



Variant FCC Test Report

According to

47 CFR Part 15 Subpart C

Equipment : CDMA 1X-EVDO Digital Mobile Phone

Trade Name : ZTE

Model Name : ZTE txtster

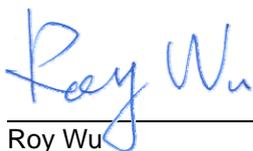
FCC ID : Q78-ZTETXTSTER

Filing Type : Certification

Applicant : ZTE CORPORATION

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

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- The test result refers exclusively to the test presented test model / sample.
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- The data shown in this test report were carried out on Jul. 02, 2008 at Sporton International (Kunshan) Inc. LAB.
- Report No.: FR862301, Report Version: Rev. 01.



Roy Wu
Manager

SPORTON International (Kunshan) Inc.
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1. General Description of Equipment under Test

1.1. Applicant

ZTE CORPORATION

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

1.2. Manufacturer

ZTE CORPORATION

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

1.3. Basic Description of Equipment under Test

AC Adapter	Brand Name	ZTE
	Model Name	STC-A22050U8
	Power Rating	I/P: 100-240Vac, 50-60Hz, 200mA; O/P: 5Vdc, 650mA
Battery	Brand Name	ZTE
	Model Name	Li3708T42p3h553756
	Power Rating	3.7Vdc, 830mAh
	Type	Li-ion

Remark: Above EUT's information was declared by manufacturer. Please refer to the specifications of manufacturer or User's Manual for more detailed features description.

1.4. Feature of Equipment under Test

Product Feature & Specification			
DUT Type :	CDMA 1X-EVDO Digital Mobile Phone		
Trade Name :	ZTE		
Model Name :	ZTE txtster		
FCC ID :	Q78-ZTETXTSTER		
Tx Frequency :	2400 MHz ~ 2483.5 MHz		
Rx Frequency :	2400 MHz ~ 2483.5 MHz		
Number of Channels :	79		
Carrier Frequency of Each Channel :	2402+n*1 MHz; n=0~78		
Channel Spacing :	1 MHz		
Maximum Output Power to Antenna :	-0.90 dBm		
Type of Antenna Connector :	N/A		
Antenna Type :	Chip Antenna		
Antenna Gain :	-5 dBi		
HW Version :	C50D		
SW Version :	CAZTED92V1.0.0B01		
Type of Modulation :	GFSK		
Function Type :	Transmitter		Transceiver V
DUT Stage :	Production Unit		

2. Test Configuration of Equipment under Test

2.1. Test Manner

- a. The EUT has been associated with peripherals pursuant to ANSI C63.4-2003 and configuration operated in a manner tended to maximize its emission characteristics in a typical application.
- b. For spurious emission below 1 GHz, only one channel of each application was tested because it is not related to channel selection.
- c. The EUT is programmed to transmit signal continuously for all tests.
- d. All the conducted TCs were tested on the original mode, ZTE D90.
- e. The radiated spurious emission was retested on the serial model, ZTE txtster
- f. Frequency range investigated: radiation 30 MHz to 25000 MHz.

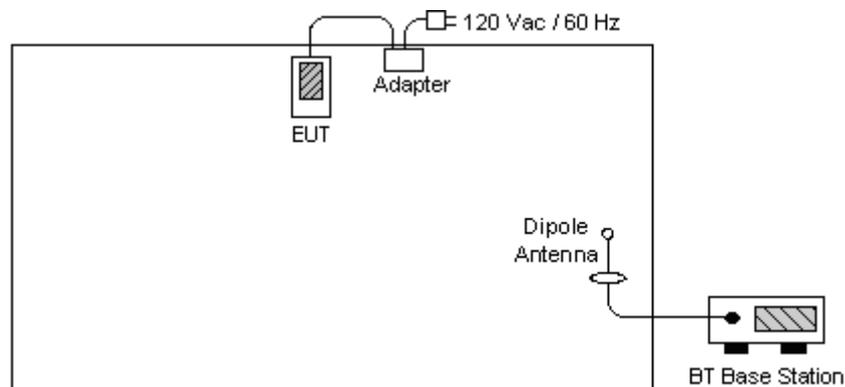
2.2. Test Mode

Test Item	Test Mode
RF Conducted	Mode 1: Tx_CH00_2402 MHz Mode 2: Tx_CH39_2441 MHz Mode 3: Tx_CH78_2480 MHz
Radiated Emission	Mode 1: Tx_CH39_2441 MHz

2.3. Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	BT Base Station	Anritus	8852A	N/A	N/A	Unshielded, 1.8 m

2.4. Connection Diagram of Test System



3. RF Utility

The EUT was in BT continuous Tx Mode controlled by base station simulator for radiation emission.

4. General Information of Test

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. : TH01-KS, 03CH01-KS

4.1. Test Voltage

AC 120V / 60Hz

4.2. Standard for Methods of Measurement

ANSI C63.4-2003

4.3. Test Compliance

47 CFR Part 15 Subpart C

4.4. Frequency Range

Radiation: from 30 MHz to 25000MHz

4.5. Test Distance

The test distance of radiated emission from antenna to EUT is 3 m.

5. Report of Measurements and Examinations

5.1 List of Measurements and Examinations

FCC Rule	Description of Test	Result
15.247(b)(1)	Output Power	Pass
15.209(a) 15.247(d)	Radiated Emission	Pass

5.2 Peak Output Power Measurement

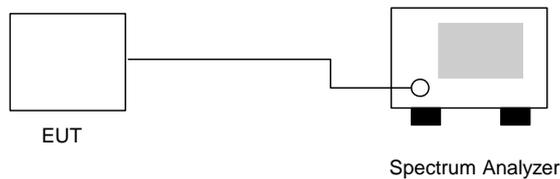
5.2.1 Measuring Instruments

As described in chapter 6 of this test report.

5.2.2 Test Procedure

The antenna port (RF output) of the EUT was connected to the input (RF input) of a spectrum analyzer for Bluetooth measurement. RBW and VBW are set to 3MHz. The cable loss has been offset before testing.

5.2.3 Test Setup Layout



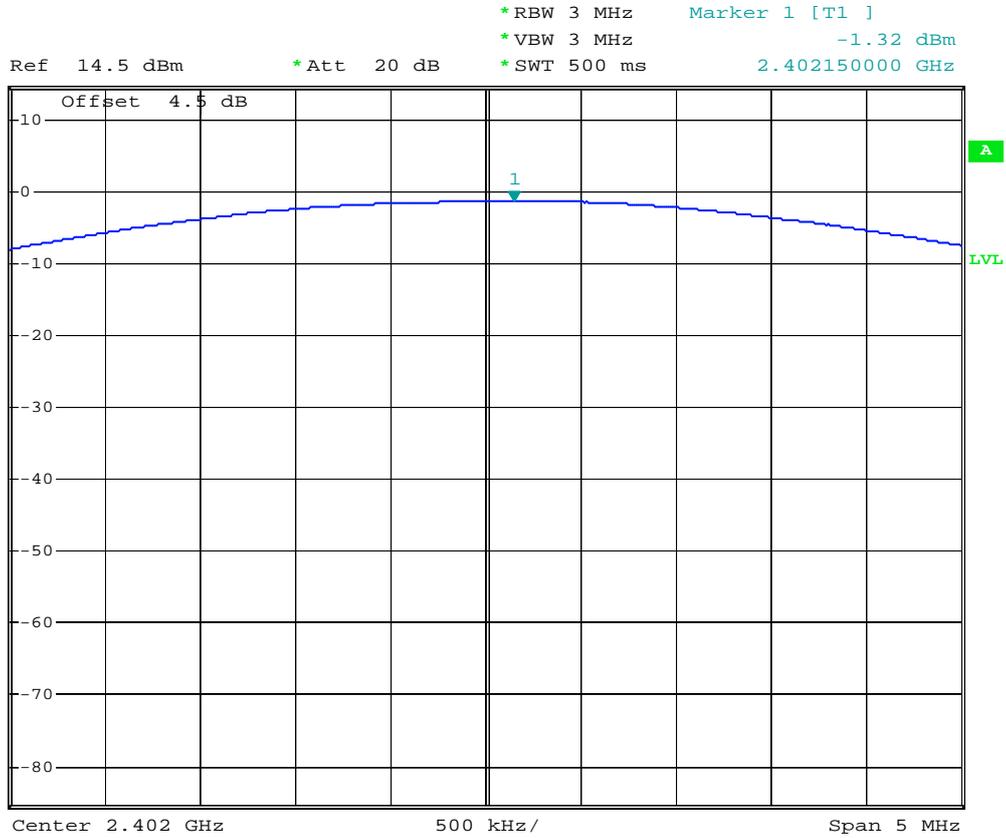
5.2.4 Test Result

- Temperature: 24~26°C
- Relative Humidity: 53~54%
- Test Engineer: Mark

Channel	Frequency (MHz)	Measured Output Power (dBm)	Limits (Watt/dBm)
00	2402	-1.32	1W/30 dBm
39	2441	-0.90	1W/30 dBm
78	2480	-2.25	1W/30 dBm

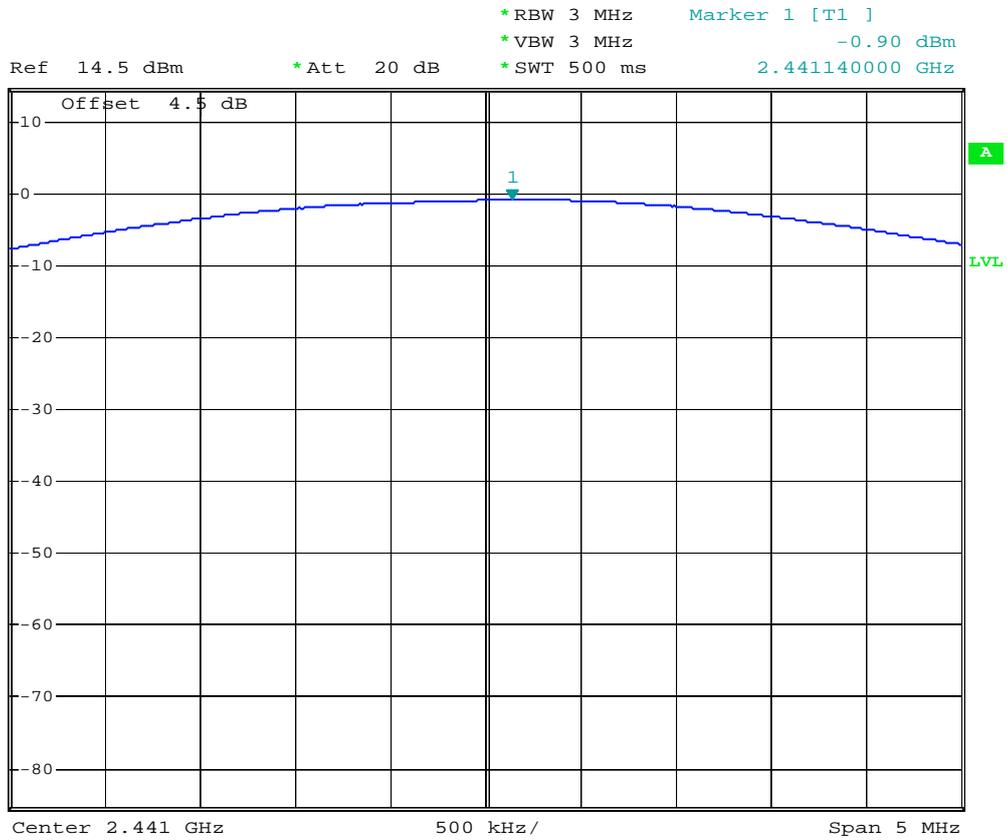
5.2.5 Output Power

Mode 1: CH00 (2402MHz)



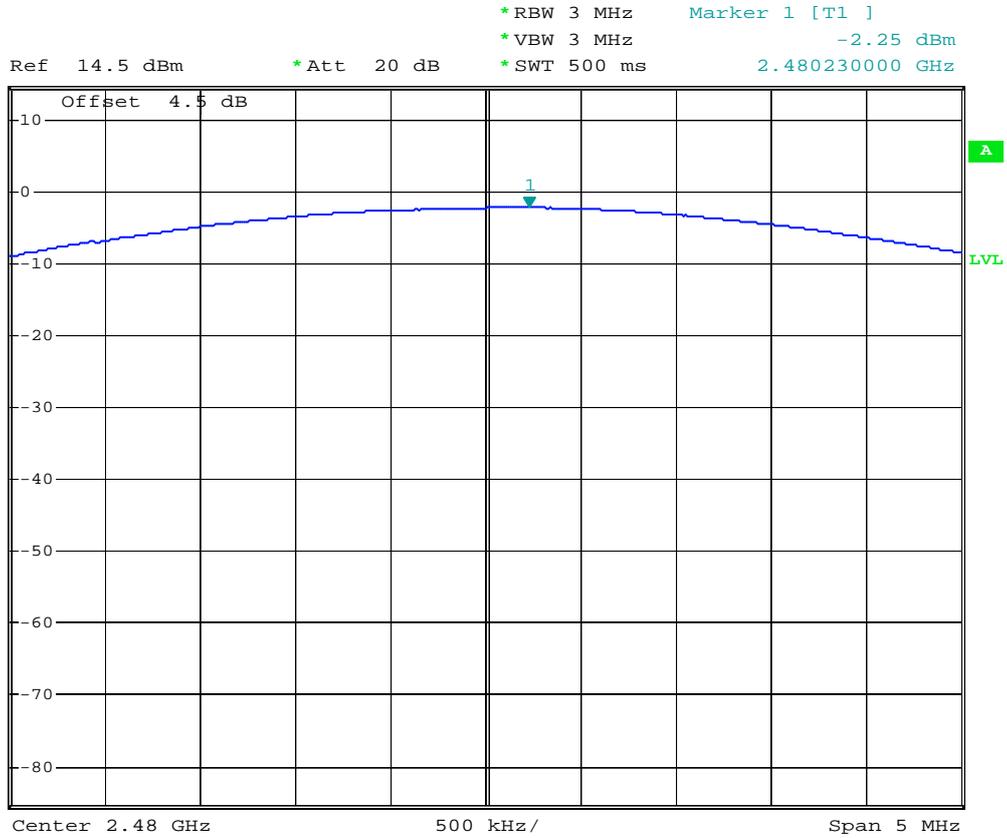
Date: 2.JUL.2008 10:34:06

Mode 2: CH39 (2441MHz)



Date: 2.JUL.2008 10:34:43

Mode 3: CH78 (2480MHz)



Date: 2.JUL.2008 10:35:15

5.3 Radiated Emission Measurement

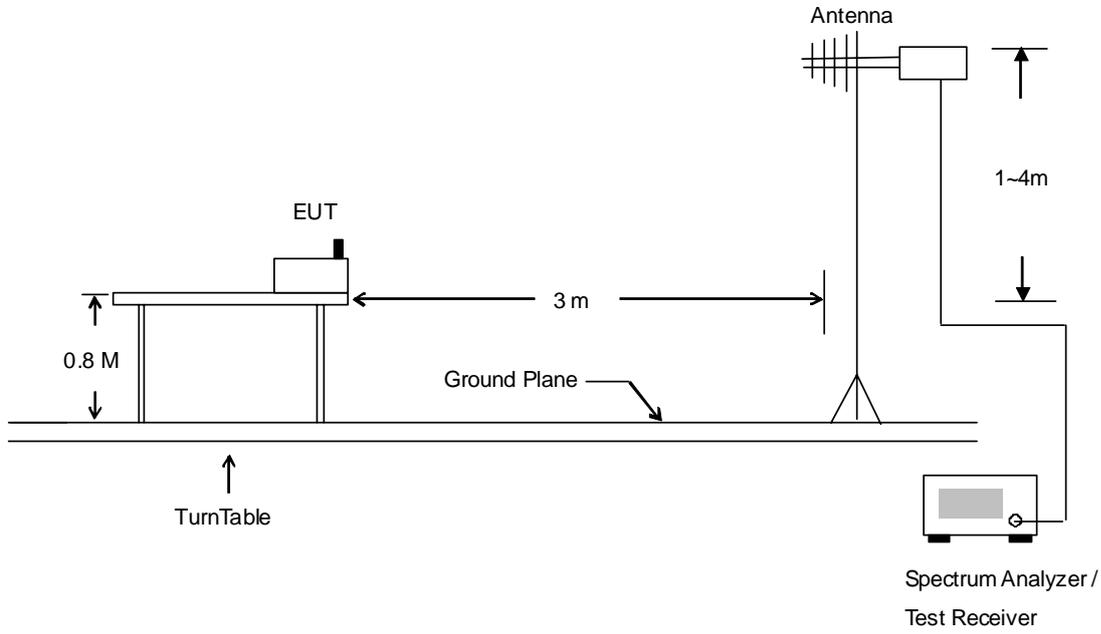
5.3.1 Measuring Instruments

As described in chapter 6 of this Report.

5.3.2 Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
8. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

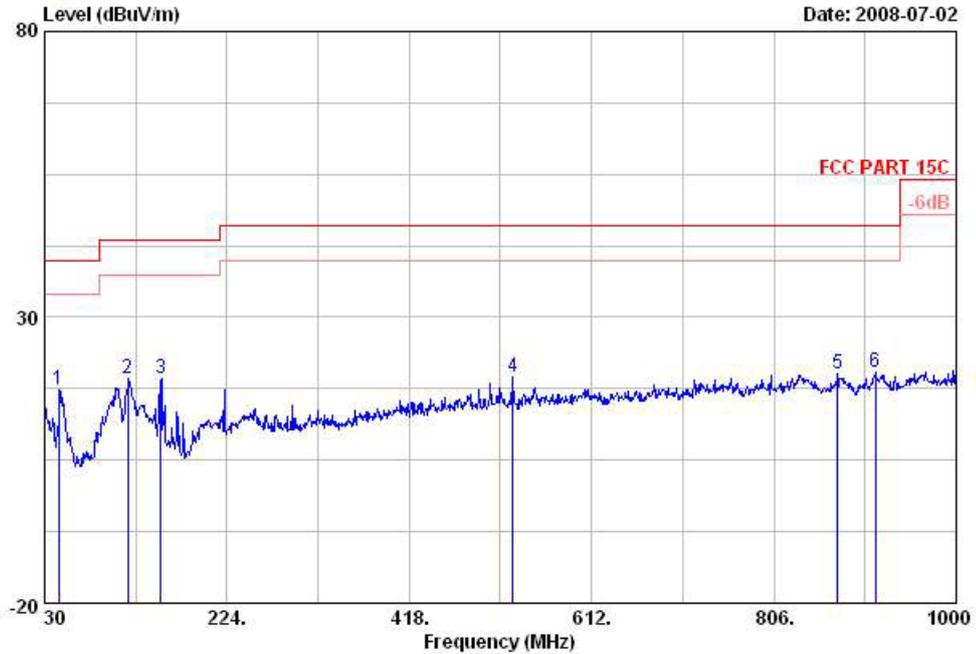
5.3.3 Typical Test Setup Layout of Radiated Emission



5.3.4 Test Data

- Test Mode : Mode 1
- Temperature : 24~25°C
- Relating Humidity : 53~54%
- Test Engineer : Mark
- Polarization : Horizontal (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.

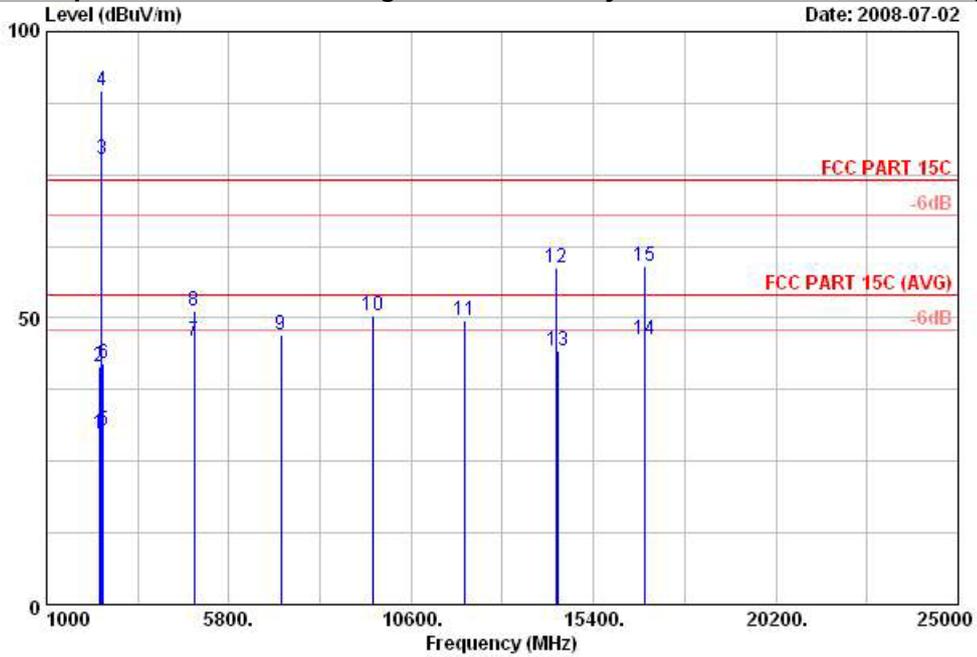


Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 HORIZONTAL
 EUT : Mobile phone
 Power : 120Vac / 60Hz
 Model : ZTE D92
 Memo : BTTx CH39

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	45.39	17.34	-22.66	40.00	36.35	9.10	0.32	28.43	---	---	Peak
2	118.83	19.18	-24.32	43.50	35.34	11.77	0.53	28.46	---	---	Peak
3	153.66	19.28	-24.22	43.50	37.51	9.70	0.58	28.51	---	---	Peak
4	528.20	19.43	-26.57	46.00	29.68	17.61	1.09	28.95	---	---	Peak
5	874.00	20.13	-25.87	46.00	26.36	20.19	1.44	27.86	---	---	Peak
6	913.90	20.37	-25.63	46.00	26.02	20.43	1.48	27.56	---	---	Peak

• Polarization : Horizontal (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



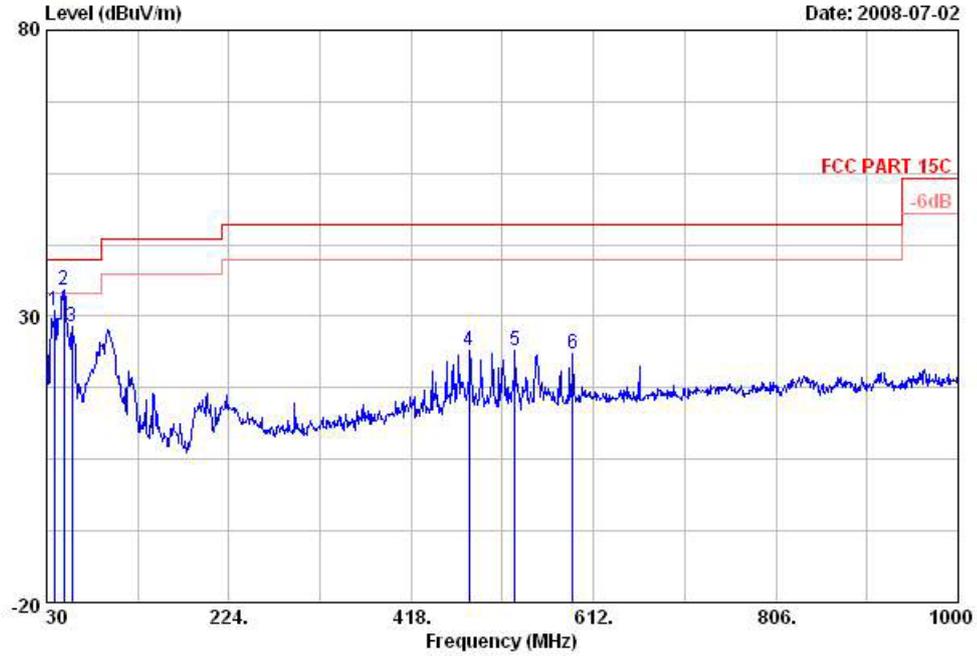
Site : 03CH01-KS
 Condition: FCC PART 15C 3m HF ANT-070911 HORIZONTAL
 EUT : Mobile phone
 Power : 120Vac / 60Hz
 Model : ZTE D92
 Memo : BTTx CH39

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2390.00	29.73	-24.27	54.00	29.73	31.93	3.25	35.18	100	33	Average
2	2390.00	41.55	-32.45	74.00	41.55	31.93	3.25	35.18	---	---	Peak
3 X	2440.88	77.72			77.51	32.13	3.27	35.19	100	0	Average
4 X	2442.00	89.78			89.57	32.13	3.27	35.19	---	---	Peak
5	2483.50	30.36	-23.64	54.00	30.03	32.24	3.29	35.20	100	21	Average
6	2483.50	41.92	-32.08	74.00	41.59	32.24	3.29	35.20	---	---	Peak
7	4882.00	45.83	-8.17	54.00	42.19	34.04	4.62	35.02	100	133	Average
8	4884.00	51.38	-22.62	74.00	47.74	34.04	4.62	35.02	---	---	Peak
9	7164.00	47.02	-26.98	74.00	40.75	35.70	5.84	35.27	---	---	Peak
10	9588.00	50.50	-23.50	74.00	41.36	36.79	8.27	35.92	---	---	Peak
11	11991.00	49.63	-24.37	74.00	37.87	38.70	8.56	35.50	---	---	Peak
12	14439.00	58.76	-15.24	74.00	44.85	39.65	8.48	34.22	---	---	Peak
13	14440.00	44.38	-9.62	54.00	30.47	39.65	8.48	34.22	100	0	Average
14	16745.00	46.33	-7.67	54.00	30.92	41.65	8.56	34.80	100	0	Average
15	16749.00	59.07	-14.93	74.00	43.61	41.65	8.56	34.75	---	---	Peak

Remark: #3 and #4 are Fundamental Signals.

• Polarization : Vertical (30MHz-1GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.

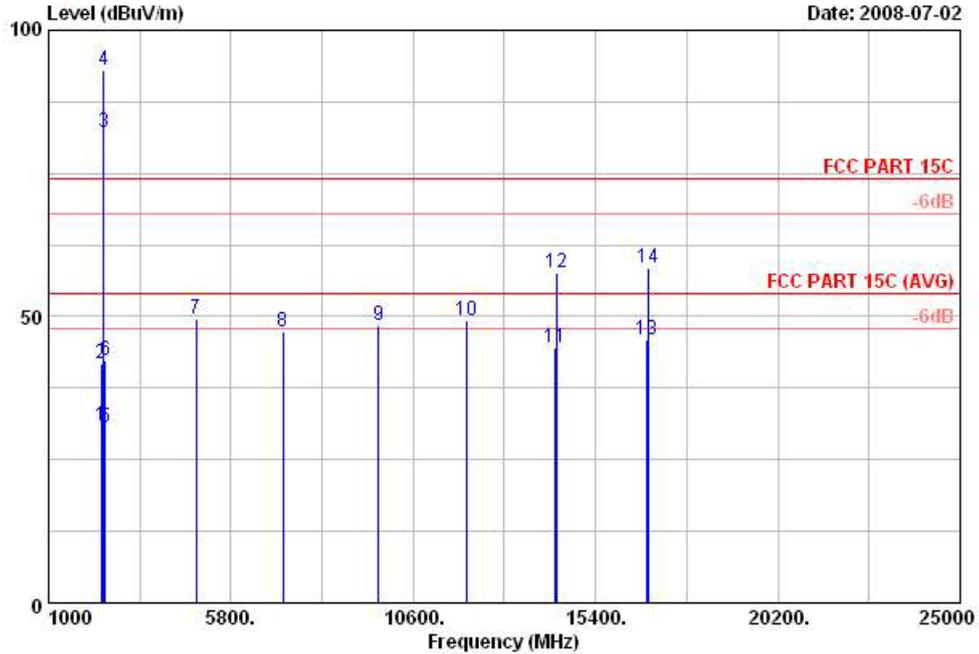


Site : 03CH01-KS
 Condition: FCC PART 15C 3m LF ANT-070906 VERTICAL
 EUT : Mobile phone
 Power : 120Vac / 60Hz
 Model : ZTE D92
 Memo : BTTX CH39

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	38.10	31.01	-8.99	40.00	45.75	13.40	0.28	28.42	---	---	Peak
2	48.63	34.57	-5.43	40.00	54.38	8.30	0.33	28.44	---	---	Peak
3	57.00	28.32	-11.68	40.00	50.79	5.60	0.38	28.45	---	---	Peak
4	479.90	23.94	-22.06	46.00	34.61	17.15	1.03	28.85	---	---	Peak
5	528.20	24.05	-21.95	46.00	34.30	17.61	1.09	28.95	---	---	Peak
6	589.80	23.49	-22.51	46.00	33.12	18.50	1.15	29.28	---	---	Peak

• Polarization : Vertical (1GHz-25GHz)

■ The test that passed at minimum margin was marked by the boldface in the following table.



Site : 03CH01-KS
 Condition: FCC PART 15C 3m HF ANT-070911 VERTICAL
 EUT : Mobile phone
 Power : 120Vac / 60Hz
 Model : ZTE D92
 Memo : BTTX CH39

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2390.00	30.97	-23.03	54.00	30.97	31.93	3.25	35.18	100	0	Average
2	2390.00	41.77	-32.23	74.00	41.77	31.93	3.25	35.18	---	---	Peak
3 X	2440.90	82.29			82.08	32.13	3.27	35.19	100	45	Average
4 X	2442.00	92.92			92.71	32.13	3.27	35.19	---	---	Peak
5	2483.50	30.74	-23.26	54.00	30.41	32.24	3.29	35.20	100	0	Average
6	2483.50	42.35	-31.65	74.00	42.02	32.24	3.29	35.20	---	---	Peak
7	4884.00	49.68	-24.32	74.00	46.04	34.04	4.62	35.02	---	---	Peak
8	7173.00	47.24	-26.76	74.00	40.97	35.70	5.84	35.27	---	---	Peak
9	9687.00	48.39	-25.61	74.00	39.07	36.92	8.34	35.94	---	---	Peak
10	11994.00	49.38	-24.62	74.00	37.62	38.70	8.56	35.50	---	---	Peak
11	14354.30	44.55	-9.45	54.00	30.59	39.55	8.51	34.10	100	0	Average
12	14358.00	57.76	-16.24	74.00	43.80	39.55	8.51	34.10	---	---	Peak
13	16767.14	45.86	-8.14	54.00	30.37	41.67	8.57	34.75	100	0	Average
14	16770.00	58.55	-15.45	74.00	43.04	41.69	8.57	34.75	---	---	Peak

Remark: #3 and #4 are Fundamental Signals.

6 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Power Meter	Agilent	E4416A	MY45101555	N/A	Jun. 18, 2007	Jun. 17, 2009	Conduction (TH01-KS)
Power Sensor	Agilent	E9327A	MY44421198	50MHz~18GHz	Jun. 12, 2007	Jun. 11, 2009	Conduction (TH01-KS)
Thermal Chamber	Rten Billion	TTC-B3S	TBN-960502	-40~150C	Jun. 27, 2007	Jun. 26, 2009	Conduction (TH01-KS)
Power Divider	ARRA	A3200-2	N/A	DC~18GHz	Sep. 01, 2007	Aug. 31, 2008	Conduction (TH01-KS)
Spectrum Analyzer	R&S	FSP40	100319	9K~40GHz	Mar. 13, 2007	Mar. 12, 2009	Radiation (03CH01-KS)
EMI Test Receiver	R&S	ESCI	100534	9KHz~2.75GHz	Mar. 15, 2007	Mar. 14, 2009	Radiation (03CH01-KS)
Bilog Antenna	Schaffner	CBL6112D	23182	25MHz~2000MHz	May 22, 2007	May 21, 2009	Radiation (03CH01-KS)
Preamplifier	Agilent	8449B	3008A02370	1G~26.5GHz	Jun. 04, 2007	Jun. 03, 2009	Radiation (03CH01-KS)
Preamplifier	Wireless	FPA6592G	60006	30M~2000MHz	Jul. 24, 2007	Jul. 23, 2009	Radiation (03CH01-KS)
DRG Horn(Medium)	EMCO	3117	75959	1GHz ~ 18GHz	Aug. 17, 2007	Aug. 16, 2008	Radiation (03CH01-KS)

7 Uncertainty of Uncertainty Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Contribution	Uncertainty of x_i		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.11	Normal(k=2)	0.06
Antenna factor calibration	0.91	Normal(k=2)	0.46
Cable loss calibration	0.12	Normal(k=2)	0.06
Pre Amplifier Gain calibration	0.15	Normal(k=2)	0.08
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.52	Rectangular	0.88
Mismatch	+0.45/-0.48	U-shaped	0.33
Combined standard uncertainty Uc(y)	1.30		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.60		

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Contribution	Uncertainty of x_i		$u(x_i)$	C_i	$C_i * u(x_i)$
	dB	Probability Distribution			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 * \Gamma_2 * \Gamma_3)$	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty Uc(y)	2.36				
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	4.72				

The measured result is : y dBuV \pm U dB
for a level of confidence of approximately 95% , (k = 2)



Appendix A. Photographs of EUT

Please refer to Sporton report number EP862301 as below.

Appendix C. Product Equality Declaration**ZTE中兴**

内部公开▲

ZTE CORPORATION

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

Declaration of Product Modifications

The product, ZTE D90, has been granted by FCC dated January 29, 2007. Now we, ZTE CORPORATION, would like to apply Class II permissive change of the authorized equipment.

The differences are listed as below:

1 ID is different

ZTE txtster is a clam-shaped handset as ZTE D90, but all the mechanical structures and plastics structures are total changed to new design.

2 The LCD FPC is different

ZTE txtster re-design the LCD FPC due to new ID design and mechanical & plastics structures re-design.

3 The LCD thickness is different

ZTE txtster choose thinner LCD due to new ID design and mechanical & plastics structures re-design.

4 The Camera thickness is different

ZTE txtster choose thinner camera due to new ID design and mechanical & plastics structures re-design.

5 The software of ZTE txtster have some minor changes based on D90 relate to the UI, Token, wallpaper, and ringtone. Others all are same with D90.

The conformities are belowing:

ZTE中兴

内部公开▲

- 1 The PCB of ZTE txtster is same as D90
ZTE txtster use all the same core parts of D90 like K/B, Main board.
- 3 The layer of PCB is consistent between ZTE txtster and D90
The layer of PCB board of ZTE txtster is 8 layers, same as ZTE D90.
- 4 LCD display performance is same between ZTE txtster and D90
Main LCD all are: 176X220,TFT,260K;
Secondary LCD all are : 96X64,CSTN,65K
- 5 The vibration motor is same between ZTE txtster and D90
ZTE txtster and ZTE D90 has one same vibration motor. No any changes to this part.
- 6 The acoustic component is same between ZTE txtster and D90
ZTE txtster has two acoustic components which are speaker and receiver , same as ZTE D90 on this half.
- 7 The capacity of battery is same between ZTE txtster and ZTE D90
The capacitance of ZTE txtster is 830 mAh, same with ZTE D90.
- 8 The internal antenna is same between ZTE txtster and ZTE D90
The shape of antenna is same because of ZTE txtster just use the same core part of D90. so no any changes to the antenna shapes.

With the exception of differences points like ID and mechanical parts. The ZTE txtster and ZTE D90 are selfsameness include the conformities as above mentioned.

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Appendix D. Original Report

Please refer to SET Report Number FCC06-8098 as below.