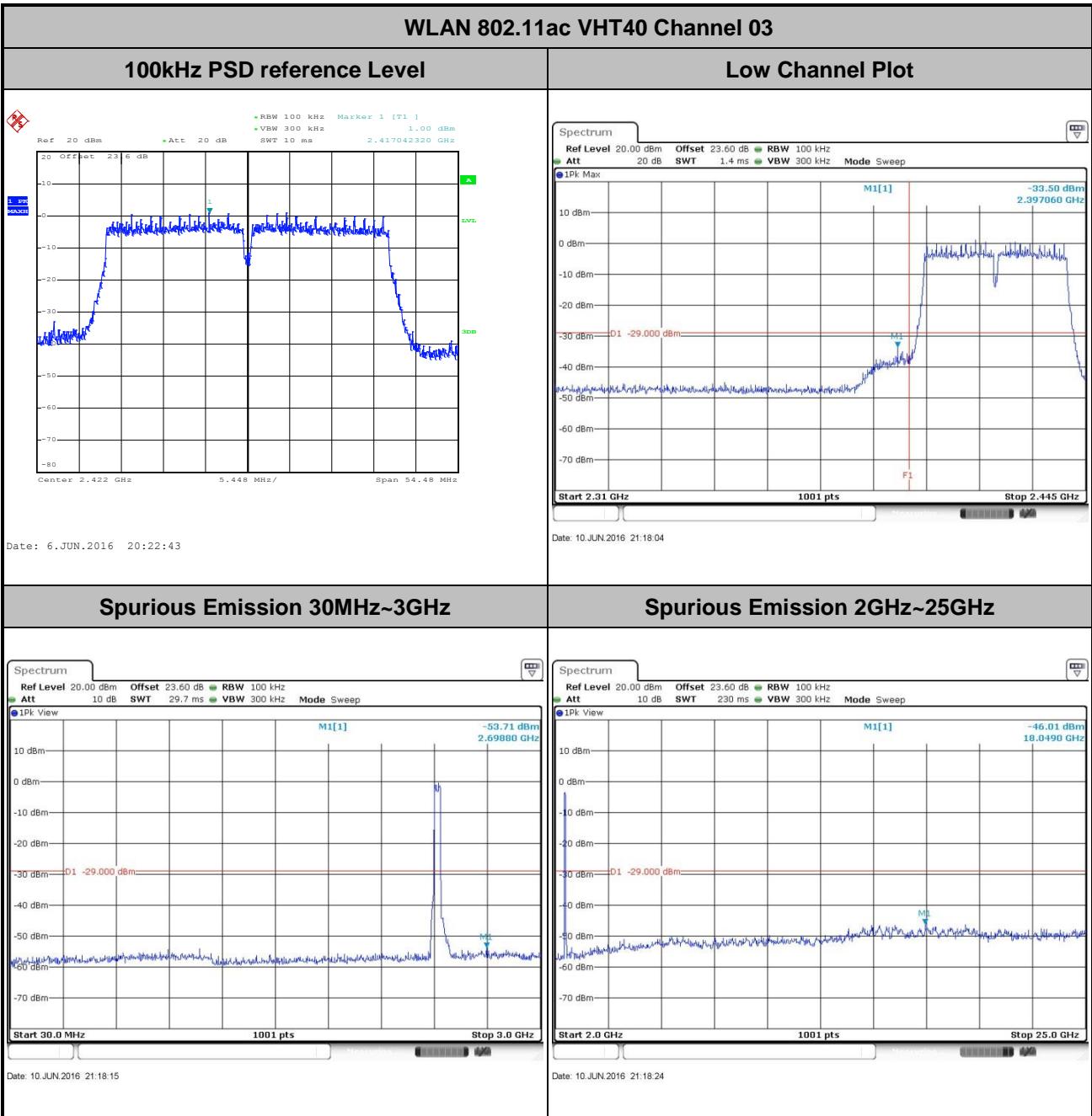


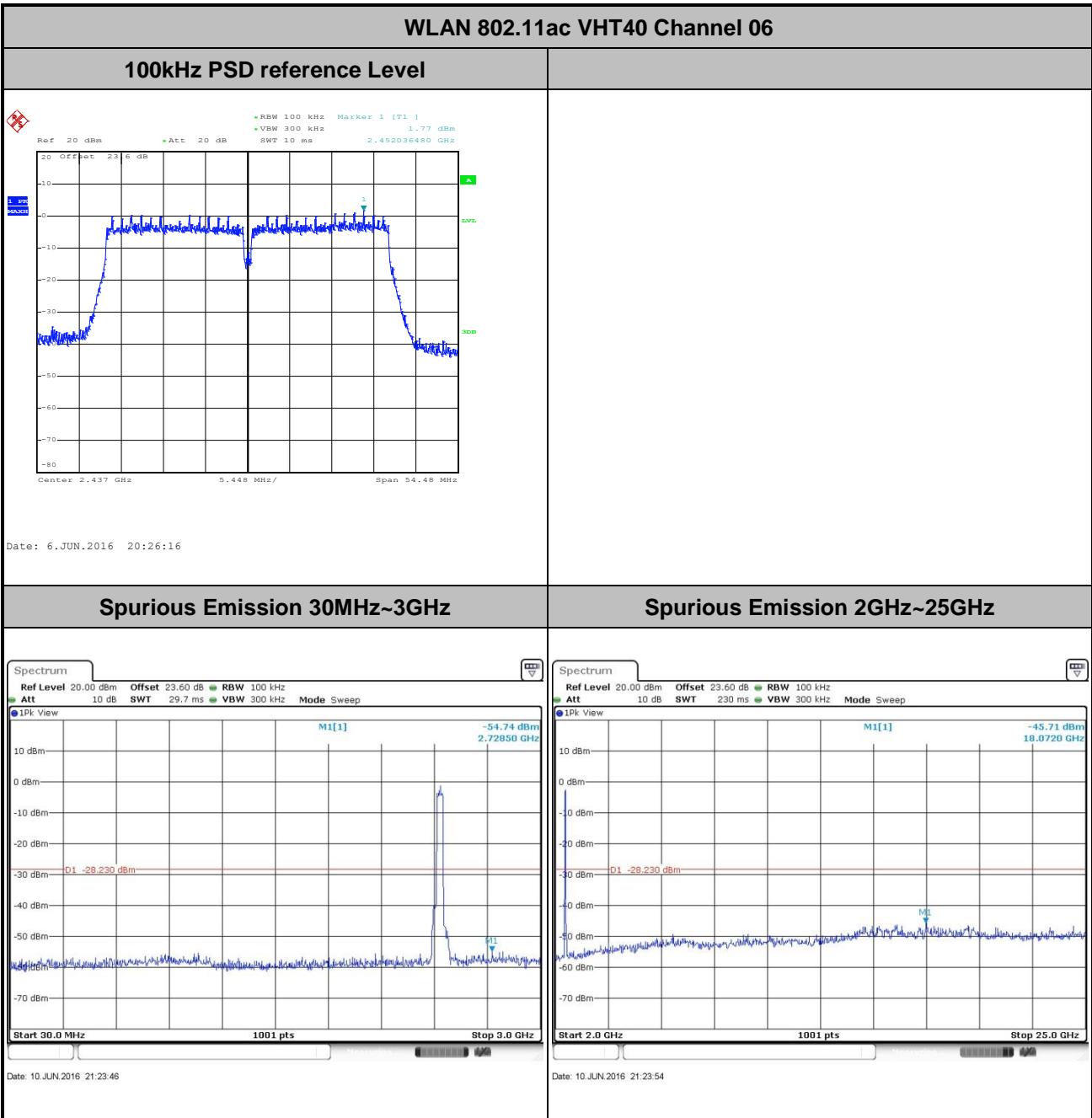


<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11ac VHT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Low	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	03	<b>Test Engineer :</b>	Kenny Chen



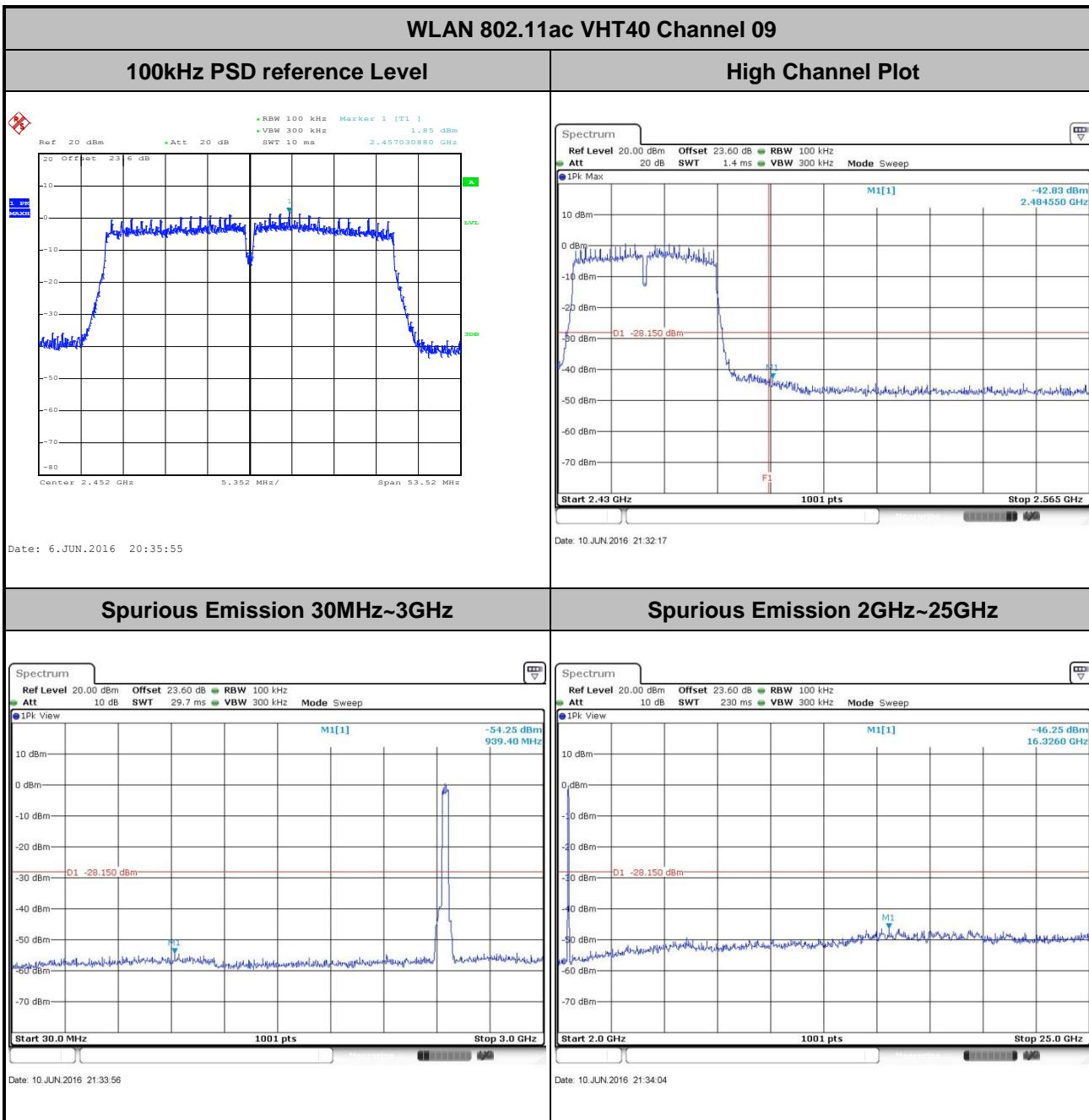


<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11ac VHT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Mid	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	06	<b>Test Engineer :</b>	Kenny Chen





<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11ac VHT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz High	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	09	<b>Test Engineer :</b>	Kenny Chen

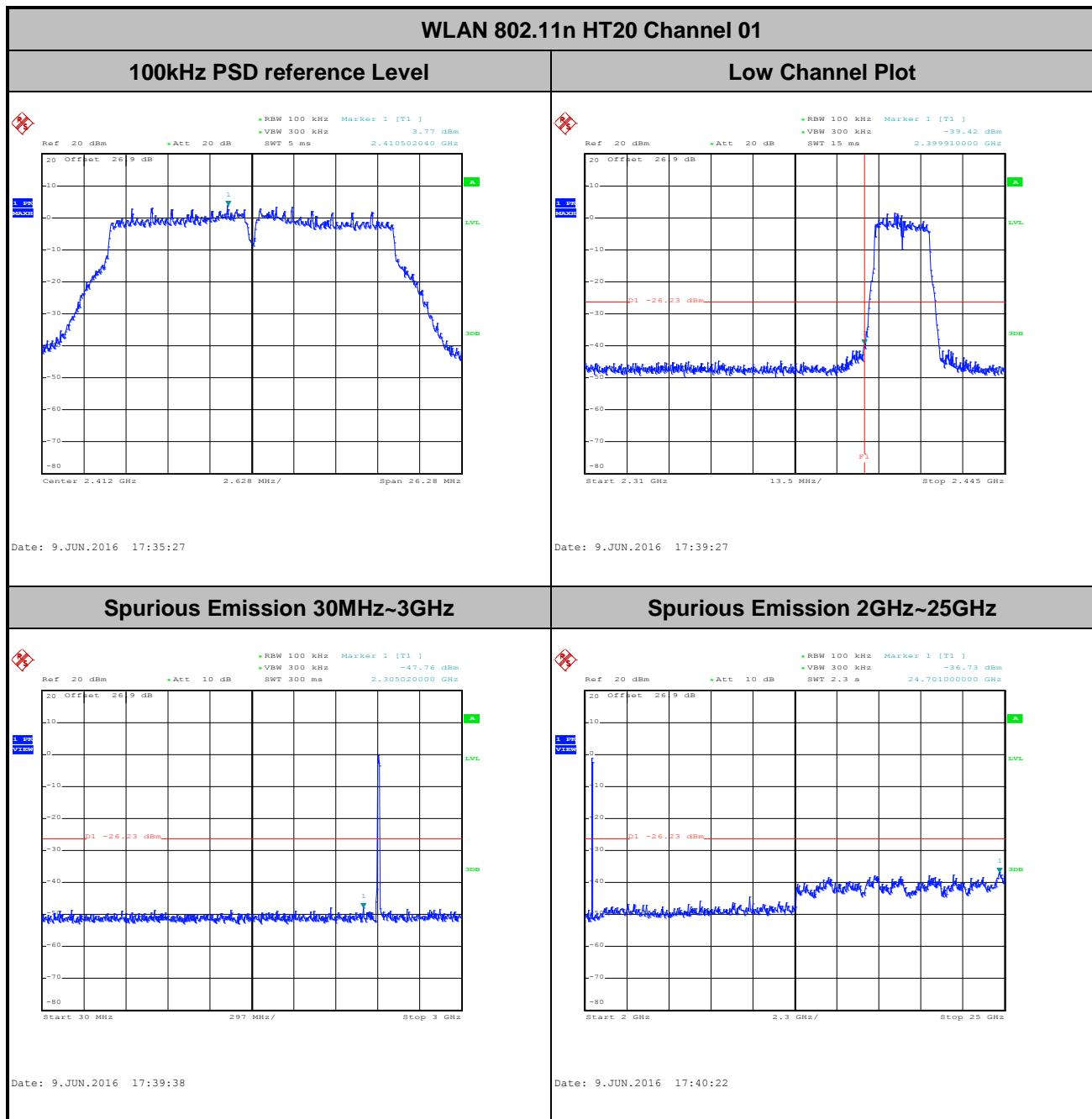




## &lt;TXBF Modes&gt;

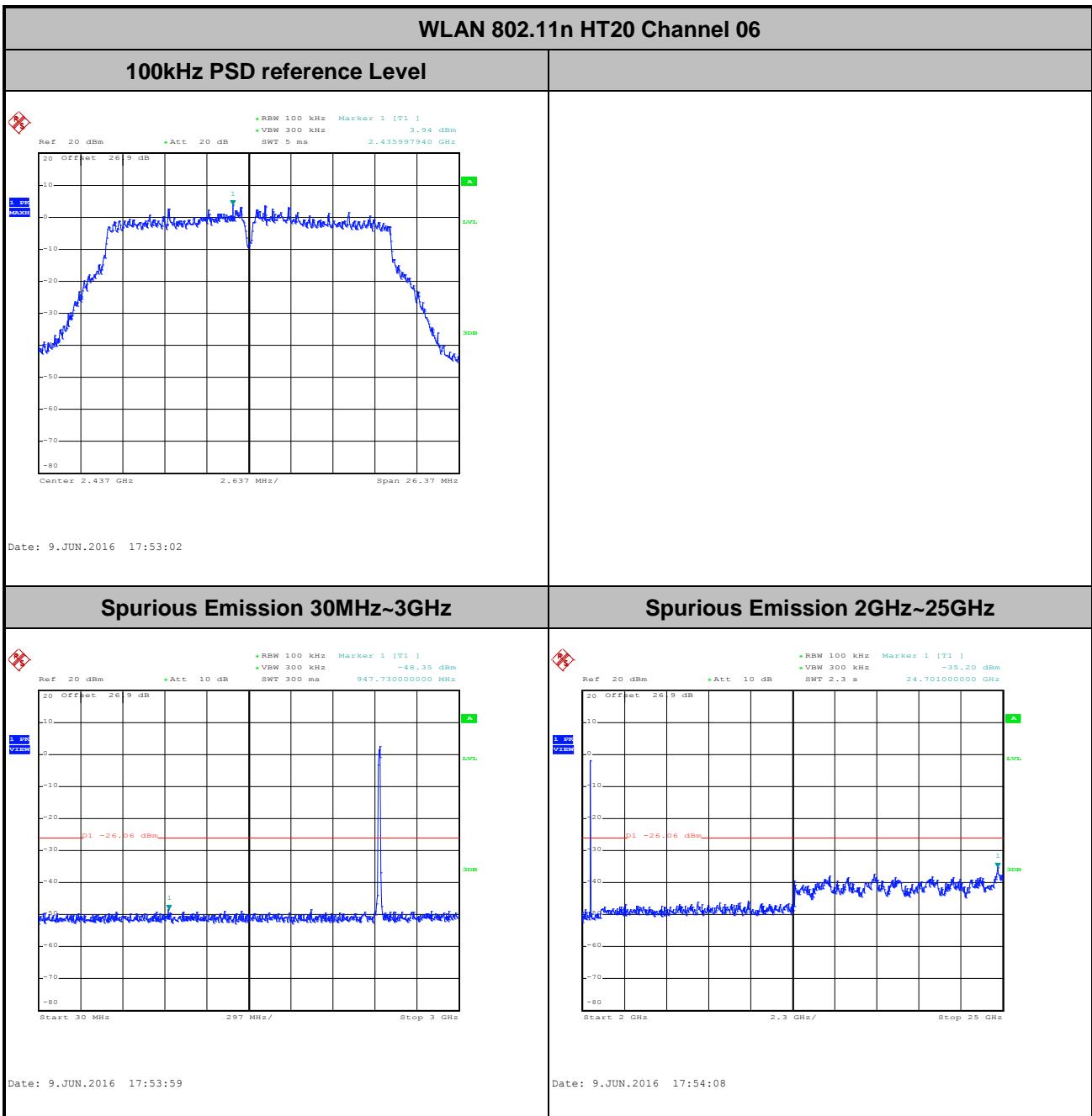
Number of TX = 2, Ant. 1 (Measured)

<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Low	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	01	<b>Test Engineer :</b>	Kenny Chen



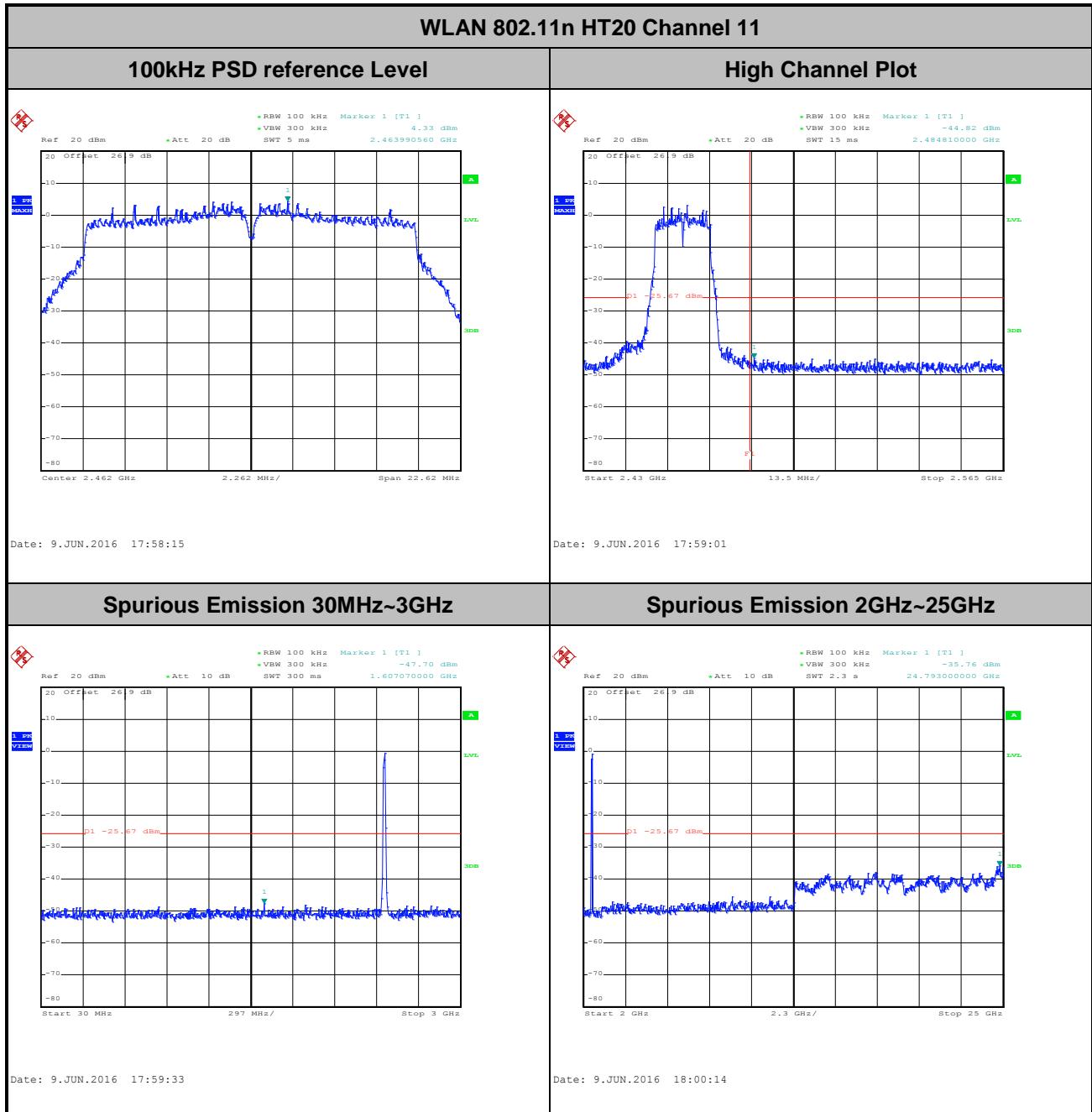


<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Mid	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	06	<b>Test Engineer :</b>	Kenny Chen



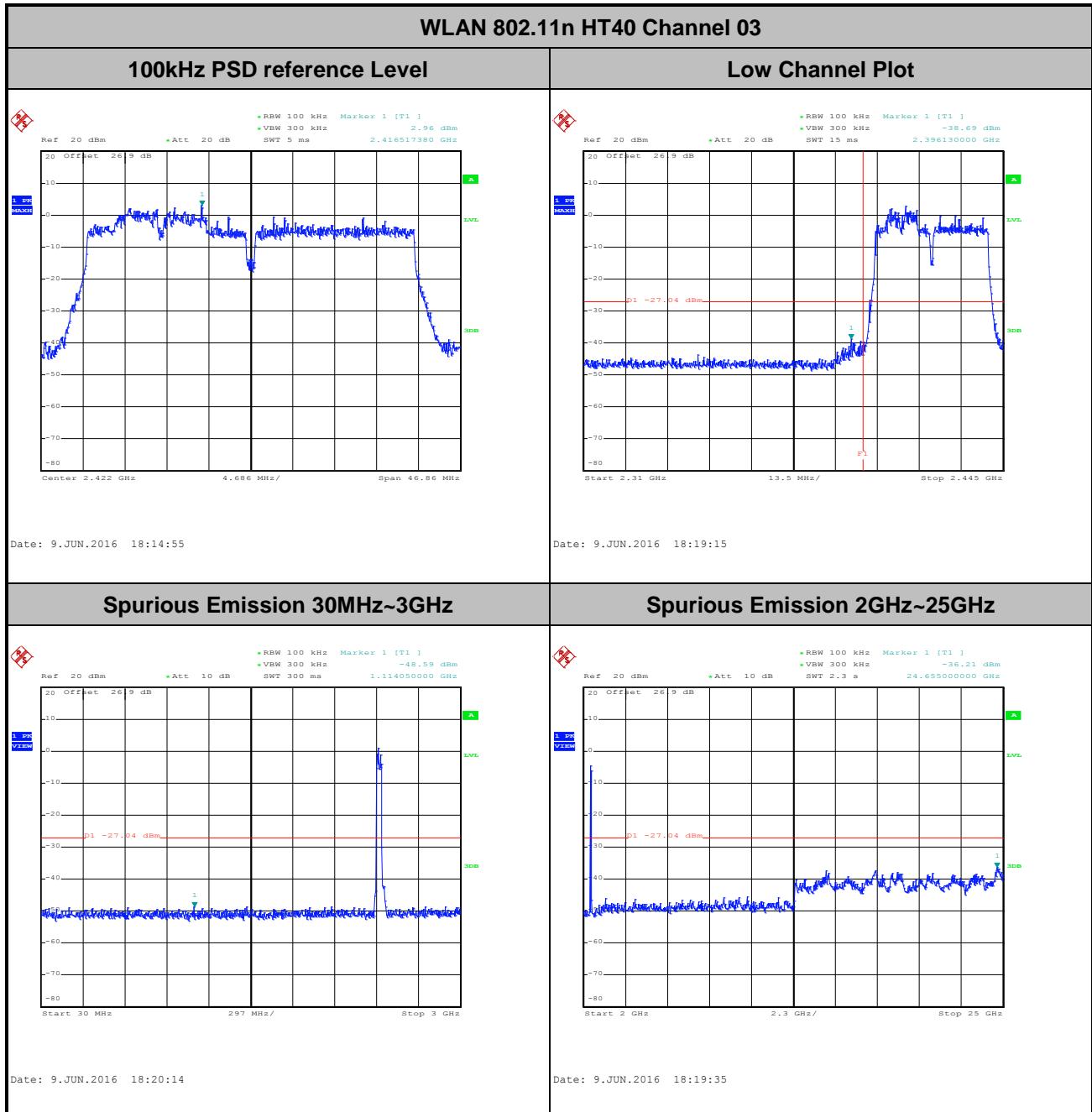


<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz High	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	11	<b>Test Engineer :</b>	Kenny Chen



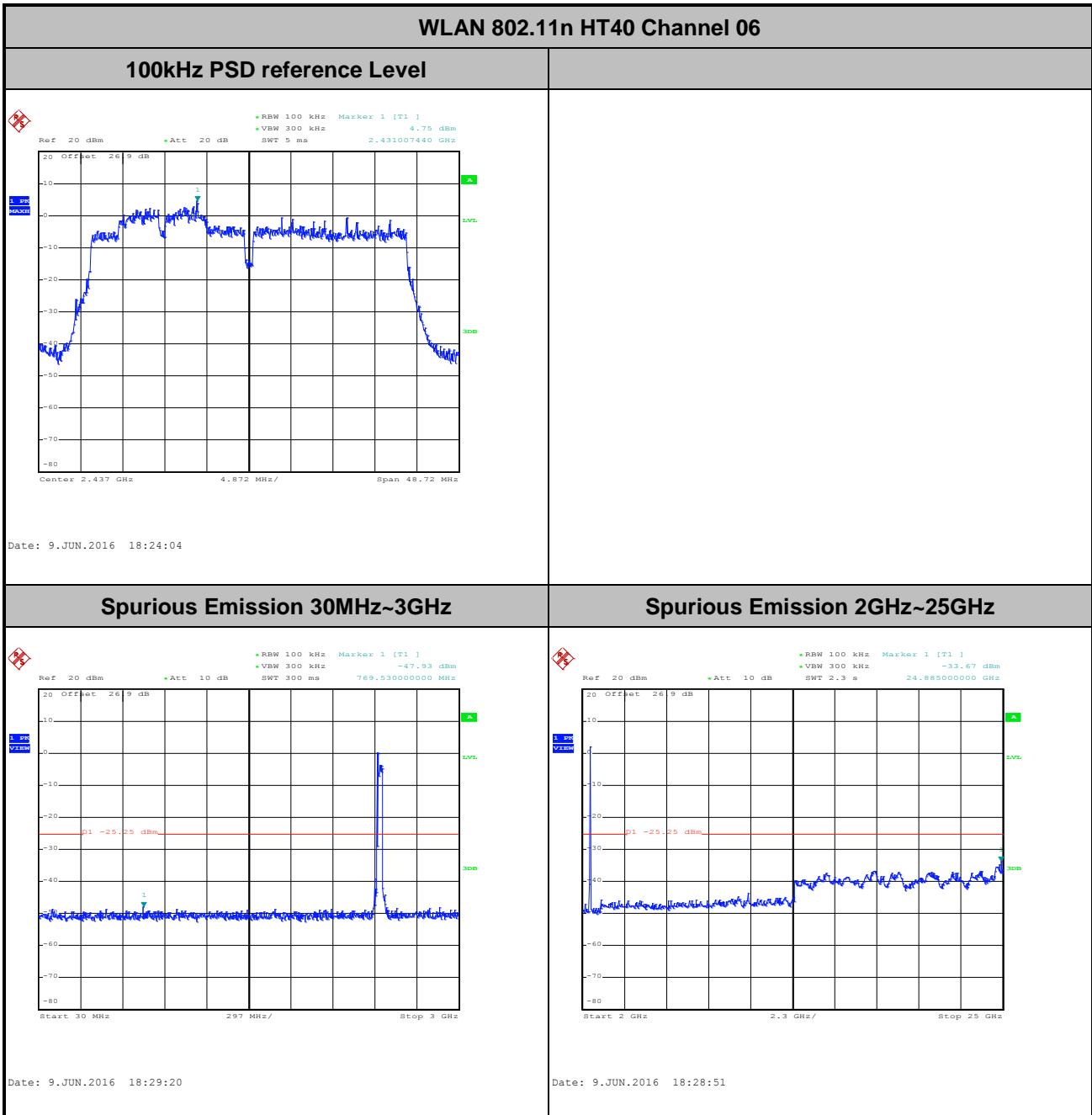


<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11n HT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Low	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	03	<b>Test Engineer :</b>	Kenny Chen



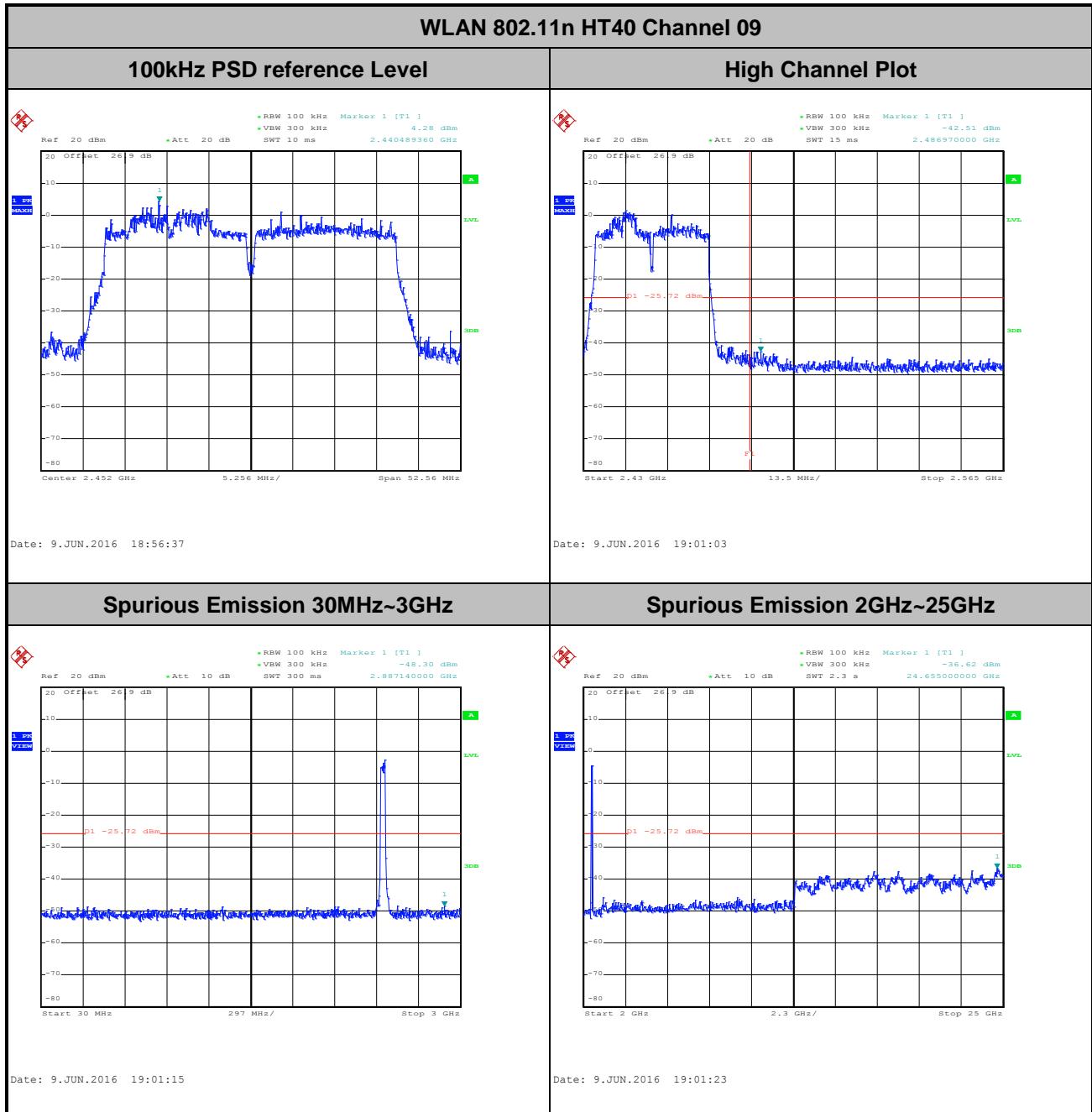


<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11n HT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Mid	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	06	<b>Test Engineer :</b>	Kenny Chen





<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11n HT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz High	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	09	<b>Test Engineer :</b>	Kenny Chen

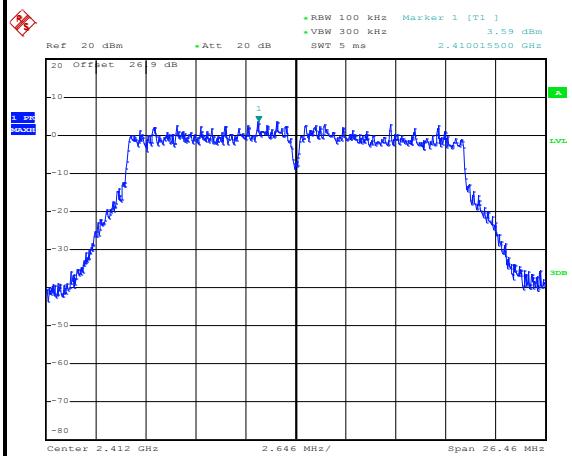




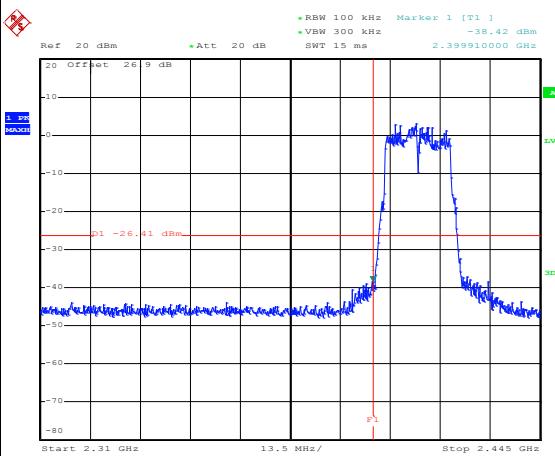
<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11ac VHT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Low	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	01	<b>Test Engineer :</b>	Kenny Chen

## WLAN 802.11ac VHT20 Channel 01

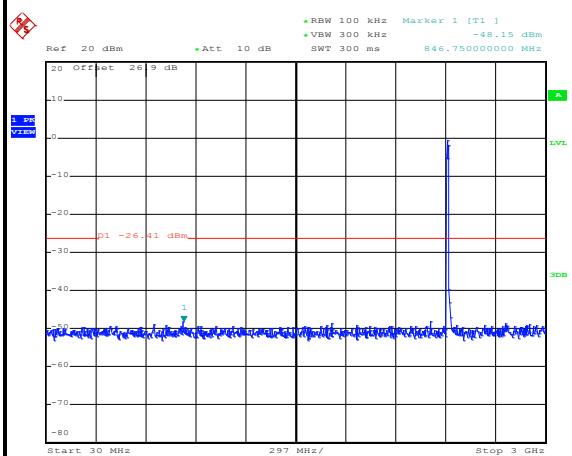
## 100kHz PSD reference Level



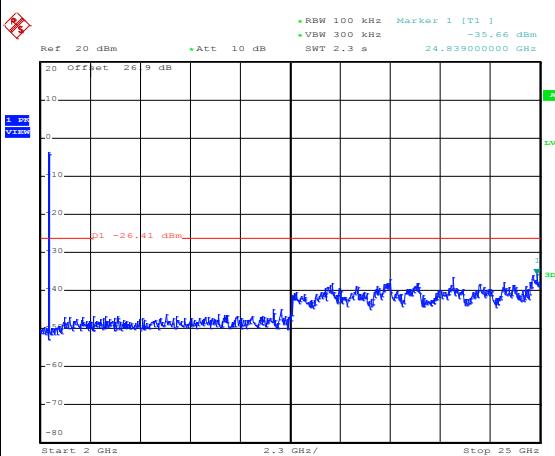
## Low Channel Plot



## Spurious Emission 30MHz~3GHz



## Spurious Emission 2GHz~25GHz

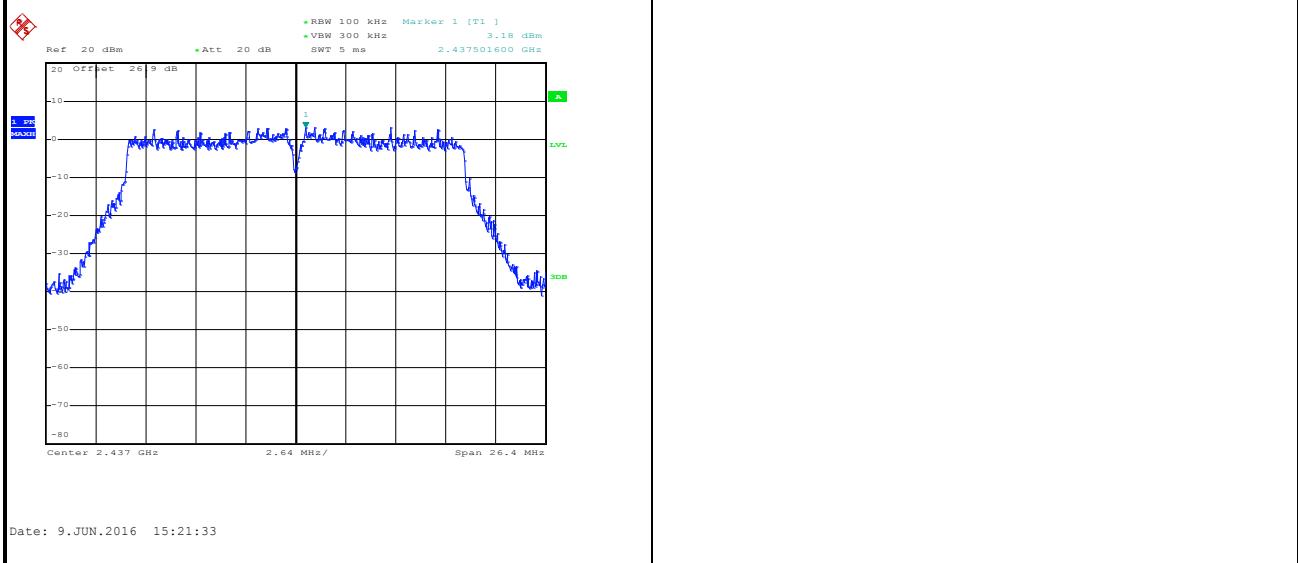




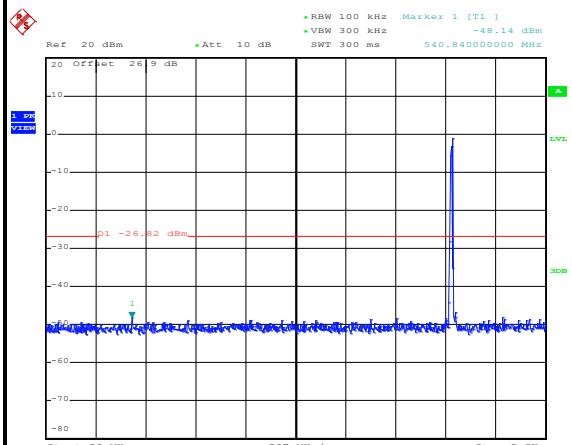
<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11ac VHT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Mid	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	06	<b>Test Engineer :</b>	Kenny Chen

## WLAN 802.11ac VHT20 Channel 06

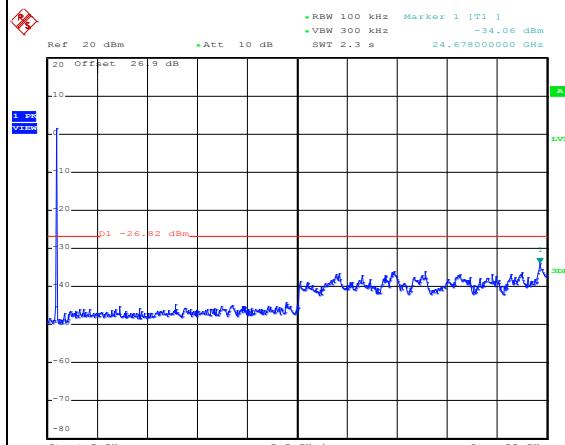
## 100kHz PSD reference Level



## Spurious Emission 30MHz~3GHz



## Spurious Emission 2GHz~25GHz

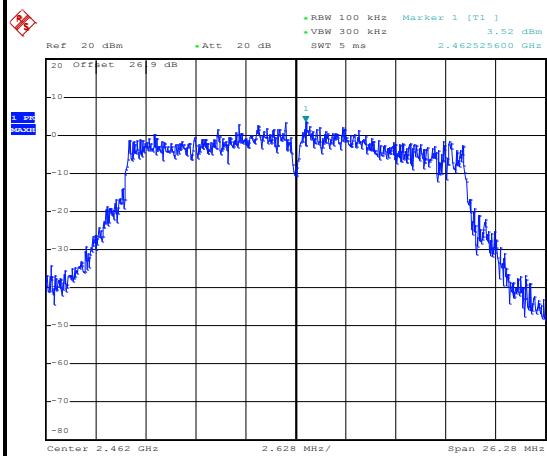




<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11ac VHT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz High	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	11	<b>Test Engineer :</b>	Kenny Chen

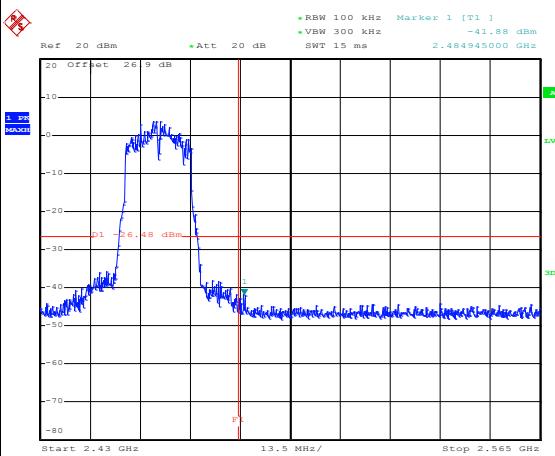
## WLAN 802.11ac VHT20 Channel 11

## 100kHz PSD reference Level



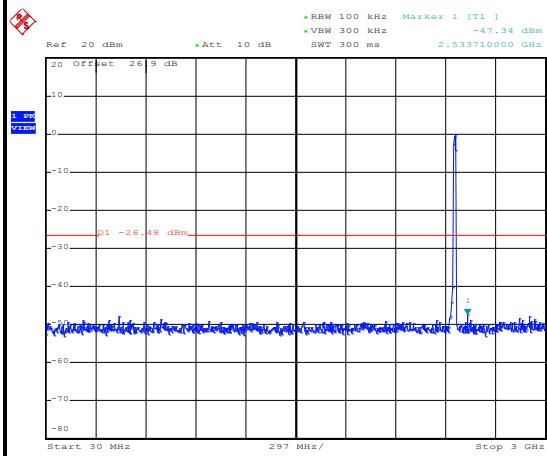
Date: 9.JUN.2016 15:31:32

## High Channel Plot



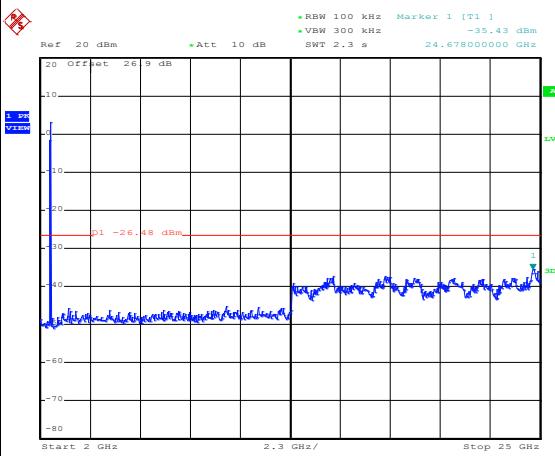
Date: 9.JUN.2016 15:38:33

## Spurious Emission 30MHz~3GHz



Date: 9.JUN.2016 15:38:44

## Spurious Emission 2GHz~25GHz



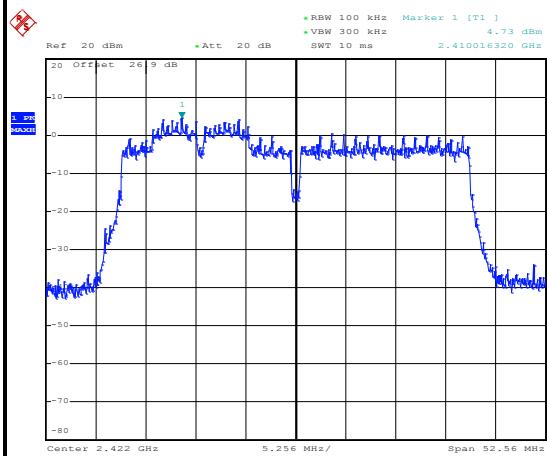
Date: 9.JUN.2016 15:39:38



<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11ac VHT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Low	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	03	<b>Test Engineer :</b>	Kenny Chen

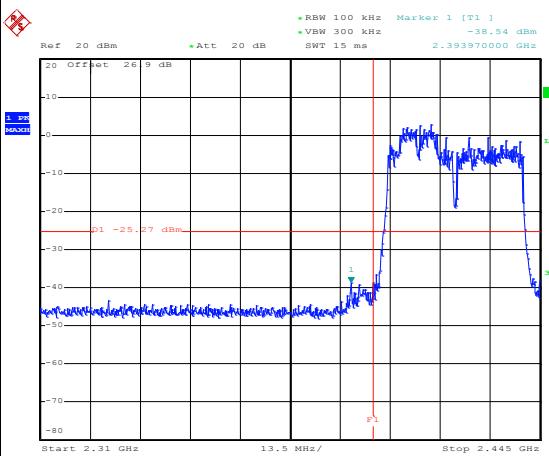
## WLAN 802.11ac VHT40 Channel 03

## 100kHz PSD reference Level



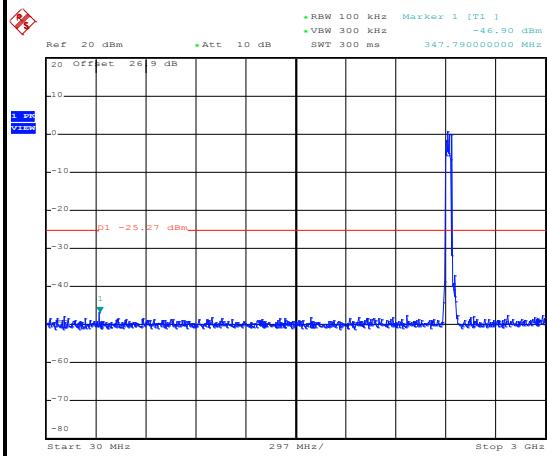
Date: 9.JUN.2016 16:15:58

## Low Channel Plot



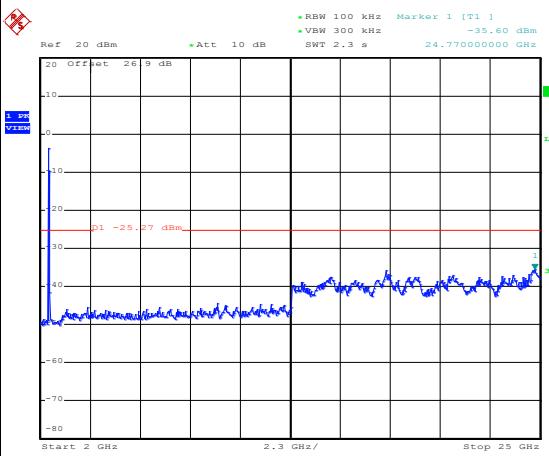
Date: 9.JUN.2016 16:22:14

## Spurious Emission 30MHz~3GHz



Date: 9.JUN.2016 16:26:06

## Spurious Emission 2GHz~25GHz



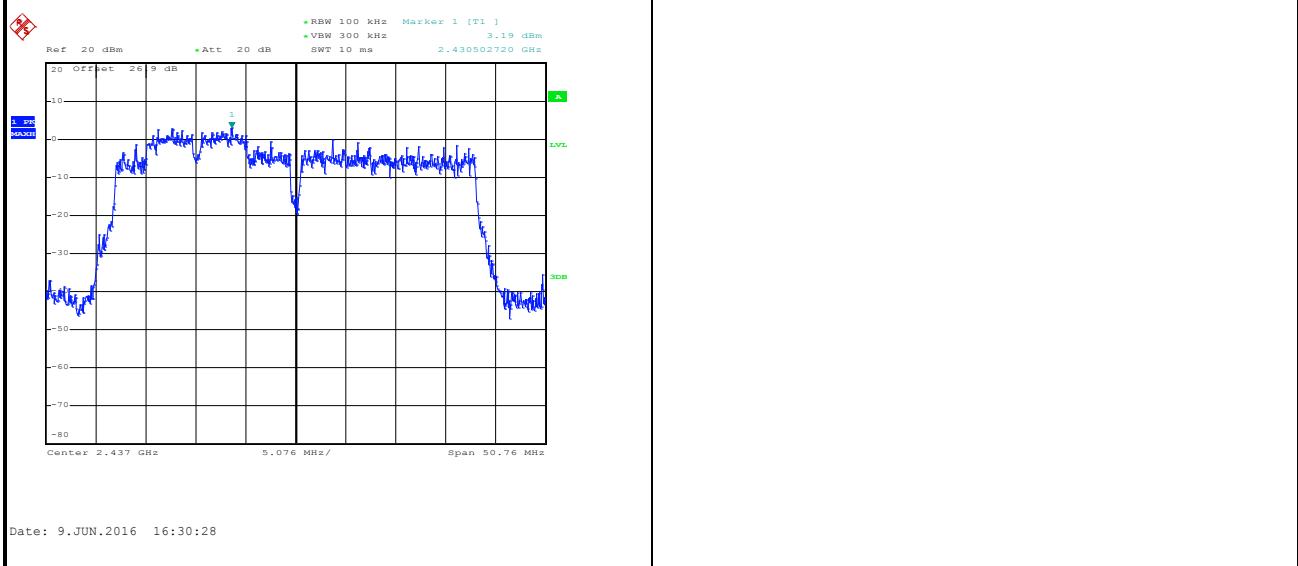
Date: 9.JUN.2016 16:25:01



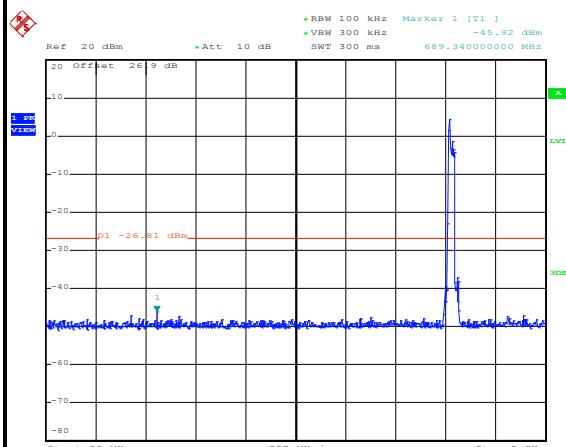
<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11ac VHT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Mid	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	06	<b>Test Engineer :</b>	Kenny Chen

## WLAN 802.11ac VHT40 Channel 06

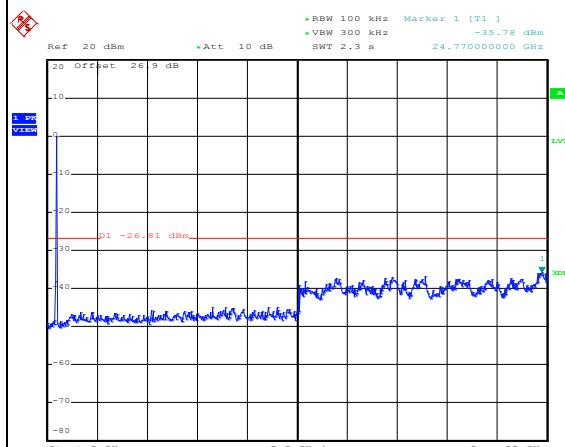
## 100kHz PSD reference Level



## Spurious Emission 30MHz~3GHz



## Spurious Emission 2GHz~25GHz

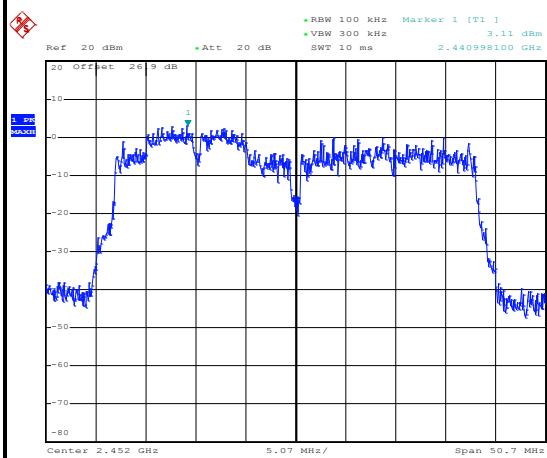




<b>Number of TX :</b>	2	<b>Ant. :</b>	1
<b>Test Mode :</b>	802.11ac VHT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz High	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	09	<b>Test Engineer :</b>	Kenny Chen

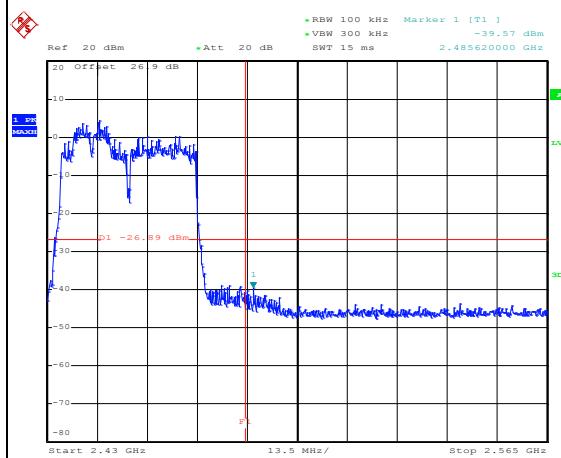
## WLAN 802.11ac VHT40 Channel 09

## 100kHz PSD reference Level



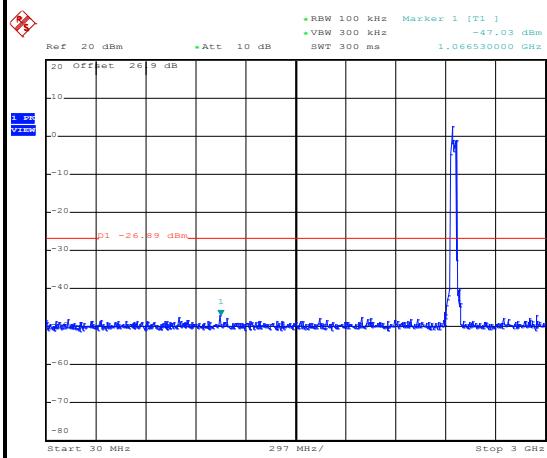
Date: 9.JUN.2016 17:21:44

## High Channel Plot



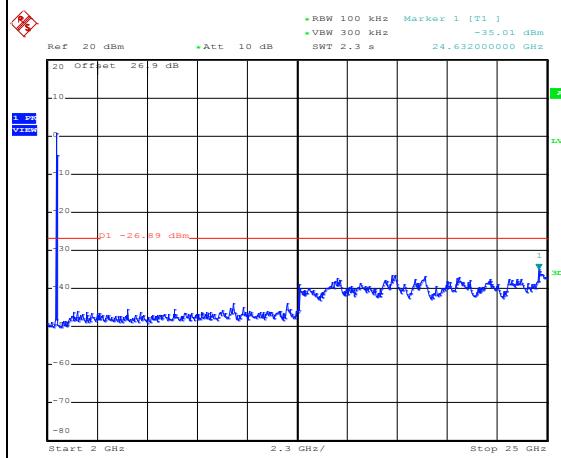
Date: 9.JUN.2016 17:25:25

## Spurious Emission 30MHz~3GHz



Date: 9.JUN.2016 17:29:33

## Spurious Emission 2GHz~25GHz

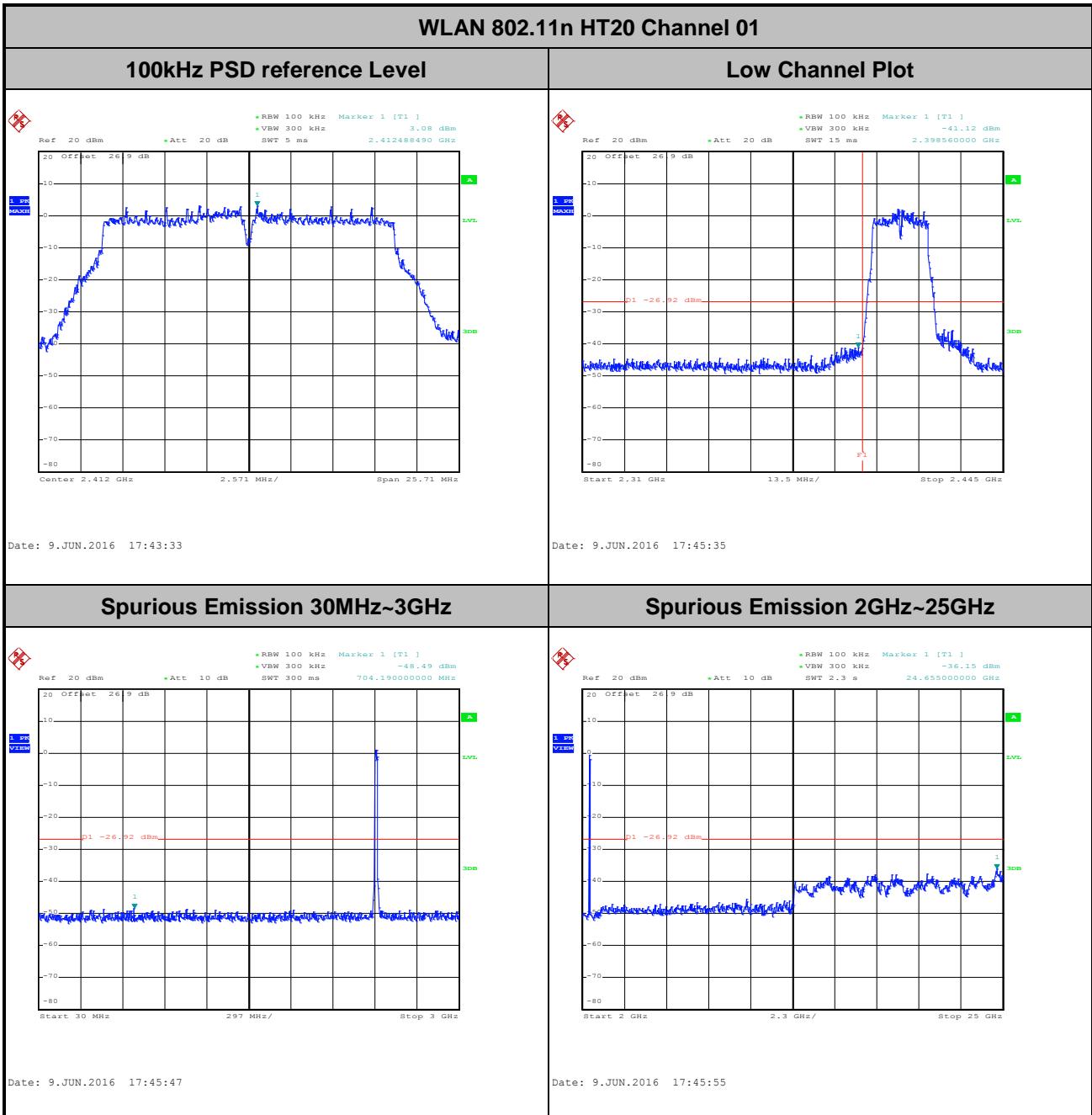


Date: 9.JUN.2016 17:26:58



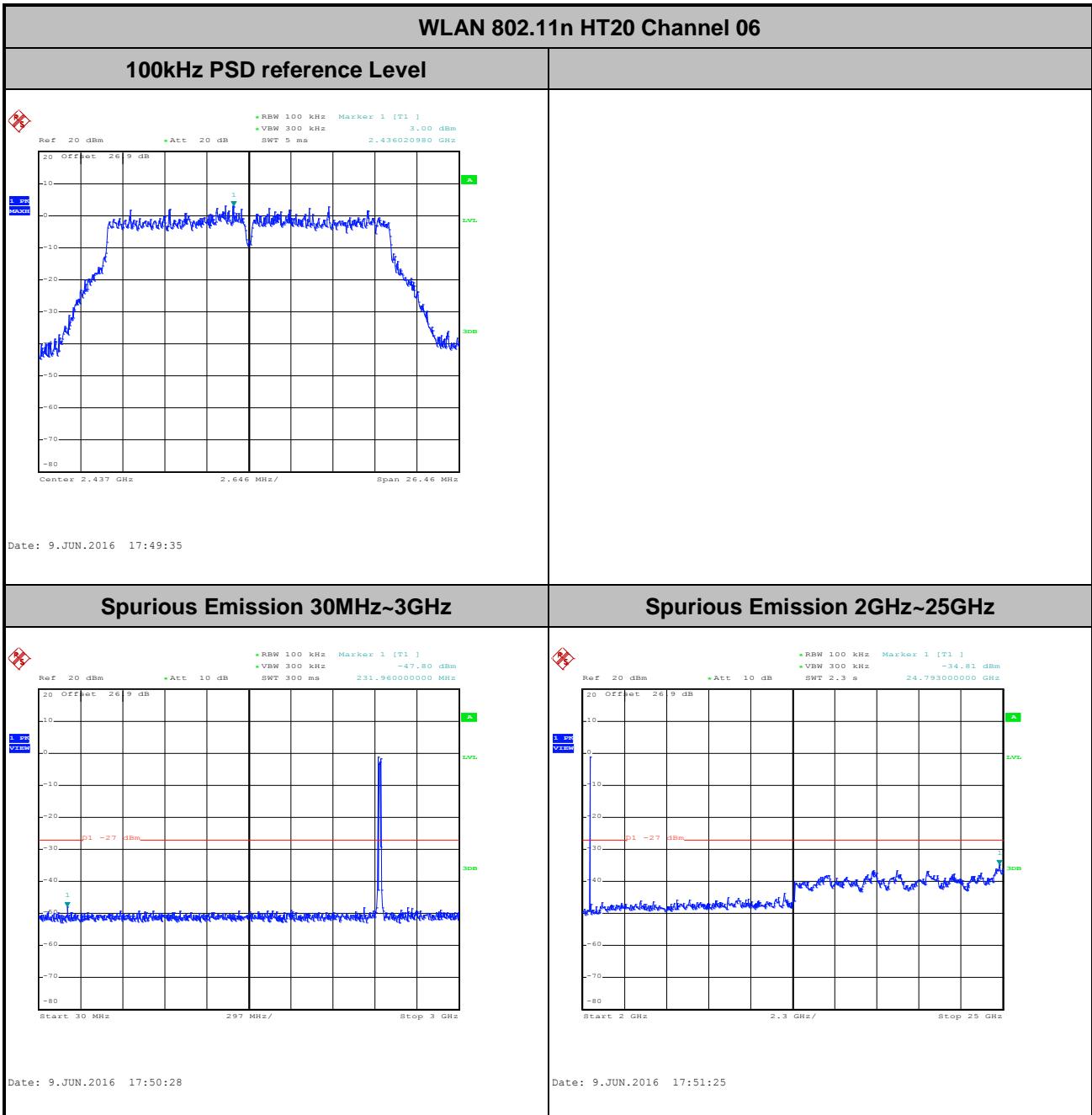
## Number of TX = 2, Ant. 2 (Measured)

<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Low	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	01	<b>Test Engineer :</b>	Kenny Chen



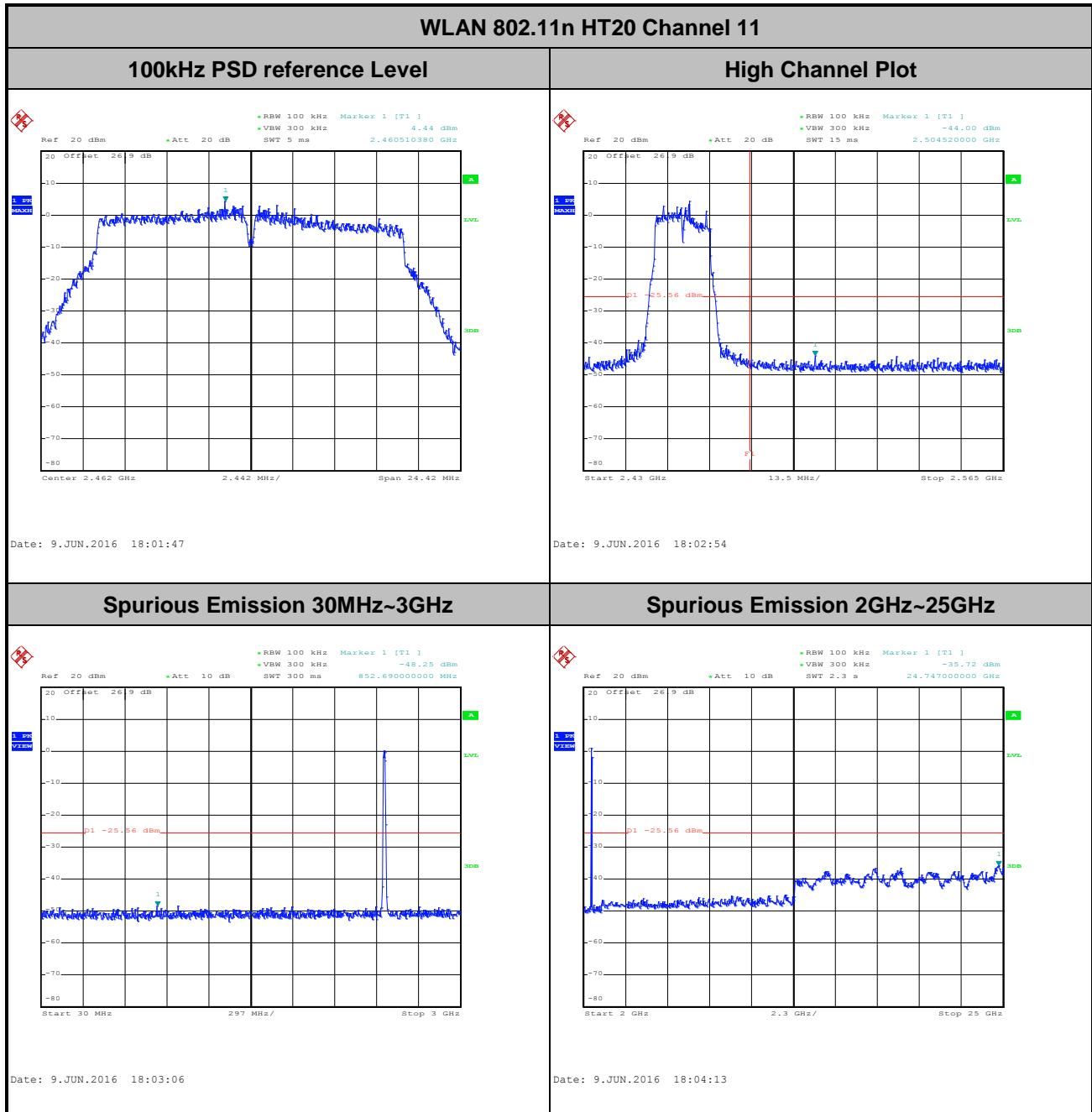


<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Mid	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	06	<b>Test Engineer :</b>	Kenny Chen



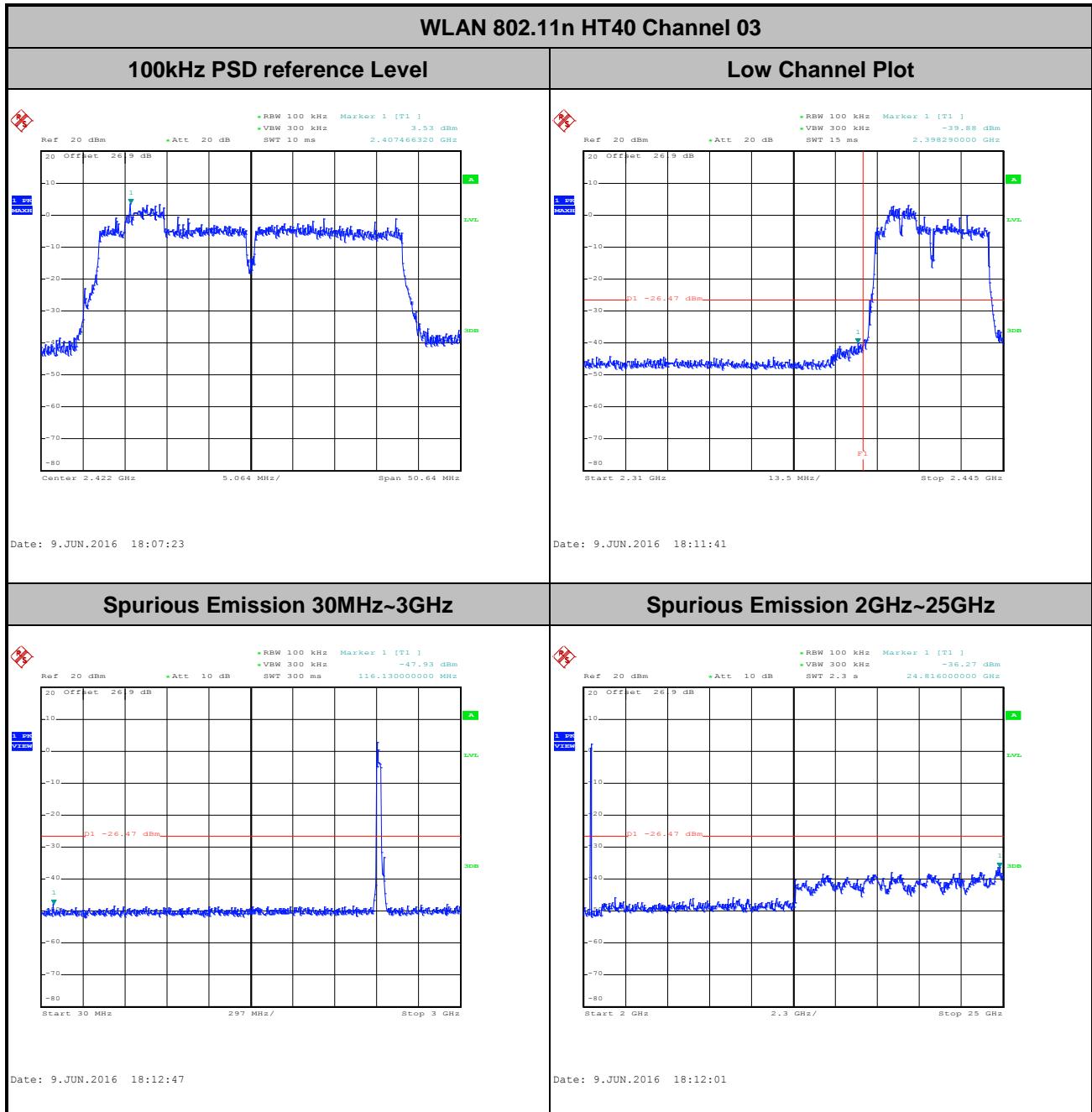


<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11n HT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz High	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	11	<b>Test Engineer :</b>	Kenny Chen



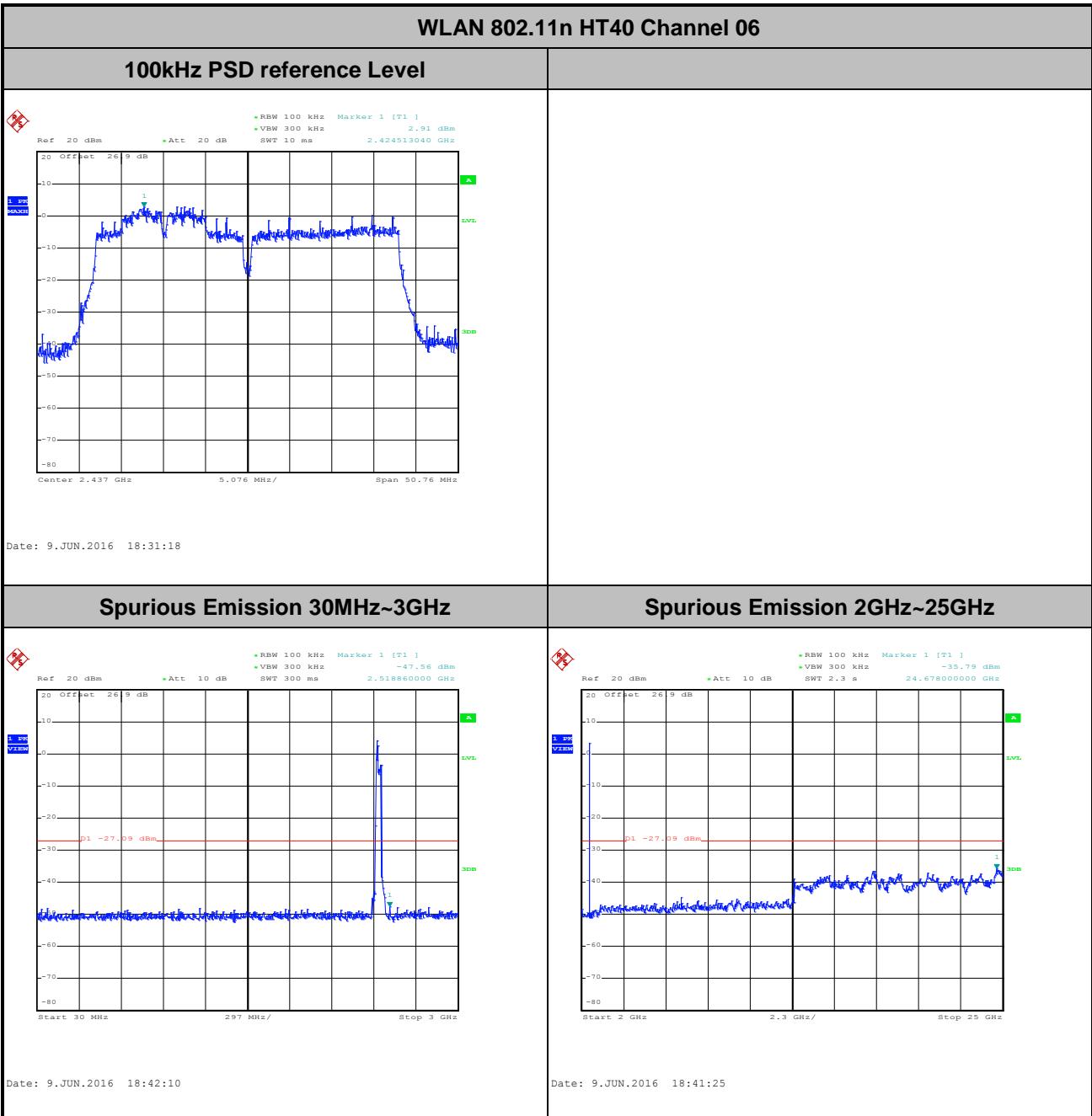


<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11n HT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Low	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	03	<b>Test Engineer :</b>	Kenny Chen



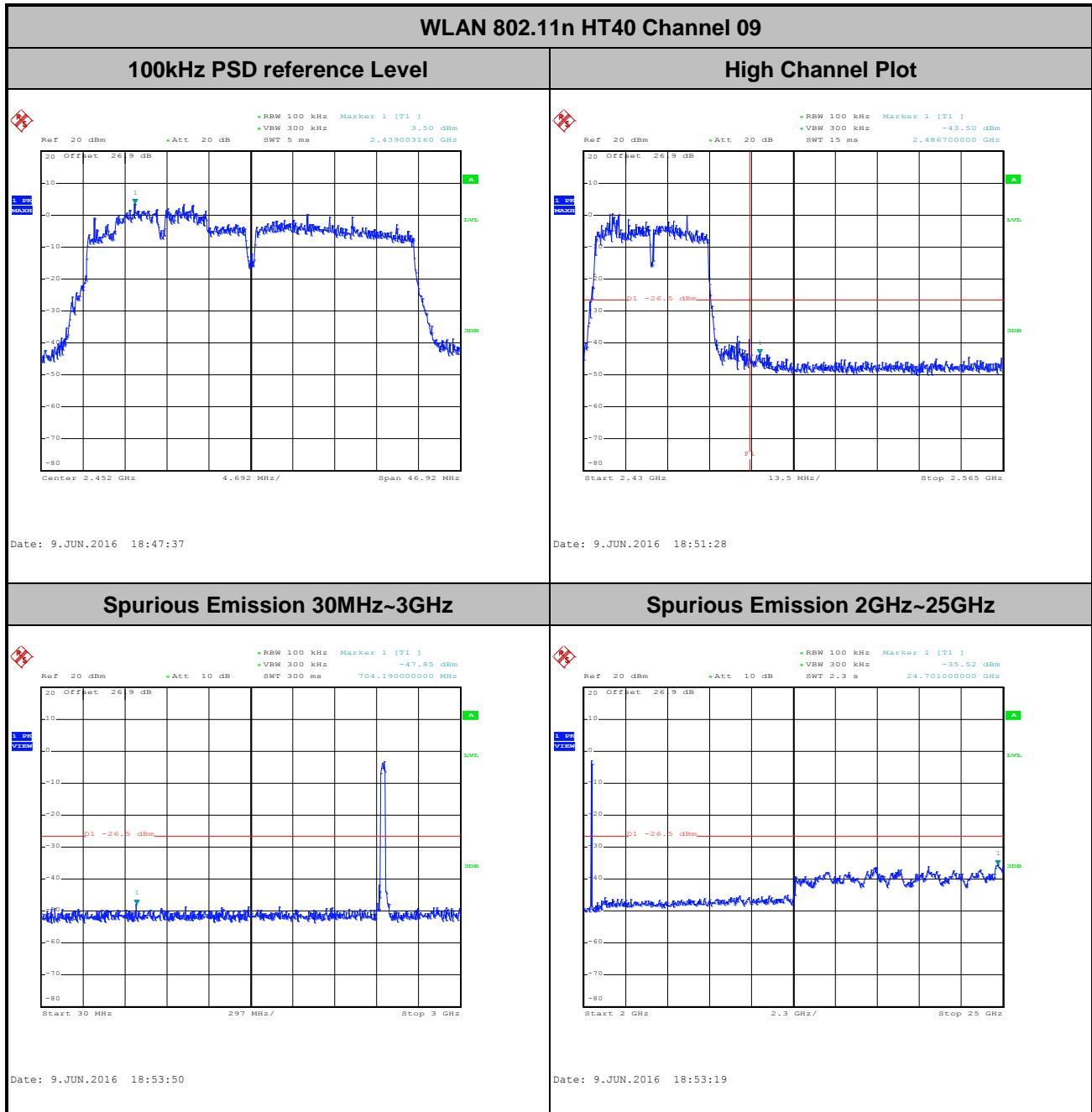


<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11n HT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Mid	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	06	<b>Test Engineer :</b>	Kenny Chen





<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11n HT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz High	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	09	<b>Test Engineer :</b>	Kenny Chen

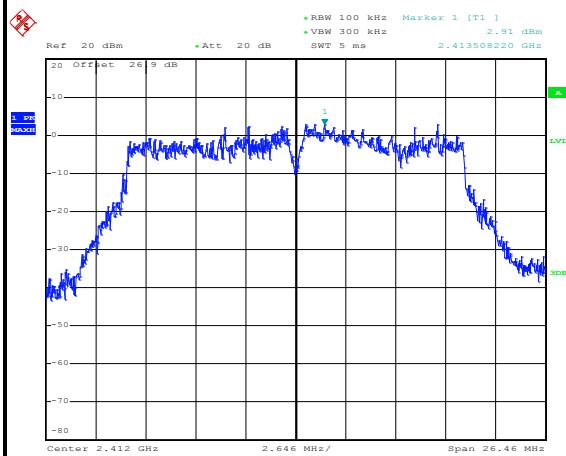




<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11ac VHT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Low	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	01	<b>Test Engineer :</b>	Kenny Chen

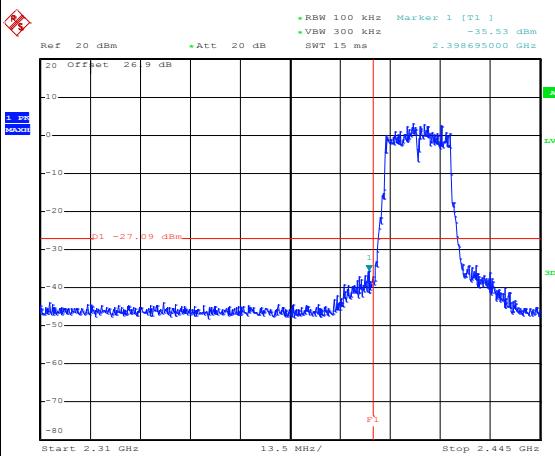
## WLAN 802.11ac VHT20 Channel 01

## 100kHz PSD reference Level



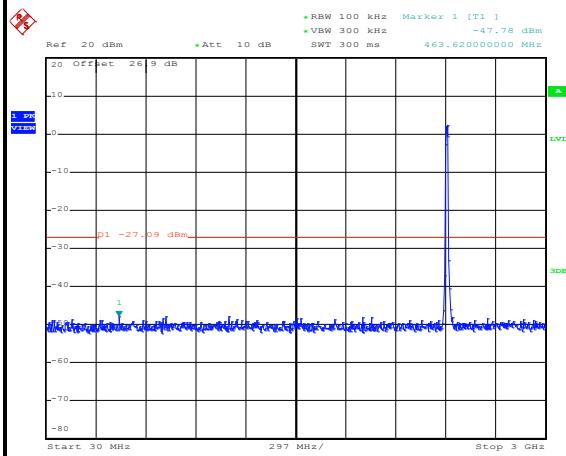
Date: 9.JUN.2016 15:04:46

## Low Channel Plot



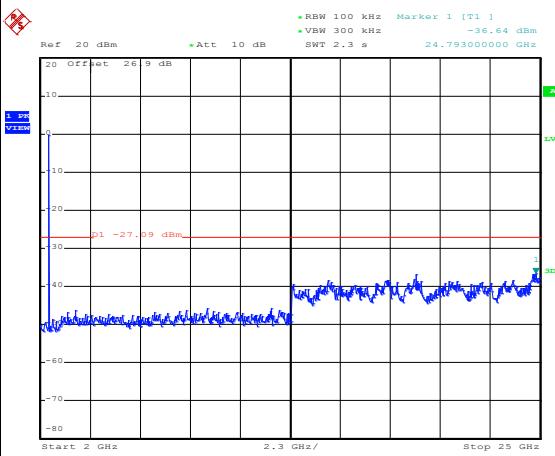
Date: 9.JUN.2016 15:09:01

## Spurious Emission 30MHz~3GHz



Date: 9.JUN.2016 15:09:57

## Spurious Emission 2GHz~25GHz



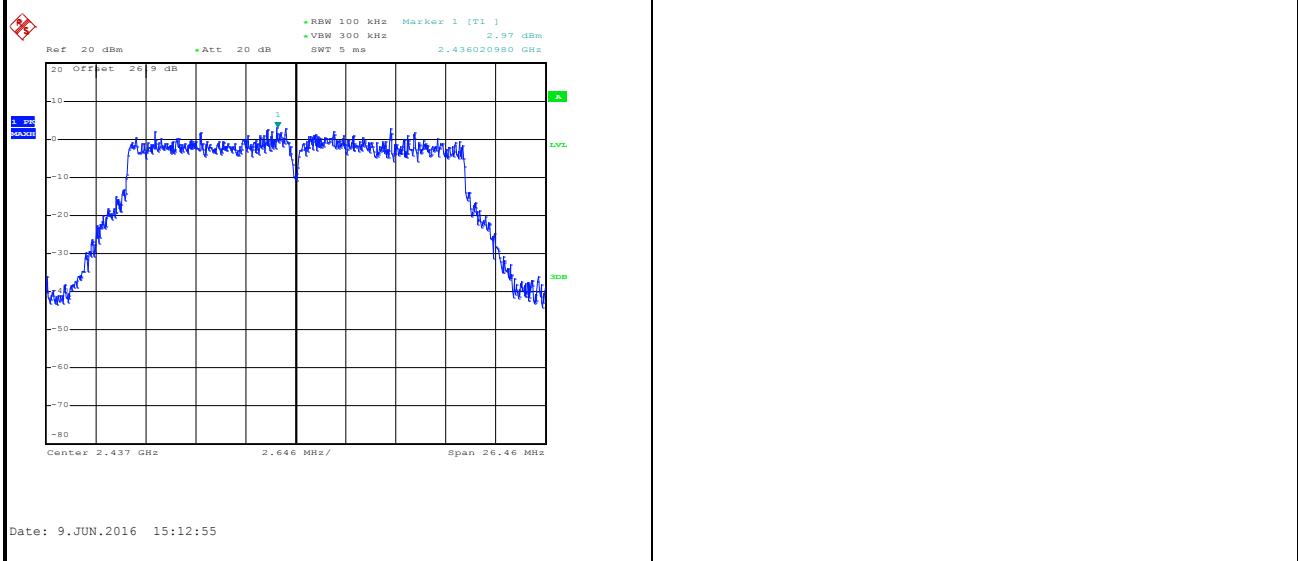
Date: 9.JUN.2016 15:09:23



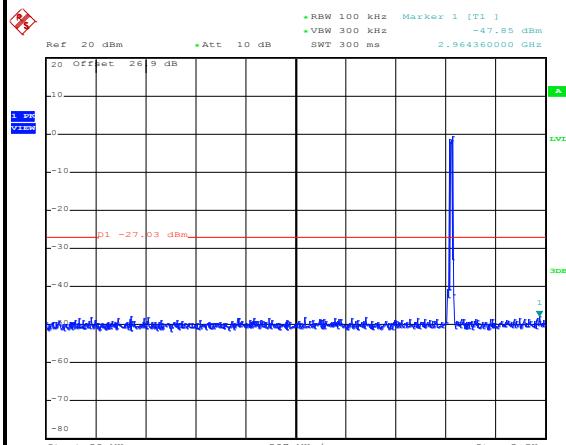
<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11ac VHT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Mid	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	06	<b>Test Engineer :</b>	Kenny Chen

## WLAN 802.11ac VHT20 Channel 06

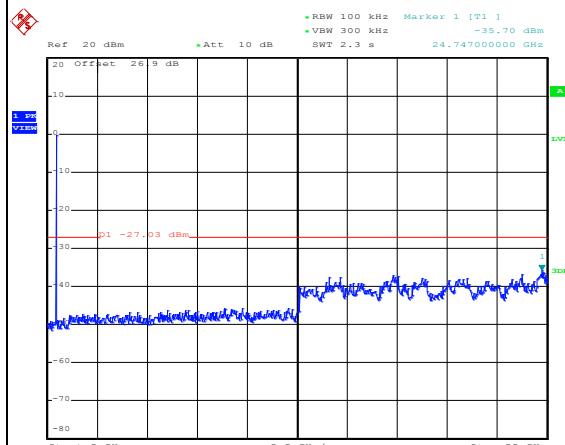
## 100kHz PSD reference Level



## Spurious Emission 30MHz~3GHz



## Spurious Emission 2GHz~25GHz

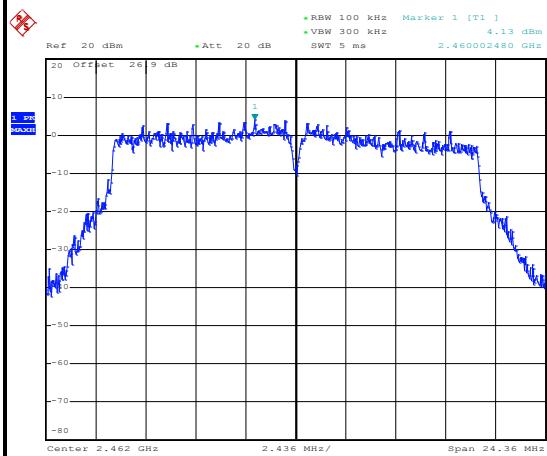




<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11ac VHT20	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz High	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	11	<b>Test Engineer :</b>	Kenny Chen

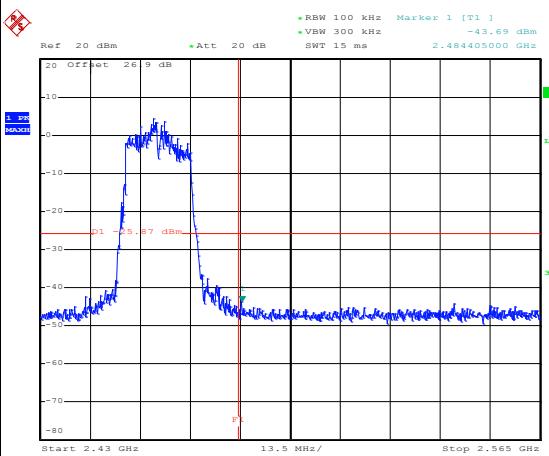
## WLAN 802.11ac VHT20 Channel 11

## 100kHz PSD reference Level



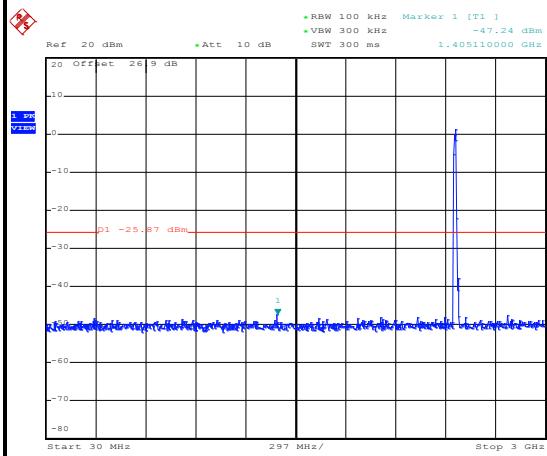
Date: 9.JUN.2016 15:41:53

## High Channel Plot



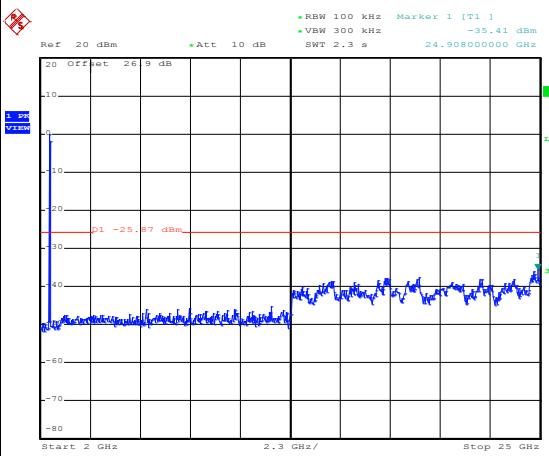
Date: 9.JUN.2016 15:44:06

## Spurious Emission 30MHz~3GHz



Date: 9.JUN.2016 15:45:04

## Spurious Emission 2GHz~25GHz



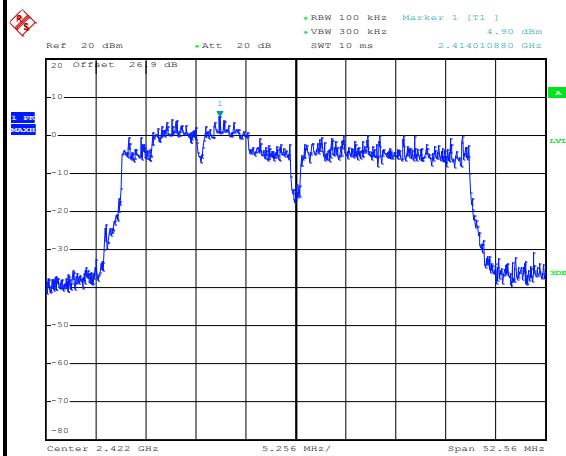
Date: 9.JUN.2016 15:44:26



<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11ac VHT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Low	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	03	<b>Test Engineer :</b>	Kenny Chen

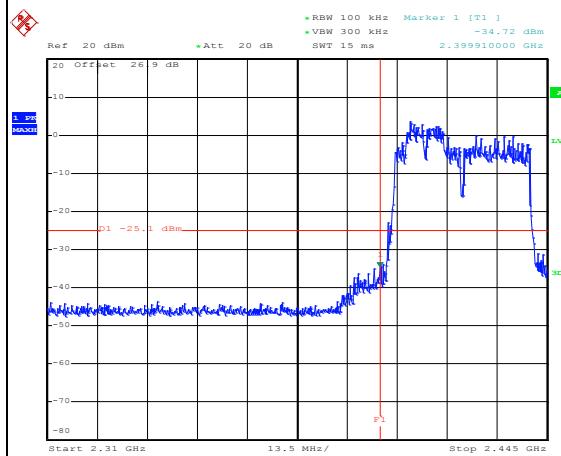
## WLAN 802.11ac VHT40 Channel 03

## 100kHz PSD reference Level



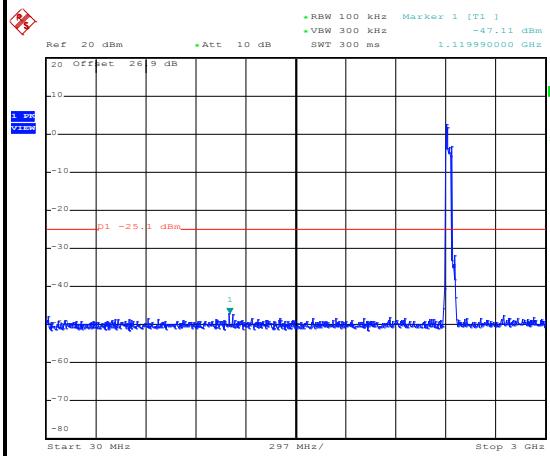
Date: 9.JUN.2016 16:04:51

## Low Channel Plot



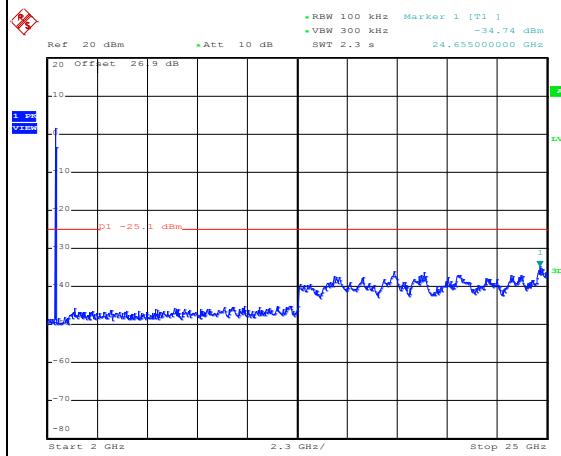
Date: 9.JUN.2016 16:08:33

## Spurious Emission 30MHz~3GHz



Date: 9.JUN.2016 16:11:22

## Spurious Emission 2GHz~25GHz



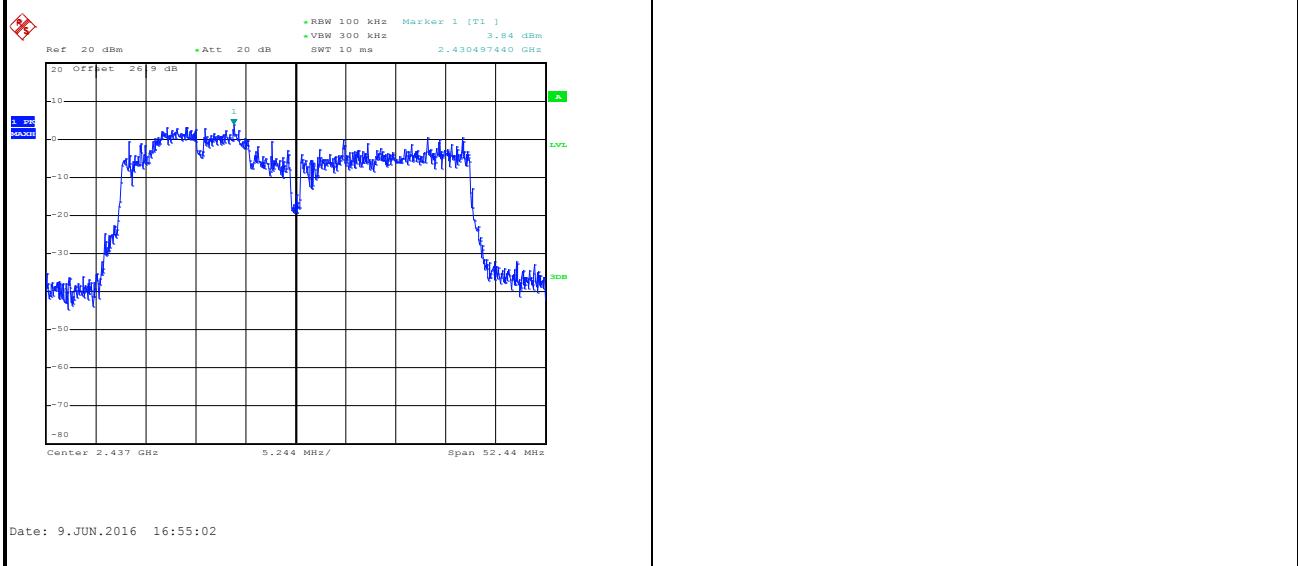
Date: 9.JUN.2016 16:10:32



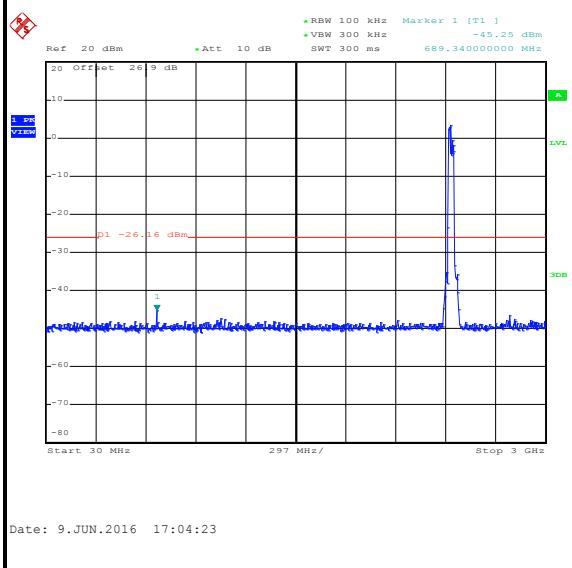
<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11ac VHT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz Mid	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	06	<b>Test Engineer :</b>	Kenny Chen

## WLAN 802.11ac VHT40 Channel 06

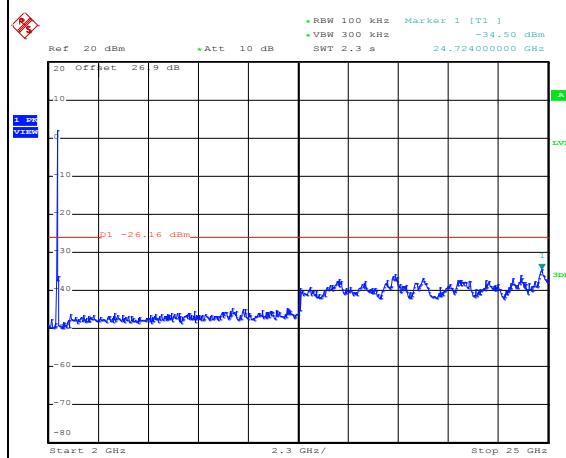
## 100kHz PSD reference Level



## Spurious Emission 30MHz~3GHz



## Spurious Emission 2GHz~25GHz

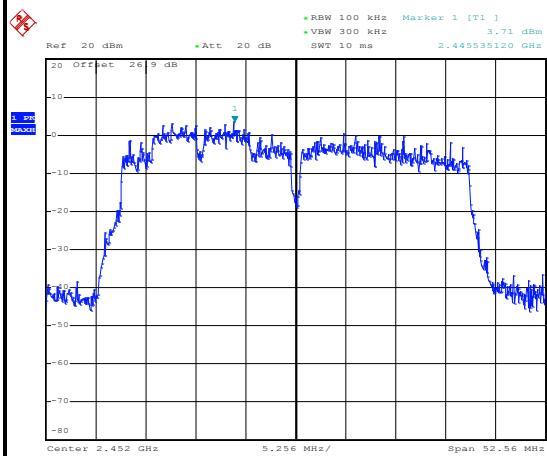




<b>Number of TX :</b>	2	<b>Ant. :</b>	2
<b>Test Mode :</b>	802.11ac VHT40	<b>Temperature :</b>	21~25°C
<b>Test Band :</b>	2.4GHz High	<b>Relative Humidity :</b>	51~54%
<b>Test Channel :</b>	09	<b>Test Engineer :</b>	Kenny Chen

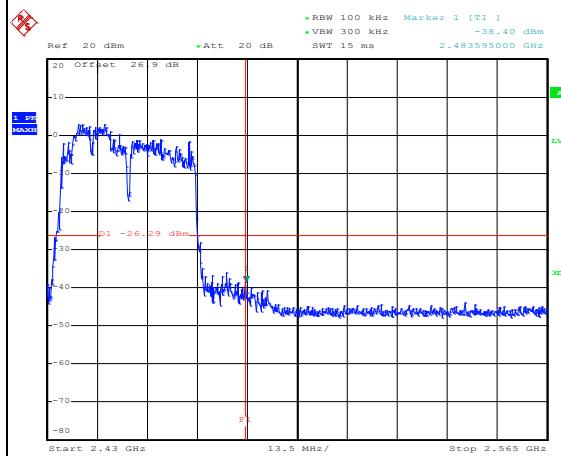
## WLAN 802.11ac VHT40 Channel 09

## 100kHz PSD reference Level



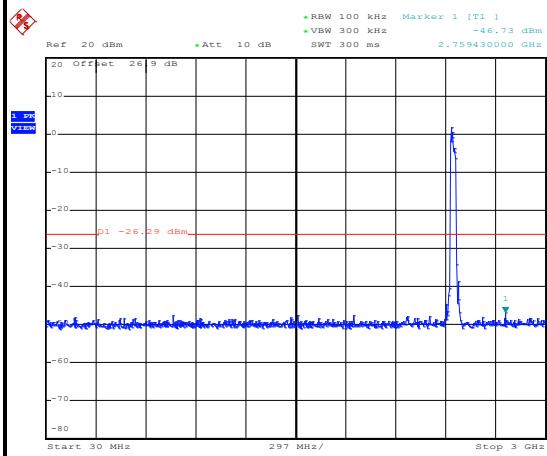
Date: 9.JUN.2016 17:09:16

## High Channel Plot



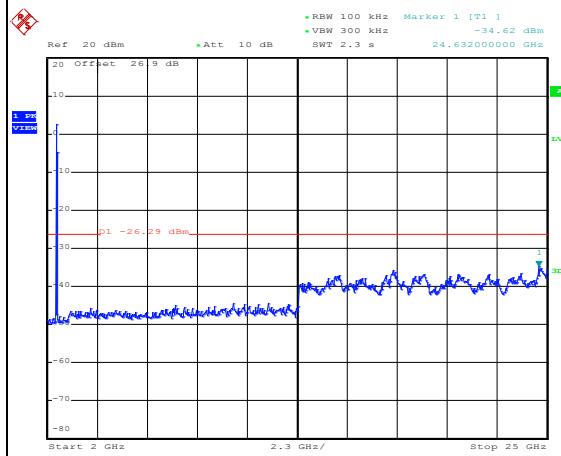
Date: 9.JUN.2016 17:14:25

## Spurious Emission 30MHz~3GHz



Date: 9.JUN.2016 17:18:43

## Spurious Emission 2GHz~25GHz



Date: 9.JUN.2016 17:17:41



### 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 Procedure

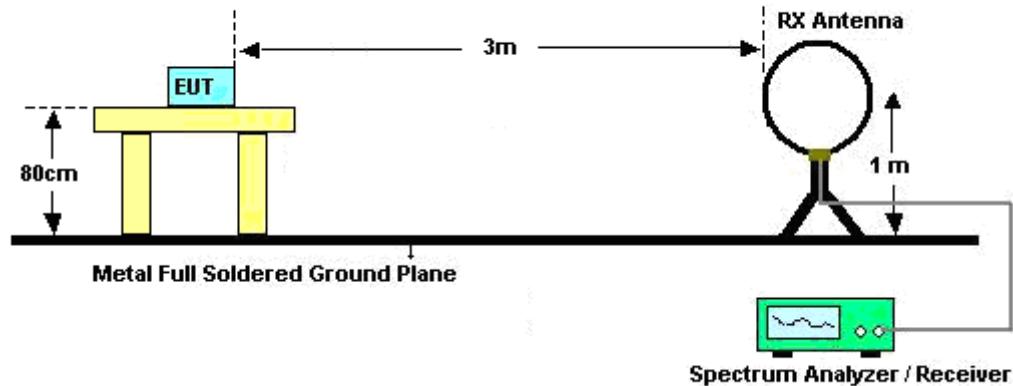
1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r05.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the 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:

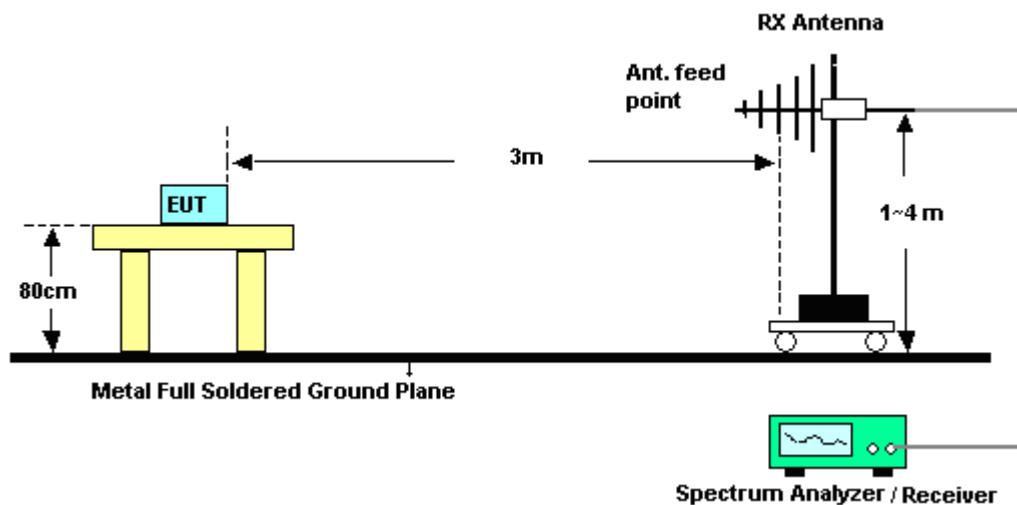
- VBW = 10 Hz, when duty cycle is no less than 98 percent.
- $VBW \geq 1/T$ , when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

### 3.5.4 Test Setup

For radiated emissions below 30MHz

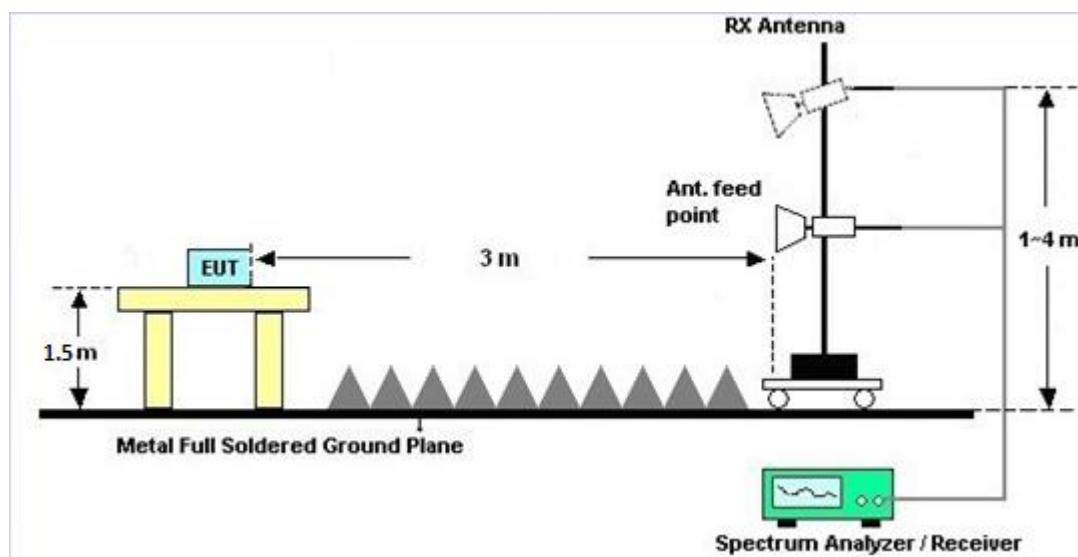


For radiated emissions from 30MHz to 1GHz

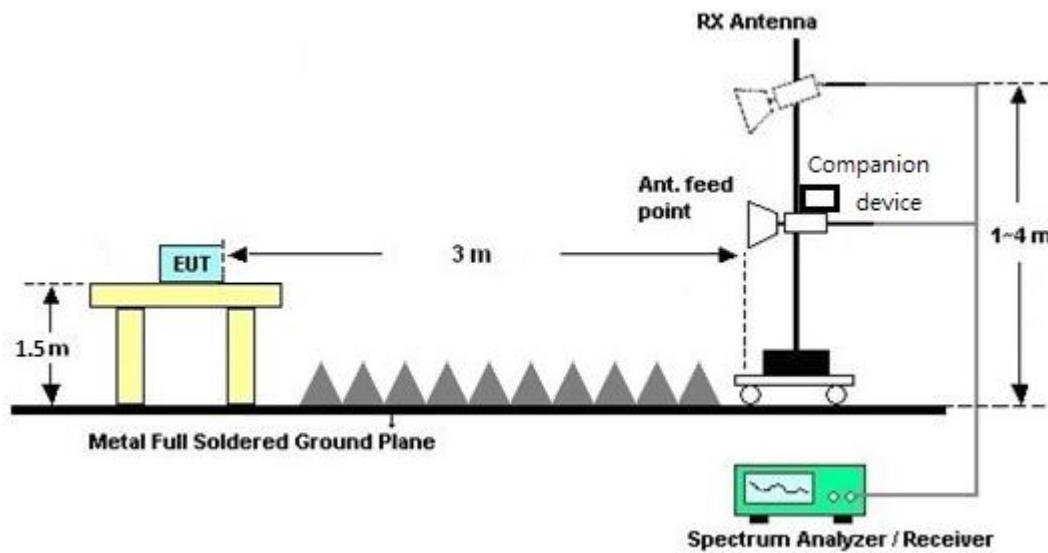


For radiated emissions above 1GHz

Non-TXBF mode



TXBF mode





### 3.5.5 Test Results of Radiated 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 of this report.

### 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.

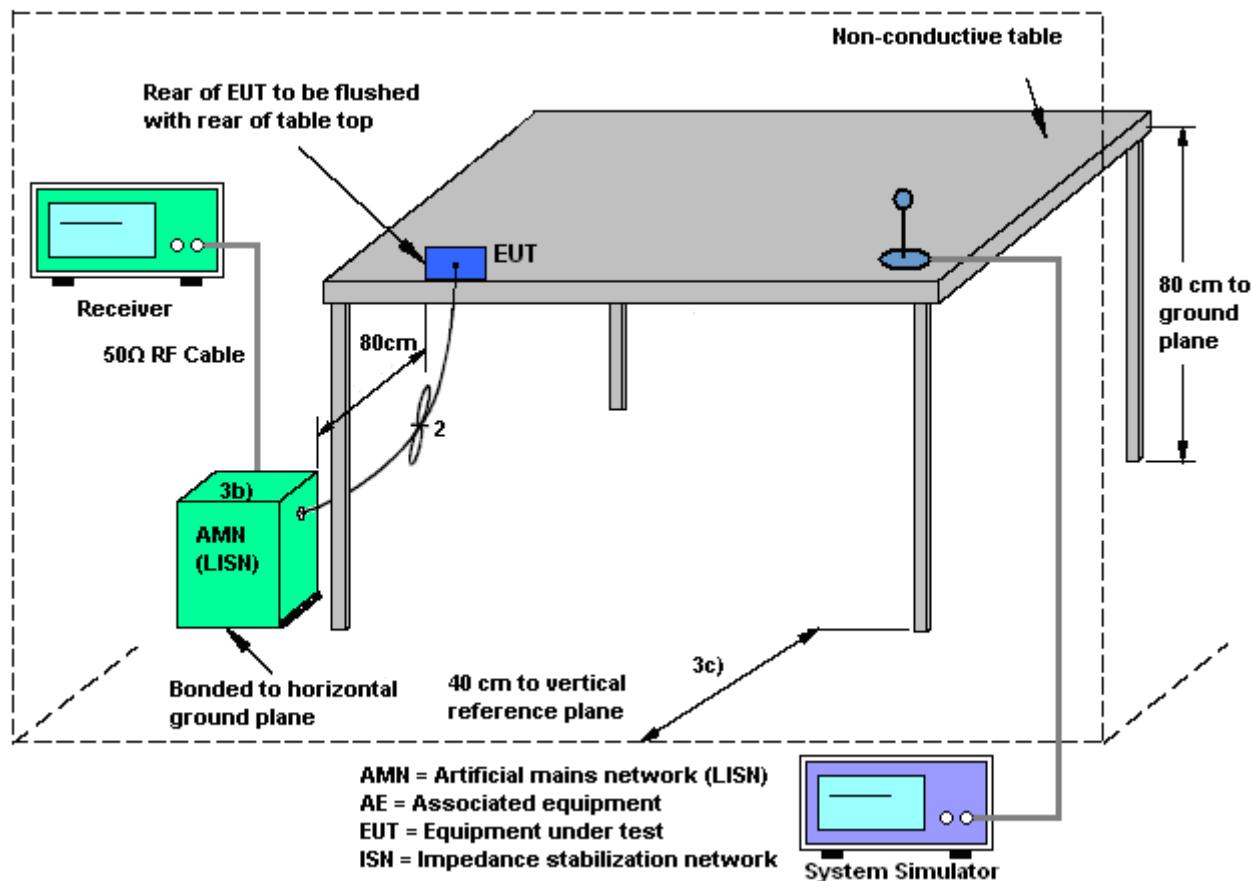
### 3.6.2 Measuring Instruments

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

### 3.6.3 Test Procedures

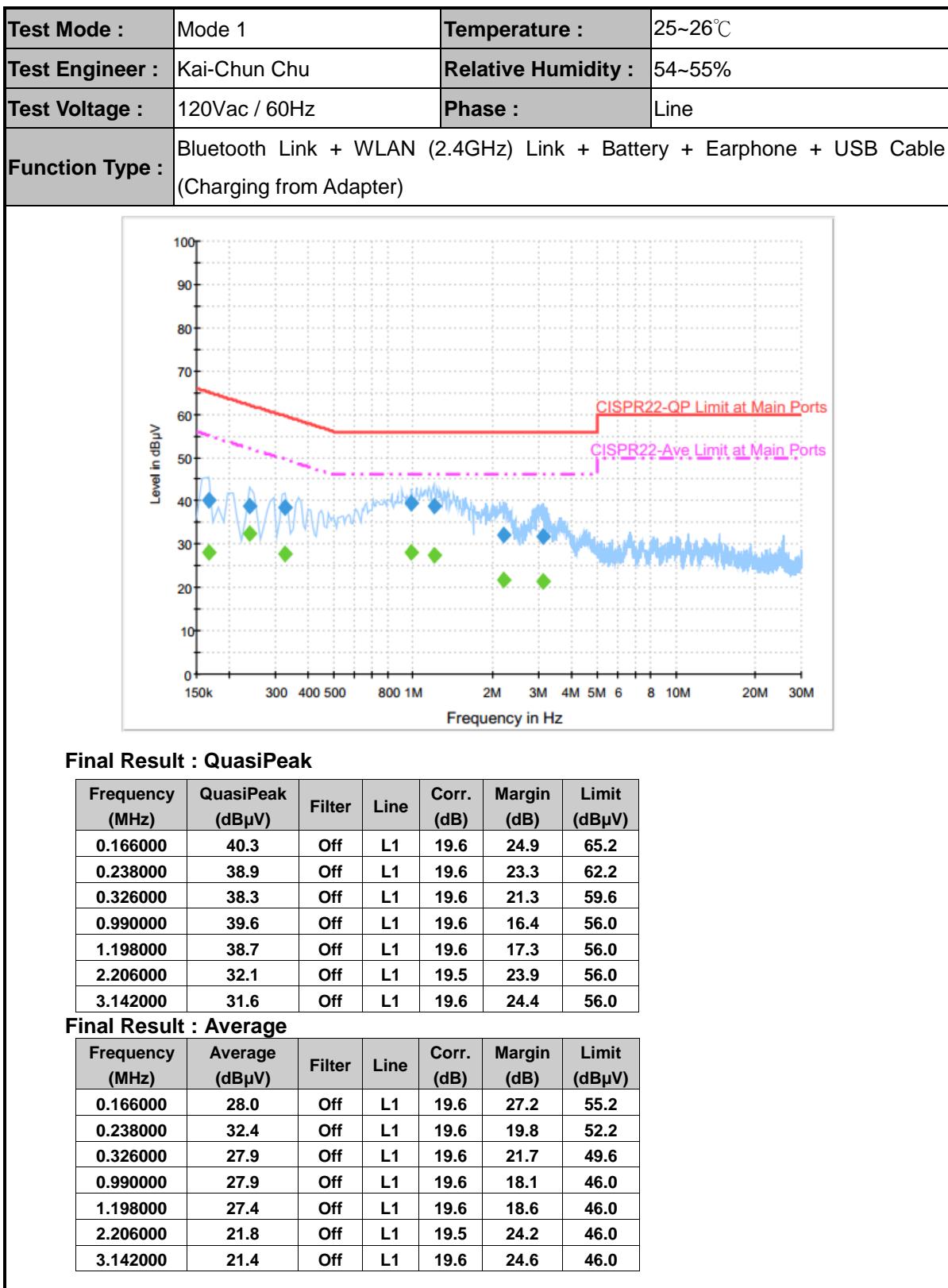
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other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



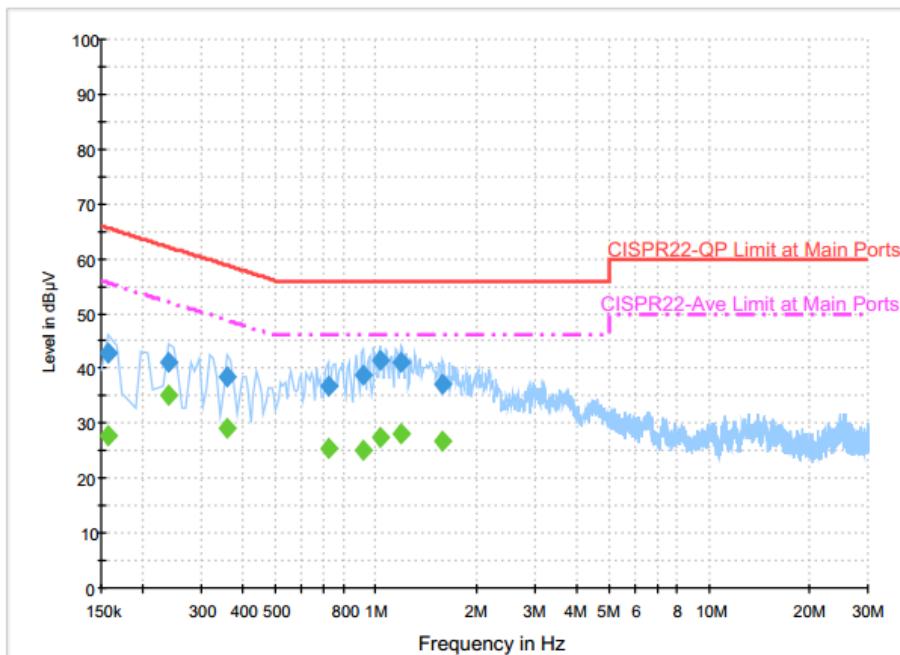


### 3.6.5 Test Result of AC Conducted Emission





<b>Test Mode :</b>	Mode 1	<b>Temperature :</b>	25~26°C
<b>Test Engineer :</b>	Kai-Chun Chu	<b>Relative Humidity :</b>	54~55%
<b>Test Voltage :</b>	120Vac / 60Hz	<b>Phase :</b>	Neutral
<b>Function Type :</b>	Bluetooth Link + WLAN (2.4GHz) Link + Battery + Earphone + USB Cable (Charging from Adapter)		



#### Final Result : QuasiPeak

Frequency (MHz)	QuasiPeak (dB $\mu$ V)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.158000	42.6	Off	N	19.6	23.0	65.6
0.238000	41.3	Off	N	19.6	20.9	62.2
0.358000	38.5	Off	N	19.6	20.3	58.8
0.718000	36.9	Off	N	19.6	19.1	56.0
0.918000	38.6	Off	N	19.6	17.4	56.0
1.030000	41.4	Off	N	19.6	14.6	56.0
1.190000	41.0	Off	N	19.6	15.0	56.0
1.590000	37.3	Off	N	19.6	18.7	56.0

#### Final Result : Average

Frequency (MHz)	Average (dB $\mu$ V)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB $\mu$ V)
0.158000	27.7	Off	N	19.6	27.9	55.6
0.238000	35.0	Off	N	19.6	17.2	52.2
0.358000	29.2	Off	N	19.6	19.6	48.8
0.718000	25.5	Off	N	19.6	20.5	46.0
0.918000	24.9	Off	N	19.6	21.1	46.0
1.030000	27.6	Off	N	19.6	18.4	46.0
1.190000	28.0	Off	N	19.6	18.0	46.0
1.590000	26.6	Off	N	19.6	19.4	46.0



## 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

#### Non-TXBF Modes

FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

For CDD transmissions, directional gain is calculated as

Directional gain =  $G_{ANT}$  + Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain =  $10 \log(N_{ANT}/N_{SS}=1)$  dB.

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ .

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

The EUT supports CDD mode.

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

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

	Ant. 1 (dBi)	Ant. 2 (dBi)	DG for Power (dBi)	DG for PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
2.4 GHz	1.90	1.50	1.90	4.71	0.00	0.00

$Power\ Limit\ Reduction = DG(Power) - 6dBi, ( min = 0 )$

$PSD\ Limit\ Reduction = DG(PSD) - 6dBi, ( min = 0 )$

**TXBF Modes**

FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

For beamforming transmissions, directional gain is calculated as

$$\text{DirectionalGain} = 10 \cdot \log \left[ \frac{\sum_{j=1}^{N_{SS}} \left\{ \sum_{k=1}^{N_{ANT}} g_{j,k} \right\}^2}{N_{ANT}} \right]$$

where

Each antenna is driven by no more than one spatial stream;

$N_{SS}$  = the number of independent spatial streams of data;

$N_{ANT}$  = the total number of antennas

$g_{j,k} = 10^{G_k / 20}$  if the  $k$ th antenna is being fed by spatial stream  $j$ , or zero if it is not;  
 $G_k$  is the gain in dBi of the  $k$ th antenna.

The EUT supports beamforming.

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

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

			DG for Power	DG for PSD	Power Limit Reduction	PSD Limit Reduction
	Ant. 1 (dBi)	Ant. 2 (dBi)	(dBi)	(dBi)	(dB)	(dB)
<b>2.4 GHz</b>	1.90	1.50	4.71	4.71	0.00	0.00

*Power Limit Reduction = DG(Power) – 6dBi, ( min = 0 )*

*PSD Limit Reduction = DG(PSD) – 6dBi, ( min = 0 )*



## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	1132003	300MHz~40GHz	Aug. 12, 2015	Jun. 01, 2016 ~ Jun. 29, 2016	Aug. 11, 2016	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	1126017	300MHz~40GHz	Aug. 12, 2015	Jun. 01, 2016 ~ Jun. 29, 2016	Aug. 11, 2016	Conducted (TH05-HY)
Power Sensor	DARE	RadiPower	15I00041S NO09	10MHz~6GHz	May 03, 2016	Jun. 01, 2016 ~ Jun. 29, 2016	May 02, 2017	Conducted (TH05-HY)
Power Sensor	DARE	RadiPower	15I00041S NO10	10MHz~6GHz	May 03, 2016	Jun. 01, 2016 ~ Jun. 29, 2016	May 02, 2017	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 23, 2015	Jun. 01, 2016 ~ Jun. 29, 2016	Nov. 22, 2016	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSV40	101397	10kHz-40GHz	Sep. 11, 2015	Jun. 01, 2016 ~ Jun. 29, 2016	Sep. 10, 2016	Conducted (TH05-HY)
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	May 14, 2016	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Aug. 26, 2015	May 14, 2016	Aug. 25, 2016	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz~30MHz	Dec. 02, 2015	May 14, 2016	Dec. 01, 2016	Conduction (CO05-HY)
Bilog Antenna	TESEQ	CBL 6111D	35419	30MHz to 1GHz	Jan. 13, 2016	May 18, 2016 ~ Jun. 01, 2016	Jan. 12, 2017	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 21, 2015	May 18, 2016 ~ Jun. 01, 2016	Aug. 20, 2016	Radiation (03CH07-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY541300 85	20Hz ~ 8.4GHz	Nov. 04, 2015	May 18, 2016 ~ Jun. 01, 2016	Nov. 03, 2016	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz-30 MHz	Sep. 02, 2015	May 18, 2016 ~ Jun. 01, 2016	Sep. 01, 2016	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101 800-30-10P	1590075	1GHz ~ 18GHz	Apr. 15, 2016	May 18, 2016 ~ Jun. 01, 2016	Apr. 14, 2017	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1GHz	Mar. 18, 2016	May 18, 2016 ~ Jun. 01, 2016	Mar. 17, 2017	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A023 62	1GHz~ 26.5GHz	Oct. 19, 2015	May 18, 2016 ~ Jun. 01, 2016	Oct. 18, 2016	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY534701 18	10Hz~44GHz	Feb. 27, 2016	May 18, 2016 ~ Jun. 01, 2016	Feb. 26, 2017	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	May 18, 2016 ~ Jun. 01, 2016	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	May 18, 2016 ~ Jun. 01, 2016	N/A	Radiation (03CH07-HY)
Preamplifier	MITEQ	TTA0204	1872107	2GHz~40GHz	Feb. 15, 2015	May 18, 2016 ~ Jun. 01, 2016	Feb. 14, 2017	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 584	18GHz- 40GHz	Nov. 02, 2015	May 18, 2016 ~ Jun. 01, 2016	Nov. 01, 2016	Radiation (03CH07-HY)



## 5 Uncertainty of Evaluation

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

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

Measuring Uncertainty for a Level of Confidence of 95% ( $U = 2U_{c(y)}$ )	4.50
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## Appendix A. Conducted Test Results

<Non-TXBF Modes>

Test Engineer:	Kenny Chen	Temperature:	21-25	°C
Test Date:	2016/06/01/~2016/06/13	Relative Humidity:	51-54	%

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

2.4GHz Band										
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2		
11b	1Mbps	2	1	2412	11.80	11.85	9.00	9.04	0.50	Pass
11b	1Mbps	2	6	2437	11.75	11.90	9.04	9.04	0.50	Pass
11b	1Mbps	2	11	2462	11.70	11.75	8.52	8.56	0.50	Pass
11g	6Mbps	2	1	2412	18.35	18.25	16.32	16.36	0.50	Pass
11g	6Mbps	2	6	2437	18.35	18.35	16.32	16.36	0.50	Pass
11g	6Mbps	2	11	2462	18.30	18.15	16.32	15.72	0.50	Pass
HT20	MCS0	2	1	2412	19.15	19.00	17.60	17.56	0.50	Pass
HT20	MCS0	2	6	2437	19.05	19.00	17.56	17.60	0.50	Pass
HT20	MCS0	2	11	2462	19.15	18.75	17.28	17.16	0.50	Pass
HT40	MCS0	2	3	2422	36.70	36.80	36.32	36.32	0.50	Pass
HT40	MCS0	2	6	2437	36.70	36.70	36.32	36.32	0.50	Pass
HT40	MCS0	2	9	2452	36.60	36.40	36.32	35.76	0.50	Pass
VHT20	MCS0	2	1	2412	19.10	18.95	17.56	17.60	0.50	Pass
VHT20	MCS0	2	6	2437	19.10	19.05	17.56	17.60	0.50	Pass
VHT20	MCS0	2	11	2462	18.90	19.05	17.52	16.96	0.50	Pass
VHT40	MCS0	2	3	2422	36.70	36.60	36.32	36.32	0.50	Pass
VHT40	MCS0	2	6	2437	36.80	36.90	36.32	36.32	0.50	Pass
VHT40	MCS0	2	9	2452	36.60	36.40	36.08	35.68	0.50	Pass

**TEST RESULTS DATA**  
**Peak Output Power**

2.4GHz Band											
Mod.	Data Rate	N <sub>Tx</sub>	CH.	Freq. (MHz)	Peak Conducted Power (dBm)			DG (dBi)		EIRP Power (dBm)	
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2
11b	1Mbps	1	1	2412	18.83	18.93		1.90	1.50	20.73	20.43
11b	1Mbps	1	6	2437	18.95	18.88		1.90	1.50	20.85	20.38
11b	1Mbps	1	11	2462	18.76	18.78		1.90	1.50	20.66	20.28
11g	6Mbps	1	1	2412	22.04	21.82		1.90	1.50	23.94	23.32
11g	6Mbps	1	6	2437	21.98	21.73		1.90	1.50	23.88	23.23
11g	6Mbps	1	11	2462	22.02	22.01		1.90	1.50	23.92	23.51
HT20	MCS0	1	1	2412	22.21	22.15		1.90	1.50	24.11	23.65
HT20	MCS0	1	6	2437	22.29	22.03		1.90	1.50	24.19	23.53
HT20	MCS0	1	11	2462	22.26	22.01		1.90	1.50	24.16	23.51
HT40	MCS0	1	3	2422	22.46	22.23		1.90	1.50	24.36	23.73
HT40	MCS0	1	6	2437	22.53	22.42		1.90	1.50	24.43	23.92
HT40	MCS0	1	9	2452	22.49	22.39		1.90	1.50	24.39	23.89
VHT20	MCS0	1	1	2412	22.12	22.01		1.90	1.50	24.02	23.51
VHT20	MCS0	1	6	2437	22.29	22.19		1.90	1.50	24.19	23.69
VHT20	MCS0	1	11	2462	22.20	22.22		1.90	1.50	24.10	23.72
VHT40	MCS0	1	3	2422	22.79	22.36		1.90	1.50	24.69	23.86
VHT40	MCS0	1	6	2437	22.76	22.53		1.90	1.50	24.66	24.03
VHT40	MCS0	1	9	2452	22.71	22.65		1.90	1.50	24.61	24.15
11b	1Mbps	2	1	2412	18.97	19.03	22.01	1.90		23.91	
11b	1Mbps	2	6	2437	19.04	19.06	22.06	1.90		23.96	
11b	1Mbps	2	11	2462	18.83	18.81	21.83	1.90		23.73	
11g	6Mbps	2	1	2412	22.03	22.06	25.06	1.90		26.96	
11g	6Mbps	2	6	2437	22.17	22.04	25.12	1.90		27.02	
11g	6Mbps	2	11	2462	22.32	22.08	25.21	1.90		27.11	
HT20	MCS0	2	1	2412	22.43	22.36	25.41	1.90		27.31	
HT20	MCS0	2	6	2437	22.37	22.23	25.31	1.90		27.21	
HT20	MCS0	2	11	2462	22.63	22.42	25.54	1.90		27.44	
HT40	MCS0	2	3	2422	22.47	22.49	25.49	1.90		27.39	
HT40	MCS0	2	6	2437	22.63	22.50	25.58	1.90		27.48	
HT40	MCS0	2	9	2452	22.56	22.43	25.51	1.90		27.41	
VHT20	MCS0	2	1	2412	22.15	22.10	25.14	1.90		27.04	
VHT20	MCS0	2	6	2437	22.26	22.37	25.33	1.90		27.23	
VHT20	MCS0	2	11	2462	22.23	22.22	25.24	1.90		27.14	
VHT40	MCS0	2	3	2422	22.86	22.74	25.81	1.90		27.71	
VHT40	MCS0	2	6	2437	22.82	22.79	25.82	1.90		27.72	
VHT40	MCS0	2	9	2452	22.83	22.70	25.78	1.90		27.68	

Note: Measured power (dBm) has offset with cable loss.

**TEST RESULTS DATA**  
**Average Output Power**

2.4GHz Band																		
Mod.	Data Rate	N <sub>Tx</sub>	CH.	Freq. (MHz)	Duty Factor (dB)		Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant 1	Ant 2	Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	1	1	2412	0.06	0.06	15.42	15.44		30.00	30.00	1.90	1.50	17.32	16.94	36.00	36.00	Pass
11b	1Mbps	1	6	2437	0.06	0.06	15.46	15.44		30.00	30.00	1.90	1.50	17.36	16.94	36.00	36.00	Pass
11b	1Mbps	1	11	2462	0.06	0.06	15.38	15.39		30.00	30.00	1.90	1.50	17.28	16.89	36.00	36.00	Pass
11g	6Mbps	1	1	2412	0.34	0.32	15.38	15.30		30.00	30.00	1.90	1.50	17.28	16.80	36.00	36.00	Pass
11g	6Mbps	1	6	2437	0.34	0.32	15.32	15.25		30.00	30.00	1.90	1.50	17.22	16.75	36.00	36.00	Pass
11g	6Mbps	1	11	2462	0.34	0.32	15.37	15.35		30.00	30.00	1.90	1.50	17.27	16.85	36.00	36.00	Pass
HT20	MCS0	1	1	2412	0.34	0.31	15.26	15.36		30.00	30.00	1.90	1.50	17.16	16.86	36.00	36.00	Pass
HT20	MCS0	1	6	2437	0.34	0.31	15.29	15.33		30.00	30.00	1.90	1.50	17.19	16.83	36.00	36.00	Pass
HT20	MCS0	1	11	2462	0.34	0.31	15.27	15.21		30.00	30.00	1.90	1.50	17.17	16.71	36.00	36.00	Pass
HT40	MCS0	1	3	2422	0.62	0.64	15.21	15.26		30.00	30.00	1.90	1.50	17.11	16.76	36.00	36.00	Pass
HT40	MCS0	1	6	2437	0.62	0.64	15.33	15.32		30.00	30.00	1.90	1.50	17.23	16.82	36.00	36.00	Pass
HT40	MCS0	1	9	2452	0.62	0.64	15.23	15.27		30.00	30.00	1.90	1.50	17.13	16.77	36.00	36.00	Pass
VHT20	MCS0	1	1	2412	0.34	0.31	15.22	15.23		30.00	30.00	1.90	1.50	17.12	16.73	36.00	36.00	Pass
VHT20	MCS0	1	6	2437	0.34	0.31	15.39	15.33		30.00	30.00	1.90	1.50	17.29	16.83	36.00	36.00	Pass
VHT20	MCS0	1	11	2462	0.34	0.31	15.35	15.31		30.00	30.00	1.90	1.50	17.25	16.81	36.00	36.00	Pass
VHT40	MCS0	1	3	2422	0.67	0.67	15.35	15.29		30.00	30.00	1.90	1.50	17.25	16.79	36.00	36.00	Pass
VHT40	MCS0	1	6	2437	0.67	0.67	15.34	15.34		30.00	30.00	1.90	1.50	17.24	16.84	36.00	36.00	Pass
VHT40	MCS0	1	9	2452	0.67	0.67	15.23	15.37		30.00	30.00	1.90	1.50	17.13	16.87	36.00	36.00	Pass
11b	1Mbps	2	1	2412	0.05	0.06	15.44	15.49	18.48	30.00		1.90		20.38		36.00		Pass
11b	1Mbps	2	6	2437	0.05	0.06	15.49	15.47	18.49	30.00		1.90		20.39		36.00		Pass
11b	1Mbps	2	11	2462	0.05	0.06	15.43	15.41	18.43	30.00		1.90		20.33		36.00		Pass
11g	6Mbps	2	1	2412	0.32	0.32	15.40	15.41	18.42	30.00		1.90		20.32		36.00		Pass
11g	6Mbps	2	6	2437	0.32	0.32	15.35	15.30	18.34	30.00		1.90		20.24		36.00		Pass
11g	6Mbps	2	11	2462	0.32	0.32	15.38	15.37	18.39	30.00		1.90		20.29		36.00		Pass
HT20	MCS0	2	1	2412	0.35	0.34	15.43	15.46	18.45	30.00		1.90		20.35		36.00		Pass
HT20	MCS0	2	6	2437	0.35	0.34	15.38	15.38	18.39	30.00		1.90		20.29		36.00		Pass
HT20	MCS0	2	11	2462	0.35	0.34	15.39	15.39	18.40	30.00		1.90		20.30		36.00		Pass
HT40	MCS0	2	3	2422	0.66	0.66	15.22	15.37	18.30	30.00		1.90		20.20		36.00		Pass
HT40	MCS0	2	6	2437	0.66	0.66	15.35	15.44	18.40	30.00		1.90		20.30		36.00		Pass
HT40	MCS0	2	9	2452	0.66	0.66	15.29	15.33	18.32	30.00		1.90		20.22		36.00		Pass
VHT20	MCS0	2	1	2412	0.31	0.31	15.29	15.45	18.38	30.00		1.90		20.28		36.00		Pass
VHT20	MCS0	2	6	2437	0.31	0.31	15.46	15.39	18.44	30.00		1.90		20.34		36.00		Pass
VHT20	MCS0	2	11	2462	0.31	0.31	15.41	15.38	18.41	30.00		1.90		20.31		36.00		Pass
VHT40	MCS0	2	3	2422	0.66	0.66	15.35	15.38	18.37	30.00		1.90		20.27		36.00		Pass
VHT40	MCS0	2	6	2437	0.66	0.66	15.38	15.42	18.41	30.00		1.90		20.31		36.00		Pass
VHT40	MCS0	2	9	2452	0.66	0.66	15.37	15.40	18.39	30.00		1.90		20.29		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

**TEST RESULTS DATA**  
**Average Power Spectral Density**

Mod.	Data Rate	N <sub>Tx</sub>	CH.	Freq. (MHz)	Duty Factor (dB)		Average PSD (dBm/3kHz)			Average PSD (dBm/3kHz With Duty Factor)			DG (dBi)		Average PSD Limit (dBm/3kHz)		Pass/Fail
							Ant 1	Ant 2	Worse + 3.01	Ant 1	Ant 2	Worse + 3.01	Ant 1	Ant 2	Ant 1	Ant 2	
					Ant 1	Ant 2				Ant 1	Ant 2		Ant 1	Ant 2	Ant 1	Ant 2	
11b	1Mbps	2	1	2412	0.05	0.06	-13.31	-13.66		-13.26	-13.60	-10.25	4.71		8.00		Pass
11b	1Mbps	2	6	2437	0.05	0.06	-12.95	-15.20		-12.90	-15.14	-9.89	4.71		8.00		Pass
11b	1Mbps	2	11	2462	0.05	0.06	-13.82	-15.64		-13.77	-15.58	-10.76	4.71		8.00		Pass
11g	6Mbps	2	1	2412	0.32	0.32	-16.44	-15.97		-16.12	-15.65	-12.64	4.71		8.00		Pass
11g	6Mbps	2	6	2437	0.32	0.32	-16.19	-16.57		-15.87	-16.25	-12.86	4.71		8.00		Pass
11g	6Mbps	2	11	2462	0.32	0.32	-15.76	-15.72		-15.44	-15.40	-12.39	4.71		8.00		Pass
HT20	MCS0	2	1	2412	0.35	0.34	-19.34	-19.59		-18.99	-19.25	-15.98	4.71		8.00		Pass
HT20	MCS0	2	6	2437	0.35	0.34	-20.04	-19.64		-19.69	-19.30	-16.29	4.71		8.00		Pass
HT20	MCS0	2	11	2462	0.35	0.34	-19.58	-18.85		-19.23	-18.51	-15.50	4.71		8.00		Pass
HT40	MCS0	2	3	2422	0.66	0.66	-20.71	-21.01		-20.05	-20.35	-17.04	4.71		8.00		Pass
HT40	MCS0	2	6	2437	0.66	0.66	-21.04	-20.98		-20.38	-20.32	-17.31	4.71		8.00		Pass
HT40	MCS0	2	9	2452	0.66	0.66	-20.93	-20.13		-20.27	-19.47	-16.46	4.71		8.00		Pass
VHT20	MCS0	2	1	2412	0.31	0.31	-19.82	-19.61		-19.51	-19.30	-16.29	4.71		8.00		Pass
VHT20	MCS0	2	6	2437	0.31	0.31	-18.55	-18.89		-18.24	-18.58	-15.23	4.71		8.00		Pass
VHT20	MCS0	2	11	2462	0.31	0.31	-20.07	-18.96		-19.76	-18.65	-15.64	4.71		8.00		Pass
VHT40	MCS0	2	3	2422	0.66	0.66	-20.77	-16.53		-20.11	-15.87	-12.86	4.71		8.00		Pass
VHT40	MCS0	2	6	2437	0.66	0.66	-17.78	-16.82		-17.12	-16.16	-13.15	4.71		8.00		Pass
VHT40	MCS0	2	9	2452	0.66	0.66	-17.26	-16.30		-16.60	-15.64	-12.63	4.71		8.00		Pass

Measured power density (dBm) has offset with cable loss.



<TXBF Modes>

Test Engineer:	Kenny Chen	Temperature:	21-25	°C
Test Date:	2016/06/01~2016/06/13	Relative Humidity:	51-54	%

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

2.4GHz Band										
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	99% Occupied BW (MHz)		6dB BW (MHz)		6dB BW Limit (MHz)	Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2		
HT20	MCS0	2	1	2412	19.00	19.05	17.52	17.14	0.50	Pass
HT20	MCS0	2	6	2437	18.70	18.85	17.58	17.64	0.50	Pass
HT20	MCS0	2	11	2462	18.40	18.70	15.08	16.28	0.50	Pass
HT40	MCS0	2	3	2422	36.50	36.40	31.24	33.76	0.50	Pass
HT40	MCS0	2	6	2437	36.50	36.50	32.48	33.84	0.50	Pass
HT40	MCS0	2	9	2452	36.30	36.10	35.04	31.28	0.50	Pass
VHT20	MCS0	2	1	2412	18.65	18.75	17.64	17.64	0.50	Pass
VHT20	MCS0	2	6	2437	18.30	18.70	17.60	17.64	0.50	Pass
VHT20	MCS0	2	11	2462	18.35	18.60	17.52	16.24	0.50	Pass
VHT40	MCS0	2	3	2422	36.30	36.40	35.04	35.04	0.50	Pass
VHT40	MCS0	2	6	2437	36.40	36.50	33.84	34.96	0.50	Pass
VHT40	MCS0	2	9	2452	36.40	36.20	33.80	35.04	0.50	Pass

**TEST RESULTS DATA**  
**Average Output Power**

2.4GHz Band																
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	Average Conducted Power (dBm)			Conducted Power Limit (dBm)		DG (dBi)		EIRP Power (dBm)		EIRP Power Limit (dBm)		Pass /Fail
					Ant 1	Ant 2	SUM	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11g	6Mbps	2	1	2412	15.10	15.10	18.11	30.00		1.90		20.01		36.00		Pass
11g	6Mbps	2	6	2437	15.20	15.10	18.16	30.00		1.90		20.06		36.00		Pass
11g	6Mbps	2	11	2462	15.20	15.20	18.21	30.00		1.90		20.11		36.00		Pass
HT20	MCS0	2	1	2412	15.30	15.30	18.31	30.00		1.90		20.21		36.00		Pass
HT20	MCS0	2	6	2437	15.10	14.90	18.01	30.00		1.90		19.91		36.00		Pass
HT20	MCS0	2	11	2462	15.40	14.60	18.03	30.00		1.90		19.93		36.00		Pass
HT40	MCS0	2	3	2422	14.80	15.20	18.01	30.00		1.90		19.91		36.00		Pass
HT40	MCS0	2	6	2437	15.10	15.60	18.37	30.00		1.90		20.27		36.00		Pass
HT40	MCS0	2	9	2452	15.40	15.10	18.26	30.00		1.90		20.16		36.00		Pass
VHT20	MCS0	2	1	2412	15.30	15.20	18.26	30.00		1.90		20.16		36.00		Pass
VHT20	MCS0	2	6	2437	15.30	15.10	18.21	30.00		1.90		20.11		36.00		Pass
VHT20	MCS0	2	11	2462	15.30	15.40	18.36	30.00		1.90		20.26		36.00		Pass
VHT40	MCS0	2	3	2422	15.30	15.40	18.36	30.00		1.90		20.26		36.00		Pass
VHT40	MCS0	2	6	2437	15.10	15.50	18.31	30.00		1.90		20.21		36.00		Pass
VHT40	MCS0	2	9	2452	15.20	15.20	18.21	30.00		1.90		20.11		36.00		Pass

Note: Measured power (dBm) has offset with cable loss.

**TEST RESULTS DATA**  
**Average Power Spectral Density**

2.4GHz Band												
Mod.	Data Rate	N <sub>Tx</sub>	CH.	Freq. (MHz)	Average PSD (dBm/3kHz)			DG (dBi)		Average PSD Limit (dBm/3kHz)		Pass/Fail
					Ant 1	Ant 2	Worse + 3.01	Ant 1	Ant 2	Ant 1	Ant 2	
HT20	MCS0	2	1	2412	-5.46	-4.45	-1.44	4.71	4.71	8.00	8.00	Pass
HT20	MCS0	2	6	2437	-5.11	-4.41	-1.40	4.71	4.71	8.00	8.00	Pass
HT20	MCS0	2	11	2462	-3.90	-4.84	-0.89	4.71	4.71	8.00	8.00	Pass
HT40	MCS0	2	3	2422	-4.94	0.69	3.70	4.71	4.71	8.00	8.00	Pass
HT40	MCS0	2	6	2437	-4.45	-4.84	-1.44	4.71	4.71	8.00	8.00	Pass
HT40	MCS0	2	9	2452	-3.69	-4.49	-0.68	4.71	4.71	8.00	8.00	Pass
VHT20	MCS0	2	1	2412	-2.88	-4.67	0.13	4.71	4.71	8.00	8.00	Pass
VHT20	MCS0	2	6	2437	-4.16	-4.95	-1.15	4.71	4.71	8.00	8.00	Pass
VHT20	MCS0	2	11	2462	-3.30	-2.14	0.87	4.71	4.71	8.00	8.00	Pass
VHT40	MCS0	2	3	2422	-2.04	-3.31	0.97	4.71	4.71	8.00	8.00	Pass
VHT40	MCS0	2	6	2437	-3.18	-3.60	-0.17	4.71	4.71	8.00	8.00	Pass
VHT40	MCS0	2	9	2452	-1.88	0.20	3.21	4.71	4.71	8.00	8.00	Pass

Measured power density (dBm) has offset with cable loss.



## Appendix B. Radiated Spurious Emission

Test Engineer :	Luke Chang/Jesse Wang/Derrick Chen/James Chiu	Temperature :		21~24°C
		Relative Humidity :		50~54%

&lt;Non-TXBF Modes&gt;

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b CH 01 2412MHz		2389.92	58.03	-15.97	74	53.12	31.93	7.31	34.33	101	278	P	H
		2390	51.27	-2.73	54	46.36	31.93	7.31	34.33	101	278	A	H
	*	2412	113.12	-	-	108.13	31.98	7.31	34.3	101	278	P	H
	*	2412	109.96	-	-	104.97	31.98	7.31	34.3	101	278	A	H
													H
													H
		2390	58.32	-15.68	74	53.41	31.93	7.31	34.33	331	121	P	V
		2390	50.1	-3.9	54	45.19	31.93	7.31	34.33	331	121	A	V
	*	2414	110.46	-	-	105.46	31.98	7.31	34.29	331	121	P	V
	*	2414	107.5	-	-	102.5	31.98	7.31	34.29	331	121	A	V
													V
													V



		2371.47	55.31	-18.69	74	50.54	31.89	7.24	34.36	164	276	P	H	
		2390	45.37	-8.63	54	40.46	31.93	7.31	34.33	164	276	A	H	
802.11b CH 06 2437MHz		*	2436	115	-	-	109.88	32.02	7.36	34.26	164	276	P	H
		*	2436	111.87	-	-	106.75	32.02	7.36	34.26	164	276	A	H
			2487	57.26	-16.74	74	51.87	32.16	7.4	34.17	164	276	P	H
			2483.92	45.94	-8.06	54	40.56	32.16	7.4	34.18	164	276	A	H
			2326.65	55.43	-18.57	74	50.94	31.75	7.18	34.44	378	108	P	V
			2390.01	45.05	-8.95	54	40.14	31.93	7.31	34.33	378	108	A	V
		*	2436	114.69	-	-	109.57	32.02	7.36	34.26	378	108	P	V
		*	2436	111.56	-	-	106.44	32.02	7.36	34.26	378	108	A	V
			2484.88	57.09	-16.91	74	51.71	32.16	7.4	34.18	378	108	P	V
			2483.92	45.43	-8.57	54	40.05	32.16	7.4	34.18	378	108	A	V
		*	2462	114.08	-	-	108.78	32.11	7.4	34.21	122	275	P	H
		*	2462	111.05	-	-	105.75	32.11	7.4	34.21	122	275	A	H
802.11b CH 11 2462MHz			2484.68	59.98	-14.02	74	54.6	32.16	7.4	34.18	122	275	P	H
			2483.52	52.96	-1.04	54	47.58	32.16	7.4	34.18	122	275	A	H
													H	
		*	2462	111.64	-	-	106.34	32.11	7.4	34.21	326	106	P	V
		*	2462	108.59	-	-	103.29	32.11	7.4	34.21	326	106	A	V
			2483.76	59.55	-14.45	74	54.17	32.16	7.4	34.18	326	106	P	V
			2483.52	50.43	-3.57	54	45.05	32.16	7.4	34.18	326	106	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 802.11b (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	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	53.68	-20.32	74	66.84	34.2	11.68	59.04	102	263	P	H
		4824	50.92	-3.08	54	64.08	34.2	11.68	59.04	102	263	A	H
													H
													H
		4824	50.93	-23.07	74	64.09	34.2	11.68	59.04	354	281	P	V
		4824	48.95	-5.05	54	62.11	34.2	11.68	59.04	354	281	A	V
													V
													V
802.11b CH 06 2437MHz		4874	43.92	-30.08	74	57.1	34.23	11.53	58.94	100	0	P	H
		7311	43.35	-30.65	74	51.87	35.6	13.81	57.93	100	0	P	H
													H
													H
		4874	42.45	-31.55	74	55.63	34.23	11.53	58.94	100	0	P	V
		7311	43.65	-30.35	74	52.17	35.6	13.81	57.93	100	0	P	V
													V
													V
802.11b CH 11 2462MHz		4924	41.8	-32.2	74	55.01	34.26	11.37	58.84	100	0	P	H
		7386	41.73	-32.27	74	50.24	35.6	13.95	58.06	100	0	P	H
													H
													H
		4924	42.34	-31.66	74	55.55	34.26	11.37	58.84	100	0	P	V
		7386	41.8	-32.2	74	50.31	35.6	13.95	58.06	100	0	P	V
													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 802.11b (LF)

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 )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
2.4GHz 802.11b LF		30	26.89	-13.11	40	31.17	26	1.07	31.35			P	H
		106.14	22.1	-21.4	43.5	35.13	16.94	1.55	31.52			P	H
		240.06	27.91	-18.09	46	39.15	18.09	2.07	31.4			P	H
		780.2	33.7	-12.3	46	32.92	27.5	3.9	30.62			P	H
		859.3	32.58	-13.42	46	30.28	28.76	4.1	30.56			P	H
		899.9	34.14	-11.86	46	31.51	29	4.17	30.54	100	0	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
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 or Average</b>
H/V	<b>Horizontal or 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 )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$2. \text{ Over Limit(dB)} = \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

#### For Peak Limit @ 2390MHz:

$$1. \text{ Level(dB}\mu\text{V/m)}$$

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$= 32.22(\text{dB/m}) + 4.58(\text{dB}) + 54.51(\text{dB}\mu\text{V}) - 35.86 (\text{dB})$$

$$= 55.45 (\text{dB}\mu\text{V/m})$$

$$2. \text{ Over Limit(dB)}$$

$$= \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

$$= 55.45(\text{dB}\mu\text{V/m}) - 74(\text{dB}\mu\text{V/m})$$

$$= -18.55(\text{dB})$$

#### For Average Limit @ 2390MHz:

$$1. \text{ Level(dB}\mu\text{V/m)}$$

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$= 32.22(\text{dB/m}) + 4.58(\text{dB}) + 42.6(\text{dB}\mu\text{V}) - 35.86 (\text{dB})$$

$$= 43.54 (\text{dB}\mu\text{V/m})$$

$$2. \text{ Over Limit(dB)}$$

$$= \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

$$= 43.54(\text{dB}\mu\text{V/m}) - 54(\text{dB}\mu\text{V/m})$$

$$= -10.46(\text{dB})$$

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



## &lt;Non-TXBF Modes&gt;

2.4GHz 2400~2483.5MHz

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

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b CH 01 2412MHz		2388.84	55.59	-18.41	74	50.68	31.93	7.31	34.33	162	42	P	H
		2390	46.94	-7.06	54	42.03	31.93	7.31	34.33	162	42	A	H
	*	2412	107.33	-	-	102.34	31.98	7.31	34.3	162	42	P	H
	*	2412	104.29	-	-	99.3	31.98	7.31	34.3	162	42	A	H
													H
													H
		2388.57	56.19	-17.81	74	51.28	31.93	7.31	34.33	100	266	P	V
		2390	46.71	-7.29	54	41.8	31.93	7.31	34.33	100	266	A	V
	*	2412	103.73	-	-	98.74	31.98	7.31	34.3	100	266	P	V
	*	2412	100.6	-	-	95.61	31.98	7.31	34.3	100	266	A	V
802.11b CH 06 2437MHz		2387.31	56.17	-17.83	74	51.27	31.93	7.31	34.34	204	41	P	H
		2390	45.34	-8.66	54	40.43	31.93	7.31	34.33	204	41	A	H
	*	2437	113.04	-	-	107.86	32.07	7.36	34.25	204	41	P	H
	*	2437	109.99	-	-	104.81	32.07	7.36	34.25	204	41	A	H
		2489.96	56.48	-17.52	74	51.05	32.2	7.4	34.17	204	41	P	H
		2483.96	46.35	-7.65	54	40.97	32.16	7.4	34.18	204	41	A	H
		2372.37	55.67	-18.33	74	50.9	31.89	7.24	34.36	103	266	P	V
		2390	45.06	-8.94	54	40.15	31.93	7.31	34.33	103	266	A	V
	*	2437	108.79	-	-	103.61	32.07	7.36	34.25	103	266	P	V
	*	2437	105.82	-	-	100.64	32.07	7.36	34.25	103	266	A	V
		2483.52	56.25	-17.75	74	50.87	32.16	7.4	34.18	103	266	P	V
		2483.84	45.8	-8.2	54	40.42	32.16	7.4	34.18	103	266	A	V



802.11b CH 11 2462MHz	*	2462	113.85	-	-	108.55	32.11	7.4	34.21	198	41	P	H
	*	2462	110.79	-	-	105.49	32.11	7.4	34.21	198	41	A	H
		2483.64	60.36	-13.64	74	54.98	32.16	7.4	34.18	198	41	P	H
		2483.52	51.97	-2.03	54	46.59	32.16	7.4	34.18	198	41	A	H
													H
													H
	*	2462	110.94	-	-	105.64	32.11	7.4	34.21	100	270	P	V
	*	2462	107.82	-	-	102.52	32.11	7.4	34.21	100	270	A	V
		2485.4	56.7	-17.3	74	51.31	32.16	7.4	34.17	100	270	P	V
		2483.52	48.72	-5.28	54	43.34	32.16	7.4	34.18	100	270	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 802.11b (Harmonic @ 3m)

WIFI Ant. 2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	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	53.06	-20.94	74	66.22	34.2	11.68	59.04	100	237	P	H
		4824	50.71	-3.29	54	63.87	34.2	11.68	59.04	100	237	A	H
													H
													H
		4824	52.77	-21.23	74	65.93	34.2	11.68	59.04	300	0	P	V
		4824	50.42	-3.58	54	63.58	34.2	11.68	59.04	300	0	A	V
													V
													V
802.11b CH 06 2437MHz		4874	52.91	-21.09	74	66.09	34.23	11.53	58.94	100	237	P	H
		4874	50.33	-3.67	54	63.51	34.23	11.53	58.94	100	237	A	H
		7311	42.2	-31.8	74	50.72	35.6	13.81	57.93	100	0	P	H
													H
		4874	51.81	-22.19	74	64.99	34.23	11.53	58.94	300	0	P	V
		4874	48.65	-5.35	54	61.83	34.23	11.53	58.94	300	0	A	V
		7311	40.78	-33.22	74	49.3	35.6	13.81	57.93	100	0	P	V
													V
802.11b CH 11 2462MHz		4924	52.99	-21.01	74	66.2	34.26	11.37	58.84	104	237	P	H
		4924	50.41	-3.59	54	63.62	34.26	11.37	58.84	104	237	A	H
		7386	42.74	-31.26	74	51.25	35.6	13.95	58.06	100	0	P	H
													H
		4924	52.98	-21.02	74	66.19	34.26	11.37	58.84	300	0	P	V
		4924	50.39	-3.61	54	63.6	34.26	11.37	58.84	300	0	A	V
		7386	40.88	-33.12	74	49.39	35.6	13.95	58.06	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 802.11b (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
2.4GHz 802.11b LF		30	27.67	-12.33	40	31.95	26	1.07	31.35			P	H
		106.14	22.96	-20.54	43.5	35.99	16.94	1.55	31.52			P	H
		240.06	27.87	-18.13	46	39.11	18.09	2.07	31.4			P	H
		744.5	30.47	-15.53	46	30.19	27.12	3.82	30.66			P	H
		780.2	33.19	-12.81	46	32.41	27.5	3.9	30.62			P	H
		899.9	34.1	-11.9	46	31.47	29	4.17	30.54	100	0	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
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 or Average</b>
H/V	<b>Horizontal or 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.	
2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$2. \text{ Over Limit(dB)} = \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

#### For Peak Limit @ 2390MHz:

$$1. \text{ Level(dB}\mu\text{V/m)}$$

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$= 32.22(\text{dB/m}) + 4.58(\text{dB}) + 54.51(\text{dB}\mu\text{V}) - 35.86 (\text{dB})$$

$$= 55.45 (\text{dB}\mu\text{V/m})$$

$$2. \text{ Over Limit(dB)}$$

$$= \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

$$= 55.45(\text{dB}\mu\text{V/m}) - 74(\text{dB}\mu\text{V/m})$$

$$= -18.55(\text{dB})$$

#### For Average Limit @ 2390MHz:

$$1. \text{ Level(dB}\mu\text{V/m)}$$

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$= 32.22(\text{dB/m}) + 4.58(\text{dB}) + 42.6(\text{dB}\mu\text{V}) - 35.86 (\text{dB})$$

$$= 43.54 (\text{dB}\mu\text{V/m})$$

$$2. \text{ Over Limit(dB)}$$

$$= \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

$$= 43.54(\text{dB}\mu\text{V/m}) - 54(\text{dB}\mu\text{V/m})$$

$$= -10.46(\text{dB})$$

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



## &lt;Non-TXBF Modes&gt;

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b CH 01 2412MHz		2389.92	57.18	-16.82	74	52.27	31.93	7.31	34.33	100	259	P	H
		2390	48.8	-5.2	54	43.89	31.93	7.31	34.33	100	259	A	H
	*	2412	110.86	-	-	105.87	31.98	7.31	34.3	100	259	P	H
	*	2412	107.69	-	-	102.7	31.98	7.31	34.3	100	259	A	H
													H
													H
		2322.42	55.5	-18.5	74	51.01	31.75	7.18	34.44	359	229	P	V
		2390	46.59	-7.41	54	41.68	31.93	7.31	34.33	359	229	A	V
	*	2412	107.49	-	-	102.5	31.98	7.31	34.3	359	229	P	V
	*	2412	104.24	-	-	99.25	31.98	7.31	34.3	359	229	A	V
802.11b CH 06 2437MHz		2372.64	55.91	-18.09	74	51.14	31.89	7.24	34.36	128	259	P	H
		2390	45.33	-8.67	54	40.42	31.93	7.31	34.33	128	259	A	H
	*	2436	114.57	-	-	109.45	32.02	7.36	34.26	128	259	P	H
	*	2436	111.53	-	-	106.41	32.02	7.36	34.26	128	259	A	H
		2486.6	56.91	-17.09	74	51.52	32.16	7.4	34.17	128	259	P	H
		2483.92	45.79	-8.21	54	40.41	32.16	7.4	34.18	128	259	A	H
		2389.2	55.3	-18.7	74	50.39	31.93	7.31	34.33	377	108	P	V
		2390	44.81	-9.19	54	39.9	31.93	7.31	34.33	377	108	A	V
	*	2436	112.82	-	-	107.7	32.02	7.36	34.26	377	108	P	V
	*	2436	109.75	-	-	104.63	32.02	7.36	34.26	377	108	A	V
		2498.4	56.03	-17.97	74	50.58	32.2	7.4	34.15	377	108	P	V
		2483.8	45.18	-8.82	54	39.8	32.16	7.4	34.18	377	108	A	V



802.11b CH 11 2462MHz	*	2462	112.88	-	-	107.58	32.11	7.4	34.21	100	265	P	H
	*	2462	109.86	-	-	104.56	32.11	7.4	34.21	100	265	A	H
		2483.68	58.81	-15.19	74	53.43	32.16	7.4	34.18	100	265	P	H
		2483.52	52.74	-1.26	54	47.36	32.16	7.4	34.18	100	265	A	H
													H
													H
	*	2462	111.31	-	-	106.01	32.11	7.4	34.21	264	119	P	V
	*	2462	108.34	-	-	103.04	32.11	7.4	34.21	264	119	A	V
		2483.56	57.36	-16.64	74	51.98	32.16	7.4	34.18	264	119	P	V
		2483.52	49.66	-4.34	54	44.28	32.16	7.4	34.18	264	119	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 802.11b (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	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	53.22	-20.78	74	66.38	34.2	11.68	59.04	102	178	P	H
		4824	50.32	-3.68	54	63.48	34.2	11.68	59.04	102	178	A	H
													H
													H
		4824	51.04	-22.96	74	64.2	34.2	11.68	59.04	332	193	P	V
		4824	48.03	-5.97	54	61.19	34.2	11.68	59.04	332	193	A	V
													V
													V
802.11b CH 06 2437MHz		4874	49.91	-24.09	74	63.09	34.23	11.53	58.94	100	18	P	H
		4874	46.26	-7.74	54	59.44	34.23	11.53	58.94	100	18	A	H
		7311	43.1	-30.9	74	51.62	35.6	13.81	57.93	100	0	P	H
													H
		4874	53.12	-20.88	74	66.3	34.23	11.53	58.94	331	29	P	V
		4874	50.84	-3.16	54	64.02	34.23	11.53	58.94	331	29	A	V
		7311	43.46	-30.54	74	51.98	35.6	13.81	57.93	100	0	P	V
													V
802.11b CH 11 2462MHz		4924	47.17	-26.83	74	60.38	34.26	11.37	58.84	100	0	P	H
		7386	41.7	-32.3	74	50.21	35.6	13.95	58.06	100	0	P	H
													H
													H
		4924	47.63	-26.37	74	60.84	34.26	11.37	58.84	100	0	P	V
		7386	41.91	-32.09	74	50.42	35.6	13.95	58.06	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

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	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		2387.49	56.95	-17.05	74	52.05	31.93	7.31	34.34	306	271	P	H
		2390	48.38	-5.62	54	43.47	31.93	7.31	34.33	306	271	A	H
	*	2412	111.44	-	-	106.45	31.98	7.31	34.3	306	271	P	H
	*	2412	103.64	-	-	98.65	31.98	7.31	34.3	306	271	A	H
													H
													H
		2389.92	61.43	-12.57	74	56.52	31.93	7.31	34.33	303	91	P	V
		2390	52.6	-1.4	54	47.69	31.93	7.31	34.33	303	91	A	V
	*	2412	108.87	-	-	103.88	31.98	7.31	34.3	303	91	P	V
	*	2412	101.5	-	-	96.51	31.98	7.31	34.3	303	91	A	V
													V
													V
802.11g CH 06 2437MHz		2389.83	58.19	-15.81	74	53.28	31.93	7.31	34.33	125	259	P	H
		2390	49.62	-4.38	54	44.71	31.93	7.31	34.33	125	259	A	H
	*	2436	115.05	-	-	109.93	32.02	7.36	34.26	125	259	P	H
	*	2436	107.28	-	-	102.16	32.02	7.36	34.26	125	259	A	H
		2483.52	58.27	-15.73	74	52.89	32.16	7.4	34.18	125	259	P	H
		2483.6	48.5	-5.5	54	43.12	32.16	7.4	34.18	125	259	A	H
		2390	56.22	-17.78	74	51.31	31.93	7.31	34.33	377	108	P	V
		2390	47.78	-6.22	54	42.87	31.93	7.31	34.33	377	108	A	V
	*	2436	113.96	-	-	108.84	32.02	7.36	34.26	377	108	P	V
	*	2436	105.99	-	-	100.87	32.02	7.36	34.26	377	108	A	V
		2486.08	57.32	-16.68	74	51.93	32.16	7.4	34.17	377	108	P	V
		2483.72	47.34	-6.66	54	41.96	32.16	7.4	34.18	377	108	A	V



802.11g CH 11 2462MHz	*	2462	111.51	-	-	106.21	32.11	7.4	34.21	102	271	P	H
	*	2462	104.03	-	-	98.73	32.11	7.4	34.21	102	271	A	H
		2483.68	61.53	-12.47	74	56.15	32.16	7.4	34.18	102	271	P	H
		2483.52	52.28	-1.72	54	46.9	32.16	7.4	34.18	102	271	P	H
													H
													H
	*	2462	110.17	-	-	104.87	32.11	7.4	34.21	300	89	P	V
	*	2462	102.69	-	-	97.39	32.11	7.4	34.21	300	89	A	V
		2483.6	60.78	-13.22	74	55.4	32.16	7.4	34.18	300	89	P	V
		2483.64	51.08	-2.92	54	45.7	32.16	7.4	34.18	300	89	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 802.11g (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	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	46.6	-27.4	74	59.76	34.2	11.68	59.04	100	0	P	H
													H
													H
													H
		4824	47.8	-26.2	74	60.96	34.2	11.68	59.04	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	51.8	-22.2	74	64.98	34.23	11.53	58.94	109	225	P	H
		4874	41.62	-12.38	54	54.8	34.23	11.53	58.94	109	225	A	H
		7311	42.9	-31.1	74	51.42	35.6	13.81	57.93	100	0	P	H
													H
		4874	53.22	-20.78	74	66.4	34.23	11.53	58.94	350	153	P	V
		4874	42.12	-11.88	54	55.3	34.23	11.53	58.94	350	153	A	V
		7311	41.09	-32.91	74	49.61	35.6	13.81	57.93	100	0	P	V
													V
802.11g CH 11 2462MHz		4924	40.94	-33.06	74	54.15	34.26	11.37	58.84	100	0	P	H
		7386	41.29	-32.71	74	49.8	35.6	13.95	58.06	100	0	P	H
													H
													H
		4924	41.93	-32.07	74	55.14	34.26	11.37	58.84	100	0	P	V
		7386	41.11	-32.89	74	49.62	35.6	13.95	58.06	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

## WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 01 2412MHz		2390	61.44	-12.56	74	56.53	31.93	7.31	34.33	101	280	P	H
		2390	52.93	-1.07	54	48.02	31.93	7.31	34.33	101	280	A	H
	*	2413	109.5	-	-	104.5	31.98	7.31	34.29	101	280	P	H
	*	2413	101.58	-	-	96.58	31.98	7.31	34.29	101	280	A	H
													H
													H
		2390	61.98	-12.02	74	57.07	31.93	7.31	34.33	334	108	P	V
		2390	52.03	-1.97	54	47.12	31.93	7.31	34.33	334	108	A	V
	*	2413	109.05	-	-	104.05	31.98	7.31	34.29	334	108	P	V
	*	2413	101.15	-	-	96.15	31.98	7.31	34.29	334	108	A	V
													V
													V
802.11ac VHT20 CH 06 2437MHz		2389.56	58.75	-15.25	74	53.84	31.93	7.31	34.33	162	272	P	H
		2389.83	49.06	-4.94	54	44.15	31.93	7.31	34.33	162	272	A	H
	*	2435	113.86	-	-	108.74	32.02	7.36	34.26	162	272	P	H
	*	2435	105.53	-	-	100.41	32.02	7.36	34.26	162	272	A	H
		2484.68	60.34	-13.66	74	54.96	32.16	7.4	34.18	162	272	P	H
		2487.68	50.38	-3.62	54	44.95	32.2	7.4	34.17	162	272	A	H
		2389.65	56.78	-17.22	74	51.87	31.93	7.31	34.33	280	224	P	V
		2390	47.32	-6.68	54	42.41	31.93	7.31	34.33	280	224	A	V
	*	2436	109.33	-	-	104.21	32.02	7.36	34.26	280	224	P	V
	*	2436	101.46	-	-	96.34	32.02	7.36	34.26	280	224	A	V
		2483.68	58.38	-15.62	74	53	32.16	7.4	34.18	280	224	P	V
		2483.52	48	-6	54	42.62	32.16	7.4	34.18	280	224	A	V



802.11ac VHT20 CH 11 2462MHz	*	2460	110.15	-	-	104.9	32.11	7.36	34.22	127	278	P	H
	*	2460	102.58	-	-	97.33	32.11	7.36	34.22	127	278	A	H
		2483.72	61.57	-12.43	74	56.19	32.16	7.4	34.18	127	278	P	H
		2483.64	52.56	-1.44	54	47.18	32.16	7.4	34.18	127	278	A	H
													H
													H
	*	2461	109.53	-	-	104.23	32.11	7.4	34.21	372	112	P	V
	*	2461	101.98	-	-	96.68	32.11	7.4	34.21	372	112	A	V
		2483.64	63.44	-10.56	74	58.06	32.16	7.4	34.18	372	112	P	V
		2483.6	51.67	-2.33	54	46.29	32.16	7.4	34.18	372	112	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 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 01 2412MHz		4824	44.76	-29.24	74	57.92	34.2	11.68	59.04	100	0	P	H
													H
													H
													H
		4824	44.62	-29.38	74	57.78	34.2	11.68	59.04	100	0	P	V
													V
													V
													V
802.11ac VHT20 CH 06 2437MHz		4874	50.11	-23.89	74	63.29	34.23	11.53	58.94	100	0	P	H
		7311	41.2	-32.8	74	49.72	35.6	13.81	57.93	100	0	P	H
													H
													H
		4874	46.93	-27.07	74	60.11	34.23	11.53	58.94	100	0	P	V
		7311	42.21	-31.79	74	50.73	35.6	13.81	57.93	100	0	P	V
													V
													V
802.11ac VHT20 CH 11 2462MHz		4924	40.31	-33.69	74	53.52	34.26	11.37	58.84	100	0	P	H
		7386	41.32	-32.68	74	49.83	35.6	13.95	58.06	100	0	P	H
													H
													H
		4924	40.43	-33.57	74	53.64	34.26	11.37	58.84	100	0	P	V
		7386	41.06	-32.94	74	49.57	35.6	13.95	58.06	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

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 03 2422MHz		2389.38	60.23	-13.77	74	55.32	31.93	7.31	34.33	124	260	P	H
		2390	52.93	-1.07	54	48.02	31.93	7.31	34.33	124	260	A	H
	*	2422	105.15	-	-	100.05	32.02	7.36	34.28	124	260	P	H
	*	2422	96.9	-	-	91.8	32.02	7.36	34.28	124	260	A	H
		2484.56	55.94	-18.06	74	50.56	32.16	7.4	34.18	124	260	P	H
		2484.48	46.79	-7.21	54	41.41	32.16	7.4	34.18	124	260	A	H
		2389.74	58.42	-15.58	74	53.51	31.93	7.31	34.33	376	102	P	V
		2390	49.86	-4.14	54	44.95	31.93	7.31	34.33	376	102	A	V
	*	2424	103.65	-	-	98.55	32.02	7.36	34.28	376	102	P	V
	*	2424	96	-	-	90.9	32.02	7.36	34.28	376	102	A	V
802.11ac VHT40 CH 06 2437MHz		2497.88	55.68	-18.32	74	50.23	32.2	7.4	34.15	376	102	P	V
		2489.28	46.22	-7.78	54	40.79	32.2	7.4	34.17	376	102	A	V
		2390	58.45	-15.55	74	53.54	31.93	7.31	34.33	136	277	P	H
		2390	50.33	-3.67	54	45.42	31.93	7.31	34.33	136	277	A	H
	*	2438	106.46	-	-	101.28	32.07	7.36	34.25	136	277	P	H
	*	2438	98.41	-	-	93.23	32.07	7.36	34.25	136	277	A	H
		2485.36	62.61	-11.39	74	57.22	32.16	7.4	34.17	136	277	P	H
		2483.52	52.16	-1.84	54	46.78	32.16	7.4	34.18	136	277	A	H
		2389.74	55.17	-18.83	74	50.26	31.93	7.31	34.33	318	202	P	V
		2389.83	46.72	-7.28	54	41.81	31.93	7.31	34.33	318	202	A	V
	*	2436	103.41	-	-	98.29	32.02	7.36	34.26	318	202	P	V
	*	2436	95.1	-	-	89.98	32.02	7.36	34.26	318	202	A	V
		2486.2	58.44	-15.56	74	53.05	32.16	7.4	34.17	318	202	P	V
		2483.52	48.69	-5.31	54	43.31	32.16	7.4	34.18	318	202	A	V



	2389.92	55.51	-18.49	74	50.6	31.93	7.31	34.33	123	278	P	H
	2389.83	46.4	-7.6	54	41.49	31.93	7.31	34.33	123	278	A	H
*	2452	106.91	-	-	101.71	32.07	7.36	34.23	123	278	P	H
*	2452	99.28	-	-	94.08	32.07	7.36	34.23	123	278	A	H
802.11ac	2484.12	62.93	-11.07	74	57.55	32.16	7.4	34.18	123	278	P	H
VHT40	2483.52	52.84	-1.16	54	47.46	32.16	7.4	34.18	123	278	A	H
CH 09	2357.88	55.49	-18.51	74	50.8	31.84	7.24	34.39	372	110	P	V
2452MHz	2389.74	46.3	-7.7	54	41.39	31.93	7.31	34.33	372	110	A	V
*	2454	107.27	-	-	102.03	32.11	7.36	34.23	372	110	P	V
*	2454	99.67	-	-	94.43	32.11	7.36	34.23	372	110	A	V
	2484.24	62.24	-11.76	74	56.86	32.16	7.4	34.18	372	110	P	V
	2483.52	52.61	-1.39	54	47.23	32.16	7.4	34.18	372	110	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 03 2422MHz		4844	40.71	-33.29	74	53.83	34.21	11.68	59.01	100	0	P	H
		7266	40.64	-33.36	74	49.18	35.6	13.75	57.89	100	0	P	H
													H
													H
		4844	40.86	-33.14	74	53.98	34.21	11.68	59.01	100	0	P	V
		7266	41.12	-32.88	74	49.66	35.6	13.75	57.89	100	0	P	V
													V
802.11ac VHT40 CH 06 2437MHz		4874	46.85	-27.15	74	60.03	34.23	11.53	58.94	100	0	P	H
		7311	41.34	-32.66	74	49.86	35.6	13.81	57.93	100	0	P	H
													H
													H
		4874	45.31	-28.69	74	58.49	34.23	11.53	58.94	100	0	P	V
		7311	41.24	-32.76	74	49.76	35.6	13.81	57.93	100	0	P	V
													V
802.11ac VHT40 CH 09 2452MHz		4904	40.86	-33.14	74	54.11	34.25	11.37	58.87	100	0	P	H
		7356	40.89	-33.11	74	49.42	35.6	13.88	58.01	100	0	P	H
													H
													H
		4904	40.42	-33.58	74	53.67	34.25	11.37	58.87	100	0	P	V
		7356	42.22	-31.78	74	50.75	35.6	13.88	58.01	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 802.11b (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
2.4GHz 802.11b LF		30	28.46	-11.54	40	32.74	26	1.07	31.35			P	H
		106.41	22.62	-20.88	43.5	35.56	17.03	1.55	31.52			P	H
		240.06	27.63	-18.37	46	38.87	18.09	2.07	31.4			P	H
		659.8	31.5	-14.5	46	32.69	26	3.57	30.76			P	H
		780.2	34.85	-11.15	46	34.07	27.5	3.9	30.62	100	0	P	H
		899.9	34.22	-11.78	46	31.59	29	4.17	30.54			P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
Remark	1.	No other spurious found.											
	2.	All results are PASS against limit line.											



## Emission below 1GHz

## 2.4GHz WIFI 802.11g (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
2.4GHz 802.11g LF		30.27	27.03	-12.97	40	31.31	26	1.07	31.35			P	H
		106.14	23.97	-19.53	43.5	37	16.94	1.55	31.52			P	H
		300	27.5	-18.5	46	36.65	19.8	2.32	31.27			P	H
		659.8	33.15	-12.85	46	34.34	26	3.57	30.76			P	H
		780.2	35.83	-10.17	46	35.05	27.5	3.9	30.62	100	0	P	H
		899.9	35.6	-10.4	46	32.97	29	4.17	30.54			P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
Remark	1.	No other spurious found.											
	2.	All results are PASS against limit line.											



## Emission below 1GHz

## 2.4GHz WIFI 802.11ac VHT20 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
2.4GHz 802.11ac VHT20 LF		30	27.03	-12.97	40	31.31	26	1.07	31.35			P	H
		127.74	21.77	-21.73	43.5	33.51	18.22	1.55	31.51			P	H
		240.06	29.19	-16.81	46	40.43	18.09	2.07	31.4			P	H
		419.7	28.26	-17.74	46	34.05	22.68	2.67	31.14			P	H
		659.8	32.02	-13.98	46	33.21	26	3.57	30.76			P	H
		780.2	35.61	-10.39	46	34.83	27.5	3.9	30.62	100	0	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
Remark	1.	No other spurious found.											
	2.	All results are PASS against limit line.											



## Emission below 1GHz

## 2.4GHz WIFI 802.11ac VHT40 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
2.4GHz 802.11ac VHT40 LF		30.27	28.5	-11.5	40	32.78	26	1.07	31.35			P	H
		106.41	23.7	-19.8	43.5	36.64	17.03	1.55	31.52			P	H
		240.06	26.56	-19.44	46	37.8	18.09	2.07	31.4			P	H
		540.1	29.08	-16.92	46	32.26	24.52	3.24	30.94			P	H
		780.2	35.53	-10.47	46	34.75	27.5	3.9	30.62	100	0	P	H
		899.9	34.35	-11.65	46	31.72	29	4.17	30.54			P	H
													H
													H
													H
													H
													H
													H
													H
													H
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 or Average</b>
H/V	<b>Horizontal or 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+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$2. \text{ Over Limit(dB)} = \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

#### For Peak Limit @ 2390MHz:

$$1. \text{ Level(dB}\mu\text{V/m)}$$

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$= 32.22(\text{dB/m}) + 4.58(\text{dB}) + 54.51(\text{dB}\mu\text{V}) - 35.86 (\text{dB})$$

$$= 55.45 (\text{dB}\mu\text{V/m})$$

$$2. \text{ Over Limit(dB)}$$

$$= \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

$$= 55.45(\text{dB}\mu\text{V/m}) - 74(\text{dB}\mu\text{V/m})$$

$$= -18.55(\text{dB})$$

#### For Average Limit @ 2390MHz:

$$1. \text{ Level(dB}\mu\text{V/m)}$$

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$= 32.22(\text{dB/m}) + 4.58(\text{dB}) + 42.6(\text{dB}\mu\text{V}) - 35.86 (\text{dB})$$

$$= 43.54 (\text{dB}\mu\text{V/m})$$

$$2. \text{ Over Limit(dB)}$$

$$= \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

$$= 43.54(\text{dB}\mu\text{V/m}) - 54(\text{dB}\mu\text{V/m})$$

$$= -10.46(\text{dB})$$

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



## &lt;TXBF Modes&gt;

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant.	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
1+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b CH 01 2412MHz		2389.92	57.18	-16.82	74	52.27	31.93	7.31	34.33	100	259	P	H
		2390	48.8	-5.2	54	43.89	31.93	7.31	34.33	100	259	A	H
	*	2412	110.86	-	-	105.87	31.98	7.31	34.3	100	259	P	H
	*	2412	107.69	-	-	102.7	31.98	7.31	34.3	100	259	A	H
													H
													H
		2322.42	55.5	-18.5	74	51.01	31.75	7.18	34.44	359	229	P	V
		2390	46.59	-7.41	54	41.68	31.93	7.31	34.33	359	229	A	V
	*	2412	107.49	-	-	102.5	31.98	7.31	34.3	359	229	P	V
	*	2412	104.24	-	-	99.25	31.98	7.31	34.3	359	229	A	V
802.11b CH 06 2437MHz		2372.64	55.91	-18.09	74	51.14	31.89	7.24	34.36	128	259	P	H
		2390	45.33	-8.67	54	40.42	31.93	7.31	34.33	128	259	A	H
	*	2436	114.57	-	-	109.45	32.02	7.36	34.26	128	259	P	H
	*	2436	111.53	-	-	106.41	32.02	7.36	34.26	128	259	A	H
		2486.6	56.91	-17.09	74	51.52	32.16	7.4	34.17	128	259	P	H
		2483.92	45.79	-8.21	54	40.41	32.16	7.4	34.18	128	259	A	H
		2389.2	55.3	-18.7	74	50.39	31.93	7.31	34.33	377	108	P	V
		2390	44.81	-9.19	54	39.9	31.93	7.31	34.33	377	108	A	V
	*	2436	112.82	-	-	107.7	32.02	7.36	34.26	377	108	P	V
	*	2436	109.75	-	-	104.63	32.02	7.36	34.26	377	108	A	V
		2498.4	56.03	-17.97	74	50.58	32.2	7.4	34.15	377	108	P	V
		2483.8	45.18	-8.82	54	39.8	32.16	7.4	34.18	377	108	A	V



802.11b CH 11 2462MHz	*	2462	112.88	-	-	107.58	32.11	7.4	34.21	100	265	P	H
	*	2462	109.86	-	-	104.56	32.11	7.4	34.21	100	265	A	H
		2483.68	58.81	-15.19	74	53.43	32.16	7.4	34.18	100	265	P	H
		2483.52	52.74	-1.26	54	47.36	32.16	7.4	34.18	100	265	A	H
													H
													H
	*	2462	111.31	-	-	106.01	32.11	7.4	34.21	264	119	P	V
	*	2462	108.34	-	-	103.04	32.11	7.4	34.21	264	119	A	V
		2483.56	57.36	-16.64	74	51.98	32.16	7.4	34.18	264	119	P	V
		2483.52	49.66	-4.34	54	44.28	32.16	7.4	34.18	264	119	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 802.11b (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	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	53.22	-20.78	74	66.38	34.2	11.68	59.04	102	178	P	H
		4824	50.32	-3.68	54	63.48	34.2	11.68	59.04	102	178	A	H
													H
													H
		4824	51.04	-22.96	74	64.2	34.2	11.68	59.04	332	193	P	V
		4824	48.03	-5.97	54	61.19	34.2	11.68	59.04	332	193	A	V
													V
													V
802.11b CH 06 2437MHz		4874	49.91	-24.09	74	63.09	34.23	11.53	58.94	100	18	P	H
		4874	46.26	-7.74	54	59.44	34.23	11.53	58.94	100	18	A	H
		7311	43.1	-30.9	74	51.62	35.6	13.81	57.93	100	0	P	H
													H
		4874	53.12	-20.88	74	66.3	34.23	11.53	58.94	331	29	P	V
		4874	50.84	-3.16	54	64.02	34.23	11.53	58.94	331	29	A	V
		7311	43.46	-30.54	74	51.98	35.6	13.81	57.93	100	0	P	V
													V
802.11b CH 11 2462MHz		4924	47.17	-26.83	74	60.38	34.26	11.37	58.84	100	0	P	H
		7386	41.7	-32.3	74	50.21	35.6	13.95	58.06	100	0	P	H
													H
													H
		4924	47.63	-26.37	74	60.84	34.26	11.37	58.84	100	0	P	V
		7386	41.91	-32.09	74	50.42	35.6	13.95	58.06	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

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	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		2387.49	56.95	-17.05	74	52.05	31.93	7.31	34.34	306	271	P	H
		2390	48.38	-5.62	54	43.47	31.93	7.31	34.33	306	271	A	H
	*	2412	111.44	-	-	106.45	31.98	7.31	34.3	306	271	P	H
	*	2412	103.64	-	-	98.65	31.98	7.31	34.3	306	271	A	H
													H
													H
		2389.92	61.43	-12.57	74	56.52	31.93	7.31	34.33	303	91	P	V
		2390	52.6	-1.4	54	47.69	31.93	7.31	34.33	303	91	A	V
	*	2412	108.87	-	-	103.88	31.98	7.31	34.3	303	91	P	V
	*	2412	101.5	-	-	96.51	31.98	7.31	34.3	303	91	A	V
													V
													V
802.11g CH 06 2437MHz		2389.83	58.19	-15.81	74	53.28	31.93	7.31	34.33	125	259	P	H
		2390	49.62	-4.38	54	44.71	31.93	7.31	34.33	125	259	A	H
	*	2436	115.05	-	-	109.93	32.02	7.36	34.26	125	259	P	H
	*	2436	107.28	-	-	102.16	32.02	7.36	34.26	125	259	A	H
		2483.52	58.27	-15.73	74	52.89	32.16	7.4	34.18	125	259	P	H
		2483.6	48.5	-5.5	54	43.12	32.16	7.4	34.18	125	259	A	H
		2390	56.22	-17.78	74	51.31	31.93	7.31	34.33	377	108	P	V
		2390	47.78	-6.22	54	42.87	31.93	7.31	34.33	377	108	A	V
	*	2436	113.96	-	-	108.84	32.02	7.36	34.26	377	108	P	V
	*	2436	105.99	-	-	100.87	32.02	7.36	34.26	377	108	A	V
		2486.08	57.32	-16.68	74	51.93	32.16	7.4	34.17	377	108	P	V
		2483.72	47.34	-6.66	54	41.96	32.16	7.4	34.18	377	108	A	V



802.11g CH 11 2462MHz	*	2462	111.51	-	-	106.21	32.11	7.4	34.21	102	271	P	H
	*	2462	104.03	-	-	98.73	32.11	7.4	34.21	102	271	A	H
		2483.68	61.53	-12.47	74	56.15	32.16	7.4	34.18	102	271	P	H
		2483.52	52.28	-1.72	54	46.9	32.16	7.4	34.18	102	271	P	H
													H
													H
	*	2462	110.17	-	-	104.87	32.11	7.4	34.21	300	89	P	V
	*	2462	102.69	-	-	97.39	32.11	7.4	34.21	300	89	A	V
		2483.6	60.78	-13.22	74	55.4	32.16	7.4	34.18	300	89	P	V
		2483.64	51.08	-2.92	54	45.7	32.16	7.4	34.18	300	89	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 802.11g (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	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	46.6	-27.4	74	59.76	34.2	11.68	59.04	100	0	P	H
													H
													H
													H
		4824	47.8	-26.2	74	60.96	34.2	11.68	59.04	100	0	P	V
													V
													V
													V
802.11g CH 06 2437MHz		4874	51.8	-22.2	74	64.98	34.23	11.53	58.94	109	225	P	H
		4874	41.62	-12.38	54	54.8	34.23	11.53	58.94	109	225	A	H
		7311	42.9	-31.1	74	51.42	35.6	13.81	57.93	100	0	P	H
													H
		4874	53.22	-20.78	74	66.4	34.23	11.53	58.94	350	153	P	V
		4874	42.12	-11.88	54	55.3	34.23	11.53	58.94	350	153	A	V
		7311	41.09	-32.91	74	49.61	35.6	13.81	57.93	100	0	P	V
													V
802.11g CH 11 2462MHz		4924	40.94	-33.06	74	54.15	34.26	11.37	58.84	100	0	P	H
		7386	41.29	-32.71	74	49.8	35.6	13.95	58.06	100	0	P	H
													H
													H
		4924	41.93	-32.07	74	55.14	34.26	11.37	58.84	100	0	P	V
		7386	41.11	-32.89	74	49.62	35.6	13.95	58.06	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

## WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 01 2412MHz		2390	61.44	-12.56	74	56.53	31.93	7.31	34.33	101	280	P	H
		2390	52.93	-1.07	54	48.02	31.93	7.31	34.33	101	280	A	H
	*	2413	109.5	-	-	104.5	31.98	7.31	34.29	101	280	P	H
	*	2413	101.58	-	-	96.58	31.98	7.31	34.29	101	280	A	H
													H
													H
		2390	61.98	-12.02	74	57.07	31.93	7.31	34.33	334	108	P	V
		2390	52.03	-1.97	54	47.12	31.93	7.31	34.33	334	108	A	V
	*	2413	109.05	-	-	104.05	31.98	7.31	34.29	334	108	P	V
	*	2413	101.15	-	-	96.15	31.98	7.31	34.29	334	108	A	V
													V
													V
802.11ac VHT20 CH 06 2437MHz		2389.56	58.75	-15.25	74	53.84	31.93	7.31	34.33	162	272	P	H
		2389.83	49.06	-4.94	54	44.15	31.93	7.31	34.33	162	272	A	H
	*	2435	113.86	-	-	108.74	32.02	7.36	34.26	162	272	P	H
	*	2435	105.53	-	-	100.41	32.02	7.36	34.26	162	272	A	H
		2484.68	60.34	-13.66	74	54.96	32.16	7.4	34.18	162	272	P	H
		2487.68	50.38	-3.62	54	44.95	32.2	7.4	34.17	162	272	A	H
		2389.65	56.78	-17.22	74	51.87	31.93	7.31	34.33	280	224	P	V
		2390	47.32	-6.68	54	42.41	31.93	7.31	34.33	280	224	A	V
	*	2436	109.33	-	-	104.21	32.02	7.36	34.26	280	224	P	V
	*	2436	101.46	-	-	96.34	32.02	7.36	34.26	280	224	A	V
		2483.68	58.38	-15.62	74	53	32.16	7.4	34.18	280	224	P	V
		2483.52	48	-6	54	42.62	32.16	7.4	34.18	280	224	A	V



802.11ac VHT20 CH 11 2462MHz	*	2460	110.15	-	-	104.9	32.11	7.36	34.22	127	278	P	H
	*	2460	102.58	-	-	97.33	32.11	7.36	34.22	127	278	A	H
		2483.72	61.57	-12.43	74	56.19	32.16	7.4	34.18	127	278	P	H
		2483.64	52.56	-1.44	54	47.18	32.16	7.4	34.18	127	278	A	H
													H
													H
	*	2461	109.53	-	-	104.23	32.11	7.4	34.21	372	112	P	V
	*	2461	101.98	-	-	96.68	32.11	7.4	34.21	372	112	A	V
		2483.64	63.44	-10.56	74	58.06	32.16	7.4	34.18	372	112	P	V
		2483.6	51.67	-2.33	54	46.29	32.16	7.4	34.18	372	112	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 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 01 2412MHz		4824	44.76	-29.24	74	57.92	34.2	11.68	59.04	100	0	P	H
													H
													H
													H
		4824	44.62	-29.38	74	57.78	34.2	11.68	59.04	100	0	P	V
													V
													V
													V
802.11ac VHT20 CH 06 2437MHz		4874	50.11	-23.89	74	63.29	34.23	11.53	58.94	100	0	P	H
		7311	41.2	-32.8	74	49.72	35.6	13.81	57.93	100	0	P	H
													H
													H
		4874	46.93	-27.07	74	60.11	34.23	11.53	58.94	100	0	P	V
		7311	42.21	-31.79	74	50.73	35.6	13.81	57.93	100	0	P	V
													V
													V
802.11ac VHT20 CH 11 2462MHz		4924	40.31	-33.69	74	53.52	34.26	11.37	58.84	100	0	P	H
		7386	41.32	-32.68	74	49.83	35.6	13.95	58.06	100	0	P	H
													H
													H
		4924	40.43	-33.57	74	53.64	34.26	11.37	58.84	100	0	P	V
		7386	41.06	-32.94	74	49.57	35.6	13.95	58.06	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

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

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 03 2422MHz		2389.38	60.23	-13.77	74	55.32	31.93	7.31	34.33	124	260	P	H
		2390	52.93	-1.07	54	48.02	31.93	7.31	34.33	124	260	A	H
	*	2422	105.15	-	-	100.05	32.02	7.36	34.28	124	260	P	H
	*	2422	96.9	-	-	91.8	32.02	7.36	34.28	124	260	A	H
		2484.56	55.94	-18.06	74	50.56	32.16	7.4	34.18	124	260	P	H
		2484.48	46.79	-7.21	54	41.41	32.16	7.4	34.18	124	260	A	H
		2389.74	58.42	-15.58	74	53.51	31.93	7.31	34.33	376	102	P	V
		2390	49.86	-4.14	54	44.95	31.93	7.31	34.33	376	102	A	V
	*	2424	103.65	-	-	98.55	32.02	7.36	34.28	376	102	P	V
	*	2424	96	-	-	90.9	32.02	7.36	34.28	376	102	A	V
802.11ac VHT40 CH 06 2437MHz		2497.88	55.68	-18.32	74	50.23	32.2	7.4	34.15	376	102	P	V
		2489.28	46.22	-7.78	54	40.79	32.2	7.4	34.17	376	102	A	V
		2390	58.45	-15.55	74	53.54	31.93	7.31	34.33	136	277	P	H
		2390	50.33	-3.67	54	45.42	31.93	7.31	34.33	136	277	A	H
	*	2438	106.46	-	-	101.28	32.07	7.36	34.25	136	277	P	H
	*	2438	98.41	-	-	93.23	32.07	7.36	34.25	136	277	A	H
		2485.36	62.61	-11.39	74	57.22	32.16	7.4	34.17	136	277	P	H
		2483.52	52.16	-1.84	54	46.78	32.16	7.4	34.18	136	277	A	H
		2389.74	55.17	-18.83	74	50.26	31.93	7.31	34.33	318	202	P	V
		2389.83	46.72	-7.28	54	41.81	31.93	7.31	34.33	318	202	A	V
	*	2436	103.41	-	-	98.29	32.02	7.36	34.26	318	202	P	V
	*	2436	95.1	-	-	89.98	32.02	7.36	34.26	318	202	A	V
		2486.2	58.44	-15.56	74	53.05	32.16	7.4	34.17	318	202	P	V
		2483.52	48.69	-5.31	54	43.31	32.16	7.4	34.18	318	202	A	V



	2389.92	55.51	-18.49	74	50.6	31.93	7.31	34.33	123	278	P	H
	2389.83	46.4	-7.6	54	41.49	31.93	7.31	34.33	123	278	A	H
*	2452	106.91	-	-	101.71	32.07	7.36	34.23	123	278	P	H
*	2452	99.28	-	-	94.08	32.07	7.36	34.23	123	278	A	H
802.11ac	2484.12	62.93	-11.07	74	57.55	32.16	7.4	34.18	123	278	P	H
VHT40	2483.52	52.84	-1.16	54	47.46	32.16	7.4	34.18	123	278	A	H
CH 09	2357.88	55.49	-18.51	74	50.8	31.84	7.24	34.39	372	110	P	V
2452MHz	2389.74	46.3	-7.7	54	41.39	31.93	7.31	34.33	372	110	A	V
*	2454	107.27	-	-	102.03	32.11	7.36	34.23	372	110	P	V
*	2454	99.67	-	-	94.43	32.11	7.36	34.23	372	110	A	V
	2484.24	62.24	-11.76	74	56.86	32.16	7.4	34.18	372	110	P	V
	2483.52	52.61	-1.39	54	47.23	32.16	7.4	34.18	372	110	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.											



## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level ( dB $\mu$ V/m )	Over Limit ( dB )	Limit Line ( dB $\mu$ V/m )	Read Level ( dB $\mu$ V )	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 03 2422MHz		4844	40.71	-33.29	74	53.83	34.21	11.68	59.01	100	0	P	H
		7266	40.64	-33.36	74	49.18	35.6	13.75	57.89	100	0	P	H
													H
													H
		4844	40.86	-33.14	74	53.98	34.21	11.68	59.01	100	0	P	V
		7266	41.12	-32.88	74	49.66	35.6	13.75	57.89	100	0	P	V
													V
802.11ac VHT40 CH 06 2437MHz		4874	46.85	-27.15	74	60.03	34.23	11.53	58.94	100	0	P	H
		7311	41.34	-32.66	74	49.86	35.6	13.81	57.93	100	0	P	H
													H
													H
		4874	45.31	-28.69	74	58.49	34.23	11.53	58.94	100	0	P	V
		7311	41.24	-32.76	74	49.76	35.6	13.81	57.93	100	0	P	V
													V
802.11ac VHT40 CH 09 2452MHz		4904	40.86	-33.14	74	54.11	34.25	11.37	58.87	100	0	P	H
		7356	40.89	-33.11	74	49.42	35.6	13.88	58.01	100	0	P	H
													H
													H
		4904	40.42	-33.58	74	53.67	34.25	11.37	58.87	100	0	P	V
		7356	42.22	-31.78	74	50.75	35.6	13.88	58.01	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 802.11b (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
2.4GHz 802.11b LF		30	28.46	-11.54	40	32.74	26	1.07	31.35			P	H
		106.41	22.62	-20.88	43.5	35.56	17.03	1.55	31.52			P	H
		240.06	27.63	-18.37	46	38.87	18.09	2.07	31.4			P	H
		659.8	31.5	-14.5	46	32.69	26	3.57	30.76			P	H
		780.2	34.85	-11.15	46	34.07	27.5	3.9	30.62	100	0	P	H
		899.9	34.22	-11.78	46	31.59	29	4.17	30.54			P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
Remark	1.	No other spurious found.											
	2.	All results are PASS against limit line.											



## Emission below 1GHz

## 2.4GHz WIFI 802.11g (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
2.4GHz 802.11g LF		30.27	27.03	-12.97	40	31.31	26	1.07	31.35			P	H
		106.14	23.97	-19.53	43.5	37	16.94	1.55	31.52			P	H
		300	27.5	-18.5	46	36.65	19.8	2.32	31.27			P	H
		659.8	33.15	-12.85	46	34.34	26	3.57	30.76			P	H
		780.2	35.83	-10.17	46	35.05	27.5	3.9	30.62	100	0	P	H
		899.9	35.6	-10.4	46	32.97	29	4.17	30.54			P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
													H
Remark	1.	No other spurious found.											
	2.	All results are PASS against limit line.											



## Emission below 1GHz

## 2.4GHz WIFI 802.11ac VHT20 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
2.4GHz 802.11ac VHT20 LF		30	27.03	-12.97	40	31.31	26	1.07	31.35			P	H
		127.74	21.77	-21.73	43.5	33.51	18.22	1.55	31.51			P	H
		240.06	29.19	-16.81	46	40.43	18.09	2.07	31.4			P	H
		419.7	28.26	-17.74	46	34.05	22.68	2.67	31.14			P	H
		659.8	32.02	-13.98	46	33.21	26	3.57	30.76			P	H
		780.2	35.61	-10.39	46	34.83	27.5	3.9	30.62	100	0	P	H
													H
													H
													H
													H
													H
													H
													H
													H
													H
Remark	1.	No other spurious found.											
	2.	All results are PASS against limit line.											



## Emission below 1GHz

## 2.4GHz WIFI 802.11ac VHT40 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	(dB $\mu$ V)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
2.4GHz 802.11ac VHT40 LF		30.27	28.5	-11.5	40	32.78	26	1.07	31.35			P	H
		106.41	23.7	-19.8	43.5	36.64	17.03	1.55	31.52			P	H
		240.06	26.56	-19.44	46	37.8	18.09	2.07	31.4			P	H
		540.1	29.08	-16.92	46	32.26	24.52	3.24	30.94			P	H
		780.2	35.53	-10.47	46	34.75	27.5	3.9	30.62	100	0	P	H
		899.9	34.35	-11.65	46	31.72	29	4.17	30.54			P	H
													H
													H
													H
													H
													H
													H
													H
													H
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 or Average</b>
H/V	<b>Horizontal or 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+2		( MHz )	( dB $\mu$ V/m )	( dB )	( dB $\mu$ V/m )	( dB $\mu$ V )	( dB/m )	( dB )	( dB )	( cm )	( deg )	( P/A )	( H/V )
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

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

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$2. \text{ Over Limit(dB)} = \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

#### For Peak Limit @ 2390MHz:

$$1. \text{ Level(dB}\mu\text{V/m)}$$

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$= 32.22(\text{dB/m}) + 4.58(\text{dB}) + 54.51(\text{dB}\mu\text{V}) - 35.86 (\text{dB})$$

$$= 55.45 (\text{dB}\mu\text{V/m})$$

$$2. \text{ Over Limit(dB)}$$

$$= \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

$$= 55.45(\text{dB}\mu\text{V/m}) - 74(\text{dB}\mu\text{V/m})$$

$$= -18.55(\text{dB})$$

#### For Average Limit @ 2390MHz:

$$1. \text{ Level(dB}\mu\text{V/m)}$$

$$= \text{Antenna Factor(dB/m)} + \text{Cable Loss(dB)} + \text{Read Level(dB}\mu\text{V)} - \text{Preamp Factor(dB)}$$

$$= 32.22(\text{dB/m}) + 4.58(\text{dB}) + 42.6(\text{dB}\mu\text{V}) - 35.86 (\text{dB})$$

$$= 43.54 (\text{dB}\mu\text{V/m})$$

$$2. \text{ Over Limit(dB)}$$

$$= \text{Level(dB}\mu\text{V/m)} - \text{Limit Line(dB}\mu\text{V/m)}$$

$$= 43.54(\text{dB}\mu\text{V/m}) - 54(\text{dB}\mu\text{V/m})$$

$$= -10.46(\text{dB})$$

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



## Appendix C. Radiated Spurious Emission Plots

### Note symbol

-L	Low channel location
-R	High channel location



## 2.4GHz 2400~2483.5MHz

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

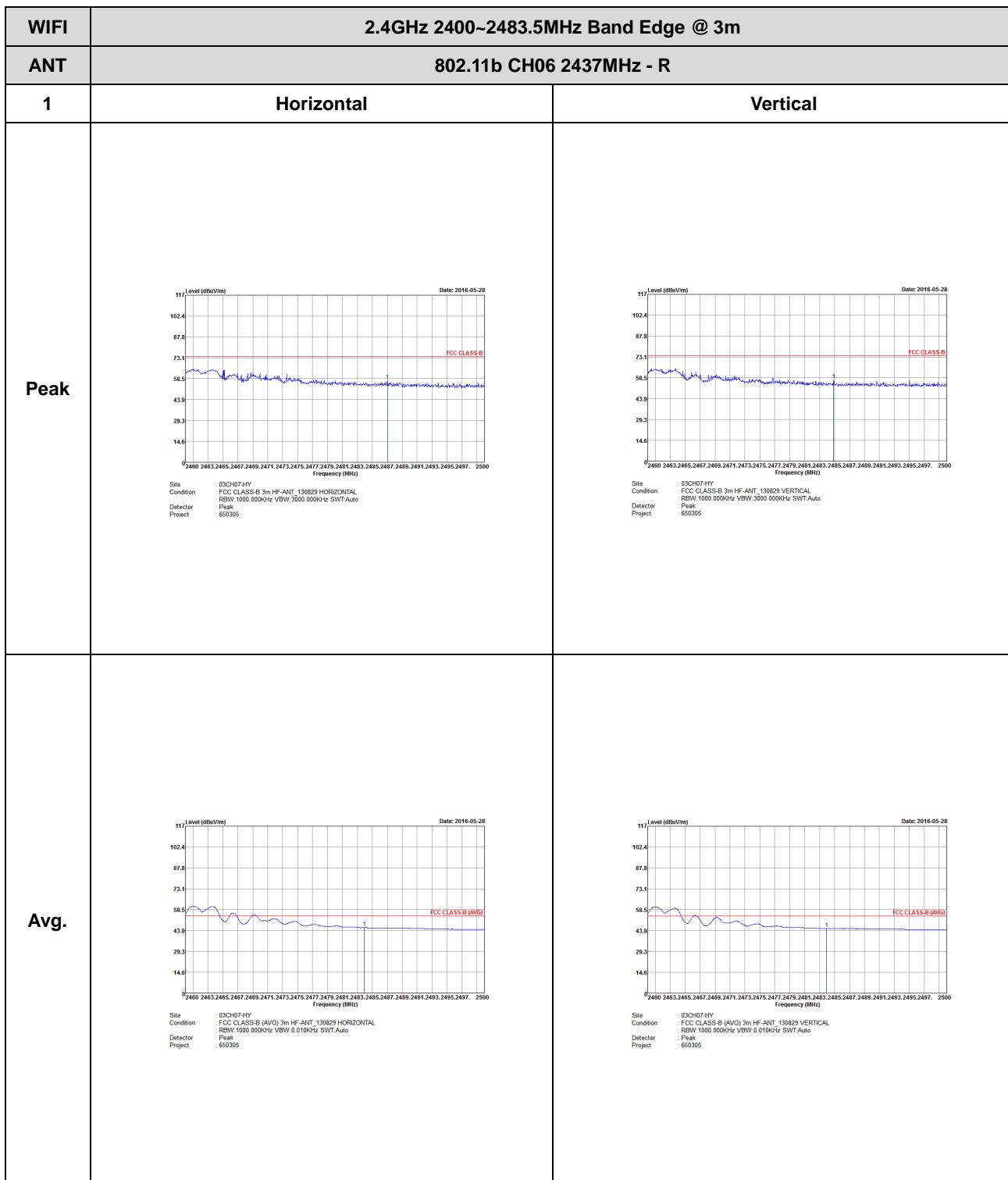
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 650305	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 650305
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 650305	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 650305



WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT 136829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT 136829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector: Peak Project: 650305
Avg.	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT 136829 HORIZONTAL RBW:1000.000KHz VBW:0.019KHz SWT:Auto Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT 136829 VERTICAL RBW:1000.000KHz VBW:0.019KHz SWT:Auto Detector: Peak Project: 650305

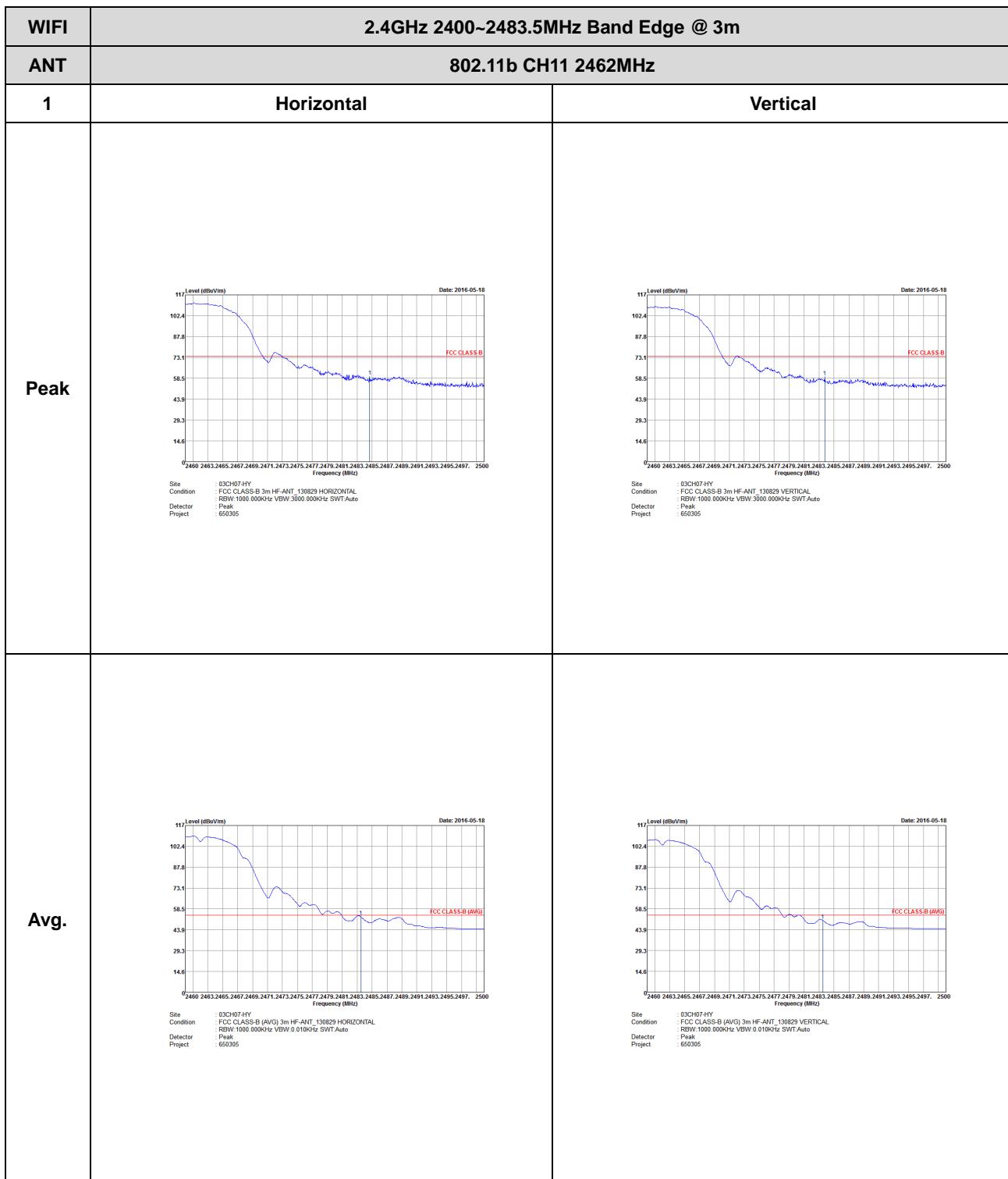


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Vertical
Peak	<p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : 650305</p>	<p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : 650305</p>
Avg.	<p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : 650305</p>	<p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : 650305</p>





WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak	 Site Condition : 03CH07-HY FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 650305	 Site Condition : 03CH07-HY FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 650305
Avg.	 Site Condition : 03CH07-HY FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:0.019KHz SWT:Auto Detector : Peak Project : 650305	 Site Condition : 03CH07-HY FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:0.019KHz SWT:Auto Detector : Peak Project : 650305





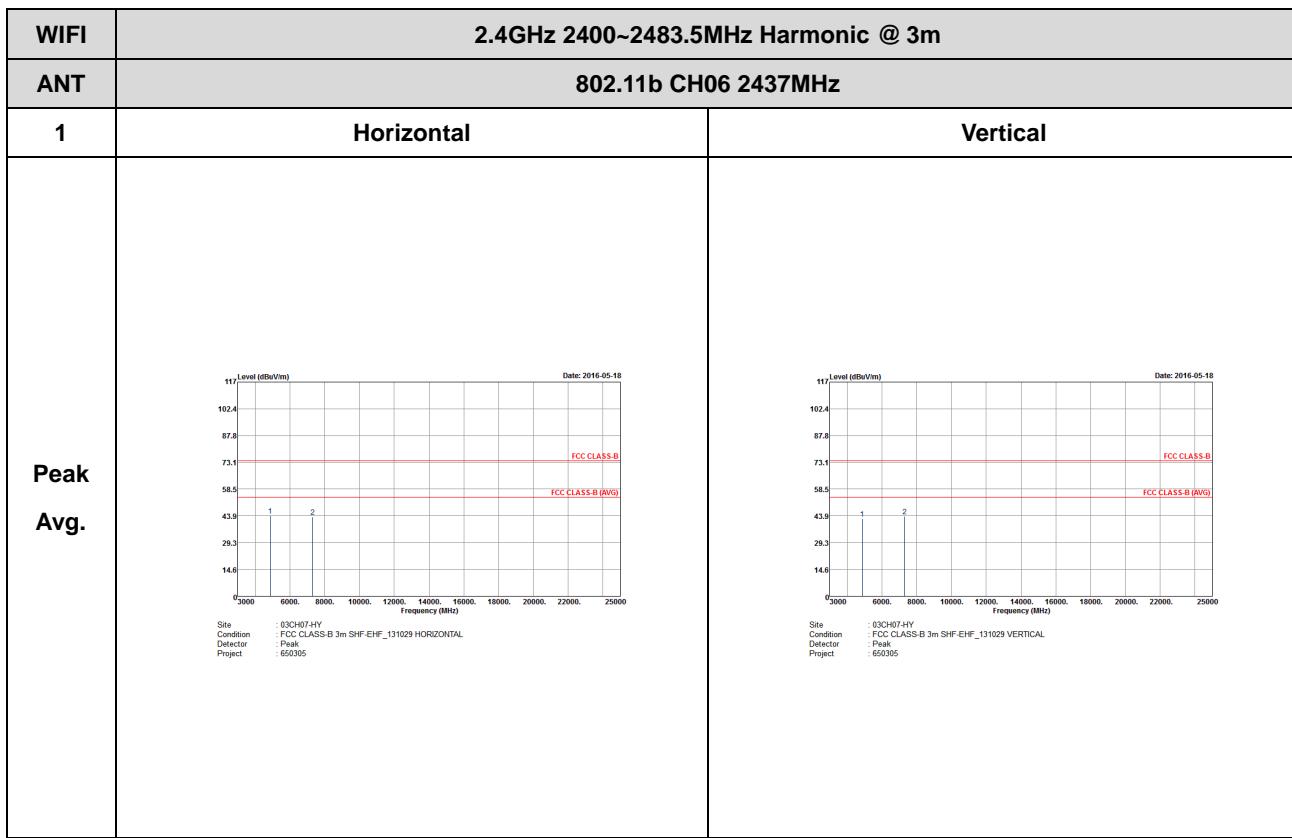
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT 136829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT 136829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector: Peak Project: 650305
Avg.	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT 136829 HORIZONTAL RBW:1000.000KHz VBW:0.019KHz SWT:Auto Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT 136829 VERTICAL RBW:1000.000KHz VBW:0.019KHz SWT:Auto Detector: Peak Project: 650305



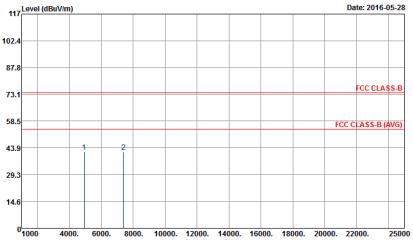
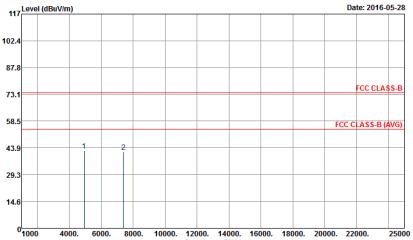
## 2.4GHz 2400~2483.5MHz

## WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Level (dBuV/m) vs Frequency (MHz). The plot shows a sharp peak at 2412MHz (labeled '1') reaching approximately 111 dBuV/m. A second peak is visible at 5.4GHz (labeled '2'). Reference lines indicate FCC CLASS-B (73.1 dBuV/m) and FCC CLASS-B (AVO) (58.5 dBuV/m). The plot is dated 2016-05-28.</p> <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 650305</p>	<p>Level (dBuV/m) vs Frequency (MHz). The plot shows a sharp peak at 2412MHz (labeled '1') reaching approximately 111 dBuV/m. A second peak is visible at 5.4GHz (labeled '2'). Reference lines indicate FCC CLASS-B (73.1 dBuV/m) and FCC CLASS-B (AVO) (58.5 dBuV/m). The plot is dated 2016-05-28.</p> <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 650305</p>



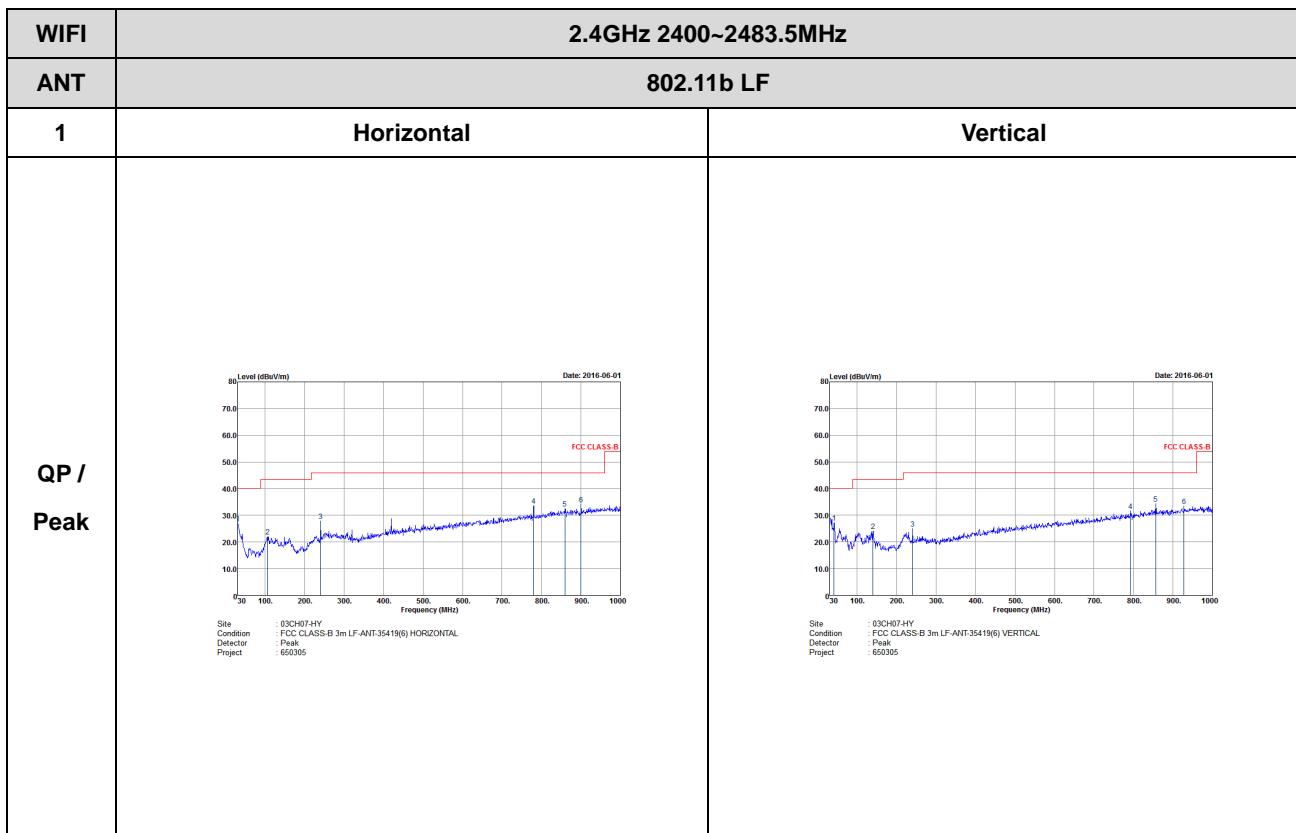


WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH11 2462MHz	
1	Horizontal	Vertical
Peak Avg.	 <p>Level (dBm/m) vs Frequency (MHz) Date: 2016-05-28</p> <p>117 102.4 87.8 73.1 58.5 43.9 29.3 14.6 0</p> <p>1000 4000 6000 8000 10000 12000 14000 16000 18000 20000 22000 25000</p> <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 650305</p>	 <p>Level (dBm/m) vs Frequency (MHz) Date: 2016-05-28</p> <p>117 102.4 87.8 73.1 58.5 43.9 29.3 14.6 0</p> <p>1000 4000 6000 8000 10000 12000 14000 16000 18000 20000 22000 25000</p> <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 650305</p>



## Emission below 1GHz

## 2.4GHz WIFI 802.11b (LF)



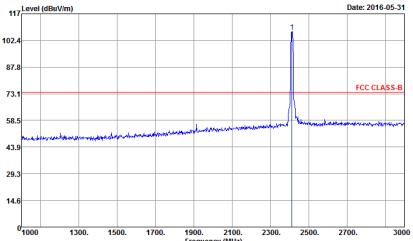
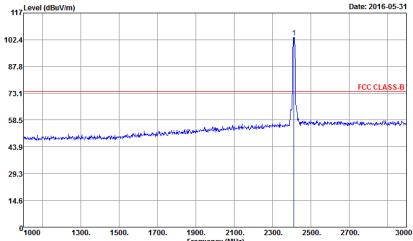
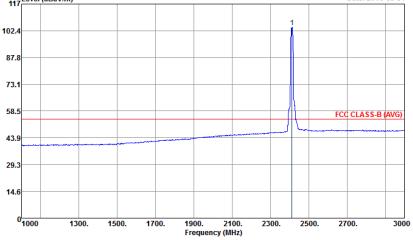
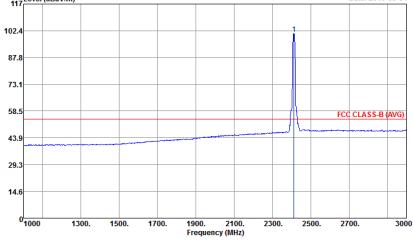


## 2.4GHz 2400~2483.5MHz

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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
2	Horizontal	Vertical
Peak	<p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWF:Auto Detector : Peak Project : 650305</p>	<p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWF:Auto Detector : Peak Project : 650305</p>
Avg.	<p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWF:Auto Detector : Peak Project : 650305</p>	<p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWF:Auto Detector : Peak Project : 650305</p>

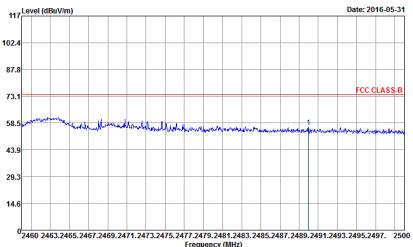
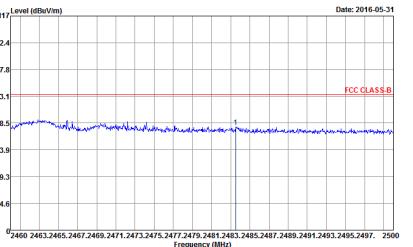
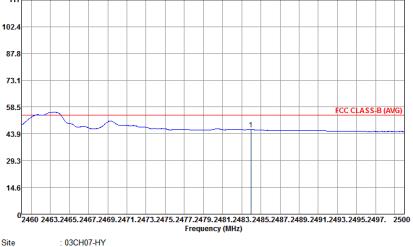


WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11b CH01 2412MHz	
2	Horizontal	Vertical
Peak	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_138029 HORIZONTAL RBW : 1000.000KHz VBW : 3000.000KHz SWT:Auto Detector : Peak Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_138029 VERTICAL RBW : 1000.000KHz VBW : 3000.000KHz SWT:Auto Detector : Peak Project : 650305</p>
Avg.	 <p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_138029 HORIZONTAL RBW : 1000.000KHz VBW : 0.019KHz SWT:Auto Detector : Peak Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_138029 VERTICAL RBW : 1000.000KHz VBW : 0.019KHz SWT:Auto Detector : Peak Project : 650305</p>

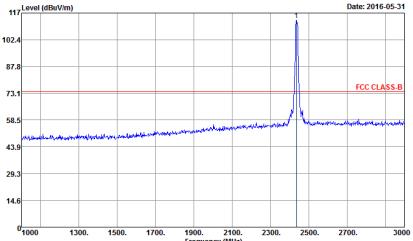
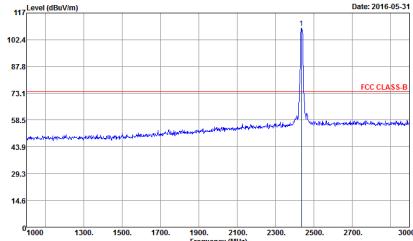
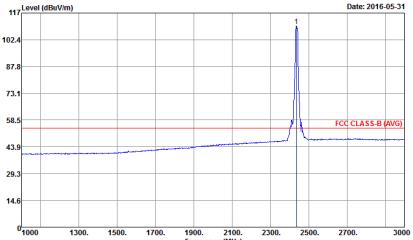
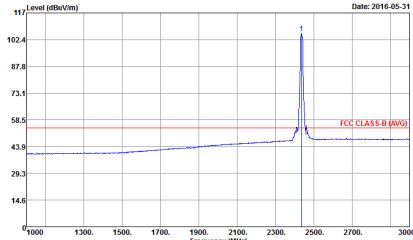


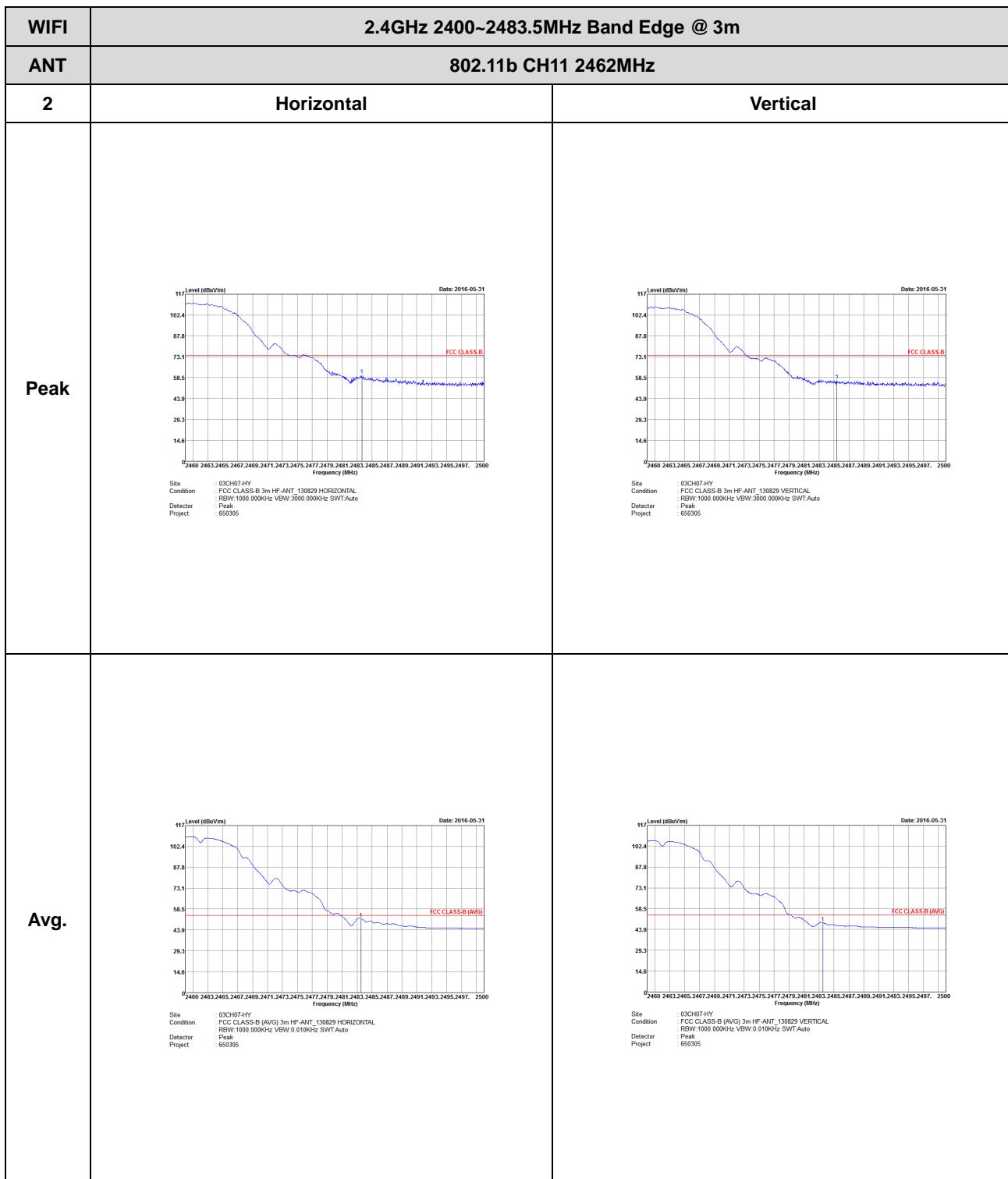
WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
2	Horizontal	Vertical
Peak	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : RBW-1000.000KHz VBW-3000.000KHz SWT-Auto Project : 650305	 Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : RBW-1000.000KHz VBW-3000.000KHz SWT-Auto Project : 650305
Avg.	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : RBW-1000.000KHz VBW 0.010KHz SWT-Auto Project : 650305	 Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : RBW-1000.000KHz VBW 0.010KHz SWT-Auto Project : 650305

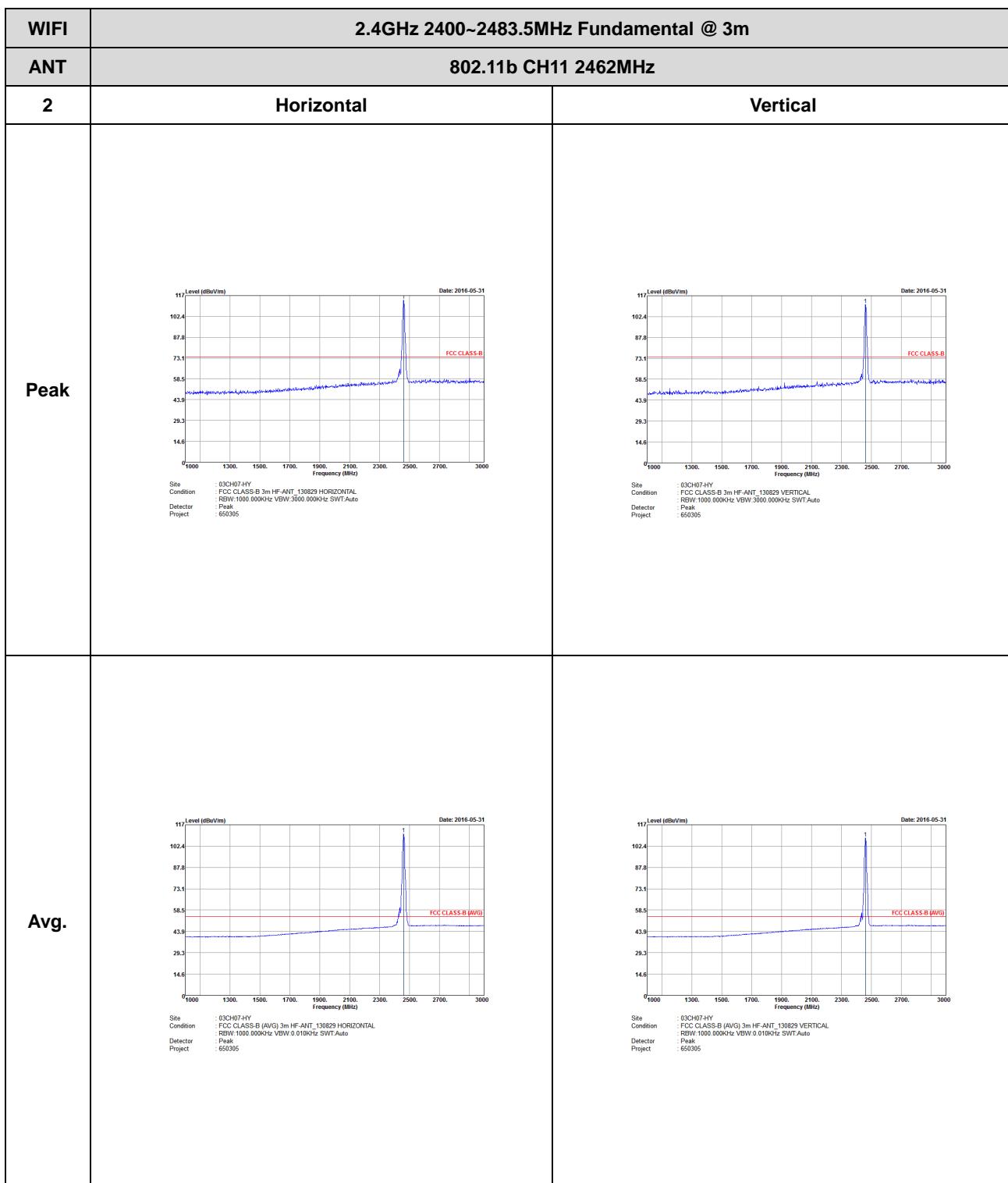


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
2	Horizontal	Vertical
Peak	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 650305</p>
Avg.	 <p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Project : 650305</p>



WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11b CH06 2437MHz	
2	Horizontal	Vertical
Peak	 <p>Site : 03CH074-HY Condition : FCC CLASS-B 3m HF-ANT_138029 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWF:Auto Detector : Peak Project : 650305</p>	 <p>Site : 03CH074-HY Condition : FCC CLASS-B 3m HF-ANT_138029 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWF:Auto Detector : Peak Project : 650305</p>
Avg.	 <p>Site : 03CH074-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_138029 HORIZONTAL RBW:1000.000KHz VBW:0.016KHz SWF:Auto Detector : Peak Project : 650305</p>	 <p>Site : 03CH074-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_138029 VERTICAL RBW:1000.000KHz VBW:0.016KHz SWF:Auto Detector : Peak Project : 650305</p>

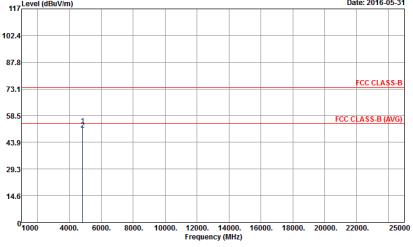
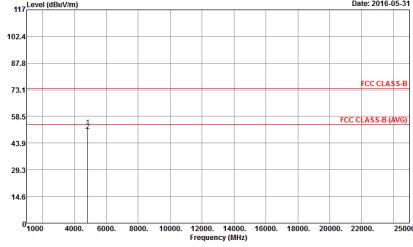


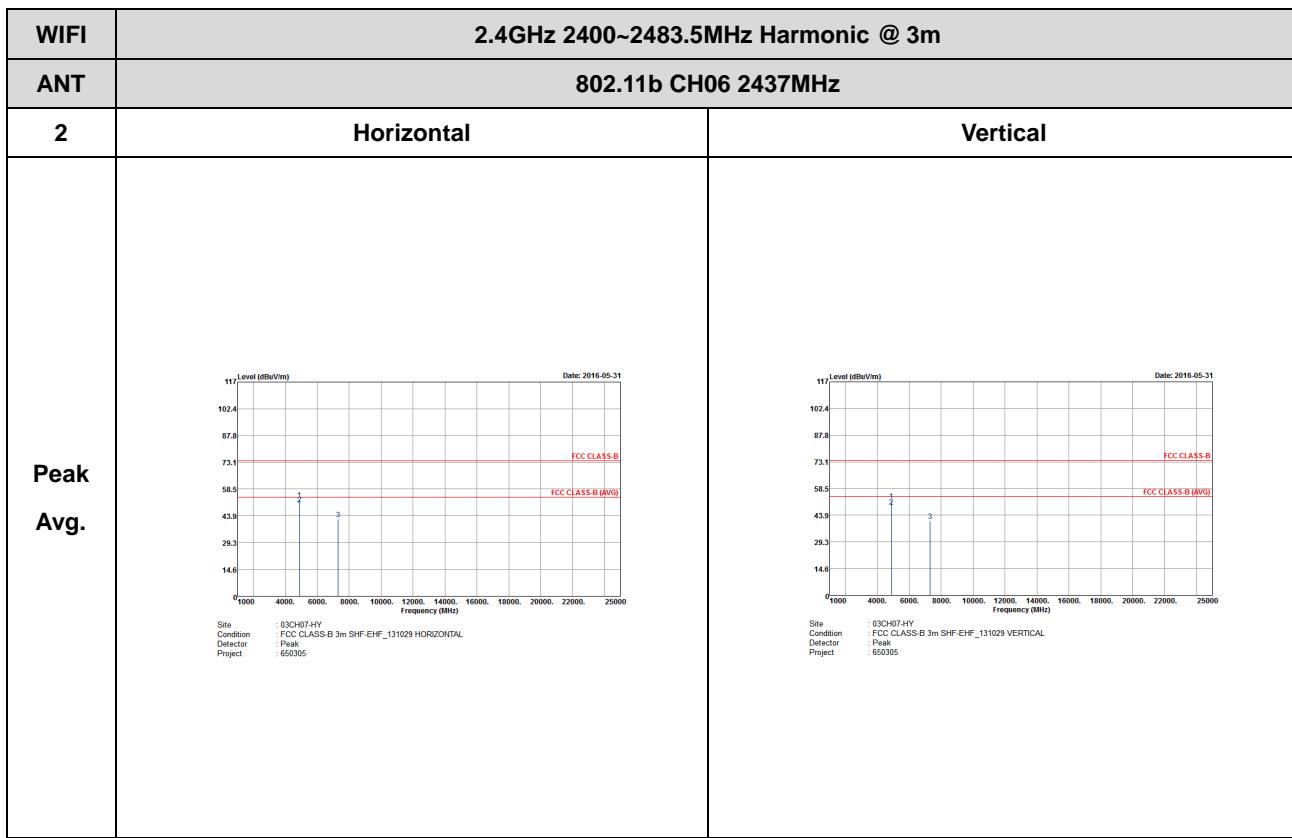


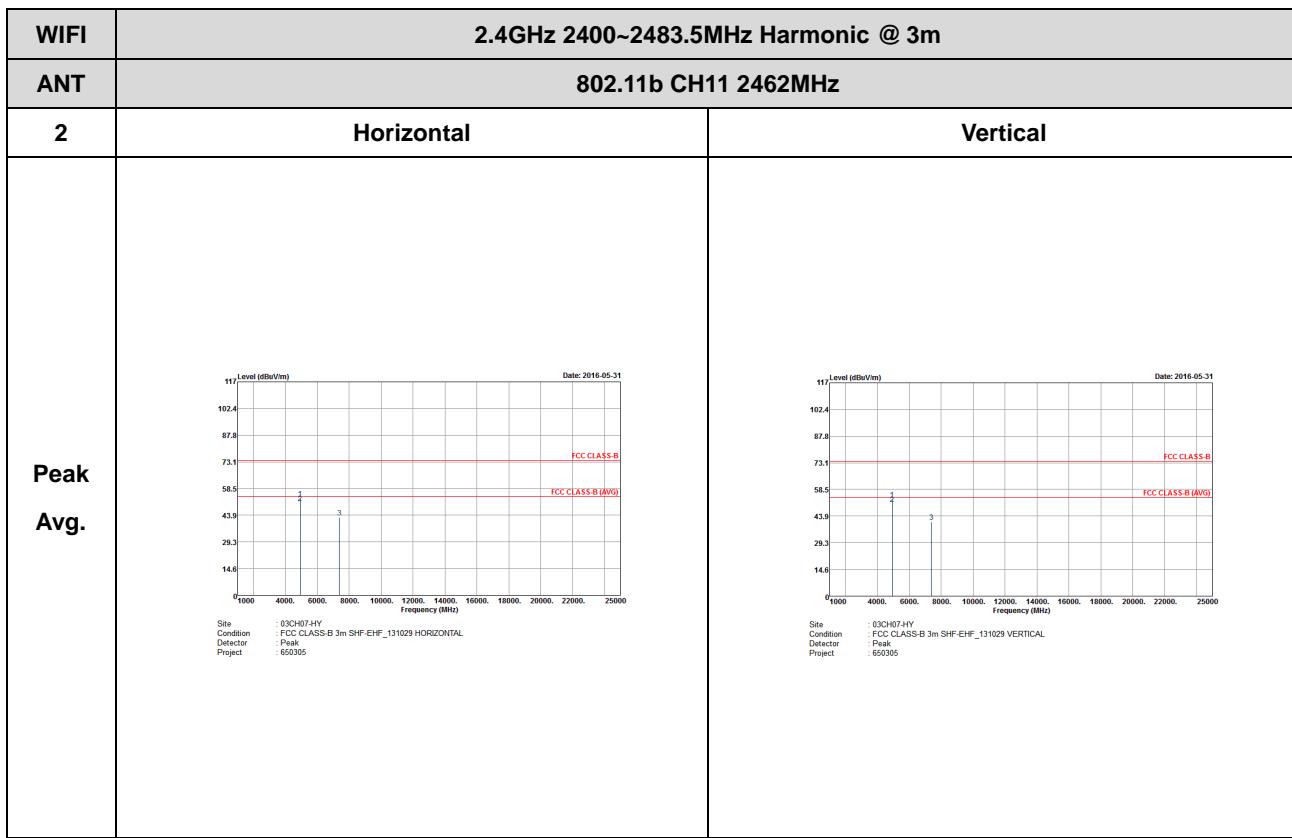


## 2.4GHz 2400~2483.5MHz

## WIFI 802.11b (Harmonic @ 3m)

<b>WIFI</b>	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
<b>ANT</b>	802.11b CH01 2412MHz	
<b>2</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak</b> <b>Avg.</b>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 HORIZONTAL Detector : Peak Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m SHF-EHF_131029 VERTICAL Detector : Peak Project : 650305</p>



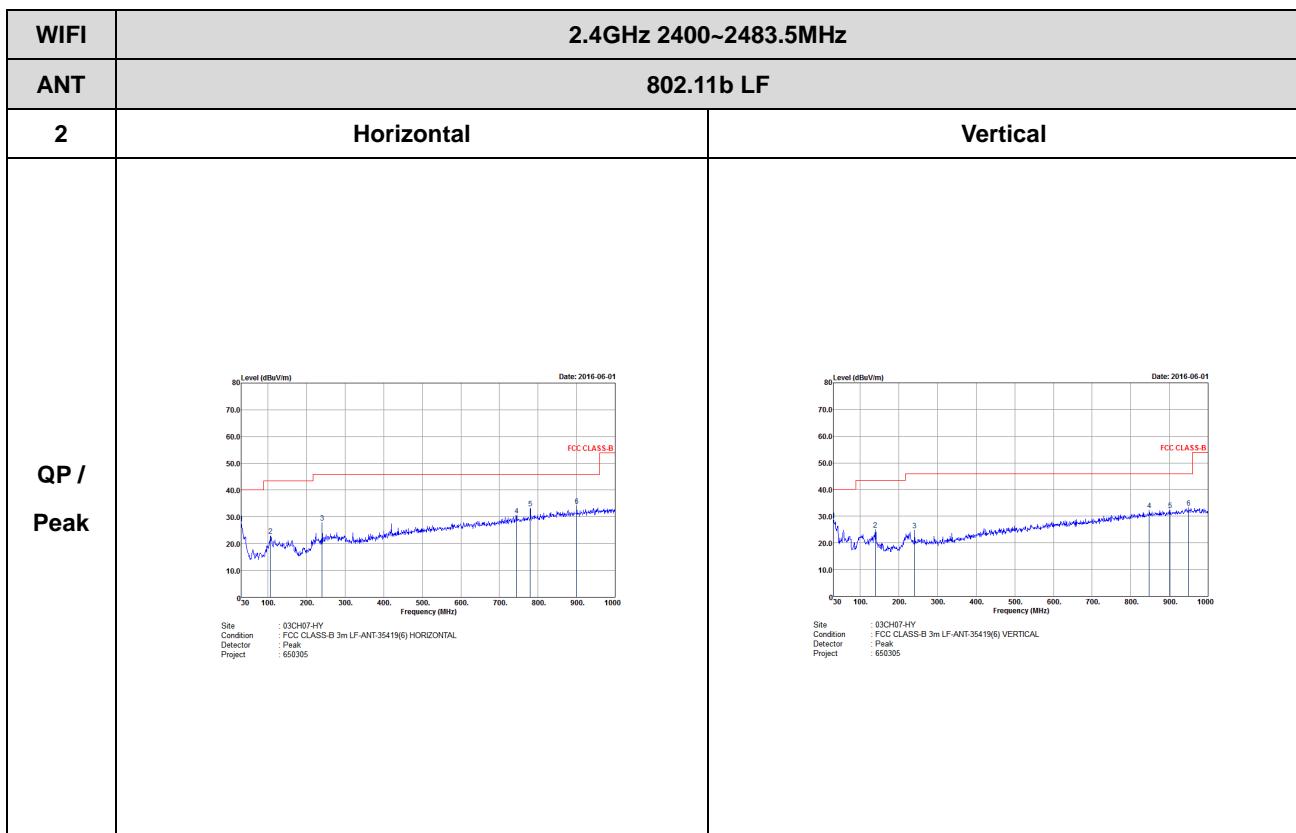




## 2.4GHz 2400~2483.5MHz

## Emission below 1GHz

## 2.4GHz WIFI 802.11b (LF)



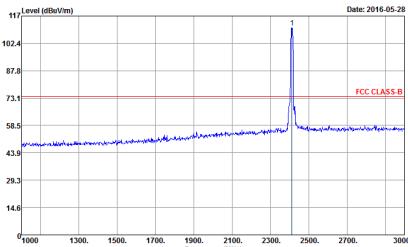
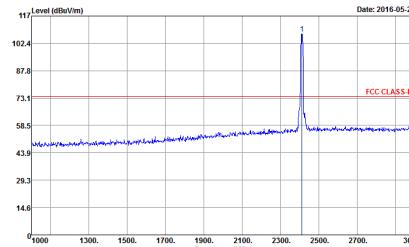
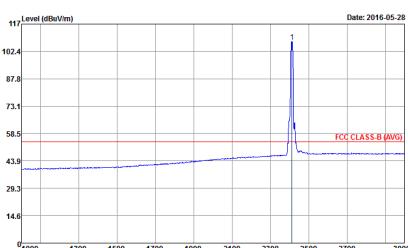
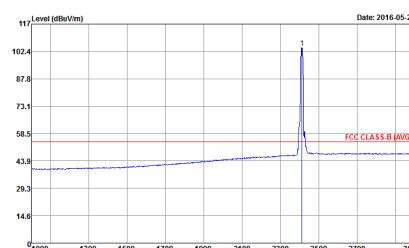


## 2.4GHz 2400~2483.5MHz

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

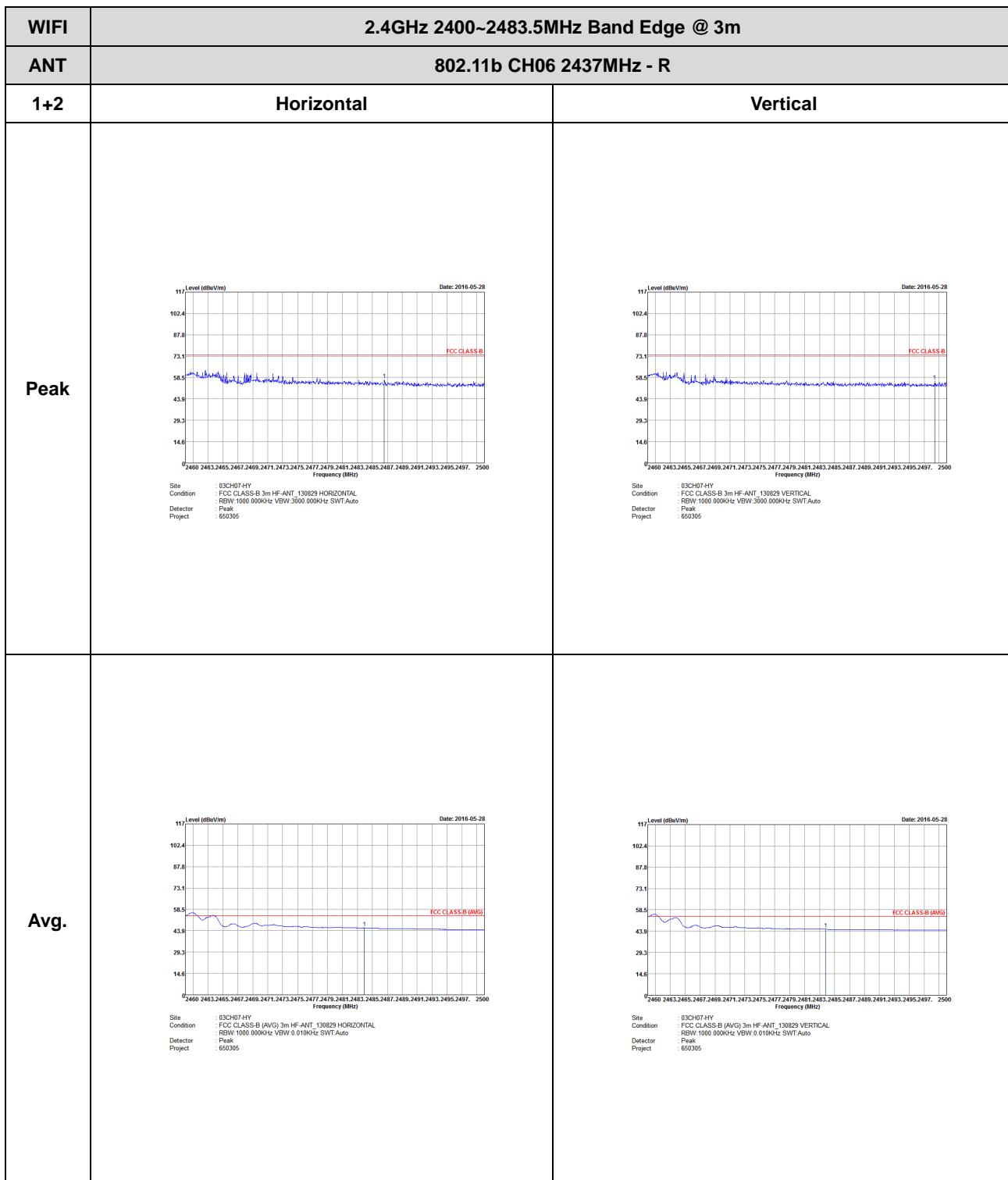
<b>WIFI</b>	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
<b>ANT</b>	802.11b CH01 2412MHz	
<b>1+2</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak</b>	<p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_138829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector: Peak Project: 650305</p>	<p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_138829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector: Peak Project: 650305</p>
<b>Avg.</b>	<p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_138829 HORIZONTAL RBW:1000.009KHz VBW:0.019KHz SWT:Auto Detector: Peak Project: 650305</p>	<p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_138829 VERTICAL RBW:1000.000KHz VBW:0.019KHz SWT:Auto Detector: Peak Project: 650305</p>



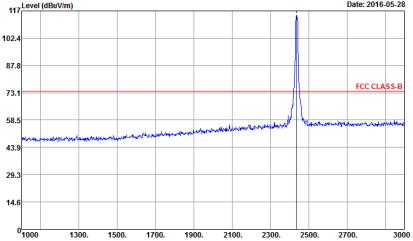
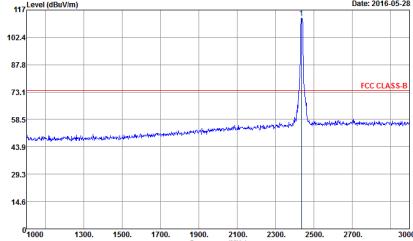
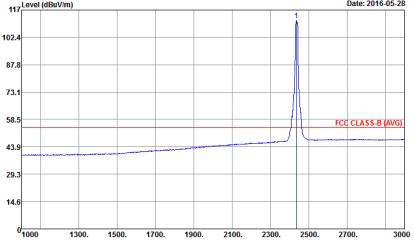
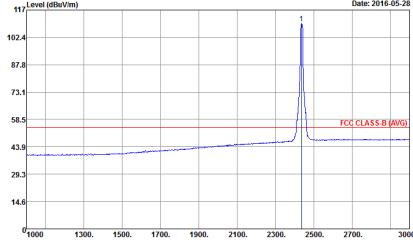
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11b CH01 2412MHz	
1+2	Horizontal	Vertical
Peak	 <p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWF:Auto Detector: Peak Project: 650305</p>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWF:Auto Detector: Peak Project: 650305</p>
Avg.	 <p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWF:Auto Detector: Peak Project: 650305</p>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWF:Auto Detector: Peak Project: 650305</p>

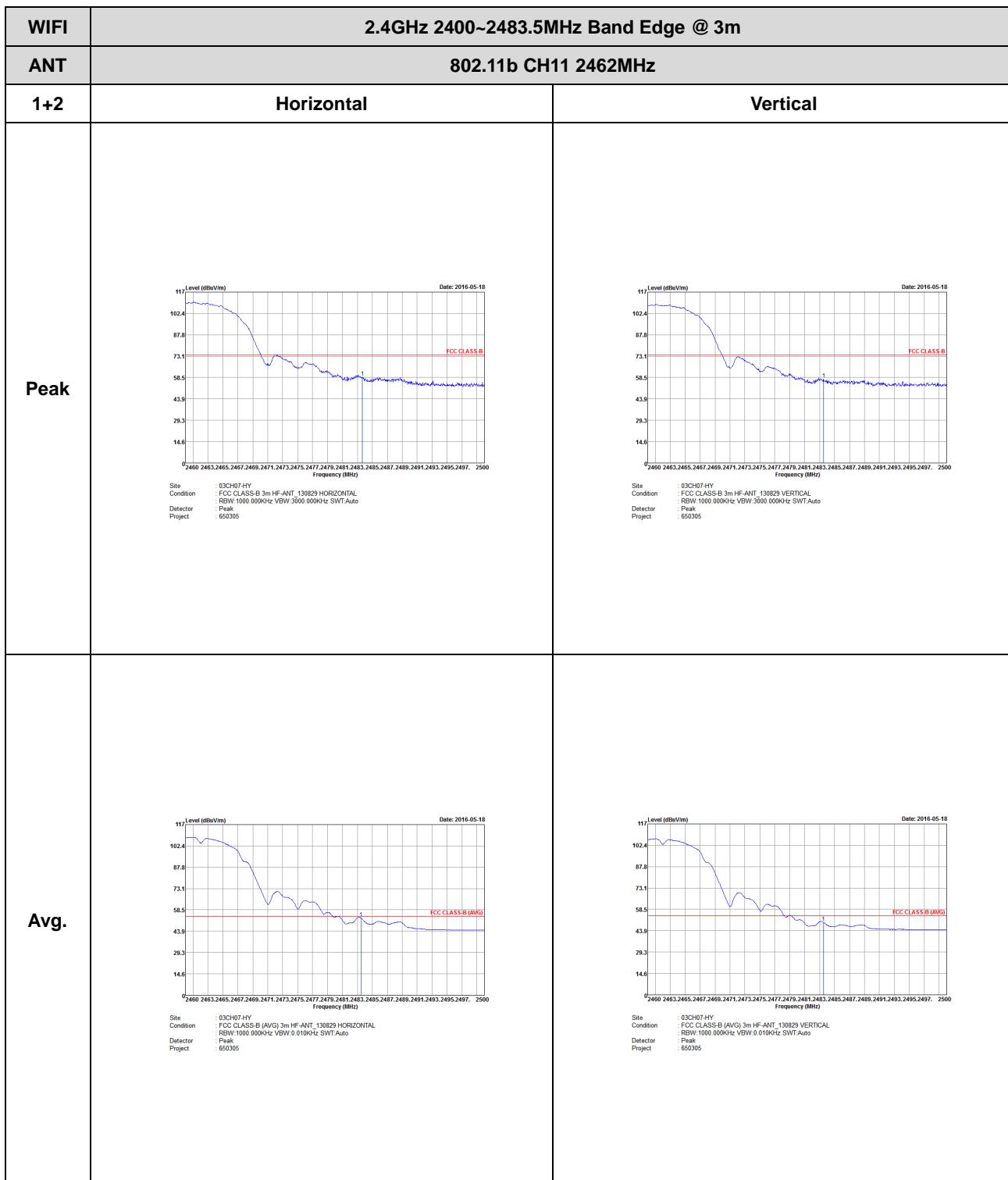


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1+2	Horizontal	Vertical
Peak	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_138829 HORIZONTAL Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_138829 VERTICAL Detector: Peak Project: 650305
Avg.	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_138829 HORIZONTAL Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_138829 VERTICAL Detector: Peak Project: 650305

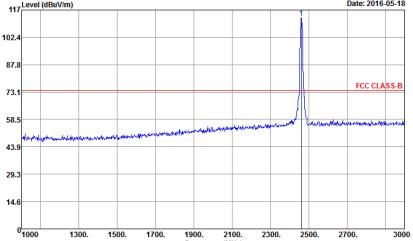
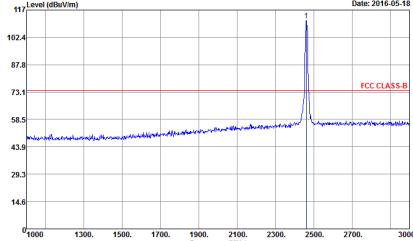
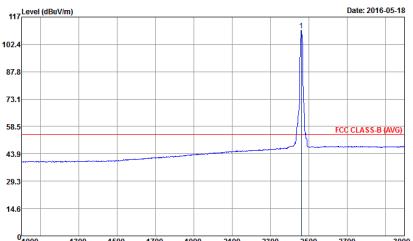
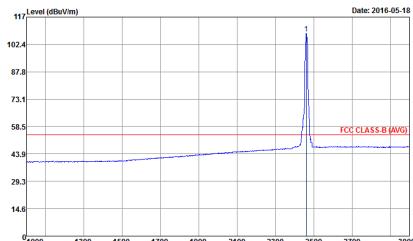




WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11b CH06 2437MHz	
1+2	Horizontal	Vertical
Peak	 <p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector: Peak Project: 650305</p>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector: Peak Project: 650305</p>
Avg.	 <p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector: Peak Project: 650305</p>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector: Peak Project: 650305</p>



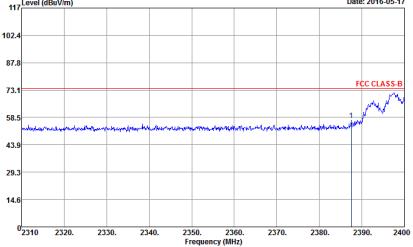
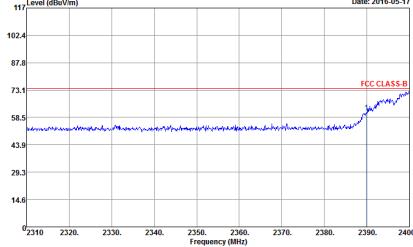
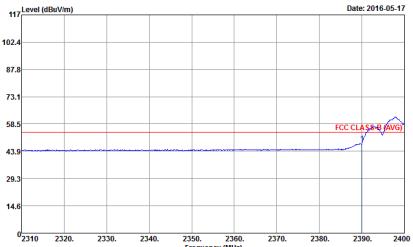
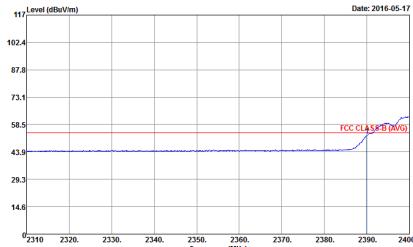


WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11b CH11 2462MHz	
1+2	Horizontal	Vertical
Peak	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWF:Auto Detector : Peak Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWF:Auto Detector : Peak Project : 650305</p>
Avg.	 <p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWF:Auto Detector : Peak Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:0.010KHz SWF:Auto Detector : Peak Project : 650305</p>

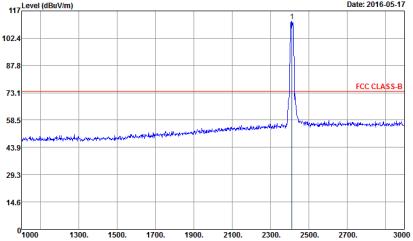
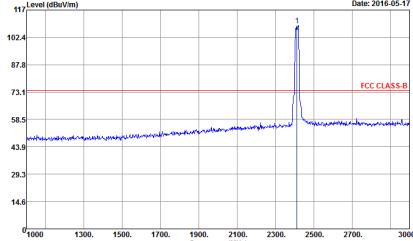
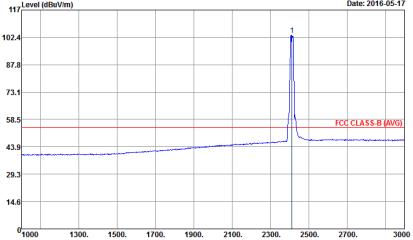
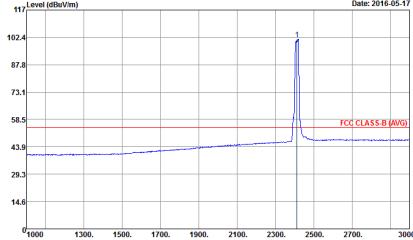


2.4GHz 2400~2483.5MHz

WIFI 802.11g (Band Edge @ 3m)

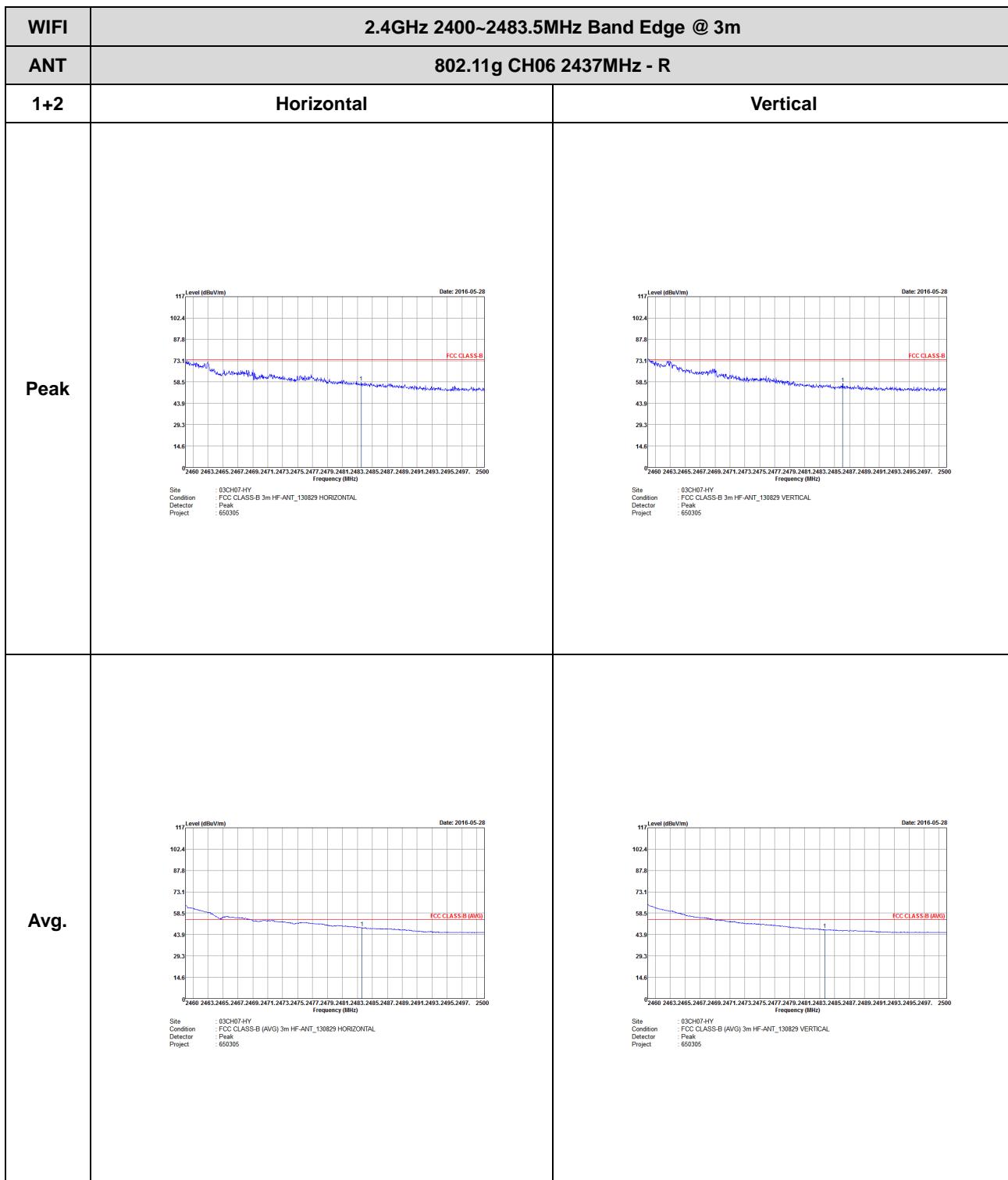
<b>WIFI</b>	<b>2.4GHz 2400~2483.5MHz Band Edge @ 3m</b>	
<b>ANT</b>	<b>802.11g CH01 2412MHz</b>	
<b>1+2</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak</b>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_138829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector: Peak Project: 650305</p>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_138829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector: Peak Project: 650305</p>
<b>Avg.</b>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_138829 HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector: Peak Project: 650305</p>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_138829 VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector: Peak Project: 650305</p>



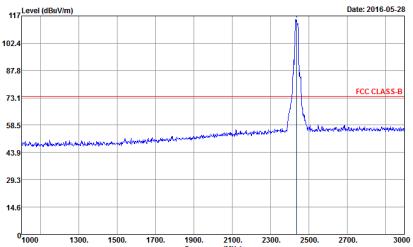
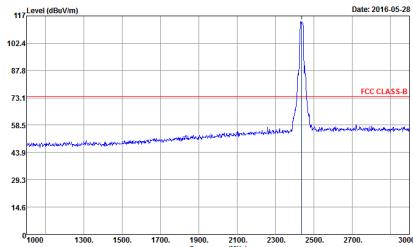
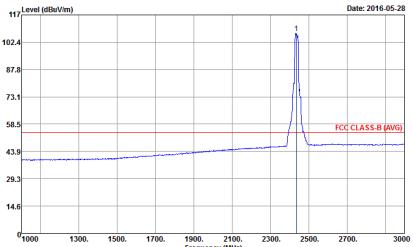
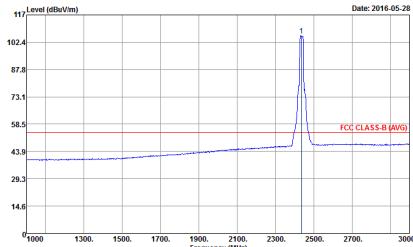
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11g CH01 2412MHz	
1+2	Horizontal	Vertical
Peak	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : 650305</p>
Avg.	 <p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : 650305</p>

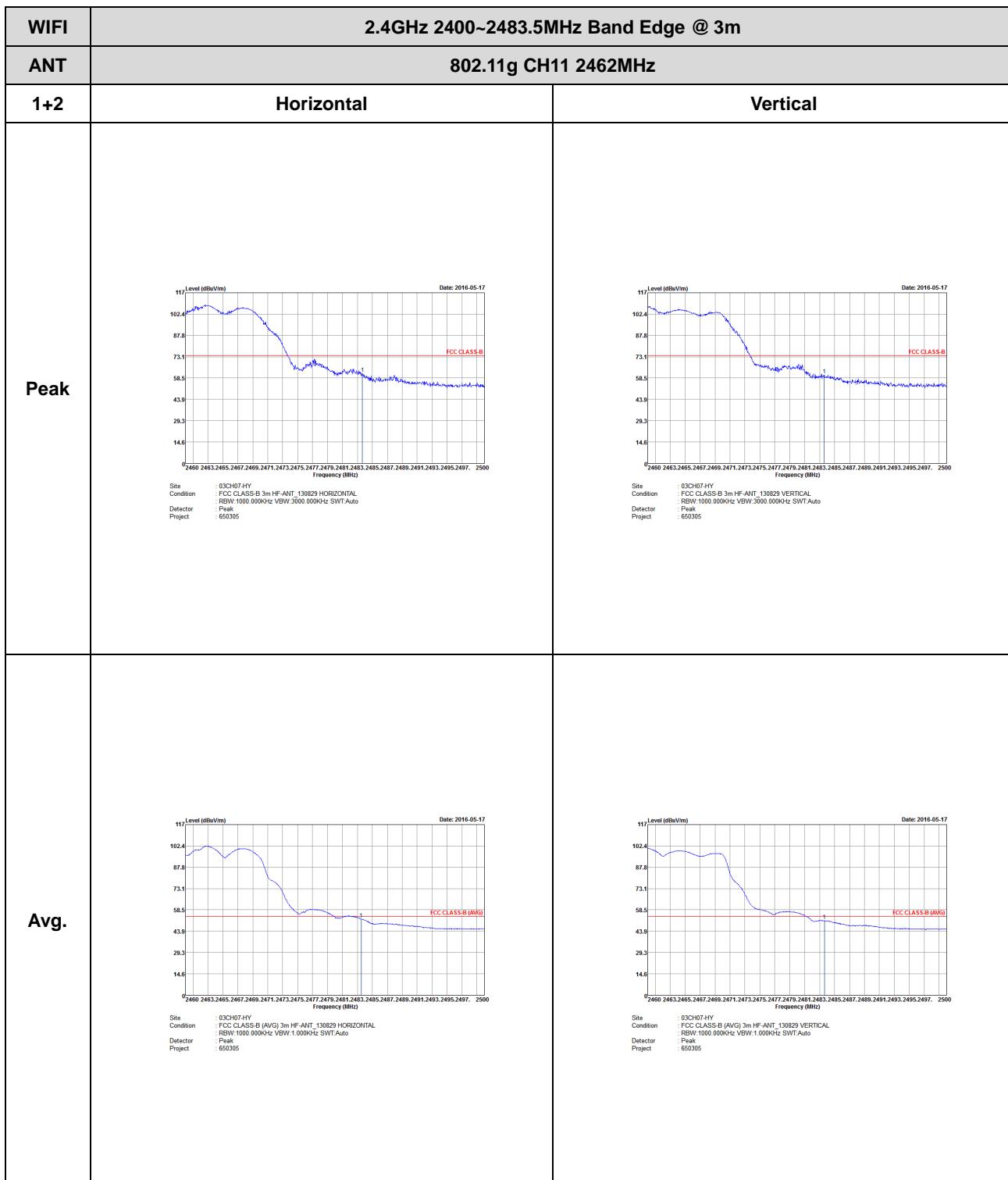


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH06 2437MHz - L	
1+2	Horizontal	Vertical
Peak	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector: Peak Project: 650305
Avg.	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector: Peak Project: 650305





WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11g CH06 2437MHz	
1+2	Horizontal	Vertical
Peak	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector : Peak Project : 650305</p>
Avg.	 <p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector : Peak Project : 650305</p>	 <p>Site : 03CH07-HY Condition : FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector : Peak Project : 650305</p>





WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11g CH11 2462MHz	
1+2	Horizontal	Vertical
Peak	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector: Peak Project: 650305
Avg.	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector: Peak Project: 650305

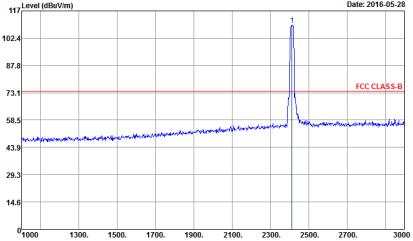
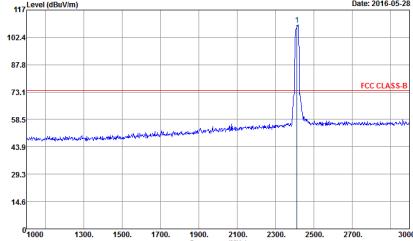
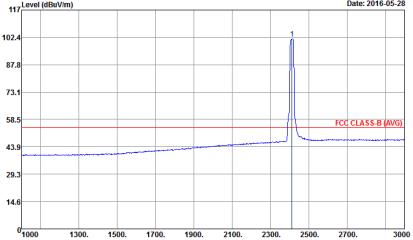
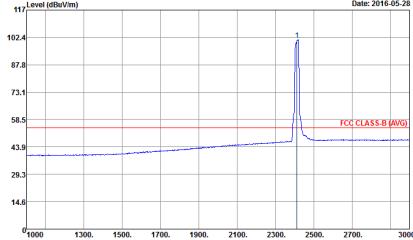


## 2.4GHz 2400~2483.5MHz

## WIFI 802.11ac VHT20 (Band Edge @ 3m)

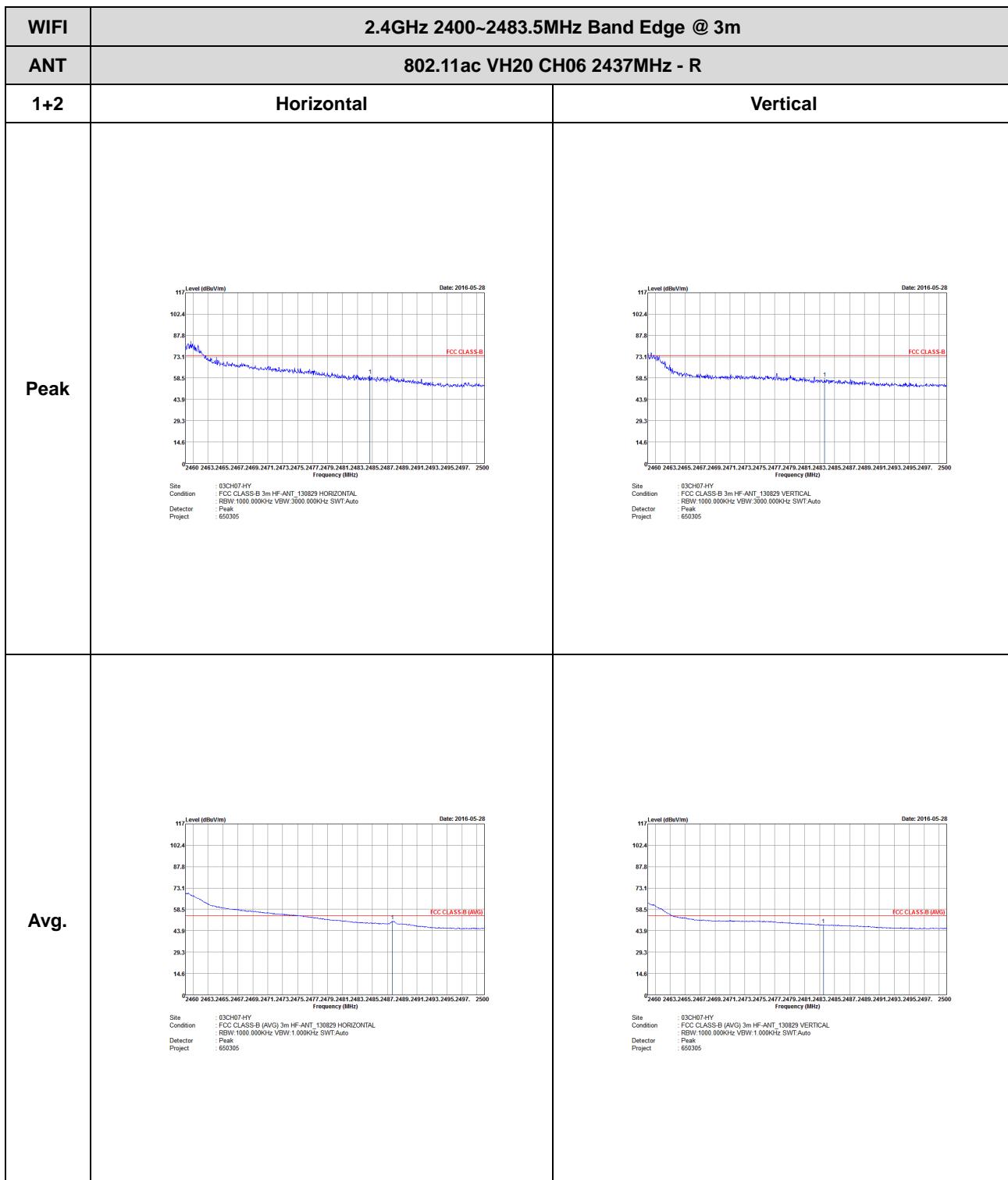
<b>WIFI</b>	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
<b>ANT</b>	802.11ac VHT20 CH01 2412MHz	
<b>1+2</b>	<b>Horizontal</b>	<b>Vertical</b>
<b>Peak</b>	<p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector: Peak Project: 650305</p>	<p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector: Peak Project: 650305</p>
<b>Avg.</b>	<p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector: Peak Project: 650305</p>	<p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector: Peak Project: 650305</p>



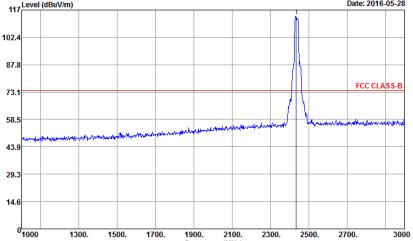
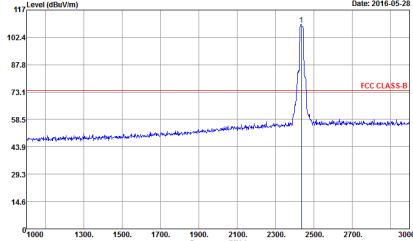
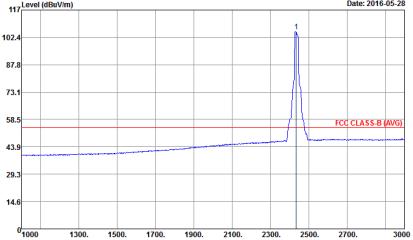
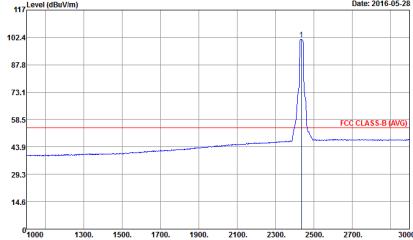
WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11ac VHT20 CH01 2412MHz	
1+2	Horizontal	Vertical
Peak	 <p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL Detector: Peak Project: 650305</p>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 VERTICAL Detector: Peak Project: 650305</p>
Avg.	 <p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL Detector: Peak Project: 650305</p>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL Detector: Peak Project: 650305</p>



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11ac VHT20 CH06 2437MHz - L	
1+2	Horizontal	Vertical
Peak	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_138829 HORIZONTAL Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_138829 VERTICAL Detector: Peak Project: 650305
Avg.	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_138829 HORIZONTAL Detector: Peak Project: 650305	 Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_138829 VERTICAL Detector: Peak Project: 650305





WIFI	2.4GHz 2400~2483.5MHz Fundamental @ 3m	
ANT	802.11ac VH20 CH06 2437MHz	
1+2	Horizontal	Vertical
Peak	 <p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWF:Auto Detector: Peak Project: 650305</p>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWF:Auto Detector: Peak Project: 650305</p>
Avg.	 <p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWF:Auto Detector: Peak Project: 650305</p>	 <p>Site: 03CH07-HY Condition: FCC CLASS-B (AVG) 3m HF-ANT_130829 VERTICAL RBW:1000.000KHz VBW:1.000KHz SWF:Auto Detector: Peak Project: 650305</p>

