





FCC 15B TEST REPORT No. I21Z62674-EMC01

for

TCL Communication Ltd.

GSM/UMTS/LTE Mobile phone

Model Name: A509DL

FCC ID: 2ACCJH131

with

Hardware Version: PIO

Software Version: vL7V

Issued Date: 2022-01-25

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.

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: cttl_terminals@caict.ac.cn, website: www.caict.ac.cn





REPORT HISTORY

Report Number Revision		Description	Issue Date	
I21Z62674-EMC01	Rev.0	1 st edition	2022-01-25	





CONTENTS

1. TEST LABORATORY	.4
1.1. TESTING LOCATION	. 4
1.2. TESTING ENVIRONMENT	. 4
1.3. PROJECT DATA	.4
1.4. SIGNATURE	. 4
2. CLIENT INFORMATION	. 5
2.1. APPLICANT INFORMATION	5
2.2. MANUFACTURER INFORMATION	. 5
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)	.6
3.1. ABOUT EUT	. 6
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	. 6
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST	. 6
3.4. EUT SET-UPS	. 7
3.5. GENERAL DESCRIPTION	. 7
4. REFERENCE DOCUMENTS	. 8
4.1. REFERENCE DOCUMENTS FOR TESTING	8
5. LABORATORY ENVIRONMENT	. 9
6. SUMMARY OF TEST RESULTS	10
7. TEST EQUIPMENTS UTILIZED	11
ANNEX A: MEASUREMENT RESULTS	12
ANNEX B: PERSONS INVOLVED IN THIS TESTING	31





1. Test Laboratory

1.1. Testing Location

CTTL(BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology

Development Area, Beijing, P. R. China 100176

1.2. <u>Testing Environment</u>

Normal Temperature: $15-35^{\circ}$ C Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2022-01-04
Testing End Date: 2022-01-21

1.4. Signature

An Hui

(Prepared this test report)

狀 新

Zhang Ying

(Reviewed this test report)

Zhang Xia

Deputy Director of the laboratory (Approved this test report)





2. Client Information

2.1. Applicant Information

Company Name: TCL Communication Ltd.

Address /Post: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science

Park, Shatin, NT, Hong Kong

City: huizhou
Contact: peter.yang

Email: peter.yang@tcl.com
Tel: 0086-755-36611722

2.2. Manufacturer Information

Company Name: TCL Communication Ltd.

Address /Post: 5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science

Park, Shatin, NT, Hong Kong

City: huizhou
Contact: peter.yang

Email: peter.yang@tcl.com
Tel: 0086-755-36611722





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

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

3.2. Internal Identification of EUT used during the test

 EUT ID*
 SN or IMEI
 HW Version
 SW Version

 EUT1
 015858000011753
 PIO
 vL7V

3.3. Internal Identification of AE used during the test

AE ID*	Description	Note
AE1-1	Adapter	CBA0058AGTC5
AE2-1	USB Cable	CDA0000143C8
AE3-1	Battery	CAB2880000C7
AE3-2	Battery	CAB2880001C1
Δ Ε 4_1	Headset	1

AE1-1

Model CBA0058AGTC5

Manufacturer PUAN Length /

AE2-1

Model CDA0000143C8

Manufacturer PUAN

Length /

AE3-1

Model CAB2880000C7

Manufacturer VEKEN
Capacitance 3000mAh

Nominal voltage /

AE3-2

Model CAB2880001C1

Manufacturer BYD Capacitance 3000mAh

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





Nominal vo	ltage	/
------------	-------	---

AE4-1

Model Headset

Manufacturer /
Length /

3.4. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1-1	EUT1+AE1-1+AE2-1 + AE3-1/AE3-2	Charger+ Real Camera+ + GSM850 idle
Set.2	EUT1+AE1-1+AE2-1+ AE3-1/AE3-2	Charger+MP4
Set.3	EUT1+AE1-1+AE2-1+ AE3-1/AE3-2+AE4-1	Charger+FM
Set.4	EUT1+AE2-1+AE3-1/AE3-2 + AE	USB SD TO PC+ Front Camera

Note: The device contains receivers which tune and operate between 30MHz-960MHz in the following bands: GSM 850MHz,WCDMA Band5, LTE Bands 5/12/13/26/71, The measurement results showed here are worst cases of different bands.

3.5. General Description

Equipment Under Test (EUT) is a model of GSM/UMTS/LTE Mobile phone with integrated antenna.

It supports

GSM Frequency Band GSM 900/GSM 1800/GSM 1900/GSM 850

UMTS Frequency Band FDD Band II/IV/V

LTE Frequency Band LTE FDD Bands 2/4/5/12/13/25/26/66/71 LTE FDD Band 41.

It has MP3, Camera, USB memory, FM, Bluetooth 5.0, Wi-Fi (802.11b/g/n, 802.11n supports 20MHz and 40MHz bandwidth,) , GNSS functions.

Manual and specifications of the EUT were provided to fulfil the test.

Samples undergoing test were selected by the client.

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

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





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	2019
ANSI C63.4	American National Standard for	2014
	Methods of Measurement of Radio-	
	Noise Emissions from Low-Voltage	
	Electrical and Electronic Equipment	
	in the Range of 9 kHz to 40 GHz	

Note: The test methods have no deviation with standards.





5. LABORATORY ENVIRONMENT

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

g.	
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 M Ω
Ground system resistance	<4 Ω
Normalised site attenuation (NSA)	< ±4 dB, 10 m distance
Site voltage standing-wave ratio (SVSWR)	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 M Ω
Ground system resistance	< 4 Ω





6. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	Р	Pass
	NA	Not applicable
	F	Fail
	BR	Re-use test data from basic model report.

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

Note: I21Z62674 is a variant model based on I20Z61833.According to the declaration of changes provided by the applicant and FCC KDB publication 178919 D01, the following test items and test modes were performed:

Test Item Mode or Feature		EUT Set-up
Radiated Emission	Camera,MP4,FM,USB	Set.1-1, Set.2, Set.3, Set.4
Conducted Emission	Camera,MP4,FM,USB	Set.1-1, Set.2, Set.3, Set.4

Other results are inherited from the initial model. The report number for initial model is I19Z62142-EMC01 (FCC ID: 2ACCJH131).





7. Test Equipments Utilized

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	LISN	ENV216	101459	Rohde & Schwarz	1 year	2022-03-22
2	Test Receiver	ESCI	100766	Rohde & Schwarz	1 year	2022-03-09
3	Shielding Room	S81	/	ETS-Lindgren	/	1
4	Test Receiver	ESU 26	100376	Rohde & Schwarz	1 year	2022-09-15
5	Universal Radio	8960	MY48361083	Agilent	1 vear	2022-06-01
	Communication Tester	8900	101146301063	Agiletit	1 year	2022-00-01
6	Dual-Ridge Waveguide Horn Antenna	VULB 9163	514	Schwarzbeck	1 year	2022-03-22
7	Dual-Ridge Waveguide Horn Antenna	3117	00119024	ETS-Lindgren	1 year	2022-04-11
8	Universal Radio Communication Tester	CMW500	159408	Rohde & Schwarz	1 year	2022-03-08
9	Signal Source	SMF100a	101295	Rohde & Schwarz	1 year	2022-11-04
10	PC	M4000e-17	M706GWXD	Lenovo	N/A	N/A
11	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 (charging mode) at distances of 3 meters(for 30MHz-1GHz) and 3 meters (for above 1GHz) 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 charging mode. During the test MS 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.

A.1.3 Measurement Limit

Frequency range	F	Field strength limit (µV/m	າ)
(MHz)	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.

Limit(10m)=Limit(3m)+20[log(3/10)]

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/3MHz	15	Peak, Average





A.1.5 Measurement Results

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss". It includes the antenna factor of receive antenna and the path loss.

The measurement results are obtained as described below:

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

Where

GA: Antenna factor of receive antenna

GPL: Path Loss

P_{Mea}: Measurement result on receiver.

Measurement uncertainty (worst case): 30MHz-1GHz: 5.16dB, 1GHz-18GHz: 5.44dB, *k*=2.

Note: The measurement results showed here are worst cases of the combinations of different Battery, cables and Headset.

Note: The measurement results showed here are worst cases.





Measurement results for Set.1-1:

EUT1 Charger1+Back Camera+GSM 850MHz idle Mode/QP detector

Frequency	QuasiPeak	Height	Polarization	Azimuth	Corr.	Margin	Limit
(MHz)	(dBuV/m)	(cm)	Polarization	(deg)	(dB)	(dB)	(dBuV/m)
30.388000	34.3	125.0	V	259.0	-1.3	5.7	40.0
35.432000	30.9	100.0	V	190.0	-0.5	9.1	40.0
37.857000	29.3	100.0	V	262.0	-0.1	10.7	40.0
51.340000	21.1	100.0	V	52.0	0.0	18.9	40.0
58.324000	20.2	100.0	V	-17.0	-0.3	19.8	40.0
918.229000	31.4	100.0	Н	299.0	12.2	14.6	46.0

EUT1 Charger1+Back Camera+GSM 850MHz idle Mode/Average detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBµV)	Limit (dBµV/m)	Margin (dB)	Antenna Pol. (H/V)
17599.000	41.84	-16.6	40.6	17.79	54.0	12.2	V
17598.500	41.70	-16.6	40.6	17.65	54.0	12.3	V
17605.000	41.64	-16.6	40.6	17.68	54.0	12.4	Н
17600.500	41.54	-16.5	40.6	17.47	54.0	12.5	V
17592.000	41.54	-16.7	40.6	17.66	54.0	12.5	V
17592.500	41.54	-16.7	40.6	17.64	54.0	12.5	V

EUT1 Charger1+Back Camera+GSM 850MHz idle Mode/Peak detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBµV)	Limit (dBµV/m)	Margin (dB)	Anten na Pol. (H/V)
17412.500	54.6	-17.4	40.8	31.14	74.0	19.4	V
17279.500	54.4	-17.9	40.9	31.33	74.0	19.6	Н
16687.000	54.2	-18.2	41.2	31.23	74.0	19.8	V
17051.500	54.1	-18.1	41.1	31.05	74.0	19.9	V
16974.500	54.0	-18.0	41.2	30.75	74.0	20.0	Н
17913.000	53.9	-18.2	40.4	31.70	74.0	20.1	V





Measurement results for Set.2:

EUT1 Charger1+MP4 Mode/QP detector

Frequency	QuasiPeak	Height	Polarization	Azimuth	Corr.	Margin	Limit
(MHz)	(dBuV/m)	(cm)	Polarization	(deg)	(dB)	(dB)	(dBuV/m)
31.261000	32.6	100.0	V	288.0	-1.1	7.4	40.0
35.044000	30.0	100.0	V	-44.0	-0.6	10.0	40.0
37.954000	29.3	100.0	V	267.0	-0.1	10.7	40.0
50.952000	21.1	100.0	V	101.0	0.0	18.9	40.0
57.354000	20.0	100.0	V	304.0	-0.3	20.0	40.0
960.036000	32.2	125.0	V	0.0	12.8	21.8	54.0

EUT1 Charger1+MP4 Mode/Average detector

	Measurement	Cable	Antenna	Receiver	Limit		Anten
Frequency	Result	loss	Factor	Reading	(dBμV/m	Margin	na
(MHz)	(dBμV/m)	(dB)	(dB/m)	(dBµV)	ιασμν/π	(dB)	Pol.
	(ασμν/πι)	(ub)	(45/111)	(αυμν)	,		(H/V)
17603.500	41.40	-16.6	40.6	17.40	54.0	12.6	V
17591.500	41.38	-16.8	40.6	17.51	54.0	12.6	V
17590.500	41.37	-16.8	40.6	17.52	54.0	12.6	Н
17599.000	41.37	-16.6	40.6	17.31	54.0	12.6	V
17590.000	41.37	-16.8	40.6	17.53	54.0	12.6	V
17596.000	41.36	-16.6	40.6	17.38	54.0	12.6	V

EUT1 Charger1+MP4 Mode/Peak detector

J	Measurement	Cable	Antenna	Receiver	Limit		Anten
Frequency	Result	loss	Factor	Reading	(dBμV/m	Margin	na
(MHz)					ιασμν/ιιι	(dB)	Pol.
	(dBµV/m)	(dB)	(dB/m)	(dBµV))		(H/V)
16929.500	54.6	-17.9	41.2	31.30	74.0	19.4	Н
17336.500	54.2	-17.7	40.9	31.02	74.0	19.8	V
17040.000	54.2	-18.1	41.2	31.12	74.0	19.8	V
17576.500	54.1	-17.1	40.6	30.65	74.0	19.9	V
17596.500	54.1	-16.6	40.6	30.07	74.0	19.9	V
17037.000	54.0	-18.1	41.2	30.92	74.0	20.0	V





Measurement results for Set.3:

EUT1 Charger1+FM Mode/QP detector

Frequency	QuasiPeak	Height	Delevization	Azimuth	Corr.	Margin	Limit
(MHz)	(dBuV/m)	(cm)	Polarization	(deg)	(dB)	(dB)	(dBuV/m)
30.776000	32.4	119.0	V	261.0	-1.2	7.6	40.0
31.455000	30.6	100.0	V	176.0	-1.1	9.4	40.0
33.880000	28.5	100.0	V	125.0	-0.7	11.5	40.0
34.850000	28.7	100.0	V	125.0	-0.6	11.3	40.0
39.797000	25.5	100.0	V	-19.0	0.2	14.5	40.0
193.251000	18.1	100.0	V	315.0	-1.4	25.4	43.5

EUT1 Charger1+FM Mode/Average detector

	Measurement	Cable	Antenna	Receiver	Limit		Anten
Frequency	Result	loss	Factor	Reading	(dBμV/m	Margin	na
(MHz)	(dBµV/m)	(dB)	(dB/m)	(dBµV)	ιασμν/ιιι	(dB)	Pol.
	(ασμν/π)	(ub)	(ив/пі)	(αδμν)	,		(H/V)
17590.500	41.66	-16.8	40.6	17.81	54.0	12.3	V
17594.000	41.47	-16.7	40.6	17.53	54.0	12.5	V
17595.000	41.44	-16.7	40.6	17.48	54.0	12.6	V
17598.500	41.44	-16.6	40.6	17.39	54.0	12.6	V
17593.000	41.44	-16.7	40.6	17.53	54.0	12.6	V
17602.500	41.43	-16.6	40.6	17.41	54.0	12.6	V

EUT1 Charger1+FM Mode/Peak detector

	Measurement	Cable	Antenna	Receiver	Limit		Anten
Frequency	Result	loss	Factor	Reading	(dBµV/m	Margin	na
(MHz)	(dBµV/m)	(dB)	(dB/m)	(dBµV)	, , ,	(dB)	Pol.
	(ασμιγιιιγ	(45)	(45,,	(αυμν)	,		(H/V)
17685.500	54.1	-17.4	40.6	30.90	74.0	19.9	V
17149.000	54.0	-17.9	41.0	30.83	74.0	20.0	V
17538.500	53.9	-17.7	40.7	31.01	74.0	20.1	Н
17288.000	53.9	-17.9	40.9	30.90	74.0	20.1	V
16922.000	53.9	-17.9	41.2	30.60	74.0	20.1	Н
17027.000	53.9	-18.1	41.2	30.83	74.0	20.1	Н





Measurement results for Set.4:

EUT1 USB + SD + Front Camera Mode/QP detector

Frequency	QuasiPeak	Height	Polarization	Azimuth	Corr.	Margin	Limit
(MHz)	(dBuV/m)	(cm)	Polarization	(deg)	(dB)	(dB)	(dBuV/m)
32.619000	32.9	100.0	V	278.0	-0.9	7.1	40.0
35.626000	32.0	100.0	V	261.0	-0.5	8.0	40.0
38.245000	30.4	118.0	V	107.0	-0.1	9.6	40.0
168.031000	34.6	125.0	Н	252.0	-3.8	8.9	43.5
517.425000	38.6	125.0	V	-44.0	6.5	7.4	46.0
661.082000	34.1	119.0	V	269.0	8.9	11.9	46.0

EUT1 USB + SD + Front Camera Mode/Average detector

	Measurement	Cable	Antenna	Receiver	Limit		Anten
Frequency	Result	loss	Factor	Reading	(dBμV/m	Margin	na
(MHz)	Result	1055	Factor	Reading	(ασμν/ιιι	(dB)	Pol.
()	(dBµV/m)	(dB)	(dB/m)	(dBµV))	(0.2)	
							(H/V)
17600.500	41.51	-16.5	40.6	17.44	54.0	12.5	V
17594.000	41.50	-16.7	40.6	17.57	54.0	12.5	V
17588.000	41.48	-16.8	40.6	17.70	54.0	12.5	V
17601.500	41.46	-16.6	40.6	17.42	54.0	12.5	V
17589.500	41.45	-16.8	40.6	17.63	54.0	12.6	V
17591.000	41.45	-16.8	40.6	17.59	54.0	12.6	V

EUT1 USB + SD + Front Camera Mode/Peak detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBµV)	Limit (dBµV/m)	Margin (dB)	Anten na Pol. (H/V)
17602.000	55.1	-16.6	40.6	31.06	74.0	18.9	Н
17010.000	54.4	-18.1	41.2	31.27	74.0	19.6	V
16974.500	54.2	-18.0	41.2	30.98	74.0	19.8	V
17588.000	53.9	-16.8	40.6	30.13	74.0	20.1	V
17599.500	53.9	-16.6	40.6	29.83	74.0	20.1	V
17703.500	53.9	-17.3	40.5	30.65	74.0	20.1	V





EUT1 Charger1+Back Camera+GSM 850MHz idle Mode, Set.1-1

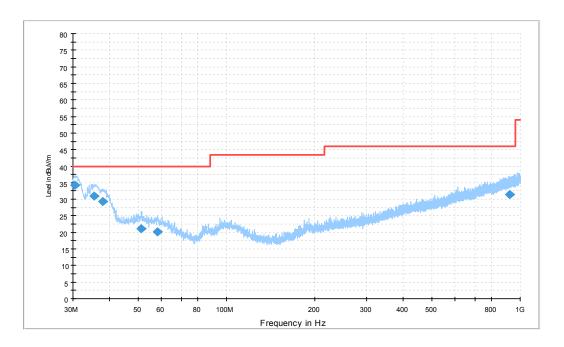


Figure A.1 Radiated Emission from 30MHz to 1GHz

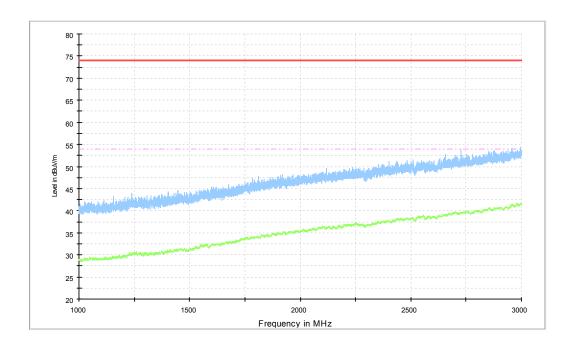


Figure A.2 Radiated Emission from 1GHz to 3GHz





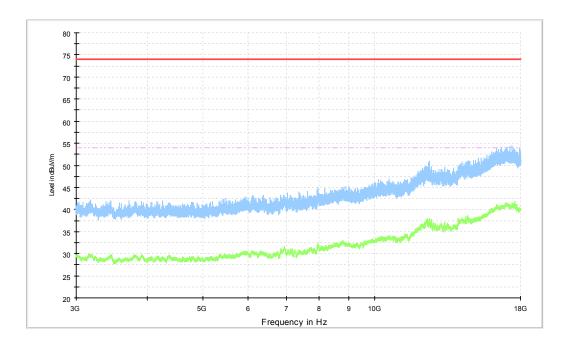


Figure A.3 Radiated Emission from 3GHz to 18GHz





EUT1 Charger1+MP4 Mode, Set.2

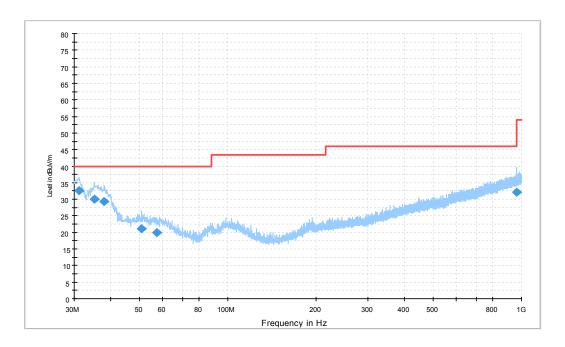


Figure A.4 Radiated Emission from 30MHz to 1GHz

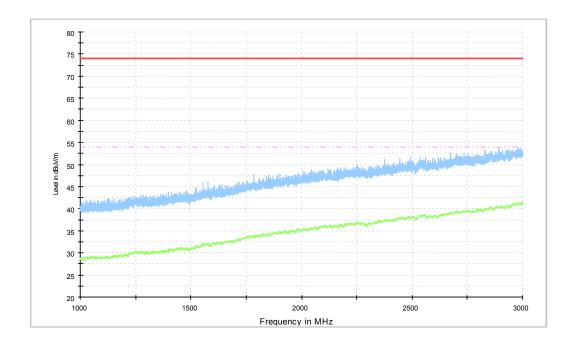


Figure A.5 Radiated Emission from 1GHz to 3GHz





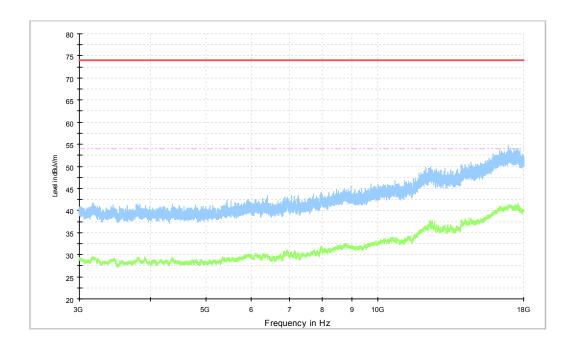


Figure A.6 Radiated Emission from 3GHz to 18GHz





EUT1 Charger1+FM Mode, Set.3

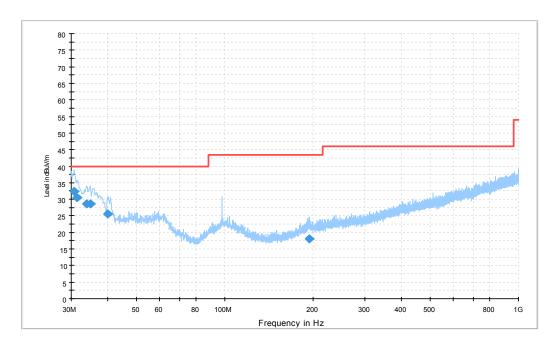


Figure A.7 Radiated Emission from 30MHz to 1GHz

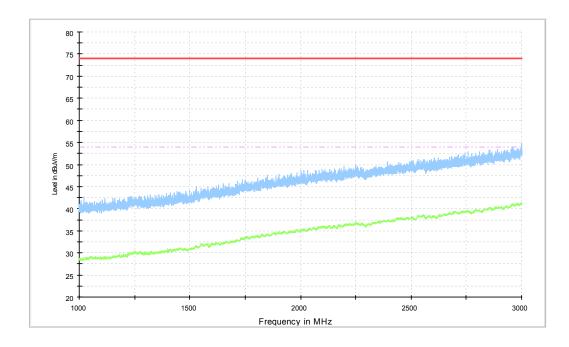


Figure A.8 Radiated Emission from 1GHz to 3GHz





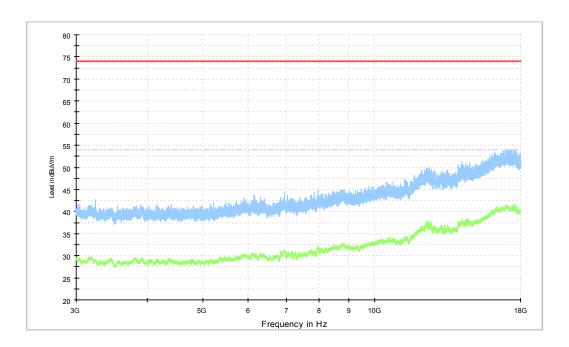


Figure A.9 Radiated Emission from 3GHz to 18GHz





EUT1 USB + SD + Front Camera Mode, Set.4

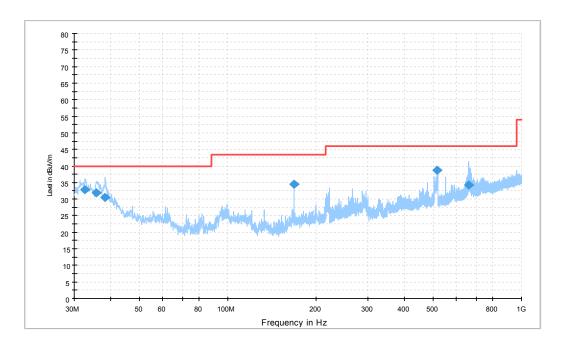


Figure A.10 Radiated Emission from 30MHz to 1GHz

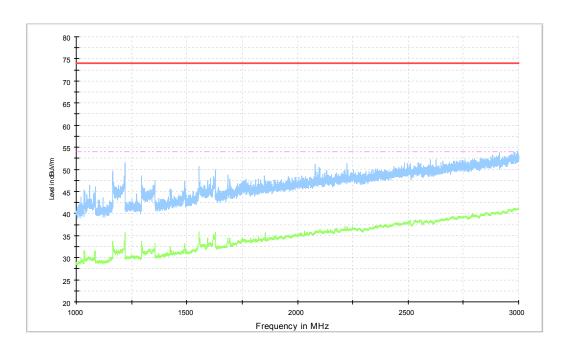


Figure A.11 Radiated Emission from 1GHz to 3GHz





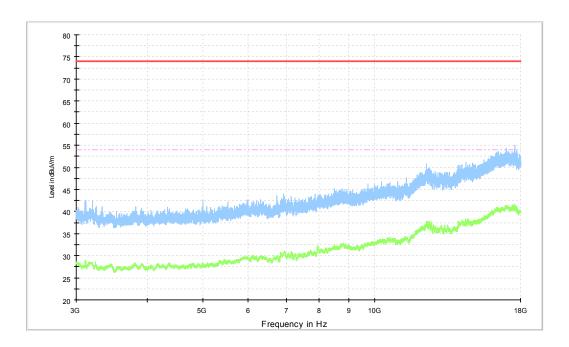


Figure A.12 Radiated Emission from 3GHz to 18GHz





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 charging mode and usb mode.

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*=3.08dB, *k*=2.

Note: The measurement results showed here are worst cases of the combinations of different Battery, cables and Headset.

Note: The measurement results showed here are worst cases.

EUT1 Charger1+Back Camera+GSM 850MHz idle Mode, Set.1-1

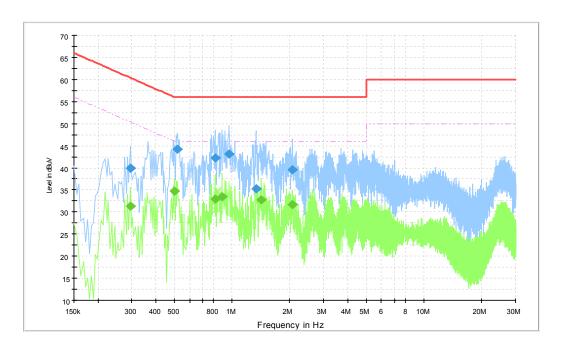


Figure A.13 Conducted Emission

Final Result 1

Frequency	QuasiPeak	Meas. Time	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	(ms)	(kHz)			(dB)	(dB)	(dBµV)
0.294000	39.9	5000.0	9.000	On	L1	19.9	20.5	60.4
0.519000	44.2	5000.0	9.000	On	L1	19.9	11.8	56.0
0.816000	42.2	5000.0	9.000	On	L1	19.8	13.8	56.0
0.964500	43.1	5000.0	9.000	On	L1	19.7	12.9	56.0
1.329000	35.2	5000.0	9.000	On	Ν	19.7	20.8	56.0
2.071500	39.5	5000.0	9.000	On	L1	19.7	16.5	56.0

Frequency	CAverage	Meas. Time	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	(ms)	(kHz)			(dB)	(dB)	(dBµV)
0.294000	31.3	5000.0	9.000	On	L1	19.9	19.2	50.4
0.501000	34.7	5000.0	9.000	On	L1	19.9	11.3	46.0
0.816000	33.0	5000.0	9.000	On	L1	19.8	13.0	46.0
0.883500	33.5	5000.0	9.000	On	L1	19.7	12.5	46.0
1.423500	32.7	5000.0	9.000	On	L1	19.7	13.3	46.0
2.049000	31.6	5000.0	9.000	On	L1	19.7	14.4	46.0





EUT1 Charger1+MP4 Mode, Set.2

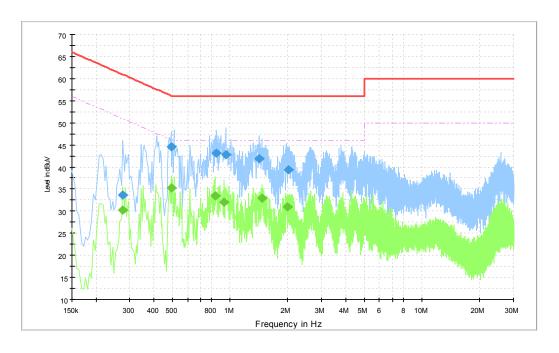


Figure A.16 Conducted Emission

Final Result 1

Frequency	QuasiPeak	Meas. Time	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	(ms)	(kHz)			(dB)	(dB)	(dBµV)
0.276000	33.6	5000.0	9.000	On	N	19.9	27.3	60.9
0.492000	44.5	5000.0	9.000	On	L1	19.9	11.6	56.1
0.847500	43.2	5000.0	9.000	On	L1	19.8	12.8	56.0
0.946500	42.8	5000.0	9.000	On	L1	19.7	13.2	56.0
1.423500	41.9	5000.0	9.000	On	L1	19.7	14.1	56.0
2.013000	39.4	5000.0	9.000	On	L1	19.7	16.6	56.0

Frequency	CAverage	Meas. Time	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	(ms)	(kHz)			(dB)	(dB)	(dBµV)
0.276000	30.2	5000.0	9.000	On	L1	19.9	20.7	50.9
0.492000	35.3	5000.0	9.000	On	L1	19.9	10.8	46.1
0.834000	33.5	5000.0	9.000	On	L1	19.8	12.5	46.0
0.933000	32.0	5000.0	9.000	On	L1	19.7	14.0	46.0
1.459500	32.9	5000.0	9.000	On	L1	19.7	13.1	46.0
1.986000	31.0	5000.0	9.000	On	L1	19.7	15.0	46.0





EUT1 Charger1+FM Mode, Set.3

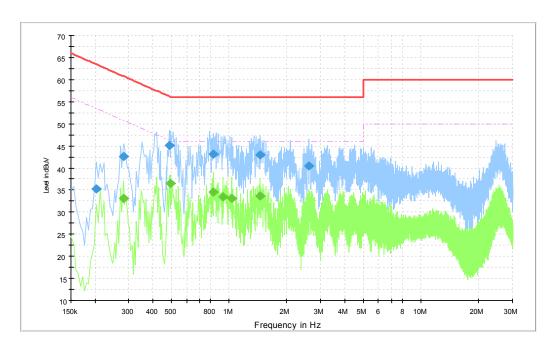


Figure A.17 Conducted Emission

Final Result 1

Frequency	QuasiPeak	Meas. Time	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	(ms)	(kHz)			(dB)	(dB)	(dBµV)
0.204000	35.3	5000.0	9.000	On	L1	19.9	28.1	63.4
0.280500	42.6	5000.0	9.000	On	L1	19.9	18.2	60.8
0.487500	45.1	5000.0	9.000	On	L1	19.9	11.1	56.2
0.829500	43.2	5000.0	9.000	On	L1	19.8	12.8	56.0
1.455000	43.0	5000.0	9.000	On	L1	19.7	13.0	56.0
2.616000	40.4	5000.0	9.000	On	L1	19.6	15.6	56.0

Frequency	CAverage	Meas. Time	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	(ms)	(kHz)			(dB)	(dB)	(dBµV)
0.280500	33.1	5000.0	9.000	On	L1	19.9	17.7	50.8
0.496500	36.4	5000.0	9.000	On	L1	19.9	9.6	46.1
0.829500	34.5	5000.0	9.000	On	L1	19.8	11.5	46.0
0.928500	33.4	5000.0	9.000	On	L1	19.7	12.6	46.0
1.027500	33.1	5000.0	9.000	On	L1	19.7	12.9	46.0
1.455000	33.7	5000.0	9.000	On	L1	19.7	12.3	46.0





EUT1 USB + SD + Front Camera Mode, Set.4

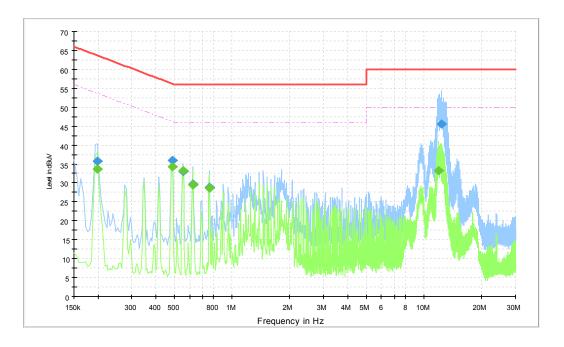


Figure A.18 Conducted Emission

Final Result 1

Frequency	QuasiPeak	Meas. Time	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	(ms)	(kHz)			(dB)	(dB)	(dBµV)
0.199500	35.7	5000.0	9.000	On	N	19.9	28.0	63.6
0.487500	35.8	5000.0	9.000	On	N	19.9	20.4	56.2
0.555000	33.1	5000.0	9.000	On	L1	19.9	22.9	56.0
0.622500	29.6	5000.0	9.000	On	L1	19.8	26.4	56.0
0.762000	28.9	5000.0	9.000	On	L1	19.8	27.1	56.0
12.349500	45.5	5000.0	9.000	On	L1	19.8	14.5	60.0

Frequency	CAverage	Meas. Time	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	(ms)	(kHz)			(dB)	(dB)	(dBµV)
0.199500	33.7	5000.0	9.000	On	L1	19.9	19.9	53.6
0.487500	34.3	5000.0	9.000	On	N	19.9	11.9	46.2
0.555000	33.2	5000.0	9.000	On	L1	19.9	12.8	46.0
0.622500	29.6	5000.0	9.000	On	L1	19.8	16.4	46.0
0.762000	28.5	5000.0	9.000	On	N	19.8	17.5	46.0
11.890500	33.2	5000.0	9.000	On	N	19.8	16.8	50.0





ANNEX B: Persons involved in this testing

Test Item	Tester
Conducted Continuous Emission	Guo Qian
Radiated Continuous Emission	LI Zongliang

END OF REPORT