TEST REPORT

No. I14Z48858-EMC01

for

TCL Communication Ltd

HSUPA/HSDPA/UMTS Dual band/GSM Quad band mobile phone

Model Name: 4009F

FCC ID: 2ACCJH012

with

Hardware Version: PIO

Software Version: v4B2A

Issued Date: 2014-12-19

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 CTTL.

Test Laboratory:

FCC 2.948 Listed: No. 525429

CTTL, Telecommunication Technology Labs, Academy of Telecommunication Research, MIIT

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

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Email: cttl_terminals@catr.cn, website: www.chinattl.com

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I14Z48858-EMC01	Rev.0	1st edition	2014-12-19

CONTENTS

1. Test Laboratory

1.1. Testing Location

Location 1: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191

1.2. Testing Environment

Normal Temperature: 15-35℃

Relative Humidity: 20-75%

1.3. Project data

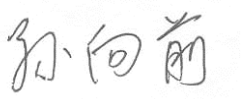
Testing Start Date: 2014-12-12

Testing End Date: 2014-12-18

1.4. Signature

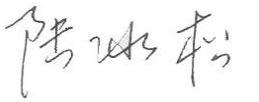
Qu Pengfei

(Prepared this test report)



Sun Xiangqian

(Reviewed this test report)



Lu Bingsong

Director of the laboratory

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name:	TCL Communication Ltd
Address /Post:	5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China.
City:	Shanghai
Postal Code:	201203
Country:	China
Contact Person:	Gong Zhizhou
Contact Email	zhizhou.gong@tcl.com
Telephone:	0086-21-61460890
Fax:	0086-21-61460602

2.2. Manufacturer Information

Company Name:	TCL Communication Ltd
Address /Post:	5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park, Pudong Area Shanghai, P.R. China.
City:	Shanghai
Postal Code:	201203
Country:	China
Telephone:	0086-21-61460890
Fax:	0086-21-61460602

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

3.1. About EUT

Description	HSUPA/HSDPA/UMTS Dual band/GSM Quad band mobile phone
Model Name	4009F
FCC ID	2ACCJH012
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.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	014281000100164	PIO	v4B2A

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

3.3. Internal Identification of AE used during the test

AE ID*	Description	SN	Remarks
AE1	Battery	B31P0000CBH02743	14TCT-BA-1950
AE2	Battery	/	/
AE3	Battery	/	/
AE4	Battery	/	/
AE5	Battery	/	/
AE11	Travel charger	/	14TCT-CH-1791
AE12	Travel charger	/	14TCT-CH-2213
AE13	Travel charger	/	14TCT-CH-2181
AE14	Travel charger	/	14TCT-CH-0354
AE15	Travel charger	/	14TCT-CH-2033
AE16	Travel charger	/	14TCT-CH-0408
AE17	USB cable	/	14TCT-DC-0596
AE18	USB cable	/	14TCT-DC-0618
AE19	USB cable	/	14TCT-DC-0745
AE20	USB cable	/	/
AE21	USB cable	/	/
AE22	USB cable	/	/
AE23	Battery	B31P0000CBH03763	14TCT-BA-1942

AE1, AE23

Model	CAB31P0000CB
Manufacturer	OCEANSUN
Capacitance	1300mAh
Nominal voltage	3.7V

AE2

Model	CAB31P0000C1
Manufacturer	BYD
Capacitance	1300mAh
Nominal voltage	3.7V

AE3

Model	CAB1300015C2
Manufacturer	SCUD
Capacitance	1300mAh
Nominal voltage	3.7V

AE4

Model	CAB1150001CB
Manufacturer	OCEANSUN
Capacitance	1150mAh
Nominal voltage	3.7V

AE5

Model	CAB1150000C1
Manufacturer	BYD
Capacitance	1150mAh
Nominal voltage	3.7V

AE11

Model	CBA3008AG0C1
Manufacturer	BYD
Length of cable	/

AE12

Model	CBA3008AG0C2
Manufacturer	Tenpao
Length of cable	/

AE13

Model	CBA3008AG0C3
Manufacturer	Yingju
Length of cable	/

AE14

Model	CBA3002AG0C1
Manufacturer	BYD
Length of cable	118cm

AE15

Model	CBA3002AG0C2
Manufacturer	Tenpao
Length of cable	118cm

AE16

Model	CBA3002AG0C3
Manufacturer	Yingju
Length of cable	121cm

AE17

Model	CDA3122002C2
Manufacturer	SHENGHUA
Length of cable	101cm

AE18

Model	CDA3122002C1
Manufacturer	JUWEI
Length of cable	99.5cm

AE19

Model	CDA3122002C7
Manufacturer	Yingju
Length of cable	100cm

AE20

Model	CDA3122005C2
Manufacturer	SHENGHUA
Length of cable	/

AE21

Model	CDA3122005C1
Manufacturer	JUWEI
Length of cable	/

AE22

Model	CDA3122005C7
Manufacturer	Yingju
Length of cable	/

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

3.4. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT1+ AE1/AE23 + AE11 + AE17	Charger
Set.2	EUT1+ AE1/AE23 + AE12 + AE18	Charger
Set.3	EUT1+ AE1/AE23 + AE13 + AE19	Charger
Set.4	EUT1+ AE1/AE23 + AE14	Charger
Set.5	EUT1+ AE1/AE23 + AE15	Charger
Set.6	EUT1+ AE1/AE23 + AE16	Charger
Set.7	EUT1+ AE1/AE2/AE3/AE4/AE5 + AE17/AE18/AE19	USB

Note:

HSUPA/HSDPA/UMTS Dual band/GSM Quad band mobile phone 4009F manufactured by TCL Communication Ltd is a variant model based on 4008A for conformance test. According to the declaration of changes, the following items are tested on Set.1, Set.2, Set.2, Set.4, Set.5, Set.6 and Set.7:

Test Item	Mode or Feature
Conducted Continuous Emission	GSM 1900MHz idle, USB mode
Radiated Continuous Emission	GSM 1900MHz idle, USB mode

4. Reference Documents

4.1. 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 - Unintentional Radiators	10-1-13 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	2009

5. LABORATORY ENVIRONMENT

Semi-anechoic chamber SAC-1 (23 meters×17meters×10meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ˚C, Max. = 35 ˚C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω
Normalised site attenuation (NSA)	< ±4 dB, 10 m distance
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 6GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

Shielded room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ˚C, Max. = 35 ˚C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz, >60dB; 1MHz－1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω

6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	NA	Not applicable
	F	Fail
Location Column	1/2/3/4	The test is performed in test location 1, 2, 3 or 4 which are described in section 1.1 of this report

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

7. Test Equipments Utilized

NO.	NAME	TYPE	SERIES NUMBER	PRODUCER	CAL. DUE DATE	CAL. INTERVAL
1.	EMI Antenna	VULB 9163	9163-234	Schwarzbeck	2016-09-15	3 Years
2.	Test Receiver	ESCI 7	100948	R&S	2015-07-16	1 Year
3.	Test Receiver	FSV	101047	R&S	2015-07-03	1 Year
4.	EMI Antenna	3115	9906-5827	ETS-Lindgren	2016-11-19	3 Years
5.	Test Receiver	ESCI	100344	R&S	2015-03-03	1 Year
6.	LISN	ENV216	101200	R&S	2015-07-07	1 Year
7.	Universal Radio Communication Tester	CMU200	109914	R&S	2015-04-13	1 Year
8.	PC	OPTIPLEX 380	2X1YV2X	DELL	/	/
9.	Monitor	E1709Wc	CN-OJ672H-64180-9BF-1CRL	DELL	/	/
10.	Printer	P1606dn	VNC3L52122	HP	/	/
11.	Keyboard	L100	CN-ORH656-65890-03S-041Y	DELL	/	/
12.	Mouse	M-UAR	LZ013HC1YLV	DELL	/	/

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 distances of 10 meters(for 30MHz-1GHz) and 3 meters (for above 1GHz) is tested. Tested in accordance with the procedures of ANSI C63.4 - 2009, section 8.3.
The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3/10 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.

A.1.2 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 380, and the serial number of the PC is 2X1YV2X. 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 range (MHz)	Field strength limit (μV/m)		
	Quasi-peak	Average	Peak
30-88	100		
88-216	150		
216-960	200		
960-1000	500		
>1000		500	5000

Note: the above limit is for 3 meters test distance. 10 meters' limit is got by converting.

A.1.4 Test Condition

Frequency range (MHz)	RBW/VBW	Sweep Time (s)	Detector
30-1000	120kHz (IF Bandwidth)	5	Peak/Quasi-peak
Above 1000	1MHz/1MHz	15	Peak, Average

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.

Measurement uncertainty (worst case): U = 4.3 dB, k=2.

Measurement results for Set.1:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	GPL (dB)	GA (dB/m)	PMea(dBμV)	Polarity
5255.938	30.6	-34.5	34.6	30.500	V
5261.875	30.4	-34.5	34.6	30.300	V
5258.750	30.4	-34.5	34.6	30.300	V
5262.813	30.4	-34.5	34.6	30.300	V
5266.875	30.4	-34.5	34.6	30.300	V
5260.938	30.4	-34.5	34.6	30.300	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	GPL (dB)	GA (dB/m)	PMea(dBμV)	Polarity
5823.750	42.7	-33.8	35.1	41.400	V
5818.438	42.7	-33.8	35.1	41.400	V
5317.188	42.3	-34.4	34.6	42.100	V
5832.813	42.2	-33.8	35.1	40.900	V
5843.438	42.2	-33.8	35.1	40.900	V
5110.000	42.2	-34.9	34.6	42.500	H

Measurement results for Set.2:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
5265.313	30.7	-34.5	34.6	30.600	V
5261.875	30.5	-34.5	34.6	30.400	V
5254.688	30.5	-34.5	34.6	30.400	V
5263.125	30.3	-34.5	34.6	30.200	V
5259.375	30.3	-34.5	34.6	30.200	V
5264.375	30.3	-34.5	34.6	30.200	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
5795.000	43.1	-33.8	35.1	41.800	V
5502.188	42.4	-34.0	35.1	41.300	V
5261.875	42.3	-34.5	34.6	42.200	V
5237.500	42.3	-34.5	34.6	42.200	V
5673.750	42.2	-34.2	35.1	41.300	V
5678.125	42.1	-34.2	35.1	41.200	H

Measurement results for Set.3:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
5264.375	30.7	-34.5	34.6	30.600	V
5265.313	30.6	-34.5	34.6	30.500	V
5268.125	30.5	-34.5	34.6	30.400	V
5263.125	30.5	-34.5	34.6	30.400	V
5260.938	30.5	-34.5	34.6	30.400	V
5262.188	30.4	-34.5	34.6	30.300	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
5014.688	42.9	-34.6	34.6	42.900	V
5677.813	42.7	-34.2	35.1	41.800	V
5286.563	42.6	-34.4	34.6	42.400	V
5266.250	42.6	-34.5	34.6	42.500	V
5260.313	42.2	-34.5	34.6	42.100	V
5820.000	42.2	-33.8	35.1	40.900	H

Measurement results for Set.4:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
5263.438	30.6	-34.5	34.6	30.500	V
5260.625	30.4	-34.5	34.6	30.300	V
5258.125	30.4	-34.5	34.6	30.300	V
5259.063	30.4	-34.5	34.6	30.300	V
5266.250	30.3	-34.5	34.6	30.200	V
5261.250	30.3	-34.5	34.6	30.200	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
5665.313	42.8	-34.2	35.1	41.900	V
5264.375	42.7	-34.5	34.6	42.600	V
5271.875	42.3	-34.4	34.6	42.100	V
5675.625	42.3	-34.2	35.1	41.400	V
5260.625	42.2	-34.5	34.6	42.100	V
5805.938	42.2	-33.8	35.1	40.900	H

Measurement results for Set.5:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
5267.813	30.4	-34.5	34.6	30.300	V
5265.625	30.4	-34.5	34.6	30.300	V
5261.875	30.4	-34.5	34.6	30.300	V
5260.313	30.3	-34.5	34.6	30.200	V
5259.688	30.3	-34.5	34.6	30.200	V
5258.438	30.3	-34.5	34.6	30.200	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
5329.688	42.8	-34.8	34.6	43.000	V
5731.563	42.7	-33.8	35.1	41.400	V
5933.125	42.5	-34.1	35.1	41.500	V
5261.875	42.3	-34.5	34.6	42.200	V
5236.250	42.3	-34.5	34.6	42.200	V
5855.000	42.2	-33.8	35.1	40.900	H

Measurement results for Set.6:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
5258.438	30.4	-34.5	34.6	30.300	V
5261.875	30.3	-34.5	34.6	30.200	V
5257.500	30.2	-34.5	34.6	30.100	V
5259.688	30.2	-34.5	34.6	30.100	V
5265.313	30.2	-34.5	34.6	30.100	V
5262.813	30.2	-34.5	34.6	30.100	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
5007.813	42.2	-34.6	34.6	42.200	V
5293.750	42.1	-34.4	34.6	41.900	V
5263.125	42.1	-34.5	34.6	42.000	V
5337.500	42.0	-34.8	34.6	42.200	V
5675.938	42.0	-34.2	35.1	41.100	V
5699.375	42.0	-34.2	35.1	41.100	H

Measurement results for Set.7:

USB Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
1051.250	32.2	-41.7	24.1	49.800	V
1254.688	32.2	-41.1	24.1	49.200	V
1088.438	31.8	-41.6	24.1	49.300	V
1093.125	31.7	-41.6	24.1	49.200	H
1089.063	31.6	-41.6	24.1	49.100	V
1093.750	31.6	-41.5	24.1	49.000	H

USB Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G_{PL} (dB)	G_A (dB/m)	P_{Mea}(dBμV)	Polarity
1197.500	54.3	-41.3	24.1	71.500	V
1325.313	50.0	-40.8	24.1	66.700	V
1325.000	48.7	-40.8	24.1	65.400	H
1604.063	48.0	-39.8	25.3	62.500	V
1603.750	47.5	-39.8	25.3	62.000	V
1324.688	47.3	-40.8	24.1	64.000	H

Note: The measurement results of Set.1, Set.2, Set.3, Set.4, Set.5, Set.6 and Set.7 showed here are worst cases of the combinations of different batteries and USB cables.

Charging Mode, Set.1

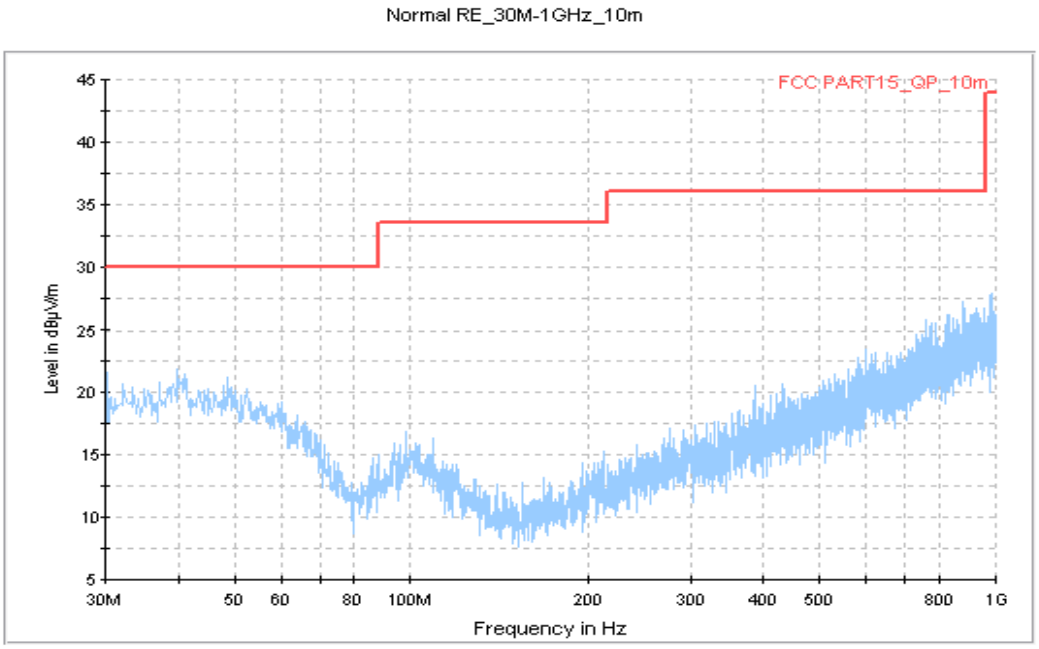


Fig.1 Radiated Emission from 30MHz to 1GHz

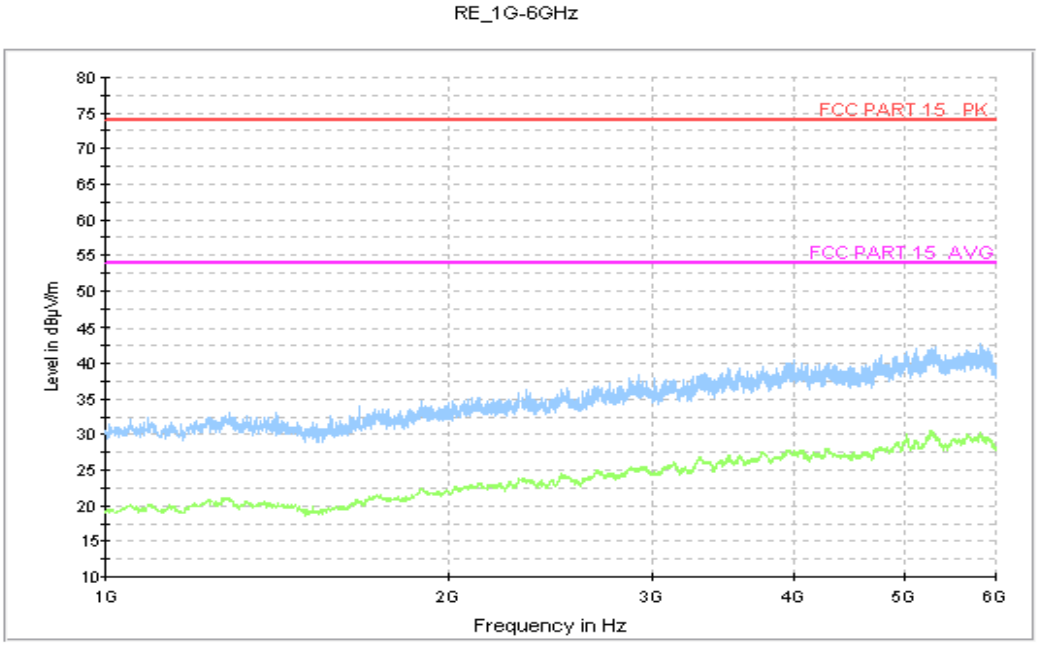


Fig.2 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.2

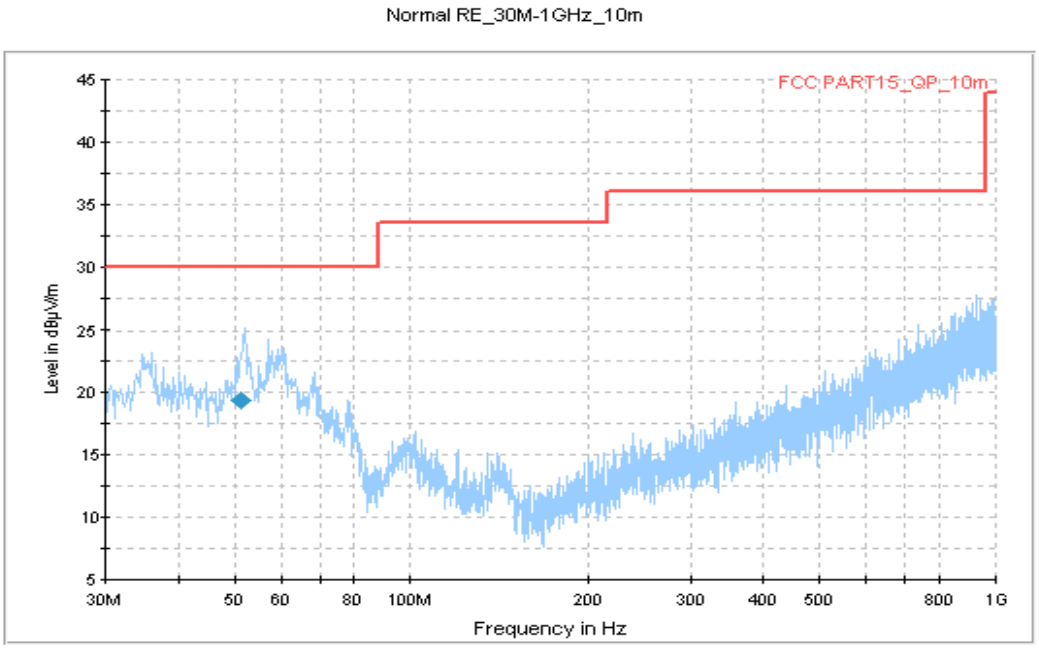


Fig.3 Radiated Emission from 30MHz to 1GHz

Final Result

Frequency MHz	QuasiPeak dBµV/m	Limit dBµV/m	Margin dB	Azimuth Deg	Polarization H/V
51.406250	19.4	400.0	V	120.0	-19.0

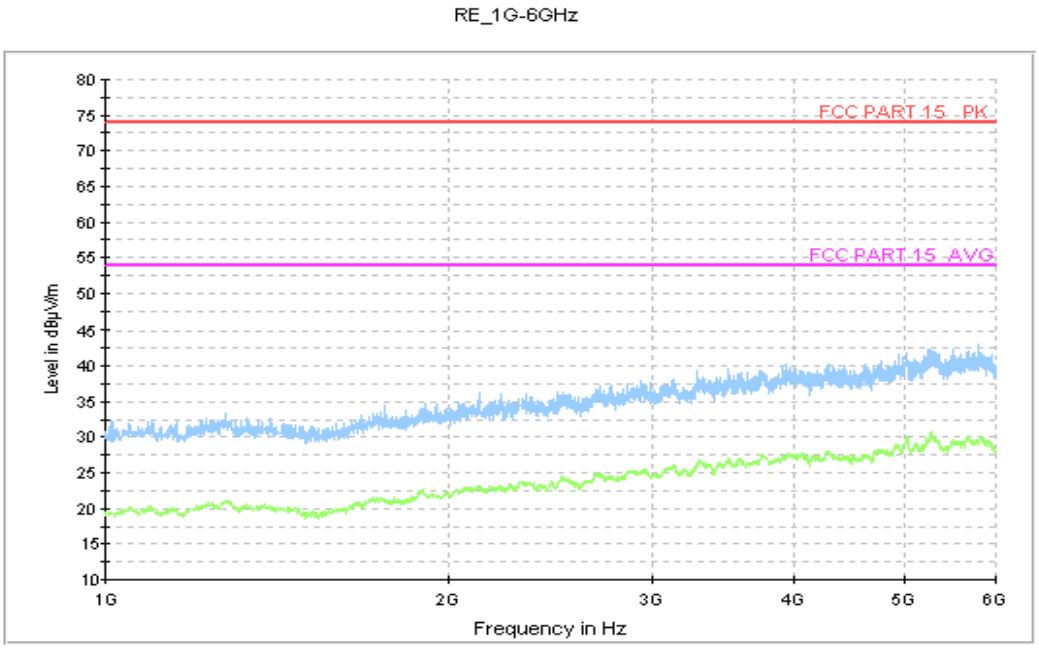


Fig.4 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.3

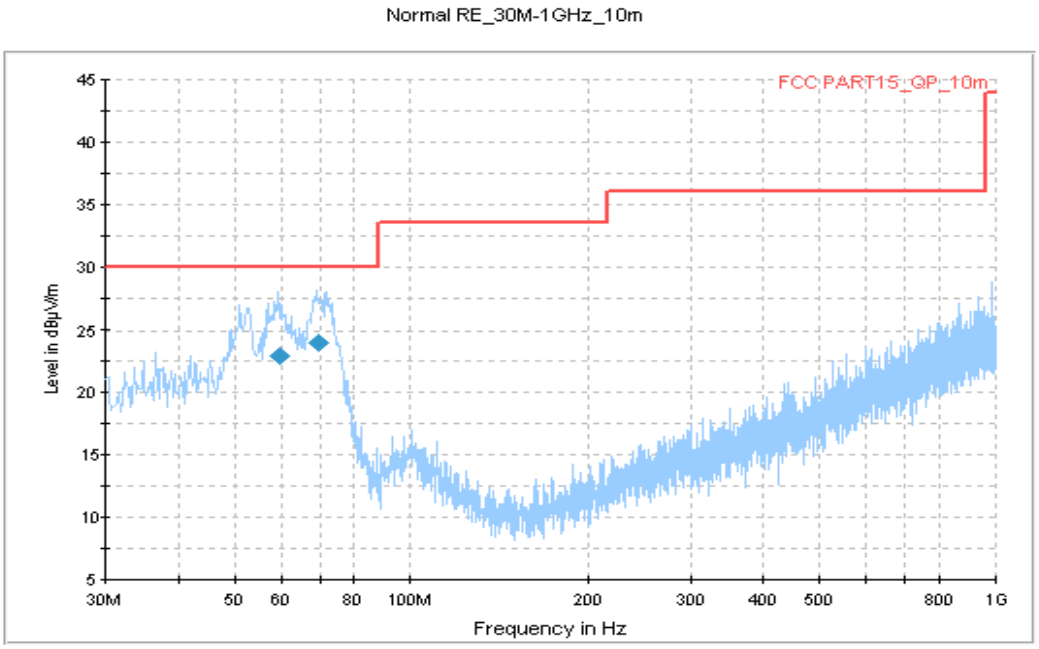


Fig.5 Radiated Emission from 30MHz to 1GHz

Final Result

Frequency MHz	QuasiPeak dBµV/m	Limit dBµV/m	Margin dB	Azimuth Deg	Polarization H/V
59.763750	23.0	100.0	V	104.0	-19.1
69.462500	24.0	225.0	V	83.0	-21.6

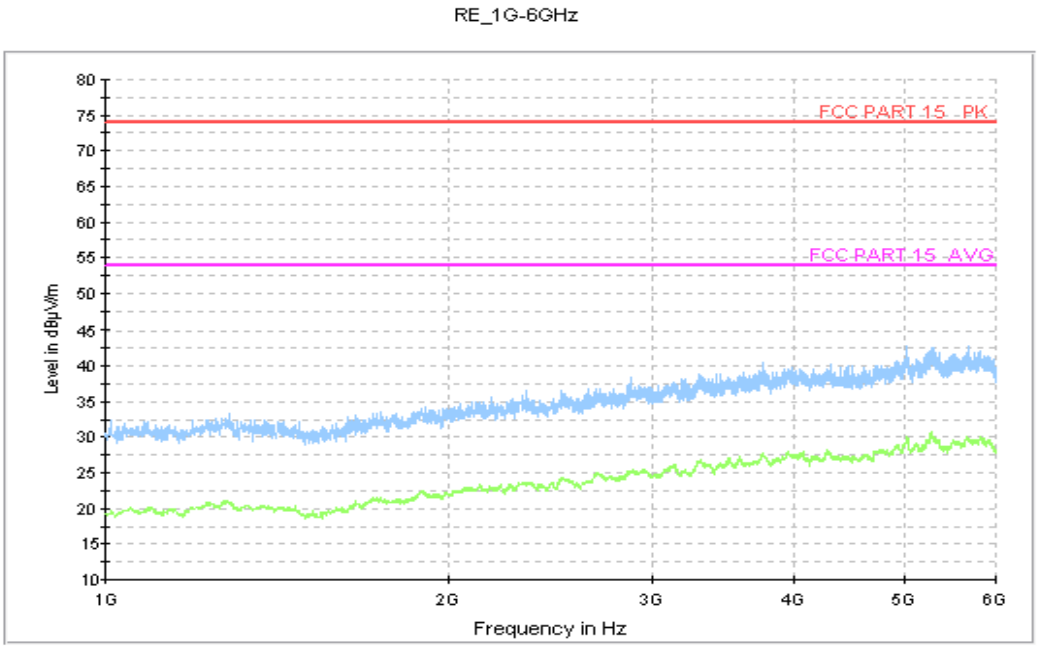


Fig.6 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.4

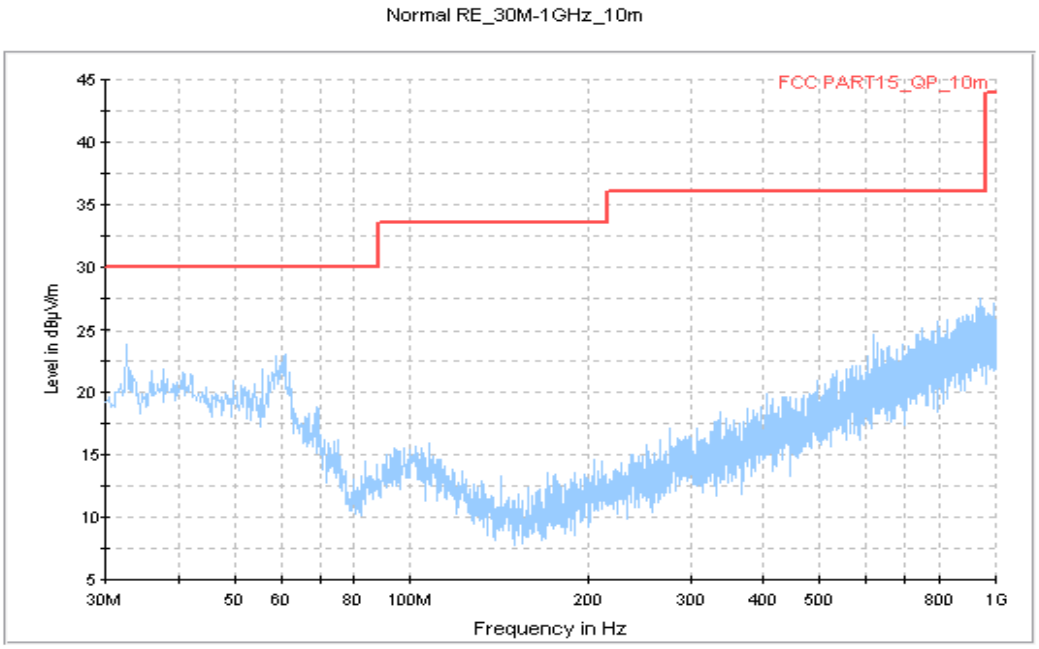


Fig.7 Radiated Emission from 30MHz to 1GHz

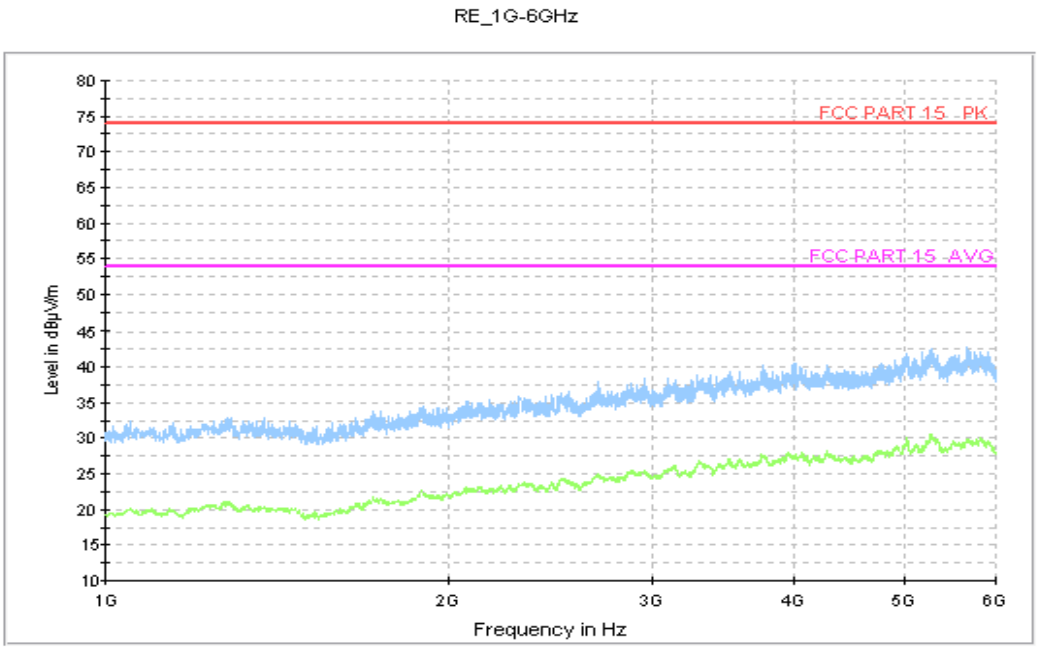


Fig.8 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.5

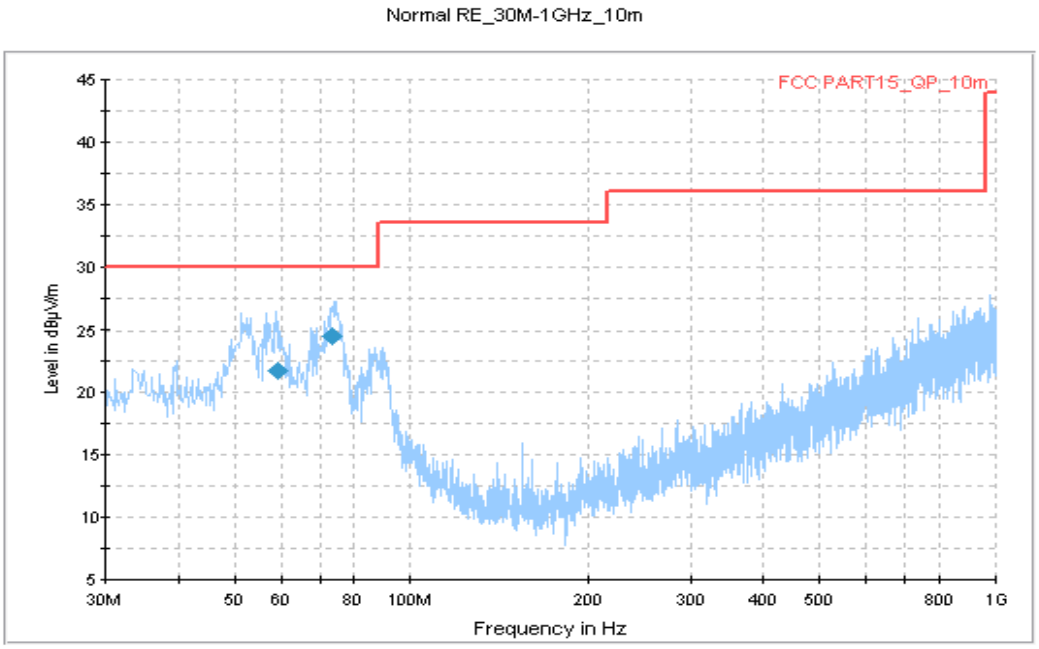


Fig.9 Radiated Emission from 30MHz to 1GHz

Final Result

Frequency MHz	QuasiPeak dBµV/m	Limit dBµV/m	Margin dB	Azimuth Deg	Polarization H/V
59.097500	21.8	100.0	V	166.0	-19.1
73.651250	24.6	217.0	V	60.0	-22.7

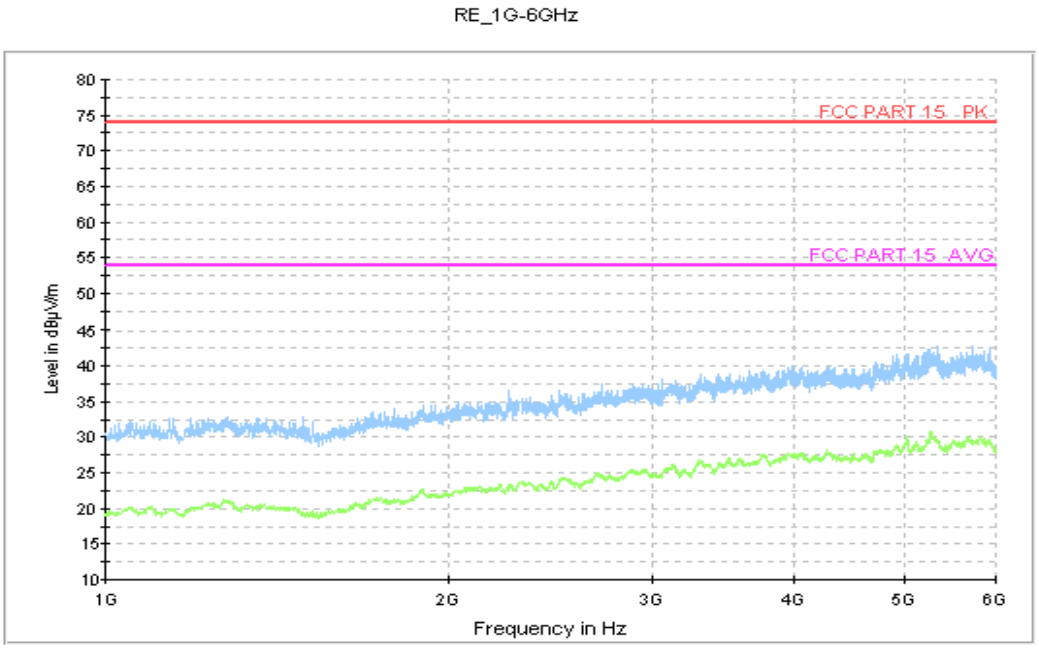


Fig.10 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.6

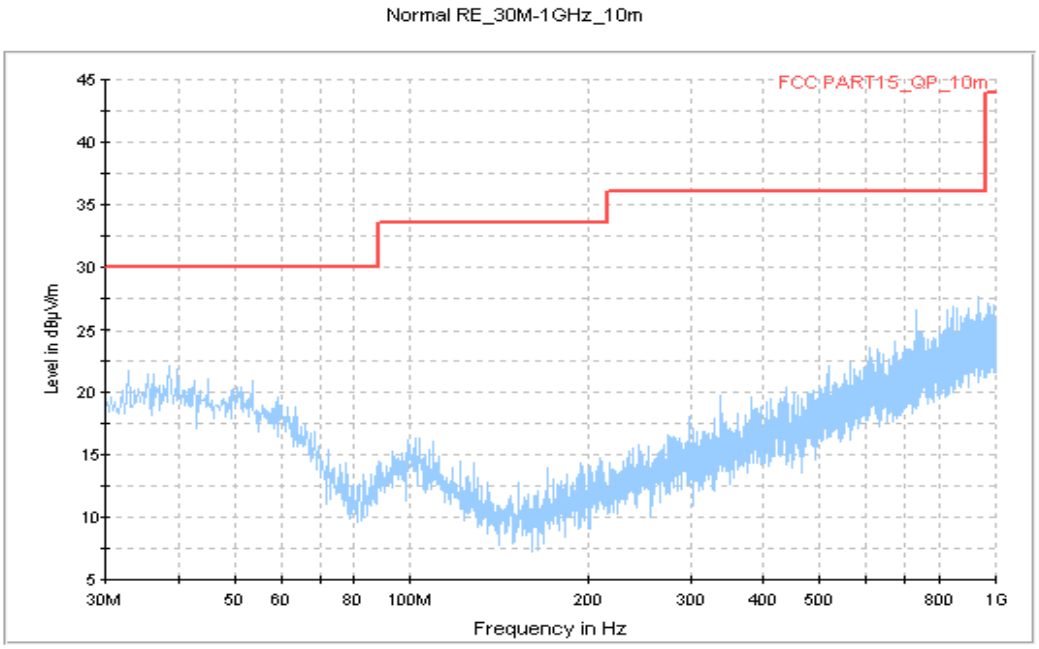


Fig.11 Radiated Emission from 30MHz to 1GHz

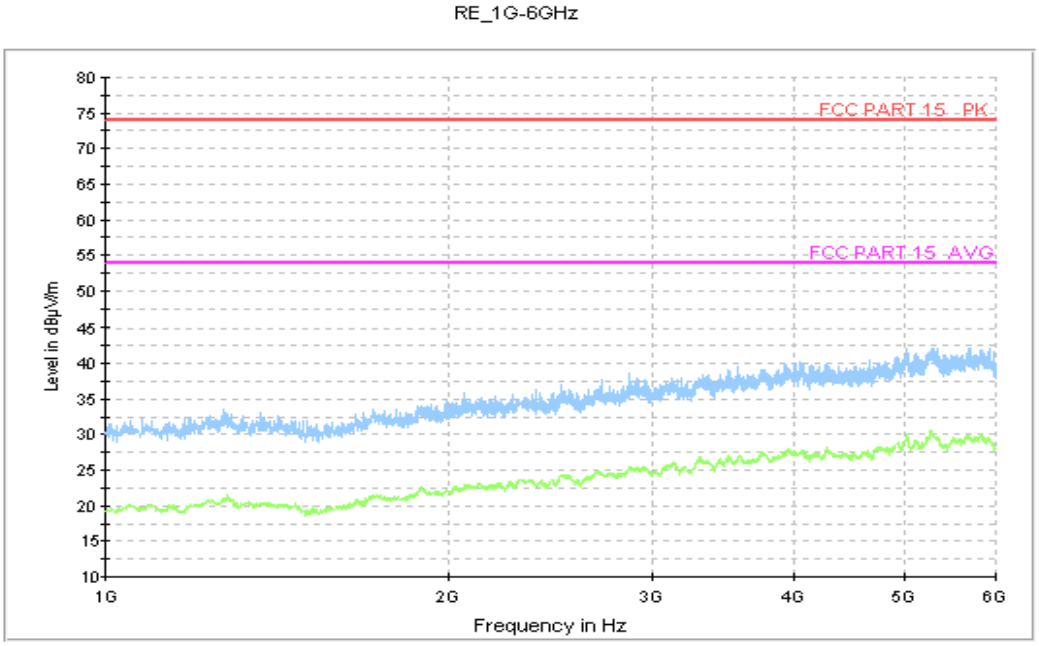


Fig.12 Radiated Emission from 1GHz to 6GHz

USB Mode, Set.7

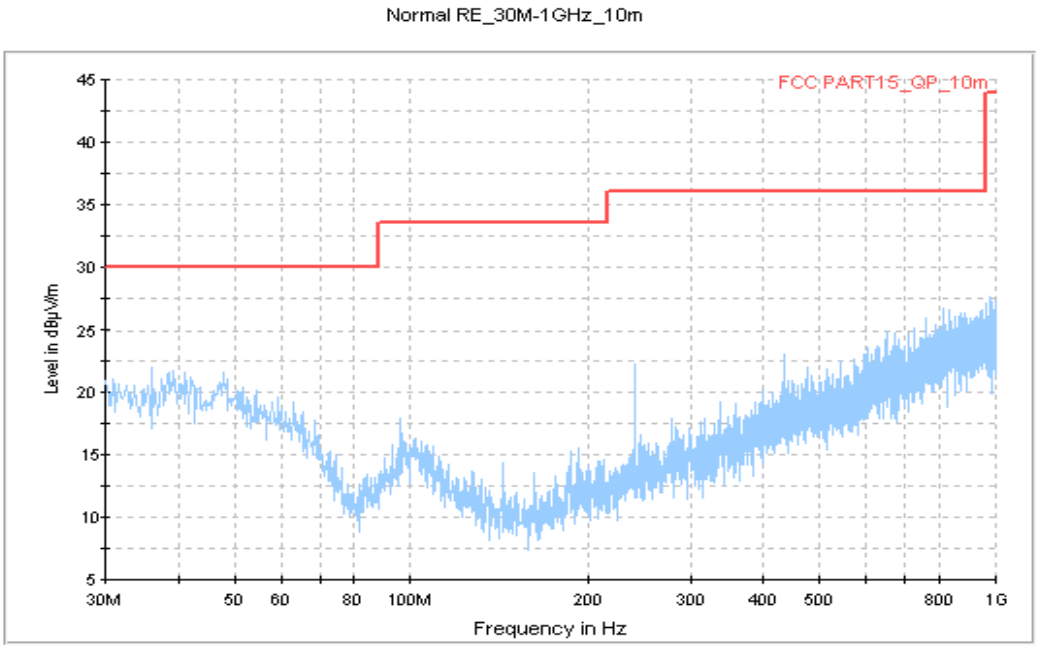


Fig.13 Radiated Emission from 30MHz to 1GHz

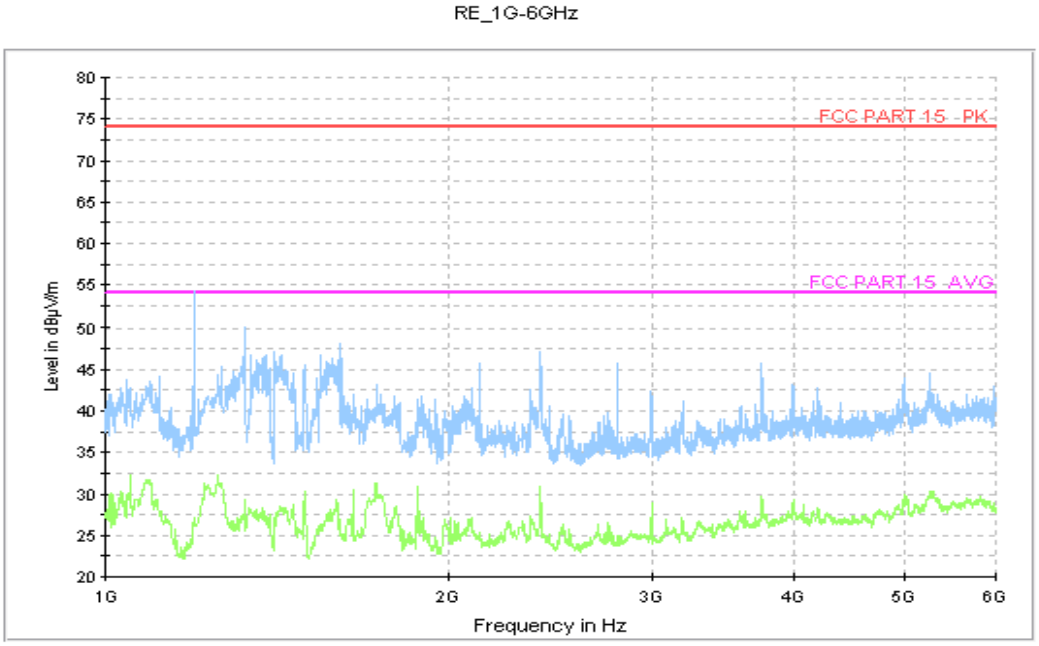


Fig.14 Radiated Emission from 1GHz to 6GHz

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 - 2009, 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 380, and the serial number of the PC is 2X1YV2X. 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/IF bandwidth	Sweep Time(s)
9kHz	1

A.2.5 Measurement Results

Measurement uncertainty: *U*= 2.9 dB, *k*=2.

Charging Mode, Set.1

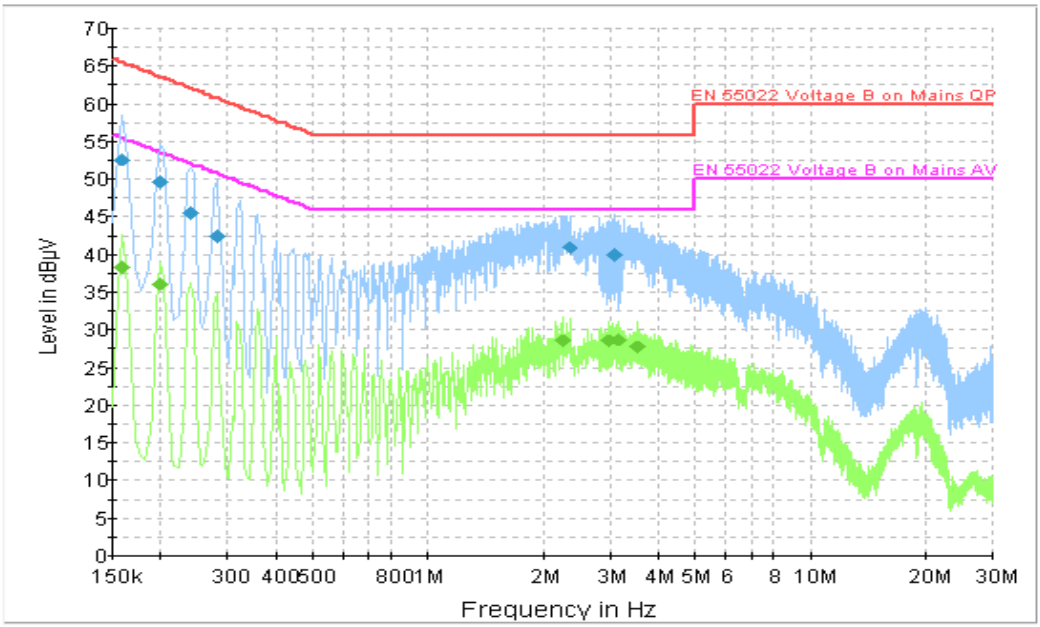


Fig.1 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	52.7	GND	N	19.9	12.8	65.5
0.199500	49.7	GND	N	19.9	14.0	63.6
0.240000	45.6	GND	N	19.9	16.5	62.1
0.280500	42.5	GND	N	19.8	18.3	60.8
2.341500	40.9	GND	L1	19.7	15.1	56.0
3.066000	40.0	GND	L1	19.7	16.0	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	38.3	GND	L1	19.8	17.3	55.5
0.199500	36.1	GND	L1	19.8	17.5	53.6
2.269500	28.6	GND	L1	19.7	17.4	46.0
2.994000	28.5	GND	L1	19.7	17.5	46.0
3.147000	28.7	GND	L1	19.7	17.3	46.0
3.534000	27.8	GND	L1	19.7	18.2	46.0

Note: The measurement results showed here are worst cases of the combinations of different batteries and USB cables.

Charging Mode, Set.2

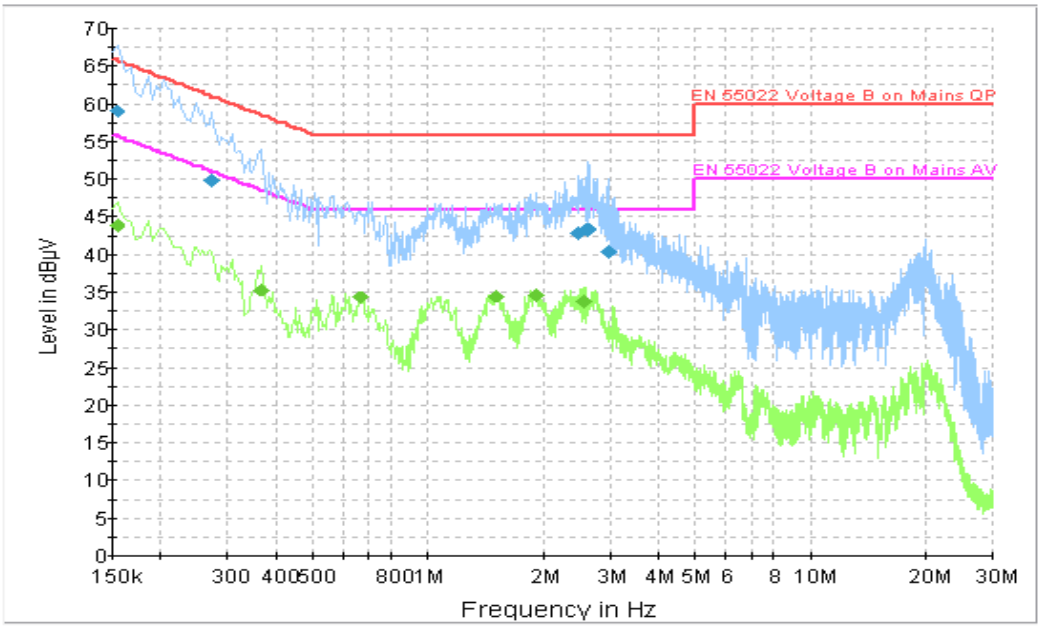


Fig.2 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	59.1	GND	L1	19.7	6.7	65.8
0.271500	49.9	GND	L1	19.9	11.2	61.1
2.463000	42.9	GND	N	19.7	13.1	56.0
2.616000	43.5	GND	N	19.7	12.5	56.0
2.629500	43.3	GND	N	19.7	12.7	56.0
2.994000	40.5	GND	N	19.7	15.5	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	43.9	GND	L1	19.7	11.8	55.8
0.366000	35.3	GND	N	19.9	13.3	48.6
0.667500	34.3	GND	L1	19.9	11.7	46.0
1.513500	34.4	GND	L1	19.7	11.6	46.0
1.914000	34.7	GND	L1	19.7	11.3	46.0
2.553000	33.9	GND	L1	19.7	12.1	46.0

Note: The measurement results showed here are worst cases of the combinations of different batteries and USB cables.

Charging Mode, Set.3

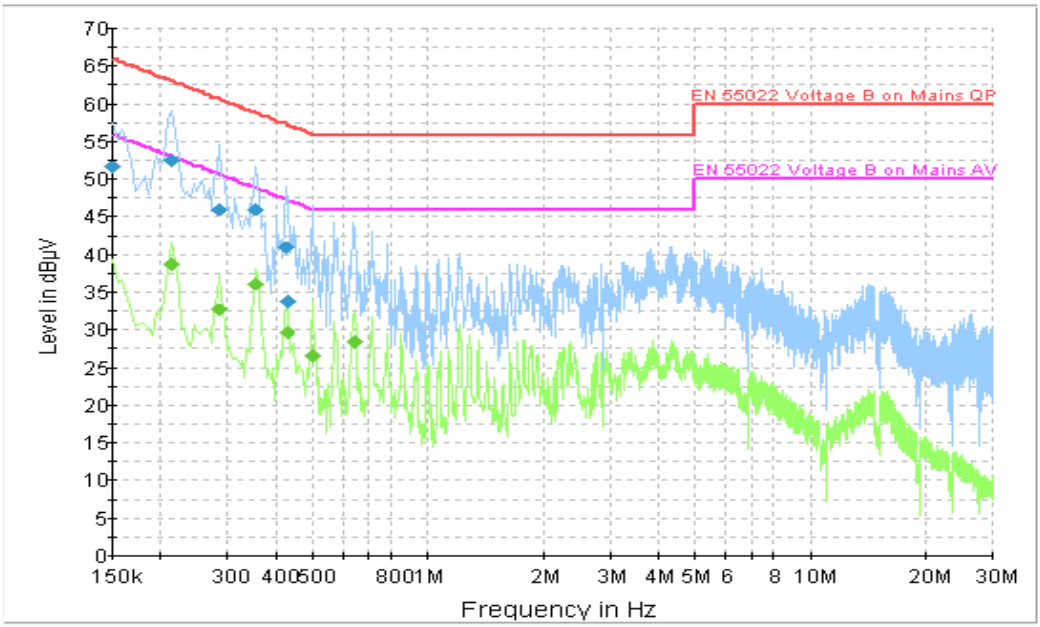


Fig.3 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	51.6	GND	L1	19.7	14.4	66.0
0.213000	52.5	GND	L1	19.8	10.6	63.1
0.285000	46.1	GND	L1	19.9	14.5	60.7
0.352500	46.0	GND	N	19.9	12.9	58.9
0.424500	41.0	GND	L1	20.0	16.4	57.4
0.433500	33.8	GND	L1	20.0	23.4	57.2

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.213000	38.7	GND	L1	19.8	14.4	53.1
0.285000	32.7	GND	L1	19.9	17.9	50.7
0.352500	36.1	GND	N	19.9	12.8	48.9
0.429000	29.7	GND	L1	20.0	17.6	47.3
0.501000	26.5	GND	L1	20.0	19.5	46.0
0.640500	28.3	GND	L1	19.9	17.7	46.0

Note: The measurement results showed here are worst cases of the combinations of different batteries and USB cables.

Charging Mode, Set.4

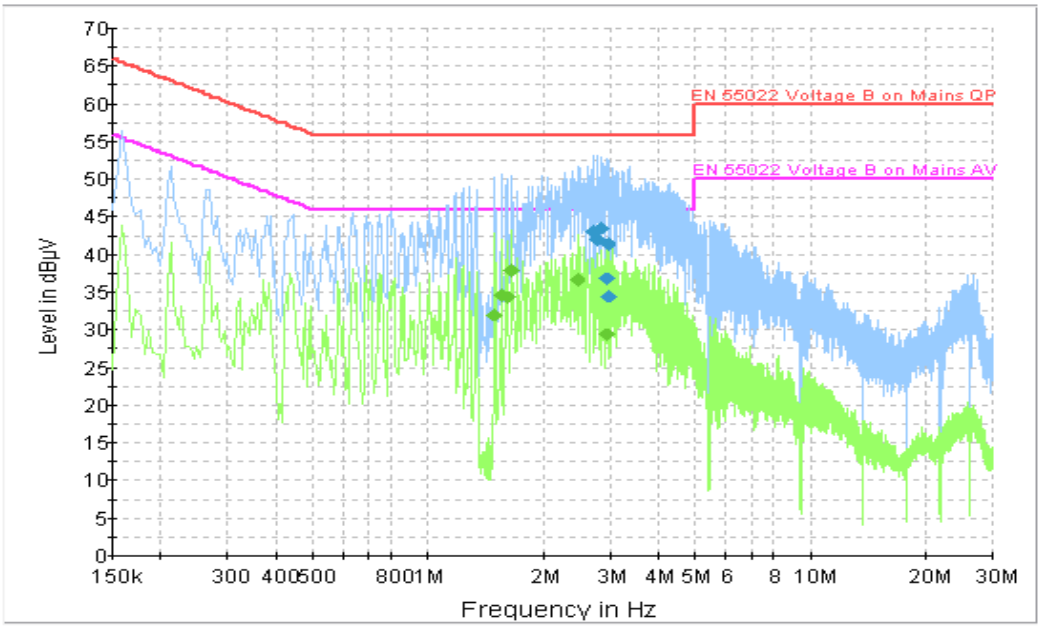


Fig.4 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
2.724000	43.1	GND	N	19.7	12.9	56.0
2.778000	42.1	GND	N	19.7	13.9	56.0
2.845500	43.7	GND	L1	19.7	12.3	56.0
2.940000	36.8	GND	L1	19.7	19.2	56.0
2.949000	41.4	GND	L1	19.7	14.6	56.0
2.994000	34.4	GND	L1	19.7	21.6	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
N	19.7	GND	L1	19.7	14.0	46.0
N	19.7	GND	L1	19.7	11.3	46.0
L1	19.7	GND	L1	19.7	11.6	46.0
L1	19.7	GND	L1	19.7	8.1	46.0
L1	19.7	GND	L1	19.7	9.3	46.0
L1	19.7	GND	L1	19.7	16.5	46.0

Note: The measurement results showed here are worst cases of the combinations of different batteries and USB cables.

Charging Mode, Set.5

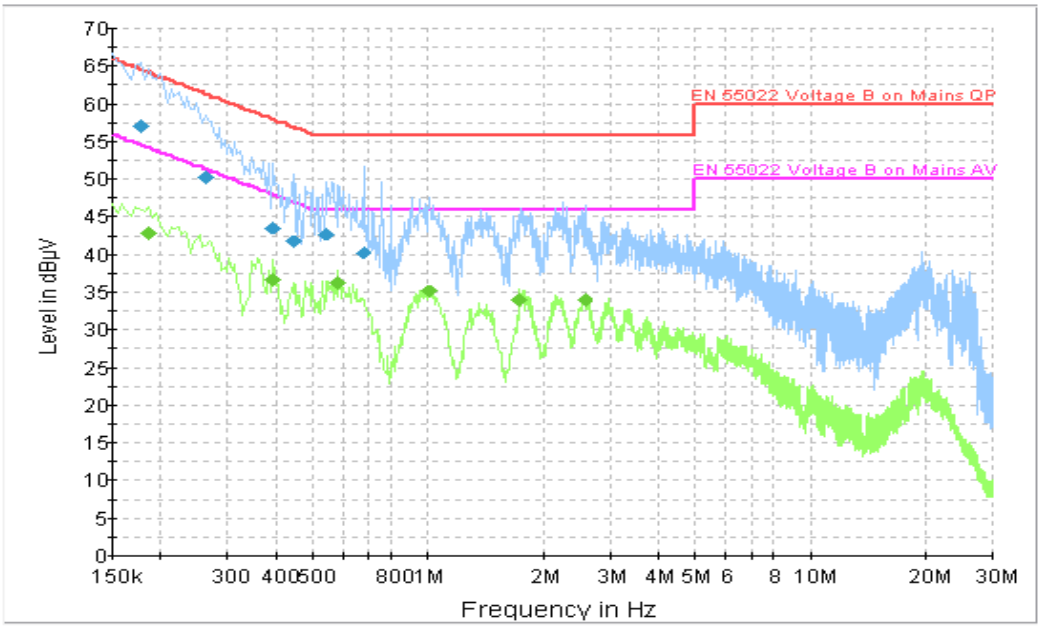


Fig.5 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.177000	57.1	GND	L1	19.9	7.5	64.6
0.262500	50.3	GND	N	19.8	11.0	61.4
0.393000	43.6	GND	L1	19.9	14.4	58.0
0.442500	41.7	GND	L1	20.0	15.3	57.0
0.541500	42.7	GND	N	20.0	13.3	56.0
0.676500	40.3	GND	N	19.9	15.7	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.186000	42.9	GND	L1	19.9	11.3	54.2
0.393000	36.6	GND	L1	19.9	11.4	48.0
0.577500	36.3	GND	L1	20.0	9.7	46.0
1.009500	35.2	GND	L1	19.7	10.8	46.0
1.738500	34.0	GND	L1	19.7	12.0	46.0
2.566500	34.0	GND	L1	19.7	12.0	46.0

Note: The measurement results showed here are worst cases of the combinations of different batteries and USB cables.

Charging Mode, Set.6

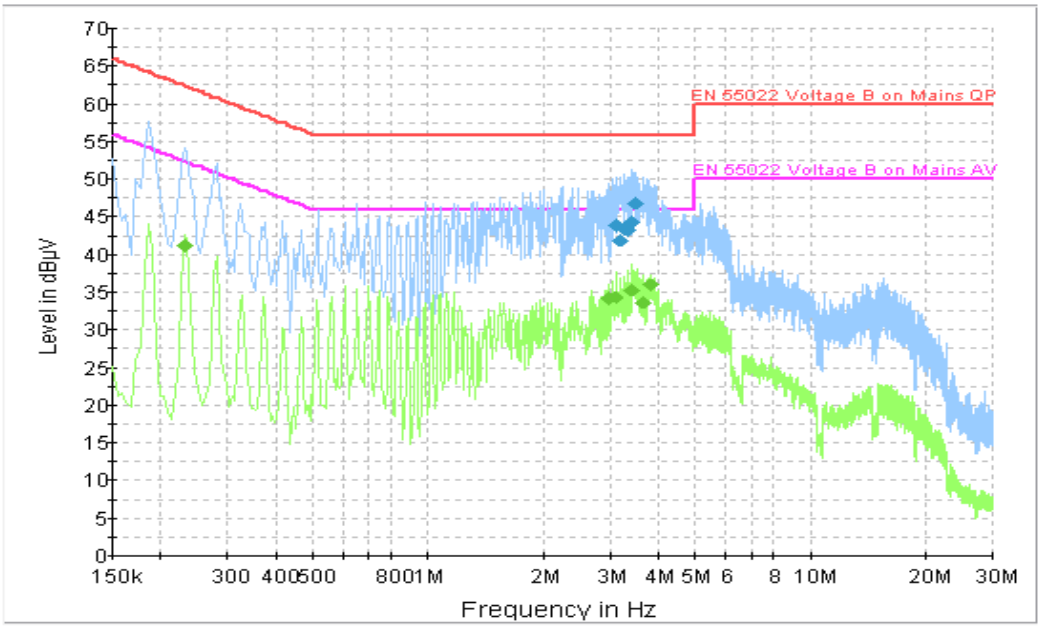


Fig.6 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
3.088500	43.9	GND	L1	19.7	12.1	56.0
3.178500	41.9	GND	N	19.7	14.1	56.0
3.273000	43.5	GND	L1	19.6	12.5	56.0
3.322500	43.3	GND	L1	19.7	12.7	56.0
3.417000	44.4	GND	L1	19.7	11.6	56.0
3.498000	46.9	GND	L1	19.6	9.1	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.231000	41.4	GND	L1	19.8	11.1	52.4
2.989500	34.2	GND	L1	19.7	11.8	46.0
3.088500	34.4	GND	L1	19.7	11.6	46.0
3.417000	35.4	GND	L1	19.7	10.6	46.0
3.651000	33.6	GND	L1	19.7	12.4	46.0
3.826500	36.0	GND	L1	19.7	10.0	46.0

Note: The measurement results showed here are worst cases of the combinations of different batteries and USB cables.

USB Mode, Set.7

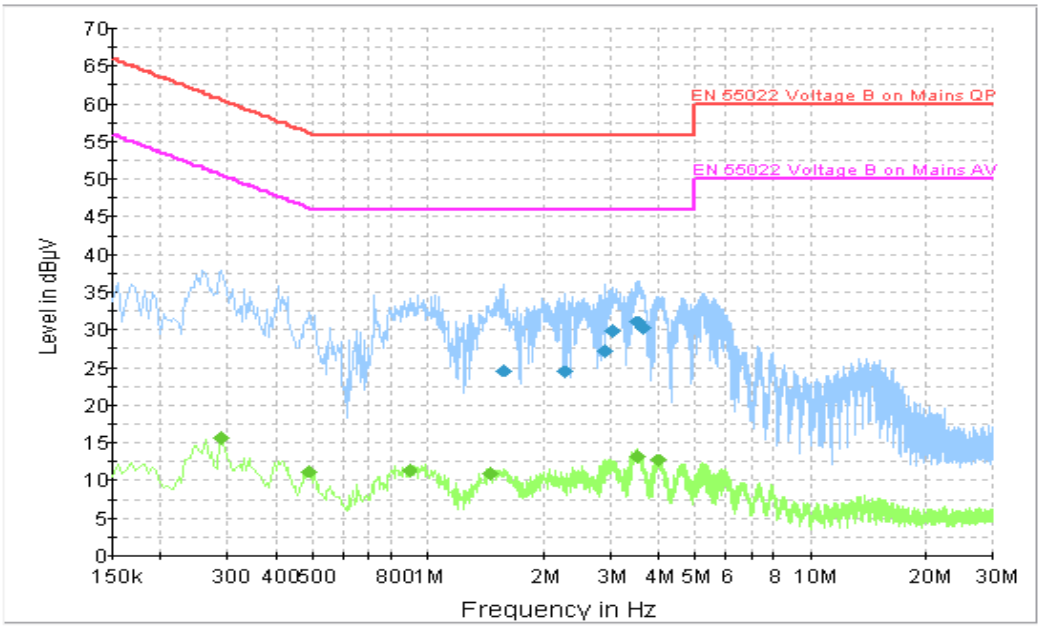


Fig.7 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
1.581000	24.6	GND	N	19.8	31.4	56.0
2.278500	24.4	GND	L1	19.7	31.6	56.0
2.904000	27.3	GND	L1	19.7	28.7	56.0
3.025500	29.8	GND	L1	19.7	26.2	56.0
3.507000	31.1	GND	L1	19.6	24.9	56.0
3.651000	30.3	GND	L1	19.7	25.7	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.289500	15.7	GND	L1	19.9	34.9	50.5
0.487500	11.3	GND	L1	20.0	35.0	46.2
0.892500	11.4	GND	L1	19.8	34.6	46.0
1.450500	10.9	GND	L1	19.7	35.1	46.0
3.534000	13.2	GND	L1	19.7	32.8	46.0
3.993000	12.7	GND	L1	19.7	33.3	46.0

Note: The measurement results showed here are worst cases of the combinations of different batteries and USB cables.

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