

SURFACE MOUNT TYPE SLIDE SWITCHES

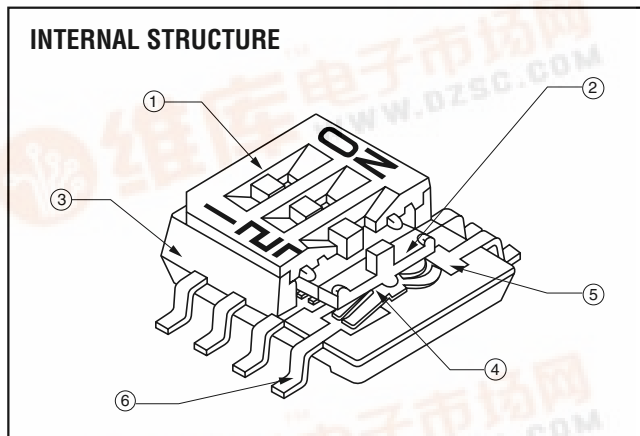
CHS

SURFACE MOUNT TYPE SWITCHES



FEATURES

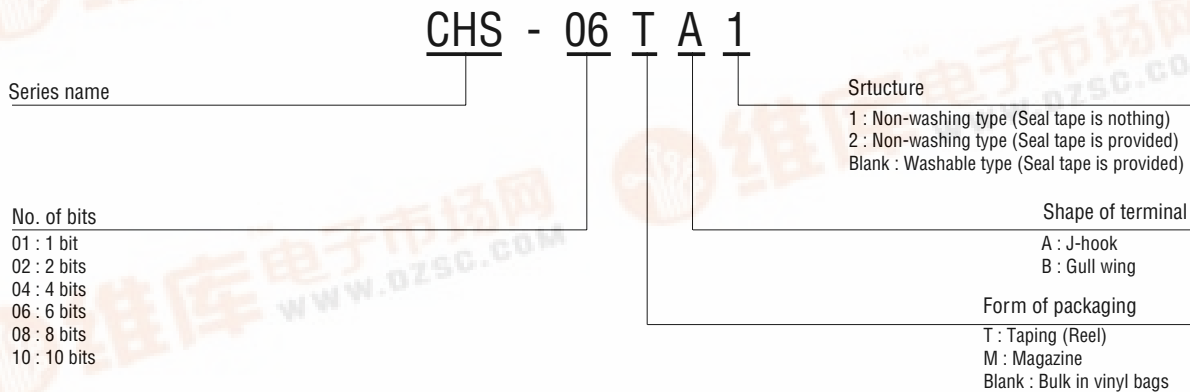
- Meets EIAJ SOP standard outline dimensions (B type)
- Low profile design of 2.5 mm
- 12 types of 1, 2, 4, 6, 8 or 10 bit with either gull wing or J-hook available
- Excellent contact stability by twin Au-plated contact



Part name	Material	Flammability
① Cover	PPS (Polyphenylenesulphide)	UL-94V-0
② Slider	Nylon	
③ Housing	PPS (Polyphenylenesulphide)	
④ Slider contact	Copper alloy, Gold-plated	—
⑤ Fixed contact		
⑥ Terminal pin		

CFCs, Halon, Carbon tetrachloride and designated bromic flame retardant PBBOs and PBBs are not used in our products.

PART NUMBER DESIGNATION



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



LIST OF PART NUMBERS

No. of bits	Form of packaging	Shape of terminals	Non-washing type (Seal tape is nothing)		Non-washing type (Seal tape is provided)		Pieces in package
			A (J-hook)	B (Gull wing)	A (J-hook)	B (Gull wing)	
1	Taping		CHS-01TA1	CHS-01TB1	CHS-01TA2	CHS-01TB2	1000 pcs./reel
	Magazine						
	Bulk packaging		CHS-01A1	CHS-01B1			50 pcs./pack
2	Taping		CHS-02TA1	CHS-02TB1	CHS-02TA2	CHS-02TB2	500 pcs./reel
	Magazine						
	Bulk packaging		CHS-02A1	CHS-02B1			50 pcs./pack
4	Taping		CHS-04TA1	CHS-04TB1	CHS-04TA2	CHS-04TB2	500 pcs./reel
	Magazine		CHS-04MA1	CHS-04MB1			70 pcs./stick
	Bulk packaging		CHS-04A1	CHS-04B1			50 pcs./pack
6	Taping		CHS-06TA1	CHS-06TB1	CHS-06TA2	CHS-06TB2	500 pcs./reel
	Magazine		CHS-06MA1	CHS-06MB1			50 pcs./stick
	Bulk packaging		CHS-06A1	CHS-06B1			50 pcs./pack
8	Taping		CHS-08TA1	CHS-08TB1	CHS-08TA2	CHS-08TB2	500 pcs./reel
	Magazine		CHS-08MA1	CHS-08MB1			40 pcs./stick
	Bulk packaging		CHS-08A1	CHS-08B1			50 pcs./pack
10	Taping		CHS-10TA1	CHS-10TB1	CHS-10TA2	CHS-10TB2	500 pcs./reel
	Magazine		CHS-10MA1	CHS-10MB1			30 pcs./stick
	Bulk packaging		CHS-10A1	CHS-10B1			50 pcs./pack

No. of bits	Form of packaging	Shape of terminals	Washable type (Seal tape is provided)		Pieces in package
			A (J-hook)	B (Gull wing)	
1	Taping		CHS-01TA	CHS-01TB	1000 pcs./reel
	Magazine				
	Bulk packaging		CHS-01A	CHS-01B	50 pcs./pack
2	Taping		CHS-02TA	CHS-02TB	500 pcs./reel
	Magazine				
	Bulk packaging		CHS-02A	CHS-02B	50 pcs./pack
4	Taping		CHS-04TA	CHS-04TB	500 pcs./reel
	Magazine		CHS-04MA	CHS-04MB	70 pcs./stick
	Bulk packaging		CHS-04A	CHS-04B	50 pcs./pack
6	Taping		CHS-06TA	CHS-06TB	500 pcs./reel
	Magazine		CHS-06MA	CHS-06MB	50 pcs./stick
	Bulk packaging		CHS-06A	CHS-06B	50 pcs./pack
8	Taping		CHS-08TA	CHS-08TB	500 pcs./reel
	Magazine		CHS-08MA	CHS-08MB	40 pcs./stick
	Bulk packaging		CHS-08A	CHS-08B	50 pcs./pack
10	Taping		CHS-10TA	CHS-10TB	500 pcs./reel
	Magazine		CHS-10MA	CHS-10MB	30 pcs./stick
	Bulk packaging		CHS-10A	CHS-10B	50 pcs./pack

☐ : Not manufactured

* Verify the above part numbers when placing orders.

Taping and magazine version must be purchased in reel or stick units.

CHS

SLIDE SWITCHES (SMD)

STANDARD SPECIFICATIONS

Operating temp. range	- 40 ~ +85 °C
Sealing	Washable by seal tape
Net weight	Approx. 0.05 g (CHS-01) Approx. 0.08 g (CHS-02) Approx. 0.12 g (CHS-04) Approx. 0.17 g (CHS-06) Approx. 0.22 g (CHS-08) Approx. 0.25 g (CHS-10)

ELECTRICAL CHARACTERISTICS

Contact rating Non-switching Switching Minimum	DC50 V, 100 mA DC6 V, 100 mA DC24 V, 25 mA DC20 mV, 1 μA
Contact resistance	50 mΩ maximum (1.5 mA, 1 kHz, 20 mV)
Insulation resistance	1000 MΩ (DC100 V) minimum
Dielectric strength	AC500 V, 50 Hz, 60 s

MECHANICAL CHARACTERISTICS

Operating force	0.5 ~ 5 N {0.05 ~ 0.51 kgf}
Stop strength	10 N {1.02 kgf}, 60 s
Solderability	235 ± 5 °C, 2 ± 0.5 s
Soldering heat	240 °C (VPS method), 30 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

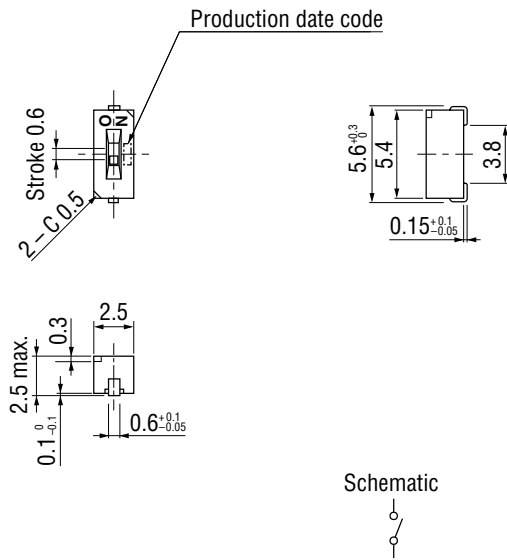
ENVIRONMENTAL CHARACTERISTICS

Vibration	Amplitude of 1.5 mm (p-p) or Acceleration of 98 m/s ² , 10-500 Hz, 3 directions for 10 cycles each
Shock	490 m/s ² , 11 ms 6 directions for 3 times each
Load life	Continuous load 2000 cycles, DC6 ± 0.5 V, 100 ± 10 mA
Humidity	-10 ~ +65 °C, 0 ~ 96 %RH, 24 h for 10 cycles
High temp. exposure	85 °C, 96 h
Low temp. exposure	-40 °C, 96 h
Thermal shock	-40 (0.5 h) ~ +85 °C (0.5 h), 5 cycles

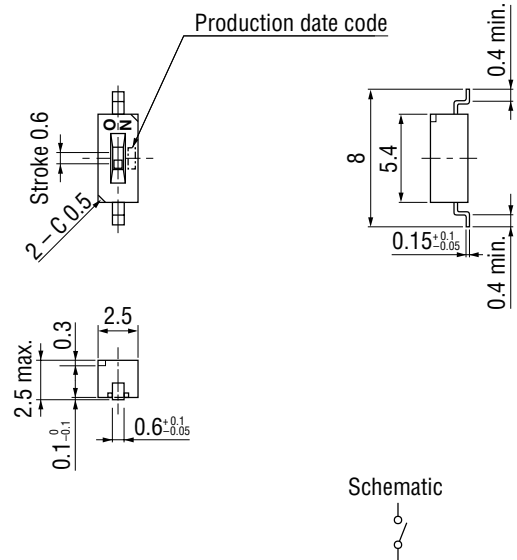
OUTLINE DIMENSIONS

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

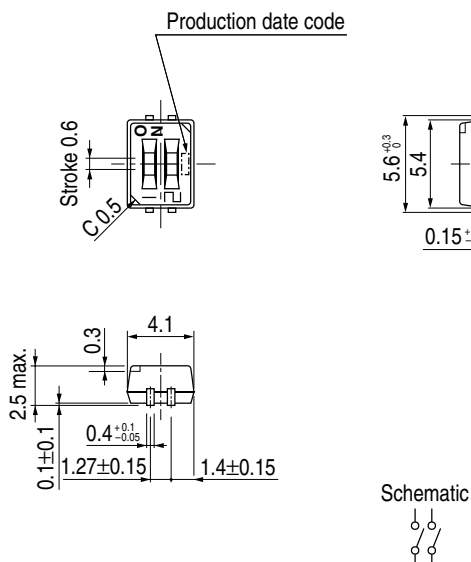
● **CHS-01A1**
Non-washing type
(Without seal tape)



● **CHS-01B1**
Non-washing type
(Without seal tape)

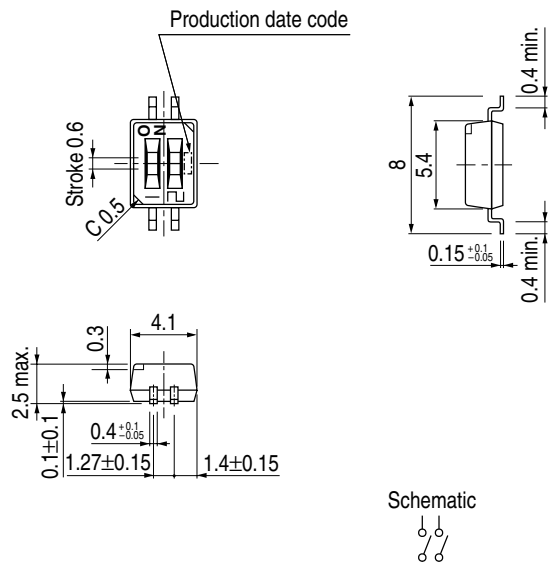


● **CHS-02A1**
Non-washing type
(Without seal tape)



● **CHS-02B1**
Non-washing type
(Without seal tape)

(In accordance with EIAJ ED-7402-1)



CHS
SLIDE SWITCHES (SMD)

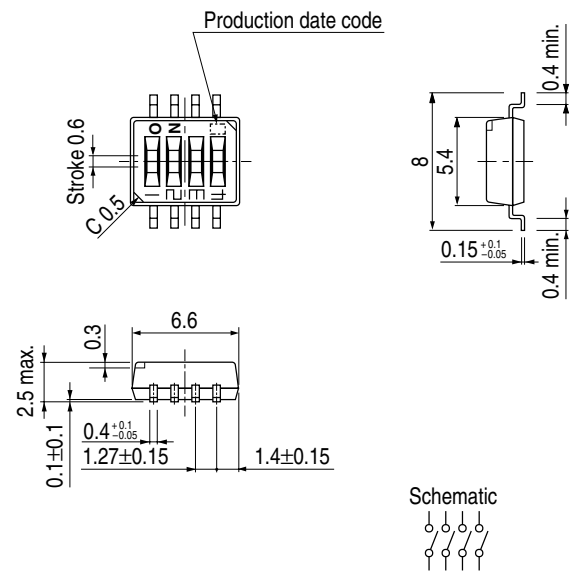
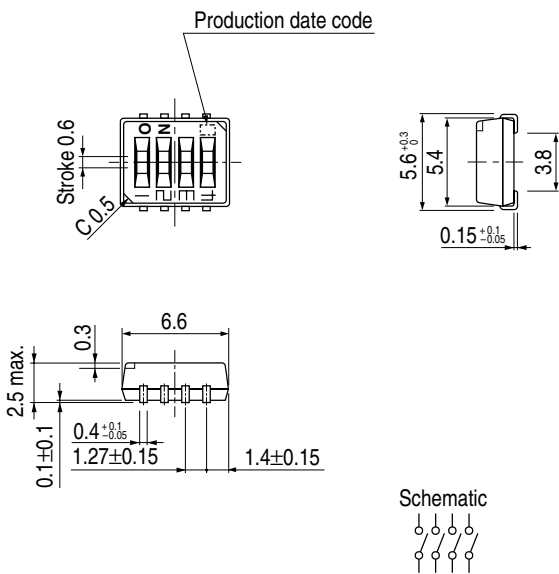
OUTLINE DIMENSIONS

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

- **CHS-04A1**
Non-washing type
(Without seal tape)

- **CHS-04B1**
Non-washing type
(Without seal tape)

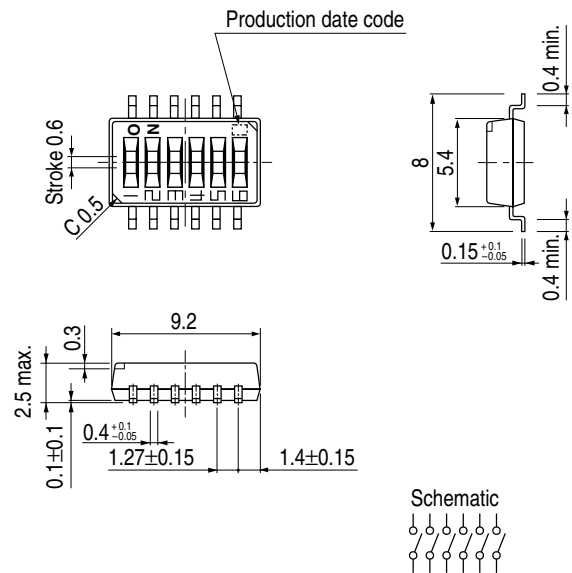
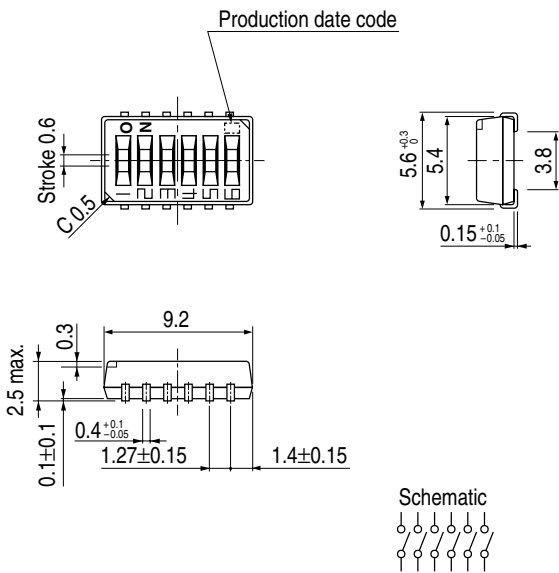
(In accordance with EIAJ ED-7402-1)



- **CHS-06A1**
Non-washing type
(Without seal tape)

- **CHS-06B1**
Non-washing type
(Without seal tape)

(In accordance with EIAJ ED-7402-1)



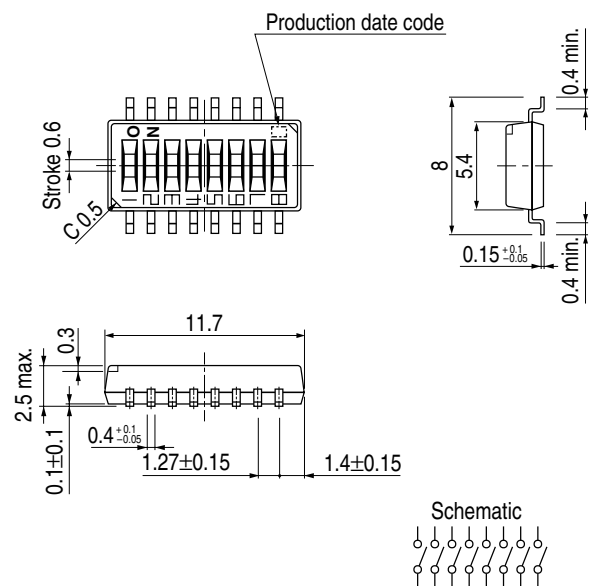
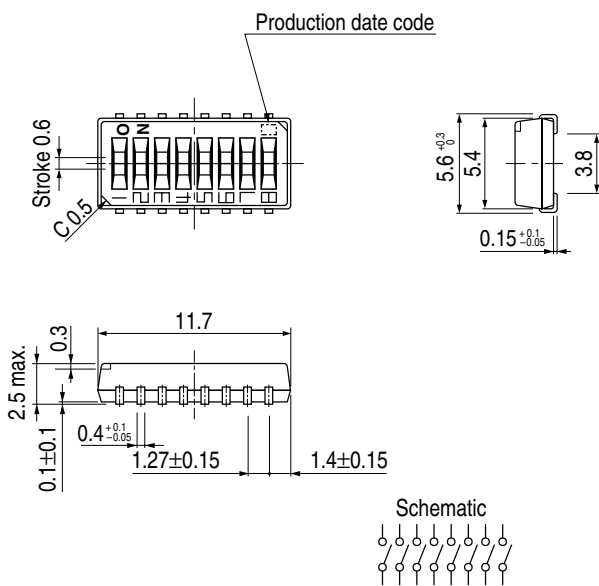
OUTLINE DIMENSIONS

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

● CHS-08A1
Non-washing type
(Without seal tape)

● CHS-08B1
Non-washing type
(Without seal tape)

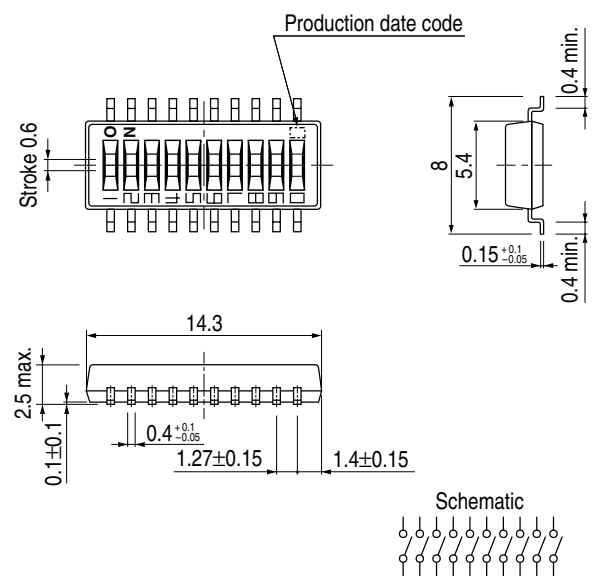
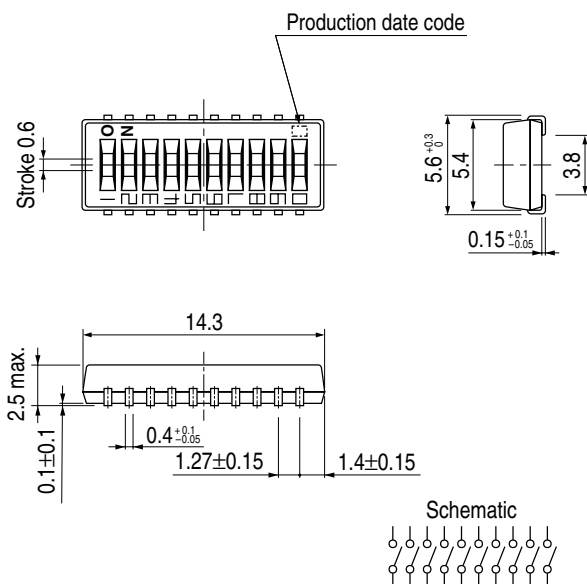
(In accordance with EIAJ ED-7402-1)



● CHS-10A1
Non-washing type
(Without seal tape)

● CHS-10B1
Non-washing type
(Without seal tape)

(In accordance with EIAJ ED-7402-1)



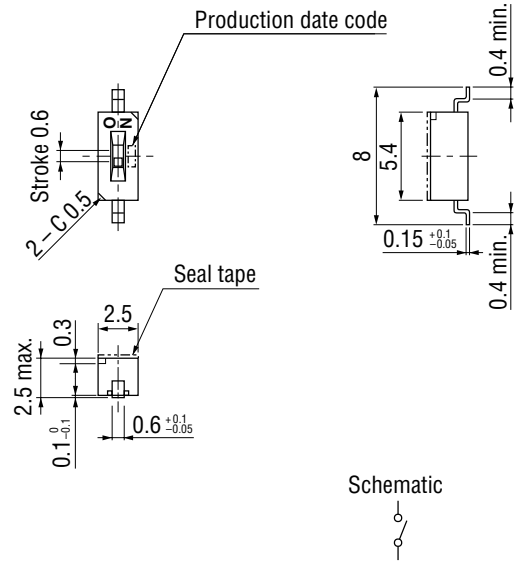
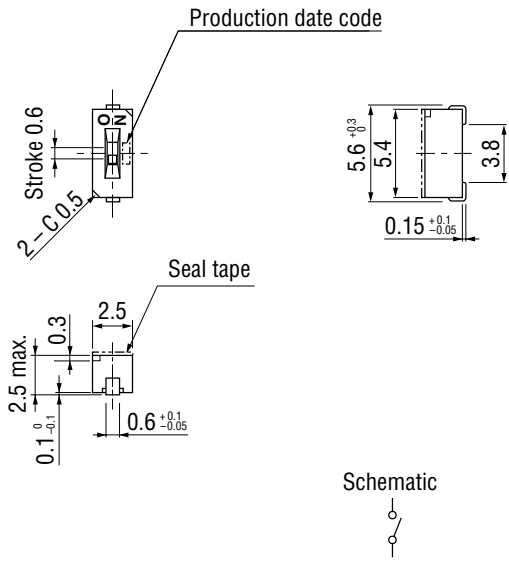
CHS

SLIDE SWITCHES (SMD)

OUTLINE DIMENSIONS (Excluding the seal tape)

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

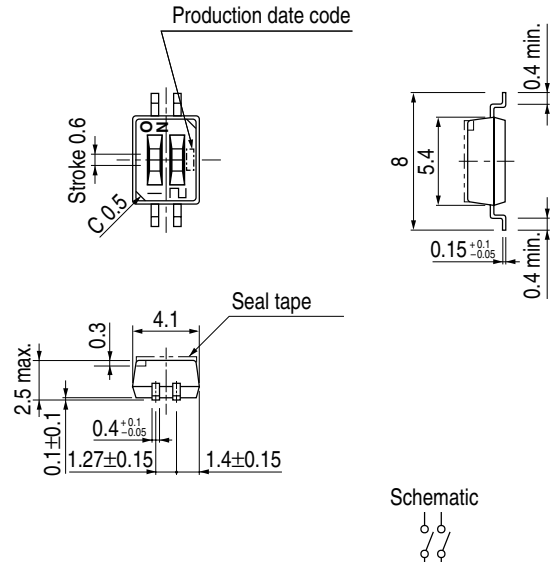
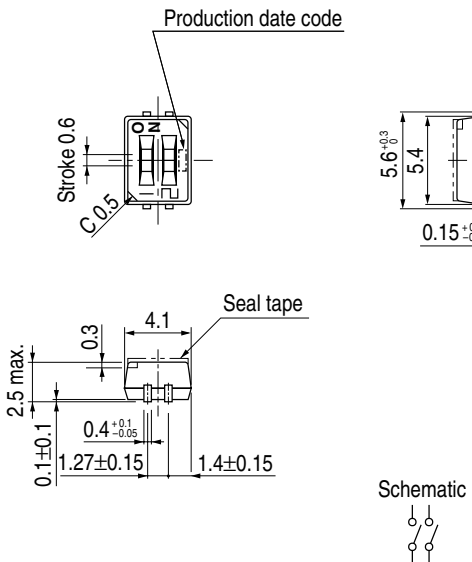
- CHS-01A Washable type (With seal tape)**
- CHS-01B Washable type (With seal tape)**
- CHS-01TA2 Non-washing type (With seal tape)**
- CHS-01TB2 Non-washing type (With seal tape)**



- CHS-02A Washable type (With seal tape)**
- CHS-02TA2 Non-washing type (With seal tape)**

- CHS-02B Washable type (With seal tape)**
- CHS-02TB2 Non-washing type (With seal tape)**

(In accordance with EIAJ ED-7402-1)



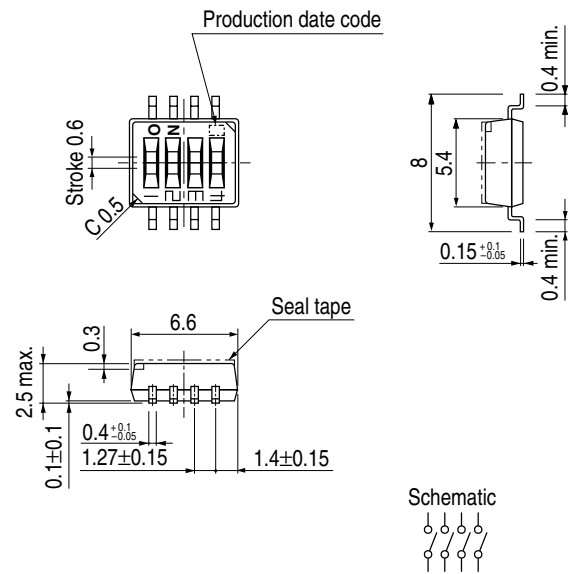
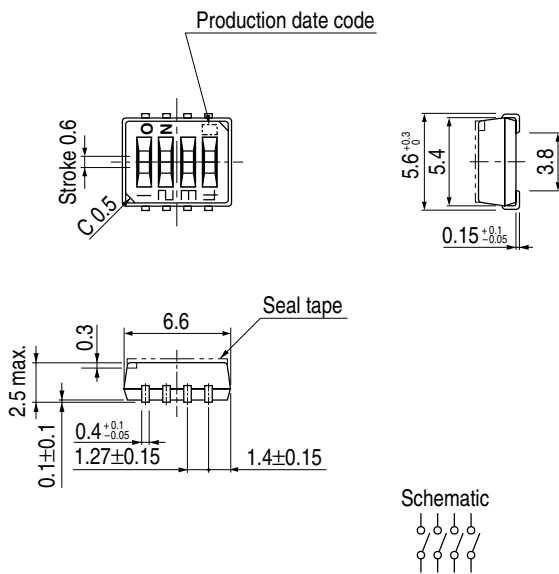
OUTLINE DIMENSIONS (Excluding the seal tape)

Unless otherwise specified, tolerance : ± 0.3

- CHS-04A Washable type (With seal tape)
- CHS-04TA2 Non-washing type (With seal tape)

- CHS-04B Washable type (With seal tape)
- CHS-04TB2 Non-washing type (With seal tape)

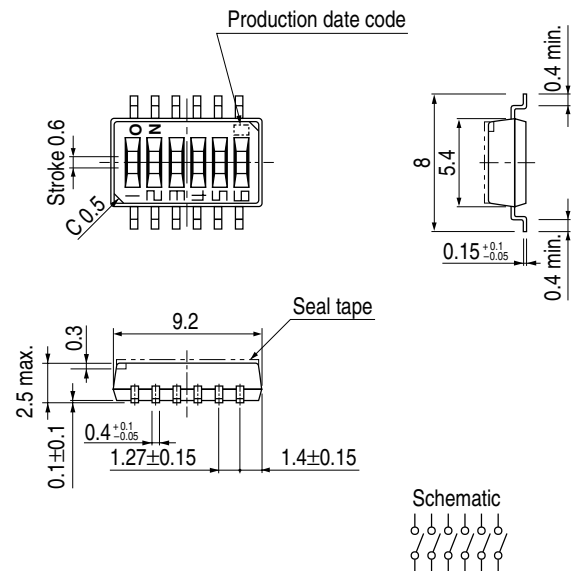
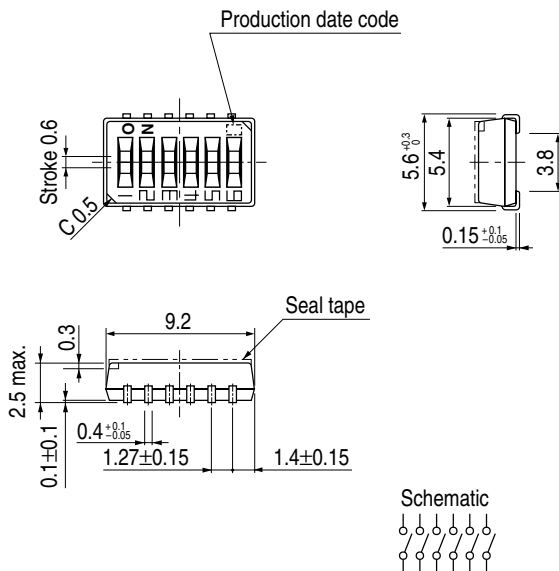
(In accordance with EIAJ ED-7402-1)



- CHS-06A Washable type (With seal tape)
- CHS-06TA2 Non-washing type (With seal tape)

- CHS-06B Washable type (With seal tape)
- CHS-06TB2 Non-washing type (With seal tape)

(In accordance with EIAJ ED-7402-1)



CHS SLIDE SWITCHES (SMD)

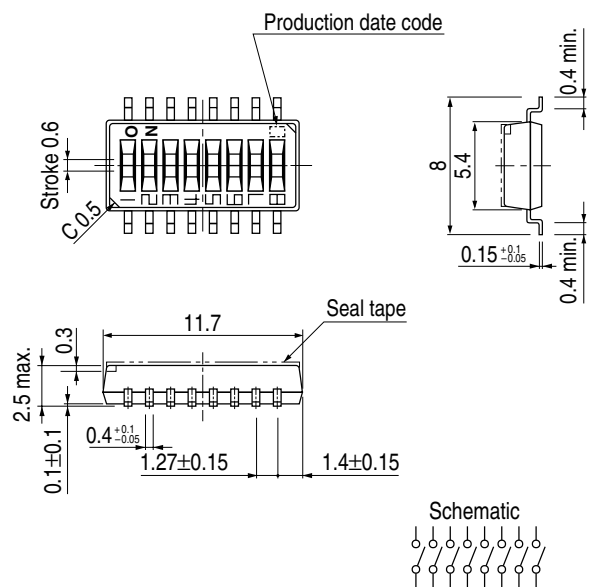
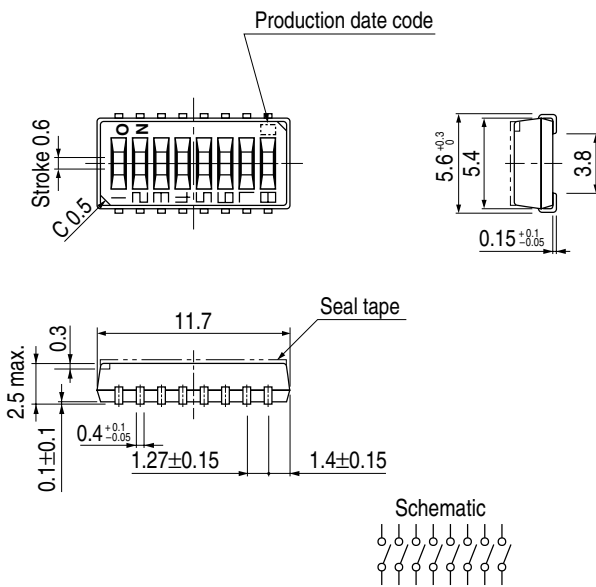
OUTLINE DIMENSIONS (Excluding the seal tape)

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

- CHS-08A Washable type (With seal tape)
- CHS-08TA2 Non-washing type (With seal tape)

- CHS-08B Washable type (With seal tape)
- CHS-08TB2 Non-washing type (With seal tape)

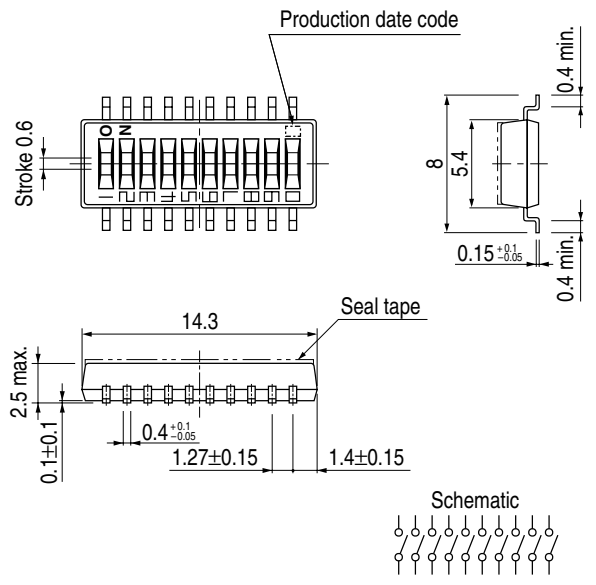
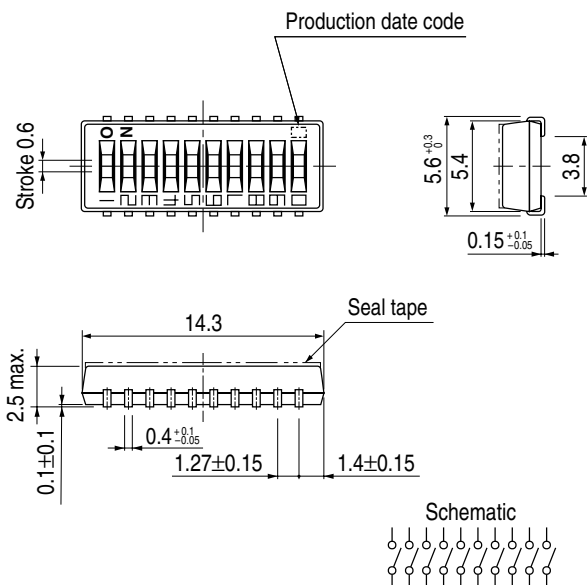
(In accordance with EIAJ ED-7402-1)



- CHS-10A Washable type (With seal tape)
- CHS-10TA2 Non-washing type (With seal tape)

- CHS-10B Washable type (With seal tape)
- CHS-10TB2 Non-washing type (With seal tape)

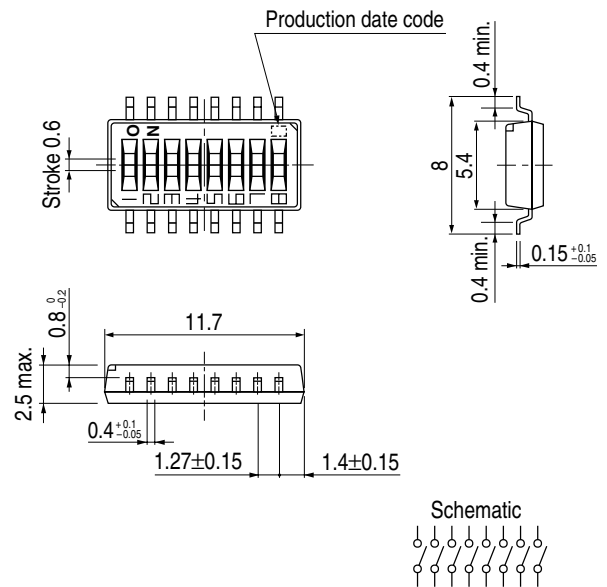
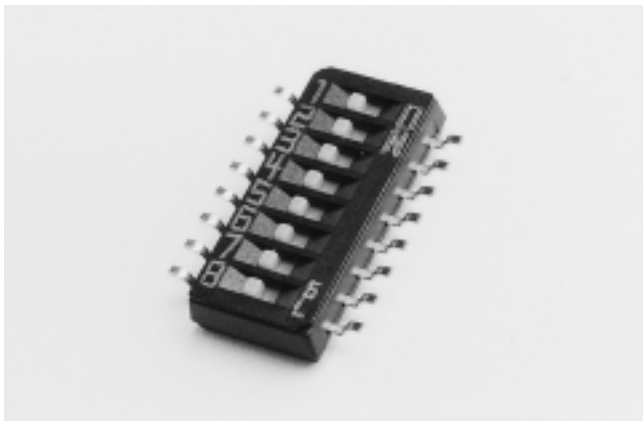
(In accordance with EIAJ ED-7402-1)



OUTLINE DIMENSIONS (Excluding the seal tape)

<The D version with opposite pin direction is available upon receipt of your order.>

● **CHS-08D**

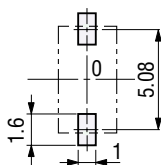


RECOMMENDED P.C.B. PAD OUTLINE DIMENSIONS

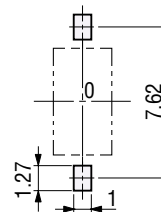
● **1 bit**

(Unit : mm)

A type

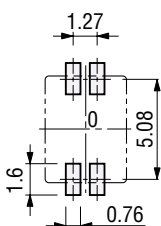


B type

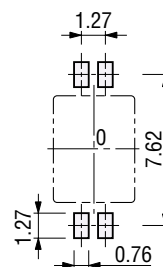


● **2 bits**

A type



B type



Note) The zero point is the center of mounting.

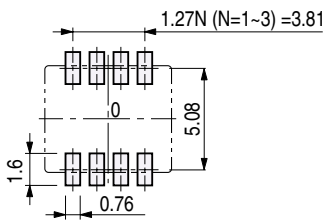
CHS

SLIDE SWITCHES (SMD)

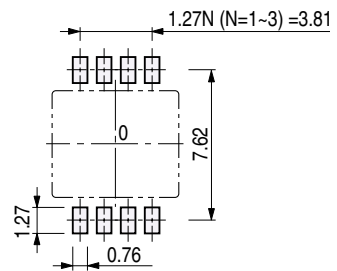
RECOMMENDED P.C.B. PAD OUTLINE DIMENSIONS

- 4 bits
A type

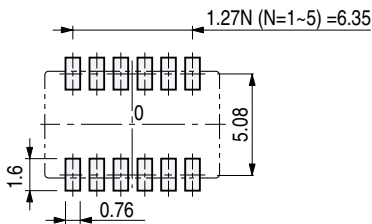
(Unit : mm)



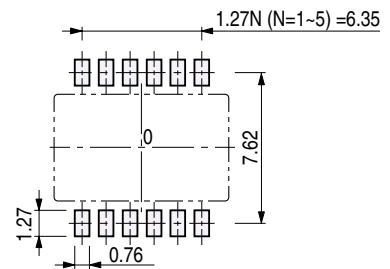
B type



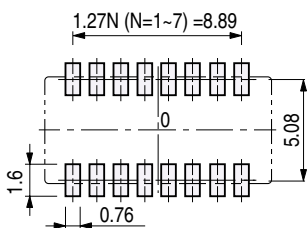
- 6 bits
A type



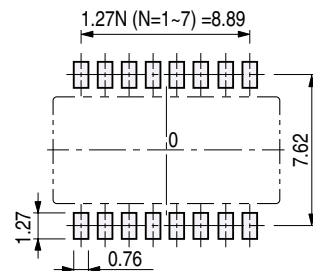
B type



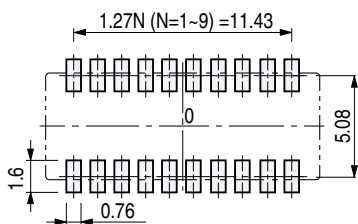
- 8 bits
A type



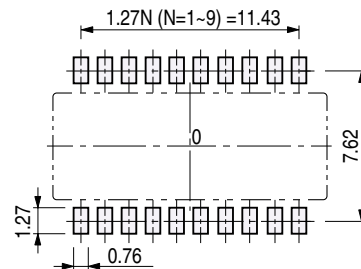
B type



- 10 bits
A type



B type



Note) The zero point is the center of mounting.

■ SOLDERING CONDITIONS

● **Soldering iron**

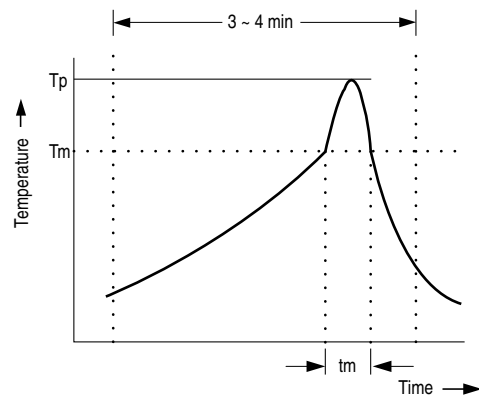
3 s maximum at 300 °C

● **Vapor-phase soldering**

215 °C, less than 35 s

● **Infrared reflow soldering**

The temperature profile shown at right is recommended for reflow soldering. However, process carefully in case of infrared heater, because the absorption rate of the object may vary according to its color, material, etc. and thus heating rate can be different. Please note that the surface temperature of the product should not exceed 240 °C. When the product temperature exceeds 250 °C, deformation may occur due to heat.



$T_p \leq 240$ °C (Peak temperature)
 $T_m = 180$ °C (Melting point temperature)
 $t_m \leq 10$ s (Melting time)

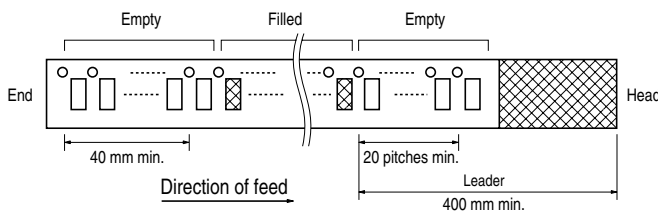
■ PACKAGING SPECIFICATIONS

<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.
- Taping version is boxed with two reels (1000 pcs.).

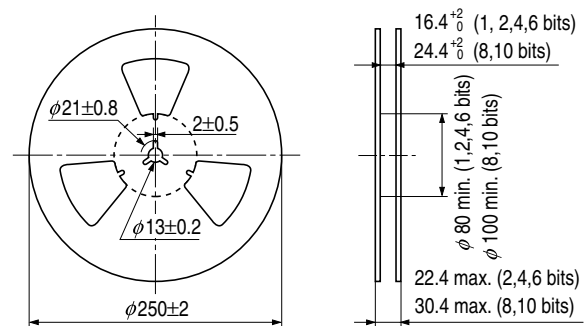
Maximum number of consecutive missing pieces=2
 Leader length and reel dimension are shown in the diagrams below:

● **Embossed tape dimensions**



● **Reel dimensions**

(Unit: mm)



● **Reel & embossed tapematerials**

Embossed tape: Plastic
 Reel: Paper

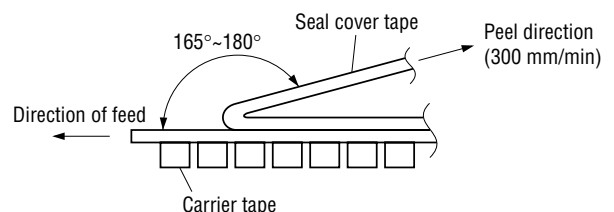
● **Embossed tape pull strength**

10 N {1.02 kgf} minimum

● **Peeling strength of seal tape**

0.1~0.7 N {10.2~71.4 gf}

● **Test method for peeling strength of seal tape**



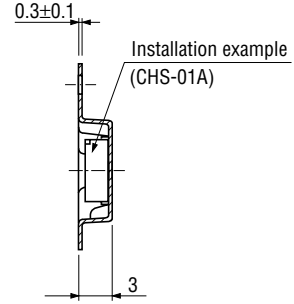
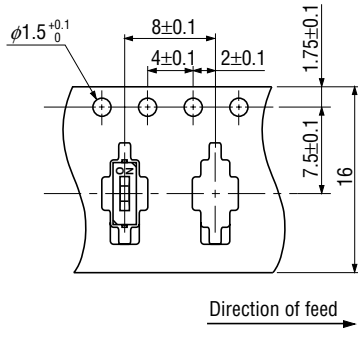
{ } : Reference only

CHS
SLIDE SWITCHES (SMD)

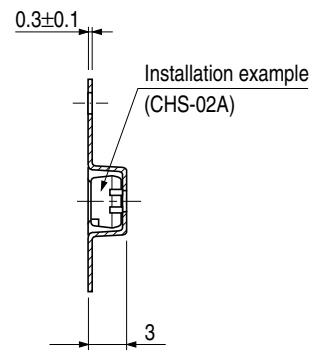
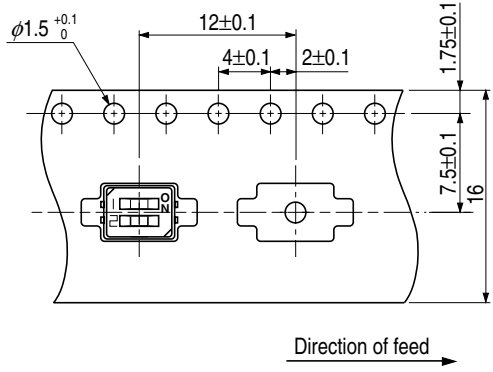
SURFACE MOUNT
TYPE SWITCHES

(Unit : mm)

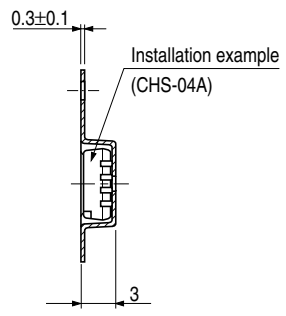
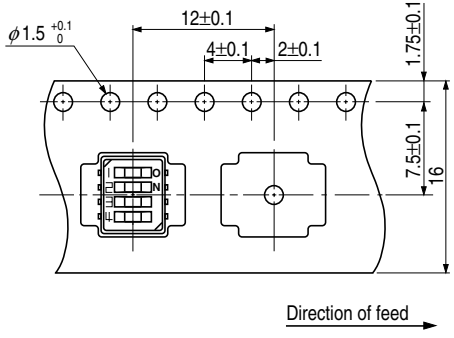
● 1 bit



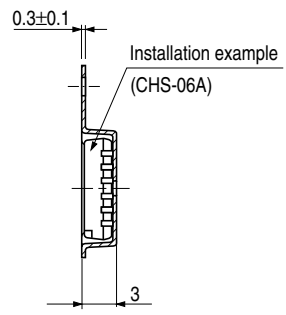
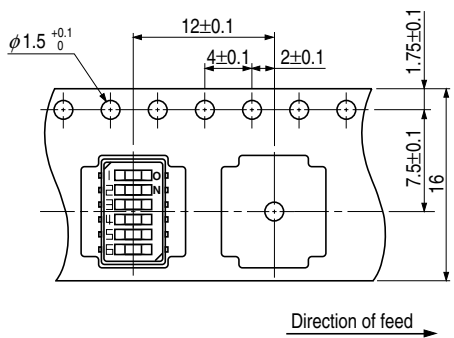
● 2 bits



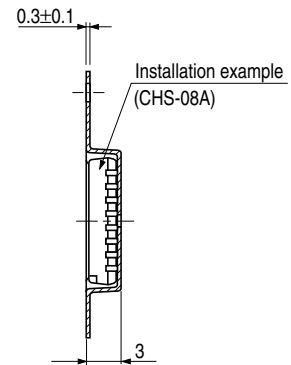
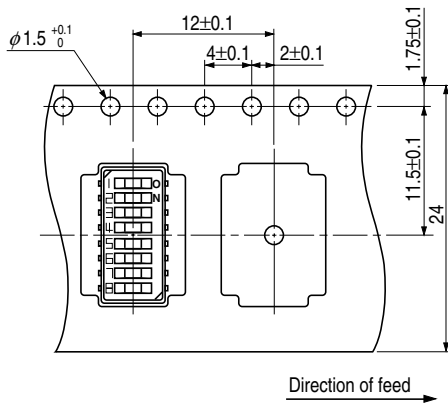
● 4 bits



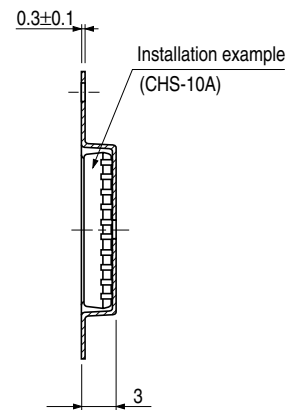
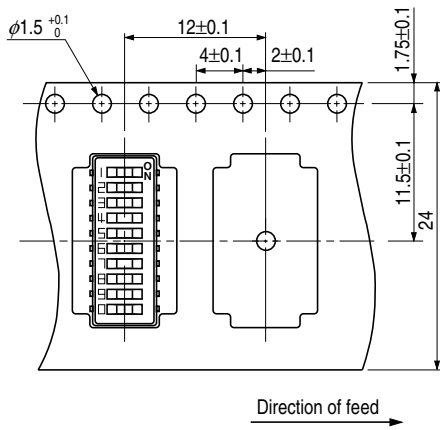
● 6 bits



● 8 bits



● 10 bits



CHS

SLIDE SWITCHES (SMD)

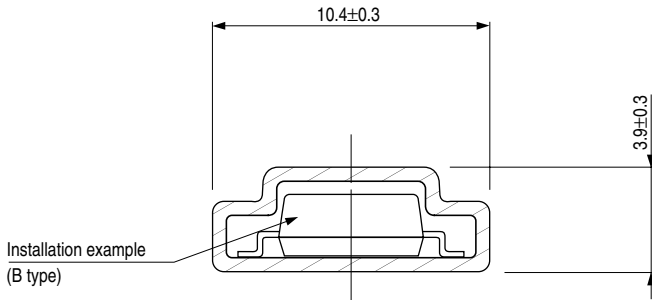
<Magazine packaging specifications>

- Packing quantities of magazines are different depending on the bit number of the switches.
Please order the multiple numbers of the specific packing quantities. (e.g. 70 pcs., 140 pcs., 210 pcs., etc., in case of 4 bits version)

Pieces in package : 4 bits, 70pcs./stick
6 bits, 50pcs./stick
8 bits, 40pcs./stick
10 bits, 30pcs./stick

● Magazine dimensions

(Unit : mm)



※ The magazine is common to A and B terminal pin.

Magazine length : 500 ± 2 mm long

<Bulk packaging specifications>

- Bulk packing is made by a small packing box and vinyl bags.
- One vinyl bag contains 50 pcs. and the small packing box contains 4 vinyl bags or 200 pcs.