Registration
No.910917

TEST REPORT

Report No.:	SRTC2017-9003(F)-0004
Product Name:	LTE/WCDMA/GSM(GPRS) Multi-Mode Digital Mobile Phone
Model Name:	ZTE BLADE V0850/ZTE BLADE V8 MINI/BLADE V8 mini/ZTE BLADE V8 mini
Applicant:	ZTE Corporation
Manufacturer:	ZTE Corporation
Specification:	FCC Part15B (Certification) (October 1, 2016 edition)
FCC ID:	SRQ-BLADEV8MINI

The State Radio_monitoring_center Testing Center (SRTC)

No.80 Beilishi Road Xicheng District Beijing, China

Tel: 86-10-57996181 Fax: 86-10-57996288

CONTENTS

1. General information

1.1 Notes of the test report

The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written permission of The State Radio_monitoring_center Testing Center (SRTC).
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)
Address:	No.80 Beilishi Road, Xicheng District
City:	Beijing
Country or Region:	China
Contacted person:	Liu Jia
Tel:	+86 10 57996181
Fax:	+86 10 57996288
Email:	liujiaf@srtc.org.cn

1.3Applicant's details

Company:	ZTE Corporation
Address:	ZTE Plaza, #55 Keji Road South, Hi-Tech, Industrial Park, Nanshan District,Guangdong
City:	Shenzhen
Country or Region:	P.R.China
Contacted person:	Min Zhang
Tel:	021-68897867
Fax:	021-50 801070
Email:	zhang.min13@zte.com.cn

1.4Manufacturer's details

Company:	ZTE Corporation
Address:	ZTE Plaza, #55 Keji Road South, Hi-Tech, Industrial Park, Nanshan District,Guangdong
City:	Shenzhen
Country or Region:	P.R.China
Contacted person:	Min Zhang
Tel:	021-68897867
Fax:	021-50801070
Email:	zhang.min13@zte.com.cn

1.5 Application details

Date of reception of test sample: 28th Mar. 2017
Date of test: 28th Mar. 2017 to 11th Apr. 2017

1.6 Reference specification

FCC Part 15B, 2016 (Certification)

1.7 Information of EUT

1.7.1 General information

Name of EUT	LTE/WCDMA/GSM（GPRS） Multi-Mode Digital Mobile Phone
FCC ID	SRQ-BLADEV8MINI
Frequency Range	LTE band XII: Tx:699~716MHz Rx:729~746MHz LTE band XIII: Tx:777~787MHz Rx:746~756MHz GSM850/WCDMA Band V/ LTE band V: Tx:824~849MHz Rx:869~894MHz PCS1900/WCDMA Band II/LTE band II: Tx:1850~1910MHz Rx:1930~1990MHz WCDMA BAND IV/LTE band IV: Tx:1710 MHz – 1755 MHz Rx:2110 MHz – 2155 MHz LTE band VII:Tx:2500 MHz – 2570 MHz Rx:2620 MHz – 2690 MHz
Rated Output Power	GSM850:33.0dBm PCS1900:30.0dBm WCDMA:24.0dBm LTE:21.0dBm
Modulation Type	GSM/GPRS:GMSK EDGE:GMSK WCDMA:QPSK LTE:QPSK; 16QAM
Emission Designator	GSM/GPRS;EDGE;WCDMA;LTE
Duplex Mode	FDD
Equipment Class	Class B
Antenna Type	Fixed Internal Antenna
Power Supply	Battery or Charger
Rated Power Supply Voltage	3.7V
Extreme Voltage	Minimum: 3.5V Maximum: 4.2V
HW Version	ux9A
SW Version	GEN_LA_BV0850_V1.0

1.7.2EUT details

Product Name	Model Name	IMEI
LTE/WCDMA/GSM(GPRS) Multi-Mode Digital Mobile Phone	ZTE BLADE V0850/ZTE BLADE V8 MINI/BLADE V8 mini/ZTE BLADE V8 mini	863927030034847 /863927030037345

1.7.3 Auxiliary equipment details

AE (Auxiliary Equipment) 1#: Charger

Equipment	TRAVELCHARGER
Manufacturer	dokocom
Model Number	STC-A515A-Z
S/N	542714000
Input Voltage	100V-240V AC
Output Voltage	5.0V DC
Frequency	50/60Hz

AE (Auxiliary Equipment) 2#: Battery

Equipment	Battery
Manufacturer	Harbin Coslight Power CO.,LTD.
Model Number	Li3928T44P8h475371
S/N	/
Rated Voltage	3.7V

AE (Auxiliary Equipment) 3#: Headset

Equipment	Headset
Manufacturer	FDC
Model Number	JD1504231

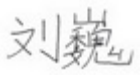
AE (Auxiliary Equipment) 4#: USB Cable

Equipment	USB Cable
Manufacturer	ChuanTuo
Model Number	LQ-0230002

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

Approved by Mr. LiuWei Director of the test department 	Checked by Mr. He Jia Project manager of the test department 
Tested by: Mr. Liu Jian Test engineer 	Issued date: 2017-04-17

2.2 Test result

2.2.1Conducted Emissions-FCC Part15.107

Ambient condition:

Temperature	Relative humidity	Pressure
23.8°C	45.8%	100.8kPa

Test Setup with laptop:

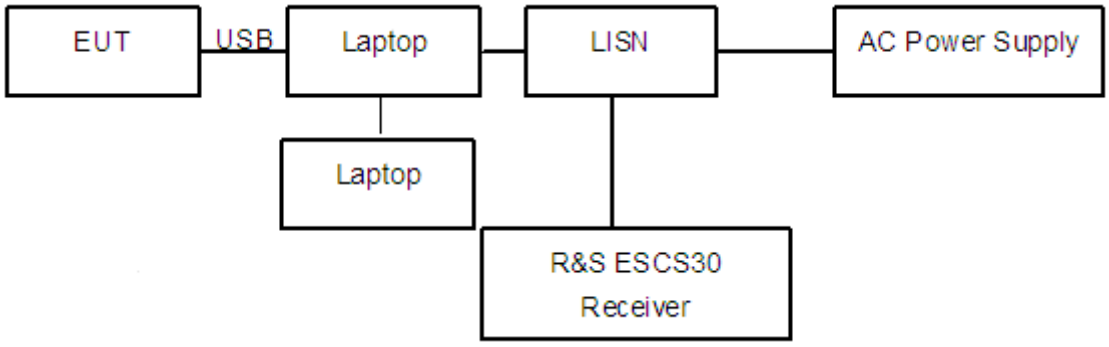


Figure 1

Test Procedure:

The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The accessories of the EUT are connected with the EUT such as headset etc. The EUT was exercised during the testing by data read and write cycles repeated with internal storages connecting with a laptop via the USB cable. The laptop's LAN port is connected with another laptop via cable. And the data transferring between two laptops 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 C63.4:2014.
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.

Test Setup with charger:

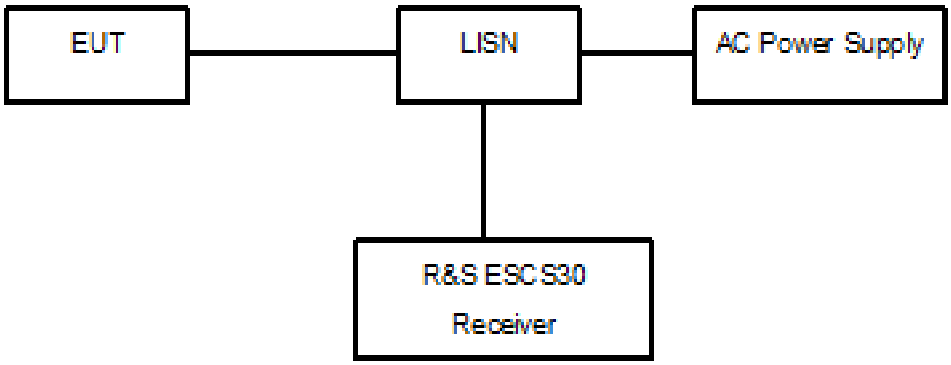


Figure 2

Test Procedure:

The EUT is placed on a non-matellic table 0.8m above the horizontal metal reference ground plane. The EUT is connected with LISN via the charger. The LISN is connected to the reference ground. The accessories of the EUT are connected with the EUT such as headset etc.
The test set-up and the test methods are performed according to ANSI C63.4:2014. 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.

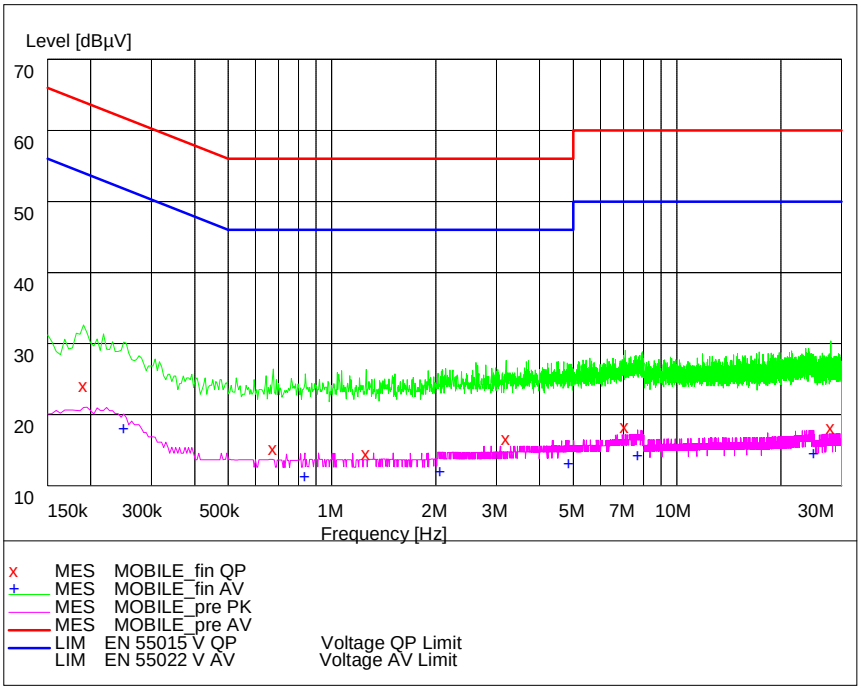
Limit:

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

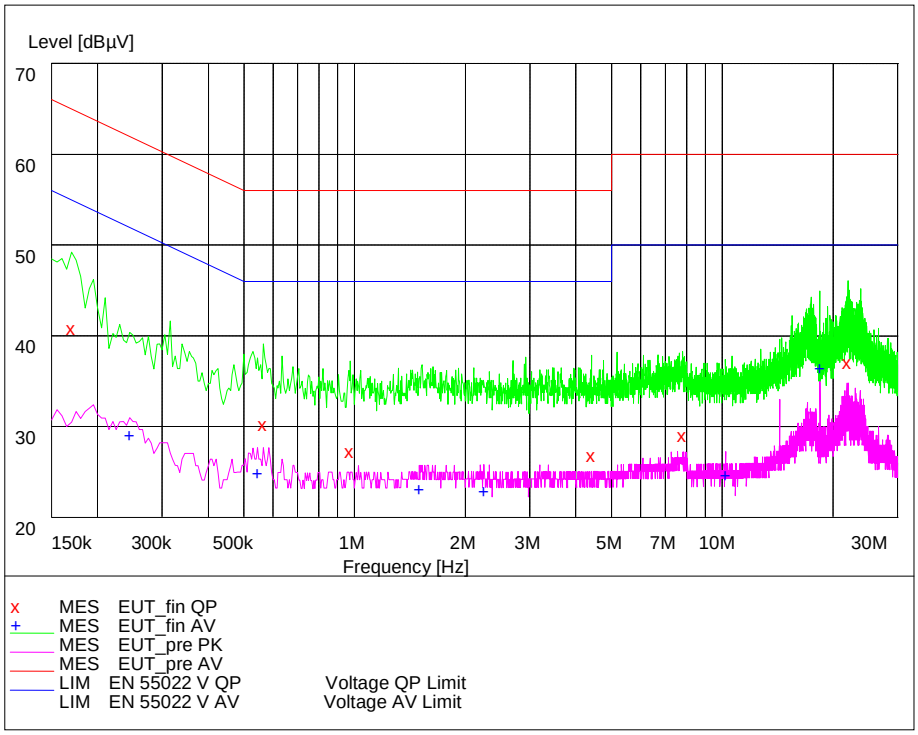
Test result:

Noise Level of the Measuring Instrument



Pic1.Conducted emission L and N Line

EUT+Laptop:



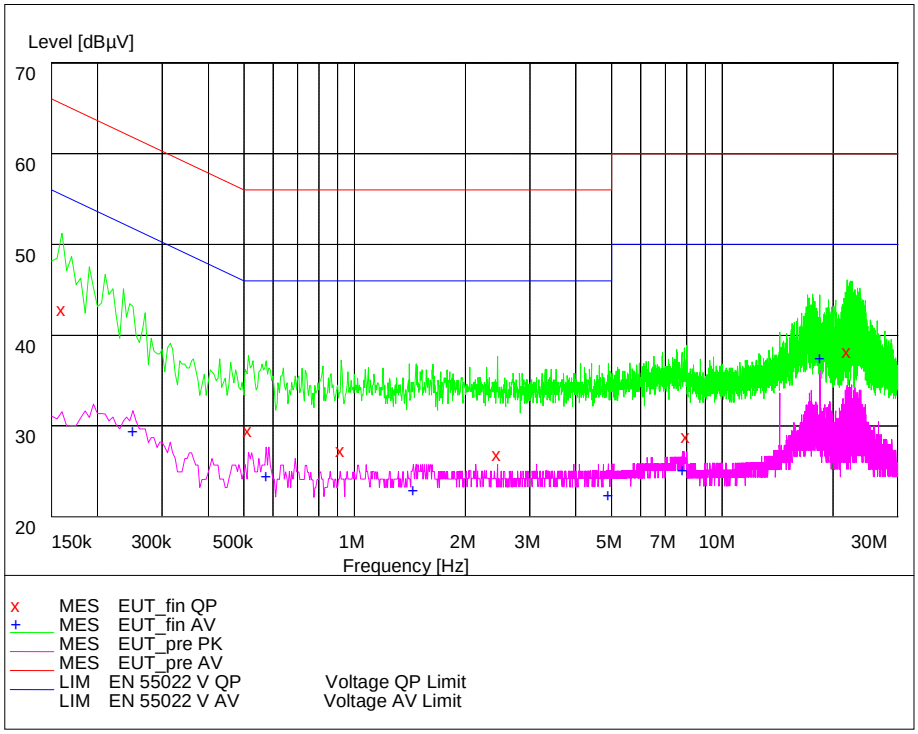
Pic2. Conducted emission L Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.170000	42.00	29.7	65	23.0	---	---
0.565000	31.50	29.5	56	24.5	---	---
0.975000	28.50	29.5	56	27.5	---	---
4.420000	28.10	29.6	56	27.9	---	---
7.805000	30.20	29.7	60	29.8	---	---
22.020000	38.30	30.6	60	21.7	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.245000	30.20	29.6	52	21.7	---	---
0.545000	26.10	29.5	46	19.9	---	---
1.500000	24.30	29.5	46	21.7	---	---
2.250000	24.10	29.6	46	21.9	---	---
10.240000	25.90	29.8	50	24.1	---	---
18.435000	37.60	30.3	50	12.4	---	---



Pic3. Conducted emission N Line

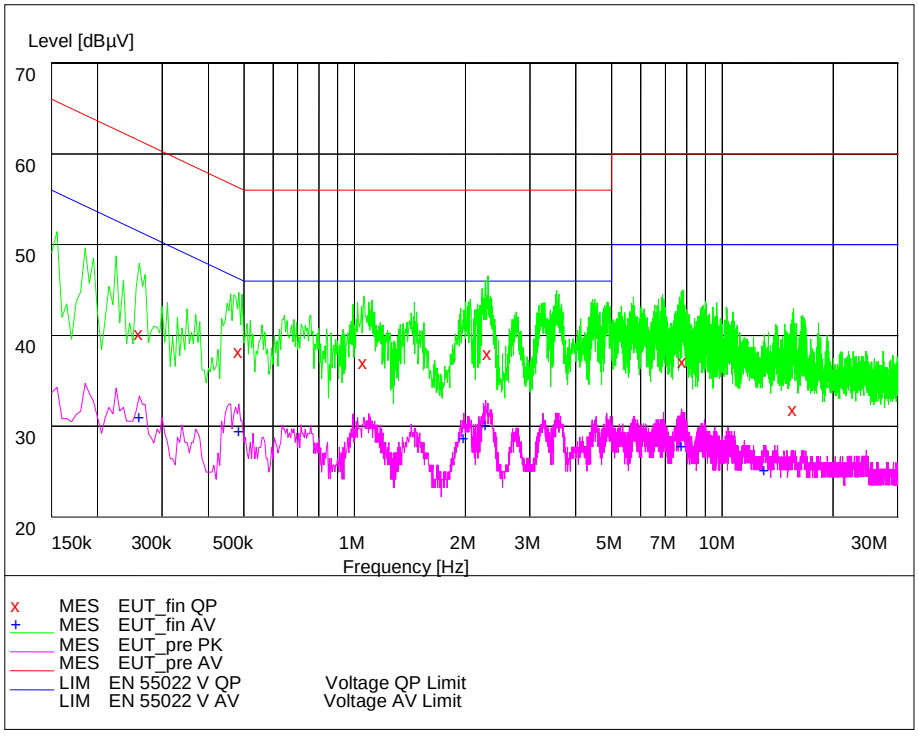
MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.160000	44.00	29.7	66	21.4	---	---
0.515000	30.80	29.5	56	25.2	---	---
0.920000	28.50	29.5	56	27.5	---	---
2.450000	28.10	29.5	56	27.9	---	---
8.000000	30.10	29.7	60	29.9	---	---
21.910000	39.50	30.6	60	20.5	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.250000	30.60	29.6	52	21.2	---	---
0.575000	25.60	29.5	46	20.4	---	---
1.445000	24.10	29.5	46	21.9	---	---
4.900000	23.60	29.6	46	22.4	---	---
7.810000	26.30	29.7	50	23.7	---	---
18.435000	38.60	30.3	50	11.4	---	---

EUT+Charger:



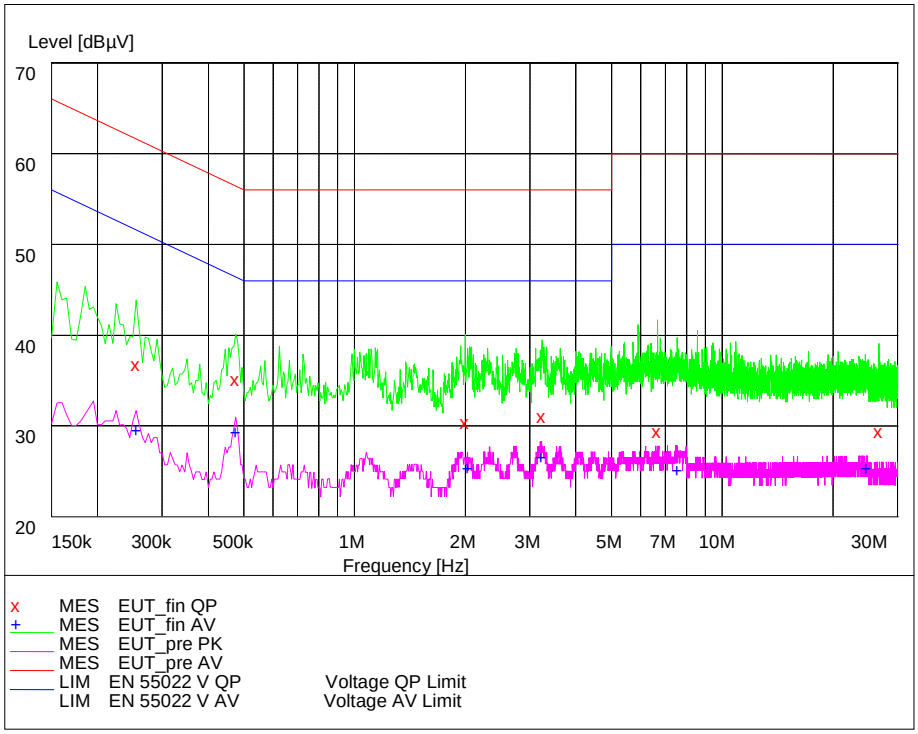
Pic4. Conducted emission L Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.260000	41.50	29.6	61	19.9	---	---
0.485000	39.50	29.5	56	16.7	---	---
1.060000	38.20	29.5	56	17.8	---	---
2.310000	39.30	29.6	56	16.7	---	---
7.820000	38.30	29.7	60	21.7	---	---
15.615000	33.10	30.1	60	26.9	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.260000	32.20	29.6	51	19.2	---	---
0.485000	30.60	29.5	46	15.6	---	---
1.985000	29.90	29.5	46	16.1	---	---
2.275000	31.30	29.6	46	14.7	---	---
7.755000	29.00	29.7	50	21.0	---	---
13.035000	26.40	30.0	50	23.6	---	---



Pic5. Conducted emission N Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.255000	38.00	29.6	62	23.6	---	---
0.475000	36.40	29.5	56	20.0	---	---
2.000000	31.60	29.5	56	24.4	---	---
3.235000	32.30	29.6	56	23.7	---	---
6.675000	30.60	29.7	60	29.4	---	---
26.675000	30.60	31.5	60	29.4	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBµV	dB	dBµV	dB		
0.255000	30.80	29.6	52	20.8	---	---
0.475000	30.50	29.5	46	15.9	---	---
2.030000	26.50	29.6	46	19.5	---	---
3.230000	27.70	29.6	46	18.3	---	---
7.550000	26.30	29.7	50	23.7	---	---
24.640000	26.60	31.1	50	23.4	---	---

2.2.2RadiatedEmissions-FCC Part15.109

Ambient condition:

Temperature	Relative humidity	Pressure
24.9°C	43.7%	100.8kPa

Test Setup:

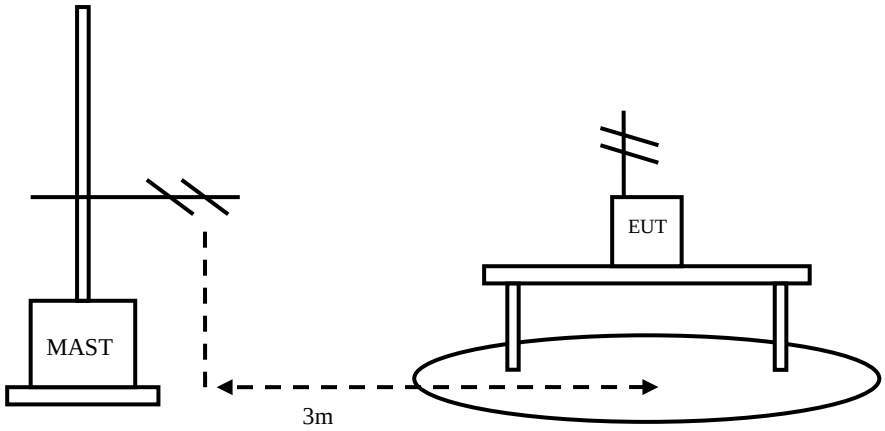


Figure 3

Test Procedure:

EUT+Laptop:
The EUT should be placed on a non-metallic table80cm 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.The EUT was exercised during the testing by data read and write cycles repeated with internal storages connecting with a laptop via the USB cable. The laptop's LAN port is connected with another laptop via cable. And the data transferring between two laptops is maintained. The test set-up and the test methods are performed according to ANSI C63.4:2014
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 to4 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 EUT is laid in two modes as follow:

1. put the EUT in horizontal direction; 2. put the EUT in vertical direction.
The data of cable loss and antenna factor have been calibrated in full testing frequency range before the testing.

EUT+Charger:
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 EUT should work inidle mode. The accessories of the EUT are connected with the EUT such as headset etc.The test set-up and the test methods are performed according to ANSI C63.4:2014.
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 to4 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 EUT is laid in two modes as follow:
1. put the EUT in horizontal direction; 2. put the EUT in vertical direction.
The data of cable loss and antenna factor have been calibrated in full testing frequency range before the testing.

A “reference path loss” is established and theA_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.
The measurement results are obtained as described below:
Result= P_{mea} + A_{Rpl}

Limit:

Frequency of Emission(MHz)	Limits	
	Detector	Unit (dBμV/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 Peak	54 74

Test result:

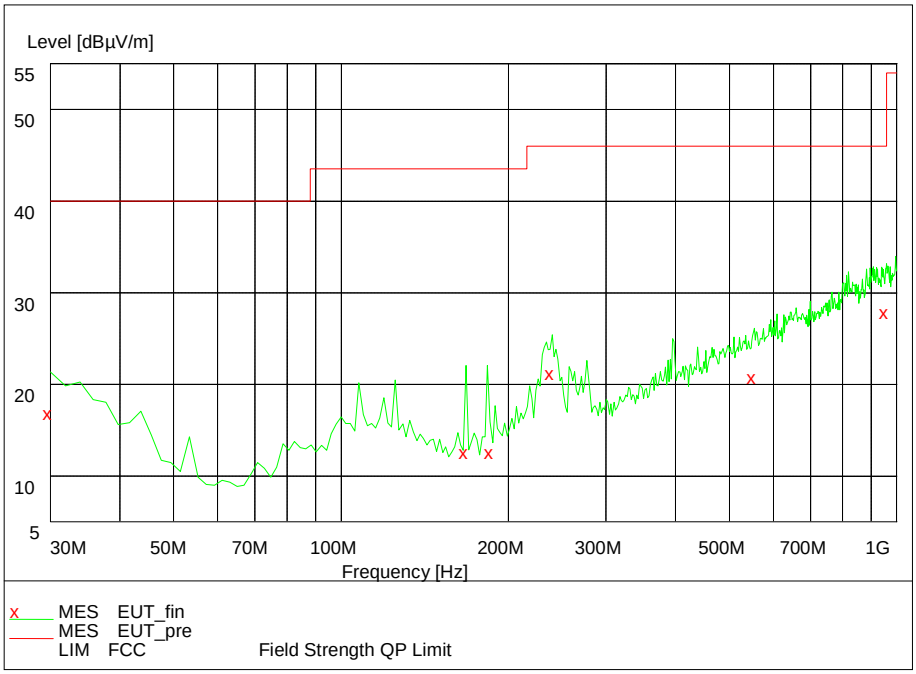
EUT+Laptop

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity
30.00	18.00	7.4	10.60	Vertical
168.02	13.80	10.8	3.00	Vertical
183.57	13.90	10.8	3.10	Vertical
239.94	22.40	11.4	11.00	Vertical
554.85	22.00	13.6	8.40	Vertical
959.18	29.10	14.8	14.30	Vertical

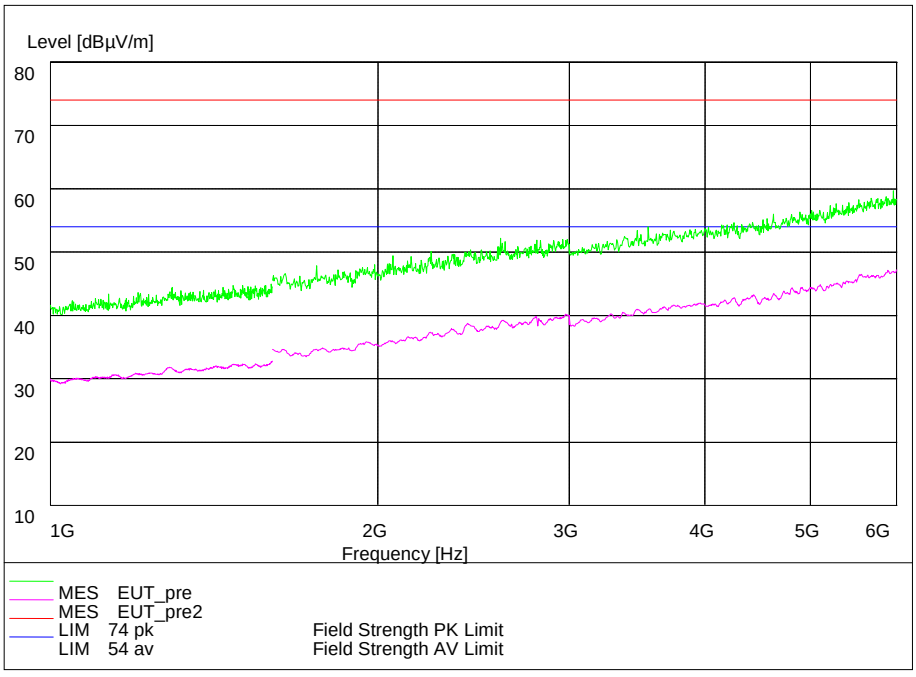
EUT+Charger

Frequency(MHz)	Result(dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity
31.94	22.90	7.4	15.50	Vertical
55.27	15.80	8.5	7.30	Vertical
86.37	14.00	9.5	4.50	Vertical
183.57	13.90	10.8	3.10	Vertical
545.13	21.40	13.6	7.80	Vertical
955.29	28.80	14.8	14.00	Vertical

EUT+Laptop:

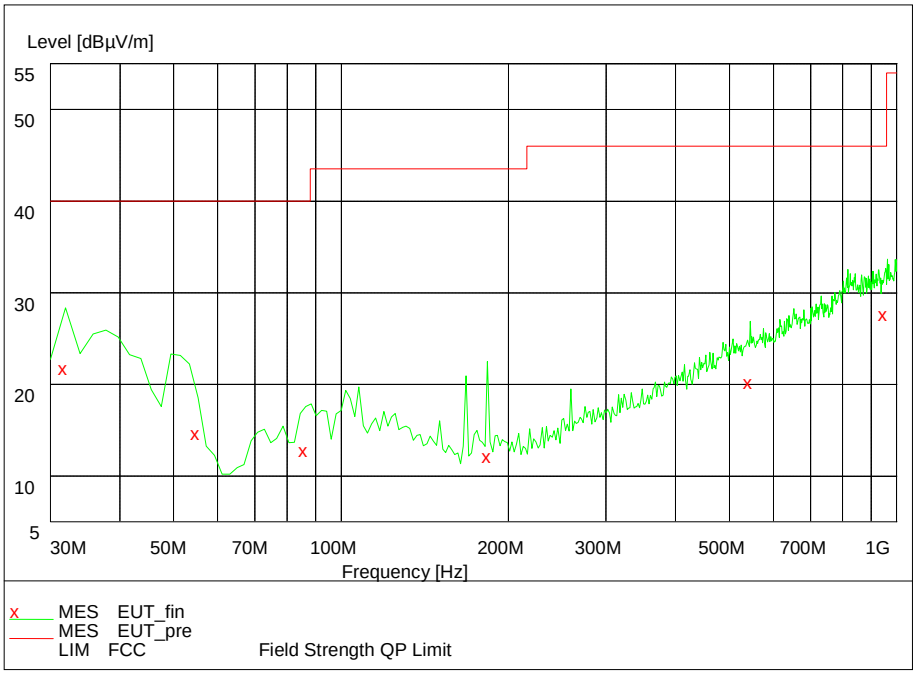


Pic6. Radiated emission(30MHz – 1GHz)

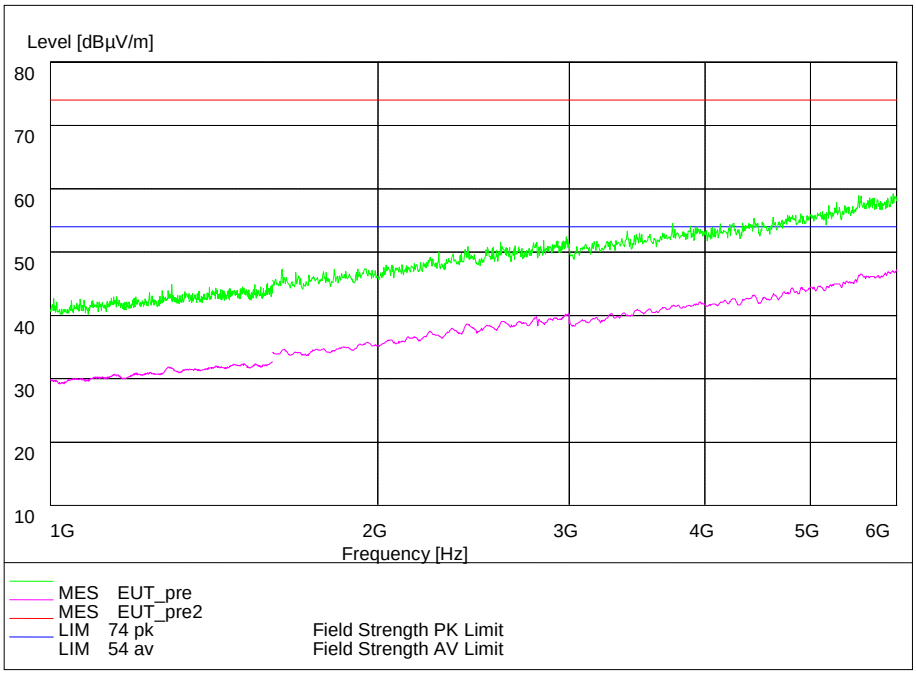


Pic7. Radiated emission (1GHz – 6GHz)

EUT+Charger:



Pic8. Radiated emission(30MHz – 1GHz)



Pic9. Radiated emission (1GHz – 6GHz)

2.3. List of test equipment

No.	Name/Model	Manufacturer	S/N	Calibration Due Date
1	23.18m×16.88m×9.60mSemi-AnechoicChamber	FRANKONIA	-----	20th Aug. 2017
2	ESI 40EMI test receiver	R&S	100015	20th Aug. 2017
3	E5515C(8960) Mobile Station Tester	Agilent	GB44050904	20th Aug. 2017
4	9.080m×5.255m×3.525m Shielding room	FRANKONIA	-----	20th Aug. 2017
5	ESCS30EMI test receiver	R&S	100029	20th Aug. 2017
6	HL562Ultra log test antenna	R&S	100016	20th Aug. 2017
7	ESH3-Z2 Pulse limiter	R&S	10002	20th Aug. 2017
8	ENV216 AMN	R&S	3560.6550.12	20th Aug. 2017
9	ESH2Z11 LISN	R&S	50FH-020-10	20th Aug. 2017
10	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100030	20th Aug. 2017
11	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100029	20th Aug. 2017
12	PS2000 Turn Table	FRANKONIA	-----	20th Aug. 2017
13	MA260 Antenna Master	FRANKONIA	-----	20th Aug. 2017
14	ES-K1EMI test software	R&S	-----	20th Aug. 2017
15	HL562 Receive antenna	R&S	100167	20th Aug. 2017

Appendix

Appendix1 Test Setup

Registration
No.910917

Appendix1 TEST SETUP

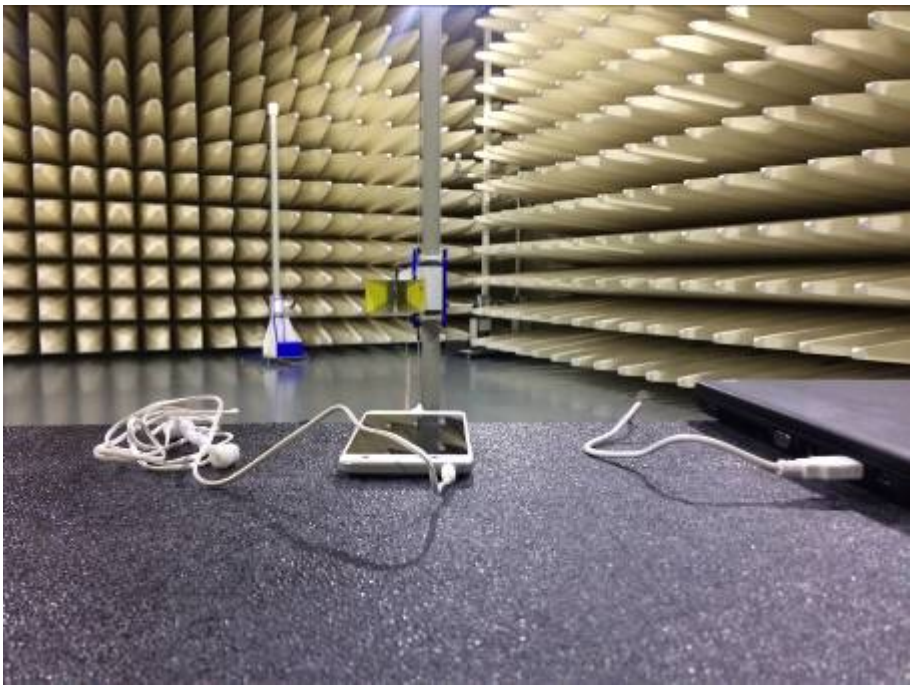
Report No.:	SRTC2017-9003(F)-0004
Product Name:	LTE/WCDMA/GSM(GPRS) Multi-Mode Digital Mobile Phone
Model Name:	ZTE BLADE V0850/ZTE BLADE V8 MINI/BLADE V8 mini/ZTE BLADE V8 mini
Applicant:	ZTE Corporation
Manufacturer:	ZTE Corporation
Specification:	FCC Part15B (Certification) (October 1, 2016 edition)
FCC ID:	SRQ-BLADEV8MINI

The State Radio_monitoring_center Testing Center (SRTC)

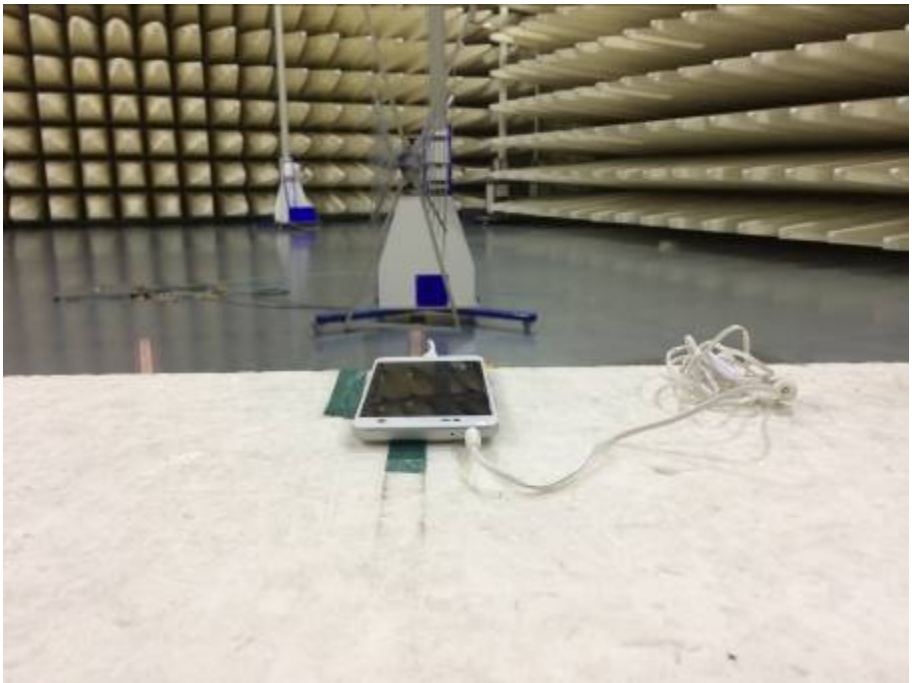
No.80 Beilishi Road Xicheng District Beijing, China

Tel: 86-10-57996181 Fax: 86-10-57996288

Appendix1 Test Setup

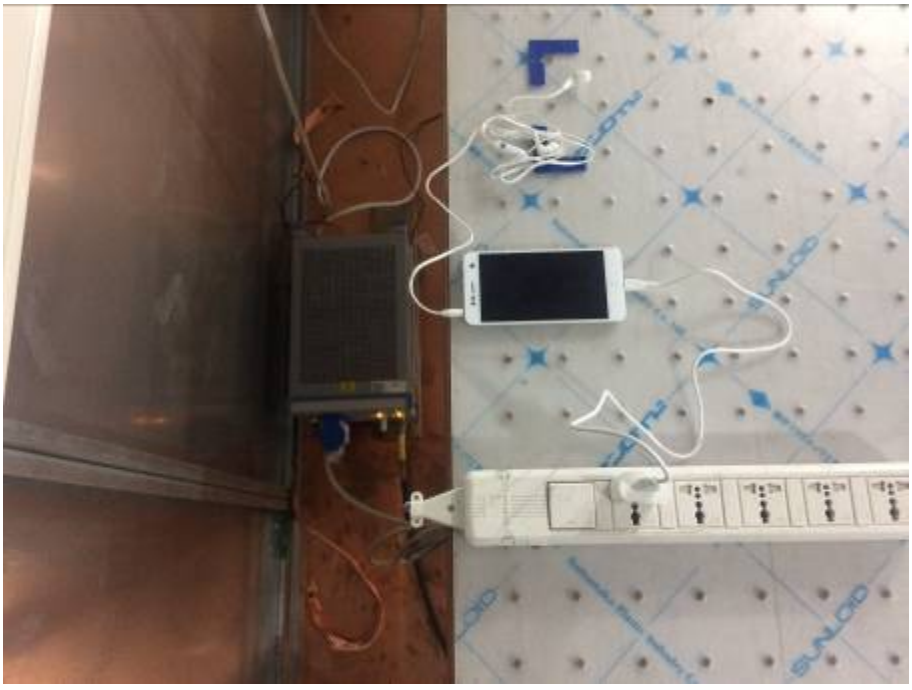


Radiated Emissions Test Setup（with laptop）



Radiated Emissions Test Setup (with charger)

Conducted Emissions Test Setup（with laptop）



Conducted Emissions Test Setup (with charger)