



TEST REPORT

No. I23Z60662-EMC04

for

TCL Communication Ltd.

Tablet PC

Model Name: 8196G

with

FCC ID: 2ACCJB201

Hardware Version: PIO

Software Version: v3SSC

Issued Date: 2023-06-09

Note:

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

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I23Z60662-EMC04	Rev.0	1 st edition	2023-06-09

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



CONTENTS

1. TEST LABORATORY.....	4
1.1. INTRODUCTION & ACCREDITATION	4
1.2. TESTING LOCATION	4
1.3. TESTING ENVIRONMENT	4
1.4. PROJECT DATA.....	4
1.5. 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
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.....	28

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 (huayuan North Road)

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

1.3. Testing Environment

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

1.4. Project data

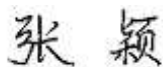
Testing Start Date: 2023-05-15
Testing End Date: 2023-06-07

1.5. Signature



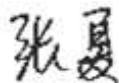
Li Yan

(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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2.2. Manufacturer Information

Company Name: TCL Communication Ltd.
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3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	Tablet PC
Model name	8196G
FCC ID	2ACCJB201

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*	IMEI/SN	HW Version	SW Version
EUT4	354304830000905	PIO	v3SSC

*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*	Name	Model	Manufacturer
AE1	Battery	TLp058C8	Huizhou Ganfeng Lienergy Battery Technology Co.,Ltd.
AE2-1	Adapter(US)	CG10A0502000UU	Huizhou Juwei Electronics Co.,LTD.
AE2-2	Adapter(EU)	CG10A0502000EU	Huizhou Juwei Electronics Co.,LTD.
AE2-3	Adapter(US)	UC13US	HUIZHOU PUAN ELECTRONICS CO., LTD
AE2-4	Adapter(EU)	UC13EU	HUIZHOU PUAN ELECTRONICS CO., LTD
AE2-5	Adapter(UK)	UC13UK	HUIZHOU PUAN ELECTRONICS CO., LTD
AE3	Date Cable	JWUB1581-Y50R	Huizhou Juwei Electronics Co.,LTD.
AE4	Headset	/	/
AE5	USB Cable C TO C	/	/

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

*AE4 and AE5 are not the AE for EUT, provided by the laboratory for relevant tests.

Note: The USB cables are shielded.

3.4. General Description

Equipment under Test (EUT) is a model of Tablet PC with integrated antenna.

Description	Tablet PC	
Model name	8196G	
Marketing name	/	
Brand name	TCL	
Cellular Bands	<input checked="" type="checkbox"/> GSM	Bands 850/900/1800/1900MHz
	<input type="checkbox"/> CDMA	/
	<input checked="" type="checkbox"/> WCDMA	Bands 1/2/4/5/8
	<input checked="" type="checkbox"/> LTE	Bands 1/2/3/4/5/7/8/12/13/17/20/28/34/38/39/40/41/66
	<input type="checkbox"/> 5G NR SA	/
	<input type="checkbox"/> 5G NR NSA	/
Unlicensed Radio	<input checked="" type="checkbox"/> Wi-Fi	<input checked="" type="checkbox"/> 802.11b <input checked="" type="checkbox"/> 802.11g <input checked="" type="checkbox"/> 802.11a
		<input checked="" type="checkbox"/> 802.11n <input checked="" type="checkbox"/> 20MHz <input checked="" type="checkbox"/> 40MHz
		<input checked="" type="checkbox"/> 802.11ac <input checked="" type="checkbox"/> 20MHz <input checked="" type="checkbox"/> 40MHz <input checked="" type="checkbox"/> 80MHz <input type="checkbox"/> 160MHz
		<input type="checkbox"/> 802.11ax <input type="checkbox"/> 20MHz <input type="checkbox"/> 40MHz <input type="checkbox"/> 80MHz <input type="checkbox"/> 160MHz
	<input checked="" type="checkbox"/> Bluetooth	<input checked="" type="checkbox"/> EDR <input type="checkbox"/> BLE4 <input checked="" type="checkbox"/> BLE5
Other	<input checked="" type="checkbox"/> GNSS	<input checked="" type="checkbox"/> GPS <input checked="" type="checkbox"/> BDS <input checked="" type="checkbox"/> Galileo <input checked="" type="checkbox"/> Glonass
	<input checked="" type="checkbox"/> FM <input checked="" type="checkbox"/> MP3 <input checked="" type="checkbox"/> MP4 <input checked="" type="checkbox"/> Camera <input checked="" type="checkbox"/> USB	
Temperature	0-40°C	
Normal Voltage	3.85V	
Extreme Low Voltage	3.6V	
Extreme High Voltage	4.3V	

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 and LTE Band17.

Samples undergoing test were selected by the client.

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

For more EUT information please refers to the manufacturer's specifications or user's manual.

3.5. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Mode
Set.1	EUT4 + AE1+ AE2-1 + AE3	Adapter + cable +R Camera+ RX
Set.2	EUT4 + AE1+ AE2-3 + AE3	Adapter + cable +MP4+ RX
Set.3	EUT4 + AE1+ AE4	Headset + FM
Set.4	EUT4 + AE1+ AE5 + Tablet PC	OTG + F camera + RX
Set.5	EUT4 + AE1+ AE3 + PC	USB mode SD TO PC + RX mode

4. Reference Documents

4.1. Documents supplied by applicant

EUT parameters are supplied by the client or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

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

Reference	Title	Version
FCC 47 CFR 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 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(huayuan North Road)
2	Conducted Emission	15.107(a)	A.2	P	CTTL(huayuan North Road)

7. Test Equipments Utilized

Test Equipment

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESW 44	103144	R&S	2023-10-25	1 year
2	BiLog Antenna	VULB9163	9163-01223	Schwarzbeck	2024-01-11	1 year
3	EMI Antenna	3115	00167250	R&S	2023-06-20	1 year
4	LISN	ENV216	101200	R&S	2023-06-29	1 year
5	Test Receiver	ESCI3	100344	R&S	2024-02-21	1 year
6	Universal Radio Communication Tester	CMW500	150344	R&S	2024-01-03	1 year
7	Printer	P1606dn	VNC3L52122	HP	N/A	N/A
8	Keyboard	KU-1601	2048361	Lenovo	N/A	N/A
9	Mouse	EMS-537A	8021S3MC	Lenovo	N/A	N/A
10	PC	M4000e-17	M706RMW2	Lenovo	N/A	N/A

Test Software

Test Item	Test Software and Version	Software Vendor
Radiated Continuous Emission	EMC32 V10.60.20	R&S
Conducted Emission	EMC32 V10.60.20	R&S

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 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 and arranged in a typical configuration in accordance with ANSI C63.4-2014 and manipulated to obtain worst case emissions. 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.

For the test setup photographs please see the test setup photos document.

A.1.2 EUT Operating Mode

The MS is operating in the USB mode, charging mode, MP4, MP3, FM, RX, CAMERA, OTG and SD 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 ($\mu\text{V}/\text{m}$)		
	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.

Limit (10m) = limit (3m) + 20(log (3/10))

A.1.4 Test Condition

Voltage (V)	Frequency (Hz)
120	60

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: 4.72dB, 1GHz-18GHz: 4.84dB, $k=2$.

Set.1, Adapter + cable +R Camera + RX GSM850MHz

Full Spectrum

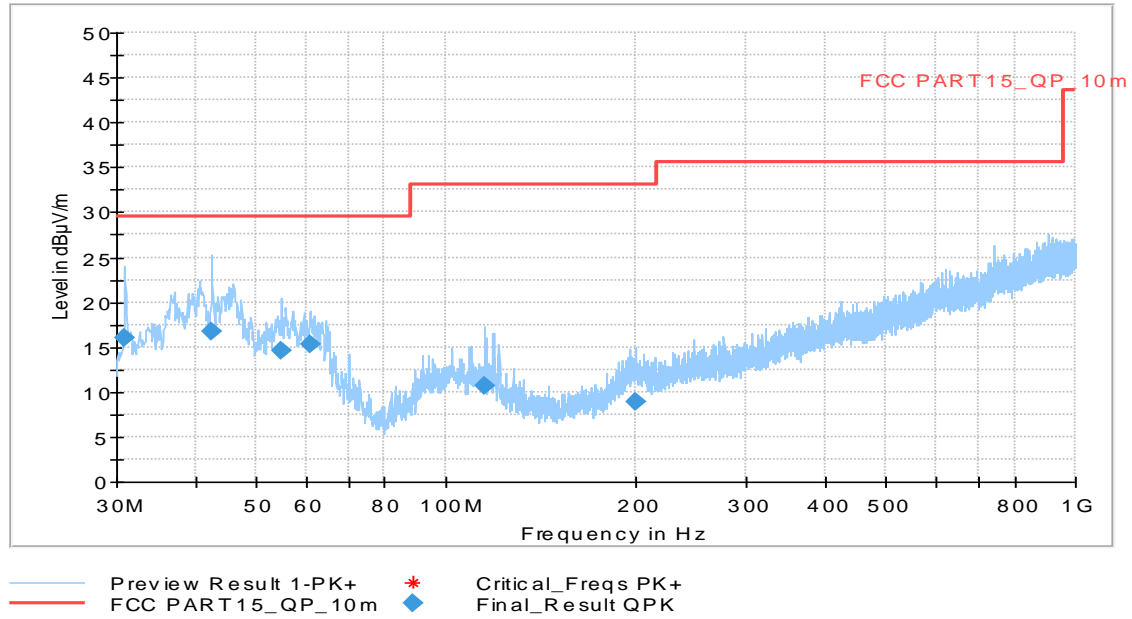


Figure A.1 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
30.873000	16.05	29.54	13.49	120.000	183.0	V	225.0
42.416000	16.69	29.54	12.85	120.000	202.0	V	47.0
54.832000	14.53	29.54	15.01	120.000	275.0	V	267.0
60.749000	15.23	29.54	14.31	120.000	225.0	V	9.0
115.36000	10.66	33.06	22.40	120.000	183.0	V	176.0
200.33200	8.95	33.06	24.11	120.000	100.0	V	239.0

Full Spectrum

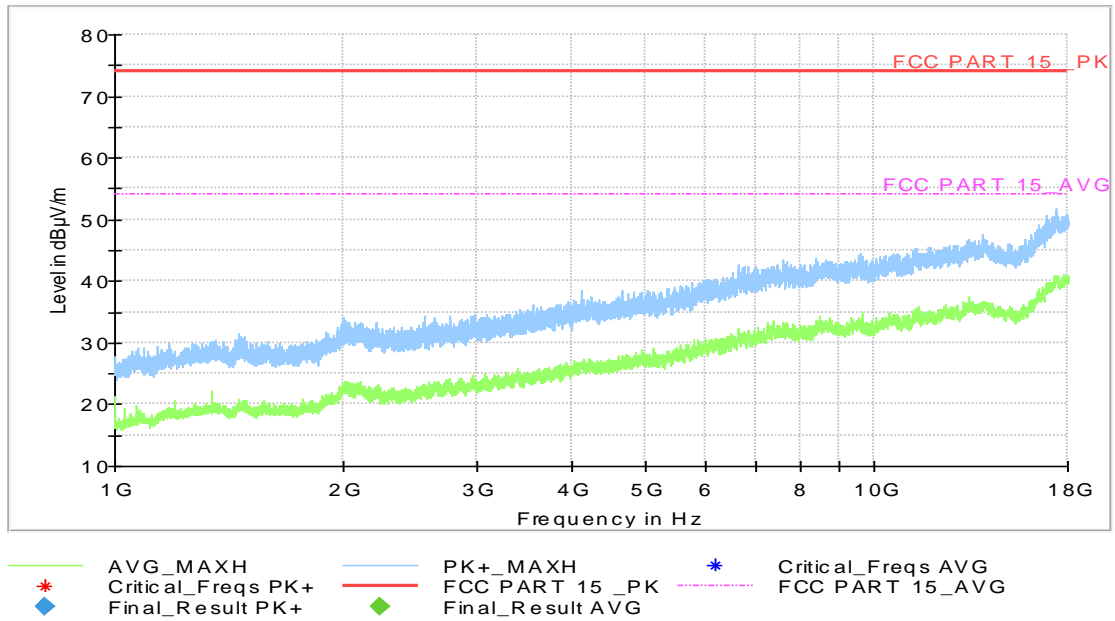


Figure A.2 Radiated Emission from 1GHz to 18GHz

Average detector result

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)
17808.580	41.0	-29.6	46.0	24.676	54.0	13.0	H
17784.780	40.9	-29.9	46.0	24.832	54.0	13.1	H
17462.120	40.9	-30.1	44.4	26.605	54.0	13.1	V
17372.020	40.8	-30.0	43.4	27.412	54.0	13.2	V
17293.480	40.8	-29.7	43.4	27.134	54.0	13.2	H
17895.280	40.8	-29.5	46.0	24.380	54.0	13.2	V

Peak detector result

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)
17364.540	51.6	-30.0	43.4	38.212	74.0	22.4	H
17362.500	51.0	-30.0	43.4	37.612	74.0	23.0	H
17331.900	50.9	-29.7	43.4	37.240	74.0	23.1	V
17351.620	50.8	-30.0	43.4	37.412	74.0	23.2	H
17972.460	50.8	-29.1	46.7	33.201	74.0	23.2	V
16888.540	50.7	-29.9	41.5	39.133	74.0	23.3	H

Set.2, Adapter + cable +MP4 + RX WCDMA5

Full Spectrum

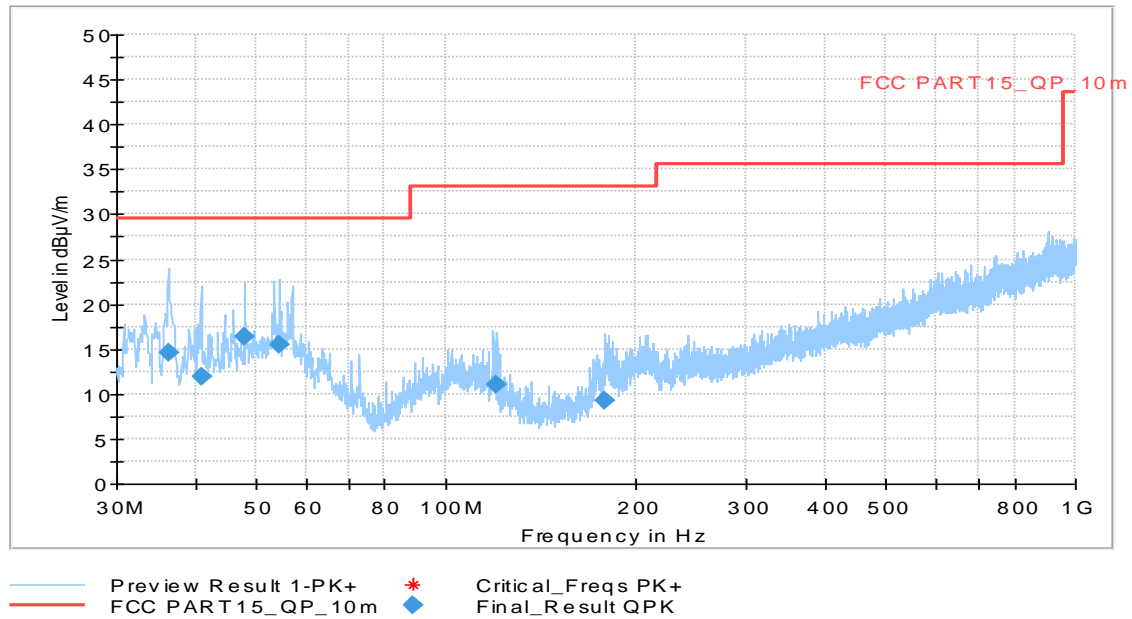


Figure A.3 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
36.208000	14.60	29.54	14.94	120.000	202.0	V	47.0
40.864000	11.90	29.54	17.64	120.000	223.0	V	306.0
47.945000	16.40	29.54	13.14	120.000	175.0	V	8.0
54.444000	15.54	29.54	14.00	120.000	275.0	V	36.0
120.59800	11.08	33.06	21.98	120.000	108.0	V	149.0
178.50700	9.20	33.06	23.86	120.000	125.0	V	239.0

Full Spectrum

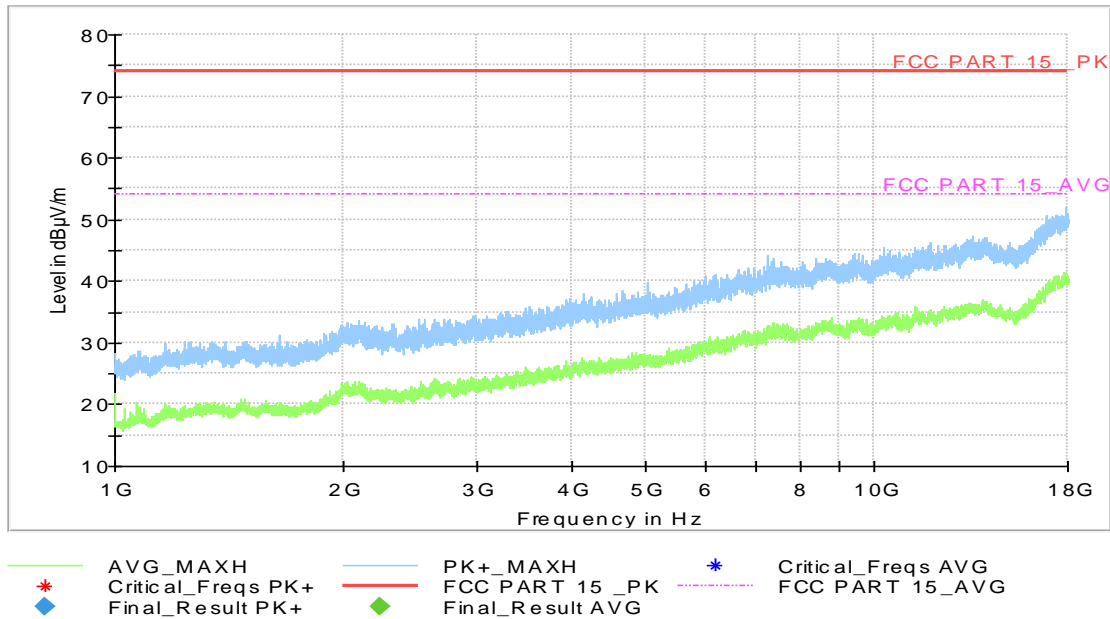


Figure A.4 Radiated Emission from 1GHz to 18GHz

Average detector result

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)
17800.080	41.3	-29.6	46.0	24.976	54.0	12.7	H
17807.560	41.3	-29.6	46.0	24.976	54.0	12.7	H
17899.700	41.3	-29.5	46.0	24.880	54.0	12.7	H
17855.500	41.2	-29.3	46.0	24.582	54.0	12.8	V
17324.080	40.9	-29.7	43.4	27.240	54.0	13.1	H
17978.580	40.9	-29.1	46.7	23.301	54.0	13.1	V

Peak detector result

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)
17893.240	52.0	-29.5	46.0	35.580	74.0	22.0	H
17994.560	51.1	-29.1	46.7	33.498	74.0	22.9	V
17411.460	50.8	-29.4	44.4	35.886	74.0	23.2	H
16868.480	50.7	-29.8	40.7	39.888	74.0	23.3	H
17898.680	50.6	-29.5	46.0	34.180	74.0	23.4	H
17973.820	50.6	-29.1	46.7	33.001	74.0	23.4	V

Set.3, Headset + FM

Full Spectrum

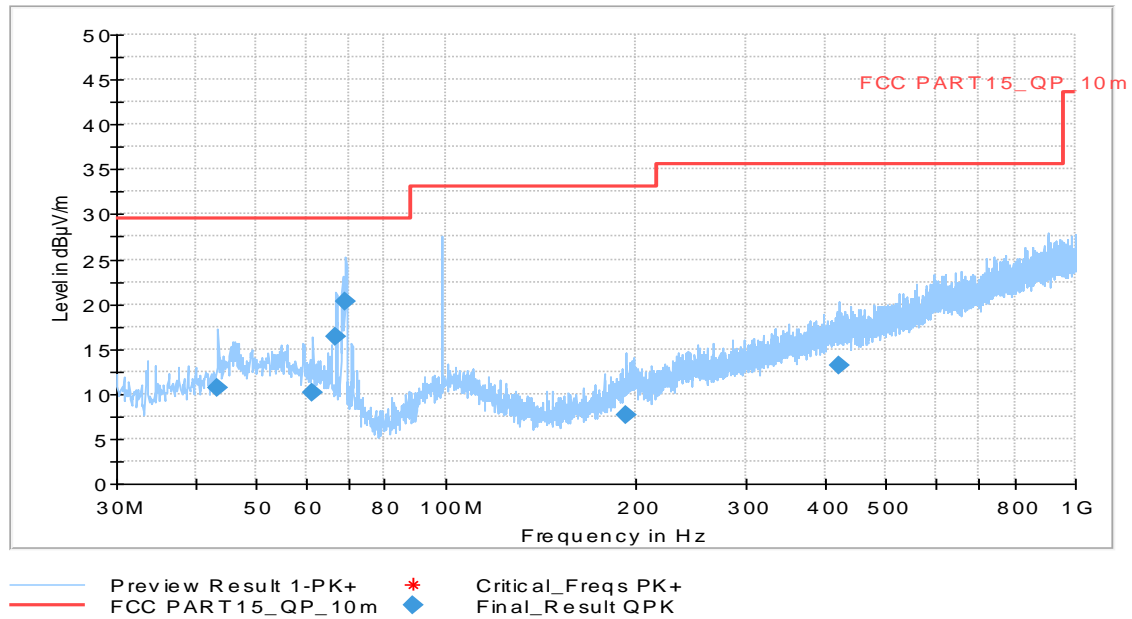


Figure A.5 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
43.483000	10.59	29.54	18.95	120.000	183.0	V	118.0
61.525000	10.07	29.54	19.47	120.000	323.0	V	112.0
66.957000	16.30	29.54	13.24	120.000	100.0	V	265.0
69.382000	20.34	29.54	9.20	120.000	322.0	H	188.0
193.34800	7.68	33.06	25.38	120.000	302.0	V	201.0
420.52200	13.09	35.56	22.47	120.000	125.0	V	203.0

Full Spectrum

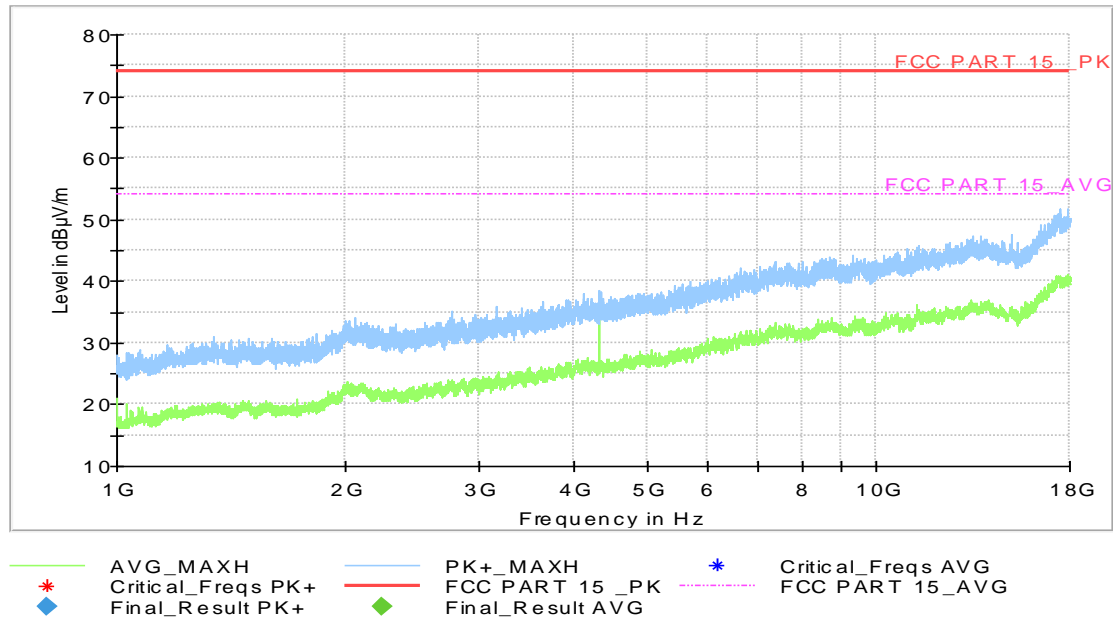


Figure A.6 Radiated Emission from 1GHz to 18GHz

Average detector result

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)
17915.680	41.2	-29.3	46.7	23.865	54.0	12.8	V
17770.840	40.9	-29.6	46.0	24.572	54.0	13.1	H
17302.320	40.9	-29.5	43.4	27.026	54.0	13.1	V
17855.160	40.9	-29.3	46.0	24.282	54.0	13.1	H
17918.400	40.8	-29.3	46.7	23.465	54.0	13.2	V
17433.220	40.8	-29.7	44.4	26.160	54.0	13.2	H

Peak detector result

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)
17917.380	51.7	-29.3	46.7	34.365	74.0	22.3	H
17447.500	51.6	-29.9	44.4	37.117	74.0	22.4	H
17864.000	51.5	-29.4	46.0	34.939	74.0	22.5	V
17458.380	51.0	-29.9	44.4	36.517	74.0	23.0	H
17419.620	50.9	-29.4	44.4	35.986	74.0	23.1	H
17221.060	50.8	-29.6	43.4	37.009	74.0	23.2	V

Set.4, OTG + F camera + RX LTE B5

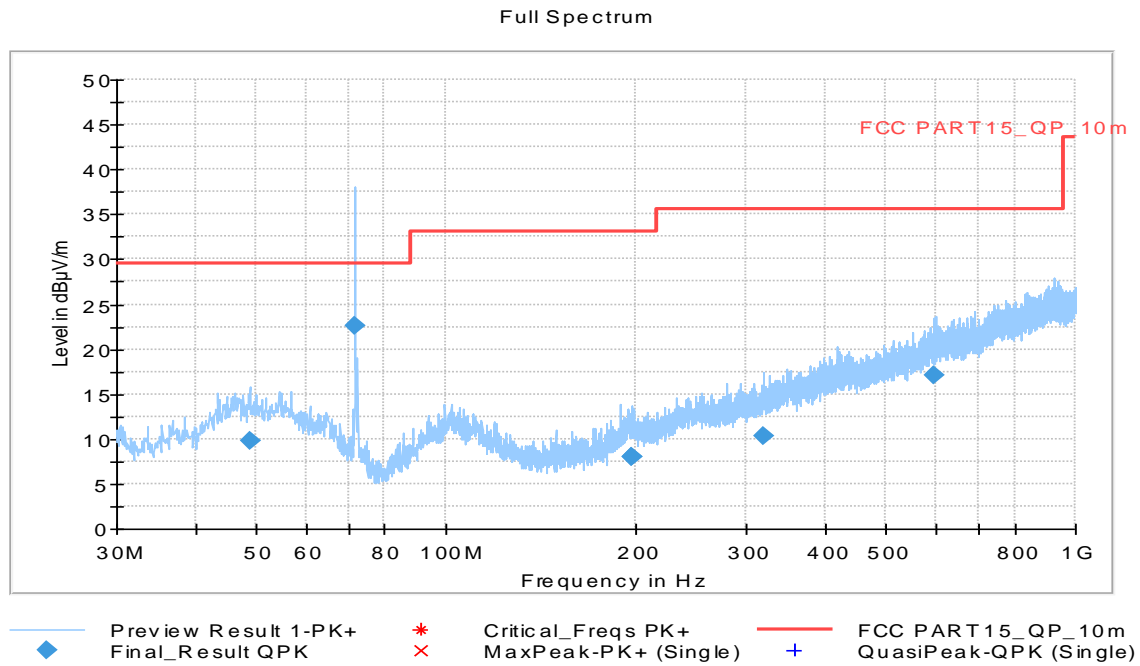


Figure A.7 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
48.818000	9.74	29.54	19.80	120.000	223.0	H	278.0
71.807000	22.65	29.54	6.89	120.000	108.0	V	135.0
197.71300	8.08	33.06	24.98	120.000	108.0	H	72.0
197.71300	8.08	33.06	24.98	120.000	108.0	H	72.0
320.12700	10.38	35.56	25.18	120.000	275.0	H	137.0
596.96500	17.04	35.56	18.52	120.000	183.0	H	225.0

Full Spectrum

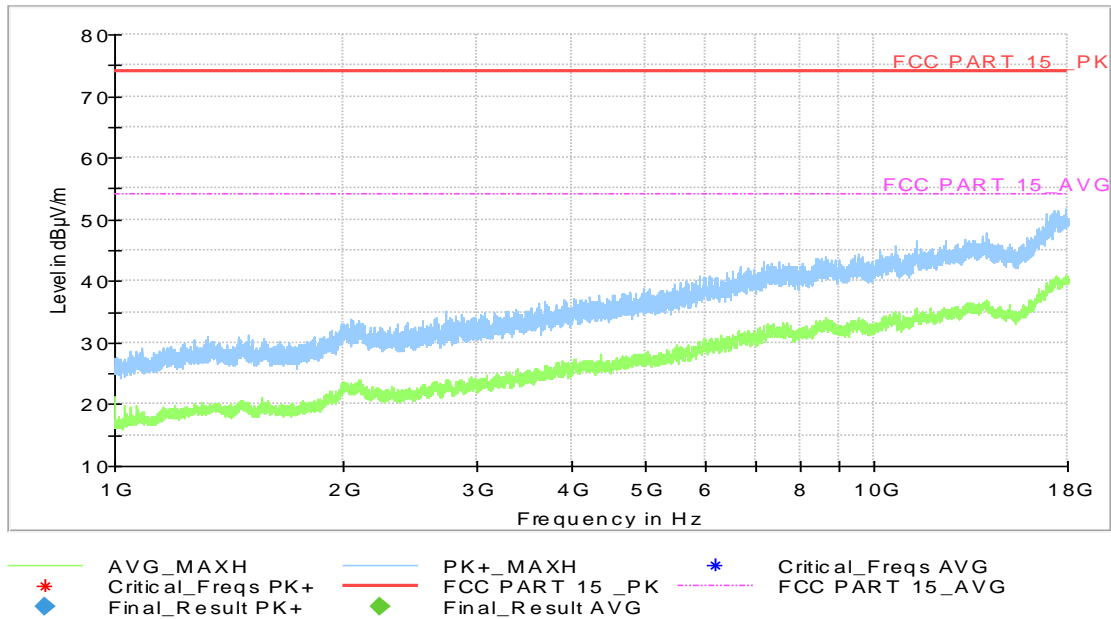


Figure A.8 Radiated Emission from 1GHz to 18GHz

Average detector result

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)
17908.200	40.9	-29.3	46.0	24.272	54.0	13.1	V
17992.180	40.9	-29.1	46.7	23.298	54.0	13.1	V
17874.880	40.9	-29.4	46.0	24.339	54.0	13.1	H
17908.880	40.8	-29.3	46.0	24.172	54.0	13.2	H
17914.660	40.8	-29.3	46.7	23.465	54.0	13.2	H
17345.160	40.8	-30.0	43.4	27.412	54.0	13.2	V

Peak detector result

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)
17917.040	51.7	-29.3	46.7	34.365	74.0	22.3	H
17279.540	51.5	-29.7	43.4	37.890	74.0	22.5	V
17443.420	51.4	-29.9	44.4	36.917	74.0	22.6	H
17867.400	51.1	-29.4	46.0	34.539	74.0	22.9	H
17447.840	51.1	-29.9	44.4	36.617	74.0	22.9	V
17148.300	51.1	-29.9	42.4	38.614	74.0	22.9	H

Set.5, USB mode SD TO PC+ RX LTE B12

Full Spectrum

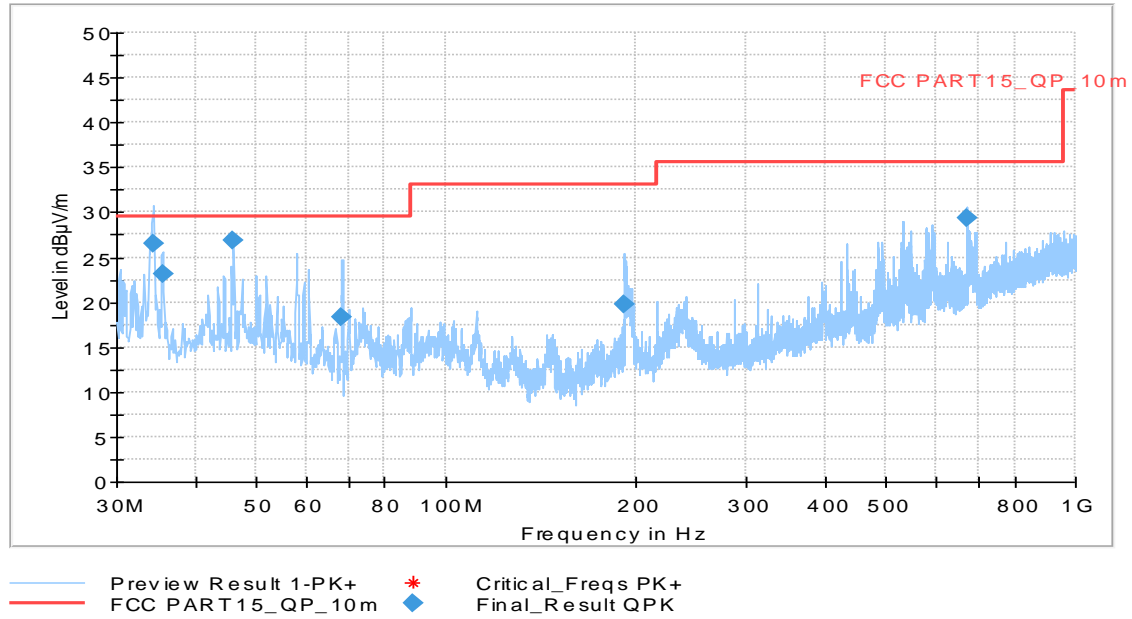


Figure A.9 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
34.365000	26.56	29.54	2.98	120.000	100.0	V	112.0
35.529000	23.18	29.54	6.36	120.000	100.0	V	135.0
46.005000	26.95	29.54	2.59	120.000	100.0	V	45.0
68.412000	18.31	29.54	11.23	120.000	125.0	V	265.0
192.37800	19.73	33.06	13.33	120.000	322.0	H	149.0
673.11000	29.35	35.56	6.21	120.000	175.0	V	-18.0

Full Spectrum

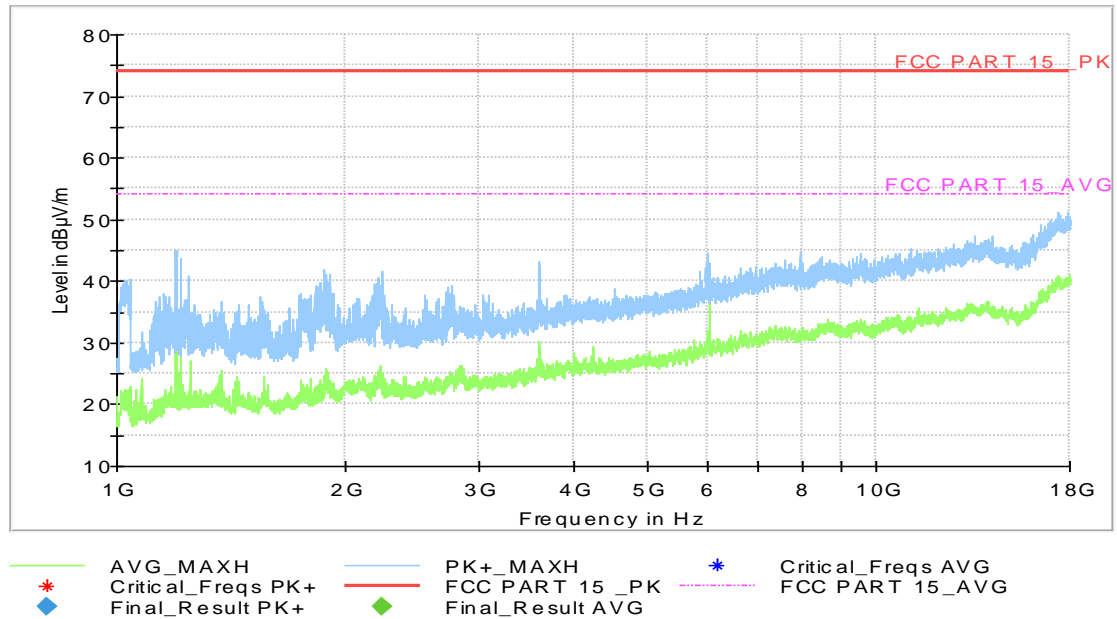


Figure A.10 Radiated Emission from 1GHz to 18GHz

Average detector result

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)
17991.500	40.9	-29.1	46.7	23.298	54.0	13.1	V
17329.520	40.7	-29.7	43.4	27.040	54.0	13.3	H
17441.380	40.6	-29.9	44.4	26.117	54.0	13.4	V
17332.920	40.6	-29.7	43.4	26.940	54.0	13.4	H
17807.900	40.6	-29.6	46.0	24.276	54.0	13.4	H
17908.540	40.7	-29.3	46.0	34.072	54.0	13.3	V

Peak detector result

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)
17921.800	51.3	-29.4	46.7	34.039	74.0	22.7	H
17328.500	51.3	-29.7	43.4	37.640	74.0	22.7	V
17326.460	51.1	-29.7	43.4	37.440	74.0	22.9	H
17367.600	51.0	-30.0	43.4	37.612	74.0	23.0	V
17442.400	50.7	-29.9	44.4	36.217	74.0	23.3	H
17385.280	50.7	-29.8	43.4	37.172	74.0	23.3	H

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.

For the test setup photographs please see the test setup photos document.

A.2.2 EUT Operating Mode

The MS is operating in the USB mode, charging mode, 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

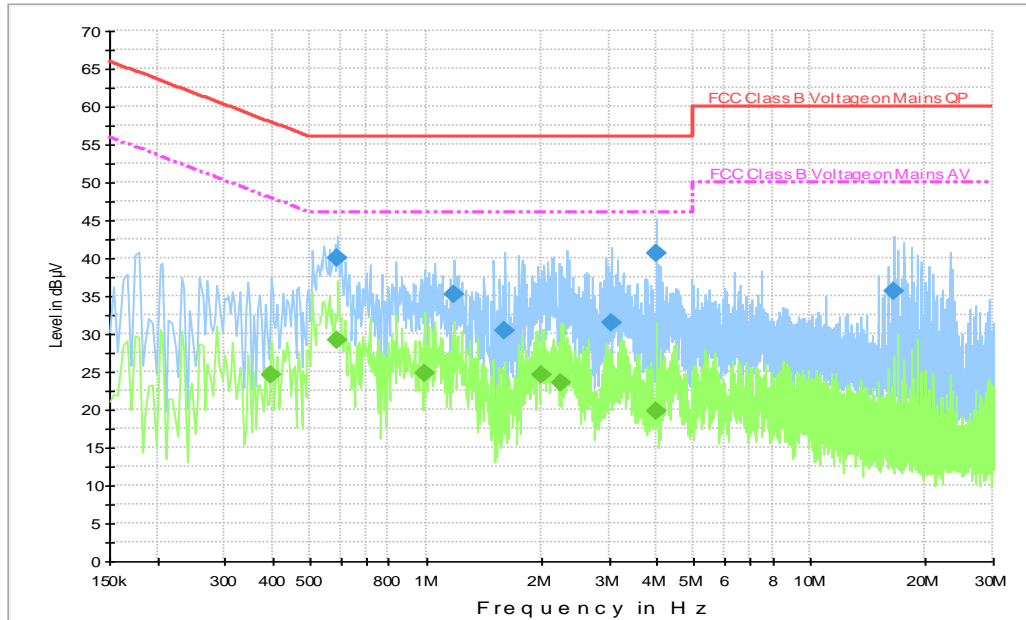
Voltage (V)	Frequency (Hz)
120	60

RBW/IF bandwidth	Sweep Time(s)
9kHz	1

A.2.5 Measurement Results

Measurement uncertainty: $U= 3.08 \text{ dB}$, $k=2$.

Set.1



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

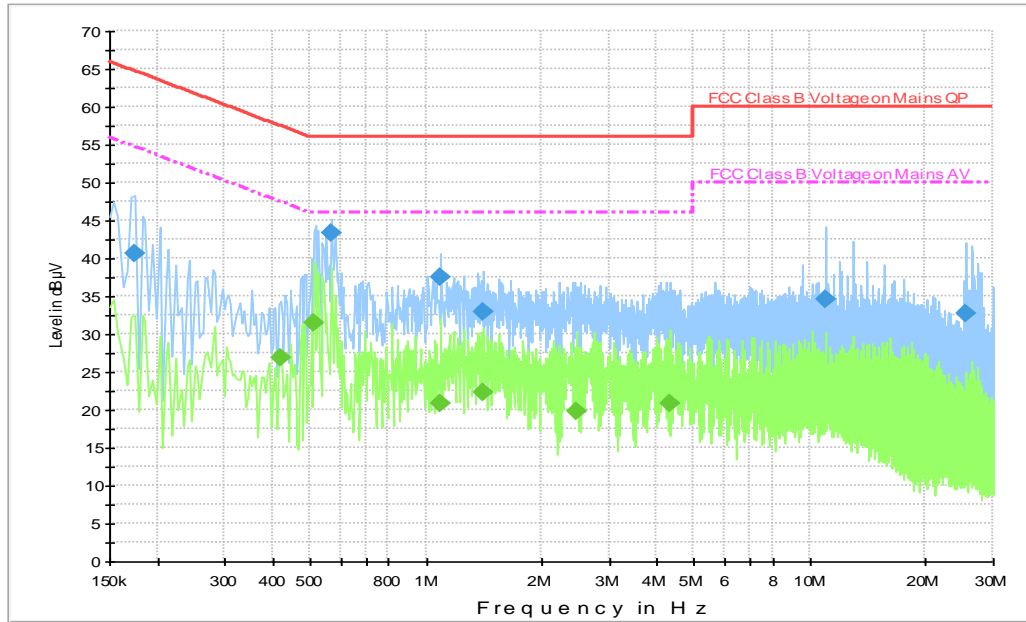
Figure A.11 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.590000	40.1	2000.0	9.000	On	L1	19.7	15.9	56.0
1.182000	35.2	2000.0	9.000	On	L1	19.7	20.8	56.0
1.610000	30.3	2000.0	9.000	On	L1	19.6	25.7	56.0
3.030000	31.5	2000.0	9.000	On	L1	19.6	24.5	56.0
3.998000	40.6	2000.0	9.000	On	L1	19.6	15.4	56.0
16.542000	35.6	2000.0	9.000	On	L1	19.7	24.4	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.394000	24.6	2000.0	9.000	On	N	19.7	23.4	48.0
0.590000	29.2	2000.0	9.000	On	L1	19.7	16.8	46.0
0.990000	24.9	2000.0	9.000	On	L1	19.7	21.1	46.0
2.010000	24.5	2000.0	9.000	On	L1	19.6	21.5	46.0
2.254000	23.5	2000.0	9.000	On	L1	19.6	22.5	46.0
3.998000	19.9	2000.0	9.000	On	L1	19.6	26.1	46.0

Set.2


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

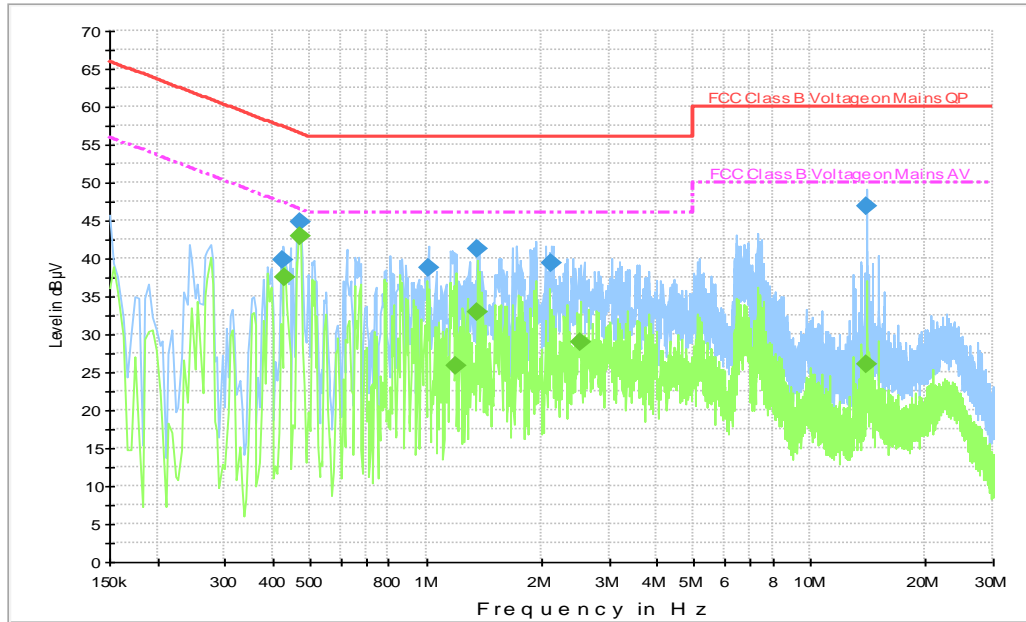
Figure A.12 Conducted Emission
Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	40.7	2000.0	9.000	On	N	19.7	24.1	64.8
0.566000	43.3	2000.0	9.000	On	L1	19.7	12.7	56.0
1.090000	37.5	2000.0	9.000	On	L1	19.6	18.5	56.0
1.410000	33.0	2000.0	9.000	On	L1	19.7	23.0	56.0
10.998000	34.6	2000.0	9.000	On	N	19.7	25.4	60.0
25.494000	32.8	2000.0	9.000	On	N	19.8	27.2	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.418000	26.9	2000.0	9.000	On	N	19.7	20.6	47.5
0.510000	31.6	2000.0	9.000	On	L1	19.7	14.4	46.0
1.090000	20.8	2000.0	9.000	On	L1	19.6	25.2	46.0
1.410000	22.3	2000.0	9.000	On	L1	19.7	23.7	46.0
2.462000	19.7	2000.0	9.000	On	L1	19.6	26.3	46.0
4.302000	20.7	2000.0	9.000	On	L1	19.6	25.3	46.0

Set.5



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

Figure A.13 Conducted Emission

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.426000	39.8	2000.0	9.000	On	L1	19.7	17.5	57.3
0.470000	44.8	2000.0	9.000	On	N	19.7	11.7	56.5
1.014000	38.8	2000.0	9.000	On	L1	19.7	17.2	56.0
1.366000	41.3	2000.0	9.000	On	L1	19.6	14.7	56.0
2.126000	39.3	2000.0	9.000	On	L1	19.6	16.7	56.0
13.998000	46.9	2000.0	9.000	On	N	19.7	13.1	60.0

Final Result 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.430000	37.6	2000.0	9.000	On	N	19.7	9.7	47.3
0.470000	42.8	2000.0	9.000	On	N	19.7	3.7	46.5
1.198000	25.8	2000.0	9.000	On	N	19.6	20.2	46.0
1.358000	33.0	2000.0	9.000	On	N	19.6	13.0	46.0
2.522000	29.0	2000.0	9.000	On	N	19.6	17.0	46.0
13.998000	26.1	2000.0	9.000	On	N	19.7	23.9	50.0



ANNEX B: Persons involved in this testing

Test Item	Tester
Radiated Emission	Ding Zai
Conducted Emission	Zhang Tianli

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