TEST REPORT

No. 2011TAR577

for

ZTE Corporation

WCDMA uFi/Hotspot

Model Name: MF50

with

FCC ID : Q78-ZTEMF50

Hardware Version: d30B

Software Version: EN_ZTE_MF50TVV1.0.0B01

Issued Date: 2011-10-26

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. DGA-PL-114/01-02

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 100191
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CONTENTS

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:	100191
Telephone:	00861062304633
Fax:	00861062304633

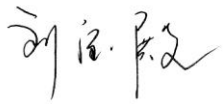
1.2. Testing Environment

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

1.3. Project data

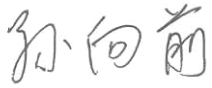
Testing Start Date:	Sep 08, 2011
Testing End Date:	Sep 25, 2011

1.4. Signature



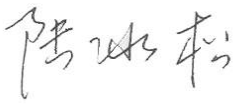
Liu Baodian

(Prepared this test report)



Sun Xiangqian

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	ZTE Corporation
Address /Post:	#68 Zijin Hua Road, Nanjing, Jiangsu Province, P. R. China
City:	Nan Jing
Postal Code:	210012
Country:	China
Telephone:	+86-25-52878232
Fax:	+86-25-68897541

2.2. Manufacturer Information

Company Name:	ZTE Corporation
Address /Post:	#68 Zijin Hua Road, Nanjing, Jiangsu Province, P. R. China
City:	Nan Jing
Postal Code:	210012
Country:	China
Telephone:	+86-25-52878232
Fax:	+86-25-68897541

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

3.1. About EUT

Description	WCDMA uFi/Hotspot
Model Name	MF50
FCC ID	Q78-ZTEMF50
Frequency	GSM 850MHz; PCS 1900MHz ;WCDMA850/1900MHz
Antenna	Internal

Note: 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
EUT1	868380000005329	d30B	EN_ZTE_MF50TVV1.0.0B01

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

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN	Note
AE1	Battery	/	/
AE2	Travel Adapter	/	/
AE3	USB Cable	/	/

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

AE1

Model	Li3715T42P3h654251
Manufacturer	ZTE
Capacitance	1500mAh
Nominal Voltage	3.7V

AE2

Model	STC-A22O50I700USBA-Z
Manufacturer	RUIDE
Length of DC line	/

AE3

Model	/
Manufacturer	ZTE
Length of headset line	120cm

*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.

Reference	Title	Version
FCC Part 15, Subpart B	Radio frequency devices	July 10, 2008 Edition
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 ℃, Max. = 30 ℃
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2MΩ
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 3000 MHz

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

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. =30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 0.5 Ω

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

Temperature	Min. = 15 ℃, Max. = 30 ℃
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 0.5 Ω

Fully-anechoic chamber1(6.8 meters×3.08 meters×3.53 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 30 ℃
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

Fully-anechoic chamber2(8.6 meters×6.1 meters×3.85 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 30 ℃
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 1Ω
Uniformity of field strength	Between 0 and 6 dB, from 80 to 4000 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	MANUFACTURE	CAL DUE DATE
1	Test Receiver	ESCI	100344	R&S	2012-03-12
2	Test Receiver	ESCI	100766	R&S	2011-12-06
3	Test Receiver	ESI40	831564/002	R&S	2012-02-12
4	BiLog Antenna	VUL9163	9163-302	Schwarzbeck	2012-02-10
5	Signal Generator	SMB100A	102063	R&S	2012-03-05
6	LISN	ESH2-Z5	829991/012	R&S	2012-04-20
7	Universal Radio Communication Tester	CMU200	100680	R&S	2012-09-05
8	Dual-Ridge Waveguide Horn Antenna	3115	6914	EMCO	2012-01-18

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 at a distance of 3 meters is tested. Tested in accordance with the procedures of ANSI C63.4 - 2003, section 8.3.

A.1.2 EUT Operating Mode:

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.
The MS is operating in the charging mode.

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 Test Condition

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100KHz/300KHz	5
1000-4000	1MHz/1MHz	15

A.1.5 Measurement Results

A "reference path loss" is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna and the path loss.
The measurement results are obtained as described below:
Result = $P_{Mea} + F_A + G_{PL}$
Where

F_A: Receive Antenna Factor

G_{PL}: Cable Loss

P_{Mea}: The measurement result on receiver.

Charging Mode

Frequency(MHz)	Result(dBuV/m)	G_{PL} (dB)	F_A (dB/m)	P_{mea}(dBuV)	Polarity
3699.399	39.11	-19.5	33.4	25.21	VERTICAL
3701.403	39.1	-19.4	33.4	25.1	VERTICAL
3697.395	39.06	-19.5	33.4	25.16	VERTICAL
3703.407	39.05	-19.4	33.4	25.05	VERTICAL
3705.411	39.02	-19.4	33.4	25.02	VERTICAL
3711.423	39.02	-19.5	33.4	25.12	VERTICAL

Charging Mode

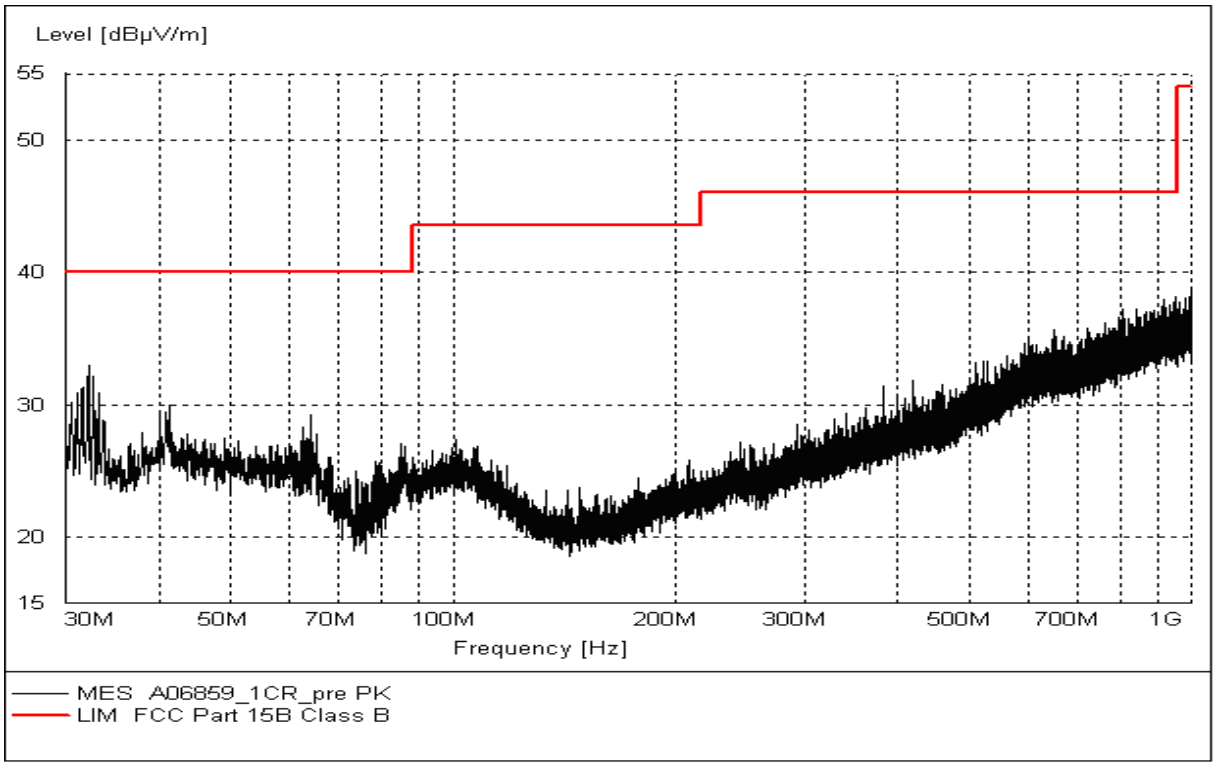


Figure A.1 Radiated Emission from 30MHz to 1GHz

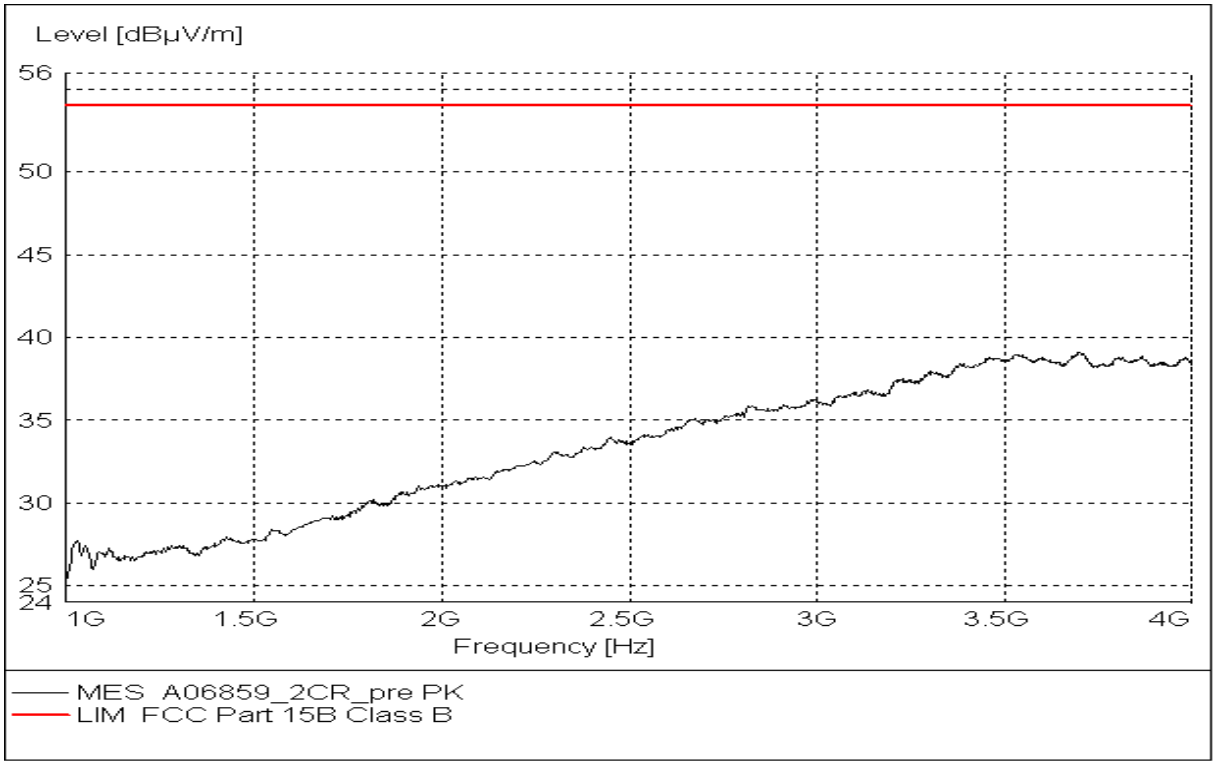


Figure A.2 Radiated Emission from 1GHz to 4GHz

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 150 kHz to 30 MHz shall not exceed the limits. Tested in accordance with the procedures of ANSI C63.4 - 2003, section 7.2.

A.2.2 EUT Operating Mode:

The MS is operating in the charging mode.

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）
120	60

RBW	Sweep Time(s)
9kHz	1

A.2.4 Measurement Results

Charging Mode

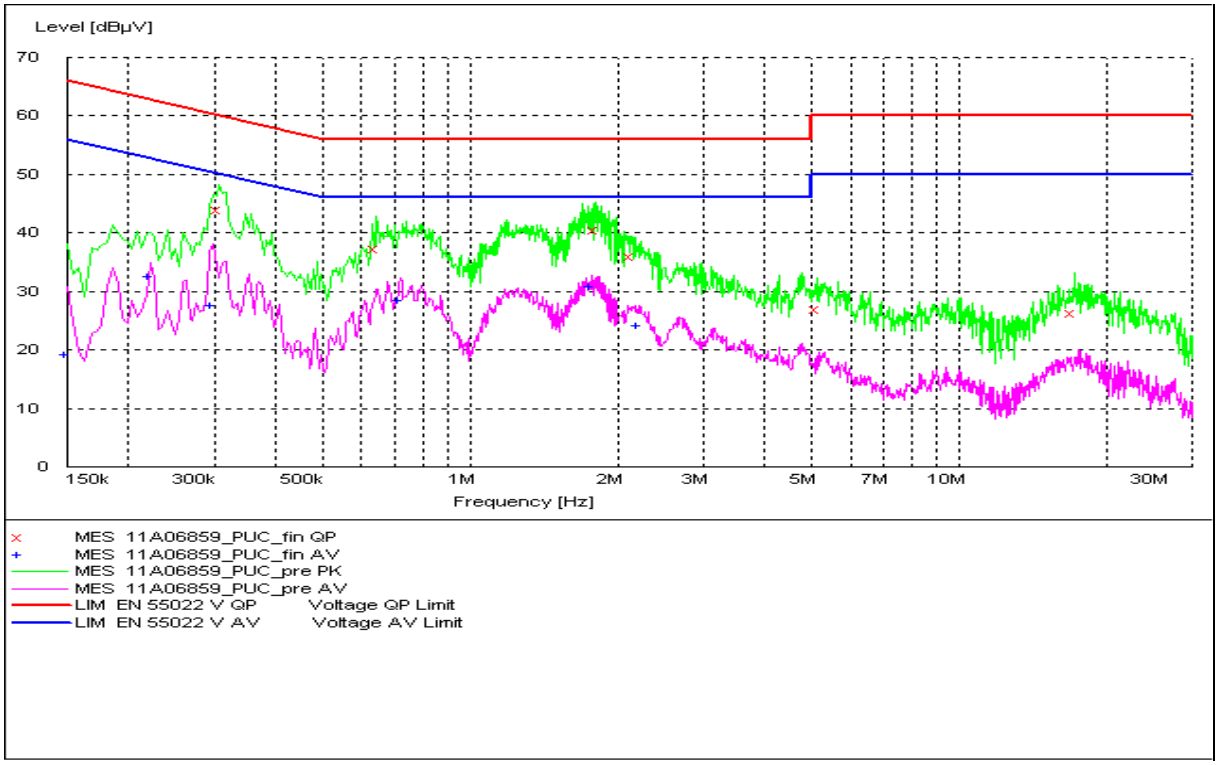


Figure A.3 Conducted Emission

MEASUREMENT RESULT: "11A06859_PUC_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB	/	/
0.307500	43.90	10.1	60	16.1	L1	GND
0.640500	37.30	10.1	56	18.7	L1	GND
1.810500	40.50	10.1	56	15.5	L1	GND
2.144642	35.90	10.1	56	20.1	L1	GND
5.133525	26.90	10.2	60	33.1	L1	GND
17.163372	26.20	10.3	60	33.8	L1	GND

MEASUREMENT RESULT: "11A06859_PUC_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB	/	/
0.150000	19.10	10.1	56	36.9	N	GND
0.222000	32.60	10.1	53	20.2	N	GND
0.298500	27.70	10.1	50	22.6	L1	GND
0.721500	28.40	10.1	46	17.6	N	GND
1.770000	30.80	10.1	46	15.2	L1	GND
2.209791	24.20	10.1	46	21.8	L1	GND

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