TEST REPORT

No. 2013TAR152

for

TCT Mobile Limited

GSM quad band mobile phone

Model Name: Tahiti 1Sim Wifi+ATV

Marketing Name：ALCATEL 3041G

FCC ID : RAD337

with

Hardware Version: PIO

Software Version: v556

Issued Date: 2013-03-04

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of TMC Beijing.

Test Laboratory:

DAR accreditation (DIN EN ISO/IEC 17025): No. DGA-PL-114/01-02

FCC 2.948 Listed: No.733176

IC O.A.T.S listed: No.6629A-1

TMC Beijing, Telecommunication Metrology Center of Ministry of Industry and Information Technology

No. 52, Huayuan Bei Road, Haidian District, Beijing, P. R. China 100191

Tel:+86(0)10-62304633-2561 , Fax:+86(0)10-62304633-2504 Email:welcome@emcite.com. www.emcite.com

CONTENTS

1. Test Laboratory

1.1. Testing Location

Company Name:	TMC Beijing, Telecommunication Metrology Center of MIIT
Address:	No 52, Huayuan beilu, Haidian District, Beijing, P. R. China
Postal Code:	100191
Telephone:	0086-10-62304633-2561
Fax:	0086-10-62304633-2504

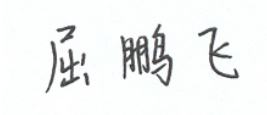
1.2. Testing Environment

Normal Temperature:	15-35℃
Relative Humidity:	20-75%

1.3. Project data

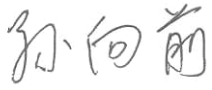
Testing Start Date:	Feb. 20th, 2013
Testing End Date:	Feb. 22nd, 2013

1.4. Signature



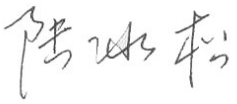
Qu Pengfei

(Prepared this test report)



Sun Xiangqian

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	TCT Mobile Limited
Address /Post:	5F, E building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
City:	Shanghai
Postal Code:	201203
Country:	China
Telephone:	0086-21-6146089
Fax:	0086-21-61460602

2.2. Manufacturer Information

Company Name:	TCT Mobile Limited
Address /Post:	5F, E building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China. 201203
City:	Shanghai
Postal Code:	201203
Country:	China
Telephone:	0086-21-6146089
Fax:	0086-21-61460602

Equipment Under Test (EUT) and Ancillary Equipment (AE)

2.3. About EUT

Description	GSM quad band mobile phone
Model Name	Tahiti 1Sim Wifi+ATV
FCC ID	RAD337
Extreme vol. Limits	3.5VDC to 4.2VDC (nominal: 3.8VDC)

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Telecommunication Metrology Center of MIIT of People's Republic of China.

2.4. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	013503000100105	PIO	V556

*EUT ID: is used to identify the test sample in the lab internally.

2.5. Internal Identification of AE used during the test

AE ID*	Description	SN
AE1	Battery	B007160874A
AE2	Battery	BAK2011051800715
AE3	Travel charger	/
AE4	Travel charger	/
AE5	USB cable	/
AE6	USB cable	/

AE1

Model	CAB31L0000C1
Manufacturer	BYD
Capacitance	1000mAh
Nominal voltage	3.7V

AE2

Model	CAB31L0000C2
Manufacturer	BAK
Capacitance	1000mAh
Nominal voltage	3.7V

AE3

Model	CBA3002AG0C1
Manufacturer	BYD
Length of cable	124cm

AE4

Model	CBA3002AG0C3
Manufacturer	Yingju
Length of cable	129cm

AE5

Model	CDA3122002C1
Manufacturer	Juwei
Length of cable	102cm

AE6

Model	CDA3122002C2
Manufacturer	Shenghua
Length of cable	102cm

*AE ID: is used to identify the test sample in the lab internally.

EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT1+ AE1 /AE2+ AE3	Charging Mode
Set.2	EUT1+ AE1 /AE2+ AE4	Charging Mode
Set.3	EUT1+ AE1 /AE2+ AE5	USB Mode

3. Reference Documents

3.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 15, Subpart B	Radio frequency devices	10-1-10 Edition
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2003

4. LABORATORY ENVIRONMENT

Conducted chamber/ Control room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ˚C, Max. = 35 ˚C
Relative humidity	Min. = 20 %, Max. = 80 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 0.5 Ω

Semi-anechoic chamber SAC-2 (10 meters×6.7meters×6.1meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 30 ℃
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 0.5 Ω
Normalised site attenuation (NSA)	< ±3.5 dB, 3 m distance, from 30 to 1000 MHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

Fully-anechoic chamber FAC-3 (9 meters×6.5 meters×4 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ˚C, Max. = 30 ˚C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 1 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80 to 4000 MHz

5. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:	
P	Pass
NA	Not applicable
F	Fail

Clause	List	Clause in FCC rules	Verdict
1	Radiated Emission	15.109(a)	P
2	Conducted Emission	15.107(a)	P

6. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE
1	LISN	ESH2-Z5	829991/012	R&S	2013-04-16
2	Test Receiver	ESCI	100344	R&S	2013-03-28
3	EMI Antenna	VULB 9163	514	Schwarzbeck	2014-11-10
4	Test Receiver	ESU26	100376	R&S	2013-11-07
5	EMI Antenna	3117	00139065	ETS-Lindgren	2014-07-31
6	Universal Radio Communication Tester	CMU200	100680	R&S	2013-09-05
7	Universal Radio Communication Tester	E5515C	MY48361083	Agilent	2013-03-16

ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission (§15.109(a))

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator (USB mode of MS and charging mode of MS) at a distance of 3 meters is tested. Tested in accordance with the procedures of ANSI C63.4 - 2003, section 8.3.

A.1.2 EUT Operating Mode:

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The MS is operating in the USB mode and charging mode. During the test MS is connected to a PC via a USB cable in the case of USB mode and is connected to a charger in the case of charging mode. The model of the PC is DELL OPTIPLEX 755, and the serial number of the PC is 3908243625. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

A.1.3 Measurement Limit

Frequency of emission (MHz)	Field strength (microvolts/meter)
30-88	100
88-216	150
216-960	200
960-4000	500

A.1.4 Test Condition

Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	100kHz/300kHz	5
1000-4000	1MHz/1MHz	15

A.1.5 Measurement Results

A "reference path loss" is established and the A_{Rpl} is the attenuation of “reference path loss”. It includes the antenna factor of receive antenna and the path loss.

The measurement results are obtained as described below:

Result = $P_{Mea} + A_{Rpl} = P_{Mea} + G_A + G_{PL}$

Where

G_A: Antenna factor of receive antenna

G_{PL}: Path Loss

P_{Mea}: Measurement result on receiver.

Charging Mode Set.1

Frequency(MHz)	Result(dBuV/m)	GPL (dB)	GA (dB/m)	PMea(dBuV)	Polarity
3000.000	41.9	-28.4	34.1	36.172	VERTICAL
2999.800	42.0	-29.0	33.8	37.179	HORIZONTAL
2999.600	42.1	-29.0	33.8	37.279	VERTICAL
2999.400	42.0	-29.0	33.8	37.179	VERTICAL
2999.200	42.0	-29.0	33.8	37.179	VERTICAL
2999.000	42.1	-29.0	33.8	37.279	HORIZONTAL

Charging Mode Set.2

Frequency(MHz)	Result(dBuV/m)	GPL (dB)	GA (dB/m)	PMea(dBuV)	Polarity
2999.400	42.0	-29.0	33.8	37.179	HORIZONTAL
2996.400	41.9	-29.0	33.8	37.079	HORIZONTAL
2996.200	41.9	-29.0	33.8	37.079	HORIZONTAL
2999.800	41.9	-29.0	33.8	37.079	VERTICAL
2995.600	41.9	-29.0	33.8	37.079	VERTICAL
2997.400	41.9	-29.0	33.8	37.079	HORIZONTAL

USB Mode Set.3

Frequency(MHz)	Result(dBuV/m)	GPL (dB)	GA (dB/m)	PMea(dBuV)	Polarity
3000.000	43.2	-28.4	34.1	37.472	VERTICAL
2999.800	42.8	-29.0	33.8	37.979	HORIZONTAL
2999.600	42.6	-29.0	33.8	37.779	VERTICAL
2999.400	42.5	-29.0	33.8	37.679	VERTICAL
2999.200	42.0	-29.0	33.8	37.179	VERTICAL
2999.000	42.0	-29.0	33.8	37.179	HORIZONTAL

Charging Mode 1

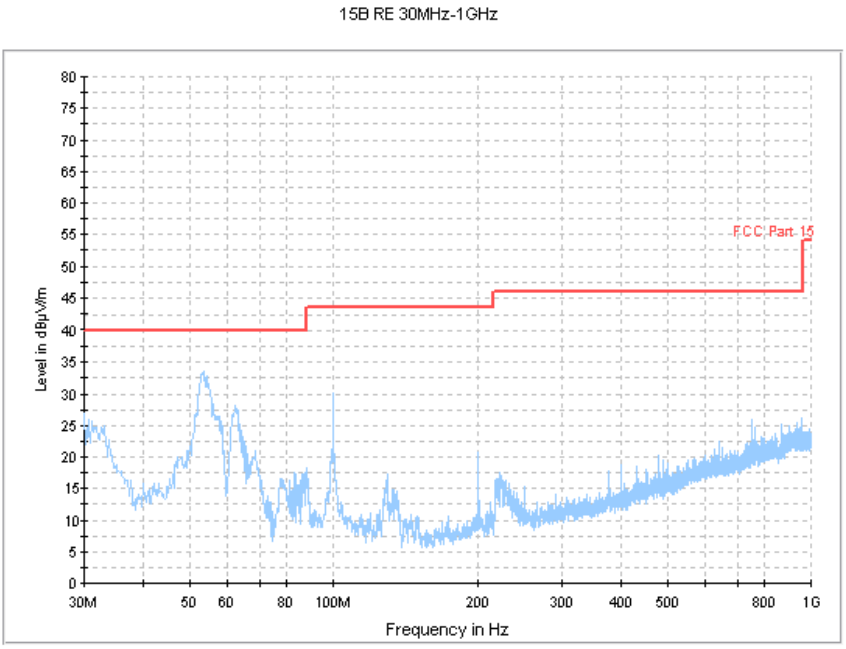


Figure A.1 Radiated Emission from 30MHz to 1GHz

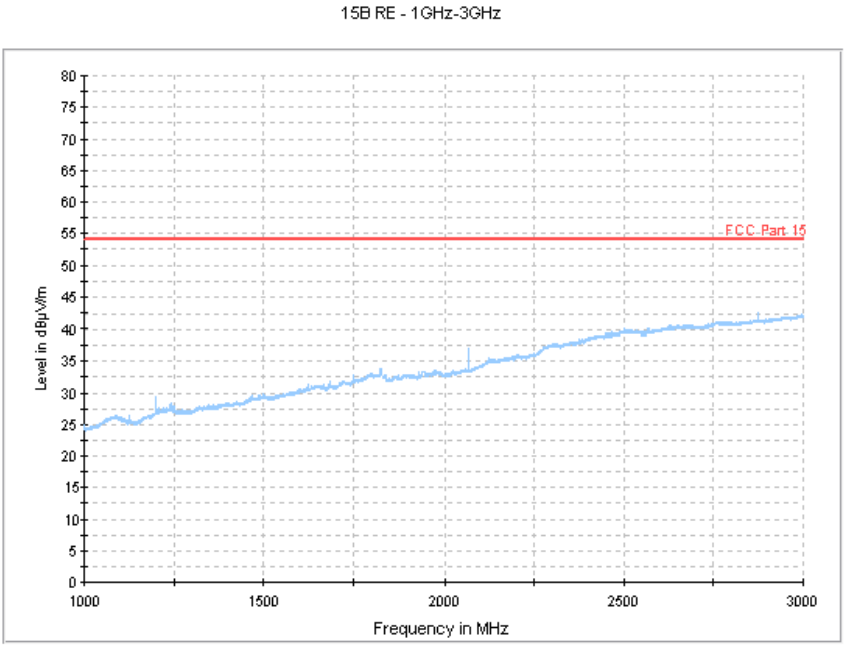


Figure A.2 Radiated Emission from 1GHz to 3GHz

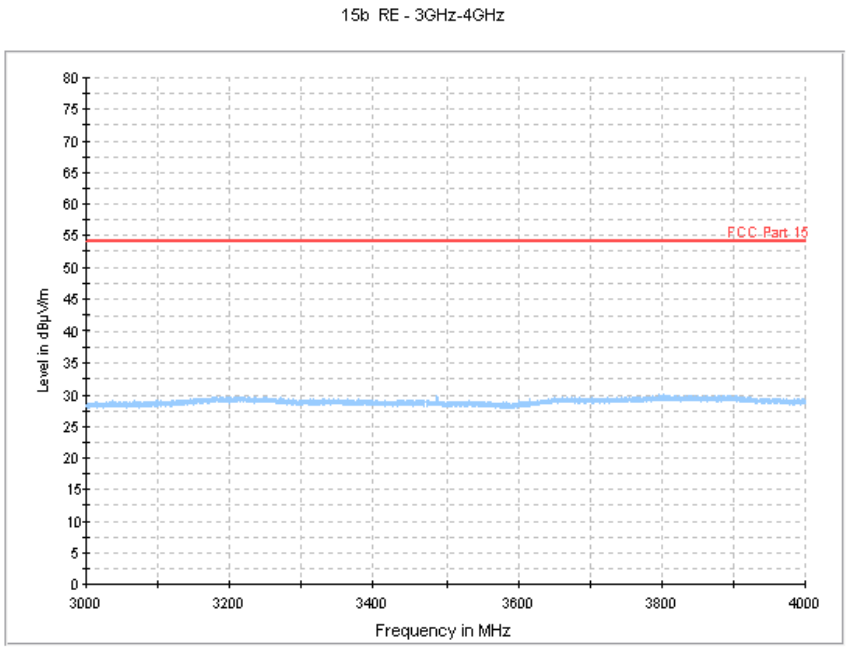


Figure A.3 Radiated Emission from 3GHz to 4GHz

Charging Mode 2

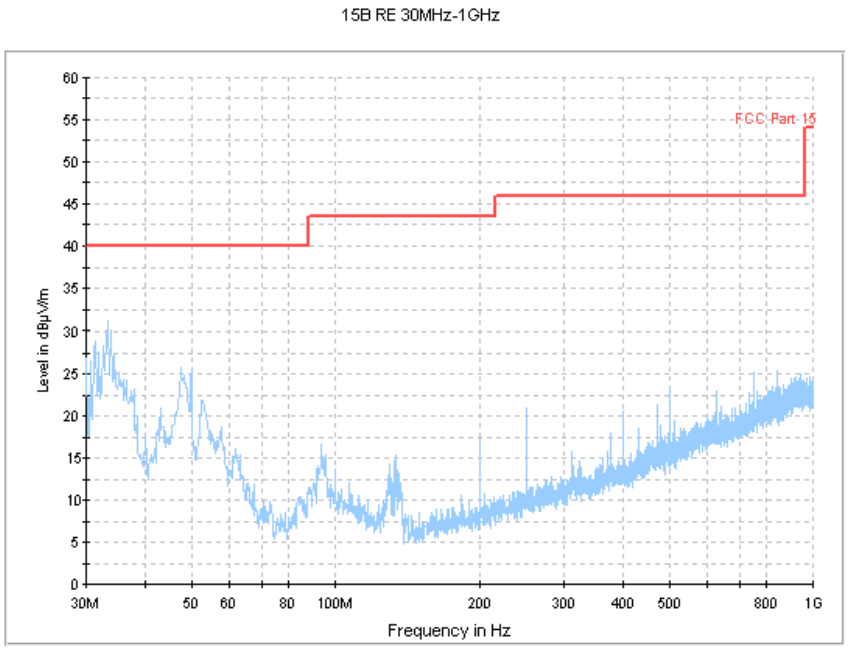


Figure A.4 Radiated Emission from 30MHz to 1GHz

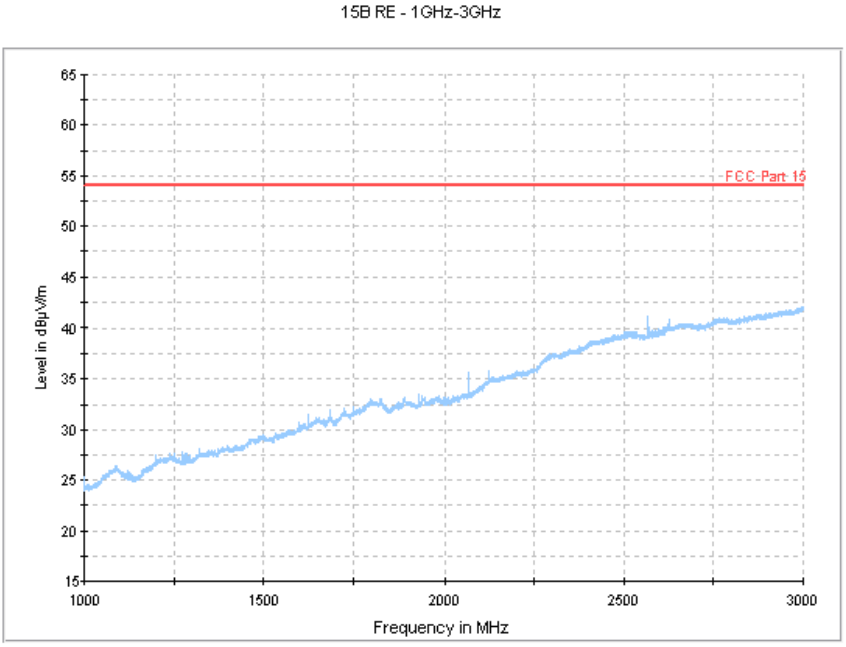


Figure A.5 Radiated Emission from 1GHz to 3GHz

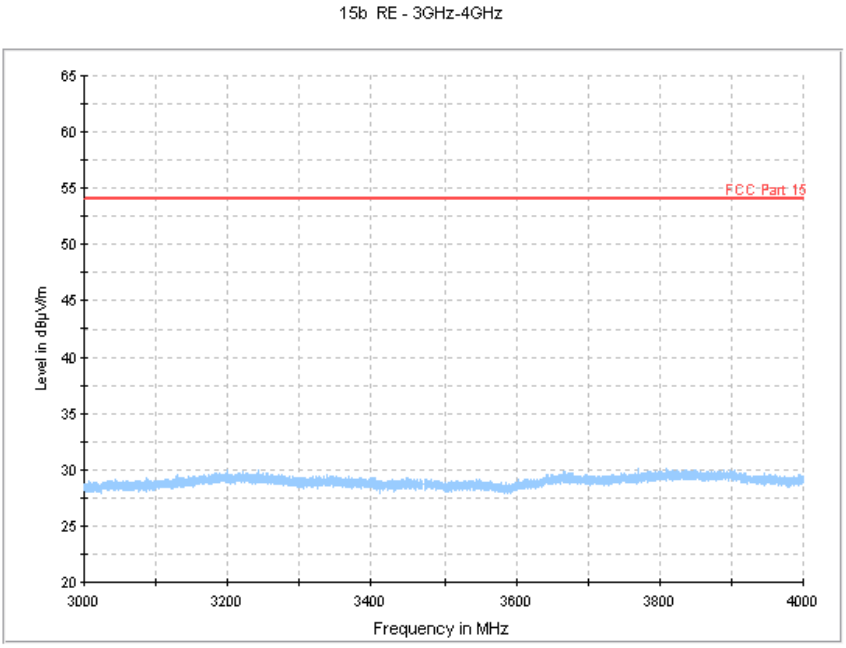


Figure A.6 Radiated Emission from 3GHz to 4GHz

USB Mode

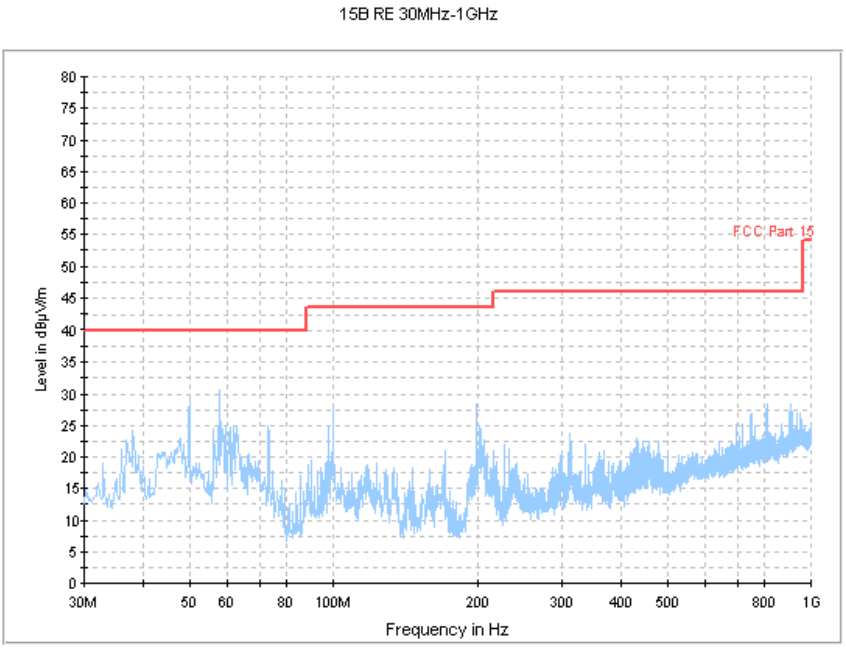


Figure A.7 Radiated Emission from 30MHz to 1GHz

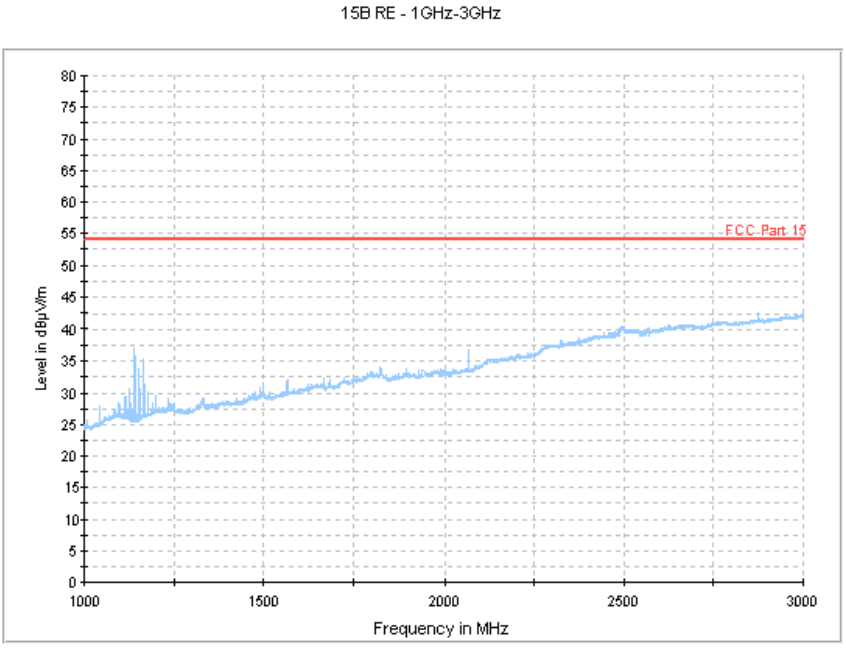


Figure A.8 Radiated Emission from 1GHz to 3GHz

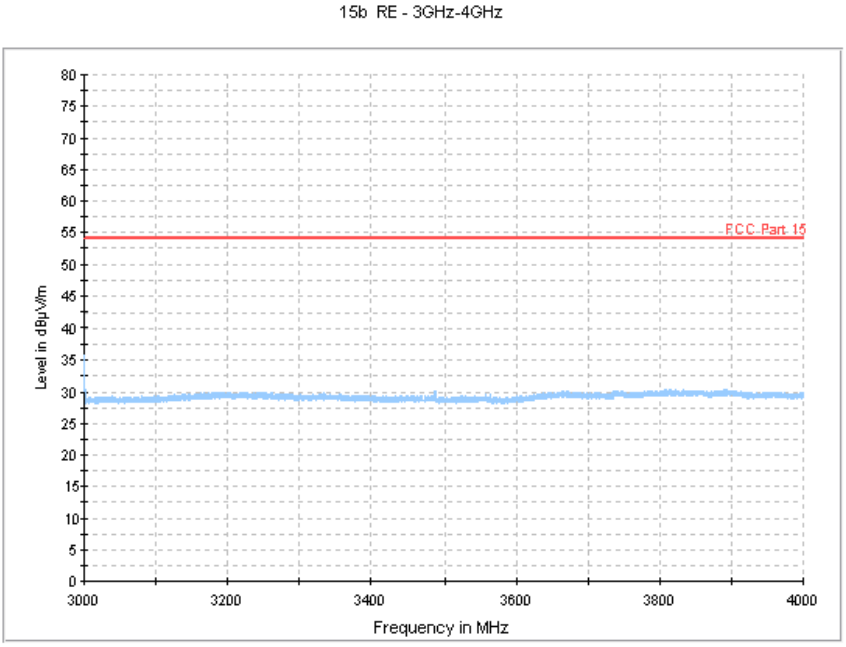


Figure A.9 Radiated Emission from 3GHz to 4GHz

A.2 Conducted Emission (§15.107(a))

A.2.1 Method of measurement

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits. Tested in accordance with the procedures of ANSI C63.4 - 2003, section 7.2.

A.2.2 EUT Operating Mode:

The MS is operating in the USB mode and charging mode. During the test MS is connected to a PC via a USB cable in the case of USB mode and is connected to a charger in the case of charging mode. The model of the PC is DELL OPTIPLEX 755, and the serial number of the PC is 3908243625. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

A.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency		

A.2.4 Test Condition in charging mode

Voltage（V）	Frequency（Hz）
120	60

RBW	Sweep Time(s)
9kHz	1

A.2.5 Measurement Results

Charging Mode 1

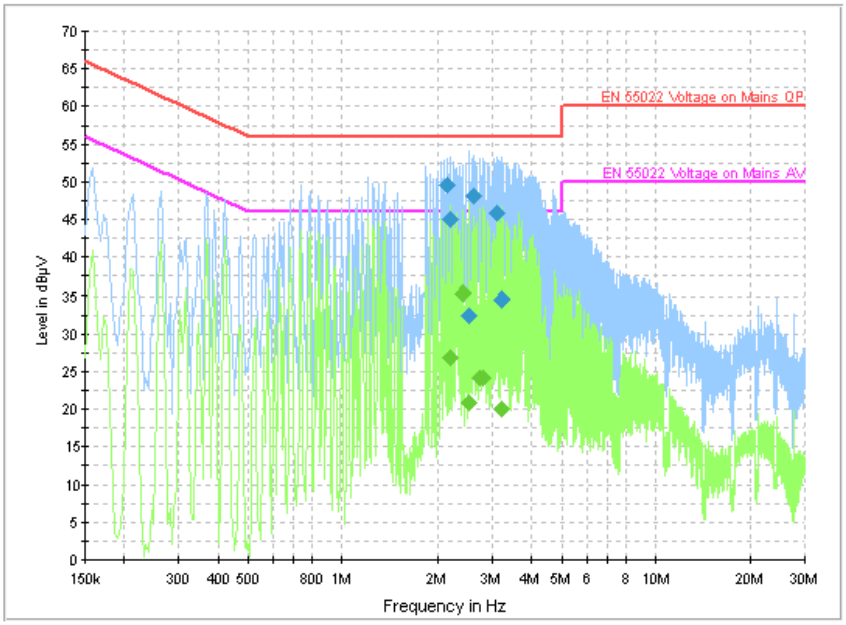


Figure A.10 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.152500	49.6	GND	L1	10.0	6.4	56.0
2.202000	44.9	GND	L1	10.0	11.1	56.0
2.517000	32.4	GND	L1	10.0	23.6	56.0
2.620500	48.2	GND	L1	10.0	7.8	56.0
3.097500	45.9	GND	L1	10.0	10.1	56.0
3.201000	34.5	GND	L1	10.0	21.5	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.202000	26.8	GND	L1	10.0	19.2	46.0
2.413500	35.4	GND	L1	10.0	10.6	46.0
2.517000	20.9	GND	L1	10.0	25.1	46.0
2.728500	24.2	GND	L1	10.0	21.8	46.0
2.782500	24.2	GND	L1	10.0	21.8	46.0
3.201000	20.0	GND	L1	10.0	26.0	46.0

Charging Mode 2

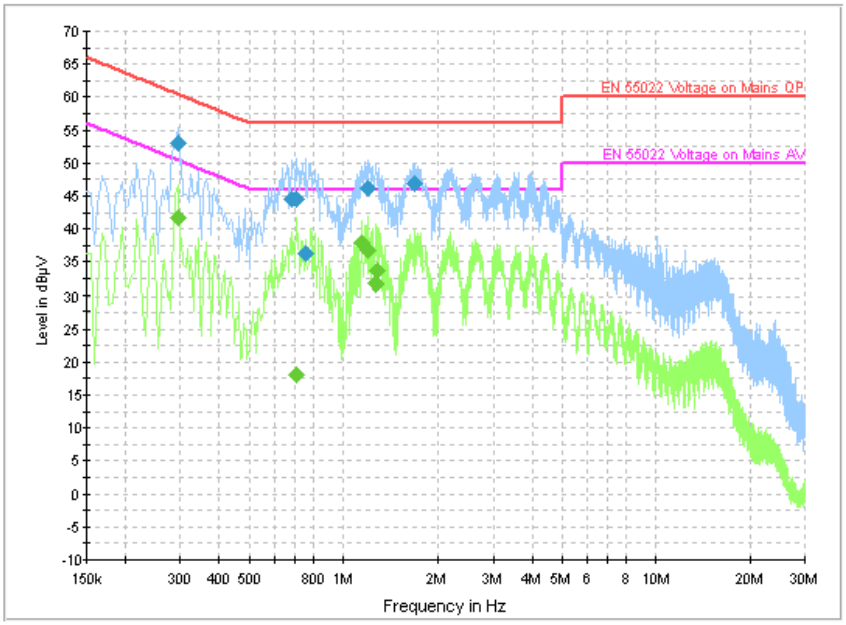


Figure A.11 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.294000	53.0	GND	L1	10.0	7.4	60.4
0.685500	44.4	GND	L1	10.0	11.6	56.0
0.708000	44.5	GND	L1	10.0	11.5	56.0
0.757500	36.2	GND	L1	10.0	19.8	56.0
1.198500	46.0	GND	L1	10.0	10.0	56.0
1.684500	46.9	GND	L1	10.0	9.1	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.294000	41.6	GND	L1	10.0	8.8	50.4
0.708000	18.0	GND	L1	10.0	28.0	46.0
1.149000	37.8	GND	L1	10.0	8.2	46.0
1.198500	36.7	GND	L1	10.0	9.4	46.0
1.270500	31.8	GND	L1	10.0	14.2	46.0
1.293000	33.6	GND	L1	10.0	12.4	46.0

USB mode

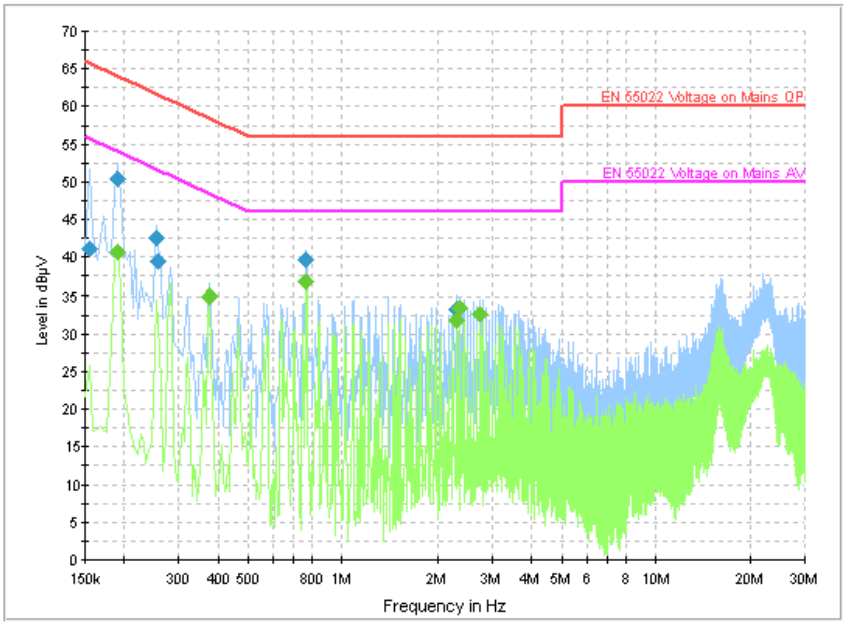


Figure A.12 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	41.2	GND	L1	10.0	24.6	65.8
0.190500	50.4	GND	L1	10.0	13.6	64.0
0.253500	42.5	GND	N	10.0	19.2	61.6
0.258000	39.5	GND	L1	10.0	22.0	61.5
0.766500	39.6	GND	N	10.0	16.4	56.0
2.296500	33.3	GND	L1	10.0	22.7	56.0

Final Result 2

Frequency (MHz)	Average (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.190500	40.8	GND	L1	10.0	13.3	54.0
0.375000	34.9	GND	N	10.0	13.5	48.4
0.766500	36.7	GND	L1	10.0	9.3	46.0
2.296500	31.9	GND	L1	10.0	14.1	46.0
2.359500	33.4	GND	L1	10.0	12.6	46.0
2.742000	32.6	GND	L1	10.0	13.4	46.0

*****END OF REPORT*****