

# **TEST REPORT**

No. 2009TAR154

for

**TCT Mobile Limited** 

GSM/GPRS/EDGE 850/1800/1900 Tri-band mobile phone

Type: Jade A

Marketing Name: OT-800A

with

**Hardware Version: Lot0** 

Software Version: V178

Issued Date: Nov 12th, 2009

#### 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:**

DAR accreditation (DIN EN ISO/IEC 17025): No. DAT-P-114/01-01

FCC 2.948 Listed: No.733176 IC O.A.T.S listed: No.6629A-1

TMC Beijing, Telecommunication Metrology Center of Ministry of Industry and Information Technology

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

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# 1. Test Laboratory

# 1.1. Testing Location

Company Name: TMC Beijing, Telecommunication Metrology Center of MIIT Address: No 52, Huayuan beilu, Haidian District, Beijing, P.R. China

Postal Code: 100083

Telephone: 00861062303288 Fax: 00861062304793

# 1.2. <u>Testing Environment</u>

Normal Temperature:  $15-35^{\circ}$ C Relative Humidity: 20-75%

#### 1.3. Project data

Testing Start Date: Oct 27th, 2009
Testing End Date: Oct 30th, 2009

#### 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 Limited

Address /Post: 4/F, South Building,No.2966, Jinke Road, Zhangjiang High-Tech Park,

Pudong, Shanghai, 201203, P.R. China

City: Shanghai Postal Code: 201203 Country: China

Telephone: 0086-21-61460876 Fax: 0086-21-61460602

### 2.2. Manufacturer Information

Company Name: TCT Mobile Limited

4/F, South Building, No. 2966, Jinke Road, Zhangjiang High-Tech Park,

Address /Post: Pudong,Shanghai, 201203, P.R.China

City: Shanghai
Postal Code: 201203
Country: China

Telephone: 0086-21-61460876 Fax: 0086-21-61460602



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

# 3.1. About EUT

Description GSM/GPRS/EDGE 850/1800/1900 Tri-band mobile phone

Model Name Jade A

Marketing Name OT-800A

FCC ID RAD106

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

EUT ID\* SN or IMEI HW Version SW Version

N03 011851003178913 Lot0 V178

## 3.3. Internal Identification of AE used during the test

AE ID*	Description	SN
AE1	Battery	/
AE2	Travel Adapter	/

AE1

Model CAB30P0000C1

Manufacturer BYD
Capacitance 850mAh
Nominal Voltage 3.7V

AE2

Model CBA30Y0AG0C1

Manufacturer BYD
Length of DC line 150cm

<sup>\*</sup>AE 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.

ReferenceTitleVersionFCC Part 15, Subpart BRadio frequency devicesV 10.1.07ANSI C63.4Methods of Measurement of Radio-Noise Emissions2003

from Low Voltage Clastrical and Clastragic Continues at in

from Low-Voltage Electrical and Electronic Equipment in

the Range of 9 kHz to 40 GHz

# 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:

3	3
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:	
Р	Pass
NA	Not applicable
F	Fail

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

# 7. Test Equipments Utilized

NO.	Description	TYPE	SERIES	MANUFACTUR	CAL DUE
	2000.1011011	=	NUMBER	E	DATE
1	Test Receiver	ESS	847151/015	R&S	2010-10-29
2	Test Receiver	ESI40	831564/002	R&S	2010-2-11
3	BiLog Antenna	3142B	9908-1403	EMCO	2010-1-16
4	BiLog Antenna	VUL9163	9163 175	Schwarzbeck	2010-9-18
5	Signal Generator	SMT06	831285/005	R&S	2009-12-26
6	Signal Generator	SMP04	100070	R&S	2010-4-20
7	LISN	ESH2-Z5	829991/012	R&S	2010-9-12
8	Spectrum Analyzer	FSU26	200030	R&S	2010-6-17
	Universal Radio				
9	Communication	CMU200	100680	R&S	2010-8-22
	Tester				
	Dual-Ridge				2010-3
10	Waveguide Horn	3115	9906-5827	EMCO	
	Antenna				
	Dual-Ridge				2010-3
11	Waveguide Horn	3116	2663	EMCO	
	Antenna				
	Dual-Ridge				2010-3
12	Waveguide Horn	3116	2661	EMCO	
	Antenna				
13	Climatic chamber	SH-241	92003546	ESPEC	2010-5-14



# **ANNEX A: MEASUREMENT RESULTS**

#### A.1 Radiated Emission (§15.109(a))

#### A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator (USB mode of MS and charging 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.

#### A.1.2 EUT Operating Mode:

The MS is operating in the USB mode and charging mode. During the test MS is connected to a PC via a USB cable in the case of USB mode and is connected to a charger in the case of charging mode. The model of the PC is DELL OPTIPLEX 755, and the serial number of the PC is 3908243625. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

#### A.1.3 Measurement Limit

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



# A.1.4 Measurement Results Charging Mode

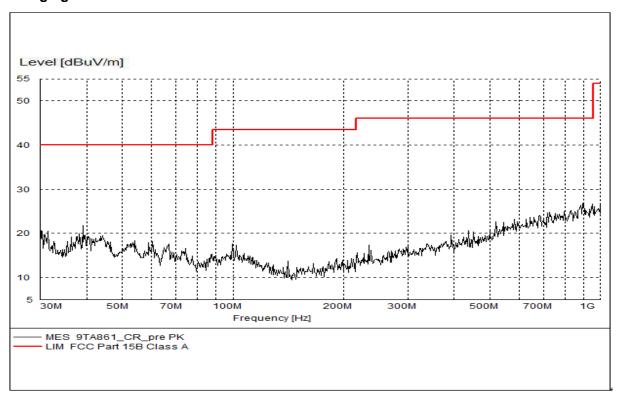


Figure A.1 Radiated Emission from 30MHz to 1GHz

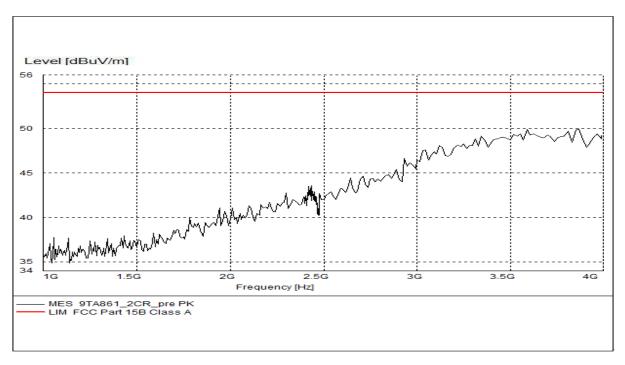


Figure A.2 Radiated Emission from 1GHz to 4GHz



#### **USB Mode**

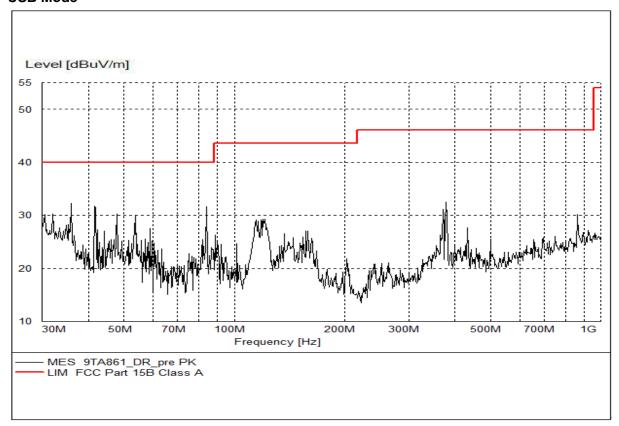


Figure A.3 Radiated Emission from 30MHz to 1GHz

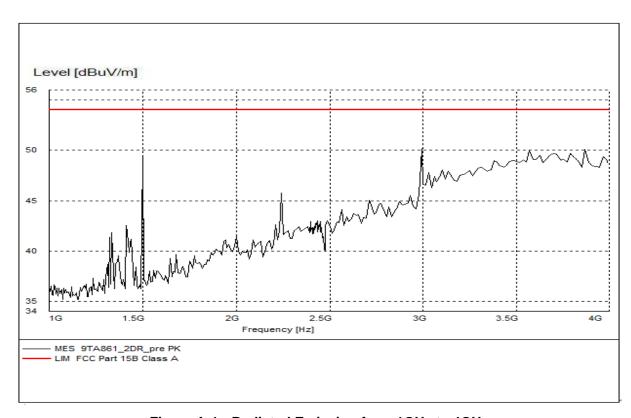


Figure A.4 Radiated Emission from 1GHz to 4GHz



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

#### A.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.

#### A.2.2 EUT Operating Mode:

The MS is operating in the USB mode and charging mode. During the test MS is connected to a PC via a USB cable in the case of USB mode and is connected to a charger in the case of charging mode. The model of the PC is DELL OPTIPLEX 755, and the serial number of the PC is 3908243625. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

#### A.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		

#### A.2.4 Test Condition in charging mode

Voltage (V)	Frequency (Hz)
110	60



# A.2.4 Measurement Results Charging Mode

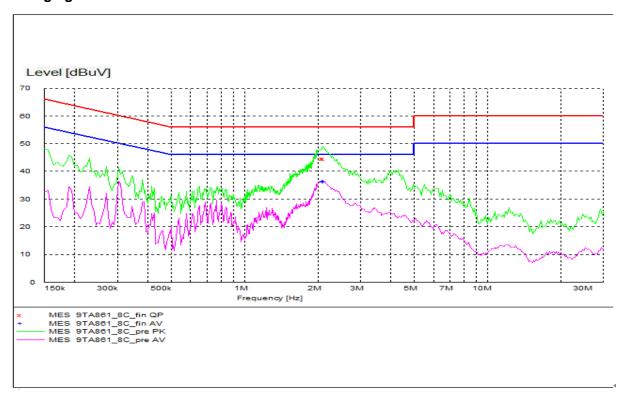


Figure A.5 Conducted Emission

# MEASUREMENT RESULT: "9TA861\_8C\_fin QP"

Frequency	Level T	ransd Li	mit M	largin	Line	PE
MHz	dΒμV	dB	dBµ∖	/	dB	
2.102020	44.60	10.1	56	11.4	L1	FLO
2.123040	44.50	10.1	56	11.5	L1	GND

# MEASUREMENT RESULT: "9TA861\_8C\_fin AV"

Frequency	Level T	Transd Lir	nit M	argin	Line	PE
MHz	dΒμV	dB	dΒμV		dB	
2.102020	36.30	10.1	46	9.7	L1	GND
2.123040	36.00	10.1	46	10.0	L1	FLO

\*\*\*END OF REPORT\*\*\*