

# FCC TEST REPORT

## (Part 24)

**REPORT NO.:** RF990129L09-3

**MODEL NO.:** F-07B

**RECEIVED:** Feb. 01, 2010

**TESTED:** Feb. 03 ~ Feb. 10, 2010

**ISSUED:** Feb. 12, 2010

**APPLICANT:** FUJITSU LIMITED

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**ISSUED BY:** Bureau Veritas Consumer Products Services (H.K.)  
Ltd., Taoyuan Branch

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## 1 CERTIFICATION

**PRODUCT:** Mobile phone  
**MODEL NO.:** F-07B  
**BRAND:** FOMA  
**APPLICANT:** FUJITSU LIMITED  
**TESTED:** Feb. 03 ~ Feb. 10, 2010  
**TEST SAMPLE:** ENGINEERING SAMPLE  
**TEST STANDARDS:** **FCC Part 24, Subpart E**  
ANSI C63.4-2003  
**TEST ITEM:** **Radiated Spurious Emissions (Section 2.1053**  
**24.238)**

The above equipment (model: 0251) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

**PREPARED BY** : Rennie Wang , **DATE:** Feb. 12, 2010  
Rennie Wang / Supervisor

**TECHNICAL**  
**ACCEPTANCE** : Long Chen , **DATE:** Feb. 12, 2010  
Responsible for RF Long Chen / Senior Engineer

**APPROVED BY** : Gary Chang , **DATE:** Feb. 12, 2010  
Gary Chang / Assistant Manager

## 2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 24 & Part 2 / IC RSS-133			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
2.1053 24.238	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -16.9dB at 3700.40MHz.

### 2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

### 3 GENERAL INFORMATION

#### 3.1 GENERAL DESCRIPTION OF EUT

<b>EUT</b>	Mobile phone
<b>MODEL NO.</b>	F-07B
<b>FCC ID</b>	VQK-F07B
<b>POWER SUPPLY</b>	3.7Vdc (Li-ion battery) 5.4Vdc (Adapter)
<b>MODULATION TYPE</b>	GMSK
<b>OPERATING FREQUENCY</b>	1850.2MHz ~ 1909.8MHz
<b>NUMBER OF CHANNEL</b>	299
<b>ANTENNA TYPE</b>	Integral antenna
<b>MAX. ANTENNA GAIN</b>	0dBi
<b>DATA CABLE</b>	NA
<b>I/O PORTS</b>	Refer to user's manual
<b>ACCESSORY DEVICES</b>	Battery

**NOTE:**

1. The EUT is a Mobile phone with RFID and Bluetooth functions.
2. The EUT is a Mobile phone. The functions of EUT listed as below:

	TEST STANDARD	REFERENCE REPORT
<b>BLUETOOTH</b>	FCC Part 15	RF990129L09
<b>RFID</b>	FCC Part 15	RF990129L09-1
<b>WCDMA 850</b>	FCC Part 22	RF990129L09-2
<b>GSM 1900</b>	FCC Part 24	RF990129L09-3

3. In this report, only included test item of radiated spurious emissions per client's requests.
4. The EUT is powered by the following adapter and battery.

<b>ADAPTER (NOT FOR SALE)</b>	
<b>BRAND</b>	SMK
<b>INPUT POWER</b>	100-240Vac, 0.12A, 50-60Hz
<b>OUTPUT POWER</b>	5.4Vdc, 700mA

<b>BATTERY</b>	
<b>BRAND</b>	Fujitsu Limited
<b>MODEL</b>	CA54310-0005
<b>RATING</b>	3.7Vdc, 770mAh

5. Hardware version: V2.0.0.
6. Software version: R16.1.
7. IMEI Code: 35317003\*\*\*\*\*.
8. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

### 3.2 DESCRIPTION OF TEST MODES

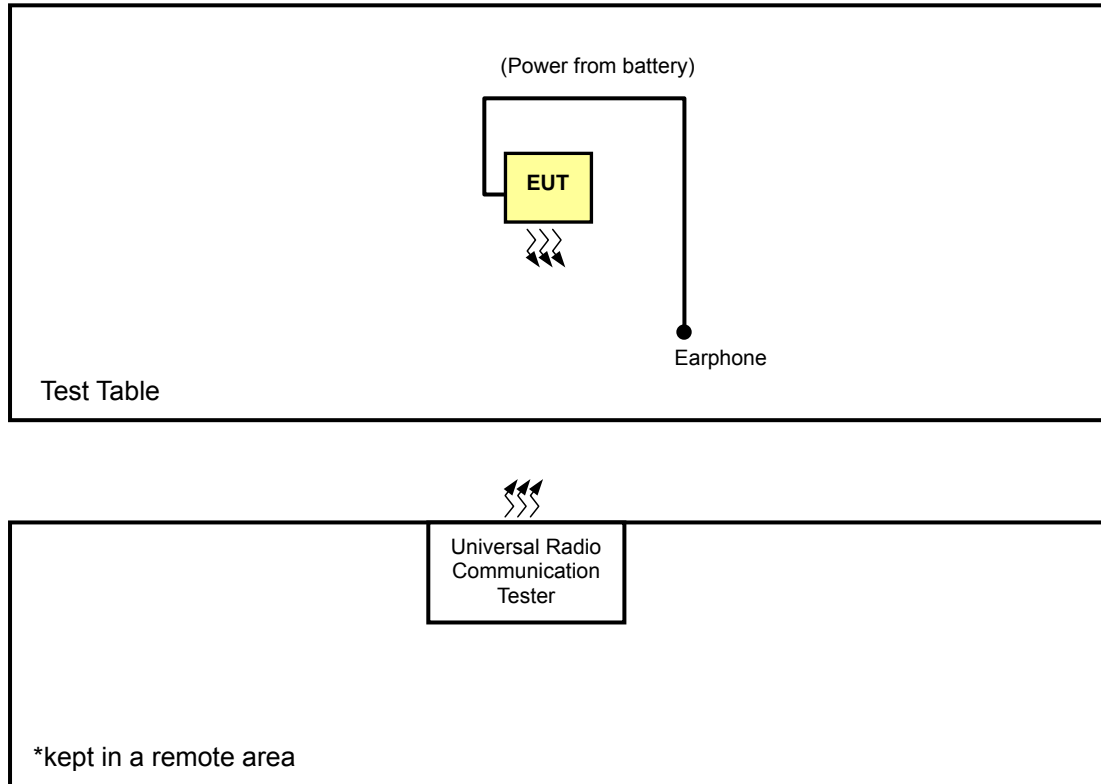
299 channels are provided to this EUT. Therefore, the low, middle and high channels are chosen for testing.

	CHANNEL	FREQUENCY	TX MODE
LOW	512	1850.2 MHz	GSM
MIDDLE	661	1880.0 MHz	GSM
HIGH	810	1909.8 MHz	GSM

#### NOTE:

1. Below 1 GHz, the channel 512, 661, and 810 were pre-tested in chamber. The channel 512 was chosen for final test.
2. Above 1 GHz, the channel 512, 661, and 810 were tested individually.

#### 3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



### 3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO		DESCRIPTION
	RE<1G	RE≥1G	
-	√	√	-

Where **RE<1G**: Radiated emission below 1GHz

**RE≥1G**: Radiated emission above 1GHz

#### **RADIATED EMISSION MEASUREMENT (BELOW 1 GHz):**

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	AXIS
512 to 810	512	GSM	X, Y, Z

#### **RADIATED EMISSION MEASUREMENT (ABOVE 1 GHz):**

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	AXIS
512 to 810	512, 661, 810	GSM	X, Y, Z

### 3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC 47 CFR Part 2**

**FCC 47 CFR Part 24**

**IC RSS-133**

**ANSI C63.4-2003**

**ANSI/TIA/EIA-603-C 2004**

**NOTE:** All test items have been performed and recorded as per the above standards.

### 3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	EARPHONE	NA	NA	NA	NA
2	NJZ-2000 (GSM+WCDMA SIMULATOR)	JRC	NJZ-2000	ET00054	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	NA
2	NA

**NOTE:** All power cords of the above support units are non shielded (1.8m).



## 4 TEST TYPES AND RESULTS

### 4.1 RADIATED EMISSION MEASUREMENT (BELOW 1GHz)

#### 4.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT

In the FCC 24.238(a), On any frequency outside a licensee's frequency block within USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log (P)$  dB. The specified minimum attenuation becomes 43dB and the limit of emission equal to  $-13\text{dBm}$ .

#### 4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESI7	100033	Jul. 06, 2009	Jul. 05, 2010
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100076	May 26, 2009	May 25, 2010
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 27, 2009	Apr. 26, 2010
HORN Antenna SCHWARZBECK	9120D	9120D-209	Jul. 01, 2009	Jun. 30, 2010
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170243	Dec. 25, 2009	Dec. 24, 2010
Preamplifier Agilent	8447D	2944A10633	Nov. 10, 2009	Nov. 09, 2010
Preamplifier Agilent	8449B	3008A01964	Nov. 09, 2009	Nov. 08, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	238141/4	May 13, 2009	May 12, 2010
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	12738/6	May 13, 2009	May 12, 2010
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100.	TT93021703	NA	NA
Turn Table Controller ADT.	SC100.	SC93021703	NA	NA

- NOTE:**
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
  2. The test was performed in HwaYa Chamber 3.
  3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
  4. The FCC Site Registration No. is 988962.
  5. The IC Site Registration No. is IC 7450F-3.

#### 4.1.3 TEST PROCEDURES

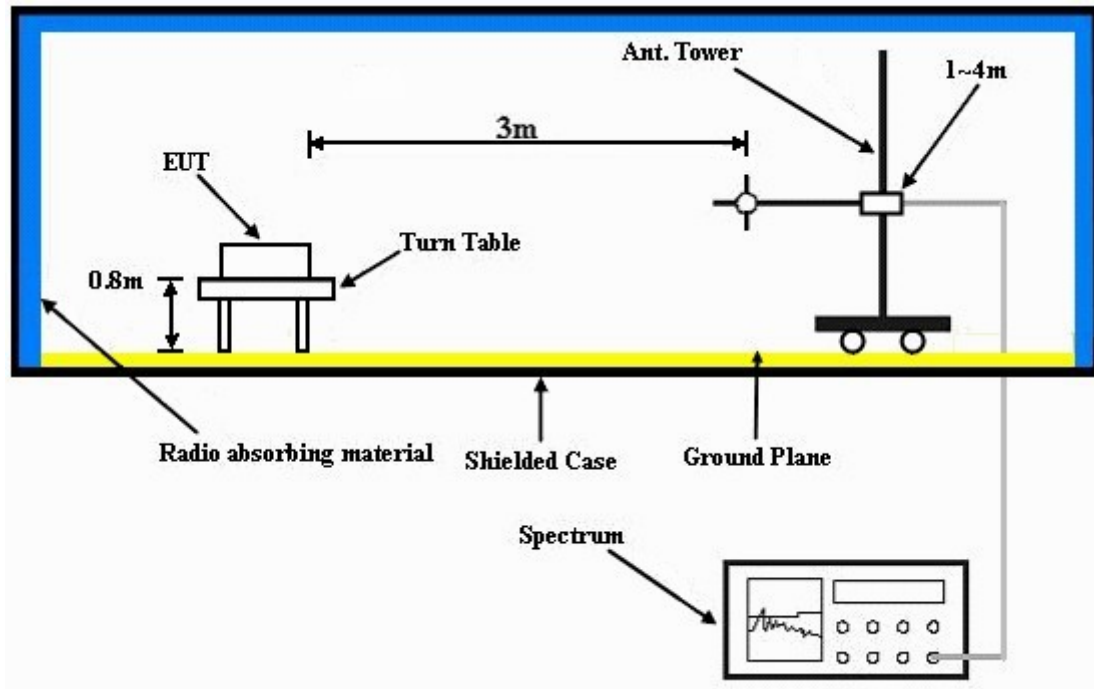
- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value “ of step a. Record the power level of S.G
- c.  $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}.$

**NOTE:** The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

#### 4.1.5 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.1.6 EUT OPERATING CONDITIONS

- The EUT makes a phone call to the communication simulator.
- The communication simulator station system controlled an EUT to export maximum output power under transmission mode and specific channel frequency.

#### 4.1.7 TEST RESULTS

##### X-AXIS

<b>MODE</b>	TX channel 661	<b>FREQUENCY RANGE</b>	Below 1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	22deg. C, 61%RH, 991hPa
<b>TESTED BY</b>	Mark Liao	<b>TEST MODE</b>	X-Axis

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	109.70	30.5	-13.0	-56.5	-7.7	-64.2
2	166.07	39.6	-13.0	-47.2	-7.7	-54.9
3	241.88	45.7	-13.0	-41.4	-7.7	-49.1
4	263.27	42.2	-13.0	-45.0	-7.7	-52.7
5	294.37	40.0	-13.0	-46.8	-7.7	-54.5
6	704.53	41.2	-13.0	-45.5	-7.9	-53.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	35.83	42.5	-13.0	-44.6	-7.7	-52.3
2	101.92	32.9	-13.0	-54.0	-7.7	-61.7
3	169.96	30.4	-13.0	-56.6	-7.7	-64.3
4	228.28	50.1	-13.0	-36.8	-7.7	-44.5
5	292.42	32.7	-13.0	-54.1	-7.7	-61.8
6	704.53	38.6	-13.0	-48.2	-7.9	-56.1

**NOTE:** Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

# Y-AXIS

MODE	TX channel 661	FREQUENCY RANGE	Below 1000 MHz
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa
TESTED BY	Mark Liao	TEST MODE	Y-Axis

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	166.07	40.0	-13.0	-47.1	-7.7	-54.8
2	241.88	45.7	-13.0	-41.0	-7.7	-48.7
3	263.27	41.9	-13.0	-45.1	-7.7	-52.8
4	294.37	39.2	-13.0	-47.9	-7.7	-55.6
5	704.53	41.4	-13.0	-45.3	-7.9	-53.2
6	828.94	42.8	-13.0	-44.2	-7.9	-52.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	35.83	41.3	-13.0	-45.5	-7.7	-53.2
2	101.92	37.2	-13.0	-49.7	-7.7	-57.4
3	228.28	42.6	-13.0	-44.4	-7.7	-52.1
4	704.53	40.5	-13.0	-46.4	-7.9	-54.3
5	828.94	45.7	-13.0	-41.2	-7.9	-49.1
6	972.79	38.5	-13.0	-48.3	-7.9	-56.2

**NOTE:** Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).



A D T

**Z-AXIS**

<b>MODE</b>	TX channel 661	<b>FREQUENCY RANGE</b>	Below 1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	22deg. C, 61%RH, 991hPa
<b>TESTED BY</b>	Mark Liao	<b>TEST MODE</b>	Z-Axis

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	146.63	38.1	-13.0	-49.0	-7.7	-56.7
2	166.07	38.2	-13.0	-48.5	-7.7	-56.2
3	249.66	42.4	-13.0	-44.8	-7.7	-52.5
4	263.27	38.9	-13.0	-48.1	-7.7	-55.8
5	848.38	40.3	-13.0	-46.4	-7.9	-54.3
6	947.52	37.6	-13.0	-49.3	-7.9	-57.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	30.00	46.2	-13.0	-40.6	-7.7	-48.3
2	216.61	43.8	-13.0	-43.1	-7.7	-50.8
3	230.22	41.5	-13.0	-45.6	-7.7	-53.3
4	704.53	39.2	-13.0	-47.5	-7.9	-55.4
5	848.38	46.4	-13.0	-40.3	-7.9	-48.2
6	939.74	37.6	-13.0	-49.2	-7.9	-57.1

**NOTE:** Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

## **4.2 RADIATED EMISSION MEASUREMENT (ABOVE 1GHz)**

### **4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT**

Same as 4.1.1.

### **4.2.2 TEST INSTRUMENTS**

Same as 4.1.2.

### **4.2.3 TEST PROCEDURES**

Same as 4.1.3.

### **4.2.4 DEVIATION FROM TEST STANDARD**

No deviation

### **4.2.5 TEST SETUP**

Same as 4.1.5.

### **4.2.6 EUT OPERATING CONDITIONS**

Same as 4.1.6.



## 4.2.7 TEST RESULTS

### X-AXIS

<b>MODE</b>	TX channel 512	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	22deg. C, 61%RH, 991hPa
<b>TESTED BY</b>	Mark Liao	<b>TEST MODE</b>	X-Axis

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3700.40	64.5	-13.0	-40.0	9.9	-30.1
2	5550.60	53.3	-13.0	-50.8	9.7	-41.1
3	7400.80	54.1	-13.0	-48.3	7.9	-40.4
4	9251.00	58.1	-13.0	-44.1	7.5	-36.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3700.40	60.6	-13.0	-44.1	9.9	-34.2
2	5550.60	53.5	-13.0	-50.8	9.7	-41.1
3	7400.80	53.8	-13.0	-48.8	7.9	-40.9
4	9251.00	57.3	-13.0	-45.0	7.5	-37.5

**NOTE:** Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

<b>MODE</b>	TX channel 661	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	22deg. C, 61%RH, 991hPa
<b>TESTED BY</b>	Mark Liao	<b>TEST MODE</b>	X-Axis

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3760.00	59.2	-13.0	-45.1	9.9	-35.2
2	5640.00	50.8	-13.0	-53.7	9.6	-44.1
3	7520.00	54.2	-13.0	-48.4	7.8	-40.6
4	9400.00	56.4	-13.0	-45.7	7.5	-38.2
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3760.00	53.3	-13.0	-51.2	9.9	-41.3
2	5640.00	53.4	-13.0	-51.0	9.6	-41.4
3	7520.00	54.6	-13.0	-47.9	7.8	-40.1
4	9400.00	57.1	-13.0	-45.0	7.5	-37.5

**NOTE:** Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

<b>MODE</b>	TX channel 810	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	22deg. C, 61%RH, 991hPa
<b>TESTED BY</b>	Mark Liao	<b>TEST MODE</b>	X-Axis

<b>ANTENNA POLARITY &amp; TEST DISTANCE: HORIZONTAL AT 3 M</b>						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3819.60	57.2	-13.0	-47.2	9.9	-37.3
2	5729.40	53.1	-13.0	-51.2	9.6	-41.6
3	7639.20	53.1	-13.0	-49.3	7.8	-41.5
4	9549.00	57.6	-13.0	-44.7	7.5	-37.2
<b>ANTENNA POLARITY &amp; TEST DISTANCE: VERTICAL AT 3 M</b>						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3819.60	54.4	-13.0	-50.3	9.9	-40.4
2	5729.40	54.3	-13.0	-49.9	9.6	-40.3
3	7639.20	54.1	-13.0	-48.5	7.8	-40.7
4	9549.00	57.1	-13.0	-45.1	7.5	-37.6

**NOTE:** Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

# Y-AXIS

MODE	TX channel 512	FREQUENCY RANGE	Above 1000 MHz
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	22deg. C, 61%RH, 991hPa
TESTED BY	Mark Liao	TEST MODE	Y-Axis

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3700.40	62.2	-13.0	-42.5	9.9	-32.6
2	5550.60	54.8	-13.0	-49.8	9.7	-40.1
3	7400.80	54.8	-13.0	-47.7	7.9	-39.8
4	9251.00	58.1	-13.0	-43.9	7.5	-36.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3700.40	61.4	-13.0	-43.1	9.9	-33.2
2	5550.60	55.2	-13.0	-49.2	9.7	-39.5
3	7400.80	55.4	-13.0	-47.0	7.9	-39.1
4	9251.00	57.6	-13.0	-44.7	7.5	-37.2

**NOTE:** Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

<b>MODE</b>	TX channel 661	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	22deg. C, 61%RH, 991hPa
<b>TESTED BY</b>	Mark Liao	<b>TEST MODE</b>	Y-Axis

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3760.00	56.6	-13.0	-48.2	9.9	-38.3
2	5640.00	53.1	-13.0	-51.2	9.6	-41.6
3	7520.00	53.7	-13.0	-48.7	7.8	-40.9
4	9400.00	57.6	-13.0	-44.4	7.5	-36.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3760.00	60.1	-13.0	-44.6	9.9	-34.7
2	5640.00	53.9	-13.0	-50.4	9.6	-40.8
3	7520.00	55.9	-13.0	-46.7	7.8	-38.9
4	9400.00	56.3	-13.0	-45.8	7.5	-38.3

**NOTE:** Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

<b>MODE</b>	TX channel 810	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	22deg. C, 61%RH, 991hPa
<b>TESTED BY</b>	Mark Liao	<b>TEST MODE</b>	Y-Axis

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3819.60	53.5	-13.0	-51.1	9.9	-41.2
2	5729.40	56.4	-13.0	-47.8	9.6	-38.2
3	7639.20	54.9	-13.0	-47.2	7.8	-39.4
4	9549.00	57.6	-13.0	-44.7	7.5	-37.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3819.60	53.8	-13.0	-50.7	9.9	-40.8
2	5729.40	53.7	-13.0	-50.3	9.6	-40.7
3	7639.20	54.6	-13.0	-48.0	7.8	-40.2
4	9549.00	57.7	-13.0	-44.7	7.5	-37.2

**NOTE:** Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

## Z-AXIS

<b>MODE</b>	TX channel 512	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	22deg. C, 61%RH, 991hPa
<b>TESTED BY</b>	Mark Liao	<b>TEST MODE</b>	Z-Axis

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3700.40	64.0	-13.0	-40.8	9.9	-30.9
2	5550.60	56.9	-13.0	-47.5	9.7	-37.8
3	7400.80	54.5	-13.0	-48.0	7.9	-40.1
4	9251.00	57.2	-13.0	-44.7	7.5	-37.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3700.40	65.1	-13.0	-39.8	9.9	-29.9
2	5550.60	59.6	-13.0	-44.8	9.7	-35.1
3	7400.80	56.6	-13.0	-46.1	7.9	-38.2
4	9251.00	56.9	-13.0	-45.3	7.5	-37.8

**NOTE:** Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

<b>MODE</b>	TX channel 661	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	22deg. C, 61%RH, 991hPa
<b>TESTED BY</b>	Mark Liao	<b>TEST MODE</b>	Z-Axis

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3760.00	58.4	-13.0	-46.1	9.9	-36.2
2	5640.00	54.1	-13.0	-50.4	9.6	-40.8
3	7520.00	54.9	-13.0	-47.6	7.8	-39.8
4	9400.00	56.9	-13.0	-45.1	7.5	-37.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3760.00	58.7	-13.0	-46.0	9.9	-36.1
2	5640.00	55.1	-13.0	-49.1	9.6	-39.5
3	7520.00	55.4	-13.0	-47.1	7.8	-39.3
4	9400.00	57.5	-13.0	-44.6	7.5	-37.1

**NOTE:** Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).



<b>MODE</b>	TX channel 810	<b>FREQUENCY RANGE</b>	Above 1000 MHz
<b>INPUT POWER</b>	120Vac, 60 Hz	<b>ENVIRONMENTAL CONDITIONS</b>	22deg. C, 61%RH, 991hPa
<b>TESTED BY</b>	Mark Liao	<b>TEST MODE</b>	Z-Axis

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3819.60	52.9	-13.0	-51.7	9.9	-41.8
2	5729.40	56.0	-13.0	-48.0	9.6	-38.4
3	7639.20	54.9	-13.0	-47.5	7.8	-39.7
4	9549.00	57.7	-13.0	-44.6	7.5	-37.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						
No.	Freq. (MHz)	Emission Level (dBuV)	Limit (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	Power Value (dBm)
1	3819.60	55.1	-13.0	-49.4	9.9	-39.5
2	5729.40	53.9	-13.0	-50.2	9.6	-40.6
3	7639.20	55.0	-13.0	-47.4	7.8	-39.6
4	9549.00	57.0	-13.0	-45.2	7.5	-37.7

**NOTE:** Power Value (dBum) = S.G Power Value (dBm) + Correction Factor (dB).

## 5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

## 6 INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: [www.adt.com.tw/index.5/phtml](http://www.adt.com.tw/index.5/phtml).  
If you have any comments, please feel free to contact us at the following:

**Linko EMC/RF Lab:**

Tel: 886-2-26052180

Fax: 886-2-26051924

**Hsin Chu EMC/RF Lab:**

Tel: 886-3-5935343

Fax: 886-3-5935342

**Hwa Ya EMC/RF/Safety/Telecom Lab:**

Tel: 886-3-3183232

Fax: 886-3-3185050

**Web Site:** [www.adt.com.tw](http://www.adt.com.tw)

The address and road map of all our labs can be found in our web site also.

## **7 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB**

No any modifications are made to the EUT by the lab during the test.

---END---