## TL6150 Series Tact Switch



Applications / Markets


## Specifications

Contact Rating: 50mA, 32VDC
Electrical Life: up to 5,000,000 Cycles
Contact Resistance: $100 \mathrm{~m} \Omega$ Max. (Initial)
Insulation Resistance: 10M Min . at 100VDC
Dielectric Strength: 250VAC for 1 Minute
Operating Temperature: $-40^{\circ} \mathrm{C}$ to $85^{\circ} \mathrm{C}$
Operating Force: $160 \mathrm{gf} \pm 50 \mathrm{gf}(5,000,000$ cycles $)$

$$
200 \mathrm{gf} \pm 50 \mathrm{gf}(500,000 \text { cycles })
$$

$$
350 \mathrm{gf} \pm 100 \mathrm{gf} \text { ( } 300,000 \text { cycles })
$$

Travel: 0.3mm; 160gf
$0.35 \mathrm{~mm} ; 200 \mathrm{gf}$ $0.5 \mathrm{~mm} ; 350 \mathrm{gf}$ Dust/Moisture Protection: IP67
Function: SPST, Off-(On)

## Features \& Benefits

- Up to 5,000,000 cycle life expectancy
- Tape and Reel packaging
- IP67 ratings
- Multiple force options


## Part Number Configurator



## Body Dimensions <br> Gull Wing



| ACTUATOR | "X" | "Y" |
| :---: | :---: | :---: |
| A | 3.50 | 2.90 |
| B | 5.20 | 2.70 |



## Body Dimensions

J Lead


| ACTUATOR | "X" | "Y" |
| :---: | :---: | :---: |
| A | 3.50 | 2.90 |
| B | 5.20 | 2.70 |



## Body Dimensions <br> Tape and Reel



## Recommended

## Solder Process

Most contamination problems can be prevented by exercising care during the cleaning and soldering process. Care should be taken not to immerse or spray unsealed switches during flux removal. Contact E-Switch for specific soldering recommendations and specifications not shown. Generalized soldering procedures are outlined below.

## "TYPICAL" SMT REFLOW (Pb and Pb-Free)

| Profile Feature | Sn-Pb Eutectic Assembly | Pb-Free Assembly |
| :---: | :---: | :---: |
| Average Ramp-Up Rate ( $\mathrm{T} \mathrm{s}_{\text {max }}$ to Tp ) | $3^{\circ} \mathrm{C} /$ second max. | $3^{\circ} \mathrm{C} /$ second max. |
| $\quad$ Preheat <br> -Temperature Min $\left(T s_{\text {min }}\right)$ <br> -Temperature $\left.\mathrm{Max}^{( } \mathrm{T} \mathrm{s}_{\text {max }}\right)$ <br> -Time $\left(\mathrm{ts}_{\text {min }}\right.$ to $\left.\mathrm{ts} \mathrm{s}_{\text {max }}\right)$ | $\begin{gathered} 100^{\circ} \mathrm{C} \\ 1500^{\circ} \mathrm{C} \\ 60-120 \text { seconds } \end{gathered}$ | $\begin{gathered} 150^{\circ} \mathrm{C} \\ 200^{\circ} \mathrm{C} \\ 60-180 \text { seconds } \end{gathered}$ |
| Time Maintained above: <br> -Temperature ( $\mathrm{T}_{\mathrm{L}}$ ) <br> -Time ( $\mathrm{t}_{\mathrm{L}}$ ) | $\begin{gathered} 183{ }^{\circ} \mathrm{C} \\ 60-150 \text { seconds } \end{gathered}$ | $\begin{gathered} 217{ }^{\circ} \mathrm{C} \\ 60-150 \text { seconds } \end{gathered}$ |
| Time within $5^{\circ} \mathrm{C}$ of actual Peak Temperature (tp) | 10-30 seconds | 20-40 seconds |
| Ramp-Down Rate | $6^{\circ} \mathrm{C} /$ second max. | $6^{\circ} \mathrm{C} /$ second max. |
| Time $25^{\circ} \mathrm{C}$ to Peak Temperature | 6 minutes max. | 8 minutes max. |

Note 1: All temperatures refer to topside of the package, measured on the package surface.


