



# TEST REPORT

No. 2008TAR006

for

**TCT Mobile Suzhou Limited**

**GSM/GPRS 850/1900 dual band mobile phone**

**Type: OT-S319A**

with

**Hardware Version: PIO4**

**Software Version: V161**

**Issued Date: Jun 27th, 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:**

TMC Beijing, Telecommunication Metrology Center of Ministry of Information Industry

No. 52, Huayuan Bei Road, Haidian District, Beijing, P. R. China 100083.

Tel:+86(0)10-62303288-2105, Fax:+86(0)10-62304793 Email:welcme@emcite.com. [www.emcite.com](http://www.emcite.com)

©Copyright. All rights reserved by TMC Beijing.

## **CONTENTS**

<b>1. TEST LABORATORY.....</b>	<b>3</b>
<b>1.1. TESTING LOCATION.....</b>	<b>3</b>
<b>1.2. TESTING ENVIRONMENT.....</b>	<b>3</b>
<b>1.3. PROJECT DATA.....</b>	<b>3</b>
<b>1.4. SIGNATURE.....</b>	<b>3</b>
<b>2. CLIENT INFORMATION.....</b>	<b>4</b>
<b>2.1. APPLICANT INFORMATION.....</b>	<b>4</b>
<b>2.2. MANUFACTURER INFORMATION.....</b>	<b>4</b>
<b>3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE).....</b>	<b>5</b>
<b>3.1. ABOUT EUT.....</b>	<b>5</b>
<b>3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST.....</b>	<b>5</b>
<b>4. LABORATORY ENVIRONMENT.....</b>	<b>5</b>
<b>5. SUMMARY OF TEST RESULTS.....</b>	<b>6</b>
<b>6. TEST EQUIPMENTS UTILIZED.....</b>	<b>6</b>
<b>ANNEX A: EUT PHOTOGRAPH.....</b>	<b>8</b>
<b>ANNEX B: MEASUREMENT RESULTS.....</b>	<b>12</b>
<b>ANNEX C: TEST LAYOUT.....</b>	<b>19</b>

## 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

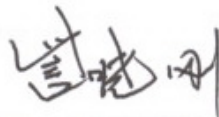
### 1.2. Testing Environment

Normal Temperature: 15-35°C  
Relative Humidity: 20-75%

### 1.3. Project data

Testing Start Date: Mar 5,2008  
Testing End Date: Mar 11,2008

### 1.4. Signature



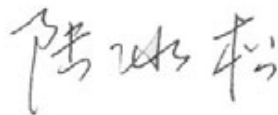
---

Zi Xiaogang  
(Prepared this test report)



---

Song Chongwen  
(Reviewed this test report)



---

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

## **2. Client Information**

### **2.1. Applicant Information**

Company Name: TCT Mobile Suzhou Limited  
Address /Post: 4F, South Building, No.2966, JinKe Road, Zhangjiang High-Tech Park  
Shanghai 201203, P.R.China  
City: Shanghai  
Postal Code: 201203  
Country: China  
Telephone: 0086-21-61460885  
Fax: 0086-21-61460602

### **2.2. Manufacturer Information**

Company Name: TCT Mobile Suzhou Limited  
Address /Post: 4F, South Building, No.2966, JinKe Road, Zhangjiang High-Tech Park  
Shanghai 201203, P.R.China  
City: Shanghai  
Postal Code: 201203  
Country: China  
Telephone: 0086-21-61460885  
Fax: 0086-21-61460602

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

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

Description	GSM/GPRS 850/1900 dual band mobile phone
Model	OT-S319A
FCC ID	RAD074
Hardware status	PIO4
Software status	V161
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	011455000002629	PIO4	V161

\*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

### **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

<b>Abbreviations used in this clause:</b>	
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	MANUFACTURER	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	2008-8-13

8	Spectrum Analyzer	FSU26	200030	R&S	2009-6-18
9	Universal Radio Communication Tester	CMU200	100680	R&S	2008-8-23
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



Charger (AC/DC Adapter)



Label of Charger (AC/DC Adapter)



Data Cable



Battery 1

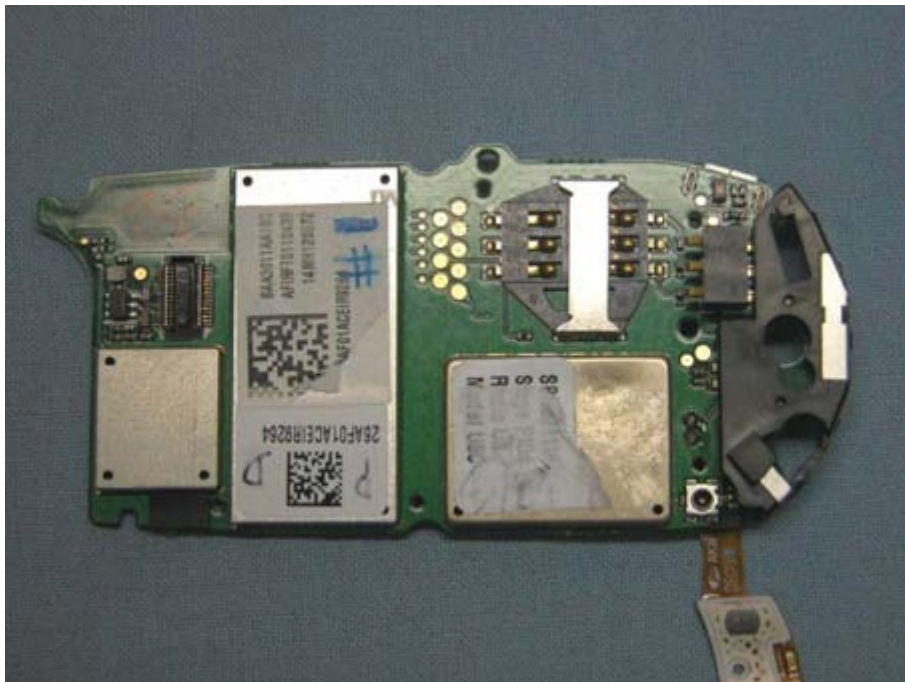


Battery 2

Internal Photo



Mobile phone Disassembly



Mobile phone Disassembly



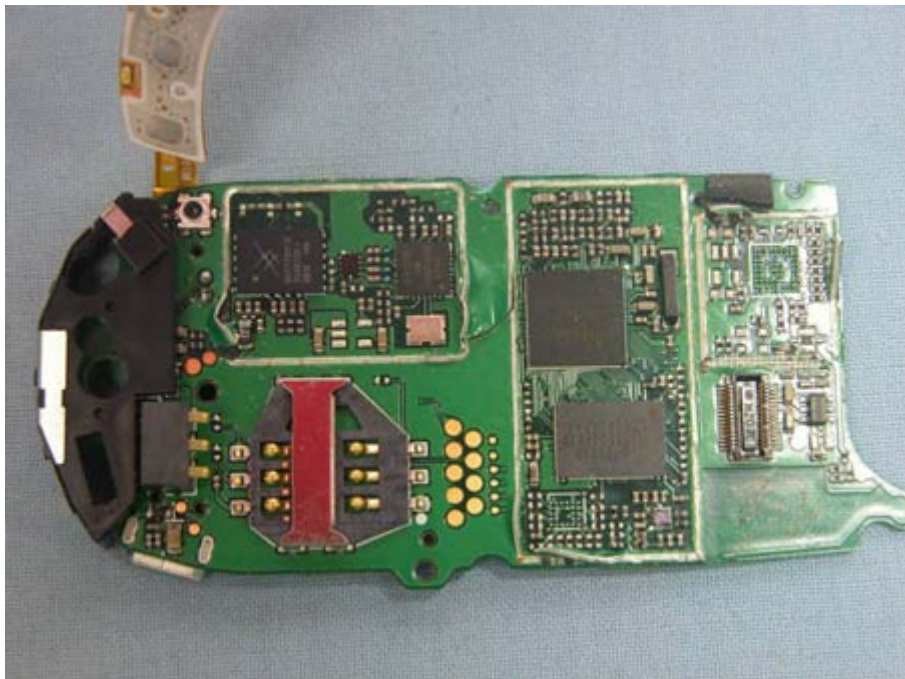
Mobile phone Disassembly



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. 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

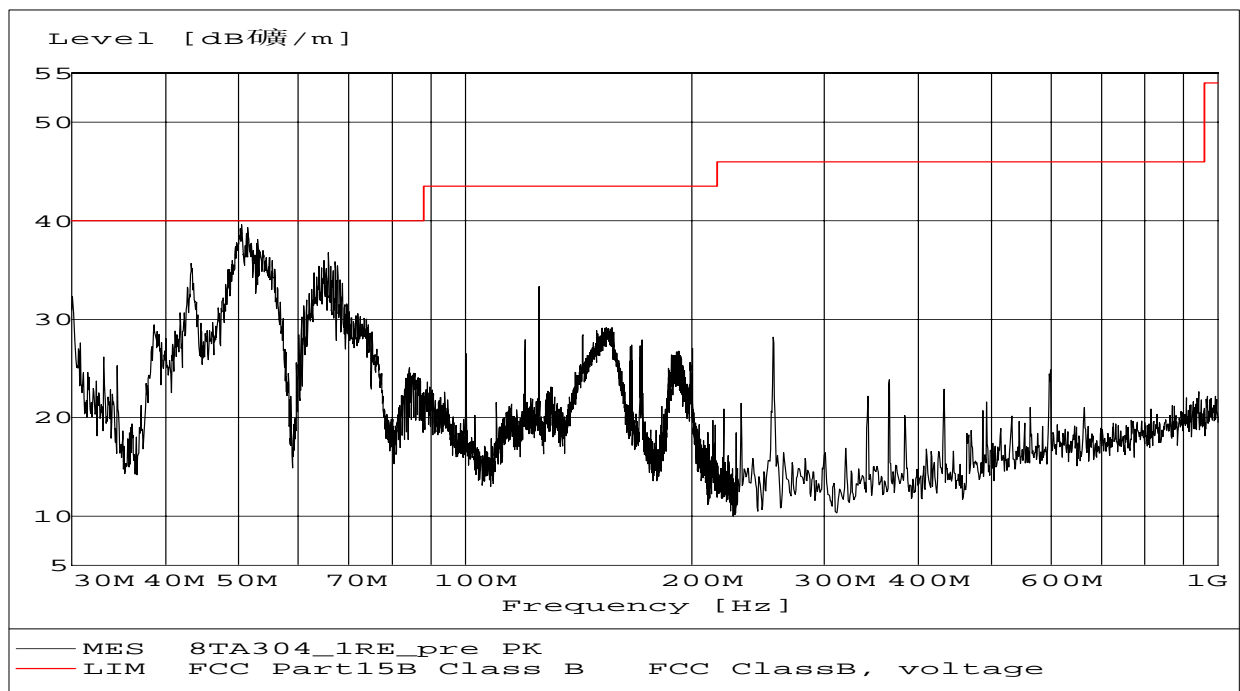


Figure B.1 Radiated Emission from 30MHz to 1GHz

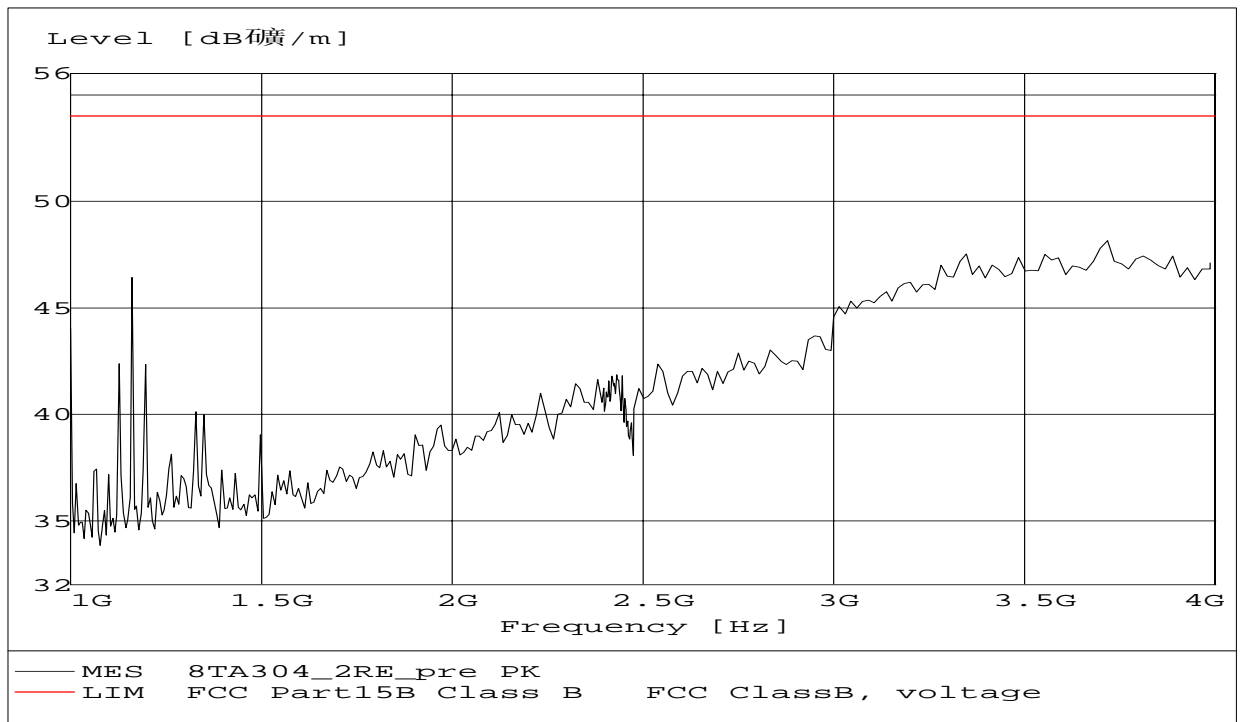


Figure B.2 Radiated Emission from 1GHz to 4GHz



## 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. The test set-up please refers to Annex C.2.

### B.2.2 EUT Operating Mode:

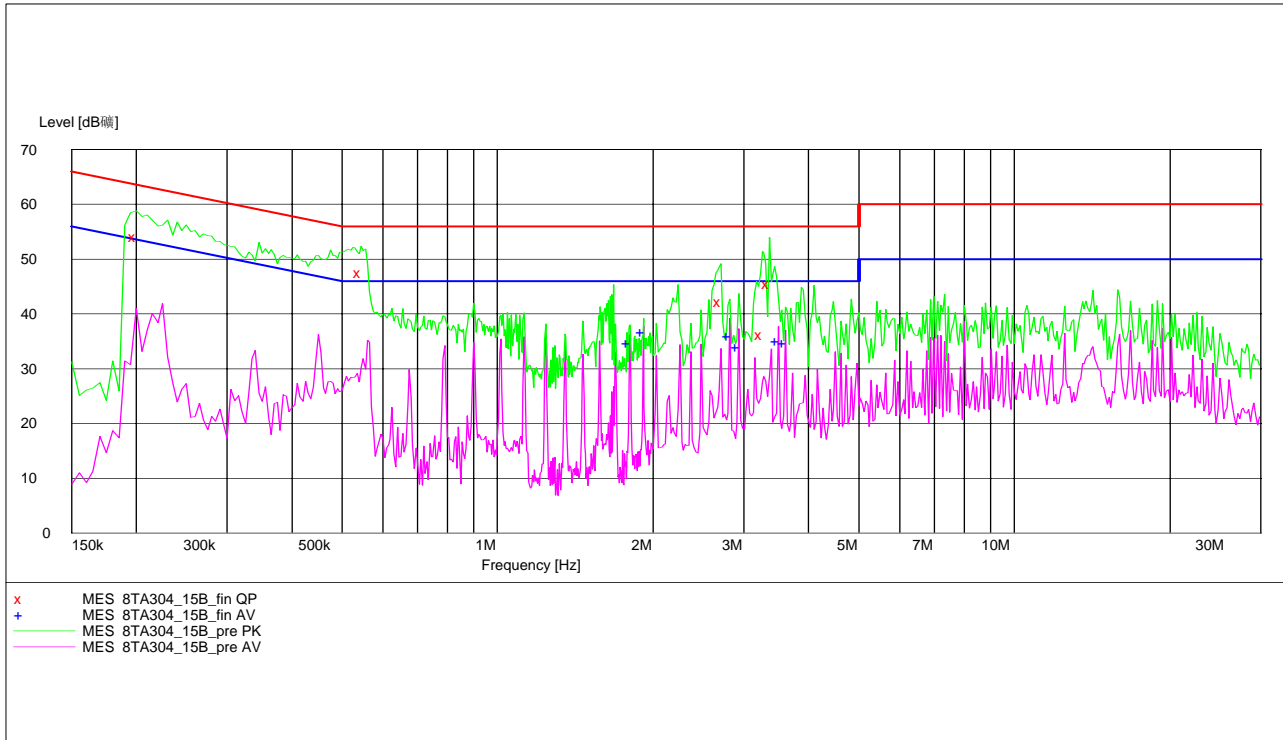
The MS is operating in the USB mode. During the test MS is connected to a laptop via a USB cable. The model of the laptop is IBM T42 2373-M6C, and the serial number of the laptop is 99-FV6P2. The software is used to let the laptop keep on copying data to MS, reading and erasing the data after copy action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

### B.2.3 Measurement Limit

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

### B.2.4 Measurement Results



#### MEASUREMENT RESULT: "8TA304\_15B\_fin QP"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
0.200000	54.00	10.1	64	9.6	L1	FLO
0.545000	47.50	10.1	56	8.5	N	GND
2.707262	42.10	10.1	56	13.9	N	GND
3.251790	36.10	10.1	56	19.9	L1	FLO
3.357102	45.40	10.1	56	10.6	N	GND

#### MEASUREMENT RESULT: "8TA304\_15B\_fin AV"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	PE
1.800000	34.60	10.1	46	11.4	N	GND
1.915000	36.80	10.1	46	9.3	N	GND
2.817299	35.90	10.1	46	10.1	N	GND
2.931808	34.00	10.1	46	12.0	N	GND
3.493552	35.10	10.1	46	10.9	N	GND
3.606695	34.60	10.1	46	11.4	L1	GND

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