



TEST REPORT

No. I14Z48975-EMC01

for

TCL Communication Ltd

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

Model Name: 4013E

FCC ID: 2ACCJH005

with

Hardware Version: PIO

Software Version: v5B4

Issued Date: 2014-12-17

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
I14Z48975-EMC01	Rev.0	1st edition	2014-12-17

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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℃

Relative Humidity: 20-75%

1.3. Project data

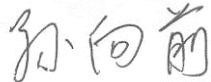
Testing Start Date: 2014-12-09

Testing End Date: 2014-12-10

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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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 Tri band/GSM Quad band mobile phone
Model Name	4013E
FCC ID	2ACCJH005
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
EUT3	357018060000297	PIO	v5B4

*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	/	14TCT-BA-2126
AE2	Battery	/	14TCT-BA-1933
AE3	Battery	/	14TCT-BA-0234
AE4	Battery	/	14TCT-BA-0221
AE5	Battery	/	14TCT-BA-2115
AE6	Battery	/	14TCT-BA-1922
AE7	Battery	/	14TCT-BA-1934
AE8	Travel charger	/	14TCT-CH-2034
AE9	Travel charger	/	14TCT-CH-1455
AE10	Travel charger	/	14TCT-CH-0359
AE11	Travel charger	/	14TCT-CH-1918
AE12	Travel charger	/	14TCT-CH-2189
AE13	USB cable	/	14TCT-DC-0612
AE14	USB cable	/	14TCT-DC-0590
AE15	USB cable	/	14TCT-DC-0721
AE16	USB cable	/	/
AE17	USB cable	/	/
AE18	USB cable	/	/
AE19	Battery	/	14TCT-BA-1591
AE20	Travel charger	/	14TCT-CH-2029
AE21	Travel charger	/	14TCT-CH-1454
AE22	Travel charger	/	14TCT-CH-0362
AE23	Travel charger	/	14TCT-CH-1915
AE24	Travel charger	/	14TCT-CH-2175
AE25	USB cable	/	14TCT-DC-0609
AE26	USB cable	/	14TCT-DC-0622



AE27 USB cable

/

14TCT-DC-0715

AE1, AE4, AE5

Model	CAB31P0000CB
Manufacturer	OCEANSUN
Capacitance	1300mAh
Nominal voltage	3.7V

AE2, AE6, AE7

Model	CAB1300015C2
Manufacturer	SCUD
Capacitance	1300mAh
Nominal voltage	3.7V

AE3, AE19

Model	CAB31P0000C1
Manufacturer	BYD
Capacitance	1300mAh
Nominal voltage	3.7V

AE8, AE20

Model	CBA3002AG0C3
Manufacturer	Yingju
Length of cable	122cm

AE9, AE21

Model	CBA3002AG0C2
Manufacturer	Tenpao
Length of cable	117cm

AE10, AE22

Model	CBA3002AG0C1
Manufacturer	BYD
Length of cable	117cm

AE11, AE23

Model	CBA3008AG0C2
Manufacturer	Tenpao
Length of cable	/

AE12, AE24

Model	CBA3008AG0C3
Manufacturer	Yingju
Length of cable	/

AE13, AE25

Model	CDA3122002C1
Manufacturer	JUWEI
Length of cable	101cm

AE14, AE26

Model	CDA3122002C2
Manufacturer	Shenghua
Length of cable	101cm

AE15, AE27

Model	CDA3122002C8
Manufacturer	PUAN
Length of cable	99.5cm

AE16

Model	CDA3122005C1
Manufacturer	Juwei
Length of cable	/

AE17

Model	CDA3122005C2
Manufacturer	Shenghua
Length of cable	/

AE18

Model	CDA3122005C8
Manufacturer	PUAN
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	EUT3+ AE1/AE2/AE3 + AE8	Charger
Set.2	EUT3+ AE1/AE2/AE3 + AE9	Charger
Set.3	EUT3+ AE1/AE2/AE3 + AE10	Charger
Set.4	EUT3+ AE1/AE2/AE3 + AE11 +AE13/AE14/AE15	Charger
Set.5	EUT3+ AE1/AE2/AE3 + AE12 +AE13/AE14/AE15	Charger
Set.6	EUT3+ AE1/AE2/AE3 + AE13/AE14/AE15	USB

Note:

HSUPA/HSDPA/UMTS Tri band/GSM Quad band mobile phone 4013E manufactured by TCL Communication Ltd is a variant model based on 4013M 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:

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	2014-12-15	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 $\mu\text{V}/\text{m}$)	GPL (dB)	GA (dB/m)	PMea(dB μV)	Polarity
5262.813	30.7	-34.5	34.6	30.600	V
5265.000	30.7	-34.5	34.6	30.600	V
5264.063	30.6	-34.5	34.6	30.500	H
5267.813	30.6	-34.5	34.6	30.500	V
5267.188	30.6	-34.5	34.6	30.500	V
5263.750	30.6	-34.5	34.6	30.500	H

Charging Mode/Peak detector

Frequency(MHz)	Result(dB $\mu\text{V}/\text{m}$)	GPL (dB)	GA (dB/m)	PMea(dB μV)	Polarity
5090.313	42.9	-34.9	34.6	43.200	V
5260.000	42.5	-34.5	34.6	42.400	V
5804.688	42.4	-33.8	35.1	41.100	H
5821.250	42.3	-33.8	35.1	41.000	V
5267.188	42.3	-34.5	34.6	42.200	H
5267.813	42.3	-34.5	34.6	42.200	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
5267.500	30.6	-34.5	34.6	30.500	V
5265.625	30.5	-34.5	34.6	30.400	V
5255.313	30.4	-34.5	34.6	30.300	V
5266.250	30.4	-34.5	34.6	30.300	V
5268.438	30.4	-34.4	34.6	30.200	H
5264.375	30.4	-34.5	34.6	30.300	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
5267.500	43.1	-34.5	34.6	43.000	V
5280.625	42.4	-34.4	34.6	42.200	H
5220.000	42.4	-34.5	34.6	42.300	V
5192.500	42.2	-34.6	34.6	42.200	V
5271.250	42.2	-34.4	34.6	42.000	H
5554.375	42.1	-34.2	35.1	41.200	V

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
5260.000	30.8	-34.5	34.6	30.700	V
5268.750	30.7	-34.4	34.6	30.500	H
5259.688	30.6	-34.5	34.6	30.500	V
5262.188	30.5	-34.5	34.6	30.400	H
5267.188	30.5	-34.5	34.6	30.400	V
5260.938	30.5	-34.5	34.6	30.400	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
5820.313	42.6	-33.8	35.1	41.300	V
5267.500	42.3	-34.5	34.6	42.200	H
5252.188	42.3	-34.5	34.6	42.200	V
5263.750	42.2	-34.5	34.6	42.100	H
4998.750	42.1	-34.6	33.1	43.600	V
5265.000	42.1	-34.5	34.6	42.000	V

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
5263.125	30.6	-34.5	34.6	30.500	V
5267.813	30.6	-34.5	34.6	30.500	V
5262.813	30.6	-34.5	34.6	30.500	H
5264.688	30.5	-34.5	34.6	30.400	V
5259.063	30.5	-34.5	34.6	30.400	V
5260.313	30.5	-34.5	34.6	30.400	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
5660.938	43.2	-34.2	35.1	42.300	V
5277.188	42.7	-34.4	34.6	42.500	H
5269.063	42.6	-34.4	34.6	42.400	H
5259.375	42.6	-34.5	34.6	42.500	V
5286.250	42.5	-34.4	34.6	42.300	H
5832.188	42.4	-33.8	35.1	41.100	V

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
5258.438	30.7	-34.5	34.6	30.600	V
5264.688	30.7	-34.5	34.6	30.600	H
5259.375	30.6	-34.5	34.6	30.500	V
5263.750	30.5	-34.5	34.6	30.400	V
5260.938	30.5	-34.5	34.6	30.400	H
5259.063	30.4	-34.5	34.6	30.300	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
5266.250	43.2	-34.5	34.6	43.100	V
5259.688	42.9	-34.5	34.6	42.800	H
5224.688	42.5	-34.5	34.6	42.400	V
5827.188	42.4	-33.8	35.1	41.100	V
5277.500	42.4	-34.4	34.6	42.200	H
5268.438	42.3	-34.4	34.6	42.100	V

Measurement results for Set.6:

USB Mode/Average detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
1875.000	35.8	-35.6	25.3	46.100	H
1874.688	35.3	-35.6	25.3	45.600	H
1051.250	34.4	-41.7	24.1	52.000	V
2396.563	34.1	-38.8	27.7	45.200	H
2396.250	33.8	-38.8	27.7	44.900	H
2395.938	33.6	-38.8	27.7	44.700	V

USB Mode/Peak detector

Frequency(MHz)	Result(dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity
2396.563	50.0	-38.8	27.7	61.100	V
2394.688	49.6	-38.8	27.7	60.700	H
2393.438	49.6	-38.8	27.7	60.700	V
2396.250	49.5	-38.8	27.7	60.600	H
2395.938	49.5	-38.8	27.7	60.600	H
2392.500	49.5	-38.8	27.7	60.600	V

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

Charging Mode, Set.1

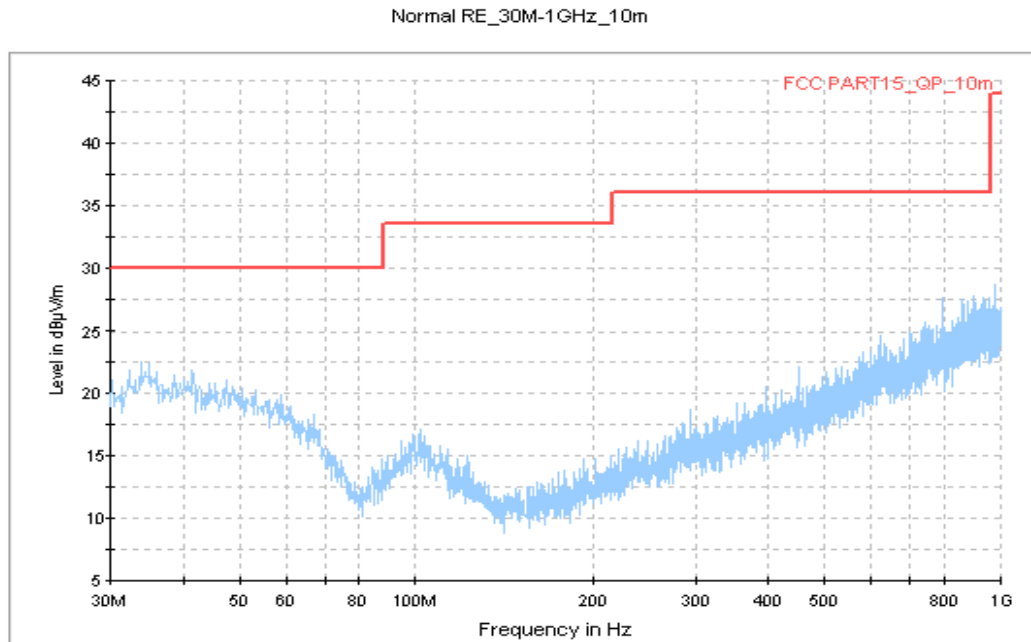


Fig.1 Radiated Emission from 30MHz to 1GHz

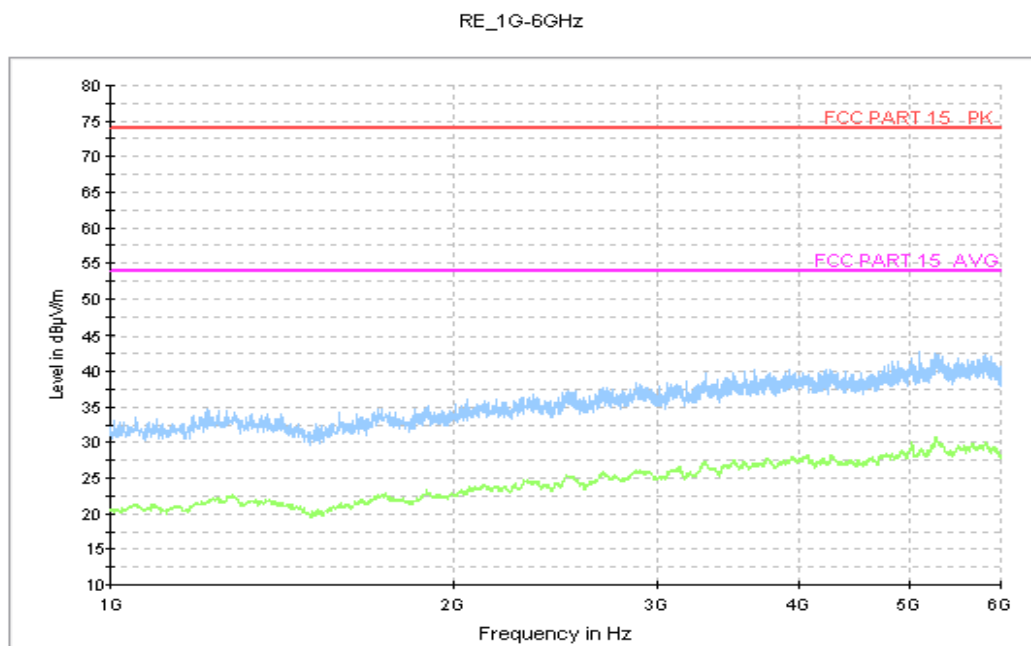


Fig.2 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.2

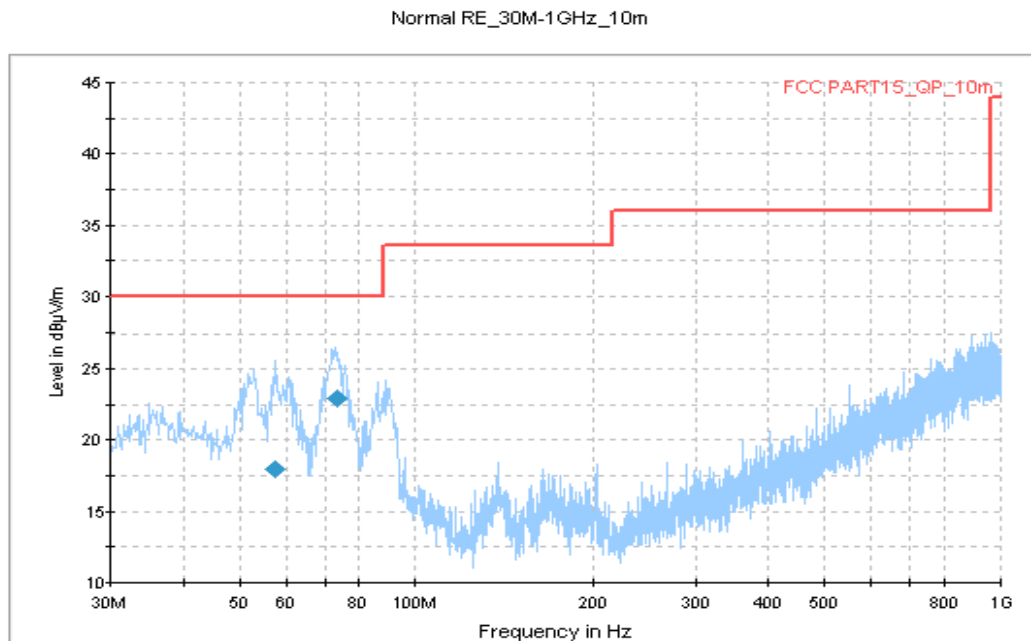


Fig.3 Radiated Emission from 30MHz to 1GHz

Final Result

Frequency MHz	QuasiPeak dB µV/m	Limit dB µV/m	Margin dB	Azimuth Deg	Polarization H/V
57.345000	18.0	125.0	V	90.0	-19.1
73.465000	23.0	200.0	V	-28.0	-22.6

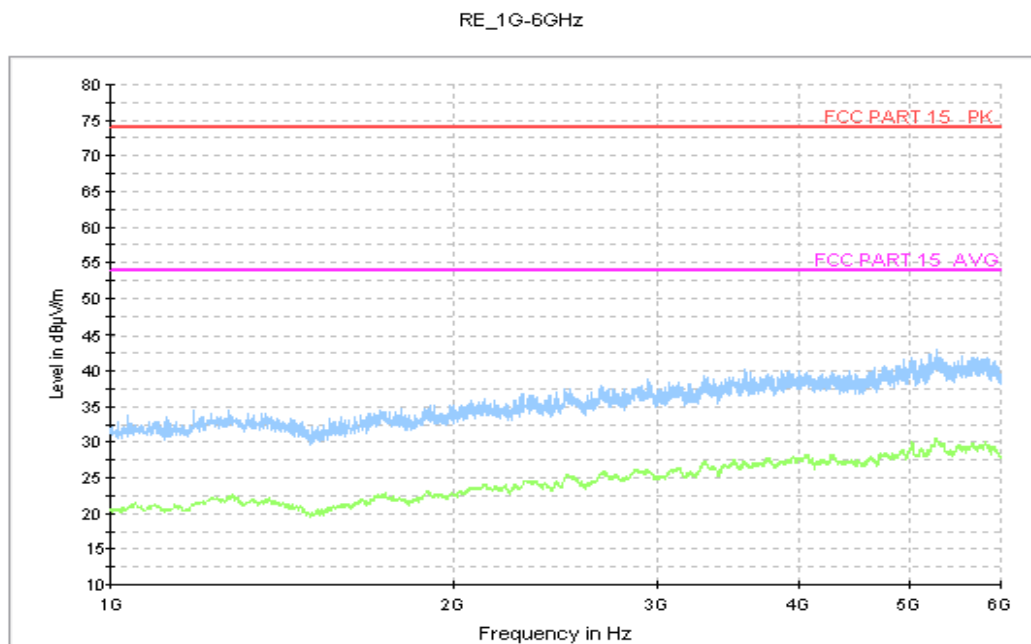


Fig.4 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.3

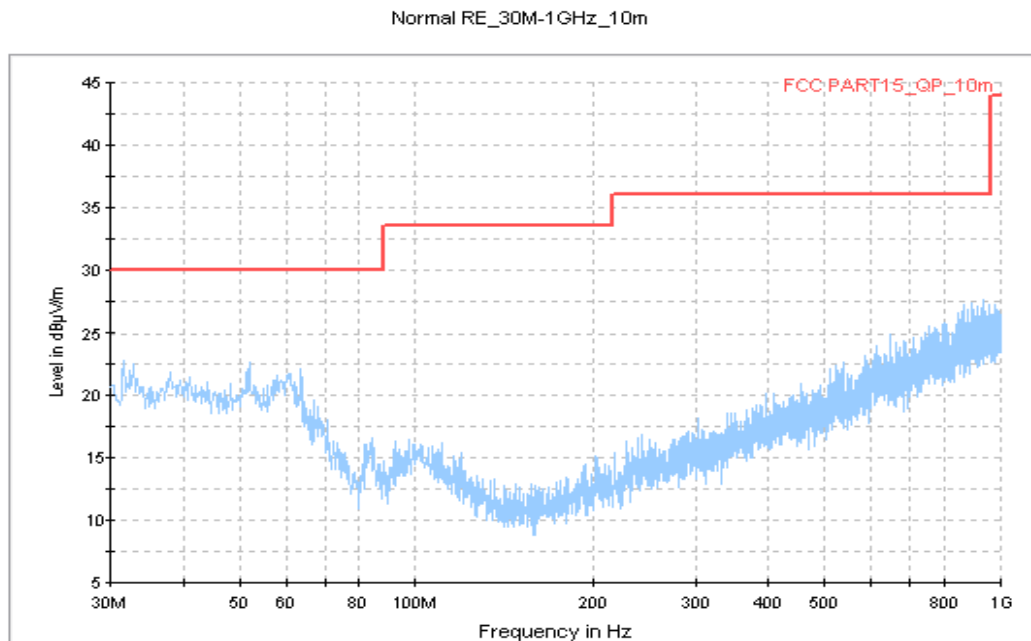


Fig.5 Radiated Emission from 30MHz to 1GHz

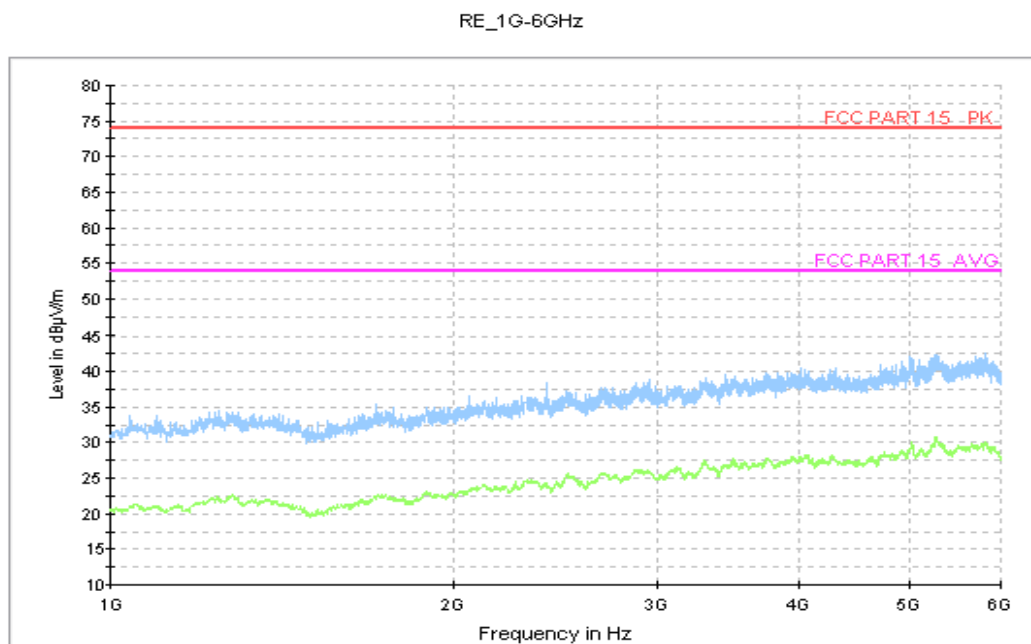


Fig.6 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.4

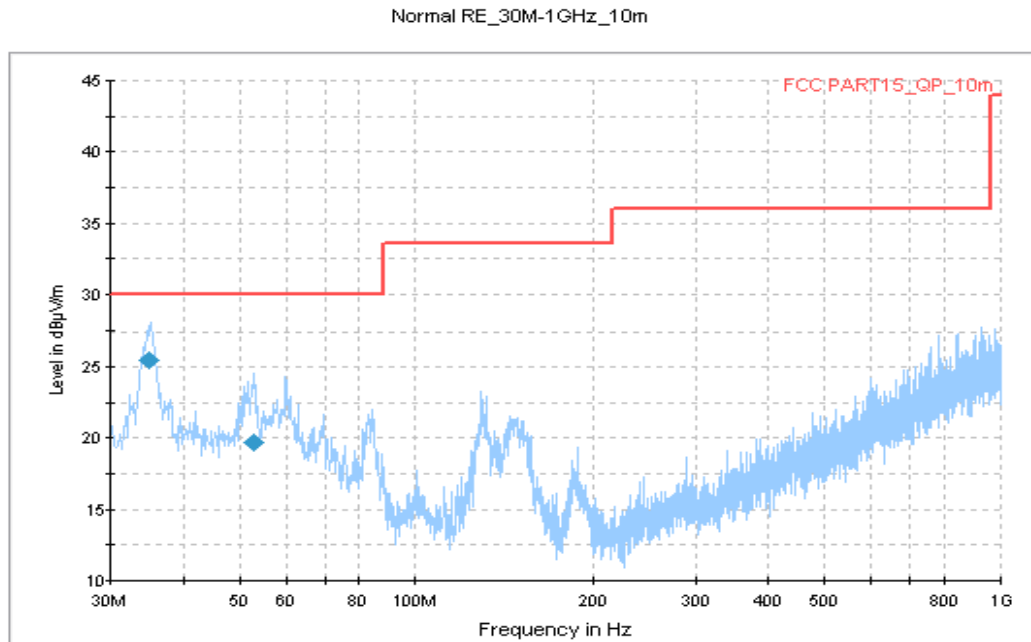


Fig.7 Radiated Emission from 30MHz to 1GHz

Final Result

Frequency MHz	QuasiPeak dB µV/m	Limit dB µV/m	Margin dB	Azimuth Deg	Polarization H/V
35.033750	25.4	275.0	V	-21.0	-19.9
52.975000	19.7	100.0	V	30.0	-19.0

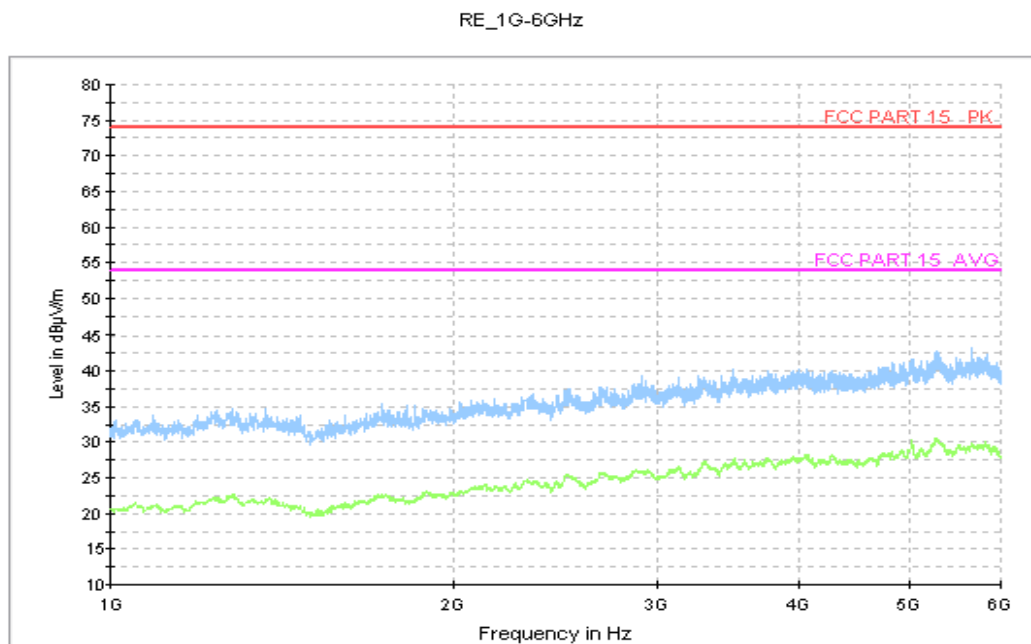


Fig.8 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.5

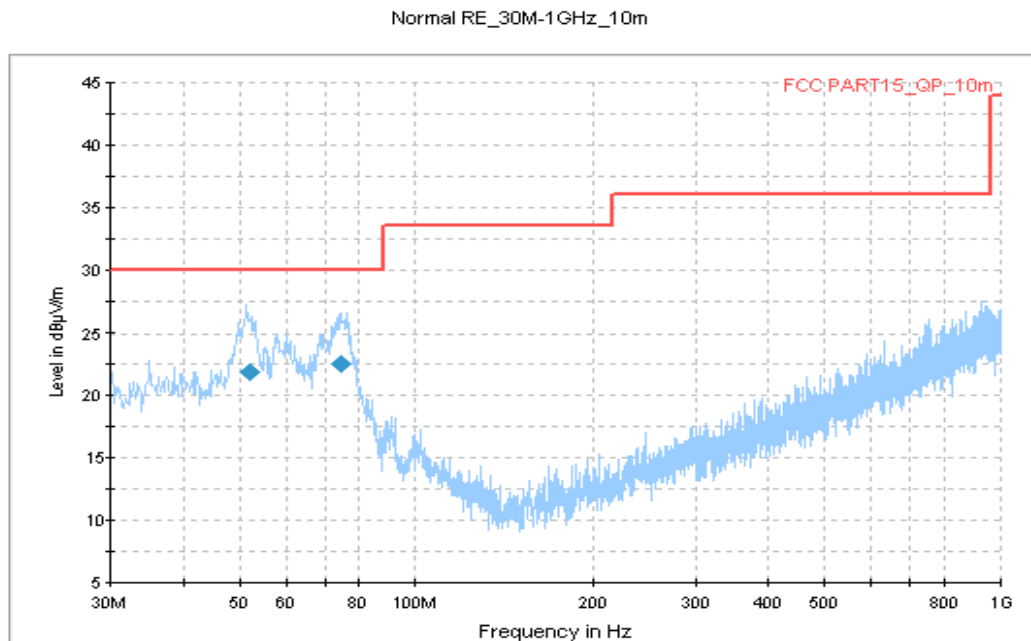


Fig.9 Radiated Emission from 30MHz to 1GHz

Final Result

Frequency MHz	QuasiPeak dB µV/m	Limit dB µV/m	Margin dB	Azimuth Deg	Polarization H/V
52.061250	21.9	194.0	V	30.0	-19.0
74.618750	22.6	175.0	V	166.0	-22.9

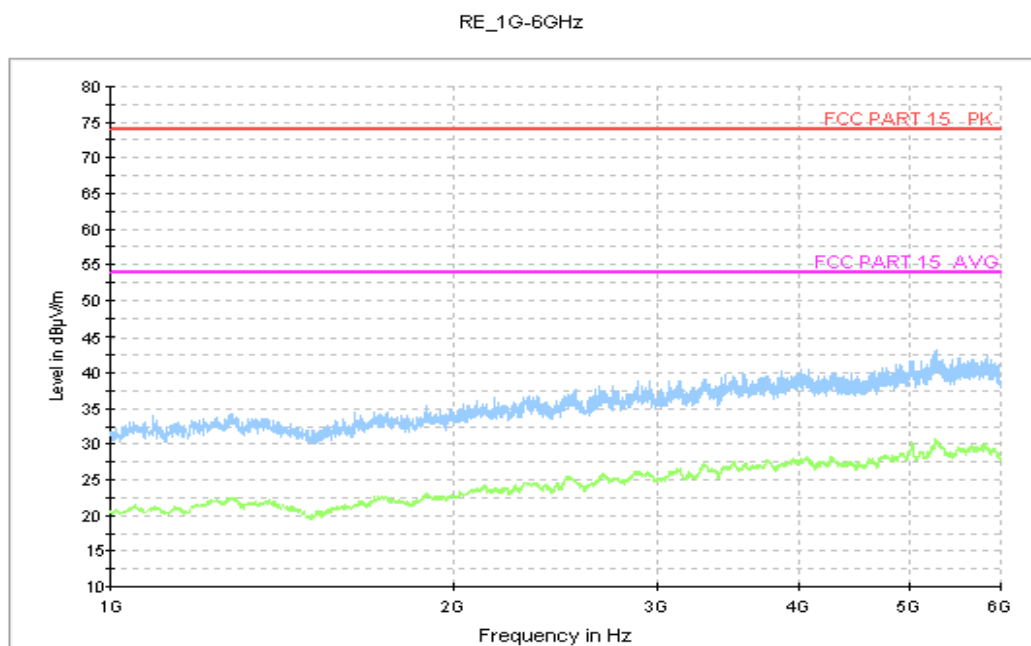


Fig.10 Radiated Emission from 1GHz to 6GHz

Charging Mode, Set.6

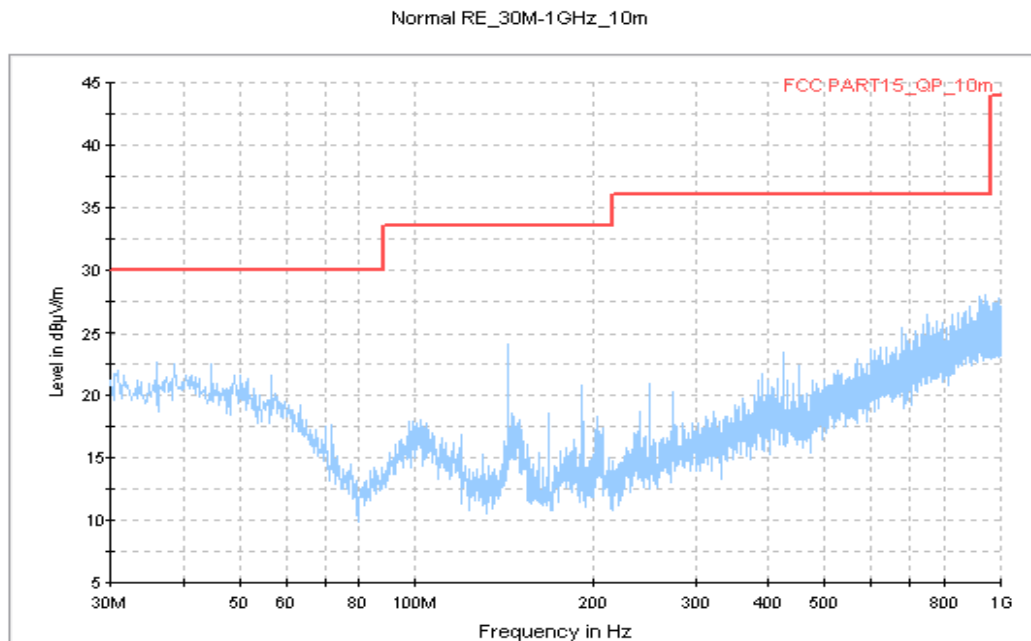


Fig.11 Radiated Emission from 30MHz to 1GHz

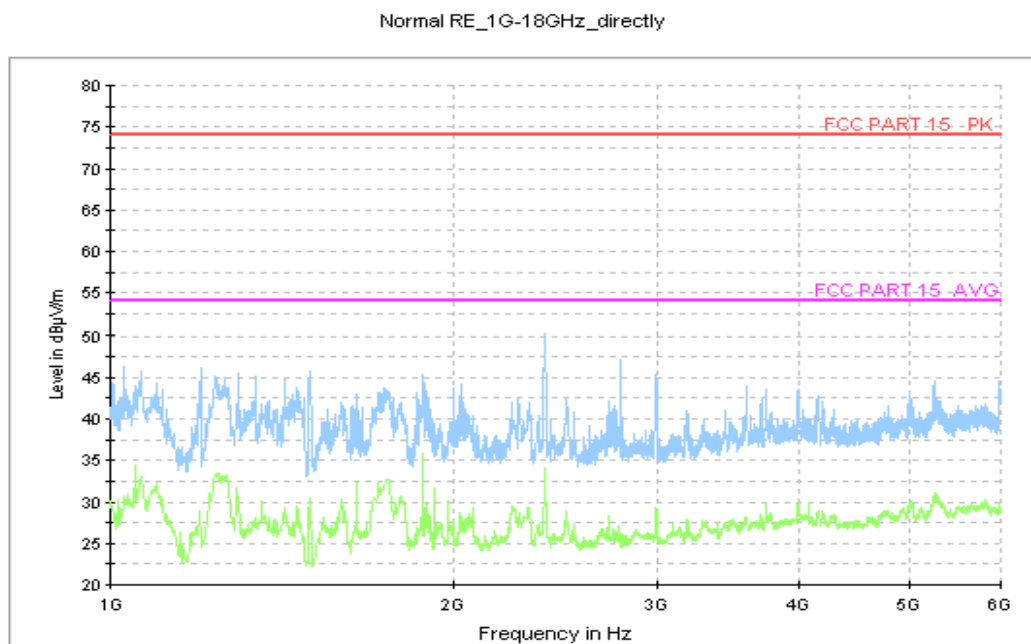


Fig.12 Radiated Emission from 1GHz to 6GHz

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: $U= 2.9 \text{ dB}$, $k=2$.

Charging Mode, Set.1

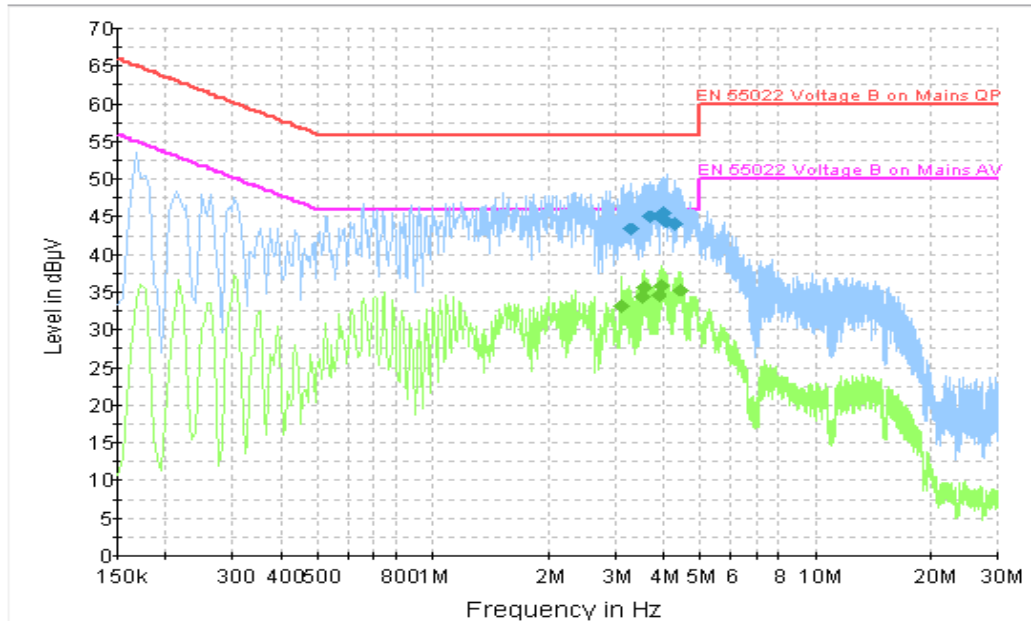


Fig.13 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
3.286500	43.5	GND	L1	19.6	12.5	56.0
3.678000	45.0	GND	L1	19.7	11.0	56.0
3.912000	45.1	GND	L1	19.7	10.9	56.0
3.993000	45.6	GND	L1	19.7	10.4	56.0
4.065000	44.4	GND	L1	19.6	11.6	56.0
4.290000	44.1	GND	L1	19.6	11.9	56.0

Final Result 2

Frequency (MHz)	CAverage (dB μ V)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
3.133500	33.2	GND	L1	19.7	12.8	46.0
3.511500	34.3	GND	L1	19.6	11.7	46.0
3.583500	35.6	GND	L1	19.7	10.4	46.0
3.880500	34.7	GND	L1	19.7	11.3	46.0
3.970500	35.9	GND	L1	19.7	10.1	46.0
4.429500	35.4	GND	L1	19.7	10.6	46.0

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

Charging Mode, Set.2

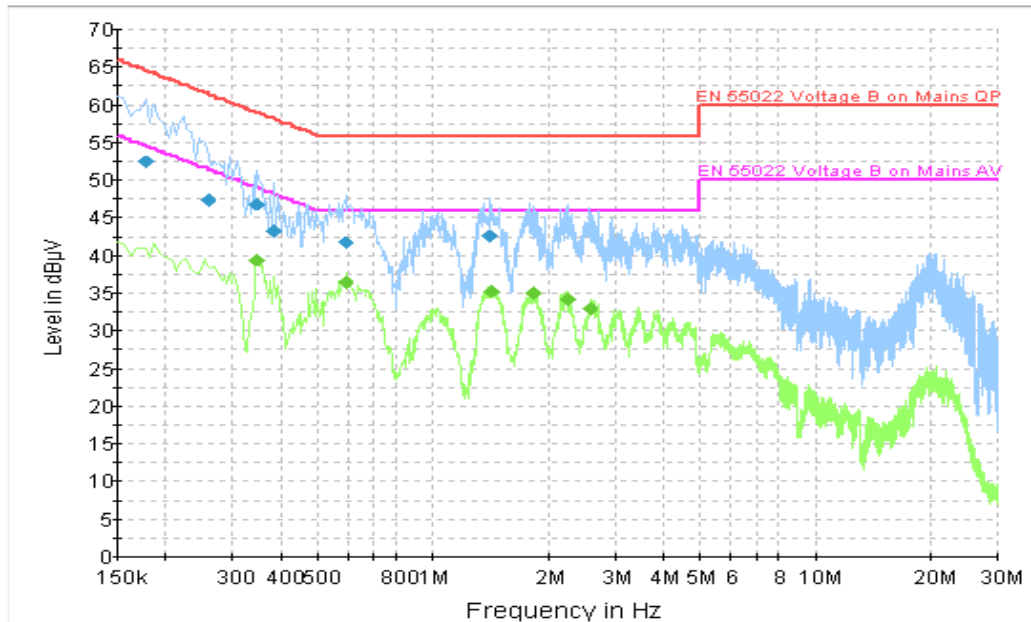


Fig.14 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.177000	52.6	GND	L1	19.9	12.1	64.6
0.258000	47.4	GND	N	19.9	14.1	61.5
0.348000	46.9	GND	L1	19.9	12.2	59.0
0.384000	43.3	GND	L1	19.9	14.9	58.2
0.591000	41.8	GND	N	20.0	14.2	56.0
1.405500	42.6	GND	L1	19.7	13.4	56.0

Final Result 2

Frequency (MHz)	CAverage (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.348000	39.5	GND	L1	19.9	9.6	49.0
0.591000	36.5	GND	L1	20.0	9.5	46.0
1.423500	35.4	GND	L1	19.7	10.6	46.0
1.828500	35.1	GND	L1	19.7	10.9	46.0
2.260500	34.2	GND	L1	19.7	11.8	46.0
2.575500	33.0	GND	L1	19.7	13.0	46.0

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

Charging Mode, Set.3

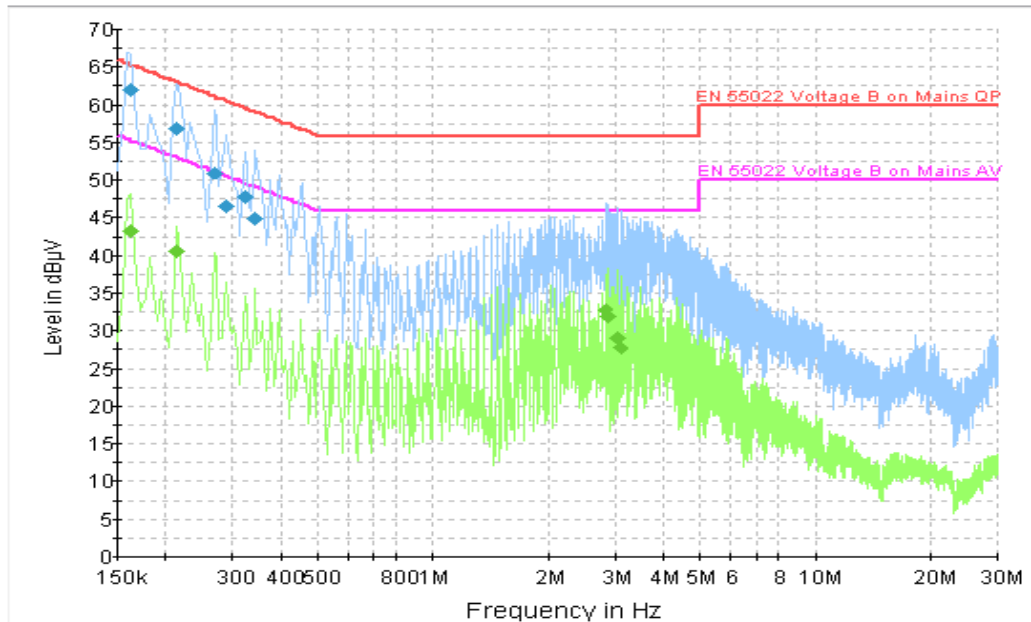


Fig.15 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.163500	62.1	GND	L1	19.9	3.2	65.3
0.213000	57.0	GND	L1	19.8	6.1	63.1
0.267000	50.9	GND	L1	19.8	10.3	61.2
0.289500	46.5	GND	L1	19.9	14.0	60.5
0.321000	47.8	GND	L1	19.9	11.8	59.7
0.343500	44.9	GND	L1	19.9	14.2	59.1

Final Result 2

Frequency (MHz)	CAverage (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.163500	43.2	GND	L1	19.9	12.1	55.3
0.213000	40.5	GND	L1	19.8	12.5	53.1
2.832000	32.9	GND	L1	19.7	13.1	46.0
2.886000	31.9	GND	L1	19.7	14.1	46.0
3.048000	29.1	GND	L1	19.7	16.9	46.0
3.102000	27.7	GND	L1	19.7	18.3	46.0

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

Charging Mode, Set.4

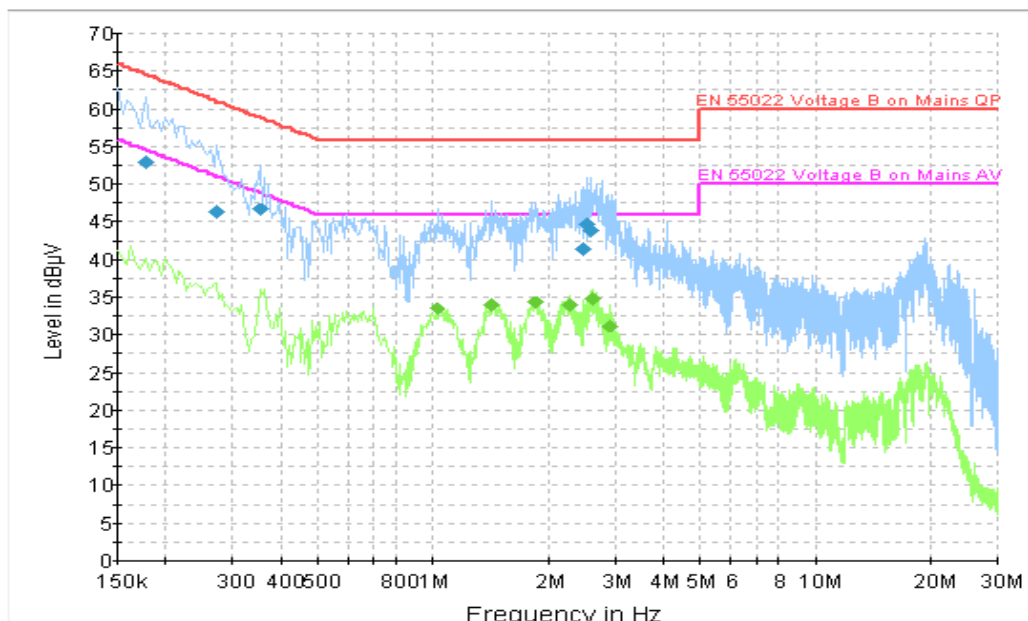


Fig.16 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.177000	53.1	GND	L1	19.9	11.6	64.6
0.271500	46.5	GND	L1	19.9	14.6	61.1
0.352500	46.8	GND	N	19.9	12.1	58.9
2.490000	41.4	GND	N	19.7	14.6	56.0
2.521500	44.7	GND	L1	19.7	11.3	56.0
2.593500	43.9	GND	N	19.7	12.1	56.0

Final Result 2

Frequency (MHz)	CAverage (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
1.027500	33.6	GND	L1	19.7	12.4	46.0
1.428000	33.9	GND	L1	19.7	12.1	46.0
1.846500	34.4	GND	L1	19.7	11.6	46.0
2.287500	34.0	GND	L1	19.7	12.0	46.0
2.625000	34.9	GND	L1	19.7	11.1	46.0
2.899500	31.2	GND	L1	19.7	14.8	46.0

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

Charging Mode, Set.5

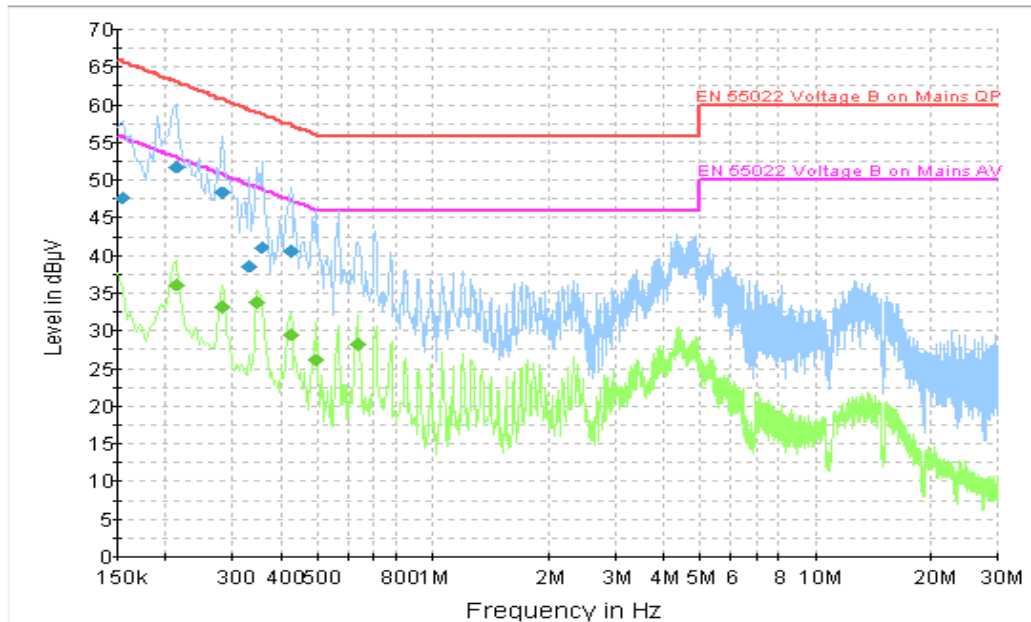


Fig.17 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.154500	47.8	GND	L1	19.7	18.0	65.8
0.213000	51.9	GND	L1	19.8	11.2	63.1
0.280500	48.4	GND	N	19.8	12.4	60.8
0.330000	38.6	GND	N	19.9	20.8	59.5
0.357000	41.2	GND	N	19.9	17.6	58.8
0.424500	40.7	GND	N	20.0	16.7	57.4

Final Result 2

Frequency (MHz)	CAverage (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.213000	36.2	GND	L1	19.8	16.9	53.1
0.280500	33.1	GND	N	19.8	17.7	50.8
0.348000	33.8	GND	N	19.9	15.2	49.0
0.424500	29.5	GND	N	20.0	17.8	47.4
0.496500	26.2	GND	L1	20.0	19.9	46.1
0.636000	28.2	GND	L1	19.9	17.8	46.0

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

USB Mode, Set.6

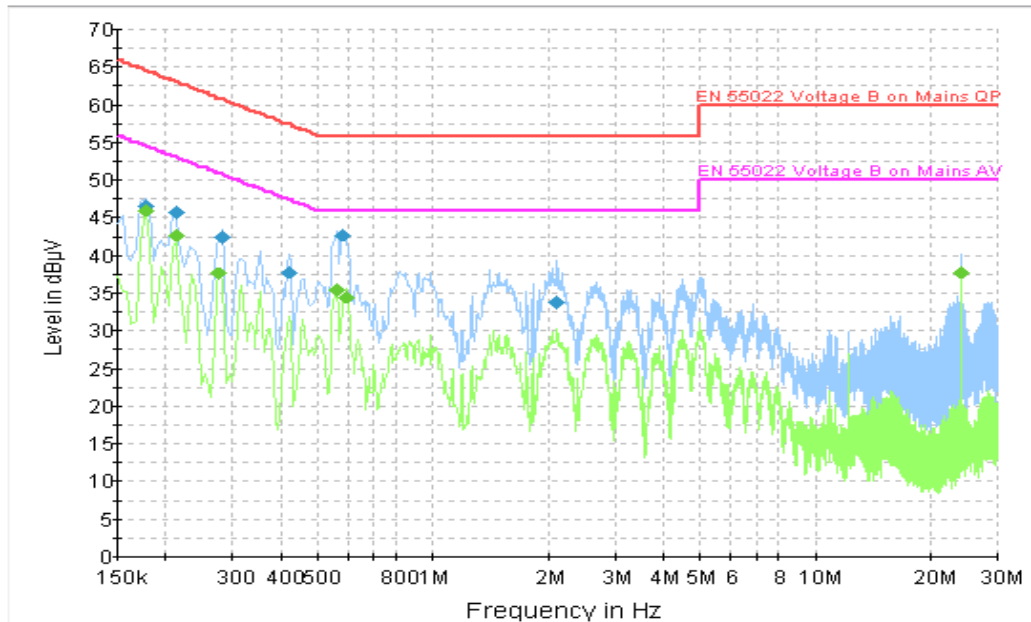


Fig.18 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.177000	46.6	GND	N	19.9	18.1	64.6
0.213000	45.7	GND	N	19.9	17.4	63.1
0.280500	42.4	GND	N	19.8	18.4	60.8
0.420000	37.8	GND	N	20.0	19.6	57.4
0.582000	42.7	GND	L1	20.0	13.3	56.0
2.107500	33.9	GND	N	19.7	22.1	56.0

Final Result 2

Frequency (MHz)	CAverage (dB µV)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dB µV)
0.177000	46.1	GND	N	19.9	8.5	54.6
0.213000	42.7	GND	N	19.9	10.4	53.1
0.276000	37.7	GND	N	19.9	13.3	50.9
0.559500	35.5	GND	N	20.0	10.5	46.0
0.595500	34.5	GND	L1	20.0	11.5	46.0
23.991000	37.7	GND	N	19.9	12.3	50.0

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

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