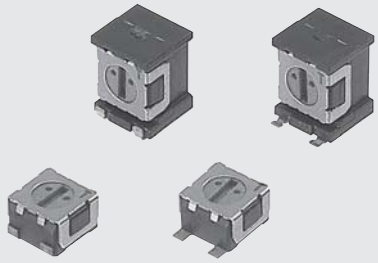
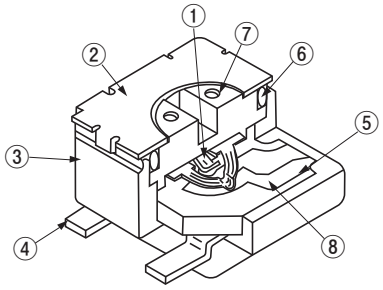
ROTARY SELECTOR SWITCHES (SMD) CS-32

RoHS compliant



INTERNAL STRUCTURE



Part name		Material	Flammability
①	Wiper	Multi metal alloy	—
②	Cover	Stainless steel (SUS 304)	
③	Housing	Epoxy	UL94V-0
④	Terminal pin	Copper alloy, Sn-Cu-plated	—
⑤	Base element	Ceramic	
⑥	"O" ring	Silicone rubber	UL94HB
⑦	Rotor	Polyphenylenesulphide	UL94V-0
⑧	Electrode	Ag-Pd cermet	—

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

PART NUMBER DESIGNATION

CS-32 - 1 2 Z E T A

Series name

No. of poles
1 : 1 pole

No. of contacts
2 : 2 contacts

Contact timing
Z : Non-shorting (without neutral detent)

Terminal pin
E : Sn-Cu (Lead-free)

Form of packaging
T : Taping (Reel)
Blank : Bulk in plastic bag

Shape of terminal
A, G : J-hook
B, H : Gull wing
C : Through hole pins

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

CS-32
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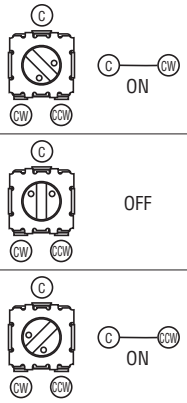
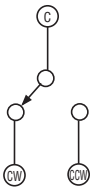
■ SCHEMATICS DIAGRAMS

● 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	A, G J-hook	B, H Gull wing	C Through hole pins	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 ※ Please refer to page 150, 151
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

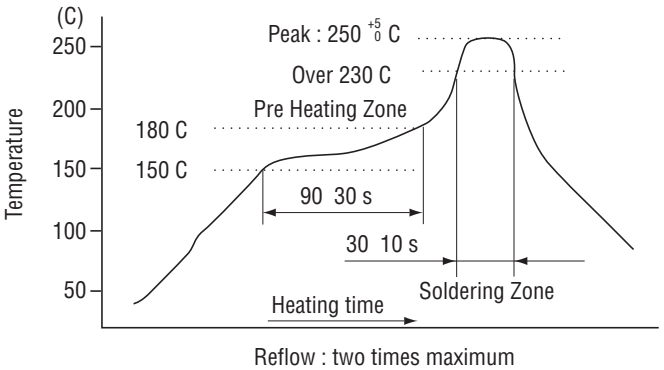
No. of positions	2
Adjustment torque	5 mN·m {51 gf·cm} maximum
Stopper strength	20 mN·m {204 gf·cm} minimum
Stepping angle	250° ± 15°
Solderability	Sn-Cu (lead-free) : 245 ± 3 °C, 2 ~ 3 s
Soldering heat	Sn-Cu (Lead-free) Flow : 260 ± 3 °C as the temperature in a pot of molten solder, immersion from head 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/s², 10-500-10 Hz, 3 directions for 3 times each
Shock	490 m/s², 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〉



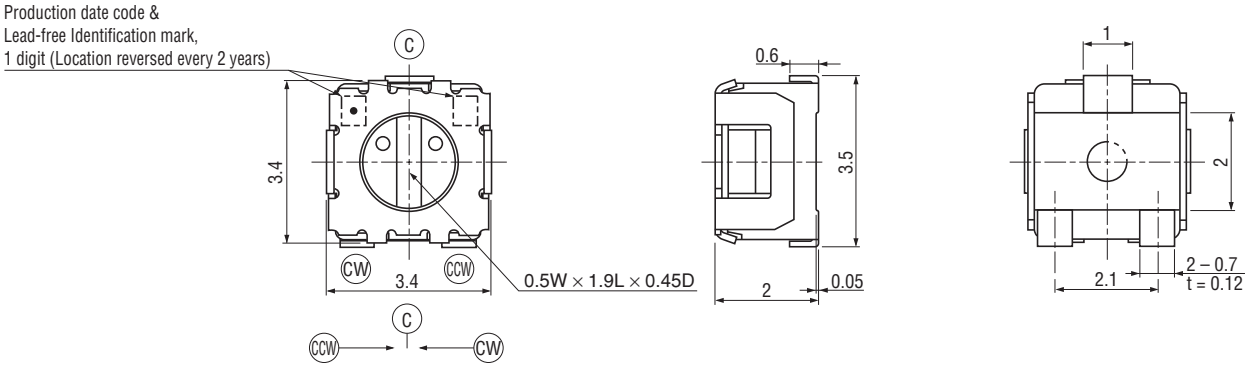
Reflow : two times maximum

CS-32
ROTARY SELECTOR SWITCHES (SMD)

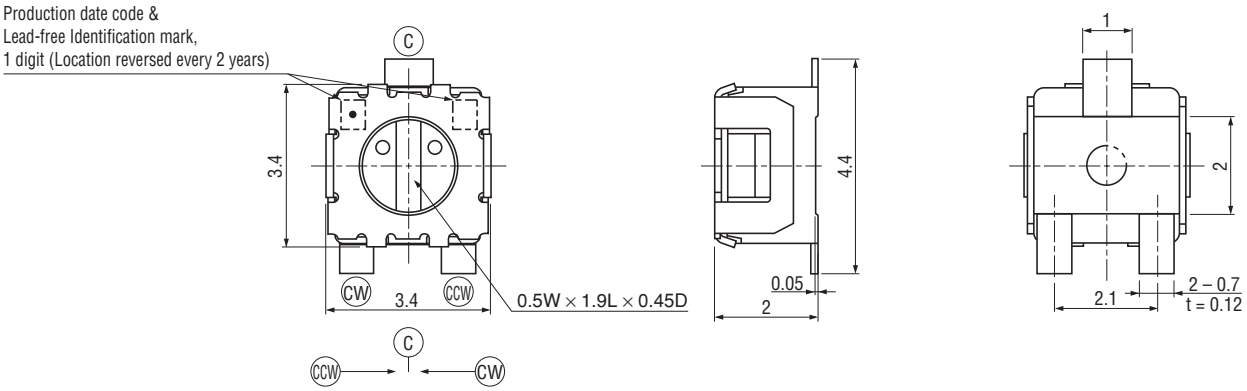
■ OUTLINE DIMENSIONS

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

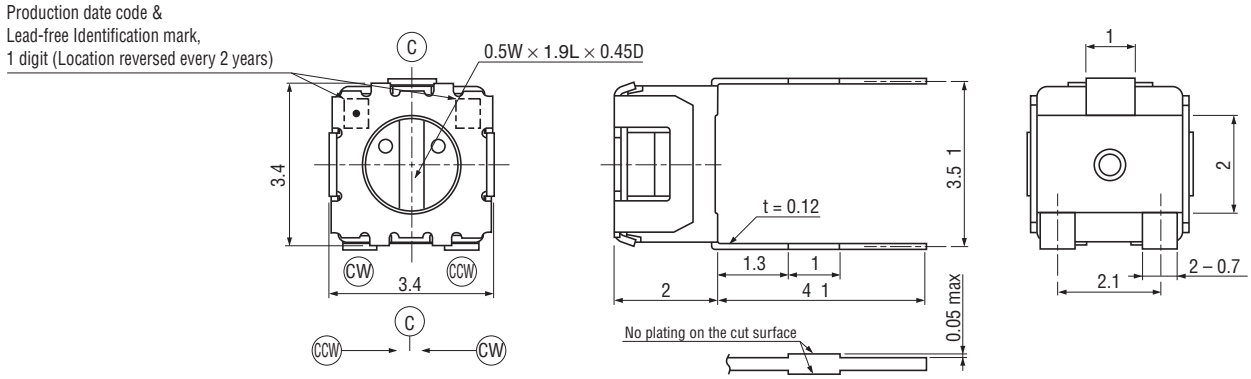
● CS-32-12ZEA



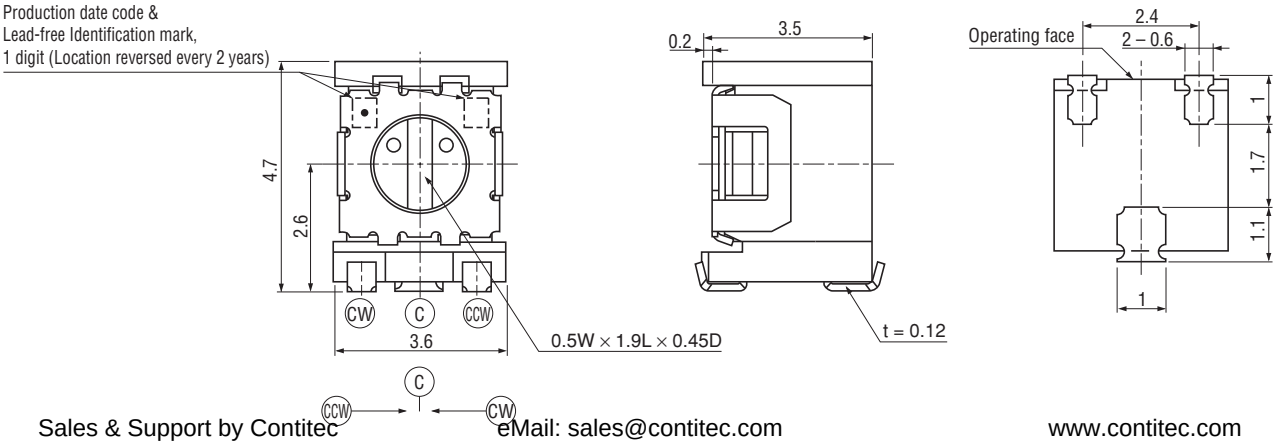
● CS-32-12ZEB



● CS-32-12ZEC



● CS-32-12ZEG

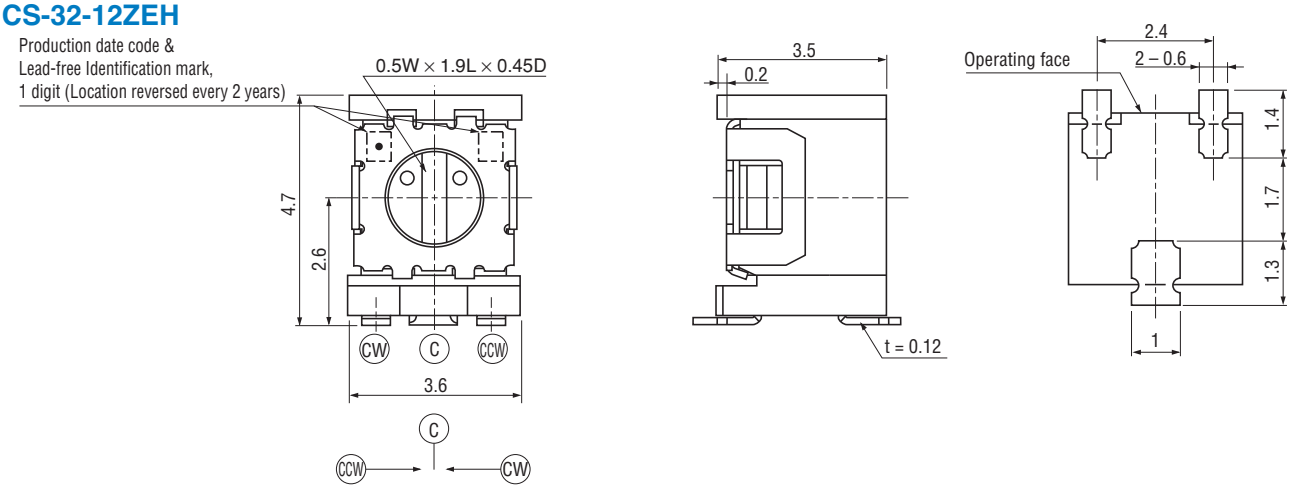


CS-32
ROTARY SELECTOR SWITCHES (SMD)

■ OUTLINE DIMENSIONS

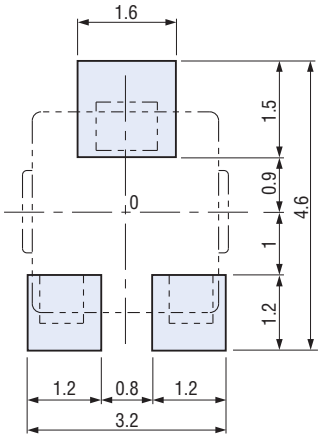
Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)

● CS-32-12ZEH



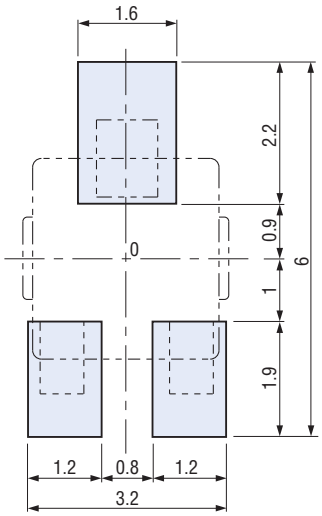
■ RECOMMENDED P.C.B. PAD OUTLINE DIMENSIONS

● 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

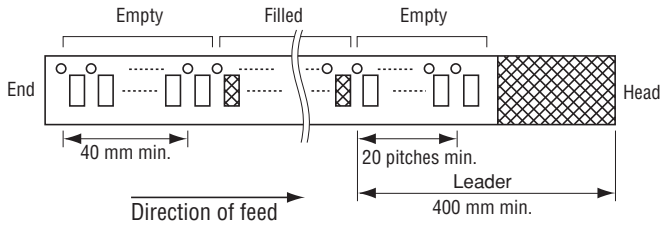
<Taping packaging specifications>

- 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.

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

- CS-32ZETA and ZETB versions are boxed with 4 reels (2000 pcs.). CS-32ZETG and ZETH versions are boxed with one reel (500 pcs.)

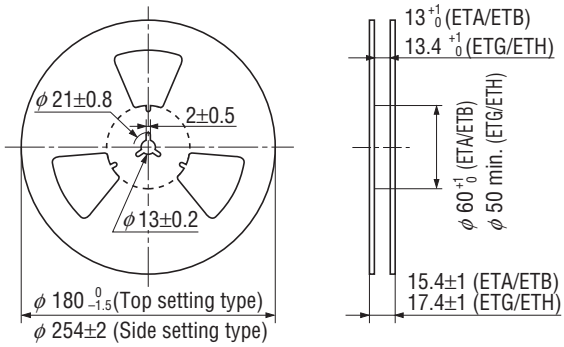
● Embossed tape dimensions



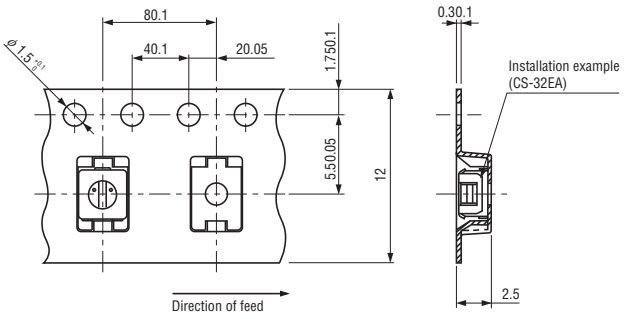
● Reel dimensions

(Unit: mm)

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



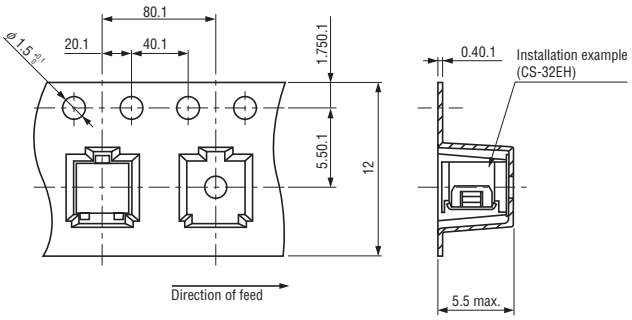
● CS-32-12ZETA/CS-32-12ZETB



● 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.