
Product Range

Tactile Switches

- 3,5 x 6 mm FSM Standard Size Tactiles
- 6 x 6 mm FSM Standard Size Tactiles
- 6 x 6 mm FSM Low Profile Tactiles
- 12 x 12 mm FSM Standard Tactiles
- FSM Slimline Tactiles
- FSM Miniature Side Actuated Tactiles
- FSM Multidirectional Tactiles



Main features:

- Different actuator length and styles
- Different actuation forces
- Sealed, unsealed, radial tape versions
- Ultra low profile versions
- Right angle versions
- SMT and THT versions
- High temperature versions
- Extended life versions

FSM . SM & FSM . JM Series 3.5 x 6.0, THT & SMT page C4



FSM . SMS & FSM . JMS Series 4.6 x 6.8, Sealed, THT & SMT page C6



FSM . SMLP & FSM . JMLP Series, 4.2 x 6.0, Low profile, SMT page C8



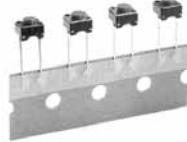
FSMJ Series 6 x 6, THT page C10



FSMCD Series 6 x 6, Square Button, THT page C13



FSMJRT Series 6 x 6, Radial Tape, THT page C15



Product Range (Continued)



FSMRAJ Series 6 x 6, Right Angle, THTpage C17



FSMJSM Series 6 x 6, SMTpage C19



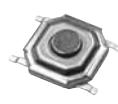
FSMLP Series 6 x 6, Low Profile, SMTpage C21



FSMJEL Series 6 x 6, Extended Life, SMTpage C23



FSMJX Series 6 x 6, Extreme Life Cycle, SMTpage C25



FSMCT Series 5.2 x 5.2, Ultra Low Profile, SMTpage C26



FSMLPU Series 4.8 x 4.8, Slimline, SMTpage C27



FSMJS6 Series 6 x 6, Sealed, SMTpage C28



FSMJS Series 7.6 x 7.3, Sealed, SMT & THTpage C29

Product Range (Continued)



FSMRAJS Series 6 x 6, Sealed, Right Angle, SMT & THTpage C32



FSMRAJSA Series 8.1 x 8.1, Sealed, Right Angle, SMTpage C34



FSM10 Series 12 x 12, THTpage C36



FSM10 Series 12 x 12, Sealed, SMT & THTpage C38



FSMMSH Series 2.55 x 4.5, Miniature Side Action, SMTpage C41



FSMMS Series 3 x 5 Miniature Side Action, SMTpage C43



FSMMST Series "Turtle" Style, SMTpage C45



FSMMDS Series 7.5 x 7.5 Multidirectional, SMTpage C47



FSM . MD Series 12 x 12 Multidirectional, THT & SMTpage C49



FSM . SM & FSM . JM Series 3.5 x 6.0, THT & SMT

Features

- 3 mounting options
- Space saving geometry

**Typical performance characteristics**

Contact configuration	SPST
Contact rating max.....	max 50 mA @ 24 VDC
Contact rating min.....	min 10 µA @ 1 VDC
Electrical life.....	20,000 to 40,000 cycles
Mechanical life.....	20,000 to 40,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force	1.3 N (130 gf) to 1.8 N (180 gf)
Actuator travel	0.25 mm (.010) average

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance	265°C/10sec wave or 260°C/10s reflow

Material specifications

Contacts	stainless steel silver finish
Actuator	pps, nylon or pb
Terminals	copper alloy silver or tin finish
Base	pps or nylon
Cover	stainless steel
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM 1 SM TR

Type
FSM Tactile switch 3.5 x 5 mm

Actuator length

1	4.3 mm (.169)
2	5.0 mm (.197)

Terminal
blank through hole - THT
SM surface mount - SMT
JM J-lead surface mount - SMT

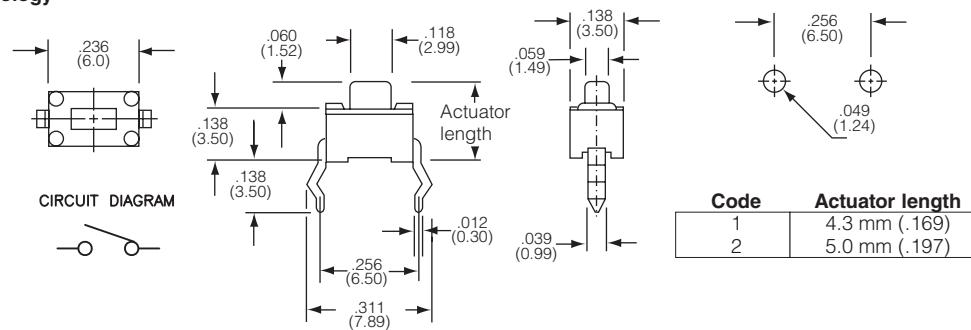
Actuation force
blank 1.8±0.5 N (180±50 gf)
L 1.3±0.5 N (130±50 gf)

Finish
blank silver
SN tin

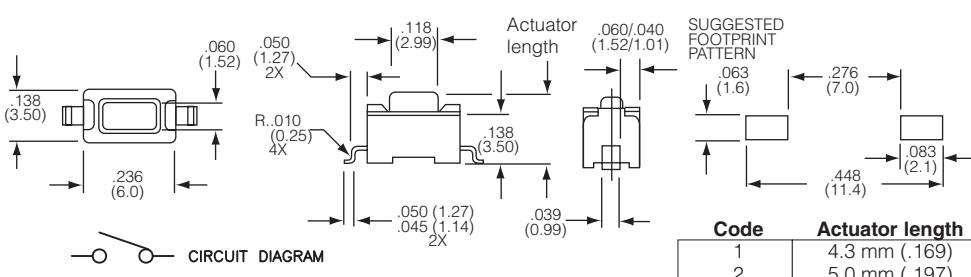
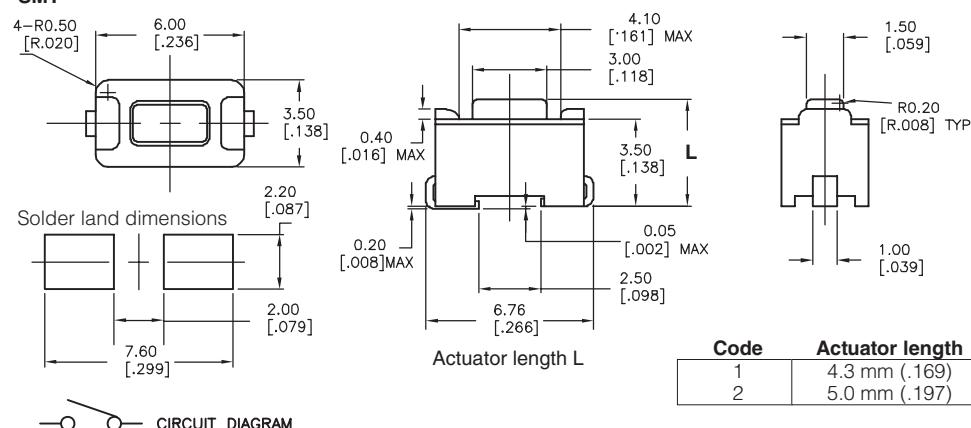
Packaging
blank bulk
TR tape & reel

FSM . SM & FSM . JM Series 3.5 x 6.0, THT & SMT (Continued)
Terminal**blank through hole technology**

FSM1

**SM surface mount SMT**

FSM1SMTR

**JM J-lead surface mount - SMT**

Product key	Actuator length	Life	Terminal	Actuation force	Finish	Packaging	Part Number
FSM1JML	4.3 mm (.169)	40,000	J-lead, SMT	1.8±0.5 N (180±50 gf)	Silver	bulk	147942-1
FSM1JMLTR				1.3±0.5 N (130±50 gf)		tape & reel	147942-2
FSM1JMSNTR				1.8±0.5 N (180±50 gf)	Tin		147873-5
FSM1JMTR					Silver		147873-2
FSM1L		20,000	THT	1.3±0.5 N (130±50 gf)		bulk	1825966-1
FSM1SM			SMT	1.8±0.5 N (180±50 gf)			1437566-3
FSM1SMTR						tape & reel	1437566-4
FSM2JMSNTR	5.0 mm (.196)	40,000	J-lead, SMT		Tin		147873-4
FSM2JMTR					Silver		147873-1
FSM2L		20,000	THT	1.3±0.5 N (130±50 gf)		bulk	1825965-1

Preferred parts in bold print

FSM . SMS & FSM . JMS Series 4.6 x 6.8, Sealed, THT & SMT

Features

- 3 mounting options
- Space saving geometry
- Sealed per IP67

**Typical performance characteristics**

Contact configuration	SPST
Contact rating max.	max 50 mA @ 24 VDC
Contact rating min.	min 10 µA @ 1 VDC
Electrical life	1,000,000 cycles
Mechanical life	1,000,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 mOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force	1.3 +/-0.5 N (130 +/-50 gf)
Actuator travel	0.35 mm (.014) average

Environmental specification

Operating temperature	-35 to +105°C in testing
Storage temperature	-35 to +105°C in testing
Solder heat resistance	265°C/10sec wave or 260°C/10s reflow
Seal	IP67

Material specifications

Contacts	stainless steel silver finish
Actuator	nylon
Terminals	copper alloy silver finish
Base	nylon
Cover	nickel silver
Seal	silicon rubber
RoHS Directive 2002/95/EC	compliant

Product key

Type	FSM	Sealed tactile switch 4.6 x 6.8 mm, THT & SMD
Actuator length	1	4.3 mm (.169)
	2	5.0 mm (.197)
Version	S	sealed
Terminal	blank	through hole - THT
	SM	surface mount - SMT
	JM	J-lead surface mount - SMT
Packaging	blank	bulk
	TR	tape & reel

Typical product key

FSM

1

S

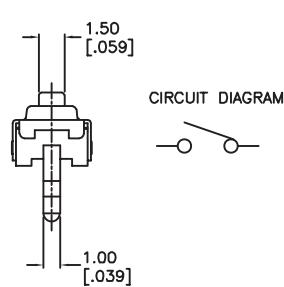
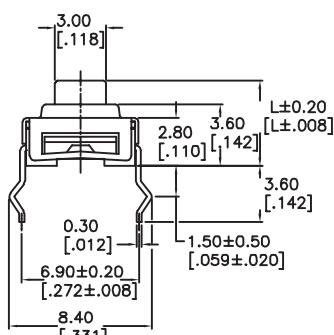
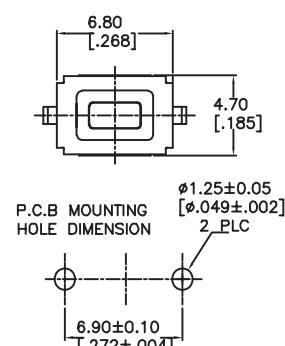
JM

FSM . SMS & FSM . JMS Series 4.6 x 6.8, Sealed, THT & SMT (Continued)

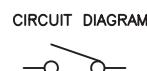
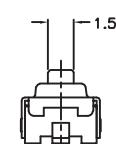
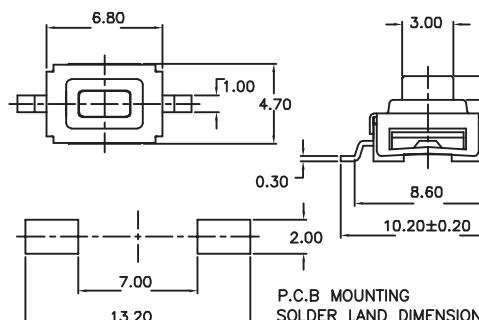
Terminal

**blank** through hole - THT

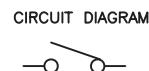
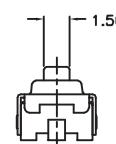
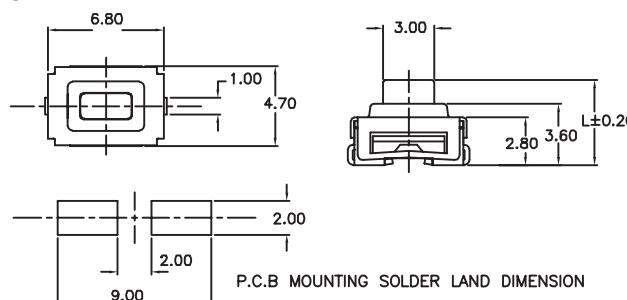
FSM2S

**SM** surface mount - SMT

FSM2SSM

**JM** J-lead surface mount - SMT

FSM2SJM



Product key	Actuator length	Version	Terminal	Packaging	Part Number
FSM1SJM	4.3 mm	sealed	J-lead, SMT	bulk	1571299-1
FSM1SJMTR				tape & reel	1571299-2
FSM2S	5.0 mm		THT	bulk	1571297-1
FSM2SJM			J-lead, SMT		1571299-3
FSM2SJMTR				tape & reel	1571299-4
FSM2SSM			SMT	bulk	1571298-1
FSM2SSMTR				tape & reel	1571298-2

Preferred parts in bold print

FSM . SMLP & FSM . JMLP Series, 4.2 x 6.0, Low profile, SMT

Features

- 2 mounting options
- Space saving geometry
- Low profile

**Typical performance characteristics**

Contact configuration	SPST
Contact rating max.....	50 mA @ 32VDC
Contact rating min.....	20 µA @ 1 VDC
Electrical life.....	100,000 cycles
Mechanical life.....	100,000 cycles
Contact resistance.....	max. 100mOhm
Capacitance	min. 100MOhm
Insulation resistance.....	250 VAC for 1 min
Actuation force	1.6 N to 5.2 N (160 to 520 gf)
Actuator travel.....	0.50 mm (.020) average

Environmental specification

Operating temperature	-40 to +85°C
Storage temperature.....	-40 to +100°C
Solder heat resistance	260°C/10s reflow

Material specifications

Contacts	stainless steel silver finish
Actuator	silicon rubber
Terminals	copper alloy silver finish
Base	nylon
Cover	stainless steel
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM**JM****LP****A****TR**

Type
FSM Low profile tactile switch 4.2 x 6.0 mm

Terminal
JM J-lead surface mount - SMT **SM** surface mount - SMT

Version
LP low profile version

Actuation force
blank 1.6±0.5 N (160±50 gf) **A** 2.6±0.5 N (260±50 gf)
AA 5.2±1.0 N (520±100 gf)

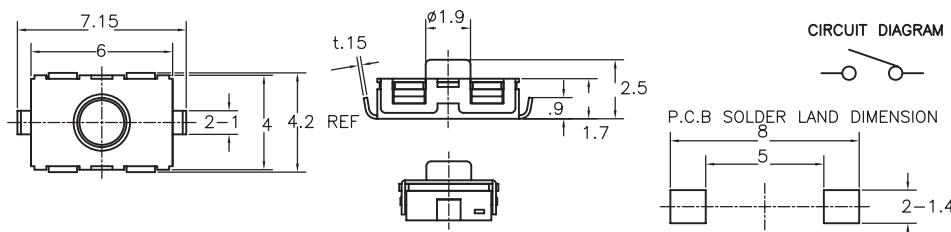
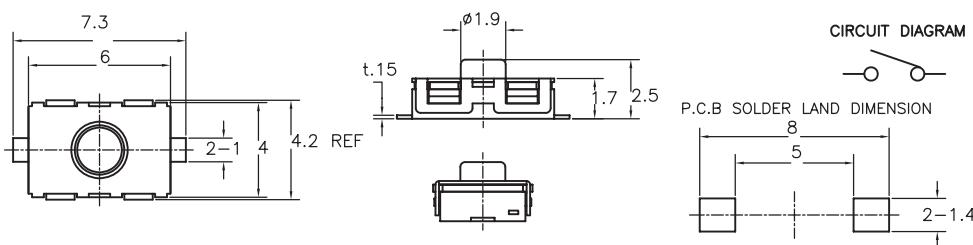
Packaging
TR tape & reel

FSM . SMLP & FSM . JMLP Series, 4.2 x 6.0, Low profile, SMT (Continued)

Terminal

**JM** J-lead surface mount

FSMJMPTR

**SM** surface mount

Product key	Terminal	Actuation force	Packaging	Part Number
FSMJMLPTR	J-lead, SMT	1.6±.5 N (160±50 gf)	tape & reel	1571528-1
FSMJMLPATR		2.6±.5 N (260±50 gf)		1571528-2
FSMSMLPTR	SMT	1.6±.5 N (160±50 gf)		1825086-1
FSMSMLPATR		2.6±.5 N (260±50 gf)		1825086-2
FSMSMLPAATR		5.2±1.0 N (520±100 gf)		1825086-3

Preferred parts in bold print

FSMJ Series 6 x 6, THT

Features

- With or without ground terminal
- 9 standard actuator lengths
- 4 different actuation forces



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	max 50 mA @ 24 VDC
Contact rating min.	min 10 µA @ 1 VDC
Electrical life.	500,000 cycles
Mechanical life.	500,000 cycles
Contact resistance	max 50 mOhm
Insulation resistance.....	min 1,000 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force.....	1.0 to 5.2 N (100 to 520 gf)
Actuator travel	0.25mm +0.20/-0.10

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance	265°C for 10 s

Material specifications

Contacts & terminals.....	copper alloy silver finish
Actuator & base	nylon 66
Cover	PET film or steel
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM**2****J****A****H**

Type

FSM Tactile switch 6 x 6 mm

Grounding terminal & actuator length

without grounding terminal, actuator length

2	4.3 mm (.169)	8	9.5 mm (.374)	14	13.0 mm (.512)
4	5.0 mm (.196)	10	7.3 mm (.287)	16	17.0 mm (.669)
6	7.0 mm (.276)	12	8.0 mm (.315)	18	8.5 mm (.335)

with grounding terminal, actuator length

1	4.3 mm (.169)	7	9.5 mm (.374)	13	13.0 mm (.512)
3	5.0 mm (.196)	9	7.3 mm (.287)	15	17.0 mm (.669)
5	7.0 mm (.276)	11	8.0 mm (.315)	17	8.5 mm (.335)

Version

J through hole version

Actuation force

L	1.0±0.5 N (100±50 gf)	A	2.6±0.5 N (260±50 gf)
blank	1.6±0.5 N (160±50 gf)	AA	5.2±1.0 N (520±100 gf)

Temperature

H high temperature version, high solder heat resistance

FSMJ Series 6 x 6, THT (Continued)

Grounding terminal & actuator length

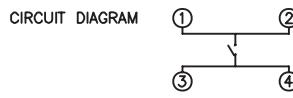
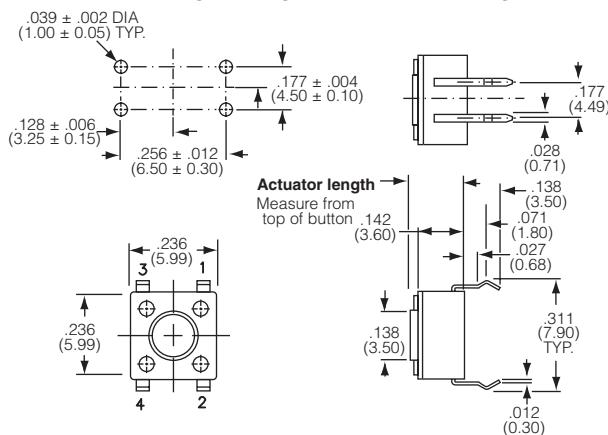


FSM2J



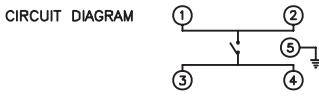
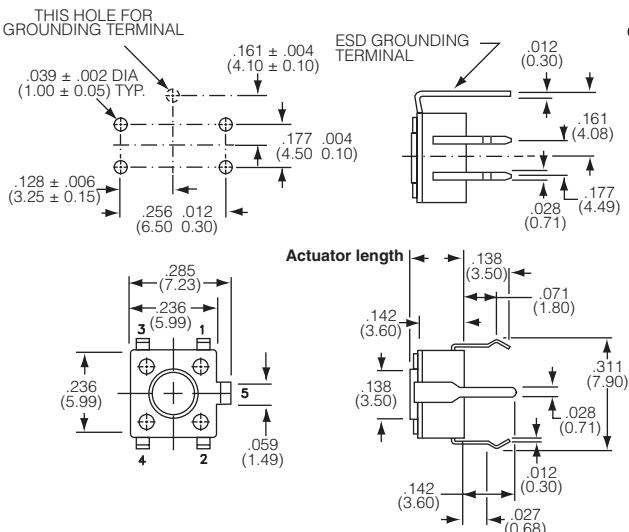
FSM1J

Codes 2, 4, 6, 8, 10, 12, 14, 16, 18 without grounding terminal, actuator length



Code	Actuator length
2	4.3 mm (.169)
4	5.0 mm (.196)
6	7.0 mm (.276)
8	9.5 mm (.374)
10	7.3 mm (.287)
12	8.0 mm (.315)
14	13.0 mm (.512)
16	17.0 mm (.669)
18	8.5 mm (.335)

Codes 1, 3, 5, 7, 9, 11, 13, 15, 17 with grounding terminal, actuator length



Code	Actuator length
1	4.3 mm (.169)
3	5.0 mm (.196)
5	7.0 mm (.276)
7	9.5 mm (.374)
9	7.3 mm (.287)
11	8.0 mm (.315)
13	13.0 mm (.512)
15	17.0 mm (.669)
17	8.5 mm (.335)

FSMJ Series 6 x 6, THT (Continued)

Product key	Grounding	Actuator length	Version	Actuation force	Temperature	Part Number
FSM2JLH	without grounding terminal	4.3 mm (.169)	through hole version	1.0±0.5 N (100±50 gf)	high temperature version	1825910-1
FSM2JH				1.6±0.5 N (160±50 gf)		1825910-2
FSM2JAH				2.6±0.5 N (260±50 gf)		1825910-3
FSM2JAAH				5.2±1.0 N (520±100 gf)	high solder heat resistance	1825910-4
FSM4JLH		5.0 mm (.196)		1.0±0.5 N (100±50 gf)		1825910-5
FSM4JH				1.6±0.5 N (160±50 gf)		1825910-6
FSM4JAH				2.6±0.5 N (260±50 gf)		1825910-7
FSM4JAAH				5.2±1.0 N (520±100 gf)		1825910-8
FSM6JLH		7.0 mm (.276)		1.0±0.5 N (100±50 gf)		1825910-9
FSM6JH				1.6±0.5 N (160±50 gf)		1-1825910-0
FSM6JAH				2.6±0.5 N (260±50 gf)		1-1825910-1
FSM6JAAH				5.2±1.0 N (520±100 gf)		1-1825910-2
FSM8JLH		9.5 mm (.374)		1.0±0.5 N (100±50 gf)		1-1825910-3
FSM8JH				1.6±0.5 N (160±50 gf)		1-1825910-4
FSM8JAH				2.6±0.5 N (260±50 gf)		1-1825910-5
FSM8JAAH				5.2±1.0 N (520±100 gf)		1-1825910-6
FSM10JLH		7.3 mm (.287)		1.0±0.5 N (100±50 gf)		1-1825910-7
FSM10JH				1.6±0.5 N (160±50 gf)		1-1825910-8
FSM10JAH				2.6±0.5 N (260±50 gf)		1-1825910-9
FSM10JAAH				5.2±1.0 N (520±100 gf)		2-1825910-0
FSM12JLH		8.0 mm (.315)		1.0±0.5 N (100±50 gf)		2-1825910-1
FSM12JH				1.6±0.5 N (160±50 gf)		2-1825910-2
FSM12JAH				2.6±0.5 N (260±50 gf)		2-1825910-3
FSM12JAAH				5.2±1.0 N (520±100 gf)		2-1825910-5
FSM14JLH		13.0 mm (.512)		1.0±0.5 N (100±50 gf)		2-1825910-6
FSM14JH				1.6±0.5 N (160±50 gf)		2-1825910-7
FSM14JAH				2.6±0.5 N (260±50 gf)		2-1825910-8
FSM14JAAH				5.2±1.0 N (520±100 gf)		2-1825910-9
FSM16JLH		17.0 mm (.669)		1.0±0.5 N (100±50 gf)		3-1825910-0
FSM16JH				1.6±0.5 N (160±50 gf)		3-1825910-1
FSM16JAH				2.6±0.5 N (260±50 gf)		3-1825910-2
FSM16JAAH				5.2±1.0 N (520±100 gf)		3-1825910-3
FSM18JLH		8.5 mm (.335)		1.0±0.5 N (100±50 gf)		3-1825910-4
FSM18JH				1.6±0.5 N (160±50 gf)		3-1825910-5
FSM18JAH				2.6±0.5 N (260±50 gf)		3-1825910-6
FSM18JAAH				5.2±1.0 N (520±100 gf)		3-1825910-7
FSM1JLH	with grounding terminal	4.3 mm (.169)		1.0±0.5 N (100±50 gf)		1825955-1
FSM1JH				1.6±0.5 N (160±50 gf)		1825955-2
FSM1JAH				2.6±0.5 N (260±50 gf)		1825955-3
FSM1JAAH				5.2±1.0 N (520±100 gf)		1825955-4
FSM3JLH		5.0 mm (.196)		1.0±0.5 N (100±50 gf)		1825955-5
FSM3JH				1.6±0.5 N (160±50 gf)		1825955-6
FSM3JAH				2.6±0.5 N (260±50 gf)		1825955-7
FSM3JAAH				5.2±1.0 N (520±100 gf)		1825955-8
FSM5JLH		7.0 mm (.276)		1.0±0.5 N (100±50 gf)		1825955-9
FSM5JH				1.6±0.5 N (160±50 gf)		1-1825955-0
FSM5JAH				2.6±0.5 N (260±50 gf)		1-1825955-1
FSM5JAAH				5.2±1.0 N (520±100 gf)		1-1825955-2
FSM7JLH	with grounding terminal	9.5 mm (.374)		1.0±0.5 N (100±50 gf)		1-1825955-3
FSM7JH				1.6±0.5 N (160±50 gf)		1-1825955-4
FSM7JAH				2.6±0.5 N (260±50 gf)		1-1825955-5
FSM7JAAH				5.2±1.0 N (520±100 gf)		1-1825955-6
FSM9JLH		7.3 mm (.287)		1.0±0.5 N (100±50 gf)		1-1825955-7
FSM9JH				1.6±0.5 N (160±50 gf)		1-1825955-8
FSM9JAH				2.6±0.5 N (260±50 gf)		1-1825955-9
FSM9JAAH				5.2±1.0 N (520±100 gf)		2-1825955-0
FSM11JLH		8.0 mm (.315)		1.0±0.5 N (100±50 gf)		2-1825955-1
FSM11JH				1.6±0.5 N (160±50 gf)		2-1825955-2
FSM11JAH				2.6±0.5 N (260±50 gf)		2-1825955-3
FSM11JAAH				5.2±1.0 N (520±100 gf)		2-1825955-4
FSM13JLH	with grounding terminal	13.0 mm (.512)		1.0±0.5 N (100±50 gf)		2-1825955-5
FSM13JH				1.6±0.5 N (160±50 gf)		2-1825955-6
FSM13JAH				2.6±0.5 N (260±50 gf)		2-1825955-7
FSM13JAAH				5.2±1.0 N (520±100 gf)		2-1825955-8
FSM15JLH		17.0 mm (.669)		1.0±0.5 N (100±50 gf)		2-1825955-9
FSM15JH				1.6±0.5 N (160±50 gf)		3-1825955-0
FSM15JAH				2.6±0.5 N (260±50 gf)		3-1825955-1
FSM15JAAH				5.2±1.0 N (520±100 gf)		3-1825955-2
FSM17JLH		8.5 mm (.335)		1.0±0.5 N (100±50 gf)		3-1825955-3
FSM17JH				1.6±0.5 N (160±50 gf)		3-1825955-4
FSM17JAH				2.6±0.5 N (260±50 gf)		3-1825955-5
FSM17JAAH				5.2±1.0 N (520±100 gf)		3-1825955-6

Preferred parts in bold print

FSMCD Series 6 x 6, Square Button, THT

Features

- Square actuator
- Vertical and right angle



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	max 50 mA @ 24 VDC
Contact rating min.	min 10 µA @ 1 VDC
Electrical life.....	500,000 cycles
Mechanical life.....	500,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force.....	1.6 to 2.6 N (160 to 260 gf)
Actuator travel	0.25 mm (.010) average

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance.....	265°C/10s wave

Material specifications

Contacts & terminals.....	copper alloy silver finish
Actuator & base.....	nylon 6/6
Cover	steel, tin finish
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

Type
FSM Tactile switch 6 x 6 mm

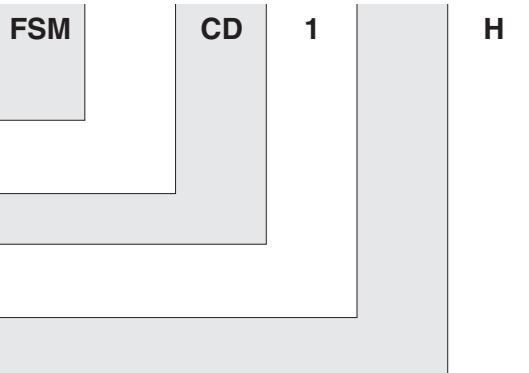
Operating direction
blank vertical
RA horizontal, right angle

Version
CD square button version

Actuator size
1 2.42 mm (.095)
2 2.8 mm (.110)

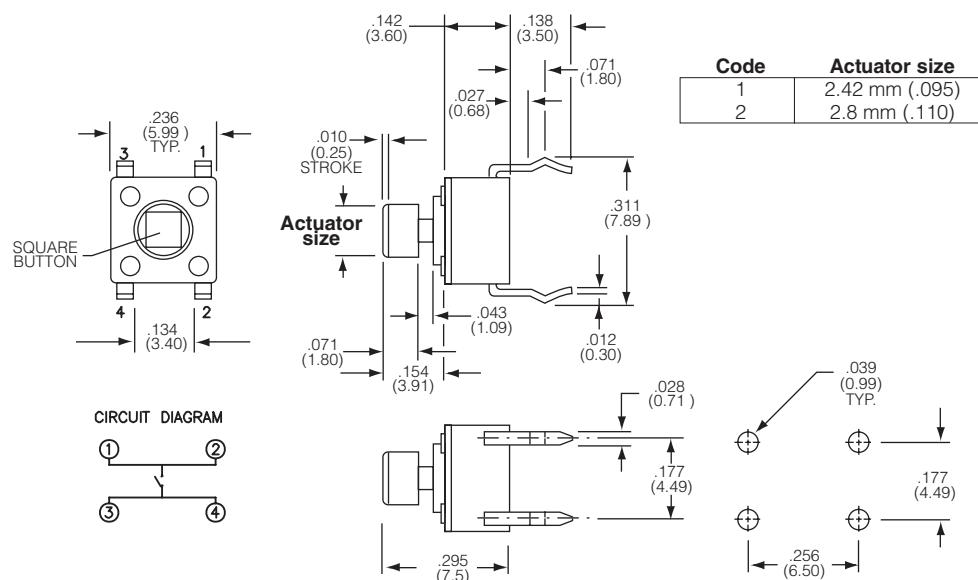
Actuation force
blank 1.6±0.5 N (160±50 gf)
A 2.6±0.5 N (260±50 gf)

Temperature
H high temperature version, high solder heat resistance

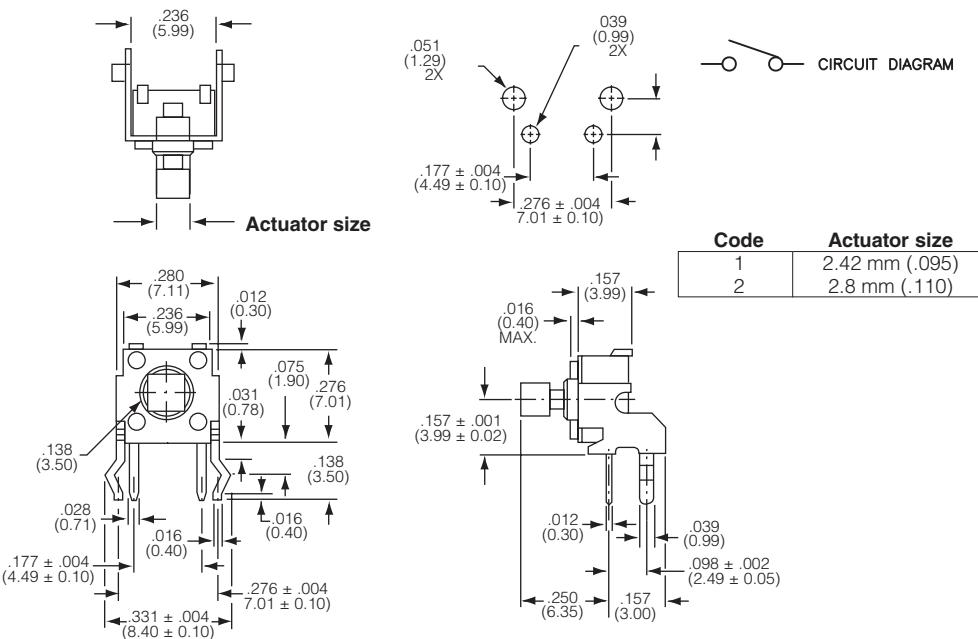


FSMCD Series 6 x 6, Square Button, THT (Continued)
Operating direction**blank vertical version**

FSMCDA

**RA right angle version**

FSMRACDA



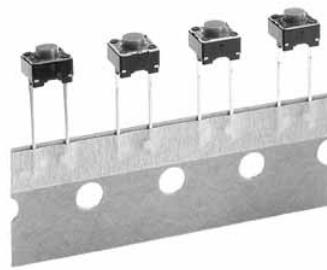
Product key	Operating direction	Version	Actuator size	Actuation force	Temperature	Part Number
FSMCD2H	vertical		2.80 mm (.110)	1.6±0.5 N (160±50 gf)	high	1825967-2
FSMCD1H	(.374)	square button version	2.42 mm (.095)		temperature	1825967-1
FSMRACD2AH	horizontal		2.80 mm (.110)	2.6±0.5 N (260±50 gf)	version	1825968-3
FSMRACD2H	right angle			1.6±0.5 N (160±50 gf)	high solder heat	1825968-2
FSMRACD1H	(.197)		2.42 mm (.095)		resistance	1825968-1

Preferred parts in bold print

FSMJRT Series 6 x 6, Radial Tape, THT

Features

- Radial tape packaged



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	50 mA @ 24 VDC
Contact rating min.	10 µA @ 1 VDC
Electrical life.....	500,000 cycles
Mechanical life.....	500,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force	1.6 to 2.6 N (160 to 260 gf)
Actuator travel	0.25mm (.010) average

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance.....	265°C/10s wave

Material specifications

Contacts & terminals.....	copper alloy silver finish
Actuator	acetal or pbt
Base	pbt
Cover	steel, tin finish
RoHS Directive 2002/95/EC	compliant

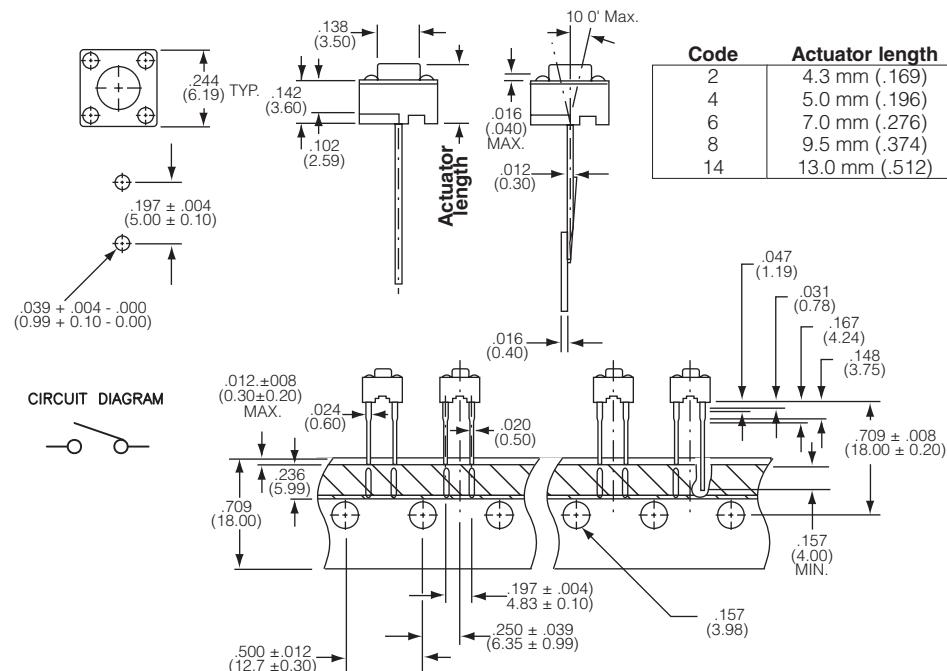
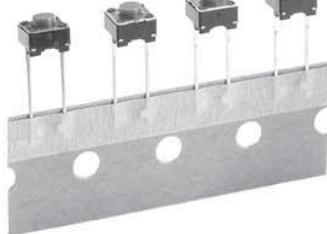
Product key

Typical product key	FSM	2	J	A	RT
Type					
FSM Tactile switch 6 x 6 mm					
Actuator length					
2 4.3 mm (.169) 4 5.0 mm (.196) 6 7.0 mm (.276) 8 9.5 mm (.374) 14 13.0 mm (.512)					
Version					
J radial tape version					
Actuation force					
blank 1.6±0.5 N (160±50 gf) A 2.6±0.5 N (260±50 gf)					
Packaging					
RT radial tape					

FSMJRT Series 6 x 6, Radial Tape, THT (Continued)

Actuator length 

Codes 2, 4, 6, 8, 10, 12, 14, 16, 18



Product key	Actuator length	Version	Actuation force	Packaging	Part Number
FSM14JRT	13.0 mm (.512)		1.6±0.5 N (160±50 gf)	radial type	1571010-1
FSM8JART	9.5 mm		2.6±0.5 N (260±50 gf)	tape & reel	147871-1
FSM8JRT	(.374)		1.6±0.5 N (160±50 gf)		147694-1
FSM6JART	7.0 mm		2.6±0.5 N (260±50 gf)		1571402-1
FSM6JRT	(.276)		1.6±0.5 N (160±50 gf)		4-1437565-8
FSM4JART	5.0 mm		2.6±0.5 N (260±50 gf)		147997-1
FSM4JRT	(.197)		1.6±0.5 N (160±50 gf)		4-1437565-0
FSM2JRT	4.3 mm				2-1437565-6
FSM2JART	(.169)		2.6±0.5 N (260±50 gf)		2-1437565-2

FSMRAJ Series 6 x 6, Right Angle, THT

Features

- Right angle mounting



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	50 mA @ 24 VDC
Contact rating min.	10 µA @ 1 VDC
Electrical life.....	500,000 cycles
Mechanical life.....	500,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force.....	1.3 N (130 gf)
Actuator travel	0.25mm (.010) average

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance.....	265°C/10s wave

Material specifications

Contacts & terminals.....	copper alloy silver finish
Actuator	nylon 6/6 or pbt
Base.....	nylon 6/6
Cover	steel tin finish
RoHS Directive 2002/95/EC	compliant

Product key

		Typical product key		FSM	RA	2	JH	L
Type	FSM	Tactile switch 6 x 6 mm						
Version	RA	right angle version						
Actuator length								
1	3.15 mm (.124)	5	6.15 mm (.242)					
2	3.86 mm (.152)	6	6.85 mm (.270)					
3	5.85 mm (.230)	7	11.85 mm (.467)					
4	8.35 mm (.329)	8	15.85 mm (.624)					
Version	JH	high temperature version, high solder heat resistance						
Actuation force	L	1.0±0.3 N (100±30 gf)	A	2.6±0.5 N (260±50 gf)				
	blank	1.6±0.5 N (160±50 gf)						

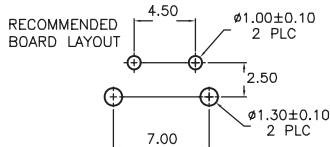
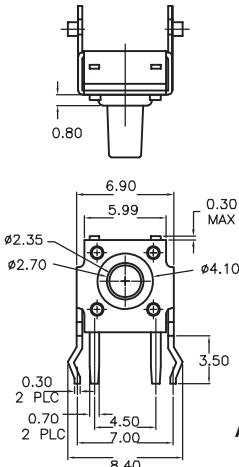
FSMRAJ Series 6 x 6, Right Angle, THT (Continued)

Actuator length 

Codes 1, 2, 3, 4, 5, 6, 7, 8



FSMRA7J



CIRCUIT DIAGRAM

Actuator length

Code	Actuator length
1	3.15 mm (.124)
2	3.86 mm (.152)
3	5.85 mm (.230)
4	8.35 mm (.329)
5	6.15 mm (.242)
6	6.85 mm (.270)
7	11.85 mm (.467)
8	15.85 mm (.624)

Product key	Version	Actuator length	Version	Actuation force	Part Number
FSMRA1JHL	version		resistance	1.0 ± 0.3 N (100 ± 30 gf)	1825027-1
FSMRA1JH	right angle	(.124)	high solder heat	1.6 ± 0.5 N (160 ± 50 gf)	1825027-2
FSMRA1JHA		3.15 mm	version	2.6 ± 0.5 N (260 ± 50 gf)	1825027-3
FSMRA2JHL			temperature	1.0 ± 0.3 N (100 ± 30 gf)	1825027-4
FSMRA2JH		(.152)	high	1.6 ± 0.5 N (160 ± 50 gf)	1825027-5
FSMRA2JHA		3.86 mm		2.6 ± 0.5 N (260 ± 50 gf)	1825027-6
FSMRA3JHL				1.0 ± 0.3 N (100 ± 30 gf)	1825027-7
FSMRA3JH		(.230)		1.6 ± 0.5 N (160 ± 50 gf)	1825027-8
FSMRA3JHA		5.85 mm		2.6 ± 0.5 N (260 ± 50 gf)	1825027-9
FSMRA4JHL				1.0 ± 0.3 N (100 ± 30 gf)	1-1825027-0
FSMRA4JH		(.329)		1.6 ± 0.5 N (160 ± 50 gf)	1-1825027-1
FSMRA4JHA		8.35 mm		2.6 ± 0.5 N (260 ± 50 gf)	1-1825027-2
FSMRA5JHL				1.0 ± 0.3 N (100 ± 30 gf)	1-1825027-3
FSMRA5JH		(.242)		1.6 ± 0.5 N (160 ± 50 gf)	1-1825027-4
FSMRA5JHA		6.15 mm		2.6 ± 0.5 N (260 ± 50 gf)	1-1825027-5
FSMRA6JHL				1.0 ± 0.3 N (100 ± 30 gf)	1-1825027-6
FSMRA6JH		(.270)		1.6 ± 0.5 N (160 ± 50 gf)	1-1825027-7
FSMRA6JHA		6.85 mm		2.6 ± 0.5 N (260 ± 50 gf)	1-1825027-8
FSMRA7JHL				1.0 ± 0.3 N (100 ± 30 gf)	1-1825027-9
FSMRA7JH		(.467)		1.6 ± 0.5 N (160 ± 50 gf)	2-1825027-0
FSMRA7JHA		11.85 mm		2.6 ± 0.5 N (260 ± 50 gf)	2-1825027-1
FSMRA8JHL				1.0 ± 0.3 N (100 ± 30 gf)	2-1825027-2
FSMRA8JH		(.624)		1.6 ± 0.5 N (160 ± 50 gf)	2-1825027-3
FSMRA8JHA		15.85 mm		2.6 ± 0.5 N (260 ± 50 gf)	2-1825027-4

Preferred parts in bold print

FSMJSM Series 6 x 6, SMT

Features

- Surface mount
- Tape & reel packaging available



Typical performance characteristics

Contact configuration	SPST
Contact rating max.....	50 mA @ 24 VDC
Contact rating min.....	10 µA @ 1 VDC
Electrical life	1,000,000 cycles
Mechanical life	1,000,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force	0.7 to 2.6 N (70 to 260 gf)
Actuator travel	0.25 mm +0.20/-0.10 (.010 +.008/-0.004)

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance	260°C/10s reflow

Material specifications

Contacts & terminals.....	copper alloy silver finish
Actuator	pps or nylon
Base	pps
Cover	steel, tin finish
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM **2** **JSM** **L** **S** **TR**

Type
FSM Tactile switch 6 x 6 mm

Actuator length	
2	4.3 mm (.169)
4	5.0 mm (.196)
6	7.0 mm (.276)

Version
JSM surface mount version

Actuation force	
XL	0.7±0.3 N (70±30 gf)
L	1.0±0.3 N (100±30 gf)

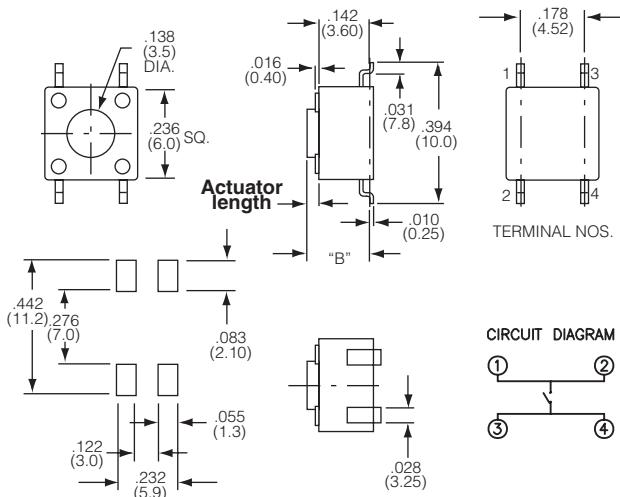
A	1.6±0.5 N (160±50 gf)
AA	2.6±0.5 N (520±50 gf)

Switching dome
S steel dome

Packaging
blank bulk
TR tape & reel

FSMJSM Series 6 x 6, SMT (Continued)
Actuator length 


FSM2JSMA



Product key	Actuator length	Version	Actuation force	Packaging	Part Number
FSM2JSMAAS	4.3 mm (.169)	version	2.6±0.5 N (260±50 gf)	bulk	1977223-5
FSM2JSMAASTR		surface mount		tape & reel	1977223-6
FSM2JSMAS		J-lead	1.6±0.5 N (160±50 gf)	bulk	1977223-3
FSM2JSMASTR				tape & reel	1977223-4
FSM2JSMLS			1.0±0.3 N (100±30 gf)	bulk	1977223-1
FSM2JSMLSTR				tape & reel	1977223-2
FSM4JSMAAS	5.0 mm (.196)		2.6±0.5 N (260±50 gf)	bulk	1-1977223-1
FSM4JSMAASTR				tape & reel	1-1977223-2
FSM4JSMAS			1.6±0.5 N (160±50 gf)	bulk	1977223-9
FSM4JSMASTR				tape & reel	1-1977223-0
FSM4JSMLS			1.0±0.3 N (100±30 gf)	bulk	1977223-7
FSM4JSMLSTR				tape & reel	1977223-8
FSM6JSMAAS	7.0 mm (.276)		2.6±0.5 N (260±50 gf)	bulk	1-1977223-9
FSM6JSMAASTR				tape & reel	2-1977223-0
FSM6JSMAS			1.6±0.5 N (160±50 gf)	bulk	1-1977223-7
FSM6JSMASTR				tape & reel	1-1977223-8
FSM6JSMLS			1.0±0.3 N (100±30 gf)	bulk	1-1977223-5
FSM6JSMLSTR				tape & reel	1-1977223-6
FSM8JSMAAS	9.5 mm (.374)		2.6±0.5 N (260±50 gf)	bulk	2-1977223-5
FSM8JSMAASTR				tape & reel	2-1977223-6
FSM8JSMAS			1.6±0.5 N (160±50 gf)	bulk	2-1977223-3
FSM8JSMASTR				tape & reel	2-1977223-4
FSM8JSMLS			1.0±0.3 N (100±30 gf)	bulk	2-1977223-1
FSM8JSMLSTR				tape & reel	2-1977223-2
FSM14JSMAAS	13.0 mm (.512)		2.6±0.5 N (260±50 gf)	bulk	2-1977223-9
FSM14JSMAS			1.6±0.5 N (160±50 gf)		2-1977223-8
FSM14JSMLS			1.0±0.3 N (100±30 gf)		2-1977223-7

Preferred parts in bold print

FSMLP Series 6 x 6, Low Profile, SMT

Features

- Low profile design



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	50 mA @ 24 VDC
Contact rating min.	10 µA @ 1 VDC
Electrical life.....	500,000 cycles
Mechanical life.....	500,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force	1.6 to 2.6 N (160 to 260 gf)
Actuator travel	0.25 mm +0.20/-0.10 (.010 +.008/-0.004)

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance	260°C/10s reflow

Material specifications

Contacts	stainless steel silver finish/copper alloy silver finish
Actuator & base.....	PPS
Terminals.....	copper alloy silver finish
Cover	nickel silver/steel tin finish
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM 1 LP A S TR

Type
FSM Tactile switch 6 x 6 mm

Actuator length & grounding terminal
1 3.1mm (.122), with grounding
4 4.3mm (.169), without grounding

Version
LP low profile version

Actuation force
blank 1.6±0.5 N (160±50 gf)
A 2.6±0.5 N (260±50 gf)

Switching dome
S steel dome

Packaging
blank bulk
TR tape & reel

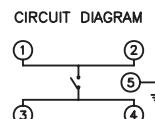
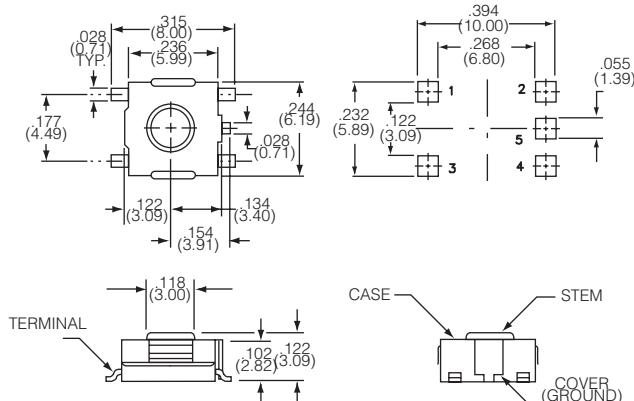
FSMLP Series 6 x 6, Low Profile, SMT (Continued)

Actuator length & grounding terminal

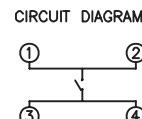
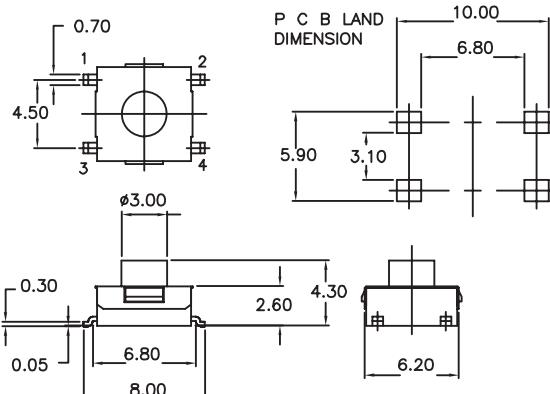
Code 1 with grounding terminal, 3.1 mm



FSM1LP



Code 4 without grounding terminal, 4.3 mm



Product key	Actuator length	Version	Actuation force	Packaging	Part Number
FSM1LPS	3.1 mm	low profile	$1.6 \pm 0.5 \text{ N}$ ($160 \pm 50 \text{ gf}$)	bulk	1977263-1
FSM1LPAS	(.169)	version	$2.6 \pm 0.5 \text{ N}$ ($260 \pm 50 \text{ gf}$)		1977263-2
FSM1LPASTR				tape & reel	1977263-3
FSM1LPSTR			$1.6 \pm 0.5 \text{ N}$ ($160 \pm 50 \text{ gf}$)		1977263-4
FSM4LPAS	4.3 mm		$2.6 \pm 0.5 \text{ N}$ ($260 \pm 50 \text{ gf}$)	bulk	1977264-1
FSM4LPSTR	(.196)			tape & reel	1977264-2

Preferred parts in bold print

FSMJEL Series 6 x 6, Extended Life, SMT

Features

- Gullwing, J-lead and gullwing w/grnd terminal surface mount
- Low profile design
- Extended life cycle



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	50 mA @ 24 VDC
Contact rating min.	10 µA @ 1 VDC
Electrical life	100,000 to 2,000,000 cycles
Mechanical life	100,000 to 2,000,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength	500 VAC for 1 min
Actuation force	0.5 to 2.6 N (50 to 260 gf)
Actuator travel	0.20 mm (.008) average

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature	-35 to +105°C
Solder heat resistance	260°C/10s reflow

Material specifications

Contacts	stainless steel silver finish
Actuator	nylon
Terminals	copper alloy silver finish
Base	PPS
Cover	copper alloy, tin finish or stainless steel
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM**1****JEL****G****TR**

Type

FSM Tactile switch 6 x 6 mm

Actuator length

1	2.0 mm (.079)
2	2.5 mm (.098)

Version

JEL extended life version

Terminals

G	gullwing
GE	gullwing with ground terminal
J	J-lead

Actuation force

XL	0.5±0.3 N (50±30 gf), 1.000.000 cycles	blank	1.6±0.5 N (160±50 gf), 1.000.000 cycles
L	1.0±0.5 N (100±50 gf), 1.000.000 cycles	A	2.6±0.5 N (520±50 gf), 100.000 cycles

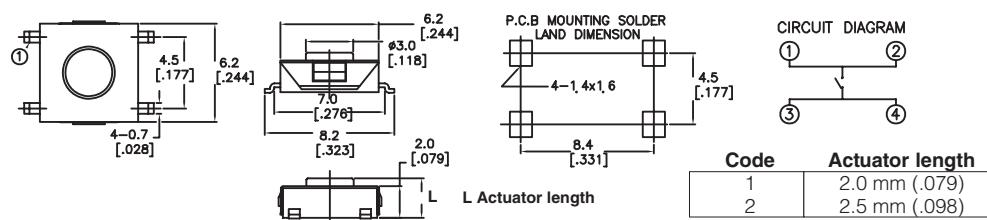
Packaging

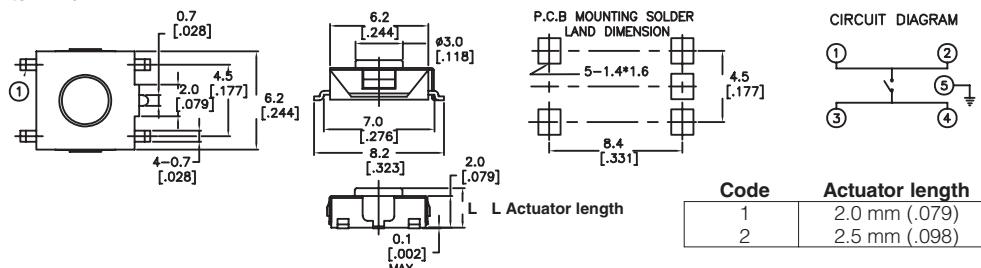
blank	bulk
TR	tape & reel

Terminal

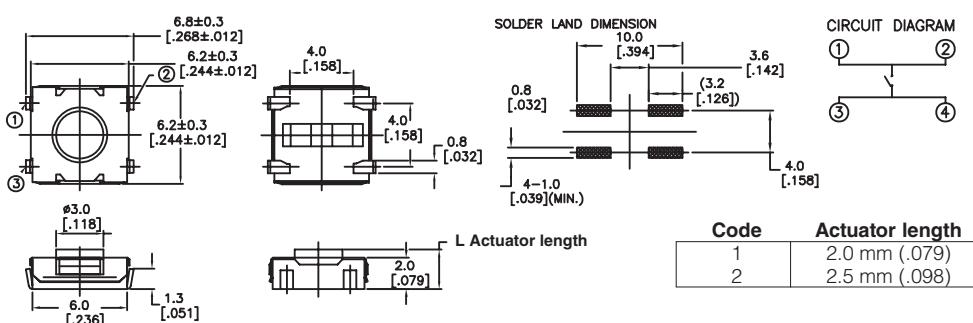


G gullwing terminal



FSMJEL Series 6 x 6, Extended Life, SMT (Continued)
GE gullwing with ground terminal**J J-lead terminal**

FSM1JELJ



Product key	Actuator length	Version	Terminal	Actuation force	Life	Packaging	Part Number
FSM1JELG	2.0 mm	extended	gullwing	1.6±0.5 N (160±50 gf)	1,000,000	bulk	1571626-7
FSM1JELGE	(.079)	life	gullwing			tape & reel	1571636-7
FSM1JELGETR		version	with ground			tape & reel	1571636-8
FSM1JELGTR			gullwing			bulk	1571626-8
FSM2JELG	2.5 mm			2.6±0.5 N (260±50 gf)	100,000	bulk	1571626-5
FSM2JELGA	(.098)					tape & reel	1571626-9
FSM2JELGATR						tape & reel	1-1571626-0
FSM2JELGE			gullwing	1.6±0.5 N (160±50 gf)	1,000,000	bulk	1571636-5
FSM2JELGEA			with ground	2.6±0.5 N (260±50 gf)	100,000	tape & reel	1571636-9
FSM2JELGEATR						tape & reel	1-1571636-0
FSM2JELGEL				1.0±0.3 N (100±30 gf)	1,000,000	bulk	1571636-3
FSM2JELGELTR						tape & reel	1571636-4
FSM2JELGETR				1.6±0.5 N (160±50 gf)		bulk	1571636-6
FSM2JELGEXL				0.5±0.3 N (50±30 gf)		tape & reel	1571636-1
FSM2JELGEXLTR						bulk	1571636-2
FSM2JELGL			gullwing	1.0±0.3 N (100±30 gf)		tape & reel	1571626-3
FSM2JELGLTR						bulk	1571626-4
FSM2JELGTR				1.6±0.5 N (160±50 gf)		tape & reel	1571626-6
FSM2JELGXL				0.5±0.3 N (50±30 gf)		bulk	1571626-1
FSM2JELGXLTR						tape & reel	1571626-2
FSM2JELJ			J-lead	1.6±0.5 N (160±50 gf)		bulk	1571625-5
FSM2JELJA				2.6±0.5 N (260±50 gf)	100,000	tape & reel	1571625-7
FSM2JELJATR						bulk	1571625-8
FSM2JELJL				1.0±0.3 N (100±30 gf)	1,000,000	tape & reel	1571625-3
FSM2JELJLTR						bulk	1571625-4
FSM2JELJTR				1.6±0.5 N (160±50 gf)		tape & reel	1571625-6
FSM2JELJXL				0.5±0.3 N (50±30 gf)	2,000,000	bulk	1571625-1
FSM2JELJXLR						tape & reel	1571625-2

Preferred parts in bold print

FSMJX Series 6 x 6, Extreme Life Cycle, SMT

Features

- The ultimate in tactile functionality
- 5,000,000 cycles
- Soft actuator allows ample over travel protection
- Tested to operate normally after being compressed for 10 years (reference 109-1098)
- Tape and reel packaging available



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	50 mA @ 24 VDC
Contact rating min.	10 µA @ 1 VDC
Electrical life	5,000,000 cycles
Mechanical life	5,000,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength	250 VAC for 1 min
Actuation force	1.6 +/-0.5 N (160 +/-50 gf)
Actuator travel	0.38 mm (.015) average

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature	-35 to +105°C
Solder heat resistance	260°C/10s reflow

Material specifications

Contacts	stainless steel silver finish
Actuator	silicon rubber
Terminals	copper alloy silver finish
Base	ppb
Cover	stainless steel
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM **JX**

Type **FSM** Tactile switch 6 x 6 mm

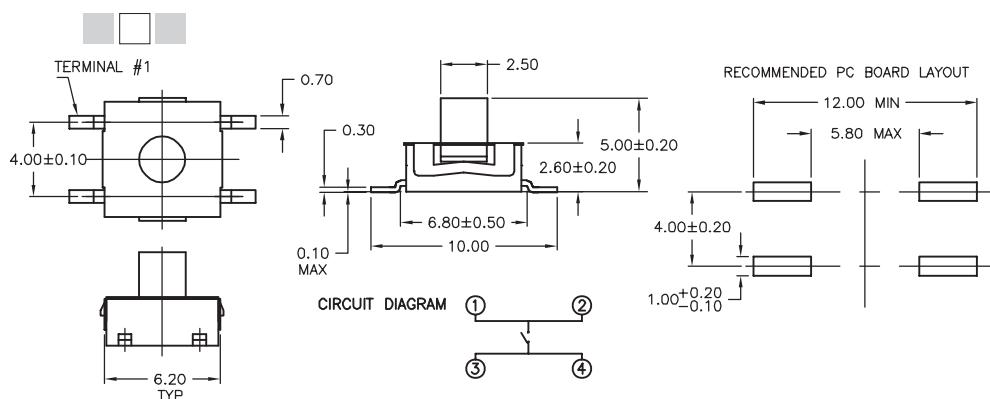
Version **JX** extreme life cycle version

Packaging blank bulk
 TR tape & reel

Extreme life cycle version



FSMJX

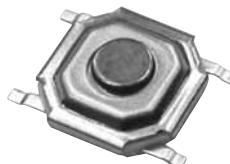


Product key	Version	Packaging	Part Number
FSMJX	extreme	bulk	1571634-1
FSMJXTR	life cycle	tape & reel	1571634-2

FSMCT Series 5.2 x 5.2, Ultra Low Profile, SMT

Features

- Ultra low profile design
- Metal actuator

**Typical performance characteristics**

Contact configuration	SPST
Contact rating max.....	50 mA @ 24 VDC
Contact rating min.....	10 µA @ 1 VDC
Electrical life	500,000 to 1,000,000 cycles
Mechanical life	500,000 to 1,000,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength	500 VAC for 1 min
Actuation force	1.6 to 2.6 N (160 to 260 gf)
Actuator travel	0.25 mm +0.10/-0.20 (.010 +.004/-0.008)

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature	-35 to +105°C
Solder heat resistance	260°C/10s reflow

Material specifications

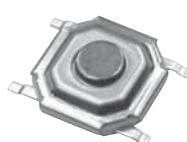
Contacts	stainless steel silver finish
Actuator	copper alloy
Terminals	copper alloy silver finish
Base	nylon 46
Cover	stainless steel
RoHS Directive 2002/95/EC	compliant

Product key

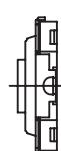
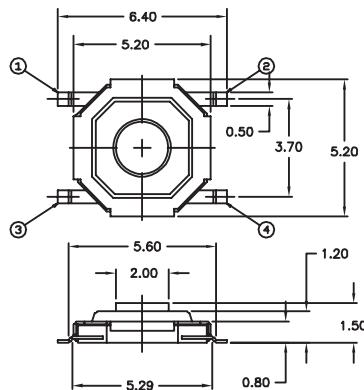
Typical product key

FSM**CT****TR****Type****FSM** Tactile switch 5.2 x 5.2 mm**Version****CT** ultra low profile version**Actuation force**

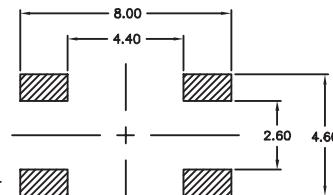
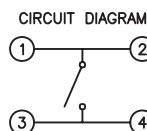
blank	1.6±0.5 N (160±50 gf), 1,000,000 cycles
A	2.6±0.5 N (260±50 gf), 500,000 cycles

Packaging**TR** tape & reel**Ultra low profile version**

FSMCTTR



P.C. BOARD LAYOUT

**Product key****Version****Actuation force****Life****Packaging****Part Number****FSMCTTR**

ultra low

1.6±0.5 N (160±50 gf)

1,000,000

tape & reel

8-1437565-0

FSMCTATR

profile version

2.6±0.5 N (260±50 gf)

500,000

8-1437565-1

Preferred parts in bold print

FSMLPU Series 4.8 x 4.8, Slimline, SMT

Features

- Ultra low (0.50mm) profile design



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	50 mA @ 24 VDC
Contact rating min.	10 µA @ 1 VDC
Electrical life.....	500,000 cycles
Mechanical life.....	500,000 cycles
Contact resistance.....	max 100 mOhm
Insulation resistance.....	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force.....	1.6 N (160 gf)
Actuator travel	0.20 mm (.008) average

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature	-35 to +105°C
Solder heat resistance	260°C/10s reflow

Material specifications

Contacts	stainless steel silver finish
Terminals	copper alloy silver finish
Base	nylon 46
Masking	PL film
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM **LPU** **TR**

Type	FSM	Tactile switch 4.8 x 4.8 mm
Version	LPU	slimline version
Packaging	TR	tape & reel

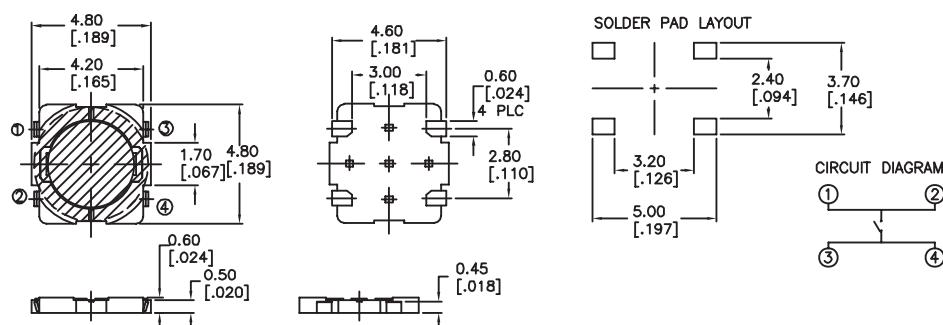
Version



LPU slimline version



FSMLPUTR



Product key	Version	Actuation force	Packaging	Part Number
FSMLPUTR	slimline version	1.6±0.5 N (160±50 gf)	tape & reel	1825534-1

Preferred parts in bold print

FSMJS6 Series 6 x 6, Sealed, SMT

Features

- Sealed to IP67
- Tape & reel available

**Typical performance characteristics**

Contact configuration	SPST
Contact rating max.....	50 mA @ 24VDC
Contact rating min.....	10 µA @ 1 VDC
Electrical life	1,000,000 cycles
Mechanical life	1,000,000 cycles
Contact resistance	max. 100mΩ
Capacitance	min. 100MOhm
Insulation resistance.....	250 VAC for 1 min
Actuation force.....	1.6 N (160 gf)
Actuator travel.....	0.20 mm (.008) average

Environmental specification

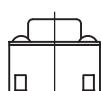
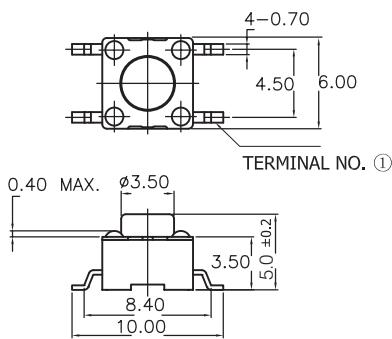
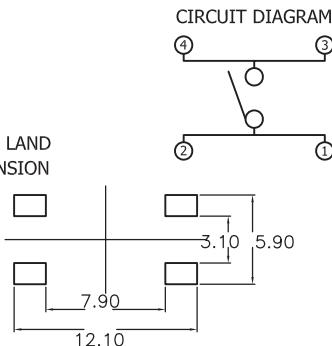
Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance	260°C/10s reflow
Seal	IP67

Material specifications

Contacts	stainless steel silver finish
Actuator	nylon
Terminals.....	copper alloy silver finish
Base	nylon
Cover	stainless steel
RoHS Directive 2002/95/EC	compliant

Product keyTypical product key **FSM** **2** **JS6** **SM** **TR****Type****FSM** Tactile switch 6 x 6 mm, sealed**Actuator length****2** 4.3 mm**Version****JS6** sealed version 6 x 6**Terminal****SM** surface mount - SMD**Packaging****blank** bulk**TR** tape & reel**Version****JS6 sealed version 6 x 6 mm**

FSM2JS6SM

**P.C.B. LAND DIMENSION****Product key****Terminal****Actuation force****Packaging****Part Number****FSM2JS6SM**

SMT

1.6±0.5 N (160±50 gf)

bulk

1977265-1

FSM2JS6SMTR

tape & reel

1977265-2

Preferred parts in bold print

FSMJS Series 7.6 x 7.3, Sealed, SMT & THT

Features

- Sealed to IP67
- Through hole and surface mount
- Tape & reel available on SMT versions



Typical performance characteristics

Contact configuration	SPST
Contact rating max.....	50 mA @ 24 VDC
Contact rating min.....	10 µA @ 1 VDC
Electrical life	1,000,000 cycles
Mechanical life	1,000,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force	1.6 to 2.6 N (160 to 260 gf)
Actuator travel	0.25 mm (.010) average

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance	265°C for 10s wave or 260°C for 10s reflow
Seal	IP67

Material specifications

Contacts	stainless steel silver finish
Actuator & base46 nylon
Terminals	copper alloy silver finish
Bracket	nickel silver
Seal	silicon rubber
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM 2 JS SM TR

Type
FSM Tactile switch 7.6 x 7.3 mm

Actuator length & grounding terminal
1 3.3mm (.130) with Gnd
2 4.3mm (.169)
4 5.0mm (.197)

Version
JS sealed version

Terminal
blank through hole - THT
SM surface mount - SMD

Actuation force
blank 1.6±0.5 N (160±50 gf)
A 2.6±0.5 N (260±50 gf)

Packaging
blank bulk
TR tape & reel

FSMJS Series 7.6 x 7.3, Sealed, SMT & THT (Continued)

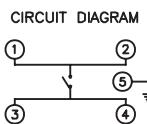
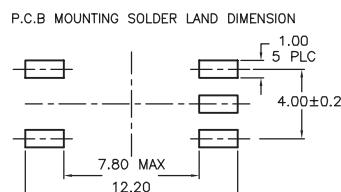
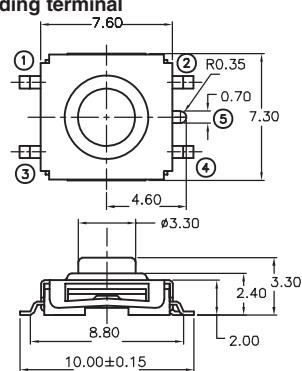
Actuator length & grounding terminal, THT & SMT



Code 1 SMT, with grounding terminal



FSM1JSSM

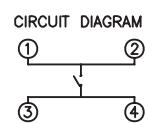
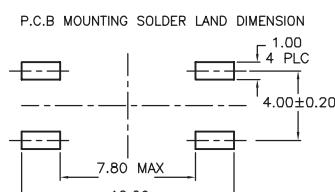
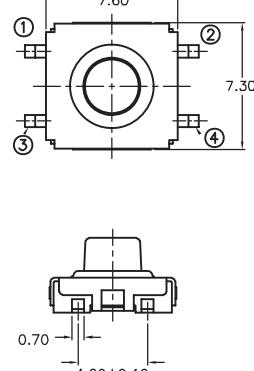


Code	Actuator length
1	3.3mm (.130) with Gnd

Codes 2, 4 SMT, without grounding terminal



FSM2JSSM

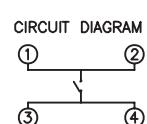
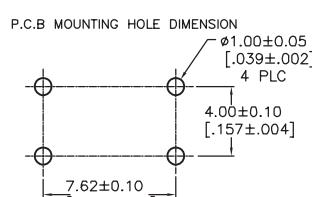
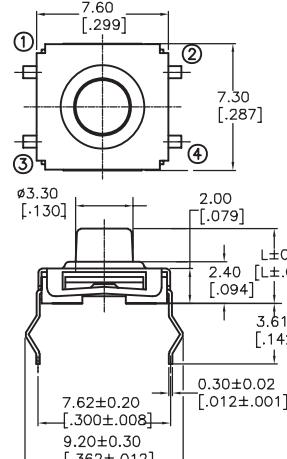


Code	Actuator length
2	4.3mm (.169)
4	5.0mm (.197)

Codes 2, 4 THT, without grounding terminal



FSM2JS



Code	Actuator length
2	4.3mm (.169)
4	5.0mm (.197)

FSMJS Series 7.6 x 7.3, Sealed, SMT & THT (Continued)

Product key	Version	Actuator length	Grounding	Terminal	Actuation force	Packaging	Part Number
FSM2JSSM	sealed	4.3 mm (.169)	without ground	SMT	1.6±0.5 N (160±50 gf)	bulk	1571294-1
FSM2JSSMTR	version				1.6±0.5 N (160±50 gf)	tape & reel	1571294-2
FSM4JSSM		5.0 mm (.196)			1.6±0.5 N (160±50 gf)	bulk	1571294-3
FSM4JSSMTR					1.6±0.5 N (160±50 gf)	tape & reel	1571294-4
FSM2JSSMA		4.3 mm (.169)			2.6±0.5 N (260±50 gf)	bulk	1571294-5
FSM2JSSMATR					2.6±0.5 N (260±50 gf)	tape & reel	1571294-6
FSM1JSSM		3.3 mm (.130)	with ground		1.6±0.5 N (160±50 gf)	bulk	1571296-1
FSM1JSSMTR					1.6±0.5 N (160±50 gf)	tape & reel	1571296-2
FSM2JS		4.3 mm (.169)	without	THT	1.6±0.5 N (160±50 gf)	bulk	1571295-1
FSM4JS		5.0 mm (.196)	ground		1.6±0.5 N (160±50 gf)		1571295-2

Preferred parts in bold print

FSMRAJS Series 6 x 6, Sealed, Right Angle, SMT & THT

Features

- Sealed to IP67
- Right angle through hole or surface mount

**Typical performance characteristics**

Contact configuration	SPST
Contact rating max.....	50 mA @ 24 VDC
Contact rating min.....	10 µA @ 1 VDC
Electrical life	1,000,000 cycles
Mechanical life	1,000,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force.....	1.3 N (130 gf)
Actuator travel	0.35 mm (.014) average

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance	265°C/10s wave or 260°C/10s reflow
Seal	IP67

Material specifications

Contacts	stainless steel silver finish
Actuator	silicon rubber
Terminals	copper alloy silver finish
Base	46 nylon or pps
Cover	nickel silver
Seal	silicon rubber
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM RAJS 3 SM TR

Type
FSM Tactile switch 6 x 6 mm

Version
RAJS sealed, right angle version

Actuator length

1	1.60 mm (.063)
2	3.85 mm (.152)
3	3.96 mm (.156)
4	6.85 mm (.270)

Terminal
blank through hole - THT
SM surface mount - SMD

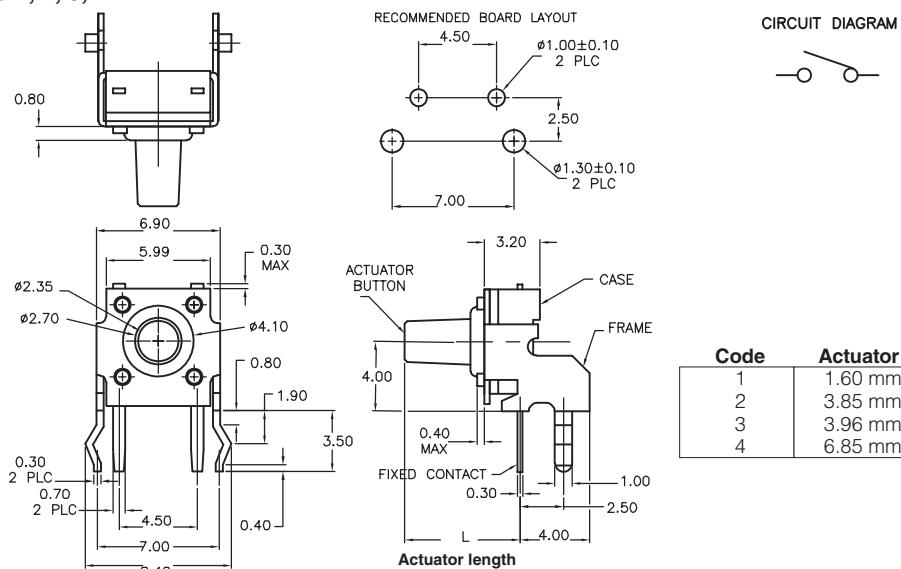
Packaging
blank bulk
TR tape & reel

FSMRAJS Series 6 x 6, Sealed, Right Angle, SMT & THT (Continued)

THT version

**Actuator length, codes 1, 2, 3, 4**

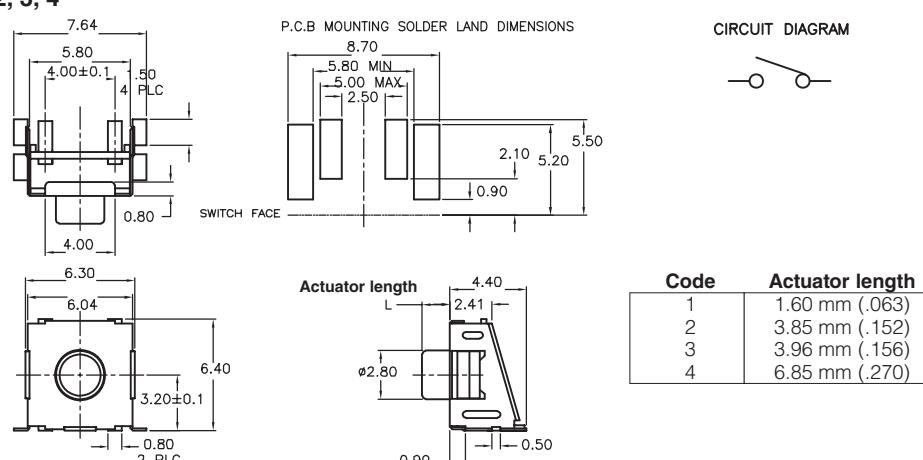
FSMRAJS2



SMT version

**Actuator length, codes 1, 2, 3, 4**

FSMRAJS2SM



Product key	Version	Actuator length	Terminal	Packaging	Part Number
FSMRAJS3SM	sealed,	3.96 mm	SMT	bulk	1571407-3
FSMRAJS1SMTR	right angle	1.60 mm		tape & reel	1571407-2
FSMRAJS1SM	version			bulk	1571407-1
FSMRAJS2		3.85 mm	THT		1571610-2
FSMRAJS4		6.85 mm			1571610-1

Preferred parts in bold print

FSMRAJSA Series 8.1 x 8.1, Sealed, Right Angle, SMT

Features

- Sealed to IP67
- Right angle surface mount

**Typical performance characteristics**

Contact configuration	SPST
Contact rating max.....	50 mA @ 24 VDC
Contact rating min.....	10 µA @ 1 VDC
Electrical life	1,000,000 cycles
Mechanical life	1,000,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force.....	1.3 N (130 gf)
Actuator travel	0.35mm (.014) Average

Environmental specification

Operating temperature	-35 to +105°C
Storage temperature.....	-35 to +105°C
Solder heat resistance	260°C/10s reflow
Seal	IP67

Material specifications

Contacts	stainless steel silver finish
Actuator	silicon rubber
Terminals	copper alloy silver finish
Base	46 nylon
Cover	nickel silver
Seal	silicon rubber
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

FSM RAJSA P

Type
FSM Tactile switch 8.1 x 8.1 mm

Version
RAJSA sealed, right angle,surface mount version

Location pin
blank no pins
P with pins

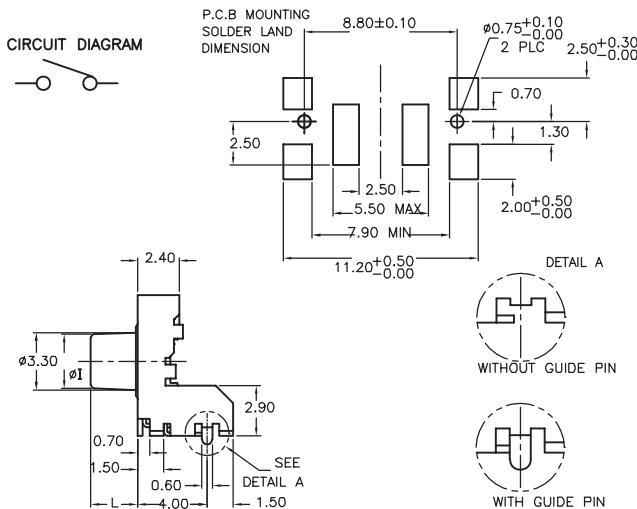
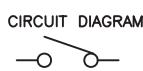
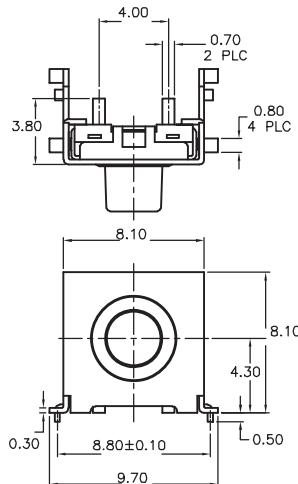
FSMRAJSA Series 8.1 x 8.1, Sealed, Right Angle, SMT (Continued)

Location pin 

Codes blank, P without/with location pins



FSMRAJSA



Product key	Version	Location pin	Actuation force	Part Number
FSMRAJSAP	sealed, right angle	with pins	1.3±0.5 N (130±50 gf)	1571300-2
FSMRAJSA		without pins		1571300-1

FSM10 Series 12 x 12, THT

Features

■ Optional actuator configurations



Typical performance characteristics

Typical performance characteristics	
Contact configuration	SPST
Contact rating max.	max 50 mA @ 24 VDC
Contact rating min.	min 10 µA @ 1 VDC
Electrical life	100,000 cycles
Mechanical life	100,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength	500 VAC for 1 min
Actuation force	1.6 to 2.6 N (160 to 260 gf)
Actuator travel	0.30 mm (.012) average

Environmental specification

Operating temperature	-35 to +85°C
Storage temperature	-35 to +85°C
Solder heat resistance	265°C/10s wave

Material specifications

Material Specifications	
Contacts	copper alloy silver finish
Actuator	acetal
Terminals	copper alloy silver finish
Base	pbt
Cover	pet film
Bracket (R/A)	nylon
RoHS Directive 2002/95/EC	Compliant

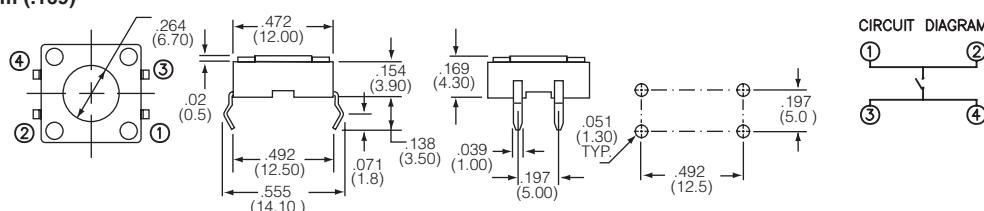
Product key

Type	FSM	Tactile switch 12 x 12 mm	
Version	10	standard, THT	
Actuator length			
0	4.3 mm (.169)	3	7.3 mm (.287)
1	8.5 mm (.335)	4	9.0 mm (.354), right angle
2	12.0 mm (.472)		
Actuation force			
blank	1.6 N (160 gf)		
A	2.6 N (260 gf)		

Actuator length

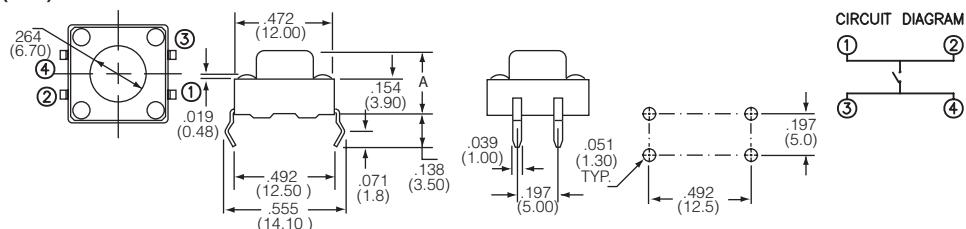


0 actuator length 4.3 mm (.169)

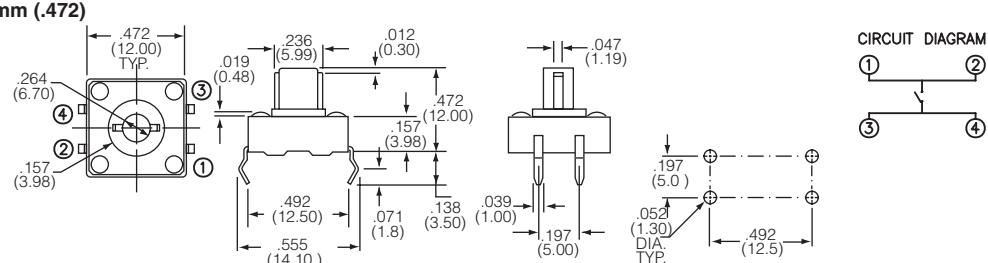


FSM10 Series 12 x 12, THT (Continued)**1 actuator length 8.5 mm (.335)**

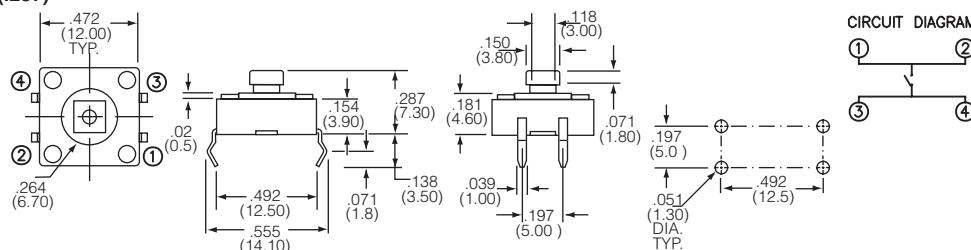
FSM101

**2 actuator length 12.0 mm (.472)**

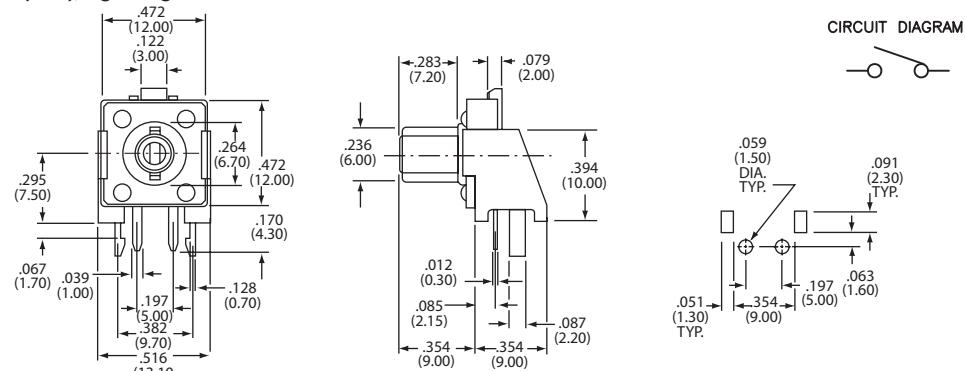
FSM102

**3 actuator length 7.3 mm (.287)**

FSM103

**4 actuator length 9.0 mm (.354), right angle**

FSM104



Product key	Version	Actuator length	Actuation force	Part Number
FSM100	standard	4.3 mm (.169)	1.6 N (160 gf)	1437565-2
FSM100A	THT		2.6 N (260 gf)	1571139-1
FSM101		8.5 mm (.335)	1.6 N (160 gf)	1437565-3
FSM101A			2.6 N (260 gf)	1571140-1
FSM102		12.0 mm (.472)	1.6 N (160 gf)	1437565-4
FSM102A			2.6 N (260 gf)	1571061-1
FSM103		7.3 mm (.287)	1.6 N (160 gf)	1437565-5
FSM103A			2.6 N (260 gf)	1571621-1
FSM104		9.0 mm (.354) right angle	1.6 N (160 gf)	1437565-6

Preferred parts in bold print

FSM10 Series 12 x 12, Sealed, SMT & THT

Features

- Optional actuator configurations
- Optional mounting configurations
- Sealed to IP67

**Typical performance characteristics**

Contact configuration	SPST
Contact rating max.	max 50 mA @ 24 VDC
Contact rating min.	min 10 µA @ 1 VDC
Electrical life	1,000,000 cycles
Mechanical life	1,000,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength	500 VAC for 1 min
Actuation force	1.6 to 2.6 N (160 to 260 gf)
Actuator travel	0.35 mm (.014) average

Environmental specification

Operating temperature	-35 to +85°C
Storage temperature	-35 to +85°C
Solder heat resistance	260°C/10s reflow or 265°C/10s wave
Sealing	IP67

Material specifications

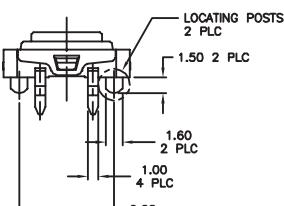
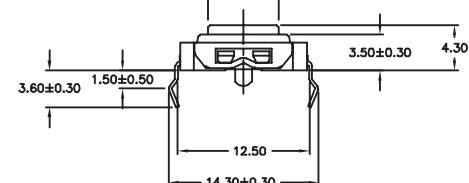
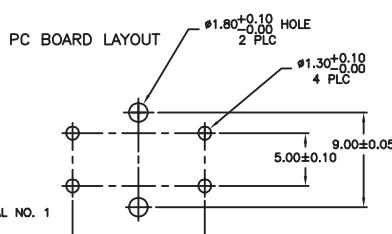
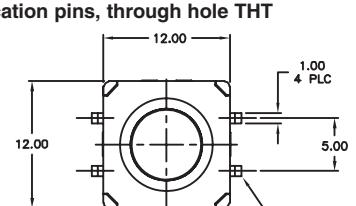
Contacts	stainless steel silver finish
Actuator	pps
Terminals	copper alloy silver finish
Base	nylon
Cover	stainless steel
Seal	silicon rubber
RoHS Directive 2002/95/EC	compliant

Product key	Typical product key	FSM	10	3	S	SM	TR
Type							
FSM	Tactile switch 12 x 12 mm						
Version							
10	standard						
Actuator length							
0	4.3 mm (.169)						
3	7.3 mm (.287) square						
Version							
S	sealed version						
Location pins							
blank	no pins						
P	with pins						
Terminal							
blank	through hole - THT						
SM	surface mount - SMT						
Actuation force							
blank	1.6±.5 N (160±50 gf)						
A	2.6±.5 N (260±50 gf)						
Packaging							
blank	bulk						
TR	tape & reel						

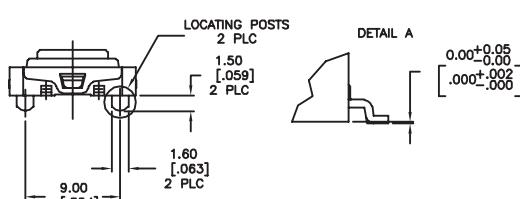
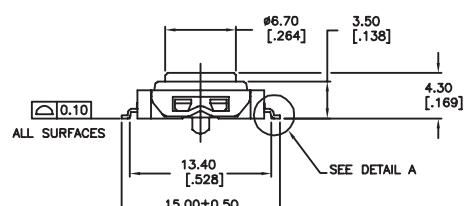
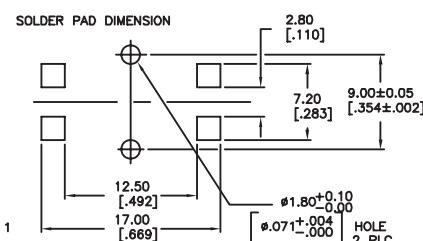
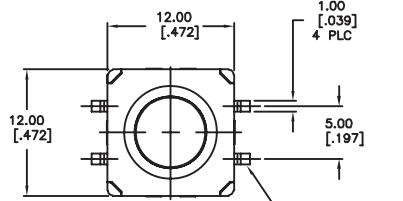
FSM10 Series 12 x 12, Sealed, SMT & THT (Continued)

Actuator length, Location pins, Terminal

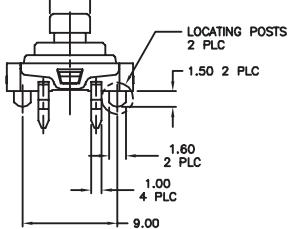
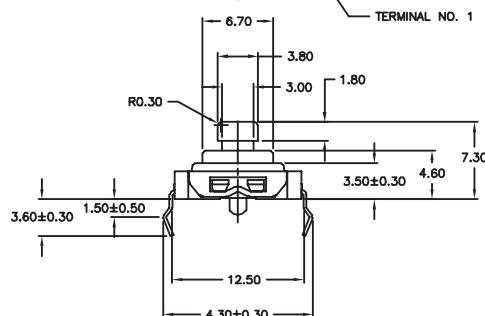
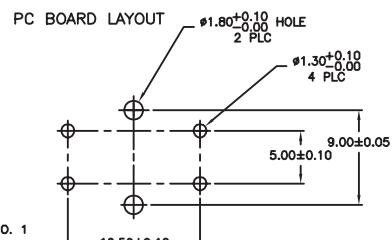
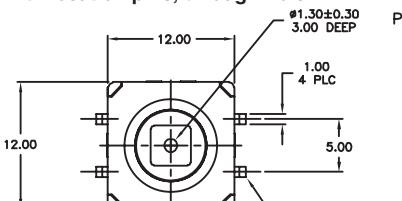

FSM100S



FSM100SM

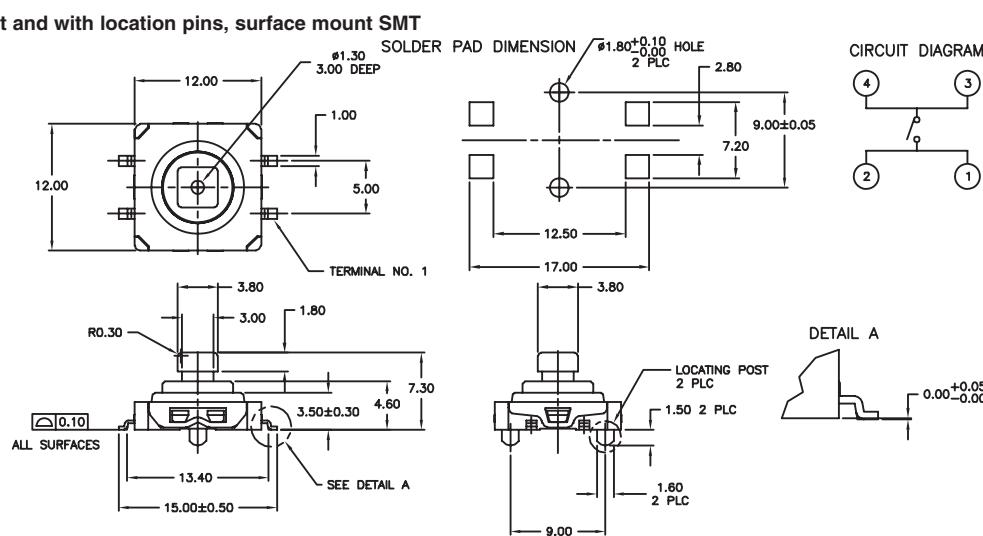


FSM103S



FSM10 Series 12 x 12, Sealed, SMT & THT (Continued)


FSM103SM



Product key	Version	Actuator length	Version	Location pins	Terminal	Act. force	Packaging	Part Number
FSM100S	standard	4.3 mm	sealed version	no pins	THT	1.6±.5 N (160±50 gf)	bulk	1571220-1
FSM100SP	THT	.169)		with pins				1571220-2
FSM100SPSM					SMT		tape & reel	1571218-2
FSM100SPSMTR							bulk	1571218-4
FSM100SSM				no pins		2.6±.5 N (260±50 gf)	tape & reel	1571218-1
FSM100SSMA							bulk	1571218-5
FSM100SSMATR							tape & reel	1571218-6
FSM100SSMTR						1.6±.5 N (160±50 gf)	1571218-3	1571218-3
FSM103S		7.3 mm			THT		bulk	1571219-1
FSM103SP		.287)		with pins				1571219-2
FSM103SPSM					SMT		tape & reel	1571217-2
FSM103SPSMTR				no pins			bulk	1571217-4
FSM103SSM							tape & reel	1571217-1
FSM103SSMTR							1571217-3	

FSMMSH Series 2.55 x 4.5, Miniature Side Action, SMT

Features

- Small PCB space required
- Tape & reel packaging



Typical performance characteristics

Contact configuration	SPST
Contact rating max.....	50 mA @ 24VDC
Contact rating min.....	10 µA @ 1 VDC
Electrical life.....	100,000 cycles
Mechanical life.....	100,000 cycles
Contact resistance.....	max. 500mOhm
Capacitance	min. 100MOhm
Insulation resistance.....	500 VAC for 1 min
Actuation force.....	1.6 N (160 gf)
Actuator travel.....	0.20 mm (.008) average

Environmental specification

Operating temperature	-35 to +85°C
Storage temperature.....	-35 to +85°C
Solder heat resistance	260°C/10s reflow

Material specifications

Contacts	stainless steel silver finish
Actuator	PPA
Terminals	copper alloy silver finish
Base	PPA
Cover	steel tin finish
RoHS Directive 2002/95/EC	compliant

Product key

Typical product key

Type	FSM	Side action tactile switch, 2.55 x 4.5 mm
Version	MSH	standard
Location pins	blank	no pins
Packaging	P	with pins

FSM MSH P TR

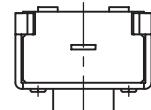
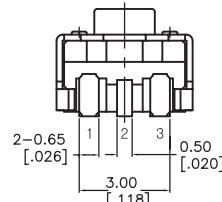
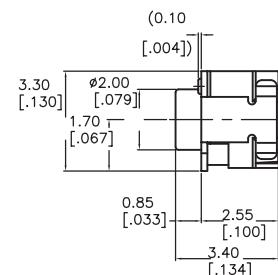
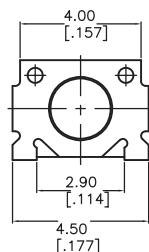
FSMMSH Series 2.55 x 4.5, Miniature Side Action, SMT (Continued)

Location pins 

blank no location pins

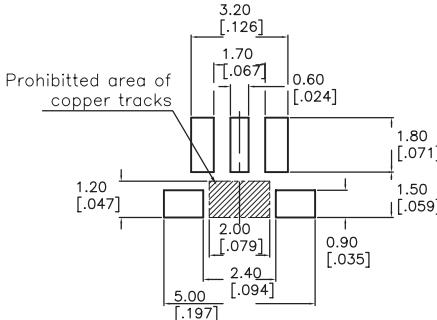


FSMMHTR



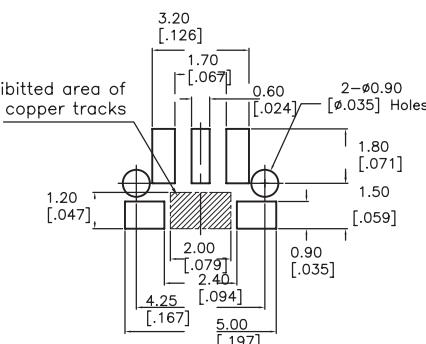
CIRCUIT DIAGRAM

P.C.B MOUNTING
SOLDER LAND DIMENSION



CIRCUIT DIAGRAM

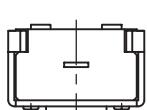
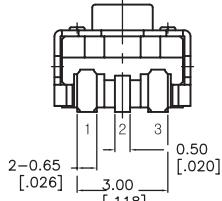
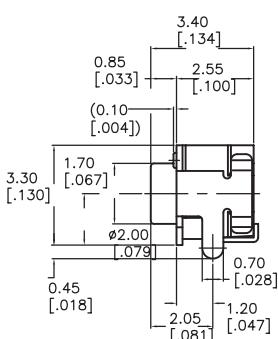
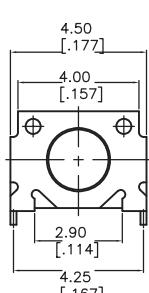
P.C.B MOUNTING
SOLDER LAND DIMENSION



P with location pins



FSMMHPTP



Product key	Location pins	Actuation force	Packaging	Part Number
FSMMHPTP	with pins	1.6±.5 N (160±50 gf)	tape & reel	1977066-1
FSMMHTR	no pins			1977067-1

Preferred parts in bold print

FSMMS Series 3 x 5 Miniature Side Action, SMT

Features

- Gullwing and J-lead surface mounting
- Tape & reel packaging
- Low profile of 1.60 mm



Typical performance characteristics

Contact configuration	SPST
Contact rating max.....	50 mA @ 24 VDC
Contact rating min.....	10 µA @ 1 VDC
Electrical life.....	100,000 cycles
Mechanical life.....	100,000 cycles
Contact resistance.....	max 100 mOhm
Insulation resistance.....	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force.....	2.2 to 2.5 N (220 to 250 gf)
Actuator travel.....	0.30 mm (.012) average

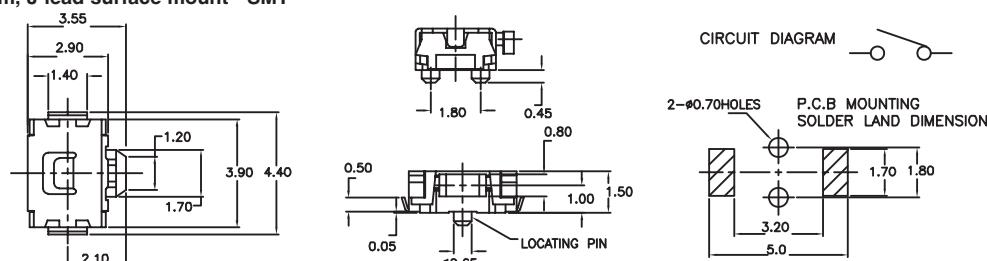
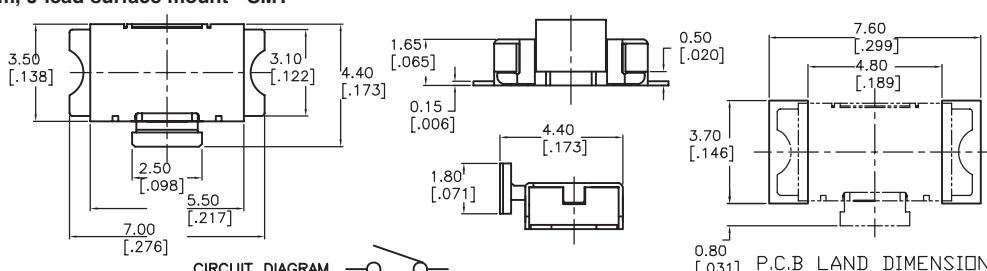
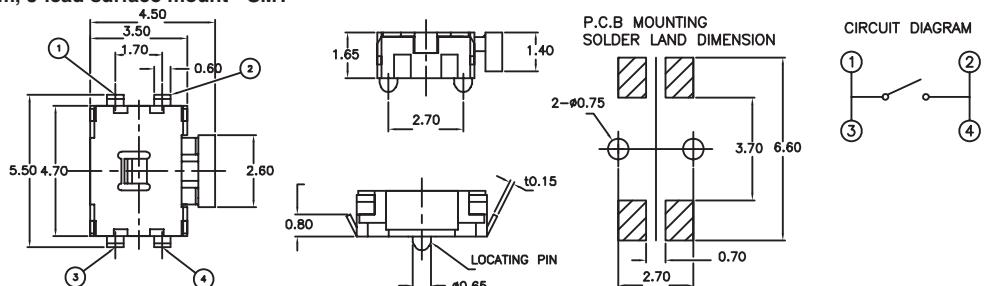
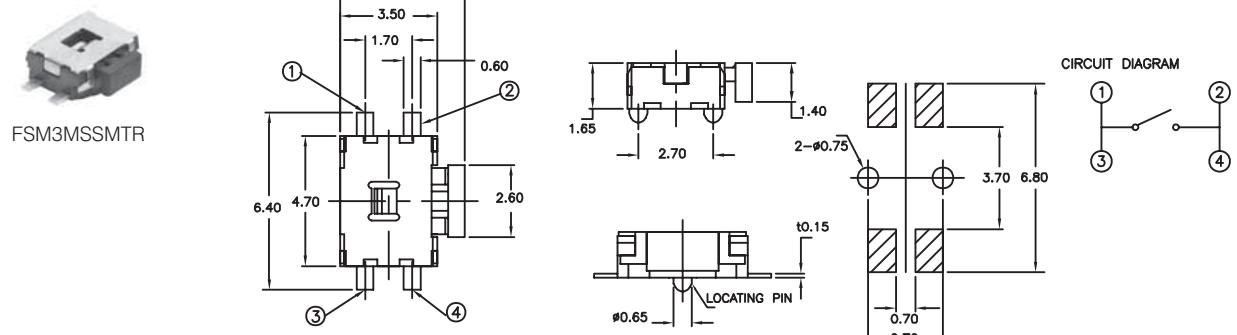
Environmental specification

Operating temperature	-35 to +105°C
Storage temperature	-35 to +105°C
Solder heat resistance	260°C/10s reflow

Material specifications

Contacts	stainless steel silver finish
Actuator46 nylon or lcp
Terminals	copper alloy silver finish
Base	nylon 6T or lcp
Cover	stainless steel
RoHS Directive 2002/95/EC	compliant

Product key	Typical product key	FSM	3	MS	SM	A	P	TR
Type								
FSM	Side action tactile switch, 3 x 5 mm							
Actuator length								
1	3.55 mm (.140)	3	4.50 mm (.177)					
2	4.40 mm (.173)							
Version								
MS	standard							
Terminal								
SM	surface mount - SMT	JM	J-lead surface mount - SMT					
Actuation force								
blank	2.2±.8 N (220±80 gf)	A	2.5±.5 N (250±50 gf)					
Location pins								
blank	no pins	P	with pins					
Packaging								
TR	tape & reel							

FSMMS Series 3 x 5 Miniature Side Action, SMT (Continued)
Actuator length, Terminal**1 actuator length 3.55 mm, J-lead surface mount - SMT****2 actuator length 4.40 mm, J-lead surface mount - SMT****3 actuator length 4.50 mm, J-lead surface mount - SMT****3 actuator length 4.50 mm, surface mount - SMT**

Product key	Actuator length	Terminal	Actuation force	Location pin	Packaging	Part Number
FSM1MSJMPTR	3.55 mm	J-Lead	2.2±.8 N (220±80 gf)	yes	tape & reel	1571908-1
FSM1MSJMTR	(.140)	SMT		no		1571908-2
FSM2MSSMATR	4.40 mm (.173)	Gullwing, SMT	2.5±.5 N (250±50 gf)			1571895-1
FSM3MSJMPTR	4.50 mm	J-Lead	2.2±.8 N (220±80 gf)	yes		1571910-1
FSM3MSJMTR	(.177)	SMT		no		1571910-2
FSM3MSSMPTR		Gullwing		yes		1571909-1
FSM3MSSMTR		SMT		no		1571909-2

Preferred parts in bold print

FSMMST Series "Turtle" Style, SMT

Features

- Tape & reel packaging
- Low profile of 1.70 mm



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	50 mA @ 24 VDC
Contact rating min.	10 µA @ 1 VDC
Electrical life.....	100,000 cycles
Mechanical life.....	100,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	500 VAC for 1 min
Actuation force.....	2.2 N (220 gf)
Actuator travel	0.25 mm (.010) average

Environmental specification

Operating temperature	-20 to +70°C
Storage temperature.....	-30 to +80°C
Solder heat resistance	260°C/10s reflow

Material specifications

Contacts	stainless steel silver finish
Actuator.....	Icp
Terminals.....	copper alloy silver finish
Base	Icp
Cover	stainless steel
RoHS Directive 2002/95/EC	compliant

Product key

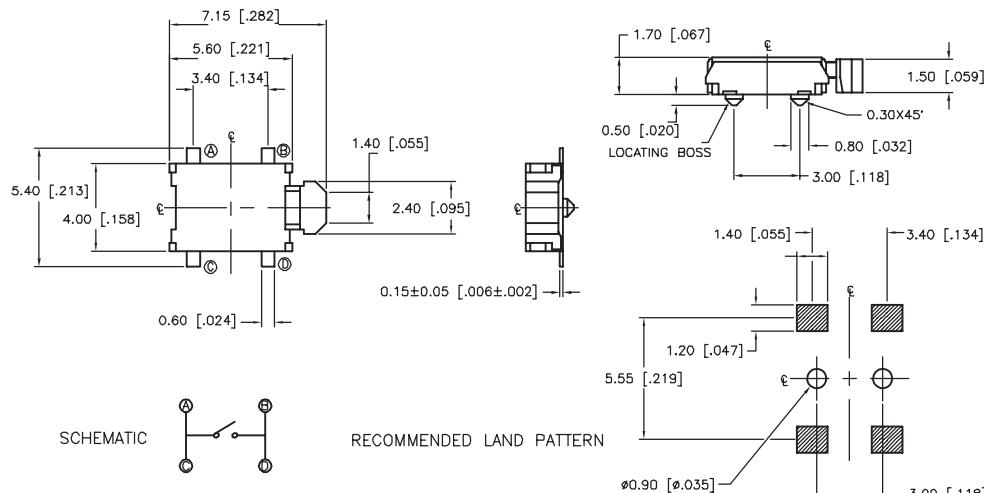
Typical product key

FSM MST**TR**

Type	FSM	Turtle style tactile switch, SMT
Version	MST	standard
Location pins	blank	no pins
	P	with pins
Packaging	blank	bulk
	TR	tape & reel

FSMMST Series

FSMMST



Product key	Version	Actuation force	Location pins	Packaging	Part Number
FSMMST	standard	2.2±.8 N (220±80 gf)	no pins	bulk	1571262-1
FSMMSTP			with pins		1571262-3
FSMMSTPTR				tape & reel	1571262-4
FSMMSTR			no pins		1571262-2

Preferred parts in bold print

FSMMDS Series 7.5 x 7.5 Multidirectional, SMT

Features

- Multi direction actuation



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	50 mA @ 24 VDC
Contact rating min.	10 µA @ 1 VDC
Electrical life.	200,000 cycles
Mechanical life.	200,000 cycles
Contact resistance	max 500 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength	100 VAC for 1 min
Actuation force	3.2 N (320 gf) center, 1.6 N (160 gf) side
Actuator travel	0.15 mm (.006) center, 2.0 (.008) side

Environmental specification

Operating temperature	-30 to +85°C
Storage temperature	-40 to +85°C
Solder heat resistance	260°C/10s reflow

Material specifications

Contacts	stainless steel silver finish
Actuator	Icp
Terminals	copper alloy silver finish
Base	nylon
Cover	stainless steel
RoHS Directive 2002/95/EC	compliant

Product key

Type	FSM	MDS	P
Type	Multidirectional tactile switch, 7.5 mm, SMT		
Version	MDS	standard	
Location pins	blank	no pins	
	P	with pins	

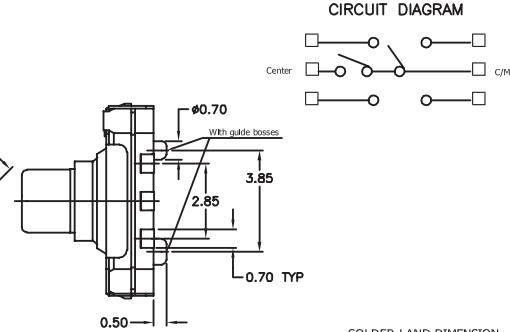
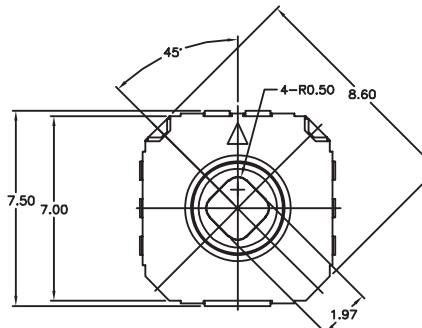
Typical product key

FSMMDS Series 7.5 x 7.5 Multidirectional, SMT (Continued)

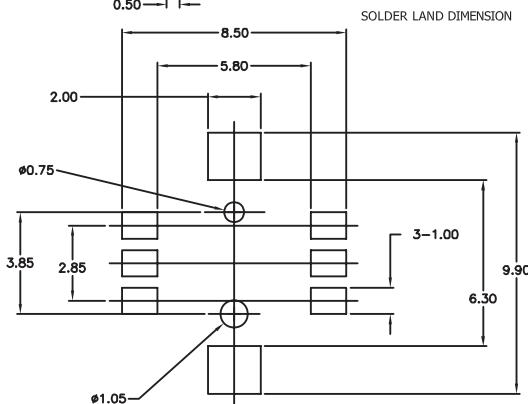
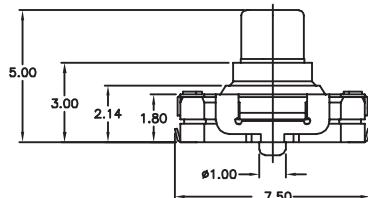
Version

**MDS** standard version, without and with location pins

FSMMDS



CIRCUIT DIAGRAM

**Product key**

FSMMDS	standard	no pins	1825446-1
FSMMDSP		with pins	1825446-2

Version

standard

Location pinsno pins
with pins**Part Number**

FSM . MD Series 12 x 12 Multidirectional, THT & SMT

Features

- Multi direction actuation
- Through hole and surface mount option



Typical performance characteristics

Contact configuration	SPST
Contact rating max.....	5 mA @ 24 VDC
Contact rating min.....	10 µA @ 1 VDC
Electrical life.....	50,000 cycles
Mechanical life.....	50,000 cycles
Contact resistance	max 100 mOhm
Insulation resistance	min 100 MOhm
Dielectric strength.....	100 VAC for 1 min
Actuation force	3.5 to 8.0 N (350 to 800 gf) center 2.0N (200 gf) side
Actuator travel.....	THT: 0.25 mm (.010) center, 5° side SMT: 1.0 mm (.040) center, 8° side

Environmental specification

Operating temperature	-35 to +85°C
Storage temperature.....	-35 to +85°C
Solder heat resistance	260°C/10s reflow or 265°C/10s wave

Material specifications

Contacts	stainless steel or copper alloy silver finish
Actuator	pbt or nylon
Terminals.....	copper alloy silver finish
Base.....	nylon
Cover	stainless steel or pet film
RoHS Directive 2002/95/EC	compliant

Product key

		Typical product key	FSM	3	MD	SM	A
Type	FSM	12 mm Multidirectional Tactile Switch					
Actuator length							
		THT		SMT			
1	10.0 mm (.394)		2	10.5 mm (.413)			
4	14.0 mm (.551)		3	12.2 mm (.480)			
			5	14.2 mm (.559)			
Version	MD	standard					
Terminal	blank	through hole - THT					
	SM	surface mount - SMT					
Actuation force							
blank	3.5 +1.0/-0.5 N (350 +100/-50 gf)						
A	5.0±1.5 N (500±150 gf)						
AA	8.0±1.0 N (800±100 gf)						

FSM . MD Series 12 x 12 Multidirectional, THT & SMT (Continued)

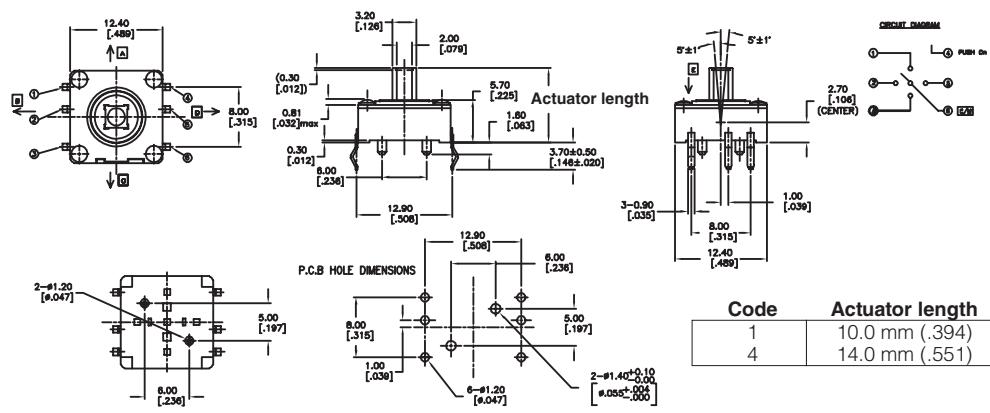
Terminal



blank through hole - THT



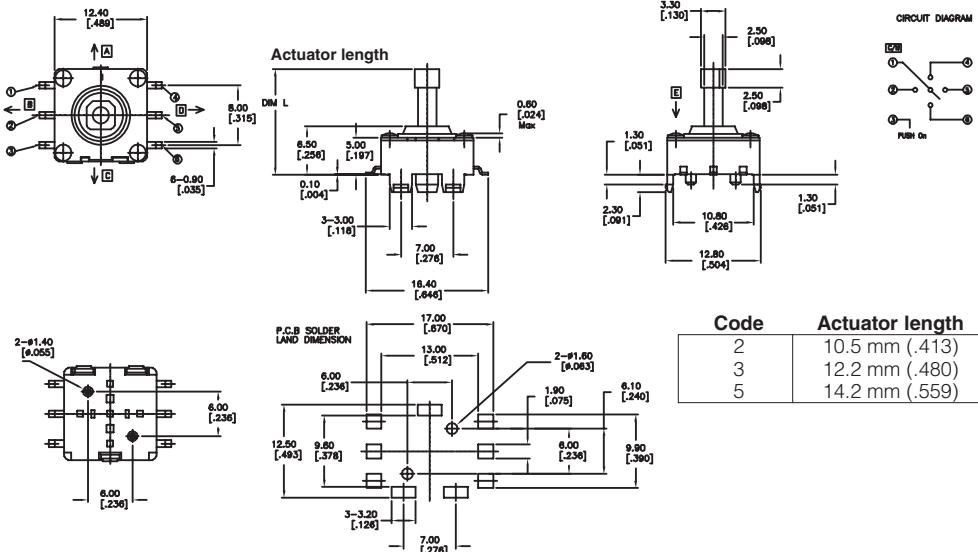
FSM1MD



SM surface mount - SMT



FSM5MDSMA



Product key	Actuator length	Version	Terminal	Actuation force	Part Number
FSM1MD	10.0 mm (.394)	standard	THT	3.5 N (350 gf)	1571515-1
FSM2MDSMA	10.5 mm (.413)		SMT	5.0±1.5 N (500±150 gf)	1571514-3
FSM3MDSMA	12.2 mm (.480)				1571514-2
FSM4MDAA	14.0 mm (.551)		THT	8.0±1.0 N (800±100 gf)	1571515-2
FSM5MDSMA	14.2 mm (.559)		SMT	5.0±1.5 N (500±150 gf)	1571514-1