



# TEST REPORT

No. 2008TAR047

for

**AMOI Mobile Co., LTD**

**Dual mode gsm wcdma mobile phone with bluetooth**

**Type: WMA8710**

with

**Hardware Version: V3.0**

**Software Version: WP3.0\_V1.5\_HK**

**Issued Date: Aug 25th, 2008**



**No. DAT-P-114/01-01**

**Note:**

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of TMC Beijing.

**Test Laboratory:**

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**1. Test Laboratory****1.1. Testing Location**

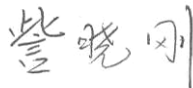
Company Name: TMC Beijing, Telecommunication Metrology Center of MII  
Address: No 52, Huayuan beilu, Haidian District, Beijing,P.R.China  
Postal Code: 100083  
Telephone: 00861062303288  
Fax: 00861062304793

**1.2. Testing Environment**

Normal Temperature: 15-35℃  
Relative Humidity: 20-75%

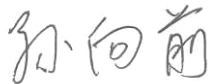
**1.3. Project data**

Testing Start Date: Aug 18th, 2008  
Testing End Date: Aug 22th, 2008

**1.4. Signature**

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**Zi Xiaogang**  
**(Prepared this test report)**



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**Sun Xiangqian**  
**(Reviewed this test report)**



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**Lu Bingsong**  
**Deputy Director of the laboratory**  
**(Approved this test report)**

## **2. Client Information**

### **2.1. Applicant Information**

Company Name: AMOI Mobile Co., LTD  
Address /Post: 102 Xianguang Road, Haicang district, Xiamen City, Fujian  
Province, P.R.China  
City: Xiamen  
Postal Code: 361022  
Country: China  
Telephone: +86-592-6516777-3316  
Fax: +86-592-6516007

### **2.2. Manufacturer Information**

Company Name: AMOI Mobile Co., LTD  
Address /Post: 102 Xianguang Road, Haicang district, Xiamen City, Fujian  
Province, P.R.China  
City: Xiamen  
Postal Code: 361022  
Country: China  
Telephone: +86-592-6516777-3316  
Fax: +86-592-6516007

### **3. Equipment Under Test (EUT) and Ancillary Equipment (AE)**

#### **3.1. About EUT**

Description	Dual mode gsm wcdma mobile phone with bluetooth
Model	WMA8710
FCC ID	WGL-WMA8710
Hardware status	V3.0
Software status	WP3.0_V1.5_HK
Power supply	Battery or Charger (AC Adaptor)

Note: Photographs of EUT are shown in ANNEX A of this test report. Components list, please refer to documents of the manufacturer; it is also included in the original test record of Telecommunication Metrology Center of MII of People's Republic of China.

#### **3.2. Internal Identification of EUT used during the test**

<b>EUT ID*</b>	<b>SN or IMEI</b>	<b>HW Version</b>	<b>SW Version</b>
EUT1	354541020002841	V3.0	WP3.0_V1.5_HK

\*EUT ID: is used to identify the test sample in the lab internally.

### **4. Reference Documents**

#### **4.1. Reference Documents for testing**

The following documents listed in this section are referred for testing.

<b>Reference</b>	<b>Title</b>	<b>Version</b>
FCC Part 15, Subpart B	Radio frequency devices	V 10.1.07
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2003

## 5. LABORATORY ENVIRONMENT

**Semi-anechoic chamber** (23 meters×17meters×10meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Normalised site attenuation (NSA)	< ±3.2 dB, 10 m distance, from 30 to 1000 MHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 2000 MHz

**Control room** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. =30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

**Conducted chamber** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

**Fully-anechoic chamber** (6.8 meters×3.08 meters×3.53 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80 to 2000 MHz

## 6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:	
P	Pass
NA	Not applicable
F	Fail

Clause	List	Clause in FCC rules	Verdict
1	Radiated Emission	15.109(a)	P
2	Conducted Emission	15.107(a)	P

## 7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTUR E	CAL DUE DATE
1	Test Receiver	ESS	847151/015	R&S	2008-10-30
2	Test Receiver	ESI40	831564/002	R&S	2009-2-11
3	BiLog Antenna	3142B	9908-1403	EMCO	2009-1-16
4	BiLog Antenna	VUL9163	9163 175	Schwarzbeck	2009-9-19
5	Signal Generator	SMT06	831285/005	R&S	2008-12-26
6	Signal Generator	SMP04	100070	R&S	2009-4-20
7	LISN	ESH2-Z5	829991/012	R&S	2008-9-13
8	Spectrum Analyzer	FSU26	200030	R&S	2009-6-18
9	Universal Radio Communication Tester	CMU200	100680	R&S	2009-8-23
10	Dual-Ridge Waveguide Horn Antenna	3115	9906-5827	EMCO	2009-3
11	Dual-Ridge Waveguide Horn Antenna	3116	2663	EMCO	2009-3
12	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2009-3
13	Climatic chamber	SH-241	92003546	ESPEC	2009-5-15



**ANNEX A: EUT photograph**

**External Photo**



**Mobile Phone**



**Mobile Phone**

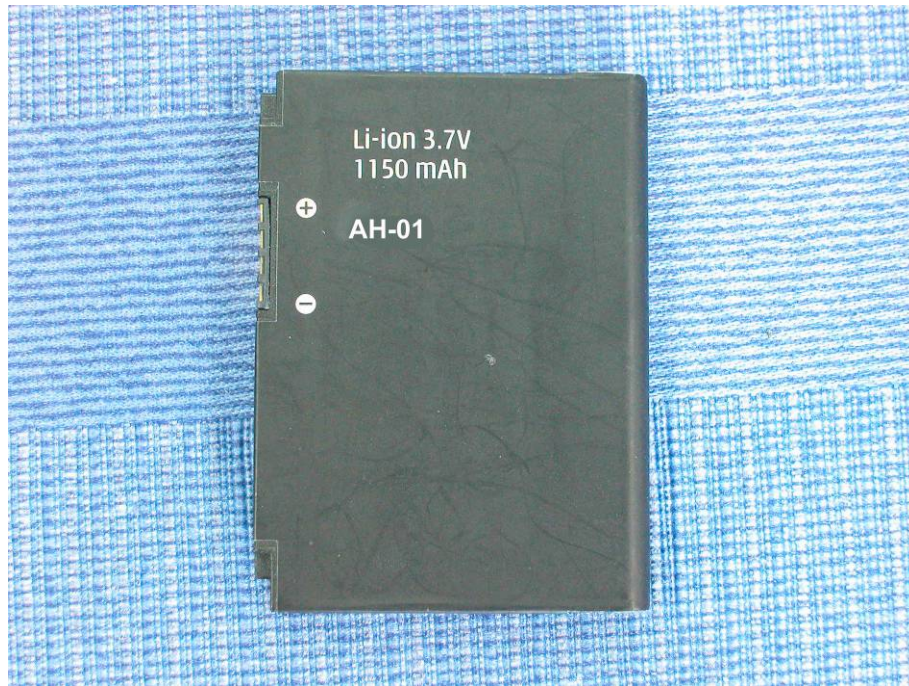




Mobile Phone



Battery AE1



**Battery AE1**



**Internal Photo**

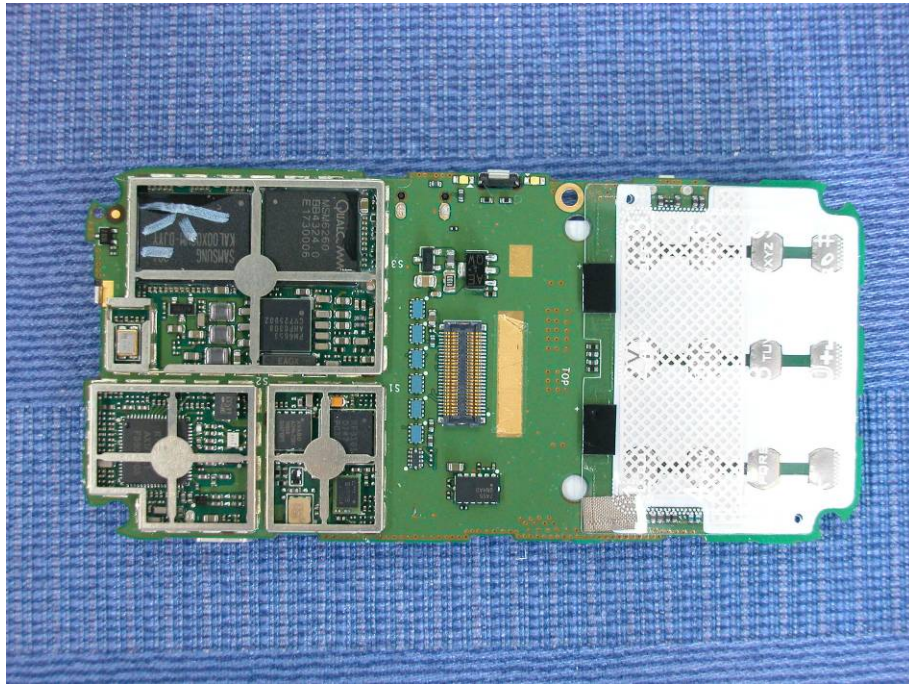


**Mobile phone Disassembly**



**Mobile phone Disassembly**





**Mobile phone Disassembly**



**Mobile phone Disassembly**

## **ANNEX B: MEASUREMENT RESULTS**

### **B.1 Radiated Emission (§15.109(a))**

#### **B.1.1 Method of measurement**

The field strength of radiated emissions from the unintentional radiator (USB mode of MS) at a distance of 3 meters is tested. Tested in accordance with the procedures of ANSI C63.4 – 2003, section 8.3. The test set-up please refers to Annex C.1.

#### **B.1.2 EUT Operating Mode:**

The MS is operating in the USB mode. During the test MS is connected to a laptop via a USB cable. The model of the laptop is IBM T42 2373-M6C, and the serial number of the laptop is 99-FV6P2. The software is used to let the laptop keep on copying data to MS, reading and erasing the data after copy action was finished.

#### **B.1.3 Measurement Limit**

Frequency of emission (MHz)	Field strength (microvolts/meter)
30-88	100
88-216	150
216-960	200
Above 960	500

### B.1.4 Measurement Results

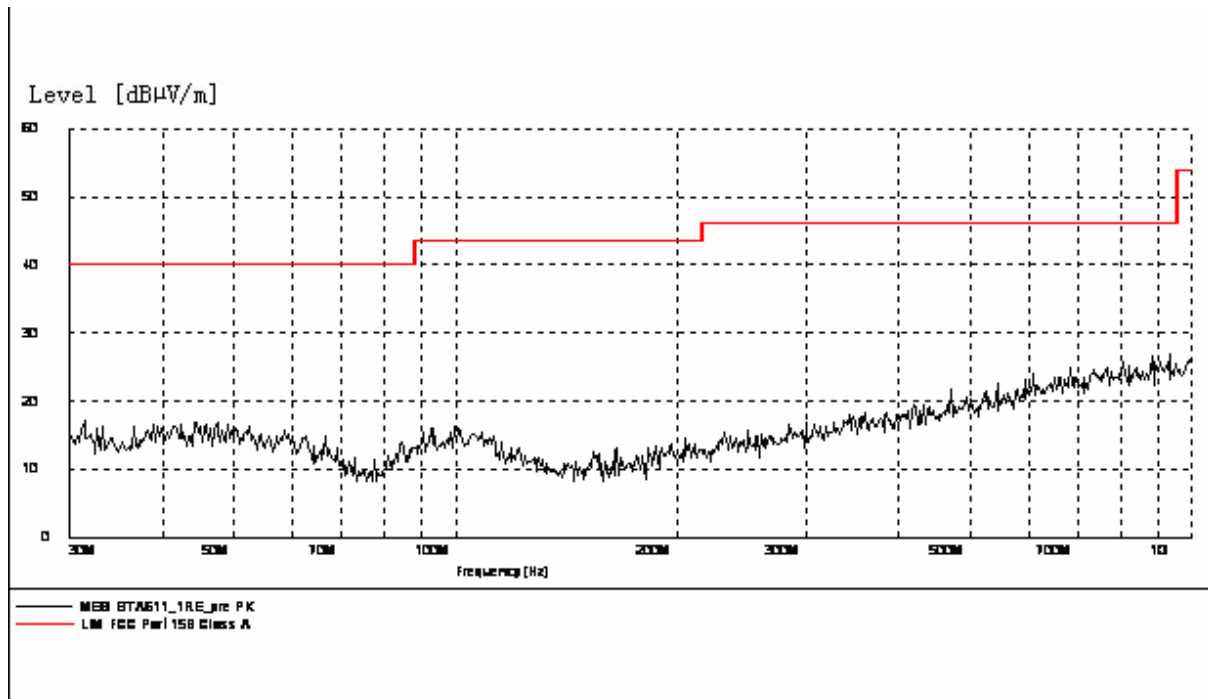


Figure B.1 Radiated Emission from 30MHz to 1GHz

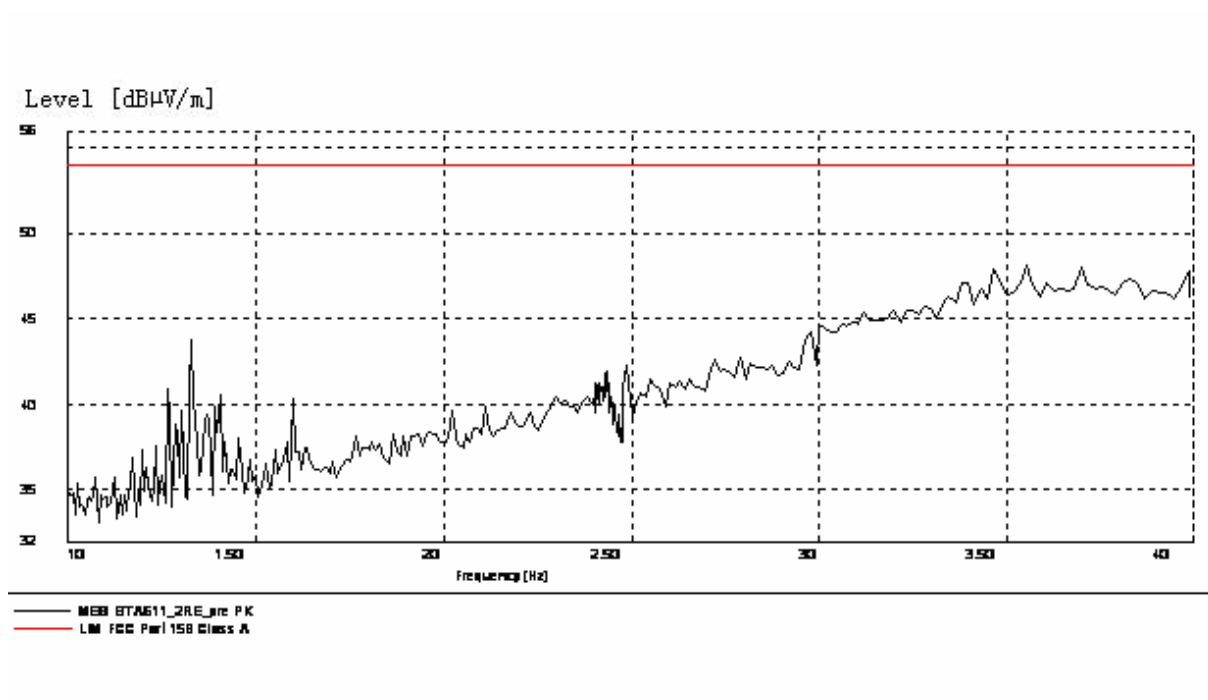


Figure B.2 Radiated Emission from 1GHz to 4GHz

## B.2 Conducted Emission (§15.107(a))

### B.2.1 Method of measurement

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 150kHz to 30MHz shall not exceed the limits. Tested in accordance with the procedures of ANSI C63.4 – 2003, section 7.2. The test set-up please refers to Annex C.2.

### B.2.2 EUT Operating Mode:

The MS is operating in the USB mode. During the test MS is connected to a laptop via a USB cable. The model of the laptop is IBM T42 2373-M6C, and the serial number of the laptop is 99-FV6P2. The software is used to let the laptop keep on copying data to MS, reading and erasing the data after copy action was finished. During the charging mode, Conducted Emission is measured with travel charger.

### B.2.3 Measurement Limit

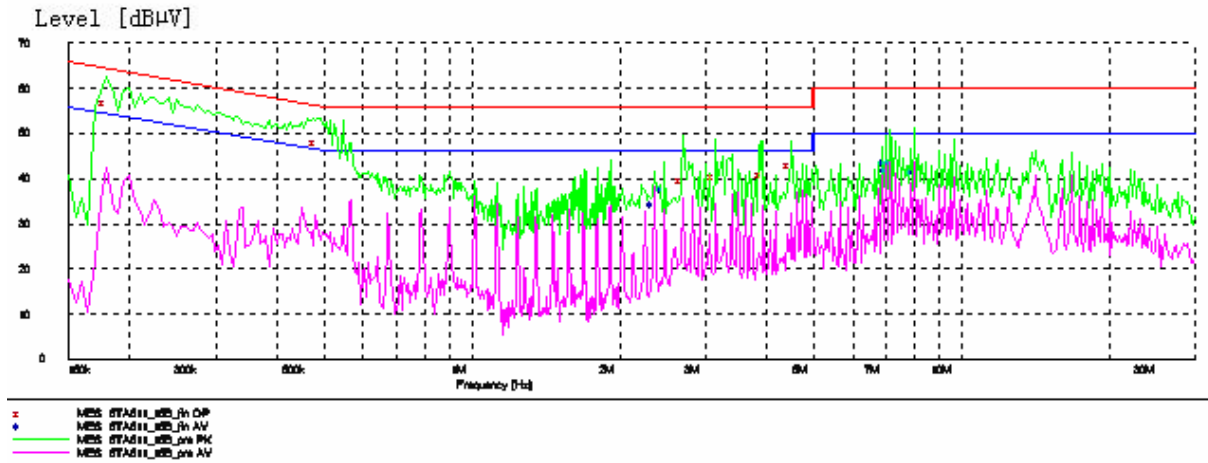
Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency		

### B.2.4 Test Condition

Voltage (V)	Frequency (Hz)
110	60



## B.2.4 Measurement Results With Laptop

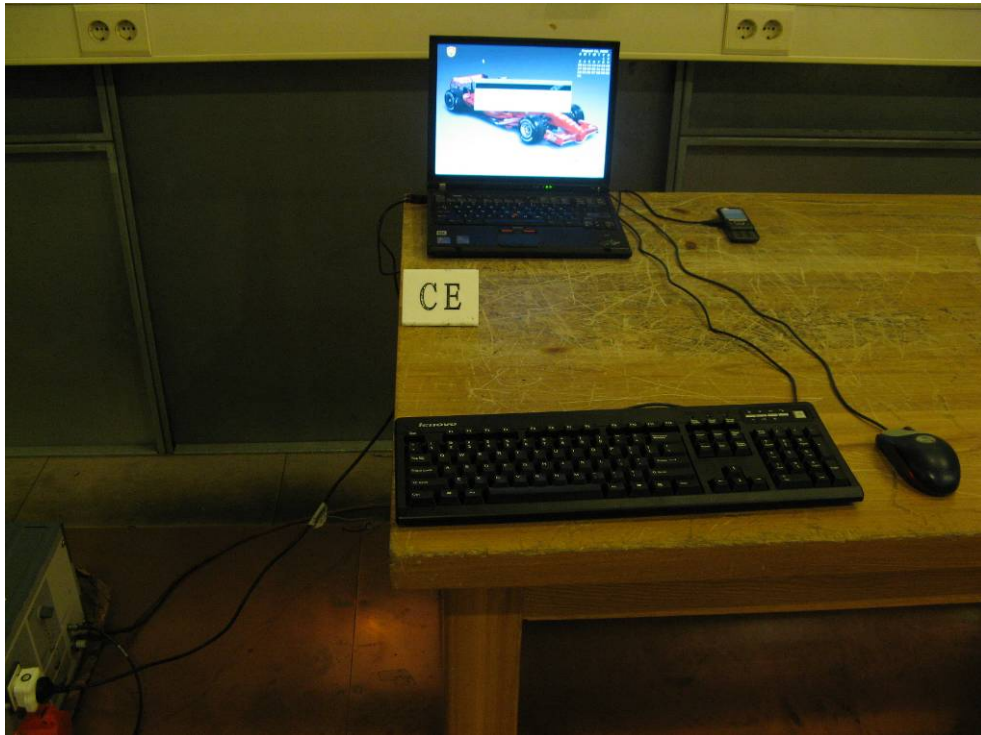


### MEASUREMENT RESULT: "8TA611\_15B\_fin QP"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.180000	56.90	10.1	65	7.5	L1	GND
0.485000	47.90	10.1	56	8.4	L1	GND
2.707262	39.50	10.1	56	16.5	N	GND
3.149781	40.50	10.1	56	15.5	L1	GND
3.937089	40.70	10.1	56	15.3	L1	GND
4.508211	43.10	10.2	56	12.9	N	GND

### MEASUREMENT RESULT: "8TA611\_15B\_fin AV"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
2.364292	34.40	10.1	46	11.6	L1	GND
2.480072	37.40	10.1	46	8.6	L1	GND
6.987689	43.40	10.2	50	6.6	N	GND
7.099939	41.60	10.2	50	8.4	L1	FLO
7.213992	43.50	10.2	50	6.5	L1	FLO
8.001337	41.50	10.2	50	8.5	N	GND

**ANNEX C: TEST LAYOUT****Pic C-1 Conducted Emission****Pic C-2 Radiated Spurious Emission****\*\*\*END OF REPORT\*\*\***