
TEST REPORT

Report No.: SRTC2014-H024-E0057

Product Name: GSM/GPRS/EDGE/UMTS

Digital Mobile Phone with Bluetooth and WiFi

Marketing Name: ONE TOUCH 7042A

Product Model: Yaris-5

Applicant: TCT Mobile Limited

Manufacturer: TCT Mobile Limited

Specification: FCC Part15B (Certification)

(October 1, 2009 edition)

FCC ID: RAD525

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	3
1.1 Notes of the test report	3
1.2 Information about the testing laboratory	3
1.3 Applicant's details	3
1.4 Manufacturer's details	3
1.5 Application details	4
1.6 Reference specification	4
1.7 Information of EUT	4
1.7.1 General information	4
1.7.2 EUT details	5
1.7.3 Auxiliary equipment details	5
2. Test information	8
2.1 Summary of the test results	8
2.2 Test result	9
2.2.1 Conducted Emissions-FCC Part15.107	9
2.2.2 Radiated Emissions-FCC Part15.109	25
2.3. List of test equipments	36
Appendix	37

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, 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: TCT Mobile Limited
Address: 5F, C building, No. 232, Liang Jing Road ZhangJiang
High-Tech Park, Pudong Area
City: Shanghai
Country or Region: P.R.China
Grantee Code: RAD
Contacted person: Gong Zhizhou
Tel: +86-21-61460890
Fax: +86-21-61460602
Email: zhizhou.gong@tcl.com

1.4 Manufacturer's details

Company: TCT Mobile Limited
Address: 5F, C building, No. 232, Liang Jing Road ZhangJiang
High-Tech Park, Pudong Area
City: Shanghai
Country or Region: P.R.China
Contacted person: Gong Zhizhou
Tel: +86-21-61460890
Fax: +86-21-61460602
Email: zhizhou.gong@tcl.com

1.5 Application details

Date of reception of test sample: 31st July 2014

Date of test: 2nd August 2014 to 11th August 2014

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/GPRS/EDGE/UMTS Digital Mobile Phone with Bluetooth and WiFi
FCC ID	RAD525
Frequency Range	GSM850/WCDMA Band V: Tx:824~849MHz Rx:869~894MHz PCS1900/WCDMA Band II: Tx:1850~1910MHz Rx:1930~1990MHz
Rated Output Power	GSM850:33.0dBm PCS1900:30.0dBm WCDMA:24.0dBm
E.R.P. & E.I.R.P.	E.R.P.:31.49dBm E.I.R.P.:28.55dBm
Modulation Type	GSM/GPRS:GMSK EDGE: GMSK(Uplink direction) 8PSK(Downlink direction) WCDMA:QPSK
Emission Designator	GSM/GPRS/EDGE:300KGXW WCDMA:4M50F9W
Duplex Mode	FDD
Equipment Class	Class B
Duplex Spacing	GSM850/WCDMA Band V:45MHz PCS1900/WCDMA Band II:80MHz
Antenna Type	Fixed Internal
Power Supply	Battery or Charger
Rated Power Supply Voltage	3.8V
Extreme Temperature	Lowest: -30°C Highest: +50°C
Extreme Voltage	Minimum: 3.5V Maximum: 4.35V
HW Version	SBA33A10001E
SW Version	vAQW

1.7.2 EUT details

Product Name	Marketing Name	Product Model	IMEI
GSM/GPRS/EDGE/UMTS Digital Mobile Phone with Bluetooth and WiFi	ONE TOUCH 7042A	Yaris-5	865867020000044

1.7.3 Auxiliary equipment details

AE (Auxiliary Equipment) 1#: Charger

Equipment	Charger
Manufacturer	Ten Pao Industrial Co., Ltd.
Model Number	S005UU0500100
Input Voltage	100V-240V a.c.
Output Voltage	5.0V d.c.
Frequency	50/60Hz

AE (Auxiliary Equipment) 2#: Charger

Equipment	Charger
Manufacturer	HUIZHOU BYD ELECTRONIC CO., LTD.
Model Number	TUUS050100-A00
Input Voltage	100V-240V a.c.
Output Voltage	5.0V d.c.
Frequency	50/60Hz

AE (Auxiliary Equipment) 3#: Battery

Equipment	Battery
Manufacturer	BYD COMPANY LIMITED
Model Number	TLi020F1
Capacity	2000mAh
Rated Voltage	4.35V d.c.

AE (Auxiliary Equipment) 4#: Battery

Equipment	Battery
Manufacturer	BYD COMPANY LIMITED
Model Number	TLi019B1
Capacity	1900mAh
Rated Voltage	4.35V d.c.

AE (Auxiliary Equipment) 5#: Battery

Equipment	Battery
Manufacturer	SCUD (FUJIAN) Electronics Co., Ltd.
Model Number	TLi019B2
Capacity	1900mAh
Rated Voltage	4.35V d.c.

AE (Auxiliary Equipment) 6#: Headset

Equipment	Headset
Manufacturer	Shenzhen Juwei Electronics Co., Ltd
Model Number	CCB3160A11C1

AE (Auxiliary Equipment) 7#: Headset

Equipment	Headset
Manufacturer	Dongguan Superfine Electronic Co., Ltd
Model Number	CCB3160A11C4

AE (Auxiliary Equipment) 8#: Headset

Equipment	Headset
Manufacturer	Shenzhen Juwei Electronics Co., Ltd
Model Number	CCB3160A15C1

AE (Auxiliary Equipment) 9#: Headset

Equipment	Headset
Manufacturer	Dongguan Superfine Electronic Co., Ltd
Model Number	CCB3160A15C4

AE (Auxiliary Equipment) 10#: Data Cable

Equipment	Data Cable
Manufacturer	Shenzhen Juwei Electronics Co., Ltd
Model Number	CDA3122002C1

AE (Auxiliary Equipment) 11#: Data Cable

Equipment	Data Cable
Manufacturer	Huizhou Shenghua Industry Co., Ltd.
Model Number	CDA3122002C2

AE (Auxiliary Equipment) 12#: Data Cable

Equipment	Data Cable
Manufacturer	Shenzhen Juwei Electronics Co., Ltd
Model Number	CDA3122005C1

AE (Auxiliary Equipment) 13#: Data Cable

Equipment	Data Cable
Manufacturer	Huizhou Shenghua Industry Co., Ltd.
Model Number	CDA3122005C2

Note:

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

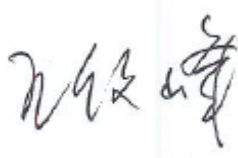
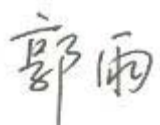
As the information described above, there are two different models of charger manufactured by two different companies, three different models of battery manufactured by two different companies, four different models of headset manufactured by two different companies and four different models of data cable manufactured by two different companies.

The relevant tests have been performed in order to verify in which combination case (EUT exercised by only one model of charger, one model of battery, one model of headset and one model of data cable) the EUT would have the worst features. So all the tests shown in this test report are performed when the EUT exercised by the charger S005UU0500100, the battery TLi020F1, the headset CCB3160A11C1 and the data cable CDA3122002C1.

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. Guo Yu Test engineer 	Issued date: 2014.08.13

2.2 Test result

2.2.1 Conducted Emissions-FCC Part15.107

Ambient condition:

Temperature	Relative humidity	Pressure
27.2°C	47.5%	101.1kPa

Test Setup:

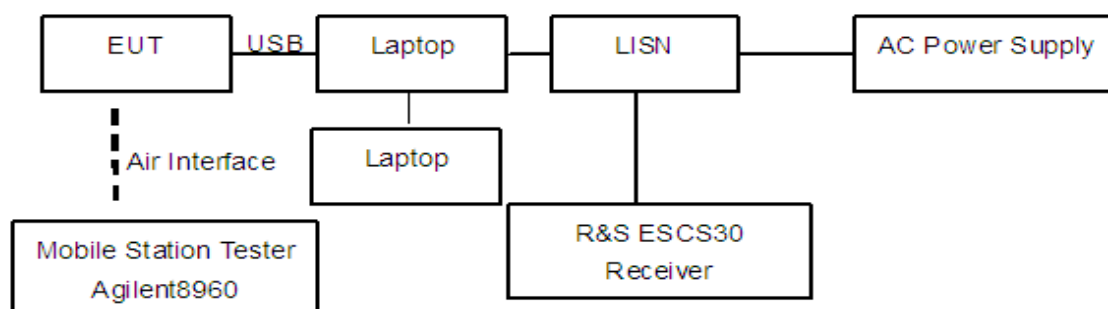


Figure 1

Test Procedure:

The EUT is placed on a non-metallic table 0.4m 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 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 C63.4:2009.

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.

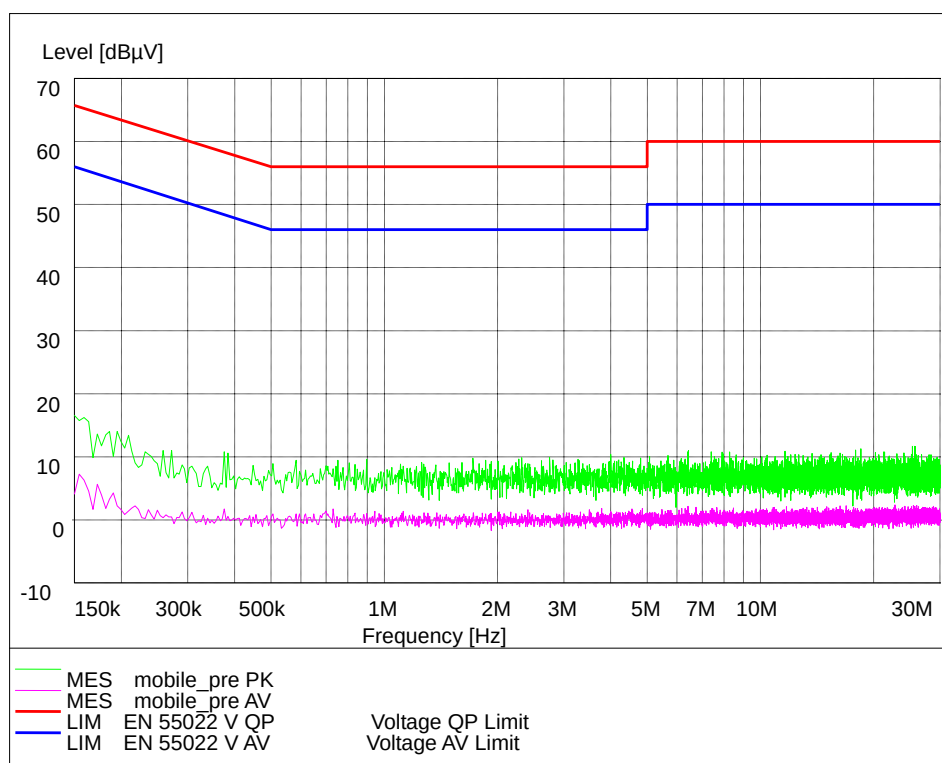
Limit:

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

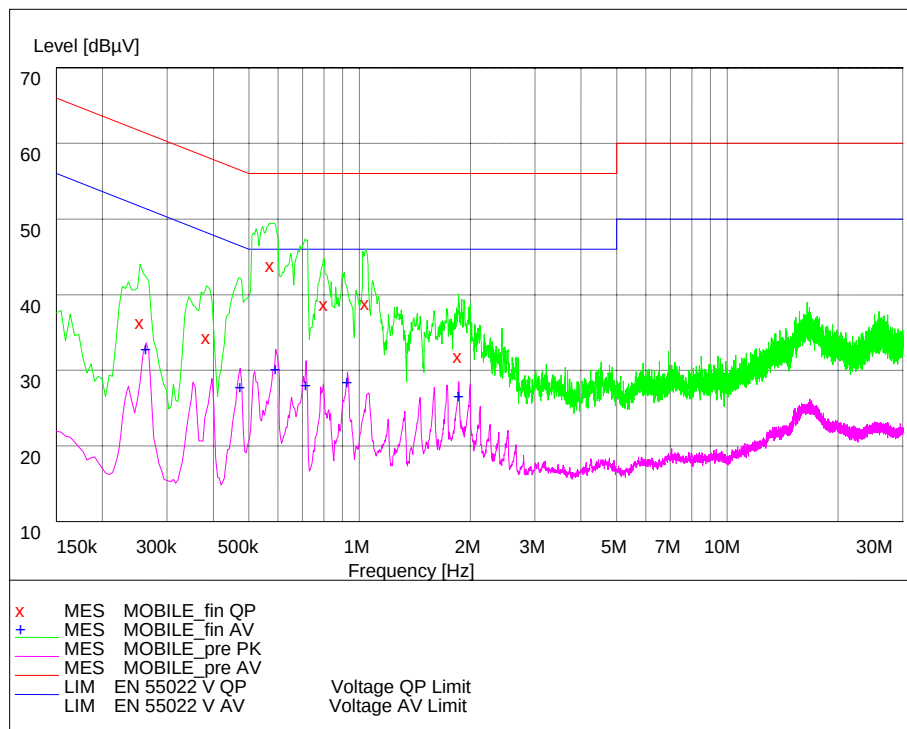
Test result:

Noise Level of The Measuring Instrument



L and N Line

GSM850 Laptop+ AE3#+AE6#+AE10#



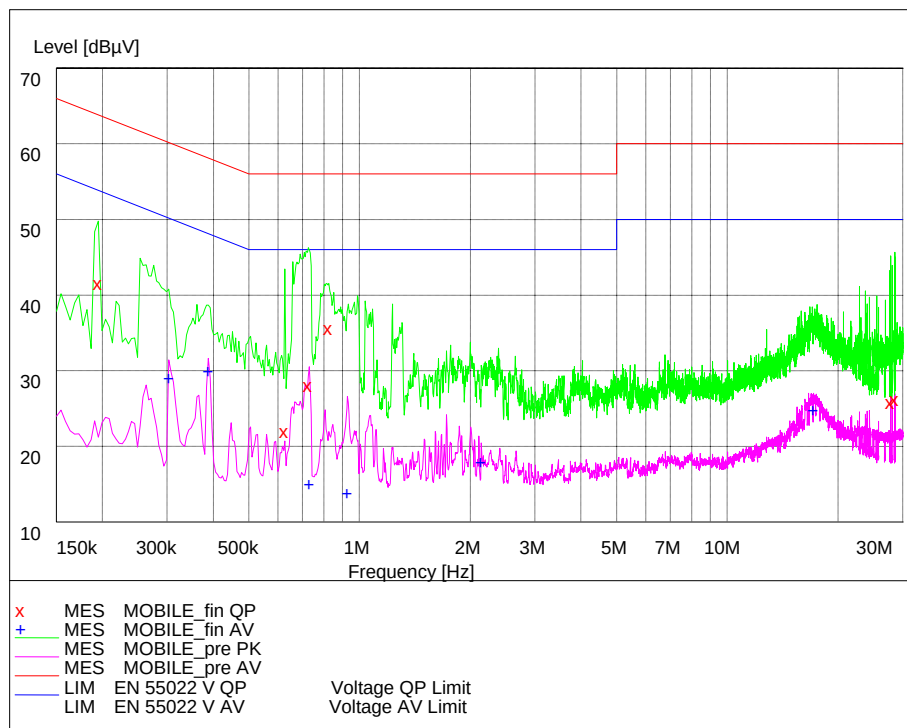
L Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.253500	37.80	20.1	62	23.8	---	---
0.384000	35.90	20.1	58	22.3	---	---
0.573000	45.30	20.1	56	10.7	---	---
0.802500	40.20	20.1	56	15.8	---	---
1.041000	40.40	20.1	56	15.6	---	---
1.860000	33.40	20.1	56	22.6	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.262500	34.20	20.1	51	17.1	---	---
0.474000	29.20	20.1	46	17.2	---	---
0.591000	31.70	20.1	46	14.3	---	---
0.717000	29.50	20.1	46	16.5	---	---
0.928500	29.80	20.2	46	16.2	---	---
1.864500	28.00	20.1	46	18.0	---	---



N Line

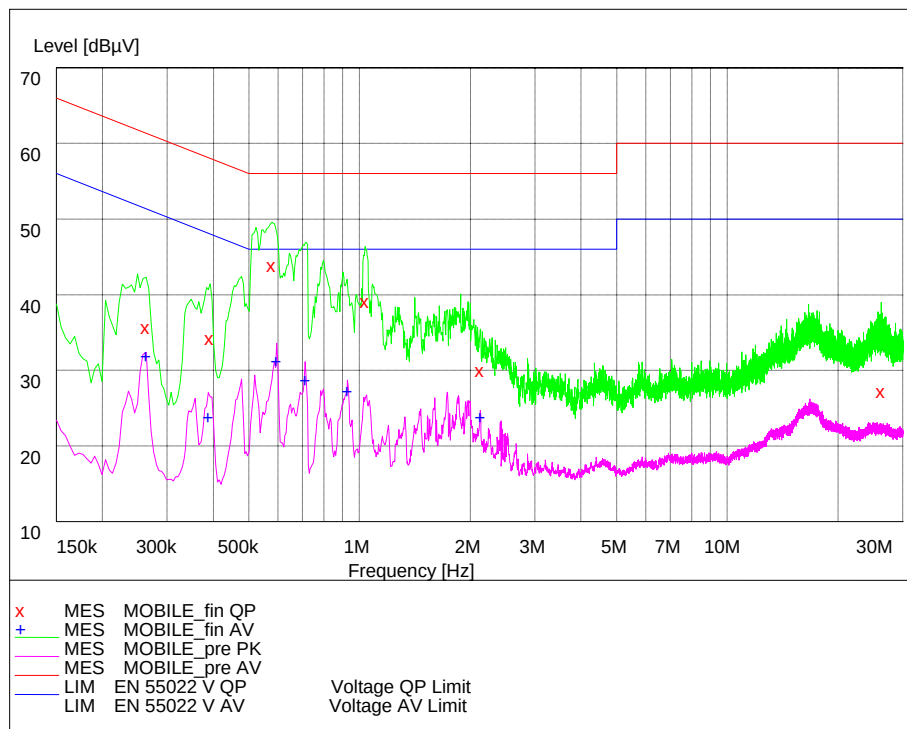
MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.195000	43.10	20.2	64	20.7	---	---
0.627000	23.50	20.1	56	32.5	---	---
0.726000	29.50	20.1	56	26.5	---	---
0.825000	37.10	20.1	56	18.9	---	---
27.825000	27.20	21.3	60	32.8	---	---
28.603500	27.70	21.3	60	32.3	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.303000	30.40	20.2	50	19.8	---	---
0.388500	31.40	20.1	48	16.6	---	---
0.730500	16.50	20.1	46	29.5	---	---
0.928500	15.30	20.2	46	30.7	---	---
2.143500	19.30	20.3	46	26.7	---	---
17.160000	26.30	20.7	50	23.7	---	---

PCS1900 Laptop+ AE3#+AE6#+AE10#



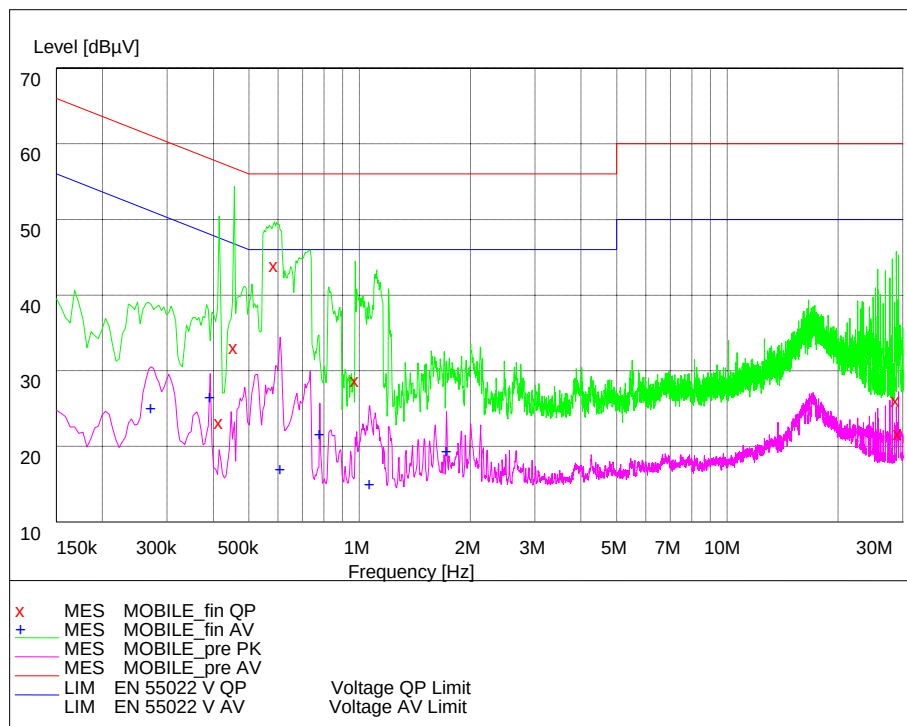
L Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.262500	37.20	20.1	61	24.1	---	---
0.393000	35.70	20.1	58	22.3	---	---
0.577500	45.30	20.1	56	10.7	---	---
1.036500	40.60	20.1	56	15.4	---	---
2.130000	31.40	20.3	56	24.6	---	---
26.263500	28.70	21.2	60	31.3	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.262500	33.30	20.1	51	18.0	---	---
0.388500	25.30	20.1	48	22.8	---	---
0.595500	32.60	20.1	46	13.4	---	---
0.712500	30.10	20.1	46	15.9	---	---
0.928500	28.70	20.2	46	17.3	---	---
2.130000	25.20	20.3	46	20.8	---	---



N Line

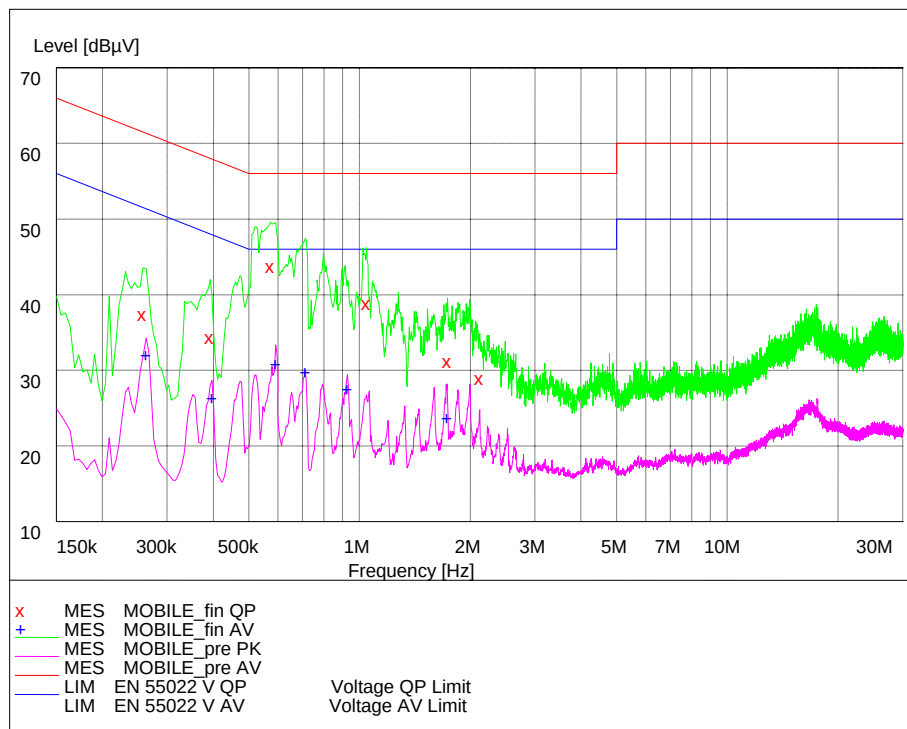
MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.415500	24.70	20.1	58	32.8	---	---
0.456000	34.50	20.1	57	22.3	---	---
0.586500	45.30	20.1	56	10.7	---	---
0.973500	30.20	20.2	56	25.8	---	---
28.864500	27.50	21.3	60	32.5	---	---
29.242500	23.20	21.3	60	36.8	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.271500	26.50	20.1	51	24.6	---	---
0.393000	27.90	20.1	48	20.1	---	---
0.609000	18.40	20.1	46	27.6	---	---
0.780000	23.10	20.1	46	22.9	---	---
1.068000	16.50	20.2	46	29.5	---	---
1.725000	20.80	20.2	46	25.2	---	---

WCDMA BAND II Laptop+ AE3#+AE6#+AE10#



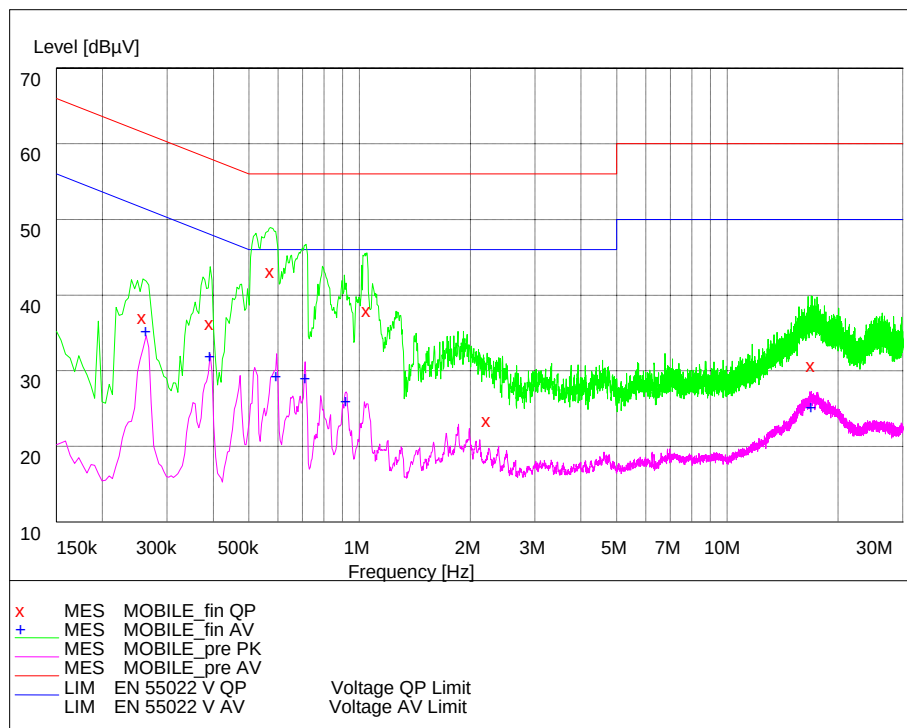
L Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.258000	38.80	20.1	62	22.7	---	---
0.393000	35.90	20.1	58	22.1	---	---
0.573000	45.20	20.1	56	10.8	---	---
1.045500	40.40	20.1	56	15.6	---	---
1.734000	32.60	20.2	56	23.4	---	---
2.125500	30.40	20.3	56	25.6	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.262500	33.50	20.1	51	17.9	---	---
0.397500	27.80	20.1	48	20.1	---	---
0.591000	32.20	20.1	46	13.8	---	---
0.712500	31.10	20.1	46	14.9	---	---
0.928500	28.90	20.2	46	17.1	---	---
1.729500	25.10	20.2	46	20.9	---	---



N Line

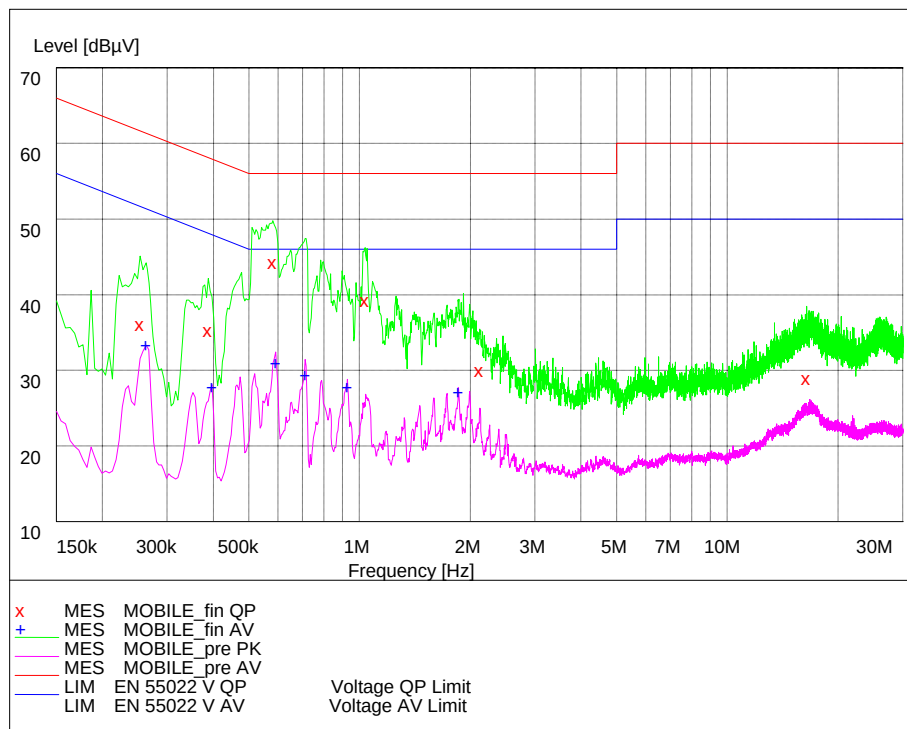
MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.258000	38.50	20.1	62	23.0	---	---
0.393000	37.70	20.1	58	20.3	---	---
0.573000	44.60	20.1	56	11.4	---	---
1.050000	39.40	20.1	56	16.6	---	---
2.224500	24.90	20.3	56	31.1	---	---
16.939500	32.20	20.7	60	27.8	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.262500	36.60	20.1	51	14.8	---	---
0.393000	33.40	20.1	48	14.6	---	---
0.595500	30.70	20.1	46	15.3	---	---
0.712500	30.50	20.1	46	15.5	---	---
0.919500	27.40	20.2	46	18.6	---	---
16.939500	26.60	20.7	50	23.4	---	---

WCDMA BAND V Laptop+ AE3#+AE6#+AE10#



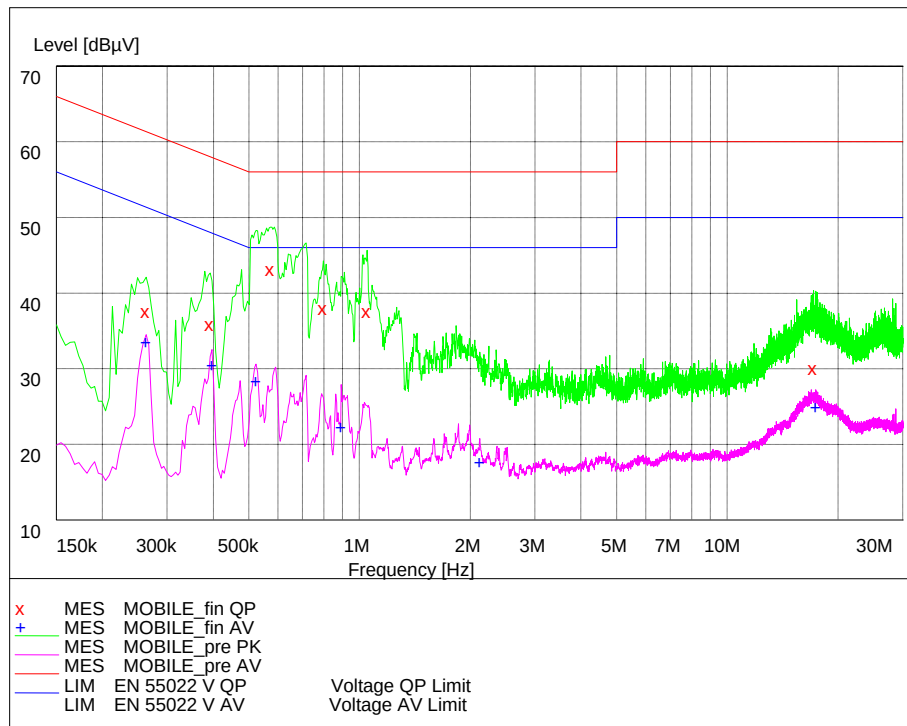
L Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.253500	37.60	20.1	62	24.1	---	---
0.388500	36.70	20.1	58	21.4	---	---
0.582000	45.70	20.1	56	10.3	---	---
1.036500	40.70	20.1	56	15.3	---	---
2.125500	31.50	20.3	56	24.5	---	---
16.467000	30.40	20.8	60	29.6	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.262500	34.80	20.1	51	16.6	---	---
0.397500	29.20	20.1	48	18.7	---	---
0.591000	32.40	20.1	46	13.6	---	---
0.712500	30.80	20.1	46	15.2	---	---
0.928500	29.20	20.2	46	16.8	---	---
1.860000	28.60	20.1	46	17.4	---	---



N Line

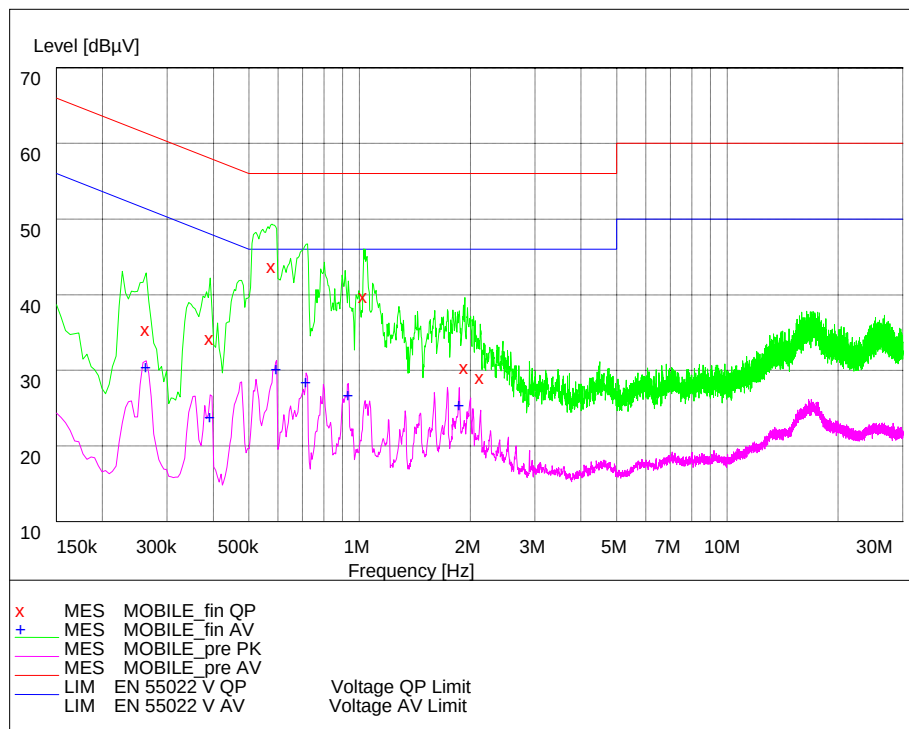
MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.262500	39.00	20.1	61	22.3	---	---
0.393000	37.30	20.1	58	20.7	---	---
0.573000	44.60	20.1	56	11.4	---	---
0.798000	39.40	20.1	56	16.6	---	---
1.050000	39.00	20.1	56	17.0	---	---
17.191500	31.60	20.7	60	28.4	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.262500	35.00	20.1	51	16.3	---	---
0.397500	32.00	20.1	48	15.9	---	---
0.523500	29.80	20.1	46	16.2	---	---
0.892500	23.70	20.1	46	22.3	---	---
2.125500	19.10	20.3	46	26.9	---	---
17.425500	26.40	20.7	50	23.6	---	---

FM Radio Laptop+ AE3#+AE6#+AE10#



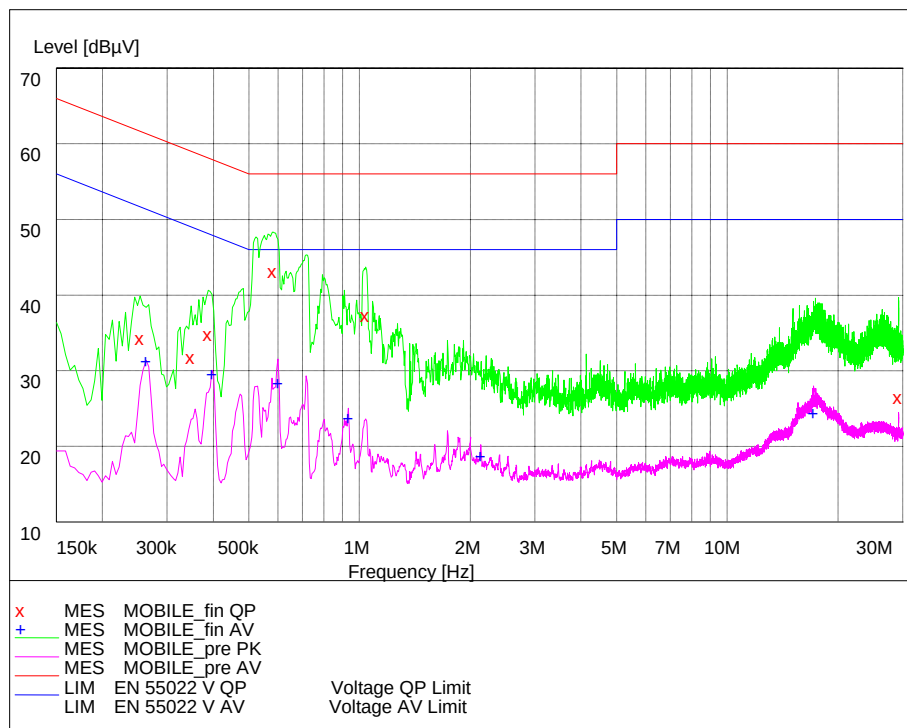
L Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.262500	36.80	20.1	61	24.5	---	---
0.393000	35.70	20.1	58	22.3	---	---
0.577500	45.20	20.1	56	10.8	---	---
1.027500	41.30	20.1	56	14.7	---	---
1.932000	31.90	20.2	56	24.1	---	---
2.130000	30.50	20.3	56	25.5	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
0.262500	31.90	20.1	51	19.5	---	---
0.393000	25.30	20.1	48	22.7	---	---
0.595500	31.70	20.1	46	14.3	---	---
0.717000	29.80	20.1	46	16.2	---	---
0.933000	28.20	20.2	46	17.8	---	---
1.869000	26.90	20.1	46	19.1	---	---



N Line

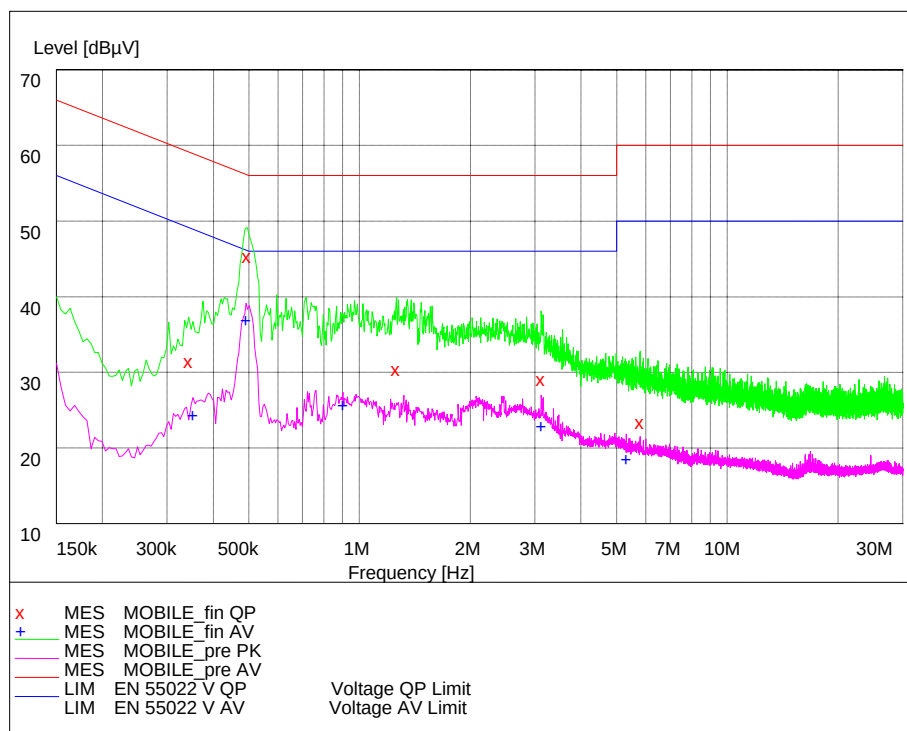
MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.253500	35.70	20.1	62	25.9	---	---
0.348000	33.30	20.1	59	25.7	---	---
0.388500	36.20	20.1	58	21.9	---	---
0.582000	44.60	20.1	56	11.4	---	---
1.041000	38.70	20.1	56	17.3	---	---
29.238000	28.00	21.3	60	32.0	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
0.262500	32.70	20.1	51	18.7	---	---
0.397500	31.00	20.1	48	16.9	---	---
0.600000	29.80	20.1	46	16.2	---	---
0.933000	25.10	20.2	46	20.9	---	---
2.139000	20.10	20.3	46	25.9	---	---
17.178000	25.90	20.7	50	24.1	---	---

MP3/MP4 Laptop+ AE3#+AE6#+AE10#



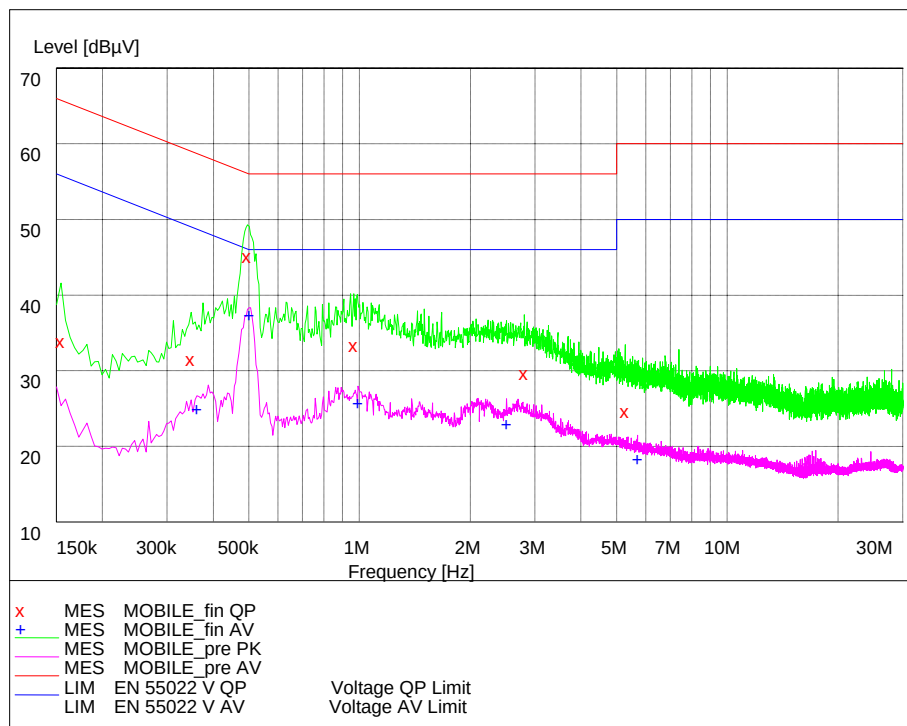
L Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.343500	32.90	20.1	59	26.2	---	---
0.496500	46.80	20.2	56	9.3	---	---
1.261500	31.90	20.2	56	24.1	---	---
3.120000	30.50	20.3	56	25.5	---	---
5.797500	24.90	20.4	60	35.1	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.352500	25.80	20.1	49	23.1	---	---
0.492000	38.30	20.2	46	7.8	---	---
0.901500	27.10	20.2	46	18.9	---	---
3.120000	24.40	20.3	46	21.6	---	---
5.320500	20.00	20.4	50	30.0	---	---



N Line

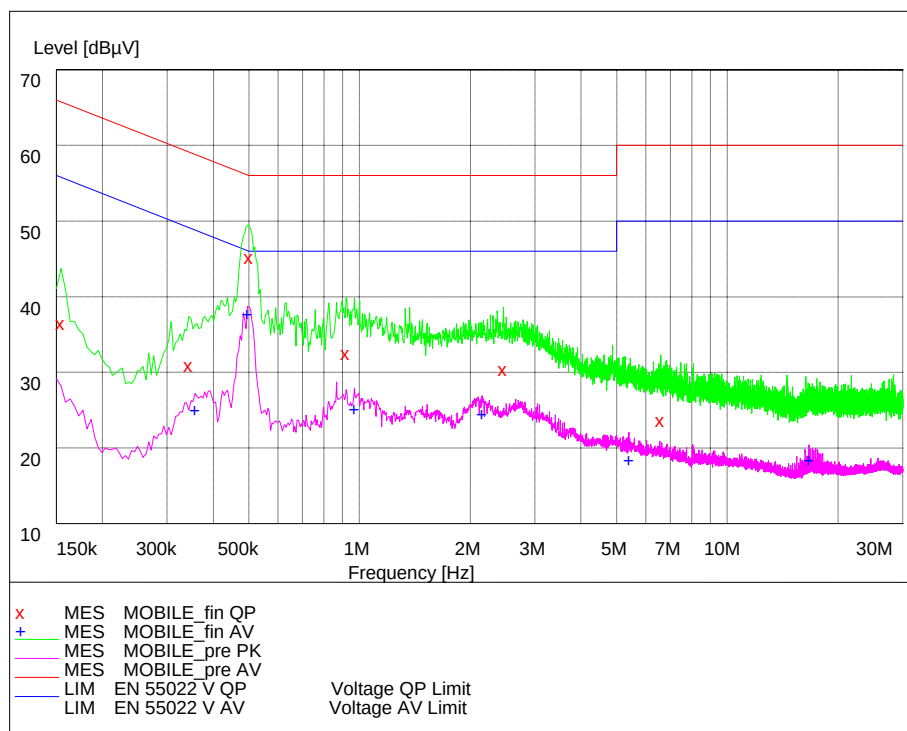
MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.154500	35.40	20.1	66	30.3	---	---
0.348000	33.00	20.1	59	26.0	---	---
0.496500	46.60	20.2	56	9.5	---	---
0.964500	34.80	20.2	56	21.2	---	---
2.809500	31.10	20.3	56	24.9	---	---
5.280000	26.10	20.4	60	33.9	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.361500	26.40	20.1	49	22.2	---	---
0.501000	38.80	20.2	46	7.2	---	---
0.991500	27.10	20.1	46	18.9	---	---
2.512500	24.40	20.2	46	21.6	---	---
5.698500	19.70	20.4	50	30.3	---	---

Camera Laptop+ AE3#+AE6#+AE10#



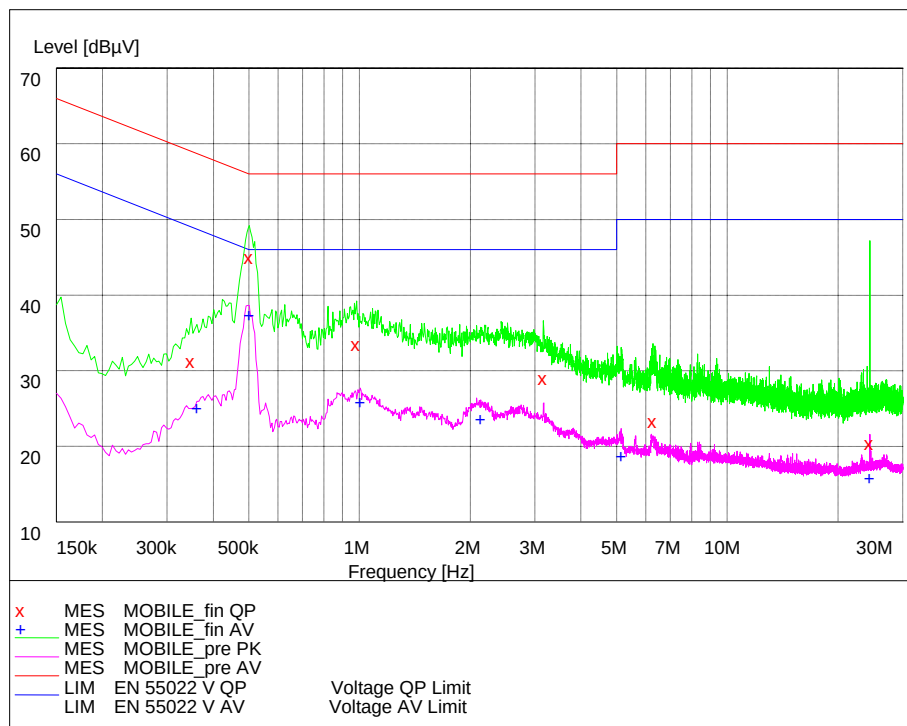
L Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.154500	37.90	20.1	66	27.9	---	---
0.343500	32.40	20.1	59	26.7	---	---
0.501000	46.60	20.2	56	9.4	---	---
0.919500	34.00	20.2	56	22.0	---	---
2.463000	31.90	20.2	56	24.1	---	---
6.598500	25.10	20.4	60	34.9	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.357000	26.40	20.1	49	22.4	---	---
0.496500	39.10	20.2	46	6.9	---	---
0.969000	26.60	20.2	46	19.4	---	---
2.152500	25.90	20.2	46	20.1	---	---
5.401500	19.80	20.4	50	30.2	---	---
16.665000	19.80	20.7	50	30.2	---	---



N Line

MEASUREMENT RESULT: "MOBILE_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.348000	32.70	20.1	59	26.3	---	---
0.501000	46.40	20.2	56	9.6	---	---
0.982500	34.90	20.1	56	21.1	---	---
3.160500	30.40	20.3	56	25.6	---	---
6.279000	24.80	20.4	60	35.2	---	---
24.436500	21.80	21.1	60	38.2	---	---

MEASUREMENT RESULT: "MOBILE_fin AV"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dBμV	dB	dBμV	dB		
0.361500	26.50	20.1	49	22.2	---	---
0.501000	38.80	20.2	46	7.2	---	---
1.005000	27.20	20.1	46	18.8	---	---
2.139000	25.00	20.3	46	21.0	---	---
5.154000	20.10	20.3	50	29.9	---	---
24.436500	17.30	21.1	50	32.7	---	---

2.2.2 Radiated Emissions-FCC Part15.109

Ambient condition:

Temperature	Relative humidity	Pressure
21.2°C	43.5%	100.9kPa

Test Setup:

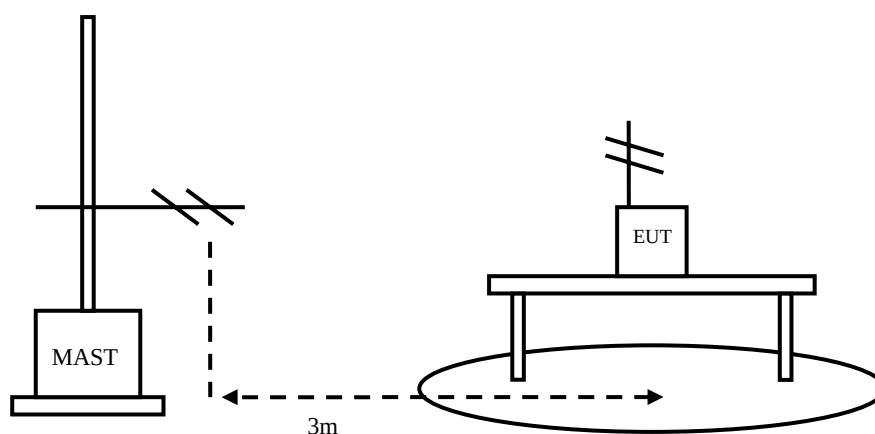


Figure 2

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 EUT should work in idle 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 C63.4:2009.

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 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 the A_{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:

$$\text{Result} = P_{\text{mea}} + A_{Rpl}$$

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	54
	Peak	74

Test result:

GSM850 Mode

Frequency(MHz)	Result(dBuV/m)	A_{Rpl} (dB)	P_{mea} (dBuV/m)	Polarity
32.705411	16.40	15.50	0.90	Vertical
67.334669	18.60	6.70	11.90	Vertical
94.929860	20.50	8.90	11.60	Vertical
99.799599	20.30	9.30	11.00	Vertical
824.649299	54.40	23.90	30.50	Vertical
876.553106	24.90	24.50	0.40	Vertical

PCS1900 Mode

Frequency(MHz)	Result(dBuV/m)	A_{Rpl} (dB)	P_{mea} (dBuV/m)	Polarity
169.058116	15.00	7.90	7.10	Horizontal
191.242485	22.40	8.00	14.40	Horizontal
193.406814	11.80	8.10	3.70	Horizontal
195.571142	12.50	8.20	4.30	Horizontal
197.194389	13.00	8.20	4.80	Horizontal
199.358717	21.30	8.20	13.10	Horizontal

WCDMA BAND II Mode

Frequency(MHz)	Result(dBuV/m)	A _{Rpl} (dB)	P _{mea} (dBuV/m)	Polarity
39.739479	12.80	16.00	-3.20	Vertical
67.334669	10.80	6.70	4.10	Vertical
87.354709	10.50	8.40	2.10	Horizontal
97.094188	14.70	9.10	5.60	Vertical
538.476954	17.70	18.80	-1.10	Vertical
948.096192	25.20	25.40	-0.20	Vertical

WCDMA BAND V Mode

Frequency(MHz)	Result(dBuV/m)	A _{Rpl} (dB)	P _{mea} (dBuV/m)	Polarity
31.082164	12.60	15.40	-2.80	Vertical
67.334669	7.20	6.70	0.50	Vertical
87.354709	10.00	8.40	1.60	Vertical
528.657315	17.60	18.70	-1.10	Vertical
835.871743	96.60	23.80	72.80	Vertical
882.164329	46.90	24.70	22.20	Vertical

FM Radio Mode

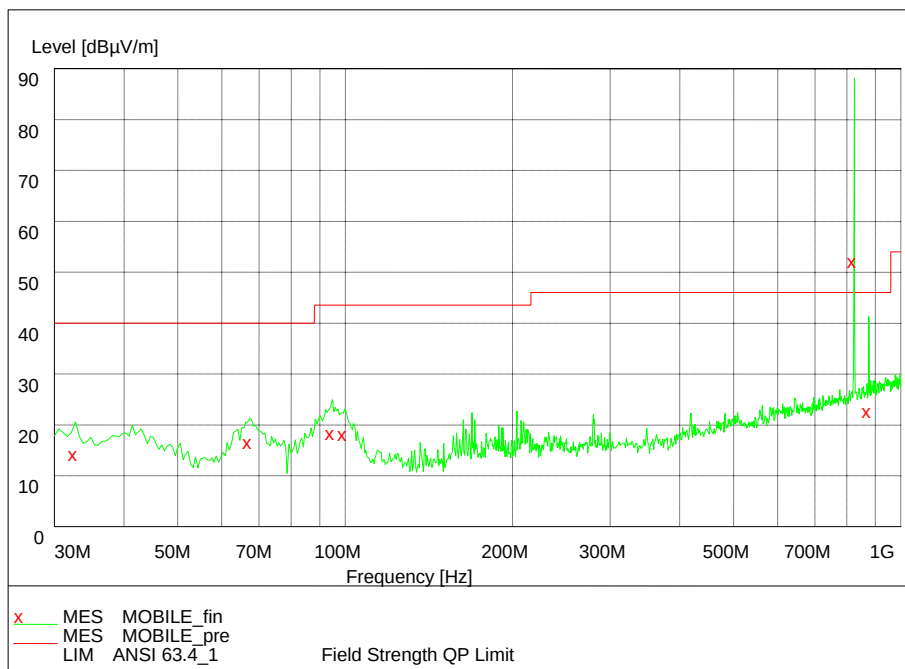
Frequency(MHz)	Result(dBuV/m)	A _{Rpl} (dB)	P _{mea} (dBuV/m)	Polarity
30.000000	15.30	15.30	0	Vertical
67.334669	18.90	6.70	12.20	Vertical
87.895792	16.20	8.40	7.80	Vertical
99.258517	19.20	9.20	10	Vertical
559.519038	20.80	19.40	1.40	Vertical
920.040080	25.20	25.50	-0.30	Horizontal

MP3/MP4 Mode

Frequency(MHz)	Result(dBuV/m)	A _{Rpl} (dB)	P _{mea} (dBuV/m)	Polarity
39.739479	14.80	16.00	-1.20	Vertical
67.334669	18.90	6.70	12.20	Vertical
94.929860	20.50	8.90	11.60	Vertical
995.258517	20.90	9.20	11.70	Vertical
493.476954	18.70	18.80	-0.10	Vertical
902.040080	25.20	25.50	-0.30	Vertical

Camera Mode

Frequency(MHz)	Result(dBuV/m)	A _{Rpl} (dB)	P _{mea} (dBuV/m)	Polarity
32.164329	16.30	15.40	0.90	Vertical
67.334669	18.90	6.70	12.2	Vertical
87.895792	16.30	8.40	7.90	Vertical
96.553106	20.90	9.00	11.9	Vertical
164.729459	11.40	7.80	3.60	Horizontal
925.651303	25.50	25.40	0.10	Vertical

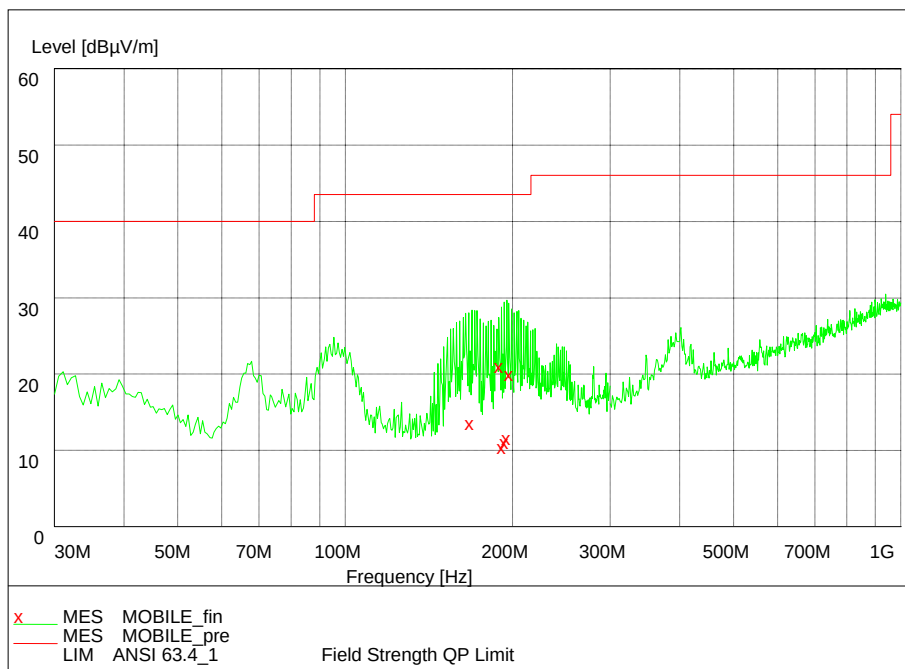


GSM850 (30MHz – 1GHz)

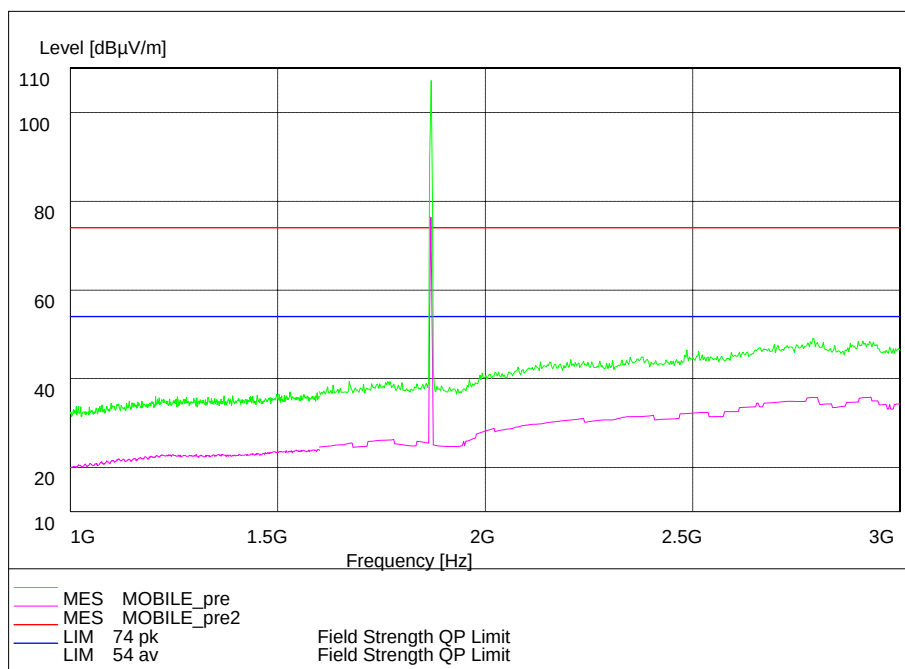
Note: The signal beyond the limit is the base station simulator carrier.



GSM850 (1GHz – 6GHz)

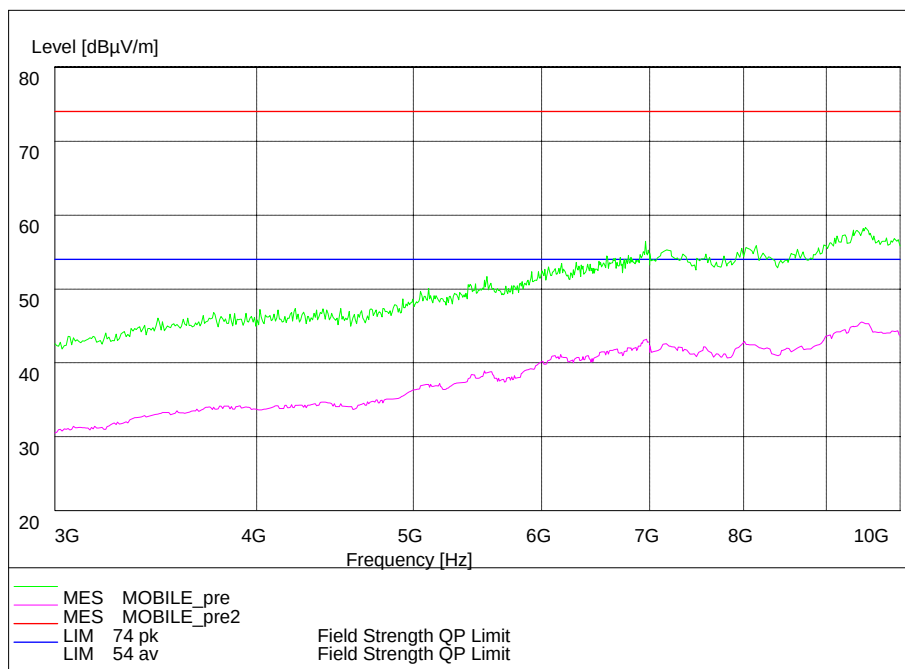


PCS1900 (30MHz – 1GHz)

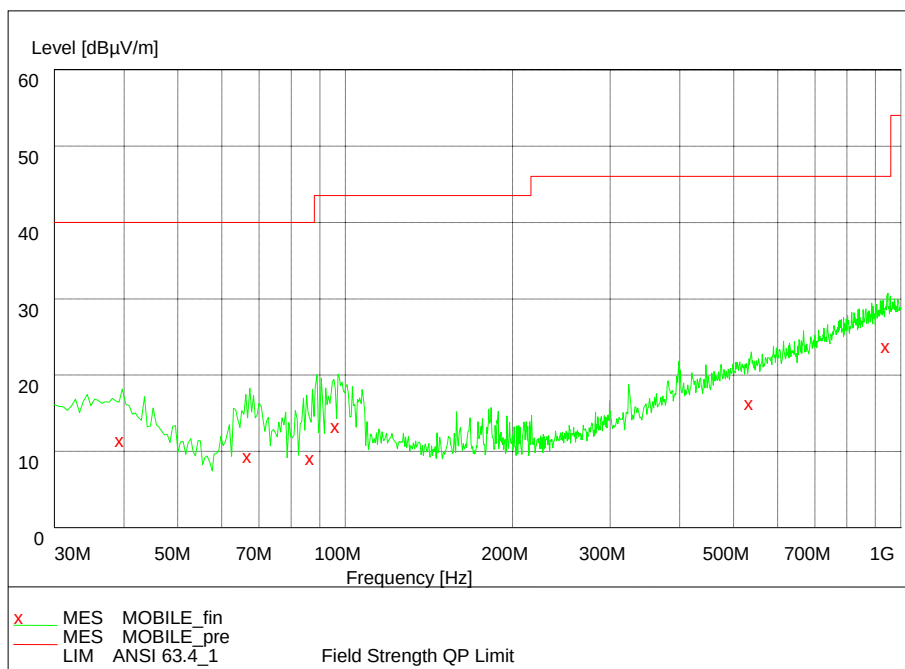


PCS1900 (1GHz – 3GHz)

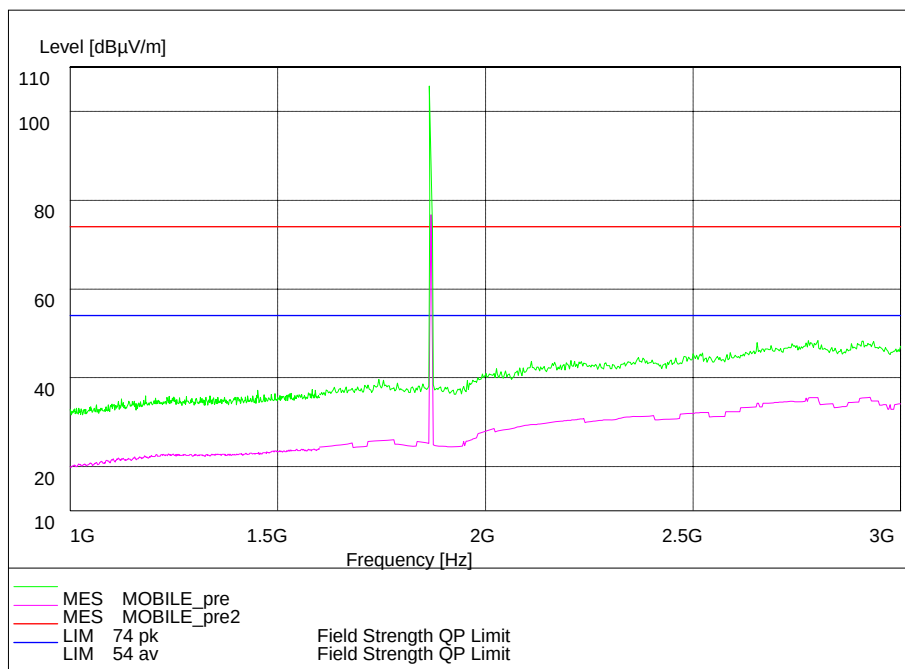
Note: The signals beyond the limit are the base station and simulator carrier.



PCS1900 (3GHz – 10GHz)

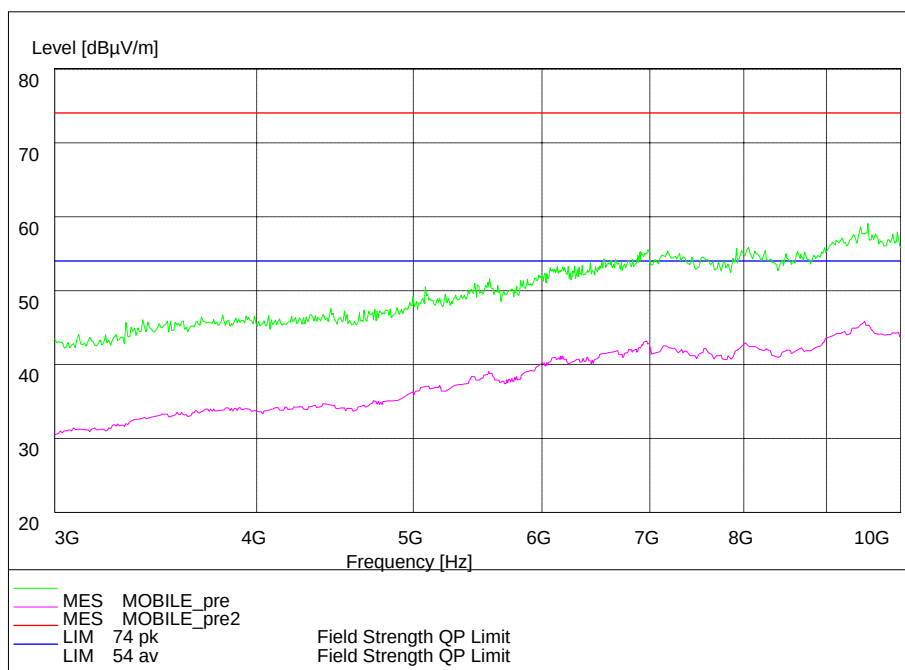


WCDMA BAND II (30MHz – 1GHz)

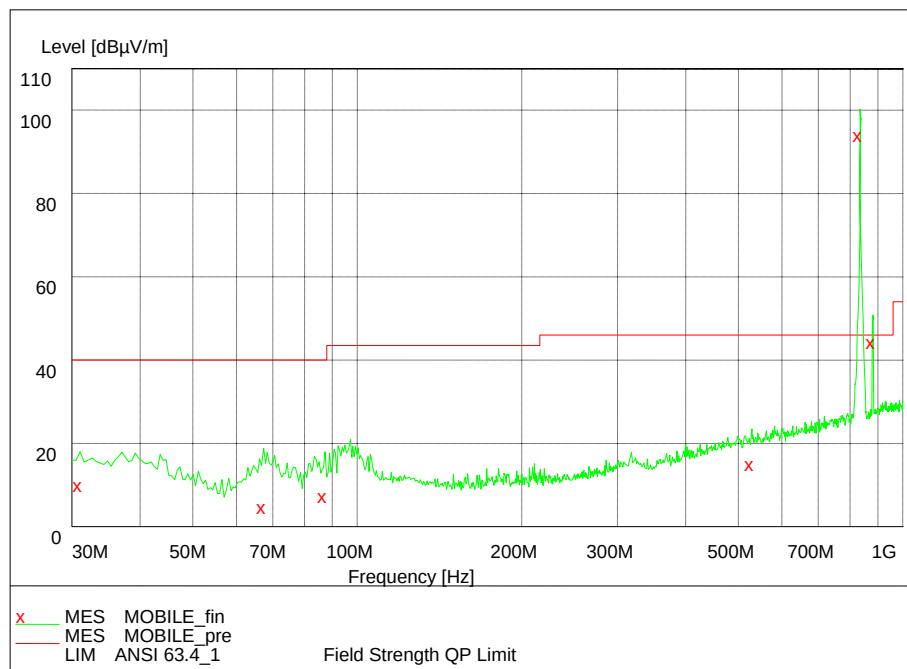


WCDMA BAND II (1GHz – 3GHz)

Note: The signal beyond the limit is the base station simulator carrier.

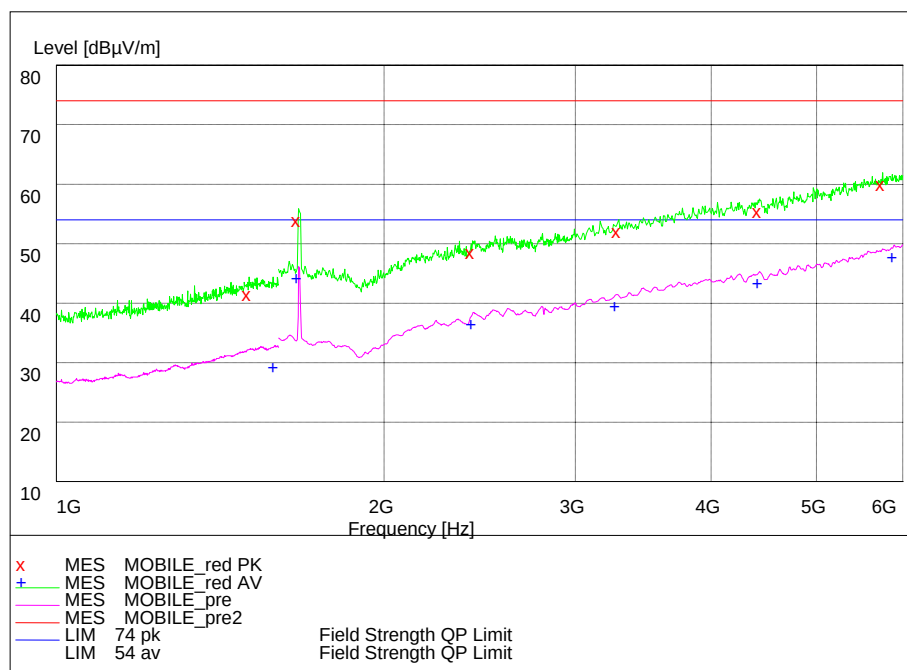


WCDMA BAND II (3GHz – 10GHz)

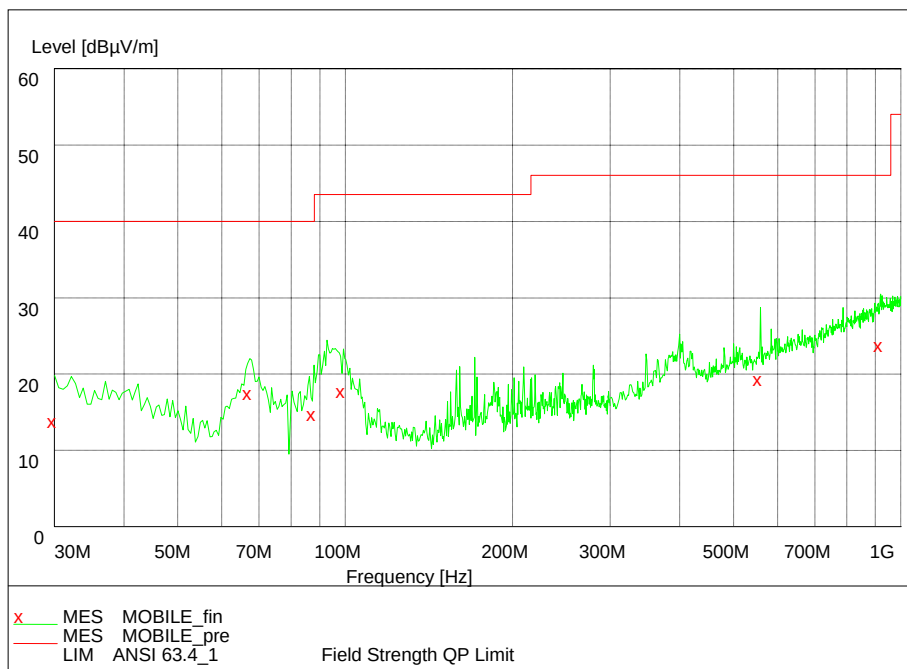


WCDMA BAND V (30MHz – 1GHz)

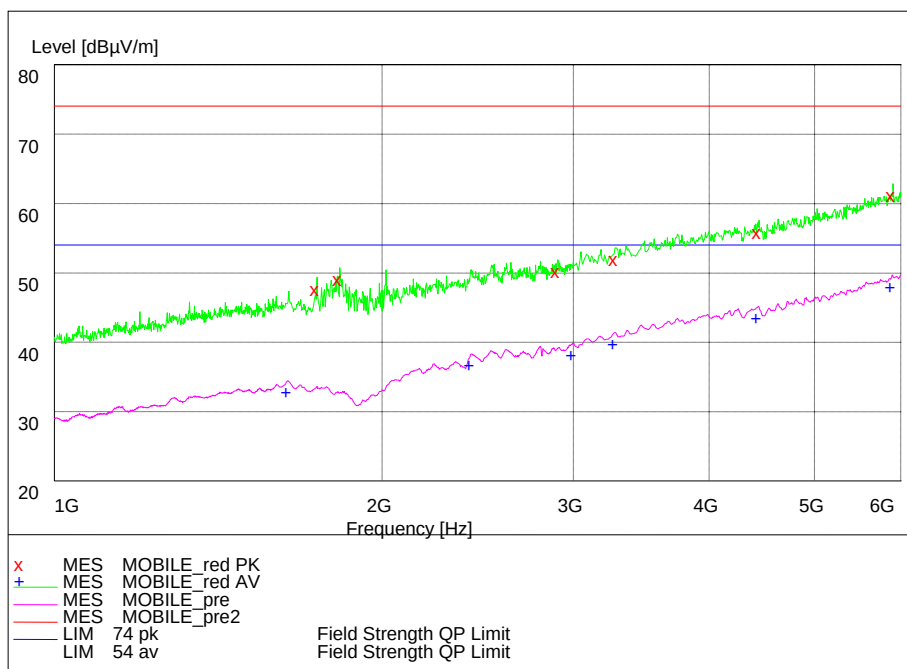
Note: The signals beyond the limit are the base station and simulator carrier.



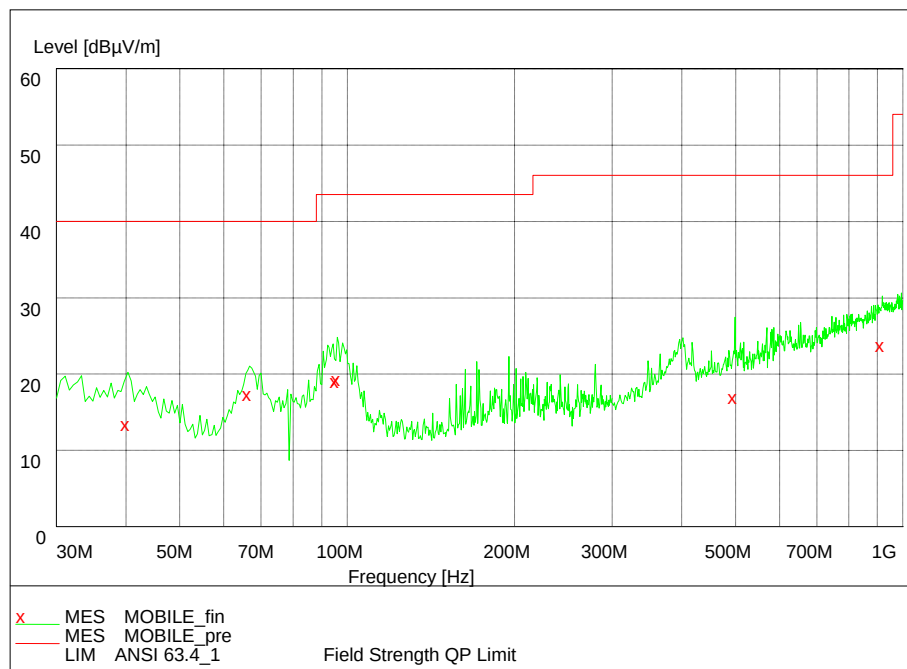
WCDMA BAND V (1GHz – 6GHz)



FM Radio (30MHz – 1GHz)



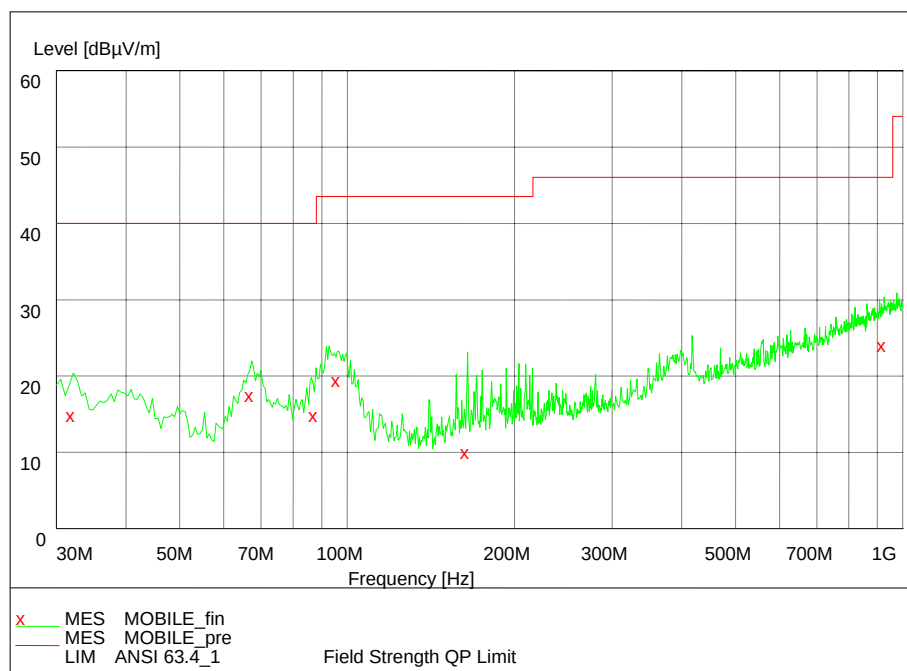
FM Radio (1GHz – 6GHz)



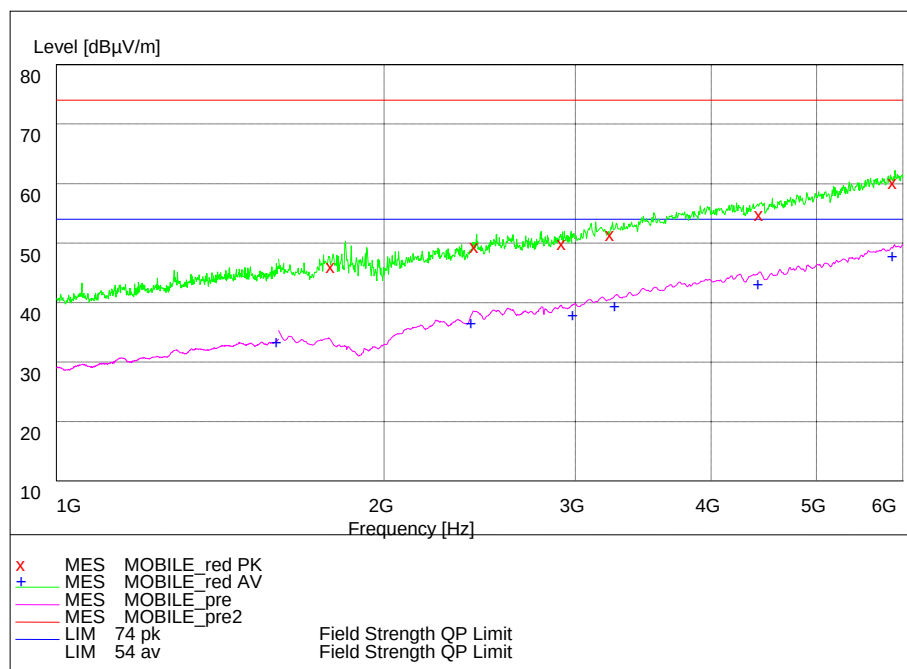
MP3/MP4 (30MHz – 1GHz)



MP3/MP4 (1GHz – 6GHz)



Camera (30MHz – 1GHz)



Camera (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	-----	19 th Aug. 2014
2	ESI 40 EMI test receiver	R&S	100015	19 th Aug. 2014
3	E5515C(8960) Mobile Station Tester	Agilent	GB44050904	19 th Aug. 2014
4	9.080m×5.255m×3.525m Shielding room	FRANKONIA	-----	19 th Aug. 2014
5	ESCS30 EMI test receiver	R&S	100029	19 th Aug. 2014
6	HL562 Ultra log test antenna	R&S	100016	19 th Aug. 2014
7	ESH3-Z2 Pulse limiter	R&S	10002	19 th Aug. 2014
8	LS16C AMN	AFJ	16011306281	19 th Aug. 2014
9	ESH2Z11 LISN	R&S	50FH-020-10	19 th Aug. 2014
10	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100030	19 th Aug. 2014
11	HF 906 Double-Ridged Waveguide Horn Antenna	R&S	100029	19 th Aug. 2014
12	PS2000 Turn Table	FRANKONIA	-----	19 th Aug. 2014
13	MA260 Antenna Master	FRANKONIA	-----	19 th Aug. 2014
14	ES-K1EMI test software	R&S	-----	19 th Aug. 2014
15	HL562 Receive antenna	R&S	100167	19 th Aug. 2014

Appendix

Appendix1 Test Setup