

**BOURNS®**

# SDT Series – Tact Switch

## Features

- Available sharp click feel with a positive tactile feedback
- Ultra-miniature and lightweight structure suitable for high density mounting
- Economical with high reliability
- Insert molding in the contact with special treatment prevents flux buildup during soldering and permits autodipping
- RoHS compliant\*

## Electrical Characteristics

Electrical Life  
 .....500,000 cycles min. for 260 g  
 1,000,000 cycles min. for 100 g, 160g  
 Rating .....DC 12 V 50 mA  
 Contact Resistance .....100 milliohms max.  
 Insulation Resistance  
 .....100 megohms, DC 500 V min.  
 Dielectric Strength...250 V AC for 1 minute  
 Contact Arrangement.....1 pole 1 position

## Environmental Characteristics

Operation Force.....260 g ±50 g,  
 160 g ±50 g, 100 g ±50 g  
 Stop Strength .....Place the switch such  
 that vertical, a static load of 3 kg shall  
 be applied in the direction of actuator  
 operation for a period of 15 sec.  
 Stroke  
 6mm type .....0.25 +0.2/-0.1 mm  
 12mm type .....0.35 ±0.1 mm  
 Temperature Range.....-20 °C to +70 °C  
 Vibration Test.....Mil-STD-202F,  
 Method 201A  
 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 msec  
 Direction & Times .....6 sides and  
 3 times in each direction.  
 High reliability

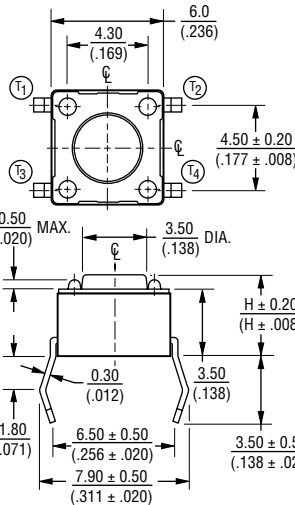
## Physical Characteristics

Cover Materials.....Steel  
 Base Materials .....UL94V-0 PBT plus glass  
 fiber reinforced  
 Cover/Base Color.....Black  
 Actuator Materials .....Dulacron POM  
 plus glass fiber reinforced  
 Actuator Color .....Black, brown, red  
 Contact Disc Materials....Phosphor bronze  
 with silver cladding  
 Terminal Materials  
 .....Brass with silver cladding  
 Wave Soldering Process  
 .....Recommended solder temperature  
 at 260 °C (500 °F) max., 5 seconds  
 Hand Soldering Process  
 .....Use a soldering iron of 30 watts  
 or less, controlled at 320 °C (608 °F)  
 for approximately 2 seconds while  
 applying solder  
 Packaging .....1,000 pieces per bag

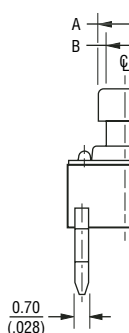
Specifications are subject to change without notice.  
 \*RoHS Directive 2002/95/EC Jan 27 2003 including Annex.  
 Customers should verify actual device performance in  
 their specific applications. REV 09/04

## Product Dimensions

### SDTX-610/620/630/650/660



### SDTX-644/648

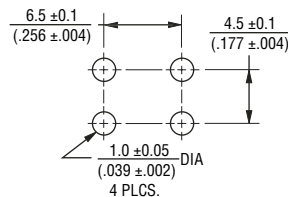


SDTX-644	
Dim.	mm/(in)
A	$\frac{2.4 \pm 1/-0}{(.094 \pm .004/-0)}$
B	$\frac{1.6 \pm 1/-0}{(.063 \pm .004/-0)}$

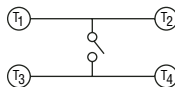
  

SDTX-648	
Dim.	mm/(in)
A	$\frac{2.8 \pm 1/-0}{(.110 \pm .004/-0)}$
B	$\frac{2.0 \pm 1/-0}{(.079 \pm .004/-0)}$

### RECOMMENDED PCB LAYOUT

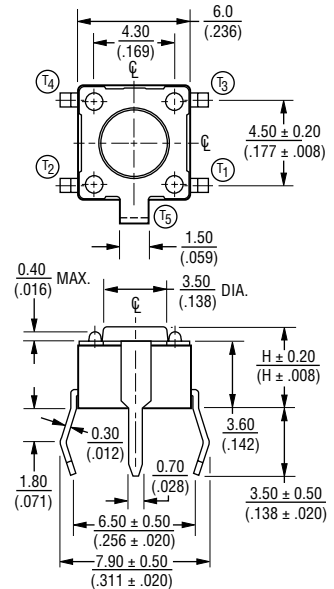


### CIRCUIT DIAGRAM

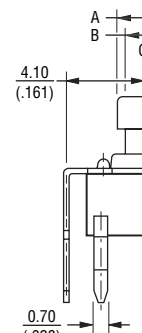


DIMENSIONS: MM/(INCHES)

### SDTG-610/620/630/650/660



### SDTG-644/648

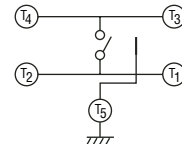


SDTG-644	
Dim.	mm/(in)
A	$\frac{2.4 \pm 1/-0}{(.094 \pm .004/-0)}$
B	$\frac{1.6 \pm 1/-0}{(.063 \pm .004/-0)}$

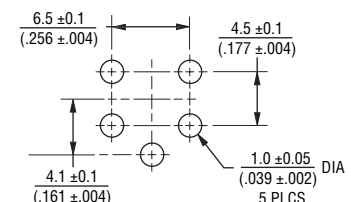
  

SDTG-648	
Dim.	mm/(in)
A	$\frac{2.8 \pm 1/-0}{(.110 \pm .004/-0)}$
B	$\frac{2.0 \pm 1/-0}{(.079 \pm .004/-0)}$

### CIRCUIT DIAGRAM

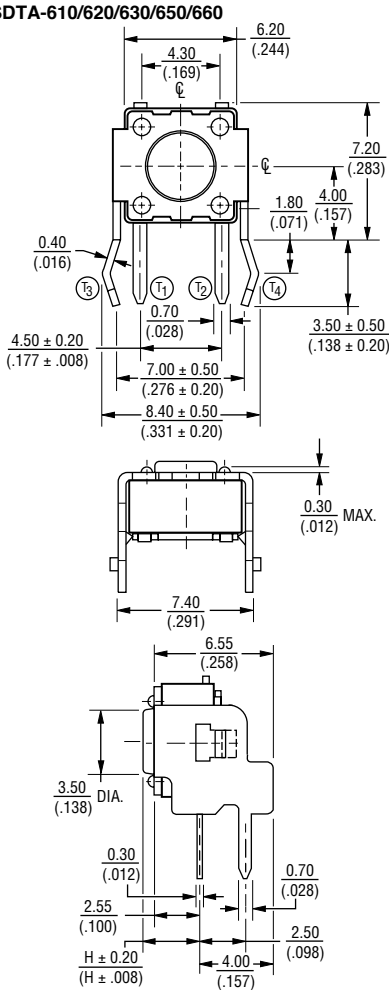


### RECOMMENDED PCB LAYOUT

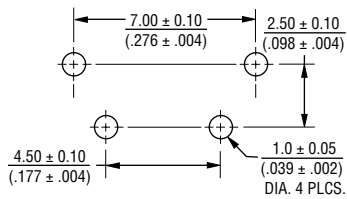


# SDT Series – Product Dimensions

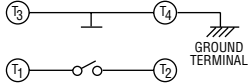
**SDTA-610/620/630/650/660**



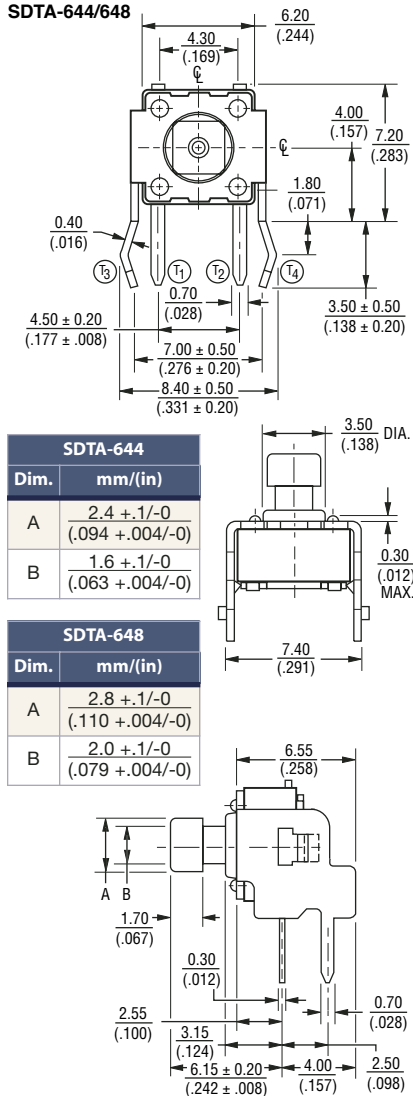
**RECOMMENDED PCB LAYOUT**



**CIRCUIT DIAGRAM**



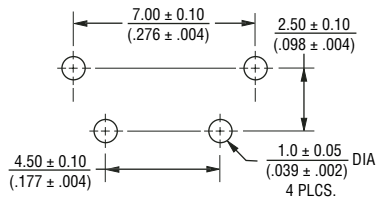
**SDTA-644/648**



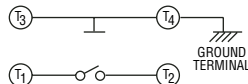
SDTA-644	
Dim.	mm/(in)
A	2.4 +.1/-0 (.094 +.004/-0)
B	1.6 +.1/-0 (.063 +.004/-0)

SDTA-648	
Dim.	mm/(in)
A	2.8 +.1/-0 (.110 +.004/-0)
B	2.0 +.1/-0 (.079 +.004/-0)

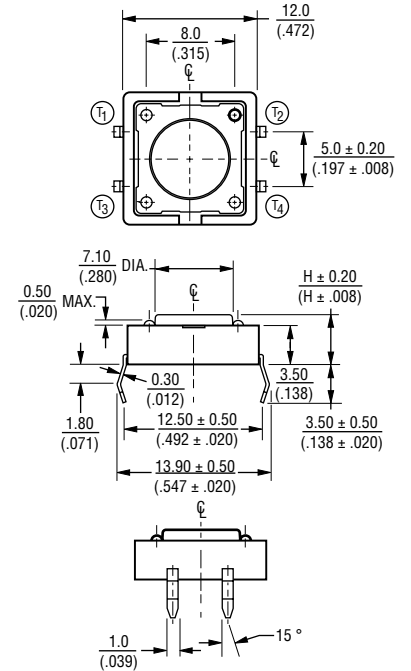
**RECOMMENDED PCB LAYOUT**



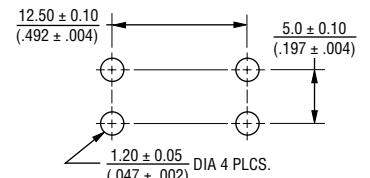
**CIRCUIT DIAGRAM**



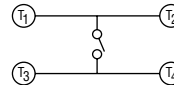
**SDTX-210**



**RECOMMENDED PCB LAYOUT**



**CIRCUIT DIAGRAM**



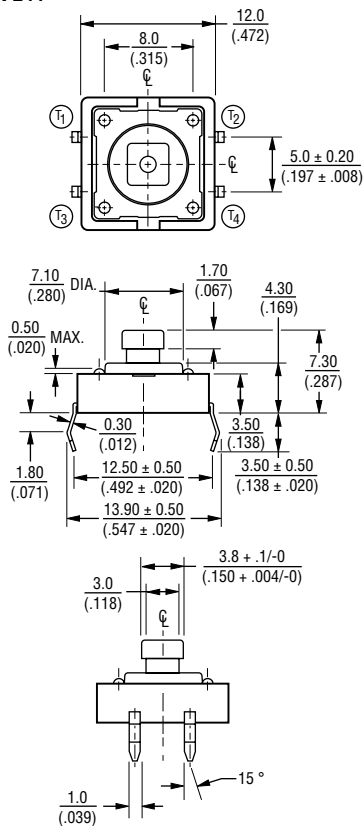
**DIMENSIONS: MM/(INCHES)**

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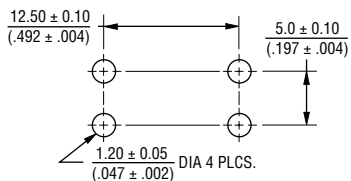
# SDT Series – Product Dimensions, Packaging Specifications and Ordering Information

## Product Dimensions

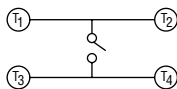
### SDTX-244



### RECOMMENDED PCB LAYOUT



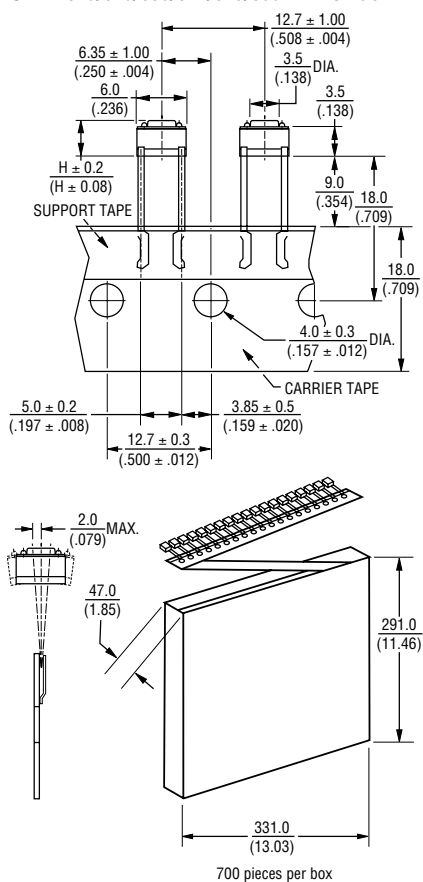
### CIRCUIT DIAGRAM



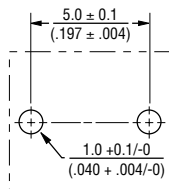
DIMENSIONS: MM/(INCHES)

## Packaging Specifications

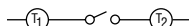
### SDTX-610/620/630/644/648/650 Ammo Pack



### RECOMMENDED PCB LAYOUT



### CIRCUIT DIAGRAM



## How To Order

### SDT G - 6 10 - K AP

Model \_\_\_\_\_

Product Series \_\_\_\_\_

X = Standard  
G = Ground Terminal  
A = Right Angle Type

Body Size \_\_\_\_\_

6 = 6 mm  
2 = 12 mm\*

Distance from First Pin to Top of Head (Right Angle Type) \_\_\_\_\_

10 = 3.15 mm  
20 = 3.85 mm  
30 = 5.85 mm  
44 = 6.15 mm (square head)  
48 = 6.15 mm (square head)  
50 = 8.35 mm  
60 = 11.85 mm

Height (Standard Type) \_\_\_\_\_

10 = 4.3 mm  
20 = 5.0 mm  
30 = 7.0 mm  
44 = 7.3 x 2.4 mm (square head)  
48 = 7.3 x 2.8 mm (square head)  
50 = 9.5 mm  
60 = 13 mm

Actuating Force \_\_\_\_\_

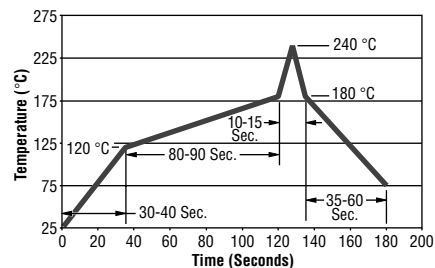
K = 100 g (black head – 6 mm only)  
N = 160 g (brown head)  
R = 260 g (red head)

Packaging Option \_\_\_\_\_ (SDTX only)

AP = Ammo Pak

\*Options available:  
SDTX-210  
SDTX-244

## Reflow Soldering Profile



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