

| | | | | | | | |
|--|---------------------------|---|---------------------------------------|---|-------------------|-------------------|----------|
| QLF0769 | | SPECIFICATION | | 承認 | 檢 印 | 擔 當 | |
| SSA-13D08-G4-NA | | | | 王忠嶽 2008/10/29 | 劉加祥 2008/10/29 | 楊惠蘭 2008/10/29 | |
| 1. General 1) Operating temperature range -10 to 60℃ 2) Standard test conditions shall be 5 to 35℃ in temperature and 45 to 85% in humidity. 2. Rating DC 12V 0.1A 3.Change over timing Non-specified 4. Electrical performance | | | | | | | 此產品僅限手工焊 |
| | Item | Conditions | | Specifications | | | |
| 1 | Contact Resistance | a) 1KHz±200Hz(20mA) b) DC 5V 1A by voltage drop method. | | 20 mohm or less. | | | |
| 2 | Insulation Resistance | DC 500 V 1 minute | Between terminals | 100 Mohm or more. | | | |
| | | | Terminal & frame | 100 Mohm or more. | | | |
| 3 | Withstand Voltage | AC 500 V 1 min. (50/60Hz,2mA) AC 500 V 1 min. (50/60Hz,2mA) | Between terminals Terminal & frame | No dielectric breakdown. | | | |
| 5. Mechanical performance | | | | | | | |
| | Item | Conditions | | Specifications | | | |
| 1 | Terminal Strength | A static load 500 gf shall be applied to the tip of the terminals for 15 seconds in any direction. 1 cycle shall be made per 1 terminal. | | Electrical performance shall be satisfied. Without damage of excessive looseness of terminals. | | | |
| 2 | Actuator Strength | A static load of 2 kg shall be applied for 15 seconds in a direction reverse to cause actuation of the switch. | | Clause 5.4 and electrical performance shall be satisfied. Without excessive looseness of bending to the actuator and stopper. | | | |
| 3 | Displacement of actuator | A static load of 100 gf shall be applied at the point 1 mm from the tip of the actuator and than displacement shall be measured. | | 1.0 mm p-p or less | | | |
| 4 | Operating force | Measure at the tip of actuator. | | a-b c-b 250±100gf b-a b-c 300±150gf | | | |
| 6.Endurance performance | | | | | | | |
| | Item | Conditions | | Specifications | | | |
| 1 | Solderability | Solder temperature 230 ± 5 °C Dipping time 3 ± 0.5 second. | | More than 90 % of the dipping covered by solder. | | | |
| 2 | Soldering heat resistance | Solder bath method Solder temperature: 260 ± 5 °C Dipping time: 5 ± 1.0 second Thickness of PCB: 1.6 mm Immersion depth: Up to the surface of the board Solder iron method Bit temperature: 350 ± 10 °C Application time: 3 ± 1.0 second | | Without deformation of frame or excessive losseness of terminals. Electrical performance shall be satisfied. | | | |
| 3 | Heat test | The switch shall be stored at a temperature of 70 ± 2 °C for 48 hours. Then the switch shall be maintained standard atmospheric condition for 1 hour , after which measurement shall be made within 1 hour. | Contact Resistance | Less than 40 mohm. | | | |
| | | | Insulation Resistance | 4.2 shall be satisfied | | | |
| | | | Operating force | 5.4 shall be satisfied | | | |
| | | | Terminal Strength | 5.1 shall be satisfied | | | |
| | | | Appearance | No deformation or crack in molded part. | | | |
| 4 | Cold test | The switch shall be stored at a temperature of -25 ± 3 °C for 48 hours. Then the switch shall be maintained standard atmospheric condition for 1 hour , after which measurement shall be made within 1 hour. | Contact Resistance | Less than 40 mohm. | | | |
| | | | Insulation Resistance | 4.2 shall be satisfied | | | |
| | | | Operating force | 5.4 shall be satisfied | | | |
| | | | Appearance | No deformation or crack in molded part. | | | |

| | Item | Conditions | | Specifications | | | | | | | | | | | | | | | |
|---|-----------------------|---|-----------------------|---|-----------|---|--------------|--------|---|--------------------------------|-----------|---|-------------|--------|---|--------------------------------|-----------|--------------------|--------------------|
| 5 | Humidity test | The switch shall be stored at a temperature of 40± 2 °C and humidity of 90 to 95% for 96 hours. Then the switch shall be maintained standard atmospheric condition for 1 hour , after which measurement shall be made within 1 hour. | Contact Resistance | Less than 40 mohm. | | | | | | | | | | | | | | | |
| | | | Insulation Resistance | More than 10 Mohm after 500 V DC is applied for 1 minute. | | | | | | | | | | | | | | | |
| | | | Withstand Voltage | Withstand AC 250 V for 1 minute. | | | | | | | | | | | | | | | |
| | | | Appearance | No deformation or crack in molded part or excessive rust or discoloration.. | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 6 | Change of temperature | The switch shall be subjected to 5 successive change of temperature cyclec,each as shown in table below. <table><tr><td></td><td>Temperature</td><td>Duration</td></tr><tr><td>1</td><td>-10 +/- 3 °C</td><td>30 min</td></tr><tr><td>2</td><td>Standard atmospheric condition</td><td>10-15 min</td></tr><tr><td>3</td><td>70 +/- 2 °C</td><td>30 min</td></tr><tr><td>4</td><td>Standard atmospheric condition</td><td>10-15 min</td></tr></table> | | Temperature | Duration | 1 | -10 +/- 3 °C | 30 min | 2 | Standard atmospheric condition | 10-15 min | 3 | 70 +/- 2 °C | 30 min | 4 | Standard atmospheric condition | 10-15 min | Contact Resistance | Less than 40 mohm. |
| | | | | Temperature | Duration | | | | | | | | | | | | | | |
| | | | 1 | -10 +/- 3 °C | 30 min | | | | | | | | | | | | | | |
| | | | 2 | Standard atmospheric condition | 10-15 min | | | | | | | | | | | | | | |
| | | | 3 | 70 +/- 2 °C | 30 min | | | | | | | | | | | | | | |
| | | | 4 | Standard atmospheric condition | 10-15 min | | | | | | | | | | | | | | |
| | | | Insulation Resistance | 4.2 shall be satisfied | | | | | | | | | | | | | | | |
| | | | Withstand Voltage | 4.3 shall be satisfied | | | | | | | | | | | | | | | |
| | | | Operating force | 5.4 shall be satisfied | | | | | | | | | | | | | | | |
| | | | Appearance | No deformation or crack in molded part or excessive rust or discoloration.. | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 7 | Vibration | Only endurance conditioning by a frequency sweep shall be made. The entire frequency range, from 10 to 55 Hz be transversed in 1 minute. Ampltued (total excursion): 1.5 mm This motion shall be applied for a period of 2 hours in each of 3 mutually perpendicular axis (a total of 6 hours) | Terminal strength | 5.1 shall be satisfied | | | | | | | | | | | | | | | |
| | | | Actuator strength | 5.2 shall be satisfied | | | | | | | | | | | | | | | |
| | | | Operating force | 5.4 shall be satisfied | | | | | | | | | | | | | | | |
| | | | | Electrical performance shall be satisfied. | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 8 | Shock | Peak acceleration: 735m/s ² Duration of pulse: 6 msec. Three successive shock shall applied in both directions of mutually perpendicular axis (a total of 18 shocks) | Terminal strength | 5.1 shall be satisfied | | | | | | | | | | | | | | | |
| | | | Actuator strength | 5.2 shall be satisfied | | | | | | | | | | | | | | | |
| | | | Operating force | 5.4 shall be satisfied | | | | | | | | | | | | | | | |
| | | | | Electrical performance shall be satisfied. | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| 9 | Life test | (Endurance without load) A switch shall be subject to 10,000 cycles at a speed of 15 to 20 cycles per min. without load. | Contact Resistance | Less than 40 mohm. | | | | | | | | | | | | | | | |
| | | | Insulation Resistance | More than 10 Mohm after 500 V DC is applied for 1 minute. | | | | | | | | | | | | | | | |
| | | | Withstand Voltage | Withstand AC 250 V for 1 minute. | | | | | | | | | | | | | | | |
| | | | Operating force | Relative to the previously specified value. +10 / -30% | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

7. Other