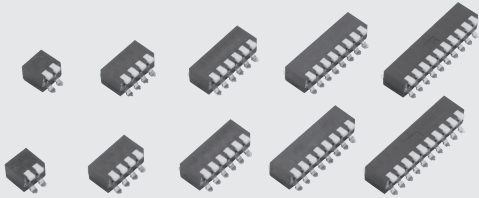


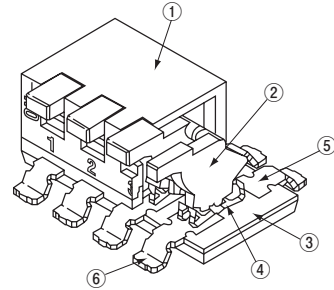
PIANO SWITCHES (FULL PITCH)



RoHS compliant



INTERNAL STRUCTURE



Part name	Material
① Cover	Polyamide
② Lever	
③ Base	
④ Slider contact	Copper alloy, Gold-plated
⑤ Fixed contact	
⑥ Terminal pin	

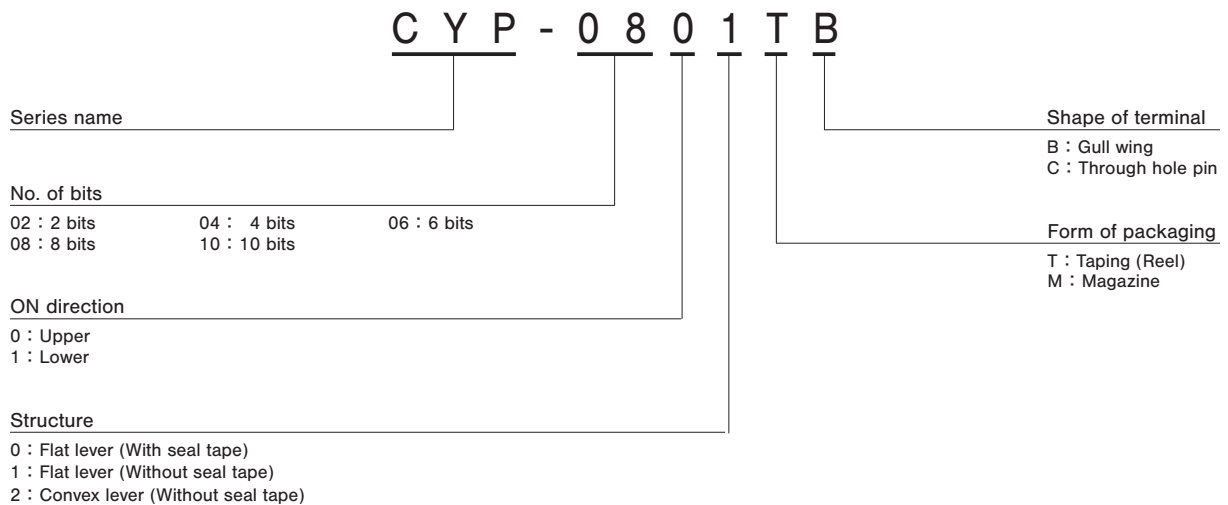
FEATURES

- Low profile design of 5 mm
- Excellent contact stability by twin gold-plated contact
- Washable type available by seal tape
- RoHS compliant
- Fine click action
- Resin material is UL Recognized 94V-0

APPLICATIONS

- OA equipments, communication devices
- Measurement equipment, FA equipment

PART NUMBER DESIGNATION



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

LIST OF PART NUMBERS

No. of bits	ON direction	Form of packaging	Structure	Flat lever (Without seal tape)				Convex lever (Without seal tape)				Flat lever (With seal tape)				Packaging quantity	
				B	Gull wing	C	Through hole pin	B	Gull wing	C	Through hole pin	B	Gull wing	C	Through hole pin		
2	Upper	Taping		CYP-0201TB				CYP-0202TB					CYP-0200TB				700 pcs./reel
		Magazine		CYP-0201MB	CYP-0201MC			CYP-0202MB	CYP-0202MC					CYP-0200MB	CYP-0200MC		70 pcs./stick
	Lower	Taping		CYP-0211TB				CYP-0212TB					CYP-0210TB				700 pcs./reel
		Magazine		CYP-0211MB	CYP-0211MC			CYP-0212MB	CYP-0212MC					CYP-0210MB	CYP-0210MC		70 pcs./stick
4	Upper	Taping		CYP-0401TB				CYP-0402TB					CYP-0400TB				700 pcs./reel
		Magazine		CYP-0401MB	CYP-0401MC			CYP-0402MB	CYP-0402MC					CYP-0400MB	CYP-0400MC		40 pcs./stick
	Lower	Taping		CYP-0411TB				CYP-0412TB					CYP-0410TB				700 pcs./reel
		Magazine		CYP-0411MB	CYP-0411MC			CYP-0412MB	CYP-0412MC					CYP-0410MB	CYP-0410MC		40 pcs./stick
6	Upper	Taping		CYP-0601TB				CYP-0602TB					CYP-0600TB				700 pcs./reel
		Magazine		CYP-0601MB	CYP-0601MC			CYP-0602MB	CYP-0602MC					CYP-0600MB	CYP-0600MC		28 pcs./stick
	Lower	Taping		CYP-0611TB				CYP-0612TB					CYP-0610TB				700 pcs./reel
		Magazine		CYP-0801TB	CYP-0611MC			CYP-0612MB	CYP-0612MC					CYP-0610MB	CYP-0610MC		28 pcs./stick
8	Upper	Taping		CYP-0801TB				CYP-0802TB					CYP-0800TB				700 pcs./reel
		Magazine		CYP-0801MB	CYP-0801MC			CYP-0802MB	CYP-0802MC					CYP-0800MB	CYP-0800MC		20 pcs./stick
	Lower	Taping		CYP-0811TB				CYP-0812TB					CYP-0810TB				700 pcs./reel
		Magazine		CYP-0811MB	CYP-0811MC			CYP-0812MB	CYP-0812MC					CYP-0810MB	CYP-0810MC		20 pcs./stick
10	Upper	Taping		CYP-1001TB				CYP-1002TB					CYP-1000TB				700 pcs./reel
		Magazine		CYP-1001MB	CYP-1001MC			CYP-1002MB	CYP-1002MC					CYP-1000MB	CYP-1000MC		16 pcs./stick
	Lower	Taping		CYP-1011TB				CYP-1012TB					CYP-1010TB				700 pcs./reel
		Magazine		CYP-1011MB	CYP-1011MC			CYP-1012MB	CYP-1012MC					CYP-1010MB	CYP-1010MC		16 pcs./stick

STANDARD SPECIFICATIONS

Operating temp. range	- 40 ~ 85 °C
Storage temp. range	
Sealing	Washable type available with seal tape
Net weight	Approx. 0.28 g (CYP-02) Approx. 0.50 g (CYP-04) Approx. 0.73 g (CYP-06) Approx. 0.97 g (CYP-08) Approx. 1.16 g (CYP-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	100 mΩ maximum
Insulation resistance	1000 MΩ (DC100 V) minimum
Dielectric strength	AC500 V, 60 s

MECHANICAL CHARACTERISTICS

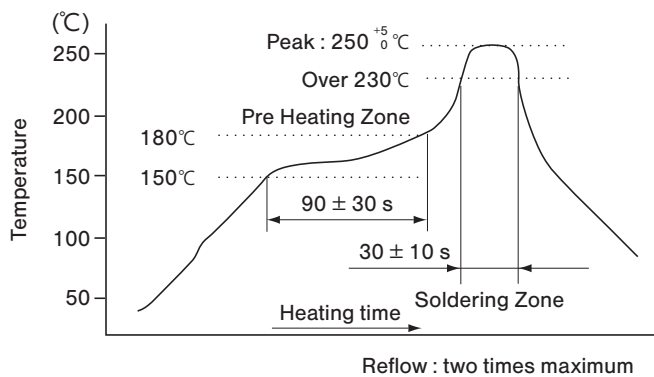
Operating force	0.3 ~ 5 N {0.03 ~ 0.51 kgf} maximum
Stop strength	8 N {0.82 kgf} 60 s
Solderability	245 ± 3 °C, 2 ~ 3 s
Soldering heat	Reflow : 255 °C (Peak temperature) Flow : 260 ± 3 °C, 5 ~ 6 s, two times maximum (Please refer to the profile below)
	Manual soldering : 350 ± 10 °C, 3 ~ 4 s
Shear (Adhesion)	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

ENVIRONMENTAL CHARACTERISTICS

Vibration	(Amplitude) 1.5 mm or (Acceleration) 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 1000 cycles, DC6 ± 0.5 V, 100 ± 10 mA
Humidity	-10 ~ 65 °C, Relative humidity 0 ~ 96 %, 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

PIANO SWITCHES (FULL PITCH)

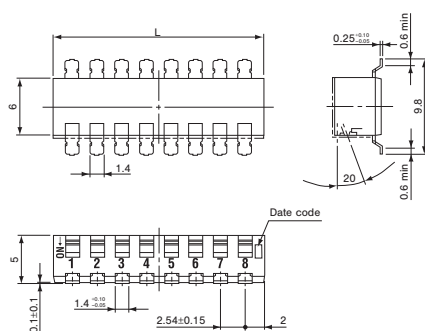
◀Reflow profile for soldering heat evaluation▶



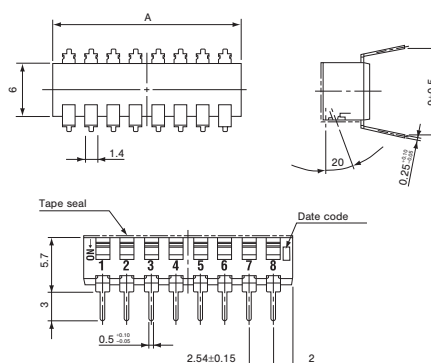
■ OUTLINE DIMENSIONS

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

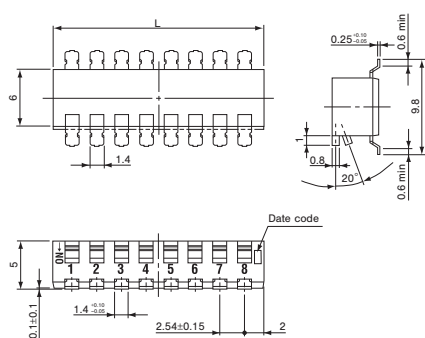
● Flat lever, Gull wing



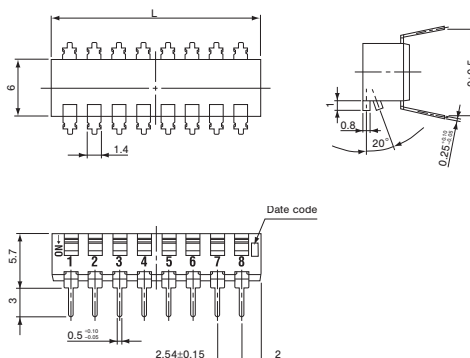
● Flat lever, Through hole pin



● Convex lever, Gull wing



● Convex lever, Through hole pin



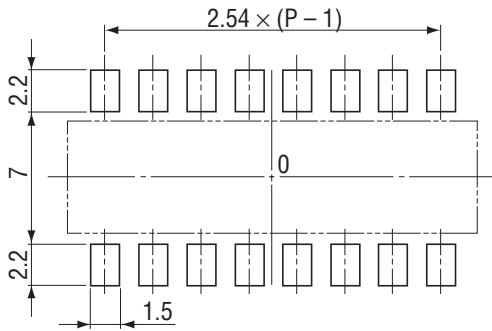
Part number	Schematic	No. of bits	L dimension
CYP-02		2	6.48
CYP-04		4	11.56
CYP-06		6	16.64
CYP-08		8	21.72
CYP-10		10	26.8

CYP

PIANO SWITCHES (FULL PITCH)

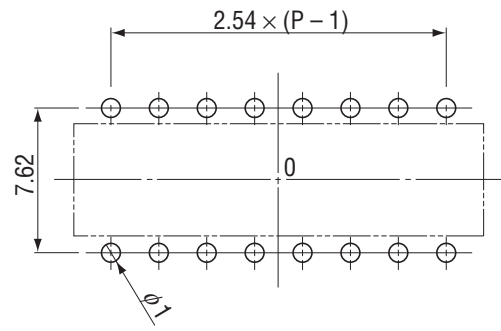
RECOMMENDED P.C.B. PAD DIMENSIONS

(Unit : mm)
P : No. of bits



SIZE OF P.C.B. PROCESSING

(Unit : mm)
P : No. of bits



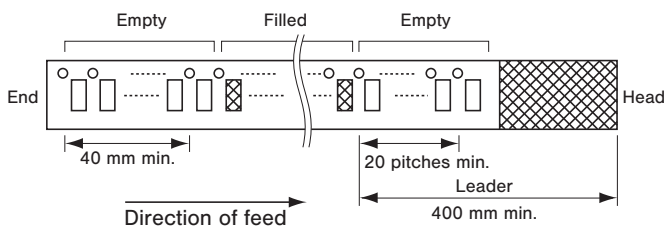
PACKAGING SPECIFICATIONS

<Taping packaging specifications>

- Taping version are packaged in 700 pcs. per reel. Orders will be accepted for units of 700 pcs., i.e., 700, 1400, 2100 pcs., etc.
- Taping version is boxed with 1 reel.

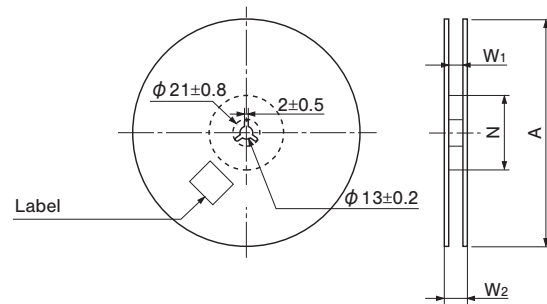
Maximum number of consecutive missing pieces = 2
Leader length and reel dimension are shown in the diagrams below:

● Embossed tape dimensions



● Reel dimensions

(Unit: mm)



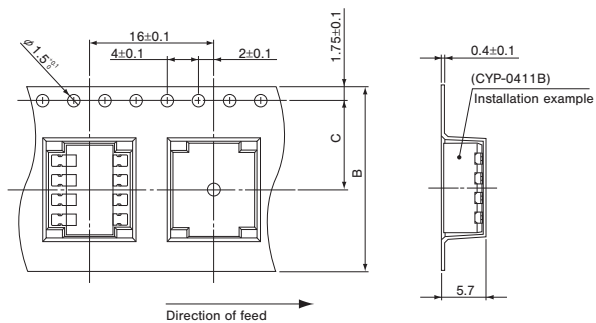
(Unit: mm)

No. of bits	A	W1	W2	N
2	$\phi 330 \pm 2$	25.4 ± 1	29.4 ± 1	$\phi 80 \pm 1$
4		25.4 ± 1	29.4 ± 1	
6		33.4 ± 1	37.4 ± 1	
8		45.4 ± 1	49.4 ± 1	
10		45.4 ± 1	49.4 ± 1	

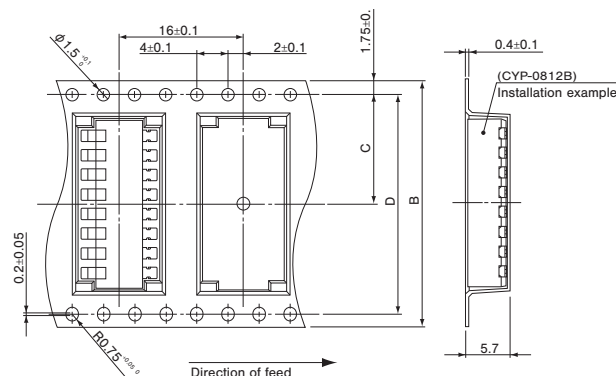
PIANO SWITCHES (FULL PITCH)

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

● 2 bits, 4 bits, 6 bits



● 8 bits, 10 bits



(Unit: mm)

No. of bits	B	C	D
2	16	7.5 ± 0.1	—
4	24	11.5 ± 0.1	
6			
8	32	14.2 ± 0.1	28.4 ± 0.1
10	42	20.2 ± 0.1	40.4 ± 0.1

<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 2 bits version)

Pieces in package : 2 bits, 70 pcs./stick
 4 bits, 40 pcs./stick
 6 bits, 28 pcs./stick
 8 bits, 20 pcs./stick
 10 bits, 16 pcs./stick