



卓時檢測
TIMEWAY TESTING LABORATORY



NO.L2292

ISO/IEC17025 Accredited Lab.

Report No:

FCC 0611117

File reference No:

2007-07-04

Applicant: CML DEVELOPMENT LIMITED

Product: FMCUP

Model No: SN-FMCUP

Trademark: Macally

Test Standards: FCC Part 15 Subpart C, Paragraph 15.239

Test result:

It is herewith confirmed and found to comply with the requirements set up by ANSI C63.4&FCC Part 15 Subpart C, Paragraph 15.239 regulations for the evaluation of electromagnetic compatibility

Approved By

Jack Chung

Jack Chung
Manager

Dated: July 04,2007

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

5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District, Shenzhen,CHINA.

Tel (755) 83448688

Fax (755) 83442996



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 CNAL. This approval result is accepted by MRA of APLAC.

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

CNAL-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAL/AC01:2002 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:1999 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.: IC5205

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.: 5205.

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



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 | Submitted Sample | 4 |
| 1.5 | Test Duration | 5 |
| 1.6 | Test Uncertainty | 5 |
| 1.7 | Test By | 5 |
| 2.0 | List of Measurement Equipment | 5 |
| 3.0 | Technical Details | 7 |
| 3.1 | Summary of Test Results | 7 |
| 3.2 | Test Standards | 7 |
| 4.0 | EUT Modification | 7 |
| 5.0 | Power Line Conducted Emission Test | 8 |
| 5.1 | Schematics of the Test | 8 |
| 5.2 | Test Method and Test Procedure | 8 |
| 5.3 | Configuration of the EUT | 8 |
| 5.4 | EUT Operating Condition | 9 |
| 5.5 | Conducted Emission Limit | 9 |
| 5.6 | Test Result | 9 |
| 6.0 | Radiated Emission test | 10 |
| 6.1 | Test Method and Test Procedure | 10 |
| 6.2 | Configuration of the EUT | 10 |
| 6.3 | EUT Operation Condition | 10 |
| 6.4 | Radiated Emission Limit | 11 |
| 6.5 | Test Result | 11 |
| 7.0 | Band Edge | 19 |
| 7.1 | Test Method and Test Procedure | 19 |
| 7.2 | Radiated Test Setup | 19 |
| 7.3 | Configuration of the EUT | 19 |
| 7.4 | EUT Operating Condition | 19 |
| 7.5 | Band Edge Limit | 20 |
| 7.6 | Band Edge Test Result | 21 |
| 8.0 | FCC ID Label | 23 |
| 9.0 | Photo of Test Setup and EUT View | 23 |

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 advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer, supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



1.0 General Details

1.1 Test Lab Details

Name : SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD
Address: 5/F,Block 4, Anhua Industrial Zone.,No.8 TaiRan Rd.CheGongMiao,FuTian District,
Shenzhen,CHINA.
Telephone: (755) 83448688
Fax: (755) 83442996
Site on File with the Federal Communications Commission – United States
Registration Number: 899988
For 3m & 10 m OATS
Site Listed with Industry Canada of Ottawa, Canada
Registration Number: IC: 5205
For 3m & 10 m OATS

1.2 Applicant Details

Applicant: CML DEVELOPMENT LIMITED
Address: Unit 705-708, Cyber Times Tower A, Tian An Cyber Park, Shenzhen
Telephone: 0086-755-83474202
Fax: 0086-755-83474201

1.3 Description of EUT

| | |
|-----------------------|---|
| Product: | FMCUP |
| Brand Name: | Macally |
| Model Number: | SN-FMCUP |
| Additional Model Name | N/A |
| Additional Trade Name | N/A |
| Rating: | 12V DC input |
| Operation Frequency | 88.1-107.9MHz |
| Channel Spacing | 0.1MHz |
| Type of Modulation | FM |
| Antenna Designation | A permanent fixed antenna, which is built-in, designed as an indispensable part of the EUT. |

1.4 Submitted Sample

1 Sample

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 advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Report No: 0611117

Date: 2007-07-04



Page 5 of 31

1.5 Test Duration

2006-11-22 to 2007-07-04

1.6 Test Uncertainty

Conducted Emissions Uncertainty = $\pm 3.0\text{dB}$

Radiated Emissions Uncertainty = $\pm 6.0\text{dB}$

1.7 Test Engineer

Terry Tang

The sample tested by _____

Print Name: Terry Tang

| 2.0 | Test Equipments | | | | |
|----------------------------|-----------------|-----------|------------|--------------|------------|
| Instrument Type | Manufacturer | Model | Serial No. | Date of Cal. | Due Date |
| ESPI Test Receiver | ROHDE&SCHWARZ | ESPI 3 | 100379 | 2006-12-06 | 2007-12-05 |
| Absorbing Clamp | ROHDE&SCHWARZ | MDS-21 | 100126 | 2006-12-06 | 2007-12-05 |
| TWO Line-V-NETW | ROHDE&SCHWARZ | EZH3-Z5 | 100294 | 2006-12-06 | 2007-12-05 |
| TWO Line-V-NETW | ROHDE&SCHWARZ | EZH3-Z5 | 100253 | 2006-12-06 | 2007-12-05 |
| Ultra Broadband ANT | ROHDE&SCHWARZ | HL562 | 100157 | 2006-12-03 | 2007-12-05 |
| ESDV Test Receiver | ROHDE&SCHWARZ | ESDV | 100008 | 2007-03-30 | 2008-03-29 |
| 4-WIRE ISN | ROHDE&SCHWARZ | ENY 41 | 830663/044 | 2007-02-19 | 2008-02-18 |
| GG ENY22 Double 2-Wire ISN | ROHDE&SCHWARZ | ENY22 | 83066/016 | 2007-02-19 | 2008-02-18 |
| Impuls-Begrenzer | ROHDE&SCHWARZ | ESH3-Z2 | 100281 | 2007-02-19 | 2008-02-18 |
| System Controller | CT | SC100 | - | 2007-02-19 | 2008-02-18 |
| Printer | EPSON | PHOTO EX3 | CFNH234850 | 2007-02-19 | 2008-02-18 |
| FM-AM Signal Generator | JUNGJIN | SG-150M | 389911177 | 2007-02-19 | 2008-02-18 |
| Color TV Pattern Generator | PHILIPS | PM5418 | LO621747 | 2007-02-19 | 2008-02-18 |

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 advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof 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.

In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



| | | | | | |
|---------------------------------|------------------------|-----------|-----------------------|------------|------------|
| Computer | IBM | 8434 | 1S8434KCE99BLX LO* | - | - |
| Oscillator | KENWOOD | AG-203D | 3070002 | 2007-02-23 | 2008-02-22 |
| Spectrum Analyzer | HAMEG | HM5012 | - | - | - |
| Power Supply | LW | APS1502 | - | - | - |
| 5K VA AC Power Source | California Instruments | 5001iX | 56060 | 2007-02-19 | 2007-02-18 |
| CDN | EM TEST | CDN M2/M3 | - | 2007-02-19 | 2008-02-18 |
| Attenuation | EM TEST | ATT6/75 | - | 2007-02-19 | 2008-02-18 |
| Resistance | EM TEST | R100 | - | 2007-02-19 | 2008-02-18 |
| Electromagnetic Injection Clamp | LITTHI | EM101 | 35708 | 2007-02-19 | 2008-02-18 |
| Inductive Components | EM TEST | MC2630 | - | 2007-02-19 | 2008-02-18 |
| Antenna | EM TEST | MS100 | - | 2007-02-19 | 2008-02-18 |
| Signal Generator | ROHDE&SCHWARZ | SMT03 | 100029 | 2007-02-06 | 2008-02-05 |
| Power Amplifier | AR | 150W1000 | 300999 | 2007-02-06 | 2008-02-05 |
| Field probe | Holaday | HI-6005 | 105152 | 2007-02-06 | 2008-02-05 |
| Bilog Antenna | Chase | CBL6111C | 2576 | 2007-02-06 | 2008-02-05 |
| Loop Antenna | EMCO | 6502 | 00042960 | 2007-02-06 | 2008-02-05 |
| ESPI Test Receiver | ROHDE&SCHWARZ | ESI26 | 838786/013 | 2007-02-06 | 2008-02-05 |
| 3m OATS | -- | -- | N/A | 2007-02-06 | 2008-02-05 |

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



3.0 Technical Details

3.1 Summary of test results

| The EUT has been tested according to the following specifications: | | | |
|--|-------------------------------|--------|--|
| Standard | Test Type | Result | Notes |
| FCC Part 15, Paragraph 15.207 | Conducted Emission Test | PASS | Complies |
| FCC Part 15 Subpart C Paragraph 15.239 Limit | Field Strength of Fundamental | PASS | Complies |
| FCC Part 15, Paragraph 15.209 | Radiated Emission Test | PASS | Meets Class B Limit |
| Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the Radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)). | Band Edge Test | PASS | The field strength of any Emissions, which appear Outside of this band, shall not exceed the general Radiated emission limits in Section 15.209. |

3.2 Test Standards

FCC Part 15 Subpart C, Paragraph 15.239

4.0 EUT Modification

No modification by Shenzhen Timeway Technology Consulting Co.,Ltd

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

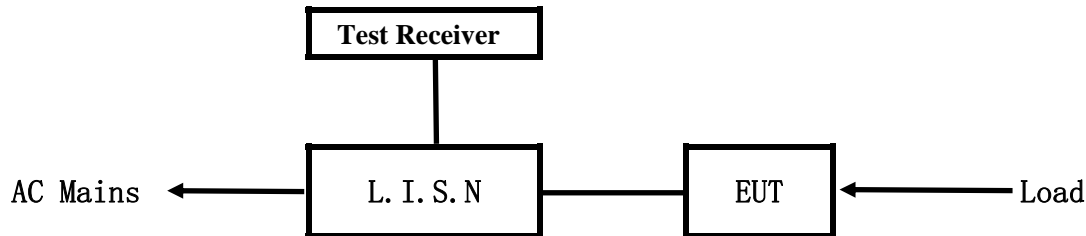
This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen Timeway Technology Consulting Co.,Ltd. It may not be reproduced in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co.,Ltd to his customer. Supplier or other 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.

In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting Co.,Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



5. Power Line Conducted Emission Test

5.1 Schematics of the test

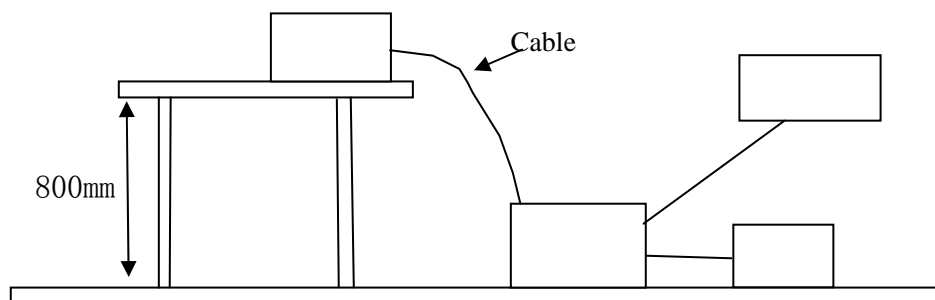


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2001. 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 –2001.

Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2001. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

Note: EUT can be powered by vehicle with 12V electrical system or batteries. During radiated emission test, EUT power by a regulated DC power supply because it produced more emission at this time.

A. EUT

| Device | Manufacturer | Model | FCC ID |
|--------|-------------------------|----------|----------|
| FMCUP | CML Development Limited | SN-FMCUP | UAPFMCUP |

B. Internal Device

| Device | Manufacturer | Model | FCC ID/DOC |
|--------|--------------|-------|------------|
| N/A | | | |

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 advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof 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.

In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting Co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



C. Peripherals

| Device | Manufacturer | Model | FCC ID/DOC | Cable |
|---------------------------|--------------|----------|------------|------------------------------|
| Oscillator | Kenwood | AG-203D | N/A | Audio cable 1.2m un-shielded |
| Regulated DC power supply | LWDQGS | APS-1502 | N/A | N/A |

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2003.

A Setup the EUT and simulators as shown on follow

B Set the volume to the maximum on the MP3 Player

C Adjust the working frequencies of the EUT and make it work under the specified frequency

5.5 Power line conducted Emission Limit according to Paragraph 15.207

| Frequency (MHz) | Class A Limits (dB μ V) | | Class B Limits (dB μ V) | |
|--------------------|-----------------------------|---------------|-----------------------------|---------------|
| | Quasi-peak Level | Average Level | Quasi-peak Level | Average Level |
| 0.15 ~ 0.50 | 79.0 | 66.0 | 66.0~56.0* | 56.0~46.0* |
| 0.50 ~ 5.00 | 73.0 | 60.0 | 56.0 | 46.0 |
| 5.00 ~ 30.00 | 73.0 | 60.0 | 60.0 | 50.0 |

- Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The tighter limit shall apply at the transition frequencies

5.6 Test Results

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

Note: **Owing to DC operation of EUT, this test item is not performed**

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd to his customer. Supplier or other 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.

In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting Co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

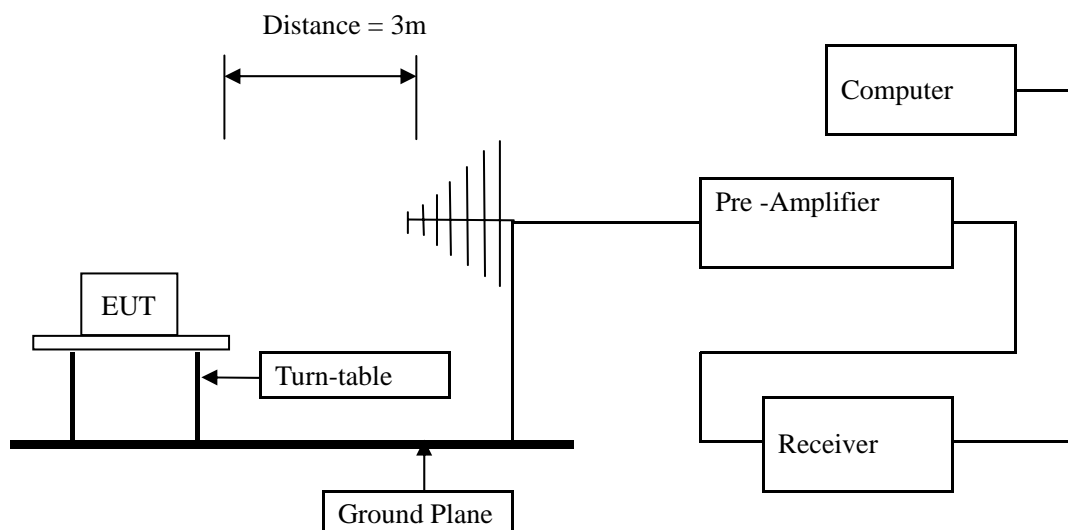


6 Radiated Emission Test

6.1 Test Method and test Procedure:

- (1) The EUT was tested according to ANSI C63.4 –2001. The radiated test was performed at Timeway Laboratory. This site is on file with the FCC laboratory division, Registration No.899988
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.4-2001.
- (3) The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz . Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (6) The antenna polarization : Vertical polarization and Horizontal polarization.

Block diagram of Test setup



6.2 Configuration of The EUT

Same as section 5.3 of this report

6.3 EUT Operating Condition

Same as section 5.4 of this 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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

A FCC Part 15 Subpart C Paragraph 15.239 Limit

| Fundamental Frequency (MHz) | Field Strength of Fundamental (3m) | |
|-----------------------------|------------------------------------|--------|
| | uV/m | dBuV/m |
| 88 to 108 | 250 | 47.96 |

- Note:
1. RF Field Strength (dBuV) = 20 log RF Voltage (uV)
 2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
 3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

B. Frequencies in restricted band are complied to limit on Paragraph 15.209.

| Frequency Range (MHz) | Distance (m) | Field strength (dB μ V/m) |
|-----------------------|--------------|-------------------------------|
| 30-88 | 3 | 40.0 |
| 88-216 | 3 | 43.5 |
| 216-960 | 3 | 46.0 |
| Above 960 | 3 | 54.0 |

- Note:
1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
 2. In the Above Table, the tighter limit applies at the band edges.
 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT

6.5 Test result

A Fundamental Radiated Emission Data

| | | | |
|---------------|------------------------------------|--------------|---------|
| Product: | FMCUP | Test Mode: | 88.1MHz |
| Test Item: | Fundamental Radiated Emission Data | Temperature: | 25°C |
| Test Voltage: | 12V | Humidity: | 56% |
| Test Result: | Pass | | |

| Frequency (MHz) | Emission PK/AV (dBuV/m) | Horiz / Vert | Limits PK/AV (dBuV/m) | Margin (dB) |
|-----------------|-------------------------|--------------|-----------------------|---------------|
| 88.103 | 34.83/33.19 | Horizontal | 67.96/47.96 | -33.13/-14.77 |
| 88.103 | 29.26/27.83 | Vertical | 67.96/47.96 | -38.70/-20.13 |

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 advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof 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.

In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



| | | | |
|---------------|------------------------------------|--------------|---------|
| Product: | FMCUP | Test Mode: | 97.1MHz |
| Test Item: | Fundamental Radiated Emission Data | Temperature: | 25°C |
| Test Voltage: | 12V | Humidity: | 56% |
| Test Result: | Pass | | |

| Frequency (MHz) | Emission PK/AV (dBuV/m) | Horiz / Vert | Limits PK/AV (dBuV/m) | Margin (dB) |
|--------------------|----------------------------|-----------------|--------------------------|----------------|
| 98.104 | 36.28/35.05 | Horizontal | 67.96/47.96 | -29.70/-12.91 |
| 98.104 | 35.89/34.27 | Vertical | 67.96/47.96 | -32.07/-13.69 |

| | | | |
|---------------|------------------------------------|--------------|----------|
| Product: | FMCUP | Test Mode: | 107.9MHz |
| Test Item: | Fundamental Radiated Emission Data | Temperature: | 25°C |
| Test Voltage: | 12V | Humidity: | 56% |
| Test Result: | Pass | | |

| Frequency (MHz) | Emission PK/AV (dBuV/m) | Horiz / Vert | Limits PK/AV (dBuV/m) | Margin (dB) |
|--------------------|----------------------------|-----------------|--------------------------|----------------|
| 107.902 | 35.10/33.96 | Horizontal | 67.96/47.96 | -32.86/-14.00 |
| 107.902 | 29.49/28.15 | Vertical | 67.96/47.96 | -38.47/-19.81 |

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



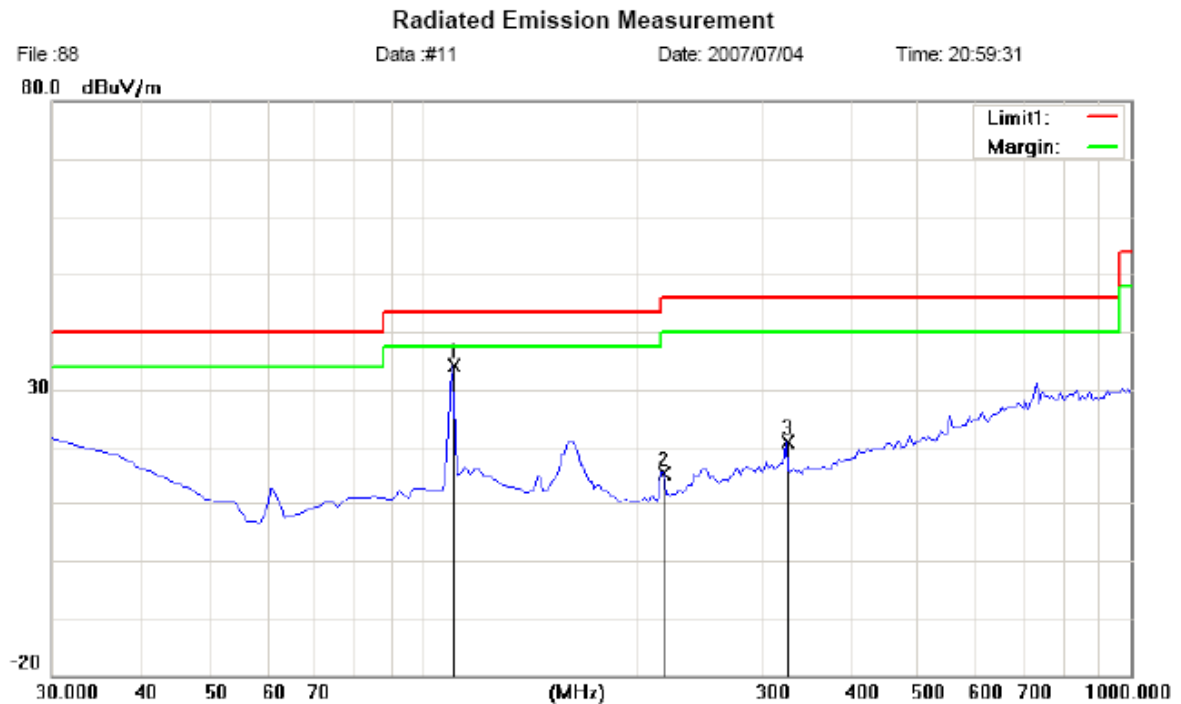
B. **General Radiated Emission Data and Harmonics Radiated Emission Data**

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

EUT set Condition: 107.9MHz

Results: Pass

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dB μ V/m) | Antenna Polarity | Limit@3m (dB μ V/m) |
|-----------------|-------------------------|------------------|-------------------------|
| -- | -- | H | -- |

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



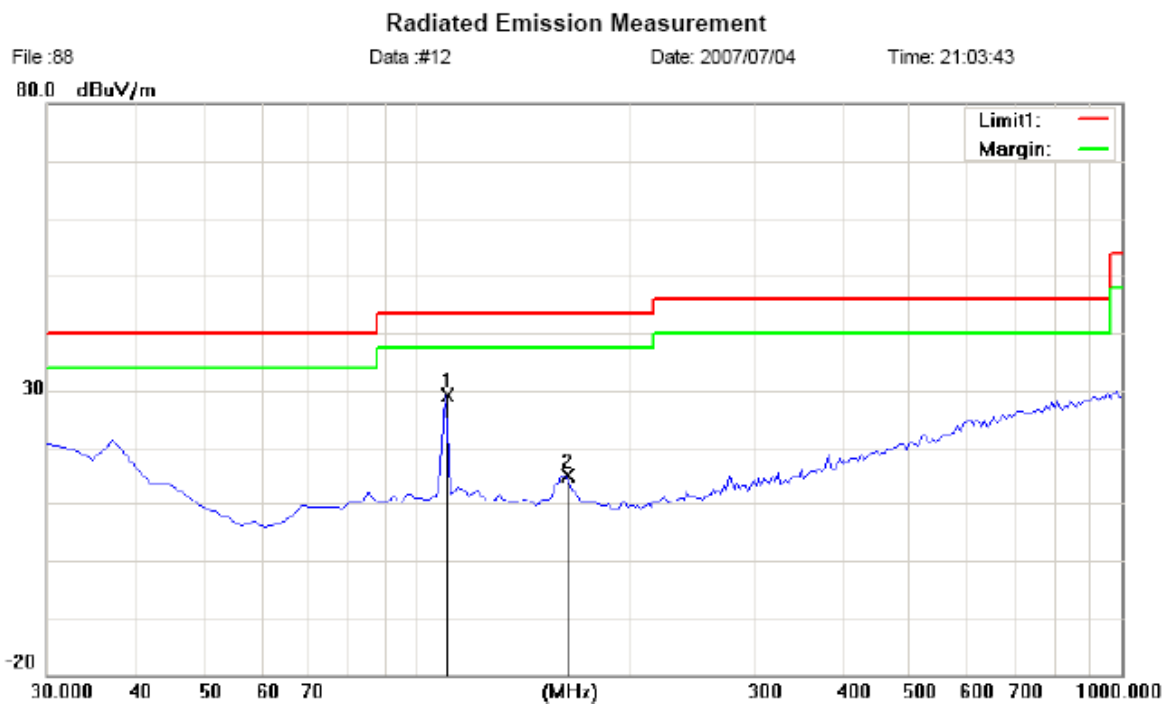
B. General Radiated Emission Data and Harmonics Radiated Emission Data

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

EUT set Condition: 107.9MHz

Results: Pass

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dB μ V/m) | Antenna Polarity | Limit@3m (dB μ V/m) |
|-----------------|-------------------------|------------------|-------------------------|
| -- | -- | V | -- |

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



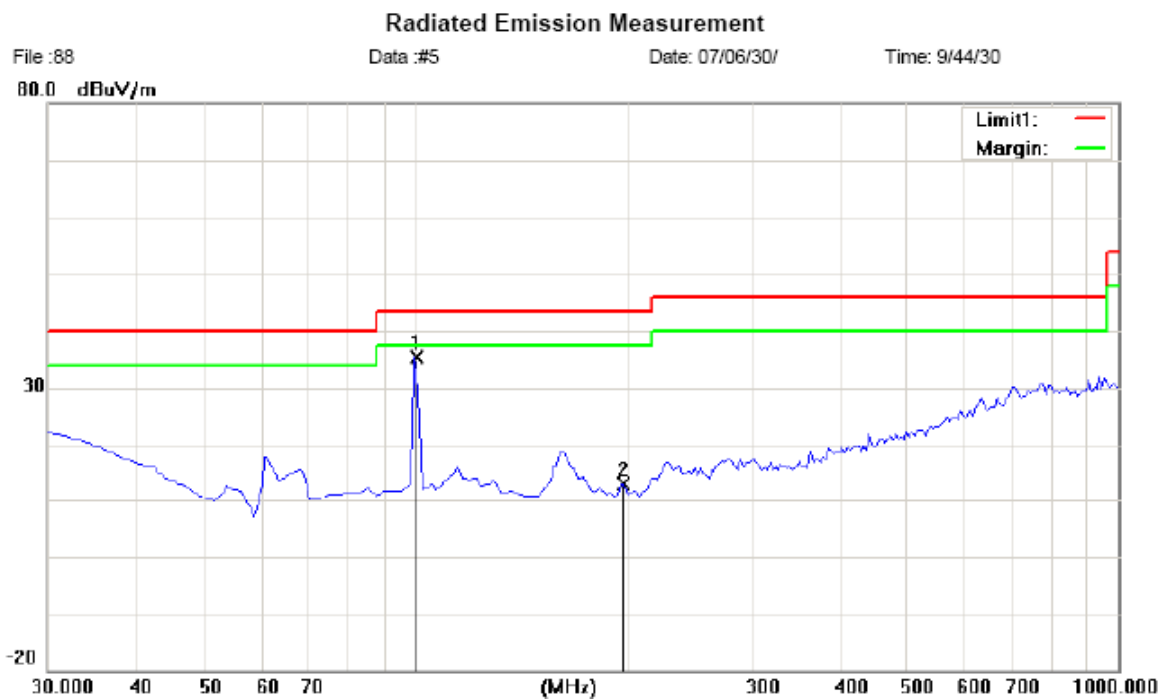
B. **General Radiated Emission Data and Harmonics Radiated Emission Data**

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

EUT set Condition: 98.1MHz

Results: Pass

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dB μ V/m) | Antenna Polarity | Limit@3m (dB μ V/m) |
|-----------------|-------------------------|------------------|-------------------------|
| -- | -- | H | -- |

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



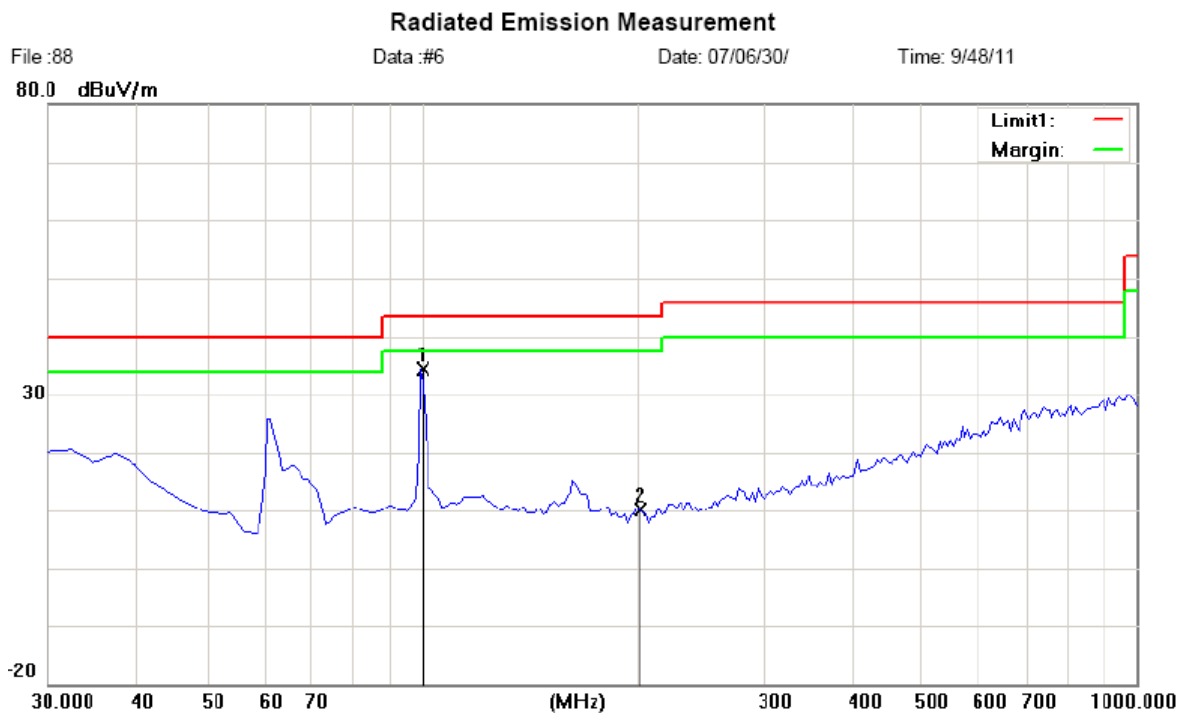
B. **General Radiated Emission Data and Harmonics Radiated Emission Data**

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

EUT set Condition: 98.1MHz

Results: Pass

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dB μ V/m) | Antenna Polarity | Limit@3m (dB μ V/m) |
|-----------------|-------------------------|------------------|-------------------------|
| -- | -- | V | -- |

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



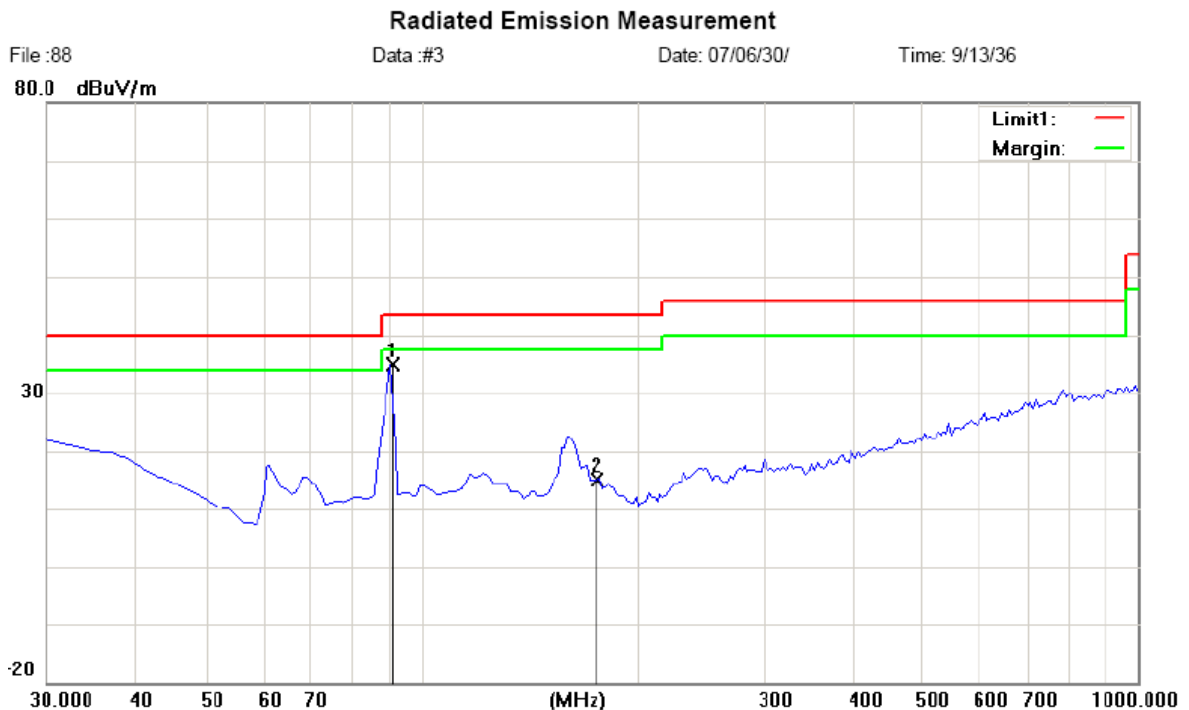
B. General Radiated Emission Data and Harmonics Radiated Emission Data

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

EUT set Condition: 88.1MHz

Results: Pass

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dB μ V/m) | Antenna Polarity | Limit@3m (dB μ V/m) |
|-----------------|-------------------------|------------------|-------------------------|
| -- | -- | H | -- |

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



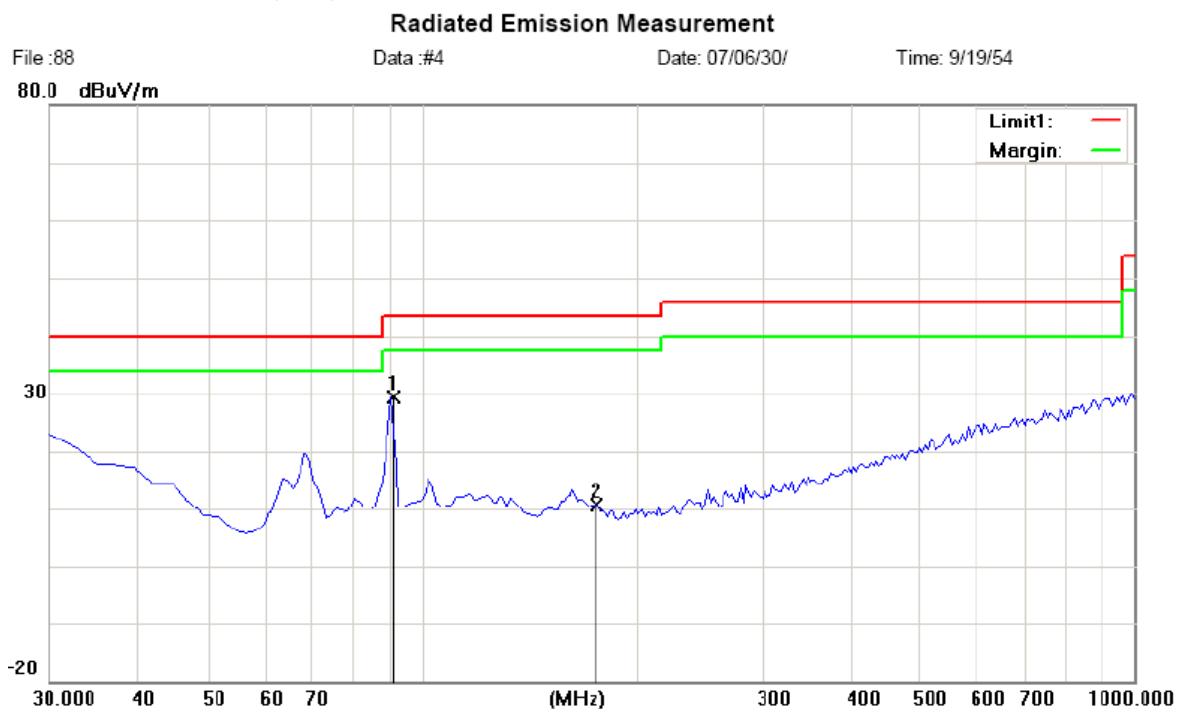
B. General Radiated Emission Data and Harmonics Radiated Emission Data

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

EUT set Condition: 88.1MHz

Results: Pass

Please refer to following diagram for individual



| Frequency (MHz) | Level@3m (dB μ V/m) | Antenna Polarity | Limit@3m (dB μ V/m) |
|-----------------|-------------------------|------------------|-------------------------|
| -- | -- | V | -- |

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

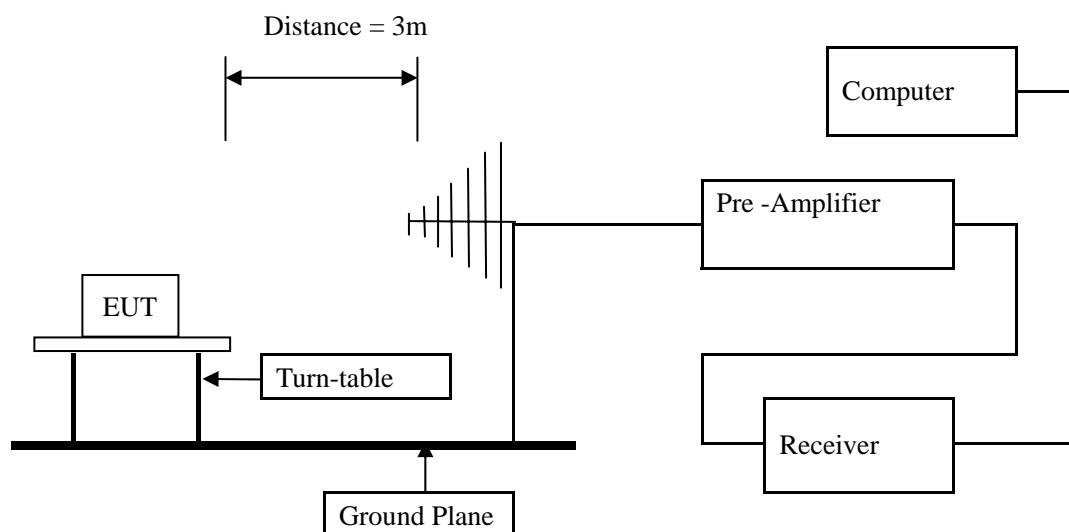


7. Band Edge

7.1 Test Method and test Procedure:

- (1) The EUT was tested according to ANSI C63.4 –2001. The radiated test was performed at Timeway Laboratory. This site is on file with the FCC laboratory division, Registration No.899988
- (2) The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. All readings are above 1 GHz , peak values with a resolution bandwidth of 1 MHz . Measurements were made at 3 meters.
- (3) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (4) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "QP" in the data table.
- (5) The antenna polarization : Vertical polarization and Horizontal polarization.

7.2 Radiated Test Setup



For the actual test configuration , please refer to the related items – Photos of Testing

7.3 Configuration of The EUT

Same as section 5.3 of this report

7.4 EUT Operating Condition

Same as section 5.3 of this 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 advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



7.5 Band Edge Limit

- (1) Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the Operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88-108 MHz.
- (2) The field strength of any emissions within the permitted 200 kHz band shall not exceed 250 microvolts/meter At 3 meters. The emission limit in this paragraph is based on measurement instrumentation employing an Average detector. The provisions in Section 15.35 for limiting peak emissions apply.
- (3) Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated Emission limits specified in Section 15.209(a) (see Section 15.205(c)).

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 advertising. The client to whom the report is issued may, however, show or send it or a certified copy thereof 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.

In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting Co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

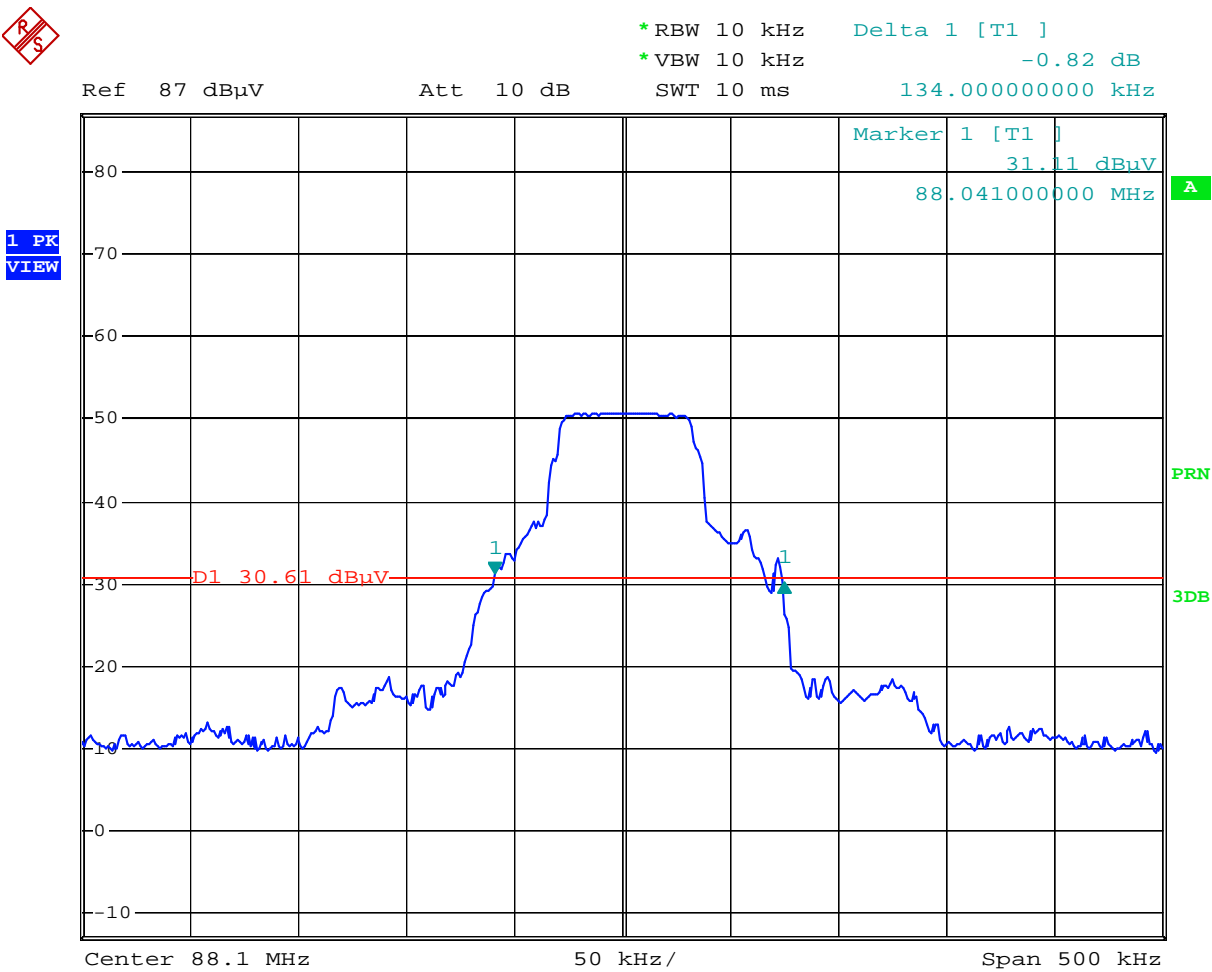


TEST REPORT

7.6 Band Edge Test Result

| | | | |
|---------------|------------------------------------|--------------|---------|
| Product: | FMCUP | Test Mode: | 88.1MHz |
| Test Item: | Fundamental Radiated Emission Data | Temperature: | 25°C |
| Test Voltage: | 12V | Humidity: | 56% |
| Test Result: | Pass | | |

Test Figure:



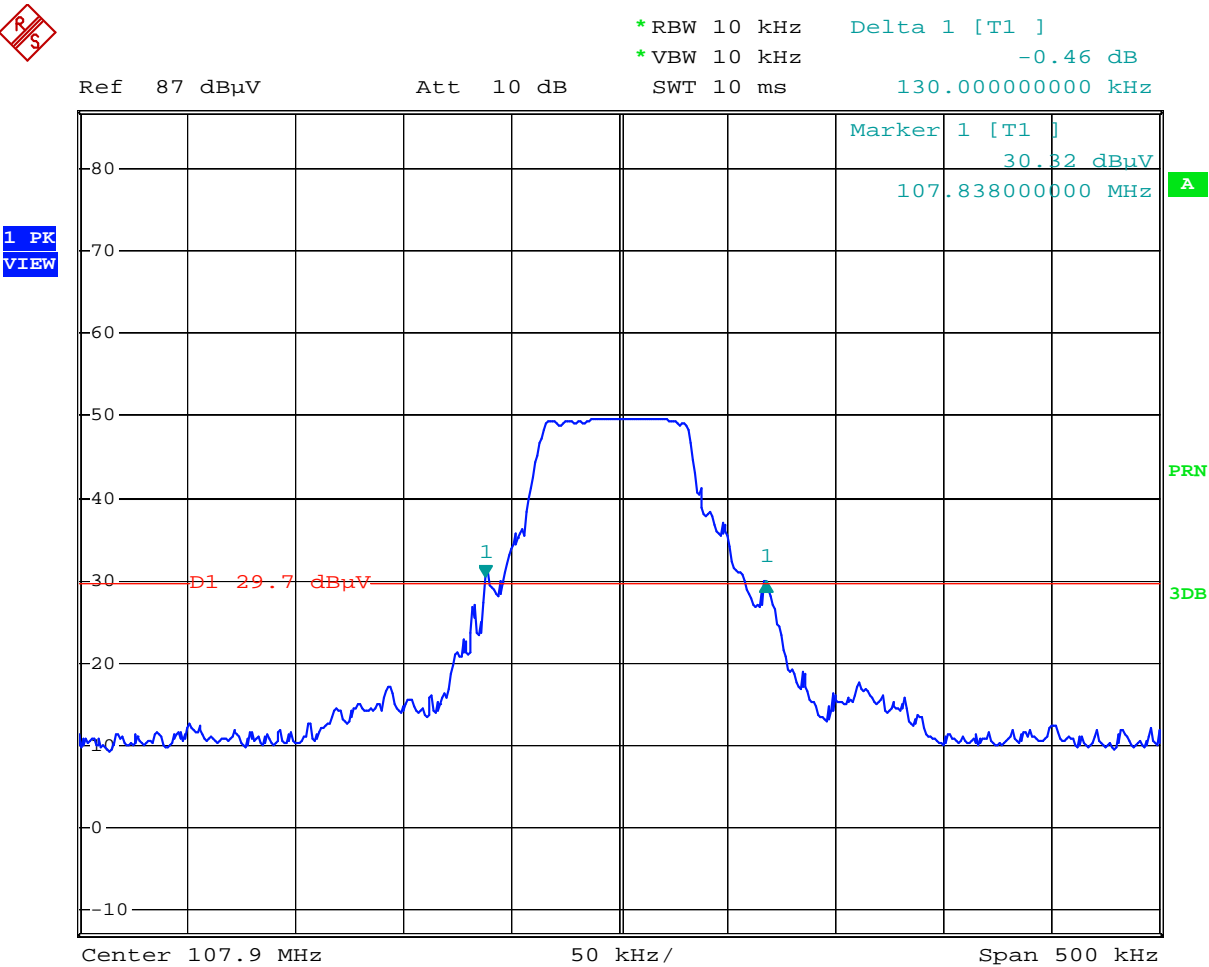
Date: 4.JUL.2007 09:36:42

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it or a certified copy thereof 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.
In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting Co.,Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



| | | | |
|---------------|------------------------------------|--------------|----------|
| Product: | FMCUP | Test Mode: | 107.9MHz |
| Test Item: | Fundamental Radiated Emission Data | Temperature: | 25℃ |
| Test Voltage: | 12V | Humidity: | 56% |
| Test Result: | Pass | | |

Test Figure:



Date: 4.JUL.2007 09:30:52

- Note:
- (1) The field strength of any emissions which appear outside of this band shall not exceed the general radiated emission limits in Section 15.209.
 - (2) The average measurement was not performed when the peak measured data under the limit of average detection.
 - (3) The Uncertainty of conducted emission= ± 20 kHz

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 advertising. 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.
In the event of the improper use of the report. The Shenzhen Timeway Technology Consulting co.,Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



8.0 FCC ID Label

FCC ID: UAPFMCUP

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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:



FCC ID Label Location

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



9.0 Photo of testing

9.1 Conducted test View—N/A

9.2 Radiated emission test view





9.3 Photo for the EUT

Outside View



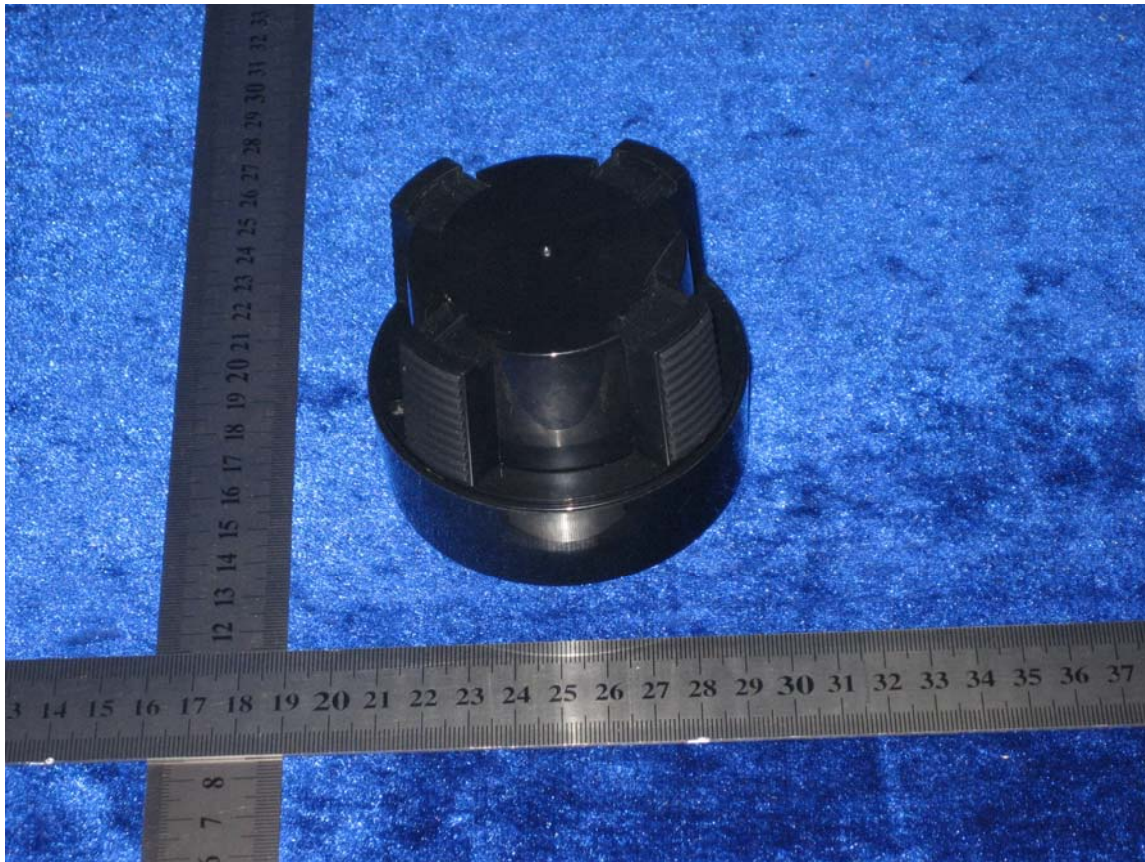
The report refers only to the sample tested and does not apply to the bulk.

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer, supplier or other 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.

In the event of the improper use of the report, the Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Outside View



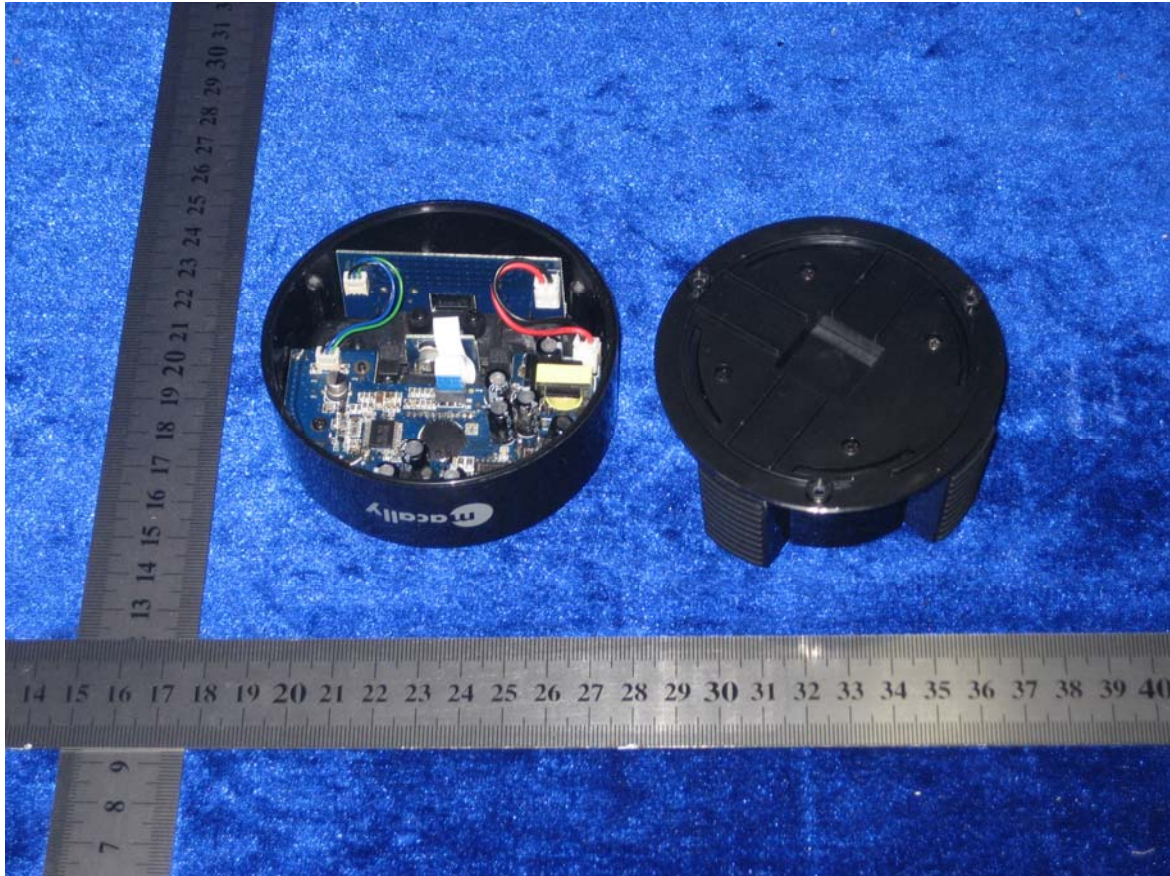
The report refers only to the sample tested and does not apply to the bulk.

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer, supplier or other 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.

In the event of the improper use of the report, the Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Outside View



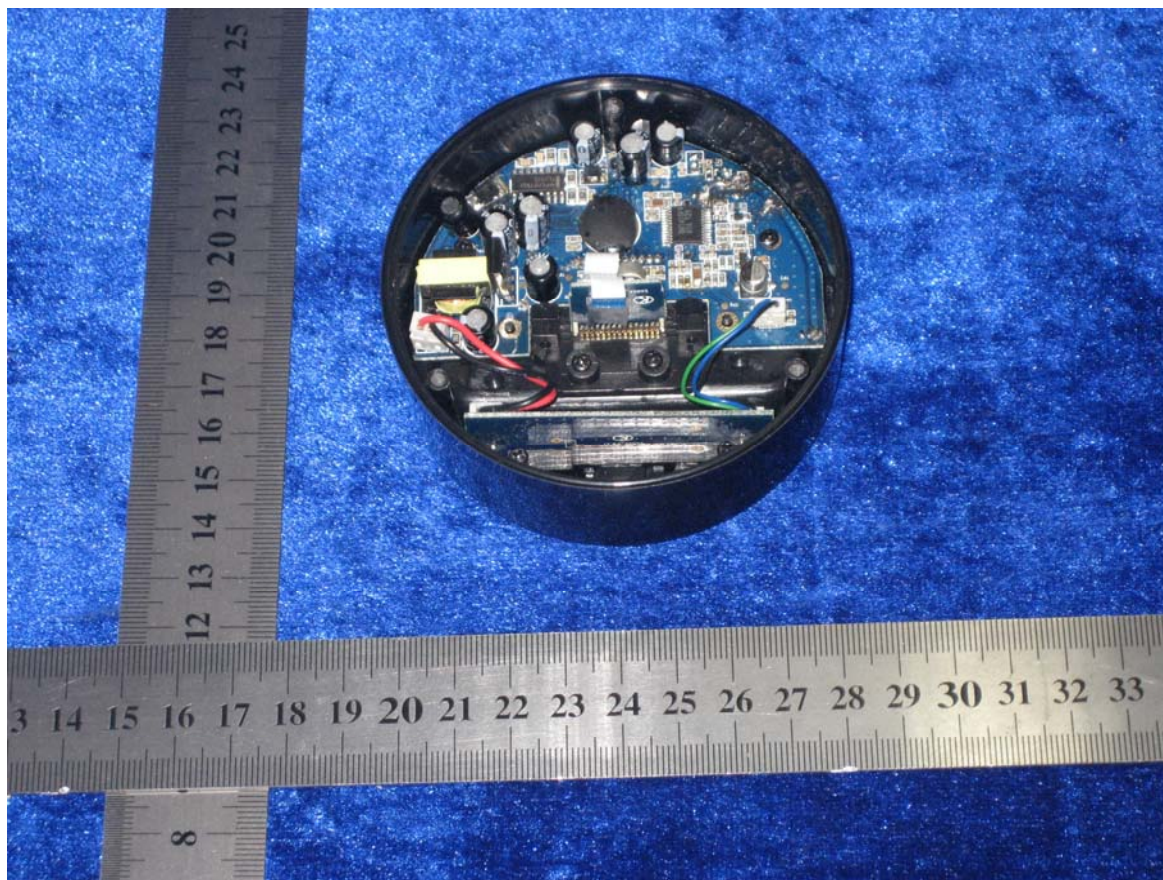
The report refers only to the sample tested and does not apply to the bulk.

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer, supplier or other 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.

In the event of the improper use of the report, the Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Outside View



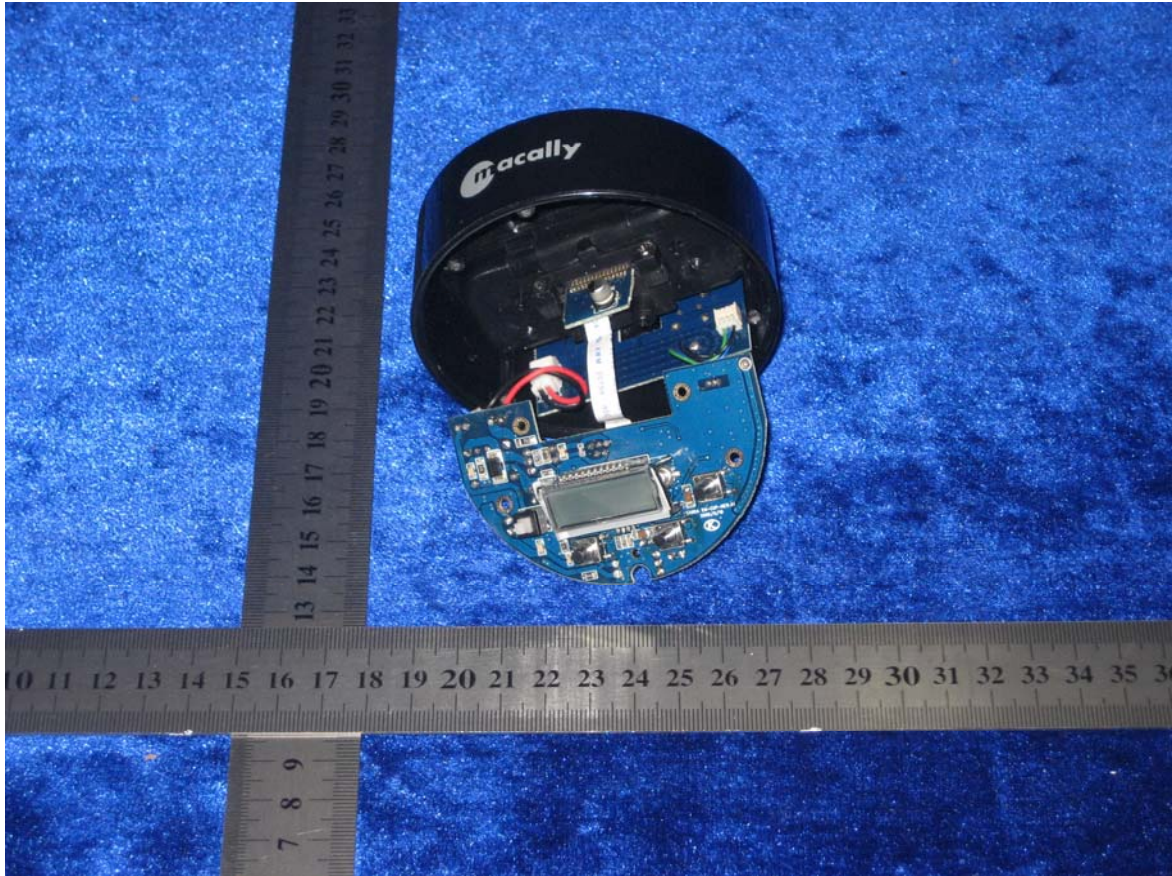
The report refers only to the sample tested and does not apply to the bulk.

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer, supplier or other 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.

In the event of the improper use of the report, the Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Interior View



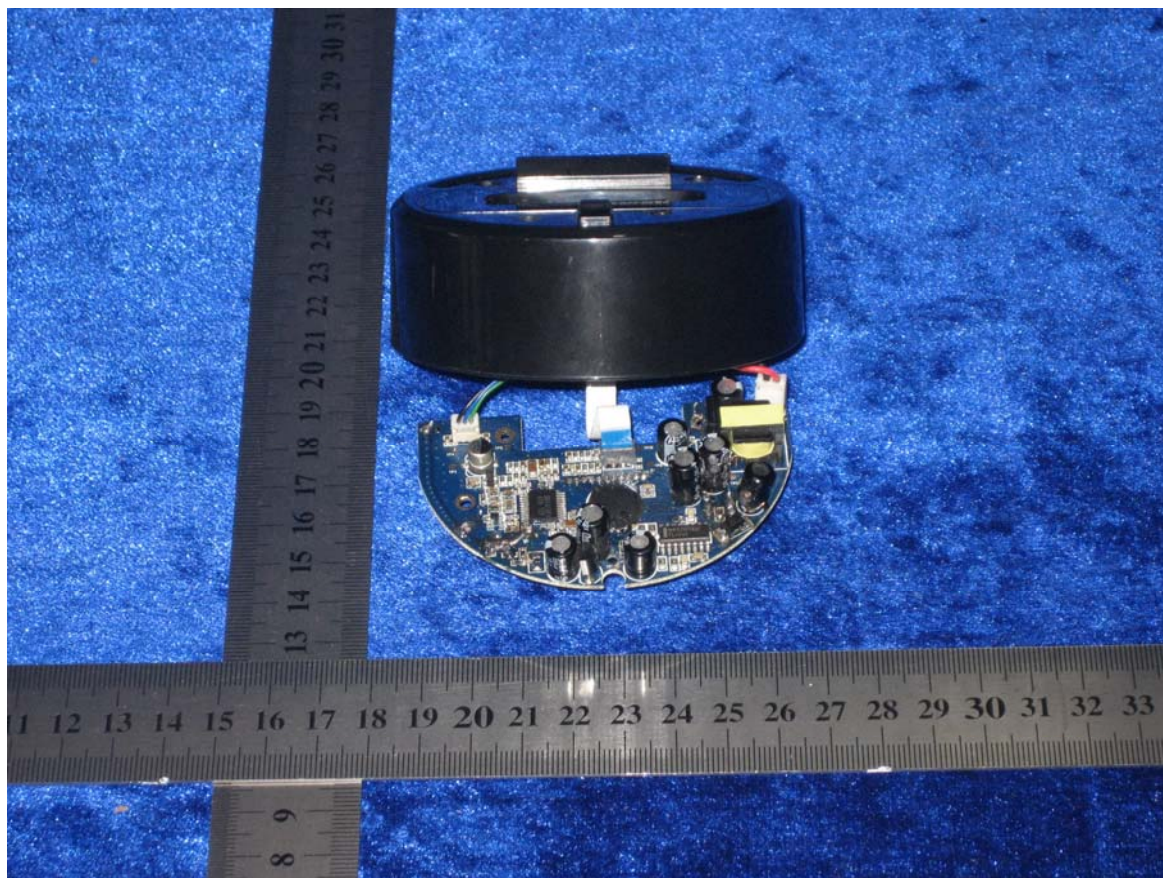
The report refers only to the sample tested and does not apply to the bulk.

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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Interior 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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer. Supplier or other 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.

In the event of the improper use of the report, The Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.



Interior 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 in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it, or a certified copy thereof prepared by the Shenzhen Timeway Technology Consulting Co., Ltd. to his customer, supplier or other 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.

In the event of the improper use of the report, the Shenzhen Timeway Technology Consulting Co., Ltd. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.