Distinctive Characteristics

Compact dimensions and low profile allow high density mounting and close stacking of PC boards.

Crisp actuation positively indicates circuit status.

Heat resistant resin allows vapor phase and infrared convection reflow soldering.

Award-winning STC mechanism with benefits unavailable in conventional mechanisms: smoother, positive detent actuation, increased contact stability, and unparalleled logic-level reliability. (Additional STC details in Terms and Acronyms in the Supplement section.)

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

Metric terminal spacing for standard PC board grid (2.0mm x 2.0mm).

Gull-wing terminals provide mechanical stability during soldering and simplified solder joint inspection.

Packaged in tape-reel or partitioned tray. 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 .0059" (0.15mm). (Additional coplanarity details in Terms and Acronyms in the Supplement section.)
General Specifications

Electrical Capacity (Resistive Load)
Logic Level: 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
Note: Find additional explanation of operating range in Supplement section.

Other Ratings
Contact Resistance: 50 miliohms maximum
Insulation Resistance: 100 megohms minimum @ 500V DC
Dielectric Strength: 500V AC minimum for 1 minute minimum
Mechanical Life: 10,000 operations minimum
Electrical Life: 10,000 operations minimum
Contact Timing: SS312S ~ Shorting (make-before-break)
Total Travel: .079” (2.0mm)

Materials & Finishes
Actuator: Polyphenylene sulfide
Housing: Phosphor bronze with tin plating (UL94V-0)
Base: Polyphenylene sulfide (UL94V-0)
Movable Contactor: Phosphor bronze with gold plating over silver plating (code 4)
Terminals: Phosphor bronze with gold plating

Environmental Data
Operating Temp Range: -25°C through +85°C (-13°F through +185°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: 50G (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation
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: UL 94V-0 rated housing & base
The SS3 Series slides have not been tested for UL recognition or CSA certification.
These switches are designed for use in a low-voltage, low-current, logic-level circuit.
When used as intended in a logic-level circuit, the results do not produce hazardous energy.

www.nkkswitches.com
TYPICAL SWITCH ORDERING EXAMPLE

**SS3**

14M

A

H

4

**Poles & Circuits**

<table>
<thead>
<tr>
<th>Pole</th>
<th>Circuit</th>
<th>On</th>
<th>Off</th>
<th>On</th>
</tr>
</thead>
<tbody>
<tr>
<td>12S</td>
<td>SPDT</td>
<td>ON</td>
<td>NONE</td>
<td>ON</td>
</tr>
<tr>
<td>14M</td>
<td>SPDT</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>SP3T</td>
<td>ON</td>
<td>ON</td>
<td>ON</td>
</tr>
</tbody>
</table>

SS312S model has shorting contacts.

For 3-on: External connection must be made during installation; see Poles & Circuits chart.

**Actuation**

H Side Actuated

**Contact Material & Rating**

4 Gold Rated 0.4VA maximum @ 28V AC/DC maximum

**Terminal Spacing**

A Metric 2.0mm x 2.0mm

**Packaging**

R Tape-Reel 500 Pieces/Reel

No Code Partitioned Tray

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

SS314MAH4

Gold Contacts with 0.4VA Rating

Side Actuated

SPDT ON-OFF-ON Circuit

2.0mm x 2.0mm Terminal Spacing
# Series SS3

## Ultra-Miniature SMT Slides

### POLES & CIRCUITS

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Slide Position</th>
<th>Connected Terminals</th>
<th>Throw &amp; Schematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>SS312S</td>
<td>Right</td>
<td>Center</td>
<td>Left</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ON</td>
<td>NONE</td>
<td>ON</td>
</tr>
<tr>
<td>SP</td>
<td>SS314M</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>

**External connection must be made during installation to create ON-ON-ON circuit.**

### TERMINAL SPACING

**A** Metric 2.0mm x 2.0mm

### ACTUATION

**H** Side Actuated

### CONTACT MATERIALS & RATING

<table>
<thead>
<tr>
<th></th>
<th>Logic Level</th>
<th>0.4VA maximum @ 28V AC/DC maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Gold over Silver/Phosphor Bronze</td>
<td>Complete explanation of operating range in Supplement section.</td>
</tr>
</tbody>
</table>
## Ultra-Miniature SMT Slides
**Series SS3**

### TYPICAL SWITCH DIMENSIONS

#### Shorting Contacts

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>SS312SAH4</th>
<th>SS314MAH4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Pole</td>
<td>Coplanar Dimension</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Nonshorting Contacts

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>SS312SAH4</th>
<th>SS314MAH4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Pole</td>
<td>Coplanar Dimension</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### PACKAGING

**No Code**

**Partitioned Tray**

If the SS3 is ordered in less than 500-piece increments, the switches are packaged in a partitioned tray. No code is required.

*www.nkkswitches.com*
Series SS3

Ultra-Miniature SMT Slides

PACKAGING

Tape-Reel Packaging

Switches must be ordered in 500-piece increments when tape-reel packaging is selected.

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

Tape-Reel Packaging for SS312SAH4

Each tape-reel of 530 pockets contains 500 switches.

Minimum Leader Length: 11.97” (304mm)  Minimum Trailer Length: 6.93” (176mm)

Reel Dimensions

Tape Dimensions

Tape-Reel Packaging for SS314MAH4

Each tape-reel of 530 pockets contains 500 switches.

Minimum Leader Length: 14.96” (380mm)  Minimum Trailer Length: 8.66” (220mm)

Reel Dimensions

Tape Dimensions