



# TEST REPORT

No. I20Z61833-EMC01

for

**TCL Communication Ltd.**

**GSM/UMTS/LTE Mobile phone**

**Model Name: A509DL**

**FCC ID: 2ACCJH131**

with

**Hardware Version: PIO**

**Software Version: vL3R**

**Issued Date: 2020-12-24**

**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

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

Tel:+86(0)10-62304633-2512, Fax:+86(0)10-62304633-2504

Email: [ctl\\_terminals@caict.ac.cn](mailto:ctl_terminals@caict.ac.cn), website: [www.caict.ac.cn](http://www.caict.ac.cn)



## **REPORT HISTORY**

<b>Report Number</b>	<b>Revision</b>	<b>Description</b>	<b>Issue Date</b>
I20Z61833-EMC01	Rev.0	1 <sup>st</sup> edition	2020-12-17
I20Z61833-EMC01	Rev.1	Update note information in page 7	2020-12-24

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 (BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology  
Development Area, Beijing, P. R. China 100176

### 1.3. Testing Environment

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

### 1.4. Project data

Testing Start Date: 2020-11-24  
Testing End Date: 2020-12-17

### 1.5. Signature



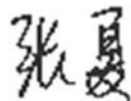
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Wang Junqing  
(Prepared this test report)



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Zhang Ying  
(Reviewed this test report)



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Zhang Xia  
Deputy Director of the laboratory  
(Approved this test report)



## **2. Client Information**

### **2.1. Applicant 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

### **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	A509DL
FCC ID	2ACCJH131
Extreme vol. Limits	3.5VDC to 4.4VDC (nominal: 3.85VDC)

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
UT48a	015858000011373	PIO	vL3R

\*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
AE1-1	Battery	/	inbuilt
AE1-2	Battery	/	inbuilt
AE2	Charger	/	CH003/15/19
AE3	USB Cable	/	DC004/013/014
AE4	Headset	/	/

##### AE1-1

Model	CAB2880000C7
Manufacturer	VEKEN
Capacitance	3000mAh
Nominal voltage	/

##### AE1-2

Model	CAB2880001C1
Manufacturer	BYD
Capacitance	3000mAh
Nominal voltage	/

##### AE2

Model	CBA0058AGTC5
Manufacturer	PUAN
Length of cable	/

##### AE3

Model	CDA0000143C8
Manufacturer	PUAN
Length of cable	/

##### AE4

Model	/
Manufacturer	/
Length of cable	/

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

### 3.4. EUT set-ups

<b>EUT set-up No.</b>	<b>Combination of EUT and AE</b>	<b>Remarks</b>
Set. 1	UT48a+AE1+AE2+AE3+AE4	Charger+FM+GSM850 Reciever
Set. 2	UT48a+AE1+AE2+AE3	Charger+Camera+WB5 Reciever
Set. 3	UT48a+AE1+AE2+AE3	Charger+MP3+LB5/12/13/26/71 Reciever
Set. 4	UT48a+AE1+AE3	USB Mode

Note:

The device supports GSM 850/1900/900/1800 and UMTS FDD Band 2/4/5 and E-UTRA FDD Band 2/4/5/12/13/25/26/66/71 and TDD Band 41. It has WLAN (802.11b/g/n, 802.11n supports 20MHz and 40MHz bandwidth) functions.

The device contains receivers which tune and operate between 30MHz-960MHz in the following bands: GSM850, WCDMA850 and LTE Band5/12/13/26/71. All licensed band receivers that tune in the range of 30MHz-960MHz are investigated. Only the worst results are shown in the report.

## **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(BDA)
2	Conducted Emission	15.107(a)	B.2	P	CTTL(BDA)

## 7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESU26	100235	R&S	2021-03-18	1 Year
2	LISN	ENV216	101200	R&S	2021-05-19	1 year
3	Universal Radio Communication Tester	CMW500	159408	R&S	2021-03-04	1 year
4	Test Receiver	ESCI	100344	R&S	2021-02-26	1 Year
5	EMI Antenna	VULB 9163	9163-1223	Schwarzbeck	2021-03-18	1 year
6	EMI Antenna	3115	6914	ETS-Lindgren	2021-01-14	1 year
7	Signal Power	SMB100A	102063	R&S	2021-03-31	1 year
8	PC	M4000e-17	M706GWXD	Lenovo	N/A	N/A
9	Printer	P1606dn	VNC3L52122	HP	N/A	N/A

## **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 ( $\mu\text{V}/\text{m}$ )		
	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:

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

Where

$G_A$ : Antenna factor of receive antenna

$G_{PL}$ : 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)
17951.267	48.6	-17.7	45.6	20.7	54.0	5.4	H
17962.600	48.3	-17.7	45.6	20.4	54.0	5.7	H
17953.533	48.1	-17.7	45.6	20.2	54.0	5.9	V
17963.733	47.9	-17.7	45.6	20.0	54.0	6.1	H
17927.467	47.9	-17.7	45.6	20.0	54.0	6.1	H
17971.667	47.8	-17.7	45.6	19.9	54.0	6.2	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)
17935.967	57.1	-17.7	45.6	29.2	74.0	16.9	H
17864.567	56.8	-18.5	45.6	29.7	74.0	17.2	H
17988.667	56.7	-17.7	45.6	28.8	74.0	17.3	V
17964.867	56.5	-17.7	45.6	28.6	74.0	17.5	H
17992.633	56.4	-17.7	45.6	28.5	74.0	17.6	H
17924.067	56.3	-17.7	45.6	28.4	74.0	17.7	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)
17941.633	49.0	-17.7	45.6	21.1	54.0	5.0	H
17893.467	48.4	-18.5	45.6	21.3	54.0	5.6	H
17992.067	48.1	-17.7	45.6	20.2	54.0	5.9	V
17993.200	48.0	-17.7	45.6	20.1	54.0	6.0	H
17907.067	48.0	-18.5	45.6	20.9	54.0	6.0	H
17950.133	47.9	-17.7	45.6	20.0	54.0	6.1	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)
17859.467	57.4	-18.5	45.6	30.3	74.0	16.6	H
17993.767	57.1	-17.7	45.6	29.2	74.0	16.9	H
17920.100	57.0	-17.7	45.6	29.1	74.0	17.0	V
17968.833	56.8	-17.7	45.6	28.9	74.0	17.2	H
17934.833	56.6	-17.7	45.6	28.7	74.0	17.4	H
17982.433	56.6	-17.7	45.6	28.7	74.0	17.4	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)
17966.567	48.5	-17.7	45.6	20.6	54.0	5.5	H
17936.533	48.4	-17.7	45.6	20.5	54.0	5.6	H
17985.833	48.4	-17.7	45.6	20.5	54.0	5.6	V
17966.000	48.2	-17.7	45.6	20.3	54.0	5.8	H
17959.200	48.1	-17.7	45.6	20.2	54.0	5.9	H
17918.967	48.1	-17.7	45.6	20.2	54.0	5.9	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)
17918.400	56.7	-17.7	45.6	28.8	74.0	17.3	H
17858.900	56.7	-18.5	45.6	29.6	74.0	17.3	H
17966.567	56.5	-17.7	45.6	28.6	74.0	17.5	V
17926.900	56.4	-17.7	45.6	28.5	74.0	17.6	H
17997.167	56.4	-17.7	45.6	28.5	74.0	17.6	H
17993.767	56.3	-17.7	45.6	28.4	74.0	17.7	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)
17978.467	48.3	-17.7	45.6	20.4	54.0	5.7	H
17973.367	48.2	-17.7	45.6	20.3	54.0	5.8	H
17954.100	48.2	-17.7	45.6	20.3	54.0	5.8	V
17949.567	48.2	-17.7	45.6	20.3	54.0	5.8	H
17955.800	48.1	-17.7	45.6	20.2	54.0	5.9	H
17928.600	48.0	-17.7	45.6	20.1	54.0	6.0	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)
17918.400	57.4	-17.7	45.6	29.5	74.0	16.6	H
17977.900	57.3	-17.7	45.6	29.4	74.0	16.7	H
17930.300	56.6	-17.7	45.6	28.7	74.0	17.4	V
17955.800	56.6	-17.7	45.6	28.7	74.0	17.4	H
17995.467	56.6	-17.7	45.6	28.7	74.0	17.4	H
17997.167	56.5	-17.7	45.6	28.6	74.0	17.5	H



### Measurement results for Set.1:

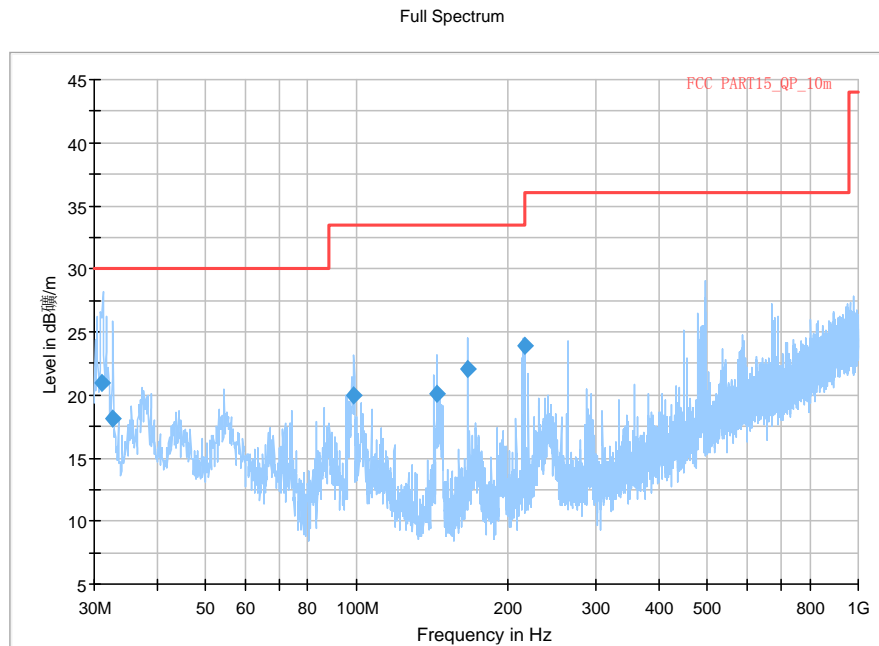
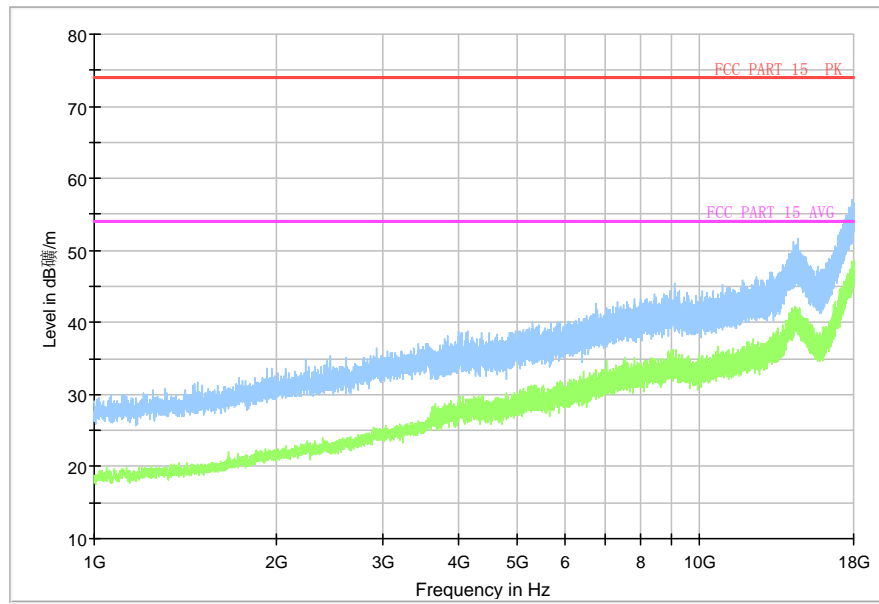


Fig A.1 Radiated Emission from 30MHz to 1GHz

### Final Result

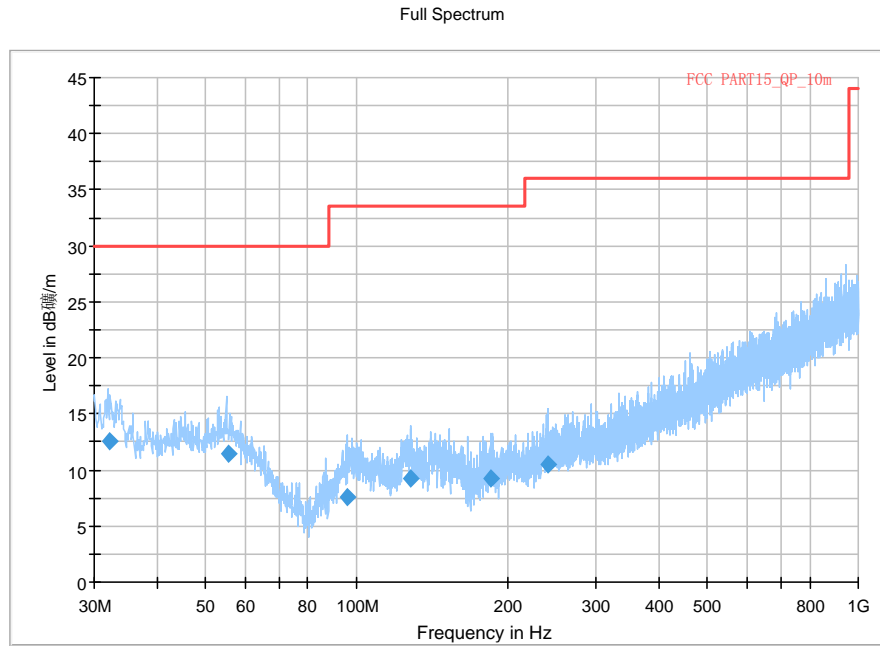
Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
32.841000	12.92	30.00	17.08	1000.0	120.000	103.0	V	111.0
54.980000	11.47	30.00	18.53	1000.0	120.000	114.0	V	156.0
102.865000	8.61	33.50	24.91	1000.0	120.000	317.0	V	169.0
128.340000	9.73	33.50	23.79	1000.0	120.000	125.0	V	20.0
146.026000	8.91	33.50	24.61	1000.0	120.000	212.0	V	300.0
265.188000	10.60	36.00	25.42	1000.0	120.000	102.0	V	108.0

Full Spectrum



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

**Measurement results for Set.2:**

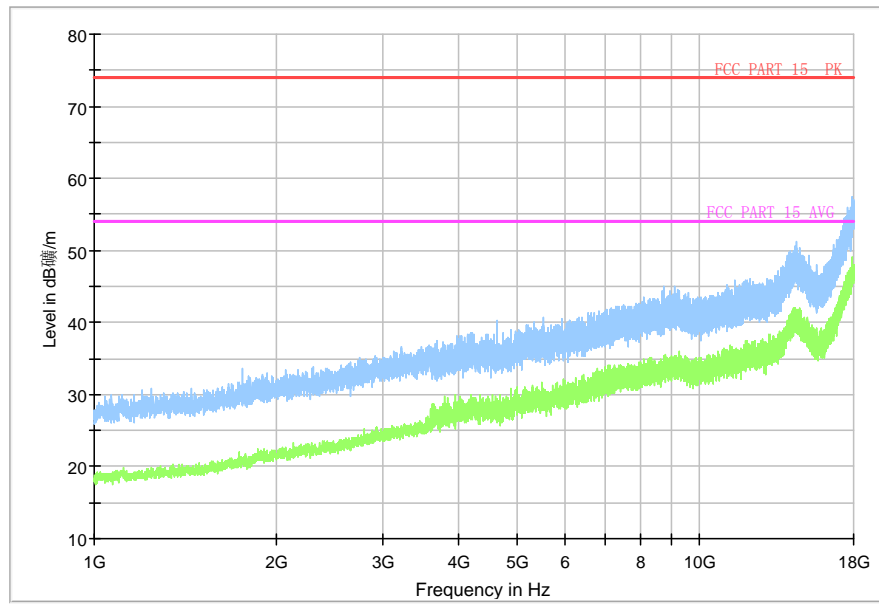


**Fig A.3 Radiated Emission from 30MHz to 1GHz**

**Final Result**

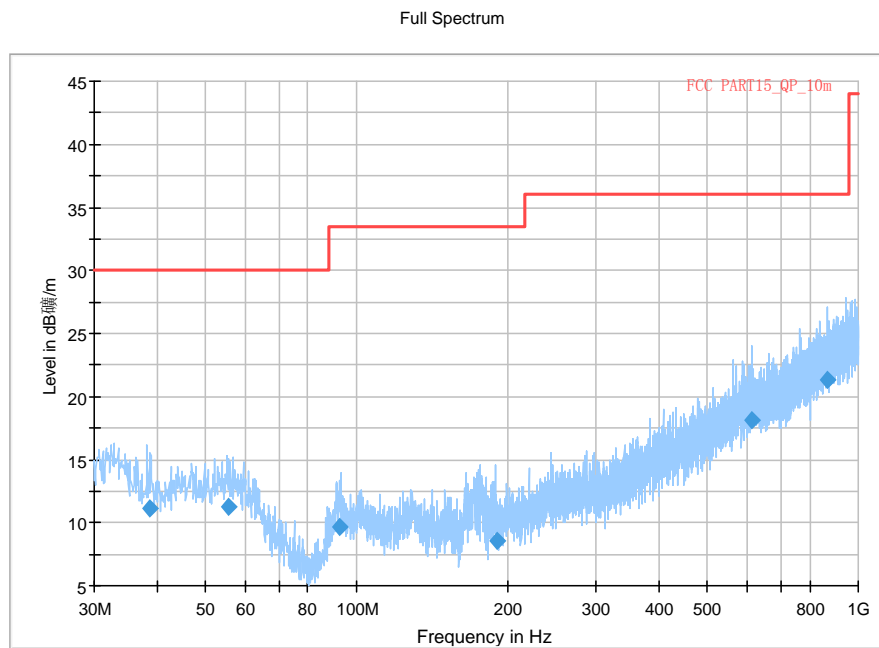
Frequency (MHz)	QuasiPeak (dB <sub>μ</sub> /m)	Limit (dB <sub>μ</sub> /m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
32.300000	12.52	30.00	17.48	1000.0	120.000	102.0	V	81.0
55.506000	11.44	30.00	18.56	1000.0	120.000	101.0	V	162.0
95.789000	7.61	33.50	25.91	1000.0	120.000	104.0	H	-23.0
128.395000	9.30	33.50	24.22	1000.0	120.000	101.0	V	171.0
185.625000	9.25	33.50	24.27	1000.0	120.000	225.0	V	184.0
241.455000	10.52	36.00	25.50	1000.0	120.000	118.0	V	80.0

Full Spectrum



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

### Measurement results for Set.3:

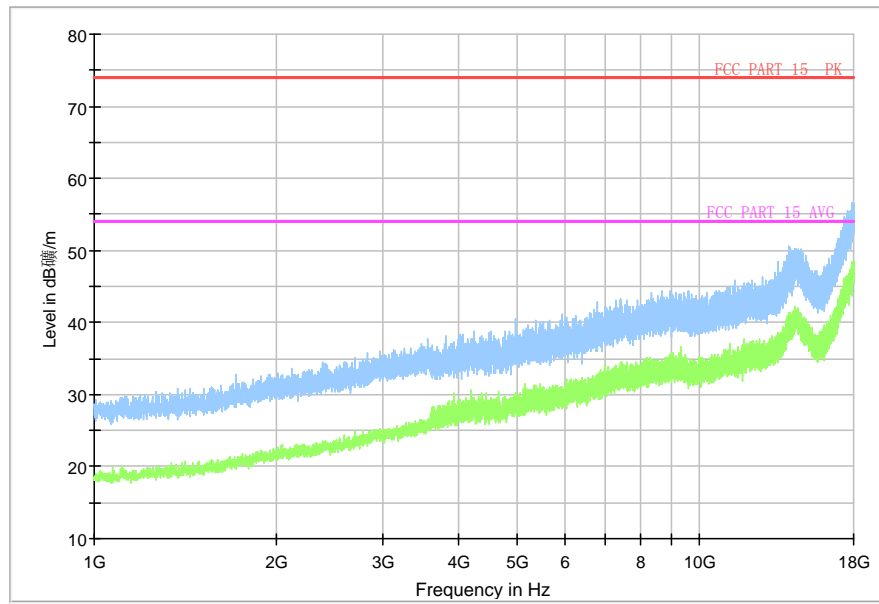


**Fig A.5 Radiated Emission from 30MHz to 1GHz**

### Final\_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
38.605000	11.11	30.00	18.89	1000.0	120.000	210.0	V	1.0
55.603000	11.26	30.00	18.74	1000.0	120.000	175.0	V	210.0
92.787000	9.64	33.50	23.88	1000.0	120.000	178.0	V	254.0
190.165000	8.61	33.50	24.91	1000.0	120.000	116.0	V	4.0
614.351000	18.14	36.00	17.88	1000.0	120.000	282.0	V	171.0
868.514000	21.33	36.00	14.69	1000.0	120.000	314.0	H	199.0

Full Spectrum



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

### Measurement results for Set.4:

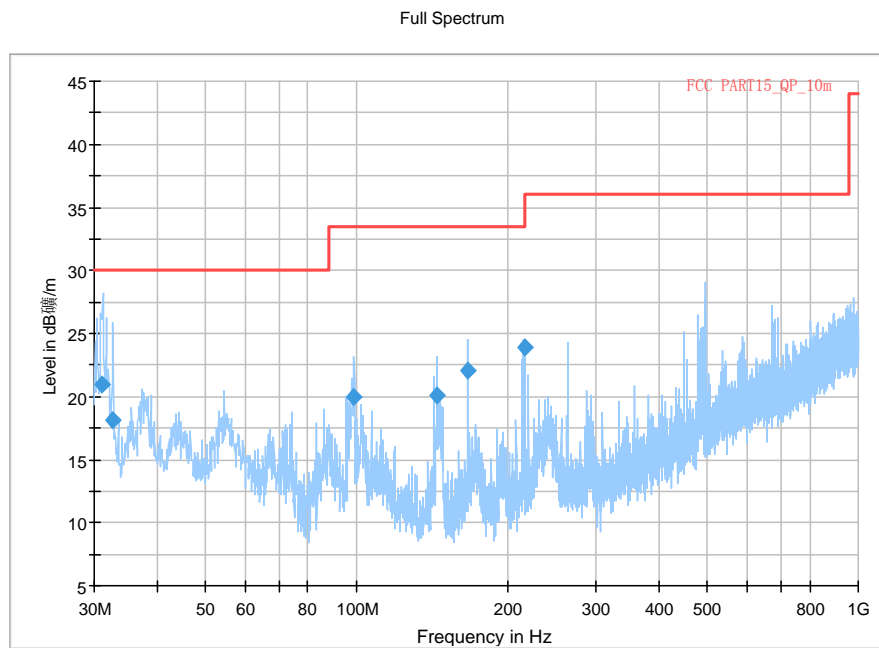
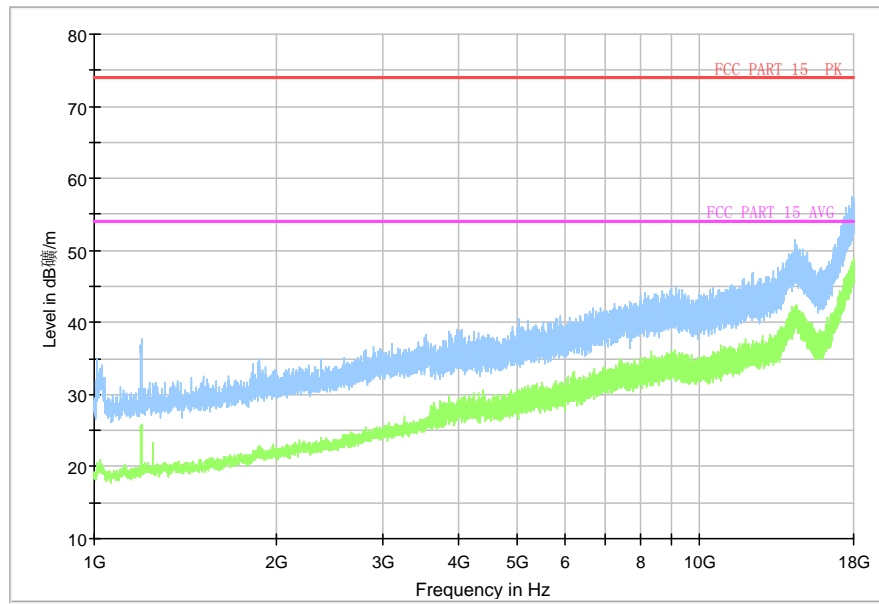


Fig A.7 Radiated Emission from 30MHz to 1GHz

### Final\_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
31.021000	20.92	30.00	9.08	1000.0	120.000	299.0	V	200.0	-15.0
32.596000	18.08	30.00	11.92	1000.0	120.000	105.0	V	81.0	-14.4
98.967000	19.91	33.50	13.61	1000.0	120.000	179.0	V	-7.0	-12.5
144.169000	20.10	33.50	13.42	1000.0	120.000	108.0	V	9.0	-15.4
166.876000	22.06	33.50	11.46	1000.0	120.000	325.0	H	272.0	-14.5
215.986000	23.93	33.50	9.59	1000.0	120.000	112.0	V	15.0	-11.6

Full Spectrum



**Fig A.8 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:  $U= 3.1 \text{ dB}$ ,  $k=2$ .

#### Charging Mode, Set.1:

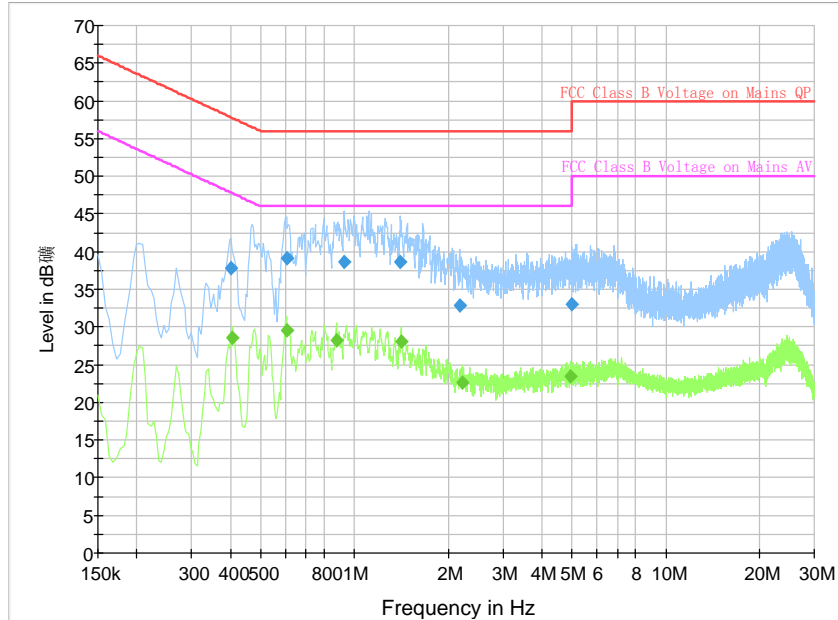


Fig A.9 Radiated Emission from 30MHz to 1GHz

#### Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.402000	37.8	1000.0	9.000	On	N	19.6	20.0	57.8	
0.604500	39.1	1000.0	9.000	On	N	19.5	16.9	56.0	
0.924000	38.6	1000.0	9.000	On	N	19.6	17.4	56.0	
1.405500	38.7	1000.0	9.000	On	L1	19.6	17.3	56.0	
2.175000	32.9	1000.0	9.000	On	L1	19.6	23.1	56.0	
4.978500	33.1	1000.0	9.000	On	N	19.7	23.0	56.0	

#### Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.406500	28.5	1000.0	9.000	On	N	19.6	19.2	47.7	
0.604500	29.6	1000.0	9.000	On	N	19.5	16.4	46.0	
0.874500	28.3	1000.0	9.000	On	L1	19.6	17.7	46.0	
1.410000	28.1	1000.0	9.000	On	N	19.6	17.9	46.0	
2.211000	22.7	1000.0	9.000	On	N	19.6	23.3	46.0	
4.960500	23.5	1000.0	9.000	On	L1	19.8	22.5	46.0	

### Charging Mode, Set.2:

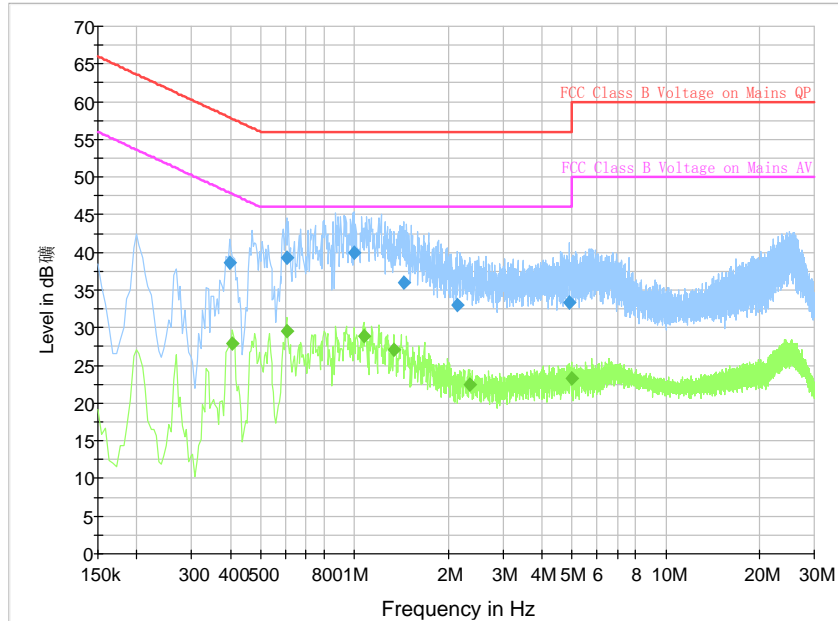


Fig A.10 Radiated Emission from 30MHz to 1GHz

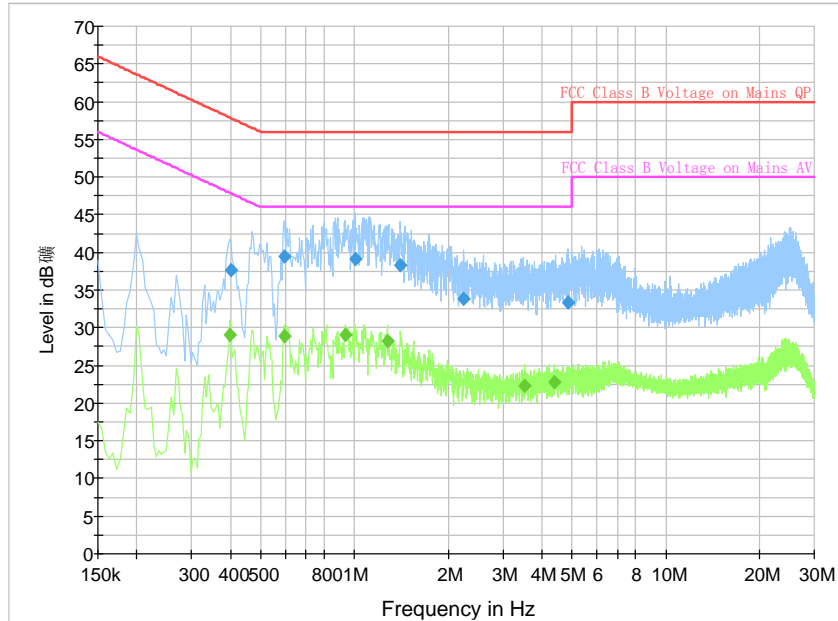
### Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.397500	38.6	1000.0	9.000	On	L1	19.6	19.3	57.9	
0.604500	39.2	1000.0	9.000	On	N	19.5	16.8	56.0	
0.996000	39.9	1000.0	9.000	On	L1	19.6	16.1	56.0	
1.437000	35.9	1000.0	9.000	On	N	19.6	20.1	56.0	
2.139000	33.0	1000.0	9.000	On	L1	19.5	23.0	56.0	
4.911000	33.3	1000.0	9.000	On	L1	19.8	22.7	56.0	

### Final Result 2

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.406500	27.8	1000.0	9.000	On	L1	19.6	19.9	47.7	
0.604500	29.5	1000.0	9.000	On	N	19.5	16.5	46.0	
1.072500	28.9	1000.0	9.000	On	L1	19.6	17.1	46.0	
1.338000	27.1	1000.0	9.000	On	N	19.6	18.9	46.0	
2.337000	22.4	1000.0	9.000	On	N	19.6	23.6	46.0	
4.987500	23.2	1000.0	9.000	On	N	19.7	22.8	46.0	

**Charging Mode, Set.3:**



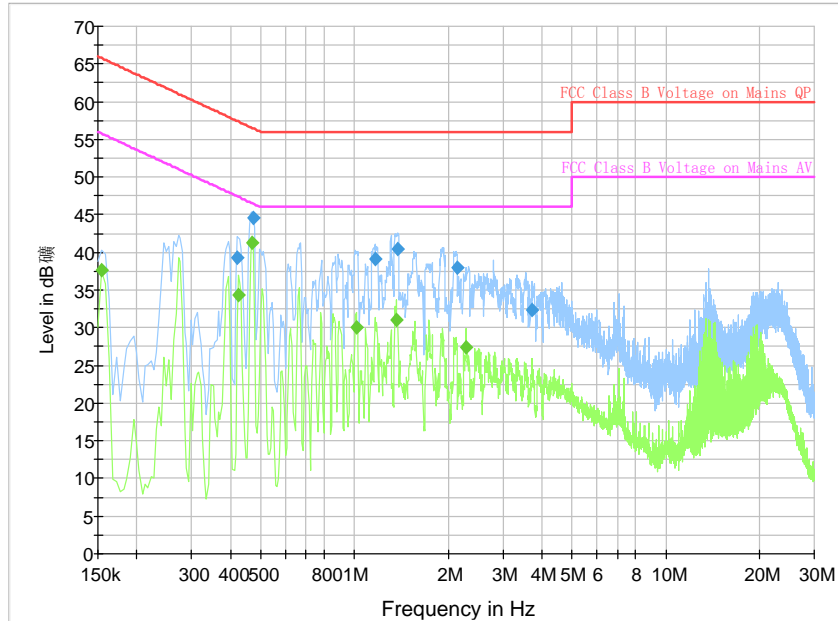
**Fig A.11 Radiated Emission from 30MHz to 1GHz**

**Final Result 1**

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.402000	37.6	1000.0	9.000	On	L1	19.6	20.2	57.8	
0.595500	39.5	1000.0	9.000	On	N	19.5	16.5	56.0	
1.005000	39.2	1000.0	9.000	On	L1	19.6	16.8	56.0	
1.401000	38.4	1000.0	9.000	On	N	19.6	17.6	56.0	
2.251500	33.9	1000.0	9.000	On	L1	19.6	22.1	56.0	
4.857000	33.3	1000.0	9.000	On	L1	19.8	22.7	56.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.397500	29.1	1000.0	9.000	On	N	19.6	18.8	47.9	
0.595500	28.9	1000.0	9.000	On	L1	19.6	17.1	46.0	
0.933000	29.1	1000.0	9.000	On	L1	19.6	16.9	46.0	
1.275000	28.3	1000.0	9.000	On	N	19.6	17.7	46.0	
3.534000	22.3	1000.0	9.000	On	L1	19.7	23.7	46.0	
4.398000	22.8	1000.0	9.000	On	L1	19.8	23.2	46.0	

**USB Mode, Set.4:**

**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
0.420000	39.3	1000.0	9.000	On	L1	19.6	18.1	57.4	
0.474000	44.5	1000.0	9.000	On	L1	19.6	11.9	56.4	
1.162500	39.2	1000.0	9.000	On	L1	19.6	16.8	56.0	
1.383000	40.5	1000.0	9.000	On	L1	19.6	15.5	56.0	
2.134500	37.9	1000.0	9.000	On	L1	19.5	18.1	56.0	
3.714000	32.3	1000.0	9.000	On	N	19.6	23.7	56.0	

**Final Result 2**

Frequency (MHz)	Average (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)	Comment
0.154500	37.6	1000.0	9.000	On	L1	19.7	18.2	55.8	
0.424500	34.4	1000.0	9.000	On	L1	19.6	12.9	47.4	
0.469500	41.2	1000.0	9.000	On	L1	19.6	5.3	46.5	
1.014000	30.1	1000.0	9.000	On	N	19.6	15.9	46.0	
1.365000	31.0	1000.0	9.000	On	L1	19.6	15.0	46.0	
2.287500	27.5	1000.0	9.000	On	L1	19.6	18.5	46.0	



## **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	Yan Hanchen
Radiated Emission	EMC32 V9.01.00	R&S	Zhang Tianli

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