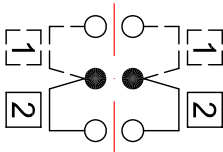
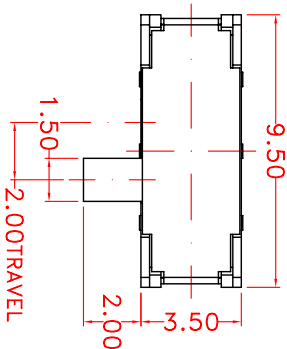
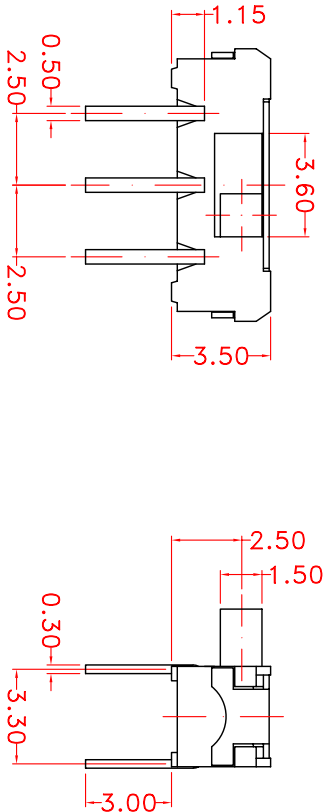


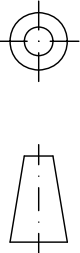
PIERCING PLAN



SCHEMATIC



5	HOUSING COVER	1	Sus-304	DE-GREASING
4	SPRING CONTACT	2	PBSR-EH	Ag CLAD
3	TERMINALS	6	BRASS	Ag PLATED
2	SLIDER	1	PA66+G.F.	WHITE COLOR
1	HOUSING	1	PPS	NATURAL COLOR
No.	PARTS	QTY.	MATERIAL	TREATMENT



THE 3rd ANGLE PROJECTION

ALL DIMENSIONS TOLERANCE ARE IN ABOVE, UNLESS OTHERWISE SPECIFIED.

SCALE : 5.0:1.0	DESIGN BY : So Chung Choi	18-JUL-1995	DESCRIPTION : HORIZONTAL KNOB SLIDE SWITCH
UNIT : MILLIMETER (mm)	DRAWN BY : So Chung Choi	04-MAY-2011	MODEL NO. : SK22N10F02-2010
TOLERANCE : ±0.20	CHECKED BY :		CAD FILE : C:\SWITCH DRAWING\SK22N10F02-2010
ANGLE TOL. : 1° 30'	APPROVED BY :		DRAWING FILE : D2K11045

1. General (一般規格)			
1-1	Scope 範圍	This specification covers Sun Rise standard PCB type slide switches. 此規格書適用於日高標準線路基版型撥動開關。	
1-2	Packing 包裝	Bulk Pack 散袋包裝	
1-3	Standard 規格	Circuit : 2P2T Travel : 2.00mm Terminal Pitch : 2.50mm No. of Row(s) : 2 (Two) Type of Mounting : PCB Mount Type Type of Contact : Spring Contact Type Timing : Non-Shorting Knob Length Option : 2.00mm	線路 : 2 刀 2 閘 行程 : 2.00 毫米 端子步距 : 2.50 毫米 列數 : 2 列 裝置類型 : PCB 線路基版裝置型 接觸類型 : 彈片式接觸 切換類型 : 非短路型 柄桿長度 : 2.00 毫米
1-4	Measurement Condition 量度測試條件	All measurement should be done at room ambient temperature and relative humidity 45%-85%. 所有量度測試皆在正常環境溫度及相對濕度 45-85%進行。	
1-5	Remarks 備註	The actuator (knob) in white color option. 柄桿顏色為白色選項。	
2. Mechanical (機械特性)			
No.	Item 項目	Test conditions 測試條件	Performance 結果
2-1	Operating Force 動作力	Operating force shall be measured after 3 times sliding with the force gauge. 開關動作力測試需使用推拉力計量器量度，並滑動 3 周次後方可量度。	200gf ± 100gf
2-2	Terminal Strength 端子強度	A static load of 0.5kgf shall be applied to the tip of the terminals for 1 min in any direction. 0.5kgf 靜負荷，施加于端子頂端的任何方向持續 1 分鐘。	Neither damage caused by crack nor omission of terminals shall be existent. However, warps and bends, which do not affect mechanical and electrical characteristics, will be considered acceptable. 端子沒有擊穿和損壞，只有不影響機械和電氣特性的變型和彎曲，則為可容許接受。
3. Electrical (電氣特性)			
3-1	Rating 額定值		DC30V@0.3A
3-2	Contact Resistance 接觸阻抗	Measurement shall be made at 1kHz with micro current (100mA or less). Using a gold plated probe shall make measurement between the terminals with the contact. 測試須於 1kHz 之微電流及(100mA 或少於)電壓下進行，並使用鍍金探頭於端子及接觸片之間量度。	30m Ω or less (Initial) 30 毫歐或以下 (最初值)
3-3	Insulation Resistance 絕緣阻抗	Measurement shall be applied voltage of DC 500V, and make measurement between terminals and between terminals and frame for 1minute. 測試須於接上 DC 500V 電壓下進行，量度端子與端子間及端子與鐵殼間，持續 1 分鐘測量。	50M Ω or more (Initial) 50 兆歐或以上 (最初值)

3-4	Dielectric Strength 耐電壓	Measurement shall be applied voltage of AC 500V (50~60Hz) and make measurement between terminals and between terminals and frame for 1minute. 測試須於接上 AC 500V (50~60Hz) 電壓下進行，量度端子與端子間及端子與鐵殼間，持續 1 分鐘測量。	There shall be no burn caused by short circuit and insulation destruction. 沒有因短路或絕緣損壞而引起燃燒。
4. Durability (耐久性)			
4-1	Solder-ability 可焊性	The terminal shall be immersed in the solder bath at a temperature of $235^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for $2 \pm 0.5\text{sec}$. Immersion depth: Up to 2mm from the terminal tip. 端子浸入 $235^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 溶錫槽 2 ± 0.5 秒 浸入深度：離端子頂端 2 毫米。	A new uniform coating of solder shall be cover a minimum of 85% of the surface being immerse 全新錫層覆蓋 85%以上於端子表面。
4-2	Cold Test 耐寒性測試	The switch shall be left at temperature of $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for 96 hours. And then it shall be kept under standard atmospheric condition for 1 hour after which measurement shall be made. 於 $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ 的環境中放置 96 小時，然後取出放置於正常環境中 1 小時後進行測試。	The following items shall be satisfied: 2-1, 3-3, 3-4. Contact resistance: 60m Ω or less 符合下列項目: 2-1, 3-3, 3-4. 接觸抵抗: 60 毫歐以下
4-3	Heat Test 耐熱性測試	The switch shall be left at a temperature of $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 96 hours. And then it shall be kept under standard atmospheric condition for 1 hour after which measurement shall be made. 於 $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 的環境中放置 96 小時，然後取出放置於正常環境中放置 1 小時後進行測試。	
4-4	Humidity Test 耐濕性測試	The switch shall be left at a temperature of $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ relative humidity of 90% to 95% for 96 hours. And then it shall be kept under standard atmospheric conditions for 1 hour after which measurement shall be made. 於 $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 及相對濕度 90~95%的環境中放置 96 小時，然後取出放置於正常環境中 1 小時後進行測試。	
4-5	Life Test Condition 壽命測試條件	Life test shall be done at (15~18 cycles / minute) <u>Unloaded</u> . 壽命測試於沒有負載下完成，每分鐘 15~18 周次。	
4-6	Life of Switch 開關的壽命	After 10,000 cycles of continuous sliding. 10,000 周次連續撥動。	The following items shall be satisfied: 3-3, 3-4 Operating force: 180gf $\pm$ 100gf Contact resistance: 60m Ω or less 符合下列項目: 3-3, 3-4. 作動力: 180gf $\pm$ 100gf 接觸抵抗: 60 毫歐以下
4-7	Actuator Bending Strength 柄桿彎曲強度	A static load of 2kgf shall be applied to the middle point of the actuator (knob) from component for 15 sec, In direction parallel to operation. 於撥動的平行方向以 2kgf 靜負荷從零件部份施加于柄桿中間點持續 15 秒。	There shall be no broken or crack caused by loading force of actuator (knob) However, warps and bends, which do not affect mechanical and electrical characteristics, will be considered acceptable. 柄桿沒有拆斷或破裂，只有不影響機械和電氣特性的變型和彎曲，則為可容許接受。

5. Precautions in Handling (處理過程中的預防)

5-1 Operating temperature and humidity range (應用溫度和濕度範圍)

Temperature: -25°C~70°C / Humidity: 70% R.H. or less.
溫度 -25°C~70°C / 相對濕度 70% R.H. 或以下

5-2 Recommended to **Wave Soldering** conditions 建議波峰焊條件

Solder temperature: 260°C ± 5°C
熔錫焊料溫度: 260°C ± 5°C

Operating time: 5 ± 0.5 second
操作時間: 5 ± 0.5 秒

PCB thickness: 1.00mm or more
線路基板厚度: 1.00 毫米或以上

5-3 For manual soldering conditions (by solder iron) 手焊條件(烙鐵)

Solder iron bit temperature: 350°C ± 5°C
烙鐵咀溫度: 350°C ± 5°C

Operating time: 3 ± 0.5 second
操作時間: 3 ± 0.5 秒

Load on terminal: approx. 50gf or less
端子負荷: 約 50gf 或以下

5-4 Storage (貯存方法)

This switch is silver-plated. Therefore, this switch should not be left with the package open, In case plating sulfurous soldering trouble or contact trouble will happen. The shelf life remains 6 months under the formal condition.

此開關為鍍銀產品，因此這開關不能外露於包裝外，以防氧化問題或接觸不良發生。保質期於正常條件下可保持 6 個月。

5-5 Washing (清洗方法)

This switch shall not be washed. In case this switch is washed contact trouble will happen.
此開關不能作清洗處理。若清洗開關會發生接觸不良問題。

5-6 Other necessary item (其他項目)

Please consult with **Sun Rise** before using the unit or performing tests under conditions other than those listed in these specifications.
在使用此產品或執行以上說明內列舉的條件測試前，請與日高電子零件有限公司聯絡。

***** END *****

