D-PL-12111-01-01

CNAS L0447

Registration No.910917

TEST REPORT

Report No.: SRTC2012-H024-E0017

Product Name: GSM Digital Mobile Phone

Product Model: ZTE-G S226

Applicant: ZTE Corporation

Manufacturer: ZTE Corporation

Specification: FCC Part15B (Certification)

(October 1, 2009 edition)

FCC ID: Q78-GS226

The State Radio_monitoring_center Testing Center (SRTC)

No.80 Beilishi Road Xicheng District Beijing, China

Tel: 86-10-68009202 Fax: 86-10-68009205

CONTENTS

1. General information

1.1 Notes of the test report

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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, Beijing China
City: Beijing
Country or Region: China
Contacted person: Wang Junfeng
Tel: +86 10 68009181 +86 10 68009202
Fax: +86 10 68009195 +86 10 68009205
Email: wangjf@srrc.org.cn / wangjunfeng@srtc.org.cn

1.3 Applicant's details

Company: ZTE Corporation
Address: ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, 518057
City: Shenzhen
Country or Region: P.R.China
Grantee Code: Q78
Contacted person: Min Zhang
Tel: +86-021-68897541
Fax: +86-021-50801070
Email: zhang.min13@zte.com.cn

1.4 Manufacturer's details

Company: ZTE Corporation
Address: Zhongxing Bldg, Hi-Tech Park, NanShan District, 518057
City: Shenzhen
Country or Region: P.R.China
Contacted person: Li Dezi
Tel: +86-021-68895196
Fax: +86-021-50801070
Email: li.dezi@zte.com.cn

1.5 Application details

Date of reception of test sample: 3rd Feb 2012
Date of test: 6th Feb 2012 to 16th Feb 2012

1.6 Reference specification

FCC Part 15B October 1, 2009 (Certification)

1.7 Information of EUT

1.7.1 General information

Name of EUT	GSM Digital Mobile Phone
FCC ID	Q78-GS226
Frequency range	GSM850: Tx:824~849MHz Rx:869~894MHz PCS1900: Tx:1850~1910MHz Rx:1930~1990MHz
Rated output power	GSM850:33.0dBm PCS1900:30.0dBm
E.R.P. & E.I.R.P.	E.R.P.: 29.9dBm E.I.R.P.: 26.3dBm
Modulation type	GMSK
Emission Designator	300KGXW
Duplex mode	FDD
Equipment Class	Class B
Duplex spacing	GSM850:45MHz PCS1900:80MHz
Antenna type	Fixed Integral
Power Supply	Battery or charger
Rated Power Supply Voltage	3.7V
Extreme Temperature	Lowest: -30°C Highest: +50°C
Extreme Voltage	Minimum: 3.5V Maximum: 4.2V
HW Version	GMAP
SW Version	ZTE-CN-QD-P120D10V0.0.1

1.7.2 EUT details

Name	Model	IMEI
GSM Digital Mobile Phone	ZTE-G S226	862781010002717

1.7.3 Auxiliary equipment details

AE (Auxiliary Equipment) 1#: Charger

Equipment	Charger
Manufacturer	ZTE CORPORATION
Model Number	STC-A22O50I200M5-C
Input Voltage	100V-240V a.c.
Output Voltage	5.0V d.c.
Frequency	50/60Hz

AE (Auxiliary Equipment) 2#: Battery

Equipment	Battery
Manufacturer	ZTE CORPORATION
Model Number	Li3706T42P3h383857
Capacity	670mAh
Rated Voltage	3.7V d.c.

Note: All the auxiliary equipments have been labeled with number in order to identify the test sample.

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

This Test Report Is Issued by: Mr. Song Qizhu Director of the test lab	Checked by: Mr. Wang Junfeng Deputy director of the test lab
Tested by: Mr. Dong Qifeng Test engineer	Issued date: **2012.03.14**

2.2 Test result

2.2.1 Conducted Emissions-FCC Part15.107

Ambient condition:

Temperature	Relative humidity	Pressure
20°C	48.6%	99.7kPa

Test Setup:

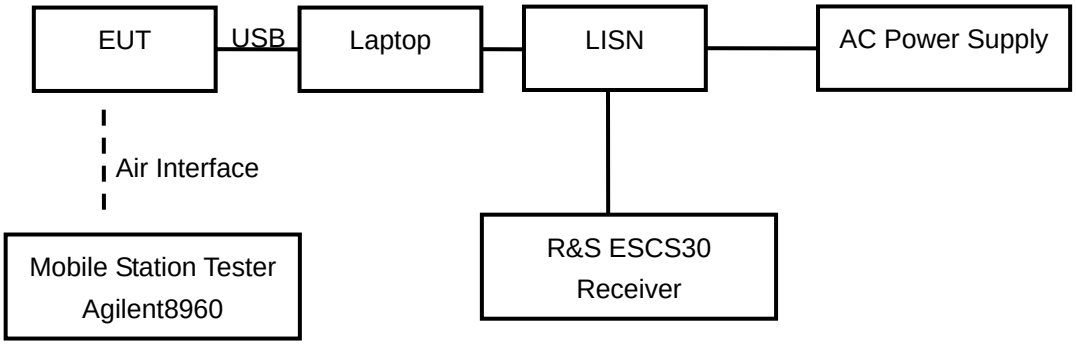


Figure 1

Test Procedure:

The EUT is placed on a non-metallic table 0.8m above the horizontal metal reference ground plane. The EUT connect with a laptop via the USB cable. The accessories of the EUT are connected with the EUT such as headset etc. During the test the data transferring via USB cable between EUT and laptop 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 C63.4:2009.

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:

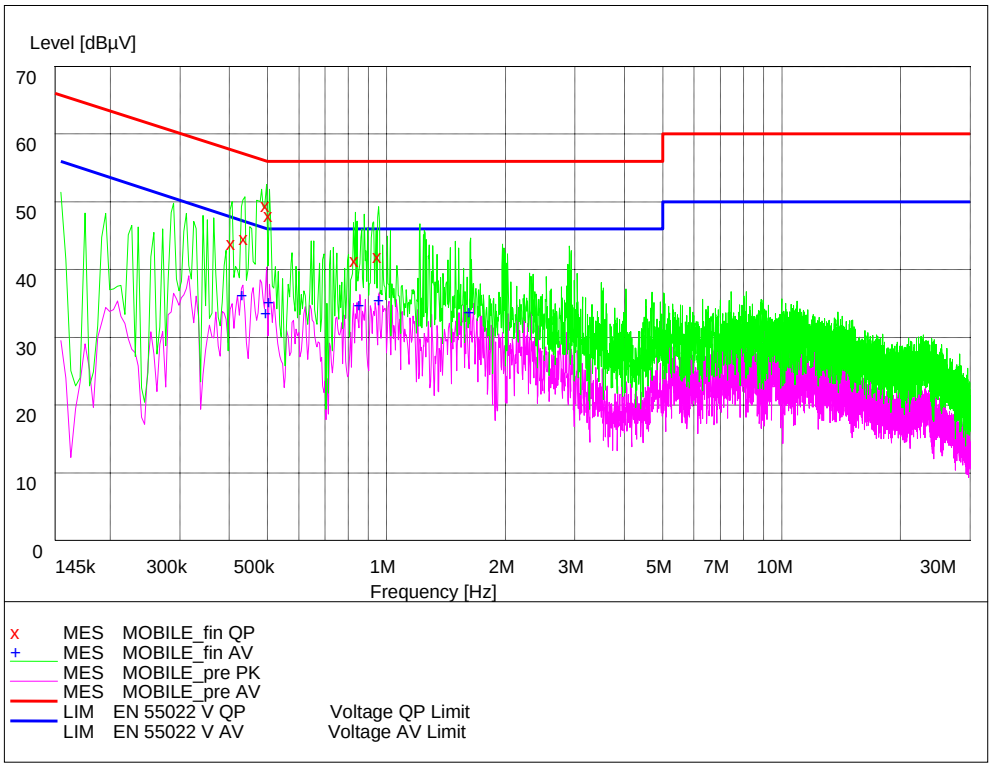
Frequency of Emission(MHz)	Limits(dBμV)	
	Quasi-peak	Average
0.15～0.5	66 to 56*	56 to 46*
0.5～5	56	46
5～30	60	50

Note: * Decreases with the logarithm of the frequency

Test result:

Refer to the following figures.

GSM 850 Laptop+AE2#



L and N Line

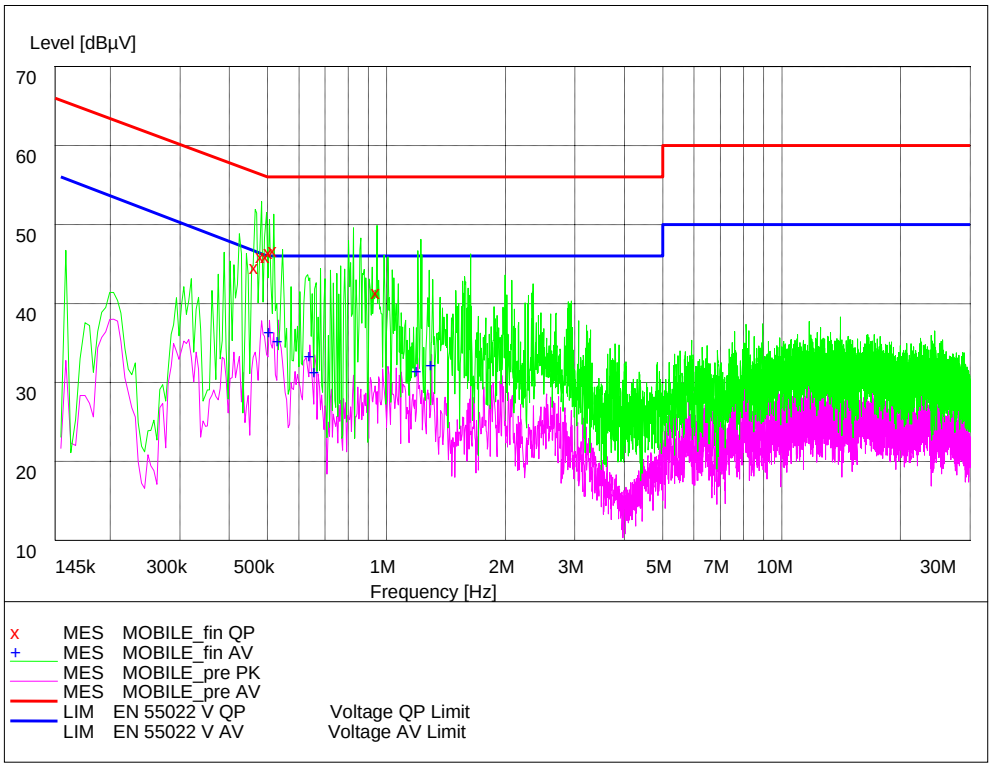
MOBILE_fin AV

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.433500	37.80	20.3	47	9.4
0.496500	35.10	20.3	46	11.0
0.505500	36.70	20.3	46	9.3
0.856500	36.40	20.3	46	9.6
0.960000	37.10	20.2	46	8.9
1.626000	35.20	20.2	46	10.8

MOBILE_fin QP

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.406500	45.50	20.3	58	12.2
0.438000	46.10	20.3	57	11.0
0.496500	51.00	20.3	56	5.0
0.505500	49.50	20.3	56	6.5
0.834000	42.90	20.3	56	13.1
0.955500	43.50	20.2	56	12.5

GSM 1900 Laptop+AE2#



L and N Line

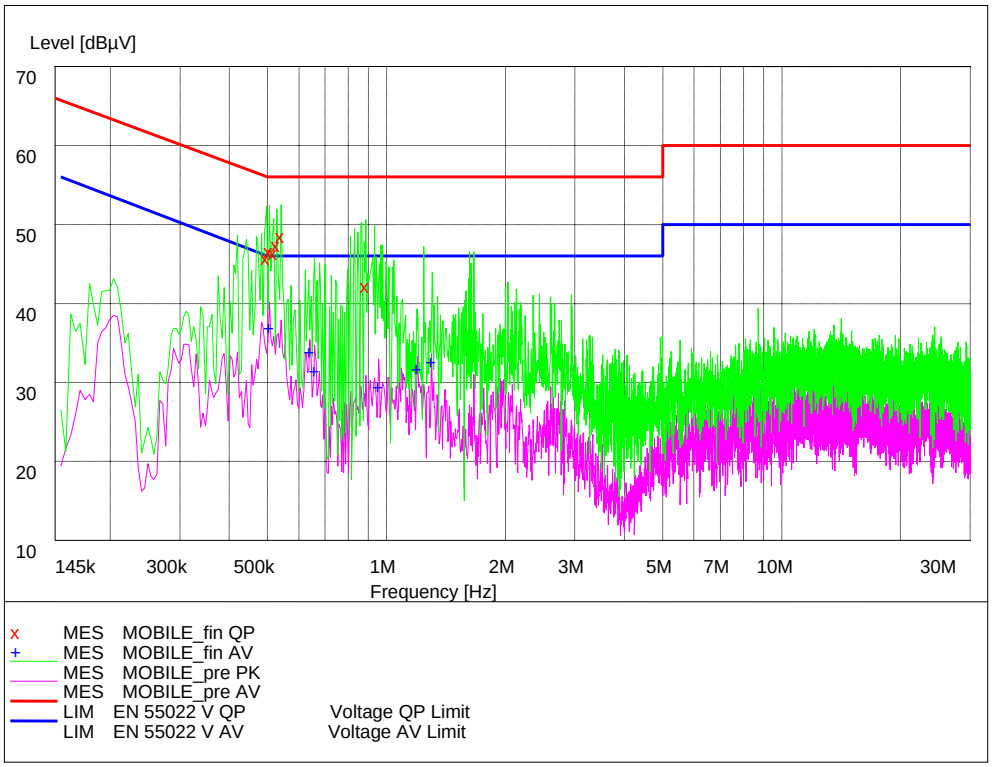
MOBILE_fin AV

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.505500	37.70	20.3	46	8.3
0.532500	36.60	20.3	46	9.4
0.640500	34.70	20.3	46	11.3
0.658500	32.60	20.3	46	13.4
1.198500	32.80	20.2	46	13.2
1.302000	33.60	20.2	46	12.4

MOBILE_fin QP

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.465000	45.90	20.3	57	10.7
0.483000	47.30	20.3	56	9.0
0.496500	47.30	20.3	56	8.7
0.505500	47.80	20.3	56	8.2
0.519000	48.00	20.3	56	8.0
0.946500	42.80	20.3	56	13.2

FM Radio Laptop+AE2#



L and N Line

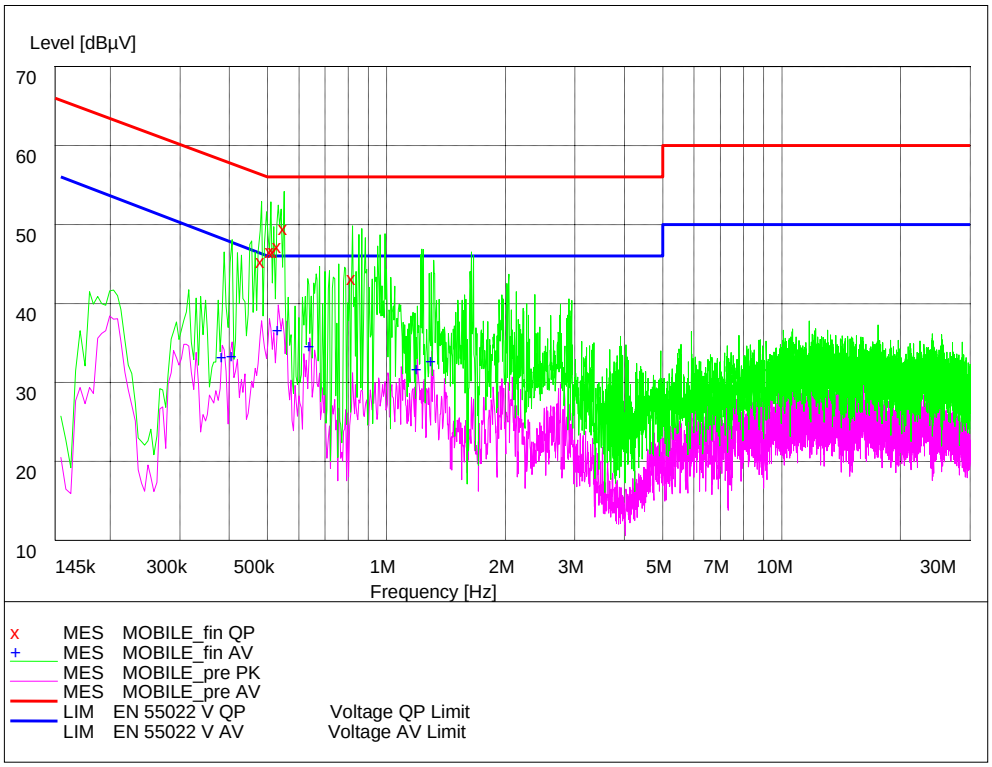
MOBILE_fin AV

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.505500	38.20	20.3	46	7.8
0.640500	35.20	20.3	46	10.8
0.658500	32.80	20.3	46	13.2
0.955500	30.70	20.2	46	15.3
1.198500	33.00	20.2	46	13.0
1.302000	33.90	20.2	46	12.1

MOBILE_fin QP

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.496500	47.00	20.3	56	9.0
0.505500	47.90	20.3	56	8.1
0.519000	47.60	20.3	56	8.4
0.528000	48.70	20.3	56	7.3
0.541500	49.90	20.3	56	6.1
0.888000	43.50	20.3	56	12.5

MP3/MP4 Laptop+AE2#



L and N Line

MOBILE_fin AV

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.384000	34.50	20.2	48	13.7
0.406500	34.70	20.3	48	13.0
0.532500	37.90	20.3	46	8.1
0.640500	35.90	20.3	46	10.1
1.198500	33.00	20.2	46	13.0
1.302000	34.10	20.2	46	11.9

MOBILE_fin QP

Frequency	Level	Transd	Limit	Margin
MHz	dBµV	dB	dBµV	dB
0.483000	46.60	20.3	56	9.6
0.510000	47.90	20.3	56	8.1
0.519000	47.90	20.3	56	8.1
0.532500	48.60	20.3	56	7.4
0.550500	50.90	20.3	56	5.1
0.820500	44.50	20.3	56	11.5

2.2.2 Radiated Emissions-FCC Part15.109

Ambient condition:

Temperature	Relative humidity	Pressure
19.7°C	49.1%	99.9kPa

Test Setup:

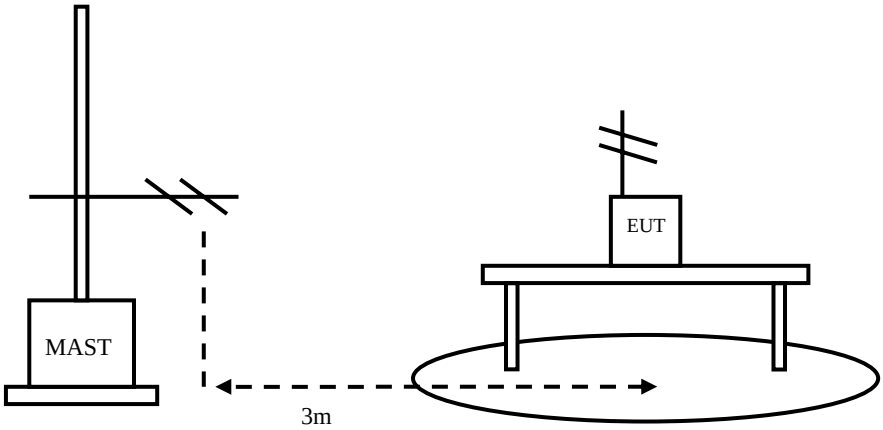


Figure 2

Test Procedure:

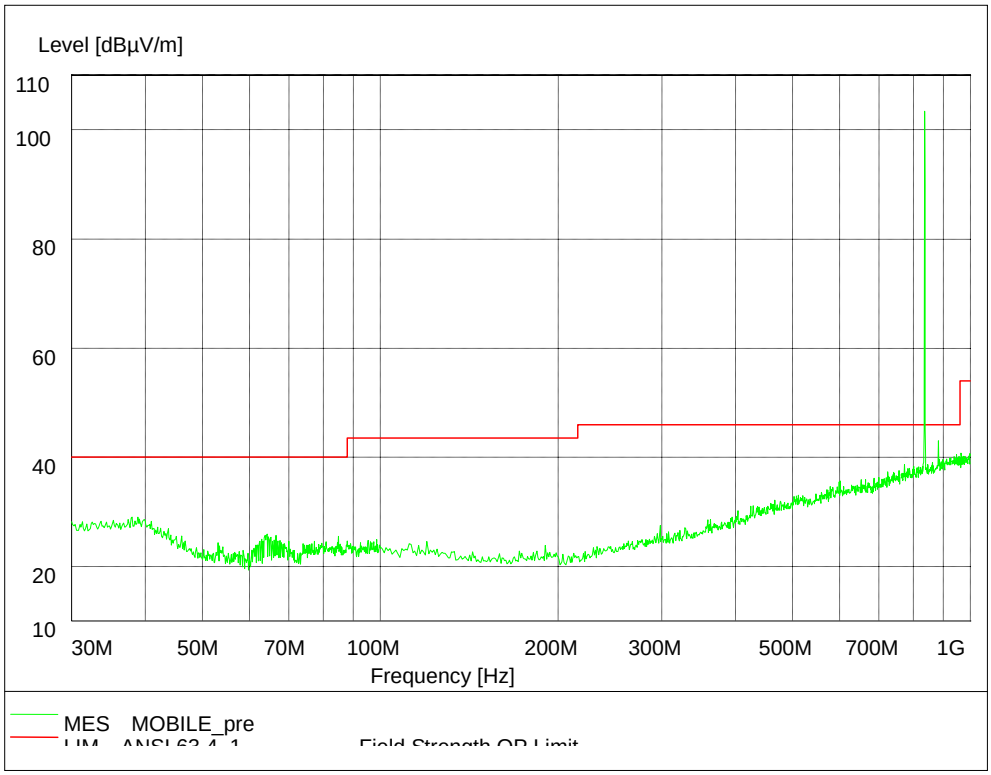
The EUT should be placed on a non-metallic table 80cm above the ground plane. The receive antennas shall be moved from 1 to 4 meters. The distance between EUT and receive antenna should be 3 meters.
The accessories of the EUT are connected with the EUT such as headset etc. During the test the data transferring via USB cable between EUT and laptop is maintained. The test set-up and the test methods are performed according to ANSI C63.4:2009.
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 to 4 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 data of cable loss and antenna factor have been calibrated in full testing frequency range before the testing.

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

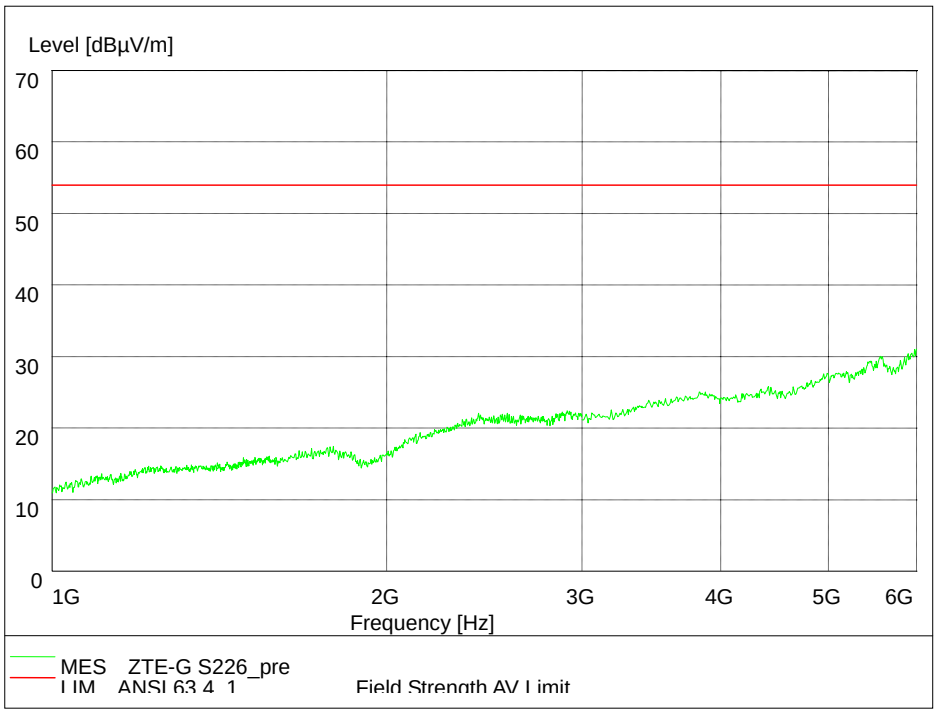
Test result:

Laptop+AE2#



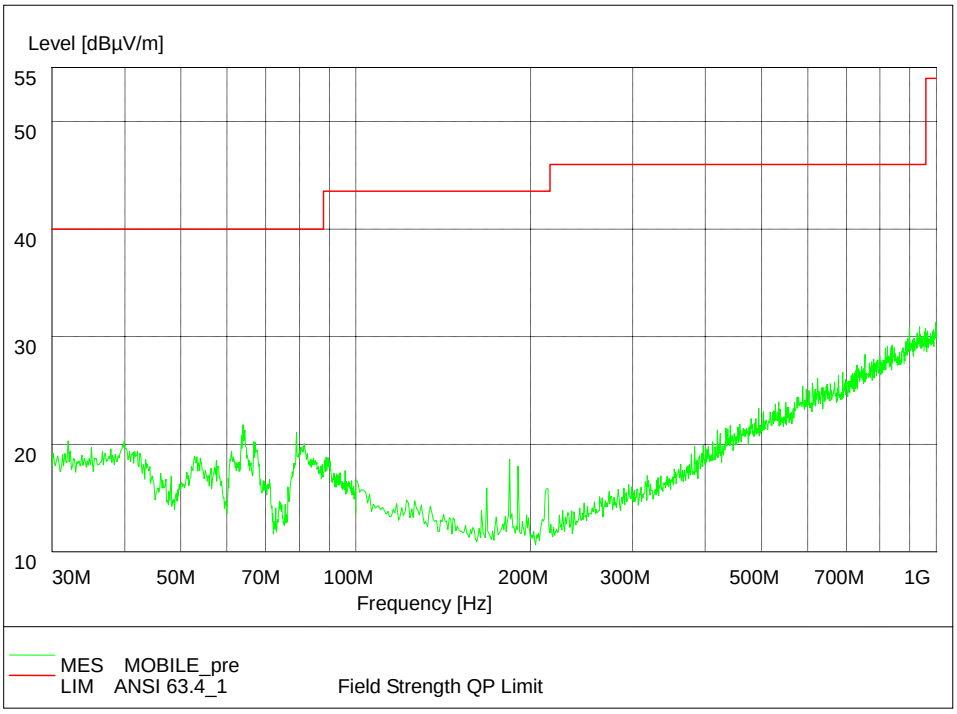
GSM 850(30MHz – 1GHz)

Note: The signals beyond the limit are the base station and simulator carrier.

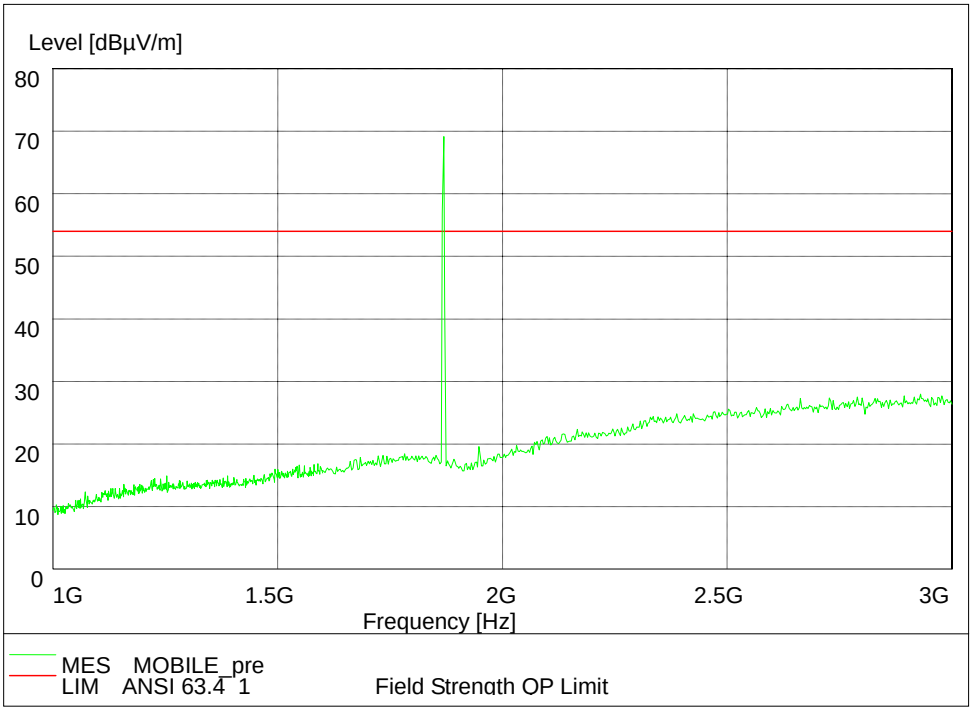


GSM 850(1GHz – 6GHz)

Laptop+AE2#

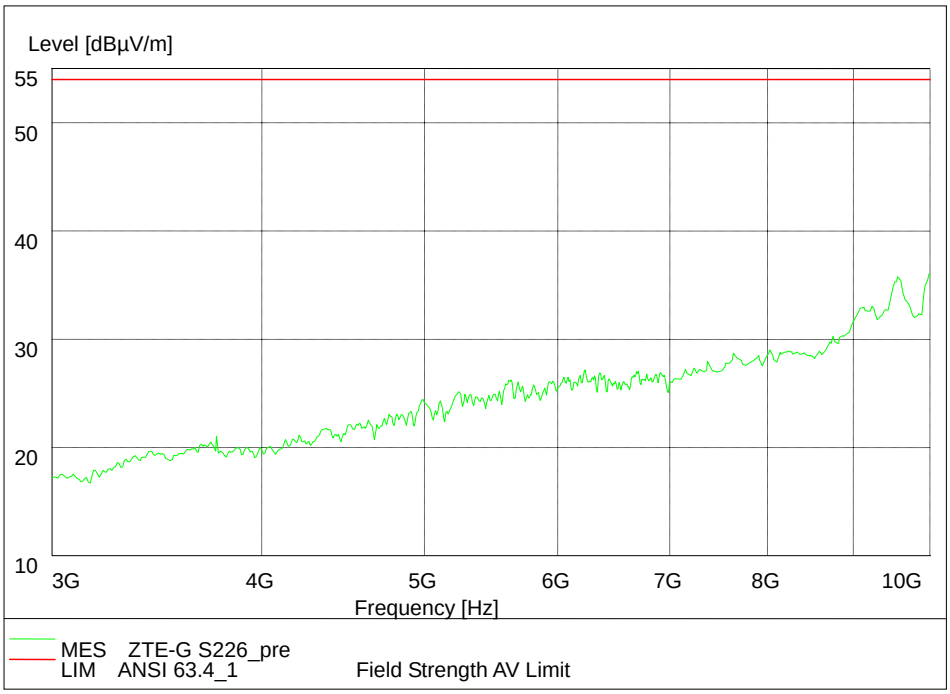


PCS 1900(30MHz – 1GHz)



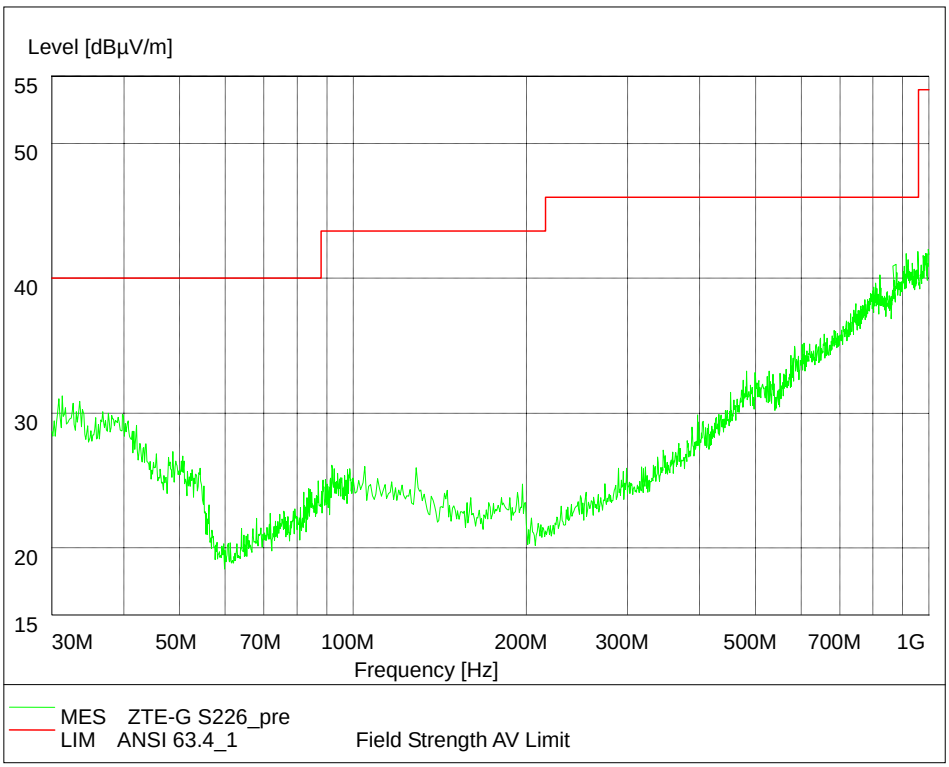
PCS 1900(1GHz – 3GHz)

Note: The signals beyond the limit are the base station and simulator carrier.

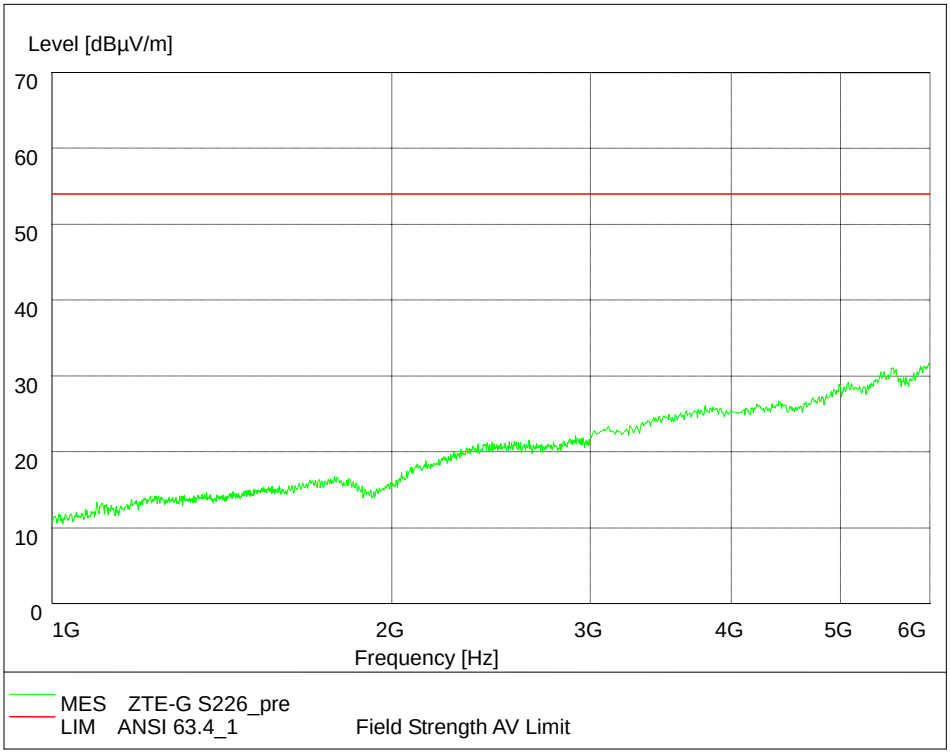


PCS 1900(3GHz – 10GHz)

Laptop+AE2#

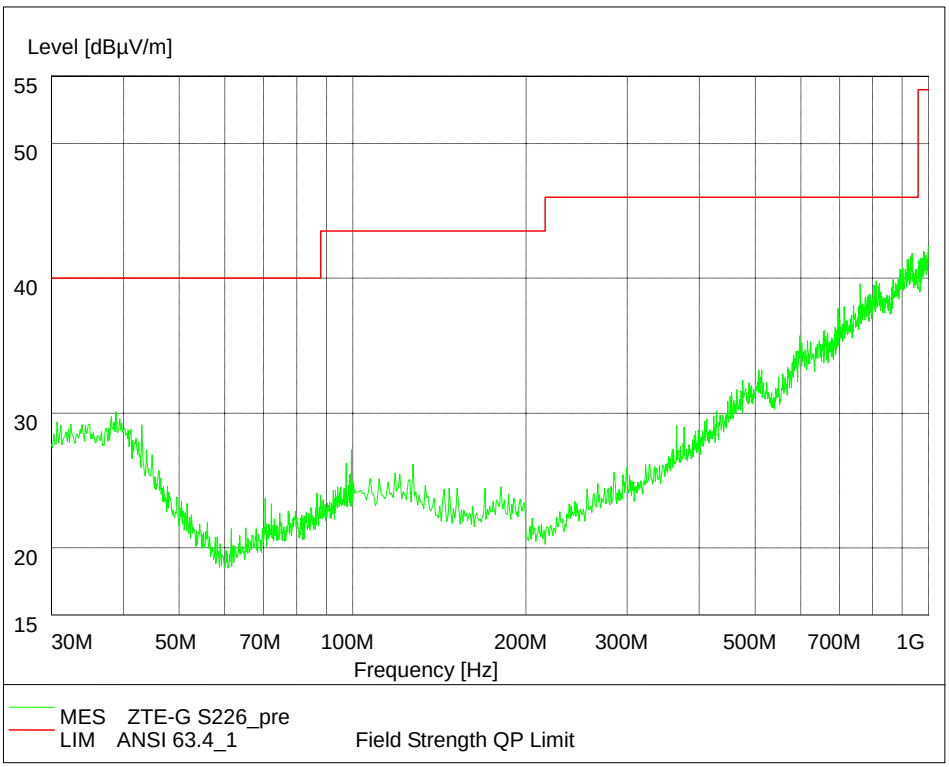


FM Radio (30MHz – 1GHz)

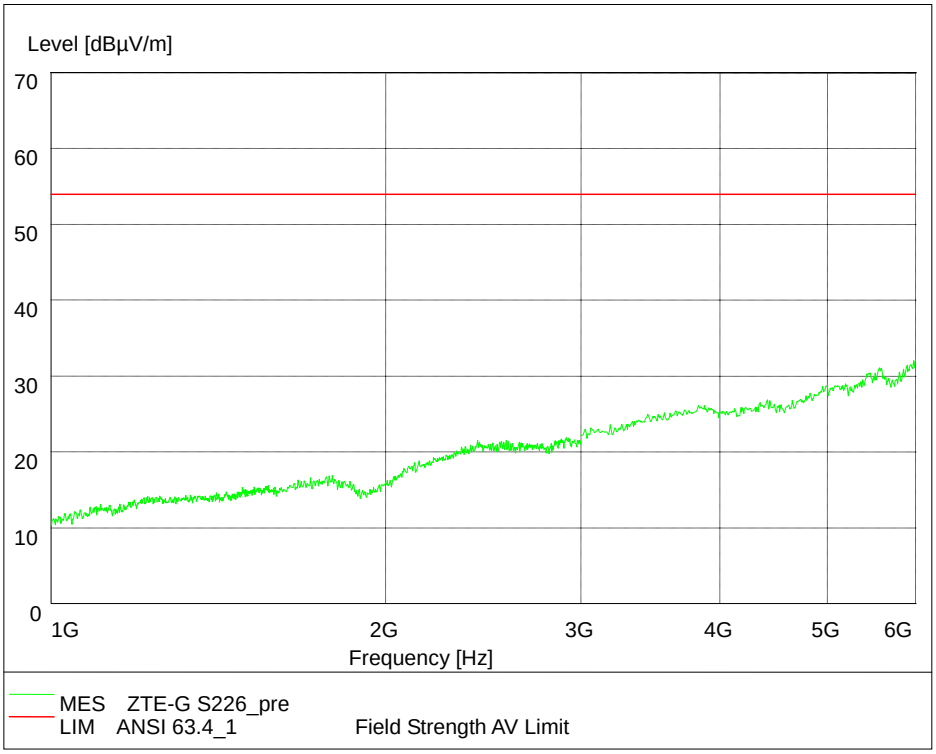


FM Radio (1GHz – 6GHz)

Laptop+AE2#



MP3/MP4 (30MHz – 1GHz)



MP3/MP4 (1GHz – 6GHz)

2.3. List of test equipments

No.	Name/Model	Manufacturer	S/N	Calibration Due Date
1	23.18m×16.88m×9.60m Semi-Anechoic Chamber	FRANKONIA	-----	19th Aug. 2012
2	ESI 40 EMI test receiver	R&S	100015	19th Aug. 2012
3	E5515C(8960) Mobile Station Tester	Agilent	GB44050904	19th Aug. 2012
4	9.080m×5.255m×3.525m Shielding room	FRANKONIA	-----	19th Aug. 2012
5	ESCS30 EMI test receiver	R&S	100029	19th Aug. 2012
6	HL562 Ultra log test antenna	R&S	100016	19th Aug. 2012
7	ESH3-Z2 Pulse limiter	R&S	10002	19th Aug. 2012
8	ESH3-Z5 Attenuator	R&S	100020	19th Aug. 2012
9	ESH2Z11 LISN	R&S	50FH-020-10	19th Aug. 2012
10	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100030	19th Aug. 2012
11	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100029	19th Aug. 2012
12	PS2000 Turn Table	FRANKONIA	-----	19th Aug. 2012
13	MA260 Antenna Master	FRANKONIA	-----	19th Aug. 2012
14	ES-K1EMI test software	R&S	-----	19th Aug. 2012
15	HL562 Receive antenna	R&S	100167	19th Aug. 2012

Appendix

Tel: 86-10-68009202 68009203
Fax: 86-10-68009195 68009205