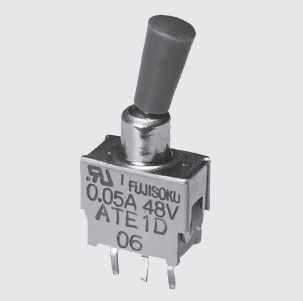
ATE

Subminiature Toggle Switches

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

■Specifications

Rating	Max.	50mA 60VAC/DC 0.4VA AC/DC
	Min.	1μA 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.(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°C～+85°C
Storage temperature range		−40°C～+85°C

■Part Numbering

A TE 2 D — 2 M 3 — 10 — Z

Series code: A

Actuator shape: TE

Code	Type
TE	Toggle type

Number of poles: 2

Fig.	Number of poles
1	1 pole
2	2 poles

Switching function: D

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

Terminal style: 2

Fig.	Terminal style
2	PC Straight
5	Right angle (0.2 inch pitch)
6	Right angle (0.3 inch pitch)

Actuator shape: M

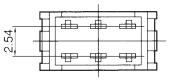
Code	Actuator shape
M	Standard
F	Flat toggle

Bracket style: 3

Fig.	Bracket
3	Without bracket

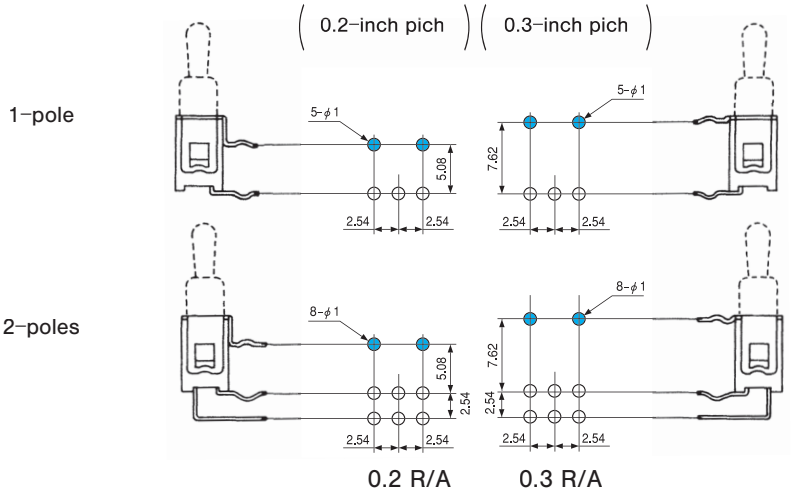
Clip mechanism: 10

Space between terminal rows (Double pole): 2.54 mm



(ON) : Momentary.

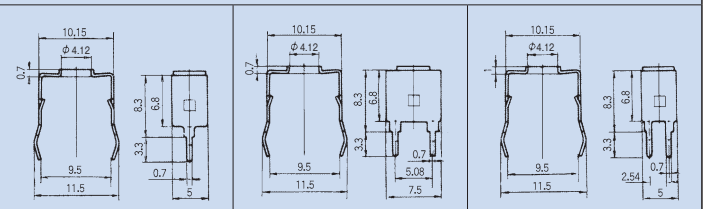
■Right Angle Terminals

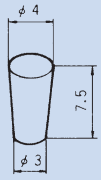


●The space between the terminal rows are available in two dimensions: 0.2 inches (5.08 mm) and 0.3 inches (7.62 mm).
[Example] 0.2-inch pitch: ATE1D-5M3-10-Z
0.3-inch pitch: ATE1D-6M3-10-Z

■Optional Accessories

Refer to PC Hole Layouts.

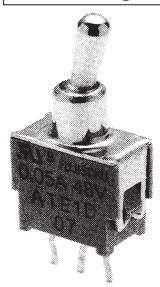
Part name	Bracket		
Poles	Single pole	Double poles	
Box size	5 mm	7.5 mm	5 mm
Type	ATE–2M • 2F		
Dimensions			
Part number	140000640314	140000640315	140000640318

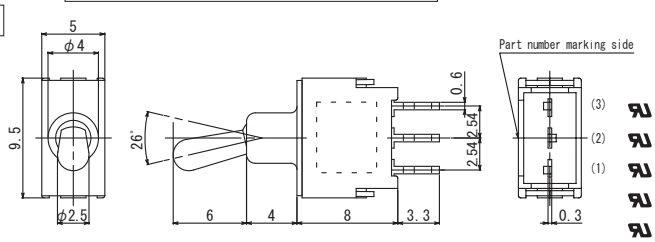
Type	ATE–2M•5M•6M
Part name	Color Cap
Dimensions	Gloss finish  Vinyl chloride
White	140000470174
Red	140000470175
Black	140000470173
Gray	140000470179

SPDT

PC Straight

Standard toggle





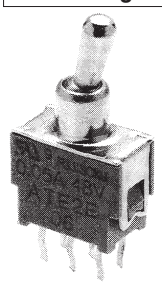
Terminal numbers are not shown on the switch.

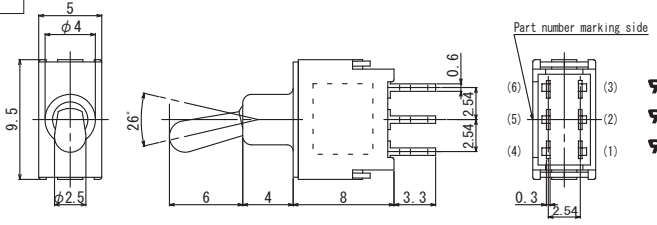
Part No. \ Switching function	Viewed from part No. marking side		
			
ATE1D-2M3-10-Z	ON	–	ON
ATE1E-2M3-10-Z	ON	OFF	ON
ATE1F-2M3-10-Z	ON	–	(ON)
ATE1G-2M3-10-Z	(ON)	OFF	(ON)
☆ATE1H-2M3-10-Z	ON	OFF	(ON)
Connecting terminals	2–3	–	2–1

DPDT

PC Straight

Distance between two terminal rows : 2.54mm





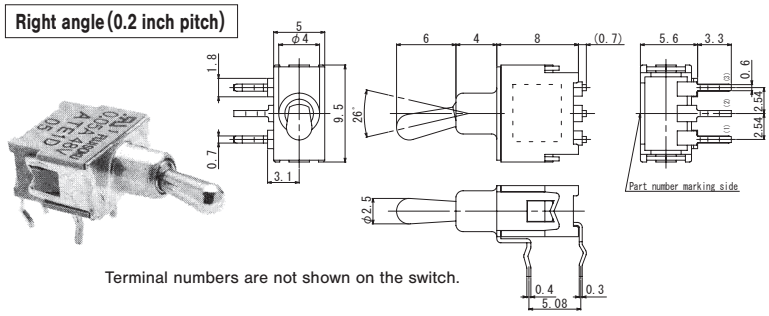
Terminal numbers are not shown on the switch.

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

☆ : Semi-standard products. (ON) : Momentary. :Optional Accessories.

SPDT (Mounting height : 3.1mm)

Right angle (0.2 inch pitch)

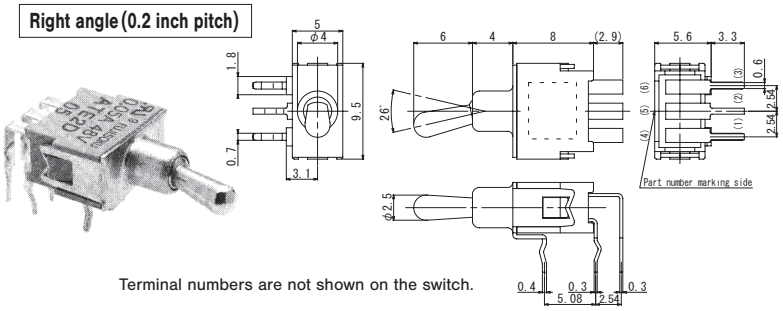


Terminal numbers are not shown on the switch.

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)

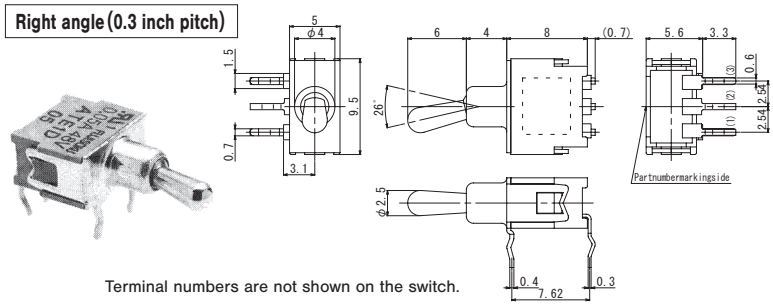


Terminal numbers are not shown on the switch.

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)

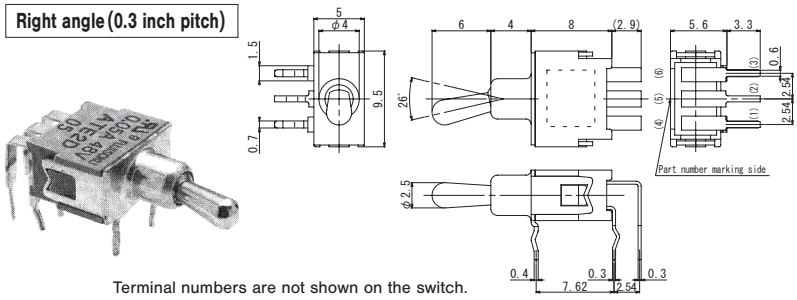


Terminal numbers are not shown on the switch.

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

DPDT (Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



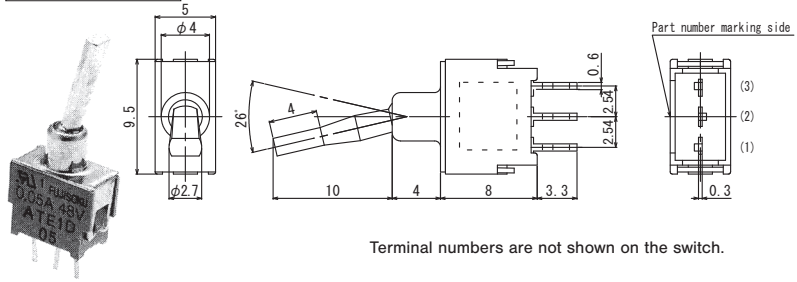
Terminal numbers are not shown on the switch.

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

SPDT

PC Straight

Flat toggle



Terminal numbers are not shown on the switch.

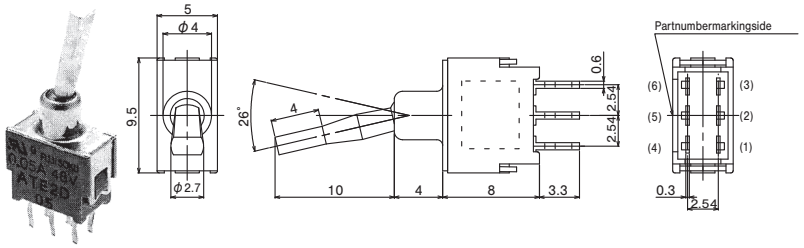
Part No. \ Switching function	Viewed from part No. marking side		
ATE1D-2F3-10-Z	ON	–	ON
ATE1E-2F3-10-Z	ON	OFF	ON
Connecting terminals	2–3	–	2–1

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

DPDT

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

PC Straight



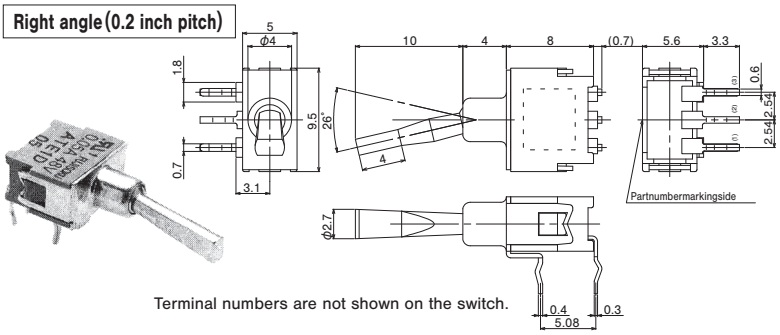
Terminal numbers are not shown on the switch.

Part No. \ Switching function	Viewed from part No. marking side		
			
☆**ATE2D-2F3-10-Z**	ON	–	ON
☆**ATE2G-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)



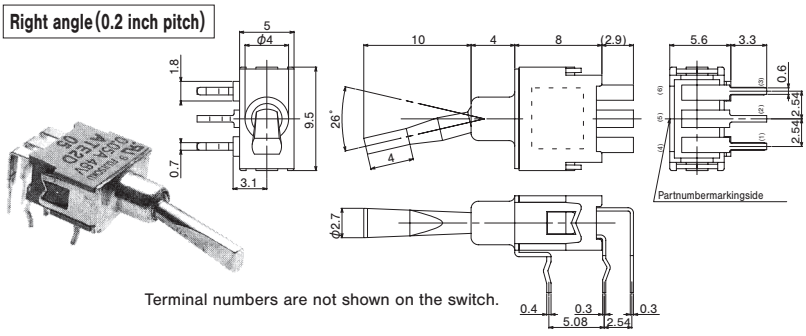
Terminal numbers are not shown on the switch.

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



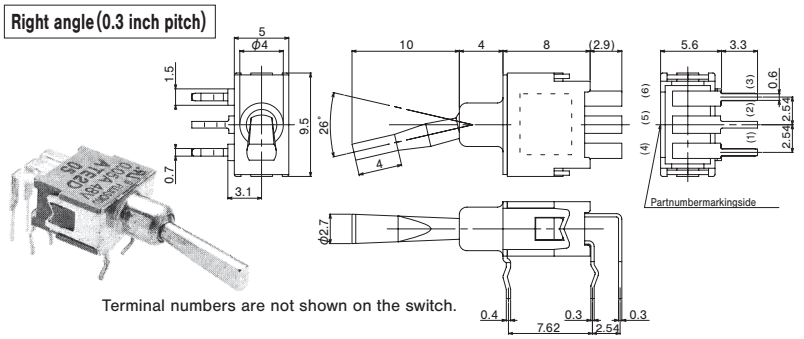
Terminal numbers are not shown on the switch.

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

DPDT

(Mounting height : 3.1mm)

Right angle (0.3 inch pitch)



Terminal numbers are not shown on the switch.

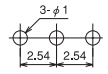
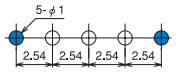
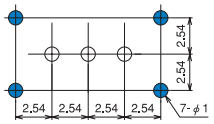
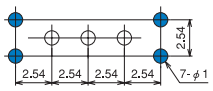
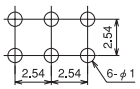
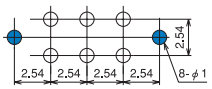
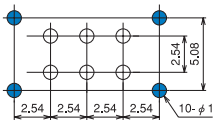
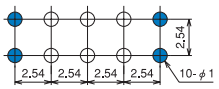
Part No. \ Switching function	Viewed from part No. marking side		
			
☆**ATE2D-6F3-10-Z**	ON	–	ON
Connecting terminals	2–3 5–6	–	2–1 5–4

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

■PC Hole Layouts

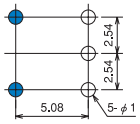
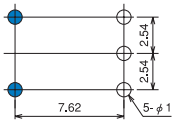
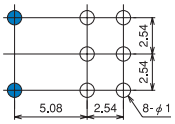
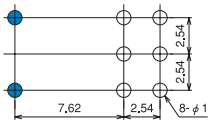
PC Straight

(Top voew)

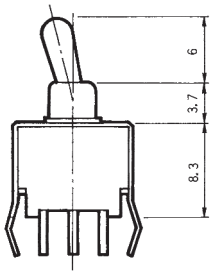
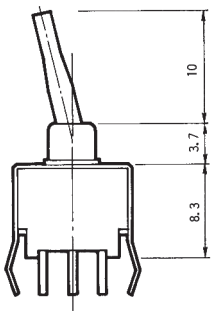
	ATE−2M・2F	ATE−2M・2F		
Installation	Whithout bracket	When optional bracket is used		
		140000640314	140000640315	140000640318
1−pole				
2−poles Tow terminal rows				

■Right Angle terminal

(Top view)

	ATE−5M・5F	ATE−6M・6F
Terminal	R/A 0.2−inch pich	R/A 0.3−inch pich
1−pole		
2−poles		

■Bracket Mounted Dimensions.

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

■Soldering Specifications

(1)Manual Soldering

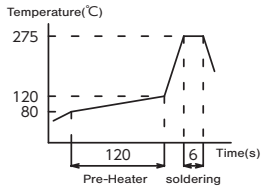
Device : Soldering iron

380℃, Max.; 3 seconds, Max.

(2)Auto Soldering

Device : Jet wave type or dip type

275℃, Max.; 6 seconds, Max.

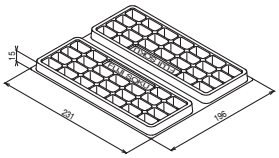


●Pre-heating should be done at temperatures ranging from 80℃ to 120℃ and within 120 seconds

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

■Packaging Specifications

Plastick Pack



PC terminals
: 100 pcs./pack

Right angle terminals
: 50 pcs./pack

■Flux Cleaning

(1)Solvent : Fluorine or Alcohol type.

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

■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.