

## Two Axis, Ultra-miniature Joystick With Optional Momentary Switch

### Features

- Smallest mini-joystick available (11x11x5 mm)
- Long Life 1 Million Cycles
- Provides excellent electrical accuracy through patented mechanism
- Optional momentary switch is operational at all positions
- RoHS compliant



Pat. Nos.: US 7,199,314 , Taiwan 279822, Pat. Pending in China

## Electrical and Mechanical Specifications

### Potentiometer 1 & 2

**Resistance Range**

10 K ohms through 100 K ohms

**Resistance Tolerance**

± 30%, ± 20%, ± 10%

**Dielectric Strength**

250 VAC 50 / 60 Hz for 1 minute

**Insulation Resistance**

100 megohms @ 250 VDC for 1 minute

**Operational Torque**

120 ± 50 gf.cm

**Power Rating**

0.0125 watt @ 50°C

**Maximum Operating Voltage**

50 VAC or 5 VDC maximum

**Rotational Angle**

55°

**Life**

1,000,000 cycles

### Optional Switch

**Switch Type**

Momentary

**Contact Resistance**

100 milliohms maximum initially

200 milliohms maximum after 200,000 cycles switching 5 mA @ 5 VDC

**Insulation Resistance**

100 megohms minimum @ 100 VDC for 1 minute

**Operational Force**

650 ± 150 gf

**Power Rating**

5 VDC, 5 mA maximum

**Travel**

0.6 ± 0.2mm

**Switch Life**

200,000 cycles

# Electrical and Mechanical Specifications

## Potentiometer 1 & 2

**Operating Temperature**  
-10°C to +80°C

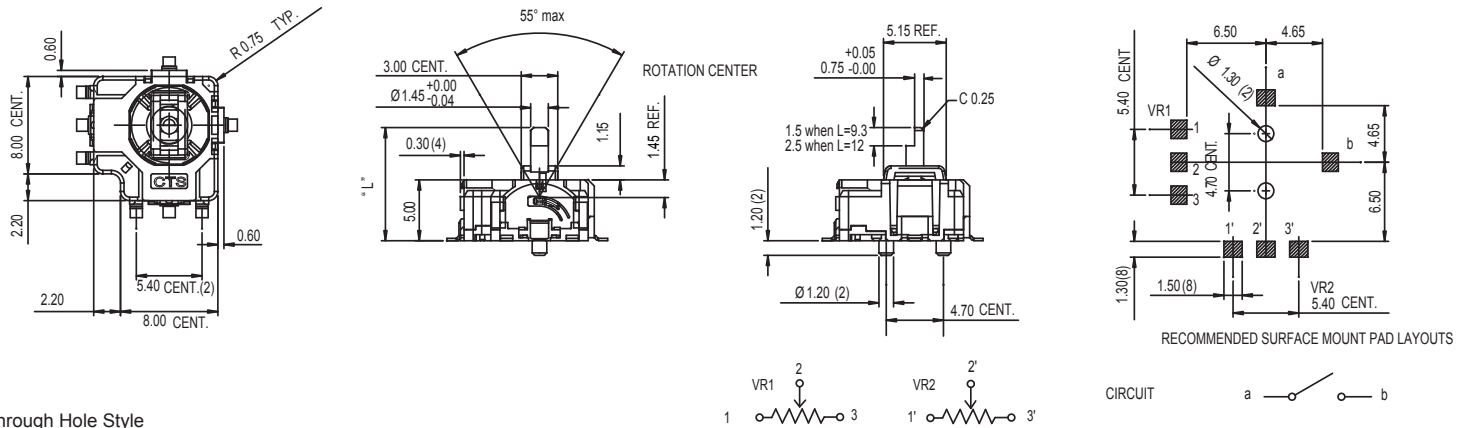
**Soldering Heat Resistance**  
260°C for 5 seconds

### Mounting Information

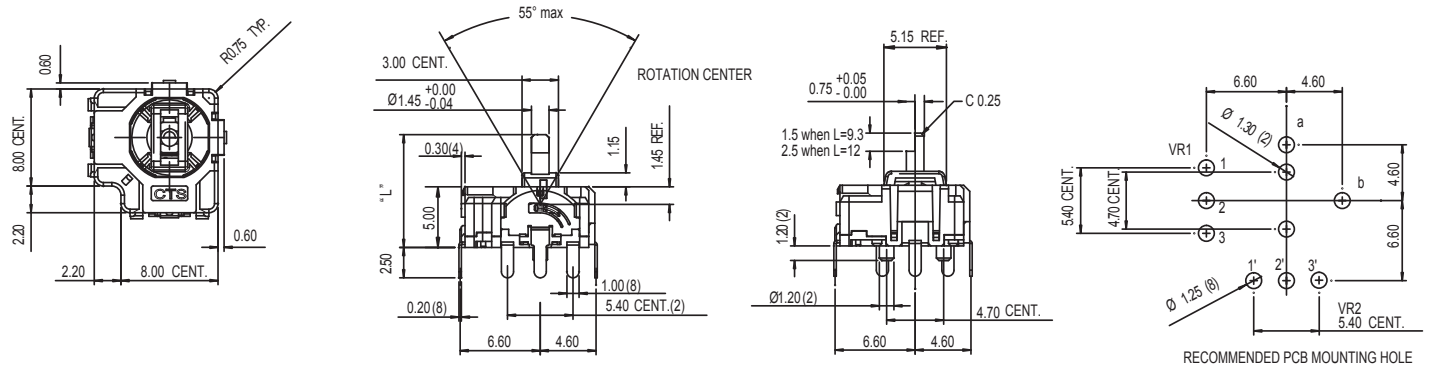
Through hole or Surface Mount terminal

## CTS Series 254 DIMENSION: mm

### Surface Mount Style



### Through Hole Style



## Ordering Information

**254**

**T**

**B**

**103**

**C**

**50**

**A**

254	T	B	103	C	50	A
<b>TERMINAL STYLE</b>	<b>DRIVE ARM LENGTH DIM "L"</b>	<b>RESISTANCE CODE EXAMPLES</b>	<b>RESISTANCE TOLERANCE</b>	<b>EFFECTIVE ANGLE</b>	<b>SWITCH CONFIGURATION</b>	
S – SURFACE MOUNT T – THROUGH HOLE	<b>LENGTH FROM MOUNTING SURFACE</b> A – 9.3 mm B – 12.0 mm	<b>CODE RESISTANCE</b> 103 10K 104 100K	A – ±10% B – ±20% C – ±30%	50 – 50° 55 – 55°	A – W/O SWITCH B – MOMENTARY SWITCH	

STANDARD PART (QUICK DELIVERY) - 254TA103C50A, 254TA103C50B, 254SA103C50A, 254SA103C50B