



**ETD/ETA/ETS SERIES  
TRI-STATE TYPE**



**FEATURES**

- With three state (1, open, 0) setting function, especially suitable for encoding/decoding of tri-state encoder/decoder integrated circuit to obtain more security codes than traditional two-state (1,0) operation. For instance, 9 bits with tri-state gets 19,683 ( $3^9$ ) codes, while two-state has 512 ( $2^9$ ) codes, gains 38 times more codes with a ECE tri-state DIP Switch.
- Bottom sealed to ensure free of flux immersion during wave soldering.
- All plastics are UL 94V-0 grade fire retardant.
- Gold plated contact to ensure low contact resistance and Tin plated terminals to prevent contamination during soldering.
- Twin contacts designed to ensure stable contact.
- Ideal for coding tele-communication, transceiving, remote control and burglar alarm systems which use integrated circuits with tri-state coding systems.

**APPLICATIONS**

- Numerical setting for computer terminal equipment
- Price setting for vending machines
- Programming for game machines
- Programming for industrial equipment and measuring instruments

**SPECIFICATIONS**

**1.ELECTRICAL**

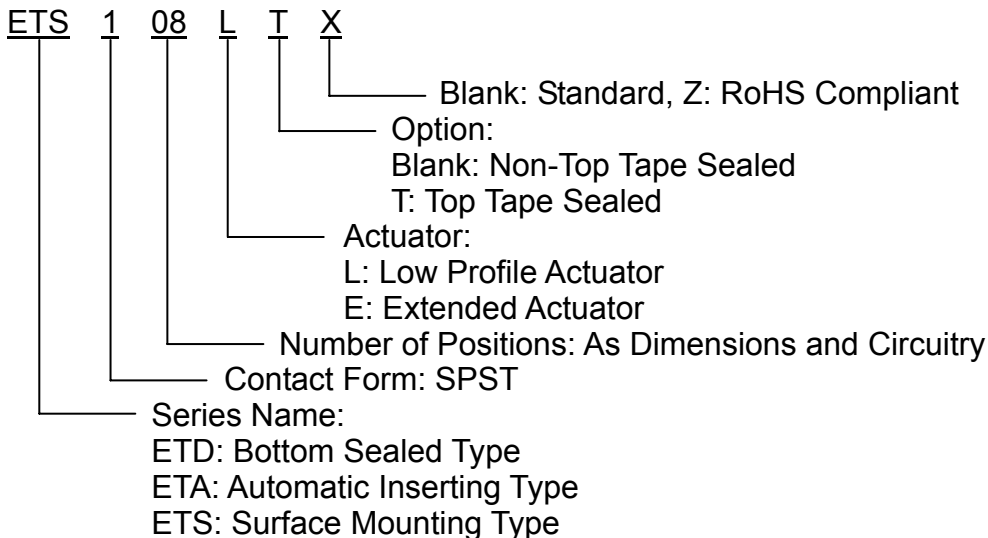
● Contact rating	
switching	25mA, 24VDC
non-switching	100mA
● Contact resistance	
initial	50mΩ Max.
after life test	100mΩ Max.
● Insulation resistance	1000MΩ Min. at 100VDC
● Dielectric strength	500VDC Min. for 60 seconds
● Capacitance between adjacent switches 5pF Max.	



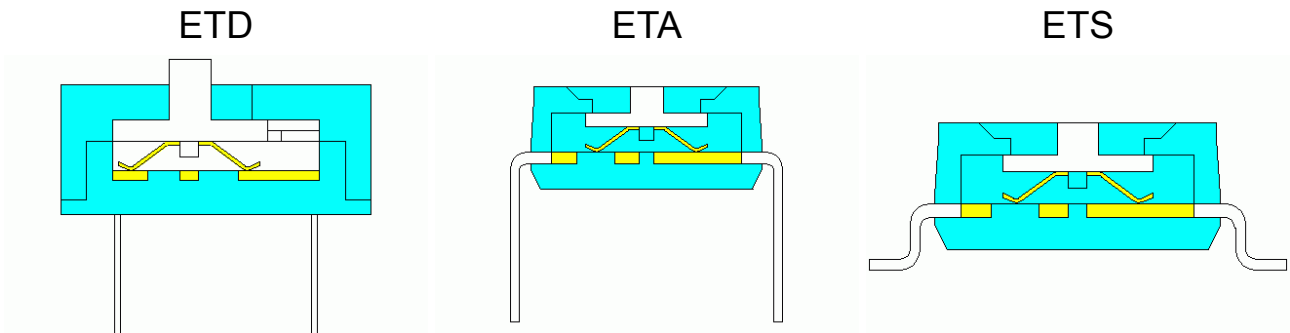
**2.MECHANICAL and ENVIRONMENTAL**

● Temperature rating	operating	-25°C to +70°C
	storage	-40°C to +85°C
● Operation force	800g Max.	
● Mechanical life	2000 operations	
● Humidity	95% RH, 40°C for 96 Hrs.	
● Vibration	Per MIL-STD-202F, method 204D.	
● Solderability (for through hole type)	after flux 230±5°C for 5±0.5 seconds, 95% coverage	
● Resistance to soldering heat (for through hole type)	260±5°C for 5±1 seconds.	
● Reflow soldering heat for SMT type (reference only)		

**■ PART NUMBERING SYSTEM**



## CONSTRUCTION

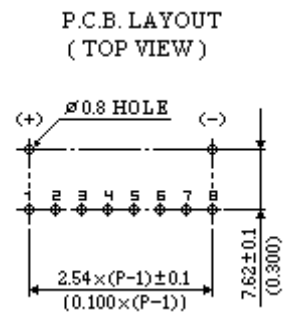


## OPTIONS

1. Tape Sealed



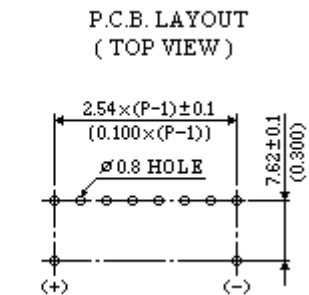
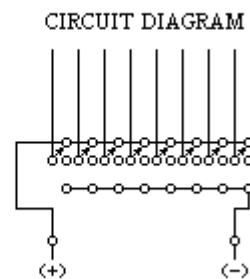
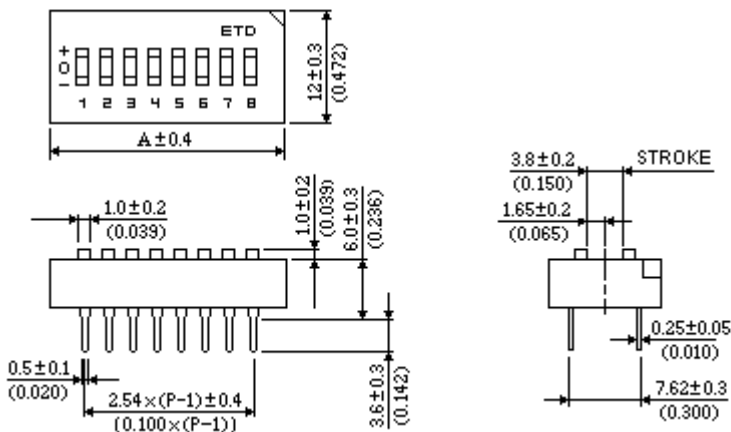
2. Reverse P.C.B. LAYOUT available



## DIMENSIONS AND CIRCUITRY

DIMENSION A		ETD					
Positions	4	5	6	7	8	9	10
A	15.30 (0.602)	17.84 (0.702)	20.38 (0.802)	22.92 (0.902)	25.46 (1.002)	28.00 (1.102)	30.54 (1.202)

Unit: mm(inch)

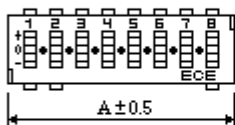


### DIMENSION A

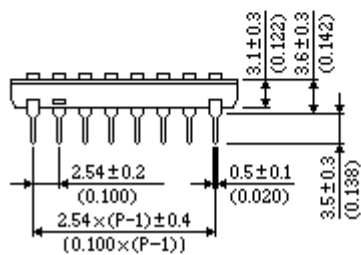
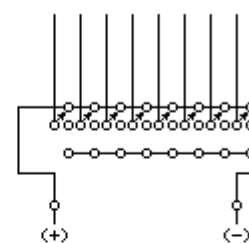
### ETA

Positions	2	3	4	5	6	7	8	9	10	12
A	6.88 (0.263)	9.22 (0.363)	11.76 (0.463)	14.30 (0.563)	16.84 (0.663)	19.38 (0.763)	21.92 (0.863)	24.46 (0.963)	27.00 (1.063)	32.08 (1.263)

Unit:mm(inch)



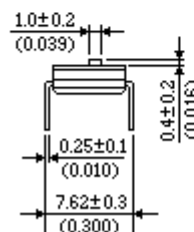
### CIRCUIT DIAGRAM



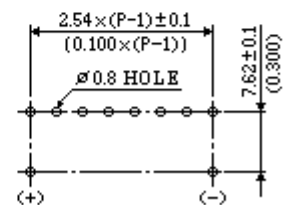
### (L) TYPE



### (E) TYPE



### P.C.B. LAYOUT (TOP VIEW)

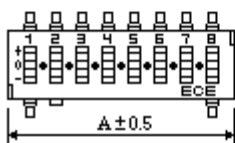


### DIMENSION A

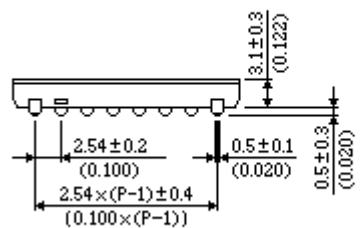
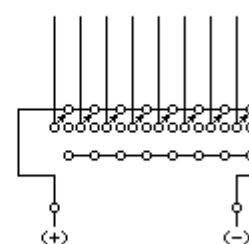
### ETS

Positions	2	3	4	5	6	7	8	9	10	12
A	6.88 (0.263)	9.22 (0.363)	11.76 (0.463)	14.30 (0.563)	16.84 (0.663)	19.38 (0.763)	21.92 (0.863)	24.46 (0.963)	27.00 (1.063)	32.08 (1.263)

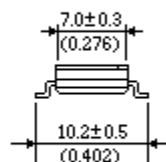
Unit:mm(inch)



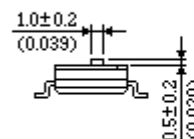
### CIRCUIT DIAGRAM



### (L) TYPE



### (E) TYPE



### P.C.B. LAYOUT (TOP VIEW)

