



# FCC RF Test Report

**APPLICANT** : Getac Technology Corporation.  
**EQUIPMENT** : Body Worn Camera  
**BRAND NAME** : Getac  
**MODEL NAME** : Veretos BC-02  
**FCC ID** : QYLBWC2  
**STANDARD** : FCC Part 15 Subpart C §15.247  
**CLASSIFICATION** : (DTS) Digital Transmission System

This is a variant report which is only valid together with the original test report. The product was received on Aug. 03, 2016 and testing was completed on Sep. 14, 2016. We, SPORTON INTERNATIONAL 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 INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



## **SPORTON INTERNATIONAL INC.**

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR660109-02B	Rev. 01	This is a variant report which can be referred to Product Equality Declaration. All the test cases were performed on original report which can be referred to Sporton Report Number FR660109B as appendix E. Based on the original report, the radiated band edges, radiated spurious emission, and AC conducted emission tests were verified.	Oct. 17, 2016



### SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 4.03 dB at 2483.520 MHz
3.2	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 17.10 dB at 0.702 MHz
3.3	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-



# 1 General Description

## 1.1 Applicant

**Getac Technology Corporation.**

5F., Building A, No. 209, Sec.1, Nangang Rd.,Nangang Dist., Taipei City 11568, Taiwan, R.O.C.

## 1.2 Manufacturer

**Ability Enterprise Co., Ltd.**

4F., No.8, Lane7, Wuchiuan Rd, Wugu Dist., New Taipei City 24886, Taiwan, R.O.C.

## 1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Body Worn Camera
Brand Name	Getac
Model Name	Veretos BC-02
FCC ID	QYLBWC2
EUT supports Radios application	NFC WLAN 11b/g/n HT20 Bluetooth v4.0 LE
EUT Stage	Production Unit

**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 Channel Frequency Range	2412 MHz ~ 2462 MHz
Maximum (Peak) Output Power to Antenna	802.11b : 14.40 dBm (0.0275 W) 802.11g : 21.15 dBm (0.1303 W) 802.11n HT20 : 21.33 dBm (0.1358 W)
Antenna Type	PIFA Antenna type with gain 0.88 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

## 1.5 Modification of EUT

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



### 1.6 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

<b>Test Site</b>	SPORTON INTERNATIONAL INC.	
<b>Test Site Location</b>	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	TH02-HY	CO05-HY

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

<b>Test Site</b>	SPORTON INTERNATIONAL INC.	
<b>Test Site Location</b>	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	03CH10-HY	

**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 C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05
- ♦ ANSI C63.10-2013

**Remark:**

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



## 2 Test Configuration of Equipment Under Test

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

### 2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437	-	-



## 2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test shown in the following tables.

Channel	Frequency	2.4GHz 802.11b RF Peak Power (dBm)	
		DSSS Data Rate	
		1 Mbps	
CH 01	2412MHz	14.02	
CH 06	2437MHz	14.06	
CH 11	2462MHz	14.40	

Channel	Frequency	2.4GHz 802.11g RF Peak Power (dBm)	
		OFDM Data Rate	
		6 Mbps	
CH 01	2412MHz	20.35	
CH 06	2437MHz	20.73	
CH 11	2462MHz	21.15	

Channel	Frequency	2.4GHz 802.11n HT20 RF Peak Power (dBm)	
		OFDM Data Rate	
		MCS0	
CH 01	2412MHz	20.64	
CH 06	2437MHz	20.92	
CH 11	2462MHz	21.33	





### 2.3 Test Mode

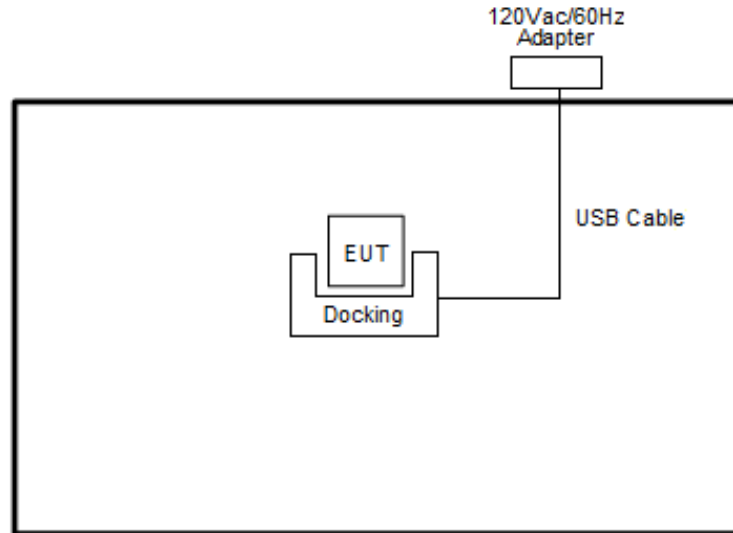
Final test mode of radiated spurious emissions is considering the modulation and worse data rates from the power table described in section 2.2.

Modulation	Data Rate
802.11b	1 Mbps
802.11g	6 Mbps
802.11n HT20	MCS0

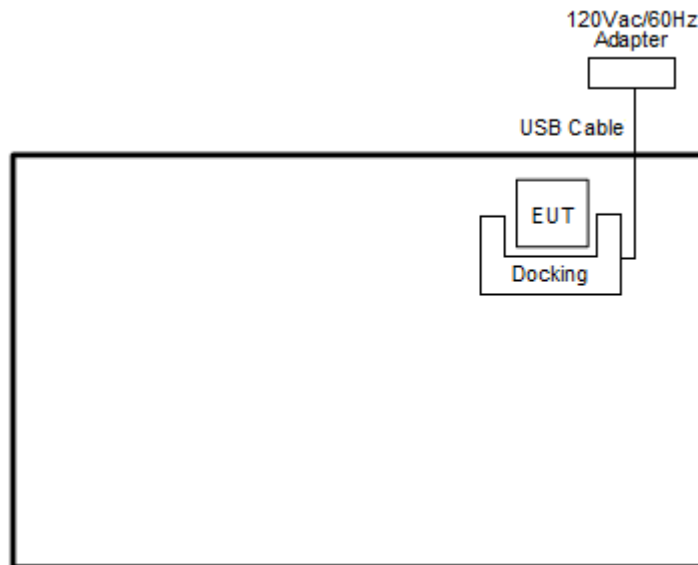
Test Cases	
<b>AC Conducted Emission</b>	Mode 1: BT LE Tx + EUT with Docking + USB Cable (Charging from Adapter) Mode 2: WLAN Tx + EUT with Docking + USB Cable (Charging from Adapter)
<b>Remark:</b> The worst case of conducted emission is mode 2; only the test data of it was reported.	

## 2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



## 2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Docking	Getac	N/A	N/A	N/A	Unshielded, 1.0m
2.	Adapter	TPC	NSS050200B	N/A	N/A	N/A



## **2.6 EUT Operation Test Setup**

The programmed RF utility "Sample\_Project", is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.



### 3 Test Result

#### 3.1 Radiated Band Edges and Spurious Emission Measurement

##### 3.1.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

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

##### 3.1.2 Measuring Instruments

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

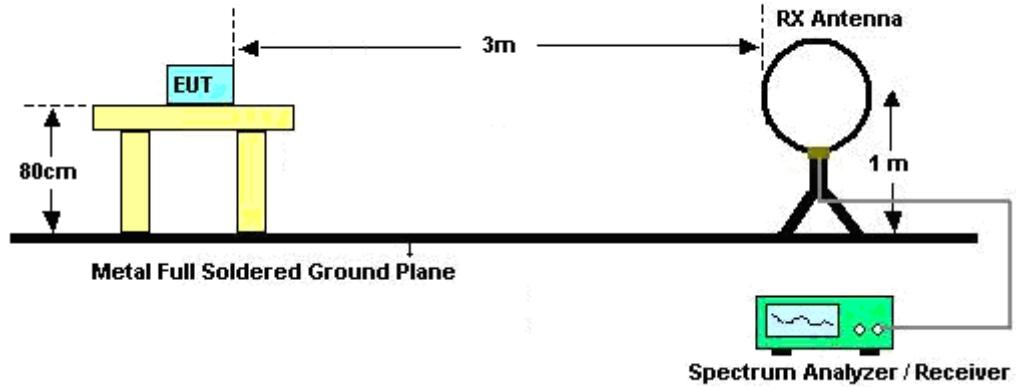


### **3.1.3 Test Procedures**

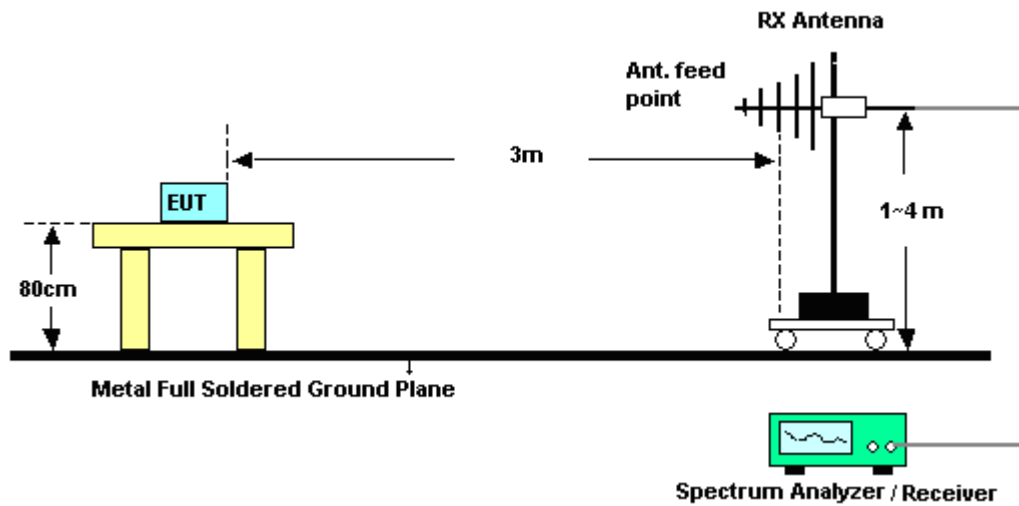
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. 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.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for  $f < 1$  GHz; VBW  $\geq$  RBW; Sweep = auto; Detector function = peak; Trace = max hold;
  - (3) Set RBW = 1 MHz, VBW= 3MHz for  $f \geq 1$  GHz for peak measurement.  
For average measurement:
    - VBW = 10 Hz, when duty cycle is no less than 98 percent.
    - VBW  $\geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

### 3.1.4 Test Setup

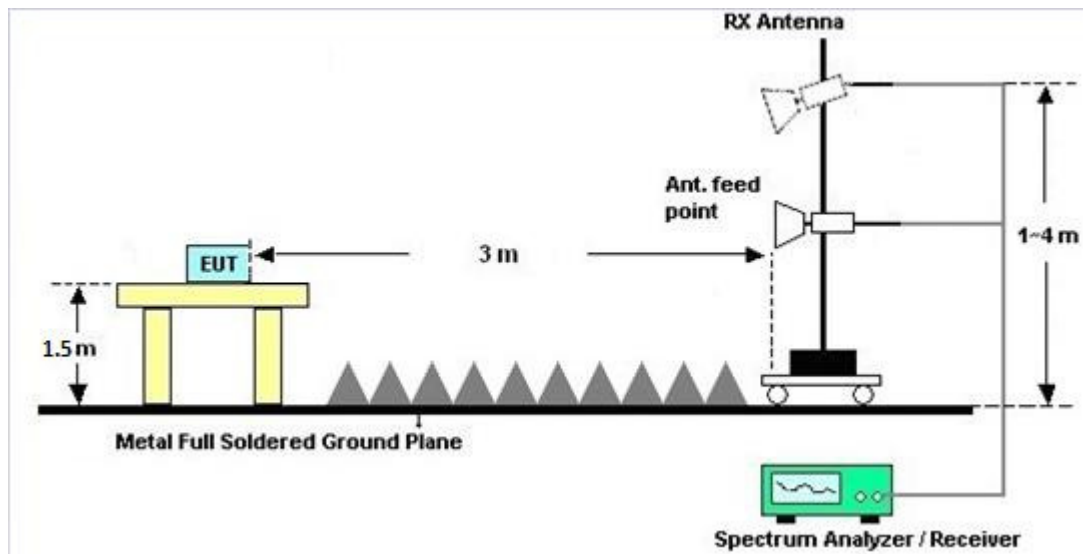
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

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

Please refer to Appendix A and B.

### 3.1.7 Duty Cycle

Please refer to Appendix C.

### 3.1.8 Test Result of Radiated Spurious Emission (30MHz ~ 10<sup>th</sup> Harmonic)

Please refer to Appendix A and B.



### 3.2 AC Conducted Emission Measurement

#### 3.2.1 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.

#### 3.2.2 Measuring Instruments

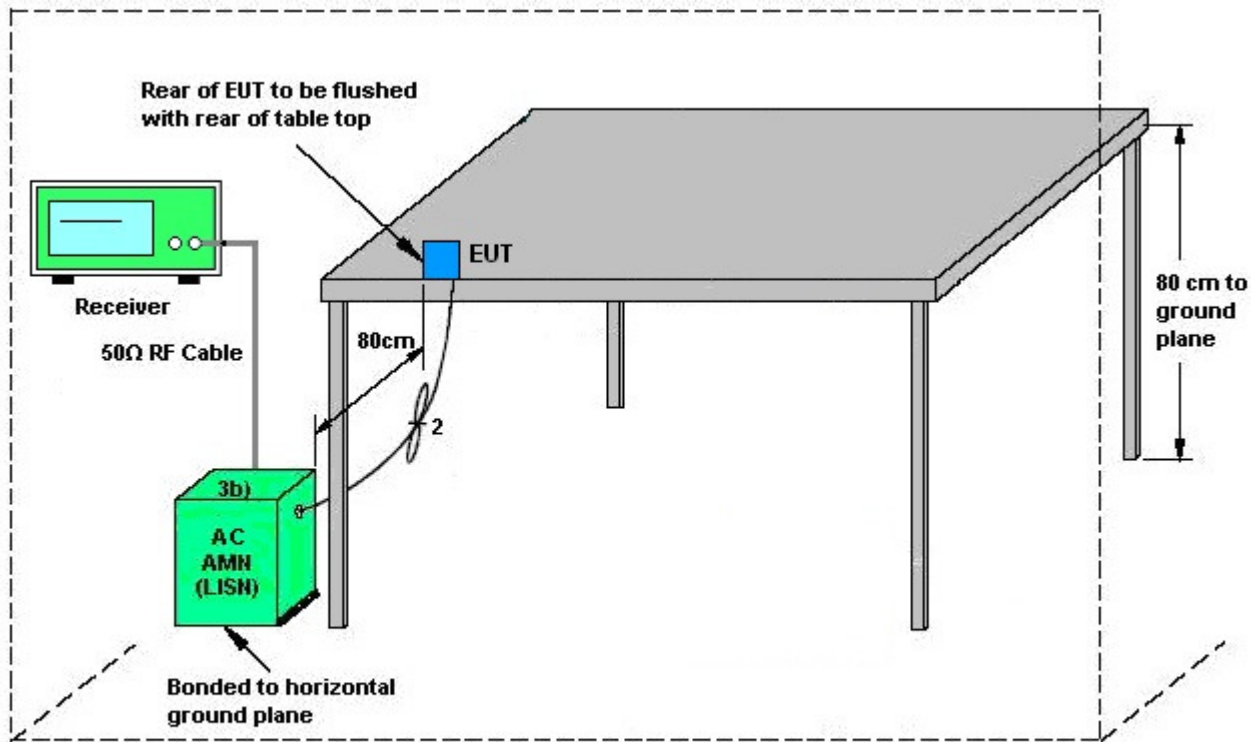
The measuring equipment is listed in the section 4 of this test report.

#### 3.2.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it 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 (IF bandwidth = 9kHz) with Maximum Hold Mode.



### 3.2.4 Test Setup

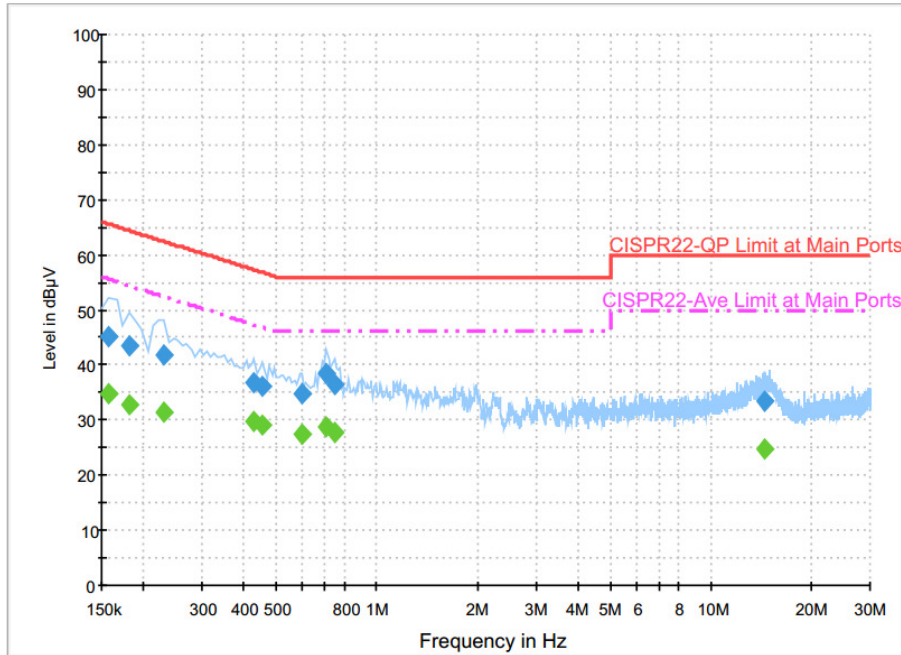


AMN = Artificial mains network (LISN)  
AE = Associated equipment  
EUT = Equipment under test  
ISN = Impedance stabilization network



### 3.2.5 Test Result of AC Conducted Emission

Test Mode :	Mode 2	Temperature :	22~23°C
Test Engineer :	Arthur Hsieh	Relative Humidity :	51~52%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	WLAN Tx + EUT with Docking + USB Cable (Charging from Adapter)		



**Final Result : Quasi-Peak**

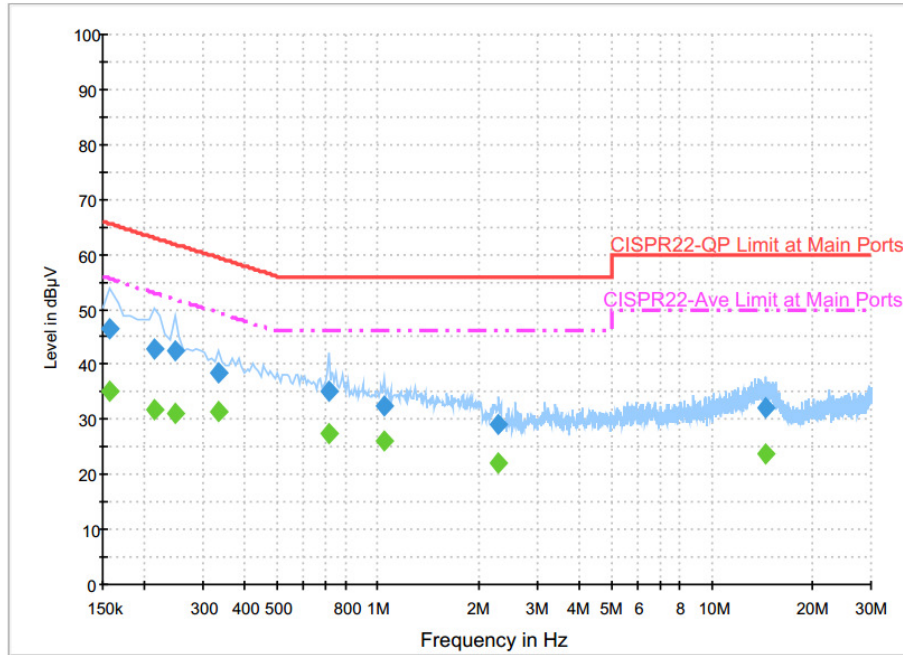
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	45.1	Off	L1	19.6	20.5	65.6
0.182000	43.5	Off	L1	19.6	20.9	64.4
0.230000	41.7	Off	L1	19.6	20.7	62.4
0.430000	36.6	Off	L1	19.6	20.7	57.3
0.454000	36.1	Off	L1	19.6	20.7	56.8
0.598000	34.7	Off	L1	19.6	21.3	56.0
0.702000	38.5	Off	L1	19.6	17.5	56.0
0.750000	36.6	Off	L1	19.6	19.4	56.0
14.574000	33.3	Off	L1	20.4	26.7	60.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	34.9	Off	L1	19.6	20.7	55.6
0.182000	32.9	Off	L1	19.6	21.5	54.4
0.230000	31.5	Off	L1	19.6	20.9	52.4
0.430000	29.7	Off	L1	19.6	17.6	47.3
0.454000	29.2	Off	L1	19.6	17.6	46.8
0.598000	27.6	Off	L1	19.6	18.4	46.0
0.702000	28.9	Off	L1	19.6	17.1	46.0
0.750000	27.6	Off	L1	19.6	18.4	46.0
14.574000	24.8	Off	L1	20.4	25.2	50.0



Test Mode :	Mode 2	Temperature :	22~23°C
Test Engineer :	Arthur Hsieh	Relative Humidity :	51~52%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	WLAN Tx + EUT with Docking + USB Cable (Charging from Adapter)		



**Final Result : Quasi-Peak**

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	46.6	Off	N	19.6	19.0	65.6
0.214000	42.7	Off	N	19.6	20.3	63.0
0.246000	42.3	Off	N	19.6	19.6	61.9
0.334000	38.4	Off	N	19.6	21.0	59.4
0.710000	35.3	Off	N	19.6	20.7	56.0
1.046000	32.6	Off	N	19.6	23.4	56.0
2.302000	29.1	Off	N	18.6	26.9	56.0
14.582000	32.1	Off	N	20.4	27.9	60.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	35.3	Off	N	19.6	20.3	55.6
0.214000	31.8	Off	N	19.6	21.2	53.0
0.246000	31.2	Off	N	19.6	20.7	51.9
0.334000	31.5	Off	N	19.6	17.9	49.4
0.710000	27.5	Off	N	19.6	18.5	46.0
1.046000	25.9	Off	N	19.6	20.1	46.0
2.302000	22.2	Off	N	18.6	23.8	46.0
14.582000	23.7	Off	N	20.4	26.3	50.0



### **3.3 Antenna Requirements**

#### **3.3.1 Standard Applicable**

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

#### **3.3.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.

#### **3.3.3 Antenna Gain**

The antenna peak gain of EUT 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
Power Meter	Agilent	E4416A	GB412923 44	300MHz~40GHz	Jan. 08, 2016	Aug. 05, 2016	Jan. 07, 2017	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Jul. 28, 2016	Aug. 05, 2016	Jul. 27, 2017	Conducted (TH02-HY)
Power Sensor	Agilent	E9327A	US404415 48	300MHz~40GHz	Jan. 07, 2016	Aug. 05, 2016	Jan. 06, 2017	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Jul. 28, 2016	Aug. 05, 2016	Jul. 27, 2017	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 17, 2016	Aug. 05, 2016	Jun. 16, 2017	Conducted (TH02-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Aug. 31, 2016	N/A	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Aug. 31, 2016	Dec. 01, 2016	Conduction (CO05-HY)
EMI Test Receiver	Keysight	N9038A (MXE)	MY541300 85	20Hz ~ 8.4GHz	Nov. 04, 2015	Aug. 31, 2016	Nov. 03, 2016	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Sep. 07, 2016 ~ Sep. 14, 2016	Sep. 01, 2017	Radiation (03CH10-HY)
Bilog Antenna	TESEQ	CBL 6111D	35413	30MHz~1GHz	Jan. 13, 2016	Sep. 07, 2016 ~ Sep. 14, 2016	Jan. 12, 2017	Radiation (03CH10-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-132 5	1GHz ~ 18GHz	Sep. 30, 2015	Sep. 07, 2016 ~ Sep. 14, 2016	Sep. 29, 2016	Radiation (03CH10-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170 576	18GHz ~ 40GHz	Apr. 15, 2016	Sep. 07, 2016 ~ Sep. 14, 2016	Apr. 14, 2017	Radiation (03CH10-HY)
Amplifier	SONOMA	310N	187311	9kHz~1GHz	Nov. 16, 2015	Sep. 07, 2016 ~ Sep. 14, 2016	Nov. 15, 2016	Radiation (03CH10-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1902246	1GHz~18GHz	Nov. 16, 2015	Sep. 07, 2016 ~ Sep. 14, 2016	Nov. 15, 2016	Radiation (03CH10-HY)
Preamplifier	Keysight	83017A	MY532700 78	1GHz~26.5GHz	Nov. 13, 2015	Sep. 07, 2016 ~ Sep. 14, 2016	Nov. 12, 2016	Radiation (03CH10-HY)
Preamplifier	MITEQ	TTA0204	1872107	2GHz~40GHz	Feb. 15, 2016	Sep. 07, 2016 ~ Sep. 14, 2016	Feb. 14, 2017	Radiation (03CH10-HY)
Spectrum Analyzer	Keysight	N9010A	MY542004 85	10Hz ~ 44GHz	Oct. 15, 2015	Sep. 07, 2016 ~ Sep. 14, 2016	Oct. 14, 2016	Radiation (03CH10-HY)
Antenna Mast	EMEC	AM-BS-4500- B	N/A	1~4m	N/A	Sep. 07, 2016 ~ Sep. 14, 2016	N/A	Radiation (03CH10-HY)
Turn Table	EMEC	TT 2200	N/A	0~360 Degree	N/A	Sep. 07, 2016 ~ Sep. 14, 2016	N/A	Radiation (03CH10-HY)



## 5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.26
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.6
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### Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.9
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### Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.2
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## Appendix A. Radiated Spurious Emission

Test Engineer :	Kyle Jhuang, Wilson Wu and Tsung Lee	Temperature :	22~24°C
		Relative Humidity :	43~44%

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11n HT20 CH 11 2462MHz	*	2462	101.68	-	-	102.03	27.41	5.44	33.2	157	6	P	H	
	*	2462	94.16	-	-	94.51	27.41	5.44	33.2	157	6	A	H	
		2484.04	64.33	-9.67	74	64.59	27.46	5.46	33.18	157	6	P	H	
		2483.52	49.97	-4.03	54	50.23	27.46	5.46	33.18	157	6	A	H	
													H	
														H
	*	2462	101.09	-	-	101.44	27.41	5.44	33.2	338	41	P	V	
	*	2462	93.6	-	-	93.95	27.41	5.44	33.2	338	41	A	V	
		2484.4	61.98	-12.02	74	62.24	27.46	5.46	33.18	338	41	P	V	
		2483.52	48.88	-5.12	54	49.14	27.46	5.46	33.18	338	41	A	V	
													V	
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11n HT20 CH 11 2462MHz		4924	47.55	-26.45	74	572.2	-500	7.93	32.58	100	0	P	H	
		7386	50.24	-23.76	74	574.24	-500	9.53	33.53	100	0	P	H	
													H	
													H	
			4924	44.6	-29.4	74	569.25	-500	7.93	32.58	100	0	P	V
			7386	50.41	-23.59	74	574.41	-500	9.53	33.53	100	0	P	V
														V
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													





2.4GHz 2400~2483.5MHz

Emission below 1GHz

2.4GHz WIFI 802.11n HT20 (LF)

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 )	
2.4GHz 802.11n HT20 LF		62.13	19.08	-20.92	40	38.77	12.12	0.93	32.74	-	-	P	H	
		129.63	25.57	-17.93	43.5	38.9	18	1.33	32.66	-	-	P	H	
		172.29	25.94	-17.56	43.5	41.15	16.01	1.48	32.7	-	-	P	H	
		510.7	25.96	-20.04	46	32.3	24.26	2.33	32.93	-	-	P	H	
		754.3	28.46	-17.54	46	30.94	27.54	2.91	32.93	-	-	P	H	
		902.7	31.96	-14.04	46	32.26	28.78	3.2	32.28	100	0	P	H	
														H
														H
														H
														H
														H
														H
			30.27	27.98	-12.02	40	34.05	26.1	0.65	32.82	100	0	P	V
			62.94	24.32	-15.68	40	43.95	12.18	0.93	32.74	-	-	P	V
			173.1	26.84	-16.66	43.5	42.11	15.95	1.48	32.7	-	-	P	V
			508.6	25.41	-20.59	46	31.76	24.25	2.33	32.93	-	-	P	V
			678.7	27.9	-18.1	46	32.06	26.17	2.67	33	-	-	P	V
			912.5	30.92	-15.08	46	30.87	29.03	3.2	32.18	-	-	P	V
														V
														V
													V	
													V	
													V	
													V	
Remark	1. No other spurious found. 2. All results are PASS against limit line.													



**Note symbol**

*	<b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is <b>over limit</b> line.
P/A	<b>Peak</b> or <b>Average</b>
H/V	<b>Horizontal</b> or <b>Vertical</b>



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

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

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

**For Peak Limit @ 2390MHz:**

- Level(dBμV/m)  
= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)  
= 55.45 (dBμV/m)
- Over Limit(dB)  
= Level(dBμV/m) – Limit Line(dBμV/m)  
= 55.45(dBμV/m) – 74(dBμV/m)  
= -18.55(dB)

**For Average Limit @ 2390MHz:**

- Level(dBμV/m)  
= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)  
= 43.54 (dBμV/m)
- Over Limit(dB)  
= Level(dBμV/m) – Limit Line(dBμV/m)  
= 43.54(dBμV/m) – 54(dBμV/m)  
= -10.46(dB)

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



## Appendix B. Radiated Spurious Emission Plots

Test Engineer :	Kyle Jhuang, Wilson Wu and Tsung Lee	Temperature :	22~24°C
		Relative Humidity :	43~44%

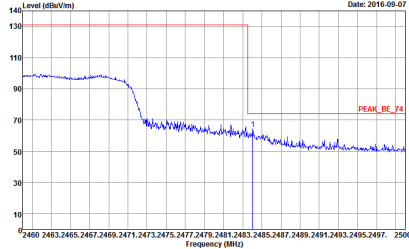
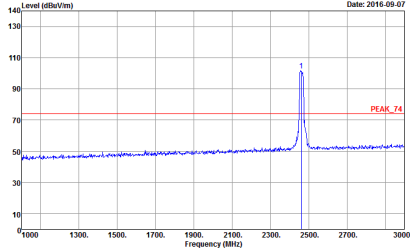
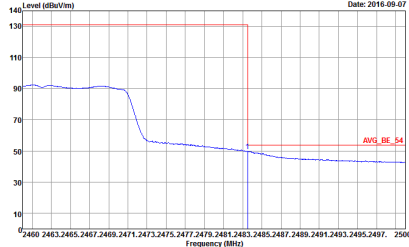
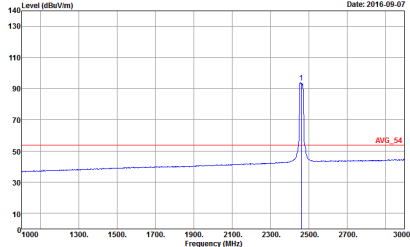
### Note symbol

-L	Low channel location
-R	High channel location

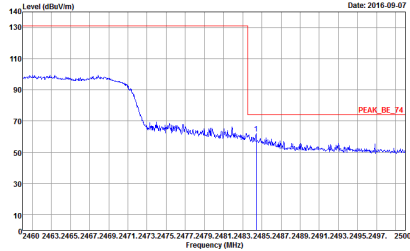
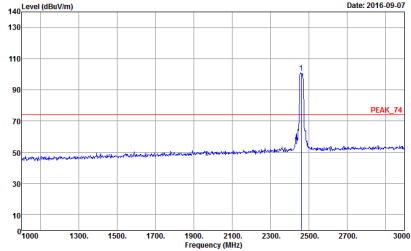
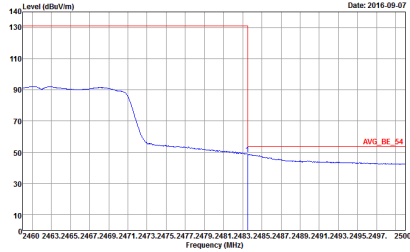
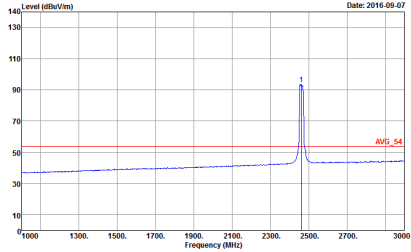


2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 <p>Level (dBuV/m) vs Frequency (MHz) plot showing a peak at 2462 MHz. The y-axis ranges from 10 to 140 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red horizontal line indicates the peak level at approximately 75 dBuV/m.</p> <p>Site : 03CH10-HY            Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109-02            Mode : 3            EUT : #11</p>	 <p>Level (dBuV/m) vs Frequency (MHz) plot showing a sharp peak at 2462 MHz. The y-axis ranges from 10 to 140 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red horizontal line indicates the peak level at approximately 75 dBuV/m.</p> <p>Site : 03CH10-HY            Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109-02            Mode : 3            EUT : #11</p>
Avg.	 <p>Level (dBuV/m) vs Frequency (MHz) plot showing the average level. The y-axis ranges from 10 to 140 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red horizontal line indicates the average level at approximately 55 dBuV/m.</p> <p>Site : 03CH10-HY            Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL            RBW:1000.000KHz VBW:1.000KHz SWT:Auto            Detector : Peak            Project : 660109-02            Mode : 3            EUT : #11</p>	 <p>Level (dBuV/m) vs Frequency (MHz) plot showing the average level of the fundamental component. The y-axis ranges from 10 to 140 dBuV/m, and the x-axis ranges from 1000 to 3000 MHz. A red horizontal line indicates the average level at approximately 55 dBuV/m.</p> <p>Site : 03CH10-HY            Condition : AVG_54 3m HORN 91200-HF HORIZONTAL            RBW:1000.000KHz VBW:1.000KHz SWT:Auto            Detector : Peak            Project : 660109-02            Mode : 3            EUT : #11</p>

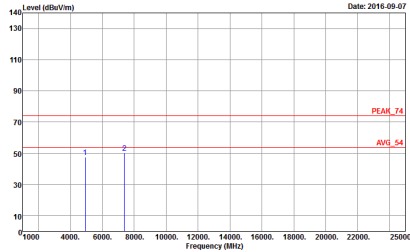
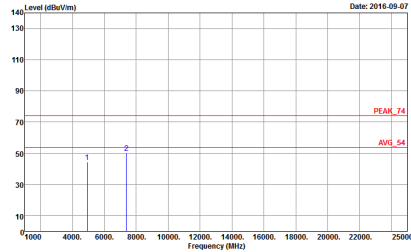


WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	 <p>Level (dBuV/m) vs Frequency (MHz) plot showing a peak at 2462 MHz. The y-axis ranges from 10 to 140 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red box highlights the peak area, and a red line indicates the peak level at approximately 130 dBuV/m.</p> <p>Site : 03CH10-HY            Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109-02            Mode : 3            EUT : #11</p>	 <p>Level (dBuV/m) vs Frequency (MHz) plot showing a sharp peak at 2462 MHz. The y-axis ranges from 10 to 140 dBuV/m, and the x-axis ranges from 2400 to 3000 MHz. A red box highlights the peak area, and a red line indicates the peak level at approximately 110 dBuV/m.</p> <p>Site : 03CH10-HY            Condition : PEAK_74 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109-02            Mode : 3            EUT : #11</p>
Avg.	 <p>Level (dBuV/m) vs Frequency (MHz) plot showing the average level. The y-axis ranges from 10 to 140 dBuV/m, and the x-axis ranges from 2460 to 2500 MHz. A red box highlights the average level area, and a red line indicates the average level at approximately 50 dBuV/m.</p> <p>Site : 03CH10-HY            Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:1.000KHz SWT:Auto            Detector : Peak            Project : 660109-02            Mode : 3            EUT : #11</p>	 <p>Level (dBuV/m) vs Frequency (MHz) plot showing the average level. The y-axis ranges from 10 to 140 dBuV/m, and the x-axis ranges from 2400 to 3000 MHz. A red box highlights the average level area, and a red line indicates the average level at approximately 50 dBuV/m.</p> <p>Site : 03CH10-HY            Condition : AVG_54 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:1.000KHz SWT:Auto            Detector : Peak            Project : 660109-02            Mode : 3            EUT : #11</p>



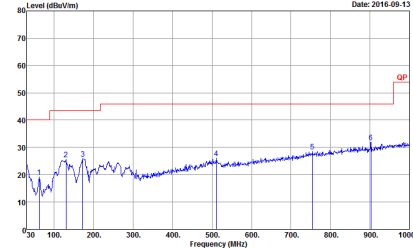
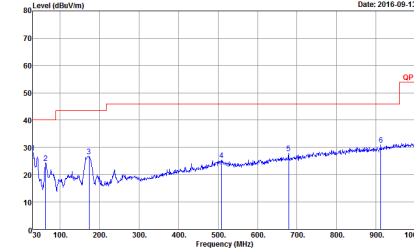
2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Vertical
<p><b>Peak</b> <b>Avg.</b></p>	 <p>Site : 03CH10-#Y            Condition : PEAK_74 3m HORN_9170_406_0584 HORIZONTAL            Detector : Peak            Project : 660109-02            Mode : 3            EUT : #11</p>	 <p>Site : 03CH10-#Y            Condition : PEAK_74 3m HORN_9170_406_0584 VERTICAL            Detector : Peak            Project : 660109-02            Mode : 3            EUT : #11</p>



Emission below 1GHz  
2.4GHz WIFI 802.11n HT20 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT20 LF	
1	Horizontal	Vertical
<p>QP / Peak</p>	 <p>Site : 03CH10-#Y Condition : QP 3m BI-LO6 6111D-LF HORIZONTAL Detector : Peak Project : 660109-02 Mode : 4 EUT : #11</p>	 <p>Site : 03CH10-#Y Condition : QP 3m BI-LO6 6111D-LF VERTICAL Detector : Peak Project : 660109-02 Mode : 4 EUT : #11</p>

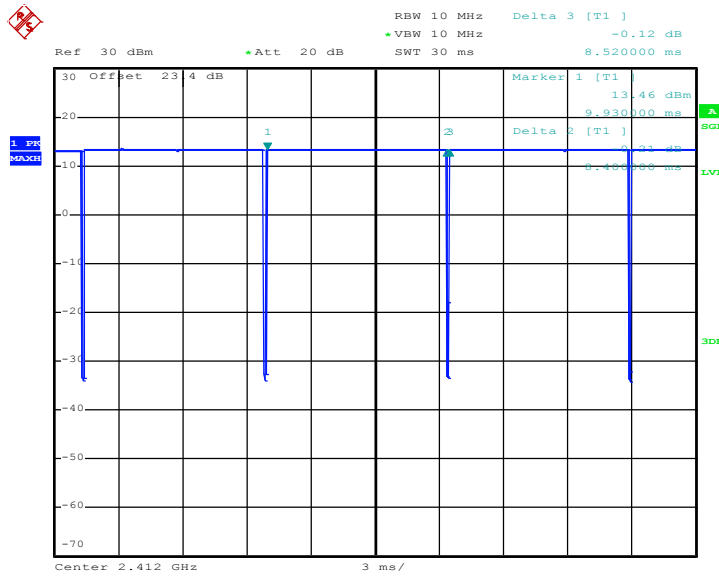




### Appendix C. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
802.11b	98.59	-	-	10Hz
802.11g	92.72	1400.00	0.71	1kHz
2.4GHz 802.11n HT20	92.96	0.76	1kHz	

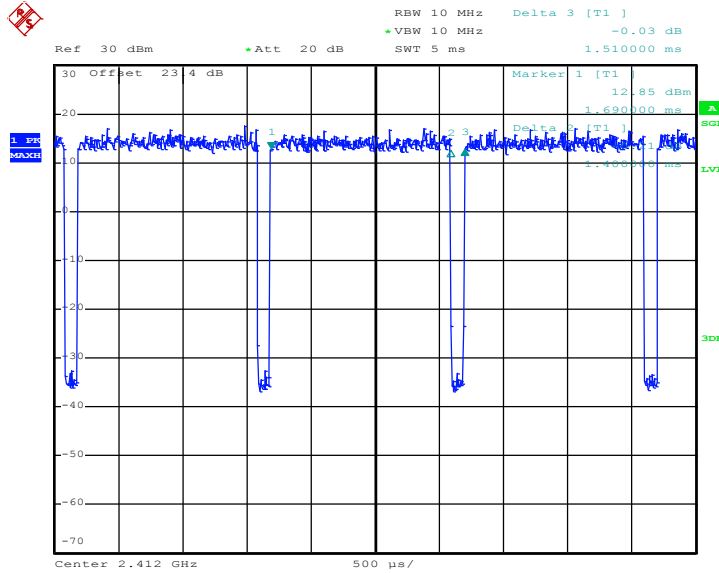
#### 802.11b



Date: 5.AUG.2016 01:15:48

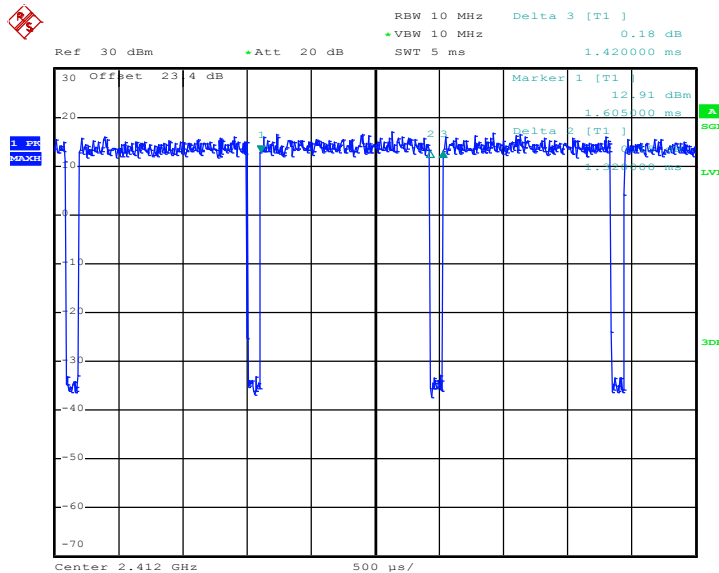


802.11g



Date: 5.AUG.2016 01:39:14

802.11n HT20



Date: 5.AUG.2016 01:52:36



## **Appendix E. Original Report**

Please refer to Sporton report number FR660109B as below.



# FCC RF Test Report

**APPLICANT** : Getac Technology Corporation.  
**EQUIPMENT** : Body Worn Camera  
**BRAND NAME** : Getac  
**MODEL NAME** : Veretos BC-02  
**FCC ID** : QYLBWC2  
**STANDARD** : FCC Part 15 Subpart C §15.247  
**CLASSIFICATION** : (DTS) Digital Transmission System

The product was received on May 17, 2016 and testing was completed on Jul. 05, 2016. We, SPORTON INTERNATIONAL 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 INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager



## **SPORTON INTERNATIONAL INC.**

**No. 52, Hwa Ya 1<sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.**



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## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR660109B	Rev. 01	Initial issue of report	Aug. 10, 2016
FR660109B	Rev. 02	Revising Antenna type	Aug. 25, 2016



### SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.1	-	99% Bandwidth	-	Pass	-
3.2	15.247(b)	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(e)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
3.4	15.247(d)	Conducted Band Edges	$\leq 20\text{dBc}$	Pass	-
		Conducted Spurious Emission		Pass	-
3.5	15.247(d)	Radiated Band Edges and Radiated Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.94 dB at 2484.760 MHz
3.6	15.207	AC Conducted Emission	15.207(a)	Pass	Under limit 19.90 dB at 0.158 MHz
3.7	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-



# 1 General Description

## 1.1 Applicant

**Getac Technology Corporation.**

5F., Building A, No. 209, Sec.1, Nangang Rd.,Nangang Dist., Taipei City 11568, Taiwan, R.O.C.

## 1.2 Manufacturer

**Ability Enterprise Co., Ltd.**

4F., No.8, Lane7, Wuchiuan Rd, Wugu Dist., New Taipei City 24886, Taiwan, R.O.C.

## 1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Body Worn Camera
Brand Name	Getac
Model Name	Veretos BC-02
FCC ID	QYLBWC2
EUT supports Radios application	WLAN 11b/g/n HT20 Bluetooth v4.0 LE
EUT Stage	Production Unit

**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 Channel Frequency Range	802.11b/g/n : 2412 MHz ~ 2462 MHz
Maximum (Peak) Output Power to Antenna	802.11b : 14.82 dBm (0.0303 W) 802.11g : 22.70 dBm (0.1862 W) 802.11n HT20 : 22.73 dBm (0.1875 W)
99% Occupied Bandwidth	802.11b : 14.15MHz 802.11g : 17.90MHz 802.11n HT20 : 18.70MHz
Antenna Type	802.11b/g/n : PIFA Antenna type with gain 0.88 dBi
Type of Modulation	802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

## 1.5 Modification of EUT

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





### 1.6 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

<b>Test Site</b>	SPORTON INTERNATIONAL INC.	
<b>Test Site Location</b>	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	TH02-HY	CO05-HY

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

<b>Test Site</b>	SPORTON INTERNATIONAL INC.	
<b>Test Site Location</b>	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855	
<b>Test Site No.</b>	<b>Sporton Site No.</b>	
	03CH10-HY	

**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 C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05
- ♦ ANSI C63.10-2013

**Remark:**

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



## 2 Test Configuration of Equipment Under Test

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

### 2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437	-	-

### 2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and data rate associated with the highest power were chosen for full test shown in the following tables.

2.4GHz 802.11b mode				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	14.26	14.51	14.51	14.82

2.4GHz 802.11g mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	21.94	21.72	21.78	21.68	22.70	22.58	22.56	22.46

2.4GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	22.06	22.03	21.74	22.73	22.60	22.57	22.53	22.60



### 2.3 Test Mode

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

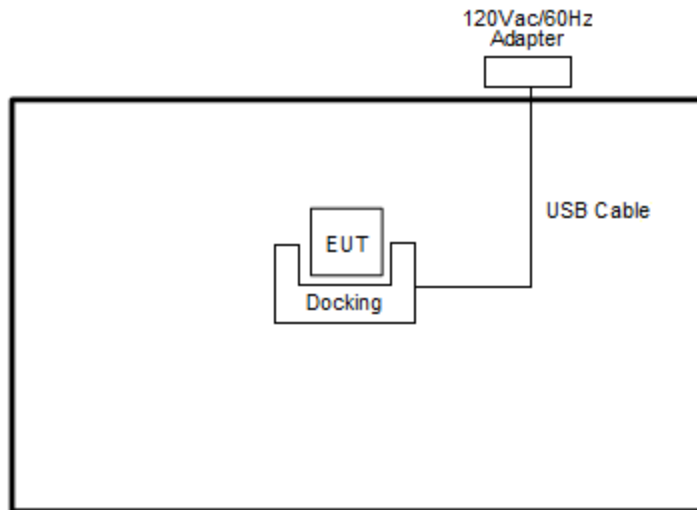
<2.4GHz>

Modulation	Data Rate
802.11b	11 Mbps
802.11g	24 Mbps
802.11n HT20	MCS3

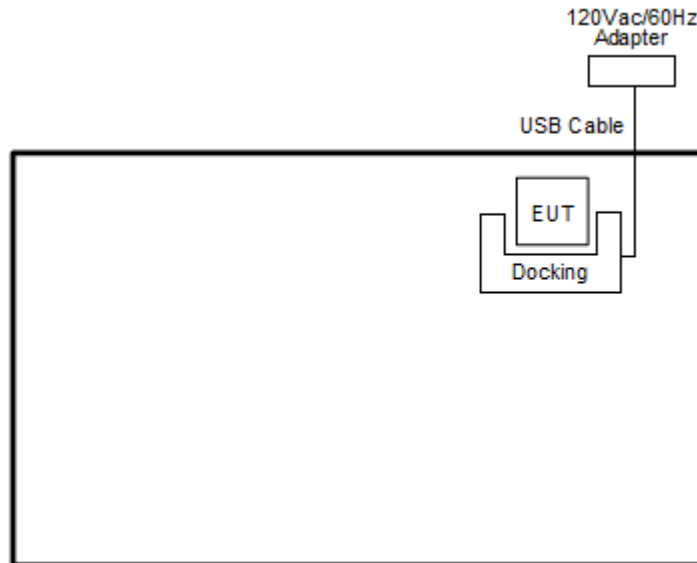
Test Cases	
<b>AC Conducted Emission</b>	Mode 1 : BT LE Tx + EUT with Docking + USB Cable (Charging from Adapter) Mode 2 : WLAN Tx + EUT with Docking + USB Cable (Charging from Adapter)
<b>Remark:</b> The worst case of conducted emission is mode 1; only the test data of it was reported.	

## 2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



## 2.5 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Docking	Getac	N/A	N/A	N/A	Unshielded, 1.1 m
2.	Adapter	TPC	NSS050200B	N/A	N/A	N/A



## 2.6 EUT Operation Test Setup

The programmed RF utility “Sample\_Project”, is installed in EUT to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

## 2.7 Measurement Results Explanation Example

**For all conducted test items:**

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

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

*Offset = RF cable loss + attenuator factor.*

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

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

### 3 Test Result

#### 3.1 6dB and 99% Bandwidth Measurement

##### 3.1.1 Limit of 6dB and 99% Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

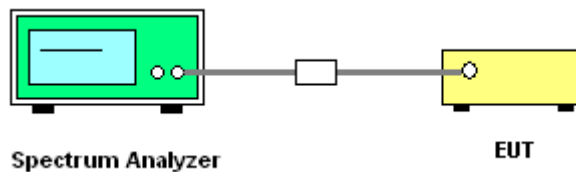
##### 3.1.2 Measuring Instruments

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

##### 3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r05.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 kHz.
5. For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) = 1MHz and set the Video bandwidth (VBW) = 3MHz.
6. Measure and record the results in the test report.

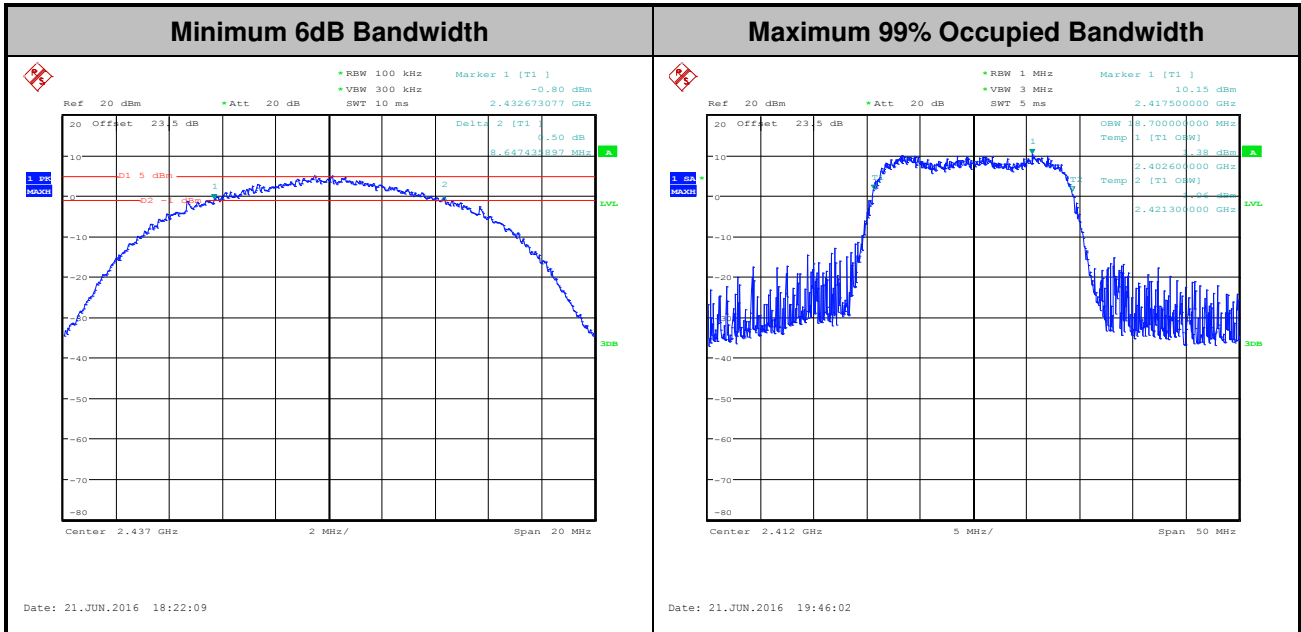
##### 3.1.4 Test Setup





### 3.1.5 Test Result of 6dB and 99% Occupied Bandwidth

Please refer to Appendix A of this test report.



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

## 3.2 Output Power Measurement

### 3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting Antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the Antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the Antenna exceeds 6dBi.

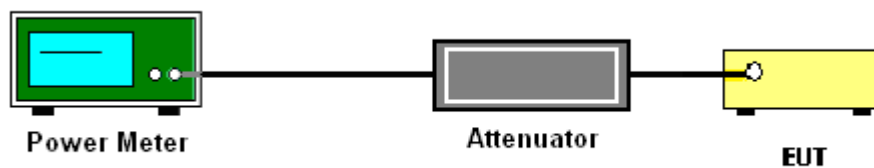
### 3.2.2 Measuring Instruments

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

### 3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v03r05 section 9.1.2 PKPM1 Peak power meter method.
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

### 3.2.4 Test Setup



### 3.2.5 Test Result of Peak Output Power

Please refer to Appendix A of this test report.

### 3.2.6 Test Result of Average output Power (Reporting Only)

Please refer to Appendix A of this test report.



### 3.3 Power Spectral Density Measurement

#### 3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.

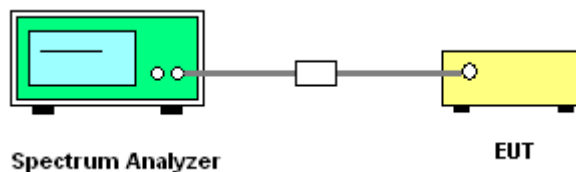
#### 3.3.2 Measuring Instruments

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

#### 3.3.3 Test Procedures

1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level.
6. Measure and record the results in the test report.

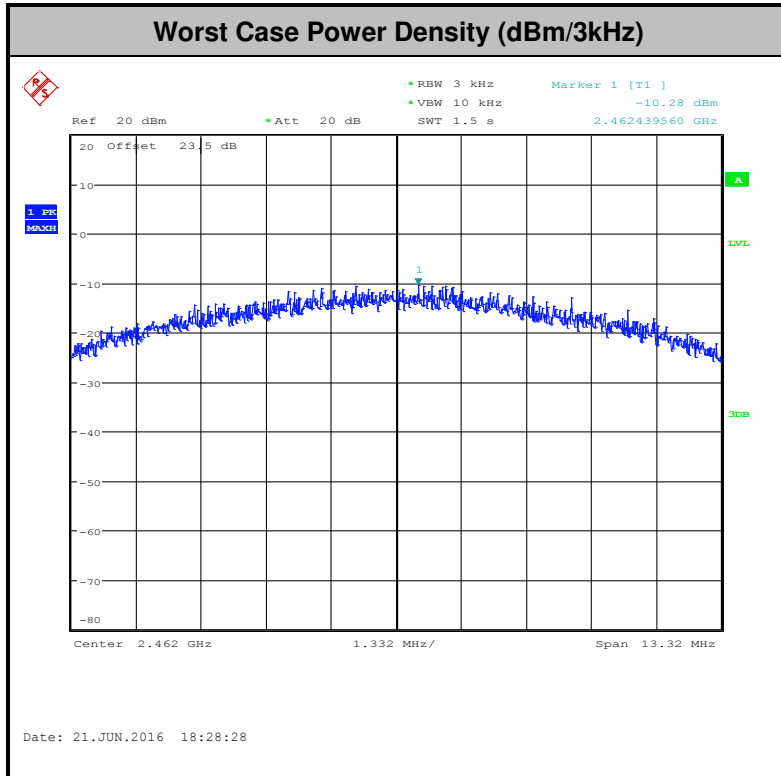
#### 3.3.4 Test Setup





### 3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A of this test report.



## 3.4 Conducted Band Edges and Spurious Emission Measurement

### 3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

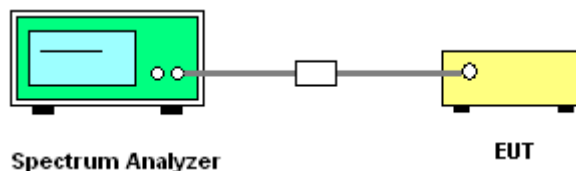
### 3.4.2 Measuring Instruments

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

### 3.4.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d).
5. Measure and record the results in the test report.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

### 3.4.4 Test Setup



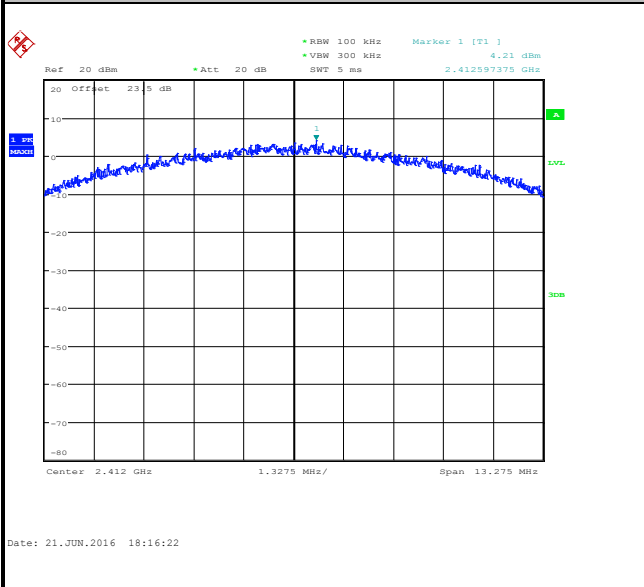


### 3.4.5 Test Result of Conducted Band Edges and Spurious Emission

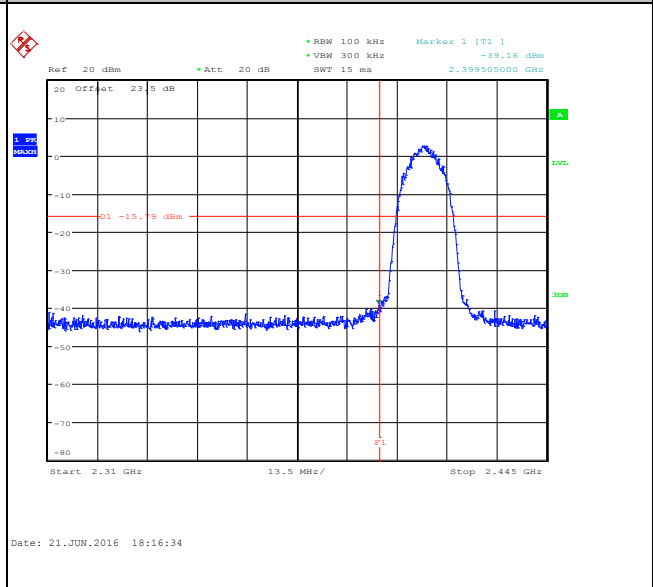
Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	PH Yang

#### WLAN 802.11b Channel 01

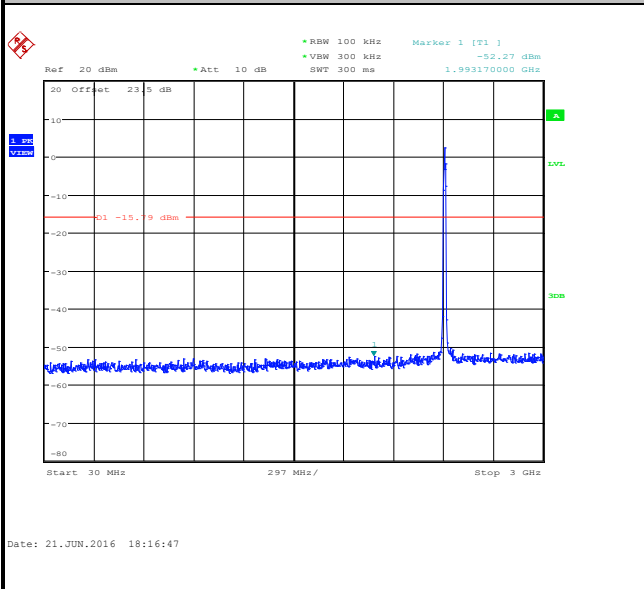
##### 100kHz PSD reference Level



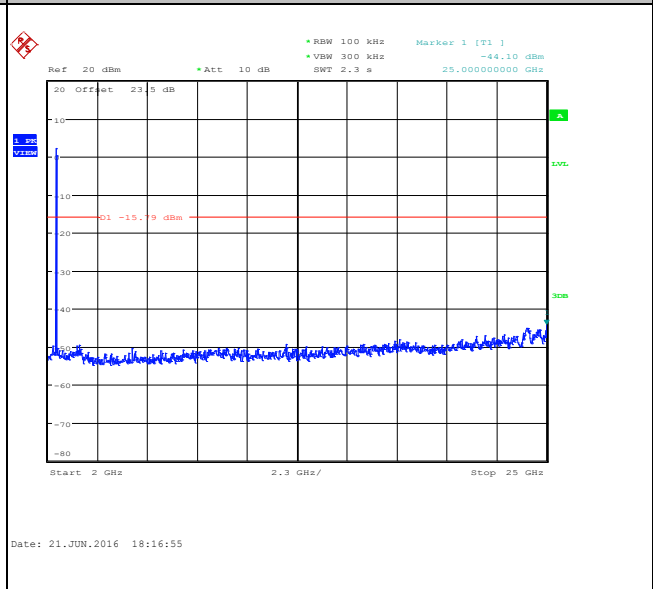
##### Low Channel Plot



##### Spurious Emission 30MHz~3GHz



##### Spurious Emission 2GHz~25GHz



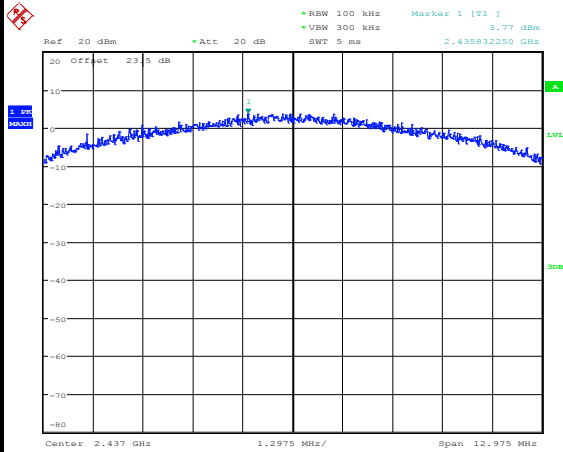


Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	PH Yang

WLAN 802.11b Channel 06

100kHz PSD reference Level

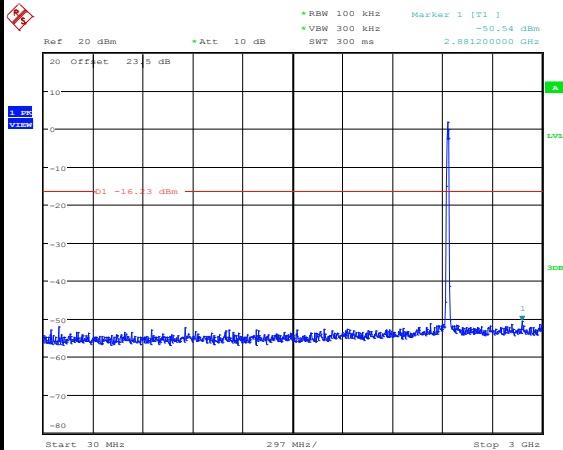
Mid Channel Plot



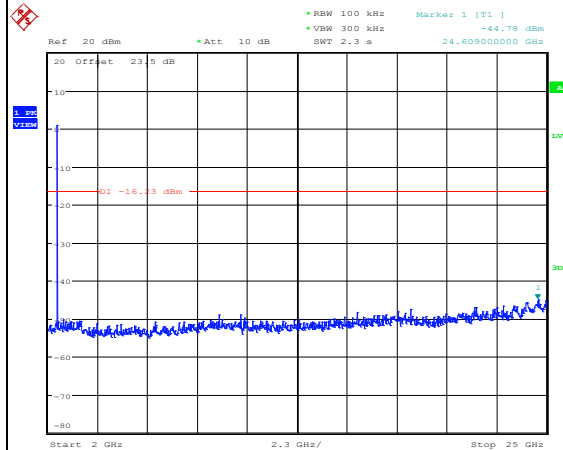
Date: 21.JUN.2016 18:23:06

Spurious Emission 30MHz~3GHz

Spurious Emission 2GHz~25GHz



Date: 21.JUN.2016 18:23:40



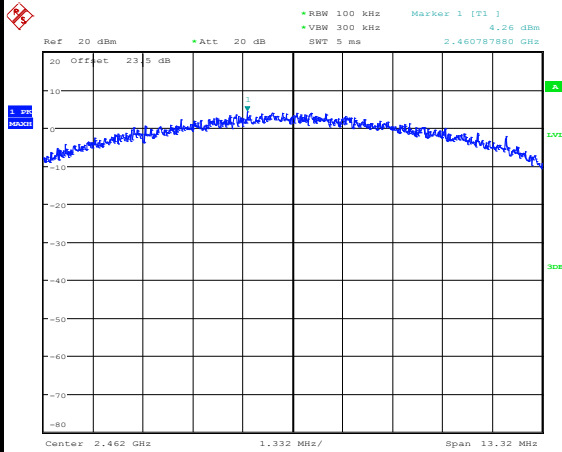
Date: 21.JUN.2016 18:23:48



Test Mode :	802.11b	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	PH Yang

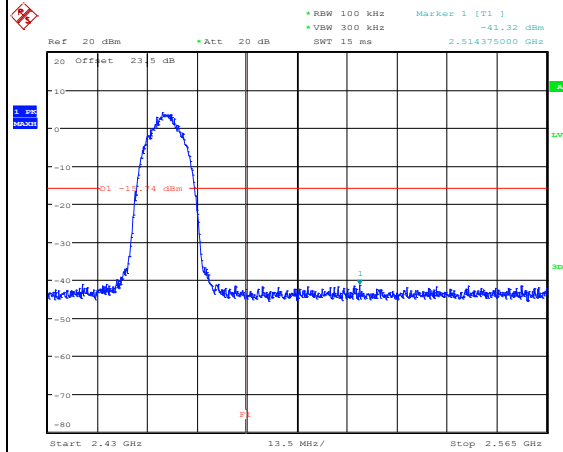
WLAN 802.11b Channel 11

100kHz PSD reference Level



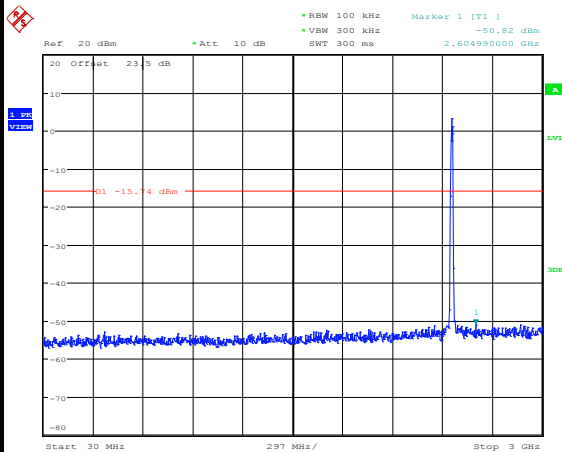
Date: 21.JUN.2016 18:28:49

High Channel Plot



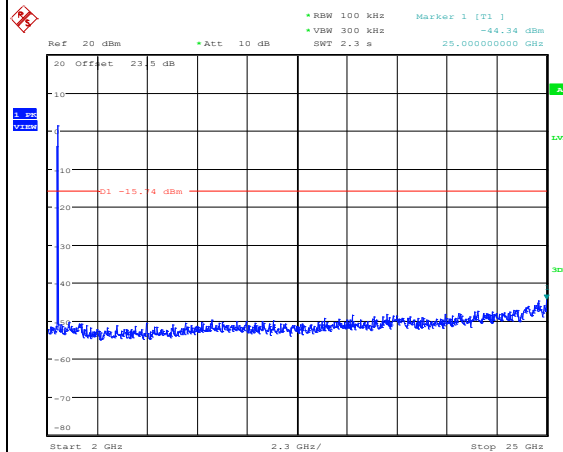
Date: 21.JUN.2016 18:29:07

Spurious Emission 30MHz~3GHz



Date: 21.JUN.2016 18:29:23

Spurious Emission 2GHz~25GHz



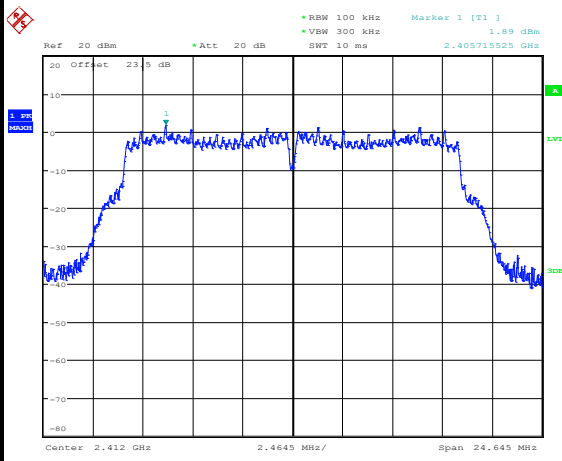
Date: 21.JUN.2016 18:29:31



Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	PH Yang

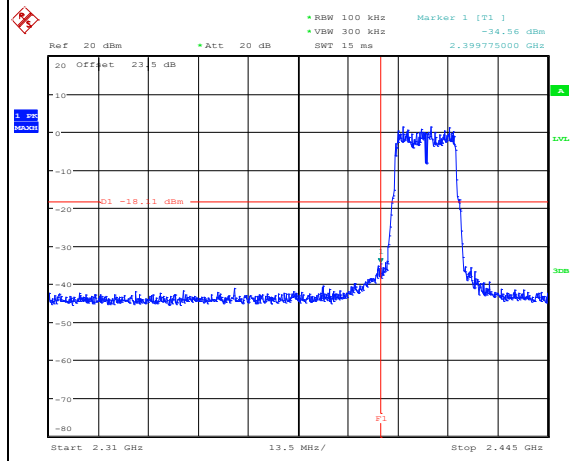
WLAN 802.11g Channel 01

100kHz PSD reference Level



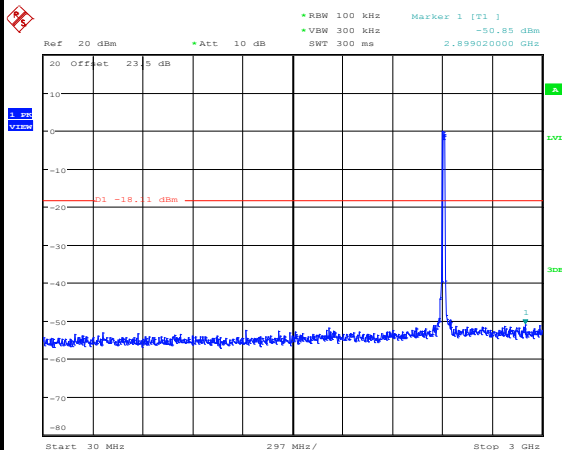
Date: 21.JUN.2016 19:15:22

Low Channel Plot



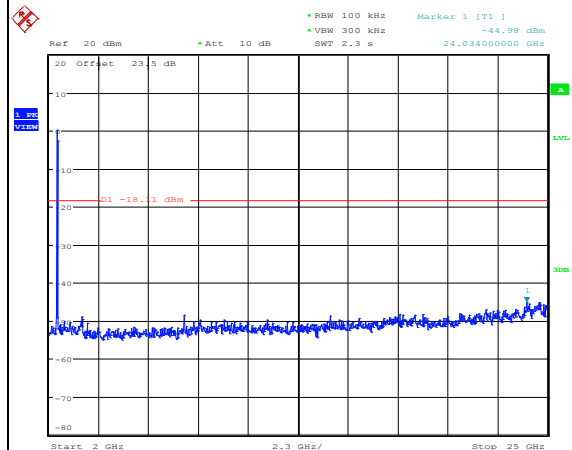
Date: 21.JUN.2016 19:15:39

Spurious Emission 30MHz~3GHz



Date: 21.JUN.2016 19:15:51

Spurious Emission 2GHz~25GHz



Date: 21.JUN.2016 19:15:59

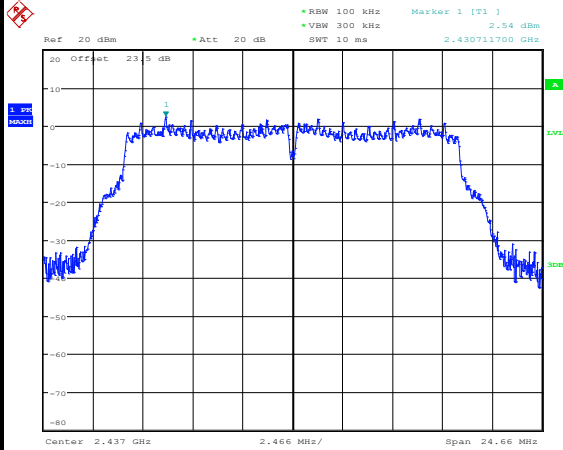


Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	PH Yang

WLAN 802.11g Channel 06

100kHz PSD reference Level

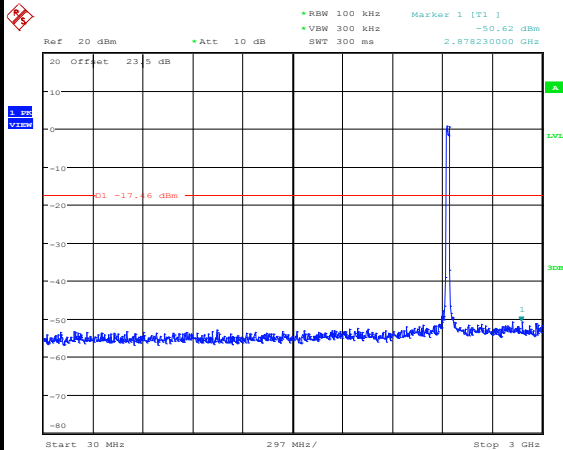
Mid Channel Plot



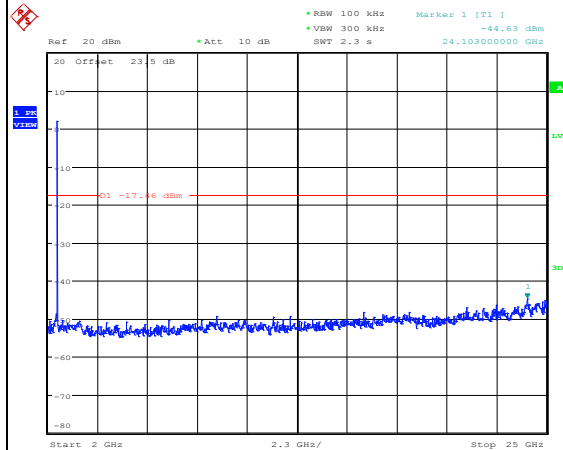
Date: 21.JUN.2016 19:20:16

Spurious Emission 30MHz~3GHz

Spurious Emission 2GHz~25GHz



Date: 21.JUN.2016 19:21:07



Date: 21.JUN.2016 19:21:15

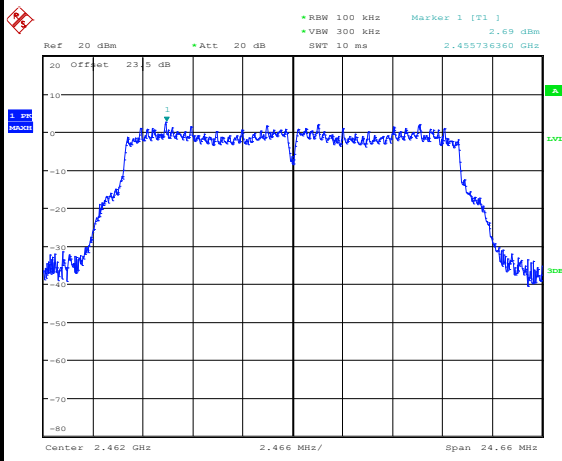




Test Mode :	802.11g	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	PH Yang

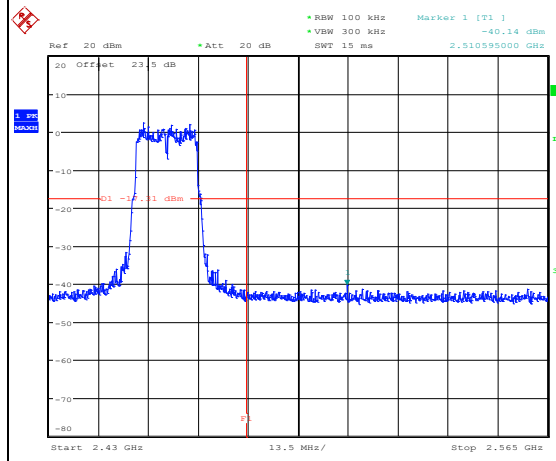
WLAN 802.11g Channel 11

100kHz PSD reference Level



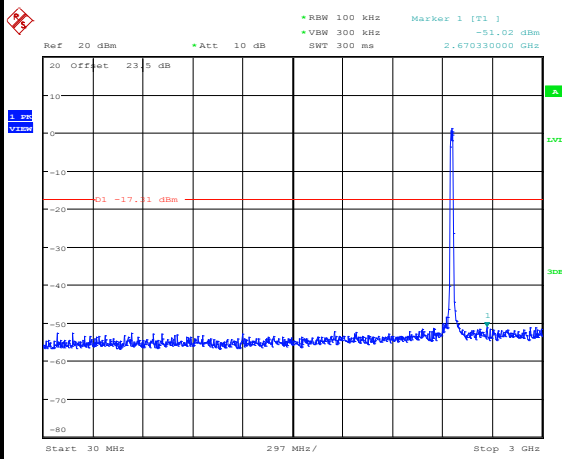
Date: 21.JUN.2016 19:27:20

High Channel Plot



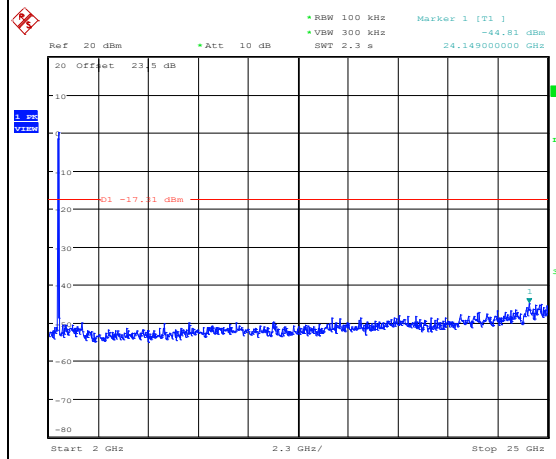
Date: 21.JUN.2016 19:27:36

Spurious Emission 30MHz~3GHz



Date: 21.JUN.2016 19:27:48

Spurious Emission 2GHz~25GHz



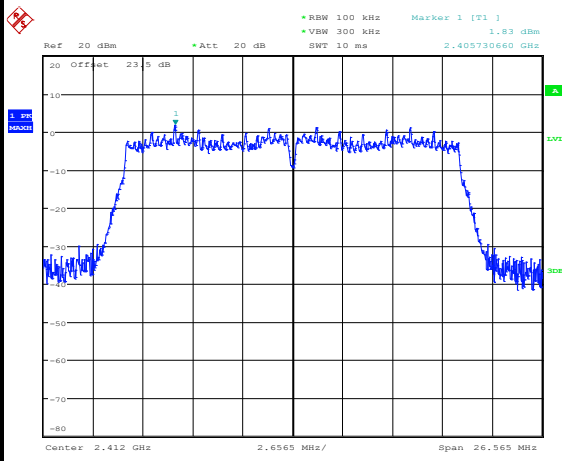
Date: 21.JUN.2016 19:27:56



Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Low	Relative Humidity :	51~54%
Test Channel :	01	Test Engineer :	PH Yang

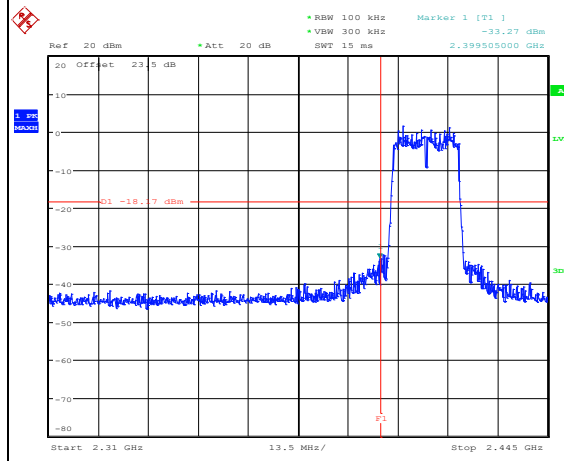
WLAN 802.11n HT20 Channel 01

100kHz PSD reference Level



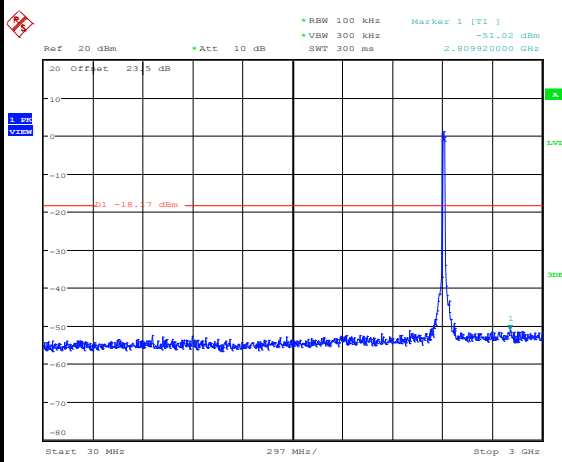
Date: 21.JUN.2016 19:33:56

Low Channel Plot



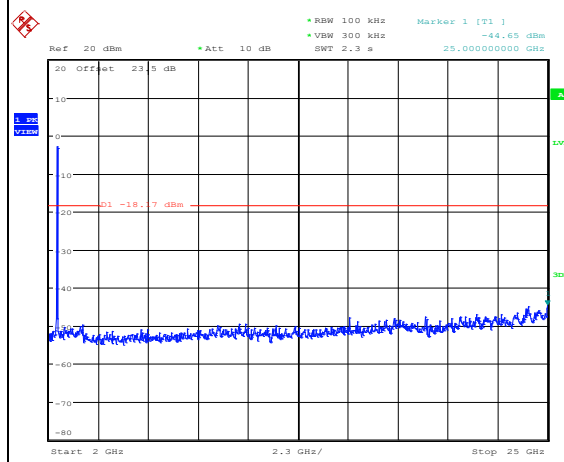
Date: 21.JUN.2016 19:34:10

Spurious Emission 30MHz~3GHz



Date: 21.JUN.2016 19:44:33

Spurious Emission 2GHz~25GHz



Date: 21.JUN.2016 19:41:10

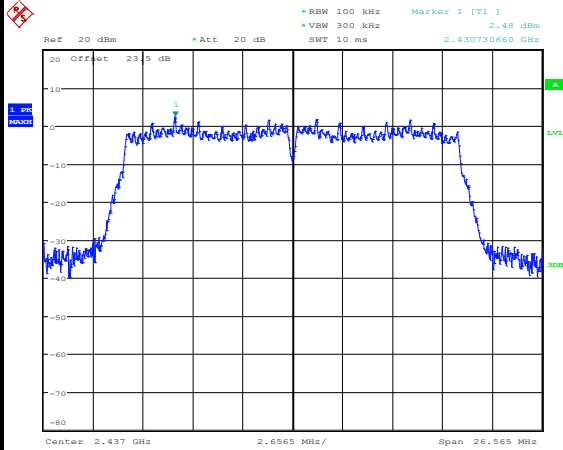


Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz Mid	Relative Humidity :	51~54%
Test Channel :	06	Test Engineer :	PH Yang

WLAN 802.11n HT20 Channel 06

100kHz PSD reference Level

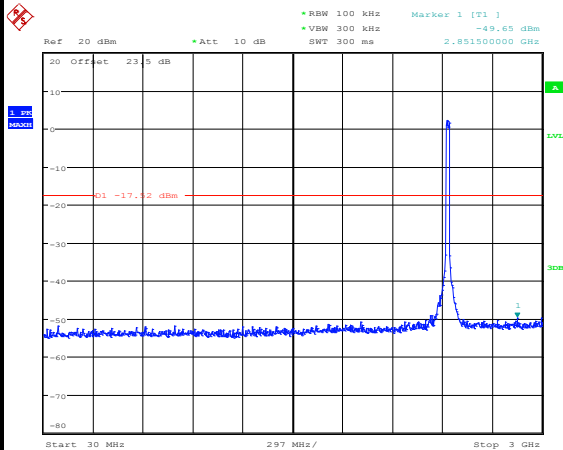
Mid Channel Plot



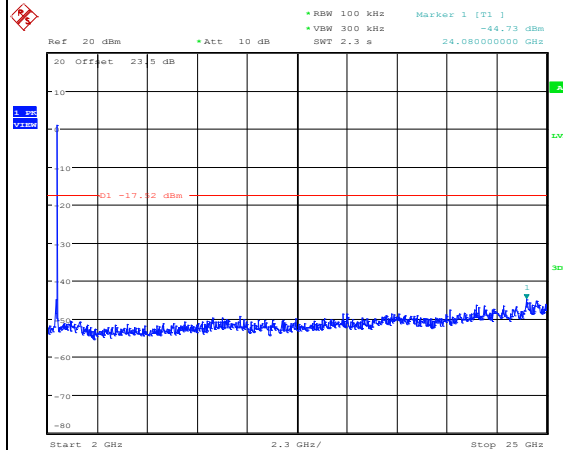
Date: 21.JUN.2016 19:49:48

Spurious Emission 30MHz~3GHz

Spurious Emission 2GHz~25GHz



Date: 21.JUN.2016 19:55:04



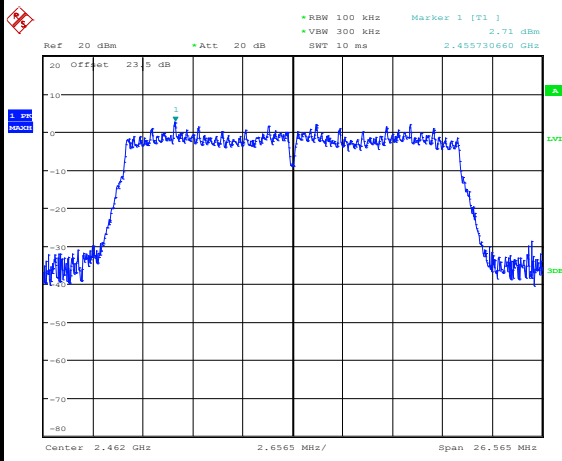
Date: 21.JUN.2016 19:52:08



Test Mode :	802.11n HT20	Temperature :	21~25°C
Test Band :	2.4GHz High	Relative Humidity :	51~54%
Test Channel :	11	Test Engineer :	PH Yang

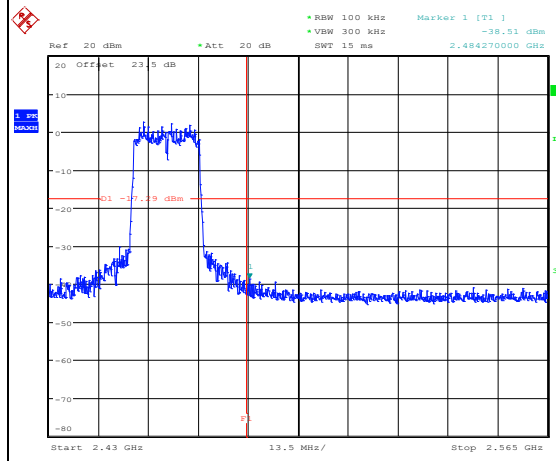
WLAN 802.11n HT20 Channel 11

100kHz PSD reference Level



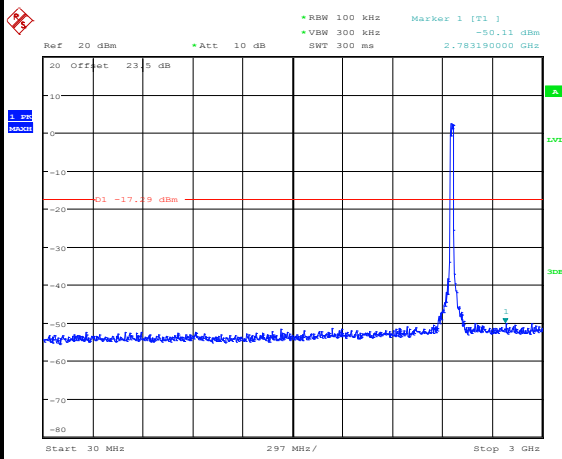
Date: 21.JUN.2016 19:58:42

High Channel Plot



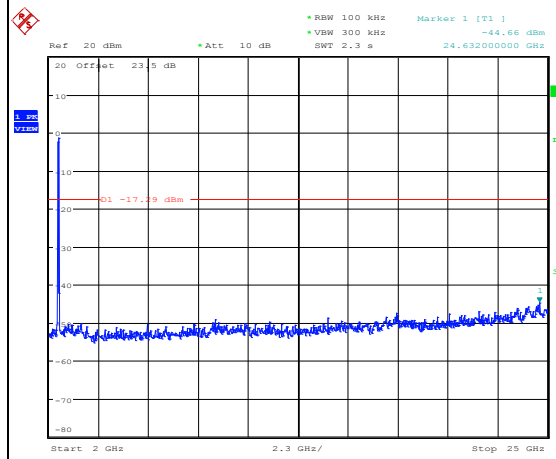
Date: 21.JUN.2016 19:58:57

Spurious Emission 30MHz~3GHz



Date: 21.JUN.2016 20:01:54

Spurious Emission 2GHz~25GHz



Date: 21.JUN.2016 20:00:18



### 3.5 Radiated Band Edges and Spurious Emission Measurement

#### 3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

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

#### 3.5.2 Measuring Instruments

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

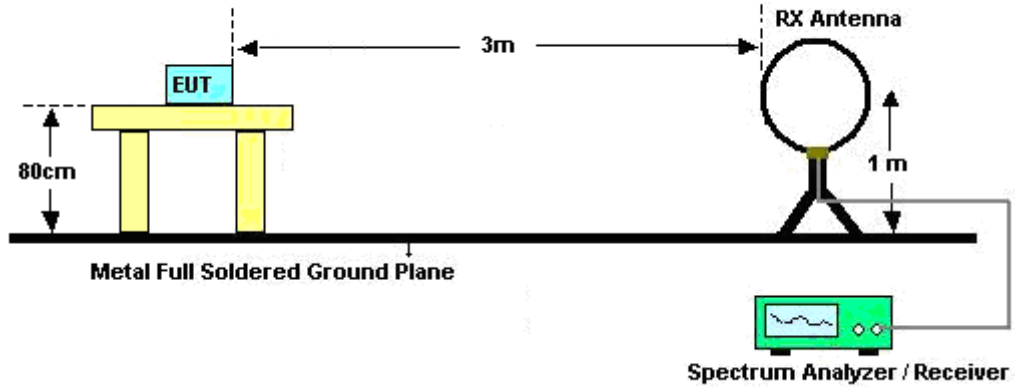


### **3.5.3 Test Procedures**

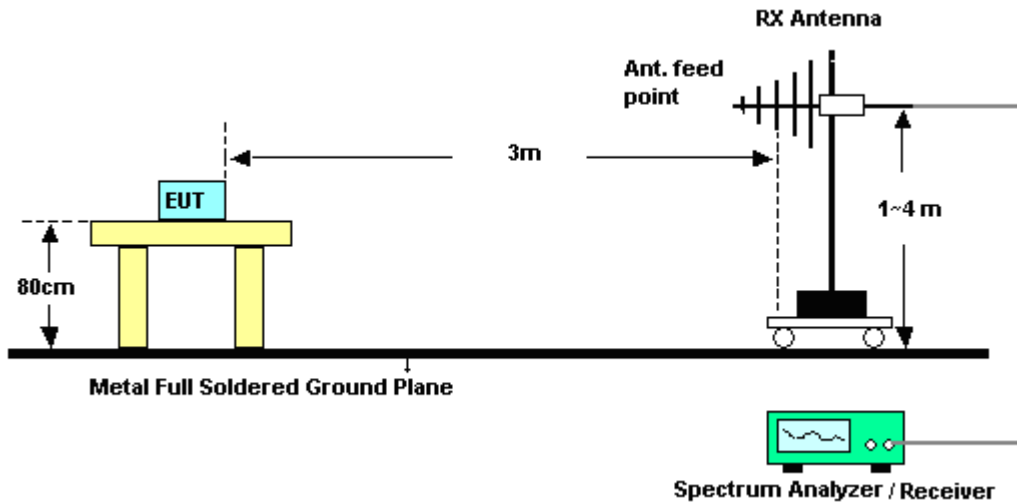
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. 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.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
  - (1) Span shall wide enough to fully capture the emission being measured;
  - (2) Set RBW=100 kHz for  $f < 1$  GHz; VBW  $\geq$  RBW; Sweep = auto; Detector function = peak; Trace = max hold;
  - (3) Set RBW = 1 MHz, VBW= 3MHz for  $f \geq 1$  GHz for peak measurement.  
For average measurement:
    - VBW = 10 Hz, when duty cycle is no less than 98 percent.
    - VBW  $\geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

### 3.5.4 Test Setup

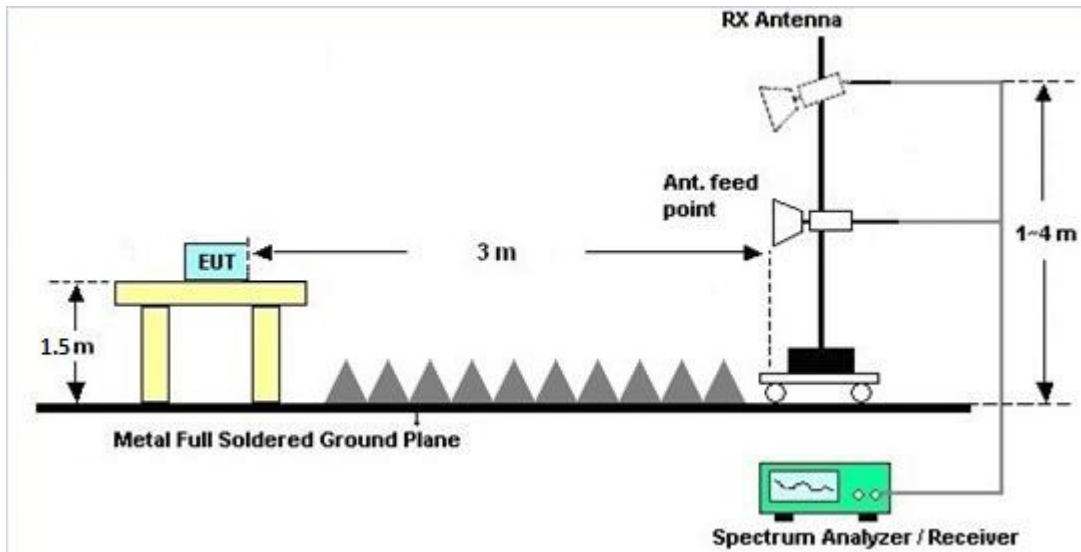
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

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

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

Please refer to Appendix B and C.

### 3.5.7 Duty Cycle

Please refer to Appendix D.

### 3.5.8 Test Result of Radiated Spurious Emission (30MHz ~ 10<sup>th</sup> Harmonic)

Please refer to Appendix B and C.





### 3.6 AC Conducted Emission Measurement

#### 3.6.1 Limit of AC Conducted Emission

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

Frequency of Emission (MHz)	Conducted Limit (dB $\mu$ V)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

\*Decreases with the logarithm of the frequency.

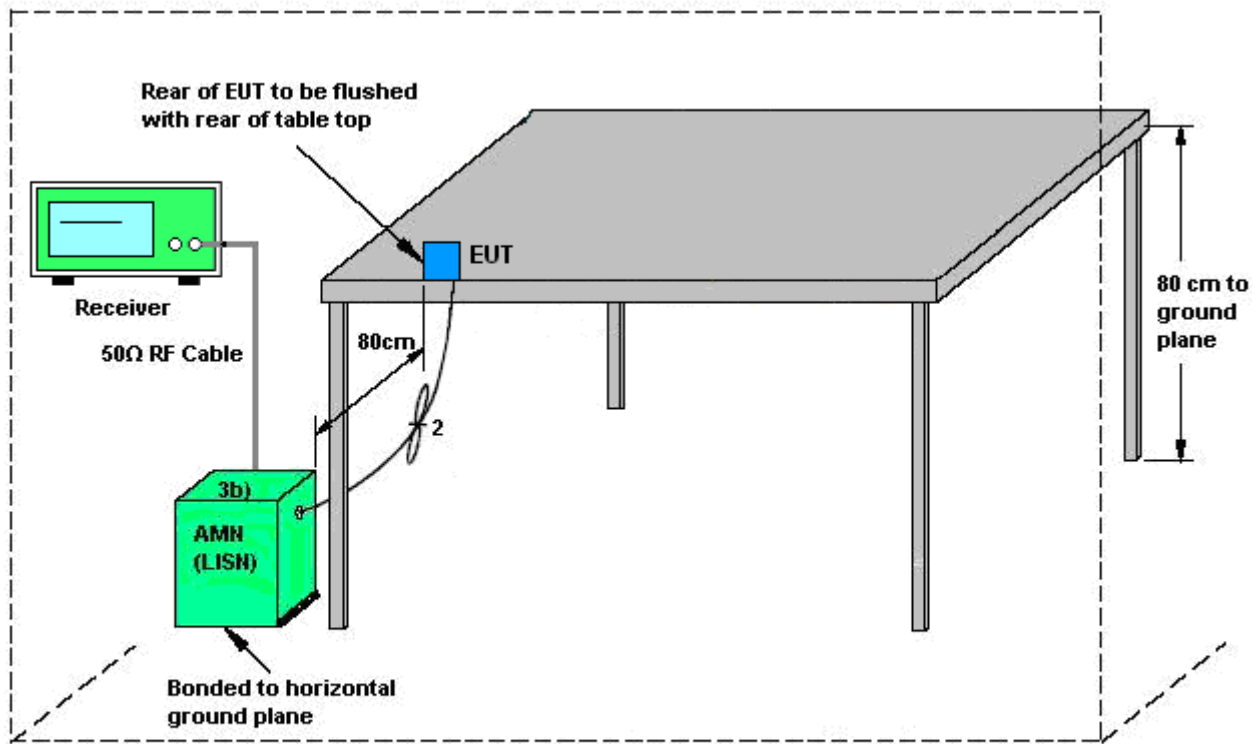
#### 3.6.2 Measuring Instruments

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

#### 3.6.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it 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 (IF bandwidth = 9kHz) with Maximum Hold Mode.

### 3.6.4 Test Setup

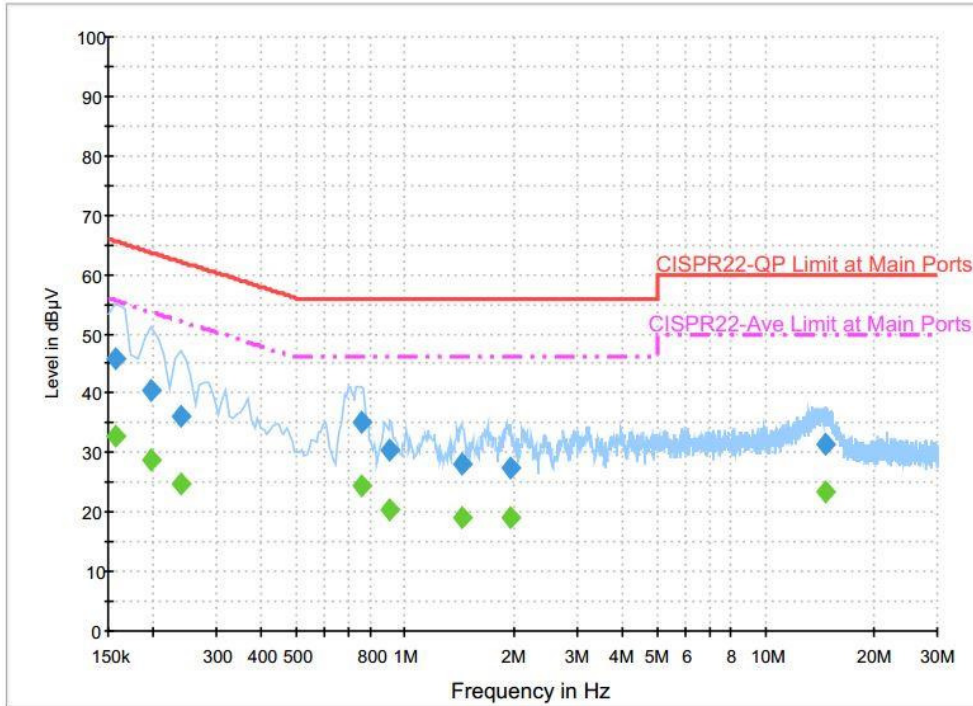


AMN = Artificial mains network (LISN)  
AE = Associated equipment  
EUT = Equipment under test  
ISN = Impedance stabilization network



3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 1	Temperature :	22~23°C
Test Engineer :	Arthur Hsieh	Relative Humidity :	51~52%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	BT LE Tx + EUT with Docking + USB Cable (Charging from Adapter)		



Final Result : Quasi-Peak

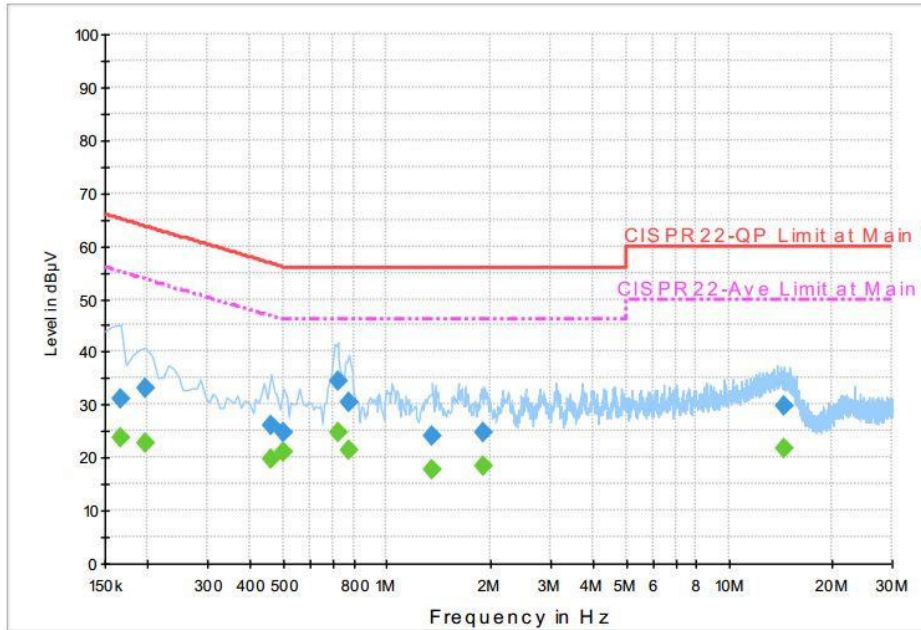
Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	45.7	Off	L1	19.6	19.9	65.6
0.198000	40.6	Off	L1	19.6	23.1	63.7
0.238000	36.1	Off	L1	19.6	26.1	62.2
0.758000	35.3	Off	L1	19.6	20.7	56.0
0.910000	30.3	Off	L1	19.6	25.7	56.0
1.438000	28.2	Off	L1	19.7	27.8	56.0
1.974000	27.4	Off	L1	19.7	28.6	56.0
14.694000	31.3	Off	L1	20.4	28.7	60.0

Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.158000	32.8	Off	L1	19.6	22.8	55.6
0.198000	28.7	Off	L1	19.6	25.0	53.7
0.238000	24.8	Off	L1	19.6	27.4	52.2
0.758000	24.5	Off	L1	19.6	21.5	46.0
0.910000	20.5	Off	L1	19.6	25.5	46.0
1.438000	19.1	Off	L1	19.7	26.9	46.0
1.974000	18.9	Off	L1	19.7	27.1	46.0
14.694000	23.4	Off	L1	20.4	26.6	50.0



Test Mode :	Mode 1	Temperature :	22~23°C
Test Engineer :	Arthur Hsieh	Relative Humidity :	51~52%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	BT LE Tx + EUT with Docking + USB Cable (Charging from Adapter)		



**Final Result : Quasi-Peak**

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	31.0	Off	N	19.6	34.2	65.2
0.198000	33.3	Off	N	19.6	30.4	63.7
0.462000	26.1	Off	N	19.6	30.6	56.7
0.502000	24.9	Off	N	19.6	31.1	56.0
0.718000	34.6	Off	N	19.6	21.4	56.0
0.774000	30.5	Off	N	19.6	25.5	56.0
1.358000	24.0	Off	N	19.6	32.0	56.0
1.926000	24.8	Off	N	19.7	31.2	56.0
14.542000	29.6	Off	N	20.4	30.4	60.0

**Final Result : Average**

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.166000	23.6	Off	N	19.6	31.6	55.2
0.198000	22.8	Off	N	19.6	30.9	53.7
0.462000	19.6	Off	N	19.6	27.1	46.7
0.502000	21.0	Off	N	19.6	25.0	46.0
0.718000	24.6	Off	N	19.6	21.4	46.0
0.774000	21.6	Off	N	19.6	24.4	46.0
1.358000	17.7	Off	N	19.6	28.3	46.0
1.926000	18.3	Off	N	19.7	27.7	46.0
14.542000	21.8	Off	N	20.4	28.2	50.0



## **3.7 Antenna Requirements**

### **3.7.1 Standard Applicable**

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

### **3.7.2 Antenna Anti-Replacement Construction**

An embedded-in antenna design is used.

### **3.7.3 Antenna Gain**

The antenna peak gain of EUT 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
Power Meter	Agilent	E4416A	GB4129 2344	300MHz~40GHz	Jan. 08, 2016	May 17, 2016 ~ Jun. 21, 2016	Jan. 07, 2017	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	1036004	300MHz~40GHz	Jul. 29, 2015	May 17, 2016 ~ Jun. 21, 2016	Jul. 28, 2016	Conducted (TH02-HY)
Power Sensor	Agilent	E9327A	US4044 1548	300MHz~40GHz	Jan. 07, 2016	May 17, 2016 ~ Jun. 21, 2016	Jan. 06, 2017	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	1027253	300MHz~40GHz	Jul. 29, 2015	May 17, 2016 ~ Jun. 21, 2016	Jul. 28, 2016	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 18, 2015	May 17, 2016 ~ Jun. 16, 2016	Jun. 17, 2016	Conducted (TH02-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 17, 2016	Jun. 17, 2016 ~ Jun. 21, 2016	Jun. 16, 2017	Conducted (TH02-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Jul. 05, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	Jul. 05, 2016	Aug. 25, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	Jul. 05, 2016	Dec. 01, 2016	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	Sep. 02, 2015	Jun. 28, 2016 ~ Jul. 01, 2016	Sep. 01, 2016	Radiation (03CH10-HY)
Amplifier	SONOMA	310N	187311	9kHz~1GHz	Nov. 16, 2015	Jun. 28, 2016 ~ Jul. 01, 2016	Nov. 15, 2016	Radiation (03CH10-HY)
Bilog Antenna	TESEQ	CBL 6111D	35413	30MHz~1GHz	Jan. 13, 2016	Jun. 28, 2016 ~ Jul. 01, 2016	Jan. 12, 2017	Radiation (03CH10-HY)
Horn Antenna	SCHWARZBE CK	BBHA 9120 D	9120D-1 325	1GHz ~ 18GHz	Sep. 30, 2015	Jun. 28, 2016 ~ Jul. 01, 2016	Sep. 29, 2016	Radiation (03CH10-HY)
Preamplifier	Keysight	83017A	MY5327 0078	1GHz~26.5GHz	Nov. 13, 2015	Jun. 28, 2016 ~ Jul. 01, 2016	Nov. 12, 2016	Radiation (03CH10-HY)
Preamplifier	MITEQ	AMF-7D-00101 800-30-10P	1902246	1GHz~18GHz	Nov. 16, 2015	Jun. 28, 2016 ~ Jul. 01, 2016	Nov. 15, 2016	Radiation (03CH10-HY)
Spectrum Analyzer	Keysight	N9010A	MY5420 0485	10Hz ~ 44GHz	Oct. 15, 2015	Jun. 28, 2016 ~ Jul. 01, 2016	Oct. 14, 2016	Radiation (03CH10-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jun. 28, 2016 ~ Jul. 01, 2016	N/A	Radiation (03CH10-HY)
Turn Table	EMEC	TT 2200	N/A	0~360 Degree	N/A	Jun. 28, 2016 ~ Jul. 01, 2016	N/A	Radiation (03CH10-HY)
Preamplifier	MITEQ	JS44-18004000 -33-8P	1840917	18GHz ~ 40GHz	Jun. 14, 2016	Jun. 28, 2016 ~ Jul. 01, 2016	Jun. 13, 2017	Radiation (03CH10-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA91 70584	18GHz- 40GHz	Nov. 02, 2015	Jun. 28, 2016 ~ Jul. 01, 2016	Nov. 01, 2016	Radiation (03CH10-HY)
EMI Test Receiver	Agilent	N9038A (MXE)	MY5329 0053	20Hz to 26.5GHz	Jan. 20, 2016	Jun. 28, 2016 ~ Jul. 01, 2016	Jan. 19, 2017	Radiation (03CH10-HY)



## 5 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	2.26
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### Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2Uc(y)$ )	5.50
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## **Appendix A. Conducted Test Results**



**A1 - DTS Part**

Test Engineer:	PH Yang	Temperature:	21~25	°C
Test Date:	2016/05/17~2016/06/21	Relative Humidity:	51~54	%

**TEST RESULTS DATA**  
**6dB and 99% Occupied Bandwidth**

2.4GHz Band								
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	99% Occupied BW (MHz)	6dB BW (MHz)	6dB BW Limit (MHz)	Pass/Fail
11b	11Mbps	1	1	2412	14.10	8.85	0.50	Pass
11b	11Mbps	1	6	2437	14.15	8.65	0.50	Pass
11b	11Mbps	1	11	2462	14.15	8.88	0.50	Pass
11g	24Mbps	1	1	2412	17.70	16.43	0.50	Pass
11g	24Mbps	1	6	2437	17.90	16.44	0.50	Pass
11g	24Mbps	1	11	2462	17.70	16.44	0.50	Pass
HT20	MCS3	1	1	2412	18.70	17.71	0.50	Pass
HT20	MCS3	1	6	2437	18.70	17.71	0.50	Pass
HT20	MCS3	1	11	2462	18.70	17.71	0.50	Pass

**TEST RESULTS DATA**  
**Peak Power Table**

2.4GHz Band										
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	Peak Conducted Power (dBm)	Conducted Power Limit (dBm)	DG (dBi)	EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
11b	11Mbps	1	1	2412	13.91	30.00	0.88	14.79	36.00	Pass
11b	11Mbps	1	6	2437	14.44	30.00	0.88	15.32	36.00	Pass
11b	11Mbps	1	11	2462	14.82	30.00	0.88	15.70	36.00	Pass
11g	24Mbps	1	1	2412	22.51	30.00	0.88	23.39	36.00	Pass
11g	24Mbps	1	6	2437	22.62	30.00	0.88	23.50	36.00	Pass
11g	24Mbps	1	11	2462	22.70	30.00	0.88	23.58	36.00	Pass
HT20	MCS3	1	1	2412	22.52	30.00	0.88	23.40	36.00	Pass
HT20	MCS3	1	6	2437	22.55	30.00	0.88	23.43	36.00	Pass
HT20	MCS3	1	11	2462	22.73	30.00	0.88	23.61	36.00	Pass

**TEST RESULTS DATA**  
**Average Power Table**  
**(Reporting Only)**

2.4GHz Band						
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	Duty Factor (dB)	Average Conducted Power (dBm)
11b	11Mbps	1	1	2412	0.50	11.43
11b	11Mbps	1	6	2437	0.50	11.97
11b	11Mbps	1	11	2462	0.50	12.22
11g	24Mbps	1	1	2412	1.09	11.94
11g	24Mbps	1	6	2437	1.09	12.44
11g	24Mbps	1	11	2462	1.09	12.71
HT20	MCS3	1	1	2412	1.08	11.79
HT20	MCS3	1	6	2437	1.08	12.30
HT20	MCS3	1	11	2462	1.08	12.61

**TEST RESULTS DATA**  
**Peak Power Density**

2.4GHz Band								
Mod.	Data Rate	N <sub>TX</sub>	CH.	Freq. (MHz)	Peak PSD (dBm /3kHz)	DG (dBi)	Peak PSD Limit (dBm /3kHz)	Pass/Fail
11b	11Mbps	1	1	2412	-10.84	0.88	8.00	Pass
11b	11Mbps	1	6	2437	-10.54	0.88	8.00	Pass
11b	11Mbps	1	11	2462	-10.28	0.88	8.00	Pass
11g	24Mbps	1	1	2412	-12.58	0.88	8.00	Pass
11g	24Mbps	1	6	2437	-11.76	0.88	8.00	Pass
11g	24Mbps	1	11	2462	-11.58	0.88	8.00	Pass
HT20	MCS3	1	1	2412	-13.09	0.88	8.00	Pass
HT20	MCS3	1	6	2437	-13.29	0.88	8.00	Pass
HT20	MCS3	1	11	2462	-11.78	0.88	8.00	Pass



## Appendix B. Radiated Spurious Emission

Test Engineer :	Wilson Wu	Temperature :	24~25°C
		Relative Humidity :	50~52%

### 2.4GHz 2400~2483.5MHz

#### WiFi 802.11b (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 )	
802.11b CH 01 2412MHz		2372.685	51.32	-22.68	74	51.98	27.19	5.39	33.24	296	115	P	H	
		2384.13	42.19	-11.81	54	42.85	27.19	5.39	33.24	296	115	A	H	
	*	2412	99.09	-	-	99.61	27.28	5.42	33.22	296	115	P	H	
	*	2412	93.3	-	-	93.82	27.28	5.42	33.22	296	115	A	H	
													H	
														H
			2389.8	50.9	-23.1	74	51.5	27.23	5.39	33.22	343	15	P	V
			2388.75	42.09	-11.91	54	42.71	27.23	5.39	33.24	343	15	A	V
	*		2412	98.14	-	-	98.66	27.28	5.42	33.22	343	15	P	V
	*		2412	92.64	-	-	93.16	27.28	5.42	33.22	343	15	A	V
														V
														V
802.11b CH 06 2437MHz		2381.82	51.09	-22.91	74	51.75	27.19	5.39	33.24	327	118	P	H	
		2385.88	41.84	-12.16	54	42.46	27.23	5.39	33.24	327	118	A	H	
	*	2437	99.72	-	-	100.14	27.37	5.42	33.21	327	118	P	H	
	*	2437	94.49	-	-	94.91	27.37	5.42	33.21	327	118	A	H	
			2489.43	51.58	-22.42	74	51.8	27.5	5.46	33.18	327	118	P	H
			2495.59	42.19	-11.81	54	42.4	27.5	5.46	33.17	327	118	A	H
			2372.72	51.7	-22.3	74	52.36	27.19	5.39	33.24	328	21	P	V
			2381.4	41.58	-12.42	54	42.24	27.19	5.39	33.24	328	21	A	V
	*		2437	99.28	-	-	99.7	27.37	5.42	33.21	328	21	P	V
	*		2437	93.84	-	-	94.26	27.37	5.42	33.21	328	21	A	V
			2491.95	51.16	-22.84	74	51.37	27.5	5.46	33.17	328	21	P	V
			2485.44	42.12	-11.88	54	42.38	27.46	5.46	33.18	328	21	A	V



<b>802.11b CH 11 2462MHz</b>	*	2462	100.45	-	-	100.8	27.41	5.44	33.2	320	109	P	H
	*	2462	95.03	-	-	95.38	27.41	5.44	33.2	320	109	A	H
		2497.44	51.01	-22.99	74	51.22	27.5	5.46	33.17	320	109	P	H
		2491.68	42.64	-11.36	54	42.86	27.5	5.46	33.18	320	109	A	H
													H
													H
	*	2462	100.37	-	-	100.72	27.41	5.44	33.2	355	52	P	V
	*	2462	94.81	-	-	95.16	27.41	5.44	33.2	355	52	A	V
		2499.04	51.27	-22.73	74	51.48	27.5	5.46	33.17	355	52	P	V
		2484.24	42.45	-11.55	54	42.71	27.46	5.46	33.18	355	52	A	V
													V
													V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**2.4GHz 2400~2483.5MHz  
WIFI 802.11b (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 )	
802.11b CH 01 2412MHz		4824	38.14	-35.86	74	50.28	31.46	7.58	51.18	100	0	P	H	
													H	
													H	
													H	
			4824	36.5	-37.5	74	48.64	31.46	7.58	51.18	100	0	P	V
														V
														V
802.11b CH 06 2437MHz		4874	38.45	-35.55	74	50.34	31.56	7.7	51.15	100	0	P	H	
		7311	43.67	-30.33	74	48.8	36.18	9.49	50.8	100	0	P	H	
													H	
													H	
			4874	36.59	-37.41	74	48.48	31.56	7.7	51.15	100	0	P	V
			7311	42.54	-31.46	74	47.67	36.18	9.49	50.8	100	0	P	V
														V
802.11b CH 11 2462MHz		4924	38.88	-35.12	74	50.42	31.66	7.93	51.13	100	0	P	H	
		7386	42.9	-31.1	74	47.8	36.37	9.53	50.8	100	0	P	H	
													H	
													H	
			4924	37.47	-36.53	74	49.01	31.66	7.93	51.13	100	0	P	V
			7386	43.21	-30.79	74	48.11	36.37	9.53	50.8	100	0	P	V
														V
Remark	1. No other spurious found.													
	2. All results are PASS against Peak and Average limit line.													





**2.4GHz 2400~2483.5MHz  
WIFI 802.11g (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 )	
802.11g CH 01 2412MHz		2387.28	57.24	-16.76	74	57.86	27.23	5.39	33.24	331	116	P	H	
		2384.97	43.58	-10.42	54	44.24	27.19	5.39	33.24	331	116	A	H	
	*	2412	98.43	-	-	98.95	27.28	5.42	33.22	331	116	P	H	
	*	2412	90.74	-	-	91.26	27.28	5.42	33.22	331	116	A	H	
													H	
														H
			2389.485	55.55	-18.45	74	56.17	27.23	5.39	33.24	332	60	P	V
			2389.065	43.7	-10.3	54	44.32	27.23	5.39	33.24	332	60	A	V
	*		2412	96.76	-	-	97.28	27.28	5.42	33.22	332	60	P	V
	*		2412	89.82	-	-	90.34	27.28	5.42	33.22	332	60	A	V
														V
														V
802.11g CH 06 2437MHz		2376.78	50.92	-23.08	74	51.58	27.19	5.39	33.24	328	116	P	H	
		2389.66	42.09	-11.91	54	42.71	27.23	5.39	33.24	328	116	A	H	
	*	2437	100.29	-	-	100.71	27.37	5.42	33.21	328	116	P	H	
	*	2437	92.34	-	-	92.76	27.37	5.42	33.21	328	116	A	H	
			2494.05	51.63	-22.37	74	51.84	27.5	5.46	33.17	328	116	P	H
			2484.53	42.18	-11.82	54	42.44	27.46	5.46	33.18	328	116	A	H
			2383.78	50.6	-23.4	74	51.26	27.19	5.39	33.24	367	50	P	V
			2382.66	41.69	-12.31	54	42.35	27.19	5.39	33.24	367	50	A	V
	*		2437	97.96	-	-	98.38	27.37	5.42	33.21	367	50	P	V
	*		2437	90.7	-	-	91.12	27.37	5.42	33.21	367	50	A	V
			2493.28	51.16	-22.84	74	51.37	27.5	5.46	33.17	367	50	P	V
			2484.81	42.13	-11.87	54	42.39	27.46	5.46	33.18	367	50	A	V



<b>802.11g</b> <b>CH 11</b> <b>2462MHz</b>	*	2462	100.65	-	-	101	27.41	5.44	33.2	321	113	P	H
	*	2462	92.57	-	-	92.92	27.41	5.44	33.2	321	113	A	H
		2484.92	60.72	-13.28	74	60.98	27.46	5.46	33.18	321	113	P	H
		2483.52	44.61	-9.39	54	44.87	27.46	5.46	33.18	321	113	A	H
													H
													H
	*	2462	99.37	-	-	99.72	27.41	5.44	33.2	360	52	P	V
	*	2462	92.03	-	-	92.38	27.41	5.44	33.2	360	52	A	V
		2484.68	54.65	-19.35	74	54.91	27.46	5.46	33.18	360	52	P	V
		2483.76	44.13	-9.87	54	44.39	27.46	5.46	33.18	360	52	A	V
													V
													V
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**2.4GHz 2400~2483.5MHz  
WIFI 802.11g (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 )	
802.11g CH 01 2412MHz		4824	36.54	-37.46	74	48.68	31.46	7.58	51.18	100	0	P	H	
													H	
													H	
													H	
			4824	37.29	-36.71	74	49.43	31.46	7.58	51.18	100	0	P	V
														V
														V
802.11g CH 06 2437MHz		4874	36.67	-37.33	74	48.56	31.56	7.7	51.15	100	0	P	H	
		7311	41.64	-32.36	74	46.77	36.18	9.49	50.8	100	0	P	H	
													H	
													H	
			4874	35.71	-38.29	74	47.6	31.56	7.7	51.15	100	0	P	V
			7311	43.99	-30.01	74	49.12	36.18	9.49	50.8	100	0	P	V
														V
802.11g CH 11 2462MHz		4924	37.81	-36.19	74	49.35	31.66	7.93	51.13	100	0	P	H	
		7386	41.99	-32.01	74	46.89	36.37	9.53	50.8	100	0	P	H	
													H	
													H	
			4926	37.63	-36.37	74	49.17	31.66	7.93	51.13	100	0	P	V
			7386	42.22	-31.78	74	47.12	36.37	9.53	50.8	100	0	P	V
														V
Remark	1. No other spurious found.													
	2. All results are PASS against Peak and Average limit line.													



**2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT20 (Band Edge @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11n HT20 CH 01 2412MHz		2376.255	62.1	-11.9	74	62.76	27.19	5.39	33.24	295	111	P	H	
		2389.8	48.09	-5.91	54	48.69	27.23	5.39	33.22	295	111	A	H	
	*	2412	98.8	-	-	99.32	27.28	5.42	33.22	295	111	P	H	
	*	2412	90.97	-	-	91.49	27.28	5.42	33.22	295	111	A	H	
													H	
														H
			2389.8	62.11	-11.89	74	62.71	27.23	5.39	33.22	343	16	P	V
			2390	48.11	-5.89	54	48.71	27.23	5.39	33.22	343	16	A	V
		*	2412	97.19	-	-	97.71	27.28	5.42	33.22	343	16	P	V
		*	2412	90.25	-	-	90.77	27.28	5.42	33.22	343	16	A	V
													V	
													V	
802.11n HT20 CH 06 2437MHz		2387.84	59.65	-14.35	74	60.27	27.23	5.39	33.24	299	113	P	H	
		2389.38	44.49	-9.51	54	45.11	27.23	5.39	33.24	299	113	A	H	
	*	2437	100.33	-	-	100.75	27.37	5.42	33.21	299	113	P	H	
	*	2437	93.2	-	-	93.62	27.37	5.42	33.21	299	113	A	H	
			2484.88	57.55	-16.45	74	57.81	27.46	5.46	33.18	299	113	P	H
			2485.23	43.77	-10.23	54	44.03	27.46	5.46	33.18	299	113	A	H
			2386.44	58.05	-15.95	74	58.67	27.23	5.39	33.24	303	43	P	V
			2386.44	44.26	-9.74	54	44.88	27.23	5.39	33.24	303	43	A	V
		*	2437	101	-	-	101.42	27.37	5.42	33.21	303	43	P	V
		*	2437	92.84	-	-	93.26	27.37	5.42	33.21	303	43	A	V
		2484.46	54.85	-19.15	74	55.11	27.46	5.46	33.18	303	43	P	V	
		2484.46	42.91	-11.09	54	43.17	27.46	5.46	33.18	303	43	A	V	



<b>802.11n</b> <b>HT20</b> <b>CH 11</b> <b>2462MHz</b>	*	2462	101.62	-	-	101.97	27.41	5.44	33.2	329	123	P	H
	*	2462	93.15	-	-	93.5	27.41	5.44	33.2	329	123	A	H
		2484.04	66.32	-7.68	74	66.58	27.46	5.46	33.18	329	123	P	H
		2484.76	50.06	-3.94	54	50.32	27.46	5.46	33.18	329	123	A	H
													H
													H
	*	2462	100.35	-	-	100.7	27.41	5.44	33.2	296	23	P	V
	*	2462	93.18	-	-	93.53	27.41	5.44	33.2	296	23	A	V
		2484.96	65.37	-8.63	74	65.63	27.46	5.46	33.18	296	23	P	V
		2483.52	49.8	-4.2	54	50.06	27.46	5.46	33.18	296	23	A	V
													V
												V	
<b>Remark</b>	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**2.4GHz 2400~2483.5MHz  
WIFI 802.11n HT20 (Harmonic @ 3m)**

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dBμV/m )	Over Limit ( dB )	Limit Line ( dBμV/m )	Read Level ( dBμV )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. ( P/A )	Pol. ( H/V )	
802.11n HT20 CH 01 2412MHz		4824	35.91	-38.09	74	48.05	31.46	7.58	51.18	100	0	P	H	
													H	
													H	
													H	
			4824	36.56	-37.44	74	48.7	31.46	7.58	51.18	100	0	P	V
														V
														V
802.11n HT20 CH 06 2437MHz		4874	35.31	-38.69	74	47.2	31.56	7.7	51.15	100	0	P	H	
		7311	43.04	-30.96	74	48.17	36.18	9.49	50.8	100	0	P	H	
													H	
													H	
			4874	35.95	-38.05	74	47.84	31.56	7.7	51.15	100	0	P	V
			7311	43.42	-30.58	74	48.55	36.18	9.49	50.8	100	0	P	V
														V
802.11n HT20 CH 11 2462MHz		4924	37.57	-36.43	74	49.11	31.66	7.93	51.13	100	0	P	H	
		7386	43.01	-30.99	74	47.91	36.37	9.53	50.8	100	0	P	H	
													H	
													H	
			4924	37.05	-36.95	74	48.59	31.66	7.93	51.13	100	0	P	V
			7386	43	-31	74	47.9	36.37	9.53	50.8	100	0	P	V
														V
Remark	1. No other spurious found.													
	2. All results are PASS against Peak and Average limit line.													



**Emission below 1GHz**  
**2.4GHz WIFI 802.11n HT20 (LF)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.	
Ant.		( MHz )	( dBµV/m )	( dB )	( dBµV/m )	( dBµV )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )	
2.4GHz 802.11n HT20 LF	1	31.62	23.79	-16.21	40	30.98	24.98	0.65	32.82	-	-	P	H	
		206.31	30.45	-13.05	43.5	45.37	16.19	1.62	32.73	100	66	P	H	
		257.34	28.16	-17.84	46	39.63	19.5	1.76	32.73	-	-	P	H	
		305.6	25.28	-20.72	46	36.27	19.87	1.88	32.74	-	-	P	H	
		586.3	26.28	-19.72	46	31.49	25.23	2.57	33.01	-	-	P	H	
		876.1	31.47	-14.53	46	32.06	28.7	3.16	32.45	-	-	P	H	
													H	
													H	
													H	
													H	
													H	
													H	
													V	
													V	
													V	
													V	
													V	
													V	
	<b>Remark</b>	1. No other spurious found. 2. All results are PASS against limit line.												



**Note symbol**

*	<b>Fundamental Frequency</b> which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is <b>over limit</b> line.
P/A	<b>Peak</b> or <b>Average</b>
H/V	<b>Horizontal</b> or <b>Vertical</b>





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

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

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

**For Peak Limit @ 2390MHz:**

- Level(dBμV/m)  
= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)  
= 55.45 (dBμV/m)
- Over Limit(dB)  
= Level(dBμV/m) – Limit Line(dBμV/m)  
= 55.45(dBμV/m) – 74(dBμV/m)  
= -18.55(dB)

**For Average Limit @ 2390MHz:**

- Level(dBμV/m)  
= Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)  
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)  
= 43.54 (dBμV/m)
- 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 C. Radiated Spurious Emission Plots

Test Engineer :	Wilson Wu	Temperature :	24~25°C
		Relative Humidity :	50~52%

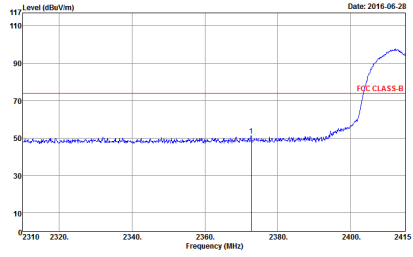
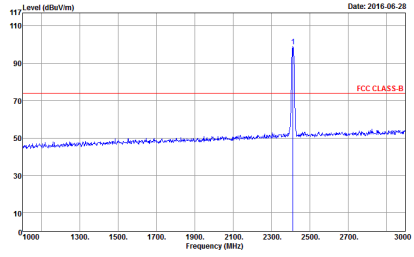
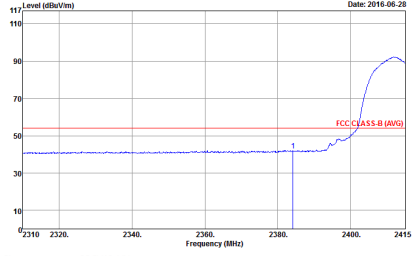
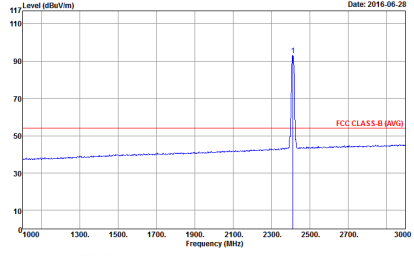
### Note symbol

-L	Low channel location
-R	High channel location

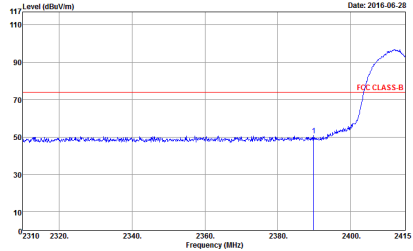
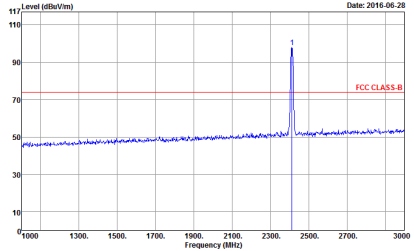
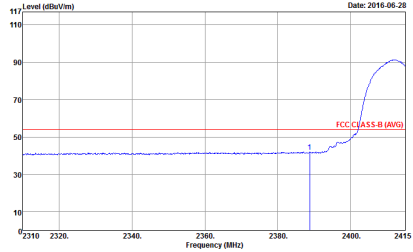
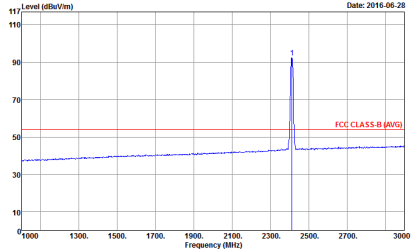


2.4GHz 2400~2483.5MHz

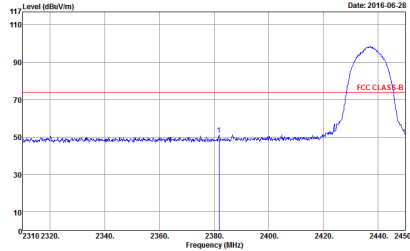
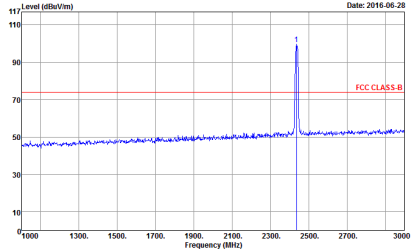
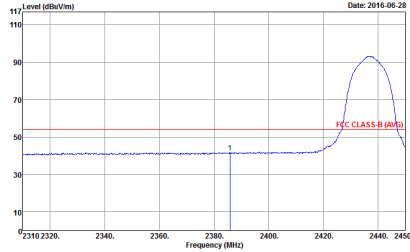
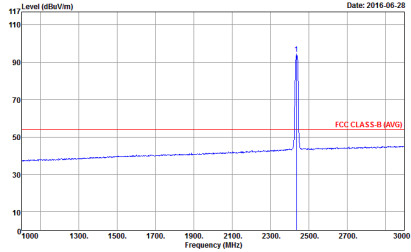
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 5</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 5</p>
Avg.	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 5</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 5</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 5</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 5</p>
Avg.	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 5</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 5</p>

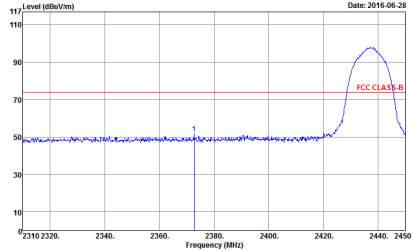
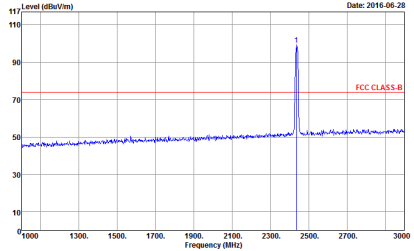
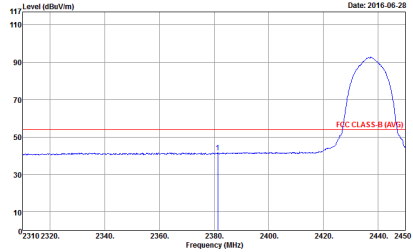
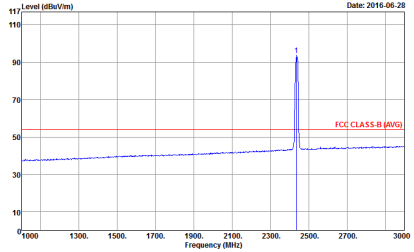


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 6</p>	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 6</p>
Avg.	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 6</p>	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 6</p>

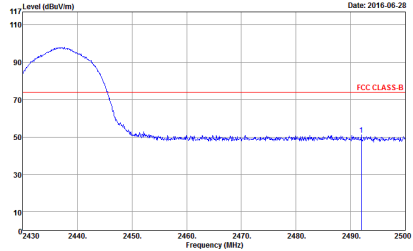
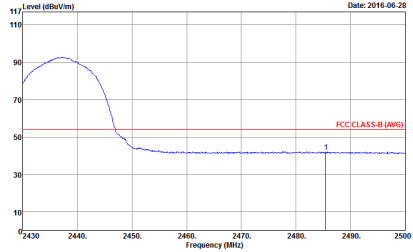


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH10-HY Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 660109 Mode : 6</p>	Left blank
Avg.	<p>Site : 03CH10-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 660109 Mode : 6</p>	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 6</p>	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 6</p>
Avg.	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 6</p>	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 6</p>



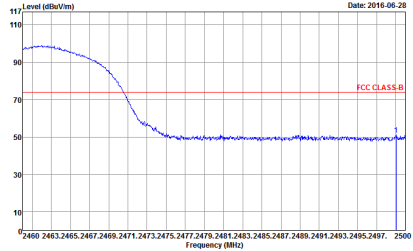
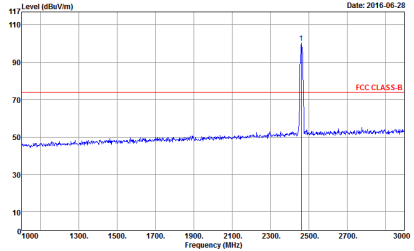
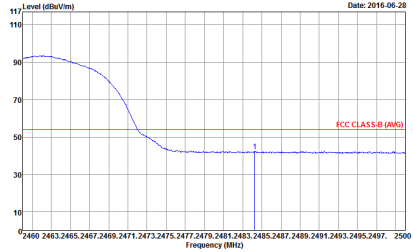
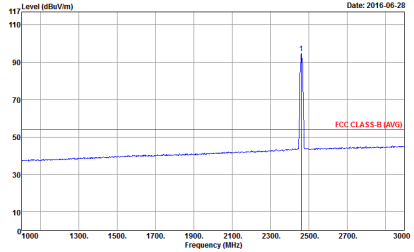
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 <p>           Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 6         </p>	Left blank
Avg.	 <p>           Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            : RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 6         </p>	Left blank





WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 7</p>	<p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 7</p>
Avg.	<p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 7</p>	<p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 7</p>

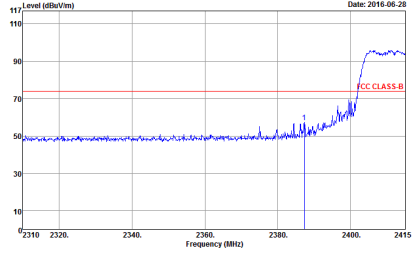
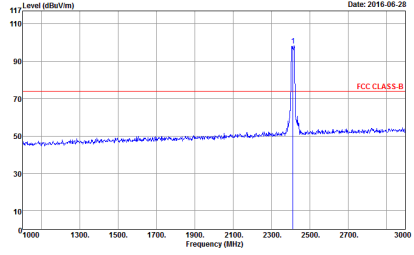
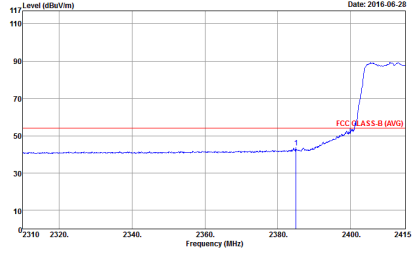
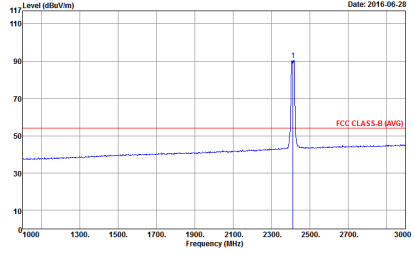


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH11 2462MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 7</p>	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 7</p>
Avg.	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 7</p>	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 7</p>

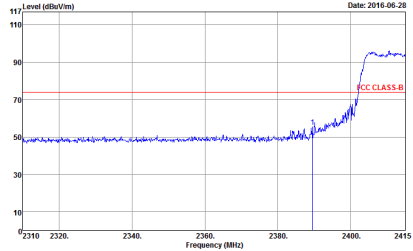
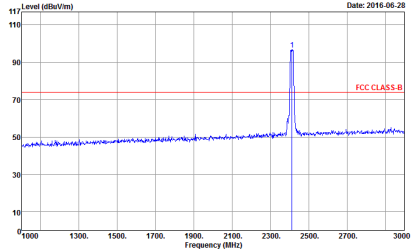
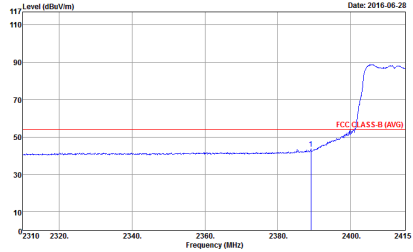
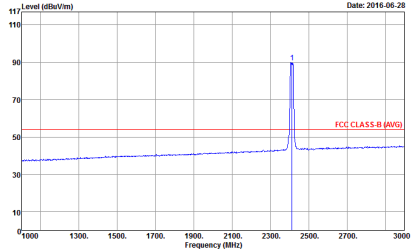


2.4GHz 2400~2483.5MHz

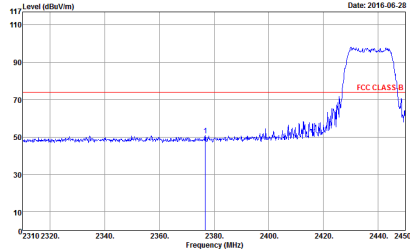
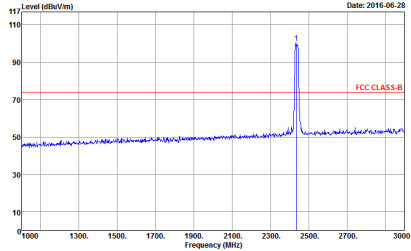
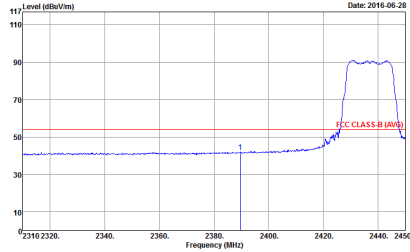
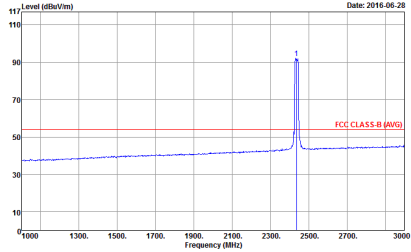
WIFI 802.11g (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 8</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 8</p>
Avg.	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 8</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 8</p>

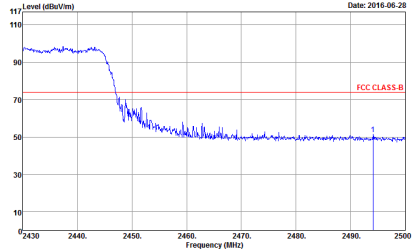
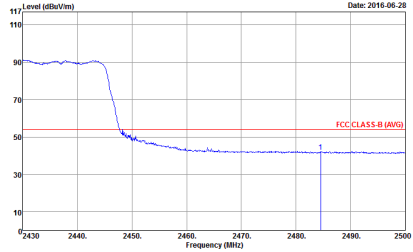


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 8</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 8</p>
Avg.	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 8</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 8</p>

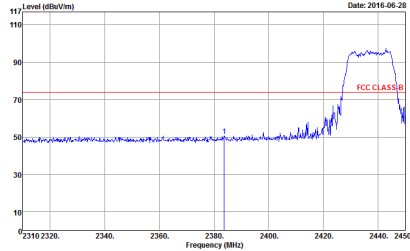
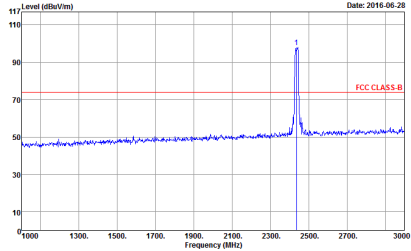
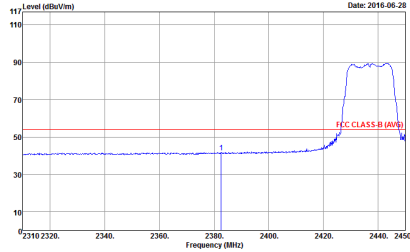
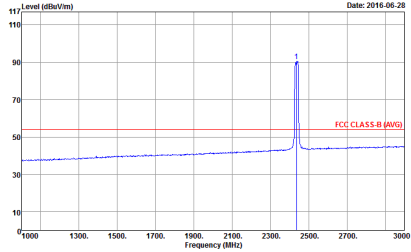


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 9</p>	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 9</p>
Avg.	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 9</p>	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 9</p>

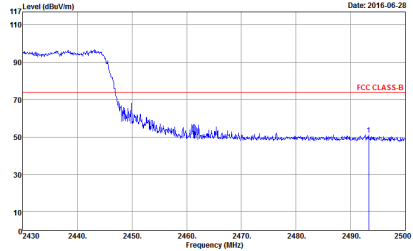
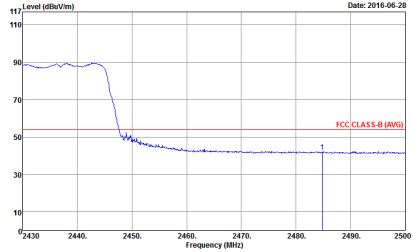


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH10-HY  Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL  RBW:1000.000KHz VBW:3000.000KHz SWT:Auto  Detector : Peak  Project : 660109  Mode : 9</p>	Left blank
Avg.	 <p>Site : 03CH10-HY  Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL  RBW:1000.000KHz VBW:3.000KHz SWT:Auto  Detector : Peak  Project : 660109  Mode : 9</p>	Left blank



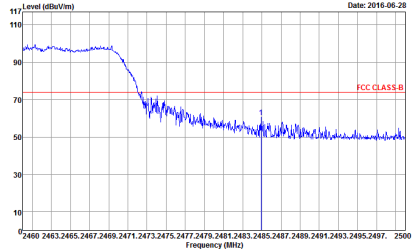
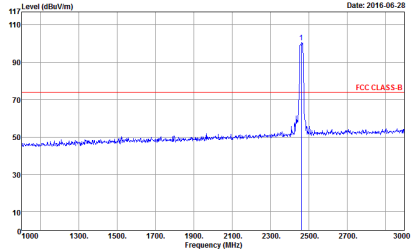
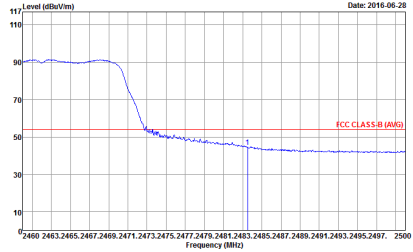
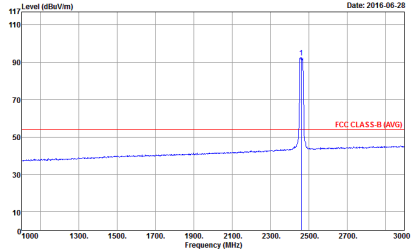
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 9</p>	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 9</p>
Avg.	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 9</p>	 <p>Date: 2016-06-28</p> <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 9</p>



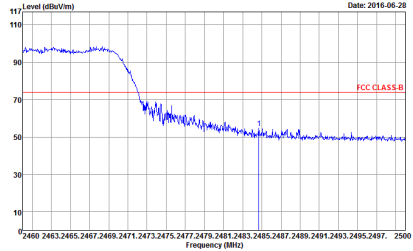
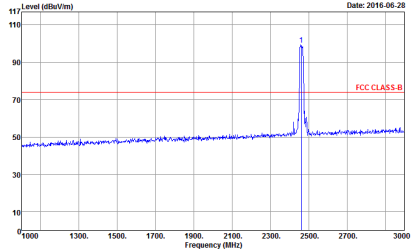
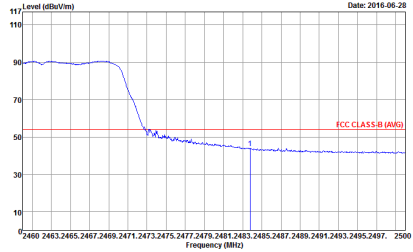
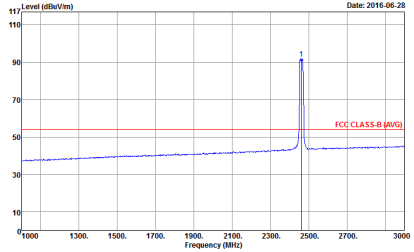
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH10-HY  Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL  RBW:1000.000KHz VBW:3000.000KHz SWT:Auto  Detector : Peak  Project : 660109  Mode : 9</p>	Left Blank
Avg.	 <p>Site : 03CH10-HY  Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL  RBW:1000.000KHz VBW:3.000KHz SWT:Auto  Detector : Peak  Project : 660109  Mode : 9</p>	Left Blank





WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : IO</p>	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : IO</p>
Avg.	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : IO</p>	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : IO</p>

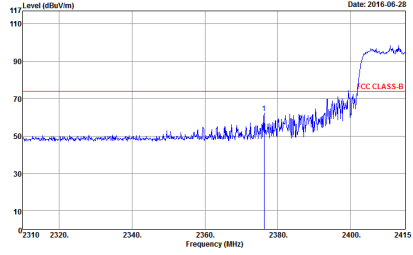
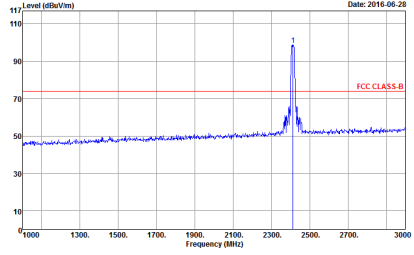
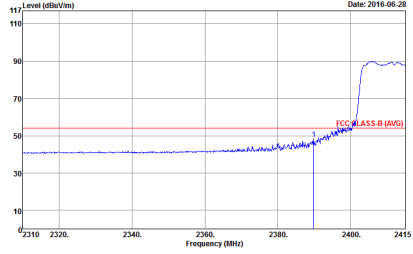
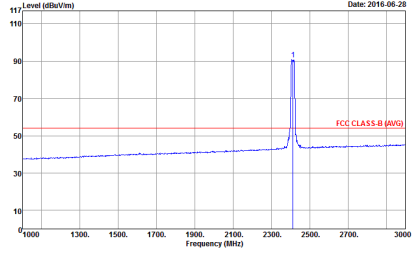


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH11 2462MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : IO</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : IO</p>
Avg.	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : IO</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : IO</p>

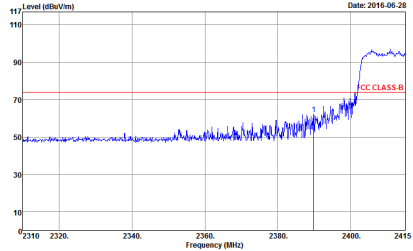
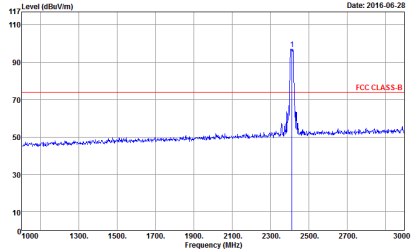
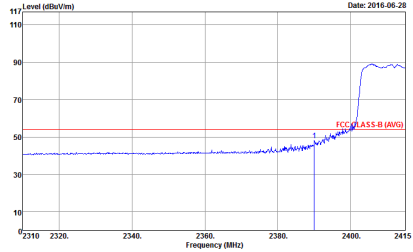
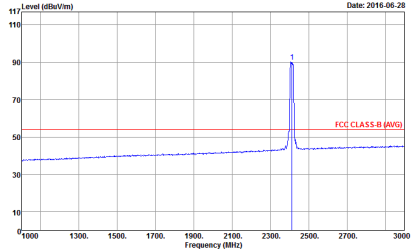


2.4GHz 2400~2483.5MHz

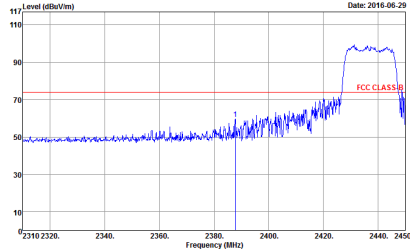
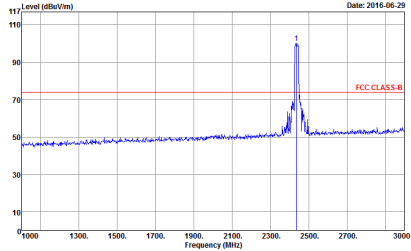
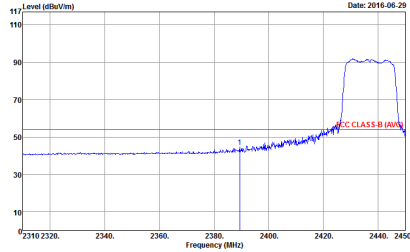
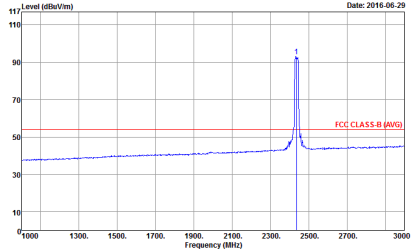
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : II</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : II</p>
Avg.	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : II</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : II</p>

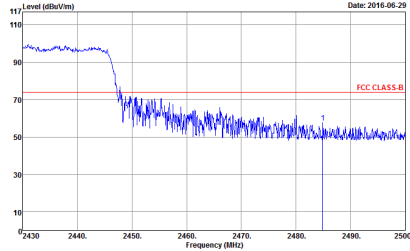
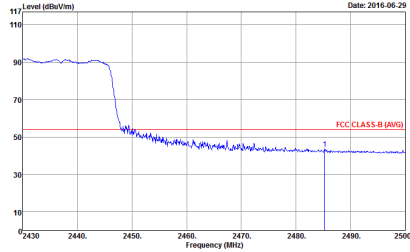


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : II</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : II</p>
Avg.	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : II</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : II</p>

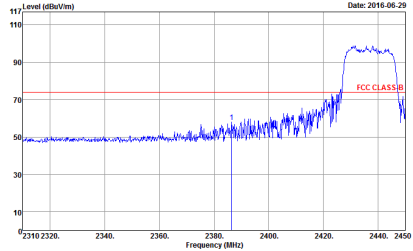
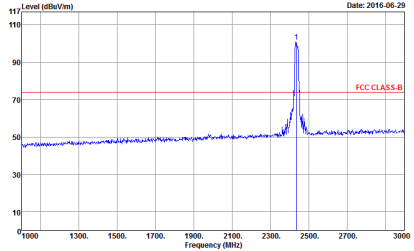
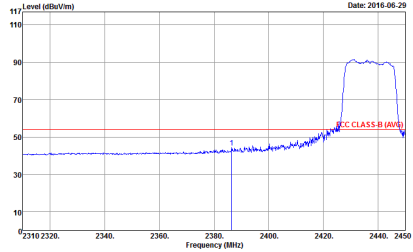
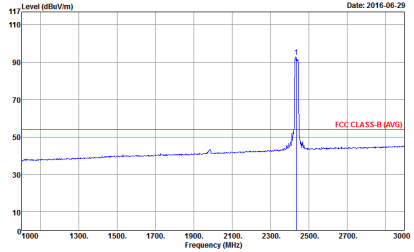


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	 <p>Date: 2016-06-29</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 12</p>	 <p>Date: 2016-06-29</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 12</p>
Avg.	 <p>Date: 2016-06-29</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 12</p>	 <p>Date: 2016-06-29</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 12</p>

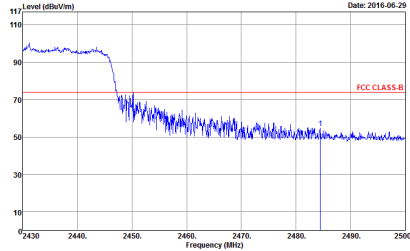
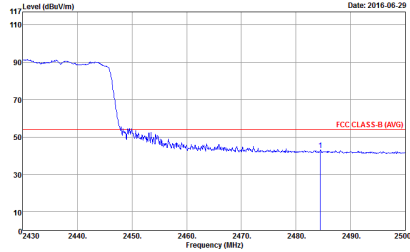


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH10-HY  Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL  RBW:1000.000KHz VBW:3000.000KHz SWT:Auto  Detector : Peak  Project : 660109  Mode : 12</p>	Left blank
Avg.	 <p>Site : 03CH10-HY  Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL  RBW:1000.000KHz VBW:3.000KHz SWT:Auto  Detector : Peak  Project : 660109  Mode : 12</p>	Left blank



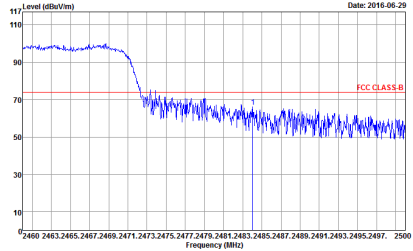
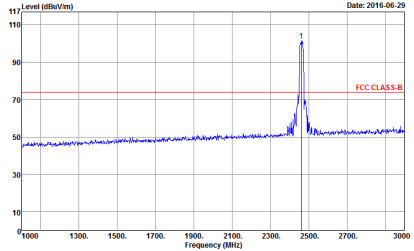
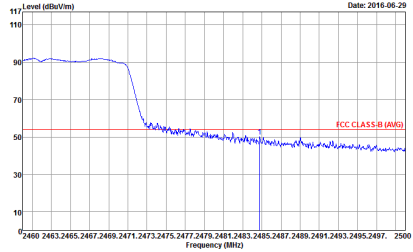
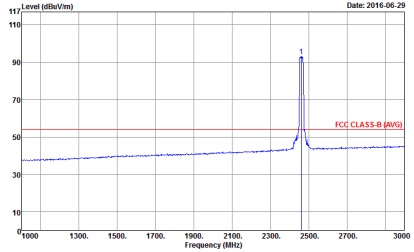
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 <p>Date: 2016-06-29</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 12</p>	 <p>Date: 2016-06-29</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 12</p>
Avg.	 <p>Date: 2016-06-29</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 12</p>	 <p>Date: 2016-06-29</p> <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 12</p>



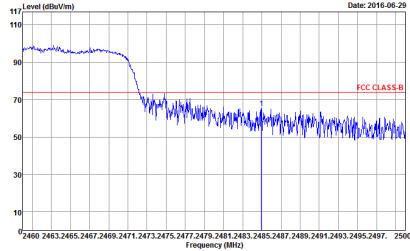
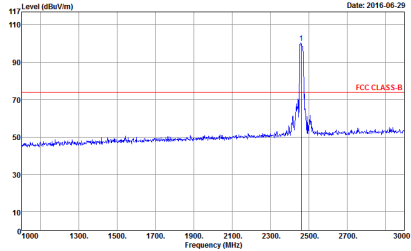
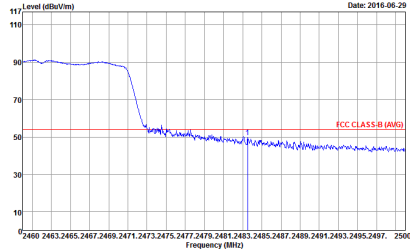
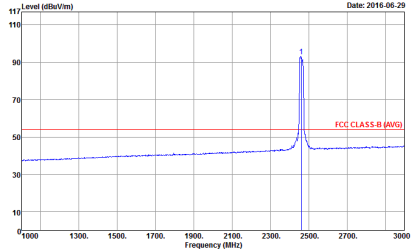
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH10-HY Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 660109 Mode : 12</p>	Left Blank
Avg.	 <p>Site : 03CH10-HY Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 660109 Mode : 12</p>	Left Blank





WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 13</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 13</p>
Avg.	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 13</p>	 <p>Site : 03CH10-HY            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF HORIZONTAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 13</p>



WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11n HT20 CH11 2462MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 13</p>	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3000.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 13</p>
Avg.	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 13</p>	 <p>Site : 03CH10-#Y            Condition : FCC CLASS-B (AVG) 3m HORN 9120D-HF VERTICAL            RBW:1000.000KHz VBW:3.000KHz SWT:Auto            Detector : Peak            Project : 660109            Mode : 13</p>

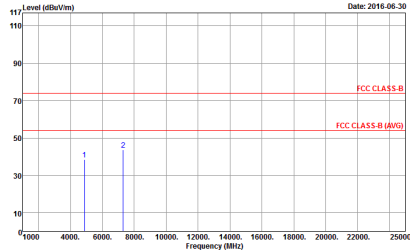
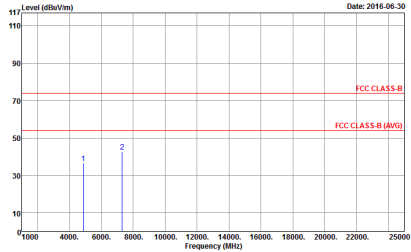


2.4GHz 2400~2483.5MHz

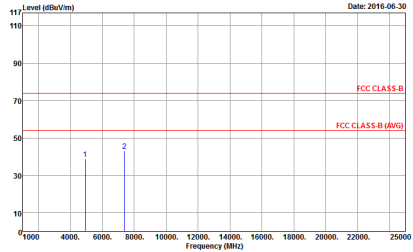
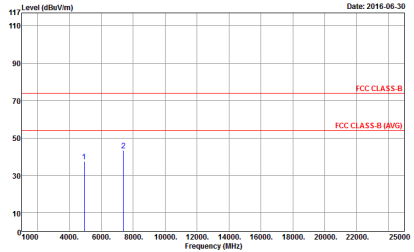
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH10-HY  Condition : FCC CLASS-B 3m HORN_9170_406_0584 HORIZONTAL  Detector : Peak  Project : 660109  Mode : 5</p>	<p>Site : 03CH10-HY  Condition : FCC CLASS-B 3m HORN_9170_406_0584 VERTICAL  Detector : Peak  Project : 660109  Mode : 5</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH10-#Y Condition : FCC CLASS-B 3m HORN_9170_406_0584 HORIZONTAL Detector : Peak Project : 660109 Mode : 6</p>	 <p>Site : 03CH10-#Y Condition : FCC CLASS-B 3m HORN_9170_406_0584 VERTICAL Detector : Peak Project : 660109 Mode : 6</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH10-#Y Condition : FCC CLASS-B 3m HORN_9170_406_0584 HORIZONTAL Detector : Peak Project : 660109 Mode : 7</p>	 <p>Site : 03CH10-#Y Condition : FCC CLASS-B 3m HORN_9170_406_0584 VERTICAL Detector : Peak Project : 660109 Mode : 7</p>



2.4GHz 2400~2483.5MHz

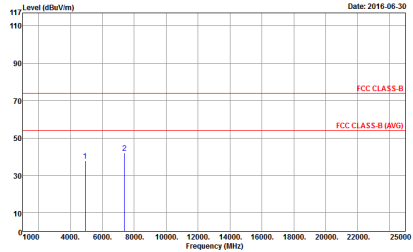
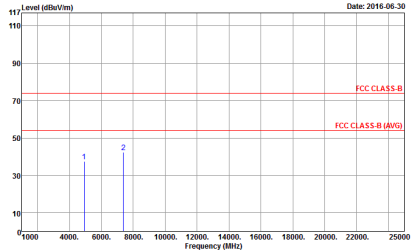
WIFI 802.11g (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH10-HY Condition : FCC CLASS-B 3m HORN_9170_406_0584 HORIZONTAL Detector : Peak Project : 660109 Mode : 8</p>	<p>Site : 03CH10-HY Condition : FCC CLASS-B 3m HORN_9170_406_0584 VERTICAL Detector : Peak Project : 660109 Mode : 8</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH06 2437MHz	
1	Horizontal	Vertical
<b>Peak</b> <b>Avg.</b>	<p>Site : 03CH10-#Y Condition : FCC CLASS-B 3m HORN_9170_406_0584 HORIZONTAL Detector : Peak Project : 660109 Mode : 9</p>	<p>Site : 03CH10-#Y Condition : FCC CLASS-B 3m HORN_9170_406_0584 VERTICAL Detector : Peak Project : 660109 Mode : 9</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH11 2462MHz	
1	Horizontal	Vertical
<b>Peak</b>  <b>Avg.</b>	 <p>Site : 03CH10-#Y  Condition : FCC CLASS-B 3m HORN_9170_406_0584 HORIZONTAL  Detector : Peak  Project : 660109  Mode : IO</p>	 <p>Site : 03CH10-#Y  Condition : FCC CLASS-B 3m HORN_9170_406_0584 VERTICAL  Detector : Peak  Project : 660109  Mode : IO</p>



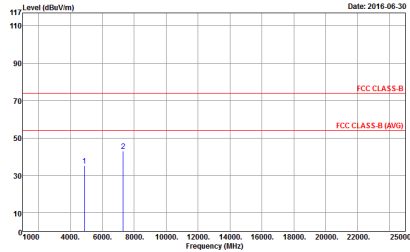
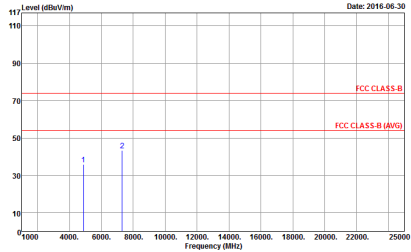


2.4GHz 2400~2483.5MHz

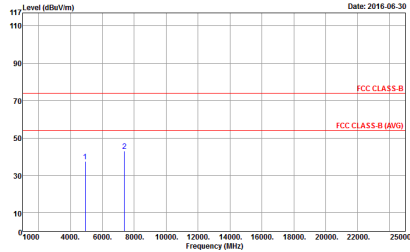
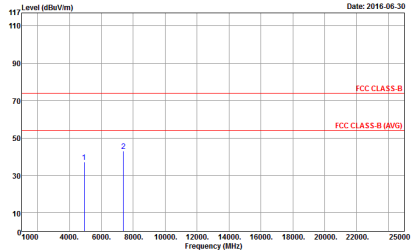
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH10-HY Condition : FCC CLASS-B 3m HORN_9170_406_0584 HORIZONTAL Detector : Peak Project : 660109 Mode : II</p>	<p>Site : 03CH10-HY Condition : FCC CLASS-B 3m HORN_9170_406_0584 VERTICAL Detector : Peak Project : 660109 Mode : II</p>



WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH06 2437MHz	
1	Horizontal	Vertical
<p><b>Peak</b> <b>Avg.</b></p>	 <p>Site : 03CH10-#Y Condition : FCC CLASS-B 3m HORN_9170_406_0584 HORIZONTAL Detector : Peak Project : 660109 Mode : 12</p>	 <p>Site : 03CH10-#Y Condition : FCC CLASS-B 3m HORN_9170_406_0584 VERTICAL Detector : Peak Project : 660109 Mode : 12</p>



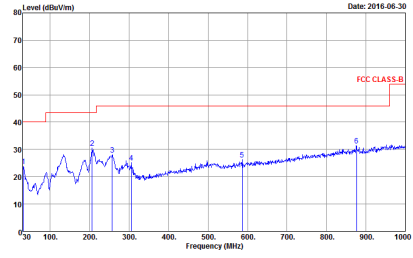
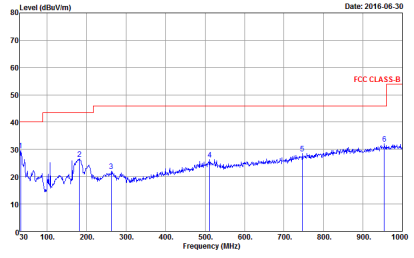
WIFI	<b>2.4GHz 2400~2483.5MHz Harmonic @ 3m</b>	
ANT	<b>802.11n HT20 CH11 2462MHz</b>	
<b>1</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak Avg.</b>	 <p>Site : 03CH10-#Y          Condition : FCC CLASS-B 3m HORN_9170_406_0584 HORIZONTAL          Detector : Peak          Project : 660109          Mode : 13</p>	 <p>Site : 03CH10-#Y          Condition : FCC CLASS-B 3m HORN_9170_406_0584 VERTICAL          Detector : Peak          Project : 660109          Mode : 13</p>



2.4GHz 2400~2483.5MHz

Emission below 1GHz

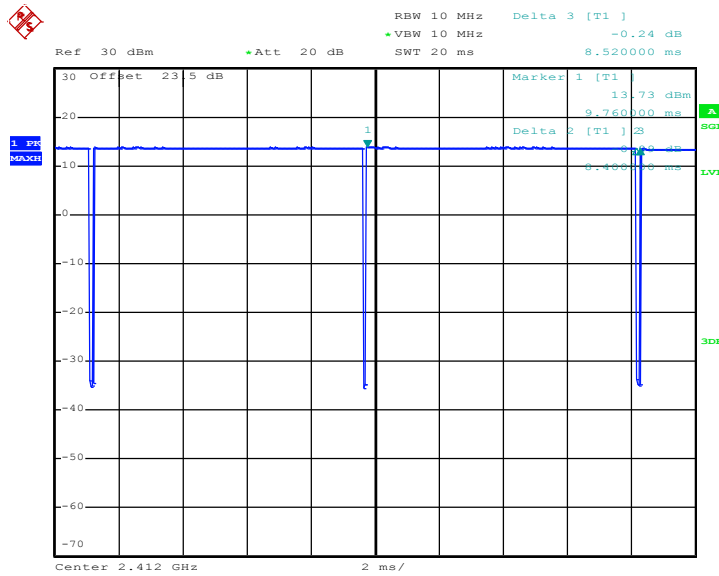
2.4GHz WIFI 802.11n HT20 (LF)

WIFI	2.4GHz 2400~2483.5MHz	
ANT	802.11n HT20 LF	
1	Horizontal	Vertical
QP / Peak	 <p>Site : 03CH10-HY Condition : FCC CLASS-B 3m BT-LOG 6111D-LF HORIZONTAL Detector : Peak Project : 660109 Mode : 14</p>	 <p>Site : 03CH10-HY Condition : FCC CLASS-B 3m BT-LOG 6111D-LF VERTICAL Detector : Peak Project : 660109 Mode : 14</p>

## Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
802.11b	89.17	840	1.19	3kHz
802.11g	77.78	364	2.75	3kHz
2.4GHz 802.11n HT20	78.07	2.81	3kHz	

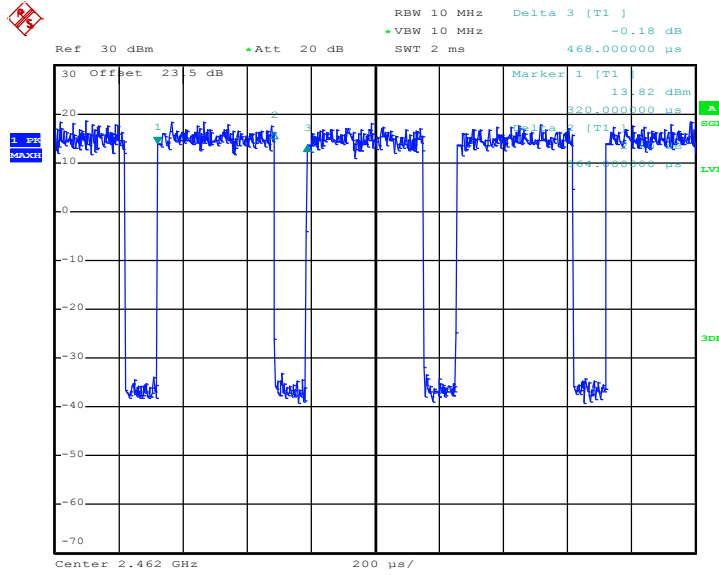
### 802.11b



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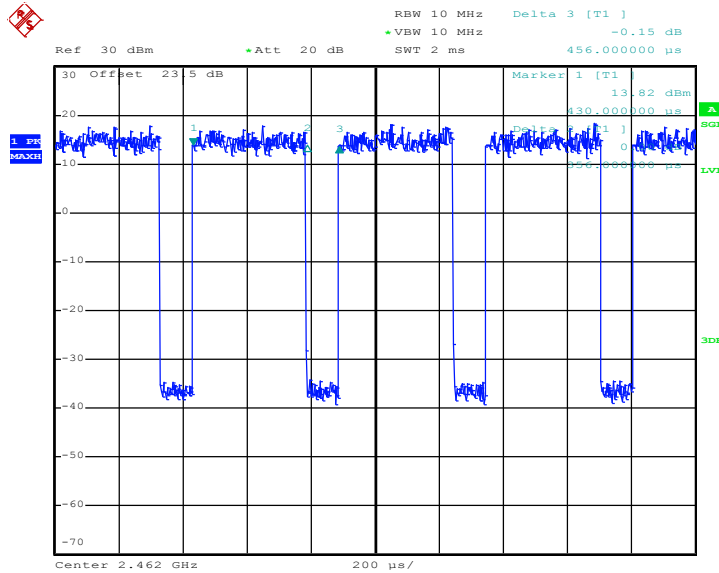


802.11g



Date: 17.MAY.2016 18:41:07

802.11n HT20



Date: 17.MAY.2016 19:06:11