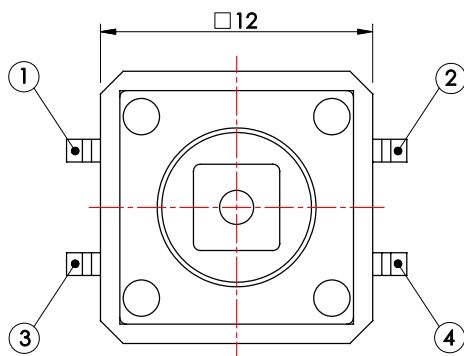
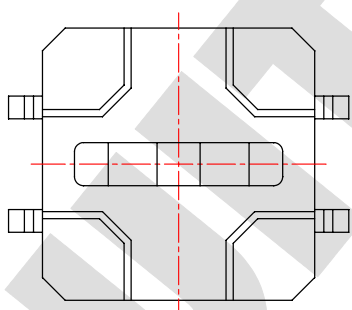
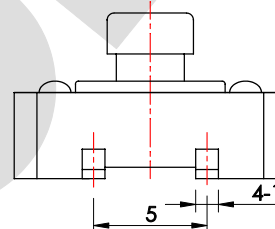
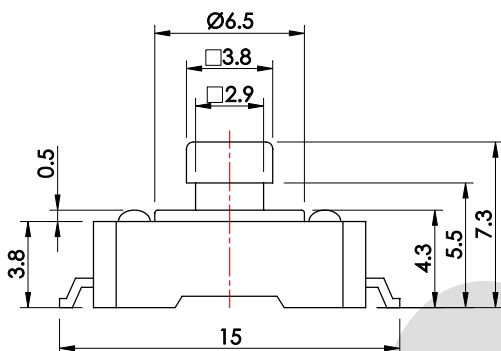
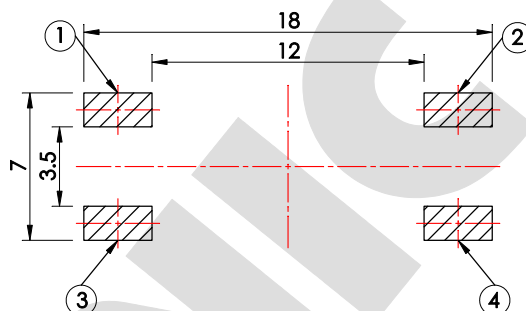


本圖面若與目錄之規格尺寸不符，以本圖面規格尺寸為主。  
Below is our main specification if different from catalog.

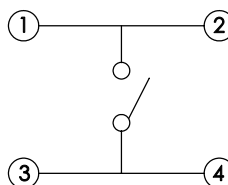
Lead free process



P.C.B. LAYOUT



CIRCUIT DIAGRAM



Lead free process

1273SHIM-XXXG-LF

OPERATING FORCE

160, 250

**SPECIFICATION**

- Rating: 50mA 12V DC Max.
- Circuit: SPST.
- Travel: 0.3±0.15mm.
- Contact resistance: 100mΩ Max.(initial)
- Operating force: 160±50g.
- Minimum load: 10mA 3.3V DC.(reference only)
- Life: 100,000 Cycles Min.
- Soldering temperature: 250°C Max. for 3 sec.
- Soldering time: 1 time only.
- Note1: Unwashable, don't be immersed by epoxy and organic solvent.
- Note2: Please check the actual size, do not scale the drawing page.



CV3.2	△		
CV3.1	無	改版	2015.07.22
CV3.0	無	新繪製	2008.10.21
版本 VER.	符號 SYMBOL	修改內容 ALTERATION	更新日期 DATE

產品 PRODUCT		Tact Switch		型號 MODEL NO.		1273SHIM-160G-LF	
比例 SCALE	3:1	單位 UNIT	mm	<p>一綺電子企業股份有限公司 總公司：110 台北市信義路四段415號13樓之3 13F-3 NO. 415, SEC. 4, HSIN YI ROAD, TAIPEI, TAIWAN TEL : 886-2-27290229(Rep.) FAX : 886-2-27582086 URL : http://www.switronic.com.tw E-MAIL : switches@ms36.hinet.net</p>			
公差 TOLERANCE	.X±0.3mm						
製圖 DRAWN BY	核圖 CHECKED BY	主管 APPROVED BY					
Allen Liao	Chuck Young	Margaret Lee					

# 一綺電子企業股份有限公司

## SWITRONIC INDUSTRIAL CORP.

MODEL NO: 1273SHIM(LF) SERIES

CV3.0

V.DATE: 2015/07/22

### 1. Features

1-1 Horizontal mounting type and small, low profile design.

1-2 Manual solder.

### 2. Applications

From the operating various of Mobile phones, Digital camcorder, Digital camera and Audio devices for which Low profile and Light weight designs are required.

### 3. Temperature range

Parameter	Value	Unit
Operating temperature range	-10 ~ 60	℃
Preservative temperature range	-5 ~ 40	℃

### 4. Standard conditions

Parameter	Value	Unit
Ambient temperature	5 ~ 35	℃
Relative humidity	45 ~ 85	% Rh
Air pressure	860 ~ 1060	mBar

If doubt arises on the design based on the measured values under the above mentioned conditions, the following conditions shall be employed.

Parameter	Value	Unit
Ambient temperature	18 ~ 22	℃
Relative humidity	60 ~ 70	% Rh
Air pressure	860 ~ 1060	mBar

### 5. Contact arrangement

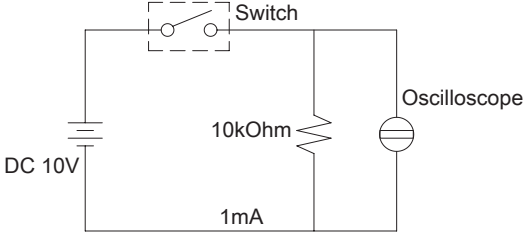
1 Pole / 1 Throw

**6. Type of actuating**  
Tactile feedback

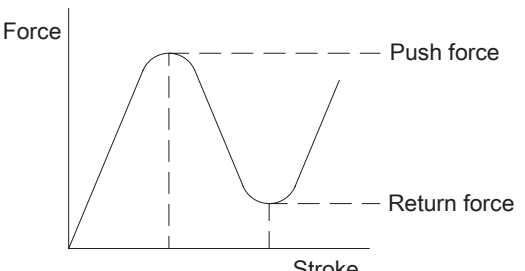
**7. Rating**

Maximum rating	12 V (DC) , 50 mA
Minimum rating	3.3 V (DC) , 10 mA

**8. Electrical characteristics**

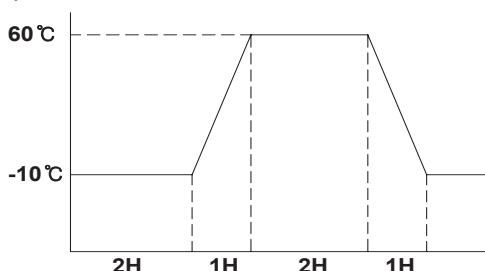
No	Item	Test conditions	Evaluation
1	Contact resistance	1-1 Push force : Operating force X 2 1-2 Small current contact resistance meter : 1Khz , 20mV , 5 ~ 50mA	100mΩ MAX.
2	Insulation resistance	100V (DC) / 1 Minute (Between terminal)	100MΩ MIN.
3	Dielectric withstand voltage	AC 250V (50Hz OR 60Hz) / 1 Minute (Between terminal)	No break down
4	Bouncing	3 to 4 Operations per second  (Switch bouncing circuit)	On / Off : 10ms MAX.

**9. Mechanical characteristics**

No	Item	Test conditions	Evaluation
1	Operating force	 Push by recommended operating conditions	Push force : As per Assembly drawing Return force : 10gf MIN.
2	Travel	Operating force x 2	0.3 ± 0.15mm

3	Stem strength	2Kgf for 15 sec.	No damage (Electrical and Mechanical)
4	Soldering heat test	Mounted the switch on P.W.B by adhesive. 1) Reflow process one time. 2) Standard conditions after test : 24 Hours	No damage (Electrical and Mechanical)

## 10. Environmental

No	Item	Test conditions	Evaluation
1	Storage heat	1) $+80 \pm 2^\circ\text{C}$ , 96 Hours 2) Standard conditions after test 1 Hour.	After the test the part shall satisfy. Specifications without any degradation in appearance and performance.
2	Storage cold	1) $-30 \pm 2^\circ\text{C}$ , 96 Hours 2) Standard conditions after test 1 Hour.	
3	Humidity	1) $40 \pm 2^\circ\text{C}$ , 90~95% Rh , 96 Hours 2) Standard conditions after test 1 Hour.	
4	Temperature cycle	1) Test cycles : 5 Cycles 2) Standard conditions after test 1 Hour. 	

## 11. Endurance

No	Item	Test conditions	Evaluation
1	Operating life	1) 5V (DC) , 50mA 2) 140 Operations/sec , Maximum value of operation force. 3) 100,000 Cycles MIN.	After the test the part shall satisfy. Specifications without any degradation in appearance and performance.

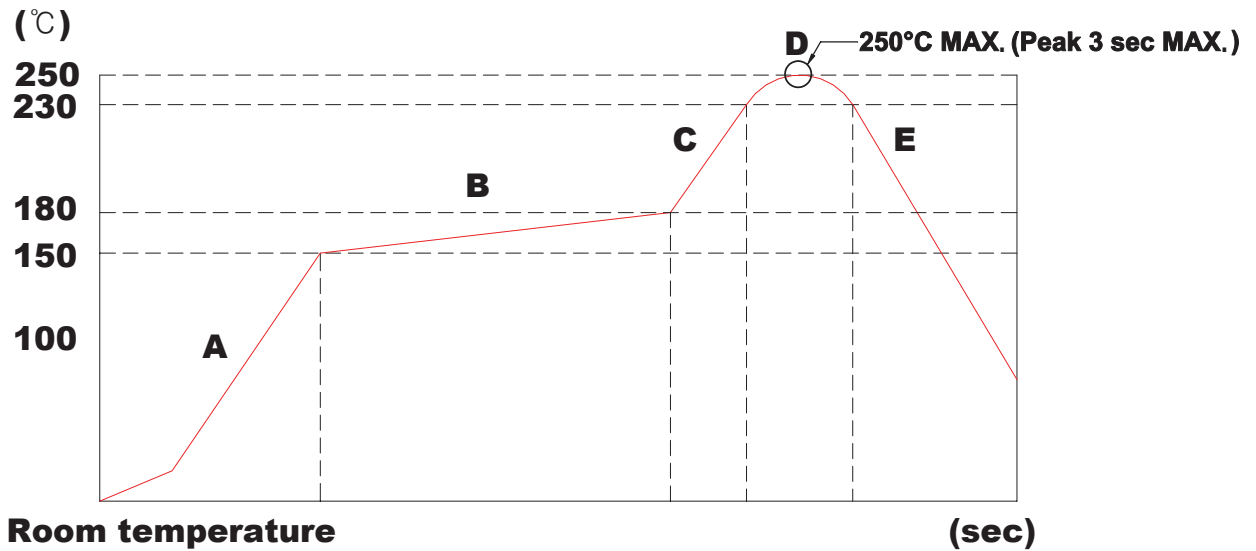
### Notes

As this product is not protected from foreign material entering please make sure that any foreign material (E.G Magnetic powder, Washing solvent, Flux, Corrosive gas) Do not enter this product in your production process.

## 12. Solder conditions

### 12-1 SMD Reflow

Soldering time: 1 time only.



Parts	Temperature (°C)	Time at temperature(sec)	Treatments
A	NO - 150		
B	150 - 180	90 ± 30	Pre-heating zone
C	180 - 230		
D	230 – 250 - 230	30 ± 10 (Peak : 3 MAX.)	Soldering zone
E	230 to NO		Cooling zone

\*\* NO : Normal conditions

12-2 Solder cream thickness :  $0.12 \pm 0.3$

12-3 Manual soldering

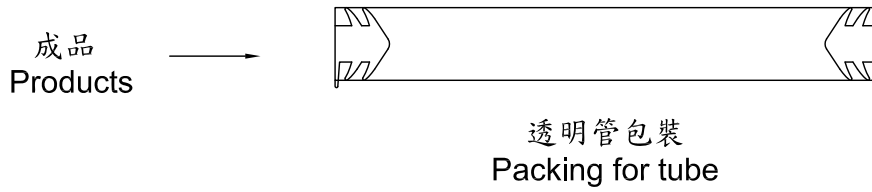
12-3-1 Iron tip temperature : 350 °C MAX.

12-3-2 Duration : 3sec MAX.

# 一綺電子企業股份有限公司 SWITRONIC INDUSTRIAL CORP.

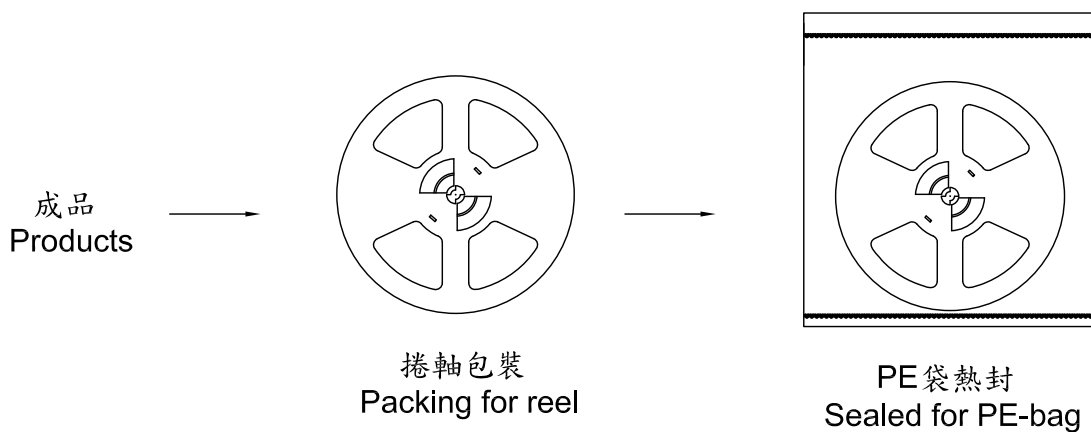
## 入料包裝方式 Packing for Products

### 管裝方式 Packing for tube



Packing for tube : \_\_\_\_\_ pcs / tube.

### 捲裝方式 Packing for reel



Packing for reel : 200 pcs / reel , 1 reel / polybag.

Quantity thickness for polybag : 0.08 mm , Quantity desiccating agent : 1 pcs.

# 一綺電子企業股份有限公司

## SWITRONIC INDUSTRIAL CORP.

### 產品綠色環保標章

"G" Mark for All RoHS Compliant Products

### 環保標章式樣

Initial "G": Standing for Green Label



### 外箱標示

Marked on The Outside of Carton As:

