General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver): 3VA maximum @ 28V DC maximum
(Applicable Range 10mA ~ 125mA @ 0.1V ~ 28V)

Logic Level (gold): 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
Note: See Supplement for further explanation of operating range.

Other Ratings

Contact Resistance: 100 milliohms maximum
Insulation Resistance: 100 megohms minimum @ 100V DC
Dielectric Strength: 250V AC minimum for 1 minute minimum between contacts & between contacts & case
Mechanical Life: 500,000 operations minimum
Electrical Life: 500,000 operations minimum
Nominal Operating Force: 1.60N
Total Travel: .008" (0.2mm)

Materials & Finishes

Actuator: Glass fiber reinforced polyamide (UL94V-0)
Case: Stainless steel
Base: Glass fiber reinforced polyamide (UL94V-0)
Movable Contacts: Stainless steel with silver or gold plating
Stationary Contacts: Brass with silver or gold plating
Terminals: Brass with silver or gold plating

Environmental Data

Operating Temperature Range: –20°C through +70°C (–4°F through +158°F)
Humidity: 90 ~ 95% humidity for 240 hours @ 40°C (104°F)
Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock: 100G (981m/s^2) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Processing

Soldering: Reflow Soldering Recommended. See Profile A in Supplement section.
Manual Soldering: See Profile A in Supplement section.
Cleaning: These devices are not process sealed. Hand clean locally using alcohol based solution.

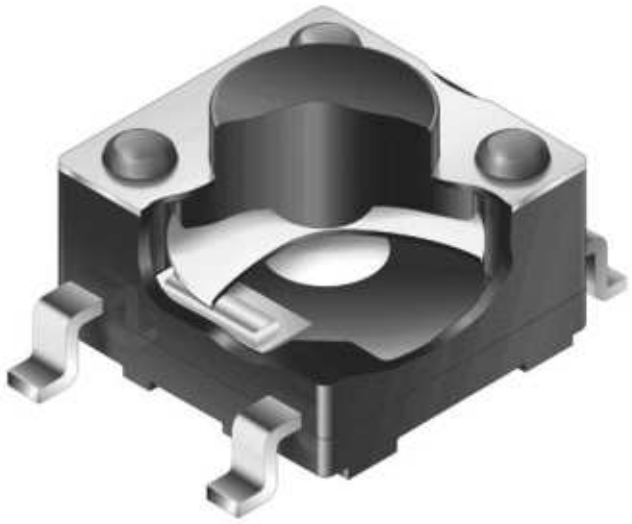
Standards & Certifications

Flammability Standards: UL94V-0 actuator and base
These switches are designed for use in a low-voltage, low-current circuit.
When used as intended, the results do not produce hazardous energy.

Distinctive Characteristics

.244″ (6.2mm) square body allows compact mounting.

Heat resistant resin body meets lead-free solder processing requirements and UL flammability rating of 94V-0.



Stick-tube and tape-reel packaging allow rapid automated placement of devices.

Gold plated contacts available for very low voltage/current applications offer advantages of little or no oxidization or sulfurization and stable contact resistance.

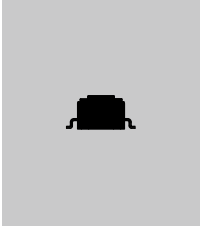
Gull-winged terminals ensure mechanical stability during soldering and simplified solder joint inspection.

Insert molded terminals lock out flux, solvents, and other contaminants and allow automated soldering.

Tape-reel packaging meets EIA-481-D Standard.

Coplanarity: all considered surfaces must lie between two parallel planes that are a maximum distance apart of .0039″ (0.10mm). (Additional coplanarity details in Terms and Acronyms in the Supplement section.)

Actual Size



TYPICAL SWITCH ORDERING EXAMPLE

HP03 | 15A | F | K | P4 — R

Pole & Circuit

15A	SPST	OFF	(ON)

( ) = Momentary
Normally Open Contacts

Actuator

F	Flat Button

Actuator Color

K	Black

Terminals & Contacts

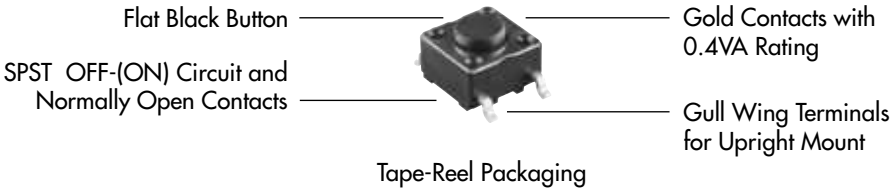
P2	Gull Wing for Upright Mount; Silver Contacts Rated 3VA max. DC
P4	Gull Wing for Upright Mount; Gold Contacts Rated 0.4VA max. @ 28V AC/DC max.

Packaging

S	Stick-Tube 100 Pieces/ Tube
R	Tape-Reel 1,000 Pieces/ Reel

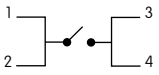
DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

HP0315AFKP4-R



Tape-Reel Packaging

POLE & CIRCUIT

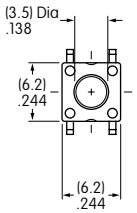
		Actuator Position ( ) = Momentary		Switch Throw & Schematic	
Pole	**Model**	**Normal**	**Down**		
SP	**HP0315A**	OFF	(ON)	SPST 	Note: Terminal numbers are not actually on the switch.

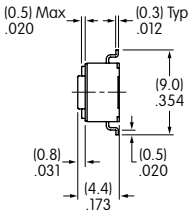
TYPICAL SWITCH DIMENSIONS

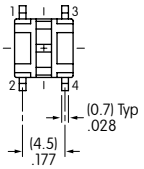
Gull-winged

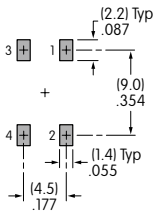


HP0315AFKP4









PACKAGING

S **Stick-Tube**

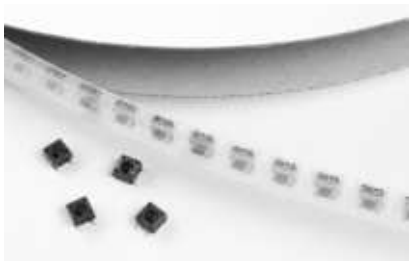
Switches must be ordered in 100-piece increments when stick-tube packaging is selected.



R **Tape-Reel**

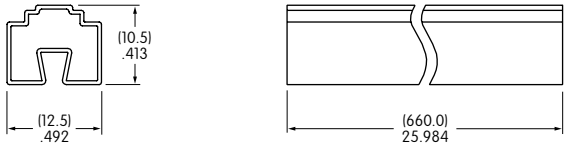
Switches must be ordered in 1,000-piece increments when tape-reel packaging is selected.

Packaging meets EIA-481-D Standard.



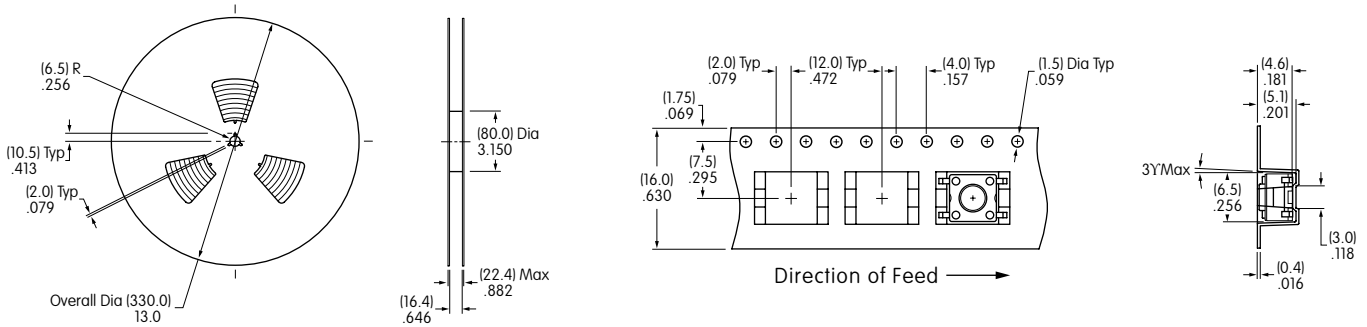
Stick-Tube Dimensions

Each stick-tube contains 100 switches



Tape-Reel Dimensions

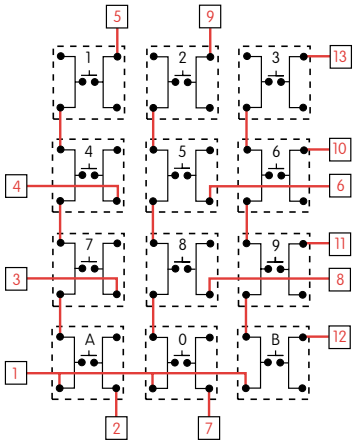
Each tape-reel of 1,100 pockets contains 1,000 switches.
Minimum Leader Length: 15.748" (400mm). Minimum Trailer Length: 6.299" (160mm).

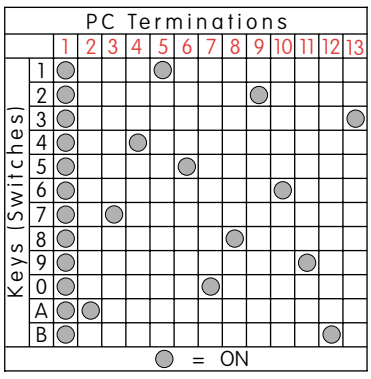


KEYBOARD MATRIX

Common Bus Matrix

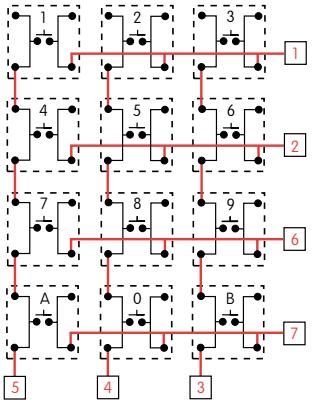
These single pole, single throw switches can be used in a keyboard matrix and, using strapped terminals, achieve a common bus electrical configuration on a single-sided PC board.

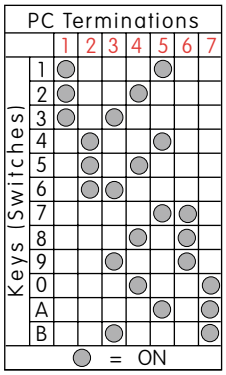




X-Y Matrix

These single pole, single throw switches can be arranged on a single-sided PC board matrix with strapped terminals to achieve an X-Y type electrical interconnection.





Red = PCB Trace **Black = Switch Circuit**