

### Surface Mount Multi-Functional DIP Switch IR Solderable, PCB Washable

#### Features

##### Optimized Mechanical Features

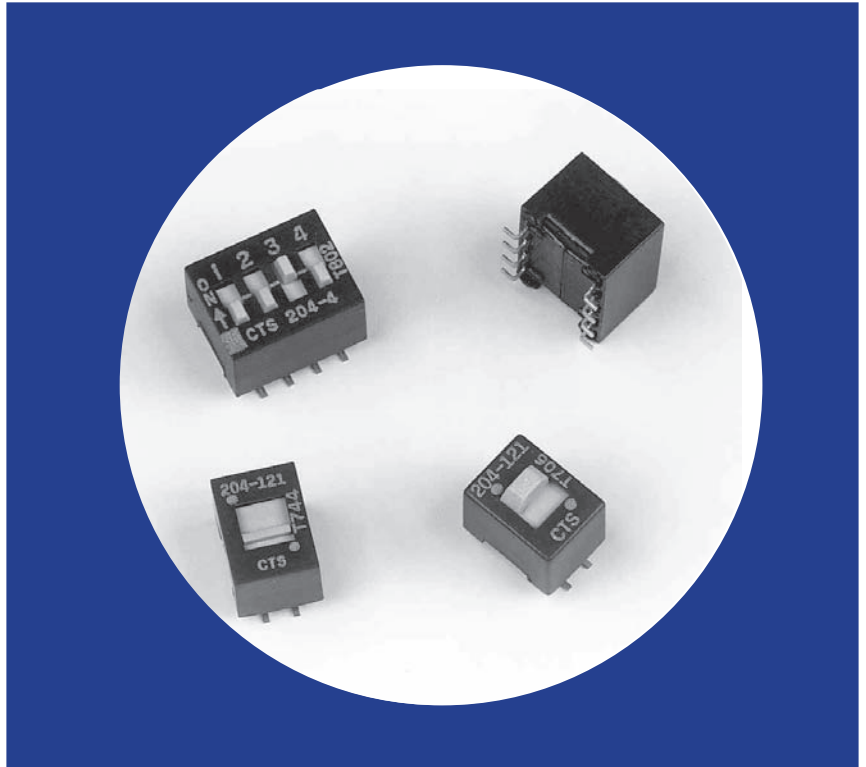
- Coplanarity: 0.1mm / .004" max.
- Compatible with SMT assembly including IR and Vapor-Phase (up to 260°C)
- Enclosed actuators shield contacts from foreign particles throughout life of switch
- Gull-wing terminal configurations
- Available with SPST, SPDT, DPST, DPDT, 3PST, 4PST circuitry choices
- Removable tape seal to withstand IR solder temperature and board washing

##### Optimized Contact System

- Contact wiping action on make and break
- Integral terminal and contact locked into thermoset base
- Available with low profile, standard, or extended actuators
- Electrostatic discharge shield rated to 22 KV

##### Materials

- Gold plated contacts for long-term contact corrosion resistance
- All UL 94 V-0 plastics used
- RoHS compliant



## Electrical and Mechanical Specifications

#### Switch Function

- SPST - 2 through 10 and 12 positions
- SPDT & DPST - 1 through 6 positions
- DPDT & 4PST - 1 through 3 positions
- 3PST - 1 through 4 positions

#### 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 pF maximum between adjacent closed switches

#### Operating Temperature

- 55°C to +85°C

#### Actuation Life

- 5,000 cycles switching 50 mA @ 24 VDC

#### Coplanarity

- 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 15 G's between 10 Hz to 2K Hz) with no contact inconsistencies greater than 1 microsecond

#### Shock

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

#### Sealing

- Bottom epoxy seal optional
- Top tape seal optional

#### Marking

- Special side or top marking available - consult CTS

#### Packaging

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

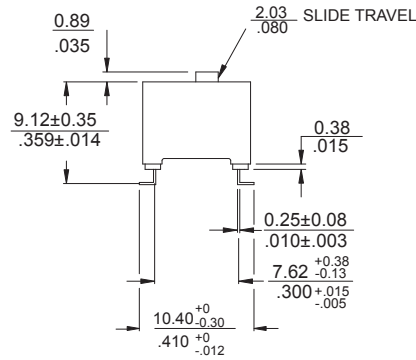
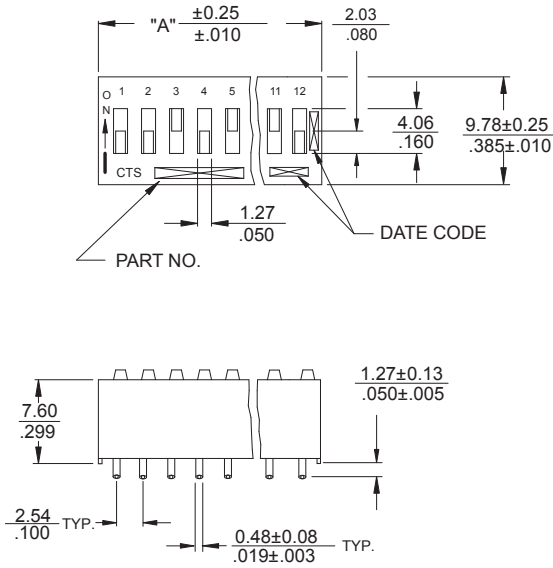
# SPST

SCHEMATIC



## Ordering Information SPST Switches

| "A" Overall Dimension | No. of Switch Positions | Part No. |
|-----------------------|-------------------------|----------|
| 7.26 / .286           | 2                       | 204-2    |
| 9.80 / .386           | 3                       | 204-3    |
| 12.34 / .486          | 4                       | 204-4    |
| 14.88 / .586          | 5                       | 204-5    |
| 17.42 / .686          | 6                       | 204-6    |
| 19.96 / .786          | 7                       | 204-7    |
| 22.50 / .886          | 8                       | 204-8    |
| 25.04 / .986          | 9                       | 204-9    |
| 27.58 / 1.086         | 10                      | 204-10   |
| 32.66 / 1.286         | 12                      | 204-12   |



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

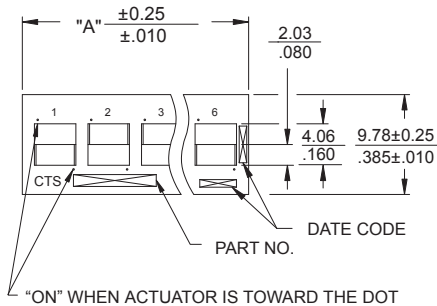
# SPDT / DPST

## Ordering Information SPDT/DPST Switches

| "A" Overall Dimension | Number of Switch Positions | Actuation | Part No.        |
|-----------------------|----------------------------|-----------|-----------------|
| 7.26 / .286           | 1                          | SPDT/DPST | 204-121/204-211 |
| 12.34 / .486          | 2                          | SPDT/DPST | 204-122/204-212 |
| 17.42 / .686          | 3                          | SPDT/DPST | 204-123/204-213 |
| 22.50 / .886          | 4                          | SPDT/DPST | 204-124/204-214 |
| 27.58 / 1.086         | 5                          | SPDT/DPST | 204-125/204-215 |
| 32.66 / 1.286         | 6                          | SPDT/DPST | 204-126/204-216 |

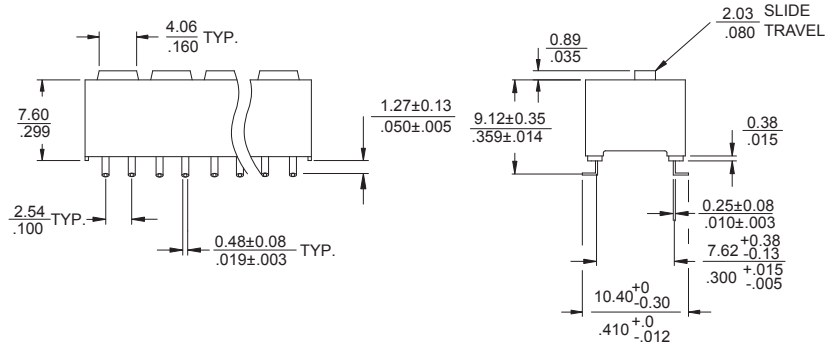
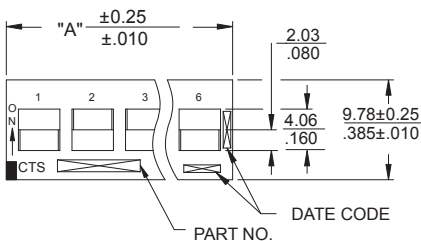
### SPDT

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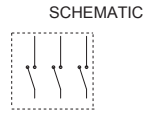
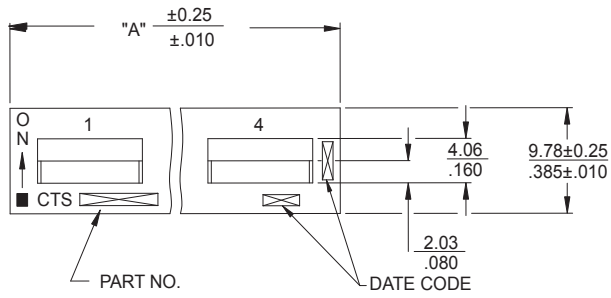
### DPST

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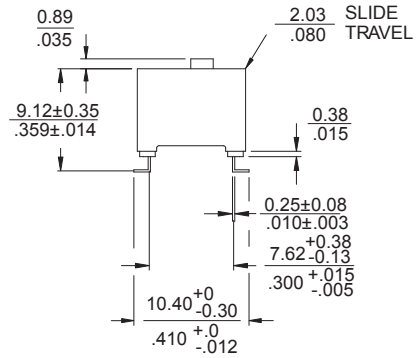
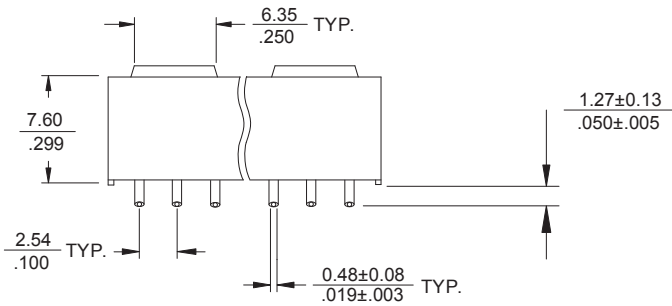
DIMENSION:  $\frac{\text{mm}}{\text{inch}}$

## 3PST



## Ordering Information 3PST Switches

| "A" Overall Dimension | No. of Switch Positions | Actuation | Part No. |
|-----------------------|-------------------------|-----------|----------|
| 9.80 / .386           | 1                       | 3PST      | 204-311  |
| 17.42 / .686          | 2                       | 3PST      | 204-312  |
| 25.04 / .986          | 3                       | 3PST      | 204-313  |
| 32.66 / 1.286         | 4                       | 3PST      | 204-314  |

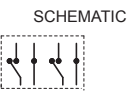
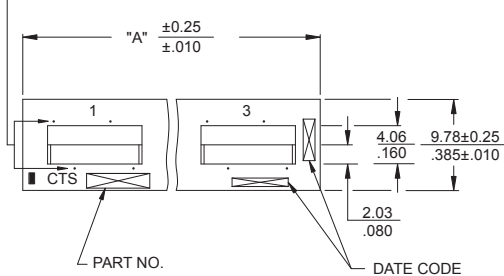


DIMENSION:  $\frac{\text{mm}}{\text{inch}}$

## DPDT / 4PST

"ON" WHEN ACTUATOR IS TOWARD THE DOT

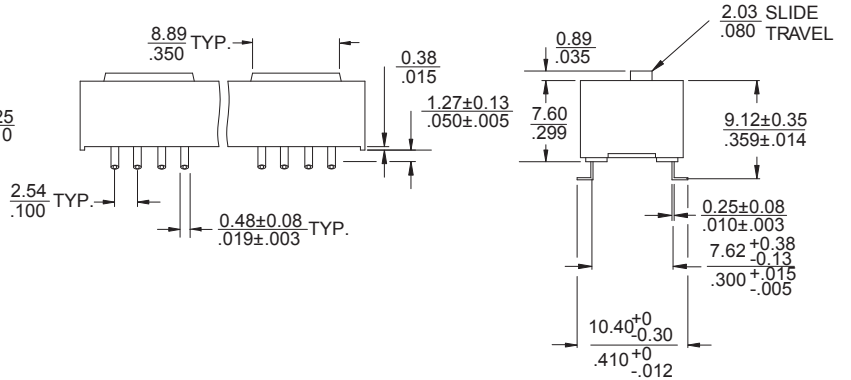
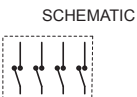
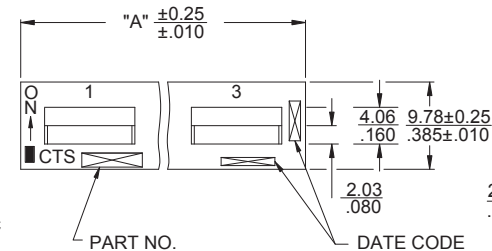
DPDT



## Ordering Information DPDT/4PST Switches

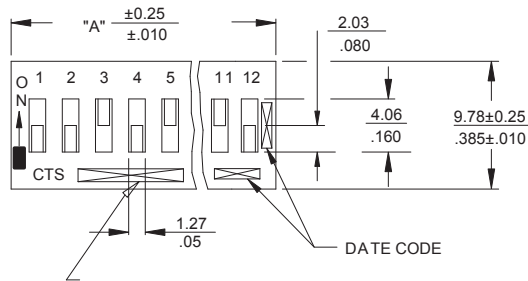
| "A" Overall Dimension | No. of Switch Positions | Actuation | Part No.        |
|-----------------------|-------------------------|-----------|-----------------|
| 12.34 / .486          | 1                       | DPDT/4PST | 204-221/204-411 |
| 22.50 / .886          | 2                       | DPDT/4PST | 204-222/204-412 |
| 32.66 / 1.286         | 3                       | DPDT/4PST | 204-223/204-413 |

4PST

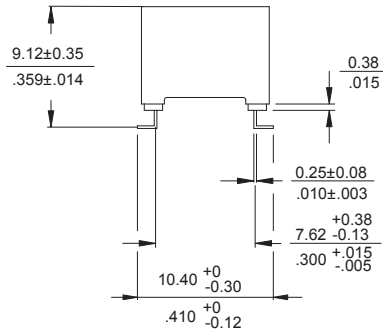
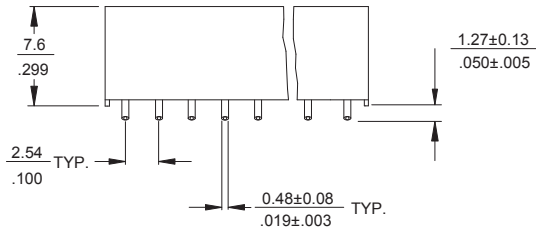
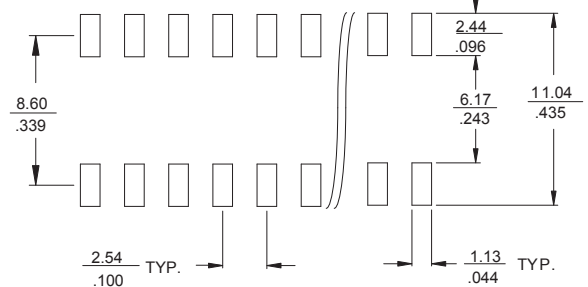


DIMENSION:  $\frac{\text{mm}}{\text{inch}}$

# Low Profile Actuators (Available in SPST and SPDT )



SURFACE MOUNT PAD LAYOUTS (ALL STYLES)



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

## Ordering Information

