

TEST REPORT

EN 50075

**Flat non-wirable two-pole plugs, 2,5 A 250 V, with cord
for the connection of class II-equipment for household and similar purposes**

Report Reference No. : SZES140700175401

Tested by (name + signature)..... : Megan Xue

Approved by (name + signature)..... : Rocky Wang

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Contents..... : 15 Pages



Testing laboratory Name : SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch E&E Lab

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Client Name : GlobTek, Inc.

Address..... : 186 Veterans Dr. Northvale
NJ 07647
USA

Standard : EN 50075:1990

Test procedure : Commission testing

Non-standard test method..... : N/A

Test Report Form/blank test report

Test Report Form No. : EN50075_A

TRF originator..... : SGS-CSTC

Master TRF : Dated 2011-11

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Test item Description : EU plug portion of Switching adaptor

Trademark..... :



Model and/or type reference..... : R-EU-2

Manufacturer : GlobTek, Inc.
186 Veterans Dr. Northvale
NJ 07647
USA

Rating(s) : Input: 100-240 V~, 50-60 Hz

Summary of testing:

The sample(s) tested complies with the requirements of EN 50075:1990, where the clause(s) is applied to direct plug-in equipment.

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

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

Tests performed (name of test and test clause):

- 6. Marking
- 7. Dimensions
- 8. Protection against electric shock
- 9. Construction
- 10. Resistance to humidity
- 11. Insulation resistance and electric strength
- 12. Flexible cords and their connection
- 13. Mechanical strength
- 14. Resistance to heat and to ageing
- 15. Current-carrying parts and connections
- 16. Creepage distances, clearance and distance through insulation
- 17. Resistance of insulating material to abnormal heat and to fire

Testing location:
Copy of marking plate

N/A

Test case verdicts

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

Test item does meet the requirement : P (Pass)

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

Testing

Date of receipt of test item : 2014-07-15

Date(s) of performance of test : 2014-07-15 to 2014-08-12

General remarks

This report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item(s) tested.

"(see appended table)" refers to a table appended to the report.

"(see remark #)" refers to a remark appended to the report.

"(see Annex #)" refers to an annex appended to the report.

Throughout this report a comma is used as the decimal separator.

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General product information:

The test samples are detachable plug parts which from an integral part of switching adaptor.

EN 50075			
Clause	Requirement – Test	Result - Remark	Verdict
5	RATING		P
	Plugs according to this standard shall be rated 2,5 A, 250 V a.c.		P
6	MARKING		N/A
6.1	Plugs shall be marked with:	Refer to the marking of final appliance	N/A
	- the rated current in amperes		N/A
	- the rated voltage in volts		N/A
	- the symbol for nature of supply: ~		N/A
	- either the name, trade mark or identification mark of the manufacturer or responsible vendor		N/A
	- the type reference, which may be a catalogue number		N/A
6.2	When symbols are used, they shall be as follows:	Refer to the marking of final appliance	N/A
	- amperes: A		N/A
	- volts: V		N/A
6.3	Symbol for class II construction not used	Refer to the marking of final appliance	N/A
6.4	Marking durable and easily legible, tested with 15 s water and 15 s petroleum spirit	Refer to the marking of final appliance	N/A
7	DIMENSIONS		P
	Plugs comply with standard sheet 1		P
	Compliance is checked by measurement	See appended table 7	P
	Compliance checked by means of the gauges in figure 1 (optional) and figure 2		P
8	PROTECTION AGAINST ELECTRIC SHOCK		P
8.1	Live parts shall not be accessible		P
	Checked by test finger		P
	No deformation or no live part accessible during the additional test: (75^{+3}) N through the tip of a straight unjointed test finger for (60^{+5}) s at ambient temperature (35 ± 2) °C		P
8.2	No possibility to make connection between a pin of the plug and a live socket contact of a socket-outlet while the other pin is accessible		P
	Compliance is checked by means of the gauge in figure 4: no contact between the gauge and the engagement face of the plug for 1 min (at 35 °C \pm 2 °C for thermoplastic material)		P

EN 50075			
Clause	Requirement – Test	Result - Remark	Verdict
8.3	External parts of plugs, with the exception of the pins, shall be of insulating material		P
9	CONSTRUCTION		P
9.1	Plugs shall be non-rewireable		P
9.2	Switches, fuses or lampholders shall not be incorporated in plugs		P
9.3	Pins of plugs shall be solid and have adequate mechanical strength	See tests of clause 13	P
9.4	Pins of plugs shall be locked against rotation and adequately fixed into the body of the plug	See tests of clause 13.1 and 13.4	P
9.5	Plugs shall be provided with soldered, welded, crimped or equally effective permanent connections, screwed or snap-on connections shall not be used. Connections made by crimping a presoldered flexible conductor are not permitted, unless the soldered area is outside the crimping area.		P
9.6	Plugs shall be shaped in such a way and made of such a material that they can easily be withdrawn by hand from a socket-outlet.		N/A
	In addition, the gripping surfaces shall be so designed that the plug can be withdrawn without having to pull the cord.		N/A
	Compliance is checked by inspecting whether the plug has either: <ul style="list-style-type: none"> - a usable length for gripping of at least 55 mm in axial direction, or - such indent that a ball with a diameter of 12 mm can penetrate radially into the body at least 2 mm from two opposite directions or at least 4 mm from one direction. 		N/A
	In case of non-compliance with the above requirements, a gripping test shall be performed		N/A
10	RESISTANCE TO HUMIDITY		N/A
	Plugs shall be proof against humidity which may occur in normal use. Checked by the humidity treatment, 91%-95%, 20°C-30°C for 48 h, then plugs shall satisfy electric strength test specified in clause 11		N/A
11	INSULATION RESISTANCE AND ELECTRIC STRENGTH		N/A
11.1	The insulation resistance shall be not less than 5 MΩ.		N/A

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Clause	Requirement – Test	Result - Remark	Verdict
11.2	Electric strength: 2000 V a.c. test voltage applied for 1 min. No flashover or breakdown shall occur during the test		N/A
12	FLEXIBLE CORDS AND THEIR CONNECTION		N/A
12.1	Cord in compliance with HD 21.5 or HD 22.4		N/A
12.2	Moulded-on plugs shall be so designed that the cores of the cord are relieved from strain where they are connected to the terminations. Checked by the following test:		N/A
	The plug is placed in a test apparatus as shown in figure 5 so that the axis of the cord is vertical where it enters the plug. The cord is then subjected 100 times to a pull of 50 N, without jerks each time for 1 s		N/A
	Immediately afterwards the cord is subjected for 1 min to a torque of :		N/A
	- nominal cross-sectional area of 0,5 mm ² , 0,1 Nm		N/A
	- nominal cross-sectional area of 0,75 mm ² , 0,15 Nm		N/A
	- flat tinsel cords is H03VH-Y		N/A
	After the tests:		
	- the cord shall not have been displaced by more than 2 mm		N/A
	- no break in electrical connections		N/A
12.3	Flexible cords and their connection		N/A
	Flexing test: 10000 flexings, is moved backwards and forwards through an angle of 90 ° (45 ° on either side of the vertical)		N/A
	10 N for plugs with cords having a nominal cross-sectional area of 0,75 mm ² or less		N/A
	20 N for plugs with other cords		N/A
	A current of 2,5 A is passed through the conductors , the voltage between them being 250 V a.c.		N/A
	During the test, there shall be no interruption of the test current and no short-circuit between conductors		N/A
	After the test, the plugs shall show no damage		N/A

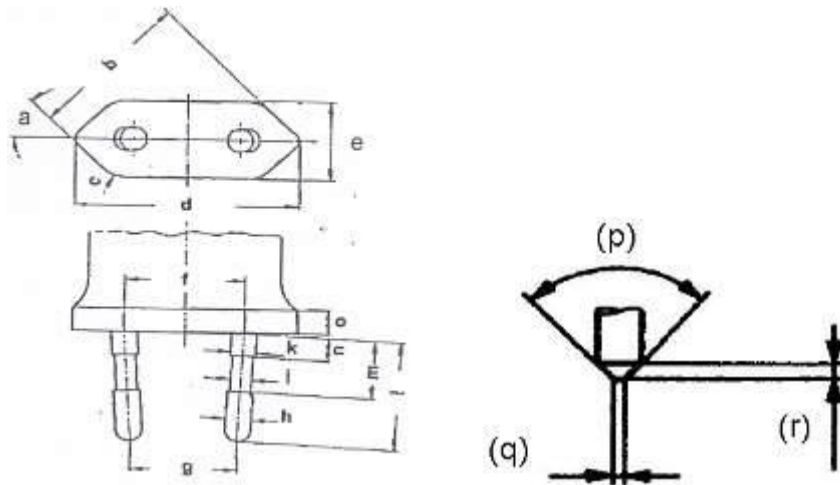
EN 50075			
Clause	Requirement – Test	Result - Remark	Verdict
	The voltage drop between a pin and the corresponding conductor shall not exceed 10 mV		N/A
13	MECHANICAL STRENGTH		P
13.1	Pressure between 2 flat surfaces on the plug (150 N for 5 min)		P
	15 minutes after removal of the force, no deformation would result in undue alteration of those dimensions which ensure safety		P
13.2	Subjected to tumbling barrel; number of falls :	Direct plug-in equipment, 172,9 g, 50 falls according to EN 61558-1:2005	P
	After the test		
	- no part shall become detached or loosened		P
	- plug shall introduced into the gauge of figure 2		P
	- shall comply with clause 7 and 8.2		P
	- the pins shall not turn when applying a torque of 0,4 Nm for 1 min, first in one direction and then in opposite direction		P
13.3	Insulating sleeves: 20000 movements, (4 _{-0,1}) N (apparatus shown in Figure 9)	20000 movements	P
	After the test		
	- the sleeve shall show no damage		P
	- the sleeve shall not have punctured or rucked up		P
	- the sleeve shall satisfy electric strength test		P
13.4	(40 ⁺¹) N applied for (60 ⁺⁵) s on each pin in turn, at (70 ± 2) °C, after the plug has been placed for (60 ⁺⁵) min		P
	Displacement ≤ 1 mm when the plug has cooled down	Max. displacement of pin: 0,3 mm	P
14	RESISTANCE TO HEAT AND TO AGEING		P
14.1	Plugs shall be sufficiently resistant to heat, compliance is checked by the test of clause 14.1.1 and 14.1.2		P
14.1.1	Plugs other than moulded-on plugs, are kept for 1 h in a heating cabinet at (100± 2) °C		P
	After the test, the plugs are allowed to cool down to approximately room temperature, the marking shall still be legible		P

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Clause	Requirement – Test	Result - Remark	Verdict
14.1.2	A force of (20 ⁺¹) N applied by means of an apparatus shown in figure 10 at (80 ± 2) °C		P
	After (60 ⁺⁵) min, the jaws are removed and the plugs shall show no damage		P
14.2	Plugs are kept in the cabinet at (70± 2) °C for 168 h, then removed from the cabinet and kept at room temperature for at least 96 h		N/A
	After the test, the plugs shall show no damage which would lead to non-compliance with this standard. Then obtained a force of 5N, no traces		N/A
15	CURRENT-CARRYING PARTS AND CONNECTIONS		P
15.1	Connections, electrical and mechanical, shall withstand the mechanical stresses occurring in normal use. Compliance is checked by inspection.		P
15.2	Electrical connections shall be so designed that contact pressure is not transmitted through insulating material.		P
15.3	Current-carrying parts shall be either of:		P
	- copper		N/A
	- an alloy containing at least 58% copper for parts made from rolled sheet (in cold condition) or at least 50% copper for other parts		P
	- other metals having a mechanical strength, an electrical conductivity and a resistance to corrosion adequate for their intended use		N/A
	Current-carrying parts which may be subjected to mechanical wear, shall not be made of steel provided with an electroplated coating		P
16	CREEPAGE DISTANCES, CLEARANCES AND DISTANCES THROUGH INSULATION		N/A
	Creepage and clearance distance between live parts ≥ 3 mm		N/A
	Creepage and clearance distance between live parts and accessible external surfaces ≥ 3 mm		N/A
	Distance through insulation ≥ 1,5 mm		N/A

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Clause	Requirement – Test	Result - Remark	Verdict

17	RESISTANCE OF INSULATING MATERIAL TO ABNORMAL HEAT AND TO FIRE		P
	Glow-wire test (750 °C): no visible flame, no sustained glowing or flames and glowing extinguish within 30 s after removal of glow-wire	See appended table 17	P
	Glow-wire test (650 °C): no visible flame, no sustained glowing or flames and glowing extinguish within 30 s after removal of glow-wire	See appended table 17	P

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Clause	Requirement – Test	Result - Remark	Verdict



7	TABLE: Dimensional measurement					P
Locations	Size (mm)	Tolerance (mm)	Measured (for both pins, if applicable) (mm)			
			Sample No.: 1	Sample No.: 2	Sample No.: 3	
a	45°	--	Pass	Pass	Pass	
b	26,1	±0,5	25,84 – 26,03	25,95 – 26,12	25,87 – 26,07	
c	R5	+1	Pass	Pass	Pass	
d	35,3	±0,7	34,73 – 35,29	34,77 – 35,28	34,78 – 35,28	
e	13,7	±0,7	13,35 – 13,77	13,41 – 13,78	13,32 – 13,77	
f	18 – 19,2	--	18,44	18,40	18,42	
g	17 – 18	--	17,97	17,82	17,98	
h	Ø4	±0,06	3,95 / 3,94	3,95 / 3,95	3,95 / 3,95	
i	Ø3,8	max.	3,41 / 3,41	3,40 / 3,40	3,43 / 3,41	
k	Ø4	max.	3,95 / 3,95	3,94 / 3,94	3,95 / 3,93	
l	19	±0,5	18,95 / 19,01	18,96 / 18,95	18,94 / 18,99	
m	10	+1	10,03 / 10,09	10,06 / 10,07	10,03 / 10,01	
n	0-4,0	--	3,05 / 3,00	2,98 / 3,01	3,02 / 3,05	
o	18,0	min.	18,13	18,12	18,10	
Alternative chamfered pins used? (No)					--	
p	90°	max.	--	--	--	
q	Ø1,2	±0,5	--	--	--	
r	2	max.	--	--	--	

EN 50075			
Clause	Requirement – Test	Result - Remark	Verdict

11.1	TABLE: insulation resistance test		N/A
Test between parts::	Measured (MΩ)	Required (MΩ)	
pins connected together and the body	--	--	
each pin in turn and the other, the latter being connected to the body	--	--	

11.2	TABLE: electric strength test		N/A
Test voltage applied between parts:	Test voltage (V)	Flashover / Breakdown (Yes/No)	
pins connected together and the body	--	--	
each pin in turn and the other, the latter being connected to the body	--	--	

17	TABLE: glow-wire test		P
part	test temperature (°C)	observation	
Pin bridge	750	No flame	
Enclosure	650	No flame	

Photo documentation

Whole unit









Appendix: Component Part List

object/part No.	manufacturer / trademark	type/model	technical data	mark(s) of conformity ¹⁾
Plastic material of pin bridge	SABIC INNOVATIVE PLASTICS B V	HF500R	PC, V-0	UL(E45329)
Plastic material of enclosure	SABIC INNOVATIVE PLASTICS B V	HF500R	PC, V-0	UL(E45329)
Metal materials of plug pins	Yuyao Yonghai Hardware Product Co., Ltd.	H62	Contain 60,5%-63,5% copper	--

--- END OF REPORT ---