Features/Benefits

- Positive tactile feeling
- J or G terminations
- Various heights
- IP67

Typical Applications

- Automotive
- Medical instruments
- Industrial electronics
- Network infrastructure and IT
- Elevator

Specification

FUNCTION: Momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
TERMINALS: J bend & Gullwing type for SMT
SEALING: IP67 except KSC5 (IP50)

Liability Limitation

This datasheet does not provide enough information for applications that require a certain level of quality or safety such as automotive, medical systems, or safety equipment. Please contact customer service for the contractual specification package.

Environmental

OPERATING TEMPERATURE: -40˚C to 85˚C
STORAGE TEMPERATURE: -55˚C to 85˚C

Process

SOLDERING: Depending on the application, this component is suited to the following methods:
- Terminals being silver or gold plated over a nickel barrier, the use of slightly activated flux is suitable.
- Soldering on double wave machine for vertical versions: soldering time ≤ 5 sec.
- Cleaning according to typical washing processes.
- Lead free reflow soldering process in accordance with IEC 61760-1.

Electrical

<table>
<thead>
<tr>
<th></th>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM POWER</td>
<td>1 VA</td>
<td>0.2 VA</td>
</tr>
<tr>
<td>MAXIMUM VOLTAGE</td>
<td>32 VDC</td>
<td>32 VDC</td>
</tr>
<tr>
<td>MINIMUM VOLTAGE</td>
<td>20 mV</td>
<td>20 mV</td>
</tr>
<tr>
<td>MAXIMUM CURRENT</td>
<td>50 mA</td>
<td>10 mA</td>
</tr>
<tr>
<td>MINIMUM CURRENT</td>
<td>1 mA*</td>
<td>0.1 mA</td>
</tr>
</tbody>
</table>

DIELECTRIC STRENGTH (50 Hz, 1 min.): ≥ 250 Vrms
CONTACT RESISTANCE: ≤ 100mΩ
INSULATION RESISTANCE (100 V): ≥ 10M Ω
BOUNCE TIME: ≤ 1 ms

* Ultra low current with 10 µA - 1 VDC version are available upon request for KSC2 and KSC4

Packaging

Tape and Reel (see series for quantity information)

NOTE: Specifications listed above are for switches with standard options.

KSC Product Range

<table>
<thead>
<tr>
<th>KSC1</th>
<th>KSC2</th>
<th>KSC3</th>
<th>KSC4</th>
<th>KSC5</th>
<th>KSC6</th>
<th>KSC7</th>
<th>KSC8</th>
<th>KSC9</th>
<th>KSC10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without actuator</td>
<td>Soft actuator</td>
<td>Hard actuator</td>
<td>Soft actuator</td>
<td>Hard actuator</td>
<td>Soft actuator</td>
<td>Hard actuator</td>
<td>Hard actuator</td>
<td>Soft actuator</td>
</tr>
<tr>
<td>H = 2.5 mm</td>
<td>H = 3.5 mm</td>
<td>H = 3.5 mm</td>
<td>H = 5.2 mm</td>
<td>H = 5.6 mm</td>
<td>H = 7.7 mm</td>
<td>H = 4.3 mm</td>
<td>H = 4.9 mm</td>
<td>H = 7.7 mm compatible with button</td>
<td>H = 4.9 mm</td>
</tr>
</tbody>
</table>

Note: KSC Series is subject to variants. Please contact customer service for other options.
KSC Series
Sealed Tact Switch for SMT

J J BEND

G GULLWING

12 MM

16 MM

<table>
<thead>
<tr>
<th></th>
<th>12 mm</th>
<th></th>
<th>16 mm</th>
<th></th>
<th>Reel Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pieces</td>
<td></td>
<td>Pieces</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSC1J</td>
<td>2,000</td>
<td>KSC1G</td>
<td>2,000</td>
<td>330 mm</td>
<td></td>
</tr>
<tr>
<td>KSC2J</td>
<td>2,000</td>
<td>KSC2G</td>
<td>2,000</td>
<td>330 mm</td>
<td></td>
</tr>
<tr>
<td>KSC3J</td>
<td>2,000</td>
<td>KSC3G</td>
<td>2,000</td>
<td>330 mm</td>
<td></td>
</tr>
<tr>
<td>KSC4J &amp; G</td>
<td>1,000</td>
<td>KSC4G</td>
<td>1,000</td>
<td>330 mm</td>
<td></td>
</tr>
<tr>
<td>KSC5J &amp; G</td>
<td>1,000</td>
<td>KSC5G</td>
<td>1,000</td>
<td>330 mm</td>
<td></td>
</tr>
<tr>
<td>KSC6J &amp; G</td>
<td>950</td>
<td>KSC6G</td>
<td>950</td>
<td>380 mm</td>
<td></td>
</tr>
<tr>
<td>KSC7J &amp; G</td>
<td>1,000</td>
<td>KSC7G</td>
<td>1,000</td>
<td>330 mm</td>
<td></td>
</tr>
<tr>
<td>KSC8J &amp; G</td>
<td>1,000</td>
<td>KSC8G</td>
<td>1,000</td>
<td>330 mm</td>
<td></td>
</tr>
<tr>
<td>KSC9J &amp; G</td>
<td>950</td>
<td>KSC9G</td>
<td>950</td>
<td>380 mm</td>
<td></td>
</tr>
<tr>
<td>KSC10J &amp; G</td>
<td>1,000</td>
<td>KSC10G</td>
<td>1,000</td>
<td>330 mm</td>
<td></td>
</tr>
</tbody>
</table>
KSC XA Series
Soft Sound Tact Switch

Features/Benefits
• New soft sound
• Extended cage
• IP67
• Long life
• J terminations
• Tape & reel

Typical Applications
• Automotive interior & openings
  (gear shift paddle, steering wheel,
  window lifter, seat adjustment
  modules, trunk & door handle
  modules)
• Medical & industrial electronics
  (front panel, instrumentation)

<table>
<thead>
<tr>
<th>Type</th>
<th>Force (N)</th>
<th>Life (cycles)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC XA 35J LFS</td>
<td>3.5 +/-1</td>
<td>1,000,000</td>
<td>0.7 +/-0.2</td>
</tr>
<tr>
<td>KSC XA 40J LFS</td>
<td>4.0 +/-1</td>
<td>1,000,000</td>
<td>0.7 +/-0.2</td>
</tr>
<tr>
<td>KSC XA 55J LFS</td>
<td>5.5 +/-1.1</td>
<td>1,000,000</td>
<td>0.7 +/-0.2</td>
</tr>
<tr>
<td>KSC XA 68J LFS</td>
<td>6.8 +/-1.4</td>
<td>500,000</td>
<td>0.7 +/-0.2</td>
</tr>
<tr>
<td>KSC XA 96J LFS</td>
<td>9.6 +/-2.4</td>
<td>150,000</td>
<td>0.7 +/-0.2</td>
</tr>
</tbody>
</table>

POWER: 0.002 VA min. / 1VA Max.
VOLTAGE: 2V min. / 24V Max.
CURRENT: 1mA min. / 42mA Max.
OPERATING TEMPERATURE: -40°C / +95°C
CONTACT RESISTANCE: 0.1 ohm

PCB LAYOUT

Packaging
In reels of 1,400 pieces.
Dimensions of reels according to EIA RS481 or IEC 2863. External diameter 380 mm ± 2 mm.

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

For any part number different from those listed above, please consult your local representative.
Tactile Switches

KSC SLT Series
Long Travel Tact Switch

Features/Benefits
- Long travel
- Soft sound
- IP40
- J & G terminations
- Tape & reel

Specifications and dimensions subject to change
www.ckswitches.com

20 Apr 21

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

For any part number different from those listed above, please consult your local representative.

Specifications

FUNCTION: Momentary
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
TERMINALS: J bend & Gullwing type for SMT

Mechanical
MAXIMUM APPLIED FORCE: 40N
* VALID ONE TIME. MAXIMUM ALLOWED TRAVEL TO AVOID OVERLOAD ISSUES IS 1.70MM.

<table>
<thead>
<tr>
<th>Type</th>
<th>Force (N)</th>
<th>Life (cycles)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC SLT 221J LFS</td>
<td>2.4 +/- 0.7</td>
<td>200,000</td>
<td>1.35 +/-0.25</td>
</tr>
<tr>
<td>KSC SLT 221G LFS</td>
<td>2.4 +/- 0.7</td>
<td>200,000</td>
<td>1.35 +/-0.25</td>
</tr>
<tr>
<td>KSC SLT 223J LFG</td>
<td>2.4 +/- 0.7</td>
<td>200,000</td>
<td>1.35 +/-0.25</td>
</tr>
<tr>
<td>KSC SLT 223G LFG</td>
<td>2.4 +/- 0.7</td>
<td>200,000</td>
<td>1.35 +/-0.25</td>
</tr>
<tr>
<td>KSC SLT 241J LFS</td>
<td>3.5 +/- 0.9</td>
<td>200,000</td>
<td>1.35 +/-0.25</td>
</tr>
<tr>
<td>KSC SLT 241G LFS</td>
<td>3.5 +/- 0.9</td>
<td>200,000</td>
<td>1.35 +/-0.25</td>
</tr>
<tr>
<td>KSC SLT 243J LFG</td>
<td>3.5 +/- 0.9</td>
<td>200,000</td>
<td>1.35 +/-0.25</td>
</tr>
<tr>
<td>KSC SLT 243G LFG</td>
<td>3.5 +/- 0.9</td>
<td>200,000</td>
<td>1.35 +/-0.25</td>
</tr>
</tbody>
</table>

Electrical

<table>
<thead>
<tr>
<th></th>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWITCHING POWER MAX.</td>
<td>1.0 VA</td>
<td>0.2 VA</td>
</tr>
<tr>
<td>MAXIMUM POWER</td>
<td>1.0 VA</td>
<td>0.2 VA</td>
</tr>
<tr>
<td>MAXIMUM VOLTAGE</td>
<td>32 VDC</td>
<td>32 VDC</td>
</tr>
<tr>
<td>MINIMUM VOLTAGE</td>
<td>20 mV</td>
<td>20 mV</td>
</tr>
<tr>
<td>MAXIMUM CURRENT</td>
<td>50 mA</td>
<td>10 mA</td>
</tr>
<tr>
<td>MINIMUM CURRENT</td>
<td>1 mA</td>
<td>1 mA</td>
</tr>
</tbody>
</table>

DIELECTRIC STRENGTH: ≥ 250 Vrms
CONTACT RESISTANCE: < 100mΩ
INSULATION RESISTANCE: Initial measurement: ≥ 1GΩ
After damp heat: ≥10MΩ

BOUNCE TIME: < 5 ms

Environmental
OPERATING TEMPERATURE: -40°C to +85°C (Silver)
-40°C to +125°C (Gold)
STORAGE TEMPERATURE: -40°C to +85°C (Silver)
-40°C to +125°C (Gold)

Process
Compatible with the lead free reflow soldering process.

Packaging
In reels of 1,000 pieces.
Dimensions of reels according to EIA RS481 or IEC 2863.
External diameter 330 mm ± 2 mm.
KSC1 without actuator 2,5 mm high

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force FA (Newtons)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC121</td>
<td>1.8 ± 0.65</td>
<td>200,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSC141</td>
<td>3 ± 0.75</td>
<td>200,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSC151</td>
<td>5.5 ± 1.4</td>
<td>100,000</td>
<td>0.35 ± 0.15</td>
</tr>
</tbody>
</table>

Packaging
Switches delivered on continuous tape & reels of 2,000 pieces
Dimensions according to EIA RS-481/ IEC 60286-3 standard
External diameter 330 ± 2 mm

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

However, please note that all the combinations of these options are not feasible.
For any part number different from those listed above, please consult your local representative.
KSC2 Series
Sealed Tact Switch for SMT

KSC2 soft actuator 3,5 mm high

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force FA (Newtons)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC201</td>
<td>1.6 ± 0.6</td>
<td>5,000,000</td>
<td>0.3 ± 0.2</td>
</tr>
<tr>
<td>KSC221</td>
<td>2 ± 0.5</td>
<td>500,000</td>
<td>0.35 ± 0.25/-0.15</td>
</tr>
<tr>
<td>KSC222</td>
<td>2 ± 0.5</td>
<td>1,000,000</td>
<td>0.35 ± 0.25/-0.15</td>
</tr>
<tr>
<td>KSC241</td>
<td>3.5 ± 0.9</td>
<td>300,000</td>
<td>0.5 ± 0.2</td>
</tr>
<tr>
<td>KSC251</td>
<td>5.55 ± 1.45</td>
<td>300,000</td>
<td>0.5 ± 0.2</td>
</tr>
<tr>
<td>KSC241 SPD</td>
<td>3.55 ± 0.9</td>
<td>300,000</td>
<td>0.5 ± 0.2</td>
</tr>
<tr>
<td>KSC251 SPD</td>
<td>6.2 ± 1.55</td>
<td>100,000</td>
<td>0.6 ± 0.2</td>
</tr>
</tbody>
</table>

Packaging
Switches delivered on continuous tape & reels of 2,000 pieces
Dimensions according to EIA RS-481/ IEC 60286-3 standard
External diameter 330 ± 2 mm

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

However, please note that all the combinations of these options are not feasible. For any part number different from those listed above, please consult your local representative.

Operating Force
0 1.6 N (160 grams)
2 2 N (200 grams)
4 3.5 N (350 grams)
5 5.5 N (550 grams)

See mechanical chart above to confirm specifications

Contact Material
1 Silver
2 Silver long life
3 Gold
4 Gold long life

Termination
J J bend
G Gullwing

LFS Lead free compatible, silver plated
LFG Lead free compatible, gold plated

NONE Standard version
SPD Special delta version

Packaging
Switches delivered on continuous tape & reels of 2,000 pieces
Dimensions according to EIA RS-481/ IEC 60286-3 standard
External diameter 330 ± 2 mm
KSC3 Series
Sealed Tact Switch for SMT

KSC3 hard actuator 3,5 mm high

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force FA (Newtons)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC321</td>
<td>2 ± 0.4</td>
<td>300,000</td>
<td>0.2 + 0.3/- 0</td>
</tr>
<tr>
<td>KSC341</td>
<td>3 ± 0.75</td>
<td>300,000</td>
<td>0.2 + 0.3/- 0</td>
</tr>
<tr>
<td>KSC351</td>
<td>5 ± 1</td>
<td>100,000</td>
<td>0.25 + 0.3/- 0</td>
</tr>
</tbody>
</table>

Packaging

Switches delivered on continuous tape & reels of 2,000 pieces
Dimensions according to EIA RS-481/ IEC 60286-3 standard
External diameter 330 ± 2 mm

How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

However, please note that all the combinations of these options are not feasible.
For any part number different from those listed above, please consult your local representative.

Operating Force
2 2 N  (200 grams)
4 3 N  (300 grams)
5 5 N  (500 grams)

See mechanical chart above to confirm specifications

Contact Material
1 Silver
3 Gold

Termination
J J bend
G Gullwing

LFS Lead free compatible, silver plated
LFG Lead free compatible, gold plated

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
KSC4 Series
Sealed Tact Switch for SMT

KSC4 soft actuator 5.2 mm high

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force FA (Newtons)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC401 50SH</td>
<td>1.45 ± 0.55</td>
<td>5,000,000</td>
<td>0.5 ± 0.25</td>
</tr>
<tr>
<td>KSC411 70SH</td>
<td>1.4 ± 0.35</td>
<td>1,000,000</td>
<td>0.35 ± 0.20</td>
</tr>
<tr>
<td>KSC421 70SH</td>
<td>1.7 ± 0.45</td>
<td>300,000</td>
<td>0.5 ± 0.25</td>
</tr>
<tr>
<td>KSC422 70SH</td>
<td>1.7 ± 0.45</td>
<td>1,000,000</td>
<td>0.5 ± 0.25</td>
</tr>
<tr>
<td>KSC441 70SH</td>
<td>4 ± 1</td>
<td>300,000</td>
<td>0.75 ± 0.25</td>
</tr>
<tr>
<td>KSC442 70SH</td>
<td>4 ± 1</td>
<td>1,000,000</td>
<td>0.75 ± 0.25</td>
</tr>
<tr>
<td>KSC451 70SH</td>
<td>4.25 ± 0.75</td>
<td>300,000</td>
<td>0.8 ± 0.2</td>
</tr>
<tr>
<td>KSC441 SPD</td>
<td>3.5 ± 0.9</td>
<td>300,000</td>
<td>0.7 ± 0.2</td>
</tr>
<tr>
<td>KSC441 ST1</td>
<td>3.4 ± 1</td>
<td>300,000</td>
<td>0.7 ± 0.25</td>
</tr>
<tr>
<td>KSC441 ST2</td>
<td>3.4 ± 1</td>
<td>300,000</td>
<td>0.35 ± 0.2</td>
</tr>
<tr>
<td>KSC461 ST1</td>
<td>6.25 ± 1.75</td>
<td>100,000</td>
<td>1 ± 0.3</td>
</tr>
<tr>
<td>KSC461 ST2</td>
<td>6.25 ± 1.75</td>
<td>300,000</td>
<td>0.5 ± 0.2</td>
</tr>
</tbody>
</table>

Packaging
Switches delivered on continuous tape & reels of 1,000 pieces
Dimensions according to EIA RS-481 / IEC 60286-3 standard
External diameter 330 ± 2 mm

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

However, please note that all the combinations of these options are not feasible.
For any part number different from those listed above, please consult your local representative.

Operating Force
0 1.45 N (145 grams)
1 1.4N (140 grams)
2 1.7 N (170 grams)
4 4 N (400 grams)
5 4.25 N (425 grams)
6 6.25 N (625 grams)
See mechanical chart above to confirm specifications

Contact Material
1 Silver
2 Silver long life
3 Gold
4 Gold long life

Termination
J J bend
G Gullwing

LFS Lead free compatible, silver plated
LFG Lead free compatible, gold plated

50SH 50 shore **
70SH 70 shore ***
SPD Special delta version
ST1 High click
ST2 Low click

** applies to KSC401J/G50SH only
*** applies to KSC411J/G70SH, KSC421J/G70SH and KSC441J/G70SH
Tactile Switches

KSC DCT Series
Dual Circuit Technology Tact Switch

Features/Benefits

- SPDT NC-NO function
- Silicone actuator
- J or G terminations
- Tape & reel
- IP67

Specifications and dimensions subject to change

www.ckswitches.com

How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

For any part number different from those listed above, please consult your local representative.

Typical Applications

- Automotive
- Medical equipment
- Industrial electronics

<table>
<thead>
<tr>
<th>Type</th>
<th>Force (N)</th>
<th>Operating Life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC441J DCT 70SH LFS</td>
<td>4.75 +/-1.25</td>
<td>300,000</td>
<td>0.85+0.35/-0.25</td>
</tr>
<tr>
<td>KSC441G DCT 70SH LFS</td>
<td>4.75 +/-1.25</td>
<td>300,000</td>
<td>0.85+0.35/-0.25</td>
</tr>
</tbody>
</table>

Packaging

In reels of 1,000 pieces.
Dimensions of reels according to EIA RS481 or IEC 2863.
External diameter 330 ± 2 mm

PCB Layout

Visual poka yoke

LAYOUT - PAD
SCALE 5

1 - 2 NC
1 - 3 NO

Termination

J J bend
G Gull wing

Contact Material

1 Silver

Actuator / Tactile

70SH Silicon 70SH

LFS Lead free compatible, silver plated

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
KSC PF Series
Potting Friendly Tact Switch

Features/Benefits
- Extended Cage
- Silicone actuator
- J or G terminations
- Tape & reel
- IP67

Typical Applications
- Automotive
- Medical equipment
- Industrial electronics

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.
For any part number different from those listed above, please consult your local representative.

Max. potting height: 2.9 mm

Packaging
In reels of 1,000 pieces.
Dimensions of reels according to EIA RS481 or IEC 2863.
External diameter 330 ± 2 mm

<table>
<thead>
<tr>
<th>Type</th>
<th>Force (N)</th>
<th>Operating Life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC421G 70SH LFS PF</td>
<td>1.8 +/- 0.45</td>
<td>300,000</td>
<td>0.5 +/- 0.25</td>
</tr>
<tr>
<td>KSC421J 70SH LFS PF</td>
<td>1.8 +/- 0.45</td>
<td>300,000</td>
<td>0.5 +/- 0.25</td>
</tr>
<tr>
<td>KSC422G 70SH LFS PF</td>
<td>1.8 +/- 0.45</td>
<td>1,000,000</td>
<td>0.5 +/- 0.25</td>
</tr>
<tr>
<td>KSC422J 70SH LFS PF</td>
<td>1.8 +/- 0.45</td>
<td>1,000,000</td>
<td>0.5 +/- 0.25</td>
</tr>
<tr>
<td>KSC441G 70SH LFS PF</td>
<td>4 +/- 1</td>
<td>300,000</td>
<td>0.65 +/- 0.25</td>
</tr>
<tr>
<td>KSC441J 70SH LFS PF</td>
<td>4 +/- 1</td>
<td>300,000</td>
<td>0.65 +/- 0.25</td>
</tr>
<tr>
<td>KSC442G 70SH LFS PF</td>
<td>4 +/- 1</td>
<td>1,000,000</td>
<td>0.65 +/- 0.25</td>
</tr>
<tr>
<td>KSC442J 70SH LFS PF</td>
<td>4 +/- 1</td>
<td>1,000,000</td>
<td>0.65 +/- 0.25</td>
</tr>
<tr>
<td>KSC461G 70SH LFS PF</td>
<td>6.25 +/- 1.75</td>
<td>300,000</td>
<td>0.75 +/- 0.25</td>
</tr>
<tr>
<td>KSC461J 70SH LFS PF</td>
<td>6.25 +/- 1.75</td>
<td>300,000</td>
<td>0.75 +/- 0.25</td>
</tr>
<tr>
<td>KSC471G 70SH LFS PF</td>
<td>4 +/- 1</td>
<td>300,000</td>
<td>0.65 +/- 0.25</td>
</tr>
<tr>
<td>KSC471J 70SH LFS PF</td>
<td>4 +/- 1</td>
<td>300,000</td>
<td>0.65 +/- 0.25</td>
</tr>
</tbody>
</table>

LFS Lead free compatible, silver plated
Actuator / Tactile
70SH Silicon 70SH

Force
2 1.8 N
4 4.0 N
6 6.25 N
7 4.0 N

Contact Material
1 Silver
2 Silver Long Life

Termination
J J bend
G Gull wing

First Angle Projection
Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
Features/Benefits
- Extended cage for mechanical stop
- Silicone actuator
- J termination
- Tape & reel
- IP67

Specifications and dimensions subject to change
www.ckswitches.com

KSC OF Series
Overload Friendly Tact Switch

Typical Applications
- Industrial electronics
- Consumer
- Medical equipment
- Automotive interior

Features/Benefits
- Extended cage for mechanical stop
- Silicone actuator
- J termination
- Tape & reel
- IP67

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box. For any part number different from those listed above, please consult your local representative.

<table>
<thead>
<tr>
<th>Type</th>
<th>Force (N)</th>
<th>Life</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC421J 70SH LFS OF</td>
<td>±1.65/-0.45</td>
<td>300,000</td>
<td>±0.5/-0.25</td>
</tr>
<tr>
<td>KSC441J 70SH LFS OF</td>
<td>±4.0/-1.0</td>
<td>300,000</td>
<td>±0.65/0.3/-0.2</td>
</tr>
</tbody>
</table>

- Life time is 300,000 cycles at 20N actuation force
- The extended cage can be used as mechanical stop for the activation button
- Overload value reaches 200N (one time)

Packaging
In reels of 1,000 pieces
Dimensions of reels according to EIA RS481 or IEC 2863
External diameter 330 ± 2 mm

Typical Applications
- Industrial electronics
- Consumer
- Medical equipment
- Automotive interior

<table>
<thead>
<tr>
<th>K</th>
<th>S</th>
<th>C</th>
<th>4</th>
<th>70SH</th>
<th>L</th>
<th>F</th>
<th>S</th>
<th>OF</th>
</tr>
</thead>
</table>

- Force
  - 2 1.65 N
  - 4 4.0 N

- Contact Material
  - 1 Silver

- Termination
  - J J bend

- Actuator / Tactile
  - 70SH Silicone 70SH

- LFS Lead free compatible, silver plated
KSC TE Series
Tireless Endurance Tact Switch

Features/Benefits
• New combination of dome/support
• Silicone actuator
• J terminations
• Tape & reel
• IP67

Typical Applications
• Elevator
• Game controllers
• Industrial applications

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.
For any part number different from those listed above, please consult your local representative.

Life time under electrical load (24 V, 1.3 mA)

Packaging
In reels of 2,000 pieces
Dimensions of reels according to EIA RS481 or IEC 2863
External diameter 330 ± 2 mm

Typical Applications
• Elevator
• Game controllers
• Industrial applications

<table>
<thead>
<tr>
<th>Type</th>
<th>Force (N)</th>
<th>Life</th>
<th>Travel (mm)</th>
<th>Electrical Height ON (mm) (from PCB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC2 TE 01J LFS</td>
<td>1.60 +/- 0.6</td>
<td>10,000,000</td>
<td>0.25 +/- 0.2</td>
<td>3.25 ± 0.2</td>
</tr>
<tr>
<td>KSC2 TE 31J LFS</td>
<td>2.80 +/- 0.7</td>
<td>5,000,000</td>
<td>0.30 +/- 0.2</td>
<td>3.25 ± 0.2</td>
</tr>
<tr>
<td>KSC2 TE 41J LFS</td>
<td>4.00 +/- 1.0</td>
<td>5,000,000</td>
<td>0.35 +/- 0.2</td>
<td>3.20 ± 0.2</td>
</tr>
</tbody>
</table>

Typical Applications
• Elevator
• Game controllers
• Industrial applications

<table>
<thead>
<tr>
<th>Type</th>
<th>Force (N)</th>
<th>Life</th>
<th>Travel (mm)</th>
<th>Electrical Height ON (mm) (from PCB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC2 TE 01J LFS</td>
<td>1.60 +/- 0.6</td>
<td>10,000,000</td>
<td>0.25 +/- 0.2</td>
<td>3.25 ± 0.2</td>
</tr>
<tr>
<td>KSC2 TE 31J LFS</td>
<td>2.80 +/- 0.7</td>
<td>5,000,000</td>
<td>0.30 +/- 0.2</td>
<td>3.25 ± 0.2</td>
</tr>
<tr>
<td>KSC2 TE 41J LFS</td>
<td>4.00 +/- 1.0</td>
<td>5,000,000</td>
<td>0.35 +/- 0.2</td>
<td>3.20 ± 0.2</td>
</tr>
</tbody>
</table>
KSC5 Series
Tact Switch with Rocker Option for SMT

KSC5 hard actuator 5,6 mm high

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force axial FA N (grams)</th>
<th>Operating force lateral FL N (grams)</th>
<th>±30%</th>
<th>Travel to make axial (mm)</th>
<th>Travel to make lateral (mm)</th>
<th>Life expectancy cycles, axial</th>
<th>Life expectancy cycles, lateral</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC521</td>
<td>2 ± 0.5</td>
<td>1.2 - 2.6</td>
<td></td>
<td>0.25 ± 0.15</td>
<td>0.5 ± 0.25</td>
<td>100,000</td>
<td>10,000</td>
</tr>
<tr>
<td>KSC541</td>
<td>3 ± 0.75</td>
<td>1.8 - 3.8</td>
<td></td>
<td>0.25 ± 0.15</td>
<td>0.5 ± 0.25</td>
<td>100,000</td>
<td>10,000</td>
</tr>
</tbody>
</table>

Packaging
Switches delivered on continuous tape & reels of 1,000 pieces, dimensions according to EIA RS-481/ IEC 60286-3 standard
External diameter 330 ± 2 mm

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

However, please note that all the combinations of these options are not feasible.
For any part number different from those listed above, please consult your local representative.

Operating Force
2 2 N (200 grams)
4 3 N (300 grams)

Contact Material
1 Silver
3 Gold

Termination
J J bend
G Gullwing

RoHS compliant, non compatible
KSC6 hard actuator 7,7 mm high

### Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force FA (Newton)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC621</td>
<td>1.7 ± 0.5</td>
<td>300,000</td>
<td>0.4 ± 0.2</td>
</tr>
<tr>
<td>KSC631</td>
<td>2.55 ± 0.65</td>
<td>300,000</td>
<td>0.4 ± 0.2</td>
</tr>
<tr>
<td>KSC641</td>
<td>3.4 ± 0.85</td>
<td>300,000</td>
<td>0.4 ± 0.2</td>
</tr>
</tbody>
</table>

### Packaging

Switches delivered on continuous tape & reels of 750 pieces
Dimensions according to EIA RS-481/IEC 60286-3 standard
External diameter 380 ± 2 mm

### How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

However, please note that all the combinations of these options are not feasible. For any part number different from those listed above, please consult your local representative.
KSC7 Series
Sealed Tact Switch for SMT

KSC7 soft actuator 4.3 mm high

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force FA (Newtons)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC701</td>
<td>1.6 ± 0.6</td>
<td>5,000,000</td>
<td>0.3 ± 0.2</td>
</tr>
<tr>
<td>KSC721</td>
<td>2.25 ± 0.55</td>
<td>300,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSC741</td>
<td>3.9 ± 1</td>
<td>300,000</td>
<td>0.4 ± 0.2</td>
</tr>
</tbody>
</table>

Packaging
Switches delivered on continuous tape & reels of 1,000 pieces
Dimensions according to EIA RS-481/ IEC 60286-3 standard
External diameter 330 ± 2 mm

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

However, please note that all the combinations of these options are not feasible.
For any part number different from those listed above, please consult your local representative.

Operating Force
0 1.6 N (160 grams)
2 2.25 N (225 grams)
4 3.9 N (390 grams)

Contact Material
1 Silver
3 Gold

Termination
J J bend
G Gullwing

LFS Lead free compatible, silver plated
LFG Lead free compatible, gold plated

See mechanical chart above to confirm specifications
KSC8 Series
Sealed Tact Switch for SMT

KSC8 hard actuator 4.9 mm high

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force FA (Newtons)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC821</td>
<td>3.15 ± 0.75</td>
<td>300,000</td>
<td>0.65 ± 0.2</td>
</tr>
<tr>
<td>KSC821 OL</td>
<td>1.7 ± 0.5</td>
<td>300,000</td>
<td>0.4 ± 0.2</td>
</tr>
<tr>
<td>KSC831 OL</td>
<td>2.55 ± 0.65</td>
<td>300,000</td>
<td>0.4 ± 0.2</td>
</tr>
<tr>
<td>KSC841 OL</td>
<td>3.4 ± 0.85</td>
<td>300,000</td>
<td>0.4 ± 0.2</td>
</tr>
</tbody>
</table>

Packaging
Switches delivered on continuous tape & reels of 1,000 pieces
Dimensions according to EIA RS-481/ IEC 60286-3 standard
External diameter 330 ± 2 mm

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

However, please note that all the combinations of these options are not feasible.
For any part number different from those listed above, please consult your local representative.

K  S  C  8

Operating Force
2 1.7 / 3.15 N (170/315 grams)
3 2.55 N (255 grams)
4 3.4 N (340 grams)

See mechanical chart above to confirm specifications

Contact Material
1 Silver
3 Gold

Option
NONE Long travel
OL Short travel

Termination
J J bend
G Gullwing

LFS Lead free compatible, silver plated
LFG Lead free compatible, gold plated

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
KSC9 Series
Sealed Tact Switches for SMT

KSC9 hard actuator 7.7 mm high

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force FA (Newtons)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC921</td>
<td>1.7 ± 0.5</td>
<td>300,000</td>
<td>0.4 ± 0.2</td>
</tr>
<tr>
<td>KSC931</td>
<td>2.25 ± 0.65</td>
<td>300,000</td>
<td>0.4 ± 0.2</td>
</tr>
<tr>
<td>KSC941</td>
<td>3.4 ± 0.85</td>
<td>300,000</td>
<td>0.4 ± 0.2</td>
</tr>
</tbody>
</table>

Packaging
Switches delivered on continuous tape & reels of 750 pieces
Dimensions according to EIA RS-481/IEC 60286-3 standard
External diameter 380 ± 2 mm

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.
For any part number different from those listed above, please consult your local representative.

Operating Force
2 1.7 N (170 grams)
3 2.55 N (255 grams)
4 3.4 N (340 grams)

Contact Material
1 Silver
2 Gold

Termination
J J bend
G Gullwing

Type
NONE 15.4mm height mounted

Color
20 Light grey
40 Red
80 White
90 Black

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
Tactile Switches

KSC10 Series
Sealed Tact Switches for SMT

KSC10 soft actuator 4,9 mm high

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force FA (Newtons)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC1001</td>
<td>1.45 ± 0.55</td>
<td>5,000,000</td>
<td>0.45 ± 0.25</td>
</tr>
</tbody>
</table>

Packaging
Switches delivered on continuous tape & reels of 1,000 pieces
Dimensions according to EIA RS-481/ IEC 60286-3 standard
External diameter 330 ± 2 mm

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

However, please note that all the combinations of these options are not feasible.
For any part number different from those listed above, please consult your local representative.

Note: KSC10 offered with yellow actuator as standard, hardness 55 Shore
KSC V2 Series
Side Actuated Sealed Tact Switch

Features/Benefits
- Full SMD side actuated
- Haptic adaptability
- Pin in paste terminations
- Tape & reel
- IP67

Specifications and dimensions subject to change

How To Order
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

For any part number different from those listed above, please consult your local representative.

Actuator
2 short, soft*
4 long, soft

Operating Force**
0 1.6 N (160 grams)
2 2 N (200 grams)
4 3.5 N (350 grams)

Contact Material
1 Silver
3 Gold

Graphical layout of ordering options

Electrical
Silver Gold
MAXIMUM POWER: 1 VA 0.2 VA
MAXIMUM VOLTAGE: 32 VDC 32 VDC
MINIMUM VOLTAGE: 20 mV 20 mV
MAXIMUM CURRENT: 50 mA 10 mA
MINIMUM CURRENT: 1 mA 0.1 mA

Environmental
Silver Gold
OPERATING TEMPERATURE: -40°C to 85°C -40°C to 125°C
STORAGE TEMPERATURE: -55°C to 85°C -55°C to 125°C

Process
SOLDERING: Depending on the application, this component is suited to the following methods:
- Cleaning according to typical washing processes.
- Lead free reflow soldering process in accordance with IEC 61760-1.

TERMINALS: pin in paste, silver or gold plated
TOP PLATE: tin plated
MSL level: 1
Vacuum pick head mandatory

Packaging
In reels of 800 pieces.
Dimensions of reels according to EIA RS481 or IEC 2863.
External diameter 380 mm ± 2 mm.

NOTE: This product is designed and manufactured for general electronic devices. For systems where reliability and safety are required, please contact your sales representative to secure product integration and function to secure usage.

NOTE: Other configurations of haptics are available upon demand
MISUSE OVERLOAD: 40N with back support
SHEAR FORCE: 10N without back support

Mechanical

<table>
<thead>
<tr>
<th>Type</th>
<th>Force (N)</th>
<th>Operating Life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC201 V2 LFS</td>
<td>1.6 ± 0.6</td>
<td>1,000,000</td>
<td>0.3 ± 0.2</td>
</tr>
<tr>
<td>KSC421 V2 70SH LFS</td>
<td>1.55 ± 0.45</td>
<td>300,000</td>
<td>0.45 ± 0.25</td>
</tr>
<tr>
<td>KSC441V2 70SH SP DELTA LFS</td>
<td>3.5 ± 1.0</td>
<td>300,000</td>
<td>0.7 ± 0.2</td>
</tr>
<tr>
<td>KSC443V2 70SH SP DELTA LFS</td>
<td>3.5 ± 1.0</td>
<td>300,000</td>
<td>0.7 ± 0.2</td>
</tr>
<tr>
<td>KSC421 V2 RT LFS</td>
<td>1.8 ± 0.5</td>
<td>300,000</td>
<td>0.3 ± 0.2</td>
</tr>
<tr>
<td>KSC423 V2 RT LFG</td>
<td>1.8 ± 0.5</td>
<td>300,000</td>
<td>0.3 ± 0.2</td>
</tr>
<tr>
<td>KSC441 V2 RT LFS</td>
<td>3.4 ± 1.0</td>
<td>300,000</td>
<td>0.35 ± 0.2</td>
</tr>
</tbody>
</table>

KSC201 V2 LFS
0.6 x 1.5 x 0.8 mm
Mass: 0.02 g

KSC202 V2 LFS
1 x 2 x 1 mm
Mass: 0.05 g

KSC421 V2 70SH LFS
0.6 x 1.5 x 0.8 mm
Mass: 0.03 g

KSC422 V2 70SH LFS
1 x 2 x 1 mm
Mass: 0.07 g

KSC423 V2 RT LFS
0.6 x 1.5 x 0.8 mm
Mass: 0.03 g

KSC424 V2 RT LFS
1 x 2 x 1 mm
Mass: 0.07 g

KSC441 V2 RT LFS
0.6 x 1.5 x 0.8 mm
Mass: 0.03 g

KSC442 V2 RT LFS
1 x 2 x 1 mm
Mass: 0.07 g

KSC443 V2 SP DELTA LFS
0.6 x 1.5 x 0.8 mm
Mass: 0.03 g

KSC444 V2 SP DELTA LFS
1 x 2 x 1 mm
Mass: 0.07 g

Contact Material
1 Silver
3 Gold
Actuator / Tactile
None for KSC2 Standard
70SH for KSC4 Silicon 70SH
70SH SP DELTA for KSC4 Silicon 70SH with improved tactile
RT for KSC4 Hard rubber

LFS Lead free compatible, silver plated
LFG Lead free compatible, gold plated

24 Nov 20

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This actuator is not compatible with grease even with restricted contact.
In case of the integration of an actuator or button by the customer, please consult us if use of plasticizer agent for button raw material (risk of chemical migration).
Our actuator contains carbon particles and is electrical conductive. In consequence, customer actuator must be electric insulating raw material.
Due to the cover raw material plating, small tin balls can appear after the reflow soldering process. These small tin balls are located near all cutting areas.