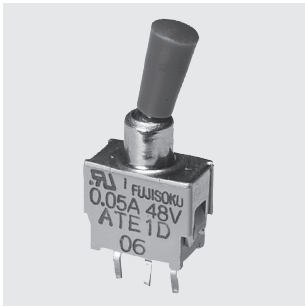


ATE

Subminiature Toggle Switch

Washable



RoHS Compliant

UL

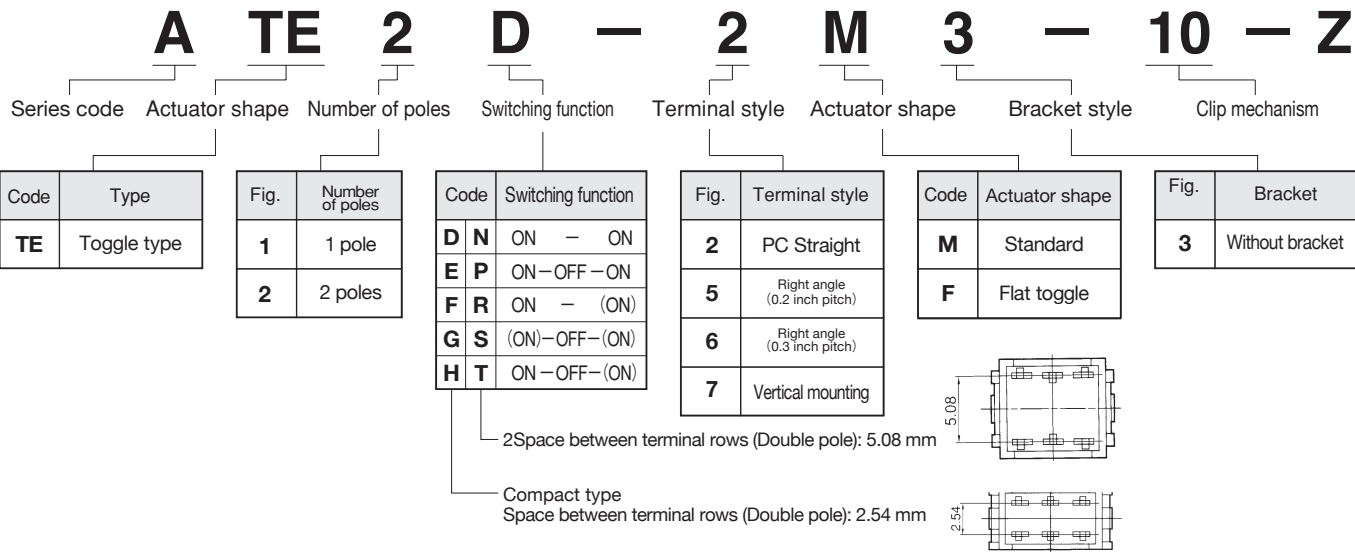
■ Features

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

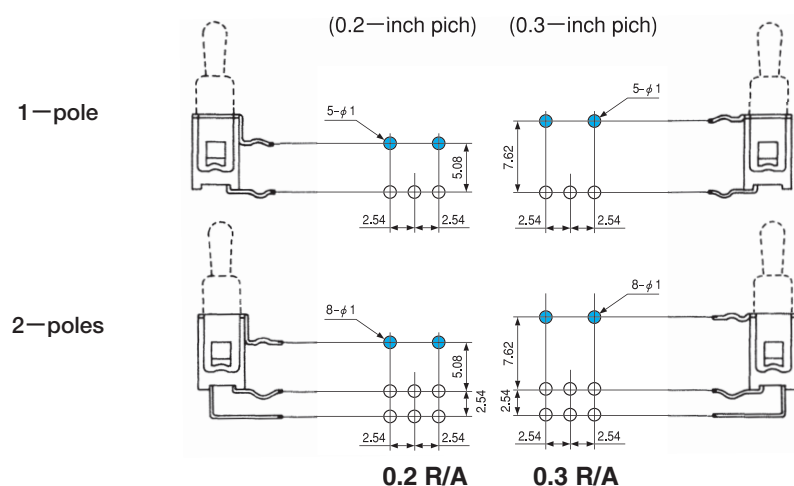
Rating	Max.	50mA 60VAC/DC 0.4VA AC/DC
	Min.	1 μ A 20mVAC/DC
	UL	48VAC/DC 50mA
Initial contact resistance	50m Ω Max. (1.5mA 200 μ VAC)	
Dielectric strength	250VAC 1 minute	
Insulation resistance	500M Ω min. (500VDC)	
Electrical life	10,000 cycles at 0.4VA rating.	
	50,000 cycles at 0.4VA rating. (D.E.N.P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

■ Part Numbering



(ON) : Momentary.

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.

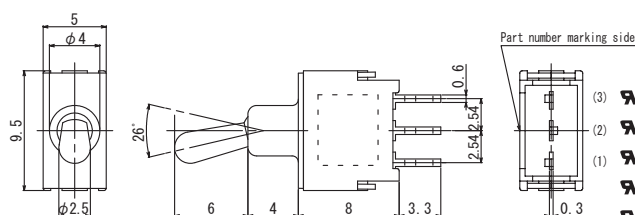
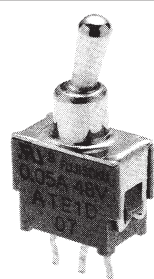
Part name	Bracket		
Poles	Single pole	Double poles	
Box size	5 mm	7.5 mm	5 mm
Type	ATE-2M • 2F		
Dimensions			
Part number	140000640314	140000640315	140000640318

Type	ATE-2M•5M•6M•7M
Part name	Color Cap
Dimensions	Gloss finish
	Vinyl chloride
	White
	Red
	Black
	Gray

SPDT

PC Straight

Standard Toggle



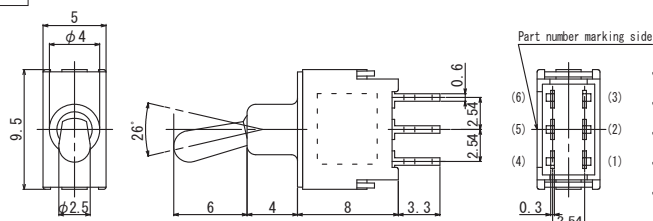
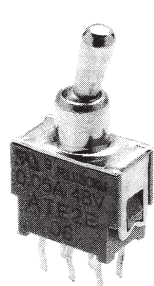
Terminal numbers are not shown on the switch.

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
★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.

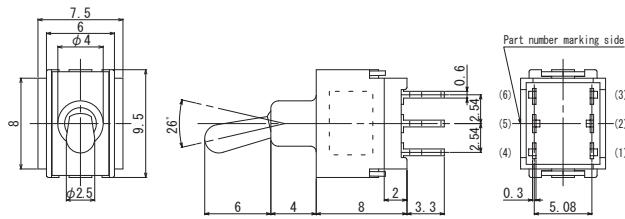
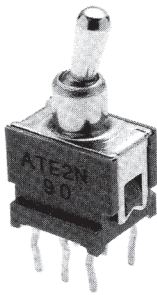
(ON) : Momentary.

: Optional Accessories.

DPDT

(Space between terminal rows : 5.08 mm)

PC Straight



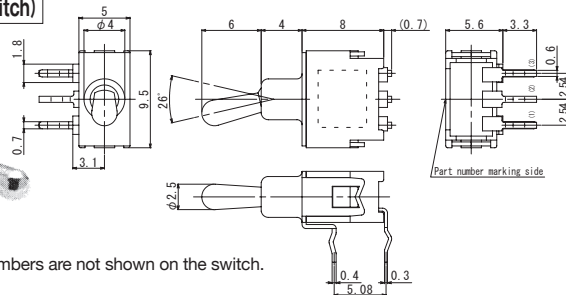
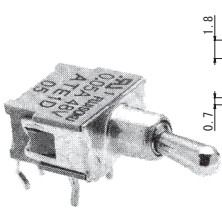
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
	Switching function	ON	OFF
☆ 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)



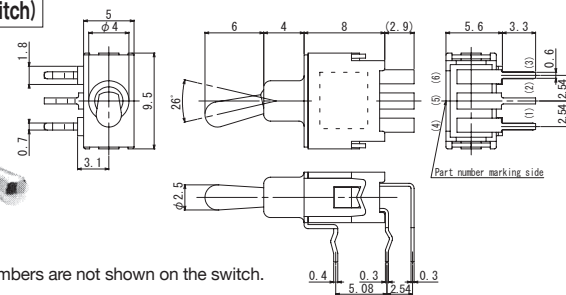
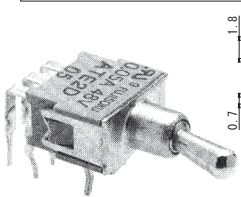
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
	Switching function	ON	OFF
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)



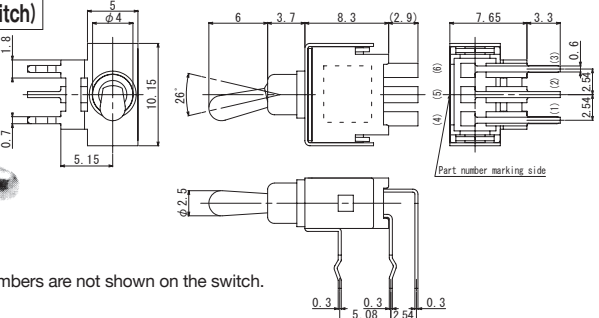
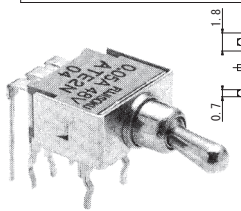
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
	Switching function	ON	OFF
☆ 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)



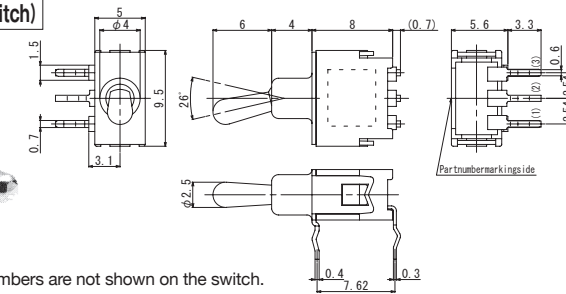
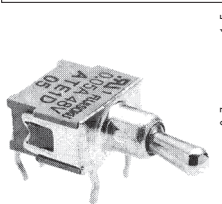
Terminal numbers are not shown on the switch.

Part No.	Viewed from part No. marking side		
	Switching function	ON	OFF
☆ 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		
	Switching function	ON	OFF
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.

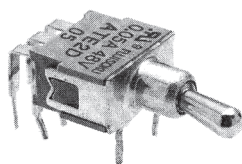
☆ : Semi-standard products.

★ : Made to order products.

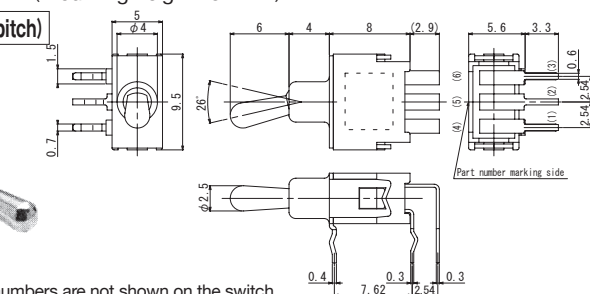
DPDT

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



Terminal numbers are not shown on the switch.

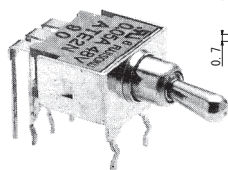


Part No.	Switching function Viewed from part No. marking side		
ATE2D-6M3-10-Z	ON	—	ON
★ATE2E-6M3-10-Z	ON	OFF	ON
★ATE2F-6M3-10-Z	ON	—	(ON)
★ATE2G-6M3-10-Z	(ON)	OFF	(ON)
▲ATE2H-6M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

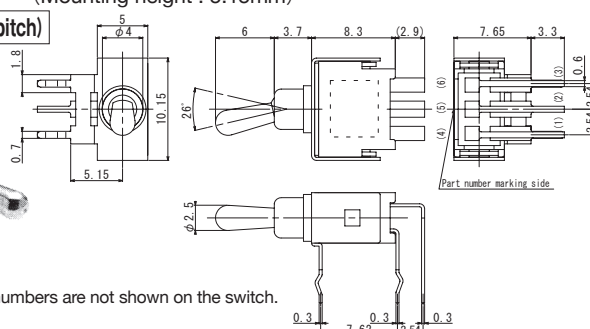
DPDT

(Mounting height : 5.15mm)

Right angle (0.3 inch pitch)



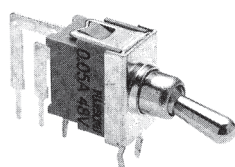
Terminal numbers are not shown on the switch.



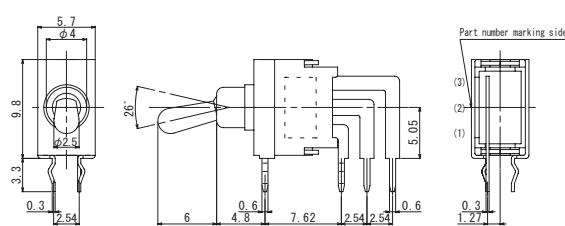
Part No.	Switching function Viewed from part No. marking side		
ATE2N-6M3-10-Z	ON	—	ON
☆ATE2P-6M3-10-Z	ON	OFF	ON
★ATE2R-6M3-10-Z	ON	—	(ON)
★ATE2S-6M3-10-Z	(ON)	OFF	(ON)
★ATE2T-6M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

SPDT

Vertical mounting



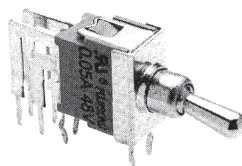
Terminal numbers are not shown on the switch.



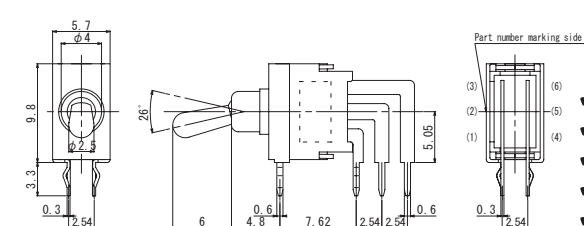
Part No.	Switching function Viewed from part No. marking side		
☆ATE1D-7M3-10-Z	ON	—	ON
☆ATE1E-7M3-10-Z	ON	OFF	ON
★ATE1F-7M3-10-Z	ON	—	(ON)
★ATE1G-7M3-10-Z	(ON)	OFF	(ON)
▲ATE1H-7M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

DPDT

Vertical mounting



Terminal numbers are not shown on the switch.

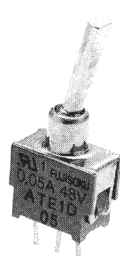


Part No.	Switching function Viewed from part No. marking side		
ATE2D-7M3-10-Z	ON	—	ON
★ATE2E-7M3-10-Z	ON	OFF	ON
★ATE2F-7M3-10-Z	ON	—	(ON)
▲ATE2G-7M3-10-Z	(ON)	OFF	(ON)
▲ATE2H-7M3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

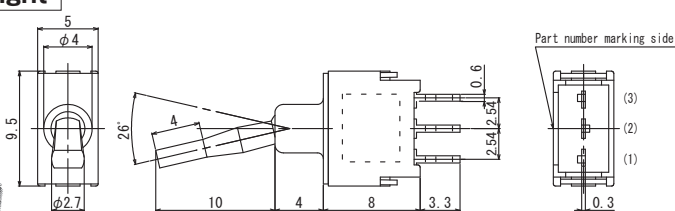
SPDT

PC Straight

Flat Toggle



Terminal numbers are not shown on the switch.



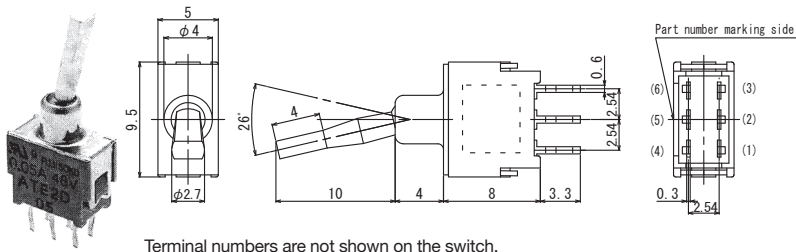
Part No.	Switching function Viewed from part No. marking side		
ATE1D-2F3-10-Z	ON	—	ON
ATE1E-2F3-10-Z	ON	OFF	ON
☆ATE1F-2F3-10-Z	ON	—	(ON)
★ATE1G-2F3-10-Z	(ON)	OFF	(ON)
★ATE1H-2F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

ATE

DPDT

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

PC Straight

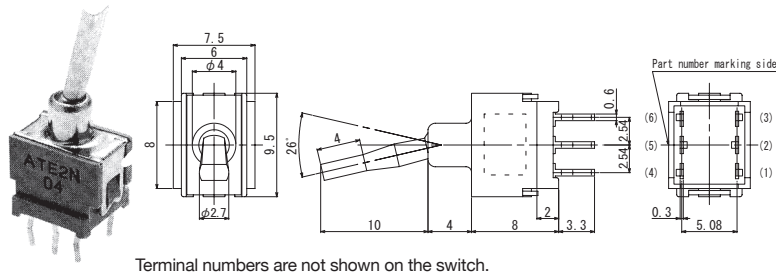


Part No.	Switching function Viewed from part No. marking side		
☆ ATE2D-2F3-10-Z	ON	—	ON
★ ATE2E-2F3-10-Z	ON	OFF	ON
★ ATE2F-2F3-10-Z	ON	—	(ON)
☆ ATE2G-2F3-10-Z	(ON)	OFF	(ON)
★ ATE2H-2F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

DPDT

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

PC Straight

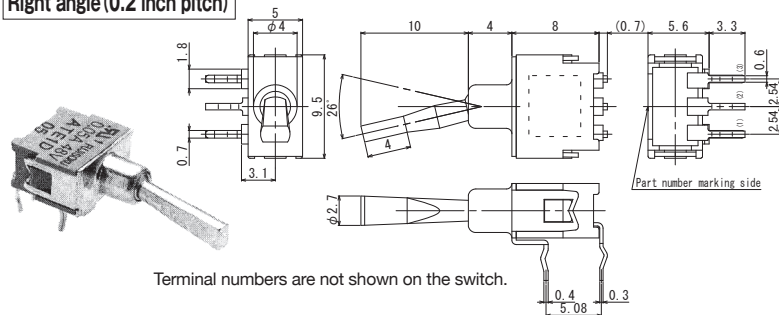


Part No.	Switching function Viewed from part No. marking side		
☆ ATE2N-2F3-10-Z	ON	—	ON
★ ATE2P-2F3-10-Z	ON	OFF	ON
★ ATE2R-2F3-10-Z	ON	—	(ON)
▲ ATE2S-2F3-10-Z	(ON)	OFF	(ON)
★ ATE2T-2F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

SPDT

(Mounting height : 3.1mm)

Right angle (0.2 inch pitch)

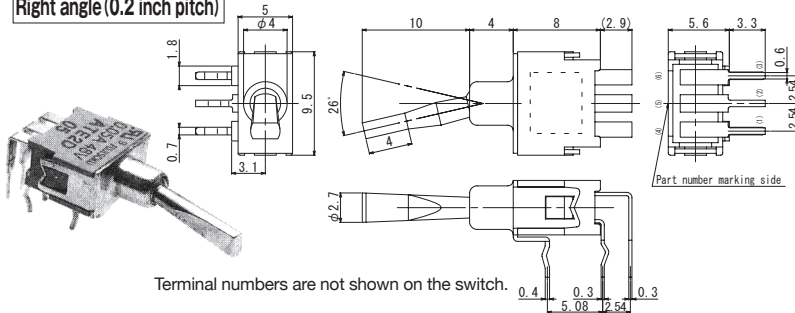


Part No.	Switching function Viewed from part No. marking side		
☆ ATE1D-5F3-10-Z	ON	—	ON
★ ATE1E-5F3-10-Z	ON	OFF	ON
★ ATE1F-5F3-10-Z	ON	—	(ON)
★ ATE1G-5F3-10-Z	(ON)	OFF	(ON)
★ ATE1H-5F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

DPDT

(Mounting height : 3.1mm)

Right angle (0.2 inch pitch)

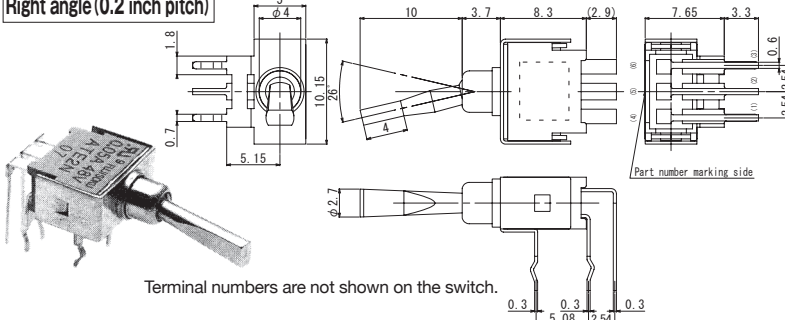


Part No.	Switching function Viewed from part No. marking side		
★ ATE2D-5F3-10-Z	ON	—	ON
▲ ATE2E-5F3-10-Z	ON	OFF	ON
▲ ATE2F-5F3-10-Z	ON	—	(ON)
★ ATE2G-5F3-10-Z	(ON)	OFF	(ON)
▲ ATE2H-5F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

DPDT

(Mounting height : 5.15mm)

Right angle (0.2 inch pitch)



Part No.	Switching function 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.

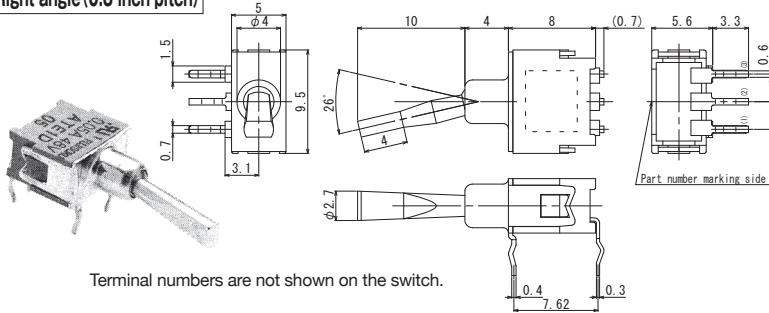
☆ : Semi-standard products.

★ : Made to order products.

SPDT

Right angle (0.3 inch pitch)

(Mounting height : 3.1mm)

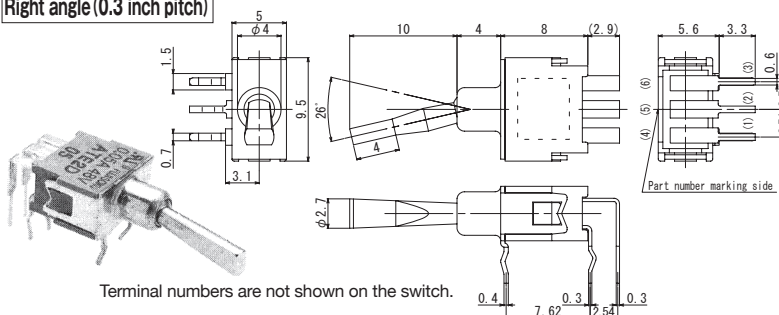


Switching function	Viewed from part No. marking side		
Part No.			
★ATE1D-6F3-10-Z	ON	—	ON
★ATE1E-6F3-10-Z	ON	OFF	ON
★ATE1F-6F3-10-Z	ON	—	(ON)
☆ATE1G-6F3-10-Z	(ON)	OFF	(ON)
★ATE1H-6F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

DPDT

Right angle (0.3 inch pitch)

(Mounting height : 3.1mm)

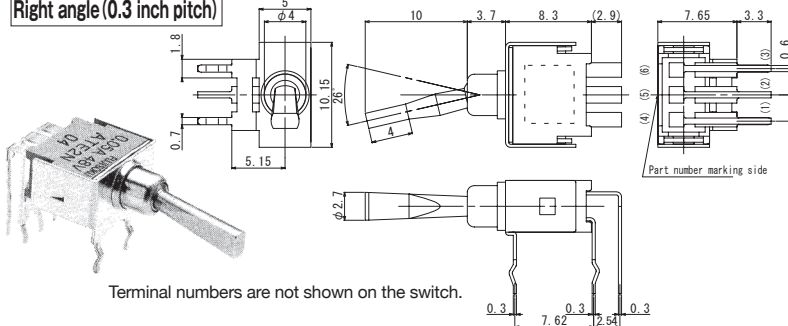


Switching function	Viewed from part No. marking side		
Part No.			
☆ATE2D-6F3-10-Z	ON	—	ON
★ATE2E-6F3-10-Z	ON	OFF	ON
▲ATE2F-6F3-10-Z	ON	—	(ON)
▲ATE2G-6F3-10-Z	(ON)	OFF	(ON)
▲ATE2H-6F3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3 5—6	—	2—1 5—4

DPDT

Right angle (0.3 inch pitch)

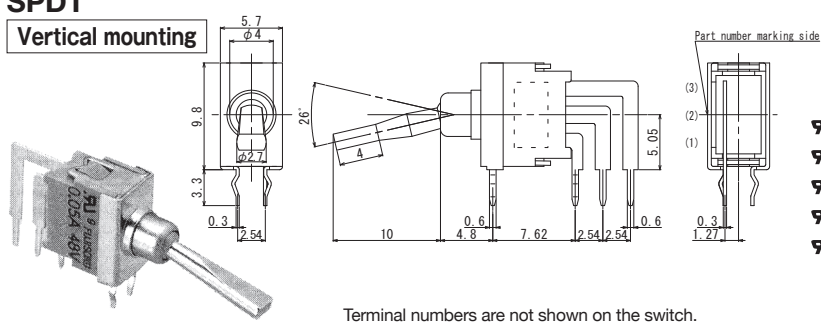
(Mounting height : 5.15mm)



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

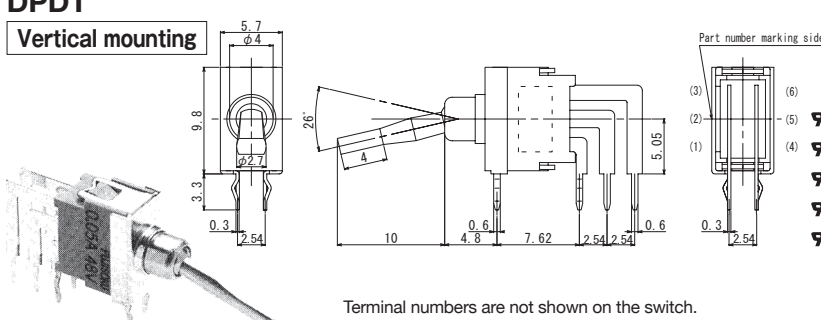
Vertical mounting



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



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

ATE-J (Plastic type)

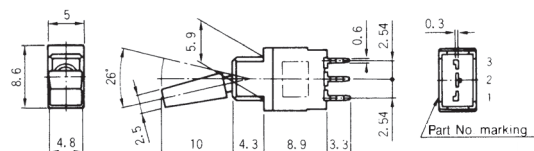
Part Numbering (Plastic cap/Rocker type)

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	Fig.	Number of poles	Code	Switching function	Fig.	Terminal style	Code	Actuator shape	Fig.	Bracket		
TE	Toggle type	1	1 pole	D	ON — ON	2	P/C terminal	J	Plastic Knob type	3	Without bracket		
		2	2 poles	E	ON—OFF—ON	6	Right angle (0.3 inch pitch)						
				F	ON — (ON)	7	Vertical mounting						
				G	(ON)—OFF—(ON)								
				H	ON—OFF—(ON)								

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

SPDT

PC Straight

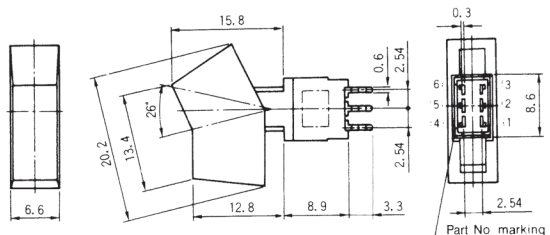
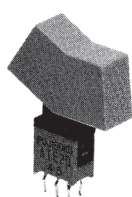


Mount with **CAP**

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

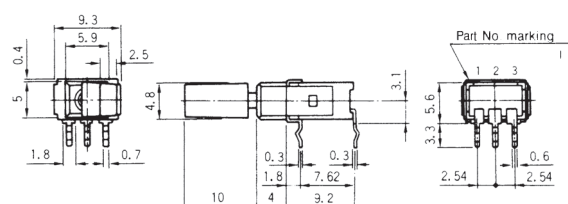
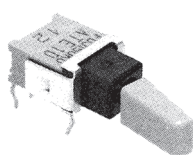


Mount with **Rocker**

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

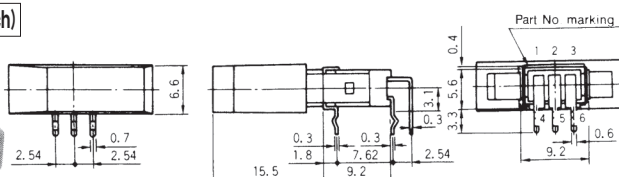
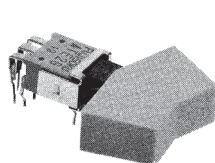


Mount with **CAP**

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

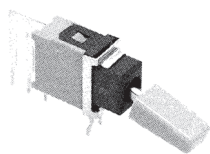
☆ : Semi-standard products.

★ : Made to order products.

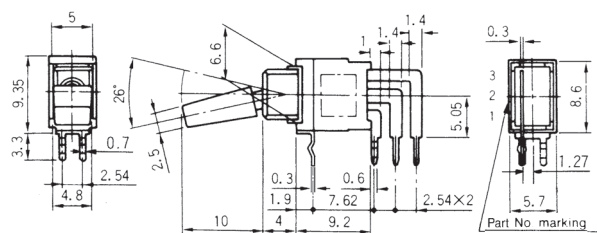
▲ : Inquiry products.

SPDT

Vertical mounting



Mount with CAP

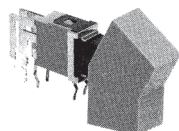


Terminal numbers are not shown on the switch.

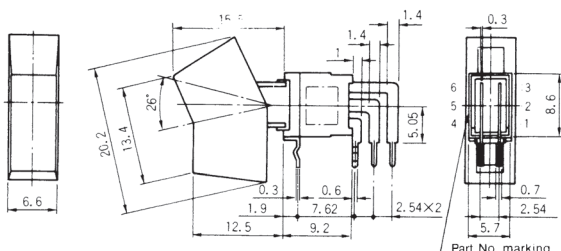
Switching function Part No.	Viewed from part No. marking side		
			
★ATE1D-7J3-10-Z	ON	—	ON
▲ATE1E-7J3-10-Z	ON	OFF	ON
▲ATE1F-7J3-10-Z	ON	—	(ON)
▲ATE1G-7J3-10-Z	(ON)	OFF	(ON)
▲ATE1H-7J3-10-Z	ON	OFF	(ON)
Connecting terminals	2—3	—	2—1

DPDT

Vertical mounting



Mount with **Rocker**

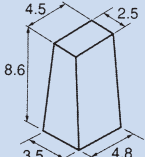
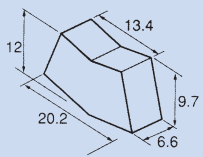


Terminal numbers are not shown on the switch.

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》

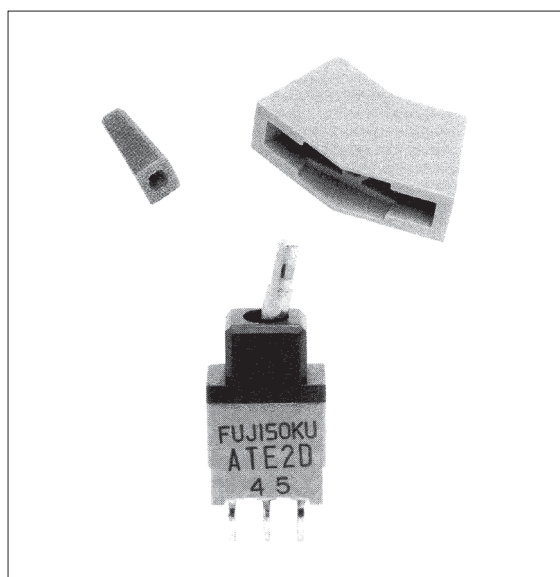
Type	ATE-2J · 6J · 7J	ATE-2J · 6J · 7J
Part name	Color Cap	Rocker
Dimensions	Matte finish  ABS resin	Matte finish  ABS resin
White	140000050884	140000481541
Red	140000050886	140000481543
Black	140000050885	140000481542

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

Type	ATE—2J
Part name	Bracket
Dimensions	Technical drawing of the ATE-2J Bracket showing front and side views with dimensions in mm. Front View Dimensions: - Top width: 9.25 - Inner top width: 6 - Bottom width: 9.8 - Overall bottom width: 11.1 Side View Dimensions: - Top flange width: 5.6 - Top flange thickness: 0.1 - Main body height: 9 - Bottom flange thickness: 3.5 - Bottom flange width: 4 - Bottom flange hole diameter: 0.7 - Bottom flange hole offset: 2.54
Part number	140000640296

■ Color Cap and Rocker

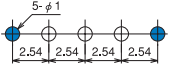
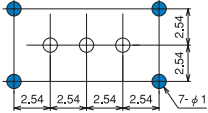
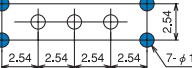
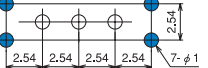
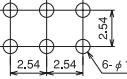
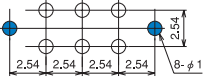
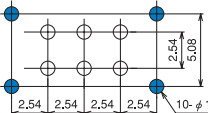
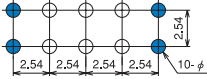
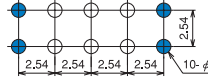
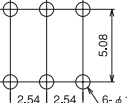
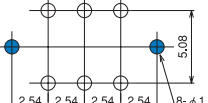
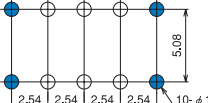
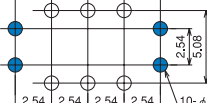
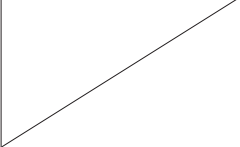
Installation Procedure for ATE—J type



PC Hole Layouts

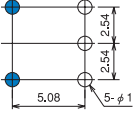
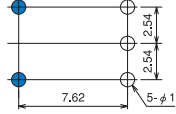
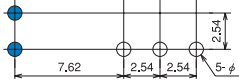
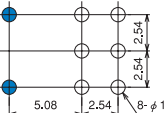
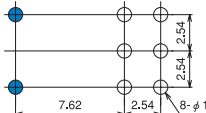
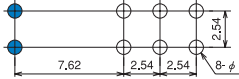
PC terminal

(Top voew)

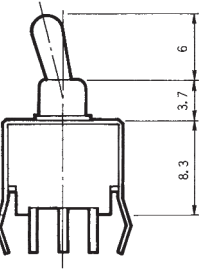
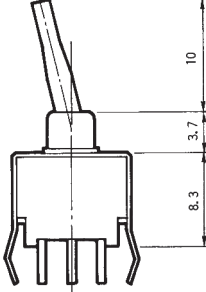
Series code	ATE—2M•2F•2J	ATE—2M•2F			ATE—2J
Installation	Whithout bracket	When optional bracket is used			
		140000640314	140000640315	140000640318	140000640296
1—pole					
2—poles 2.54mm Tow terminal rows					
2—poles 5.08mm Tow terminal rows					

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 pich	R/A 0.3—inch pich	Vertical mount
1—pole			
2—poles			

Bracket Mounted Dimensions.

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

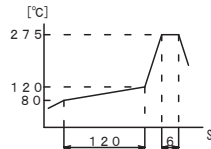
■Soldering Specifications

(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

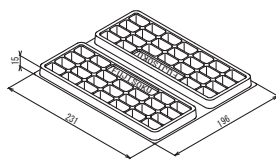
(3)Install the cap/rocker accessory after soldering and cleaning.

■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

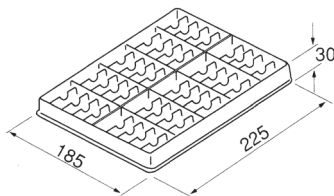
Plastick Pack



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.

