





TEST REPORT

No. 24T04Z100644-013

for

Shenzhen Tinno Mobile Technology Corp.

Smart Phone

Model Name: U572AA,U572AC

FCC ID: XD6U572AA

with

Hardware Version: V1.0

Software Version: U572AAV01.04.10

Issued Date: 2024-05-28

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:

CTTL-Telecommunication Technology Labs, CAICT

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

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
24T04Z100644-013	Rev.0	1st edition	2024-05-28

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





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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 American Association for Laboratory Accreditation (A2LA) with lab code 7049.01, and is also an FCC accredited test laboratory (CN1349), and ISED accredited test laboratory (CAB identifier:CN0066). The detail accreditation scope can be found on A2LA website.

1.2. Testing Location

Location 1: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,

P. R. China 100191

Location 2: CTTL(BDA)

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

Development Area, Beijing, P. R. China 100176

1.3. <u>Testing Environment</u>

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

1.4. Project data

Testing Start Date: 2024-05-23 Testing End Date: 2024-05-27

1.5. Signature

张 颖

Zhang Ying

(Prepared this test report)

An Hui

(Reviewed this test report)

张县

Zhang Xia

Deputy Director of the laboratory

(Approved this test report)





2. Client Information

2.1. Applicant Information

Company Name: Shenzhen Tinno Mobile Technology Corp.

27-001, South Side of Tianlong Mobile Headquarters Building,

Address /Post: Tongfa South Road, Xili Community, Xili Street, Nanshan District, Sh

enzhen ,PRC

Contact: xiaoping.li

Email: xiaoping.li@tinno.com

Telephone: 0755-86095550 Fax: 0755-86095551

2.2. Manufacturer Information

Company Name: Shenzhen Tinno Mobile Technology Corp.

27-001, South Side of Tianlong Mobile Headquarters Building,

Address /Post: Tongfa South Road, Xili Community, Xili Street, Nanshan District, Sh

enzhen ,PRC

Contact: xiaoping.li

Email: xiaoping.li@tinno.com

Telephone: 0755-86095550 Fax: 0755-86095551





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

3.1. About EUT

Description Smart Phone
Model Name U572AA,U572AC
FCC ID XD6U572AA

Note: The EUT functions are described in Annex A of this test report. Specifications of the EUT were provided to fulfil the test. Samples undergoing test were selected by the client. 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

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
UT28a	864975070007933	V1.0	U572AAV01.04.10	2024-04-25

^{*}EUT ID: is used to identify the test sample in the lab internally. The HW and SW version information were provided by the applicant.

3.3. Internal Identification of AE

AE ID*	Description	Model	Manufacturer	Note	
AE1	Battery	TNO496386AG-	GUANGDONG FENGHUA		
ALI	Dallery	N1	NEW ENERGY CO.,LTD		
AE2-1	Charger	TN-050200U3	Guangdong Beicom	First source	
ALZ-1	Charger	114-03020003	Electronics Co.,Ltd	i iist source	
AE2-2	Charger	LM-603U-05020	Chongqing Lianmao	Second source	
ALZ-Z	Onlarger	0U02UL	Electronics Co.,LTD.	Occord Source	
AE3-1	USB cable	T365-011B-1	Shenzhen Yihuaxing	First source	
ALS-1	OOD Cable	1303-0115-1	Electronics Co. Ltd.	i iist source	
AE3-2	USB cable	336275	SUNTOPS ELECTRONICS	Second source	
AL3-2	OSD Cable	JJUZ1 J	CO.,LTD	Second Source	

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

3.4. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.4	UT28a + AE1 + AE2-1 + AE3-1	Charger First source
Set.5	UT28a + AE1 + AE2-2 + AE3-2	Charger Second source
Set.6	UT28a + AE1 + AE3-1 + PC	USB First source
Set.7	UT28a + AE1 + AE3-2 + PC	USB Second source





4. Reference Documents

4.1. <u>Documents supplied by applicant</u>

EUT parameters, referring to Annex A for detailed information, were supplied by the client or manufacturer, which is the basis of testing. CAICT is not responsible for the accuracy of customer supplied technical information that may affect the test results (for example, antenna gain and loss of customer supplied cable).

4.2. Reference Documents for testing

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

Reference			Title	Version
FCC	Part	15,	Radio frequency devices - Unintentional Radiators	2023
Subpar	t B			
ANSI C	63.4		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. Test Results

Abbreviations used in this clause:		
Р		Pass
Verdict Column	F	Fail
	BR	Re-use test data from basic model report.
	NA	Not applicable
	NM	Not measured

Items	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(huayuan North Road)





6. <u>Test Facilities Utilized</u>

Test instruments list:

Location 1: CTTL(huayuan North Road)

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	LISN	ENV216	101200	R&S	1 Year	2025-05-16
2	Test Receiver	ESCI	100344	R&S	1 Year	2025-04-01

Location 2: CTTL(BDA)

No.	Equipment	Model	Serial	Manufacture	Calibration	Calibratio
NO.	Equipment	Wodei	Number	r	Period	n Due date
3	Test Receiver	ESU26	100376	R&S	1 Year	2024-05-30
4	EMI Antenna	VULB 9163	01223	SCHWARZB ECK	1 year	2024-07-18
5	EMI Antenna	3117	00119021	ETS	1 Year	2024-05-24
6	Universal Communicati on Tester	CMW500	159408	R&S	2 years	2025-03-26
8	Universal Communicati on Tester	CMW500	167943	R&S	3 years	2025-04-13
9	Universal Communicati on Tester	CMW500	143008	R&S	2 years	2025-01-03
10	PC	E500-1042	2140770010 640901850	Tsinghua Tongfang	N/A	N/A
11	Printer	1160	33740	HP	N/A	N/A
12	Keyboard	/	/	/	N/A	N/A
14	Mouse	1	/	/	N/A	N/A

Test software list:

Test software information(huayuan North Road)

Test Item	Test Software	Software Vendor
Conducted emission	EMC32 V8.53.0	R&S

Test software information(BDA)

Test Item	Test Software	Software Vendor
Conducted emission	EMC32 V8.53.0	R&S
Radiated emission(30MHz-1GHz)	EMC32 V8.53.0	R&S





Semi-anechoic chamber utilized did not exceed following limits along the 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 M Ω		
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		

Shielded room utilized did not exceed following limits along the testing:

Temperature	Min. = 15 °C, Max. = 35 °C	
Relative humidity	Min. = 20 %, Max. = 75 %	
nielding effectiveness 0.014MHz-1MHz, >60dB;		
	1MHz-1000MHz, >90dB.	
Electrical insulation	> 2 M Ω	
Ground system resistance	< 4 Ω	

7. Measurement Uncertainty

Where relevant, the following measurement uncertainty(worse case) levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Location 1: CTTL(huayuan North Road)

Test item	Frequency ranges	Measurement uncertainty		
Conducted Emission	150kHz-30MHz	AC Power Line: 3.08dB(k=2)		

Location 2: CTTL(BDA)

Test item	Frequency ranges	Measurement uncertainty
Radiated Emission(30MHz-1GHz	5.73dB(<i>k</i> =2)
	1GHz-6GHz	5.58dB(<i>k</i> =2)





ANNEX A: EUT parameters

Cellular Bands operate	□GSM	Band
between	□CDMA	Band
30MHz-960MHz	√ WCDMA	Band 5
	√ LTE	Band 5/12/14
	□5G NR SA	Band
Other FCC Part 15B	□FM √MP3 √N	MP4 √Camera √USB data □NFC
related features		





ANNEX B: Detailed Test Results

B.1. Radiated Emission

Reference: FCC Part 15.109(a).

Method of measurement: The field strength of radiated emissions from the unintentional radiator at distances of 3/10 meters(for 30MHz-1GHz) and 3 meters (for above 1GHz) were tested. The test was 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 the specified distance from the EUT. During the test, 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. For the test setup photographs please see the test setup photos document.

EUT operating mode: The EUT was operating in the USB data and/or charging mode. During the test, the EUT was connected to a charger in the case of charging mode. The EUT was tested while operating in licensed band Rx mode. All licensed band receivers that tune in the range of 30MHz-960MHz, as listed in Annex A, were investigated. Only the worst case emissions are reported. All equipment was 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.

Measurement limit:

Frequency range	Field strength limit (μV/m)					
(MHz)	Quasi-peak	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. The limits for 10 meters distance is got by converting: Limit(10m) = Limit(3m) + $20[\log(3/10)]$, which is according to FCC 15.109(g)(2)

Test settings:

Frequency range (MHz)	RBW/VBW	Sweep Time (s)	Detector
30-1000	120kHz (IF	5	Peak/Quasi-peak
	Bandwidth)		
Above 1000	1MHz/3MHz	15	Peak, Average

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.

Note: The measurement results showed as followed are worst cases, and the combinations of different batteries, cables and headsets were considered if applicable.

Function Type:

Setup	Function	Conclusion
Set.4	Charger+Real Camera+ RX WCDMA band 5	Pass
Set.5	Charger+Front Camera + RX LTE band 5	Pass
Set.4	Charger+MP4 + RX LTE band 12	Pass
Set.5	Charger+MP4 + RX LTE band 14	Pass
Set.6	USB TO PC	Pass
Set.7	USB TO PC	Pass





Charger+MP4 + RX LTE band 14 mode, Set.5

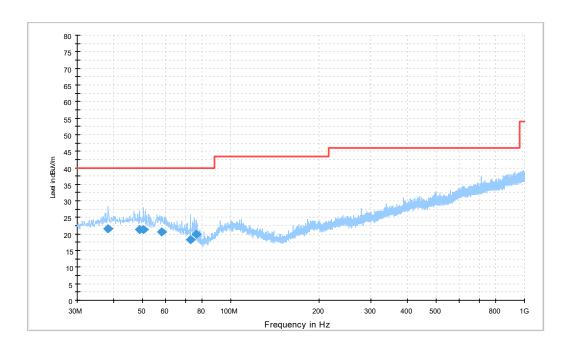


Figure A.1 Radiated Emission from 30MHz to 1GHz

QP detector

Frequency	QuasiPeak	Limit	Margin	Height	Pol	Azimuth
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	(cm)		(deg)
38.148000	21.6	40.0	18.4	100.0	V	-1.0
49.012000	21.3	40.0	18.7	100.0	V	257.0
50.467000	21.4	40.0	18.6	100.0	V	89.0
58.227000	20.5	40.0	19.5	113.0	V	135.0
73.068000	18.3	40.0	21.7	125.0	V	225.0
76.172000	19.9	40.0	20.1	100.0	V	231.0





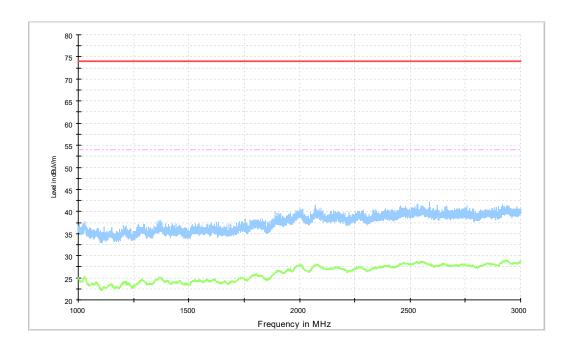


Figure A.2 Radiated Emission from 1GHz to 3GHz

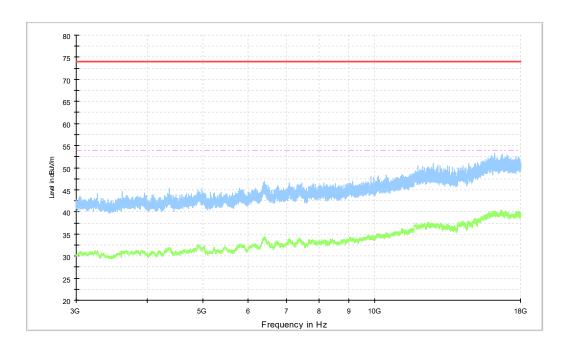


Figure A.2 Radiated Emission from 3GHz to 18GHz





Average detector

Eroguepov	Measurement	Cable	Antenna	Receiver	Limit	Margin	Antenna
Frequency (MHz)	Result	loss	Factor	Reading			Pol.
(IVITZ)	(dBµV/m)	(dB)	(dB/m)	(dBµV)	(dBµV/m)	(dB)	(H/V)
16634.500	40.33	-24.7	41.4	23.55	54.0	13.7	V
16637.000	40.32	-24.6	41.4	23.50	54.0	13.7	V
16636.500	40.30	-24.6	41.4	23.49	54.0	13.7	V
16643.500	40.29	-24.6	41.4	23.46	54.0	13.7	V
16639.000	40.24	-24.6	41.4	23.38	54.0	13.8	V
16633.000	40.23	-24.7	41.4	23.47	54.0	13.8	V

Peak detector

Erogueney	Measurement	Cable	Antenna	Receiver	Limit	Margin	Antenna
Frequency	Result	loss	Factor	Reading		•	Pol.
(MHz)	(dBµV/m)	(dB)	(dB/m)	(dBµV)	(dBµV/m)	(dB)	(H/V)
16214.500	53.2	-24.3	40.8	36.64	74.0	20.8	V
16715.000	53.1	-24.5	41.5	36.12	74.0	20.9	V
17034.000	53.0	-24.5	41.0	36.48	74.0	21.0	V
16637.000	52.7	-24.6	41.4	35.86	74.0	21.3	V
16011.000	52.7	-25.1	40.9	36.84	74.0	21.3	V
16237.500	52.6	-24.9	40.8	36.75	74.0	21.4	V





USB connected to PC mode, Set.6

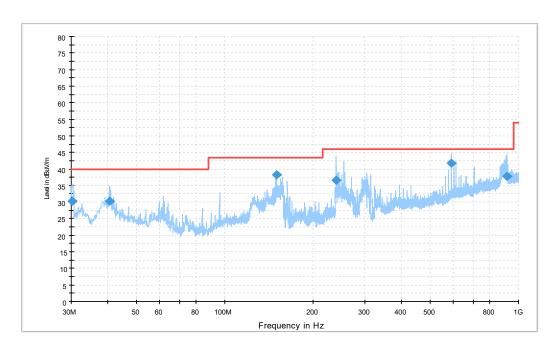


Figure A.5 Radiated Emission from 30MHz to 1GHz

QP detector

Frequency	QuasiPeak	Limit	Margin	Height	Pol	Azimuth
(MHz)	(dBµV/m)	(dBµV/m)	(dB)	(cm)		(deg)
30.291000	30.4	40.0	9.6	100.0	V	307.0
40.670000	30.3	40.0	9.7	100.0	V	135.0
149.989000	38.1	43.5	5.4	100.0	Н	225.0
239.811000	36.7	46.0	9.3	125.0	Н	315.0
589.787000	41.8	46.0	4.2	125.0	V	186.0
913.767000	37.7	46.0	8.3	100.0	V	0.0





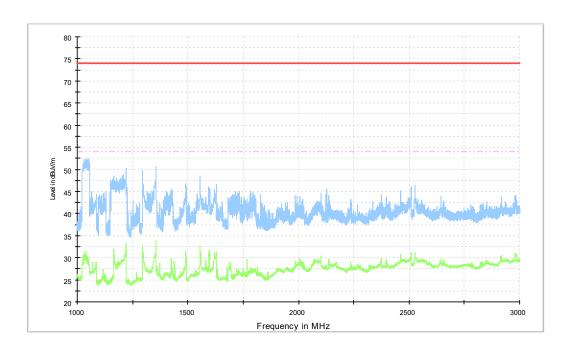


Figure A.6 Radiated Emission from 1GHz to 3GHz

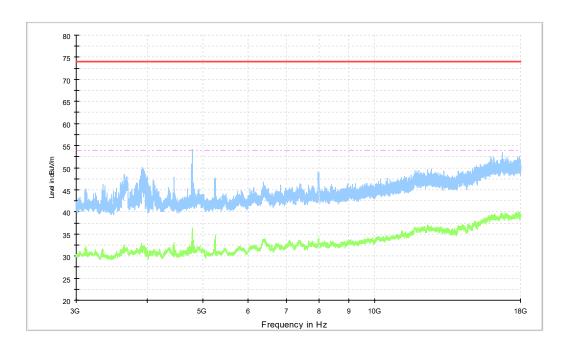


Figure A.6 Radiated Emission from 3GHz to 18GHz





Average detector

Eroguepov	Measurement	Cable	Antenna	Receiver	Limit	Margin Antenna	
Frequency (MHz)	Result	loss	Factor	Reading	(dBµV/m)	· ·	Pol.
(IVITZ)	(dBµV/m)	(dB)	(dB/m)	(dBµV)	(ασμν/ιιι)	(dB)	(H/V)
1036.800	33.89	-38.1	28.6	43.39	54.0	20.1	V
1220.600	33.71	-38.2	27.9	43.97	54.0	20.3	V
1356.200	33.88	-37.7	28.9	42.64	54.0	20.1	V
4796.500	35.75	-34.1	34.0	35.86	54.0	18.3	V
5247.500	34.42	-34.3	34.2	34.56	54.0	19.6	V
8000.000	35.31	-32.2	35.8	31.68	54.0	18.7	٧

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)
1053.800	52.4	-38.3	28.2	62.51	74.0	21.6	V
1220.600	50.3	-38.2	27.9	60.58	74.0	23.7	V
1356.200	50.6	-37.7	28.9	59.39	74.0	23.4	V
3914.500	50.2	-34.7	33.3	51.51	74.0	23.8	V
4798.500	54.2	-34.0	34.0	54.20	74.0	19.8	V
7969.500	49.0	-32.2	35.7	45.55	74.0	25.0	V





B.2. Conducted Emission

Reference: FCC: Part 15.107(a).

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.

EUT operating mode: The EUT is operating in the charging mode and USB data mode if applicable.

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					

Test Settings:

Voltage(V)	Frequency(Hz)		
120	60		

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

Measurement results:

The measurement results showed as followed are worst cases, and the combinations of different batteries, cables and headsets were considered if applicable.

Function Type:

Setup	Function	Conclusion
Set.4	Charger+Real Camera+ RX WCDMA band 5	Pass
Set.5	Charger+Front Camera + RX LTE band 5	Pass
Set.4	Charger+MP4 + RX LTE band 12	Pass
Set.6	USB TO PC	Pass
Set.7	USB TO PC	Pass





Charger+Front Camera + RX LTE band 5 mode, Set.5

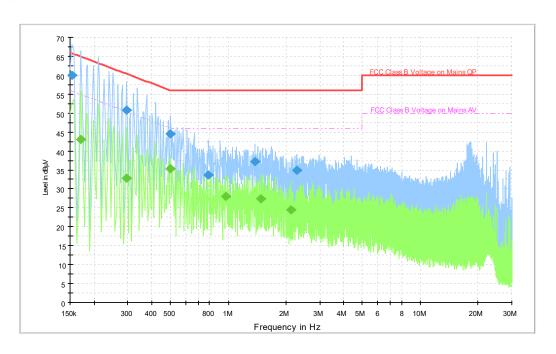


Figure A.9 Conducted Emission

Final Result 1

					_			
Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.154000	60.0	2000.0	9.000	On	L1	20.0	5.8	65.8
0.294000	50.9	2000.0	9.000	On	L1	19.9	9.6	60.4
0.498000	44.6	2000.0	9.000	On	L1	20.0	11.5	56.0
0.790000	33.7	2000.0	9.000	On	N	19.8	22.3	56.0
1.378000	37.1	2000.0	9.000	On	L1	19.9	18.9	56.0
2.282000	34.9	2000.0	9.000	On	L1	19.8	21.1	56.0

Final Result 2

Frequency	CAverage	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.170000	43.1	2000.0	9.000	On	L1	19.9	11.9	55.0
0.294000	32.7	2000.0	9.000	On	L1	19.9	17.7	50.4
0.498000	35.3	2000.0	9.000	On	L1	20.0	10.8	46.0
0.966000	28.1	2000.0	9.000	On	L1	19.9	17.9	46.0
1.478000	27.4	2000.0	9.000	On	L1	19.9	18.6	46.0
2.122000	24.4	2000.0	9.000	On	L1	19.8	21.6	46.0





USB connected to PC mode, Set.6

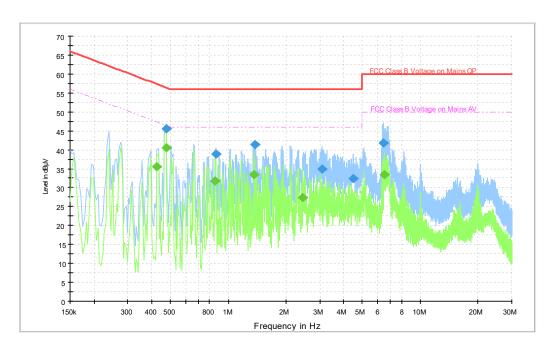


Figure A.11 Conducted Emission

Final Result 1

Frequency	QuasiPeak	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.474000	45.5	2000.0	9.000	On	L1	20.0	10.9	56.4
0.862000	38.9	2000.0	9.000	On	L1	19.9	17.1	56.0
1.374000	41.4	2000.0	9.000	On	L1	19.9	14.6	56.0
3.078000	34.8	2000.0	9.000	On	L1	19.8	21.2	56.0
4.470000	32.4	2000.0	9.000	On	L1	19.8	23.6	56.0
6.454000	41.9	2000.0	9.000	On	N	19.7	18.1	60.0

Final Result 2

Frequency	CAverage	Meas.	Bandwidth	Filter	Line	Corr.	Margin	Limit
(MHz)	(dBµV)	Time	(kHz)			(dB)	(dB)	(dBµV)
		(ms)						
0.426000	35.5	2000.0	9.000	On	L1	20.0	11.8	47.3
0.474000	40.6	2000.0	9.000	On	L1	20.0	5.9	46.4
0.854000	31.8	2000.0	9.000	On	L1	19.9	14.2	46.0
1.362000	33.5	2000.0	9.000	On	L1	19.9	12.5	46.0
2.450000	27.5	2000.0	9.000	On	N	19.6	18.5	46.0
6.470000	33.5	2000.0	9.000	On	N	19.7	16.5	50.0





ANNEX C: Persons involved in this testing

Test Item	Tester		
Radiated Emission	Sun Tianyuan		
Conducted Emission	Yan Hanchen		

END OF REPORT