

Tactile Switches

Product Selection Guide


B
Tactile Switches

Surface Mount										
Series	KMX	KMR 2-4	KMS	PTS525	KSR	KSS	KST			
Size on PCB L x W (mm)	4,1 x 4,1	4,6 x 2,8	4,6 x 2,8	6,4 x 5,25	7,15x3,8 7,3x3,8	7 x 3,5	J 6,8x6,2 G 10x6,2			
Total Height (mm)	0,5 0,58	1,9 2,5	1,42	0,8 1,5	2,5	1,7	5			
Travel (mm)	0,2	0,2 to 0,35	0,25 to 0,3	0,3	0,3 to 0,5	0,3	1,33			
Actuation Force (N)	1.6 2.2	1.2 2 3 4	2 3	1.6 2.6	1.2 2 3 4.5	2 2.5 4	2.0 3.5			
Contact Type	Silver Gold	Silver Gold	Silver Gold	Silver Gold	Silver Gold	Silver Gold	Silver Gold			
Max. Voltage (V)	32 32	32 32	32 32	32 32	32 32	32 32	30 30			
Max. Switching Power (VA)	0.5	1 0.2	1 0.2	1 0.2	1 0.2	1 0.2	.50 0.2			
Life Cycles	250,000 250,000	100,000 300,000	100,000	100,000	100,000 200,000	100,000	100,000			
Sealing	Dust and flux tight	Dust and flux tight	Dust and flux tight	Dust and flux tight	Dust and flux tight	Dust and flux tight	Flux tight			
Page Number	B-5	B-7	B-11	B-13	B-15	B-19	B-32			
Surface Mount										
Series	KSC1	2	3	4	6	KSC4 V	KSC5	KSC6V	KT	K5AT
Size on PCB L x W (mm)	J 6,8x6,2	G 10x6,2				7,4 x 3,8	J 6,8x6,2 G 10x6,2	8,2x3,67	SA 7,5x5 SA2 7,5x7	G 8,4x10,8
Total Height (mm)	2,6	3,5	3,5	5,2	7,7	6,9	5,6	6,9	6,6 7,11 with tab	6,1
Travel (mm)				0,20 to 0,75		0,375 to 0,5	axial: 0,25 lateral: 0,5	0,5	0,3 to 0,5	0,5
Actuation Force (N)				1,1 to 5,5		1,7 3,2	2,0 3,0	1,5	3	4
Contact Type	Silver			Gold		Silver Gold	Silver Gold	Silver Gold	Silver Gold	Gold
Max. Voltage (V)	32			32		32 32	32 32	32 32	50 50	32
Max. Switching Power (VA)	1			0.2		1 0.2	1 0.2	1 0.2	1 0.2	1
Life Cycles				100,000 to 1,000,000		300,000	10,000 100,000	100,000	100,000	25,000
Sealing				IP67		IP40	IP50	IP40	IP57	IP40
Page Number				B-21		B-23	B-26	B-23	B-28	B-34

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Tactile Switches

Thru-hole Sealed High Performance							
Series	K5V SMT	K5V THT	K5V PM	KSB	KSF	KSA	KSA MKII
Footprint	8 x 9 x 17	8 x 9 x 17	9 x 13	7,62 x 5,08	7,62 x 5,08	7,62 x 5,08	7,62 x 5,08
Total Height (mm)	9	9	13	2,01	2,6	4,7 button option	4,7
Travel (mm)	1,2	1,2	1,2	0,2	0,3 to 0,5	0,3 to 0,5	0,3 to 0,5
Actuation Force (N)	4,0	4,0	4,0	1,6 3,0	1,3 3,0 1,6 5,0	1,3 3,0 5,0	1,3 3,0 5,0
Contact Type	Gold	Gold	Gold	Silver Gold	Silver Gold	Silver Gold	Silver Gold
Max. Voltage (V)	32	32	32	32 32	32 32	32 32	32 32
Max. Switching Power (VA)	1	1	1	1 0,2	1 0,2	1 0,2	1 0,2
Life Cycles	25,000	25,000	25,000	100,000	100,000	100,000	100,000 1,000,000
Sealing	Dust protected	Dust protected	Dust protected	IP40	IP60	IP60	IP67
Page Number	B-36	B-38	B-40	B-42	B-42	B-44	B-49

Thru-hole Sealed High Performance							
Series	KSA-V	KSI	KSI-V	KSL	KSL-V	KSJ	KSJ-V
Footprint	7,62 x 2,54	7,62 x 5,08	7,62 x 2,54	7,62 x 5,08	7,62 x 2,54	7,62 x 5,08	7,62 x 2,54
Total Height (mm)	8	5,4	8	9,9	8	6,65	8
Travel (mm)	0,3 to 0,5	0,4 to 1,1	0,4 to 1,1	0,3 to 0,5	0,3 to 0,5	0,55 to 0,7	0,55 to 0,7
Actuation Force (N)	1,3 3,0 5,0	1,1 3,0	1,1 3,0	1,3 3,0	1,3 3,0	2,0 3,0	2,0 3,0
Contact Type	Silver Gold	Silver Gold	Silver Gold	Silver Gold	Silver Gold	Silver Gold	Silver Gold
Max. Voltage (V)	32 32	32 32	32 32	32 32	32 32	32 32	32 32
Max. Switching Power (VA)	1 0,2	1 0,2	1 0,2	1 0,2	1 0,2	1 0,2	1 0,2
Life Cycles	100,000	100,000	100,000	100,000	100,000	100,000 30,000	100,000 30,000
Sealing	IP60	IP60	IP60	IP60	IP60	IP60	IP60
Page Number	B-46	B-51	B-52	B-44	B-46	B-53	B-54

See next page for additional products.



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

Tactile Switches

Product Selection Guide

Thru-hole Flux Tight Only							
Series	PTS635	PTS635-V	PTS645	PTS645-V	PTS645-TR	PTS125	PTS125-V
Footprint	6,5	7,0 x 2,5	6,5 x 4,5	7,0 x 2,5	5,00	12,5 x 5,0	3,20 x 11,53
Total Height (mm)	4,3 5,0	4,3	4,3 5,0 7,0 7,3 Sq. 9,5 13,0 17,0	7,1	4,3 5,0 7,0 9,5	4,3 7,3 Sq. 8,5 12,0	14,90
Travel (mm)	0,25	0,25	0,25	0,25	0,25	0,30	0,30
Actuation Force (N)	1.3 2.0	1.3 2.0	1.3 1.6 2.0	1.3 1.6 2.0	1.3 1.6 2.0	1.6 2.6	1.6 2.6
Contact Type	Silver	Silver	Silver	Silver	Silver	Silver	Silver
Max. Voltage (V)	12	12	12	12	12	12	12
Max. Current (mA)	50	50	50	50	50	50	50
Life Cycles	20,000	20,000	100,000	100,000	100,000	200,000	200,000
Sealing	Flux tight	Flux tight	Flux tight	Flux tight	Flux tight	Flux tight	Flux tight
Page Number	B-55	B-55	B-58	B-58	B-61	B-64	B-64

Tactile Switches B

KMX Series Low Profile SMT Top Actuated



Features

- Ultra low profile 0.58mm
- Compact switch body; 4.1x4.1mm
- 1.6 and 2.2N sharp tactile feel
- 250k cycles
- \varnothing 1.4mm actuator grounded
- RoHS compliant and compatible

Typical Applications

- Allows higher board density with compact SMT switch for ultra low profile environment: cell phones keypads, key fob, white goods, medical and military

Specification

FUNCTION: Snap action push-on type SPST/shielded
CONTACT TYPE: Normally open
TERMINALS: Gullwing type for SMT

Mechanical

OVERLOAD: 50N
TACTILE FEELING: 30% min.
ACTUATION CONDITION LIMITS:
- inclination: 4° max.
- de-centering:
 * series 100: 0.15 mm max.
 * series 200: 0.30 mm max.
- actuator diameter: 1 mm max. with 0.1 mm radius.

Type	Operating force Newtons (grams)	Operating life (operations)	Travel
KMX211G/213G	1.6 (160) \pm 30%	250,000	0,20 \pm 0,10
KMX221G/223G	2.2 (220) \pm 30%	250,000	0,20 \pm 0,10

Packaging

Tape and reels in reels of 10,000 pieces.
External diameter 380mm \pm 2mm.

Electrical

	Silver	Gold
MAXIMUM POWER:	0.5 VA	0.5 VA
MAXIMUM VOLTAGE:	32 VDC	32 VDC
MAXIMUM CURRENT DC:	50 mA	20 mA
MINIMUM CURRENT DC:	1 mA	1 mA
CONTACT RESISTANCE:	\leq 100 m Ω	
INSULATION RESISTANCE:	\geq 50 M Ω	
BOUNCE TIME:	\leq 6 ms	

Environmental

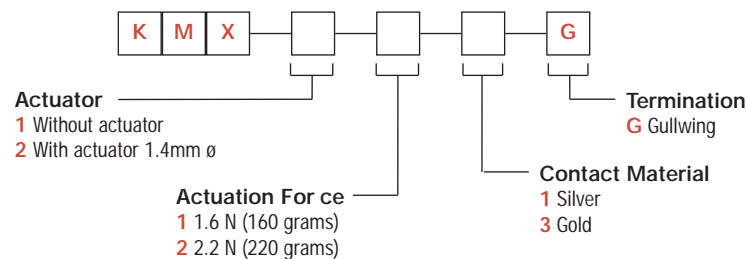
	Silver	Gold
OPERATING TEMPERATURE:	-40°C to 85°C	-40°C to 125°C
STORAGE TEMPERATURE:	-55°C to 85°C	-55°C to 125°C
RELATIVE HUMIDITY	90 to 96%	

Process

Infrared reflow soldering in accordance with IEC 61760-1

How To Order

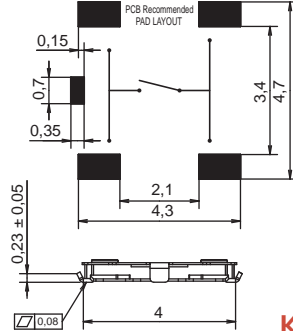
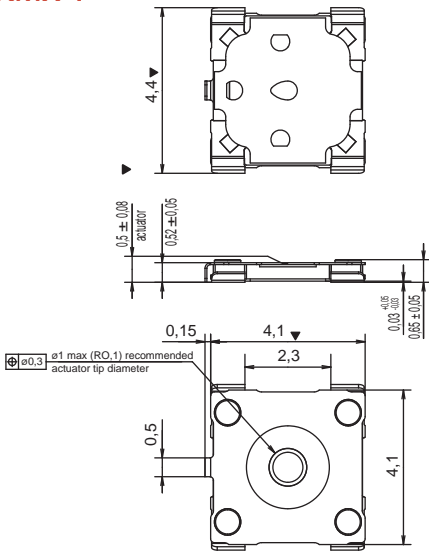
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



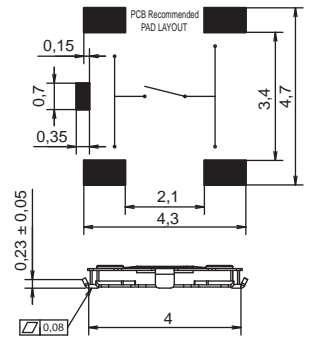
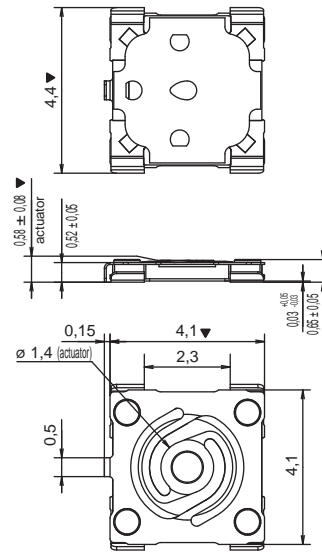
KMX Series Low Profile SMT Top Actuated

Tactile Switches

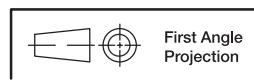
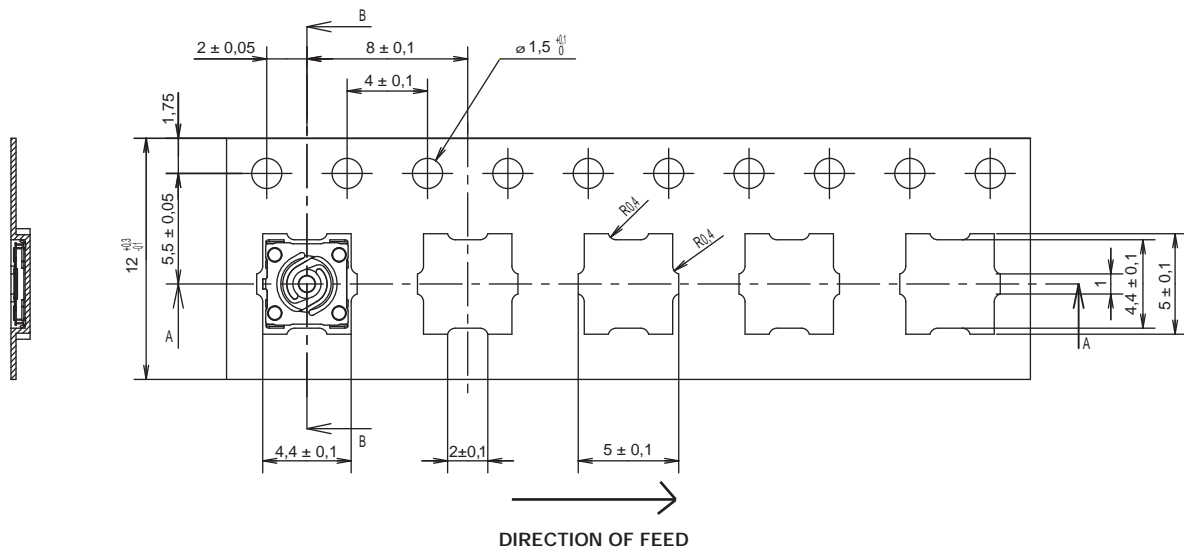
KMX 1



KMX 2



TAPE & REEL



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

KMR 2 Series Microminiature SMT Top Actuated



Features/Benefits

- Long Life version
- 4 actuation forces
- Optional ground pin
- Ultra low current capabilities
- Excellent tactile feel

Typical Applications

- Automotive
- Cellular phones
- Industrial electronics
- Medical equipment

Specification

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

Mechanical

Type G and NG (except gold version G only) See description below	Operating force N (grs)	Operating life (cycles)	Travel (mm)
KMR211 LFS	1.2 (120) ± 0.30	200 000	0.20 mm ± 0.1
KMR213 LFG	1.2 (120) ± 0.30	200 000	0.20 mm ± 0.1
KMR221 LFS	2.0 (200) ± 0.50	200 000	0.25 mm ± 0.1
KMR223G LFG	2.0 (200) ± 0.50	200 000	0.25 mm ± 0.1
KMR231 LFS	3.0 (300) ± 0.75	150 000	0.25 mm ± 0.1
KMR233G LFG	3.0 (300) ± 0.75	150 000	0.25 mm ± 0.1
KMR231 ULC LFS	3.0 (300) ± 0.75	150 000	0.25 mm ± 0.1
KMR232 LFS	3.0 (300) ± 0.75	300 000	0.25 mm ± 0.1
KMR232 ULC LFS	3.0 (300) ± 0.75	300 000	0.25 mm ± 0.1
KMR241 LFS	4.0 (400) ± 1.00	100 000	0.30 mm ± 0.1
KMR243G LFG	4.0 (400) ± 1.00	100 000	0.30 mm ± 0.1
KMR241 ULC LFS	4.0 (400) ± 1.00	100 000	0.30 mm ± 0.1
KMR242 LFS	4.0 (400) ± 1.00	200 000	0.30 mm ± 0.1
KMR242 ULC LFS	4.0 (400) ± 1.00	200 000	0.30 mm ± 0.1

TACTILE FEELING: for KMR 2 series: ≥ 30% (1.2N at 20%)

Electrical

	Silver	Gold
MAXIMUM POWER:	1 VA	0.2 VA
MAXIMUM VOLTAGE:	32 VDC	32 VDC
MINIMUM VOLTAGE:	20 mVDC	20 mVDC
MAXIMUM CURRENT:	50 mA	10 mA
MINIMUM CURRENT:	1 mA*	1 mA*
DIELECTRIC STRENGTH:	≥ 250 Vrms	
CONTACT RESISTANCE:	≤ 100 mΩ	
INSULATION RESISTANCE:	≥ 1GΩ	
BOUNCE TIME:	≤ 3 ms	

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

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

Infrared Reflow Soldering in accordance with IEC61760-1

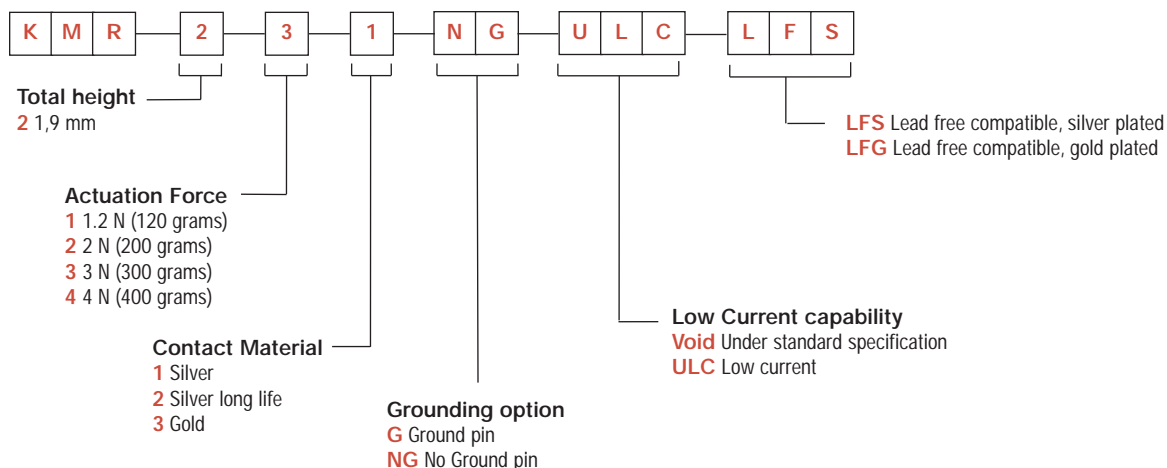
Packaging

In reels of 7,000 pieces for KMR 2
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.



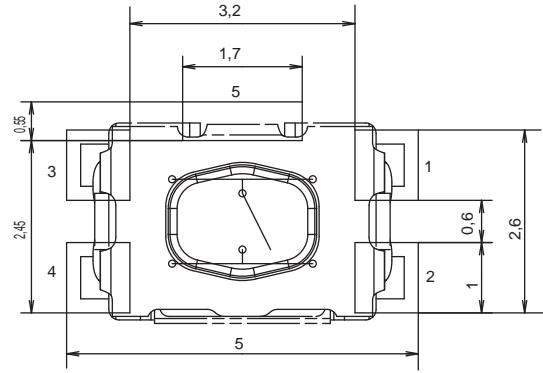
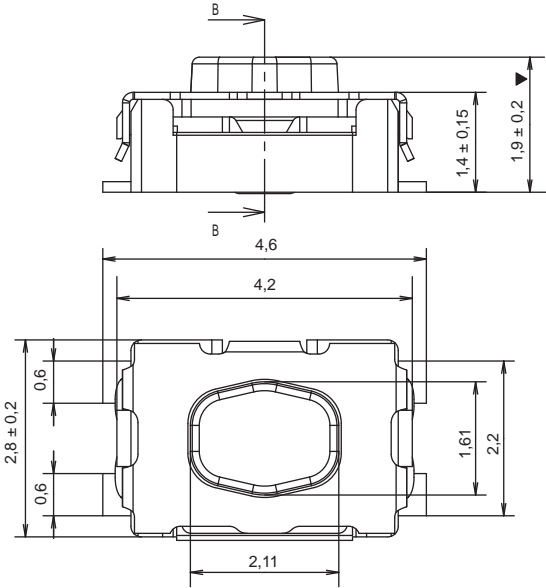
KMR 2 Series Microminiature Tact Switch for SMT

KMR 2 Series - 1.9 mm height

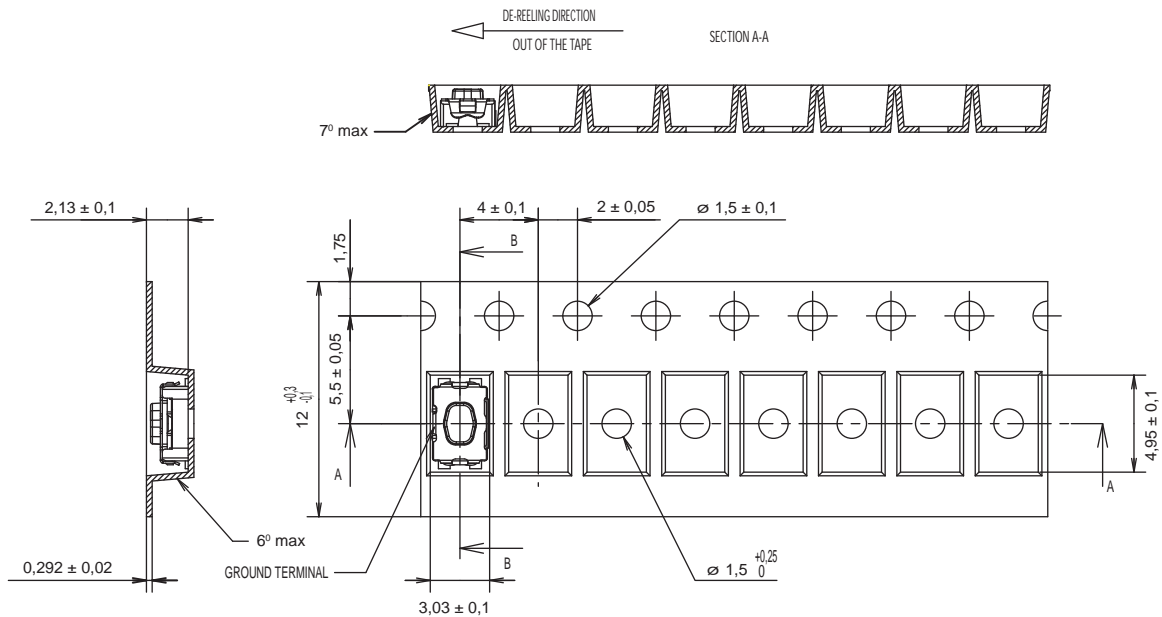
PCB layout shown with ground pin option

Tactile Switches

B



TAPE & REEL



DIRECTION OF FEED



First Angle
Projection

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

www.ck-components.com



KMR 4 Series Microminiature SMT Top Actuated



Features/Benefits

- Long Life version
- 4 actuation forces
- Optional ground pin
- Ultra low current capabilities
- Excellent tactile feel

Typical Applications

- Automotive
- Cellular phones
- Industrial electronics
- Medical equipment

Specification

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

Mechanical

Type G and NG (except gold version G only) See description below	Operating force N (grs)	Operating life (cycles)	Travel (mm)
KMR421 LFS	2.0 (200) ± 0.50	200 000	0.25 mm ± 0.1
KMR431 LFS	3.0 (300) ± 0.75	150 000	0.30 mm ± 0.1
KMR431 ULC LFS	3.0 (300) ± 0.75	150 000	0.30 mm ± 0.1
KMR432 LFS	3.0 (300) ± 0.75	300 000	0.30 mm ± 0.1
KMR432 ULC LFS	3.0 (300) ± 0.75	300 000	0.30 mm ± 0.1
KMR441 LFS	4.0 (400) ± 1.00	100 000	0.35 mm ± 0.1
KMR441 ULC LFS	4.0 (400) ± 1.00	100 000	0.35 mm ± 0.1
KMR442 LFS	4.0 (400) ± 1.00	200 000	0.35 mm ± 0.1
KMR442 ULC LFS	4.0 (400) ± 1.00	200 000	0.35 mm ± 0.1

TACTILE FEELING: for KMR 4 series: ≥ 25%

Electrical

	Silver	Gold
MAXIMUM POWER:	1 VA	0.2 VA
MAXIMUM VOLTAGE:	32 VDC	32 VDC
MINIMUM VOLTAGE:	20 mVDC	20 mVDC
MAXIMUM CURRENT:	50 mA	10 mA
MINIMUM CURRENT:	1 mA*	1 mA*
DIELECTRIC STRENGTH:	≥ 250 Vrms	
CONTACT RESISTANCE:	≤ 100 mΩ	
INSULATION RESISTANCE:	≥ 1GΩ	
BOUNCE TIME:	≤ 3 ms	

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

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

Infrared Reflow Soldering in accordance with IEC61760-1

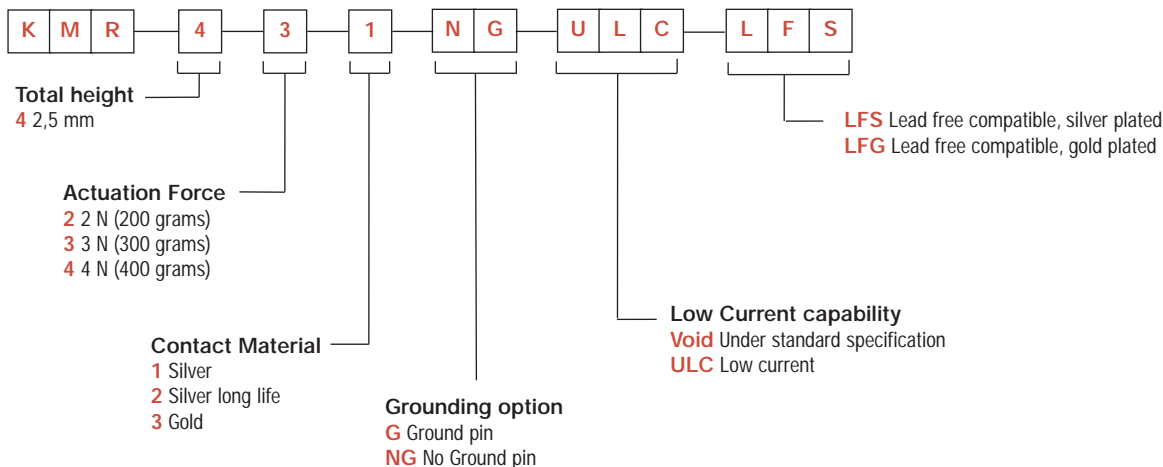
Packaging

In reels of 6,000 pieces for KMR 4
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.

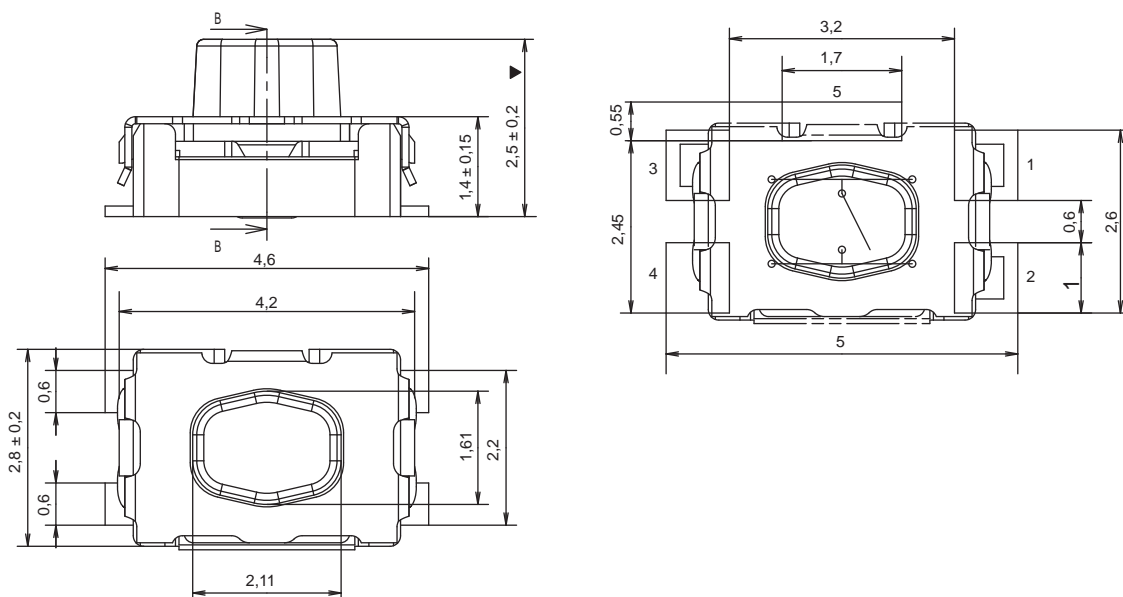


KMR 4 Series Microminiature Tact Switch for SMT

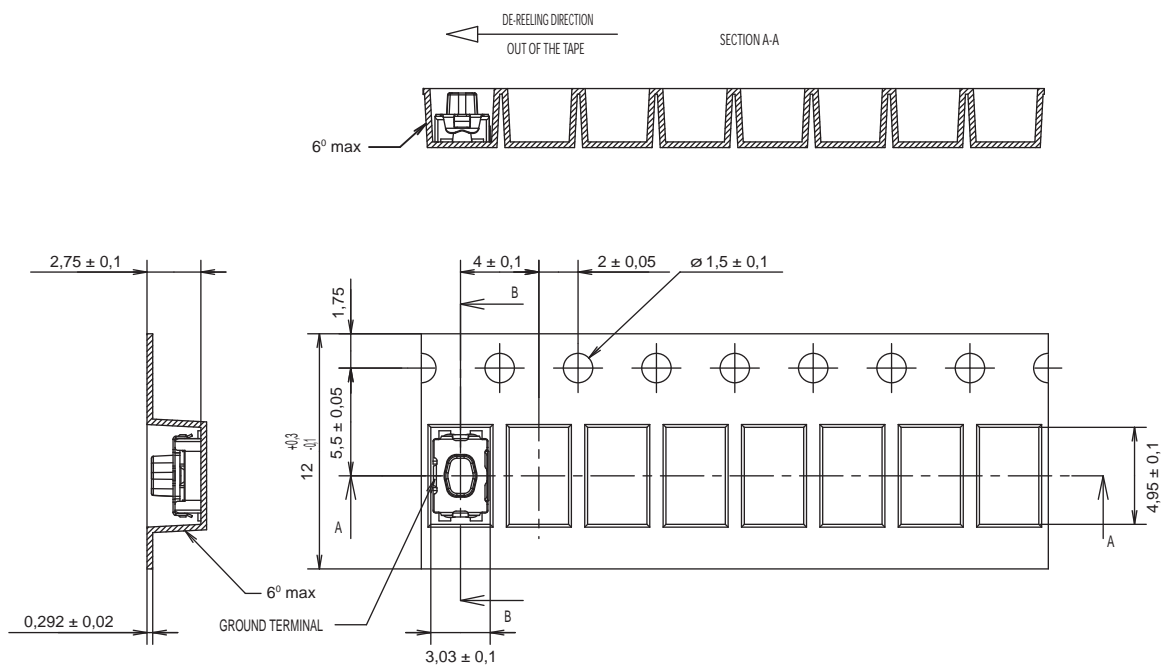
KMR 4 Series - 2.5 mm height

PCB layout shown with ground pin option

Tactile Switches



TAPE & REEL



KMS Series Microminiature SMT Side Actuated



Features/Benefits

- Compact size
- Excellent tactile feel
- ESD protection
- Positioning pegs for stability
- IP 40 sealing
- RoHS compliant and compatible

Typical Applications

- Mobile phones, pagers
- PDAs
- 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

Type	Operating force Newtons (grams)	Operating life (operations)	Travel
KMS221G/GP	2N (200) ± 0.5	100 K cycles	0,25 ± 0,15
KMS223G/GP	2N (200) ± 0.5	100 K cycles	0,25 ± 0,15
KMS231G/GP	3N (300) ± 0.6	100 K cycles	0,3 ± 0,15
KMS233G/GP	3N (300) ± 0.6	100 K cycles	0,3 ± 0,15

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

Packaging

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

Electrical

	Silver	Gold
MAXIMUM POWER:	1 VA	0.2 VA
MAXIMUM VOLTAGE:	32 VDC	32 VDC
MAXIMUM CURRENT DC:	50 mA	10 mA
MINIMUM CURRENT DC:	1 mA	1 mA
DIELECTRIC STRENGTH:	250 VDC	
CONTACT RESISTANCE:	≤100 mΩ	
INSULATION RESISTANCE:	10 ⁹ Ω	
BOUNCE TIME:	≤ 3 ms	

Environmental

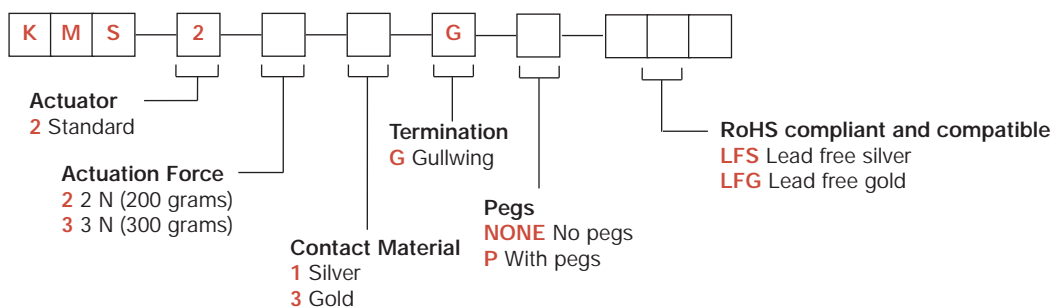
	Silver	Gold
OPERATING TEMPERATURE:	-40°C to 85°C	-40°C to 125°C
STORAGE TEMPERATURE:	-55°C to 85°C	-55°C to 125°C

Process

Infrared reflow soldering in accordance with IEC 61760-1

How To Order

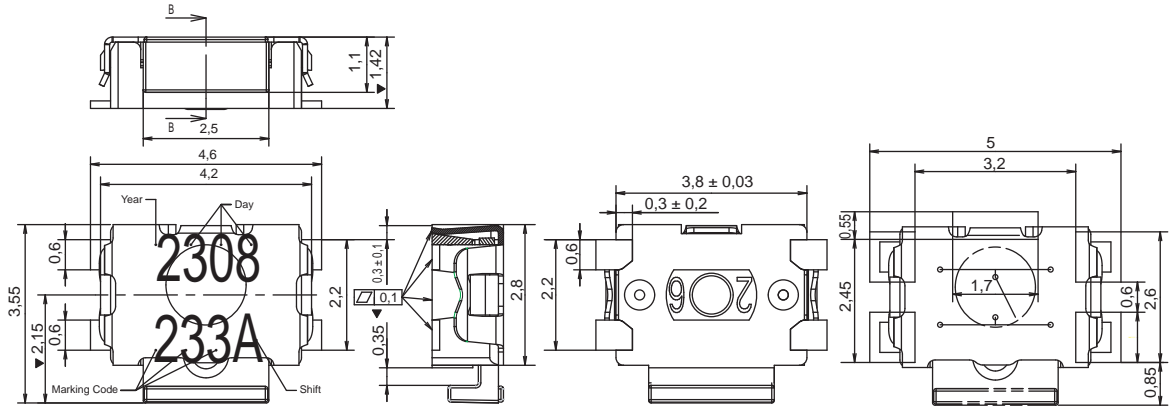
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



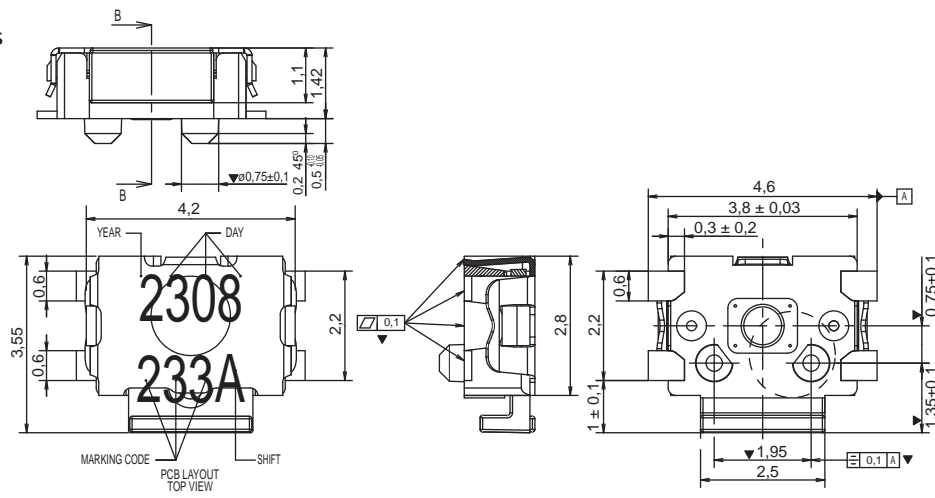
KMS Series Microminiature SMT Side Actuated

Tactile Switches

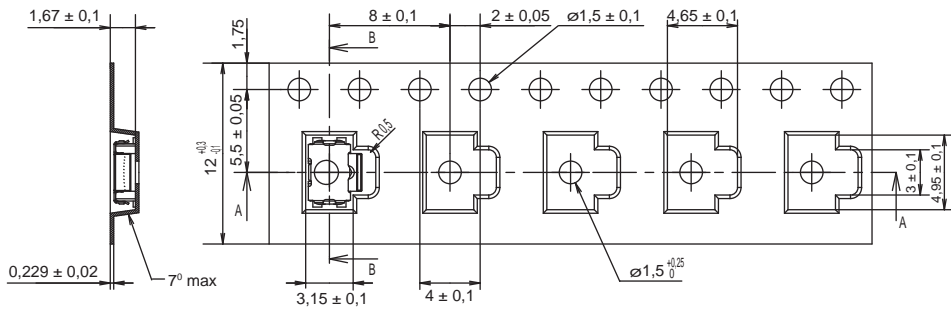
KMS



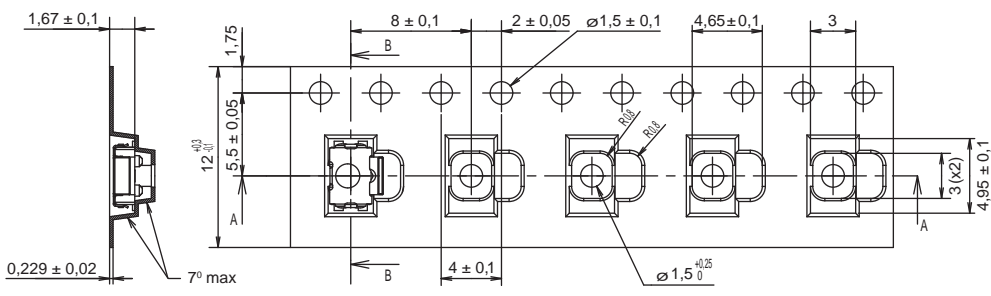
KMS WITH PEGS



TAPE & REEL



WITH PEGS



→
DIRECTION OF FEED



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



PTS 525 Series Microminiature Tact Switch for SMT



Features/Benefits

- Ultra low profile, 0.8 & 1.5 mm actuator height
- Long life
- Compact package of 5.25 x 5.25 mm saves PCB space
- RoHS compliant and compatible

Typical Applications

- Consumer products
- Instrumentation
- Computer products
- Hand-held devices

Specification

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

Mechanical

ACTUATION FORCE: PTS525 models: 160 grams, 260 grams
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.
ELECTRICAL TRAVEL: 0,30 ± 0,15 mm

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

Environmental

OPERATING TEMPERATURE: -40°C to 60°C

Process

SMT capable of IR solder process. Lead free soldering process compatible. Do not clean switch with solvents.

Materials

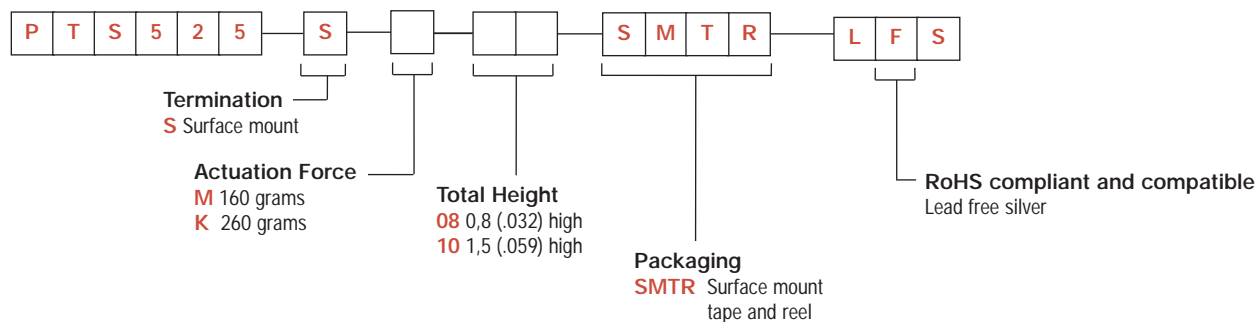
BASE: 6/6 nylon or glass filled polyester (PBT) (UL 94V-0).
ACTUATOR: 6/6 nylon or polyacetal (UL 94HB).
DOME CONTACTS: Phosphor bronze, silver clad.
STATIONARY CONTACTS: Brass, silver plated.
TERMINALS: Brass, silver plated. Insert molded.

Packaging

3000 pieces per Tape and 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.

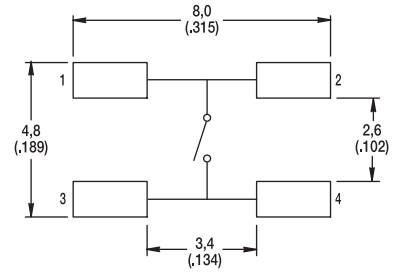
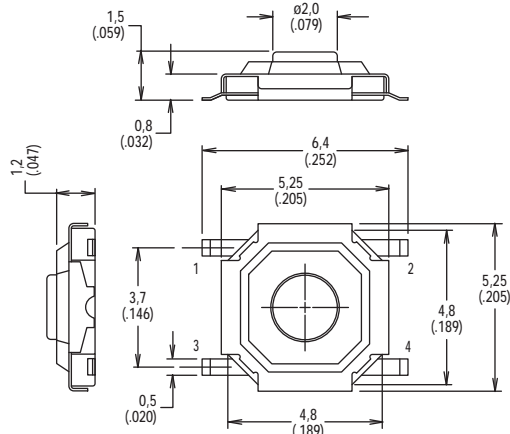


PTS 525 Series Microminiature Tact Switch for SMT

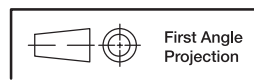
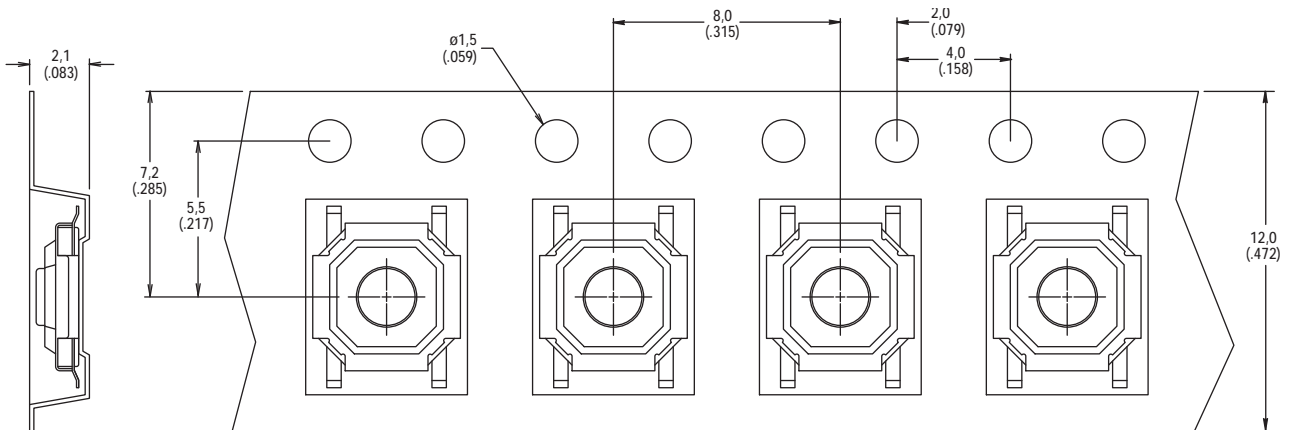
PTS525



PTS525SM10SMTR



TAPE & REEL



First Angle
Projection

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

www.ck-components.com



Tactile Switches

KSR Series Subminiature Tact Switch for SMT

Features/Benefits

- Saves PCB space
- Range of 4 actuation forces
- G terminations
- N.O.
- Detect type available
- Rubber actuator
- IP 50 sealed
- RoHS compliant and compatible

Typical Applications

- Automotive
- Cellular phones & accessories
- Industrial electronics
- Computers & network equipment



B

Tactile Switches

Specification

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

Mechanical

Type	Operating force Newtons (grams)	Operating life (operations)	Travel
KSR211/213	1.8 (180) ± 20%	100,000	0,25 ± 0,15
KSR221/223	2.3 (200) ± 25%	200,000	0,3 ± 0,15
KSR231/233	3.0 (300) ± 25%	200,000	0,35 ± 0,15
KSR251/253	4.5 (450) ± 25%	100,000	0,5 ± 0,15
KSR223GNC	2 (200) ± 25%	100,000	0,3 ± 0,15

A detect switch version is available KSR2D3G.
Please see Detect chapter, page F-6.

Packaging

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

Electrical

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

CONTACT RESISTANCE: ≤ 100 mΩ
INSULATION RESISTANCE: (100 V): 10⁹ 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: Compatible with the lead free soldering profile.

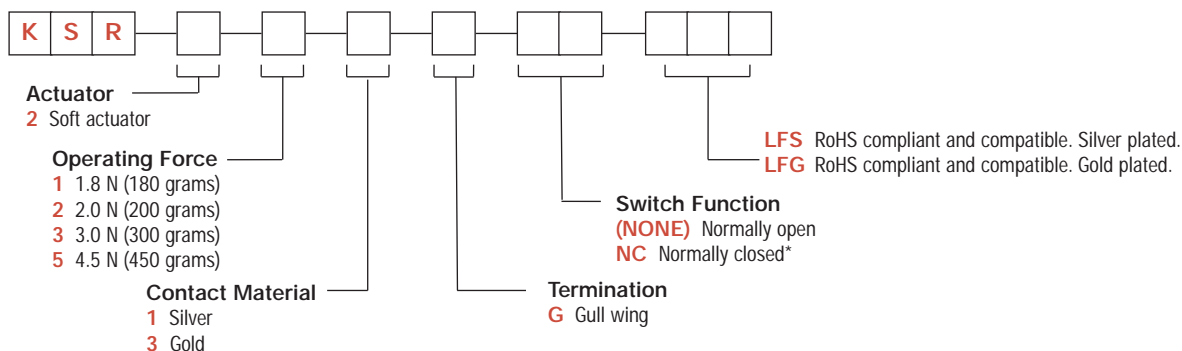
NOTE: Specifications listed above are for switches with standard options.
For information on specific and custom switches, consult Customer Service Center.

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.

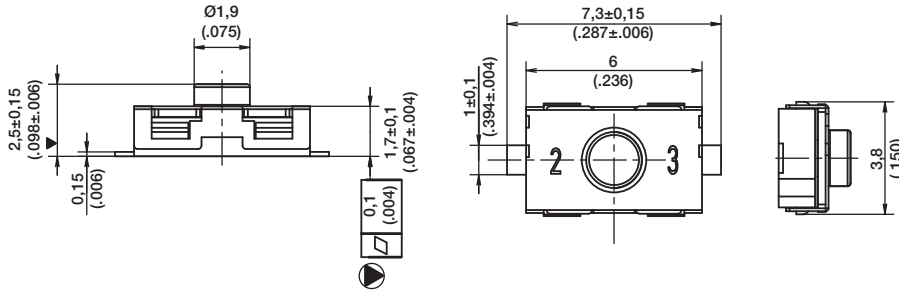
For any part number different from those listed above, please consult your local representative.



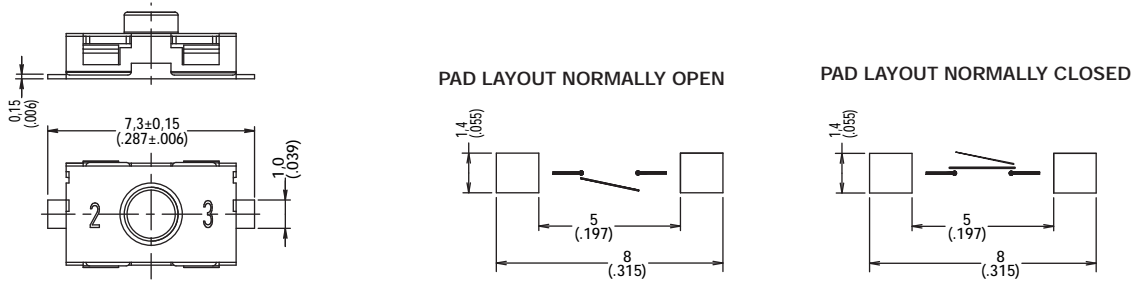
*Available on KSR223GNC only.

KSR Series Subminiature Tact Switch for SMT

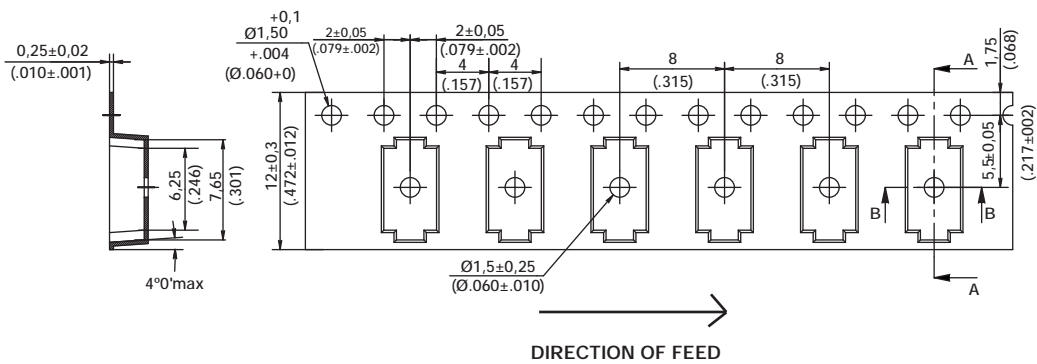
KSR



G GULLWING



TAPE & REEL



KSR Long Life-200,000 cycles-Gold and Silver Series Subminiature Tact Switch for SMT

Features/Benefits

- Saves PCB space
- Range of 4 actuation forces
- G terminations
- N.O.
- Detect type available
- Rubber actuator
- IP 50 sealed
- RoHS compliant and compatible

Typical Applications

- Automotive
- Cellular phones & accessories
- Industrial electronics
- Computers & network equipment



B

Tactile Switches

Specification

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

Mechanical

Type	Operating force(Fa) Newtons (grams)	Operating life (operations)	Travel
Silver versions			
KSR212G LFS	1.5 < Fa < 2.2	200,000	0,25 ± 0,15
KSR222G LFS	1.9 < Fa < 2.6	200,000	0,3 ± 0,15
KSR232G LFS	2.25 < Fa < 3.75	200,000	0,35 ± 0,15
KSR252G LFS	1.5 < Fa < 2.2	100,000	0,5 ± 0,15
Gold versions			
KSR214G LFS	1.5 < Fa < 2.2	200,000	0,25 ± 0,15
KSR224G LFS	1.9 < Fa < 2.6	200,000	0,3 ± 0,15
KSR234G LFS	2.25 < Fa < 3.75	200,000	0,35 ± 0,15
KSR254G LFS	1.5 < Fa < 2.2	100,000	0,5 ± 0,15

Electrical

	Silver	Gold
MAXIMUM POWER:	1 VA	0.2 VA
MAXIMUM VOLTAGE:	32 V dc	32 V dc
MINIMUM VOLTAGE:	20 m Vdc	20 m Vdc
MAXIMUM CURRENT DC:	50 mA	50 mA
MINIMUM CURRENT DC:	1 mA	1 mA

CONTACT RESISTANCE: ≤ 100 m_Ω
INSULATION RESISTANCE (100 V): 1 G_Ω
BOUNCE TIME: 1 ms max

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: Compatible with the lead free soldering profile.

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

Mechanical

OVERLOAD: 20 Newtons

Packaging

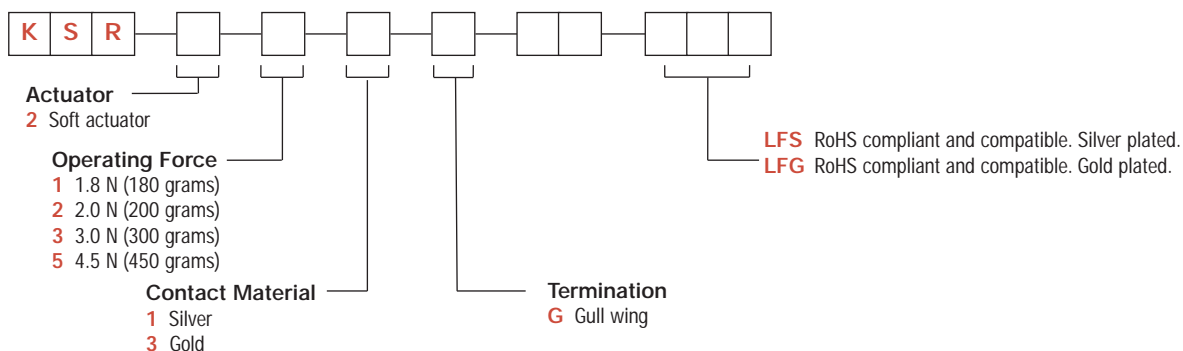
Switches are delivered on continuous tape, in reels of 2,500 pieces.

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.

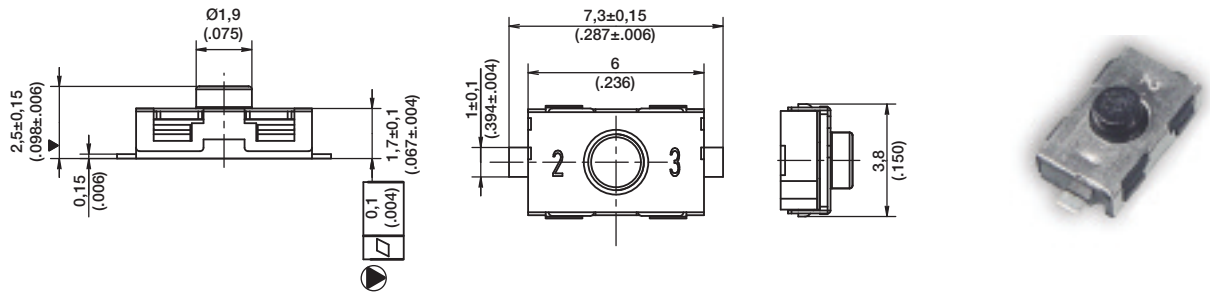
However, please note that all the combinations of these options are not feasible.

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

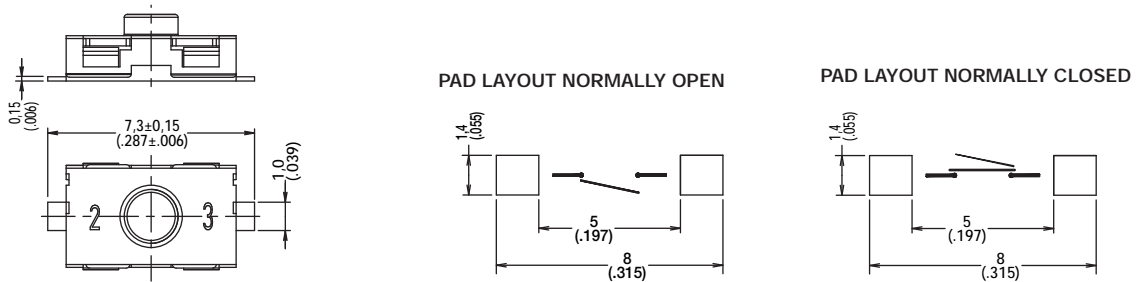


KSR Long Life-200,000 cycles-Gold and Silver Series Subminiature Tact Switch for SMT

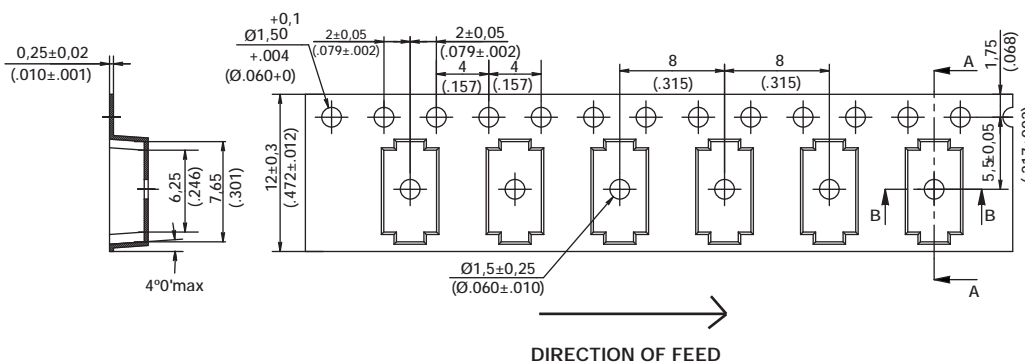
KSR



G GULLWING



TAPE & REEL



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

www.ck-components.com

Tactile Switches

KSS Series Subminiature SMT Side Actuated



Features/Benefits

- Low profile of 1.6 mm
- Excellent tactile feel
- High shear force
- Range of actuation forces
- Large flat top
- Redundant contacts option
- IP 40 sealed
- RoHS compliant and compatible

Typical Applications

- Cellular phone
- PDA, pagers
- Industrial electronics
- Health diagnostic electronics

Specification

FUNCTION: momentary action
CONTACT ARRANGEMENT: N.O.
TERMINALS: Gullwing / 3-Way type for SMT
IP40 sealed

Mechanical

OVERLOAD: 20N
TACTILE FEELING: 2 and 4N: 25% min.
2.5N: 30% min.

Type	Operating force Newtons (grams)	Operating life (operations)	Travel
KSS221G	2.0 (200) ± 0.5	100,000	0,3 ± 0,15
KSS231G	2.5 (250) ± 0.5	100,000	0,3 ± 0,10
KSS233W	2.5 (250) ± 0.6	100,000	0,3 ± 0,15
KSS241G	4.0 (400) ± 1.0	100,000	0,3 ± 0,15

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

Electrical

	Silver	Gold
MAXIMUM POWER:	1 VA	0.2 VA
MAXIMUM VOLTAGE:	32 VDC	32 VDC
MAXIMUM CURRENT:	50 mA	10 mA
MINIMUM CURRENT:	1 mA	1 mA
DIELECTRIC STRENGTH:	≥ 250 VDC	
CONTACT RESISTANCE:	≤ 100 mΩ	
INSULATION RESISTANCE (100 VDC):	≥ 10 ⁹ Ω	
BOUNCE TIME:	≤ 3 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

Infrared reflow soldering in accordance with IEC 61760-1

Packaging

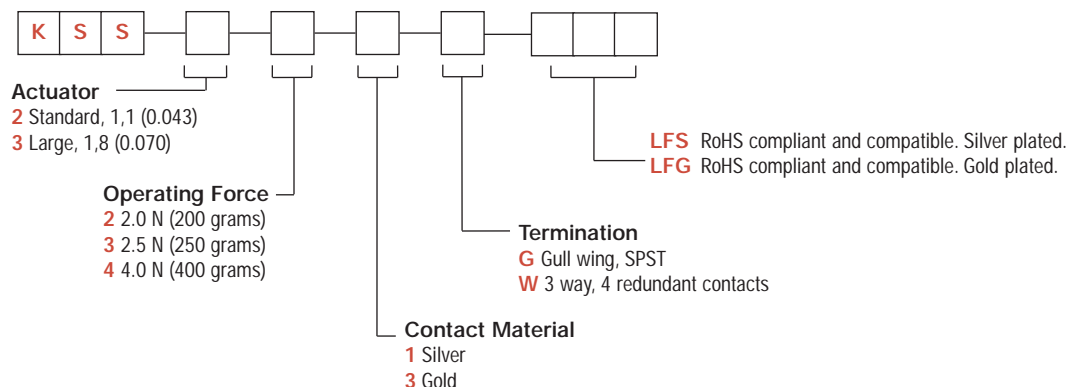
Tape and reels in reels of 3,000 pieces.
External diameter 330mm ± 2mm.

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.

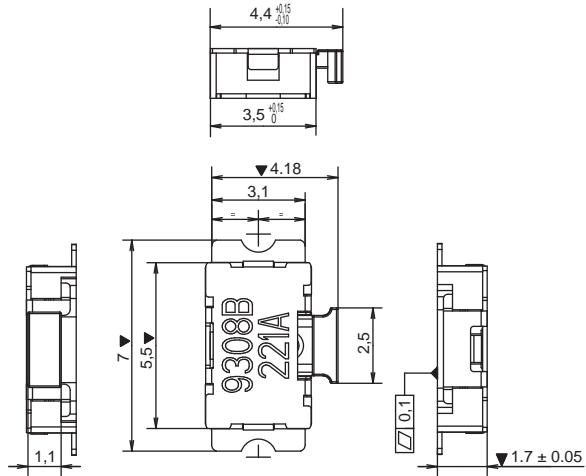
For any part number different from those listed above, please consult your local representative.



KSS Series Subminiature SMT Side Actuated

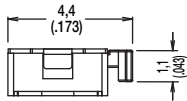
KSS

Tactile Switches

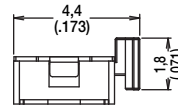


ACTUATOR

2 STANDARD, 1,1 (0.043)

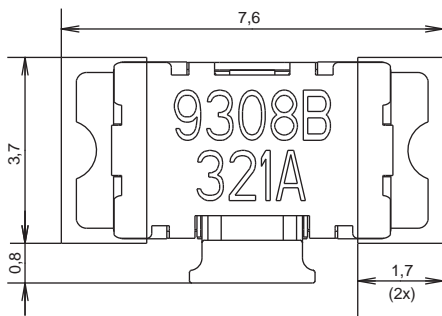


3 LARGE, 1,8 (0.070)

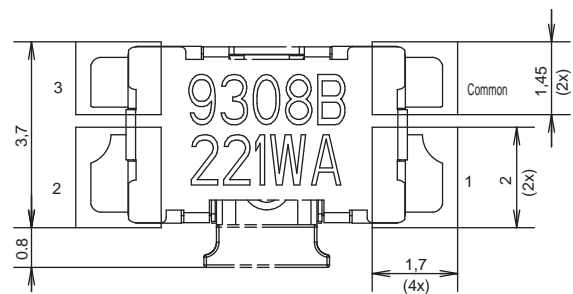


TERMINATION

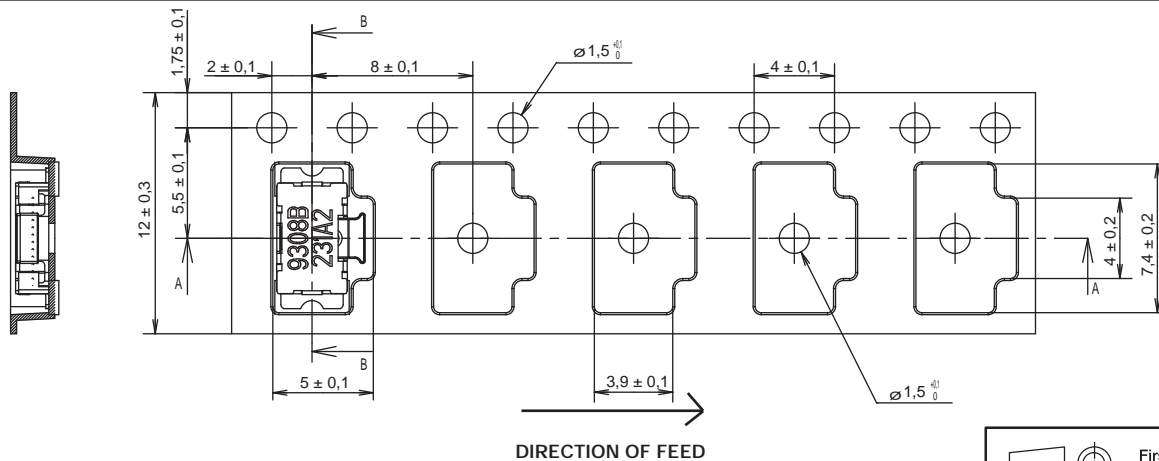
G GULLWING



W 3 WAY, 4 REDUNDANT CONTACTS



TAPE & REEL



First Angle Projection

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

www.ck-components.com



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



B

Tactile Switches

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): > 10⁹ 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

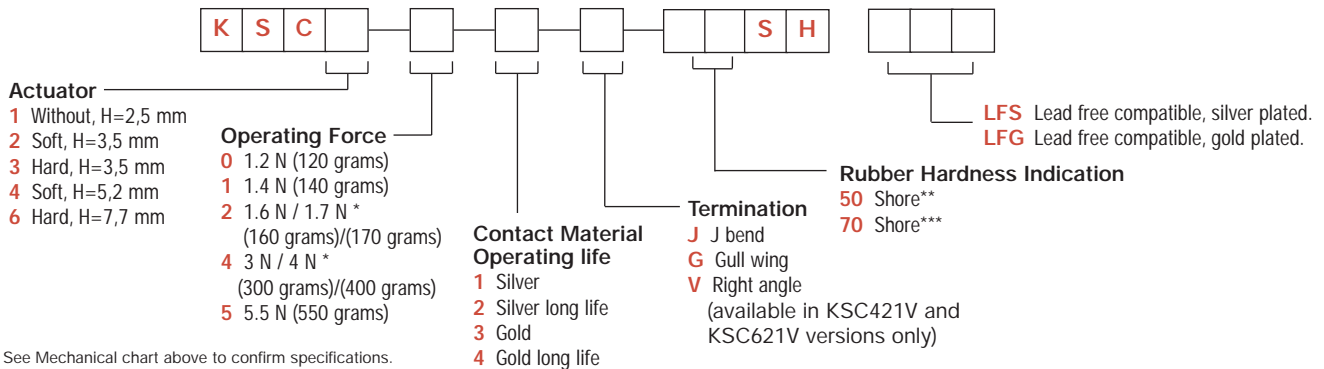
KSC1, KSC2 and KSC3 are delivered on continuous tape and reels of 2,000 pieces, KSC4 in reels of 1,000 pieces. KSC 6 in reels of 750 pieces. KSCV in boxes of 500 pieces. Dimensions of reels according to EIA RS481 or IEC 2863. External diameter 330 mm ± 2 mm.

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

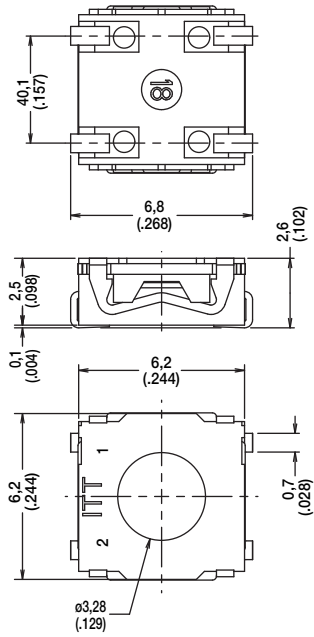


Dimensions shown in: mm (inch)
Specifications and dimensions subject to change

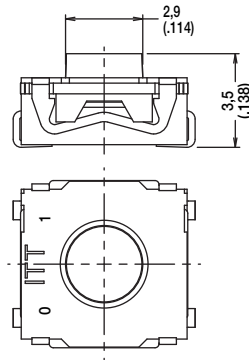
KSC Series Sealed Tact Switch for SMT

ACTUATOR

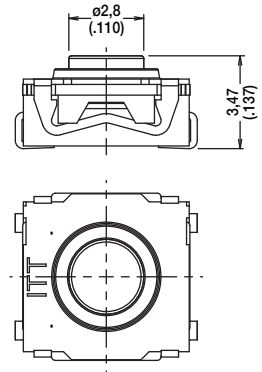
KSC1 WITHOUT, 2,5 mm HIGH



KSC2 SOFT, 3,5 mm HIGH

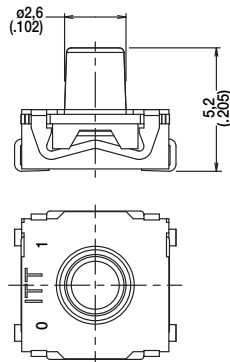


KSC3 HARD, 3,5 mm HIGH



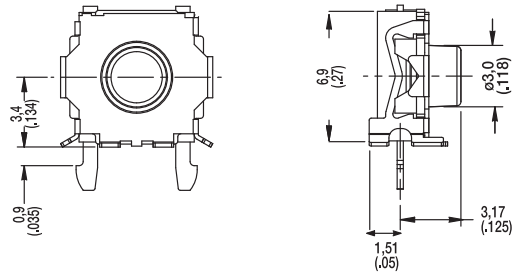
KSC4 SOFT, 5,2 mm HIGH

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

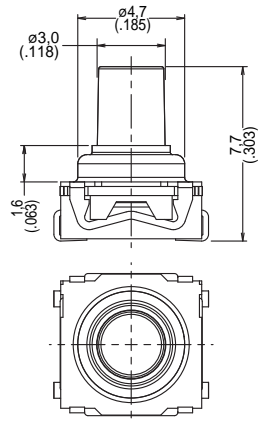


KSC4 KSC421V ONLY

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

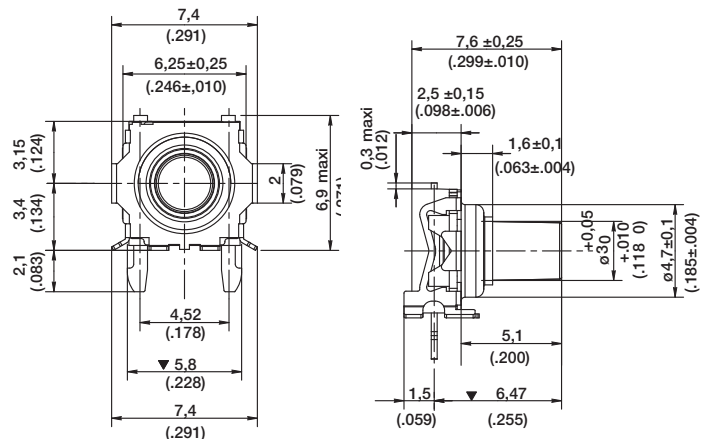


KSC6 HARD, 7,7 mm HIGH



KSC6 KSC621V ONLY

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



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

www.ck-components.com

KSC Series Sealed Tact Switch for SMT

OPERATING FORCE

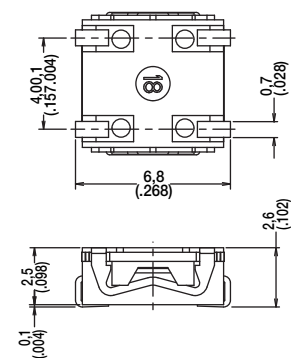
OPTION CODE	OPERATING FORCE
0	1.2 N (120 grams)
1	1.4 N (140 grams)
2	1.6 N / 1.7 N (160/170 grams)
4	3 N / 3.5 N (300/350 grams)
5	5.5 N (550 grams)

CONTACT MATERIAL

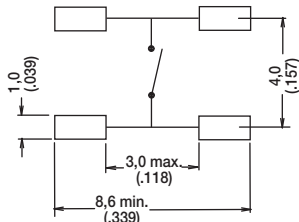
OPTION CODE	MATERIAL
1	SILVER
3	GOLD

TERMINATION

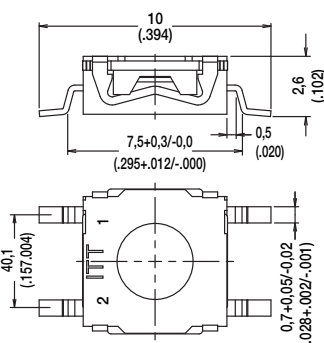
J J BEND



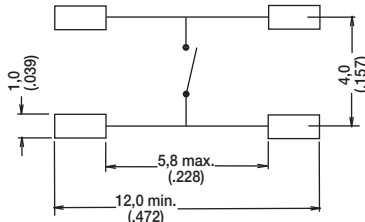
PAD LAYOUT



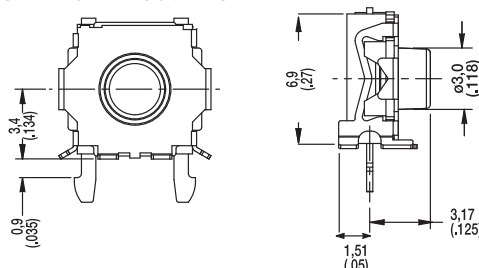
G GULLWING



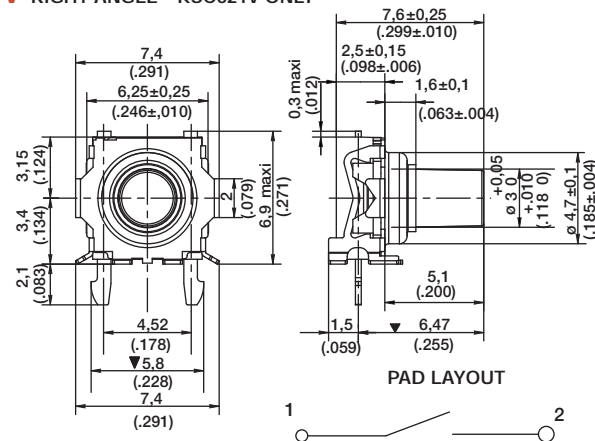
PAD LAYOUT



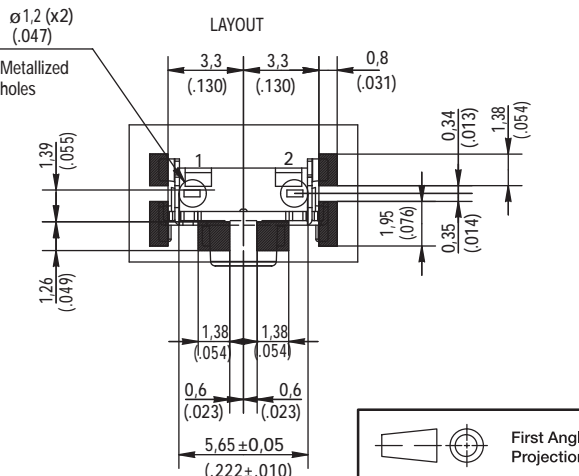
V RIGHT ANGLE - KSC421V ONLY



V RIGHT ANGLE - KSC621V ONLY



PAD LAYOUT



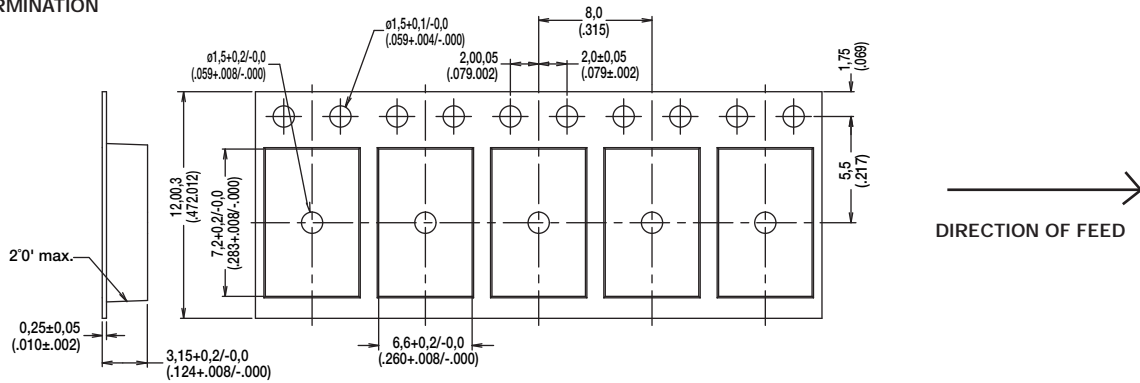
Dimensions shown in: mm (inch)
Specifications and dimensions subject to change



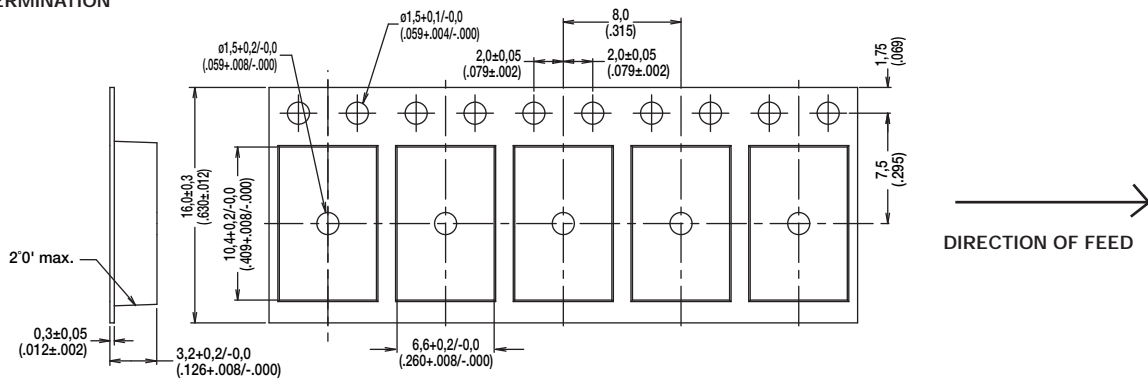
KSC Series Sealed Tact Switch for SMT

TAPE & REEL

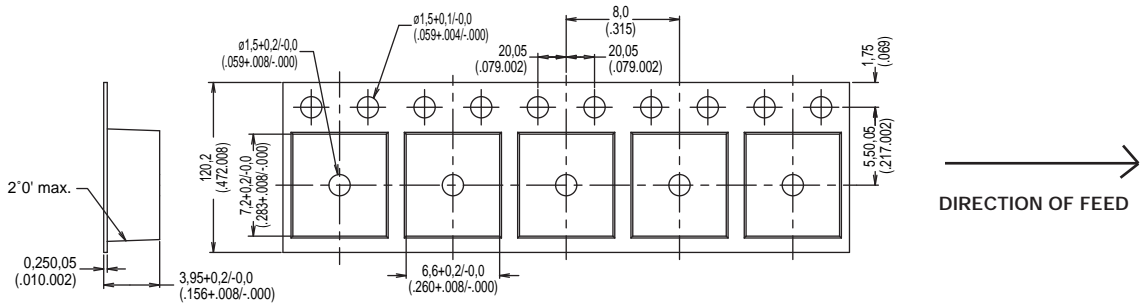
FOR KSC1 J TERMINATION



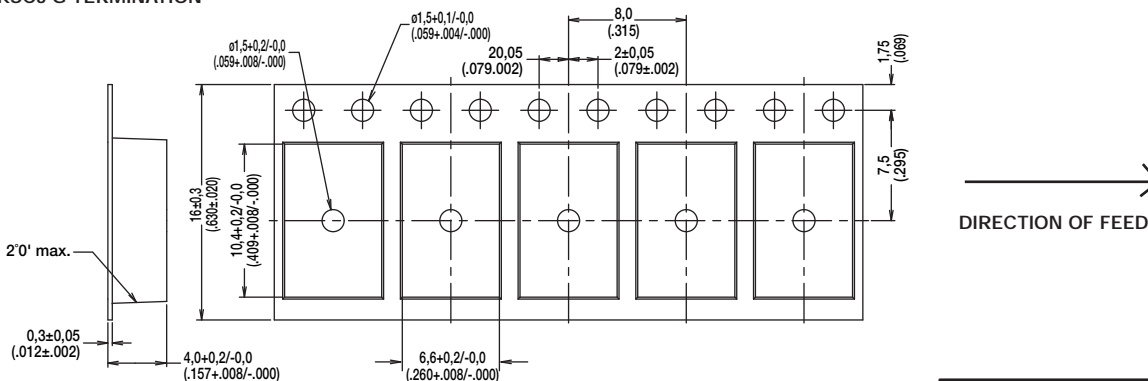
FOR KSC1 G TERMINATION



FOR KSC2 & KSC3 J TERMINATION



FOR KSC2 & KSC3 G TERMINATION



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

www.ck-components.com

KSC5 Series

Tact Switch with Rocker Option for SMT



Features/Benefits

- Can be actuated from either side or top
- Silver or Gold plated terminals
- Compatible with automatic insertion machines
- IP 50
- RoHS compliant

Typical Applications

- Automotive
- Computers
- Instrumentation

Specification

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

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 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	-55°C to 125°C

Process

SOLDERING: Infrared reflow in accordance with IEC61760-1

Packaging

Switches delivered on continuous tape & reels of 1,000 pieces, 330 (12.992) external diameter. Other dimensions according to EIA-RS-481 standard.

Mechanical

Type	Operating force axial FA N (grams) ±25%	Operating force lateral FL N (grams) ±30%	Travel to make axial (mm)	Travel to make lateral (mm)	Life expectancy cycles, axial	Life expectancy cycles, lateral
KSC521G	1,5 - 2,5	1,8 - 3,8	0,25 ± 0,15	0,5 ± 0,25	100,000	10,000
KSC541G	2,25 - 3,75	1,8 - 3,8	0,25 ± 0,15	0,5 ± 0,25	100,000	10,000

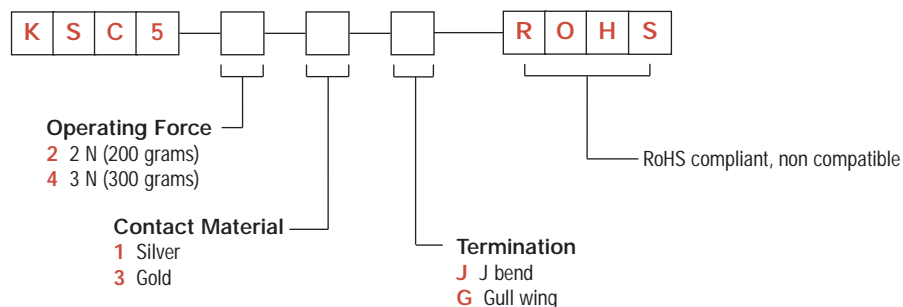
NOTE: Specifications listed above are for switches with standard options.
 For information on specific and custom switches, consult Customer Service Center.

How To Order

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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.

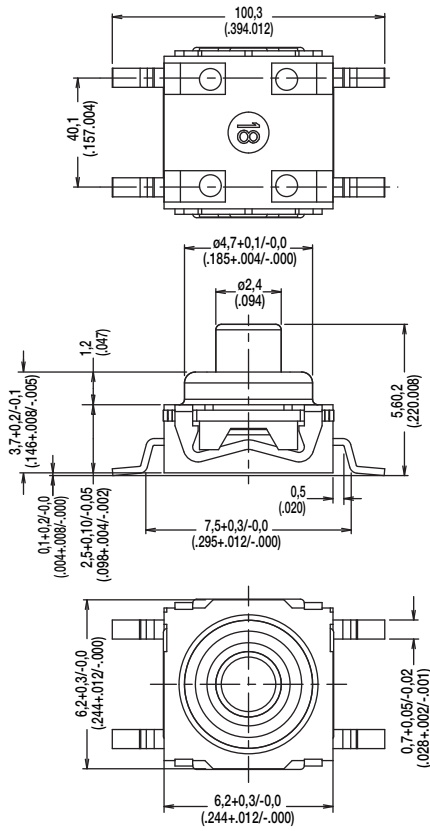


KSC5 Series Tact Switch with Rocker Option for SMT

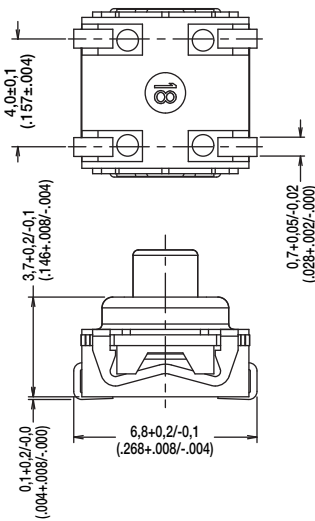
KSC5



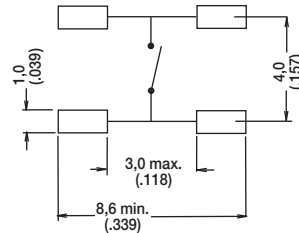
KSC521G



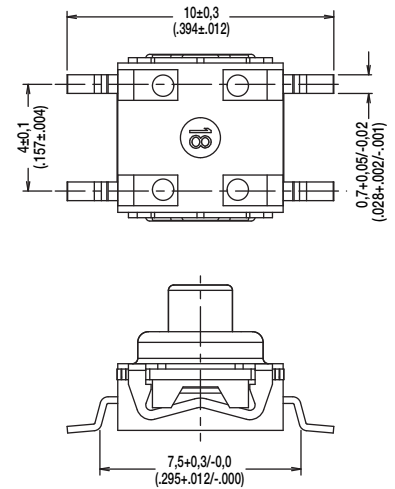
J J BEND



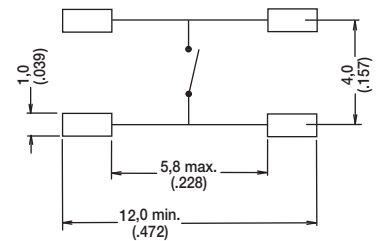
PAD LAYOUT



G GULLWING

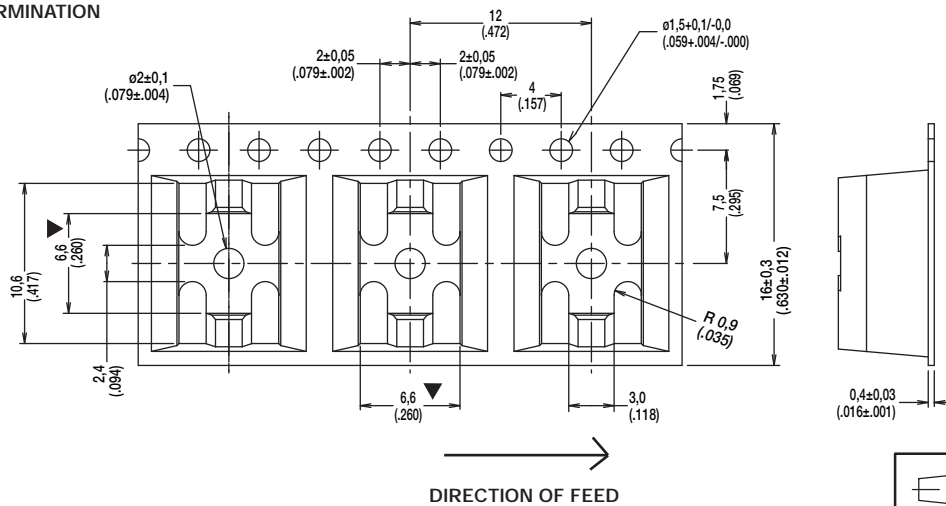


PAD LAYOUT



TAPE & REEL

FOR KSC5 G & J TERMINATION



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

www.ck-components.com

KT Series Right Angle Sealed Tact Switch for SMT



Features/Benefits

- 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
- IP 57
- RoHS compliant and compatible

Typical Applications

- Telecommunications
- Computer products
- Instrumentation
- Power supply

Specification

CONTACT ARRANGEMENT: SPST, N.O.
TERMINALS: Gullwing type for SMT

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: 10⁹ Ω min.

Environmental

OPERATING TEMPERATURE: -40°C to 90°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 rigid dispensing tubes or anti-static tape and reels per EIA 481-2 (800 pieces per reel.). 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.

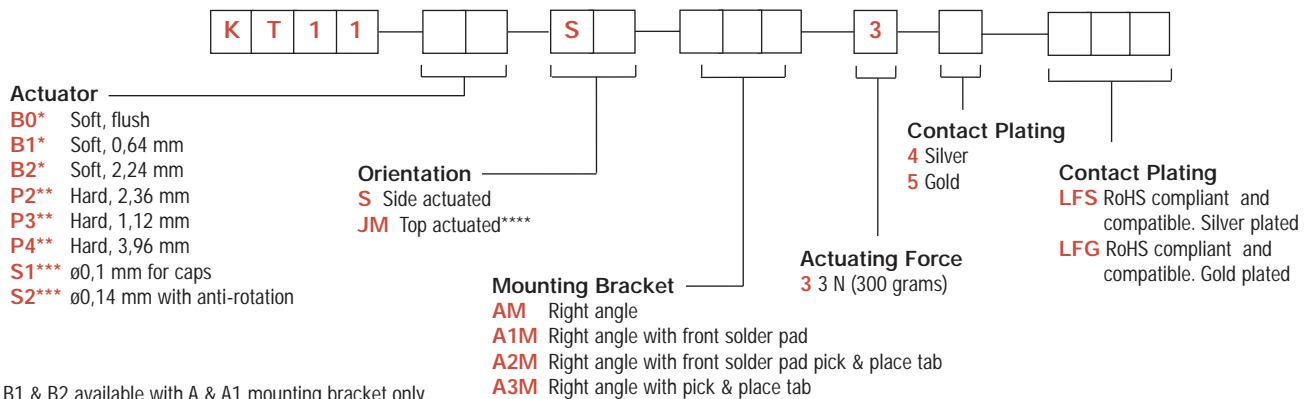
How To Order

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

SWITCH



* B0, B1 & B2 available with A & A1 mounting bracket only.

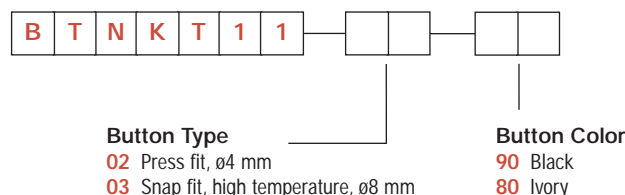
** P4 available with A1 & A2 mounting bracket only.

*** S1 & S2 available with A1 & A2 mounting bracket only.

**** JM available with B0, B1, B2, P2, P3, P4 without mounting bracket.

BUTTON

To order buttons in bulk

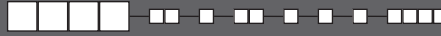


Dimensions shown in: mm (inch)
Specifications and dimensions subject to change

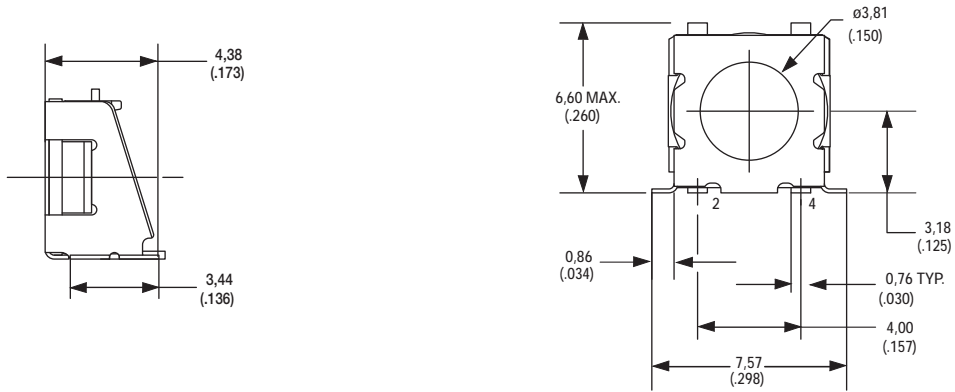
www.ck-components.com

KT Series Right Angle Sealed Tact Switch for SMT

SERIES



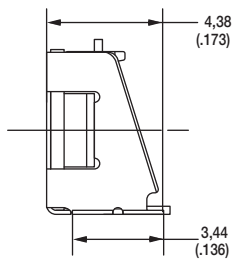
KT11



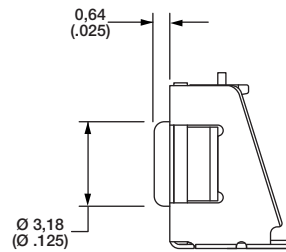
ACTUATOR



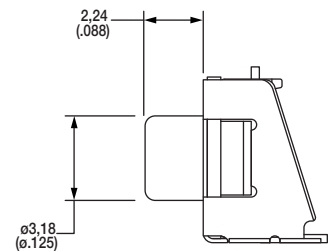
B0 SOFT, FLUSH*



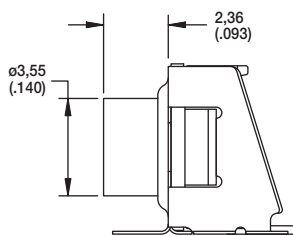
B1 SOFT, 0,64 mm*



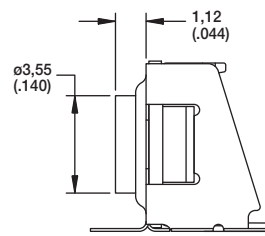
B2 SOFT, 2,24 mm*



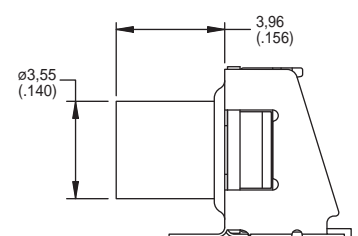
P2 HARD, 2,36 mm



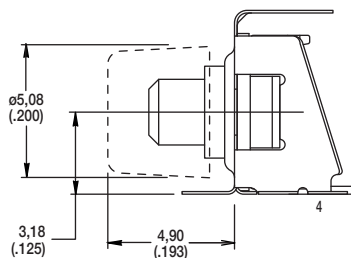
P3 HARD, 1,12 mm



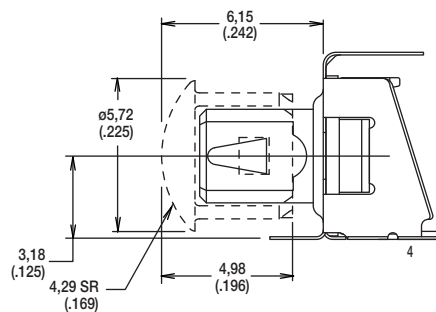
P4 HARD, 3,96 mm**



S1 $\phi 0,1$ mm FOR PRESS FIT CAPS***



S2 $\phi 0,14$ mm FOR SNAP FIT CAPS***



First Angle
Projection

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

C&K

KT Series Right Angle Sealed Tact Switch

ORIENTATION



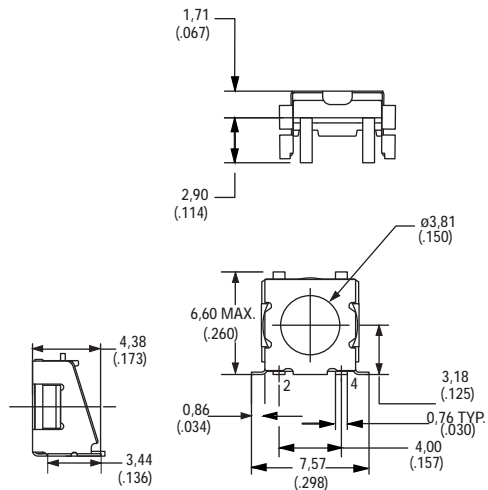
S SIDE ACTUATED

MOUNTING BRACKET

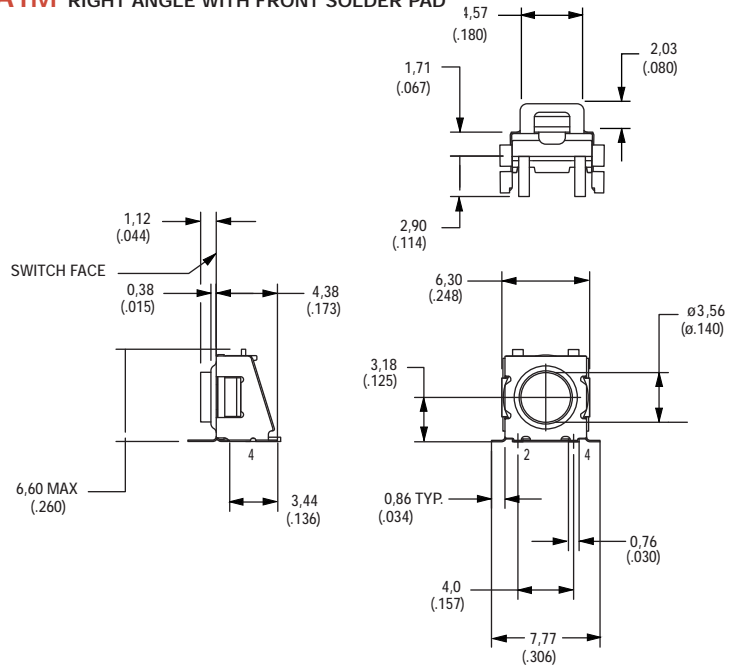


Tactile Switches

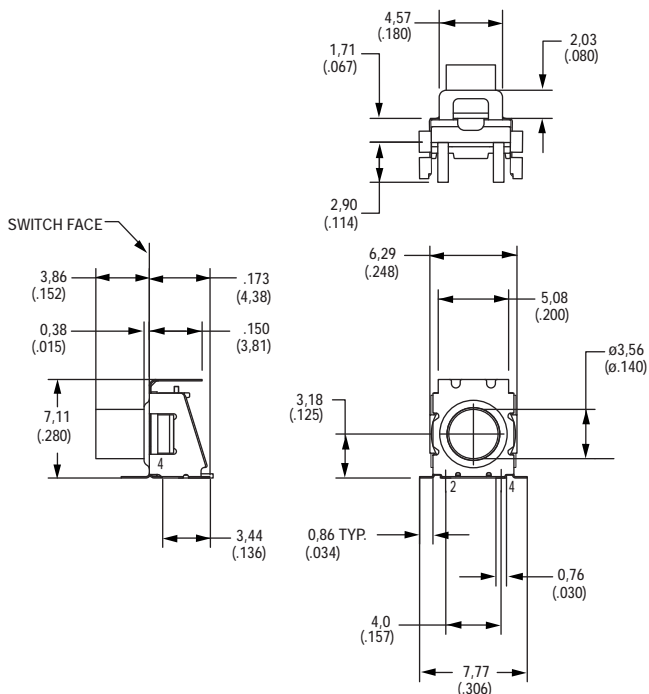
AM RIGHT ANGLE



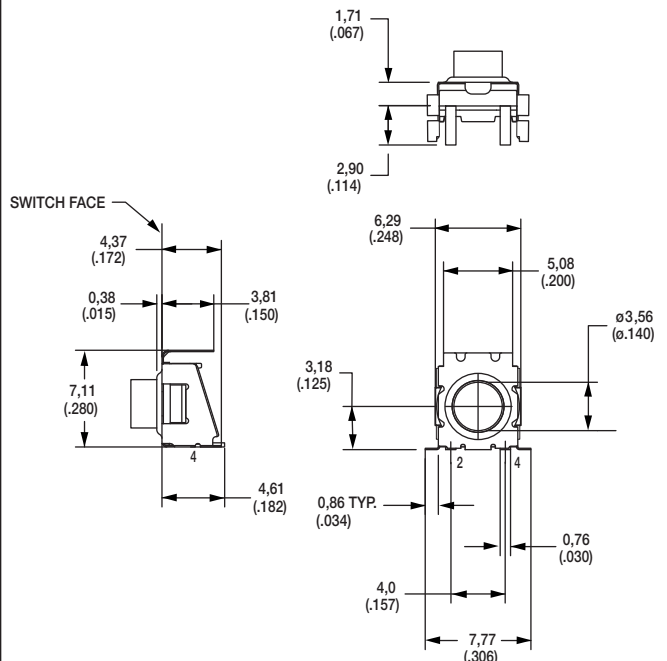
A1M RIGHT ANGLE WITH FRONT SOLDER PAD



A2M RIGHT ANGLE WITH FRONT SOLDER PAD AND PICK & PLACE TAB



A3M RIGHT ANGLE WITH PICK & PLACE TAB



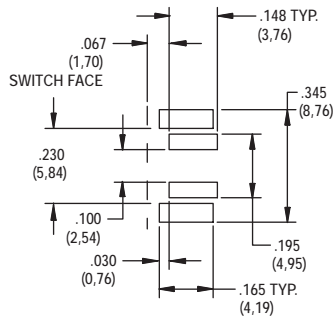
Dimensions shown in: mm (inch)
Specifications and dimensions subject to change



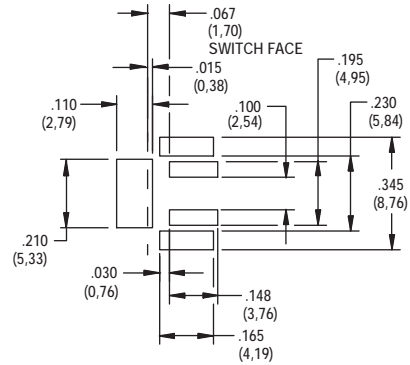
KT Series Right Angle Sealed Tact Switch

MOUNTING BRACKET

PAD LAYOUT
AM & A3M MOUNTING BRACKET



PAD LAYOUT
A1M & A2M MOUNTING BRACKET



ACTUATING FORCE

OPTION CODE	FORCE
3	3 N (300 grams)

CONTACT PLATING

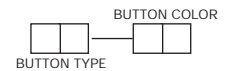
OPTION CODE	MATERIAL
4	SILVER
5	GOLD

BUTTON

BUTTON

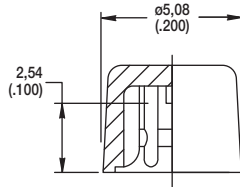
To order buttons in bulk

B T N K T 1 1

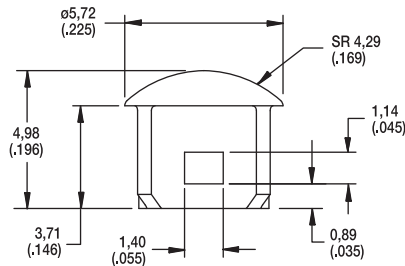


Button Type

02 PRESS FIT, Ø4 mm



03 SNAP FIT, HIGH TEMPERATURE, Ø8 mm



Button Color

OPTION CODE	BUTTON COLOR
90	BLACK
80	IVORY



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

www.ck-components.com

KST Series

Long Travel Tact Switch for SMT

Features/Benefits

- Rubber actuator
- Silver contact material
- J or G terminals
- Compatible with pick and place machines
- IP 40 sealed
- RoHS compliant and compatible

Typical Applications

- Front panel
- Car dashboards
- Telephone set
- Instrumentation



Specification

FUNCTION: Momentary
 CONTACT ARRANGEMENT: 1 make contact = SPST N.O.
 TERMINALS: J Bend or Gullwing type for SMT

Mechanical

MAXIMUM APPLIED FORCE: 40 N (400 grams)

Type	Operating force Fa N (grams)±30%	Operating life (operations)	Travel to make
KST221G / J	1,6-3,2	100,000	1,3+0,3/-0.2
KST241G / J	2,45-4,55	100,000	1,3+0,3/-0.2

Packaging

Switches are delivered on continuous tape and reels of 1,000 pieces, 330 (12.992) external diameter. Other dimensions according to EIA-RS-481 standard.

Electrical

	Silver	Gold
SWITCHING POWER MAX.:	1.0 VA	0.50 VA
MAXIMUM POWER:	0.2 VA	0.2 VA
MAXIMUM VOLTAGE:	32 VDC	32 VDC
MINIMUM VOLTAGE:	20 mV	20 mV
MAXIMUM CURRENT:	10 mA	10 mA
MINIMUM CURRENT:	1 mA	1 mA
DIELECTRIC STRENGTH (50 Hz, 1 min.):	> 250 V	
CONTACT RESISTANCE:	<100m Ω	
INSULATION RESISTANCE:	<10 ⁹ Ω	
BOUNCE TIME:	< 1 ms	

Environmental

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

Process

Compatible with the lead free soldering profile.

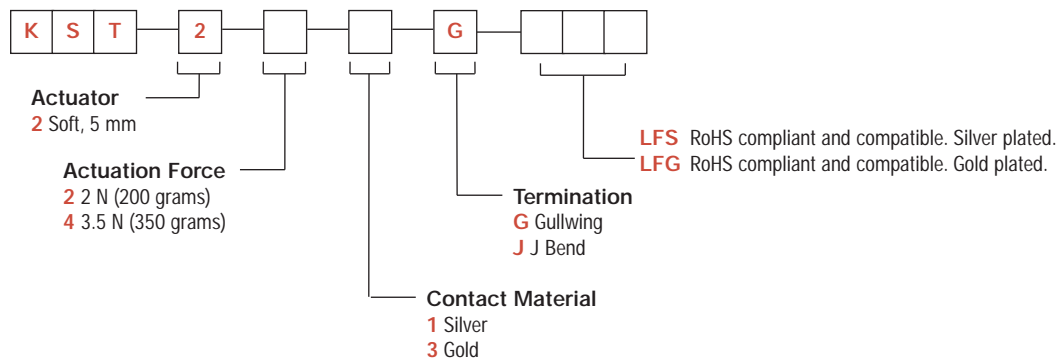
NOTE: Specifications listed above are for switches with standard options.
 For information on specific and custom switches, consult Customer Service Center.

How To Order

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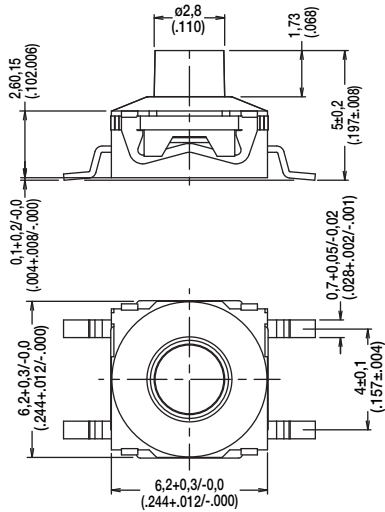
However, please note that all the combinations of these options are not feasible.

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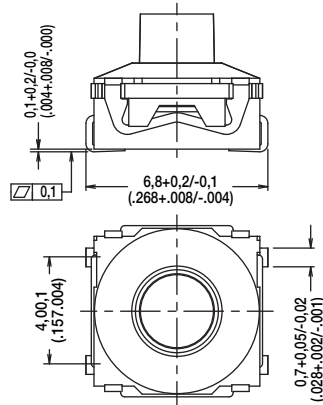


KST Series Long Travel Tact Switch for SMT

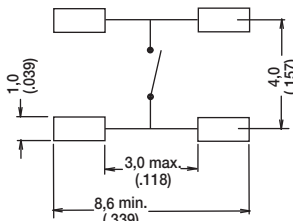
KST



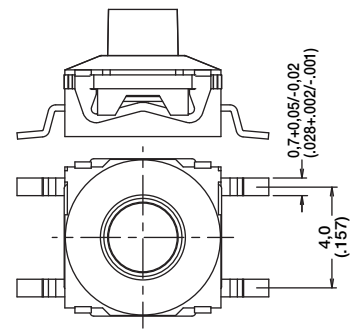
J J BEND



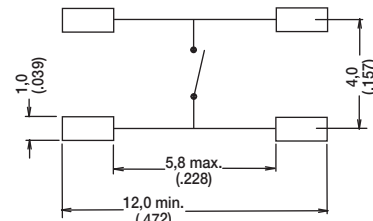
PAD LAYOUT



G GULLWING

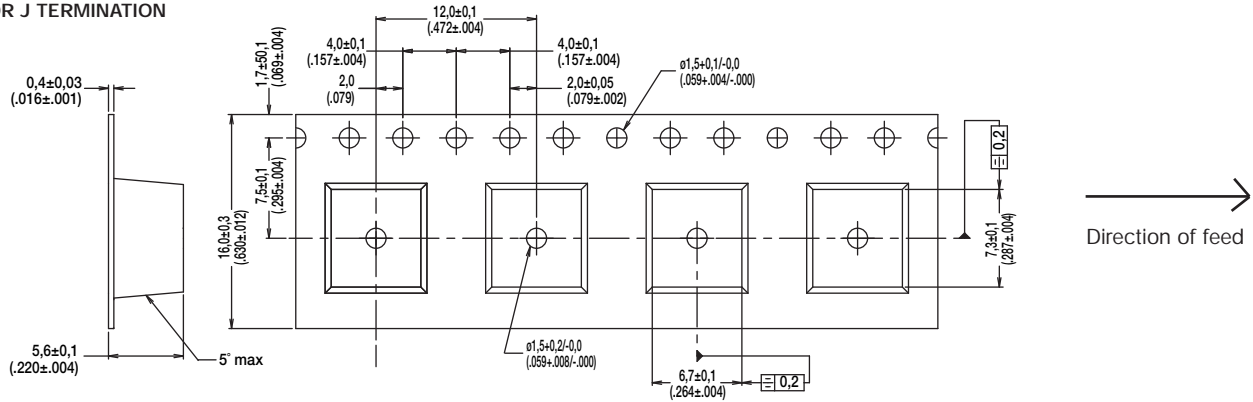


PAD LAYOUT

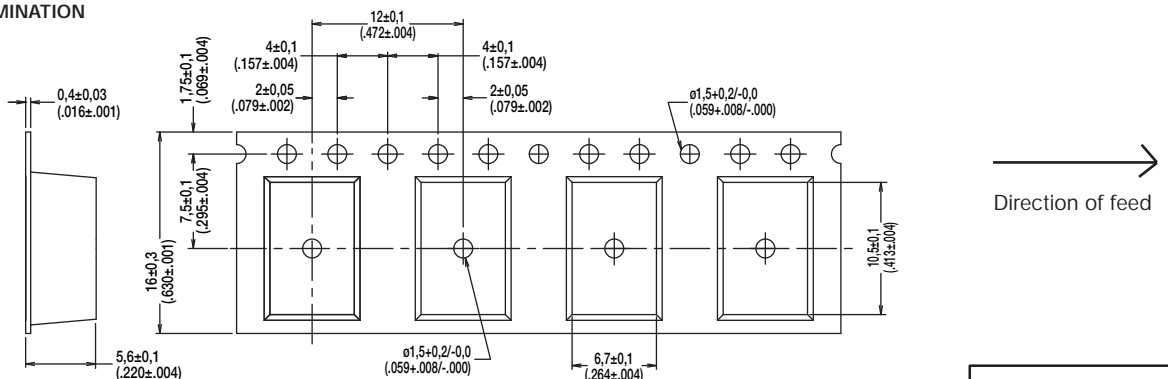


TAPE & REEL

FOR J TERMINATION



FOR G TERMINATION



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

www.ck-components.com

K5AT Lighted 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



Specification

FUNCTION: momentary action
 CONTACT ARRANGEMENT: Normally Open
 TERMINALS: SMT with positioning pegs as an option

Mechanical

Type	Operating force FA ¹ Newtons (grams)	Operating life (operations)	Travel (total travel) mm(mm)
K5AT WH 43GP	4.0 (400)	100,000	0,5 (0.8)

¹ Tolerances of operating force FA is ± 25%.

Packaging

900 pieces per reel
 Reel ø 380mm

Electrical

POWER MIN/MAX: 0.02VA / 1.0VA
 VOLTAGE MIN/MAX: 20mVdc – 32 Vdc
 CURRENT MIN/MAX: 0.1mA – 100mA
 CONTACT RESISTANCE: <100m Ω
 INSULATION RESISTANCE: >1G Ω initial, >10M Ω 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

Process

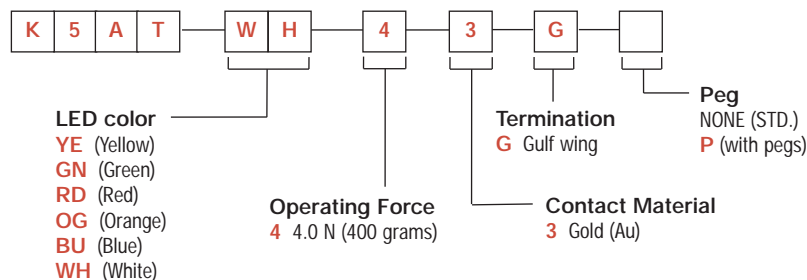
SOLDERING: Compatible with the lead free soldering profile.
 No washing

Materials

LEAD FREE
 CONTACTS: Au over Ni
 SOLDERING: Au over Ni
 HOUSING: Thermoplastic UL94 VO
 LED: type P-LCC-2

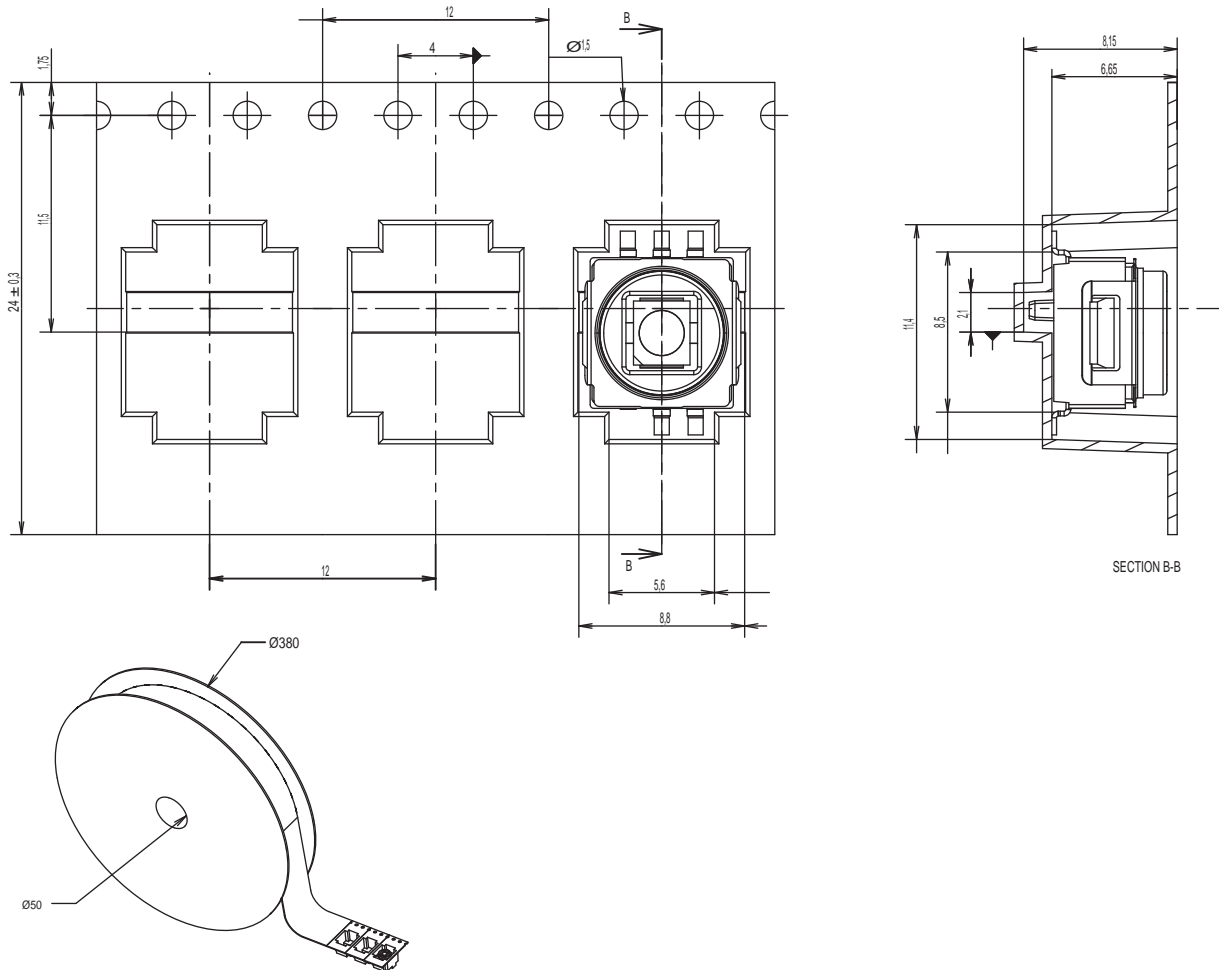
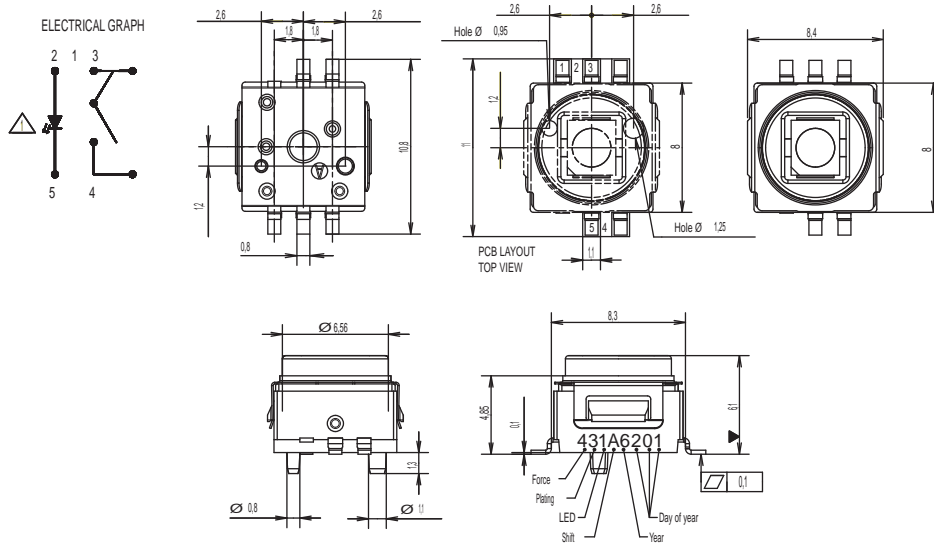
How To Order

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K5AT Lighted SMT Tact Switch

K5AT



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

www.ck-components.com

K5V

Right Angle Lighted SMT 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: SMT with positioning pegs

Mechanical

Type	Operating force FA ¹ Newtons (grams)	Operating life (operations)	Travel (total travel) mm(mm)
K5V1CL43G	4.0 (400)	25,000	1.2 (2.4)

¹ Tolerances of operating force FA is ± 25%.

Packaging

330 pieces per reel
 Reel ø 360mm

Electrical

POWER MIN/MAX: 0.02VA / 1.0VA
 VOLTAGE MIN/MAX: 20mVdc – 32 Vdc
 CURRENT MIN/MAX: 0.1mA – 100mA
 CONTACT RESISTANCE: <150m Ω
 INSULATION RESISTANCE: >1G Ω initial, >10M Ω 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 min

Process

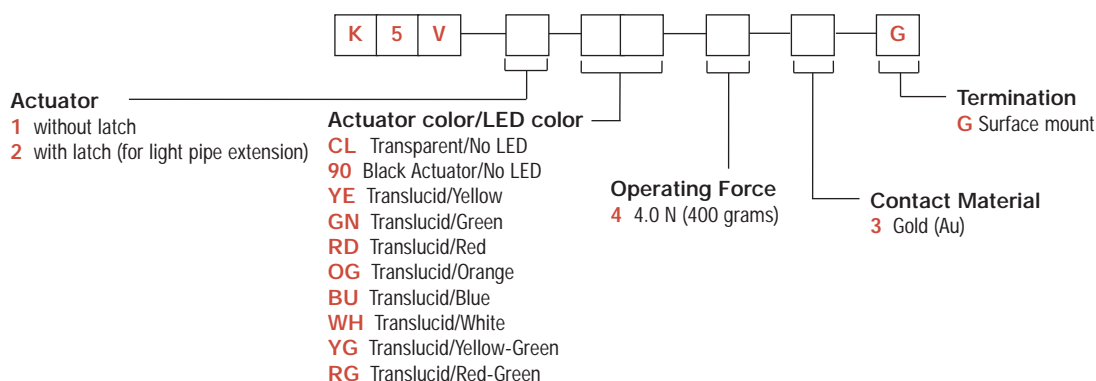
SOLDERING: Compatible with the lead free soldering profile.
 No washing

Materials

LEAD FREE
 CONTACTS: Au over Ni
 SOLDERING: Au over Ni
 HOUSING: Thermoplastic UL94 HB

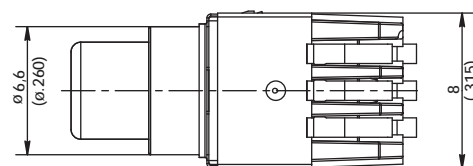
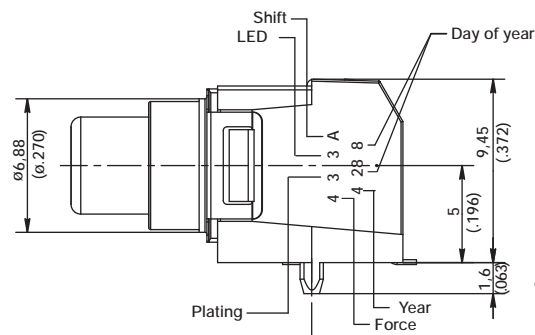
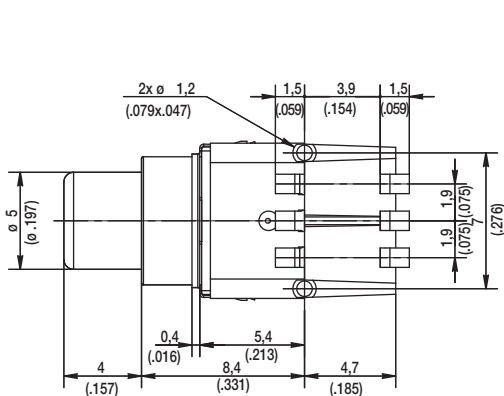
How To Order

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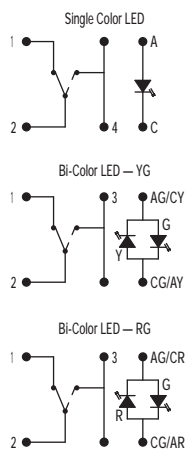


K5V Right Angle Lighted SMT Tact Switch

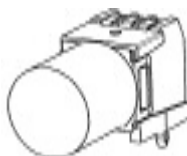
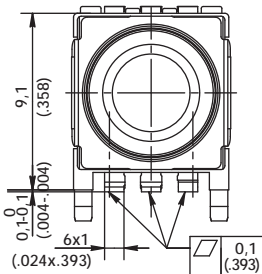
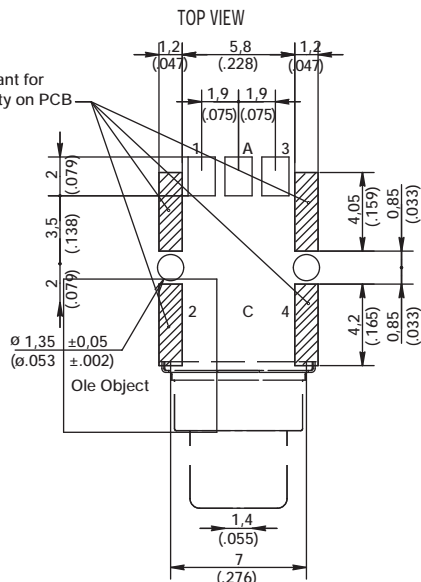
K5V SMT



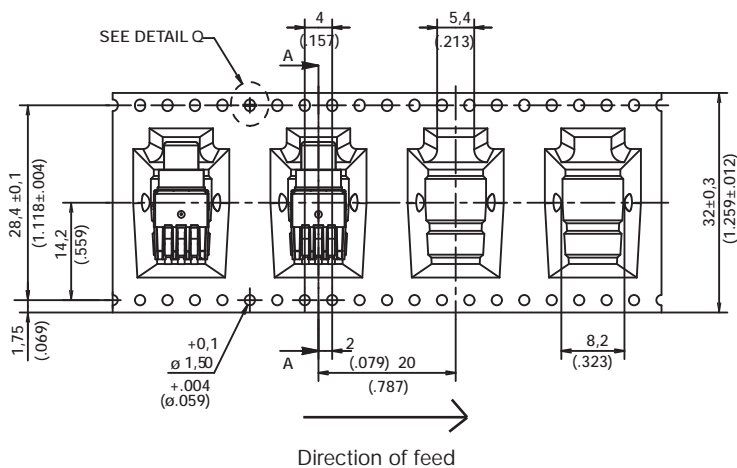
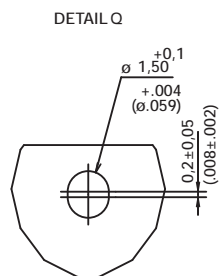
ELECTRICAL DIAGRAM



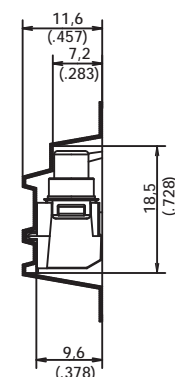
RECOMMENDED PCB LAYOUT



TAPE & REEL



COUPE A-A



K5V

Right Angle Lighted THT Tact Switch

Features

- Gold plated dome contact SPST/SPDT
- Excellent ergonomics
- High bright LEDs
- Reduced space usage on board
- 40 N overload
- 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: Through hole terminals with positioning pegs.
 Terminals keying in option

Electrical

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

Mechanical

Type	Operating force FA ¹ Newtons (grams)	Operating life (operations)	Travel (total travel) mm(mm)
K5V1CL43T	4.0 (400)	25,000	1.2 (2.4)

¹Tolerances of operating force FA is ± 25%.

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 min

Packaging

60 pieces per tray
 300 pieces per box

Process

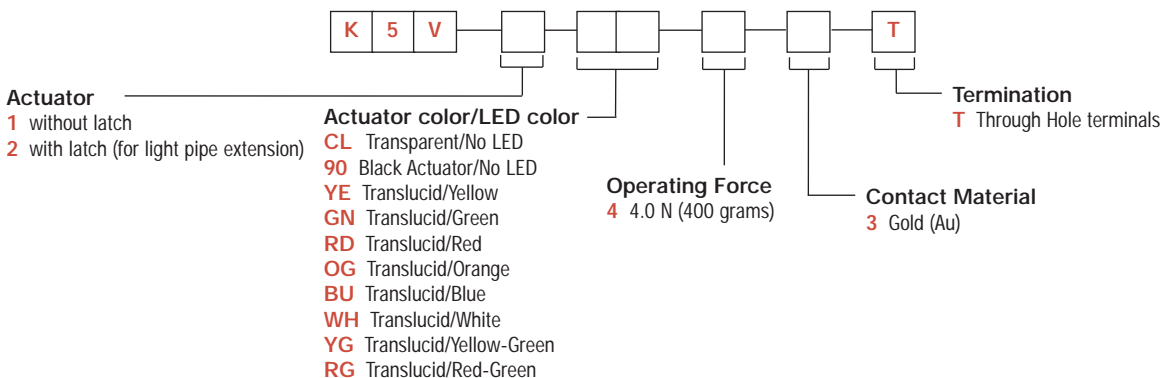
SOLDERING: Compatible with the lead free soldering profile.

Materials

LEAD FREE
 CONTACTS: Au over Ni
 SOLDERING: Au over Ni
 HOUSING: Thermoplastic UL94 HB

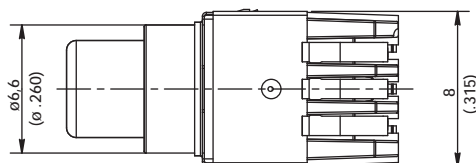
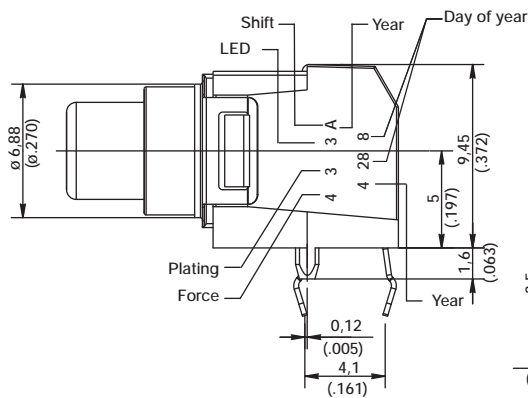
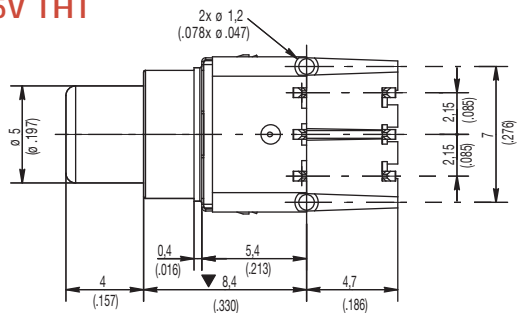
How To Order

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.

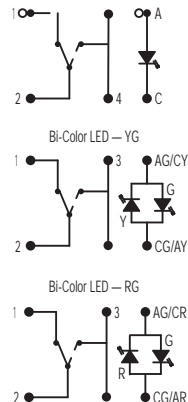


K5V Right Angle Lighted THT Tact Switch

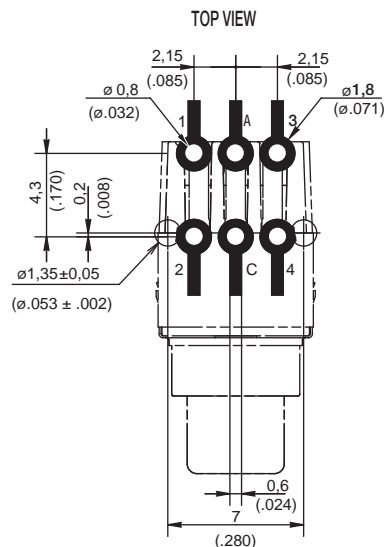
K5V THT



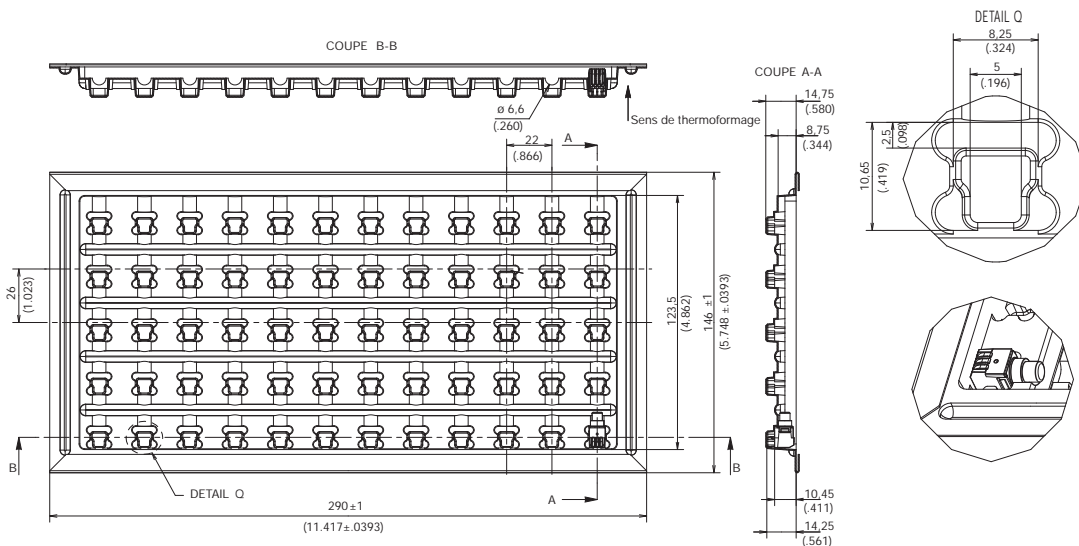
ELECTRICAL DIAGRAM



RECOMMENDED PCB LAYOUT (WITH HOLES)



TRAY



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

www.ck-components.com

K5V Panel Mount Lighted Tact Switch

Features

- Gold plated dome contact SPST/SPDT
- Excellent ergonomics
- High bright leds
- Reduced space usage on panel
- 40 N overload
- RoHS compliant

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
 BACKLIGHTING: high bright LED, independent terminals
 TERMINALS: Solder terminals with wire holes 1.3 x 0.6mm

Electrical

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

Mechanical

Type	Operating force FA ¹ Newtons (grams)	Operating life (operations)	Travel (total travel) mm(mm)
K5V1CL43P	4.0 (400)	25,000	1.2 (2.4)

¹ Tolerances of operating force FA is ± 25%.

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 min

Packaging

60 pieces per tray
 300 pieces per box

Process

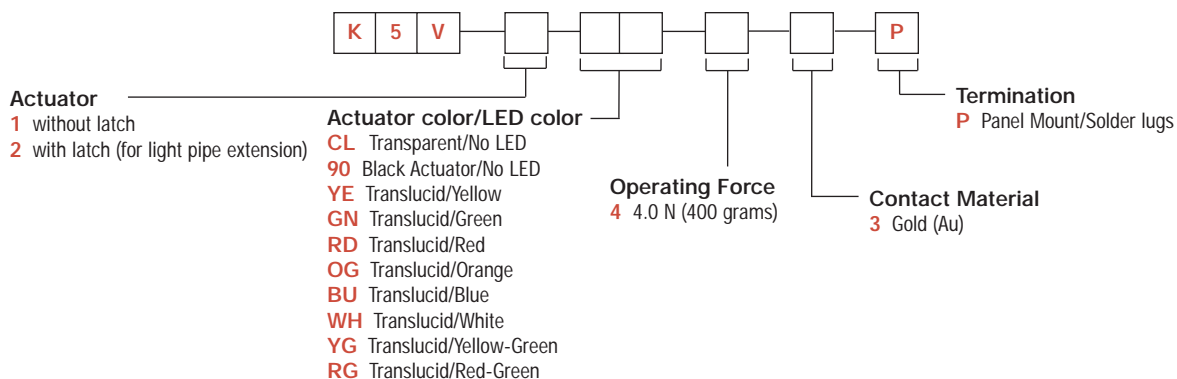
SOLDERING: Low wattage soldering iron (25-50 watts max).
 Solder time 3 seconds max. No washing.

Materials

LEAD FREE
 CONTACTS: Au over Ni
 SOLDERING: Au over Ni
 HOUSING: Thermoplastic UL94 HB

How To Order

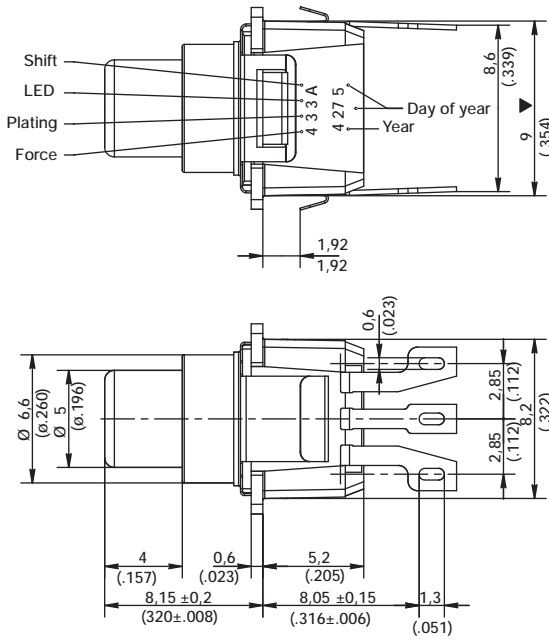
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and and place it in the appropriate box.



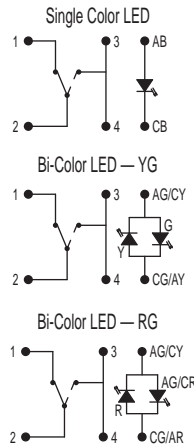
K5V Panel Mount Lighted Tact Switch

K5V PM

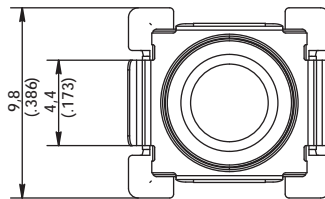
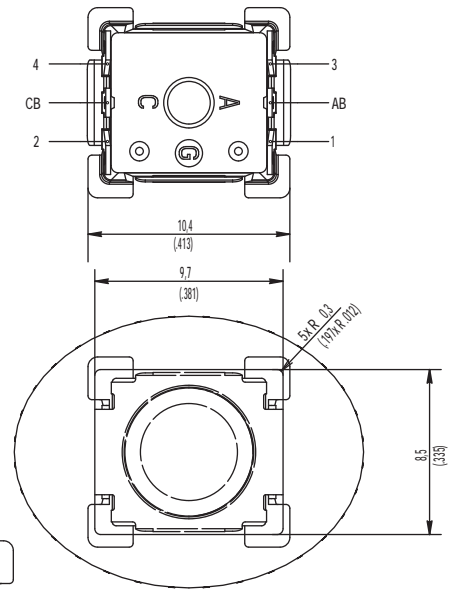
PRODUCT IDENTIFICATION AND DATE CODES



ELECTRICAL DIAGRAM

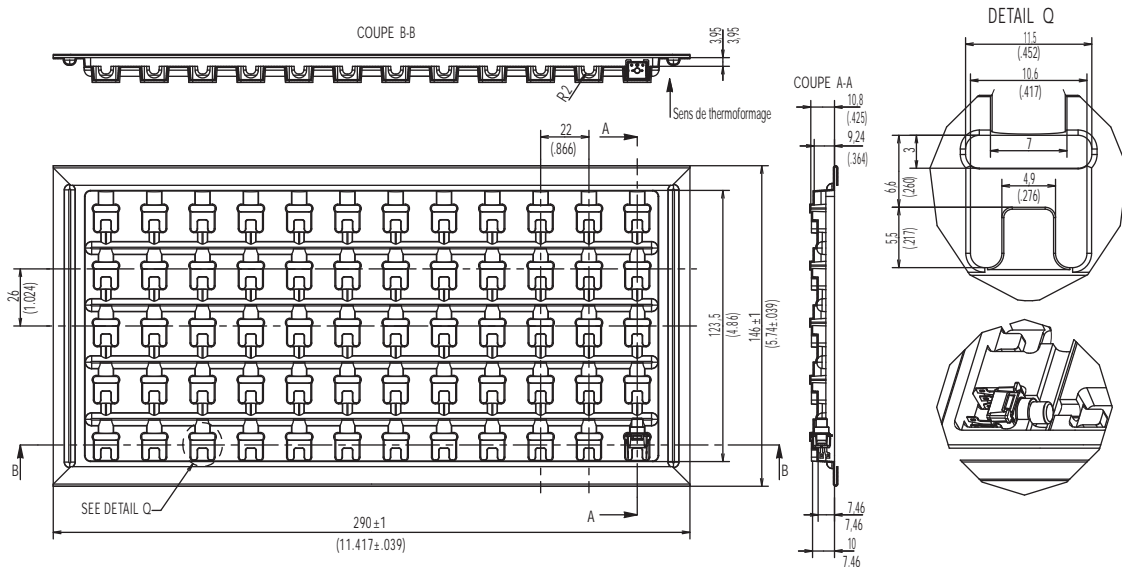


TERMINAL REFERENCES



TRAY

SUITABLE FOR PANEL THICKNESS OF 1.8MM MAX



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

www.ck-components.com

KSB & KSF Series Low-profile Tact Switch



Features/Benefits

- Low profile
- Protected against flux
- KSB without top sealing
- KSF with top sealing
- RoHS compliant and compatible

Typical Applications

- Low profile keyboards
- Instrumentation
- Industrial control
- Medical
- Military

Specification

CONTACT ARRANGEMENT: SPST, N.O.
DOUBLE OVERMOLDING ON TERMINAL
MEMBRANE SEALING
TERMINALS: PC pins

Mechanical

Type	Actuation force Newtons (grams)	Operating life (operations)
KSB0M110	1,2 - 2	100,000
KSB0M410	2,25 - 3,75	500,000
KSF0M210	1.3 (130)	100,000
KSF0M310	1.6 (160)	500,000
KSF0M410	3.0 (300)	100,000
KSF0M510	5.0 (500)	100,000
KSF0M910	3.0 (300)	500,000

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

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.):	300 Vrms	
CONTACT RESISTANCE: KSF 100 m Ω; KSB 100 m Ω		
INSULATION RESISTANCE (100 V):	≤ 10 ⁹ Ω	
BOUNCE TIME:	1 ms	

Environmental

	Silver	Gold
OPERATING TEMPERATURE:	-40°C to 90°C	-40°C to 125°C
STORAGE TEMPERATURE:	-40°C to 90°C	-55°C to 125°C

Process

Wave soldering compatible with lead free soldering profile.

Packaging

KSF can be delivered in tubes of 65 pieces for automatic insertion.
KSB in boxes of 500 pieces for manual insertion.

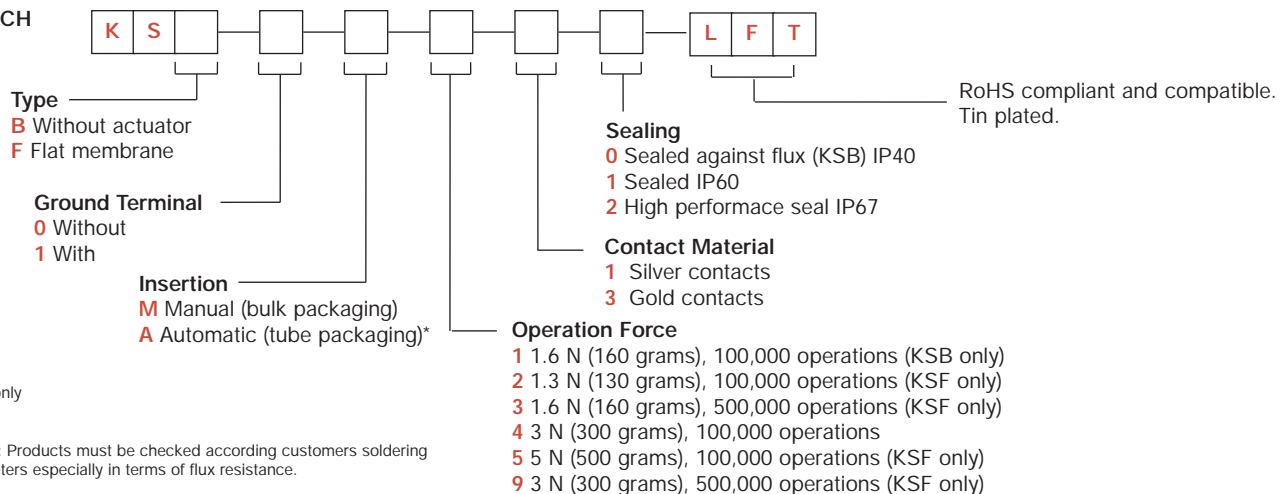
How To Order

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.

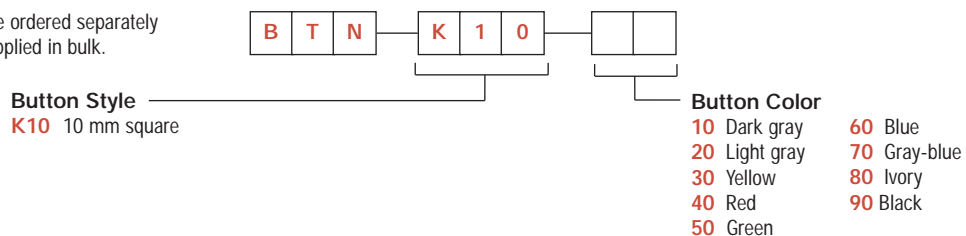
SWITCH



* KSF only

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

BUTTON for KSF Button must be ordered separately and will be supplied in bulk.



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

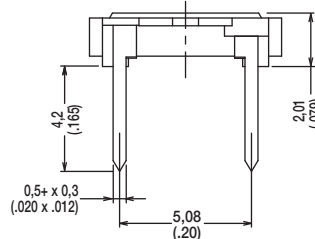
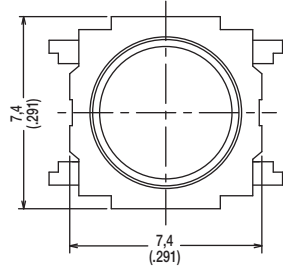
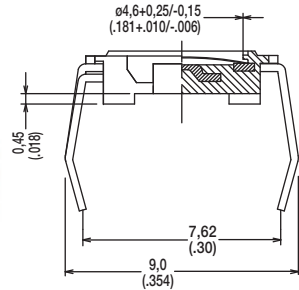
www.ck-components.com

KSB & KSF Series Low-profile Tact Switch

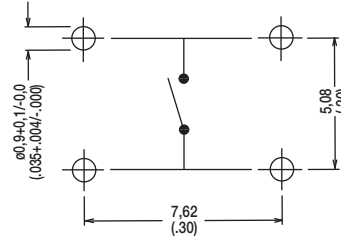
KSB



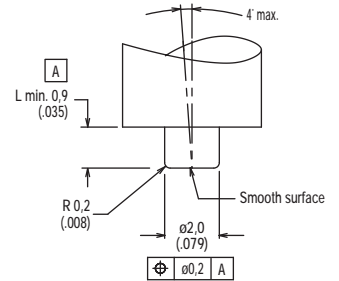
KSB0M110



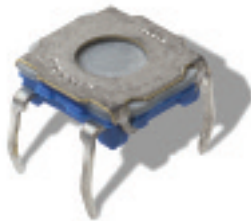
PCB LAYOUT



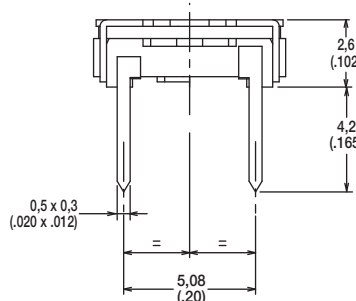
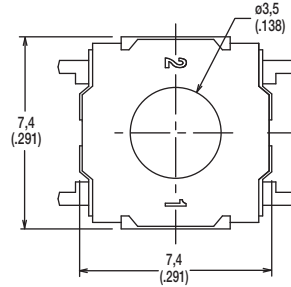
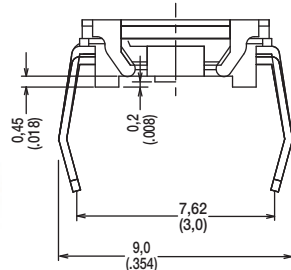
RECOMMENDED SHAPE OF ACTUATOR



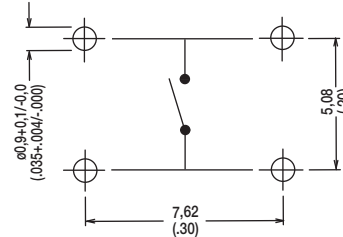
KSF



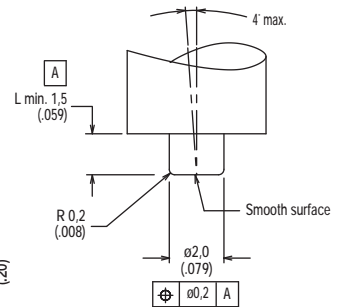
KSF0M111



PCB LAYOUT

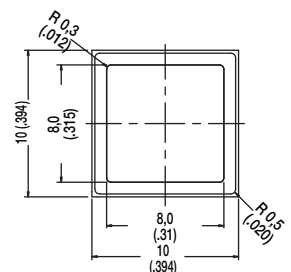
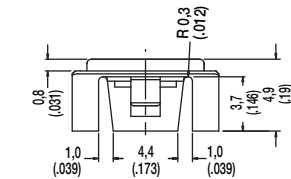
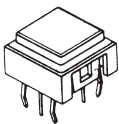


RECOMMENDED SHAPE OF ACTUATOR



BUTTON

K10 BUTTON FOR KSF ONLY Button must be ordered separately and will be supplied in bulk.



First Angle
Projection

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
MEMBRANE SEALING
TERMINALS: PC pins, ground pin optional

Mechanical

Type	Actuation force N (grams)	Operating life (operations)	Travel to make
KSA0M211	1 - 1,8	100,000	0,5 ± 0,2
KSA0M311	1 - 1,8	1,000,000	0,5 ± 0,2
KSA0M411	2,25 - 3,75	100,000	0,6 ± 0,2
KSA0M511	4,2 - 7,0	100,000	0,7 ± 0,2
KSA0M911	2,25 - 3,75	500,000	0,6 ± 0,2
KSL0M211	1 - 1,8	100,000	0,5 ± 0,2
KSL0M311	1 - 1,8	1,000,000	0,5 ± 0,2
KSL0M411	2,25 - 3,75	100,000	0,6 ± 0,2
KSL0M511	4,2 - 7	100,000	0,7 ± 0,2
KSL0M911	2,25 - 3,75	500,000	0,6 ± 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: 300 Vrms		
CONTACT RESISTANCE: < 100m Ω		
INSULATION RESISTANCE (100 V): > 10 ⁹ Ω		
BOUNCE TIME: < 1 ms		

Environmental

	Silver	Gold
OPERATING TEMPERATURE:	-40°C to 90°C	-40°C to 125°C
STORAGE TEMPERATURE:	-40°C to 90°C	-55°C to 125°C

Process

Wave soldering compatible with lead free soldering profile.

Packaging

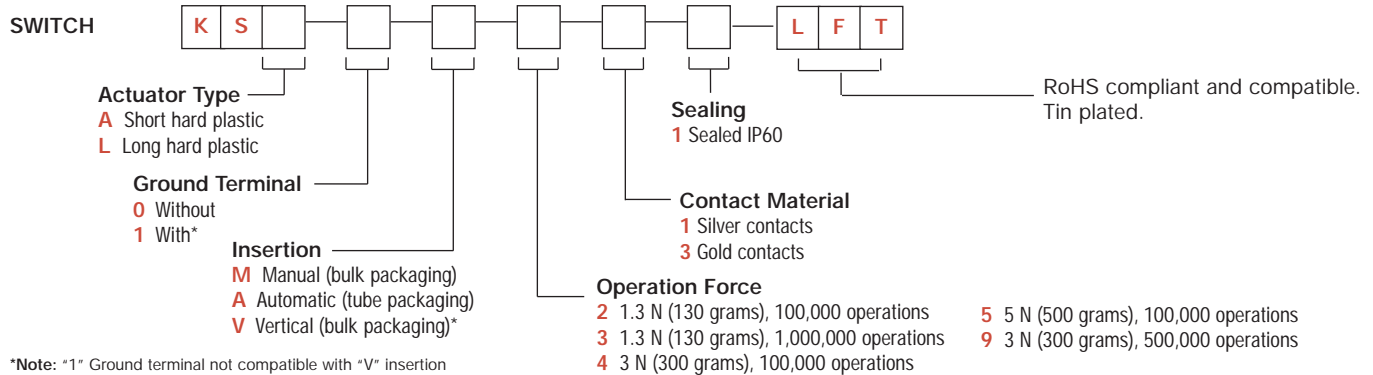
Can be delivered in tubes of 65 pieces for automatic insertion or in boxes of 500 pieces for manual insertion (250 pieces for KSL, KSLV, KSAV).

How To Order

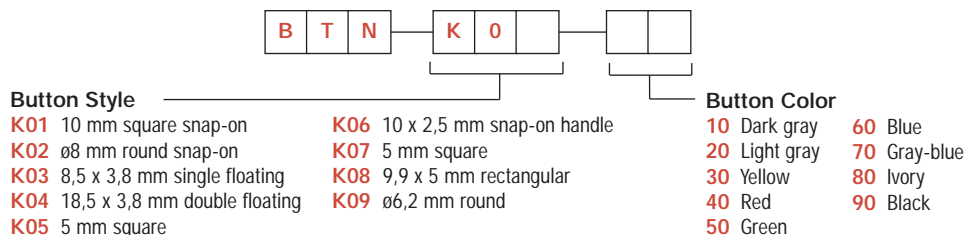
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

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.



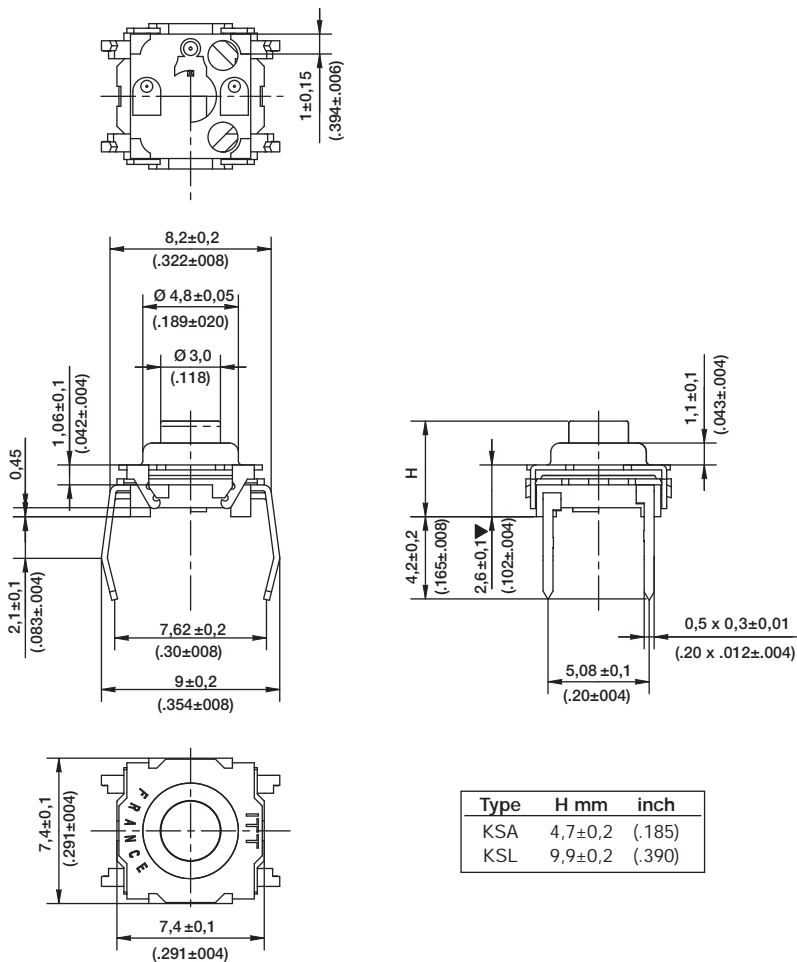
BUTTONS Buttons must be ordered separately and will be supplied in bulk.



*NOTE: Please note that all buttons are not RoHS compliant. Please check the compliance with your ITT sales representative.

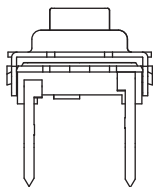
ACTUATOR TYPE

KSA & KSL

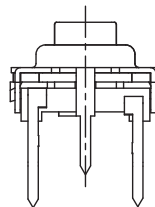


GROUND TERMINAL

0 WITHOUT



1* WITH



*Not compatible with "V" insertion

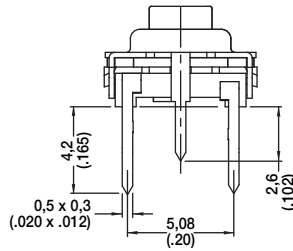
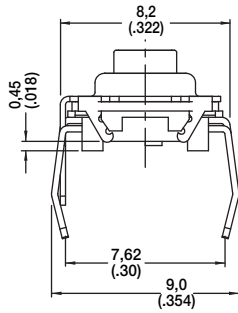


First Angle
Projection

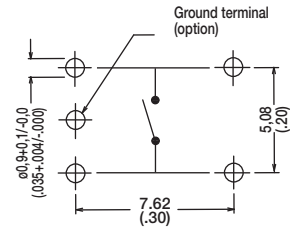
KSA & KSL Series Sealed Tact Switch

INSERTION

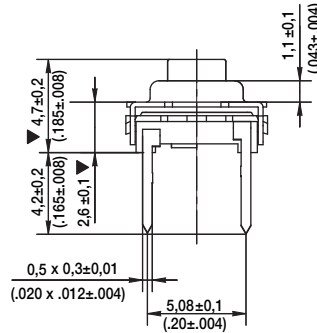
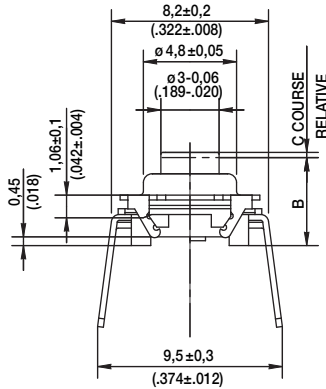
M MANUAL (BULK PACKAGING)



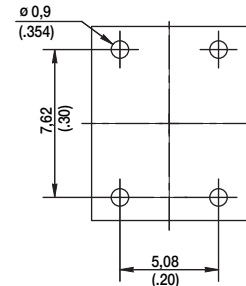
PCB LAYOUT



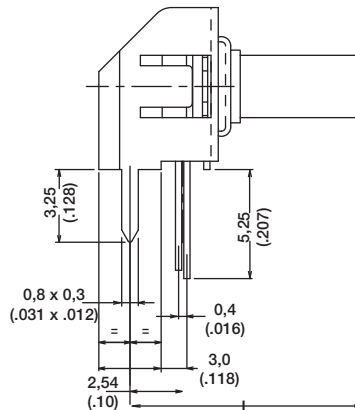
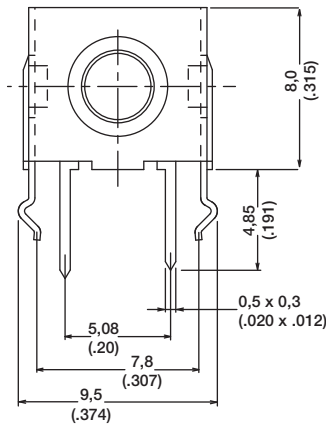
A AUTOMATIC (TUBE PACKAGING, 65 PIECES PER TUBE)



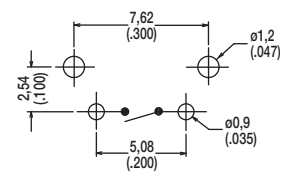
PCB LAYOUT



V VERTICAL



PCB LAYOUT



DIMENSION L

Type	L mm	inch
KSA0V	5,8	.228
KSL0V	11,1	.437

OPERATING FORCE

OPTION CODE	OPERATING FORCE
2	1.3 N (130 grams) 100,000 operations
3	1.3 N (130 grams) 1,000,000 operations
4	3.0 N (300 grams) 100,000 operations
5	5.0 N (500 grams) 100,000 operations
9	3.0 N (300 grams) 500,000 operations



First Angle
Projection

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

www.ck-components.com



CONTACT MATERIAL



OPTION CODE	CONTACT MATERIAL
1	Silver contacts
3	Gold contacts

SEALING



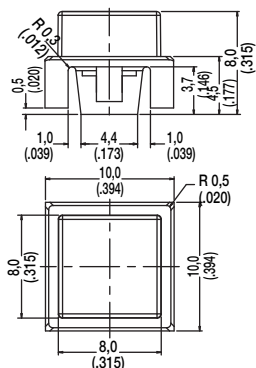
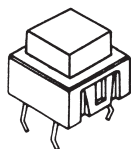
OPTION CODE	SEALING
0	Sealed against flux
1	Totally sealed

BUTTONS

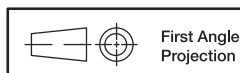
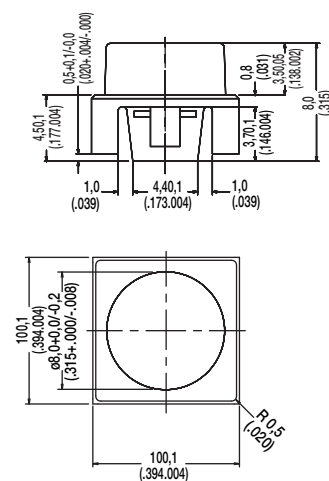
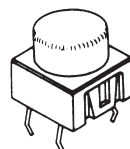
Buttons must be ordered separately and will be supplied in bulk.

BUTTON TYPE	KSA	KSL	KSAV	KSLV
K01	X			
K02	X			
K03	X	X	X	X
K04	X	X	X	X
K05		X		X
K06	X			
K07		X		X
K08		X		X
K09		X		X

K01



K02



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

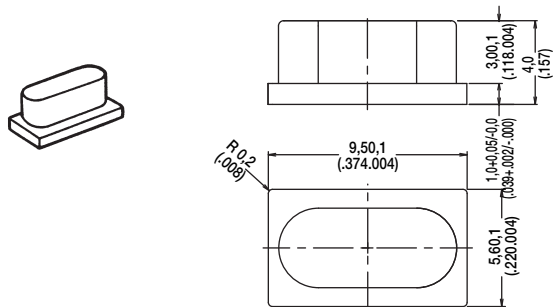
KSA & KSL Series Sealed Tact Switch



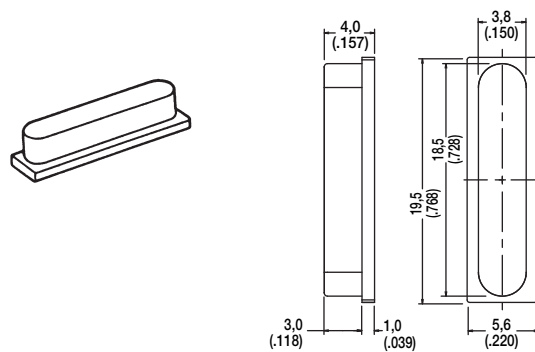
Tactile Switches

B

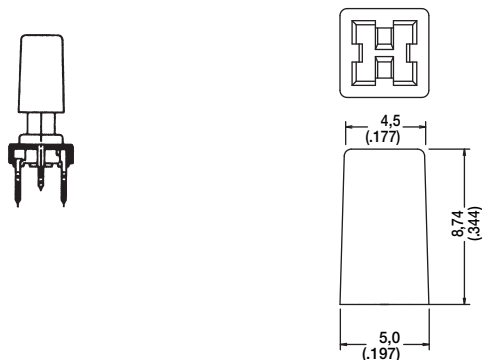
K03



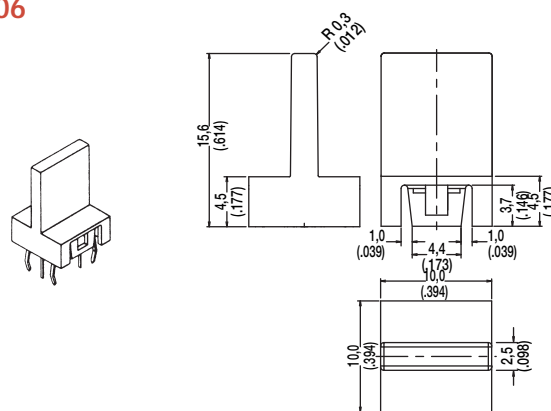
K04



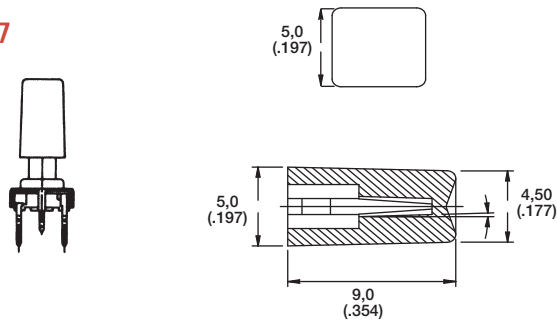
K05



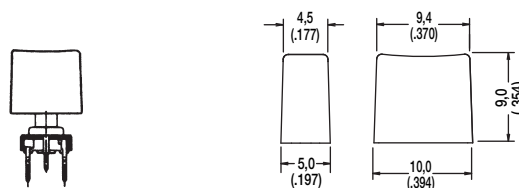
K06



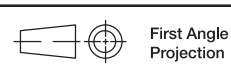
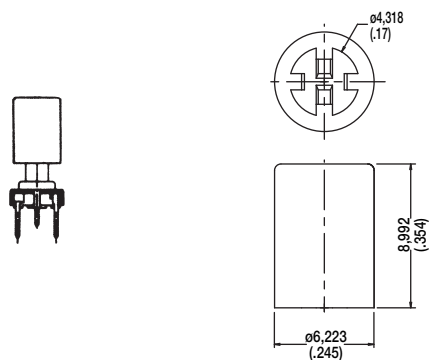
K07



K08



K09



First Angle
Projection

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



www.ck-components.com

KSA & KSL MKII Series High Performance Sealed Tact Switch

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 (IP 65)
- Up to 1M operations
- RoHS compliant and compatible

Typical Applications

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



B

Tactile Switches

Specification

CONTACT ARRANGEMENT: SPST, N.O.
TERMINALS: PC pins
Double overmold on terminals

Mechanical

Type	Actuation force N (grams)	Operating life (operations)	Travel to make
KSA0M212	1,0 - 1,65	100,000	0,5 ± 0,15
KSA0M312	1,0 - 1,65	1,000,000	0,5 ± 0,15
KSA0M412	2,75 - 3,75	100,000	0,6 ± 0,25
KSA0M512	3,75 - 6,25	100,000	0,7 ± 0,25
KSA0M912	2,25 - 3,75	500,000	0,6 ± 0,25

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)

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: 300 Vrms		
CONTACT RESISTANCE: < 100m Ω		
INSULATION RESISTANCE (100 V): > 10 ⁹ Ω		
BOUNCE TIME: 1 ms		

Environmental

	Silver	Gold
OPERATING TEMPERATURE:	-40°C to 90°C	-40°C to 125°C
STORAGE TEMPERATURE:	-40°C to 90°C	-55°C to 125°C

Process

Wave soldering compatible with lead free soldering profile.

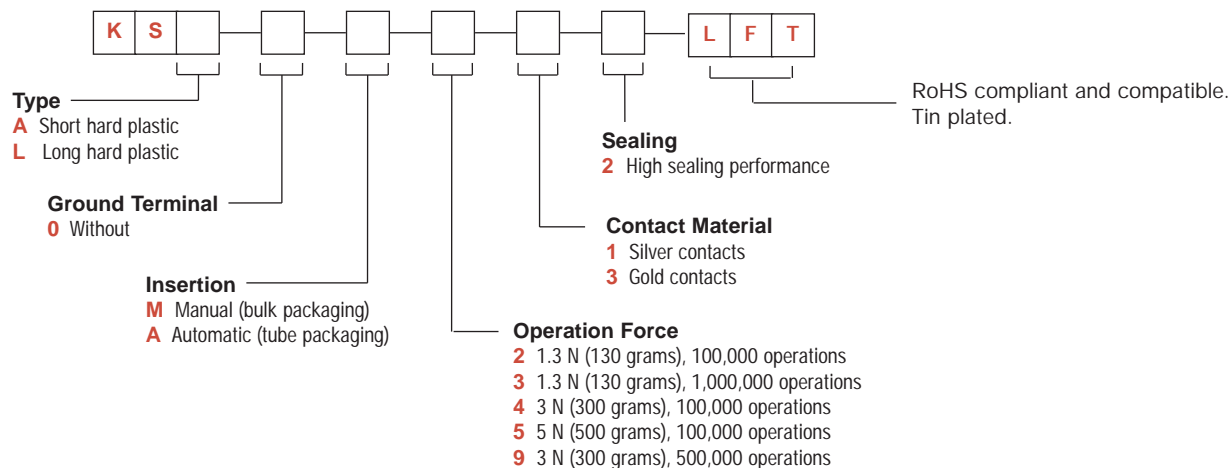
NOTE: Specifications listed above are for switches with standard options.
For information on specific and custom switches, consult Customer Service Center.

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.



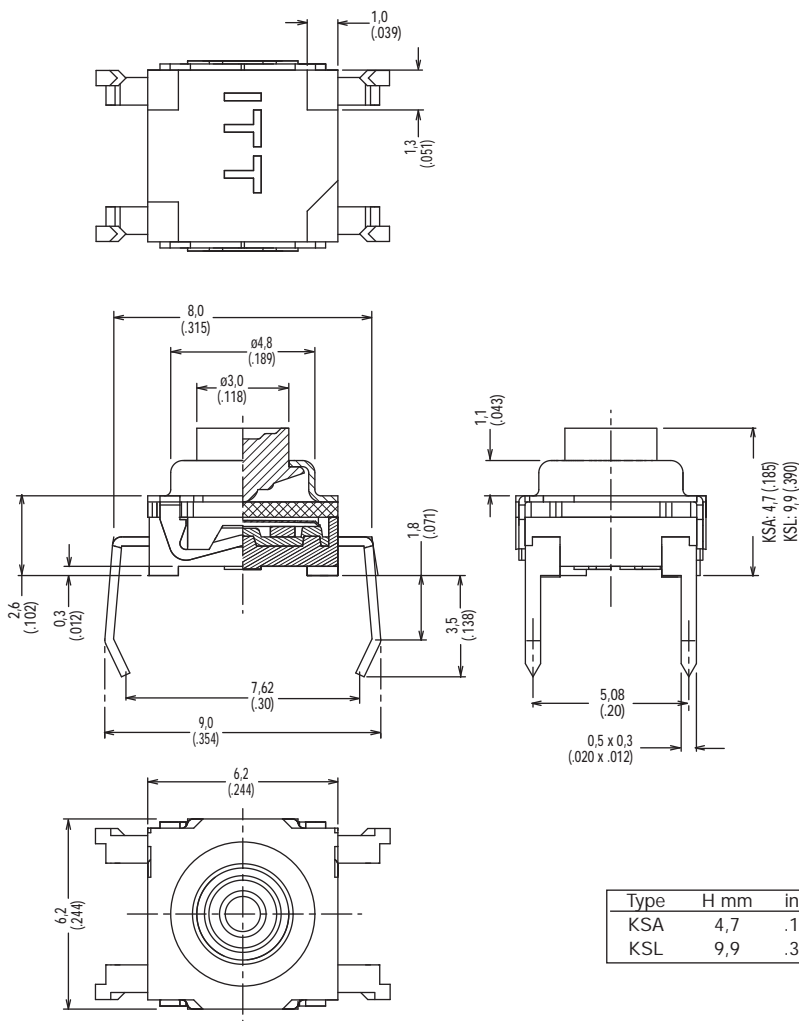
KSA & KSL MKII Series High Performance Sealed Tact Switch

TYPE

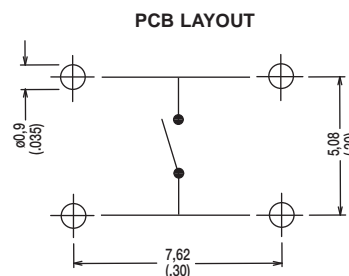
KSA & KSL MANUAL (BULK PACKAGING) DRAWING SHOWN

B

Tactile Switches



KSA0M112



Type	H mm	inch
KSA	4,7	.185
KSL	9,9	.390



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

www.ck-components.com

KSI Series Sealed Tact Switches



Features/Benefits

- Long and soft actuator
- Distinctive tactile feel
- 1.1 & 3 N actuation force
- Ground terminal optional
- RoHS compliant and compatible

Typical Applications

- Automotive
- Automation
- Door entry systems
- Remote controls

Specification

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

Mechanical

Type	Actuation force N (grams)	Operating life (operations)	Travel to make
KSI0M011	1.1 (110)	500,000	0,4 ± 0,15
KSI0M411	3.0 (300)	100,000	1,1 ± 0,2
KSI0V211	2.0 (200)	300,000	0,8 ± 0,2
KSI0V411	3.0 (400)	100,000	1,1 ± 0,2

Durometer for silicone actuator is 50 shore

Packaging

Delivered in boxes of 500 pieces (M version) or 250 pieces (V version).

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

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.):	300 Vrms	
CONTACT RESISTANCE:	< 50 mΩ	
INSULATION RESISTANCE (100V):	> 10 ¹¹ Ω	
BOUNCE TIME:	< 1 ms	

Environmental

	Silver	Gold
OPERATING TEMPERATURE:	-40°C to 90°C	-40°C to 125°C
STORAGE TEMPERATURE:	-40°C to 90°C	-55°C to 125°C

Process

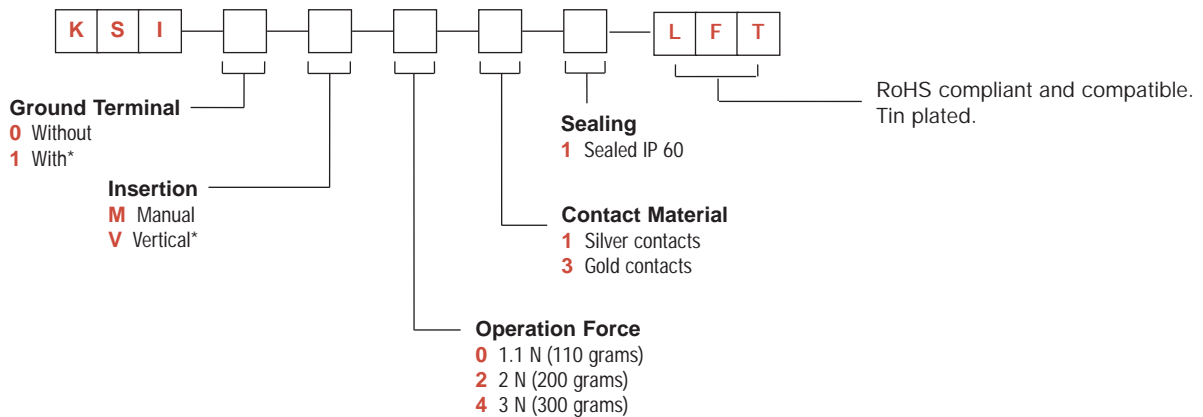
Wave soldering, compatible with lead free soldering profile.

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.



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

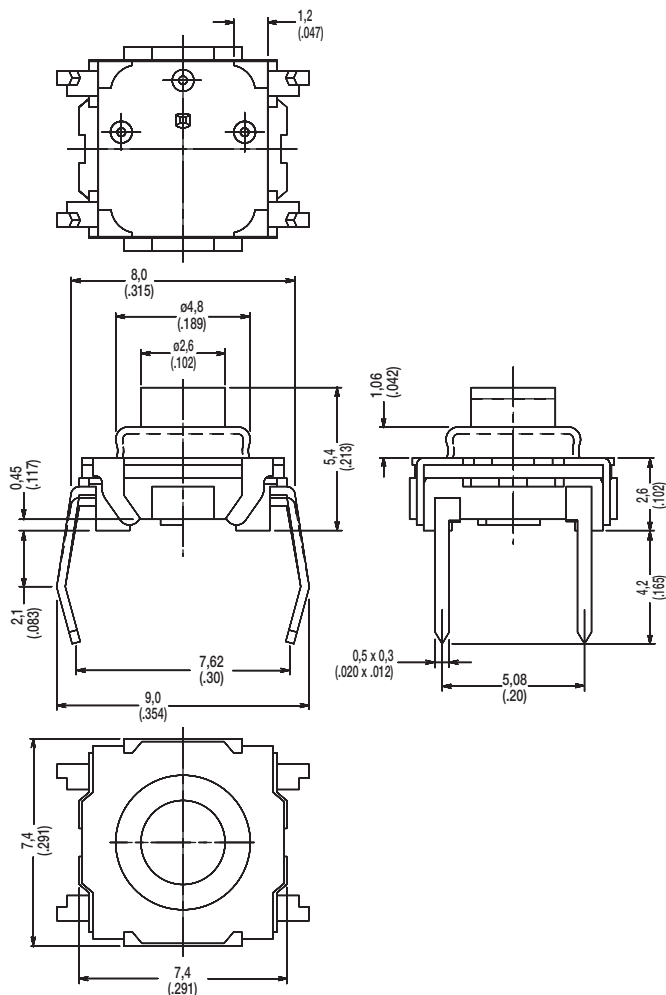
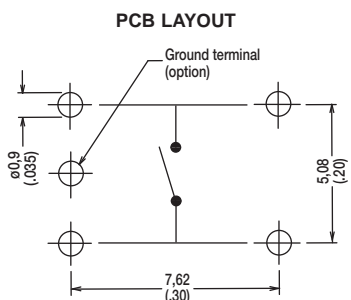
KSI Series Sealed Tact Switches

KSI

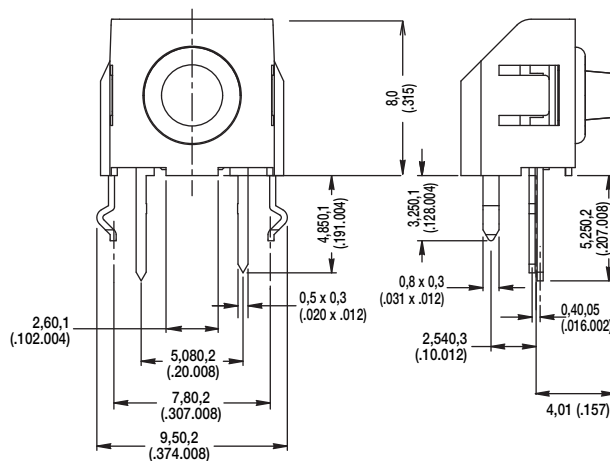
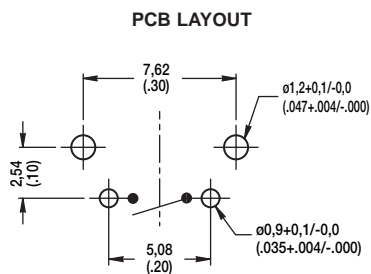
M MANUAL

B

Tactile Switches



V VERTICAL



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

www.ck-components.com

KSJ Series Spherical Actuator Tact Switches

Features/Benefits

- Spherical actuator allows actuation force off center $\pm 30^\circ$ with regard to vertical
- Total travel 1.2 mm
- Sealed against flux
- RoHS compliant and compatible

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

Environmental

	Silver	Gold
OPERATING TEMPERATURE:	-40°C to 90°C	-40°C to 125°C
STORAGE TEMPERATURE:	-40°C to 90°C	-55°C to 125°C

Packaging

Delivered in boxes of 500 pieces.

Mechanical

Type	Actuation force N (grams)	Operating life (operations) axial	Operating life (operations) radial	Travel to make
KSJ0M21160SH	1,5 - 2,5	100,000	30,000	0,7 \pm 0,25
KSJ0M41180SH	2,25 - 3,75	100,000	30,000	0,55 \pm 0,25

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	50 mA
MINIMUM CURRENT:	1 mA	1 mA

DIELECTRIC STRENGTH (50 Hz, 1 min.): ≥ 300 Vrms
 CONTACT RESISTANCE: ≤ 100 mOhms
 INSULATION RESISTANCE (100V): $> 10^9$ ohms
 BOUNCE TIME: < 1 ms

Process

Wave soldering, compatible with lead free soldering profile.

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

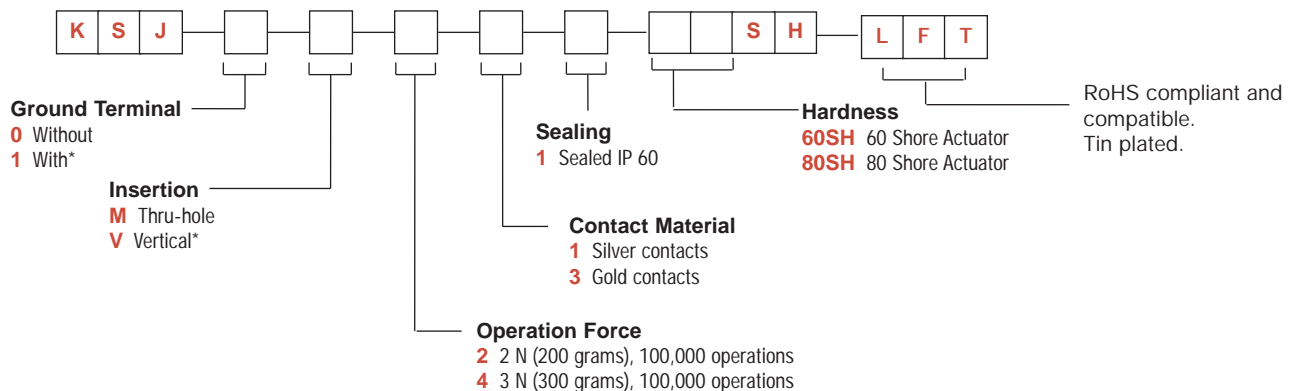
* Please contact your ITT representative for any question regarding the product integration.

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.

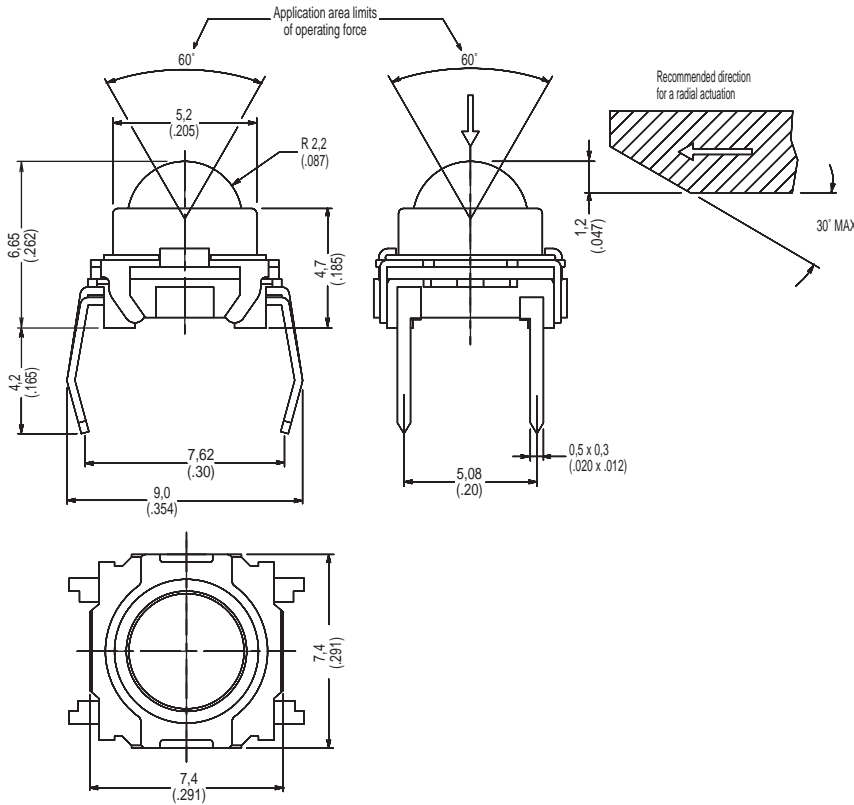
For any part number different from those listed in the table above, please consult your local representative.



*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

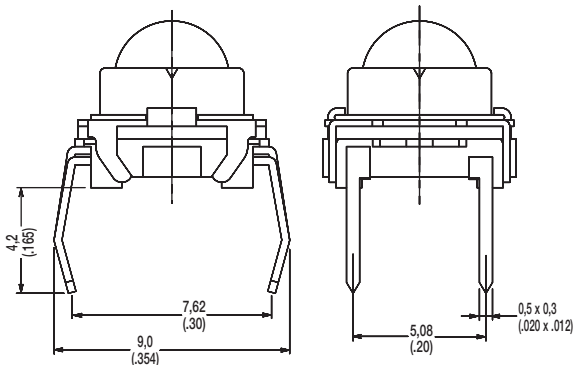


KSJ0M211

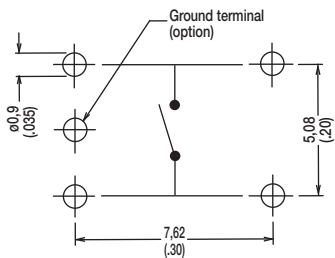
Tactile Switches

INSERTION

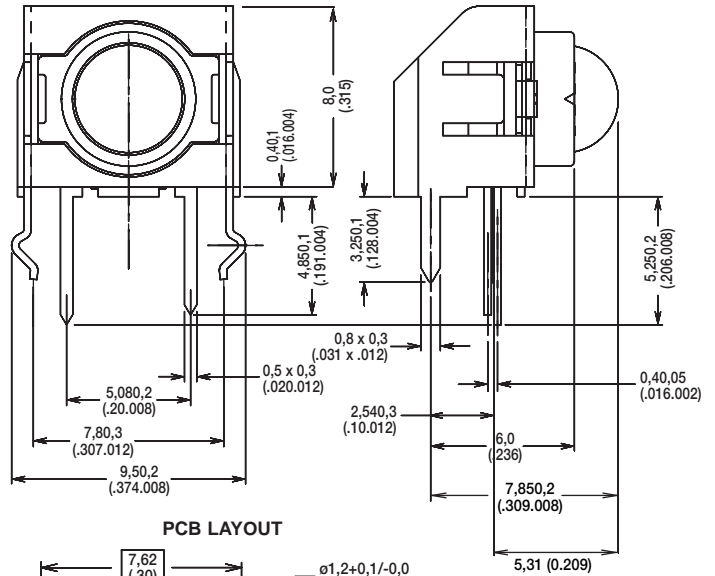
M THRU-HOLE



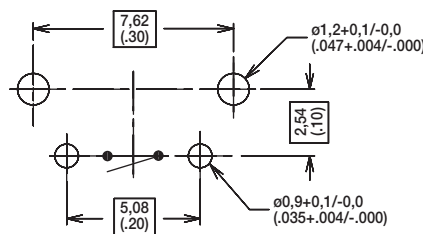
PCB LAYOUT



V VERTICAL



PCB LAYOUT



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

www.ck-components.com

PTS635 Series 3,5 mm Tact Switches



Features/Benefits

- Compact size 6 x 3.5 mm
- Variety of switch heights
- 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

ACTUATION FORCE: PTS635L models: 130 grams.
PTS635H models: 200 grams.
LIFE EXPECTANCY: 20,000 operations.

Electrical

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

Environmental

OPERATING TEMPERATURE: -40°C to 60°C

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

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.

Materials

BASE: 6/6 nylon or glass filled polyester (PBT) (UL 94V-0).
ACTUATOR: 6/6 nylon or polyacetal (UL 94HB).
COVER PLATE: PTS635S and PTS635V models: Tin plated stainless steel
DOME CONTACTS: Phosphor bronze, silver clad.
STATIONARY CONTACTS: Brass, silver plated.
TERMINALS: Brass, silver plated. Insert molded.

Packaging

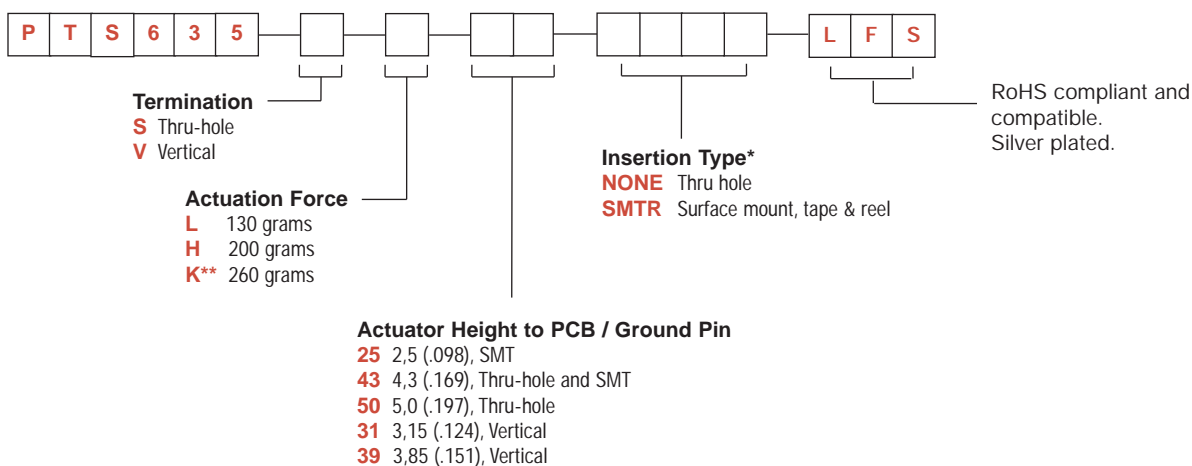
Bulk packaging.

Tape & reel for:

PTS635Sx43SMTR, 1700 pcs per reel
PTS635Sx25SMTR, 3000 pcs 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.



* SM and SMTR only available with PTS635 43 and 25 actuator options.

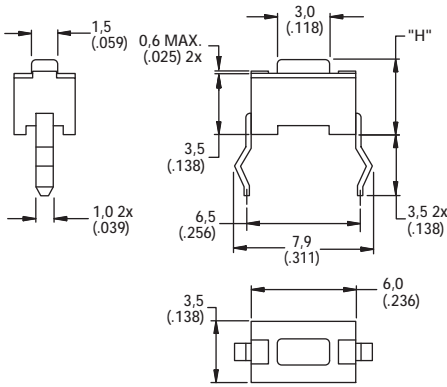
** Only for the PTS635Sx25SMTR.

PTS635 Series

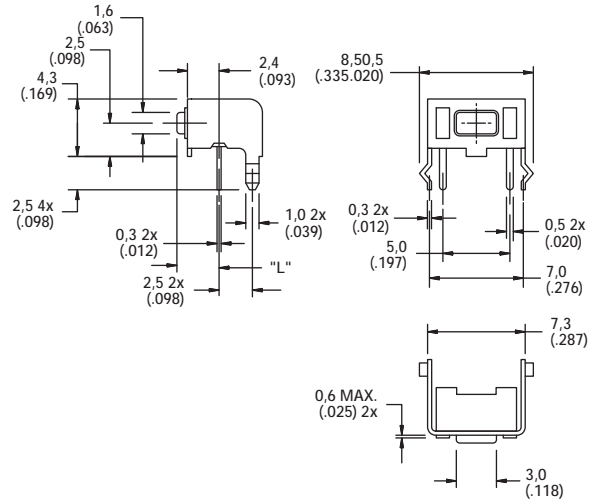
3,5 mm Tact Switches

SERIES

PTS635

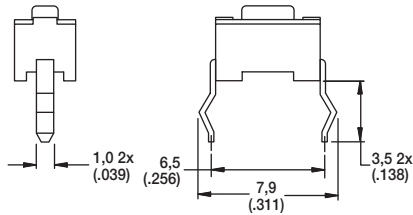


PTS635S Model

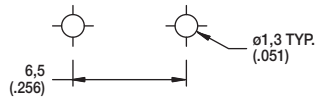


TERMINATION

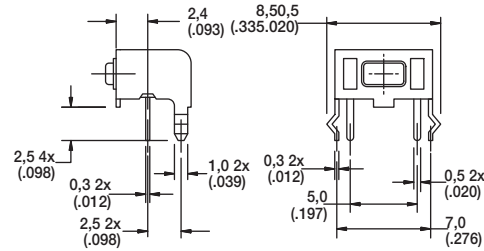
S THRU-HOLE



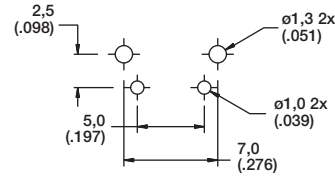
PCB LAYOUT



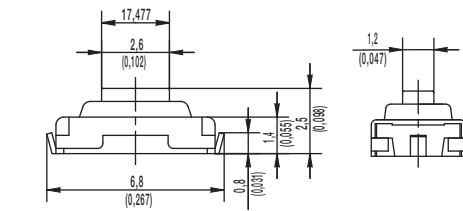
V VERTICAL



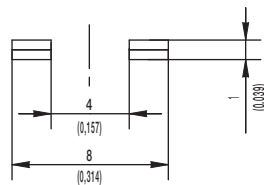
PCB LAYOUT



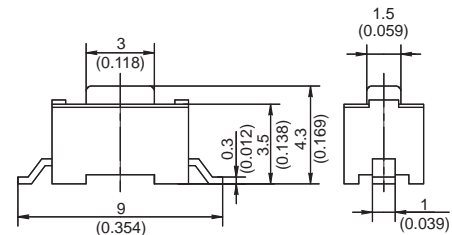
SMT 25



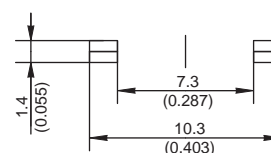
PCB LAYOUT



SMT 43



PCB LAYOUT



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

www.ck-components.com



ACTUATION FORCE



OPTION CODE	FORCE
L	130 grams
H	200 grams

ACTUATOR HEIGHT

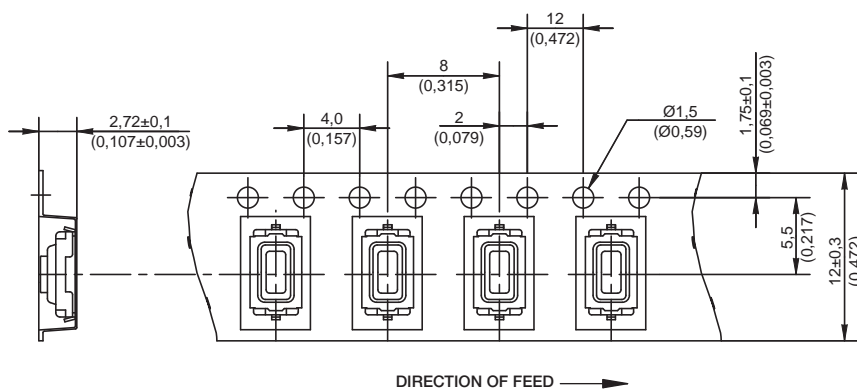


OPTION CODE	HEIGHT "H" or LENGTH "L"	TERMINATION	SCHEMATIC
43	4,3 (.169)	Thru-hole	
50	5,0 (.197)	Thru-hole	
31	3,15 (.124)	Vertical	
39	3,85 (.151)	Vertical	

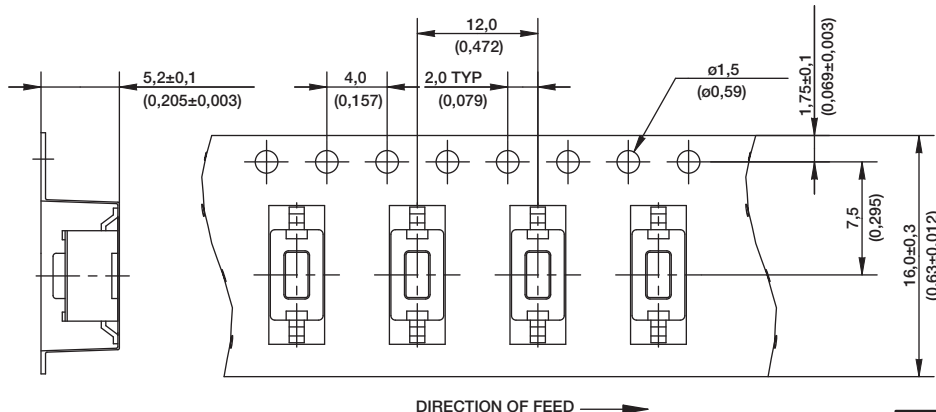
INSERTION TYPE



SMT 25



SMT 43



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

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

ACTUATION FORCE: PTS645 models: 130 grams, 160 grams,
200 grams, 260 grams
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: -20°C to 60°C

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

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.

Materials

BASE: 6/6 nylon or glass filled polyester (PBT) (UL 94V-0).
ACTUATOR: 6/6 nylon or polyacetal (UL 94HB).
COVER PLATE: PTS645S: Polyester or stainless steel.
PTS645T and PTS645V: Tin alloy or stainless steel.
DOME CONTACTS: Phosphor bronze, silver clad.
STATIONARY CONTACTS: Brass, silver plated.
TERMINALS: Brass, silver plated. Insert molded.

Packaging

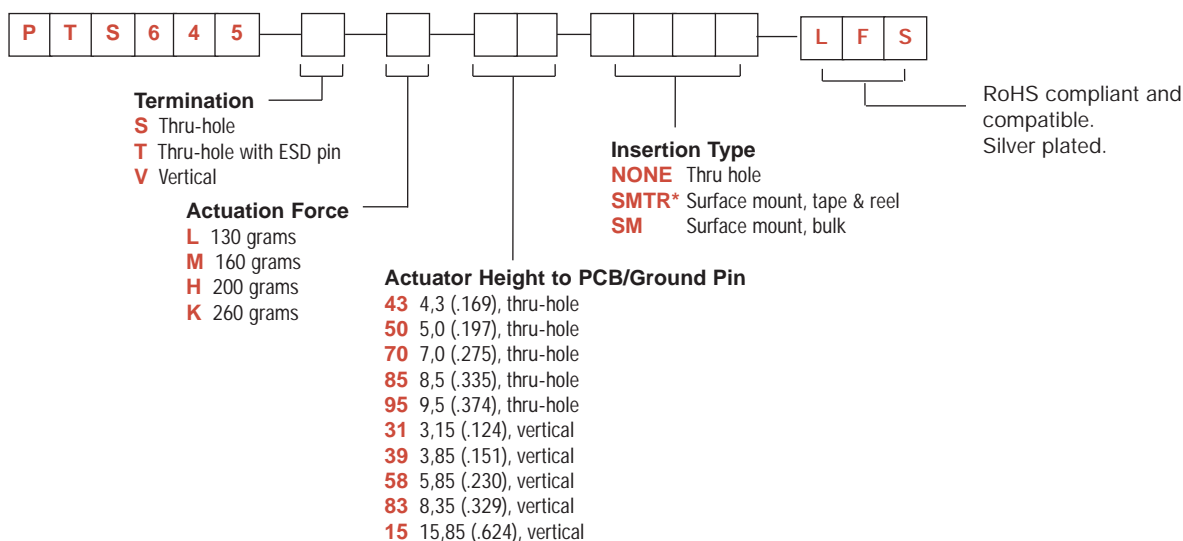
Bulk packaging.

Tape & reel for the SMT type:

Reel of 1000 pcs for the PST645Sx43 & 50
Reel of 750 pcs for the PTS645Sx70
Reel of 500 pcs for the PTS645Sx95

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.

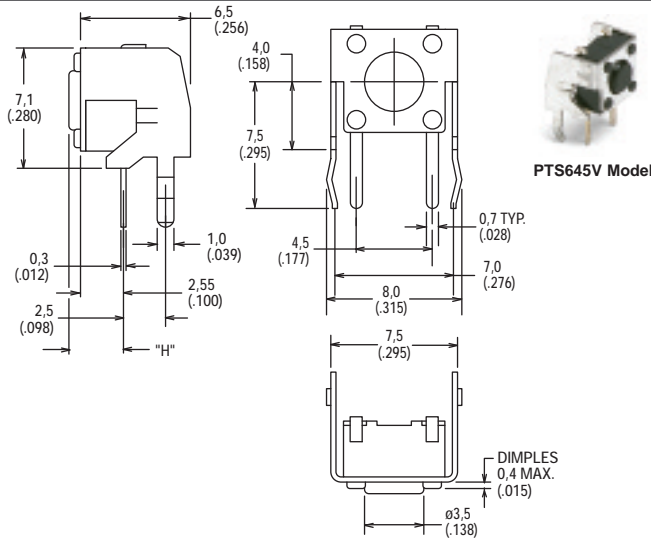
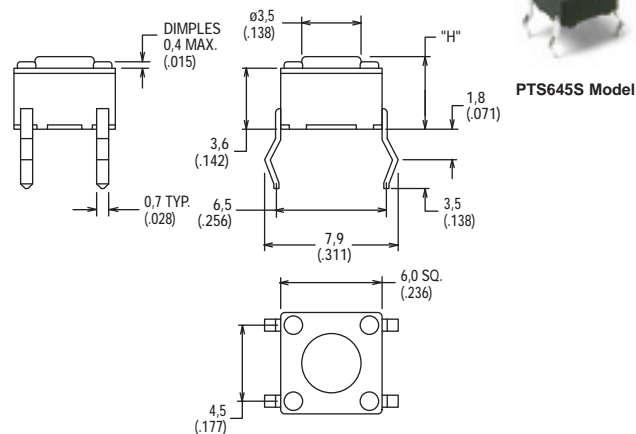


*Only the PTS645 in horizontal type without ESD pin is available in SMT type.

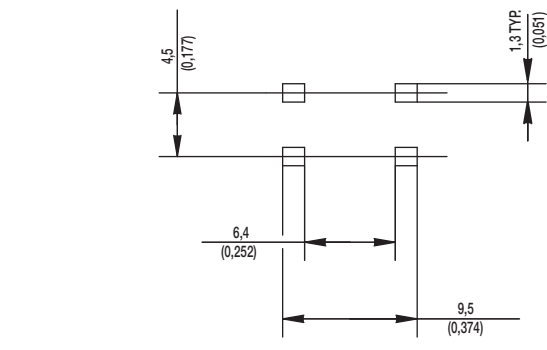
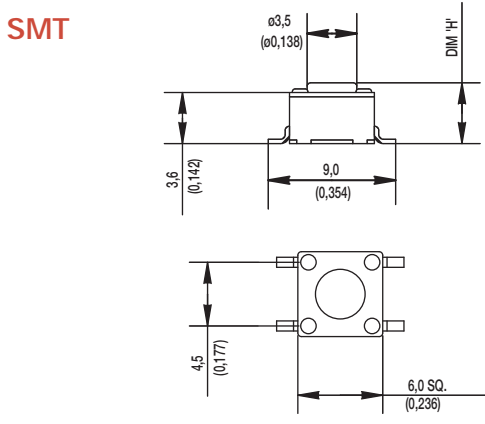
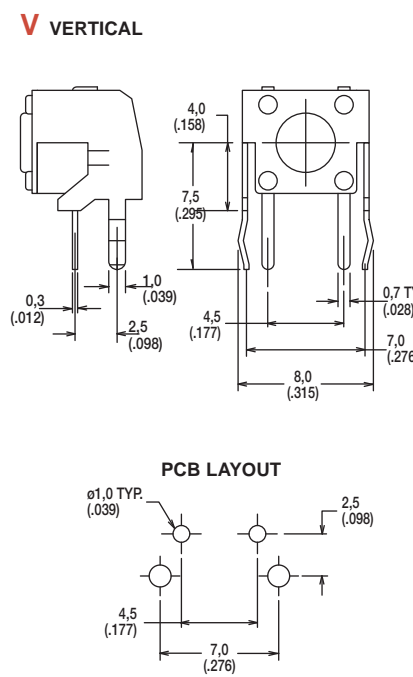
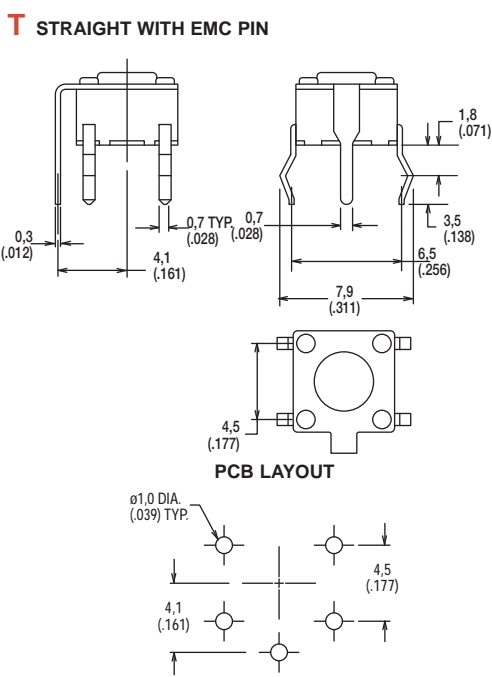
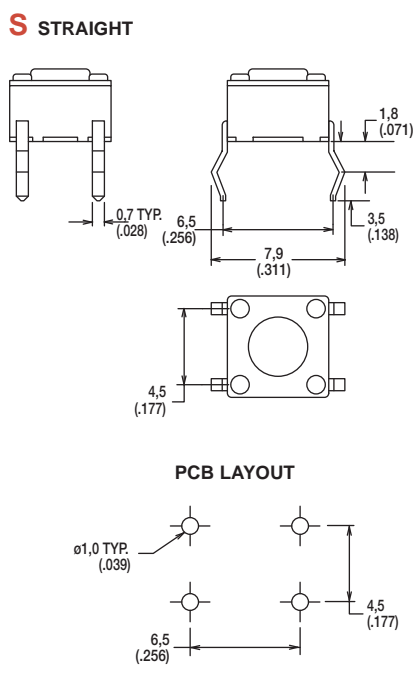
PTS645 Series 6 mm Tact Switches

SERIES 

PTS645



TERMINATION



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

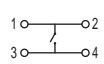
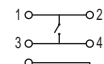

B Tactile Switches

PTS645 Series 6 mm Tact Switches

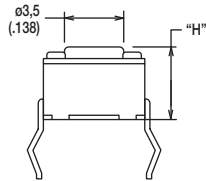
ACTUATION FORCE

OPTION CODE	FORCE
L	130 grams
M	160 grams
H	200 grams
K	260 grams

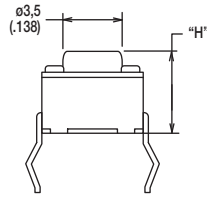
ACTUATOR HEIGHT

OPTION CODE	HEIGHT "H" or LENGTH "L"	TERMINATION	SCHEMATIC	
			Without EMC pin	With EMC pin
43	4,3 (.169)	Thru-hole		
50	5,0 (.197)	Thru-hole		
70	7,0 (.275)	Thru-hole		
95	9,5 (.374)	Thru-hole		
31	3,15 (.124)	Vertical		
39	3,85 (.151)	Vertical		
58	5,85 (.230)	Vertical		
83	8,35 (.329)	Vertical		
15	15,85 (.624)	Vertical		

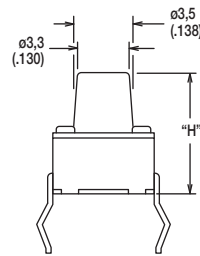
43



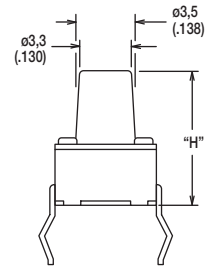
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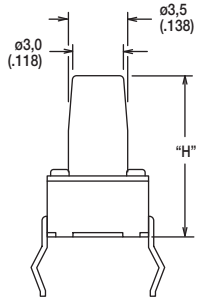
70



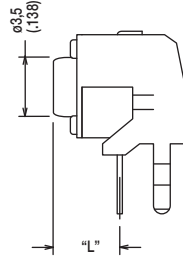
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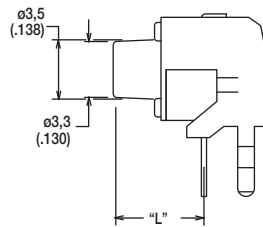
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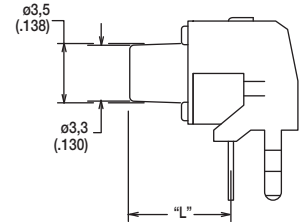
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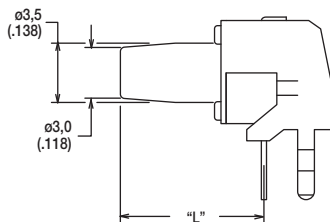
39



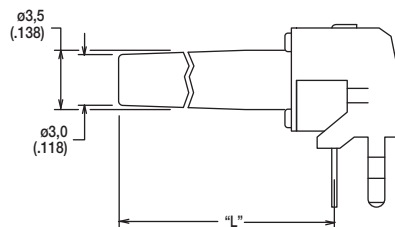
58



83



15



First Angle
Projection

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

www.ck-components.com

PTS645-TR Series 6 mm Radial Tact Switches



Features/Benefits

- Radial taping
- Thru-hole or vertical actuation
- From 130 to 260 grams actuation force
- RoHS compliant and compatible

Typical Applications

- Consumer products
- Instrumentation
- Computer product
- Industrial

Specification

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

Mechanical

ACTUATION FORCE: PTS645 models: 130 grams, 160 grams, 200 grams, 260 grams
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: -20°C to 70°C
STORAGE TEMPERATURE: -30°C to 80°C

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.

Materials

BASE: 6/6 nylon or glass filled polyester (PBT) (UL 94V-0).
ACTUATOR: PPO (UL94V0)
COVER PLATE: PTS645S: Stainless steel tin plate.
PTS645V: Tin alloy or stainless steel.
DOME CONTACTS: Phosphor bronze, silver clad.
STATIONARY CONTACTS: Brass, silver plated.
TERMINALS: Brass, silver plated. Insert molded.

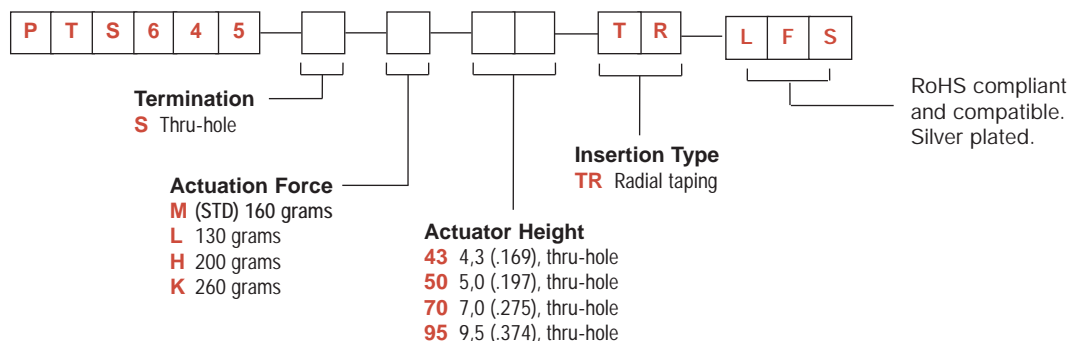
Packaging

Radial taping in carton box, 1000 pieces.

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

How To Order

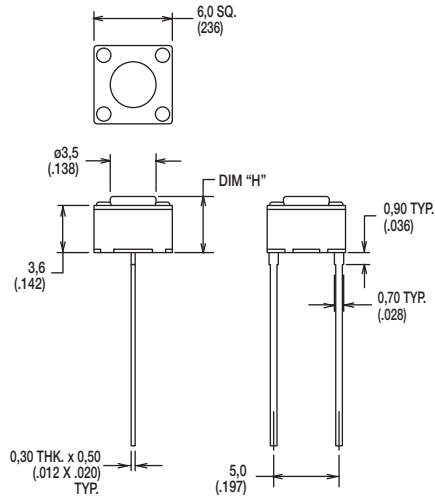
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



PTS645-TR Series 6 mm Radial Tact Switches

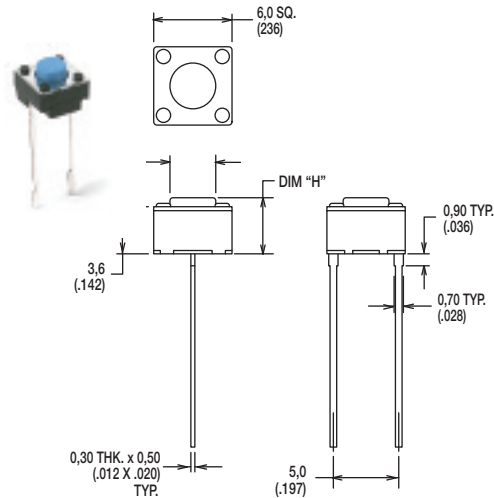
SERIES

PTS645

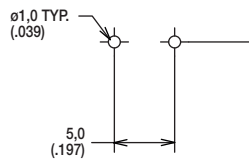


TERMINATION

S THRU-HOLE



PCB LAYOUT



ACTUATION FORCE

OPTION CODE	FORCE
L	130 grams
M	160 grams
H	200 grams
K	260 grams



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

www.ck-components.com



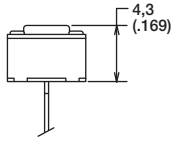
Tactile Switches

B

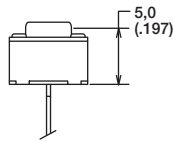
PTS645-TR Series 6 mm Radial Tact Switches

ACTUATOR HEIGHT

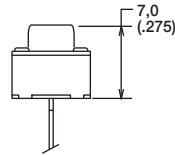
43 4,3 mm



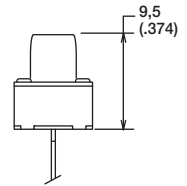
50 5,0 mm



70 7,0 mm

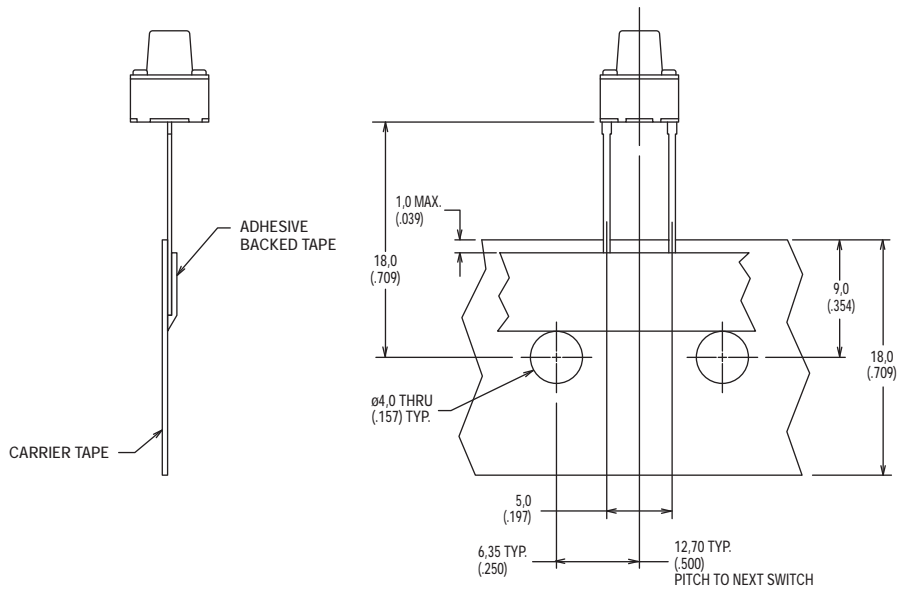


95 9,5 mm



INSERTION TYPE

TR RADIAL TAPING



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

PTS125 Series 12 mm Tact Switches

Features/Benefits

- **Stable control feeling**
- **Thru-hole or vertical actuation**
- **160 or 260 grams 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

ACTUATION FORCE: PTS125M models: 160 grams.
PTS125 K models: 260 grams.
LIFE EXPECTANCY: 200,000 operations, M option;
100,000 operations, K option.

Electrical

CONTACT RATING: 50 mA @ 12 V DC.0
DIELECTRIC STRENGTH: 250 V AC min.
CONTACT RESISTANCE: 100 mΩ max. initial.
INSULATION RESISTANCE: 10¹¹ Ω min.

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

Environmental

OPERATING TEMPERATURE: -40°C to 60°C

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.

Materials

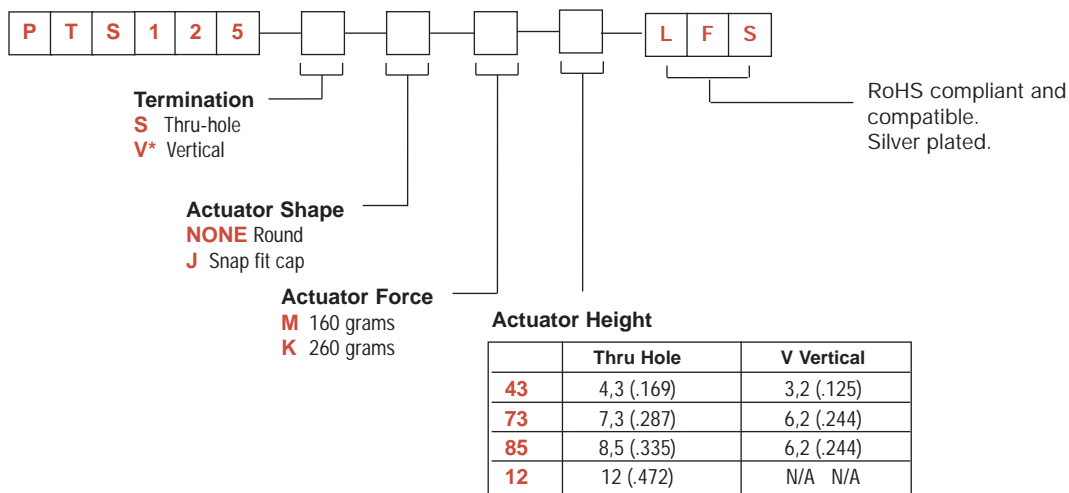
BASE: 6/6 nylon or glass filled polyester (PBT) (UL 94V-0).
ACTUATOR: PBT (UL94V0) or polyacetal (UL 94HB).
COVER PLATE: Tin alloy.
DOME CONTACTS: Phosphor bronze, silver clad.
STATIONARY CONTACTS: Brass, silver plated.
TERMINALS: Brass, silver plated. Insert molded.

Packaging

Tube packaging.

How To Order

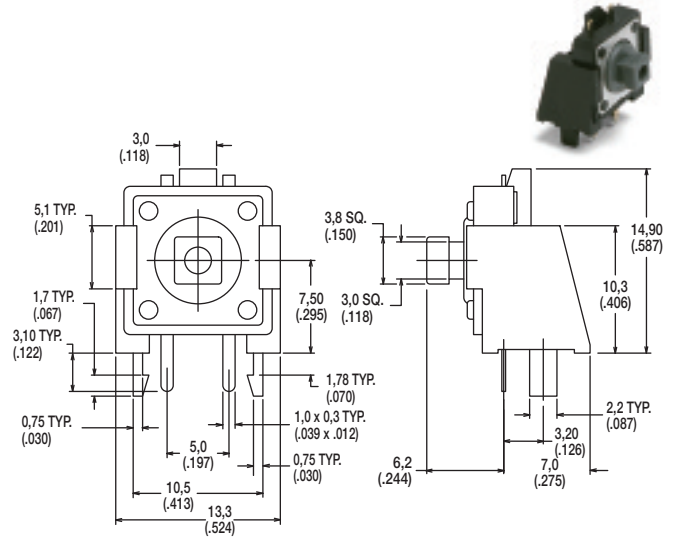
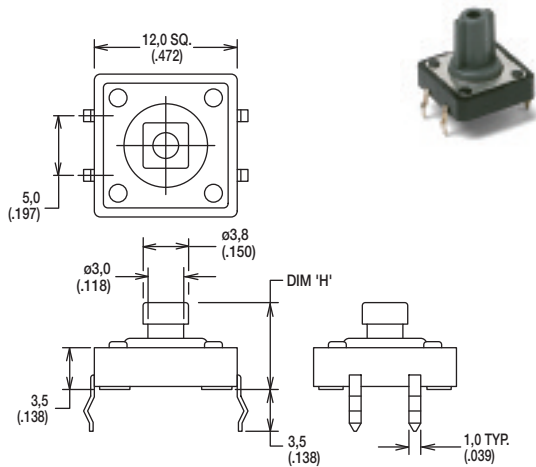
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and and place it in the appropriate box.



* V option available with J73 actuator only.

PTS125 Series 12 mm Tact Switches

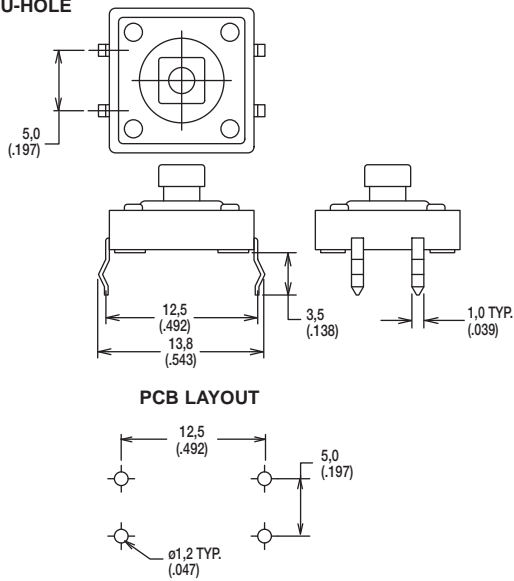
SERIES



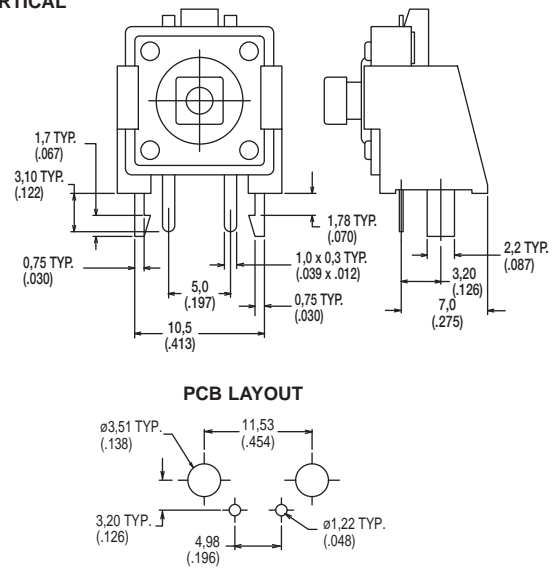
B
Tactile Switches

TERMINATION

S THRU-HOLE



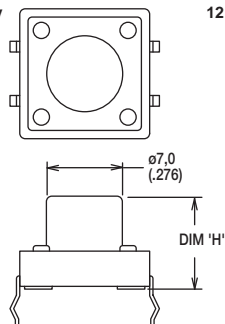
V VERTICAL



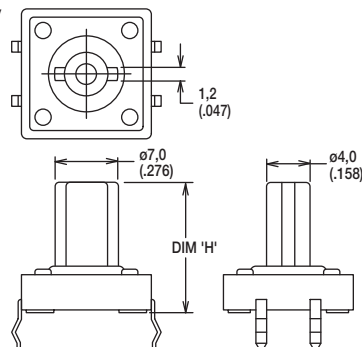
ACTUATOR SHAPE

NONE ROUND

43 and 85 heights only

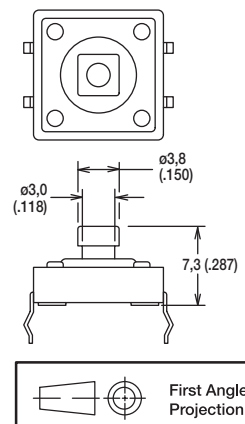


12 height only



J SNAP-FIT CAP

73 height only



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

PTS125 Series 12 mm Tact Switches

ACTUATION FORCE



OPTION CODE	FORCE
M	160 grams
K	260 grams

ACTUATOR HEIGHT

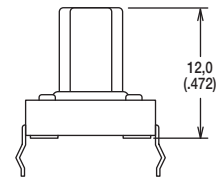
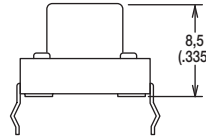
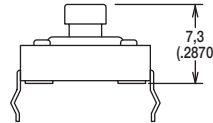
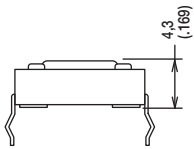


43 4,3 mm

73 7,3 mm SNAP-FIT

85 8,5 mm

12 12 mm



Tactile Switches

B