



TEST REPORT

No. 2011TAR255

for

ZTE Corporation

GSM Dual-Band Digital Mobile Phone

Model Name: ZTE-G S319

FCC ID: Q78--ZTEGS319

with

Hardware Version: gbwA

Software Version: P108A34FM(U)B01-En-01\\ngbwA

Issued Date: 2011-06-16

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

Tel:+86(0)10-62304633-2678 , Fax:+86(0)10-62304633-2504 Email:welcome@emcite.com. www.emcite.com

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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: 100191
Telephone: 00861062304633
Fax: 00861062304633

1.2. Testing Environment

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

1.3. Project data

Testing Start Date: May 24, 2011
Testing End Date: May 25, 2011

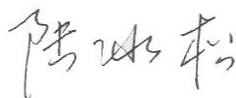
1.4. Signature



Qu Pengfei
(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 | GSM Dual-Band Digital Mobile Phone |
| Model Name | ZTE-G S319 |
| FCC ID | Q78--ZTEGS319 |
| Extreme vol. Limits | 3.5VDC to 4.2VDC (nominal: 3.7VDC) |

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Telecommunication Metrology Center of MIIT 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 | 358530030001329 | gbwA | P108A34FM(U)B01-En-01\\ngbwA |

*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 |
|---------------|--------------------|-------------------|
| AE1 | Battery | 10190907281438531 |
| AE2 | Travel Adapter | / |

AE1

| | |
|-----------------|--------------------|
| Model | Li3704T42P3h383857 |
| Manufacturer | ZTE |
| Capacitance | 400mAh |
| Nominal Voltage | 3.7V |

AE2

| | |
|-----------------|--------------------|
| Model | STC-A22O50I200U8-C |
| Manufacturer | RUIDE |
| Length of cable | 119.5cm |

*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 °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

| 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 | 2012-02-11 |
| 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 | 2012-04-17 |
| 7 | Universal Radio Communication Tester | CMU200 | 100680 | R&S | 2011-09-05 |
| 8 | Dual-Ridge Waveguide Horn Antenna | 3115 | 6914 | EMCO | 2012-2-18 |

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 (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 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.

A.1.2 EUT Operating Mode:

The MS is operating in the charging mode. During the test MS is connected to a charger in the case of 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". It includes the antenna factor of receive antenna and the path loss.

The measurement results are obtained as described below:

$$\text{Result} = P_{\text{Mea}} + A_{\text{Rpl}} = P_{\text{Mea}} + G_A + G_{\text{PL}}$$

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Charging Mode

| Frequency(MHz) | Result(dBuV/m) | G_{PL} (dB) | G_A (dB/m) | P_{Mea} (dBuV) | Polarity |
|----------------|----------------|----------------------|--------------|-------------------------|------------|
| 3472.946 | 51.47 | -19.7 | 31.2 | 39.97 | HORIZONTAL |
| 3557.114 | 51.41 | -19.5 | 33.4 | 37.51 | HORIZONTAL |
| 3981.964 | 51.26 | -19.3 | 33.4 | 37.16 | VERTICAL |
| 3456.914 | 51.25 | -19.6 | 31.2 | 39.65 | HORIZONTAL |
| 3523.046 | 51.17 | -19.6 | 33.4 | 37.37 | HORIZONTAL |
| 3589.178 | 51.13 | -19.6 | 33.4 | 37.33 | VERTICAL |

Charging Mode

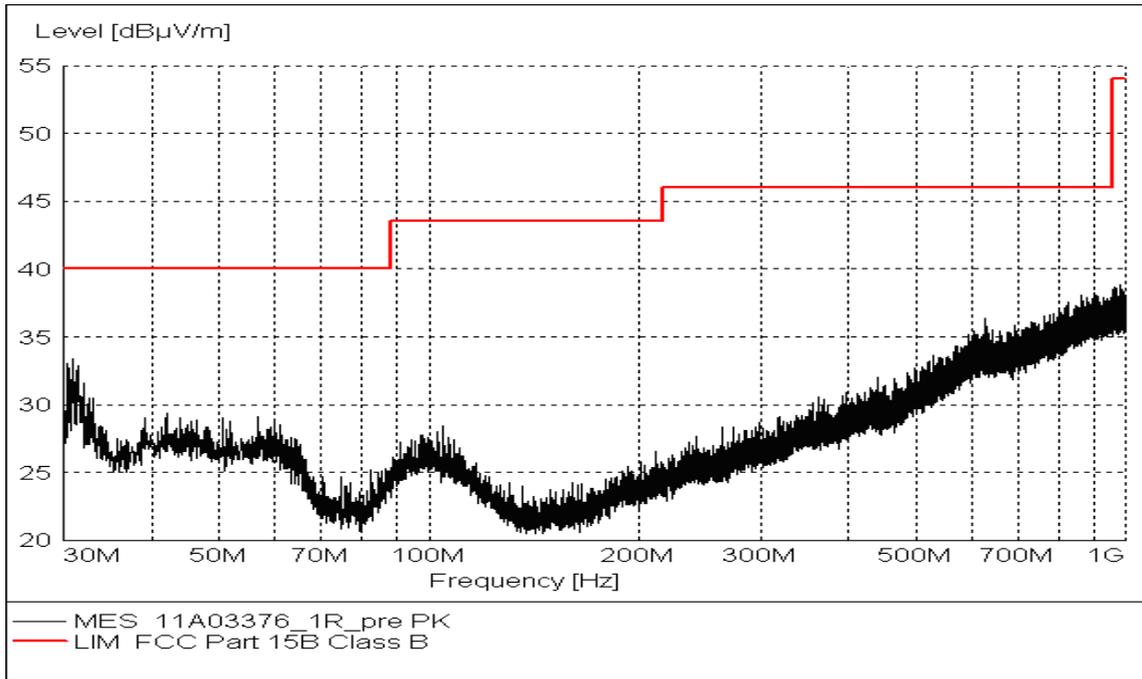


Figure A.1 Radiated Emission from 30MHz to 1GHz

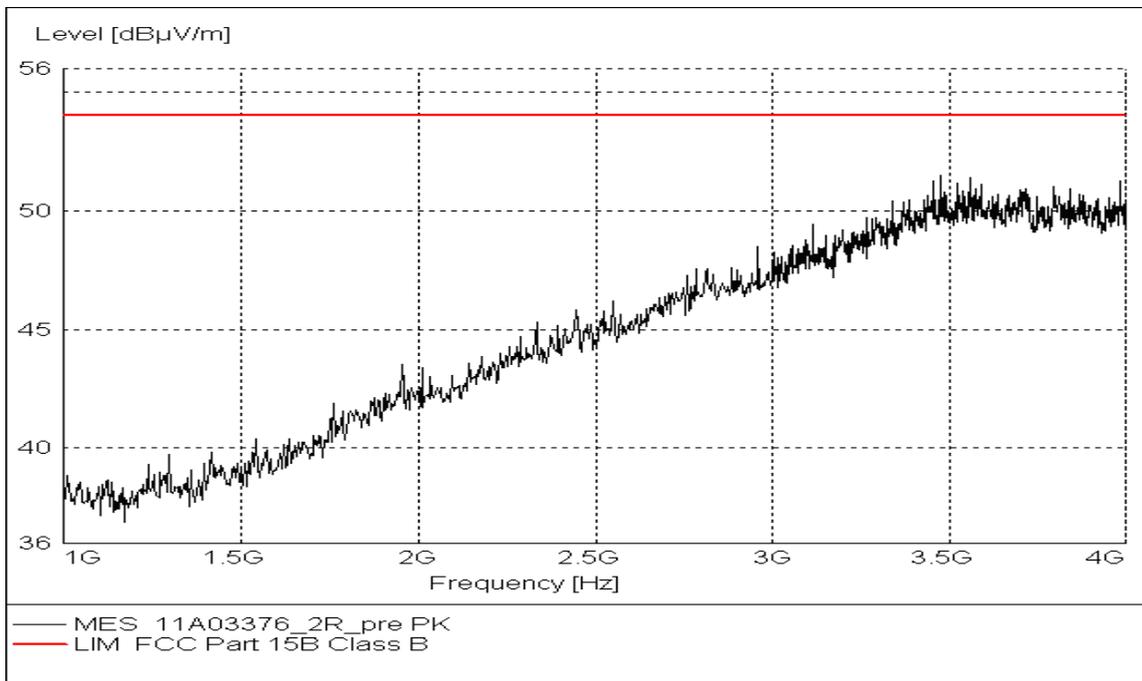


Figure A.2 Radiated Emission from 1GHz to 4GHz

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. During the test MS is connected to a charger in the case of charging mode.

A.2.3 Measurement Limit

| Frequency of emission (MHz) | Conducted limit (dB μ 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

A.2.4 Test Condition in charging mode

| Voltage (V) | Frequency (Hz) |
|-------------|----------------|
| 120 | 60 |

| RBW | Sweep Time(s) |
|------|---------------|
| 9kHz | 1 |

A.2.5 Measurement Results Charging Mode

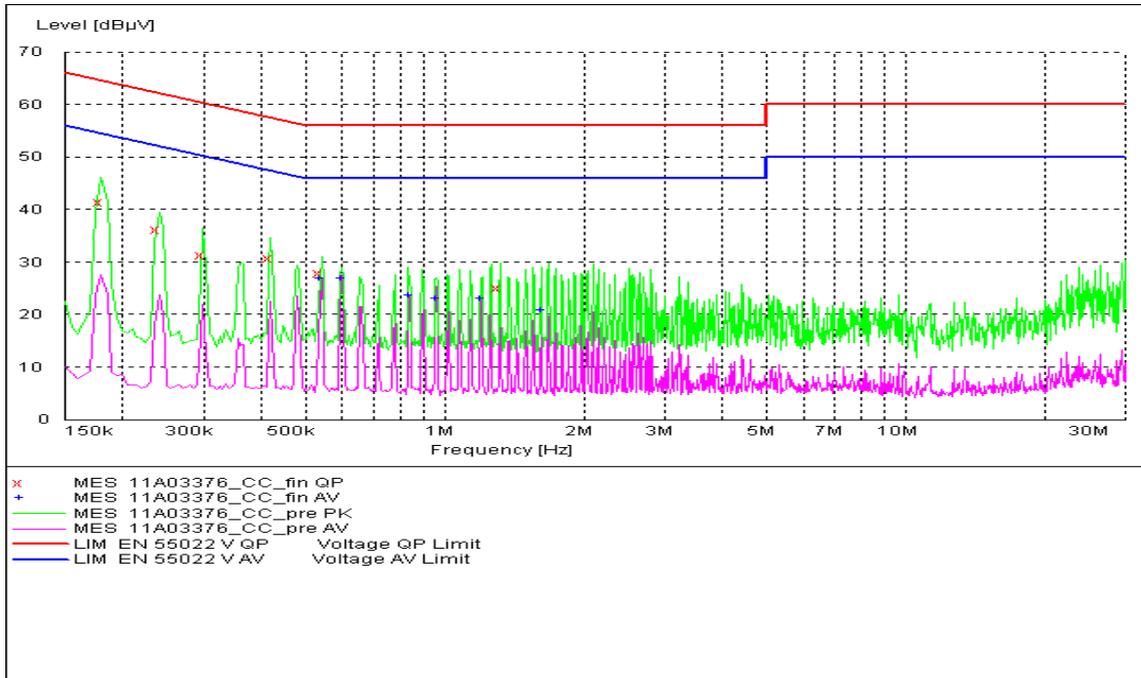


Figure A.5 Conducted Emission

MEASUREMENT RESULT: "11A03376_CC_fin QP"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Line | PE |
|---------------|------------|-----------|------------|-----------|------|-----|
| 0.180000 | 41.40 | 10.1 | 65 | 23.1 | L1 | GND |
| 0.240000 | 36.20 | 10.1 | 62 | 25.9 | N | GND |
| 0.300000 | 31.30 | 10.1 | 60 | 28.9 | N | GND |
| 0.420000 | 30.70 | 10.1 | 57 | 26.7 | N | GND |
| 0.540000 | 28.00 | 10.1 | 56 | 28.0 | N | GND |
| 1.315000 | 25.20 | 10.1 | 56 | 30.8 | L1 | GND |

MEASUREMENT RESULT: "11A03376_CC_fin AV"

| Frequency MHz | Level dBµV | Transd dB | Limit dBµV | Margin dB | Line | PE |
|---------------|------------|-----------|------------|-----------|------|-----|
| 0.540000 | 26.90 | 10.1 | 46 | 19.1 | N | GND |
| 0.600000 | 26.90 | 10.1 | 46 | 19.1 | N | GND |
| 0.840000 | 23.70 | 10.1 | 46 | 22.3 | N | GND |
| 0.960000 | 23.00 | 10.1 | 46 | 23.0 | N | GND |
| 1.200000 | 23.10 | 10.1 | 46 | 22.9 | N | GND |
| 1.620000 | 20.80 | 10.1 | 46 | 25.2 | N | GND |

END OF REPORT