



FCC 15B TEST REPORT

No. I21Z61051-EMC01

for

TCL Communication Ltd.

GSM/UMTS/LTE/NR Mobile phone

Model Name: T767H

FCC ID: 2ACCJH140

with

Hardware Version: PIO

Software Version: 2B56

Issued Date: 2021-08-02

Note:

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REPORT HISTORY

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1. Test Laboratory

1.1. Testing Location

Location 1: CTTL(BDA)

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

1.2. Testing Environment

Normal Temperature: 15-35°C

Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2021-06-23

Testing End Date: 2021-07-30


1.4. Signature



An Hui
(Prepared this test report)



Zhang Ying
(Reviewed this test report)



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2. Client Information

2.1. Applicant Information

Company Name: TCL Communication Ltd.
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Park, Shatin, NT, Hong Kong
City: Hong Kong
Postal Code: /
Country: China
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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: Hong Kong
Postal Code: /
Country: China
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3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	GSM/UMTS/LTE/NR Mobile phone
Model Name	T767H
FCC ID	2ACCJH140

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	354382910001738/	PIO	2B56
	354382910001746		

*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	Note
AE2	Adapter	CBA0059AGTC5	Test
AE21	Adapter	CBA0059AATC5	No Test
AE22	Adapter	CBA0059ABTC5	No Test
AE23	Adapter	CBA0059ACNC5	No Test
AE3	USB Cable	/	/
AE4	USB Cable	/	/
AE5	Battery	/	/
AE6	Headset	/	/

AE2

Model	CBA0059AGTC5
Manufacturer	/
Length	/

AE21

Model	CBA0059AATC5
Manufacturer	/
Length	/

AE22

Model	CBA0059ABTC5
Manufacturer	/
Length	/

AE23

Model CBA0059ACNC5
 Manufacturer /
 Length /

AE3

Model CDA0000123C8
 Manufacturer PUAN
 Length /

AE4

Model CDA0000123C1
 Manufacturer JUWEI
 Length /

AE5

Model TLp043E7
 Manufacturer VEKEN
 Capacitance 4500mAh
 Nominal voltage /

AE6

Model CCB0049A12C1
 Manufacturer DALIN
 Length of cable /

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

3.4. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT1 + AE5 + AE2 + AE3/AE4	Charger + Back Camera + RX worse case
Set.2	EUT1 + AE5 + AE2 + AE3/AE4	Charger + MP4
Set.3	EUT1 + AE5 + AE2 + AE3/AE4 + AE6	Charger + FM
Set.4	EUT1 + AE5 + AE3/AE4	USB + Front Camera

Note1:

The device contains receivers which tune and operate between 30MHz-960MHz in the following bands: GSM 850MHz,WCDMA Band5, LTE Bands 5/26, 5G NR n5. 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/NR Mobile phone with integrated antenna.

It supports

GSM Frequency Bands	GSM900/GSM 1800/GSM 1900/GSM 850
---------------------	----------------------------------

UMTS Frequency Bands	FDD Bands 1/2/4/5/8
LTE Frequency Bands	FDD Bands 1/3/5/7/8/20/26/28/32 and TDD Bands 38/40/41
LTE CA Frequency Bands	DL_CA: 1A(2x2)_1A(2x2), 1A(2x2)_3A(2x2), 1A(2x2)_5A(2x2), 1A(2x2)_7A(2x2), 1A(2x2)_8A(2x2), 1A(2x2)_20A(2x2), 1A(2x2)_28A(2x2), 1A(2x2)_32A(2x2), 1A(2x2)_38A(2x2), 3A(2x2)_3A(2x2), 3A(2x2)_5A(2x2), 3A(2x2)_7A(2x2), 3A(2x2)_8A(2x2), 3A(2x2)_20A(2x2), 3A(2x2)_28A(2x2), 3A(2x2)_32A(2x2), 3A(2x2)_38A(2x2), 3C(2x2), 5A(2x2)_7A(2x2), 7A(2x2)_7A(2x2), 7A(2x2)_8A(2x2), 7A(2x2)_20A(2x2), 7A(2x2)_28A(2x2), 7A(2x2)_32A(2x2), 7C(2x2), 8A(2x2)_32A(2x2), 20A(2x2)_38A(2x2), 20A(2x2)_32A(2x2), 28A(2x2)_32A(2x2), 40C(2x2). UL_CA: UL 1A_3A, UL 1A_7A, UL 1A_8A, UL 1A_20A, UL_1A_5A, UL 1A_28A, UL 3A_7A, UL 3A_8A, UL 3A_20A, UL 3A_28A, UL_3A_5A, UL 3C, UL 7A_8A, UL 7A_20A, UL 7A_28A, UL 7C,

It supports

5G NR	n1	SA n1
		EN-DC DL bands: 3A(2x2)_n1A(4x4), 7A(2x2)_n1A(4x4), 8A(2x2)_n1A(4x4), 20A(2x2)_n1A(4x4), 28A(2x2)_n1A(4x4), 3C(2x2)_n1A(4x4), 3A(2x2)_3A(2x2)_n1A(4x4), 3A(2x2)_7A(2x2)_n1A(4x4), 3A(2x2)_20A(2x2)_n1A(4x4), 7A(2x2)_28A(2x2)_n1A(4x4), 7C(2x2)_n1A(4x4), 7A(2x2)_7A(2x2)_n1A(4x4), 8A(2x2)_3A(2x2)_n1A(4x4), 20A(2x2)_3A(2x2)_n1A(4x4), 20A(2x2)_7A(2x2)_n1A(4x4), 20A(2x2)_32A(2x2)_n1A(4x4), 28A(2x2)_3A(2x2)_n1A(4x4), 3A(1x1)_n1A(1x1), 7A(1x1)_n1A(1x1), 8A(1x1)_n1A(1x1), 20A(1x1)_n1A(1x1), 28A(1x1)_n1A(1x1) EN-DC UL bands: 3A(1x1)_n1A(1x1), 7A(1x1)_n1A(1x1), 8A(1x1)_n1A(1x1), 20A(1x1)_n1A(1x1), 28A(1x1)_n1A(1x1)
	n3	SA n3
		EN-DC DL bands: 1A(2x2)_n3A(4x4), 3A(2x2)_n3A(2x2), 7A(2x2)_n3A(4x4), 8A(2x2)_n3A(4x4), 20A(2x2)_n3A(4x4), 28A(2x2)_n3A(4x4), 1A(2x2)_32A(2x2)_n3A(2x2), 1A(2x2)_7A(2x2)_n3A(4x4), 8A(2x2)_1A(2x2)_n3A(4x4), 20A(2x2)_32A(2x2)_n3A(2x2), 20A(2x2)_1A(2x2)_n3A(4x4), 20A(2x2)_7A(2x2)_n3A(4x4), 28A(2x2)_1A(2x2)_n3A(4x4), 28A(2x2)_7A(2x2)_n3A(4x4), EN-DC UL bands: 1A(1x1)_n3A(1x1), 3A(1x1)_n3A(1x1), 7A(1x1)_n3A(1x1), 8A(1x1)_n3A(1x1), 20A(1x1)_n3A(1x1), 28A(1x1)_n3A(1x1),
	n5	SA n5
n7	SA n7	

		<p>EN-DC DL bands: 1A(2x2)_n7A(4x4), 3A(2x2)_n7A(4x4),20A(2x2)_n7A(4x4), 28A(2x2)_n7A(4x4), EN-DC UL bands: 1A(1x1)_n7A(1x1), 3A(1x1)_n7A(1x1), 20A(1x1)_n7A(1x1), 28A(1x1)_n7A(1x1)</p>
	n8	<p>SA n8 EN-DC DL bands: 1A(4x4)_n8A(2x2), 7A(4x4)_n8A(2x2) EN-DC UL bands: 1A(1x1)_n8A(1x1), 7A(1x1)_n8A(1x1)</p>
	n28	<p>SA n28 EN-DC DL bands: 1A(4x4)_n28A(2x2), 3A(4x4)_n28A(2x2), 7A(4x4)_n28A(2x2), 1A(2x2)_1A(2x2)_n28A(2x2), 1A(2x2)_3A(2x2)_n28A(2x2), 1A(2x2)_7A(2x2)_n28A(2x2), 1A(2x2)_32A(2x2)_n28A(2x2), 3A(2x2)_7A(2x2)_n28A(2x2), 3A(2x2)_32A(2x2)_n28A(2x2), 7A(2x2)_32A(2x2)_n28A(2x2), 1A(4x4)_n78A(4x4)_n28A(2x2), 3A(4x4)_n78A(4x4)_n28A(2x2), 7A(4x4)_n78A(4x4)_n28A(2x2), EN-DC UL bands: 1A(1x1)_n28A(1x1), 3A(1x1)_n28A(1x1), 7A(1x1)_n28A(1x1)</p>
	n40	<p>SA n40 EN-DC DL bands: 1A(2x2)_n40A(2x2), 3A(2x2)_n40A(2x2), 7A(2x2)_n40A(2x2),28A(2x2)_n40A(2x2),1A(2x2)_28A(2x2)_n40A(2x2), 3A(2x2)_28A(2x2)_n40A(2x2),1A(2x2)_7A(2x2)_n40A(2x2), 3A(2x2)_7A(2x2)_n40A(2x2),7A(2x2)_28A(2x2)_n40A(2x2), EN-DC UL bands: 1A(1x1)_n40A(1x1), 3A(1x1)_n40A(1x1), 7A(1x1)_n40A(1x1), 28A(1x1)_n40A(1x1)</p>
	n78	<p>SA n78 EN-DC DL bands: 1A(4x4)_n78A(4x4), 3A(4x4)_n78A(4x4), 5A(2x2)_n78A(4x4), 7A(4x4)_n78A(4x4), 8A(2x2)_n78A(4x4), 20A(2x2)_n78A(4x4), 28A(2x2)_n78A(4x4), 1A(2x2)_1A(2x2)_n78A(4x4), 1A(2x2)_3A(2x2)_n78A(4x4), 1A(2x2)_5A(2x2)_n78A(4x4), 1A(2x2)_7A(2x2)_n78A(4x4), 1A(2x2)_8A(2x2)_n78A(4x4), 1A(2x2)_20A(2x2)_n78A(4x4), 1A(2x2)_28A(2x2)_n78A(4x4), 1A(2x2)_32A(2x2)_n78A(4x4), 1A(2x2)_40A(2x2)_n78(4x4)(Partial, B40 only SCC), 3A(2x2)_3A(2x2)_n78A(4x4), 3A(2x2)_5A(2x2)_n78A(4x4), 3A(2x2)_7A(2x2)_n78A(4x4), 3A(2x2)_8A(2x2)_n78A(4x4), 3A(2x2)_20A(2x2)_n78A(4x4), 3A(2x2)_28A(2x2)_n78A(4x4), 3A(2x2)_32A(2x2)_n78A(4x4), 3A(2x2)_38A(2x2)_n78A(4x4) (Partial, B38 only SCC), 3A(2x2)_40A(2x2)_n78A(4x4)(Partial, B40 only SCC), 3C(2x2)_n78A(4x4), 5A(2x2)_7A(2x2)_n78A(4x4), 7A(2x2)_7A(2x2)_n78A(4x4), 7A(2x2)_20A(2x2)_n78A(4x4), 7A(2x2)_28A(2x2)_n78A(4x4), 7C(2x2)_n78A(4x4), 20A(2x2)_32A(2x2)_n78A(4x4), 1A(2x2)_n3A(4x4)_n78A(4x4), 1A(4x4)_n5A(2x2)_n78A(4x4), 1A(2x2)_n7A(4x4)_n78A(4x4),</p>

		1A(2x2)_n40A(2x2)_n78A(4x4), 3A(2x2)_n1A(4x4)_n78A(4x4), 3A(4x4)_n5A(2x2)_n78A(4x4), 3A(2x2)_n7A(4x4)_n78A(4x4), 3A(2x2)_n5A(2x2)_n78A(4x4), 3A(2x2)_n40A(2x2)_n78A(4x4), 7A(2x2)_n5A(2x2)_n78A(4x4), 7A(4x4)_n5A(2x2)_n78A(4x4), 7A(2x2)_n1A(4x4)_n78A(4x4), 8A(2x2)_n1A(4x4)_n78A(4x4), 20A(2x2)_n1A(4x4)_n78A(4x4), 20A(2x2)_n3A(4x4)_n78A(4x4), 28A(2x2)_n1A(4x4)_n78A(4x4), 28A(2x2)_n7A(4x4)_n78A(4x4), 7A(2x2)_n40A(2x2)_n78A(4x4), 28A(2x2)_n40A(2x2)_n78A(4x4), EN-DC UL bands: 1A(1x1)_n78A(1x1), 3A(1x1)_n78A(1x1),7A(1x1)_n78A(1x1),5A(1x1)_n78A(1x1), 8A(1x1)_n78A(1x1), 20A(1x1)_n78A(1x1), 28A(1x1)_n78A(1x1)
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It has MP3, Camera, USB memory, FM, Bluetooth 5.1, Wi-Fi (802.11a/b/g/n/ac, 802.11n supports 20MHz and 40MHz bandwidth, 802.11ac supports 20MHz and 40MHz and 80MHz bandwidth) ,NFC and 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.

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 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 (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
	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	P	CTTL((BDA))
2	Conducted Emission	15.107(a)	A.2	P	CTTL((BDA))

7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	LISN	ENV216	101459	R & S	2022-03-22	1 year
2	Test Receiver	ESCI	100766	R & S	2022-03-09	1 year
3	Universal Radio Communication Tester	CMW500	159408	R&S	2021-12-07	1 Year
4	Test Receiver	ESU26	100376	R & S	2022-03-08	1 year
5	BiLog Antenna	VULB9163	482	Schwarzbeck	2021-11-04	1 year
6	Dual-Ridge Waveguide Horn Antenna	3117	00139065	ETS-Lindgren	2021-10-11	1 year
7	Universal Radio Communication Tester	MT8821C	6262257899	Anritsu	2022-05-06	1 year
8	Universal Radio Communication Tester	MT8000A	6262261933	Anritsu	2022-05-06	1 year
9	FM Signal Source	SMF100A	104940	R & S	2022-01-09	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 (charging mode) 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 – 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 (MHz)	Field strength limit (μV/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.

$$\text{Limit}(10\text{m}) = \text{Limit}(3\text{m}) + 20[\log(3/10)]$$

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/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_{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:
EUT1 Charger+Back Camera+GSM 850MHz idle Mode/QP detector

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)
44.841000	22.7	100.0	V	270.0	-0.6	17.3	40.0
54.153000	27.3	100.0	V	60.0	-0.7	12.7	40.0
59.391000	21.9	100.0	V	0.0	-0.9	18.1	40.0
99.258000	22.6	100.0	V	180.0	-2.0	20.9	43.5
101.586000	22.2	113.0	V	180.0	-2.0	21.3	43.5
103.429000	19.4	100.0	V	270.0	-2.1	24.1	43.5

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

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17132.500	41.26	-23.0	41.6	22.71	54.0	12.7	V
17278.500	41.26	-22.8	41.4	22.62	54.0	12.7	V
17167.000	41.24	-23.0	41.5	22.67	54.0	12.8	H
17156.500	41.23	-23.0	41.5	22.66	54.0	12.8	V
17280.000	41.22	-22.8	41.4	22.58	54.0	12.8	V
17276.000	41.22	-22.8	41.4	22.58	54.0	12.8	V

EUT1 Charger+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)	Antenna Pol. (H/V)
17166.000	54.2	-23.0	41.5	35.60	74.0	19.8	V
17388.000	53.7	-23.0	41.3	35.45	74.0	20.3	H
17289.500	53.7	-22.8	41.4	35.07	74.0	20.3	V
16890.500	53.5	-23.0	41.6	34.83	74.0	20.5	H
16858.500	53.5	-23.0	41.6	34.84	74.0	20.5	V
17110.500	53.4	-23.0	41.6	34.85	74.0	20.6	V

Measurement results for Set.2:
EUT1 Charger+MP4 Mode/QP detector

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)
44.453000	22.9	100.0	V	45.0	-0.6	17.1	40.0
54.347000	26.9	100.0	V	0.0	-0.7	13.1	40.0
55.317000	26.5	100.0	V	60.0	-0.8	13.5	40.0
98.288000	22.6	100.0	V	180.0	-2.2	20.9	43.5
99.355000	22.8	100.0	V	180.0	-2.0	20.7	43.5
102.265000	20.4	113.0	V	180.0	-2.0	23.1	43.5

EUT1 Charger+MP4 Mode/Average detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17263.500	41.11	-22.8	41.4	22.48	54.0	12.9	V
17162.000	41.11	-23.0	41.5	22.54	54.0	12.9	V
17295.500	41.07	-22.8	41.4	22.46	54.0	12.9	V
17424.000	41.05	-23.1	41.3	22.87	54.0	13.0	V
17167.000	41.04	-23.0	41.5	22.47	54.0	13.0	V
17050.000	41.00	-23.0	41.6	22.38	54.0	13.0	V

EUT1 Charger+MP4 Mode/Peak detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver eading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17691.000	54.01	-22.2	41.2	34.93	74.0	20.0	V
16987.500	53.55	-23.0	41.7	34.88	74.0	20.4	V
17024.500	53.52	-23.0	41.7	34.87	74.0	20.5	H
17184.000	53.32	-22.9	41.5	34.74	74.0	20.7	H
17278.000	53.31	-22.8	41.4	34.67	74.0	20.7	V
17209.500	53.28	-22.9	41.5	34.68	74.0	20.7	V

Measurement results for Set.3:
EUT1 Charger+FM Mode/QP detector

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)
40.961000	20.4	100.0	V	30.0	-0.6	19.6	40.0
46.005000	24.0	100.0	V	45.0	-0.5	16.0	40.0
54.832000	25.4	100.0	V	135.0	-0.7	14.6	40.0
56.772000	23.6	125.0	V	60.0	-0.8	16.4	40.0
59.391000	21.8	100.0	V	315.0	-0.9	18.2	40.0
623.349000	26.9	125.0	H	59.0	8.4	19.1	46.0

EUT1 Charger+FM Mode/Average detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17173.500	41.12	-22.9	41.5	22.54	54.0	12.9	V
17264.500	41.03	-22.8	41.4	22.39	54.0	13.0	V
17639.500	41.02	-22.0	41.2	21.83	54.0	13.0	V
17285.500	41.02	-22.8	41.4	22.37	54.0	13.0	V
17278.000	41.00	-22.8	41.4	22.36	54.0	13.0	V
17426.500	40.98	-23.1	41.3	22.81	54.0	13.0	V

EUT1 Charger+FM Mode/Peak detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17762.500	54.0	-22.3	41.3	35.10	74.0	20.0	H
17887.500	53.9	-22.6	41.3	35.24	74.0	20.1	V
17082.000	53.7	-23.0	41.6	35.10	74.0	20.3	V
16951.500	53.6	-23.0	41.7	34.98	74.0	20.4	V
17113.500	53.6	-23.0	41.6	35.03	74.0	20.4	V
17280.500	53.3	-22.8	41.4	34.62	74.0	20.7	H

Measurement results for Set.4:
EUT1 USB + SD + Front Camera Mode/QP detector

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)
34.947000	32.0	100.0	V	225.0	-1.8	8.0	40.0
73.941000	32.6	113.0	V	300.0	-5.8	7.4	40.0
202.660000	27.2	112.0	H	90.0	-2.1	16.3	43.5
389.482000	29.5	100.0	V	16.0	3.7	16.5	46.0
503.554000	38.0	100.0	V	-31.0	6.1	8.0	46.0
677.475000	32.5	100.0	V	15.0	8.9	13.5	46.0

EUT1 USB + SD + Front Camera Mode/Average detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
17270.000	41.17	-22.8	41.4	22.54	54.0	12.8	V
17170.500	41.14	-23.0	41.5	22.56	54.0	12.9	V
17270.500	41.14	-22.8	41.4	22.50	54.0	12.9	V
17072.000	41.12	-23.0	41.6	22.53	54.0	12.9	V
17263.500	41.12	-22.8	41.4	22.49	54.0	12.9	V
17013.500	41.11	-23.0	41.7	22.45	54.0	12.9	V

EUT1 USB + SD + Front Camera Mode/Peak detector

Frequency (MHz)	Result (dB μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dB μ V)	Polarity	Limit (dB μ V/m)	Margin (dB)
16432.000	54.1	-23.1	41.3	35.86	74.0	19.9	V
17778.000	53.9	-22.4	41.3	35.00	74.0	20.1	H
17544.500	53.9	-22.6	41.2	35.28	74.0	20.1	H
17511.500	53.9	-22.8	41.2	35.51	74.0	20.1	V
16883.500	53.8	-23.0	41.6	35.17	74.0	20.2	V
17091.000	53.8	-23.0	41.6	35.20	74.0	20.2	V

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

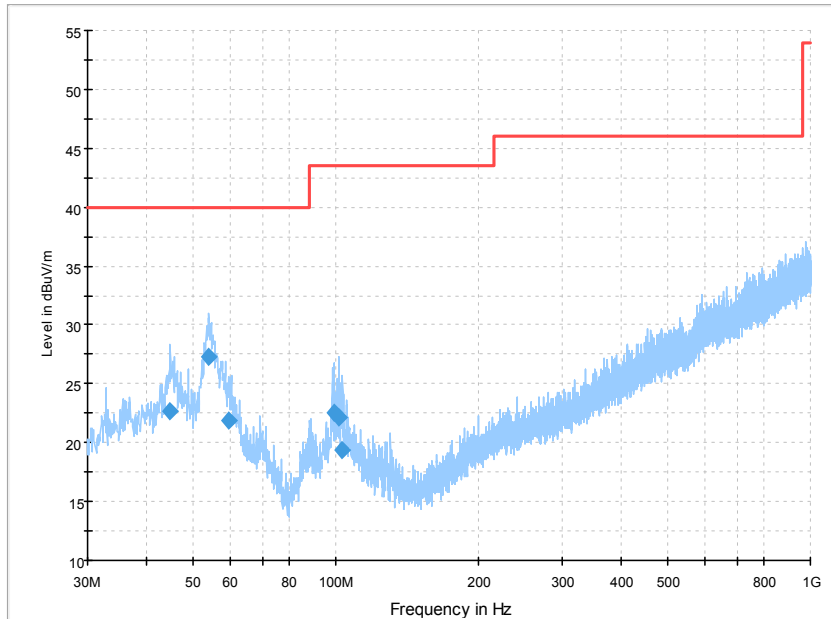


Figure A.1 Radiated Emission from 30MHz to 1GHz

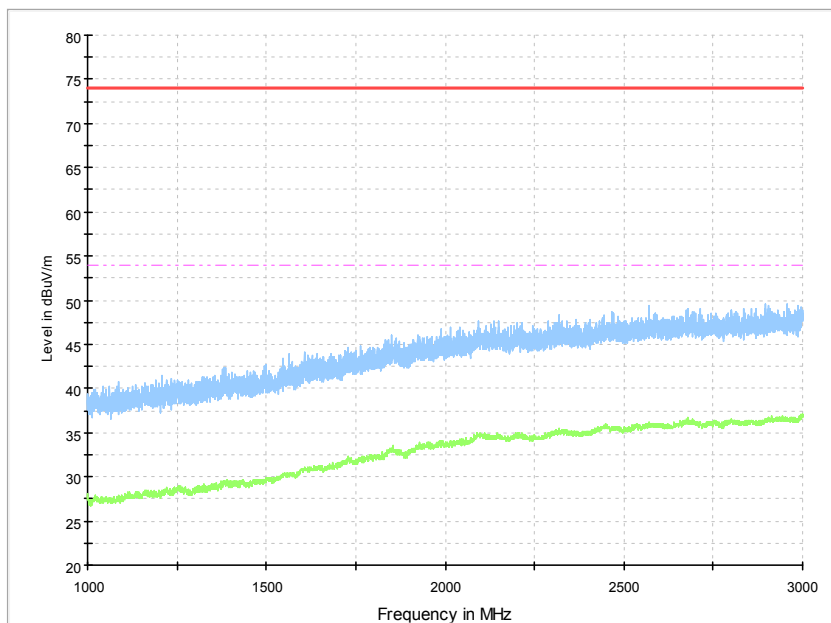


Figure A.2 Radiated Emission from 1GHz to 3GHz

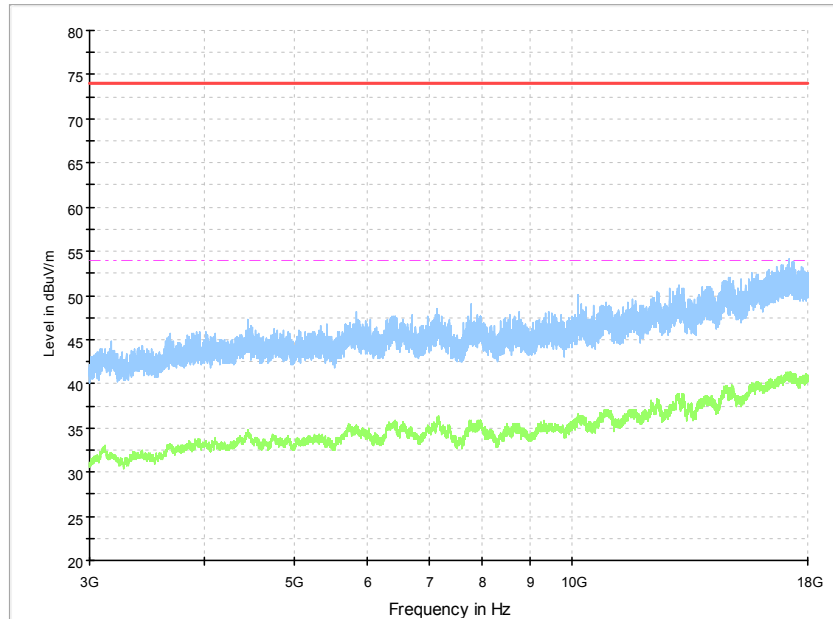


Figure A.2 Radiated Emission from 3GHz to 18GHz

EUT1 Charger+MP4 Mode, Set.2

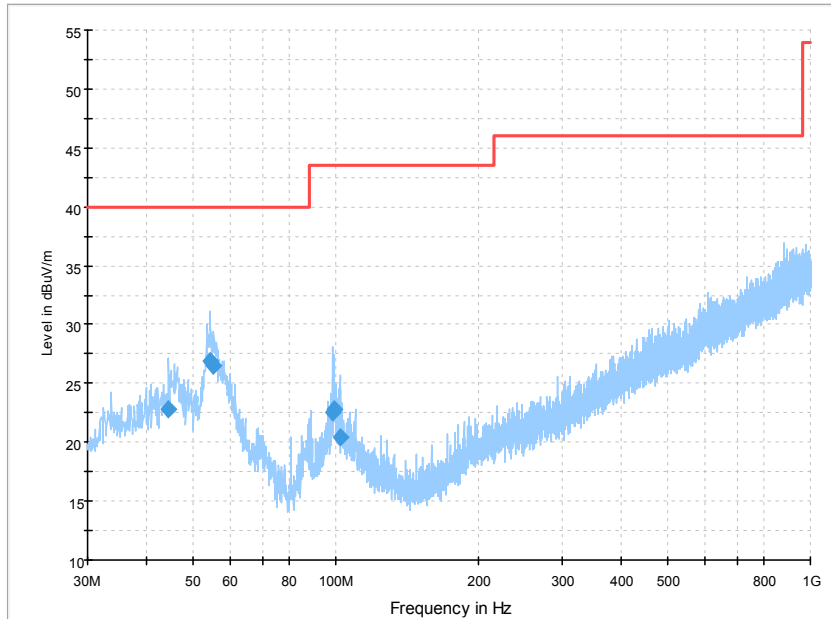


Figure A.4 Radiated Emission from 30MHz to 1GHz

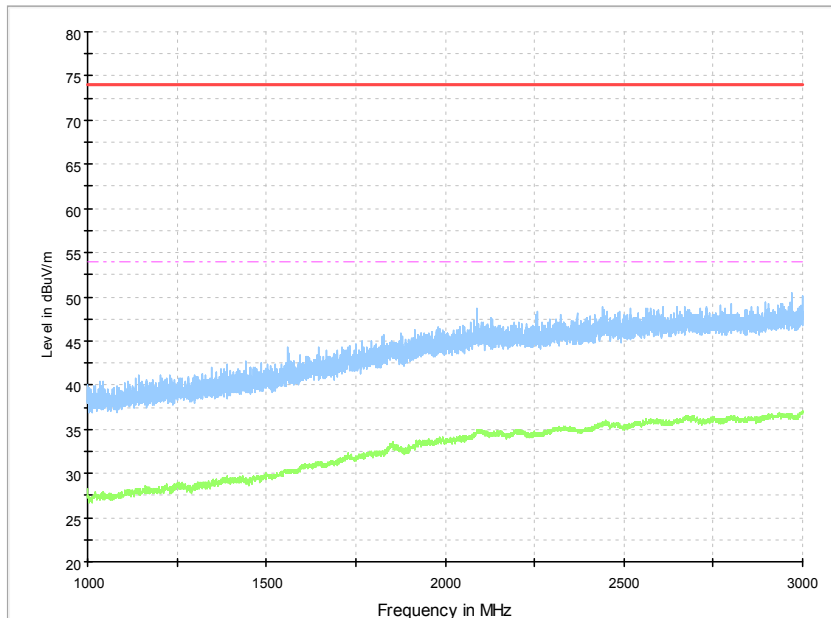


Figure A.5 Radiated Emission from 1GHz to 3GHz

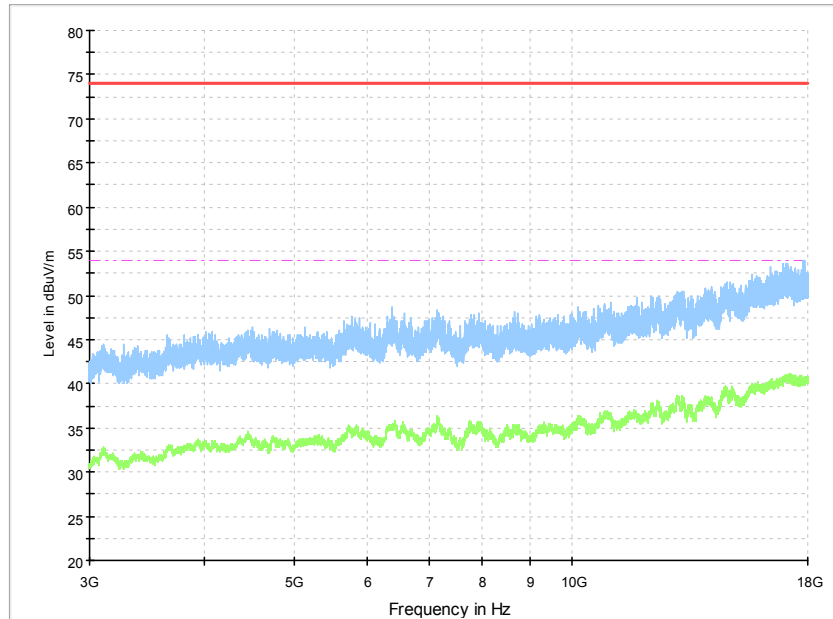


Figure A.6 Radiated Emission from 3GHz to 18GHz

EUT1 Charger+FM Mode, Set.3

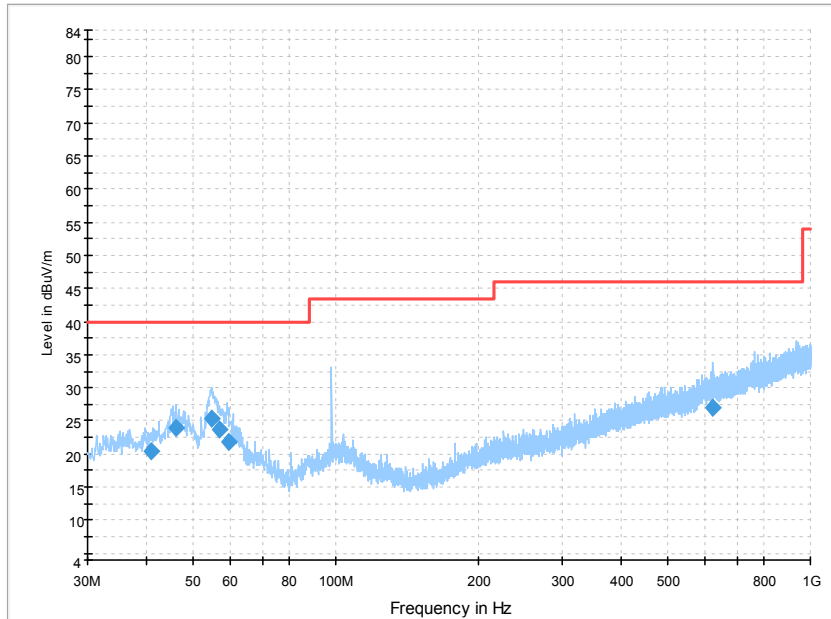


Figure A.7 Radiated Emission from 30MHz to 1GHz

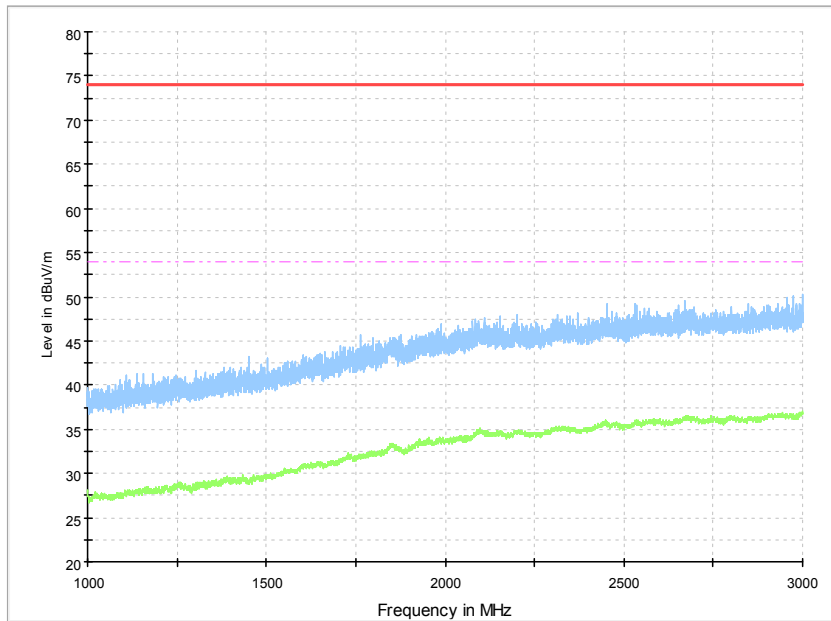


Figure A.8 Radiated Emission from 1GHz to 3GHz

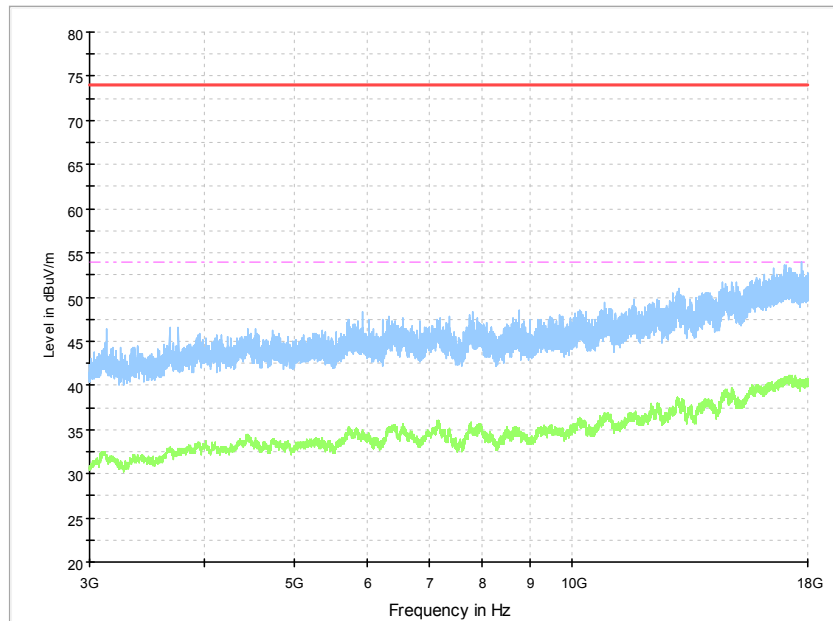


Figure A.9 Radiated Emission from 3GHz to 18GHz

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

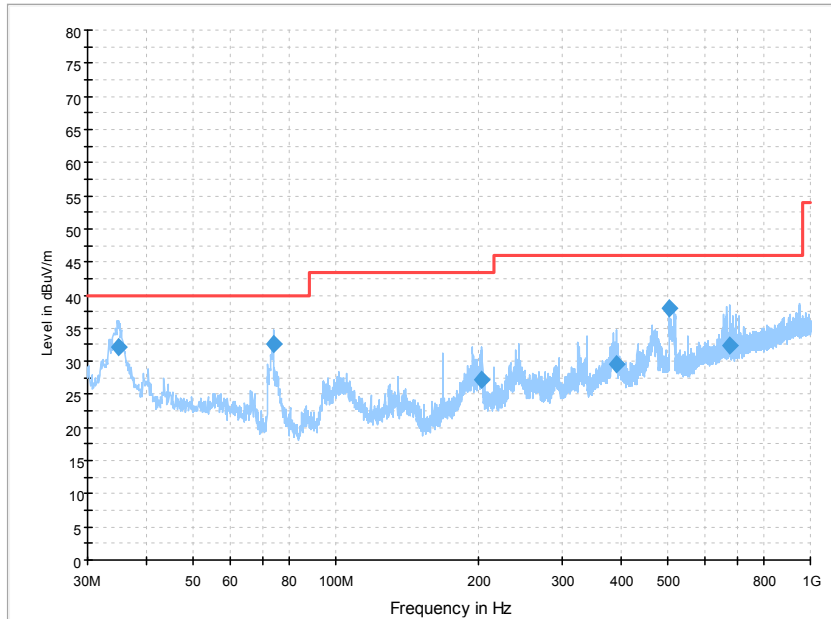


Figure A.10 Radiated Emission from 30MHz to 1GHz

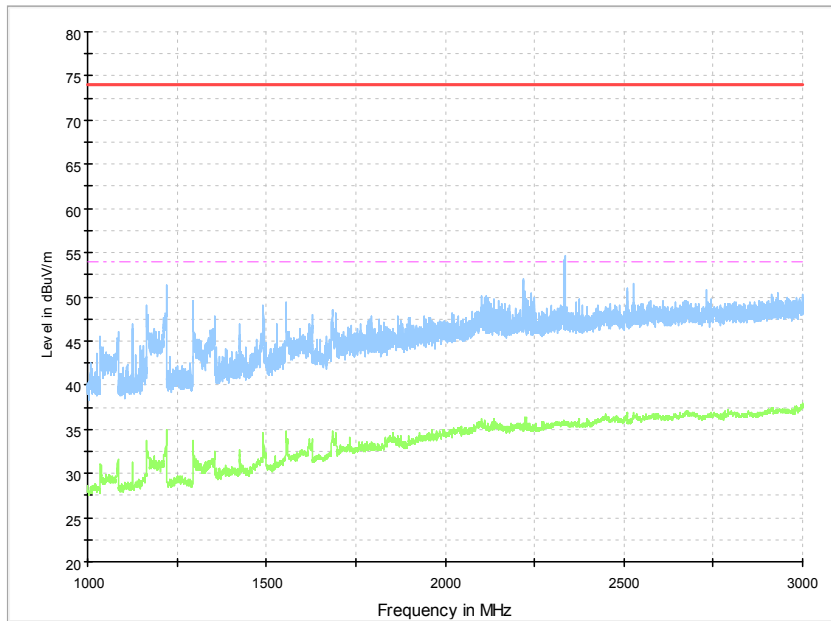


Figure A.11 Radiated Emission from 1GHz to 3GHz

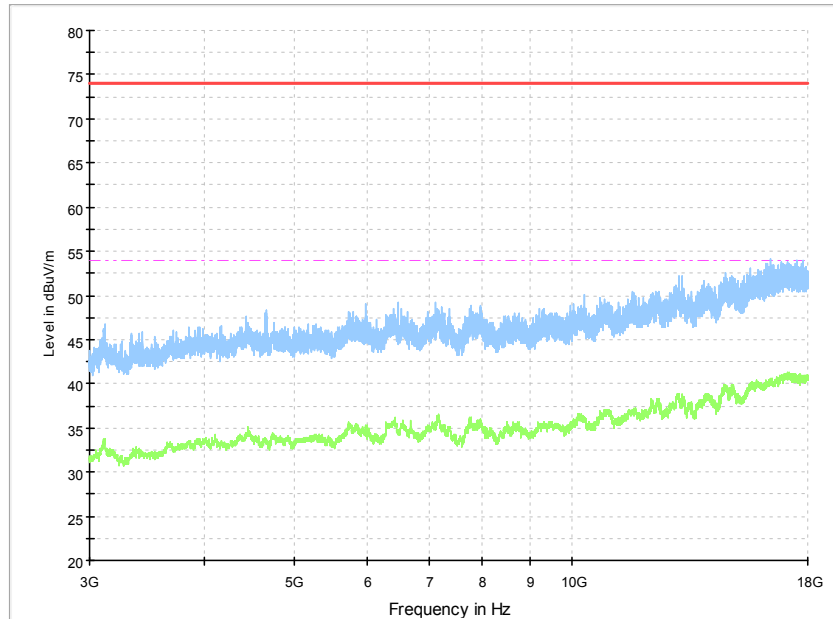


Figure A.12 Radiated Emission from 3GHz to 18GHz

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. During the test MS is connected to a charger in the case of charging mode.

A.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dB μ 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: $U=3.08\text{dB}$, $k=2$.

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 Charger+Back Camera+GSM 850MHz idle Mode, Set.1

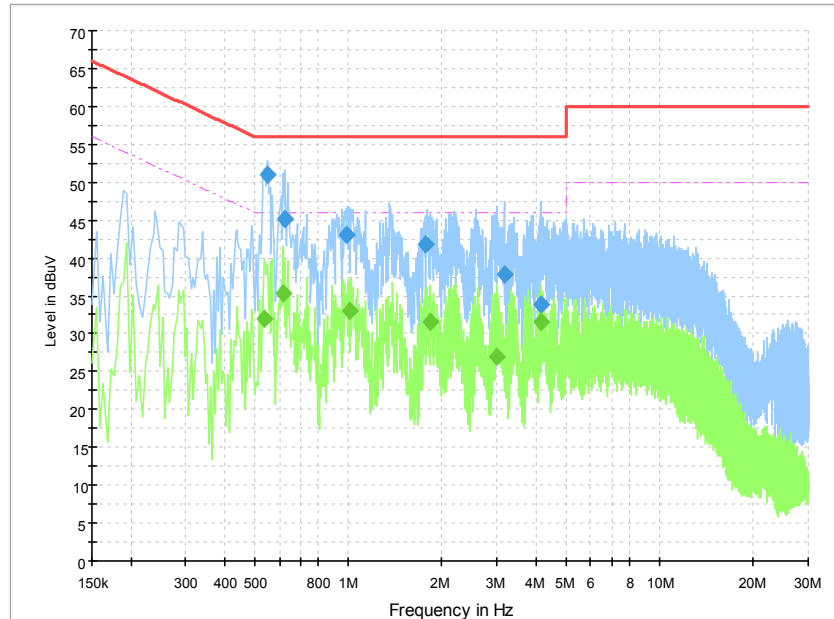


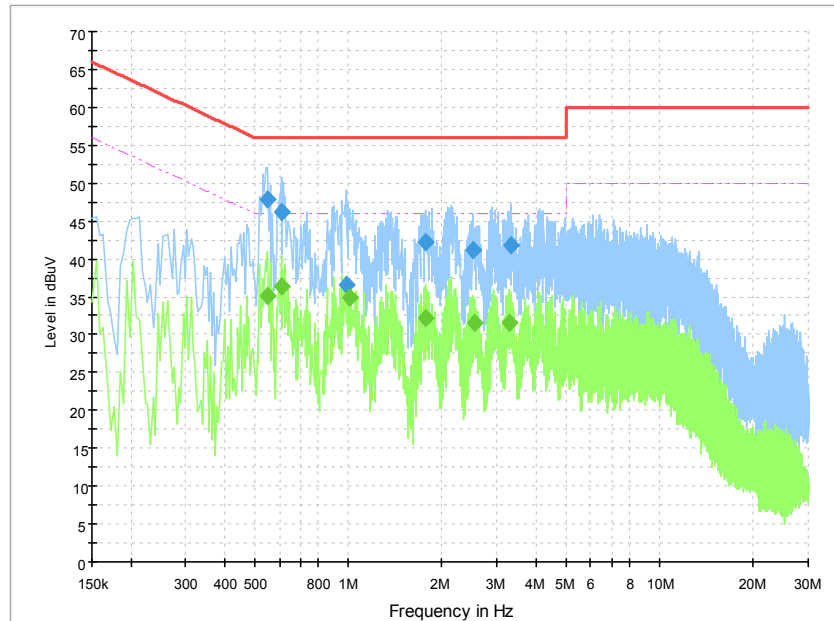
Figure A.9 Conducted Emission

Final Result 1

Frequency(MHz)	QuasiPea(dB μ V)	Line	Margin(dB)	Limi(dB μ V)
0.550500	51.0	L1	5.0	56.0
0.627000	45.0	L1	11.0	56.0
0.991500	43.1	L1	12.9	56.0
1.774500	41.8	L1	14.2	56.0
3.160500	37.8	L1	18.2	56.0
4.132500	33.9	N	22.1	56.0

Final Result 2

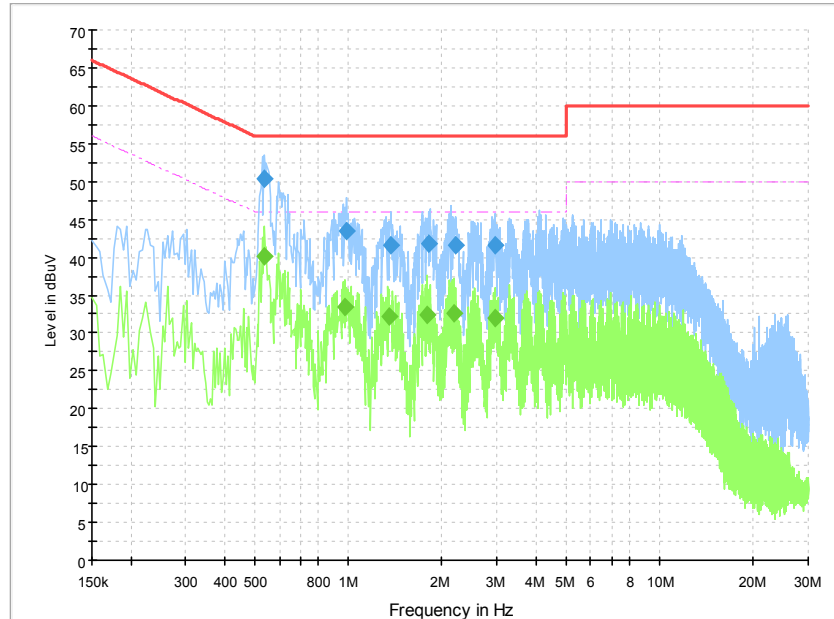
Frequency(MHz)	Average(dB μ V)	Line	Margin(dB)	Limit(dB μ V)
0.537000	32.0	N	14.0	46.0
0.618000	35.2	L1	10.8	46.0
1.009500	33.0	L1	13.0	46.0
1.833000	31.6	L1	14.4	46.0
2.994000	26.9	N	19.1	46.0
4.141500	31.5	L1	14.5	46.0

EUT1 Charger+MP4 Mode, Set.2

Figure A.10 Conducted Emission
Final Result 1

Frequency(MHz)	QuasiPea(dBμV)	Line	Margin(dB)	Limi(dBμV)
0.550500	47.8	L1	8.2	56.0
0.609000	46.2	L1	9.8	56.0
0.982500	36.6	N	19.4	56.0
1.765500	42.1	L1	13.9	56.0
2.517000	41.1	L1	14.9	56.0
3.318000	41.8	L1	14.2	56.0

Final Result 2

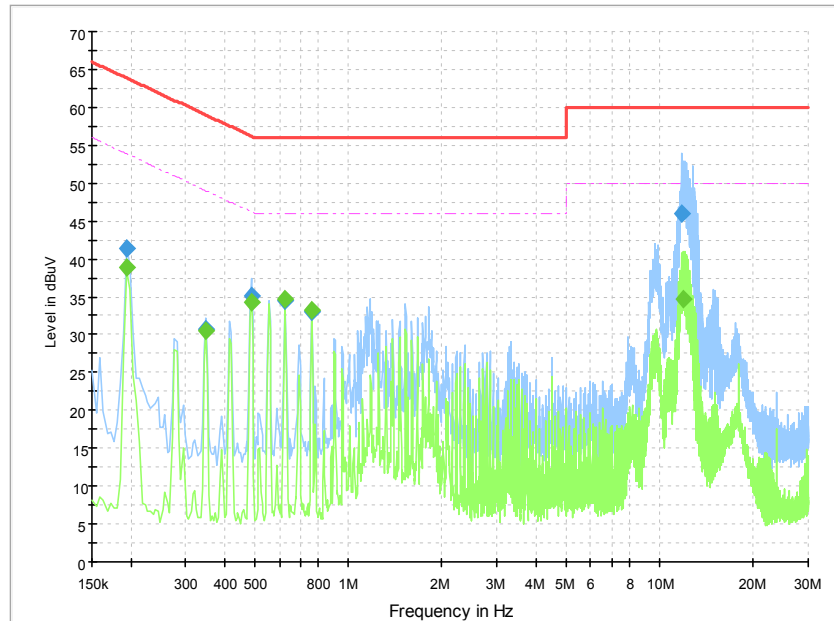
Frequency(MHz)	Average(dBμV)	Line	Margin(dB)	Limit(dBμV)
0.550500	35.1	N	10.9	46.0
0.609000	36.5	L1	9.5	46.0
1.009500	34.9	L1	11.1	46.0
1.765500	32.2	L1	13.8	46.0
2.548500	31.5	L1	14.5	46.0
3.295500	31.5	L1	14.5	46.0

EUT1 Charger+FM Mode, Set.3

Figure A.11 Conducted Emission
Final Result 1

Frequency(MHz)	QuasiPea(dBµV)	Line	Margin(dB)	Limi(dBµV)
0.537000	50.4	L1	5.6	56.0
0.987000	43.5	L1	12.5	56.0
1.365000	41.7	L1	14.3	56.0
1.806000	41.8	L1	14.2	56.0
2.197500	41.6	L1	14.4	56.0
2.962500	41.6	L1	14.4	56.0

Final Result 2

Frequency(MHz)	Average(dBµV)	Line	Margin(dB)	Limit(dBµV)
0.537000	40.1	L1	5.9	46.0
0.969000	33.5	L1	12.5	46.0
1.351500	32.2	L1	13.8	46.0
1.783500	32.4	L1	13.6	46.0
2.184000	32.7	L1	13.3	46.0
2.962500	31.9	L1	14.1	46.0

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

Figure A.12 Conducted Emission
Final Result 1

Frequency(MHz)	QuasiPea(dBμV)	Line	Margin(dB)	Limi(dBμV)
0.195000	41.4	L1	22.4	63.8
0.348000	30.6	N	28.4	59.0
0.487500	35.2	N	21.0	56.2
0.627000	34.5	N	21.5	56.0
0.766500	33.1	L1	22.9	56.0
11.769000	46.0	N	14.0	60.0

Final Result 2

Frequency(MHz)	Average(dBμV)	Line	Margin(dB)	Limit(dBμV)
0.195000	38.8	N	15.0	53.8
0.348000	30.6	N	18.5	49.0
0.487500	34.3	N	12.0	46.2
0.627000	34.6	N	11.4	46.0
0.766500	33.3	N	12.7	46.0
11.854500	34.6	N	15.4	50.0



ANNEX B: Persons involved in this testing

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

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