



Variant FCC RF Test Report

APPLICANT : ZTE CORPORATION
EQUIPMENT : cdma2000 Digital Mobile Handset
BRAND NAME : ZTE
MODEL NAME : V8000
FCC ID : Q78-V8000
STANDARD : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

This is a variant report which is only valid together with the original test report. The product was received on Jun. 25, 2012 and completely tested on Jul. 26, 2012. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (KUNSHAN) INC., the test report shall not be reproduced except in full.

Reviewed by:

Jones Tsai / Manager



SPORTON INTERNATIONAL (KUNSHAN) INC.
No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C.



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SUMMARY OF TEST RESULT

| Report Section | FCC Rule | IC Rule | Description | Limit | Result | Remark |
|----------------|---------------|----------------------------------|-------------------------------------|-----------|--------|--------|
| 2.1 | §2.1046 | N/A | Conducted Output Power | N/A | PASS | - |
| 2.2 | §22.913(a)(2) | RSS-132(4.4) SRSP-503(5.1.3) | Effective Radiated Power | < 7 Watts | PASS | - |
| 2.2 | §24.232(c) | RSS-133 (6.4) SRSP-510(5.1.2) | Equivalent Isotropic Radiated Power | < 2 Watts | PASS | - |
| 2.2 | §27.50(d)(4) | RSS-139 (6.4) SRSP-513(5.1.2) | Equivalent Isotropic Radiated Power | < 1 Watts | PASS | - |



1 General Description

1.1 Applicant

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China

1.2 Manufacturer

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China

1.3 Feature of Equipment Under Test

| Product Feature | |
|---------------------------------|---------------------------------------|
| Equipment | cdma2000 Digital Mobile Handset |
| Brand Name | ZTE |
| Model Name | V8000 |
| FCC ID | Q78-V8000 |
| EUT supports Radios application | CDMA / EV-DO / WLAN 11bgn / Bluetooth |
| HW Version | QB8655-02A_V1DMB_B |
| SW Version | V8000_CKT_1.72 |
| EUT Stage | Identical Prototype |

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

| Product Specification subjective to this standard | |
|---|---|
| Tx Frequency | CDMA2000 BC0: 824.70 MHz ~ 848.31 MHz CDMA2000 BC1: 1815.25 MHz ~ 1908.75 MHz CDMA2000 BC15 : 1711.25 ~ 1753.75 MHz |
| Rx Frequency | CDMA2000 BC0: 869.70 MHz ~ 893.31 MHz CDMA2000 BC1: 1931.25 MHz ~ 1988.75 MHz CDMA2000 BC15 : 2111.25 ~ 2153.75 MHz |
| Maximum Output Power to Antenna | CDMA2000 BC0 : 24.12 dBm CDMA2000 BC1 : 23.77 dBm CDMA2000 BC15 : 24.10 dBm |
| Antenna Type | Fixed Internal Antenna |
| Type of Modulation | QPSK |

1.4 Maximum ERP/EIRP Power

| FCC Rule | System | Type of Modulation | Maximum ERP/EIRP (W) |
|----------|------------------------------|--------------------|----------------------|
| Part 22 | CDMA2000 BC0 1xRTT | QPSK | 0.1084 |
| Part 24 | CDMA2000 BC1 1xRTT | QPSK | 0.1936 |
| Part 27 | CDMA2000 BC15 1xEV-DO Rev. A | QPSK | 0.2355 |

1.5 Testing Site

| | | |
|---------------------------|--|--------------------------------|
| Test Site | SPORTON INTERNATIONAL (KUNSHAN) INC. | |
| Test Site Location | No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P.R.C. TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958 | |
| Test Site No. | Sporton Site No. | FCC/IC Registration No. |
| | TH01-KS | 149928/4086E-1 |

1.6 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ Preliminary Guidance for Receiving Applications for Certification of 3G Device. May 9, 2006.
- ♦ 47 CFR Part 2, 22(H), 24(E), 27(L)
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v01
- ♦ IC RSS-132 Issue 2
- ♦ IC RSS-133 Issue 5
- ♦ IC RSS-139 Issue 2

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.



1.7 Ancillary Equipment List

| Item | Equipment | Trade Name | Model No. | FCC ID | Data Cable | Power Cord |
|------|------------------|------------|-----------|--------|------------|-------------------|
| 1. | System Simulator | R&S | CMU200 | N/A | N/A | Unshielded, 1.8 m |
| 2. | DC Power Supply | GWINSTEK | GPS-3030D | N/A | N/A | Unshielded, 1.8 m |

2 Test Result

2.1 Conducted Output Power Measurement

2.1.1 Description of the Conducted Output Power Measurement

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

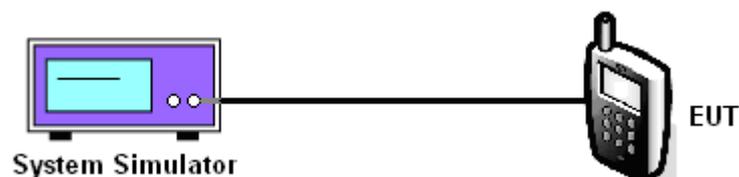
2.1.2 Measuring Instruments

See list of measuring instruments of this test report.

2.1.3 Test Procedures

1. The transmitter output port was connected to base station.
2. Set EUT at maximum power through base station.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Compare each band and different modulation combination to show the worst data rate.

2.1.4 Test Setup





2.1.5 Test Result of Conducted Output Power

The conducted power tables are as follows:

| Conducted Power (*Unit: dBm) | | | | | | | | | |
|------------------------------|--------------|--------|--------|--------------|-------|---------|---------------|---------|---------|
| Band | CDMA2000 BC0 | | | CDMA2000 BC1 | | | CDMA2000 BC15 | | |
| Channel | 1013 | 384 | 777 | 25 | 600 | 1175 | 25 | 425 | 875 |
| Frequency | 824.7 | 836.52 | 848.31 | 1851.25 | 1880 | 1908.75 | 1711.25 | 1731.25 | 1753.75 |
| 1xRTT RC1+SO55 | 24.10 | 24.04 | 24.01 | 23.71 | 23.69 | 23.68 | 23.78 | 23.90 | 23.88 |
| 1xRTT RC3+SO55 | 24.12 | 24.06 | 24.03 | 23.77 | 23.67 | 23.62 | 23.80 | 23.92 | 23.89 |
| 1xRTT RC3+SO32(+ F-SCH) | 24.11 | 24.05 | 24.04 | 23.71 | 23.68 | 23.69 | 23.79 | 23.91 | 23.87 |
| 1xRTT RC3+SO32(+SCH) | 24.10 | 24.03 | 24.02 | 23.75 | 23.73 | 23.61 | 23.78 | 23.90 | 23.88 |
| 1xEVDO RTAP 153.6 | 24.09 | 24.02 | 24.04 | 23.75 | 23.75 | 23.64 | 23.99 | 24.10 | 24.09 |
| 1xEVDO RETAP 4096 | 24.10 | 24.01 | 24.00 | 23.76 | 23.76 | 23.66 | 23.97 | 24.09 | 24.08 |



| CDMA2000 BC0 | | | |
|-------------------------|-----------------|-----------|------------|
| Test Mode | CDMA 2000 1xRTT | | |
| Test Status | RC3+SO55 | | |
| Channel | 1013 (Low) | 384 (Mid) | 777 (High) |
| Frequency (MHz) | 824.70 | 836.52 | 848.31 |
| Conducted Power (dBm) | 24.12 | 24.06 | 24.03 |
| Conducted Power (Watts) | 0.26 | 0.25 | 0.25 |

| CDMA2000 BC1 | | | |
|-------------------------|-----------------|-----------|-------------|
| Test Mode | CDMA 2000 1xRTT | | |
| Test Status | RC3+SO55 | | |
| Channel | 25 (Low) | 600 (Mid) | 1175 (High) |
| Frequency (MHz) | 1851.25 | 1880.00 | 1908.75 |
| Conducted Power (dBm) | 23.77 | 23.67 | 23.62 |
| Conducted Power (Watts) | 0.24 | 0.24 | 0.23 |

| CDMA2000 BC15 | | | |
|-------------------------|--------------------------|-----------|------------|
| Test Mode | CDMA 2000 1xEV-DO Rev. A | | |
| Test Status | RTAP 153.6K | | |
| Channel | 25 (Low) | 425 (Mid) | 875 (High) |
| Frequency (MHz) | 1711.25 | 1731.25 | 1753.75 |
| Conducted Power (dBm) | 23.99 | 24.10 | 24.09 |
| Conducted Power (Watts) | 0.25 | 0.26 | 0.26 |

Note: maximum average power for CDMA2000.



2.2 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

2.2.1 Description of the ERP/EIRP Measurement

The substitution method, in ANSI / TIA / EIA-603-C-2004, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v01. The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts.

2.2.2 Measuring Instruments

See list of measuring instruments of this test report.

2.2.3 Test Procedures

1. The EUT was placed on a turntable with 1.0 meter height in a fully anechoic chamber.
2. The EUT was set at 1.2 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiated power.
4. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
5. Taking the record of maximum ERP/EIRP.
6. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
7. The conducted power at the terminal of the dipole antenna is measured.
8. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
9. $ERP/EIRP = P_s + E_t - E_s + G_s = P_s + R_t - R_s + G_s$

P_s (dBm) : Input power to substitution antenna.

G_s (dBi or dBd) : Substitution antenna Gain.

$E_t = R_t + AF$

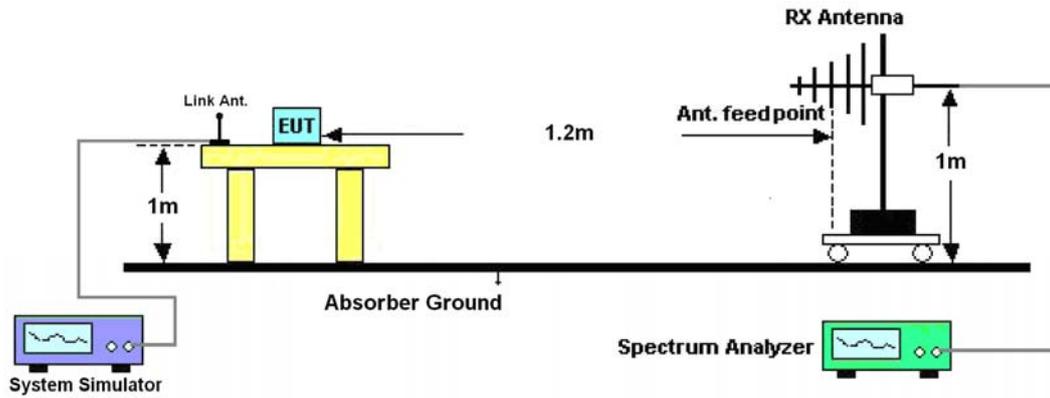
$E_s = R_s + AF$

AF (dB/m) : Receive antenna factor

R_t : The highest received signal in spectrum analyzer for EUT.

R_s : The highest received signal in spectrum analyzer for substitution antenna.

2.2.4 Test Setup



2.2.5 Test Result of ERP

| CDMA2000 BC0 1xRTT_RC3+SO55 Radiated Power ERP | | | | | | |
|--|----------|----------|----------|----------|-----------|---------|
| Horizontal Polarization | | | | | | |
| Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBd) | ERP (dBm) | ERP (W) |
| 824.70 | -27.59 | -48.12 | 0.00 | -1.08 | 19.45 | 0.0881 |
| 836.52 | -27.00 | -48.28 | 0.00 | -0.93 | 20.35 | 0.1084 |
| 848.31 | -28.18 | -48.35 | 0.00 | -0.76 | 19.41 | 0.0873 |
| Vertical Polarization | | | | | | |
| Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBd) | ERP (dBm) | ERP (W) |
| 824.70 | -38.85 | -47.97 | 0.00 | -1.08 | 8.04 | 0.0064 |
| 836.52 | -37.67 | -48.01 | 0.00 | -0.93 | 9.41 | 0.0087 |
| 848.31 | -38.39 | -48.05 | 0.00 | -0.76 | 8.90 | 0.0078 |



2.2.6 Test Result of EIRP

| CDMA2000 BC1 1xRTT_RC3+SO55 Radiated Power EIRP | | | | | | |
|---|----------|----------|----------|----------|------------|----------|
| Horizontal Polarization | | | | | | |
| Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBi) | EIRP (dBm) | EIRP (W) |
| 1851.25 | -31.54 | -51.88 | 0.00 | 1.96 | 22.30 | 0.1698 |
| 1880.00 | -32.46 | -52.99 | 0.00 | 2.00 | 22.53 | 0.1791 |
| 1908.75 | -35.40 | -54.28 | 0.00 | 1.98 | 20.86 | 0.1219 |
| Vertical Polarization | | | | | | |
| Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBi) | EIRP (dBm) | EIRP (W) |
| 1851.25 | -31.28 | -52.13 | 0.00 | 1.96 | 22.81 | 0.1910 |
| 1880.00 | -32.30 | -53.17 | 0.00 | 2.00 | 22.87 | 0.1936 |
| 1908.75 | -35.14 | -54.13 | 0.00 | 1.98 | 20.97 | 0.1250 |

| CDMA2000 BC15 1xEV-DO Rev. A_RTAP 153.6K Radiated Power EIRP | | | | | | |
|--|----------|----------|----------|----------|------------|----------|
| Horizontal Polarization | | | | | | |
| Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBi) | EIRP (dBm) | EIRP (W) |
| 1711.25 | -30.59 | -51.88 | 0.00 | 1.96 | 23.25 | 0.2113 |
| 1731.25 | -31.73 | -52.99 | 0.00 | 2.00 | 23.26 | 0.2118 |
| 1753.75 | -32.99 | -54.28 | 0.00 | 1.98 | 23.27 | 0.2123 |
| Vertical Polarization | | | | | | |
| Frequency (MHz) | Rt (dBm) | Rs (dBm) | Ps (dBm) | Gs (dBi) | EIRP (dBm) | EIRP (W) |
| 1711.25 | -30.88 | -52.13 | 0.00 | 1.96 | 23.21 | 0.2094 |
| 1731.25 | -31.46 | -53.17 | 0.00 | 2.00 | 23.71 | 0.2350 |
| 1753.75 | -32.39 | -54.13 | 0.00 | 1.98 | 23.72 | 0.2355 |



3 List of Measuring Equipments

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|-------------------|--------------|-----------|------------|-----------------|------------------|---------------|---------------|---------------------|
| Spectrum Analyzer | R&S | FSP40 | 100319 | 9kHz~40GHz | Dec. 30, 2011 | Jul. 26, 2012 | Dec. 29, 2012 | Conducted (TH01-KS) |
| System Simulator | R&S | CMU200 | 837587/066 | 2G Full-Band | Dec. 30, 2011 | Jul. 26, 2012 | Dec. 29, 2012 | Conducted (TH01-KS) |
| DC Power Supply | GWINSTEK | GPS-3030D | E1884515 | N/A | Aug. 23, 2011 | Jul. 26, 2012 | Aug. 22, 2012 | Conducted (TH01-KS) |
| Thermal Chamber | Ten Billion | TTC-B3S | TBN-960502 | N/A | Dec. 30, 2011 | Jul. 26, 2012 | Dec. 29, 2012 | Conducted (TH01-KS) |



Appendix A. Photographs of EUT

Please refer to Sporton report number EP222301-01 as below.



Appendix B. Product Equality Declaration

ZTE CORPORATION

ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong,
518057, P.R.China

Tel: +86-755-86360734 ; Fax: +86-755-86360734

Date: July 26, 2012

Product Equality Declaration

We, ZTE CORPORATION, declare on our sole responsibility for the product of **V8000** below:

The differences between previous and current model of **V8000** are as below:

1. Added one SIM slot.
2. BT, WIFI Antenna was slightly changed.
3. Modified the software version.

Except listings above, the others are all the same as previous version.

Should you have any questions or comments regarding this matter, please have my best attention.

Sincerely yours,



Contact Person: Gong Bolin

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