



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# General Specifications

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

## Electrical Capacity (Resistive Load)

<b>Power Level (silver):</b>	3VA maximum @ 28V DC maximum (Applicable Range 10mA ~ 125mA @ 0.1V ~ 28V)
<b>Logic Level (gold):</b>	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

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

## Materials & Finishes

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

## Environmental Data

<b>Operating Temperature Range:</b>	-20°C through +70°C (-4°F through +158°F)
<b>Humidity:</b>	90 ~ 95% humidity for 240 hours @ 40°C (104°F)
<b>Vibration:</b>	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
<b>Shock:</b>	100G (981m/s <sup>2</sup> ) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

## Processing

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

## Standards & Certifications

<b>Flammability Standards:</b>	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.
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# 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.

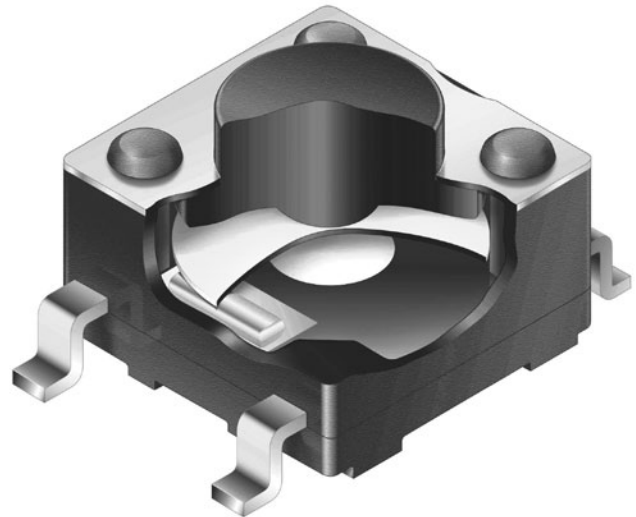
Gold plated contacts available for very low voltage/current applications offer advantages of little or no oxidization or sulfurization and stable contact resistance.

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

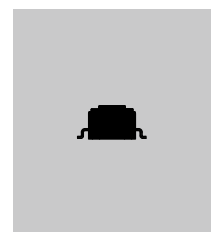
Insert molded terminals lock out flux, solvents, and other contaminants and allow automated soldering.

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.)

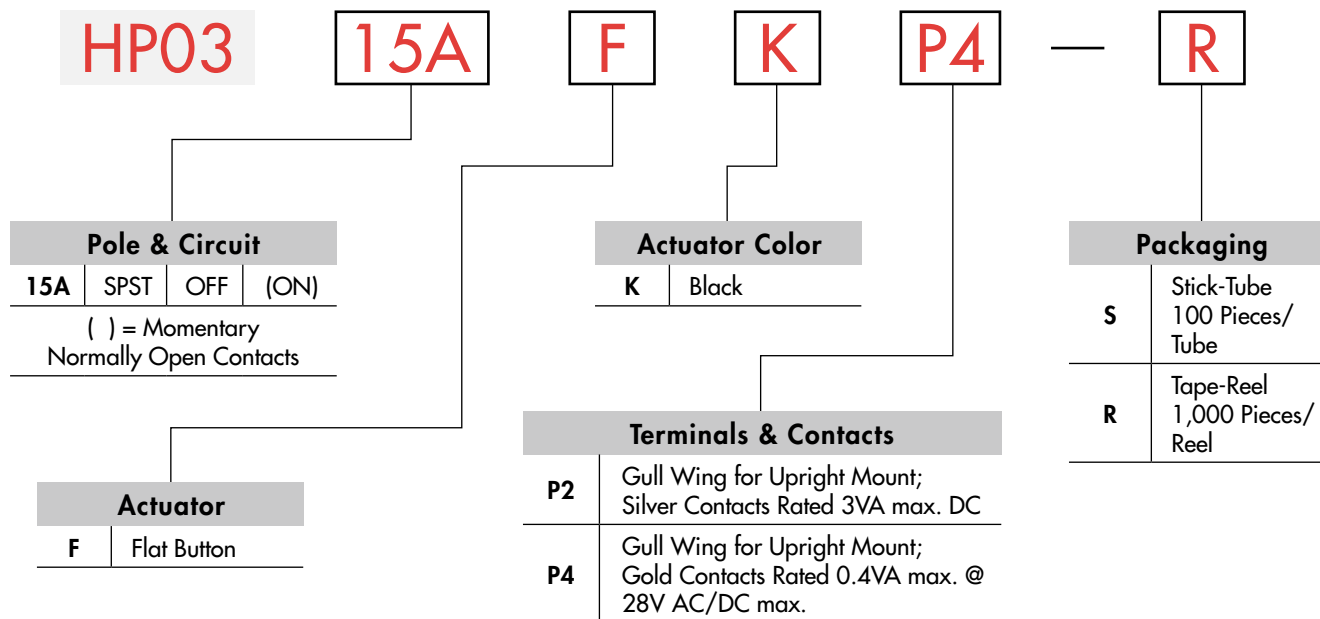


Actual Size





### TYPICAL SWITCH ORDERING EXAMPLE

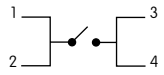


### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

#### HP0315AFKP4-R



### POLE & CIRCUIT

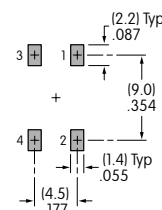
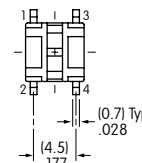
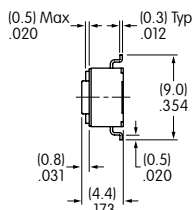
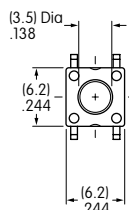
Pole	Model	Actuator Position ( ) = Momentary		Switch Throw & Schematic	Note: Terminal numbers are not actually on the switch.
		Normal	Down		
SP	HP0315A	OFF	(ON)	SPST 	

### TYPICAL SWITCH DIMENSIONS

#### Gull-winged



HP0315AFKP4



PACKAGING

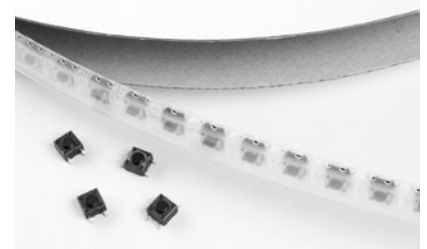
**S** Stick-Tube

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



**R** Tape-Reel

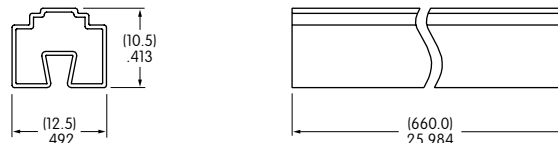
Switches must be ordered in 1,000-piece increments when tape-reel packaging is selected.



Packaging meets EIA-481-D Standard.

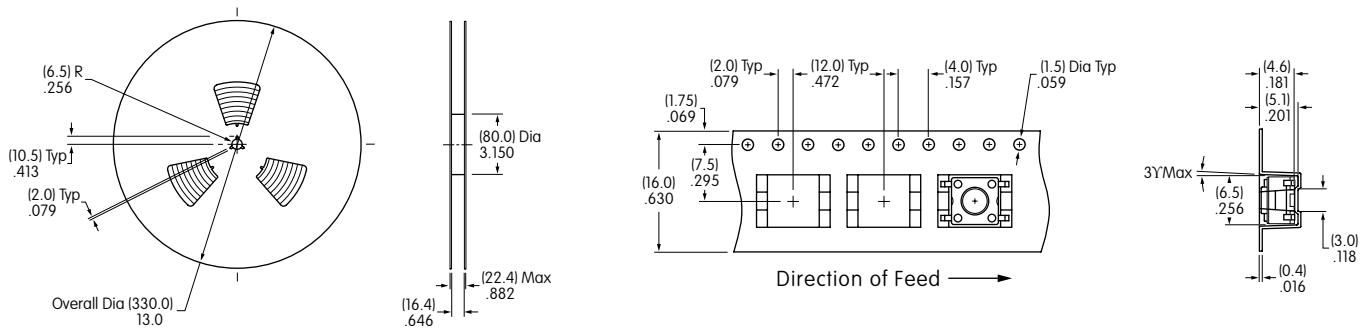
Stick-Tube Dimensions

Each stick-tube contains 100 switches



Tape-Reel Dimensions

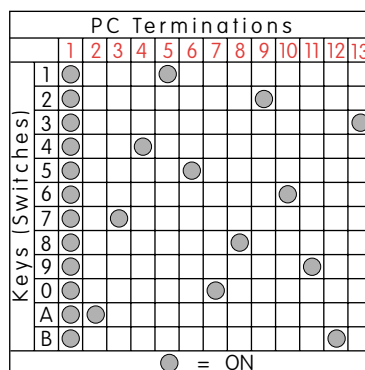
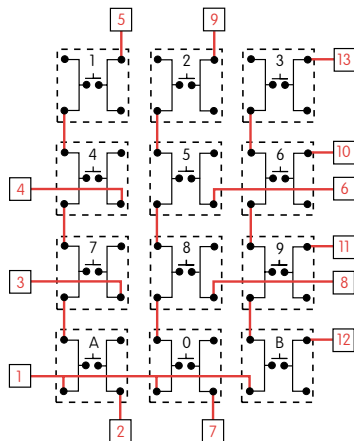
Each tape-reel of 1,100 pockets contains 1,000 switches.  
Minimum Leader Length: 15.748" (400mm). Minimum Trailer Length: 6.299" (160mm).



KEYBOARD MATRIX

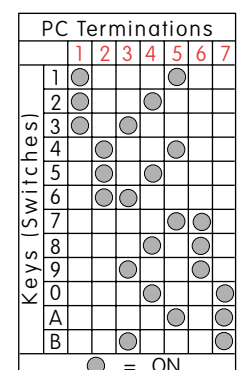
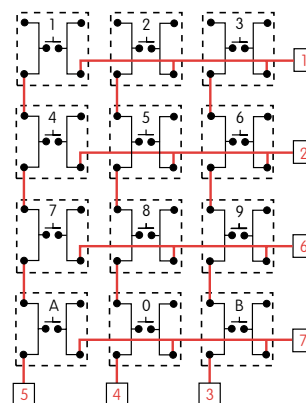
Common Bus Matrix

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

Toggles  
Rockers  
Pushbuttons  
Illuminated PB  
Programmable  
Keylocks  
Rotaries  
Slides  
Tactiles  
Tilt  
Touch  
Indicators  
Accessories  
Supplement