	89.47	31.96	8.4	36.35	100	350	P	H
	*	5494	86.59	-	-	82.63	31.95	8.39	36.38	100	350	A	H
		5465.52	49.59	-24.41	74	45.66	31.95	8.38	36.4	100	350	P	H
		5469.68	39.08	-14.92	54	35.15	31.95	8.38	36.4	100	350	A	H
	*	5496	94.01	-	-	90.05	31.95	8.39	36.38	100	333	P	V
	*	5492	86.86	-	-	82.9	31.95	8.39	36.38	100	333	A	V
		5465.2	47.34	-26.66	74	43.41	31.95	8.38	36.4	100	333	P	V
		5447.76	39.26	-14.74	54	35.37	31.94	8.37	36.42	100	333	A	V
802.11ac VHT20 CH 116 5580MHz	*	5588	93.28	-	-	89.06	31.98	8.47	36.23	112	350	P	H
	*	5588	86.35	-	-	82.13	31.98	8.47	36.23	112	350	A	H
	*	5584	92.91	-	-	88.69	31.98	8.47	36.23	100	334	P	V
	*	5588	86.24	-	-	82.02	31.98	8.47	36.23	100	334	A	V
802.11ac VHT20 CH 140 5700MHz	*	5692	92.34	-	-	88.03	32.02	8.54	36.25	100	345	P	H
	*	5704	85.64	-	-	81.33	32.03	8.55	36.27	100	345	A	H
		5725.4	48.34	-25.66	74	44.01	32.04	8.57	36.28	100	345	P	H
		5725	39.96	-14.04	54	35.63	32.04	8.57	36.28	100	345	A	H
	*	5694	92.7	-	-	88.39	32.02	8.54	36.25	100	334	P	V
	*	5692	85.65	-	-	81.34	32.02	8.54	36.25	100	334	A	V
		5725	50.94	-23.06	74	46.61	32.04	8.57	36.28	100	334	P	V
		5725	40.9	-13.1	54	36.57	32.04	8.57	36.28	100	334	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 100 5500MHz		11001	46.54	-27.46	74	55.02	38.4	13.91	60.79	100	0	P	H
		11001	49.66	-24.34	74	58.14	38.4	13.91	60.79	100	360	P	V
802.11ac VHT20 CH 116 5580MHz		11160	47.79	-26.21	74	56.02	38.47	14.01	60.71	100	0	P	H
		11160	50.67	-23.33	74	58.9	38.47	14.01	60.71	100	360	P	V
802.11ac VHT20 CH 140 5700MHz		11400	48.22	-25.78	74	56.1	38.56	14.15	60.59	100	0	P	H
		11400	49.62	-24.38	74	57.5	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.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 102 5510MHz	*	5508	90.91	-	-	86.9	31.96	8.4	36.35	100	335	P	H
	*	5518	83.6	-	-	79.55	31.96	8.42	36.33	100	335	A	H
		5468.56	54.59	-19.41	74	50.66	31.95	8.38	36.4	100	335	P	H
		5468.88	44.55	-9.45	54	40.62	31.95	8.38	36.4	100	335	A	H
	*	5502	92.16	-	-	88.15	31.96	8.4	36.35	100	335	P	V
	*	5500	85.45	-	-	81.44	31.96	8.4	36.35	100	335	A	V
		5468.72	57.58	-16.42	74	53.65	31.95	8.38	36.4	100	335	P	V
802.11ac VHT40 CH 110 5550MHz		5470	46.52	-7.48	54	42.59	31.95	8.38	36.4	100	335	A	V
	*	5564	89.95	-	-	85.82	31.97	8.44	36.28	100	333	P	H
	*	5548	83.02	-	-	78.89	31.97	8.44	36.28	100	333	A	H
	*	5540	92.34	-	-	88.24	31.97	8.43	36.3	100	334	P	V
802.11ac VHT40 CH 134 5670MHz	*	5540	85.52	-	-	81.42	31.97	8.43	36.3	100	334	A	V
	*	5680	90.25	-	-	85.94	32.02	8.53	36.24	100	326	P	H
	*	5678	83.22	-	-	78.91	32.02	8.53	36.24	100	326	A	H
		5731.64	47.7	-26.3	74	43.37	32.04	8.57	36.28	100	326	P	H
		5727.4	38.47	-15.53	54	34.14	32.04	8.57	36.28	100	326	A	H
	*	5680	90.64	-	-	86.33	32.02	8.53	36.24	100	337	P	V
	*	5658	83.76	-	-	79.46	32.01	8.52	36.23	100	337	A	V
		5725.64	47.62	-26.38	74	43.29	32.04	8.57	36.28	100	337	P	V
Remark		5726.6	38.87	-15.13	54	34.54	32.04	8.57	36.28	100	337	A	V
	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11019	46.93	-27.07	74	55.38	38.41	13.92	60.78	100	0	P	H
VHT40		11019	53.85	-20.15	74	62.3	38.41	13.92	60.78	100	360	P	V
CH 102	!	11019	48.89	-5.11	54	57.34	38.41	13.92	60.78	100	360	A	V
5510MHz													
802.11ac		11100	46.49	-27.51	74	54.82	38.44	13.97	60.74	100	0	P	H
VHT40		11100	54.66	-19.34	74	62.99	38.44	13.97	60.74	100	360	P	V
CH 110	!	11100	48.86	-5.14	54	57.19	38.44	13.97	60.74	100	360	A	V
5550MHz													
802.11ac		11340	48.46	-25.54	74	56.44	38.53	14.11	60.62	100	0	P	H
VHT40													
CH 134		11340	47.85	-26.15	74	55.83	38.53	14.11	60.62	100	360	P	V
5670MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz	*	5458.96	60.87	-13.13	74	56.98	31.94	8.37	36.42	163	352	P	H
	*	5469.68	53.25	-0.75	54	49.32	31.95	8.38	36.4	163	352	A	H
		5506	90.18	-	-	86.17	31.96	8.4	36.35	163	352	P	H
	!	5504	83.74	-	-	79.73	31.96	8.4	36.35	163	352	A	H
		5746.6	47.37	-26.63	74	43.03	32.05	8.58	36.29	163	352	P	H
		5751.56	39.02	-14.98	54	34.68	32.05	8.59	36.3	163	352	A	H
	*	5449.52	60.75	-13.25	74	56.86	31.94	8.37	36.42	100	343	P	V
	*	5470	53.01	-0.99	54	49.08	31.95	8.38	36.4	100	343	A	V
		5524	90.26	-	-	86.21	31.96	8.42	36.33	100	343	P	V
	!	5524	83.94	-	-	79.89	31.96	8.42	36.33	100	343	A	V
		5731.96	47.21	-26.79	74	42.88	32.04	8.57	36.28	100	343	P	V
		5754.2	39.03	-14.97	54	34.69	32.05	8.59	36.3	100	343	A	V
802.11ac VHT80 CH 122 5610MHz		5463.28	46.32	-27.68	74	42.39	31.95	8.38	36.4	174	356	P	H
		5443.12	38.59	-15.41	54	34.75	31.94	8.35	36.45	174	356	A	H
	*	5588	88.76	-	-	84.54	31.98	8.47	36.23	174	356	P	H
	*	5584	82.41	-	-	78.19	31.98	8.47	36.23	174	356	A	H
		5732.12	46.27	-27.73	74	41.94	32.04	8.57	36.28	174	356	P	H
		5740.44	39.11	-14.89	54	34.77	32.05	8.58	36.29	174	356	A	H
		5414.8	46.55	-27.45	74	42.75	31.93	8.34	36.47	100	344	P	V
		5467.44	38.81	-15.19	54	34.88	31.95	8.38	36.4	100	344	A	V
	*	5590	88.93	-	-	84.71	31.98	8.47	36.23	100	344	P	V
	*	5584	82.88	-	-	78.66	31.98	8.47	36.23	100	344	A	V
		5738.6	46.91	-27.09	74	42.57	32.05	8.58	36.29	100	344	P	V
		5728.28	38.97	-15.03	54	34.64	32.04	8.57	36.28	100	344	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 3 5470~5725MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		11061	49.62	-24.38	74	58	38.43	13.95	60.76	100	0	P	H
		11061	45	-29	74	53.38	38.43	13.95	60.76	100	360	P	V
802.11ac VHT80 CH 122 5610MHz		11220	48.15	-25.85	74	56.3	38.49	14.04	60.68	100	0	P	H
		11220	46.2	-27.8	74	54.35	38.49	14.04	60.68	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
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 144 5720MHz	*	5726	94.43	-	-	90.1	32.04	8.57	36.28	153	344	P	H
	*	5724	87.58	-	-	83.25	32.04	8.57	36.28	153	344	A	H
	*	5716	92.6	-	-	88.29	32.03	8.55	36.27	112	337	P	V
	*	5716	85.21	-	-	80.9	32.03	8.55	36.27	112	337	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		11439	48.15	-25.85	74	55.98	38.57	14.17	60.57	100	0	P	H
CH 144 5720MHz		11439	50.05	-23.95	74	57.88	38.57	14.17	60.57	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n	*	5716	93.79	-	-	89.48	32.03	8.55	36.27	118	344	P	H
HT20	*	5716	86.84	-	-	82.53	32.03	8.55	36.27	118	344	A	H
CH 144	*	5712	92.41	-	-	88.1	32.03	8.55	36.27	100	336	P	V
5720MHz	*	5714	85.17	-	-	80.86	32.03	8.55	36.27	100	336	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 144 5720MHz		11439	48.96	-25.04	74	56.79	38.57	14.17	60.57	100	0	P	H
		11439	50.35	-23.65	74	58.18	38.57	14.17	60.57	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n	*	5702	91.38	-	-	87.07	32.03	8.55	36.27	100	11	P	H
HT40	*	5698	84.47	-	-	80.16	32.02	8.54	36.25	100	11	A	H
CH 142	*	5712	91.19	-	-	86.88	32.03	8.55	36.27	100	335	P	V
5710MHz	*	5712	84.36	-	-	80.05	32.03	8.55	36.27	100	335	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 142 5710MHz		11421	48.55	-25.45	74	56.4	38.57	14.16	60.58	100	0	P	H
		11421	47.3	-26.7	74	55.15	38.57	14.16	60.58	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac	*	5716	93.04	-	-	88.73	32.03	8.55	36.27	100	345	P	H
VHT20	*	5714	86.25	-	-	81.94	32.03	8.55	36.27	100	345	A	H
CH 144	*	5728	93.29	-	-	88.96	32.04	8.57	36.28	139	339	P	V
5720MHz	*	5712	86.2	-	-	81.89	32.03	8.55	36.27	139	339	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11439	49.46	-24.54	74	57.29	38.57	14.17	60.57	100	0	P	H
VHT20													
CH 144		11439	47.68	-26.32	74	55.51	38.57	14.17	60.57	100	360	P	V
5720MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac	*	5708	92.35	-	-	88.04	32.03	8.55	36.27	100	346	P	H
VHT40	*	5708	84.36	-	-	80.05	32.03	8.55	36.27	100	346	A	H
CH 142	*	5708	91.46	-	-	87.15	32.03	8.55	36.27	100	339	P	V
5710MHz	*	5718	84.03	-	-	79.7	32.04	8.57	36.28	100	339	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11421	48.8	-25.2	74	56.65	38.57	14.16	60.58	100	0	P	H
VHT40													
CH 142		11421	47.86	-26.14	74	55.71	38.57	14.16	60.58	100	360	P	V
5710MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac	*	5672	88.97	-	-	84.66	32.02	8.53	36.24	346	351	P	H
VHT80	*	5664	81.6	-	-	77.3	32.01	8.52	36.23	346	351	A	H
CH 138	*	5686	87.06	-	-	82.75	32.02	8.54	36.25	301	38	P	V
5690MHz	*	5684	80.88	-	-	76.57	32.02	8.54	36.25	301	38	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - Straddle Channel
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11379	46.05	-27.95	74	53.96	38.55	14.14	60.6	100	0	P	H
VHT80													
CH 138		11379	43.23	-30.77	74	51.14	38.55	14.14	60.6	100	360	P	V
5690MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802. 11ac 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 HT40 LF		36.79	18.47	-21.53	40	33.82	16.42	0.73	32.5	-	-	P	H
		58.13	26.19	-13.81	40	50.7	7.12	0.91	32.54	108	227	P	H
		216.24	15.4	-30.6	46	34.49	11.52	1.73	32.34	-	-	P	H
		323.91	19.99	-26.01	46	34.69	15.33	2.21	32.24	-	-	P	H
		779.81	24.14	-21.86	46	30.96	21.34	3.54	31.7	-	-	P	H
		919.49	25.07	-20.93	46	29.58	23.11	3.9	31.52	-	-	P	H
		30	28.01	-11.99	40	41.37	18.6	0.65	32.61	-	-	P	V
		58.13	32.38	-7.62	40	56.89	7.12	0.91	32.54	147	306	P	V
		252.13	18.95	-27.05	46	36.37	13.27	1.75	32.44	-	-	P	V
		288.02	21.38	-24.62	46	37.04	14.5	2.04	32.2	-	-	P	V
		552.83	21.91	-24.09	46	32.1	18.52	2.94	31.65	-	-	P	V
		839.95	24.83	-21.17	46	30.61	22.18	3.69	31.65	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Battery 2

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		5449.36	57.44	-16.56	74	53.55	31.94	8.37	36.42	343	0	P	H
		5453.68	49.25	-4.75	54	45.36	31.94	8.37	36.42	343	0	A	H
	*	5550	87.54	-	-	83.41	31.97	8.44	36.28	343	0	P	H
	*	5504	81.27	-	-	77.26	31.96	8.4	36.35	343	0	A	H
		5764.44	47.18	-26.82	74	42.84	32.05	8.59	36.3	343	0	P	H
		5744.36	38.95	-15.05	54	34.61	32.05	8.58	36.29	343	0	A	H
		5449.2	61.21	-12.79	74	57.32	31.94	8.37	36.42	160	25	P	V
		5462.8	53.87	-0.13	54	49.94	31.95	8.38	36.4	160	25	A	V
	*	5504	92.65	-	-	88.64	31.96	8.4	36.35	160	25	P	V
	*	5504	85.04	-	-	81.03	31.96	8.4	36.35	160	25	A	V
		5729.96	47.65	-26.35	74	43.32	32.04	8.57	36.28	160	25	P	V
		5745.72	39.08	-14.92	54	34.74	32.05	8.58	36.29	160	25	A	V

**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		11061	48.58	-25.42	74	56.96	38.43	13.95	60.76	100	0	P	H
VHT80													
CH 106		11061	43.24	-30.76	74	51.62	38.43	13.95	60.76	100	360	P	V
5530MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Note symbol**

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

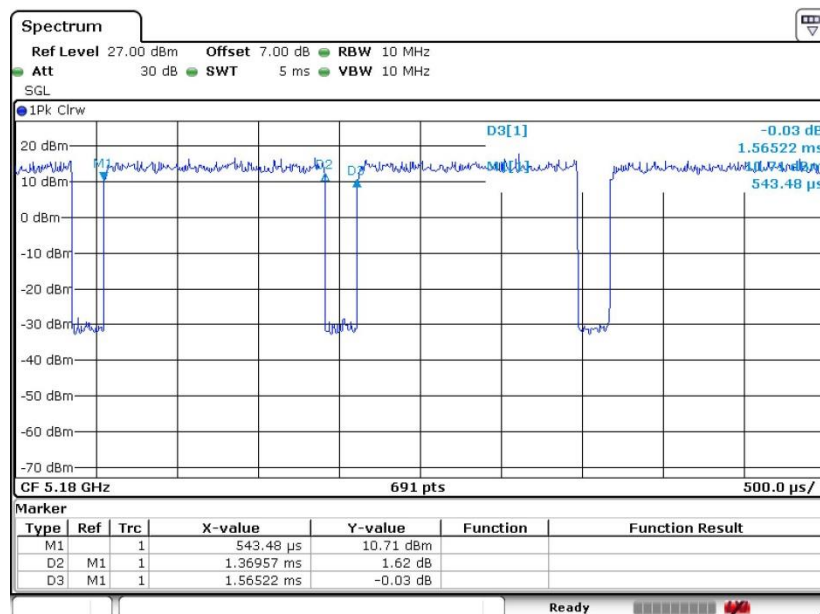
= -10.46(dB)

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

Appendix C. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	87.500	1.370	0.730	1kHz
802.11n HT20	86.516	1.274	0.785	1kHz
802.11n HT40	75.951	0.636	1.572	3kHz
802.11ac VHT20	83.560	0.980	1.021	3kHz
802.11ac VHT40	71.217	0.491	2.035	3kHz
802.11ac VHT80	55.162	0.248	4.035	10kHz

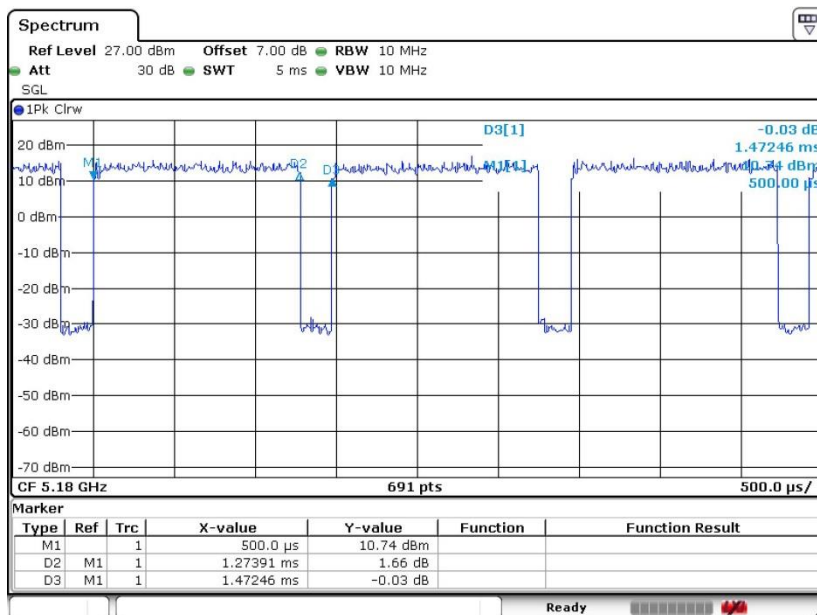
802.11a



Date: 22 APR.2016 21:57:56

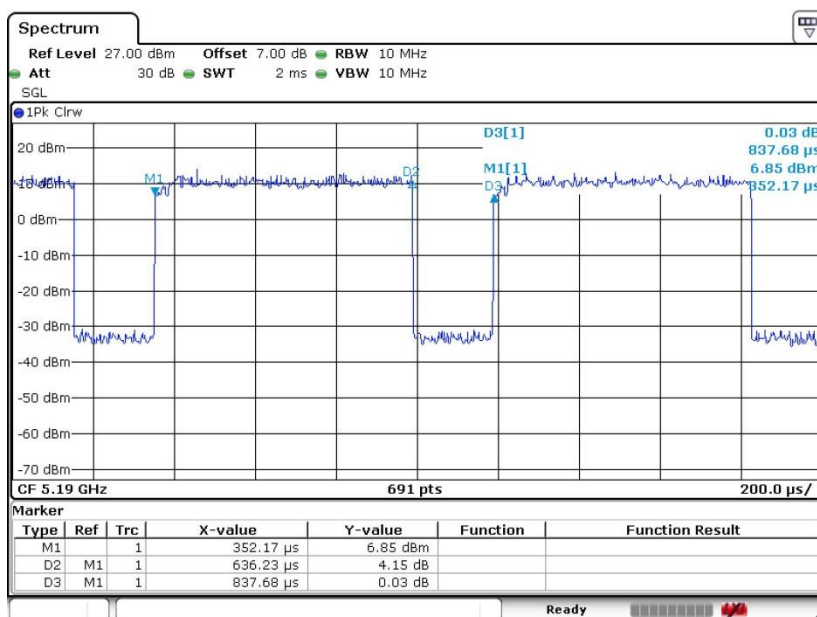


802.11n HT20



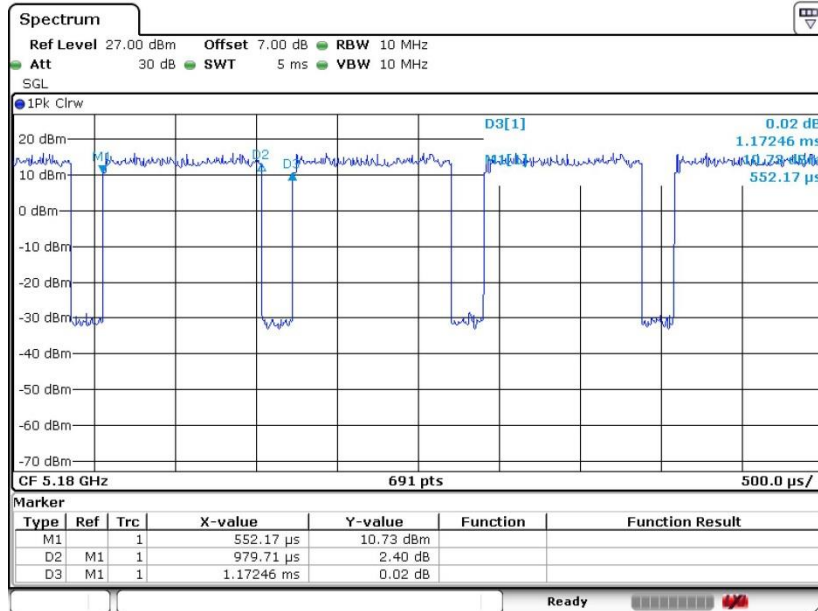
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802.11n HT40



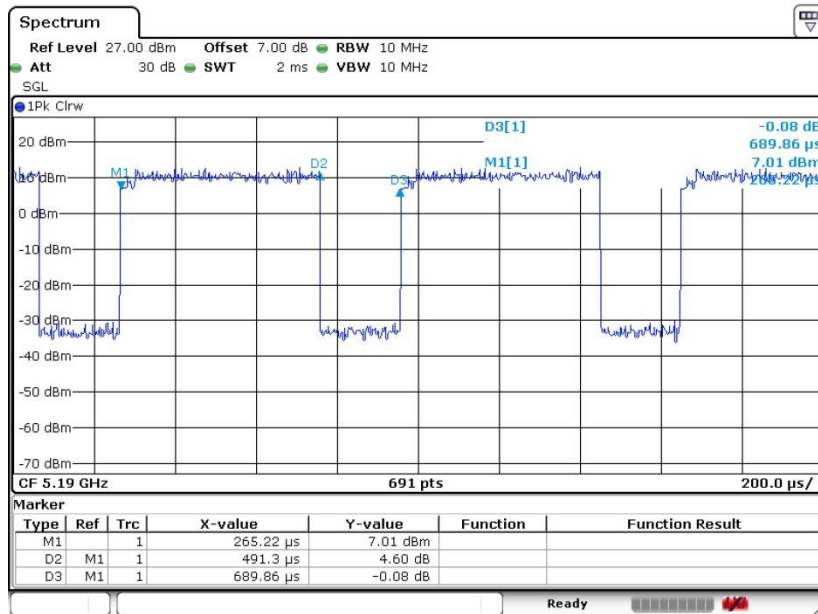
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802.11ac VHT20



Date: 22.APR.2016 22:20:11

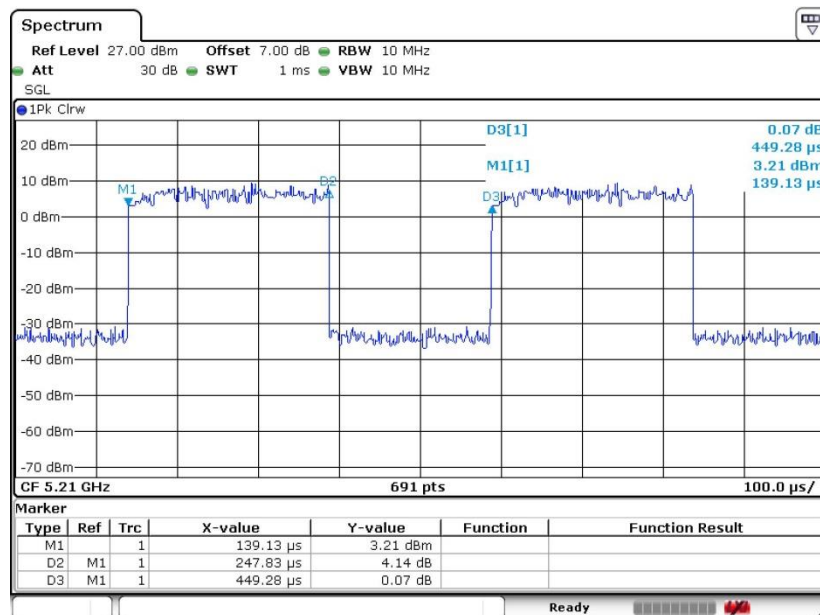
802.11ac VHT40



Date: 22.APR.2016 22:25:44



802.11ac VHT80



Date: 22.APR.2016 22:31:36



Appendix E. Product Equality Declaration



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TEL: +86(0)21 61460666
FAX: +86(0)21 61460602

Declaration of changes from Initial to Variant

General: 6055A is a variant product of 6055U

● SOFTWARE MODIFICATIONS:

- Protocol Stack changes: No
- MMS/STK/USAT/USIM changes: No
- DM/SUPL/VT/FUMO/SWP/HCI: Yes (6055A does not support DM/FUMO)
- Other changes detailed:
 1. Enable FDD band17
 2. Add UICC base NFC

● HARDWARE MODIFICATIONS:

- Band changes: No
- PCB Layout changes: No
- Main RF components changes:

	Antenna	AP	Modem	Transceiver	Power Amplifier	Rx SAW Filter	ASM
GSM850	No	No	No	No	No	No	No
GSM900	No	No	No	No	No	No	No
GSM1800	No	No	No	No	No	No	No
GSM1900	No	No	No	No	No	No	No

	Antenna	AP	Modem	Transceiver	Power Amplifier	Tx SAW Filter	Duplexer	ASM
UMTS band X	No	No	No	No	No	No	No	No

	Antenna	AP	Modem	Transceiver	Power Amplifier	Tx SAW Filter	Rx SAW Filter	Duplexer	ASM
LTE Band x	No	No	No	No	No	No	No	No	No
LTE Band x	No	No	No	No	No	No	No	No	No

	Antenna	AP	Modem	Transceiver	Power Amplifier	Balun	Band pass filter	Diplexer
Bluetooth	No	No	No	No	No	No	No	No

Wi-Fi	No	No	No	No	No	No	No	No
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- FM changes: No
- LCD/ Speaker/ Camera/ Vibrator changes: No (indicated the changed items if yes)
- Other changes detailed:
Reduce 2db power in band 7.

● **MECHANICAL MODIFICATIONS:**

- Use new metal front/back cover or keypad: No
- Mechanical shell changes:
Whole size of EUT: No
Distance of Ear reference point to bottom of handset: No
Other trinkets to change the surface of handset: No
- Other changes detailed:
1. Different logo on backcover.

APPROVED BY:

Project Manager: *Freda*

Signature: *8.10.*

Date: