

TEST REPORT No. I16Z42280-EMC01

for

TCL Communication Ltd.

LTE / UMTS / GSM mobile phone

Model Name: 50440

FCC ID: 2ACCJH063

with

Hardware Version: PIO

Software Version: v4HA2

Issued Date: 2016-12-15

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.

Test Laboratory:

FCC 2.948 Listed: No. 525429

CTTL, Telecommunication Technology Labs, Academy of Telecommunication Research, MIIT

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@catr.cn, website: www.chinattl.com



REPORT HISTORY

Report Number	Revision	Description	Issue Date
I16Z42280-EMC01	Rev.0	1st edition	2016-12-15



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	8
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
A NIE	NEY A: MEASIDEMENT DESILITS	12



1. Test Laboratory

1.1. Testing Location

CTTL(BDA District)

Address: No. 18 Jia Kangding Street, BDA District, Beijing, P. R. China

100191

1.2. <u>Testing Environment</u>

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

1.3. Project data

Testing Start Date: 2016-12-05 Testing End Date: 2016-12-05

1.4. Signature

Zhang Hui

(Prepared this test report)

Qu Pengfei

(Reviewed this test report)

Liu Baodian

Deputy Director of the laboratory

(Approved this test report)



2. Client Information

2.1. Applicant Information

Company Name: TCL Communication Ltd.

Address /Post: 5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,

Pudong Area Shanghai, P.R. China.

City: Shanghai Postal Code: 201203 Country: China

Contact Person: Gong Zhizhou

Contact Email zhizhou.gong@tcl.com
Telephone: 0086-21-31363544
Fax: 0086-21-61460602

2.2. Manufacturer Information

Company Name: TCL Communication Ltd.

Address /Post: 5F, C building, No. 232, Liang Jing Road ZhangJiang High-Tech Park,

Pudong Area Shanghai, P.R. China.

City: Shanghai Postal Code: 201203 Country: China

Telephone: 0086-21-31363544 Fax: 0086-21-61460602



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

3.1. About EUT

Description LTE / UMTS / GSM mobile phone

Model Name 5044O

FCC ID 2ACCJH063

Extreme vol. Limits 3.5VDC to 4.2VDC (nominal: 3.8VDC)

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Telecommunication Metrology Center of MIIT of People's Republic of China.

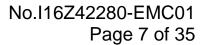
3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
EUT1	/	PIO	v4HA2

^{*}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	Battery	/	16TCT-BA-1280
AE2	Battery	/	16TCT-BA-1269
AE3	Battery	/	16TCT-BA-1175
AE4	Battery	/	16TCT-BA-1270
AE5	Battery	/	16TCT-BA-1279
AE6	Battery	/	16TCT-BA-1281
AE7	Battery	/	/
AE8	USB Cable	/	15TCT-DC-0208
AE9	USB Cable	/	16TCT-DC-0017
AE10	USB Cable	/	16TCT-DC-0459
AE11	Travel charger	/	16TCT-CH-1359
AE12	Travel charger	/	16TCT-CH-1360
AE13	Travel charger	/	16TCT-CH-1176
AE14	Travel charger	/	16TCT-CH-1180
AE15	Travel charger	/	16TCT-CH-1318
AE16	Travel charger	/	16TCT-CH-1313
AE17	Travel charger	/	16TCT-CH-1274
AE18	Travel charger	/	16TCT-CH-1271
AE19	Travel charger	/	16TCT-CH-0744
AE20	Travel charger	/	16TCT-CH-0742
AE21	Travel charger	/	16TCT-CH-1592
AE22	Travel charger	/	16TCT-CH-1590





AE1/AE2/AE3/AE4/AE5/AE6

Model CAB2000070C1

Manufacturer BYD
Capacitance 2000mAh
Nominal voltage 3.8V

AE7

Model CAB2000071C7

Manufacturer VEKEN
Capacitance 2000mAh
Nominal voltage 3.8V

AE8

Model CDA3122005C2 Manufacturer SHENHUA

Length of cable /

AE9

Model CDA3122005C1

Manufacturer JUWEI

Length of cable /

AE10

Model CDA3122005C8

Manufacturer PUAN

Length of cable /

AE11/AE12

Model CBA3068AGAC1

Manufacturer BYD Length of cable /

AE13/AE14

Model CBA3068AGAC3

Manufacturer yingju Length of cable /

AE15/AE16

Model CBA3068AGAC4

Manufacturer Aohai
Length of cable /

AE17/AE18

Model CBA0066AGAC3

Manufacturer yingju
Length of cable /

AE19/AE20

Model CBA0066AGAC1

Manufacturer BYD Length of cable /



AE21/AE22

Model CBA0066AGAC5

Manufacturer PUAN

Length of cable /

Note: The USB cables are shielded.

3.4. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT1 + AE1 + AE8 + AE11	Charging mode
Set.2	EUT1 + AE1 + AE8 + AE13	Charging mode
Set.3	EUT1 + AE1 + AE8 + AE15	Charging mode
Set.4	EUT1 + AE1 + AE17	Charging mode
Set.5	EUT1 + AE1 + AE19	Charging mode
Set.6	EUT1 + AE1 + AE21	Charging mode
Set.7	EUT1 + AE1 + AE8	USB mode
Note:		

Note:

The LTE / UMTS / GSM mobile phone 5044O manufactured by TCL Communication Ltd. is a variant model based on 5044A for conformance test. According to the declaration of changes, all ther results are inherited from the initial model. The report number of initial model is I16Z42271-EMC01.

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	2015
ANSI C63.4	Methods of Measurement of Radio-Noise	2014
	Emissions from Low - Voltage Electrical and	
	Electronic Equipment in the Range of 9 kHz to 40	
	GHz	

Note: The test methods used have no deviation with standards above.

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



5. LABORATORY ENVIRONMENT

Semi-anechoic chamber SAC-2 (10.0 m x 6.7 m x 6.15 m) 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, 3 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:		
Р		Pass
Verdict Column	NA	Not applicable
F		Fail
Location Column 1		The test is performed in test location 1 which are
		described in section 1.1 of this report

Clause	List	Clause in FCC rules	Verdict	Location
1	Radiated Emission	15.109(a)	Р	1
2	Conducted Emission	15.107(a)	Р	1



7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESU26	100376	R&S	2017-10-31	1 year
2	Test Receiver	ESCI	100766	R&S	2017-03-30	1 year
3	Universal Radio Communication Tester	CMW500	127406	R&S	2017-01-27	1 year
4	AMN	ESH2-Z5	829991/012	R&S	2017-04-11	1 year
5	EMI Antenna	VULB 9163	9163-514	Schwarzbeck	2017-11-24	3 years
6	EMI Antenna	3117	00139065	ETS	2017-09-21	3 years

Test Software Utilized

Test Item	Test Software and Version	Software Vendor
Radiated Continuous Emission	EMC32 V9.01	R&S
Conducted Emission	EMC32 V8.52.0	R&S



ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission (§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 3/10 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

A.1.2 EUT Operating Mode:

The MS is operating in the USB mode and charging mode. During the test MS is connected to a PC via a USB cable in the case of USB mode and is connected to a charger in the case of charging mode. The model of the PC is DELL OPTIPLEX 380, and the serial number of the PC is 2X1YV2X. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

Note: I/O information: Printer - USB, Mouse - PS/2, Keyboard - USB.

A.1.3 Measurement Limit

Frequency range	Field strength limit (µV/m)					
(MHz)	Quasi-peak	Quasi-peak Average				
30-88	100					
88-216	150					
216-960	200					
960-1000	500					
>1000		500	5000			

Note: the above limit is for 3 meters test distance. 10 meters' limit is got by converting.

A.1.4 Test Condition

Frequency range (MHz)	RBW/VBW	Sweep Time (s)	Detector
30-1000	120kHz (IF Bandwidth)	5	Peak/Quasi-peak
Above 1000	1MHz/1MHz	15	Peak, Average



A.1.5 Measurement Results

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

The measurement results are obtained as described below:

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

Where

G_A: Antenna factor of receive antenna

G_{PL}: Path Loss

 P_{Mea} : Measurement result on receiver.

Measurement uncertainty (worst case):

30MHz-1GHz: U = 4.86 dB, k=2, 1GHz-18GHz: U = 5.26 dB, k=2

.

Measurement results for Set.1:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	$P_{Mea}(dB\mu V)$	Polarity
17290.500	47.9	-14.0	41.2	20.655	Н
17617.500	47.9	-13.2	41.1	19.926	V
17652.750	47.8	-13.1	41.1	19.793	V
17744.250	47.8	-13.3	41.0	20.089	V
17727.750	47.8	-13.3	41.0	20.007	Н
17607.000	47.8	-13.3	41.1	19.938	Н

Charging Mode/Peak detector

Frequency(MHz)	Result(dB _μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dBµV)	Polarity
17697.750	60.1	-13.2	41.0	32.221	V
17791.500	60.0	-13.4	41.0	32.401	V
17681.250	59.8	-13.1	41.1	31.906	Н
17316.750	59.8	-14.1	41.2	32.727	Н
17760.750	59.8	-13.3	41.0	32.115	Н
17254.500	59.7	-14.1	41.2	32.665	V

Measurement results for Set.2:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	$P_{Mea}(dB\mu V)$	Polarity
17652.750	47.8	-13.1	41.1	19.752	V
17283.750	47.8	-13.9	41.2	20.505	Н
17639.250	47.8	-13.0	41.1	19.683	Н
17647.500	47.7	-13.0	41.1	19.695	V
17645.250	47.7	-13.0	41.1	19.674	V
17620.500	47.7	-13.1	41.1	19.745	V

Charging Mode/Peak detector



Frequency(MHz)	Result(dB _μ V/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dBµV)	Polarity
17655.000	60.1	-13.1	41.1	32.051	Н
17705.250	59.7	-13.2	41.0	31.852	Н
17221.500	59.6	-14.4	41.2	32.738	V
17763.000	59.5	-13.3	41.0	31.861	V
17280.000	59.5	-14.0	41.2	32.247	V
17183.250	59.4	-14.6	41.3	32.750	Н

Measurement results for Set.3:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dBµV)	Polarity
17642.250	47.9	-13.0	41.1	19.892	V
17577.000	47.9	-13.6	41.1	20.385	Н
17623.500	47.9	-13.1	41.1	19.880	V
17639.250	47.9	-13.0	41.1	19.784	Н
17285.250	47.8	-13.9	41.2	20.544	V
17637.000	47.8	-13.0	41.1	19.734	Н

Charging Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dBµV)	Polarity
17629.500	59.7	-13.0	41.1	31.601	Н
17943.750	59.5	-13.6	40.8	32.280	Н
17588.250	59.5	-13.5	41.1	31.822	V
17577.000	59.4	-13.6	41.1	31.843	V
17229.750	59.3	-14.3	41.2	32.414	Н
17513.250	59.2	-14.3	41.2	32.338	V

Measurement results for Set.4:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dBµV)	Polarity
17633.250	47.9	-13.0	41.1	19.783	Н
17577.000	47.8	-13.6	41.1	20.290	Н
17640.750	47.8	-13.0	41.1	19.707	V
17642.250	47.8	-13.0	41.1	19.711	Н
17622.000	47.8	-13.1	41.1	19.777	V
17630.250	47.8	-13.0	41.1	19.692	V

Charging Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dBµV)	Polarity
17578.500	59.8	-13.6	41.1	32.310	Н
17579.250	59.7	-13.6	41.1	32.181	Н
17657.250	59.6	-13.1	41.1	31.573	V
17266.500	59.6	-14.1	41.2	32.412	Н



17286.000	59.6	6 -13.9	41.2	32.280	Н
17955.750	59.	5 -13.6	40.8	32.273	V

Measurement results for Set.5:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dBµV)	Polarity
17639.250	48.0	-13.0	41.1	19.982	V
17637.750	47.9	-13.0	41.1	19.860	V
17286.000	47.8	-13.9	41.2	20.559	V
17609.250	47.8	-13.3	41.1	19.944	Н
17568.750	47.8	-13.7	41.1	20.346	V
17282.250	47.8	-13.9	41.2	20.499	V

Charging Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	$P_{Mea}(dB\mu V)$	Polarity
17880.750	59.7	-13.5	40.9	32.358	Н
17303.250	59.5	-14.0	41.2	32.328	Н
17319.000	59.4	-14.1	41.2	32.356	V
17978.250	59.4	-13.6	40.8	32.228	V
17811.000	59.3	-13.5	41.0	31.852	Н
17729.250	59.3	-13.3	41.0	31.559	V

Measurement results for Set.6:

Charging Mode/Average detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	$P_{Mea}(dB\mu V)$	Polarity
17290.500	48.0	-14.0	41.2	20.733	V
17627.250	47.8	-13.1	41.1	19.767	Н
17635.500	47.8	-13.0	41.1	19.716	Н
17646.000	47.8	-13.0	41.1	19.747	Н
17634.750	47.8	-13.0	41.1	19.683	V
17734.500	47.7	-13.3	41.0	19.996	V

Charging Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	$P_{Mea}(dB\mu V)$	Polarity
17287.500	60.0	-13.9	41.2	32.766	Н
17960.250	60.0	-13.6	40.8	32.769	Н
17257.500	59.8	-14.1	41.2	32.680	Н
17635.500	59.7	-13.0	41.1	31.627	V
17247.750	59.6	-14.2	41.2	32.531	Н
17604.750	59.4	-13.3	41.1	31.587	V

Measurement results for Set.7: USB Mode/Average detector



Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dBµV)	Polarity
17670.000	47.8	-13.1	41.1	19.860	V
17614.500	47.8	-13.2	41.1	19.921	V
17598.750	47.8	-13.4	41.1	20.034	Н
17637.750	47.8	-13.0	41.1	19.700	Н
17288.250	47.8	-13.9	41.2	20.504	V
17292.750	47.8	-14.0	41.2	20.520	Н

USB Mode/Peak detector

Frequency(MHz)	Result(dBμV/m)	G _{PL} (dB)	G _A (dB/m)	P _{Mea} (dBμV)	Polarity
17871.000	61.0	-13.5	40.9	33.641	Н
17610.750	60.5	-13.2	41.1	32.600	V
17961.750	59.8	-13.6	40.8	32.598	V
17737.500	59.8	-13.3	41.0	32.064	Н
17671.500	59.7	-13.1	41.1	31.781	V
17280.000	59.7	-14.0	41.2	32.414	Н

Sample calculation: Average detector, 17871MHz

Result = P_{Mea} + A_{Rpl} = P_{Mea} (33.641 dBuV) + G_A (40.9dB/m)+ G_{PL} (-13.5dB) = 61.0dBuV/m





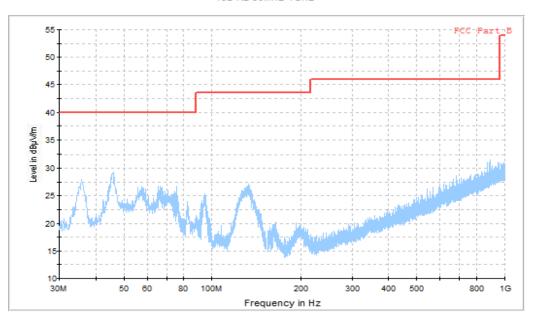


Fig.1 Radiated Emission from 30MHz to 1GHz



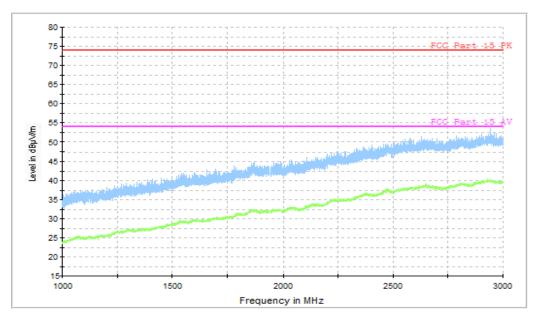


Fig.2 Radiated Emission from 1GHz to 3GHz



15b RE - 3GHz-18GHz

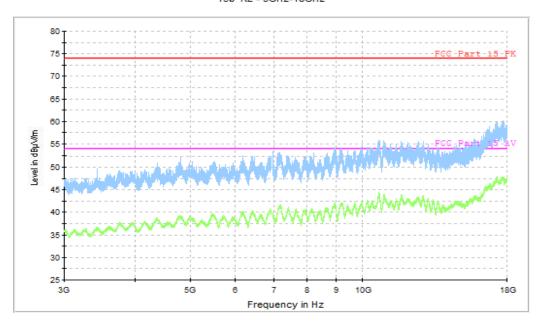


Fig.3 Radiated Emission from 3GHz to 18GHz

Charging Mode, Set.2

15B RE 30MHz-1GHz

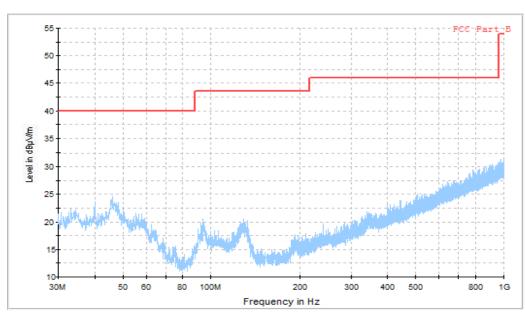


Fig.4 Radiated Emission from 30MHz to 1GHz



15B RE - 1GHz-3GHz

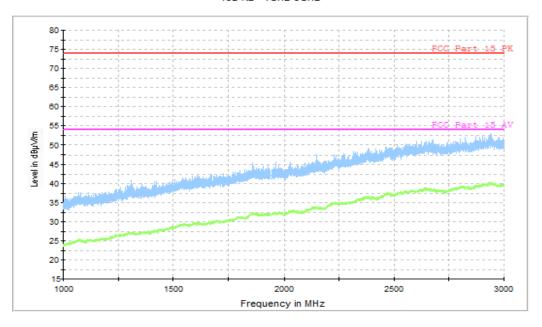


Fig.5 Radiated Emission from 1GHz to 3GHz

15b RE - 3GHz-18GHz

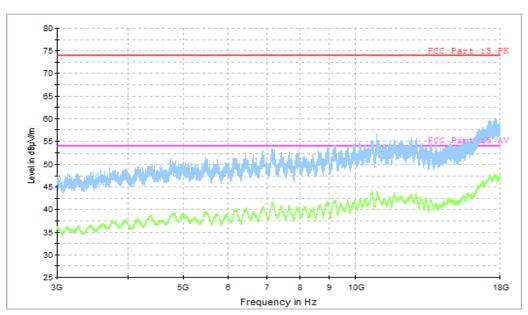


Fig.6 Radiated Emission from 3GHz to 18GHz





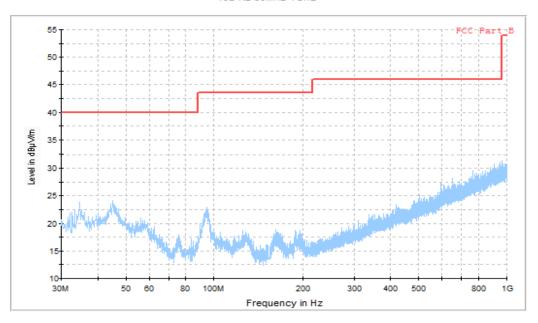


Fig.7 Radiated Emission from 30MHz to 1GHz

15B RE - 1GHz-3GHz

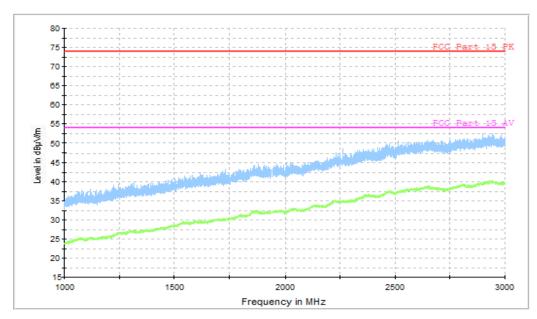


Fig.8 Radiated Emission from 1GHz to 3GHz



15b RE - 3GHz-18GHz

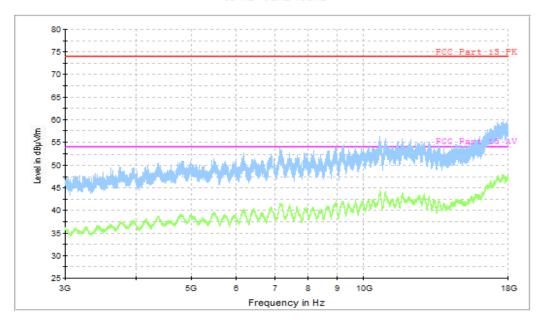


Fig.9 Radiated Emission from 3GHz to 18GHz

Charging Mode, Set.4

15B RE 30MHz-1GHz

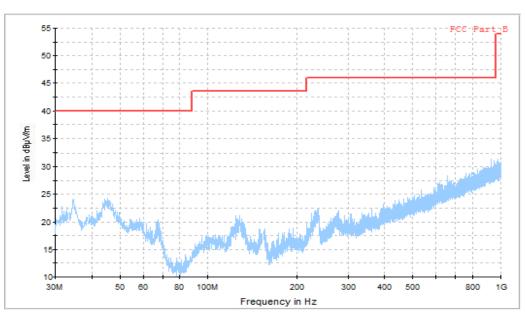


Fig.10 Radiated Emission from 30MHz to 1GHz



15B RE - 1GHz-3GHz

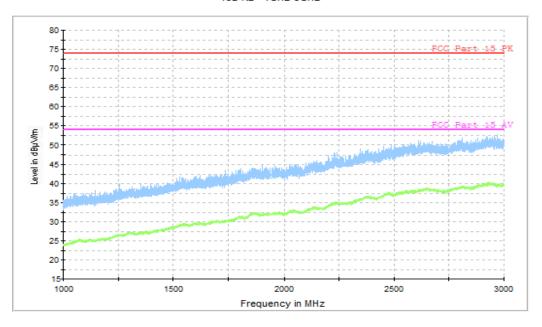


Fig.11 Radiated Emission from 1GHz to 3GHz

15b RE - 3GHz-18GHz

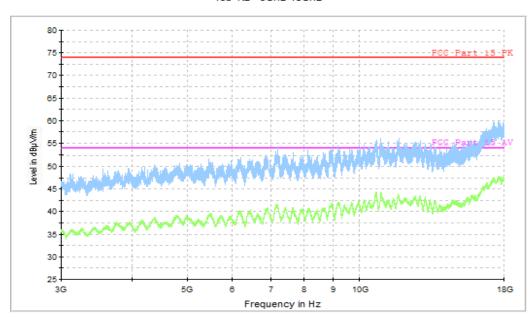


Fig.12 Radiated Emission from 3GHz to 18GHz





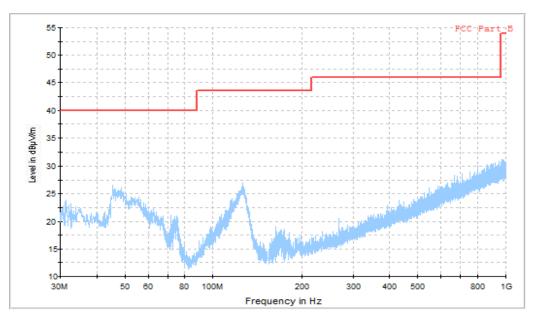


Fig.13 Radiated Emission from 30MHz to 1GHz



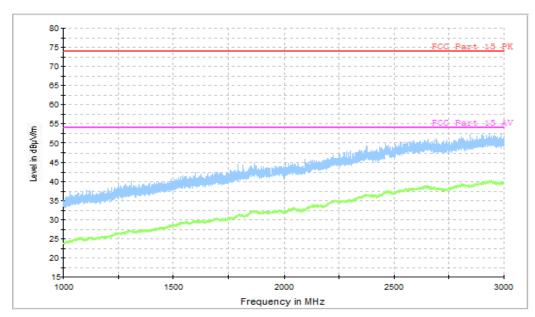


Fig.14 Radiated Emission from 1GHz to 3GHz





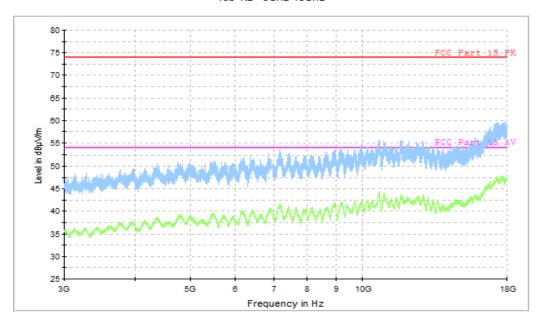


Fig.15 Radiated Emission from 3GHz to 18GHz

15B RE 30MHz-1GHz

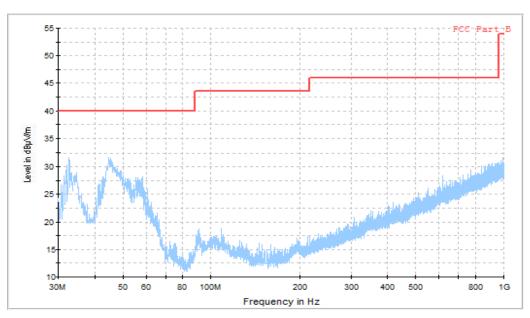


Fig.16 Radiated Emission from 30MHz to 1GHz



15B RE - 1GHz-3GHz

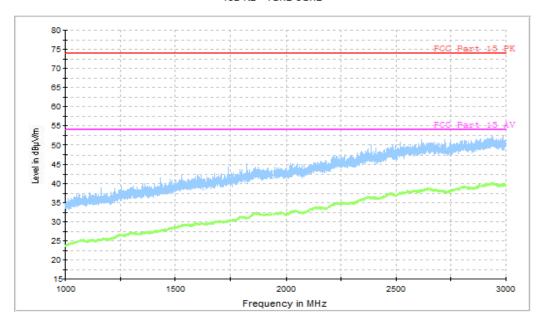


Fig.17 Radiated Emission from 1GHz to 3GHz

15b RE - 3GHz-18GHz

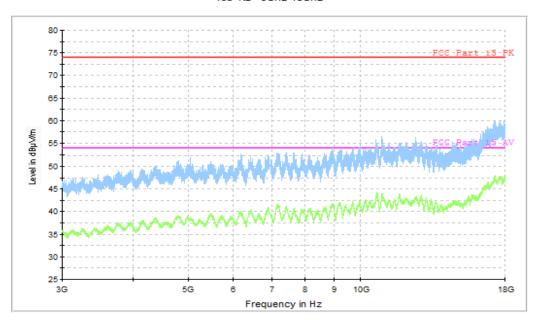


Fig.18 Radiated Emission from 3GHz to 18GHz



USB Mode, Set.7



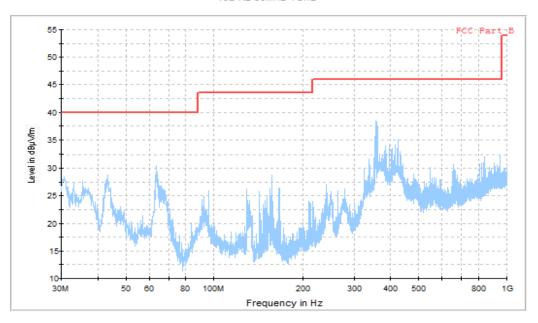


Fig.19 Radiated Emission from 30MHz to 1GHz



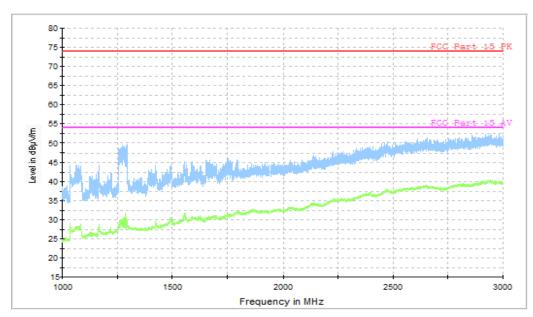


Fig.20 Radiated Emission from 1GHz to 3GHz





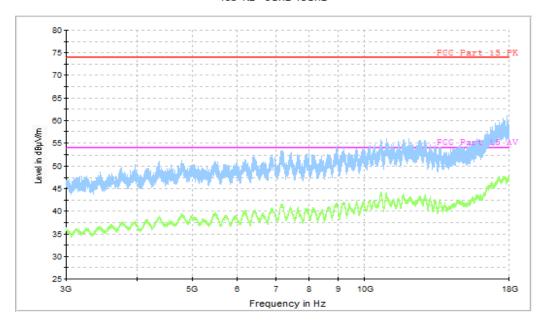


Fig.21 Radiated Emission from 3GHz to 18GHz



A.2 Conducted Emission (§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 7.2.

A.2.2 EUT Operating Mode

The MS is operating in the USB mode and charging mode. During the test MS is connected to a PC via a USB cable in the case of USB mode and is connected to a charger in the case of charging mode. The model of the PC is DELL OPTIPLEX 380, and the serial number of the PC is 2X1YV2X. 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 (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= 3.38 dB, k=2.

Charging Mode, Set.1

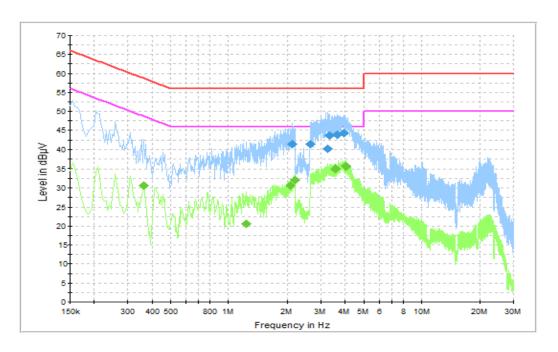


Fig.22 Conducted Emission

Final Result 1

Frequency	QuasiPeak	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
2.116500	41.3	GND	L1	10.4	14.7	56.0
2.647500	41.3	GND	L1	10.4	14.7	56.0
3.259500	40.1	GND	L1	10.4	15.9	56.0
3.331500	43.7	GND	L1	10.4	12.3	56.0
3.637500	43.9	GND	L1	10.4	12.1	56.0
3.925500	44.3	GND	L1	10.4	11.7	56.0

Frequency	Average	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
0.361500	30.7	GND	N	10.4	18.0	48.7
1.234500	20.6	GND	L1	10.3	25.4	46.0
2.080500	30.7	GND	L1	10.4	15.3	46.0
2.188500	32.1	GND	L1	10.4	13.9	46.0
3.565500	34.9	GND	L1	10.4	11.1	46.0
4.015500	35.6	GND	L1	10.5	10.4	46.0



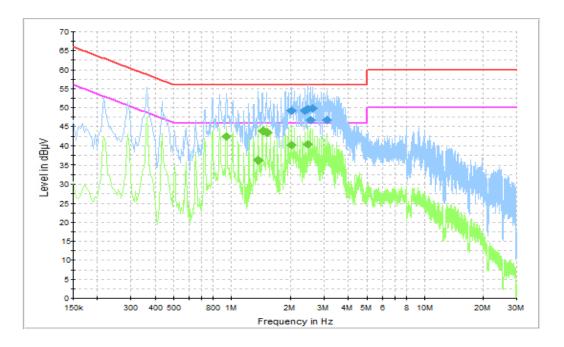


Fig.23 Conducted Emission

Final Result 1

· ····a· ····coaic	•					
Frequency	QuasiPeak	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
2.026500	49.3	GND	L1	10.4	6.7	56.0
2.386500	49.2	GND	L1	10.4	6.8	56.0
2.458500	49.6	GND	L1	10.4	6.4	56.0
2.535000	46.8	GND	L1	10.4	9.2	56.0
2.602500	49.7	GND	L1	10.4	6.3	56.0
3.111000	46.8	GND	L1	10.4	9.2	56.0
		I	1			

Frequency	Average	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
0.942000	42.4	GND	L1	10.3	3.6	46.0
1.374000	36.1	GND	L1	10.3	9.9	46.0
1.446000	43.9	GND	L1	10.3	2.1	46.0
1.518000	43.5	GND	L1	10.3	2.5	46.0
2.026500	40.2	GND	L1	10.4	5.8	46.0
2.458500	40.4	GND	L1	10.4	5.6	46.0



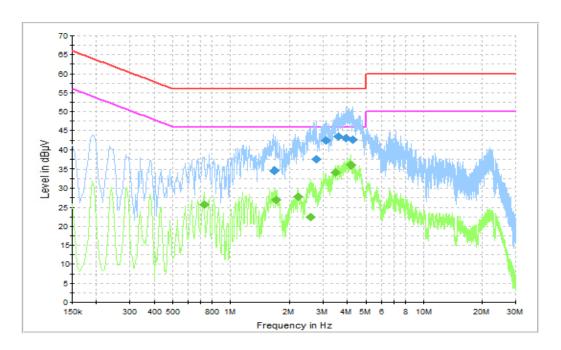


Fig.24 Conducted Emission

Final Result 1

Frequency	QuasiPeak	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
1.666500	34.5	GND	N	10.4	21.5	56.0
2.769000	37.4	GND	N	10.5	18.6	56.0
3.097500	42.3	GND	L1	10.4	13.7	56.0
3.588000	43.4	GND	L1	10.4	12.6	56.0
3.943500	43.1	GND	N	10.5	12.9	56.0
4.276500	42.7	GND	N	10.5	13.3	56.0

Frequency	Average	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
0.726000	25.8	GND	L1	10.3	20.2	46.0
1.698000	26.9	GND	L1	10.3	19.1	46.0
2.229000	27.8	GND	L1	10.4	18.2	46.0
2.571000	22.5	GND	L1	10.4	23.5	46.0
3.489000	34.2	GND	L1	10.4	11.8	46.0
4.164000	36.0	GND	L1	10.5	10.0	46.0



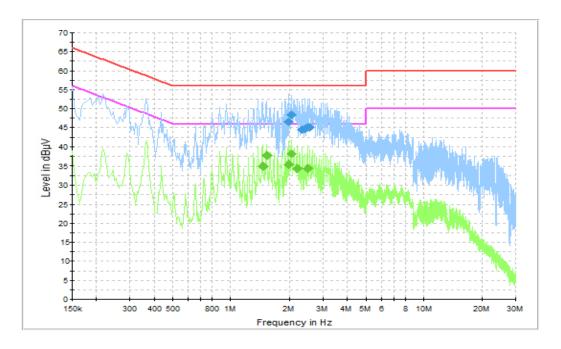


Fig.25 Conducted Emission

Final Result 1

	=					
Frequency	QuasiPeak	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
1.972500	46.5	GND	L1	10.4	9.5	56.0
2.040000	48.3	GND	L1	10.4	7.7	56.0
2.332500	44.5	GND	L1	10.4	11.5	56.0
2.409000	44.7	GND	L1	10.4	11.3	56.0
2.481000	45.1	GND	L1	10.4	10.9	56.0
2.557500	45.1	GND	L1	10.4	10.9	56.0

Frequency	Average	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
1.464000	35.1	GND	L1	10.3	10.9	46.0
1.531500	37.7	GND	L1	10.3	8.3	46.0
1.972500	35.4	GND	L1	10.4	10.6	46.0
2.040000	38.1	GND	L1	10.4	7.9	46.0
2.188500	34.5	GND	L1	10.4	11.5	46.0
2.481000	34.3	GND	L1	10.4	11.7	46.0



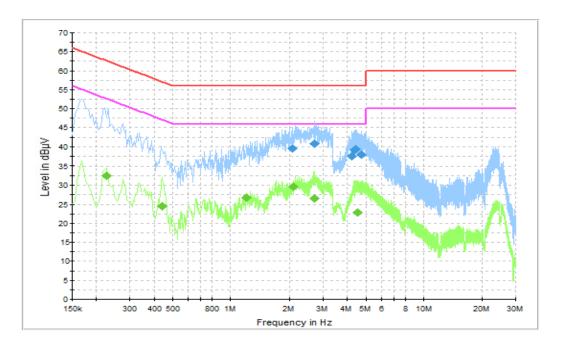


Fig.26 Conducted Emission

Final Result 1

· ····a· ····coait	•					
Frequency	QuasiPeak	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
2.067000	39.5	GND	L1	10.4	16.5	56.0
2.706000	40.7	GND	L1	10.4	15.3	56.0
4.213500	37.4	GND	L1	10.5	18.6	56.0
4.357500	39.2	GND	L1	10.5	16.8	56.0
4.407000	39.3	GND	L1	10.5	16.7	56.0
4.708500	38.0	GND	L1	10.5	18.0	56.0

Frequency	Average	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
0.226500	32.6	GND	N	10.4	19.9	52.6
0.442500	24.6	GND	N	10.4	22.4	47.0
1.212000	26.8	GND	L1	10.3	19.2	46.0
2.107500	29.7	GND	L1	10.4	16.3	46.0
2.692500	26.7	GND	L1	10.4	19.3	46.0
4.506000	22.9	GND	L1	10.5	23.1	46.0



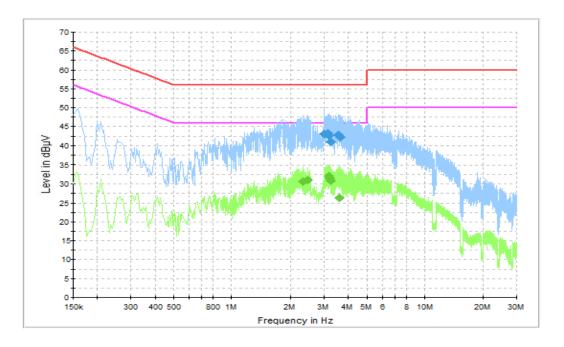


Fig.27 Conducted Emission

Final Result 1

	-					
Frequency	QuasiPeak	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
3.007500	43.0	GND	L1	10.4	13.0	56.0
3.133500	43.2	GND	L1	10.4	12.8	56.0
3.160500	42.6	GND	L1	10.4	13.4	56.0
3.250500	40.9	GND	L1	10.4	15.1	56.0
3.534000	42.9	GND	L1	10.4	13.1	56.0
3.655500	42.2	GND	L1	10.4	13.8	56.0
3.160500 3.250500 3.534000	42.6 40.9 42.9	GND GND GND	L1 L1 L1	10.4 10.4 10.4	13.4 15.1 13.1	

	_					
Frequency	Average	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
2.332500	30.7	GND	L1	10.4	15.3	46.0
2.467500	31.0	GND	L1	10.4	15.0	46.0
3.174000	32.0	GND	L1	10.4	14.0	46.0
3.210000	31.5	GND	L1	10.4	14.5	46.0
3.259500	30.9	GND	L1	10.4	15.1	46.0
3.615000	26.4	GND	L1	10.4	19.6	46.0



USB Mode, Set.7

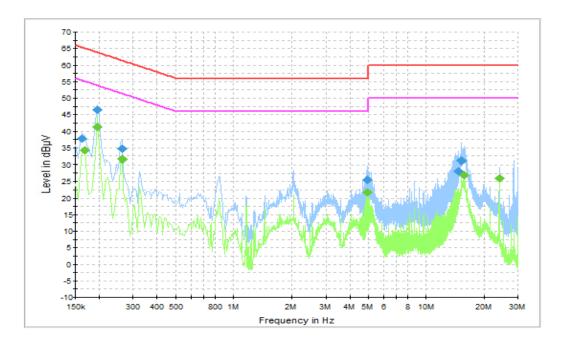


Fig.28 Conducted Emission

Final Result 1

	-					
Frequency	QuasiPeak	PE	Line	Corr.	Margin	Limit
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)
0.163500	37.8	GND	L1	10.3	27.5	65.3
0.195000	46.4	GND	L1	10.3	17.5	63.8
0.262500	34.7	GND	L1	10.3	26.6	61.4
4.942500	25.6	GND	L1	10.5	30.4	56.0
14.761500	28.1	GND	N	10.9	31.9	60.0
15.270000	31.3	GND	N	10.9	28.7	60.0

Final Result 2

mai Robait 2								
Frequency	Average	PE	Line	Corr.	Margin	Limit		
(MHz)	(dBµV)			(dB)	(dB)	(dBµV)		
0.168000	34.1	GND	L1	10.3	20.9	55.1		
0.195000	41.4	GND	L1	10.3	12.4	53.8		
0.262500	31.6	GND	L1	10.3	19.8	51.4		
4.947000	21.9	GND	L1	10.5	24.1	46.0		
15.778500	27.0	GND	N	10.9	23.0	50.0		
24.040500	26.0	GND	L1	11.3	24.0	50.0		

END OF REPORT