FCC RF Test Report

APPLICANT	:	Lemobile Information Technology (Beijing) Co., Ltd
EQUIPMENT	:	mobile phone
BRAND NAME	:	
MODEL NAME	:	Le X829
FCC ID	:	2AFWMLEX829
STANDARD	:	FCC Part 15 Subpart E §15.407
CLASSIFICATION	:	(NII) Unlicensed National Information Infrastructure

The product was received on Mar. 02, 2016 and testing was completed on Apr. 20, 2016. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

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

James Huang

Prepared by: James Huang / Manager

Jones Tsai

Approved by: Jones Tsai / Manager

Testing Laboratory 2627

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

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR630205E	Rev. 01	Initial issue of report	May 03, 2016

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 15.403(i)	26dB & 99% Bandwidth	-	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	FCC ≤24 dBm (depend on band)	Pass	-
3.3	15.407(a)	Power Spectral Density	FCC ≤11 dBm (depend on band)	Pass	-
3.4	15.407(b)	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 3.22 dB at 5149.900 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 13.50 dB at 0.450 MHz
3.6	15.407(g)	Frequency Stability	Within Operation Band	Pass	-
3.7	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.8	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Lemobile Information Technology (Beijing) Co., Ltd
WENHUAYING NORTH (No.1, LINKONG 2nd St), GAOLIYING, SHUNYI DISTRICT, BEIJING

1.2 Manufacturer

Lemobile Information Technology (Beijing) Co., Ltd
WENHUAYING NORTH (No.1, LINKONG 2nd St), GAOLIYING, SHUNYI DISTRICT, BEIJING

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	mobile phone
Brand Name	
Model Name	Le X829
FCC ID	2AFWMLEX829
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA HSPA+(16QAM uplink is not supported)/LTE/ANT+/ WLAN 2.4GHz 802.11b/g/n HT20/HT40/ WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0+EDR/Bluetooth v4.1 LE
IMEI Code	Conducted: 869941020005984/869941020005992 Radiation: 869941020004383/869941020004391 Conduction: 869941020004383/869941020004391
HW Version	X2_NA_DVT1
SW Version	FIXNAOP5517302294D
EUT Stage	Identical Prototype

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

1.4 Product Specification of Equipment Under Test

Product Specification subjective to this standard	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5700 MHz
Maximum Output Power to Antenna	**<5180 MHz ~ 5240 MHz>** 802.11a : 14.49 dBm / 0.0281 W 802.11n HT20 : 16.96 dBm / 0.0497 W 802.11n HT40 : 16.37 dBm / 0.0434 W 802.11ac VHT20 : 16.02 dBm / 0.0400 W 802.11ac VHT40 : 15.31 dBm / 0.0340 W 802.11ac VHT80 : 14.21 dBm / 0.0264 W **<5260 MHz ~ 5320 MHz>** 802.11a : 14.54 dBm / 0.0284 W 802.11n HT20 : 16.74 dBm / 0.0472 W 802.11n HT40 : 16.14 dBm / 0.0411 W 802.11ac VHT20 : 15.78 dBm / 0.0378 W 802.11ac VHT40 : 15.13 dBm / 0.0326 W 802.11ac VHT80 : 14.24 dBm / 0.0265 W **<5500 MHz ~ 5700 MHz>** 802.11a : 15.82 dBm / 0.0382 W 802.11n HT20 : 16.59 dBm / 0.0456 W 802.11n HT40 : 15.86 dBm / 0.0385 W 802.11ac VHT20 : 15.59 dBm / 0.0362 W 802.11ac VHT40 : 14.86 dBm / 0.0306 W 802.11ac VHT80 : 13.78 dBm / 0.0239 W
99% Occupied Bandwidth	**<5180 MHz ~ 5240 MHz>** 802.11a : 16.78 MHz 802.11n HT20 : 17.78 MHz 802.11n HT40 : 36.06 MHz 802.11ac VHT20: 17.78 MHz 802.11ac VHT40 : 35.96 MHz 802.11ac VHT80 : 74.93 MHz **<5260 MHz ~ 5320 MHz>** 802.11a : 16.78 MHz 802.11n HT20 : 17.78 MHz 802.11n HT40 : 35.96 MHz 802.11ac VHT20: 17.78 MHz 802.11ac VHT40 : 35.96 MHz 802.11ac VHT80 : 74.81 MHz **<5500 MHz ~ 5700 MHz>** 802.11a : 16.73 MHz 802.11n HT20 : 17.78 MHz 802.11n HT40 : 35.96 MHz 802.11ac VHT20: 17.78 MHz 802.11ac VHT40 : 36.06 MHz 802.11ac VHT80 : 74.93 MHz

<table>
<tr><td>Antenna Type</td><td>Chain Port 1 : Monopole Antenna
Chain Port 2 : Monopole Antenna</td></tr>
<tr><td>Antenna Gain</td><td><5180 MHz ~ 5240 MHz>:
Chain Port 1 : 2.60 dBi
Chain Port 2 : -2.00 dBi
<5260 MHz ~ 5320 MHz>:
Chain Port 1 : 2.90 dBi
Chain Port 2 : -1.10 dBi
<5500 MHz ~ 5700 MHz>:
Chain Port 1 : 3.70 dBi
Chain Port 2 : 0.90 dBi</td></tr>
<tr><td>Type of Modulation</td><td>802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)</td></tr>
<tr><td>Antenna Function Description</td><td>
<table>
<tr><td></td><td>Chain Port 1</td><td>Chain Port 2</td></tr>
<tr><td>802.11a</td><td>V</td><td>V</td></tr>
<tr><td>802.11n/ac SISO</td><td>V</td><td>V</td></tr>
<tr><td>802.11n/ac MIMO</td><td>V</td><td>V</td></tr>
</table>
</td></tr>
</table>

1.5 Modification of EUT

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

1.6 Testing Location

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

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

1.7 Applicable Standards

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

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- FCC KDB 644545 D03 Guidance for IEEE 802 11ac New Rules v01
- ANSI C63.10-2013

Remark:

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

2 Test Configuration of Equipment Under Test

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

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

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

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5180- 5240 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38	**5190**	**46**	**5230**
	40	5200	48	5240
	42	5210		

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

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5500-5700 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102	**5510**	116	5580
	104	5520	132	5660
	106	5530	**134**	**5670**
	108	5540	136	5680
	110	**5550**	140	5700

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

2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

WLAN 5GHz 802.11a Average Power (dBm)											
Power vs. Channel				Power vs. Data Rate							
Channel	Frequency (MHz)	Chain Port	Data Rate 6Mbps	Channel	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
CH 36	5180	1	14.41	CH 48	14.42	14.36	14.44	14.43	14.40	14.41	14.46
CH 44	5220	1	14.44								
CH 48	5240	1	**14.49**								
CH 52	5260	1	**14.54**	CH 52	14.35	14.32	14.43	14.44	14.46	14.49	14.50
CH 60	5300	1	14.42								
CH 64	5320	1	14.50								
CH 100	5500	1	**15.82**	CH 100	15.67	15.58	15.76	15.72	15.80	15.77	15.79
CH 116	5580	1	15.62								
CH 140	5700	1	15.58								
CH 36	5180	2	**14.09**	CH 36	13.89	13.84	13.94	13.96	14.02	14.07	14.06
CH 44	5220	2	13.66								
CH 48	5240	2	13.53								
CH 52	5260	2	**13.67**	CH 52	13.45	13.34	13.53	13.57	13.61	13.62	13.64
CH 60	5300	2	13.59								
CH 64	5320	2	13.48								
CH 100	5500	2	**13.77**	CH 100	13.59	13.54	13.70	13.71	13.73	13.75	13.72
CH 116	5580	2	13.42								
CH 140	5700	2	13.66								

WLAN 5GHz 802.11n-HT20 Average Power (dBm)											
Power vs. Channel				Power vs. Data Rate							
Channel	Frequency (MHz)	Chain Port	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 36	5180	1	14.23	CH 48	14.06	14.11	14.30	14.35	14.36	14.28	14.32
CH 44	5220	1	14.30								
CH 48	5240	1	**14.37**								
CH 52	5260	1	**14.32**	CH 52	14.01	14.05	14.25	14.20	14.28	14.24	14.23
CH 60	5300	1	14.20								
CH 64	5320	1	14.11								
CH 100	5500	1	14.70	CH 116	14.66	14.68	14.88	14.84	14.86	14.89	14.85
CH 116	5580	1	**14.91**								
CH 140	5700	1	14.66								
CH 36	5180	2	**13.08**	CH 36	12.71	12.81	13.00	13.02	12.98	13.06	13.03
CH 44	5220	2	12.49								
CH 48	5240	2	12.57								
CH 52	5260	2	**13.46**	CH 52	13.15	13.22	13.38	13.43	13.41	13.44	13.45
CH 60	5300	2	13.30								
CH 64	5320	2	13.21								
CH 100	5500	2	**12.76**	CH 100	12.37	12.47	12.69	12.72	12.70	12.74	12.75
CH 116	5580	2	12.38								
CH 140	5700	2	12.44								
Channel	Frequency (MHz)	Chain Port	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 36	5180	1+2(1)	**14.10**	CH 36	13.72	13.83	13.90	14.07	14.06	14.03	14.09
CH 44	5220	1+2(1)	13.92								
CH 48	5240	1+2(1)	13.96								
CH 52	5260	1+2(1)	**14.04**	CH 52	13.63	13.83	12.98	14.01	13.99	14.00	14.02
CH 60	5300	1+2(1)	13.85								
CH 64	5320	1+2(1)	13.90								
CH 100	5500	1+2(1)	**13.60**	CH 100	13.22	13.41	13.59	13.57	13.55	13.56	13.58
CH 116	5580	1+2(1)	13.35								
CH 140	5700	1+2(1)	13.30								
CH 36	5180	1+2(2)	**13.79**	CH 36	13.50	13.48	13.77	13.67	13.72	13.66	13.75
CH 44	5220	1+2(2)	13.33								
CH 48	5240	1+2(2)	13.38								
CH 52	5260	1+2(2)	**13.38**	CH 52	13.08	13.10	13.34	13.33	13.30	13.36	13.35
CH 60	5300	1+2(2)	13.18								
CH 64	5320	1+2(2)	13.11								
CH 100	5500	1+2(2)	**13.55**	CH 100	13.34	13.39	13.54	13.49	13.51	13.50	13.52
CH 116	5580	1+2(2)	13.11								
CH 140	5700	1+2(2)	13.17								
CH 36	5180	1+2	**16.96**	CH 36	16.62	16.67	16.85	16.89	16.90	16.86	16.93
CH 44	5220	1+2	16.65								
CH 48	5240	1+2	16.69								
CH 52	5260	1+2	**16.74**	CH 52	16.37	16.49	16.17	16.69	16.67	16.71	16.70
CH 60	5300	1+2	16.54								
CH 64	5320	1+2	16.54								
CH 100	5500	1+2	**16.59**	CH 100	16.29	16.41	16.58	16.54	16.54	16.54	16.56
CH 116	5580	1+2	16.25								
CH 140	5700	1+2	16.25								

WLAN 5GHz 802.11n-HT40 Average Power (dBm)											
Power vs. Channel				Power vs. Data Rate							
Channel	Frequency (MHz)	Chain Port	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 38	5190	1	13.66	CH 46	13.77	13.80	13.80	13.73	13.72	13.69	13.66
CH 46	5230	1	**13.81**								
CH 54	5270	1	13.66	CH 62	13.66	13.61	13.71	13.64	13.59	13.65	13.57
CH 62	5310	1	**13.75**								
CH 102	5510	1	14.12	CH 134	14.25	14.22	14.24	14.17	14.20	14.24	14.18
CH 110	5550	1	14.17								
CH 134	5670	1	**14.31**								
CH 38	5190	2	**12.33**	CH 38	12.30	12.23	12.18	12.26	12.25	12.27	12.19
CH 46	5230	2	12.11								
CH 54	5270	2	**12.02**	CH 54	11.91	11.89	11.78	11.94	11.88	11.90	11.86
CH 62	5310	2	11.94								
CH 102	5510	2	**12.11**	CH 102	12.06	12.07	11.95	12.03	12.01	12.00	11.90
CH 110	5550	2	12.02								
CH 134	5670	2	11.91								
Channel	Frequency (MHz)	Chain Port	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 38	5190	1+2(1)	**13.46**	CH 38	13.37	13.30	13.34	13.33	13.29	13.36	13.27
CH 46	5230	1+2(1)	13.42								
CH 54	5270	1+2(1)	13.40	CH 62	13.43	13.34	13.38	13.45	13.35	13.41	13.37
CH 62	5310	1+2(1)	**13.47**								
CH 102	5510	1+2(1)	**12.86**	CH 102	12.79	12.72	12.68	12.75	12.71	12.70	12.63
CH 110	5550	1+2(1)	12.72								
CH 134	5670	1+2(1)	12.85								
CH 38	5190	1+2(2)	**13.25**	CH 38	13.23	13.21	13.08	13.14	13.19	13.10	13.08
CH 46	5230	1+2(2)	12.77								
CH 54	5270	1+2(2)	12.70	CH 62	12.71	12.68	12.66	12.72	12.73	12.69	12.67
CH 62	5310	1+2(2)	**12.75**								
CH 102	5510	1+2(2)	**12.84**	CH 102	12.85	12.80	12.77	12.82	12.83	12.78	12.74
CH 110	5550	1+2(2)	12.77								
CH 134	5670	1+2(2)	12.65								
CH 38	5190	1+2	**16.37**	CH 38	16.31	16.27	16.22	16.24	16.25	16.24	16.18
CH 46	5230	1+2	16.12								
CH 54	5270	1+2	16.07	CH 62	16.10	16.03	16.05	16.11	16.06	16.07	16.04
CH 62	5310	1+2	**16.14**								
CH 102	5510	1+2	**15.86**	CH 102	15.83	15.77	15.74	15.79	15.78	15.75	15.69
CH 110	5550	1+2	15.76								
CH 134	5670	1+2	15.76								

WLAN 5GHz 802.11ac VHT20 Average Power (dBm)												
Power vs. Channel				Power vs. Data Rate								
Channel	Frequency (MHz)	Chain Port	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8
CH 36	5180	1	14.34	CH 48	14.07	14.20	14.36	14.34	14.40	14.38	14.39	14.33
CH 44	5220	1	14.26									
CH 48	5240	1	**14.41**									
CH 52	5260	1	**14.31**	CH 52	13.96	14.07	14.25	14.22	14.26	14.27	14.29	14.24
CH 60	5300	1	14.19									
CH 64	5320	1	14.15									
CH 100	5500	1	13.63	CH 116	13.36	13.44	13.77	13.82	13.78	13.81	13.80	13.76
CH 116	5580	1	**13.84**									
CH 140	5700	1	13.56									
CH 36	5180	2	**12.12**	CH 36	11.75	11.78	12.08	12.02	12.06	12.05	12.11	12.04
CH 44	5220	2	11.71									
CH 48	5240	2	11.66									
CH 52	5260	2	**11.78**	CH 52	11.39	11.46	11.70	11.72	11.75	11.76	11.73	11.71
CH 60	5300	2	11.65									
CH 64	5320	2	11.45									
CH 100	5500	2	**11.79**	CH 100	11.46	11.53	11.67	11.72	11.74	11.76	11.75	11.73
CH 116	5580	2	11.33									
CH 140	5700	2	11.46									
CH 36	5180	1+2(1)	**13.16**	CH 36	12.75	12.88	13.09	13.12	13.15	13.13	13.10	13.11
CH 44	5220	1+2(1)	13.06									
CH 48	5240	1+2(1)	13.11									
CH 52	5260	1+2(1)	**13.14**	CH 52	12.69	12.86	13.07	13.10	13.06	13.12	13.11	13.08
CH 60	5300	1+2(1)	12.98									
CH 64	5320	1+2(1)	13.00									
CH 100	5500	1+2(1)	**12.58**	CH 100	12.21	12.25	12.48	12.51	12.54	12.55	12.52	12.50
CH 116	5580	1+2(1)	12.45									
CH 140	5700	1+2(1)	12.53									
CH 36	5180	1+2(2)	**12.86**	CH 36	12.57	12.64	12.81	12.76	12.83	12.84	12.80	12.79
CH 44	5220	1+2(2)	12.41									
CH 48	5240	1+2(2)	12.29									
CH 52	5260	1+2(2)	**12.36**	CH 52	11.97	12.18	12.32	12.29	12.34	12.33	12.35	12.31
CH 60	5300	1+2(2)	12.21									
CH 64	5320	1+2(2)	12.17									
CH 100	5500	1+2(2)	**12.58**	CH 100	12.29	12.38	12.51	12.55	12.57	12.54	12.50	12.52
CH 116	5580	1+2(2)	12.18									
CH 140	5700	1+2(2)	12.34									
CH 36	5180	1+2	**16.02**	CH 36	15.67	15.77	15.96	15.95	16.00	16.00	15.96	15.96
CH 44	5220	1+2	15.76									
CH 48	5240	1+2	15.73									
CH 52	5260	1+2	**15.78**	CH 52	15.35	15.54	15.72	15.72	15.73	15.76	15.76	15.72
CH 60	5300	1+2	15.62									
CH 64	5320	1+2	15.61									
CH 100	5500	1+2	**15.59**	CH 100	15.26	15.33	15.50	15.54	15.57	15.56	15.52	15.52
CH 116	5580	1+2	15.33									
CH 140	5700	1+2	15.44									

WLAN 5GHz 802.11ac VHT40 Average Power (dBm)													
Power vs. Channel				Power vs. Data Rate									
Channel	Frequency (MHz)	Chain Port	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
CH 38	5190	1	12.56	CH 46	12.71	12.65	12.63	12.64	12.66	12.62	12.76	12.68	12.70
CH 46	5230	1	**12.79**										
CH 54	5270	1	12.47	CH 62	12.55	12.49	12.54	12.48	12.52	12.51	12.56	12.53	12.46
CH 62	5310	1	**12.59**										
CH 102	5510	1	12.91	CH 134	13.11	13.07	13.09	13.03	13.06	13.04	13.14	13.05	13.08
CH 110	5550	1	12.86										
CH 134	5670	1	**13.18**										
CH 38	5190	2	**11.33**	CH 38	11.20	11.24	11.22	11.28	11.31	11.27	11.25	11.30	11.21
CH 46	5230	2	10.91										
CH 54	5270	2	10.90	CH 62	10.84	10.94	10.86	10.91	10.92	10.88	10.89	10.90	10.81
CH 62	5310	2	**10.96**										
CH 102	5510	2	**11.20**	CH 102	11.13	11.14	11.07	11.09	11.11	11.12	11.06	11.05	11.02
CH 110	5550	2	10.99										
CH 134	5670	2	10.81										
CH 38	5190	1+2(1)	**12.42**	CH 38	12.35	12.30	12.33	12.38	12.32	12.36	12.27	12.34	12.28
CH 46	5230	1+2(1)	12.40										
CH 54	5270	1+2(1)	**12.43**	CH 54	12.36	12.31	12.35	12.33	12.39	12.41	12.29	12.32	12.27
CH 62	5310	1+2(1)	12.32										
CH 102	5510	1+2(1)	**11.81**	CH 102	11.76	11.66	11.75	11.78	11.72	11.79	11.74	11.69	11.68
CH 110	5550	1+2(1)	11.71										
CH 134	5670	1+2(1)	11.67										
CH 38	5190	1+2(2)	**12.18**	CH 38	12.15	12.00	12.08	12.02	12.06	12.05	11.97	12.09	12.04
CH 46	5230	1+2(2)	11.90										
CH 54	5270	1+2(2)	**11.79**	CH 54	11.78	11.73	11.77	11.71	11.75	11.72	11.67	11.74	11.70
CH 62	5310	1+2(2)	11.73										
CH 102	5510	1+2(2)	**11.89**	CH 102	11.80	11.82	11.87	11.79	11.84	11.86	11.81	11.85	11.74
CH 110	5550	1+2(2)	11.83										
CH 134	5670	1+2(2)	11.71										
CH 38	5190	1+2	**15.31**	CH 38	15.26	15.16	15.22	15.22	15.20	15.22	15.13	15.23	15.17
CH 46	5230	1+2	15.17										
CH 54	5270	1+2	**15.13**	CH 54	15.09	15.04	15.08	15.04	15.09	15.09	15.00	15.05	15.01
CH 62	5310	1+2	15.04										
CH 102	5510	1+2	**14.86**	CH 102	14.79	14.75	14.82	14.80	14.79	14.84	14.78	14.78	14.72
CH 110	5550	1+2	14.78										
CH 134	5670	1+2	14.70										

WLAN 5GHz 802.11ac VHT80 Average Power (dBm)													
Power vs. Channel				Power vs. Data Rate									
Channel	Frequency (MHz)	Chain Port	MCS Index MCS0	Channel	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7	MCS8	MCS9
CH 42	5210	1	**12.42**	CH 42	12.31	12.28	12.33	12.36	12.35	12.39	12.34	12.32	12.41
CH 58	5290	1	**12.37**	CH 58	12.27	12.25	12.32	12.33	12.30	12.28	12.34	12.35	12.31
CH 106	5530	1	11.51	CH 122	11.80	11.75	11.83	11.81	11.79	11.84	11.82	11.86	11.85
CH 122	5610	1	**11.88**										
CH 42	5210	2	**10.10**	CH 42	9.96	9.89	10.08	10.06	10.03	10.01	10.07	10.09	10.05
CH 58	5290	2	**10.07**	CH 58	9.95	9.93	10.05	9.97	10.00	10.01	10.04	10.03	9.98
CH 106	5530	2	9.57	CH 122	9.63	9.61	9.72	9.67	9.66	9.70	9.69	9.71	9.68
CH 122	5610	2	**9.74**										
CH 42	5210	1+2(1)	**11.45**	CH 42	11.28	11.25	11.42	11.39	11.37	11.41	11.43	11.38	11.40
CH 58	5290	1+2(1)	**11.48**	CH 58	11.30	11.28	11.43	11.45	11.38	11.47	11.46	11.41	11.42
CH 106	5530	1+2(1)	10.44	CH 122	10.73	10.62	10.82	10.78	10.72	10.85	10.80	10.84	10.79
CH 122	5610	1+2(1)	**10.86**										
CH 42	5210	1+2(2)	**10.95**	CH 42	10.80	10.62	10.91	10.87	10.90	10.86	10.89	10.89	10.92
CH 58	5290	1+2(2)	**10.96**	CH 58	10.83	10.62	10.94	10.84	10.71	10.80	10.86	10.92	10.93
CH 106	5530	1+2(2)	10.52	CH 122	10.57	10.40	10.66	10.58	10.64	10.54	10.61	10.65	10.67
CH 122	5610	1+2(2)	**10.68**										
CH 42	5210	1+2	**14.21**	CH 42	14.06	13.96	14.18	14.15	14.15	14.16	14.18	14.15	14.18
CH 58	5290	1+2	**14.24**	CH 58	14.08	13.97	14.20	14.16	14.07	14.16	14.18	14.18	14.19
CH 106	5530	1+2	13.49	CH 122	13.66	13.52	13.75	13.69	13.69	13.71	13.72	13.76	13.74
CH 122	5610	1+2	**13.78**										

Note: Chain Port 1+2 is a calculated result from sum of the power Chain Port 1+2(1) and Chain Port 1+2(2).

2.3 Test Mode

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

Single Antenna

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

MIMO Antenna

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

Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + USB Cable (Charging from Adapter 1)
Remark: For Radiated TCs, the tests were performed with adapter 1 and USB cable.	

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

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

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

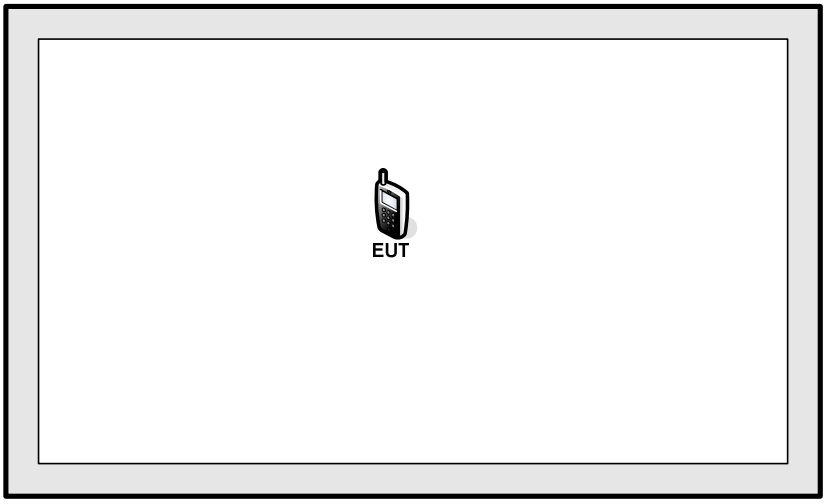
Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5700MHz
		802.11ac VHT20	802.11ac VHT20	802.11ac VHT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

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

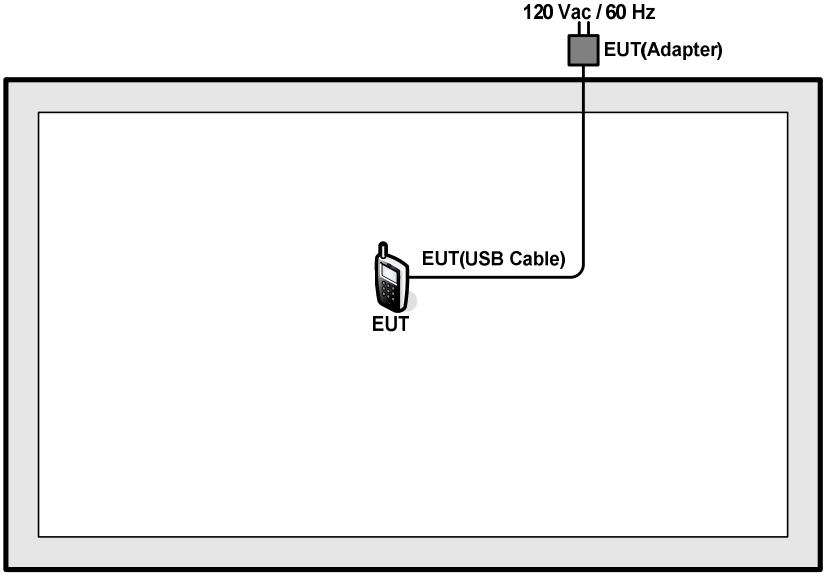
Ch. #		Band I：5180-5240 MHz	Band II：5260-5320 MHz	Band III：5500-5700MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	122

2.4 Connection Diagram of Test System

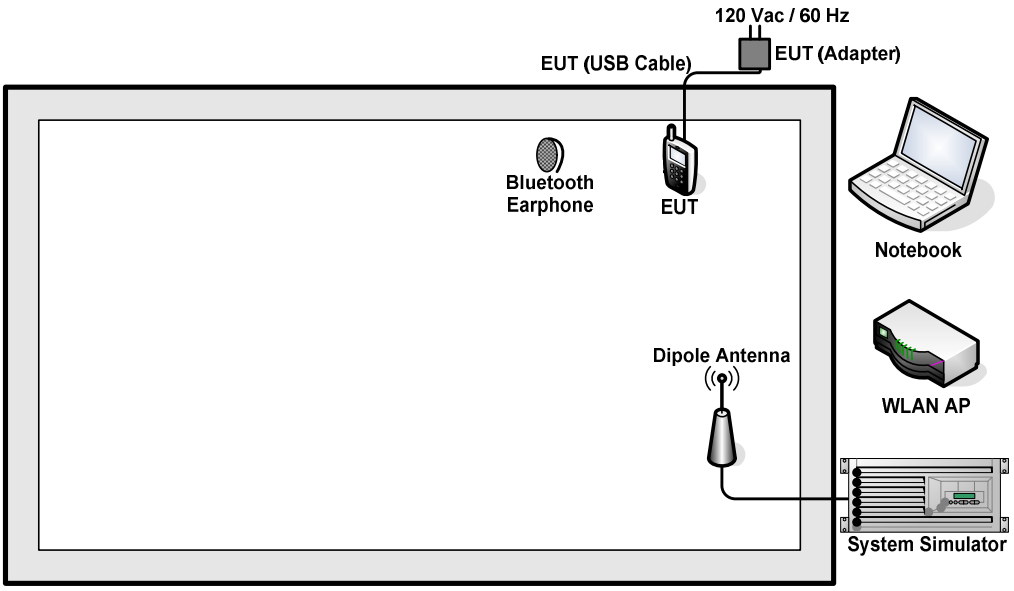
<WLAN5GHz 802.11a Tx Mode>



< WLAN5GHz 802.11n HT20/HT40/WLAN5GHz 802.11ac VHT20/VHT40/VHT80 Tx Mode>



<AC Conducted Emission Mode>



2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
2.	WLAN AP	D-link	DIR-855	KA2DIR855A2	N/A	Unshielded, 1.8 m
3.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
4.	Bluetooth Earphone	Nokia	BH-106	QTLBH-106	N/A	N/A
5.	DC Power Supply	GW INSTEK	GPD-2303S	N/A	N/A	Unshielded, 1.8 m

2.6 EUT Operation Test Setup

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

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

2.7 Measurement Results Explanation Example

For all conducted test items:

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

Example:
The spectrum analyzer offset is derived from RF cable loss.
Offset = RF cable loss.
Following shows an offset computation example with cable loss 7.0 dB.

Offset (dB) = RF cable loss(dB).
= 7.0 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

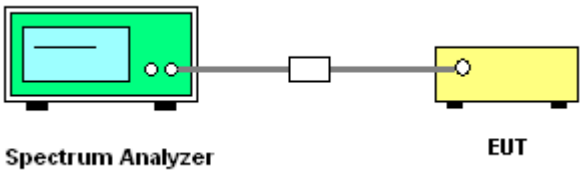
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

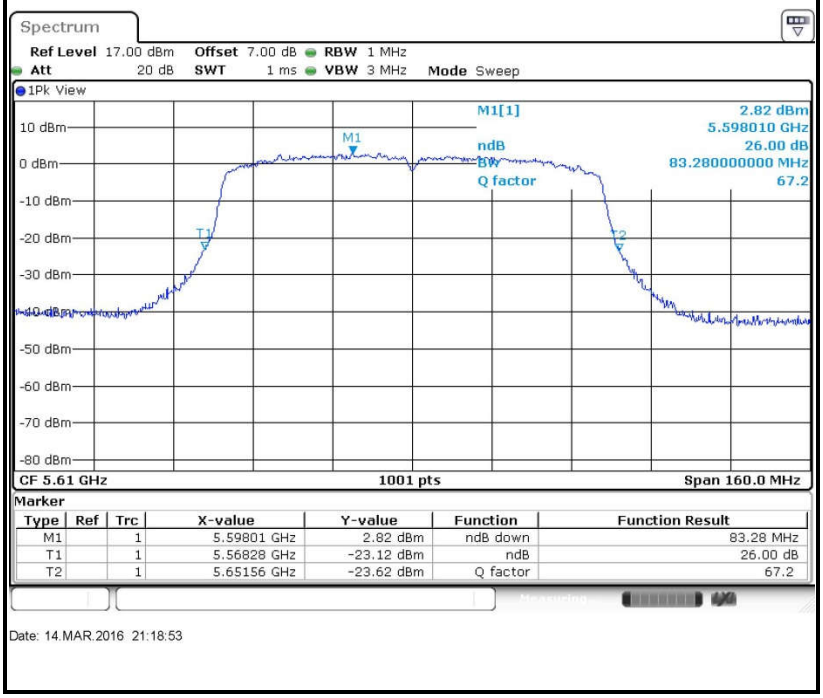
3.1.4 Test Setup



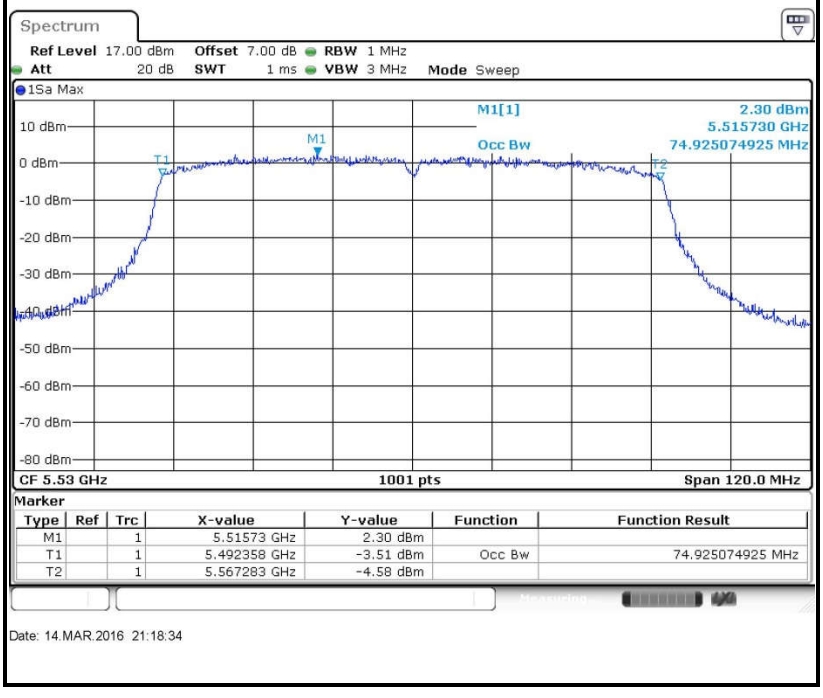
3.1.5 Test Result of 26dB & 99% Occupied Bandwidth Plots

Please refer to Appendix A.

Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW.

For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

3.2.2 Measuring Instruments

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

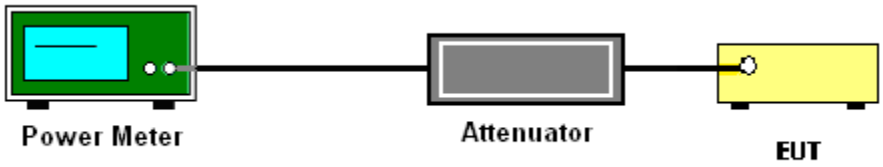
3.2.3 Test Procedures

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

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

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

For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02. Section F) Maximum power spectral density.

 # Method SA-2 #

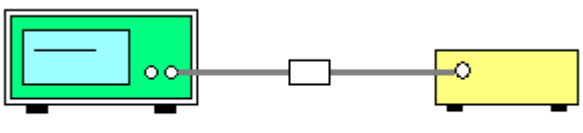
(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

1. The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02.
   - Measure the duty cycle.
   - Set span to encompass the entire emission bandwidth (EBW) of the signal.
   - Set RBW = 1 MHz.
   - Set VBW ≥ 3 MHz.
   - Number of points in sweep ≥ 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 v02r01.

   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.

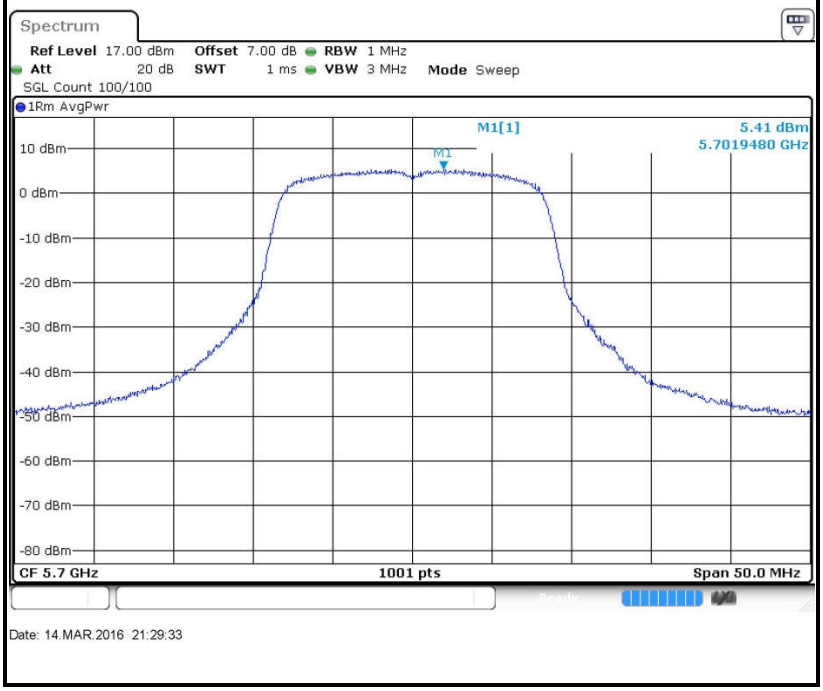
3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Spectral Density(dBm/MHz)



3.4 Unwanted Radiated Emission Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part15.205.

3.4.1 Limit of Unwanted Emissions

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

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

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

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

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

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

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

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r02. Section G) Unwanted emissions measurement.

   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz

   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz

   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

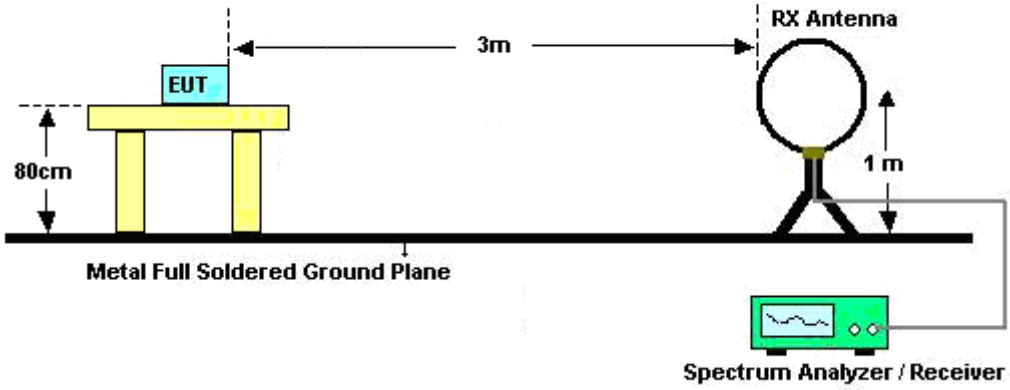
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz

   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

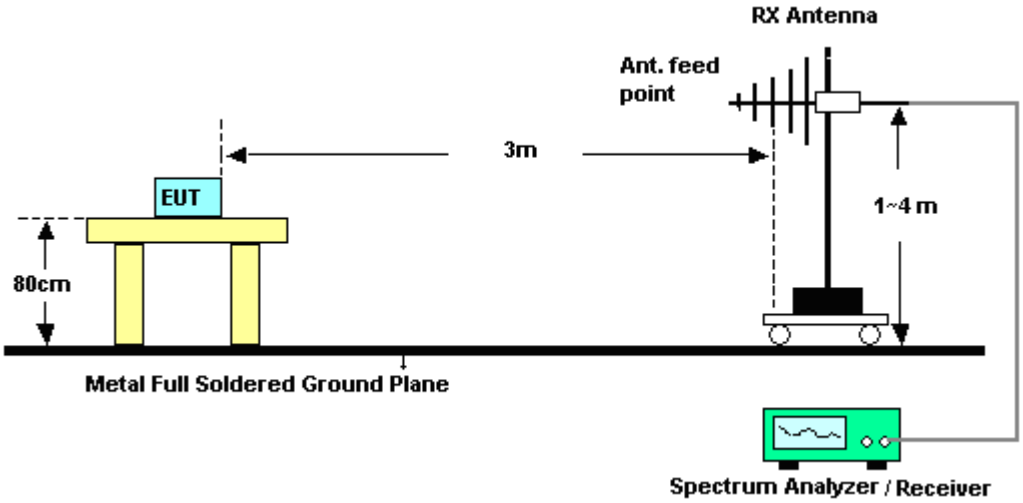
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband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

3.4.4 Test Setup

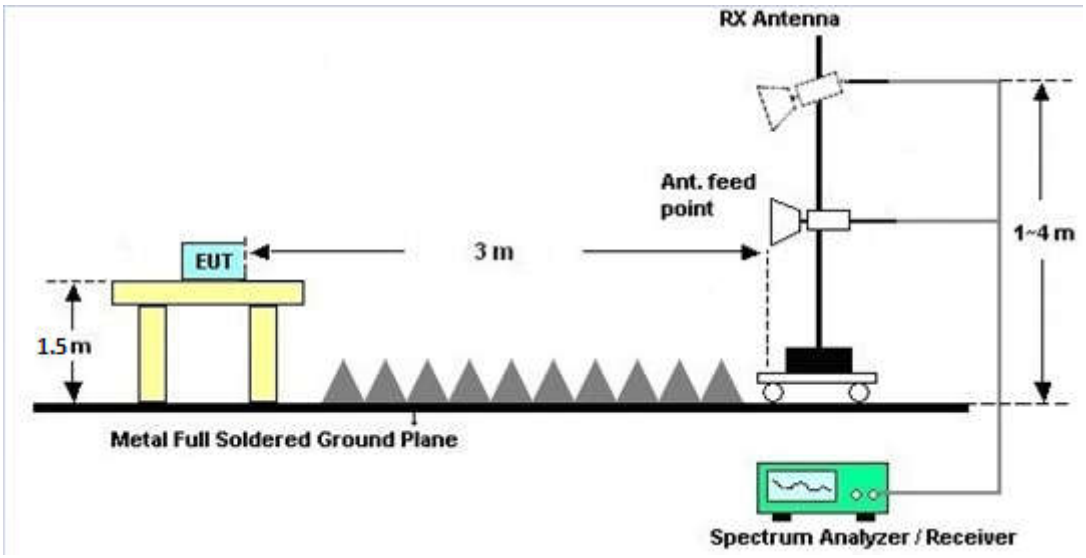
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix B.

3.4.7 Duty Cycle

Please refer to Appendix D.

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

Please refer to Appendix B.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

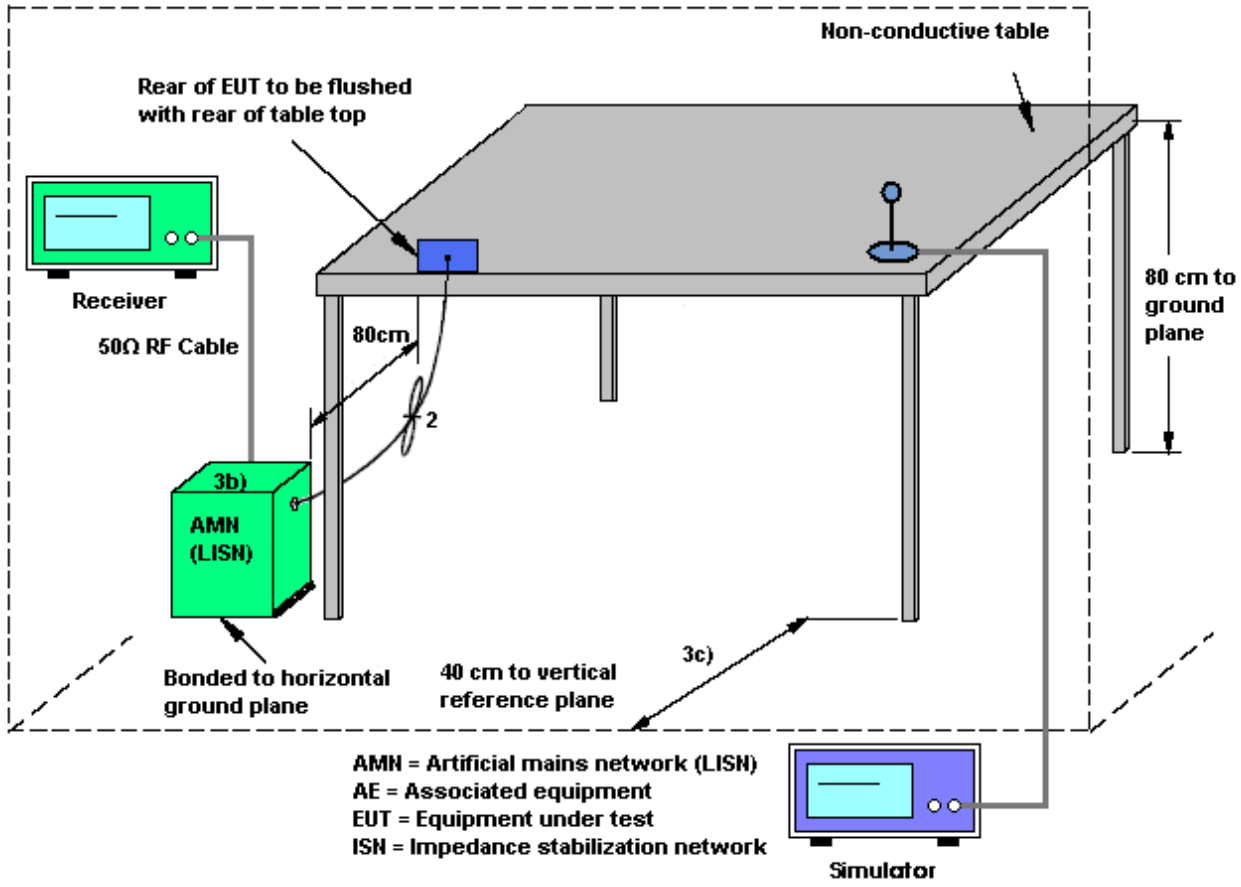
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

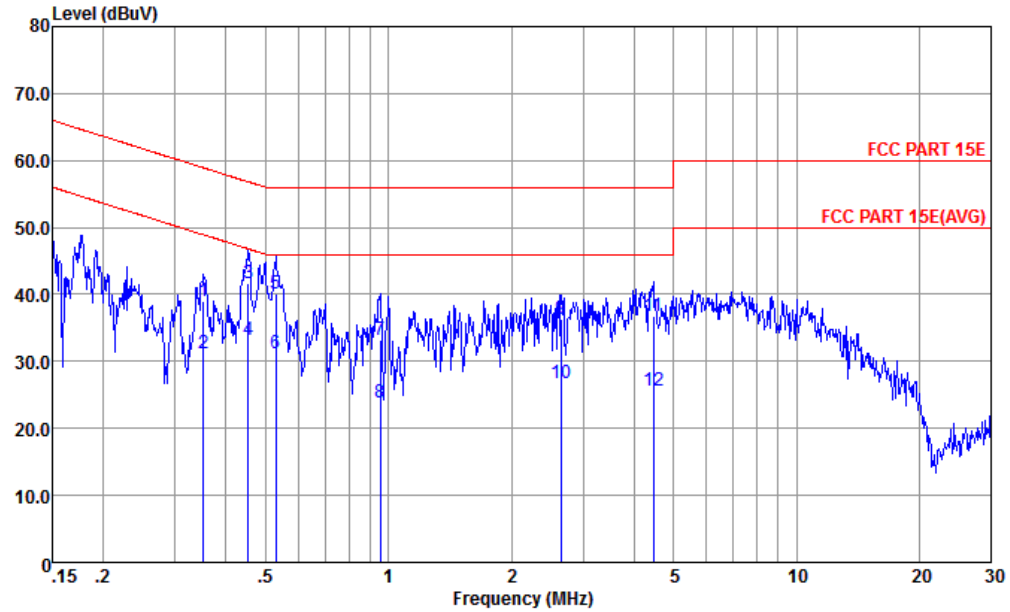
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Amos Zhang	Relative Humidity :	36~38%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + USB Cable (Charging from Adapter 1)		

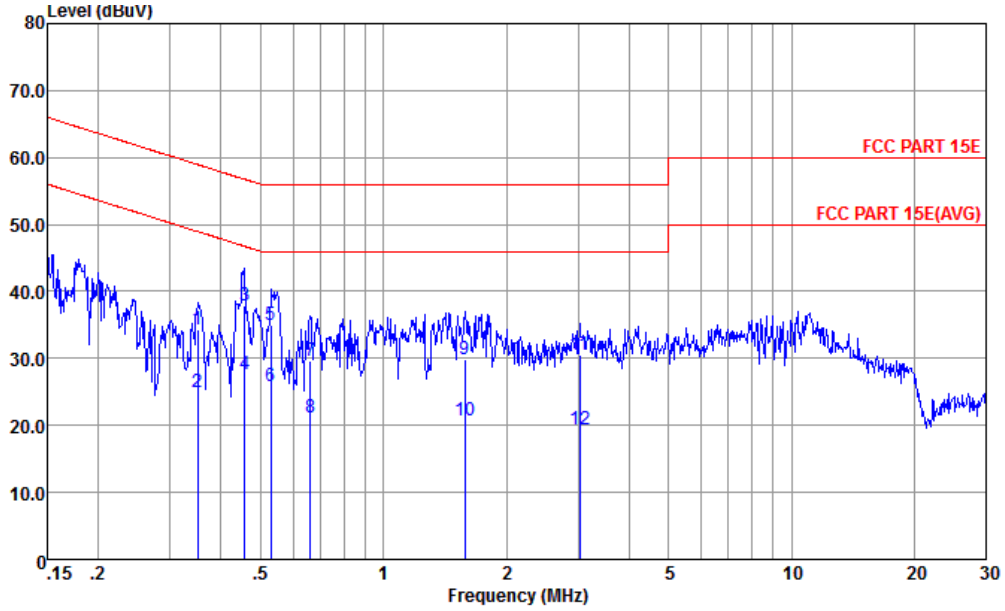


Site : CO01-KS
Condition : FCC PART 15E LISN-L-20151024 LINE

mode : Mode 1
: 869941020004383/869941020004391 #15

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.35	38.99	-19.92	58.91	28.60	0.23	10.16	QP
2	0.35	31.09	-17.82	48.91	20.70	0.23	10.16	Average
3	0.45	41.60	-15.20	56.80	31.20	0.23	10.17	QP
4 *	0.45	33.30	-13.50	46.80	22.90	0.23	10.17	Average
5	0.53	40.09	-15.91	56.00	29.70	0.23	10.16	QP
6	0.53	31.19	-14.81	46.00	20.80	0.23	10.16	Average
7	0.95	33.29	-22.71	56.00	22.90	0.25	10.14	QP
8	0.95	23.79	-22.21	46.00	13.40	0.25	10.14	Average
9	2.65	36.23	-19.77	56.00	25.90	0.18	10.15	QP
10	2.65	26.73	-19.27	46.00	16.40	0.18	10.15	Average
11	4.45	36.86	-19.14	56.00	26.50	0.19	10.17	QP
12	4.45	25.56	-20.44	46.00	15.20	0.19	10.17	Average

Test Mode :	Mode 1	Temperature :	20~22℃
Test Engineer :	Amos Zhang	Relative Humidity :	36~38%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5GHz) Link + USB Cable (Charging from Adapter 1)		



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

mode : Mode 1
: 869941020004383/869941020004391 #15

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.35	34.38	-24.58	58.96	23.90	0.32	10.16	QP
2		0.35	24.98	-23.98	48.96	14.50	0.32	10.16	Average
3	*	0.46	37.89	-18.87	56.76	27.40	0.32	10.17	QP
4		0.46	27.59	-19.17	46.76	17.10	0.32	10.17	Average
5		0.53	34.98	-21.02	56.00	24.50	0.32	10.16	QP
6		0.53	25.88	-20.12	46.00	15.40	0.32	10.16	Average
7		0.66	29.69	-26.31	56.00	19.20	0.34	10.15	QP
8		0.66	21.09	-24.91	46.00	10.60	0.34	10.15	Average
9		1.59	29.82	-26.18	56.00	19.30	0.38	10.14	QP
10		1.59	20.62	-25.38	46.00	10.10	0.38	10.14	Average
11		3.03	30.63	-25.37	56.00	20.11	0.37	10.15	QP
12		3.03	19.43	-26.57	46.00	8.91	0.37	10.15	Average

3.6 Frequency Stability Measurement

3.6.1 Limit of Frequency Stability

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

3.6.2 Measuring Instruments

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

3.6.3 Test Procedures

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

3.6.4 Test Setup

3.6.5 Test Result of Frequency Stability

Please refer to Appendix A.

3.7 Automatically Discontinue Transmission

3.7.1 Limit of Automatically Discontinue Transmission

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

3.7.2 Measuring Instruments

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

3.7.3 Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

3.8 Antenna Requirements

3.8.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2) ,if transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.8.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.8.3 Antenna Gain

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

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 $N_{ANT} \leq 4$.

Directional gain may be calculated by using the formulas applicable to equal gain antennas with GANT set equal to the gain of the antenna having the highest gain;

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.

	Ant 1 (dBi)	Ant 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
Band I	2.60	-2.00	2.60	3.61	0.00	0.00
Band II	2.90	-1.10	2.90	4.14	0.00	0.00
Band III	3.70	0.90	3.70	5.42	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	R&S	FSV30	101338	9kHz~30GHz	May 04, 2015	Mar. 04, 2016~ Mar. 14, 2016	May 03, 2016	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	30MHz~40GHz	Jan. 20, 2016	Mar. 04, 2016~ Mar. 14, 2016	Jan. 19, 2017	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 20, 2016	Mar. 04, 2016~ Mar. 14, 2016	Jan. 19, 2017	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 24, 2015	Mar. 04, 2016~ Mar. 14, 2016	Oct. 23, 2016	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz; Max 30dBm	Sep. 10, 2015	Mar. 04, 2016~ Apr. 02, 2016	Sep. 09, 2016	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44GHz	Jun. 05, 2015	Mar. 04, 2016~ Apr. 02, 2016	Jun. 04, 2016	Radiation (03CH03-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 07, 2015	Mar. 04, 2016~ Apr. 02, 2016	Nov. 06, 2016	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	25MHz-2GHz	Jan. 16, 2016	Mar. 04, 2016~ Apr. 02, 2016	Jan. 15, 2017	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120 D	9120D-1356	1GHz~18GHz	Jun. 25, 2015	Mar. 04, 2016~ Apr. 02, 2016	Jun. 24, 2016	Radiation (03CH03-KS)
SHF-EHF Horn	com-power	AH-840	101070	18Ghz-40Ghz	Oct. 10, 2015	Mar. 04, 2016~ Apr. 02, 2016	Oct. 09, 2016	Radiation (03CH03-KS)
Amplifier	Burgeon	BPA-530	102212	0.01MHz-3000M Hz	Aug. 10, 2015	Mar. 04, 2016~ Apr. 02, 2016	Aug. 09, 2016	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 24, 2015	Mar. 04, 2016~ Apr. 02, 2016	Oct. 23, 2016	Radiation (03CH03-KS)
Amplifier	MITEQ	TTA1840-35-HG	1887435	18GHz~40GHz	Aug. 27, 2015	Mar. 04, 2016~ Apr. 02, 2016	Aug. 26, 2016	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Mar. 04, 2016~ Apr. 02, 2016	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Mar. 04, 2016~ Apr. 02, 2016	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Mar. 04, 2016~ Apr. 02, 2016	NCR	Radiation (03CH03-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz	May 04, 2015	Apr. 20, 2016	May 03, 2016	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 24, 2015	Apr. 20, 2016	Oct. 23, 2016	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 24, 2015	Apr. 20, 2016	Oct. 23, 2016	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 24, 2015	Apr. 20, 2016	Oct. 23, 2016	Conduction (CO01-KS)

NCR: No Calibration Required

5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.3 dB**

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.5 dB**

Appendix A. Conducted Test Results

Report Number : FR630205E

Test Engineer:	Issac Song	Temperature:	24~25	°C
Test Date:	2016/3/4~2016/3/14	Relative Humidity:	49~51	%

Report Number : FR630205E

TEST RESULTS DATA
26dB and 99% OBW

Band I														
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)			Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	36	5180	16.78	16.73	20.53	20.68	-		22.25	22.24		
11a	6Mbps	1	44	5220	16.78	16.73	20.73	20.68	-		22.25	22.24		
11a	6Mbps	1	48	5240	16.78	16.78	20.78	20.53	-		22.25	22.25		
HT20	MCS0	1	36	5180	17.68	17.68	21.28	21.28	-		22.48	22.48		
HT20	MCS0	1	44	5220	17.68	17.68	21.68	21.68	-		22.48	22.48		
HT20	MCS0	1	48	5240	17.68	17.68	21.58	21.53	-		22.48	22.48		
HT40	MCS0	1	38	5190	36.06	35.96	41.45	41.27	-		23.01	23.01		
HT40	MCS0	1	46	5230	35.96	35.86	41.45	41.36	-		23.01	23.01		
VHT20	MCS0	1	36	5180	17.68	17.68	21.18	21.48	-		22.48	22.48		
VHT20	MCS0	1	44	5220	17.68	17.73	21.38	21.63	-		22.48	22.49		
VHT20	MCS0	1	48	5240	17.68	17.68	21.53	21.38	-		22.48	22.48		
VHT40	MCS0	1	38	5190	35.96	35.86	41.36	41.45	-		23.01	23.01		
VHT40	MCS0	1	46	5230	35.96	35.96	41.54	41.45	-		23.01	23.01		
VHT80	MCS0	1	42	5210	74.81	74.81	82.96	82.32	-		23.01	23.01		
HT20	MCS0	2	36	5180	17.68	17.73	21.18	21.43	-		22.48			
HT20	MCS0	2	44	5220	17.68	17.73	21.58	21.43	-		22.48			
HT20	MCS0	2	48	5240	17.73	17.78	21.53	21.28	-		22.49			
HT40	MCS0	2	38	5190	35.86	35.96	41.45	41.36	-		23.01			
HT40	MCS0	2	46	5230	35.96	35.96	41.36	41.18	-		23.01			
VHT20	MCS0	2	36	5180	17.68	17.73	21.38	21.23	-		22.48			
VHT20	MCS0	2	44	5220	17.68	17.78	21.58	21.38	-		22.48			
VHT20	MCS0	2	48	5240	17.68	17.73	21.63	21.33	-		22.48			
VHT40	MCS0	2	38	5190	35.96	35.86	41.18	41.27	-		23.01			
VHT40	MCS0	2	46	5230	35.96	35.96	41.45	41.63	-		23.01			
VHT80	MCS0	2	42	5210	74.81	74.93	82.64	81.68	-		23.01			

TEST RESULTS DATA
Average Power Table

FCC Band I															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	36	5180	0.21	0.21	14.41	14.09		24.00	24.00	2.60	-2.00		Pass
11a	6Mbps	1	44	5220	0.21	0.21	14.44	13.66		24.00	24.00	2.60	-2.00		Pass
11a	6Mbps	1	48	5240	0.21	0.21	14.49	13.53		24.00	24.00	2.60	-2.00		Pass
HT20	MCS0	1	36	5180	0.25	0.23	14.23	13.08		24.00	24.00	2.60	-2.00		Pass
HT20	MCS0	1	44	5220	0.25	0.23	14.30	12.49		24.00	24.00	2.60	-2.00		Pass
HT20	MCS0	1	48	5240	0.25	0.23	14.37	12.57		24.00	24.00	2.60	-2.00		Pass
HT40	MCS0	1	38	5190	0.48	0.46	13.66	12.33		24.00	24.00	2.60	-2.00		Pass
HT40	MCS0	1	46	5230	0.48	0.46	13.81	12.11		24.00	24.00	2.60	-2.00		Pass
VHT20	MCS0	1	36	5180	0.22	0.24	14.34	12.12		24.00	24.00	2.60	-2.00		Pass
VHT20	MCS0	1	44	5220	0.22	0.24	14.26	11.71		24.00	24.00	2.60	-2.00		Pass
VHT20	MCS0	1	48	5240	0.22	0.24	14.41	11.66		24.00	24.00	2.60	-2.00		Pass
VHT40	MCS0	1	38	5190	0.45	0.42	12.56	11.33		24.00	24.00	2.60	-2.00		Pass
VHT40	MCS0	1	46	5230	0.45	0.42	12.79	10.91		24.00	24.00	2.60	-2.00		Pass
VHT80	MCS0	1	42	5210	0.83	0.83	12.42	10.10		24.00	24.00	2.60	-2.00		Pass
HT20	MCS0	2	36	5180	0.23	0.24	14.10	13.79	16.96	24.00		2.60			Pass
HT20	MCS0	2	44	5220	0.23	0.24	13.92	13.33	16.65	24.00		2.60			Pass
HT20	MCS0	2	48	5240	0.23	0.24	13.96	13.38	16.69	24.00		2.60			Pass
HT40	MCS0	2	38	5190	0.44	0.48	13.46	13.25	16.37	24.00		2.60			Pass
HT40	MCS0	2	46	5230	0.44	0.48	13.42	12.77	16.12	24.00		2.60			Pass
VHT20	MCS0	2	36	5180	0.24	0.23	13.16	12.86	16.02	24.00		2.60			Pass
VHT20	MCS0	2	44	5220	0.24	0.23	13.06	12.41	15.76	24.00		2.60			Pass
VHT20	MCS0	2	48	5240	0.24	0.23	13.11	12.29	15.73	24.00		2.60			Pass
VHT40	MCS0	2	38	5190	0.39	0.46	12.42	12.18	15.31	24.00		2.60			Pass
VHT40	MCS0	2	46	5230	0.39	0.46	12.40	11.90	15.17	24.00		2.60			Pass
VHT80	MCS0	2	42	5210	0.80	0.80	11.45	10.95	14.21	24.00		2.60			Pass

Report Number : FR630205E

TEST RESULTS DATA
Power Spectral Density

FCC Band I															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	36	5180	0.21	0.21	4.00	-		11.00	11.00	2.60	-2.00		Pass
11a	6Mbps	1	44	5220	0.21	0.21	3.77	-		11.00	11.00	2.60	-2.00		Pass
11a	6Mbps	1	48	5240	0.21	0.21	3.81	-		11.00	11.00	2.60	-2.00		Pass
HT20	MCS0	1	36	5180	0.25	0.23	3.37	-		11.00	11.00	2.60	-2.00		Pass
HT20	MCS0	1	44	5220	0.25	0.23	3.47	-		11.00	11.00	2.60	-2.00		Pass
HT20	MCS0	1	48	5240	0.25	0.23	3.33	-		11.00	11.00	2.60	-2.00		Pass
HT40	MCS0	1	38	5190	0.48	0.46	-0.08	-		11.00	11.00	2.60	-2.00		Pass
HT40	MCS0	1	46	5230	0.48	0.46	0.24	-		11.00	11.00	2.60	-2.00		Pass
VHT20	MCS0	1	36	5180	0.22	0.24	3.51	-		11.00	11.00	2.60	-2.00		Pass
VHT20	MCS0	1	44	5220	0.22	0.24	3.59	-		11.00	11.00	2.60	-2.00		Pass
VHT20	MCS0	1	48	5240	0.22	0.24	3.62	-		11.00	11.00	2.60	-2.00		Pass
VHT40	MCS0	1	38	5190	0.45	0.42	-1.03	-		11.00	11.00	2.60	-2.00		Pass
VHT40	MCS0	1	46	5230	0.45	0.42	-0.89	-		11.00	11.00	2.60	-2.00		Pass
VHT80	MCS0	1	42	5210	0.83	0.83	-4.14	-		11.00	11.00	2.60	-2.00		Pass
HT20	MCS0	2	36	5180	0.23	0.24			5.37	11.00		3.61			Pass
HT20	MCS0	2	44	5220	0.23	0.24			5.24	11.00		3.61			Pass
HT20	MCS0	2	48	5240	0.23	0.24			5.37	11.00		3.61			Pass
HT40	MCS0	2	38	5190	0.44	0.48			1.88	11.00		3.61			Pass
HT40	MCS0	2	46	5230	0.44	0.48			1.43	11.00		3.61			Pass
VHT20	MCS0	2	36	5180	0.24	0.23			4.42	11.00		3.61			Pass
VHT20	MCS0	2	44	5220	0.24	0.23			4.36	11.00		3.61			Pass
VHT20	MCS0	2	48	5240	0.24	0.23			3.87	11.00		3.61			Pass
VHT40	MCS0	2	38	5190	0.39	0.46			0.64	11.00		3.61			Pass
VHT40	MCS0	2	46	5230	0.39	0.46			0.47	11.00		3.61			Pass
VHT80	MCS0	2	42	5210	0.80	0.80			-3.44	11.00		3.61			Pass

Report Number : FR630205E

TEST RESULTS DATA
26dB and 99% OBW

Band II															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	52	5260	16.73	16.73	20.58	20.68	23.24	23.24	29.24	29.24	23.98	23.98	
11a	6Mbps	1	60	5300	16.68	16.68	20.33	20.68	23.22	23.22	29.22	29.22	23.98	23.98	
11a	6Mbps	1	64	5320	16.73	16.78	20.68	20.43	23.24	23.25	29.24	29.25	23.98	23.98	
HT20	MCS0	1	52	5260	17.68	17.68	21.58	21.53	23.48	23.48	29.48	29.48	23.98	23.98	
HT20	MCS0	1	60	5300	17.68	17.73	21.58	21.58	23.48	23.49	29.48	29.49	23.98	23.98	
HT20	MCS0	1	64	5320	17.73	17.68	21.68	21.58	23.49	23.48	29.49	29.48	23.98	23.98	
HT40	MCS0	1	54	5270	35.86	35.96	41.54	41.54	23.98	23.98	30.00	30.00	23.98	23.98	
HT40	MCS0	1	62	5310	35.96	35.96	41.36	41.54	23.98	23.98	30.00	30.00	23.98	23.98	
VHT20	MCS0	1	52	5260	17.68	17.68	21.63	21.63	23.48	23.48	29.48	29.48	23.98	23.98	
VHT20	MCS0	1	60	5300	17.68	17.63	21.43	21.48	23.48	23.46	29.48	29.46	23.98	23.98	
VHT20	MCS0	1	64	5320	17.68	17.68	21.58	21.68	23.48	23.48	29.48	29.48	23.98	23.98	
VHT40	MCS0	1	54	5270	35.96	35.86	41.54	41.45	23.98	23.98	30.00	30.00	23.98	23.98	
VHT40	MCS0	1	62	5310	35.96	35.96	41.36	41.54	23.98	23.98	30.00	30.00	23.98	23.98	
VHT80	MCS0	1	58	5290	74.81	74.81	82.48	82.00	23.98	23.98	30.00	30.00	23.98	23.98	
HT20	16.74	2	52	5260	17.68	17.78	21.48	21.38	23.48		29.48		23.98		
HT20	16.74	2	60	5300	17.68	17.78	21.53	21.33	23.48		29.48		23.98		
HT20	16.74	2	64	5320	17.73	17.78	21.53	21.33	23.49		29.49		23.98		
HT40	MCS0	2	54	5270	35.96	35.96	41.54	41.27	23.98		30.00		23.98		
HT40	MCS0	2	62	5310	35.96	35.96	41.27	41.45	23.98		30.00		23.98		
VHT20	MCS0	2	52	5260	17.68	17.73	21.48	21.38	23.48		29.48		23.98		
VHT20	MCS0	2	60	5300	17.68	17.73	21.43	21.53	23.48		29.48		23.98		
VHT20	MCS0	2	64	5320	17.68	17.78	21.63	21.38	23.48		29.48		23.98		
VHT40	MCS0	2	54	5270	35.96	35.86	41.36	41.36	23.98		30.00		23.98		
VHT40	MCS0	2	62	5310	35.86	35.96	41.45	41.36	23.98		30.00		23.98		
VHT80	MCS0	2	58	5290	74.81	74.81	82.48	82.00	23.98		30.00		23.98		

TEST RESULTS DATA
Average Power Table

FCC Band II															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	52	5260	0.21	0.21	14.54	13.67		23.98	23.98	2.90	-1.10		Pass
11a	6Mbps	1	60	5300	0.21	0.21	14.42	13.59		23.98	23.98	2.90	-1.10		Pass
11a	6Mbps	1	64	5320	0.21	0.21	14.50	13.48		23.98	23.98	2.90	-1.10		Pass
HT20	MCS0	1	52	5260	0.25	0.23	14.32	13.46		23.98	23.98	2.90	-1.10		Pass
HT20	MCS0	1	60	5300	0.25	0.23	14.20	13.30		23.98	23.98	2.90	-1.10		Pass
HT20	MCS0	1	64	5320	0.25	0.23	14.11	13.21		23.98	23.98	2.90	-1.10		Pass
HT40	MCS0	1	54	5270	0.48	0.46	13.66	12.02		23.98	23.98	2.90	-1.10		Pass
HT40	MCS0	1	62	5310	0.48	0.46	13.75	11.94		23.98	23.98	2.90	-1.10		Pass
VHT20	MCS0	1	52	5260	0.22	0.24	14.31	11.78		23.98	23.98	2.90	-1.10		Pass
VHT20	MCS0	1	60	5300	0.22	0.24	14.19	11.65		23.98	23.98	2.90	-1.10		Pass
VHT20	MCS0	1	64	5320	0.22	0.24	14.15	11.45		23.98	23.98	2.90	-1.10		Pass
VHT40	MCS0	1	54	5270	0.45	0.42	12.47	10.90		23.98	23.98	2.90	-1.10		Pass
VHT40	MCS0	1	62	5310	0.45	0.42	12.59	10.96		23.98	23.98	2.90	-1.10		Pass
VHT80	MCS0	1	58	5290	0.83	0.83	12.37	10.07		23.98	23.98	2.90	-1.10		Pass
HT20	16.74	2	52	5260	0.23	0.24	14.04	13.38	16.74	23.98		2.90			Pass
HT20	16.74	2	60	5300	0.23	0.24	13.85	13.18	16.54	23.98		2.90			Pass
HT20	16.74	2	64	5320	0.23	0.24	13.90	13.11	16.54	23.98		2.90			Pass
HT40	MCS0	2	54	5270	0.44	0.48	13.40	12.70	16.07	23.98		2.90			Pass
HT40	MCS0	2	62	5310	0.44	0.48	13.47	12.75	16.14	23.98		2.90			Pass
VHT20	MCS0	2	52	5260	0.24	0.23	13.14	12.36	15.78	23.98		2.90			Pass
VHT20	MCS0	2	60	5300	0.24	0.23	12.98	12.21	15.62	23.98		2.90			Pass
VHT20	MCS0	2	64	5320	0.24	0.23	13.00	12.17	15.61	23.98		2.90			Pass
VHT40	MCS0	2	54	5270	0.39	0.46	12.43	11.79	15.13	23.98		2.90			Pass
VHT40	MCS0	2	62	5310	0.39	0.46	12.32	11.73	15.04	23.98		2.90			Pass
VHT80	MCS0	2	58	5290	0.80	0.80	11.48	10.96	14.24	23.98		2.90			Pass

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TEST RESULTS DATA
Power Spectral Density

Band II															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	52	5260	0.21	0.21	3.76	-		11.00	11.00	2.90	-1.10		Pass
11a	6Mbps	1	60	5300	0.21	0.21	3.81	-		11.00	11.00	2.90	-1.10		Pass
11a	6Mbps	1	64	5320	0.21	0.21	3.70	-		11.00	11.00	2.90	-1.10		Pass
HT20	MCS0	1	52	5260	0.25	0.23	3.51	-		11.00	11.00	2.90	-1.10		Pass
HT20	MCS0	1	60	5300	0.25	0.23	3.44	-		11.00	11.00	2.90	-1.10		Pass
HT20	MCS0	1	64	5320	0.25	0.23	3.34	-		11.00	11.00	2.90	-1.10		Pass
HT40	MCS0	1	54	5270	0.48	0.46	0.14	-		11.00	11.00	2.90	-1.10		Pass
HT40	MCS0	1	62	5310	0.48	0.46	0.07	-		11.00	11.00	2.90	-1.10		Pass
VHT20	MCS0	1	52	5260	0.22	0.24	3.57	-		11.00	11.00	2.90	-1.10		Pass
VHT20	MCS0	1	60	5300	0.22	0.24	3.53	-		11.00	11.00	2.90	-1.10		Pass
VHT20	MCS0	1	64	5320	0.22	0.24	3.41	-		11.00	11.00	2.90	-1.10		Pass
VHT40	MCS0	1	54	5270	0.45	0.42	-0.95	-		11.00	11.00	2.90	-1.10		Pass
VHT40	MCS0	1	62	5310	0.45	0.42	-1.12	-		11.00	11.00	2.90	-1.10		Pass
VHT80	MCS0	1	58	5290	0.83	0.83	-3.78	-		11.00	11.00	2.90	-1.10		Pass
HT20	16.74	2	52	5260	0.23	0.24			5.30	11.00		4.14			Pass
HT20	16.74	2	60	5300	0.23	0.24			5.23	11.00		4.14			Pass
HT20	16.74	2	64	5320	0.23	0.24			4.93	11.00		4.14			Pass
HT40	MCS0	2	54	5270	0.44	0.48			1.50	11.00		4.14			Pass
HT40	MCS0	2	62	5310	0.44	0.48			1.69	11.00		4.14			Pass
VHT20	MCS0	2	52	5260	0.24	0.23			4.28	11.00		4.14			Pass
VHT20	MCS0	2	60	5300	0.24	0.23			4.27	11.00		4.14			Pass
VHT20	MCS0	2	64	5320	0.24	0.23			3.97	11.00		4.14			Pass
VHT40	MCS0	2	54	5270	0.39	0.46			0.77	11.00		4.14			Pass
VHT40	MCS0	2	62	5310	0.39	0.46			0.56	11.00		4.14			Pass
VHT80	MCS0	2	58	5290	0.80	0.80			-3.46	11.00		4.14			Pass

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TEST RESULTS DATA
26dB and 99% OBW

Band III															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)		26 dB Bandwidth (MHz)		IC 99% Bandwidth Power Limit (dBm)		IC 99% Bandwidth EIRP Limit (dBm)		FCC 26dB Bandwidth Power Limit (dBm)		Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	100	5500	16.73	16.73	20.43	20.78	23.24	23.24	29.24	29.24	23.98	23.98	
11a	6Mbps	1	116	5580	16.73	16.73	20.73	20.63	23.24	23.24	29.24	29.24	23.98	23.98	
11a	6Mbps	1	140	5700	16.73	16.68	20.73	20.68	23.24	23.22	29.24	29.22	23.98	23.98	
HT20	MCS0	1	100	5500	17.68	17.68	21.53	21.53	23.48	23.48	29.48	29.48	23.98	23.98	
HT20	MCS0	1	116	5580	17.68	17.73	21.48	21.53	23.48	23.49	29.48	29.49	23.98	23.98	
HT20	MCS0	1	140	5700	17.68	17.68	21.58	21.63	23.48	23.48	29.48	29.48	23.98	23.98	
HT40	MCS0	1	102	5510	35.96	35.96	41.54	41.36	23.98	23.98	30.00	30.00	23.98	23.98	
HT40	MCS0	1	110	5550	35.96	35.96	41.54	41.45	23.98	23.98	30.00	30.00	23.98	23.98	
HT40	MCS0	1	134	5670	35.96	35.96	41.72	41.54	23.98	23.98	30.00	30.00	23.98	23.98	
VHT20	MCS0	1	100	5500	17.68	17.68	21.58	21.58	23.48	23.48	29.48	29.48	23.98	23.98	
VHT20	MCS0	1	116	5580	17.68	17.68	21.43	21.48	23.48	23.48	29.48	29.48	23.98	23.98	
VHT20	MCS0	1	140	5700	17.68	17.68	21.63	21.63	23.48	23.48	29.48	29.48	23.98	23.98	
VHT40	MCS0	1	102	5510	35.86	35.86	41.63	41.54	23.98	23.98	30.00	30.00	23.98	23.98	
VHT40	MCS0	1	110	5550	35.96	35.96	41.45	41.54	23.98	23.98	30.00	30.00	23.98	23.98	
VHT40	MCS0	1	134	5670	36.06	35.96	41.72	41.54	23.98	23.98	30.00	30.00	23.98	23.98	
VHT80	MCS0	1	106	5530	74.93	74.81	82.64	82.32	23.98	23.98	30.00	30.00	23.98	23.98	
VHT80	MCS0	1	122	5610	74.81	74.69	83.28	82.80	23.98	23.98	30.00	30.00	23.98	23.98	
HT20	16.74	2	100	5500	17.68	17.78	21.38	21.33	23.48		29.48		23.98		
HT20	16.74	2	116	5580	17.68	17.73	21.53	21.38	23.48		29.48		23.98		
HT20	16.74	2	140	5700	17.73	17.73	21.58	21.38	23.49		29.49		23.98		
HT40	MCS0	2	102	5510	35.96	35.86	41.54	41.63	23.98		30.00		23.98		
HT40	MCS0	2	110	5550	35.96	35.96	41.54	41.54	23.98		30.00		23.98		
HT40	MCS0	2	134	5670	35.96	35.96	41.36	41.27	23.98		30.00		23.98		
VHT20	MCS0	2	100	5500	17.68	17.73	21.53	21.38	23.48		29.48		23.98		
VHT20	MCS0	2	116	5580	17.68	17.78	21.58	21.43	23.48		29.48		23.98		
VHT20	MCS0	2	140	5700	17.68	17.73	21.63	21.33	23.48		29.48		23.98		
VHT40	MCS0	2	102	5510	35.86	35.86	41.45	41.45	23.98		30.00		23.98		
VHT40	MCS0	2	110	5550	35.96	35.86	41.63	41.54	23.98		30.00		23.98		
VHT40	MCS0	2	134	5670	35.86	35.96	41.81	41.72	23.98		30.00		23.98		
VHT80	MCS0	2	106	5530	74.93	74.81	82.48	81.84	23.98		30.00		23.98		
VHT80	MCS0	2	122	5610	74.81	74.81	83.28	81.84	23.98		30.00		23.98		

TEST RESULTS DATA
Average Power Table

FCC Band III															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			FCC Conducted Power Limit (dBm)		DG (dBi)			Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	100	5500	0.21	0.21	15.82	13.77		23.98	23.98	3.70	0.90		Pass
11a	6Mbps	1	116	5580	0.21	0.21	15.62	13.42		23.98	23.98	3.70	0.90		Pass
11a	6Mbps	1	140	5700	0.21	0.21	15.78	13.66		23.98	23.98	3.70	0.90		Pass
HT20	MCS0	1	100	5500	0.25	0.23	14.70	12.76		23.98	23.98	3.70	0.90		Pass
HT20	MCS0	1	116	5580	0.25	0.23	14.91	12.38		23.98	23.98	3.70	0.90		Pass
HT20	MCS0	1	140	5700	0.25	0.23	14.66	12.44		23.98	23.98	3.70	0.90		Pass
HT40	MCS0	1	102	5510	0.48	0.46	14.12	12.11		23.98	23.98	3.70	0.90		Pass
HT40	MCS0	1	110	5550	0.48	0.46	14.17	12.02		23.98	23.98	3.70	0.90		Pass
HT40	MCS0	1	134	5670	0.48	0.46	14.31	11.91		23.98	23.98	3.70	0.90		Pass
VHT20	MCS0	1	100	5500	0.22	0.24	13.63	11.79		23.98	23.98	3.70	0.90		Pass
VHT20	MCS0	1	116	5580	0.22	0.24	13.84	11.33		23.98	23.98	3.70	0.90		Pass
VHT20	MCS0	1	140	5700	0.22	0.24	13.56	11.46		23.98	23.98	3.70	0.90		Pass
VHT40	MCS0	1	102	5510	0.45	0.42	12.91	11.20		23.98	23.98	3.70	0.90		Pass
VHT40	MCS0	1	110	5550	0.45	0.42	12.86	10.99		23.98	23.98	3.70	0.90		Pass
VHT40	MCS0	1	134	5670	0.45	0.42	13.18	10.81		23.98	23.98	3.70	0.90		Pass
VHT80	MCS0	1	106	5530	0.83	0.83	11.51	9.57		23.98	23.98	3.70	0.90		Pass
VHT80	MCS0	1	122	5610	0.83	0.83	11.88	9.74		23.98	23.98	3.70	0.90		Pass
HT20	16.74	2	100	5500	0.23	0.24	13.60	13.55	16.59	23.98		3.70			Pass
HT20	16.74	2	116	5580	0.23	0.24	13.35	13.11	16.25	23.98		3.70			Pass
HT20	16.74	2	140	5700	0.23	0.24	13.30	13.17	16.25	23.98		3.70			Pass
HT40	MCS0	2	102	5510	0.44	0.48	12.86	12.84	15.86	23.98		3.70			Pass
HT40	MCS0	2	110	5550	0.44	0.48	12.72	12.77	15.76	23.98		3.70			Pass
HT40	MCS0	2	134	5670	0.44	0.48	12.85	12.65	15.76	23.98		3.70			Pass
VHT20	MCS0	2	100	5500	0.24	0.23	12.58	12.58	15.59	23.98		3.70			Pass
VHT20	MCS0	2	116	5580	0.24	0.23	12.45	12.18	15.33	23.98		3.70			Pass
VHT20	MCS0	2	140	5700	0.24	0.23	12.53	12.34	15.44	23.98		3.70			Pass
VHT40	MCS0	2	102	5510	0.39	0.46	11.81	11.89	14.86	23.98		3.70			Pass
VHT40	MCS0	2	110	5550	0.39	0.46	11.71	11.83	14.78	23.98		3.70			Pass
VHT40	MCS0	2	134	5670	0.39	0.46	11.67	11.71	14.70	23.98		3.70			Pass
VHT80	MCS0	2	106	5530	0.80	0.80	10.44	10.52	13.49	23.98		3.70			Pass
VHT80	MCS0	2	122	5610	0.80	0.80	10.86	10.68	13.78	23.98		3.70			Pass

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TEST RESULTS DATA
Power Spectral Density

Band III															
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)		Average Power Density (dBm/MHz)			Average PSD Limit (dBm/MHz)		DG (dBi)			Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2		
11a	6Mbps	1	100	5500	0.21	0.21	5.58	-		11.00	11.00	3.70	0.90		Pass
11a	6Mbps	1	116	5580	0.21	0.21	5.31	-		11.00	11.00	3.70	0.90		Pass
11a	6Mbps	1	140	5700	0.21	0.21	5.62	-		11.00	11.00	3.70	0.90		Pass
HT20	MCS0	1	100	5500	0.25	0.23	4.02	-		11.00	11.00	3.70	0.90		Pass
HT20	MCS0	1	116	5580	0.25	0.23	4.09	-		11.00	11.00	3.70	0.90		Pass
HT20	MCS0	1	140	5700	0.25	0.23	4.33	-		11.00	11.00	3.70	0.90		Pass
HT40	MCS0	1	102	5510	0.48	0.46	0.66	-		11.00	11.00	3.70	0.90		Pass
HT40	MCS0	1	110	5550	0.48	0.46	0.69	-		11.00	11.00	3.70	0.90		Pass
HT40	MCS0	1	134	5670	0.48	0.46	0.99	-		11.00	11.00	3.70	0.90		Pass
VHT20	MCS0	1	100	5500	0.22	0.24	3.23	-		11.00	11.00	3.70	0.90		Pass
VHT20	MCS0	1	116	5580	0.22	0.24	3.15	-		11.00	11.00	3.70	0.90		Pass
VHT20	MCS0	1	140	5700	0.22	0.24	3.22	-		11.00	11.00	3.70	0.90		Pass
VHT40	MCS0	1	102	5510	0.45	0.42	-0.63	-		11.00	11.00	3.70	0.90		Pass
VHT40	MCS0	1	110	5550	0.45	0.42	-0.60	-		11.00	11.00	3.70	0.90		Pass
VHT40	MCS0	1	134	5670	0.45	0.42	-0.46	-		11.00	11.00	3.70	0.90		Pass
VHT80	MCS0	1	106	5530	0.83	0.83	-5.11	-		11.00	11.00	3.70	0.90		Pass
VHT80	MCS0	1	122	5610	0.83	0.83	-4.55	-		11.00	11.00	3.70	0.90		Pass
HT20	16.74	2	100	5500	0.23	0.24			5.04	11.00		5.42			Pass
HT20	16.74	2	116	5580	0.23	0.24			4.72	11.00		5.42			Pass
HT20	16.74	2	140	5700	0.23	0.24			4.56	11.00		5.42			Pass
HT40	MCS0	2	102	5510	0.44	0.48			1.50	11.00		5.42			Pass
HT40	MCS0	2	110	5550	0.44	0.48			1.56	11.00		5.42			Pass
HT40	MCS0	2	134	5670	0.44	0.48			1.11	11.00		5.42			Pass
VHT20	MCS0	2	100	5500	0.24	0.23			4.09	11.00		5.42			Pass
VHT20	MCS0	2	116	5580	0.24	0.23			3.74	11.00		5.42			Pass
VHT20	MCS0	2	140	5700	0.24	0.23			3.71	11.00		5.42			Pass
VHT40	MCS0	2	102	5510	0.39	0.46			0.42	11.00		5.42			Pass
VHT40	MCS0	2	110	5550	0.39	0.46			0.27	11.00		5.42			Pass
VHT40	MCS0	2	134	5670	0.39	0.46			0.08	11.00		5.42			Pass
VHT80	MCS0	2	106	5530	0.80	0.80			-3.82	11.00		5.42			Pass
VHT80	MCS0	2	122	5610	0.80	0.80			-4.00	11.00		5.42			Pass

TEST RESULTS DATA
Frequency Stability

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stablility (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	3.6	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	4.4	
11a	6Mbps	1	36	5180	5180.000	0.000	0.00	20	3.8	
11a	6Mbps	1	36	5180	5180.100	0.100	19.31	-30	3.8	
11a	6Mbps	1	36	5180	5179.975	-0.025	-4.83	50	3.8	

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stablility (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	3.6	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	4.4	
11a	6Mbps	1	64	5320	5320.000	0.000	0.00	20	3.8	
11a	6Mbps	1	64	5320	5320.075	0.075	14.10	-30	3.8	
11a	6Mbps	1	64	5320	5319.975	-0.025	-4.70	50	3.8	

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Center Frequency (MHz)	Frequency Deviation (MHz)	Frequency Stablility (ppm)	Temperature (°C)	Voltage (V)	Note
11a	6Mbps	1	100	5500	5500.025	0.025	4.55	20	3.6	
11a	6Mbps	1	100	5500	5499.975	-0.025	-4.55	20	4.4	
11a	6Mbps	1	100	5500	5500.025	0.025	4.55	20	3.8	
11a	6Mbps	1	100	5500	5500.100	0.100	18.18	-30	3.8	
11a	6Mbps	1	100	5500	5499.975	-0.025	-4.55	50	3.8	

Appendix B. Radiated Test Results

15E Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5147.85	59.1	-14.9	74	55.66	31.84	8.13	36.53	243	64	P	H
	!	5149.9	50.78	-3.22	54	47.34	31.84	8.13	36.53	243	64	A	H
	*	5178	110.6	-	-	107.09	31.85	8.17	36.51	243	64	P	H
	*	5182	103.61	-	-	100.1	31.85	8.17	36.51	243	64	A	H
		5139.55	56.09	-17.91	74	52.65	31.84	8.13	36.53	400	97	P	V
		5150	47.22	-6.78	54	43.78	31.84	8.13	36.53	400	97	A	V
	*	5182	107.98	-	-	104.47	31.85	8.17	36.51	400	97	P	V
	*	5182	100.32	-	-	96.81	31.85	8.17	36.51	400	97	A	V
802.11a CH 44 5220MHz	*	5222	111	-	-	107.44	31.86	8.2	36.5	127	57	P	H
	*	5222	103.3	-	-	99.74	31.86	8.2	36.5	127	57	A	H
	*	5222	107.96	-	-	104.4	31.86	8.2	36.5	400	99	P	V
	*	5222	100.56	-	-	97	31.86	8.2	36.5	400	99	A	V
802.11a CH 48 5240MHz	*	5242	108.73	-	-	105.13	31.88	8.22	36.5	100	300	P	H
	*	5238	101.39	-	-	97.81	31.87	8.21	36.5	100	300	A	H
		5361.2	53.88	-20.12	74	50.16	31.91	8.31	36.5	100	300	P	H
		5353.25	43.48	-10.52	54	39.78	31.91	8.29	36.5	100	300	A	H
	*	5242	103.9	-	-	100.3	31.88	8.22	36.5	100	265	P	V
	*	5242	96.29	-	-	92.69	31.88	8.22	36.5	100	265	A	V
		5354.2	54.11	-19.89	74	50.41	31.91	8.29	36.5	100	265	P	V
		5394.95	42.91	-11.09	54	39.16	31.92	8.33	36.5	100	265	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		10359	55.43	-18.57	74	64.97	38.02	13.54	61.1	241	97	P	H
		10359	44.1	-9.9	54	53.64	38.02	13.54	61.1	241	97	A	H
		10365	54.36	-19.64	74	63.9	38.02	13.54	61.1	389	150	P	V
		10365	39.63	-14.37	54	49.17	38.02	13.54	61.1	389	150	A	V
802.11a CH 44 5220MHz		10440	54.05	-19.95	74	63.48	38.06	13.58	61.07	100	232	P	H
		10440	43.14	-10.86	54	52.57	38.06	13.58	61.07	100	232	A	H
		10440	44.43	-29.57	74	53.86	38.06	13.58	61.07	100	0	P	V
802.11a CH 48 5240MHz		10480	54.63	-19.37	74	42.17	38.09	11.67	37.3	100	122	P	H
		10480	43.85	-10.15	54	31.39	38.09	11.67	37.3	100	122	A	H
		10479	47.62	-26.38	74	56.96	38.09	13.61	61.04	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E Band 2 - 5250~5350MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 52 5260MHz		5148.05	55.07	-18.93	74	51.63	31.84	8.13	36.53	236	65	P	H
		5147	45.12	-8.88	54	41.68	31.84	8.13	36.53	236	65	A	H
	*	5264	111.75	-	-	108.14	31.88	8.23	36.5	236	65	P	H
	*	5258	104.36	-	-	100.76	31.88	8.22	36.5	236	65	A	H
		5107.35	53.85	-20.15	74	50.47	31.83	8.1	36.55	395	90	P	V
		5140.95	44.4	-9.6	54	40.96	31.84	8.13	36.53	395	90	A	V
	*	5256	107.1	-	-	103.5	31.88	8.22	36.5	395	90	P	V
	*	5262	100.21	-	-	96.6	31.88	8.23	36.5	395	90	A	V
802.11a CH 60 5300MHz	*	5298	109.56	-	-	105.91	31.89	8.26	36.5	100	10	P	H
	*	5298	102.25	-	-	98.6	31.89	8.26	36.5	100	10	A	H
	*	5302	107	-	-	103.35	31.89	8.26	36.5	400	88	P	V
	*	5302	99.58	-	-	95.93	31.89	8.26	36.5	400	88	A	V
802.11a CH 64 5320MHz	*	5318	109.61	-	-	105.94	31.9	8.27	36.5	103	9	P	H
	*	5318	102.37	-	-	98.7	31.9	8.27	36.5	103	9	A	H
		5351.9	57.09	-16.91	74	53.39	31.91	8.29	36.5	103	9	P	H
	!	5350.05	48.16	-5.84	54	44.46	31.91	8.29	36.5	103	9	A	H
	*	5324	107.34	-	-	103.67	31.9	8.27	36.5	387	103	P	V
	*	5318	99.71	-	-	96.04	31.9	8.27	36.5	387	103	A	V
		5366.8	54.97	-19.03	74	51.25	31.91	8.31	36.5	387	103	P	V
		5350.3	46.01	-7.99	54	42.31	31.91	8.29	36.5	387	103	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 52 5260MHz		10521	49.91	-24.09	74	59.2	38.11	13.63	61.03	100	0	P	H
		10521	46.5	-27.5	74	55.79	38.11	13.63	61.03	100	360	P	V
802.11a CH 60 5300MHz		10602	48.16	-25.84	74	57.3	38.16	13.68	60.98	100	0	P	H
		10599	47.42	-26.58	74	56.56	38.16	13.68	60.98	100	360	P	V
802.11a CH 64 5320MHz		10635	48.79	-25.21	74	57.88	38.18	13.7	60.97	100	0	P	H
		10638	48.69	-25.31	74	57.78	38.18	13.7	60.97	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E Band 3 - 5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		5469.52	56.6	-17.4	74	52.67	31.95	8.38	36.4	100	12	P	H
		5469.6	47.58	-6.42	54	43.65	31.95	8.38	36.4	100	12	A	H
	*	5498	106.04	-	-	102.03	31.96	8.4	36.35	100	12	P	H
	*	5498	98.43	-	-	94.42	31.96	8.4	36.35	100	12	A	H
		5467.12	54.38	-19.62	74	50.45	31.95	8.38	36.4	400	91	P	V
		5470	46.49	-7.51	54	42.56	31.95	8.38	36.4	400	91	A	V
	*	5498	103.95	-	-	99.94	31.96	8.4	36.35	400	91	P	V
	*	5502	96.88	-	-	92.87	31.96	8.4	36.35	400	91	A	V
802.11a CH 116 5580MHz	*	5582	105.55			101.33	31.98	8.47	36.23	108	9	P	H
	*	5584	98.11			93.89	31.98	8.47	36.23	108	9	A	H
	*	5578	104.37			100.19	31.98	8.45	36.25	314	86	P	V
	*	5582	96.88			92.66	31.98	8.47	36.23	314	86	A	V
802.11a CH 140 5700MHz	*	5698	105.6	-	-	101.29	32.02	8.54	36.25	100	32	P	H
	*	5698	98.03	-	-	93.72	32.02	8.54	36.25	100	32	A	H
		5725.24	61.14	-12.86	74	56.81	32.04	8.57	36.28	100	32	P	H
	!	5725.24	48.52	-5.48	54	44.19	32.04	8.57	36.28	100	32	A	H
	*	5702	103.8	-	-	99.49	32.03	8.55	36.27	314	87	P	V
	*	5698	96.39	-	-	92.08	32.02	8.54	36.25	314	87	A	V
		5725.88	60.96	-13.04	74	56.63	32.04	8.57	36.28	314	87	P	V
		5725.08	47.93	-6.07	54	43.6	32.04	8.57	36.28	314	87	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a		11007	49.31	-24.69	74	57.76	38.41	13.92	60.78	100	0	P	H
CH 100		11001	45.53	-28.47	74	54.01	38.4	13.91	60.79	100	360	P	V
5500MHz													
802.11a		11163	53.25	-20.75	74	61.48	38.47	14.01	60.71	100	258	P	H
CH 116		11163	42.04	-11.96	54	50.27	38.47	14.01	60.71	100	258	A	H
5580MHz		11160	46.74	-27.26	74	54.97	38.47	14.01	60.71	100	0	P	V
802.11a		11400	43.65	-30.35	74	51.53	38.56	14.15	60.59	100	0	P	H
CH 140		11400	42.73	-31.27	74	50.61	38.56	14.15	60.59	100	0	P	V
5700MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E Emission below 1GHz

WIFI 802.11a (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a LF		75.59	25.22	-14.78	40	45.53	9.13	1.06	30.5	100	23	P	H
		288.02	20.12	-25.88	46	34.08	14.5	2.04	30.5	-	-	P	H
		323.91	23.64	-22.36	46	36.65	15.33	2.21	30.55	-	-	P	H
		546.04	20.65	-25.35	46	29.46	18.58	2.92	30.31	-	-	P	H
		701.24	21.53	-24.47	46	28.17	20.41	3.35	30.4	-	-	P	H
		935.98	28.2	-17.8	46	31.41	23.38	3.94	30.53	-	-	P	H
		40.67	27.13	-12.87	40	43.32	13.92	0.77	30.88	-	-	P	V
		48.43	27.72	-12.28	40	47.21	10.47	0.84	30.8	-	-	P	V
		74.62	30.28	-9.72	40	50.65	9.1	1.05	30.52	165	87	P	V
		252.13	19.37	-26.63	46	34.85	13.27	1.75	30.5	-	-	P	V
		288.02	20.02	-25.98	46	33.98	14.5	2.04	30.5	-	-	P	V
		323.91	20.21	-25.79	46	33.22	15.33	2.21	30.55	-	-	P	V

Remark	1. No other spurious found. 2. All results are PASS against limit line.

15E Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5123.45	47.89	-26.11	74	44.48	31.84	8.11	36.54	100	8	P	H
		5112.9	37.28	-16.72	54	33.9	31.83	8.1	36.55	100	8	A	H
	*	5182	90.81	-	-	87.3	31.85	8.17	36.51	100	8	P	H
	*	5184	83.5	-	-	79.99	31.85	8.17	36.51	100	8	A	H
		5126.8	47.35	-26.65	74	43.94	31.84	8.11	36.54	173	1	P	V
		5149	38.05	-15.95	54	34.61	31.84	8.13	36.53	173	1	A	V
	*	5184	95.7	-	-	92.19	31.85	8.17	36.51	173	1	P	V
	*	5178	88.2	-	-	84.69	31.85	8.17	36.51	173	1	A	V
802.11a CH 44 5220MHz	*	5224	94.83	-	-	91.27	31.86	8.2	36.5	394	50	P	H
	*	5218	87.98	-	-	84.42	31.86	8.2	36.5	394	50	A	H
	*	5218	96.53	-	-	92.97	31.86	8.2	36.5	113	0	P	V
	*	5222	89.18	-	-	85.62	31.86	8.2	36.5	113	0	A	V
802.11a CH 48 5240MHz	*	5244	92.77	-	-	89.17	31.88	8.22	36.5	354	357	P	H
	*	5242	85.91	-	-	82.31	31.88	8.22	36.5	354	357	A	H
		5399.1	45.66	-28.34	74	41.91	31.92	8.33	36.5	354	357	P	H
		5398.85	36.57	-17.43	54	32.82	31.92	8.33	36.5	354	357	A	H
	*	5238	96.67	-	-	93.09	31.87	8.21	36.5	105	348	P	V
	*	5242	89.26	-	-	85.66	31.88	8.22	36.5	105	348	A	V
		5379.3	46.26	-27.74	74	42.52	31.92	8.32	36.5	105	348	P	V
		5376.65	36.68	-17.32	54	32.96	31.91	8.31	36.5	105	348	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		10359	45.28	-28.72	74	54.82	38.02	13.54	61.1	100	283	P	H
		10359	45.88	-28.12	74	55.42	38.02	13.54	61.1	100	0	P	V
802.11a CH 44 5220MHz		10440	44.42	-29.58	74	53.85	38.06	13.58	61.07	100	0	P	H
		10440	44.35	-29.65	74	53.78	38.06	13.58	61.07	100	360	P	V
802.11a CH 48 5240MHz		10479	46.79	-27.21	74	56.13	38.09	13.61	61.04	100	0	P	H
		10479	45.07	-28.93	74	54.41	38.09	13.61	61.04	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E Band 2 - 5250~5350MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 52 5260MHz		5111.85	47.16	-26.84	74	43.78	31.83	8.1	36.55	400	20	P	H
		5121.85	37.15	-16.85	54	33.77	31.83	8.1	36.55	400	20	A	H
	*	5264	94.13	-	-	90.52	31.88	8.23	36.5	400	20	P	H
	*	5264	86.56	-	-	82.95	31.88	8.23	36.5	400	20	A	H
		5121.2	46.8	-27.2	74	43.42	31.83	8.1	36.55	112	339	P	V
		5108.8	37.09	-16.91	54	33.71	31.83	8.1	36.55	112	339	A	V
	*	5260	96.26	-	-	92.65	31.88	8.23	36.5	112	339	P	V
	*	5258	89.16	-	-	85.56	31.88	8.22	36.5	112	339	A	V
802.11a CH 60 5300MHz	*	5302	94.76	-	-	91.11	31.89	8.26	36.5	400	21	P	H
	*	5296	87.73	-	-	84.08	31.89	8.26	36.5	400	21	A	H
	*	5302	96.16	-	-	92.51	31.89	8.26	36.5	103	358	P	V
	*	5298	89.87	-	-	86.22	31.89	8.26	36.5	103	358	A	V
802.11a CH 64 5320MHz	*	5318	94.87	-	-	91.2	31.9	8.27	36.5	395	20	P	H
	*	5322	88.02	-	-	84.35	31.9	8.27	36.5	395	20	A	H
		5356.2	46.78	-27.22	74	43.08	31.91	8.29	36.5	395	20	P	H
		5368.05	37.5	-16.5	54	33.78	31.91	8.31	36.5	395	20	A	H
	*	5318	97.02	-	-	93.35	31.9	8.27	36.5	107	348	P	V
	*	5318	90.15	-	-	86.48	31.9	8.27	36.5	107	348	A	V
		5353.85	46.61	-27.39	74	42.91	31.91	8.29	36.5	107	348	P	V
		5367.9	38.07	-15.93	54	34.35	31.91	8.31	36.5	107	348	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 52 5260MHz		10521	45.31	-28.69	74	54.6	38.11	13.63	61.03	100	0	P	H
		10521	44.74	-29.26	74	54.03	38.11	13.63	61.03	100	360	P	V
802.11a CH 60 5300MHz		10599	43.44	-30.56	74	52.58	38.16	13.68	60.98	100	0	P	H
		10599	43.65	-30.35	74	52.79	38.16	13.68	60.98	100	360	P	V
802.11a CH 64 5320MHz		10641	44.58	-29.42	74	53.67	38.18	13.7	60.97	100	0	P	H
		10641	44.61	-29.39	74	53.7	38.18	13.7	60.97	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E Band 3 - 5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		5459.44	47.37	-26.63	74	43.48	31.94	8.37	36.42	393	48	P	H
		5469.52	38.12	-15.88	54	34.19	31.95	8.38	36.4	393	48	A	H
	*	5498	97.11	-	-	93.1	31.96	8.4	36.35	393	48	P	H
	*	5498	89.94	-	-	85.93	31.96	8.4	36.35	393	48	A	H
		5468.24	46.65	-27.35	74	42.72	31.95	8.38	36.4	102	360	P	V
		5468.72	38.65	-15.35	54	34.72	31.95	8.38	36.4	102	360	A	V
	*	5498	99.26	-	-	95.25	31.96	8.4	36.35	102	360	P	V
	*	5498	91.72	-	-	87.71	31.96	8.4	36.35	102	360	A	V
802.11a CH 116 5580MHz	*	5576	98.28			94.1	31.98	8.45	36.25	400	50	P	H
	*	5578	91.2			87.02	31.98	8.45	36.25	400	50	A	H
	*	5582	99.91			95.69	31.98	8.47	36.23	118	351	P	V
	*	5578	92.39			88.21	31.98	8.45	36.25	118	351	A	V
802.11a CH 140 5700MHz	*	5702	98.68	-	-	94.37	32.03	8.55	36.27	400	55	P	H
	*	5702	91.46	-	-	87.15	32.03	8.55	36.27	400	55	A	H
		5725.32	48.1	-25.9	74	43.77	32.04	8.57	36.28	400	55	P	H
		5725.24	39.72	-14.28	54	35.39	32.04	8.57	36.28	400	55	A	H
	*	5702	101.01	-	-	96.7	32.03	8.55	36.27	100	331	P	V
	*	5698	93.8	-	-	89.49	32.02	8.54	36.25	100	331	A	V
		5728.84	49.38	-24.62	74	45.05	32.04	8.57	36.28	100	331	P	V
		5725.16	41.24	-12.76	54	36.91	32.04	8.57	36.28	100	331	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

15E band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		11001	46.45	-27.55	74	54.93	38.4	13.91	60.79	100	0	P	H
		11001	44.63	-29.37	74	53.11	38.4	13.91	60.79	100	360	P	V
802.11a CH 116 5580MHz		11160	44.36	-29.64	74	52.59	38.47	14.01	60.71	100	0	P	H
		11160	44.06	-29.94	74	52.29	38.47	14.01	60.71	100	360	P	V
802.11a CH 140 5700MHz		11400	46.35	-27.65	74	54.23	38.56	14.15	60.59	100	0	P	H
		11400	43.3	-30.7	74	51.18	38.56	14.15	60.59	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5142.6	53.88	-20.12	74	50.44	31.84	8.13	36.53	300	309	P	H
		5150	44.38	-9.62	54	40.94	31.84	8.13	36.53	300	309	A	H
802.11n	*	5176	100.94	-	-	97.43	31.85	8.17	36.51	300	309	P	H
HT20	*	5178	94	-	-	90.49	31.85	8.17	36.51	300	309	A	H
CH 36		5135.05	55.17	-18.83	74	51.76	31.84	8.11	36.54	100	347	P	V
5180MHz		5149.75	45.8	-8.2	54	42.36	31.84	8.13	36.53	100	347	A	V
	*	5178	106.18	-	-	102.67	31.85	8.17	36.51	100	347	P	V
	*	5178	98.33	-	-	94.82	31.85	8.17	36.51	100	347	A	V
802.11n	*	5222	101.44	-	-	97.88	31.86	8.2	36.5	306	319	P	H
HT20	*	5222	94.45	-	-	90.89	31.86	8.2	36.5	306	319	A	H
CH 44	*	5218	106.76	-	-	103.2	31.86	8.2	36.5	100	345	P	V
5220MHz	*	5218	99.12	-	-	95.56	31.86	8.2	36.5	100	345	A	V
	*	5242	101.88	-	-	98.28	31.88	8.22	36.5	304	319	P	H
	*	5242	94.52	-	-	90.92	31.88	8.22	36.5	304	319	A	H
802.11n		5358.6	53.47	-20.53	74	49.77	31.91	8.29	36.5	304	319	P	H
HT20		5391.45	42.97	-11.03	54	39.23	31.92	8.32	36.5	304	319	A	H
CH 48	*	5238	106.53	-	-	102.95	31.87	8.21	36.5	118	347	P	V
5240MHz	*	5238	99.67	-	-	96.09	31.87	8.21	36.5	118	347	A	V
		5362.45	53.62	-20.38	74	49.9	31.91	8.31	36.5	118	347	P	V
		5398	43.29	-10.71	54	39.54	31.92	8.33	36.5	118	347	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 1 5150~5250MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		10359	45.81	-28.19	74	55.35	38.02	13.54	61.1	100	0	P	H
		10356	49.45	-24.55	74	59.02	38.01	13.53	61.11	100	0	P	V
802.11n HT20 CH 44 5220MHz		10440	46.81	-27.19	74	56.24	38.06	13.58	61.07	100	360	P	H
		10452	49.51	-24.49	74	58.91	38.07	13.59	61.06	100	0	P	V
802.11n HT20 CH 48 5240MHz		10473	48.97	-25.03	74	58.34	38.08	13.6	61.05	100	0	P	H
		10479	49.26	-24.74	74	58.6	38.09	13.61	61.04	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5137.4	54.99	-19.01	74	51.58	31.84	8.11	36.54	309	326	P	H
		5149.65	43.98	-10.02	54	40.54	31.84	8.13	36.53	309	326	A	H
802.11n	*	5192	98.17	-	-	94.62	31.86	8.19	36.5	309	326	P	H
HT40	*	5192	91.04	-	-	87.49	31.86	8.19	36.5	309	326	A	H
CH 38		5144.8	60.57	-13.43	74	57.13	31.84	8.13	36.53	128	351	P	V
5190MHz	!	5149.7	48.55	-5.45	54	45.11	31.84	8.13	36.53	128	351	A	V
	*	5196	101.32	-	-	97.77	31.86	8.19	36.5	128	351	P	V
	*	5198	95.14	-	-	91.59	31.86	8.19	36.5	128	351	A	V
	*	5238	98.7	-	-	95.12	31.87	8.21	36.5	295	309	P	H
	*	5228	92.02	-	-	88.44	31.87	8.21	36.5	295	309	A	H
802.11n		5375.2	49.9	-24.1	74	46.18	31.91	8.31	36.5	295	309	P	H
HT40		5369.45	37.95	-16.05	54	34.23	31.91	8.31	36.5	295	309	A	H
CH 46	*	5236	102.53	-	-	98.95	31.87	8.21	36.5	128	346	P	V
5230MHz	*	5226	95.54	-	-	91.96	31.87	8.21	36.5	128	346	A	V
		5357.6	55.09	-18.91	74	51.39	31.91	8.29	36.5	128	346	P	V
		5353.85	39.65	-14.35	54	35.95	31.91	8.29	36.5	128	346	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		10380	43.5	-30.5	74	53.02	38.03	13.55	61.1	100	0	P	H
		10380	44.95	-29.05	74	54.47	38.03	13.55	61.1	100	360	P	V
802.11n HT40 CH 46 5230MHz		10479	44.6	-29.4	74	53.94	38.09	13.61	61.04	100	0	P	H
		10479	46.68	-27.32	74	56.02	38.09	13.61	61.04	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5147.35	48.37	-25.63	74	44.93	31.84	8.13	36.53	300	315	P	H
		5149.65	38.71	-15.29	54	35.27	31.84	8.13	36.53	300	315	A	H
802.11ac	*	5178	99.81	-	-	96.3	31.85	8.17	36.51	300	315	P	H
VHT20	*	5178	92.41	-	-	88.9	31.85	8.17	36.51	300	315	A	H
CH 36		5149.35	51.14	-22.86	74	47.7	31.84	8.13	36.53	131	348	P	V
5180MHz		5149.85	41.97	-12.03	54	38.53	31.84	8.13	36.53	131	348	A	V
	*	5184	103.11	-	-	99.6	31.85	8.17	36.51	131	348	P	V
	*	5178	96.41	-	-	92.9	31.85	8.17	36.51	131	348	A	V
802.11ac	*	5218	100.31	-	-	96.75	31.86	8.2	36.5	300	139	P	H
VHT20	*	5220	92.83	-	-	89.27	31.86	8.2	36.5	300	139	A	H
CH 44	*	5222	104.19	-	-	100.63	31.86	8.2	36.5	261	174	P	V
5220MHz	*	5222	96.9	-	-	93.34	31.86	8.2	36.5	261	174	A	V
	*	5238	98.56	-	-	94.98	31.87	8.21	36.5	100	143	P	H
	*	5238	92.57	-	-	88.99	31.87	8.21	36.5	100	143	A	H
802.11ac		5395.4	46.34	-27.66	74	42.59	31.92	8.33	36.5	100	143	P	H
VHT20		5351.85	36.8	-17.2	54	33.1	31.91	8.29	36.5	100	143	A	H
CH 48	*	5240	104.72	-	-	101.14	31.87	8.21	36.5	300	182	P	V
5240MHz	*	5238	97.55	-	-	93.97	31.87	8.21	36.5	300	182	A	V
		5353.05	47.39	-26.61	74	43.69	31.91	8.29	36.5	300	182	P	V
		5356.25	37.6	-16.4	54	33.9	31.91	8.29	36.5	300	182	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 1 5150~5250MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 36 5180MHz		10359	45.98	-28.02	74	55.52	38.02	13.54	61.1	100	0	P	H
		10359	48.31	-25.69	74	57.85	38.02	13.54	61.1	100	360	P	V
802.11ac VHT20 CH 44 5220MHz		10440	44.23	-29.77	74	53.66	38.06	13.58	61.07	100	0	P	H
		10452	48.57	-25.43	74	57.97	38.07	13.59	61.06	100	360	P	V
802.11ac VHT20 CH 48 5240MHz		10479	44.72	-29.28	74	54.06	38.09	13.61	61.04	100	0	P	H
		10476	48.55	-25.45	74	57.92	38.08	13.6	61.05	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5148.9	56.78	-17.22	74	53.34	31.84	8.13	36.53	347	313	P	H
		5149.6	41.28	-12.72	54	37.84	31.84	8.13	36.53	347	313	A	H
802.11ac	*	5200	95.42	-	-	91.87	31.86	8.19	36.5	347	313	P	H
VHT40	*	5198	88.77	-	-	85.22	31.86	8.19	36.5	347	313	A	H
CH 38		5131.25	58.08	-15.92	74	54.67	31.84	8.11	36.54	130	351	P	V
5190MHz		5148.05	46.81	-7.19	54	43.37	31.84	8.13	36.53	130	351	A	V
	*	5198	100.95	-	-	97.4	31.86	8.19	36.5	130	351	P	V
	*	5200	93.93	-	-	90.38	31.86	8.19	36.5	130	351	A	V
	*	5234	95.03	-	-	91.45	31.87	8.21	36.5	342	331	P	H
	*	5222	88.25	-	-	84.69	31.86	8.2	36.5	342	331	A	H
802.11ac		5361.2	46.57	-27.43	74	42.85	31.91	8.31	36.5	342	331	P	H
VHT40		5381.3	37	-17	54	33.26	31.92	8.32	36.5	342	331	A	H
CH 46	*	5228	102.11	-	-	98.53	31.87	8.21	36.5	139	349	P	V
5230MHz	*	5228	94.45	-	-	90.87	31.87	8.21	36.5	139	349	A	V
		5350.25	50.99	-23.01	74	47.29	31.91	8.29	36.5	139	349	P	V
		5350.95	39.27	-14.73	54	35.57	31.91	8.29	36.5	139	349	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 1 5150~5250MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 38 5190MHz		10380	44.58	-29.42	74	54.1	38.03	13.55	61.1	100	0	P	H
		10380	43.73	-30.27	74	53.25	38.03	13.55	61.1	100	360	P	V
802.11ac VHT40 CH 46 5230MHz		10461	44.26	-29.74	74	53.63	38.08	13.6	61.05	100	0	P	H
		10461	44.32	-29.68	74	53.69	38.08	13.6	61.05	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5150	50.88	-23.12	74	47.44	31.84	8.13	36.53	303	309	P	H
		5148.2	42.49	-11.51	54	39.05	31.84	8.13	36.53	303	309	A	H
	*	5198	92.67	-	-	89.12	31.86	8.19	36.5	303	309	P	H
	*	5228	84.64	-	-	81.06	31.87	8.21	36.5	303	309	A	H
		5351.55	46.56	-27.44	74	42.86	31.91	8.29	36.5	303	309	P	H
		5353.35	38.27	-15.73	54	34.57	31.91	8.29	36.5	303	309	A	H
		5144.15	54.97	-19.03	74	51.53	31.84	8.13	36.53	116	357	P	V
		5148.3	45.77	-8.23	54	42.33	31.84	8.13	36.53	116	357	A	V
	*	5204	97.34	-	-	93.79	31.86	8.19	36.5	116	357	P	V
	*	5204	90.01	-	-	86.46	31.86	8.19	36.5	116	357	A	V
		5351.8	49.58	-24.42	74	45.88	31.91	8.29	36.5	116	357	P	V
		5350.8	41.23	-12.77	54	37.53	31.91	8.29	36.5	116	357	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		10419	43.73	-30.27	74	53.19	38.05	13.57	61.08	100	0	P	H
		10419	44.15	-29.85	74	53.61	38.05	13.57	61.08	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5101	54.16	-19.84	74	50.81	31.83	8.08	36.56	303	319	P	H
		5102.5	44.09	-9.91	54	40.74	31.83	8.08	36.56	303	319	A	H
802.11n	*	5262	102.22	-	-	98.61	31.88	8.23	36.5	303	319	P	H
HT20	*	5262	94.95	-	-	91.34	31.88	8.23	36.5	303	319	A	H
CH 52		5113.5	53.89	-20.11	74	50.51	31.83	8.1	36.55	314	350	P	V
5260MHz		5106.05	44.42	-9.58	54	41.04	31.83	8.1	36.55	314	350	A	V
	*	5256	106.21	-	-	102.61	31.88	8.22	36.5	314	350	P	V
	*	5258	98.81	-	-	95.21	31.88	8.22	36.5	314	350	A	V
802.11n	*	5302	102.18	-	-	98.53	31.89	8.26	36.5	317	318	P	H
HT20	*	5302	95.11	-	-	91.46	31.89	8.26	36.5	317	318	A	H
CH 60	*	5298	106.91	-	-	103.26	31.89	8.26	36.5	100	339	P	V
5300MHz	*	5296	98.97	-	-	95.32	31.89	8.26	36.5	100	339	A	V
	*	5324	102.04	-	-	98.37	31.9	8.27	36.5	307	321	P	H
	*	5322	94.87	-	-	91.2	31.9	8.27	36.5	307	321	A	H
802.11n		5357.75	53.51	-20.49	74	49.81	31.91	8.29	36.5	307	321	P	H
HT20		5350.3	43.94	-10.06	54	40.24	31.91	8.29	36.5	307	321	A	H
CH 64	*	5318	105.9	-	-	102.23	31.9	8.27	36.5	100	340	P	V
5320MHz	*	5318	99.43	-	-	95.76	31.9	8.27	36.5	100	340	A	V
		5351.3	56.57	-17.43	74	52.87	31.91	8.29	36.5	100	340	P	V
		5351.1	47.76	-6.24	54	44.06	31.91	8.29	36.5	100	340	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 2 5250~5350MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		10521	45.63	-28.37	74	54.92	38.11	13.63	61.03	100	0	P	H
		10521	44.94	-29.06	74	54.23	38.11	13.63	61.03	100	0	P	V
802.11n HT20 CH 60 5300MHz		10599	43	-31	74	52.14	38.16	13.68	60.98	100	270	P	H
		10599	41.89	-32.11	74	51.03	38.16	13.68	60.98	100	311	P	V
802.11n HT20 CH 64 5320MHz		10638	47.33	-26.67	74	56.42	38.18	13.7	60.97	100	360	P	H
		10641	44.5	-29.5	74	53.59	38.18	13.7	60.97	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5139.55	49.71	-24.29	74	46.27	31.84	8.13	36.53	287	330	P	H
		5130.5	38.07	-15.93	54	34.66	31.84	8.11	36.54	287	330	A	H
802.11n	*	5272	98.37	-	-	94.76	31.88	8.23	36.5	287	330	P	H
HT40	*	5274	91.5	-	-	87.89	31.88	8.23	36.5	287	330	A	H
CH 54		5149.95	54.64	-19.36	74	51.2	31.84	8.13	36.53	135	349	P	V
5270MHz		5145.9	40.21	-13.79	54	36.77	31.84	8.13	36.53	135	349	A	V
	*	5262	102.19	-	-	98.58	31.88	8.23	36.5	135	349	P	V
	*	5268	95.5	-	-	91.89	31.88	8.23	36.5	135	349	A	V
	*	5308	99.65	-	-	96	31.89	8.26	36.5	254	312	P	H
	*	5308	92.13	-	-	88.48	31.89	8.26	36.5	254	312	A	H
802.11n		5361.4	55.56	-18.44	74	51.84	31.91	8.31	36.5	254	312	P	H
HT40		5350.75	44.4	-9.6	54	40.7	31.91	8.29	36.5	254	312	A	H
CH 62	*	5312	102	-	-	98.33	31.9	8.27	36.5	115	352	P	V
5310MHz	*	5308	95.14	-	-	91.49	31.89	8.26	36.5	115	352	A	V
		5356.4	61.87	-12.13	74	58.17	31.91	8.29	36.5	115	352	P	V
		5350.15	47.95	-6.05	54	44.25	31.91	8.29	36.5	115	352	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 2 5250~5350MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		10539	43.92	-30.08	74	53.18	38.12	13.64	61.02	100	0	P	H
		10539	46.94	-27.06	74	56.2	38.12	13.64	61.02	100	360	P	V
802.11n HT40 CH 62 5310MHz		10620	42.93	-31.07	74	52.05	38.17	13.69	60.98	100	0	P	H
		10617	47.25	-26.75	74	56.37	38.17	13.69	60.98	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5123	47.53	-26.47	74	44.12	31.84	8.11	36.54	300	124	P	H
		5110.8	37.39	-16.61	54	34.01	31.83	8.1	36.55	300	124	A	H
802.11ac	*	5258	100.09	-	-	96.49	31.88	8.22	36.5	300	124	P	H
VHT20	*	5258	92.58	-	-	88.98	31.88	8.22	36.5	300	124	A	H
CH 52		5108.3	48.87	-25.13	74	45.49	31.83	8.1	36.55	100	166	P	V
5260MHz		5149.05	38.45	-15.55	54	35.01	31.84	8.13	36.53	100	166	A	V
	*	5258	104.13	-	-	100.53	31.88	8.22	36.5	100	166	P	V
	*	5258	96.89	-	-	93.29	31.88	8.22	36.5	100	166	A	V
802.11ac	*	5296	100.63	-	-	96.98	31.89	8.26	36.5	100	185	P	H
VHT20	*	5304	93.26	-	-	89.61	31.89	8.26	36.5	100	185	A	H
CH 60	*	5302	104.28	-	-	100.63	31.89	8.26	36.5	100	168	P	V
5300MHz	*	5298	97.47	-	-	93.82	31.89	8.26	36.5	100	168	A	V
	*	5324	101.17	-	-	97.5	31.9	8.27	36.5	112	185	P	H
	*	5324	93.86	-	-	90.19	31.9	8.27	36.5	112	185	A	H
802.11ac		5350.15	48.92	-25.08	74	45.22	31.91	8.29	36.5	112	185	P	H
VHT20		5352.4	39.36	-14.64	54	35.66	31.91	8.29	36.5	112	185	A	H
CH 64	*	5316	104.28	-	-	100.61	31.9	8.27	36.5	100	163	P	V
5320MHz	*	5318	97.23	-	-	93.56	31.9	8.27	36.5	100	163	A	V
		5351.9	51.34	-22.66	74	47.64	31.91	8.29	36.5	100	163	P	V
		5351.45	42.37	-11.63	54	38.67	31.91	8.29	36.5	100	163	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 52 5260MHz		10521	46.25	-27.75	74	55.54	38.11	13.63	61.03	100	0	P	H
		10512	46.98	-27.02	74	56.27	38.11	13.63	61.03	100	360	P	V
802.11ac VHT20 CH 60 5300MHz		10596	46.51	-27.49	74	55.68	38.15	13.67	60.99	100	0	P	H
		10602	46.76	-27.24	74	55.9	38.16	13.68	60.98	100	360	P	V
802.11ac VHT20 CH 64 5320MHz		10635	46.64	-27.36	74	55.73	38.18	13.7	60.97	100	0	P	H
		10644	49.09	-24.91	74	58.18	38.18	13.7	60.97	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5107.5	46.71	-27.29	74	43.33	31.83	8.1	36.55	337	313	P	H
		5146.4	37.68	-16.32	54	34.24	31.84	8.13	36.53	337	313	A	H
802.11ac	*	5260	94.75	-	-	91.14	31.88	8.23	36.5	337	313	P	H
VHT40	*	5272	88.45	-	-	84.84	31.88	8.23	36.5	337	313	A	H
CH 54		5124.7	49.84	-24.16	74	46.43	31.84	8.11	36.54	258	341	P	V
5270MHz		5148.75	38.68	-15.32	54	35.24	31.84	8.13	36.53	258	341	A	V
	*	5268	100.16	-	-	96.55	31.88	8.23	36.5	258	341	P	V
	*	5268	93.16	-	-	89.55	31.88	8.23	36.5	258	341	A	V
	*	5314	95.71	-	-	92.04	31.9	8.27	36.5	314	354	P	H
	*	5302	88.76	-	-	85.11	31.89	8.26	36.5	314	354	A	H
802.11ac		5352.75	54.34	-19.66	74	50.64	31.91	8.29	36.5	314	354	P	H
VHT40		5356.4	40.56	-13.44	54	36.86	31.91	8.29	36.5	314	354	A	H
CH 62	*	5318	100.42	-	-	96.75	31.9	8.27	36.5	122	344	P	V
5310MHz	*	5318	93.06	-	-	89.39	31.9	8.27	36.5	122	344	A	V
		5360.2	58.26	-15.74	74	54.56	31.91	8.29	36.5	122	344	P	V
		5350.7	46.16	-7.84	54	42.46	31.91	8.29	36.5	122	344	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 2 5250~5350MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 54 5270MHz		10539	45.09	-28.91	74	54.35	38.12	13.64	61.02	100	0	P	H
		10539	44.03	-29.97	74	53.29	38.12	13.64	61.02	100	360	P	V
802.11ac VHT40 CH 62 5310MHz		10620	42.81	-31.19	74	51.93	38.17	13.69	60.98	100	0	P	H
		10620	42.5	-31.5	74	51.62	38.17	13.69	60.98	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5144.95	47.43	-26.57	74	43.99	31.84	8.13	36.53	133	358	P	H
		5147.75	38.12	-15.88	54	34.68	31.84	8.13	36.53	133	358	A	H
	*	5282	90.76	-	-	87.12	31.89	8.25	36.5	133	358	P	H
	*	5302	83.67	-	-	80.02	31.89	8.26	36.5	133	358	A	H
		5373.85	47.32	-26.68	74	43.6	31.91	8.31	36.5	133	358	P	H
		5350	39.14	-14.86	54	35.44	31.91	8.29	36.5	133	358	A	H
		5149.75	49.83	-24.17	74	46.39	31.84	8.13	36.53	138	1	P	V
		5148.8	41.35	-12.65	54	37.91	31.84	8.13	36.53	138	1	A	V
	*	5274	96.88	-	-	93.27	31.88	8.23	36.5	138	1	P	V
	*	5272	89.26	-	-	85.65	31.88	8.23	36.5	138	1	A	V
		5350.35	51.75	-22.25	74	48.05	31.91	8.29	36.5	138	1	P	V
		5350.05	43.61	-10.39	54	39.91	31.91	8.29	36.5	138	1	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		10581	43.11	-30.89	74	52.28	38.15	13.67	60.99	100	0	P	H
		10581	44.2	-29.8	74	53.37	38.15	13.67	60.99	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5454.56	53.25	-20.75	74	49.36	31.94	8.37	36.42	139	356	P	H
		5468.24	44.76	-9.24	54	40.83	31.95	8.38	36.4	139	356	A	H
802.11n	*	5496	101.49	-	-	97.53	31.95	8.39	36.38	139	356	P	H
HT20	*	5504	94.87	-	-	90.86	31.96	8.4	36.35	139	356	A	H
CH 100		5469.2	56.01	-17.99	74	52.08	31.95	8.38	36.4	105	342	P	V
5500MHz		5468.96	46.57	-7.43	54	42.64	31.95	8.38	36.4	105	342	A	V
	*	5498	105.39	-	-	101.38	31.96	8.4	36.35	105	342	P	V
	*	5498	97.93	-	-	93.92	31.96	8.4	36.35	105	342	A	V
802.11n	*	5576	102.29			98.11	31.98	8.45	36.25	132	0	P	H
HT20	*	5584	95.27			91.05	31.98	8.47	36.23	132	0	A	H
CH 116	*	5578	104.89			100.71	31.98	8.45	36.25	110	339	P	V
5580MHz	*	5578	97.91			93.73	31.98	8.45	36.25	110	339	A	V
	*	5696	104.45	-	-	100.14	32.02	8.54	36.25	123	0	P	H
	*	5698	96.95	-	-	92.64	32.02	8.54	36.25	123	0	A	H
802.11n		5725.08	54.48	-19.52	74	50.15	32.04	8.57	36.28	123	0	P	H
HT20		5725.08	45.56	-8.44	54	41.23	32.04	8.57	36.28	123	0	A	H
CH 140	*	5702	104.85	-	-	100.54	32.03	8.55	36.27	100	347	P	V
5700MHz	*	5702	97.78	-	-	93.47	32.03	8.55	36.27	100	347	A	V
		5747.88	54.65	-19.35	74	50.31	32.05	8.58	36.29	100	347	P	V
		5727.16	45.31	-8.69	54	40.98	32.04	8.57	36.28	100	347	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 3 - 5470~5725MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		11001	45.5	-28.5	74	53.98	38.4	13.91	60.79	100	0	P	H
		11001	45.44	-28.56	74	53.92	38.4	13.91	60.79	100	0	P	V
802.11n HT20 CH 116 5580MHz		11160	44.55	-29.45	74	52.78	38.47	14.01	60.71	100	360	P	H
		11160	44.68	-29.32	74	52.91	38.47	14.01	60.71	100	360	P	V
802.11n HT20 CH 140 5700MHz		11400	43.39	-30.61	74	51.27	38.56	14.15	60.59	100	0	P	H
		11400	45.11	-28.89	74	52.99	38.56	14.15	60.59	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5469.04	54.27	-19.73	74	50.34	31.95	8.38	36.4	248	2	P	H
		5468.08	43.95	-10.05	54	40.02	31.95	8.38	36.4	248	2	A	H
802.11n	*	5508	97.86	-	-	93.85	31.96	8.4	36.35	248	2	P	H
HT40	*	5506	90.78	-	-	86.77	31.96	8.4	36.35	248	2	A	H
CH 102		5425.68	56.26	-17.74	74	52.46	31.93	8.34	36.47	100	341	P	V
5510MHz		5468.24	45.75	-8.25	54	41.82	31.95	8.38	36.4	100	341	A	V
	*	5498	99.54	-	-	95.53	31.96	8.4	36.35	100	341	P	V
	*	5508	92.68	-	-	88.67	31.96	8.4	36.35	100	341	A	V
802.11n	*	5556	98.19	-	-	94.06	31.97	8.44	36.28	286	352	P	H
HT40	*	5554	91.34	-	-	87.21	31.97	8.44	36.28	286	352	A	H
CH 110	*	5546	100.78	-	-	96.68	31.97	8.43	36.3	100	342	P	V
5550MHz	*	5546	93.38	-	-	89.28	31.97	8.43	36.3	100	342	A	V
	*	5676	100.36	-	-	96.05	32.02	8.53	36.24	100	0	P	H
	*	5676	92.95	-	-	88.64	32.02	8.53	36.24	100	0	A	H
802.11n		5729.72	58.71	-15.29	74	54.38	32.04	8.57	36.28	100	0	P	H
HT40		5727.8	41.95	-12.05	54	37.62	32.04	8.57	36.28	100	0	A	H
CH 134	*	5666	100.91	-	-	96.61	32.01	8.52	36.23	100	0	P	V
5670MHz	*	5666	93.22	-	-	88.92	32.01	8.52	36.23	100	0	A	V
		5733.96	57.33	-16.67	74	53	32.04	8.57	36.28	100	0	P	V
		5727.56	42.67	-11.33	54	38.34	32.04	8.57	36.28	100	0	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		11019	44.5	-29.5	74	52.95	38.41	13.92	60.78	100	0	P	H
		11019	44.8	-29.2	74	53.25	38.41	13.92	60.78	100	360	P	V
802.11n HT40 CH 110 5550MHz		11100	44.08	-29.92	74	52.41	38.44	13.97	60.74	100	0	P	H
		11100	44.38	-29.62	74	52.71	38.44	13.97	60.74	100	360	P	V
802.11n HT40 CH 134 5670MHz		11340	43.76	-30.24	74	51.74	38.53	14.11	60.62	100	0	P	H
		11340	44.2	-29.8	74	52.18	38.53	14.11	60.62	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5462	47.79	-26.21	74	43.9	31.94	8.37	36.42	238	0	P	H
		5465.68	39.6	-14.4	54	35.67	31.95	8.38	36.4	238	0	A	H
802.11ac	*	5496	100.68	-	-	96.72	31.95	8.39	36.38	238	0	P	H
VHT20	*	5496	93.56	-	-	89.6	31.95	8.39	36.38	238	0	A	H
CH 100		5464.56	51.74	-22.26	74	47.81	31.95	8.38	36.4	100	343	P	V
5500MHz		5469.84	42.71	-11.29	54	38.78	31.95	8.38	36.4	100	343	A	V
	*	5496	102.1	-	-	98.14	31.95	8.39	36.38	100	343	P	V
	*	5498	95.53	-	-	91.52	31.96	8.4	36.35	100	343	A	V
802.11ac	*	5582	101.28	-	-	97.06	31.98	8.47	36.23	100	360	P	H
VHT20	*	5576	94.05	-	-	89.87	31.98	8.45	36.25	100	360	A	H
CH 116	*	5576	102.26	-	-	98.08	31.98	8.45	36.25	100	339	P	V
5580MHz	*	5576	95.39	-	-	91.21	31.98	8.45	36.25	100	339	A	V
	*	5698	102.79	-	-	98.48	32.02	8.54	36.25	100	360	P	H
	*	5696	95.16	-	-	90.85	32.02	8.54	36.25	100	360	A	H
802.11ac		5733.4	50.34	-23.66	74	46.01	32.04	8.57	36.28	100	360	P	H
VHT20		5748.28	41.26	-12.74	54	36.92	32.05	8.58	36.29	100	360	A	H
CH 140	*	5696	101.59	-	-	97.28	32.02	8.54	36.25	100	0	P	V
5700MHz	*	5704	95.04	-	-	90.73	32.03	8.55	36.27	100	0	A	V
		5725.64	49.77	-24.23	74	45.44	32.04	8.57	36.28	100	0	P	V
		5725	40.99	-13.01	54	36.66	32.04	8.57	36.28	100	0	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 100 5500MHz		11004	46.61	-27.39	74	55.09	38.4	13.91	60.79	100	0	P	H
		11001	45.39	-28.61	74	53.87	38.4	13.91	60.79	100	360	P	V
802.11ac VHT20 CH 116 5580MHz		11160	43.98	-30.02	74	52.21	38.47	14.01	60.71	100	0	P	H
		11160	43.89	-30.11	74	52.12	38.47	14.01	60.71	100	360	P	V
802.11ac VHT20 CH 140 5700MHz		11400	43.37	-30.63	74	51.25	38.56	14.15	60.59	100	0	P	H
		11403	45.14	-28.86	74	53.02	38.56	14.15	60.59	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5506	96.26	-	-	92.25	31.96	8.4	36.35	155	2	P	H
	*	5514	89.56	-	-	85.51	31.96	8.42	36.33	155	2	A	H
802.11ac		5464.08	53.37	-20.63	74	49.44	31.95	8.38	36.4	155	2	P	H
VHT40		5468.08	41.54	-12.46	54	37.61	31.95	8.38	36.4	155	2	A	H
CH 102	*	5508	99.21	-	-	95.2	31.96	8.4	36.35	125	341	P	V
5510MHz	*	5516	92.1	-	-	88.05	31.96	8.42	36.33	125	341	A	V
		5468.56	57.05	-16.95	74	53.12	31.95	8.38	36.4	125	341	P	V
		5468.08	45.66	-8.34	54	41.73	31.95	8.38	36.4	125	341	A	V
802.11ac	*	5556	97.25	-	-	93.12	31.97	8.44	36.28	129	360	P	H
VHT40	*	5546	90.15	-	-	86.05	31.97	8.43	36.3	129	360	A	H
CH 110	*	5556	100.04	-	-	95.91	31.97	8.44	36.28	100	334	P	V
5550MHz	*	5546	92.77	-	-	88.67	31.97	8.43	36.3	100	334	A	V
	*	5666	97.58	-	-	93.28	32.01	8.52	36.23	118	0	P	H
	*	5666	90.92	-	-	86.62	32.01	8.52	36.23	118	0	A	H
802.11ac		5729.08	56.67	-17.33	74	52.34	32.04	8.57	36.28	118	0	P	H
VHT40		5725.96	40.6	-13.4	54	36.27	32.04	8.57	36.28	118	0	A	H
CH 134	*	5666	100.52	-	-	96.22	32.01	8.52	36.23	100	338	P	V
5670MHz	*	5666	92.86	-	-	88.56	32.01	8.52	36.23	100	338	A	V
		5732.6	56.73	-17.27	74	52.4	32.04	8.57	36.28	100	338	P	V
		5727.16	40.87	-13.13	54	36.54	32.04	8.57	36.28	100	338	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 102 5510MHz		11019	44.21	-29.79	74	52.66	38.41	13.92	60.78	100	0	P	H
		11019	44.86	-29.14	74	53.31	38.41	13.92	60.78	100	360	P	V
802.11ac VHT40 CH 110 5550MHz		11100	44.91	-29.09	74	53.24	38.44	13.97	60.74	100	0	P	H
		11100	44.05	-29.95	74	52.38	38.44	13.97	60.74	100	360	P	V
802.11ac VHT40 CH 134 5670MHz		11340	44.1	-29.9	74	52.08	38.53	14.11	60.62	100	0	P	H
		11340	43.81	-30.19	74	51.79	38.53	14.11	60.62	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5457.04	48.68	-25.32	74	44.79	31.94	8.37	36.42	227	0	P	H
		5467.76	40.97	-13.03	54	37.04	31.95	8.38	36.4	227	0	A	H
	*	5546	92.6	-	-	88.5	31.97	8.43	36.3	227	0	P	H
	*	5536	85.28	-	-	81.18	31.97	8.43	36.3	227	0	A	H
		5739.72	46.95	-27.05	74	42.61	32.05	8.58	36.29	227	0	P	H
		5725.32	37.87	-16.13	54	33.54	32.04	8.57	36.28	227	0	A	H
		5423.28	53.54	-20.46	74	49.74	31.93	8.34	36.47	100	350	P	V
		5431.92	45.24	-8.76	54	41.4	31.94	8.35	36.45	100	350	A	V
	*	5522	96.45	-	-	92.4	31.96	8.42	36.33	100	350	P	V
	*	5510	87.84	-	-	83.83	31.96	8.4	36.35	100	350	A	V
		5739	46.53	-27.47	74	42.19	32.05	8.58	36.29	100	350	P	V
		5732.04	38.05	-15.95	54	33.72	32.04	8.57	36.28	100	350	A	V
802.11ac VHT80 CH 122 5610MHz		5469.04	47.44	-26.56	74	43.51	31.95	8.38	36.4	100	0	P	H
		5467.92	38.86	-15.14	54	34.93	31.95	8.38	36.4	100	0	A	H
	*	5618	92.98	-	-	88.71	31.99	8.49	36.21	100	0	P	H
	*	5616	85.27	-	-	81	31.99	8.49	36.21	100	0	A	H
		5749.64	47.76	-26.24	74	43.42	32.05	8.58	36.29	100	0	P	H
		5733.8	39.04	-14.96	54	34.71	32.04	8.57	36.28	100	0	A	H
		5462.16	49.61	-24.39	74	45.72	31.94	8.37	36.42	100	0	P	V
		5465.36	41.68	-12.32	54	37.75	31.95	8.38	36.4	100	0	A	V
	*	5598	95.09	-	-	90.87	31.98	8.47	36.23	100	0	P	V
	*	5616	87.83	-	-	83.56	31.99	8.49	36.21	100	0	A	V
		5737.08	48.49	-25.51	74	44.15	32.05	8.58	36.29	100	0	P	V
		5725.48	39.88	-14.12	54	35.55	32.04	8.57	36.28	100	0	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		11061	44.39	-29.61	74	52.77	38.43	13.95	60.76	100	0	P	H
		11061	45.05	-28.95	74	53.43	38.43	13.95	60.76	100	360	P	V
802.11ac VHT80 CH 122 5610MHz		11220	42.66	-31.34	74	50.81	38.49	14.04	60.68	100	0	P	H
		11220	43.12	-30.88	74	51.27	38.49	14.04	60.68	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Note symbol

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

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

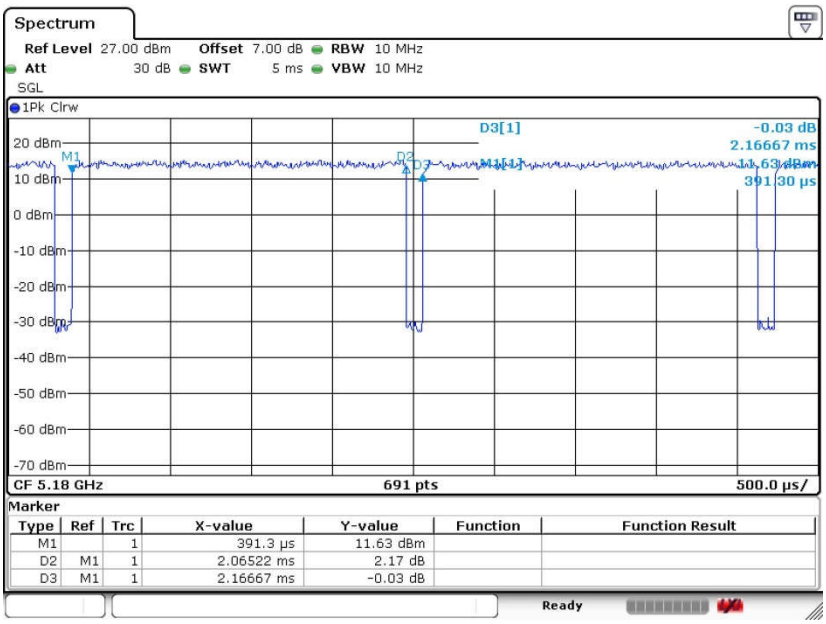
= -10.46(dB)

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

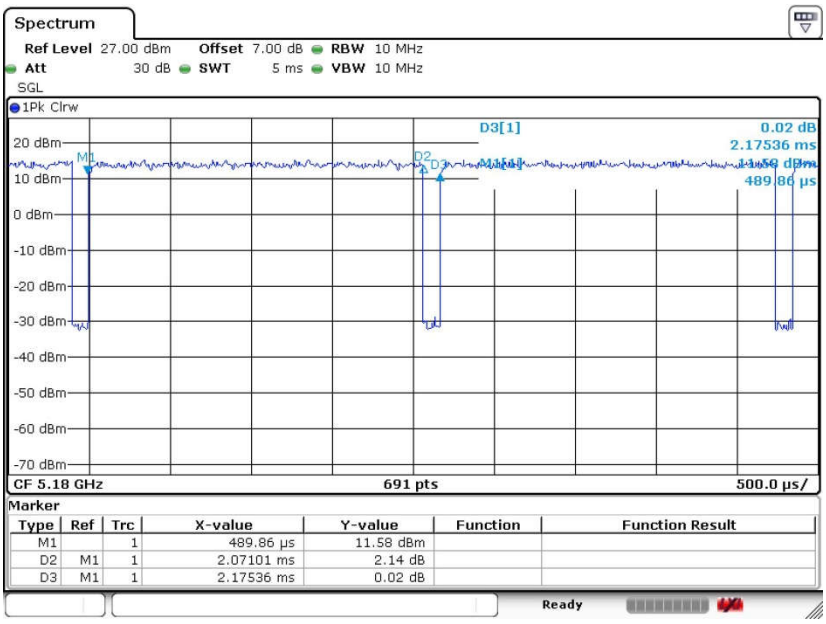
Appendix D. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
1	802.11a	95.318	2.065	0.484	1kHz
2	802.11a	95.203	2.071	0.483	1kHz
1+2	802.11n HT20	94.797	1.928	0.519	1kHz
1+2	802.11n HT40	90.430	0.945	1.058	3kHz
1+2	802.11ac VHT20	94.882	1.935	0.517	1kHz
1+2	802.11ac VHT40	91.449	0.961	1.041	3kHz
1+2	802.11ac VHT80	83.248	0.468	2.137	3kHz

802.11a Antenna 1



802.11a Antenna 2



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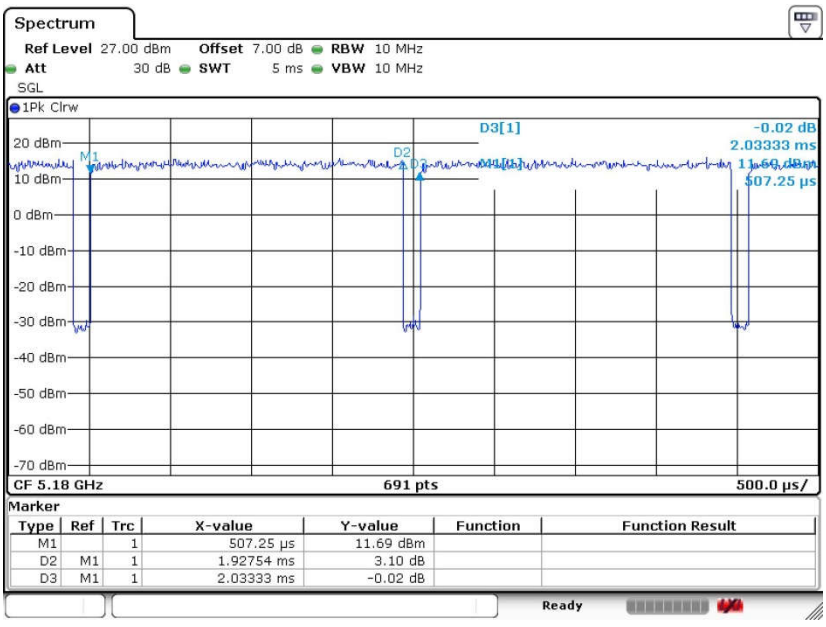
802.11n HT20 Antenna 1 + 2



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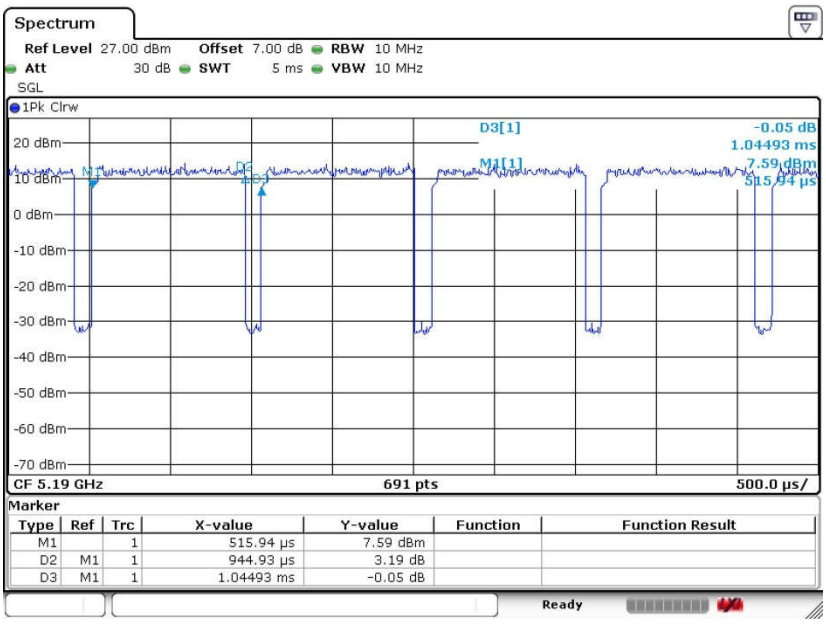
802.11n HT40 Antenna 1 + 2



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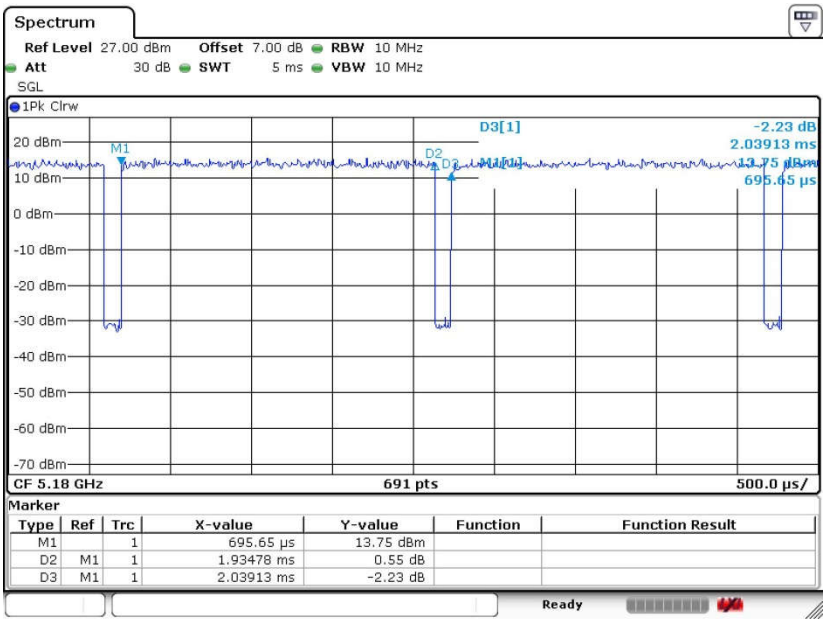
802.11ac VHT20 Antenna 1 + 2



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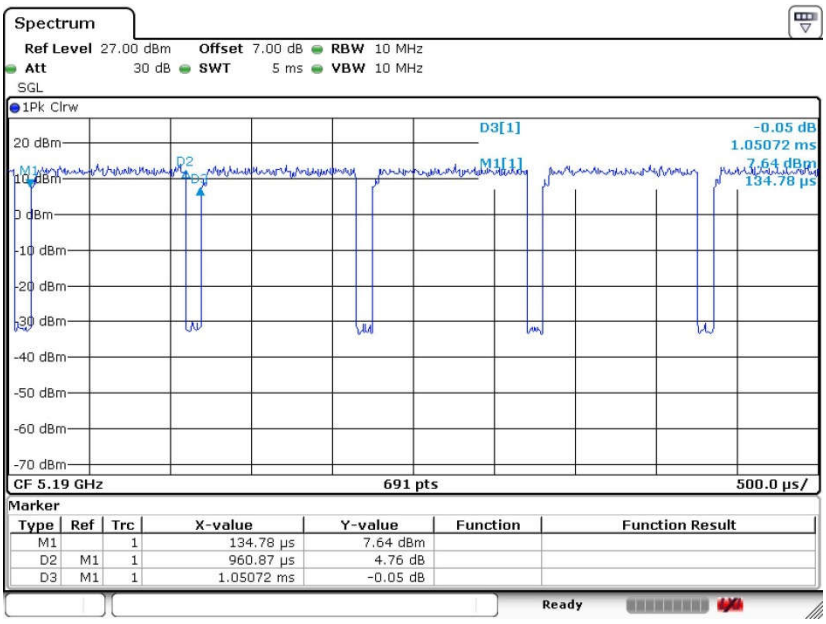
802.11ac VHT40 Antenna 1 + 2



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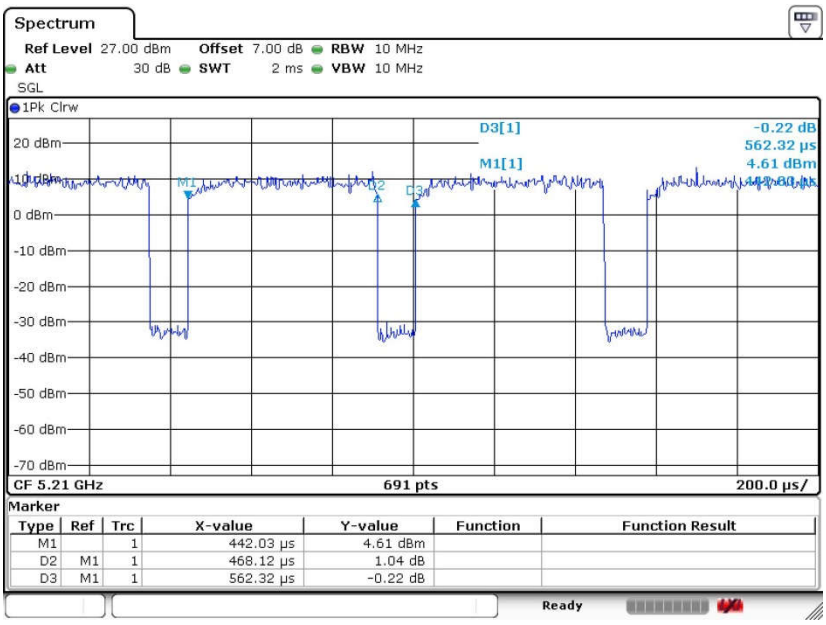
802.11ac VHT80 Antenna 1 + 2



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