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# TEST REPORT

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Report No.: SRTC2011-H024-E0080

Product Name: CDMA 1X Digital Mobile Phone

Product Model: ZTE-C S165

Applicant: ZTE Corporation

Manufacturer: ZTE Corporation

Specification: FCC Part15B (Certification)

(October 1, 2009 edition)

FCC ID: Q78-ZTECS165

The State Radio\_monitoring\_center Testing Center (SRTC)

No.80 Beilishi Road Xicheng District Beijing, China

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## 1. General information

### 1.1 Notes of the test report

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The test results relate only to individual items of the samples which have been tested.

### 1.2 Information about the testing laboratory

Company: The State Radio\_monitoring\_center Testing Center (SRTC)  
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City: Beijing  
Country or Region: China  
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### 1.3 Applicant's details

Company: ZTE Corporation  
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Grantee Code: Q78  
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Email: zhang.min13@zte.com.cn

### 1.4 Manufacturer's details

Company: ZTE Corporation  
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Country or Region: P.R.China  
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Fax: +86-021-50801070  
Email: li.dezi@zte.com.cn

## 1.5 Application details

Date of reception of test sample: 18<sup>th</sup> Nov 2011

Date of test: 18<sup>th</sup> Nov 2011 to 23<sup>rd</sup> Nov 2011

## 1.6 Reference specification

FCC Part 15B October 1, 2009 (Certification)

## 1.7 Information of EUT

### 1.7.1 General information

Name of EUT	CDMA 1X Digital Mobile Phone
FCC ID	Q78-ZTECS165
Frequency range	Tx:824~849MHz Rx:869~894MHz
Rated output power	24.0dBm
E.R.P.	22.4dBm
Modulation type	OQPSK
Emission Designator	1M25F9W
Duplex mode	FDD
Equipment Class	Class B
Duplex spacing	45MHz
Antenna type	Fixed Internal
Power Supply	Battery or charger
Rated Power Supply Voltage	3.7V
Extreme Temperature	Lowest: -30°C Highest: +50°C
Extreme Voltage	Minimum: 3.4V Maximum: 4.2V
HW Version	cu7A
SW Version	PBTL_S165_RBTL19NV0.1.0B01

### 1.7.2 EUT details

Name	Model	SN
CDMA 1X Digital Mobile Phone	ZTE-C S165	A0000032064971

### 1.7.3 Auxiliary equipment details

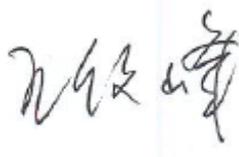
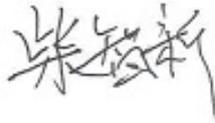
Equipment	Charger
Manufacturer	ZTE
Model Number	STC-A22O50U5-C
Input Voltage	100V-240V a.c.
Output Voltage	5.0V d.c.
Frequency	50/60Hz

Equipment	Battery
Manufacturer	ZTE
Model Number	Li3710T42P3h553457
Capacity	1000mAh
Rated Voltage	3.7V d.c.

## 2. Test information

### 2.1 Summary of the test results

No.	Test case	FCC reference	Verdict
1	Conducted emissions	15.107	Pass
2	Radiated emissions	15.109	Pass

This Test Report Is Issued by: Mr. Song Qizhu Director of the test lab 	Checked by: Mr. Wang Junfeng Deputy director of the test lab 
Tested by: Mr. Chai Zhixin Test engineer 	Issued date:  <p style="text-align: center;"><b>2011.11.30</b></p>

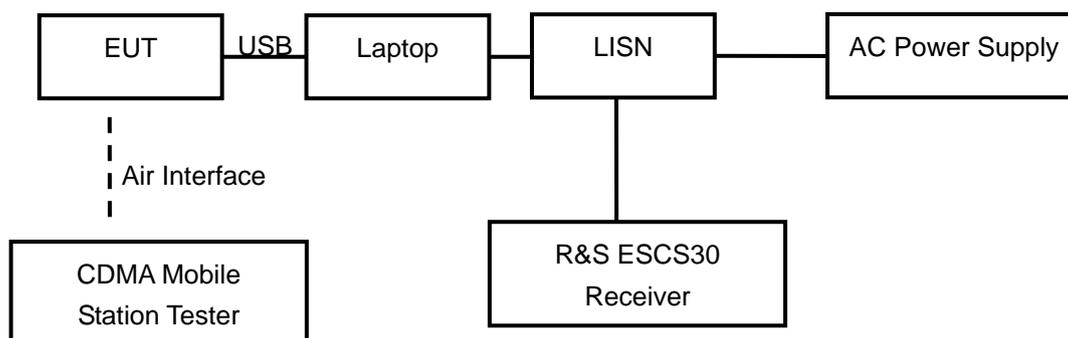
## 2.2 Test result

### 2.2.1 Conducted Emissions-FCC Part15.107

Ambient condition:

Temperature	Relative humidity	Pressure
22°C	30%	100.1kPa

Test Setup:



Test Procedure:

The EUT is placed on a non-metallic table 0.4m above the horizontal metal reference ground plane. The EUT connect with a laptop via the USB cable. The accessories of the EUT are connected with the EUT such as headset etc. During the test the data transferring via USB cable between EUT and laptop is maintained.

The AC main power supply of the laptop is connected to LISN and LISN is connected to the reference ground. The test set-up and the test methods are performed according to ANSI C63.4:2009. Then start the test software ES-K1. Sweep the whole frequency band through the range from 150 KHz to 30 MHz. The measurement should be done for both L line and N line. During pre-test, the receiver uses both peak detector and average detector. And the final test, the receiver uses both average detector and Quasi-peak detector.

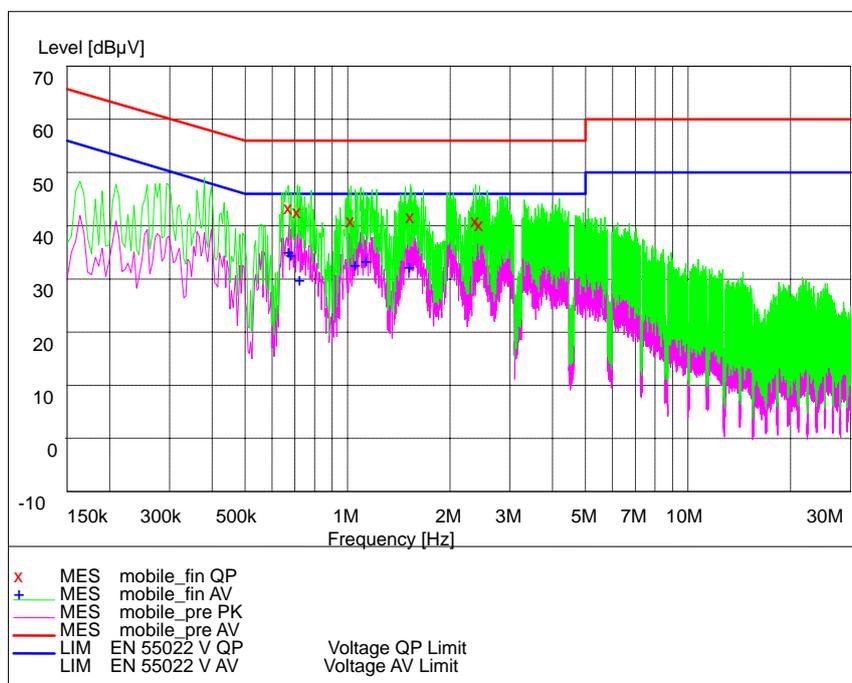
The data of cable loss has been calibrated in full testing frequency range before the testing.

Limit:

Frequency of Emission(MHz)	Limits(dBμV)	
	Quasi-peak	Average
0.15~0.5	66 to 56*	56 to 46*
0.5~5	56	46
5~30	60	50

Note: \* Decreases with the logarithm of the frequency

Test result:  
Refer to the following figures.



### L and N Line

#### MEASUREMENT RESULT: "mobile\_fin QP"

Frequency MHz	Level dBμV	Transd	Limit dB	Margin dBμV	Line dB	PE
0.672000	45.60	20.4	56	10.4	---	---
0.712500	44.80	20.3	56	11.2	---	---
1.023000	43.20	20.2	56	12.8	---	---
1.531500	43.90	20.2	56	12.1	---	---
2.377500	43.10	20.3	56	12.9	---	---
2.445000	42.50	20.3	56	13.5	---	---

#### MEASUREMENT RESULT: "mobile\_fin AV"

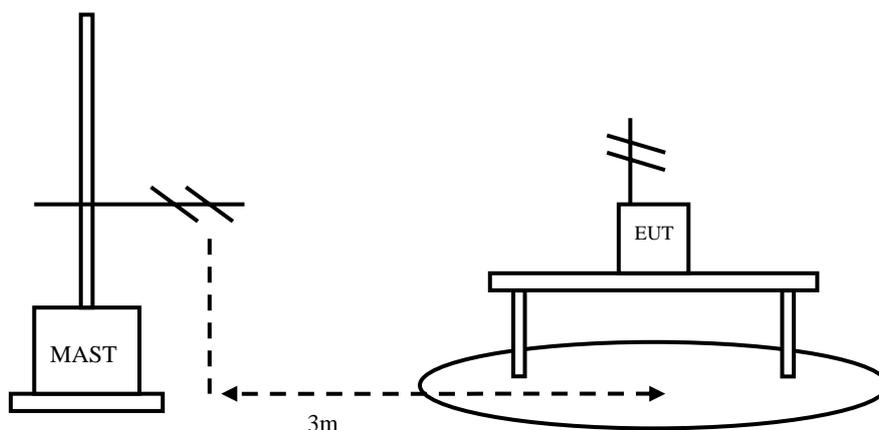
Frequency MHz	Level dBμV	Transd	Limit dB	Margin dBμV	Line dB	PE
0.672000	37.30	20.4	46	8.7	---	---
0.681000	36.80	20.3	46	9.2	---	---
0.721500	32.10	20.3	46	13.9	---	---
1.054500	34.90	20.2	46	11.1	---	---
1.135500	35.60	20.2	46	10.4	---	---
1.518000	34.50	20.2	46	11.5	---	---

## 2.2.2 Radiated Emissions-FCC Part15.109

Ambient condition:

Temperature	Relative humidity	Pressure
27°C	56%	102.1kPa

Test Setup:



Test Procedure:

The EUT should be placed on a non-metallic table 80cm above the ground plane. The receive antennas shall be moved from 1 to 4 meters. The distance between EUT and receive antenna should be 3 meters.

The accessories of the EUT are connected with the EUT such as headset etc. During the test the data transferring via USB cable between EUT and laptop is maintained. The test set-up and the test methods are performed according to ANSI C63.4:2009.

Then start the test software ES-K1. Sweep the whole frequency band through the range from 30MHz to 1GHz, using receive log period antenna HL562.

During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum of radiated spurious signal level. The measurements shall be repeated with orthogonal polarization of the test antenna.

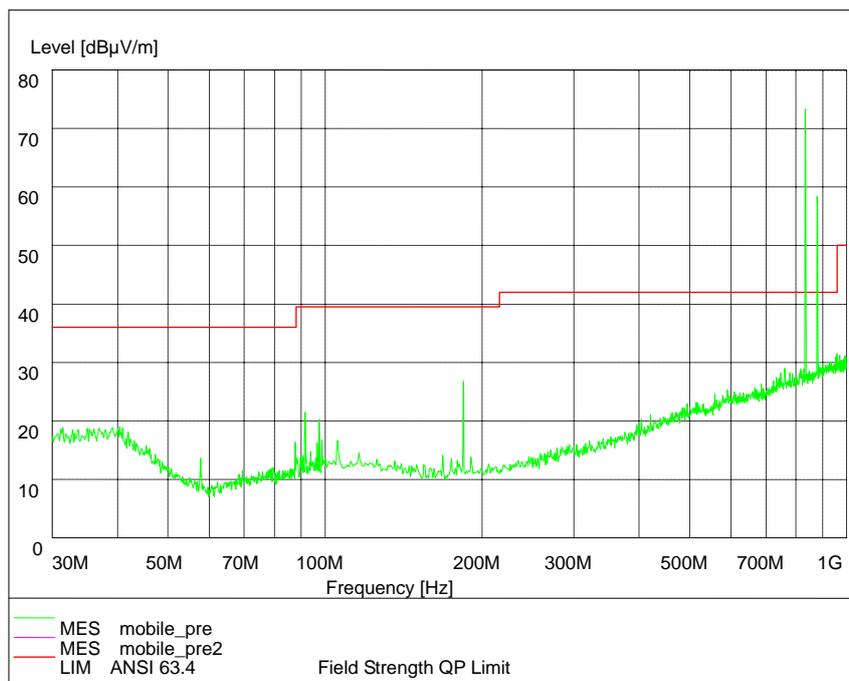
The data of cable loss and antenna factor have been calibrated in full testing frequency range before the testing.

Limit:

Frequency of Emission(MHz)	Limits	
	Detector	Unit (dB $\mu$ V/m)
30~88	Quasi-peak	40
88~216	Quasi-peak	43.5
216~960	Quasi-peak	46
960~1000	Quasi-peak	54
1000~5th harmonic of the highest frequency or 40GHz, whichever is lower	Average	54

Test result:

Refer to the following figures.



Note: The signal beyond the limit is the signal of base station simulator and the carrier occasional.

For measurement above 1GHz, all emissions level measured were more than 10dB below the limit.

### 2.3. List of test equipments

No.	Name/Model	Manufacturer	S/N	Calibration Due Date
1	23.18m×16.88m×9.60m Semi-Anechoic Chamber	FRANKONIA	-----	19 <sup>th</sup> Aug. 2012
2	ESI 40 EMI test receiver	R&S	100015	19 <sup>th</sup> Aug. 2012
3	E5515C(8960) Mobile Station Tester	Agilent	GB44050904	19 <sup>th</sup> Aug. 2012
4	9.080m×5.255m×3.525m Shielding room	FRANKONIA	-----	19 <sup>th</sup> Aug. 2012
5	ESCS30 EMI test receiver	R&S	100029	19 <sup>th</sup> Aug. 2012
6	HL562 Ultra log test antenna	R&S	100016	19 <sup>th</sup> Aug. 2012
7	ESH3-Z2 Pulse limiter	R&S	10002	19 <sup>th</sup> Aug. 2012
8	ESH3-Z5 Attenuator	R&S	100020	19 <sup>th</sup> Aug. 2012
9	ESH2Z11 LISN	R&S	50FH-020-10	19 <sup>th</sup> Aug. 2012
10	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100030	19 <sup>th</sup> Aug. 2012
11	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100029	19 <sup>th</sup> Aug. 2012
12	PS2000 Turn Table	FRANKONIA	-----	19 <sup>th</sup> Aug. 2012
13	MA260 Antenna Master	FRANKONIA	-----	19 <sup>th</sup> Aug. 2012
14	ES-K1EMI test software	R&S	-----	19 <sup>th</sup> Aug. 2012
15	HL562 Receive antenna	R&S	100167	19 <sup>th</sup> Aug. 2012

## Appendix