# **FCC RF Test Report**

APPLICANT : Lemobile Information Technology (Beijing) Co., Ltd.

**EQUIPMENT**: Mobile phone

BRAND NAME : LeEco
MODEL NAME : LEX727

FCC ID : 2AFWMLEX727

STANDARD : FCC Part 15 Subpart E §15.407

**CLASSIFICATION**: (NII) Unlicensed National Information Infrastructure

The product was received on Aug. 30, 2016 and testing was completed on Sep. 27, 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.

Prepared by: James Huang / Manager

Approved by: Jones Tsai / Manager

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

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 1 of 43
Report Issued Date : Oct. 10, 2016

Report No.: FR683002E

Report Version : Rev. 01

## **TABLE OF CONTENTS**

RE	VISIO	N HISTORY	3
su	MMAI	2. Manufacturer       5         3. Feature of Equipment Under Test       5         4. Product Specification of Equipment Under Test       6         5. Modification of EUT       8         6. Testing Location       8         7. Applicable Standards       9         EST CONFIGURATION OF EQUIPMENT UNDER TEST       10         1. Carrier Frequency and Channel       10         2. Test Mode       11         .3 Connection Diagram of Test System       13         4 Support Unit used in test configuration and system       14         5 EUT Operation Test Setup       14         6 Measurement Results Explanation Example       14         EST RESULT       15         1. 26dB & 99% Occupied Bandwidth Measurement       15         2. Maximum Conducted Output Power Measurement       18         3. Power Spectral Density Measurement       27         4. Unwanted Emissions Measurement       30         5. AC Conducted Emission Measurement       30         6. Frequency Stability Measurement       30         7. Automatically Discontinue Transmission       40         8. Antenna Requirements       41         ST OF MEASURING EQUIPMENT       42         NCERTAINTY OF EVALUATION       43	
1	GEN	5	
	1.1 1.2 1.3 1.4 1.5 1.6 1.7	Manufacturer  Feature of Equipment Under Test  Product Specification of Equipment Under Test  Modification of EUT  Testing Location	
2	TES	T CONFIGURATION OF EQUIPMENT UNDER TEST	10
	2.1 2.2 2.3 2.4 2.5 2.6	Test Mode  Connection Diagram of Test System  Support Unit used in test configuration and system  EUT Operation Test Setup	11 13 14
3	TEST	T RESULT	15
	3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8	Maximum Conducted Output Power Measurement Power Spectral Density Measurement Unwanted Emissions Measurement AC Conducted Emission Measurement Frequency Stability Measurement Automatically Discontinue Transmission	
4	LIST	OF MEASURING EQUIPMENT	42
ΑP	PEND	DIX A. CONDUCTED TEST RESULTS	43
ΑP	PEND	DIX D. SETUP PHOTOGRAPHS	

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 2 of 43
Report Issued Date : Oct. 10, 2016

Report No.: FR683002E

Report Version : Rev. 01
Report Template No.: BU5-FR15EWL MA Version 1.4

## **REVISION HISTORY**

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR683002E	Rev. 01	Initial issue of report	Oct. 10, 2016

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 3 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

## **SUMMARY OF TEST RESULT**

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	2.1049 15.403(i)	RSS-247 Section 6	26dB & 99% Bandwidth	-	Pass	-
3.2	15.407(a)	RSS-247 Section 6	Maximum Conducted Output Power	FCC ≤ 24 dBm (depend on band) IC RSS-247 Section 6 Limit	Pass	-
3.3	15.407(a)	RSS-247 Section 6	Power Spectral Density	FCC ≤ 11 dBm/MHz (depend on band) IC RSS-247 Section 6 Limit	Pass	-
3.4	15.407(b)	RSS-247 Section 6	Unwanted Emissions	≤ -17, -27 dBm (depend on band)&15.209(a)	Pass	Under limit 0.23 dB at 5145.340 MHz
3.5	15.207	RSS-Gen 8.8	AC Conducted Emission	15.207(a)	Pass	Under limit 7.09 dB at 0.167 MHz
3.6	15.407(g)	-	Frequency Stability	Within Operation Band	Pass	-
3.7	15.407(c)	RSS-247 6.4(2)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.8	15.203 & 15.407(a)	N/A	Antenna Requirement	N/A	Pass	-

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 4 of 43

Report Issued Date : Oct. 10, 2016

Report Version : Rev. 01

Report No.: FR683002E

## **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					
Equipment	Mobile phone				
Brand Name	LeEco				
Model Name	LEX727				
FCC ID	2AFWMLEX727				
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+(16QAM uplink is not supported)/DC-HSDPA/LTE/NFC WLAN2.4GHz 802.11b/g/n HT20 WLAN5GHz 802.11a/n HT20/HT40 WLAN5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v3.0 + EDR/Bluetooth v4.0 LE Bluetooth v4.2 LE				
IMEI Code	Conducted: 862524030000208 Conduction: 862524030000471 Radiation: 862524030000471				
HW Version	HW_1.0.0				
SW Version	zl1_cert_fcc				
EUT Stage	Identical Prototype				

Report No.: FR683002E

: 5 of 43

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

SPORTON INTERNATIONAL (KUNSHAN) INC. Page Number TEL: 86-0512-5790-0158 Report Issued Date: Oct. 10, 2016

FAX: 86-0512-5790-0958 Report Version : Rev. 01 FCC ID: 2AFWMLEX727 Report Template No.: BU5-FR15EWL MA Version 1.4

## 1.4 Product Specification of Equipment Under Test

Standards-related Product Specification				
5180 MHz ~ 5240 MHz				
Tx/Rx Frequency Range	5260 MHz ~ 5320 MHz			
TA/KA Frequency Kange	5500 MHz ~ 5720 MHz			
	<5180 MHz ~ 5240 MHz>			
	<ant. 1=""></ant.>			
	802.11a : 14.38 dBm / 0.0274 W			
	802.11n HT20 : 14.26 dBm / 0.0267 W			
	802.11n HT40 : 14.21 dBm / 0.0264 W			
	802.11ac VHT20: 14.23 dBm / 0.0265 W			
	802.11ac VHT40 : 14.23 dBm / 0.0265 W			
	802.11ac VHT80 : 14.12 dBm / 0.0258 W			
	MIMO <ant. 1+2=""></ant.>			
	802.11n HT20 : 15.17 dBm / 0.0329 W			
	802.11n HT40 : 15.69 dBm / 0.0371 W			
	802.11ac VHT20 : 15.14 dBm / 0.0327 W			
	802.11ac VHT40 : 15.86 dBm / 0.0385 W			
	802.11ac VHT80 : 15.83 dBm / 0.0383 W			
	<5260 MHz ~ 5320 MHz>			
	<b><ant. 1=""></ant.></b> 802.11a : 14.44 dBm / 0.0278 W			
	802.11n HT20 : 14.33 dBm / 0.0271 W			
	802.11n HT40 : 14.17 dBm / 0.0261 W			
	802.11ac VHT20 : 14.32 dBm / 0.0270 W			
La diamenta de la constanta de	802.11ac VHT40: 14.26 dBm / 0.0267 W			
Maximum Output Power to Antenna	802.11ac VHT80 : 14.10 dBm / 0.0257 W			
	MIMO <ant. 1+2=""></ant.>			
	802.11n HT20 : 15.44 dBm / 0.0350 W			
	802.11n HT40 : 16.02 dBm / 0.0400 W			
	802.11ac VHT20 : 15.28 dBm / 0.0337 W			
	802.11ac VHT40 : 16.09 dBm / 0.0406 W			
	802.11ac VHT80 : 16.08 dBm / 0.0406 W			
	<5500 MHz ~ 5720 MHz > <a href="#"><ant. 1=""></ant.></a>			
	802.11a : 15.42 dBm / 0.0348 W			
	802.11n HT20 : 15.33 dBm / 0.0341 W			
	802.11n HT40 : 15.27 dBm / 0.0337 W			
	802.11ac VHT20 : 15.25 dBm / 0.0335 W			
	802.11ac VHT40 : 15.33 dBm / 0.0341 W			
	802.11ac VHT80 : 15.32 dBm / 0.0340 W			
	MIMO <ant. 1+2=""></ant.>			
	802.11n HT20 : 13.65 dBm / 0.0232 W			
	802.11n HT40 : 14.16 dBm / 0.0261 W			
	802.11ac VHT20 : 13.28 dBm / 0.0213 W			
	802.11ac VHT40 : 14.18 dBm / 0.0262 W			
	802.11ac VHT80 : 14.13 dBm / 0.0259 W			

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 6 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No. : FR683002E

Standards-related Product Specification				
Maximum Output Power to Antenna for Straddle Channel	802.11n HT40: 15 802.11ac VHT20: 802.11ac VHT40: 802.11ac VHT80: MIMO <ant. 1+2=""> 802.11n HT20: 12 802.11n HT40: 13 802.11ac VHT20: 802.11ac VHT40:</ant.>	.81 dBm / 0.0303 \ 6.05 dBm / 0.0320 \ 15.09 dBm / 0.032 15.41 dBm / 0.034 14.91 dBm / 0.031 2.51 dBm / 0.0178 \ 6.51 dBm / 0.0224 \ 12.19 dBm / 0.025	W 23 W 88 W 0 W W W 66 W 59 W	
99% Occupied Bandwidth	802.11ac VHT80: 13.92 dBm / 0.0247 W  <5180 MHz ~ 5240 MHz> 802.11a: 16.73 MHz 802.11n HT20: 17.78 MHz 802.11ac VHT40: 35.96 MHz 802.11ac VHT80: 74.93 MHz <5260 MHz ~ 5320 MHz> 802.11a: 16.78 MHz 802.11a: 16.78 MHz 802.11ac VHT40: 35.96 MHz 802.11ac VHT80: 74.93 MHz 802.11ac VHT80: 74.93 MHz 802.11ac VHT80: 74.93 MHz <5500 MHz ~ 5700 MHz > 802.11a: 16.73 MHz 802.11ac VHT40: 35.96 MHz 802.11ac VHT40: 35.96 MHz 802.11ac VHT80: 74.93 MHz 802.11ac VHT80: 74.93 MHz			
99% Occupied Bandwidth for Straddle Channel	802.11a : 16.73 M 802.11n HT20 : 17 802.11ac VHT40 : 802.11ac VHT80 :	Hz 7.78 MHz 35.96 MHz		
Antenna Type / Gain  Type of Modulation	<5180 MHz ~ 5240 MHz> Ant. 1: IFA Antenna with gain -2.00 dBi Ant. 2: IFA Antenna with gain -4.00 dBi <5260 MHz ~ 5320 MHz> Ant. 1: IFA Antenna with gain -2.00 dBi Ant. 2: IFA Antenna with gain -4.00 dBi <5500 MHz ~ 5720 MHz > Ant. 1: IFA Antenna with gain -2.00 dBi Ant. 2: IFA Antenna with gain -2.00 dBi Ant. 2: IFA Antenna with gain -4.00 dBi 802.11a/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM /			
Antenna Function Description	802.11 a/n/ac 802.11 n/ac MIMO	Ant. 1 V	Ant. 2 - V	

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

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 7 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

## 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.			
	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China			
Test Site Location	TEL: +86-0512-5790-0158			
	FAX: +86-0512-5790-0958			
Test Site No.	Sporton	Site No.		
rest site NO.	TH01-KS	CO01-KS		

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.			
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. China			
	TEL: +86-755- 3320-2398			
Took Cita No	Sporton Site No. FCC/IC Registration N			
Test Site No.	03CH03-SZ 565805/4086F			

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

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 8 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

## 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 v01r03
- FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ANSI C63.10-2013
- IC RSS-247 Issue 1
- IC RSS-Gen Issue 4

#### 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.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 9 of 43

Report Issued Date : Oct. 10, 2016

Report Version : Rev. 01

Report No.: FR683002E

## 2 Test Configuration of Equipment Under Test

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

## 2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
	36	5180	44	5220
5180-5240 MHz Band 1	38*	5190	46*	5230
(U-NII-1)	40	5200	48	5240
(3 1)	42#	5210	-	-

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
	52	5260	60	5300
5260-5320 MHz Band 2	54*	5270	62*	5310
(U-NII-2A)	56	5280	64	5320
(3 :::: 2/1)	58#	5290	-	-

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
	100	5500	112	5560
	102*	5510	116	5580
5500-5720 MHz Band 3	104	5520	132	5660
(U-NII-2C)	106#	5530	134*	5670
(3 : 111 20)	108	5540	136	5680
	110*	5550	140	5700

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
Straddle Channel	138#	5690	144	5720
Straudie Channel	142*	5710	-	-

#### Note:

1. The above Frequency and Channel in "\*" were 802.11n HT40 and 802.11ac VHT40.

2. The above Frequency and Channel in "#" were 802.11ac VHT80.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL : 86-0512-5790-0158 FAX : 86-0512-5790-0958 FCC ID : 2AFWMLEX727 Page Number : 10 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

## 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.

#### Single Antenna

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

#### **MIMO Antenna**

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

Test Cases		
AC Conducted	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN Link (5G) + USB Cable (Charging from	
Emission	Adapter)	

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 11 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

	Ch. #	Band I: 5180-5240 MHz	Band II: 5260-5320 MHz	Band III:5500-5720MHz
	Cn. #	802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
Н	High	48	64	140
:	Straddle	-	-	144

	Ch. #	Band I: 5180-5240 MHz	Band II:5260-5320 MHz	Band III: 5500-5720MHz
	CII. #	802.11n HT20	802.11n HT20	802.11n HT20
L	Low	36	52	100
М	Middle	44	60	116
Н	High	48	64	140
	Straddle	-	-	144

	Ch. #	Band I: 5180-5240 MHz	Band II: 5260-5320 MHz	Band III:5500-5720MHz
	CII. #	802.11ac VHT40	802.11ac VHT40	802.11ac VHT40
L	Low	38	54	102
М	Middle	-	-	110
Н	High	46	62	134
	Straddle	-	-	142

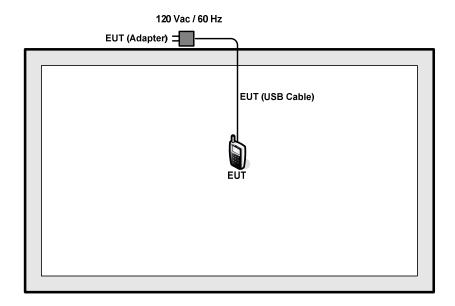
	Ch #	Band I: 5180-5240 MHz	Band II: 5260-5320 MHz	Band III: 5500-5720MHz
	Ch. #	802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
Н	High	-	-	122
	Straddle	-	-	138

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 12 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

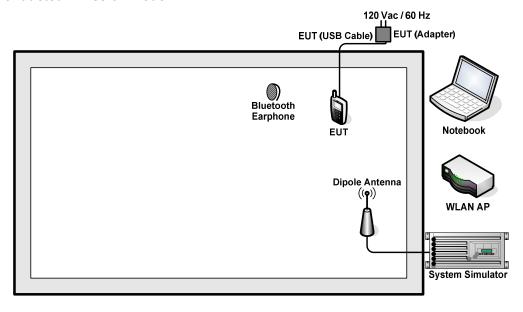
Report No. : FR683002E

## 2.3 Connection Diagram of Test System

#### <WLAN Tx Mode>



#### <AC Conducted Emission Mode>



SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 13 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

## 2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	Anritsu	MT8820C	N/A	N/A	Unshielded, 1.8 m
2.	WLAN AP	LINKSYS	WRT600N	Q87-WRT600NV11	N/A	Unshielded, 1.8 m
3.	Notebook	Lenovo	G480	N/A	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Lenovo	LBH308	N/A	N/A	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.

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

## 2.6 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 7.5dB.

 $Offset(dB) = RF \ cable \ loss(dB).$ = 7.5 (dB)

Report No.: FR683002E

#### 3 Test Result

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

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

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

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

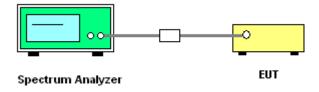
#### 3.1.2 Measuring Instruments

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

#### 3.1.3 Test Procedures

- The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03.
   Section C) Emission bandwidth
- 2. Set RBW = approximately 1% of the emission bandwidth.
- 3. Set the VBW > RBW.
- 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



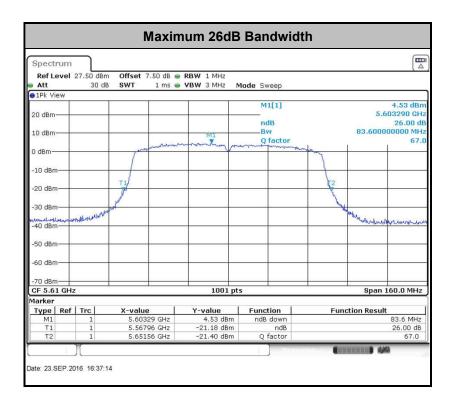
SPORTON INTERNATIONAL (KUNSHAN) INC.

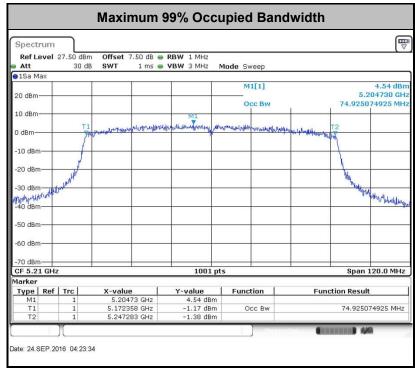
TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 15 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

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

Please refer to Appendix A.



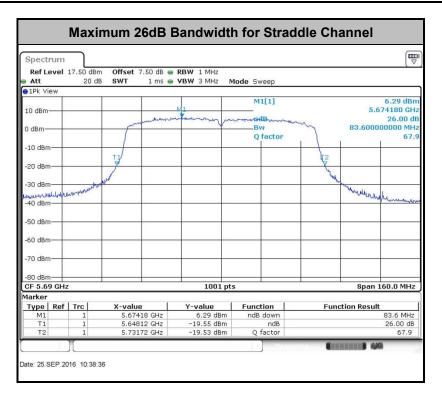


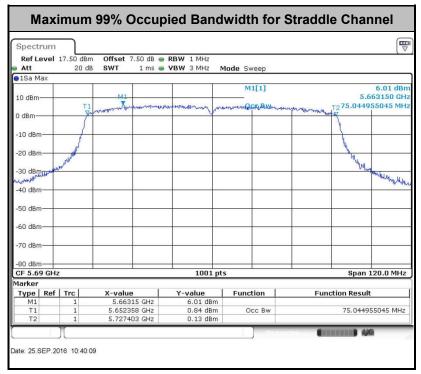
**Note:** The occupied channel bandwidth is maintained within the band of operation for all of the modulations.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 16 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E





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

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727

Page Number : 17 of 43 Report Issued Date: Oct. 10, 2016 Report Version : Rev. 01

Report No.: FR683002E

## 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 5.25–5.725 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.

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

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

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

#### 3.2.2 Measuring Instruments

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

Page Number : 18 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

#### 3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03 for CDD modes.

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

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

For straddle channel, the testing follows Method SA-3 (RMS detection with max hold) of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03.

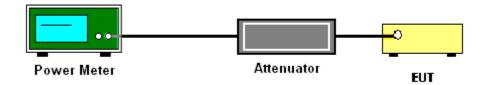
Compute power by integrating the spectrum across the 99% occupied bandwidth of the signal using the instrument's band power measurement function.

Page Number : 19 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

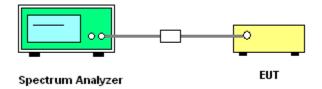
Report No.: FR683002E

## 3.2.4 Test Setup

#### For normal channel:



#### For straddle channel:



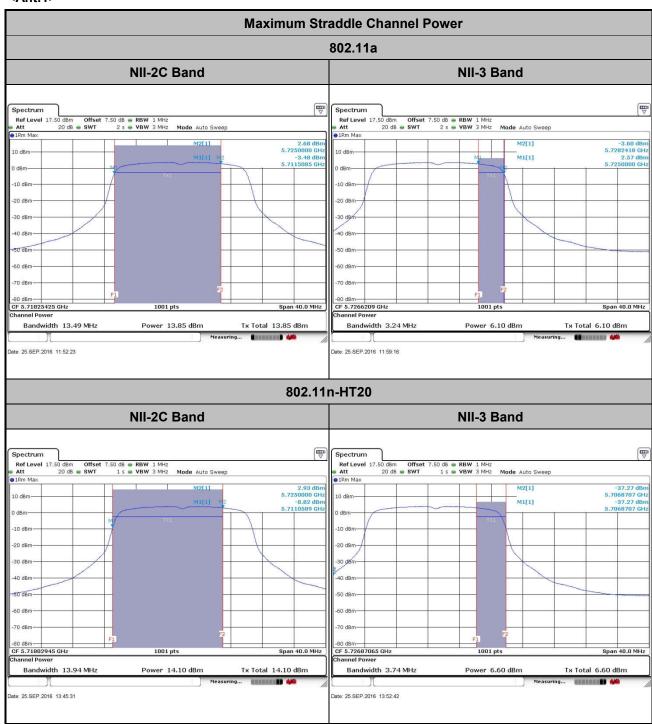
TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 20 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No. : FR683002E

#### 3.2.5 Test Result of Maximum Conducted Output Power

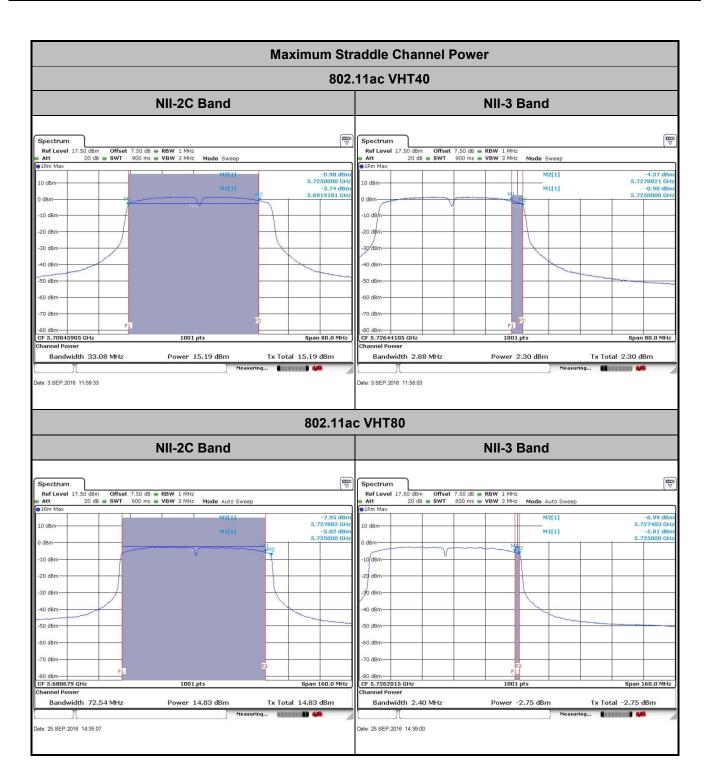
Please refer to Appendix A.

#### <Ant.1>



TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 21 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

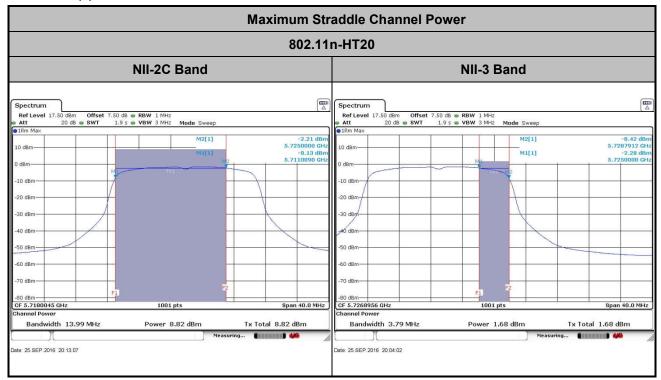
Report No.: FR683002E



TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 22 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

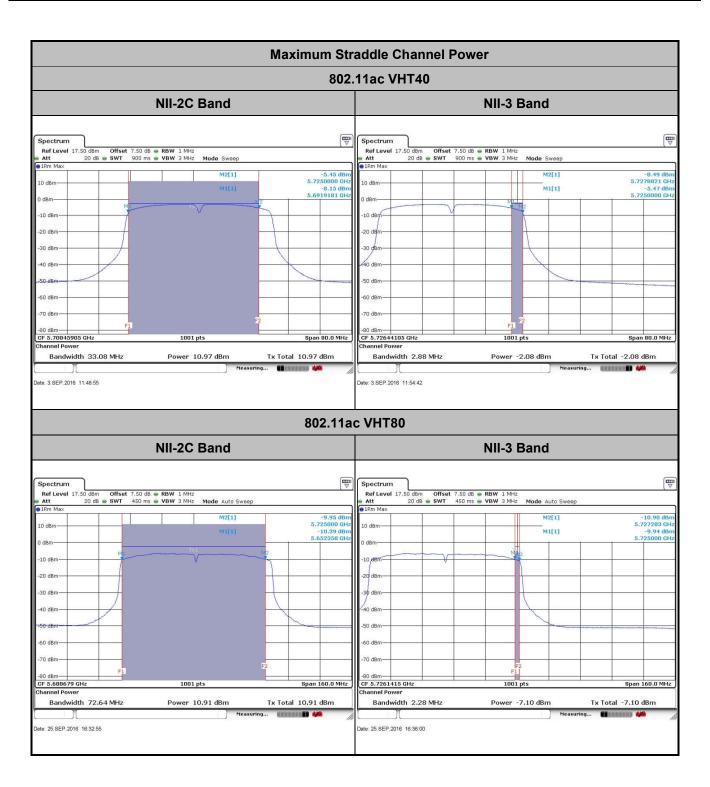
Report No.: FR683002E

#### <Ant. 1+2(1) >



TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 23 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

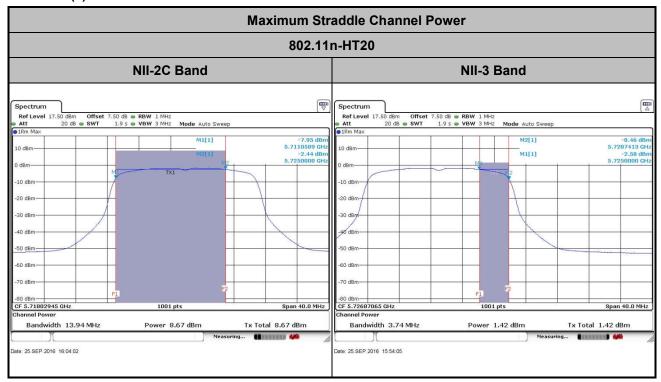
Report No.: FR683002E



TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 24 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

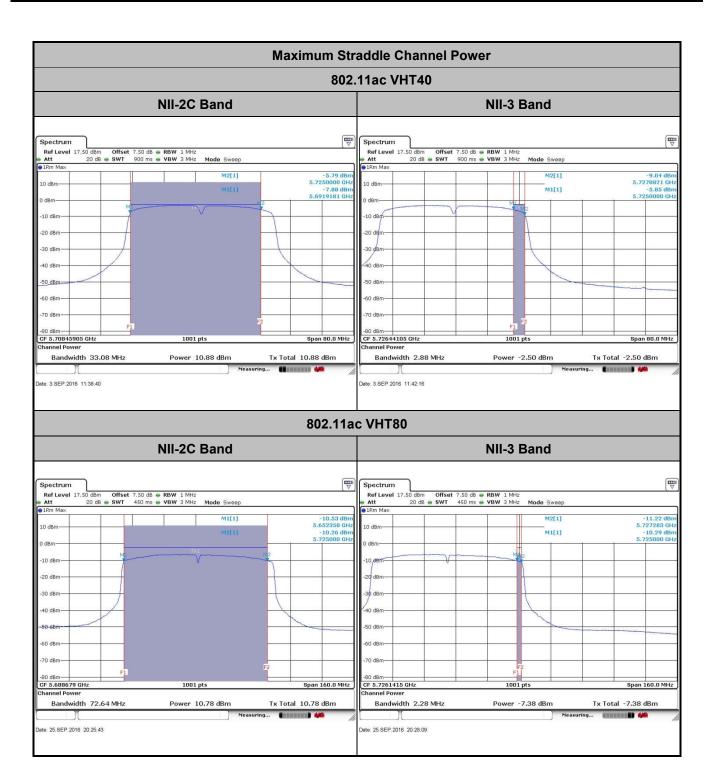
Report No.: FR683002E

#### <Ant. 1+2(2) >



TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 25 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E



TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 26 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

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

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

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

#### 3.3.2 Measuring Instruments

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

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 27 of 43

Report Issued Date : Oct. 10, 2016

Report Version : Rev. 01

Report No.: FR683002E

#### 3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03. 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).

- The testing follows Method SA-2 of FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03.
  - 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 (a): 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.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 28 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

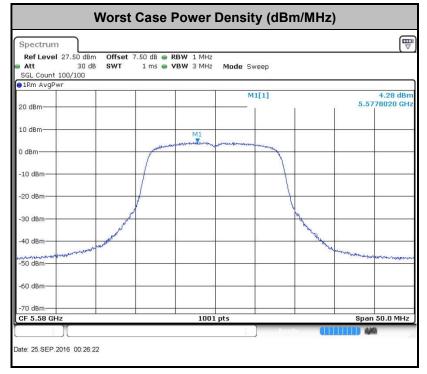
Report No.: FR683002E

#### 3.3.4 Test Setup



## 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



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

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 29 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

#### 3.4 Unwanted Emissions Measurement

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

#### 3.4.1 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	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(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)

Page Number : 30 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

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

(3) KDB789033 D02 v01r03 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

- The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03. 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.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727

Page Number : 31 of 43 Report Issued Date: Oct. 10, 2016 Report Version

: Rev. 01

Report No.: FR683002E

- 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



SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 32 of 43
Report Issued Date : Oct. 10, 2016

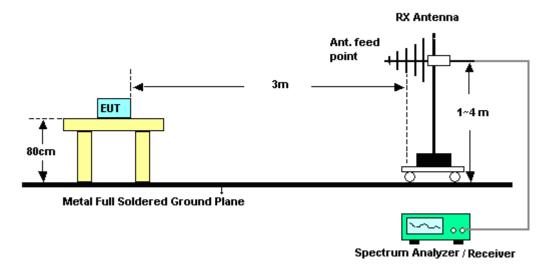
: Rev. 01

Report No.: FR683002E

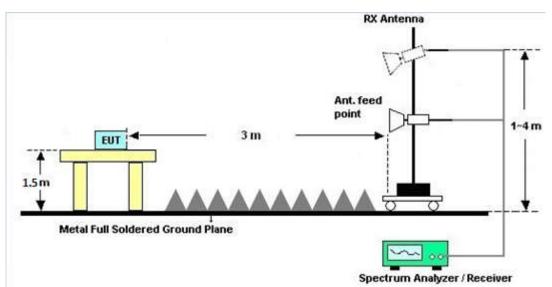
Report Template No.: BU5-FR15EWL MA Version 1.4

Report Version

## For radiated emissions from 30MHz to 1GHz



#### For radiated emissions above 1GHz



TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 33 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

#### 3.4.5 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 per 15.31(o) was not reported.

#### 3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B.

#### 3.4.7 Duty Cycle

Please refer to Appendix C.

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

Please refer to Appendix B.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 34 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

#### 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.

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

<sup>\*</sup>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

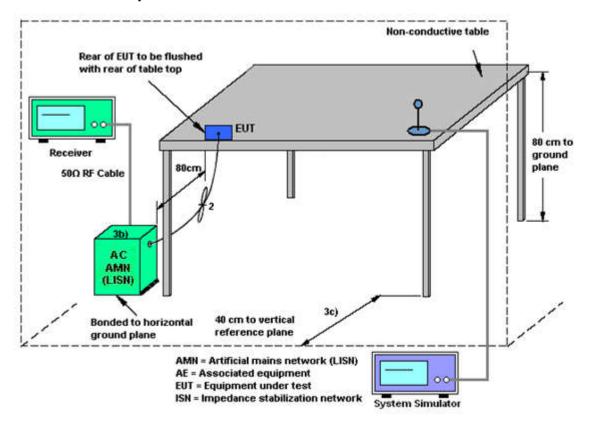
- 1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- 2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
- 3. All the support units are connecting to the other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

SPORTON INTERNATIONAL (KUNSHAN) INC. TEL: 86-0512-5790-0158

FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 35 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

#### 3.5.4 Test Setup



TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 36 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

#### 3.5.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1		Ten	nperatu	re:	2	<b>22~24</b> ℃							
Test Engineer :	Morris Li		Rel	ative H	umidity	<b>/</b> : 4	2~4	4%						
Test Voltage :	120Vac / 60	)Hz	Pha	ise :		L	ine							
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link (5G) + USB Cable (Charging from Adapter)													
80 Level (di	80 Level (dBuV)													
70.0														
60.0								F	CC PART 15E					
50.0								FCC PA	ART 15E(AVG)					
40.0			•						Λ/ <b>\</b>					
30.0	1. 1111				had the contract of the	on the property of	WALLAND	M.M. Mahala	12 1/1					
20.0		3" 3" 1" 1	M. Mid.	MAI MAA.					7004					
10.0														
0.15 .2		5 1		2	5			10	20 3	0				
Site Condition	: CO01-F : FCC PA	TS RT 15E LISN-L-2015		ency (MHz) E										
	Freq Level	Over Limit Limit Line	Read Level	LISN Factor	Cable Loss	Remar	k							
	MHz dBuV	dB dBuV	dBuV	dB	dB			_						
2 * 0	.167 48.03	-14.39 65.12 -7.09 55.12	37.50	0.41	10.12 10.12	Ävera	ige							
4 0 5 0	.337 41.58 .555 39.19	-16.09 59.27 -7.69 49.27 -16.81 56.00	31.19 28.80	0.23 0.23	10.16 10.16	Avera QP								
7 0	.822 31.99	-11.11 46.00 -24.01 56.00 -24.11 46.00	21.61	0.24	10.16 10.14 10.14	QP								
9 1 10 1	.255 35.56 .255 25.06	-20.44 56.00 -20.94 46.00	25.19 14.69	0.23 0.23	10.14 10.14	QP Avera								
		-20.58 60.00 -21.68 50.00			10.45 10.45	•	ge							

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 37 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No. : FR683002E



Test Mode :	Mode 1		Temperatu	re :	22~24℃									
Test Engineer :	Morris Li		Relative Hu	umidity :	42~44%									
Test Voltage :	120Vac / 60	)Hz	Neutral											
Function Type :	GSM850 Id Adapter)	··												
80 Level (d	80 Level (dBuV)													
70.0														
60.0					FCC PART 15E									
50.0					FCC PART 15E(AVG)									
40.0		<b>1</b>												
30.0			to the state of th	hohhahba	MY 110 12 " 1 M									
20.0														
10.0														
0.15 .2		.5 1	2	5	10 20 30									
			Frequency (MHz)	_	10 20 00									
Site Condition	: CO01-I : FCC PA	CS RT 15E LISN-N-20151	024 NEUTRAL											
	Freq Level	Over Limit Limit Line	Read LISN Level Factor	Cable Loss Rer	nank									
_				dB										
		-18.37 64.99		10.12 QP	nnago.									
		-13.27 54.99 -24.32 62.96		10.12 Ave	a. age									
		-26.22 52.96		10.13 QF	erage									
		-18.01 56.00		10.15 AV	0-									
				10.16 Ave	erage									
				10.15 QP										
		-25.90 46.00		10.15 Ave	erage									
		-24.75 60.00		10.28 QP										
		-20.15 50.00		10.28 Ave	erage									
		-24.18 60.00 -19.78 50.00	25.21 0.27 19.61 0.27		prage									
12 13	30.22	-17.70 30.00	17.01 0.27	10.34 AV	age.									

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 38 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No. : FR683002E

## 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.

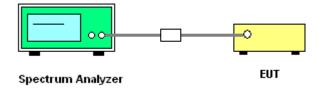
#### 3.6.2 Measuring Instruments

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

#### 3.6.3 Test Procedures

- 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.

Page Number : 39 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

## 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.

Page Number : 40 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report Template No.: BU5-FR15EWL MA Version 1.4

### 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  $N_{ANT} \le 4$ .

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.

For power, the directional gain G<sub>ANT</sub> is set equal to the antenna having the highest gain, i.e., F)2)f)i).

For PSD, the directional gain calculation is following F)2)f)ii) of KDB 662911 D01 v02r01.

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

The directional gain "DG" is calculated as following table.

			DG	DG	Power	PSD
			for	for	Limit	Limit
	Ant 1	Ant 2	Power	PSD	Reduction	Reduction
	(dBi)	(dBi)	(dBi)	(dBi)	(dB)	(dB)
Band I	-200	-4.00	-200	0.07	0.00	0.00
Band II	-2.00	-4.00	-200	0.07	0.00	0.00
Band III	-200	-4.00	-200	0.07	0.00	0.00

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

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

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 41 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

# 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Aug. 09, 2016	Sep. 03, 2016~ Sep. 25, 2016	Aug. 08, 2017	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 20, 2016	Sep. 03, 2016~ Sep. 25, 2016	Jan. 19, 2017	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 20, 2016	Sep. 03, 2016~ Sep. 25, 2016	Jan. 19, 2017	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 24, 2015	Sep. 03, 2016~ Sep. 25, 2016	Oct. 23, 2016	Conducted (TH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 29, 2016	Sep. 13, 2016	Apr. 28, 2017	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 24, 2015	Sep. 13, 2016	Oct. 23, 2016	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 24, 2015	Sep. 13, 2016	Oct. 23, 2016	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP0000008 11	AC 0V~300V, 45Hz~1000Hz	Oct. 24, 2015	Sep. 13, 2016	Oct. 23, 2016	Conduction (CO01-KS)
EMI Test Receiver&SA	KEYSIGHT	N9038A	MY54450083	20Hz~8.4GHz	May 07, 2016	Sep. 07, 2016~ Sep. 27, 2016	May 06, 2017	Radiation (03CH03-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150246	10Hz~44GHz	May 07, 2016	Sep. 07, 2016~ Sep. 27, 2016	May 06, 2017	Radiation (03CH03-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	May 07, 2016	Sep. 07, 2016~ Sep. 27, 2016	May 06, 2017	Radiation (03CH03-SZ)
Bilog Antenna	TeseQ	CBL6112D	35408	30MHz~2GHz	May 21, 2016	Sep. 07, 2016~ Sep. 27, 2016	May 20, 2017	Radiation (03CH03-SZ)
Double Ridge Horn Antenna	SCHWARZBE CK	BBHA9120D	9120D-1355	1GHz~18GHz	May 07, 2016	Sep. 07, 2016~ Sep. 27, 2016	May 06, 2017	Radiation (03CH03-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz~40GHz	Aug. 10, 2016	Sep. 07, 2016~ Sep. 27, 2016	Aug. 09, 2017	Radiation (03CH03-SZ)
Amplifier	Burgeon	BPA-530	102210	0.01Hz ~3000MHz	Oct. 20, 2015	Sep. 07, 2016~ Sep. 27, 2016	Oct. 19, 2016	Radiation (03CH03-SZ)
HF Amplifier	MITEQ	AMF-7D-0010 1800-30-10P- R	1943528	1GHz~18GHz	Oct. 20, 2015	Sep. 07, 2016~ Sep. 27, 2016	Oct. 19, 2016	Radiation (03CH03-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5G Hz	Jan. 12, 2016	Sep. 07, 2016~ Sep. 27, 2016	Jan. 11, 2017	Radiation (03CH03-SZ)
HF Amplifier	Amplifier MITEQ TTA18		1871923	18GHz~40GHz	Jul. 16, 2016	Sep. 07, 2016~ Sep. 27, 2016	Jul. 15, 2017	Radiation (03CH03-SZ)
AC Power Source	l Chroma l		6160100019 85	N/A	NCR	Sep. 07, 2016~ Sep. 27, 2016	NCR	Radiation (03CH03-SZ)
Turn Table	Turn Table EM		N/A	0~360 degree	NCR	Sep. 07, 2016~ Sep. 27, 2016	NCR	Radiation (03CH03-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Sep. 07, 2016~ Sep. 27, 2016	NCR	Radiation (03CH03-SZ)

NCR: No Calibration Required

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 42 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No. : FR683002E

# 5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence	2.3 dB
of 95% (U = 2Uc(y))	2.5 UB

#### <u>Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)</u>

Measuring Uncertainty for a Level of Confidence	5.1 dB
of 95% (U = 2Uc(y))	011 42

#### <u>Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)</u>

Measuring Uncertainty for a Level of Confidence	5.0 dB
of 95% (U = 2Uc(y))	3.0 UB

#### <u>Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)</u>

Measuring Uncertainty for a Level of Confidence	5.0 dB
of 95% (U = 2Uc(y))	5.0 UB

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : 43 of 43
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report No.: FR683002E

# **Appendix A. Conducted Test Results**

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : A1 of A1
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

Report Template No.: BU5-FR15EWL MA Version 1.4

Test Engineer:	Ivan Zhang	Temperature:	24~25	°C
Test Date:	2016/9/3~2016/9/25	Relative Humidity:	54~55	%

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

	Band I													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Band	9% width Hz)	Band	dB lwidth Hz)	IC 99% Bandwidth Power Limit (dBm)					Note
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 1 Ant 2		Ant 2		
11a	6Mbps	1	36	5180	16.73	-	20.58	-		-	22.24	-		
11a	6Mbps	1	44	5220	16.73	-	20.48	-		-	22.24	-		
11a	6Mbps	1	48	5240	16.73	-	20.73	-		-	22.24	-		
HT20	MCS0	1	36	5180	17.73	-	21.48	-		-	22.49	-		
HT20	MCS0	1	44	5220	17.68	-	21.53	-		-	22.48	-		
HT20	MCS0	1	48	5240	17.68	-	21.58	-		-	22.48	-		
VHT40	MCS0	1	38	5190	35.96	-	41.45	-		-	23.01	-		
VHT40	MCS0	1	46	5230	35.96	-	41.54	-		-	23.01	-		
VHT80	MCS0	1	42	5210	74.93	-	82.48	-		-	23.01	-		
HT20	MCS0	2	36	5180	17.73	17.73	21.43	21.23		-	22.	49		
HT20	MCS0	2	44	5220	17.73	17.73	21.63	21.38		_	22.	49		
HT20	MCS0	2	48	5240	17.68	17.78	21.68	21.43		-		48		
VHT40	MCS0	2	38	5190	35.86	35.96	41.36	41.18		-		01		
VHT40	MCS0	2	46	5230	35.96	35.96	41.45	41.36		- 23.01		01		
VHT80	MCS0	2	42	5210	74.93	74.93	82.64	82.00		-	23.	01		

# TEST RESULTS DATA Average Power Table

	FCC Band I															
Mod.	Data Rate	N⊤x	CH.	Freq. (MHz)	Fac	uty ctor B)		Average Conducted Power (dBm)		Conducted Conducted DG Power Power Limit (dBi)		Conducted Power Limit		-		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	-	14.38	-		24.00	24.00	-2.00	-4.00		Pass	
11a	6Mbps	1	44	5220	0.21	-	14.23	-		24.00	24.00	-2.00	-4.00		Pass	
11a	6Mbps	1	48	5240	0.21	-	14.16	-		24.00	24.00	-2.00	-4.00		Pass	
HT20	MCS0	1	36	5180	0.21	-	14.26	-		24.00 24.00		-2.00	-4.00		Pass	
HT20	MCS0	1	44	5220	0.21	-	14.11	-		24.00	24.00	-2.00	-4.00		Pass	
HT20	MCS0	1	48	5240	0.21	-	14.04	-		24.00	24.00	-2.00	-4.00		Pass	
VHT40	MCS0	1	38	5190	0.41	-	14.23	-		24.00	24.00	-2.00	-4.00		Pass	
VHT40	MCS0	1	46	5230	0.41	-	14.18	-		24.00	24.00	-2.00	-4.00		Pass	
VHT80	MCS0	1	42	5210	0.64	-	14.12	-		24.00	24.00	-2.00	-4.00		Pass	
HT20	MCS0	2	36	5180	0.23	0.22	10.94	13.10	15.17	24.	.00	-2.	00		Pass	
HT20	MCS0	2	44	5220	0.23	0.22	10.98	12.87	15.04	24.	.00	-2.	00		Pass	
HT20	MCS0	2	48	5240	0.23	0.22	10.82	12.63	14.83	24.	.00	-2.	00		Pass	
VHT40	MCS0	2	38	5190	0.47	0.47	12.06	13.14	15.64	24.	.00	-2.00			Pass	
VHT40	MCS0	2	46	5230	0.47	0.47	12.27	13.36	15.86	24.	.00	-2.00			Pass	
VHT80	MCS0	2	42	5210	0.66	0.64	12.74	12.89	15.83	24.	.00	-2.	00		Pass	

# TEST RESULTS DATA Power Spectral Density

	FCC Band I														
Mod.	Data Rate	N⊤x	CH.	Freq. (MHz)	Fac	uty ctor B)	Average Power Density (dBm/MHz)		Average PSD Limit (dBm/MHz)			G Bi)		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	-	3.56	-		11.00	11.00	-2.00	-4.00		Pass
11a	6Mbps	1	44	5220	0.21	-	3.49	-		11.00	11.00	-2.00	-4.00		Pass
11a	6Mbps	1	48	5240	0.21	-	3.39	-		11.00	11.00	-2.00	-4.00		Pass
HT20	MCS0	1	36	5180	0.21	-	3.12	-		11.00	11.00	-2.00	-4.00		Pass
HT20	MCS0	1	44	5220	0.21	-	3.19	-		11.00	11.00	-2.00	-4.00		Pass
HT20	MCS0	1	48	5240	0.21	-	2.86	-		11.00	11.00	-2.00	-4.00		Pass
VHT40	MCS0	1	38	5190	0.41	-	0.52	-		11.00	11.00	-2.00	-4.00		Pass
VHT40	MCS0	1	46	5230	0.41	-	0.52	-		11.00	11.00	-2.00	-4.00		Pass
VHT80	MCS0	1	42	5210	0.64	-	-2.25	-		11.00	11.00	-2.00	-4.00		Pass
HT20	MCS0	2	36	5180	0.23	0.22		•	4.40	11.	.00	0.0	07		Pass
HT20	MCS0	2	44	5220	0.23	0.22			3.76	11.	.00	0.0	07		Pass
HT20	MCS0	2	48	5240	0.23	0.22			3.71	11.	.00	0.0	07		Pass
VHT40	MCS0	2	38	5190	0.47	0.47			1.70	11.	.00	0.0	07		Pass
VHT40	MCS0	2	46	5230	0.47	0.47			1.31	11.	.00	0.0	07		Pass
VHT80	MCS0	2	42	5210	0.66	0.64			-0.98	11.	.00	0.0	07		Pass

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

								Band	II						
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Band	9% width Hz)	Band	dB lwidth Hz)	Band Powe	99% width r Limit Bm)	IC 9 Band EIRP (dE	width	Band Powe	26dB width r Limit Bm)	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	-	20.88	-	23.24	-	29.24	-	23.98	-	
11a	6Mbps	1	60	5300	16.73	-	20.63	-	23.24	-	29.24	-	23.98	-	
11a	6Mbps	1	64	5320	16.78	-	20.48	-	23.25	-	29.25	-	23.98	-	
HT20	MCS0	1	52	5260	17.73	-	21.58	-	23.49	-	29.49	-	23.98	-	
HT20	MCS0	1	60	5300	17.73	-	21.58	-	23.49	-	29.49	-	23.98	-	
HT20	MCS0	1	64	5320	17.73	-	21.58	-	23.49	-	29.49	-	23.98	-	
VHT40	MCS0	1	54	5270	35.86	-	41.54	-	23.98	-	30.00	-	23.98	-	
VHT40	MCS0	1	62	5310	35.96	-	41.54	-	23.98	-	30.00	-	23.98	-	
VHT80	MCS0	1	58	5290	74.93	-	83.12	-	23.98	-	30.00	-	23.98	-	
HT20	MCS0	2	52	5260	17.68	17.78	21.43	21.33	23.	48	29.	48	23.	98	
HT20	MCS0	2	60	5300	17.63	17.68	21.63	21.38	23.	46	29.	46	23.	.98	
HT20	MCS0	2	64	5320	17.68	17.68	21.68	21.38	23.	48	29.	48	23.	.98	
VHT40	MCS0	2	54	5270	35.86	35.96	41.45	41.54	23.	.98	30.	.00	23.	.98	
VHT40	MCS0	2	62	5310	35.96	35.76	41.45	41.27	23.	.98	30.	.00	23.	.98	
VHT80	MCS0	2	58	5290	74.93	74.81	82.48	82.32	23.	.98	30.	.00	23.	.98	

# TEST RESULTS DATA Average Power Table

								FCC Ba	nd II						
Mod.	Data Rate	N⊤x	CH.	Freq. (MHz)	Fad (d	uty ctor B)		Average conducte Power (dBm)	ed	Cond Powe (dE	r Limit Bm)	(dl	G Bi)	EIRP Power Limit (dBm)	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	-	14.44	-		23.98	-	-2.00	-4.00	26.99	Pass
11a	6Mbps	1	60	5300	0.21	-	14.41	-		23.98	-	-2.00	-4.00	26.99	Pass
11a	6Mbps	1	64	5320	0.21	-	14.23	-		23.98	-	-2.00	-4.00	26.99	Pass
HT20	MCS0	1	52	5260	0.21	-	14.33	-		23.98	-	-2.00	-4.00	26.99	Pass
HT20	MCS0	1	60	5300	0.21	-	14.24	-		23.98	-	-2.00	-4.00	26.99	Pass
HT20	MCS0	1	64	5320	0.21	-	14.13	-		23.98	-	-2.00	-4.00	26.99	Pass
VHT40	MCS0	1	54	5270	0.41	-	14.26	-		23.98	-	-2.00	-4.00	26.99	Pass
VHT40	MCS0	1	62	5310	0.41	-	14.18	-		23.98	-	-2.00	-4.00	26.99	Pass
VHT80	MCS0	1	58	5290	0.64	-	14.10	-		23.98	-	-2.00	-4.00	26.99	Pass
HT20	MCS0	2	52	5260	0.23	0.22	11.27	12.75	15.08	23.	98	-2.	00	26.99	Pass
HT20	MCS0	2	60	5300	0.23	0.22	11.37	13.28	15.44	23.	98	-2.	00	26.99	Pass
HT20	MCS0	2	64	5320	0.23	0.22	11.12	13.17	15.28	23.	98	-2.	00	26.99	Pass
VHT40	MCS0	2	54	5270	0.47	0.47	12.25	13.33	15.83	23.	98	-2.	00	26.99	Pass
VHT40	MCS0	2	62	5310	0.47	0.47	12.31	13.73	16.09	23.	98	-2.	00	26.99	Pass
VHT80	MCS0	2	58	5290	0.66	0.64	12.70	13.41	16.08	23.	98	-2.	00	26.99	Pass

# TEST RESULTS DATA Power Spectral Density

								Band	п					
								Danu	"					
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Fac	uty ctor B)		Average Power Density Bm/MH		PS Lir	rage SD mit /MHz)		G Bi)	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	-	3.56	-		11.00	11.00	-2.00	-4.00	Pass
11a	6Mbps	1	60	5300	0.21	-	3.95	-		11.00	11.00	-2.00	-4.00	Pass
11a	6Mbps	1	64	5320	0.21	-	3.61	-		11.00	11.00	-2.00	-4.00	Pass
HT20	MCS0	1	52	5260	0.21	-	3.31	-		11.00	11.00	-2.00	-4.00	Pass
HT20	MCS0	1	60	5300	0.21	-	3.67	-		11.00	11.00	-2.00	-4.00	Pass
HT20	MCS0	1	64	5320	0.21	-	3.45	-		11.00	11.00	-2.00	-4.00	Pass
VHT40	MCS0	1	54	5270	0.41	-	0.46	-		11.00	11.00	-2.00	-4.00	Pass
VHT40	MCS0	1	62	5310	0.41	-	0.44	-		11.00	11.00	-2.00	-4.00	Pass
VHT80	MCS0	1	58	5290	0.64	-	-2.00	-		11.00	11.00	-2.00	-4.00	Pass
HT20	MCS0	2	52	5260	0.23	0.22		•	3.98	11.	00	0.0	7	Pass
HT20	MCS0	2	60	5300	0.23	0.22			4.33	11.	.00	0.0	07	Pass
HT20	MCS0	2	64	5320	0.23	0.22			4.12	11.	.00	0.0	07	Pass
VHT40	MCS0	2	54	5270	0.47	0.47			1.51	11.	.00	0.0	07	Pass
VHT40	MCS0	2	62	5310	0.47	0.47			1.56	11.	.00	0.0	07	Pass
VHT80	MCS0	2	58	5290	0.66	0.64			-0.69	11.	.00	0.0	07	Pass

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

								Band	III						
Mod.	Data Rate	NTX	CH.	Freq. (MHz)		l% width Hz)	Band	dB width Hz)	IC 9 Band Powe (dE	width	IC 9 Band EIRP (dE	width Limit	FCC Band Powe (dE	width r Limit	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	16.68	-	20.68	-	23.22	-	29.22	-	23.98	-	
11a	6Mbps	1	116	5580	16.73	-	20.68	-	23.23	-	29.23	-	23.98	-	
11a	6Mbps	1	140	5700	16.73	-	20.68	-	23.23	ı	29.23	-	23.98	-	
HT20	MCS0	1	100	5500	17.68	-	21.53	-	23.48	ı	29.48	-	23.98	-	
HT20	MCS0	1	116	5580	17.68	-	21.53	-	23.48	ı	29.48	-	23.98	-	
HT20	MCS0	1	140	5700	17.68	-	21.58	-	23.48	-	29.48	-	23.98	-	
VHT40	MCS0	1	102	5510	35.96	-	41.45	-	23.98	-	30.00	-	23.98	-	
VHT40	MCS0	1	110	5550	35.96	-	41.72	-	23.98	-	30.00	-	23.98	-	
VHT40	MCS0	1	134	5670	35.96	-	41.72	-	23.98	-	30.00	-	23.98	-	
VHT80	MCS0	1	106	5530	74.93	-	82.80	-	23.98	-	30.00	-	23.98	-	
VHT80	MCS0	1	122	5610	74.93	-	83.60	-	23.98	-	30.00	-	23.98	-	
HT20	MCS0	2	100	5500	17.73	17.73	21.63	21.28	23.	49	29.	49	23.	98	
HT20	MCS0	2	116	5580	17.73	17.73	21.53	21.48	23.	49	29.	49	23.	98	
HT20	MCS0	2	140	5700	17.68	17.73	21.58	21.28	23.	48	29.	48	23.	98	
VHT40	MCS0	2	102	5510	35.86	35.86	41.54	41.36	23.	98	30.	.00	23.	98	
VHT40	MCS0	2	110	5550	35.96	35.96	41.45	41.72	23.	98	30.	.00	23.	98	
VHT40	MCS0	2	134	5670	35.86	35.96	41.63	41.99	23.	98	30.	.00	23.	98	
VHT80		2	106	5530	74.93	74.81	82.48	81.84	23.		30.	.00	23.		
VHT80	MCS0	2	122	5610	74.93	74.81	83.44	82.48	23.	98	30.	.00	23.	98	

# TEST RESULTS DATA Average Power Table

							I	FCC Ba	nd III						
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	Fad (d	uty etor B)		Average conducte Power (dBm)	ed	(dE	ucted r Limit Bm)	D (dl	Bi)	EIRP Power Limit (dBm)	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	-	15.42	-		23.98	-	-2.00	-4.00	26.99	Pass
11a	6Mbps	1	116	5580	0.21	-	15.29	-		23.98	-	-2.00	-4.00	26.99	Pass
11a	6Mbps	1	140	5700	0.21	-	15.11	-		23.98	-	-2.00	-4.00	26.99	Pass
HT20	MCS0	1	100	5500	0.21	-	15.33	-		23.98	-	-2.00	-4.00	26.99	Pass
HT20	MCS0	1	116	5580	0.21	-	15.07	-		23.98	-	-2.00	-4.00	26.99	Pass
HT20	MCS0	1	140	5700	0.21	-	14.98	-		23.98	-	-2.00	-4.00	26.99	Pass
VHT40	MCS0	1	102	5510	0.41	-	15.33	-		23.98	-	-2.00	-4.00	26.99	Pass
VHT40	MCS0	1	110	5550	0.41	-	15.16	-		23.98	-	-2.00	-4.00	26.99	Pass
VHT40	MCS0	1	134	5670	0.41	-	15.13	-		23.98	-	-2.00	-4.00	26.99	Pass
VHT80	MCS0	1	106	5530	0.64	-	15.17	-		23.98	-	-2.00	-4.00	26.99	Pass
VHT80	MCS0	1	122	5610	0.64	-	15.32	-		23.98	-	-2.00	-4.00	26.99	Pass
HT20	MCS0	2	100	5500	0.23	0.22	10.15	11.07	13.65	23.	.98	-2.	00	26.99	Pass
HT20	MCS0	2	116	5580	0.23	0.22	10.02	10.17	13.11	23.	.98	-2.	00	26.99	Pass
HT20	MCS0	2	140	5700	0.23	0.22	9.97	10.26	13.13	23.	.98	-2.	00	26.99	Pass
VHT40	MCS0	2	102	5510	0.47	0.47	10.91	11.42	14.18	23.	.98	-2.	00	26.99	Pass
VHT40	MCS0	2	110	5550	0.47	0.47	10.86	10.74	13.81	23.	.98	-2.	00	26.99	Pass
VHT40	MCS0	2	134	5670	0.47	0.47	10.71	10.47	13.60	23.	.98	-2.	00	26.99	Pass
VHT80	MCS0	2	106	5530	0.66	0.64	11.37	10.86	14.13	23.	.98	-2.	00	26.99	Pass
VHT80	MCS0	2	122	5610	0.66	0.64	11.34	10.83	14.10	23.	.98	-2.	00	26.99	Pass

# TEST RESULTS DATA Power Spectral Density

								Band	III					
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Fac	uty etor B)		Average Power Density Bm/MH		PS Lir	rage SD mit /MHz)		G Bi)	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	-	4.44	-		11.00	11.00	-2.00	-4.00	Pass
11a	6Mbps	1	116	5580	0.21	-	4.49	-		11.00	11.00	-2.00	-4.00	Pass
11a	6Mbps	1	140	5700	0.21	-	4.21	-		11.00	11.00	-2.00	-4.00	Pass
HT20	MCS0	1	100	5500	0.21	-	4.27	-		11.00	11.00	-2.00	-4.00	Pass
HT20	MCS0	1	116	5580	0.21	-	4.23	-		11.00	11.00	-2.00	-4.00	Pass
HT20	MCS0	1	140	5700	0.21	-	3.85	-		11.00	11.00	-2.00	-4.00	Pass
VHT40	MCS0	1	102	5510	0.41	-	1.14	-		11.00	11.00	-2.00	-4.00	Pass
VHT40	MCS0	1	110	5550	0.41	-	1.18	-		11.00	11.00	-2.00	-4.00	Pass
VHT40	MCS0	1	134	5670	0.41	-	1.18	-		11.00	11.00	-2.00	-4.00	Pass
VHT80	MCS0	1	106	5530	0.64	-	-1.29	-		11.00	11.00	-2.00	-4.00	Pass
VHT80	MCS0	1	122	5610	0.64	-	-1.21	-		11.00	11.00	-2.00	-4.00	Pass
HT20	MCS0	2	100	5500	0.23	0.22			2.70	11.	.00	0.0	07	Pass
HT20	MCS0	2	116	5580	0.23	0.22			2.33	11.	.00	0.0	07	Pass
HT20	MCS0	2	140	5700	0.23	0.22			2.05	11.	.00	0.0	07	Pass
VHT40	MCS0	2	102	5510	0.47	0.47			0.05	11.	.00	0.0	)7 	Pass
VHT40	MCS0	2	110	5550	0.47	0.47			-0.53	11.	.00	0.0	07	Pass
VHT40	MCS0	2	134	5670	0.47	0.47			-0.65	11.	.00	0.0	07	Pass
VHT80	MCS0	2	106	5530	0.66	0.64			-2.72	11.	.00	0.0	07	Pass
VHT80	MCS0	2	122	5610	0.66	0.64			-3.10	11.	.00	0.0	)7	Pass

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

							٥.									
							Stı	raddle C	hannel							
Mod.	Data Rate	N⊤x	CH.	Freq. (MHz)		9% width Hz)	Emis Band	dB ssion lwidth Hz)	Emis	dB ssion width Hz)	IC 9 Band Powe (dE	width r Limit	Band	Limit		
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2
				5720	16.73	-	20.58	-	15.31	-	-	-	-	-	-	-
11a	6Mbps	1	144	NII-2C	13.49	-	15.54	-	12.85	-	22.30	-	28.30	-	22.91	-
				NII-3	3.24	-	5.04	-	2.45	-	30.00	-	36.02	-	-	-
				5720	17.68	-	21.58	-	15.13	-	-	-	-	-	-	-
HT20	MCS0	1	144	NII-2C	13.94	-	15.89	-	12.67	-	22.44	-	28.44	-	23.01	-
				NII-3	3.74	-	5.69	-	2.45	-	30.00	-	36.02	-	-	-
				5710	35.96	-	41.54	-	35.13	-	-	-	-	-	-	-
VHT40	MCS0	1	142	NII-2C	33.08	-	35.77	-	32.66	-	23.98	-	30.00	-	23.98	-
				NII-3	2.88	-	5.77	-	2.46	-	30.00	ı	36.02	-	-	-
				5690	75.05	-	83.60	-	75.13	-	-	-	-	-	-	-
VHT80	MCS0	1	138	NII-2C	72.64	-	76.88	-	72.64	-	23.98	-	30.00	-	23.98	-
				NII-3	2.40	-	6.72	-	2.48	-	30.00	-	36.02	-	-	-
				5720	17.68	17.78	21.63	21.33	15.15	15.13		-		-		-
HT20	MCS0	2	144	NII-2C	13.94	13.99	15.94	15.74	12.67	12.67	22.		28.		22.	97
				NII-3	3.74	3.79	5.69	5.59	2.47	2.45	30.		36.			-
				5710	35.96	35.96	41.72	41.45	35.09	35.09						
VHT40	MCS0	2	142	NII-2C	33.08	33.08	35.95	35.77	32.62	32.62	23.		30.		23.	98
				NII-3	2.88	2.88	5.77	5.68	2.46	2.46	30.		36.			-
) (I ITC )			400	5690	74.93	74.93	83.44	82.00	75.13	75.13		-		-		-
VH180	MCS0	2	138	NII-2C	72.64	72.64	76.88	75.92	72.64	72.64	23.		30.		23.	98
				NII-3	2.28	2.28	6.56	6.08	2.48	2.48	30.	UU	36.	.02		-

# TEST RESULTS DATA Average Power Table

							FCC	Straddl	e Chanı	nel				
Mod.	Data Rate	N⊤x	CH.	Freq. (MHz)	Fac	uty ctor B)		Average Conducte Power (dBm)		Cond	CC ducted er Limit Bm)	_	G Bi)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
				5720	0.21	-	14.52	-		-	-	-2.00	-4.00	-
11a	6Mbps	1	144	NII-2C	0.21	-	13.85	-		22.91	-	-2.00	-4.00	Pass
				NII-3	0.21	-	6.10	-		-	-	-2.00	-4.00	Pass
				5720	0.21	-	14.81	-		-	-	-2.00	-4.00	-
HT20	MCS0	1	144	NII-2C	0.21	-	14.10	-		23.01	-	-2.00	-4.00	Pass
				NII-3	0.21	-	6.60	-		-	-	-2.00	-4.00	Pass
				5710	0.41	-	15.41	-		-	-	-2.00	-4.00	-
VHT40	MCS0	1	142	NII-2C	0.41	-	15.19	-		23.98	-	-2.00	-4.00	Pass
				NII-3	0.41	-	2.30	-		-	-	-2.00	-4.00	Pass
				5690	0.64	-	14.91	-		-	-	-2.00	-4.00	-
VHT80	MCS0	1	138	NII-2C	0.64	-	14.83	-		23.98	-	-2.00	-4.00	Pass
				NII-3	0.64	-	-2.75	-		-	-	-2.00	-4.00	Pass
				5720	0.23	0.22	9.59	9.42	12.51		-	-2.	00	-
HT20	MCS0	2	144	NII-2C	0.23	0.22	8.82	8.67	11.76	22	.97	-2.	00	Pass
				NII-3	0.23	0.22	1.68	1.42	4.56		-	-2.		Pass
				5710	0.47	0.47	11.18	11.07	14.14		-	-2.	00	-
VHT40	MCS0	2	142	NII-2C	0.47	0.47	10.97	10.88	13.94	23	.98	-2.	00	Pass
				NII-3	0.47	0.47	-2.08	-2.50	0.73		-	-2.	00	Pass
				5690	0.66	0.64	10.98	10.85	13.92		-	-2.	00	-
VHT80	MCS0	2	138	NII-2C	0.66	0.64	10.91	10.78	13.86	23	.98	-2.		Pass
				NII-3	0.66	0.64	-7.10	-7.38	-4.23		-	-2.	00	Pass

# TEST RESULTS DATA Power Spectral Density

							Stı	raddle C	hannel					
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Fac	uty ctor B)		Average Power Density Bm/MH		PS Lii	rage SD mit /MHz)	D (dl	G Bi)	Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	144	NII-2C	0.21	-	2.63	-		11.00	11.00	-2.00	-4.00	Pass
Па	olvibbs	ı	144	NII-3	0.21	-	2.63	-		30.00	30.00	-2.00	-4.00	Pass
HT20	MCS0	1	144	NII-2C	0.21	-	3.41	-		11.00	11.00	-2.00	-4.00	Pass
11120	MCSU	'	144	NII-3	0.21	-	3.41	-		30.00	30.00	-2.00	-4.00	Pass
VHT40	MCSO	1	142	NII-2C	0.41	-	0.51	-		11.00	11.00	-2.00	-4.00	Pass
V11140	NICSU		142	NII-3	0.41	-	0.51	-		30.00	30.00	-2.00	-4.00	Pass
VHT80	MCSO	1	138	NII-2C	0.64	-	-2.14	-		11.00	11.00	-2.00	-4.00	Pass
VH160	MCSU	!	130	NII-3	0.64	-	-2.14	-		30.00	30.00	-2.00	-4.00	Pass
HT20	MCS0	2	144	NII-2C	0.23	0.22			2.19	11.	.00	0.0	07	Pass
11120	IVICSU		144	NII-3	0.23	0.22			2.19	30	.00	0.0	07	Pass
VHT40	MCSO	2	142	NII-2C	0.47	0.47			0.20	11.	.00	0.0	07	Pass
V11140	IVICSU		142	NII-3	0.47	0.47			0.20	30	.00	0.0	07	Pass
VHT80	MCSO	2	138	NII-2C	0.66	0.64			-2.93	11	.00	0.0	07	Pass
V11100	IVICOU	_	130	NII-3	0.66	0.64			-2.93	30	.00	0.0	07	Pass

# TEST RESULTS DATA Frequency Stability

						Band	П			
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	5179.900	-0.100	-19.31	50	3.85	
11a	6Mbps	1	36	5180	5179.975	-0.025	-4.83	-30	3.85	
11a	6Mbps	1	36	5180	5179.925	-0.075	-14.48	20	4.35	
11a	6Mbps	1	36	5180	5179.925	-0.075	-14.48	20	3.7	
11a	6Mbps	1	36	5180	5179.925	-0.075	-14.48	20	3.85	

						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	5319.900	-0.100	-18.80	50	3.85	
11a	6Mbps	1	64	5320	5319.975	-0.025	-4.70	-30	3.85	
11a	6Mbps	1	64	5320	5319.925	-0.075	-14.10	20	4.35	
11a	6Mbps	1	64	5320	5319.925	-0.075	-14.10	20	3.7	
11a	6Mbps	1	64	5320	5319.925	-0.075	-14.10	20	3.85	

						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	5499.900	-0.100	-18.18	50	3.85	
11a	6Mbps	1	100	5500	5499.975	-0.025	-4.55	-30	3.85	
11a	6Mbps	1	100	5500	5499.900	-0.100	-18.18	20	4.35	
11a	6Mbps	1	100	5500	5499.925	-0.075	-13.64	20	3.7	
11a	6Mbps	1	100	5500	5499.900	-0.100	-18.18	20	3.85	

# Appendix B. Radiated Spurious Emission

#### For Single Antenna

#### Band 1 - 5150~5250MHz

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

WIFI	Note		Level	Over	l imais	Dood	Antonno	Cabla	Duaguaga	Aust	Table	Peak	Dal
	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table		Poi.
Ant.		(MHz)	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg.	(H/V)
<u> </u>		5147.94	53.59	-20.41	74	47.07	32.93	7.26	33.67	150	118	P	H
		5149.76	45.23	-8.77	54	38.71	32.93	7.26	33.67	150	118	A	Н
	*	5180	105.65	-	-	98.99	32.94	7.37	33.65	150	118	Р	Н
802.11a	*	5180	96.28	-	-	89.62	32.94	7.37	33.65	150	118	Α	Н
CH 36		5147.42	50.22	-23.78	74	43.7	32.93	7.26	33.67	245	100	Р	٧
5180MHz		5147.16	42	-12	54	35.48	32.93	7.26	33.67	245	100	Α	٧
	*	5180	100.37	-	-	93.71	32.94	7.37	33.65	245	100	Р	٧
	*	5180	91.45	-	-	84.79	32.94	7.37	33.65	245	100	Α	٧
		5126.36	50.62	-23.38	74	44.12	32.93	7.26	33.69	150	117	Р	Н
		5150	41.96	-12.04	54	35.44	32.93	7.26	33.67	150	117	Α	Н
	*	5220	105.45	-	-	98.78	32.94	7.37	33.64	150	117	Р	Н
	*	5220	96.56	-	-	89.89	32.94	7.37	33.64	150	117	Α	Н
		5389.2	47.61	-26.39	74	40.76	32.98	7.39	33.52	150	117	Р	Н
802.11a		5353.2	38.89	-15.11	54	32.06	32.97	7.39	33.53	150	117	Α	Н
CH 44 5220MHz		5115.7	48.72	-25.28	74	42.34	32.92	7.16	33.7	239	84	Р	٧
522UIVITZ		5146.9	39.98	-14.02	54	33.46	32.93	7.26	33.67	239	84	Α	V
	*	5220	100.01	-	-	93.34	32.94	7.37	33.64	239	84	Р	V
	*	5220	90.13	-	-	83.46	32.94	7.37	33.64	239	84	Α	V
		5397.12	47.29	-26.71	74	40.44	32.98	7.39	33.52	239	84	Р	V
		5440.8	38.04	-15.96	54	31.1	32.99	7.43	33.48	239	84	Α	٧

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B1 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

		5144.56	52.15	-21.85	74	45.63	32.93	7.26	33.67	150	119	Р	Н
		5149.76	42.93	-11.07	54	36.41	32.93	7.26	33.67	150	119	Α	Н
	*	5240	106	-	-	99.3	32.95	7.37	33.62	150	119	Р	Н
	*	5240	96.43	-	-	89.73	32.95	7.37	33.62	150	119	Α	Н
		5353.44	48.14	-25.86	74	41.31	32.97	7.39	33.53	150	119	Р	Н
802.11a		5352.72	40.23	-13.77	54	33.4	32.97	7.39	33.53	150	119	Α	Н
CH 48 5240MHz		5047.06	48.81	-25.19	74	42.49	32.91	7.15	33.74	242	81	Р	٧
524UWITZ		5149.76	39.94	-14.06	54	33.42	32.93	7.26	33.67	242	81	Α	٧
	*	5240	99.19	-	-	92.49	32.95	7.37	33.62	242	81	Р	٧
	*	5240	90.43	-	-	83.73	32.95	7.37	33.62	242	81	Α	٧
		5352.72	47.61	-26.39	74	40.78	32.97	7.39	33.53	242	81	Р	٧
		5364.96	38.13	-15.87	54	31.3	32.97	7.39	33.53	242	81	Α	٧
Remark		o other spurious		Peak and	Average lir	nit line.						,	,

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B2 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

# Band 1 5150~5250MHz

#### WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1		( MHz )	( dBµV/m )	Limit ( dB )	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	i
		10360	50.19	-23.81	74	58.9	39.71	10.58	59	152	260	Р	Н
802.11a		15540	49.99	-24.01	74	58.67	37.97	13.04	59.69	189	238	Р	Н
CH 36 5180MHz		10360	50.36	-23.64	74	59.07	39.71	10.58	59	152	260	Р	V
3100WIF12		15540	50.19	-23.81	74	58.87	37.97	13.04	59.69	189	238	Р	٧
		10440	50.93	-23.07	74	59.52	39.85	10.58	59.02	125	230	Р	Н
802.11a		15660	50.74	-23.26	74	59.46	37.88	13.15	59.75	110	225	Р	Н
CH 44 5220MHz		10440	50.74	-23.26	74	59.33	39.85	10.58	59.02	125	230	Р	٧
3220WIFI2		15660	50.6	-23.4	74	59.32	37.88	13.15	59.75	110	225	Р	٧
		10480	48.52	-25.48	74	58.61	38.79	10.15	59.03	149	289	Р	Н
802.11a		15720	50.52	-23.48	74	59.32	37.96	13.03	59.79	139	291	Р	Н
CH 48 5240MHz		10480	48.8	-25.2	74	58.89	38.79	10.15	59.03	149	289	Р	V
524UIVIMZ		15720	50.29	-23.71	74	59.09	37.96	13.03	59.79	139	291	Р	V

## Remark

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727

Page Number : B3 of B63 Report Issued Date : Oct. 10, 2016 Report Version : Rev. 01

All results are PASS against Peak and Average limit line.

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

NA/IEI		_							_				
WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	
Ant. 1		(MHz)	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg.	(H/V)
		5146.64	54.71	-19.29	74	48.19	32.93	7.26	33.67	154	133	P	(n/ <b>v</b> )
		5147.16	45.92	-8.08	54	39.4	32.93	7.26	33.67	154	133	Α	Н
802.11n	*	5180	104.38	-	-	97.72	32.94	7.37	33.65	154	133	Р	Н
HT20	*	5180	96.22	-	-	89.56	32.94	7.37	33.65	154	133	Α	Н
CH 36		5144.04	52.29	-21.71	74	45.77	32.93	7.26	33.67	161	91	Р	V
5180MHz		5145.34	43.58	-10.42	54	37.06	32.93	7.26	33.67	161	91	Α	V
	*	5180	103.01	-	-	96.35	32.94	7.37	33.65	161	91	Р	V
	*	5180	94.15	-	-	87.49	32.94	7.37	33.65	161	91	Α	٧
		5130	51.98	-22.02	74	45.48	32.93	7.26	33.69	154	132	Р	Н
		5150	42.35	-11.65	54	35.83	32.93	7.26	33.67	154	132	Α	Н
	*	5220	104.6	-	-	97.93	32.94	7.37	33.64	154	132	Р	Н
	*	5220	96.67	-	-	90	32.94	7.37	33.64	154	132	Α	Н
802.11n		5383.68	47.59	-26.41	74	40.74	32.98	7.39	33.52	154	132	Р	Н
HT20		5350.32	38.87	-15.13	54	32.04	32.97	7.39	33.53	154	132	Α	Н
CH 44		5145.08	48.8	-25.2	74	42.28	32.93	7.26	33.67	157	89	Р	V
5220MHz		5149.24	40.62	-13.38	54	34.1	32.93	7.26	33.67	157	89	Α	V
	*	5220	102.99	-	-	96.32	32.94	7.37	33.64	157	89	Р	V
	*	5220	94	-	-	87.33	32.94	7.37	33.64	157	89	Α	V
		5368.32	47.53	-26.47	74	40.7	32.97	7.39	33.53	157	89	Р	٧
		5441.04	38.25	-15.75	54	31.31	32.99	7.43	33.48	157	89	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B4 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

												$\overline{}$
	5094.64	51.51	-22.49	74	45.13	32.92	7.16	33.7	166	128	Р	Н
	5150	43.16	-10.84	54	36.64	32.93	7.26	33.67	166	128	Α	Н
*	5240	105.29	-	-	98.59	32.95	7.37	33.62	166	128	Р	Н
*	5240	95.87	-	-	89.17	32.95	7.37	33.62	166	128	Α	Н
	5419.68	48.04	-25.96	74	41.13	32.98	7.43	33.5	166	128	Р	Н
	5352.96	39.84	-14.16	54	33.01	32.97	7.39	33.53	166	128	Α	Н
	5143.26	49.51	-24.49	74	43.01	32.93	7.26	33.69	153	90	Р	V
	5147.16	41.12	-12.88	54	34.6	32.93	7.26	33.67	153	90	Α	V
*	5240	102.51	-	-	95.81	32.95	7.37	33.62	153	90	Р	V
*	5240	93.73	-	-	87.03	32.95	7.37	33.62	153	90	Α	V
	5459.28	48.78	-25.22	74	41.79	32.99	7.47	33.47	153	90	Р	V
	5350.56	38.79	-15.21	54	31.96	32.97	7.39	33.53	153	90	Α	V
	*	5150  * 5240  * 5240  * 5240  5419.68  5352.96  5143.26  5147.16  * 5240  * 5240  5459.28	5150     43.16       *     5240     105.29       *     5240     95.87       5419.68     48.04       5352.96     39.84       5143.26     49.51       5147.16     41.12       *     5240     102.51       *     5240     93.73       5459.28     48.78	5150       43.16       -10.84         *       5240       105.29       -         *       5240       95.87       -         5419.68       48.04       -25.96         5352.96       39.84       -14.16         5143.26       49.51       -24.49         5147.16       41.12       -12.88         *       5240       102.51       -         *       5240       93.73       -         5459.28       48.78       -25.22	5150     43.16     -10.84     54       *     5240     105.29     -     -       *     5240     95.87     -     -       5419.68     48.04     -25.96     74       5352.96     39.84     -14.16     54       5143.26     49.51     -24.49     74       5147.16     41.12     -12.88     54       *     5240     102.51     -     -       *     5240     93.73     -     -       5459.28     48.78     -25.22     74	5150       43.16       -10.84       54       36.64         *       5240       105.29       -       -       98.59         *       5240       95.87       -       -       89.17         5419.68       48.04       -25.96       74       41.13         5352.96       39.84       -14.16       54       33.01         5143.26       49.51       -24.49       74       43.01         5147.16       41.12       -12.88       54       34.6         *       5240       102.51       -       -       95.81         *       5240       93.73       -       -       87.03         5459.28       48.78       -25.22       74       41.79	5150       43.16       -10.84       54       36.64       32.93         *       5240       105.29       -       -       98.59       32.95         *       5240       95.87       -       -       89.17       32.95         5419.68       48.04       -25.96       74       41.13       32.98         5352.96       39.84       -14.16       54       33.01       32.97         5143.26       49.51       -24.49       74       43.01       32.93         5147.16       41.12       -12.88       54       34.6       32.93         *       5240       102.51       -       -       95.81       32.95         *       5240       93.73       -       -       87.03       32.95         5459.28       48.78       -25.22       74       41.79       32.99	5150       43.16       -10.84       54       36.64       32.93       7.26         *       5240       105.29       -       -       98.59       32.95       7.37         *       5240       95.87       -       -       89.17       32.95       7.37         5419.68       48.04       -25.96       74       41.13       32.98       7.43         5352.96       39.84       -14.16       54       33.01       32.97       7.39         5143.26       49.51       -24.49       74       43.01       32.93       7.26         5147.16       41.12       -12.88       54       34.6       32.93       7.26         *       5240       102.51       -       -       95.81       32.95       7.37         *       5240       93.73       -       -       87.03       32.95       7.37         5459.28       48.78       -25.22       74       41.79       32.99       7.47	5150     43.16     -10.84     54     36.64     32.93     7.26     33.67       *     5240     105.29     -     -     98.59     32.95     7.37     33.62       *     5240     95.87     -     -     89.17     32.95     7.37     33.62       5419.68     48.04     -25.96     74     41.13     32.98     7.43     33.5       5352.96     39.84     -14.16     54     33.01     32.97     7.39     33.53       5143.26     49.51     -24.49     74     43.01     32.93     7.26     33.69       5147.16     41.12     -12.88     54     34.6     32.93     7.26     33.67       *     5240     102.51     -     -     95.81     32.95     7.37     33.62       *     5240     93.73     -     -     87.03     32.95     7.37     33.62       *     5249     48.78     -25.22     74     41.79     32.99     7.47     33.47	5150     43.16     -10.84     54     36.64     32.93     7.26     33.67     166       *     5240     105.29     -     -     98.59     32.95     7.37     33.62     166       *     5240     95.87     -     -     89.17     32.95     7.37     33.62     166       5419.68     48.04     -25.96     74     41.13     32.98     7.43     33.5     166       5352.96     39.84     -14.16     54     33.01     32.97     7.39     33.53     166       5143.26     49.51     -24.49     74     43.01     32.93     7.26     33.69     153       5147.16     41.12     -12.88     54     34.6     32.93     7.26     33.67     153       *     5240     102.51     -     -     95.81     32.95     7.37     33.62     153       *     5240     93.73     -     -     87.03     32.95     7.37     33.62     153       5459.28     48.78     -25.22     74     41.79     32.99     7.47     33.47     153	5150       43.16       -10.84       54       36.64       32.93       7.26       33.67       166       128         *       5240       105.29       -       -       98.59       32.95       7.37       33.62       166       128         *       5240       95.87       -       -       89.17       32.95       7.37       33.62       166       128         5419.68       48.04       -25.96       74       41.13       32.98       7.43       33.5       166       128         5352.96       39.84       -14.16       54       33.01       32.97       7.39       33.53       166       128         5143.26       49.51       -24.49       74       43.01       32.93       7.26       33.69       153       90         5147.16       41.12       -12.88       54       34.6       32.93       7.26       33.67       153       90         *       5240       102.51       -       -       95.81       32.95       7.37       33.62       153       90         *       5240       93.73       -       -       87.03       32.95       7.37       33.47       153       90	5150       43.16       -10.84       54       36.64       32.93       7.26       33.67       166       128       A         *       5240       105.29       -       -       98.59       32.95       7.37       33.62       166       128       P         *       5240       95.87       -       -       89.17       32.95       7.37       33.62       166       128       A         5419.68       48.04       -25.96       74       41.13       32.98       7.43       33.5       166       128       P         5352.96       39.84       -14.16       54       33.01       32.97       7.39       33.53       166       128       A         5143.26       49.51       -24.49       74       43.01       32.93       7.26       33.69       153       90       P         5147.16       41.12       -12.88       54       34.6       32.93       7.26       33.67       153       90       A         *       5240       102.51       -       -       95.81       32.95       7.37       33.62       153       90       A         *       5240       93.73       -

#### Remark

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B5 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>1.</sup> No other spurious found.

<sup>2.</sup> All results are PASS against Peak and Average limit line.

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	i
802.11n		10360	50.63	-23.37	74	59.34	39.71	10.58	59	152	260	Р	Н
HT20		15540	49.17	-24.83	74	57.85	37.97	13.04	59.69	189	238	Р	Н
CH 36		10360	50.09	-23.91	74	58.8	39.71	10.58	59	152	260	Р	V
5180MHz		15540	49.68	-24.32	74	58.36	37.97	13.04	59.69	189	238	Р	V
802.11n		10440	50.81	-23.19	74	59.4	39.85	10.58	59.02	125	230	Р	Н
HT20		15660	49.98	-24.02	74	58.7	37.88	13.15	59.75	110	225	Р	Н
CH 44		10440	49.6	-24.4	74	58.19	39.85	10.58	59.02	125	230	Р	V
5220MHz		15660	50.28	-23.72	74	59	37.88	13.15	59.75	110	225	Р	٧
802.11n		10480	50	-24	74	58.48	39.96	10.59	59.03	149	289	Р	Н
HT20		15720	50.03	-23.97	74	58.77	37.82	13.23	59.79	139	291	Р	Н
CH 48		10480	50.74	-23.26	74	59.22	39.96	10.59	59.03	149	289	Р	V
5240MHz		15720	50.7	-23.3	74	59.44	37.82	13.23	59.79	139	291	Р	V

### Remark

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B6 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>1.</sup> No other spurious found.

<sup>2.</sup> All results are PASS against Peak and Average limit line.

# Band 1 5150~5250MHz WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	, ,	( dBµV/m )	(dBµV)	( dB/m )	( dB )	(dB)	( cm )	( deg )	(P/A)	
		5145.86	61.94	-12.06	74	55.42	32.93	7.26	33.67	237	122	Р	Н
		5149.5	50.73	-3.27	54	44.21	32.93	7.26	33.67	237	122	Α	Н
	*	5190	102.22	-	-	95.56	32.94	7.37	33.65	237	122	Р	Н
	*	5190	93.45	-	-	86.79	32.94	7.37	33.65	237	122	Α	Н
802.11ac		5374.56	49.39	-24.61	74	42.55	32.97	7.39	33.52	237	122	Р	Н
VHT40		5359.92	39.19	-14.81	54	32.36	32.97	7.39	33.53	237	122	Α	Н
CH 38		5144.3	60.65	-13.35	74	54.13	32.93	7.26	33.67	172	84	Р	V
5190MHz		5150	47.84	-6.16	54	41.32	32.93	7.26	33.67	172	84	Α	V
	*	5190	98.83	-	-	92.17	32.94	7.37	33.65	172	84	Р	V
	*	5190	89.67	-	-	83.01	32.94	7.37	33.65	172	84	Α	V
		5377.2	49.38	-24.62	74	42.54	32.97	7.39	33.52	172	84	Р	٧
		5459.04	38.73	-15.27	54	31.74	32.99	7.47	33.47	172	84	Α	V
		5148.2	53.82	-20.18	74	47.3	32.93	7.26	33.67	237	122	Р	Н
		5149.5	45.35	-8.65	54	38.83	32.93	7.26	33.67	237	122	Α	Н
	*	5230	103.23	-	-	96.53	32.95	7.37	33.62	237	122	Р	Н
	*	5230	93.73	-	-	87.03	32.95	7.37	33.62	237	122	Α	Н
802.11ac		5354.16	49.9	-24.1	74	43.07	32.97	7.39	33.53	237	122	Р	Н
VHT40		5351.76	40.88	-13.12	54	34.05	32.97	7.39	33.53	237	122	Α	Н
CH 46		5144.3	50.97	-23.03	74	44.45	32.93	7.26	33.67	185	85	Р	٧
5230MHz		5149.24	43.11	-10.89	54	36.59	32.93	7.26	33.67	185	85	Α	٧
	*	5230	99.95	-	-	93.25	32.95	7.37	33.62	185	85	Р	٧
	*	5230	90.82	-	-	84.12	32.95	7.37	33.62	185	85	Α	٧
		5351.52	49.92	-24.08	74	43.09	32.97	7.39	33.53	185	85	Р	٧
		5353.92	40.14	-13.86	54	33.31	32.97	7.39	33.53	185	85	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B7 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

# Band 1 5150~5250MHz

# WIFI 802.11ac VHT40 (Harmonic @ 3m)

(MHz)	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	î
10380	50.07	-23.93	74	58.76	39.74	10.58	59.01	150	360	Р	Н
15570	50.51	-23.49	74	59.2	37.94	13.08	59.71	100	360	Р	Н
10380	50.11	-23.89	74	58.8	39.74	10.58	59.01	150	360	Р	V
15570	50.42	-23.58	74	59.11	37.94	13.08	59.71	100	360	Р	V
10460	50.57	-23.43	74	59.12	39.89	10.59	59.03	100	360	Р	Н
15690	50.69	-23.31	74	59.42	37.85	13.19	59.77	100	225	Р	Н
10460	50.11	-23.89	74	58.66	39.89	10.59	59.03	100	360	Р	V
15690	50.76	-23.24	74	59.49	37.85	13.19	59.77	100	225	Р	V
	15570 10380 15570 10460 15690 10460	15570     50.51       10380     50.11       15570     50.42       10460     50.57       15690     50.69       10460     50.11	15570     50.51     -23.49       10380     50.11     -23.89       15570     50.42     -23.58       10460     50.57     -23.43       15690     50.69     -23.31       10460     50.11     -23.89	15570     50.51     -23.49     74       10380     50.11     -23.89     74       15570     50.42     -23.58     74       10460     50.57     -23.43     74       15690     50.69     -23.31     74       10460     50.11     -23.89     74	15570     50.51     -23.49     74     59.2       10380     50.11     -23.89     74     58.8       15570     50.42     -23.58     74     59.11       10460     50.57     -23.43     74     59.12       15690     50.69     -23.31     74     59.42       10460     50.11     -23.89     74     58.66	15570     50.51     -23.49     74     59.2     37.94       10380     50.11     -23.89     74     58.8     39.74       15570     50.42     -23.58     74     59.11     37.94       10460     50.57     -23.43     74     59.12     39.89       15690     50.69     -23.31     74     59.42     37.85       10460     50.11     -23.89     74     58.66     39.89	15570     50.51     -23.49     74     59.2     37.94     13.08       10380     50.11     -23.89     74     58.8     39.74     10.58       15570     50.42     -23.58     74     59.11     37.94     13.08       10460     50.57     -23.43     74     59.12     39.89     10.59       15690     50.69     -23.31     74     59.42     37.85     13.19       10460     50.11     -23.89     74     58.66     39.89     10.59	15570     50.51     -23.49     74     59.2     37.94     13.08     59.71       10380     50.11     -23.89     74     58.8     39.74     10.58     59.01       15570     50.42     -23.58     74     59.11     37.94     13.08     59.71       10460     50.57     -23.43     74     59.12     39.89     10.59     59.03       15690     50.69     -23.31     74     59.42     37.85     13.19     59.77       10460     50.11     -23.89     74     58.66     39.89     10.59     59.03	15570         50.51         -23.49         74         59.2         37.94         13.08         59.71         100           10380         50.11         -23.89         74         58.8         39.74         10.58         59.01         150           15570         50.42         -23.58         74         59.11         37.94         13.08         59.71         100           10460         50.57         -23.43         74         59.12         39.89         10.59         59.03         100           15690         50.69         -23.31         74         59.42         37.85         13.19         59.77         100           10460         50.11         -23.89         74         58.66         39.89         10.59         59.03         100	15570         50.51         -23.49         74         59.2         37.94         13.08         59.71         100         360           10380         50.11         -23.89         74         58.8         39.74         10.58         59.01         150         360           15570         50.42         -23.58         74         59.11         37.94         13.08         59.71         100         360           10460         50.57         -23.43         74         59.12         39.89         10.59         59.03         100         360           15690         50.69         -23.31         74         59.42         37.85         13.19         59.77         100         225           10460         50.11         -23.89         74         58.66         39.89         10.59         59.03         100         360	15570       50.51       -23.49       74       59.2       37.94       13.08       59.71       100       360       P         10380       50.11       -23.89       74       58.8       39.74       10.58       59.01       150       360       P         15570       50.42       -23.58       74       59.11       37.94       13.08       59.71       100       360       P         10460       50.57       -23.43       74       59.12       39.89       10.59       59.03       100       360       P         15690       50.69       -23.31       74       59.42       37.85       13.19       59.77       100       225       P         10460       50.11       -23.89       74       58.66       39.89       10.59       59.03       100       360       P

Remark

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B8 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>.</sup> No other spurious lourid.

<sup>2.</sup> All results are PASS against Peak and Average limit line.

# Band 1 5150~5250MHz WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1		(MHz)	( dBµV/m )	Limit (dB)	Line (dBµV/m)	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	(H/V)
		5132.34	63.12	-10.88	74	56.62	32.93	7.26	33.69	153	131	Р	Н
		5145.34	53.77	-0.23	54	47.25	32.93	7.26	33.67	153	131	Α	Н
	*	5210	98.84	-	-	92.17	32.94	7.37	33.64	153	131	Р	Н
	*	5210	91.24	-	-	84.57	32.94	7.37	33.64	153	131	Α	Н
802.11ac		5358.24	49.61	-24.39	74	42.78	32.97	7.39	33.53	153	131	Р	Н
VHT80		5350.08	41.68	-12.32	54	34.85	32.97	7.39	33.53	153	131	Α	Н
CH 42		5147.16	58.32	-15.68	74	51.8	32.93	7.26	33.67	184	85	Р	٧
5210MHz		5147.42	49.62	-4.38	54	43.1	32.93	7.26	33.67	184	85	Α	٧
	*	5210	96.14	-	-	89.47	32.94	7.37	33.64	184	85	Р	٧
	*	5210	88.22	-	-	81.55	32.94	7.37	33.64	184	85	Α	٧
		5359.2	48.63	-25.37	74	41.8	32.97	7.39	33.53	184	85	Р	٧
		5351.04	41	-13	54	34.17	32.97	7.39	33.53	184	85	Α	٧

#### Remark

1. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B9 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

# Band 1 5150~5250MHz

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	(deg)	(P/A)	(H/V)
802.11ac		10420	50.09	-23.91	74	58.7	39.82	10.58	59.01	250	0	Р	Н
VHT80		15630	50.5	-23.5	74	59.23	37.89	13.12	59.74	150	0	Р	Н
CH 42		10420	50.18	-23.82	74	58.79	39.82	10.58	59.01	250	0	Р	V
5210MHz		15630	49.5	-24.5	74	58.23	37.89	13.12	59.74	150	0	Р	V

Remark

1. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B10 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

# For MIMO Antenna Band 1 5150~5250MHz

## WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant		Peak	ļ
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	i i
1+2		(MHz)	( dBµV/m )	( dB )	( dBµV/m )	(dBµV)	( dB/m )	( dB )	(dB)	( cm )	,		(H/V)
		5138.06	49.89	-24.11	74	43.39	32.93	7.26	33.69	150	159	Р	Н
		5149.76	41.96	-12.04	54	35.44	32.93	7.26	33.67	150	159	Α	Н
802.11n	*	5180	103.96	-	-	97.3	32.94	7.37	33.65	150	159	Р	Н
HT20	*	5180	94.49	-	-	87.83	32.94	7.37	33.65	150	159	Α	Н
CH 36		5145.86	49.6	-24.4	74	43.08	32.93	7.26	33.67	150	88	Р	V
5180MHz		5144.3	41.39	-12.61	54	34.87	32.93	7.26	33.67	150	88	Α	V
	*	5180	100.72	-	-	94.06	32.94	7.37	33.65	150	88	Р	V
	*	5180	91.31	-	-	84.65	32.94	7.37	33.65	150	88	Α	V
		5142.74	49.07	-24.93	74	42.57	32.93	7.26	33.69	158	151	Р	Н
		5145.6	40.37	-13.63	54	33.85	32.93	7.26	33.67	158	151	Α	Н
	*	5220	102.39	-	-	95.72	32.94	7.37	33.64	158	151	Р	Н
	*	5220	94.2	-	-	87.53	32.94	7.37	33.64	158	151	Α	Н
802.11n		5420.16	46.65	-27.35	74	39.74	32.98	7.43	33.5	158	151	Р	Н
HT20		5350.32	38.2	-15.8	54	31.37	32.97	7.39	33.53	158	151	Α	Н
CH 44		5134.42	49.8	-24.2	74	43.3	32.93	7.26	33.69	186	89	Р	V
5220MHz		5149.5	40.4	-13.6	54	33.88	32.93	7.26	33.67	186	89	Α	V
	*	5220	101.24	-	-	94.57	32.94	7.37	33.64	186	89	Р	V
	*	5220	92.05	-	-	85.38	32.94	7.37	33.64	186	89	Α	V
		5362.32	47.04	-26.96	74	40.21	32.97	7.39	33.53	186	89	Р	V
		5445.84	38.18	-15.82	54	31.24	32.99	7.43	33.48	186	89	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B11 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

		5016.38	49.28	-24.72	74	42.98	32.9	7.15	33.75	150	155	Р	Н
		5150	40.7	-13.3	54	34.18	32.93	7.26	33.67	150	155	Α	Н
	*	5240	102.36	-	-	95.66	32.95	7.37	33.62	150	155	Р	Н
	*	5240	93.68	-	-	86.98	32.95	7.37	33.62	150	155	Α	Н
802.11n		5350.56	47.47	-26.53	74	40.64	32.97	7.39	33.53	150	155	Р	Н
HT20		5351.52	38.55	-15.45	54	31.72	32.97	7.39	33.53	150	155	Α	Н
CH 48		5136.76	49.71	-24.29	74	43.21	32.93	7.26	33.69	168	83	Р	٧
5240MHz		5148.72	41.34	-12.66	54	34.82	32.93	7.26	33.67	168	83	Α	٧
	*	5240	100.57	-	-	93.87	32.95	7.37	33.62	168	83	Р	٧
	*	5240	91.54	-	-	84.84	32.95	7.37	33.62	168	83	Α	V
		5455.2	47.45	-26.55	74	40.46	32.99	7.47	33.47	168	83	Р	V
		5362.56	38.82	-15.18	54	31.99	32.97	7.39	33.53	168	83	Α	V
Remark		o other spurious		Dook and	Avorago li	nit lino							

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B12 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant. 1+2		(MHz)	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	i .
802.11n		10360	50.07	-23.93	74	60.38	38.62	10.07	59	152	260	Р	Н
HT20		15540	49.32	-24.68	74	57.7	38.54	12.77	59.69	189	238	Р	Н
CH 36		10360	49.49	-24.51	74	59.8	38.62	10.07	59	152	260	Р	V
5180MHz		15540	47.93	-26.07	74	56.31	38.54	12.77	59.69	189	238	Р	V
802.11n		10440	49.93	-24.07	74	60.1	38.72	10.13	59.02	125	230	Р	Н
HT20		15660	48.4	-25.6	74	57.05	38.17	12.93	59.75	110	225	Р	Н
CH 44		10440	50.02	-23.98	74	60.19	38.72	10.13	59.02	125	230	Р	V
5220MHz		15660	48.83	-25.17	74	57.48	38.17	12.93	59.75	110	225	Р	V
802.11n		10480	48.99	-25.01	74	59.08	38.79	10.15	59.03	149	289	Р	Н
HT20		15720	49.89	-24.11	74	58.69	37.96	13.03	59.79	139	291	Р	Н
CH 48		10480	48.91	-25.09	74	59	38.79	10.15	59.03	149	289	Р	V
5240MHz		15720	48.74	-25.26	74	57.54	37.96	13.03	59.79	139	291	Р	V

## Remark

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B13 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>1.</sup> No other spurious found.

<sup>2.</sup> All results are PASS against Peak and Average limit line.

# Band 1 5150~5250MHz WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	(dB)	( cm )	( deg )	(P/A)	1
		5149.24	53.38	-20.62	74	46.86	32.93	7.26	33.67	150	131	Р	Н
		5149.5	46.77	-7.23	54	40.25	32.93	7.26	33.67	150	131	Α	Н
	*	5190	101.35	-	-	94.69	32.94	7.37	33.65	150	131	Р	Н
	*	5190	94.5	-	-	87.84	32.94	7.37	33.65	150	131	Α	Н
802.11ac		5434.08	47.56	-26.44	74	40.62	32.99	7.43	33.48	150	131	Р	Н
VHT40		5433.6	39.16	-14.84	54	32.22	32.99	7.43	33.48	150	131	Α	Н
CH 38		5150	61.28	-12.72	74	54.76	32.93	7.26	33.67	164	107	Р	V
5190MHz		5150	45.33	-8.67	54	38.81	32.93	7.26	33.67	164	107	Α	٧
	*	5190	98.65	-	-	91.99	32.94	7.37	33.65	164	107	Р	٧
	*	5190	89.22	-	-	82.56	32.94	7.37	33.65	164	107	Α	٧
		5370.96	48.05	-25.95	74	41.22	32.97	7.39	33.53	164	107	Р	V
		5364	39.12	-14.88	54	32.29	32.97	7.39	33.53	164	107	Α	V
		5144.04	51.77	-22.23	74	45.25	32.93	7.26	33.67	250	131	Р	Н
		5149.76	43.95	-10.05	54	37.43	32.93	7.26	33.67	250	131	Α	Н
	*	5230	102.9	-	-	96.2	32.95	7.37	33.62	250	131	Р	Н
	*	5230	93.21	-	-	86.51	32.95	7.37	33.62	250	131	Α	Н
802.11ac		5366.88	49.29	-24.71	74	42.46	32.97	7.39	33.53	250	131	Р	Н
VHT40		5354.64	40.01	-13.99	54	33.18	32.97	7.39	33.53	250	131	Α	Н
CH 46		5142.48	51.24	-22.76	74	44.74	32.93	7.26	33.69	164	108	Р	V
5230MHz		5147.94	42.68	-11.32	54	36.16	32.93	7.26	33.67	164	108	Α	V
	*	5230	99.21	-	-	92.51	32.95	7.37	33.62	164	108	Р	V
	*	5230	89.82	-	-	83.12	32.95	7.37	33.62	164	108	Α	V
		5428.56	46.8	-27.2	74	39.86	32.99	7.43	33.48	164	108	Р	V
		5359.2	39.37	-14.63	54	32.54	32.97	7.39	33.53	164	108	Α	V
Remark		other spurious	s found.										

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B14 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	i
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	(cm)	(deg)	(P/A)	(H/V
802.11ac		10380	50.99	-23.01	74	59.68	39.74	10.58	59.01	150	360	Р	Н
VHT40		15570	49.55	-24.45	74	58.24	37.94	13.08	59.71	100	360	Р	Н
CH 38		10380	50.73	-23.27	74	59.42	39.74	10.58	59.01	150	360	Р	٧
5190MHz		15570	50.14	-23.86	74	58.83	37.94	13.08	59.71	100	360	Р	٧
802.11ac		10460	50.37	-23.63	74	58.92	39.89	10.59	59.03	100	360	Р	Н
VHT40		15690	50.42	-23.58	74	59.15	37.85	13.19	59.77	100	225	Р	Н
CH 46		10460	50.69	-23.31	74	59.24	39.89	10.59	59.03	100	360	Р	٧
5230MHz		15690	50.62	-23.38	74	59.35	37.85	13.19	59.77	100	225	Р	٧

Remark

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727

Page Number : B15 of B63 Report Issued Date : Oct. 10, 2016 Report Version : Rev. 01

All results are PASS against Peak and Average limit line.

### Band 1 5150~5250MHz WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	(H/V)
		5142.48	61.09	-12.91	74	54.59	32.93	7.26	33.69	250	126	Р	Н
		5142.74	53.6	-0.4	54	47.1	32.93	7.26	33.69	250	126	Α	Н
	*	5210	102.08	-	-	95.41	32.94	7.37	33.64	250	126	Р	Н
	*	5210	92.07	-	-	85.4	32.94	7.37	33.64	250	126	Α	Н
802.11ac		5355.84	51.04	-22.96	74	44.21	32.97	7.39	33.53	250	126	Р	Н
VHT80		5352.24	42.98	-11.02	54	36.15	32.97	7.39	33.53	250	126	Α	Н
CH 42		5143	57.38	-16.62	74	50.88	32.93	7.26	33.69	171	107	Р	٧
5210MHz		5150	49.78	-4.22	54	43.26	32.93	7.26	33.67	171	107	Α	٧
	*	5210	96.57	-	-	89.9	32.94	7.37	33.64	171	107	Р	٧
	*	5210	87.04	-	-	80.37	32.94	7.37	33.64	171	107	Α	V
		5388.24	48.33	-25.67	74	41.48	32.98	7.39	33.52	171	107	Р	٧
		5350.8	41.11	-12.89	54	34.28	32.97	7.39	33.53	171	107	Α	V

#### Remark

1. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B16 of B63
Report Issued Date : Oct. 10, 2016

Report No.: FR683002E

Report Version : Rev. 01

### Band 1 5150~5250MHz

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	1
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	(deg)	(P/A)	(H/V)
802.11ac		10420	50.18	-23.82	74	58.79	39.82	10.58	59.01	250	0	Р	Н
VHT80		15630	48.8	-25.2	74	57.53	37.89	13.12	59.74	150	0	Р	Н
CH 42		10420	50.29	-23.71	74	58.9	39.82	10.58	59.01	250	0	Р	٧
5210MHz		15630	50.15	-23.85	74	58.88	37.89	13.12	59.74	150	0	Р	V

Remark

1. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B17 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

#### For Single Antenna

#### 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)
		5105.82	50.7	-23.3	74	44.32	32.92	7.16	33.7	150	122	Р	Н
		5148.72	42.65	-11.35	54	36.13	32.93	7.26	33.67	150	122	Α	Н
	*	5260	107.28	-	-	100.55	32.95	7.38	33.6	150	122	Р	Н
	*	5260	97.82	-	-	91.09	32.95	7.38	33.6	150	122	Α	Н
000.44		5355.12	49.7	-24.3	74	42.87	32.97	7.39	33.53	150	122	Р	Н
802.11a CH 52		5353.2	41.26	-12.74	54	34.43	32.97	7.39	33.53	150	122	Α	Н
5260MHz		5071.76	49.82	-24.18	74	43.47	32.92	7.15	33.72	250	104	Р	٧
3200WIFI2		5149.24	40.12	-13.88	54	33.6	32.93	7.26	33.67	250	104	Α	٧
	*	5260	100.8	-	-	94.07	32.95	7.38	33.6	250	104	Р	V
	*	5260	93.28	-	-	86.55	32.95	7.38	33.6	250	104	Α	٧
		5431.2	47.97	-26.03	74	41.03	32.99	7.43	33.48	250	104	Р	V
		5351.76	39.26	-14.74	54	32.43	32.97	7.39	33.53	250	104	Α	٧
		5063.7	50.46	-23.54	74	44.14	32.91	7.15	33.74	150	120	Р	Н
		5148.72	41.83	-12.17	54	35.31	32.93	7.26	33.67	150	120	Α	Н
	*	5300	107.56	-	-	100.79	32.96	7.38	33.57	150	120	Р	Н
	*	5300	98.04	-	-	91.27	32.96	7.38	33.57	150	120	Α	Н
		5350.08	52.3	-21.7	74	45.47	32.97	7.39	33.53	150	120	Р	Н
802.11a		5350.32	44.56	-9.44	54	37.73	32.97	7.39	33.53	150	120	Α	Н
CH 60 5300MHz		5135.46	48.49	-25.51	74	41.99	32.93	7.26	33.69	250	106	Р	٧
53UUWITZ		5148.72	39.81	-14.19	54	33.29	32.93	7.26	33.67	250	106	Α	٧
	*	5300	102.51	-	-	95.74	32.96	7.38	33.57	250	106	Р	٧
	*	5300	93	-	-	86.23	32.96	7.38	33.57	250	106	Α	٧
		5357.76	50.66	-23.34	74	43.83	32.97	7.39	33.53	250	106	Р	٧
		5353.92	41.11	-12.89	54	34.28	32.97	7.39	33.53	250	106	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B18 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

	*	5320	106.55	-	-	99.78	32.96	7.38	33.57	150	119	Р	Н
	*	5320	97.21	-	-	90.44	32.96	7.38	33.57	150	119	Α	Н
		5364	53.67	-20.33	74	46.84	32.97	7.39	33.53	150	119	Р	Н
802.11a		5351.68	46.05	-7.95	54	39.22	32.97	7.39	33.53	150	119	Α	Н
CH 64 5320MHz	*	5320	101.49	-	-	94.72	32.96	7.38	33.57	229	107	Р	٧
532UNITZ	*	5320	91.98	-	-	85.21	32.96	7.38	33.57	229	107	Α	V
		5353.44	50.49	-23.51	74	43.66	32.97	7.39	33.53	229	107	Р	V
		5350.4	41.67	-12.33	54	34.84	32.97	7.39	33.53	229	107	Α	V
Remark		o other spurious			A								

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B19 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

# Band 2 5250~5350MHz

#### WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor ( dB )	Pos ( cm )	Pos ( deg )	Avg. (P/A)	i
		10520	50.22	-23.78	74	60.26	38.84	10.18	59.06	110	220	Р	Н
802.11a		15780	50.62	-23.38	74	59.56	37.79	13.09	59.82	109	345	Р	Н
CH 52 5260MHz		10520	49.75	-24.25	74	59.79	38.84	10.18	59.06	110	220	Р	V
3260WITZ		15780	50.13	-23.87	74	59.07	37.79	13.09	59.82	109	345	Р	V
		10600	49.85	-24.15	74	59.76	38.95	10.29	59.15	185	215	Р	Н
802.11a		15900	50.21	-23.79	74	59.43	37.42	13.24	59.88	196	190	Р	Н
CH 60		10600	49.82	-24.18	74	59.73	38.95	10.29	59.15	185	215	Р	V
5300MHz		15900	49.82	-24.18	74	59.04	37.42	13.24	59.88	196	190	Р	V
		10640	49.17	-24.83	74	59.01	39	10.34	59.18	152	135	Р	Н
802.11a		15960	50.05	-23.95	74	59.41	37.21	13.35	59.92	173	245	Р	Н
CH 64		10640	50.58	-23.42	74	60.42	39	10.34	59.18	152	135	Р	V
5320MHz		15960	49.79	-24.21	74	59.15	37.21	13.35	59.92	173	245	Р	V

#### Remark

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727

Page Number : B20 of B63 Report Issued Date : Oct. 10, 2016 Report Version : Rev. 01

All results are PASS against Peak and Average limit line.

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant		Peak	Pol.
Ant. 1		(MHz)	dΒμV/m)	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	
•		5123.76	51.3	-22.7	74	44.9	32.93	7.16	33.69	174	131	P	H
		5146.64	42.34	-11.66	54	35.82	32.93	7.26	33.67	174	131	Α	Н
	*	5260	104.91	_	_	98.18	32.95	7.38	33.6	174	131	Р	Н
	*	5260	96.15	_	-	89.42	32.95	7.38	33.6	174	131	Α	Н
802.11n		5350.08	49.19	-24.81	74	42.36	32.97	7.39	33.53	174	131	Р	Н
HT20		5352.96	40.76	-13.24	54	33.93	32.97	7.39	33.53	174	131	Α	Н
CH 52		5149.76	51.22	-22.78	74	44.7	32.93	7.26	33.67	165	92	Р	V
5260MHz		5148.46	40.76	-13.24	54	34.24	32.93	7.26	33.67	165	92	Α	V
•	*	5260	101.88	-	-	95.15	32.95	7.38	33.6	165	92	Р	V
•	*	5260	92.96	-	-	86.23	32.95	7.38	33.6	165	92	Α	V
•		5382.96	47.25	-26.75	74	40.4	32.98	7.39	33.52	165	92	Р	V
		5350.8	39.26	-14.74	54	32.43	32.97	7.39	33.53	165	92	Α	V
		5126.62	50.28	-23.72	74	43.78	32.93	7.26	33.69	155	133	Р	Н
		5148.98	41.51	-12.49	54	34.99	32.93	7.26	33.67	155	133	Α	Н
	*	5300	105.22	-	-	98.45	32.96	7.38	33.57	155	133	Р	Н
	*	5300	95.78	-	-	89.01	32.96	7.38	33.57	155	133	Α	Н
802.11n		5352	51.46	-22.54	74	44.63	32.97	7.39	33.53	155	133	Р	Н
HT20		5350.08	43.44	-10.56	54	36.61	32.97	7.39	33.53	155	133	Α	Н
CH 60		5126.36	48.87	-25.13	74	42.37	32.93	7.26	33.69	153	92	Р	٧
5300MHz		5148.2	39.92	-14.08	54	33.4	32.93	7.26	33.67	153	92	Α	V
	*	5300	101.65	-	-	94.88	32.96	7.38	33.57	153	92	Р	V
	*	5300	92.18	-	-	85.41	32.96	7.38	33.57	153	92	Α	V
		5350.56	49.07	-24.93	74	42.24	32.97	7.39	33.53	153	92	Р	٧
		5350.08	40.9	-13.1	54	34.07	32.97	7.39	33.53	153	92	Α	٧

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B21 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

	*	5320	104.99	-	-	98.22	32.96	7.38	33.57	163	132	Р	Н
	*	5320	96.73	-	-	89.96	32.96	7.38	33.57	163	132	Α	Н
802.11n		5351.52	52.13	-21.87	74	45.3	32.97	7.39	33.53	163	132	Р	Н
HT20		5351.36	44.76	-9.24	54	37.93	32.97	7.39	33.53	163	132	Α	Н
CH 64	*	5320	101.81	-	-	95.04	32.96	7.38	33.57	166	91	Р	V
5320MHz	*	5320	92.8	-	-	86.03	32.96	7.38	33.57	166	91	Α	V
		5360.48	51.94	-22.06	74	45.11	32.97	7.39	33.53	166	91	Р	V
		5351.36	42.22	-11.78	54	35.39	32.97	7.39	33.53	166	91	Α	V

Remark

1. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B22 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table		1
Ant. 1		(MHz)	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos (cm)	Pos ( deg )	Avg. (P/A)	i .
802.11n		10520	50.86	-23.14	74	59.34	39.99	10.59	59.06	110	220	Р	Н
HT20		15780	50.58	-23.42	74	59.35	37.78	13.27	59.82	109	345	Р	Н
CH 52		10520	50.49	-23.51	74	58.97	39.99	10.59	59.06	110	220	Р	V
5260MHz		15780	50.58	-23.42	74	59.35	37.78	13.27	59.82	109	345	Р	V
802.11n		10600	50.23	-23.77	74	58.77	39.96	10.65	59.15	185	215	Р	Н
HT20		15900	49.44	-24.56	74	58.26	37.68	13.38	59.88	196	190	Р	Н
CH 60		10600	50	-24	74	58.54	39.96	10.65	59.15	185	215	Р	V
5300MHz		15900	50.43	-23.57	74	59.25	37.68	13.38	59.88	196	190	Р	V
802.11n		10640	50.01	-23.99	74	58.57	39.94	10.68	59.18	152	135	Р	Н
HT20		15960	49.69	-24.31	74	58.52	37.63	13.46	59.92	173	245	Р	Н
CH 64		10640	50.78	-23.22	74	59.34	39.94	10.68	59.18	152	135	Р	V
5320MHz		15960	49.76	-24.24	74	58.59	37.63	13.46	59.92	173	245	Р	V

#### Remark

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B23 of B63 Report Issued Date : Oct. 10, 2016 Report Version : Rev. 01

All results are PASS against Peak and Average limit line.

### Band 2 5250~5350MHz WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	( dB )	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/\
		5117.52	52.68	-21.32	74	46.3	32.92	7.16	33.7	248	124	Р	Н
		5147.42	43.28	-10.72	54	36.76	32.93	7.26	33.67	248	124	Α	Н
	*	5270	103.05	-	-	96.32	32.95	7.38	33.6	248	124	Р	Н
	*	5270	93.76	-	-	87.03	32.95	7.38	33.6	248	124	Α	Н
802.11ac		5376.96	52.84	-21.16	74	46	32.97	7.39	33.52	248	124	Р	Н
VHT40		5351.52	42.85	-11.15	54	36.02	32.97	7.39	33.53	248	124	Α	Н
CH 54		5142.22	48.82	-25.18	74	42.32	32.93	7.26	33.69	194	85	Р	V
5270MHz		5123.24	40.98	-13.02	54	34.58	32.93	7.16	33.69	194	85	Α	V
	*	5270	100.07	-	-	93.34	32.95	7.38	33.6	194	85	Р	V
	*	5270	91.24	-	-	84.51	32.95	7.38	33.6	194	85	Α	V
		5353.44	50.26	-23.74	74	43.43	32.97	7.39	33.53	194	85	Р	٧
		5351.52	41.54	-12.46	54	34.71	32.97	7.39	33.53	194	85	Α	V
		5144.3	50.06	-23.94	74	43.54	32.93	7.26	33.67	247	120	Р	Н
		5149.24	42.06	-11.94	54	35.54	32.93	7.26	33.67	247	120	Α	Н
	*	5310	102.45	-	-	95.68	32.96	7.38	33.57	247	120	Р	Н
	*	5310	93.78	-	-	87.01	32.96	7.38	33.57	247	120	Α	Н
802.11ac		5357.28	60.69	-13.31	74	53.86	32.97	7.39	33.53	247	120	Р	Н
VHT40		5355.84	48.32	-5.68	54	41.49	32.97	7.39	33.53	247	120	Α	Н
CH 62		5005.46	49.71	-24.29	74	43.44	32.9	7.14	33.77	190	85	Р	٧
5310MHz		5129.74	40.71	-13.29	54	34.21	32.93	7.26	33.69	190	85	Α	V
	*	5310	100.06	-	-	93.29	32.96	7.38	33.57	190	85	Р	V
	*	5310	90.78	-	-	84.01	32.96	7.38	33.57	190	85	Α	V
		5366.4	53.56	-20.44	74	46.73	32.97	7.39	33.53	190	85	Р	V
		5350.32	46.45	-7.55	54	39.62	32.97	7.39	33.53	190	85	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B24 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	
Ant. 1		(MHz)	( dBµV/m )	Limit ( dB )	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos (cm)	Pos ( deg )	Avg. (P/A)	ï
802.11ac		10540	50.38	-23.62	74	58.85	39.99	10.62	59.08	110	220	Р	Н
VHT40		15810	50.59	-23.41	74	59.37	37.75	13.31	59.84	109	345	Р	Н
CH 54		10540	50.63	-23.37	74	59.1	39.99	10.62	59.08	110	220	Р	٧
5270MHz		15810	50.96	-23.04	74	59.74	37.75	13.31	59.84	109	345	Р	٧
802.11ac		10620	50.1	-23.9	74	58.64	39.95	10.68	59.17	100	220	Р	Н
VHT40		15930	49.91	-24.09	74	58.73	37.66	13.42	59.9	100	100	Р	Н
CH 62		10620	50.92	-23.08	74	59.46	39.95	10.68	59.17	100	220	Р	٧
5310MHz		15930	49.89	-24.11	74	58.71	37.66	13.42	59.9	100	100	Р	V

Remark

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B25 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>·</sup> 

<sup>2.</sup> All results are PASS against Peak and Average limit line.

### Band 2 5250~5350MHz WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	î .
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	(cm)	(deg)	(P/A)	(H/V)
		5149.24	56.26	-17.74	74	49.74	32.93	7.26	33.67	250	120	Р	Н
		5148.72	48.25	-5.75	54	41.73	32.93	7.26	33.67	250	120	Α	Н
	*	5290	100.93	-	-	94.17	32.96	7.38	33.58	250	120	Р	Н
	*	5290	91.7	-	-	84.94	32.96	7.38	33.58	250	120	Α	Н
802.11ac		5353.44	56.69	-17.31	74	49.86	32.97	7.39	33.53	250	120	Р	Н
VHT80		5350.08	49.1	-4.9	54	42.27	32.97	7.39	33.53	250	120	Α	Н
CH 58		5142.48	53.5	-20.5	74	47	32.93	7.26	33.69	179	89	Р	V
5290MHz		5149.5	45.91	-8.09	54	39.39	32.93	7.26	33.67	179	89	Α	V
	*	5290	97.35	-	-	90.59	32.96	7.38	33.58	179	89	Р	V
	*	5290	88.3	-	-	81.54	32.96	7.38	33.58	179	89	Α	V
		5350.56	53.09	-20.91	74	46.26	32.97	7.39	33.53	179	89	Р	V
		5350.8	46.31	-7.69	54	39.48	32.97	7.39	33.53	179	89	Α	V

#### Remark

I. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B26 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

# Band 2 5250~5350MHz

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	(deg)	(P/A)	(H/V)
802.11ac		10580	50.42	-23.58	74	58.93	39.97	10.65	59.13	250	0	Р	Н
VHT80		15870	49.83	-24.17	74	58.65	37.7	13.35	59.87	150	0	Р	Н
CH 58		10580	50.01	-23.99	74	58.52	39.97	10.65	59.13	250	0	Р	٧
5290MHz		15870	49.77	-24.23	74	58.59	37.7	13.35	59.87	150	0	Р	V

Remark

1. No other spurious found.

2. All results are PASS against Peak and Average limit line.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B27 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

# For MIMO Antenna Band 2 5250~5350MHz

#### WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	(H/V)
		5088.66	49.51	-24.49	74	43.15	32.92	7.16	33.72	150	179	Р	Н
		5148.46	40.02	-13.98	54	33.5	32.93	7.26	33.67	150	179	Α	Н
	*	5260	102.63	-	-	95.9	32.95	7.38	33.6	150	179	Р	Н
	*	5260	94.06	-	-	87.33	32.95	7.38	33.6	150	179	Α	Н
802.11n		5455.92	47.66	-26.34	74	40.67	32.99	7.47	33.47	150	179	Р	Н
HT20		5351.04	38.74	-15.26	54	31.91	32.97	7.39	33.53	150	179	Α	Н
CH 52		5032.76	49.58	-24.42	74	43.27	32.91	7.15	33.75	170	87	Р	V
5260MHz		5145.6	40.56	-13.44	54	34.04	32.93	7.26	33.67	170	87	Α	V
	*	5260	101.57	-	-	94.84	32.95	7.38	33.6	170	87	Р	V
	*	5260	92.01	-	-	85.28	32.95	7.38	33.6	170	87	Α	V
		5350.56	47.08	-26.92	74	40.25	32.97	7.39	33.53	170	87	Р	٧
		5350.56	39.26	-14.74	54	32.43	32.97	7.39	33.53	170	87	Α	٧
		5112.32	48.89	-25.11	74	42.51	32.92	7.16	33.7	150	174	Р	Н
		5147.42	39.37	-14.63	54	32.85	32.93	7.26	33.67	150	174	Α	Н
	*	5300	102.43	-	-	95.66	32.96	7.38	33.57	150	174	Р	Н
	*	5300	93.36	-	-	86.59	32.96	7.38	33.57	150	174	Α	Н
802.11n		5352.96	48.1	-25.9	74	41.27	32.97	7.39	33.53	150	174	Р	Н
HT20		5351.28	40.65	-13.35	54	33.82	32.97	7.39	33.53	150	174	Α	Н
CH 60		5147.42	49.65	-24.35	74	43.13	32.93	7.26	33.67	185	87	Р	V
5300MHz		5148.72	39.84	-14.16	54	33.32	32.93	7.26	33.67	185	87	Α	V
	*	5300	101.57	-	-	94.8	32.96	7.38	33.57	185	87	Р	V
	*	5300	92.48	-	-	85.71	32.96	7.38	33.57	185	87	Α	V
		5354.88	49.23	-24.77	74	42.4	32.97	7.39	33.53	185	87	Р	V
		5350.56	41.14	-12.86	54	34.31	32.97	7.39	33.53	185	87	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B28 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

		1				I		I				1	
	*	5320	105.05	-	-	98.28	32.96	7.38	33.57	150	124	Р	Н
	*	5320	96.69	-	-	89.92	32.96	7.38	33.57	150	124	Α	Н
802.11n		5363.36	50.12	-23.88	74	43.29	32.97	7.39	33.53	150	124	Р	Н
HT20		5356.32	41.85	-12.15	54	35.02	32.97	7.39	33.53	150	124	Α	Н
CH 64	*	5320	99.23	-	-	92.46	32.96	7.38	33.57	159	115	Р	٧
5320MHz	*	5320	90.72	-	-	83.95	32.96	7.38	33.57	159	115	Α	V
		5351.84	48.11	-25.89	74	41.28	32.97	7.39	33.53	159	115	Р	V
		5350.08	39.36	-14.64	54	32.53	32.97	7.39	33.53	159	115	Α	V
		·			·		•						

Remark

1. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B29 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	î .
802.11n		10520	49.72	-24.28	74	59.76	38.84	10.18	59.06	110	220	Р	Н
HT20		15780	48.79	-25.21	74	57.73	37.79	13.09	59.82	109	345	Р	Н
CH 52		10520	49.65	-24.35	74	59.69	38.84	10.18	59.06	110	220	Р	V
5260MHz		15780	49.05	-24.95	74	57.99	37.79	13.09	59.82	109	345	Р	V
802.11n		10600	49.39	-24.61	74	59.3	38.95	10.29	59.15	185	215	Р	Н
HT20		15900	47.72	-26.28	74	56.94	37.42	13.24	59.88	196	190	Р	Н
CH 60		10600	49.78	-24.22	74	59.69	38.95	10.29	59.15	185	215	Р	٧
5300MHz		15900	47.95	-26.05	74	57.17	37.42	13.24	59.88	196	190	Р	٧
802.11n		10640	50.43	-23.57	74	60.27	39	10.34	59.18	152	135	Р	Н
HT20		15960	47.62	-26.38	74	56.98	37.21	13.35	59.92	173	245	Р	Н
CH 64		10640	49.6	-24.4	74	59.44	39	10.34	59.18	152	135	Р	V
5320MHz		15960	47.79	-26.21	74	57.15	37.21	13.35	59.92	173	245	Р	V

#### Remark

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B30 of B63
Report Issued Date : Oct. 10, 2016

Report No.: FR683002E

Report Version : Rev. 01

<sup>1.</sup> No other spurious found.

<sup>2.</sup> All results are PASS against Peak and Average limit line.

#### Band 2 5250~5350MHz WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V
		5102.18	50.08	-23.92	74	43.7	32.92	7.16	33.7	250	131	Р	Н
		5147.68	42	-12	54	35.48	32.93	7.26	33.67	250	131	Α	Н
	*	5270	102.83	-	-	96.1	32.95	7.38	33.6	250	131	Р	Н
	*	5270	93.86	-	-	87.13	32.95	7.38	33.6	250	131	Α	Н
802.11ac		5375.76	53.79	-20.21	74	46.95	32.97	7.39	33.52	250	131	Р	Н
VHT40		5352.24	42.03	-11.97	54	35.2	32.97	7.39	33.53	250	131	Α	Н
CH 54		5076.18	49.34	-24.66	74	42.99	32.92	7.15	33.72	166	109	Р	٧
5270MHz		5140.14	41.17	-12.83	54	34.67	32.93	7.26	33.69	166	109	Α	V
	*	5270	99.08	-	-	92.35	32.95	7.38	33.6	166	109	Р	V
	*	5270	89.85	-	-	83.12	32.95	7.38	33.6	166	109	Α	V
		5373.12	48.25	-25.75	74	41.42	32.97	7.39	33.53	166	109	Р	٧
		5351.28	40.92	-13.08	54	34.09	32.97	7.39	33.53	166	109	Α	V
		5112.32	49.07	-24.93	74	42.69	32.92	7.16	33.7	250	133	Р	Н
		5140.14	41.04	-12.96	54	34.54	32.93	7.26	33.69	250	133	Α	Н
	*	5310	101.83	-	-	95.06	32.96	7.38	33.57	250	133	Р	Н
	*	5310	94.02	-	-	87.25	32.96	7.38	33.57	250	133	Α	Н
802.11ac		5383.2	54.12	-19.88	74	47.27	32.98	7.39	33.52	250	133	Р	Н
VHT40		5352.96	45.64	-8.36	54	38.81	32.97	7.39	33.53	250	133	Α	Н
CH 62		5126.62	48.77	-25.23	74	42.27	32.93	7.26	33.69	150	107	Р	٧
5310MHz		5125.84	40.6	-13.4	54	34.2	32.93	7.16	33.69	150	107	Α	V
	*	5310	98.08	-	-	91.31	32.96	7.38	33.57	150	107	Р	V
	*	5310	89.45	-	-	82.68	32.96	7.38	33.57	150	107	Α	V
		5351.28	55.3	-18.7	74	48.47	32.97	7.39	33.53	150	107	Р	V
		5350.56	44	-10	54	37.17	32.97	7.39	33.53	150	107	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B31 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Avg.	
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	(deg)	(P/A)	(H/\
802.11ac		10540	50.27	-23.73	74	58.74	39.99	10.62	59.08	110	220	Р	Н
VHT40		15810	50.22	-23.78	74	59	37.75	13.31	59.84	109	345	Р	Н
CH 54		10540	50.39	-23.61	74	58.86	39.99	10.62	59.08	110	220	Р	٧
5270MHz		15810	50.5	-23.5	74	59.28	37.75	13.31	59.84	109	345	Р	٧
802.11ac		10620	50.48	-23.52	74	59.02	39.95	10.68	59.17	100	220	Р	Н
VHT40		15930	50.47	-23.53	74	59.29	37.66	13.42	59.9	100	100	Р	Н
CH 62		10620	50.54	-23.46	74	59.08	39.95	10.68	59.17	100	220	Р	٧
5310MHz		15930	50.41	-23.59	74	59.23	37.66	13.42	59.9	100	100	Р	V

Remark

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B32 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>2.</sup> All results are PASS against Peak and Average limit line.

### Band 2 5250~5350MHz WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	(H/V)
		5142.48	55.4	-18.6	74	48.9	32.93	7.26	33.69	250	127	Р	Н
		5149.5	47.6	-6.4	54	41.08	32.93	7.26	33.67	250	127	Α	Н
	*	5290	102.09	-	-	95.33	32.96	7.38	33.58	250	127	Р	Н
	*	5290	92.57	-	-	85.81	32.96	7.38	33.58	250	127	Α	Н
802.11ac		5375.52	55.32	-18.68	74	48.48	32.97	7.39	33.52	250	127	Р	Н
VHT80		5350.08	47.93	-6.07	54	41.1	32.97	7.39	33.53	250	127	Α	Н
CH 58		5149.76	53.36	-20.64	74	46.84	32.93	7.26	33.67	150	107	Р	V
5290MHz		5150	45	-9	54	38.48	32.93	7.26	33.67	150	107	Α	V
	*	5290	96.4	-	-	89.64	32.96	7.38	33.58	150	107	Р	V
	*	5290	87.29	-	-	80.53	32.96	7.38	33.58	150	107	Α	V
		5365.2	51.78	-22.22	74	44.95	32.97	7.39	33.53	150	107	Р	V
		5350.08	44.83	-9.17	54	38	32.97	7.39	33.53	150	107	Α	V

#### Remark

1. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B33 of B63
Report Issued Date : Oct. 10, 2016

Report No.: FR683002E

Report Version : Rev. 01

# Band 2 5250~5350MHz

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	( dBµV/m )	( dB )	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	(cm)	( deg )	(P/A)	(H/V)
802.11ac		10580	50.71	-23.29	74	59.22	39.97	10.65	59.13	250	0	Р	Н
VHT80		15870	48.12	-25.88	74	56.94	37.7	13.35	59.87	150	0	Р	Н
CH 58		10580	50.62	-23.38	74	59.13	39.97	10.65	59.13	250	0	Р	V
5290MHz		15870	49.79	-24.21	74	58.61	37.7	13.35	59.87	150	0	Р	V

Remark

1. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B34 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

#### For Single Antenna

#### 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)
		5466.96	54.59	-19.41	74	47.6	32.99	7.47	33.47	150	121	Р	Н
		5468.56	46.42	-7.58	54	39.43	32.99	7.47	33.47	150	121	Α	Н
000 44-	*	5500	107.54	-	-	100.48	33	7.51	33.45	150	121	Р	Н
802.11a CH 100	*	5500	98.01	1	-	90.95	33	7.51	33.45	150	121	Α	Н
5500MHz		5467.92	51.47	-22.53	74	44.48	32.99	7.47	33.47	250	106	Р	V
3300WII 12		5470	42.59	-11.41	54	35.6	32.99	7.47	33.47	250	106	Α	V
	*	5500	102.21	-	-	95.15	33	7.51	33.45	250	106	Р	V
	*	5500	92.92	-	-	85.86	33	7.51	33.45	250	106	Α	V
		5431.36	48.3	-25.7	74	41.36	32.99	7.43	33.48	150	118	Р	Н
		5466.64	40.04	-13.96	54	33.05	32.99	7.47	33.47	150	118	Α	Н
	*	5580	107.68	-	-	100.44	33.08	7.64	33.48	150	118	Р	Н
	*	5580	98.46	-	-	91.22	33.08	7.64	33.48	150	118	Α	Н
		5740.85	48.51	-25.49	74	41.01	33.29	7.74	33.53	150	118	Р	Н
802.11a		5727.9	39.61	-14.39	54	32.12	33.27	7.74	33.52	150	118	Α	Н
CH 116		5377.6	48.12	-25.88	74	41.27	32.98	7.39	33.52	250	111	Р	V
5580MHz		5467.12	38.57	-15.43	54	31.58	32.99	7.47	33.47	250	111	Α	V
	*	5580	102.23	-	-	94.99	33.08	7.64	33.48	250	111	Р	٧
	*	5580	93.09	-	-	85.85	33.08	7.64	33.48	250	111	Α	٧
		5738.575	47.97	-26.03	74	40.47	33.29	7.74	33.53	250	111	Р	٧
		5726.675	39.02	-14.98	54	31.53	33.27	7.74	33.52	250	111	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B35 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01



	*	5700	107.55	-	-	100.15	33.23	7.68	33.51	150	123	Р	Н
	*	5700	98.35	-	-	90.95	33.23	7.68	33.51	150	123	Α	Н
000 44		5732.44	54.73	-19.27	74	47.25	33.27	7.74	33.53	150	123	Р	Н
802.11a CH 140		5725.16	46.2	-7.8	54	38.77	33.27	7.68	33.52	150	123	Α	Н
5700MHz	*	5700	103.69	-	-	96.29	33.23	7.68	33.51	250	107	Р	V
37 00WII 12	*	5700	94.94	-	-	87.54	33.23	7.68	33.51	250	107	Α	V
		5728.68	51.38	-22.62	74	43.89	33.27	7.74	33.52	250	107	Р	٧
		5725.96	43.42	-10.58	54	35.93	33.27	7.74	33.52	250	107	Α	V

Remark

. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B36 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	(deg)	(P/A)	(H/V
000.44		11100	48.97	-25.03	74	58.28	39.41	10.88	59.6	100	200	Р	Н
802.11a		16650	50.11	-23.89	74	57.04	38.88	13.7	59.51	100	350	Р	Н
CH 100		11100	49.06	-24.94	74	58.37	39.41	10.88	59.6	100	200	Р	٧
5500MHz		16650	50.94	-23.06	74	57.87	38.88	13.7	59.51	100	350	Р	٧
		11160	49.59	-24.41	74	58.97	39.35	10.9	59.63	170	200	Р	Н
802.11a		16740	50.06	-23.94	74	56.51	39.11	13.86	59.42	156	350	Р	Н
CH 116		11160	48.9	-25.1	74	58.28	39.35	10.9	59.63	170	200	Р	٧
5580MHz		16740	50.6	-23.4	74	57.05	39.11	13.86	59.42	156	350	Р	٧
		11400	47.86	-26.14	74	57.45	39.13	11	59.72	147	285	Р	Н
802.11a		17100	50.97	-23.03	74	54.73	40.48	14.53	58.77	165	246	Р	Н
CH 140		11400	47.71	-26.29	74	57.3	39.13	11	59.72	147	285	Р	٧
5700MHz		17100	50.18	-23.82	74	53.94	40.48	14.53	58.77	165	246	Р	٧

#### Remark

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B37 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>2.</sup> All results are PASS against Peak and Average limit line.

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	i i
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
		5463.92	53.69	-20.31	74	46.7	32.99	7.47	33.47	155	131	Р	Н
		5469.04	45.31	-8.69	54	38.32	32.99	7.47	33.47	155	131	Α	Н
802.11n	*	5500	105.13	-	-	98.07	33	7.51	33.45	155	131	Р	Н
HT20	*	5500	96.27	-	-	89.21	33	7.51	33.45	155	131	Α	Н
CH 100		5466.96	51.21	-22.79	74	44.22	32.99	7.47	33.47	174	93	Р	٧
5500MHz		5470	42.78	-11.22	54	35.79	32.99	7.47	33.47	174	93	Α	٧
	*	5500	101.74	-	-	94.68	33	7.51	33.45	174	93	Р	V
	*	5500	92.8	-	-	85.74	33	7.51	33.45	174	93	Α	V
		5433.76	48.95	-25.05	74	42.01	32.99	7.43	33.48	169	130	Р	Н
		5453.68	39.7	-14.3	54	32.71	32.99	7.47	33.47	169	130	Α	Н
	*	5580	105.13	-	-	97.89	33.08	7.64	33.48	169	130	Р	Н
	*	5580	96.78	-	-	89.54	33.08	7.64	33.48	169	130	Α	Н
802.11n		5730.35	48.1	-25.9	74	40.62	33.27	7.74	33.53	169	130	Р	Н
HT20		5745.05	39.35	-14.65	54	31.85	33.29	7.74	33.53	169	130	Α	Н
CH 116		5378.08	48.07	-25.93	74	41.22	32.98	7.39	33.52	157	91	Р	٧
5580MHz		5462.08	38.96	-15.04	54	31.97	32.99	7.47	33.47	157	91	Α	٧
	*	5580	103.12	-	-	95.88	33.08	7.64	33.48	157	91	Р	٧
	*	5580	94.18	-	-	86.94	33.08	7.64	33.48	157	91	Α	٧
		5764.475	47.93	-26.07	74	40.41	33.31	7.74	33.53	157	91	Р	٧
		5741.9	39.01	-14.99	54	31.51	33.29	7.74	33.53	157	91	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B38 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

*	5700	105.53	-	-	98.13	33.23	7.68	33.51	154	122	Р	Н
*	5700	97.54	-	-	90.14	33.23	7.68	33.51	154	122	Α	Н
	5729.08	54.45	-19.55	74	46.96	33.27	7.74	33.52	154	122	Р	Н
	5725	45.58	-8.42	54	38.15	33.27	7.68	33.52	154	122	Α	Н
*	5700	102.68	-	-	95.28	33.23	7.68	33.51	152	91	Р	٧
*	5700	94.14	-	-	86.74	33.23	7.68	33.51	152	91	Α	٧
	5726.2	53.06	-20.94	74	45.57	33.27	7.74	33.52	152	91	Р	٧
	5725.32	43.59	-10.41	54	36.16	33.27	7.68	33.52	152	91	Α	٧
	*	* 5700 * 5700 5729.08 5725 * 5700 * 5700 5726.2	* 5700 97.54  * 5700 97.54  5729.08 54.45  5725 45.58  * 5700 102.68  * 5700 94.14  5726.2 53.06	* 5700 97.54 - 5729.08 54.45 -19.55 5725 45.58 -8.42 * 5700 102.68 - * 5700 94.14 - 5726.2 53.06 -20.94	* 5700 97.54 5729.08 54.45 -19.55 74  * 5700 103.53	*     5700     105.53     -     -     98.13       *     5700     97.54     -     -     90.14       5729.08     54.45     -19.55     74     46.96       5725     45.58     -8.42     54     38.15       *     5700     102.68     -     -     95.28       *     5700     94.14     -     -     86.74       5726.2     53.06     -20.94     74     45.57	*     5700     105.53     -     -     98.13     33.23       *     5700     97.54     -     -     90.14     33.23       5729.08     54.45     -19.55     74     46.96     33.27       *     5725     45.58     -8.42     54     38.15     33.27       *     5700     102.68     -     -     95.28     33.23       *     5700     94.14     -     -     86.74     33.23       5726.2     53.06     -20.94     74     45.57     33.27	*     5700     105.53     -     -     98.13     33.23     7.68       *     5700     97.54     -     -     90.14     33.23     7.68       5729.08     54.45     -19.55     74     46.96     33.27     7.74       5725     45.58     -8.42     54     38.15     33.27     7.68       *     5700     102.68     -     -     95.28     33.23     7.68       *     5700     94.14     -     -     86.74     33.23     7.68       5726.2     53.06     -20.94     74     45.57     33.27     7.74	*     5700     105.53     -     -     98.13     33.23     7.68     33.51       *     5700     97.54     -     -     90.14     33.23     7.68     33.51       5729.08     54.45     -19.55     74     46.96     33.27     7.74     33.52       5725     45.58     -8.42     54     38.15     33.27     7.68     33.52       *     5700     102.68     -     -     95.28     33.23     7.68     33.51       *     5700     94.14     -     -     86.74     33.23     7.68     33.51       5726.2     53.06     -20.94     74     45.57     33.27     7.74     33.52	*       5700       105.53       -       -       98.13       33.23       7.68       33.51       154         *       5700       97.54       -       -       90.14       33.23       7.68       33.51       154         5729.08       54.45       -19.55       74       46.96       33.27       7.74       33.52       154         5725       45.58       -8.42       54       38.15       33.27       7.68       33.52       154         *       5700       102.68       -       -       95.28       33.23       7.68       33.51       152         *       5700       94.14       -       -       86.74       33.23       7.68       33.51       152         5726.2       53.06       -20.94       74       45.57       33.27       7.74       33.52       152	*       5700       105.53       -       -       98.13       33.23       7.68       33.51       154       122         *       5700       97.54       -       -       90.14       33.23       7.68       33.51       154       122         5729.08       54.45       -19.55       74       46.96       33.27       7.74       33.52       154       122         5725       45.58       -8.42       54       38.15       33.27       7.68       33.52       154       122         *       5700       102.68       -       -       95.28       33.23       7.68       33.51       152       91         *       5700       94.14       -       -       86.74       33.23       7.68       33.51       152       91         5726.2       53.06       -20.94       74       45.57       33.27       7.74       33.52       152       91	*       5700       105.53       -       -       98.13       33.23       7.68       33.51       154       122       P         *       5700       97.54       -       -       90.14       33.23       7.68       33.51       154       122       A         5729.08       54.45       -19.55       74       46.96       33.27       7.74       33.52       154       122       P         5725       45.58       -8.42       54       38.15       33.27       7.68       33.52       154       122       A         *       5700       102.68       -       -       95.28       33.23       7.68       33.51       152       91       P         *       5700       94.14       -       -       86.74       33.23       7.68       33.51       152       91       A         5726.2       53.06       -20.94       74       45.57       33.27       7.74       33.52       152       91       P

Remark

1. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B39 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	ì
802.11n		11000	50.17	-23.83	74	58.97	39.8	10.96	59.56	163	230	Р	Н
HT20		16500	50.73	-23.27	74	58.09	38.5	13.81	59.67	178	296	Р	Н
CH 100		11000	50.29	-23.71	74	59.09	39.8	10.96	59.56	163	230	Р	V
5500MHz		16500	50.24	-23.76	74	57.6	38.5	13.81	59.67	178	296	Р	V
802.11n		11160	50.23	-23.77	74	59.09	39.77	11	59.63	170	200	Р	Н
HT20		16740	50.65	-23.35	74	56.69	38.98	14.4	59.42	156	350	Р	Н
CH 116		11160	48.81	-25.19	74	57.67	39.77	11	59.63	170	200	Р	٧
5580MHz		16740	50.34	-23.66	74	56.38	38.98	14.4	59.42	156	350	Р	٧
802.11n		11400	48.46	-25.54	74	57.39	39.72	11.07	59.72	147	285	Р	Н
HT20		17100	50.04	-23.96	74	54.06	39.74	15.01	58.77	165	246	Р	Н
CH 140		11400	48.78	-25.22	74	57.71	39.72	11.07	59.72	147	285	Р	V
5700MHz		17100	50.58	-23.42	74	54.6	39.74	15.01	58.77	165	246	Р	V

#### Remark

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B40 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>1.</sup> No other spurious found.

<sup>2.</sup> All results are PASS against Peak and Average limit line.

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.		( <b>1411</b> )	( 15 )( )	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		( MHz )	( dBµV/m )	(dB)	( dBµV/m )	( dBµV )	( dB/m )	(dB)	(dB)	( cm )			(H/V)
		5469.52	53.74	-20.26	74	46.75	32.99	7.47	33.47	166	128	Р	Н
		5462.8	47.56	-6.44	54	40.57	32.99	7.47	33.47	166	128	Α	Н
	*	5510	101.83	-	-	94.78	33	7.51	33.46	166	128	Р	Н
	*	5510	93.04	-	-	85.99	33	7.51	33.46	166	128	Α	Н
802.11ac		5727.55	47.9	-26.1	74	40.41	33.27	7.74	33.52	166	128	Р	Н
VHT40		5750.475	39.51	-14.49	54	32.01	33.29	7.74	33.53	166	128	Α	Н
CH 102		5395.12	53.37	-20.63	74	46.52	32.98	7.39	33.52	167	84	Р	٧
5510MHz		5469.52	45.02	-8.98	54	38.03	32.99	7.47	33.47	167	84	Α	V
	*	5510	99.97	-	-	92.92	33	7.51	33.46	167	84	Р	٧
	*	5510	90.92	-	-	83.87	33	7.51	33.46	167	84	Α	٧
		5750.825	48.2	-25.8	74	40.7	33.29	7.74	33.53	167	84	Р	٧
		5734.9	39.44	-14.56	54	31.94	33.29	7.74	33.53	167	84	Α	٧
		5452.96	49.38	-24.62	74	42.39	32.99	7.47	33.47	244	122	Р	Н
		5464.24	41.77	-12.23	54	34.78	32.99	7.47	33.47	244	122	Α	Н
	*	5550	101.37	-	-	94.21	33.06	7.57	33.47	244	122	Р	Н
	*	5550	92.58	-	-	85.42	33.06	7.57	33.47	244	122	Α	Н
802.11ac		5725.1	47.79	-26.21	74	40.36	33.27	7.68	33.52	244	122	Р	Н
VHT40		5729.475	39.73	-14.27	54	32.24	33.27	7.74	33.52	244	122	Α	Н
CH 110		5408.32	47.65	-26.35	74	40.74	32.98	7.43	33.5	188	90	Р	٧
5550MHz		5465.92	40.51	-13.49	54	33.52	32.99	7.47	33.47	188	90	Α	V
	*	5550	99.72	-	-	92.56	33.06	7.57	33.47	188	90	Р	V
	*	5550	89.07	-	-	81.91	33.06	7.57	33.47	188	90	Α	V
		5725.625	49.08	-24.92	74	41.65	33.27	7.68	33.52	188	90	Р	V
		5728.25	39.55	-14.45	54	32.06	33.27	7.74	33.52	188	90	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B41 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

		5416.24	49.59	-24.41	74	42.68	32.98	7.43	33.5	153	118	Р	Н
		5460.64	39.42	-14.58	54	32.43	32.99	7.47	33.47	153	118	Α	Н
	*	5670	101.49	-	-	94.11	33.21	7.67	33.5	153	118	Р	Н
	*	5670	92.83	-	-	85.45	33.21	7.67	33.5	153	118	Α	Н
802.11ac		5724.925	51.27	-22.73	74	43.84	33.27	7.68	33.52	153	118	Р	Н
VHT40		5729.125	44.44	-9.56	54	36.95	33.27	7.74	33.52	153	118	Α	Н
CH 134		5350.24	47.45	-26.55	74	40.62	32.97	7.39	33.53	193	87	Р	٧
5670MHz		5469.52	38.84	-15.16	54	31.85	32.99	7.47	33.47	193	87	Α	٧
	*	5670	99.82	-	-	92.44	33.21	7.67	33.5	193	87	Р	٧
	*	5670	91.88	-	-	84.5	33.21	7.67	33.5	193	87	Α	٧
		5761.5	50.64	-23.36	74	43.12	33.31	7.74	33.53	193	87	Р	٧
		5727.025	43.72	-10.28	54	36.23	33.27	7.74	33.52	193	87	Α	٧

Remark

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B42 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>1.</sup> No other spurious found.

<sup>2.</sup> All results are PASS against Peak and Average limit line.

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level ( dBµV )	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	i
802.11ac		11020	50.24	-23.76	74	59.04	39.8	10.97	59.57	100	230	Р	Н
VHT40		16530	50.28	-23.72	74	57.43	38.57	13.91	59.63	100	300	Р	Н
CH 102		11020	50.21	-23.79	74	59.01	39.8	10.97	59.57	100	230	Р	V
5510MHz		16530	50.18	-23.82	74	57.33	38.57	13.91	59.63	100	300	Р	V
802.11ac		11100	50.23	-23.77	74	59.06	39.78	10.99	59.6	100	200	Р	Н
VHT40		16650	50.92	-23.08	74	57.42	38.81	14.2	59.51	100	350	Р	Н
CH 110		11100	50.14	-23.86	74	58.97	39.78	10.99	59.6	100	200	Р	V
5550MHz		16650	50.25	-23.75	74	56.75	38.81	14.2	59.51	100	350	Р	V
802.11ac		11340	49.06	-24.94	74	57.96	39.73	11.06	59.69	200	360	Р	Н
VHT40		17010	50.07	-23.93	74	54.55	39.54	15.08	59.1	200	360	Р	Н
CH 134		11340	48.91	-25.09	74	57.81	39.73	11.06	59.69	200	360	Р	V
5670MHz		17010	50.68	-23.32	74	55.16	39.54	15.08	59.1	200	360	Р	V

#### Remark

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B43 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>1.</sup> No other spurious found.

<sup>2.</sup> All results are PASS against Peak and Average limit line.

### Band 3 5470~5725MHz WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	(dB)	(cm)	( deg )	(P/A)	
		5460.88	57.19	-16.81	74	50.2	32.99	7.47	33.47	158	126	Р	Н
		5460.64	48.97	-5.03	54	41.98	32.99	7.47	33.47	158	126	Α	Н
	*	5530	99.85	-	-	92.73	33.02	7.57	33.47	158	126	Р	Н
	*	5530	91.7	-	-	84.58	33.02	7.57	33.47	158	126	Α	Н
802.11ac		5726.85	49.6	-24.4	74	42.11	33.27	7.74	33.52	158	126	Р	Н
VHT80		5725.275	40.43	-13.57	54	33	33.27	7.68	33.52	158	126	Α	Н
CH 106		5435.2	52.91	-21.09	74	45.97	32.99	7.43	33.48	190	87	Р	V
5530MHz		5452.96	45.9	-8.1	54	38.91	32.99	7.47	33.47	190	87	Α	٧
	*	5530	96.47	-	-	89.35	33.02	7.57	33.47	190	87	Р	V
	*	5530	88.6	-	-	81.48	33.02	7.57	33.47	190	87	Α	V
		5733.325	48.4	-25.6	74	40.92	33.27	7.74	33.53	190	87	Р	V
		5726.675	40.07	-13.93	54	32.58	33.27	7.74	33.52	190	87	Α	V
		5465.68	52.17	-21.83	74	45.18	32.99	7.47	33.47	165	124	Р	Н
		5467.6	44.36	-9.64	54	37.37	32.99	7.47	33.47	165	124	Α	Н
	*	5610	99.41	-	-	92.13	33.12	7.65	33.49	165	124	Р	Н
	*	5610	91.27	-	-	83.99	33.12	7.65	33.49	165	124	Α	Н
802.11ac		5727.375	53.9	-20.1	74	46.41	33.27	7.74	33.52	165	124	Р	Н
VHT80		5724.925	44.69	-9.31	54	37.26	33.27	7.68	33.52	165	124	Α	Н
CH 122		5438.56	50.39	-23.61	74	43.45	32.99	7.43	33.48	198	87	Р	V
5610MHz		5465.44	42.68	-11.32	54	35.69	32.99	7.47	33.47	198	87	Α	V
	*	5610	97.94	-	-	90.66	33.12	7.65	33.49	198	87	Р	V
	*	5610	89.08	-	-	81.8	33.12	7.65	33.49	198	87	Α	٧
		5726.85	50.15	-23.85	74	42.66	33.27	7.74	33.52	198	87	Р	V
		5726.5	42.84	-11.16	54	35.35	33.27	7.74	33.52	198	87	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B44 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI Ant.	Note	Frequency	Level	Over	Limit Line	Read Level	Antenna	Cable	Preamp Factor	Ant Pos	Table Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	(cm)	( deg )	(P/A)	(H/V)
802.11ac		11060	49.09	-24.91	74	57.91	39.79	10.98	59.59	250	0	Р	Н
VHT80		16590	50.91	-23.09	74	57.81	38.67	14.01	59.58	150	0	Р	Н
CH 106		11060	50.22	-23.78	74	59.04	39.79	10.98	59.59	250	0	Р	V
5530MHz		16590	50.13	-23.87	74	57.03	38.67	14.01	59.58	150	0	Р	V
802.11ac		11220	49.79	-24.21	74	58.66	39.76	11.02	59.65	250	0	Р	Н
VHT80		16830	50.4	-23.6	74	55.99	39.16	14.59	59.34	150	0	Р	Н
CH 122		11220	49.01	-24.99	74	57.88	39.76	11.02	59.65	250	0	Р	V
5610MHz		16830	49.84	-24.16	74	55.43	39.16	14.59	59.34	150	0	Р	V
	1. No	o other spurious		-24.10	14	00.40	33.10	14.55	00.04	100	0	'	

Remark

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B45 of B63 Report Issued Date : Oct. 10, 2016 Report Version : Rev. 01

All results are PASS against Peak and Average limit line.

### For MIMO Antenna Band 3 - 5470~5725MHz

#### WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant		Peak	ļ
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	i i
1+2		(MHz)	( dBµV/m )	( dB )	( dBµV/m )	(dBµV)	( dB/m )	( dB )	(dB)	( cm )	,		(H/V)
		5466.16	51.36	-22.64	74	44.37	32.99	7.47	33.47	250	125	Р	Н
		5468.72	43.75	-10.25	54	36.76	32.99	7.47	33.47	250	125	Α	Н
802.11n	*	5500	101.53	-	-	94.47	33	7.51	33.45	250	125	Р	Н
HT20	*	5500	93.85	-	-	86.79	33	7.51	33.45	250	125	Α	Н
CH 100		5465.84	48.34	-25.66	74	41.35	32.99	7.47	33.47	150	111	Р	V
5500MHz		5469.68	40.44	-13.56	54	33.45	32.99	7.47	33.47	150	111	Α	V
	*	5500	97.42	-	-	90.36	33	7.51	33.45	150	111	Р	V
	*	5500	88.43	-	-	81.37	33	7.51	33.45	150	111	Α	V
		5454.4	48.58	-25.42	74	41.59	32.99	7.47	33.47	249	117	Р	Н
		5465.44	39.38	-14.62	54	32.39	32.99	7.47	33.47	249	117	Α	Н
	*	5580	104.47	-	-	97.23	33.08	7.64	33.48	249	117	Р	Н
	*	5580	94.66	-	-	87.42	33.08	7.64	33.48	249	117	Α	Н
802.11n		5738.4	48.5	-25.5	74	41	33.29	7.74	33.53	249	117	Р	Н
HT20		5725.625	39.45	-14.55	54	32.02	33.27	7.68	33.52	249	117	Α	Н
CH 116		5454.16	47.54	-26.46	74	40.55	32.99	7.47	33.47	154	109	Р	V
5580MHz		5445.76	38.52	-15.48	54	31.58	32.99	7.43	33.48	154	109	Α	V
	*	5580	97.91	-	-	90.67	33.08	7.64	33.48	154	109	Р	V
	*	5580	88.62	-	-	81.38	33.08	7.64	33.48	154	109	Α	V
		5730.875	47.81	-26.19	74	40.33	33.27	7.74	33.53	154	109	Р	V
		5748.375	39.19	-14.81	54	31.69	33.29	7.74	33.53	154	109	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B46 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

*	5700	105.07	-	-	97.67	33.23	7.68	33.51	150	117	Р	Н
*	5700	96.12	1	-	88.72	33.23	7.68	33.51	150	117	Α	Н
	5734.04	52.97	-21.03	74	45.49	33.27	7.74	33.53	150	117	Р	Н
	5747.96	44.14	-9.86	54	36.64	33.29	7.74	33.53	150	117	Α	Н
*	5700	99.36	-	-	91.96	33.23	7.68	33.51	150	111	Р	V
*	5700	90.09	1	-	82.69	33.23	7.68	33.51	150	111	Α	V
	5729.08	50.49	-23.51	74	43	33.27	7.74	33.52	150	111	Р	V
	5727.24	41.73	-12.27	54	34.24	33.27	7.74	33.52	150	111	Α	V
	*	* 5700 * 5700 5734.04 5747.96 * 5700 * 5700 5729.08	* 5700 96.12 5734.04 52.97 5747.96 44.14 * 5700 99.36 * 5700 90.09 5729.08 50.49	* 5700 96.12 -  5734.04 52.97 -21.03  5747.96 44.14 -9.86  * 5700 99.36 -  * 5700 90.09 -  5729.08 50.49 -23.51	*     5700     103.07     -     -       *     5700     96.12     -     -       5734.04     52.97     -21.03     74       5747.96     44.14     -9.86     54       *     5700     99.36     -     -       *     5700     90.09     -     -       5729.08     50.49     -23.51     74	*     5700     103.07     -     -     97.67       *     5700     96.12     -     -     88.72       5734.04     52.97     -21.03     74     45.49       5747.96     44.14     -9.86     54     36.64       *     5700     99.36     -     -     91.96       *     5700     90.09     -     -     82.69       5729.08     50.49     -23.51     74     43	*     5700     103.07     -     -     97.67     33.23       *     5700     96.12     -     -     88.72     33.23       5734.04     52.97     -21.03     74     45.49     33.27       5747.96     44.14     -9.86     54     36.64     33.29       *     5700     99.36     -     -     91.96     33.23       *     5700     90.09     -     -     82.69     33.23       5729.08     50.49     -23.51     74     43     33.27	*     5700     103.07     -     -     97.67     33.23     7.68       *     5700     96.12     -     -     88.72     33.23     7.68       5734.04     52.97     -21.03     74     45.49     33.27     7.74       5747.96     44.14     -9.86     54     36.64     33.29     7.74       *     5700     99.36     -     -     91.96     33.23     7.68       *     5700     90.09     -     -     82.69     33.23     7.68       5729.08     50.49     -23.51     74     43     33.27     7.74	*     5700     105.07     -     -     97.67     33.23     7.68     33.51       *     5700     96.12     -     -     88.72     33.23     7.68     33.51       5734.04     52.97     -21.03     74     45.49     33.27     7.74     33.53       5747.96     44.14     -9.86     54     36.64     33.29     7.74     33.53       *     5700     99.36     -     -     91.96     33.23     7.68     33.51       *     5700     90.09     -     -     82.69     33.23     7.68     33.51       5729.08     50.49     -23.51     74     43     33.27     7.74     33.52	*     5700     105.07     -     -     97.67     33.23     7.68     33.51     150       *     5700     96.12     -     -     88.72     33.23     7.68     33.51     150       5734.04     52.97     -21.03     74     45.49     33.27     7.74     33.53     150       5747.96     44.14     -9.86     54     36.64     33.29     7.74     33.53     150       *     5700     99.36     -     -     91.96     33.23     7.68     33.51     150       *     5700     90.09     -     -     82.69     33.23     7.68     33.51     150       5729.08     50.49     -23.51     74     43     33.27     7.74     33.52     150	*     5700     105.07     -     -     97.67     33.23     7.68     33.51     150     117       *     5700     96.12     -     -     88.72     33.23     7.68     33.51     150     117       5734.04     52.97     -21.03     74     45.49     33.27     7.74     33.53     150     117       5747.96     44.14     -9.86     54     36.64     33.29     7.74     33.53     150     117       *     5700     99.36     -     -     91.96     33.23     7.68     33.51     150     111       *     5700     90.09     -     -     82.69     33.23     7.68     33.51     150     111       5729.08     50.49     -23.51     74     43     33.27     7.74     33.52     150     111	*       5700       103.07       -       -       97.67       33.23       7.68       33.51       150       117       P         *       5700       96.12       -       -       88.72       33.23       7.68       33.51       150       117       A         5734.04       52.97       -21.03       74       45.49       33.27       7.74       33.53       150       117       P         5747.96       44.14       -9.86       54       36.64       33.29       7.74       33.53       150       117       A         *       5700       99.36       -       -       91.96       33.23       7.68       33.51       150       111       P         *       5700       90.09       -       -       82.69       33.23       7.68       33.51       150       111       A         5729.08       50.49       -23.51       74       43       33.27       7.74       33.52       150       111       P

Remark

I. No other spurious found.

2. All results are PASS against Peak and Average limit line.

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B47 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	i .
802.11n		11000	50.46	-23.54	74	59.69	39.5	10.83	59.56	163	230	Р	Н
HT20		16500	47.96	-26.04	74	55.8	38.47	13.36	59.67	178	296	Р	Н
CH 100		11000	49.32	-24.68	74	58.55	39.5	10.83	59.56	163	230	Р	V
5500MHz		16500	47.79	-26.21	74	55.63	38.47	13.36	59.67	178	296	Р	V
802.11n		11160	48.63	-25.37	74	58.01	39.35	10.9	59.63	170	200	Р	Н
HT20		16740	48.87	-25.13	74	55.32	39.11	13.86	59.42	156	350	Р	Н
CH 116		11160	48.53	-25.47	74	57.91	39.35	10.9	59.63	170	200	Р	٧
5580MHz		16740	48.39	-25.61	74	54.84	39.11	13.86	59.42	156	350	Р	٧
802.11n		11400	49.17	-24.83	74	58.1	39.72	11.07	59.72	147	285	Р	Н
HT20		17100	50.28	-23.72	74	54.3	39.74	15.01	58.77	165	246	Р	Н
CH 140		11400	49.19	-24.81	74	58.12	39.72	11.07	59.72	147	285	Р	V
5700MHz		17100	50.04	-23.96	74	54.06	39.74	15.01	58.77	165	246	Р	V

#### Remark

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B48 of B63 Report Issued Date : Oct. 10, 2016

Report No.: FR683002E

Report Version : Rev. 01

No other spurious found.

All results are PASS against Peak and Average limit line.

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level ( dBµV )	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg.	(H/V)
		5469.52	51.41	-22.59	74	44.42	32.99	7.47	33.47	250	127	Р	Н
		5470	45.6	-8.4	54	38.61	32.99	7.47	33.47	250	127	Α	Н
	*	5510	100.19	-	-	93.14	33	7.51	33.46	250	127	Р	Н
	*	5510	91.47	-	-	84.42	33	7.51	33.46	250	127	Α	Н
802.11ac		5761.325	48.21	-25.79	74	40.69	33.31	7.74	33.53	250	127	Р	Н
VHT40		5745.05	39.58	-14.42	54	32.08	33.29	7.74	33.53	250	127	Α	Н
CH 102		5454.88	50.4	-23.6	74	43.41	32.99	7.47	33.47	171	106	Р	V
5510MHz		5464	42.19	-11.81	54	35.2	32.99	7.47	33.47	171	106	Α	V
	*	5510	96.15	-	-	89.1	33	7.51	33.46	171	106	Р	V
	*	5510	87.65	-	-	80.6	33	7.51	33.46	171	106	Α	V
		5764.825	47.86	-26.14	74	40.34	33.31	7.74	33.53	171	106	Р	V
		5727.2	39.69	-14.31	54	32.2	33.27	7.74	33.52	171	106	Α	V
		5460.88	47.87	-26.13	74	40.88	32.99	7.47	33.47	233	154	Р	Н
		5469.04	40.29	-13.71	54	33.3	32.99	7.47	33.47	233	154	Α	Н
	*	5550	99.64	-	-	92.48	33.06	7.57	33.47	233	154	Р	Н
	*	5550	90.78	-	-	83.62	33.06	7.57	33.47	233	154	Α	Н
802.11ac		5764.475	47.82	-26.18	74	40.3	33.31	7.74	33.53	233	154	Р	Н
VHT40		5725.975	39.68	-14.32	54	32.19	33.27	7.74	33.52	233	154	Α	Н
CH 110		5418.16	48.14	-25.86	74	41.23	32.98	7.43	33.5	180	110	Р	V
5550MHz		5463.76	40.39	-13.61	54	33.4	32.99	7.47	33.47	180	110	Α	V
	*	5550	95.95	-	-	88.79	33.06	7.57	33.47	180	110	Р	V
	*	5550	87.17	-	-	80.01	33.06	7.57	33.47	180	110	Α	V
		5747.325	47.5	-26.5	74	40	33.29	7.74	33.53	180	110	Р	V
		5726.15	39.63	-14.37	54	32.14	33.27	7.74	33.52	180	110	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B49 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

		5459.68	46.65	-27.35	74	39.66	32.99	7.47	33.47	150	156	Р	Н
		5460.88	38.99	-15.01	54	32	32.99	7.47	33.47	150	156	Α	Н
	*	5670	100	-	-	92.62	33.21	7.67	33.5	150	156	Р	Н
	*	5670	92.03	-	-	84.65	33.21	7.67	33.5	150	156	Α	Н
802.11ac		5730.175	49.86	-24.14	74	42.37	33.27	7.74	33.52	150	156	Р	Н
VHT40		5733.15	42.5	-11.5	54	35.02	33.27	7.74	33.53	150	156	Α	Н
CH 134		5457.52	46.6	-27.4	74	39.61	32.99	7.47	33.47	159	107	Р	V
5670MHz		5469.04	39.09	-14.91	54	32.1	32.99	7.47	33.47	159	107	Α	V
	*	5670	96.41	-	-	89.03	33.21	7.67	33.5	159	107	Р	V
	*	5670	88.01	-	-	80.63	33.21	7.67	33.5	159	107	Α	V
		5740.5	52.58	-21.42	74	45.08	33.29	7.74	33.53	159	107	Р	V
		5725.975	41.76	-12.24	54	34.27	33.27	7.74	33.52	159	107	Α	٧

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B50 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

<sup>2.</sup> All results are PASS against Peak and Average limit line.

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		( MHz )	( dBµV/m )	Limit ( dB )	Line ( dBµV/m )	Level ( dBµV )	Factor ( dB/m )	Loss (dB)	Factor ( dB )	Pos ( cm )	Pos ( deg )	Avg. (P/A)	(H/V)
802.11ac		11020	49.35	-24.65	74	58.15	39.8	10.97	59.57	100	230	Р	Н
VHT40		16530	50.27	-23.73	74	57.42	38.57	13.91	59.63	100	300	Р	Н
CH 102		11020	49.68	-24.32	74	58.48	39.8	10.97	59.57	100	230	Р	V
5510MHz		16530	50	-24	74	57.15	38.57	13.91	59.63	100	300	Р	V
802.11ac		11100	50	-24	74	58.83	39.78	10.99	59.6	100	200	Р	Н
VHT40		16650	50.08	-23.92	74	56.58	38.81	14.2	59.51	100	350	Р	Н
CH 110		11100	49.4	-24.6	74	58.23	39.78	10.99	59.6	100	200	Р	٧
5550MHz		16650	50.47	-23.53	74	56.97	38.81	14.2	59.51	100	350	Р	٧
802.11ac		11340	49.33	-24.67	74	58.23	39.73	11.06	59.69	200	360	Р	Н
VHT40		17010	50.5	-23.5	74	54.98	39.54	15.08	59.1	200	360	Р	Н
CH 134		11340	49.41	-24.59	74	58.31	39.73	11.06	59.69	200	360	Р	V
5670MHz		17010	50.97	-23.03	74	55.45	39.54	15.08	59.1	200	360	Р	V

## Remark

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

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B51 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

## Band 3 5470~5725MHz WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant		Peak	Pol.
Ant. 1+2		(MHz)	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	(H/V
		5442.64	55.99	-18.01	74	49.05	32.99	7.43	33.48	250	125	Р	Н
		5464.48	46.73	-7.27	54	39.74	32.99	7.47	33.47	250	125	Α	Н
	*	5530	98.89	-	-	91.77	33.02	7.57	33.47	250	125	Р	Н
	*	5530	89.48	-	-	82.36	33.02	7.57	33.47	250	125	Α	Н
802.11ac		5745.925	48.39	-25.61	74	40.89	33.29	7.74	33.53	250	125	Р	Н
VHT80		5725.275	40.47	-13.53	54	33.04	33.27	7.68	33.52	250	125	Α	Н
CH 106		5429.2	51.32	-22.68	74	44.38	32.99	7.43	33.48	172	106	Р	V
5530MHz		5433.76	43.95	-10.05	54	37.01	32.99	7.43	33.48	172	106	Α	V
	*	5530	94.49	-	-	87.37	33.02	7.57	33.47	172	106	Р	V
	*	5530	85.13	-	-	78.01	33.02	7.57	33.47	172	106	Α	V
		5752.575	48.8	-25.2	74	41.28	33.31	7.74	33.53	172	106	Р	V
		5735.6	40.13	-13.87	54	32.63	33.29	7.74	33.53	172	106	Α	V
		5450.56	49.48	-24.52	74	42.49	32.99	7.47	33.47	250	153	Р	Н
		5466.4	42.51	-11.49	54	35.52	32.99	7.47	33.47	250	153	Α	Н
	*	5610	98.09	-	-	90.81	33.12	7.65	33.49	250	153	Р	Н
	*	5610	88.75	-	-	81.47	33.12	7.65	33.49	250	153	Α	Н
802.11ac		5732.975	51.68	-22.32	74	44.2	33.27	7.74	33.53	250	153	Р	Н
VHT80		5726.675	43.28	-10.72	54	35.79	33.27	7.74	33.52	250	153	Α	Н
CH 122		5470	50.18	-23.82	74	43.19	32.99	7.47	33.47	150	107	Р	V
5610MHz		5464	42.11	-11.89	54	35.12	32.99	7.47	33.47	150	107	Α	V
	*	5610	95.06	-	-	87.78	33.12	7.65	33.49	150	107	Р	V
	*	5610	85.16	-	-	77.88	33.12	7.65	33.49	150	107	Α	V
		5728.075	51.84	-22.16	74	44.35	33.27	7.74	33.52	150	107	Р	٧
		5727.2	42.96	-11.04	54	35.47	33.27	7.74	33.52	150	107	Α	V

SPORTON INTERNATIONAL (KUNSHAN) INC.
TEL: 86-0512-5790-0158
FAX: 86-0512-5790-0958
FCC ID: 2AFWMLEX727

Page Number : B52 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	i
1+2		(MHz)	( dBµV/m )	( dB )	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	(cm)	( deg )	(P/A)	(H/V
802.11ac		11060	49.67	-24.33	74	58.49	39.79	10.98	59.59	250	0	Р	Н
VHT80		16590	50.46	-23.54	74	57.36	38.67	14.01	59.58	150	0	Р	Н
CH 106		11060	49.32	-24.68	74	58.14	39.79	10.98	59.59	250	0	Р	٧
5530MHz		16590	49.92	-24.08	74	56.82	38.67	14.01	59.58	150	0	Р	٧
802.11ac		11220	48.5	-25.5	74	57.37	39.76	11.02	59.65	250	0	Р	Н
VHT80		16830	50.1	-23.9	74	55.69	39.16	14.59	59.34	150	0	Р	Н
CH 122		11220	47.87	-26.13	74	56.74	39.76	11.02	59.65	250	0	Р	٧
5610MHz		16830	49.21	-24.79	74	54.8	39.16	14.59	59.34	150	0	Р	٧

<sup>2.</sup> All results are PASS against Peak and Average limit line.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B53 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

## For Single Antenna

### **Band 3 - Straddle Channel**

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	(deg)	(P/A)	(H/V)
	*	5720	104.84	-	-	97.41	33.27	7.68	33.52	150	111	Р	Н
802.11a CH 144	*	5720	95.03	-	-	87.6	33.27	7.68	33.52	150	111	Α	Н
5720MHz	*	5720	103.43	-	-	96	33.27	7.68	33.52	156	86	Р	V
37 20WII 12	*	5720	94.13	-	-	86.7	33.27	7.68	33.52	156	86	Α	V
Remark		other spurious		Peak and	l Average lim	it line.							

## **Band 3 - Straddle Channel**

## 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)
		11440	48.61	-25.39	74	57.55	39.71	11.08	59.73	250	0	Р	Н
802.11a		17160	50.23	-23.77	74	53.91	39.9	14.93	58.51	150	0	Р	Н
CH 144 5720MHz		11440	48.54	-25.46	74	57.48	39.71	11.08	59.73	250	0	Р	V
37 ZOWI 12		17160	49.43	-24.57	74	53.11	39.9	14.93	58.51	150	0	Р	V
Remark		other spurious		Peak and	l Average lim	it line.							

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B54 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1		( MHz )	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	
802.11n	*	5720	105.57	-	-	98.14	33.27	7.68	33.52	150	114	Р	Н
HT20	*	5720	96.54	-	-	89.11	33.27	7.68	33.52	150	114	Α	Н
CH 144	*	5720	101.74	-	-	94.31	33.27	7.68	33.52	150	107	Р	V
5720MHz	*	5720	92.46	-	-	85.03	33.27	7.68	33.52	150	107	Α	V
Remark		o other spurious		eak and	Average lim	it line.							

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

	F	<b>-</b>		11 1 002		(Hallin		111)				-	
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		11440	48.17	-25.83	74	57.11	39.71	11.08	59.73	250	0	Р	Н
HT20		17160	50.61	-23.39	74	54.29	39.9	14.93	58.51	150	0	Р	Н
CH 144		11440	48.45	-25.55	74	57.39	39.71	11.08	59.73	250	0	Р	V
5720MHz		17160	50.58	-23.42	74	54.26	39.9	14.93	58.51	150	0	Р	V
Domonk	1. No	o other spurious	s found.										
Remark	2. AI	l results are PA	SS against F	eak and	Average lim	it line.							

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B55 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.		( BALL - )	( -ID)// )	Limit	Line	Level	Factor	Loss	Factor	Pos		Avg.	(110.0
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dB <sub>µ</sub> V)	( dB/m )	( dB )	( dB )	(cm)	(deg)	(P/A)	(H/V)
802.11ac	*	5710	103.44	-	-	96.03	33.25	7.68	33.52	150	112	Р	Н
VHT40	*	5710	93.28	-	-	85.87	33.25	7.68	33.52	150	112	Α	Н
CH 142	*	5710	99.83	-	-	92.42	33.25	7.68	33.52	150	105	Р	V
5710MHz	*	5710	89.5	-	-	82.09	33.25	7.68	33.52	150	105	Α	V
Remark		o other spurious		Peak and	l Average lim	it line.				1		1	

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Book	Pol
	Note	riequency	Level						•				
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dB <sub>µ</sub> V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac		11420	47.37	-26.63	74	56.3	39.72	11.08	59.73	250	0	Р	Н
VHT40		17130	50.56	-23.44	74	54.41	39.82	14.97	58.64	150	0	Р	Н
CH 142		11420	47.69	-26.31	74	56.62	39.72	11.08	59.73	250	0	Р	<b>V</b>
5710MHz		17130	50.53	-23.47	74	54.38	39.82	14.97	58.64	150	0	Р	٧
Remark		o other spurious		Peak and	l Average lim	it line.							

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B56 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	j
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
802.11ac	*	5690	101.45	-	-	94.05	33.23	7.68	33.51	152	113	Р	Н
VHT80	*	5690	90.17	-	-	82.77	33.23	7.68	33.51	152	113	Α	Н
CH 138	*	5690	96.43	-	-	89.03	33.23	7.68	33.51	176	251	Р	V
5690MHz	*	5690	85.61	-	-	78.21	33.23	7.68	33.51	176	251	Α	٧
Remark		o other spurious		eak and	Average lim	it line.							

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

	-				1140 1111	(1101111					F	Г	
WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	(deg)	(P/A)	(H/V)
802.11ac		11380	48.28	-25.72	74	57.2	39.72	11.07	59.71	250	0	Р	Н
VHT80		17070	50.41	-23.59	74	54.61	39.66	15.04	58.9	150	0	Р	Н
CH 138		11380	48.41	-25.59	74	57.33	39.72	11.07	59.71	250	0	Р	V
5690MHz		17070	50.89	-23.11	74	55.09	39.66	15.04	58.9	150	0	Р	V
Remark		o other spurious		Peak and	Average lim	it line.						,	

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B57 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

### For MIMO Antenna

### **Band 3 - Straddle Channel**

### WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.	ĺ			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)
802.11n	*	5720	104.96	-	-	97.53	33.27	7.68	33.52	155	115	Р	Н
HT20	*	5720	96.15	-	-	88.72	33.27	7.68	33.52	155	115	Α	Н
CH 144	*	5720	99.14	-	-	91.71	33.27	7.68	33.52	150	106	Р	V
5720MHz	*	5720	90.16	-	-	82.73	33.27	7.68	33.52	150	106	Α	V
						<u>I</u>							
Remark	1. No	other spurious	s found.										

2. All results are PASS against Peak and Average limit line.

## Band 3 - Straddle Channel

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	(deg)	(P/A)	(H/V)
802.11n		11440	47.96	-26.04	74	56.9	39.71	11.08	59.73	250	0	Р	Н
HT20		17160	50.98	-23.02	74	54.66	39.9	14.93	58.51	150	0	Р	Н
CH 144		11440	48.56	-25.44	74	57.5	39.71	11.08	59.73	250	0	Р	V
5720MHz		17160	50.14	-23.86	74	53.82	39.9	14.93	58.51	150	0	Р	V

### Remark

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

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B58 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.		( <b>54</b> 11 )	( ID )(( )	Limit	Line	Level	Factor	Loss	Factor	Pos		Avg.	1
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dB <sub>µ</sub> V)	( dB/m )	( dB )	( dB )	(cm)	(deg)	(P/A)	(H/V)
802.11ac	*	5710	102.24	-	-	94.83	33.25	7.68	33.52	150	115	Р	Н
VHT40	*	5710	93.17	-	-	85.76	33.25	7.68	33.52	150	115	Α	Н
CH 142	*	5710	97.07	-	-	89.66	33.25	7.68	33.52	150	105	Р	<b>\</b>
5710MHz	*	5710	86.64	-	-	79.23	33.25	7.68	33.52	150	105	Α	٧
Remark	1. No other spurious found.												

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	(deg)		
802.11ac		11420	48.03	-25.97	74	56.96	39.72	11.08	59.73	250	0	Р	Н
VHT40		17130	50.47	-23.53	74	54.32	39.82	14.97	58.64	150	0	Р	Н
CH 142		11420	47.93	-26.07	74	56.86	39.72	11.08	59.73	250	0	Р	V
5710MHz		17130	50.42	-23.58	74	54.27	39.82	14.97	58.64	150	0	Р	V
Remark	No other spurious found.												1
	2. AI	2. All results are PASS against Peak and Average limit line.											

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B59 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level	Factor ( dB/m )	Loss	Factor (dB)	Pos	Pos (deg)	Avg.	
802.11ac	*	5690	100.74	- ( ub )	- ( ubµv/iii )	(dBµV) 93.34	33.23	( <b>dB</b> ) 7.68	33.51	( <b>cm</b> )	114	P	H
VHT80	*	5690	89.84	-	-	82.44	33.23	7.68	33.51	150	114	Α	Н
CH 138	*	5690	94.66	-	-	87.26	33.23	7.68	33.51	150	263	Р	٧
5690MHz	*	5690	83.43	-	-	76.03	33.23	7.68	33.51	150	263	Α	V
Remark	No other spurious found.     All results are PASS against Peak and Average limit line.												

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

VAZIEL	Note	<b>.</b>			11	,				<b>A</b> . 4	<b>T.</b> 1. 1.	<b>D</b> 1	<b>D</b> .
WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Реак	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)
802.11ac		11380	47.93	-26.07	74	56.85	39.72	11.07	59.71	250	0	Р	Н
VHT80		17070	50.91	-23.09	74	55.11	39.66	15.04	58.9	150	0	Р	Н
CH 138		11380	47.96	-26.04	74	56.88	39.72	11.07	59.71	250	0	Р	V
5690MHz		17070	50.05	-23.95	74	54.25	39.66	15.04	58.9	150	0	Р	٧
Remark		o other spurious		Peak and	l Average lim	it line.							

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B60 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

### **Emission below 1GHz**

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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
		30	26.65	-13.35	40	31.11	26.7	0.62	31.78	-	-	Р	Н
		84.32	31.35	-8.65	40	45.73	16.44	0.83	31.65	100	0	Р	Н
		154.16	24.01	-19.49	43.5	36.63	17.63	1.15	31.4	-	-	Р	Н
		422.85	29.4	-16.6	46	33.24	25.49	1.89	31.22	-	-	Р	Н
000 44		680.87	29.74	-16.26	46	31.81	26.78	2.37	31.22	-	-	Р	Н
802.11n VHT80		969.93	34.08	-19.92	54	32.36	29.8	3.19	31.27	-	-	Р	Н
LF		30.97	36.54	-3.46	40	41.42	26.28	0.62	31.78	100	0	Р	V
<u>-</u> .		79.47	26.99	-13.01	40	42.31	15.52	0.83	31.67	-	-	Р	V
		145.43	34.43	-9.07	43.5	46.81	17.9	1.15	31.43	-	-	Р	٧
		291.9	28.36	-17.64	46	39.15	18.93	1.6	31.32	-	-	Р	٧
		562.53	30.29	-15.71	46	34.35	25.02	2.13	31.21	-	-	Р	V
		937.92	33.37	-12.63	46	32.57	29.19	2.88	31.27	-	-	Р	V
Remark		o other spurious		mit line.									

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B61 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

## 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 <b>over limit</b> line.
P/A	Peak or Average
H/V	Horizontal or Vertical

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B62 of B63
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01

### 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 )	(dB <sub>µ</sub> V)	( 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	Р	Н
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	Α	Н

1. Level( $dB\mu V/m$ ) =

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

2. Over Limit(dB) = Level(dB $\mu$ V/m) – Limit Line(dB $\mu$ V/m)

#### For Peak Limit @ 2390MHz:

- Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 54.51(dB\mu V) 35.86 (dB)$
- $= 55.45 (dB\mu V/m)$
- 2. Over Limit(dB)
- = Level( $dB\mu V/m$ ) Limit Line( $dB\mu V/m$ )
- $= 55.45(dB\mu V/m) 74(dB\mu V/m)$
- = -18.55(dB)

### For Average Limit @ 2390MHz:

- 1. Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 42.6(dB\mu V) 35.86 (dB)$
- $= 43.54 (dB\mu V/m)$
- 2. Over Limit(dB)
- = Level( $dB\mu V/m$ ) Limit Line( $dB\mu V/m$ )
- $= 43.54(dB\mu V/m) 54(dB\mu V/m)$
- = -10.46(dB)

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

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : B63 of B63
Report Issued Date : Oct. 10, 2016

Report No.: FR683002E

Report Version : Rev. 01

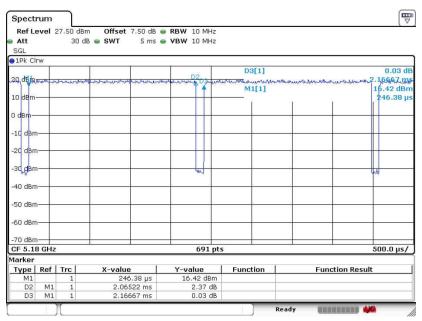


Appendix C. Duty Cycle Plots

Antenna	Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
1	802.11a	95.32	2.07	0.48	1KHz
1	802.11n HT20	95.34	1.93	0.52	1KHz
1	802.11ac VHT40	91.03	0.96	1.05	3KHz
1	802.11ac VHT80	82.26	0.46	2.16	3KHz
1+2	802.11n HT20	94.97	1.92	0.52	1KHz
1+2	802.11ac VHT40	89.83	0.96	1.05	3KHz
1+2	802.11ac VHT80	82.73	0.47	2.15	3KHz

<Ant.1>

### 802.11a



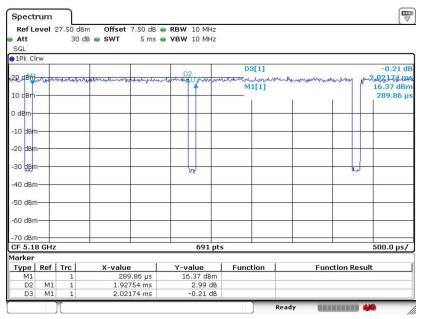
Date: 7.SEP.2016 17:37:35

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : C1 of C4
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01



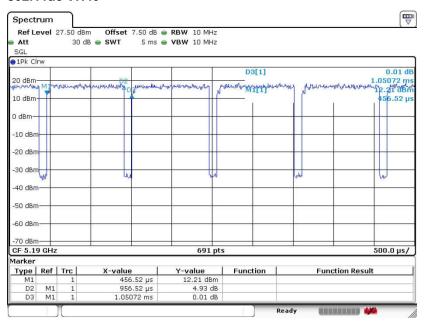
Report No.: FR683002E

#### 802.11n HT20



Date: 7.SEP.2016 17:38:22

#### 802.11ac VH40



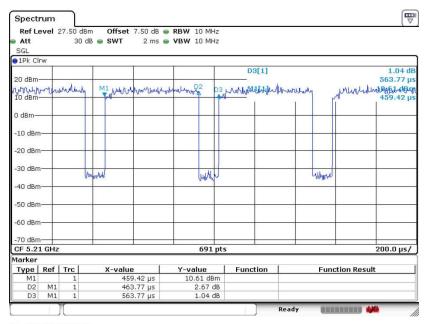
Date: 7.SEP.2016 17:46:40

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727 Page Number : C2 of C4
Report Issued Date : Oct. 10, 2016
Report Version : Rev. 01



Report No.: FR683002E

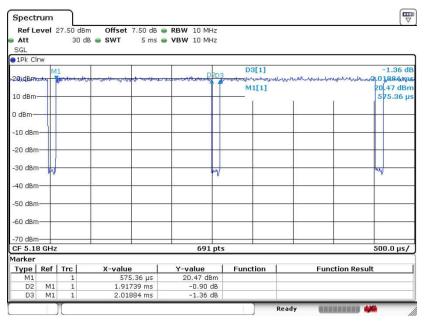
#### 802.11ac VHT80



Date: 7.SEP.2016 17:47:39

#### <Ant.1+2>

### 802.11n HT20



Date: 7.SEP.2016 17:59:45

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727

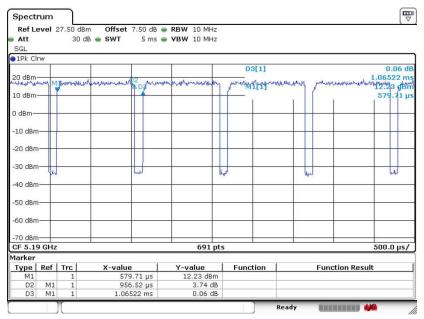
Page Number : C3 of C4 Report Issued Date: Oct. 10, 2016

: Rev. 01 Report Version



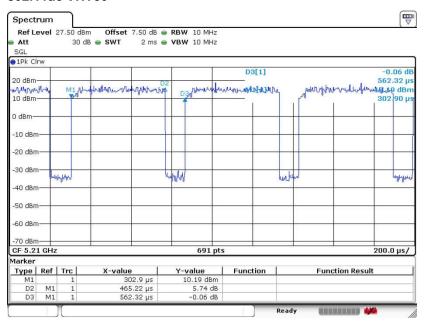
Report No.: FR683002E

#### 802.11ac VH40



Date: 7.SEP.2016 18:36:03

#### 802.11ac VHT80



Date: 7.SEP.2016 18:25:31

SPORTON INTERNATIONAL (KUNSHAN) INC.

TEL: 86-0512-5790-0158 FAX: 86-0512-5790-0958 FCC ID: 2AFWMLEX727

Page Number : C4 of C4 Report Issued Date: Oct. 10, 2016

: Rev. 01 Report Version