







# ISO/IEC17025 Accredited Lab.

Report No: FCC 1408164-01 File reference No: 2014-09-05

Applicant: Supper sonic INC

Product: Mobile

Model No: SC-155, SC-150, SV-6, SV-7, SC-151, SC-152, SC-153, SC-145,

SC-140, SC-159, SC-160, SC-166

Trademark: OBO

Test Standards: FCC Part 15 Subpart B: 2012

Test result: It is herewith confirmed and found to comply with the requirements

set up by ANSI C63.4&FCC Part 15 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: Sep 05, 2014

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd. Chegongmiao, FuTian District, Shenzhen, CHINA.

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timewaytech.com

Report No: 1408164-01 Page 2 of 33

Date: 2014-09-05



# **Special Statement:**

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

## **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

### FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

### IC- Registration No.: IC5205A-02

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-02.

Page 3 of 33

Report No: 1408164-01

Date: 2014-09-05



# **Test Report Conclusion**

### Content

1.0	General Details	4
1.1	Test Lab Details	4
1.2	Applicant Details	4
1.3	Description of EUT	4
1.4	Test Uncertainty.	4
1.5	Submitted Sample	4
1.6	Test Duration.	4
2.0	List of Measurement Equipment	5
2.1	Conducted Emission Test.	5
2.2	Radiated electromagnetic disturbance test.	5
2.3	Auxiliary Equipment	5
3.0	Technical Details	6
3.1	Investigations Requested.	6
3.2	Test Standards.	6
4.0	Power line Conducted Emission Test.	7
5.0	Radiated Disturbance Test.	11
6.0	FCC ID Label	18
7.0	Photo of testing	19



#### 1.0 General Details

Date: 2014-09-05

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO., LTD

Address: East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd.

CheGongMiao, FuTian District, Shenzhen, CHINA.

Telephone: (755) 83448688 Fax: (755) 83442996

1.2 Applicant Details

Applicant: Supper sonic INC

Address: 6555 Bandini Blvd. Commerce CA 90400

Telephone: 323-201-5060 Fax: 323-201-5069

1.3 Description of EUT

Product: Mobile

Manufacturer: ShenZhen Jingwah-Kaoge Communication Technology Co., Ltd. Address: ShenZhen Jingwah-Kaoge Communication Technology Co., Ltd. Floor5th, Bldg 4, Jingwah Square, NO1, Huafa Road, Futian

District, Shenzhen, China

Brand Name: OBO
Model Number: SC-155

Additional Model Number: SC-150, SV-6, SV-7, SC-151, SC-152, SC-153, SC-145, SC-140, SC-159,

SC-160, SC-166

Power Adapter Model No.: S050-100-US

Input: 100-240V, 50/60Hz, 0.2A; Output: 5.0V, 1.0A

1.4 Submitted Sample: 2 Samples

The sample tested by

1.5 Test Duration: 2014-08-28 to 2014-09-04

1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB Radiated Emissions Uncertainty = 4.7dB

1.7 Test Engineer

leng any

Print Name: Terry Tong

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



#### 2.0 List of Measurement Equipment

#### 2.1 **Conducted Emission Test**

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESH3	860905/006	RS	2014.08.21	1Year
Spectrum Analyzer	ESA-L1500A	US37451154	HP	2014.08.21	1Year
PULSE LIMITER	ESH3-Z2	100281	RS	2014.08.22	1Year
LISN	ESH3-Z5	100294	RS	2014.08.22	1Year
LISN	ESH3-Z5	100253	RS	2014.08.22	1Year
LISN	LS16C	10010947251	AFJ	2014.08.21	1Year
LISN (Three Phase)	NSLK 8126	8126453	Schwarebeck	2014.08.22	1Year

#### 2.2 Radiated electromagnetic disturbance test

				Calibration	Calibration
Name	Model No.	Serial No.	Manufacturer	Date	Cycle
EMI Test Receiver	ESVD	100008	RS	2014.08.21	1Year
Coaxial Switch	MP59B	M70585	ANRITSU	N/A	N/A
Spectrum Analyzer	8595E	3441A00893	НР	2014.06.24	1Year
Amplifier	8447D	2727A05017	HP	2014.08.22	1Year
Bilog Antenna	VULB9163	9163/340	Schwarebeck	2014.08.23	1Year
Horn Antenna	BBHA 9120D	9120D-631	Schwarebeck	2014.08.23	1Year
Horn Antenna	BBHA 9170	BBHA9170265	Schwarebeck	2014.08.23	1Year

#### 2.3 **Auxiliary Equipment**

					FCC DOC/
Name	Model No.	Serial No.	Manufacturer	Cable	ID
				Data cable of	
Monitor	P2450		SAMSUNG	1.5m length	FCC DOC
Passive Earphone					-
PC	R400		IBM		FCC DOC
Mouse	M-F105		L.SEletron		FCC DOC
TF					

Report No: 1408164-01 Page 6 of 33

#### 3.0 **Technical Details**

Date: 2014-09-05

3.1 **Investigations Requested** Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

3.2 Test Standards

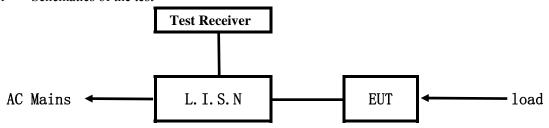
FCC Part 15 Subpart B: 2012

Date: 2014-09-05



#### 4.0 Conducted Power line Test

### 4.1 Schematics of the test



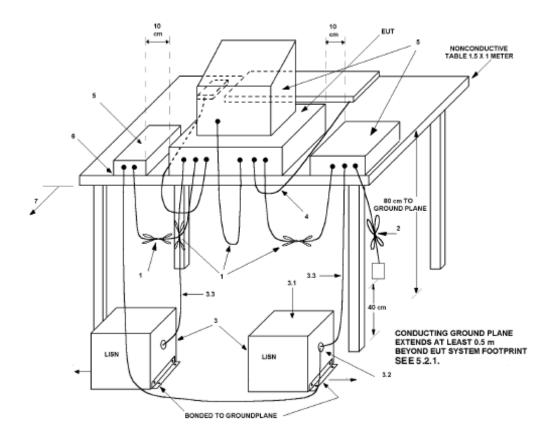
**EUT: Equipment Under Test** 

#### 4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2003. Cables and peripherals were moved to find the maximum emission levels for each frequency.

Actual Working Voltage and Frequency: 120V~, 60Hz

Block diagram of Test setup



The report refers only to the sample tested and does not apply to the bulk.

Report No: 1408164-01 Page 8 of 33

TIMEWAY TESTING LARS

### 4.3 Power line conducted Emission Limit

Fraguanay (MHz)	Class A Li	mits dB(μV)	Class B Limits dB(µV)		
Frequency(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level	
$0.15 \sim 0.50$	79.00	66.00	66.00~56.00*	56.00~46.00*	
$0.50 \sim 5.00$	73.00	60.00	56.00	46.00	
5.00 ~ 30.00	73.00	60.00	60.00	50.00	

Notes: 1. \*decreasing linearly with logarithm of frequency.

2. The tighter limit shall apply at the transition frequencies

# 4.4 Test Results

Date: 2014-09-05

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

Date: 2014-09-05



# A: Conducted Emission on Live Terminal (150kHz to 30MHz)

### **EUT Operating Environment**

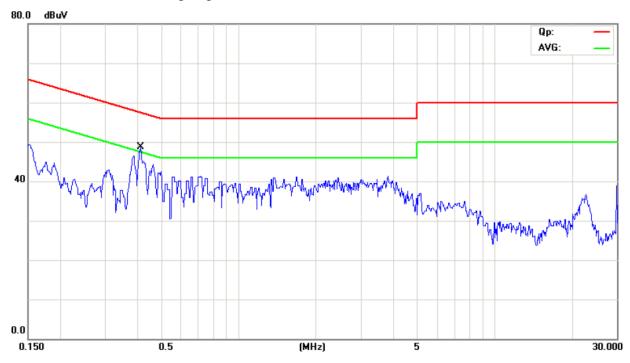
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Communication with PC** 

**Equipment Level: Class B** 

**Results: PASS** 

Please refer to following diagram for individual



No. Mk.	Freq.	Reading Level		Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.4116	31.70	11.28	42.98	57.62	-14.64	QP	
2	0.4116	3.20	11.28	14.48	47.62	-33.14	AVG	

Date: 2014-09-05



# B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

### **EUT Operating Environment**

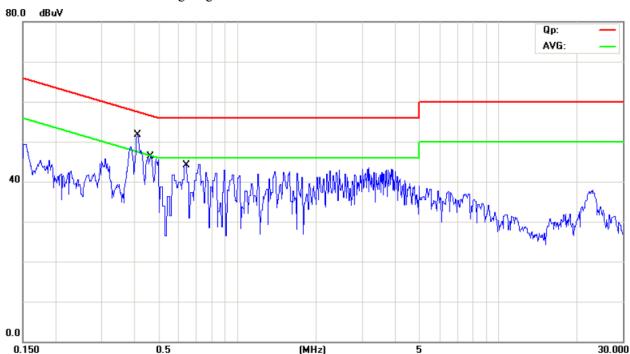
Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Communication with PC** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1 *	0.4115	38.40	11.28	49.68	57.62	-7.94	QP	
2	0.4115	5.20	11.28	16.48	47.62	-31.14	AVG	
3	0.4641	29.10	11.33	40.43	56.62	-16.19	QP	
4	0.4641	-9.30	11.33	2.03	46.62	-44.59	AVG	
5	0.6375	30.80	11.52	42.32	56.00	-13.68	QP	
6	0.6375	11.20	11.52	22.72	46.00	-23.28	AVG	

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

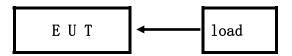
Report No: 1408164-01 Page 11 of 33

Date: 2014-09-05



### 5.0 Radiated Disturbance Test

#### 5.1 Schematics of the test

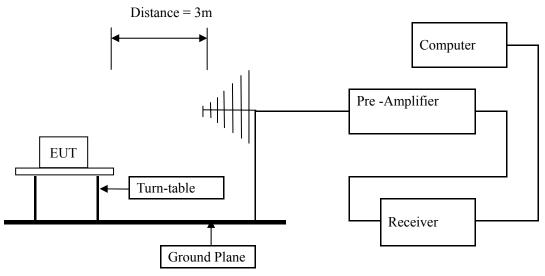


### 5.2 Test Method and test Procedure:

The EUT was tested according to ANSI C63.4 –2003; The frequency spectrum from 30MHz to 5GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. For measurement above 1GHz, peak values with RBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK

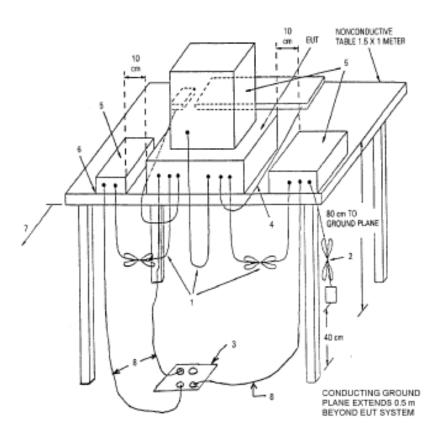
Actual Working Voltage and Frequency: 120V~, 60Hz

# **Block diagram of Test setup**



Date: 2014-09-05





#### 5.3 Radiated Emission Limit

Frequency Range (MHz)	Distance (m)	Field strength (dB µ V/m)
30-88	3	40.00
88-216	3	43.50
216-960	3	46.00
Above 960	3	54.00

Note: 1. The lower limit shall apply at the transition frequencies

2. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.

#### 5.4 Test result

The frequency spectrum from 30MHz to 18GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120kHz. For measurement above 1GHz, peak values with RBW=VBW=1MHz and PK detector. AV value with RBW=1MHz, VBW=10Hz and PK. Measurements were made at 3 meters.

Report No: 1408164-01 Page 13 of 33

Date: 2014-09-05



#### Test result

# General Radiated Emission Data and Harmonics Radiated Emission Data

Radiated Emission In Horizontal/ In Vertical (30MHz----1000MHz)

**EUT set Condition:** Communication with PC

**Results: Pass** 

Frequency (MHz)	Level@3m (dB \u03b4 V/m)	Antenna Polarity	Limit@3m (dB \mu V/m)
35.520	26.83	Н	40.00
383.960	42.74	Н	46.00
30.120	35.24	V	40.00
385.960	32.85	V	46.00

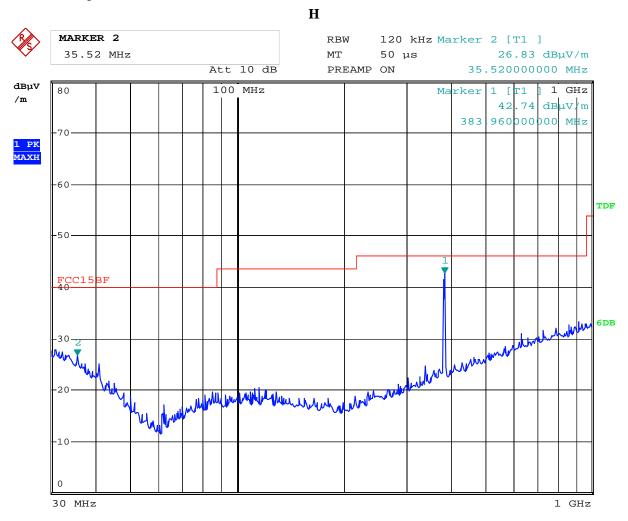
Page 14 of 33

Report No: 1408164-01

Date: 2014-09-05



# Test Figure:



Date: 29.AUG.2014 16:10:42

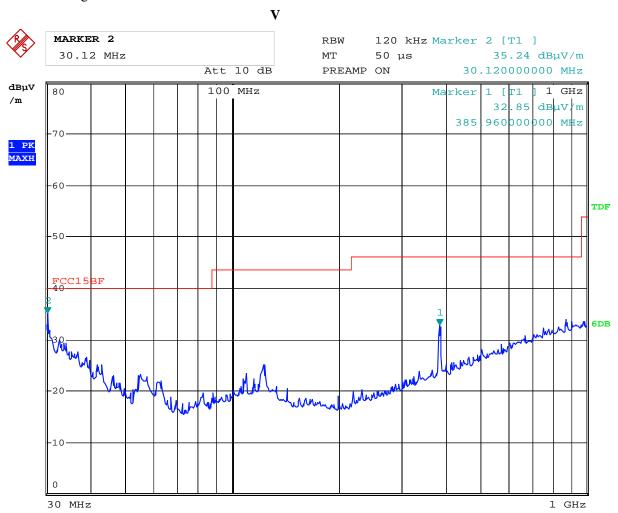
Page 15 of 33

Report No: 1408164-01

Date: 2014-09-05



# Test Figure:



Date: 29.AUG.2014 16:14:10

Date: 2014-09-05



# Radiated Disturbance (1000MHz----18000MHz)

**EUT Operating Environment** 

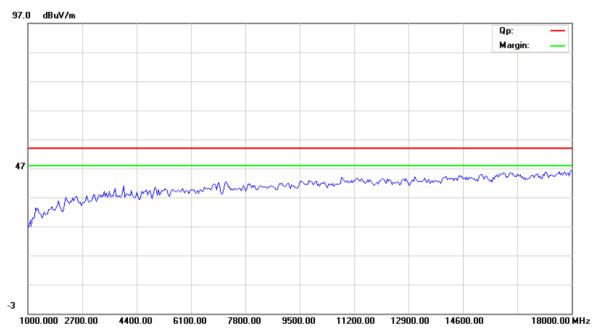
Temperature:25℃ Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Connected to PC** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



Frequency (MHz)	Level@3m (dBµV/m)	Antenna Polarity	Limit@3m (dBµV/m)
		Н	54(AV)

Note: Due to the final radiated level much less than the limit, so necessary take down final radiated level

Report No: 1408164-01 Page 17 of 33

Date: 2014-09-05



# Radiated Disturbance (1000MHz----18000MHz)

# **EUT Operating Environment**

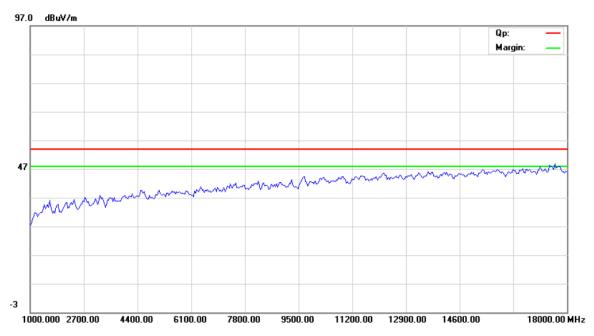
Temperature: 25°C Humidity: 75%RH Atmospheric Pressure: 101 KPa

**EUT set Condition: Connected to PC** 

**Equipment Level: Class B** 

**Results: Pass** 

Please refer to following diagram for individual



Freque	ency (MHz)	Level@3m (dBµV/m)	Antenna Polarity	Limit@3m (dBµV/m)
			V	54(AV)

Note: Due to the final radiated level much less than the limit, so necessary take down final radiated level

Report No: 1408164-01 Page 18 of 33

Date: 2014-09-05



### 6.0 FCC ID Label

### FCC ID: 2AC5R-SC155

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

# **Mark Location:**



Page 19 of 33

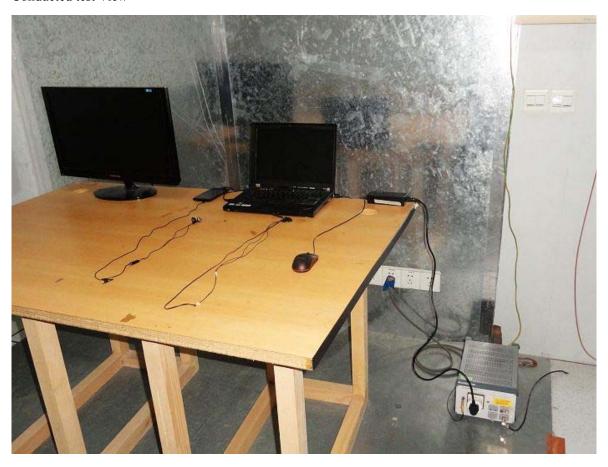
Report No: 1408164-01

Date: 2014-09-05



# 7.0 Photo of testing

# Conducted test View--



Report No: 1408164-01 Date: 2014-09-05

#### 7.2 Radiated emission test view--





The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



# Photographs - EUT

#### Outside view





The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



Outside view





The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



Outside view





The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 24 of 33

Report No: 1408164-01

Date: 2014-09-05



Outside view





The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



Outside view



Inside view



The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



Inside view





The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



Inside view





The report refers only to the sample tested and does not apply to the bulk.

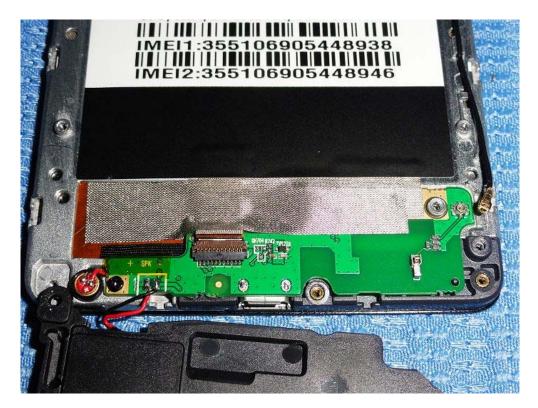
This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



Inside view





The report refers only to the sample tested and does not apply to the bulk.

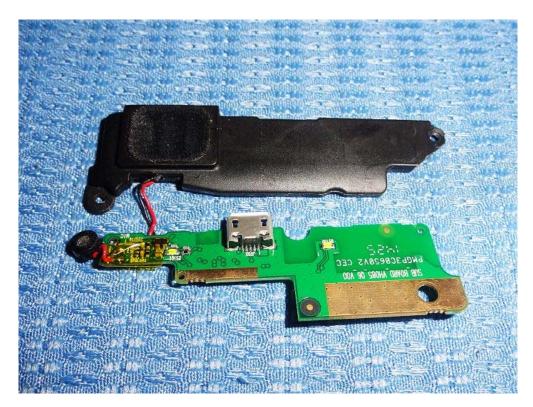
This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



Inside view





The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 30 of 33

Report No: 1408164-01

Date: 2014-09-05



Inside view





The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



Inside view





The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No: 1408164-01 Date: 2014-09-05



### Inside view





The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2014-09-05



Inside view





-End of the report-

The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the Shenzhen Timeway Technology Consulting co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen Timeway Technology Consulting co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.