

Side Actuated, Surface Mount DIP Switches

Features

Optimized Mechanical Features

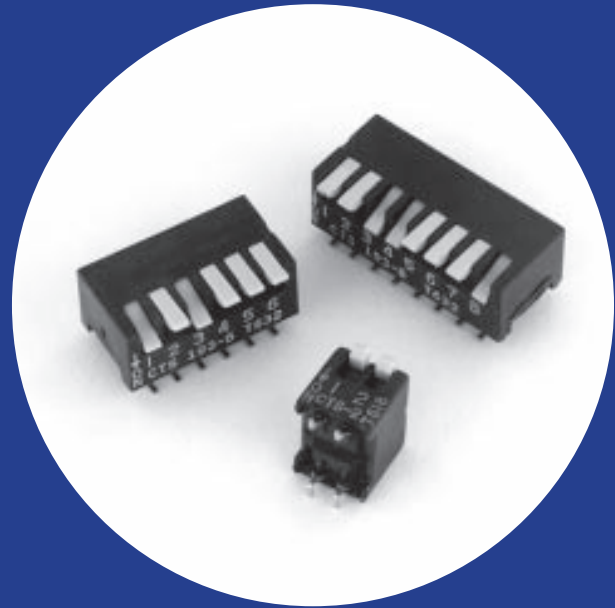
- Coplanarity: 0.1mm/.004" maximum
- Enclosed actuators shield contacts from foreign particles throughout life of switch
- Gull-wing terminal configuration
- Tube or tape and reel packaging available

Optimized Contact System

- Contact wiping action on make and break
- Integral terminal and contact locked into thermoset 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, copper alloy contacts.
- High temperature body and actuator materials (UL 94V-0)
- 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 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 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

IR and Vapor Phase - up to 60 seconds at 260°C
Wave - up to 5 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

Shock

Per MIL-STD-202F, method 213B, condition A (25G'S) with no contact inconsistencies

Sealing

Bottom epoxy seal standard

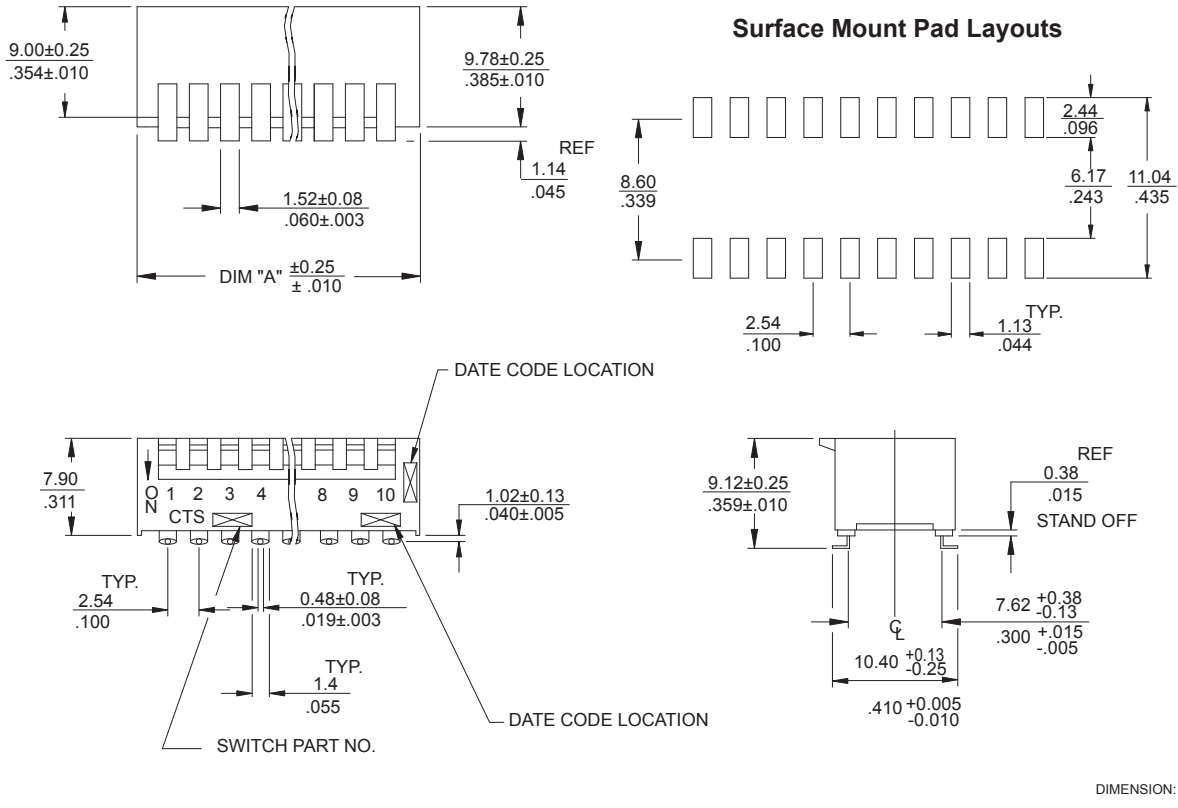
Marking

Special side or top marking available-consult CTS

Packaging

Standard : Anti-Static tube packaging
Optional : Tape and Reel packaging

CTS SERIES 193



DIMENSION: $\frac{\text{mm}}{\text{inch}}$

"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

193 - 08 M S R - N - P

XX: # OF POSITIONS

M: MEDIUM LENGTH ACTUATOR
(1.14mm/.045")

S: BOTTOM EPOXY SEAL

R: TAPE AND REEL PACKAGING
Available for 2,3,4,5,6,8 positions,
consult CTS for other positions

BLANK: Anti-Static Tube Packaging

N: SHIP AT ON POSITION
BLANK: SHIP AT OFF POSITION

P: RoHS COMPLIANT

BLANK: RoHS COMPLIANT FOR SHIPMENT FROM 7/01/06