ISO9001: 2015

ISO14001: 2015

APPROVAL SPECIFICATIONS

Title. SLIDE SWITCH

Product Model. SS12E21-TG3

Customer's Part NO.

Customer's Model:

Customer's Approval Requested.

Please return this copy as a certification of your approval.

Checked by: Date:

Approved by: Date:

Swiclick

Address:Rm. D1/25F,No 2070,Electronical Technology Building-C,Shennan Mid-road,Futian Dist.,Shenzhen,China.

Website:https://www.swiclick.com

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Version	**History**	**Changed by**	**Date**

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1 GENERAL

1.1 APPLICATION

This specification applies to the requirements of a mechanical toggle switch

1.2 Operating Temperature Range

-20 70 ( )

-20 70 (Normal humidity, normal air pressure)

1.3 Storage Temperature Range

-25 70 ( )

-25 70 (Normal humidity, normal air pressure)

1.4 Test Conditions

Unless otherwise specified, tests and measurement shall be made in the following standard conditions:

……5 35

Normal temperature……5 35

…… 25% 85%

Normal humidity……relative humidity 25% 85%

……86Kpa 106Kpa

Normal air pressure……86Kpa 106Kpa

If any doubt arise from the judgment, tests shall be conducted at the following conditions:

……20 ±2

Temperature……20 ±2

……65%±5%

Relative humidity…….....…65%±5%

……86Kpa 106Kpa

Air pressure……86Kpa 106Kpa

1.5

Storage method

1. .

Ensure that the product without package breaking or wetting before use.

2. Storage conditions:

Storage temperature -5 ~ 35 C

Storage humidity 25% ~80%

12 12

Unopened status: Use up the product as soon as possible before 12 months. (calculated from shipment date).Over 12 months, please make sure below before use it: terminal without oxidation or blackening, plastic parts without moisture absorption or bubble, ensure solderability.

1

Opened status: use up within 1 month;

Storage precautions: Please avoid the following environment: with high humidity, high temperature , corrosive gases and direct sunlight.

3. **.**

Do not stack too many switches.

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2

Detailed specification

2.1

Appearance: There should be no defects that affect the serviceability of product.

2.2

Style and dimension: shall conform to the assemble drawings.

2.3 1P2T

Function: 1P2T

2.4 DC 50V 0.3A

Ratings: DC 50V 0.3A

3

ELECTRICAL SPECIFICATION

ITEM		TEST CONDITIONS	REQUIREMENTS
3.1	Contact Resistance	1KHz (100mA) . Measured at 1KHz small current(100mA or less)	≤100mΩ
3.2	Insulation Resistance	DC 500V /min , Measurement shall be made following application of 500V DC potential, across terminals, and across terminals and cover, for one minute.	≥100MΩ
3.3	Dielectric voltage proof	500V AC(50Hz-60Hz)/min 500V AC (50Hz - 60Hz) shall be applied across terminals, for one minute.	There should be no breakdown and flashover

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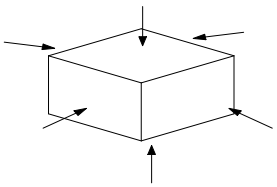
		ITEM	TEST CONDITIONS	REQUIREMENTS
4		**MECHANICAL SPECIFICATION**		
4.1		Operating Force	(5mm) 3mm .5mm 2mm . Measurement shall be made at the mearest point of the component or at the point 3mm from the tip of the actuator(KNOB) high 5mm .Under 5mm below the plastic handle front end 2mm as a measuring point.	300±100gf
4.2		Full Travel	2 The switch is placed perpendicular to the operating direction, and a static load equal to 2 times the thrust is applied to the side of the switch driver to measure the distance from which the handle moves.	2.5±0.2mm
4.3		Terminal strength	2mm (500gf) , 15 Add(500 gf) strength test to the apex approximately 2mm perpendicular to the terminal foot for 15 seconds	No loose end, no damage to plastic body, etc.(except terminal deformation)
4.4		Vibration	Measurement shall be made following the test set forth below: 1 10 55 10Hz Vibration frequency range: 10 to 55 to 10Hz 2 1.5mm Amplitude: 1.5mm 3 Direction of vibration:Three mutually perpendicular direction including the direction of stem travel 4 2 Duration: Each 2 hours.	Item 3 Item4.1 Item4.2
4.5		Shock	Test by following conditions (1) (1)installation method: normal (2) 784m/s² (2)Acceleration: 784m/s² (3) 11ms (3)Acting time: 11ms (4) 6 3 18 (4)Test direction: 6 directions Times: 3 times/direction ,total 18 times 	Item3 Item4.1 Item4.2

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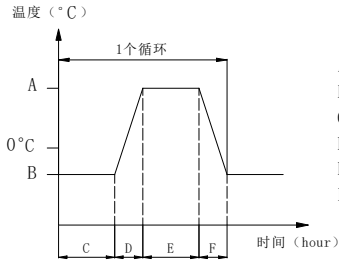
5
ENVIRONMENTAL SPECIFICATION

ITEM		TEST CONDITIONS	REQUIREMENTS
5.1	Resistance to low temperature	1 Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 h before measurements are made: 1 -25±3 Temperature : -25±3 2 48h Time:48h	Item3 Item4.1 Item4.2
5.2	Heat resistance	1 Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 h before measurements are made: 1 70±2 temperature:70±2 2 48h time:48h	Item3 Item4.1 Item4.2
5.3	Change of temperature	5 1 . After 5 cycles of following conditions, the sample shall be allowed to stand under normal temperature and humidity conditions for 1 h. and measurements shall be made. During the test water drops shall be removed.  A +70±2 B --25±3 C 2 D 1 E 2 F 1	Item3 Item4.1 Item4.2
5.4	Moisture resistance	1 Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 h before measurements are made: 1 40±2 temperature: 40±2 2 90% 95% relative humidity:90% to 95% 3 96h time: 96h	Item3 Item4.1 Item4.2

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	ITEM	TEST CONDITIONS	REQUIREMENTS
5.5	Practical temperature range	-20 +70 . Shall be used at -20 +70 .	
5.6	Operation life	15—18 10 000 . Test at a uniform rate of 15-18 rounds per minute for 10,000 rounds without load.	≤2Ω Contact resistance≤2Ω ≥50MΩ Insulation Resistance≥50MΩ **Within strength specifications** Item3.3 Item4.2
5.7	Standard atmospheric conditions	(1) 5 35 . (2) 45% 85% (3) 86Kpa 106Kpa. Unless otherwise specified,the standard range of atmospheric conditions for making measurements and tests are as follows: (1)Ambient temperature :5 TO 35 (2)Relative humidity :45% TO 85% (3)Air pressure :86Kpa TO 106Kpa	

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APPROVAL SPECIFICATIONS

<table>
<tr><th colspan="2">ITEM</th><th>TEST CONDITIONS</th><th>REQUIREMENTS</th></tr>
<tr><td>5.8</td><td>Solderability test</td><td>2mm , 245±5 , 5±0.5 .
The top of the terminals shall be dipped 2mm in the solder bath of 245±5 for 5±0.5 Secs.</td><td>90% .
The area of soldering should be over 90%</td></tr>
<tr><td>5.9</td><td>Resistance to soldering heat test</td><td>Temperature and immersing time
<table>
<tr><td></td><td>Temperature</td><td>Time
s</td></tr>
<tr><td>Dip soldering</td><td>260±5</td><td>10±1</td></tr>
<tr><td>Manual soldering</td><td>350±10</td><td>3±0.5</td></tr>
</table>
(2)
(PCB) 1.6mm
Immersion depth:
Immersion depth up to the surface of the board thickness of printed wiring board 1.6mm
(3)
Wave soldering
260±5 , 10±1 .
Temperature:260±5 ,time:10±1s.
100 150 .
Preheat time shall be done in 150s max at 100 max</td><td>,
There shall be no deformation or cracks in molded part</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
</table>

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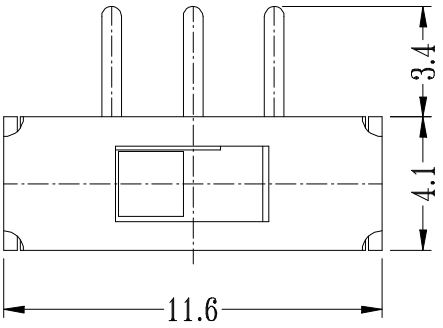
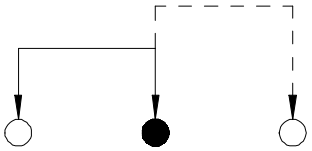
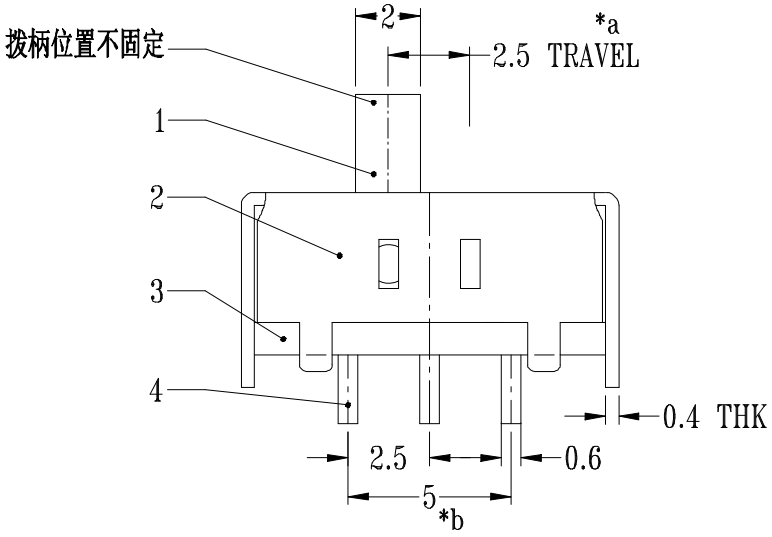
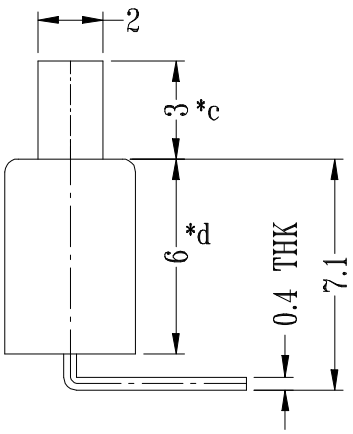
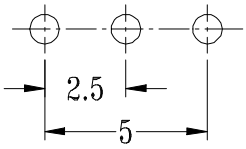




SCHEMATIC (SHORTING)







P.C.B LAYOUT
BOTTOM VIEW

General tolerance ±0.3mm PCB 1.6mm

NO.	NAME	MATERIAL	QTY.	FINISHING
1	KNOB	PA66	1	Black
2	FRAME	STEEL STRIP	1	(Black)Ni plating ≥ 1.5um
3	BASE	PHENOLIC RESIN	1	Natural
4	TERMINAL	BRASS STRIP	3	Ag plating ≥ 0.1um
5	CONTACT CLIP	Phosphorus copper C5210	1	Ag clad ≥ 0.1um
6	SPRING PLATE	PBS STRIP	2	Natural