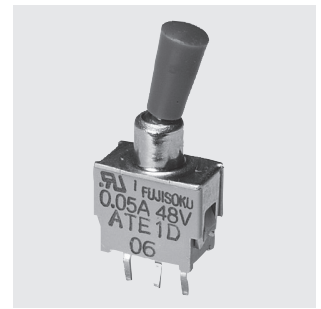


# ATE

## Subminiature Toggle Switch

Washable



RoHS Compliant

UL

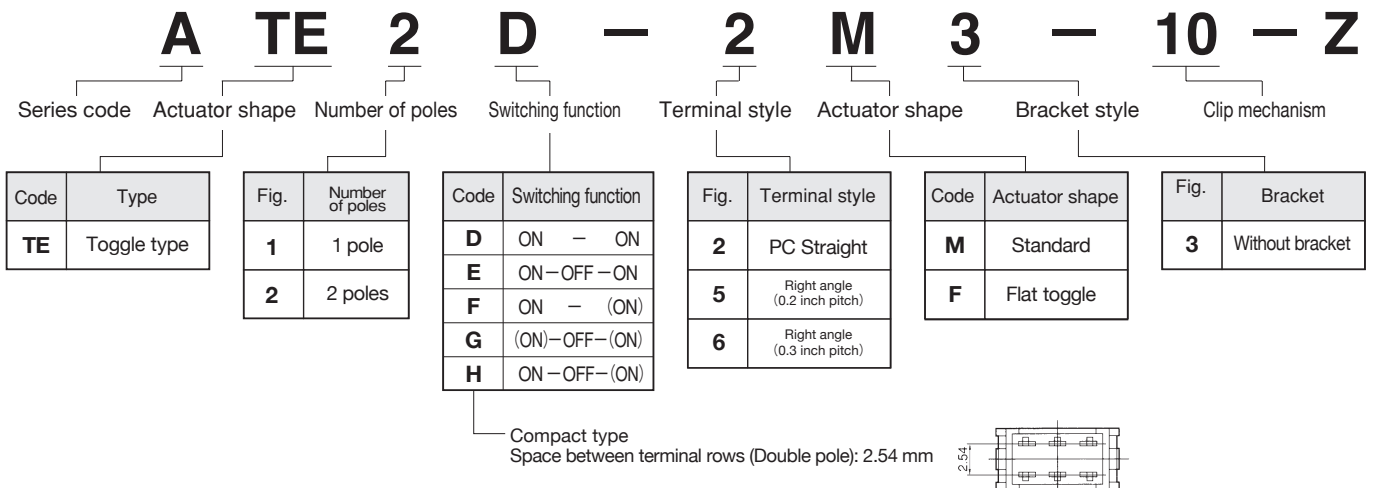
### Features

1. Twin-contact clip mechanism for high reliability.
2. Process sealed structure
3. Gold-plated contacts.
4. Terminal pin pitch: 2.54 mm.
5. Independent detent mechanism ensures light operational feel.
6. UL recognized (Excluding ATE-J series with plastic cap/rocker)

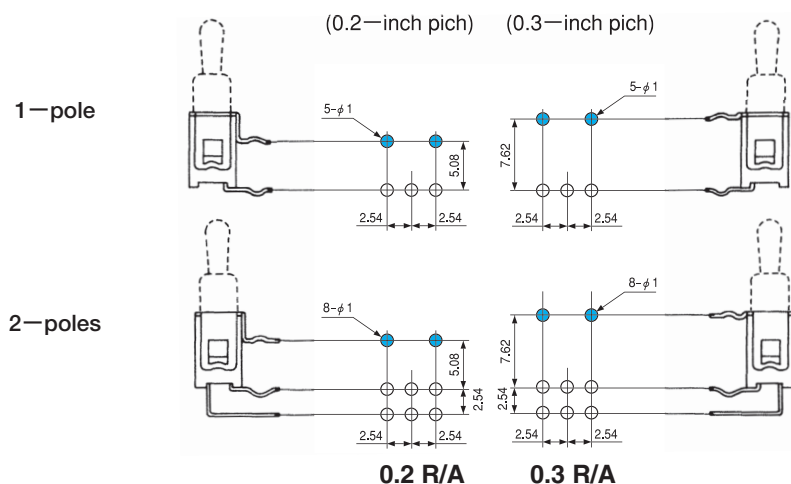
### Specifications

Rating	Max.	50mA 60VAC/DC 0.4VA AC/DC
	Min.	1 $\mu$ A 20mVAC/DC
	UL	48VAC/DC 50mA
Initial contact resistance	50m $\Omega$ Max. (1.5mA 200 $\mu$ VAC)	
Dielectric strength	250VAC 1 minute	
Insulation resistance	500M $\Omega$ min. (500VDC)	
Electrical life	10,000 cycles at 0.4VA rating.	
	50,000 cycles at 0.4VA rating. ( <b>D.E</b> type)	
	30,000 cycles at 0.4VA rating. ( <b>F.G.H</b> type)	
Mechanical life	<b>D.E</b> type 50,000 cycles	
	<b>F.G.H</b> type 30,000 cycles	
Operating temperature range	-20 $^{\circ}$ C ~ +85 $^{\circ}$ C	
Storage temperature range	-40 $^{\circ}$ C ~ +85 $^{\circ}$ C	

### Part Numbering



Right Angle Terminals



The space between the terminal rows are available in two dimensions: 0.2 inches (5.08 mm) and 0.3 inches (7.62 mm).

[Example] 0.2-inch pitch: **ATE1D-5M3-10-Z**  
0.3-inch pitch: **ATE1D-6M3-10-Z**

Optional Accessories

Refer to P.371 for PC Hole Layouts.

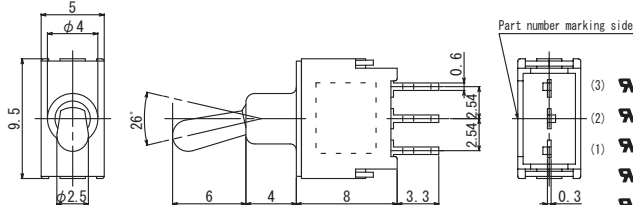
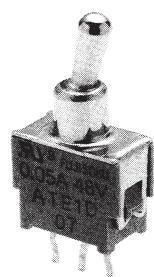
Part name	Bracket		
	Single pole	Double poles	
Poles	Single pole	Double poles	
Box size	5 mm	7.5 mm	5 mm
Type	ATE-2M · 2F		
Dimensions			
Part number	<b>140000640314</b>	<b>140000640315</b>	<b>140000640318</b>

Type	ATE-2M·5M·6M
Part name	Color Cap
Dimensions	Gloss finish  Vinyl chloride
White	<b>140000470174</b>
Red	<b>140000470175</b>
Black	<b>140000470173</b>
Gray	<b>140000470179</b>

SPDT

PC Straight

Standard Toggle



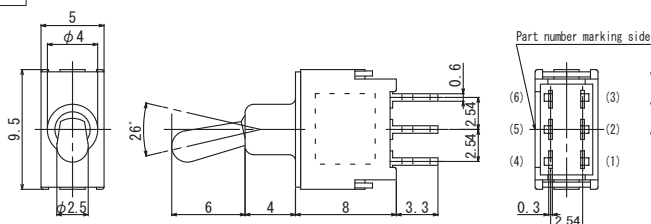
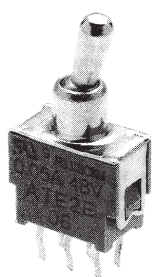
Terminal numbers are not shown on the switch.

Switching function	Viewed from part No. marking side		
Part No.			
ATE1D-2M3-10-Z	ON	—	ON
ATE1E-2M3-10-Z	ON	OFF	ON
ATE1F-2M3-10-Z	ON	—	(ON)
ATE1G-2M3-10-Z	(ON)	OFF	(ON)
☆ATE1H-2M3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3	—	2-1

DPDT

PC Straight

Distance between two terminal rows : 2.54mm



Terminal numbers are not shown on the switch.

Switching function	Viewed from part No. marking side		
Part No.			
ATE2D-2M3-10-Z	ON	—	ON
☆ATE2E-2M3-10-Z	ON	OFF	ON
☆ATE2G-2M3-10-Z	(ON)	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

★ : Made to order products.

☆ : Semi-standard products.

(ON) : Momentary.

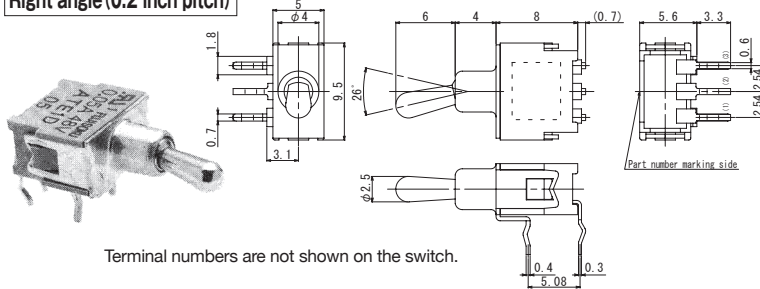
: Optional Accessories.

# ATE

## SPDT

(Mounting height : 3.1mm)

Right angle (0.2 inch pitch)



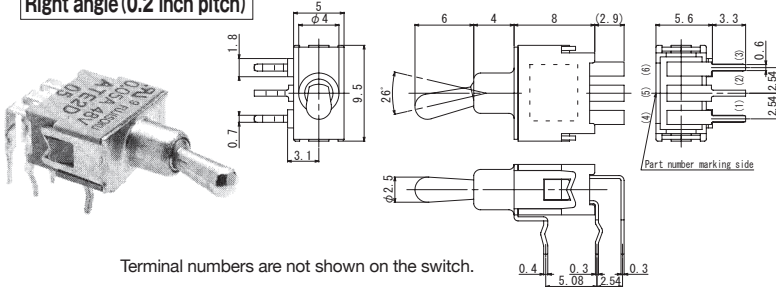
Terminal numbers are not shown on the switch.

Part No.	Switching function	Viewed from part No. marking side		
ATE1D-5M3-10-Z	ON	ON	—	ON
☆ATE1E-5M3-10-Z	ON	ON	OFF	ON
☆ATE1G-5M3-10-Z	(ON)	(ON)	OFF	(ON)
★ATE1H-5M3-10-Z	ON	ON	OFF	(ON)
Connecting terminals		2-3	—	2-1

## DPDT

(Mounting height : 3.1mm)

Right angle (0.2 inch pitch)



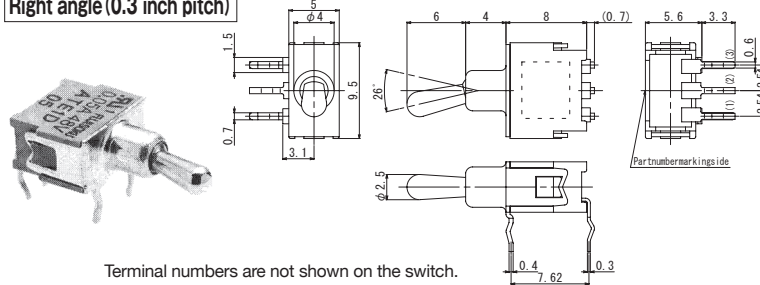
Terminal numbers are not shown on the switch.

Part No.	Switching function	Viewed from part No. marking side		
☆ATE2D-5M3-10-Z	ON	ON	—	ON
☆ATE2G-5M3-10-Z	(ON)	(ON)	OFF	(ON)
Connecting terminals		2-3 5-6	—	2-1 5-4

## SPDT

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



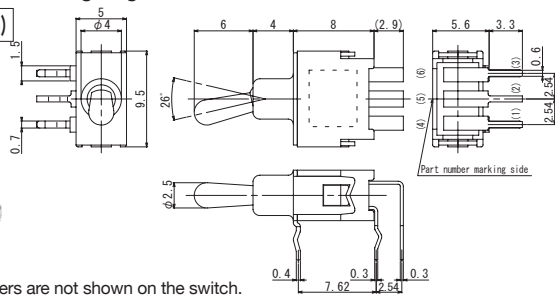
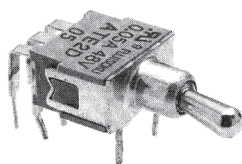
Terminal numbers are not shown on the switch.

Part No.	Switching function	Viewed from part No. marking side		
ATE1D-6M3-10-Z	ON	ON	—	ON
ATE1E-6M3-10-Z	ON	ON	OFF	ON
ATE1F-6M3-10-Z	ON	ON	—	(ON)
☆ATE1G-6M3-10-Z	(ON)	(ON)	OFF	(ON)
☆ATE1H-6M3-10-Z	ON	ON	OFF	(ON)
Connecting terminals		2-3	—	2-1

**DPDT**

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



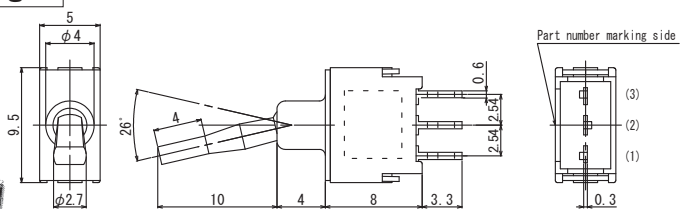
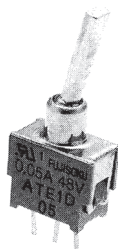
Terminal numbers are not shown on the switch.

Switching function	Viewed from part No. marking side		
Part No.	<b>ATE2D-6M3-10-Z</b>	—	ON
Connecting terminals	2-3 5-6	—	2-1 5-4

**SPDT**

Flat Toggle

PC Straight



Terminal numbers are not shown on the switch.

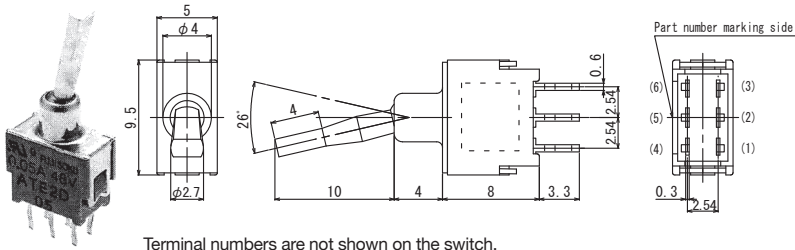
Switching function	Viewed from part No. marking side		
Part No.	<b>ATE1D-2F3-10-Z</b>	—	ON
Part No.	<b>ATE1E-2F3-10-Z</b>	ON	OFF
Connecting terminals	2-3	—	2-1

# ATE

## DPDT

(Space between terminal rows (Double pole): 2.54 mm)

### PC Straight

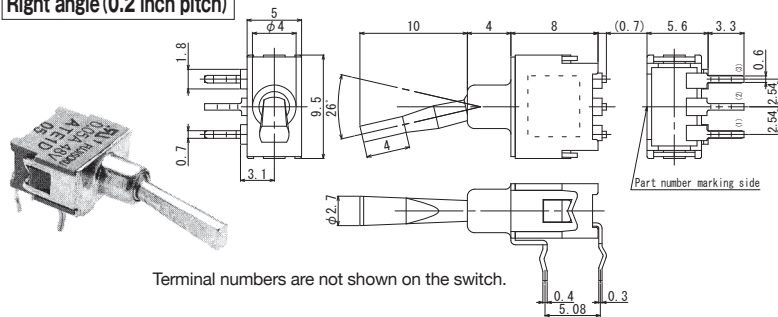


Switching function	Viewed from part No. marking side		
Part No.	☆ ATE2D-2F3-10-Z	—	ON
Part No.	☆ ATE2G-2F3-10-Z	(ON)	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

## SPDT

(Mounting height : 3.1mm)

### Right angle (0.2 inch pitch)

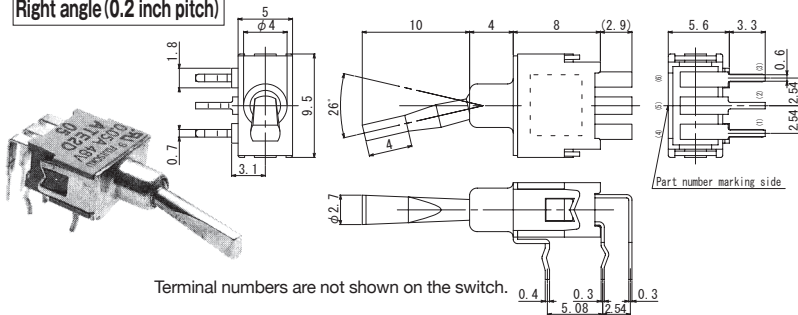


Switching function	Viewed from part No. marking side		
Part No.	★ ATE1G-5F3-10-Z	(ON)	(ON)
Part No.	★ ATE1H-5F3-10-Z	ON	(ON)
Connecting terminals	2-3	—	2-1

## DPDT

(Mounting height : 3.1mm)

### Right angle (0.2 inch pitch)

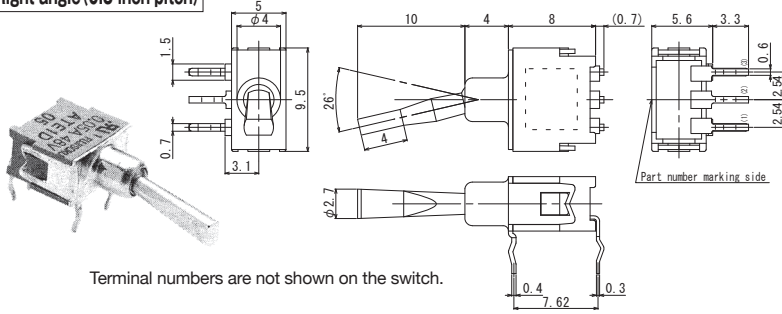


Switching function	Viewed from part No. marking side		
Part No.	★ ATE2D-5F3-10-Z	ON	ON
Connecting terminals	2-3 5-6	—	2-1 5-4

**SPDT**

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



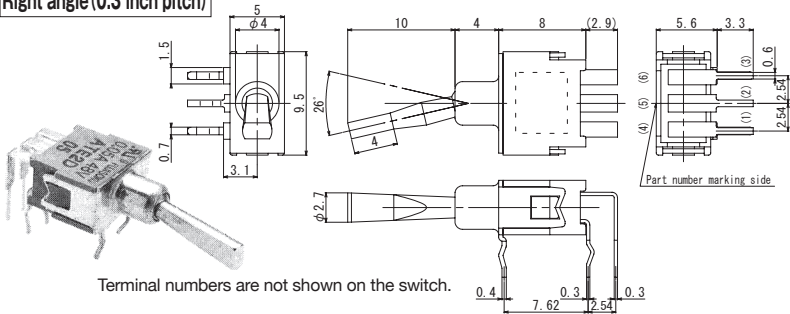
Terminal numbers are not shown on the switch.

Switching function	Viewed from part No. marking side		
Part No.	☆ATE1G-6F3-10-Z	(ON)	(ON)
Connecting terminals	2-3	-	2-1

**DPDT**

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)

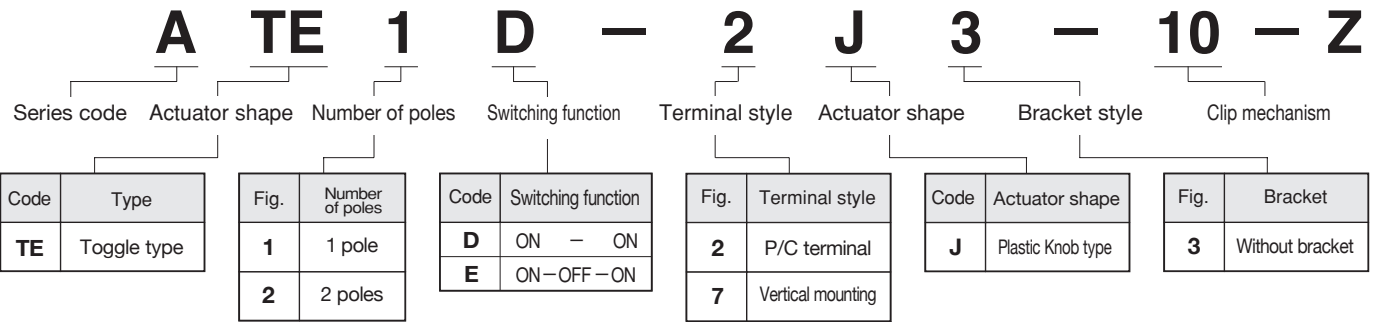


Terminal numbers are not shown on the switch.

Switching function	Viewed from part No. marking side		
Part No.	☆ATE2D-6F3-10-Z	ON	ON
Connecting terminals	2-3 5-6	-	2-1 5-4

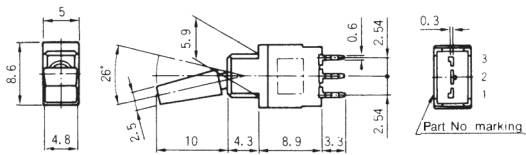
## ATE-J (Plastic type)

### Part Numbering (Plastic cap·Rocker type)



## SPDT

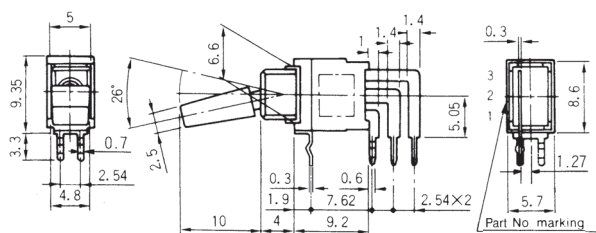
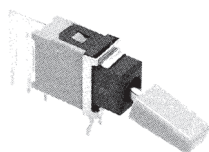
### PC Straight



Part No.	Viewed from part No. marking side		
☆ATE1D-2J3-10-Z	ON	—	ON
★ATE1E-2J3-10-Z	ON	OFF	ON
Connecting terminals	2—3	—	2—1

**SPDT**

**Vertical mounting**



Switching function	Viewed from part No. marking side		
Part No.	★ATE1D-7J3-10-Z	—	ON
Connecting terminals	2-3	—	2-1

Mount with CAP

Terminal numbers are not shown on the switch.

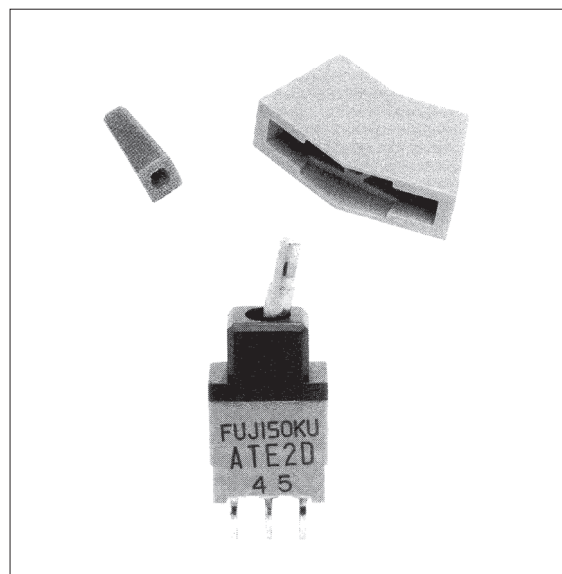
**Optional Accessories**

《Sold separately》

Type	ATE-2J · 7J	ATE-2J · 7J
Part name	Color Cap	Rocker
Dimensions		
White	<b>14000050884</b>	<b>140000481541</b>
Red	<b>14000050886</b>	<b>140000481543</b>
Black	<b>14000050885</b>	<b>140000481542</b>

**Color Cap and Rocker**

**Installation Procedure for ATE-J type**





PC Hole Layouts

PC terminal

(Top view)

Series code	ATE-2M-2F-2J	ATE-2M-2F		
Installation	Whithout bracket	When optional bracket is used		
		140000640314	140000640315	140000640318
1-pole				
2-poles 2.54mm Two terminal rows				

Right Angle terminal • Vertical Mount terminal

(Top view)

Series code	ATE-5M-5F	ATE-6M-6F	ATE-7J
Terminal	R/A 0.2-inch pitch	R/A 0.3-inch pitch	Vertical mount
1-pole			
2-poles			

Bracket Mounted Dimensions.

Type	ATE-2M	ATE-2F
	Standard	Flat
Dimensions		

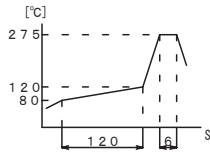
**Soldering Specifications**

(1) Manual Soldering

Device : Soldering iron  
380°C, Max.; 3 seconds, Max.

(2) Auto Soldering

Device : Jet wave type or dip type  
275°C, Max.; 6 seconds, Max.



● Pre-heating should be done at temperatures ranging from 80°C to 120°C and within 120 seconds

(3) Install the cap/rocker accessory after soldering and cleaning.

**Flux Cleaning**

(1) Solvent : Fluorine or Alcohol type.

(2) Cleaning after soldering should be done after the terminal temperature falls to 90°C or below, or after leaving the switch for five minutes or longer at room temperature.

**Packaging Specifications**

Plastick Pack		PC terminals : 100 pcs./pack
Plastick Pack		Vertical mounting terminals 100 pcs./pack

**Mounting of Switch**

- Use PC boards with hole diameter of 1mm.
- Do not bend the terminal pins before mounting the switch on the PC board.
- After mounting the switch, do not place the device in such a way that the device weight will be applied on to the actuator of the switch.
- Do not apply load exceeding 12.7 N to the actuator.

