

Test Report

Report No: GZES161201859801

Date: 2017-01-11

The following sample(s) was/were submitted and identified on behalf of the client as:

Applicant : Guangzhou Zhiyuan Electronics Stock Co., Ltd.
2 Floor, 7 Building, Huangzhou Industrial Estate, Chebei Road, Tianhe,
Guangzhou, Guangdong, China

Manufacturing location : Same as applicant

Test object : USBCAN Interface Card

Model : USBCAN-4E-U

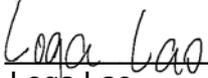
Test specifications / Test standard : EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

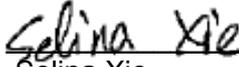
Purpose of examination : Test according to the test specification.

Test result : In the opinion of SGS-CSTC the presented appliance was found to be in compliance with the test specification.

Remark : None




Loga Lao
Project Reviewer
Safety Laboratory


Selina Xie
Project Engineer

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1. Function / Description :

USBCAN Interface Card used for IT products is a building-in module and powered by DC, It shall be mounted with the end product through its DC connector.

Metallic enclosure is fixed by screws. For indoor use only.

2. Ratings :

Model :	USBCAN-4E-U
Rated input :	5 Vd.c., 500 mA, or 9-36 Vd.c., 300 mA
Rated output :	N/A
Protection Class :	Class III
Construction :	Building-in
Supply connection :	DC connector
Operation mode :	Continuous
Weight:	0,53 kg

3. Label :



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

4. Test :

The test was done in the Electrical Safety Laboratory of SGS-CSTC in Guangzhou.

These tests fulfil the requirements of standard ISO/IEC 17025.

When determining the test conclusion, the Measurement Uncertainty of test has been considered.

The max. recommended temperature is 85 degree C by manufacturer.

After review, test conducted on 5 Vd.c. (powered through USB input terminal) and 7,65 – 43,2 Vd.c. according to client's requirement (powered by terminal block).

Possible test case verdicts:

Test case does not apply to the test object : N/A (or N)

Test item does meet the requirement : P(ass)

Test item does not meet the requirement : F(ail)

Testing :

Date of receipt of test item : 2016-12-20

Date(s) of performance of tests : 2016-12-21 to 2016-12-26

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Clause	Requirement	Remarks	Verdict
1.5	Components	(see appended table)	P
1.6	Power interface	(see appended table)	P
1.7	Markings and instructions		P
2.1	Protection from electric shock and energy hazards		P
2.2	SELV circuits		N/A
2.3	TNV circuits		N/A
2.4	Limited current circuits		N/A
2.5	Limited power sources		P
2.6	Provisions for earthing and bonding		N/A
2.7	Overcurrent and earth fault protection in primary circuits		N/A
2.8	Safety interlocks		N/A
2.9	Electrical insulation		N/A
2.10	Clearances, creepage distances and distances through insulation		N/A
3.1	General		N/A
3.2	Connection to an a.c. mains supply or a d.c. mains supply		N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.4	Disconnection from the mains supply		N/A
3.5	Interconnection of equipment		P
4.1	Stability		N/A
4.2	Mechanical strength		N/A
4.3	Design and construction	It shall be evaluated with end-product	N/A
4.4	Protection against hazardous moving parts		N/A
4.5	Thermal requirement	(see appended table)	P
4.6	Openings in enclosures		N/A
4.7	Resistance to fire	It shall be evaluated with end-product	N/A
5.1	Touch current and protective conductor current		N/A
5.2	Electric strength		N/A
5.3	Abnormal operating and fault conditions		P
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A

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Clause	Requirement	Remarks	Verdict
6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.3	Protection of the telecommunication wiring system from overheating		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
Annex A	Tests for resistance to heat and fire		N/A
Annex B	Motor tests under abnormal conditions		N/A
Annex C	Transformers		N/A
Annex D	Measuring instruments for touch-current tests		N/A
Annex E	Temperature rise of a winding		N/A
Annex F	Measurement of clearances and creepage distances		N/A
Annex G	Alternative method for determining minimum clearances		N/A
Annex H	Ionizing radiation		N/A
Annex J	Table of electrochemical potentials		N/A
Annex K	Thermal controls		N/A
Annex L	Normal load conditions for some types of electrical business equipment		P
Annex M	Criteria for telephone ringing signals		N/A
Annex N	Impulse test generators		N/A
Annex P	Normative references		P
Annex Q	Voltage dependent resistors (VDRs)		N/A
Annex R	Examples of requirements for quality control programmes		N/A
Annex S	Procedure for impulse testing		N/A
Annex T	Guidance on protection against ingress of water		N/A
Annex U	Insulated winding wires for use without interleaved insulation		N/A
Annex V	AC power distribution systems		N/A
Annex W	Summation of touch currents		N/A

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Clause	Requirement	Remarks	Verdict
Annex X	Maximum heating effect in transformer tests		N/A
Annex Y	Ultraviolet light conditioning		N/A
Annex Z	Overvoltage categories		N/A
Annex AA	Mandrel test		N/A
Annex BB	Changes in the second edition		N/A
Annex CC	Evaluation of integrated circuit (IC) current limiters		N/A
Annex DD	Requirements for the mounting means of rack-mounted equipment		N/A
Annex EE	Household and home/office document/media shredders		N/A
EN deviations			
Zx	Protection against excessive sound pressure from personal music players		N/A

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1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	
5,0 VDC	0,25	0,5	1,25	--	--	Normal condition	
7,65 VDC	0,28	--	2,14	--	--	Normal condition	
9 VDC	0,24	0,3	2,16	--	--	Normal condition	
36 VDC	0,07	0,3	2,52	--	--	Normal condition	
43,2 VDC	0,06	--	2,59	--	--	Normal condition	
supplementary information:							

2.10.3 & 2.10.4	TABLE: Clearance and creepage distance measurements						N/A
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Require cl. (mm)	cl. (mm)	Require cr. (mm)	cr. (mm)	
Functional:							
Basic/supplementary:							
Reinforced:							
Supplementary information: Test at 10 N for internal parts.							

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4.5	TABLE: Thermal requirements						P
	Supply voltage (V)	5 V	7,65 V	43,2 V			—
	Ambient Tmin (°C)	84,7	85,1	84,9			—
	Ambient Tmax (°C)	85,9	86,7	86,4			—
Maximum measured temperature T of part/at:		T (°C)				Allowed T (°C), T _{ma} = 85 °C	
Metallic enclosure surface (Top)		88,9	90,8	92,5			Ref.*
Metallic enclosure surface (Side)		90,2	92,4	92,7			Ref.*
Metallic enclosure surface (Bottom)		88,3	90,4	92,9			Ref.*
PWB (near D2)		92,7	100,4	106,8			130
PWB (near U1)		93,0	101,3	113,1			130
PWB (near REY1)		91,0	100,0	105,2			130
PWB (near U11)		97,4	100,4	103,6			130
PWB (near U12)		98,1	100,5	103,2			130
PWB (near U5)		95,8	97,9	100,3			130
PWB (near U9)		97,4	99,5	102,1			130
PWB (near U4)		100,7	103,0	105,8			130
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
supplementary information:							
*: The temperature rising for external enclosure should be evaluated with end-product							

4.5.5	TABLE: Ball pressure test of thermoplastic parts		N/A
	Allowed impression diameter (mm)	≤ 2 mm	—
Part	Test temperature (°C)		Impression diameter (mm)
supplementary information:			

5.1	TABLE: touch current measurement			N/A
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions	
supplementary information:				

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5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			N/A
Test voltage applied between:		Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No
Functional:				
Basic/supplementary:				
Reinforced:				
supplementary information:				

5. Component List

object/part No.	manufac- turer/trademark	type/model	technical data	standard	mark(s) of conformity ¹⁾
PWB	GUANGZHOU FAST-PRINT CIRCUIT TECHNOLOGY CO LTD	D1	V-0, 130 °C	--	UL (E204460)
Alt.	Interchangeabl e	Interchangeabl e	V-0, 130 °C	--	UL

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6. Photo document

Details of:



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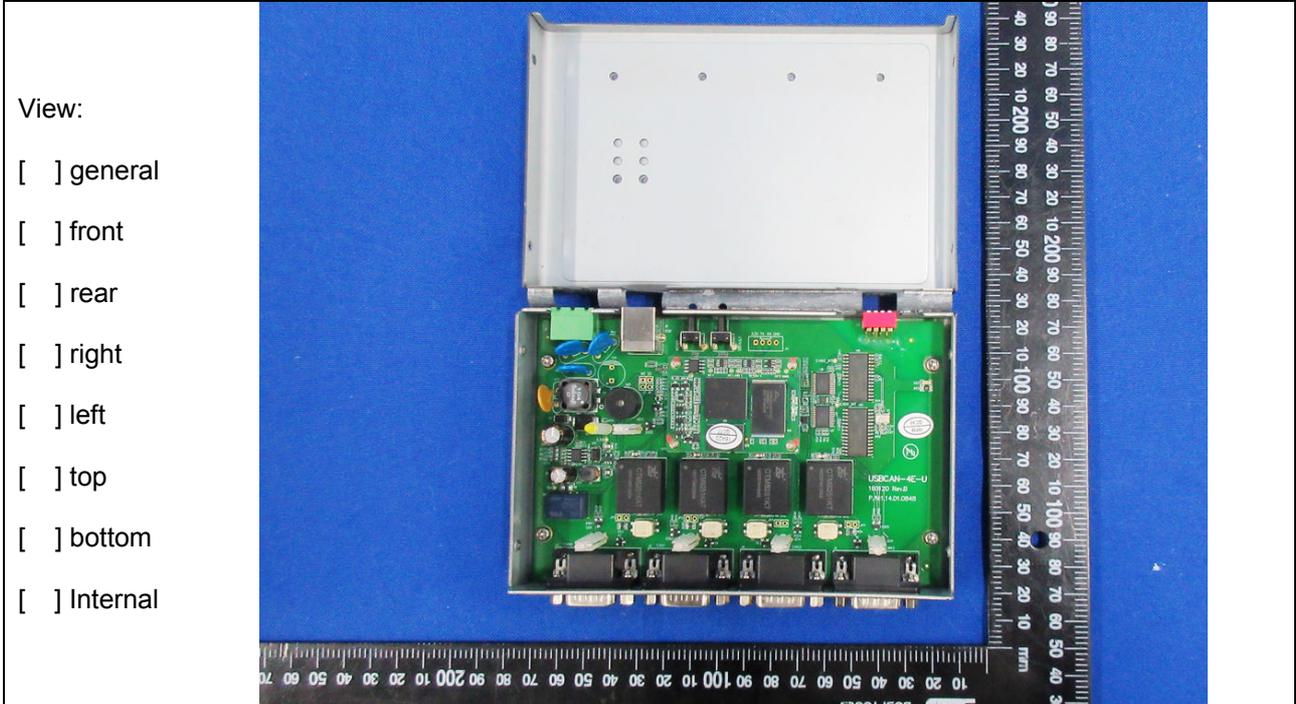


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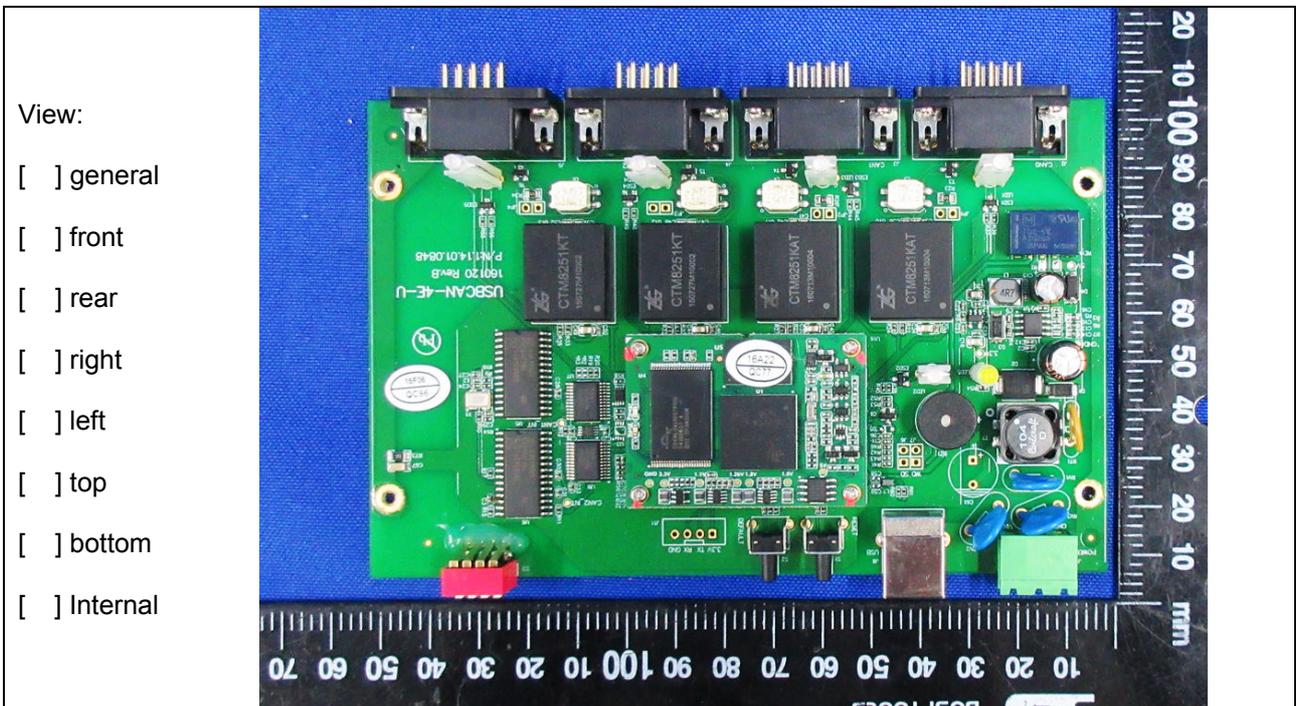
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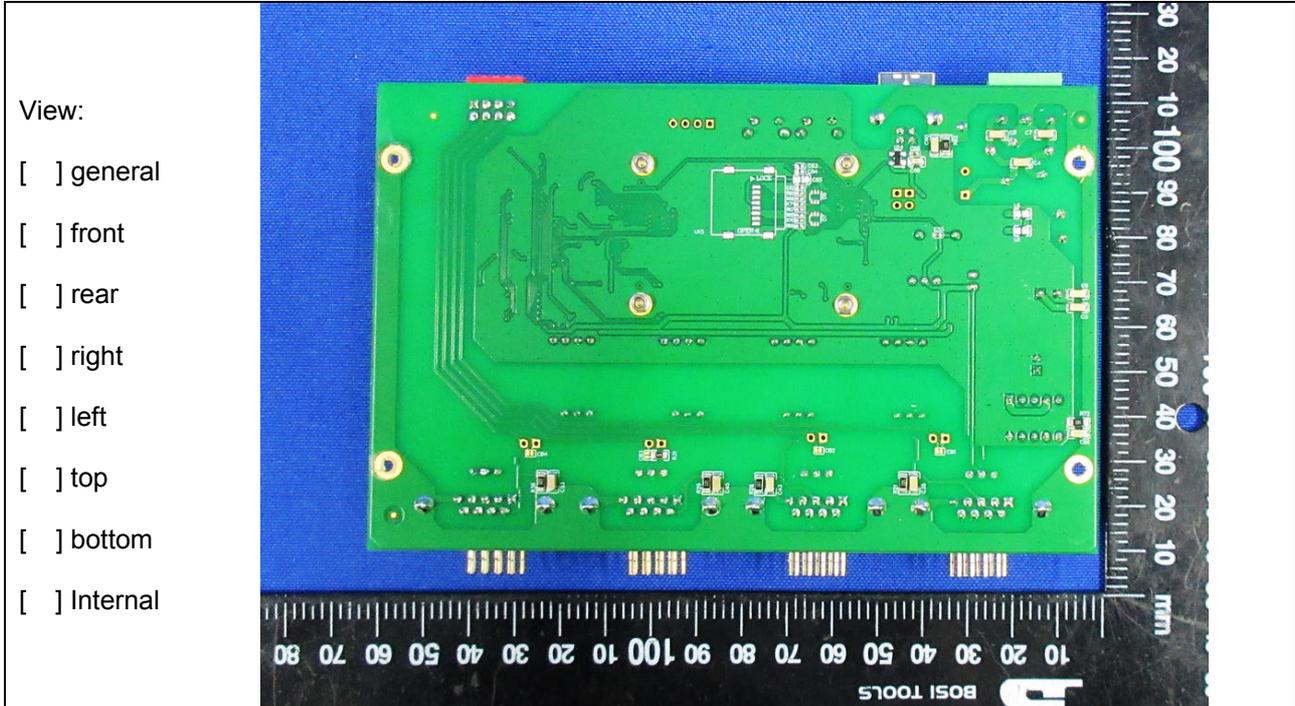
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NOTES TO THIS TEST REPORT

1. The following language(s) of marking(s) and instruction sheets were submitted during the test application:

- English

According to the standard, instruction sheets and other texts required by the standard should be written in the official language(s) of the country in which the product is to be sold. The applicant should ensure that the product in future production fulfils the receptive standard requirements.

2. The components performed satisfactorily during testing and are considered to be suitable for use in the sample tested. Acceptances of the safety critical components and materials were based on:

- the certification record(s) and/or test report submitted by the applicant; or
- component / material tested with the appliance

--- End of Report ---