

# Variant FCC RF Test Report

**APPLICANT** : Motorola Solutions, Inc.  
**EQUIPMENT** : Access Point, Radio Module 6  
**BRAND NAME** : Motorola  
**MODEL NAME** : AP-6  
**FCC ID** : UZ7AP6  
**STANDARD** : FCC Part 15 Subpart C §15.247  
**CLASSIFICATION** : Digital Transmission System (DTS)

This is a variant report which is only valid together with the original test report. The product was received on Jul. 14, 2011 and completely tested on Jul. 20, 2011. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.4-2003 and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:



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Jones Tsai / Manager



## **SPORTON INTERNATIONAL INC.**

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



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## REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR092308-07A	Rev. 01	This is a variant report. All the test cases were performed on original report which can be referred to Sporton Report NO.FR092308A.	Sep. 20, 2011
FR092308-07A	Rev. 02	Update report of revising Connection Diagram of Test System	Sep. 29, 2011

## SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(b)	A8.4	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.2	15.247(d)	A8.5	Transmitter Radiated Emission	15.209(a) & 15.247(d)	Pass	Under limit 9.48 dB at 11490.00 MHz
3.3	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-

# 1 General Description

## 1.1 Applicant

**Motorola Solutions, Inc.**

One Motorola Plaza, Holtsville, NY 11742-1300 USA

## 1.2 Manufacturer

**Motorola Solutions, Inc.**

One Motorola Plaza, Holtsville, NY 11742-1300 USA

## 1.3 Feature of Equipment Under Test

Product Feature & Specification	
<b>Equipment</b>	Access Point, Radio Module 6
<b>Brand Name</b>	Motorola
<b>Model Name</b>	AP-6
<b>FCC ID</b>	UZ7AP6
<b>Tx/Rx Frequency Range</b>	802.11b/g/n : 2400 MHz ~ 2483.5 MHz 802.11a/n : 5725 MHz ~ 5850 MHz
<b>Channel Spacing</b>	802.11b/g : 5 MHz 802.11a : 20 MHz
<b>Maximum Output Power to Antenna</b>	<2400 MHz ~ 2483.5 MHz> 802.11b : 29.31 dBm (0.8531 W) 802.11g : 29.77 dBm (0.9484 W) 802.11n (BW 20MHz) : 29.77 dBm (0.9484 W) 802.11n (BW 40MHz) : 29.64 dBm (0.9204 W) <5725 MHz ~ 5850 MHz> 802.11a : 29.56 dBm (0.9036 W) 802.11n (BW 20MHz) : 29.61 dBm (0.9141 W) 802.11n (BW 40MHz) : 29.59 dBm (0.9099 W)
<b>Antenna Gain</b>	802.11b/g/n : 3.00 dBi 802.11a/n : 6.00 dBi
<b>HW Version</b>	
<b>SW Version</b>	ART Rev 0.9 Build #16
<b>Type of Modulation</b>	802.11b : DSSS (BPSK / QPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)
<b>EUT Stage</b>	Production Unit

**Remark:**

1. For other wireless features of this EUT, test report will be issued separately.
2. This test report recorded only product characteristics and test results of Digital Transmission System (DTS).
3. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

**<Antenna Information>**

Type	Model Number	2.4GHz				
		Peak Gain	Cable Loss (external)	Cable Loss (internal)	Net Peak Gain	Note
PIFA_NCAP	NCAP PIFA	3	0	0	3	Antenna 4

Type	Model Number	5GHz				
		Peak Gain	Cable Loss (external)	Cable Loss (internal)	Net Peak Gain	Note
PIFA_NCAP	NCAP PIFA	6	0	0	6	Antenna 4

## 1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1 <sup>st</sup> Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978	
Test Site No.	Sporton Site No.	FCC/IC Registration No.
	TH02-HY / 03CH07HY	722060/4086B-1

## 1.5 Applied Standards

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

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 (Measurement Guidelines of DTS)
- ANSI C63.4-2003
- IC RSS-210 Issue 8

**Remark:**

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

## 1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	DC Power Supply	GW	GPC-60300	N/A	N/A	Unshielded, 1.8 m
2.	Notebook	DELL	Vostro 1510	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

## **2 Test Configuration of Equipment Under Test**

### **2.1 Test Mode**

The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 kHz to 30 MHz), radiated emission (30 MHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

Pre-scanned tests were conducted to determine the final configuration from all possible combinations.

#### **WORST-CASE CONFIGURATION AND MODE:**

The worst-case data rates are determined to be as follows for each mode, based on the investigations by measuring the average power, peak power and PPSD across all the data rates, bandwidths, modulations and spatial stream modes.

Thus all tests were made with following data rates:

802.11b mode, 20 MHz Channel Bandwidth, 1 Mb/s, CCK Modulation

802.11g mode, 20 MHz Channel Bandwidth, 6 Mb/s, OFDM Modulation

802.11a mode, 20 MHz Channel Bandwidth, 6 Mb/s, OFDM Modulation

802.11n HT20 mode, 20 MHz Channel Bandwidth, 6.5 Mb/s, OFDM Modulation

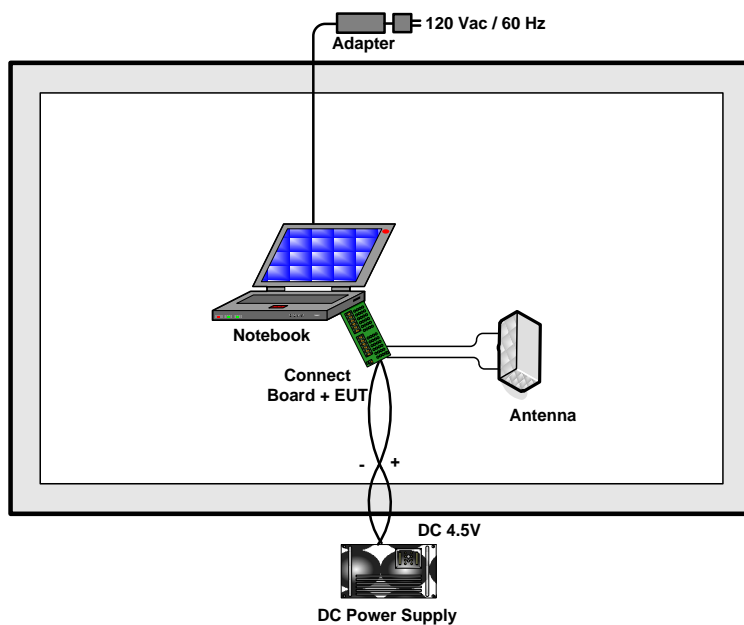
802.11n HT40 mode, 40 MHz Channel Bandwidth, 13.5 Mb/s, OFDM Modulation



The following table is showing the total pre-scanned test modes, and the worst modes are recorded in this report only.

Test Cases	
Test Item	802.11a/n (Modulation : OFDM)
Radiated TCs	Mode 1: 802.11a_CH149_5745 MHz (Chain A)
	Mode 2: 802.11a_CH157_5785 MHz (Chain A)
	Mode 3: 802.11a_CH165_5825 MHz (Chain A)
	Mode 4: 802.11a_CH149_5745 MHz (Chain B)
	Mode 5: 802.11a_CH157_5785 MHz (Chain B)
	Mode 6: 802.11a_CH165_5825 MHz (Chain B)
	Mode 7: 802.11a_CH149_5745 MHz (Chain A+B)
	Mode 8: 802.11a_CH157_5785 MHz (Chain A+B)
	Mode 9: 802.11a_CH165_5825 MHz (Chain A+B)
	Mode 10: 802.11n_CH149_5745 MHz (BW 20M, Chain A)
	Mode 11: 802.11n_CH157_5785 MHz (BW 20M, Chain A)
	Mode 12: 802.11n_CH165_5825 MHz (BW 20M, Chain A)
	Mode 13: 802.11n_CH149_5745 MHz (BW 20M, Chain B)
	Mode 14: 802.11n_CH157_5785 MHz (BW 20M, Chain B)
	Mode 15: 802.11n_CH165_5825 MHz (BW 20M, Chain B)
	Mode 16: 802.11n_CH149_5745 MHz (BW 20M, Chain A+B)
	Mode 17: 802.11n_CH157_5785 MHz (BW 20M, Chain A+B)
	Mode 18: 802.11n_CH165_5825 MHz (BW 20M, Chain A+B)
	Mode 19: 802.11n_CH151_5755 MHz (BW 40M, Chain A)
	Mode 20: 802.11n_CH159_5795 MHz (BW 40M, Chain A)
	Mode 21: 802.11n_CH151_5755 MHz (BW 40M, Chain B)
	Mode 22: 802.11n_CH159_5795 MHz (BW 40M, Chain B)
	Mode 23: 802.11n_CH151_5755 MHz (BW 40M, Chain A+B)
	Mode 24: 802.11n_CH159_5795 MHz (BW 40M, Chain A+B)

## 2.2 Connection Diagram of Test System



## 2.3 RF Utility

The programmed RF utility "ART", is installed in notebook to provide channel selection, power level, data rate and the application type. RF Utility can send transmitting signal for all testing. The EUT was set to the maximum obtainable power level and was tested at that power level.

### 3 Test Result

#### 3.1 Output Power Measurement

##### 3.1.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz and 5725-5850MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

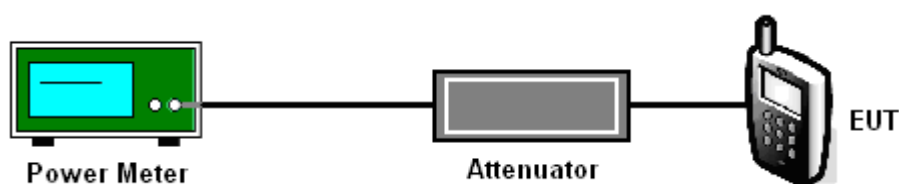
##### 3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

##### 3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
2. The RF output of EUT was connected to the power meter by a low loss cable.
3. Measure the power by power meter.

##### 3.1.4 Test Setup



**3.1.5 Test Result of Output Power**

<b>Test Mode :</b>	Mode 1, 2, 3	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11b (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	1	21	23.31	30	Pass
02	2417	1	21.5	23.80	30	Pass
06	2437	1	23.5	25.49	30	Pass
10	2457	1	22	24.33	30	Pass
11	2462	1	22	24.46	30	Pass

<b>Test Mode :</b>	Mode 1, 2, 3	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11b (Chain B) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	1	21.5	24.04	30	Pass
02	2417	1	21.5	24.25	30	Pass
06	2437	1	23.5	26.25	30	Pass
10	2457	1	21.5	24.06	30	Pass
11	2462	1	22	24.59	30	Pass

<b>Test Mode :</b>	Mode 1, 2, 3	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11b (Chain A+B) Measured Output Power (dBm)			Max. Limits (dBm)	Pass/Fail
				Chain A	Chain B	Total Power		
01	2412	1	19	22.01	22.11	25.07	30	Pass
02	2417	1	19	22.05	21.96	25.02	30	Pass
06	2437	1	23.5	26.22	26.37	29.31	30	Pass
10	2457	1	21	24.16	23.63	26.91	30	Pass
11	2462	1	21	23.88	23.96	26.93	30	Pass



<b>Test Mode :</b>	Mode 4, 5, 6	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11g (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	6	17.5	27.71	30	Pass
02	2417	6	19	28.32	30	Pass
06	2437	6	20.5	29.63	30	Pass
10	2457	6	18.5	28.44	30	Pass
11	2462	6	17.5	27.62	30	Pass

<b>Test Mode :</b>	Mode 4, 5, 6	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11g (Chain B) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	6	16.5	27.86	30	Pass
02	2417	6	18	28.99	30	Pass
06	2437	6	18.5	29.52	30	Pass
10	2457	6	18	28.21	30	Pass
11	2462	6	18	28.10	30	Pass

<b>Test Mode :</b>	Mode 4, 5, 6	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11g (Chain A+B) Measured Output Power (dBm)			Max. Limits (dBm)	Pass/Fail
				Chain A	Chain B	Total Power		
01	2412	6	14	26.70	26.50	29.61	30	Pass
02	2417	6	15	26.60	26.51	29.57	30	Pass
06	2437	6	15	26.53	26.41	29.48	30	Pass
10	2457	6	15	26.82	26.69	29.77	30	Pass
11	2462	6	15	26.26	26.33	29.31	30	Pass

<b>Test Mode :</b>	Mode 7, 8, 9	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n BW 20MHz (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	6	16	26.91	30	Pass
02	2417	6	18.5	28.85	30	Pass
06	2437	6	19.5	29.31	30	Pass
10	2457	6	18	28.68	30	Pass
11	2462	6	16	27.24	30	Pass

<b>Test Mode :</b>	Mode 7, 8, 9	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n BW 20MHz (Chain B) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	6	15.5	27.31	30	Pass
02	2417	6	17	28.55	30	Pass
06	2437	6	17.5	28.99	30	Pass
10	2457	6	18	28.62	30	Pass
11	2462	6	16.5	27.45	30	Pass

<b>Test Mode :</b>	Mode 7, 8, 9	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n BW 20MHz (Chain A+B) Measured Output Power (dBm)			Max. Limits (dBm)	Pass/Fail
				Chain A	Chain B	Total Power		
01	2412	6	14.5	26.54	26.88	29.72	30	Pass
02	2417	6	15	26.48	26.50	29.50	30	Pass
06	2437	6	15	26.51	26.66	29.60	30	Pass
10	2457	6	15	26.83	26.69	29.77	30	Pass
11	2462	6	15	25.83	26.03	28.94	30	Pass



<b>Test Mode :</b>	Mode 10, 11, 12	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n BW 40MHz (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
03	2422 MHz	13.5	12	24.64	30	Pass
04	2427 MHz	13.5	13	25.31	30	Pass
05	2432 MHz	13.5	15.5	27.84	30	Pass
06	2437 MHz	13.5	17	28.42	30	Pass
07	2442 MHz	13.5	16.5	28.04	30	Pass
08	2447 MHz	13.5	14.5	26.90	30	Pass
09	2452 MHz	13.5	14	26.68	30	Pass

<b>Test Mode :</b>	Mode 10, 11, 12	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11n BW 40MHz (Chain B) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
03	2422 MHz	13.5	13	25.27	30	Pass
04	2427 MHz	13.5	14.5	26.78	30	Pass
05	2432 MHz	13.5	15	27.84	30	Pass
06	2437 MHz	13.5	16	28.87	30	Pass
07	2442 MHz	13.5	14	27.12	30	Pass
08	2447 MHz	13.5	14.5	27.91	30	Pass
09	2452 MHz	13.5	13.5	25.39	30	Pass



<b>Test Mode :</b>	Mode 10, 11, 12	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Data Rate	Power Setting	802.11n BW 40MHz (Chain A+B) Measured Output Power (dBm)			Max. Limits (dBm)	Pass/Fail
				Chain A	Chain B	Total Power		
03	2422 MHz	13.5	10.5	23.05	23.80	26.45	30	Pass
04	2427 MHz	13.5	12	25.12	25.08	28.11	30	Pass
05	2432 MHz	13.5	14	26.79	26.40	29.61	30	Pass
06	2437 MHz	13.5	14	26.87	26.34	29.62	30	Pass
07	2442 MHz	13.5	14	26.97	26.27	29.64	30	Pass
08	2447 MHz	13.5	14	26.61	26.10	29.37	30	Pass
09	2452 MHz	13.5	11	23.47	23.45	26.47	30	Pass





<b>Test Mode :</b>	Mode 10, 11, 12	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11a (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
149	5745	6	21.5	26.64	30	Pass
157	5785	6	21.5	26.70	30	Pass
165	5825	6	21.5	26.68	30	Pass

<b>Test Mode :</b>	Mode 10, 11, 12	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11a (Chain B) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
149	5745	6	21.5	26.59	30	Pass
157	5785	6	21.5	26.56	30	Pass
165	5825	6	21.5	26.62	30	Pass

<b>Test Mode :</b>	Mode 10, 11, 12	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11a (Chain A+B) Measured Output Power (dBm)			Max. Limits (dBm)	Pass/Fail
				Chain A	Chain B	Total Power		
149	5745	6	21	26.46	26.35	29.42	30	Pass
157	5785	6	21	26.52	26.58	29.56	30	Pass
165	5825	6	21	26.22	26.41	29.33	30	Pass

<b>Test Mode :</b>	Mode 13, 14, 15	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11 BW 20MHz (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
149	5745	6.5	21.5	26.7	30	Pass
157	5785	6.5	21.5	26.81	30	Pass
165	5825	6.5	21.5	26.82	30	Pass

<b>Test Mode :</b>	Mode 13, 14, 15	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11 BW 20MHz (Chain B) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
149	5745	6.5	21.5	26.61	30	Pass
157	5785	6.5	21.5	26.56	30	Pass
165	5825	6.5	21.5	26.67	30	Pass

<b>Test Mode :</b>	Mode 13, 14, 15	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11 BW 20MHz (Chain A+B) Measured Output Power (dBm)			Max. Limits (dBm)	Pass/Fail
				Chain A	Chain B	Total Power		
149	5745	6.5	21	26.61	26.59	29.61	30	Pass
157	5785	6.5	21	26.52	26.56	29.55	30	Pass
165	5825	6.5	21	26.47	26.53	29.51	30	Pass



<b>Test Mode :</b>	Mode 16, 17, 18	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11 BW 40MHz (Chain A) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
151	5755 MHz	6.5	21.5	26.70	30	Pass
159	5795 MHz	6.5	21.5	26.68	30	Pass

<b>Test Mode :</b>	Mode 16, 17, 18	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11 BW 40MHz (Chain B) Measured Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
151	5755 MHz	6.5	21.5	26.74	30	Pass
159	5795 MHz	6.5	21.5	26.73	30	Pass

<b>Test Mode :</b>	Mode 16, 17, 18	<b>Temperature :</b>	25-27°C
<b>Test Engineer :</b>	Alan Liu	<b>Relative Humidity :</b>	55-57%

Channel	Frequency (MHz)	Date Rate	Power Setting	802.11 BW 40MHz (Chain A+B) Measured Output Power (dBm)			Max. Limits (dBm)	Pass/Fail
				Chain A	Chain B	Total Power		
151	5755 MHz	6.5	21	26.50	26.65	29.59	30	Pass
159	5795 MHz	6.5	21	26.40	26.71	29.57	30	Pass

## 3.2 Radiated Emission Measurement

### 3.2.1 Limit of Radiated Emission

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

### 3.2.2 Measuring Instruments

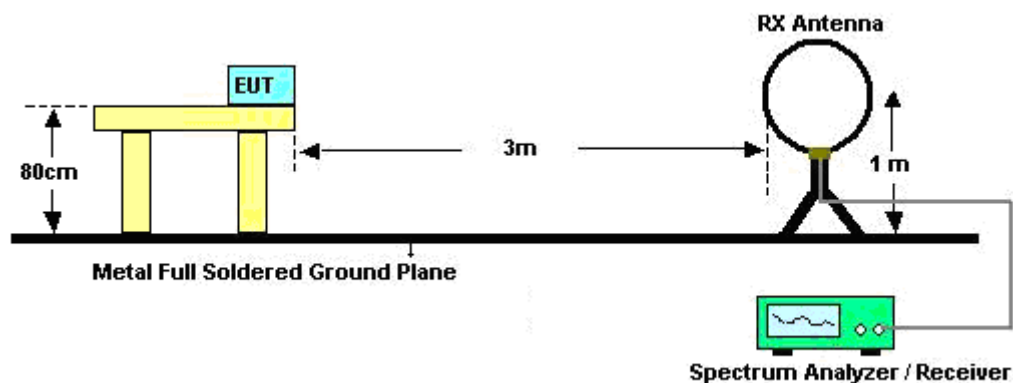
See list of measuring instruments of this test report.

### 3.2.3 Test Procedures

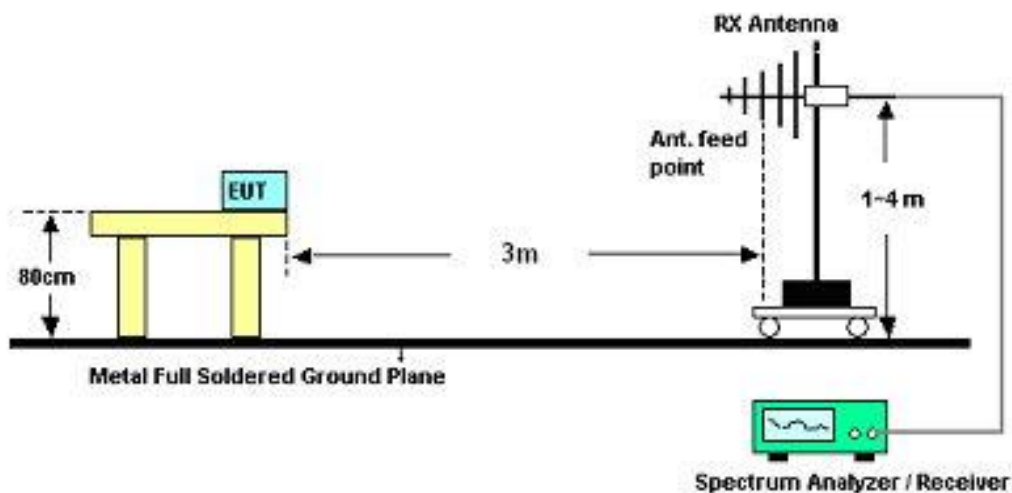
- The testing follows the guidelines in FCC KDB Publication No. 558074 (Measurement Guidelines of DTS).
- Use the following spectrum analyzer settings:
  - Span = wide enough to fully capture the emission being measured; RBW = 1 MHz for  $f \geq 1$  GHz, 100 kHz for  $f < 1$  GHz; VBW  $\geq$  RBW; Sweep = auto; Detector function = peak; Trace = max hold.
  - Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.  
Distance extrapolation factor =  $20 \log (\text{specific distance [3m]} / \text{test distance [1m]})$  (dB)
- Follow the guidelines in ANSI C63.4-2003 with respect to maximizing the emission by rotating the EUT, measuring the emission for three EUT orthogonal planes, and adjusting the measurement antenna height and polarization. A pre-amp and a high pass filter are used for this test in order to get the good signal level.

### 3.2.4 Test Setup

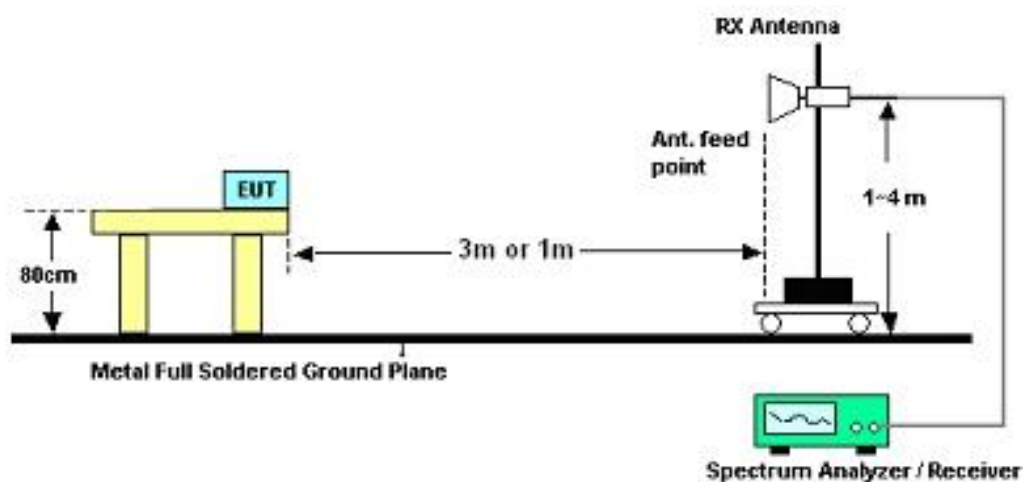
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



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

<b>Test Engineer :</b>	Ivan Chiang	<b>Temperature :</b>	23~25℃	
		<b>Relative Humidity :</b>	50~51%	

Frequency (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

**Note:**

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =  $40 \log (\text{specific distance} / \text{test distance})$  (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

**3.2.6 Test Result of Radiated Emission (30MHz ~ 10<sup>th</sup> Harmonic)**

<b>Test Mode :</b>	Mode 1	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	116.66	-	-	105.12	34.84	9.91	33.21	100	220	Peak
5745	105.73	-	-	94.19	34.84	9.91	33.21	100	220	Average
7478	48.31	-25.69	74	61.06	35.31	10.14	58.2	100	0	Peak

<b>Test Mode :</b>	Mode 1	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	117.18	-	-	105.64	34.84	9.91	33.21	159	224	Peak
5745	106.45	-	-	94.91	34.84	9.91	33.21	159	224	Average
7484	49.52	-24.48	74	62.27	35.31	10.14	58.2	100	0	Peak
11490	49.19	-24.81	74	55.82	38.29	13.14	58.06	100	0	Peak

<b>Test Mode :</b>	Mode 2	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	116.93	-	-	105.38	34.88	9.9	33.23	100	214	Peak
5785	105.82	-	-	94.27	34.88	9.9	33.23	100	214	Average
7478	47.78	-26.22	74	60.53	35.31	10.14	58.2	100	0	Peak

<b>Test Mode :</b>	Mode 2	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	118	-	-	106.45	34.88	9.9	33.23	158	234	Peak
5785	107.62	-	-	96.07	34.88	9.9	33.23	158	234	Average
7484	50.63	-23.37	74	63.38	35.31	10.14	58.2	100	0	Peak
11570	49.5	-24.5	74	55.9	38.38	13.17	57.95	100	0	Peak



<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	116.26	-	-	104.74	34.93	9.88	33.29	100	217	Peak
5825	105.86	-	-	94.34	34.93	9.88	33.29	100	217	Average
7494	47.47	-26.53	74	60.23	35.3	10.15	58.21	100	0	Peak

<b>Test Mode :</b>	Mode 3	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	117.13	-	-	105.61	34.93	9.88	33.29	156	234	Peak
5825	106.74	-	-	95.22	34.93	9.88	33.29	156	234	Average
7484	49.81	-24.19	74	62.56	35.31	10.14	58.2	100	0	Peak
11650	50.6	-23.4	74	56.77	38.47	13.22	57.86	100	0	Peak

<b>Test Mode :</b>	Mode 4	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	115.78	-	-	104.24	34.84	9.91	33.21	164	331	Peak
5745	105.49	-	-	93.95	34.84	9.91	33.21	164	331	Average
7484	47.31	-26.69	74	60.06	35.31	10.14	58.2	100	0	Peak
11490	50.16	-23.84	74	56.79	38.29	13.14	58.06	100	0	Peak

<b>Test Mode :</b>	Mode 4	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	117	-	-	105.46	34.84	9.91	33.21	138	8	Peak
5745	106.89	-	-	95.35	34.84	9.91	33.21	138	8	Average
7478	49.57	-24.43	74	62.32	35.31	10.14	58.2	100	0	Peak
11490	52.4	-21.6	74	59.03	38.29	13.14	58.06	137	12	Peak
11490	42.81	-11.19	54	49.44	38.29	13.14	58.06	137	12	Average

<b>Test Mode :</b>	Mode 5	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	115.11	-	-	103.56	34.88	9.9	33.23	159	2	Peak
5785	104.79	-	-	93.24	34.88	9.9	33.23	159	2	Average
7478	47.42	-26.58	74	60.17	35.31	10.14	58.2	100	0	Peak
11570	51.66	-22.34	74	58.06	38.38	13.17	57.95	100	49	Peak
11570	41.06	-12.94	54	47.46	38.38	13.17	57.95	100	49	Average

<b>Test Mode :</b>	Mode 5	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	117.33	-	-	105.78	34.88	9.9	33.23	149	6	Peak
5785	107.01	-	-	95.46	34.88	9.9	33.23	149	6	Average
7484	49.6	-24.4	74	62.35	35.31	10.14	58.2	100	0	Peak
11570	52.5	-21.5	74	58.9	38.38	13.17	57.95	124	13	Peak
11570	42.78	-11.22	54	49.18	38.38	13.17	57.95	124	13	Average

<b>Test Mode :</b>	Mode 6	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	115.35	-	-	103.83	34.93	9.88	33.29	183	328	Peak
5825	105.22	-	-	93.7	34.93	9.88	33.29	183	328	Average
7492	47.53	-26.47	74	60.3	35.3	10.14	58.21	100	0	Peak
11650	52.35	-21.65	74	58.52	38.47	13.22	57.86	104	78	Peak
11650	41.96	-12.04	54	48.13	38.47	13.22	57.86	104	78	Average

<b>Test Mode :</b>	Mode 6	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	117.6	-	-	106.08	34.93	9.88	33.29	147	7	Peak
5825	106.82	-	-	95.3	34.93	9.88	33.29	147	7	Average
7492	49.31	-24.69	74	62.08	35.3	10.14	58.21	100	0	Peak
11650	54.03	-19.97	74	60.2	38.47	13.22	57.86	135	14	Peak
11650	43.82	-10.18	54	49.99	38.47	13.22	57.86	135	14	Average

<b>Test Mode :</b>	Mode 7	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	117.31	-	-	105.77	34.84	9.91	33.21	100	327	Peak
5745	106.23	-	-	94.69	34.84	9.91	33.21	100	327	Average
7486	47.4	-26.6	74	60.17	35.3	10.14	58.21	100	0	Peak
11490	50.18	-23.82	74	56.81	38.29	13.14	58.06	100	0	Peak

<b>Test Mode :</b>	Mode 7	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	118.15	-	-	106.61	34.84	9.91	33.21	136	342	Peak
5745	106.81	-	-	95.27	34.84	9.91	33.21	136	342	Average
7478	49.04	-24.96	74	61.79	35.31	10.14	58.2	100	0	Peak
11490	55.08	-18.92	74	61.71	38.29	13.14	58.06	137	12	Peak
11490	44.52	-9.48	54	51.15	38.29	13.14	58.06	137	12	Average

<b>Test Mode :</b>	Mode 8	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	116.53	-	-	104.98	34.88	9.9	33.23	134	225	Peak
5785	105.24	-	-	93.69	34.88	9.9	33.23	134	225	Average
7478	47.58	-26.42	74	60.33	35.31	10.14	58.2	100	0	Peak
11570	51.5	-22.5	74	57.9	38.38	13.17	57.95	100	105	Peak
11570	41.42	-12.58	54	47.82	38.38	13.17	57.95	100	105	Average

<b>Test Mode :</b>	Mode 8	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	117.3	-	-	105.75	34.88	9.9	33.23	121	226	Peak
5785	105.99	-	-	94.44	34.88	9.9	33.23	121	226	Average
7484	48.98	-25.02	74	61.73	35.31	10.14	58.2	100	0	Peak
11570	56.74	-17.26	74	63.14	38.38	13.17	57.95	136	7	Peak
11570	43.87	-10.13	54	50.27	38.38	13.17	57.95	136	7	Average

<b>Test Mode :</b>	Mode 9	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	116.17	-	-	104.65	34.93	9.88	33.29	121	322	Peak
5825	105.04	-	-	93.52	34.93	9.88	33.29	121	322	Average
7492	46.99	-27.01	74	59.76	35.3	10.14	58.21	100	0	Peak
11650	51.96	-22.04	74	58.13	38.47	13.22	57.86	104	86	Peak
11650	42.8	-11.2	54	48.97	38.47	13.22	57.86	104	86	Average

<b>Test Mode :</b>	Mode 9	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	117.19	-	-	105.67	34.93	9.88	33.29	146	342	Peak
5825	105.66	-	-	94.14	34.93	9.88	33.29	146	342	Average
7484	49.64	-24.36	74	62.39	35.31	10.14	58.2	100	0	Peak
11650	54.86	-19.14	74	61.03	38.47	13.22	57.86	139	14	Peak
11650	44.27	-9.73	54	50.44	38.47	13.22	57.86	139	14	Average

<b>Test Mode :</b>	Mode 10	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	117.2	-	-	105.66	34.84	9.91	33.21	100	225	Peak
5745	106.32	-	-	94.78	34.84	9.91	33.21	100	225	Average
7478	47.37	-26.63	74	60.12	35.31	10.14	58.2	100	0	Peak

<b>Test Mode :</b>	Mode 10	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	117.55	-	-	106.01	34.84	9.91	33.21	123	233	Peak
5745	107.05	-	-	95.51	34.84	9.91	33.21	123	233	Average
7486	49.46	-24.54	74	62.23	35.3	10.14	58.21	100	0	Peak
11490	49.43	-24.57	74	56.06	38.29	13.14	58.06	100	0	Peak



<b>Test Mode :</b>	Mode 11	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	117.11	-	-	105.56	34.88	9.9	33.23	100	225	Peak
5785	107.08	-	-	95.53	34.88	9.9	33.23	100	225	Average
7478	48.66	-25.34	74	61.41	35.31	10.14	58.2	100	0	Peak

<b>Test Mode :</b>	Mode 11	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	118.14	-	-	106.59	34.88	9.9	33.23	121	233	Peak
5785	107.76	-	-	96.21	34.88	9.9	33.23	121	233	Average
7484	50.12	-23.88	74	62.87	35.31	10.14	58.2	100	0	Peak
11570	50.3	-23.7	74	56.7	38.38	13.17	57.95	100	0	Peak

<b>Test Mode :</b>	Mode 12	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	116.66	-	-	105.14	34.93	9.88	33.29	100	213	Peak
5825	105.12	-	-	93.6	34.93	9.88	33.29	100	213	Average
7486	48.48	-25.52	74	61.25	35.3	10.14	58.21	100	0	Peak

<b>Test Mode :</b>	Mode 12	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	117.07	-	-	105.55	34.93	9.88	33.29	171	234	Peak
5825	106.23	-	-	94.71	34.93	9.88	33.29	171	234	Average
7484	50.13	-23.87	74	62.88	35.31	10.14	58.2	100	0	Peak
11658	50.7	-23.3	74	56.83	38.49	13.22	57.84	100	0	Peak

<b>Test Mode :</b>	Mode 13	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	114.61	-	-	103.07	34.84	9.91	33.21	100	320	Peak
5745	104.31	-	-	92.77	34.84	9.91	33.21	100	320	Peak
7486	48.1	-25.9	74	60.87	35.3	10.14	58.21	100	0	Peak
11490	50.82	-23.18	74	57.45	38.29	13.14	58.06	100	0	Peak

<b>Test Mode :</b>	Mode 13	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	116.78	-	-	105.24	34.84	9.91	33.21	138	9	Peak
5745	106.57	-	-	95.03	34.84	9.91	33.21	138	9	Average
7486	49.6	-24.4	74	62.37	35.3	10.14	58.21	100	0	Peak
11490	52.66	-21.34	74	59.29	38.29	13.14	58.06	163	9	Peak
11490	42.12	-11.88	54	48.75	38.29	13.14	58.06	163	9	Average

<b>Test Mode :</b>	Mode 14	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	114.85	-	-	103.3	34.88	9.9	33.23	100	322	Peak
5785	104.31	-	-	92.76	34.88	9.9	33.23	100	322	Average
7476	48.26	-25.74	74	61.01	35.31	10.14	58.2	100	0	Peak
11570	51.27	-22.73	74	57.67	38.38	13.17	57.95	113	155	Peak
11570	40.13	-13.87	54	46.53	38.38	13.17	57.95	113	155	Average

<b>Test Mode :</b>	Mode 14	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	116.57	-	-	105.02	34.88	9.9	33.23	162	9	Peak
5785	106.09	-	-	94.54	34.88	9.9	33.23	162	9	Average
7492	49.65	-24.35	74	62.42	35.3	10.14	58.21	100	0	Peak
11570	53.31	-20.69	74	59.71	38.38	13.17	57.95	155	11	Peak
11570	42.45	-11.55	54	48.85	38.38	13.17	57.95	155	11	Average

<b>Test Mode :</b>	Mode 15	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	116.39	-	-	104.87	34.93	9.88	33.29	100	320	Peak
5825	106.13	-	-	94.61	34.93	9.88	33.29	100	320	Average
7478	48.65	-25.35	74	61.4	35.31	10.14	58.2	100	0	Peak
11650	51.96	-22.04	74	58.13	38.47	13.22	57.86	105	141	Peak
11650	40.86	-13.14	54	47.03	38.47	13.22	57.86	105	141	Average

<b>Test Mode :</b>	Mode 15	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	118.11	-	-	106.59	34.93	9.88	33.29	148	8	Peak
5825	107.29	-	-	95.77	34.93	9.88	33.29	148	8	Average
7478	50.13	-23.87	74	62.88	35.31	10.14	58.2	100	0	Peak
11650	54.26	-19.74	74	60.43	38.47	13.22	57.86	139	10	Peak
11650	42.45	-11.55	54	48.62	38.47	13.22	57.86	139	10	Average

<b>Test Mode :</b>	Mode 16	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	116.78	-	-	105.24	34.84	9.91	33.21	100	322	Peak
5745	106.26	-	-	94.72	34.84	9.91	33.21	100	322	Average
7478	48.14	-25.86	74	60.89	35.31	10.14	58.2	100	0	Peak
11490	51.77	-22.23	74	58.4	38.29	13.14	58.06	108	114	Peak
11490	41.64	-12.36	54	48.27	38.29	13.14	58.06	108	114	Average

<b>Test Mode :</b>	Mode 16	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	149	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5745 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5745	117.62	-	-	106.08	34.84	9.91	33.21	161	9	Peak
5745	107.47	-	-	95.93	34.84	9.91	33.21	161	9	Average
7478	49.04	-24.96	74	61.79	35.31	10.14	58.2	100	0	Peak
11490	55.62	-18.38	74	62.25	38.29	13.14	58.06	137	10	Peak
11490	43.8	-10.2	54	50.43	38.29	13.14	58.06	137	10	Average

<b>Test Mode :</b>	Mode 17	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	116.4	-	-	104.85	34.88	9.9	33.23	100	325	Peak
5785	105.51	-	-	93.96	34.88	9.9	33.23	100	325	Average
7470	47.34	-26.66	74	60.09	35.31	10.14	58.2	100	0	Peak
11570	50.09	-23.91	74	56.49	38.38	13.17	57.95	100	0	Peak

<b>Test Mode :</b>	Mode 17	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	157	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5785 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5785	117.42	-	-	105.87	34.88	9.9	33.23	149	8	Peak
5785	106.61	-	-	95.06	34.88	9.9	33.23	149	8	Average
7478	48.83	-25.17	74	61.58	35.31	10.14	58.2	100	0	Peak
11570	52.9	-21.1	74	59.3	38.38	13.17	57.95	141	16	Peak
11570	42.91	-11.09	54	49.31	38.38	13.17	57.95	141	16	Average

<b>Test Mode :</b>	Mode 18	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	116.6	-	-	105.08	34.93	9.88	33.29	132	321	Peak
5825	105.97	-	-	94.45	34.93	9.88	33.29	132	321	Average
7492	47.86	-26.14	74	60.63	35.3	10.14	58.21	100	0	Peak
11650	52.03	-21.97	74	58.16	38.49	13.22	57.84	100	136	Peak
11650	41.72	-12.28	54	47.89	38.47	13.22	57.86	100	136	Average

<b>Test Mode :</b>	Mode 18	<b>Temperature :</b>	23~25℃
<b>Test Channel :</b>	165	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5825 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5825	117.8	-	-	106.28	34.93	9.88	33.29	146	8	Peak
5825	107.05	-	-	95.53	34.93	9.88	33.29	146	8	Average
7494	49.45	-24.55	74	62.21	35.3	10.15	58.21	100	0	Peak
11650	55.34	-18.66	74	61.51	38.47	13.22	57.86	132	14	Peak
11650	43.3	-10.7	54	49.47	38.47	13.22	57.86	132	14	Average



<b>Test Mode :</b>	Mode 19	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	151	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5755 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5755	114.47	-	-	102.91	34.86	9.91	33.21	100	225	Peak
5755	103.98	-	-	92.42	34.86	9.91	33.21	100	225	Average
7478	47.88	-26.12	74	60.63	35.31	10.14	58.2	100	0	Peak

<b>Test Mode :</b>	Mode 19	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	151	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5755 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5755	115.22	-	-	103.66	34.86	9.91	33.21	147	233	Peak
5755	104.57	-	-	93.01	34.86	9.91	33.21	147	233	Average
7478	49.35	-24.65	74	62.1	35.31	10.14	58.2	100	0	Peak
11510	48.74	-25.26	74	55.34	38.3	13.14	58.04	100	0	Peak

<b>Test Mode :</b>	Mode 20	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	159	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5795 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5795	112.55	-	-	101	34.88	9.9	33.23	100	215	Peak
5795	101.57	-	-	90.05	34.89	9.89	33.26	100	215	Average
7476	47.69	-26.31	74	60.44	35.31	10.14	58.2	100	0	Peak

<b>Test Mode :</b>	Mode 20	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	159	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5795 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5795	113.41	-	-	101.86	34.88	9.9	33.23	132	225	Peak
5795	101.97	-	-	90.45	34.89	9.89	33.26	132	225	Average
7494	50.06	-23.94	74	62.82	35.3	10.15	58.21	100	0	Peak
11590	48.46	-25.54	74	54.8	38.4	13.19	57.93	100	0	Peak

<b>Test Mode :</b>	Mode 21	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	151	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5755 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5755	111.45	-	-	99.91	34.84	9.91	33.21	100	320	Peak
5755	100.11	-	-	88.55	34.86	9.91	33.21	100	320	Average
7478	47.43	-26.57	74	60.18	35.31	10.14	58.2	100	0	Peak
11510	48.81	-25.19	74	55.41	38.3	13.14	58.04	100	0	Peak

<b>Test Mode :</b>	Mode 21	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	151	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5755 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5755	113.79	-	-	102.25	34.84	9.91	33.21	163	6	Peak
5755	102.74	-	-	91.18	34.86	9.91	33.21	163	6	Average
7468	50.35	-23.65	74	63.08	35.33	10.14	58.2	100	0	Peak
11510	51.7	-22.3	74	58.3	38.3	13.14	58.04	125	20	Peak
11510	42.82	-11.18	54	49.42	38.3	13.14	58.04	125	20	Average

<b>Test Mode :</b>	Mode 22	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	159	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5795 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5795	110.21	-	-	98.69	34.89	9.89	33.26	100	320	Peak
5795	99.05	-	-	87.53	34.89	9.89	33.26	100	320	Average
7478	48.53	-25.47	74	61.28	35.31	10.14	58.2	100	0	Peak
11590	48.81	-25.19	74	55.11	38.42	13.19	57.91	100	0	Peak

<b>Test Mode :</b>	Mode 22	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	159	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5795 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5795	114.14	-	-	102.59	34.88	9.9	33.23	161	8	Peak
5795	102.28	-	-	90.76	34.89	9.89	33.26	161	8	Average
7474	49.17	-24.83	74	61.92	35.31	10.14	58.2	100	0	Peak
11590	51.57	-22.43	74	57.92	38.4	13.18	57.93	137	15	Peak
11590	43.02	-10.98	54	49.37	38.4	13.18	57.93	137	15	Average

<b>Test Mode :</b>	Mode 23	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	151	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5755 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5755	114.68	-	-	103.12	34.82	9.92	33.18	100	322	Peak
5755	102.34	-	-	90.78	34.86	9.91	33.21	100	322	Average
7500	47.6	-26.4	74	60.36	35.3	10.15	58.21	100	0	Peak
11510	50.07	-23.93	74	56.67	38.3	13.14	58.04	100	0	Peak

<b>Test Mode :</b>	Mode 23	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	151	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5755 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5755	115.5	-	-	103.96	34.84	9.91	33.21	162	10	Peak
5755	102.42	-	-	90.86	34.86	9.91	33.21	162	10	Average
7470	49.18	-24.82	74	61.93	35.31	10.14	58.2	100	0	Peak
11510	53.52	-20.48	74	60.12	38.3	13.14	58.04	138	25	Peak
11510	44.21	-9.79	54	50.81	38.3	13.14	58.04	138	25	Average

<b>Test Mode :</b>	Mode 24	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	159	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Horizontal
<b>Remark :</b>	5795 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5795	113.83	-	-	102.31	34.89	9.89	33.26	100	323	Peak
5795	100.24	-	-	88.72	34.89	9.89	33.26	100	323	Average
7478	47.34	-26.66	74	60.09	35.31	10.14	58.2	100	0	Peak
11590	49.33	-24.67	74	55.68	38.4	13.18	57.93	100	0	Peak

<b>Test Mode :</b>	Mode 24	<b>Temperature :</b>	23~25°C
<b>Test Channel :</b>	159	<b>Relative Humidity :</b>	50~51%
<b>Test Engineer :</b>	Ivan Chiang	<b>Polarization :</b>	Vertical
<b>Remark :</b>	5795 MHz is Fundamental Signals which can be ignored.		

Frequency ( MHz )	Level ( dBuV/m )	Over Limit ( dB )	Limit Line ( dBuV/m )	Read Level (dBuV)	Antenna Factor ( dB )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Remark
5795	114.82	-	-	103.3	34.89	9.89	33.26	161	8	Peak
5795	101.42	-	-	89.9	34.89	9.89	33.26	161	8	Average
7462	49.99	-24.01	74	62.73	35.33	10.13	58.2	100	0	Peak
11590	52.83	-21.17	74	59.18	38.4	13.18	57.93	131	13	Peak
11590	43.54	-10.46	54	49.89	38.4	13.18	57.93	131	13	Average

### **3.3 Antenna Requirements**

#### **3.3.1 Standard Applicable**

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

#### **3.3.2 Antenna Connected Construction**

The antennas type used in this product is PIFA Antenna without connector and it is considered to meet antenna requirement.

#### **3.3.3 Antenna Gain**

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

## 4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 13, 2011	Jun. 12, 2012	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 13, 2010	Sep. 12, 2011	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	0846202	N/A	Sep. 14, 2010	Sep. 13, 2011	Conducted (TH02-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2726	30MHz ~ 1GHz	Oct. 31, 2010	Oct. 30, 2011	Radiation (03CH07-HY)
Spectrum Analyzer	R&S	FSP30	101067	9KHz ~ 30GHz	Dec. 03, 2010	Dec. 02, 2011	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 19, 2010	Aug. 18, 2011	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 18, 2010	Oct. 17, 2011	Radiation (03CH07-HY)
Pre Amplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Dec. 06, 2010	Dec. 05, 2011	Radiation (03CH07-HY)
Pre Amplifier	COM-POWER	PA-103A	161241	10-1000MHz.32 dB.GAIN	Mar. 29, 2011	Mar. 28, 2012	Radiation (03CH07-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 29, 2010	Jul. 28, 2011	Radiation (03CH07-HY)



## 5 Uncertainty of Evaluation

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

Contribution	Uncertainty of $X_i$		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
<b>Combined Standard Uncertainty <math>U_c(y)</math></b>	<b>1.27</b>		
<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b>	<b>2.54</b>		

### Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Contribution	Uncertainty of $X_i$		$u(X_i)$	$C_i$	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	$\pm 0.10$	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	$\pm 1.70$	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	$\pm 0.50$	Normal (k=2)	0.25	1	0.25
Receiver Correction	$\pm 2.00$	Rectangular	1.15	1	1.15
Antenna Factor Directional	$\pm 1.50$	Rectangular	0.87	1	0.87
Site Imperfection	$\pm 2.80$	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20\log(1-\Gamma_1*\Gamma_2)$	+0.34 / -0.35	U-Shape	0.244	1	0.244
<b>Combined Standard Uncertainty <math>U_c(y)</math></b>	<b>2.36</b>				
<b>Measuring Uncertainty for a Level of Confidence of 95% (<math>U = 2U_c(y)</math>)</b>	<b>4.72</b>				



## **Appendix A. Photographs of EUT**

Please refer to Sporton report number EP092308-07 as below.