



## Features

- Sharp click feel with a positive tactile feed-back. Due to small movement distance (stroke), user experiences distinct sensation when the switch clicks into place
- Ultraminiature and light weight structure suitable for high density mounting. Economic but high reliability
- Insert moulding in the contact with special treatment prevents flux build-up during soldering and permits auto-dipping

## Specifications

### Mechanical

Operation Force	: 160 ±50 gf
Stop Strength	: Place the switch such that vertical, a static load of 3 kgf shall be applied in the direction of stem operation for a period of 15 seconds
Stroke	: 0.25 (+0.2mm / -0.1mm)
Operating Temperature Range	: -25°C to +70°C
Storage Temperature Range	: -30°C to +80°C
Vibration Test	: MIL-STD-202F Method 201 A Frequency : 10 - 55 - 10 Hz/1 minute Directions : X, Y, Z, three mutually perpendicular directions Time : 2 hours each direction High reliability
Shock Test	: MIL-STD-202F Method 213B Condition A Gravity : 50 G (peak value), 11 milliseconds Direction and times : 6 sides and 3 times in each direction and High reliability

### Electrical

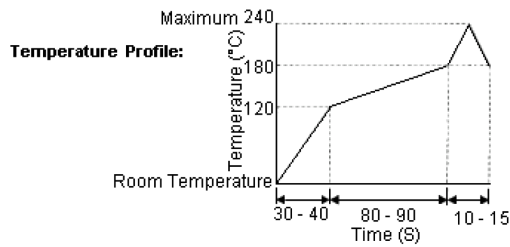
Electrical Life	: 300,000 cycles minimum
Contact Resistance	: 100mΩ maximum
Insulation Resistance	: 100mΩ minimum at 500V DC
Dielectric Strength	: 250V AC/1 minute
Contact Arrangement	: 1 Pole 1 throw

### Materials

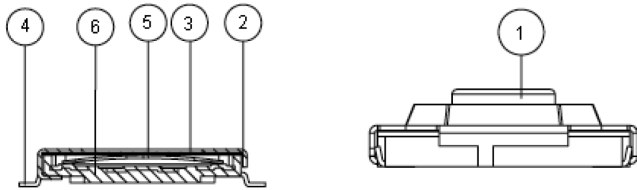
Cover	: Stainless steel
Contact Disc	: Phosphor bronze with silver cladding
Terminal	: Brass with silver cladding
Base	: LCP High-temperature thermoplastic
Colour	: Black
Stem	: Brass

## Soldering Process

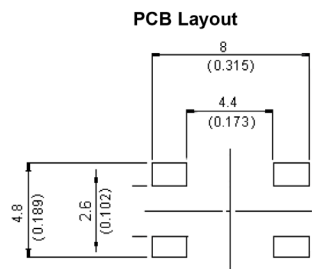
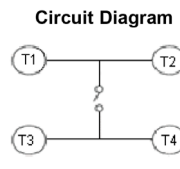
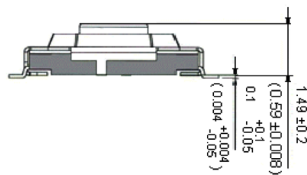
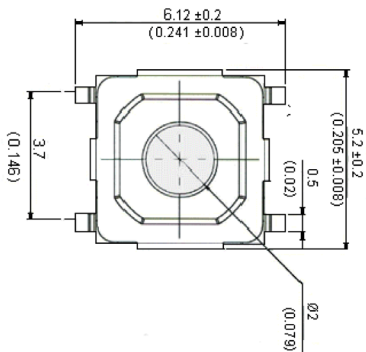
- Wave Soldering : Recommended solder temperature at 500°F (260°C) maximum 5 seconds subject to PCB 1.6mm thickness. (Soldering for through hole type)
  - Hand Soldering : Use a soldering iron of 30 watts, controlled at 608°F (320°C) approximately 2 seconds while applying solder
  - Soldering : Vapour phase and IR-reflow soldering can be applied
- Condition for Soldering (Reflow and non-washable type)



## Diagram



Item	Description	Materials	Treatment
1	Stem	SPCC-SD	Ni Plating
2	Cover	□ = Nickel Silver S = Stainless Steel	□ = None S = With Silver Plating
3	Adhesive Tape	PTFE	None
4	Terminal	Phosphor Bronze	With Silver Plating
5	Contact	Stainless Steel	With Silver Cladding
6	Base	High – Temperature Thermoplastic LCP	Moulded Black



Dimensions : Millimetres (Inches)  
Tolerance: ±0.2mm (±0.008 Inches)

## Part Number Table

Description	Part Number
Tactile Switch, SPNO, SMD	TM-533I-Q-T/R

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