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Report No. 210601525SHA-001

## TEST REPORT

APPLICANT: GlobTek, Inc. REPORT NUMBER: 210601525SHA-001  
ADDRESS: 186 Veterans Dr. Northvale, NJ 07647 USA DATE: 2021-06-28

SAMPLE DESCRIPTION : Detachable integral plug for power supplies

MODEL NO. : Q-SAA, Q-AU

TESTING LABORATORY : Intertek Testing Services Shanghai Limited.

ADDRESS : Building No.86, 1198 Qinzhou Road (North), Shanghai 200233, China

MANUFACTURER: GlobTek (Suzhou) Co., Ltd  
Building 4, No. 76 JinLing East Road, Suzhou Industrial Park, Suzhou, JiangSu,  
215021, China

TRADEMARK:



RATING. : GT\*46101-\*\*\*-USB, GT\*41078-\*05-USB, GT\*46161-\*\*-USB, GT-41134\*\*\*\*  
Input: 100-240 Vac, 50-60 Hz or 50/60 Hz, 0.3A or 0.45A

DATE RECEIVED : 2021-06-11

DATE TEST CONDUCTED: 2021-06-11 to 2021-06-24

TEST REQUESTED : Test for compliance with Appendix J of AS/NZS 3112: 2017

TEST METHOD : According to Appendix J of AS/NZS 3112: 2017

REMARK : --

\*\*\*\*\* E N D \*\*\*\*\*

PREPARED BY:  
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## TEST REPORT

### Model Similarity:

| No. | Model name       | Model description   |
|-----|------------------|---|
| 1   | GT*46101-***-USB | <p>The 1st "*" can be "M" or "-" or "H" for market identification and not related to safety.</p> <p>The 2nd "*" denote the rated output wattage designation, which can be "01" to "13", in step of 1 denote 1W.</p> <p>The 3rd "*" denote the standard rated output voltage designation, which can be "05", "06",</p> <p>The 4th "*" is optional deviation, subtracted from standard output voltage, which can be "-0.5" to "-0.9", in step of 0.1 denote 0.1V, or blank to indicate no voltage different.</p> <p>The 3rd and 4th "***" together denote the output voltage, with a range of 5-5.5 volts.</p>          |
| 2   | GT*41078-*05-USB | <p>The 1st "*" part can be 'M' or '-' or 'H' for market identification and not related to safety.</p> <p>The 2nd "*" part denotes the rated output wattage designation, which can be "01" to "06", with interval of 1.</p>  |
| 3   | GT*46161-**-USB  | <p>The 1st symbol "*" denotes "M" or "-" or "H" for market identification and not related to safety.</p> <p>The 2nd symbol "*" denotes the rated output wattage designation, which can be "01" to "16", with interval of 1.</p> <p>The 3rd symbol "*" denotes the standard rated output voltage designation, which can be "5.0" to "5.5" or "05" to "05.5" with interval of 0.1 Vdc.</p>  |
| 4   | GT-41134****     | <p>The 1st * denote the rated output wattage designation, which can be "01" to "06".</p> <p>The 2nd* denote the standard rated output voltage designation, which can be "03", "04", "06", "12", "15", "18" or "24";</p> <p>The 3rd* is the optional deviation, added or subtracted from standard output voltage, which can be "-0.1" to "-9.9" with interval of 0.1, or blank to indicate no voltage different.</p> <p>The 2nd* and 3rd* together denote the output voltage, with a maximum value of 24V.</p> <p>The last * denote any six character = 0-9 or A-Z or () [ ] or - or blank for marketing purposes.</p> |

- The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
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| Clause      | Requirement + Test  | Result - Remark | Verdict |
|-------------|---|-----------------|---------|
| <b>2.2</b>  | <b>PLUG PINS</b>  |                 | P       |
| 2.2.1       | Material for pins   |                 | P       |
|             | Current carrying parts of plug pins -copper, or copper alloy containing at least 58% copper for parts made from cold rolled sheet or at least 50% copper for other parts; or stainless steel containing at least 13% chromium and not more than 0.09% carbon. | 58% copper      | P       |
| 2.2.2       | Assembly of pins  |                 | P       |
| 2.2.3       | The exposed ends and the contact portion of plug pins shall be smooth and free from openings or indentations;   |                 | P       |
| 2.2.4       | Live parts of insulated pin plugs shall not be exposed when the plug is partially or fully engaged with the associated socket.  |                 | P       |
|             | Plugs with insulated pin do not need to comply with the R20.0 +/-1 mm of Figure 2.1(e).   |                 | P       |
| <b>2.8</b>  | <b>RATINGS AND DIMENSIONS OF LOW VOLTAGE PLUGS</b>  |                 | P       |
| 2.8.1       | Low voltage flat-pin plugs shall conform to the appropriate dimensions shown in Figure 2.1.   |                 | P       |
|             | the distance between a live pin of any plug and the edge of the moulding of the plug, shall be not less than 9 mm.  | 10.38mm min.    | P       |
|             | No point on the front face of the plug is more than 0.5 mm.   | No protrusion   | P       |
| 2.8.4       | Compliance with dimensional requirements of Figure 2.1  |                 | P       |
|             | Low voltage flat-pin or combination of flat and round pin, plugs having ratings up to 15A of Figure 2.1(a1), Figure 2.1(c), Figure 2.1(d), Figure 2.1(f) or Figure 2.1(g) type shall comply with the dimensional requirements of Figure 2.1(e).               |                 | P       |
|             | Plugs with insulated pins, complying with this Standard, need not comply with dimension R20+/-1.0 mm of Figure 2.1(e)   |                 | P       |
| <b>2.9</b>  | <b>INTERNAL CONNECTIONS</b>   |                 | N/A     |
|             | A loose terminal screw or conductive material cannot bridge any live parts or earthing parts;   |                 | N/A     |
| <b>2.10</b> | <b>ARRANGEMENT OF EARTHING CONNECTIONS</b>  | No earthing pin | N/A     |
| <b>2.12</b> | <b>MARKING</b> (No marking is applicable for the integral plug portion. See markings for transformer)   |                 | N/A     |



| Clause      | Requirement + Test   | Result - Remark             | Verdict |
|-------------|--|-----------------------------|---------|
| 2.12.6      | Configuration of plugs, viewed as from the pins, shall be earth, neutral and active in a clockwise direction. Where there is no earthing pin, the live pins shall conform to this configuration.   |                             | P       |
| <b>2.13</b> | <b>TESTS ON PLUGS</b>  |                             | P       |
| 2.13.2      | Insulation Resistance test   | See appended table 2.13.2   | P       |
| 2.13.3      | High voltage test  | See appended table 2.13.3   | P       |
| 2.13.7      | Mechanical strength of pin tests   |                             | P       |
| 2.13.7.1    | Tumbling barrel test   | See appended table 2.13.7.1 | P       |
| 2.13.7.2    | Pin bending test   | See appended table 2.13.7.2 | P       |
|             | The point of application of the force shall be $14 \pm 0.5$ mm from the face of the plug.  |                             | P       |
|             | The direction of the force shall be along a line parallel to the face of the plug.   |                             | P       |
|             | Active and neutral pins shall be forced towards the centroid of the plug and then back to the starting point. Earth pin shall be forced but in one direction only then back to the starting point. |                             | P       |
|             | The distance moved from the point of application shall be $7.5 \pm 0.3$ mm. Any "spring-back" is ignored.  |                             | P       |
|             | The travel from the starting point to the end point and back to the starting point is one cycle.   |                             | P       |
|             | The interval between successive cycles shall be a minimum of 10 s.   |                             | P       |
|             | The duration of one cycle shall be a maximum of 60 s.  |                             | P       |
|             | The pins shall be tested for 20 complete cycles.   |                             | P       |
|             | After to tests the pins shall be inspected with normal or corrected to normal vision.  |                             | P       |
|             | The pin shall not be broken off.   |                             | P       |
| 2.13.8      | Temperature rise test (modified as follows)  |                             | P       |
|             | With 1.1 times rated current prescribed by transformer. The temperature rise of the terminals shall not exceed 45 K.   | See table 2.13.8            | P       |
| 2.13.9      | Securement of pins   |                             | P       |
| 2.13.9.1    | Movement of pins   |                             | P       |
|             | Clamped $5 \pm 0.5$ mm and applying $18 \pm 1$ N to the pin at $14 \pm 0.5$ mm   |                             | P       |



| Clause  | Requirement + Test   | Result - Remark     | Verdict |
|---|--|---------------------|---------|
|   | The maximum deflection shall not exceed 2.0 mm.  | See table 2.13.9.1  | P       |
| 2.13.9.2  | Fixing of pins   |                     | P       |
|   | Maintained 50 ±2°C for 1 h. 60 ±0.6 N for 10 min.  |                     | P       |
|   | The attachment of pins shall be not more than 2.4 mm or if any pin fails to return to within 0.8 mm of its nominal length specified in Figure 2.1 within 5 min of the removal of the test force. | See table 2.13.9.2  | P       |
| 2.13.13   | Tests on the insulation material of insulated pin plugs, if any  |                     | P       |
| 2.13.13.2   | Pressure test at high temperature  |                     | P       |
|   | Maintained for 2 h at 160 ±5°C. Force applied through the blade: 2,5 N   |                     | P       |
|   | Thickness within the area of impression ≥ 50 %. no cracks  | See table 2.13.13.2 | P       |
| 2.13.13.3   | Static damp heat test  |                     | P       |
|   | Two damp heat cycles (12+12h), 95% relative humidity, Lower temperature 25+3°C and upper temperature 40°C  |                     | P       |
|   | (a) the insulation resistance test in accordance with Clause 2.13.2(e);<br>(b) high voltage test in accordance with Clause 2.13.3 and;<br>(c) abrasion test in accordance with Clause 2.13.13.6. |                     | P       |
| 2.13.13.4   | Low temperature test   |                     | P       |
|   | Maintained at -15+2°C for 24h and returned to room temperature   |                     | P       |
|   | (a) the insulation resistance test in accordance with Clause 2.13.2(e);<br>(b) high voltage test in accordance with Clause 2.13.3 and;<br>(c) abrasion test in accordance with Clause 2.13.13.6. |                     | P       |
| 2.13.13.5   | Impact test at low temperature   |                     | P       |
|   | Maintained at -15 ±2°C for at least 24 h. a height of 100 mm. Four impacts. No cracks.   |                     | P       |
| 2.13.13.6   | Abrasion test  |                     | P       |
|   | Plug pins provided with insulating sleeves: 20000 movements, 4 N (apparatus shown in fig. 23). No damage, the insulating sleeve shall not have punctured or rucked up.                           |                     | P       |
| <b>Appendix J of AS/NZS 3112: INTEGRAL OR DETACHABLE PLUG PORTIONS OF EQUIPMENT FOR INSERTION INTO SOCKET-OUTLETS</b> |  |                     |         |



| Clause | Requirement + Test  | Result - Remark | Verdict |
|--------|---|-----------------|---------|
| J1     | SCOPE   |                 | —       |
| J2     | DEFINITIONS   |                 | P       |
| J2.1   | Detachable plug portion   |                 | P       |
|        | a). Type A  |                 | N/A     |
|        | b). Type B  |                 | P       |
|        | c). Type C  |                 | N/A     |
| J2.2   | Integral plug portion   |                 | N/A     |
|        | Integral to the equipment enclosure and not detachable.   |                 | N/A     |
| J2.3   | Plug portion  |                 | P       |
|        | Plug portion includes the plug pins, terminals of the plug pins, external dimension of the 'maximum projection' and any connections of a detachable plug portion. |                 | P       |
| J3     | REQUIREMENTS FOR THE PLUG PORTION   |                 | P       |
| J3.1   | General   |                 | P       |
|        | The following provisions apply to the dimensional and constructional requirements of the plug portion of equipment and any detachable connection:                 |                 | —       |
|        | a). For detachable plug portions, the relevant tests are performed in the most onerous orientation.   |                 | P       |
|        | b). For type A detachable plug portions, the relevant requirements of AS/NZS 3105 are applicable, in addition to conformance with this appendix.                  |                 | N/A     |
|        | c). For type B detachable plug portions, the conformance is shown by this appendix.   |                 | P       |
|        | d). For type C detachable plug portions, conformance is shown by assessment to section 2 of this standard and this appendix.                                      |                 | N/A     |
| J3.2   | Plug pins of plug portions  |                 | P       |
|        | The requirements of Clause 2.2 are applicable for plug pins.  | See clause 2.2  | P       |
| J3.3   | Ratings and dimensions for low voltage plug portions  |                 | P       |
|        | The requirements of Clauses 2.8.1 and 2.8.4 are applicable for ratings and dimensions.  | See clause 2.8  | P       |
| J3.4   | Internal connections for plug portions  |                 | N/A     |
|        | The requirements of Clause 2.9 are applicable for internal connections unless requirements are contained in the relevant product standard.                        | See clause 2.9  | N/A     |



| Clause | Requirement + Test  | Result - Remark             | Verdict |
|--------|---|-----------------------------|---------|
| J3.5   | Arrangement of earthing connections for plug portions   |                             | N/A     |
|        | The requirements of Clause 2.10 are applicable for the arrangement of earthing connections.   | See clause 2.10             | N/A     |
| J3.6   | Configuration of plug portions  |                             | P       |
|        | The requirements of Clause 2.12.6 are applicable to the configuration of the plug portion.  | See clause 2.12.6           | P       |
| J4     | TESTS   |                             | P       |
| J4.1   | General   |                             | —       |
|        | Plug portions of equipment shall be subjected to the following tests and unless stated otherwise, shall comply with the requirements specified in Section 2 for each test.      |                             | P       |
|        | Conformance for detachable plug portions shall be established by assessment with the plug portion fully assembled with the equipment.   |                             | P       |
| J4.2   | High voltage test   |                             | P       |
|        | The requirements of Clause 2.13.3 are applicable unless requirements are contained in the relevant product standard.  | See appended table 2.13.3   | P       |
| J4.3   | Mechanical strength of pin tests  |                             | P       |
| J4.3.1 | Tumbling barrel test  |                             | P       |
|        | The requirements of clause 2.13.7.1 are modified as follow:   |                             | —       |
|        | a). 500 times if the mass does not exceed 250 g.  | Measured: Max. 70g          | P       |
|        | b). 250 times if the mass exceeds 250 g.  | Measured: Min. g            | N/A     |
|        | Following each test the samples shall comply with item clause 2.13.7.1.   | See appended table 2.13.7.1 | P       |
| J4.3.2 | Pin bending test  |                             | P       |
|        | The pins of the plug portion not subjected to any previous tests shall be tested for conformance with the pin bending test of Clause 2.13.7.2.                                  | See appended table 2.13.7.2 | P       |
| J4.4   | Temperature rise test   |                             | P       |
|        | The relevant requirements of Clause 2.13.8 are applicable for the temperature rise test, except that the test current shall be that specified in the relevant product Standard. | See appended table 2.13.8   | P       |
|        | The temperature rise of the pins shall not exceed 45 K irrespective of the temperature rise of parts specified in end product standards.  |                             | P       |
| J4.5   | Securement of pins of the plug portion  |                             | P       |



| Clause | Requirement + Test   | Result - Remark  | Verdict |
|--------|--|--|---------|
|        | The requirements of Clause 2.13.9 are applicable for the securement of pins.   | See appended table 2.13.9  | P       |
| J4.6   | Tests on the insulation material of insulated pin-plug portions  |  | P       |
|        | The requirements of Clause 2.13.13 are applicable for insulating material of insulated plug pins.  | See appended table 2.13.13.2 ~ 2.13.13.6                         | P       |
| J4.7   | Equipment with a plug portion intended to be supported by the contacts of a socket-outlet  |  | P       |
|        | Equipment with a plug portion intended to be supported by the contacts of socket-outlets shall not impose undue strain on those socket-outlets.                                      |  | P       |
|        | The additional torque shall not exceed 0.25Nm.   | Normal position: 0.096Nm max.;<br>Reverse position: 0.094Nm max. | P       |
|        | The flexible cord is allowed to hang freely in excess of 500mm resting on the horizontal surface during the test.  |  | P       |
| J4.8   | Additional requirements for detachable plug portions   |  | P       |
| J4.8.1 | Access to live parts   |  | P       |
|        | It is not possible to contact live parts with the small test finger of Fig.13 of IEC 61032.  |  | P       |
|        | It shall not be possible to incorrectly assemble the plug portion to the equipment allowing access to live parts.  |  | P       |
|        | Conformance is checked by inspection and applying small test finger of Fig.13 of IEC 61032.  |  | P       |
| J4.8.2 | Construction of detachable contacts where the input current of the equipment exceeds 0.2A  |  | P       |
|        | Contact shall be made with both sides of each flat pin.  |  | P       |
|        | It shall be permissible to use spring-assisted single-sided contacts.  |  | P       |
|        | Contacts shall not rely exclusively on the resilience of the contact material and shall have an opposite face of material other than thermoplastic or resilient insulating material. |  | P       |
|        | The alignment and contact making properties of contacts shall be independent of terminal screws.   |  | P       |
|        | The effectiveness of the contacts shall be independent of pressure from any thermoplastic or resilient moulding.   |  | P       |
|        | Conformance with the effectiveness of the contacts is checked by inspection and appendix J4.8.3.   |  | P       |





| Clause   | Requirement + Test   | Result - Remark            | Verdict |
|----------|--|----------------------------|---------|
| J4.8.3   | Plug portion detachment requirements   |                            | P       |
|          | Conformance is verified by inspection and the following test:  |                            | P       |
|          | The plug portion shall be connected and disconnected 50 times (100 strokes).   |                            | P       |
|          | Test with a force.....:  | 60N                        | P       |
|          | During the test period, the plug portion shall not separate from the equipment.  |                            | P       |
|          | Temperature rise test for plugs shall be conducted immediately without disturbing the samples.....:  | 7K                         | P       |
| J4.8.4   | Resistance of insulating material to heat and fire   |                            | P       |
| J4.8.4.1 | Resistance to heat   |                            | P       |
|          | For Type B detachable plug portions parts of non-metallic material, parts of insulating material supporting live parts including connections, and parts of thermoplastic material providing supplementary insulation or reinforced insulation, shall be sufficiently resistant to heat if their deterioration could cause the appliance to fail to comply with this Standard |                            | P       |
|          | This requirement does not apply to the insulation or sheath of flexible cords or internal wiring   |                            | N/A     |
|          | Conformance is checked by subjecting the relevant part to the ball pressure test of IEC 60695-10-2   |                            | P       |
|          | The test is carried out at a temperature of 40±2°C plus the maximum temperature rise determined during the temperature test of Paragraph J4.4, but it shall be at least--  |                            | P       |
|          | a. 75±2°C, for external parts;   |                            | N/A     |
|          | 2. 125±2°C, for parts supporting live parts  | See appended table 4.8.4.1 | P       |
| J4.8.4.2 | Resistance to fire   |                            | P       |
|          | Plug portions shall comply with the requirements for resistance to fire in accordance with AS/NZS 3100. The glow-wire test temperature 'T' shall be 750°C  | See appended table 4.8.4.2 | P       |



| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

|  |  |   |     |
|--|--|---|-----|
| 2.13.2   | TABLE 2.2: Test No. 1 - Insulation Resistance test |   | P   |
| Electric strength:   |  |   |     |
| Between:   |  | Insulation Resistance at 500V d.c. (required $\geq 5 \text{ M}\Omega$ ) | —   |
| (a) Between all poles of the plug, taken in pairs.   |  | 199 M $\Omega$  | P   |
| (b) Between live poles and any external metal, all live poles being connected together.  |  | 199 M $\Omega$  | P   |
| (c) Between live poles and earthing terminal metal of exposed metal, all live poles being connected together.  |  | N/A   | N/A |
| (d) Between live poles and accessible insulating part, all live poles being connected together.  |  | 199 M $\Omega$  | P   |
| (e) For insulated pin plugs, between live poles and a metal foil applied around the insulation on each live pin for a distance of approximately 4 mm from plug face, all live poles being connected. |  | 199 M $\Omega$  | P   |

|  |   |                       |     |
|--|---|-----------------------|-----|
| 2.13.3   | TABLE 2.2: Test No. 2 - High voltage test |                       | P   |
| Electric strength:   |   |                       |     |
| Between:   |   | Test voltage (V a.c.) | —   |
| (a) Between all poles of the plug, taken in pairs.   |   | 1000                  | P   |
| (b) Between live poles and any external metal, all live poles being connected together.  |   | 3000                  | P   |
| (c) Between live poles and earthing terminal metal of exposed metal, all live poles being connected together.  |   | N/A                   | N/A |
| (d) Between live poles and accessible insulating part, all live poles being connected together.  |   | 3000                  | P   |
| (e) For insulated pin plugs, between live poles and a metal foil applied around the insulation on each live pin for a distance of approximately 4 mm from plug face, all live poles being connected. |   | 1250V                 | P   |



| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

| 2.13.7.1  | TABLE 2.2: Test No. 7a – Tumbling barrel test | P           |          |          |
|---|---|-------------|----------|----------|
| Requirement   |   | Test result |          |          |
|   |   | Sample 1    | Sample 2 | Sample 3 |
| After 1000 times of falls, the sample shall show no damage within the meaning of this standard:   |   | —           | —        | —        |
| (a) Live parts shall not have become exposed to the standard test finger.   |   | P           | P        | P        |
| (b) For earthing pin, the resistance of the plug/socket-outlet circuit shall be such that compliance with Clause 3.14.7 is maintained.                          |   | N/A         | N/A      | N/A      |
| (c) Any other function affecting safety shall not be impaired.  |   | P           | P        | P        |
| (d) No live part shall have become detached or loosened, to the extent that a hazardous situation is created.   |   | P           | P        | P        |
| (e) The pins shall be inspected with normal, or corrected to normal, vision. Insulation may be removed if necessary. Pins shall not be broken or show cracking. |   | P           | P        | P        |

| 2.13.7.2   | TABLE 2.2: Test No. 7b – Pin bending test | P           |          |          |
|--|---|-------------|----------|----------|
| Requirement  |   | Test result |          |          |
|  |   | Sample 1    | Sample 2 | Sample 3 |
| Bend the pins with 20 cycles according to standard, after the tests:   |   | —           | —        | —        |
| The pins shall be inspected with normal or corrected to normal vision. |   | P           | P        | P        |
| The pin shall not be broken off.                                       |   | P           | P        | P        |

| 2.13.8  | TABLE 2.2: Test No. 8 – Temperature rise test | P |  |  |
|---|---|---|--|--|
| Test current (1.1×I <sub>n</sub> ): 0.495A (For model GTM46161-165.0-USB) |   |   |  |  |
| Tested part   | Test result                                   |   |  |  |
| Temperature rise on termination 1 (K):                                    | 7K  |   |  |  |
| Temperature rise on termination 2 (K):                                    | 6K  |   |  |  |
| Test current (1.1×I <sub>n</sub> ): 0.33A (For model GTM41078-0605-USB)   |   |   |  |  |
| Tested part   | Test result                                   |   |  |  |
| Temperature rise on termination 1 (K):                                    | 5K  |   |  |  |
| Temperature rise on termination 2 (K):                                    | 5K  |   |  |  |



| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

|   |   |             |   |
|---|---|-------------|---|
| 2.13.9.1  | TABLE 2.2: Test No. 9a – Movement of pins |             | P |
| Test condition:<br>Preconditioned at 40°C for 1 h;<br>Applied a force of 18 N gradually in 10 s and maintained for 10 s.              |   |             |   |
| Requirement   |   | Test result |   |
| The maximum deflection shall not exceed 2.0 mm.   |   | 0.62mm      |   |
| The plug can be inserted in the standard gauge shown in Appendix A, Appendix B and Appendix F without the application of undue force. |   | P           |   |
| For other types of plugs, the plug can be inserted into an appropriate socket-outlet without the application of undue force.          |   | N/A         |   |

|  |   |             |        |           |
|--|---|-------------|--------|-----------|
| 2.13.9.2   | TABLE 2.2: Test No. 9b – Fixing of pins |             | P      |           |
| Test condition:<br>Heated to 50°C for 1 h;<br>Applied a force of 60 N gradually in 10 s and maintained for 10 min.                     |   |             |        |           |
| Requirement  |   | Test result |        |           |
|  |   | Pin 1       | Pin 2  | Earth Pin |
| Any pin shall not be displaced relative to the adjacent material of the body by more than 2.4 mm at any time during these tests        |   | 0.56mm      | 0.58mm | N/A       |
| Any pin shall return to within 0.8 mm of its nominal length specified in Figure 2.1 (a1) within 5 min of the removal of the test force |   | 0.26mm      | 0.31mm | N/A       |

|   |   |             |            |         |
|---|---|-------------|------------|---------|
| 2.13.13.2   | TABLE 2.2: Test No. 13a – Pressure test at high temperature |             | P          |         |
| Test condition: heating at 160°C for 2h, applied a force of 2.5N through the blade to the specimen                |   |             |            |         |
| Requirement   |   | Test result |            |         |
|   |   | Before test | After test | verdict |
| The thickness within the area of impression shall be not less than 50% of the thickness measured before the test. |   | P           | P          | P       |
| No cracks on the insulation material.   |   | No cracks   | No cracks  | P       |
| The dimension of the insulating material shall not have changed below the minimum size shown in fig2.4            |   | P           | P          | P       |



| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

|  |   |             |   |
|--|---|-------------|---|
| 2.13.13.3  | TABLE 2.2: Test No. 13b – Static damp heat test |             | P |
| Test condition: two damp heat cycles (12+12h), 95% relative humidity,<br>Lower temperature 25±3°C and upper temperature 40°C |   |             |   |
| Requirement  |   | Test result |   |
| after this treatment and after recovery to room temperature, this specimen shall be subjected to:                            |   | —           |   |
| (a) the insulation resistance test   |   | P           |   |
| (b) high voltage test  |   | P           |   |
| (c) abrasion test  |   | P           |   |

|   |  |             |   |
|---|--|-------------|---|
| 2.13.13.4   | TABLE 2.2: Test No. 13c – Low temperature test |             | P |
| Test condition:<br>maintained at -15±2°C for 24h and returned to room temperature                 |  |             |   |
| Requirement   |  | Test result |   |
| after this treatment and after recovery to room temperature, this specimen shall be subjected to: |  | —           |   |
| (a)the insulation resistance test   |  | P           |   |
| (b)high voltage test  |  | P           |   |
| (c)abrasion test  |  | P           |   |

|  |  |             |   |
|--|--|-------------|---|
| 2.13.13.5  | TABLE 2.2: Test No. 13d – Impact test at low temperature |             | P |
| Test condition:<br>Test temperature (°C): -15<br>Duration: 24 hours                  |  |             |   |
| Requirement  |  | Test result |   |
| After the test the specimen shall show no damage within the meaning of this standard |  | P           |   |



| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|
|--------|--------------------|-----------------|---------|

|   |   |             |   |
|---|---|-------------|---|
| 2.13.13.6   | TABLE 2.2: Test No. 13e – Abrasion test |             | P |
| Test condition:<br>20000 movements,30 movements per min.                                    |   |             |   |
| Requirement   |   | Test result |   |
| After the test:   |   | —           |   |
| The pins shall show no damage which may affect safety or impair the further use of the plug |   | P           |   |
| The insulating sleeve shall not have punctured or rucked up.                                |   | P           |   |

|  |                               |                       |                          |
|--|-------------------------------|-----------------------|--------------------------|
| 4.8.4.1                                | TABLE 2.2: Ball pressure test |                       | P                        |
| Allowed impression diameter (mm) ..... |                               | 2.0                   | —                        |
| Tested parts                           |                               | Test temperature (°C) | Impression diameter (mm) |
| Plug pin holder SE1X(GG)(f1)           |                               | 125                   | 1.6                      |
| Plug pin holder CX7211(GG)             |                               | 125                   | 1.4                      |
| Plug pin holder C2950                  |                               | 125                   | 1.5                      |
| Plug pin holder 945(GG)                |                               | 125                   | 1.3                      |

|                              |                           |                           |                              |                |  |   |
|------------------------------|---------------------------|---------------------------|------------------------------|----------------|--|---|
| 4.8.4.2                      | TABLE 2.2: Glow wire test |                           |                              |                |  | P |
| Tested parts                 | Test temperature (°C)     | Ignition of tissue paper? | Scorching of pinewood board? | Visible flame? | Extinguish within 30 s after removal of the glow wire? |   |
| Plug pin holder SE1X(GG)(f1) | 750                       | No                        | No                           | No             | --   |   |
| Plug pin holder CX7211(GG)   | 750                       | No                        | No                           | No             | --   |   |
| Plug pin holder C2950        | 750                       | No                        | No                           | No             | --   |   |
| Plug pin holder 945(GG)      | 750                       | No                        | No                           | No             | --   |   |



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|        |                    |                 |         |
|--------|--------------------|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
|--------|--------------------|-----------------|---------|

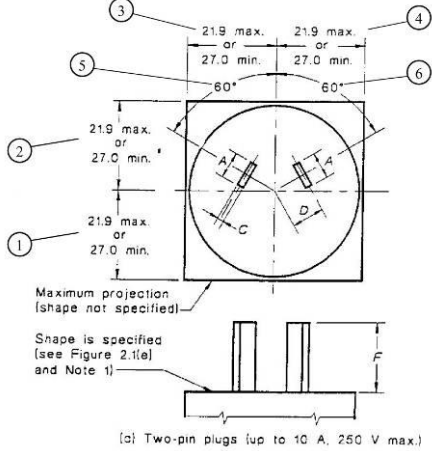
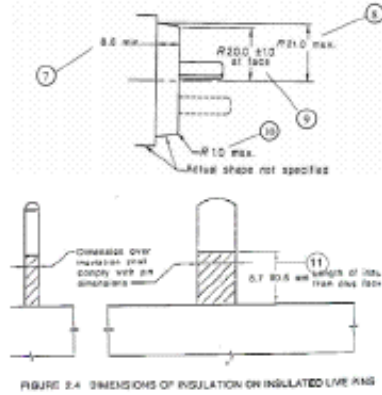
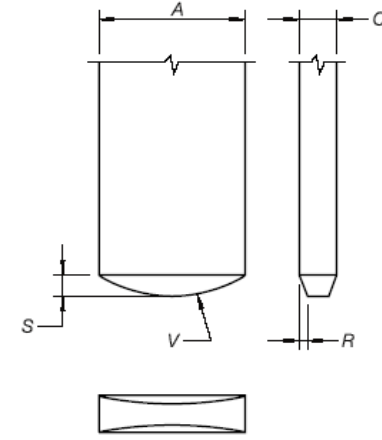
**Table 14: Critical Component List**

| Object/ part No. | Manufacture/ trademark        | Type/model   | Technical data | Standard | Mark of conformity |
|------------------|-------------------------------|--------------|----------------|----------|--------------------|
| Plug pin holder  | SABIC INNOVATIVE PLASTICS B V | SE1X(GG)(f1) | V-1, 105°C     | UL94     | UL E45329          |
|                  | SABIC INNOVATIVE PLASTICS B V | CX7211(GG)   | V-0, 90°C      | UL94     | UL E45329          |
|                  | SABIC INNOVATIVE PLASTICS B V | C2950        | V-0, 75°C      | UL94     | UL E45329          |
|                  | SABIC INNOVATIVE PLASTICS B V | 945(GG)      | V-0, 120°C     | UL94     | UL E45329          |

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Table 15

CHECKING OF DIMENSIONS

| Dimensions checked by gauge and measurement                                       |  |   |
|---|--|---|
| Standard sheet Figure 2.1 (c)   | Standard sheet Figure 2.1 (e)  | Standard sheet Figure 2.1 (h)   |
|  |  <p>FIGURE 2.4 DIMENSIONS OF INSULATION ON INSULATED LIVE RING</p> |  |

For model GT-41134\*\*\*\* series

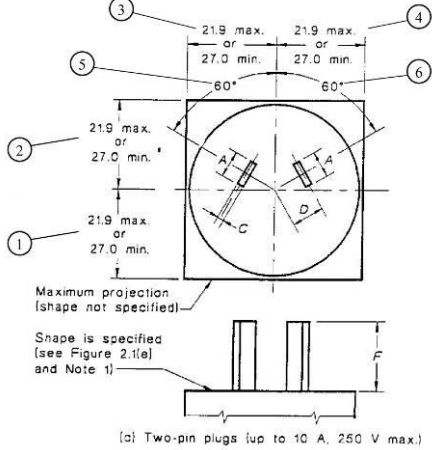
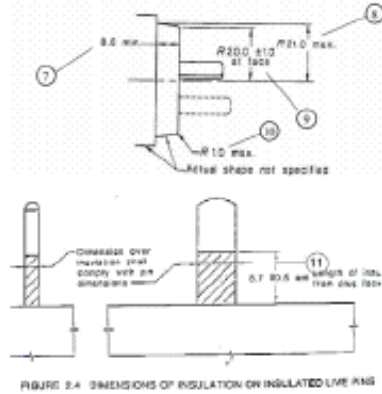
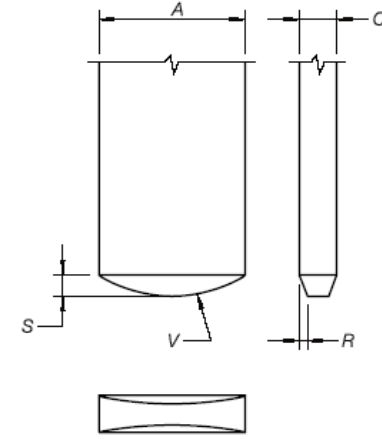
| Position | Required (mm)                          | By Measurement (mm) (Q-SAA / Q-AU) | By the gauge shown in Figure A1 |
|----------|--|------------------------------------|---------------------------------|
| A        | 6.35±0.15                              | 6.35 / 6.36                        | -                               |
| B        | 6.35±0.15                              | -                                  | -                               |
| C        | 1.63 <sup>+0.15</sup> <sub>-0.05</sub> | 1.62 / 1.66                        | -                               |
| D        | 7.92                                   | -                                  | OK                              |
| E        | 10.31                                  | -                                  | OK                              |
| F        | 17.06±0.4                              | 17.17 / 16.93                      | -                               |
| G        | 19.94±0.8                              | -                                  | -                               |
| R        | 0.35±0.05                              | 0.32 / 0.34                        | -                               |
| S        | 0.90±0.10                              | 0.84 / 0.88                        | -                               |
| T        | ≥0.60                                  | -                                  | -                               |
| V        | 6                                      | -                                  | OK                              |
| 1        | 21.9 max. or 27.0 min.                 | 21.14 / 52.55                      | -                               |
| 2        | 21.9 max. or 27.0 min.                 | 21.14 / 20.95                      | -                               |
| 3        | 21.9 max. or 27.0 min.                 | 52.81 / 20.77                      | -                               |
| 4        | 21.9 max. or 27.0 min.                 | 20.71 / 20.77                      | -                               |
| 5        | 60°                                    | -                                  | OK                              |
| 6        | 60°                                    | -                                  | OK                              |
| 7        | 8.6 min.                               | 10.47 / 10.89                      | -                               |
| 8        | 21.0 max.                              | 20.71 / 20.95                      | -                               |
| 9        | 20.0±1.0                               | 20.61 / 20.75                      | -                               |
| 10       | 1.0 max                                | 0.34 / 0.31                        | -                               |
| 11       | 8.7±0.5                                | 8.95 / 8.97                        | -                               |



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Table 16

CHECKING OF DIMENSIONS

| Dimensions checked by gauge and measurement  |  |   |                                 |
|--|--|---|---------------------------------|
| Standard sheet Figure 2.1 (c)  | Standard sheet Figure 2.1 (e)  | Standard sheet Figure 2.1 (h)   |                                 |
|                   |  |  |                                 |
| For model GT*46101-***-USB, GT*41078-*05-USB and GT*46161-**-USB series                            |  |   |                                 |
| Position   | Required (mm)  | By Measurement (mm) (Q-SAA / Q-AU)  | By the gauge shown in Figure A1 |
| A  | 6.35±0.15  | 6.35 / 6.36   | -                               |
| B  | 6.35±0.15  | -   | -                               |
| C  | 1.63 <sup>+0.15</sup> <sub>-0.05</sub>   | 1.62 / 1.66   | -                               |
| D  | 7.92   | -   | OK                              |
| E  | 10.31  | -   | OK                              |
| F  | 17.06±0.4  | 17.17 / 16.93   | -                               |
| G  | 19.94±0.8  | -   | -                               |
| R  | 0.35±0.05  | 0.32 / 0.34   | -                               |
| S  | 0.90±0.10  | 0.84 / 0.88   | -                               |
| T  | ≥0.60  | -   | -                               |
| V  | 6  | -   | OK                              |
| 1  | 21.9 max. or 27.0 min.   | 20.73 / 59.37   | -                               |
| 2  | 21.9 max. or 27.0 min.   | 20.73 / 20.81   | -                               |
| 3  | 21.9 max. or 27.0 min.   | 57.84 / 20.79   | -                               |
| 4  | 21.9 max. or 27.0 min.   | 20.76 / 20.79   | -                               |
| 5  | 60°  | -   | OK                              |
| 6  | 60°  | -   | OK                              |
| 7  | 8.6 min.   | 10.47 / 10.89   | -                               |
| 8  | 21.0 max.  | 20.75 / 20.95   | -                               |
| 9  | 20.0±1.0   | 20.61 / 20.75   | -                               |
| 10   | 1.0 max  | 0.34 / 0.31   | -                               |
| 11   | 8.7±0.5  | 8.95 / 8.97   | -                               |
| Note: Model GT*46101-***-USB, GT*41078-*05-USB and GT*46161-**-USB series have the same enclosure. |  |   |                                 |

## Appendix 1: Photos of the products

Overall view for Q-SAA plug



Overall view for Q-AU plug



Internal view for Q-SAA integral plug



Internal view for Q-SAA integral plug



Internal view for Q-AU integral plug



Internal view for Q-AU integral plug

