

# KSC Series Sealed Tact Switch for SMT

## Features/Benefits

- Positive tactile feeling
- Range of 6 actuation forces
- J or G terminations
- Tape & reel
- IP 67

## Typical Applications

- Automotive
- Cellular phones
- Industrial electronics
- Network infrastructure and IT



## Specification

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

## Mechanical

| Type         | Operating force FA (Newtons) Min/Max | Operating life (operations) | Travel (mm)      |
|--------------|--------------------------------------|-----------------------------|------------------|
| KSC121J      | 1.2 / 2.5                            | 200 000                     | 0.3 ± 0.15       |
| KSC141J      | 2.25 / 3.75                          | 200 000                     | 0.3 ± 0.15       |
| KSC151J      | 4.3 / 7.3                            | 100 000                     | 0.3 ± 0.15       |
| KSC201J      | 0.9 / 2N                             | 300 000                     | 0.3 +0.2 / -0.15 |
| KSC221J      | 1.5 / 2.5                            | 500 000                     | 0.35 +0.3 / -0.1 |
| KSC222J      | 1.5 / 2.5                            | 1 000 000                   | 0.35 +0.3 / -0.1 |
| KSC241J      | 2.6 / 4.4                            | 300 000                     | 0.5 ± 0.2        |
| KSC251J      | 4.1 / 7.0                            | 300 000                     | 0.5 ± 0.2        |
| KSC321J      | 1.6 / 2.4                            | 300 000                     | 0.2 +0.3 / 0     |
| KSC341J      | 2.25 / 3.75                          | 300 000                     | 0.2 +0.3 / 0     |
| KSC351J      | 4.1 / 6.9                            | 100 000                     | 0.25 +0.3 / 0    |
| KSC401J 50SH | 0.9 / 2.0                            | 300 000                     | 0.5 ± 0.25       |
| KSC411J 70SH | 1.05 / 1.75                          | 300 000                     | 0.35 ± 0.15      |
| KSC421J 70SH | 1.25 / 2.12                          | 300 000                     | 0.5 ± 0.25       |
| KSC422J 70SH | 1.25 / 2.12                          | 1 000 000                   | 0.5 ± 0.25       |
| KSC441J 70SH | 3.0 / 5.0                            | 300 000                     | 0.75 ± 0.25      |
| KSC442J 70SH | 3.0 / 5.0                            | 1 000 000                   | 0.75 ± 0.25      |
| KSC621J      | 1.0 / 1.65                           | 300 000                     | 0.5 ± 0.2        |
| KSC641J      | 2.25 / 3.75                          | 300 000                     | 0.5 ± 0.2        |
| KSC421V      | 1.3 / 2.1                            | 300 000                     | 0.375 ± 0.225    |
| KSC621V      | 1.1 / 1.9                            | 100 000                     | 0.5 ± 0.2        |

## 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 V  
CONTACT RESISTANCE: < 100 mΩ  
INSULATION RESISTANCE (100 V): > 10<sup>9</sup> 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 | -55°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.
- Infrared Reflow Soldering in accordance with IEC 61760-1.

## Packaging

KSC1, KSC2 and KSC3 are delivered on continuous tape and reels of 2,000 pieces, KSC4 in reels of 1,000 pieces. KSC 6 in reels of 750 pieces. KSCV in boxes of 500 pieces. Dimensions of reels according to EIA RS481 or IEC 2863. 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.

A detect switch version is available KSC4D1J and KSC4D1G.

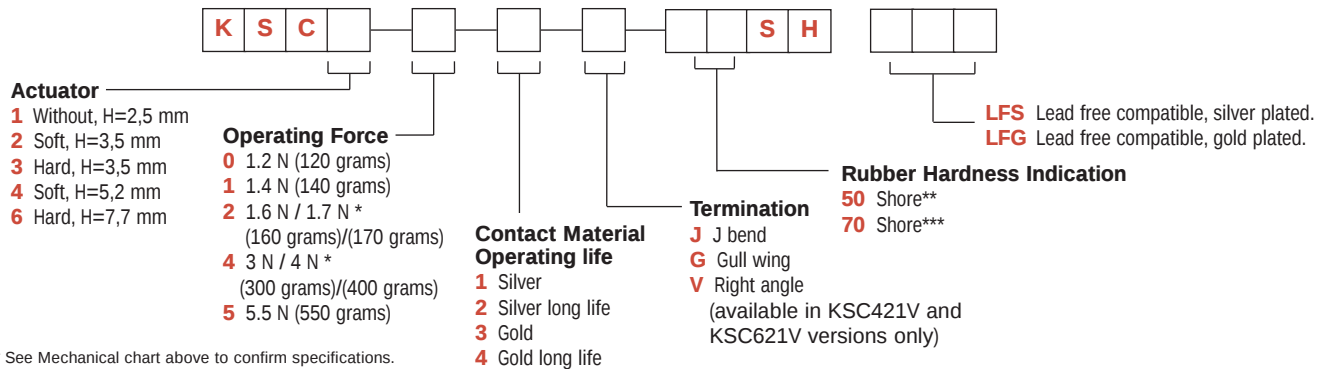
Please see Detect chapter, page F-7.

KSC vertical series have an IP40 sealing level.

## 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.**



\* See Mechanical chart above to confirm specifications.

\*\* Applies to KSC401J50SH only.

\*\*\* Applies to KSC 411J70SH, KSC421J70SH, KSC441J70SH



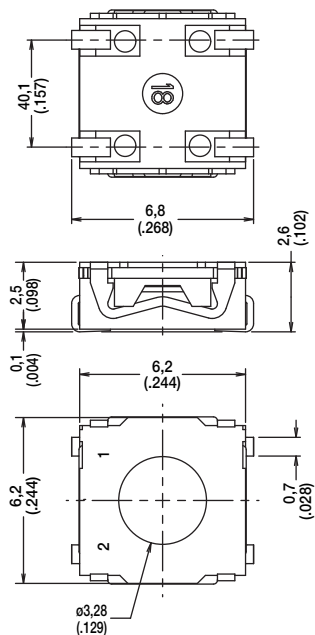
Dimensions shown in: mm (inch)  
Specifications and dimensions subject to change

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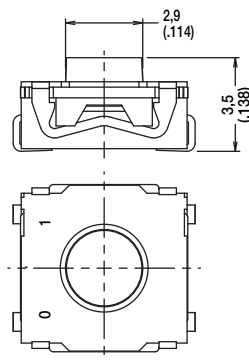
# KSC Series Sealed Tact Switch for SMT

## ACTUATOR

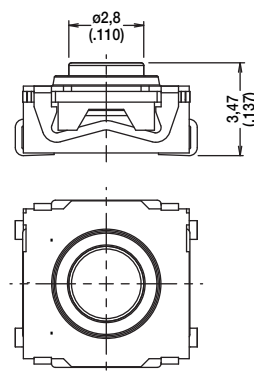
### KSC1 WITHOUT, 2,5 mm HIGH



### KSC2 SOFT, 3,5 mm HIGH

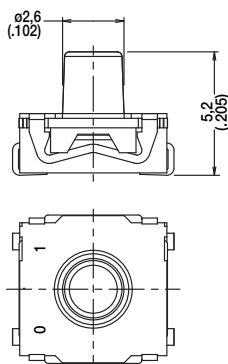


### KSC3 HARD, 3,5 mm HIGH



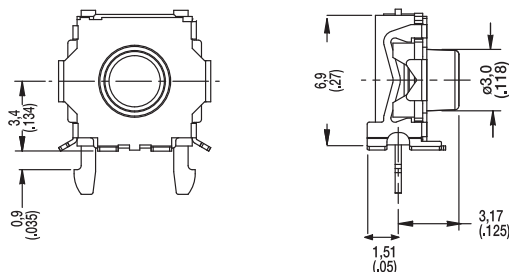
### KSC4 SOFT, 5,2 mm HIGH

**NOTE:** KSC4 standard silicone material is 70 shore, the only exception is KSC401J which is 50 shore.

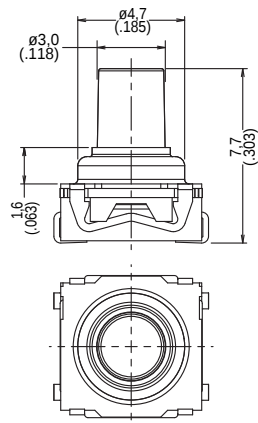


### KSC4 KSC421V ONLY

**NOTE:** KSC421V requires metalized holds for simultaneous reflow soldering of switch terminals and bracket terminals.

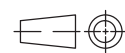
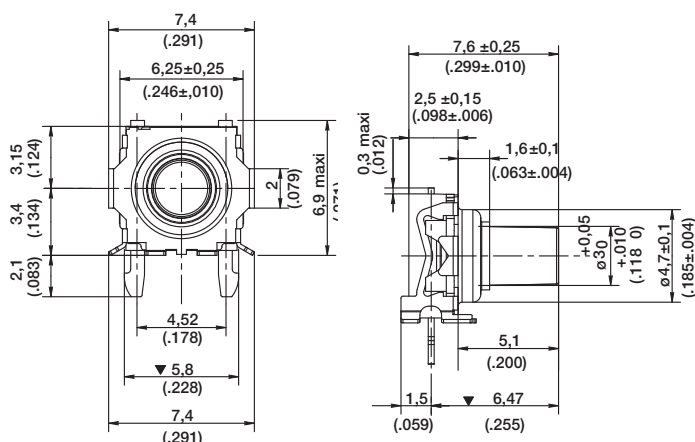


### KSC6 HARD, 7,7 mm HIGH



### KSC6 KSC621V ONLY

**NOTE:** KSC621V requires metalized holds for simultaneous reflow soldering of switch terminals and bracket terminals.



First Angle  
Projection

Dimensions shown in: mm (inch)  
Specifications and dimensions subject to change

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# KSC Series Sealed Tact Switch for SMT

## OPERATING FORCE

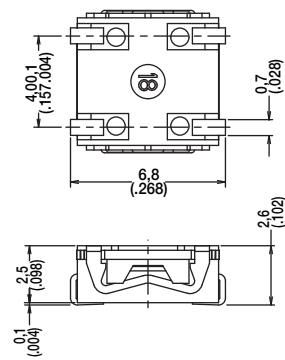
| OPTION CODE | OPERATING FORCE               |
|-------------|-------------------------------|
| 0           | 1.2 N (120 grams)             |
| 1           | 1.4 N (140 grams)             |
| 2           | 1.6 N / 1.7 N (160/170 grams) |
| 4           | 3 N / 3.5 N (300/350 grams)   |
| 5           | 5.5 N (550 grams)             |

## CONTACT MATERIAL

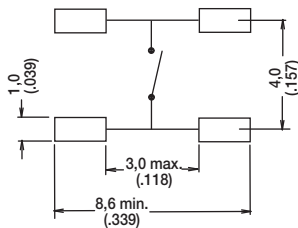
| OPTION CODE | MATERIAL |
|-------------|----------|
| 1           | SILVER   |
| 3           | GOLD     |

## TERMINATION

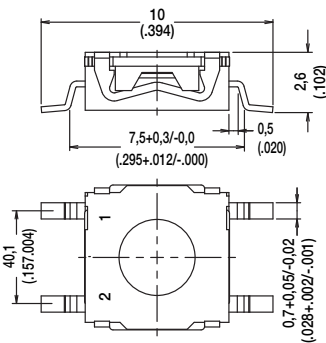
### J J BEND



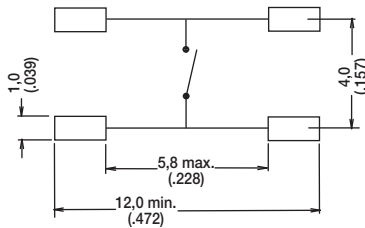
#### PAD LAYOUT



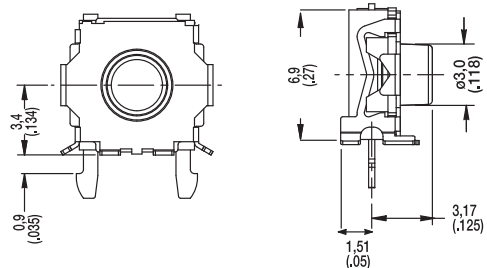
### G GULLWING



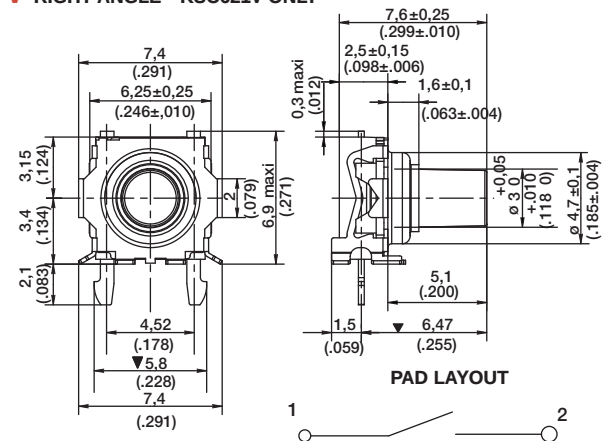
#### PAD LAYOUT



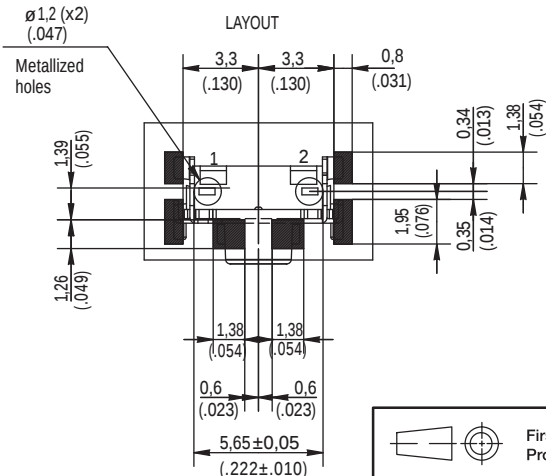
### V RIGHT ANGLE - KSC421V ONLY



### V RIGHT ANGLE - KSC621V ONLY



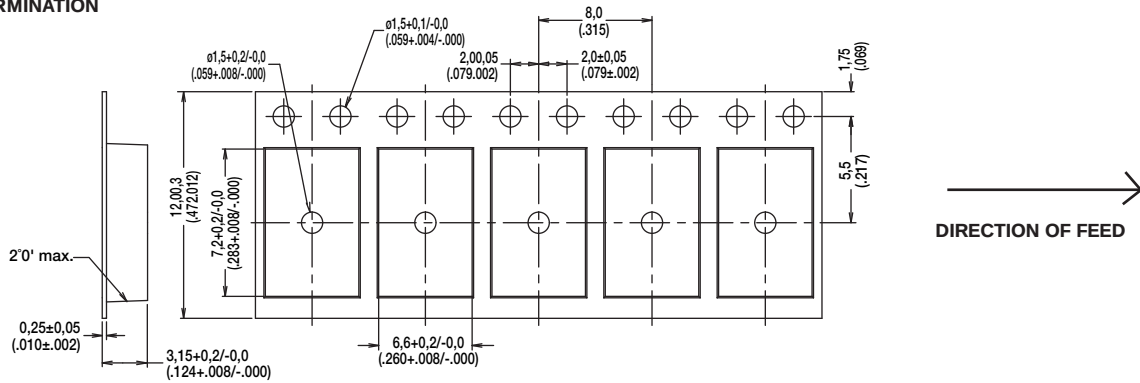
#### PAD LAYOUT



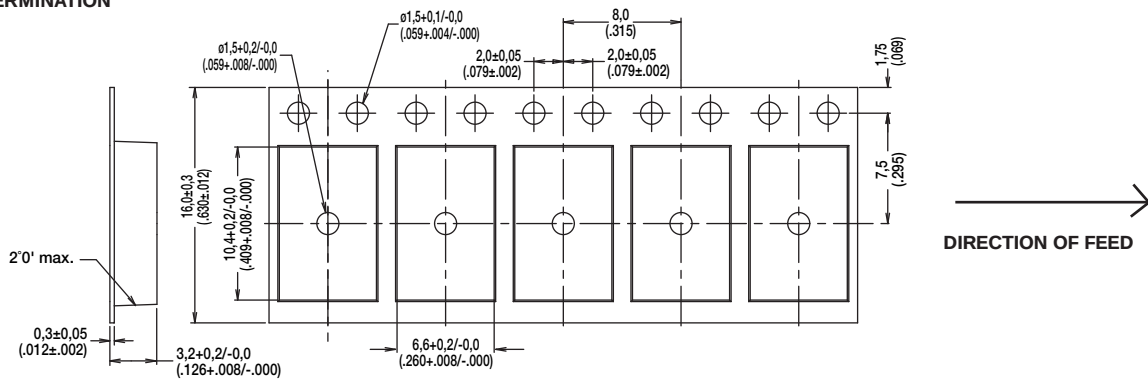
# KSC Series Sealed Tact Switch for SMT

## TAPE & REEL

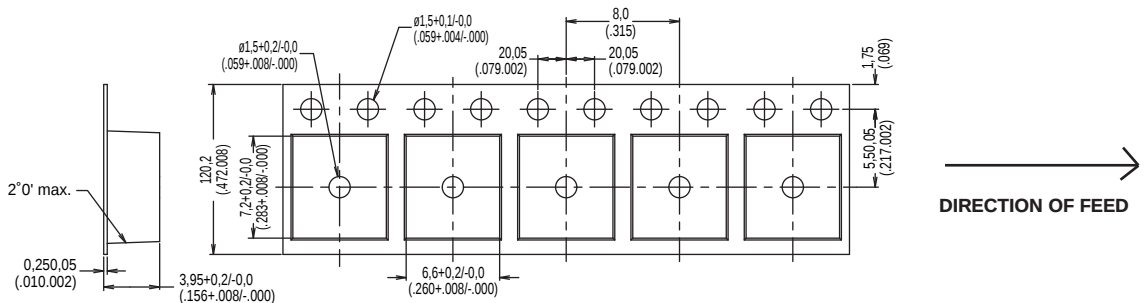
### FOR KSC1 J TERMINATION



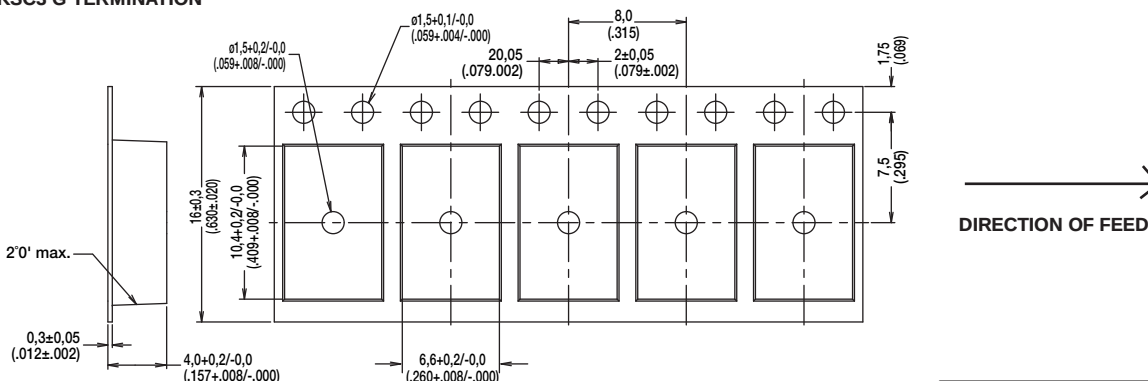
### FOR KSC1 G TERMINATION



### FOR KSC2 & KSC3 J TERMINATION



### FOR KSC2 & KSC3 G TERMINATION



Dimensions shown in: mm (inch)  
Specifications and dimensions subject to change

## TAPE & REEL

B

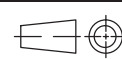
## Tactile Switches



Direction of feed



Direction of feed



First Angle  
Projection

**C&K**