# Body Height 1.8mm, Side Push Type Tactile Switches <br> TSW-1 Series 

## [] Features

<>With $5.4 \times 5.0 \mathrm{~mm}$ dimension and 1.8 mm height, these surface-mounting type switches are ideal for high-density mounting.
<>A sharp click feeling of key touch is provided utilizing the tactile feedback characteristic.
<>Permits reflow soldering.
<>Easy mounting by flat surface at upper side of the body.
$<>$ Package in 12 mm wide embossed taping.
[] Applications
<>Digital still camera and digital video camera
<>Audio equipment, VTR and Car navigation system
<>Cellar phone, PDA
Actual size

[ Products Line

| No | Products No | Operating force | Travel | Variety | Qty/reel(pcs.) |
| :---: | :--- | :---: | :---: | :---: | :---: |
| 1 | TSW-1A-1T20 | 1.76 N |  |  |  |
| 1 | TSW-1B-1T20 | 2.45 N |  | With guide <br> bosses |  |
| 2 | TSW-1C-1T20 | 1.76 N |  | 0.3 mm |  |
| 2,000 <br> (Minimum packing <br> unit) |  |  |  |  |  |
| 2 | TSW-1D-1T20 | 2.45 N |  | Without guide <br> bosses |  |

[] Typical Specifications

| Item |  |
| :--- | :--- |
| Ratings (max.) (Resistive load) | 50 mA 12 V DC |
| Contact resistance | 500 milliohm max. (Initial) |
| Insulation resistance | 100 megohm min. 100V DC |
| Withstanding voltage | 250 V AC for 1min. |
| Operating life | 50,000 cycles |
| Operating temperature range | -20 to +70 degree Celsius |
| Storage temperature range | -30 to +80 degree Celsius (except carrier tape) |

No
With guide bosses
TSW-1A-1T20, TSW-1B-1T20

## $\square$ Notes

1. The appearance and specifications of the product may be modified to improve its performance without prior notice.
2. This catalog shows only outline specifications. When using the product, please obtain formal specifications.
3. Please see appendix [Cautions in Using Switches].
4. $2,000 \mathrm{pcs} /$ one reel is the minimum packing unit. It is requested that the quantity of order shall be an integer multiple of the minimum packing unit.
5. Please set the reflow soldering condition confirming under the actual conditions of mass-production.
6. Characteristics of switch may change due to the warping of the circuit writing board. Consideration should be given to the pattern design and layout.
7. This push switch is not washable.
8. This push switch permits reflow soldering and the switch has the possibility to be mounted on the edge of the PC board. But auto-dip shall not be done after the mounting of the switch because of the big possibility of the penetration of the soldering flux into the contacts sliding portion.
9. Larger stress than specified and/ or shock shall not be applied during switch operation.
10. Pressure to the push-button shall be applied to the whole surface of $A$ or $B$ portion equally and avoid the pressure to only C portion.

11. Pressure of the vertical direction against switch operating direction shall not be applied to the push button.
12. In manual soldering, consider that the abnormal pressure of the soldering iron shall not be applied to the tip of the terminal as well do not apply any pressure for more than 1 minute after soldering.
13. Care shall be taken so that the flux shall not penetrate into the terminal portion.
14. The operating characteristic may change if force is exerted to the top the cover.
