



TEST REPORT

No. I16D00182-EMC

For

Client : Mobewire SAS

Production: MOBIPRINT (Wireless Printer)

Model Name : Mobiprint Lite

Hardware Version: V01

SoftwareVersion: V01

FCC ID: QPN-MPLITE

Issued date: 2016-09-14

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 ECIT Shanghai.

Test Laboratory:

ECIT Shanghai, East China Institute of Telecommunications

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Revision Version

Report Number	Revision	Date	Memo
I16D00182-EMC	00	2016-09-14	Initial creation of test report

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1. Test Laboratory

1.1. Testing Location

Company Name: ECIT Shanghai, East China Institute of Telecommunications
Address: 7F, G Area, No. 668, Beijing East Road, Huangpu District, Shanghai,
P. R. China
Postal Code: 200001
Telephone: 86-21-63843300
Fax: 86-21-63843301
FCC registration No: 489729

1.2. Testing Environment

Normal Temperature: 15-35°C
Relative Humidity: 30-60%

1.3. Project data

Project Leader: Xu Yuting
Testing Start Date: 08-26, 2016
Testing End Date: 09-14, 2016

1.4. Signature



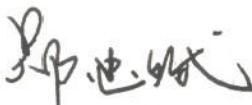
Qin Yabin

(Prepared this test report)



You Jinjun

(Reviewed this test report)



Zheng Zhongbin

Director of the laboratory

(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name: Mobiwire SAS
Address /Post: 79 AVENUE FRANCOIS ARAGO92017 NANTERRE CEDEX
France./ France 92017
Tel: +33 620 38 75 21

2.2. Manufacturer Information

Company Name: MOBIWIRE MOBILES (NINGBO) CO.,LTD
Address /Post: No.999,Dacheng East Road,FenghuaCity,Zhejiang / 315500
Tel: 0574 88916450

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

3.1. About EUT

EUT Description	MOBIPRINT (Wireless Printer)
Model name	Mobiprint Lite
Serial Number or IMEI	359128041805892/358128046805897
GSM Frequency Band	GSM850/900/1800/1900
HW Version	V01
SW Version	V01

3.2. Internal Identification of AE used during the test

AE ID*	Description	Model	SN
C04	Adapter	S024WM1200200	/
AE1	Desktop PC	OptiPlex 790 DT	X8RP1 A01 APCC
AE2	Notebook PC	ThinkPad Edge E430	/
AE3	LAN Cable	NA	/
AE4	VGA Cable	NA	/
AE5	RS232 Cable	NA	/
AE6	Keyboard	SK-8120	/
AE7	Mouse	M032B0B	/
AE8	SD Card	Kingston SDC4/4GB 77	/
AE9	USB Cable	/	/

*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	10-1-10 Edition
ANSI C63.4	Method of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

5. Test Results

5.1. Summary of Test Results

Items	Test List	Clause in FCC rules	Verdict
1	Radiated Emission	15.109(a)	Pass
2	Conducted Emission	15.107(a)	Pass

5.2. Statements

The Mobiprint Lite supporting GSM, manufactured by MOBIWIRE MOBILES (NINGBO) CO.,LTD is a new product for testing. ECIT only performed test cases which identified with Pass/Fail/Inc result in section 5.1.

ECIT has verified that the compliance of the tested device specified in section 3 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 4 of this test report.

Note: For the Data Link mode testing, the USB cable was provided by the laboratory.

6. Test Equipments Utilized

6.1 Radiated Emission Equipments list

No.	Name	Type	Series Number	Producer	Cal. Date	Cal. interval
1	Universal Radio Communication	CMU200	123126	R&S	2016-05-12	1
2	Test Receiver	ESU40	100307	R&S	2016-05-12	1
3	Trilog Antenna	VULB9163	VULB9163-515	Schwarzbeck	2014-11-05	3
4	Double Ridged Guide	ETS-3117	00135885	ETS	2014-05-06	3
5	EMI Test Software	EMC32 V9.15	NA	R&S	NA	NA

6.1 CE Equipments list

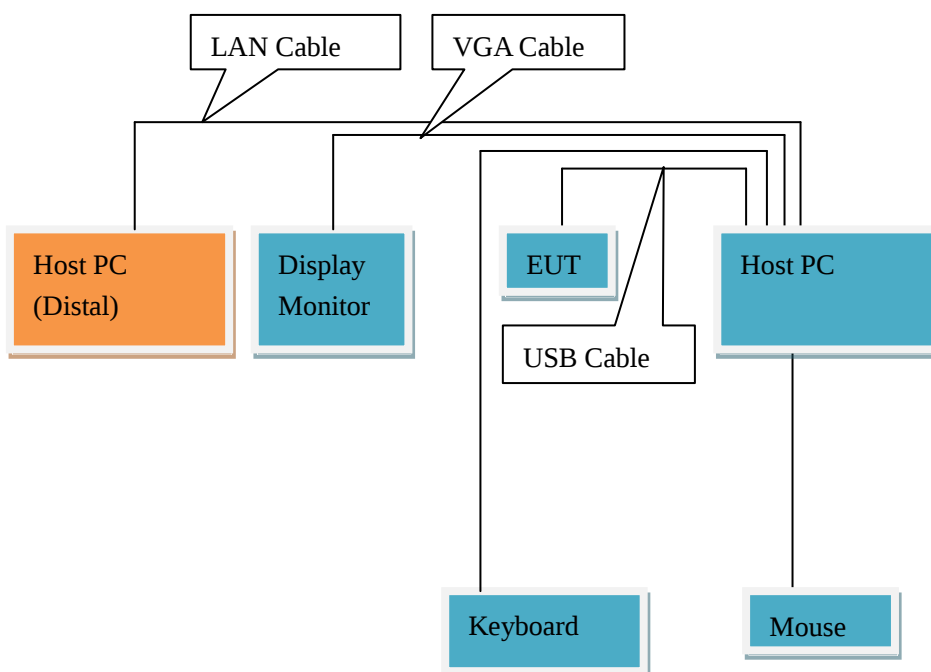
No.	Name	Type	Series Number	Producer	Cal. Date	Cal. interval
1	Universal Radio	CMU200	123123	R&S	2016-05-12	1
2	Test Receiver	ESCI	101235	R&S	2016-05-12	1
3	2-Line V-Network	ENV216	101380	R&S	2016-05-12	1
4	EMI Test Software	EMC32 V9.15	NA	R&S	NA	NA

7. System Configuration during Test

7.1 Test Mode

Test Item	Function Type
AC Conducted Emission	Mode 1: Idle + USB cable (Data Link with PC) <Figure 1>
Radiated Emission	Mode 1: Idle + USB cable (Data Link with PC) <Figure 1>
Remark: 1. All test modes are performed, only the worst cases test data are recorded in this report. 2. Data Link with PC means data application transferred mode between EUT and PC.	

7.2 Connection Diagram of Test System



<Figure 1>

8. Measurement Results

Only the worst test result was shown in this report.

8.1 Radiated Emission 30MHz-12.75GHz

Method of Measurement

For 30-1000MHz, the EUT was placed on the top of a rotating 0.8-m table above the ground at a semi-anechoic chamber. The distance between the EUT and the received antenna was 3 meters. The table was rotated 360 degree and the received antenna mounted on a variable-height antenna tower was varied from 1m to 4m to find the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement Tested in accordance with the procedures of ANSI C63.4-2014, section 8.3.

For 1000-12750MHz, The maximal emission value was acquired by adjusting the antenna height, The table was rotated 360 degree to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna were set during the measurement.

Limits for Radiated Emission at a measuring distance of 3m

Frequency Range (MHz)	Quasi-Peak (dBuV/m)
30-88	40
88-216	43.5
216-960	46
Above 960	54

Frequency Range (MHz)	Peak (dBuV/m)	Average (dBuV/m)
Above 1000	74	54

Test conditions

Frequency Range (MHz)	RBW/VBW	Sweep Time (s)
30-1000	120KHz/300KHz	Auto
1000-12750	1MHz/3MHz	Auto

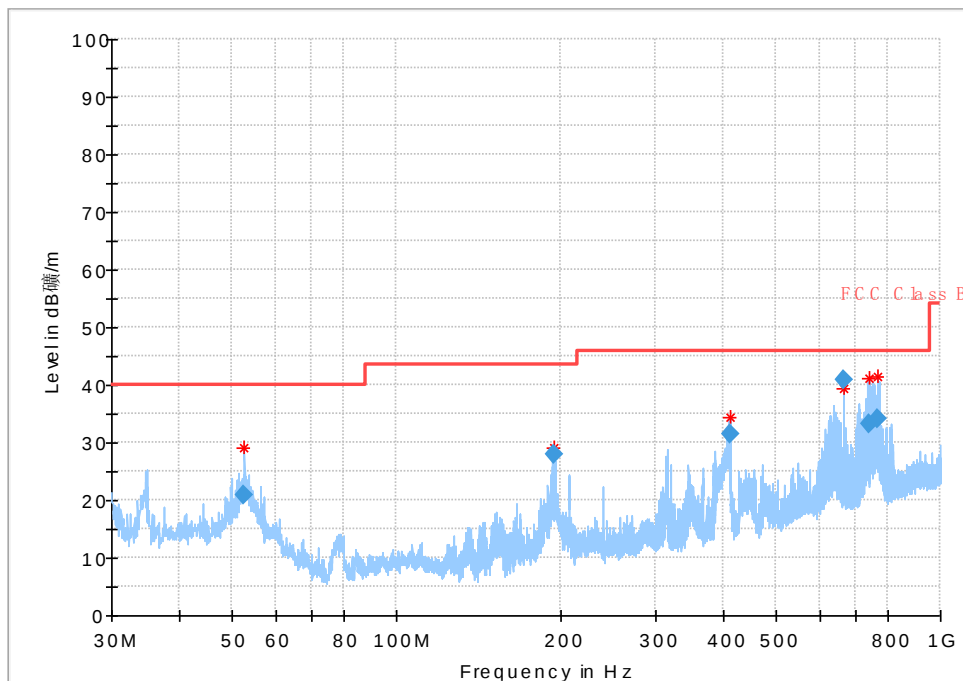
Uncertainty Measurement

The measurement uncertainty is 5.71dB (k=2).

Test Results

Mode 1: Idle + USB cable (Data Link with PC)

Frequency Range: 30MHz – 1GHz



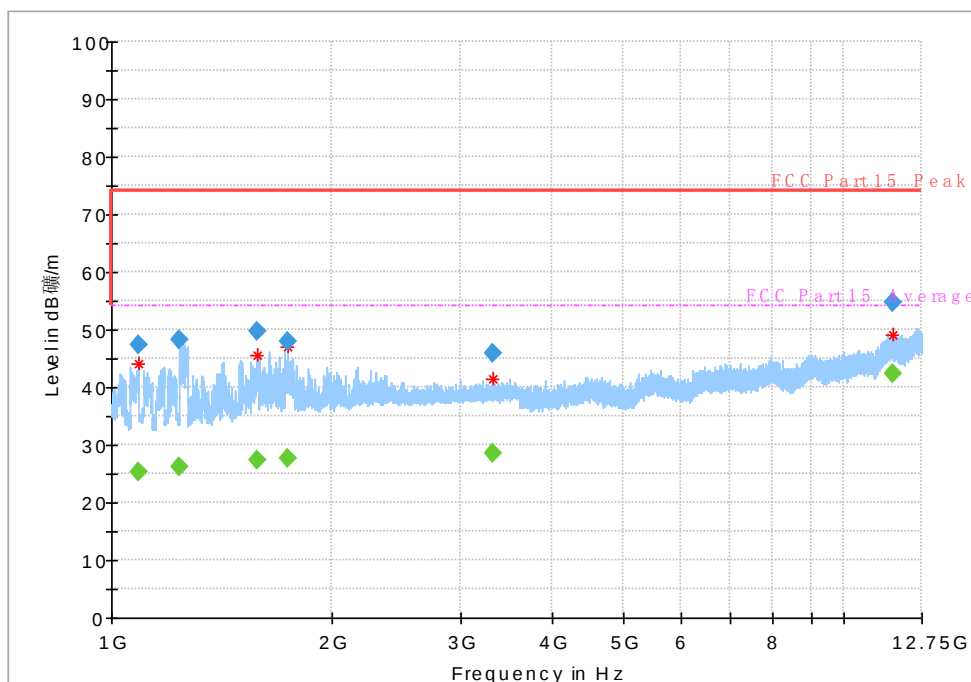
Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
52.634728	20.96	40.00	19.04	1000.0	120.000	100.0	V	-29.0	-25.2
194.304788	27.99	43.50	15.51	1000.0	120.000	225.0	H	340.0	-25.1
411.409116	31.33	46.00	14.67	1000.0	120.000	100.0	V	171.0	-17.0
664.131368	40.93	46.00	5.07	1000.0	120.000	100.0	H	126.0	-12.0
739.419144	33.10	46.00	12.90	1000.0	120.000	100.0	V	171.0	-11.2
765.604116	34.11	46.00	11.89	1000.0	120.000	100.0	H	117.0	-10.8

Note:

- Emission level(QP)=Raw value by receiver + Corr(Antenna factor + cable loss - preamplifier gain)
- The raw value is used to calculate by software which is not shown in the sheet.
- Margin=limit value – emission level.

Mode 1: Idle + USB cable (Data Link with PC)

Frequency Range: 1GHz –12.75GHz



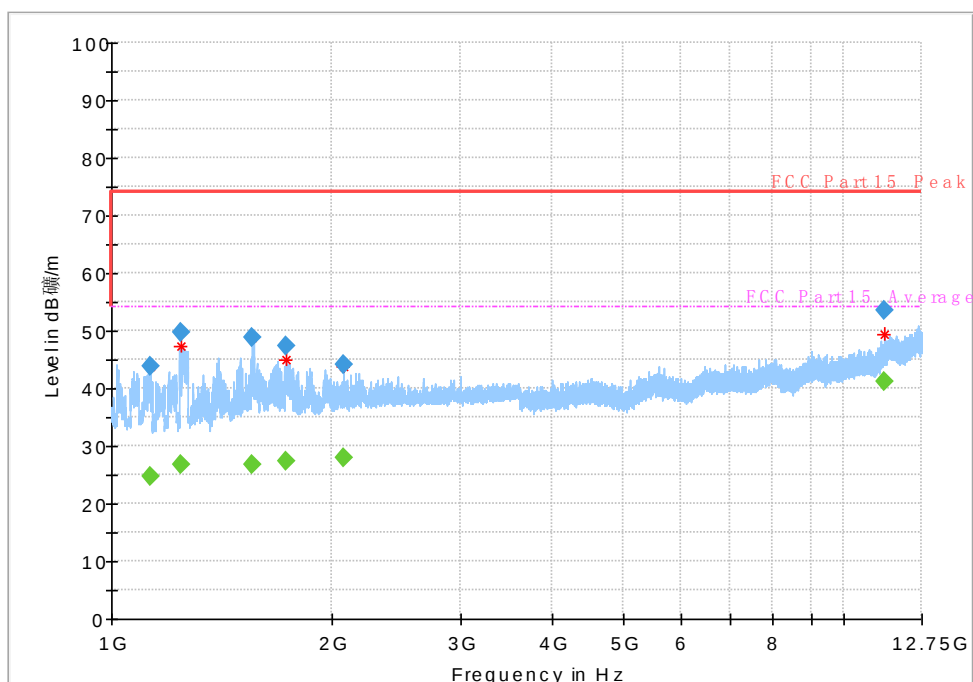
Vertical

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
1088.798733	47.40	---	74.00	26.60	50.0	1000.000	100.0	V	183.0
1088.798733	---	25.30	54.00	28.70	50.0	1000.000	100.0	V	183.0
1239.873200	48.29	---	74.00	25.71	50.0	1000.000	100.0	V	177.0
1239.873200	---	26.04	54.00	27.96	50.0	1000.000	100.0	V	177.0
1578.068200	49.83	---	74.00	24.17	50.0	1000.000	100.0	V	235.0
1578.068200	---	27.29	54.00	26.71	50.0	1000.000	100.0	V	235.0
1743.581200	47.95	---	74.00	26.05	50.0	1000.000	100.0	V	139.0
1743.581200	---	27.60	54.00	26.40	50.0	1000.000	100.0	V	139.0
3321.409334	45.85	---	74.00	28.15	50.0	1000.000	200.0	V	334.0
3321.409334	---	28.53	54.00	25.47	50.0	1000.000	200.0	V	334.0
11654.686000	54.60	---	74.00	19.40	50.0	1000.000	200.0	V	101.0
11654.686000	---	42.27	54.00	11.73	50.0	1000.000	200.0	V	101.0

Note:

- Emission level(peak or average)=Raw value by receiver + Corr(Antenna factor+ cable loss - preamplifier gain)
- The raw value is used to calculate by software which is not shown in the sheet.
- Margin=limit value – emission level.



Horizontal

Final Result

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
1132.609066	43.93	---	74.00	30.07	50.0	1000.000	100.0	H	179.0
1132.609066	---	24.60	54.00	29.40	50.0	1000.000	100.0	H	179.0
1243.309466	---	26.89	54.00	27.11	50.0	1000.000	100.0	H	175.0
1243.309466	49.85	---	74.00	24.15	50.0	1000.000	100.0	H	175.0
1553.144933	---	26.74	54.00	27.26	50.0	1000.000	100.0	H	235.0
1553.144933	48.78	---	74.00	25.22	50.0	1000.000	100.0	H	235.0
1729.092866	---	27.25	54.00	26.75	50.0	1000.000	100.0	H	140.0
1729.092866	47.35	---	74.00	26.65	50.0	1000.000	100.0	H	140.0
2068.868600	44.09	---	74.00	29.91	50.0	1000.000	100.0	H	191.0
2068.868600	---	27.90	54.00	26.10	50.0	1000.000	100.0	H	191.0
11314.701933	---	41.16	54.00	12.84	50.0	1000.000	300.0	H	269.0
11314.701933	53.51	---	74.00	20.49	50.0	1000.000	300.0	H	269.0

Note:

1. Emission level(peak or average)=Raw value by receiver + Corr(Antenna factor+ cable loss - preamplifier gain)
2. The raw value is used to calculate by software which is not shown in the sheet.
3. Margin=limit value – emission level.

8.2 Conducted Emission

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 with the band 150 kHz to 30MHz shall not exceed the limits. Both lines of the power mains connected to the EUT were checked for maximum conducted interference. Tested in accordance with the procedures of ANSI C63.4-2014, section 7.3

Limit of Conducted Emission

Frequency Range (MHz)	Conducted Limit (dBuV)	
	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 Condition in Charging Mode

Voltage (V)	Frequency (Hz)	RBW	Sweep Time (s)
120	60	9 KHz	Auto

Uncertainty Measurement

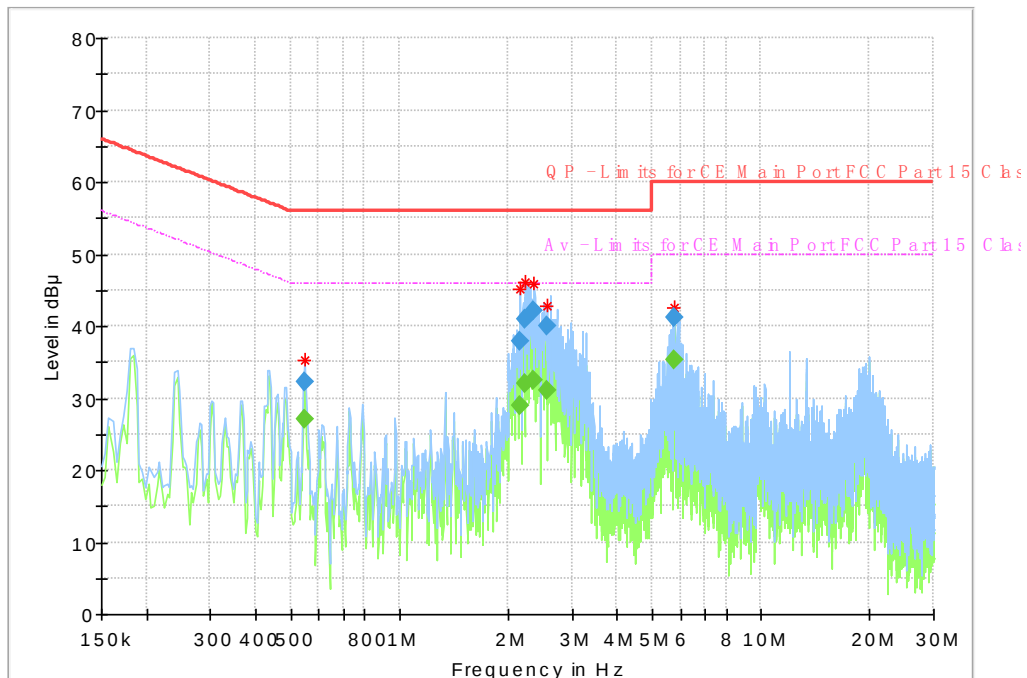
The measurement uncertainty is 3.55dB (k=2).

Test Results

Mode 1: Idle + USB cable (Data Link with PC)

Frequency Range:

150kHz – 30MHz



Frequency (MHz)	QuasiPeak (dB μ V)	Average (dB μ V)	Limit (dB μ V)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.545512	---	27.14	46.00	18.86	1000.0	9.000	N	ON	9.7
0.545512	32.33	---	56.00	23.67	1000.0	9.000	N	ON	9.7
2.157412	---	28.83	46.00	17.17	1000.0	9.000	N	ON	9.7
2.157412	37.99	---	56.00	18.01	1000.0	9.000	N	ON	9.7
2.228306	---	31.90	46.00	14.10	1000.0	9.000	L1	ON	9.7
2.228306	41.04	---	56.00	14.96	1000.0	9.000	L1	ON	9.7
2.362631	42.16	---	56.00	13.84	1000.0	9.000	L1	ON	9.7
2.362631	---	32.36	46.00	13.64	1000.0	9.000	L1	ON	9.7
2.567850	39.92	---	56.00	16.08	1000.0	9.000	L1	ON	9.7
2.567850	---	31.15	46.00	14.85	1000.0	9.000	L1	ON	9.7
5.731950	---	35.24	50.00	14.76	1000.0	9.000	N	ON	9.7
5.731950	41.29	---	60.00	18.71	1000.0	9.000	N	ON	9.7

Note:

- Emission level(quasi-peak or Average peak)=Raw value by receiver + Corr(Insertion loss+ cable loss)
- The raw value is used to calculate by software which is not shown in the sheet.
- Margin=limit value – emission level.

Annex A Accreditation Certificate**Accredited Laboratory**

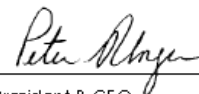
A2LA has accredited

EAST CHINA INSTITUTE OF TELECOMMUNICATIONS*Shanghai, People's Republic of China*

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of any additional program requirements in the field of Electrical. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).

Presented this 10th day of December 2014.

President & CEO
For the Accreditation Council
Certificate Number 3682.01
Valid to February 28, 2017

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

*****End the Report*****