

TEST REPORT

REPORT NUMBER: I10CA7003-FCC-BT

ON

Type of Equipment: CDMA 1X Digital Mobile Phone
Type of Designation: ZTE-C S550
Manufacturer: ZTE Corporation

ACCORDING TO

**FCC Part 15, FREQUENCY Hopping Spread Spectrum
Transceiver, Oct, 1, 2009**

PART 15 subpart C 15.247

China Telecommunication Technology Labs.

Month date, year

Aug, 23, 2010

Signature

A handwritten signature in black ink, appearing to be 'He Guili', written over a light grey rectangular background.

He Guili

Director

FCC ID: Q78-ZTECS550

Report Date: 2010-08-23

Test Firm Name: China Telecommunication Technology Labs

Registration Number: 840587

Statement

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC Parts 15, subpart C 15.247. The sample tested was found to comply with the requirements defined in the applied rules.

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1 General Information

1.1 Notes

All reported tests were carried out on a sample equipment to demonstrate limited compliance with FCC Parts 15, subpart C 15.247.

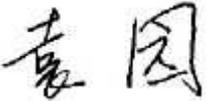
The test results of this test report relate exclusively to the item(s) tested as specified in section 2.

The following deviation from, additions to, or exclusions from the test specifications have been made. See Annex B.

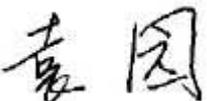
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1.2 Testers

Name: Yuan Yuan
Position: Engineer
Department: Department of EMC test
Signature: 

Editor of this test report:

Name: Yuan Yuan
Position: Engineer
Department: Department of EMC test
Date: 2010-8-23
Signature: 

Technical responsibility for area of testing:

Name: Zhang Xia
Position: Manager
Department: Department of EMC test
Date: 2010-08-23
Signature: 

1.3 Testing Laboratory information

1.3.1 Location

Name: China Telecommunication Technology Labs.
Address: No. 11, Yue Tan Nan Jie, Xi Cheng District
BEIJING
P. R. CHINA, 100083
Tel: +86 10 68094053
Fax: +86 10 68011404
Email: emc@chinattl.com

1.3.2 Details of accreditation status

Accredited by: China National Accreditation Service for Conformity
Assessment (CNAS)
Registration number: CNAL Registration No.L0570
Standard: ISO/IEC 17025:2005

1.3.3 Test location, where different from section 1.3.1

Name: -----
Street: -----
City: -----
Country: -----
Telephone: -----
Fax: -----
Postcode: -----

1.4 Details of applicant or manufacturer

1.4.1 Applicant

Name: ZTE Corporation
Address: ZTE Plaza, Keji Road South, Hi-Tech Industrial Park,
Nanshan District, Shenzhen, Guangdong, 518057,
P.R.China
Country: P.R.China
Telephone: 86-21-68895196
Fax: 86-21-68895196
Contact: chen yanli
Telephone: 86-21-68895196
Email: chen.yanli1@zte.com.cn

1.4.2 Manufacturer (if different from applicant in section 1.4.1)

Name: ----
Address: ----

1.4.3 Manufactory (if different from applicant in section 1.4.1)

Name: ----
Address: ----

2 Test Item

2.1 General Information

Manufacturer: ZTE Corporation
 Name: CDMA 1X Digital Mobile Phone
 Model Number: ZTE-C S550
 Serial Number: 12805317904
 Production Status: Product
 Receipt date of test item: 2010-08-06

2.2 Outline of EUT

E.U.T. is a CDMA 1X Digital Mobile Phone with Bluetooth.

2.3 Modifications Incorporated in EUT

The EUT has not been modified from what is described by the brand name and unique type identification stated above.

2.4 Equipment Configuration

Equipment configuration list:

Item	Generic Description	Manufacturer	Type	Serial No.	Remarks
A	CDMA 1X Digital Mobile Phone	ZTE Corporation	ZTE-C S550	--	None
B	Adaptor	Ruide Electronical Industrial Co Ltd	STC-A22050I700USBA-Z	--	None
C	Battery	ZTE Corporation	LP053450A5U	--	None
D	Earphone	ZTE Corporation	--	--	None

Cables:

Item	Cable Type	Manufacturer	Length	Shield	Quantity	Remarks
1	DC cable on Adapter	Unknown	1.2m	No	1	None

2.5 Other Information

--

3 Summary of Test Results

A brief summary of the tests carried out is shown as following.

	Name of Test	Result
1、	Peak power	Pass
2、	Band edge (conducted)	Pass
3、	Band edge (radiated)	Pass
4、	Frequency separation	Pass
5、	Number of hopping frequency	Pass
6、	Time of occupancy	Pass
7、	Spurious emission (conducted)	Pass
8、	Spurious emission (radiated)	Pass
9、	Power line Conducted Emissions	Pass

Note: none

4 Test Results

4.1 Peak power

Specifications:	15.247 (b)(3)(i),(ii)and(iii)					
Date of Tests	2010-08-12					
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa					
Operation Mode	Fix channel transmit					
Test Results:	Pass					
Test equipment Used:						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup:

The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

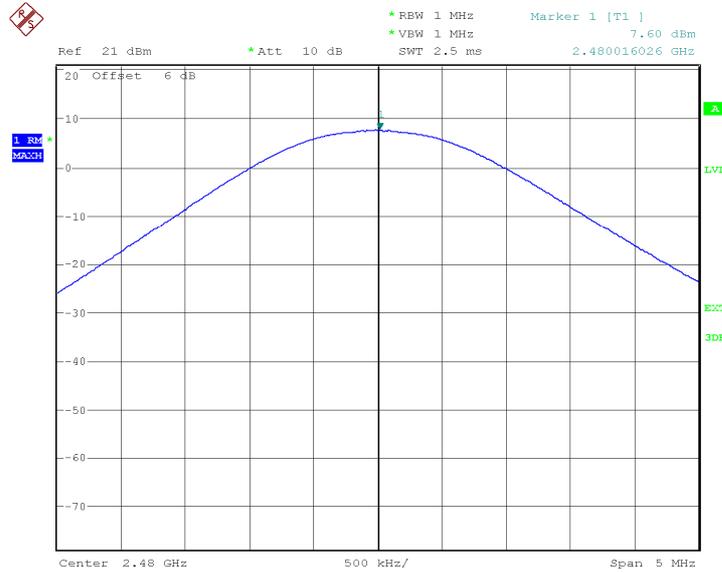
Test Results:

channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Result
0	2402	7.60	30	Pass
39	2441	7.41	30	Pass
78	2480	8.94	30	pass

FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

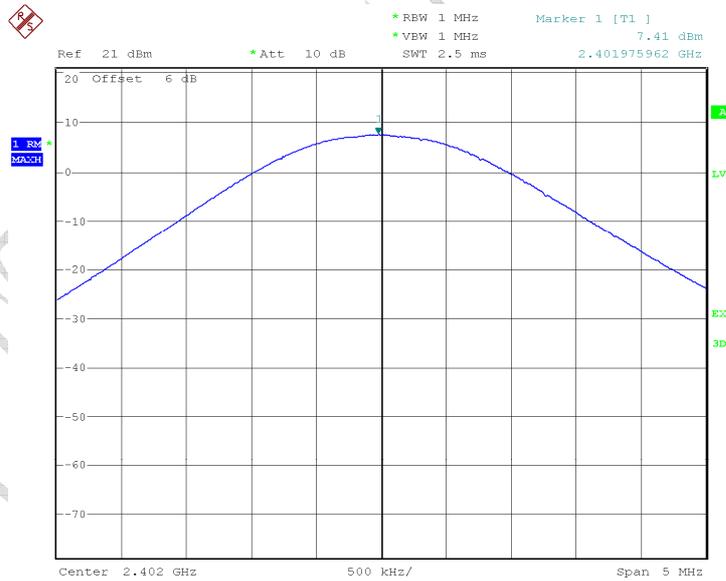
REPORT NO.: I10CA7003-FCC-BT

Test Data:
Channel 0:



Date: 12.AUG.2010 05:45:13

Channel 39

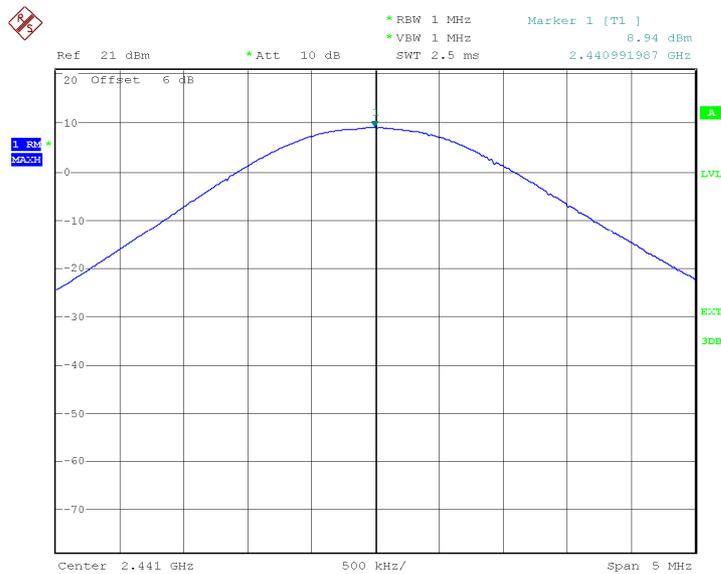


Date: 12.AUG.2010 05:45:49

FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

REPORT NO.: I10CA7003-FCC-BT

Channel 78



Date: 12.AUG.2010 05:46:21

CTTL TEST

4.2 Band edges (conducted)

Specifications:	15.247 (d)					
Date of Tests	2010-08-12					
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa					
Operation Mode	Fix channel transmit					
Test Results:	Pass					
Test equipment Used:						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup:

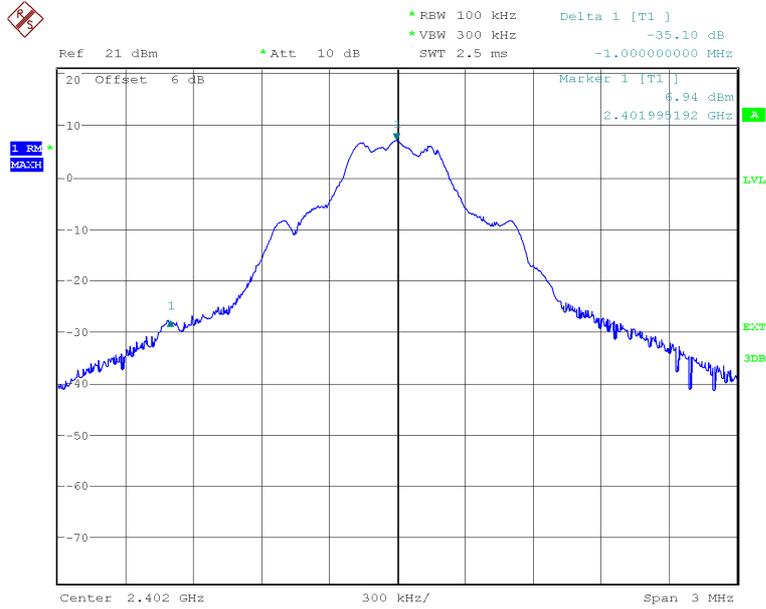
The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

REPORT NO.: I10CA7003-FCC-BT

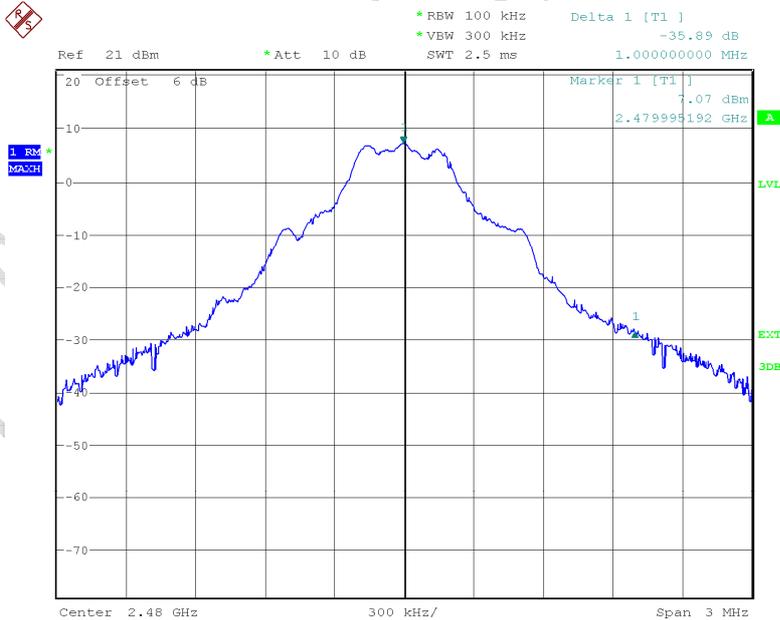
Test data:

Channel 0, fixed mode, left band-edge



Date: 12.AUG.2010 05:34:46

Hopping mode, left band-edge

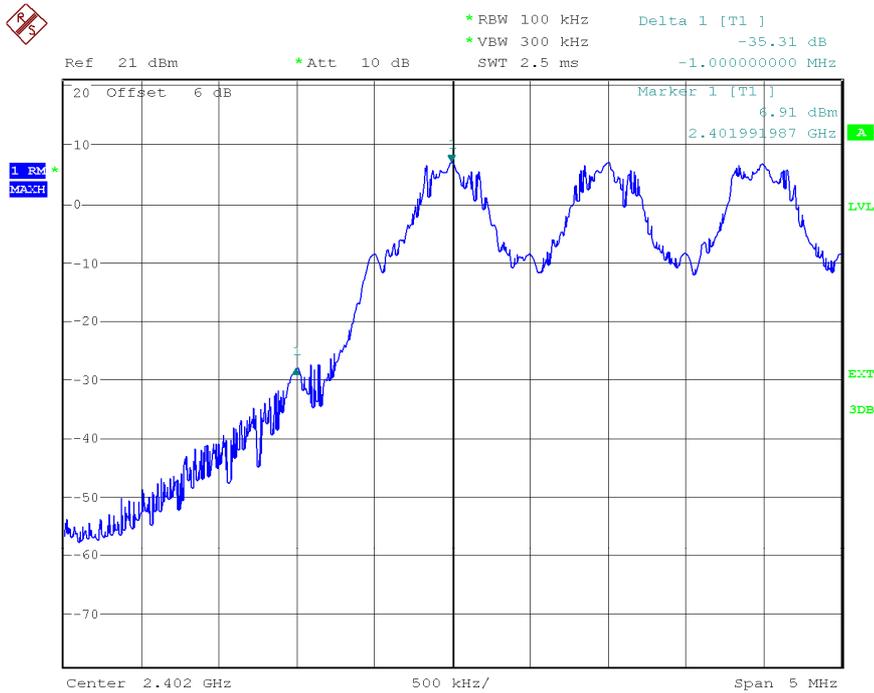


Date: 12.AUG.2010 05:38:16

FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

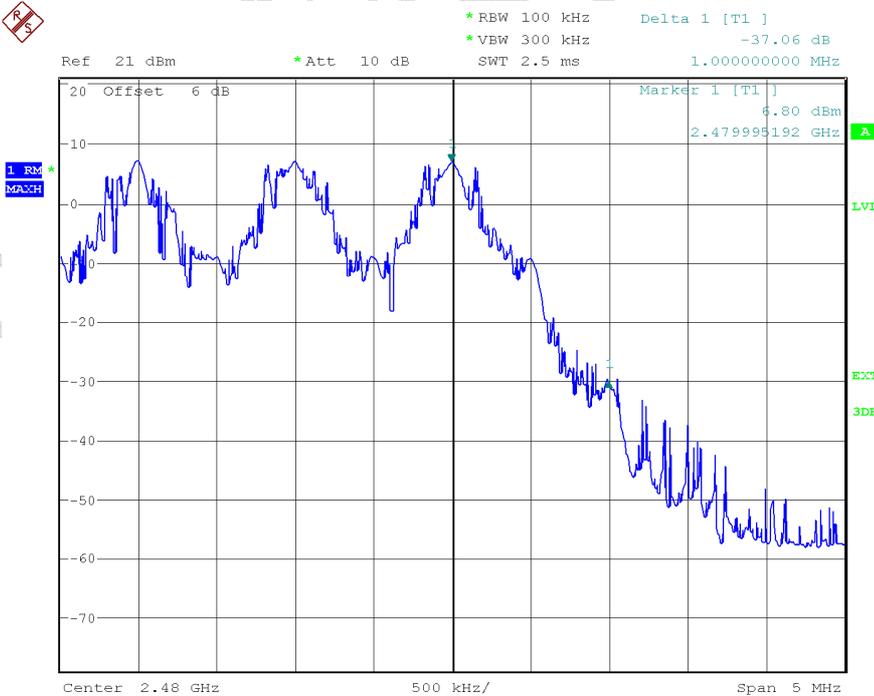
REPORT NO.: I10CA7003-FCC-BT

Channel 78, fixed mode, right band-edge



Date: 12.AUG.2010 05:43:54

Hopping mode, right band-edge



Date: 12.AUG.2010 05:40:38

4.3 Band edges measurement (Radiated)

Specifications:	15.247 (c); 15.205(a) and 15.209(a)					
Date of Tests	2010-08-12					
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa					
Operation Mode	Fix channel transmit					
Test Results:	Pass					
Test equipment Used:						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Double-Ridged Horn Antenna	R/S	HF906	100037	2010-11-17	Normal
713	Fully-Anechoic Chamber	ETS	11.8m×6.5m×6.3m	--	2010-11-16	Normal
111835	Wireless Communications Test Set	R&S	CMU200	1100000802	2011-06-08	Normal

Test Setup:

The EUT was placed in an anechoic chamber. The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a Horn antenna.

Test method:

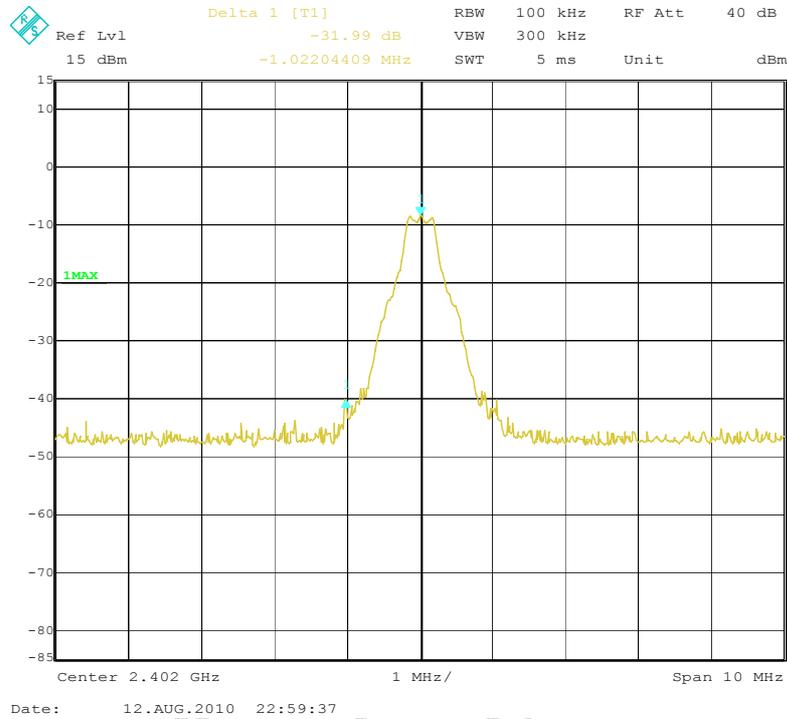
Use peak and average detector to measure band edges.

Test should be performing under Vertical and Horizontal modes.

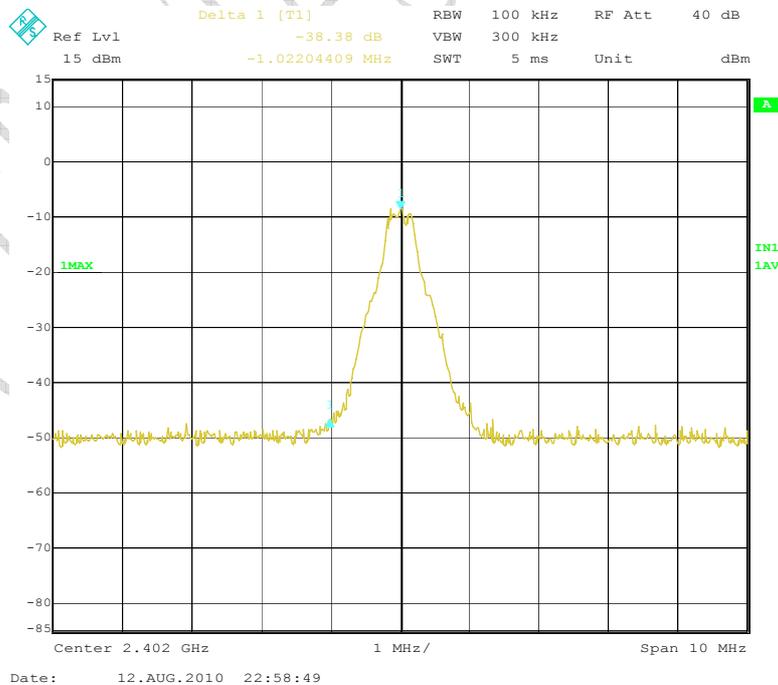
FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

REPORT NO.: I10CA7003-FCC-BT

Test data:
Channel 0
Vertical
Peak mode:



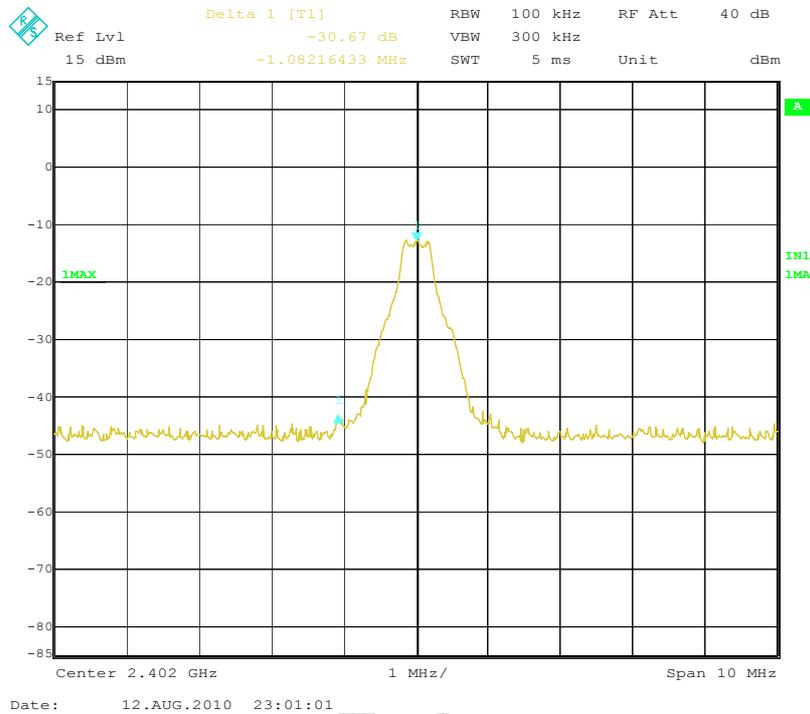
Average mode:



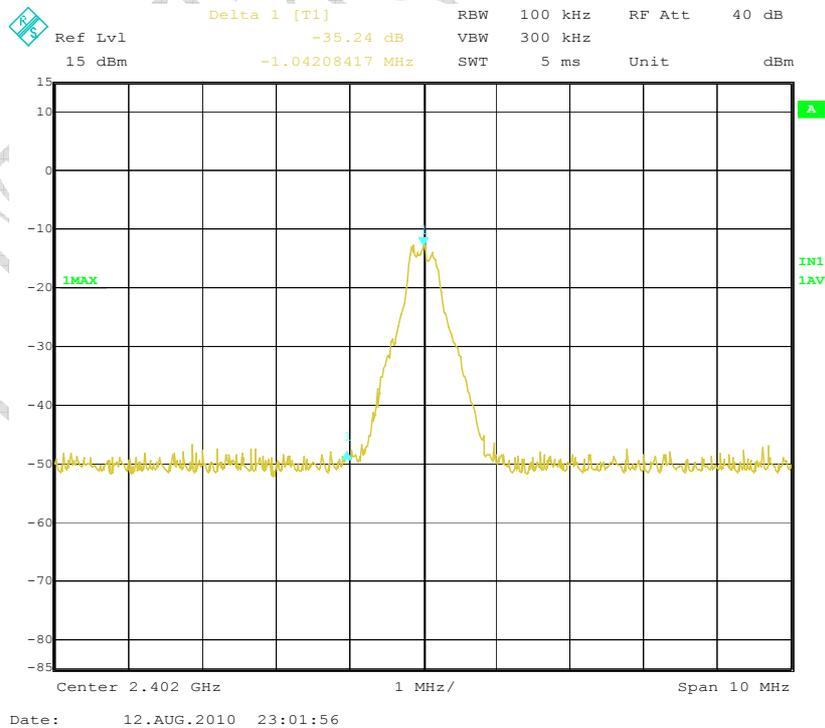
FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

REPORT NO.: I10CA7003-FCC-BT

Channel 0
Horizontal
Peak mode:



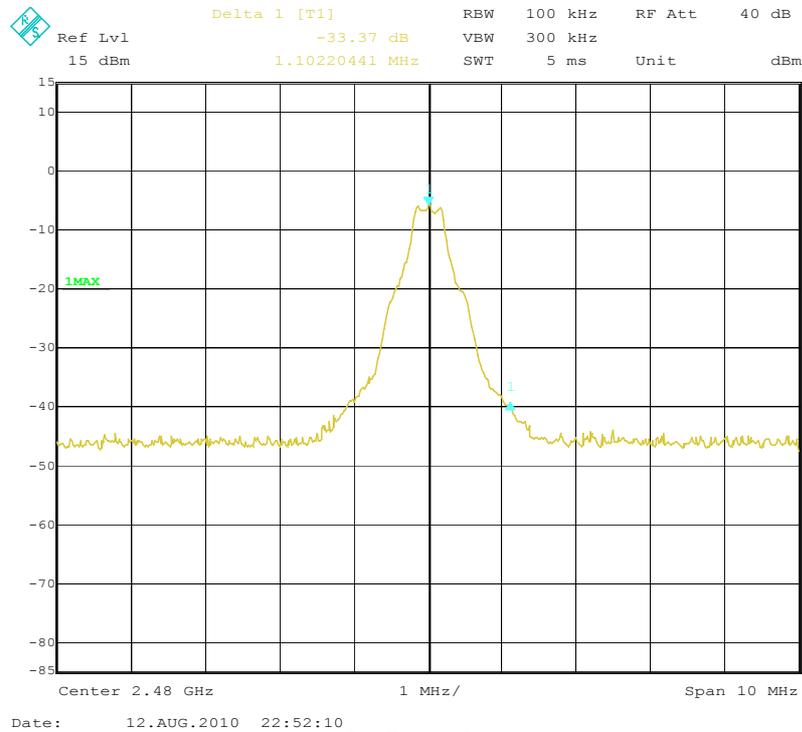
Average mode:



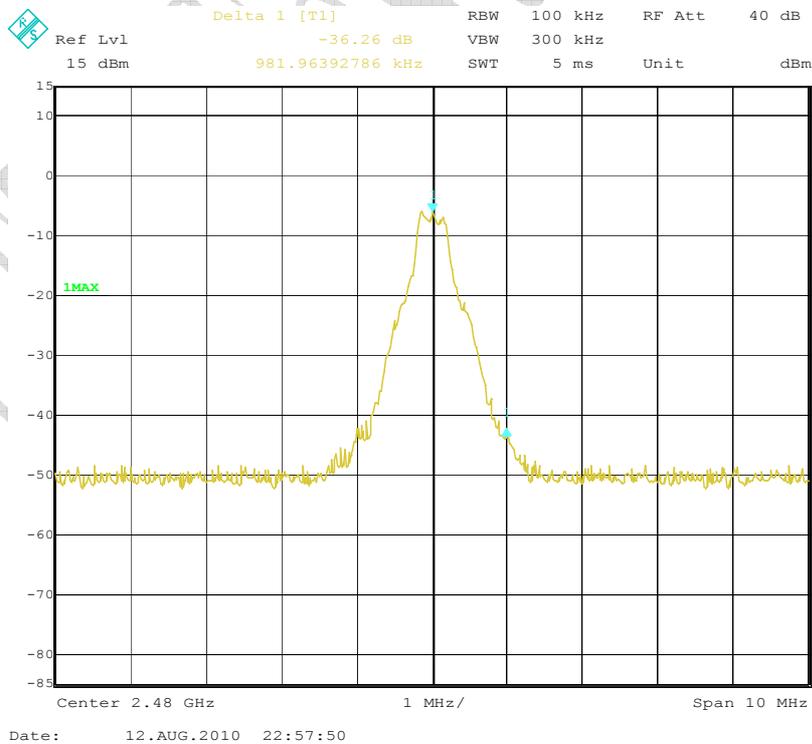
FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

REPORT NO.: I10CA7003-FCC-BT

Channel 78
Vertical
Peak mode:



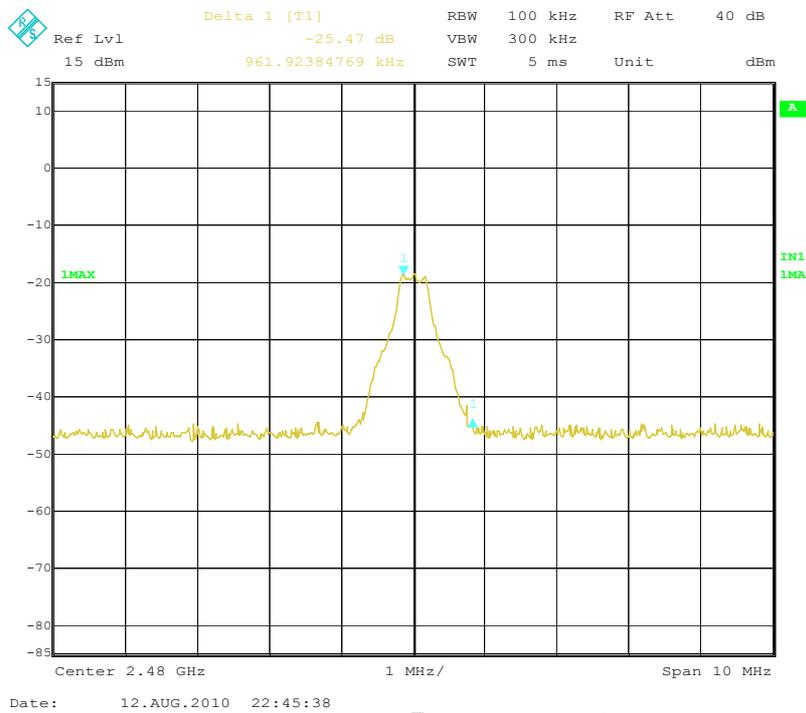
Average mode:



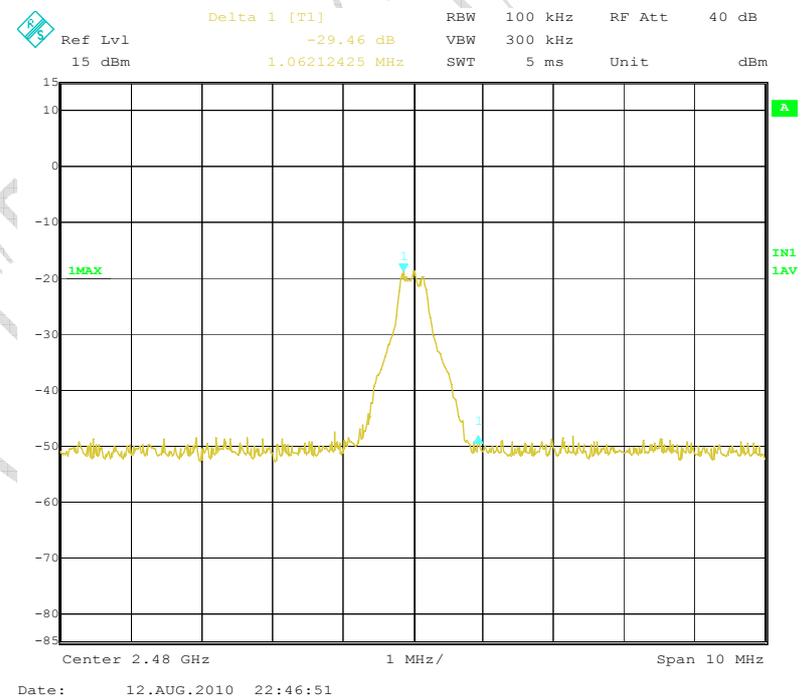
FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

REPORT NO.: I10CA7003-FCC-BT

Channel 78
Horizontal
Peak mode:



Average mode:



4.4 Frequency separation

Specifications:	15.247(a)(1)					
Date of Test	2010-08-12					
Test conditions:	Ambient Temperature: 15°C-35°C Relative Humidity: 30%-60% Air pressure: 86-106kPa					
Operation Mode	Fix channel transmit					
Test Results:	Pass					
Test equipment Used:						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup

The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

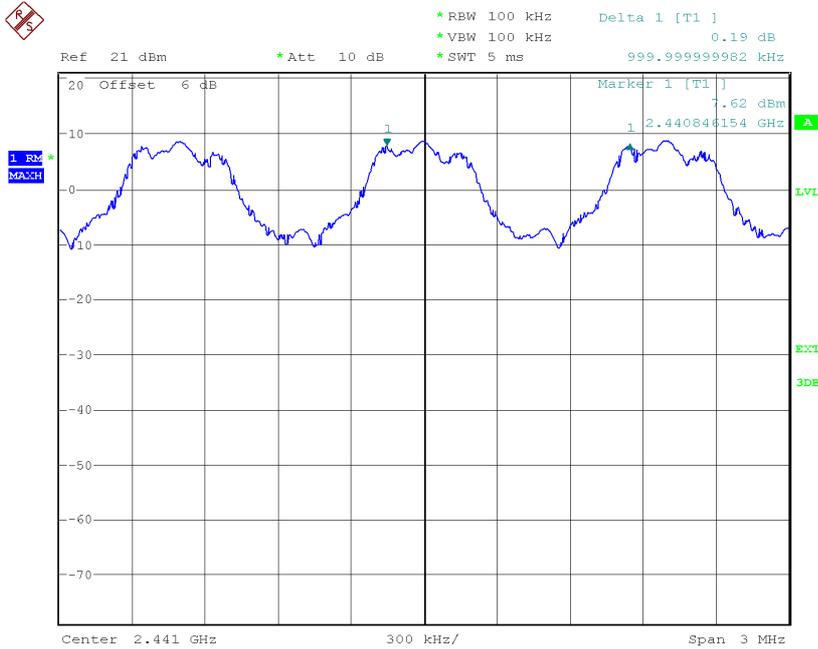
Test Result:

Channel separation (kHz)	20dB Bandwidth (kHz)		Limit (kHz)	Result
998	Ch 0	1009.6	>25	Pass
	Ch 39	1014.4	>25	Pass
	Ch 78	1024.0	>25	Pass

FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

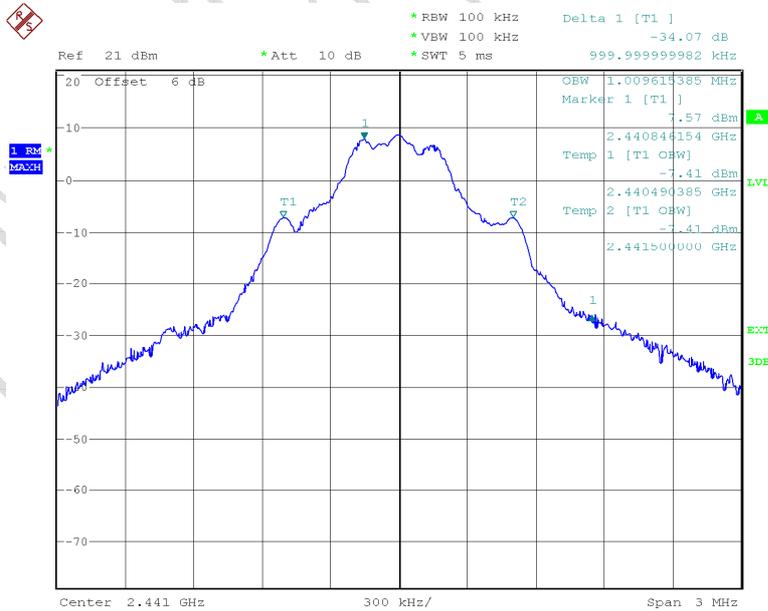
REPORT NO.: I10CA7003-FCC-BT

Test data:
Channel Separation



Date: 12.AUG.2010 05:57:40

20dB Bandwidth (Ch 0)

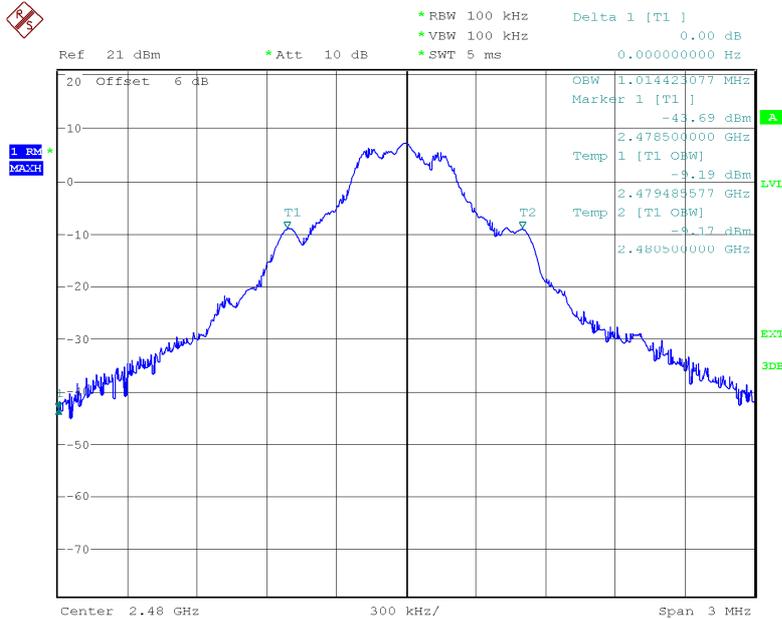


Date: 12.AUG.2010 05:58:48

FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

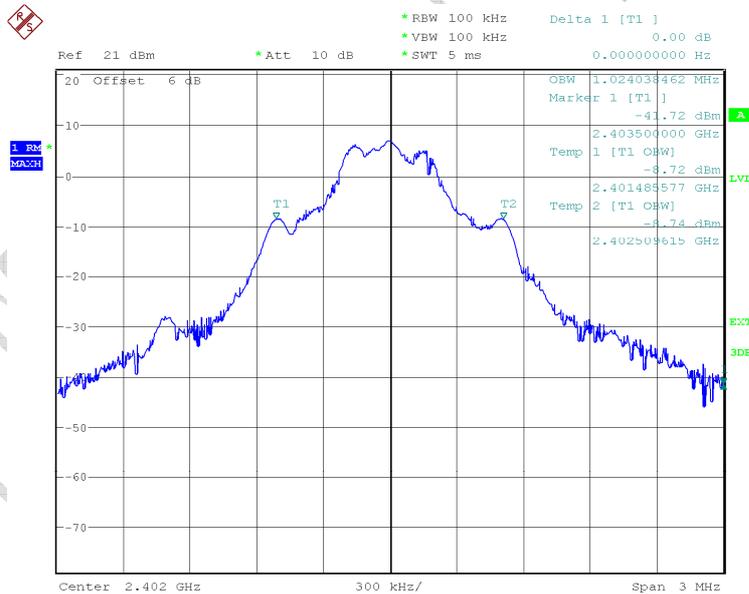
REPORT NO.: I10CA7003-FCC-BT

20dB Bandwidth (Ch 39)



Date: 12.AUG.2010 05:59:13

20dB Bandwidth (Ch 78)



Date: 12.AUG.2010 05:59:33

4.5 Number of hopping frequency

Specifications:	15.247(a)(1)(ii)					
Date of Test	2010-08-12					
Test conditions:	Ambient Temperature:15℃-35℃ Relative Humidity:30%-60% Air pressure: 86-106kPa					
Operation Mode	hopping					
Test Results:	Pass					
Test equipment Used:						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup

The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

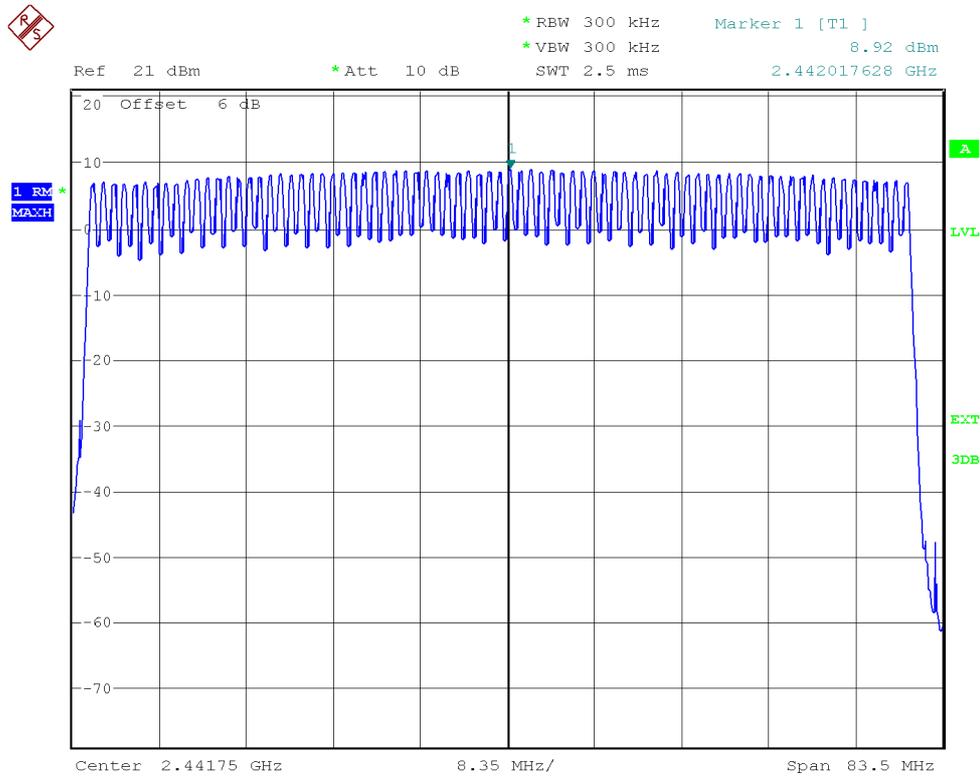
Test Result:

Result (No. of Ch)	Limit (No. of Ch)	Result
79	>75	Pass

FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

REPORT NO.: I10CA7003-FCC-BT

Test data:
Channel Number



Date: 12.AUG.2010 04:53:25

COPY

4.6 Time of occupancy

Specifications:	15.247(a)(1)(iii)					
Date of Test	2010-08-12					
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa					
Operation Mode	Fix channel					
Test Results:	Pass					
Test equipment Used:						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup

The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

Test Result:

DH1 channel 39:

$$0.396 * (1600/2) / 79 * 31.6 = 127\text{ms}$$

Pulse time[ms]	Total dwell[ms]	Period time[s]	result
0.396	127	31.6	PASS

DH3 channel 39:

$$1.64 * (1600/4) / 79 * 31.6 = 262\text{ms}$$

Pulse time[ms]	Total dwell[ms]	Period time[s]	result
1.64	262	31.6	PASS

DH5 for channel 39:

$$2.91 * (1600/6) / 79 * 31.6 = 310\text{ms}$$

Pulse time[ms]	Total dwell[ms]	Period time[s]	result
2.91	310	31.6	PASS

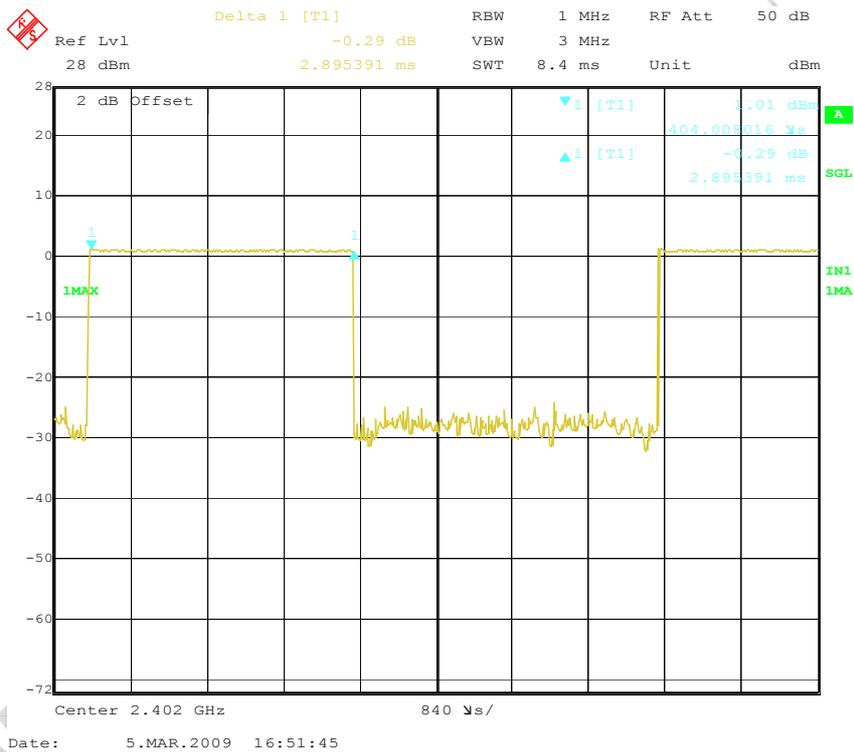
DH5 has the maximum dwell time, so only lowest and highest channel of DH5 are demonstrated as following.

Function for DH5:

$$\text{Total Dwell Time} = \text{pulsetime} \times \left(\frac{1600}{6}\right) / 79 \times 31.6$$

Channel	Pulse Time (ms)	Total of Dwell (ms)	Period Time (s)	Limit (ms)	Result
0	2.895	308.8	31.6	400	Pass
39	2.912	310.6	31.6		Pass
78	2.879	307.1	31.6		Pass

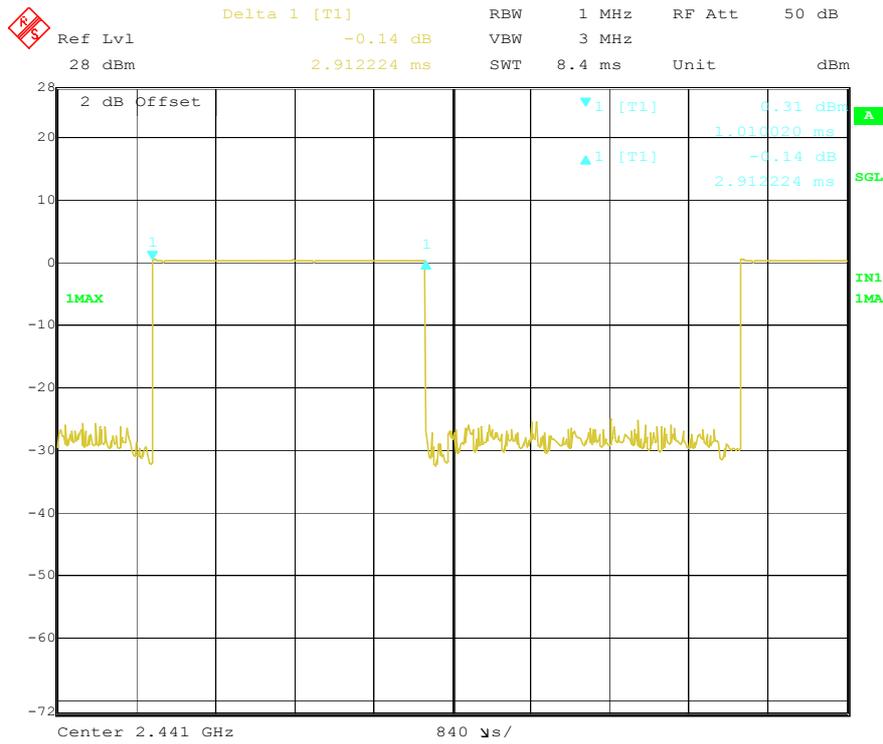
Test data:
Channel 0



Channel 39

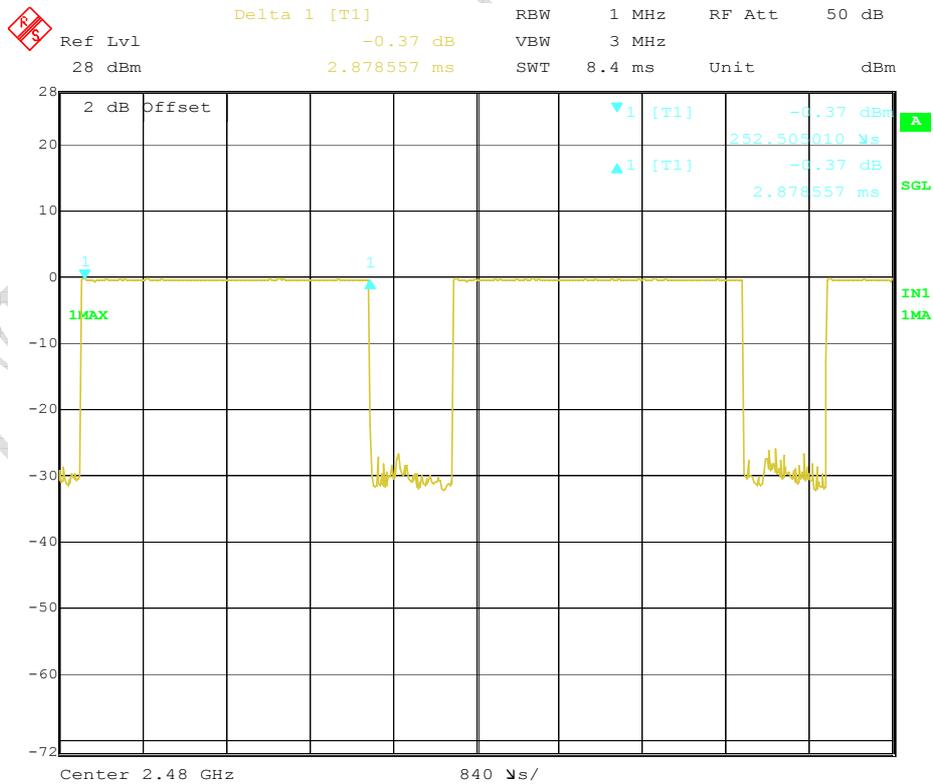
FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

REPORT NO.: I10CA7003-FCC-BT



Date: 5.MAR.2009 16:30:40

Channel 78



Date: 5.MAR.2009 16:27:53

4.7 Spurious Measurement (Conducted)

Specifications:	15.209(a) and 15.205(a)					
Date of Test	2010-08-12					
Test conditions:	Ambient Temperature: 15°C-35°C Relative Humidity: 30%-60% Air pressure: 86-106kPa					
Operation Mode	Fix channel transmit					
Test Results:	Pass					
Test equipment Used:						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup

The Universal Radio Communications Tester was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a coupling.

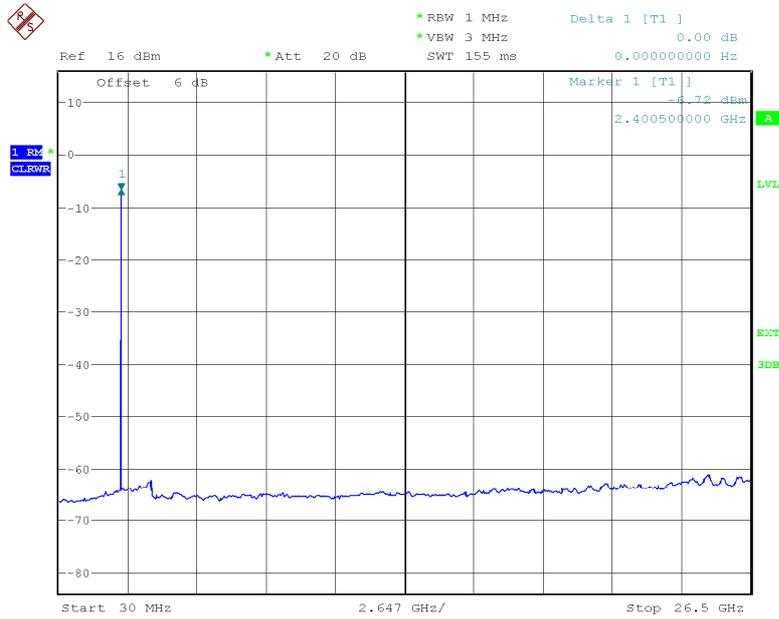
Test Result:

Channel	Result
0	Pass
39	Pass
78	Pass

FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

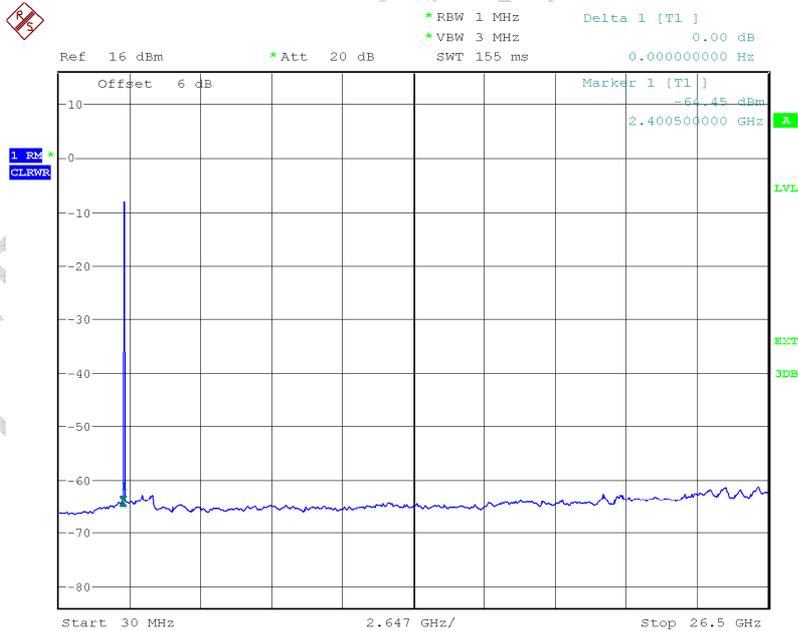
REPORT NO.: I10CA7003-FCC-BT

Test data:
Channel 0



Date: 12.AUG.2010 06:16:59

Channel 39

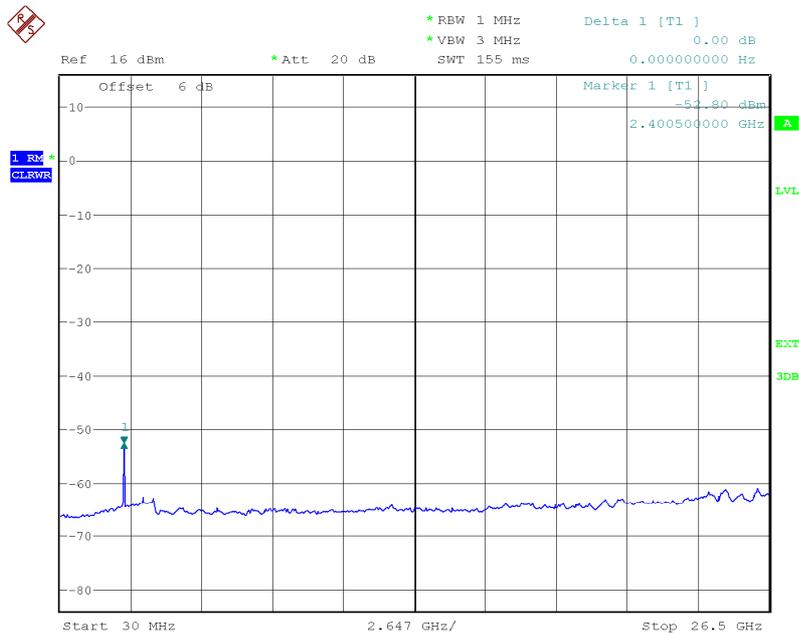


Date: 12.AUG.2010 06:17:06

FCC Parts 15 subpart C 15.247
Equipment: ZTE-C S550

REPORT NO.: I10CA7003-FCC-BT

Channel 78



Date: 12.AUG.2010 06:17:11

OTL TEST

4.8 Radiated Spurious Measurement

Specifications:	15.209(a) and 15.205(a)					
Date of Test	2010-08-12					
Test conditions:	Ambient Temperature: 15°C-35°C Relative Humidity: 30%-60% Air pressure: 86-106kPa					
Operation Mode	Fix channel transmit					
Test Results:	Pass					
Test equipment Used:						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
713	Fully-Anechoic Chamber	ETS	11.8m×6.5m×6.3 m	--	2010-11-16	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	2011-06-08	Normal

Test Setup

The EUT was placed in an anechoic chamber. The CMU 200 was used to set the TX channel and power level. The transmitter output is connected to Spectrum analyzer through a Bilog antenna (for frequency under 1GHz) or a horn antenna (for frequency above 1GHz).

Limit:

Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test result:
9kHz-30MHz

There is No frequency exceeds and near limit line in 20dB scope blow.

30MHz-1GHz:

Frequency [MHz]	Level [dBuV/m]	Limit [dBuV/m]	Antenna height [cm]	Turntable azimuth [degree]	Antenna polarization [V/H]
--	--	--	--	--	--

Note: --

Above 1GHz:
Channel 0:

Frequency[GHz]	Level[dBuV/m]	Limit[dBuV/m]	Antenna Polarization[V/H]	Detector
--	--	--	--	Peak
--	--	--	--	Average

Channel 39:

Frequency[GHz]	Level[dBuV/m]	Limit[dBuV/m]	Antenna Polarization[V/H]	Detector
--	--	--	--	Peak
--	--	--	--	Average

Channel 78:

Frequency[GHz]	Level[dBuV/m]	Limit[dBuV/m]	Antenna Polarization[V/H]	Detector
--	--	--	--	Peak
--	--	--	--	Average

Note:

1. Test from 1GHz up to 10th harmonic of operating frequency.
2. 2.4~2.4835GHz band is the operating frequency.
3. The maximum radiated spurious emission point is lower than 20dB compared with the limits, so no data was listed.

4.9 Power line Conducted Emissions

Specifications:	ANSI C63.4 voltage mains test					
Date of Test	2010-08-18					
Test conditions:	Ambient Temperature:15°C-35°C Relative Humidity:30%-60% Air pressure: 86-106kPa					
Operation Mode	Hopping					
Test Results:	Pass					
Test equipment Used:						
Asset Number	Description	Manufacturer	Model Number	Serial Number	Cal Due	State
7805	EMI Test Receiver	R/S	ESI26	100211	2011-01-11	Normal
7330	Artificial Mains Network	R/S	ESH2-Z5	837480/002	2011-01-08	Normal
714	Shielding Room	ETS	--	19003	2010-11-16	Normal
7330	Universal Radio Communications Tester	R&S	CMU200	100233	22011-06-08	Normal

Test Setup

The EUT was placed in a shielding room. The Universal Radio Communications Tester was used to set the TX channel and power level. The ac adapter output is connected to Spectrum analyzer through an AMN (Artificial Mains Network).

Limits of the conducted disturbance at the AC mains ports:

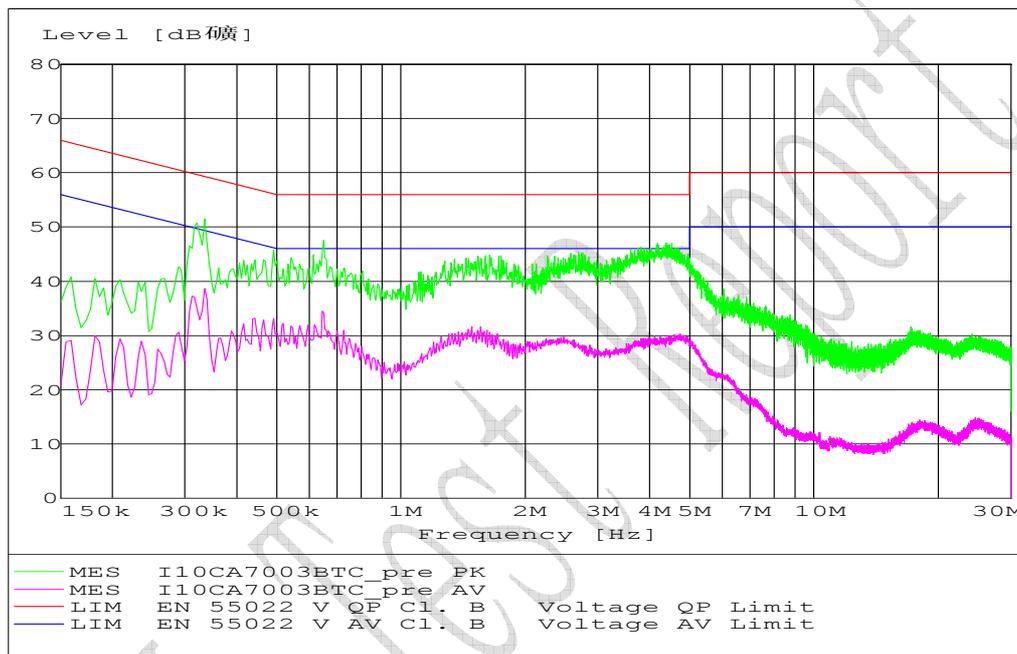
Frequency range	Limit(Quasi-peak)	Limit(Average)
0.15 MHz to 0.5 MHz	66 dBµV – 56 dBµV	56 dBµV – 46 dBµV
>0.5 MHz to 5MHz	56 dBµV	46 dBµV
>5 MHz to 30 MHz	60 dBµV	50 dBµV

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

Test Result:

Pass					
Detector (QP/AV)	Frequency (MHz)	Level (dB μ V)	Limit (dB μ V)	Line	PE
--	--	--	--	--	--
Remarks: No frequency exceeds the limit.					

Test data:



Annex A External Photos



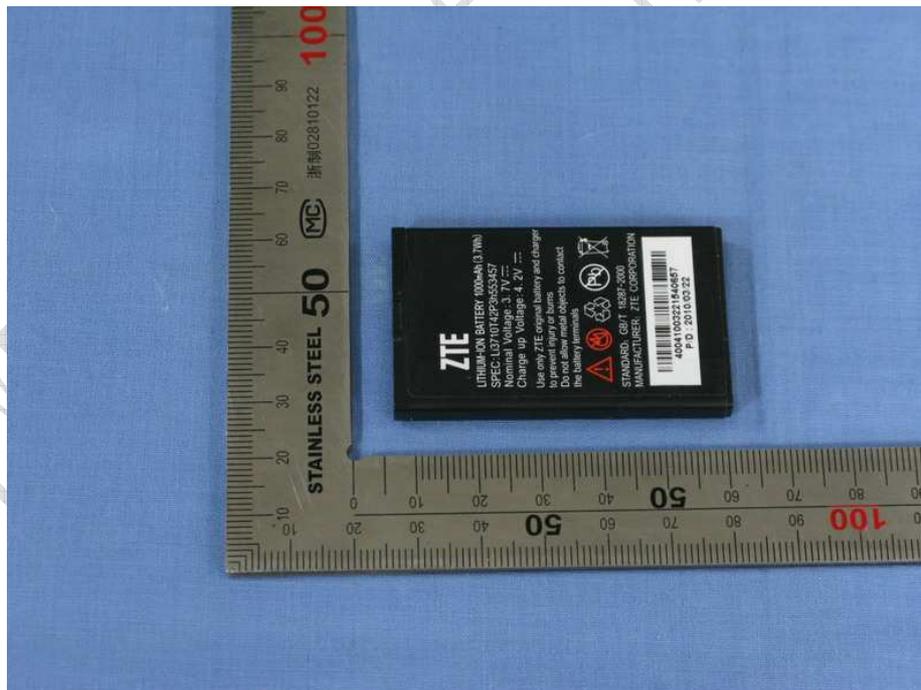
Front view



Back view



Adaptor and Cable



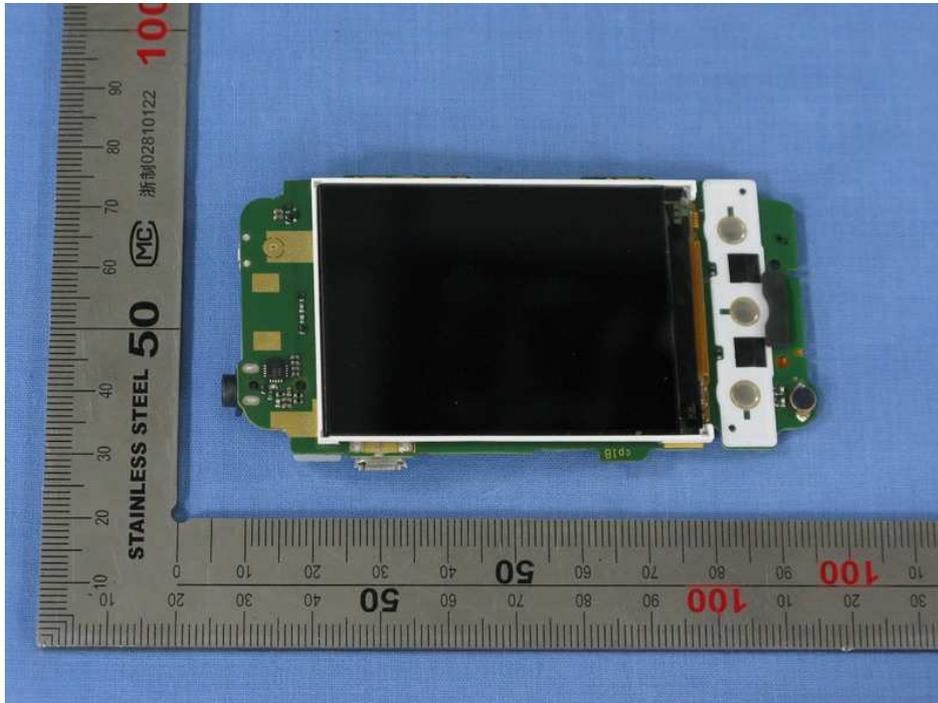
Battery



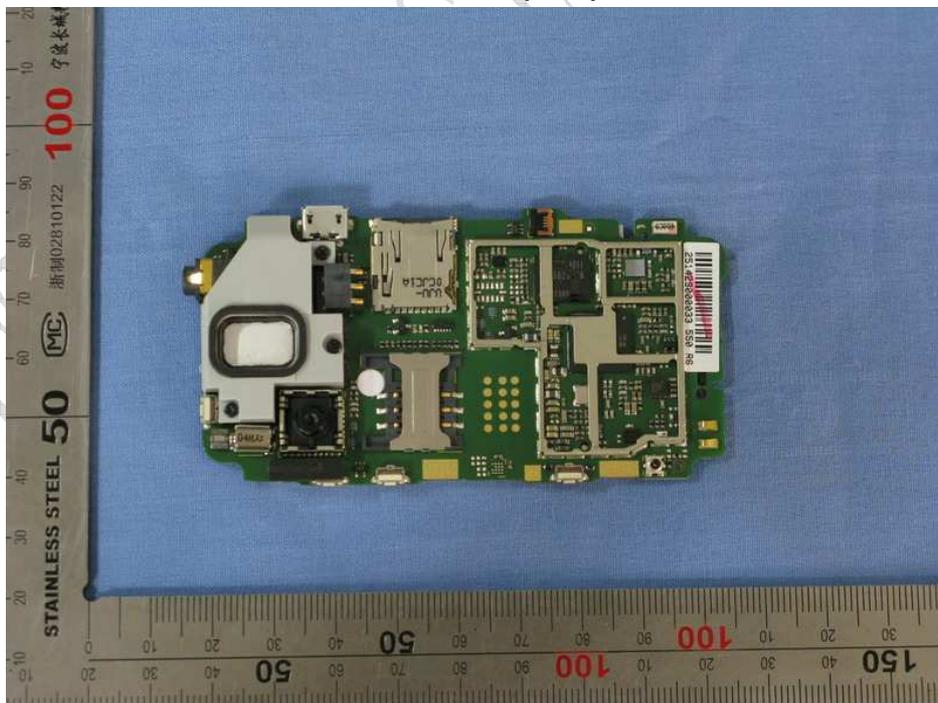
Earphone

China Test Report

Annex B Internal Photos



Main board (face)



Main board (back)

ANNEX C Deviations from Prescribed Test Methods

No deviation from Prescribed Test Methods.

————— The End of this Report —————

CITL Test Report