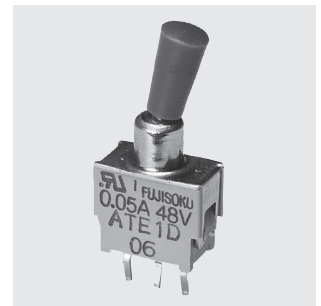


# ATE

## Subminiature Toggle Switch

Washable



RoHS Compliant

UL

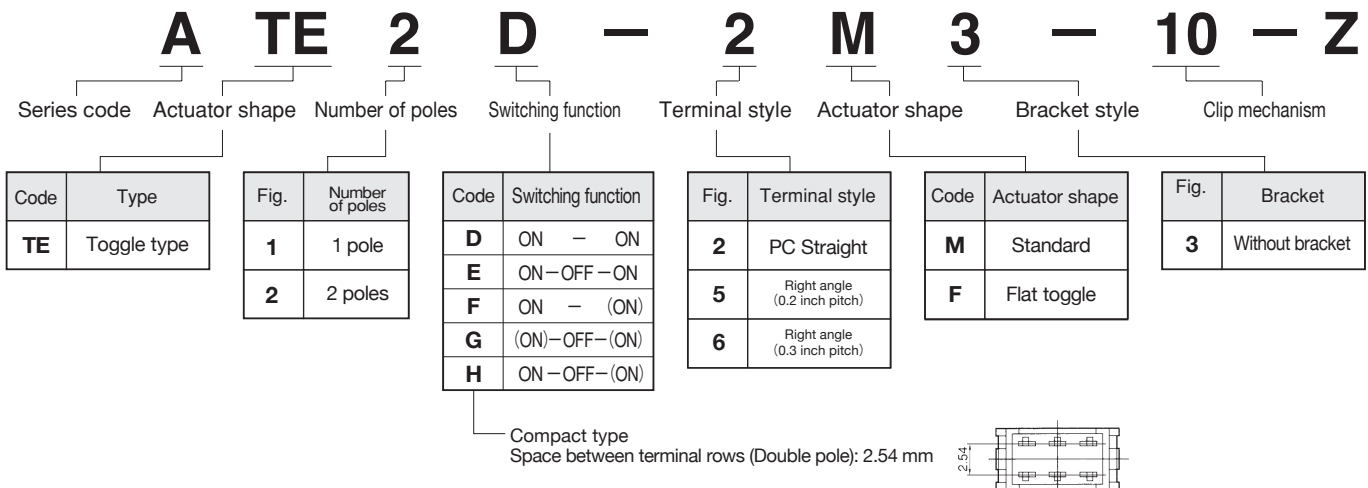
### Features

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)

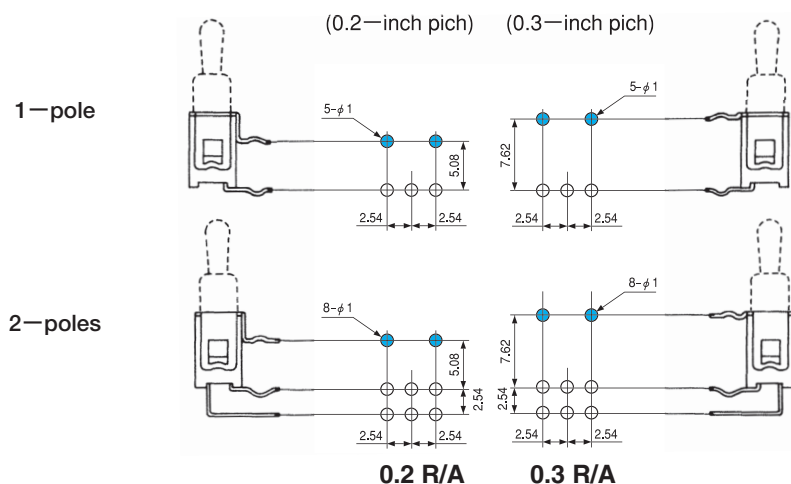
### Specifications

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. (D,E type)	
	30,000 cycles at 0.4VA rating. (F,G,H type)	
Mechanical life	D,E type 50,000 cycles	
	F,G,H 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.

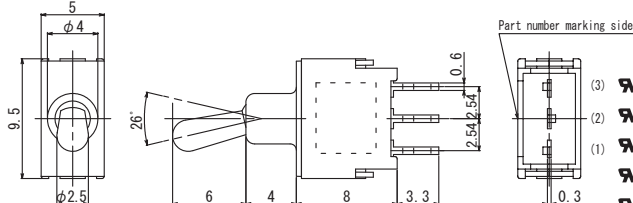
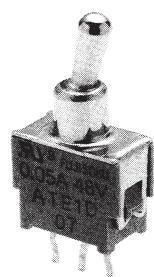
Part name	Bracket		
	Single pole	Double poles	
Poles	Single pole	Double poles	
Box size	5 mm	7.5 mm	5 mm
Type	ATE-2M · 2F		
Dimensions			
Part number	<b>140000640314</b>	<b>140000640315</b>	<b>140000640318</b>

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



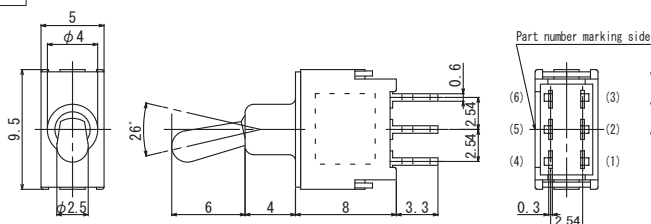
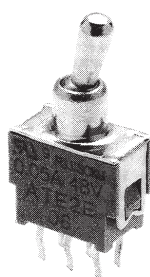
Terminal numbers are not shown on the switch.

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.

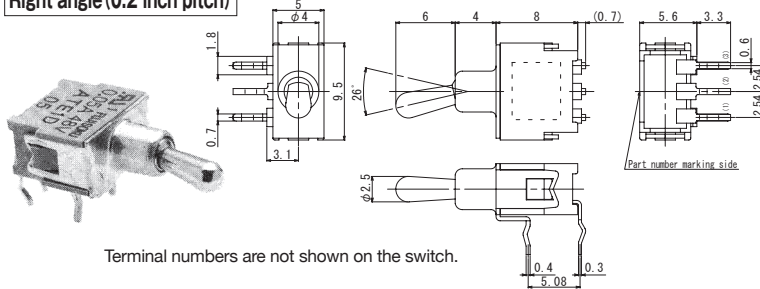
: Optional Accessories.

# ATE

## SPDT

(Mounting height : 3.1mm)

Right angle (0.2 inch pitch)



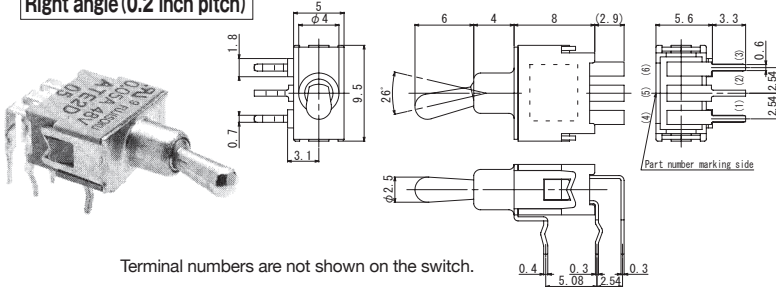
Terminal numbers are not shown on the switch.

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

## DPDT

(Mounting height : 3.1mm)

Right angle (0.2 inch pitch)



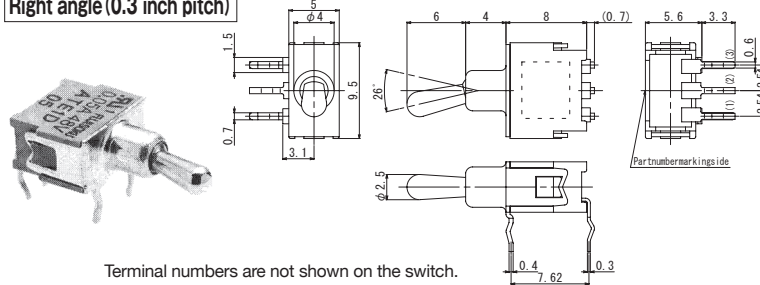
Terminal numbers are not shown on the switch.

Part No.	Switching function	Viewed from part No. marking side		
☆ATE2D-5M3-10-Z	ON	—	ON	
☆ATE2G-5M3-10-Z	(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	
ATE1E-6M3-10-Z	ON	OFF	ON	
ATE1F-6M3-10-Z	ON	—	(ON)	
☆ATE1G-6M3-10-Z	(ON)	OFF	(ON)	
☆ATE1H-6M3-10-Z	ON	OFF	(ON)	
Connecting terminals	2-3	—	2-1	

(ON) : Momentary.

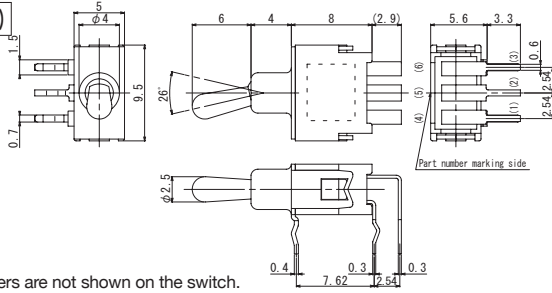
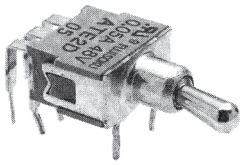
☆ : Semi-standard products.

★ : Made to order products.

**DPDT**

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



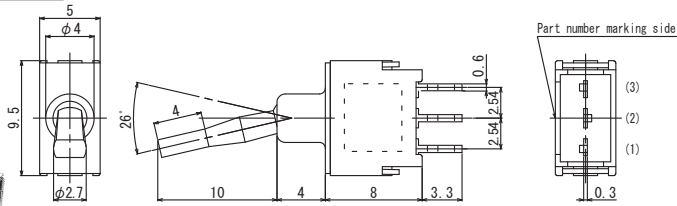
Terminal numbers are not shown on the switch.

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

**SPDT**

Flat Toggle

PC Straight



Terminal numbers are not shown on the switch.

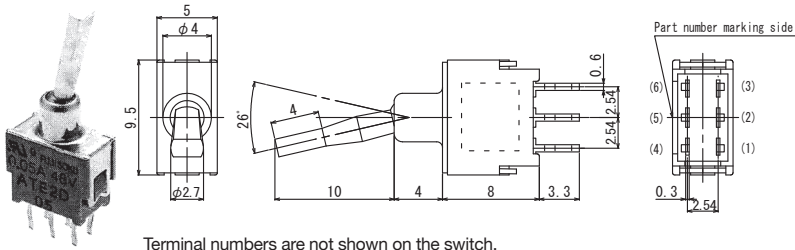
Switching function	Viewed from part No. marking side		
Part No.			
ATE1D-2F3-10-Z	ON	—	ON
ATE1E-2F3-10-Z	ON	OFF	ON
Connecting terminals	2-3	—	2-1

# ATE

## DPDT

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

### PC Straight



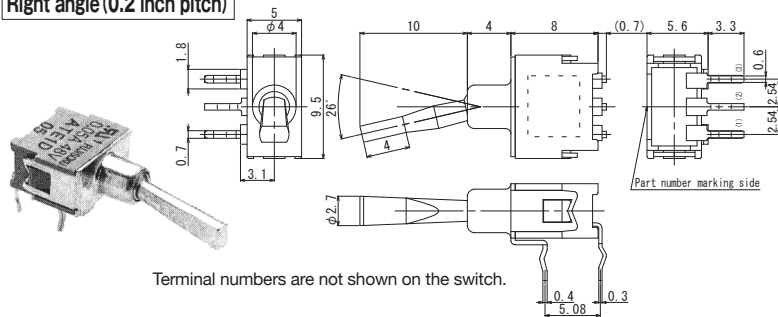
Terminal numbers are not shown on the switch.

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)



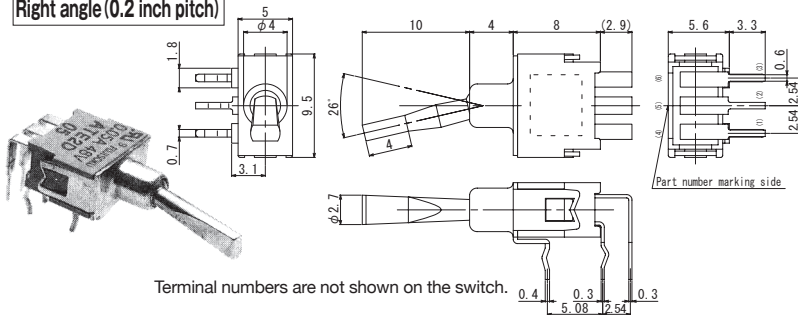
Terminal numbers are not shown on the switch.

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)



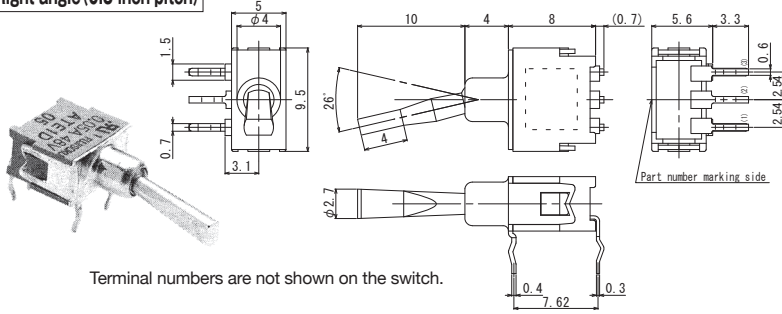
Terminal numbers are not shown on the switch.

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)



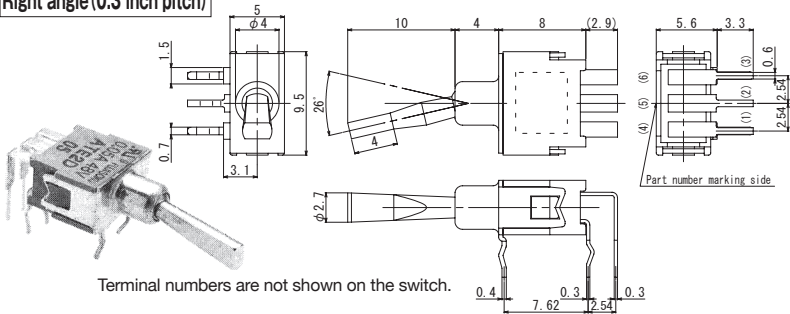
Terminal numbers are not shown on the switch.

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)

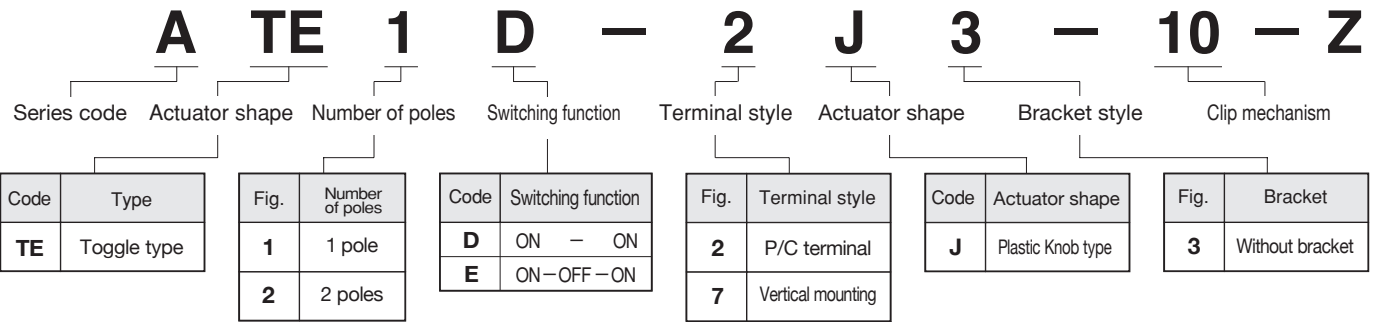


Terminal numbers are not shown on the switch.

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

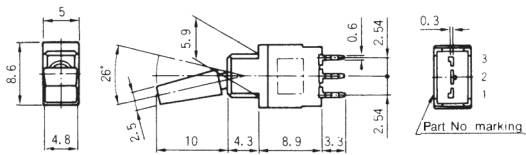
## ATE-J (Plastic type)

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



## SPDT

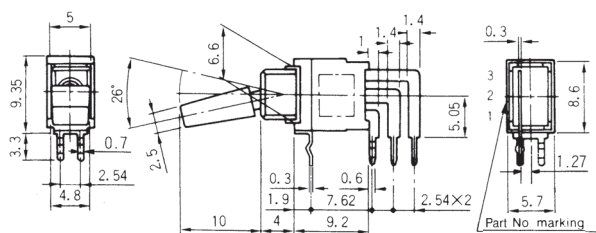
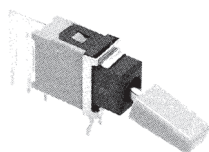
### PC Straight



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	—	ON
Connecting terminals	2-3	—	2-1

Mount with CAP

Terminal numbers are not shown on the switch.

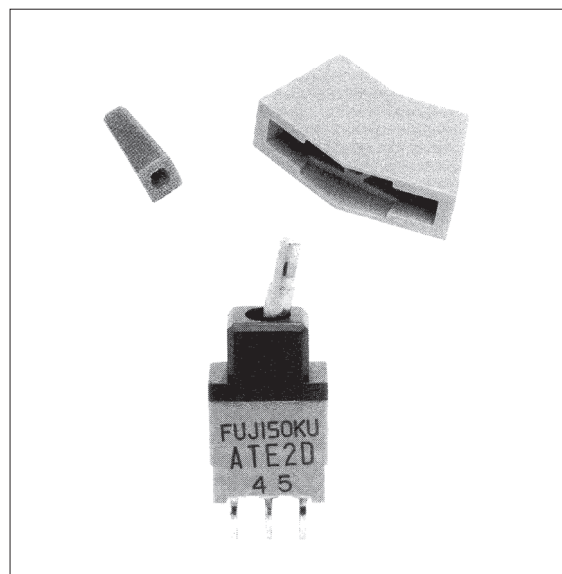
**Optional Accessories**

《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		

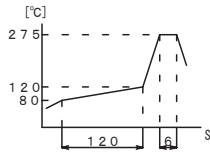
**Soldering Specifications**

(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.

