

DETECT SWITCHES

CL-DB

RoHS compliant



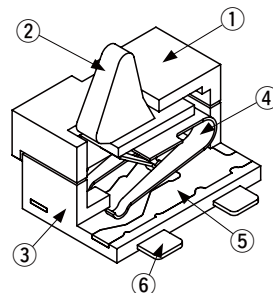
FEATURES

- 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

APPLICATIONS

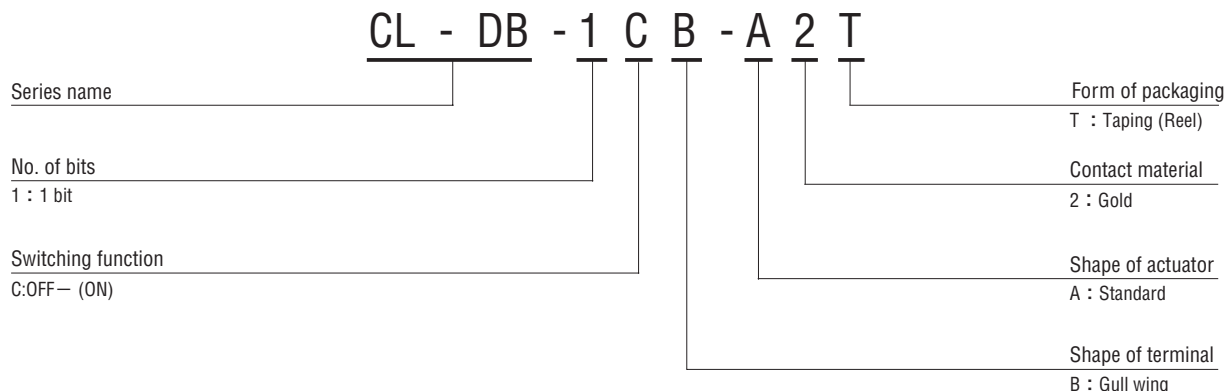
- Detection of Communication devices, Audio-visual equipment, Industrial instrument, Security devices, etc.

INTERNAL STRUCTURE



| | Part name | Material | Flammability |
|---|----------------|---------------------------|--------------|
| ① | Cover | Polyamide | UL-94-V0 |
| ② | Lever | Polyamide | UL-94-V0 |
| ③ | Housing | Polyamide | UL-94-V0 |
| ④ | Slider contact | Copper alloy, Gold-plated | — |
| ⑤ | Fixed contact | Copper alloy, Gold-plated | — |
| ⑥ | Terminal pin | Copper alloy, Gold-plated | — |

PART NUMBER DESIGNATION



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

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

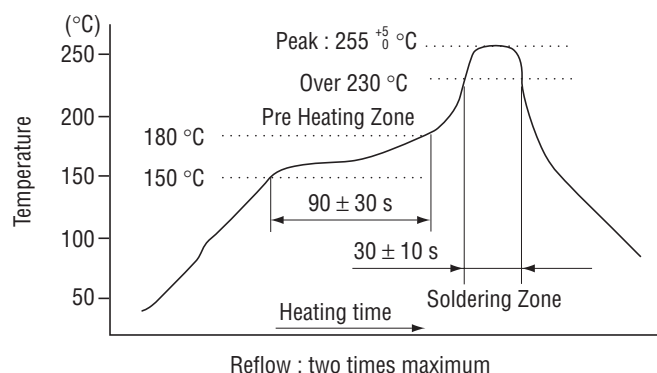
| | |
|--------------------|---|
| Switching function | OFF – (ON) |
| Stroke | Pre-travel: 0.30mm Over-travel: 0.75mm total: 1.05mm |
| Operating force | 0.34 N {0.035 kgf} |
| Stop strength | 2 N {0.02 kgf}, 60 s |
| Solderability | 245 ± 3 °C, 2 ~ 3 s |
| Soldering heat | Reflow : 260 °C (Peak temperature) (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 |

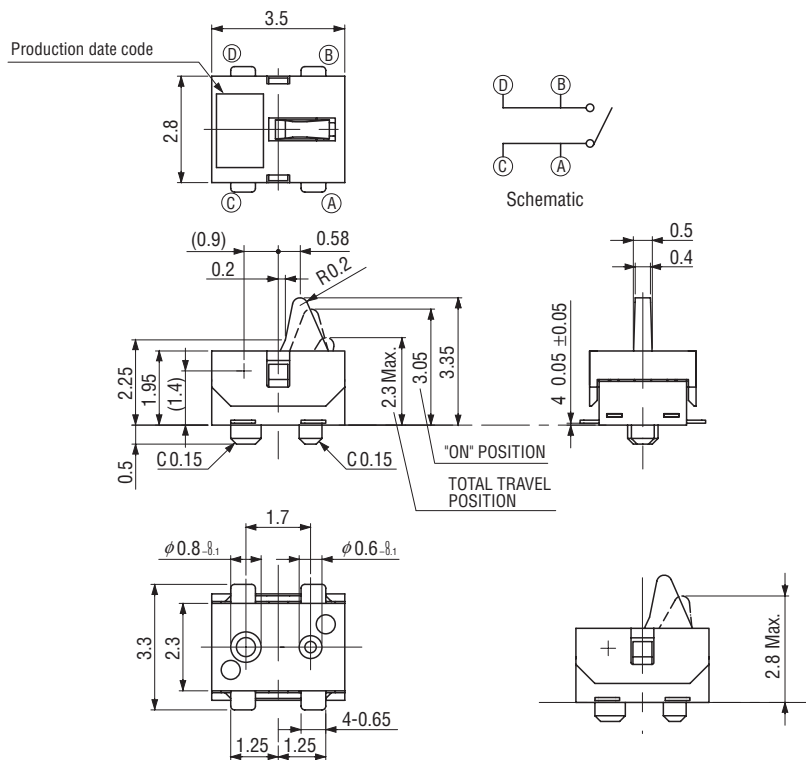
<Reflow profile for soldering heat evaluation>



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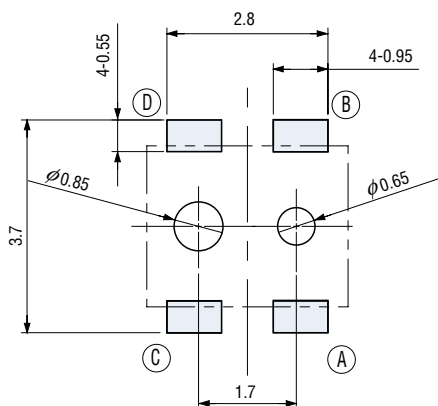
OUTLINE DIMENSIONS

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



RECOMMENDED P.C.B. PAD DIMENSIONS

(Unit : mm)



SWITCHING FUNCTION

| Part number | CL-DB-1CB-A2T | |
|--------------------|---------------|-------------|
| Switching function | <p>OFF</p> | <p>(ON)</p> |

CL-DB DETECT SWITCHES

PACKAGING SPECIFICATIONS

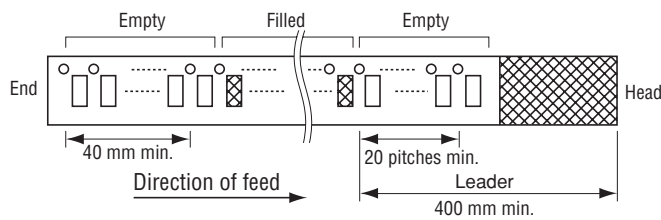
<Taping packaging specifications>

- 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

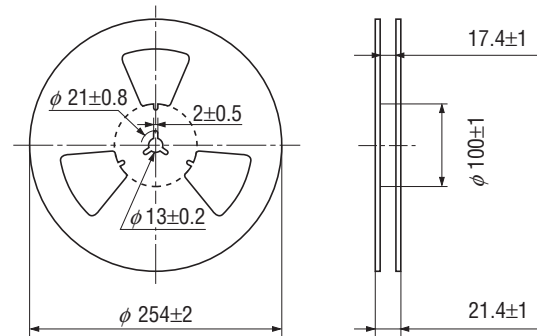


● Reel dimensions

(Unit: mm)

(Conforms to JIS C 0806-3)

(In accordance with EIAJ ET-7200A)



● 1 bits

(Unit : mm)

