



TEST REPORT

No. I14Z48817-EMC01

for

TCL Communication Ltd

HSUPA/HSDPA/UMTS triple band /GSM quad band mobile phone

Model Name: 4009E

FCC ID: 2ACCJH011

with

Hardware Version: PIO

Software Version: v4B2D

Issued Date: 2014-12-26

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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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I14Z48817-EMC01	Rev.0	1st edition	2014-12-26

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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 °C

Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2014-12-12

Testing End Date: 2014-12-25

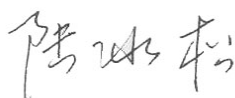
1.4. Signature



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
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Contact Email: zhizhou.gong@tcl.com
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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 triple band/GSM Quad band mobile phone
Model Name	4009E
FCC ID	2ACCJH011
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	356870060100068	PIO	v4B2D

*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	B31P0000CBH01001	14TCT-BA-1216
AE2	Battery	B111246611A	14TCT-BA-1506
AE3	Battery	B1300015C2Y0007V	14TCT-BA-1930
AE4	Battery	B1150001CBH04531	14TCT-BA-2046
AE5	Battery	B1150000C1100270	14TCT-BA-2053
AE11	Travel charger	/	14TCT-CH-2221
AE12	Travel charger	/	14TCT-CH-0205
AE13	Travel charger	/	14TCT-CH-2187
AE14	Travel charger	/	14TCT-CH-0367
AE15	Travel charger	/	14TCT-CH-1458
AE16	Travel charger	/	14TCT-CH-1986
AE17	USB cable	/	14TCT-DC-0671
AE18	USB cable	/	14TCT-DC-0604
AE19	USB cable	/	14TCT-DC-0751
AE20	USB cable	/	14TCT-DC-0664
AE21	USB cable	/	14TCT-DC-0508
AE22	USB cable	/	14TCT-DC-0743

AE1

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 triple band /GSM quad band mobile phone 4009E 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	6914	ETS-Lindgren	2016-12-15	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-6 4180-9BF-1CR L	DELL	/	/
10.	Printer	P1606dn	VNC3L52122	HP	/	/
11.	Keyboard	L100	CN-ORH656-6 5890-03S-041 Y	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 ($\mu\text{V/m}$)		
	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:

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

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Measurement uncertainty (worst case): $U = 4.3 \text{ dB}$, $k=2$.

Measurement results for Set.1:

Charging Mode/Average detector

Frequency(MHz)	Result(dB μ V/m)	GPL (dB)	GA (dB/m)	PMea(dB μ V)	Polarity
5260.625	30.5	-34.5	34.6	30.400	V
5266.250	30.4	-34.5	34.6	30.300	H
5256.875	30.3	-34.5	34.6	30.200	V
5263.438	30.3	-34.5	34.6	30.200	H
5263.125	30.3	-34.5	34.6	30.200	V
5265.625	30.2	-34.5	34.6	30.100	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dB μ V/m)	GPL (dB)	GA (dB/m)	PMea(dB μ V)	Polarity
5755.000	42.7	-33.8	35.1	41.400	H
5812.188	42.6	-33.8	35.1	41.300	H
5019.063	42.5	-34.6	34.6	42.500	V
5230.313	42.3	-34.5	34.6	42.200	H
5262.813	42.3	-34.5	34.6	42.200	V
5014.688	42.3	-34.6	34.6	42.300	V

Measurement results for Set.2:
Charging Mode/Average detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
5262.188	30.4	-34.5	34.6	30.300	V
5261.875	30.4	-34.5	34.6	30.300	V
5263.125	30.4	-34.5	34.6	30.300	H
5261.563	30.3	-34.5	34.6	30.200	V
5255.000	30.3	-34.5	34.6	30.200	H
5259.375	30.3	-34.5	34.6	30.200	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
5255.938	42.8	-34.5	34.6	42.700	H
5274.063	42.5	-34.4	34.6	42.300	H
5278.438	42.2	-34.4	34.6	42.000	V
5019.375	42.2	-34.6	34.6	42.200	V
5695.313	42.2	-34.2	35.1	41.300	H
5287.813	42.0	-34.4	34.6	41.800	H

Measurement results for Set.3:
Charging Mode/Average detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
5258.750	30.4	-34.5	34.6	30.300	H
5258.438	30.3	-34.5	34.6	30.200	V
5261.563	30.3	-34.5	34.6	30.200	V
5263.750	30.3	-34.5	34.6	30.200	V
5253.438	30.2	-34.5	34.6	30.100	H
5269.375	30.2	-34.4	34.6	30.000	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
5266.875	42.7	-34.5	34.6	42.600	V
5273.438	42.6	-34.4	34.6	42.400	H
5630.000	42.4	-34.4	35.1	41.700	V
5262.813	42.4	-34.5	34.6	42.300	H
5265.000	42.0	-34.5	34.6	41.900	H
5287.813	42.0	-34.4	34.6	41.800	H

Measurement results for Set.4:
Charging Mode/Average detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
5257.813	30.4	-34.5	34.6	30.300	H
5259.063	30.3	-34.5	34.6	30.200	H
5260.625	30.3	-34.5	34.6	30.200	V
5258.438	30.3	-34.5	34.6	30.200	V
5263.125	30.3	-34.5	34.6	30.200	H
5267.188	30.3	-34.5	34.6	30.200	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
5337.188	42.9	-34.8	34.6	43.100	H
5767.188	42.7	-33.8	35.1	41.400	H
5323.438	42.3	-34.8	34.6	42.500	V
5617.188	42.3	-34.4	35.1	41.600	V
5527.813	42.2	-34.0	35.1	41.100	V
5015.938	42.1	-34.6	34.6	42.100	H

Measurement results for Set.5:
Charging Mode/Average detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
5261.875	30.6	-34.5	34.6	30.500	H
5265.000	30.5	-34.5	34.6	30.400	H
5259.375	30.5	-34.5	34.6	30.400	V
5256.250	30.4	-34.5	34.6	30.300	H
5267.500	30.3	-34.5	34.6	30.200	V
5267.188	30.3	-34.5	34.6	30.200	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
5257.188	42.9	-34.5	34.6	42.800	H
5262.813	42.3	-34.5	34.6	42.200	V
5284.063	42.0	-34.4	34.6	41.800	V
5021.250	42.0	-34.6	34.6	42.000	H
5738.438	42.0	-33.8	35.1	40.700	H
5298.438	41.9	-34.4	34.6	41.700	V

Measurement results for Set.6:
Charging Mode/Average detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
5263.750	30.4	-34.5	34.6	30.300	V
5259.688	30.3	-34.5	34.6	30.200	H
5258.750	30.3	-34.5	34.6	30.200	V
5254.375	30.3	-34.5	34.6	30.200	H
5278.125	30.3	-34.4	34.6	30.100	V
5259.063	30.2	-34.5	34.6	30.100	V

Charging Mode/Peak detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
5818.750	43.0	-33.8	35.1	41.700	H
5310.625	42.6	-34.4	34.6	42.400	H
5011.563	42.5	-34.6	34.6	42.500	V
5665.000	42.4	-34.2	35.1	41.500	H
5667.188	42.2	-34.2	35.1	41.300	H
5318.438	42.1	-34.4	34.6	41.900	H

Measurement results for Set.7:
USB Mode/Average detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
1442.813	35.0	-40.4	24.1	51.300	H
1442.188	34.8	-40.4	24.1	51.100	H
1443.125	34.7	-40.4	24.1	51.000	V
1442.500	34.7	-40.4	24.1	51.000	H
1440.625	34.6	-40.4	24.1	50.900	H
1441.563	34.5	-40.4	24.1	50.800	H

USB Mode/Peak detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
1464.063	54.4	-40.0	24.1	70.300	H
1463.750	54.3	-40.0	24.1	70.200	H
1198.125	54.0	-41.3	24.1	71.200	V
1464.375	53.6	-40.0	24.1	69.500	H
1464.688	53.3	-40.0	24.1	69.200	H
1441.875	53.0	-40.4	24.1	69.300	V

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

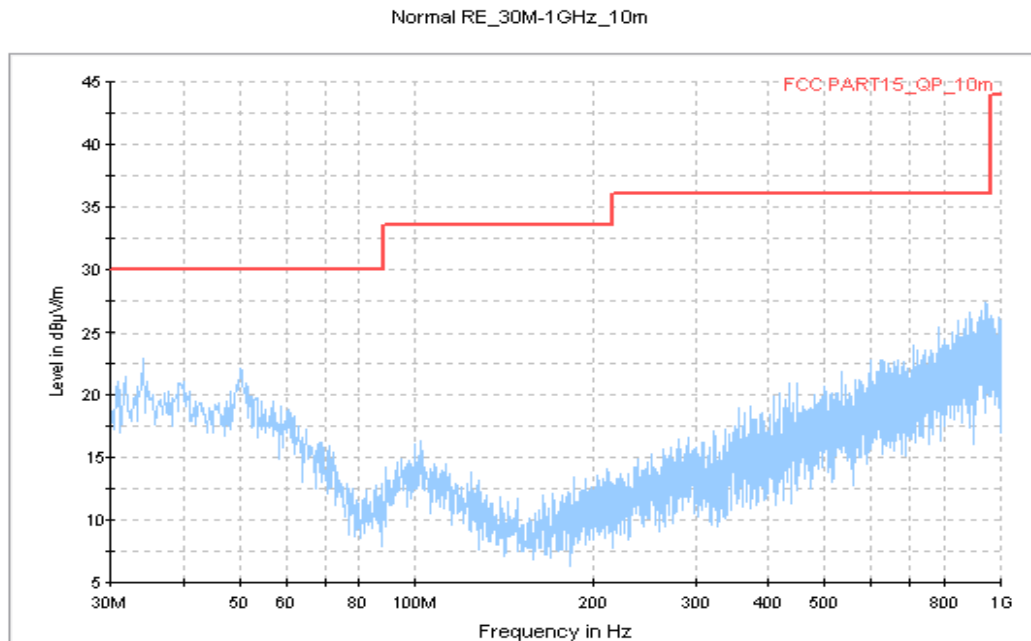


Fig.1 Radiated Emission from 30MHz to 1GHz

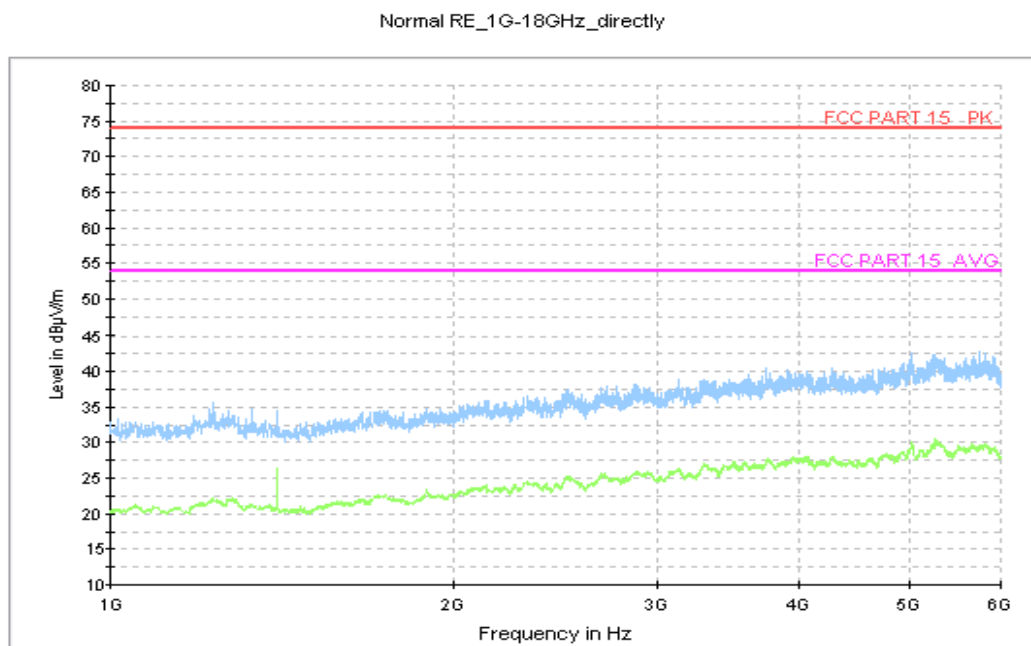


Fig.2 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.2

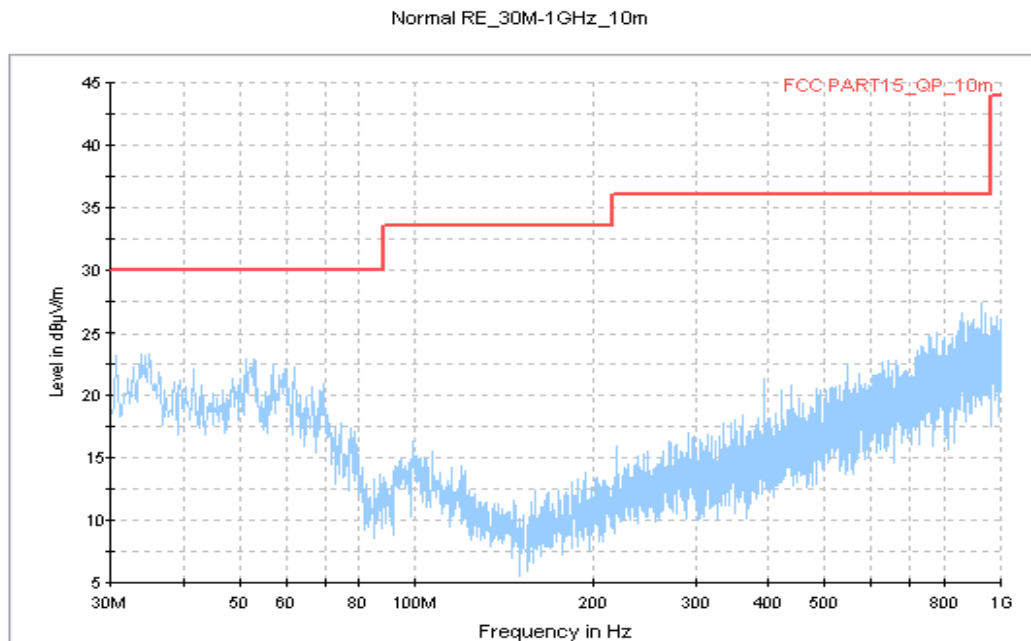


Fig.3 Radiated Emission from 30MHz to 1GHz

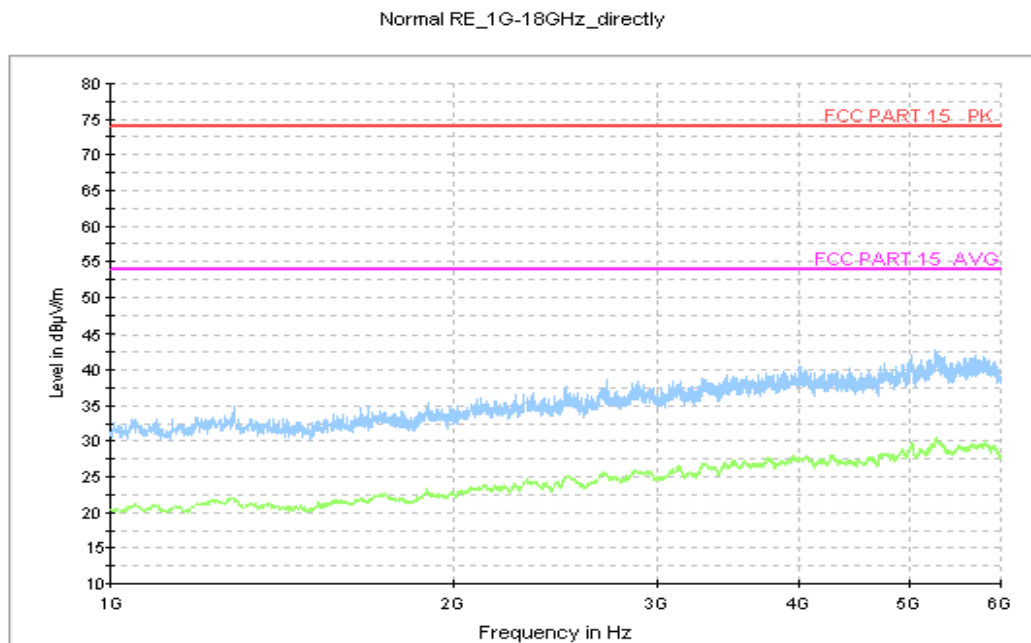


Fig.4 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.3

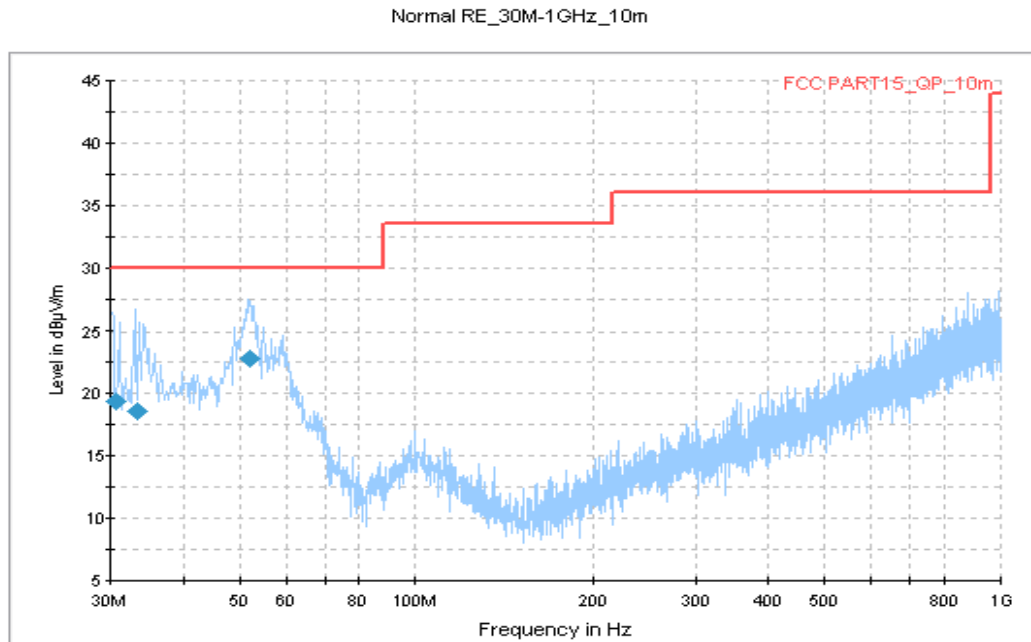


Fig.5 Radiated Emission from 30MHz to 1GHz

Final Result

Frequency MHz	QuasiPeak dBμV/m	Limit dBμV/m	Margin dB	Azimuth Deg	Polarization H/V
30.721250	19.4	30.0	10.6	-30.0	V
33.332500	18.6	30.0	11.4	158.0	V
52.182500	22.8	30.0	7.2	-29.0	V

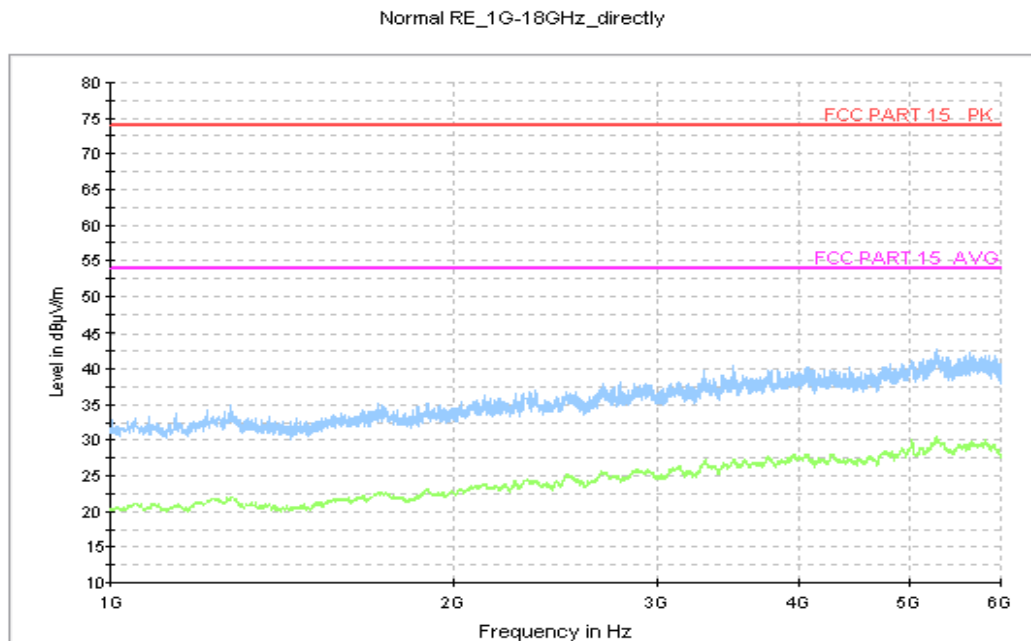


Fig.6 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.4

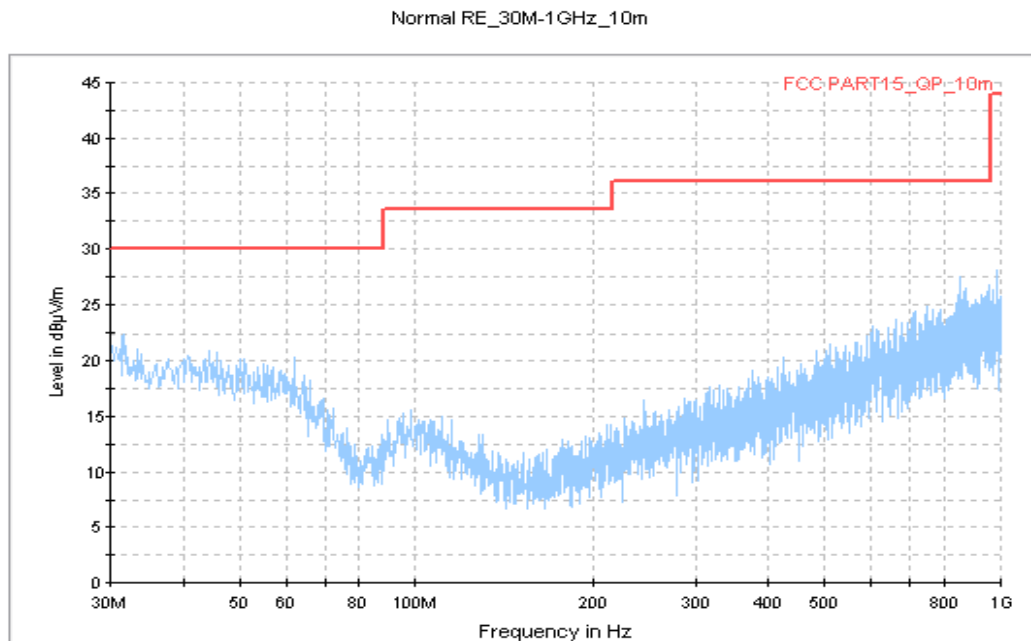


Fig.7 Radiated Emission from 30MHz to 1GHz

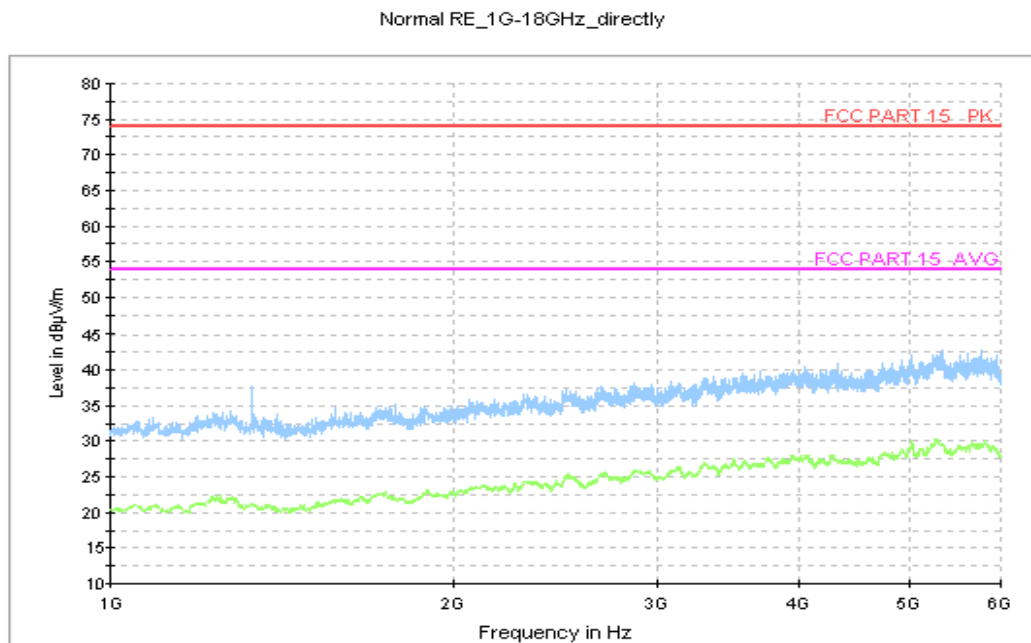


Fig.8 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.5

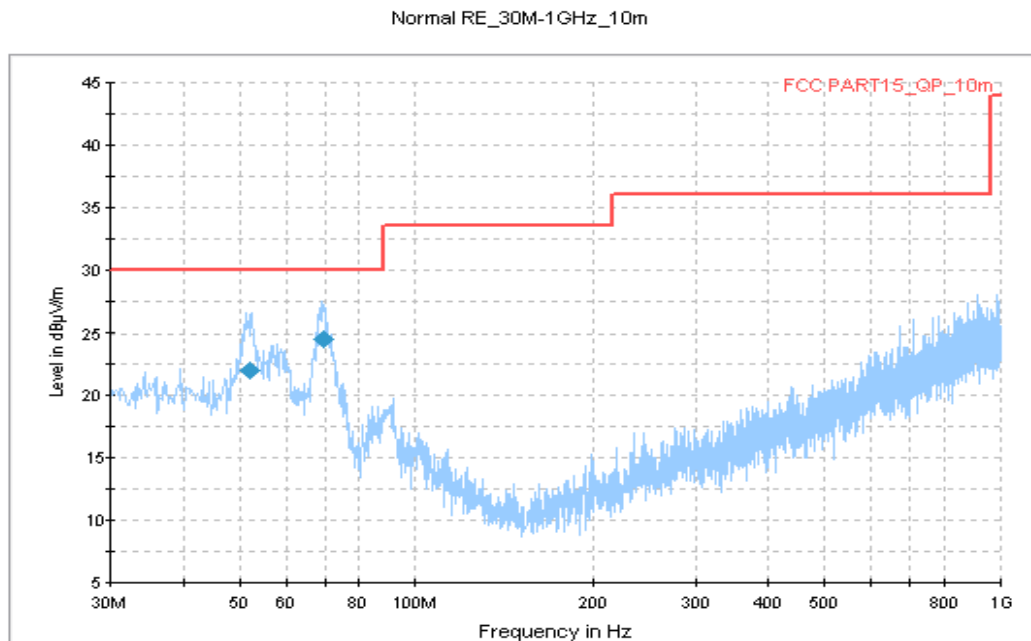


Fig.9 Radiated Emission from 30MHz to 1GHz

Final Result

Frequency MHz	QuasiPeak dBμV/m	Limit dBμV/m	Margin dB	Azimuth Deg	Polarization H/V
52.061250	22.0	30.0	8.0	60.0	V
69.403750	24.6	30.0	5.4	120.0	V

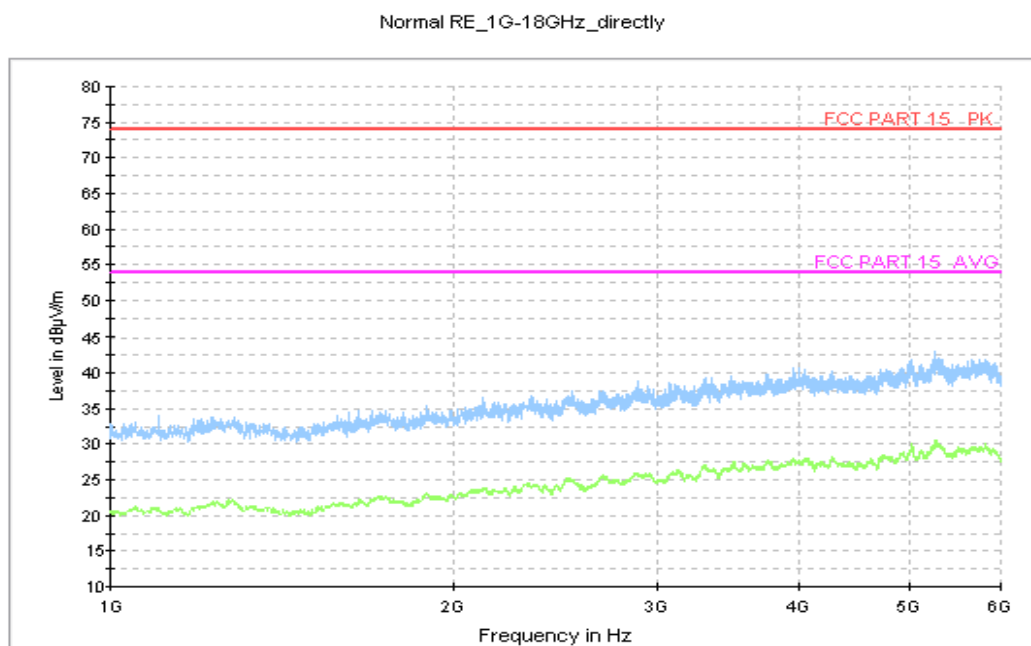


Fig.10 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.6

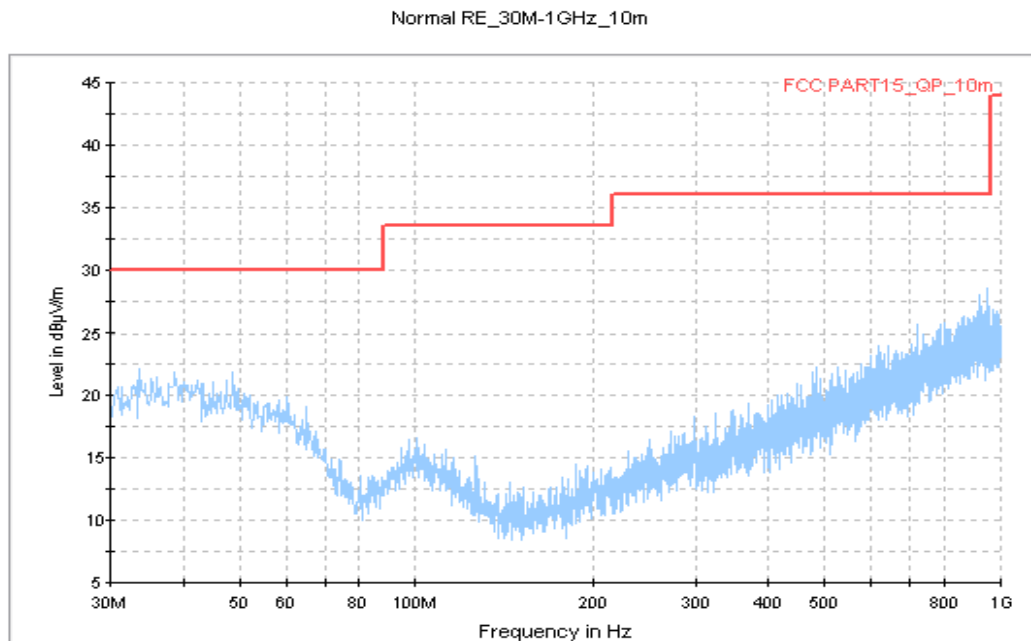


Fig.11 Radiated Emission from 30MHz to 1GHz

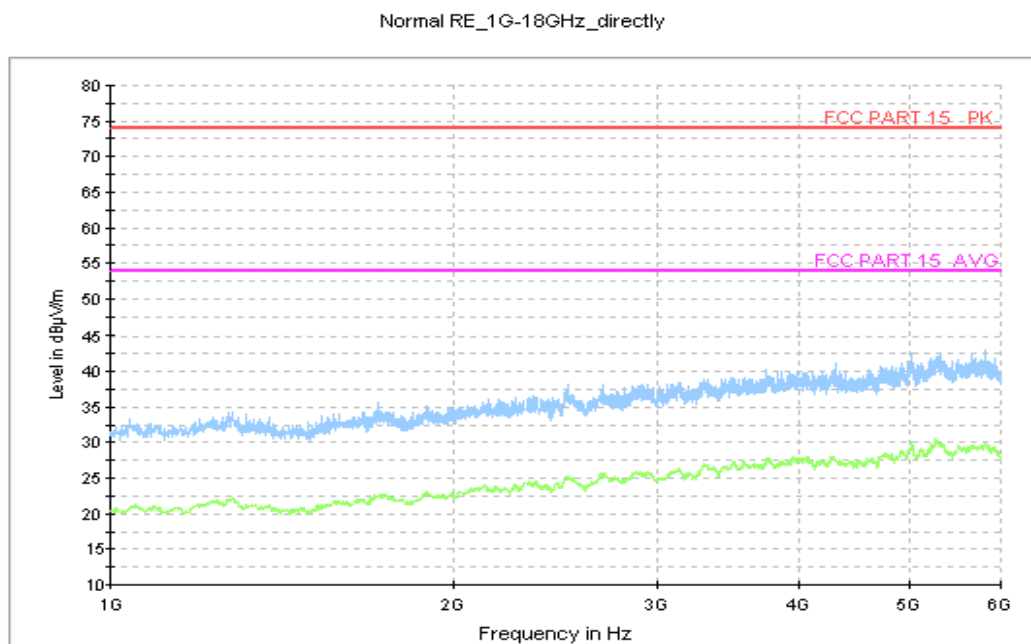


Fig.12 Radiated Emission from 1GHz to 6GHz

USB Mode, Set.7

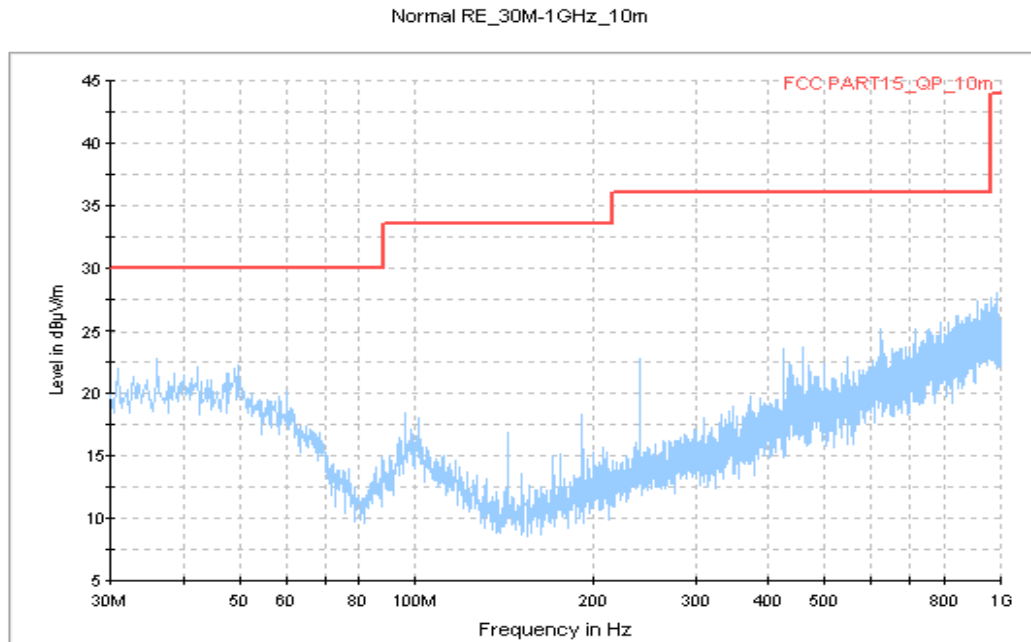


Fig.13 Radiated Emission from 30MHz to 1GHz

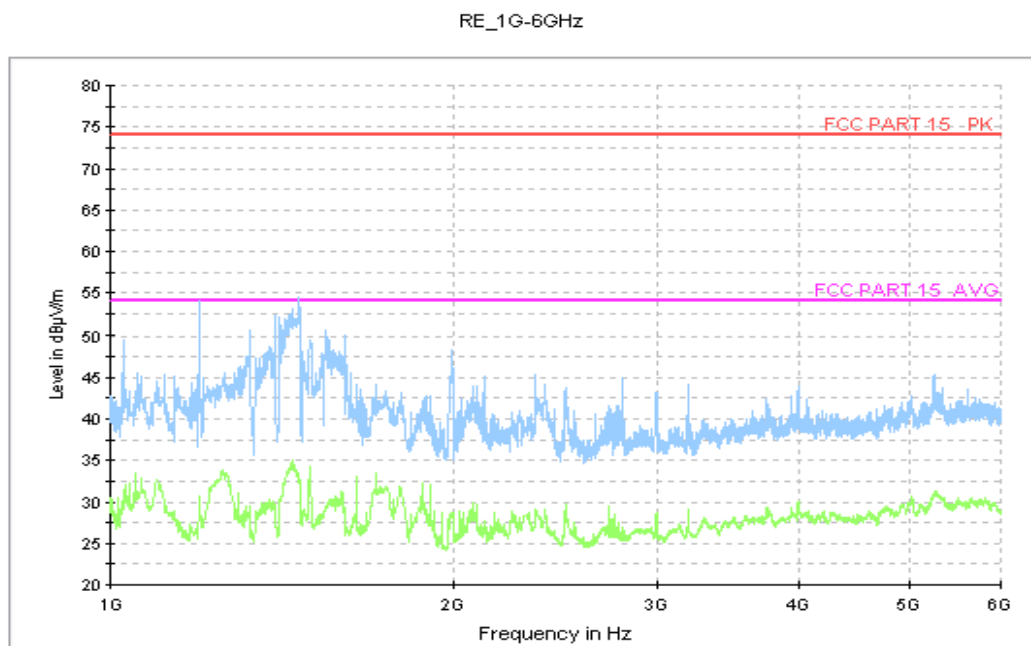


Fig.14 Radiated Emission from 1GHz to 6GHz

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

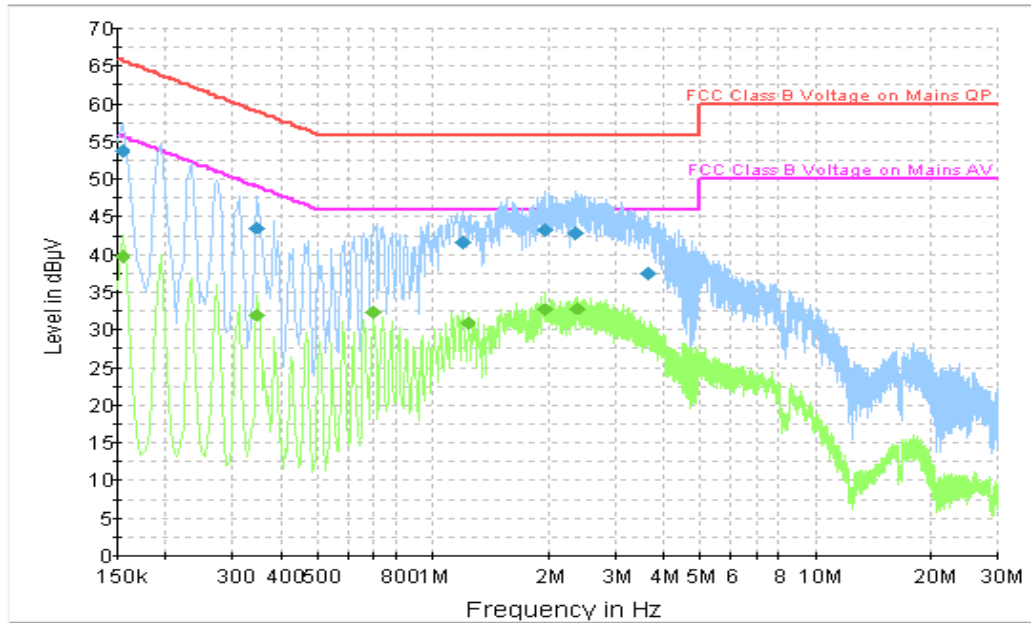


Fig.1 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154500	53.9	GND	N	19.8	11.9	65.8
0.348000	43.5	GND	N	19.9	15.5	59.0
1.194000	41.6	GND	L1	19.7	14.4	56.0
1.972500	43.3	GND	L1	19.7	12.7	56.0
2.359500	43.0	GND	L1	19.7	13.0	56.0
3.651000	37.5	GND	N	19.7	18.5	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154500	39.8	GND	N	19.8	16.0	55.8
0.348000	32.0	GND	N	19.9	17.0	49.0
0.699000	32.4	GND	L1	19.9	13.6	46.0
1.234500	30.8	GND	L1	19.7	15.2	46.0
1.972500	32.7	GND	L1	19.7	13.3	46.0
2.400000	32.8	GND	L1	19.7	13.2	46.0

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

Charging Mode, Set.2

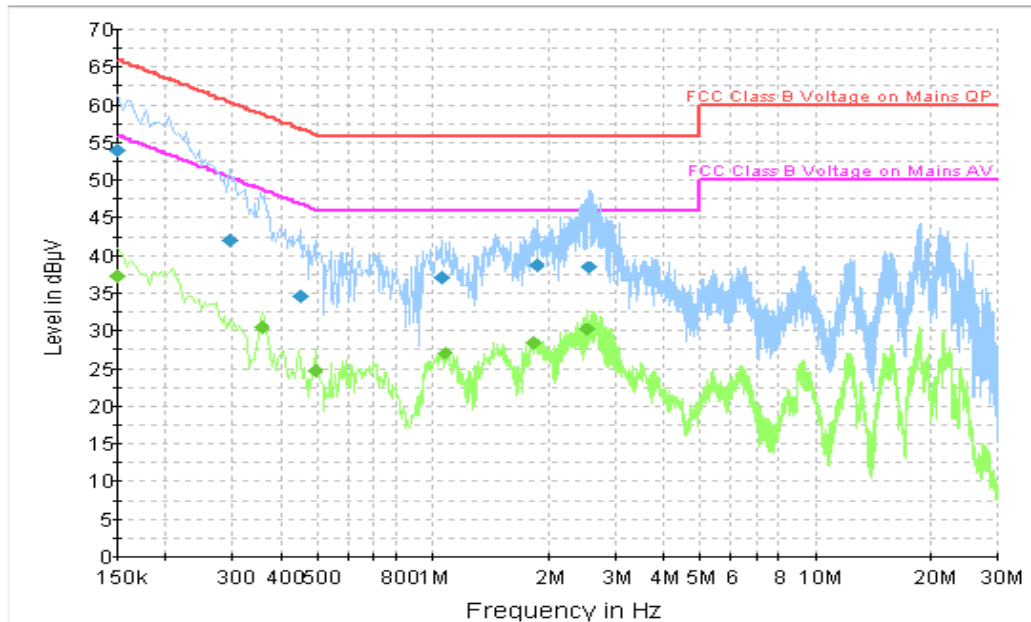


Fig.2 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	53.9	GND	L1	19.7	12.1	66.0
0.294000	42.1	GND	L1	19.8	18.3	60.4
0.451500	34.7	GND	L1	20.0	22.2	56.8
1.050000	37.2	GND	L1	19.8	18.8	56.0
1.864500	38.7	GND	L1	19.7	17.3	56.0
2.544000	38.5	GND	N	19.7	17.5	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	37.4	GND	L1	19.7	18.6	56.0
0.357000	30.5	GND	L1	19.9	18.3	48.8
0.492000	24.8	GND	L1	20.0	21.3	46.1
1.077000	27.0	GND	L1	19.8	19.0	46.0
1.824000	28.3	GND	L1	19.7	17.7	46.0
2.530500	30.1	GND	L1	19.7	15.9	46.0

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

Charging Mode, Set.3

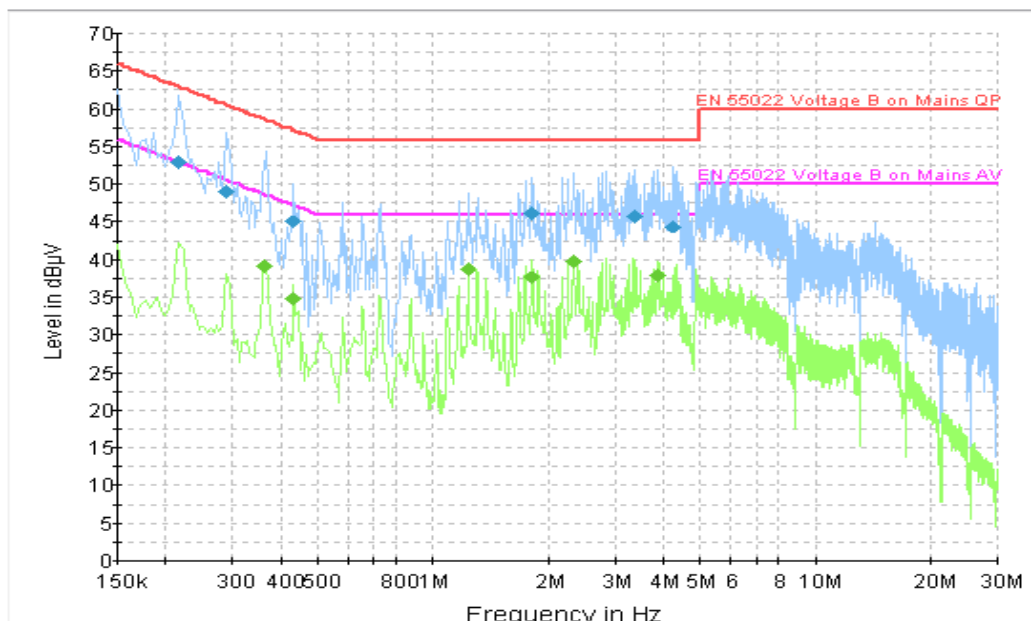


Fig.3 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.217500	53.1	GND	N	19.9	9.8	62.9
0.289500	49.0	GND	N	19.9	11.5	60.5
0.433500	45.1	GND	N	20.0	12.1	57.2
1.819500	46.2	GND	L1	19.7	9.8	56.0
3.349500	45.7	GND	L1	19.7	10.3	56.0
4.222500	44.5	GND	L1	19.7	11.5	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.361500	39.2	GND	L1	19.9	9.5	48.7
0.433500	34.8	GND	N	20.0	12.4	47.2
1.234500	38.8	GND	L1	19.7	7.2	46.0
1.819500	37.7	GND	L1	19.7	8.3	46.0
2.323500	39.9	GND	L1	19.7	6.1	46.0
3.853500	37.9	GND	L1	19.7	8.1	46.0

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

Charging Mode, Set.4

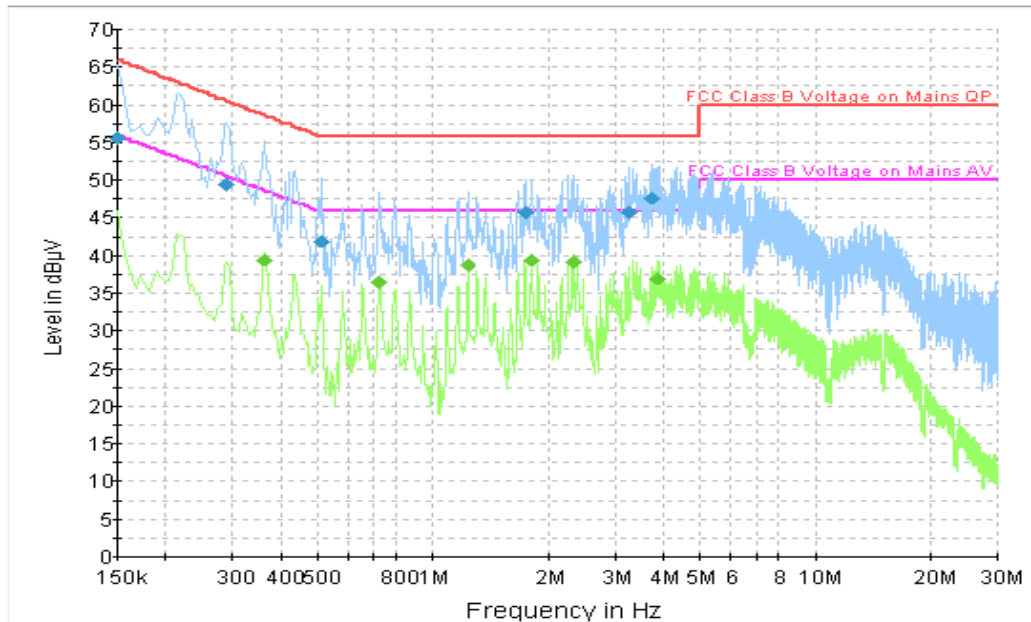


Fig.4 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150000	55.6	GND	L1	19.7	10.4	66.0
0.289500	49.5	GND	L1	19.9	11.1	60.5
0.510000	41.9	GND	L1	20.0	14.1	56.0
1.743000	45.7	GND	L1	19.7	10.3	56.0
3.268500	45.8	GND	L1	19.6	10.2	56.0
3.768000	47.7	GND	L1	19.7	8.3	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.361500	39.5	GND	L1	19.9	9.2	48.7
0.726000	36.4	GND	L1	19.9	9.6	46.0
1.230000	38.7	GND	L1	19.7	7.3	46.0
1.810500	39.5	GND	L1	19.7	6.5	46.0
2.319000	39.1	GND	L1	19.7	6.9	46.0
3.844500	37.0	GND	L1	19.7	9.0	46.0

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

Charging Mode, Set.5

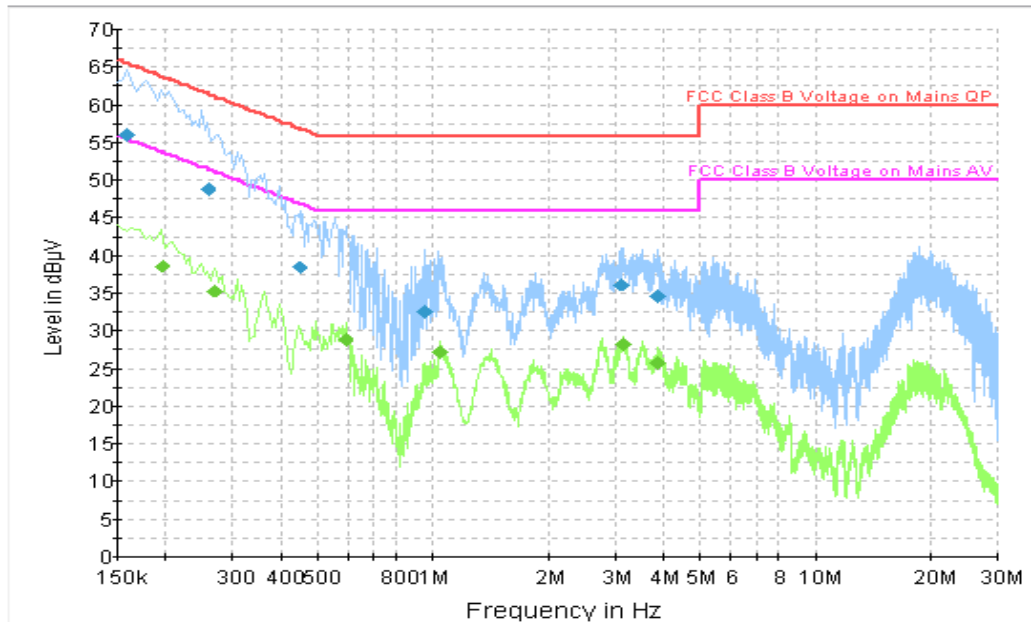


Fig.5 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.159000	56.1	GND	L1	19.8	9.4	65.5
0.258000	48.9	GND	L1	19.8	12.6	61.5
0.447000	38.4	GND	N	20.0	18.5	56.9
0.951000	32.6	GND	N	19.8	23.4	56.0
3.120000	36.2	GND	L1	19.7	19.8	56.0
3.853500	34.7	GND	L1	19.7	21.3	56.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.195000	38.7	GND	L1	19.9	15.2	53.8
0.267000	35.3	GND	L1	19.8	15.9	51.2
0.591000	28.9	GND	L1	20.0	17.1	46.0
1.045500	27.2	GND	L1	19.8	18.8	46.0
3.138000	28.3	GND	L1	19.7	17.7	46.0
3.862500	25.8	GND	L1	19.7	20.2	46.0

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

Charging Mode, Set.6

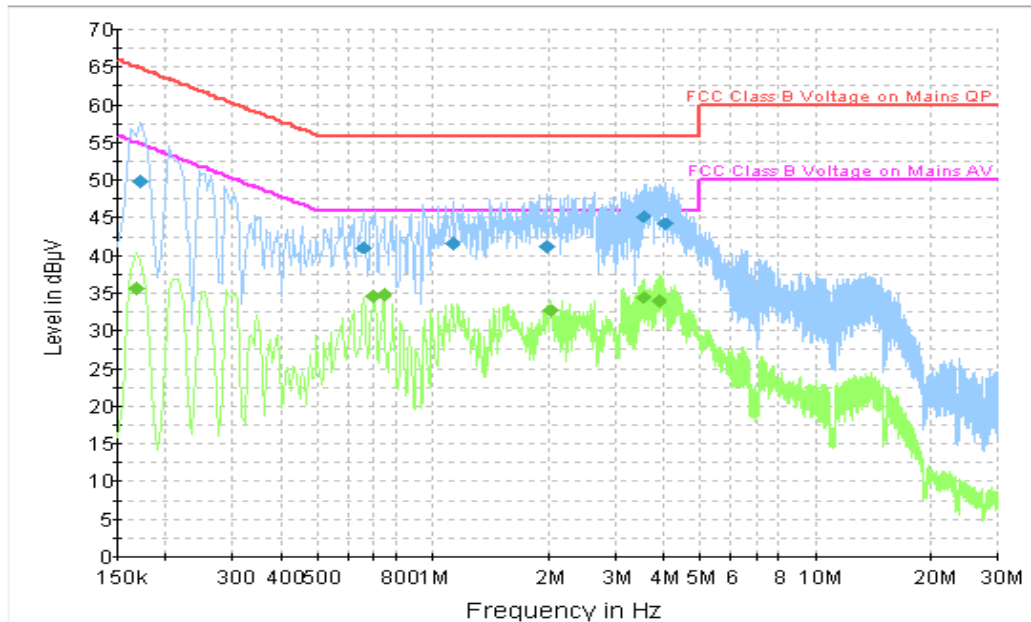


Fig.6 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.172500	49.8	GND	L1	19.9	15.0	64.8
0.658500	41.1	GND	N	19.9	14.9	56.0
1.122000	41.7	GND	N	19.8	14.3	56.0
1.990500	41.2	GND	N	19.7	14.8	56.0
3.538500	45.2	GND	L1	19.7	10.8	56.0
4.029000	44.2	GND	L1	19.6	11.8	56.0

Final Result 2

Frequency (MHz)	CAverage (dBμV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.168000	35.7	GND	L1	19.9	19.3	55.1
0.699000	34.6	GND	N	19.9	11.4	46.0
0.744000	34.8	GND	N	19.9	11.2	46.0
2.026500	32.6	GND	N	19.7	13.4	46.0
3.565500	34.5	GND	L1	19.7	11.5	46.0
3.885000	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.

USB Mode, Set.7

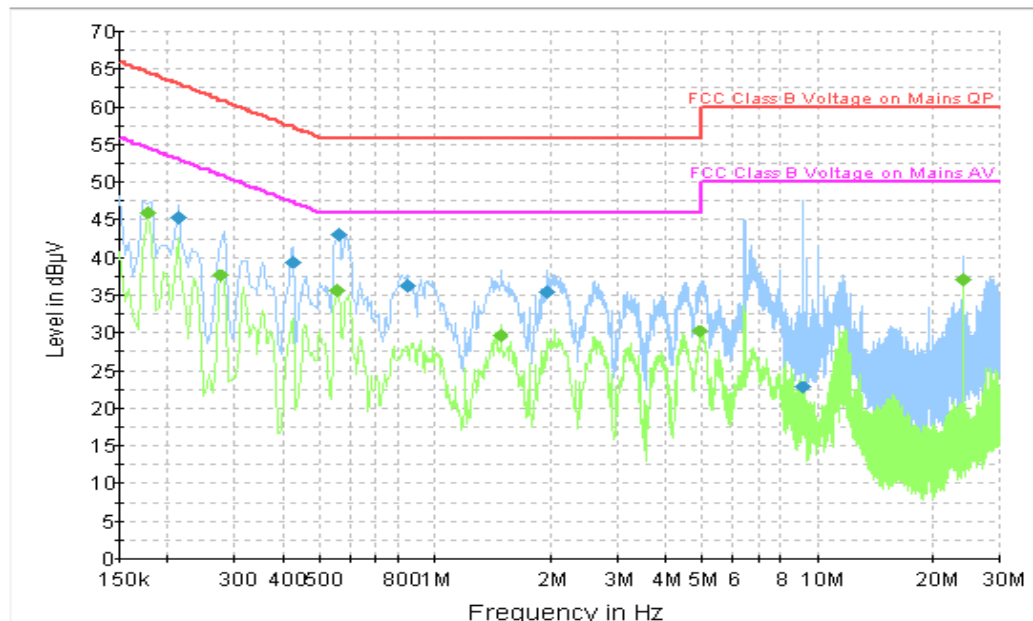


Fig.7 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.213000	45.4	GND	N	19.9	17.7	63.1
0.424500	39.4	GND	L1	20.0	18.0	57.4
0.559500	43.1	GND	L1	20.0	12.9	56.0
0.843000	36.3	GND	N	19.9	19.7	56.0
1.977000	35.5	GND	N	19.7	20.5	56.0
9.141000	22.9	GND	L1	19.7	37.2	60.0

Final Result 2

Frequency (MHz)	CAverage (dBµV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.177000	46.0	GND	N	19.9	8.6	54.6
0.276000	37.7	GND	N	19.9	13.3	50.9
0.555000	35.7	GND	N	20.0	10.3	46.0
1.482000	29.8	GND	N	19.7	16.2	46.0
4.956000	30.3	GND	N	19.6	15.7	46.0
24.054000	37.1	GND	N	19.9	12.9	50.0

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

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