



TEST REPORT

No. I22Z70098-EMC01

for

Samsung Electronics Co., Ltd.

Multi-band GSM/WCDMA/LTE phone with Bluetooth, WLAN

Model Name: SM-A045M/DS, SM-A045M

FCC ID: ZCASMA045M

with

Hardware Version: REV1.0

Software Version: A045M.001

Issued Date: 2022-06-28

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.

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I22Z70098-EMC01	Rev.0	1 st edition	2022-06-28

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

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1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 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 (ISED#: 24849). 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, 100176, P.R. China

1.3. Testing Environment

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

1.4. Project data

Testing Start Date: 2022-05-31
Testing End Date: 2022-06-24

1.5. Signature



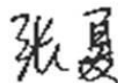
Li Yan

(Prepared this test report)



Zhang Ying

(Reviewed this test report)



Zhang Xia

Deputy Director of the laboratory
(Approved this test report)



2. Client Information

2.1. Applicant Information

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City: /
Postal Code: /
Country: /
Contact: Jenni Chun
Email: j1.chun@samsung.com
Telephone: +1-201-937-4203

2.2. Manufacturer Information

Company Name: Samsung Electronics. Co., Ltd.
Address: Samsung R5, Maetan dong 129, Samsung ro
Youngtong gu, Suwon city 443 742, Korea
City: /
Postal Code: /
Country: /
Contact: Sunghoon Cho
Email: ggobi.cho@samsung.com
Telephone: +82-10-2722-4159

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

3.1. About EUT

Description	Multi-band GSM/WCDMA/LTE phone with Bluetooth, WLAN
Model Name	SM-A045M/DS, SM-A045M
FCC ID	ZCASMA045M

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*	IME/SNI	HW Version	SW Version	Date of receipt
UT15a	2270098UT15a	REV1.0	A045M.001	2022.05.31
UT16a	2270098UT16a	REV1.0	A045M.001	2022.05.31

*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	Adapter1	/	/
AE2	Adapter2	/	/
AE3	Adapter3	/	/
AE4	Data Cable1	/	/
AE5	Data Cable2	/	/
AE6	Headset1	/	/
AE7	Headset2	/	/
AE8	Battery	/	/
AE9	Data Cable	/	Type-C
AE10	Mobile HD	/	/

AE1

Model	EP-TA200JWE
Manufacturer	HAEM Co.,Ltd
Length of cable	/

AE2

Model	EP-TA200JWE
Manufacturer	SoluM Co.,Ltd.
Length of cable	/

AE3

Model	EP-TA200JWE
Manufacturer	RFTECH Co., Ltd.
Length of cable	/

AE4

Model	EP-DR140AWE
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Manufacturer	DONGGUAN KSD CO.,LTD
Length of cable	/
AE5	
Model	EP-DR140AWE
Manufacturer	CRESYN HANOI Co., Ltd
Length of cable	/
AE6	
Model	EHS61ASFWE
Manufacturer	DONGGUAN YOUNGBO ELECTRONICS CO.,LTD
Length of cable	/
AE7	
Model	EHS61ASFWE
Manufacturer	Shenzhen Grandsound Electronics Co.,Ltd
Length of cable	/
AE8	
Model	/
Manufacturer	/
Length of cable	/

Note:

1. The USB cables are shielded.
2. AE9 and AE10 are not the AE of EUT, which are provided by Lab for relevant testing.

3.4. General Description

The Equipment under Test (EUT) is a model of Tablet with Bluetooth, WLAN with integrated antenna and inbuilt battery.

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

Samples undergoing test were selected by the client.

The device contains receivers which tune and operate between 30MHz-960MHz in the following bands: GSM850, WCDMA BAND 5, LTE BAND 5, LTE BAND 12, LTE BAND 13, LTE BAND 17, and LTE BAND 26.

3.5. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	UT15a + AE1 + AE4/AE5+ AE6/ AE7	Adapter1 +Headset + Rear Camera
Set.2	UT15a + AE2 + AE4/AE5	Adapter2 +MP4
Set.3	UT15a + AE3 + AE4/AE5+ AE6/ AE7	Adapter3 +Headset + FM
Set.4	UT15a + UT16a+ AE6+ AE9	OTG + Headset+ Front camera+ RX
Set.5	UT15a + AE7 + AE10	OTG +MP4+ Headset+ RX
Set.6	UT15a + AE4/AE5 + AE6/ AE7	USB mode(SD) + Headset + RX

Note: All the set-ups above were tested but only the worst test data of worst set-up showed in this report.

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	2021
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-2 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, from 30 to 1000 MHz
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
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
	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)

Note: The only difference between SM-A045M/DS and SM-A045M is Dual SIM slot rack and Single SIM slot rack, the tests were performed on SM-A045M/DS and SM-A045M shared the SM-A045M/DS results.

7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESU26	100376	R&S	2022-09-15	1 year
2	Test Receiver	ESCI	100766	R&S	2023-03-02	1 year
3	LISN	ENV216	101459	R&S	2023-03-16	1 year
4	BiLog Antenna	VULB9163	01176	Schwarzbeck	2022-11-15	1 year
5	EMI Antenna	3117	00167252	ETS-Lindgren	2022-12-26	1 year
7	Signal Generator	SMF100A	R&S	101295	2022-12-04	1 year
8	Universal Radio Communication Tester	CMW500	159408	R&S	2023-03-01	1 year
9	Printer	P1606dn	VNC3L52122	HP	N/A	N/A
10	Keyboard	KU-1601	2048361	Lenovo	N/A	N/A
11	Mouse	EMS-537A	8021S3MC	Lenovo	N/A	N/A
12	PC	M4000e-17	M706RMW2	Lenovo	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(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 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, charging mode, FM, MP4, MP3, CAMERA, OTG and SD mode.

The WIFI and BT function was on and worked in receiving 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 the Section 3.4, are investigated. Only the worst case emissions are reported.

The FM radio mode radiated testing was performed with the Low/Mid/High channel. Only the worst cases 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.

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/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:

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

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Measurement uncertainty (worst case): 30MHz-1GHz: 5.37dB, 1GHz-18GHz: 5.58dB, $k=2$.

Note: all the set-up lists in section 3.5 and each operating mode were tested, only the worst test data are showed in this section.

Measurement results for Set.1:

Adapter1+ Headset+ Rear Camera /Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17989.500	39.42	-26.2	41.2	24.39	54.0	14.6	V
17996.500	39.36	-26.2	41.2	24.31	54.0	14.6	H
17984.000	39.36	-26.2	41.2	24.31	54.0	14.6	H
17913.500	39.34	-26.2	41.2	24.25	54.0	14.7	H
16931.500	39.33	-26.2	41.2	24.31	54.0	14.7	H
17930.000	39.31	-26.2	41.2	24.27	54.0	14.7	V

Adapter1+ Headset+ Rear Camera /Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17957.000	52.0	-26.8	41.1	37.74	74.0	22.0	H
16217.500	51.9	-26.6	41.0	37.44	74.0	22.1	H
17241.000	51.8	-27.8	40.7	38.92	74.0	22.2	H
17705.000	51.7	-26.8	41.1	37.45	74.0	22.3	H
17994.500	51.7	-26.3	41.2	36.81	74.0	22.3	H
17807.500	51.5	-27.0	41.7	36.92	74.0	22.5	H

Measurement results for Set.3
Adapter3 +Headset + FM /Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17995.500	39.31	-26.2	41.2	24.27	54.0	14.7	V
17999.000	39.24	-26.2	41.2	24.21	54.0	14.8	H
17997.000	39.23	-26.2	41.2	24.19	54.0	14.8	V
17035.500	39.22	-26.2	41.2	24.17	54.0	14.8	H
17996.000	39.22	-26.2	41.2	24.17	54.0	14.8	V
16922.500	39.21	-26.2	41.2	24.17	54.0	14.8	H

Adapter3 +Headset + FM /Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17906.500	51.5	-26.4	41.2	36.79	74.0	22.5	H
17471.000	51.4	-26.4	41.2	36.65	74.0	22.6	V
17890.500	51.3	-27.6	41.1	37.83	74.0	22.7	H
17821.000	51.3	-26.0	41.3	36.01	74.0	22.7	H
17892.500	51.2	-26.2	41.2	36.17	74.0	22.8	V
17113.000	51.1	-27.1	41.6	36.62	74.0	22.9	H

Measurement results for Set.4
OTG + Headset+ Front camera+ RX GSM850MHz /Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17982.500	39.39	-26.2	41.2	24.35	54.0	14.6	H
17935.000	39.31	-26.2	41.2	24.28	54.0	14.7	V
17918.500	39.21	-26.2	41.2	24.19	54.0	14.8	V
17933.500	39.21	-26.2	41.2	24.19	54.0	14.8	H
17998.000	39.20	-26.2	41.2	24.16	54.0	14.8	V
17988.500	39.17	-26.2	41.2	24.13	54.0	14.8	H

OTG + Headset+ Front camera+ RX GSM850MHz /Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17368.000	51.4	-27.0	41.6	36.76	74.0	22.6	V
17043.000	51.2	-27.0	41.5	36.64	74.0	22.8	H
17926.000	51.2	-27.3	41.5	36.93	74.0	22.8	V
17718.000	51.1	-26.1	41.3	35.92	74.0	22.9	V
16950.000	50.9	-26.9	41.5	36.36	74.0	23.1	V
16930.000	50.9	-26.3	41.2	35.96	74.0	23.1	V

Measurement results for Set.6
USB mode (SD) + Headset + RX LTE Band5 /Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17996.000	39.74	-26.2	41.2	24.70	54.0	14.3	V
16930.000	39.73	-26.2	41.2	24.66	54.0	14.3	V
17112.000	39.73	-26.2	41.2	24.71	54.0	14.3	H
16930.500	39.68	-26.2	41.2	24.63	54.0	14.3	V
17114.000	39.65	-26.2	41.2	24.61	54.0	14.3	V
17012.000	39.64	-26.2	41.2	24.61	54.0	14.4	V

USB mode (SD) + Headset + RX LTE Band5 /Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
16438.000	52.4	-27.2	41.6	37.93	74.0	21.6	V
17502.500	52.0	-26.9	41.4	37.47	74.0	22.0	V
16655.500	51.9	-26.6	41.1	37.39	74.0	22.1	V
17146.500	51.8	-26.2	41.2	36.74	74.0	22.2	V
17881.500	51.7	-26.2	41.2	36.71	74.0	22.3	V
16951.500	51.7	-27.0	41.6	37.12	74.0	22.3	H

Adapter1+ Headset+ Rear Camera, Set.1

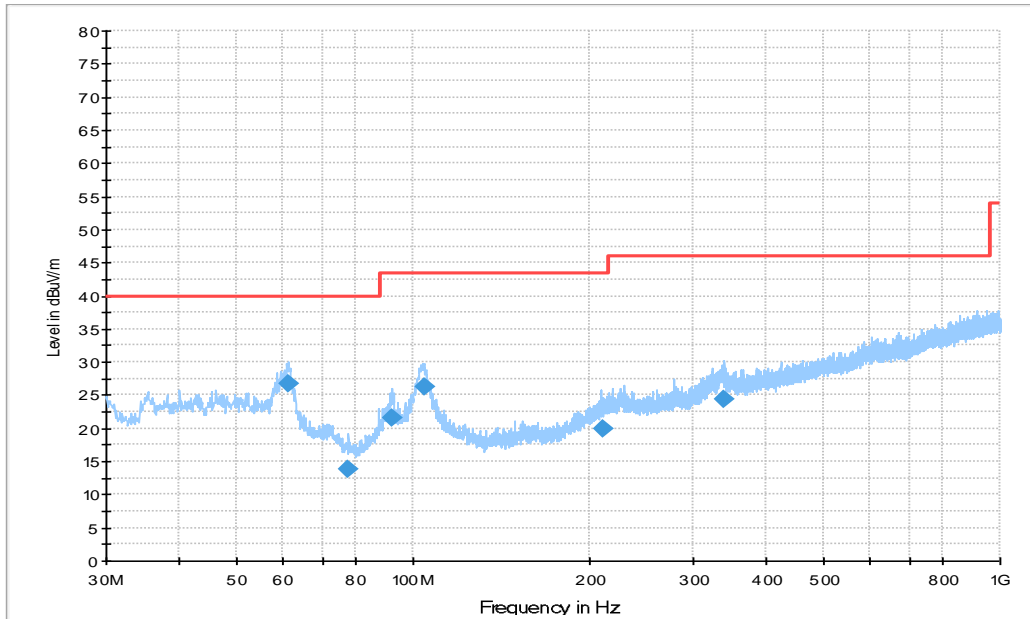


Figure A.1 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
61.234000	26.8	100.0	V	276.0	-1.7	13.2	40.0
77.627000	13.8	125.0	V	269.0	-6.0	26.2	40.0
92.177000	21.5	100.0	V	180.0	-2.9	22.0	43.5
104.30200	26.3	100.0	V	180.0	-1.7	17.2	43.5
209.93500	20.0	100.0	V	-33.0	-0.6	23.5	43.5
339.62400	24.4	100.0	H	289.0	3.1	21.6	46.0

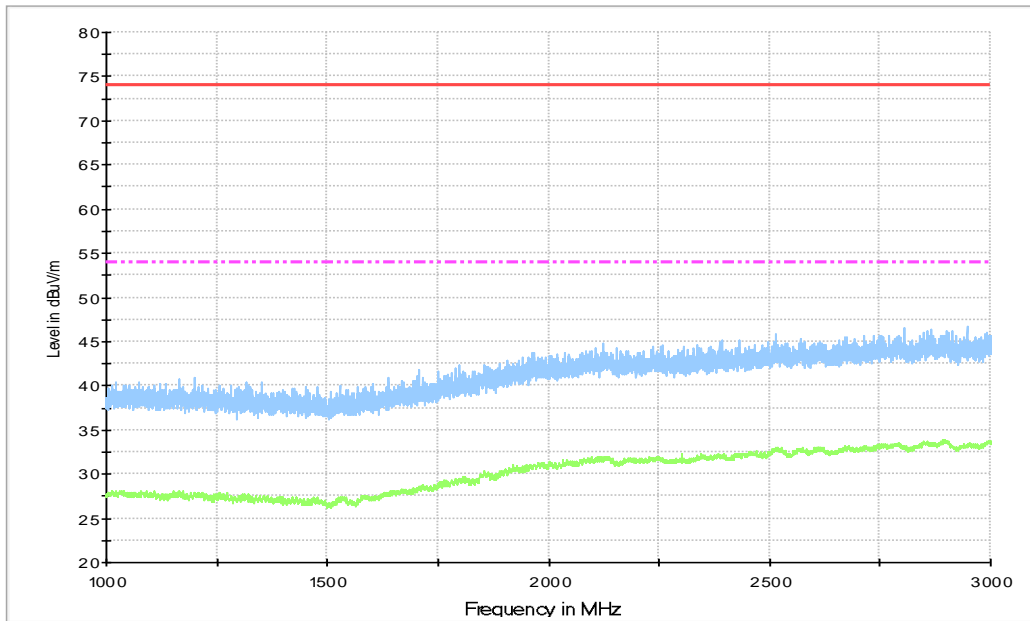


Figure A.2 Radiated Emission from 1GHz to 3GHz

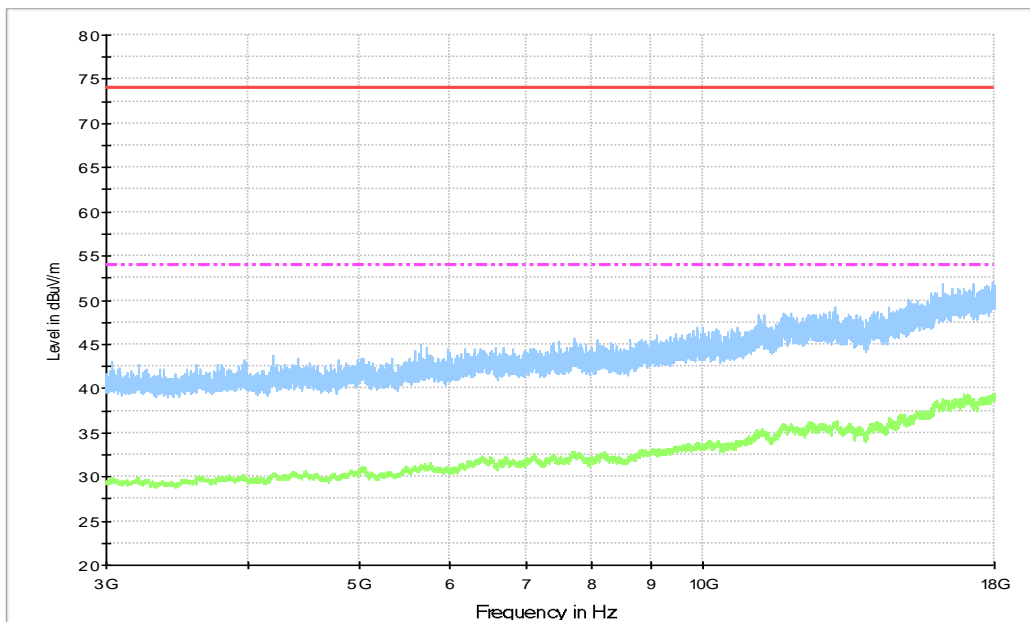


Figure A.3 Radiated Emission from 3GHz to 18GHz

Adapter3 +Headset + FM, Set.3

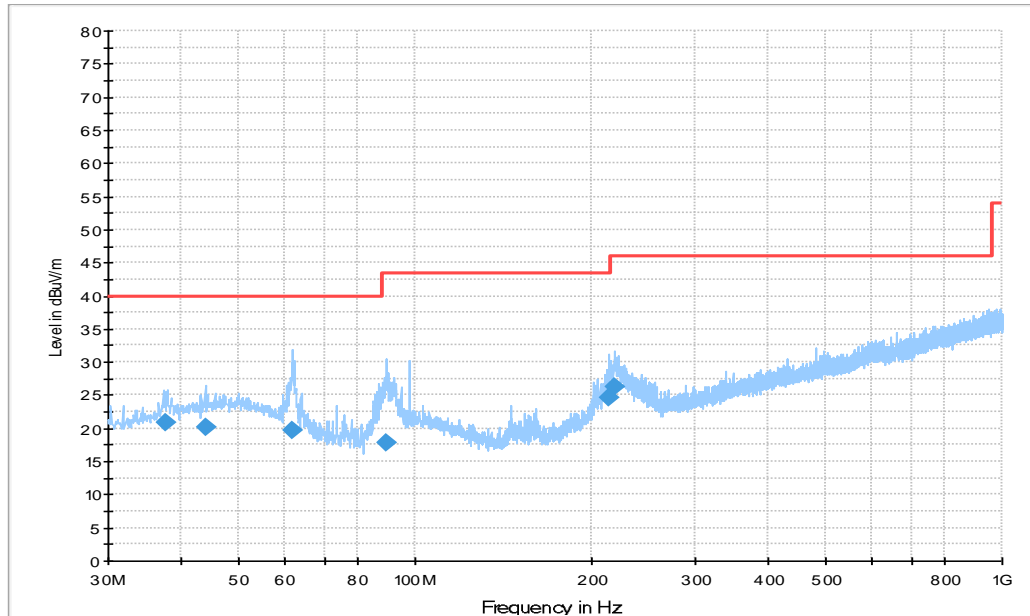


Figure A.4 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
37.469000	20.8	100.0	V	-39.0	-1.4	19.2	40.0
43.871000	20.2	125.0	V	90.0	-0.3	19.8	40.0
61.719000	19.7	100.0	V	103.0	-1.8	20.3	40.0
89.267000	17.9	125.0	V	135.0	-3.5	25.6	43.5
214.49400	24.6	100.0	V	186.0	-0.5	18.9	43.5
219.24700	26.3	100.0	V	193.0	-0.3	19.7	46.0

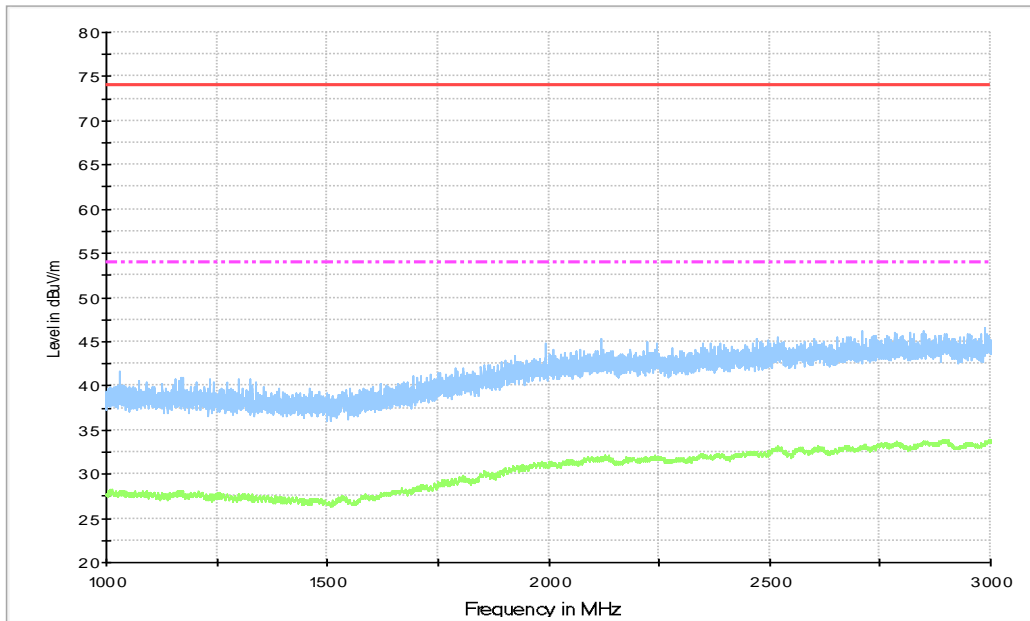


Figure A.5 Radiated Emission from 1GHz to 3GHz

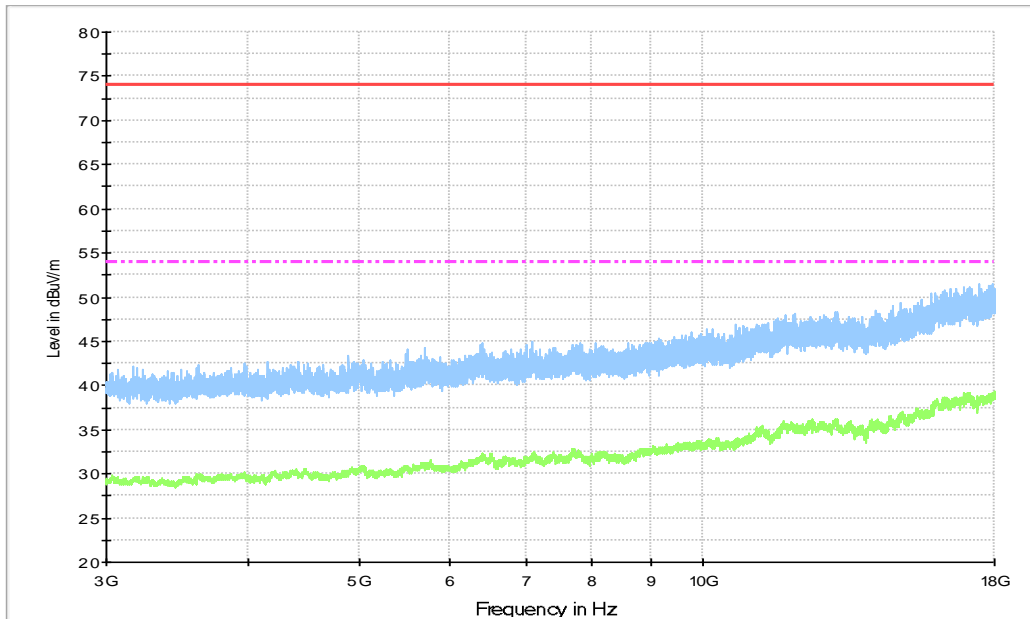


Figure A.6 Radiated Emission from 3GHz to 18GHz

OTG + Headset+ Front camera+ RX GSM850MHz, Set.4

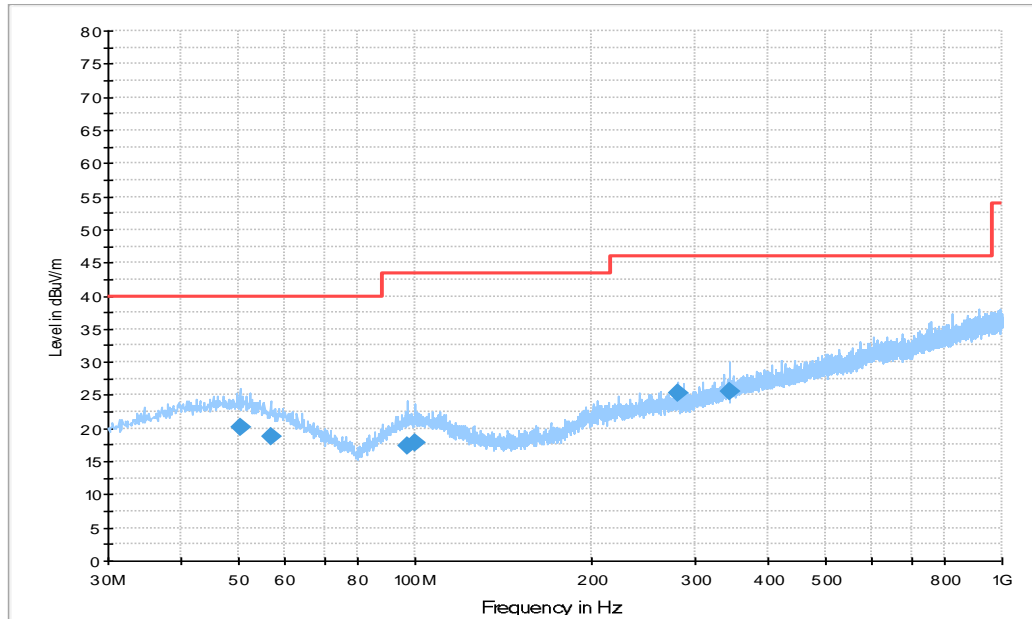


Figure A.7 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
50.273000	20.3	100.0	V	167.0	0.4	19.7	40.0
56.675000	18.8	125.0	H	276.0	-0.8	21.2	40.0
97.124000	17.5	115.0	H	225.0	-1.9	26.0	43.5
99.743000	17.9	100.0	V	-33.0	-1.4	25.6	43.5
281.23000	25.3	119.0	H	265.0	0.9	20.7	46.0
343.69800	25.5	100.0	H	270.0	3.3	20.5	46.0

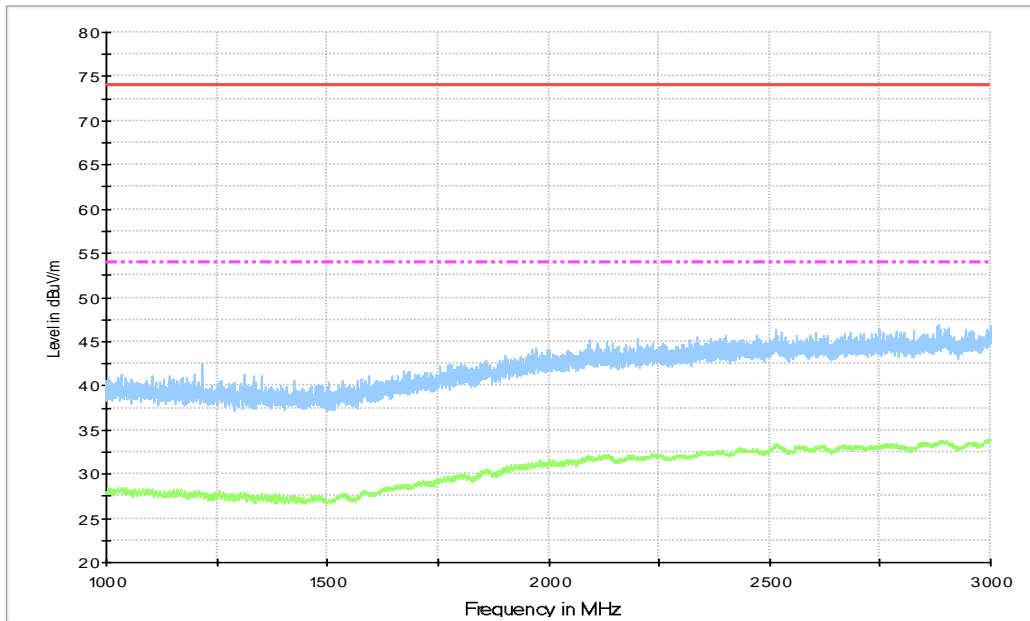


Figure A.8 Radiated Emission from 1GHz to 3GHz

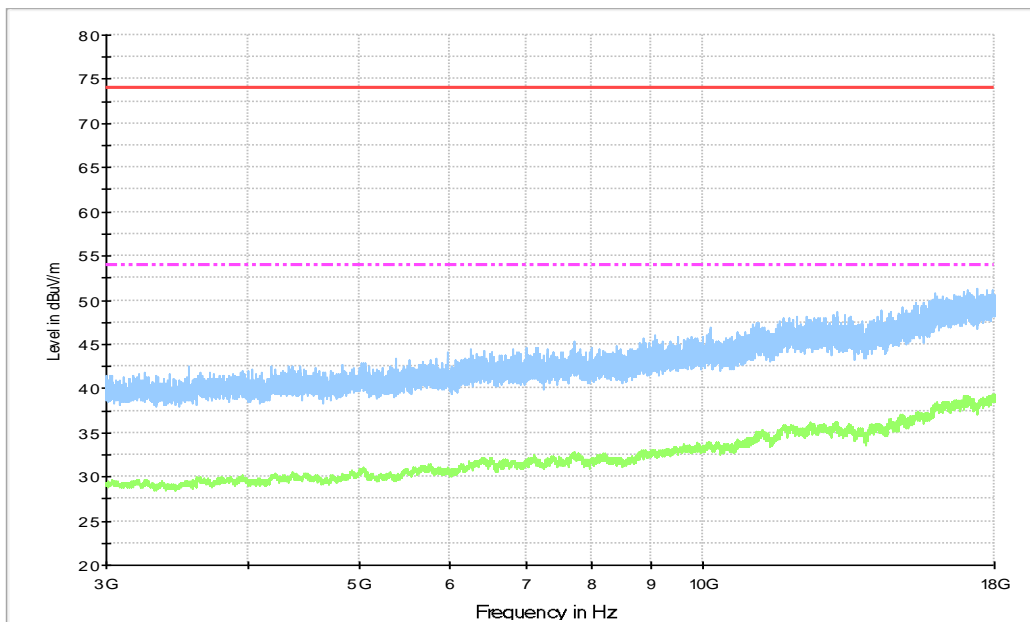


Figure A.9 Radiated Emission from 3GHz to 18GHz

USB mode (SD) + Headset + RX LTE Band5, Set.6

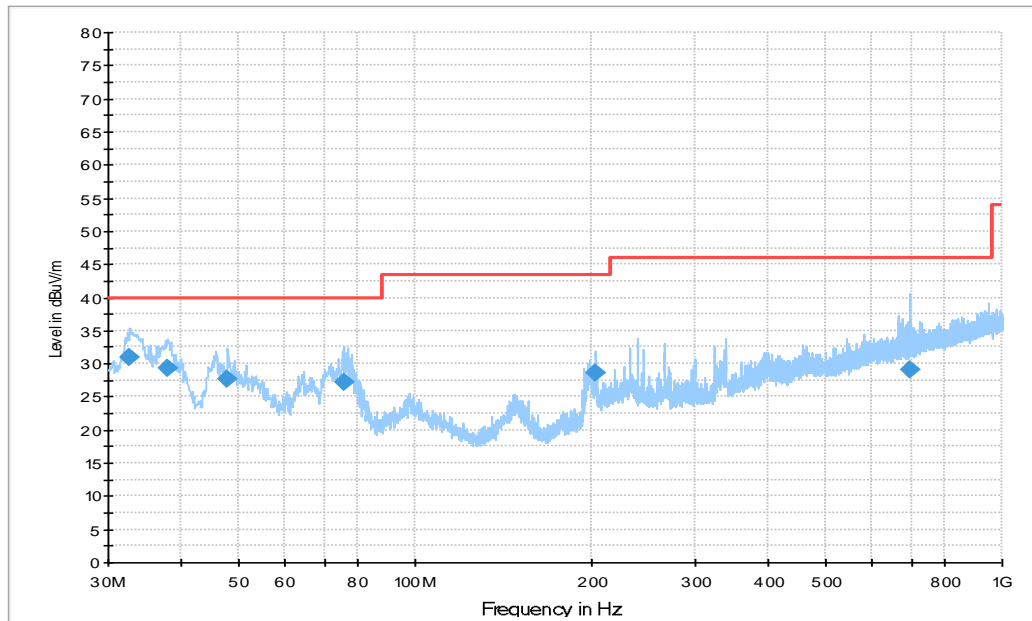


Figure A.10 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
32.619000	30.9	100.0	V	289.0	-3.0	9.1	40.0
37.954000	29.4	125.0	V	256.0	-1.3	10.6	40.0
47.945000	27.6	100.0	V	225.0	0.2	12.4	40.0
75.493000	27.2	113.0	V	95.0	-5.5	12.8	40.0
203.33900	28.5	100.0	H	-13.0	-0.8	15.0	43.5
695.03200	29.2	125.0	V	12.0	9.3	16.8	46.0

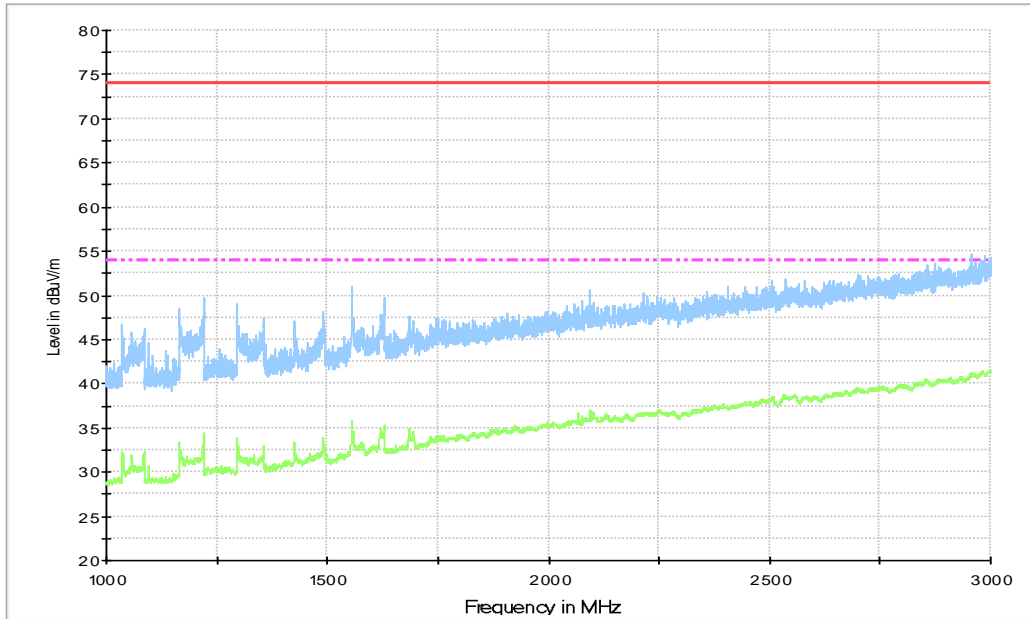


Figure A.11 Radiated Emission from 1GHz to 3GHz

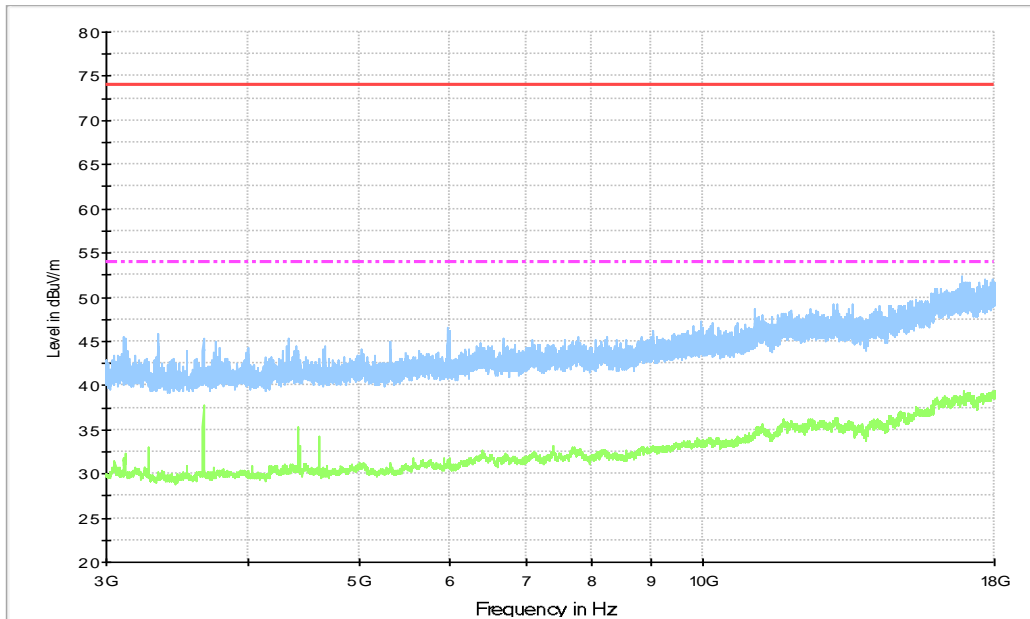


Figure A.12 Radiated Emission from 3GHz to 18GHz

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 USB mode, charging mode, FM, MP4, MP3, CAMERA and SD mode. 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 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: $U= 3.10$ dB, $k=2$.

Note: all the set-up lists in section 3.5 and each operating mode were tested, only the worst test data are showed in this section.

Set.1

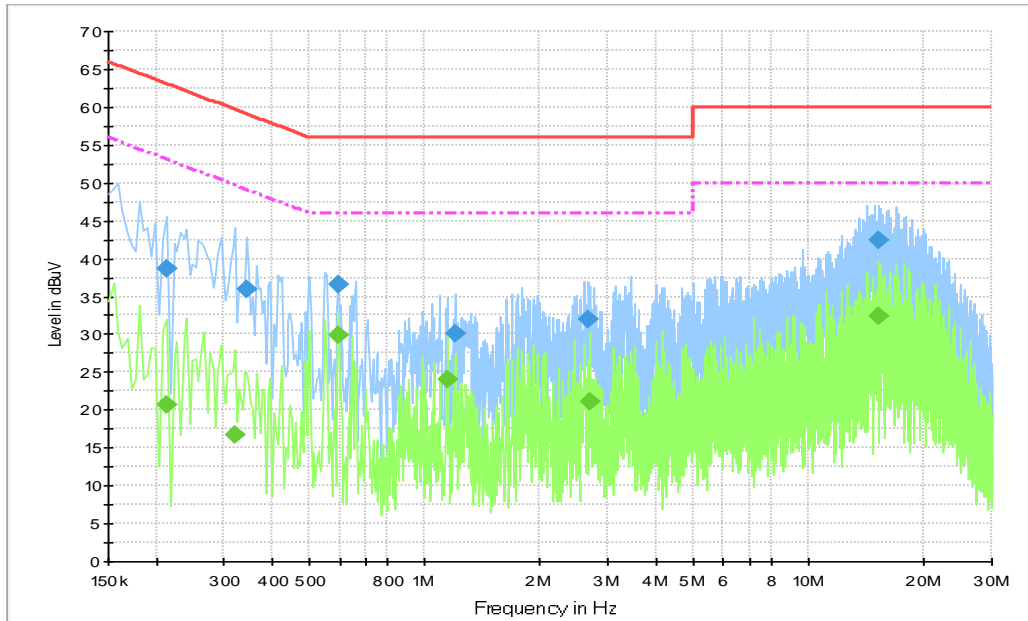


Figure A.13 Conducted Emission

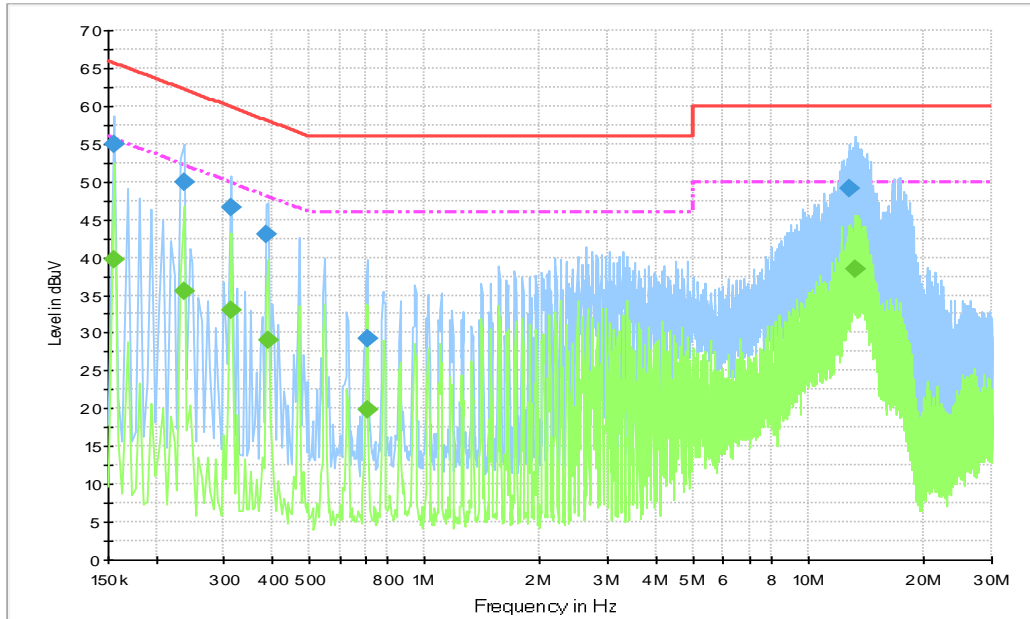
Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.213000	38.7	5000.0	9.000	On	N	19.7	24.4	63.1
0.343500	35.9	5000.0	9.000	On	L1	19.5	23.2	59.1
0.595500	36.5	5000.0	9.000	On	L1	19.4	19.5	56.0
1.203000	30.0	5000.0	9.000	On	L1	19.5	26.0	56.0
2.679000	31.9	5000.0	9.000	On	L1	19.6	24.1	56.0
15.310500	42.4	5000.0	9.000	On	L1	19.8	17.6	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.213000	20.7	5000.0	9.000	On	L1	19.5	32.4	53.1
0.321000	16.8	5000.0	9.000	On	N	19.8	32.9	49.7
0.595500	29.8	5000.0	9.000	On	L1	19.4	16.2	46.0
1.149000	24.0	5000.0	9.000	On	L1	19.5	22.0	46.0
2.701500	21.0	5000.0	9.000	On	L1	19.6	25.0	46.0
15.310500	32.4	5000.0	9.000	On	L1	19.8	17.6	50.0

Set.3

Figure A.14 Conducted Emission

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	54.9	5000.0	9.000	On	N	20.0	10.9	65.8
0.235500	49.9	5000.0	9.000	On	N	19.8	12.4	62.3
0.312000	46.5	5000.0	9.000	On	L1	19.5	13.4	59.9
0.388500	43.0	5000.0	9.000	On	N	19.8	15.1	58.1
0.708000	29.3	5000.0	9.000	On	L1	19.5	26.7	56.0
12.813000	49.0	5000.0	9.000	On	L1	19.8	11.0	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.154500	39.6	5000.0	9.000	On	L1	19.5	16.1	55.8
0.235500	35.5	5000.0	9.000	On	L1	19.5	16.8	52.3
0.312000	33.0	5000.0	9.000	On	L1	19.5	16.9	49.9
0.393000	29.0	5000.0	9.000	On	L1	19.5	19.0	48.0
0.708000	19.8	5000.0	9.000	On	L1	19.5	26.2	46.0
13.173000	38.4	5000.0	9.000	On	L1	19.9	11.6	50.0

USB (SD) mode, Set.6

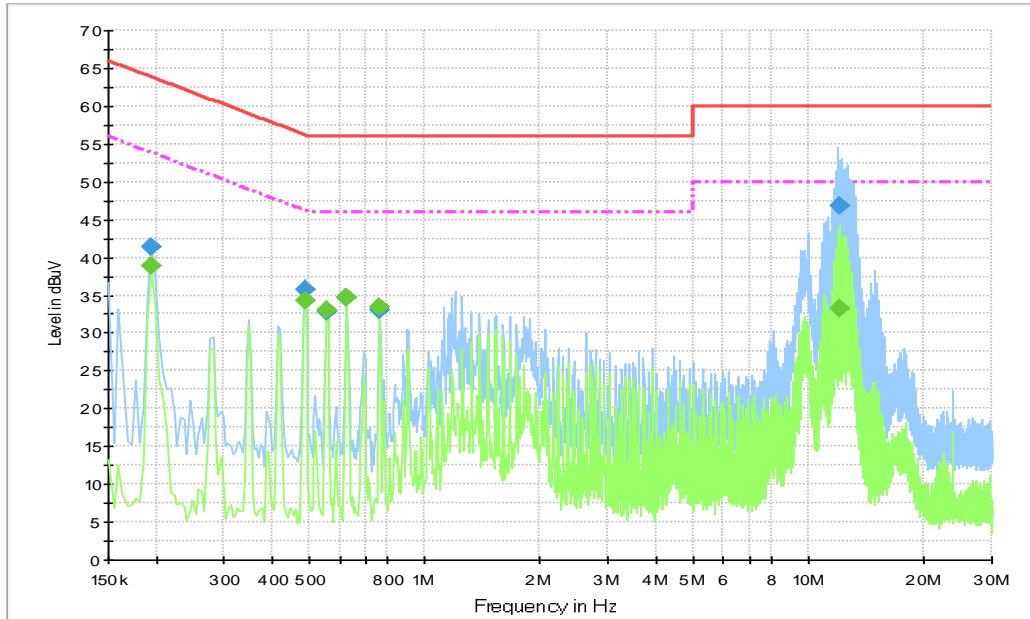


Figure A.15 Conducted Emission

Note: The graphic result above is the maximum of the measurements for both phase line and neutral line.

Final Result 1

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.195000	41.4	5000.0	9.000	On	L1	19.5	22.4	63.8
0.487500	35.8	5000.0	9.000	On	N	19.8	20.5	56.2
0.555000	32.7	5000.0	9.000	On	N	19.8	23.3	56.0
0.627000	34.6	5000.0	9.000	On	N	19.7	21.4	56.0
0.766500	33.0	5000.0	9.000	On	L1	19.5	23.0	56.0
11.980500	46.8	5000.0	9.000	On	N	19.8	13.2	60.0

Final Result 2

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.195000	38.9	5000.0	9.000	On	L1	19.5	14.9	53.8
0.487500	34.2	5000.0	9.000	On	L1	19.5	12.0	46.2
0.555000	33.0	5000.0	9.000	On	N	19.8	13.0	46.0
0.627000	34.8	5000.0	9.000	On	N	19.7	11.2	46.0
0.766500	33.4	5000.0	9.000	On	N	19.7	12.6	46.0
12.111000	33.2	5000.0	9.000	On	L1	19.8	16.8	50.0



ANNEX B: Persons involved in this testing

Test Item	Tester
Radiated Emission	Zhao Wenhui
Conducted Emission	Guo Qian

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