



SGS-CSTC Standards
Technical Services Co., Ltd.



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CERTIFICATE OF EMC COMPLIANCE

Certificate No.	04.05.1363EEC	Date of Issue: 31 May 2004
Product Description:	DRY BATTERY (ZINC, MANGANESE DIOXIDE BATTERY)	
Model No:	Not supplied by client	
Applicant:	SHENZHEN MOTOMA POWER CO., LTD.	
Address of Applicant:	12/F SHENMAO BLDG, XINWEN RD. FUTIAN, SHENZHEN, CHINA	
SGS Approved Laboratory:	SGS-CSTC Ltd. and No. L32	
Test Report Number(s):	04.05.1363EE, issued on 31 May 2004	
Date of Receipt:	28 May 2004	
Date of Test:	N/A	
Test Required:	EN 61000-6-3 : 2001 & EN 61000-6-1 : 2001	

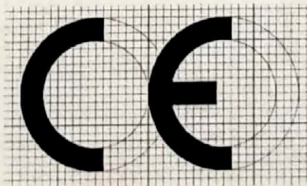
Conclusion

Based on a review of the test report detailed above, this apparatus meets the requirements of the above standards and hence fulfills the requirements of Directive 89/336/EEC as amended by Directives 92/31/EEC and 93/68/EEC.

This certificate is only valid for the equipment and configuration described, in conjunction with the test data detailed above. It does not permit the use of the SGS PRODUCT CERTIFICATION MARK.

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives.

Kent Hsu
Laboratory Manager
SGS-CSTC Co., Ltd.



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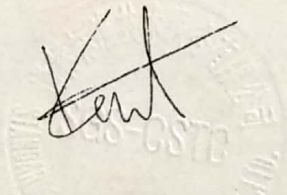
EMC TEST REPORT

Application No.: 04.05.1363E
Applicant: SHENZHEN MOTOMA POWER CO., LTD.
Equipment Under Test (EUT):
EUT Name: DRY BATTERY (ZINC, MANGANESE DIOXIDE BATTERY)
Item No.: Not supplied by client
Serial No.: Not supplied by client
Standards: EN 61000-6-3 : 2001 & EN 61000-6-1 : 2001
Date of Receipt: 28 May 2004
Date of Test: N/A
Date of Issue: 31 May 2004

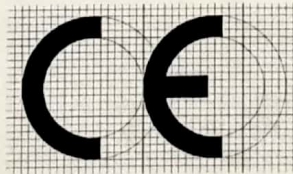
Test Result :	PASS*
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* The EUT complies with the standards specified above as the product is benign under the EMC directive. Please refer to section 2 of this report for further details.

The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives.



Kent Hsu
Laboratory Manager
SGS-CSTC Co., Ltd.



This report refers to the General Conditions for Inspection and Testing Services, printed overleaf.

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the SGS PRODUCT CERTIFICATION MARK. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

All test results in this report can be traceable to National or International Standards.

EC Declaration of Conformity

Council Directive 89/336/EEC on Electromagnetic Compatibility

We, SHENZHEN MOTOMA POWER CO., LTD.
12/F SHENMAO BLDG, XINWEN RD.
FUTIAN, SHENZHEN, CHINA

Certify that the product described is in conformity with the
Directive 89/336/EEC as amended.

EUT Name: DRY BATTERY (ZINC, MANGANESE DIOXIDE
BATTERY)

Item No.: Not supplied by client

The product has been assessed by the application of the following standards:

EN 61000-6-3 : 2001 & EN 61000-6-1 : 2001

Issue place and date

Company stamp and Signature
of authorized personnel

2 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Emission	EN 61000-6-3: 2001	N/A	Clause 8 of EN 61000-6-3	N/A
Immunity	EN 61000-6-1: 2001	N/A	Clause 8 of EN 61000-6-1	N/A

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4 General Information

4.1 Client Information

Applicant: SHENZHEN MOTOMA POWER CO., LTD.
Address of Applicant: 12/F SHENMAO BLDG, XINWEN RD.
FUTIAN, SHENZHEN, CHINA

4.2 General Description of E.U.T.

EUT Name: DRY BATTERY (ZINC, MANGANESE DIOXIDE BATTERY)
Item No.: Not supplied by client
Serial No.: Not supplied by client

4.3 Details of E.U.T.

Power Supply: - N/A-
Power Cord: - N/A-

4.4 Description of Support Units

The EUT has been tested as an independent unit.

4.5 Standards Applicable for Testing

The customer requested EMC tests for a Dry Battery.

The standards used were EN 61000-6-3 (Emissions) & EN 61000-6-1 (Immunity).

Table 1 : Tests Carried Out Under EN 61000-6-3:2001

	Standard	Status
EN 55022 : 1998+A1:2000+A2:2003	Radiated Emissions	×
EN 55022 : 1998+A1:2000+A2:2003	Conducted Emissions on AC	×
EN 61000-3-2: 2000	Harmonic Emissions on AC	×
EN 61000-3-3: 1995 + A1: 2001	Flicker Emissions on AC	×
EN 55014-1: 2000 + A1: 2001+A2:2002	Discontinuous Emissions on AC	×

× Indicates that the test is not applicable.

√ Indicates that the test is applicable.

Note: The EUT contains no electronics at all and hence no tests need to be performed according to standard EN 61000-6-3.

Table 2 : Tests Carried Out Under EN 61000-6-1:2001

Standard	Status
EN 61000-4-2: 1995 + A1: 1998+ A2:2001 Electro-static discharge	×
EN 61000-4-3: 1996+A1:1998+A2:2001 Radio frequency EM fields (80MHz to 1GHz)	×
EN 61000-4-4: 1995+A1:2001+A2:2001 Fast transients	×
EN 61000-4-5: 1995 +A1: 2001 Surges	×
EN 61000-4-6: 1996+A1:2001 Radio frequency continuous conducted (150kHz to 80MHz)	×
EN 61000-4-8: 1993+A1:2001 Power-frequency magnetic field (50Hz)	×
EN 61000-4-11: 1994+A1:2001 Voltage dips & interruptions	×

× Indicates that the test is not applicable.

√ Indicates that the test is applicable.

Note: The EUT contains no electronics at all and hence no tests need to be performed according to standard EN 61000-6-1.

4.6 Test Location

All tests (if necessary) were performed at: -
SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Safety & EMC Laboratory,
1/F, Building No. 1, Agriculture Machinery Materials Company Warehouse Ltd., Wushan
Road Shipai, Tianhe District, Guangzhou, China. P.C. 510630.

Tel: +86 20 3848 1001 Fax: +86 20 3848 1006

No tests were sub-contracted.

4.7 Test Facility

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

- **NVLAP – Lab Code: 200611-0**
SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is recognized under the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0. Effective through December 31, 2004.
- **ACA**
SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.
- **VCCI**
The 3m Semi-anechoic chamber and Shielded Room (11.5m x 4m x 4m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-1599 and C-1706 respectively.
Date of Registration: February 28, 2003. Valid until May 30, 2005
- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**
Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.
- **CNAL – LAB Code: L0141**
SGS-CSTC Standards Technical Services Co., Ltd., 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.: 282399**
SGS-CSTC Standards Technical Services Co., Ltd., 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 282399, May 31, 2002. With the above and NVLAP's accreditation, SGS-CSTC is an authorized test laboratory for the DoC process.

4.8 Deviation from Standards

None

4.9 Abnormalities from Standard Conditions

None.

4.10 Monitoring of EUT for All Immunity Test

None

5 Emission Test Results

Test Requirement: EN 61000-6-3
Test Method: N/A: See Remark Below

There is no need for emission tests to be performed on this product in accordance with standard EN 61000-6-3.

For further details, please refer to clause 8 of EN 61000-6-3 which states:-

“ It may be determined from consideration of the electrical characteristics and usage of a particular apparatus that some of the measurements are inappropriate and therefore unnecessary. In such a case it is required that the decision not to measure be recorded in the test report.”

6 Immunity Test Results

Test Requirement: EN 61000-6-1
Test Method: N/A: See Remark Below

There is no need for immunity tests to be performed on this product in accordance with standard EN 61000-6-1.

For further details, please refer to clause 8 of EN61000-6-1 which states:-

“ It was determined from consideration of the electrical characteristics ad usage of a particular apparatus that some of the tests are inappropriate and therefore unnecessary.”

7 Photographs – EUT Constructional Details

