



FCC RF Test Report

APPLICANT : BYD Precision Manufacture Co.,Ltd.
EQUIPMENT : Trident
BRAND NAME : iRobot
MODEL NAME : AXC-Y1
FCC ID : ZW9AXCY1
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

The product was received on Jan. 19, 2018 and testing was completed on Feb. 08, 2018. 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.

Approved by: James Huang / Manager



Sporton International (Kunshan) Inc.
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China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR792901-03C	Rev. 01	Initial issue of report	Feb. 23, 2018

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
-	2.1049 15.403(i)	26dB & 99% Bandwidth	-	Not Required	-
-	15.407(a)	Maximum Conducted Output Power	FCC ≤ 24 dBm (depend on band)	Not Required	-
-	15.407(a)	Power Spectral Density	FCC ≤ 11 dBm (depend on band)	Not Required	-
3.1	15.407(b)	Unwanted Emissions	15.407(b) 15.209(a)	Pass	Under limit 5.10 dB at 5752.040 MHz
-	15.207	AC Conducted Emission	15.207(a)	Not Required	-
-	15.407(g)	Frequency Stability	Within Operation Band	Not Required	-
-	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Not Required	-
-	15.203 & 15.407(a)	Antenna Requirement	N/A	Not Required	-

Remark: Not required means the change does not affected the test result.



1 General Description

1.1 Applicant

BYD Precision Manufacture Co.,Ltd.

No.3001, Bao He Road, Baolong Industry Zone, Longgang, Shenzhen, Guangdong Province, P.R.China

1.2 Manufacturer

Huizhou BYD Electronic Co.,Ltd.

Xiangshui River, Economic Development Zone, Daya Bay, Huizhou, Guangdong Province, P.R.China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Trident
Brand Name	iRobot
Model Name	AXC-Y1
FCC ID	ZW9AXCY1
EUT supports Radios application	WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40/ Bluetooth v4.0 LE /Bluetooth v4.2 LE
HW Version	Trident B2.5
SW Version	Trident_00.00.25_20171223
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. This is a variant report for AXC-Y1. The product equality declaration could be referred to Appendix D. Based on the similarity between current and previous project, only the worst cases of RSE from original test report (Sporton Report Number FR792901C) were verified for the differences.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5700 MHz
Antenna Type / Gain	Please see Remark 1
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

Remark:

1. The antenna provided to the EUT, please refer to the following table:
2. We only evaluate the Antenna of max Gain to test.

Antenna No.	Brand	Model	Gain(dBi)	Antenna Type	Frequency range (GHz to GHz)	Cable length (mm)
1(External)	Laird	EMN2449A 2S-25UFL	3.50	PCB dipole antenna	2.4-2.4835	250
1(External)	Laird	EMN2449A 2S-25UFL	5.75	PCB dipole antenna	5.15-5.25	250
1(External)	Laird	EMN2449A 2S-25UFL	6.26	PCB dipole antenna	5.25-5.35	250
1(External)	Laird	EMN2449A 2S-25UFL	6.24	PCB dipole antenna	5.47-5.725	250
1(External)	Laird	EMN2449A 2S-25UFL	5.18	PCB dipole antenna	5.725-5.85	250



Antenna No.	Brand	Model	Gain(dBi)	Antenna Type	Frequency range (GHz to GHz)	Cable length (mm)
2(External)	Laird	MAF94264	3.33	PCB dipole antenna	2.4-2.4835	80
2(External)	Laird	MAF94264	5.52	PCB dipole antenna	5.15-5.25	80
2(External)	Laird	MAF94264	6.14	PCB dipole antenna	5.25-5.35	80
2(External)	Laird	MAF94264	6.06	PCB dipole antenna	5.47-5.725	80
2(External)	Laird	MAF94264	5.33	PCB dipole antenna	5.725-5.85	80

1.5 Modification of EUT

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

1.6 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO 17025 by National Voluntary Laboratory Accreditation Program (NVLAP code: 600155-0) and the FCC designation No. is CN5013.

Test Site	Sporton International (Kunshan) Inc.	
Test Site Location	No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China TEL : +86-512-57900158 FAX : +86-512-57900958	
Test Site No.	Sporton Site No.	FCC Test Firm Registration No.
	03CH03-KS	630927

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 U-NII Test Procedures New Rules v02r01
- ANSI C63.10-2013

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

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: radiated emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the worst cases were recorded in this report.

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
	-	-	-	-

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
	-	-	-	-

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
	-	-	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

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

2.2 Test Mode

Final test mode of conducted test items and radiated spurious emissions are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0

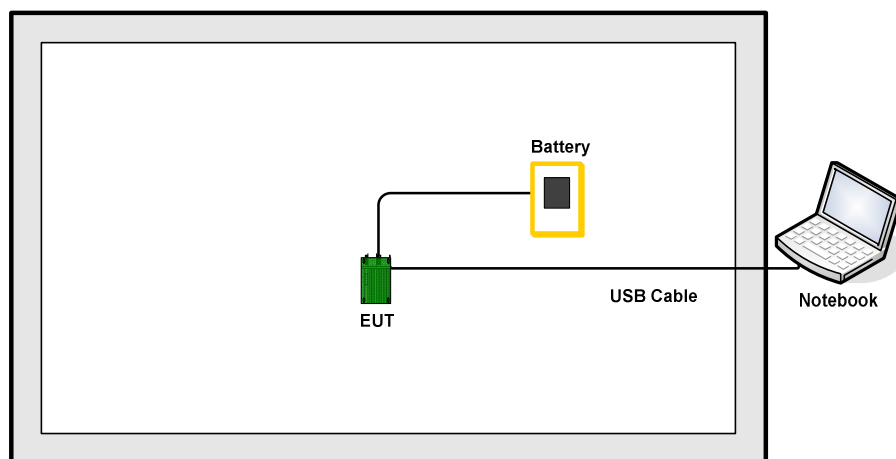
Ch. #		Band I : 5180-5240 MHz	Band II : 5260-5320 MHz	Band III : 5500-5700MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140

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

2.3 Connection Diagram of Test System

<WLAN Tx Mode>



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Battery	N/A	N/A	N/A	N/A	N/A
2.	Notebook	Dell	Latitude3440	N/A	N/A	shielded cable DC O/P 1.8m , Unshielded AC I/P cable 1.8m
3.	USB Cable	N/A	N/A	N/A	Unshielded, 1.2m	N/A

2.5 EUT Operation Test Setup

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

3 Test Result

3.1 Unwanted Radiated Emission Measurement

This section is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement.

3.1.1 Limit of Unwanted Emissions

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

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

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

- (2) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

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

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

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

(3) KDB789033 D01 v01r04 G)2)c)

- (i) Section 15.407(b)(1) to (b)(3) specify the unwanted emission limits for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.³
- (ii) Section 15.407(b)(4) specifies the unwanted emission limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are in terms of a Peak detector. An alternative to the band emissions mask is specified in Section 15.407(b)(4)(ii). The alternative limits are based on the highest antenna gain specified in the filing. There are also marketing and importation restrictions for the devices using the alternative limit.⁴

Note 3: An out-of-band emission that complies with both the average and peak limits of Section 15.209 is not required to satisfy the -27 dBm/MHz peak emission limit.

Note 4: Only devices with antenna gains of 10 dBi or less may be approved using the emission limits specified in Section 15.247(d) till March 2, 2018; all other devices operating in this band must use the mask specified in Section 15.407(b)(4)(i).



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 U-NII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.

(1) Procedure for Unwanted Emissions Measurements Below 1000MHz

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

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

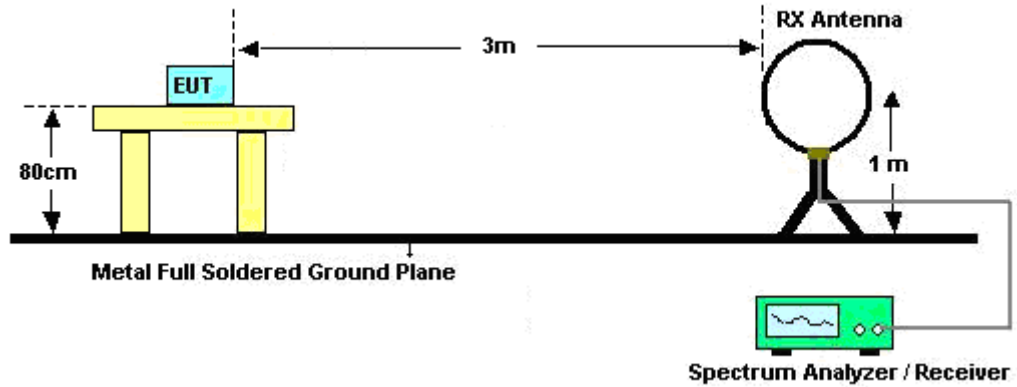
- RBW = 1 MHz
- VBW \geq 3 MHz
- Detector = Peak
- Sweep time = auto
- Trace mode = max hold



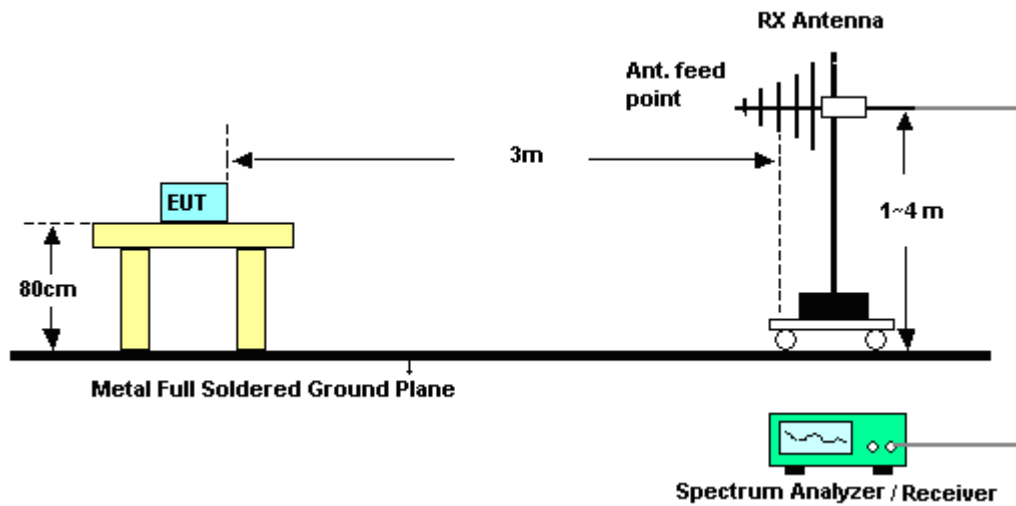
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband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

3.1.4 Test Setup

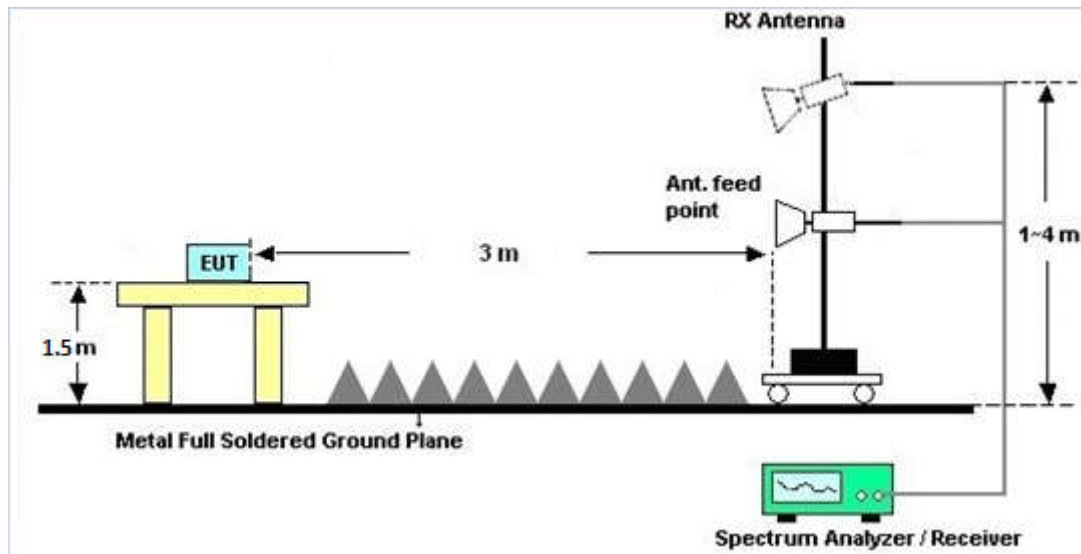
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.1.5 Test Results of Radiated Spurious 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 was not reported.

3.1.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A.

3.1.7 Duty Cycle

Please refer to Appendix B.

3.1.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix A.



4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Keysight	N9038A	MY564000 04	3Hz~8.5GHz; Max 30dBm	Oct. 19, 2017	Feb. 06, 2018~ Feb. 08, 2018	Oct. 18, 2018	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY551502 44	10Hz~44GHz	Apr. 18, 2017	Feb. 06, 2018~ Feb. 08, 2018	Apr. 17, 2018	Radiation (03CH03-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 22, 2017	Feb. 06, 2018~ Feb. 08, 2018	Oct.21, 2018	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	35406	25MHz~2GHz	Apr. 22, 2017	Feb. 06, 2018~ Feb. 08, 2018	Apr. 21, 2018	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-135 6	1GHz~18GHz	Apr. 22, 2017	Feb. 06, 2018~ Feb. 08, 2018	Apr. 21, 2018	Radiation (03CH03-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA1702 49	15GHz~40GHz	Feb. 15, 2017	Feb. 06, 2018~ Feb. 08, 2018	Feb. 14, 2018	Radiation (03CH03-KS)
Amplifier	com-power	PA-103A	161069	1MHz~1000MH z / 32 dB	Apr. 18, 2017	Feb. 06, 2018~ Feb. 08, 2018	Apr. 17, 2018	Radiation (03CH03-KS)
Amplifier	MITEQ	TTA1840-35- HG	1887435	18GHz~40GHz	Oct. 12, 2017	Feb. 06, 2018~ Feb. 08, 2018	Oct. 11, 2018	Radiation (03CH03-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2025788	1GHz~18GHz	Apr. 18, 2017	Feb. 06, 2018~ Feb. 08, 2018	Apr. 17, 2018	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A023 70	1GHz~26.5GHz	Oct. 12, 2017	Feb. 06, 2018~ Feb. 08, 2018	Oct. 11, 2018	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F1040900 04	N/A	NCR	Feb. 06, 2018~ Feb. 08, 2018	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Feb. 06, 2018~ Feb. 08, 2018	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Feb. 06, 2018~ Feb. 08, 2018	NCR	Radiation (03CH03-KS)

NCR: No Calibration Required



5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.6dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.5dB
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Appendix A. Radiated Spurious Emission

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5128.48	53.41	-20.59	74	43.09	35.16	11.86	36.7	300	30	P	H
		5127.68	46.74	-7.26	54	36.42	35.16	11.86	36.7	300	30	A	H
	*	5184	104.86	-	-	94.44	35.18	11.93	36.69	300	30	P	H
	*	5184	97.41	-	-	86.99	35.18	11.93	36.69	300	30	A	H
		5123.68	54.2	-19.8	74	43.88	35.16	11.86	36.7	318	151	P	V
		5127.68	46.37	-7.63	54	36.05	35.16	11.86	36.7	318	151	A	V
	*	5174	103.53	-	-	93.11	35.18	11.93	36.69	318	151	P	V
	*	5174	96.4	-	-	85.98	35.18	11.93	36.69	318	151	A	V
802.11a CH 44 5220MHz		5117.28	53	-21	74	42.71	35.15	11.84	36.7	316	160	P	H
		5124.48	43.7	-10.3	54	33.38	35.16	11.86	36.7	316	160	A	H
	*	5214	105.5	-	-	95.02	35.2	11.97	36.69	316	160	P	H
	*	5214	98.31	-	-	87.83	35.2	11.97	36.69	316	160	A	H
		5384.88	52.84	-21.16	74	42.08	35.28	12.17	36.69	316	160	P	H
		5353.2	42.98	-11.02	54	32.28	35.26	12.13	36.69	316	160	A	H
		5114.24	52.78	-21.22	74	42.49	35.15	11.84	36.7	272	42	P	V
		5116.96	43.75	-10.25	54	33.46	35.15	11.84	36.7	272	42	A	V
	*	5228	105.18	-	-	94.67	35.21	11.99	36.69	272	42	P	V
	*	5228	97.83	-	-	87.32	35.21	11.99	36.69	272	42	A	V
		5354.82	52.11	-21.89	74	41.41	35.26	12.13	36.69	272	42	P	V
		5371.56	42.9	-11.1	54	32.17	35.27	12.15	36.69	272	42	A	V



802.11a CH 48 5240MHz	*	5244	104.7	-	-	94.17	35.21	12.01	36.69	313	158	P	H
	*	5244	97.43	-	-	86.9	35.21	12.01	36.69	313	158	A	H
		5358.24	52.96	-21.04	74	42.26	35.26	12.13	36.69	313	158	P	H
		5382.18	43.18	-10.82	54	32.42	35.28	12.17	36.69	313	158	A	H
	*	5234	102.3	-	-	91.79	35.21	11.99	36.69	100	129	P	V
	*	5234	95.06	-	-	84.55	35.21	11.99	36.69	100	129	A	V
		5387.04	52.47	-21.53	74	41.71	35.28	12.17	36.69	100	129	P	V
		5386.86	43.11	-10.89	54	32.35	35.28	12.17	36.69	100	129	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		10360	43.17	-30.83	74	55.42	38.25	15.65	66.15	100	360	P	H
CH 36 5180MHz		10360	44.4	-29.6	74	56.65	38.25	15.65	66.15	100	360	P	V
802.11a		10440	42.57	-31.43	74	54.71	38.28	15.68	66.1	100	360	P	H
CH 44 5220MHz		10440	42.62	-31.38	74	54.76	38.28	15.68	66.1	100	360	P	V
802.11a		10480	41.63	-32.37	74	53.7	38.3	15.7	66.07	100	360	P	H
CH 48 5240MHz		10480	42.56	-31.44	74	54.63	38.3	15.7	66.07	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		5116.32	53.28	-20.72	74	42.99	35.15	11.84	36.7	100	52	P	H
		5128.32	44.68	-9.32	54	34.36	35.16	11.86	36.7	100	52	A	H
	*	5184	97.86	-	-	87.44	35.18	11.93	36.69	100	52	P	H
	*	5184	90.76	-	-	80.34	35.18	11.93	36.69	100	52	A	H
		5128.32	55.77	-18.23	74	45.45	35.16	11.86	36.7	321	27	P	V
		5128.16	47.47	-6.53	54	37.15	35.16	11.86	36.7	321	27	A	V
	*	5174	104.47	-	-	94.05	35.18	11.93	36.69	321	27	P	V
	*	5174	97.02	-	-	86.6	35.18	11.93	36.69	321	27	A	V
802.11n HT20 CH 44 5220MHz		5138.4	53.28	-20.72	74	42.96	35.16	11.86	36.7	100	52	P	H
		5112.8	43.64	-10.36	54	33.35	35.15	11.84	36.7	100	52	A	H
	*	5214	97.49	-	-	87.01	35.2	11.97	36.69	100	52	P	H
	*	5214	90.53	-	-	80.05	35.2	11.97	36.69	100	52	A	H
		5393.16	51.87	-22.13	74	41.11	35.28	12.17	36.69	100	52	P	H
		5390.82	42.77	-11.23	54	32.01	35.28	12.17	36.69	100	52	A	H
		5109.44	53.06	-20.94	74	42.77	35.15	11.84	36.7	314	17	P	V
		5112.64	43.67	-10.33	54	33.38	35.15	11.84	36.7	314	17	A	V
	*	5226	104.86	-	-	94.35	35.21	11.99	36.69	314	17	P	V
	*	5226	97.64	-	-	87.13	35.21	11.99	36.69	314	17	A	V
		5390.28	52.22	-21.78	74	41.46	35.28	12.17	36.69	314	17	P	V
		5395.5	42.76	-11.24	54	31.97	35.29	12.19	36.69	314	17	A	V



802.11n HT20 CH 48 5240MHz	*	5248	97.2	-	-	86.67	35.21	12.01	36.69	100	45	P	H
	*	5248	90.03	-	-	79.5	35.21	12.01	36.69	100	45	A	H
		5389.56	51.73	-22.27	74	40.97	35.28	12.17	36.69	100	45	P	H
		5388.48	42.84	-11.16	54	32.08	35.28	12.17	36.69	100	45	A	H
	*	5246	104.93	-	-	94.4	35.21	12.01	36.69	318	16	P	V
	*	5246	97.42	-	-	86.89	35.21	12.01	36.69	318	16	A	V
		5367.24	51.96	-22.04	74	41.23	35.27	12.15	36.69	318	16	P	V
		5385.24	43	-11	54	32.24	35.28	12.17	36.69	318	16	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 36 5180MHz		10360	42.12	-31.88	74	54.37	38.25	15.65	66.15	300	360	P	H
		10360	42.47	-31.53	74	54.72	38.25	15.65	66.15	300	360	P	V
802.11n HT20 CH 44 5220MHz		10440	40.93	-33.07	74	53.07	38.28	15.68	66.1	300	360	P	H
		10440	40.94	-33.06	74	53.08	38.28	15.68	66.1	300	360	P	V
802.11n HT20 CH 48 5240MHz		10480	41.4	-32.6	74	53.47	38.3	15.7	66.07	300	360	P	H
		10480	42.51	-31.49	74	54.58	38.3	15.7	66.07	300	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5149.92	54.45	-19.55	74	44.11	35.16	11.88	36.7	400	189	P	H
		5137.76	44.07	-9.93	54	33.75	35.16	11.86	36.7	400	189	A	H
	*	5204	101.13	-	-	90.68	35.19	11.95	36.69	400	189	P	H
	*	5204	94.33	-	-	83.88	35.19	11.95	36.69	400	189	A	H
		5385.78	53.15	-20.85	74	42.39	35.28	12.17	36.69	400	189	P	H
		5385.42	43.31	-10.69	54	32.55	35.28	12.17	36.69	400	189	A	H
		5149.92	54.18	-19.82	74	43.84	35.16	11.88	36.7	337	71	P	V
		5148.16	44.81	-9.19	54	34.47	35.16	11.88	36.7	337	71	A	V
	*	5202	103.62	-	-	93.17	35.19	11.95	36.69	337	71	P	V
	*	5202	96.03	-	-	85.58	35.19	11.95	36.69	337	71	A	V
		5393.52	54.18	-19.82	74	43.42	35.28	12.17	36.69	337	71	P	V
		5391.18	43.38	-10.62	54	32.62	35.28	12.17	36.69	337	71	A	V
802.11n HT40 CH 46 5230MHz		5142.56	53.63	-20.37	74	43.29	35.16	11.88	36.7	100	61	P	H
		5125.12	44.02	-9.98	54	33.7	35.16	11.86	36.7	100	61	A	H
	*	5236	99.22	-	-	88.71	35.21	11.99	36.69	100	61	P	H
	*	5236	92.18	-	-	81.67	35.21	11.99	36.69	100	61	A	H
		5385.06	53.24	-20.76	74	42.48	35.28	12.17	36.69	100	61	P	H
		5360.4	43.2	-10.8	54	32.5	35.26	12.13	36.69	100	61	A	H
		5120.8	53	-21	74	42.71	35.15	11.84	36.7	333	73	P	V
		5126.88	44.54	-9.46	54	34.22	35.16	11.86	36.7	333	73	A	V
	*	5236	103.08	-	-	92.57	35.21	11.99	36.69	333	73	P	V
	*	5236	95.74	-	-	85.23	35.21	11.99	36.69	333	73	A	V
		5363.64	53.19	-20.81	74	42.46	35.27	12.15	36.69	333	73	P	V
		5387.58	43.22	-10.78	54	32.46	35.28	12.17	36.69	333	73	A	V
Remark	1. No other spurious found.												
	2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		10380	42.95	-31.05	74	55.17	38.26	15.66	66.14	300	360	P	H
		10380	43.25	-30.75	74	55.47	38.26	15.66	66.14	300	360	P	V
802.11n HT40 CH 46 5230MHz		10460	42.98	-31.02	74	55.1	38.28	15.69	66.09	300	360	P	H
		10460	42.8	-31.2	74	54.92	38.28	15.69	66.09	300	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 802.11a (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		5128	53.46	-20.54	74	43.14	35.16	11.86	36.7	100	133	P	H
		5131.52	43.7	-10.3	54	33.38	35.16	11.86	36.7	100	133	A	H
	*	5258	102.67	-	-	92.14	35.21	12.01	36.69	100	133	P	H
	*	5258	95.66	-	-	85.13	35.21	12.01	36.69	100	133	A	H
		5134.72	53.04	-20.96	74	42.72	35.16	11.86	36.7	327	46	P	V
		5114.72	43.73	-10.27	54	33.44	35.15	11.84	36.7	327	46	A	V
	*	5264	104.16	-	-	93.6	35.22	12.03	36.69	327	46	P	V
	*	5264	96.76	-	-	86.2	35.22	12.03	36.69	327	46	A	V
802.11a CH 60 5300MHz		5135.84	53.21	-20.79	74	42.89	35.16	11.86	36.7	270	156	P	H
		5102.72	43.78	-10.22	54	33.52	35.14	11.82	36.7	270	156	A	H
	*	5304	103.32	-	-	92.7	35.24	12.07	36.69	270	156	P	H
	*	5304	96.8	-	-	86.18	35.24	12.07	36.69	270	156	A	H
		5353.5	53.43	-20.57	74	42.73	35.26	12.13	36.69	270	156	P	H
		5352.3	45.95	-8.05	54	35.25	35.26	12.13	36.69	270	156	A	H
		5123.36	53.31	-20.69	74	42.99	35.16	11.86	36.7	321	44	P	V
		5104.64	43.8	-10.2	54	33.54	35.14	11.82	36.7	321	44	A	V
	*	5306	104.7	-	-	94.08	35.24	12.07	36.69	321	44	P	V
	*	5306	97.33	-	-	86.71	35.24	12.07	36.69	321	44	A	V
		5352.9	53.92	-20.08	74	43.22	35.26	12.13	36.69	321	44	P	V
		5352.5	46.8	-7.2	54	36.1	35.26	12.13	36.69	321	44	A	V



802.11a CH 64 5320MHz	*	5326	103.65	-	-	93	35.25	12.09	36.69	400	156	P	H
	*	5326	96.87	-	-	86.22	35.25	12.09	36.69	400	156	A	H
		5372.8	54.6	-19.4	74	43.87	35.27	12.15	36.69	400	156	P	H
		5372.5	46.26	-7.74	54	35.53	35.27	12.15	36.69	400	156	A	H
	*	5328	104.33	-	-	93.66	35.25	12.11	36.69	337	46	P	V
	*	5328	97.36	-	-	86.69	35.25	12.11	36.69	337	46	A	V
		5373.2	55.01	-18.99	74	44.28	35.27	12.15	36.69	337	46	P	V
		5372.4	46.61	-7.39	54	35.88	35.27	12.15	36.69	337	46	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		10520	41.38	-32.62	74	53.39	38.31	15.72	66.04	100	360	P	H
CH 52 5260MHz		10520	43.2	-30.8	74	55.21	38.31	15.72	66.04	100	360	P	V
802.11a		10600	42.02	-31.98	74	53.91	38.34	15.75	65.98	300	360	P	H
CH 60 5300MHz		10600	42.81	-31.19	74	54.7	38.34	15.75	65.98	300	360	P	V
802.11a		10640	45.13	-28.87	74	56.96	38.36	15.77	65.96	300	360	P	H
CH 64 5320MHz		10640	45.46	-28.54	74	57.29	38.36	15.77	65.96	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 HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		5104.8	51.87	-22.13	74	41.61	35.14	11.82	36.7	100	181	P	H
		5110.08	43.2	-10.8	54	32.91	35.15	11.84	36.7	100	181	A	H
	*	5266	97.09	-	-	86.53	35.22	12.03	36.69	100	181	P	H
	*	5266	90.25	-	-	79.69	35.22	12.03	36.69	100	181	A	H
		5128.48	52.45	-21.55	74	42.13	35.16	11.86	36.7	291	116	P	V
		5107.2	43.2	-10.8	54	32.91	35.15	11.84	36.7	291	116	A	V
	*	5266	102.93	-	-	92.37	35.22	12.03	36.69	291	116	P	V
	*	5266	95.88	-	-	85.32	35.22	12.03	36.69	291	116	A	V
802.11n HT20 CH 60 5300MHz		5102.72	52.8	-21.2	74	42.54	35.14	11.82	36.7	314	182	P	H
		5123.04	43.42	-10.58	54	33.1	35.16	11.86	36.7	314	182	A	H
	*	5294	97.29	-	-	86.67	35.24	12.07	36.69	314	182	P	H
	*	5294	90.36	-	-	79.74	35.24	12.07	36.69	314	182	A	H
		5379.1	52.71	-21.29	74	41.95	35.28	12.17	36.69	314	182	P	H
		5351.9	43.57	-10.43	54	32.87	35.26	12.13	36.69	314	182	A	H
		5110.4	52.36	-21.64	74	42.07	35.15	11.84	36.7	301	98	P	V
		5105.12	43.45	-10.55	54	33.19	35.14	11.82	36.7	301	98	A	V
	*	5298	102.94	-	-	92.32	35.24	12.07	36.69	301	98	P	V
	*	5298	96.1	-	-	85.48	35.24	12.07	36.69	301	98	A	V
		5351.7	53.87	-20.13	74	43.17	35.26	12.13	36.69	301	98	P	V
		5351.9	45.57	-8.43	54	34.87	35.26	12.13	36.69	301	98	A	V



802.11n HT20 CH 64 5320MHz	*	5314	98.04	-	-	87.39	35.25	12.09	36.69	261	117	P	H
	*	5314	90.85	-	-	80.2	35.25	12.09	36.69	261	117	A	H
		5350.1	55.21	-18.79	74	44.51	35.26	12.13	36.69	261	117	P	H
		5371.8	43.35	-10.65	54	32.62	35.27	12.15	36.69	261	117	A	H
	*	5324	103.51	-	-	92.86	35.25	12.09	36.69	319	115	P	V
	*	5324	96.24	-	-	85.59	35.25	12.09	36.69	319	115	A	V
		5372.9	52.36	-21.64	74	41.63	35.27	12.15	36.69	319	115	P	V
		5371.9	46.31	-7.69	54	35.58	35.27	12.15	36.69	319	115	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 52 5260MHz		10520	40.33	-33.67	74	52.34	38.31	15.72	66.04	100	360	P	H
		10520	40.89	-33.11	74	52.9	38.31	15.72	66.04	100	360	P	V
802.11n HT20 CH 60 5300MHz		10600	40.08	-33.92	74	51.97	38.34	15.75	65.98	100	360	P	H
		10600	41.65	-32.35	74	53.54	38.34	15.75	65.98	100	360	P	V
802.11n HT20 CH 64 5320MHz		10640	41.12	-32.88	74	52.95	38.36	15.77	65.96	100	360	P	H
		10640	41.76	-32.24	74	53.59	38.36	15.77	65.96	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		5117.76	53.33	-20.67	74	43.04	35.15	11.84	36.7	100	61	P	H
		5119.68	43.79	-10.21	54	33.5	35.15	11.84	36.7	100	61	A	H
	*	5278	100.46	-	-	89.87	35.23	12.05	36.69	100	61	P	H
	*	5278	93.59	-	-	83	35.23	12.05	36.69	100	61	A	H
		5355.6	52.65	-21.35	74	41.95	35.26	12.13	36.69	100	61	P	H
		5373.7	43.84	-10.16	54	33.11	35.27	12.15	36.69	100	61	A	H
		5111.68	54.09	-19.91	74	43.8	35.15	11.84	36.7	349	74	P	V
		5117.92	43.94	-10.06	54	33.65	35.15	11.84	36.7	349	74	A	V
	*	5258	103.71	-	-	93.18	35.21	12.01	36.69	349	74	P	V
	*	5258	96.52	-	-	85.99	35.21	12.01	36.69	349	74	A	V
		5375.8	53.09	-20.91	74	42.36	35.27	12.15	36.69	349	74	P	V
		5373	44.31	-9.69	54	33.58	35.27	12.15	36.69	349	74	A	V
802.11n HT40 CH 62 5310MHz		5107.68	53.31	-20.69	74	43.02	35.15	11.84	36.7	100	59	P	H
		5109.76	43.85	-10.15	54	33.56	35.15	11.84	36.7	100	59	A	H
	*	5302	101.26	-	-	90.64	35.24	12.07	36.69	100	59	P	H
	*	5302	93.54	-	-	82.92	35.24	12.07	36.69	100	59	A	H
		5350.01	59.08	-14.92	74	48.38	35.26	12.13	36.69	100	59	P	H
		5350.8	46.72	-7.28	54	36.02	35.26	12.13	36.69	100	59	A	H
		5118.4	54.05	-19.95	74	43.76	35.15	11.84	36.7	334	71	P	V
		5109.76	43.9	-10.1	54	33.61	35.15	11.84	36.7	334	71	A	V
	*	5316	102.64	-	-	91.99	35.25	12.09	36.69	334	71	P	V
	*	5316	95.47	-	-	84.82	35.25	12.09	36.69	334	71	A	V
		5350.7	59.38	-14.62	74	48.68	35.26	12.13	36.69	334	71	P	V
	!	5350.01	48.47	-5.53	54	37.77	35.26	12.13	36.69	334	71	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 54 5270MHz		10540	42.25	-31.75	74	54.24	38.32	15.72	66.03	300	360	P	H
		10540	41.24	-32.76	74	53.23	38.32	15.72	66.03	300	360	P	V
802.11n HT40 CH 62 5310MHz		10620	40.78	-33.22	74	52.64	38.35	15.76	65.97	300	360	P	H
		10620	41.76	-32.24	74	53.62	38.35	15.76	65.97	300	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		5447.6	54.64	-19.36	74	43.77	35.31	12.25	36.69	288	53	P	H
		5447.44	46.44	-7.56	54	35.57	35.31	12.25	36.69	288	53	A	H
	*	5494	104.5	-	-	93.56	35.33	12.3	36.69	288	53	P	H
	*	5494	97.05	-	-	86.11	35.33	12.3	36.69	288	53	A	H
		5446.8	55.4	-18.6	74	44.53	35.31	12.25	36.69	391	95	P	V
		5447.76	47.95	-6.05	54	37.08	35.31	12.25	36.69	391	95	A	V
	*	5494	105.06	-	-	94.12	35.33	12.3	36.69	391	95	P	V
	*	5494	97.84	-	-	86.9	35.33	12.3	36.69	391	95	A	V
802.11a CH 116 5580MHz		5434.32	52.74	-21.26	74	41.9	35.3	12.23	36.69	308	56	P	H
		5434.8	43.37	-10.63	54	32.53	35.3	12.23	36.69	308	56	A	H
	*	5584	104.6	-	-	93.48	35.38	12.42	36.68	308	56	P	H
	*	5584	97.27	-	-	86.15	35.38	12.42	36.68	308	56	A	H
		5753.16	52.93	-21.07	74	41.62	35.56	12.6	36.85	308	56	P	H
		5731	43.73	-10.27	54	32.49	35.52	12.57	36.85	308	56	A	H
		5442.64	52.84	-21.16	74	42	35.3	12.23	36.69	318	85	P	V
		5439.6	43.25	-10.75	54	32.41	35.3	12.23	36.69	318	85	A	V
	*	5586	104.23	-	-	93.11	35.38	12.42	36.68	318	85	P	V
	*	5586	97.08	-	-	85.96	35.38	12.42	36.68	318	85	A	V
		5764.84	53.55	-20.45	74	42.29	35.56	12.6	36.9	318	85	P	V
		5764.68	43.73	-10.27	54	32.47	35.56	12.6	36.9	318	85	A	V



802.11a CH 140 5700MHz	*	5696	104.66	-	-	93.43	35.47	12.53	36.77	283	57	P	H
	*	5696	97.38	-	-	86.15	35.47	12.53	36.77	283	57	A	H
		5752.52	55.38	-18.62	74	44.07	35.56	12.6	36.85	283	57	P	H
		5752.36	47.08	-6.92	54	35.77	35.56	12.6	36.85	283	57	A	H
	*	5708	104.42	-	-	93.19	35.49	12.55	36.81	319	89	P	V
	*	5708	97.36	-	-	86.13	35.49	12.55	36.81	319	89	A	V
		5752.68	56.47	-17.53	74	45.16	35.56	12.6	36.85	319	89	P	V
		5752.84	46.56	-7.44	54	35.25	35.56	12.6	36.85	319	89	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		11000	42.1	-31.9	74	53.38	38.5	15.92	65.7	300	360	P	H
CH 100 5500MHz		11000	42.29	-31.71	74	53.57	38.5	15.92	65.7	300	360	P	V
802.11a		11160	43.93	-30.07	74	54.95	38.57	15.99	65.58	300	360	P	H
CH 116 5580MHz		11160	42.92	-31.08	74	53.94	38.57	15.99	65.58	100	0	P	V
802.11a		11400	44.02	-29.98	74	54.67	38.66	16.1	65.41	300	360	P	H
CH 140 5700MHz		11400	44.34	-29.66	74	54.99	38.66	16.1	65.41	298	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	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		5449.84	53.19	-20.81	74	42.32	35.31	12.25	36.69	100	112	P	H
		5447.92	44.38	-9.62	54	33.51	35.31	12.25	36.69	100	112	A	H
	*	5496	98.04	-	-	87.1	35.33	12.3	36.69	100	112	P	H
	*	5496	90.7	-	-	79.76	35.33	12.3	36.69	100	112	A	H
		5467.44	59.16	-14.84	74	48.26	35.32	12.27	36.69	297	117	P	V
		5448.56	46.72	-7.28	54	35.85	35.31	12.25	36.69	297	117	A	V
	*	5502	103.26	-	-	92.28	35.34	12.32	36.68	297	117	P	V
	*	5502	96.82	-	-	85.84	35.34	12.32	36.68	297	117	A	V
802.11n HT20 CH 116 5580MHz		5358.16	52.35	-21.65	74	41.65	35.26	12.13	36.69	100	148	P	H
		5451.28	43.33	-10.67	54	32.46	35.31	12.25	36.69	100	148	A	H
	*	5584	98.63	-	-	87.51	35.38	12.42	36.68	100	148	P	H
	*	5584	91.24	-	-	80.12	35.38	12.42	36.68	100	148	A	H
		5752.36	52.74	-21.26	74	41.43	35.56	12.6	36.85	100	148	P	H
		5742.6	43.74	-10.26	54	32.46	35.54	12.59	36.85	100	148	A	H
		5412.88	52.66	-21.34	74	41.85	35.29	12.21	36.69	360	132	P	V
		5463.28	43.33	-10.67	54	32.43	35.32	12.27	36.69	360	132	A	V
	*	5586	105.14	-	-	94.02	35.38	12.42	36.68	360	132	P	V
	*	5586	97.87	-	-	86.75	35.38	12.42	36.68	360	132	A	V
		5754.76	53.35	-20.65	74	42.04	35.56	12.6	36.85	360	132	P	V
		5757.88	43.91	-10.09	54	32.65	35.56	12.6	36.9	360	132	A	V



802.11n HT20 CH 140 5700MHz	*	5704	100.77	-	-	89.5	35.49	12.55	36.77	100	147	P	H
	*	5704	93.2	-	-	81.93	35.49	12.55	36.77	100	147	A	H
		5725.24	54.41	-19.59	74	43.13	35.52	12.57	36.81	100	147	P	H
		5751.8	45.17	-8.83	54	33.86	35.56	12.6	36.85	100	147	A	H
	*	5706	105.98	-	-	94.75	35.49	12.55	36.81	300	86	P	V
	*	5706	98.66	-	-	87.43	35.49	12.55	36.81	300	86	A	V
		5726.44	60.45	-13.55	74	49.17	35.52	12.57	36.81	300	86	P	V
		5752.04	48.9	-5.1	54	37.59	35.56	12.6	36.85	300	86	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 100 5500MHz		11000	41.47	-32.53	74	52.75	38.5	15.92	65.7	100	360	P	H
		11000	42.51	-31.49	74	53.79	38.5	15.92	65.7	100	360	P	V
802.11n HT20 CH 116 5580MHz		11160	41.83	-32.17	74	52.85	38.57	15.99	65.58	100	360	P	H
		11160	43.01	-30.99	74	54.03	38.57	15.99	65.58	100	360	P	V
802.11n HT20 CH 140 5700MHz		11400	40.94	-33.06	74	51.59	38.66	16.1	65.41	100	360	P	H
		11400	41.6	-32.4	74	52.25	38.66	16.1	65.41	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		5469.68	58.81	-15.19	74	47.91	35.32	12.27	36.69	400	172	P	H
		5469.99	45.36	-8.64	54	34.46	35.32	12.27	36.69	400	172	A	H
	*	5504	101.93	-	-	90.95	35.34	12.32	36.68	400	172	P	H
	*	5504	94.65	-	-	83.67	35.34	12.32	36.68	400	172	A	H
		5733.88	53.3	-20.7	74	42.06	35.52	12.57	36.85	400	172	P	H
		5747.64	43.76	-10.24	54	32.48	35.54	12.59	36.85	400	172	A	H
		5468.24	56.06	-17.94	74	45.16	35.32	12.27	36.69	301	71	P	V
		5465.84	45.59	-8.41	54	34.69	35.32	12.27	36.69	301	71	A	V
	*	5522	102.03	-	-	91.03	35.34	12.34	36.68	301	71	P	V
	*	5522	94.79	-	-	83.79	35.34	12.34	36.68	301	71	A	V
		5757.48	53.3	-20.7	74	42.04	35.56	12.6	36.9	301	71	P	V
		5763.32	43.86	-10.14	54	32.6	35.56	12.6	36.9	301	71	A	V
802.11n HT40 CH 110 5550MHz		5465.2	53.21	-20.79	74	42.31	35.32	12.27	36.69	371	173	P	H
		5447.12	44.06	-9.94	54	33.19	35.31	12.25	36.69	371	173	A	H
	*	5538	100.01	-	-	88.98	35.35	12.36	36.68	371	173	P	H
	*	5538	93.02	-	-	81.99	35.35	12.36	36.68	371	173	A	H
		5753	52.71	-21.29	74	41.4	35.56	12.6	36.85	371	173	P	H
		5750.92	43.81	-10.19	54	32.53	35.54	12.59	36.85	371	173	A	H
		5448.56	53.67	-20.33	74	42.8	35.31	12.25	36.69	316	73	P	V
		5447.12	44.56	-9.44	54	33.69	35.31	12.25	36.69	316	73	A	V
	*	5536	100.94	-	-	89.91	35.35	12.36	36.68	316	73	P	V
	*	5536	93.54	-	-	82.51	35.35	12.36	36.68	316	73	A	V
		5743	52.89	-21.11	74	41.61	35.54	12.59	36.85	316	73	P	V
		5734.52	43.72	-10.28	54	32.44	35.54	12.59	36.85	316	73	A	V



802.11n HT40 CH 134 5670MHz		5418.32	52.52	-21.48	74	41.71	35.29	12.21	36.69	100	65	P	H
		5450.16	43.26	-10.74	54	32.39	35.31	12.25	36.69	100	65	A	H
	*	5684	98.84	-	-	87.61	35.47	12.53	36.77	100	65	P	H
	*	5684	91.98	-	-	80.75	35.47	12.53	36.77	100	65	A	H
		5725.8	53.31	-20.69	74	42.03	35.52	12.57	36.81	100	65	P	H
		5727.8	43.92	-10.08	54	32.64	35.52	12.57	36.81	100	65	A	H
		5452.56	53.1	-20.9	74	42.23	35.31	12.25	36.69	316	74	P	V
		5464.72	43.25	-10.75	54	32.35	35.32	12.27	36.69	316	74	A	V
	*	5660	102.59	-	-	91.39	35.42	12.5	36.72	316	74	P	V
	*	5660	95.45	-	-	84.25	35.42	12.5	36.72	316	74	A	V
		5746.76	53.58	-20.42	74	42.3	35.54	12.59	36.85	316	74	P	V
		5726.76	44.62	-9.38	54	33.34	35.52	12.57	36.81	316	74	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



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

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		11020	43.62	-30.38	74	54.88	38.5	15.93	65.69	300	360	P	H
		11020	42.32	-31.68	74	53.58	38.5	15.93	65.69	300	360	P	V
802.11n HT40 CH 110 5550MHz		11100	41.14	-32.86	74	52.27	38.54	15.96	65.63	300	360	P	H
		11100	41.82	-32.18	74	52.95	38.54	15.96	65.63	300	360	P	V
802.11n HT40 CH 134 5670MHz		11340	43	-31	74	53.76	38.63	16.07	65.46	300	360	P	H
		11340	42.13	-31.87	74	52.89	38.63	16.07	65.46	300	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Emission below 1GHz

WIFI 802.11n HT20 (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 LF		30.97	24.41	-15.59	40	29.43	26.58	0.69	32.29	-	-	P	H
		109.54	17.82	-25.68	43.5	29.89	18.71	1.49	32.27	-	-	P	H
		194.9	26.55	-16.95	43.5	39.71	17.05	2.05	32.26	-	-	P	H
		374.35	24.09	-21.91	46	30.87	22.19	3.07	32.04	-	-	P	H
		694.45	28.97	-17.03	46	28.9	27.7	4.05	31.68	-	-	P	H
		806	30.97	-15.03	46	30.24	28.01	4.29	31.57	100	320	P	H
		32.91	24.5	-15.5	40	29.89	26.14	0.77	32.3	100	152	P	V
		71.71	23.03	-16.97	40	39.31	14.66	1.25	32.19	-	-	P	V
		288.02	22.4	-23.6	46	33	18.96	2.51	32.07	-	-	P	V
		323.91	26.52	-19.48	46	35.11	20.61	2.88	32.08	-	-	P	V
		359.8	23.26	-22.74	46	30.21	21.96	3.16	32.07	-	-	P	V
		456.8	25.26	-20.74	46	28.87	25.12	3.21	31.94	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												



Note symbol

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



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

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

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

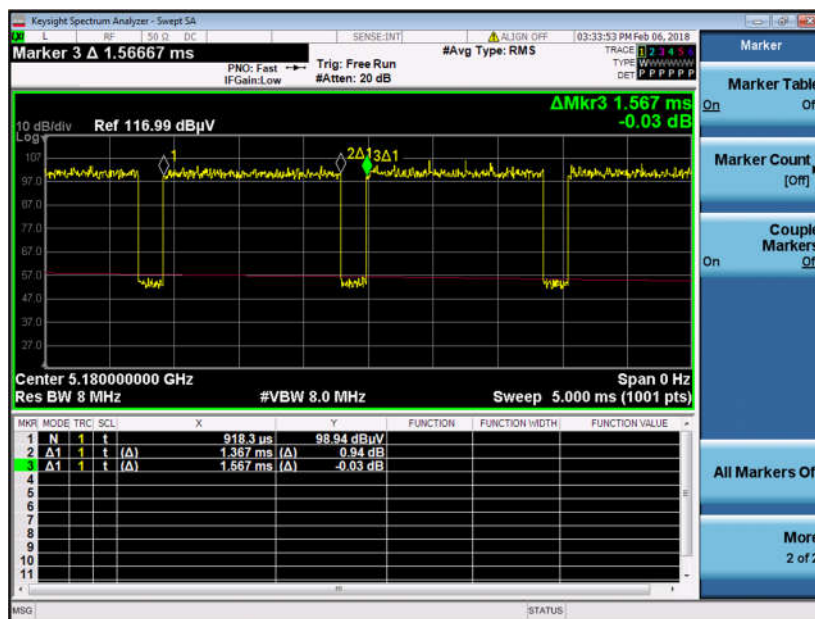
= -10.46(dB)

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

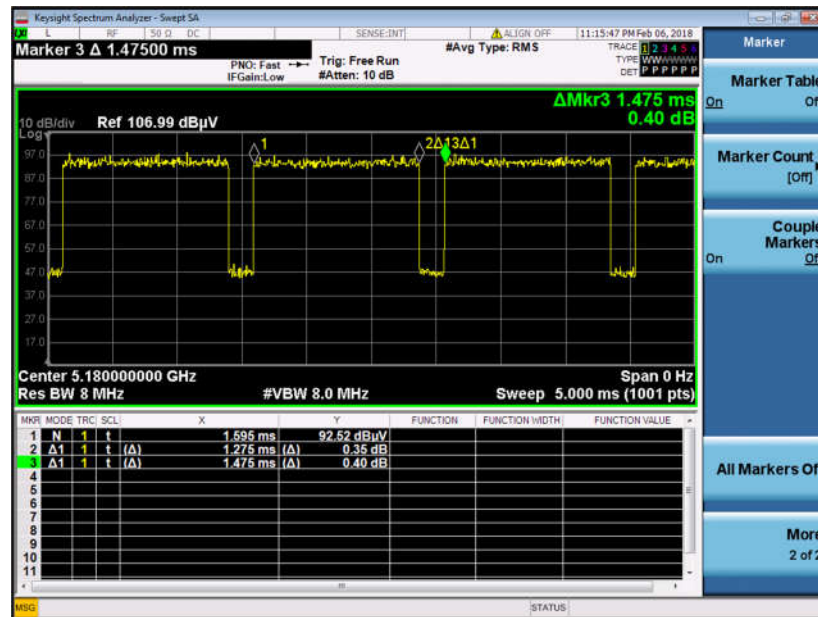
Appendix B. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	87.24	1.367	0.732	1 kHz
802.11n HT20	86.44	1.275	0.784	1 kHz
802.11n HT40	84.62	1.210	0.826	1 kHz

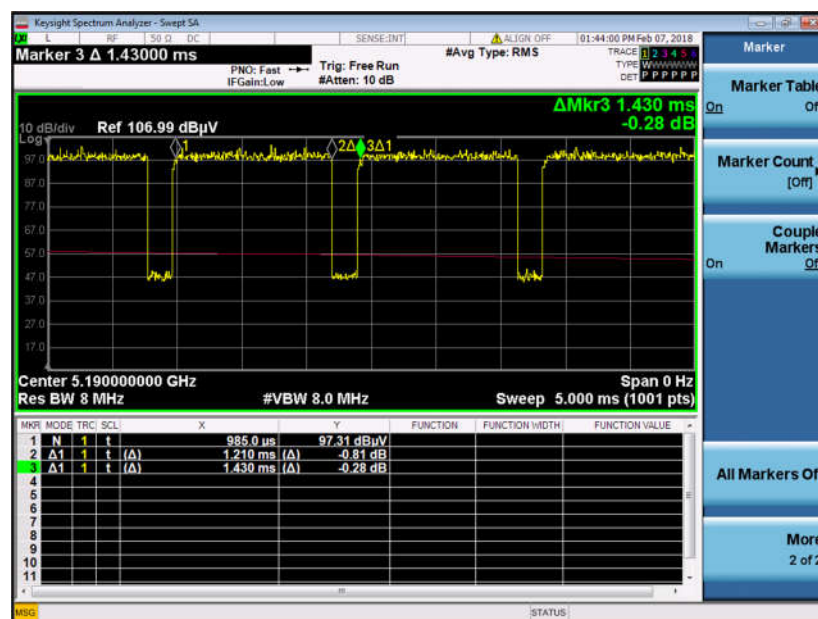
802.11a



802.11n HT20



802.11n HT40





Appendix D. Product Equality Declaration

BYD Precision Manufacture Co.,Ltd.

Add: No.3001,Bao He Road,Baolong Industry Zone,Longgang,Shenzhen,Guangdong Province,P.R.China

Product Equality Declaration

We, BYD Precision Manufacture Co.,Ltd. , declare on our sole responsibility for the product of AXC-Y1 as below:

The differences between AXC-Y1 B2 and B2.5 are as below:

Category	First Supplier	Specification	Second Supplier	Specification
PCB	GCE	8layers_FR-4	Elec&Eltek	8layers_FR-4
Capacitance	Eyang	10nF_±10%_10V_X5R	Eyang	10nF_±10%_10V_X7R
Capacitance	Eyang	100nF_±10%_6.3V_X5R	Eyang	100nF_±10%_10V_X6S
Capacitance	Eyang	470nF_±10%_4V_-55℃~85℃	Eyang	470nF_±10%_6.3V_X6S
Capacitance	SAMSUNG	1uF_±20%_6.3V_X5R	Murata	1uF_±20%_6.3V_X6S
Capacitance	Eyang	1uF_±10%_10V_-55~125℃	Eyang	1uF_±10%_10V_X6S
Capacitance	Eyang	2.2uF_±10%_10V_X5R	Murata	2.2uF_±10%_10V_X7S
Capacitance	Murata	4.7uF_±20%_10V_X5R	Murata	4.7uF_±20%_6.3V_X6S
Capacitance	Eyang	10uF_±20%_6.3V_X5R	Eyang	10uF_±20%_10V_X5R
			Murata	10uF_±20%_6.3V_X6S
Capacitance	TAIYO	22uF_±20%_6.3V_X5R	Murata	22uF_±20%_10V_X5R
Capacitance	Eyang	47uF_±20%_6.3V_X5R	Murata	47uF_±20%_2.5V_X6S
Crystal	TXC	48MHz_±20PPM	KYOCERA	48MHz_±20PPM
External PCB Dipole Antenna	Laird	Antenna Model No: MAF94109 Cable Length: 100mm Peak Gain(dBi): 2400~2483.5MHz:3.2 5150~5250MHz:2.7 5250~5350MHz:3.1 5470~5725MHz:2.7 5725~5850MHz:2.6	Laird	Antenna Model No: EMN2449A2S-25UFL Cable Length: 250mm Peak Gain(dBi): 2400~2483.5MHz:3.50 5150~5250MHz:5.75 5250~5350MHz:6.26 5470~5725MHz:6.24 5725~5850MHz:5.18
				Antenna Model No: MAF94264 Cable Length: 80mm Peak Gain(dBi): 2400~2483.5MHz:3.33 5150~5250MHz:5.52

				5250~5350MHz:6.14
				5470~5725MHz:6.06
				5725~5850MHz:5.33

Except listings above, the others are all the same as previous version.

Should you have any questions or comments regarding this matter, please have my best attention.

Sincerely yours,

Xu Pengfei

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