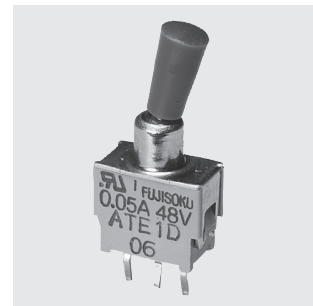


# ATE

## Subminiature Toggle Switch

Washable



RoHS Compliant

UL

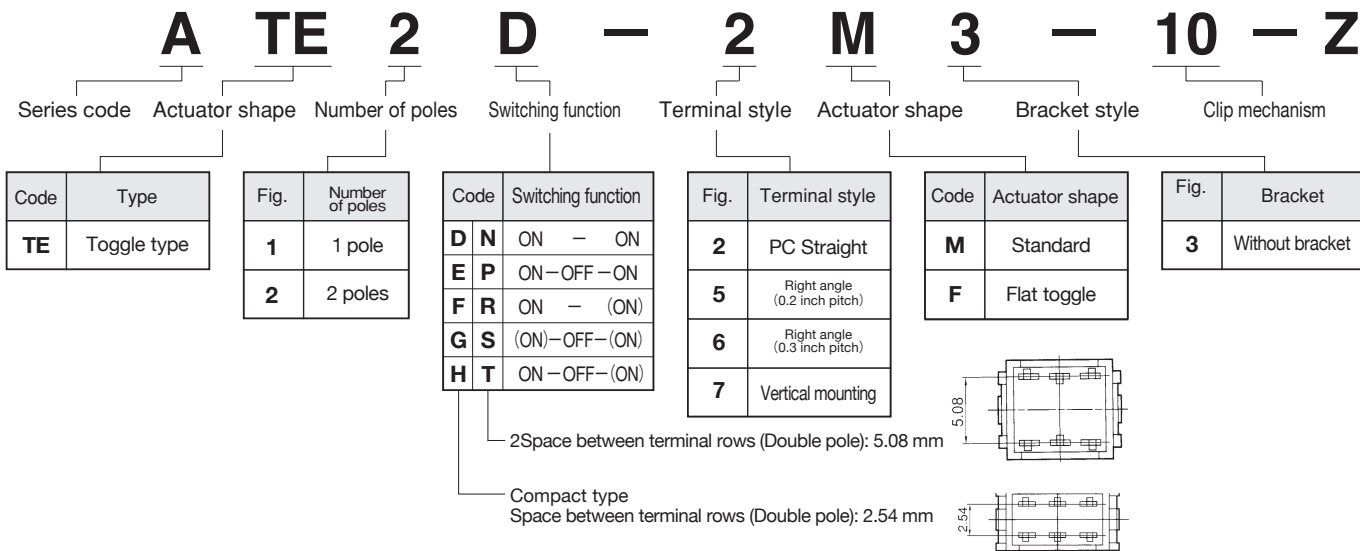
### Features

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)

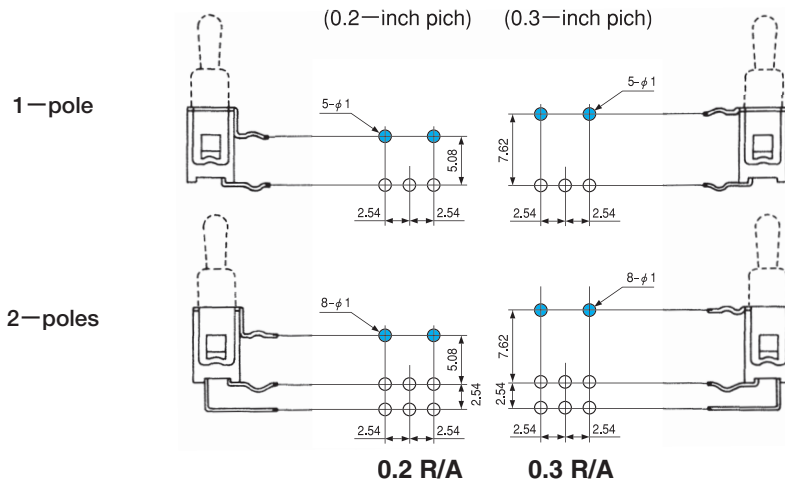
### Specifications

Rating	Max.	50mA 60VAC/DC 0.4VA AC/DC
	Min.	1 μA 20mVAC/DC
	UL	48VAC/DC 50mA
Initial contact resistance	50mΩ Max.	(1.5mA 200μVAC)
Dielectric strength	250VAC 1 minute	
Insulation resistance	500MΩ min.	(500VDC)
Electrical life	10,000 cycles at 0.4VA rating.	
	50,000 cycles at 0.4VA rating. ( <b>D.E.N.P</b> type)	
	30,000 cycles at 0.4VA rating. ( <b>F.G.H.R.S.T</b> type)	
Mechanical life	<b>D.E.N.P</b> type 50,000 cycles	
	<b>F.G.H.R.S.T</b> type 30,000 cycles	
Operating temperature range	-20°C~+85°C	
Storage temperature range	-40°C~+85°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.

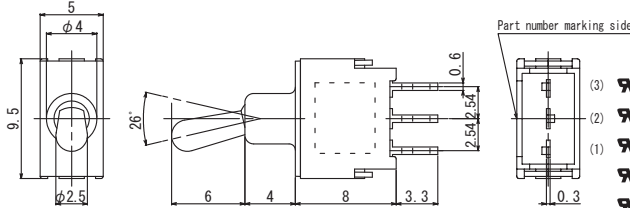
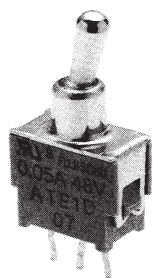
Part name	Bracket		
	Single pole	Double poles	
Poles	Single pole	Double poles	
Box size	5 mm	7.5 mm	5 mm
Type	ATE-2M · 2F		
Dimensions			
Part number	<b>140000640314</b>	<b>140000640315</b>	<b>140000640318</b>

Type	ATE-2M·5M·6M·7M
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



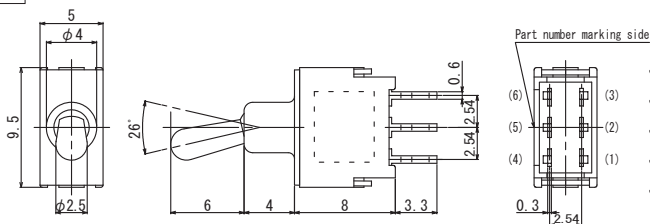
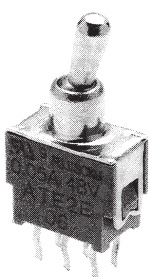
Terminal numbers are not shown on the switch.

Part No.	Switching function		
	Viewed from part No. marking side		
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.

Part No.	Switching function		
	Viewed from part No. marking side		
ATE2D-2M3-10-Z	ON	—	ON
☆ATE2E-2M3-10-Z	ON	OFF	ON
★ATE2F-2M3-10-Z	ON	—	(ON)
☆ATE2G-2M3-10-Z	(ON)	OFF	(ON)
☆ATE2H-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.

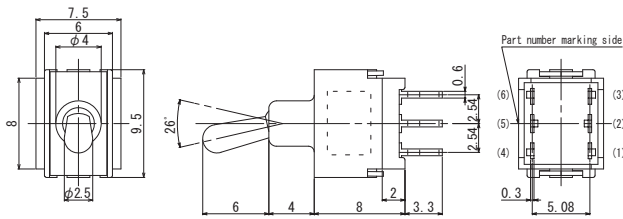
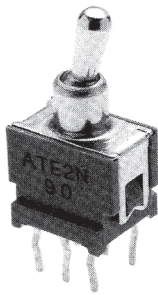
: Optional Accessories.

# ATE

## DPDT

(Space between terminal rows : 5.08 mm)

### PC Straight



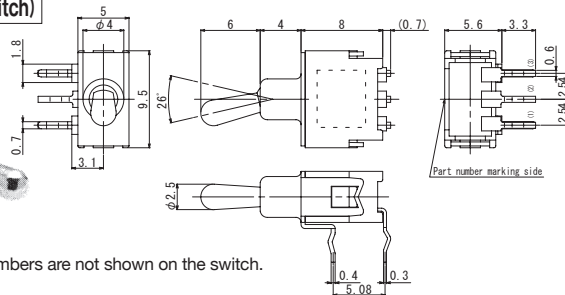
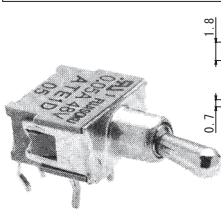
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
☆ ATE2N-2M3-10-Z	ON	—	ON
★ ATE2P-2M3-10-Z	ON	OFF	ON
★ ATE2R-2M3-10-Z	ON	—	(ON)
★ ATE2S-2M3-10-Z	(ON)	OFF	(ON)
★ ATE2T-2M3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

## SPDT

(Mounting height : 3.1mm)

### Right angle (0.2 inch pitch)



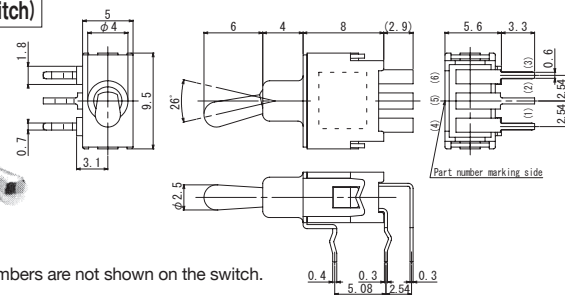
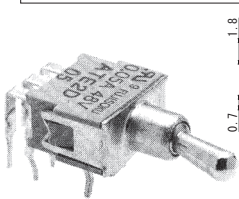
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
ATE1D-5M3-10-Z	ON	—	ON
☆ ATE1E-5M3-10-Z	ON	OFF	ON
★ ATE1F-5M3-10-Z	ON	—	(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)



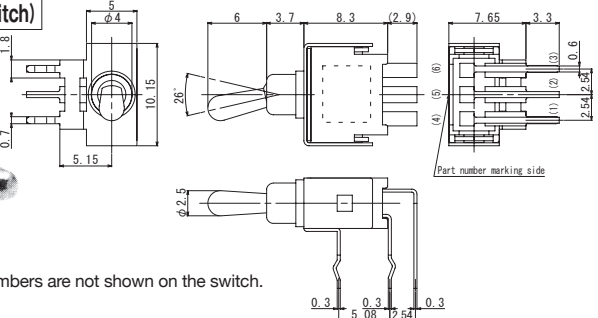
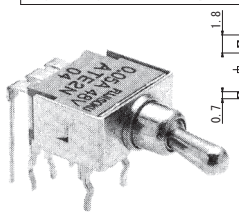
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
☆ ATE2D-5M3-10-Z	ON	—	ON
★ ATE2E-5M3-10-Z	ON	OFF	ON
★ ATE2F-5M3-10-Z	ON	—	(ON)
☆ ATE2G-5M3-10-Z	(ON)	OFF	(ON)
▲ ATE2H-5M3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

## DPDT

(Mounting height : 5.15mm)

### Right angle (0.2 inch pitch)



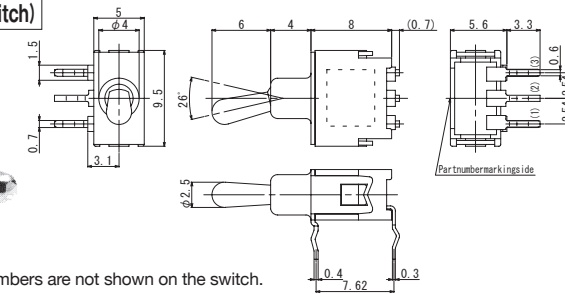
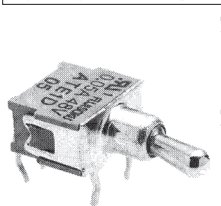
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
☆ ATE2N-5M3-10-Z	ON	—	ON
★ ATE2P-5M3-10-Z	ON	OFF	ON
▲ ATE2R-5M3-10-Z	ON	—	(ON)
★ ATE2S-5M3-10-Z	(ON)	OFF	(ON)
▲ ATE2T-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.	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.

▲ : Inquiry products.

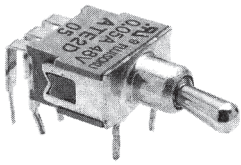
☆ : Semi-standard products.

★ : Made to order products.

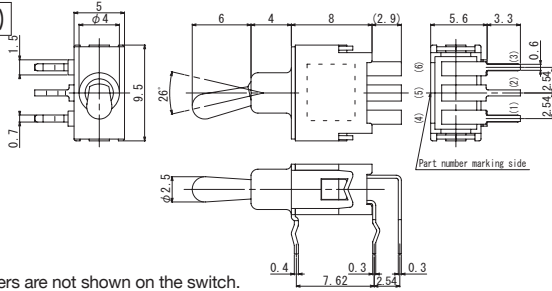
**DPDT**

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



Terminal numbers are not shown on the switch.

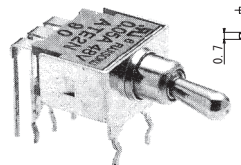


Part No.	Switching function		
	Viewed from part No. marking side		
ATE2D-6M3-10-Z	ON	—	ON
★ATE2E-6M3-10-Z	ON	OFF	ON
★ATE2F-6M3-10-Z	ON	—	(ON)
★ATE2G-6M3-10-Z	(ON)	OFF	(ON)
▲ATE2H-6M3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

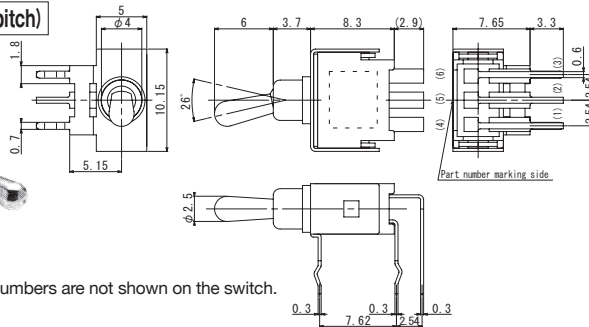
**DPDT**

(Mounting height : 5.15mm)

Right angle (0.3 inch pitch)



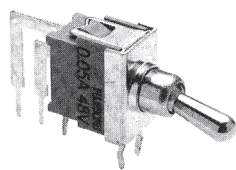
Terminal numbers are not shown on the switch.



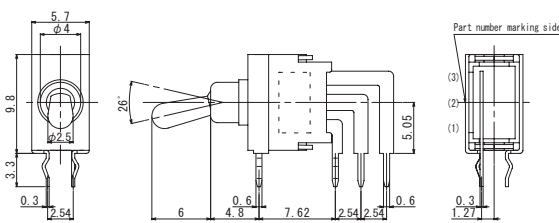
Part No.	Switching function		
	Viewed from part No. marking side		
ATE2N-6M3-10-Z	ON	—	ON
☆ATE2P-6M3-10-Z	ON	OFF	ON
★ATE2R-6M3-10-Z	ON	—	(ON)
★ATE2S-6M3-10-Z	(ON)	OFF	(ON)
★ATE2T-6M3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

**SPDT**

Vertical mounting



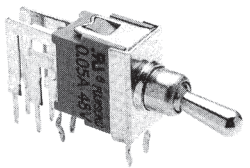
Terminal numbers are not shown on the switch.



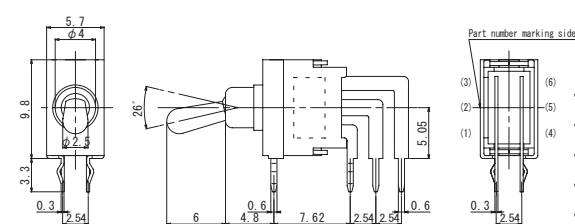
Part No.	Switching function		
	Viewed from part No. marking side		
☆ATE1D-7M3-10-Z	ON	—	ON
☆ATE1E-7M3-10-Z	ON	OFF	ON
★ATE1F-7M3-10-Z	ON	—	(ON)
★ATE1G-7M3-10-Z	(ON)	OFF	(ON)
▲ATE1H-7M3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3	—	2-1

**DPDT**

Vertical mounting



Terminal numbers are not shown on the switch.



Part No.	Switching function		
	Viewed from part No. marking side		
ATE2D-7M3-10-Z	ON	—	ON
★ATE2E-7M3-10-Z	ON	OFF	ON
★ATE2F-7M3-10-Z	ON	—	(ON)
▲ATE2G-7M3-10-Z	(ON)	OFF	(ON)
▲ATE2H-7M3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

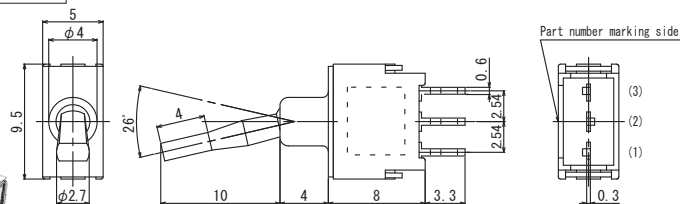
**SPDT**

PC Straight

Flat Toggle



Terminal numbers are not shown on the switch.



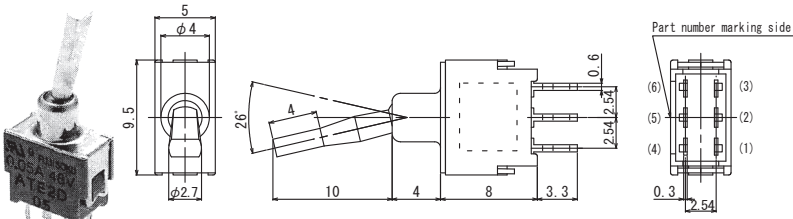
Part No.	Switching function		
	Viewed from part No. marking side		
ATE1D-2F3-10-Z	ON	—	ON
ATE1E-2F3-10-Z	ON	OFF	ON
☆ATE1F-2F3-10-Z	ON	—	(ON)
★ATE1G-2F3-10-Z	(ON)	OFF	(ON)
★ATE1H-2F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3	—	2-1

# ATE

## DPDT

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

### PC Straight



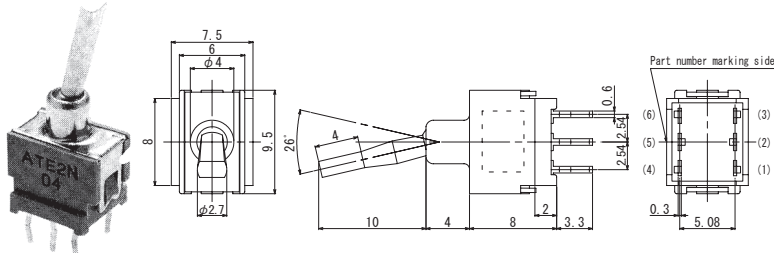
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
☆ ATE2D-2F3-10-Z	ON	—	ON
★ ATE2E-2F3-10-Z	ON	OFF	ON
★ ATE2F-2F3-10-Z	ON	—	(ON)
☆ ATE2G-2F3-10-Z	(ON)	OFF	(ON)
★ ATE2H-2F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

## DPDT

(Space between terminal rows (Double pole): 5.08 mm)

### PC Straight



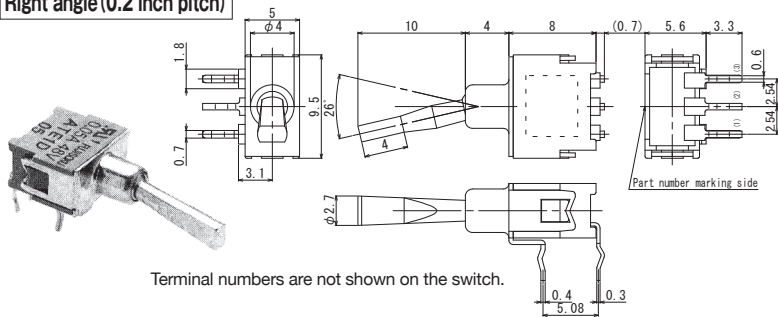
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
☆ ATE2N-2F3-10-Z	ON	—	ON
★ ATE2P-2F3-10-Z	ON	OFF	ON
★ ATE2R-2F3-10-Z	ON	—	(ON)
▲ ATE2S-2F3-10-Z	(ON)	OFF	(ON)
★ ATE2T-2F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

## SPDT

(Mounting height : 3.1mm)

### Right angle (0.2 inch pitch)



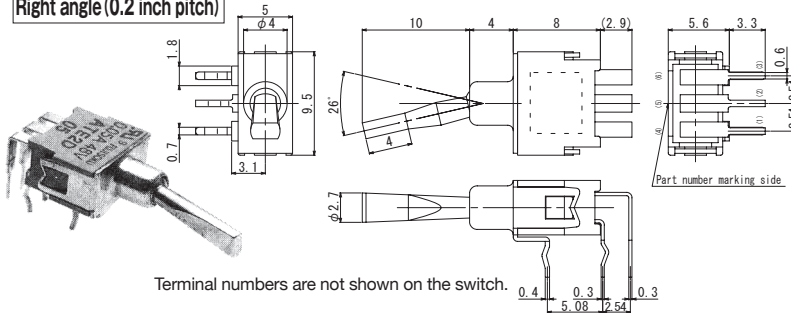
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
☆ ATE1D-5F3-10-Z	ON	—	ON
★ ATE1E-5F3-10-Z	ON	OFF	ON
★ ATE1F-5F3-10-Z	ON	—	(ON)
★ ATE1G-5F3-10-Z	(ON)	OFF	(ON)
★ ATE1H-5F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3	—	2-1

## DPDT

(Mounting height : 3.1mm)

### Right angle (0.2 inch pitch)



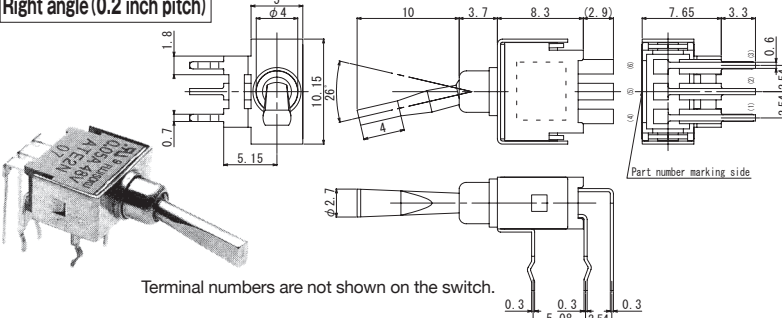
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
★ ATE2D-5F3-10-Z	ON	—	ON
▲ ATE2E-5F3-10-Z	ON	OFF	ON
▲ ATE2F-5F3-10-Z	ON	—	(ON)
★ ATE2G-5F3-10-Z	(ON)	OFF	(ON)
▲ ATE2H-5F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

## DPDT

(Mounting height : 5.15mm)

### Right angle (0.2 inch pitch)



Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
★ ATE2N-5F3-10-Z	ON	—	ON
▲ ATE2P-5F3-10-Z	ON	OFF	ON
★ ATE2R-5F3-10-Z	ON	—	(ON)
▲ ATE2S-5F3-10-Z	(ON)	OFF	(ON)
▲ ATE2T-5F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

(ON) : Momentary.

▲ : Inquiry products.

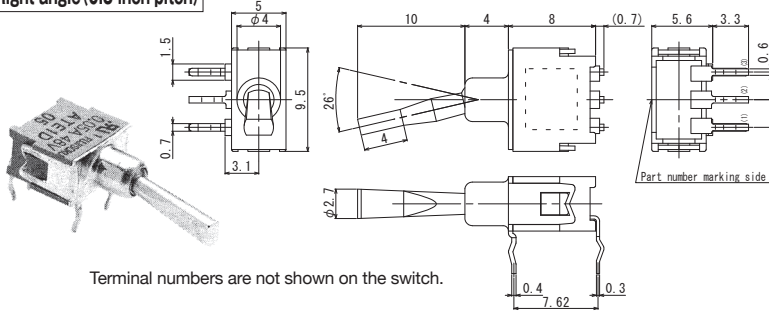
☆ : Semi-standard products.

★ : Made to order products.

**SPDT**

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



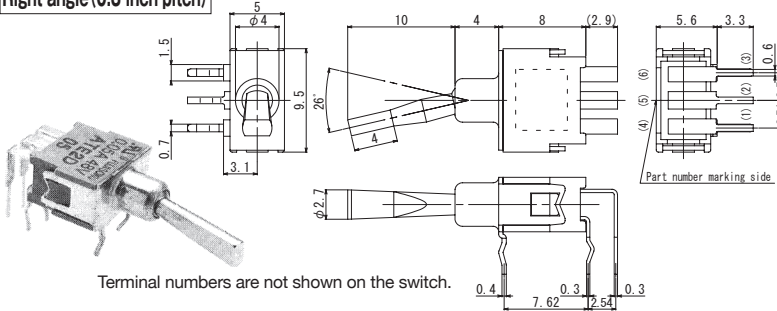
Terminal numbers are not shown on the switch.

Part No.	Switching function		
	Viewed from part No. marking side		
★ATE1D-6F3-10-Z	ON	—	ON
★ATE1E-6F3-10-Z	ON	OFF	ON
★ATE1F-6F3-10-Z	ON	—	(ON)
☆ATE1G-6F3-10-Z	(ON)	OFF	(ON)
★ATE1H-6F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3	—	2-1

**DPDT**

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



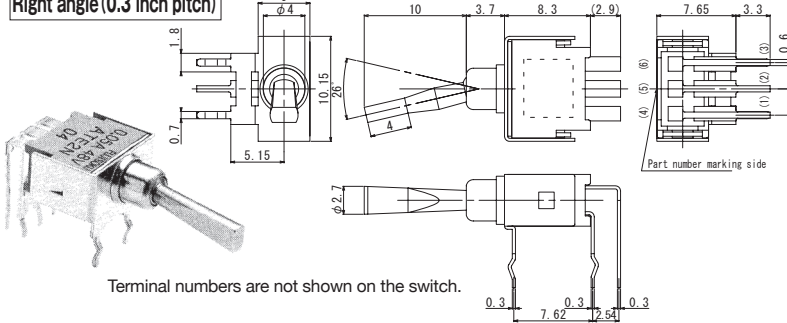
Terminal numbers are not shown on the switch.

Part No.	Switching function		
	Viewed from part No. marking side		
☆ATE2D-6F3-10-Z	ON	—	ON
★ATE2E-6F3-10-Z	ON	OFF	ON
▲ATE2F-6F3-10-Z	ON	—	(ON)
▲ATE2G-6F3-10-Z	(ON)	OFF	(ON)
▲ATE2H-6F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

**DPDT**

(Mounting height : 5.15mm)

Right angle (0.3 inch pitch)

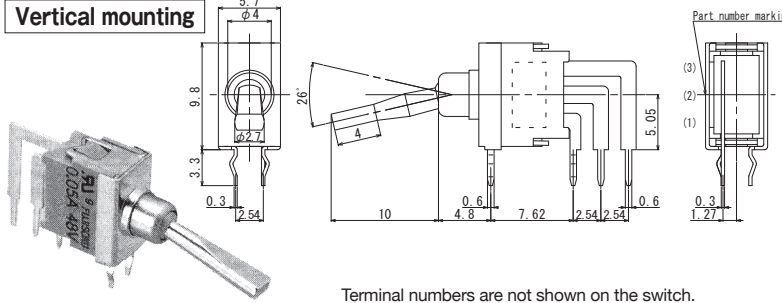


Terminal numbers are not shown on the switch.

Part No.	Switching function		
	Viewed from part No. marking side		
★ATE2N-6F3-10-Z	ON	—	ON
▲ATE2P-6F3-10-Z	ON	OFF	ON
▲ATE2R-6F3-10-Z	ON	—	(ON)
▲ATE2S-6F3-10-Z	(ON)	OFF	(ON)
▲ATE2T-6F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

**SPDT**

Vertical mounting

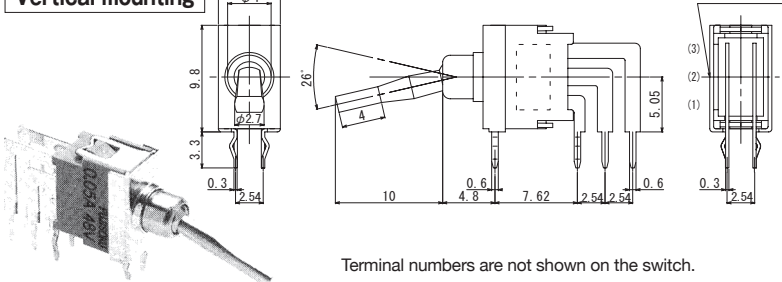


Terminal numbers are not shown on the switch.

Part No.	Switching function		
	Viewed from part No. marking side		
★ATE1D-7F3-10-Z	ON	—	ON
▲ATE1E-7F3-10-Z	ON	OFF	ON
★ATE1F-7F3-10-Z	ON	—	(ON)
▲ATE1G-7F3-10-Z	(ON)	OFF	(ON)
★ATE1H-7F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3	—	2-1

**DPDT**

Vertical mounting



Terminal numbers are not shown on the switch.

Part No.	Switching function		
	Viewed from part No. marking side		
★ATE2D-7F3-10-Z	ON	—	ON
★ATE2E-7F3-10-Z	ON	OFF	ON
★ATE2F-7F3-10-Z	ON	—	(ON)
▲ATE2G-7F3-10-Z	(ON)	OFF	(ON)
▲ATE2H-7F3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

★ : Made to order products. ☆ : Semi-standard products. (ON) : Momentary.

# ATE-J (Plastic type)

## Part Numbering (Plastic cap/Rocker type)

**A** **TE** **2** **D** - **2** **J** **3** - **10** - **Z**

Series code    Actuator shape    Number of poles    Switching function    Terminal style    Actuator shape    Bracket style    Clip mechanism

Code	Type
TE	Toggle type

Fig.	Number of poles
1	1 pole
2	2 poles

Code	Switching function
D	ON - ON
E	ON-OFF - ON
F	ON - (ON)
G	(ON)-OFF-(ON)
H	ON-OFF-(ON)

Fig.	Terminal style
2	P/C terminal
6	Right angle (0.3 inch pitch)
7	Vertical mounting

Code	Actuator shape
J	Plastic Knob type

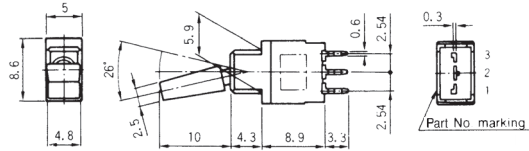
Fig.	Bracket
3	Without bracket

(Compact type)

Space between terminal rows (Double pole): 2.54 mm  
[5.08 mm is not available]

### SPDT

#### PC Straight

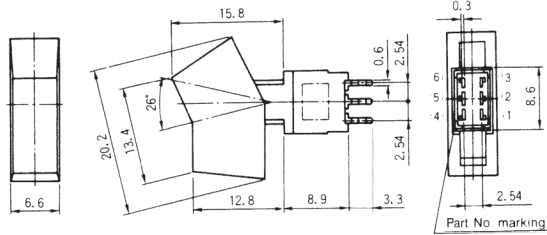
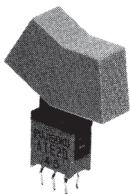


Mount with CAP

Switching function	Viewed from part No. marking side		
Part No.			
☆ATE1D-2J3-10-Z	ON	-	ON
★ATE1E-2J3-10-Z	ON	OFF	ON
▲ATE1F-2J3-10-Z	ON	-	(ON)
▲ATE1G-2J3-10-Z	(ON)	OFF	(ON)
★ATE1H-2J3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3	-	2-1

### DPDT

#### PC Straight

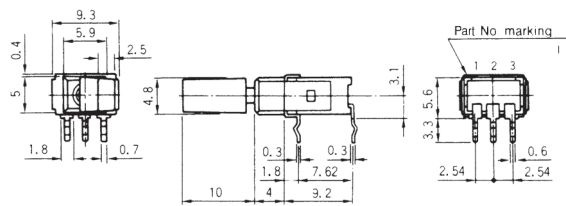
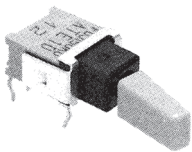


Mount with Rocker

Switching function	Viewed from part No. marking side		
Part No.			
★ATE2D-2J3-10-Z	ON	-	ON
▲ATE2E-2J3-10-Z	ON	OFF	ON
▲ATE2F-2J3-10-Z	ON	-	(ON)
▲ATE2G-2J3-10-Z	(ON)	OFF	(ON)
▲ATE2H-2J3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	-	2-1 5-4

### SPDT

#### Right angle (0.3 inch pitch)

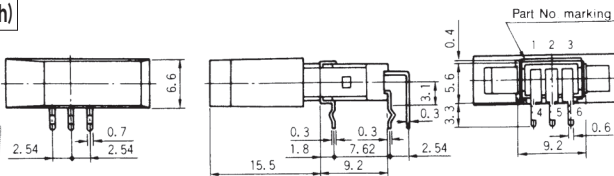
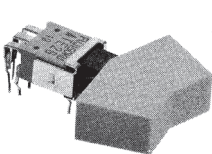


Mount with CAP

Switching function	Viewed from part No. marking side		
Part No.			
★ATE1D-6J3-10-Z	ON	-	ON
▲ATE1E-6J3-10-Z	ON	OFF	ON
▲ATE1F-6J3-10-Z	ON	-	(ON)
▲ATE1G-6J3-10-Z	(ON)	OFF	(ON)
▲ATE1H-6J3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3	-	2-1

### DPDT

#### Right angle (0.3 inch pitch)



Mount with Rocker

Switching function	Viewed from part No. marking side		
Part No.			
▲ATE2D-6J3-10-Z	ON	-	ON
▲ATE2E-6J3-10-Z	ON	OFF	ON
▲ATE2F-6J3-10-Z	ON	-	(ON)
▲ATE2G-6J3-10-Z	(ON)	OFF	(ON)
▲ATE2H-6J3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	-	2-1 5-4

#### Notes:

- Install the cap/rocker accessory after soldering and cleaning.
- Specify the shape and coloring when ordering.
- Space between terminal rows: 5.08 mm is not available.

● Color cap and Rocker accessories are sold separately.

Terminal numbers are not shown on the switch.

(ON) : Momentary.

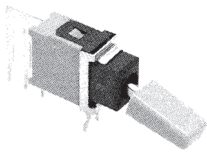
★ : Made to order products.

☆ : Semi-standard products.

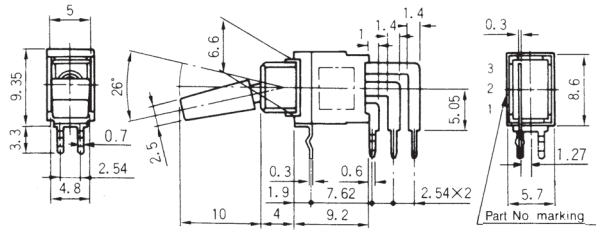
▲ : Inquiry products.

**SPDT**

Vertical mounting



Mount with CAP

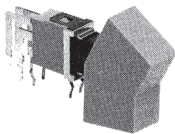


Terminal numbers are not shown on the switch.

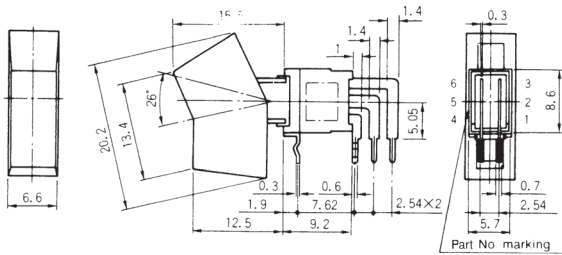
Switching function Part No.	Viewed from part No. marking side		
★ATE1D-7J3-10-Z	ON	—	ON
▲ATE1E-7J3-10-Z	ON	OFF	ON
▲ATE1F-7J3-10-Z	ON	—	(ON)
▲ATE1G-7J3-10-Z	(ON)	OFF	(ON)
▲ATE1H-7J3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3	—	2-1

**DPDT**

Vertical mounting



Mount with Rocker



Terminal numbers are not shown on the switch.

Switching function Part No.	Viewed from part No. marking side		
▲ATE2D-7J3-10-Z	ON	—	ON
▲ATE2E-7J3-10-Z	ON	OFF	ON
▲ATE2F-7J3-10-Z	ON	—	(ON)
▲ATE2G-7J3-10-Z	(ON)	OFF	(ON)
▲ATE2H-7J3-10-Z	ON	OFF	(ON)
Connecting terminals	2-3 5-6	—	2-1 5-4

**Optional Accessories**

《Sold separately》

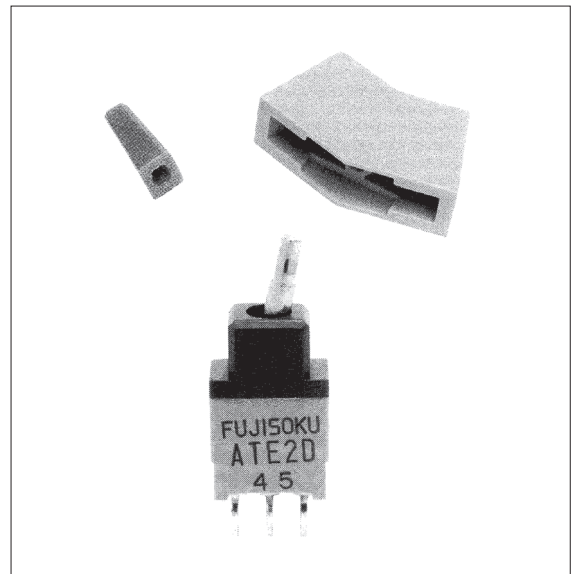
Type	ATE-2J · 6J · 7J	ATE-2J · 6J · 7J
Part name	<b>Color Cap</b>	<b>Rocker</b>
Dimensions		
White	<b>14000050884</b>	<b>140000481541</b>
Red	<b>14000050886</b>	<b>140000481543</b>
Black	<b>14000050885</b>	<b>140000481542</b>

●PC hole layout is different depending on the type of Bracket.

Type	ATE-2J
Part name	<b>Bracket</b>
Dimensions	
Part number	<b>140000640296</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			ATE-2J
Installation	Whithout bracket	When optional bracket is used			
		140000640314	140000640315	140000640318	140000640296
1-pole					
2-poles 2.54mm Two terminal rows					
2-poles 5.08mm Two terminal rows					

Right Angle terminal · Vertical Mount terminal

(Top view)

Series code	ATE-5M · 5F	ATE-6M · 6F · 6J	ATE-7M · 7F · 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		

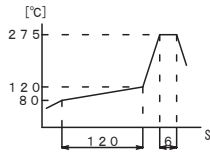
**■ Soldering Specifications**

(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
		Right angle terminals : 50 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.

