

## Side actuated, through hole DIP switches

### Features

#### Optimized Mechanical Features

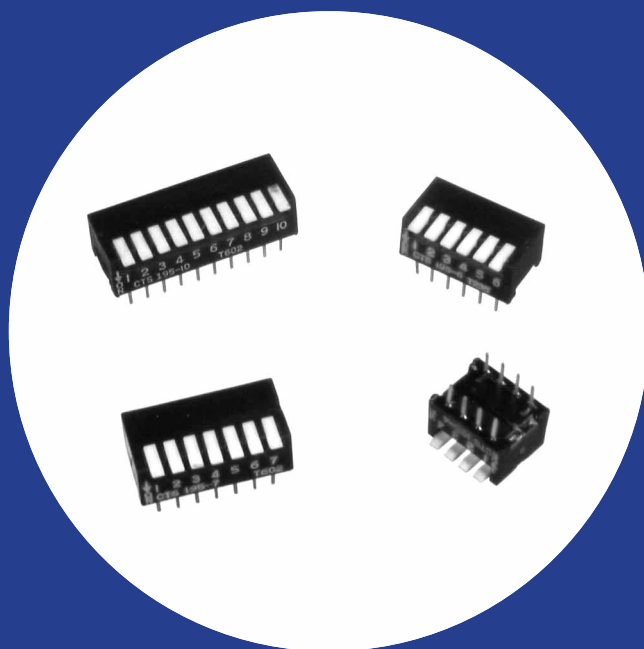
- SPST switching functions
- Enclosed actuators shield contacts from foreign particles throughout life of switch
- Reliable tape top seal optional/bottom epoxy seal standard
- Standard 2.54mm (.100") x 7.62mm (.300") DIP centers
- Complete marking on front side includes all information: ON direction, pole number, logo, part number and date code

#### Optimized Contact System

- Contact wiping on make and break
- Lock-over-center design provides positive detent action
- Optimized, active contact design incorporating a dimple-to-flat surface wiping interface with high contact force
- Insert molded base halves, of high temperature plastic, ensure mechanical integrity of contacts and terminals through soldering operations

#### Materials

- All U.L. 94 V-O plastics used
- Series 194 – gold plated contacts
- Series 195 – tin-lead plated contacts



U.S. Patent # 4,389,549

**Series 194 – Premium Gold Plated Contacts**  
**Series 195 – Economical Tin-Lead Plated Contacts**

## Electrical and Mechanical Specifications

#### Switch Function

Single pole single throw

#### Switch Contact Resistance

Switch Series	Initial, max.	End of life, max.
194	50 milliohms	100 milliohms
195	100 milliohms	500 milliohms

#### Insulation Resistance

1,000 megohms minimum across open switch  
1,000 megohms minimum between adjacent closed switches

#### Dielectric Strength

500 VAC minimum for 1 minute between adjacent switches

#### Nonswitching Rating

100 mA or 50 VDC

#### Switch Capacitance

5.0 pF maximum between adjacent switches

#### Operating Temperature

–40°C to +85°C

#### Actuation Life

Series 194 – 7,000 cycles switching 50 mA @ 24 VDC  
Series 195 – 2,000 cycles switching 50 mA @ 24 VDC

#### Allowable Solder Time

Up to 4 seconds with 260°C solder

#### Vibration

No mechanical damage or changes of switch settings during or after testing, when tested in three mutually perpendicular planes at 10-50 Hz sweep or at 60 Hz constant vibration

#### Shock

No mechanical damage or changes of switch settings with 25 G applied

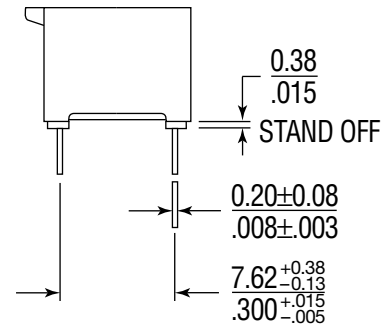
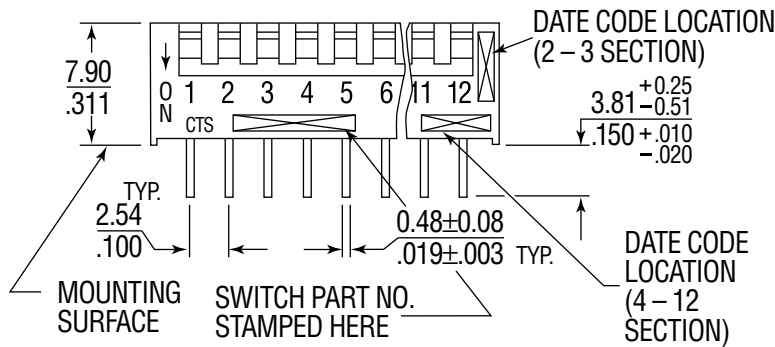
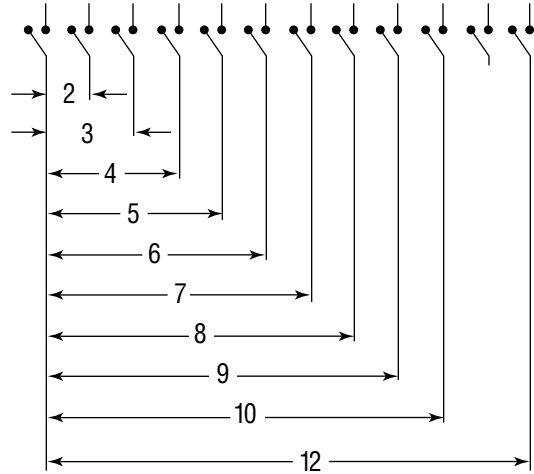
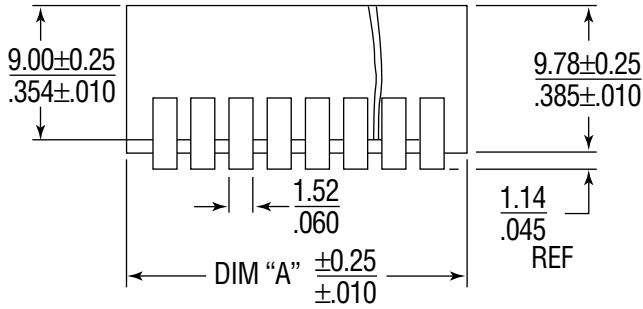
#### Sealing

Bottom epoxy seal standard  
Top tape seal optional

#### Marking

Special side or top marking available-consult CTS

## CTS SERIES 194/195



DIMENSION:  $\frac{\text{MM}}{\text{INCH}}$

### Ordering Information

"A" Overall Dimension	No. of Switch Sections
7.26 / .286	2
9.80 / .386	3
12.34 / .486	4
14.88 / .586	5
17.42 / .686	6
19.96 / .786	7
22.50 / .886	8
25.04 / .986	9
27.58 / 1.086	10
32.66 / 1.286	12

### Part Number Code For Ordering

**XXX** - **XX** **M** **S** **T**  
 Series 194  
 Series 195  
 XX: Number of Positions  
 M: Medium Length Actuator  
 S: Bottom Epoxy Seal  
 T: Top Tape Seal (optional)  
 Example: 195-8MST

### Order From:

**CTS CORPORATION, ELECTROCOMPONENTS** / 1601 Mishawaka Street / Elkhart, Indiana 46514  
 North America Toll Free (888) 287-4690 / (219) 296-6700 / FAX: (219) 293-1240 <http://www.ctscorp.com>

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