

# TEST REPORT No. I17Z61900-EMC04

for

**TCL Communication Ltd.** 

Mobile phone

Model Name: 5026D

FCC ID: 2ACCJBT10

with

**Hardware Version: V03** 

**Software Version: FD1** 

Issued Date: 2017-11-24



#### Note:

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#### **Test Laboratory:**

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## **REPORT HISTORY**

Report Number	Revision	Description	Issue Date
I17Z61900-EMC04	Rev.0	1 <sup>st</sup> edition	2017-11-24



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## 1. Test Laboratory

## 1.1. Testing Location

CTTL (BDA)

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

Area, Beijing, P. R. China 100176

1.2. Testing Environment

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

1.3. Project data

Testing Start Date: 2017-11-10
Testing End Date: 2017-11-24

1.4. Signature

**Wang Junqing** 

(Prepared this test report)

胀,

**Zhang Ying** 

(Reviewed this test report)

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**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-Tower, No. 232, Liang Jing Road, ZhangJiang High-Tech Park,

Pudong Area, Shanghai, 201203, P.R. China

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## 2.2. Manufacturer Information

Company Name: TCL Communication Ltd.

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

Pudong Area, Shanghai, 201203, P.R. China

Contact Person: Gong Zhizhou

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

### 3.1. About EUT

Description Mobile phone

Model Name 5026D

FCC ID 2ACCJBT10

Extreme vol. Limits 3.65VDC to 4.35VDC (nominal: 3.8VDC)

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	<b>HW Version</b>	SW Version
EUT1	/	V03	FA2

<sup>\*</sup>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	/	inbuilt
AE2	Battery	1	inbuilt
AE3	Charger	1	17TCT-CH-0482
AE4	Charger	1	17TCT-CH-0736
AE5	USB Cable	1	16TCT-DC-0002
AE6	USB Cable	/	17TCT-DC-0238

#### AE1

Model	TLp029C7
Manufacturer	VEKEN
Capacitance	2900 mAh
Nominal voltage	3.85V

AE2

Model TLp029C1
Manufacturer BYD
Capacitance 2900 mAh
Nominal voltage 3.85V

AE3

Model CBA0058AGAC5

Manufacturer PUAN Length of cable /

AE4

Model CBA0058AGAC2

Manufacturer TENPAO

Length of cable /



AE5

Model CDA3122005C1

Manufacturer JUWEI Length of cable 100cm

AE6

Model CDA3122005C8

Manufacturer PUAN Length of cable 100cm

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/AE2+ AE3+ AE5/AE6	Charger
Set.2	EUT1+ AE1/AE2+ AE4+ AE5/AE6	Charger
Set.3	EUT1+ AE1/AE2+ AE5/AE6	USB mode

Note: Mobile phone 5026D manufactured by TCL Communication Ltd is a variant model based on 5026A for conformance test. According to the declaration of changes, no test needs to been performed, all results are cited from the initial model. The report number for initial model is I17Z61901-EMC01.

<sup>\*</sup>AE ID: is used to identify the test sample in the lab internally.



## 4. Reference Documents

## 4.1. Reference Documents for testing

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

Reference	Title	Version
FCC Part 15, Subpart B	Radio frequency devices - Unintentional Radiators	2016
ANSI C63.4	American National Standard for	2014
	Methods of Measurement of Radio-	
	Noise Emissions from Low-Voltage	
	Electrical and Electronic Equipment	
	in the Range of 9 kHz to 40 GHz	

Note: The test methods have no deviation with standards.



## 5. LABORATORY ENVIRONMENT

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

9		
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	

**Semi-anechoic chamber SAC-2** (10 meters × 6.7 meters × 6.1 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C	
Relative humidity	Min. = 15 %, Max. = 75 %	
Chialding offsativeness	0.014MHz - 1MHz, >60dB;	
Shielding effectiveness	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 <sub>VSWR</sub> )	Between 0 and 6 dB, from 1GHz to 18GHz	
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

lte	ems	Test Name	Clause in FCC rules	Section in this report	Verdict	Test Location
	1	Radiated Emission	15.109(a)	B.1	Р	CTTL(BDA)
	2	Conducted Emission	15.107(a)	B.2	Р	CTTL(BDA)



## 7. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATI ON INTERVAL
1	Test Receiver	ESU26	100235	R&S	2018-04-01	1 year
2	Test Receiver	ESCI 7	100344	R&S	2018-03-15	1 year
3	Universal Radio Communication Tester	CMW500	143008	R&S	2017-12-01	1 year
4	Universal Radio Communication Tester	CMW500	155415	R&S	2018-02-15	1 year
5	LISN	ENV216	101200	R&S	2018-08-03	1 year
6	EMI Antenna	VULB 9163	9163-301	Schwarzbeck	2017-12-16	3 years
7	EMI Antenna	3115	6914	ETS-Lindgren	2017-12-15	3 years
8	PC	OPTIPLEX 380	2X1YV2X	DELL	N/A	N/A
9	Printer	P1606dn	VNC3L52122	HP	N/A	N/A
10	Keyboard	L100	CN0RH6596589 07ATOI40	DELL	N/A	N/A
11	Mouse	M-UAE119	LZ935220ZRC	Lenovo	N/A	N/A

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

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 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 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	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/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<sub>A</sub>: Antenna factor of receive antenna

G<sub>PL</sub>: Path Loss

P<sub>Mea</sub>: Measurement result on receiver.

Measurement uncertainty (worst case): U = 4.3 dB, k=2.

#### Measurement results for Set.1:

#### **Charging Mode/Average detector**

Frequency	Measurement	Cable	Antenna	Receiver	Limit	Margin	Antenna
	Result	loss	Factor	Reading			Pol.
(MHz)	(dBμV/m)	(dB)	(dB/m)	(dBμV)	(dBμV/m)	(dB)	(H/V)
16812.750	38.2	-26.1	41.5	22.84	54.0	15.8	Н
16948.500	38.2	-25.7	41.4	22.44	54.0	15.8	V
16946.250	38.1	-25.7	41.4	22.34	54.0	15.9	V
16959.750	38.1	-25.6	41.4	22.33	54.0	15.9	Н
16816.500	38.0	-26.1	41.5	22.63	54.0	16.0	V
16785.000	38.0	-26.2	41.5	22.73	54.0	16.0	Н

### **Charging 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)
17969.250	50.4	-25.1	40.8	34.71	74.0	23.6	٧
17610.000	50.4	-25.8	41.1	35.09	74.0	23.6	٧
16917.000	50.3	-25.8	41.4	34.63	74.0	23.7	Н
17096.250	50.3	-25.5	41.3	34.46	74.0	23.7	Н
16932.000	50.1	-25.7	41.4	34.38	74.0	23.9	٧
16785.000	50.1	-26.2	41.5	34.83	74.0	23.9	V



## Measurement results for Set.2: Charging Mode/Average detector

Frequency (MHz)	Measurement Result (dBµV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBµV/m)	Margin (dB)	Antenna Pol. (H/V)
16773.750	38.0	-26.2	41.5	22.74	54.0	16.0	Н
16785.750	38.0	-26.2	41.5	22.72	54.0	16.0	V
16792.500	38.0	-26.2	41.5	22.70	54.0	16.0	Н
16815.000	38.0	-26.1	41.5	22.64	54.0	16.0	V
16800.000	37.9	-26.2	41.5	22.58	54.0	16.1	V
16779.750	37.9	-26.2	41.5	22.64	54.0	16.1	Н

### **Charging Mode/Peak detector**

onarging moder can acted or											
Fraguency	Measurement	Cable	Antenna	Receiver	Limit	Margin	Antenna				
Frequency (MHz)	Result	loss	Factor	Reading	tillit (dBμV/m)	(dB)	Pol.				
	(dBµV/m)	(dB)	(dB/m)	(dBμV)	(ασμν/ιιι)	(ub)	(H/V)				
17975.250	50.7	-25.2	40.8	35.09	74.0	23.3	Н				
17529.750	50.3	-25.5	41.2	34.60	74.0	23.7	Н				
16887.750	50.2	-25.9	41.4	34.61	74.0	23.8	V				
17103.750	50.2	-25.5	41.3	34.35	74.0	23.8	V				
16703.250	50.2	-26.1	41.4	34.87	74.0	23.8	Н				
16780.500	49.9	-26.2	41.5	34.64	74.0	24.1	V				



### **Measurement results for Set.3:**

## **USB Mode/Average detector**

Eroguency	Measurement	Cable	Antenna	Receiver	Limit	Margin	Antenna
Frequency	Result	loss	Factor	Reading		(dB)	Pol.
(MHz)	(dBμV/m)	(dB)	(dB/m)	(dBμV)	(dBμV/m)	(ub)	(H/V)
16947.000	38.2	-25.7	41.4	22.44	54.0	15.8	V
16799.250	38.2	-26.2	41.5	22.88	54.0	15.8	V
16778.250	38.2	-26.2	41.5	22.95	54.0	15.8	Н
16935.750	38.1	-25.7	41.4	22.37	54.0	15.9	Н
16789.500	38.1	-26.2	41.5	22.81	54.0	15.9	V
16788.000	38.0	-26.2	41.5	22.72	54.0	16.0	Н

#### **USB 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)
17003.250	50.3	-25.6	41.4	34.50	74.0	23.7	Н
17803.500	50.3	-23.1	41.0	32.43	74.0	23.7	V
17655.000	50.0	-25.5	41.1	34.46	74.0	24.0	Н
17532.750	49.9	-25.5	41.2	34.21	74.0	24.1	V
16887.000	49.8	-25.9	41.4	34.22	74.0	24.2	V
17052.750	49.8	-25.5	41.4	33.97	74.0	24.2	Н

Note: The measurement results of Set.1, Set.2 and Set.3 showed here are worst cases of the combinations of different batteries and USB cables.



## **Charging Mode, Set.1**

#### 15B RE 30MHz-1GHz

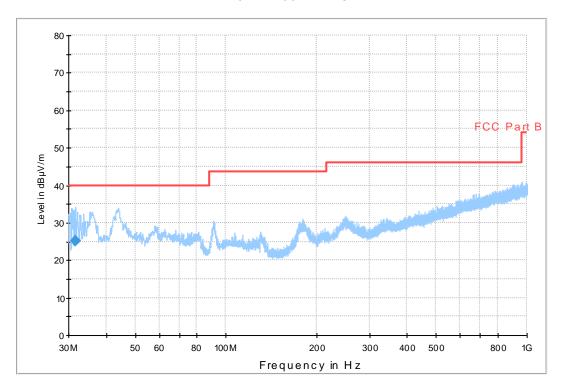


Fig A.1 Radiated Emission from 30MHz to 1GHz

## **Final Result 1**

Frequency	QuasiPeak	Height	Polarization	Azimuth	Corr.	Margin	Limit	Comment
(MHz)	(dBµV/m)	(cm)		(deg)	(dB)	(dB)	(dBµV/m)	
31.746000	25.3	109.0	V	245.0	-4.5	14.7	40.0	



#### 15B RE - 1GHz-3GHz

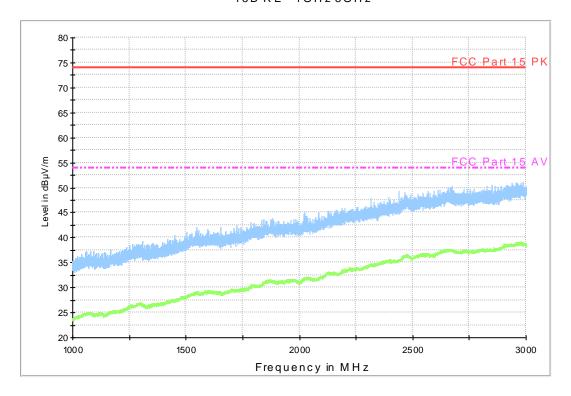


Fig A.2 Radiated Emission from 1GHz to 3GHz

15b RE - 3GHz-18GHz

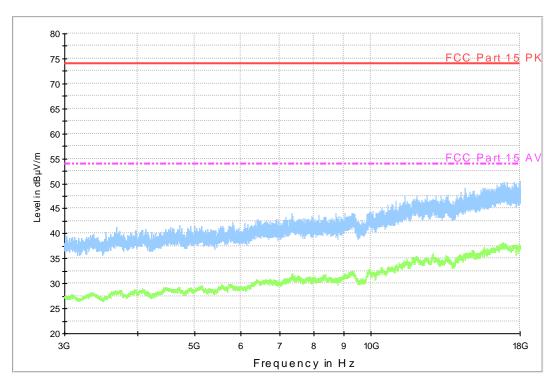


Fig A.3 Radiated Emission from 3GHz to 18GHz



## **Charging Mode, Set.2**

#### 15B RE 30MHz-1GHz

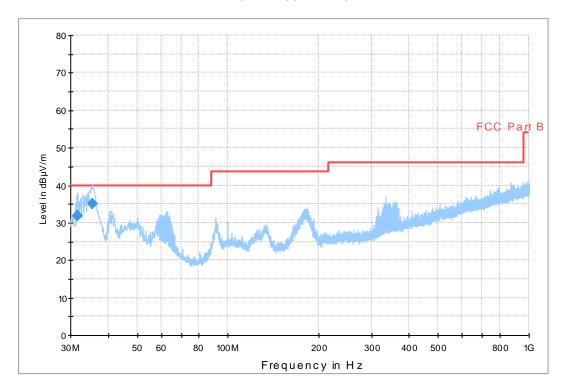


Fig A.4 Radiated Emission from 30MHz to 1GHz

## **Final Result 1**

Frequency	QuasiPeak	Height	Polarization	Azimuth	Corr.	Margin	Limit	Comment
(MHz)	(dBµV/m)	(cm)		(deg)	(dB)	(dB)	(dBµV/m)	
31.746000	31.8	100.0	V	187.0	-4.5	8.2	40.0	
35.432000	35.2	100.0	٧	114.0	-3.1	4.8	40.0	



#### 15B RE - 1GHz-3GHz



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

15b RE - 3GHz-18GHz

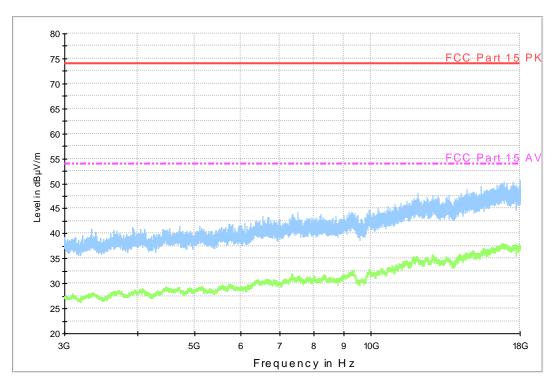


Fig A.6 Radiated Emission from 3GHz to 18GHz



### **USB Mode, Set.3**

#### 15B RE 30MHz-1GHz

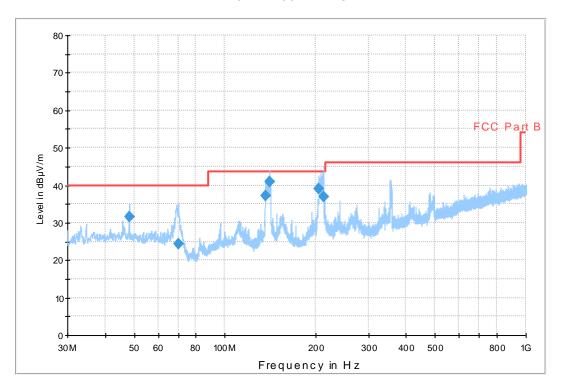


Fig A.7 Radiated Emission from 30MHz to 1GHz

## **Final Result 1**

Frequency	QuasiPeak	Height	Polarization	Azimuth	Corr.	Margin	Limit	Comment
(MHz)	(dBµV/m)	(cm)		(deg)	(dB)	(dB)	(dBµV/m)	
48.042000	31.5	109.0	V	107.0	-1.1	8.5	40.0	
69.964000	24.2	109.0	٧	315.0	-5.1	15.8	40.0	
136.603000	37.2	125.0	Н	271.0	-4.5	6.3	43.5	
140.968000	40.9	125.0	Н	270.0	-4.8	2.6	43.5	
204.697000	38.9	121.0	Н	10.0	-1.9	4.6	43.5	
212.263000	36.8	109.0	Н	-42.0	-1.6	6.7	43.5	



#### 15B RE - 1GHz-3GHz

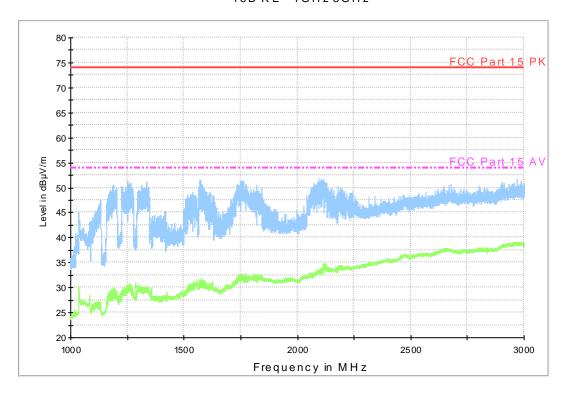


Fig A.8 Radiated Emission from 1GHz to 3GHz

15b RE - 3GHz-18GHz

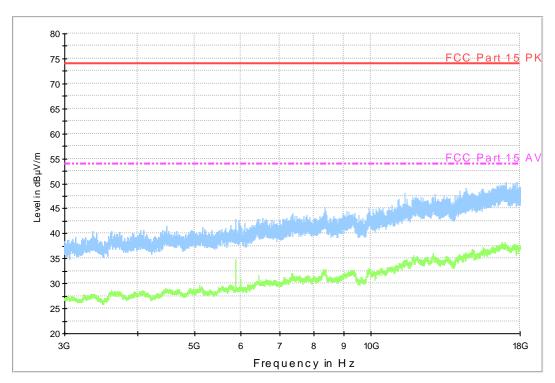


Fig A.9 Radiated Emission from 3GHz to 18GHz



## 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 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

<u> </u>							
Voltage (V)	Frequency (Hz)						
120	60						

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



#### A.2.5 Measurement Results

Measurement uncertainty: *U*= 2.9 dB, *k*=2.

## Charging Mode, Set.1

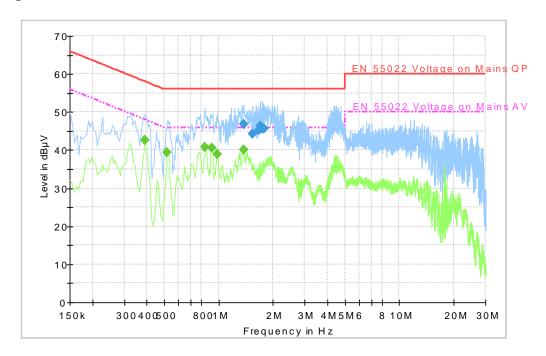


Fig A.10 Conducted Emission

## **Final Result 1**

Frequency	QuasiPeak	Meas.	Bandwidth	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)		(dB)	(dB)	(dBµV)
		(ms)					
1.374000	46.8	2000.0	9.000	L1	10.2	9.2	56.0
1.540500	44.2	2000.0	9.000	L1	10.2	11.8	56.0
1.671000	45.3	2000.0	9.000	L1	10.2	10.7	56.0
1.698000	46.3	2000.0	9.000	L1	10.2	9.7	56.0
1.738500	45.7	2000.0	9.000	L1	10.2	10.3	56.0
1.774500	45.6	2000.0	9.000	L1	10.2	10.4	56.0

## **Final Result 2**

Frequency	Average	Meas.	Bandwidth	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)		(dB)	(dB)	(dBµV)
		(ms)					
0.388500	42.6	2000.0	9.000	N	10.2	5.5	48.1
0.519000	39.5	2000.0	9.000	N	10.2	6.5	46.0
0.843000	40.9	2000.0	9.000	N	10.2	5.1	46.0
0.915000	40.6	2000.0	9.000	N	10.2	5.4	46.0
0.978000	39.0	2000.0	9.000	N	10.2	7.0	46.0
1.369500	40.1	2000.0	9.000	N	10.2	5.9	46.0

Note: The measurement results showed here are worst cases of the combinations of different batteries and USB cables.



## **Charging Mode, Set.2**

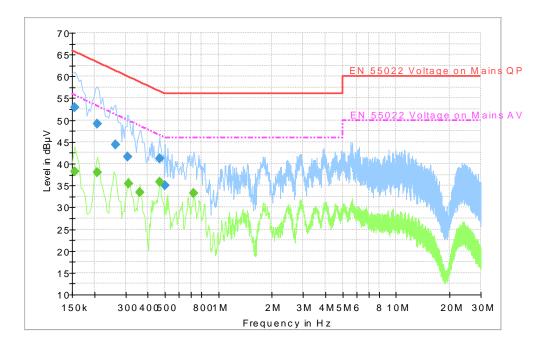


Fig A.11 Conducted Emission

## **Final Result 1**

Frequency	QuasiPeak	Meas.	Bandwidth	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)		(dB)	(dB)	(dBµV)
		(ms)					
0.154500	52.9	2000.0	9.000	L1	10.1	12.9	65.8
0.208500	49.0	2000.0	9.000	L1	10.1	14.2	63.3
0.262500	44.4	2000.0	9.000	L1	10.1	17.0	61.4
0.307500	41.6	2000.0	9.000	N	10.2	18.5	60.0
0.465000	41.1	2000.0	9.000	L1	10.2	15.5	56.6
0.501000	35.0	2000.0	9.000	L1	10.2	21.0	56.0

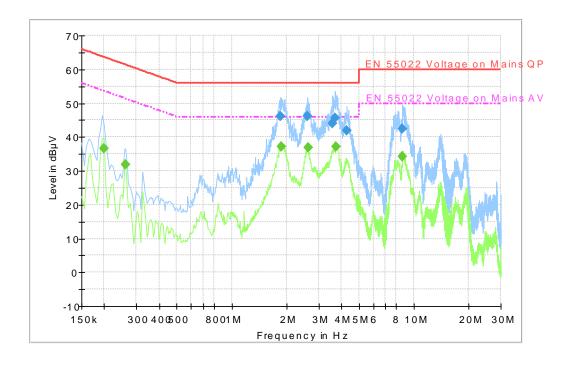
## **Final Result 2**

Frequency	Average	Meas.	Bandwidth	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)		(dB)	(dB)	(dBµV)
		(ms)					
0.154500	38.2	2000.0	9.000	L1	10.1	17.5	55.8
0.208500	38.0	2000.0	9.000	L1	10.1	15.2	53.3
0.312000	35.5	2000.0	9.000	L1	10.2	14.4	49.9
0.361500	33.5	2000.0	9.000	L1	10.2	15.2	48.7
0.465000	35.7	2000.0	9.000	L1	10.2	10.9	46.6
0.726000	33.2	2000.0	9.000	L1	10.2	12.8	46.0

Note: The measurement results showed here are worst cases of the combinations of different batteries and USB cables.



### **USB Mode, Set.3**



## **Final Result 1**

Frequency	QuasiPeak	Meas.	Bandwidth	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)		(dB)	(dB)	(dBµV)
		(ms)					
1.860000	46.1	2000.0	9.000	N	10.3	9.9	56.0
2.611500	46.0	2000.0	9.000	L1	10.2	10.0	56.0
3.570000	44.0	2000.0	9.000	L1	10.3	12.0	56.0
3.696000	45.5	2000.0	9.000	L1	10.3	10.5	56.0
4.272000	41.8	2000.0	9.000	L1	10.3	14.2	56.0
8.632500	42.4	2000.0	9.000	L1	10.5	17.6	60.0

## **Final Result 2**

Frequency	Average	Meas.	Bandwidth	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)		(dB)	(dB)	(dBµV)
		(ms)					
0.199500	36.6	2000.0	9.000	L1	10.1	17.0	53.6
0.262500	31.7	2000.0	9.000	L1	10.1	19.6	51.4
1.878000	37.1	2000.0	9.000	N	10.3	8.9	46.0
2.616000	36.9	2000.0	9.000	L1	10.2	9.1	46.0
3.750000	37.1	2000.0	9.000	N	10.3	8.9	46.0
8.677500	34.3	2000.0	9.000	N	10.5	15.7	50.0

Note: The measurement results showed here are worst cases of the combinations of different batteries and USB cables.



## **ANNEX B: Accreditation Certificate**

United States Department of Commerce National Institute of Standards and Technology



## Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 600118-0

### Telecommunication Technology Labs, CAICT

Beijing China

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

#### Electromagnetic Compatibility & Telecommunications

This laboratory is accredited in accordance with the recognized international Standard ISO/IEC 17025:2005.

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2016-09-29 through 2017-09-30

Effective Dates



For the National Voluntary Laboratory Accreditation Program

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