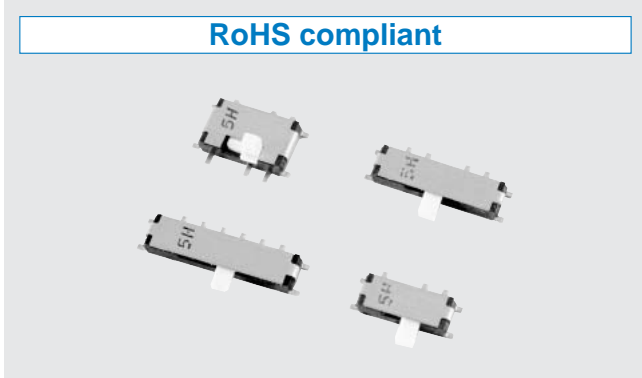


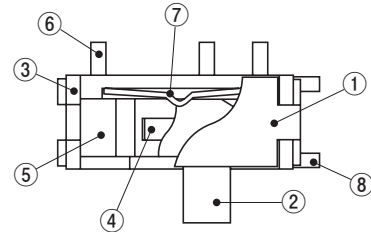
CUS

LOW-PROFILE SLIDE SWITCHES

RoHS compliant



INTERNAL STRUCTURE



Part name	Material	Flammability
① Cover	Nickel silver	—
② Slider	PA(Polyamide)	UL-94V-0
③ Housing	LCP(Liquid crystal polymer)	
④ Slider contact	Copper alloy, Gold-plated	—
⑤ Fixed contact		
⑥ Terminal pin	Stainless steel (SUS 301)	
⑦ Click spring		
⑧ Ground terminal	Nickel silver	

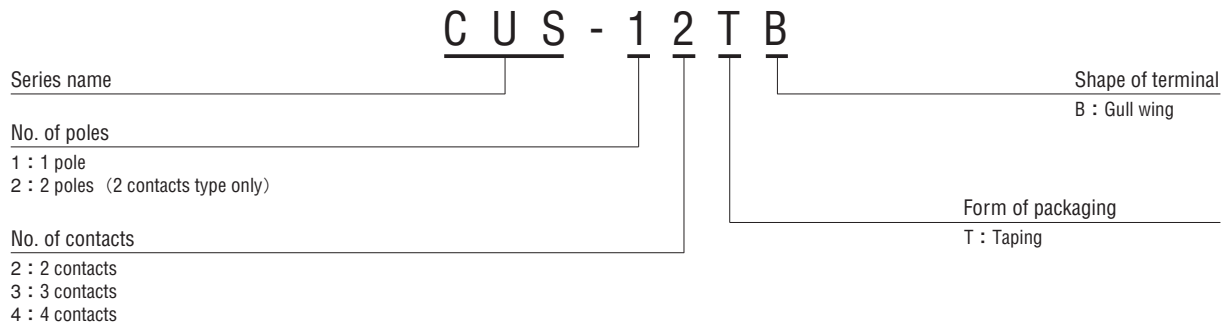
FEATURES

- Low-profile of 1.4 mm
- 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

Schematic	No. of contacts	Shape of terminal	Form of packaging	Part number	Pieces in package
1	2	B (Gull wing)	Taping	CUS-12TB	2500 pcs./reel
	3			CUS-13TB	
	4			CUS-14TB	
2	CUS-22TB			1400 pcs./reel	

STANDARD SPECIFICATIONS

Operating temp. range	-20 ~ 70 °C
Storage temp. range	-40 ~ 85 °C
Sealing	Non washable
Net weight	Approx. 0.08 g (CUS-12) Approx. 0.10 g (CUS-13) Approx. 0.13 g (CUS-14) Approx. 0.11 g (CUS-22)

MECHANICAL CHARACTERISTICS

No. of positions	2, 3, 4	
Stroke	1.5 mm	
Operating force	CUS-12 ^{※1}	2 ± 1.7 N {0.2 ± 0.17 kgf}
	CUS-13 ^{※2}	A → B : 1.5 ± 1.2 N {0.15 ± 0.12 kgf}
		B → C : 2 ± 1.7 N {0.2 ± 0.17 kgf}
		C → B : 1.5 ± 1.2 N {0.15 ± 0.12 kgf}
	CUS-14 ^{※3}	A → B : 1.5 ± 1.2 N {0.15 ± 0.12 kgf}
		B → C : 2 ± 1.7 N {0.2 ± 0.17 kgf}
		C → D : 2 ± 1.7 N {0.2 ± 0.17 kgf}
		D → C : 1.5 ± 1.2 N {0.15 ± 0.12 kgf}
C → B : 2 ± 1.7 N {0.2 ± 0.17 kgf}		
B → A : 2 ± 1.7 N {0.2 ± 0.17 kgf}		
CUS-22 ^{※4}	2 ± 1.7 N {0.2 ± 0.17 kgf}	
Stop strength	10 N {1.02 kgf} 15 s	
Solderability	245 ± 3 °C 2 ~ 3 s	
Soldering heat	Reflow peak : 250 ~ 255 °C	
	Manual soldering : 350 ± 10 °C 3 ~ 4 s	
Shear	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	

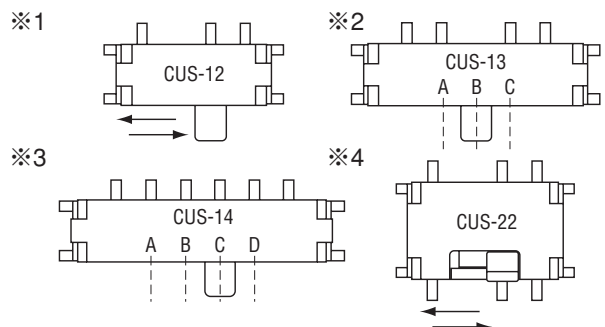
{ } : Reference only

ELECTRICAL CHARACTERISTICS

Contact rating	DC50 V 100 mA
Non-switching	DC4 V 300 mA
Switching	DC20 mV 1 μA
Minimum	
Contact timing	Non-shorting
Contact resistance	70 mΩ maximum
Insulation resistance	100 MΩ minimum (DC 100 V)
Dielectric strength	AC100 V 60 s

ENVIRONMENTAL CHARACTERISTICS

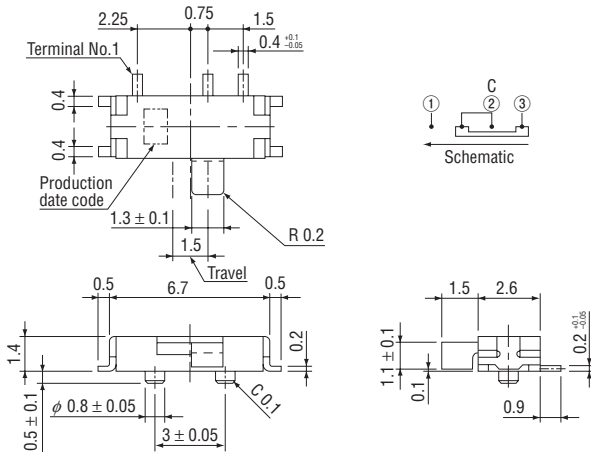
Vibration	Amplitude 1.5 mm or Acceleration 98 m/s ² , 10-500-10 Hz, 3 directions for 10 cycles each
Shock	490 m/s ² , 11 ms, 6 directions for 3 times each
Load life	Continuous load 10000 cycles, DC4 ± 0.5 V, 300 ± 10 mA
Humidity	40 °C, Relative humidity 90 ~ 95 %, 240 h, No load
High temp. exposure	85 °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



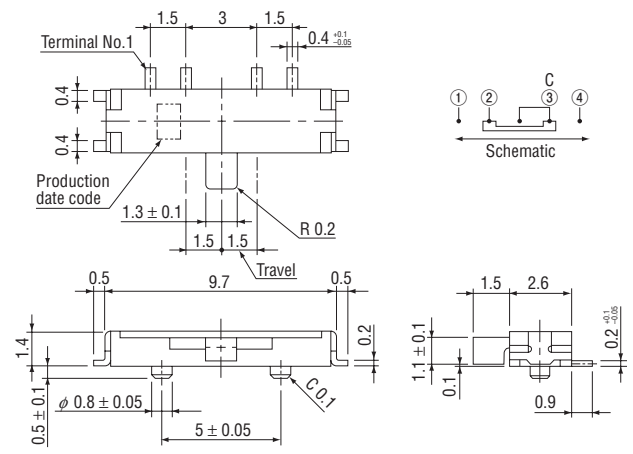
OUTLINE DIMENSIONS

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

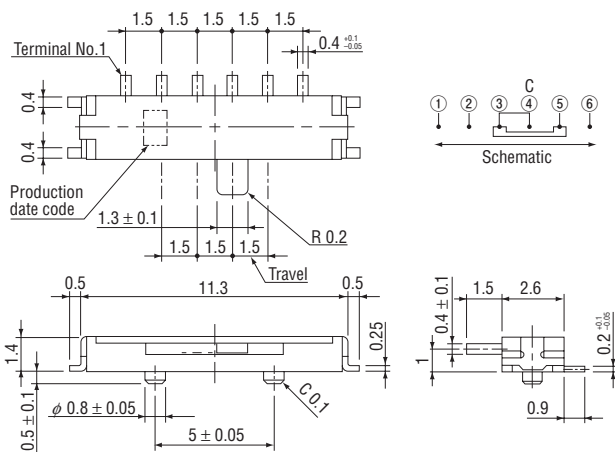
● CUS-12B



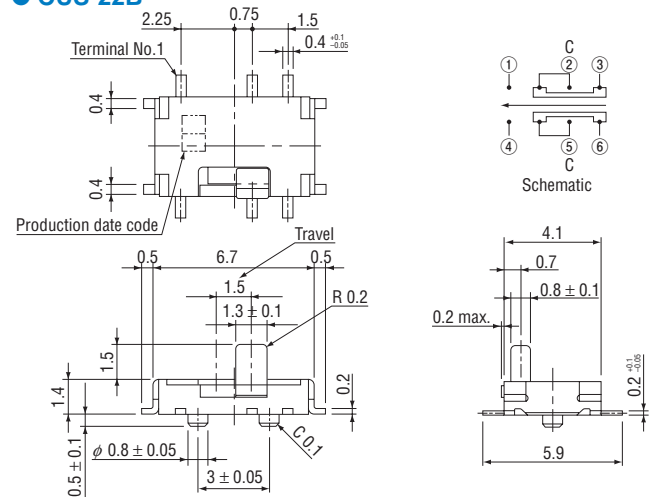
● CUS-13B



● CUS-14B



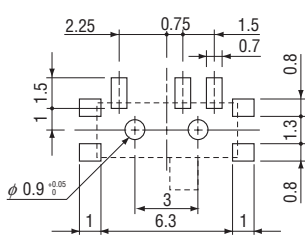
● CUS-22B



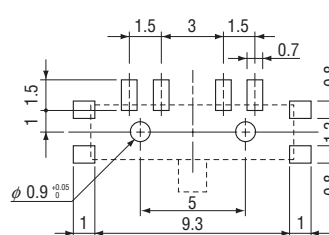
RECOMMENDED P.C.B. PAD OUTLINE DIMENSIONS

(Unit : mm)

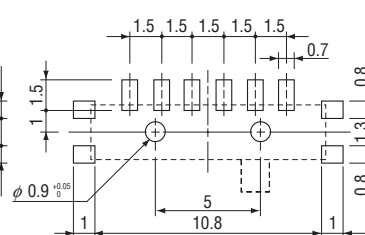
● CUS-12B



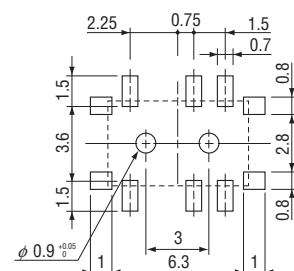
● CUS-13B



● CUS-14B



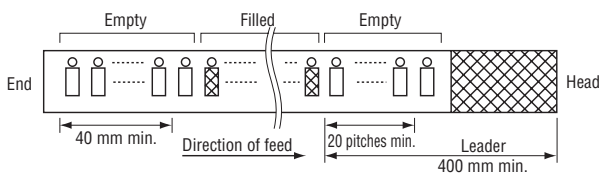
● CUS-22B



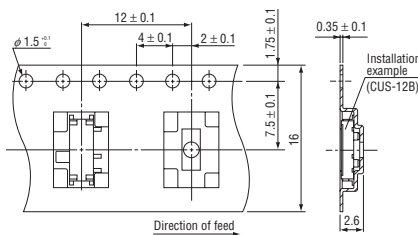
PACKAGING SPECIFICATIONS

Taping version is packaged in 2500 pcs. per reel (1400 pcs. for CUS-22).
Taping version is boxed with 1 reel (2500 pcs. or 1400 pcs.). Maximum number of consecutive missing pieces = 2. Leader length and reel dimension are shown in the diagrams below.

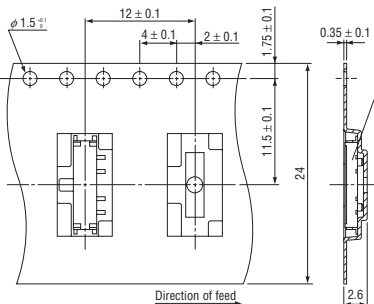
Embossed tape dimensions



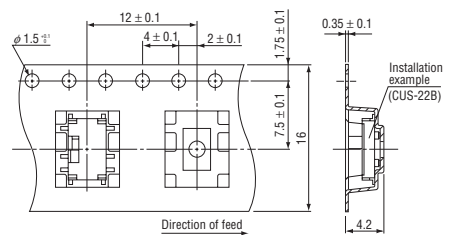
CUS-12TB



CUS-13TB, CUS-14TB



CUS-22TB

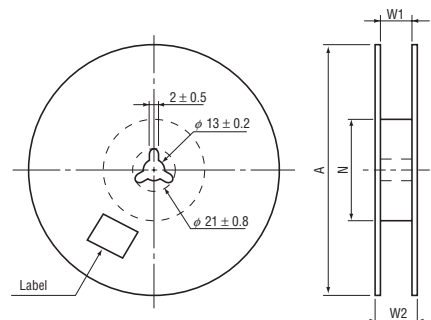
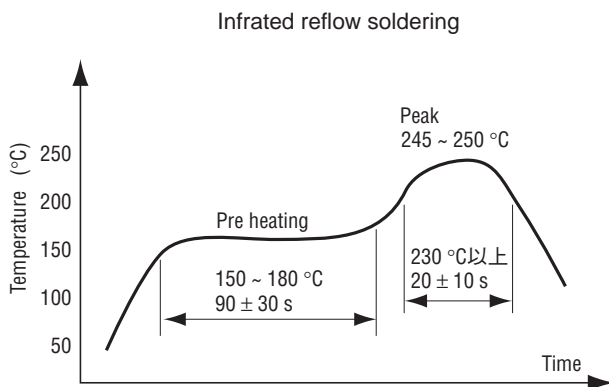


Reel dimensions

(Unit: mm)

SOLDERING CONDITIONS

- Manual soldering 350 °C 3 s maximum



Part number	A	W ₁	W ₂	N
12TB, 22TB	φ 330 ± 2	17.4 ± 1	21.4 ± 1	φ 80 ± 1
13TB, 14TB	φ 330 ± 2	25.4 ± 1	29.4 ± 1	φ 80 ± 1