FCC RF Test Report

APPLICANT	:	**Huawei Technologies Co.,Ltd.**
EQUIPMENT	:	**Huawei Mediapad M5 wp**
BRAND NAME	:	**HUAWEI**
MODEL NAME	:	**d-02K**
FCC ID	:	**QISHDL-L0J**
STANDARD	:	**FCC Part 15 Subpart E §15.407**
CLASSIFICATION	:	**(NII) Unlicensed National Information Infrastructure**

The product was received on Apr. 04, 2018 and testing was completed on Apr. 23, 2018. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

James Huang

Approved by: James Huang / Manager

NVLAP®
TESTING
NVLAP LAB CODE 600155-0

Sporton International (Kunshan) Inc.
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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR840402D	Rev. 01	Initial issue of report	May 11, 2018

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	2.1049 & 15.403(i)	26dB & 99% Bandwidth	-	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 24 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 11 dBm	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) & 15.209(a)	Pass	Under limit 5.7 dB at 5149.990 MHz
3.5	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 11.91 dB at 0.502 MHz
3.6	15.407(c)	Automatically Discontinue Transmission	Discontinue Transmission	Pass	-
3.7	15.203 & 15.407(a)	Antenna Requirement	N/A	Pass	-

1 General Description

1.1 Applicant

Huawei Technologies Co.,Ltd.
Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

1.2 Manufacturer

Huawei Technologies Co.,Ltd.
Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Huawei Mediapad M5 wp
Brand Name	HUAWEI
Model Name	d-02K
FCC ID	QISHDL-L0J
EUT supports Radios application	WCDMA/HSDPA/HSUPA B5 LTE B5 WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth v2.1+EDR/Bluetooth v 4.2 LE
IMEI Code	Conducted: 867555030008853 Conduction: 867555030008838 Radiation: 867555030008713
HW Version	SH1HDLAL09M
SW Version	18032602

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

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5720 MHz
Maximum Output Power to Antenna	**<5180 MHz ~ 5240 MHz>** 802.11a : 9.51 dBm / 0.0089 W 802.11ac VHT20 : 9.26 dBm / 0.0084 W 802.11 ac VHT40 : 9.36 dBm / 0.0086 W 802.11ac VHT80 : 9.28 dBm / 0.0085 W **<5260 MHz ~ 5320 MHz>** 802.11a : 9.63 dBm / 0.0092 W 802.11ac VHT20 : 9.39 dBm / 0.0087 W 802.11 ac VHT40 : 9.46 dBm / 0.0088 W 802.11ac VHT80 : 9.30 dBm / 0.0085 W **<5500 MHz ~ 5720 MHz >** 802.11a : 9.82 dBm / 0.0096 W 802.11ac VHT20 : 9.59 dBm / 0.0091 W 802.11 ac VHT40 : 9.63 dBm / 0.0092 W 802.11ac VHT80 : 9.08 dBm / 0.0081 W
99% Occupied Bandwidth	**<5180 MHz ~ 5240 MHz>** 802.11a : 17.53 MHz 802.11ac VHT20 : 18.33 MHz 802.11ac VHT40 : 36.06 MHz 802.11ac VHT80 : 74.81 MHz **<5260 MHz ~ 5320 MHz>** 802.11a : 17.58 MHz 802.11ac VHT20 : 18.28 MHz 802.11ac VHT40 : 36.06 MHz 802.11ac VHT80 : 74.93 MHz **<5500 MHz ~ 5720 MHz >** 802.11a : 17.58 MHz 802.11ac VHT20 : 18.33 MHz 802.11ac VHT40 : 36.06 MHz 802.11ac VHT80 : 75.04 MHz
Antenna Gain / Gain	**<5150 MHz ~ 5250 MHz>** IFA Antenna with gain 2.00 dBi **<5250 MHz ~ 5350 MHz>** IFA Antenna with gain 2.00 dBi **<5470 MHz ~ 5725 MHz>** IFA Antenna with gain 2.10 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

Note: For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing has assessed only 802.11ac VHT20/ VHT40 by referring to their maximum conducted power.

1.5 Modification of EUT

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

1.6 Testing Location

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

Test Site	Sporton International (Kunshan) Inc.			
Test Site Location	No.3-2 Ping-Xiang Rd, Kunshan Development Zone Kunshan City Jiangsu Province 215335 China TEL : +86-512-57900158 FAX : +86-512-57900958			
Test Site No.	**Sporton Site No.**			**FCC Test Firm Registration No.**
	TH01-KS	CO01-KS	03CH03-KS	630927

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

1.7 Applicable Standards

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

- FCC Part 15 Subpart E
- FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ANSI C63.10-2013

Remark:

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

2 Test Configuration of Equipment Under Test

a. 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: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5150-5250 MHz Band 1 (U-NII-1)	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42#	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5250-5350 MHz Band 2 (U-NII-2A)	52	5260	60	5300
	54*	5270	62*	5310
	56	5280	64	5320
	58#	5290		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5470-5725 MHz Band 3 (U-NII-2C)	100	5500	112	5560
	102*	5510	116	5580
	104	5520	132	5660
	106#	5530	134*	5670
	108	5540	136	5680
	110*	5550	140	5700

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
TDWR Channel	118*	5590	124	5620
	120	5600	126*	5630
	122#	5610	128	5640

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

2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20 (Covered by VHT20)	MCS0
802.11n HT40 (Covered by VHT40)	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Test Cases	
AC Conducted Emission	Mode 1 : WCDMA Band V Idle + Bluetooth Link + WLAN Link (5G) + USB Cable (Charging from Adapter) + Earphone
Remark: For Radiated Test Cases, The tests were performance with Adapter, Earphone, USB Cable.	

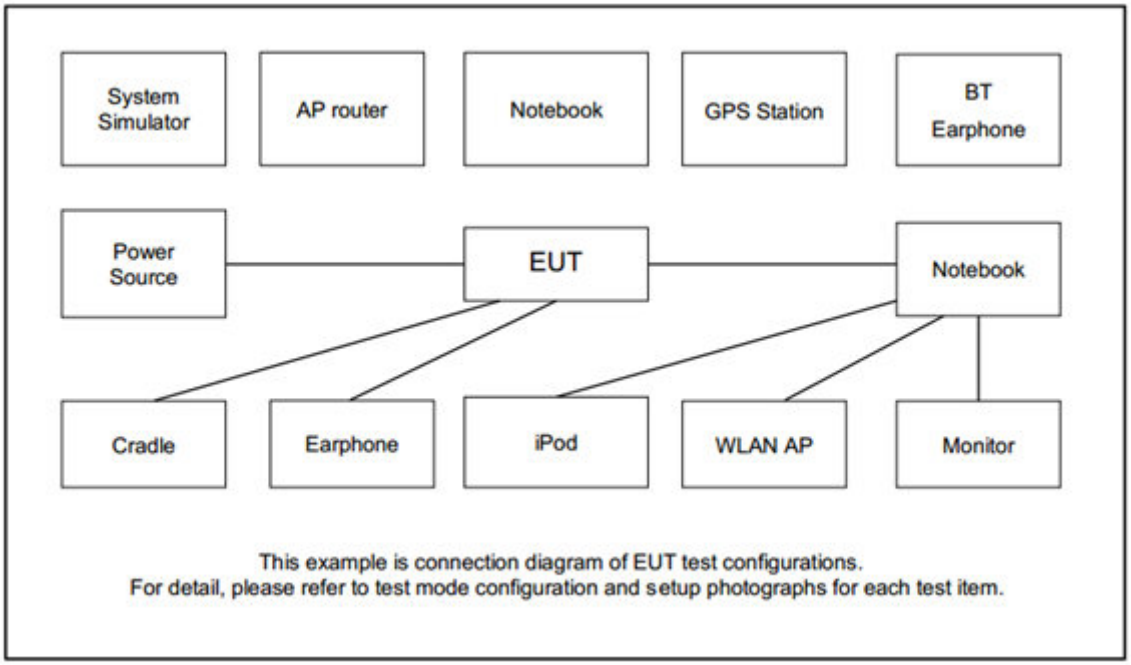
Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11a	802.11a	802.11a
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11ac VHT20	802.11ac VHT20	802.11ac VHT20
L	Low	36	52	100
M	Middle	44	60	116
H	High	48	64	140
Straddle		-	-	144

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11ac VHT40	802.11ac VHT40	802.11ac VHT40
L	Low	38	54	102
M	Middle	-	-	110
H	High	46	62	134
Straddle		-	-	142

Ch. #		Band I：5150-5250 MHz	Band II：5250-5350 MHz	Band III：5470-5725MHz
		802.11ac VHT80	802.11ac VHT80	802.11ac VHT80
L	Low	-	-	106
M	Middle	42	58	-
H	High	-	-	-
Straddle		-	-	138

2.3 Connection Diagram of Test System



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	R&S	CMU 200	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	PRC4	N/A	AC I/P: Unshielded, 1.8 m DC O/P: Shielded, 1.8 m
4.	Bluetooth Earphone	Lenovo	LH102	N/A	N/A	N/A
5.	SD Card	Kingston	SDC4/4GB	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 WLAN AP 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 6.6 dB.

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

= 6.6 (dB)

3 Test Result

3.1 26dB & 99% Occupied Bandwidth Measurement

3.1.1 Description of 26dB & 99% Occupied Bandwidth

This section is for reporting purpose only.

There is no restriction limits for bandwidth.

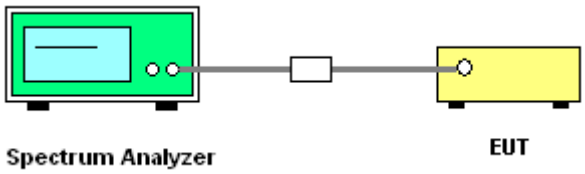
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section C) Emission bandwidth
2. Set RBW = approximately 1% of the emission bandwidth.
3. Set the VBW > RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
7. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1MHz and set the Video bandwidth (VBW) ≥ 3 * RBW.
8. Measure and record the results in the test report.

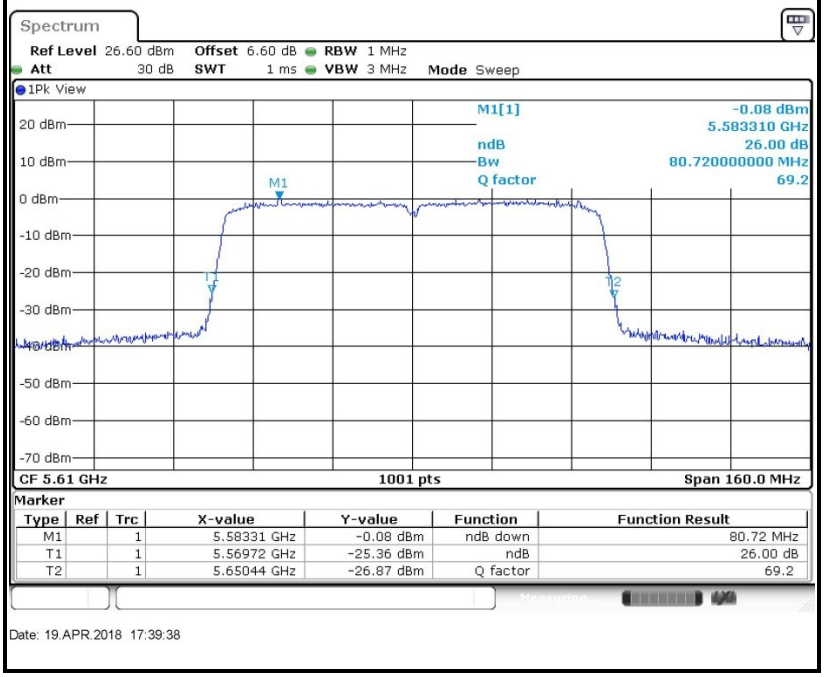
3.1.4 Test Setup



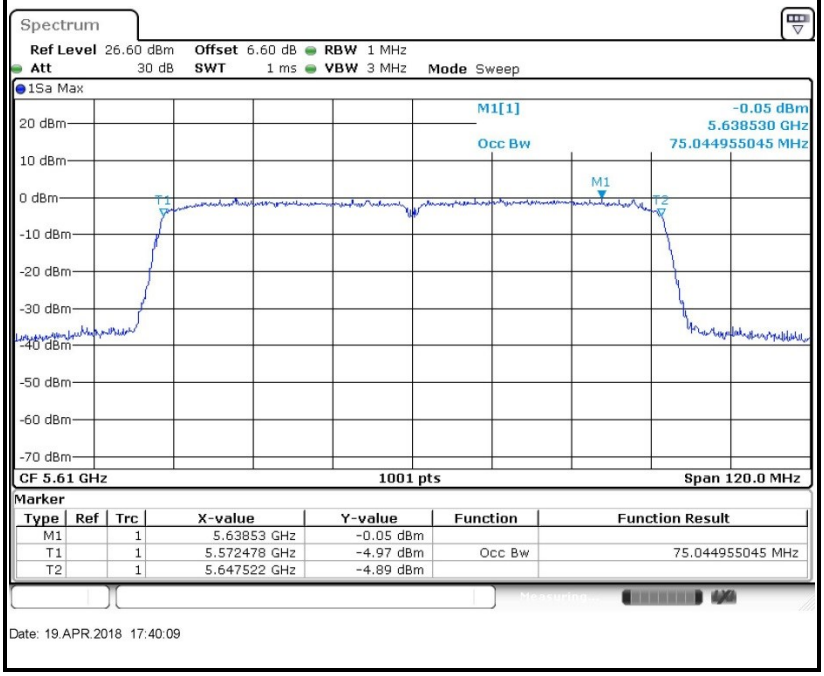
3.1.5 Test Result of 26dB & 99% Occupied Bandwidth

Please refer to Appendix A.

Maximum 26dB Bandwidth



Maximum 99% Occupied Bandwidth



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

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

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

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

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

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

3.2.2 Measuring Instruments

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

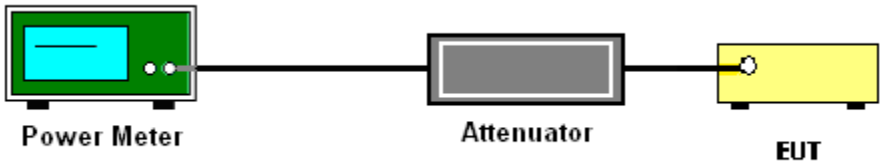
3.2.3 Test Procedures

The testing follows Method PM of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

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

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

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

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

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

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

3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. 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).

- 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.

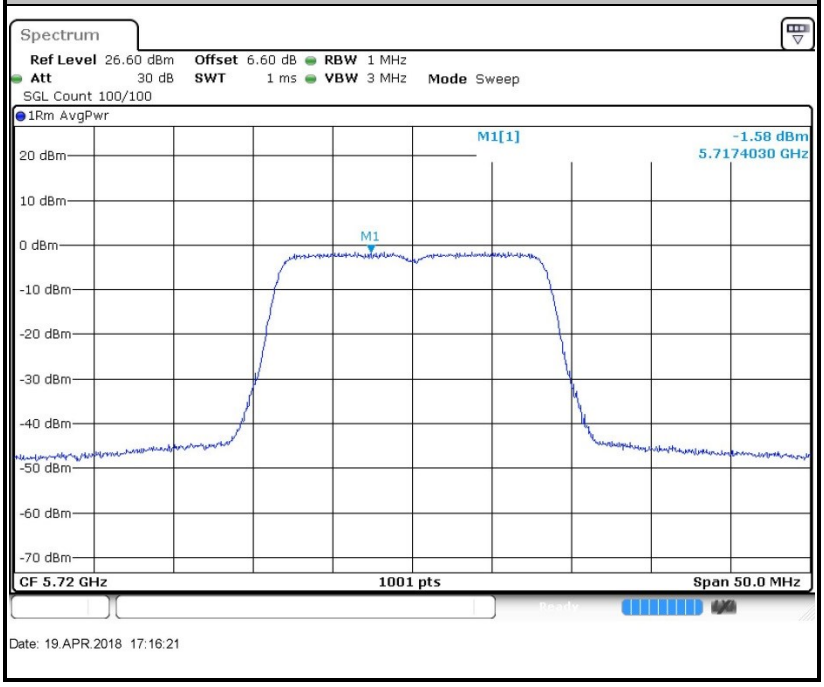
1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup

3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

Worst Case Power Density (dBm/MHz)



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

3.4 Unwanted Emissions Measurement

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

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 shall comply with the general field strength limits as below table,

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

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.2

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

$$EIRP = E_{Meas} + 20\log(d_{Meas}) - 104.7$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01. Section G) Unwanted emissions measurement.

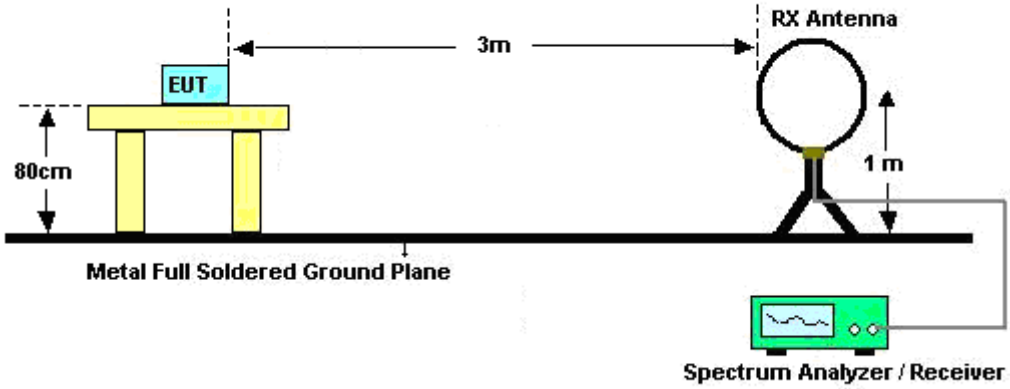
   (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
   - RBW = 120 kHz
   - VBW = 300 kHz
   - Detector = Peak
   - Trace mode = max hold

   (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
   - RBW = 1 MHz
   - VBW ≥ 3 MHz
   - Detector = Peak
   - Sweep time = auto
   - Trace mode = max hold

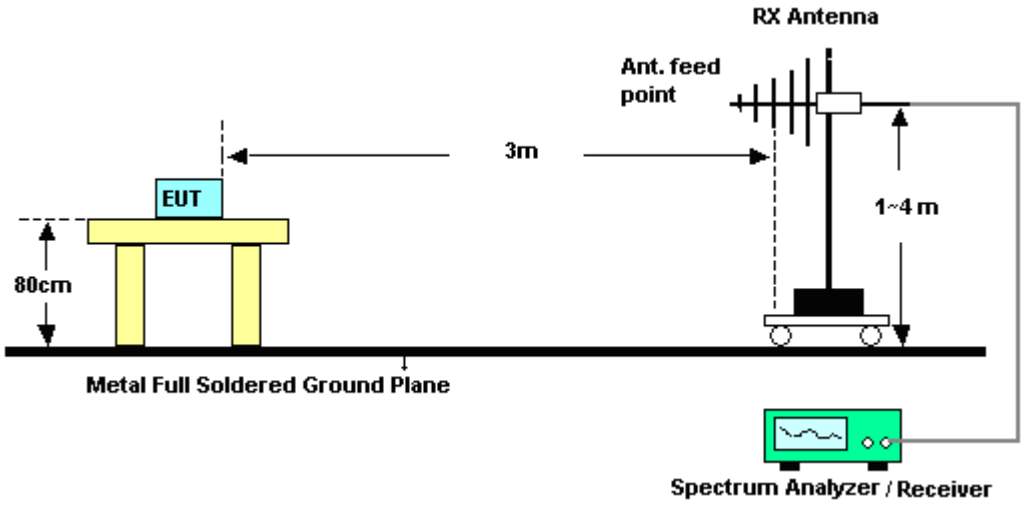
   (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
   - RBW = 1 MHz
   - VBW = 10 Hz, when duty cycle is no less than 98 percent.
   - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

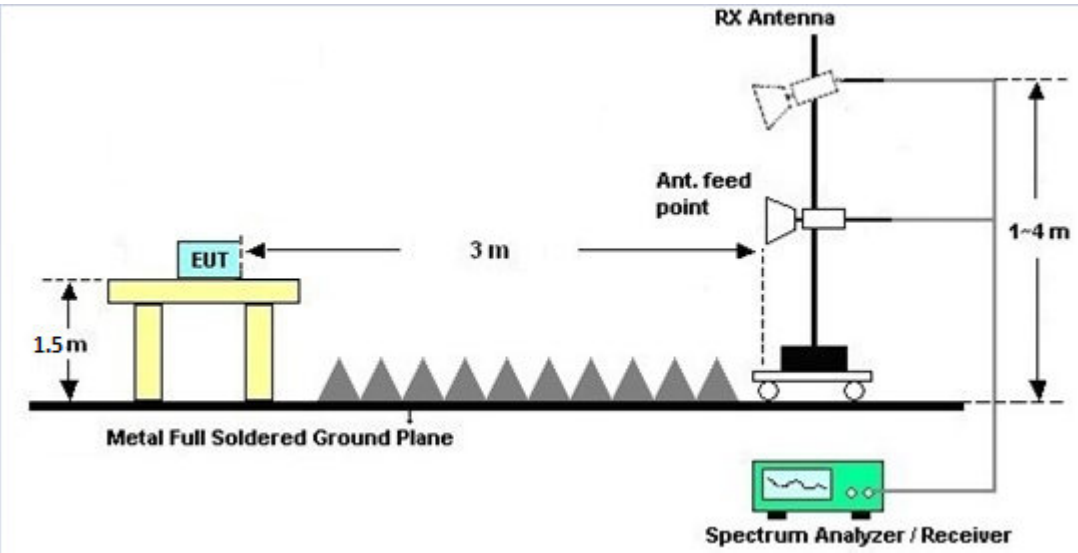
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C and Appendix D.

3.4.7 Duty Cycle

Please refer to Appendix E.

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

Please refer to Appendix C and Appendix D.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

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

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

*Decreases with the logarithm of the frequency.

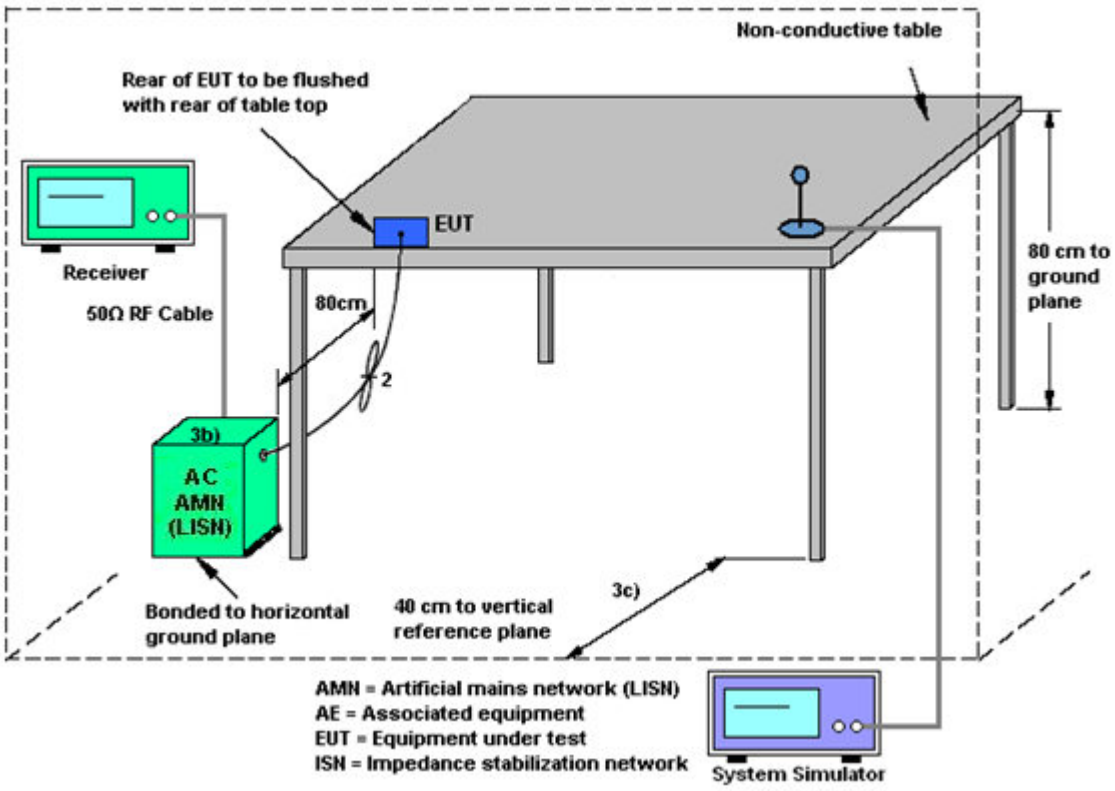
3.5.2 Measuring Instruments

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

3.5.3 Test Procedures

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

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.6 Automatically Discontinue Transmission

3.6.1 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.

3.6.2 Measuring Instruments

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

3.6.3 Test Result of Automatically Discontinue Transmission

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

3.7 Antenna Requirements

3.7.1 Standard Applicable

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.

3.7.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.7.3 Antenna Gain

The antenna gain is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Aug. 8, 2017	Apr. 19, 2018	Aug. 7, 2018	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 18, 2018	Apr. 19, 2018	Jan. 17, 2019	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 18, 2018	Apr. 19, 2018	Jan. 17, 2019	Conducted (TH01-KS)
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct..19.2017	Apr. 23, 2018	Oct..18.2018	Radiation (03CH03-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44GHz	Apr. 17, 2018	Apr. 23, 2018	Apr.16, 2019	Radiation (03CH03-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 22, 2017	Apr. 23, 2018	Oct. 21, 2018	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	47610	30MHz-1GHz	Sep. 12, 2017	Apr. 23, 2018	Sep. 11, 2018	Radiation (03CH03-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75959	1GHz~18GHz	Jan. 21, 2018	Apr. 23, 2018	Jan. 20, 2019	Radiation (03CH03-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz~40GHz	Feb. 07, 2018	Apr. 23, 2018	Feb.06, 2019	Radiation (03CH03-KS)
Amplifier	com-power	PA-103A	161069	1MHz ~1000MHz / 32 dB	Apr 17, 2018	Apr. 23, 2018	Apr 16, 2019	Radiation (03CH03-KS)
Amplifier	MITEQ	TTA1840-35-HG	1887435	18~40GHz	Oct. 12, 2017	Apr. 23, 2018	Oct. 11, 2018	Radiation (03CH03-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz-18Ghz	Apr.17.2018	Apr. 23, 2018	Apr.16, 2019	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 12, 2017	Apr. 23, 2018	Oct. 11, 2018	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Apr. 23, 2018	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Apr. 23, 2018	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Apr. 23, 2018	NCR	Radiation (03CH03-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	Apr. 20, 2017	Apr. 18, 2018	Apr. 19, 2018	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 13, 2017	Apr. 18, 2018	Oct. 12, 2018	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 13, 2017	Apr. 18, 2018	Oct. 12, 2018	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 12, 2017	Apr. 18, 2018	Oct. 11, 2018	Conduction (CO01-KS)

NCR: No Calibration Required

5 Uncertainty of Evaluation

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

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

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

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

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.1dB**

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

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

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Silent Hai	Temperature:	21~25	°C
Test Date:	2017/4/19	Relative Humidity:	51~55	%

TEST RESULTS DATA
26dB and 99% OBW

Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)		
11a	6Mbps	1	36	5180	17.38	20.58	-	22.40		
11a	6Mbps	1	44	5220	17.53	20.68	-	22.44		
11a	6Mbps	1	48	5240	17.48	20.78	-	22.43		
VHT20	MCS0	1	36	5180	18.18	21.03	-	22.60		
VHT20	MCS0	1	44	5220	18.28	21.33	-	22.62		
VHT20	MCS0	1	48	5240	18.33	21.28	-	22.63		
VHT40	MCS0	1	38	5190	36.06	40.19	-	23.01		
VHT40	MCS0	1	46	5230	36.06	40.01	-	23.01		
VHT80	MCS0	1	42	5210	74.81	80.56	-	23.01		

TEST RESULTS DATA
Average Power Table

FCC Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)		Pass/Fail
11a	6Mbps	1	36	5180	0.10	9.38	24.00	2.00		Pass
11a	6Mbps	1	44	5220	0.10	9.46	24.00	2.00		Pass
11a	6Mbps	1	48	5240	0.10	9.51	24.00	2.00		Pass
HT20	MCS0	1	36	5180	0.11	9.01	24.00	2.00		Pass
HT20	MCS0	1	44	5220	0.11	9.16	24.00	2.00		Pass
HT20	MCS0	1	48	5240	0.11	9.23	24.00	2.00		Pass
HT40	MCS0	1	38	5190	0.21	9.32	24.00	2.00		Pass
HT40	MCS0	1	46	5230	0.21	9.35	24.00	2.00		Pass
VHT20	MCS0	1	36	5180	0.11	9.03	24.00	2.00		Pass
VHT20	MCS0	1	44	5220	0.11	9.19	24.00	2.00		Pass
VHT20	MCS0	1	48	5240	0.11	9.26	24.00	2.00		Pass
VHT40	MCS0	1	38	5190	0.18	9.33	24.00	2.00		Pass
VHT40	MCS0	1	46	5230	0.18	9.36	24.00	2.00		Pass
VHT80	MCS0	1	42	5210	0.19	9.28	24.00	2.00		Pass

TEST RESULTS DATA
Power Spectral Density

FCC Band I										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)	-	Pass/Fail
11a	6Mbps	1	36	5180	0.10	-1.83	11.00	2.00		Pass
11a	6Mbps	1	44	5220	0.10	-1.84	11.00	2.00		Pass
11a	6Mbps	1	48	5240	0.10	-1.77	11.00	2.00		Pass
VHT20	MCS0	1	36	5180	0.11	-2.41	11.00	2.00		Pass
VHT20	MCS0	1	44	5220	0.11	-2.33	11.00	2.00		Pass
VHT20	MCS0	1	48	5240	0.11	-2.44	11.00	2.00		Pass
VHT40	MCS0	1	38	5190	0.18	-5.18	11.00	2.00		Pass
VHT40	MCS0	1	46	5230	0.18	-5.09	11.00	2.00		Pass
VHT80	MCS0	1	42	5210	0.19	-8.22	11.00	2.00		Pass

Report Number : FR840402D

TEST RESULTS DATA
26dB and 99% OBW

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	52	5260	17.58	20.68	23.45	29.45	23.98	
11a	6M bps	1	60	5300	17.58	20.78	23.45	29.45	23.98	
11a	6M bps	1	64	5320	17.53	20.58	23.44	29.44	23.98	
VHT20	MCS 0	1	52	5260	18.28	21.38	23.62	29.62	23.98	
VHT20	MCS 0	1	60	5300	18.28	21.33	23.62	29.62	23.98	
VHT20	MCS 0	1	64	5320	18.28	21.23	23.62	29.62	23.98	
VHT40	MCS 0	1	54	5270	36.06	40.01	23.98	30.00	23.98	
VHT40	MCS 0	1	62	5310	36.06	40.19	23.98	30.00	23.98	
VHT80	MCS 0	1	58	5290	74.93	80.56	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

FCC Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	52	5260	0.10	9.56	23.98	2.00	26.99	Pass
11a	6M bps	1	60	5300	0.10	9.63	23.98	2.00	26.99	Pass
11a	6M bps	1	64	5320	0.10	9.45	23.98	2.00	26.99	Pass
HT20	MCS 0	1	52	5260	0.11	9.26	23.98	2.00	26.99	Pass
HT20	MCS 0	1	60	5300	0.11	9.37	23.98	2.00	26.99	Pass
HT20	MCS 0	1	64	5320	0.11	9.25	23.98	2.00	26.99	Pass
HT40	MCS 0	1	54	5270	0.21	9.40	23.98	2.00	26.99	Pass
HT40	MCS 0	1	62	5310	0.21	9.45	23.98	2.00	26.99	Pass
VHT20	MCS 0	1	52	5260	0.11	9.32	23.98	2.00	26.99	Pass
VHT20	MCS 0	1	60	5300	0.11	9.39	23.98	2.00	26.99	Pass
VHT20	MCS 0	1	64	5320	0.11	9.26	23.98	2.00	26.99	Pass
VHT40	MCS 0	1	54	5270	0.18	9.41	23.98	2.00	26.99	Pass
VHT40	MCS 0	1	62	5310	0.18	9.46	23.98	2.00	26.99	Pass
VHT80	MCS 0	1	58	5290	0.19	9.30	23.98	2.00	26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band II										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	52	5260	0.10	-2.22	11.00	2.00		Pass
11a	6M bps	1	60	5300	0.10	-2.06	11.00	2.00		Pass
11a	6M bps	1	64	5320	0.10	-1.97	11.00	2.00		Pass
VHT20	MCS 0	1	52	5260	0.11	-2.43	11.00	2.00		Pass
VHT20	MCS 0	1	60	5300	0.11	-2.40	11.00	2.00		Pass
VHT20	MCS 0	1	64	5320	0.11	-2.42	11.00	2.00		Pass
VHT40	MCS 0	1	54	5270	0.18	-4.98	11.00	2.00		Pass
VHT40	MCS 0	1	62	5310	0.18	-5.19	11.00	2.00		Pass
VHT80	MCS 0	1	58	5290	0.19	-8.43	11.00	2.00		Pass

TEST RESULTS DATA
26dB and 99% OBW

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	99% Bandwidth (MHz)	26 dB Bandwidth (MHz)	IC 99% Bandwidth Power Limit (dBm)	IC 99% Bandwidth EIRP Limit (dBm)	FCC 26dB Bandwidth Power Limit (dBm)	Note
11a	6M bps	1	100	5500	17.58	20.73	23.45	29.45	23.98	
11a	6M bps	1	116	5580	17.53	20.73	23.44	29.44	23.98	
11a	6M bps	1	140	5700	17.53	20.63	23.44	29.44	23.98	
11a	6Mbps	1	144	5720	17.48	20.73	23.43	29.43	23.98	
VHT20	MCS 0	1	100	5500	18.33	21.43	23.63	29.63	23.98	
VHT20	MCS 0	1	116	5580	18.33	21.33	23.63	29.63	23.98	
VHT20	MCS 0	1	140	5700	18.33	21.43	23.63	29.63	23.98	
VHT20	MCS0	1	144	5720	18.28	21.38	23.62	29.62	23.98	
VHT40	MCS 0	1	102	5510	36.06	40.28	23.98	30.00	23.98	
VHT40	MCS 0	1	110	5550	35.96	40.10	23.98	30.00	23.98	
VHT40	MCS 0	1	134	5670	36.06	40.01	23.98	30.00	23.98	
VHT40	MCS0	1	142	5710	36.06	40.28	23.98	30.00	23.98	
VHT80	MCS 0	1	106	5530	74.81	80.40	23.98	30.00	23.98	
VHT80	MCS 0	1	122	5610	75.04	80.72	23.98	30.00	23.98	
VHT80	MCS0	1	138	5690	74.93	80.56	23.98	30.00	23.98	

TEST RESULTS DATA
Average Power Table

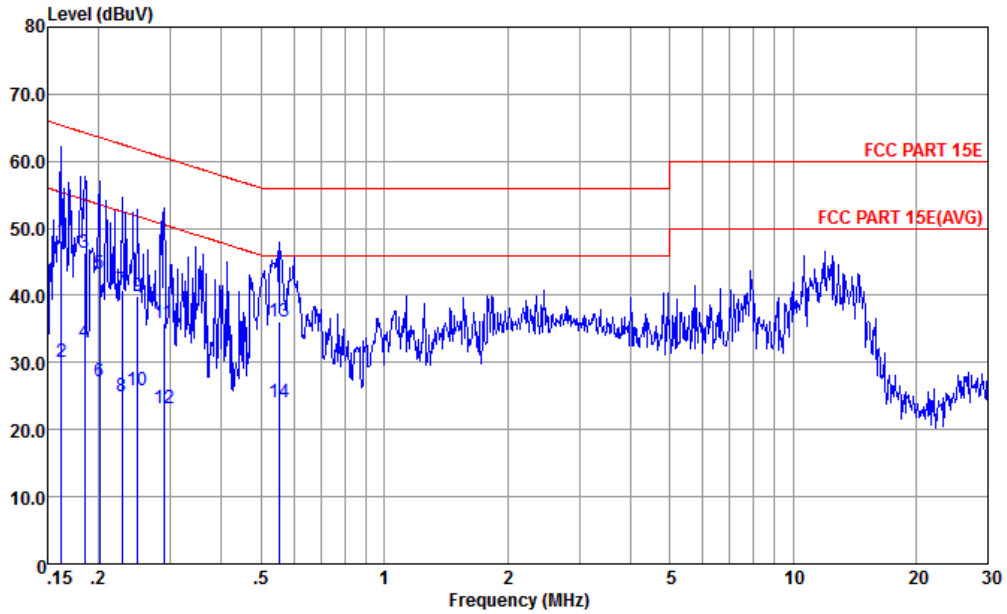
FCC Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)	FCC Conducted Power Limit (dBm)	DG (dBi)	EIRP Power Limit (dBm)	Pass/Fail
11a	6M bps	1	100	5500	0.10	9.07	23.98	2.10	26.99	Pass
11a	6M bps	1	116	5580	0.10	9.29	23.98	2.10	26.99	Pass
11a	6M bps	1	140	5700	0.10	9.69	23.98	2.10	26.99	Pass
11a	6Mbps	1	144	5720	0.10	9.82	23.98	2.10	26.99	Pass
HT20	MCS 0	1	100	5500	0.11	8.83	23.98	2.10	26.99	Pass
HT20	MCS 0	1	116	5580	0.11	9.06	23.98	2.10	26.99	Pass
HT20	MCS 0	1	140	5700	0.11	9.45	23.98	2.10	26.99	Pass
HT40	MCS 0	1	102	5510	0.21	9.08	23.98	2.10	26.99	Pass
HT40	MCS 0	1	110	5550	0.21	8.65	23.98	2.10	26.99	Pass
HT40	MCS 0	1	134	5670	0.21	9.39	23.98	2.10	26.99	Pass
VHT20	MCS 0	1	100	5500	0.11	8.87	23.98	2.10	26.99	Pass
VHT20	MCS 0	1	116	5580	0.11	9.08	23.98	2.10	26.99	Pass
VHT20	MCS 0	1	140	5700	0.11	9.47	23.98	2.10	26.99	Pass
VHT20	MCS0	1	144	5720	0.11	9.59	23.98	2.10	26.99	Pass
VHT40	MCS 0	1	102	5510	0.18	9.09	23.98	2.10	26.99	Pass
VHT40	MCS 0	1	110	5550	0.18	8.66	23.98	2.10	26.99	Pass
VHT40	MCS 0	1	134	5670	0.18	9.40	23.98	2.10	26.99	Pass
VHT40	MCS0	1	142	5710	0.18	9.63	23.98	2.10	26.99	Pass
VHT80	MCS 0	1	106	5530	0.19	8.69	23.98	2.10	26.99	Pass
VHT80	MCS 0	1	122	5610	0.19	8.88	23.98	2.10	26.99	Pass
VHT80	MCS0	1	138	5690	0.19	9.08	23.98	2.10	26.99	Pass

TEST RESULTS DATA
Power Spectral Density

Band III										
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Duty Factor (dB)	Average Power Density (dBm/MHz)	Average PSD Limit (dBm/MHz)	DG (dBi)		Pass/Fail
11a	6M bps	1	100	5500	0.10	-2.44	11.00	2.10		Pass
11a	6M bps	1	116	5580	0.10	-2.47	11.00	2.10		Pass
11a	6M bps	1	140	5700	0.10	-1.88	11.00	2.10		Pass
11a	6Mbps	1	144	5720	0.10	-1.48	11.00	2.10		Pass
VHT20	MCS 0	1	100	5500	0.11	-2.97	11.00	2.10		Pass
VHT20	MCS 0	1	116	5580	0.11	-2.56	11.00	2.10		Pass
VHT20	MCS 0	1	140	5700	0.11	-1.95	11.00	2.10		Pass
VHT20	MCS0	1	144	5720	0.11	-1.75	11.00	2.10		Pass
VHT40	MCS 0	1	102	5510	0.18	-5.54	11.00	2.10		Pass
VHT40	MCS 0	1	110	5550	0.18	-5.56	11.00	2.10		Pass
VHT40	MCS 0	1	134	5670	0.18	-4.82	11.00	2.10		Pass
VHT40	MCS0	1	142	5710	0.18	-4.76	11.00	2.10		Pass
VHT80	MCS 0	1	106	5530	0.19	-8.63	11.00	2.10		Pass
VHT80	MCS 0	1	122	5610	0.19	-8.79	11.00	2.10		Pass
VHT80	MCS0	1	138	5690	0.19	-8.47	11.00	2.10		Pass

Appendix B. AC Conducted Emission Test Results

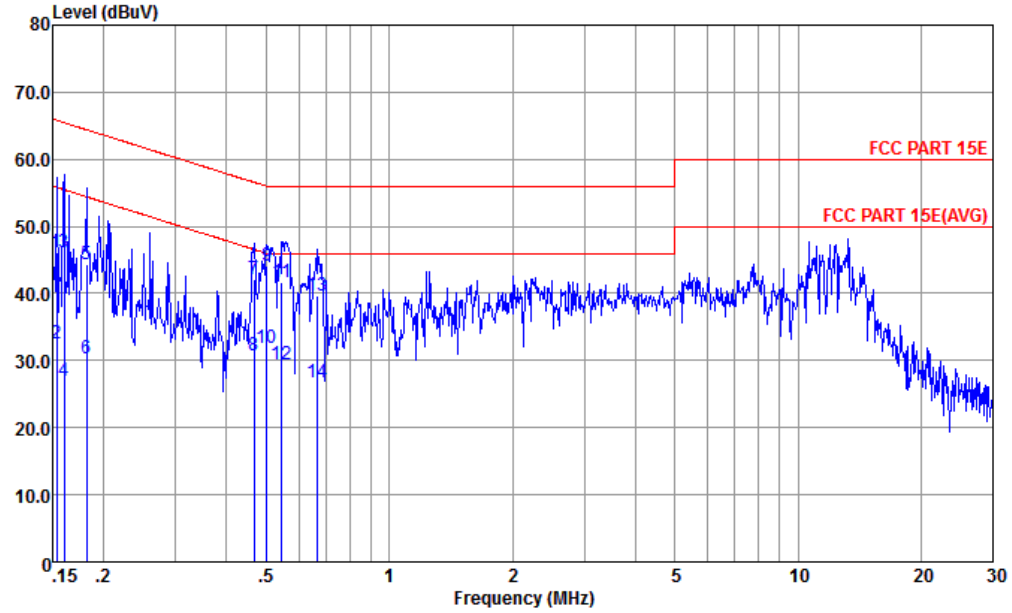
Test Engineer :	Amos Zhang	**Temperature :**	21.1~22.3℃
		Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : FCC PART 15E LISN-L-171013-060103 LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	*	0.162	48.05	-17.29	65.34	37.31	0.17	10.57	QP
2		0.162	30.05	-25.29	55.34	19.31	0.17	10.57	Average
3		0.184	46.29	-17.99	64.28	35.60	0.19	10.50	QP
4		0.184	32.99	-21.29	54.28	22.30	0.19	10.50	Average
5		0.201	43.26	-20.32	63.58	32.61	0.20	10.45	QP
6		0.201	27.26	-26.32	53.58	16.61	0.20	10.45	Average
7		0.228	40.85	-21.67	62.52	30.19	0.21	10.45	QP
8		0.228	24.85	-27.67	52.52	14.19	0.21	10.45	Average
9		0.249	39.85	-21.93	61.78	29.20	0.21	10.44	QP
10		0.249	25.85	-25.93	51.78	15.20	0.21	10.44	Average
11		0.289	35.85	-24.69	60.54	25.20	0.22	10.43	QP
12		0.289	23.25	-27.29	50.54	12.60	0.22	10.43	Average
13		0.555	36.12	-19.88	56.00	25.60	0.26	10.26	QP
14		0.555	24.02	-21.98	46.00	13.50	0.26	10.26	Average

Test Engineer :	Amos Zhang	**Temperature :**	21.1~22.3℃
		Relative Humidity :	40~42%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : FCC PART 15E LISN-N-171013-060103 NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.153	46.09	-19.73	65.82	35.20	0.28	10.61	QP
2		0.153	32.49	-23.33	55.82	21.60	0.28	10.61	Average
3		0.160	46.06	-19.41	65.47	35.20	0.28	10.58	QP
4		0.160	27.06	-28.41	55.47	16.20	0.28	10.58	Average
5		0.182	44.39	-20.03	64.42	33.60	0.28	10.51	QP
6		0.182	30.39	-24.03	54.42	19.60	0.28	10.51	Average
7		0.466	42.13	-14.45	56.58	31.50	0.29	10.34	QP
8		0.466	30.83	-15.75	46.58	20.20	0.29	10.34	Average
9	*	0.502	44.09	-11.91	56.00	33.50	0.29	10.30	QP
10		0.502	31.89	-14.11	46.00	21.30	0.29	10.30	Average
11		0.546	41.76	-14.24	56.00	31.20	0.29	10.27	QP
12		0.546	29.46	-16.54	46.00	18.90	0.29	10.27	Average
13		0.665	39.68	-16.32	56.00	29.20	0.30	10.18	QP
14		0.665	26.78	-19.22	46.00	16.30	0.30	10.18	Average

Appendix C. Radiated Spurious Emission

Band 1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5147.36	54.62	-19.38	74	44.9	34.54	11.88	36.7	399	188	P	H
		5149.92	45.39	-8.61	54	35.67	34.54	11.88	36.7	399	188	A	H
	*	5174	102.34	-	-	92.55	34.55	11.93	36.69	399	188	P	H
	*	5174	95.11	-	-	85.32	34.55	11.93	36.69	399	188	A	H
		5144.32	55.65	-18.35	74	45.93	34.54	11.88	36.7	383	92	P	V
		5149.99	44.55	-9.45	54	34.83	34.54	11.88	36.7	383	92	A	V
	*	5182	98.73	-	-	88.94	34.55	11.93	36.69	383	92	P	V
	*	5182	91.32	-	-	81.53	34.55	11.93	36.69	383	92	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		10360	42.06	-31.94	74	55.01	37.55	15.65	66.15	100	360	P	H
CH 36 5180MHz		10360	44.51	-29.49	74	57.46	37.55	15.65	66.15	100	360	P	V
802.11a		10440	42.14	-31.86	74	54.97	37.59	15.68	66.1	100	360	P	H
CH 44 5220MHz		10440	43.22	-30.78	74	56.05	37.59	15.68	66.1	100	360	P	V
802.11a		10480	43.5	-30.5	74	56.24	37.63	15.7	66.07	100	360	P	H
CH 48 5240MHz		10480	43	-31	74	55.74	37.63	15.7	66.07	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 36 5180MHz		5145.6	54.93	-19.07	74	45.21	34.54	11.88	36.7	186	196	P	H
		5149.28	45.89	-8.11	54	36.17	34.54	11.88	36.7	186	196	A	H
	*	5182	101.62	-	-	91.83	34.55	11.93	36.69	186	196	P	H
	*	5182	94.66	-	-	84.87	34.55	11.93	36.69	186	196	A	H
		5105.28	54.09	-19.91	74	44.44	34.53	11.82	36.7	370	89	P	V
		5148	44.66	-9.34	54	34.94	34.54	11.88	36.7	370	89	A	V
	*	5174	98.77	-	-	88.98	34.55	11.93	36.69	370	89	P	V
	*	5174	91.52	-	-	81.73	34.55	11.93	36.69	370	89	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10360	42.06	-31.94	74	55.01	37.55	15.65	66.15	100	360	P	H
VHT20 CH 36 5180MHz		10360	44.51	-29.49	74	57.46	37.55	15.65	66.15	100	360	P	V
802.11ac		10440	42.91	-31.09	74	55.74	37.59	15.68	66.1	100	360	P	H
VHT20 CH 44 5220MHz		10440	43.77	-30.23	74	56.6	37.59	15.68	66.1	100	360	P	V
802.11ac		10480	43.53	-30.47	74	56.27	37.63	15.7	66.07	100	360	P	H
VHT20 CH 48 5240MHz		10480	43.59	-30.41	74	56.33	37.63	15.7	66.07	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 38 5190MHz		5149.76	53.85	-20.15	74	44.13	34.54	11.88	36.7	314	202	P	H
		5149.76	45.58	-8.42	54	35.86	34.54	11.88	36.7	314	202	A	H
	*	5196	98.59	-	-	88.77	34.56	11.95	36.69	314	202	P	H
	*	5196	91.44	-	-	81.62	34.56	11.95	36.69	314	202	A	H
		5375.52	52.68	-21.32	74	42.61	34.61	12.15	36.69	314	202	P	H
		5359.5	43.51	-10.49	54	33.46	34.61	12.13	36.69	314	202	A	H
		5107.04	53.51	-20.49	74	43.84	34.53	11.84	36.7	299	97	P	V
		5147.52	44.58	-9.42	54	34.86	34.54	11.88	36.7	299	97	A	V
	*	5196	94.26	-	-	84.44	34.56	11.95	36.69	299	97	P	V
	*	5196	87.5	-	-	77.68	34.56	11.95	36.69	299	97	A	V
		5383.26	51.58	-22.42	74	41.48	34.62	12.17	36.69	299	97	P	V
		5379.84	42.97	-11.03	54	32.87	34.62	12.17	36.69	299	97	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10380	43.34	-30.66	74	56.26	37.56	15.66	66.14	100	360	P	H
VHT40 CH 38 5190MHz		10380	44.02	-29.98	74	56.94	37.56	15.66	66.14	100	360	P	V
802.11ac		10460	43.86	-30.14	74	56.66	37.6	15.69	66.09	100	360	P	H
VHT40 CH 46 5230MHz		10460	43.36	-30.64	74	56.16	37.6	15.69	66.09	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5149.99	56.13	-17.87	74	46.41	34.54	11.88	36.7	174	196	P	H
		5149.99	48.3	-5.7	54	38.58	34.54	11.88	36.7	174	196	A	H
	*	5184	96.41	-	-	86.62	34.55	11.93	36.69	174	196	P	H
	*	5184	88.27	-	-	78.48	34.55	11.93	36.69	174	196	A	H
		5382.18	51.51	-22.49	74	41.41	34.62	12.17	36.69	174	196	P	H
		5399.1	43.68	-10.32	54	33.56	34.62	12.19	36.69	174	196	A	H
		5144.32	55.16	-18.84	74	45.44	34.54	11.88	36.7	369	90	P	V
		5148.32	46.68	-7.32	54	36.96	34.54	11.88	36.7	369	90	A	V
	*	5222	92.47	-	-	82.63	34.56	11.97	36.69	369	90	P	V
	*	5222	85.05	-	-	75.21	34.56	11.97	36.69	369	90	A	V
		5381.46	52.27	-21.73	74	42.17	34.62	12.17	36.69	369	90	P	V
		5398.92	43.46	-10.54	54	33.34	34.62	12.19	36.69	369	90	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 1 5150~5250MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10420	43.22	-30.78	74	56.09	37.58	15.67	66.12	100	360	P	H
VHT80 CH 42 5210MHz		10420	43.65	-30.35	74	56.52	37.58	15.67	66.12	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 - 5250~5350MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 64 5320MHz	*	5312	100.58	-	-	90.58	34.6	12.09	36.69	394	184	P	H
	*	5312	93.64	-	-	83.64	34.6	12.09	36.69	394	184	A	H
		5351.1	52.87	-21.13	74	42.82	34.61	12.13	36.69	394	184	P	H
		5350.5	44.5	-9.5	54	34.45	34.61	12.13	36.69	394	184	A	H
	*	5324	100.31	-	-	90.31	34.6	12.09	36.69	386	97	P	V
	*	5324	92.23	-	-	82.23	34.6	12.09	36.69	386	97	A	V
		5350.3	52.06	-21.94	74	42.01	34.61	12.13	36.69	386	97	P	V
		5351.6	43.84	-10.16	54	33.79	34.61	12.13	36.69	386	97	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		10520	43.74	-30.26	74	56.41	37.65	15.72	66.04	100	360	P	H
CH 52 5260MHz		10520	42.65	-31.35	74	55.32	37.65	15.72	66.04	100	360	P	V
802.11a		10600	42.64	-31.36	74	55.17	37.7	15.75	65.98	100	360	P	H
CH 60 5300MHz		10600	42.47	-31.53	74	55	37.7	15.75	65.98	100	360	P	V
802.11a		10640	43.99	-30.01	74	56.45	37.73	15.77	65.96	100	360	P	H
CH 64 5320MHz		10640	43.21	-30.79	74	55.67	37.73	15.77	65.96	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
	*	5324	100.74	-	-	90.74	34.6	12.09	36.69	208	197	P	H
	*	5324	93.42	-	-	83.42	34.6	12.09	36.69	208	197	A	H
802.11ac		5352	53.27	-20.73	74	43.22	34.61	12.13	36.69	208	197	P	H
VHT20		5350.01	44.8	-9.2	54	34.75	34.61	12.13	36.69	208	197	A	H
CH 64	*	5314	97.86	-	-	87.86	34.6	12.09	36.69	340	104	P	V
5320MHz	*	5314	90.82	-	-	80.82	34.6	12.09	36.69	340	104	A	V
		5350.6	51.59	-22.41	74	41.54	34.61	12.13	36.69	340	104	P	V
		5353.7	43.48	-10.52	54	33.43	34.61	12.13	36.69	340	104	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10520	43.91	-30.09	74	56.58	37.65	15.72	66.04	100	360	P	H
VHT20 CH 52 5260MHz		10520	43.69	-30.31	74	56.36	37.65	15.72	66.04	100	360	P	V
802.11ac		10600	43.4	-30.6	74	55.93	37.7	15.75	65.98	100	360	P	H
VHT20 CH 60 5300MHz		10600	43.85	-30.15	74	56.38	37.7	15.75	65.98	100	360	P	V
802.11ac		10640	43.81	-30.19	74	56.27	37.73	15.77	65.96	100	360	P	H
VHT20 CH 64 5320MHz		10640	44.6	-29.4	74	57.06	37.73	15.77	65.96	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 62 5310MHz		5132.32	53.22	-20.78	74	43.52	34.54	11.86	36.7	100	169	P	H
		5101.6	44.36	-9.64	54	34.71	34.53	11.82	36.7	100	169	A	H
	*	5308	96.67	-	-	86.7	34.59	12.07	36.69	100	169	P	H
	*	5308	89.81	-	-	79.84	34.59	12.07	36.69	100	169	A	H
		5350.3	52.16	-21.84	74	42.11	34.61	12.13	36.69	100	169	P	H
		5350.6	44.12	-9.88	54	34.07	34.61	12.13	36.69	100	169	A	H
		5122.4	54.35	-19.65	74	44.68	34.53	11.84	36.7	300	104	P	V
		5120.96	44.24	-9.76	54	34.57	34.53	11.84	36.7	300	104	A	V
	*	5302	94.09	-	-	84.12	34.59	12.07	36.69	300	104	P	V
	*	5302	86.91	-	-	76.94	34.59	12.07	36.69	300	104	A	V
		5353.8	51.78	-22.22	74	41.73	34.61	12.13	36.69	300	104	P	V
		5350.4	43.24	-10.76	54	33.19	34.61	12.13	36.69	300	104	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10540	43.78	-30.22	74	56.43	37.66	15.72	66.03	100	360	P	H
VHT40 CH 54 5270MHz		10540	43.27	-30.73	74	55.92	37.66	15.72	66.03	100	360	P	V
802.11ac		10620	43.61	-30.39	74	56.1	37.72	15.76	65.97	100	360	P	H
VHT40 CH 62 5310MHz		10620	43.6	-30.4	74	56.09	37.72	15.76	65.97	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 58 5290MHz		5115.84	53.78	-20.22	74	44.11	34.53	11.84	36.7	124	189	P	H
		5148.16	45.11	-8.89	54	35.39	34.54	11.88	36.7	124	189	A	H
	*	5280	94.64	-	-	84.69	34.59	12.05	36.69	124	189	P	H
	*	5280	87.57	-	-	77.62	34.59	12.05	36.69	124	189	A	H
		5354	54.28	-19.72	74	44.23	34.61	12.13	36.69	124	189	P	H
		5350.3	46.34	-7.66	54	36.29	34.61	12.13	36.69	124	189	A	H
		5113.76	53.35	-20.65	74	43.68	34.53	11.84	36.7	398	97	P	V
		5108.64	44.59	-9.41	54	34.92	34.53	11.84	36.7	398	97	A	V
	*	5304	92.48	-	-	82.51	34.59	12.07	36.69	398	97	P	V
	*	5304	85.19	-	-	75.22	34.59	12.07	36.69	398	97	A	V
		5350.1	54.77	-19.23	74	44.72	34.61	12.13	36.69	398	97	P	V
		5350.6	44.99	-9.01	54	34.94	34.61	12.13	36.69	398	97	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		10580	43.48	-30.52	74	56.04	37.69	15.75	66	100	360	P	H
VHT80 CH 58 5290MHz		10580	43.68	-30.32	74	56.24	37.69	15.75	66	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 100 5500MHz		5462.32	53.32	-20.68	74	43.12	34.64	12.25	36.69	300	156	P	H
		5469.68	44.66	-9.34	54	34.43	34.65	12.27	36.69	300	156	A	H
	*	5504	99.23	-	-	88.93	34.66	12.32	36.68	300	156	P	H
	*	5504	92.09	-	-	81.79	34.66	12.32	36.68	300	156	A	H
		5457.84	52.49	-21.51	74	42.29	34.64	12.25	36.69	324	95	P	V
		5469.84	44.05	-9.95	54	33.82	34.65	12.27	36.69	324	95	A	V
	*	5504	97.09	-	-	86.79	34.66	12.32	36.68	324	95	P	V
	*	5504	90.48	-	-	80.18	34.66	12.32	36.68	324	95	A	V
802.11a CH 140 5700MHz	*	5694	100.02	-	-	89.54	34.72	12.53	36.77	392	148	P	H
	*	5694	92.76	-	-	82.28	34.72	12.53	36.77	392	148	A	H
		5732.76	54.04	-19.96	74	43.58	34.74	12.57	36.85	392	148	P	H
		5725.4	45.6	-8.4	54	35.1	34.74	12.57	36.81	392	148	A	H
	*	5702	97.36	-	-	86.85	34.73	12.55	36.77	331	89	P	V
	*	5702	90.2	-	-	79.69	34.73	12.55	36.77	331	89	A	V
		5728.76	53.47	-20.53	74	42.97	34.74	12.57	36.81	331	89	P	V
		5725.16	44.45	-9.55	54	33.95	34.74	12.57	36.81	331	89	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a		11000	44.93	-29.07	74	56.75	37.96	15.92	65.7	100	360	P	H
CH 100 5500MHz		11000	44.82	-29.18	74	56.64	37.96	15.92	65.7	100	360	P	V
802.11a		11160	44.33	-29.67	74	55.84	38.08	15.99	65.58	100	360	P	H
CH 116 5580MHz		11160	43.38	-30.62	74	54.89	38.08	15.99	65.58	100	360	P	V
802.11a		11400	37.96	-36.04	74	49.04	38.23	16.1	65.41	100	0	P	H
CH 140 5700MHz		11400	40.84	-33.16	74	51.92	38.23	16.1	65.41	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5457.2	53.06	-20.94	74	42.86	34.64	12.25	36.69	393	159	P	H
		5469.68	44.68	-9.32	54	34.45	34.65	12.27	36.69	393	159	A	H
802.11ac	*	5500	100.14	-	-	89.85	34.66	12.32	36.69	393	159	P	H
VHT20	*	5500	92.83	-	-	82.54	34.66	12.32	36.69	393	159	A	H
CH 100		5449.36	52.39	-21.61	74	42.19	34.64	12.25	36.69	300	106	P	V
5500MHz		5467.28	43.6	-10.4	54	33.37	34.65	12.27	36.69	300	106	A	V
	*	5494	95.52	-	-	85.26	34.65	12.3	36.69	300	106	P	V
	*	5494	88.28	-	-	78.02	34.65	12.3	36.69	300	106	A	V
	*	5698	98.89	-	-	88.41	34.72	12.53	36.77	100	182	P	H
	*	5698	91.71	-	-	81.23	34.72	12.53	36.77	100	182	A	H
802.11ac		5731.32	53.61	-20.39	74	43.15	34.74	12.57	36.85	100	182	P	H
VHT20		5725.24	45.04	-8.96	54	34.54	34.74	12.57	36.81	100	182	A	H
CH 140	*	5696	97.08	-	-	86.6	34.72	12.53	36.77	372	93	P	V
5700MHz	*	5696	89.06	-	-	78.58	34.72	12.53	36.77	372	93	A	V
		5746.28	52.98	-21.02	74	42.49	34.75	12.59	36.85	372	93	P	V
		5725.08	44.26	-9.74	54	33.76	34.74	12.57	36.81	372	93	A	V

Remark

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

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11000	44.77	-29.23	74	56.59	37.96	15.92	65.7	100	360	P	H
VHT20 CH 100 5500MHz		11000	44.52	-29.48	74	56.34	37.96	15.92	65.7	100	360	P	V
802.11ac		11160	44.12	-29.88	74	55.63	38.08	15.99	65.58	100	360	P	H
VHT20 CH 116 5580MHz		11160	45.03	-28.97	74	56.54	38.08	15.99	65.58	100	360	P	V
802.11ac		11400	43.18	-30.82	74	54.26	38.23	16.1	65.41	100	360	P	H
VHT20 CH 140 5700MHz		11400	44.07	-29.93	74	55.15	38.23	16.1	65.41	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5436.72	53.08	-20.92	74	42.9	34.64	12.23	36.69	400	170	P	H
		5468.4	44.91	-9.09	54	34.68	34.65	12.27	36.69	400	170	A	H
	*	5520	96.82	-	-	86.5	34.66	12.34	36.68	400	170	P	H
	*	5520	89.4	-	-	79.08	34.66	12.34	36.68	400	170	A	H
802.11ac		5748.84	53.18	-20.82	74	42.69	34.75	12.59	36.85	400	170	P	H
VHT40		5759.24	44.23	-9.77	54	33.78	34.75	12.6	36.9	400	170	A	H
CH 102		5437.52	51.98	-22.02	74	41.8	34.64	12.23	36.69	395	106	P	V
5510MHz		5469.99	44.24	-9.76	54	34.01	34.65	12.27	36.69	395	106	A	V
	*	5514	93.03	-	-	82.71	34.66	12.34	36.68	395	106	P	V
	*	5514	85.89	-	-	75.57	34.66	12.34	36.68	395	106	A	V
		5755.88	52.7	-21.3	74	42.25	34.75	12.6	36.9	395	106	P	V
		5760.2	44	-10	54	33.55	34.75	12.6	36.9	395	106	A	V
		5434.64	51.72	-22.28	74	41.54	34.64	12.23	36.69	335	163	P	H
		5461.36	43.95	-10.05	54	33.75	34.64	12.25	36.69	335	163	A	H
	*	5666	97.16	-	-	86.67	34.71	12.5	36.72	335	163	P	H
	*	5666	89.72	-	-	79.23	34.71	12.5	36.72	335	163	A	H
802.11ac		5738.28	53.13	-20.87	74	42.64	34.75	12.59	36.85	335	163	P	H
VHT40		5759.24	44.49	-9.51	54	34.04	34.75	12.6	36.9	335	163	A	H
CH 134		5468.56	51.86	-22.14	74	41.63	34.65	12.27	36.69	400	103	P	V
5670MHz		5462.48	43.71	-10.29	54	33.51	34.64	12.25	36.69	400	103	A	V
	*	5682	93.05	-	-	82.58	34.72	12.52	36.77	400	103	P	V
	*	5682	86.19	-	-	75.72	34.72	12.52	36.77	400	103	A	V
		5742.84	53.38	-20.62	74	42.89	34.75	12.59	36.85	400	103	P	V
		5759.64	44.09	-9.91	54	33.64	34.75	12.6	36.9	400	103	A	V

Remark

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

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11020	43.92	-30.08	74	55.71	37.97	15.93	65.69	100	360	P	H
VHT40 CH 102 5510MHz		11020	44.83	-29.17	74	56.62	37.97	15.93	65.69	100	360	P	V
802.11ac		11100	44.51	-29.49	74	56.15	38.03	15.96	65.63	100	360	P	H
VHT40 CH 110 5550MHz		11100	45.43	-28.57	74	57.07	38.03	15.96	65.63	100	360	P	V
802.11ac		11340	43.85	-30.15	74	55.05	38.19	16.07	65.46	100	360	P	H
VHT40 CH 134 5670MHz		11340	44.15	-29.85	74	55.35	38.19	16.07	65.46	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5462.16	54.01	-19.99	74	43.81	34.64	12.25	36.69	109	188	P	H
		5469.52	46.58	-7.42	54	36.35	34.65	12.27	36.69	109	188	A	H
	*	5510	93.33	-	-	83.03	34.66	12.32	36.68	109	188	P	H
	*	5510	86.35	-	-	76.05	34.66	12.32	36.68	109	188	A	H
		5751.88	53.63	-20.37	74	43.13	34.75	12.6	36.85	109	188	P	H
		5759.96	44.45	-9.55	54	34	34.75	12.6	36.9	109	188	A	H
		5468.72	53.14	-20.86	74	42.91	34.65	12.27	36.69	373	94	P	V
		5468.56	45.87	-8.13	54	35.64	34.65	12.27	36.69	373	94	A	V
	*	5550	90.84	-	-	80.47	34.67	12.38	36.68	373	94	P	V
	*	5550	83.8	-	-	73.43	34.67	12.38	36.68	373	94	A	V
		5761	52.19	-21.81	74	41.74	34.75	12.6	36.9	373	94	P	V
		5762.68	43.88	-10.12	54	33.43	34.75	12.6	36.9	373	94	A	V
802.11ac VHT80 CH 122 5610MHz		5468.88	53.09	-20.91	74	42.86	34.65	12.27	36.69	109	185	P	H
		5460.56	44.28	-9.72	54	34.08	34.64	12.25	36.69	109	185	A	H
	*	5584	93.6	-	-	83.18	34.68	12.42	36.68	109	185	P	H
	*	5584	85.89	-	-	75.47	34.68	12.42	36.68	109	185	A	H
		5745.8	53.56	-20.44	74	43.07	34.75	12.59	36.85	109	185	P	H
		5759.8	44.6	-9.4	54	34.15	34.75	12.6	36.9	109	185	A	H
		5413.36	52.39	-21.61	74	42.24	34.63	12.21	36.69	360	90	P	V
		5454.96	44.06	-9.94	54	33.86	34.64	12.25	36.69	360	90	A	V
	*	5586	90.99	-	-	80.57	34.68	12.42	36.68	360	90	P	V
	*	5586	83.79	-	-	73.37	34.68	12.42	36.68	360	90	A	V
		5739.24	52.46	-21.54	74	41.97	34.75	12.59	36.85	360	90	P	V
		5756.84	44.1	-9.9	54	33.65	34.75	12.6	36.9	360	90	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11060	44.68	-29.32	74	56.38	38.01	15.95	65.66	100	360	P	H
VHT80 CH 106 5530MHz		11060	44.86	-29.14	74	56.56	38.01	15.95	65.66	100	360	P	V
802.11ac		11220	43.78	-30.22	74	55.2	38.11	16.02	65.55	100	360	P	H
VHT80 CH 122 5610MHz		11220	44.91	-29.09	74	56.33	38.11	16.02	65.55	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 144 5720MHz	*	5722	100.87	-	-	90.37	34.74	12.57	36.81	275	192	P	H
	*	5722	93.17	-	-	82.67	34.74	12.57	36.81	275	192	A	H
	*	5718	98.68	-	-	88.18	34.74	12.57	36.81	282	107	P	V
	*	5718	91.13	-	-	80.63	34.74	12.57	36.81	282	107	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 144 5720MHz		11440	44.64	-29.36	74	55.66	38.26	16.11	65.39	100	360	P	H
		11440	44.87	-29.13	74	55.89	38.26	16.11	65.39	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac	*	5712	100.11	-	-	89.64	34.73	12.55	36.81	100	187	P	H
VHT20	*	5712	92.73	-	-	82.26	34.73	12.55	36.81	100	187	A	H
CH 144	*	5728	98.36	-	-	87.86	34.74	12.57	36.81	352	106	P	V
5720MHz	*	5728	90.75	-	-	80.25	34.74	12.57	36.81	352	106	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11440	45.62	-28.38	74	56.64	38.26	16.11	65.39	100	360	P	H
VHT20 CH 144 5720MHz		11440	43.85	-30.15	74	54.87	38.26	16.11	65.39	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac	*	5708	97.39	-	-	86.92	34.73	12.55	36.81	100	186	P	H
VHT40	*	5708	90.39	-	-	79.92	34.73	12.55	36.81	100	186	A	H
CH 142	*	5700	95.82	-	-	85.34	34.72	12.53	36.77	278	107	P	V
5710MHz	*	5700	88.13	-	-	77.65	34.72	12.53	36.77	278	107	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11420	44.17	-29.83	74	55.23	38.24	16.1	65.4	100	360	P	H
VHT40 CH 142 5710MHz		11420	44.84	-29.16	74	55.9	38.24	16.1	65.4	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac	*	5712	93.66	-	-	83.19	34.73	12.55	36.81	100	189	P	H
VHT80	*	5712	86.89	-	-	76.42	34.73	12.55	36.81	100	189	A	H
CH 138	*	5686	91.38	-	-	80.9	34.72	12.53	36.77	300	107	P	V
5690MHz	*	5686	84.3	-	-	73.82	34.72	12.53	36.77	300	107	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - Straddle Channel

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11380	45.01	-28.99	74	56.12	38.22	16.09	65.42	100	360	P	H
VHT80 CH 138 5690MHz		11380	43.7	-30.3	74	54.81	38.22	16.09	65.42	100	360	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

WIFI 802.11ac VHT80 (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 LF		33.88	27.13	-12.87	40	35.62	23	0.81	32.3	-	-	P	H
		59.1	31.36	-8.64	40	50.43	12.03	1.11	32.21	100	246	P	H
		64.92	30.32	-9.68	40	49.2	12.2	1.18	32.26	-	-	P	H
		79.47	20.99	-19.01	40	38.62	13.33	1.3	32.26	-	-	P	H
		623.64	27.51	-18.49	46	29.42	25.79	3.99	31.69	-	-	P	H
		802.12	30.14	-15.86	46	29.12	28.31	4.28	31.57	-	-	P	H
		30.97	27.23	-12.77	40	34.18	24.65	0.69	32.29	100	225	P	V
		42.61	23.77	-16.23	40	36.81	18.17	0.99	32.2	-	-	P	V
		59.1	22.7	-17.3	40	41.77	12.03	1.11	32.21	-	-	P	V
		67.83	23.91	-16.09	40	42.47	12.44	1.21	32.21	-	-	P	V
		342.34	21.96	-24.04	46	30.7	20.23	3.12	32.09	-	-	P	V
		842.86	29.5	-16.5	46	28.06	28.6	4.38	31.54	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

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

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

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

1. Level(dBμV/m) =

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

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

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

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

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

= 43.54 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

= -10.46(dB)

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

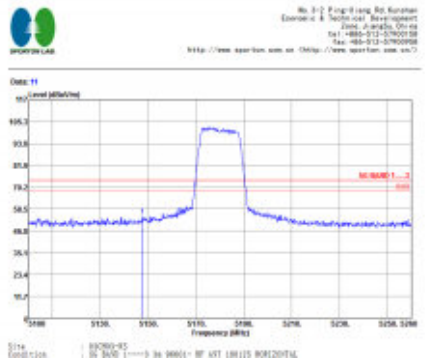
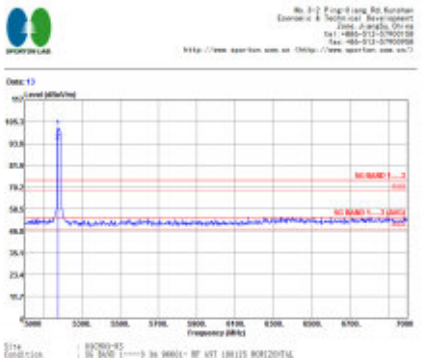
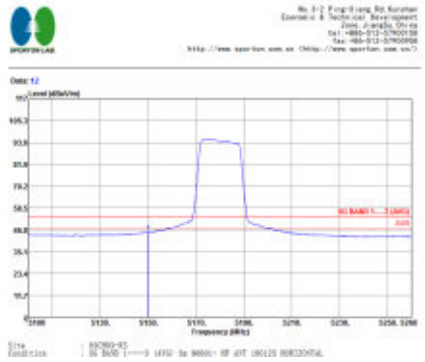
Appendix D. Radiated Spurious Emission Plots

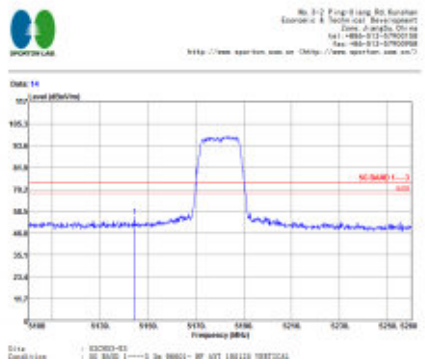
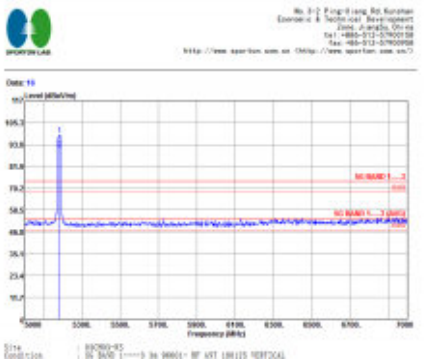
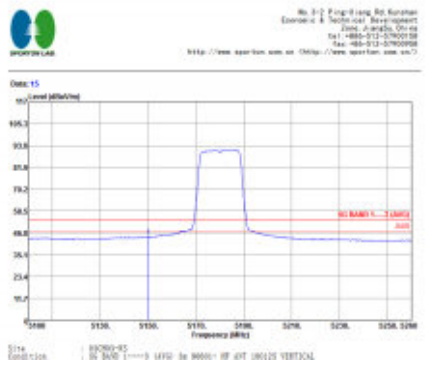
Note symbol

-L	**Low channel location**
-R	**High channel location**

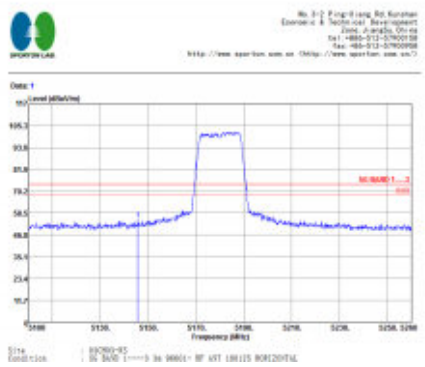
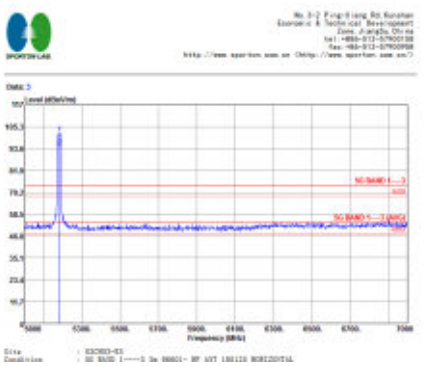
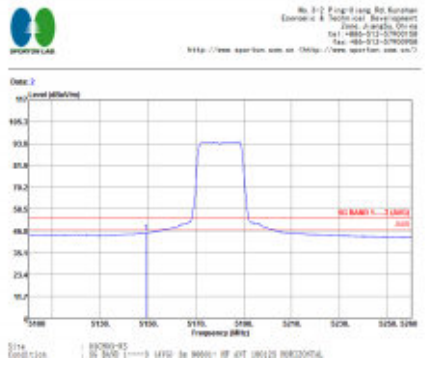
Band 1 - 5150~5250MHz

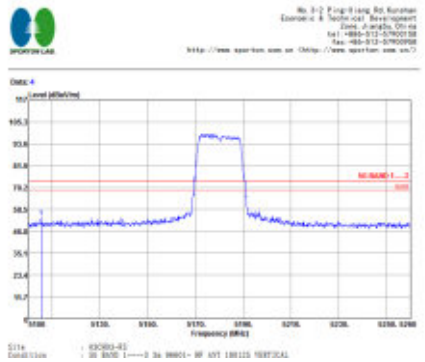
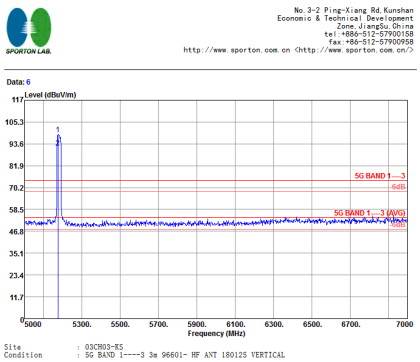
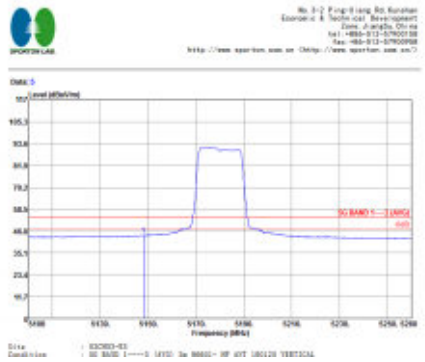
WIFI 802.11a (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Fundamental
Peak		
Avg.		-

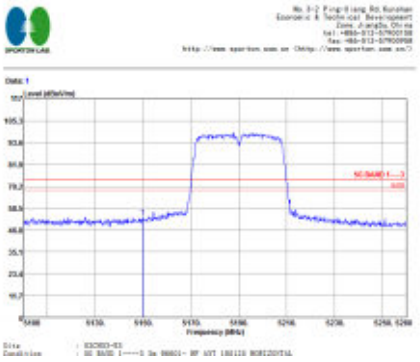
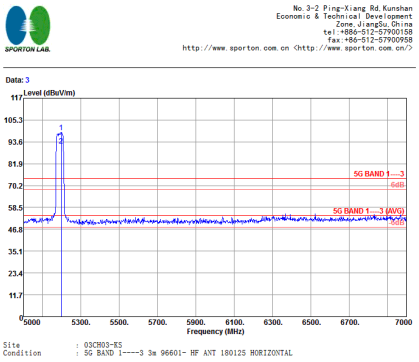
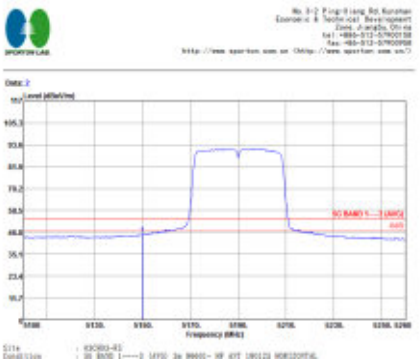
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11a CH36 5180MHz	
1	Vertical	Fundamental
Peak		
Avg.		-

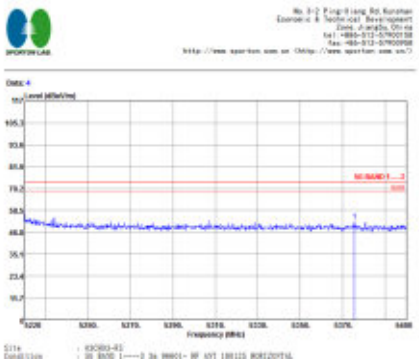
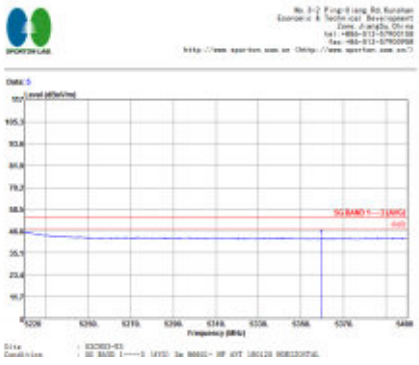
Band 1 5150~5250MHz
WIFI 802.11ac VHT20 (Band Edge @ 3m)

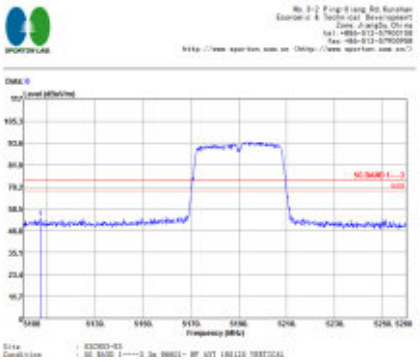
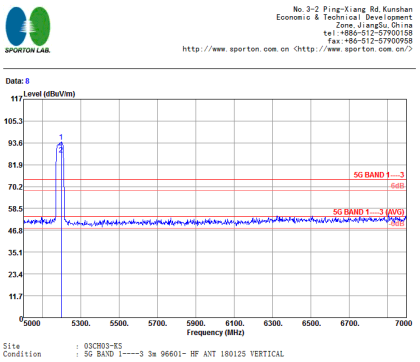
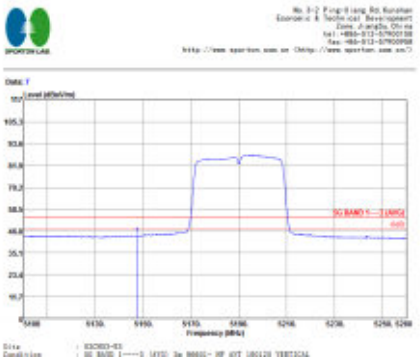
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH36 5180MHz	
1	Horizontal	Fundamental
Peak		
Avg.		-

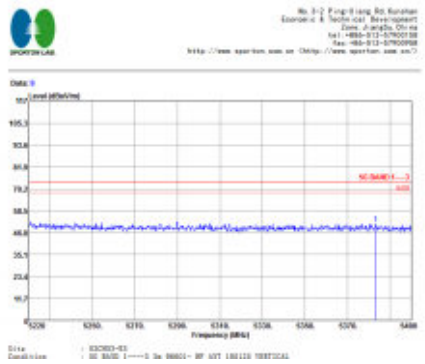
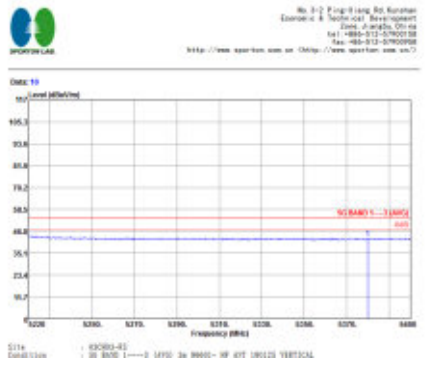
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH36 5180MHz	
1	Vertical	Fundamental
Peak		
Avg.		-

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

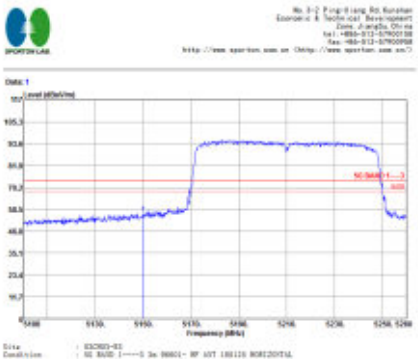
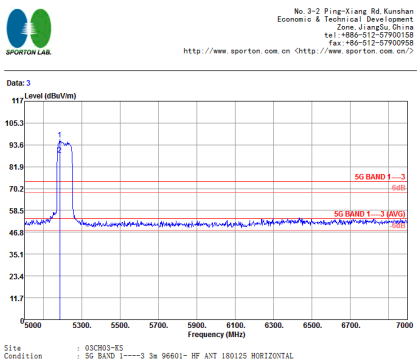
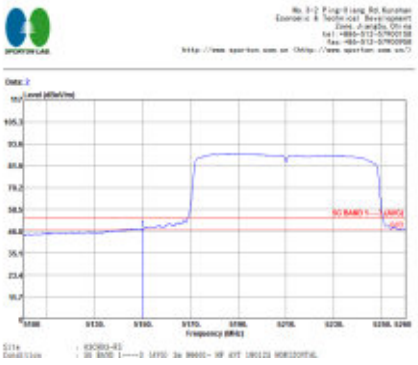
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH38 5190MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		-

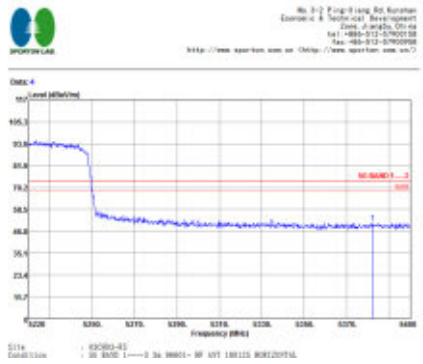
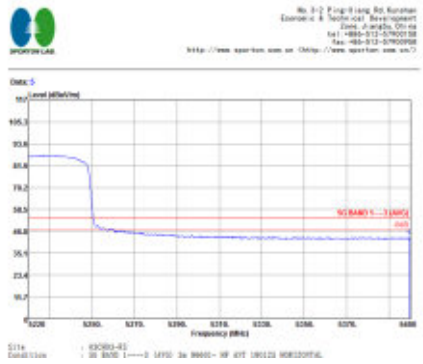
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH38 5190MHz - R	
1	Horizontal	Fundamental
Peak		-
Avg.		-

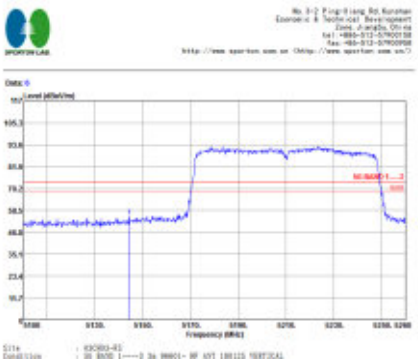
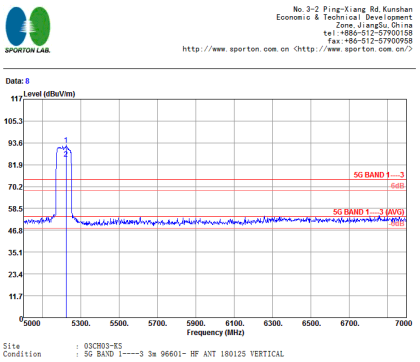
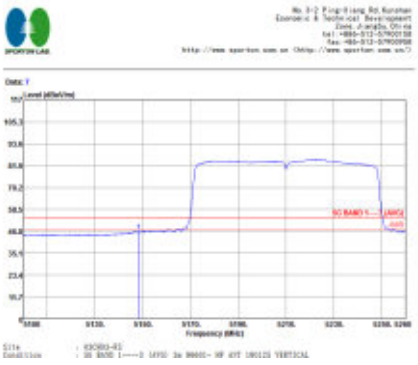
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH38 5190MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		-

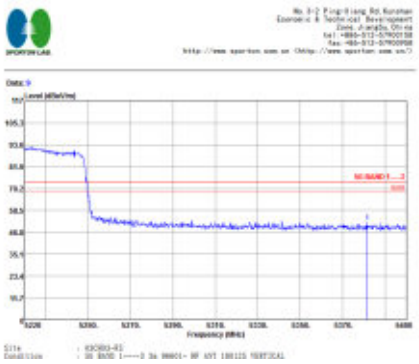
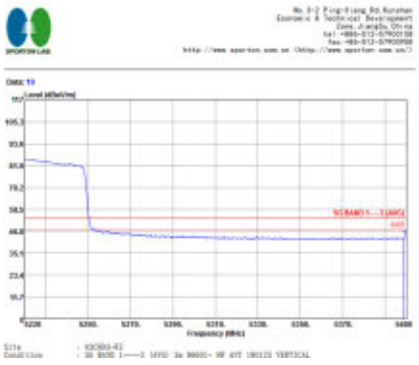
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH38 5190MHz - R	
1	Vertical	Fundamental
Peak		-
Avg.		-

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

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		Left blank

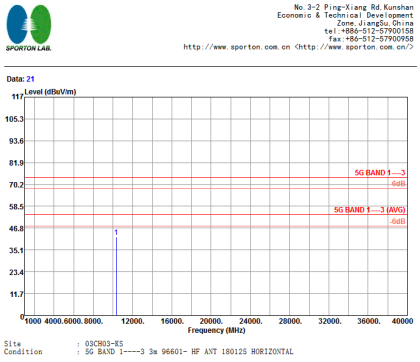
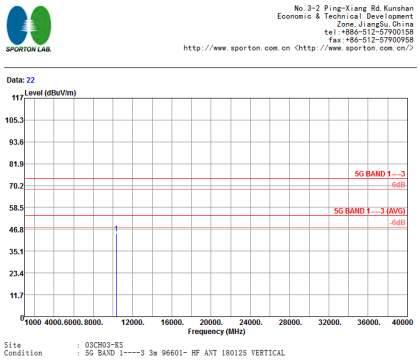
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Horizontal	Fundamental
Peak		-
Avg.		-

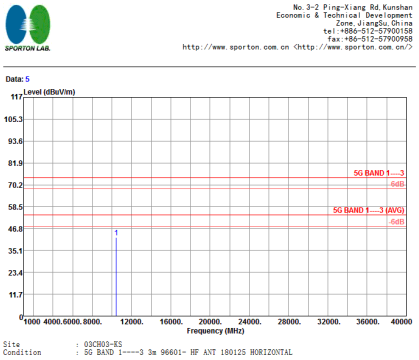
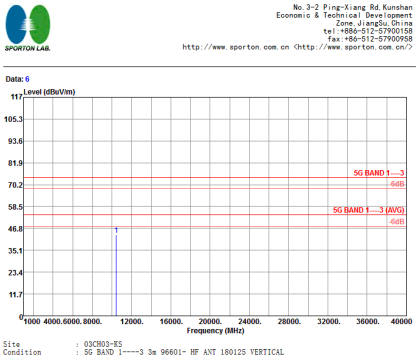
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		-

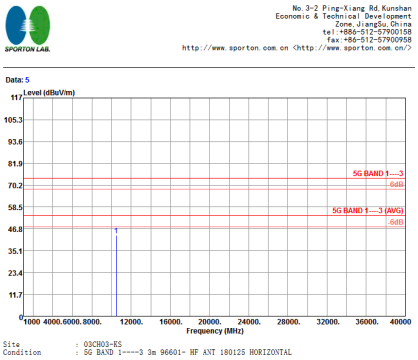
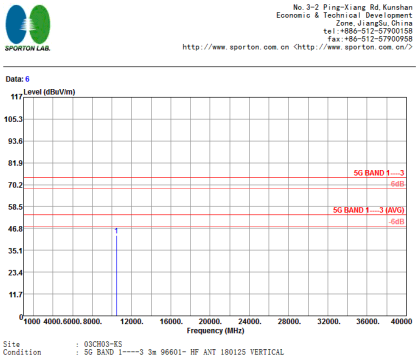
WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Vertical	Fundamental
Peak		-
Avg.		-

Band 1 - 5150~5250MHz

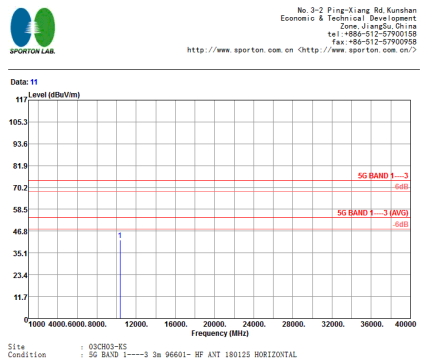
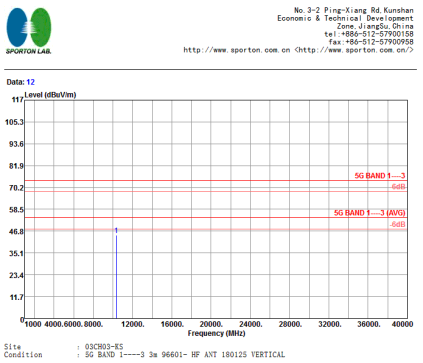
WIFI 802.11a (Harmonic @ 3m)

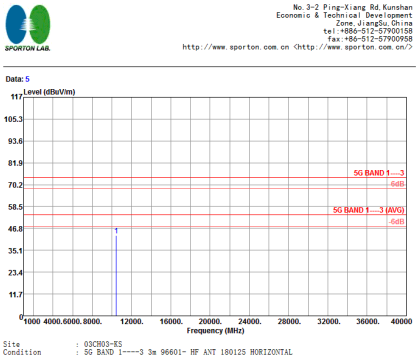
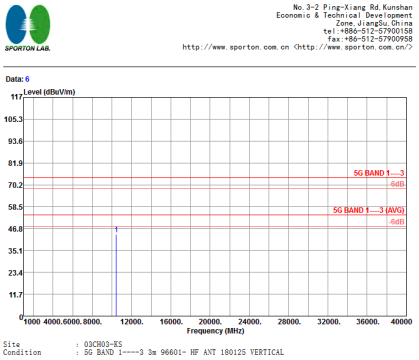
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH36 5180MHz	
1	Horizontal	Vertical
Peak Avg.		

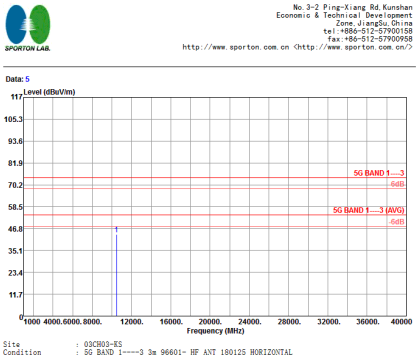
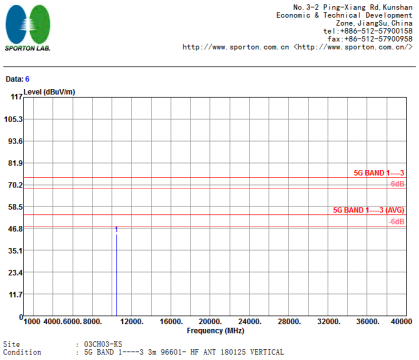
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH44 5220MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11a CH48 5240MHz	
1	Horizontal	Vertical
Peak Avg.		

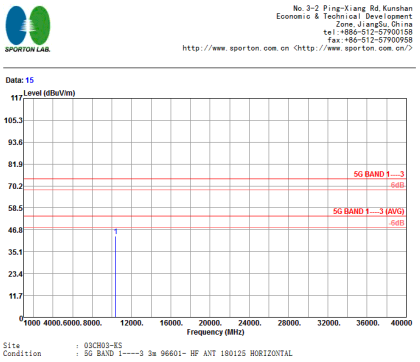
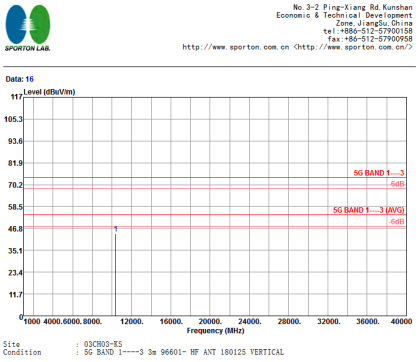
Band 1 5150~5250MHz
WIFI 802.11ac VHT20 (Harmonic @ 3m)

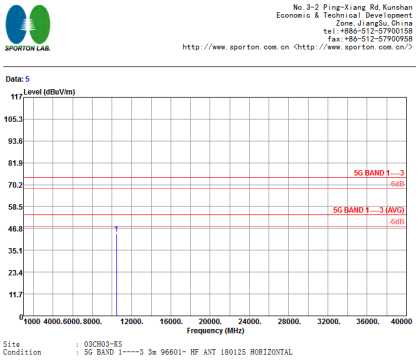
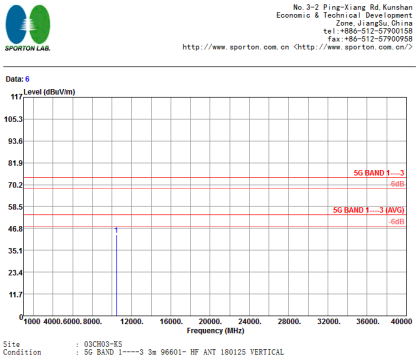
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH36 5180MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH44 5220MHz	
1	Horizontal	Vertical
Peak Avg.		

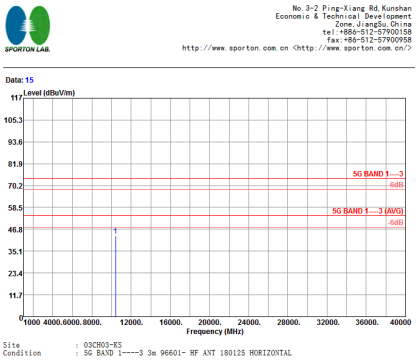
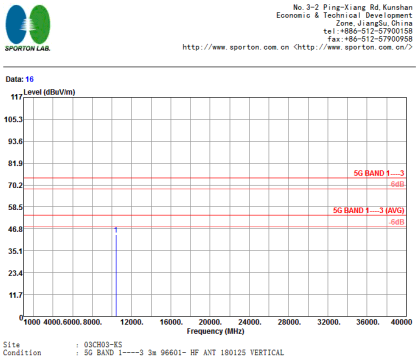
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH48 5240MHz	
1	Horizontal	Vertical
Peak Avg.		

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

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH38 5190MHz	
1	Horizontal	Vertical
Peak Avg.		

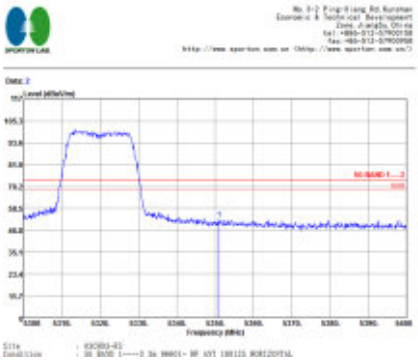
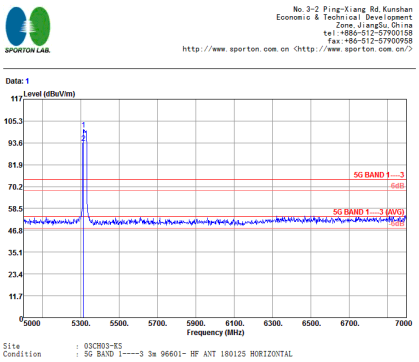
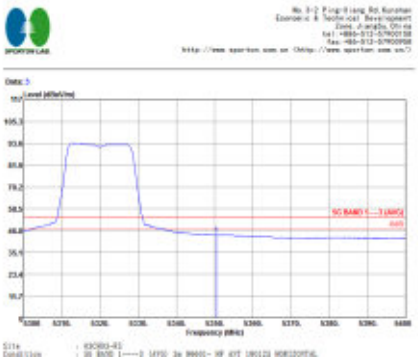
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH46 5230MHz	
1	Horizontal	Vertical
Peak Avg.		

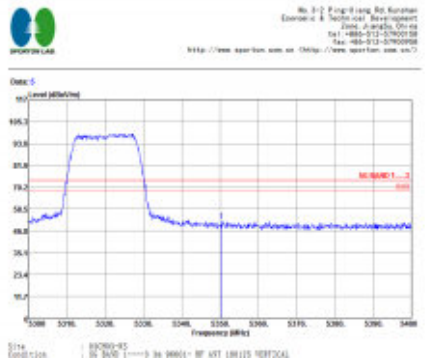
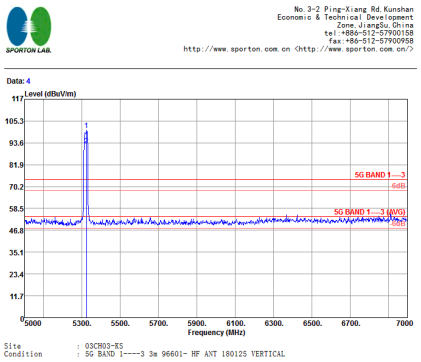
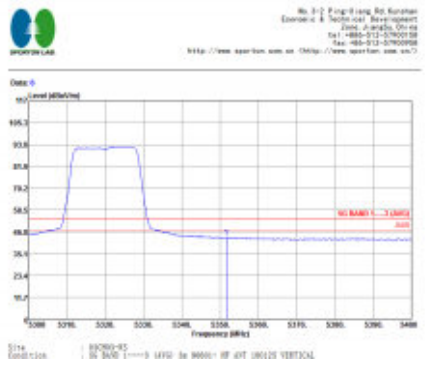
Band 1 5150~5250MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz	
1	Horizontal	Vertical
Peak Avg.		

Band 2 - 5250~5350MHz

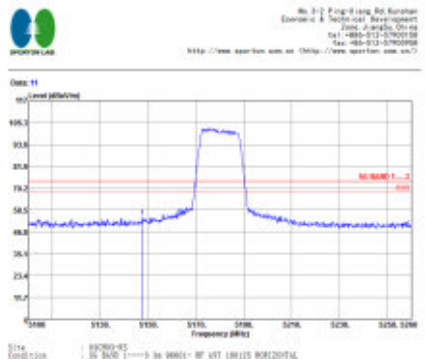
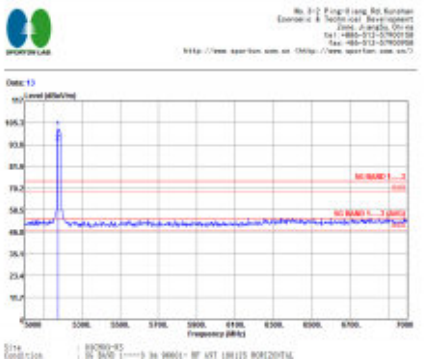
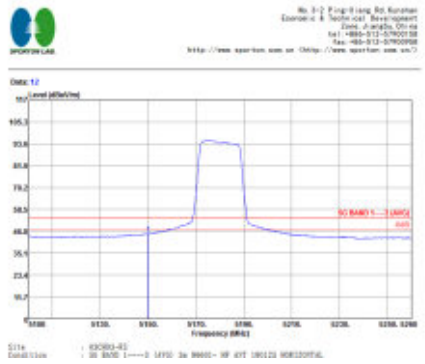
WIFI 802.11a (Band Edge @ 3m)

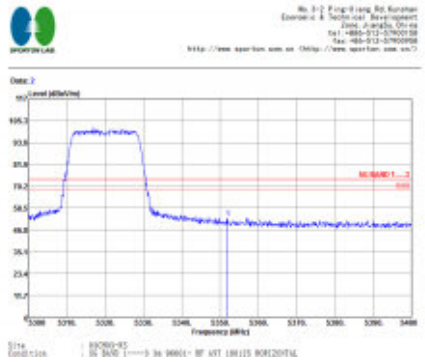
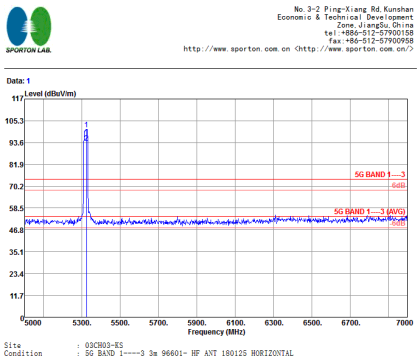
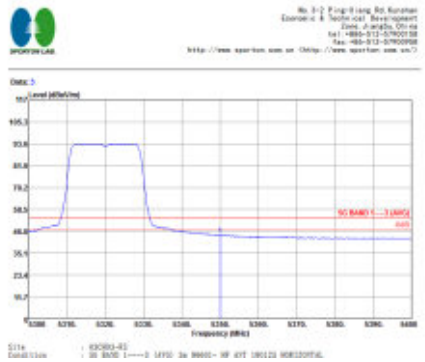
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH64 5320MHz	
1	Horizontal	Fundamental
Peak		
Avg.		-

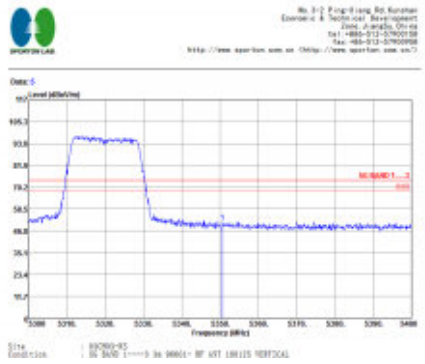
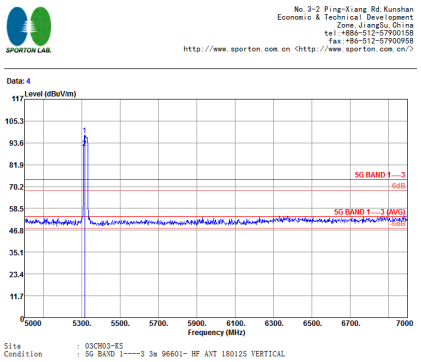
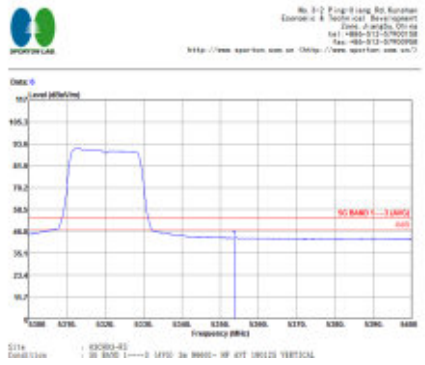
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11a CH64 5320MHz	
1	Vertical	Fundamental
Peak		
Avg.		-

Band 2 5250~5350MHz

WIFI 802.11ac VHT20 (Band Edge @ 3m)

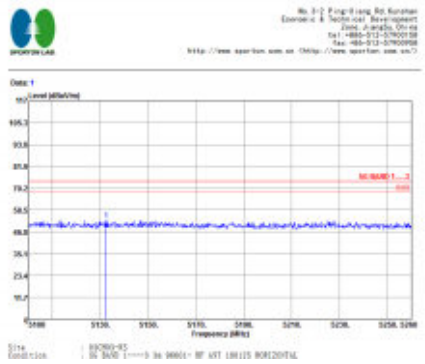
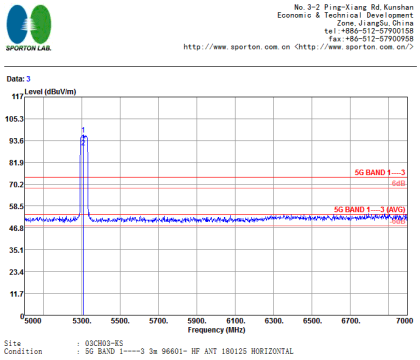
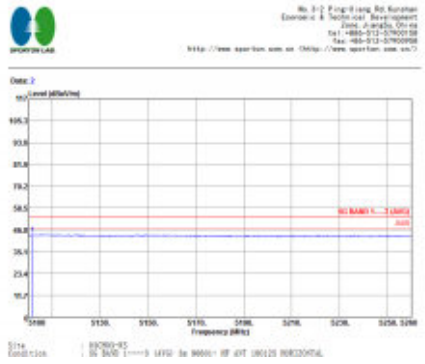
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH60 5300MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		-

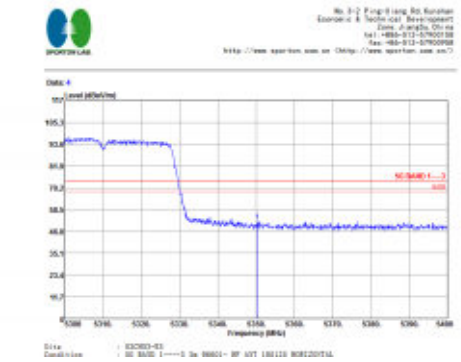
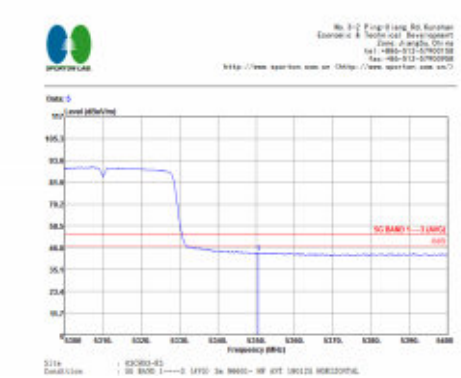
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH64 5320MHz	
1	Horizontal	Fundamental
Peak		
Avg.		-

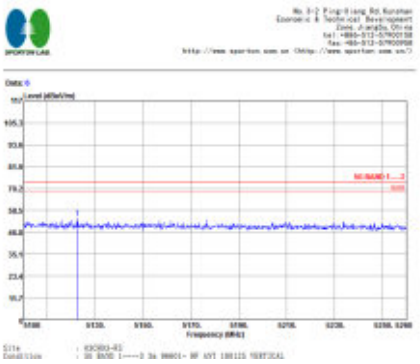
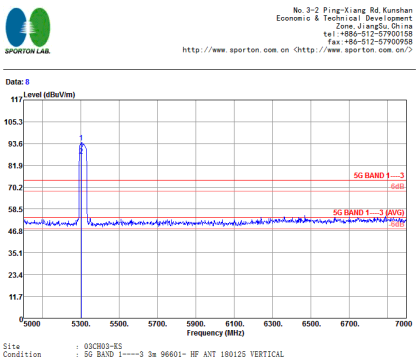
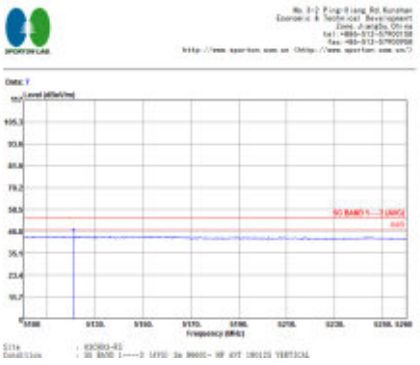
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH64 5320MHz	
1	Vertical	Fundamental
Peak		
Avg.		-

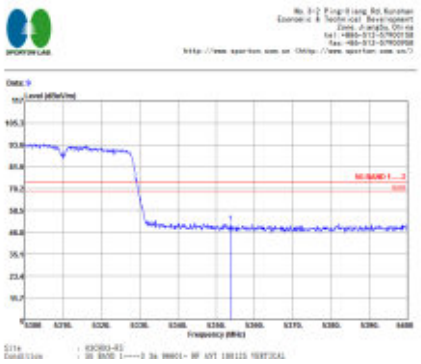
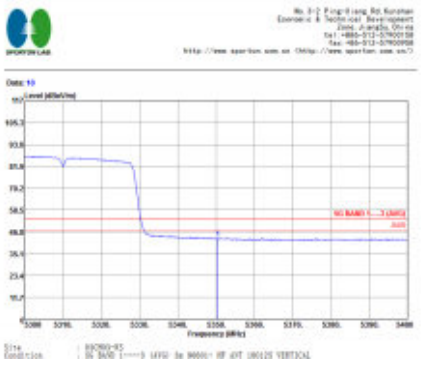
Band 2 5250~5350MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH62 5310 - L	
1	Horizontal	Fundamental
Peak		
Avg.		-

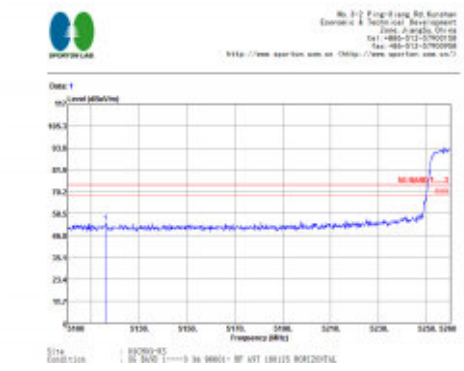
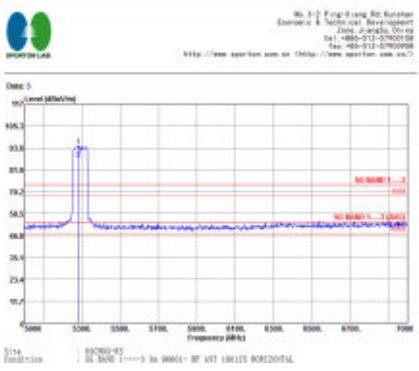
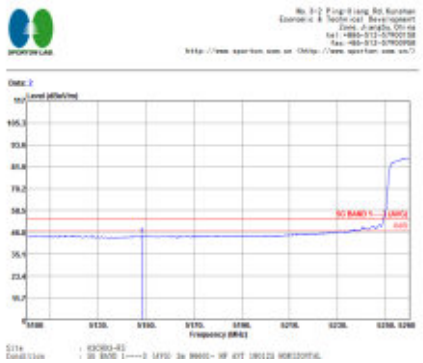
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH62 5310 - R	
1	Horizontal	Fundamental
Peak		-
Avg.		-

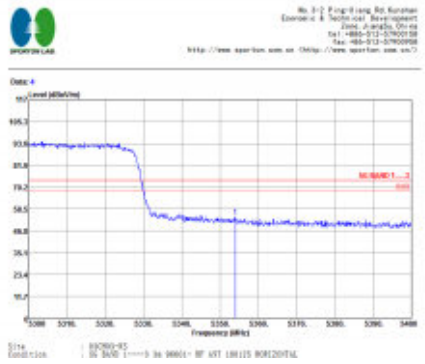
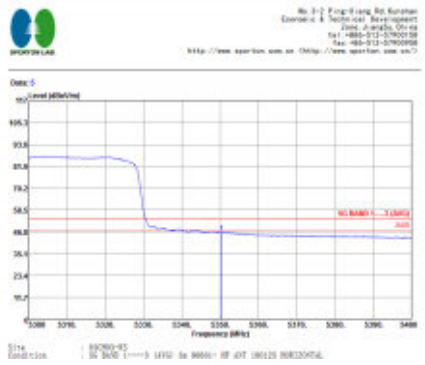
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH62 5310 - L	
1	Vertical	Fundamental
Peak		
Avg.		-

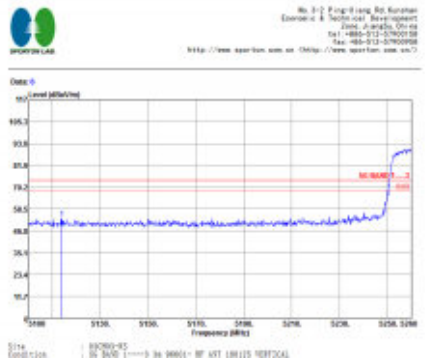
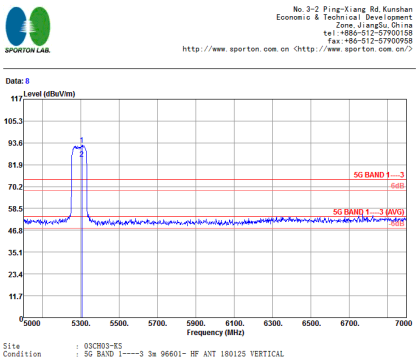
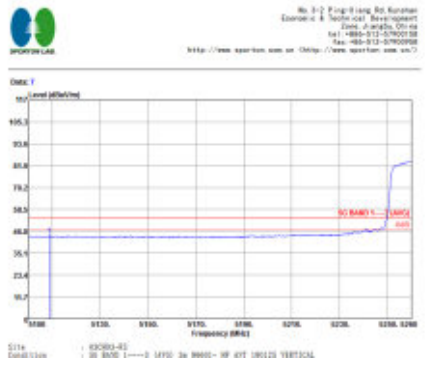
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH62 5310 - R	
1	Vertical	Fundamental
Peak		-
Avg.		-

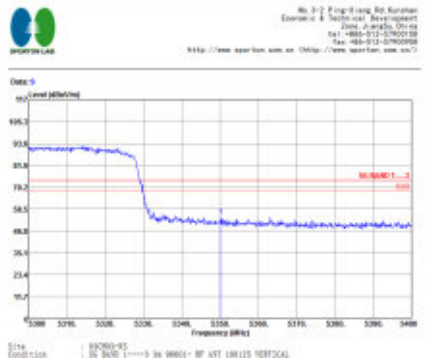
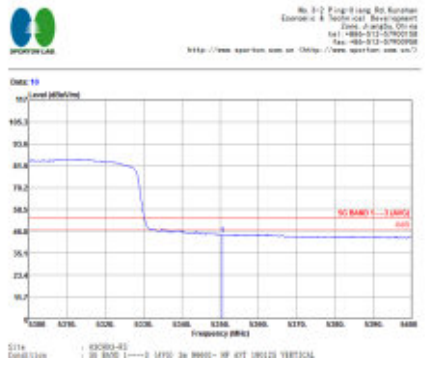
Band 2 5250~5350MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		-

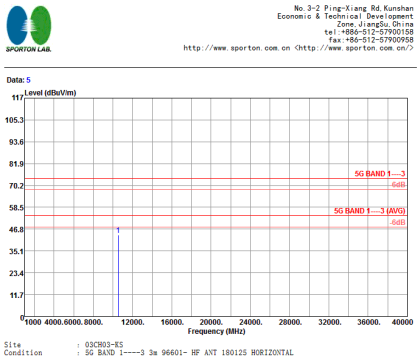
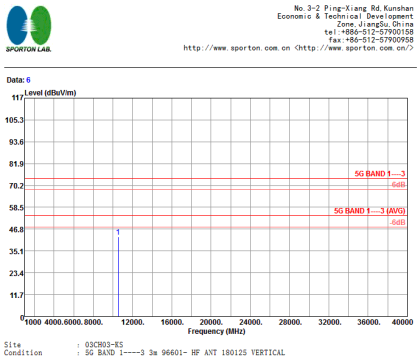
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1	Horizontal	Fundamental
Peak		-
Avg.		-

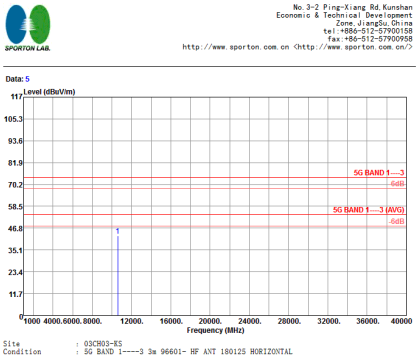
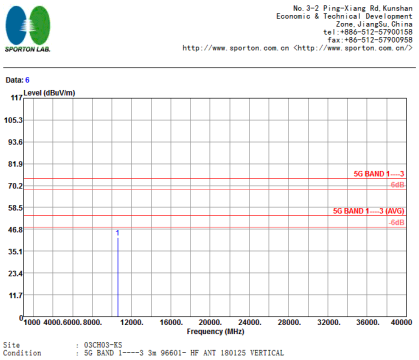
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		-

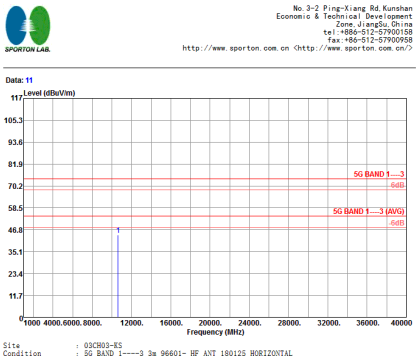
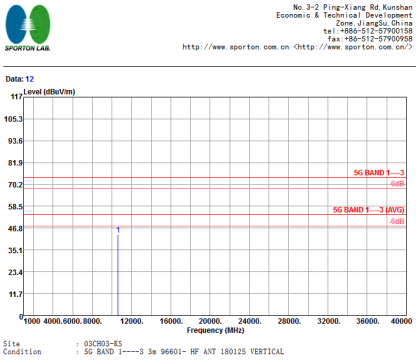
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1	Vertical	Fundamental
Peak		-
Avg.		-

Band 2 - 5250~5350MHz

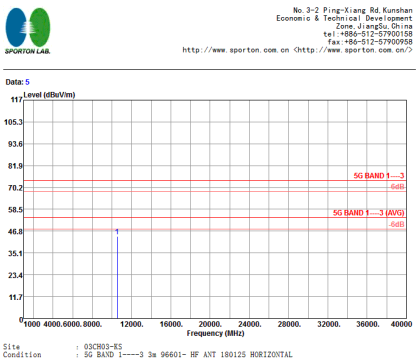
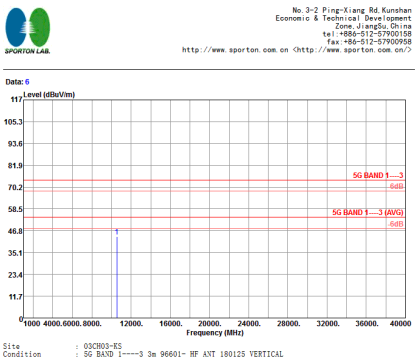
WIFI 802.11a (Harmonic @ 3m)

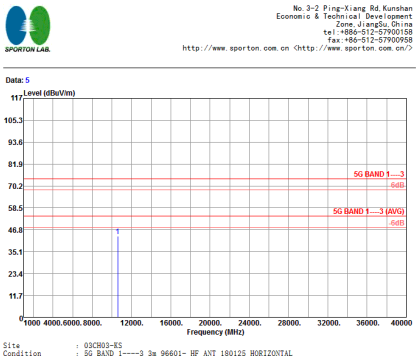
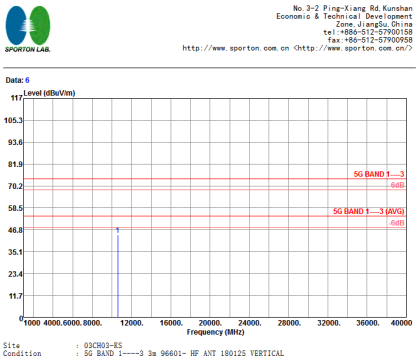
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11a CH52 5260MHz	
1	Horizontal	Vertical
Peak Avg.		

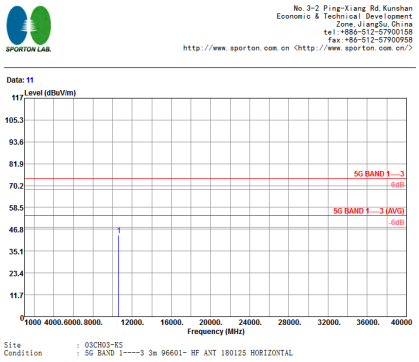
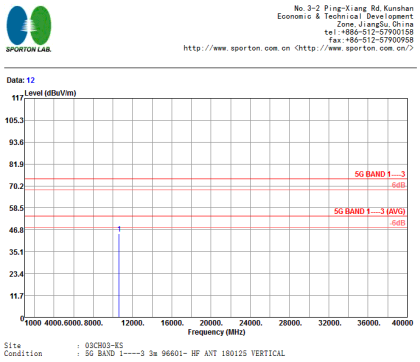
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11a CH60 5300MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11a CH64 5320MHz	
1	Horizontal	Vertical
Peak Avg.		

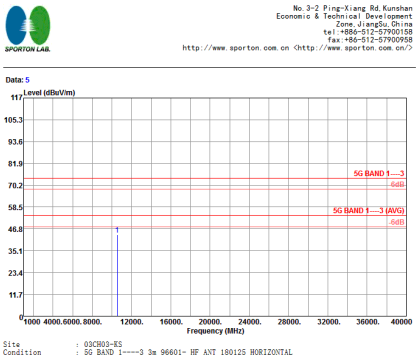
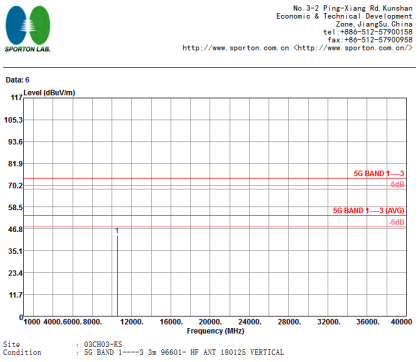
Band 2 5250~5350MHz
WIFI 802.11ac VHT20 (Harmonic @ 3m)

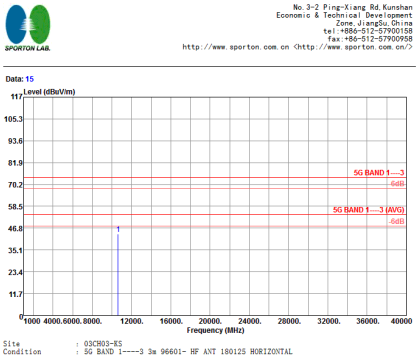
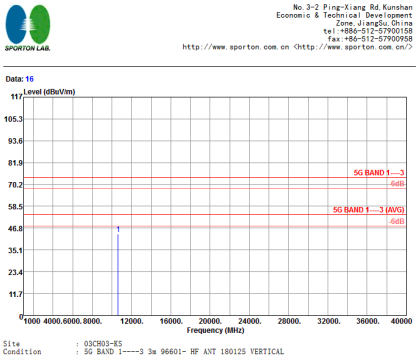
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH52 5260MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH60 5300MHz	
1	Horizontal	Vertical
Peak Avg.		

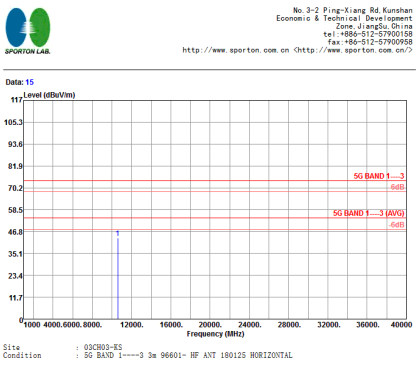
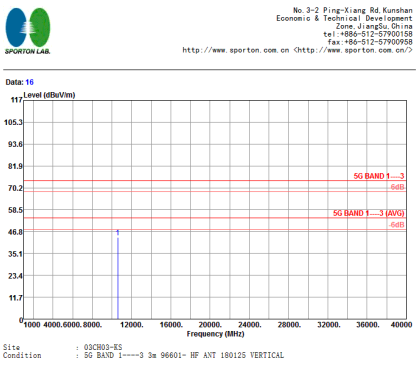
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH64 5320MHz	
1	Horizontal	Vertical
Peak Avg.		

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

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH54 5270	
1	Horizontal	Vertical
Peak Avg.		

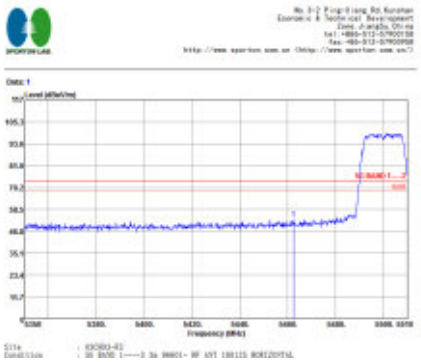
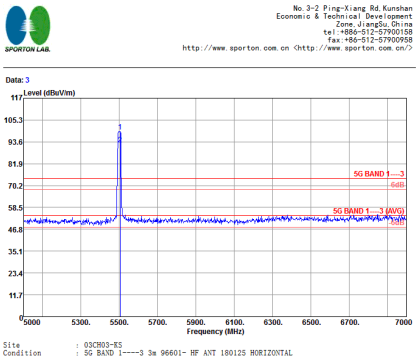
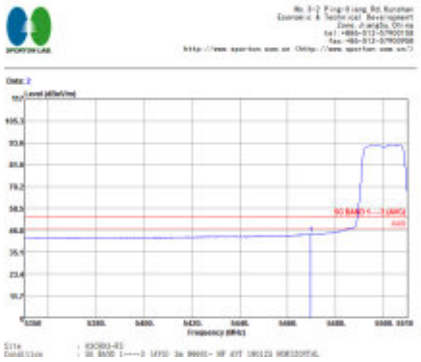
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH62 5310	
1	Horizontal	Vertical
Peak Avg.		

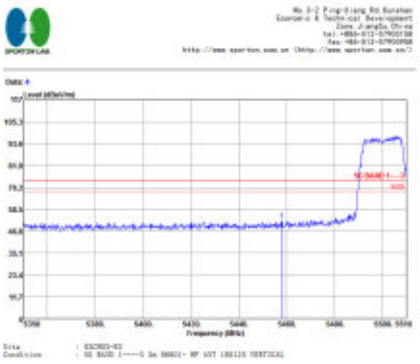
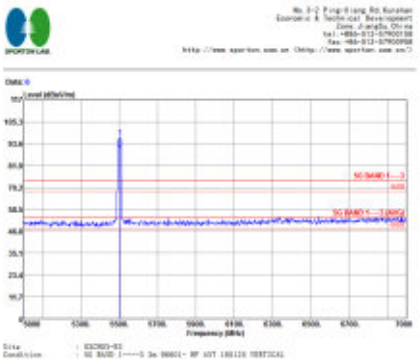
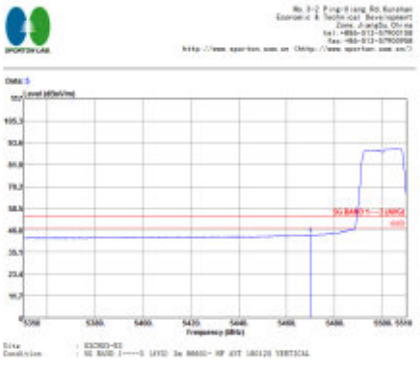
Band 2 5250~5350MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

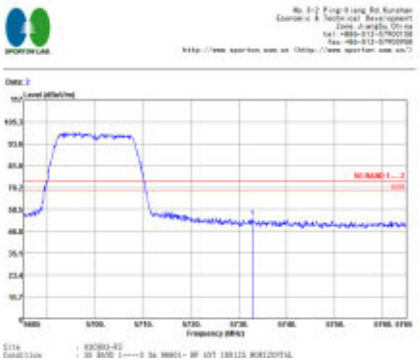
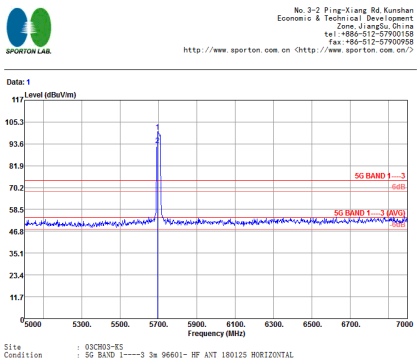
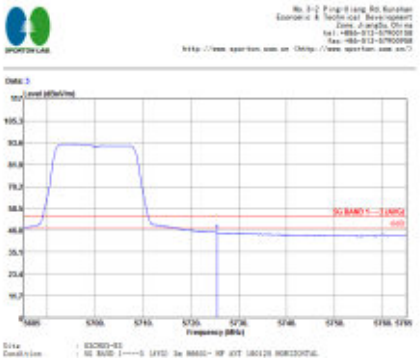
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz	
1	Horizontal	Vertical
Peak Avg.		

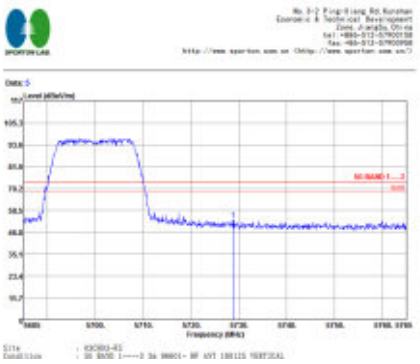
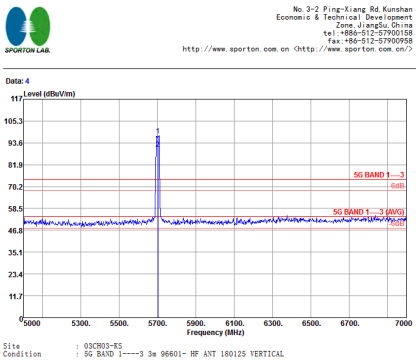
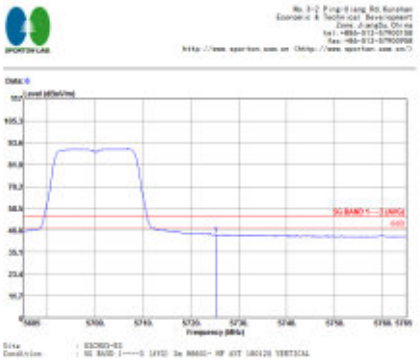
Band 3 - 5470~5725MHz

WIFI 802.11a (Band Edge @ 3m)

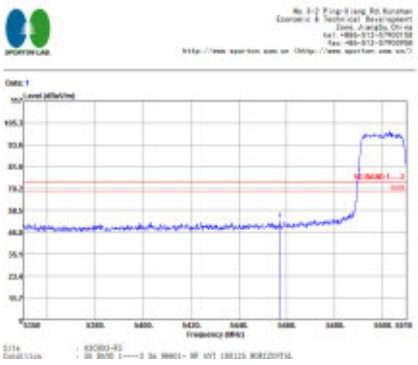
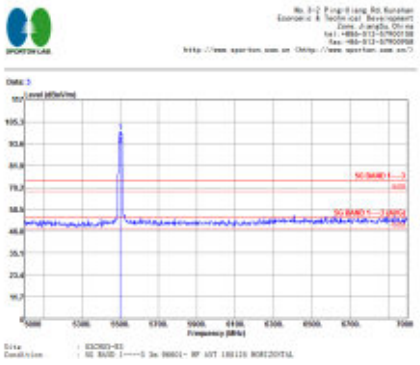
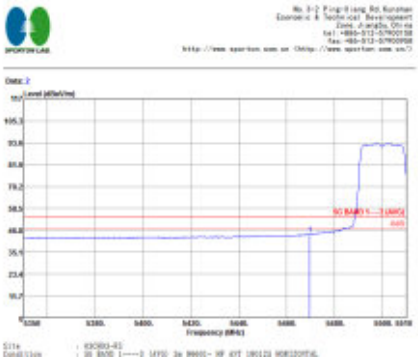
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH100 5500MHz	
1	Horizontal	Fundamental
Peak		
Avg.		-

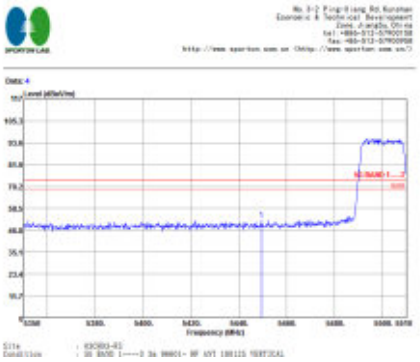
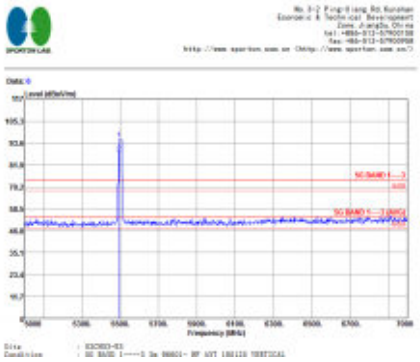
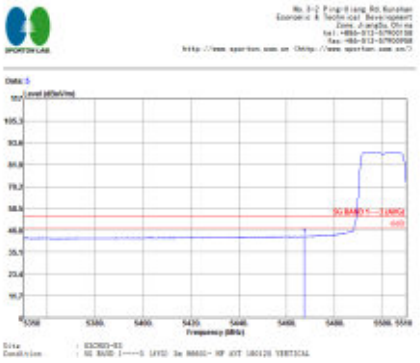
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH100 5500MHz	
1	Vertical	Fundamental
Peak		
Avg.		-

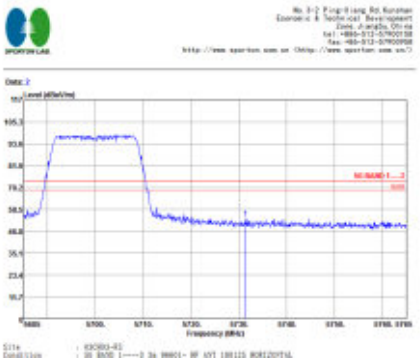
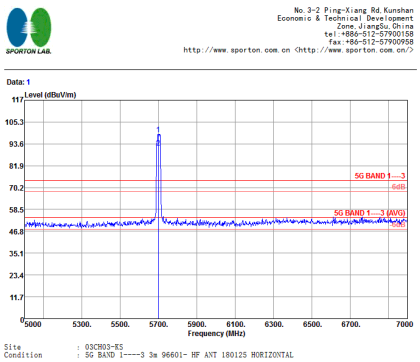
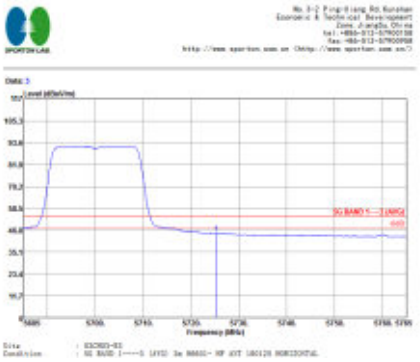
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH140 5700MHz	
1	Horizontal	Fundamental
Peak		
Avg.		-

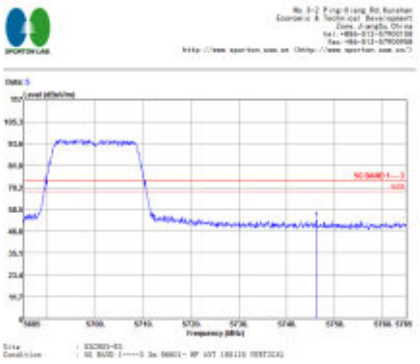
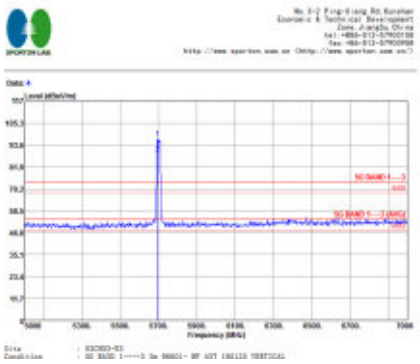
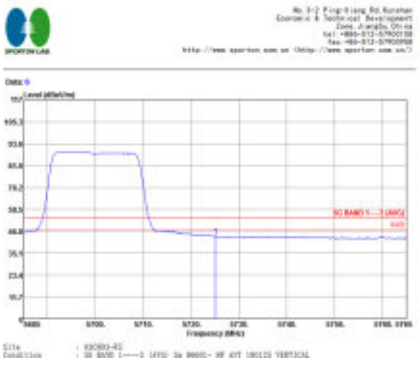
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH140 5700MHz	
1	Vertical	Fundamental
Peak		
Avg.		-

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

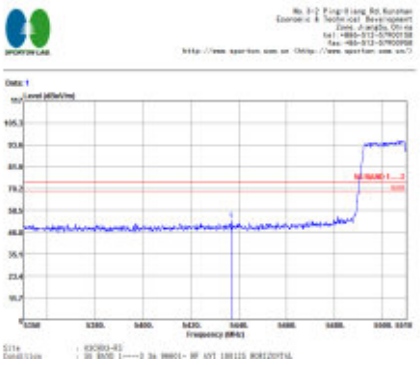
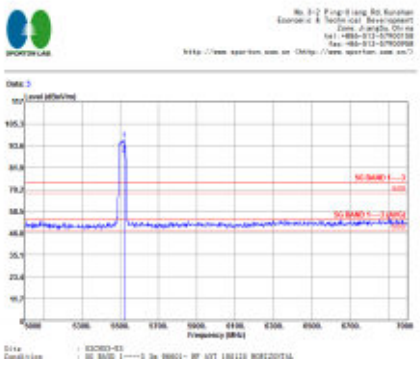
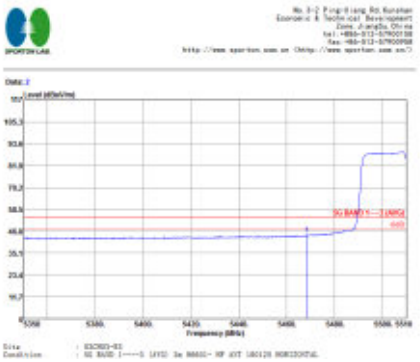
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH100 5500MHz	
1	Horizontal	Fundamental
Peak		
Avg.		-

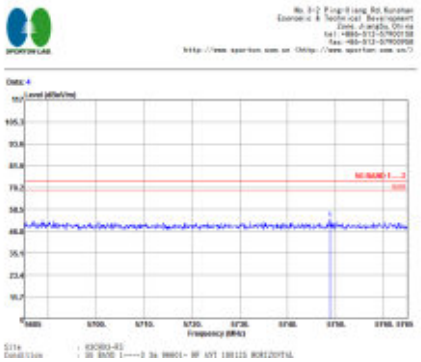
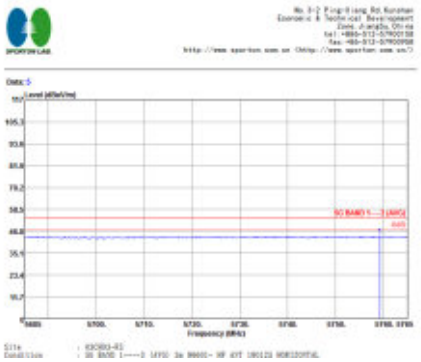
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH100 5500MHz	
1	Vertical	Fundamental
Peak		
Avg.		-

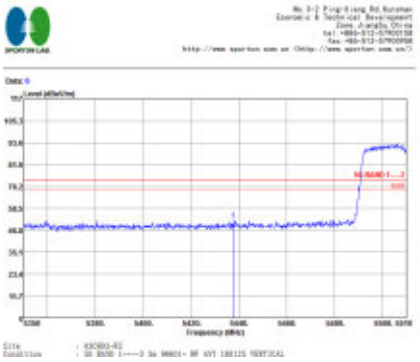
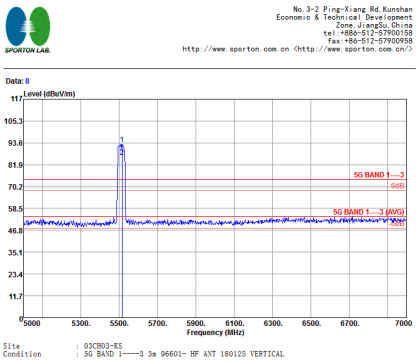
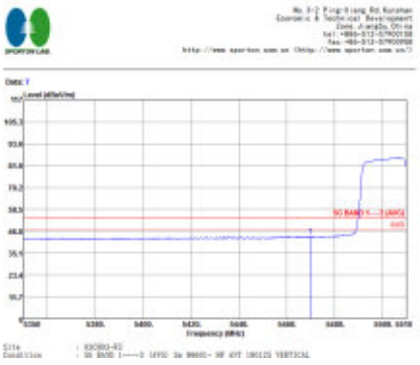
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH140 5700MHz	
1	Horizontal	Fundamental
Peak		
Avg.		-

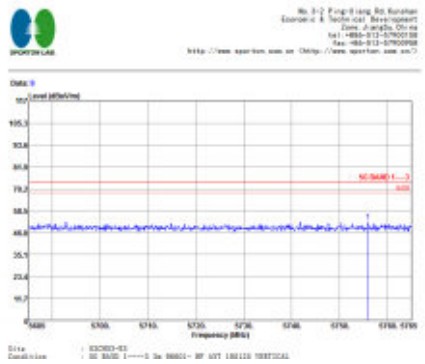
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH140 5700MHz	
1	Vertical	Fundamental
Peak		
Avg.		-

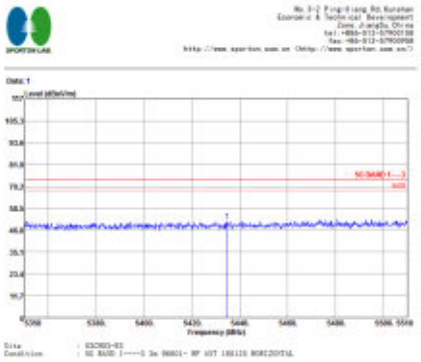
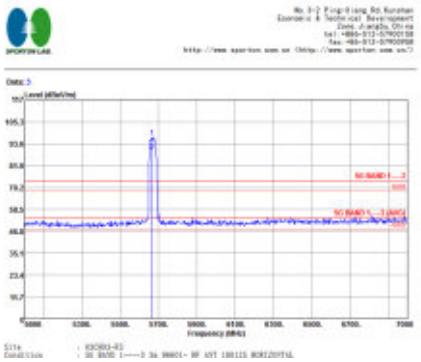
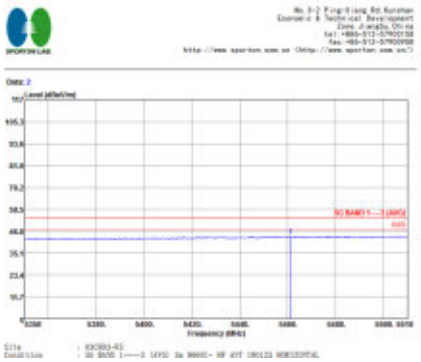
Band 3 5470~5725MHz
WIFI 802.11ac VHT40 (Band Edge @ 3m)

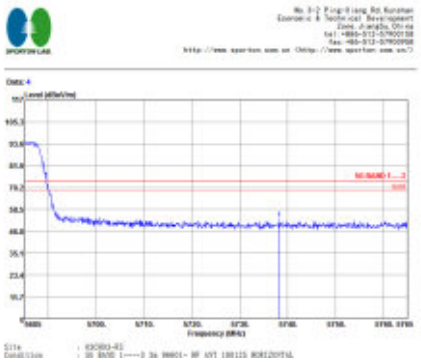
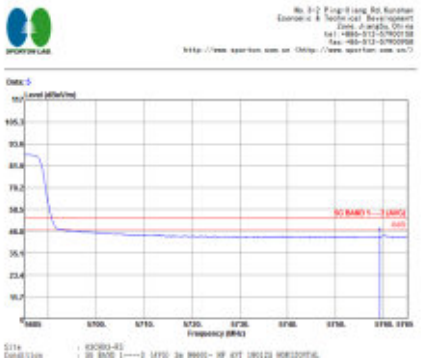
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH102 5510MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		-

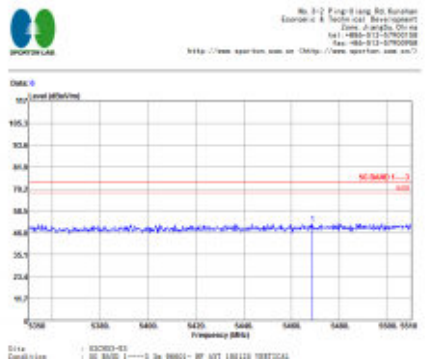
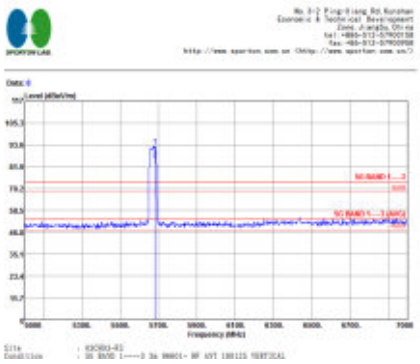
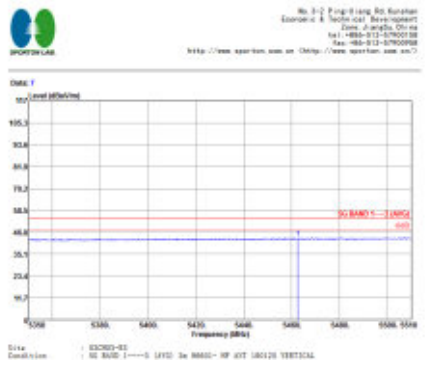
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH102 5510MHz - R	
1	Horizontal	Fundamental
Peak		-
Avg.		-

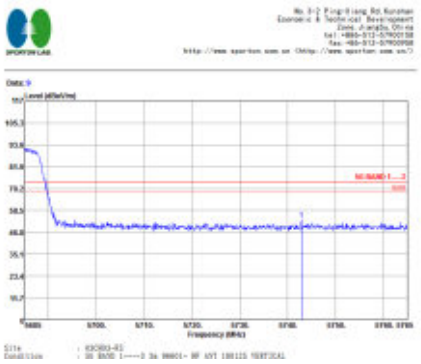
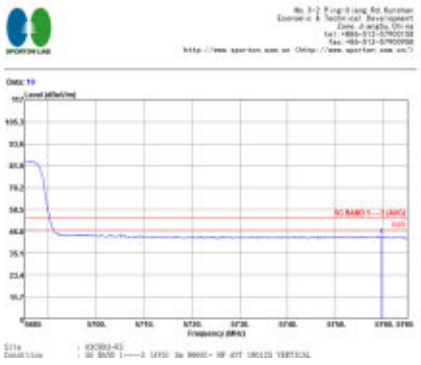
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH102 5510MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		-

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH102 5510MHz - R	
1	Vertical	Fundamental
Peak		-
Avg.		-

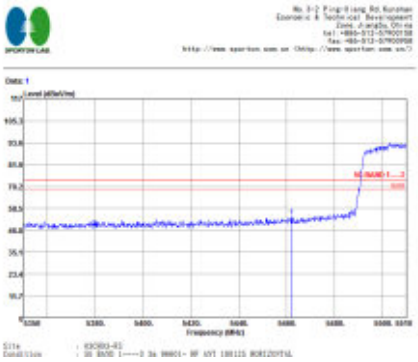
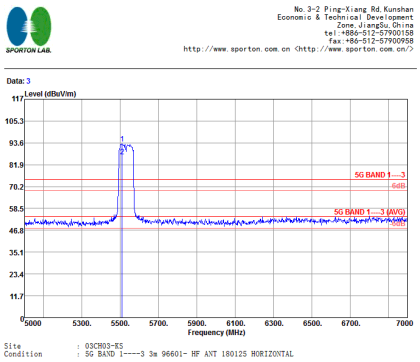
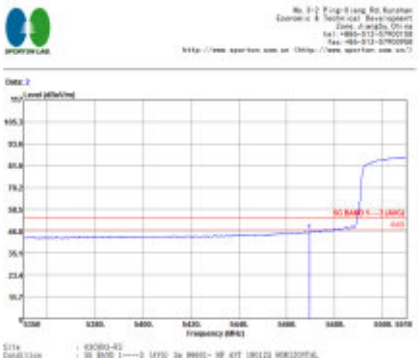
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH134 5670MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		-

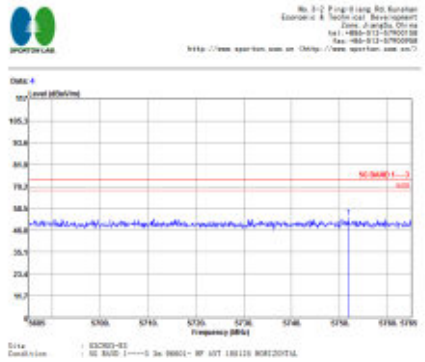
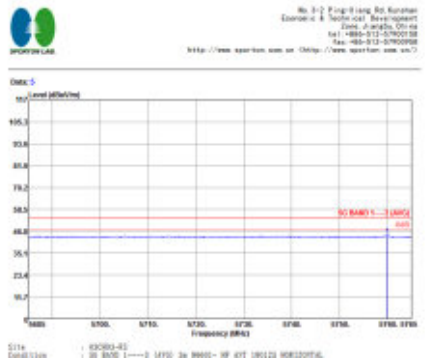
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH134 5670MHz - R	
1	Horizontal	Fundamental
Peak		-
Avg.		-

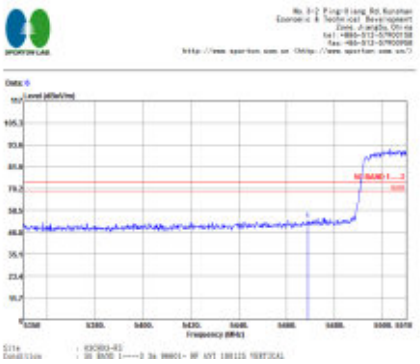
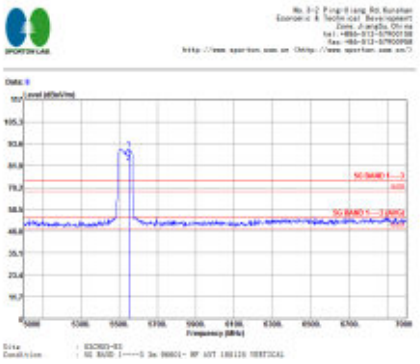
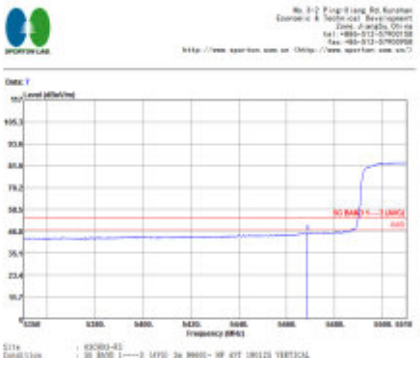
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH134 5670MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		-

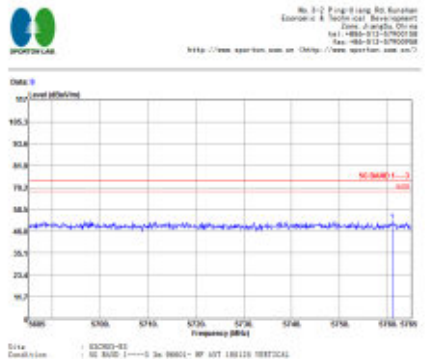
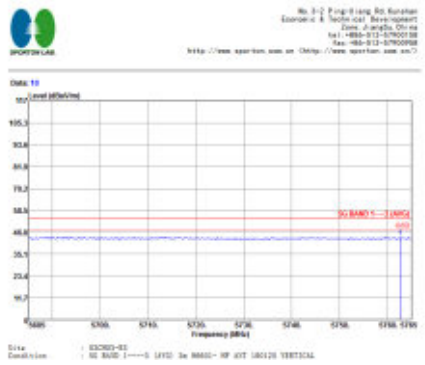
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT40 CH134 5670MHz - R	
1	Vertical	Fundamental
Peak		-
Avg.		-

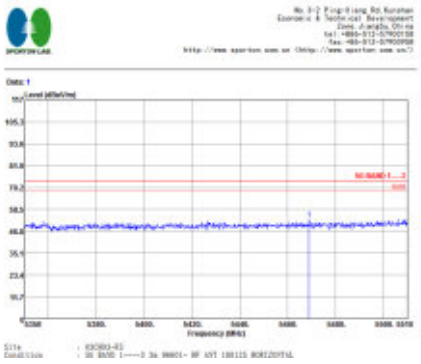
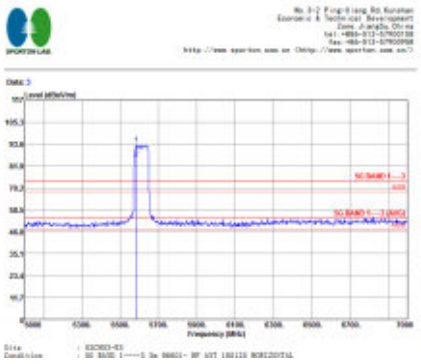
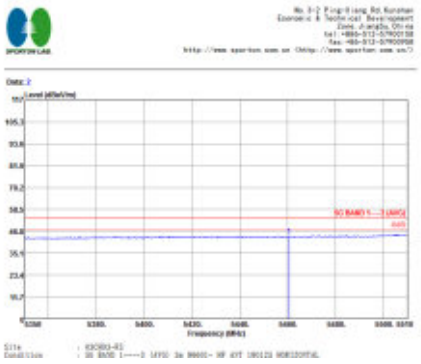
Band 3 5470~5725MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

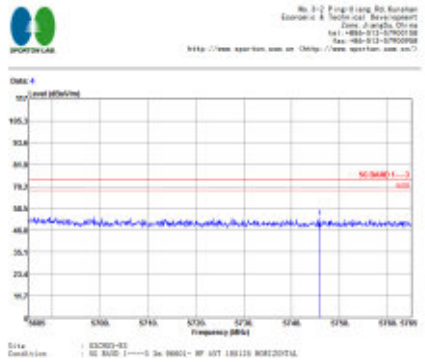
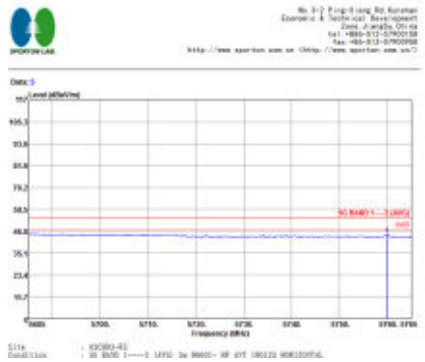
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		-

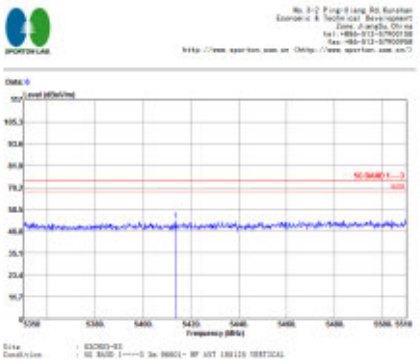
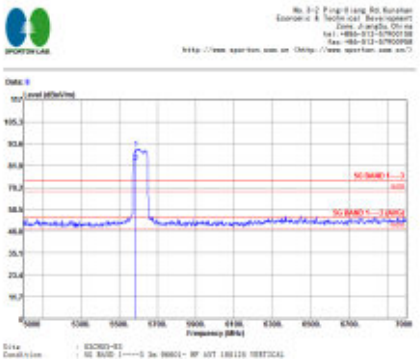
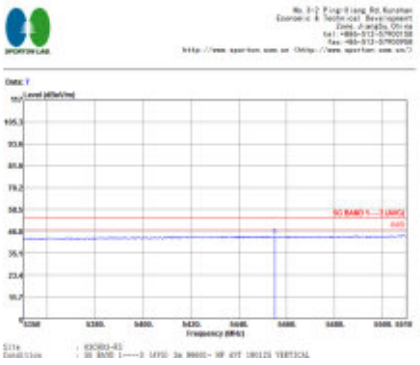
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
1	Horizontal	Fundamental
Peak		-
Avg.		-

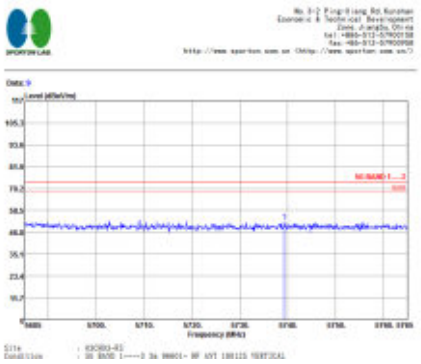
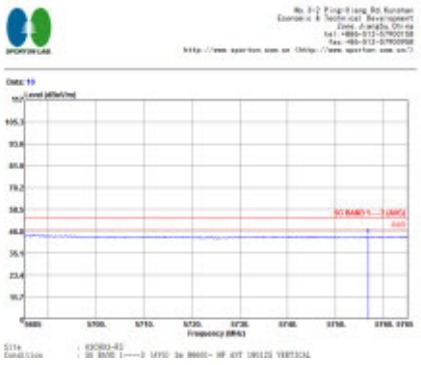
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		-

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
1	Vertical	Fundamental
Peak		-
Avg.		-

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH122 5610MHz - L	
1	Horizontal	Fundamental
Peak		
Avg.		-

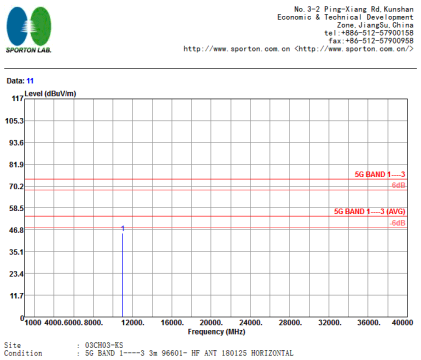
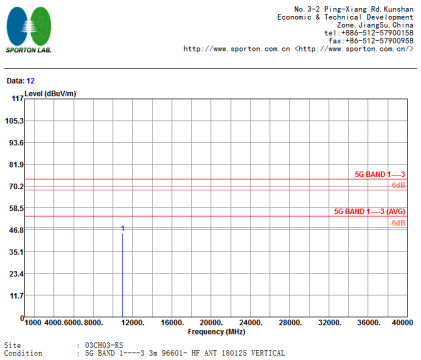
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH122 5610MHz - R	
1	Horizontal	Fundamental
Peak		-
Avg.		-

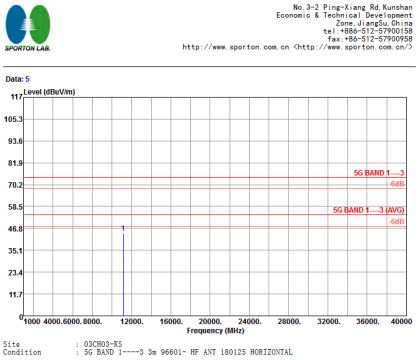
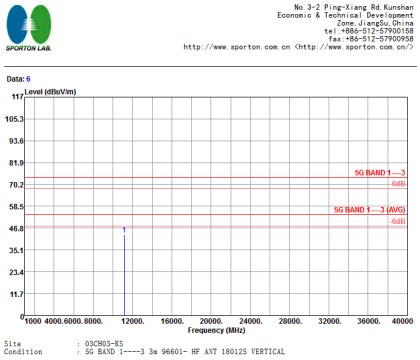
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH122 5610MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		-

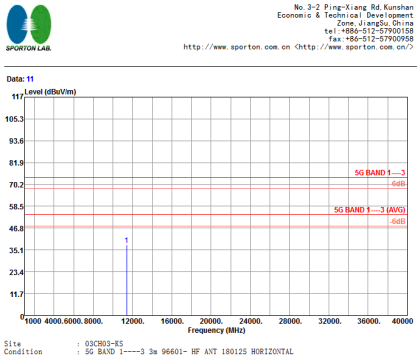
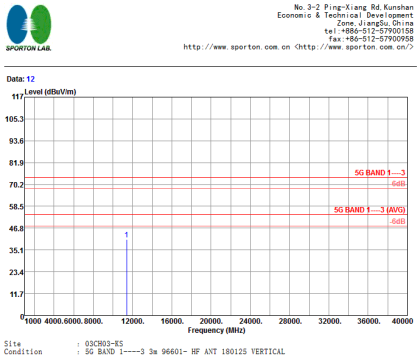
WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH122 5610MHz - R	
1	Vertical	Fundamental
Peak		-
Avg.		-

Band 3 - 5470~5725MHz

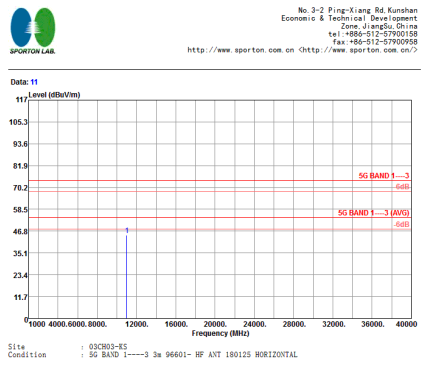
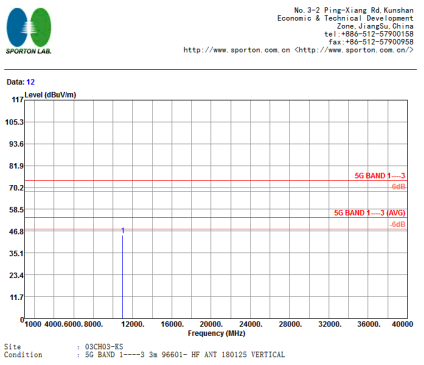
WIFI 802.11a (Harmonic @ 3m)

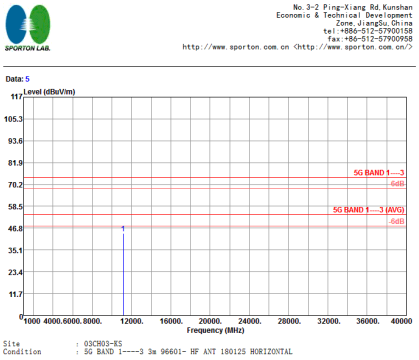
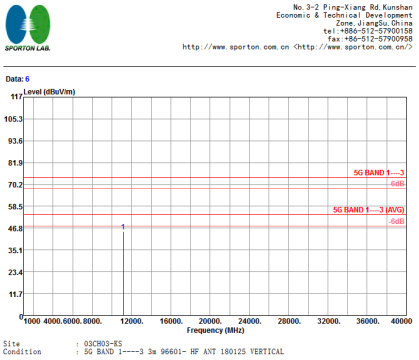
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11a CH100 5500MHz	
1	Horizontal	Vertical
Peak Avg.		

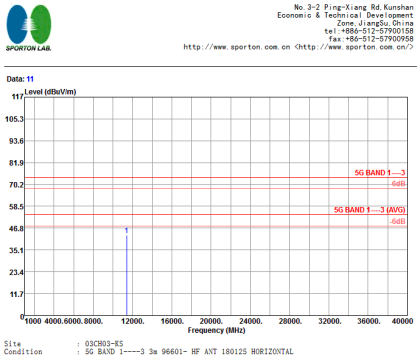
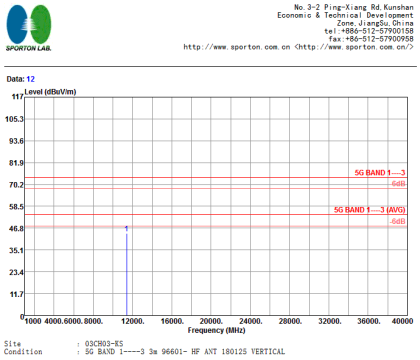
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11a CH116 5580MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11a CH140 5700MHz	
1	Horizontal	Vertical
Peak Avg.		

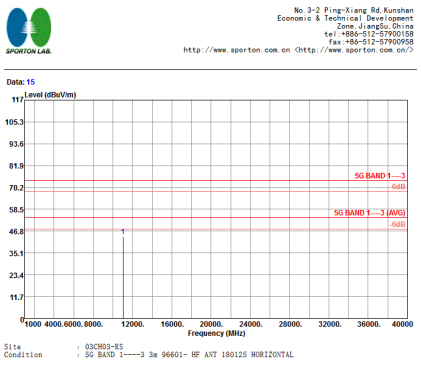
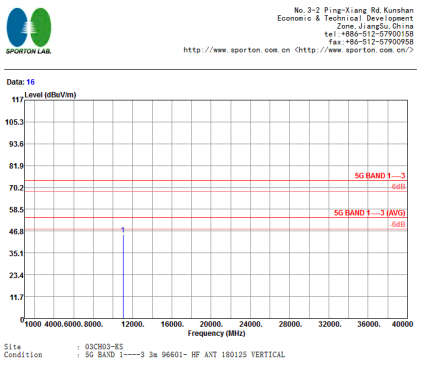
Band 3 5470~5725MHz
WIFI 802.11ac VHT20 (Harmonic @ 3m)

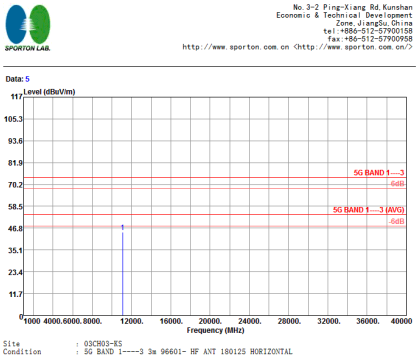
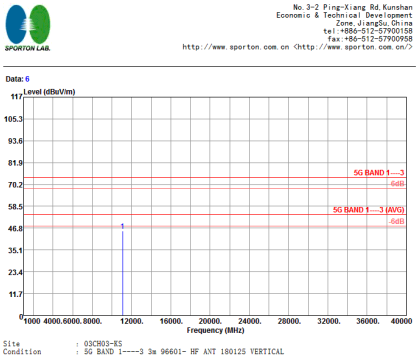
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH100 5500MHz	
1	Horizontal	Vertical
Peak Avg.		

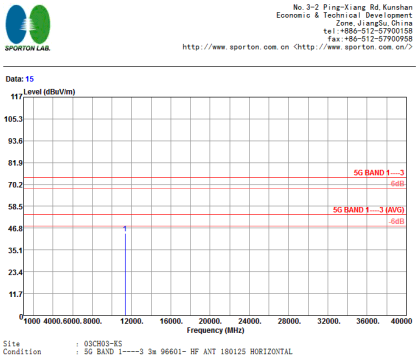
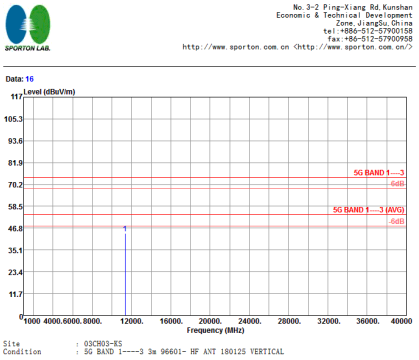
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH116 5580MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT20 CH140 5700MHz	
1	Horizontal	Vertical
Peak Avg.		

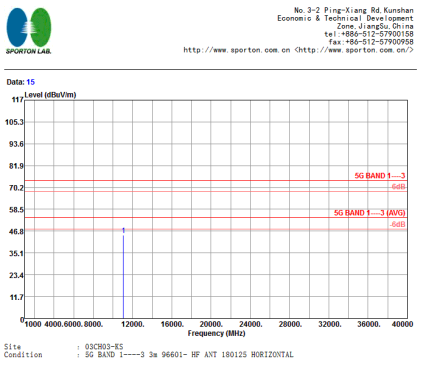
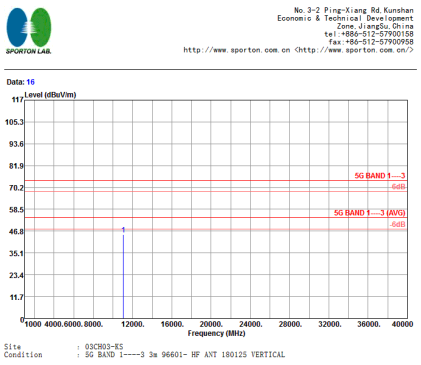
Band 3 5470~5725MHz
WIFI 802.11ac VHT40 (Harmonic @ 3m)

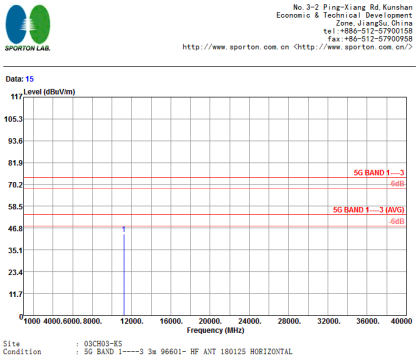
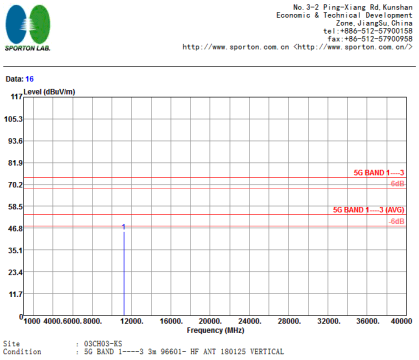
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH102 5510MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH110 5550MHz	
1	Horizontal	Vertical
Peak Avg.		

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT40 CH134 5670MHz	
1	Horizontal	Vertical
Peak Avg.		

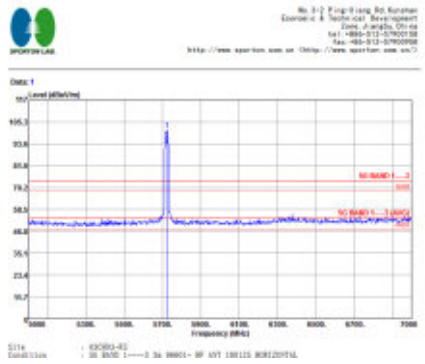
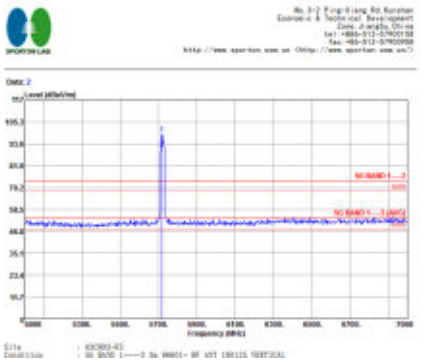
Band 3 5470~5725MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz	
1	Horizontal	Vertical
Peak Avg.		

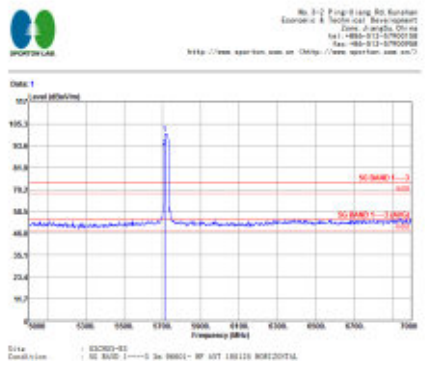
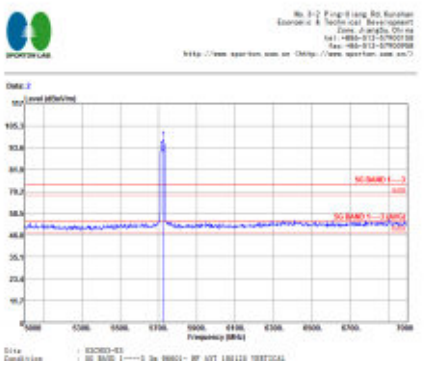
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH122 5610MHz	
1	Horizontal	Vertical
Peak Avg.		

Band 3 - Straddle Channel

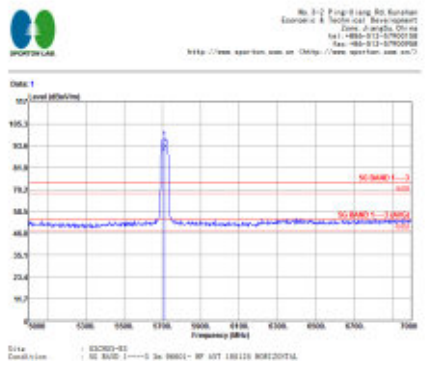
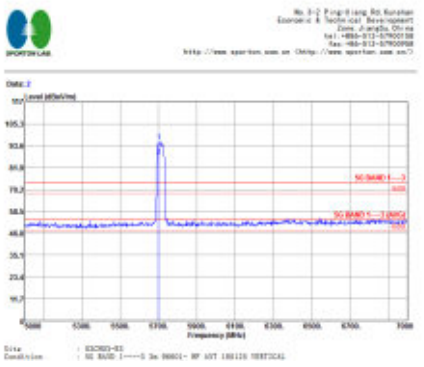
WIFI 802.11a (Fundamental @ 3m)

WIFI	Band 3 Straddle Channel Fundamental @ 3m	
ANT	802.11a CH144 5720MHz	
1	Horizontal	Vertical
Peak Avg.		

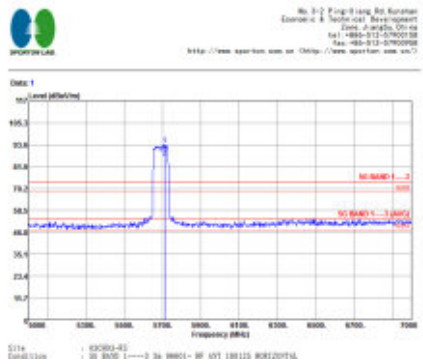
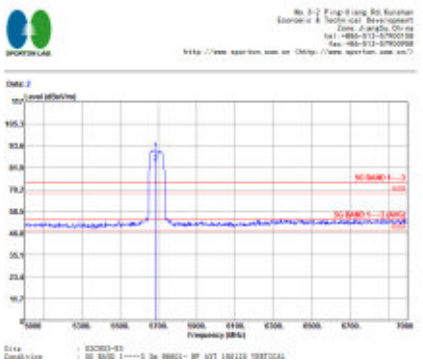
Band 3 – Straddle Channel
WIFI 802.11ac VHT20 (Fundamental @ 3m)

WIFI	Band 3 Straddle Channel Fundamental @ 3m	
ANT	802.11ac VHT20 CH144 5720MHz	
1	Horizontal	Vertical
Peak Avg.		

Band 3 – Straddle Channel
WIFI 802.11ac VHT40 (Fundamental @ 3m)

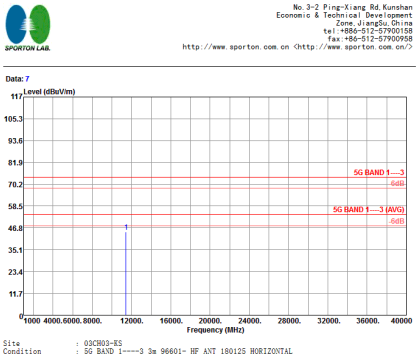
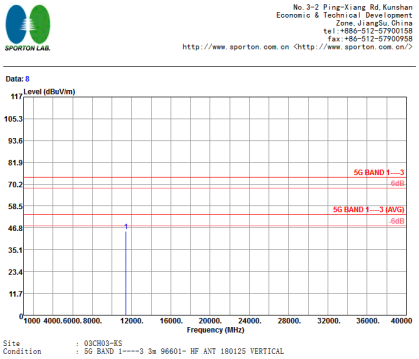
WIFI	Band 3 Straddle Channel Fundamental @ 3m	
ANT	802.11ac VHT40 CH142 5710MHz	
1	Horizontal	Vertical
Peak Avg.		

Band 3 – Straddle Channel
WIFI 802.11ac VHT80 (Fundamental @ 3m)

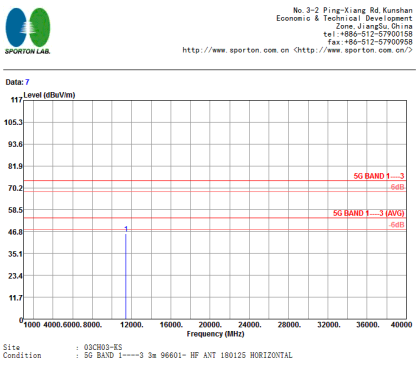
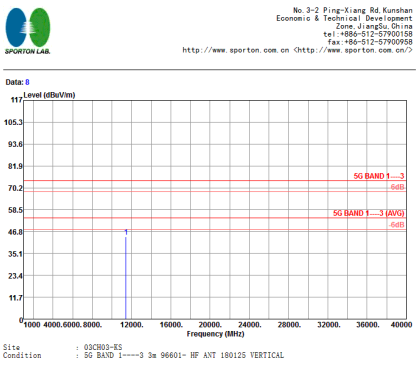
WIFI	Band 3 Straddle Channel Fundamental @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz	
1	Horizontal	Vertical
Peak Avg.		

Band 3 - Straddle Channel

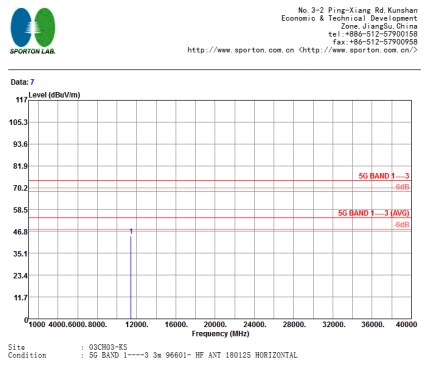
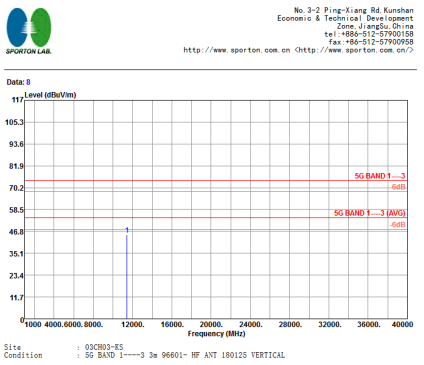
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11a CH144 5720MHz	
1	Horizontal	Vertical
Peak Avg.		

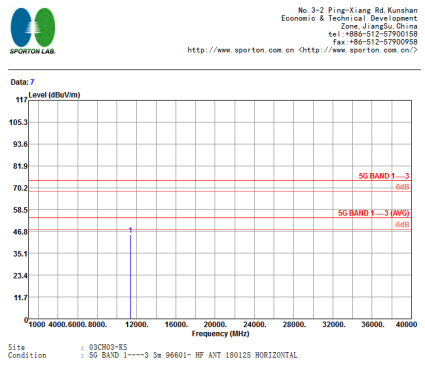
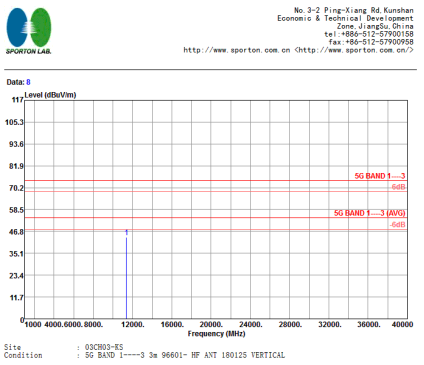
Band 3 – Straddle Channel
WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ac VHT20 CH144 5720MHz	
1	Horizontal	Vertical
Peak Avg.		

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

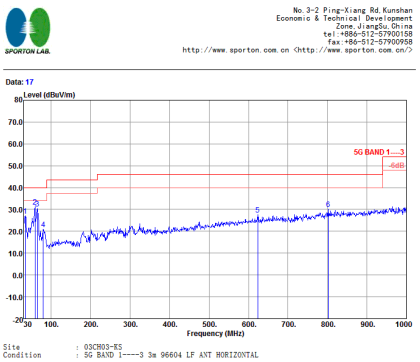
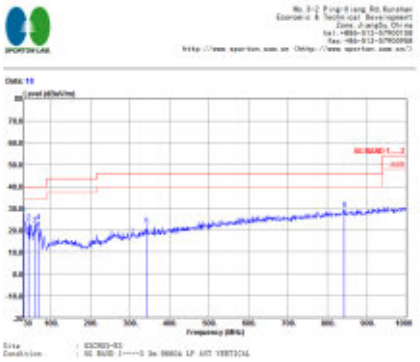
WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ac VHT40 CH142 5710MHz	
1	Horizontal	Vertical
Peak Avg.		

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

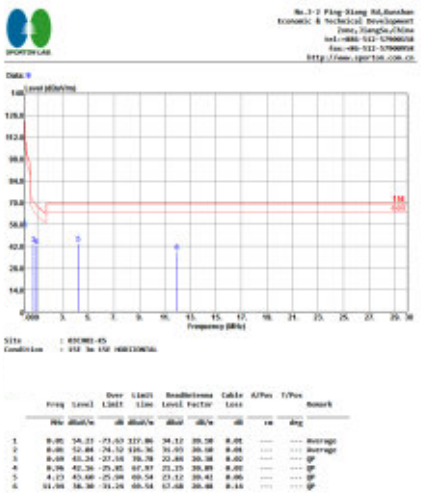
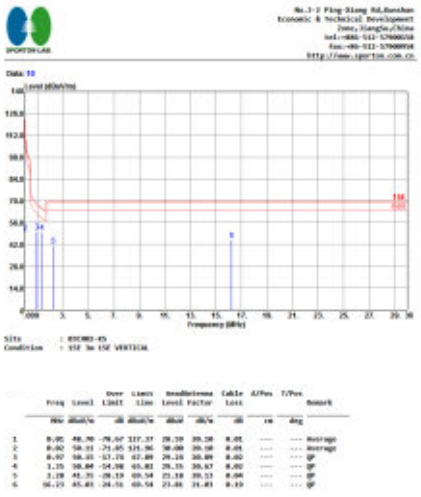
WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ac VHT80 CH138 5690MHz	
1	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

5GHz WIFI 802.11ac VHT80 (LF)

WIFI	5GHz WIFI	
ANT	802.11ac VHT80 LF	
1	Horizontal	Vertical
QP / Peak		

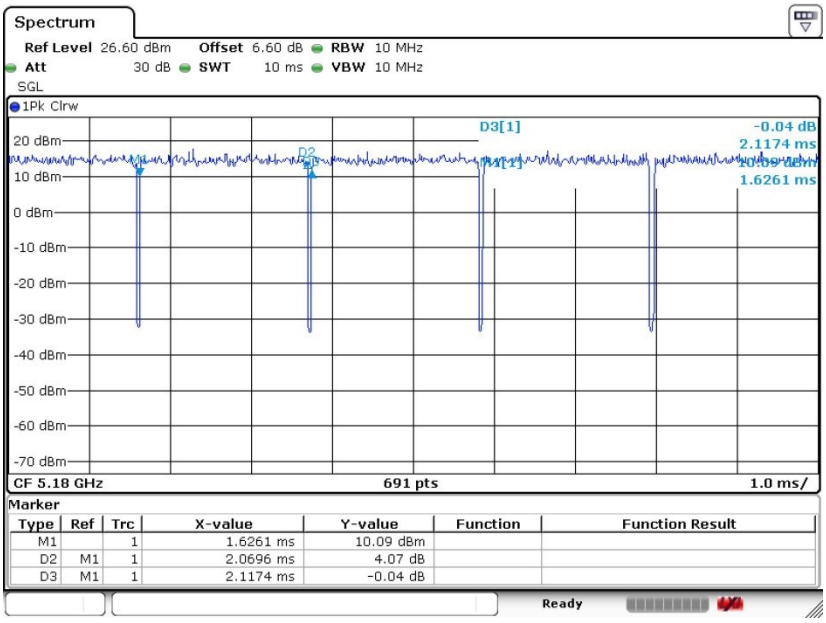
5GHz WIFI 802.11ac VHT80 (9KHz ~ 30MHz)

WIFI	5GHz WIFI	
ANT	802.11ac VHT80	
1	Horizontal	Vertical
QP / Avg.		

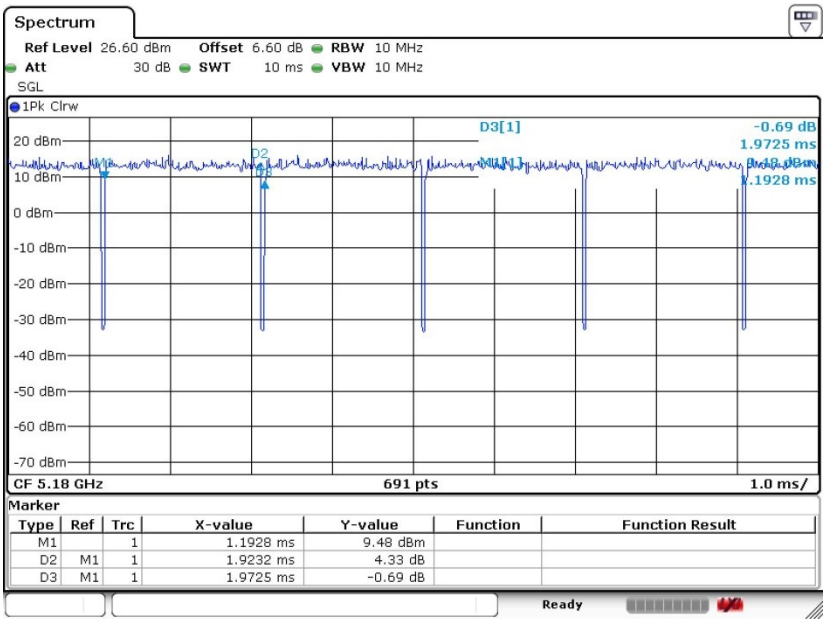
Appendix E. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	97.74	2.070	0.483	1 kHz
802.11ac VHT20	97.50	1.923	0.520	1 kHz
802.11ac VHT40	96.04	0.948	1.055	3 kHz
802.11ac VHT80	95.74	0.880	1.137	3 kHz

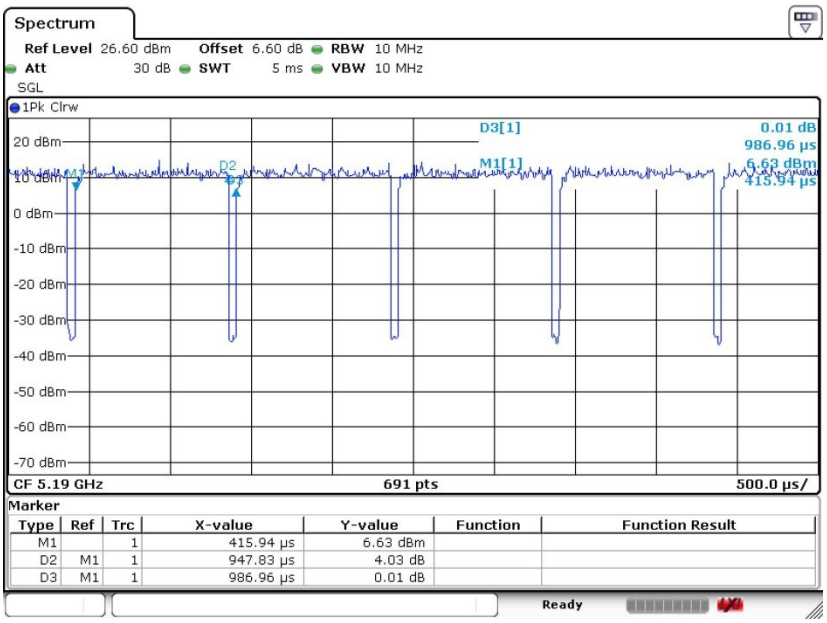
802.11a



802.11ac VHT20



802.11ac VHT40



802.11ac VHT80