

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

CB TEST CERTIFICATE

Product

Network Switch

Name and address of the applicant

Radware Ltd.
22 Raoul Wallenberg St.
6971917 Tel Aviv, Israel

Name and address of the manufacturer

Radware Ltd.
22 Raoul Wallenberg St.
6971917 Tel Aviv, Israel

Name and address of the factory

See additional page(s)

Ratings and principal characteristics

100-240Vac; 50-60Hz; 5-3A (with AC single PS)
100-240Vac; 50-60Hz; 5-3A x 2 (with AC dual PS)
-36 - -72Vdc; 12-6A (with DC single PS)
-36 - -72Vdc; 12-6A x 2 (with DC dual PS); Class I

Trademark (if any)

RADWARE

Customer's Testing Facility (CTF) Stage used

N/A

Model / Type Ref.

ODS-LS2

Additional information (if necessary may also be reported on page 2)

Re-issue of JPTUV-100394 dated 12.09.2019,
due to non-technical change.

A sample of the product was tested and found to be in conformity with

IEC 62368-1:2014
See Test Report for National Differences

As shown in the Test Report Ref. No. which forms part of this Certificate

50271998 002

This CB Test Certificate is issued by the National Certification Body



TÜV Rheinland Japan Ltd.
Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
Yokohama 224-0021 Japan
Phone + 81 45 914-3888
Fax + 81 45 914-3354
Mail: info@jpn.tuv.com
Web: www.tuv.com

Date: 26.09.2019

Signature:

Jason C. H. Chang

1. NEXCOM International Co., Ltd.
5F, 7F, 8F, 9F, 10F&12F,
No. 63, Sec. 1, Sanmin Rd.,
Banqiao Dist, New Taipei City
Taiwan
2. NEXCOM International Co., Ltd.
(Hua-Ya Factory)
2F., No.50, Huaya 3rd Rd.,
Guishan Dist., Taoyuan City 333
Taiwan

Additional information (if necessary)
Information complémentaire (si nécessaire)

Report Ref. No.: 50271998 002

Date:

26.09.2019

Signature:



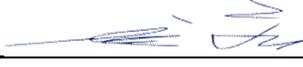
Jason C. H. Chang



Test Report issued under the responsibility of:



TEST REPORT IEC 62368-1 Audio/video, information and communication technology equipment Part 1: Safety requirements	
Report Number	50271998 002
Date of issue	2019-09-25
Total number of pages	6
Applicant's name	Radware Ltd.
Address	22 Raoul Wallenberg St. 6971917 Tel Aviv, Israel
Test specification:	
Standard.....	IEC 62368-1:2014 (Second Edition)
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No.	IEC62368_1B
Test Report Form(s) Originator.....	UL(US)
Master TRF	2014-03
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General disclaimer: 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 CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	

Test Item description	Network Switch	
Trade Mark	RADWARE	
Manufacturer.....	Same as applicant	
Model/Type reference	ODS-LS2	
Ratings	100-240Vac, 50-60Hz, 5-3A (with AC single PS) 100-240Vac, 50-60Hz, 5-3A x 2 (with AC dual PS) -36 - -72Vdc, 12-6A (with DC single PS) -36 - -72Vdc, 12-6A x 2 (with DC dual PS)	
Testing procedure and testing location:		
<input checked="" type="checkbox"/> CB Testing Laboratory:	TÜV Rheinland Taiwan Ltd., Taichung Branch	
Testing location/ address	No. 9, Ln. 36, Sec. 3, Minsheng Rd., Daya District, Taichung City 428, Taiwan CHINESE TAIPEI	
<input type="checkbox"/> Associated CB Testing Laboratory:		
Testing location/ address		
Tested by (name + signature).....		X  Project Engineer Signed by: Paul LM Lin
Approved by (name + signature)		X  Reviewer Signed by: Simon Yu
<input type="checkbox"/> Testing procedure: CTF Stage 1		
Testing location/ address		
Tested by (name + signature).....		
Approved by (name + signature)		
<input type="checkbox"/> Testing procedure: CTF Stage 2		
Testing location/ address		
Tested by (name + signature).....		
Witnessed by (name + signature).....		
Approved by (name + signature)		
<input type="checkbox"/> Testing procedure: CTF Stage 3		
<input type="checkbox"/> Testing procedure: CTF Stage 4		
Testing location/ address		
Tested by (name + signature).....		
Approved by (name + signature)		
Supervised by (name + signature).....		

List of Attachments (including a total number of pages in each attachment):

- N/A

Summary of testing:**Tests performed (name of test and test clause):**

All applicable tests as described in Test Case and Measurement Sections were performed.

- N/A

Testing location:

N/A

Summary of compliance with National Differences:**List of countries addressed:**

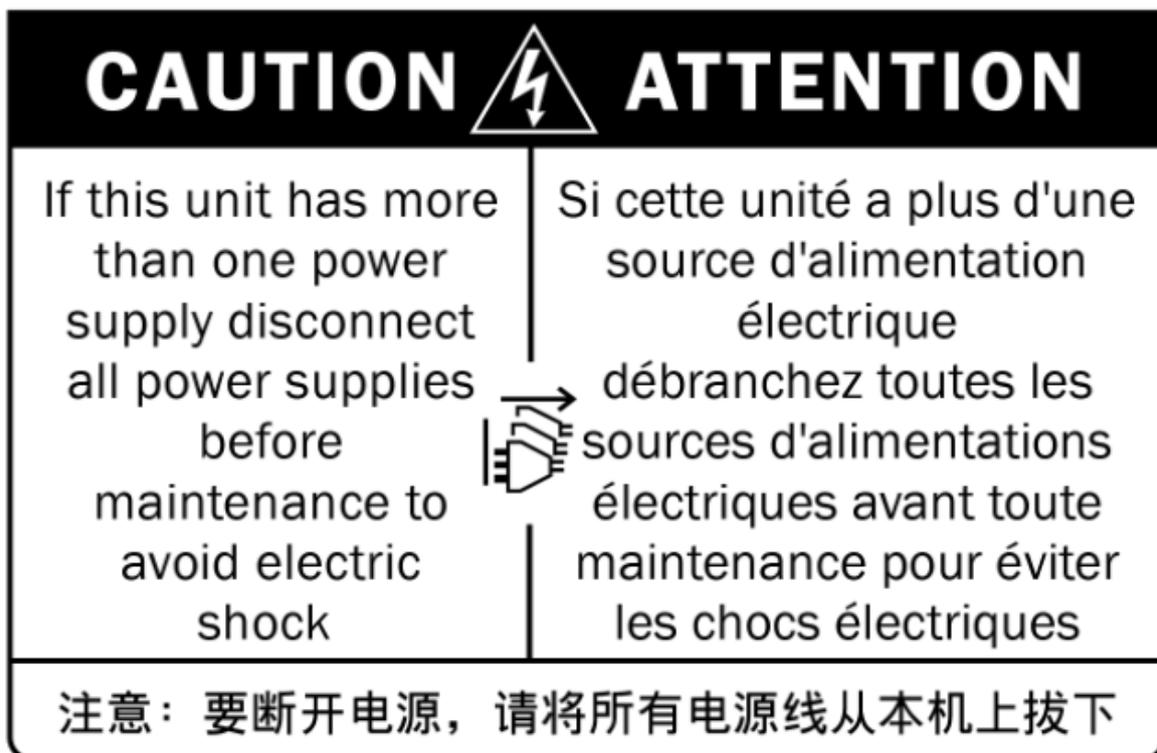
EU Group Differences, EU Special National Conditions, AU, CA, DK, US, JP.

Explanation of used codes: AU=Australia, CA = Canada, DK = Denmark, US = United States of America, JP = Japan.

The product fulfils the requirements of EN 62368-1:2014+A11:2017 and AS/NZS 62368.1:2018

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



TEST ITEM PARTICULARS:	
Classification of use by	<input checked="" type="checkbox"/> Ordinary person <input type="checkbox"/> Instructed person <input type="checkbox"/> Skilled person <input type="checkbox"/> Children likely to be present
Supply Connection.....	<input checked="" type="checkbox"/> AC Mains <input type="checkbox"/> DC Mains <input checked="" type="checkbox"/> External Circuit - not Mains connected - <input checked="" type="checkbox"/> ES1 <input type="checkbox"/> ES2 <input type="checkbox"/> ES3
Supply % Tolerance	<input checked="" type="checkbox"/> +10%/-10% (for AC mains) <input type="checkbox"/> +20%/-15% <input type="checkbox"/> + ____ % / - ____ % <input checked="" type="checkbox"/> None (for DC input)
Supply Connection – Type	<input checked="" type="checkbox"/> pluggable equipment type A - <input type="checkbox"/> non-detachable supply cord <input checked="" type="checkbox"/> appliance coupler <input type="checkbox"/> direct plug-in <input type="checkbox"/> mating connector <input type="checkbox"/> pluggable equipment type B - <input type="checkbox"/> non-detachable supply cord <input type="checkbox"/> appliance coupler <input type="checkbox"/> permanent connection <input type="checkbox"/> mating connector <input checked="" type="checkbox"/> other: terminal block
Considered current rating of protective device as part of building or equipment installation	16 or 20 A Installation location: <input checked="" type="checkbox"/> building; <input type="checkbox"/> equipment
Equipment mobility	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in <input checked="" type="checkbox"/> rack-mounting <input type="checkbox"/> wall-mounted
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other: _____
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III
Access location	<input type="checkbox"/> restricted access location <input checked="" type="checkbox"/> N/A
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
Manufacturer's specified maximum operating ambient	45°C
IP protection class	<input checked="" type="checkbox"/> IPX0
Power Systems	<input checked="" type="checkbox"/> TN <input type="checkbox"/> TT <input checked="" type="checkbox"/> IT - 230 V _{L-L}
Altitude during operation (m)	<input type="checkbox"/> 2000 m or less <input checked="" type="checkbox"/> 5000m
Altitude of test laboratory (m)	<input checked="" type="checkbox"/> 2000 m or less <input type="checkbox"/> _____ m
Mass of equipment (kg)	<input checked="" type="checkbox"/> 7.5 Max.
POSSIBLE TEST CASE VERDICTS:	
- test case does not apply to the test object.....	N/A
- test object does meet the requirement.....	P (Pass)
- test object does not meet the requirement	F (Fail)

TESTING:		
Date of receipt of test item	:	N/A
Date (s) of performance of tests	:	N/A
GENERAL REMARKS:		
<p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p> <p>Where statement of conformity is provided in this test report, if not otherwise indicated, "accuracy method" described in IEC GUIDE 115 has been taken to address uncertainty of measurement.</p>		
Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:		
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....:		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.		
Name and address of factory (ies)		<ol style="list-style-type: none"> NEXCOM International Co., Ltd. (Hua-Ya Factory) 2F., No.50, Huaya 3rd Rd., Guishan Dist., Taoyuan City 333, Taiwan NEXCOM International Co., Ltd. 5F, 7F, 8F, 9F, 10F&12F, No.63, Sec.1, Sanmin Rd., Banqiao Dist., New Taipei City, Taiwan
GENERAL PRODUCT INFORMATION:		
Product Description – Description of change(s): <ol style="list-style-type: none"> Correction typo for Name and address of factory (ies). Change Caution label. <p>For the above described change(s) the following was considered to be necessary:</p>		
Change	Testing	Comments
1.	• N/A	See information of " Name and address of factory (ies) " in bold types.
2.	• N/A	See Copy of marking plate for details.
History of amendments and modifications: Ref. No. 50271998 001, dated Sep. 03, 2019 (original test report) Ref. No. 50271998 002, dated Sep. 25, 2019 (amendment)		

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT
(IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	Network Switch
Name and address of the applicant	Radware Ltd. 22 Raoul Wallenberg St. 6971917 Tel Aviv, Israel
Name and address of the manufacturer	Radware Ltd. 22 Raoul Wallenberg St. 6971917 Tel Aviv, Israel
Name and address of the factory	See additional page(s)
Ratings and principal characteristics	100-240Vac; 50-60Hz; 5-3A (with AC single PS) 100-240Vac; 50-60Hz; 5-3A x 2 (with AC dual PS) -36 - -72Vdc; 12-6A (with DC single PS) -36 - -72Vdc; 12-6A x 2 (with DC dual PS); Class I
Trademark (if any)	RADWARE
Customer's Testing Facility (CTF) Stage used	N/A
Model / Type Ref.	ODS-LS2
Additional information (if necessary may also be reported on page 2)	Re-issue of JPTUV-100423 dated 12.09.2019, due to non-technical change.
A sample of the product was tested and found to be in conformity with	IEC 60950-1:2005+A1+A2 See Test Report for National Differences
As shown in the Test Report Ref. No. which forms part of this Certificate	50276983 002

This CB Test Certificate is issued by the National Certification Body



TÜV Rheinland Japan Ltd.
Global Technology Assessment Center
4-25-2 Kita-Yamata, Tsuzuki-ku
Yokohama 224-0021 Japan
Phone + 81 45 914-3888
Fax + 81 45 914-3354
Mail: info@jpn.tuv.com
Web: www.tuv.com

Date: 26.09.2019

Signature:

Jason C. H. Chang

1. NEXCOM International Co., Ltd.
5F, 7F, 8F, 9F, 10F&12F,
No. 63, Sec. 1, Sanmin Rd.,
Banqiao Dist, New Taipei City
Taiwan
2. NEXCOM International Co., Ltd.
(Hua-Ya Factory)
2F., No.50, Huaya 3rd Rd.,
Guishan Dist., Taoyuan City 333
Taiwan

Additional information (if necessary)
Information complémentaire (si nécessaire)

Report Ref. No.: 50276983 002

Date: 26.09.2019

Signature:


Jason C. H. Chang



Test Report issued under the responsibility of:



TEST REPORT IEC 60950-1 Information technology equipment – Safety – Part 1: General requirements	
Report Number.	50276983 002
Date of issue	Sep. 25, 2019
Total number of pages	6
Applicant's name	Radware Ltd.
Address	22 Raoul Wallenberg St. 6971917 Tel Aviv, Israel
Test specification:	
Standard	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013
Test procedure	CB Scheme
Non-standard test method	N/A
Test Report Form No.	IEC60950_1F
Test Report Form(s) Originator	SGS Fimko Ltd
Master TRF	Dated 2014-02
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This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.	
General disclaimer:	
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 CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.	

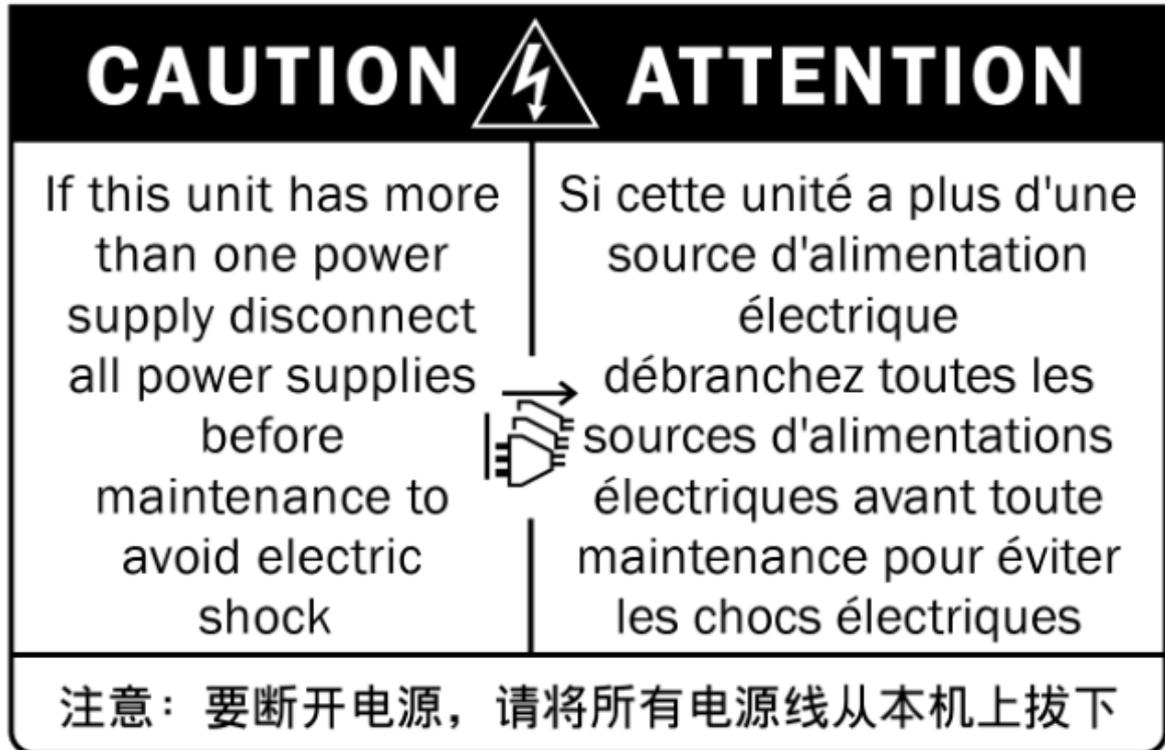
Test item description		Network Switch
Trade Mark		RADWARE
Manufacturer		Same as applicant
Model/Type reference		ODS-LS2
Ratings		100-240Vac, 50-60Hz, 5-3A (with AC single PS) 100-240Vac, 50-60Hz, 5-3A x 2 (with AC dual PS) -36 - -72Vdc, 12-6A (with DC single PS) -36 - -72Vdc, 12-6A x 2 (with DC dual PS)
Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	TÜV Rheinland Taiwan Ltd., Taichung Branch
Testing location/ address		No. 9, Ln. 36, Sec. 3, Minsheng Rd., Daya District, Taichung City 428, Taiwan CHINESE TAIPEI
<input type="checkbox"/>	Associated CB Testing Laboratory:	
Testing location/ address		
Tested by (name + signature)		X  Project Engineer Signed by: Paul L.M Lin
Approved by (name + signature)		X  Reviewer Signed by: Simon Yu
<input type="checkbox"/>	Testing procedure: TMP/CTF Stage 1:	
Testing location/ address		
Tested by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/>	Testing procedure: WMT/CTF Stage 2:	
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/>	Testing procedure: SMT/CTF Stage 3 or 4:	
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name + signature)		
Approved by (name + signature)		
Supervised by (name + signature)		

List of Attachments (including a total number of pages in each attachment):	
- N/A	
Summary of testing:	
Tests performed (name of test and test clause):	Testing location:
• N/A	N/A
Summary of compliance with National Differences	
List of countries addressed:	
EU Group Differences, EU Special National Conditions, AU, CA, NZ, US.	
Explanation of used codes: AU = Australia, CA = Canada, NZ = New Zealand, US = United States of America.	
<input checked="" type="checkbox"/> The product fulfils the requirements of <u>EN 60950-1:2006 + A11:2009 + A1:2010+A12:2011+A2:2013 and AS/NZS 60950.1:2015</u>	
List of countries addressed (for IEC 60950-1:2005+A1:2009):	
DE, FI, IL, KR.	
Explanation of used codes: DE = Germany, FI = Finland, IL = Israel, KR = Republic of Korea.	

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

(Additional requirements for markings. See 1.7 NOTE)



Test item particulars	
Equipment mobility	<input checked="" type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains	<input checked="" type="checkbox"/> pluggable equipment <input checked="" type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input checked="" type="checkbox"/> detachable power supply cord (AC mains) <input type="checkbox"/> non-detachable power supply cord <input checked="" type="checkbox"/> not directly connected to the mains (DC power source)
Operating condition	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Mains supply tolerance (%) or absolute mains supply values	±10 (AC mains)
Tested for IT power systems	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
IT testing, phase-phase voltage (V)	230
Class of equipment	<input checked="" type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating of protective device as part of the building installation (A)	16A (or 13A for UK, 20A for North America)
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IPX0
Altitude during operation (m)	5000
Altitude of test laboratory (m)	Not over 500
Mass of equipment (kg)	Max. 7.5
Possible test case verdicts:	
- test case does not apply to the test object.....	N/A
- test object does meet the requirement	P (Pass)
- test object does not meet the requirement.....	F (Fail)
Testing	
Date of receipt of test item	N/A
Date(s) of performance of tests	N/A
General remarks:	
"(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.	
Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.	
Where statement of conformity is provided in this test report, if not otherwise indicated, "accuracy method" described in IEC GUIDE 115 has been taken to address uncertainty of measurement.	

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... : **Yes**
 Not applicable

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies)..... : 1. **NEXCOM International Co., Ltd. (Hua-Ya Factory)**
2F., No.50, Huaya 3rd Rd., Guishan Dist., Taoyuan City 333, Taiwan
 2. NEXCOM International Co., Ltd.
5F, 7F, 8F, 9F, 10F&12F, No.63, Sec.1, Sanmin Rd., Banqiao Dist., New Taipei City, Taiwan

Description of change(s):

1. Correction typo for Name and address of factory (ies).
2. Change Caution label.

For the above described change(s) the following was considered to be necessary:

Change	Testing	Comments
1.	N/A	See information of " Name and address of factory (ies) " in bold types.
2.	N/A	See Copy of marking plate for details.

History of amendments and modifications:

Ref. No. 50276983 001, dated Aug. 27, 2019 (original test report)

Ref. No. 50276983 002, dated Sep. 25, 2019 (amendment)

Abbreviations used in the report:

- normal conditions	N.C.	- single fault conditions	S.F.C
- functional insulation	OP	- basic insulation	BI
- double insulation	DI	- supplementary insulation	SI
- between parts of opposite polarity	BOP	- reinforced insulation	RI

Indicate used abbreviations (if any)