

# Series 193 SMT DIP Technical Data

## Side Actuated, Surface Mount DIP Switches

#### **Features**

#### **Optimized Mechanical Features**

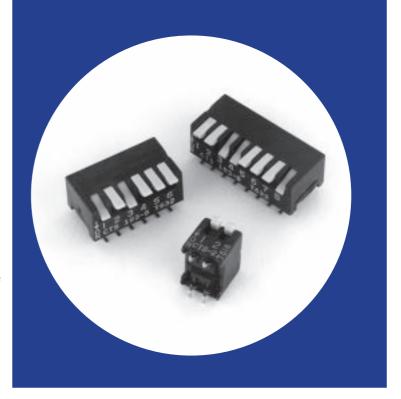
- Coplanarity: 0.1mm/.004" maximum
- Enclosed actuators shield contacts from foreign particles throughout life of switch
- Gull-wing terminal configuration
- Compatible with SMT assembly including IR and Vapor-phase (up to 260°C)
- · SPST configuration,2 through 10 positions

#### **Optimized Contact System**

- · Contact wiping action on make and break
- Integral terminal and contact locked into high temperature plastic base
- Lock-over-center design provides positive detent action
- Optimized, active contact design incorporating dimple-to-flat surface wiping interface with high contact force

#### **Materials**

- Gold plated contacts for long-term contact corrosion resistance
- · Tin plated terminals for better solderability
- · All UL 94V-0 plastic used
- · RoHS compliant



### **Electrical and Mechanical Specifications**

#### **Switch Function**

SPST-2 through 10 positions

#### **Switch Contact Resistance**

50 milliohms maximum initial

100 milliohms maximum at end of life

#### **Insulation Resistance**

1,000 megohms minimum between insulated terminals

#### **Dielectric Strength**

500 VAC for 1 minute between adjacent switches

#### **Nonswitching Rating**

100 mA or 50 VDC maximum

#### **Switch Capacitance**

5.0 pF maximum between adjacent closed switches

#### **Operating Temperature**

-40°C to +85°C

#### **Actuation Life**

7,000 cycles switching 50 mA @ 24 VDC

#### Coplanarity

Coplanarity of 0.1mm / .004" max

#### **Allowable Solder Time**

Up to 60 seconds at 260°C

#### **Vibration**

Per MIL-STD-202F, method 204D, condition B (.06" or 15G'S between 10 HZ to 2K HZ) with no contact inconsistencies greater than 1 microsecond

#### **Shock**

Per MIL-STD-202F, method 213B, condition A (50G'S) with no contact inconsistencies greater than 1 microsecond

#### Sealing

Bottom epoxy seal standard

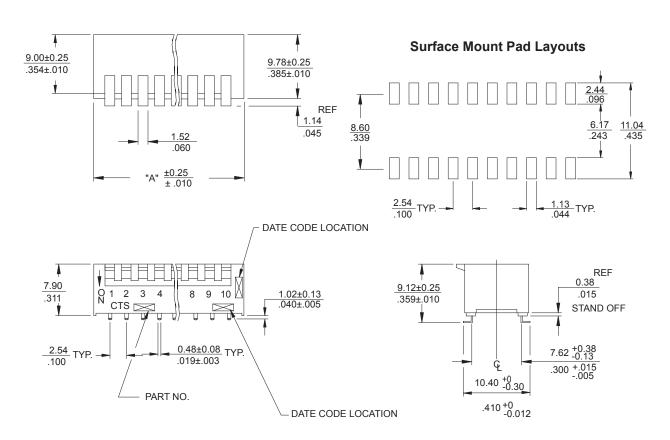
#### Marking

Special side or top marking available-consult CTS

#### **Packaging**

Standard : Anti-static tube packaging Optional : Tape and reel packaging

#### CTS SERIES 193



DIMENSION:	mm
	inch

"A" Overall Dimensions	No. of Switch Positions	Part Number
7.26 / .286	2	193–2MS
9.80 / .386	3	193–3MS
12.34 / .486	4	193–4MS
14.88 / .586	5	193–5MS
17.42 / .686	6	193–6MS
19.96 / .786	7	193–7MS
22.50 / .886	8	193–8MS
25.04 / .986	9	193–9MS
27.58 / 1.086	10	193–10MS

## **Ordering Information**

