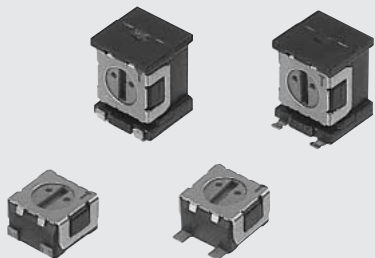


# ROTARY SELECTOR SWITCHES (SMD)

# CS-32

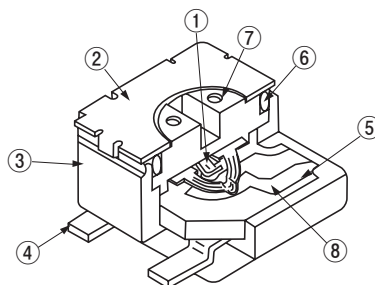
## RoHS compliant



## FEATURES

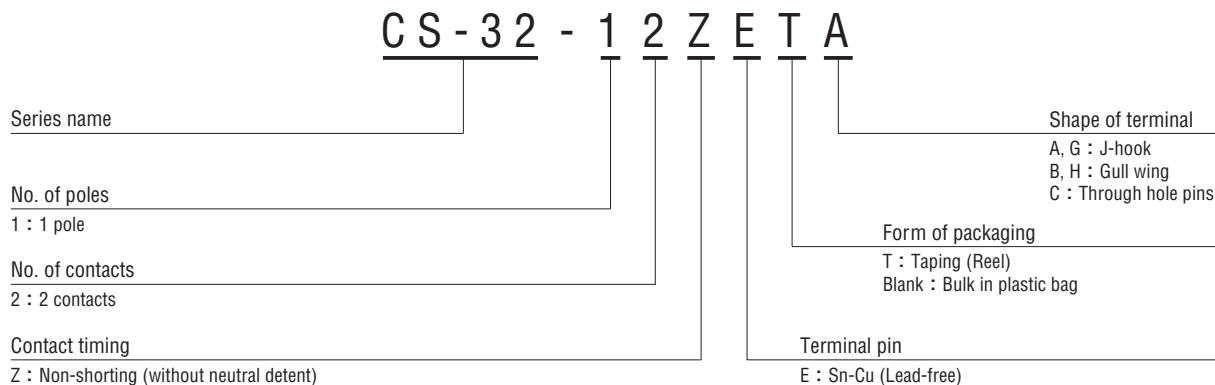
- RoHS compliant
- Optimum for high density board mounting applications
- Compatible with most automatic pick & place machinery
- Protection against dust and washable after soldering
- Top and side setting types are available
- Same dimensions as ST-32 trimmer and conveniently usable as a set

## INTERNAL STRUCTURE



Part name	Material	Flammability
① Wiper	Multi metal alloy	—
② Cover	Stainless steel (SUS 304)	
③ Housing	Epoxy	UL-94V-0
④ Terminal pin	Copper alloy, Sn-Cu-plated	—
⑤ Base element	Ceramic	
⑥ "O" ring	Silicone rubber	UL-94HB
⑦ Rotor	PPS(Polyphenylenesulphide)	UL-94V-0
⑧ Electrode	Ag-Pd cermet	—

## PART NUMBER DESIGNATION

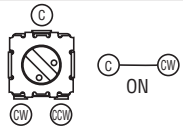
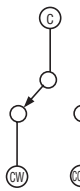
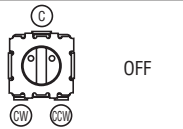
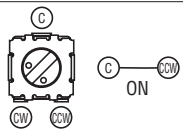


※ Please refer to the LIST OF PART NUMBERS when placing orders.

# CS-32 ROTARY SELECTOR SWITCHES (SMD)

## SCHEMATICS DIAGRAMS

● 1 pole 2 contacts

Series	Switching specifications	Schematic
CS-32-12ZEA ≧ 12ZEB ≧ 12ZEC ≧ 12ZEG ≧ 12ZEH		
		
		

## LIST OF PART NUMBERS

Circuit type		Setting position	Form of packaging	J-hook A, G	Gull wing B, H	Through hole pins C	Pieces in package
1 pole 2 contacts	Whitout neutral detent	Top setting	Taping	CS-32-12ZETA	CS-32-12ZETB		500 pcs. /reel
			Plastic bag	CS-32-12ZEA	CS-32-12ZEB	CS-32-12ZEC	100 pcs. /pack
		Side setting	Taping	CS-32-12ZETG	CS-32-12ZETH		500 pcs. /reel
			Plastic bag	CS-32-12ZEG	CS-32-12ZEH		100 pcs. /pack

※ Verify the above part numbers when placing orders.  
 Taping version can be supplied only in reel unit.

# CS-32

## ROTARY SELECTOR SWITCHES (SMD)

### STANDARD SPECIFICATIONS

Circuit type	1 pole 2 contacts
Operating temperature range	-40 ~ 85 °C
Storage temperature range	
Sealing	Washable by "O" ring
Net weight	Approx. 0.05g (A, B) Approx. 0.06g (C) Approx. 0.11g (G, H)

### ELECTRICAL CHARACTERISTICS

Contact rating	0.5 VA
Maximum current	100 mA
Maximum voltage	16 V
Contact timing	Non-shorting
Contact resistance	2 Ω maximum
Insulation resistance	100 MΩ (DC500 V) minimum
Dielectric strength	AC250 V, 60 s

### MECHANICAL CHARACTERISTICS

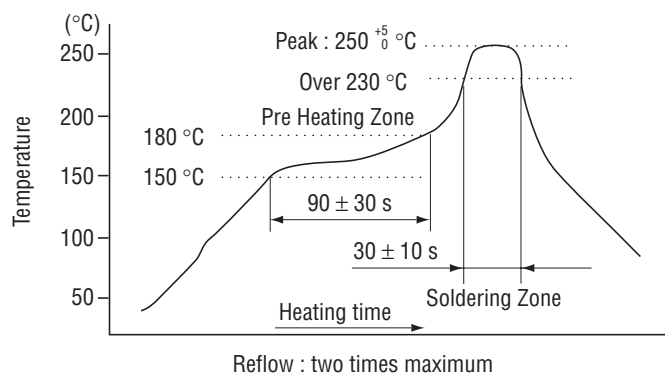
No. of positions	2
Adjustment torque	5 mN·m {51 gf·cm} maximum
Stopper strength	20 mN·m {204 gf·cm} minimum
Stepping angle	250° ± 15°
Solderability	Sn-Cu (lead-free): 245 ± 3 °C, 2 ~ 3 s
Soldering heat	Sn-Cu (Lead-free) Flow : 260 ± 3 °C as the temperature in a pot of molten solder, immersion from head of terminal to backside of board, 5 ~ 6 s, two times maximum. Reflow : Peak temperature 255 °C (Please refer to the profile below.) Manual soldering : 350 ± 10 °C, 3 ~ 4 s
Shear (Adhesion)	5 N {0.51 kgf}, 10 s
Substrate bending	Width 90 mm, bend 3 mm, 5 s, 1 time
Pull-off strength	5 N {0.51 kgf}, 10 s

{ } : Reference only

### ENVIRONMENTAL CHARACTERISTICS

Vibration	Amplitude 1.5 mm or Acceleration 98 m/s <sup>2</sup> , 10-500-10 Hz, 3 directions for 3 times each
Shock	490 m/s <sup>2</sup> , 11 ms 6 directions for 3 times each
Load life	50 cycles minimum DC16 V 30 mA
Humidity (Steady state)	40 °C, Relative humidity 90 ~ 95 %, 240 h
High temperature exposure	85 °C, 96 h
Low temperature exposure	-40 °C, 96 h
Thermal shock	-40 (0.5 h) ~ 85 °C (0.5 h), 5 cycles

### <Reflow profile for soldering heat evaluation>



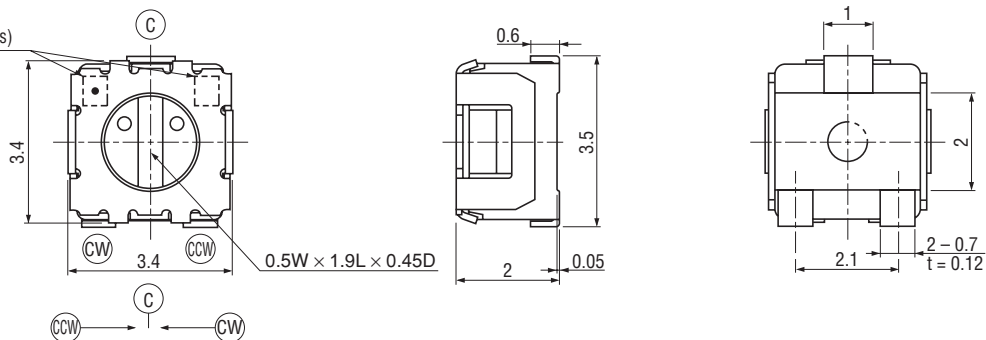
# CS-32 ROTARY SELECTOR SWITCHES (SMD)

## OUTLINE DIMENSIONS

Unless otherwise specified, tolerance:  $\pm 0.3$  (Unit: mm)

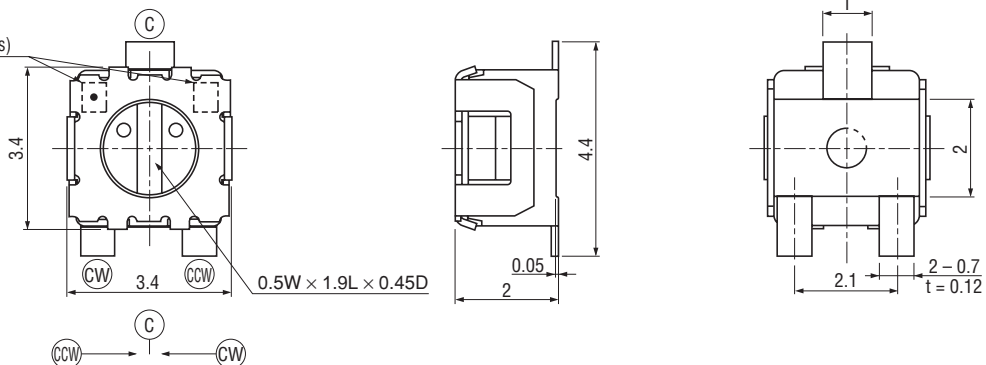
### CS-32-12ZEA

Production date code &  
 Lead-free Identification mark,  
 1 digit (Location reversed every 2 years)



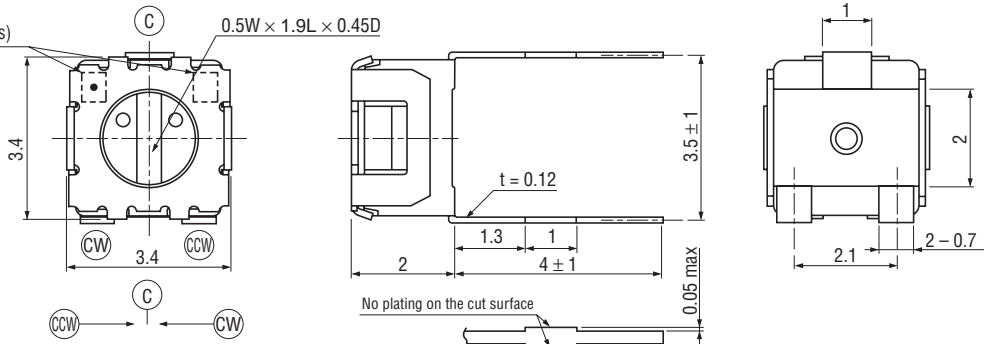
### CS-32-12ZEB

Production date code &  
 Lead-free Identification mark,  
 1 digit (Location reversed every 2 years)



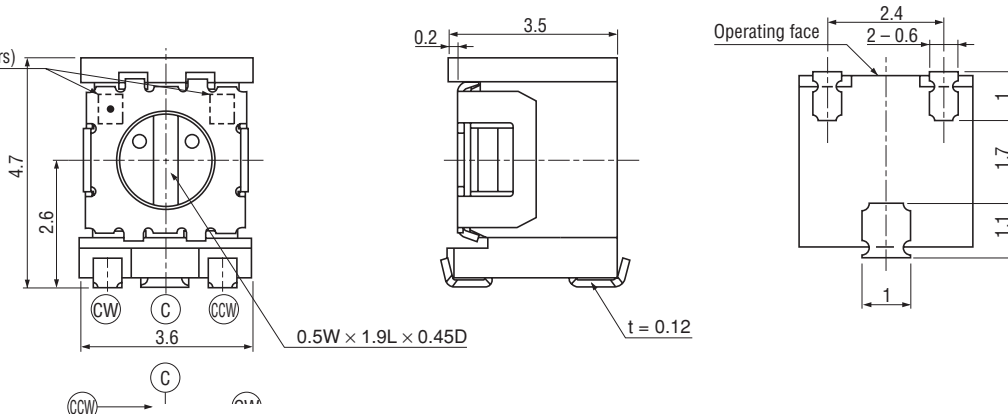
### CS-32-12ZEC

Production date code &  
 Lead-free Identification mark,  
 1 digit (Location reversed every 2 years)



### CS-32-12ZEG

Production date code &  
 Lead-free Identification mark,  
 1 digit (Location reversed every 2 years)

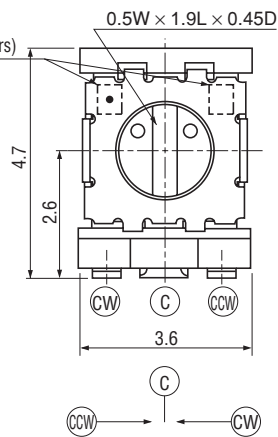


# CS-32 ROTARY SELECTOR SWITCHES (SMD)

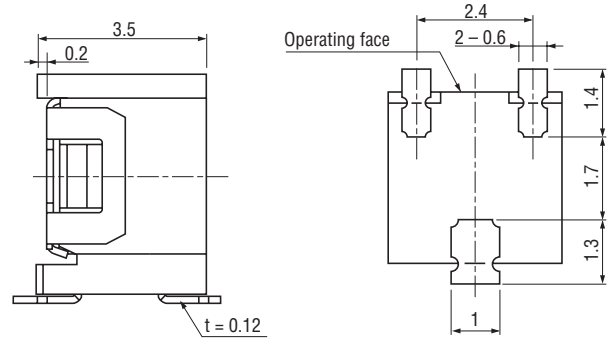
## OUTLINE DIMENSIONS

### CS-32-12ZEH

Production date code &  
 Lead-free Identification mark,  
 1 digit (Location reversed every 2 years)

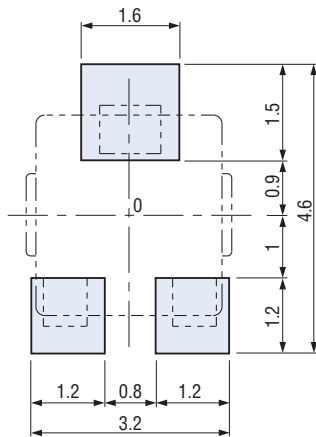


Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)



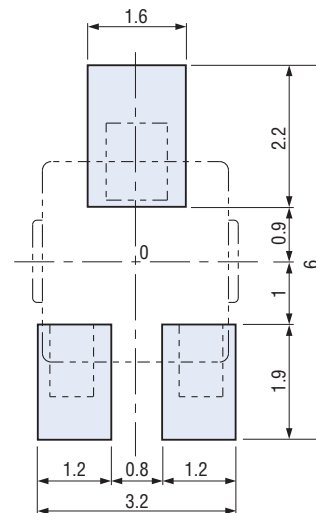
## RECOMMENDED P.C.B. PAD OUTLINE DIMENSIONS

### CS-32-12ZEA, 12ZEG



### CS-32-12ZEB, 12ZEH

(Unit: mm)



Note 1) The zero point is the center of mounting.  
 Note 2) The land patterns conform to EIAJ RC2161.  
 Note 3) The land patterns are for reflow soldering.

# CS-32 ROTARY SELECTOR SWITCHES (SMD)

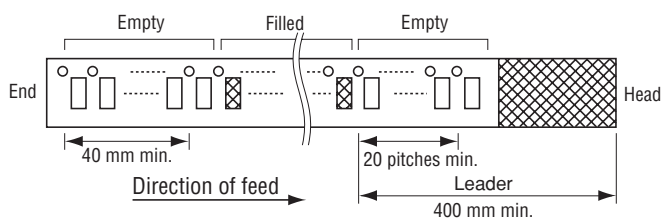
## PACKAGING SPECIFICATIONS

### <Taping packaging specifications>

- Taping version is packaged in 500 pcs. per reel.  
 Orders will be accepted for units of 500 pcs., i.e., 500, 1000, 1500 pcs., etc.
- CS-32ZETA and ZETB versions are boxed with 4 reels (2000 pcs.). CS-32ZETG and ZETH versions are boxed with one reel (500 pcs.)

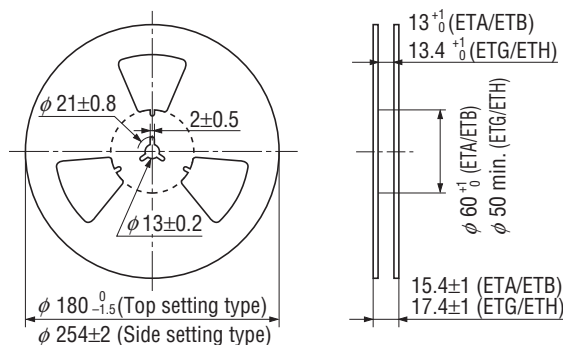
Maximum number of consecutive missing pieces = 2  
 Leader length and reel dimension are shown in the dia-grams below:

### ● Embossed tape dimensions

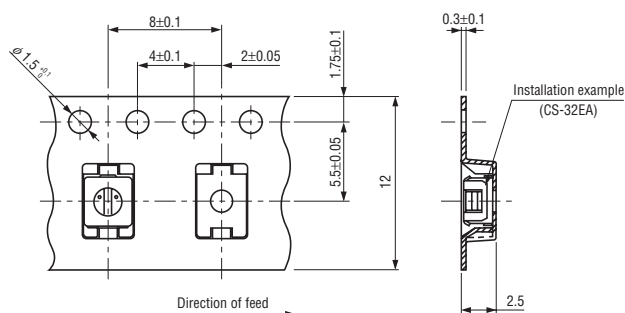


### ● Reel dimensions

(Unit: mm)  
 (Conforms to JIS C 0806-3)  
 (In accordance with EIAJ ET-7200A)

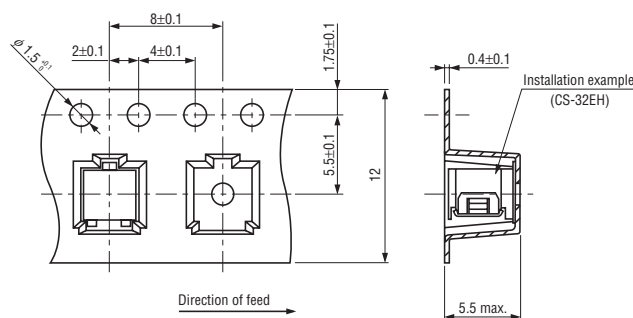


### ● CS-32-12ZETA/CS-32-12ZETB



### ● CS-32-12ZETG/CS-32-12ZETH

(Unit: mm)  
 (Conforms to JIS C 0806)



### <Bulk pack specifications>

- The smallest unit of bulk pack in a plastic bag is 10 pcs. per pack. Orders will be accepted for unit of minimum 10 pcs., i.e., 10, 20, 30 pcs., etc.
- Boxing of bulk in a plastic bag is performed with 100 pcs. (standard 500 pcs.) per box.