

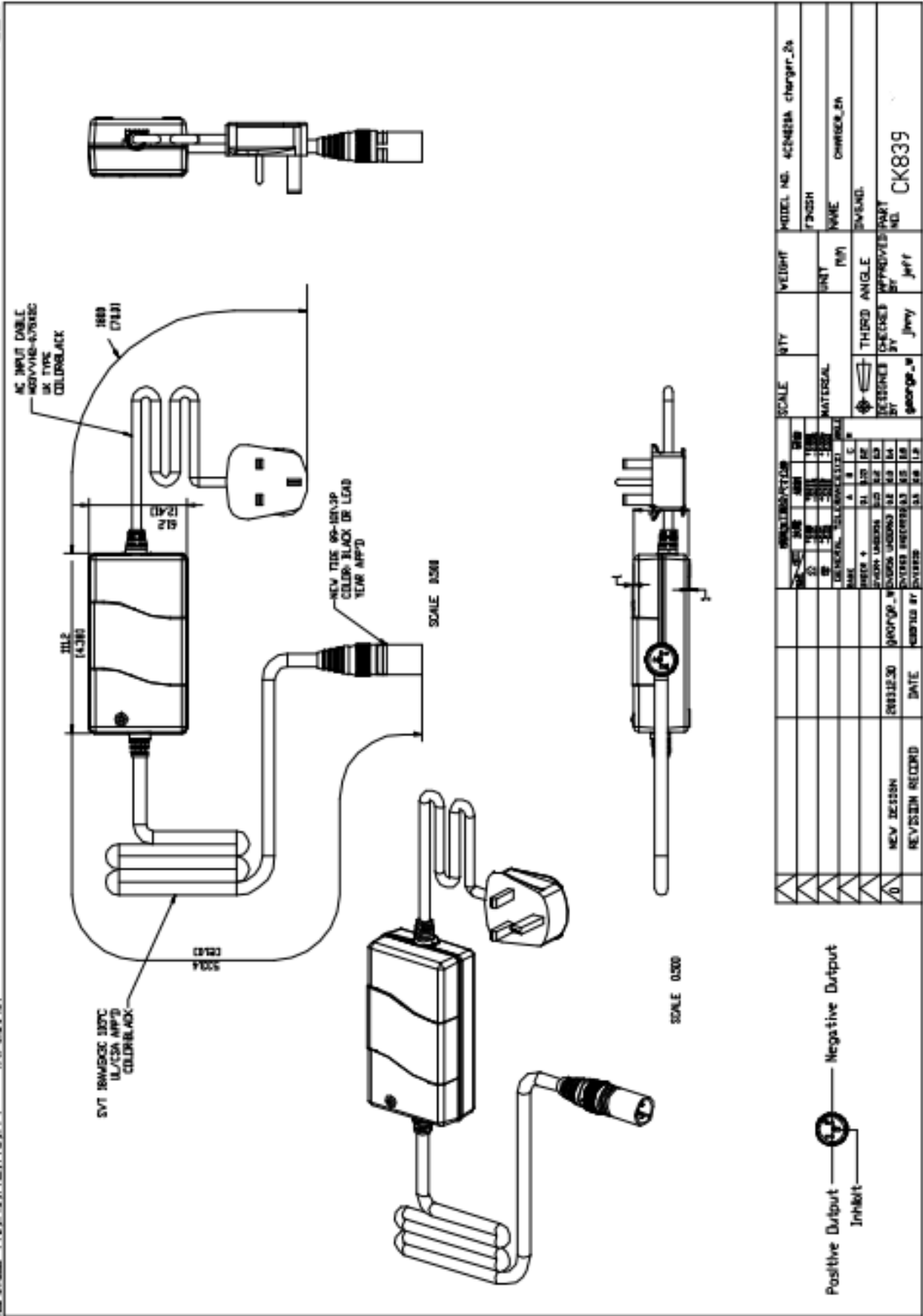
Electrical Specification

Item	Specification
Model	4C24020A
Output Current	2±0.2A
Charging Voltage	28.8±0.2V
Float Charging V.	27.6±0.2V
Input Current	1.0A max
Input Voltage	100~240V 50/60Hz
Efficiency	AC-DC MIN 80%
Performance	Switching Mode
Charging Method	Constant Current , Two Stage Constant Voltage
Operating Temperature	0°C ~40°C
Battery Application	24V Lead Acid Rechargeable Battery (9Ahr~20Ahr)
Output Detection	1.Short Circuit Protction 2.Reverse Power Protected
Operating Humidity	20%~85%
Measurement	L 110mm×W 60mm×H 36mm
Weight	400 g
Colour	Black
品 名	內容
型 號	4C24020A
輸出電流	2±0.2A
充電電壓	28.8±0.2V
浮充電壓	27.6±0.2V
輸入電流	1.0A max
輸入電壓(AC)	100~240V 50/60Hz
效 率	AC-DC MIN 80%
轉換方式	電子交換式 Switching Mode
充電方式	定電流，兩段式定電壓
操作溫度	0°C ~40°C
使用電池	24V 鉛酸電池（9Ahr~20Ahr）
輸出保護	1.短路保護 2.逆接保護
操作環境濕度	20%~85%
外觀尺寸	長 110mm×寬 60mm×高 36mm
重 量	400g
顏 色	黑色

Engineering Drawing

工程圖樣

適用範圍：A0,A1,A2,A3,A4 及其縮小版



中國電子電器股份有限公司

表號-SF81N-001

Certificate FCC

SPORTON INTERNATIONAL INC.



FCC Test Report

Report No. : F300905

FCC TEST REPORT

for

47 CFR, Part 2 and Part 15 of the FCC Rules, Subpart B Class B

Equipment : Battery Charger

Model No. : 4C24020A

FCC ID : N/A

Filing Type : Verification

Applicant : **CTE CORPORATION**
No. 3, Kung-Chien N. Rd., Liu Tu Industrial Park,
Keelung, Taiwan, R.O.C.

- The test result refers exclusively to the test presented test model / sample.
- Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.
- Certificate or Test Report must not be used by the applicant to claim the product in this test report endorsement by NVLAP or any agency of U.S. government.

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

SPORTON International Inc.

TEL : 886-2-2696-2468

FAX : 886-2-2696-2255

6F, No.106, Sec.1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C. TEL:886-2-26962468 FAX:886-2-26962255

Scope of NVLAP Accreditation: ESD-CMPR 22, FCC 47CFR Part 15, Digital Services 45 (2014)



1 TEST RESULT CERTIFICATION

Applicant: CTE CORPORATION
 No. 3, Kung-Chien N, Rd., Liu Tu Industrial Park,
 Keelung, Taiwan R.O.C.
Manufacturer: CTE CORPORATION
 No. 3, Kung-Chien N, Rd., Liu Tu Industrial Park,
 Keelung, Taiwan R.O.C.
Equipment Under Test: Battery Charger
Trade Name: CTE CORPORATION
Model: 4C24020A
Detailed EUT Description: See Item 2 of this report
Date of Test: April 10, 2007 ~ June 20, 2007

Applicable Standard	Class/Limit/Criterion	Test Result
EN 60601-1-2: 2001, including		
EN 55011: 1998 + A1: 1999 + A2: 2002	Group I, Class B	No non-compliance noted
IEC 61000-4-2: 1995 + A1: 1998 + A2: 2000	See Item 10 of this report	No non-compliance noted
IEC 61000-4-3: 2002 + A1: 2002	See Item 11 of this report	No non-compliance noted
IEC 61000-4-4: 2004	See Item 12 of this report	No non-compliance noted
IEC 61000-4-5: 1995 + A1: 2000	See Item 13 of this report	No non-compliance noted
IEC 61000-4-6: 1996 + A1: 2000	See Item 14 of this report	No non-compliance noted
IEC 61000-4-8: 1993 + A1: 2000	See Item 15 of this report	No non-compliance noted
IEC 61000-4-11: 2004	See Item 16 of this report	No non-compliance noted
EN 61000-3-2: 2000	Class D	N/A
EN 61000-3-3: 1995 + A1: 2001	Limit	No non-compliance noted
Deviation from Applicable Standard		
None		

The above equipment was tested by Compliance Certification Services Inc. for compliance with the requirements set forth in the EMC Directive 2004/108/EC and the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Reviewed by:


 David Wang
 Manager of SINDIAN BU
 Compliance Certification Services Inc.



 Vince Chiang
 Assistant Manager of SINDIAN BU
 Compliance Certification Services Inc.



28.JAN.2004 19:36

UL.TW 886 2 28917644

NO.120 P.1

UL International Services Ltd. - Taiwan Branch



**An Affiliate of
Underwriters Laboratories Inc.**

Tel: 886-2-2896-7790 Fax: 886-2-2891-7644

January 28, 2004

E241359, 03CA38624

Company Name: CTE Corp.
c/o: Sporton International Inc., BTL Group
Address: 4th Fl 339 Hsin Hu 2nd Rd Nei Hu
Taipei Taiwan 114

Attention: Ms. Joan Lei

Fax: (02)2794-9777

Dear Ms. Joan Lei:

Subject: Switching Power Supply, Model 4C24020A for UL and C-UL Investigation & 03CA38624

**NOTICE OF COMPLETION OF ENGINEERING INVESTIGATION
AND THE REQUIREMENT FOR AN INITIAL PRODUCTION INSPECTION (IPI)**

This letter is sent on behalf of Underwriters Laboratories Inc. (UL) pursuant to the Corporate Services Agreement between UL International Services Ltd.- Taiwan Branch and UL.

The engineering investigation under the above project number has been completed. **This letter does not authorize use of the UL Mark on the products under the above project number.**

Before you may begin shipping product with the UL Mark at each of the manufacturing locations listed below, an Initial Production Inspection (IPI) must be successfully performed by a UL representative at the manufacturing location:

CTE CORP
3 KUNG-CHIEN NORTH RD
KEELUNG TAIWAN

The IPI is intended to confirm that the manufacturer is capable of producing a product in accordance with UL's requirements. **THE MANUFACTURER MAY NOT SHIP PRODUCTS WITH THE UL MARK UNTIL THE IPI HAS BEEN COMPLETED AND UL HAS FOUND THE PRODUCTS AT THE FACTORY TO COMPLY WITH OUR REQUIREMENTS. Once this has been successfully completed the manufacturer will be granted authorization to ship products bearing the Recognized Component Mark.**

THIS MESSAGE AND ANY DOCUMENTS ACCOMPANYING IT IS INTENDED ONLY FOR THE USE OF THE INDIVIDUAL OR ENTITY TO WHICH IT IS ADDRESSED AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, CONFIDENTIAL, AND EXEMPT FROM DISCLOSURE UNDER APPLICABLE LAW. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received the communication in error, please notify us immediately by return fax and advise whether you have destroyed the original message or are returning it to us through the mail.

IF YOU EXPERIENCE A PROBLEM RECEIVING THIS TRANSMISSION, PLEASE CALL.

UL.TW-11ND-0026-01-13-04

1 of 2

01-28-03 19:27 TO:SPORTON INC. (BTL GROUP)

FROM:886 2 28917644

P01

Certificate



Certificate no.

TA 50247954 01

License Holder:

CTE TECH CORP.
No. 1-7, Gongjian Rd.
Cidu District, Keelung City 20647
Taiwan

Manufacturing Plant:

CTE TECH CORP.
No. 1-7, Gongjian Rd.
Cidu District, Keelung City 20647
Taiwan

Test report no.: ZTWI-LinPr 10039121 001

Client Reference: 1220306SEU/ACC

Tested to: IEC 60601-1:2005
EN 60601-1:2006

Certified Product: (Battery Charger)

License Fee - Units

Type Designation : 4C24020A (CTE)
Rated Voltage : AC 100-240V, 50-60Hz
Rated Current : 1.0-0.5A
Output Voltage : DC 24V
Output Current : 2A
Protection Class : II
max. Ambient Temperature : 40°C

8

Remark: 1. The risk management requirements of the standard were not addressed.
2. This certificate is valid for maximum 5 years.

8

Appendix: 1

Licensed Test mark:



TÜV Rheinland Taiwan Ltd.

Signature

Dipl.-Ing. W. Hsu



Date of Issue
(day/mo/yr)
07/02/2013

RCM



Proof of Compliance

Product	Battery Charger
Name and Address of Applicant	CTE TECH CORP 1-7 GONGJAIN RD CIDU DISTRICT KEELUNG, 206 TW
Models / Type Ref.	4C24020A
Trade Mark	CTE

This is to certify that the electrical article as described above meets the requirements of the standards listed as follow.

Standard

AS/NZS 60335.1:2011+A1, AS/NZS 60335.2.29:2004+A1+A2 Compliance Mark: RCM	Certificate No.: U21656-A1 by UL International New Zealand Ltd,
---	--

Date of Issue: 07/04/2014

Date of Expiry: 27/03/2019

A handwritten signature in black ink that reads "David Chen".

David Chen
TVC Service Pty Ltd
556 Musgrave Road ROBERTSON QLD 41

RCM2014040202-S

IPX1



ELECTRONICS TESTING CENTER, TAIWAN
Product safety Testing Laboratory
ADDRESS: NO.8 LANE 29, WENMING RD., LESHAN TSUEN,
GUISHAN SHIANG TAOYUAN COUNTY 33383, TAIWAN
TEL:03-3280026 FAX:03-3276175
<http://www.etc.org.tw>



Testing Laboratory
2624

Page: 1 of 6 Pages
Issue Date : Apr.08, 2013

TEST REPORT

Rep. No. : 13-03-VAA-107
Applicant : CTE TECH CORP.
Address : No. 1-7, Gongjian Rd., Cidu District, Keelung City
20647, Taiwan, R.O.C.
Commodity : Battery Charger
Model : 4C24020A
Quantity : 1 set
Date of Receipt : Mar. 27, 2013
Date of Testing : Mar. 27, 2013
Test specification : IEC 60529 Edition 2.1 2001-02
Ambient Environment : Temp. 19 °C, R.H. 70 %, A.P. 990 mbar
Test Item : IPX1
Test condition & result : See the following sheets

General remarks :

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the
Issuing testing laboratory.



Approved by

Vincent Lin

IPX1



TEST REPORT

Rep. No. : 13-03-VAA-107

Page: 2 of 6 Pages

1. Test Item : IPX1

2. Test Conditions :

2.1 Ambient Condition

- Temperature range: 15 °C to 35 °C.
- Relative humidity: 25 % to 75 %.
- Air pressure: 860 mbar to 1060 mbar.

2.2 IPX1 (In accordance with IEC60529 14.1/14.2.1 test)

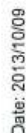
- The turntable on which the enclosure is placed has a rotation speed of 1 r/min.
- Water flow rate: 1 mm/min.
- The duration of test is 10 min.

3. Test Result :

IP Code	Results	Acceptance Criteria
IPX1	There is no trace of water inside.	IEC60529 14.3

Tested by :

Mark Chen
Mark Chen



Report No.: CX/2013/70163A

TWB 0424117

[illegible]

Conclusion

: Based upon the performed tests by submitted samples, the test results comply with the limits of RoHS Directive 2011/65/EU with the exempted materials below according to the declaration from applicant (Directive 2002/95/EC being recast by Directive 2011/65/EU);

"7(a), Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)"

2. SILVER COLORED METALLIC PIN (No.2.1) in Table 1: Lead (Pb)

* This report is combined with reports of CX/2013/50355, CX/2013/70161 and CX/2013/70163 *

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SCS Taiwan Ltd.

33, Wu Duan Rd., New Taipei Industrial Park, New Taipei City, Taiwan / 新北市新莊區五權路33號

1 (886-2) 2799-3939

F (888.2) 2299.3237

www.elsevier.com

Member of SSS Group

REACH



Produkte
Products

Prüfbericht - Nr.: 10044080 001		Seite 1 von 13	
<i>Test Report No.:</i>		<i>Page 1 of 13</i>	
Auftraggeber:		CTE TECH CORP.	
<i>Client:</i>		No. 1-7, Gongjian Rd., Cidu District, Keelung City 20647, Taiwan, R.O.C.	
Gegenstand der Prüfung: Battery Charger			
<i>Test Item:</i>			
Bezeichnung:		4C24040, 4C24030A, 4C24040A, 4C24080, 4F24040, 4F24050, 4F24060,	
<i>Identification:</i>		4C24050A, 4C24080A, BAT-GC08X2, 4C24020A, 4C12030, 4C12020, 4C24020	
Anlieferungszustand:		apparent good	
<i>Delivery condition:</i>		Eingangsdatum: 2013-10-04	
		<i>Date of Receipt:</i>	
Prüfört:		TÜV Rheinland Hong Kong Ltd.	
<i>Testing location:</i>			
Prüfgrundlage:		With reference to Corrigendum to Regulation (EC) no.1907/2006, concerning the	
<i>Test specification:</i>		Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)	
		Screening of 144 Substances of Very High Concern (SVHC) based on the	
		Candidate List published on 28.10.2008, 13.01.2010, 30.03.2010, 18.06.2010,	
		15.12.2010, 20.06.2011, 19.12.2011, 18.06.2012, 19.12.2012 and 20.06.2013 by	
		European Chemicals Agency (ECHA)	
Prüfergebnis:		The test results are the measurements, stated in the test report.	
<i>Test result:</i>			
geprüft: tested by:		kontrolliert: checked by:	
 2013-11-11 Anne Chen /Coordinator		 2013-11-11 Carl Chang /Department Manager	
Datum	Name/Stellung	Unterschrift	
<i>Date</i>	<i>Name/Position</i>	<i>Signature</i>	
Sonstiges/ Other Aspects:			
Test period: 2013-10-04 – 2013-11-04			
Abkürzungen: ok / P = entspricht Prüfgrundlage fail / F = entspricht nicht Prüfgrundlage n.a. / N = nicht anwendbar			
Abbreviations: ok / P = passed fail / F = failed n.a. / N = not applicable			
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.			

TÜV Rheinland Taiwan Ltd. Softlines
4F., No.758, Sec. 4, Bade Rd., Songshan Dist., Taipei 105, Taiwan, R.O.C.
Tel.: +886 2 2172-7000 Fax: +886 2 2528-0018
Mail: service-gc@tuv.com Web: www.tw.tuv.com



REACH



Produkte
Products

Test Report No. : 10044080 001
Customer : CTE TECH CORP.

2013-11-11

Abstract

Product Classification:

With reference to Corrigendum to Regulation (EC) no.1907/2006 and ECHA, this product is classified as:

☒	Article
☐	Article with an integral substance/ mixture
☐	Combinations of an article (functioning as a container or a carrier material) and a substance/ mixture
☐	Substance/ mixture

Conclusion:

Product Location	Conclusion	Detected Substance (if any)
Main Unit / Accessories / Packaging materials	Acc. to authorisation list (EU) no. 143/2011, (EU) no. 125/2012 and (EU) no. 348/2013 (Annex XIV of EC no. 1907/2006), candidate list by ECHA, the detected SVHC concentration is: ☒ < 0.1% ☐ > 0.1% Obligation of Importer: ☐ Necessary ☒ Not necessary (For article) To communicate information down the supply chain according to article. 33 of REACH. OR 1. Notification to ECHA, if the quantities of SVHC in the produced/imported articles are above 1 ton in total per year per company. 2. Provide sufficient information to ensure safe use of the article and, as a minimum, include the name of the substance, to their customers and on request to consumers within 45 days of the receipt of this request.	DBP, DEHP, SCCP & Fatty acids, C16-18, lead salts (by calculation)



Charging Curve

