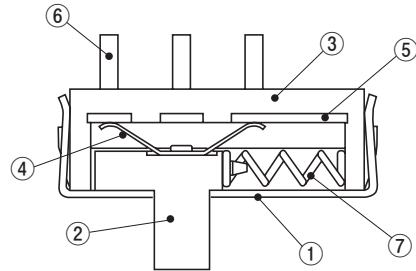


COMPACT SLIDE SWITCHES

RoHS compliant



INTERNAL STRUCTURE



Part name	Material	Flammability
① Cover	Stainless steel (SUS 304)	—
② Slider	LCP(Liquid Crystal polymer)	UL-94V-0
③ Housing		
④ Slider contact		
⑤ Fixed contact	Copper alloy, Gold-plated	—
⑥ Terminal pin		
⑦ Return spring	SWP	

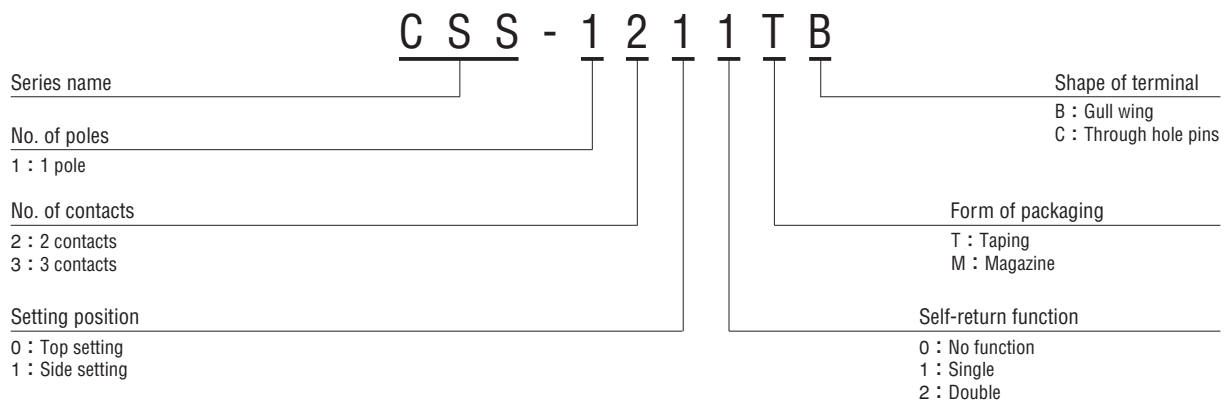
FEATURES

- Low-profile of 2 mm
- Self-return type available
- RoHS compliant

APPLICATIONS

- Mobile stereo · LCD TV · Camcorder

PART NUMBER DESIGNATION



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

### LIST OF PART NUMBERS

No. of contacts	Setting position	Self-return function	Shape of terminal	Form of packaging	Part number	Pieces in package
2	Side setting	No function	B (Gull wing)	Taping	CSS-1210TB	1,900 pcs./reel
			C (Through hole pins)	Magazine	CSS-1210MC	53 pcs./stick
		Single	B (Gull wing)	Taping	CSS-1211TB	1,900 pcs./reel
			C (Through hole pins)	Magazine	CSS-1211MC	53 pcs./stick
3	Side setting	No function	B (Gull wing)	Taping	CSS-1310TB	1,900 pcs./reel
			C (Through hole pins)	Magazine	CSS-1310MC	38 pcs./stick
		Single	B (Gull wing)	Taping	CSS-1311TB	1,900 pcs./reel
			C (Through hole pins)	Magazine	CSS-1311MC	38 pcs./stick
		Double	B (Gull wing)	Taping	CSS-1312TB	1,900 pcs./reel
			C (Through hole pins)	Magazine	CSS-1312MC	38 pcs./stick
	Top setting	No function	C (Through hole pins)	Magazine	CSS-1300MC	38 pcs./stick
		Double	C (Through hole pins)	Magazine	CSS-1302MC	38 pcs./stick

### STANDARD SPECIFICATIONS

Operating temp. range	-20 ~ 70 °C
Storage temp. range	-40 ~ 85 °C
Sealing	Non washable
Net weight	Approx. 0.11 g (CSS-12), Approx. 0.15 g (CSS-13)

### MECHANICAL CHARACTERISTICS

No. of positions	2, 3
Stroke	2 mm
Operating force	1 ~ 3.5 N (0.1 ~ 0.36 kgf)
Stop strength	10 N (1.02 kgf) 15 s
Solderability	245 ± 3 °C 2 ~ 3 s Sn-3Ag-0.5Cu
Soldering heat	Reflow : 250 ~ 255 °C (Peak temperature) (Please refer to the profile below)
	Manual soldering : 350 ± 10 °C, 3 ~ 4 s
Shear (Adhesion)	5 N (0.5 kgf) 10 s
Substrate bending	Width 90 mm, bend 3 mm, 5 s, 1 time
Pull-off strength	5 N (0.5 kgf) 10 s

{ } : Reference only

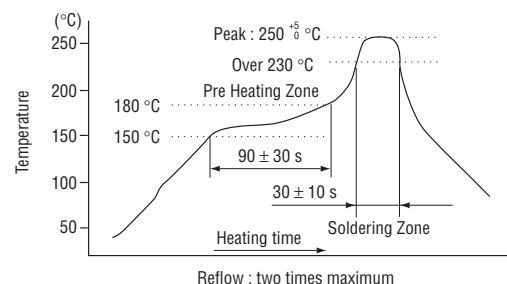
### ELECTRICAL CHARACTERISTICS

Contact rating	Non-switching : DC50 V 100 mA Switching : DC12 V 100 mA Minimum : DC20 mV 1 µA
Contact timing	Non-shorting
Contact resistance	70 mΩ maximum
Insulation resistance	100 MΩ minimum (DC 500 V)
Dielectric strength	AC500 V 60 s

### ENVIRONMENTAL CHARACTERISTICS

Vibration	Amplitude 1.5 mm or Acceleration 98 m/s <sup>2</sup> , 10-500-10 Hz, 3 directions for 10 cycles each
Shock	490 m/s <sup>2</sup> , 11 ms, 6 directions for 3 times each
Load life	Continuous load 10000 cycles, DC12 ± 0.5 V, 100 ± 10 mA
Humidity	40 °C, Relative humidity 90 ~ 95 %, 240 h, No load
High temp. exposure	85 °C, 96 h, No load
Low temp. exposure	-40 °C, 96 h, No load
Thermal shock	-40 (0.5 h) ~ 85 °C (0.5 h), 5 cycles

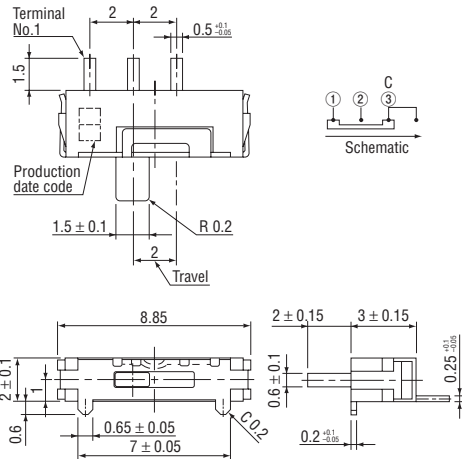
### <Reflow profile for soldering heat evaluation>



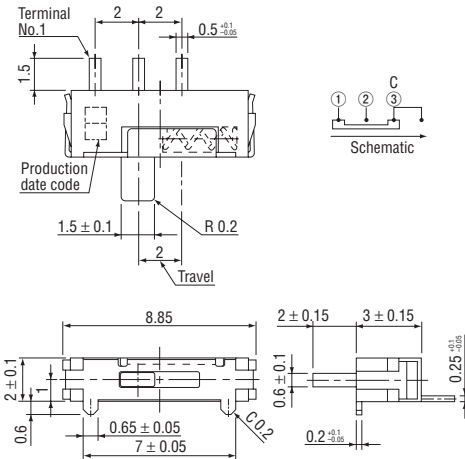
### OUTLINE DIMENSIONS

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

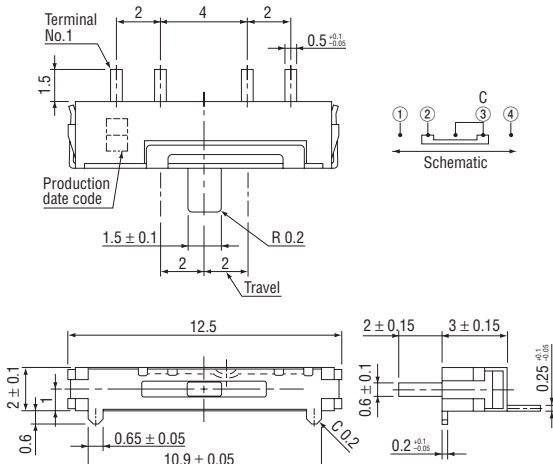
#### ● CSS-1210B



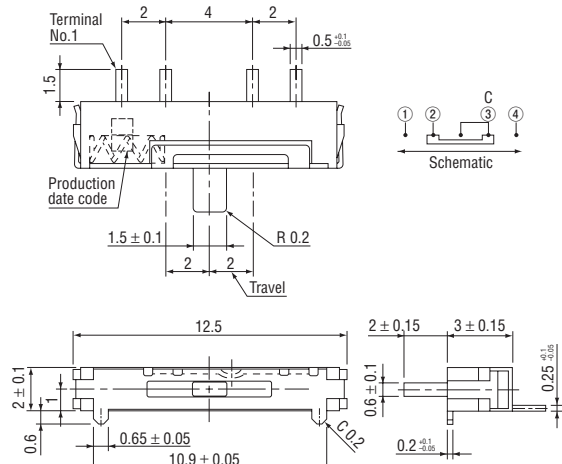
#### ● CSS-1211B



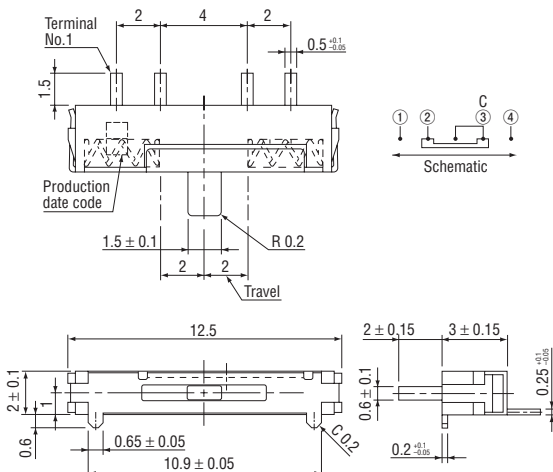
#### ● CSS-1310B



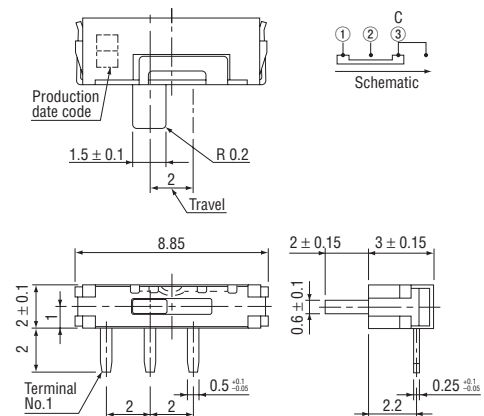
#### ● CSS-1311B



#### ● CSS-1312B



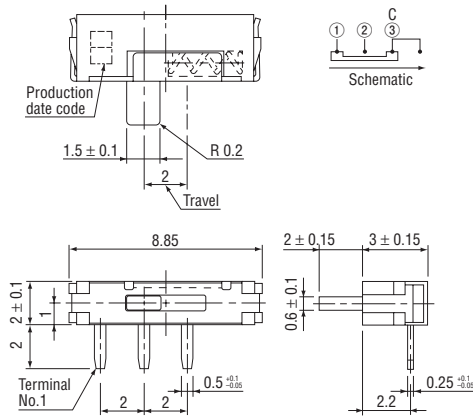
#### ● CSS-1210C



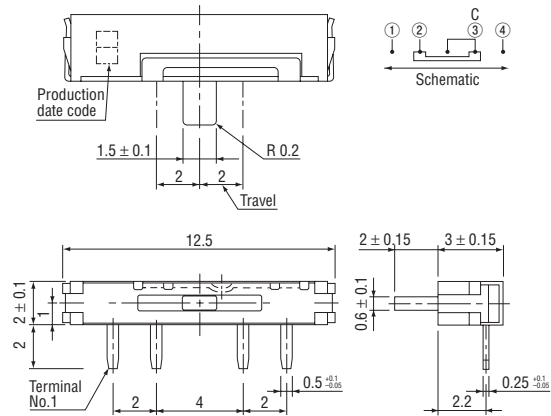
### OUTLINE DIMENSIONS

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

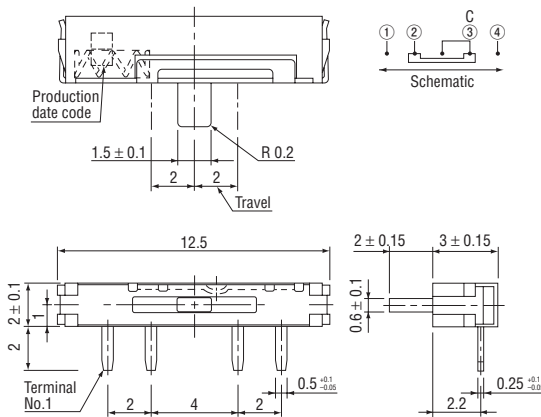
#### ● CSS-1211C



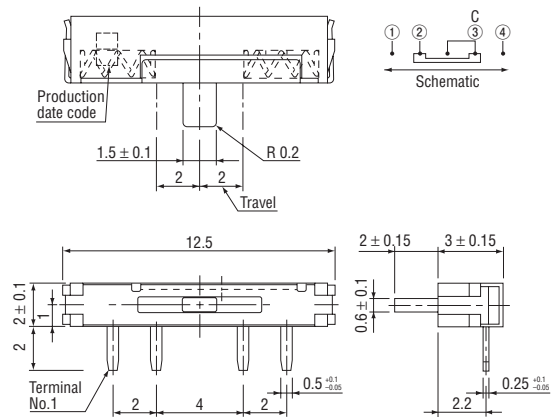
#### ● CSS-1310C



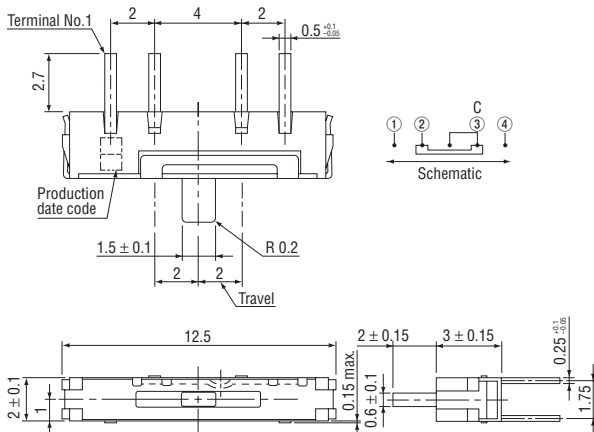
#### ● CSS-1311C



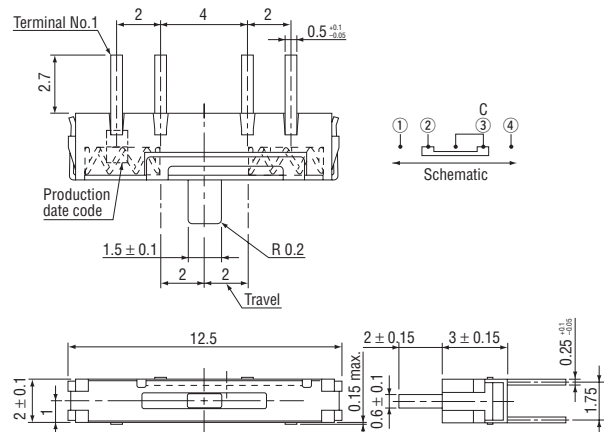
#### ● CSS-1312C



#### ● CSS-1300C

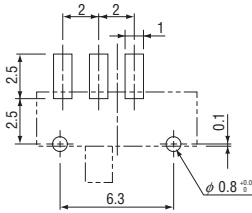


#### ● CSS-1302C

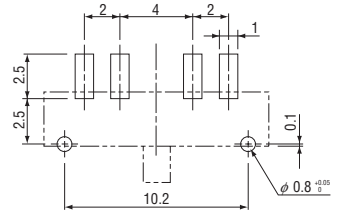


### RECOMMENDED P.C.B. PAD OUTLINE DIMENSIONS

#### ● CSS-121□B



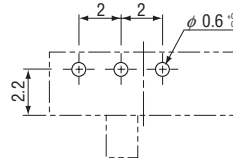
#### ● CSS-131□B



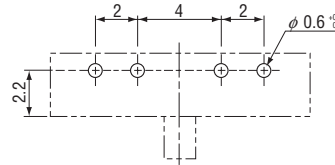
(Unit : mm)

### SIZE OF P.C.B. PROCESSING

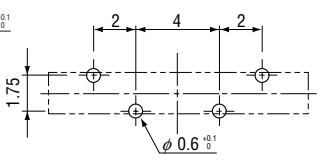
#### ● CSS-121□C



#### ● CSS-131□C



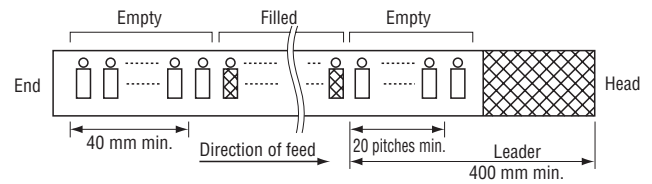
#### ● CSS-130□C



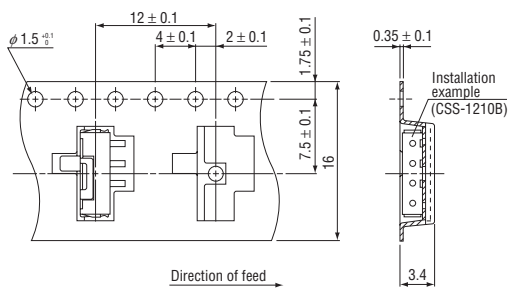
### PACKAGING SPECIFICATIONS

Taping version is packaged in 1900 pcs. per reel.  
Taping version is boxed with 1 reel (1900 pcs.).  
Maximum number of consecutive missing pieces = 2.  
Leader length and reel dimension are shown in the diagrams below.

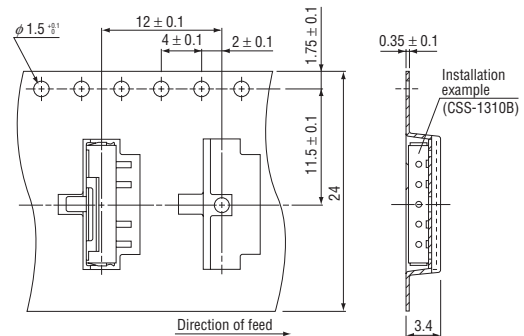
#### ● Embossed tape dimensions



#### ● CSS-121□TB

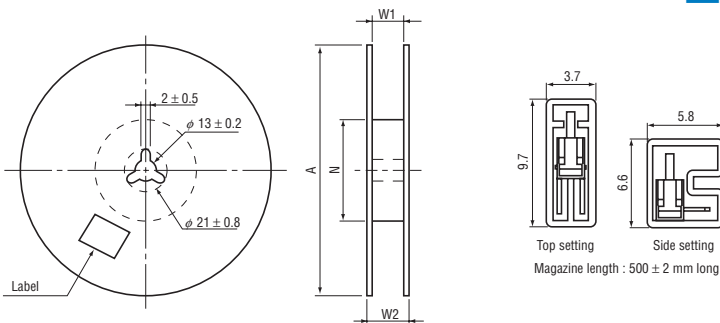


#### ● CSS-131□TB



#### ● Reel dimensions

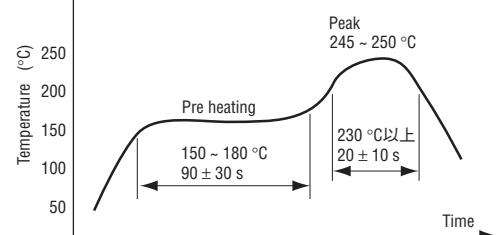
(Unit: mm)



### SOLDERING CONDITIONS

#### ● Manual soldering 350 °C 3 s maximum

#### Infrared reflow soldering



Part number	A	W <sub>1</sub>	W <sub>2</sub>	N	Packing quantity of magazine	
					Part number	Quantity / Stick
121□TB	φ 330 ± 2	17.4 ± 1	21.4 ± 1	φ 80 ± 1	12□□	53
131□TB	φ 330 ± 2	25.4 ± 1	29.4 ± 1	φ 80 ± 1	13□□	38