MODEL	SLIDE SWITCH SPECIFICATION	DATE	2007.03.22	DSN	CHK	APP
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1. General

1.1 Switch rating : DC 6V, 0.3A

1.2 Operation temperature range : -10℃ ~ 60℃

1.3 Apperance and dimension : See outside drawing page

1.4 Standard conditions : Unless otherwise specified, the test and measurements shall be carried out as follows :

Ambient temperature : 5 ~ 35℃

Relative humidity : 45 ~ 85%RH

Air pressure : 86 ~ 106kpa (860 ~ 1060mbar)

However, if doubt arises on the decision based on the measured value under the above-mentioned conditions, the following conditions shall be employed.

Ambient temperature : 20±2℃

Relative humidity : 65±5%RH

Air pressure : 86 ~ 106kpa (860 ~ 1060mbar)

2. Performance

2.1 Electrical characteristics

NO.	ITEMS	TEST CONDITIONS	PERFORMANCE
2.1.1	Contact Resistance	Push force : Operation force Measurements shall be made with a 1kHz small current contact resistance.	70mΩ Max.
2.1.2	Insulation Resistance	D.C. 500V for 1 minute. (Between terminals)	100MΩ Min.
2.1.3	Dielectric Withstanding Voltage	A.C. 500V for 1 minute. (Between terminals)	There shall be no breakdown

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2.2 Mechanical characteristics

NO.	ITEMS	TEST CONDITIONS	PERFORMANCE
2.2.1	Operation Force	Gradually increasing the load applied to the center of the stem, the maximum load required for the stem to come to a stop sheel be measured.	See outside drawing page
2.2.2	Travel	Appling a static load twice the actuating force to the center of the stem, the travel distance for the stem to come to a stop shall be measured.	See outside drawing page
2.2.3	Stop strength	A static load of 1 kgf shall be applied in the direction of stem operation for a period of 3 seconds.	No damage (Electrical and Mechanical)
2.2.4	Stem strength	The maximum force to withstand a pull applied opposite to the direction of stem operation shall be measured.	1 kgf static force
2.2.5	Terminal strength	A force of 300 gf being applied in one direction on the tip of the terminal for one minute and only one time to each terminal.	The terminal may be deformed but shall not sustain any trouble such as deviation and breaking of terminal and breaking of insu -lation material. Electrical per -formance shall be assured.
2.2.6	Vibration test	(1) Amplitude : 1.5mm (2) Sweep rate : 10-55-10Hz for 1 minute. (3) Sweep method : Logarithmic frequency sweep rate. (4) Vibration direction : X.Y.Z (3 directions). (5) Time : Each direction 2 hours (Total 6 hours).	No. 2.1 to 2.2.1 to 2.2.2 shall be satisfied.
2.2.7	Soldering heat test	Soldering area : t/2 of P.W.B thickness (P.W.B : t = 1.6) Soldering temperature : 260±5℃ Soldering time : 5±1 sec	No damage (Electrical and Mechanical)

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2.3 Climatic characteristics

NO.	ITEMS	TEST CONDITIONS	PERFORMANCE
2.3.1	Cold test	(1) Temperature : -40±2℃ (2) Duration of test : 96 hours (3) Take off a drop water (4) Standard conditions after test : 1 hour	Contact Resistance : 140mΩ max. Insulation resistance : 10 MΩ min. (NO 2.3.1 to 2.3.3) : 10 MΩ min. (NO 2.3.3) Withstanding voltage : 100 V AC, 1 minute. insulation unbroken. Operating force : within + 10%, -30% of specification. There shall be no defects in apperarance or in the mechanical functions.
2.3.2	Heat test	(1) Temperature : 80±2℃ (2) Duration of test : 96 hours (3) Standard conditions after test : 1 hour	
2.3.3	Humidity test	(1) Temperature : 40±2℃ (2) Relative humidity : 90 ~ 95% (3) Duration of test : 96 hours (4) Take off a drop water (5) Standard conditions after test : 1 hour	
2.3.4	Operating life test	(1) DC 5V, 5mA Resistance load (2) Operation speed : 15 ~ 20 cycles/minute (3) Push force : Maximum value of operation force (4) Cycles of operation : See outside drawing page	
2.3.5	Salt mist test	Switch shall be checked after following test. (1) Temperature : 35±2℃ (2) Salt solution : 5 ± 1% (3) Duration of test : 48 hours	Without excessive rust or discoloration

3. SOLDERING

3.1 Auto soldering conditions

ITEM	CONDITION
Preheat temperature	100℃ max. (Environmental temperature of soldering surface of P.W.B)
Preheat time	45 sec max.
Area of flux	1/2 max. of P.W.B thickness
Temperature of solder	255℃ max.
Time of immersion	within 5 sec
Soldering number	within 2 times (But should bring down heat of the first soldering)
Preinted wiring board	single sided copper-clad laminates.

1) After switchs were soldered, please be careful not to clean switches with solvent.
2) In the case of using soldering iron, soldering conditions shall be 280℃ max. and 3 sec max.
3) After switchs were soldered, please be careful not to load the knobs of switchs.

3.2 Manual soldering conditions
Temperature : 300 ± 5℃
Time : 5 sec max.

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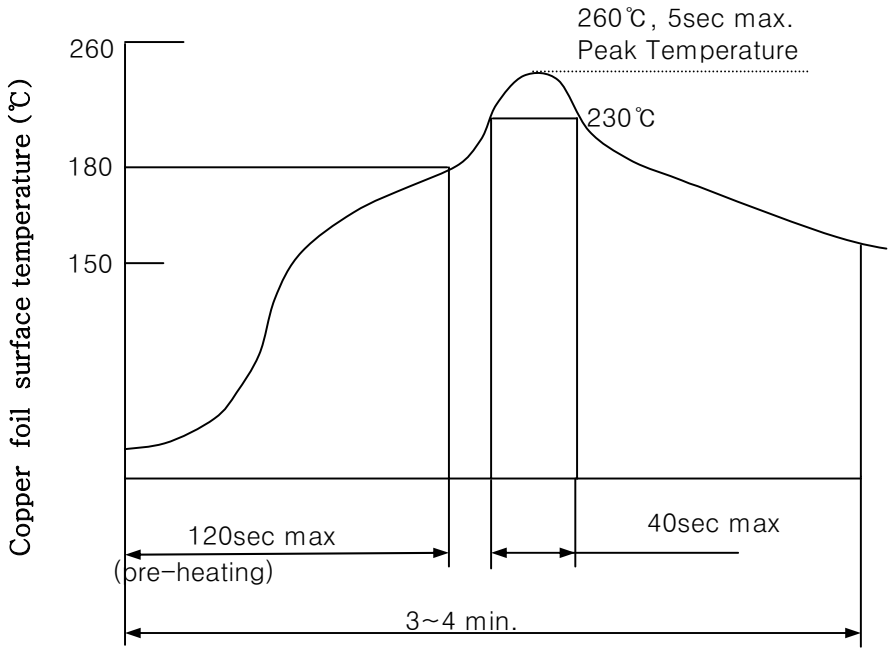
3.3 Reflow soldering conditions

Preheat : Temperature on the copper foil surface should reach 180℃, 120 sec(max) after the P.W.B entered into the soldering equipment.

Soldering heat : Temperature on there copper foil surface should reach the peak temperature of 260℃ within 40 seconds after the P.W.B(t=1.6mm) entered into soldering heat zone.



Time inside soldering equipment

Temperature Profile

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1. Scope

This specification covers the requirement of the tapping packaging for BSL- 2245SA standard of SLIDE switches.

2. Packaging Materials

Item	Description
Package	Cartons
Reel	core : Formed ploystyrene sideboard : Ploystyrene
Carrier tape	Polystyrene
Cover	Polyester

3. Packing Quantity

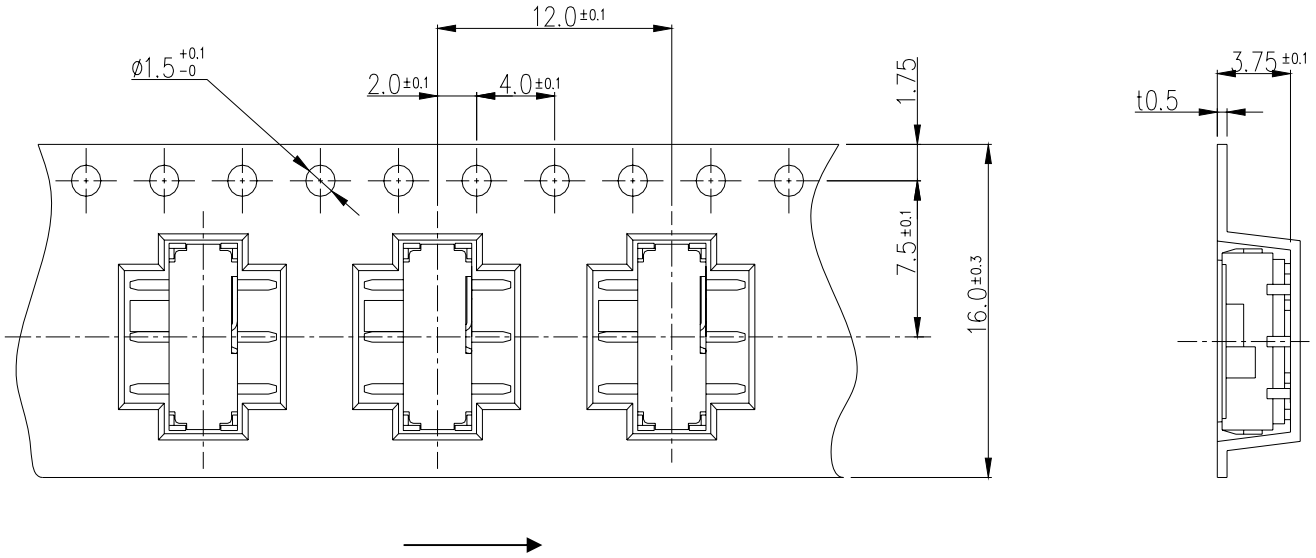
3.1 The number of the reels.

10 reels at maximum, which contain 10,000 switches shall be packed in a package.

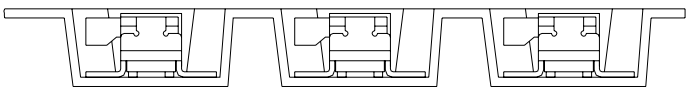
3.2 The number of the switches.

1,000 switches shall be packed in a reel.

4. Tape Form and Dimensions



Pulling-out direction of the tape



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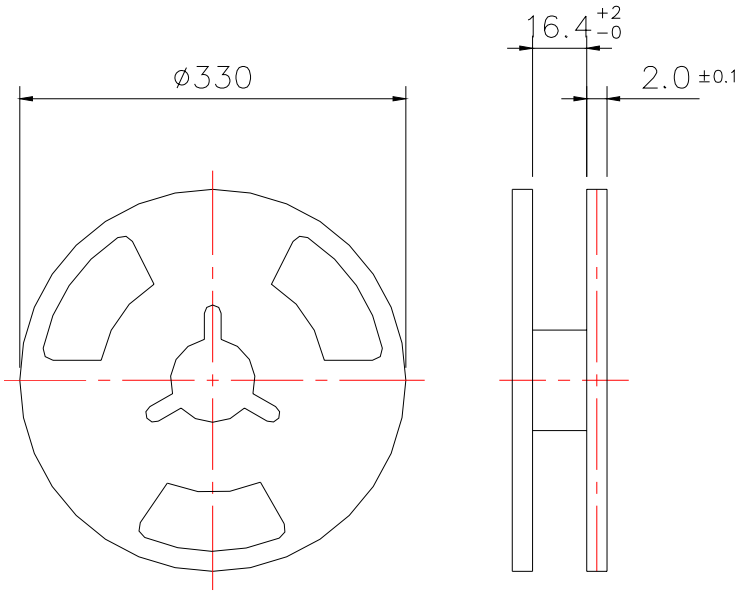
5. Reel Form and Dimensions



6. Packing Procedure

6.1 At the beginning of reeling, the end of the tape, 200mm or more, shall be empty and fit into the groove in the reel core.

6.2 After reeling, the end of the tape, 130±4mm, shall be empty and the tape edge shall cut in 45° the cover tape shall be extended 250±10mm from the tape edge and fixed with tape

6.3 Total number of missing switches shall be less then 10 in one reel.
(Three consecutive switches may be missing)

7. Storage Condition

7.1 Storage environment : -20℃ ~ +50℃, 20% ~ 85% RH.
(Storage in high temperature and high humidity shall be avoided)

8. Safety Keeping Condition

1) Please keep the received products under conditions of not high temperature, no high humidity and no direct-rays of the and no corrosive gases.

2) Our products are strongly recommended to use off within 3 months and are guaranteed the quality for 6 months of maximum period after receiving the products.

3) Please put some desiccants after opening off a vinyl pack in order not to enter the damp air and keep the products at the same place of the above-mentioned

4) Please be cautious not to give excessive load on the products.

5) Please be cautious not to keep the products with high pressure on the push buttons.