



# FCC PART 15B TEST REPORT

No. I20Z62072-EMC01

for

**TCL Communication Ltd.**

**GSM/UMTS/LTE Mobile phone**

**Model Name: A600DL**

**FCC ID: 2ACCJH132**

with

**Hardware Version: PIO**

**Software Version: vA3D**

**Issued Date: 2020-12-22**

**Note:**

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The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the U.S. Government.

**Test Laboratory:**

CTTL-Telecommunication Technology Labs, CAICT

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## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I20Z62072-EMC01	Rev.0	1 <sup>st</sup> edition	2020-12-22

Note: the latest revision of the test report supersedes all previous version.

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## **1. Test Laboratory**

### **1.1. Introduction & Accreditation**

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (CN0066). The detail accreditation scope can be found on NVLAP website.

### **1.2. Testing Location**

#### **CTTL (huayuan North Road)**

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

### **1.3. Testing Environment**

Normal Temperature: 15-35° C  
Relative Humidity: 20-75%

### **1.4. Project data**

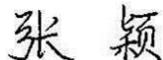
Testing Start Date: 2020-12-08  
Testing End Date: 2020-12-18

### **1.5. Signature**



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Wang Xue  
(Prepared this test report)



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Zhang Ying  
(Reviewed this test report)



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Zhang Xia  
(Approved this test report)



## **2. Client Information**

### **2.1. Applicant Information**

Company Name: TCL Communication Ltd.  
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Contact Email zhizhou.gong@tcl.com  
Telephone: 0086-755-36611722  
Fax: 0086-755-36612000-81722

### **2.2. Manufacturer Information**

Company Name: TCL Communication Ltd.  
Address: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong  
Contact Person Gong Zhizhou  
Contact Email zhizhou.gong@tcl.com  
Telephone: 0086-755-36611722  
Fax: 0086-755-36612000-81722

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

#### **3.1. About EUT**

Description	GSM/UMTS/LTE Mobile phone
Model Name	A600DL
FCC ID	2ACCJH132
Extreme vol. Limits	3.5VDC to 4.4VDC (nominal: 3.8VDC)

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL, Telecommunication Technology Labs, CAICT.

#### **3.2. Internal Identification of EUT used during the test**

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	015865000211192	PIO	vA3D

\*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	/	/
AE2	Charger	/	/
AE3	Data Cable	/	/
AE4	Headset	/	/

##### AE1

Model	CAC3400011C1
Manufacturer	BYD
Capacity	3500mAh
Nominal Voltage	/

##### AE2

Model	CBA0058AGAC5
Manufacturer	PUAN
Capacity	/
Nominal Voltage	/

##### AE3

Model	CDA3122002C2
Manufacturer	SHENGHUA
Length of cable	/

##### AE4

Model	/
Manufacturer	/
Length of cable	/

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

Note: The USB cables are shielded.

### 3.4. EUT set-ups

<b>EUT set-up No.</b>	<b>Combination of EUT and AE</b>	<b>Remarks</b>
Set.1	EUT1 + AE1 + AE2+ AE3	Charger+ Camera+LB5
Set.2	EUT1 + AE1 + AE2+ AE3	Charger+MP3+WB5
Set.3	EUT1 + AE1 + AE2+ AE3	Charger+Front Camera+GSM850
Set.4	EUT1 + AE1 + AE2+ PC	USB SD TO PC +MP3
Set.5	EUT1 + AE1 + AE2+ AE3+AE4	Charger+FM

**Note:**

The device supports GSM/GPRS/EGPRS 850/1900, UMTS FDD Band2/4/5; LTE FDD Band 2/4/5/12/13/25/26/41/66/71. It has WLAN (802.11b/g/n, 802.11n supports 20MHz and 40MHz bandwidth), Bluetooth (EDR, BLE) and GNSS (GPS&GLONASS&BDS& GALILEO) functions.

The device contains receivers which tune and operate between 30MHz-960MHz in the following bands: GSM850, WCDMA850 and LTE Band 5. All licensed band receivers that tune in the range of 30MHz-960MHz are investigated.

## **4. Reference Documents**

### **4.1. Reference Documents for testing**

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

<b>Reference</b>	<b>Title</b>	<b>Version</b>
FCC Part 15, Subpart B	Radio frequency devices - Unintentional Radiators	2019
ANSI C63.4	American National Standard for Methods of Measurement of Radio- Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

Note: The test methods have no deviation with standards.

## 5. LABORATORY ENVIRONMENT

**Semi-anechoic chamber SAC-1** (10 meters×6.7meters×6.1meters) 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, 3m 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 6000 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

Items	Test Name	Clause in FCC rules	Section in this report	Verdict	Test Location
1	Radiated Emission	15.109(a)	B.1	P	CTTL(huayuan North Road)
2	Conducted Emission	15.107(a)	B.2	P	CTTL(huayuan North Road)

## 7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESU26	100235	R&S	2021-03-02	1 Year
2	LISN	ENV216	101200	R&S	2021-05-19	1 year
3	Universal Radio Communication Tester	CMW500	116588	R&S	2021-12-04	1 year
4	Test Receiver	ESCI	100344	R&S	2021-02-26	1 Year
5	EMI Antenna	VULB 9163	01223	Schwarzbeck	2021-03-17	1 year
6	EMI Antenna	3115	6914	ETS-Lindgren	2021-01-14	1 year

## **ANNEX A: MEASUREMENT RESULTS**

### **A.1 Radiated Emission**

#### **Reference**

FCC: CFR Part 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 3 meters is tested. Tested in accordance with the procedures of ANSI C63.4 – 2014, 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 EUT was tested while operating in licensed band Rx mode. All licensed band receivers that tune in the range of 30MHz-960MHz, as listed in section 3.4, are investigated. Only the worst case emissions are reported.

All equipment is placed on the test table top and arranged in a typical configuration in accordance with ANSI C63.4-2014 and manipulated to obtain worst case emissions.

The model of the PC is M4000E-17, and the serial number of the PC is M706GWXD. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

Note: I/O information: Printer – USB, Mouse – PS/2, Keyboard – USB.

#### **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

$G_{\text{PL}}$ : Path Loss

$P_{\text{Mea}}$ : Measurement result on receiver.

Measurement uncertainty (worst case):  $U = 4.74 \text{ dB}$ ,  $k=2$ .

#### Measurement results for Set.1:

##### Charging Mode/Average detector

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17942.200	48.9	-17.7	45.6	21.0	54.0	33.0	H
17988.100	48.6	-17.7	45.6	20.7	54.0	33.3	H
17976.767	48.3	-17.7	45.6	20.4	54.0	33.6	V
17925.767	48.1	-17.7	45.6	20.2	54.0	33.8	H
17924.067	48.1	-17.7	45.6	20.2	54.0	33.8	H
17984.133	48.1	-17.7	45.6	20.2	54.0	33.8	H

##### Charging Mode/Peak detector

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
18000.000	57.6	-45.6	44.5	58.7	74.0	15.3	H
17939.933	57.3	-17.7	45.6	29.4	74.0	44.6	H
17928.600	57.2	-17.7	45.6	29.3	74.0	44.7	V
17960.900	56.9	-17.7	45.6	29.0	74.0	45.0	H
17931.433	56.7	-17.7	45.6	28.8	74.0	45.2	H
17935.967	56.7	-17.7	45.6	28.8	74.0	45.2	H

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

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17934.833	48.9	-17.7	45.6	21.0	54.0	33.0	H
17962.033	48.5	-17.7	45.6	20.6	54.0	33.4	H
17950.133	48.2	-17.7	45.6	20.3	54.0	33.7	V
17928.033	48.0	-17.7	45.6	20.1	54.0	33.9	H
17919.533	47.8	-17.7	45.6	19.9	54.0	34.1	H
17930.867	47.7	-17.7	45.6	19.8	54.0	34.2	H

**Charging Mode/Peak detector**

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17911.033	56.9	-18.5	45.6	29.8	74.0	44.2	H
17832.267	56.6	-18.5	45.6	29.5	74.0	44.5	H
17962.600	56.5	-17.7	45.6	28.6	74.0	45.4	V
17966.000	56.3	-17.7	45.6	28.4	74.0	45.6	H
17955.800	56.2	-17.7	45.6	28.3	74.0	45.7	H
17994.333	56.1	-17.7	45.6	28.2	74.0	45.8	H

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

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17833.400	48.7	-18.5	45.6	21.6	54.0	32.4	H
17839.633	48.4	-18.5	45.6	21.3	54.0	32.7	H
17923.500	48.4	-17.7	45.6	20.5	54.0	33.5	V
17929.167	48.3	-17.7	45.6	20.4	54.0	33.6	H
17897.433	48.2	-18.5	45.6	21.1	54.0	32.9	H
17943.900	48.0	-17.7	45.6	20.1	54.0	33.9	H

**Charging Mode/Peak detector**

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17941.067	57.2	-17.7	45.6	29.3	74.0	44.7	H
17976.200	57.2	-17.7	45.6	29.3	74.0	44.7	H
17930.867	57.1	-17.7	45.6	29.2	74.0	44.8	V
17933.700	56.2	-17.7	45.6	28.3	74.0	45.7	H
17979.033	56.1	-17.7	45.6	28.2	74.0	45.8	H
17942.200	56.1	-17.7	45.6	28.2	74.0	45.8	H

**Measurement results for Set.4:**
**USB Mode/Average detector**

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17948.433	48.7	-17.7	45.6	20.8	54.0	33.2	H
17905.933	48.5	-18.5	45.6	21.4	54.0	32.6	H
17979.033	48.4	-17.7	45.6	20.5	54.0	33.5	V
17955.233	48.4	-17.7	45.6	20.5	54.0	33.5	H
17942.200	47.9	-17.7	45.6	20.0	54.0	34.0	H
17998.867	47.9	-17.7	45.6	20.0	54.0	34.0	H

**USB Mode/Peak detector**

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17994.900	57.1	-17.7	45.6	29.2	74.0	44.8	H
17987.533	56.9	-17.7	45.6	29.0	74.0	45.0	H
17926.333	56.6	-17.7	45.6	28.7	74.0	45.3	V
17894.600	56.4	-18.5	45.6	29.3	74.0	44.7	H
17976.767	56.4	-17.7	45.6	28.5	74.0	45.5	H
17849.833	56.4	-18.5	45.6	29.3	74.0	44.7	H

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

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17891.767	48.6	-5.7	43.4	10.9	54.0	43.1	H
17928.033	48.2	-5.4	33.8	19.8	54.0	34.2	H
17952.400	48.2	-5.4	43.4	10.2	54.0	43.8	V
17989.800	48.0	-5.4	43.4	10.0	54.0	44.0	H
17987.533	48.0	-5.4	43.4	10.0	54.0	44.0	H
17993.200	48.0	-5.4	43.4	10.0	54.0	44.0	H

**Charging Mode/Peak detector**

Frequency (MHz)	Measurement Result (dB $\mu$ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB $\mu$ V)	Limit (dB $\mu$ V/m)	Margin (dB)	Antenna Pol. (H/V)
17869.100	57.0	-5.7	43.4	19.3	74.0	54.7	H
17996.033	57.0	-5.4	33.8	28.6	74.0	45.4	H
17984.700	56.9	-5.4	43.4	18.9	74.0	55.1	V
17981.300	56.4	-5.4	43.4	18.4	74.0	55.6	H
17949.567	56.2	-5.4	43.4	18.2	74.0	55.8	H
17835.100	56.2	-5.7	43.4	18.5	74.0	55.5	H

### Measurement results for Set.1:

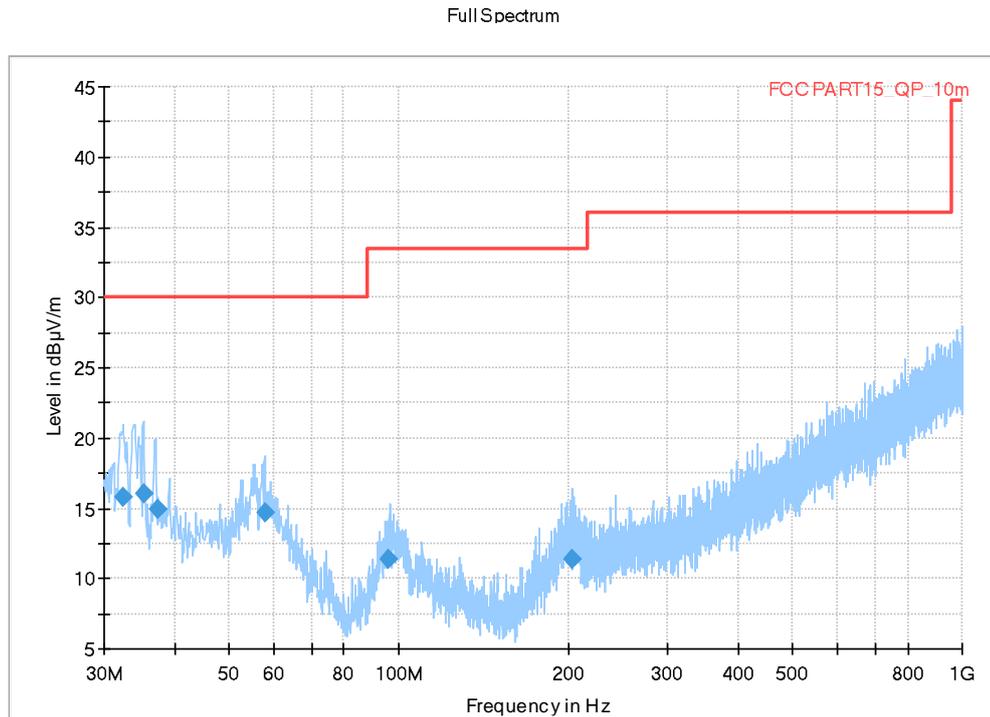
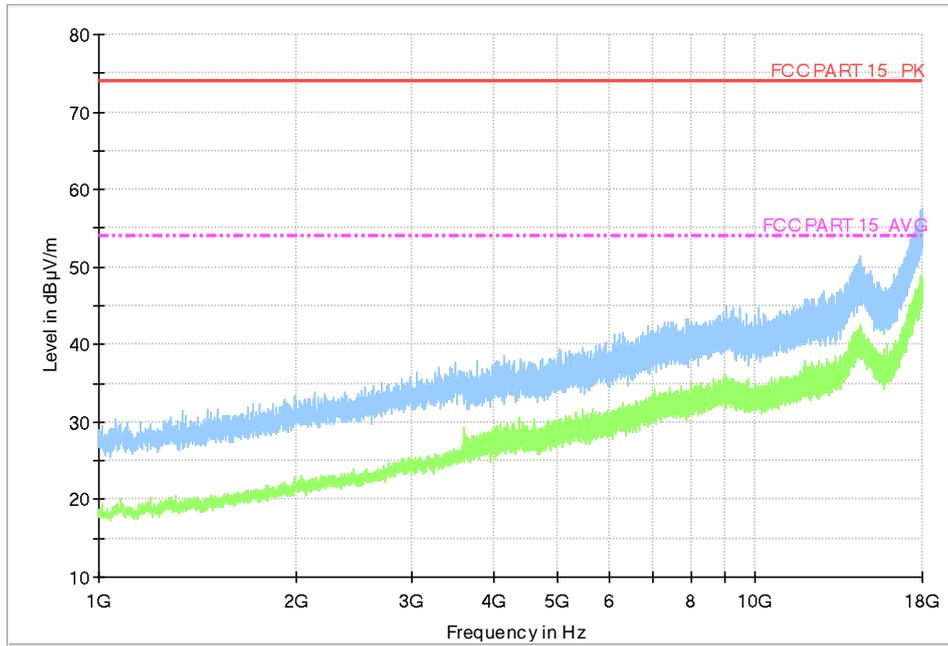


Fig A.1 Radiated Emission from 30MHz to 1GHz

### Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
32.425000	15.77	30.00	14.23	1000.0	120.000	120.0	V	210.0
35.298000	16.04	30.00	13.96	1000.0	120.000	103.0	V	240.0
37.344000	14.91	30.00	15.09	1000.0	120.000	216.0	V	151.0
57.839000	14.69	30.00	15.31	1000.0	120.000	299.0	V	300.0
96.085000	11.36	33.50	22.16	1000.0	120.000	104.0	V	-30.0
202.868000	11.38	33.50	22.14	1000.0	120.000	125.0	V	186.0

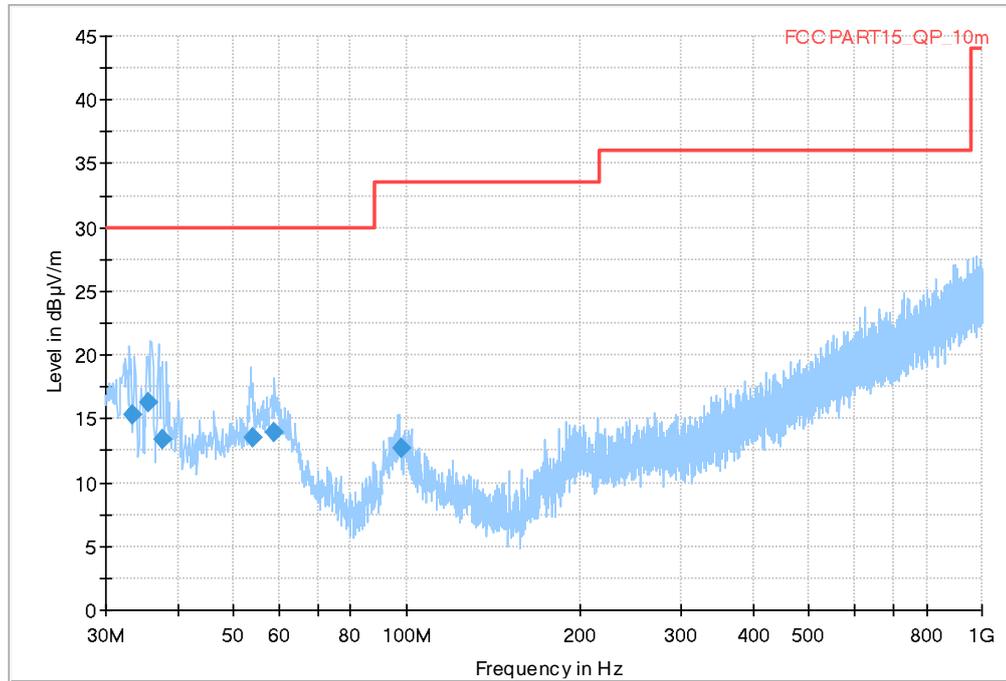
Full Spectrum



**Fig A.2 Radiated Emission from 1GHz to 18GHz**

**Measurement results for Set. 2:**

Full Spectrum

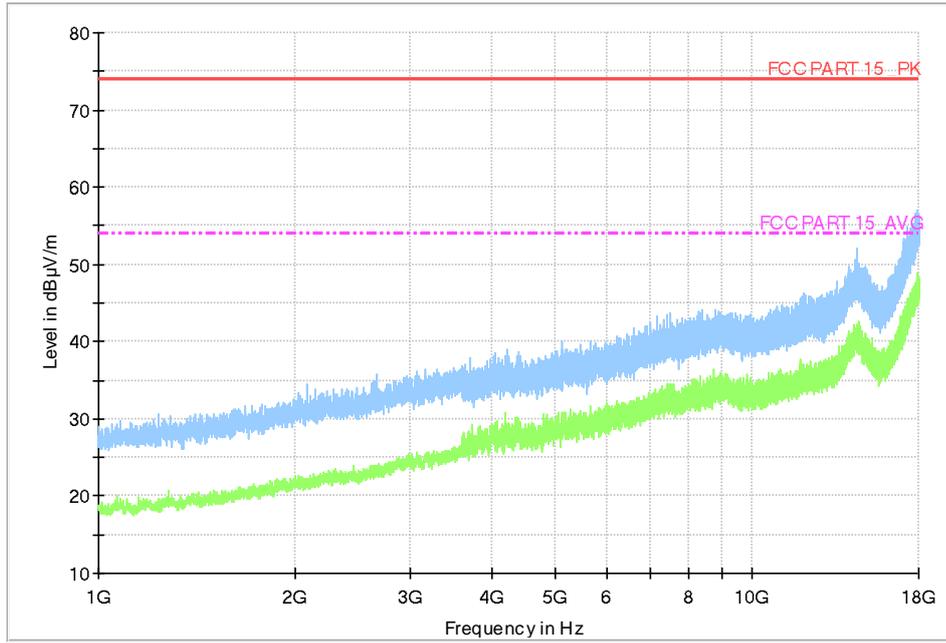


**Fig A.3 Radiated Emission from 30MHz to 1GHz**

**Final Result 1**

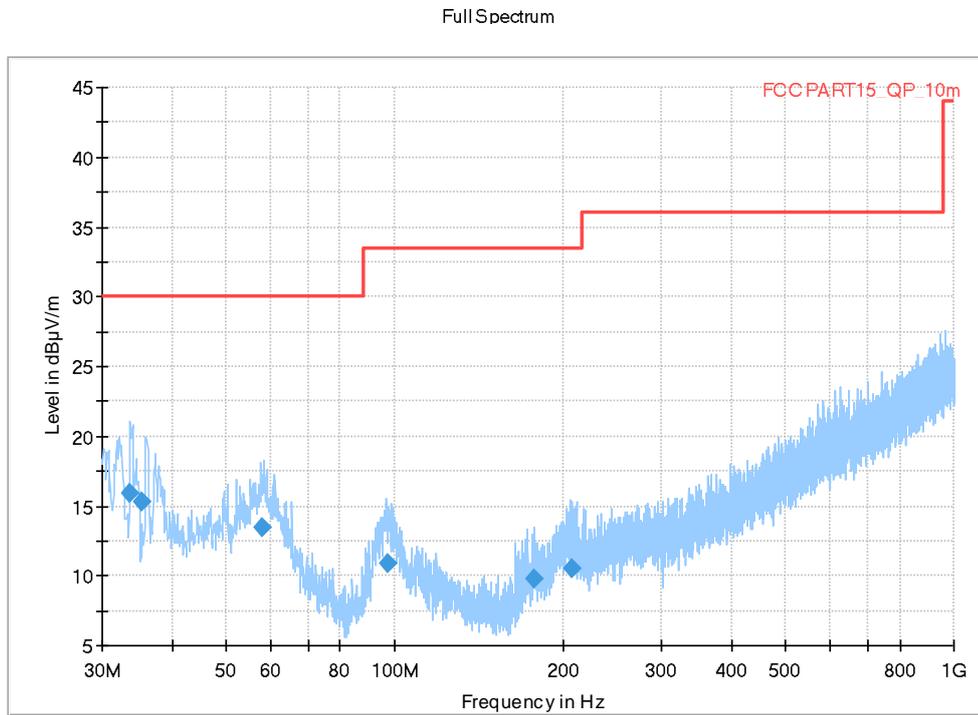
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
33.307000	15.36	30.00	14.64	1000.0	120.000	104.0	V	30.0
35.654000	16.34	30.00	13.66	1000.0	120.000	102.0	V	111.0
37.548000	13.35	30.00	16.65	1000.0	120.000	219.0	V	7.0
54.088000	13.51	30.00	16.49	1000.0	120.000	106.0	V	2.0
58.643000	13.91	30.00	16.09	1000.0	120.000	125.0	V	240.0
97.858000	12.65	33.50	20.87	1000.0	120.000	102.0	V	269.0

Full Spectrum



**Fig A.4 Radiated Emission from 1GHz to 18GHz**

**Measurement results for Set.3:**

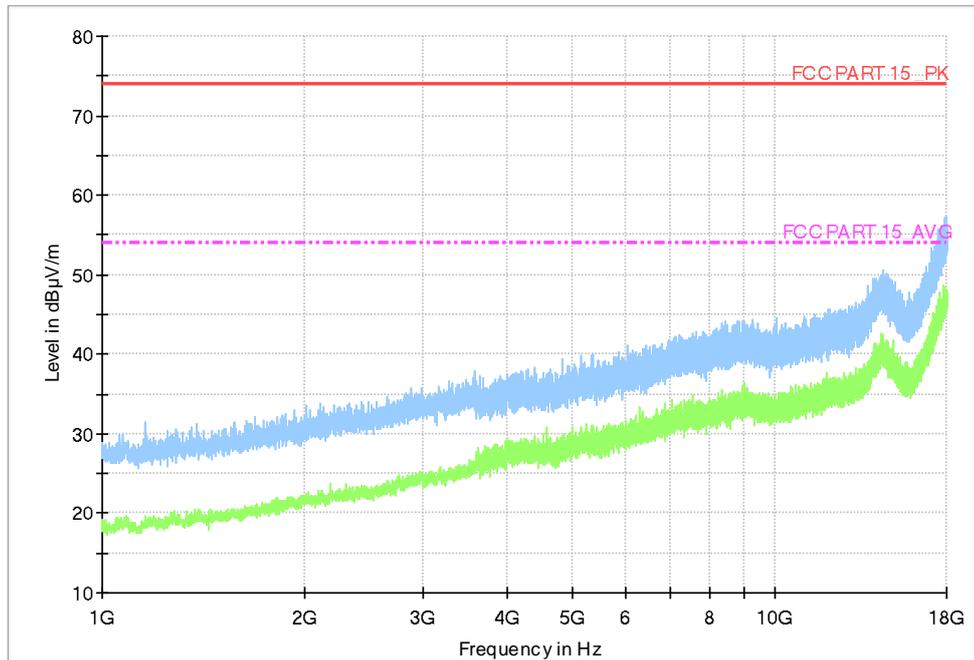


**Fig A.5 Radiated Emission from 30MHz to 1GHz**

**Final Result 1**

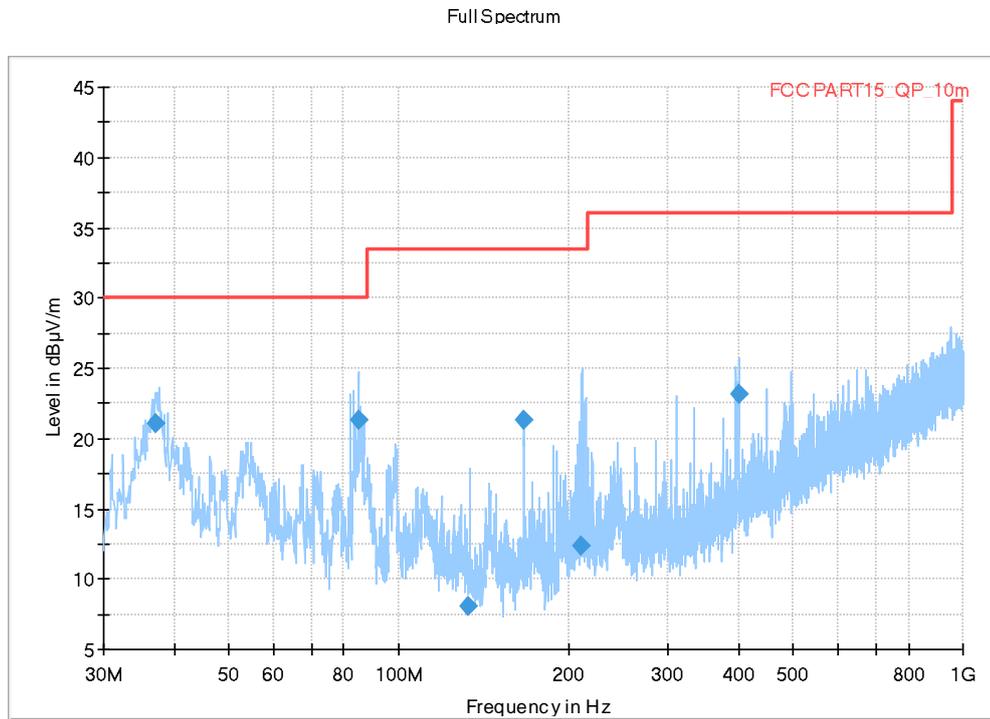
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
33.626000	15.90	30.00	14.10	1000.0	120.000	325.0	V	150.0
35.317000	15.34	30.00	14.66	1000.0	120.000	102.0	V	300.0
57.982000	13.45	30.00	16.55	1000.0	120.000	213.0	V	195.0
97.313000	10.91	33.50	22.61	1000.0	120.000	113.0	V	108.0
177.297000	9.73	33.50	23.79	1000.0	120.000	108.0	V	-9.0
208.055000	10.56	33.50	22.96	1000.0	120.000	109.0	V	87.0

Full Spectrum



**Fig A.6 Radiated Emission from 1GHz to 18GHz**

### Measurement results for Set.4:

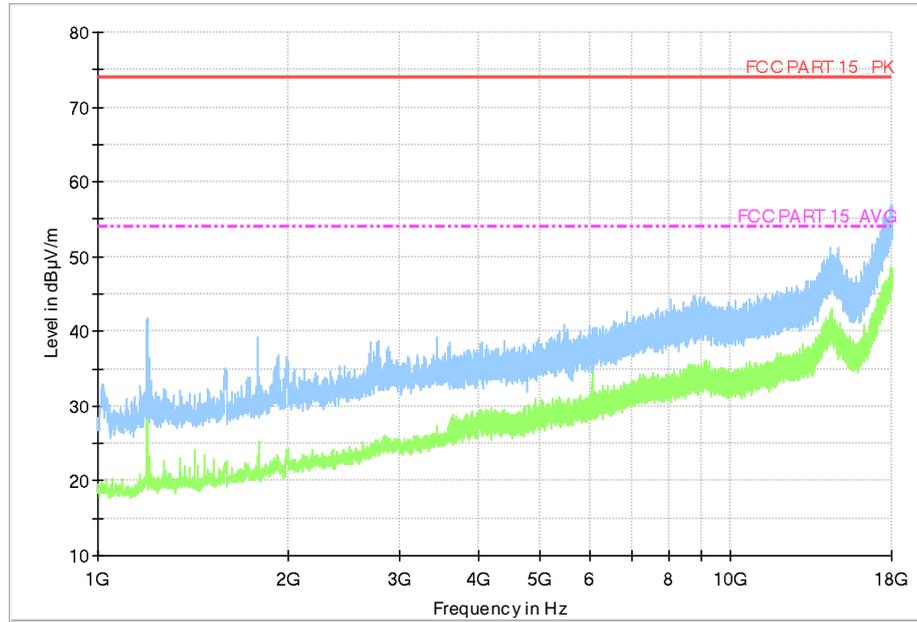


**Fig A.7 Radiated Emission from 30MHz to 1GHz**

### Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
36.984000	21.11	30.00	8.89	1000.0	120.000	225.0	V	61.0
85.008000	21.29	30.00	8.71	1000.0	120.000	115.0	V	246.0
133.042000	8.02	33.50	25.50	1000.0	120.000	201.0	V	243.0
166.913000	21.30	33.50	12.22	1000.0	120.000	325.0	H	65.0
210.873000	12.34	33.50	21.18	1000.0	120.000	110.0	V	-23.0
399.727000	23.19	36.00	12.83	1000.0	120.000	112.0	V	259.0

Full Spectrum



**Fig A.8 Radiated Emission from 1GHz to 18GHz**

### Measurement results for Set.5:

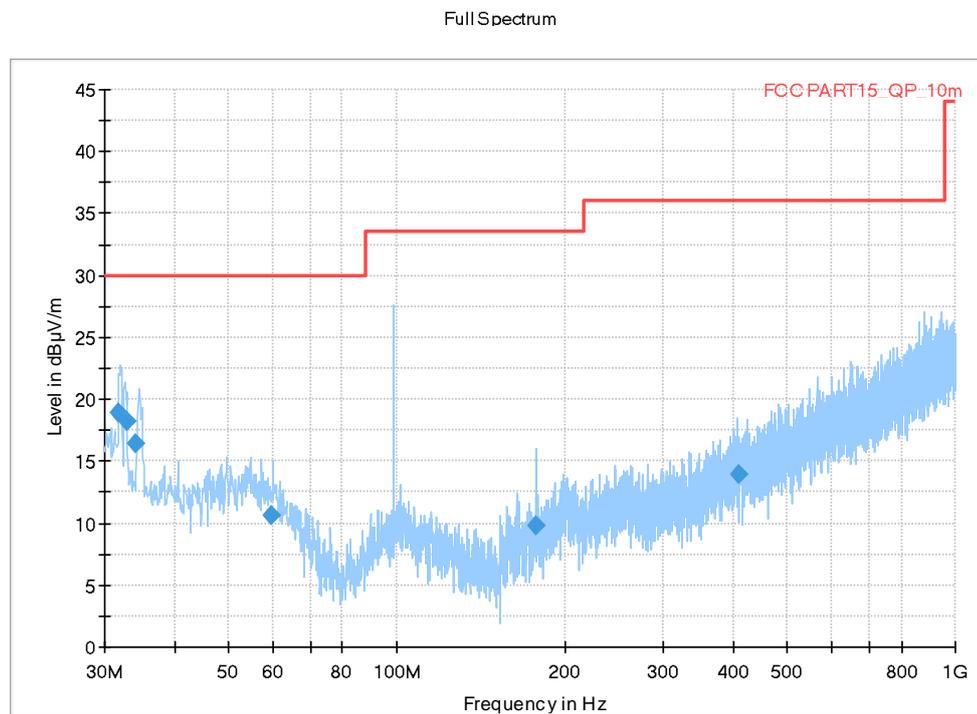
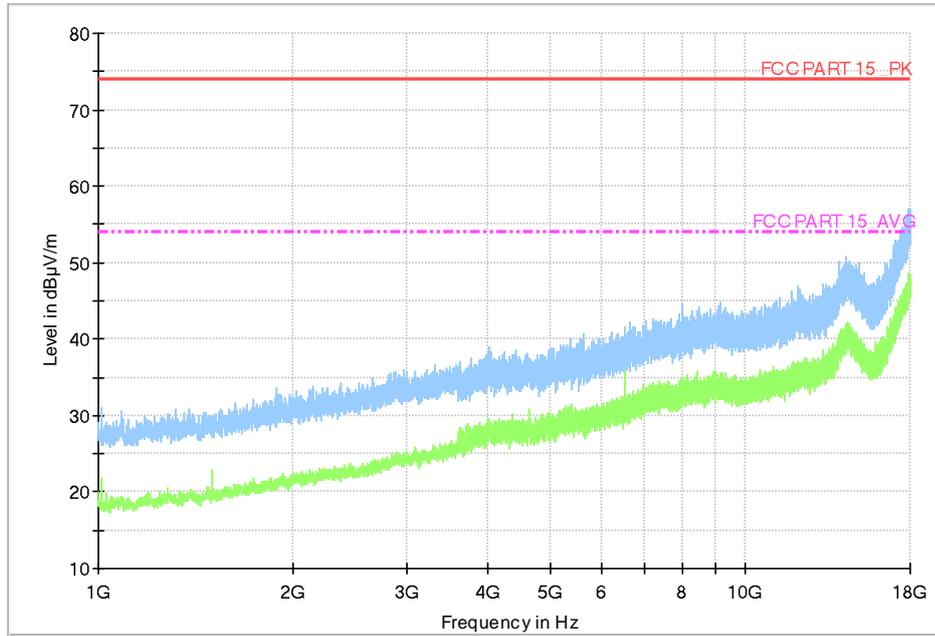


Fig A.9 Radiated Emission from 30MHz to 1GHz

### Final\_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
31.857000	18.89	30.00	11.11	2000.0	120.000	185.0	V	8.0
32.956000	18.25	30.00	11.75	2000.0	120.000	198.0	V	60.0
34.056000	16.36	30.00	13.64	2000.0	120.000	108.0	V	150.0
59.567000	10.68	30.00	19.32	2000.0	120.000	125.0	V	23.0
177.592000	9.78	33.50	23.74	2000.0	120.000	225.0	V	-25.0
408.646000	13.89	36.00	22.13	2000.0	120.000	116.0	V	11.0

Full Spectrum



**Fig A.10 Radiated Emission from 1GHz to 18GHz**

## A.2 Conducted Emission

### Reference

FCC: CFR Part 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 – 2014, section 7.3.

### 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 M4000E-17, and the serial number of the PC is M706GWXD. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

Note: I/O information: Printer – USB, Mouse – PS/2, Keyboard – USB.

### A.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dB $\mu$ V)	
	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:  $U= 3.1$  dB,  $k=2$ .

Charging Mode, Set.1:

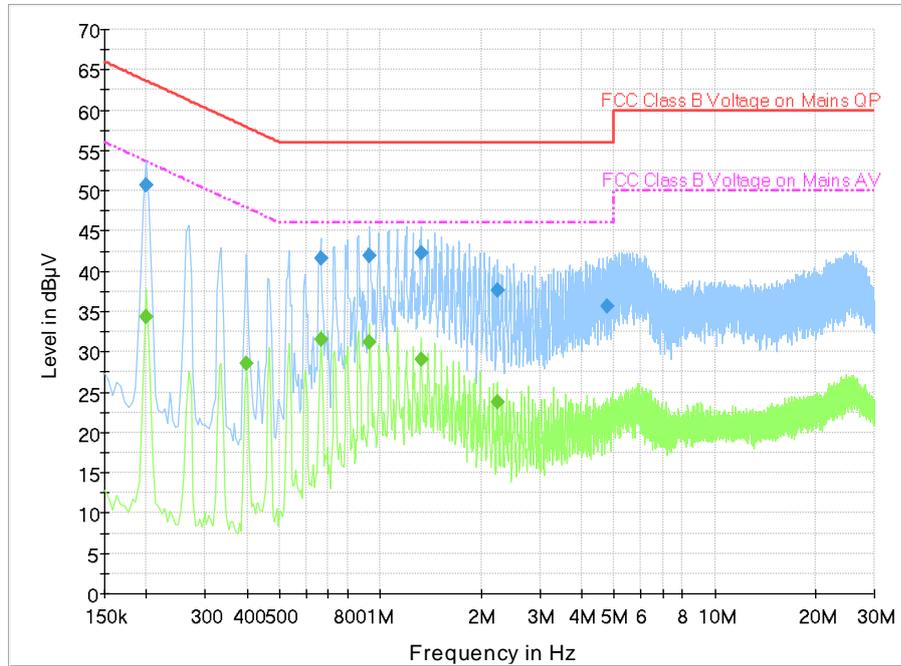


Fig A.11 Radiated Emission from 30MHz to 1GHz

### Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.199500	50.8	1000.0	9.000	On	L1	19.6	12.9	63.6	
0.663000	41.6	1000.0	9.000	On	L1	19.6	14.4	56.0	
0.928500	42.0	1000.0	9.000	On	N	19.6	14.0	56.0	
1.324500	42.3	1000.0	9.000	On	N	19.6	13.7	56.0	
2.247000	37.6	1000.0	9.000	On	L1	19.6	18.4	56.0	
4.762500	35.7	1000.0	9.000	On	L1	19.8	20.3	56.0	

### Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.199500	34.4	1000.0	9.000	On	L1	19.6	19.2	53.6	
0.397500	28.5	1000.0	9.000	On	N	19.6	19.4	47.9	
0.663000	31.5	1000.0	9.000	On	N	19.4	14.5	46.0	
0.928500	31.1	1000.0	9.000	On	L1	19.6	14.9	46.0	
1.324500	29.1	1000.0	9.000	On	N	19.6	16.9	46.0	
2.233500	23.8	1000.0	9.000	On	L1	19.6	22.2	46.0	

### Charging Mode, Set.2:

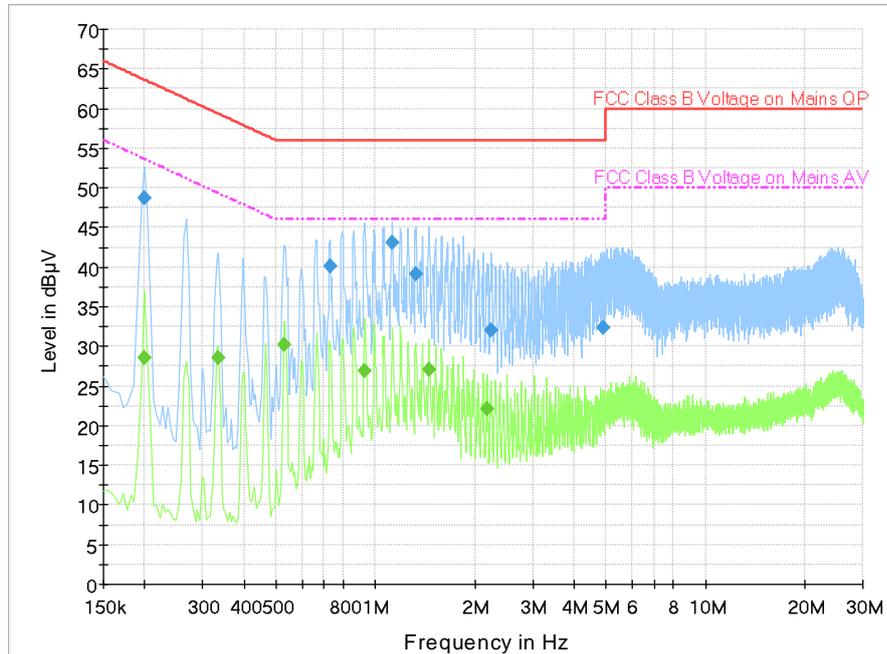


Fig A.12 Radiated Emission from 30MHz to 1GHz

### Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.199500	48.7	1000.0	9.000	On	N	19.6	15.0	63.6	
0.730500	40.1	1000.0	9.000	On	L1	19.6	15.9	56.0	
1.126500	43.0	1000.0	9.000	On	L1	19.6	13.0	56.0	
1.329000	39.1	1000.0	9.000	On	L1	19.6	16.9	56.0	
2.247000	32.1	1000.0	9.000	On	N	19.6	23.9	56.0	
4.888500	32.4	1000.0	9.000	On	N	19.7	23.6	56.0	

### Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.199500	28.5	1000.0	9.000	On	N	19.6	25.1	53.6	
0.334500	28.6	1000.0	9.000	On	L1	19.6	20.8	49.3	
0.528000	30.2	1000.0	9.000	On	L1	19.6	15.8	46.0	
0.928500	26.9	1000.0	9.000	On	N	19.6	19.1	46.0	
1.455000	27.1	1000.0	9.000	On	N	19.6	18.9	46.0	
2.184000	22.2	1000.0	9.000	On	N	19.5	23.8	46.0	

### Charging Mode, Set.3:

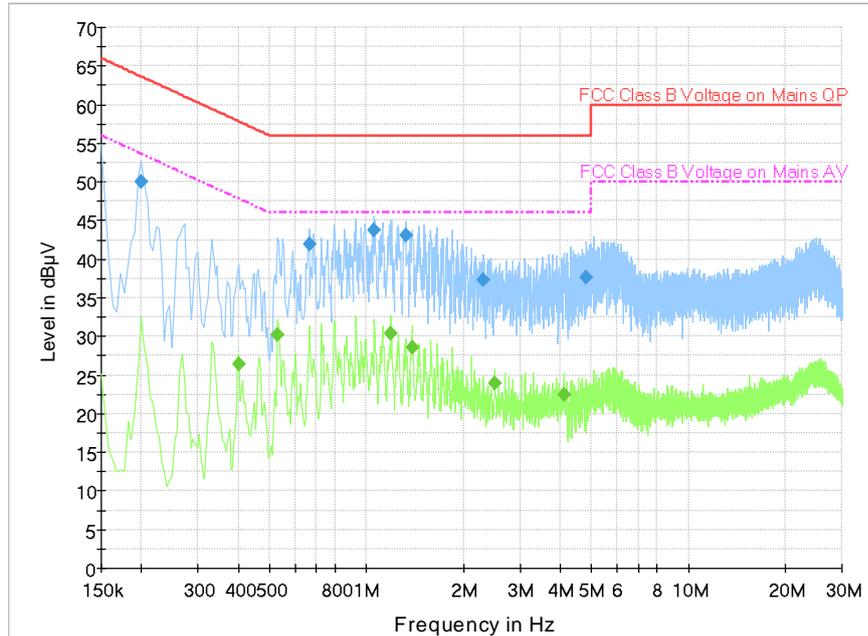


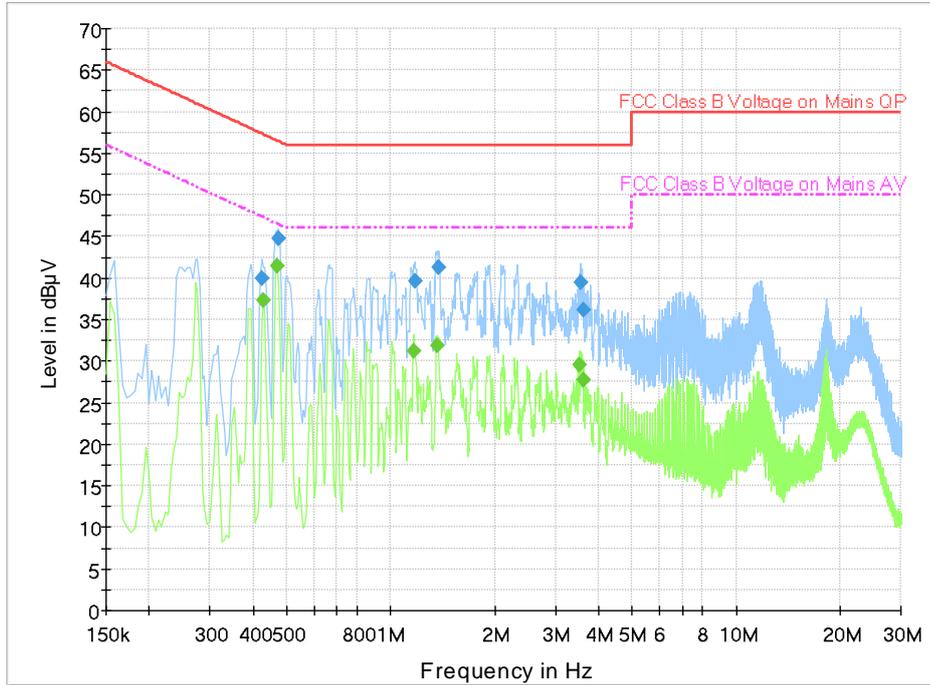
Fig A.13 Radiated Emission from 30MHz to 1GHz

### Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.199500	50.1	1000.0	9.000	On	N	19.6	13.5	63.6	
0.663000	41.9	1000.0	9.000	On	N	19.4	14.1	56.0	
1.059000	43.8	1000.0	9.000	On	N	19.6	12.2	56.0	
1.324500	43.0	1000.0	9.000	On	N	19.6	13.0	56.0	
2.314500	37.3	1000.0	9.000	On	N	19.6	18.7	56.0	
4.830000	37.6	1000.0	9.000	On	L1	19.8	18.4	56.0	

### Final Result 2

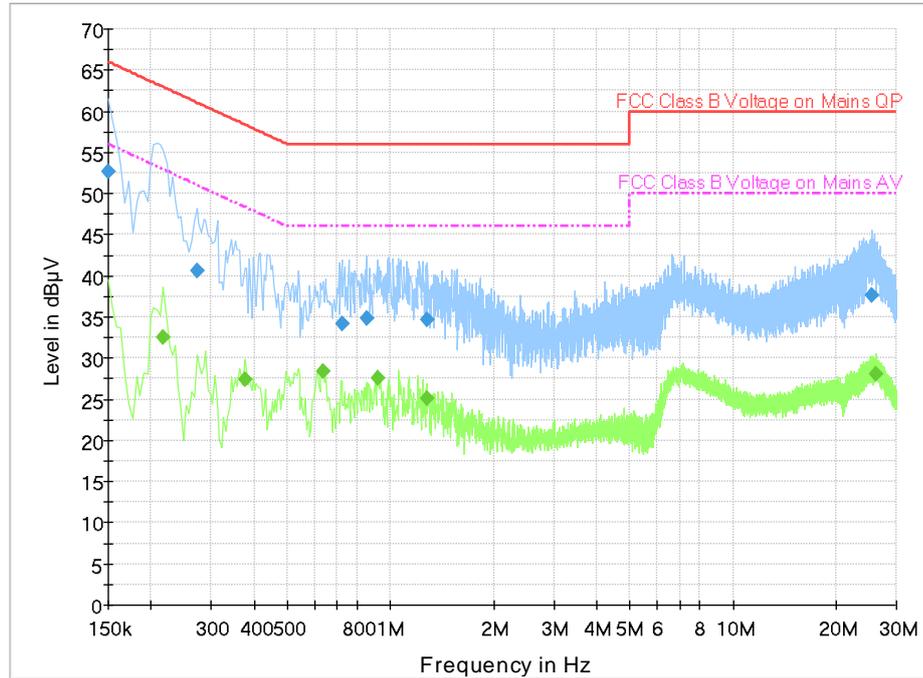
Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.402000	26.5	1000.0	9.000	On	N	19.6	21.3	47.8	
0.528000	30.1	1000.0	9.000	On	N	19.5	15.9	46.0	
1.189500	30.3	1000.0	9.000	On	N	19.6	15.7	46.0	
1.387500	28.6	1000.0	9.000	On	N	19.6	17.4	46.0	
2.503500	24.0	1000.0	9.000	On	N	19.6	22.0	46.0	
4.096500	22.5	1000.0	9.000	On	N	19.7	23.5	46.0	

**USB Mode, Set.4:**

**Fig A.14 Radiated Emission from 30MHz to 1GHz**
**Final Result 1**

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.424500	40.0	1000.0	9.000	On	L1	19.6	17.4	57.4	
0.474000	44.7	1000.0	9.000	On	L1	19.6	11.8	56.4	
1.176000	39.6	1000.0	9.000	On	N	19.6	16.4	56.0	
1.383000	41.3	1000.0	9.000	On	N	19.6	14.7	56.0	
3.538500	39.5	1000.0	9.000	On	N	19.6	16.5	56.0	
3.619500	36.1	1000.0	9.000	On	L1	19.7	19.9	56.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.429000	37.3	1000.0	9.000	On	L1	19.6	10.0	47.3	
0.469500	41.4	1000.0	9.000	On	N	19.6	5.1	46.5	
1.162500	31.2	1000.0	9.000	On	N	19.6	14.8	46.0	
1.365000	31.9	1000.0	9.000	On	N	19.6	14.1	46.0	
3.516000	29.5	1000.0	9.000	On	L1	19.7	16.5	46.0	
3.619500	27.7	1000.0	9.000	On	L1	19.7	18.3	46.0	

**Charging Mode, Set.5:**

**Fig A.15 Radiated Emission from 30MHz to 1GHz**
**Final Result 1**

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.150000	52.7	1000.0	9.000	On	L1	19.6	13.3	66.0	
0.271500	40.7	1000.0	9.000	On	N	19.6	20.4	61.1	
0.721500	34.1	1000.0	9.000	On	N	19.4	21.9	56.0	
0.852000	34.9	1000.0	9.000	On	L1	19.6	21.1	56.0	
1.284000	34.7	1000.0	9.000	On	L1	19.6	21.3	56.0	
25.471500	37.6	1000.0	9.000	On	L1	20.1	22.4	60.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.217500	32.5	1000.0	9.000	On	L1	19.6	20.4	52.9	
0.375000	27.4	1000.0	9.000	On	L1	19.6	21.0	48.4	
0.636000	28.3	1000.0	9.000	On	N	19.5	17.7	46.0	
0.915000	27.6	1000.0	9.000	On	N	19.5	18.4	46.0	
1.275000	25.0	1000.0	9.000	On	N	19.6	21.0	46.0	
26.119500	28.0	1000.0	9.000	On	N	20.0	22.0	50.0	



**ANNEX B: PERSONS INVOLVED IN THIS TESTING**

<b>Test Item</b>	<b>Test Software and Version</b>	<b>Software Vendor</b>	<b>Test operator</b>
Conducted Emission	EMC32 V8.5.2	R&S	Wang Huan
Radiated Emission	EMC32 V9.01.00	R&S	Zhang Tianli

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