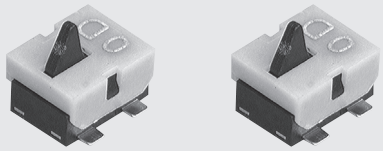
DETECT SWITCHES

CL-DB

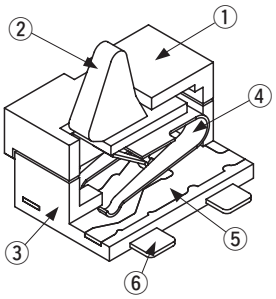
RoHS compliant



FEATURES

- High reliability by Gold contact
- RoHS compliant
- Available to detect from Top or side direction
- Automatic mounting possible
- Ultra-compact
- Low profile design of 3.35mm

INTERNAL STRUCTURE



Part name		Material	Flammability
①	Cover	Polyamide	UL94V-0
②	Lever	Polyamide	UL94V-0
③	Housing	Polyamide	UL94V-0
④	Slider contact	Copper alloy, Gold-plated	—
⑤	Fixed contact	Copper alloy, Gold-plated	—
⑥	Terminal pin	Copper alloy, Gold-plated	—

APPLICATIONS

- Detection of Communication devices, Audio-visual equipment, Industrial instrument, Security devices, etc.

PART NUMBER DESIGNATION

CL - DB - 1 C B - A 2 T

- Series name
- No. of bits
  1 : 1 bit
- Switching function
  C:OFF– (ON)
- Shape of terminal
  B : Gull wing
- Shape of actuator
  A : Standard
- Contact material
  2 : Gold
- Form of packaging
  T : Taping (Reel)

CL-DB
DETECT SWITCHES

STANDARD SPECIFICATIONS

Operating temp. range	− 40 ~ 85 °C
Storage temp. range	
Sealing	Non-washable
Net weight	0.02 g

ELECTRICAL CHARACTERISTICS

Contact rating Switching Minimum	DC5 V, 1 mA DC20 mV, 1 μA
Contact resistance	300 mΩ maximum
Insulation resistance	100 MΩ (DC100 V) minimum
Dielectric strength	AC 250 V, 60s

MECHANICAL CHARACTERISTICS

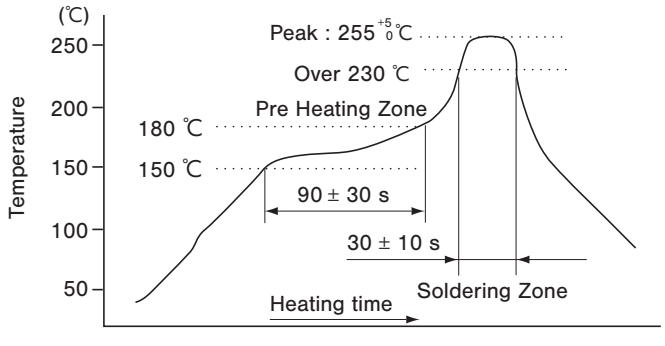
Switching function	OFF − (ON)
Stroke	Pre-travel: 0.30mm Over-travel:0.75mm total: 1.05mm
Operating force	0.34 N {0.035 kgf}
Stop strength	2 N {0.2 kgf}, 60 s
Solderability	245 ± 3 °C, 2 ~ 3 s
Soldering heat	Reflow : 260 °C (Peak temperature) (Please refer to the profile below)
Shear (Adhesion)	5 N {0.51 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/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 100,000 cycles DC 5V, 1mA
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

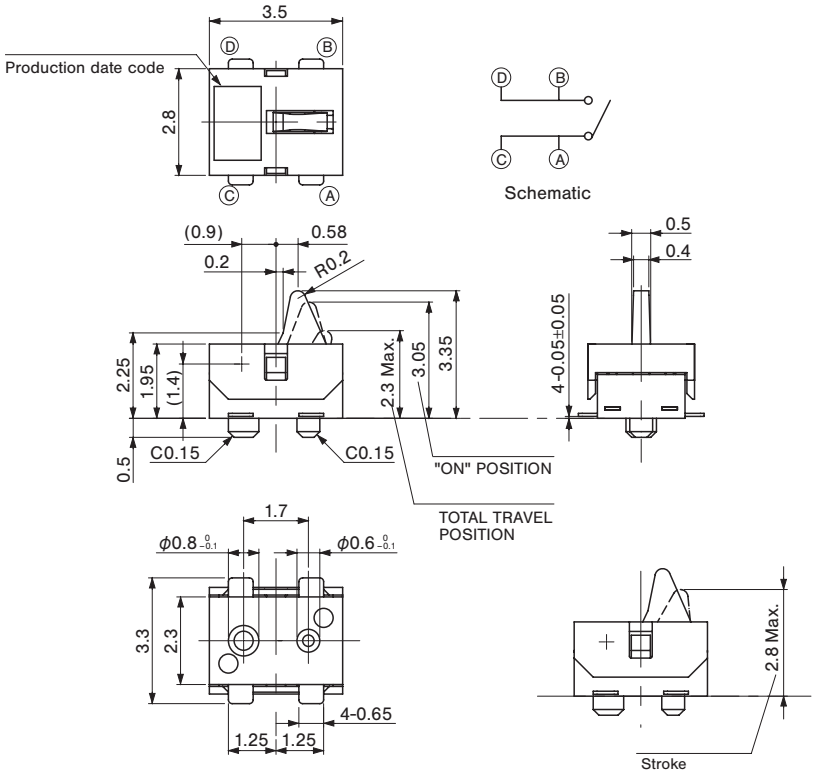
〈Reflow profile for soldering heat evaluation〉



Reflow : two times maximum

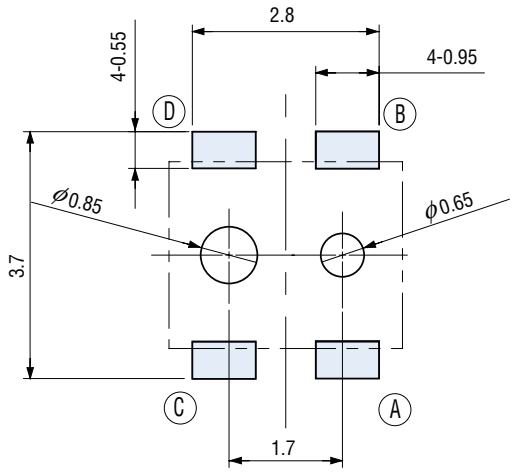
OUTLINE DIMENSIONS

Unless otherwise specified, tolerance : ± 0.2 (Unit : mm)

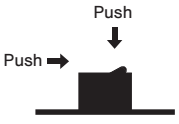


RECOMMENDED P.C.B. PAD DIMENSIONS

(Unit : mm)



LIST OF PART NUMBERS / SWITCHING FUNCTION

Part number	CL-DB-1CB-A2T	
Switching function		
	OFF	(ON)

CL-DB
DETECT SWITCHES

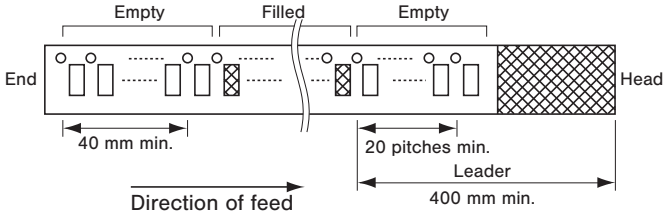
PACKAGING SPECIFICATIONS

<Taping packaging specifications>

● Taping version is packaged in 1000 pcs. per reel. Orders will be accepted for units of 1000 pcs.

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

● Embossed tape dimensions

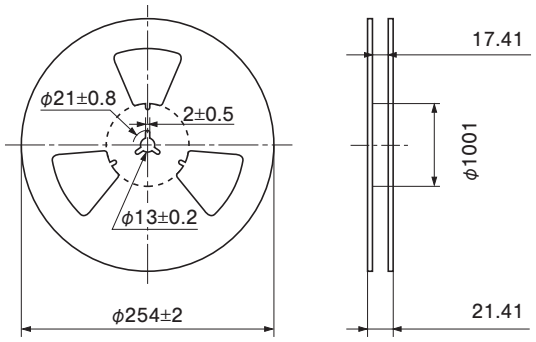


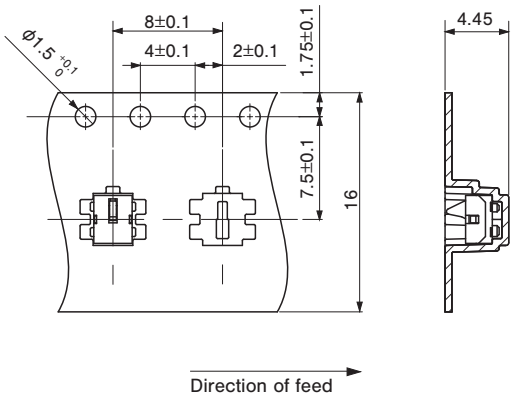
● Reel dimensions

(Unit: mm)

(Conforms to JIS C 0806-3)

(In accordance with EIAJ ET-7200A)



● 1 bit

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