# Tactile Switches

## Product Selection Guide

### Surface Mount Through-Hole Options

<table>
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<tr>
<th>Series</th>
<th>KXT3</th>
<th>NanoT</th>
<th>KMT2</th>
<th>KMT0</th>
<th>KMR 2-8</th>
<th>KMS</th>
<th>PTS525</th>
<th>PTS526</th>
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### Surface Mount Thru-Hole Options

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<th>PTS810</th>
<th>PTS815</th>
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Dimensions are shown: mm
Specifications and dimensions subject to change.
### Tactile Switches

**Product Selection Guide**

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<th>PTS850</th>
<th>PTS847</th>
<th>KSR</th>
<th>KSS</th>
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**Surface Mount Thru-Hole Options**

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<th>KSC DCT</th>
<th>KSC PF</th>
<th>KSC OF</th>
<th>KSC TE</th>
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* Other options available by request

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
Tactile Switches
Product Selection Guide

### Surface Mount, Thru-Hole Options

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<th>K8</th>
<th>K5V</th>
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## Surface Mount Thru-Hole Options

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<td>Life Cycles</td>
<td>100 000</td>
<td>100 000</td>
<td>100 000</td>
<td>200 000</td>
<td>50 000</td>
<td>100 000</td>
<td>300 000 to 500 000</td>
</tr>
<tr>
<td>IP Rating</td>
<td>IP40</td>
<td>IP40</td>
<td>IP40</td>
<td>IP40</td>
<td>IP40</td>
<td>IP40</td>
<td>IP54</td>
</tr>
<tr>
<td>Page Number</td>
<td>B-143</td>
<td>B-151</td>
<td>B-154</td>
<td>B-156</td>
<td>B-161</td>
<td>B-170</td>
<td>B-174</td>
</tr>
</tbody>
</table>

## Surface Mount Thru-Hole Options

<table>
<thead>
<tr>
<th>Series</th>
<th>TLSM</th>
<th>RK</th>
<th>RKC2</th>
<th>SFS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footprint</td>
<td>6.0 x 6.1</td>
<td>4.5 x 4.5; 4.2 x 3.2; 3.5 x 2.6</td>
<td>3.5 x 2.7</td>
<td>12 x 12</td>
</tr>
<tr>
<td>Total Height (mm)</td>
<td>3.45</td>
<td>0.55; 2.5; 1.4</td>
<td>1.7</td>
<td>4.95</td>
</tr>
<tr>
<td>Travel (mm)</td>
<td>0.3</td>
<td>0.15 to 0.2</td>
<td>0.15</td>
<td>0.6, 0.7, 0.8</td>
</tr>
<tr>
<td>Actuation Force (N)</td>
<td>2</td>
<td>160gf; 180gf; 250gf; 400gf; 450gf; 540gf</td>
<td>180gf; 250gf; 360gf; 500gf; 540gf</td>
<td>360gf; 680gf; 970gf</td>
</tr>
<tr>
<td>Contact Type</td>
<td>Silver</td>
<td>Silver</td>
<td>Silver</td>
<td>Gold</td>
</tr>
<tr>
<td>Max. Voltage (V)</td>
<td>16V DC</td>
<td>12 to 15</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>Life Cycles</td>
<td>3 000 000</td>
<td>100 000 to 500 000</td>
<td>100 000 to 200 000</td>
<td>300 000</td>
</tr>
<tr>
<td>IP Rating</td>
<td>IP54</td>
<td>IP54</td>
<td>IP54</td>
<td>IP40</td>
</tr>
<tr>
<td>Page Number</td>
<td>B-175</td>
<td>B-177</td>
<td>B-182</td>
<td>B-185</td>
</tr>
</tbody>
</table>
Features
- **Smallest footprint 3.0 x 2.0 mm**
- **0.6 mm thickness**
- **High number of cycle**

**Typical Applications**
- **Wearable electronics**
- **In-Ear headphones, Earbuds**
- **Mobile Phones**
- **Portable Electronics**
- **Hearing Aids**

**Specification**

**FUNCTION:** momentary action
**CONTACT ARRANGEMENT:** 1 make contact = SPST, N.O.
**TERMINALS:** G type for SMT
**TRAVEL:** 0.13 mm ± 0.05 mm

**Electrical**
- **MAXIMUM VOLTAGE:** 15 VDC
- **MAXIMUM CURRENT DC:** 20 mA
- **DIELECTRIC STRENGTH:** (50/60 Hz, 1 min) 250 Vrms
- **CONTACT RESISTANCE:** ≤ 500 mΩ
- **INSULATION RESISTANCE:** ≥ 50 MΩ
- **BOUNCE TIME:** ≤ 10 ms

**Environmental**
- **OPERATING TEMPERATURE:** -40˚C to 85˚C
- **STORAGE TEMPERATURE:** -40˚C to 85˚C

**Process**
- **SOLDERING:** This component is suited to the following methods:
  - Infrared Reflow Soldering in accordance with IEC61760-1

**Packaging**
- In reels of 8,500 pieces
- Dimensions of reels according to EIA 481B
- External diameter 330 mm

**Part Number Description**

For any part number different from those listed above, please consult your local representative.
KXT3 Series
Ultra Low Profile Top Actuated

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
NanoT Series
The Most Compact Nano Size Tact Switch

Features
- Ultra Compact Size
- SMT or PIP versions
- IP67
- Integrated Actuator
- High life cycles

Typical Applications
- Hearing Aids
- Headsets
- Sports watch
- IoT portable device

Specifications
TRAVEL: 0.1 mm +/- 0.05 mm
OPERATING TEMPERATURE: -40 – +85°C
OPERATING TEMPERATURE: -40 – +85°C
RATING: 15V D.C. / 20mA
INSULATION RESISTANCE: 100 MΩ Min.
WITHSTAND VOLTAGE: 250V A.C. (50–60Hz 2mA) for 1 min.
BOUNCE: ON/OFF 10 ms Max.
CONTACT RESISTANCE: 500mΩ Max.

Packaging
In reels of 7,500 pieces for the Side actuated
In reels of 8,000 pieces for the Top actuated
Dimensions of reels according to EIA RS481 or IEC 2863. External diameter 330 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.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Style</th>
<th>Force (gf)</th>
<th>Life (Cycles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NanoT 100 AS</td>
<td>Top Actuated with SMT termination</td>
<td>100 +/- 30</td>
<td>200,000</td>
</tr>
<tr>
<td>NanoT 160 AS</td>
<td>Top Actuated with SMT termination</td>
<td>160 +/- 50</td>
<td>300,000</td>
</tr>
<tr>
<td>NanoT 240 AS</td>
<td>Top Actuated with SMT termination</td>
<td>240 +/- 60</td>
<td>200,000</td>
</tr>
<tr>
<td>NanoT 160 BP</td>
<td>Side actuated with PIP* termination</td>
<td>160 +/- 50</td>
<td>300,000</td>
</tr>
<tr>
<td>NanoT 240 BP</td>
<td>Side actuated with PIP* termination</td>
<td>240 +/- 60</td>
<td>200,000</td>
</tr>
</tbody>
</table>

*PIP: Pin in Paste also called Pin Through Paste

* P termination for side version only
** S termination for top version only
NanoT Series
The Most Compact Nano Size Tact Switch

TOP ACTUATED

SIDE ACTUATED PIP

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
KMT2 Series
Nano-Miniature SMT Top Actuated

Features
- Smallest footprint
- High number of cycles within the smallest packaging
- Smallest thickness with integrated actuator
- Ground pin option
- Halogen free

Typical Applications
- Mobile Phones
- Hearing Aids
- MP3 accessories
- Bluetooth Headset

Specifications
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
TERMINALS: Gullwing type for SMT

Mechanical

<table>
<thead>
<tr>
<th>Type G and NG</th>
<th>Operating force</th>
<th>Operating Life</th>
<th>Tactile Feeling</th>
<th>Travel mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMT 211 HF LFS</td>
<td>1.0 (100) ± 0.25</td>
<td>150,000</td>
<td>≥ 10%</td>
<td>0.15 ± 0.1</td>
</tr>
<tr>
<td>KMT 221 HF LFS</td>
<td>1.6 (160) ± 0.40</td>
<td>150,000</td>
<td>≥ 30%</td>
<td>0.15 ± 0.1</td>
</tr>
</tbody>
</table>

Electrical
- Silver
- MAXIMUM POWER: 0.5 VA
- MAXIMUM VOLTAGE: 32 VDC
- MINIMUM VOLTAGE: 20 mV
- MAXIMUM CURRENT DC: 50 mA
- MINIMUM CURRENT DC: 1 mA
- DIELECTRIC STRENGTH: ≥ 250 Vrms (1mn)
- CONTACT RESISTANCE: ≤ 150 mΩ
- INSULATION RESISTANCE: ≥ 50 MΩ
- BOUNCE TIME: ≤ 6 ms

Environmental
- Silver
- OPERATING TEMPERATURE: -40˚C to 85˚C
- STORAGE TEMPERATURE: -55˚C (10 days) +85˚C (4 days)

Process
SOLDERING: This component is suited to the following methods:
- Lead free reflow soldering process in accordance with IEC 61760-1.

Packaging
In reels of 4,000 pieces.
Dimensions of reels according to EIA 481B
External diameter 180 mm

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

KMT 20.65 mm

NOTE: Specifications listed above are for switches with standard options.
For information on specific and custom switches, consult Customer Service Center.

Electrical Specifications
- MAXIMUM POWER: 0.5 VA
- MAXIMUM VOLTAGE: 32 VDC
- MINIMUM VOLTAGE: 20 mV
- MAXIMUM CURRENT DC: 50 mA
- MINIMUM CURRENT DC: 1 mA
- DIELECTRIC STRENGTH: ≥ 250 Vrms (1mn)
- CONTACT RESISTANCE: ≤ 150 mΩ
- INSULATION RESISTANCE: ≥ 50 MΩ
- BOUNCE TIME: ≤ 6 ms

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

KMT 20.65 mm

Actuation Force
1 1.0 N (100 grams)
2 1.6 N (160 grams)

Grounding Option
G Ground Pin
NG No Ground Pin

Contact Material
1 Silver
3 Gold - please contact Customer Service

Type
HF Halogen Free
LFS RoHS, silver plated
LFG RoHS, gold plated

Contact: www.ckswitches.com

Dimensions shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
KMT Series
Nano-Miniature SMT Top Actuated

KMT Series – No Ground Pin

ELECTRICAL DIAGRAM

RECOMMENDED LAYOUT

KMT Series – With Ground Pin

ELECTRICAL DIAGRAM

RECOMMENDED LAYOUT

TAPE & REEL

DE-REELING DIRECTION
OUT OF THE TAPE

SECTION A-A

Draft 5˚ max

First Angle Projection

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
**Features**
- 3.0 x 2.6 mm footprint
- Smallest thickness with integrated actuator
- Extended life cycles
- IP68
- Ultra low current capabilities

**Typical Applications**
- Mobile Phones
- Hearing Aids
- MP3 accessories
- Bluetooth Headset
- Automotive keyless entry system
- Smoke and CO detectors
- E-readers
- Home automation remote controls

**Specification**

**FUNCTION:** momentary action, normally open

**CONTACT ARRANGEMENT:** 1 make contact = SPST, N.O.

**TERMINALS:** J lead type for SMT

**Mechanical**

TRAVEL (mm): 0.15 ± 0.1

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Operating Force (Newtons)</th>
<th>Tactile Feeling</th>
<th>Operating Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMT011NGJLHS</td>
<td>1.0 (100) ± 25%</td>
<td>≥ 10%</td>
<td>300,000</td>
</tr>
<tr>
<td>KMT021NGJLHS</td>
<td>1.6 (160) ± 25%</td>
<td>≥ 30%</td>
<td>300,000</td>
</tr>
<tr>
<td>KMT071NGJLHS</td>
<td>2.3 (230) ± 25%</td>
<td>≥ 30%</td>
<td>300,000</td>
</tr>
<tr>
<td>KMT031NGJLHS</td>
<td>3.4 (340) ± 25%</td>
<td>≥ 30%</td>
<td>300,000</td>
</tr>
</tbody>
</table>

**Environmental**

OPERATING TEMPERATURE: -40°C to 85°C

STORAGE TEMPERATURE: -55°C (10 days) +85°C (4 days)

**Process**

SOLDERING: This component is suited to the following methods:
- Lead free reflow soldering process in accordance with IEC 61760-1.

**Packaging**

In reels of 5,000 pieces.

Dimensions of reels according to EIA 481B

External diameter 180 mm

**Part Number Description**

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

**Electrical**

- **MAXIMUM POWER:** 0.5 VA
- **MAXIMUM VOLTAGE:** 32 VDC
- **MINIMUM VOLTAGE:** 20 mV
- **MAXIMUM CURRENT DC:** 50 mA
- **MINIMUM CURRENT DC:** 1 mA
- **DIELECTRIC STRENGTH:** ≥ 250 Vrms (1mn)
- **CONTACT RESISTANCE:** ≤ 150 mΩ
- **INSULATION RESISTANCE:** ≥ 50 MΩ
- **BOUNCE TIME:** ≤ 6 ms

**WARNING:** Specifications listed above are for switches with standard options.

For information on specific and custom switches, consult Customer Service Center.

**Grounding Option**

**LHS** Lead free, RoHS, Halogen free, Silver plated

**Contact Material**

1. Silver
2. Silver long life
3. Gold

**Actuation Force**

1. 1.0 N (100 grams)
2. 1.6 N (160 grams)
3. 2.3 N (230 grams)
4. 3.4 N (340 grams)

**Total Height**

0.65 mm
KMT0 Series
Nano-Miniature SMT Top Actuated

Minimum actuator diameter is 1.0 mm. It is recommended to enlarge this diameter to a full flat surface covering the switch.

Designation

<table>
<thead>
<tr>
<th>Designation</th>
<th>H ±0.07</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMT011NGJLHS</td>
<td>0.63</td>
</tr>
<tr>
<td>KMT021NGJLHS</td>
<td>0.65</td>
</tr>
<tr>
<td>KMT031NGJLHS</td>
<td></td>
</tr>
<tr>
<td>KMT071NGJLHS</td>
<td></td>
</tr>
</tbody>
</table>

TAPE & REEL

Dimensions are shown: mm
Specifications and dimensions subject to change.
Features/Benefits
- Small footprint
- 4 actuation forces
- Excellent tactile feel
- Ultra low current capabilities
- IP40

Specifications and dimensions subject to change

Typical Applications
- Automotive
- Industrial electronics
- Medical equipment

Specification
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
TERMINALS: Gullwing type for SMT

Mechanical

<table>
<thead>
<tr>
<th>Type G and NG</th>
<th>Operating force N (g)</th>
<th>Operating life (cycles)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMR211 LFS</td>
<td>1.2 (120) ± 0.30</td>
<td>200,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR211 ULC LFS</td>
<td>1.2 (120) ± 0.30</td>
<td>200,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR213 LFG</td>
<td>1.2 (120) ± 0.30</td>
<td>200,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR213 ULC LFG</td>
<td>1.2 (120) ± 0.30</td>
<td>200,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR221 LFS</td>
<td>2.0 (200) ± 0.50</td>
<td>200,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR221 ULC LFS</td>
<td>2.0 (200) ± 0.50</td>
<td>200,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR223 LFG</td>
<td>2.0 (200) ± 0.50</td>
<td>200,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR223 ULC LFG</td>
<td>2.0 (200) ± 0.50</td>
<td>200,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR231 LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>150,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR231 ULC LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>150,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR232 LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>300,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR232 ULC LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>300,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR233 LFG</td>
<td>3.0 (300) ± 0.75</td>
<td>150,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR233 ULC LFG</td>
<td>3.0 (300) ± 0.75</td>
<td>150,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR241 LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>100,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR241 ULC LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>100,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR242 LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>200,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR242 ULC LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>200,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR243 LFG</td>
<td>4.0 (400) ± 1.00</td>
<td>100,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR243 ULC LFG</td>
<td>4.0 (400) ± 1.00</td>
<td>100,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
</tbody>
</table>

TACTILE FEELING: KMR 2 series with actuation force in 2N - 3N - 4N: ≥ 30%
KMR 2 series with actuation force in 1.2N: ≥ 20%

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

Electrical

<table>
<thead>
<tr>
<th>Specification</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 mVDC</td>
<td>20 mVDC</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>
<tr>
<td>DIELECTRIC STRENGTH:</td>
<td>≥ 250 Vrms</td>
<td></td>
</tr>
<tr>
<td>CONTACT RESISTANCE:</td>
<td>≤ 100 mΩ</td>
<td></td>
</tr>
<tr>
<td>INSULATION RESISTANCE:</td>
<td>≥ 1GΩ</td>
<td></td>
</tr>
<tr>
<td>BOUNCE TIME:</td>
<td>≤ 3 ms</td>
<td></td>
</tr>
</tbody>
</table>

Environmental

<table>
<thead>
<tr>
<th>Specification</th>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING TEMPERATURE:</td>
<td>-40°C to 85°C</td>
<td>-40°C to 125°C</td>
</tr>
<tr>
<td>STORAGE TEMPERATURE:</td>
<td>-55°C to 85°C</td>
<td>-55°C to 125°C</td>
</tr>
</tbody>
</table>

Process

Soldering: Lead free reflow soldering process in accordance with IEC 61760-1.

Packaging

In reels of 7,000 pieces
External diameter 330 mm ± 2 mm

NOTE: Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Specifications and dimensions subject to change
www.ckswitches.com
**Features/Benefits**
- Small footprint
- 4 actuation forces
- Excellent tactile feel
- Ultra low current capabilities
- IP40

**Typical Applications**
- Automotive
- Industrial electronics
- Medical equipment

**Specification**
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
TERMINALS: Gullwing type for SMT

**Mechanical**

<table>
<thead>
<tr>
<th>Type G and NG See description below</th>
<th>Operating force (N, g, lbs)</th>
<th>Operating life (cycles)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMR411 LFS</td>
<td>1.2 (120) ± 0.30</td>
<td>100,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR411 ULC LFS</td>
<td>1.2 (120) ± 0.30</td>
<td>100,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR413 LFG</td>
<td>1.2 (120) ± 0.30</td>
<td>100,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR413 ULC LFG</td>
<td>1.2 (120) ± 0.30</td>
<td>100,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR421 LFS</td>
<td>2.0 (200) ± 0.50</td>
<td>100,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR421 ULC LFS</td>
<td>2.0 (200) ± 0.50</td>
<td>100,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR423 LFG</td>
<td>2.0 (200) ± 0.50</td>
<td>100,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR423 ULC LFG</td>
<td>2.0 (200) ± 0.50</td>
<td>100,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR431 LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>300,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR431 ULC LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>300,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR432 LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>300,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR432 ULC LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>300,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR433 LFG</td>
<td>3.0 (300) ± 0.75</td>
<td>300,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR433 ULC LFG</td>
<td>3.0 (300) ± 0.75</td>
<td>300,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR441 LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>300,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR441 ULC LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>200,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR442 LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>200,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR442 ULC LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>200,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR443 LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>100,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR443 ULC LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>100,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
</tbody>
</table>

**TACTILE FEELING:**
- KMR 4 series with actuation force in 2N - 3N - 4N: ≥ 25%
- KMR 4 series with actuation force in 1.2N: ≥ 20%

**Environmental**
OPERATING TEMPERATURE: -40°C to 85°C
STORAGE TEMPERATURE: -55°C to 85°C

**Company Information**
24 Aug 21

**Packaging**
In reels of 6,000 pieces
External diameter 330 mm ± 2 mm

**Process**
Soldering: Lead free reflow soldering process in accordance with IEC 61760-1.

**Part Number Description**
For any part number different from those listed above, please consult your local representative.
KMR 4 Series
Microminiature Tact Switch for SMT

G - Ground Pin

NG - No Ground Pin

TAPE & REEL

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
Features/Benefits

- Watertight IP67
- Standard and long life versions
- No ground pin
- Ultra low current capabilities
- Excellent tactile feel

Typical Applications

- Automotive
- Medical
- Consumer
- Industrial

Specification

FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
TERMINALS: Gullwing type for SMT

Mechanical

<table>
<thead>
<tr>
<th>Type NG</th>
<th>Operating force N (g)</th>
<th>Operating life (cycles)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMR611NG LFS</td>
<td>1.2 (120) ± 0.30</td>
<td>200,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR611NG ULC LFS</td>
<td>1.2 (120) ± 0.30</td>
<td>200,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR613NG LFS</td>
<td>1.2 (120) ± 0.30</td>
<td>200,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR613NG ULC LFS</td>
<td>1.2 (120) ± 0.30</td>
<td>200,000</td>
<td>0.20 mm ± 0.1</td>
</tr>
<tr>
<td>KMR621NG LFS</td>
<td>2.0 (200) ± 0.50</td>
<td>200,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR621NG ULC LFS</td>
<td>2.0 (200) ± 0.50</td>
<td>200,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR623NG LFS</td>
<td>2.0 (200) ± 0.50</td>
<td>200,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR623NG ULC LFS</td>
<td>2.0 (200) ± 0.50</td>
<td>200,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR631NG LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>150,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR631NG ULC LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>150,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR632NG LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>300,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR632NG ULC LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>300,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR633NG LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>150,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR633NG ULC LFS</td>
<td>3.0 (300) ± 0.75</td>
<td>150,000</td>
<td>0.25 mm ± 0.1</td>
</tr>
<tr>
<td>KMR641NG LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>100,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR641NG ULC LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>100,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR642NG LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>200,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR642NG ULC LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>200,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR643NG LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>100,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
<tr>
<td>KMR643NG ULC LFS</td>
<td>4.0 (400) ± 1.00</td>
<td>100,000</td>
<td>0.30 mm ± 0.1</td>
</tr>
</tbody>
</table>

TACTILE FEELING:
- KMR 6 series with actuation force in 2N - 3N - 4N: ≥ 30%
- KMR 6 series with actuation force in 1.2N: ≥ 20%

Part Number Description

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

Electrical

<table>
<thead>
<tr>
<th>Specification</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 mVDC</td>
<td>20 mVDC</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>
<tr>
<td>DIELECTRIC STRENGTH:</td>
<td>≥ 250 Vrms</td>
<td></td>
</tr>
<tr>
<td>CONTACT RESISTANCE:</td>
<td>≤ 100 mΩ</td>
<td></td>
</tr>
<tr>
<td>INSULATION RESISTANCE:</td>
<td>≥ 1GΩ</td>
<td></td>
</tr>
<tr>
<td>BOUNCE TIME:</td>
<td>≤ 3 ms</td>
<td></td>
</tr>
</tbody>
</table>

* For ULC version minimum current is 1µA at 1.8 VDC

Environmental

<table>
<thead>
<tr>
<th>Specification</th>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING TEMPERATURE:</td>
<td>-40˚C to 85˚C</td>
<td>-40˚C to 125˚C</td>
</tr>
<tr>
<td>STORAGE TEMPERATURE:</td>
<td>-55˚C to 85˚C</td>
<td>-55˚C to 125˚C</td>
</tr>
</tbody>
</table>

Process

Soldering: Lead free reflow soldering process in accordance with IEC 61760-1.

Packaging

In reels of 7,000 pieces
External diameter 330 mm ± 2 mm

NOTE:
Specifications listed above are for switches with standard options.
For information on specific and custom switches, consult Customer Service Center.

24 Aug 21
KMR 6 Series
Microminiature SMT Top Actuated  IP67

NG - No Ground Pin

**TAPE & REEL**

Dimensions are shown: mm
Specifications and dimensions subject to change

24 Aug 21

www.ckswitches.com
Features/Benefits
- Watertight IP67
- Standard and long life versions
- No ground pin
- Ultra low current capabilities
- Excellent tactile feel

Typical Applications
- Automotive
- Medical
- Consumer
- Industrial

Specification

FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
TERMINALS: Gullwing type for SMT

Mechanical

<table>
<thead>
<tr>
<th>Type NG</th>
</tr>
</thead>
<tbody>
<tr>
<td>See description below</td>
</tr>
<tr>
<td>Operating force N (g)</td>
</tr>
<tr>
<td>Operating life (cycles)</td>
</tr>
<tr>
<td>Travel (mm)</td>
</tr>
<tr>
<td>KMR711NG LFS</td>
</tr>
<tr>
<td>KMR711NG ULC LFS</td>
</tr>
<tr>
<td>KMR713NG LFG</td>
</tr>
<tr>
<td>KMR713NG ULC LFG</td>
</tr>
<tr>
<td>KMR721NG LFS</td>
</tr>
<tr>
<td>KMR721NG ULC LFS</td>
</tr>
<tr>
<td>KMR723NG LFG</td>
</tr>
<tr>
<td>KMR723NG ULC LFG</td>
</tr>
<tr>
<td>KMR731NG LFS</td>
</tr>
<tr>
<td>KMR731NG ULC LFS</td>
</tr>
<tr>
<td>KMR732NG LFG</td>
</tr>
<tr>
<td>KMR732NG ULC LFG</td>
</tr>
<tr>
<td>KMR733NG LFG</td>
</tr>
<tr>
<td>KMR733NG ULC LFG</td>
</tr>
<tr>
<td>KMR741NG LFS</td>
</tr>
<tr>
<td>KMR741NG ULC LFS</td>
</tr>
<tr>
<td>KMR742NG LFG</td>
</tr>
<tr>
<td>KMR742NG ULC LFG</td>
</tr>
<tr>
<td>KMR743NG LFG</td>
</tr>
<tr>
<td>KMR743NG ULC LFG</td>
</tr>
</tbody>
</table>

TACTILE FEELING:
- KMR 7 series with actuation force in 2N - 3N - 4N: ≥ 25%
- KMR 7 series with actuation force in 1.2N: ≥ 20%

Part Number Description

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

Electrical

<table>
<thead>
<tr>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM POWER: 1 VA</td>
<td>0.2 VA</td>
</tr>
<tr>
<td>MAXIMUM VOLTAGE: 32 VDC</td>
<td>32 VDC</td>
</tr>
<tr>
<td>MINIMUM VOLTAGE: 20 mVDC</td>
<td>20 mVDC</td>
</tr>
<tr>
<td>MAXIMUM CURRENT: 50 mA</td>
<td>10 mA</td>
</tr>
<tr>
<td>MINIMUM CURRENT: 1 mA</td>
<td>1 mA*</td>
</tr>
<tr>
<td>DIELECTRIC STRENGTH: ≥ 250 Vrms</td>
<td></td>
</tr>
<tr>
<td>CONTACT RESISTANCE: ≤ 100 mΩ</td>
<td></td>
</tr>
<tr>
<td>INSULATION RESISTANCE: ≥ 1GΩ</td>
<td></td>
</tr>
<tr>
<td>BOUNCE TIME: ≤ 3 ms</td>
<td></td>
</tr>
</tbody>
</table>

*For ULC version minimum current is 1µA at 1.8 VDC

Environmental

<table>
<thead>
<tr>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING TEMPERATURE: -40°C to 85°C</td>
<td>-40°C to 125°C</td>
</tr>
<tr>
<td>STORAGE TEMPERATURE: -55°C to 85°C</td>
<td>-55°C to 125°C</td>
</tr>
</tbody>
</table>

Process

Soldering: Lead free reflow soldering process in accordance with IEC 61760-1.

Packaging

In reels of 6,000 pieces
External diameter 330 mm ± 2 mm

NOTE: Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
KMR 7 Series
Microminiature SMT Top Actuated IP67

NG - No Ground Pin

Tactile Switches

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com

24 Aug 21
Features/Benefits
• Small footprint
• 3 actuation forces
• Excellent tactile feel
• Hard actuator
• IP40

Typical Applications
• Automotive
• Mobile phones
• Industrial electronics
• Medical equipment

Specification
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
TERMINALS: Gullwing type for SMT

Mechanical

<table>
<thead>
<tr>
<th>Type G and NG</th>
<th>Operating force (N (gms))</th>
<th>Operating life (cycles)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMR811G LFS 1.2 (120) ± 0.30</td>
<td>200,000</td>
<td>0.20 mm ± 0.1</td>
<td></td>
</tr>
<tr>
<td>KMR821G LFS 2.0 (200) ± 0.50</td>
<td>200,000</td>
<td>0.25 mm ± 0.1</td>
<td></td>
</tr>
<tr>
<td>KMR831G LFS 3.0 (300) ± 0.75</td>
<td>150,000</td>
<td>0.25 mm ± 0.1</td>
<td></td>
</tr>
<tr>
<td>KMR831NG ULC LFS 3.0 (300) ± 0.75</td>
<td>150,000</td>
<td>0.25 mm ± 0.1</td>
<td></td>
</tr>
</tbody>
</table>

TACTILE FEELING:
KMR 8 series with actuation force in 2N - 3N - 4N: ≥ 30%
KMR 8 series with actuation force in 1.2N: ≥ 20%

Electrical
Silver
MAXIMUM POWER: 1 VA
MAXIMUM VOLTAGE: 32 VDC
MINIMUM VOLTAGE: 20 mVDC
MAXIMUM CURRENT: 50 mA
MINIMUM CURRENT: 1 mA*
DIELECTRIC STRENGTH: ≥ 250 Vrms
CONTACT RESISTANCE: ≤ 100 mΩ
INSULATION RESISTANCE: ≥ 1 GΩ
BOUNCE TIME: ≤ 3 ms

*For ULC version minimum current is 1µA at 1.8 VDC

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

Process
Soldering: Lead free reflow soldering process in accordance with IEC 61760-1.

Packaging
In reels of 7,000 pieces
External diameter 330 mm ± 2 mm

NOTE: Specifications listed above are for switches with standard options.
For information on specific and custom switches, consult Customer Service Center.

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

KMR 8 Series
Microminiature SMT Top Actuated

Tactile Switches

B–25
24 Aug 21
www.c-kswitches.com
KMR 8 Series
Microminiature SMT Top Actuated

G - Ground Pin

NG - No Ground Pin

TAPE & REEL

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
### Features/Benefits
- 1.42mm thickness with excellent tactile feel
- ESD protection by compact size
- Positioning pegs for stability
- RoHS compliant and compatible

### Typical Applications
- Mobile phones
- Medical handheld monitors
- Consumer electronics
- Telecommunication networks

### Specification
**FUNCTION:** Momentary  
**CONTACT ARRANGEMENT:** SPST, N.O.  
**TERMINALS:** Gullwing type for SMT  
**IP40 Sealed**

#### Mechanical
- **OVERLOAD:** 20N  
- **TACTILE FEELING:** 15% min. for the 2N version  
  25% min for the 2.5N version

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force</th>
<th>Operating life</th>
<th>Travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>KMS221G/GP</td>
<td>2N (200) ± 0.5</td>
<td>100 K cycles</td>
<td>0.25 ± 0.15</td>
</tr>
<tr>
<td>KMS223G/GP</td>
<td>2N (200) ± 0.5</td>
<td>100 K cycles</td>
<td>0.25 ± 0.15</td>
</tr>
<tr>
<td>KMS231G/GP</td>
<td>3N (300) ± 0.6</td>
<td>100 K cycles</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KMS233G/GP</td>
<td>3N (300) ± 0.6</td>
<td>100 K cycles</td>
<td>0.3 ± 0.15</td>
</tr>
</tbody>
</table>

**Note:** Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

### Typical Applications
- Mobile phones
- Medical handheld monitors
- Consumer electronics
- Telecommunication networks

### Packaging
- Tape and reels in reels of 3,000 pieces.  
- External diameter 330mm ± 2mm.

#### Electrical
- **MAXIMUM POWER:** 1 VA  
- **MAXIMUM VOLTAGE:** 32 VDC  
- **MAXIMUM CURRENT DC:** 50 mA  
- **MINIMUM CURRENT DC:** 1 mA  
- **DIELECTRIC STRENGTH:** 250 VDC  
- **CONTACT RESISTANCE:** ≤100 mΩ  
- **INSULATION RESISTANCE:** 10¹⁰ Ω  
- **BOUNCE TIME:** ≤ 3 ms

#### Environmental
- **OPERATING TEMPERATURE:** -40°C to 85°C  
- **STORAGE TEMPERATURE:** -55°C to 125°C

#### Process
- Soldering: Lead free reflow soldering process in accordance with IEC 61760-1.

### 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.
KMS Series
Microminiature SMT Side Actuated

**KMS**

| Specifications and dimensions subject to change |

**KMS WITH PEGS**

**TAPE & REEL**

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
PTS525 Series
Microminiature Tact Switch for SMT

Features/Benefits
• 0.8 & 1.5 mm actuator height
• Ruggedized package in a compact size
• High number of cycles

Typical Applications
• Consumer products
• Instrumentation
• Remote controls

Specification
FUNCTION: Momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.

Electrical
MAXIMUM VOLTAGE: 15 VDC
MAXIMUM CURRENT DC: 20 mA
DIELECTRIC STRENGTH: 250 VA C (1mm)
CONTACT RESISTANCE: ≤ 100 mΩ
INSULATION RESISTANCE: ≥ 100 MΩ
BOUNCE TIME: ≤ 10 ms

Environmental
OPERATING TEMPERATURE: -20°C to 70°C

Process
SOLDERING: This component is suited to the following methods:
Infrared Reflow Soldering in accordance with IEC61760-1

Packaging
Switches in reels of:
5,000 pieces in 0.8 mm height
4,000 pieces in 1.5 mm height
Dimensions of reels according to EIA 481B
External diameter 330 mm

NOTE:
• Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
• The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

How To Order
Please see chart below for full part numbers.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Height (mm)</th>
<th>Leads Shape</th>
<th>Ground Pin</th>
<th>Force</th>
<th>Travel (mm)</th>
<th>Operating Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS525 SM08 SMTR 2 LFS</td>
<td>0.8</td>
<td>G</td>
<td>No</td>
<td>160 gf ± 50 gf</td>
<td>0.25 ± 0.2</td>
<td>1,000,000</td>
</tr>
<tr>
<td>PTS525 SK08 SMTR 2 LFS</td>
<td>0.8</td>
<td>G</td>
<td>No</td>
<td>260 gf ± 50 gf</td>
<td>0.25 ± 0.2</td>
<td>200,000</td>
</tr>
<tr>
<td>PTS525 SM15 SMTR 2 LFS</td>
<td>1.5</td>
<td>G</td>
<td>No</td>
<td>160 gf ± 50 gf</td>
<td>0.25 ± 0.2</td>
<td>1,000,000</td>
</tr>
<tr>
<td>PTS525 SK15 SMTR 2 LFS</td>
<td>1.5</td>
<td>G</td>
<td>No</td>
<td>260 gf ± 50 gf</td>
<td>0.25 ± 0.2</td>
<td>500,000</td>
</tr>
<tr>
<td>PTS525 SMG15 SMTR 2 LFS</td>
<td>1.5</td>
<td>G</td>
<td>Yes</td>
<td>160 gf ± 50 gf</td>
<td>0.25 ± 0.2</td>
<td>1,000,000</td>
</tr>
<tr>
<td>PTS525 SKG15 SMTR 2 LFS</td>
<td>1.5</td>
<td>G</td>
<td>Yes</td>
<td>260 gf ± 50 gf</td>
<td>0.25 ± 0.2</td>
<td>500,000</td>
</tr>
<tr>
<td>PTS525 SMG15J SMTR 2 LFS</td>
<td>1.5</td>
<td>J</td>
<td>Yes</td>
<td>160 gf ± 50 gf</td>
<td>0.25 ± 0.2</td>
<td>1,000,000</td>
</tr>
<tr>
<td>PTS525 SKG15J SMTR 2 LFS</td>
<td>1.5</td>
<td>J</td>
<td>Yes</td>
<td>260 gf ± 50 gf</td>
<td>0.25 ± 0.2</td>
<td>500,000</td>
</tr>
</tbody>
</table>
PTS525 Series
Microminiature Tact Switch for SMT

PTS525 SM08 SMTR2 LFS
PTS525 SK08 SMTR2 LFS

PTS525 SM15 SMTR2 LFS
PTS525 SK15 SMTR2 LFS

PTS525 SMG15 SMTR2 LFS
PTS525 SKG15 SMTR2 LFS

Dimensions are shown: mm
Specifications and dimensions subject to change
PTS525 Series
Microminiature Tact Switch for SMT

PTS525 SMG15J SMTR2 LFS
PTS525 SKG15J SMTR2 LFS

Tape & Reel

0.8 mm height
5,000 pieces per reel

Cover tape (Polyester)
Reel (Polystyrene)
Carrier tape (Polystyrene)

SEE DETAIL A
REEL

DETAIL A SCALE 0.5

NOTE:

CARRIERTAPE

Max
10^3

n 336

14

n 13' 0.5

2' 0.5

n 21' 0.8

8

175

5.6

12 0.3

8

See Detail A

Dimensions shown: mm
Specifications and dimensions subject to change
www.ckswitches.com

PTS525 SMG15J SMTR2 LFS
PTS525 SKG15J SMTR2 LFS

Reel (Polystyrene)

Carrier tape (Polystyrene)

0.8 mm height
5,000 pieces per reel

Cover tape (Polyester)
PTS525 Series
Microminiature Tact Switch for SMT

Tape & Reel

1.5 mm height
4,000 pieces per reel

Cover tape (Polyester)

Reel (Polystyrene)

Carrier tape (Polystyrene)

SEE DETAIL A

DETAIL A
SCALE 0,5

CARRIER TAPE

Max 14
Max 10

n 300

SEE DETAIL A

REEL

4

8

1,75

n 1,5

n 300

n 21 0,6

n 13 0,5

1,5 mm height
4,000 pieces per reel

Specifications and dimensions subject to change

Dimensions are shown: mm

First Angle Projection

www.ckswitches.com

B-32

14 Nov 22
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.
PTS526 Series
Microminiature SMT Top Actuated

0.8 mm height – G leads lead only, no ground pin

1.5 ; 1.7 and 2.0 mm height – G leads, no ground pin
PTS526 Series
Microminiature SMT Top Actuated

1.5 ; 1.7 and 2.0 mm height – G leads, with ground pin

1.5 ; 1.7 and 2.0 mm height – J leads, with ground pin
PTS526 Series
Microminiature SMT Top Actuated

TAPE & REEL

0,8 mm height
5,000 pieces per reel

1.5; 1.7 and 2.0 mm height
4,000 pieces per reel
## Features/Benefits
- 4.5 x 4.5 mm footprint
- 0.55 mm thickness
- High number of cycles
- Symbol line identification

## Typical Applications
- MP3 accessories
- Bluetooth headset
- Remote controls
- Garage door opener

### Specifications

**FUNCTION:** momentary action  
**CONTACT ARRANGEMENT:** 1 make contact = SPST N.O.  
**TERMINALS:** Gullwing for SMT  
**TRAVEL:** 0.2mm - 0.1 /+ 0.15mm

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Operating Force (gf)</th>
<th>Operating Life (operations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS530 GN055 SMTR LFS</td>
<td>100 ± 30</td>
<td>1,000,000</td>
</tr>
<tr>
<td>PTS530 GM055 SMTR LFS</td>
<td>160 ± 30</td>
<td>1,000,000</td>
</tr>
<tr>
<td>PTS530 GH055 SMTR LFS</td>
<td>200 ± 30</td>
<td>200,000</td>
</tr>
<tr>
<td>PTS530 GK055 SMTR LFS</td>
<td>260 ± 30</td>
<td>200,000</td>
</tr>
<tr>
<td>PTS530 GG065 SMTR LFS</td>
<td>400 ± 70</td>
<td>300,000</td>
</tr>
<tr>
<td>PTS530 GS065 SMTR LFS</td>
<td>600 - 50/+100</td>
<td>150,000</td>
</tr>
</tbody>
</table>

### Electrical

**MAXIMUM VOLTAGE:** 12 VDC  
**MAXIMUM CURRENT DC:** 50 mA  
**DIELECTRIC STRENGTH:** 250 VA C (1mn)  
**CONTACT RESISTANCE:** ≤ 100 mΩ  
**INSULATION RESISTANCE:** ≥ 100 MΩ  
**BOUNCE TIME:** ≤ 10 ms

### Environmental

**OPERATING TEMPERATURE:** -40°C to 85°C

### Process

**SOLDERING:** This component is suited to the following methods:
- Infrared Reflow Soldering in accordance with IEC61760-1

### Packaging

- Switches in reels of 7,000 pieces.  
- Dimensions of reels according to EIA 481B  
- External diameter 330 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.

**Part Number**: PTS530  
**Gullwing**: G  
**Termination**: Gullwing  
**Actuation Force**:  
- N: 100 gf  
- M: 160 gf  
- H: 200 gf  
- K: 260 gf  
- G: 400 gf  
- S: 600 gf  

**Body Type**:  
- GN055: 0.55mm height for 100, 160, 200 and 260 gf  
- GS065: 0.65mm height for 400 and 600 gf

**Packaging**: SMTR Tape & reel  
**RoHS, silver plated**: LFS

**NOTE**:  
- Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.  
- The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.
PTS530 Series
Ultra Low Profile SMT Top Actuated

TERMINATION

G GULLWING

4,65

BODY TYPE / ACTUATION FORCE

055 0,55 MM HEIGHT

PART NUMBER
PTS 530 GS 055 SMTR LFS
PTS 530 GG 055 SMTR LFS

HEIGHT 0,72
H: 200 gf

065 0,65 MM HEIGHT

PART NUMBER
PTS 530 GS 065 SMTR LFS
PTS 530 GG 065 SMTR LFS

HEIGHT 0,68
H: 200 gf

G: 400 gf

Actuation force identification lines:

N: 100 gf
M: 160 gf
No Lines
H: 200 gf
K: 260 gf
G: 400 gf
No Lines
S: 600 gf

Restriction in operation

TAPE & REEL

Dimensions are shown: mm
Specifications and dimensions subject to change.

www.ckswitches.com
PTS540 Series
Ultra Low Profile SMT Top Actuated

Features/Benefits
• 3.7 x 3.7 mm footprint
• 0.35 mm thickness
• High number of cycles

Typical Applications
• MP3 accessories
• Bluetooth headset
• Remote controls

Specifications
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
TERMINALS: J type for SMT
TRAVEL: 0.15 mm ± 0.1 mm

Mechanical

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Operating Force (gf)</th>
<th>Operating Life (operations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS540 JM035 SMTR LFS</td>
<td>160 ± 50</td>
<td>500,000</td>
</tr>
<tr>
<td>PTS540 JK035 SMTR LFS</td>
<td>230 ± 50</td>
<td>300,000</td>
</tr>
</tbody>
</table>

Packaging
Switches in reels of 10,000 pieces.
Dimensions of reels according to EIA 481B
External diameter 330 mm

Electrical
MAXIMUM VOLTAGE: 12 VDC
MAXIMUM CURRENT DC: 50 mA
DIELECTRIC STRENGTH: 250 VA C (1mn)
CONTACT RESISTANCE: ≤ 100 mΩ
INSULATION RESISTANCE: ≥ 100 MΩ
BOUNCE TIME: ≤ 10 ms

Environmental
OPERATING TEMPERATURE: -30°C to 85°C

Process
SOLDERING: This component is suited to the following methods:
Infrared Reflow Soldering in accordance with IEC61760-1

NOTE:
• Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
• The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

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.

PART NUMBER

PT S 5 4 0 J 0 3 5 S M T R L F S

Termination
J J bend

Actuation Force
M 160 gf black casing
K 230 gf gray casing

Packaging
SMTR Tape & reel
LFS RoHS, silver plated

Body Type
035 0.35mm height
### Features/Benefits
- 4.2 x 3.2 mm footprint
- 2.5 mm thickness
- High number of cycles
- Color coded actuators

### Typical Applications
- Control panels
- Nomad devices
- Remote controls

### Specifications

<table>
<thead>
<tr>
<th>Function</th>
<th>momentary action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Arrangement</td>
<td>1 make contact = SPST N.O.</td>
</tr>
<tr>
<td>Terminals</td>
<td>J type for SMT</td>
</tr>
<tr>
<td>Travel</td>
<td>160 &amp; 260 gf: 0.15mm ± 0.1mm</td>
</tr>
<tr>
<td></td>
<td>400 &amp; 600 gf: 0.20mm ± 0.1mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actuation Force (gf)</th>
<th>Operating Life (operations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS810 SJM 250 SMTR LFS</td>
<td>160 ± 50</td>
</tr>
<tr>
<td>PTS810 SJK 250 SMTR LFS</td>
<td>260 ± 70</td>
</tr>
<tr>
<td>PTS810 SJG 250 SMTR LFS</td>
<td>400 ± 100</td>
</tr>
<tr>
<td>PTS810 SJS 250 SMTR LFS</td>
<td>600 ± 150</td>
</tr>
</tbody>
</table>

### Electrical
- Maximum Voltage: 16 VDC
- Maximum Current DC: 50 mA
- Dielectric Strength: 250 VA C (1mn)
- Contact Resistance: ≤ 500 mΩ
- Insulation Resistance: ≥ 100 MΩ
- Bounce Time: ≤ 10 ms

### Environmental
- Operating Temperature: -40°C to 85°C

### Process
- Soldering: Infrared Reflow Soldering in accordance with IEC61760-1

### 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.

### Packaging
Switches in reels of 2,900 pieces. Dimensions of reels according to EIA 481B
External diameter 330 mm
Features/Benefits
- 4.2 x 3.2 mm footprint
- 2.5 mm thickness
- Commercial grade

Specifications
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
TERMINALS: J type for SMT
TRAVEL: 0.20mm ± 0.1mm

<table>
<thead>
<tr>
<th></th>
<th>Operating Force (gf)</th>
<th>Operating Life (operations)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS815 SJM 250 SMTR LFS</td>
<td>180 ± 50</td>
<td>100,000</td>
</tr>
<tr>
<td>PTS815 SJK 250 SMTR LFS</td>
<td>250 ± 50</td>
<td>100,000</td>
</tr>
<tr>
<td>PTS815 SJG 250 SMTR LFS</td>
<td>400 ± 100</td>
<td>100,000</td>
</tr>
</tbody>
</table>

Packaging
Switches in reels of 3,000 pieces.
Dimensions of reels according to EIA 481B
External diameter 330 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.

PTS815 Series
Microminiature SMT Top Actuated

Typical Applications
- IoT devices
- Home Automation
- Remote Controls

Electrical
MAXIMUM VOLTAGE: 12 VDC
MAXIMUM CURRENT DC: 50 mA
DIELECTRIC STRENGTH: 250 VA C (1mn)
CONTACT RESISTANCE: ≤ 100 mΩ initial
INSULATION RESISTANCE: ≥ 100 MΩ
BOUNCE TIME: ≤ 10 ms

Environmental
OPERATING TEMPERATURE: -40°C to 90°C

Process
SOLDERING: This component is suited to the following methods:
Infrared Reflow Soldering in accordance with IEC61760-1

NOTE:
- Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
- The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

Packaging
Switches in reels of 3,000 pieces.
Dimensions of reels according to EIA 481B
External diameter 330 mm

PTS815 SJM 250 SMTR LFS
180 ± 50
100,000

PTS815 SJK 250 SMTR LFS
250 ± 50
100,000

PTS815 SJG 250 SMTR LFS
400 ± 100
100,000

Actuator Type
S Standard

Termination
J J bend SMT

Actuation Force
M 180 gf; white actuator
K 250 gf; white actuator
G 400 gf; black actuator

Height
250 2.5 mm height

Packaging
SMTR Tape & reel

LFS RoHS, silver plated

14 Nov 22

www.ckswitches.com
PTS815 Series
Microminiature SMT Top Actuated

PTS815

CIRCUIT DIAGRAM
P.C.B LAND DIMENSION

TAPE & REEL

Dimensions are shown: mm
Specifications and dimensions subject to change

14 Nov 22
PTS820 Series
Microminiature SMT Top Actuated

Features/Benefits
- 3.9 x 2.9 mm footprint
- Three different heights
- High number of cycles
- Reduced footprint

Typical Applications
- Control panels
- Nomad devices
- Remote controls
- Keyless entry system

Specifications
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
TERMINALS: J type for SMT
TRAVEL: 0.2mm + 0.1mm / -0.05 mm

<table>
<thead>
<tr>
<th></th>
<th>Operating Force (gf)</th>
<th>Life Cycles</th>
<th>Height mm</th>
<th>Pegs</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS820 J25M SMTR LFS</td>
<td>160 ± 50</td>
<td>200,000</td>
<td>2.5</td>
<td>No</td>
</tr>
<tr>
<td>PTS820 J25K SMTR LFS</td>
<td>250 ± 50</td>
<td>100,000</td>
<td>2.5</td>
<td>No</td>
</tr>
<tr>
<td>PTS820 J25MP SMTR LFS</td>
<td>160 ± 50</td>
<td>200,000</td>
<td>2.5</td>
<td>Yes</td>
</tr>
<tr>
<td>PTS820 J25KP SMTR LFS</td>
<td>250 ± 50</td>
<td>100,000</td>
<td>2.0</td>
<td>Yes</td>
</tr>
<tr>
<td>PTS820 J20M SMTR LFS</td>
<td>160 ± 50</td>
<td>200,000</td>
<td>2.0</td>
<td>No</td>
</tr>
<tr>
<td>PTS820 J20K SMTR LFS</td>
<td>250 ± 50</td>
<td>100,000</td>
<td>2.0</td>
<td>No</td>
</tr>
<tr>
<td>PTS820 J20MP SMTR LFS</td>
<td>160 ± 50</td>
<td>200,000</td>
<td>2.0</td>
<td>Yes</td>
</tr>
<tr>
<td>PTS820 J20KP SMTR LFS</td>
<td>250 ± 50</td>
<td>100,000</td>
<td>2.0</td>
<td>Yes</td>
</tr>
<tr>
<td>PTS820 J15M SMTR LFS</td>
<td>160 ± 50</td>
<td>200,000</td>
<td>1.5</td>
<td>No</td>
</tr>
<tr>
<td>PTS820 J15K SMTR LFS</td>
<td>250 ± 50</td>
<td>100,000</td>
<td>1.5</td>
<td>No</td>
</tr>
<tr>
<td>PTS820 J15MP SMTR LFS</td>
<td>160 ± 50</td>
<td>200,000</td>
<td>1.5</td>
<td>Yes</td>
</tr>
<tr>
<td>PTS820 J15KP SMTR LFS</td>
<td>250 ± 50</td>
<td>100,000</td>
<td>1.5</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Electrical
MAXIMUM VOLTAGE: 12 VDC
MAXIMUM CURRENT DC: 50 mA
DIELECTRIC STRENGTH: 100 VA C (1mn)
CONTACT RESISTANCE: ≤ 100 mΩ
INSULATION RESISTANCE: ≥ 100 MΩ
BOUNCE TIME: ≤ 10 ms

Environmental
OPERATING TEMPERATURE: -40°C to 85°C

Process
SOLDERING: This component is suited to the following methods: Infrared Reflow Soldering in accordance with IEC61760-1

NOTE:
• Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
• The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

Packaging
Switches in reels of 2,300 pieces for 2.5 mm height
Switches in reels of 2,500 pieces for 2.0 mm height
Switches in reels of 3,000 pieces for 1.5 mm height
Dimensions of reels according to EIA 481B
External diameter 330 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.

PTS820 J25M SMTR LFS
PTS820 J25K SMTR LFS
PTS820 J25MP SMTR LFS
PTS820 J25KP SMTR LFS
PTS820 J20M SMTR LFS
PTS820 J20K SMTR LFS
PTS820 J20MP SMTR LFS
PTS820 J20KP SMTR LFS
PTS820 J15M SMTR LFS
PTS820 J15K SMTR LFS
PTS820 J15MP SMTR LFS
PTS820 J15KP SMTR LFS

Actuator Type
J J bend SMT

Height
15 1.5 mm
20 2.0 mm
25 2.5 mm

Actuation Force
M 160 gf
K 250 gf

Packaging
LFS RoHS, silver plated
SMTR Tape & reel

P Pegs
P with pegs
Void no pegs

14 Nov 22
PTS820 Series
Microminiature SMT Top Actuated

2.5 & 2.0 mm height (H) - version shown here with pegs

RECOMMENDED PCB LAYOUT

CARRIER TAPE

SEE DETAIL A

DETAIL A
SCALE 0.5

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
1.5 mm height (H) - version shown here with pegs

RECOMMENDED PCB LAYOUT

SEE DETAIL A
PTS830 Series
Microminiature SMT Top Actuated

Features/Benefits
- 3.5 x 2.6 mm footprint
- High number of cycles
- Optional ground pin

Typical Applications
- Wearable electronics
- Nomad devices
- Remote controls
- Keyless entry system

Specifications

<table>
<thead>
<tr>
<th>Function</th>
<th>momentary action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact Arrangement</td>
<td>1 make contact = SPST N.O.</td>
</tr>
<tr>
<td>Terminals</td>
<td>G type for SMT</td>
</tr>
<tr>
<td>Travel</td>
<td>0.15 mm ± 0.1 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Force (gf)</th>
<th>Life Cycles</th>
<th>Ground Pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS830 GM140 SMTR LFS</td>
<td>160 ± 50</td>
<td>500,000</td>
</tr>
<tr>
<td>PTS830 GG140 SMTR LFS</td>
<td>450 ± 80</td>
<td>200,000</td>
</tr>
<tr>
<td>PTS830 GM140G SMTR LFS</td>
<td>160 ± 50</td>
<td>500,000</td>
</tr>
<tr>
<td>PTS830 GG140G SMTR LFS</td>
<td>450 ± 80</td>
<td>200,000</td>
</tr>
</tbody>
</table>

Electrical

- Maximum Voltage: 12 VDC
- Maximum Current DC: 50 mA
- Dielectric Strength: 100 VA C (1mn)
- Contact Resistance: ≤ 100 mΩ
- Insulation Resistance: ≥ 100 MΩ
- Bounce Time: ≤ 10 ms

Environmental

- Operating Temperature: -40°C to 85°C

Process

- Soldering: This component is suited to the following methods:
  Infrared Reflow Soldering in accordance with IEC61760-1

Note:

- Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
- The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

Packaging

Switches in reels of 9,500 pieces
Dimensions of reels according to EIA 481B
External diameter 330 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.

---

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
PTS830 Series
Microminiature SMT Top Actuated

PTS830 GX 140 G SMTR LFS

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
PTS840 Series
Microminiature SMT Side Actuated

**Features/Benefits**
- 3.5 x 3.55 mm footprint
- Front PIP leads option for strong shear resistance
- ESD pin option
- Reduced footprint

**Typical Applications**
- Nomad devices
- Remote controls
- Personal health diagnostics
- Consumer electronics

---

### Specifications

**FUNCTION:** momentary action
**CONTACT ARRANGEMENT:** 1 make contact = SPST N.O.
**TERMINALS:** G and front PIP types for SMT
**TRAVEL:** 0.2mm + 0.2mm / -0.1 mm
**LIFE:** 100,000 cycles

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating Force (gf)</th>
<th>SMT Leads</th>
<th>Pegs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Without ground pin</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTS840 GM SMTR LFS</td>
<td>160 -40/+70</td>
<td>G leads</td>
<td>No</td>
</tr>
<tr>
<td>PTS840 GK SMTR LFS</td>
<td>220 -70/+80</td>
<td>G leads</td>
<td>No</td>
</tr>
<tr>
<td>PTS840 PM SMTR LFS</td>
<td>160 -40/+70</td>
<td>P leads</td>
<td>No</td>
</tr>
<tr>
<td>PTS840 PK SMTR LFS</td>
<td>220 -70/+80</td>
<td>P leads</td>
<td>No</td>
</tr>
<tr>
<td>PTS840 GMP SMTR LFS</td>
<td>160 -40/+70</td>
<td>G leads</td>
<td>Yes</td>
</tr>
<tr>
<td>PTS840 GKP SMTR LFS</td>
<td>220 -70/+80</td>
<td>G leads</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>With ground pin</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PTS840 ESDGM SMTR LFS</td>
<td>160 -40/+70</td>
<td>G leads</td>
<td>No</td>
</tr>
<tr>
<td>PTS840 ESDGK SMTR LFS</td>
<td>220 -70/+80</td>
<td>G leads</td>
<td>No</td>
</tr>
<tr>
<td>PTS840 ESDPM SMTR LFS</td>
<td>160 -40/+70</td>
<td>P leads</td>
<td>No</td>
</tr>
<tr>
<td>PTS840 ESDPK SMTR LFS</td>
<td>220 -70/+80</td>
<td>P leads</td>
<td>No</td>
</tr>
<tr>
<td>PTS840 ESDGMP SMTR LFS</td>
<td>160 -40/+70</td>
<td>G leads</td>
<td>Yes</td>
</tr>
<tr>
<td>PTS840 ESDGKP SMTR LFS</td>
<td>220 -70/+80</td>
<td>G leads</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Electrical**
- **MAXIMUM VOLTAGE:** 12 VDC
- **MAXIMUM CURRENT DC:** 50 mA
- **DIELECTRIC STRENGTH:** 250 VA C (1mn)
- **CONTACT RESISTANCE:** ≤ 500 mΩ
- **INSULATION RESISTANCE:** ≥ 100 MΩ
- **BOUNCE TIME:** ≤ 10 ms

**Environmental**
- **OPERATING TEMPERATURE:** -40°C to 85°C

**Process**
- **SOLDERING:** This component is suited to the following methods:
  Infrared Reflow Soldering in accordance with IEC61760-1

**Packaging**
- In reels of 3,500 pieces
- Dimensions of reels according to EIA 481B
- External diameter 330 mm

**NOTE:**
- Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
- The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

**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.

---

**Design Recommendations**
- “P” leads are recommended for applications where shear resistance is of importance
- When a precise alignment between application button and the switch is requested, version with pegs are the right choice to limit the possible floating of the switch during solderability.
PTS840 Series
Microminiature SMT Side Actuated

Standard G SMT Leads with ESD and Peg options

P SMT Leads with ESD option
PTS840 Series
Microminiature SMT Side Actuated

TAPE & REEL

Dimensions are shown: mm
Specifications and dimensions subject to change.

www.ckswitches.com

14 Nov 22

B-54
## Features/Benefits
- 3.6 x 3.5 mm footprint
- 1.25 mm thickness
- ESD pin option
- Peg option
- Commercial grade

## Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating Force (gf)</th>
<th>Pegs</th>
<th>ESD pin option</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS841 GM SMTR LFS</td>
<td>180 ± 50</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>PTS841 GK SMTR LFS</td>
<td>250 ± 50</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>PTS841 GMP SMTR LFS</td>
<td>180 ± 50</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PTS841 GKP SMTR LFS</td>
<td>250 ± 50</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>PTS841 ESD GM SMTR LFS</td>
<td>180 ± 50</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>PTS841 ESD GK SMTR LFS</td>
<td>250 ± 50</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>PTS841 ESD GMP SMTR LFS</td>
<td>180 ± 50</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>PTS841 ESD GKP SMTR LFS</td>
<td>250 ± 50</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Electrical
- **MAXIMUM VOLTAGE:** 12 VDC
- **MAXIMUM CURRENT DC:** 50 mA
- **DIELECTRIC STRENGTH:** 250 VA C (1mn)
- **CONTACT RESISTANCE:** ≤ 100 mΩ Initial
- **INSULATION RESISTANCE:** ≥ 100 MΩ
- **BOUNCE TIME:** ≤ 5 ms

### Environmental
- **OPERATING TEMPERATURE:** -40°C to 85°C

### Process
- **SOLDERING:** This component is suited to the following methods:
  - Infrared Reflow Soldering in accordance with IEC61760-1

### Packaging
- In reels of 3,000 pieces
- Dimensions of reels according to EIA 481B
- External diameter 330 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.

*When a precise alignment between application button and the switch is requested, version with pegs are the right choice to limit the possible floating of the switch during solderability.*
PTS841 Series
Microminiature SMT Side Actuated

G SMT Leads with ESD and Peg options

CIRCUIT DIAGRAM

P.C.B LAND DIMENSION

TAPE & REEL

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
PTS845 Series
4.5x3.4mm SMT Side Actuated Tact

Features/Benefits
• 4.5 x 3.4 x 3.3 mm package
• SMT termination
• Side actuated with bracket peg design
• 80, 160 & 260 gf versions
• Lifecycles 100K

Typical Applications
• Headphone/ Headset
• Health monitoring
• Sports watch
• Black box
• Bluetooth accessory

Specifications
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
TERMINALS: SMT termination
TRAVEL: 0.2 mm ± 0.1 mm
LIFE: 100,000 cycles

Electrical
MAXIMUM VOLTAGE: 12 VDC
MAXIMUM CURRENT DC: 50 mA
CONTACT RESISTANCE: 100 mΩ
INSULATION RESISTANCE: 100 MΩ min.
DIELECTRIC VOLTAGE: 10 mA

Environmental
OPERATING TEMPERATURE: -40°C to 90°C
STORAGE TEMPERATURE: -30°C to 80°C

Process
SOLDERING: This component is suited to the following methods:
Infrared Reflow Soldering in accordance with IEC61760-1

Packaging
2,000 pieces per reel

NOTE:
• The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

How To Order
Please see chart below for full part numbers.

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating Force (gf)</th>
<th>Stem Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS845VN20PSMTR4 LFS</td>
<td>80 ± 40</td>
<td>Grey</td>
</tr>
<tr>
<td>PTS845VM20PSMTR4 LFS</td>
<td>160 ± 50</td>
<td>Ivory</td>
</tr>
<tr>
<td>PTS845VK20PSMTR4 LFS</td>
<td>260 ± 50</td>
<td>Black</td>
</tr>
</tbody>
</table>

14 Nov 22
**Features/Benefits**

- 5.4 x 5.0 x 1.8 mm package
- SMT termination
- Side actuated with or without boss design
- 180 & 350 gf versions
- Lifecycles 50K

**Typical Applications**

- Headphone/Headset
- Health monitoring
- Sports watch
- Black box
- Bluetooth accessory
- Navigation

**Specifications**

FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
TERMINALS: SMT termination
TRAVEL: 0.2 mm ± 0.1 mm
LIFE: 50,000 cycles

**Electrical**

MAXIMUM VOLTAGE: 12 VDC
MAXIMUM CURRENT DC: 50 mA
CONTACT RESISTANCE: 500 mΩ
INSULATION RESISTANCE: 100 MΩ min.

**Environmental**

OPERATING TEMPERATURE: -40˚C to 85˚C
STORAGE TEMPERATURE: -30˚C to 85˚C

**Process**

SOLDERING: This component is suited to the following methods:
- Infrared Reflow Soldering in accordance with IEC61760-1

**Packaging**

2,000 pieces per reel

**NOTE:**
- The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

---

**How To Order**

Please see chart below for full part numbers.

<table>
<thead>
<tr>
<th>Type</th>
<th>Actuation Force (gf)</th>
<th>Stem Colour</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS850VM18PSMTR LFS</td>
<td>180 + 80/- 40</td>
<td>Black</td>
<td>With Boss</td>
</tr>
<tr>
<td>PTS850VR18PSMTR LFS</td>
<td>350 ± 80</td>
<td>Natural</td>
<td>With Boss</td>
</tr>
<tr>
<td>PTS850VM18SMTR LFS</td>
<td>180 + 80/- 40</td>
<td>Black</td>
<td>Without Boss</td>
</tr>
<tr>
<td>PTS850VR18SMTR LFS</td>
<td>350 ± 80</td>
<td>Natural</td>
<td>Without Boss</td>
</tr>
</tbody>
</table>
PTS850 Series
5.4x5mm SMT Side Actuated Tact

WITH BOSS

PIERCING PLAN

SCHEMATIC

HATCHED AREA SHOWS SOLDERING LAND

P.C.B MOUNTING FACE

TAPE & REEL

CARRIER TAPE

REEL

SCECTION A-A

SCECTION B-B

DRAWING DIRECTION

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
PTS847 Series
4.6x2.2mm SMT Side Actuated Tact

Features/Benefits
• 4.6 x 2.2 x 2.6 mm package
• Height 0.95 mm above PCB (edge mount)
• Side actuation
• SMT termination with or without L-shape shield
• Hard & soft actuator options
• 160 & 350 gf versions
• Lifecycles 200K

Specifications
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
TERMINALS: SMT termination
TRAVEL: 0.15 mm
LIFE: 200,000 cycles

Electrical
MAXIMUM VOLTAGE: 15 VDC
MAXIMUM CURRENT DC: 20 mA
CONTACT RESISTANCE: 100 mΩ
INSULATION RESISTANCE: 100 MΩ min.
DIELECTRIC VOLTAGE: AC 250V

Environmental
OPERATING TEMPERATURE: -40°C to 85°C
STORAGE TEMPERATURE: -40°C to 85°C

Process
SOLDERING: This component is suited to the following methods:
Infrared Reflow Soldering in accordance with IEC61760-1

Packaging
2,500 pieces per reel

NOTE:
• The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

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.

Actuation Force
160 160 gf
350 350 gf

Shield Termination
NONE Standard version
L With long type L-shape

Actuation Type
NONE Hard actuation
S Soft actuation

Lead free compatible
PTS847 Series
4.6x2.2mm SMT Side Actuated Tact

STANDARD EDGE MOUNTING (HARD ACTUATOR VERSION)

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
PTS847 Series
4.6x2.2mm SMT Side Actuated Tact

EDGE MOUNTING WITH L-SHAPE SHIELD TERMINATION (HARD ACTUATOR VERSION)
PTS847 Series
4.6x2.2mm SMT Side Actuated Tact

STANDARD EDGE MOUNTING (SOFT ACTUATOR VERSION)

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
PTS847 Series
4.6x2.2mm SMT Side Actuated Tact

EDGE MOUNTING WITH L-SHAPE SHIELD TERMINATION (SOFT ACTUATOR VERSION)

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com

NEW

14 Nov 22

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
Features/Benefits
- 4 actuation forces
- G terminations
- N.O. and N.C.
- Detect type available
- Rubber actuator
- RoHS compliant and compatible

Typical Applications
- Automotive
- Medical equipment
- Industrial electronics
- Smart meters

Specifications

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force (Newtons/grams)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSR211G LFS / KSR213G LFG</td>
<td>1.5 &lt; 1.85 (185) &lt; 2.2</td>
<td>100,000</td>
<td>0.25 ± 0.15</td>
</tr>
<tr>
<td>KSR221G LFS / KSR223G LFG</td>
<td>1.9 &lt; 2.25 (225) &lt; 2.6</td>
<td>100,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSR231G LFS / KSR233G LFG</td>
<td>2.25 &lt; 3.00 (300) &lt; 3.75</td>
<td>100,000</td>
<td>0.35 ± 0.15</td>
</tr>
<tr>
<td>KSR251G LFS / KSR253G LFG</td>
<td>3.4 &lt; 4.50 (450) &lt; 5.6</td>
<td>100,000</td>
<td>0.5 ± 0.15</td>
</tr>
<tr>
<td>KSR221G NC LFS</td>
<td>1.5 &lt; 2.25 (225) &lt; 3</td>
<td>30,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSR223G NC LFG</td>
<td>1.5 &lt; 2 (200) &lt; 2.5</td>
<td>30,000</td>
<td>0.3 ± 0.15</td>
</tr>
</tbody>
</table>

Overload: 20 Newtons
Detect switch versions are available. Please see Detect chapter KSR2D/M series.

Packaging
Switches are delivered on continuous tape, in reels of 2,500 pieces.

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.

*Available on KSR2xG only.
KSR Long Life-200,000 cycles-Gold and Silver Series Subminiature Tact Switch for SMT

Features/Benefits
- 4 actuation forces
- G terminations
- N.O.
- Detect type available
- Rubber actuator
- IP50 sealed
- RoHS compliant and compatible

Typical Applications
- Automotive
- Medical equipment
- Industrial electronics

Specification
FUNCTION: momentary action
CONTACT ARRANGEMENT: Normally Open
TERMINALS: Gullwing type for SMT

Mechanical

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating Force (Fa)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver versions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSR212G LFS</td>
<td>1,5 &lt; 1,85 (185)</td>
<td>200,000</td>
<td>0.25 ± 0.15</td>
</tr>
<tr>
<td>KSR222G LFS</td>
<td>1.9 &lt; 2.25 (225)</td>
<td>200,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSR232G LFS</td>
<td>2.25 &lt; 3.00 (300)</td>
<td>200,000</td>
<td>0.35 ± 0.15</td>
</tr>
<tr>
<td>KSR252G LFS</td>
<td>3.4 &lt; 4.50 (450)</td>
<td>200,000</td>
<td>0.5 ± 0.15</td>
</tr>
<tr>
<td>Gold versions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSR214G LFS</td>
<td>1.5 &lt; 1.85 (185)</td>
<td>200,000</td>
<td>0.25 ± 0.15</td>
</tr>
<tr>
<td>KSR224G LFS</td>
<td>1.9 &lt; 2.25 (225)</td>
<td>200,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSR234G LFS</td>
<td>2.25 &lt; 3.00 (300)</td>
<td>200,000</td>
<td>0.35 ± 0.15</td>
</tr>
<tr>
<td>KSR254G LFS</td>
<td>3.4 &lt; 4.50 (450)</td>
<td>200,000</td>
<td>0.5 ± 0.15</td>
</tr>
</tbody>
</table>

OVERLOAD: 20 Newtons

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 V dc</td>
<td>32 V dc</td>
</tr>
<tr>
<td>MINIMUM VOLTAGE:</td>
<td>20 m Vdc</td>
<td>20 m Vdc</td>
</tr>
<tr>
<td>MAXIMUM CURRENT DC:</td>
<td>50 mA</td>
<td>10 mA</td>
</tr>
<tr>
<td>MINIMUM CURRENT DC:</td>
<td>1 mA</td>
<td>1 mA</td>
</tr>
</tbody>
</table>

CONTACT RESISTANCE: ≤ 100 mΩ
INSULATION RESISTANCE (100 V): 1 GΩ (between terminals)
BOUNCE TIME: 1 ms max

Environmental

<table>
<thead>
<tr>
<th></th>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING TEMPERATURE:</td>
<td>-40°C to 85°C</td>
<td>-40°C to 125°C</td>
</tr>
<tr>
<td>STORAGE TEMPERATURE:</td>
<td>-55°C to 85°C</td>
<td>-55°C to 125°C</td>
</tr>
</tbody>
</table>

Process
SOLDERING: Compatible with lead free reflow soldering process.

NOTE: Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

OVERLOAD: 20 Newtons

Packaging
Switches are delivered on continuous tape, in reels of 2,500 pieces.

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.

Actuator
2 Soft actuator

Operating Force
1 1.8 N (180 grams)
2 2.0 N (200 grams)
3 3.0 N (300 grams)
5 4.5 N (450 grams)

Contact Material
2 Silver
4 Gold

Termination
G Gull wing

LFS RoHS compliant and compatible. Silver plated.
LFG RoHS compliant and compatible. Gold plated.

Dimensions are shown: mm
Specifications and dimensions subject to change
KSR Long Life-200,000 cycles-Gold and Silver Series
Subminiature Tact Switch for SMT

KSR

TERMINATION
TAPE & REEL

Recommended PCB layout

TAPE & REEL

DIRECTION OF FEED
KSS Series
Subminiature SMT Side Actuated

Features/Benefits
- Low profile of 1.7 mm
- Excellent tactile feel
- High shear force
- Range of actuation forces
- Large flat top
- RoHS compliant and compatible

Typical Applications
- Cellular phone
- Industrial electronics
- Health diagnostic electronics

Specifications

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.

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force (Newtons, grams)</th>
<th>Operating life (operations)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSS221G</td>
<td>2.0 (200) ± 0.5</td>
<td>100,000</td>
<td>0.3 ± 0.15</td>
</tr>
<tr>
<td>KSS231G</td>
<td>2.5 (250) ± 0.5</td>
<td>100,000</td>
<td>0.3 ± 0.10</td>
</tr>
<tr>
<td>KSS241G</td>
<td>4.0 (400) ± 1.0</td>
<td>100,000</td>
<td>0.3 ± 0.15</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Actuator</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Standard, 1.1 (0.043)</td>
</tr>
<tr>
<td>3 Large, 1.8 (0.070)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 2.0 N (200 grams)</td>
</tr>
<tr>
<td>3 2.5 N (250 grams)</td>
</tr>
<tr>
<td>4 4.0 N (400 grams)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Termination</th>
</tr>
</thead>
<tbody>
<tr>
<td>G Gull wing, SPST</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Silver</td>
</tr>
<tr>
<td>3 Gold</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electrical</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM POWER:</td>
</tr>
<tr>
<td>1 VA</td>
</tr>
<tr>
<td>0.2 VA</td>
</tr>
<tr>
<td>MAXIMUM VOLTAGE:</td>
</tr>
<tr>
<td>32 VDC</td>
</tr>
<tr>
<td>32 VDC</td>
</tr>
<tr>
<td>MAXIMUM CURRENT:</td>
</tr>
<tr>
<td>50 mA</td>
</tr>
<tr>
<td>10 mA</td>
</tr>
<tr>
<td>MINIMUM CURRENT:</td>
</tr>
<tr>
<td>1 mA</td>
</tr>
<tr>
<td>1 mA</td>
</tr>
<tr>
<td>DIELECTRIC STRENGTH: ≥ 250 VDC</td>
</tr>
<tr>
<td>CONTACT RESISTANCE: &lt; 100 mΩ</td>
</tr>
<tr>
<td>INSULATION RESISTANCE (100 VDC): ≥ 10Ω</td>
</tr>
<tr>
<td>BOUNCE TIME:</td>
</tr>
<tr>
<td>&lt; 3 ms</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING TEMPERATURE: -40°C to 85°C</td>
</tr>
<tr>
<td>STORAGE TEMPERATURE: -55°C to 85°C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soldering: Lead free reflow soldering process in accordance with IEC 61760-1.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tape and reels in reels of 3,000 pieces.</td>
</tr>
<tr>
<td>External diameter 330mm ± 2mm.</td>
</tr>
</tbody>
</table>

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
KSS Series
Subminiature SMT Side Actuated

KSS

PCB PROPOSED LAYOUT

ACTUATOR

2 STANDARD, 1.1 (0.043)

3 LARGE, 1.8 (0.070)

TAPE & REEL

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
KSC Series
Sealed Tact Switch for SMT

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: 0°C to 85°C
Storage temperature: 0°C to 125°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
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

Dielectric strength (50 Hz, 1 min.): ≥ 250 Vrms
Contact resistance: ≤ 100 mΩ
Insulation resistance (100 V): ≥ 10 MΩ
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>
<th>KSC11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without 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>
<td>Hard actuator</td>
<td>Hard actuator</td>
<td>Soft actuator</td>
<td>Hard 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 = 4.4 mm</td>
<td>H = 4.9 mm</td>
<td>H = 7.7 mm compatible with button</td>
<td>H = 4.9 mm</td>
<td>H = 4 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>12 mm</th>
<th>Pieces</th>
<th>16 mm</th>
<th>Pieces</th>
<th>Reel Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC1J</td>
<td>2,000</td>
<td>KSC1G</td>
<td>2,000</td>
<td>330 mm</td>
</tr>
<tr>
<td>KSC2J</td>
<td>2,000</td>
<td>KSC2G</td>
<td>2,000</td>
<td>330 mm</td>
</tr>
<tr>
<td>KSC3J</td>
<td>2,000</td>
<td>KSC3G</td>
<td>2,000</td>
<td>330 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KSC4J &amp; G</td>
<td>1,000</td>
<td>330 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KSC5J &amp; G</td>
<td>1,000</td>
<td>330 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KSC6J &amp; G</td>
<td>950</td>
<td>380 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KSC7J &amp; G</td>
<td>1,000</td>
<td>330 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KSC8J &amp; G</td>
<td>1,000</td>
<td>330 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KSC9J &amp; G</td>
<td>950</td>
<td>380 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KSC10J &amp; G</td>
<td>1,000</td>
<td>330 mm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KSC11J</td>
<td>1,000</td>
<td>380 mm</td>
</tr>
</tbody>
</table>

Specifications and dimensions subject to change.
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>

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.

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

Operating Force
35 3.5 N
40 4.0 N
55 5.5 N
60 6.8 N
96 9.6 N

Termination
J J bend

LFS Lead free compatible, silver plated

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
KSC SLT Series
Long Travel Tact Switch

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

Typical Applications
- Automotive interior
- Front panel
- Instrumentation

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.

<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>

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.

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>
<tr>
<td>Dielectric Strength:</td>
<td>≥ 250 Vrms</td>
<td></td>
</tr>
<tr>
<td>Contact Resistance:</td>
<td>&lt; 100mΩ</td>
<td></td>
</tr>
<tr>
<td>Insulation Resistance:</td>
<td>Initial measurement: ≥ 1GΩ</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>After damp heat: ≥ 10MΩ</td>
</tr>
<tr>
<td>Bounce Time:</td>
<td>&lt; 5 ms</td>
<td></td>
</tr>
</tbody>
</table>

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 SP DELTA</td>
<td>3.55 ± 0.9</td>
<td>300,000</td>
<td>0.5 ± 0.2</td>
</tr>
<tr>
<td>KSC251 SP DELTA</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.

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

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

Termination
J J bend
G Gullwing

Tactile Ratio
NONE Standard version
SP DELTA Special delta version

LFS Lead free compatible, silver plated
LFG Lead free compatible, gold plated
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/-</td>
</tr>
<tr>
<td>KSC341</td>
<td>3 ± 0.75</td>
<td>300,000</td>
<td>0.2 + 0.3/-</td>
</tr>
<tr>
<td>KSC351</td>
<td>5 ± 1</td>
<td>100,000</td>
<td>0.25 + 0.3/-</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 ± 0.20</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.
KSC DCT Series
Dual Circuit Technology Tact Switch

Features/Benefits
- SPDT NC-NO function
- 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.

<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

Contact Material
1 Silver

Termination
J J bend
G Gull wing

Actuator / Tactile
70SH Silicon 70SH

LFS Lead free compatible, silver plated

Dimensions are shown: mm
Specifications and dimensions subject to change
KSC PF Series
Potting Friendly Tact Switch

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

Specifications and dimensions subject to change

Typical Applications
- Automotive
- Medical equipment
- Industrial electronics

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

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>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>

Contact Material
1 Silver
2 Silver Long Life

Termination
J J bend
G Gull wing

Actuator / Tactile
70SH Silicon 70SH

LFS Lead free compatible, silver plated

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
Tactile Switches

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

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

<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

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

Typical Applications
- Elevator
- Game controllers/ Drones
- Industrial applications
- Medical 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>

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

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.

Contact Material
1 Silver

Termination
J J bend

LFS Lead free compatible, silver plated

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
KSC4 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/ Drones
- Industrial applications
- Medical applications

Specification
FUNCTION: Normally open
CONTACT TYPE: SPST, N.O.
TERMINALS: J bend for SMT
CONTACT MATERIAL: Silver plated

Environmental
OPERATING TEMPERATURE: -40°C to 90°C

Mechanical
<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>KSC4 TE 01J LFS</td>
<td>1.60 ±0.6</td>
<td>10,000,000</td>
<td>0.25 ±0.2</td>
<td>4.9 ±0.2</td>
</tr>
<tr>
<td>KSC4 TE 31J LFS</td>
<td>2.80 ±0.7</td>
<td>5,000,000</td>
<td>0.35 ±0.2</td>
<td>4.8 ±0.2</td>
</tr>
<tr>
<td>KSC4 TE 41J LFS</td>
<td>4.00 ±1.0</td>
<td>5,000,000</td>
<td>0.60 ±0.2</td>
<td>4.6 ±0.2</td>
</tr>
</tbody>
</table>

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

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

Electrical
MAXIMUM POWER: 0.03 VA
MIN/MAX VOLTAGE: 1V / 24V
MIN/MAX CURRENT: 1mA / 3mA
DIELECTRIC STRENGTH: 250 Vrms
CONTACT RESISTANCE: ≤ 100 mΩ
INSULATION RESISTANCE: (100V): ≥ 1000 MΩ
BOUNCE TIME: 1ms

Soldering
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

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.

Contact Material
1 Silver

Termination
J J bend

LFS Lead free compatible, silver plated

Dimensions are shown: mm
Specifications and dimensions subject to change

27 Oct 22

www.ckswitches.com
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) ±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>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>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.
KSC6 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>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 950 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.

Contact Material
- 1 Silver
- 3 Gold

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

Termination
- J J bend
- G Gullwing

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

First Angle Projection
Dimensions are shown: mm
Specifications and dimensions subject to change

19 Nov 21

www.ckswitches.com
KSC7 Series
Sealed Tact Switch for SMT

KSC7 soft actuator 4,4 mm high

<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>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.
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.
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 950 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.
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.

How you build your switch:

- **Operating Force**
  - 0: 1.45 N (145 grams)
  - See mechanical chart above to confirm specifications

- **Contact Material**
  - 1: Silver

- **Termination**
  - J: J bend
  - G: Gullwing

- **LFS**: Lead free compatible, silver plated

Note: KSC10 offered with yellow actuator as standard, hardness 55 Shore
### KSC11 Series
Sealed Tact Switch for SMT

#### Features/Benefits
- Hard actuator
- Long life
- Positive tactile feeling
- IP67 sealed
- SMT

#### Typical Applications
- Gaming/ Drones
- Industrial
- Medical
- High-end consumer
- Avionics

#### Specification
**FUNCTION:** Normally open  
**CONTACT TYPE:** SPST NO  
**TERMINALS:** J bend for SMT  
**CONTACT MATERIAL:** Silver plated

#### Environmental
**OPERATING TEMPERATURE:** -40˚C to 85˚C

#### Mechanical

<table>
<thead>
<tr>
<th>Type</th>
<th>Force (N)</th>
<th>Life</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSC1101J LFS</td>
<td>1.60 ±0.4</td>
<td>3,000,000</td>
<td>0.20 ±0.1</td>
</tr>
<tr>
<td>KSC1131J LFS</td>
<td>3.20 ±0.6</td>
<td>2,000,000</td>
<td>0.25 ±0.15</td>
</tr>
<tr>
<td>KSC1151J LFS</td>
<td>5.00 ±1.0</td>
<td>1,000,000</td>
<td>0.40 ±0.15</td>
</tr>
</tbody>
</table>

#### Electrical
**MAXIMUM POWER:** 1 VA  
**MIN. / MAX. VOLTAGE:** 0.02V / 32V  
**MIN. / MAX. CURRENT:** 1 mA / 50 mA  
**DIELECTRIC STRENGTH:** 250 Vrms  
**CONTACT RESISTANCE:** ≤ 100 mΩ  
**INSULATION RESISTANCE:** (100V): 1000 MΩ  
**BOUNCE TIME:** ≤ 5 ms

#### Soldering
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

#### Packaging
In reels of 1,700 pieces  
**Width of carrier tape:** 16 mm  
**Dimensions of reels:** 380 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.

**K S C 1 1 J L F S**

**Operating Force**
- 01 1.6 N
- 31 3.2 N
- 51 5.0 N

**Termination**
- J J bend

**LFS** Lead free compatible, silver plated

---

Dimensions are shown: mm  
Specifications and dimensions subject to change  
www.ckswitches.com  
26 May 22
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

www.ckswitches.com

Tactile Switches
B

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
- Industrial electronics
- Network equipment
- Telecommunications

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

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

Electrical Specifications

DIELECTRIC STRENGTH (50 Hz, 1 min.): ≥ 250 Vrms
CONTACT RESISTANCE: < 100 mΩ
INSULATION RESISTANCE (100 V, initial stage): > 10^9 Ω
BOUNCE TIME: < 1 ms

Environmental

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

Process

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.

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

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
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.
KSE Series
Low Profile Tact Switch

Features/Benefits
- Low profile
- Cost efficient
- J or G terminations
- Tape and reel
- IP67

Typical Applications
- Smart meters
- Home appliances
- Consumer electronics
- Industrial electronics
- Telecommunications

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

Mechanical

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating Force FA (Newtons)</th>
<th>Operating Life Min.</th>
<th>Operating Life Max.</th>
<th>Travel Operations (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSEM31JLFS</td>
<td>1.6 ± 0.6</td>
<td>300,000</td>
<td>300,000</td>
<td>0.3 ± 0.1/-0.2</td>
</tr>
<tr>
<td>KSEM31GLFS</td>
<td>1.6 ± 0.6</td>
<td>300,000</td>
<td>300,000</td>
<td>0.3 ± 0.1/-0.2</td>
</tr>
<tr>
<td>KSEK43JLFS</td>
<td>2.25 ± 0.75</td>
<td>300,000</td>
<td>300,000</td>
<td>0.3 ± 0.2</td>
</tr>
<tr>
<td>KSEK43GLFS</td>
<td>2.25 ± 0.75</td>
<td>300,000</td>
<td>300,000</td>
<td>0.3 ± 0.2</td>
</tr>
</tbody>
</table>

NOTE: For cost effectiveness the tactile feeling is not specified and can change along production. If your application requires a defined tactile effect, please consider KSC series for your application.

Electrical
MAXIMUM POWER: 1 VA
MINIMUM/MAXIMUM VOLTAGE: 20 mV / 32 VDC
MINIMUM/MAXIMUM CURRENT: 1 mA / 50 mA
DIELECTRIC STRENGTH: (50 Hz, 1 min.): ≥ 250 V
CONTACT RESISTANCE: ≤ 100 mΩ
INSULATION RESISTANCE: (100 V): ≥ 10^9 Ω
BOUNCE TIME: ≤ 1 ms

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:
- Cleaning according to typical washing processes.
- Lead free reflow soldering process in accordance with IEC 61760-1.

NOTE: Specifications listed above are for switches with standard options. KSE series is not subject to adaptation and/or modification for specific use. If you require additional features, please refer to the KSC series. KSE is not recommended for applications requiring high level of performance such as aerospace, automotive and some industrial applications.

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

K S E

Operating Force
M 1.5N for 3.1mm height
K 2.25N for 4.3mm height

Height
31 3.1mm
43 4.3mm

Termination
J J bend
G Gullwing

LFS Lead free compatible, silver plated.
### KSE Series
**Low Profile Tact Switch**

#### HEIGHT

<table>
<thead>
<tr>
<th>Model</th>
<th>Height</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>3.1 MM</td>
<td>3.1 ±0.2</td>
</tr>
<tr>
<td>43</td>
<td>4.3 MM</td>
<td>4.3 ±0.2</td>
</tr>
</tbody>
</table>

#### TERMINATION

**G GULLWING**

**J J BEND**

Dimensions are shown in mm. Specifications and dimensions subject to change.
12 mm height

16 mm height
EL Series
Basic Tact Switch for SMT

Features/Benefits
- Cost efficient
- Market standard size
- SMT - Tape & reel
- IP67 sealed
- Silicone actuator

Typical Applications
- Smart meters
- Home appliances
- Consumer electronics
- Industrial electronics
- Medical portable devices

Specification
FUNCTION: Momentary action
CONTACT ARRANGEMENT: SPST NO
TERMINALS: J bend for SMT
CONTACT MATERIAL: Silver plated

Mechanical

<table>
<thead>
<tr>
<th>Type</th>
<th>Force (N)</th>
<th>Life (cycles)</th>
<th>Travel (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL35 20 J LFS</td>
<td>2 ± 0.6</td>
<td>200,000</td>
<td>0.3 ± 0.2</td>
</tr>
<tr>
<td>EL35 35 J LFS</td>
<td>3.5 ± 1.0</td>
<td></td>
<td>0.4 ± 0.2</td>
</tr>
<tr>
<td>EL52 20 J LFS</td>
<td>2 ± 0.6</td>
<td></td>
<td>0.4 ± 0.25</td>
</tr>
<tr>
<td>EL52 35 J LFS</td>
<td>3.5 ± 1.0</td>
<td></td>
<td>0.6 ± 0.25</td>
</tr>
</tbody>
</table>

Electrical
MAXIMUM POWER: 0.9 VA
MINIMUM / MAXIMUM VOLTAGE: 1V / 18V
MINIMUM / MAXIMUM CURRENT: 0.01 mA / 150 mA
DIELECTRIC STRENGTH: 250 Vrms
CONTACT RESISTANCE: ≤100 mΩ
INSULATION RESISTANCE: (100 V): ≥100 MΩ
BOUNCE TIME: ≤5 ms

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

Process
SOLDERING: This component is suited to the following methods:
- Cleaning according to typical washing processes
- Lead free reflow soldering process in accordance with IEC61760-1

Packaging
In reels of 2,000 pieces for EL35
Width of carrier tape: 12 mm
Dimensions of reels: 330 mm

In reels of 1,400 pieces for EL52
Width of carrier tape: 16 mm
Dimensions of reels: 380 mm

Note:
Specifications listed above are for switches with standard options.
EL series is not subject to adaptation and/or modification for specific use. If additional features are required, please refer to the KSC series.
Price available on request only, please contact your sales representative.

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.

Height
- 35 3.5 mm
- 52 5.2 mm

Operating Force
- 20 2N
- 35 3.5N

Termination
- J J bend

LFS Lead free compatible, silver plated

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
EL Series
Basic Tact Switch for SMT

3.5 MM HEIGHT

5.2 MM HEIGHT

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
Features/Benefits
- Rubber actuator
- Silver contact material
- J or G terminals
- Compatible with pick and place machines
- IP40 sealed
- RoHS compliant and compatible

Specifications
FUNCTION: Momentary
CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
TERMINALS: J BEND OR GULLWING TYPE FOR SMT

Mechanical
MAXIMUM APPLIED FORCE: 4 KG (4078GF)*
* VALID ONE TIME. MAXIMUM ALLOWED TRAVEL TO AVOID OVERLOAD ISSUES
IS 1.75MM

<table>
<thead>
<tr>
<th>Type</th>
<th>Operating force Fa N (grams) ≥30%</th>
<th>Operating life (operations)</th>
<th>Travel to make</th>
</tr>
</thead>
<tbody>
<tr>
<td>KST221G / J</td>
<td>1.6-3.2</td>
<td>100,000</td>
<td>1.3+0.3/-0.2</td>
</tr>
<tr>
<td>KST241G / J</td>
<td>2.45-4.55</td>
<td>100,000</td>
<td>1.3+0.3/-0.2</td>
</tr>
</tbody>
</table>

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
Soldering: lead free reflow soldering process in accordance with IEC 61760-1.

Packaging
Switches are delivered on continuous tape and reels of 1,000 pieces, 330 (12.992) external diameter. Other dimensions according to IEC 60286-3.

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.

Actuator
2 Soft, 5 mm

Actuation Force
2 2 N (200 grams)
4 3.5 N (350 grams)

Termination
J J bend
G Gullwing

Contact Material
1 Silver
3 Gold

LFS ROHS compliant and compatible. Silver plated.
LFG ROHS compliant and compatible. Gold plated.

NOTE: Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
KST Series
Long Travel Tact Switch for SMT

**For J and G termination**

**Tape & Reel**
**KT Series**

**Full SMT Top & Side Actuated Sealed Tact Switch**

### Features/Benefits
- Full SMT side-actuated tact switch
- SMT top-actuated tact switch with G or J terminations
- High shear force with extended bracket
- Easy to pick & place with top plate tab
- Rubber or hard plastic actuator
- Press fit or snap fit caps
- RoHS compliant and compatible

### Typical Applications
- Telecommunications
- Computer products
- Instrumentation
- Power supply

### Specification

**CONTACT ARRANGEMENT:** SPST, N.O.

**TERMINALS:** SMT termination

### Electrical

**CONTACT RATING:** 1.0 VA max. @ 32 V AC or DC max.

**ELECTRICAL & MECHANICAL LIFE:** 100,000 make-and-break cycles at full load.

**DIELECTRIC STRENGTH:** 250 Vrms min. @ sea level.

**CONTACT RESISTANCE:** Below 50 mΩ typ. initial @ 2-4 V DC, 100 mA.

**INSULATION RESISTANCE:** 10^9 Ω min.

### Environmental

**OPERATING TEMPERATURES:** Ag version: -40°C to 90°C

Au version: -40°C to 125°C

**Process**

**SOLDERABILITY:** Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

**DEGREE OF PROTECTION:** IP57; protection against harmful dust deposits, full-scale voltage protection.

### Packaging

Switches supplied in anti-static tape and reels per EIA 481-2. Tape and cover strip are conductive for use near statically sensitive components.

**NOTE:** Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

### 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.

### SWITCH

**Actuator**

- **B0** Soft, flush
- **B1** Soft, 0.64 mm
- **B2** Soft, 2.24 mm
- **P2** Hard, 2.36 mm
- **P3** Hard, 1.12 mm
- **P4** Hard, 3.96 mm
- **S1** ø0.1” for Press Fit Caps
- **S2** ø0.14” for Snap Fit Caps (with anti-rotation)

**Orientation and Mounting Style**

- **SM** Top Gullwing
- **JM** Top J Bend ****
- **SAM** Right angle
- **SA1M** Right angle with front solder pad
- **SA2M** Right angle with front solder pad and pick & place tab
- **SA3M** Right angle with pick & place tab

**Contact Plating**

- **4 Silver**
- **5 Gold**

**Contact Plating**

- **LFS** RoHS compliant and compatible. Silver plated
- **LFG** RoHS compliant and compatible. Gold plated

* B0, B1 & B2 available with A, A1 & A3 mounting bracket only.
** P2, P3, P4 actuators suitable with A1 & A2 mounting bracket only.
*** S1 & S2 available with A1 & A2 mounting bracket only.
**** JM available with B0, B1, B2, P3, P4 without mounting bracket.

### BUTTON

**To order buttons in bulk**

**Button Style**

- **02** Press fit
- **03** Snap fit, high temperature

**Button Color**

- **90 Black**
- **80 Ivory (natural)**
- **40 Red**

Dimensions are shown: mm

Specifications and dimensions subject to change

www.ckswitches.com
Tactile Switches

KT Series

Full SMT Top & Side Actuated Sealed Tact Switch

ACTUATOR

B0 SOFT, FLUSH*

B1 SOFT, 0.64 mm*

B2 SOFT, 2.24 mm*

P2 HARD, 2.36 mm

P3 HARD, 1.12 mm

P4 HARD, 3.96 mm**

S1 Ø0.1" FOR PRESS FIT CAPS***

S2 Ø0.14" FOR SNAP FIT CAPS***

* B0, B1 & B2 available with A, A1 & A3 mounting bracket only.
** P2, P3, P4 actuators suitable with A1 & A2 mounting bracket only.
*** S1 & S2 available with A1 & A2 mounting bracket only.
**** JM available with B0, B1, B2, P2, P3, P4 without mounting bracket.
KT Series
Full SMT Top & Side Actuated Sealed Tact Switch

ORIENTATION & MOUNTING STYLE

SM - TOP GULLWING

JM - TOP J BEND

SAM - RIGHT ANGLE

SA1M - RIGHT ANGLE WITH FRONT SOLDER PAD

SUGGESTED PAD LAYOUT
SCALE: 7:1

SUGGESTED PAD LAYOUT
SCALE: 8:1

Dimensions are shown: mm
Specifications and dimensions subject to change
KT Series
Full SMT Top & Side Actuated Sealed Tact Switch

SA2M  RIGHT ANGLE WITH FRONT SOLDER PAD AND PICK & PLACE TAB

```
SWITCH FACE
3.86  (152)
0.38  (0.015)
3.18  (125)
7.11  (280)
3.44  (136)
0.86 TYP.  (0.034)
4.0  (0.157)
7.77  (306)

SA3M  RIGHT ANGLE WITH PICK & PLACE TAB

```

PAD LAYOUT
SA1M & SA2M MOUNTING BRACKET

```
SWITCH FACE
0.067  (1.70)
0.015  (0.38)
0.100  (2.54)
0.195  (4.95)
0.230  (5.84)

SA1M & SA3M MOUNTING BRACKET

```
SWITCH FACE
0.067  (1.70)
0.330  (8.34)
0.100  (2.54)
0.195  (4.95)
0.345  (8.76)

```

SCHEMATIC
BTN Series
Full SMT Top & Side Actuated Sealed Tact Switch

BUTTON

To order buttons in bulk

**02 PRESS FIT**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>Internal Part Number</th>
<th>Button Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTN KT11 02 80</td>
<td>5081 01000</td>
<td>Ivory (Natural)</td>
</tr>
<tr>
<td>BTN KT11 02 90</td>
<td>5081 02000</td>
<td>Black</td>
</tr>
<tr>
<td>BTN KT11 02 40</td>
<td>5081 03000</td>
<td>Red</td>
</tr>
</tbody>
</table>

Materials: Nylon
Finish: Gloss

**03 SNAP FIT, HIGH TEMPERATURE**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>Internal Part Number</th>
<th>Button Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>BTN KT11 03 80</td>
<td>685B 01000</td>
<td>Ivory (Natural)</td>
</tr>
<tr>
<td>BTN KT11 03 90</td>
<td>685B 02000</td>
<td>Black</td>
</tr>
</tbody>
</table>

Materials: Nylon
Finish: Gloss

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
K5AT
Illuminated SMT Tact Switch

Features
- High bright LED’s
- Gold plated dome contact offering superior contact reliability in time
- Excellent ergonomics: sharp tactile feel and audible click
- Reduced space usage on board “2 in 1”
- 40 N overload
- Tape and reel
- RoHS compliant and compatible

Typical Applications
- Application requiring illumination
- Server, storage
- Network infrastructure
- Telecom
- Medical

Specifications
- Dimensions are shown: mm
- Specifications and dimensions subject to change
- www.ckswitches.com

Electrical
- POWER MIN/MAX: 0.02VA / 1.0VA
- VOLTAGE MIN/MAX: 20mVdc – 32 Vdc
- CURRENT MIN/MAX: 0.1mA – 100mA
- CONTACT RESISTANCE: <100mΩ
- INSULATION RESISTANCE: >1GΩ initial, >10MΩ after damp heat
- BOUNCE TIME: <10ms

Environmental
- OPERATING TEMPERATURE: -40˚C to 125˚C
- STORAGE TEMPERATURE: -55˚C to 125˚C
- RELATIVE HUMIDITY: 90 to 96% according to NF EN 60068-2-30
- PROTECTION: dust protection and flux tight (IP 40)
- OVERLOAD: 40N min

Mechanical
- FUNCTION: momentary action
- CONTACT ARRANGEMENT: Normally Open
- TERMINALS: SMT with positioning pegs;
  SMT without positioning pegs is available, contact Customer Service

<table>
<thead>
<tr>
<th>Type</th>
<th>Actuation force (N)</th>
<th>Operating life (operations)</th>
<th>Travel (total travel) mm (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K5AT xx 43GP</td>
<td>4.0</td>
<td>100,000</td>
<td>0.45 (0.95)</td>
</tr>
</tbody>
</table>

1 Tolerances of operating force FA is ± 25%.

Packaging
- Standard: 900 pcs per reel; Reel diameter 380 mm
- Reduced: 180 pcs per reel; Reel diameter 180 mm

Materials
- CONTACTS: Au over Ni
- TERMINALS: Au over Ni
- HOUSING: Thermoplastic UL94 V0

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 and place it in the appropriate box.

LED color
- YE Yellow
- GN Green
- RD Red
- BU Blue
- WH White
- GA Green apple

Operating Force
- 4.0 N (400 grams)

Termination
- G Gulf wing

Peg
- NONE (STD.)
- P (with pegs)

Packaging
- NONE (900 pieces per reel)
- R (reduced packaging 180 pieces per reel)

Contact Material
- 3 Gold (Au)
**Features**
- Various LED options
- No light perturbation
- Sound haptic
- Various climatic classes

**Typical Applications**
- Automotive
- Network equipment
- Telecommunications
- Medical equipment
- Industrial controls

**Specification**
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make control = SPST, N.O.
TERMINALS: Gullwing type for SMT, 2 terminals for LED

**Mechanical**

<table>
<thead>
<tr>
<th>Type</th>
<th>Actuation Force (N)</th>
<th>Operating Life (operations)</th>
<th>Travel (Total Travel) mm (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K8xx41G LFS</td>
<td>4.0</td>
<td>300,000</td>
<td>0.45 (0.95)</td>
</tr>
</tbody>
</table>

Tolerances on actuation force is ± 25%.
SEALING LEVEL: IP40

**Illumination Colors**
White, blue, pure green, orange, super red
LED technical information available on product specification.
For any extra color, please contact your sales representative.

**Packaging**
In reels of 900 pieces under sealed foil.
Dimensions of reels according to EIA RS481 or IEC 2863. External diameter 380 mm.

**Electrical**
- MAXIMUM POWER: 1.0 VA
- MAXIMUM VOLTAGE: 32 VDC
- MINIMUM VOLTAGE: 20 mV
- MAXIMUM CURRENT: 50 mA
- MINIMUM CURRENT: 1 mA
- DIELECTRIC STRENGTH: (50 Hz, 1 min.) ≥ 250 Vrms
- CONTACT RESISTANCE: < 100mΩ
- INSULATION RESISTANCE: (100 V, initial stage) > 10⁹Ω
- BOUNCE TIME: < 10 ms

**Environmental**
- OPERATING TEMPERATURE: -40°C to +85°C
- STORAGE TEMPERATURE: -55°C to +85°C

**Process**
SOLDERING: Compatible with the lead free soldering profile.
No washing
MSL level: 5a

**Materials**
- CONTACTS: Ag over Ni
- TERMINALS: Ag over Ni
- HOUSING: Thermoplastic UL94 V0

**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.

**NOTE:**
The specifications show in the datasheet are for reference only and are not valid for design-in work. Please contact your sales representative to request drawings and product specifications.
For systems where reliability and safety are required, please contact your sales representative to secure product integration and function to secure usage.
K8
Illuminated SMT Tact Switch with Dedicated LED

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>REF LED</th>
<th>EMMITED COLOR</th>
<th>LUMINOUS INTENSITY (mcd) If = 20 mA</th>
<th>CHROMATICITY COORDINATES OR PEAK WAVE LENGTH (typ) If = 20 mA</th>
<th>FORWARD VOLTAGE V If = 20 mA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>min</td>
<td>typ</td>
<td>X</td>
</tr>
<tr>
<td>K8WH41G LFS</td>
<td>LW T67C-S2U1-5K8L</td>
<td>WHITE</td>
<td>224</td>
<td>560</td>
<td>0.33</td>
</tr>
<tr>
<td>K8BU41G LFS</td>
<td>LB T67C-P2R1-35</td>
<td>BLUE</td>
<td>56</td>
<td>140</td>
<td>465 mm</td>
</tr>
<tr>
<td>K8PG41G LFS</td>
<td>LP T676-L1M2-25</td>
<td>PURE GREEN</td>
<td>11.2</td>
<td>28</td>
<td>562 mm</td>
</tr>
<tr>
<td>K8SR41G LFS</td>
<td>LP T676-Q1R2-1</td>
<td>SUPER RED</td>
<td>71</td>
<td>180</td>
<td>645 mm</td>
</tr>
<tr>
<td>K8OG41G LFS</td>
<td>LO T676-R1S2-24</td>
<td>ORANGE</td>
<td>112</td>
<td>280</td>
<td>610 mm</td>
</tr>
</tbody>
</table>

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
K5V
Illuminated Tact Switch

Features
• Gold plated dome contact SPST/SPDT
• Excellent ergonomics
• High bright leds
• Reduced space usage on board
• 40 N overload
• Tape and reel
• RoHS compliant and compatible

Typical Applications
• When backlighting and switch are required to be a “2 in 1” component
• The dome contact secures a superior contact reliability in time
• The ergonomics of K5V provides a long travel, a sharp tactile feel and an audible click
• Server, storage, automotive, network infrastructure, medical

Specification
FUNCTION: momentary action
CONTACT ARRANGEMENT: Normally Open + Normally Closed
TERMINALS:
  THT: Through hole terminals with positioning pegs
  SMT: Surface mount terminals with positioning pegs
  PM: Panel mount solder terminals with wire hole

Mechanical

<table>
<thead>
<tr>
<th>Version</th>
<th>Operating force FA (Newtons)</th>
<th>Operating life (operations)</th>
<th>Travel (total travel) mm(mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>THT, SMT, PM</td>
<td>4.0 (400)</td>
<td>25,000</td>
<td>1.2 (2.4)</td>
</tr>
</tbody>
</table>

1 Tolerances of operating force FA is ± 25%.

Electrical
POWER MIN/MAX: 0.02VA / 1.0VA
VOLTAGE MIN/MAX: 20mVdc – 32 Vdc
CURRENT MIN/MAX: 0.1mA – 100mA
CONTACT RESISTANCE: <150mΩ
INSULATION RESISTANCE: >1GΩ initial, >10MΩ after damp heat
BOUNCE TIME: <5ms

Environmental
OPERATING TEMPERATURE: -40°C to 85°C
STORAGE TEMPERATURE: -50°C to 85°C
RELATIVE HUMIDITY: 90 to 96% according to NF EN 60068-2-30
PROTECTION: dust protection and flux tight
OVERLOAD: 40N

Process

<table>
<thead>
<tr>
<th>SMT</th>
<th>Soldering: Compatible with the lead free soldering profile No washing</th>
</tr>
</thead>
<tbody>
<tr>
<td>THT</td>
<td>Soldering: Compatible with the lead free soldering profile No washing</td>
</tr>
<tr>
<td>PM</td>
<td>Soldering: Low wattage soldering iron (25-50 watts max). Solder time 3 seconds max. No washing</td>
</tr>
</tbody>
</table>

Materials
LEAD FREE
CONTACTS: Au over Ni
SOLDERING: Au over Ni
HOUSING: Thermoplastic UL94 V0
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 and place it in the appropriate box.

Actuator
1 without snap-in, clear (TH and PM version only)
2 with snap-ins, clear for light pipe extension (TH and PM version only)
3 without snap-in, light grey (SMT version only)
4 with snap-ins, light grey for light pipe extension (SMT version only)

Actuator color/LED color
BA Translucid/Blue-Amber
GN Translucid/Green
BU Translucid/Blue
RG Translucid/Red-Green
WX Translucid/White
YG Translucid/Yellow-Green
CL Transparent/No LED
90 Black Actuator/No LED

Operating Force
4 4.0 N (400 grams)

Contact Material
3 Gold (Au)

Termination
G Surface mount
P Panel mount
T Through-hole 3.5mm
S Through-hole 2.1mm

Option
NONE General version (260°C)
H High temperature version with robust design (270°C)

* When high temperature version with robust design is requested, K5V1 and K5V2 TH and PM version are the right options

Option
4 High temperature SMT PIP (270°C)

Actuator color/LED color
BA Translucid/Blue-Amber
GN Translucid/Green
BU Translucid/Blue
RG Translucid/Red-Green
WX Translucid/White
YG Translucid/Yellow-Green
CL Transparent/No LED
90 Black Actuator/No LED

Operating Force
4 4.0 N (400 grams)

Contact Material
3 Gold (Au)

Termination
S 2.1mm
V 2.5mm
W 3.0mm
X 3.5mm

Option
NONE No option
P3 Terminal 3 is cut
P4 Terminal 4 is cut
P13 Terminal 1 & 3 is cut
P14 Terminal 1 & 4 is cut

Patented
No - US 11/363815

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
K5V Illuminated Tact Switch

**K5V SMT**

**ELECTRICAL DIAGRAM**

**RECOMMENDED PCB LAYOUT (WITH HOLES)**

**TOP VIEW**

Areas important for switch stability on PCB

**TAPE & REEL**

Direction of feed
**K5V Illuminated Tact Switch**

**K5V PM**

PRODUCT IDENTIFICATION AND DATE CODES

- **Shift**
- **LED**
- **Plating**
- **Force**

**ELECTRICAL DIAGRAM**

Single Color LED

1. **1**
2. **2**
3. **3**  **AB**

Bi-Color LED — YG

1. **4**
2. **5**  **CB**
3. **6**  **YG**

Bi-Color LED — RG

1. **7**
2. **8**  **CB**
3. **9**  **RG**

**TERMINAL REFERENCES**

4. **CB**
3. **AB**

**TRAY**

SUITABLE FOR PANEL THICKNESS OF 1.8MM MAX

**DETAIL Q**

- **COUPE A-A**
- **COUPE B-B**

SEE DETAIL Q

286 x 1
(11.25 x 0.039)

www.ckswitches.com

13 May 22

B-121
KSF & KSFI Series
Soft Actuated Tact Switch

Features/Benefits
- Soft actuated switch
- Sealed front end
- Top and side actuated

Typical Applications
- Low profile keyboards
- Automotive interfaces
- Industrial control

Specification
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make conact = SPST, N.O.
TERMINALS: THT pins

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>KSF0M211LFTR</td>
<td>1.5 ± 0.5</td>
<td>100,000</td>
<td>0.25 ± 0.1</td>
</tr>
<tr>
<td>KSF0M311LFTR</td>
<td>1.9 ± 0.5</td>
<td>100,000</td>
<td>0.25 ± 0.1</td>
</tr>
<tr>
<td>KSF0M411LFTR</td>
<td>3.0 ± 0.75</td>
<td>100,000</td>
<td>0.25 ± 0.1</td>
</tr>
<tr>
<td>KSF0M511LFTR</td>
<td>5.2 ± 1.0</td>
<td>100,000</td>
<td>0.25 ± 0.1</td>
</tr>
<tr>
<td>KSF0V91170SH LFT</td>
<td>3.4 ± 1.5</td>
<td>100,000</td>
<td>0.65 ± 0.25</td>
</tr>
<tr>
<td>KSF0M212 LFT</td>
<td>1.6 ± 0.4</td>
<td>300,000</td>
<td>0.25 ± 0.1</td>
</tr>
<tr>
<td>KSF0M412 70SHLFT</td>
<td>3.2 ± 0.8</td>
<td>100,000</td>
<td>0.75 ± 0.25</td>
</tr>
</tbody>
</table>

Overload resistance: 40N, 1 time
Sealing: IP60 or IP67

NOTE: Other configurations of haptics and terminals are available upon demand.
Please also refer to KSF and KSFI Mk2 catalogues pages for other options.

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.

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 1 mA
DIELECTRIC STRENGTH (50 Hz, 1 min.): > 250 Vrms
CONTACT RESISTANCE: < 100 mΩ
INSULATION RESISTANCE (100 V, initial stage): > 10^9 Ω
BOUNCE TIME: < 1 ms

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

Process
SOLDERING

Packaging
In boxes of 250 pieces (V type) or 500 pieces (M type).

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.

Regarding the Insertion type:
- F Flat membrane
- FI Soft actuator

Sealing:
- 1 IP60
- 2 IP67 *** note selecting this option part number will end with LFT

RoHS compliant and compatible. Tin plated.

Contact Material
- 1 Silver
- 3 Gold

Operation Force
- 2 1.5 N (150 grams)*
- 3 1.9 N (190 grams)*
- 4 3 N (300 grams)*
- 5 5.2 N (520 grams)*
- 9 3.4 N (340 grams)**

*valid for KSFI only
**valid for KSFI MK1 series only

NOTE: Products must be checked according to customers soldering parameters especially in terms of flux resistance.

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
KSA & KSL Series
Sealed Tact Switch

Features/Benefits
- Designed for automatic or manual insertion
- Cambered terminals to ensure self retention
- Top or side actuated
- Large choice of caps
- RoHS compliant and compatible

Typical Applications
- Automotive
- Industrial
- Telecommunication networks

Specification
CONTACT ARRANGEMENT: SPST, N.O.
DOUBLE OVERMOLDING ON TERMINAL
SEALING: IP60
TERMINALS: PC pins, ground pin optional

Mechanical

<table>
<thead>
<tr>
<th>Type</th>
<th>Actuation force N</th>
<th>Operating life (operations)</th>
<th>Travel to make</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSA0M211</td>
<td>1.4 ± 0.4</td>
<td>100,000</td>
<td>0.5 ± 0.2</td>
</tr>
<tr>
<td>KSA0M311</td>
<td>1.4 ± 0.4</td>
<td>1,000,000</td>
<td>0.5 ± 0.2</td>
</tr>
<tr>
<td>KSA0M411</td>
<td>3 ± 0.75</td>
<td>100,000</td>
<td>0.6 ± 0.2</td>
</tr>
<tr>
<td>KSA0M511</td>
<td>5 ± 1.5</td>
<td>100,000</td>
<td>0.7 ± 0.2</td>
</tr>
<tr>
<td>KSA0M911</td>
<td>3 ± 0.75</td>
<td>500,000</td>
<td>0.6 ± 0.2</td>
</tr>
<tr>
<td>KSL0M211</td>
<td>1.4 ± 0.4</td>
<td>100,000</td>
<td>0.5 ± 0.2</td>
</tr>
<tr>
<td>KSL0M311</td>
<td>1.4 ± 0.4</td>
<td>1,000,000</td>
<td>0.5 ± 0.2</td>
</tr>
<tr>
<td>KSL0M411</td>
<td>3 ± 0.75</td>
<td>100,000</td>
<td>0.6 ± 0.2</td>
</tr>
<tr>
<td>KSL0M511</td>
<td>5 ± 1.5</td>
<td>100,000</td>
<td>0.7 ± 0.2</td>
</tr>
</tbody>
</table>

NOTE: Other versions in terms of force, termination length and corrosion protection available. Please contact your sales representative. This data sheet does not provide enough information for applications which require a certain level of quality or safety such as automotive, medical systems, safety equipment. Please contact your sales representative to get contractual specification package.

Electrical
- MAXIMUM POWER: Silver 1 VA, Gold 0.2 VA
- MAXIMUM VOLTAGE: Silver 32 VDC, Gold 32 VDC
- MINIMUM VOLTAGE: Silver 20 mV, Gold 20 mV
- MAXIMUM CURRENT: Silver 50 mA, Gold 10 mA
- MINIMUM CURRENT: Silver 1 mA, Gold 1 mA
- DIELECTRIC STRENGTH: 250 Vrms
- CONTACT RESISTANCE: ≤ 100 mΩ
- INSULATION RESISTANCE (100 V): ≥ 10⁹ Ω
- BOUNCE TIME: ≤ 1 ms

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

Process
Wave soldering compatible with lead free soldering profile.

Packaging
Can be delivered in tubes of 65 pieces for automatic insertion or in boxes of 500 pieces for manual insertion (250 pieces for KSL, KSLV, KSAV).

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.

BUTTONS
Buttons must be ordered separately and will be supplied in bulk.

Note: "1" Ground terminal not compatible with "V" insertion

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com

10 Dark gray 60 Blue
20 Light gray 70 Gray-blue
30 Yellow 80 Ivory
40 Red 90 Black
KSA & KSL Series
Sealed Tact Switch

ACTUATOR TYPE

KSA & KSL

GROUND TERMINAL

0 WITHOUT

1* WITH

*Not compatible with "V" insertion

www.ckswitches.com

15 Oct 21
KSA & KSL Series
Sealed Tact Switch

INSERTION

M MANUAL (BULK PACKAGING)

A AUTOMATIC (TUBE PACKAGING, 65 PIECES PER TUBE)

V VERTICAL

OPERATING FORCE

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>OPERATING FORCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1.3 N (130 grams)</td>
</tr>
<tr>
<td></td>
<td>100,000 operations</td>
</tr>
<tr>
<td>3</td>
<td>1.3 N (130 grams)</td>
</tr>
<tr>
<td></td>
<td>1,000,000 operations</td>
</tr>
<tr>
<td>4</td>
<td>3.0 N (300 grams)</td>
</tr>
<tr>
<td></td>
<td>100,000 operations</td>
</tr>
<tr>
<td>5</td>
<td>5.0 N (500 grams)</td>
</tr>
<tr>
<td></td>
<td>100,000 operations</td>
</tr>
<tr>
<td>9</td>
<td>3.0 N (300 grams)</td>
</tr>
<tr>
<td></td>
<td>500,000 operations</td>
</tr>
</tbody>
</table>

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
## Contact Material

<table>
<thead>
<tr>
<th>Option Code</th>
<th>Contact Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Silver contacts</td>
</tr>
<tr>
<td>3</td>
<td>Gold contacts</td>
</tr>
</tbody>
</table>

## Sealing

<table>
<thead>
<tr>
<th>Option Code</th>
<th>Sealing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sealing level IP60</td>
</tr>
</tbody>
</table>

## Buttons

Buttons must be ordered separately and will be supplied in bulk.

<table>
<thead>
<tr>
<th>Button Type</th>
<th>KSA</th>
<th>KSL</th>
<th>KSAV</th>
<th>KSLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>K01</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K02</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K03</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
KSA & KSL Series
Sealed Tact Switch

K02

K03
Features/Benefits

- Highest tact switch sealing performance
- Improved sealing through a modification of the crimping technique and to a double overmolding of the terminal
- Totally sealed
- Up to 1M operations
- RoHS compliant and compatible

Typical Applications

- Automotive
- Industrial
- Telecommunication networks
- Household appliances
- Heating control systems

Specification

CONTACT ARRANGEMENT: SPST, N.O.
TERMINALS: PC pins
SEALING: IP65

Mechanical

<table>
<thead>
<tr>
<th>Type</th>
<th>Actuation force N (grams)</th>
<th>Operating life (operations)</th>
<th>Travel to make</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSA0M212</td>
<td>1.3 ± 0.3</td>
<td>100,000</td>
<td>0.5 ± 0.15</td>
</tr>
<tr>
<td>KSA0M312</td>
<td>1.3 ± 0.3</td>
<td>1,000,000</td>
<td>0.5 ± 0.15</td>
</tr>
<tr>
<td>KSA0M412</td>
<td>3.25 ± 0.5</td>
<td>100,000</td>
<td>0.6 ± 0.25</td>
</tr>
<tr>
<td>KSA0M512</td>
<td>5 ± 1.25</td>
<td>100,000</td>
<td>0.7 ± 0.25</td>
</tr>
</tbody>
</table>

Packaging

Delivered in boxes of 500 pieces (250 pieces for KSL)

NOTE: Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Other versions in terms of force, termination length and corrosion protection available. Please contact your sales representative.

This data sheet does not provide enough information for applications which require a certain level of quality or safety such as automotive, medical systems, safety equipment. Please contact your sales representative to get contractual specification package.

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 representive.

<table>
<thead>
<tr>
<th>Type</th>
<th>Ground Terminal</th>
<th>Insertion</th>
<th>Sealing</th>
<th>Contact Material</th>
<th>Operation Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>S</td>
<td>O</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

RoHS compliant and compatible.
Tin plated.

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>1 mA</td>
</tr>
</tbody>
</table>

DIELECTRIC STRENGTH: \( \geq 250 \text{ Vrms} \)
CONTACT RESISTANCE: \( \leq 100 \text{m\Omega} \)
INSULATION RESISTANCE (100 V): \( \geq 10^9 \Omega \)
BOUNCE TIME: \( \leq 1 \text{ ms} \)

Environmental

<table>
<thead>
<tr>
<th></th>
<th>Silver</th>
<th>Gold</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATING TEMPERATURE:</td>
<td>–40°C to 85°C</td>
<td>–40°C to 125°C</td>
</tr>
<tr>
<td>STORAGE TEMPERATURE:</td>
<td>–40°C to 85°C</td>
<td>–55°C to 125°C</td>
</tr>
</tbody>
</table>

Process

Wave soldering compatible with lead free soldering profile.

Wire size: 26 AWG for KSA Series

Dimensions are shown in mm
Specifications and dimensions subject to change

www.ckswitches.com
KSA & KSL MKII Series
High Performance Sealed Tact Switch

KSA & KSL
MANUAL INSERTION

Recommended PCB (component side)

KSA & KSL
AUTOMATIC INSERTION

PCB LAYOUT

Dimensions are shown: mm
Specifications and dimensions subject to change

30 Jan 19

www.ckswitches.com
KSJ Series
Spherical Actuator Tact Switches

Features/Benefits
- Spherical actuator allows actuation force off center ± 30° with regard to vertical
- RoHS compliant and compatible
- Designed for mechanisms
- Compliant side actuation

Typical Applications
- Automotive
- Cranes, off road, railway
- Factory automation
- Security systems

Specification
FUNCTION: Momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
DISTANCE BETWEEN BUTTON CENTERS (min.): 7.62 (0.300)
TERMINALS: PC pins
SEALING: IP60

Environmental
OPERATING TEMPERATURE: -40°C to 85°C
STORAGE TEMPERATURE: -40°C to 85°C

Packaging
Delivered in boxes of 250 pieces.

Mechanical

<table>
<thead>
<tr>
<th>Type</th>
<th>Actuation force N (grams)</th>
<th>Operating life (operations) axial</th>
<th>Operating life (operations) radial</th>
<th>Travel to make (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSJ0M21160SH</td>
<td>2 ± 0,5</td>
<td>100,000</td>
<td>30,000</td>
<td>0,6 ± 0,3</td>
</tr>
<tr>
<td>KSJ0M41180SH</td>
<td>3,0 ± 0,8</td>
<td>100,000</td>
<td>30,000</td>
<td>0,55 ± 0,25</td>
</tr>
<tr>
<td>KSJ0M21180SH</td>
<td>2 ± 0,5</td>
<td>100,000</td>
<td>30,000</td>
<td>0,35 ± 0,2</td>
</tr>
<tr>
<td>KSJ0M91180SH</td>
<td>3,9 ± 0,8</td>
<td>100,000</td>
<td>30,000</td>
<td>0,7 ± 0,25</td>
</tr>
</tbody>
</table>

Electrical
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 1 mA
DIELECTRIC STRENGTH (50 Hz, 1 min.): ≥ 250 Vrms
CONTACT RESISTANCE: ≤ 100m Ω
INSULATION RESISTANCE (100V): ≥ 10^6 ohms
BOUNCE TIME: ≤ 1 ms

Process
Wave soldering, compatible with lead free soldering profile.

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 in the table above, please consult your local representative.

Contact Material
1 Silver contacts
3 Gold contacts

Operation Force
2 2 N (200 grams), 100,000 operations
4 3 N (300 grams), 100,000 operations

Ground Terminal
0 Without
1 With*

Insertion
M Thru-hole
V Vertical*

Sealing
1 Sealed IP 60

Hardness
60SH 60 Shore Actuator
80SH 80 Shore Actuator

RoHS compliant and compatible.
Tin plated.

*Note: "1" ground terminal option not available with "V" version. The bracket for the "V" version plays this role.
KSJ Series
Spherical Actuator Tact Switches

KSJ

Application area limits of operating force

Recommended direction for a radial actuation

KSJ0M211

INSERTION

M THRU-HOLE

V VERTICAL

PCB LAYOUT

Ground terminal (option)

Dimensions are shown: mm
Specifications and dimensions subject to change

www.cks-switches.com
PTS636 Series
6.0 x 3.5 Top Actuated

Features/Benefits
- 6.0 x 3.5 mm footprint
- Multiple heights
- THT or SMT type

Specifications
FUNCTION: Momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST, N.O.
TERMINALS: THT, J, G and F type for SMT

Electrical
MAXIMUM VOLTAGE: 12 VDC
MAXIMUM CURRENT DC: 50 mA
DIELECTRIC STRENGTH: 250 VA C (1mm)
CONTACT RESISTANCE: \( \leq 100 \, \text{m}\Omega \)
INSULATION RESISTANCE: \( \geq 100 \, \text{M}\Omega \)
BOUNCE TIME: \( \leq 10 \, \text{ms} \)
TRAVEL: 0.25 ± 0.1 mm

Environmental
OPERATING TEMPERATURE: -40˚C to 90˚C

Life Cycles
<table>
<thead>
<tr>
<th>Height (mm)</th>
<th>Force</th>
<th>Operating Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5mm</td>
<td>180gf ± 30gf</td>
<td>70,000</td>
</tr>
<tr>
<td></td>
<td>250gf ± 50gf</td>
<td>100,000</td>
</tr>
<tr>
<td>4.3mm &amp; 5.0mm</td>
<td>130gf ± 50gf</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td>180gf ± 50gf</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td>250gf ± 50gf</td>
<td>30,000</td>
</tr>
<tr>
<td></td>
<td>320gf ± 50gf</td>
<td>20,000</td>
</tr>
</tbody>
</table>

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 and place it in the appropriate box.

Process
SOLDERING: This component is suited to the following methods:
- Infrared Reflow Soldering in accordance with IEC61760-1

Packaging
In bags of 1,000 pcs for THT
In reels of 3,000 pieces for 2.5 mm height
In reels of 1,500 pieces for 4.3 and 5.0 mm height
Dimensions of reels according to EIA 481B
External diameter 330 mm

NOTE:
- Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
- The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

Features/Benefits
- 6.0 x 3.5 mm footprint
- Multiple heights
- THT or SMT type

Typical Applications
- IoT devices
- Home automation
- Remote controls
PTS636 Series
6.0 x 3.5 Top Actuated

THT versions (4.3 & 5.0 mm height)

SMT G leads (4.3 & 5.0 mm height)
PTS636 Series
6.0 x 3.5 Top Actuated

SMT J leads (4.3 & 5.0 mm height)

SMT G leads (2.5 mm height)
PTS636 Series
6.0 x 3.5 Top Actuated

SMT J leads (2.5 mm height)

SMT F leads (2.5 mm height)
Tactile Switches

PTS636 Series
6.0 x 3.5 Top Actuated

SMT G leads, with ground pin (2.5 mm height)

SMT J leads, with ground pin (2.5 mm height)
PTS636 Series
6.0 x 3.5 Top Actuated

**PACKAGING**

4.3 and 5.0 mm height - G leads

4.3 and 5.0 mm height - J leads

2.5 mm height

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
PTS641 Series
SMT Top Actuated Switches

Features/Benefits

• 6.3 x 6.3 mm footprint
• Multiple heights
• Ground pin option

Typical Applications

• Metering
• White goods
• Home and garden equipment

Specification

FUNCTION: Momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
TERMINALS: G type for SMT

Mechanical

TRAVEL: 0.20 mm ±0.15 mm for 160 & 250 gf
0.30 mm ±0.15 mm for 320 gf
OPERATING LIFE: 200,000 cycles for 160 gf version
100,000 cycles for 250 gf & 320 gf versions
OPERATION FORCE: 160 gf ±50 gf blue actuator
250 gf ±50 gf red actuator
320 gf ±80 gf black actuator

Packaging

Switches in reels of 1,500 pieces.
Dimensions of reels according to EIA 481B
External diameter 330 mm

Electrical

MAXIMUM VOLTAGE: 12 VDC
MAXIMUM CURRENT DC: 50 mA
DIELECTRIC STRENGTH: 250 VA C (1mn)
CONTACT RESISTANCE: 100 mΩ
INSULATION RESISTANCE: ≥ 100 MΩ
BOUNCE TIME: < 5 ms

Environmental

OPERATING TEMPERATURE: -20°C to 85°C

Process

SOLDERING: This component is suited to the following methods:
Infrared Reflow Soldering in accordance with IEC61760-1

NOTE:
• Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
• The PTS series is not certified for using in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

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.

Ground Pin
S No ground pin
T With ground pin

Actuation Force
M 160 gf
K 250 gf
P 320 gf

Body Type
25 2.5 mm height
31 3.1 mm height
34 3.4 mm height

Packaging
SMTR2 Tape & Reel

RoHS compliant, silver plated

14 Nov 22
PTS641 Series
SMT Top Actuated Switches

NO GROUND PIN  H = 2.5, 3.1, or 3.4 mm

GROUND PIN  H = 2.5, 3.1, or 3.4 mm
PTS645 Series
6 mm Tact Switches

Features/Benefits
• Compact size 6 x 6 mm
• Variety of actuator lengths
• Choice of actuation force
• RoHS compliant and compatible

Typical Applications
• Consumer products
• Instrumentation
• Computer products
• Industrial

Specification
FUNCTION: Momentary action
CONTACT ARRANGEMENT: SPST, N.O.
TERMINALS: PC pins

Mechanical
LIFE EXPECTANCY: 100,000 operations.

Electrical
CONTACT RATING: 50 mA @ 12 V DC.
DIELECTRIC STRENGTH: 250 V AC min.
CONTACT RESISTANCE: 100 mΩ max. initial.
INSULATION RESISTANCE: 10¹¹ Ω min.

Environmental
OPERATING TEMPERATURE: -40°C to 85°C
STORAGE TEMPERATURE: -40°C to 85°C

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.

Termination
S Straight
T Straight with ESD pin
V Vertical THT

Actuator Shape
NONE Round actuator, All versions
J Square actuator, 2.4 mm side
(available for Straight 7.3 mm and Vertical 6.15 mm)

Actuation Force
N 100 gf
L 130 gf
M 160 gf
H 200 gf
K 260 gf
P 320 gf

Insertion Type
2 Thru hole
SMTR92* Surface mount G-type, tape & reel
JSMTR92* Surface mount J-type, tape & reel

Switch height from PCB for S and T only
(H dimension see actuator height drawings)
43 4.3 (.169), thru-hole and SMT
50 5.0 (.197), thru-hole and SMT
70 7.0 (.276), thru-hole and SMT
73 7.3 (.287), thru-hole and SMT, square actuator 2.4 mm side only
95 9.5 (.374), thru-hole and SMT
13 13.0 (.512) SMT only
11 11.0 (.433) SMT only

Switch length from front leads for V only
(H dimension see actuator height drawings)
31 3.15 (.124), vertical
39 3.85 (.151), vertical
58 5.85 (.230), vertical
61 6.15 (.242), vertical, square actuator 2.4 mm side only
83 8.35 (.329), vertical

Process
SOLDERING: Preheating to 100°C for 45 sec. max. Keep flux flush with top surface of PCB; do not apply to component side of PCB and area where terminals are located. Soldering to 255°C for 5 sec. max. Clean by brushing on solder surface. Do not clean switch with solvents.

Packaging
Bulk packaging

Tape & reel for the SMT type:
Reels of 1,000 pieces for 4.3 and 5.0 mm height
Reels of 700 pieces for 7.0 mm height
Reels of 700 pieces for 7.3 mm height
Reels of 500 pieces for 9.5 mm height
Reels of 400 pieces for 13.0 mm height

NOTE:
• Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
• The PTS series is not certified for use in Automotive application and no PPAP. However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

Features/Benefits
• Compact size 6 x 6 mm
• Variety of actuator lengths
• Choice of actuation force
• RoHS compliant and compatible

Typical Applications
• Consumer products
• Instrumentation
• Computer products
• Industrial
PTS645 Series
6 mm Tact Switches

TERMINATION

S STRAIGHT

T STRAIGHT WITH ESD PIN

V VERTICAL THT

Dimensions are shown: mm
Specifications and dimensions subject to change
PTS645 Series
6 mm Tact Switches

TERMINATION

SMT G Type

SMT J Type

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com
PTS645 Series
6 mm Tact Switches

ACTUATOR SHAPE

STRAIGHT SMT G TYPE - FOR 7.3MM HEIGHT ONLY

STRAIGHT SMT J TYPE - FOR 7.3MM HEIGHT ONLY

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
ACTUATOR SHAPE

STRAIGHT SMT - FOR 7.3MM HEIGHT ONLY

PTS645 Series
6 mm Tact Switches

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com

14 Nov 22
PTS645 Series
6 mm Tact Switches

ACTUATION FORCE

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>FORCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>130 grams Black</td>
</tr>
<tr>
<td>M</td>
<td>160 grams Blue</td>
</tr>
<tr>
<td>H</td>
<td>200 grams Gray</td>
</tr>
<tr>
<td>K</td>
<td>260 grams Red</td>
</tr>
</tbody>
</table>

ACTUATOR HEIGHT

Switch height from PCB for S and T only

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>DIMENSION H</th>
<th>TERMINATION</th>
<th>SCHEMATIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>4.3 (.169)</td>
<td>Thru-hole and SMT</td>
<td>1</td>
</tr>
<tr>
<td>50</td>
<td>5.0 (.197)</td>
<td>Thru-hole and SMT</td>
<td>1</td>
</tr>
<tr>
<td>70</td>
<td>7.0 (.275)</td>
<td>Thru-hole and SMT</td>
<td>1</td>
</tr>
<tr>
<td>95</td>
<td>9.5 (.374)</td>
<td>Thru-hole and SMT</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>13.0 (.512)</td>
<td>SMT</td>
<td>1</td>
</tr>
</tbody>
</table>

Switch length from front leads for V only

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>DIMENSION H</th>
<th>TERMINATION</th>
<th>SCHEMATIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>3.15 (.124)</td>
<td>Vertical</td>
<td>1</td>
</tr>
<tr>
<td>39</td>
<td>3.85 (.151)</td>
<td>Vertical</td>
<td>1</td>
</tr>
<tr>
<td>58</td>
<td>5.85 (.230)</td>
<td>Vertical</td>
<td>1</td>
</tr>
<tr>
<td>83</td>
<td>8.35 (.329)</td>
<td>Vertical</td>
<td>1</td>
</tr>
</tbody>
</table>

TAPE & REEL FOR SMT G TYPE VERSIONS

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>WIDTH TAPE</th>
<th>POCKET HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>16 , 0.3</td>
<td>5.3</td>
</tr>
<tr>
<td>50</td>
<td>16 , 0.3</td>
<td>5.3</td>
</tr>
<tr>
<td>70</td>
<td>16 , 0.3</td>
<td>7.3</td>
</tr>
<tr>
<td>73</td>
<td>16 , 0.3</td>
<td>7.6</td>
</tr>
<tr>
<td>95</td>
<td>24 , 0.3</td>
<td>10.3</td>
</tr>
<tr>
<td>13</td>
<td>24 , 0.3</td>
<td>13.3</td>
</tr>
</tbody>
</table>
TAPE & REEL FOR SMT J TYPE VERSIONS

Tape specifications

<table>
<thead>
<tr>
<th>Product height</th>
<th>Corner tape width</th>
<th>Center distance of corner tape</th>
<th>pcs/reel</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3</td>
<td>16</td>
<td>7.5</td>
<td>1000</td>
</tr>
<tr>
<td>5.0</td>
<td>16</td>
<td>7.5</td>
<td>1000</td>
</tr>
<tr>
<td>7.0</td>
<td>16</td>
<td>7.5</td>
<td>700</td>
</tr>
<tr>
<td>9.5</td>
<td>24</td>
<td>11.5</td>
<td>500</td>
</tr>
<tr>
<td>11.5</td>
<td>24</td>
<td>11.5</td>
<td>500</td>
</tr>
<tr>
<td>13</td>
<td>24</td>
<td>11.5</td>
<td>500</td>
</tr>
</tbody>
</table>

Note: The disc rotates counterclockwise. According to the packing shown in the figure, the board must not be twisted to prevent product deformation.

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
## PTS645V Series

### 6 mm SMT Side Actuated Tact Switch

#### Features/Benefits
- Full SMT processing
- Strong PCB soldering pads
- Compact 6 x 6 mm design

#### Typical Applications
- Consumer Products
- Set Top and Access Boxes
- Instrumentation
- Home and Garden Equipment

#### Specification
- **FUNCTION:** Momentary action
- **CONTACT ARRANGEMENT:** 1 make contact = SPST, N.O.
- **TERMINALS:** G type for SMT
- **TRAVEL:** PTS645V: 0.25 +0.2/-0.1 mm
  - PTS645VS: 0.35 +0.2/-0.1 mm
- **OPERATING LIFE:** 100,000 cycles

#### Mechanical

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Operating Force (gf)</th>
<th>Actuator Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS645VN13SMTR92 LFS</td>
<td>100</td>
<td>Dark Grey</td>
</tr>
<tr>
<td>PTS645VM13SMTR92 LFS</td>
<td>160</td>
<td>Yellow Green</td>
</tr>
<tr>
<td>PTS645VSN19PSMTR92 LFS</td>
<td>100</td>
<td>Grey</td>
</tr>
<tr>
<td>PTS645VSM19PSMTR92 LFS</td>
<td>160</td>
<td>Black</td>
</tr>
<tr>
<td>PTS645VSK19PSMTR92 LFS</td>
<td>260</td>
<td>Red</td>
</tr>
<tr>
<td>PTS645VSP19PSMTR92 LFS</td>
<td>320</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

#### Electrical
- **MAXIMUM VOLTAGE:** 12 V DC
- **MAXIMUM CURRENT:** 50 mA
- **DIELECTRIC STRENGTH:** 100 V AC (1mn)
- **CONTACT RESISTANCE:** ≤ 100 mΩ
- **INSULATION RESISTANCE:** ≥ 100 MΩ
- **BOUNCE TIME:** ≤ 10 ms

#### Environmental
- **OPERATING TEMPERATURE:** -40°C to 85°C
- **STORAGE TEMPERATURE:** -40°C to 85°C

#### Process
- **SOLDERING:** This component is suited to the following methods:
  - Infrared Reflow Soldering in accordance with IEC61760-1
- **Recommended solder paste thickness:** ≥ 15µm

#### Packaging
- In reels of 650 pieces
- Dimensions of reels according to EIA 481B
- External diameter 330 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.

- **Termination:**
  - V: Vertical
- **Water Proof:**
  - NONE: Non-waterproof
  - S: Sealed version for waterproof
- **Actuation Force:**
  - N: 100 gf
  - M: 160 gf
  - K: 260 gf
  - P: 320 gf
- **Actuator Length:**
  - 1.3 mm from metal front face
  - 1.9 mm from metal front face
- **Peg:**
  - NONE: Without peg
  - P: With peg

**NEW**

*Sealed version with IP67 is currently only for 1.9mm actuator length. For other lengths, please contact your local C&K representative.*
PTS645V Series
6 mm SMT Side Actuated Tact Switch

STANDARD VERSION WITHOUT PEG

RECOMMENDED PCB LAYOUT

SECTIONA-A

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com

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B-152
PTS645V Series
6 mm SMT Side Actuated Tact Switch

VERSION WITH PEG

P.C.B SOLDER LAND DIMENSIONS

PACKAGE

1. 650 PCS SWITCHES PER 1 REEL
2. GENERAL TOLERANCE ±0.3

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
**Tactile Switches**

**B–154**

Dimensions are shown: mm
Specifications and dimensions subject to change

**PTS647 Series**

**4.5 mm Tact Switch**

**Features/Benefits**
- Compact size 4.5 x 4.5 mm
- SMT terminals
- Different actuator heights
- Choice of actuation forces
- Tape & reel

**Typical Applications**
- Consumer
- Industrial control panels
- Computer products

---

**Mechanical**
TRAVEL: 0.25 mm +/- 0.15 mm

**Electrical**
CONTACT RATING: 50 mA @ 12 V DC.
DIELECTRIC STRENGTH: 250 V AC min.
CONTACT RESISTANCE: 100 mΩ max. initial.
INSULATION RESISTANCE: 100 MΩ min.

**Environmental**
OPERATING TEMPERATURE: -20°C to 70°C

**Packaging**
In reels of 1,000 pieces for 7.0 mm height
In reels of 1,500 pieces for 5.0 mm height
In reels of 2,000 pieces for 3.8 mm height
Dimensions of reels according to EIA RS481 or IEC 2863.
External diameter 330 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 and place it in the appropriate box.

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

---

### Features

- Compact size 4.5 x 4.5 mm
- SMT terminals
- Different actuator heights
- Choice of actuation forces
- Tape & reel

### Specifications

- **Part Number**: PTS647 SN38 SMTR2 LFS
- **Operating Force (gf)**: 100 +/- 50
- **Life**: 100,000
- **Height (H)**: 3.8 mm

### Environmental

- **Operating Temperature**: -20°C to 70°C

### Packaging

- In reels of 1,000 pieces for 7.0 mm height
- In reels of 1,500 pieces for 5.0 mm height
- In reels of 2,000 pieces for 3.8 mm height
- Dimensions of reels according to EIA RS481 or IEC 2863.
- External diameter 330 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.

---

### Typical Applications

- Consumer
- Industrial control panels
- Computer products

---

### Important Notes

- Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.
- The PTS series is not certified for using in Automotive application and no PPAP.
- However, in the case of some automotive accessories and specific applications for 2 and 3 wheeled vehicles the PTS is widely used and very suitable. Please contact your local C&K representative to discuss your application and the best switch solution.

---

### Actuation Force

- **N**: 100 grams
- **M**: 180 grams
- **K**: 250 grams

---

### Total Height

- **38**: 3.8 mm
- **50**: 5.0 mm
- **70**: 7.0 mm

---

### Termination

- **S**: Straight

---

### LFS

Lead free compatible, silver plated

---

Dimensions are shown: mm
Specifications and dimensions subject to change

---

**www.ckswitches.com**
PTS647 Series
4.5 mm Tact Switch

**TAPE & REEL**

![Diagram of tape and reel with dimensions and labels]

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Pocket Height (H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTS647 SN38 SMTR2 LFS</td>
<td>4.2 mm</td>
</tr>
<tr>
<td>PTS647 SM38 SMTR2 LFS</td>
<td>4.2 mm</td>
</tr>
<tr>
<td>PTS647 SK38 SMTR2 LFS</td>
<td>4.2 mm</td>
</tr>
<tr>
<td>PTS647 SN50 SMTR2 LFS</td>
<td>5.4 mm</td>
</tr>
<tr>
<td>PTS647 SM50 SMTR2 LFS</td>
<td>5.4 mm</td>
</tr>
<tr>
<td>PTS647 SK50 SMTR2 LFS</td>
<td>5.4 mm</td>
</tr>
<tr>
<td>PTS647 SN70 SMTR2 LFS</td>
<td>7.2 mm</td>
</tr>
<tr>
<td>PTS647 SM70 SMTR2 LFS</td>
<td>7.2 mm</td>
</tr>
<tr>
<td>PTS647 SK70 SMTR2 LFS</td>
<td>7.2 mm</td>
</tr>
</tbody>
</table>
PTS125 Series
12 mm Tact Switches

Features/Benefits
• THT and SMT terminations
• Various heights
• Snap fit actuator option

Typical Applications
• Consumer products
• Instrumentation
• Computer products
• Industrial

Specification
FUNCTION: Momentary action
CONTACT ARRANGEMENT: 1 make contact SPST, N.O.
TERMINALS: PC pins for THT and G type for SMT
TRAVEL: 130 gf 0.20 mm
180 gf 0.25 mm
250 gf 0.30 mm
350 gf 0.35 mm

Mechanical
OPERATING FORCE: 130 gf, 180 gf, 250 gf, 350 gf

Environmental
OPERATING TEMPERATURE: -40°C to 85°C

Process
SOLDERING: This component is suited to the following methods:
Infrared reflow soldering in accordance with IEC 61760-1 for SMT version
Wave soldering compatible with lead free soldering profile

Packaging
Dimensions of reels according to EIA 481B. External diameter 330 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.

STANDARD VERSION: 200K LIFE

<table>
<thead>
<tr>
<th>Style</th>
<th>Actuator Shape</th>
<th>Actuator Force</th>
<th>Termination &amp; Packaging</th>
<th>Pegs Option</th>
<th>Switch Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>NONE Round</td>
<td>M 180 grams</td>
<td>THT in bags</td>
<td>NONE</td>
<td>43 4.3 mm round actuator</td>
</tr>
<tr>
<td></td>
<td>Snap fit 73 height only</td>
<td>K 250 grams</td>
<td>SMTR SMT in tape &amp; reel</td>
<td>P with pegs</td>
<td>73 7.3 mm square snap fit actuator</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>no pegs</td>
<td>85 8.5 mm round actuator</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12 12.0 mm round actuator with ribs</td>
</tr>
</tbody>
</table>

Other heights with the round actuator are available upon request. Different minimum order quantities than the stand may apply.

Specifications and dimensions subject to change.

www.ckswitches.com

Dimensions are shown: mm

14 Nov 22
PTS125 Series
12 mm Tact Switches

LONG LIFE VERSION: 1000K TO 5000K LIFE

- **Style**
  - S: Straight, top actuated

- **Actuator Shape**
  - NONE: Round
  - J: Snap fit 73 height only

- **Actuator Force**
  - L: 130 grams
  - M: 180 grams
  - K: 250 grams
  - R: 350 grams

- **Switch Height**
  - 43: 4.3 mm round actuator
  - 73: 7.3 mm square snap fit actuator
  - 85: 8.5 mm round actuator
  - 12: 12.0 mm round actuator with ribs

- **Pegs Option**
  - NONE: no pegs
  - P: with pegs

- **Ground Pin Option**
  - NONE: no ground pin
  - G: with ground pin *

- **Termination & Packaging**
  - NONE: THT in bags
  - SMTR: SMT in tape & reel

- **Life Cycles**
  - 1M: 1M life cycles
  - 5M: 5M life cycles *

  * 5M life only for 130 gf version

- **RoHS, silver plated**

Other heights with the round actuator are available upon request. Different minimum order quantities than the stand may apply.

THT VERSION WITHOUT PEGS WITH ROUND ACTUATOR
H= 4.3, 7.3 & 8.5 MM (other height upon request)

```
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

THT VERSION WITH PEGS WITH ROUND ACTUATOR
H= 4.3, 7.3 & 8.5 MM (other height upon request)

```
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

---

**Recommended PCB Layout**

---

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
PTS125 Series
12 mm Tact Switches

SMT VERSION WITH PEGS WITH ROUND ACTUATOR AND PEGS H= 4.3, 7.3 & 8.5 MM (other height upon request)

SMT VERSION WITHOUT PEGS WITH ROUND ACTUATOR AND PEGS H= 4.3, 7.3 & 8.5 MM (other height upon request)
PTS125 Series
12 mm Tact Switches

**THT VERSION WITHOUT PEGS WITH SQUARE SNAP FIT ACTUATOR**

H = 7.3 MM

**SMT VERSION WITH PEGS WITH SQUARE SNAP FIT ACTUATOR AND PEGS**

H = 7.3 MM

**SMT VERSION WITHOUT PEGS WITH SQUARE SNAP FIT ACTUATOR AND PEGS**

H = 7.3 MM

---

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com

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**C&K**

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Dimensions or drawings shown are approximate. Specifications and tolerances are subject to change.
PTS125 Series
12 mm Tact Switches

THT VERSION WITH ROUND RIBBED ACTUATOR H = 12.0 MM

SMT VERSION WITH ROUND RIBBED ACTUATOR H = 12.0 MM

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
## ITS Series
### Illuminated Tact Switch

#### Features/Benefits
- Vertical and right angle SMT models
- Vertical and right angle thru-hole models
- Multiple caps and legends
- Several LED colors and bi-color options
- RoHS compliant /compatible

#### Typical Applications
- Consumer electronics
- Server/storage
- Medical devices
- Test/Measurement/Instrumentation
- Audio/Video
- Computers/Peripherals
- Security

### Specification

**FUNCTION:** N.O. momentary action  
**TERMINALS:** SMT & Thru-hole

#### Mechanical

- **OPERATING FORCE:** 160 ± 50gf for V1; V2; V3; R1; R2 models  
  220 ± 50 gf for R3N model  
- **OPERATING LIFE:** 50,000 cycles (250m Ω max)  
- **RECOMMENDED OPERATING STROKE:** 0.25mm ± 0.1mm

#### Electrical

- **RATING:** 50mA @ 12VDC  
- **CONTACT RESISTANCE:** <100m Ω (initial)  
- **DIELECTRIC WITHSTANDING VOLTAGE:** >250VAC (50-60 Hz) between terminals - 1 min.Ω  
- **INSULATION RESISTANCE:** >100M Ω  
- **BOUNCE TIME:** <10ms

#### Environmental

- **OPERATING TEMPERATURE:** -25°C to +70°C  
- **STORAGE TEMPERATURE:** -25°C to +80°C

#### Process

- **SOLDERABILITY:** Thru-hole - wave compatible  
  SMT - convection or IR reflow compatible

#### Materials

- **CONTACTS/TERMINALS:** Base metal; brass  
  Plating; Ag  
- **DOME:** Base metal: Phosphor bronze  
  Plating; Ag  
- **BASE:** PA  
- **ACTUATOR:** PA  
- **COVER:** R3N option: Stainless steel  
  V2 & V3 options - PPA  
  Other options - PA

#### Caps

Caps are ordered separately and shipped bulk. Thru-hole versions available with caps assembled under custom part number. Contact customer service for details.

### 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.

**LED Color**

- 00 No light
- 10 Red
- 12 Red/Yellow
- 13 Red/Green
- 14 Red/Blue
- 20 Yellow
- 21 Yellow/Red
- 23 Yellow/Green
- 30 Green
- 31 Green/Red
- 32 Green/Yellow
- 40 Blue
- 41 Blue/Red
- 50 White
- 60 True green

* Other colors available by request

**Mounting Style**

- **V1** Vertical thru-hole
- **V2** Vertical SMT Gull wing
- **V3** Vertical SMT Gull wing with J bend LED
- **R1** Right angle thru-hole
- **R2** Right angle thru-hole 2.5mm leads
- **R3N** Right angle SMT

**LED Brightness**

- **F** Standard

**Force**

- **S** Standard actuation force  
  160 grams: V1, V2, V3, R1, R2 options  
  220 grams: R3N option

**Packaging**

- **T** Tray  
- **R** Tape & reel

---

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B-161
# ITS Series
## Illuminated Tact Switch

### LED COLOR / BRIGHTNESS

<table>
<thead>
<tr>
<th>LED Characteristic</th>
<th>units</th>
<th>Red (1)</th>
<th>Yellow (2)</th>
<th>Green (3)</th>
<th>Blue (4)</th>
<th>White (5)</th>
<th>True Green (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommended Operating</td>
<td>mA @ 5VDC</td>
<td>20mA</td>
<td>20mA</td>
<td>20mA</td>
<td>20mA</td>
<td>20mA</td>
<td>20mA</td>
</tr>
<tr>
<td>Forward Current</td>
<td>mA</td>
<td>30 mA</td>
<td>30 mA</td>
<td>30 mA</td>
<td>30 mA</td>
<td>30 mA</td>
<td>30 mA</td>
</tr>
<tr>
<td>Peak Pulsing Current (1/8 duty @ 1kHz)</td>
<td>mA</td>
<td>125 mA</td>
<td>125 mA</td>
<td>125 mA</td>
<td>125 mA</td>
<td>125 mA</td>
<td>125 mA</td>
</tr>
<tr>
<td>Power Dissipation</td>
<td>mW</td>
<td>75 mW</td>
<td>75 mW</td>
<td>75 mW</td>
<td>108 mW</td>
<td>108 mW</td>
<td>108 mW</td>
</tr>
<tr>
<td>Forward Voltage @ 20mA</td>
<td>Volts</td>
<td>2.5 Volts Max.</td>
<td>2.5 Volts Max.</td>
<td>3.6 Volts Max.</td>
<td>3.6 Volts Max.</td>
<td>3.6 Volts Max.</td>
<td>3.6 Volts Max.</td>
</tr>
<tr>
<td>Dominant Wavelength @ 20mA</td>
<td>nm</td>
<td>637nm (Typical)</td>
<td>590nm (Typical)</td>
<td>570nm (Typical)</td>
<td>465nm (Typical)</td>
<td>650nm (Typical)</td>
<td>522nm (Typical)</td>
</tr>
<tr>
<td>Wavelength at Peak Emission @ 20mA</td>
<td>nm</td>
<td>645nm (Typical)</td>
<td>590nm (Typical)</td>
<td>573nm (Typical)</td>
<td>460nm (Typical)</td>
<td>515nm (Typical)</td>
<td>515nm (Typical)</td>
</tr>
<tr>
<td>Spectral Half Bandwidth @ 20mA</td>
<td>nm</td>
<td>20nm (Typical)</td>
<td>20nm (Typical)</td>
<td>17nm (Typical)</td>
<td>25nm (Typical)</td>
<td>33nm (Typical)</td>
<td>33nm (Typical)</td>
</tr>
<tr>
<td>Luminous Intensity @ 20mA</td>
<td>mcd</td>
<td>50mcd Minimum</td>
<td>125mcd Minimum</td>
<td>100mcd Minimum</td>
<td>200mcd Minimum</td>
<td>250mcd Minimum</td>
<td>500mcd Minimum</td>
</tr>
<tr>
<td>Viewing Angle at 50% LV (@10mA)</td>
<td>degrees</td>
<td>150˚ Typical</td>
<td>120˚ Typical</td>
<td>120˚ Typical</td>
<td>120˚ Typical</td>
<td>150˚ Typical</td>
<td>120˚ Typical</td>
</tr>
</tbody>
</table>

### MOUNTING STYLES

#### V1 - Vertical Thru-hole

**ELECTRICAL SCHEMATIC**

**COLOR 1**

**COLOR 2**

**P.C.B. LAYOUT**

**TRAY PACKAGING: 200 PIECES**
V2 - Vertical SMT; Gullwing

DOT SHOWING LED COLOR IS MARKED FOR MINUS POLE (CATHODE) SEE SCHEMATIC

ELECTRICAL SCHEMATIC

COLOR 1

COLOR 2

LED

TAPE & REEL: 500 PIECES

NOTES:
1. SWITCH WITH TEMPORARY PICK AND PLACE CAP.
ITS Series
Illuminated Tact Switch

MOUNTING STYLES

V3 - Vertical SMT; Gull wing with J bend LED

NOTES:
1. SWITCH WITH TEMPORARY PICK AND PLACE CAP.

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
MOUNTING STYLES

R1 - Right Angle; Thru-hole

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com

Tactile Switches

MOUNTING STYLES

R1 - Right Angle; Thru-hole

DOT SHOWING LED COLOR IS MARKED FOR MINUS POLE (CATHODE) SEE SCHEMATIC

ELECTRICAL SCHEMATIC

TACT

COLOR 1

COLOR 2 LED

DOT SHOWING LED COLOR IS MARKED FOR MINUS POLE (CATHODE) SEE SCHEMATIC

TRAY PACKAGING: 200 PIECES

R2 - Right Angle; Thru-hole 2.5mm leads

DOT SHOWING LED COLOR IS MARKED FOR MINUS POLE (CATHODE) SEE SCHEMATIC

ELECTRICAL SCHEMATIC

TACT

COLOR 1

COLOR 2 LED

TRAY PACKAGING: 200 PIECES
ITS Series
Illuminated Tact Switch

MOUNTING STYLES

R3N - Right Angle, SMT

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
ITS Series
Illuminated Tact Switch

FORCE

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>FORCE</th>
</tr>
</thead>
</table>
| S           | Standard  
160 gf - V1, V2, V3, R1, R2 options  
220 gf - R3N option |

CAPS

Use the individual ordering code for each cap

399EA0000*  
Round cap, clear

3 9 9 E  A  0  0  0  0

Material  
A Polycarbonate - Natural/Clear

Marking  
00 No marking

Marking Color  
0 No marking

Paint Color  
0 No paint

* Not to be used with right angle versions
ITS Series
Illuminated Tact Switch

CAPS

400EA0000
Natural/clear

400EB0000
Translucent white, flat edge

400ECA01E
Matte silver paint laser etch, flat edge

* All caps not to be used to R3N

Material
A Natural/Clear - polycarbonate
B Translucent white - polycarbonate
C Silver paint laser etch - polycarbonate

Paint Color
0 No paint
A Matte silver

Laser Etch
Marking
00 No marking
01 Power On/Off
04 Arrow right
05 Arrow left
06 Arrow up
07 Arrow down
09 Power
33 Arrow up (fill)
34 Arrow down (fill)
97 I/O

Marking Color
0 No marking
E Laser etch (painted caps only)

* Material A has only one part number 400EA0000
* Material B has only one part number 400EB0000
* Paint color option 0 is not available for 400EC

* Material A has only one part number 400EA0000
* Material B has only one part number 400EB0000
* Paint color option 0 is not available for 400EC

ITSXXFR1ST & 400ECA01E cap

400E cap dimensions shown are “as molded” (no paint).
**ITS Series**

**Illuminated Tact Switch**

**CAPS**

**401ECA06E**

Matte silver paint, laser etch, tall oval

Material
- A  Natural/clear - polycarbonate*
- B  Translucent white - polycarbonate*
- C  Paint laser etch - polycarbonate

Laser Etch Marking
- 00  No marking
- 06  Arrow up
- 07  Arrow down
- 33  Arrow up (fill)
- 34  Arrow down (fill)

Paint Color
- 0  No paint*
- A  Matte silver

Marking Color
- 0  No marking
- E  Laser etch (painted caps only)

* Material A has only one part number 400EA0000
* Material B has only one part number 400EB0000
* Paint color option 0 is not available for 400EC

401E cap dimensions shown are “as molded” (no paint).
**Features/Benefits**
- Compact Size
- THT versions
- Different height
- Several LED colors
- High life cycles

**Typical Applications**
- Consumer electronics
- Health monitoring device
- Test & measurement
- Audio/Video control board

**Specification**

**Mechanical**
OPERATING LIFE: 100,000 cycles

**Electrical**
RATING: 100mA max. @ 30VDC
10µA min. @ 1VDC
INSULATION RESISTANCE: 100M Ω min.
DIELECTRIC WITHSTANDING VOLTAGE: 250VAC (50-60 Hz 2mA) for 1 min
BOUNCE TIME: ON/OFF 5ms max.
INITIAL CONTACT RESISTANCE: 100m Ω max.

**Environmental**
OPERATING TEMPERATURE: -40˚C to +85˚C
STORAGE TEMPERATURE: -40˚C to +85˚C

**Packaging**
Bulk packing in bag of 500 pieces
2 bags per carton box
* All caps are not recommended to soldering process

**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.

**New Style & Height**
- **TA** 7.20 mm height
- **TB** 9.00 mm height
- **TC** 7.00 mm height

**LED Color**
- **10** Red
- **30** Yellow green
- **40** Blue
- **50** White
- **60** Green

**Actuation Force**
- **180** 180gf
- **250** 250gf

**Dimensions are shown: mm**
Specifications and dimensions subject to change

www.ckswitches.com
## LED CHARACTERISTICS

### STANDARD LED COLOR OPTIONS

<table>
<thead>
<tr>
<th>LED Parameter</th>
<th>Symbol</th>
<th>Condition</th>
<th>UNITS</th>
<th>RED 10</th>
<th>YELLOW/GREEN 30</th>
<th>BLUE 40</th>
<th>WHITE 50</th>
<th>GREEN 60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Dissipation</td>
<td>Pd</td>
<td>-</td>
<td>mW</td>
<td>52</td>
<td>60</td>
<td>120</td>
<td>18</td>
<td>120</td>
</tr>
<tr>
<td>Forward Current</td>
<td>IF</td>
<td>-</td>
<td>mA</td>
<td>20</td>
<td>20</td>
<td>30</td>
<td>5</td>
<td>30</td>
</tr>
<tr>
<td>Peak Forward Current</td>
<td>IFP</td>
<td>-</td>
<td>mA</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Reverse Voltage</td>
<td>VR</td>
<td>-</td>
<td>V</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>Topr</td>
<td>-</td>
<td></td>
<td>-50°C</td>
<td>-85°C</td>
<td>-50°C</td>
<td>-85°C</td>
<td>-50°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>Tstg</td>
<td>-</td>
<td></td>
<td>-50°C</td>
<td>-85°C</td>
<td>-50°C</td>
<td>-85°C</td>
<td>-50°C</td>
</tr>
<tr>
<td>Forward Voltage</td>
<td>Vf</td>
<td>F=5mA</td>
<td>V</td>
<td>2.6</td>
<td>2.3</td>
<td>3.2</td>
<td>3.6</td>
<td>3.4</td>
</tr>
<tr>
<td>Luminous Intensity</td>
<td>Iv</td>
<td>F=5mA</td>
<td>mcd</td>
<td>140</td>
<td>100</td>
<td>63</td>
<td>94</td>
<td>1000</td>
</tr>
<tr>
<td>Reverse Current</td>
<td>IR</td>
<td>F=5mA</td>
<td>µA</td>
<td>100</td>
<td>100</td>
<td>63</td>
<td>94</td>
<td>1000</td>
</tr>
<tr>
<td>Peak Wave Length</td>
<td>λp</td>
<td>F=5mA</td>
<td>nm</td>
<td>644</td>
<td>570</td>
<td>460</td>
<td>521.5</td>
<td></td>
</tr>
<tr>
<td>Dominant Wave Length</td>
<td>λd</td>
<td>F=5mA</td>
<td>nm</td>
<td>620</td>
<td>567-573</td>
<td>465-470</td>
<td>515-525</td>
<td></td>
</tr>
<tr>
<td>Spectral Line Half-width</td>
<td>Δλ</td>
<td>F=5mA</td>
<td>nm</td>
<td>20</td>
<td>30</td>
<td>30</td>
<td>-</td>
<td>30</td>
</tr>
<tr>
<td>Viewing Angle</td>
<td>2θ1/2</td>
<td>F=5mA</td>
<td>deg</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
</tbody>
</table>

### STYLES

**TA**

[Circuit Diagram]

Dimensions are shown: mm
Specifications and dimensions subject to change
ILS Series
Integrated LED Tact Switch

STYLES

TB

TC

Specifications and dimensions subject to change.
Tactile Switches

**NEW**

**ILS Series**
**Integrated LED Tact Switch**

**CAPS**

**ILSCAPR0690-10**
Round cap, grey with power logo

**ILSCAPS757501**
Square cap with hole

**ILSCAPS757502 (Nature) ILSCAPS757503 (Grey)**
Square cap without hole

**ILSCAPR0690-10B**
Round cap, black with power logo

**ILSCAPR0690**
Round cap, grey with power logo

**ILSCAPR0691**
Round cap, without power logo

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com

20 Nov 20

20 Nov 20
Tactile Switches

**TLS Series**

**Soft Sound Tact Switch**

NEW

### Features/Benefits
- New soft sound
- Soft actuator
- IP54
- Long life
- J terminations
- Tape & reel

### Typical Applications
- Automotive interior controls
- Automatic gear shift paddle
- Steering wheel
- Window lifter
- Seat adjustment module

### Type | Force (N) | Tactile Feeling (%) | Travel (mm) | Life (cycles)
--- | --- | --- | --- | ---
TLS A 040 J LFS | 4 ± 0.8 | 50 ± 15 | 0.9 ± 0.3 | 1,000,000
TLS A 070 J LFS | 7 ± 1.5 | 30 ± 15 | | 500,000
TLS A 100 J LFS | 10 ± 2 | | | 300,000
TLS A 040 T3 J LFS | 4 ± 0.8 | 50 ± 15 | 0.75 ± 0.2 | 1,000,000
TLS A 070 T3 J LFS | 7 ± 1.5 | | | 500,000
TLS A 100 T3 J LFS | 10 ± 2 | | | 300,000
TLS B 040 J LFS | 4 +1.0/-0.5 | 50 ± 15 | | 1,000,000
TLS B 060 J LFS | 6 +1.5/-0.75 | | | 500,000

**Power**

POWER: 10μ VA min. / 0.8 VA max.
VOLTAGE: DC 1V min. / 16 V max.
CURRENT: 10μA min. / 50 mA max.
OPERATING TEMPERATURE: -40°C / +90°C

### Packaging

Switches in reels of 900 pieces.
Dimensions of reels according to EIA 481B. External diameter 330 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.

---

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VOLTAGE: DC 1V min. / 16 V max.
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Switches in reels of 900 pieces.
Dimensions of reels according to EIA 481B. External diameter 330 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.
**Features/Benefits**
- 6.0 x 6.1 mm dimension
- Height 3.45 mm
- Soft actuator
- Long life - 3M cycles
- IP54

**Typical Applications**
- Elevator button & alarm
- Robotic vacuum
- Door handle
- Mower

---

**Specification**

**Function:**
- Momentary action

**Contact Arrangement:**
- SPDT, NC

**Terminals:**
- SMT termination

**Travel:**
- 0.3 ± 0.2 mm

**Operating Life:**
- 2,000,000 cycles

**Electrical**

- **Voltage:** DC 1V to 16V
- **Current:** 10µA to 50mA
- **Contact Resistance:** 200mΩ max.
- **500mΩ max. after testing**
- **Insulation Resistance:** 100 MΩ min.
- **Dielectric Voltage:** AC 250V

**Environmental**

- **Operating Temperature:** -40°C to 90°C
- **Storage Temperature:** -40°C to 90°C

**Process**

- **Soldering:** This component is suited to the following methods: Infrared Reflow Soldering in accordance with IEC61760-1

**Packaging**

- 1100 pieces per reel

---

**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.

---

**Terminations**

- **D** SPDT
- **Haptic/%** T3 30%
- **Travel** C 0.3 mm
- **Operating Force** 020 2N
- **LFS** Lead free compatible
- **Termination** G Gull wing
TLSM Series
6 mm Compact Top Mount Endurance SMT Tact Switch

Dimensions are shown: mm
Specifications and dimensions subject to change
www.ckswitches.com

5 Aug 22

C&K
B–176

Specifications and dimensions subject to change
www.ckswitches.com
RK Series
Microminiature SMT Top Actuated Tact Switch

Features/Benefits
- Low profile & microminiature package
- SMT termination
- Hard actuator
- Different actuation forces
- Life cycles up to 500K

Specifications
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
TERMINALS: SMT termination
TRAVEL:

- RKA2: 0.20 ± 0.1 mm
- RKB2: 0.20 ± 0.1 mm
- RKC: 0.15 ± 0.1 mm

Mechanical

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Operating Force</th>
<th>Life Cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>RKB2SJ250SMTR LFS</td>
<td>180 gf</td>
<td>100,000</td>
</tr>
<tr>
<td>RKB2SG250SMTR LFS</td>
<td>250 gf</td>
<td>100,000</td>
</tr>
<tr>
<td>RKB2SGN055SMTR LFS</td>
<td>400 gf</td>
<td>100,000</td>
</tr>
<tr>
<td>RKA2SGM055SMTR LFS</td>
<td>160 gf</td>
<td>1,000,000</td>
</tr>
<tr>
<td>RKA2SGG055SMTR LFS</td>
<td>250 gf</td>
<td>200,000</td>
</tr>
<tr>
<td>RKA2SGS055SMTR LFS</td>
<td>400 gf</td>
<td>200,000</td>
</tr>
<tr>
<td>RKA2SGG055SMTR LFS</td>
<td>540 gf</td>
<td>150,000</td>
</tr>
<tr>
<td>RKC GG140 SMTR LFS</td>
<td>450 gf</td>
<td>200,000</td>
</tr>
<tr>
<td>RKC GG140 G SMTR LFS</td>
<td>450 gf</td>
<td>200,000</td>
</tr>
</tbody>
</table>

Electrical

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Max. Voltage</th>
<th>Max. Current</th>
<th>Contact Resistance</th>
<th>Insulation Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RKA2</td>
<td>DC 15V</td>
<td>20 mA max.</td>
<td>500Ω max.</td>
<td>50MΩ min.</td>
</tr>
<tr>
<td>RKB2</td>
<td>DC 12V</td>
<td>50 mA max.</td>
<td>200Ω max.</td>
<td>100MΩ min.</td>
</tr>
<tr>
<td>RKC</td>
<td>DC 12V</td>
<td>50 mA max.</td>
<td>2Ω max.</td>
<td>100MΩ min.</td>
</tr>
</tbody>
</table>

DIELECTRIC STRENGTH: 250 VA C (1 minute)
BOUNCE TIME: ≤ 10 ms

Environmental

OPERATING TEMPERATURE:
- RKA2: -40˚C to 85˚C
- RKB2: -40˚C to 90˚C
- RKC: -40˚C to 85˚C

Process
SOLDERING: This component is suited to the following methods:
Infrared Reflow Soldering in accordance with IEC61760-1

Packaging
- RKA2: 5,000 pieces per reel
- RKB2: 3,000 pieces per reel
- RKC: 9,500 pieces per reel

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 below, please consult your local representative.

Termination
- G: Gullwing

Actuation Force
- N: 100 gf
- M: 160 gf
- K: 250 gf
- G: 400 gf
- S: 540 gf

Height
- 055: 0.55 mm Height

LFS: Lead Free Compatible

Dimensions are shown: mm
Specifications and dimensions subject to change
**RK Series**

**Microminiature SMT Top Actuated Tact Switch**

**Termination**
- **J** J Bend SMT

**Actuation Force**
- **M** 180 gf
- **K** 250 gf
- **G** 400 gf

**Height**
- **250** 2.5 mm Height

**Termination**
- **G** Gullwing

**Actuation Force**
- **G** 450 gf

**Height**
- **140** 1.4 mm Height

**Grounding Option**
- **G** Ground Pin
- **NONE** Without Ground Pin

**LFS** Lead Free Compatible

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
RK Series
Microminiature SMT Top Actuated Tact Switch

NEW

RKA2 4.5 X 4.5 X 0.55 MM

CIRCUIT DIAGRAM

SET MAKER KNOB SIZE

P.C.B MOUNTING SOLDER LAND DIMENSION

1. 5,000 PCS SWITCHES PER 1 REEL
2. GENERAL TOLERANCE ±0.1

Dimensions are shown: mm
Specifications and dimensions subject to change
RKB2 4.2 X 3.2 X 2.5 MM

CIRCUIT DIAGRAM

P.C.B LAND DIMENSION

Reel
Scale 1:3

Note:
1. 3K pcs Switches per reel.
2. General tolerance: 0.3mm.
RKC2 Series
Microminiature SMT Top Actuated Tact Switch

Features/Benefits
• 1.7 mm height, 3.5 x 2.7 mm size
• SMT termination
• Hard actuator
• 180, 250, 350 & 500 gf actuation forces
• 100k to 200k cycles

Typical Applications
• Automotive keyfob
• High-end consumer
• Health & medical devices

Specifications
FUNCTION: momentary action
CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
TERMINALS: SMT termination
TRAVEL: 0.15 ± 0.1 mm

Mechanical

<table>
<thead>
<tr>
<th>Product Description</th>
<th>Life Cycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>RKC2SJM170SMTR LFS</td>
<td>200,000</td>
</tr>
<tr>
<td>RKC2SJK170SMTR LFS</td>
<td>200,000</td>
</tr>
<tr>
<td>RKC2SJ170SMTR LFS</td>
<td>200,000</td>
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<tr>
<td>RKC2SJR170SMTR LFS</td>
<td>100,000</td>
</tr>
<tr>
<td>RKC2SJF170SMTR LFS</td>
<td>200,000</td>
</tr>
</tbody>
</table>

Electrical
MAXIMUM VOLTAGE: 12 VDC
MAXIMUM CURRENT DC: 20 mA
CONTACT RESISTANCE: 100 mΩ
INSULATION RESISTANCE: 100 MΩ min.
DIELECTRIC STRENGTH: 250 VA C (1 minute)
BOUNCE TIME: ≤ 10 ms

Environmental
OPERATING TEMPERATURE: -40°C to 85°C

Process
SOLDERING: This component is suited to the following methods:
Infrared Reflow Soldering in accordance with IEC61760-1

Packaging
4,000 pieces per reel

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 below, please consult your local representative.

<table>
<thead>
<tr>
<th>R</th>
<th>K</th>
<th>C</th>
<th>S</th>
<th>J</th>
<th>1</th>
<th>7</th>
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<th>S</th>
<th>M</th>
<th>T</th>
<th>R</th>
<th>L</th>
<th>F</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Termination: J-lead Termination</td>
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<td>Actuation Force:</td>
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<td>K 250 gf</td>
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<td>R 350 gf</td>
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<td>Ground Pin:</td>
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<td>NONE without ground pin</td>
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<td>G with ground pin</td>
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<td>LFS Lead Free Compatible</td>
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<td>Height: 170 1.7 mm Height</td>
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</tbody>
</table>

Dimensions are shown: mm
Specifications and dimensions subject to change
RKC2 Series
Microminiature SMT Top Actuated Tact Switch

Standard Version without Ground Pin

1. 4K pcs SWITCHES PER 1 REEL
2. GENERAL TOLERANCE : 0.3mm
RKC2 Series
Microminiature SMT Top Actuated Tact Switch

Version with Ground Pin

**Specifications and dimensions subject to change**

www.ckswitches.com

**NOTE**
1. 4K pcs SWITCHES PER 1 REEL
2. GENERAL TOLERANCE : ± 0.3mm
SFS Series
Mid-Travel, Soft Sound Tact Switch

Features/Benefits
- Construction with standard dimension 12x12 mm overall size
- Gold plating contacts
- SMT termination design
- Unique click & a sealed contact system
- 360 gf, 680 gf & 970 gf versions

Typical Applications
- Measurement-control-regulation
- Monitoring system
- Automotive (steering wheel, mid-console, window lifter)
- Navigation
- Disposable medical devices
- Patient monitoring
- Scan system

Specifications

**Function:** Momentary action
**Contact Arrangement:** 1 make contact = SPST NO
**Terminals:** Gold plating, G type for SMT and THT for manual soldering

**Travel:**

<table>
<thead>
<tr>
<th>Operating Force</th>
<th>TRAVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>360 ± 70 gf</td>
<td>0.6 ± 0.2 mm</td>
</tr>
<tr>
<td>680 ± 160 gf</td>
<td>0.7 ± 0.2 mm</td>
</tr>
<tr>
<td>970 ± 250 gf</td>
<td>0.8 ± 0.2 mm</td>
</tr>
</tbody>
</table>

**Mechanical**

Operating life with load: 300,000 cycles
Operating life without load: 1,000,000 cycles

**Electrical**

- **Maximum Voltage:** 35 VDC
- **Maximum Current DC:** 100 mA
- **Maximum Power DC:** 1W
- **Contact Resistance:** 100 mΩ
- **Insulation Resistance:** 1000 MΩ min.
- **Dielectric Voltage:** < 0.5 mA

**Environmental**

- **Operating Temperature:** -40˚C to +90˚C
- **Storage Temperature:** -40˚C to +80˚C

**Process**

- **Soldering:** This component is suited to the following methods:
  - Infrared Reflow Soldering in accordance with IEC61760-1

**Packaging**

- 700 pieces per reel
- 58 pieces per tube

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.

![Diagram](image)
SFS Series
Mid-Travel, Soft Sound Tact Switch

SFS12XS2T LFS

SFS12XS1T LFS

SFS12XSSMTX LFS

Dimensions are shown: mm
Specifications and dimensions subject to change

www.ckswitches.com
SFS Series
Mid-Travel, Soft Sound Tact Switch

NEW

1 Dec 20

Specifications and dimensions subject to change

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