

FCC RF Test Report

APPLICANT : Kilpatrick LLC
EQUIPMENT : Tablet PC
MODEL NAME : C6R7NC
FCC ID : S2F-5830
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The testing was completed on Sep. 05, 2013. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown to be compliant with the applicable technical standards.

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



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.403(i)	26dB Bandwidth	-	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 17, 24, 30 dBm (depend on band)	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 4, 11, 17 dBm (depend on band)	Pass	-
3.4	15.407(a)(6)	Peak Excursion Ratio	≤ 13dB	Pass	-
3.5	15.407(b)	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 0.55 dB at 5252.000 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 8.50 dB at 0.406 MHz
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

Kilpatrick LLC
102 S. Tejon Street
Suite 1100
Colorado Springs, Colorado 80903

1.2 Feature of Equipment Under Test

Product Feature	
Equipment	Tablet PC
Model Name	C6R7NC
FCC ID	S2F-5830
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/LTE WLAN 11b/g/n (HT20), WLAN 11a/n (HT20/HT40) Bluetooth v3.0

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

1.3 Product Specification of Equipment Under Test

Product Specification subjective to this standard										
Tx/Rx Channel Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5580 MHz 5660 MHz ~ 5720 MHz									
Maximum Output Power	<p><5180 MHz ~ 5240 MHz> 802.11a : 14.6 dBm / 0.0288 W 802.11n HT20 : 14.4 dBm / 0.0275 W 802.11n HT40 : 14.6 dBm / 0.0288 W</p> <p><5260 MHz ~ 5320 MHz> 802.11a : 14.6 dBm / 0.0288 W 802.11n HT20 : 14.5 dBm / 0.0282 W 802.11n HT40 : 14.5 dBm / 0.0282 W</p> <p><5500 MHz ~ 5580 MHz and 5660 MHz ~ 5720 MHz > 802.11a : 14.8 dBm / 0.0302 W 802.11n HT20 : 14.7 dBm / 0.0295 W 802.11n HT40 : 14.6 dBm / 0.0288 W</p>									
Antenna Type	<p><5180 MHz ~ 5240 MHz> Ant. 1 : Fixed internal Antenna with gain 2.70 dBi Ant. 2 : Fixed internal Antenna with gain 4.10 dBi</p> <p><5260 MHz ~ 5320 MHz> Ant. 1 : Fixed internal Antenna with gain 3.00 dBi Ant. 2 : Fixed internal Antenna with gain 4.20 dBi</p> <p><5500 MHz ~ 5580 MHz and 5660 MHz ~ 5720 MHz > Ant. 1 : Fixed internal Antenna with gain 3.80 dBi Ant. 2 : Fixed internal Antenna with gain 1.70 dBi</p>									
Type of Modulation	OFDM (BPSK / QPSK / 16QAM / 64QAM)									
Antenna Function Description	<table border="1"> <thead> <tr> <th></th> <th>Ant. 1</th> <th>Ant. 2</th> </tr> </thead> <tbody> <tr> <td>802.11 a MIMO</td> <td>V</td> <td>V</td> </tr> <tr> <td>802.11 n MIMO</td> <td>V</td> <td>V</td> </tr> </tbody> </table>		Ant. 1	Ant. 2	802.11 a MIMO	V	V	802.11 n MIMO	V	V
	Ant. 1	Ant. 2								
802.11 a MIMO	V	V								
802.11 n MIMO	V	V								

1.4 Modification of EUT

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

1.5 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	Sporton Site No.			FCC Registration No.
	TH02-HY	CO05-HY	03CH08-HY	636805

The test site complies with ANSI C63.4 2003 requirement.

1.6 Applied 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 D01 General UNII Test Procedures v01r03
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02.
- ♦ ANSI C63.4-2003

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 (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 and Channel

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

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2)	52	5260	60	5300
	54	5270	62	5310
	56	5280	64	5320

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5500-5580 MHz and 5660-5720 MHz Band 3 (U-NII-2ext)	100	5500	116	5580
	102	5510	132	5660
	104	5520	134	5670
	108	5540	136	5680
	110	5550	140	5700
	112	5560		

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

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 antenna configurations as following table and the highest power data rates were chosen for full test in the following tables.

MIMO <Ant. 1+2>

5GHz 802.11a mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Average Power (dBm)	14.8	14.3	14.4	14.5	14.4	14.5	14.5	14.5

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	14.7	14.3	14.4	14.3	14.2	14.3	14.3	14.3
Data Rate (MHz)	MCS 8	MCS 9	MCS 10	MCS 11	MCS 12	MCS 13	MCS 14	MCS15
Average Power (dBm)	14.2	14.2	14.1	14.5	14.4	14.3	14.3	14.3

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Average Power (dBm)	14.6	14.3	14.3	13.2	13.1	13.2	13.1	13.1
Data Rate (MHz)	MCS 8	MCS 9	MCS 10	MCS 11	MCS 12	MCS 13	MCS 14	MCS15
Average Power (dBm)	14.3	14.1	14.3	13.2	13.1	13.3	13.2	13.1

Note: MIMO Ant. 1+2 is a calculated result from sum of the power MIMO Ant. 1 and MIMO Ant. 2.

2.3 Test Mode

Final results of test modes, data rates and test channels are shown as following table.

Test Cases					
	Test Items	Mode	Data rate	N _{TX}	Test Channel
Conducted TCs	26dB BW Power Spectral Density	802.11a	6 Mbps	2	L/M/H/Straddle
		802.11n HT20	MCS0	2	L/M/H/Straddle
		802.11n HT40	MCS0	2	L/M/H/Straddle
	Output Power	802.11a	6 Mbps	2	L/M/H/Straddle
		802.11n HT20	MCS0	2	L/M/H/Straddle
		802.11n HT40	MCS0	2	L/M/H/Straddle
	Peak Excursion	802.11a	6 Mbps	2	L
		802.11n HT20	MCS0	2	L
		802.11n HT40	MCS0	2	L
Radiated TCs	Radiated Band Edge	802.11a	6 Mbps	2	L/H
		802.11n HT20	MCS0	2	L/H
		802.11n HT40	MCS0	2	L/H
	Radiated Spurious Emission	802.11a	6 Mbps	2	L/M/H/Straddle
		802.11n HT20	MCS0	2	L/M/H/Straddle
		802.11n HT40	MCS0	2	L/M/H/Straddle
AC Conducted Emission	Mode 1 : GSM850 (GPRS Class 8) Idle + WLAN (5GHz, 11a, Ch116, 6Mbps) Link + Bluetooth Link + Earphone + H Pattern + USB Cable (Charging from Adapter) <Fig. 1> Mode 2 : GSM850 (GPRS Class 8) Idle + WLAN (5GHz, 11a, Ch116, 6Mbps) MIMO Tx + Earphone + H Pattern + USB Cable (Charging from Adapter) <Fig. 2>				
Note: The N _{TX} =2 means 2 antenna ports simultaneously transmit during test.					

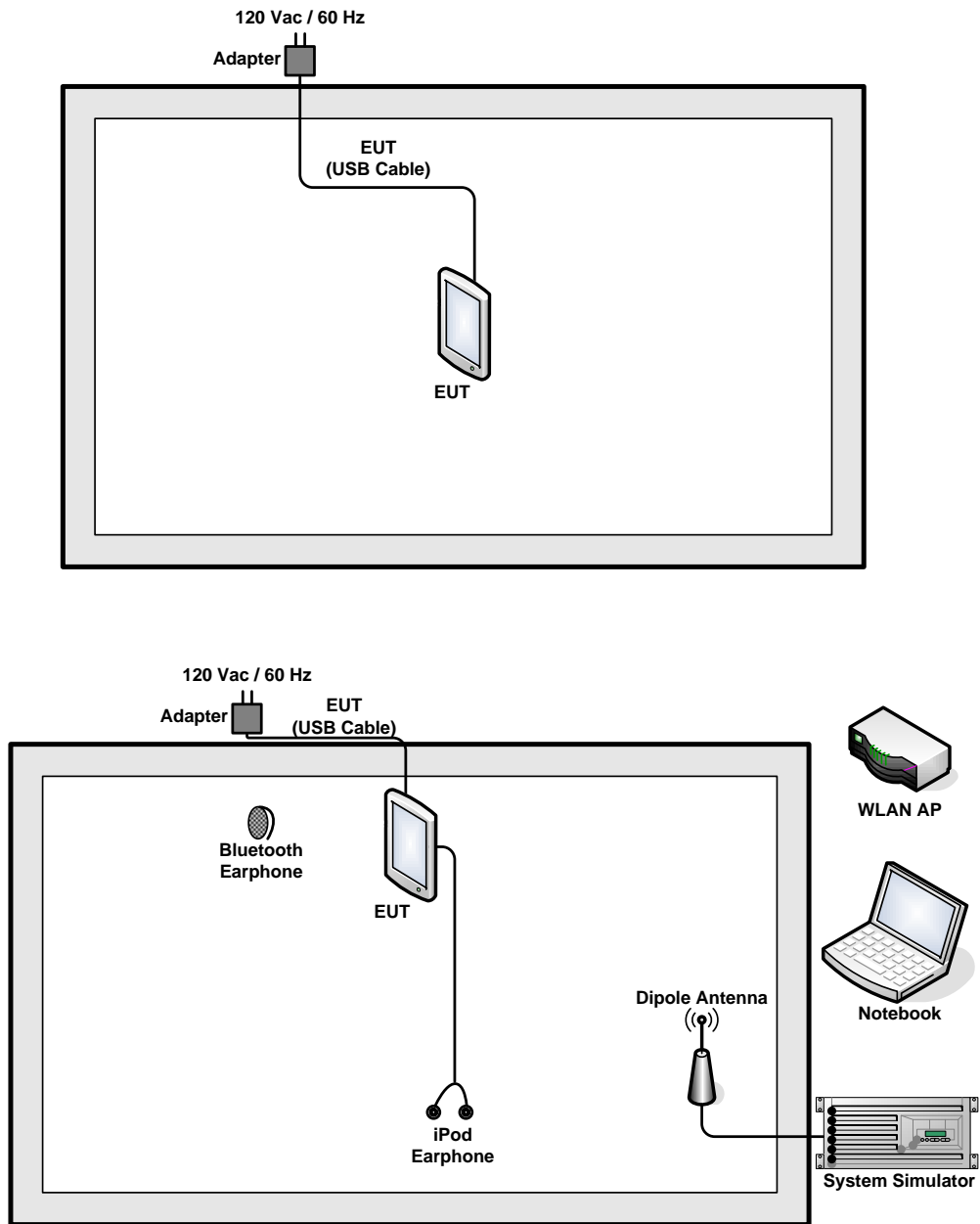
Ch. #		Band 1 : 5150-5250 MHz	Band 2 : 5250-5350 MHz	Band 3 : 5470-5600 MHz and 5650-5725 MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

Ch. #		Band 1 : 5150-5250 MHz	Band 2 : 5250-5350 MHz	Band 3 : 5470-5600 MHz and 5650-5725 MHz
		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		-	-	144

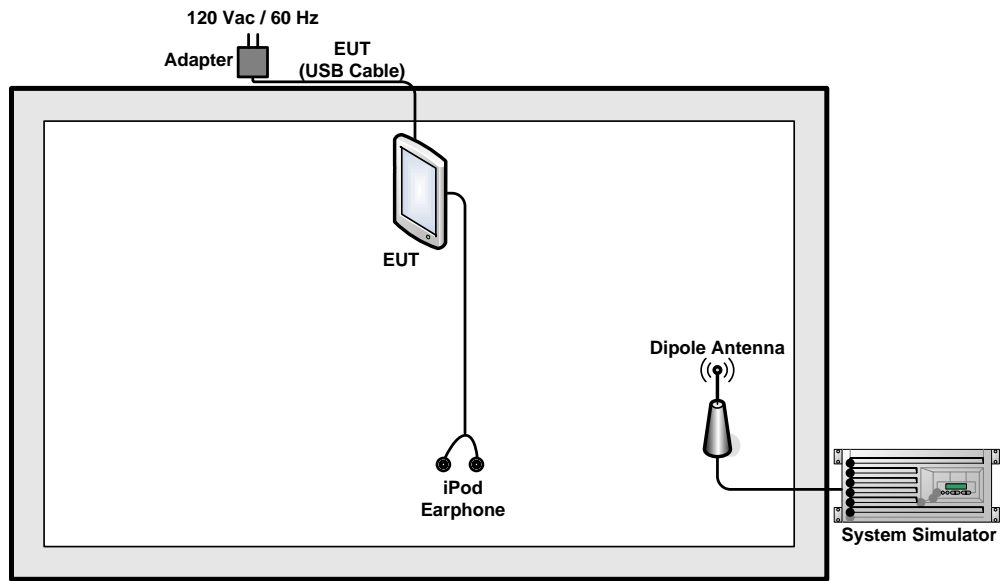
Ch. #		Band 1 : 5150-5250 MHz	Band 2 : 5250-5350 MHz	Band 3 : 5470-5600 MHz and 5650-5725 MHz
		802.11n HT40	802.11n HT40	802.11n HT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle		-	-	142

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<Fig. 1>



<Fig. 2>

2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	iPod Earphone	Apple	N/A	FCC DoC	Unshielded, 1.0 m	N/A
6.	Adapter	Foxlink	PE98ED	Verification	N/A	N/A

2.6 EUT Operation Test Setup

For WLAN function, programmed RF utility, "ADB" installed in notebook and make the EUT provides functions like channel selection and power level for continuous transmitting and receiving signals.

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 and attenuator factor 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 and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10dB attenuator.

$$\begin{aligned} \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\ &= 4.2 + 10 = 14.2 \text{ (dB)} \end{aligned}$$

3 Test Result

3.1 26dB Bandwidth Measurement

3.1.1 Description of 26dB Bandwidth

There is no restriction limits for bandwidth. The maximum conducted output power can be limited by measured emission bandwidth (B).

For the band 5150-5250 MHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW (17dBm) or $4 \text{ dBm} + 10\log B$.

For the bands 5250-5350 MHz, 5470-5600 MHz, and 5650-5725 MHz, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or $11 \text{ dBm} + 10\log B$.

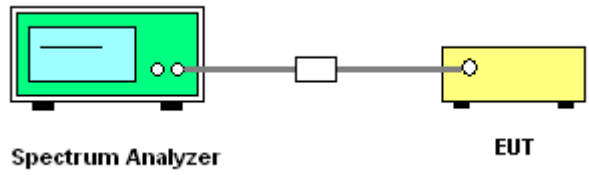
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03.
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. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 26dB Bandwidth

Test Band :	5GHz band 1,2,3	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)
					Ant. 1	Ant. 2	Ant. 1	Ant. 2		
11a	6Mbps	2	36	5180	-	-	21.50	20.85	-	23.01
11a	6Mbps	2	44	5220			21.80	20.70		23.01
11a	6Mbps	2	48	5240			21.30	20.90		23.01
HT20	MCS0	2	36	5180			21.35	21.55		23.01
HT20	MCS0	2	44	5220			21.95	21.45		23.01
HT20	MCS0	2	48	5240			21.50	22.15		23.01
HT40	MCS0	2	38	5190			42.39	42.66		23.01
HT40	MCS0	2	46	5230			42.57	43.02		23.01

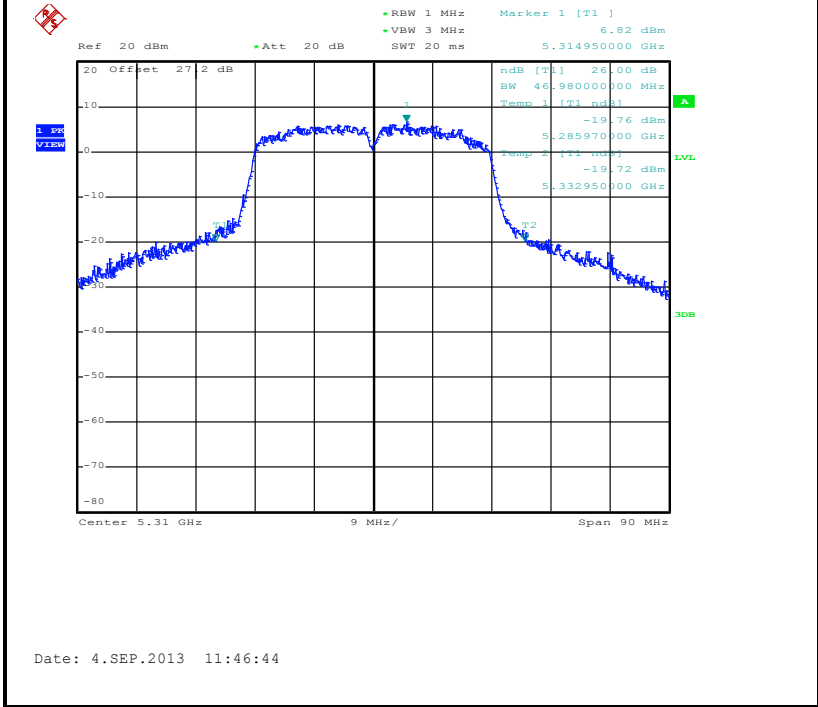
Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)
					Ant. 1	Ant. 2	Ant. 1	Ant. 2		
11a	6Mbps	2	52	5260	-	-	22.05	20.85	-	23.98
11a	6Mbps	2	60	5300			23.50	20.65		23.98
11a	6Mbps	2	64	5320			26.80	21.00		23.98
HT20	MCS0	2	52	5260			23.05	21.40		23.98
HT20	MCS0	2	60	5300			23.85	21.75		23.98
HT20	MCS0	2	64	5320			23.75	21.60		23.98
HT40	MCS0	2	54	5270			44.55	43.02		23.98
HT40	MCS0	2	62	5310			46.98	42.48		23.98

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)		26dB Bandwidth (MHz)		IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)
					Ant. 1	Ant. 2	Ant. 1	Ant. 2		
11a	6Mbps	2	100	5500	-	-	21.00	20.65	-	23.98
11a	6Mbps	2	116	5580			21.50	20.65		23.98
11a	6Mbps	2	140	5700			21.10	20.70		23.98
HT20	MCS0	2	100	5500			21.90	21.70		23.98
HT20	MCS0	2	116	5580			21.85	21.80		23.98
HT20	MCS0	2	140	5700			21.80	21.10		23.98
HT40	MCS0	2	102	5510			43.92	43.29		23.98
HT40	MCS0	2	110	5550			43.38	42.75		23.98
HT40	MCS0	2	134	5670	43.74	43.29	23.98			

Test Band :	Straddle Channel	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	Channel	Freq. (MHz)	99% Bandwidth (MHz)		Emission Bandwidth (MHz)		IC 99% Bandwidth EIRP Limit (dBm)	FCC Emission Bandwidth Power Limit (dBm)	
					Ant. 1	Ant. 2	Ant. 1	Ant. 2			
11a	6Mbps	2	144	5720	-		20.75	20.60	-	-	
				NII -2e			15.45	15.5		22.89	
				DTS			5.30	5.10		24.08	
HT20	MCS0	2	144	5720			22.05	21.65		-	-
				NII -2e			16.10	16.00		23.04	
				DTS			5.95	5.65		24.52	
HT40	MCS0	2	142	5710			44.73	42.84		-	-
				NII -2e			37.41	36.69		23.98	
				DTS			7.32	6.15		24.89	

Maximum 26dB Bandwidth



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the band 5150-5250 MHz, the maximum conducted output power shall not exceed the lesser of 50 mW (17dBm) or $4 \text{ dBm} + 10\log B$, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the bands 5250-5350 MHz and 5470-5600 MHz and 5650-5725 MHz, bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or $11 \text{ dBm} + 10\log B$, where B is the 26 dB emissions bandwidth in 1-MHz. If transmitting antenna directional gain is greater than 6 dBi, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

U-NII limits were applied for straddle channel in accordance with FCC KDB 644545 D01.

3.2.2 Measuring Instruments

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

3.2.3 Test Procedures

For normal channel, the testing follows Method PM of FCC KDB 789033 D01 General UNII Test Procedures v01r03. Method PM (Measurement using an RF average power meter):

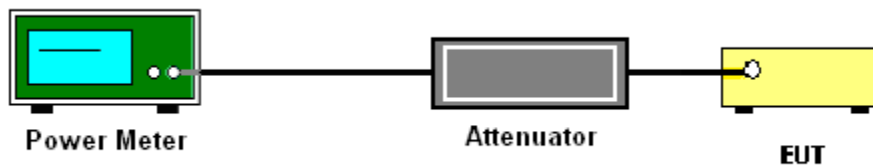
1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit continuously with a consistent duty cycle at its maximum power control level.
3. Measure the average power of the transmitter, and the average power is corrected with duty factor, $10 \log(1/x)$, where x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

For Straddle Channel, U-NII procedures and limits were applied for operations in the frequency band in accordance with FCC KDB 644545 D01.

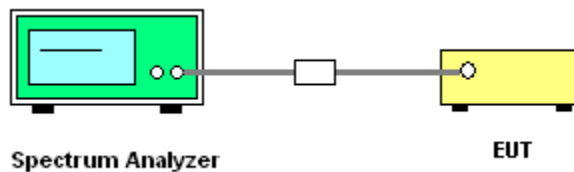
Compute power by integrating the spectrum across the 26dB occupied bandwidth of the signal using the instrument's band power measurement function.

3.2.4 Test Setup

For normal channel:



For straddle channel:



3.2.5 Test Result of Maximum Conducted Output Power

Test Band :	5GHz band 1	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Power Limit (dBm)	DG (dBi)	-	Pass /Fail
					Ant. 1	Ant. 2	Sum Power				
11a	6Mbps	2	36	5180	12.7	9.5	14.4	23.01	3.46	-	Pass
11a	6Mbps	2	44	5220	12.9	9.5	14.6	23.01	3.46		Pass
11a	6Mbps	2	48	5240	12.9	9.5	14.5	23.01	3.46		Pass
HT20	MCS0	2	36	5180	12.6	9.4	14.3	23.01	3.46		Pass
HT20	MCS0	2	44	5220	12.7	9.5	14.4	23.01	3.46		Pass
HT20	MCS0	2	48	5240	12.5	9.4	14.2	23.01	3.46		Pass
HT40	MCS0	2	38	5190	12.6	9.5	14.3	23.01	3.46		Pass
HT40	MCS0	2	46	5230	13.0	9.5	14.6	23.01	3.46		Pass

Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant. 2.
2. For the band 5150-5250 MHz, the maximum average conducted output power shall not exceed lesser of 50 mW (17dBm) or 4 dBm + 10log (B), where B is 26dB BW for FCC.

Test Band :	5GHz band 2	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Power Limit (dBm)	DG (dBi)	-	Pass /Fail
					Ant. 1	Ant. 2	Sum Power				
11a	6Mbps	2	52	5260	13.0	9.5	14.6	23.98	3.64		Pass
11a	6Mbps	2	60	5300	13.0	9.5	14.6	23.98	3.64		Pass
11a	6Mbps	2	64	5320	12.8	9.5	14.5	23.98	3.64		Pass
HT20	MCS0	2	52	5260	12.6	9.4	14.3	23.98	3.64		Pass
HT20	MCS0	2	60	5300	12.8	9.5	14.5	23.98	3.64		Pass
HT20	MCS0	2	64	5320	12.7	9.5	14.4	23.98	3.64		Pass
HT40	MCS0	2	54	5270	12.9	9.5	14.5	23.98	3.64		Pass
HT40	MCS0	2	62	5310	11.5	8.5	13.3	23.98	3.64		Pass

Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant. 2.
2. For the band 5250-5350 MHz, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log (B), where B is 26dB BW for FCC.

Test Band :	5GHz band 3	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Power Limit (dBm)	DG (dBi)	-	Pass /Fail
					Ant. 1	Ant. 2	Sum Power				
11a	6Mbps	2	100	5500	12.6	10.0	14.5	23.98	2.88	-	Pass
11a	6Mbps	2	116	5580	13.0	10.0	14.8	23.98	2.88		Pass
11a	6Mbps	2	140	5700	12.9	10.0	14.7	23.98	2.88		Pass
HT20	MCS0	2	100	5500	12.5	10.0	14.4	23.98	2.88		Pass
HT20	MCS0	2	116	5580	12.9	9.5	14.5	23.98	2.88		Pass
HT20	MCS0	2	140	5700	12.9	10.0	14.7	23.98	2.88		Pass
HT40	MCS0	2	102	5510	9.1	7.1	11.2	23.98	2.88		Pass
HT40	MCS0	2	110	5550	12.8	10.0	14.6	23.98	2.88		Pass
HT40	MCS0	2	134	5670	12.6	10.0	14.5	23.98	2.88		Pass

Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant. 2.
2. For the 5470-5600MHz and 5650-5725MHz bands, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log (B), where B is 26dB BW for FCC.

Test Band :	Straddle Channel	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Conducted Power (dBm)			FCC Power Limit (dBm)	DG (dBi)	-	Pass /Fail
					Ant. 1	Ant. 2	Sum Power				
11a	6Mbps	2	144	5720	12.9	9.9	14.6	-	2.88	-	-
				NII -2e	12.1	9.0	13.8	22.89	2.88		Pass
				DTS	5.2	2.4	7.0	24.08	2.88		Pass
HT20	MCS0	2	144	5720	12.7	10.0	14.5	-	2.88	-	-
				NII -2e	11.8	9.0	13.6	23.04	2.88		Pass
				DTS	5.2	3.0	7.3	24.52	2.88		Pass
HT40	MCS0	2	142	5710	13.0	9.8	14.7	-	2.88	-	-
				NII -2e	12.8	9.6	14.5	23.98	2.88		Pass
				DTS	-0.8	-4.2	0.8	24.89	2.88		Pass

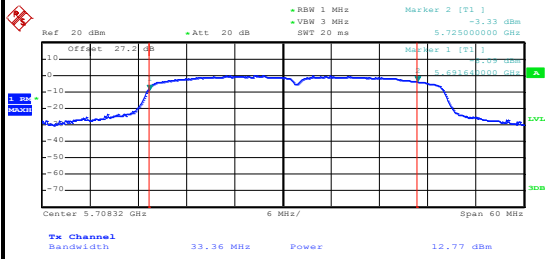
Note:

1. Sum Power is a calculated result from sum of the power Ant. 1 and Ant. 2.
2. For lower band falls into 5470-5725 MHz, the maximum conducted output power shall not exceed the lesser of 250 mW (24dBm) or 11 dBm + 10log (B), where B is 26dB BW for FCC.
3. For upper band falls into 5725-5825 MHz, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 1 W (30dBm) or 17 dBm + 10log (B), where B is 26dB BW for FCC.

Maximum Straddle Channel Power

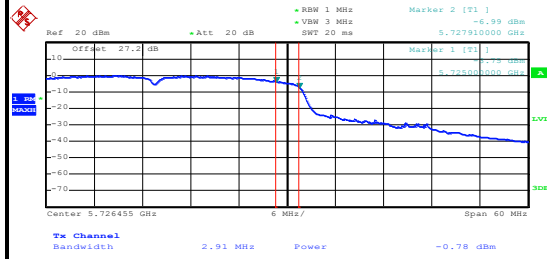
Ant. 1

NII-2e Band



Date: 31.AUG.2013 10:14:16

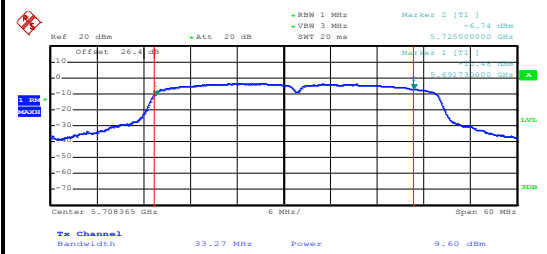
DTS Band



Date: 31.AUG.2013 10:16:04

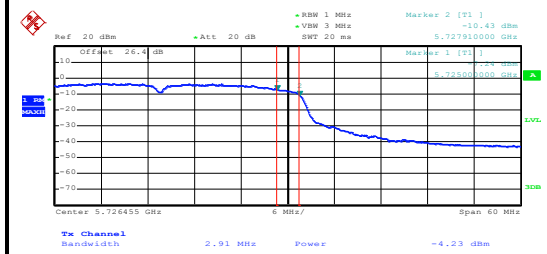
Ant. 2

NII-2e Band



Date: 31.AUG.2013 10:10:33

DTS Band



Date: 31.AUG.2013 10:11:31

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

For the band 5150-5250 MHz, peak power spectral density shall not exceed 4 dBm in any 1-MHz.

For the bands 5250-5350 MHz and 5470-5600 MHz and 5650-5725 MHz, peak power spectral density shall not exceed 11 dBm in any 1-MHz.

For Straddle Channel, U-NII procedures and limits were applied for operations in the frequency band in accordance with FCC KDB 644545 D01.

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03.

Section F) Peak power spectral density (PPSD).

Note: Though the rule refers to “peak power spectral density”, the intent is to measure the maximum value of the time average of the power spectral density measured during a period of continuous transmission.

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 D01 General UNII Test Procedures v01r03.
 - 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

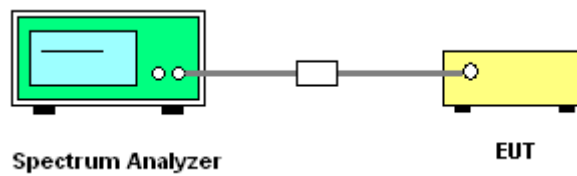
record it.

4. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02.

Method (1): Measure and sum the spectra across the outputs.

The total final Power Spectral Density is from a device with 2 transmitter outputs. The spectrum measurements of the individual outputs are all performed with the same span and number of points, the spectrum value in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 to obtain the value for the first frequency bin of the summed spectrum.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Test Band :	5GHz band 1	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm)	DG (dBi)	EIRP PSD Limit (dBm)	Pass /Fail
					Ant. 1	Ant. 2	Sum PSD				
11a	6Mbps	2	36	5180			2.54	3.53	6.47	Pass	
11a	6Mbps	2	44	5220			2.72	3.53	6.47	Pass	
11a	6Mbps	2	48	5240			2.38	3.53	6.47	Pass	
HT20	MCS0	2	36	5180			2.02	3.53	6.47	Pass	
HT20	MCS0	2	44	5220			1.95	3.53	6.47	Pass	
HT20	MCS0	2	48	5240			1.70	3.53	6.47	Pass	
HT40	MCS0	2	38	5190			-0.24	3.53	6.47	Pass	
HT40	MCS0	2	46	5230			-1.13	3.53	6.47	Pass	

Note: Sum PSD is a bin-by-bin combined result of Ant. 1 and Ant. 2.

Test Band :	5GHz band 2	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm)	DG (dBi)	EIRP PSD Limit (dBm)	Pass /Fail
					Ant. 1	Ant. 2	Sum PSD				
11a	6Mbps	2	52	5260			2.33	10.35	6.65	Pass	
11a	6Mbps	2	60	5300			2.48	10.35	6.65	Pass	
11a	6Mbps	2	64	5320			2.81	10.35	6.65	Pass	
HT20	MCS0	2	52	5260			2.15	10.35	6.65	Pass	
HT20	MCS0	2	60	5300			2.26	10.35	6.65	Pass	
HT20	MCS0	2	64	5320			2.22	10.35	6.65	Pass	
HT40	MCS0	2	54	5270			-1.46	10.35	6.65	Pass	
HT40	MCS0	2	62	5310			-0.57	10.35	6.65	Pass	

Note: Sum PSD is a bin-by-bin combined result of Ant. 1 and Ant. 2.

Test Band :	5GHz band 3	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

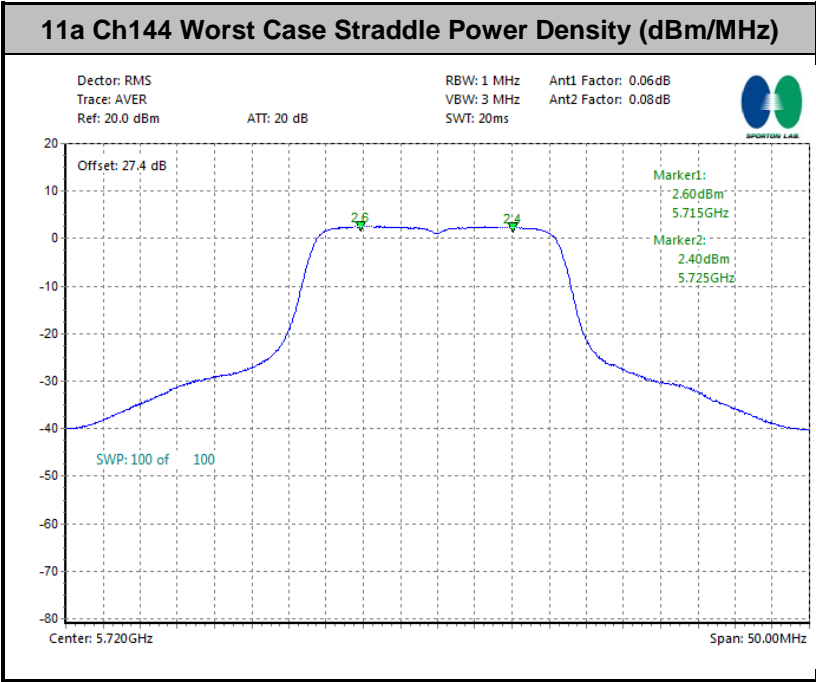
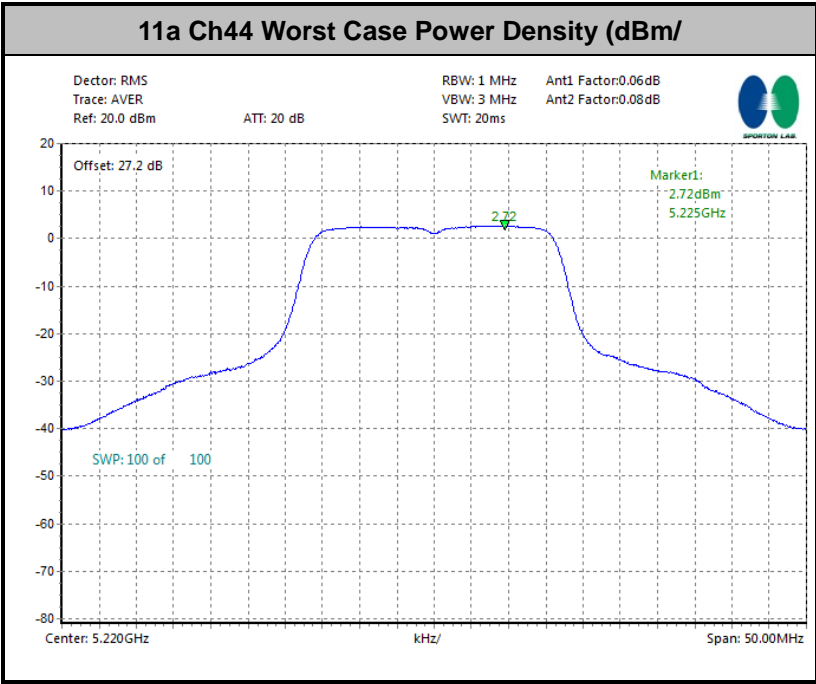
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm)	DG (dBi)	EIRP PSD Limit (dBm)	Pass /Fail
					Ant. 1	Ant. 2	Sum PSD				
11a	6Mbps	2	100	5500	-		2.76	11.00	5.89	Pass	
11a	6Mbps	2	116	5580			3.36	11.00	5.89	Pass	
11a	6Mbps	2	140	5700			2.95	11.00	5.89	Pass	
HT20	MCS0	2	100	5500			1.97	11.00	5.89	Pass	
HT20	MCS0	2	116	5580			0.49	11.00	5.89	Pass	
HT20	MCS0	2	140	5700			2.29	11.00	5.89	Pass	
HT40	MCS0	2	102	5510			-0.49	11.00	5.89	Pass	
HT40	MCS0	2	110	5550			-1.75	11.00	5.89	Pass	
HT40	MCS0	2	134	5670			0.44	11.00	5.89	Pass	

Note: Sum PSD is a bin-by-bin combined result of Ant. 1 and Ant. 2.

Test Band :	Straddle Channel	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/MHz)			Average PSD Limit (dBm)	DG (dBi)	EIRP PSD Limit (dBm)	Pass /Fail
					Ant. 1	Ant. 2	Sum PSD				
11a	6Mbps	2	144	NII -2e	-		2.60	11.00	5.89	Pass	
				DTS			2.40	11.00	5.89	Pass	
HT20	MCS0	2	144	NII -2e			1.90	11.00	5.89	Pass	
				DTS			1.76	11.00	5.89	Pass	
HT40	MCS0	2	142	NII -2e			0.27	11.00	5.89	Pass	
				DTS			-3.02	11.00	5.89	Pass	

Note: Sum PSD is a bin-by-bin combined result of Ant. 1 and Ant. 2.



3.4 Peak Excursion Ratio Measurement

3.4.1 Limit of Peak Excursion Ratio

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the maximum conducted output power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

3.4.2 Measuring Instruments

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

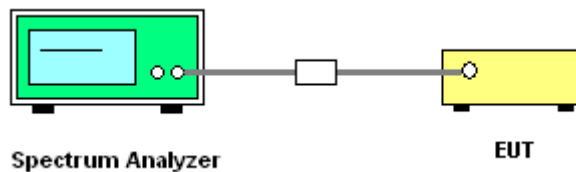
3.4.3 Test Procedures

The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03.

Section G) Peak excursion measurement

1. The transmitter output is connected to the spectrum analyzer.
2. Set the spectrum analyzer span to view the entire emission bandwidth.
3. Find the maximum of the peak-max-hold spectrum.
 - *Set RBW = 1MHz.
 - *Set VBW \geq 3MHz.
 - *Detector = peak.
 - *Trace mode = max-hold.
 - *Allow the sweeps to continue until the trace stabilizes.
 - *Use the peak search function to find the peak of the spectrum.
4. Use the procedure found under section 3.3 to measure the PPSD.
5. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD.

3.4.4 Test Setup



3.4.5 Test Result of Peak Excursion Ratio

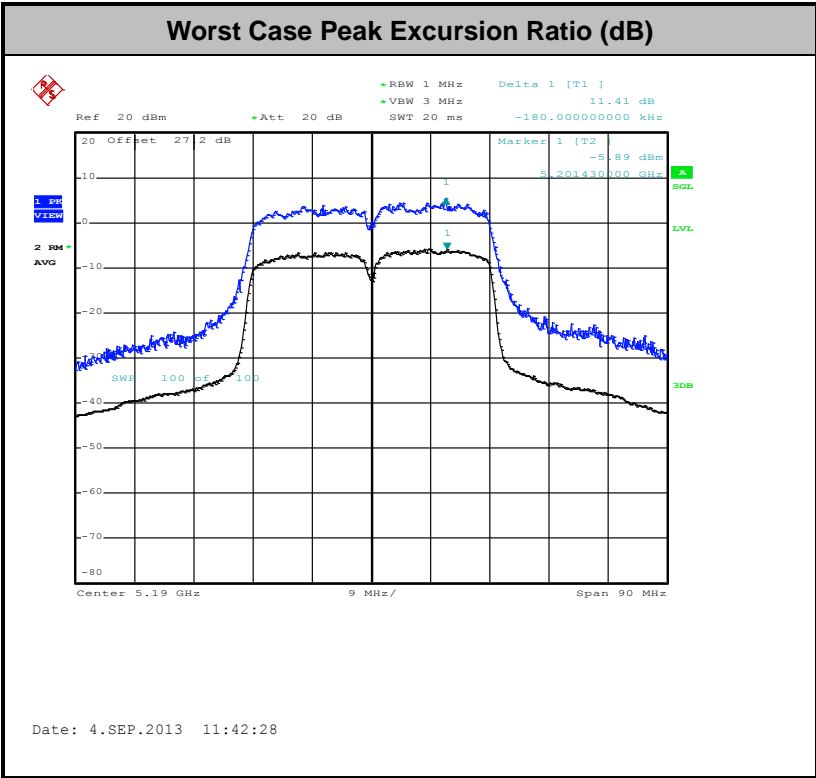
Test Band :	5GHz band 1,2,3	Temperature :	24~26°C
Test Engineer :	Reece Li	Relative Humidity :	45~49%

Mod.	N _{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	2	36	5180	8.98	8.97	9.89	9.14	-	13	Pass
HT20	2	36	5180	9.47	9.56	9.35	9.74	-	13	Pass
HT40	2	38	5190	10.42	9.26	9.72	10.52	-	13	Pass

Mod.	N _{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	2	52	5260	9.19	8.97	9.73	9.20	-	13	Pass
HT20	2	52	5260	9.65	9.66	9.43	10.07	-	13	Pass
HT40	2	54	5270	10.11	9.25	9.30	9.68	-	13	Pass

Mod.	N _{TX}	Channel	Freq. (MHz)	Peak Excursion Ratio (dB)					Max. Limits (dB)	Pass/Fail
				BPSK	QPSK	16QAM	64QAM	256QAM		
11a	2	100	5500	9.25	8.75	9.75	8.76	-	13	Pass
HT20	2	100	5500	9.06	9.58	8.94	9.82	-	13	Pass
HT40	2	102	5510	9.91	9.28	9.36	9.65	-	13	Pass

Note: All modulation measured based on the minimum data rate setting.



Note: Peak Excursion Ratio (dB) = Peak – (Average + Duty Cycle Offset)

3.5 Unwanted Emissions 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.

3.5.1 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 5500-5580 MHz and 5660-5720 MHz band: all emissions outside of the 5470-5600 MHz and 5650-5725MHz band shall not exceed an EIRP of -27 dBm/MHz .

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

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

EIRP (dBm)	Field Strength at 3m (dBμV/m)
-17	78.3
- 27	68.3

(3) KDB789033 v01r03 H)2)c(i) 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.

3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

1. The testing follows FCC KDB 789033 D01 General UNII Test Procedures v01r03.

Section H) 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

- The setting follows the H) 5) of FCC KDB 789033.
- RBW = 1 MHz
- VBW \geq 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold

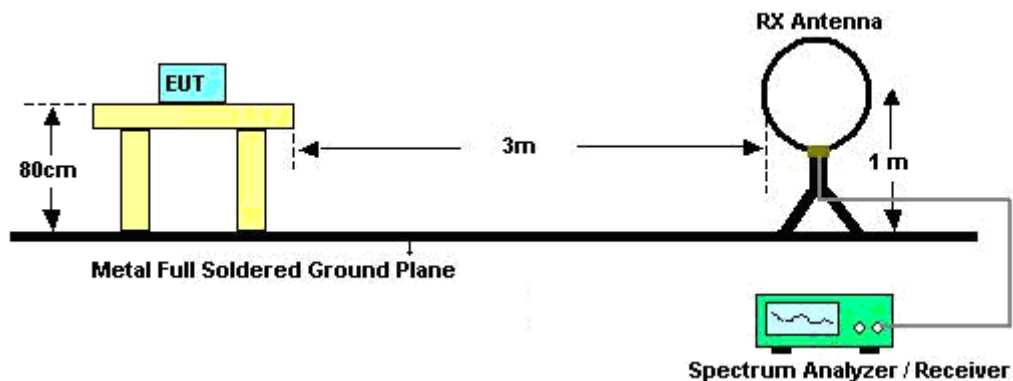
(3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

- The setting follows H) 6) of FCC KDB 789033.
- 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.
- For 802.11a mode, the VBW is set 10Hz; for 802.11n HT20 mode is set to 10Hz for Ant. 1 and for 802.11n HT20 mode is set to 1kHz for Ant. 2; for 802.11n HT40 mode set to 3kHz.

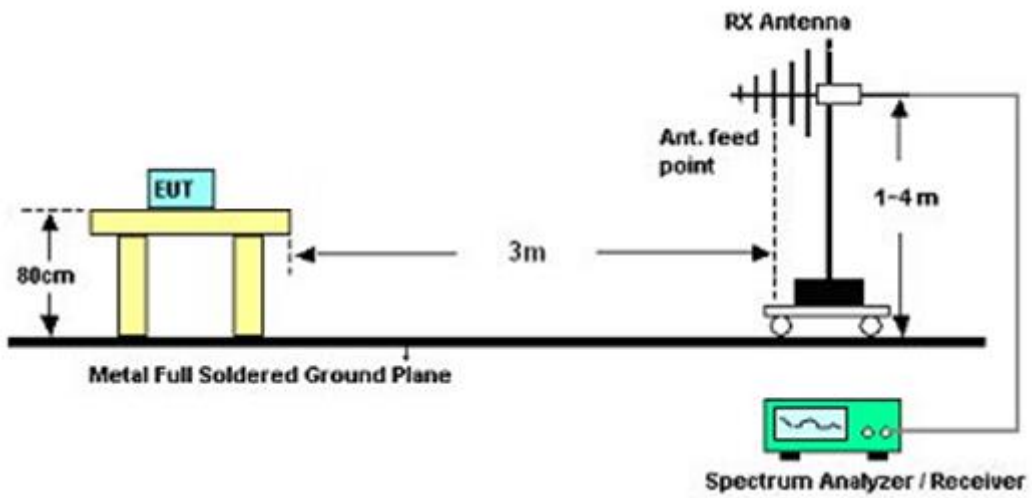
2. The EUT was placed on a rotatable table top 0.8 meter above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters 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.

3.5.4 Test Setup

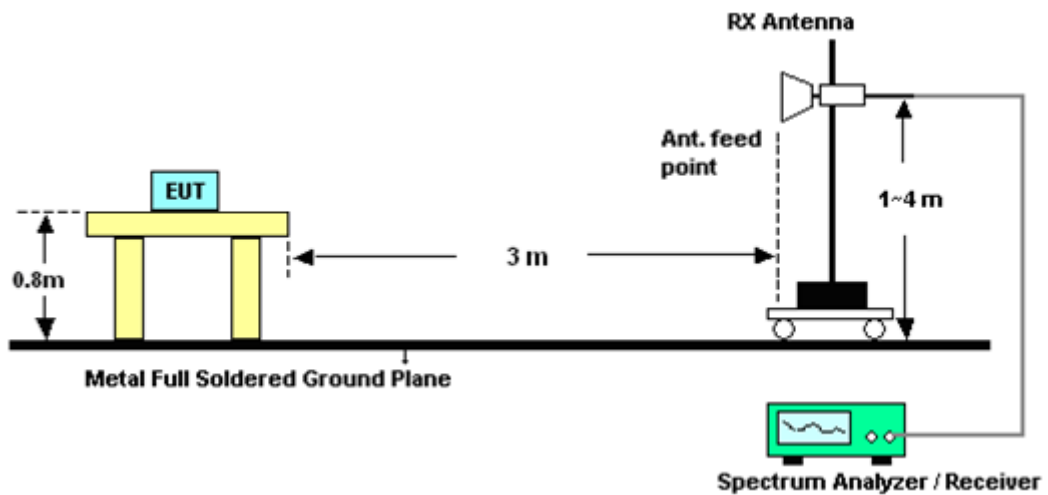
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 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.

3.5.6 Test Result of Radiated Band Edges

MIMO<Ant. 1+ 2>

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5116.7	52.17	-21.83	74	44.14	34.39	8.6	34.96	104	209	Peak
5148.05	41.51	-12.49	54	33.38	34.42	8.65	34.94	104	209	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.55	56.57	-17.43	74	48.68	34.18	8.65	34.94	110	334	Peak
5148.05	44.75	-9.25	54	36.86	34.18	8.65	34.94	110	334	Average

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5143.1	52.47	-21.53	74	44.35	34.42	8.65	34.95	114	343	Peak
5148.05	41.23	-12.77	54	33.1	34.42	8.65	34.94	114	343	Average
5419.96	53.28	-20.72	74	44.73	34.57	8.81	34.83	114	343	Peak
5460	41.38	-12.62	54	32.8	34.58	8.81	34.81	114	343	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5147.75	53.59	-20.41	74	45.7	34.18	8.65	34.94	109	356	Peak
5147.9	43.62	-10.38	54	35.73	34.18	8.65	34.94	109	356	Average
5366.28	53.38	-20.62	74	45.1	34.33	8.8	34.85	109	356	Peak
5407.97	41.81	-12.19	54	33.43	34.4	8.81	34.83	109	356	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5065.85	53.08	-20.92	74	45.27	34.35	8.44	34.98	113	352	Peak
5147.9	41.06	-12.94	54	32.93	34.42	8.65	34.94	113	352	Average
5359.57	53.23	-20.77	74	44.74	34.54	8.8	34.85	113	352	Peak
5407.86	41.44	-12.56	54	32.9	34.56	8.81	34.83	113	352	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5147.75	55.7	-18.3	74	47.81	34.18	8.65	34.94	104	300	Peak
5147.9	45.51	-8.49	54	37.62	34.18	8.65	34.94	104	300	Average
5407.31	54.62	-19.38	74	46.24	34.4	8.81	34.83	104	300	Peak
5407.86	44.07	-9.93	54	35.69	34.4	8.81	34.83	104	300	Average

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5363.97	53.32	-20.68	74	44.82	34.55	8.8	34.85	100	187	Peak
5407.86	41.8	-12.2	54	33.26	34.56	8.81	34.83	100	187	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5351.43	59.38	-14.62	74	51.13	34.3	8.8	34.85	114	296	Peak
5407.97	45.16	-8.84	54	36.78	34.4	8.81	34.83	114	296	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5458.96	52.81	-21.19	74	44.23	34.58	8.81	34.81	100	22	Peak
5459.92	42.71	-11.29	54	34.13	34.58	8.81	34.81	100	22	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5469.68	55.28	-18.72	74	46.75	34.53	8.81	34.81	120	300	Peak
5459.92	47.28	-6.72	54	38.78	34.5	8.81	34.81	120	300	Average

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5727.8	54.05	-19.95	74	45.18	34.69	9.07	34.89	101	302	Peak
5745.96	41.67	-12.33	54	32.77	34.7	9.1	34.9	101	302	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725.4	59.78	-14.22	74	50.91	34.69	9.07	34.89	109	354	Peak
5725	45.18	-8.82	54	36.31	34.69	9.07	34.89	109	354	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5026.25	51.99	-22.01	74	44.27	34.33	8.38	34.99	102	209	Peak
5147.75	41.78	-12.22	54	33.65	34.42	8.65	34.94	102	209	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5148.5	55.85	-18.15	74	47.96	34.18	8.65	34.94	108	320	Peak
5147.9	46.18	-7.82	54	38.29	34.18	8.65	34.94	108	320	Average

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5127.5	52.11	-21.89	74	44.05	34.41	8.6	34.95	103	351	Peak
5148.05	41.51	-12.49	54	33.38	34.42	8.65	34.94	103	351	Average
5361.33	52.88	-21.12	74	44.38	34.55	8.8	34.85	103	351	Peak
5355.83	41.67	-12.33	54	33.18	34.54	8.8	34.85	103	351	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5147.75	56.14	-17.86	74	48.25	34.18	8.65	34.94	109	323	Peak
5148.05	48.66	-5.34	54	40.77	34.18	8.65	34.94	109	323	Average
5433.93	53.93	-20.07	74	45.47	34.47	8.81	34.82	109	323	Peak
5433.93	43.92	-10.08	54	35.46	34.47	8.81	34.82	109	323	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5088.05	52.48	-21.52	74	44.59	34.37	8.49	34.97	114	248	Peak
5147.9	41.33	-12.67	54	33.2	34.42	8.65	34.94	114	248	Average
5377.28	53.14	-20.86	74	44.63	34.55	8.8	34.84	114	248	Peak
5358.03	41.75	-12.25	54	33.26	34.54	8.8	34.85	114	248	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5148.35	56.39	-17.61	74	48.5	34.18	8.65	34.94	108	322	Peak
5147.9	48.76	-5.24	54	40.87	34.18	8.65	34.94	108	322	Average
5459.89	53.63	-20.37	74	45.13	34.5	8.81	34.81	108	322	Peak
5460	43.35	-10.65	54	34.85	34.5	8.81	34.81	108	322	Average

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5441.96	53.27	-20.73	74	44.71	34.57	8.81	34.82	114	244	Peak
5351.43	42.02	-11.98	54	33.53	34.54	8.8	34.85	114	244	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5351.43	54.71	-19.29	74	46.46	34.3	8.8	34.85	108	351	Peak
5407.75	44.41	-9.59	54	36.03	34.4	8.81	34.83	108	351	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5373.04	53.18	-20.82	74	44.68	34.55	8.8	34.85	119	342	Peak
5433.84	43.03	-10.97	54	34.47	34.57	8.81	34.82	119	342	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5408.08	56.62	-17.38	74	48.24	34.4	8.81	34.83	110	298	Peak
5459.92	47.71	-6.29	54	39.21	34.5	8.81	34.81	110	298	Average

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	56.25	-17.75	74	47.38	34.69	9.07	34.89	106	345	Peak
5725	43.53	-10.47	54	34.66	34.69	9.07	34.89	106	345	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	60.44	-13.56	74	51.57	34.69	9.07	34.89	118	322	Peak
5725	45.93	-8.07	54	37.06	34.69	9.07	34.89	118	322	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	38	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5149.55	56.9	-17.1	74	48.77	34.42	8.65	34.94	104	210	Peak
5150	45.39	-8.61	54	37.26	34.42	8.65	34.94	104	210	Average
5425.02	52.64	-21.36	74	44.08	34.57	8.81	34.82	104	210	Peak
5382.56	41.89	-12.11	54	33.37	34.55	8.81	34.84	104	210	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5150	65.37	-8.63	74	57.48	34.18	8.65	34.94	108	324	Peak
5150	52.19	-1.81	54	44.3	34.18	8.65	34.94	108	324	Average
5459.89	54.15	-19.85	74	45.65	34.5	8.81	34.81	108	324	Peak
5459.89	45.52	-8.48	54	37.02	34.5	8.81	34.81	108	324	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	46	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5108	52.37	-21.63	74	44.39	34.39	8.55	34.96	103	209	Peak
5148.65	41.91	-12.09	54	33.78	34.42	8.65	34.94	103	209	Average
5419.08	52.46	-21.54	74	43.91	34.57	8.81	34.83	103	209	Peak
5374.75	42	-12	54	33.49	34.55	8.8	34.84	103	209	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5147.9	53.58	-20.42	74	45.69	34.18	8.65	34.94	109	354	Peak
5148.05	45.3	-8.7	54	37.41	34.18	8.65	34.94	109	354	Average
5371.89	54.04	-19.96	74	45.76	34.33	8.8	34.85	109	354	Peak
5407.86	43.99	-10.01	54	35.61	34.4	8.81	34.83	109	354	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	54	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5129.45	52.06	-21.94	74	44	34.41	8.6	34.95	125	343	Peak
5147.6	41.33	-12.67	54	33.2	34.42	8.65	34.94	125	343	Average
5375.52	53.73	-20.27	74	45.22	34.55	8.8	34.84	125	343	Peak
5352.75	42.02	-11.98	54	33.53	34.54	8.8	34.85	125	343	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5148.35	55.51	-18.49	74	47.62	34.18	8.65	34.94	115	299	Peak
5148.05	46.74	-7.26	54	38.85	34.18	8.65	34.94	115	299	Average
5356.05	54.88	-19.12	74	46.63	34.3	8.8	34.85	115	299	Peak
5407.97	45.99	-8.01	54	37.61	34.4	8.81	34.83	115	299	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	62	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5127.35	56.34	-17.66	74	48.28	34.41	8.6	34.95	100	211	Peak
5150	44.98	-9.02	54	36.85	34.42	8.65	34.94	100	211	Average
5353.63	56.57	-17.43	74	48.08	34.54	8.8	34.85	100	211	Peak
5350.66	45.7	-8.3	54	37.21	34.54	8.8	34.85	100	211	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5148.05	55.75	-18.25	74	47.86	34.18	8.65	34.94	103	270	Peak
5147.9	47.91	-6.09	54	40.02	34.18	8.65	34.94	103	270	Average
5350.33	61.46	-12.54	74	53.21	34.3	8.8	34.85	103	270	Peak
5350	51.71	-2.29	54	43.46	34.3	8.8	34.85	103	270	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	102	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5469.84	55.47	-18.53	74	46.88	34.59	8.81	34.81	100	356	Peak
5469.36	44.37	-9.63	54	35.78	34.59	8.81	34.81	100	356	Average
5746.76	53.94	-20.06	74	45.04	34.7	9.1	34.9	100	356	Peak
5750.84	41.94	-12.06	54	33.04	34.7	9.1	34.9	100	356	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5469.84	63.66	-10.34	74	55.13	34.53	8.81	34.81	110	298	Peak
5469.84	51.39	-2.61	54	42.86	34.53	8.81	34.81	110	298	Average
5743	53.33	-20.67	74	44.43	34.7	9.1	34.9	110	298	Peak
5749	41.99	-12.01	54	33.09	34.7	9.1	34.9	110	298	Average

MIMO<Ant. 1+ 2>

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	134	Relative Humidity :	51~53%
Test Engineer :	David Ke		

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5410.96	53.58	-20.42	74	45.04	34.56	8.81	34.83	107	66	Peak
5459.76	42.82	-11.18	54	34.24	34.58	8.81	34.81	107	66	Average
5744.36	52.94	-21.06	74	44.04	34.7	9.1	34.9	107	66	Peak
5744.44	41.98	-12.02	54	33.08	34.7	9.1	34.9	107	66	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5360.24	53.81	-20.19	74	45.56	34.3	8.8	34.85	109	351	Peak
5408.08	43.41	-10.59	54	35.03	34.4	8.81	34.83	109	351	Average
5731.72	53.98	-20.02	74	45.12	34.69	9.07	34.9	109	351	Peak
5727.64	42.08	-11.92	54	33.21	34.69	9.07	34.89	109	351	Average

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

MIMO <Ant. 1+2>

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5182 MHz is fundamental signal which can be ignored. 10359 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5182	92.01	-	-	83.78	34.45	8.71	34.93	104	209	Average
5182	105.69	-	-	97.46	34.45	8.71	34.93	104	209	Peak
10359	45.39	-28.61	74	53.15	37.69	12	57.45	100	0	Peak
15540	48.69	-25.31	74	49.8	40.33	17.13	58.57	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5182 MHz is fundamental signal which can be ignored.. 10359 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5182	98.86	-	-	90.93	34.15	8.71	34.93	110	334	Average
5182	111.07	-	-	103.14	34.15	8.71	34.93	110	334	Peak
10359	43	-31	74	51.3	37.15	12	57.45	100	0	Peak
15540	47.58	-26.42	74	49.52	39.5	17.13	58.57	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5222 MHz is fundamental signal which can be ignored. 10440 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5222	90.25	-	-	81.92	34.47	8.77	34.91	102	332	Average
5222	103.02	-	-	94.69	34.47	8.77	34.91	102	332	Peak
10440	44.12	-29.88	74	51.76	37.75	12.04	57.43	100	0	Peak
15660	45.14	-28.86	74	45.76	40.8	17.06	58.48	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5218 MHz is fundamental signal which can be ignored. 10440 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5218	98.2	-	-	90.22	34.13	8.77	34.92	109	334	Average
5218	110.52	-	-	102.54	34.13	8.77	34.92	109	334	Peak
10440	43.33	-30.67	74	51.59	37.13	12.04	57.43	100	0	Peak
15660	44	-30	74	45.92	39.5	17.06	58.48	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5238 MHz is fundamental signal which can be ignored. 10480 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5238	89.26	-	-	80.91	34.49	8.77	34.91	114	343	Average
5238	102.71	-	-	94.36	34.49	8.77	34.91	114	343	Peak
10480	44.92	-29.08	74	52.49	37.77	12.07	57.41	100	0	Peak
15720	49.58	-24.42	74	49.9	41.07	17.03	58.42	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5242 MHz is fundamental signal which can be ignored. 10479 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5242	96.71	-	-	88.75	34.1	8.77	34.91	109	356	Average
5242	109.94	-	-	101.98	34.1	8.77	34.91	109	356	Peak
10479	42.7	-31.3	74	50.93	37.11	12.07	57.41	100	0	Peak
15720	47.26	-26.74	74	49.15	39.5	17.03	58.42	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5262 MHz is fundamental signal which can be ignored. 10518 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5262	89.63	-	-	81.23	34.51	8.78	34.89	113	352	Average
5262	102.34	-	-	93.94	34.51	8.78	34.89	113	352	Peak
10518	43.71	-30.29	74	51.2	37.81	12.1	57.4	100	0	Peak
15780	47.74	-26.26	74	47.94	41.19	16.99	58.38	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5262 MHz is fundamental signal which can be ignored. 10521 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5262	98.56	-	-	90.54	34.13	8.78	34.89	104	300	Average
5262	111.03	-	-	103.01	34.13	8.78	34.89	104	300	Peak
10521	44.27	-29.73	74	52.46	37.11	12.1	57.4	100	0	Peak
15780	46.13	-27.87	74	47.98	39.54	16.99	58.38	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5302 MHz is fundamental signal which can be ignored. 10599 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5302	91.13	-	-	82.7	34.52	8.78	34.87	112	7	Average
5302	103.95	-	-	95.52	34.52	8.78	34.87	112	7	Peak
10599	45.44	-28.56	74	52.88	37.84	12.14	57.42	100	0	Peak
15900	47.53	-26.47	74	47.81	41.07	16.92	58.27	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5302 MHz is fundamental signal which can be ignored. 5226 MHz, and 10599 MHz are not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5226	44.51	-9.49	54	36.54	34.11	8.77	34.91	120	349	Average
5226	56.24	-17.76	74	48.27	34.11	8.77	34.91	120	349	Peak
5302	98.77	-	-	90.66	34.2	8.78	34.87	114	298	Average
5302	111.35	-	-	103.24	34.2	8.78	34.87	114	298	Peak
10599	43.62	-30.38	74	51.72	37.18	12.14	57.42	100	0	Peak
15900	45.91	-28.09	74	47.43	39.84	16.92	58.28	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	1. 5322 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5322	90.3	-	-	81.85	34.53	8.79	34.87	100	187	Average
5322	103.31	-	-	94.86	34.53	8.79	34.87	100	187	Peak
10641	44.16	-29.84	74	51.58	37.85	12.16	57.43	100	0	Peak
15960	47.18	-26.82	74	47.49	41.03	16.89	58.23	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	1. 5322 MHz is fundamental signal which can be ignored. 2. 5220 MHz, and 5252 MHz are not within a restricted band, and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5200	50.83	-3.17	54	42.85	34.14	8.76	34.92	116	293	Average
5200	55.8	-18.2	74	47.82	34.14	8.76	34.92	116	293	Peak
5252	50.49	-3.51	54	42.51	34.1	8.77	34.89	116	293	Average
5252	56.24	-17.76	74	48.26	34.1	8.77	34.89	116	293	Peak
5322	99.3	-	-	91.15	34.23	8.79	34.87	114	296	Average
5322	111.09	-	-	102.94	34.23	8.79	34.87	114	296	Peak
10641	45.16	-28.84	74	53.22	37.21	12.16	57.43	100	0	Peak
15960	45.68	-28.32	74	47.01	40.01	16.89	58.23	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5502 MHz is fundamental signal which can be ignored. 16500 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	92.79	-	-	84.19	34.6	8.81	34.81	100	22	Average
5502	105.29	-	-	96.69	34.6	8.81	34.81	100	22	Peak
11001	44.23	-29.77	74	51.4	38	12.33	57.5	100	0	Peak
16500	48.01	-25.99	74	46.49	41.7	17.12	57.3	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5502 MHz is fundamental signal which can be ignored. 16500 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	99.39	-	-	90.79	34.6	8.81	34.81	120	300	Average
5502	111.43	-	-	102.83	34.6	8.81	34.81	120	300	Peak
11001	44.15	-29.85	74	51.92	37.4	12.33	57.5	100	0	Peak
16500	46.61	-27.39	74	46.29	40.5	17.12	57.3	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5582 MHz is fundamental signal which can be ignored. 16740 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5582	92.72	-	-	84.02	34.64	8.9	34.84	106	61	Average
5582	104.13	-	-	95.43	34.64	8.9	34.84	106	61	Peak
11160	43.74	-30.26	74	50.39	38.27	12.51	57.43	100	0	Peak
16740	47.69	-26.31	74	45.95	42.3	16.74	57.3	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5582 MHz is fundamental signal which can be ignored. 16740 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5582	96.86	-	-	88.16	34.64	8.9	34.84	102	2	Average
5582	109.6	-	-	100.9	34.64	8.9	34.84	102	2	Peak
11160	42.62	-31.38	74	50.07	37.47	12.51	57.43	100	0	Peak
16740	46.68	-27.32	74	45.94	41.3	16.74	57.3	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5702 MHz is fundamental signal which can be ignored. 17100 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5702	89.24	-	-	80.38	34.69	9.05	34.88	101	302	Average
5702	101.82	-	-	92.96	34.69	9.05	34.88	101	302	Peak
11400	43.57	-30.43	74	49.59	38.52	12.8	57.34	100	0	Peak
17100	47.96	-26.04	74	46.52	42.64	16.36	57.56	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5702 MHz is fundamental signal which can be ignored. 5200 MHz, 5252 MHz, and 17100 MHz are not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5200	51.09	-2.91	54	43.11	34.14	8.76	34.92	109	350	Average
5200	57.24	-16.76	74	49.26	34.14	8.76	34.92	109	350	Peak
5252	50.92	-3.08	54	42.94	34.1	8.77	34.89	109	350	Average
5252	56.37	-17.63	74	48.39	34.1	8.77	34.89	109	350	Peak
5702	96.23	-	-	87.37	34.69	9.05	34.88	109	354	Average
5702	108.8	-	-	99.94	34.69	9.05	34.88	109	354	Peak
11400	43.58	-30.42	74	50.44	37.68	12.8	57.34	100	0	Peak
17100	46.7	-27.3	74	46.86	41.04	16.36	57.56	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	144	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 1. 5722 MHz is fundamental signal which can be ignored. 2. 17160 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
66.72	21.05	-18.95	40	46.86	5.16	0.97	31.94	-	-	Peak
149.88	33.32	-10.18	43.5	53.72	9.96	1.44	31.8	-	-	Peak
189.3	37.19	-6.31	43.5	58.84	8.51	1.6	31.76	100	19	Peak
300.7	28.92	-17.08	46	45.55	13.02	2	31.65	-	-	Peak
409.9	24.19	-21.81	46	36.94	16.34	2.35	31.44	-	-	Peak
813.8	26.45	-19.55	46	33.81	20.26	3.29	30.91	-	-	Peak
5722	89.59	-	-	80.72	34.69	9.07	34.89	105	31	Average
5722	102.33	-	-	93.46	34.69	9.07	34.89	105	31	Peak
11439	44.02	-29.98	74	49.94	38.55	12.86	57.33	100	0	Peak
17160	47.52	-26.48	74	46.07	42.8	16.38	57.73	100	0	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	144	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	1. 5722 MHz is fundamental signal which can be ignored. 2. 5200 MHz, 5252 MHz, and 17160 MHz are not within a restricted band, and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
66.72	32.88	-7.12	40	58.58	5.27	0.97	31.94	-	-	Peak
150.96	31.51	-11.99	43.5	50.63	11.24	1.44	31.8	-	-	Peak
187.68	36.9	-6.6	43.5	58.67	8.41	1.59	31.77	100	93	Peak
300.7	27.52	-18.48	46	43.94	13.23	2	31.65	-	-	Peak
743.8	23.19	-22.81	46	31.08	19.87	3.14	30.9	-	-	Peak
836.9	24.9	-21.1	46	32.22	20.17	3.34	30.83	-	-	Peak
5200	51.96	-2.04	54	43.98	34.14	8.76	34.92	110	327	Average
5200	58.54	-15.46	74	50.56	34.14	8.76	34.92	110	327	Peak
5252	53.45	-0.55	54	45.47	34.1	8.77	34.89	106	316	Average
5252	57.91	-16.09	74	49.93	34.1	8.77	34.89	106	316	Peak
5722	95.74	-	-	86.87	34.69	9.07	34.89	108	331	Average
5722	108.25	-	-	99.38	34.69	9.07	34.89	108	331	Peak
11439	43.71	-30.29	74	50.46	37.72	12.86	57.33	100	0	Peak
17160	45.9	-28.1	74	46.32	40.93	16.38	57.73	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5182 MHz is fundamental signal which can be ignored. 10359 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5182	92.58	-	-	84.35	34.45	8.71	34.93	102	209	Average
5182	102.59	-	-	94.36	34.45	8.71	34.93	102	209	Peak
10359	43.19	-30.81	74	50.95	37.69	12	57.45	100	0	Peak
15540	47.25	-26.75	74	48.36	40.33	17.13	58.57	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	36	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5182 MHz is fundamental signal which can be ignored. 10359 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5182	97.96	-	-	90.03	34.15	8.71	34.93	108	320	Average
5182	108.58	-	-	100.65	34.15	8.71	34.93	108	320	Peak
10359	41.81	-32.19	74	50.11	37.15	12	57.45	100	0	Peak
15540	47.07	-26.93	74	49.01	39.5	17.13	58.57	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5222 MHz is fundamental signal which can be ignored. 10440 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5222	90.56	-	-	82.23	34.47	8.77	34.91	103	348	Average
5222	102.22	-	-	93.89	34.47	8.77	34.91	103	348	Peak
10440	42.36	-31.64	74	50	37.75	12.04	57.43	100	0	Peak
15660	46.15	-27.85	74	46.77	40.8	17.06	58.48	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	44	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5222 MHz is fundamental signal which can be ignored. 10440 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5222	96.85	-	-	88.86	34.13	8.77	34.91	109	322	Average
5222	108.37	-	-	100.38	34.13	8.77	34.91	109	322	Peak
10440	42.15	-31.85	74	50.41	37.13	12.04	57.43	100	0	Peak
15660	44.75	-29.25	74	46.67	39.5	17.06	58.48	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5242 MHz is fundamental signal which can be ignored. 10479 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5242	92.14	-	-	83.78	34.5	8.77	34.91	103	351	Average
5242	103.6	-	-	95.24	34.5	8.77	34.91	103	351	Peak
10479	43.89	-30.11	74	51.44	37.79	12.07	57.41	100	0	Peak
15720	47.88	-26.12	74	48.2	41.07	17.03	58.42	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	48	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5236 MHz is fundamental signal which can be ignored. 10479 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5236	98.77	-	-	90.8	34.11	8.77	34.91	109	323	Average
5236	109.64	-	-	101.67	34.11	8.77	34.91	109	323	Peak
10479	42.08	-31.92	74	50.31	37.11	12.07	57.41	100	0	Peak
15720	47.56	-26.44	74	49.45	39.5	17.03	58.42	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5262 MHz is fundamental signal which can be ignored. 10521 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5262	91.22	-	-	82.82	34.51	8.78	34.89	114	248	Average
5262	102.25	-	-	93.85	34.51	8.78	34.89	114	248	Peak
10521	42.49	-31.51	74	49.98	37.81	12.1	57.4	100	0	Peak
15780	47.66	-26.34	74	47.86	41.19	16.99	58.38	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	52	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5262 MHz is fundamental signal which can be ignored. 5200 MHz, and 10521 MHz are not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5200	50.52	-3.48	54	42.54	34.14	8.76	34.92	108	322	Average
5200	58.61	-15.39	74	50.63	34.14	8.76	34.92	108	322	Peak
5262	98.15	-	-	90.13	34.13	8.78	34.89	108	322	Average
5262	109.24	-	-	101.22	34.13	8.78	34.89	108	322	Peak
10521	41.91	-32.09	74	50.1	37.11	12.1	57.4	100	0	Peak
15780	46.12	-27.88	74	47.97	39.54	16.99	58.38	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5298 MHz is fundamental signal which can be ignored. 10599 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5298	92.8	-	-	84.37	34.52	8.78	34.87	115	240	Average
5298	103.66	-	-	95.23	34.52	8.78	34.87	115	240	Peak
10599	42.96	-31.04	74	50.4	37.84	12.14	57.42	100	0	Peak
15900	47.4	-26.6	74	47.67	41.09	16.92	58.28	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	60	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5298 MHz is fundamental signal which can be ignored. 5200 MHz, 5252 MHz, and 10599 MHz are not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5200	48.81	-5.19	54	40.83	34.14	8.76	34.92	108	353	Average
5200	55.39	-18.61	74	47.41	34.14	8.76	34.92	108	353	Peak
5252	48.83	-5.17	54	40.85	34.1	8.77	34.89	108	353	Average
5252	56.17	-17.83	74	48.19	34.1	8.77	34.89	108	353	Peak
5298	97.24	-	-	89.13	34.2	8.78	34.87	108	353	Average
5298	108.14	-	-	100.03	34.2	8.78	34.87	108	353	Peak
10599	41.81	-32.19	74	49.91	37.18	12.14	57.42	100	0	Peak
15900	46.86	-27.14	74	48.38	39.84	16.92	58.28	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	1. 5318 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5318	91.98	-	-	83.53	34.53	8.79	34.87	114	244	Average
5318	102.77	-	-	94.32	34.53	8.79	34.87	114	244	Peak
10641	42.1	-31.9	74	49.52	37.85	12.16	57.43	100	0	Peak
15960	46.45	-27.55	74	46.76	41.03	16.89	58.23	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	64	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	1. 5318 MHz is fundamental signal which can be ignored. 2. 5200 MHz, and 5252 MHz are not within a restricted band, and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5200	50.17	-3.83	54	42.19	34.14	8.76	34.92	108	351	Average
5200	55.93	-18.07	74	47.95	34.14	8.76	34.92	108	351	Peak
5252	50.52	-3.48	54	42.54	34.1	8.77	34.89	108	351	Average
5252	56.69	-17.31	74	48.71	34.1	8.77	34.89	108	351	Peak
5318	97.68	-	-	89.53	34.23	8.79	34.87	108	351	Average
5318	108.81	-	-	100.66	34.23	8.79	34.87	108	351	Peak
10641	41.99	-32.01	74	50.05	37.21	12.16	57.43	100	0	Peak
15960	45.78	-28.22	74	47.11	40.01	16.89	58.23	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5502 MHz is fundamental signal which can be ignored. 16500 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5502	94.02	-	-	85.42	34.6	8.81	34.81	119	342	Average
5502	105.5	-	-	96.9	34.6	8.81	34.81	119	342	Peak
11001	44.19	-29.81	74	51.36	38	12.33	57.5	100	0	Peak
16500	48.02	-25.98	74	46.5	41.7	17.12	57.3	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	100	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5498 MHz is fundamental signal which can be ignored. 16500 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5498	101.08	-	-	92.47	34.6	8.81	34.8	110	298	Average
5498	112.12	-	-	103.51	34.6	8.81	34.8	110	298	Peak
11001	44.14	-29.86	74	51.91	37.4	12.33	57.5	100	0	Peak
16500	46.62	-27.38	74	46.3	40.5	17.12	57.3	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5582 MHz is fundamental signal which can be ignored. 16740 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5582	93.09	-	-	84.39	34.64	8.9	34.84	106	343	Average
5582	104.6	-	-	95.9	34.64	8.9	34.84	106	343	Peak
11160	43.96	-30.04	74	50.61	38.27	12.51	57.43	100	0	Peak
16740	47.6	-26.4	74	45.86	42.3	16.74	57.3	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	116	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5578 MHz is fundamental signal which can be ignored. 5200 MHz, 5252 MHz, and 16740 MHz are not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5200	51.3	-2.7	54	43.32	34.14	8.76	34.92	110	322	Average
5200	56.63	-17.37	74	48.65	34.14	8.76	34.92	110	322	Peak
5252	49.66	-4.34	54	41.68	34.1	8.77	34.89	110	322	Average
5252	55.48	-18.52	74	47.5	34.1	8.77	34.89	110	322	Peak
5578	98.78	-	-	90.09	34.63	8.9	34.84	110	322	Average
5578	110.17	-	-	101.48	34.63	8.9	34.84	110	322	Peak
11160	42.89	-31.11	74	50.34	37.47	12.51	57.43	100	0	Peak
16740	46.72	-27.28	74	45.98	41.3	16.74	57.3	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5698 MHz is fundamental signal which can be ignored. 17100 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
66.72	21	-19	40	46.81	5.16	0.97	31.94	-	-	Peak
149.88	33.32	-10.18	43.5	53.72	9.96	1.44	31.8	-	-	Peak
189.3	37.26	-6.24	43.5	58.91	8.51	1.6	31.76	100	19	Peak
300.7	28.82	-17.18	46	45.45	13.02	2	31.65	-	-	Peak
409.9	24.18	-21.82	46	36.93	16.34	2.35	31.44	-	-	Peak
813.8	26.42	-19.58	46	33.78	20.26	3.29	30.91	-	-	Peak
5698	93.27	-	-	84.42	34.68	9.05	34.88	106	345	Average
5698	105.23	-	-	96.38	34.68	9.05	34.88	106	345	Peak
11400	43.47	-30.53	74	49.49	38.52	12.8	57.34	100	0	Peak
17100	47.86	-26.14	74	46.42	42.64	16.36	57.56	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	140	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	1. 5698 MHz is fundamental signal which can be ignored. 2. 5200 MHz, 5252 MHz, and 17100 MHz are not within a restricted band, and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
66.72	32.86	-7.14	40	58.56	5.27	0.97	31.94	-	-	Peak
150.96	31.46	-12.04	43.5	50.58	11.24	1.44	31.8	-	-	Peak
187.68	36.81	-6.69	43.5	58.58	8.41	1.59	31.77	100	93	Peak
300.7	27.52	-18.48	46	43.94	13.23	2	31.65	-	-	Peak
743.8	23.17	-22.83	46	31.06	19.87	3.14	30.9	-	-	Peak
836.9	24.86	-21.14	46	32.18	20.17	3.34	30.83	-	-	Peak
5200	52.31	-1.69	54	44.33	34.14	8.76	34.92	118	322	Average
5200	57.28	-16.72	74	49.3	34.14	8.76	34.92	118	322	Peak
5252	52.07	-1.93	54	44.09	34.1	8.77	34.89	118	322	Average
5252	57.09	-16.91	74	49.11	34.1	8.77	34.89	118	322	Peak
5698	97.52	-	-	88.67	34.68	9.05	34.88	118	322	Average
5698	108.5	-	-	99.65	34.68	9.05	34.88	118	322	Peak
11400	43.47	-30.53	74	50.33	37.68	12.8	57.34	100	0	Peak
17100	46.66	-27.34	74	46.82	41.04	16.36	57.56	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	144	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5722 MHz is fundamental signal which can be ignored. 17160 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5722	92.55	-	-	83.68	34.69	9.07	34.89	103	309	Average
5722	103.83	-	-	94.96	34.69	9.07	34.89	103	309	Peak
11439	43.97	-30.03	74	49.89	38.55	12.86	57.33	100	0	Peak
17160	47.43	-26.57	74	45.98	42.8	16.38	57.73	100	0	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Channel :	144	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5718 MHz is fundamental signal which can be ignored. 5200 MHz, 5252 MHz, and 17160 MHz are not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5200	50.16	-3.84	54	42.18	34.14	8.76	34.92	117	330	Average
5200	55.31	-18.69	74	47.33	34.14	8.76	34.92	117	330	Peak
5252	50.99	-3.01	54	43.01	34.1	8.77	34.89	117	330	Average
5252	55.9	-18.1	74	47.92	34.1	8.77	34.89	117	330	Peak
5718	95.79	-	-	86.92	34.69	9.07	34.89	117	330	Average
5718	106.54	-	-	97.67	34.69	9.07	34.89	117	330	Peak
11439	43.76	-30.24	74	50.51	37.72	12.86	57.33	100	0	Peak
17160	45.82	-28.18	74	46.24	40.93	16.38	57.73	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	38	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5186 MHz is fundamental signal which can be ignored. 10380 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
66.72	21.05	-18.95	40	46.86	5.16	0.97	31.94	-	-	Peak
149.88	33.32	-10.18	43.5	53.72	9.96	1.44	31.8	-	-	Peak
189.3	37.19	-6.31	43.5	58.84	8.51	1.6	31.76	100	19	Peak
300.7	28.92	-17.08	46	45.55	13.02	2	31.65	-	-	Peak
409.9	24.19	-21.81	46	36.94	16.34	2.35	31.44	-	-	Peak
813.8	26.45	-19.55	46	33.81	20.26	3.29	30.91	-	-	Peak
5186	90.08	-	-	81.85	34.45	8.71	34.93	104	210	Average
5186	100.79	-	-	92.56	34.45	8.71	34.93	104	210	Peak
10380	44.72	-29.28	74	52.45	37.71	12.01	57.45	100	0	Peak
15570	47.79	-26.21	74	48.74	40.47	17.12	58.54	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	38	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 1. 5192 MHz is fundamental signal which can be ignored. 2. 10380 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
66.72	32.86	-7.14	40	58.56	5.27	0.97	31.94	-	-	Peak
150.96	31.46	-12.04	43.5	50.58	11.24	1.44	31.8	-	-	Peak
187.68	36.81	-6.69	43.5	58.58	8.41	1.59	31.77	100	93	Peak
300.7	27.52	-18.48	46	43.94	13.23	2	31.65	-	-	Peak
743.8	23.19	-22.81	46	31.08	19.87	3.14	30.9	-	-	Peak
836.9	24.9	-21.1	46	32.22	20.17	3.34	30.83	-	-	Peak
5192	97.13	-	-	89.16	34.14	8.76	34.93	108	324	Average
5192	107.63	-	-	99.66	34.14	8.76	34.93	108	324	Peak
10380	42.95	-31.05	74	51.24	37.15	12.01	57.45	100	0	Peak
15570	47.81	-26.19	74	49.73	39.5	17.12	58.54	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	46	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5228 MHz is fundamental signal which can be ignored. 10461 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5228	90.47	-	-	82.12	34.49	8.77	34.91	103	209	Average
5228	101.55	-	-	93.2	34.49	8.77	34.91	103	209	Peak
10461	44.48	-29.52	74	52.06	37.77	12.06	57.41	100	0	Peak
15690	48.13	-25.87	74	48.6	40.93	17.05	58.45	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	46	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5228 MHz is fundamental signal which can be ignored. 10461 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5228	96.93	-	-	88.96	34.11	8.77	34.91	109	354	Average
5228	107.43	-	-	99.46	34.11	8.77	34.91	109	354	Peak
10461	43.33	-30.67	74	51.57	37.11	12.06	57.41	100	0	Peak
15690	46.89	-27.11	74	48.79	39.5	17.05	58.45	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	54	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5272 MHz is fundamental signal which can be ignored. 10539 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5272	89.94	-	-	81.53	34.51	8.78	34.88	125	343	Average
5272	99.69	-	-	91.28	34.51	8.78	34.88	125	343	Peak
10539	42.56	-31.44	74	50.06	37.81	12.1	57.41	100	0	Peak
15810	46.55	-27.45	74	46.77	41.16	16.97	58.35	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	54	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5268 MHz is fundamental signal which can be ignored. 10539 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5268	99.5	-	-	91.48	34.13	8.78	34.89	115	299	Average
5268	110.03	-	-	102.01	34.13	8.78	34.89	115	299	Peak
10539	43.49	-30.51	74	51.67	37.13	12.1	57.41	100	0	Peak
15810	45.29	-28.71	74	47.04	39.63	16.97	58.35	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	62	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	1. 5308 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5308	87.78	-	-	79.34	34.52	8.79	34.87	124	344	Average
5308	98.31	-	-	89.87	34.52	8.79	34.87	124	344	Peak
10620	44.16	-29.84	74	51.58	37.85	12.15	57.42	100	0	Peak
15930	48.68	-25.32	74	48.98	41.06	16.9	58.26	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	62	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	1. 5312 MHz is fundamental signal which can be ignored. 2. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5312	96.59	-	-	88.44	34.23	8.79	34.87	102	299	Average
5312	106.86	-	-	98.71	34.23	8.79	34.87	102	299	Peak
10620	42.87	-31.13	74	50.95	37.19	12.15	57.42	100	0	Peak
15930	46.5	-27.5	74	47.93	39.93	16.9	58.26	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	102	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5512 MHz is fundamental signal which can be ignored. 16530 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5512	87.4	-	-	78.8	34.6	8.81	34.81	100	356	Average
5512	97.3	-	-	88.7	34.6	8.81	34.81	100	356	Peak
11019	43.54	-30.46	74	50.67	38.03	12.33	57.49	100	0	Peak
16530	47.03	-26.97	74	45.46	41.79	17.08	57.3	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	102	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5508 MHz is fundamental signal which can be ignored. 16530 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5508	96.87	-	-	88.27	34.6	8.81	34.81	110	298	Average
5508	106.76	-	-	98.16	34.6	8.81	34.81	110	298	Peak
11019	43.06	-30.94	74	50.81	37.41	12.33	57.49	100	0	Peak
16530	47.32	-26.68	74	46.93	40.61	17.08	57.3	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	110	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5548 MHz is fundamental signal which can be ignored. 16650 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5548	90.82	-	-	82.15	34.62	8.87	34.82	119	65	Average
5548	100.99	-	-	92.32	34.62	8.87	34.82	119	65	Peak
11100	44.02	-29.98	74	50.87	38.16	12.45	57.46	100	0	Peak
16650	47.8	-26.2	74	46.12	42.09	16.89	57.3	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	110	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5548 MHz is fundamental signal which can be ignored. 16650 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5548	98.33	-	-	89.66	34.62	8.87	34.82	111	322	Average
5548	108.58	-	-	99.91	34.62	8.87	34.82	111	322	Peak
11100	43.8	-30.2	74	51.37	37.44	12.45	57.46	100	0	Peak
16650	47.44	-26.56	74	46.84	41.01	16.89	57.3	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	134	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	1. 5668 MHz is fundamental signal which can be ignored. 2. 17010 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 3. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5668	90.05	-	-	81.26	34.67	8.99	34.87	107	66	Average
5668	100.44	-	-	91.65	34.67	8.99	34.87	107	66	Peak
11340	44.02	-29.98	74	50.18	38.47	12.74	57.37	100	0	Peak
17010	47.8	-26.2	74	46.38	42.44	16.32	57.34	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	134	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	4. 5672 MHz is fundamental signal which can be ignored. 5. 17010 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. 6. Average measurement was not performed if peak level went lower than the average limit.		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5672	94.06	-	-	85.24	34.67	9.02	34.87	109	351	Average
5672	104.34	-	-	95.52	34.67	9.02	34.87	109	351	Peak
11340	43.37	-30.63	74	50.4	37.6	12.74	57.37	100	0	Peak
17010	46.47	-27.53	74	46.32	41.17	16.32	57.34	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	142	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Horizontal
Remark :	<ol style="list-style-type: none"> 5708 MHz is fundamental signal which can be ignored. 17130 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5708	89.96	-	-	81.11	34.69	9.05	34.89	103	308	Average
5708	100.68	-	-	91.83	34.69	9.05	34.89	103	308	Peak
11421	45.43	-28.57	74	51.4	38.53	12.83	57.33	100	0	Peak
17130	46.18	-27.82	74	44.74	42.72	16.37	57.65	100	0	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Channel :	142	Relative Humidity :	51~53%
Test Engineer :	David Ke	Polarization :	Vertical
Remark :	<ol style="list-style-type: none"> 5708 MHz is fundamental signal which can be ignored. 17130 MHz is not within a restricted band, and satisfies both the average and peak limits of 15.209. Average measurement was not performed if peak level went lower than the average limit. 		

Frequency (MHz)	Level (dB μ V/m)	Over Limit (dB)	Limit Line (dB μ V/m)	Read Level (dB μ V)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5708	94.96	-	-	86.11	34.69	9.05	34.89	119	327	Average
5708	105.18	-	-	96.33	34.69	9.05	34.89	119	327	Peak
11421	44.1	-29.9	74	50.9	37.7	12.83	57.33	100	0	Peak
17130	42.05	-31.95	74	42.34	40.99	16.37	57.65	100	0	Peak

3.6 AC Conducted Emission Measurement

3.6.1 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.

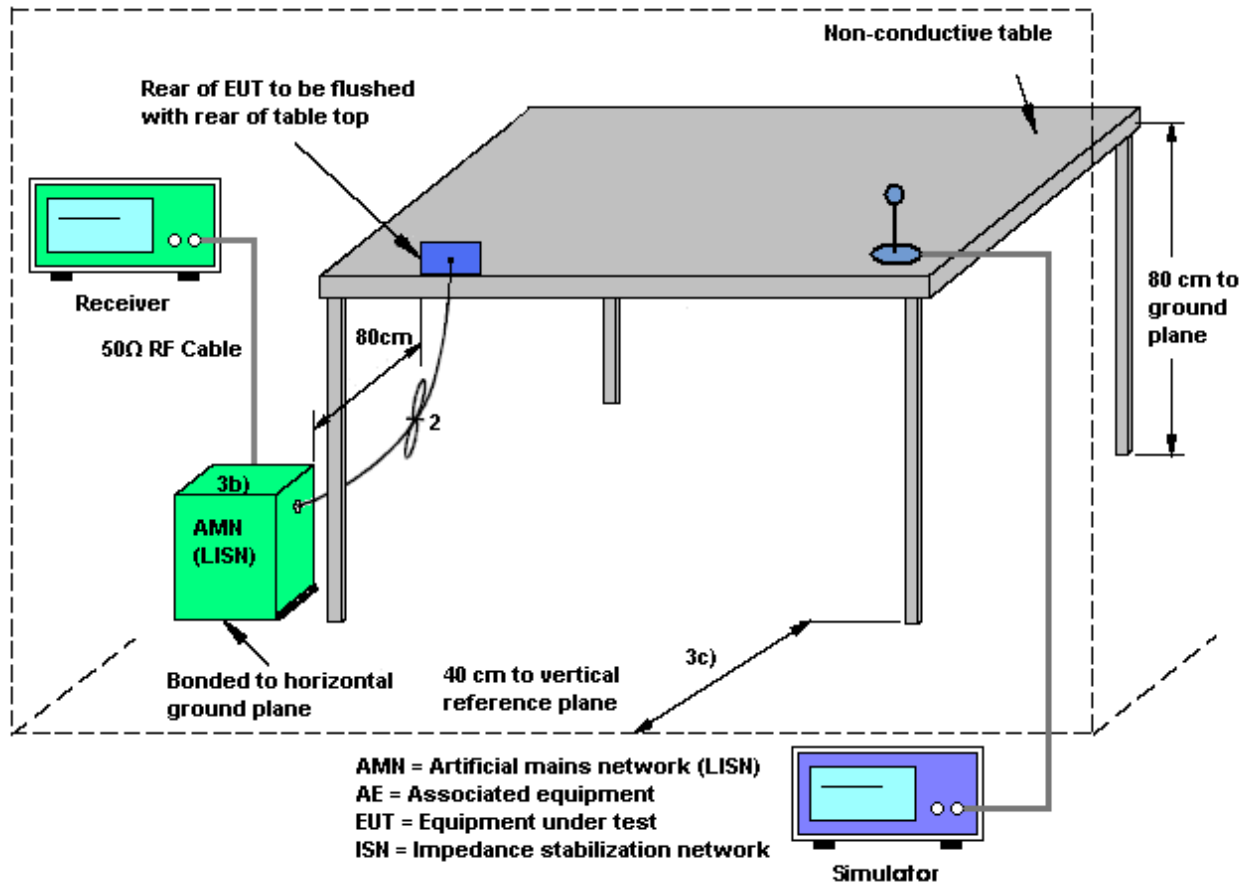
3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

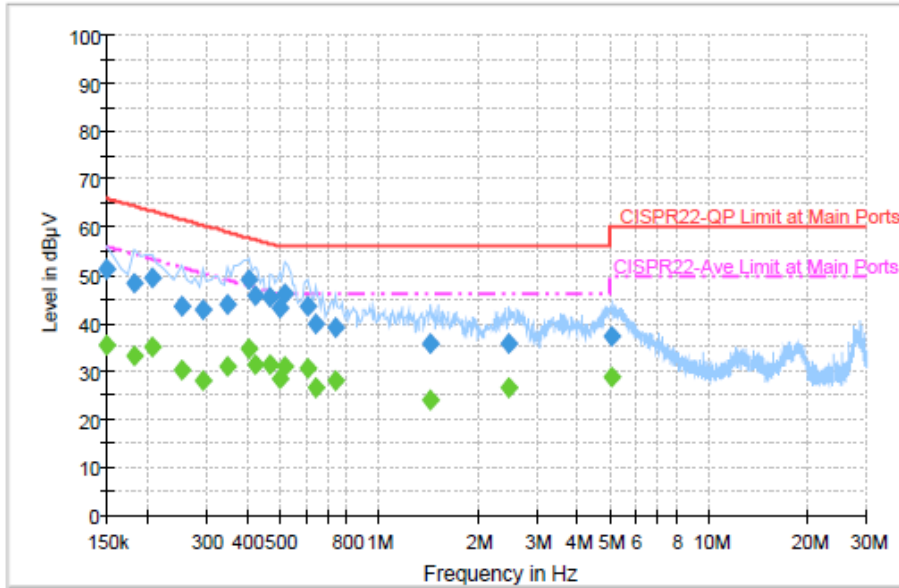
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
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.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

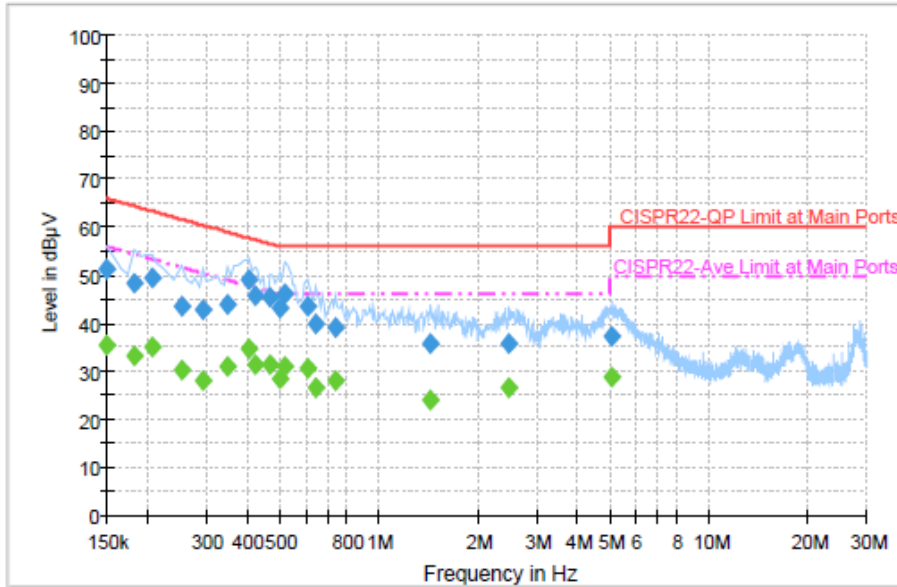
Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 (GPRS Class 8) Idle + WLAN (5GHz, 11a, Ch116, 6Mbps) Link + Bluetooth Link + Earphone + H Pattern + USB Cable (Charging from Adapter)		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBμV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.150000	51.2	Off	L1	19.4	14.8	66.0
0.182000	48.3	Off	L1	19.4	16.1	64.4
0.206000	49.4	Off	L1	19.4	14.0	63.4
0.254000	43.6	Off	L1	19.5	18.0	61.6
0.294000	42.8	Off	L1	19.4	17.6	60.4
0.350000	43.8	Off	L1	19.4	15.2	59.0
0.406000	48.9	Off	L1	19.4	8.8	57.7
0.422000	45.9	Off	L1	19.4	11.5	57.4
0.470000	45.3	Off	L1	19.4	11.2	56.5
0.502000	43.1	Off	L1	19.3	12.9	56.0
0.518000	46.2	Off	L1	19.4	9.8	56.0
0.606000	43.7	Off	L1	19.4	12.3	56.0
0.646000	40.0	Off	L1	19.4	16.0	56.0
0.742000	39.1	Off	L1	19.4	16.9	56.0
1.438000	35.7	Off	L1	19.5	20.3	56.0
2.470000	35.6	Off	L1	19.6	20.4	56.0
5.062000	37.4	Off	L1	19.6	22.6	60.0

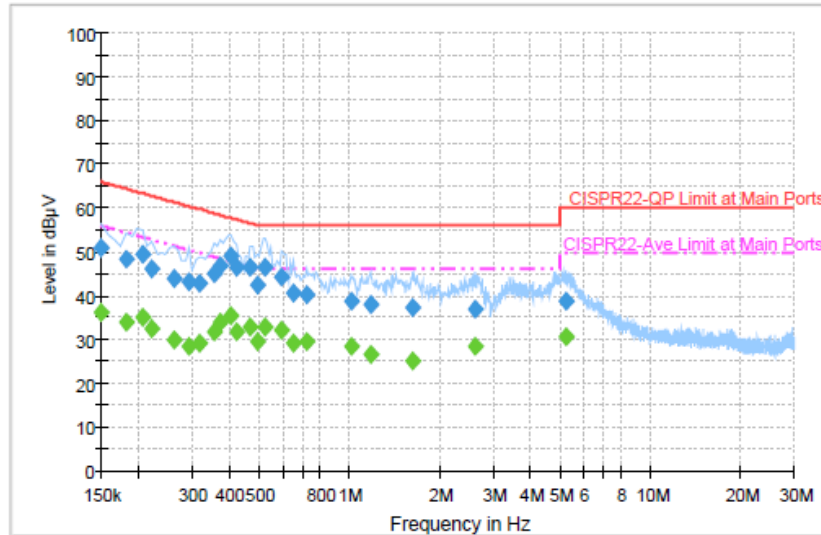
Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 (GPRS Class 8) Idle + WLAN (5GHz, 11a, Ch116, 6Mbps) Link + Bluetooth Link + Earphone + H Pattern + USB Cable (Charging from Adapter)		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	35.6	Off	L1	19.4	20.4	56.0
0.182000	33.3	Off	L1	19.4	21.1	54.4
0.206000	35.2	Off	L1	19.4	18.2	53.4
0.254000	30.3	Off	L1	19.5	21.3	51.6
0.294000	27.9	Off	L1	19.4	22.5	50.4
0.350000	30.9	Off	L1	19.4	18.1	49.0
0.406000	34.6	Off	L1	19.4	13.1	47.7
0.422000	31.3	Off	L1	19.4	16.1	47.4
0.470000	31.4	Off	L1	19.4	15.1	46.5
0.502000	28.3	Off	L1	19.3	17.7	46.0
0.518000	31.1	Off	L1	19.4	14.9	46.0
0.606000	30.7	Off	L1	19.4	15.3	46.0
0.646000	26.5	Off	L1	19.4	19.5	46.0
0.742000	28.0	Off	L1	19.4	18.0	46.0
1.438000	23.9	Off	L1	19.5	22.1	46.0
2.470000	26.5	Off	L1	19.6	19.5	46.0
5.062000	28.7	Off	L1	19.6	21.3	50.0

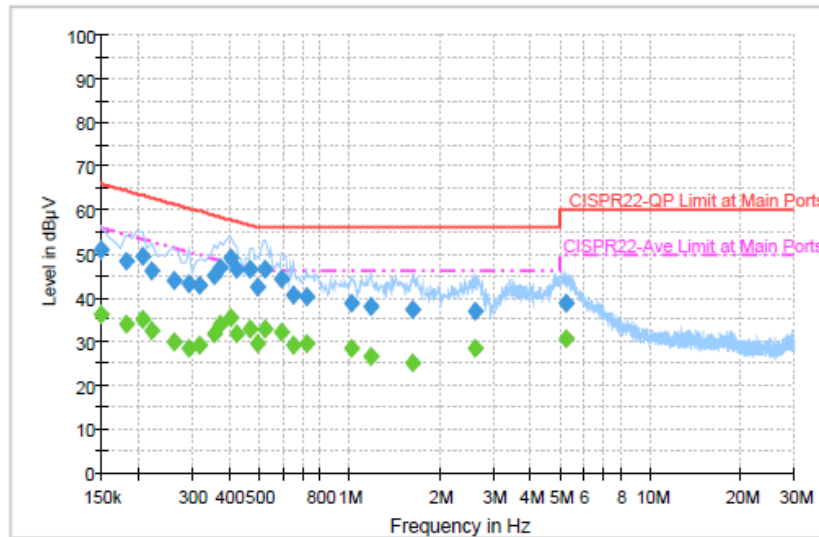
Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 (GPRS Class 8) Idle + WLAN (5GHz, 11a, Ch116, 6Mbps) Link + Bluetooth Link + Earphone + H Pattern + USB Cable (Charging from Adapter)		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	51.0	Off	N	19.4	15.0	66.0
0.182000	48.4	Off	N	19.4	16.0	64.4
0.206000	49.6	Off	N	19.4	13.8	63.4
0.222000	46.1	Off	N	19.4	16.6	62.7
0.262000	43.8	Off	N	19.4	17.6	61.4
0.294000	43.1	Off	N	19.4	17.3	60.4
0.318000	42.9	Off	N	19.4	16.9	59.8
0.358000	45.0	Off	N	19.4	13.8	58.8
0.374000	46.9	Off	N	19.4	11.5	58.4
0.406000	49.2	Off	N	19.4	8.5	57.7
0.422000	46.4	Off	N	19.4	11.0	57.4
0.470000	46.3	Off	N	19.4	10.2	56.5
0.494000	42.5	Off	N	19.3	13.6	56.1
0.526000	46.4	Off	N	19.4	9.6	56.0
0.598000	44.3	Off	N	19.4	11.7	56.0
0.654000	40.7	Off	N	19.4	15.3	56.0
0.726000	40.1	Off	N	19.4	15.9	56.0
1.014000	38.9	Off	N	19.5	17.1	56.0
1.174000	38.1	Off	N	19.5	17.9	56.0
1.630000	37.2	Off	N	19.4	18.8	56.0
2.630000	36.9	Off	N	19.6	19.1	56.0
5.254000	38.8	Off	N	19.5	21.2	60.0

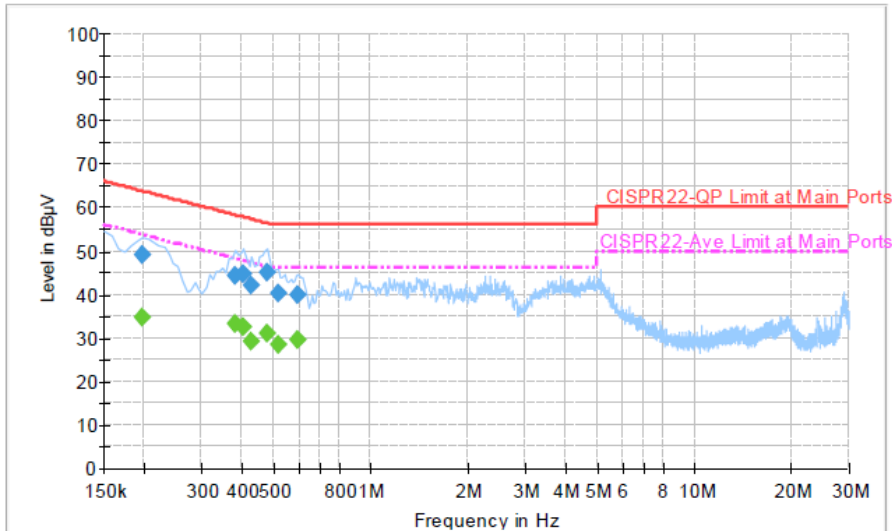
Test Mode :	Mode 1	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 (GPRS Class 8) Idle + WLAN (5GHz, 11a, Ch116, 6Mbps) Link + Bluetooth Link + Earphone + H Pattern + USB Cable (Charging from Adapter)		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	36.0	Off	N	19.4	20.0	56.0
0.182000	33.8	Off	N	19.4	20.6	54.4
0.206000	35.1	Off	N	19.4	18.3	53.4
0.222000	32.7	Off	N	19.4	20.0	52.7
0.262000	29.9	Off	N	19.4	21.5	51.4
0.294000	28.3	Off	N	19.4	22.1	50.4
0.318000	29.0	Off	N	19.4	20.8	49.8
0.358000	31.8	Off	N	19.4	17.0	48.8
0.374000	33.9	Off	N	19.4	14.5	48.4
0.406000	35.5	Off	N	19.4	12.2	47.7
0.422000	31.8	Off	N	19.4	15.6	47.4
0.470000	32.8	Off	N	19.4	13.7	46.5
0.494000	29.4	Off	N	19.3	16.7	46.1
0.526000	33.0	Off	N	19.4	13.0	46.0
0.598000	32.1	Off	N	19.4	13.9	46.0
0.654000	29.0	Off	N	19.4	17.0	46.0
0.726000	29.7	Off	N	19.4	16.3	46.0
1.014000	28.5	Off	N	19.5	17.5	46.0
1.174000	26.7	Off	N	19.5	19.3	46.0
1.630000	24.9	Off	N	19.4	21.1	46.0
2.630000	28.3	Off	N	19.6	17.7	46.0
5.254000	30.7	Off	N	19.5	19.3	50.0

Test Mode :	Mode 2	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 (GPRS Class 8) Idle + WLAN (5GHz, 11a, Ch116, 6Mbps) MIMO Tx + Earphone + H Pattern + USB Cable (Charging from Adapter)		



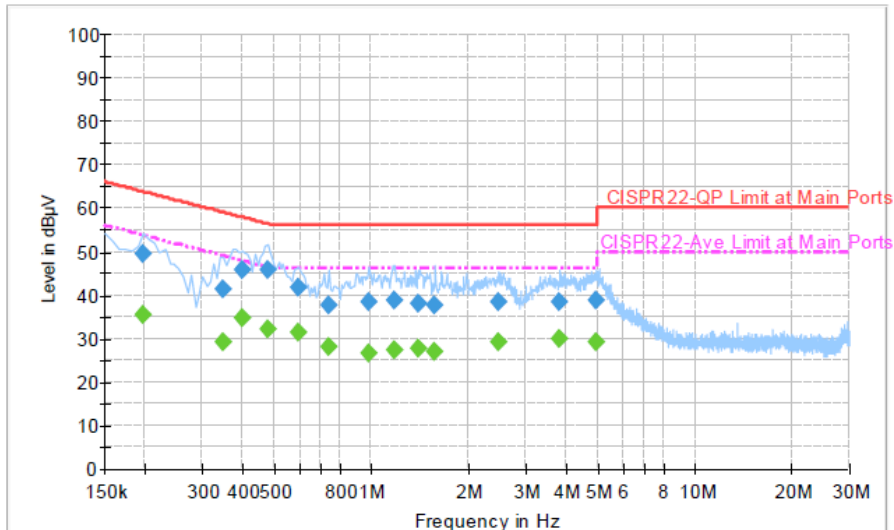
Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	48.9	Off	L1	19.3	14.8	63.7
0.382000	44.2	Off	L1	19.4	14.0	58.2
0.406000	44.8	Off	L1	19.4	12.9	57.7
0.430000	42.0	Off	L1	19.4	15.3	57.3
0.478000	45.1	Off	L1	19.4	11.3	56.4
0.518000	40.1	Off	L1	19.4	15.9	56.0
0.598000	39.7	Off	L1	19.4	16.3	56.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	34.8	Off	L1	19.3	18.9	53.7
0.382000	33.1	Off	L1	19.4	15.1	48.2
0.406000	32.4	Off	L1	19.4	15.3	47.7
0.430000	29.2	Off	L1	19.4	18.1	47.3
0.478000	31.0	Off	L1	19.4	15.4	46.4
0.518000	28.6	Off	L1	19.4	17.4	46.0
0.598000	29.5	Off	L1	19.4	16.5	46.0

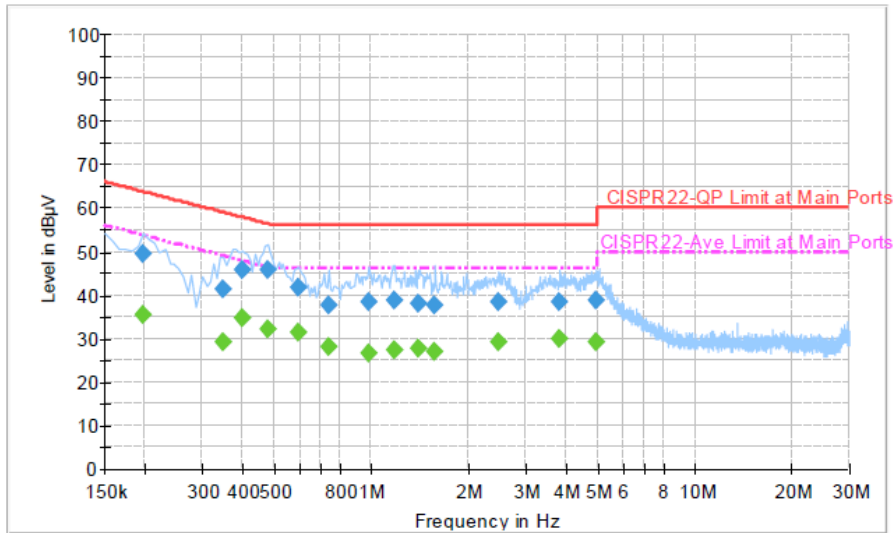
Test Mode :	Mode 2	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 (GPRS Class 8) Idle + WLAN (5GHz, 11a, Ch116, 6Mbps) MIMO Tx + Earphone + H Pattern + USB Cable (Charging from Adapter)		



Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	49.4	Off	N	19.3	14.3	63.7
0.350000	41.3	Off	N	19.4	17.7	59.0
0.398000	45.6	Off	N	19.5	12.3	57.9
0.478000	45.8	Off	N	19.4	10.6	56.4
0.598000	41.7	Off	N	19.4	14.3	56.0
0.742000	37.5	Off	N	19.4	18.5	56.0
0.982000	38.5	Off	N	19.5	17.5	56.0
1.182000	38.8	Off	N	19.5	17.2	56.0
1.398000	37.9	Off	N	19.5	18.1	56.0
1.574000	37.5	Off	N	19.4	18.5	56.0
2.478000	38.5	Off	N	19.6	17.5	56.0
3.830000	38.5	Off	N	19.6	17.5	56.0
4.958000	38.8	Off	N	19.7	17.2	56.0

Test Mode :	Mode 2	Temperature :	20~22°C
Test Engineer :	Slash Huang	Relative Humidity :	45~47%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 (GPRS Class 8) Idle + WLAN (5GHz, 11a, Ch116, 6Mbps) MIMO Tx + Earphone + H Pattern + USB Cable (Charging from Adapter)		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.198000	35.5	Off	N	19.3	18.2	53.7
0.350000	29.0	Off	N	19.4	20.0	49.0
0.398000	34.7	Off	N	19.5	13.2	47.9
0.478000	32.1	Off	N	19.4	14.3	46.4
0.598000	31.5	Off	N	19.4	14.5	46.0
0.742000	28.0	Off	N	19.4	18.0	46.0
0.982000	26.6	Off	N	19.5	19.4	46.0
1.182000	27.3	Off	N	19.5	18.7	46.0
1.398000	27.8	Off	N	19.5	18.2	46.0
1.574000	27.1	Off	N	19.4	18.9	46.0
2.478000	29.1	Off	N	19.6	16.9	46.0
3.830000	30.0	Off	N	19.6	16.0	46.0
4.958000	29.0	Off	N	19.7	17.0	46.0

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

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 Connected Construction

Non-detachable antenna is used.

3.8.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02

For CDD transmissions, directional gain is calculated as

Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain = $10 \log(N_{ANT}/N_{SS}=1)$ dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$.

The EUT supports CDD mode.

The power and PSD limit should be modified if the directional gain of EUT is over 6 dBi,

The directional gain “DG” is calculated as following table.

			DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	Ant 1 (dBi)	Ant 2 (dBi)				
Band I	2.70	4.10	3.46	6.47	0.00	0.47
Band II	3.00	4.20	3.64	6.65	0.00	0.65
Band III	3.80	1.70	2.88	5.89	0.00	0.00

Power limit reduction = Composite gain – 6dBi, (min = 0)

PSD limit reduction = Composite gain + PSD Array gain – 6dBi, (min = 0)

4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Aug. 20, 2013~ Sep. 05, 2013	Jun. 06, 2014	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Sep. 08, 2012	Aug. 20, 2013~ Sep. 05, 2013	Sep. 07, 2013	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Sep. 08, 2012	Aug. 20, 2013~ Sep. 05, 2013	Sep. 07, 2013	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 13, 2012	Aug. 29, 2013~ Sep. 04, 2013	Nov. 12, 2013	Conduction (CO05-HY)
Two-LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2012	Aug. 29, 2013~ Sep. 04, 2013	Dec. 11, 2013	Conduction (CO05-HY)
Two-LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 06, 2012	Aug. 29, 2013~ Sep. 04, 2013	Dec. 05, 2013	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Aug. 29, 2013~ Sep. 04, 2013	N/A	Conduction (CO05-HY)
Spectrum Analyzer	R&S	ESU26	100390	20Hz~26.5GHz	Dec. 14, 2012	Aug. 22, 2013~ Aug. 26, 2013	Dec. 13, 2013	Radiation (03CH08-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9kHz~30MHz	Jul. 03, 2012	Aug. 22, 2013~ Aug. 26, 2013	Jul. 03, 2014	Radiation (03CH08-HY)
Bilog Antenna	Schaffner	CBL6111C	2725	30MHz~2GHz	Oct. 06, 2012	Aug. 22, 2013~ Aug. 26, 2013	Oct. 05, 2013	Radiation (03CH08-HY)
Horn Antenna	ESCO	3117	66584	1GHz~18GHz	Aug. 07, 2013	Aug. 22, 2013~ Aug. 26, 2013	Aug. 06, 2014	Radiation (03CH08-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA917025 1	15GHz ~ 40GHz	Sep. 28, 2012	Aug. 22, 2013~ Aug. 26, 2013	Sep. 27, 2013	Radiation (03CH08-HY)
Preamplifier	COM-POWER	PA-103	161075	10Hz~1000MHz Gain:32dB	Feb. 26, 2013	Aug. 22, 2013~ Aug. 26, 2013	Feb. 25, 2014	Radiation (03CH08-HY)
Pre Amplifier	Agilent	8449B	3008A02665	1GHz~26.5GHz	Aug. 28, 2012	Aug. 22, 2013~ Aug. 26, 2013	Aug. 27, 2013	Radiation (03CH08-HY)
Turn Table	HD	Deis HD 2000	420/611	0 ~ 360 degree	N/A	Aug. 22, 2013~ Aug. 26, 2013	N/A	Radiation (03CH08-HY)
Antenna Mast	HD	MA 240	240/666	1 m ~ 4 m	N/A	Aug. 22, 2013~ Aug. 26, 2013	N/A	Radiation (03CH08-HY)

5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
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Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.72
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Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.26
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