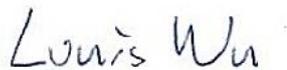


Variant FCC Test Report

APPLICANT : ZTE CORPORATION
EQUIPMENT : WCDMA Digital Mobile Phone
BRAND NAME : ZTE
MODEL NAME : ZTE Z933
FCC ID : SRQ-Z933W
STANDARD : FCC 47 CFR FCC Part 15 Subpart B
CLASSIFICATION : Certification

This is a variant report which is only valid together with the original test report. The product was received on Jul. 29, 2014 and testing was completed on Aug. 16, 2014. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI C63.4-2003 and has been in 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 (SHENZHEN) INC., the test report shall not be reproduced except in full.



Reviewed by: Louis Wu / Manager



Approved by: Jones Tsai / Manager



Testing Laboratory

2353

SPORTON INTERNATIONAL (SHENZHEN) INC.

No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. C.



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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.109	Radiated Emission	< 15.109 limits	PASS	Under limit 3.47 dB at 33.510 MHz



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. Product Feature of Equipment Under Test

Product Feature	
Equipment	WCDMA Digital Mobile Phone
Brand Name	ZTE
Model Name	ZTE Z933
FCC ID	SRQ-Z933W
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/HSPA+ (Downlink Only)/ WLAN 2.4GHz 802.11b/g/n HT20 Bluetooth v3.0 + EDR/Bluetooth v4.0 LE
HW Version	wyuA
SW Version	Z933_WALMARTV1.0.0B01
EUT Stage	Pre-Production

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

1.4. Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band IV : 1712.4 MHz ~ 1752.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Rx Frequency	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band IV : 2112.4 MHz ~ 2152.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz 802.11b/g/n: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz GPS : 1.57542 GHz
Antenna Type	WWAN : PIFA Antenna WLAN : PIFA Antenna Bluetooth : PIFA Antenna GPS : PIFA Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: QPSK (Uplink) HSDPA: QPSK (Uplink) HSUPA: QPSK (Uplink) HSPA+: 16QAM (Downlink Only) 802.11b : DSSS (DBPSK / DQPSK / CCK) 802.11g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth v4.0 LE : GFSK Bluetooth v3.0 + EDR: GFSK, $\pi/4$ -DQPSK, 8-DPSK GPS : BPSK

1.5. Modification of EUT

No modifications are made to the EUT during all test items.

1.6. Test Location

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.	
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. C. TEL: +86-755- 3320-2398	
Test Site No.	Sporton Site No.	FCC Registration No.
	03CH01-SZ	831040

1.7. Applicable Standards

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

- ♦ FCC 47 CFR FCC Part 15 Subpart B
- ♦ ANSI C63.4-2003

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.

2. Test Configuration of Equipment Under Test

2.1. Test Mode

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.

Frequency range investigated: radiation (30MHz to the 5th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower).

The following tables are showing the test modes as the worst cases and recorded in this report.

Item	EUT Configuration	Test Condition	
		EMI RE<1G	EMI RE≥1G
1.	Data application transferred mode (EUT connected with notebook)	☒	☒

Abbreviations:

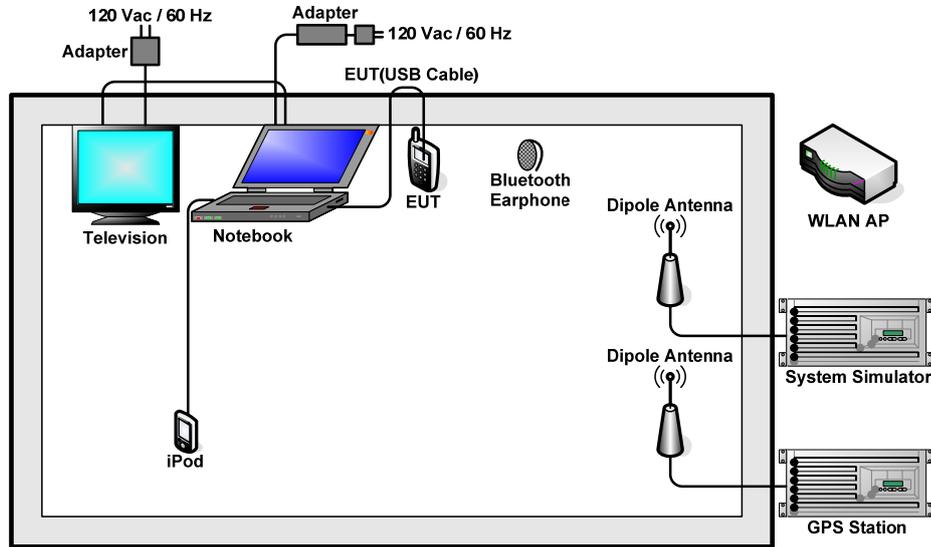
- EMI RE ≥ 1G: EUT radiated emissions ≥ 1GHz
- EMI RE < 1G: EUT radiated emissions < 1GHz

Test Items	EUT Configure Mode	Function Type
Radiated Emissions < 1GHz	1	Mode 1 : WCDMA Band IV Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + GPS Rx Mode 2 : WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + GPS Rx
Radiated Emissions ≥ 1GHz	1	Mode 1 : WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + GPS Rx

Remark:

1. The worst case of RE < 1G is mode 2; only the test data of this mode is reported.
2. Link with Notebook means data application transferred mode between EUT and Notebook.

2.2. Connection Diagram of Test System



2.3. Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMW 500	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	ADIVIC	MP9000	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-615	N/A	N/A	Unshielded, 1.8 m
4.	Bluetooth Earphone	Nokia	BH-108	PYAHS-107W	N/A	N/A
5.	Notebook	Lenovo	G480	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
6.	Television	changhong	LT19920EX	N/A	N/A	Unshielded, 1.8 m
7.	SD Card	SanDisk	4G class4	FCC Doc	N/A	N/A
8.	iPod	Apple	MC525 ZP/A	FCC DoC	Shielded, 1.0 m	N/A

2.4. EUT Operation Test Setup

The EUT was in GSM or WCDMA idle mode during the testing. The EUT was synchronized to the BCCH, and is in continuous receiving mode by setting system simulator's paging reorganization.

At the same time, the EUT was attached to the Bluetooth earphone or WLAN AP, and the following programs installed in the EUT were programmed during the test.

1. Execute the program, "Winthrax" under WIN7 installed in notebook for files transfer with EUT via USB cable.
2. Execute "GPS Test" to make the EUT receive continuous signals from GPS station.

3. Test Result

3.1. Test of Radiated Emission Measurement

3.1.1. Limit of Radiated Emission

The emissions from an unintentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.1.2. Measuring Instruments

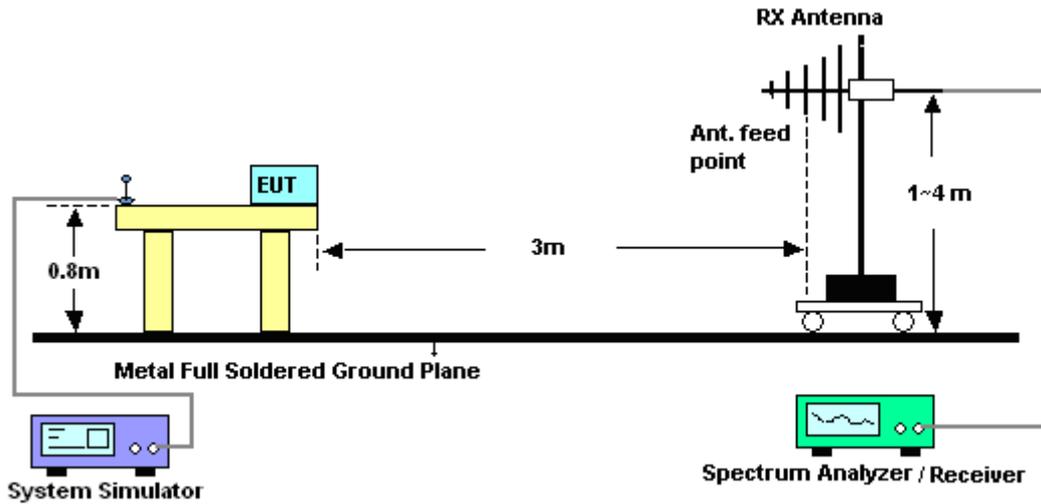
The measuring equipment is listed in the section 4 of this test report.

3.1.3. Test Procedures

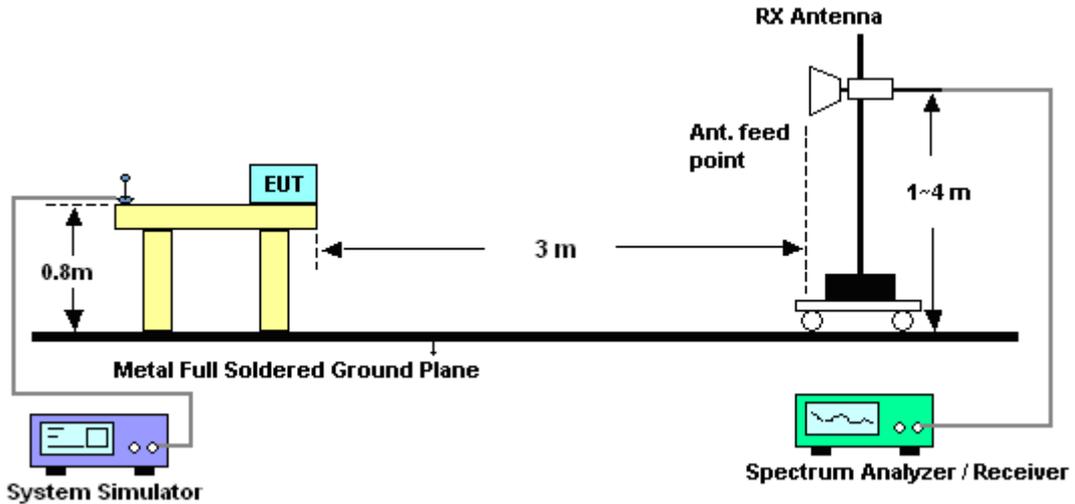
1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a Bi-Log antenna and its height is adjusted between one to 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 Detect Function and specified bandwidth with Maximum Hold Mode.
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, peak values of EUT will be reported. Otherwise, the emission will be repeated by using the quasi-peak method and reported.
8. Emission level (dB μ V/m) = 20 log Emission level (μ V/m)
9. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level

3.1.4. Test Setup of Radiated Emission

For radiated emissions from 30MHz to 1GHz



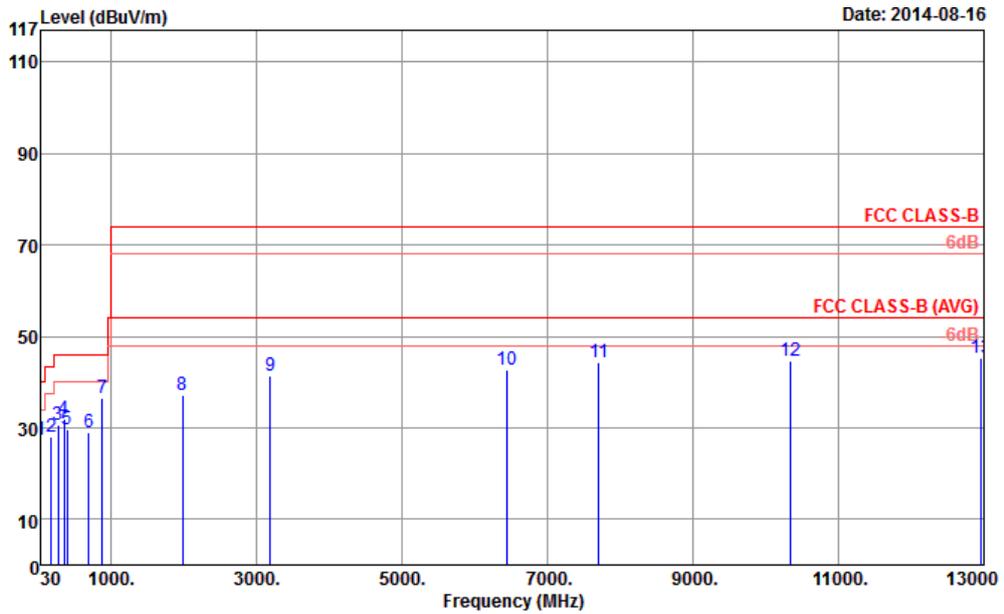
For radiated emissions above 1GHz





3.1.5. Test Result of Radiated Emission

Test Mode :	Mode 2	Temperature :	24~25°C
Test Engineer :	Tang Chen	Relative Humidity :	48~49%
Test Distance :	3m	Polarization :	Horizontal
Function Type :	WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + GPS Rx		
Remark :	#7 is system simulator signal which can be ignored.		

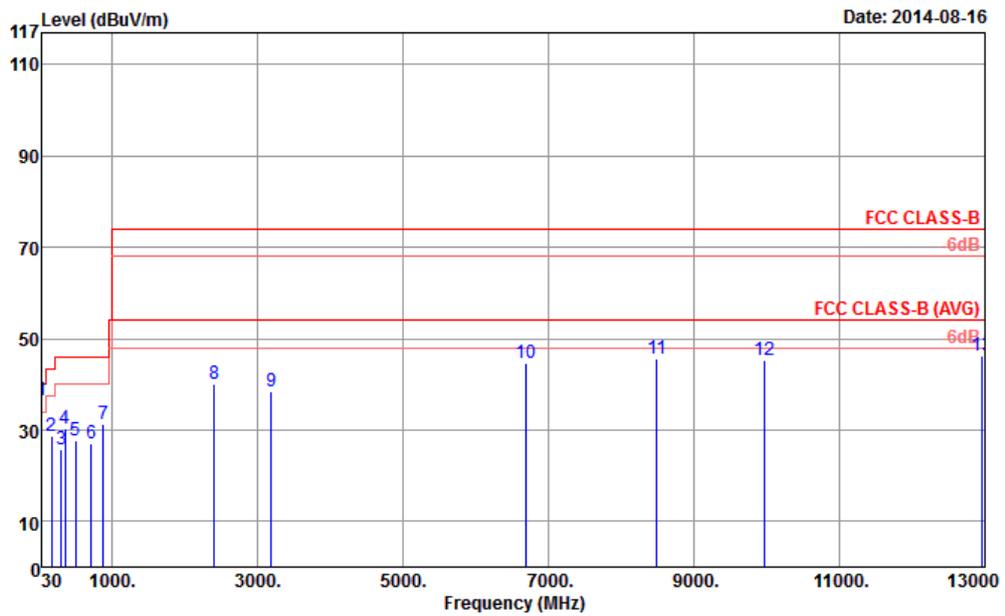


Site : 03CH01-SZ
 Condition : FCC CLASS-B 3m LF_ANT_131026 HORIZONTAL
 Project : (FC) 452005-01
 Mode : Mode 2

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	33.24	27.51	-12.49	40.00	39.35	17.30	0.79	29.93	100	203 Peak
2	180.39	28.16	-15.34	43.50	48.68	7.80	1.62	29.94	---	Peak
3	271.11	30.59	-15.41	46.00	46.48	12.12	1.92	29.93	---	Peak
4	350.40	31.87	-14.13	46.00	45.45	14.20	2.15	29.93	---	Peak
5	399.40	29.52	-16.48	46.00	41.26	15.90	2.29	29.93	---	Peak
6	696.90	28.91	-17.09	46.00	37.02	18.86	2.96	29.93	---	Peak
7 P	881.70	36.34			42.43	20.56	3.29	29.94	---	Peak
8	1980.00	37.24	-36.76	74.00	59.13	29.91	5.10	56.90	---	Peak
9	3192.00	41.43	-32.57	74.00	59.34	33.04	6.57	57.52	---	Peak
10	6452.00	42.71	-31.29	74.00	55.85	34.00	9.78	56.92	---	Peak
11	7704.00	44.28	-29.72	74.00	56.40	34.36	10.32	56.80	---	Peak
12	10342.00	44.54	-29.46	74.00	53.47	36.79	12.84	58.56	---	Peak
13	12968.00	45.25	-28.75	74.00	50.25	38.74	14.34	58.08	100	209 Peak



Test Mode :	Mode 2	Temperature :	24~25°C
Test Engineer :	Tang Chen	Relative Humidity :	48~49%
Test Distance :	3m	Polarization :	Vertical
Function Type :	WCDMA Band V Idle + Bluetooth Idle + WLAN Idle + USB Cable (Data Link with Notebook) + GPS Rx		
Remark :	#7 is system simulator signal which can be ignored.		



Site : 03CH01-SZ
 Condition : FCC CLASS-B 3m LF_ANT_131026 VERTICAL
 Project : (FC) 452005-01
 Mode : Mode 2

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 P	33.51	36.53	-3.47	40.00	48.96	16.70	0.80	29.93	100	156	Peak
2	171.48	28.68	-14.82	43.50	48.67	8.37	1.58	29.94	---	---	Peak
3	298.65	25.87	-20.13	46.00	41.47	12.31	2.02	29.93	---	---	Peak
4	350.40	30.39	-15.61	46.00	43.97	14.20	2.15	29.93	---	---	Peak
5	499.50	27.60	-18.40	46.00	37.97	17.02	2.53	29.92	---	---	Peak
6	715.10	27.08	-18.92	46.00	34.87	19.15	2.99	29.93	---	---	Peak
7	881.00	31.37			37.45	20.58	3.28	29.94	---	---	Peak
8	2404.00	39.97	-34.03	74.00	59.27	32.07	5.62	56.99	---	---	Peak
9	3190.00	38.58	-35.42	74.00	56.49	33.04	6.57	57.52	---	---	Peak
10	6696.00	44.67	-29.33	74.00	58.09	33.89	9.85	57.16	---	---	Peak
11	8488.00	45.57	-28.43	74.00	56.21	35.77	11.04	57.45	---	---	Peak
12	9972.00	45.28	-28.72	74.00	53.78	36.98	12.63	58.11	---	---	Peak
13	12954.00	46.18	-27.82	74.00	51.22	38.71	14.34	58.09	100	206	Peak



4. List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
ESCIO TEST Receiver	R&S	ESCI	100724	9kHz~3GHz	Feb. 21, 2014	Aug. 16, 2014	Feb. 20, 2015	Radiation (03CH01-SZ)
Spectrum Analyzer	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2014	Aug. 16, 2014	May 25, 2015	Radiation (03CH01-SZ)
Bilog Antenna	TESEQ	CBL 6112D	23188	30MHz~2GHz	Oct. 26, 2013	Aug. 16, 2014	Oct. 25, 2014	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS Lindgren	3117	00119436	1GHz~18GHz	Oct. 26, 2013	Aug. 16, 2014	Oct. 25, 2014	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz~3000MHz	Feb. 21, 2014	Aug. 16, 2014	Feb. 20, 2015	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	May 08, 2014	Aug. 16, 2014	May 07, 2015	Radiation (03CH01-SZ)
AC Source(AVR)	Chroma	61601	616010001985	100Vac~250Vac	Mar. 25, 2014	Aug. 16, 2014	Mar. 24, 2015	Radiation (03CH01-SZ)
Turn Table	EM Electronics	EM 1000	N/A	0~360 degree	NCR	Aug. 16, 2014	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM Electronics	EM 1000	N/A	1 m~4 m	NCR	Aug. 16, 2014	NCR	Radiation (03CH01-SZ)



5. Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.9
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Appendix B. Product Equality Declaration

ZTE CORPORATION**Product Change Description**

As the applicant of the below model, [ZTE Corporation] declares that the product,

[ZTE Z933 FCC ID: SRQ-Z933W]
[ZTE Corporation]

is the variant of the initial certified product,

[ZTE Z933 FCC ID: SRQ-Z933]
[ZTE Corporation]
[Project Number: P2014ZTEMT010]

SOFTWARE MODIFICATIONS:

Protocol Stack changes: NO

MMS/STK changes: NO

JAVA changes: NO

Other changes detailed: YES, There are change the UMTS frequency 2100MHz to 1700MHz and Software Version, the change pin to pin duplexer and PA.

	Bell Z933	walmart Z933
PA	SKY77761-12	SKY77764-11
Duplexer	SAYRF1G95GC0F0A	SAYRF1G73BA0F0A

HARDWARE MODIFICATION:

Band changes: NO

Power Amplifier changes: YES

Antenna changes: NO

PCB Layout changes: NO

Components on PCB changes: NO

LCD changes: NO

Speaker changes: NO

Camera changes: NO

Vibrator changes: NO

Bluetooth changes: NO

FM changes: NO

Other changes: NO

MECHANICAL MODIFICATIONS:

Use new metal front/back cover or keypad: NO

Mechanical shell changes: NO

Other changes detailed: NO

ACCESSORY MODIFICATIONS:

Battery changes: NO

AC Adaptor changes: NO

Earphone changes: NO



APPROVED BY: Bolin Gong

Project Manager: Jizhi Jiang

Date: 2014-7-28

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