

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 & SMTpage C4



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



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



FSMJ Series 6 x 6, THTpage C10



FSMCD Series 6 x 6, Square Button, THTpage C13



FSMJRT Series 6 x 6, Radial Tape, THTpage C15

Product Range (Continued)



FSMRAJ Series 6 x 6, Right Angle, THTpage C17



FSMJSM Series 6 x 6, SMTpage C19



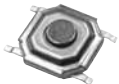
FSMLP Series 6 x 6, Low Profile, SMTpage C21



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



Tactile Switches

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 pbt
 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)

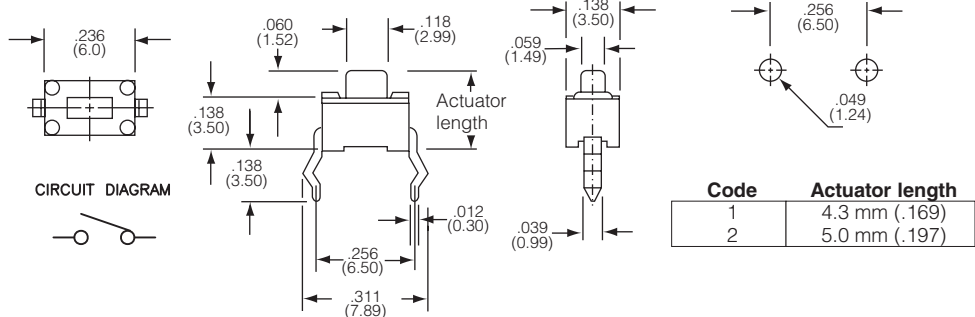
Terminal



blank through hole technology



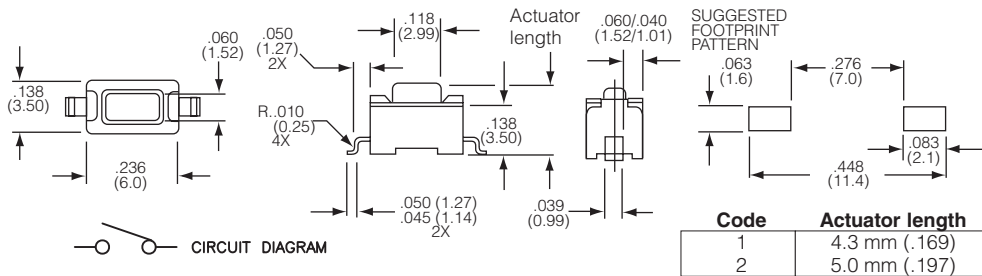
FSM1



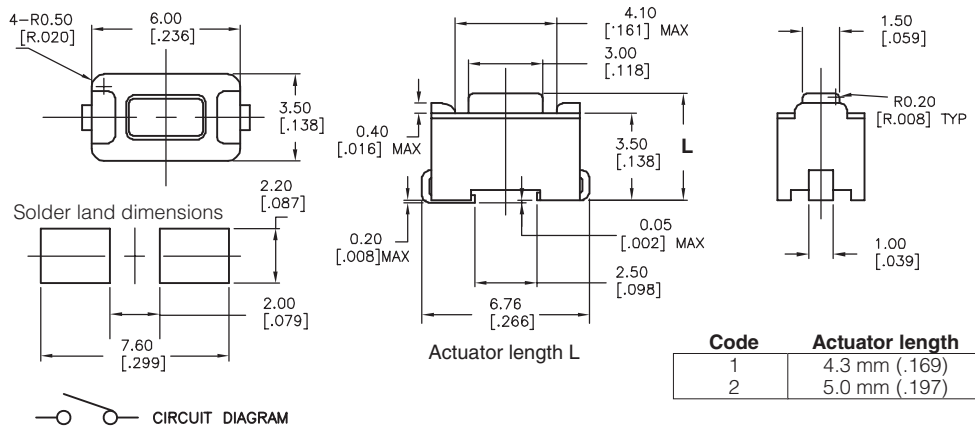
SM surface mount SMT



FSM1SMTR



JM J-lead surface mount - SMT



Product key	Actuator length	Life	Terminal	Actuation force	Finish	Packaging	Part Number
FSM1JML	4.3 mm	40,000	J-lead, SMT	1.8±0.5 N (180±50 gf)	Silver	bulk	147942-1
FSM1JMLTR	(.169)			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	40,000	J-lead, SMT		Tin		147873-4
FSM2JMTR	(.196)				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



Tactile Switches

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

Typical product key

FSM 1 S JM

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

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

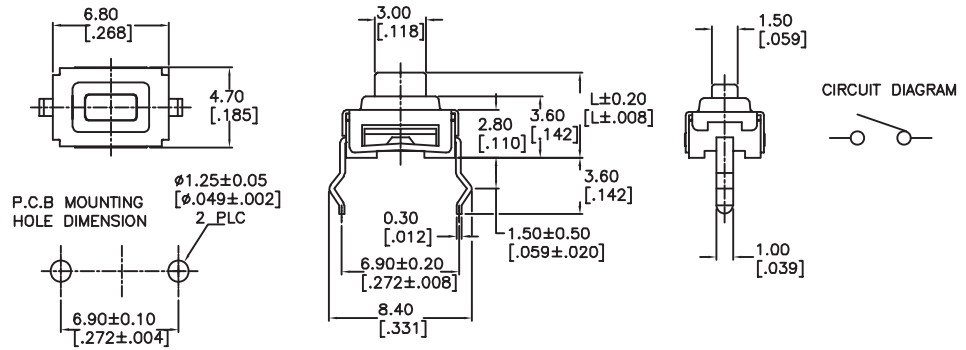
Terminal



blank through hole - THT



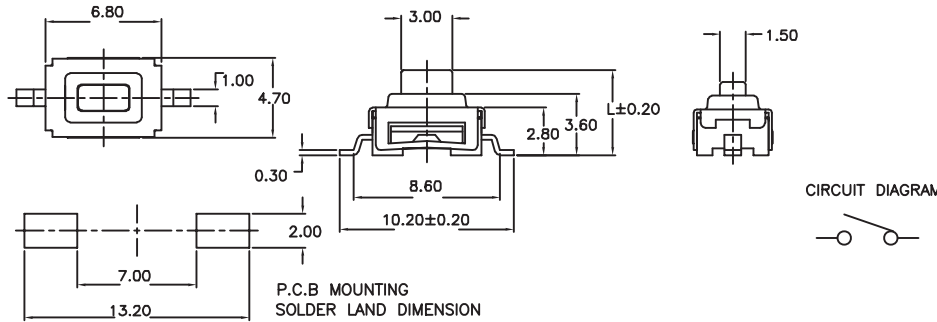
FSM2S



SM surface mount - SMT



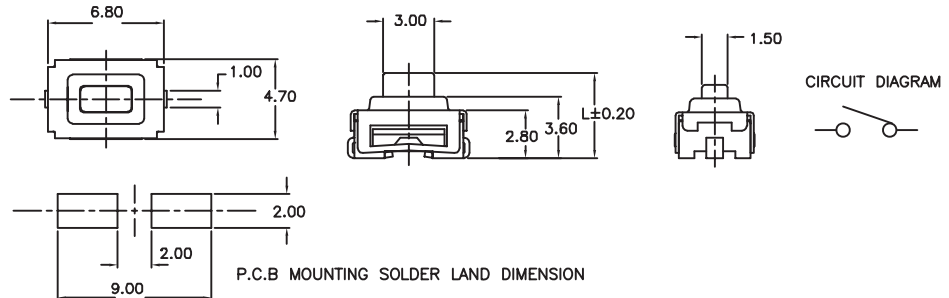
FSM2SSM



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 (Continued)

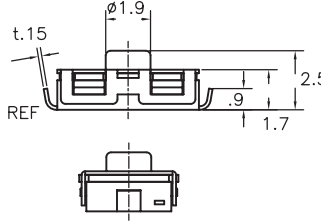
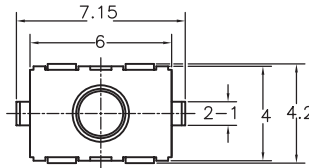
Terminal



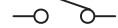
JM J-lead surface mount



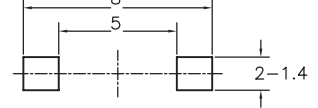
FSMJMPTR



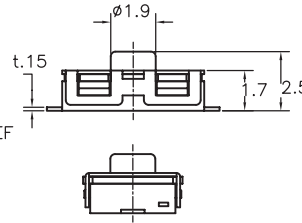
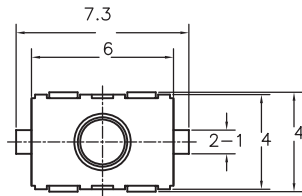
CIRCUIT DIAGRAM



P.C.B SOLDER LAND DIMENSION



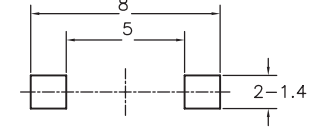
SM surface mount



CIRCUIT DIAGRAM



P.C.B SOLDER LAND DIMENSION



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



Tactile Switches

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

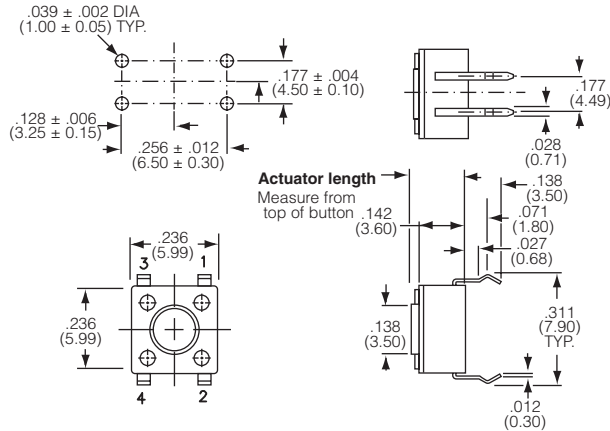
FSMJ Series 6 x 6, THT (Continued)

Grounding terminal & actuator length

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



FSM2J

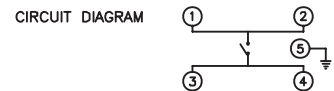
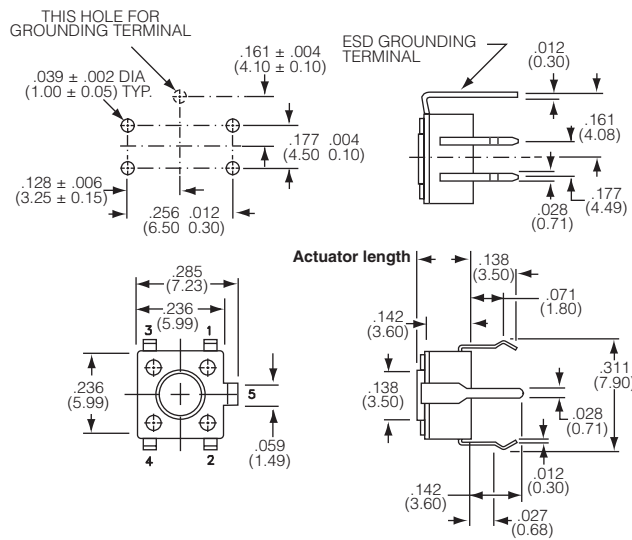


Code	Actuator length
2	4.3 mm (.169)
4	5.0 mm (.196)
6	7.0 mm (.276)
8	9.5 mm (.374)
10	7.3 mm (.287)
12	8.0 mm (.315)
14	13.0 mm (.512)
16	17.0 mm (.669)
18	8.5 mm (.335)

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



FSM1J



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)

Tactile Switches

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)	
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)	
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)	
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)	
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)	
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)	
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)	
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)	
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)	
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		9.5 mm (.374)		1.0±0.5 N (100±50 gf)		1-1825955-3
FSM7JH					1.6±0.5 N (160±50 gf)	
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)	
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)	
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		13.0 mm (.512)		1.0±0.5 N (100±50 gf)		2-1825955-5
FSM13JH					1.6±0.5 N (160±50 gf)	
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)	
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)	
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 travel0.25 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	FSM	CD	1	H
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)

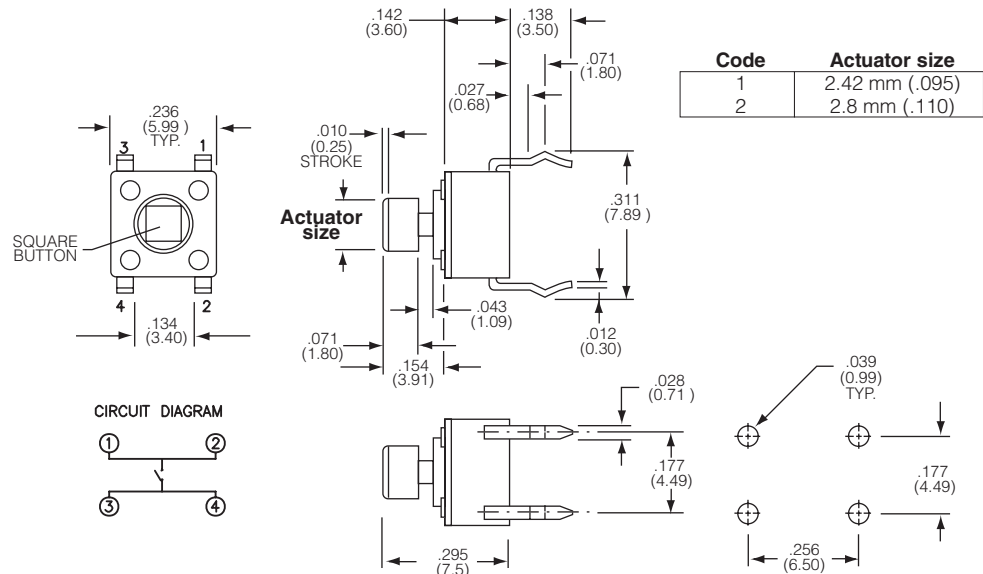
Operating direction



blank vertical version



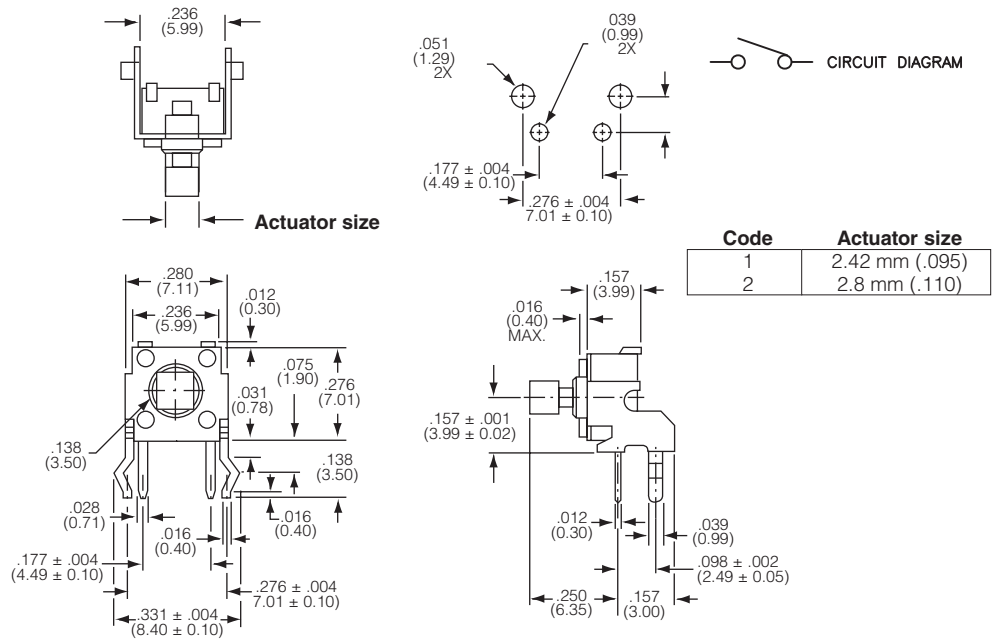
FSMCDA



RA right angle version



FSMRACDA



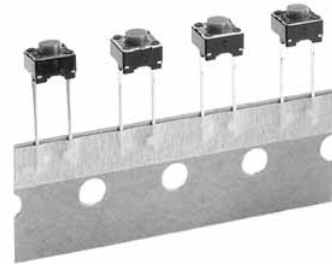
Product key	Operating direction	Version	Actuatore size	Actuation force	Temperature	Part Number
FSMCD2H	vertical	square button	2.80 mm (.110)	1.6±0.5 N (160±50 gf)	high	1825967-2
FSMCD1H	(.374)	version	2.42 mm (.095)		temperature	1825967-1
FSMRACD2AH	horizontal		2.80 mm (.110)	2.6±0.5 N (260±50 gf)	version	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

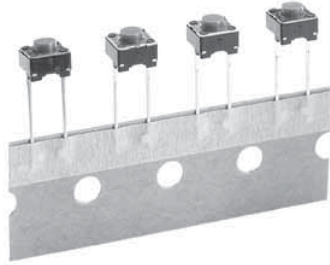
FSMJRT Series 6 x 6, Radial Tape, THT (Continued)

Actuator length

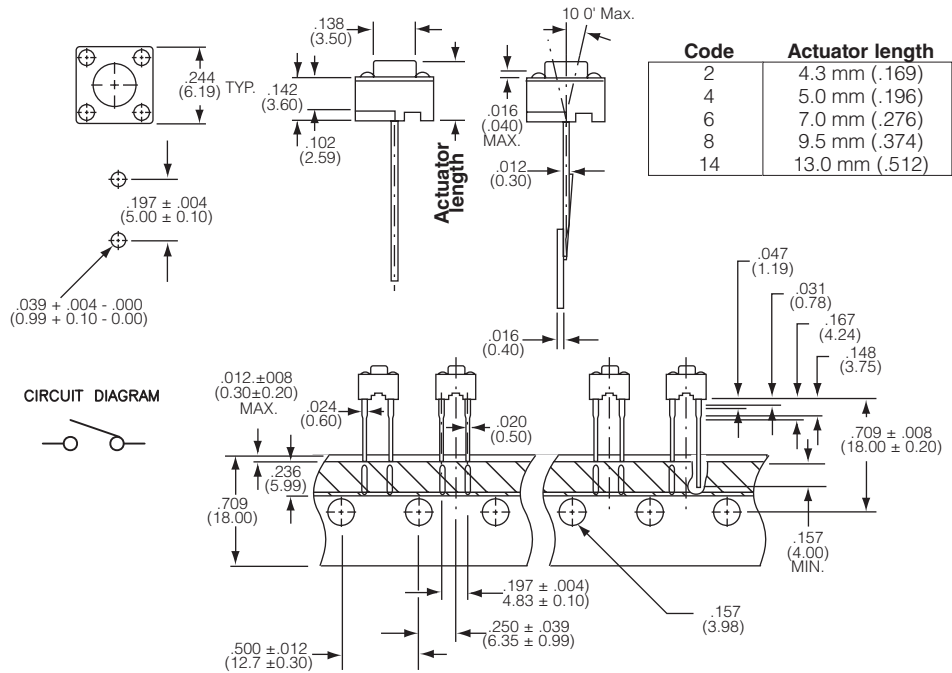


Codes 2, 4, 6, 8, 10, 12, 14, 16, 18

Tactile Switches



FSM4JRT



Product key	Actuator length	Version	Actuation force	Packaging	Part Number
FSM14JRT	13.0 mm (.512)	radial tape	1.6±0.5 N (160±50 gf)	radial type	1571010-1
FSM8JART	9.5 mm	version	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)

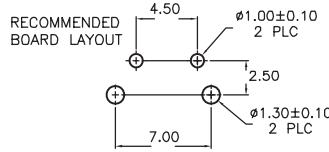
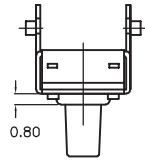
Actuator length



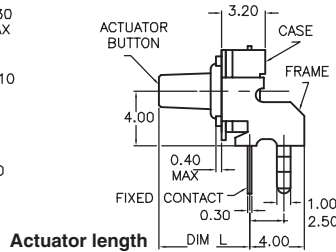
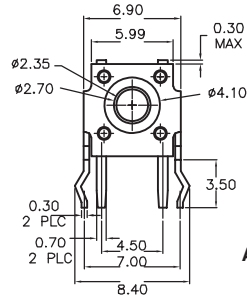
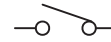
Codes 1, 2, 3, 4, 5, 6, 7, 8



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)	8	9.5 mm (.374)						
4	5.0 mm (.196)	14	13.0 mm (.512)						
6	7.0 mm (.276)								
Version	JSM surface mount version								
Actuation force									
XL	0.7±0.3 N (70±30 gf)	A	1.6±0.5 N (160±50 gf)						
L	1.0±0.3 N (100±30 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)

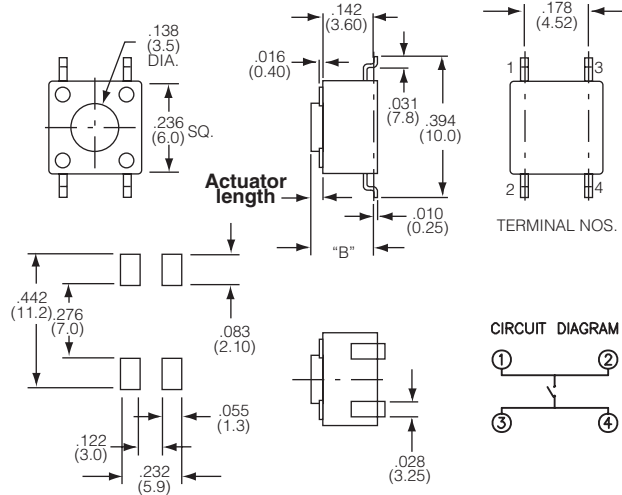
Actuator length



Codes 2, 4, 6, 8, 14



FSM2JSMAS



Code	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)

Tactile Switches

Product key	Actuator length	Version	Actuation force	Packaging	Part Number
FSM2JSMAAS	4.3 mm	version	2.6±0.5 N (260±50 gf)	bulk	1977223-5
FSM2JSMAASTR	(.169)	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		2.6±0.5 N (260±50 gf)	bulk	1-1977223-1
FSM4JSMAASTR	(.196)			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		2.6±0.5 N (260±50 gf)	bulk	1-1977223-9
FSM6JSMAASTR	(.276)			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		2.6±0.5 N (260±50 gf)	bulk	2-1977223-5
FSM8JSMAASTR	(.374)			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		2.6±0.5 N (260±50 gf)	bulk	2-1977223-9
FSM14JSMAS	(.512)		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/-.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

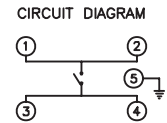
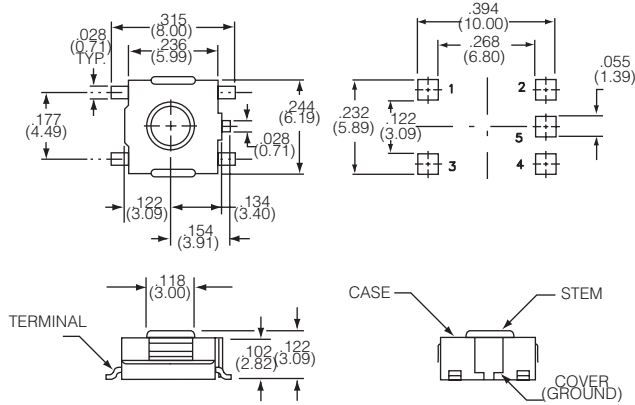
Product key		Typical product key					
		FSM	1	LP	A	S	TR
Type	FSM Tactile switch 6 x 6 mm						
Actuator length & grounding terminal							
1	3.1mm (.122), with grounding						
4	4.3mm (.169), without grounding						
Version							
LP	low profile version						
Actuation force							
blank	1.6±0.5 N (160±50 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)

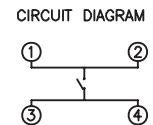
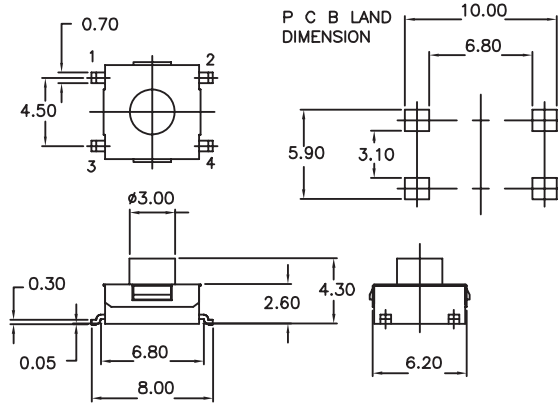
Actuator length & grounding terminal



Code 1 with grounding terminal, 3.1 mm



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±0.5 N (160±50 gf)	bulk	1977263-1
FSM1LPAS	(.169)	version	2.6±0.5 N (260±50 gf)		1977263-2
FSM1LPASTR				tape & reel	1977263-3
FSM1LPSTR			1.6±0.5 N (160±50 gf)		1977263-4
FSM4LPAS	4.3 mm		2.6±0.5 N (260±50 gf)	bulk	1977264-1
FSM4LPASTR	(.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

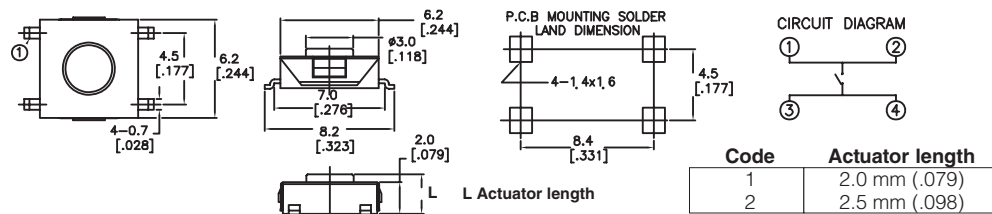
Contacts stainless steel silver finish
 Actuator nylon
 Terminals copper alloy silver finish
 Base PPS
 Cover copper alloy, tin finish or stainless steel
 RoHS Directive 2002/95/EC compliant

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

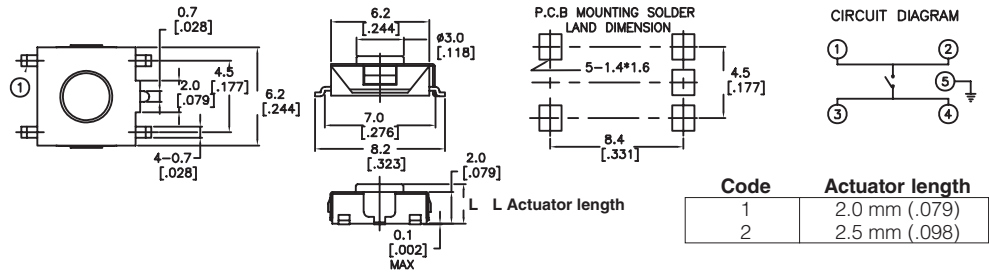


G gullwing terminal

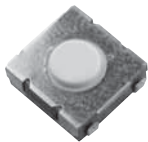


FSMJEL Series 6 x 6, Extended Life, SMT (Continued)

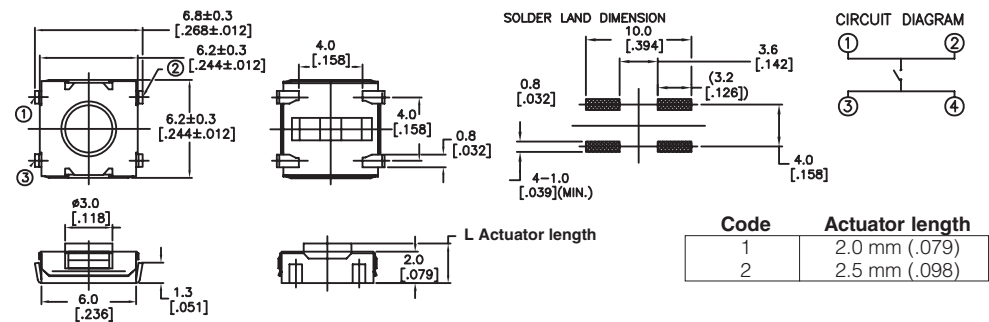
GE gullwing with ground terminal



J J-lead terminal



FSM1JELJ



Product key	Actuator length	Version	Terminal	Actuation force	Life	Packaging	Part Number
FSM1JELG	2.0 mm (.079)	extended life version	gullwing with ground gullwing	1.6±0.5 N (160±50 gf)	1,000,000	bulk	1571626-7
FSM1JELGE						tape & reel	1571636-7
FSM1JELGETR						FSM1JELGTR	bulk
FSM2JELG	2.5 mm (.098)		gullwing with ground	2.6±0.5 N (260±50 gf)	100,000	bulk	1571626-9
FSM2JELGA						tape & reel	1-1571626-0
FSM2JELGATR						FSM2JELGE	bulk
FSM2JELGEA			gullwing with ground	1.6±0.5 N (160±50 gf)	1,000,000	bulk	1571636-9
FSM2JELGEATR				2.6±0.5 N (260±50 gf)	100,000	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)			1571636-6
FSM2JELGEXL				0.5±0.3 N (50±30 gf)		bulk	1571636-1
FSM2JELGEXLTR						tape & reel	1571636-2
FSM2JELGL			gullwing	1.0±0.3 N (100±30 gf)		bulk	1571626-3
FSM2JELGLTR		tape & reel				1571626-4	
FSM2JELGTR		bulk				1571626-6	
FSM2JELGXL				1.6±0.5 N (160±50 gf)		bulk	1571626-1
FSM2JELGXLTR				0.5±0.3 N (50±30 gf)		tape & reel	1571626-2
FSM2JELJ			J-lead	1.6±0.5 N (160±50 gf)	100,000	bulk	1571625-5
FSM2JELJA		2.6±0.5 N (260±50 gf)				tape & reel	1571625-7
FSM2JELJATR						bulk	1571625-8
FSM2JELJL				1.0±0.3 N (100±30 gf)	1,000,000	bulk	1571625-3
FSM2JELJLTR						tape & reel	1571625-4
FSM2JELJTR				1.6±0.5 N (160±50 gf)		bulk	1571625-6
FSM2JELJXL				0.5±0.3 N (50±30 gf)	2,000,000	bulk	1571625-1
FSM2JELJXLTR						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 μ A @ 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	pps
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

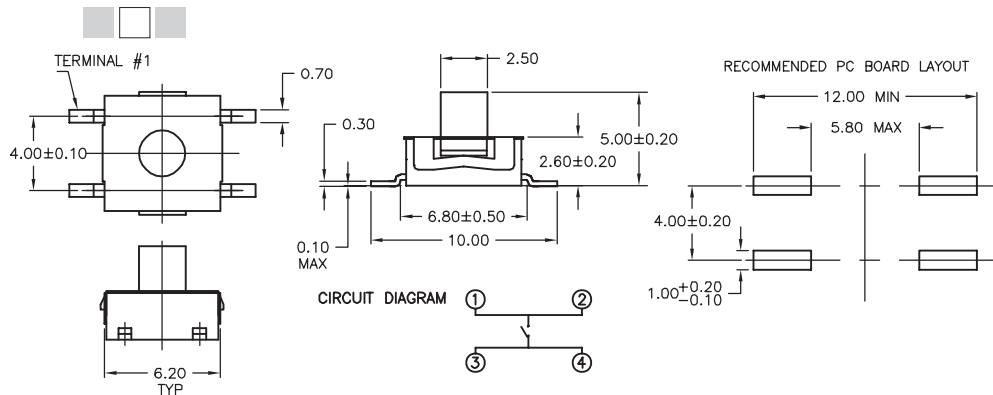
Packaging

blank bulk
TR tape & reel

Extreme life cycle version



FSMJX

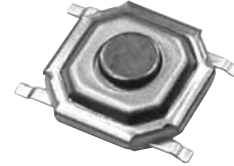


Product key	Version	Packaging	Part Number
FSMJX	extreme	bulk	1571634-1
FSMJXTR	life cycle	tape & reel	1571634-2

FSMCT Series 5.2 x 5.2, Ultra Low Profile, SMT

Features

- Ultra low profile design
- Metal actuator



Tactile Switches

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/-.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

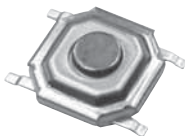
Actuation force

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

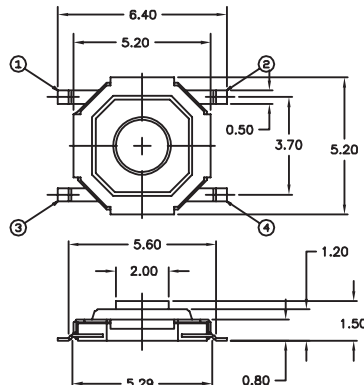
Packaging

TR tape & reel

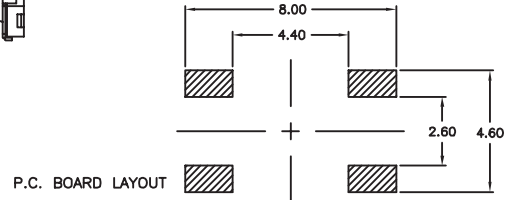
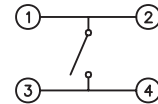
Ultra low profile version



FSMCTTR



CIRCUIT DIAGRAM



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	tape & reel	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

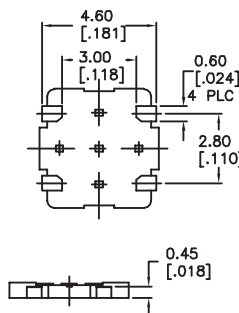
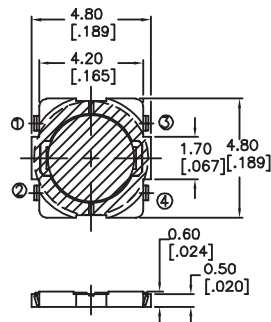
Version



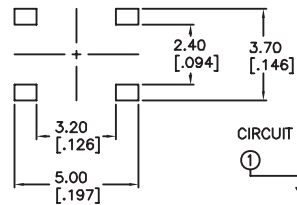
LPU slimline version



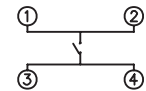
FSMLPUTR



SOLDER PAD LAYOUT



CIRCUIT DIAGRAM



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 iA @ 1 VDC
Electrical life	1,000,000 cycles
Mechanical life	1,000,000 cycles
Contact resistance	max. 100mOhm
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

Tactile Switches

Product key

Typical 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

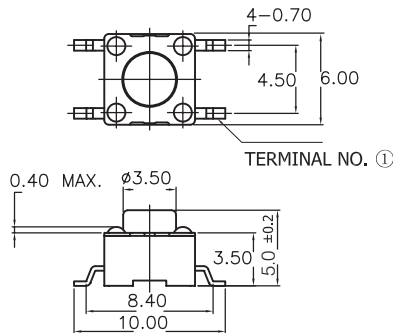
Version



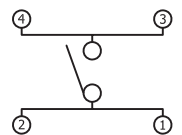
JS6 sealed version 6 x 6 mm



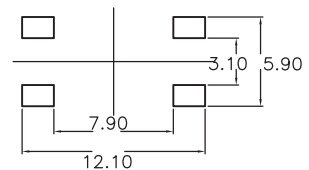
FSM2JS6SM



CIRCUIT DIAGRAM



P.C.B. LAND DIMENSION



Product key	Terminal	Actuation force	Packaging	Part Number
FSM2JS6SM	SMT	1.6±.5 N (160±50 gf)	bulk	1977265-1
FSM2JS6SMTR			tape & reel	1977265-2

Preferred parts in bold print

FSMJ 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 & base	46 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						

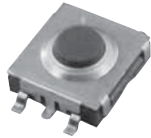
FSMJ Series 7.6 x 7.3, Sealed, SMT & THT (Continued)

Tactile Switches

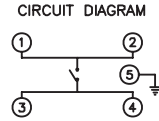
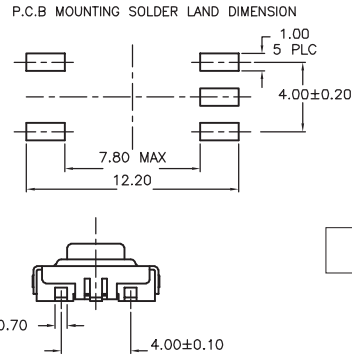
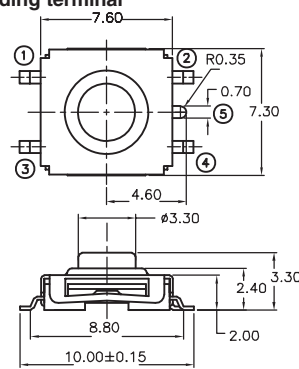
Actuator length & grounding terminal, THT & SMT



Code 1 SMT, with grounding terminal



FSM1JSSM

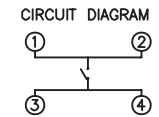
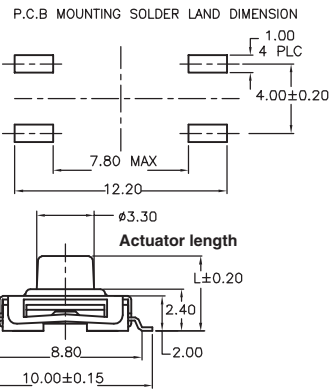
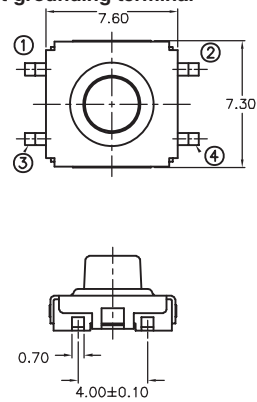


Code	Actuator length
1	3.3mm (.130) with Gnd

Codes 2, 4 SMT, without grounding terminal



FSM2JSSM

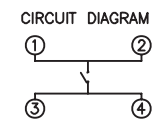
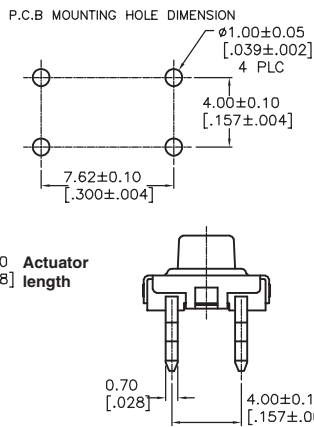
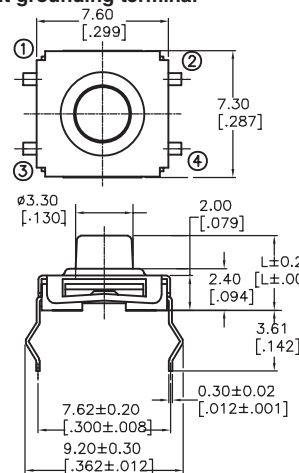


Code	Actuator length
2	4.3mm (.169)
4	5.0mm (.197)

Codes 2, 4 THT, without grounding terminal



FSM2JS



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

FSMJ5 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	without	SMT	1.6±0.5 N (160±50 gf)	bulk	1571294-1
FSM2JSSMTR	version	(.169)	ground		1.6±0.5 N (160±50 gf)	tape & reel	1571294-2
FSM4JSSM		5.0 mm			1.6±0.5 N (160±50 gf)	bulk	1571294-3
FSM4JSSMTR		(.196)			1.6±0.5 N (160±50 gf)	tape & reel	1571294-4
FSM2JSSMA		4.3 mm			2.6±0.5 N (260±50 gf)	bulk	1571294-5
FSM2JSSMATR		(.169)			2.6±0.5 N (260±50 gf)	tape & reel	1571294-6
FSM1JSSM		3.3 mm	with		1.6±0.5 N (160±50 gf)	bulk	1571296-1
FSM1JSSMTR		(.130)	ground		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



Tactile Switches

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)

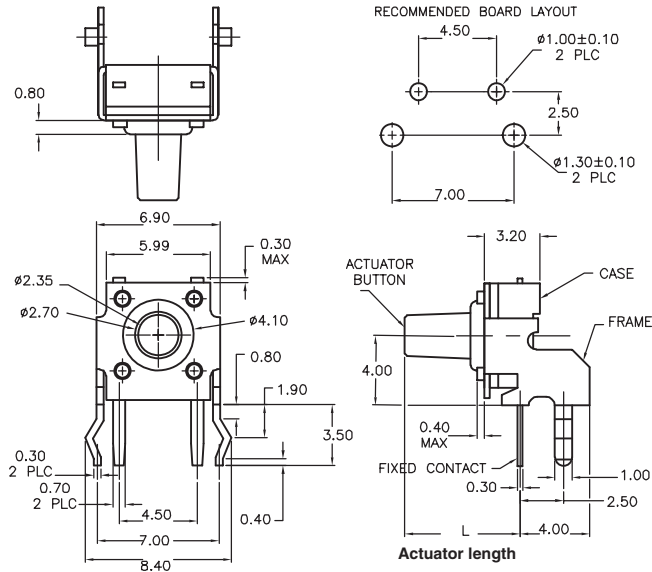
THT version



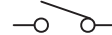
Actuator length, codes 1, 2, 3, 4



FSMRAJS2



CIRCUIT DIAGRAM



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

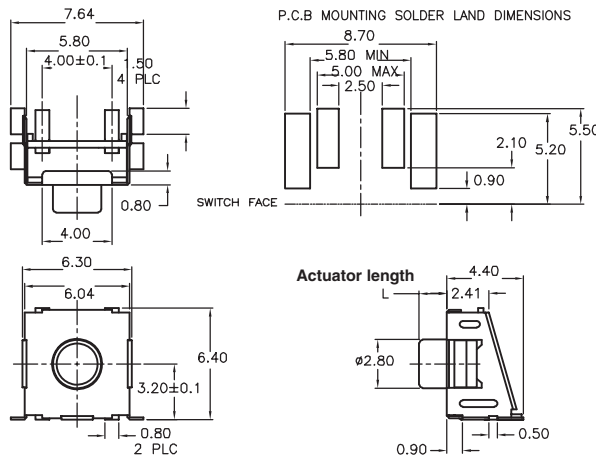
SMT version



Actuator length, codes 1, 2, 3, 4



FSMRAJS2SM



CIRCUIT DIAGRAM



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

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



Tactile Switches

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)

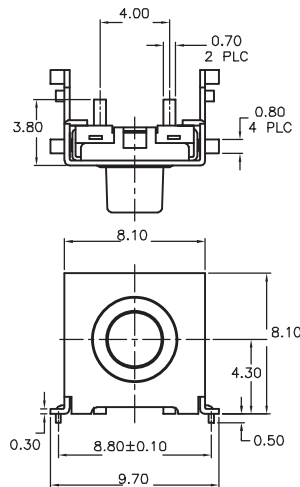
Location pin



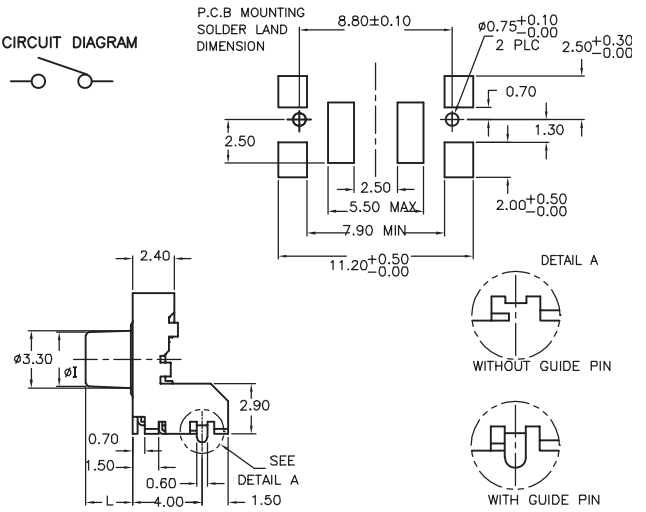
Codes blank, P without/with location pins



FSMRAJSA



CIRCUIT DIAGRAM



Tactile Switches

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

FSM10 Series 12 x 12, THT

Features

- Optional actuator configurations



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

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

Tactile Switches

Product key

Typical product key

FSM 10 0 A

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)

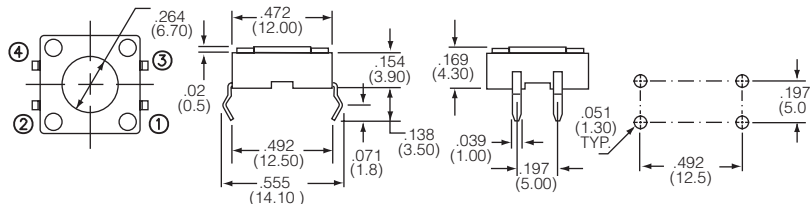
Actuator length



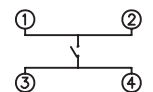
0 actuator length 4.3 mm (.169)



FSM100



CIRCUIT DIAGRAM

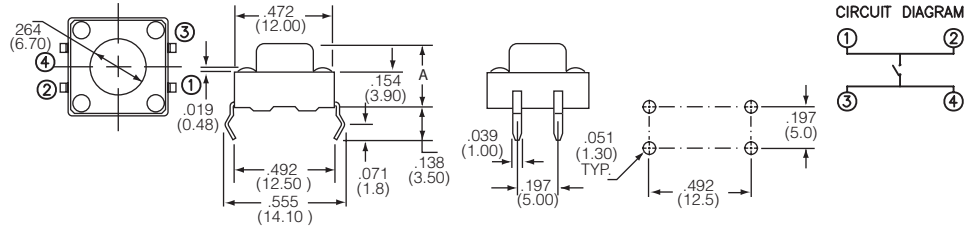


FSM10 Series 12 x 12, THT (Continued)

1 actuator length 8.5 mm (.335)



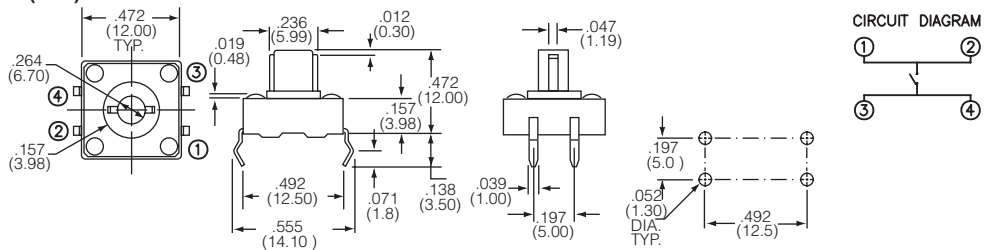
FSM101



2 actuator length 12.0 mm (.472)



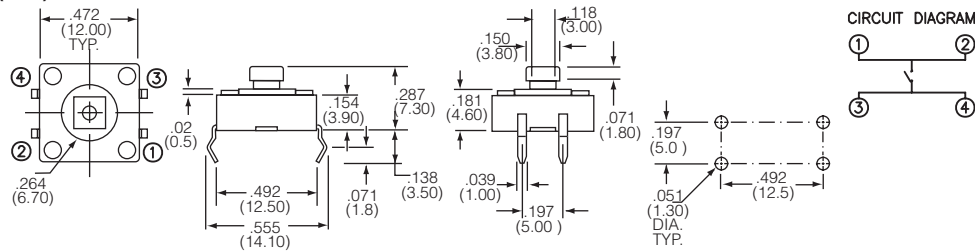
FSM102



3 actuator length 7.3 mm (.287)



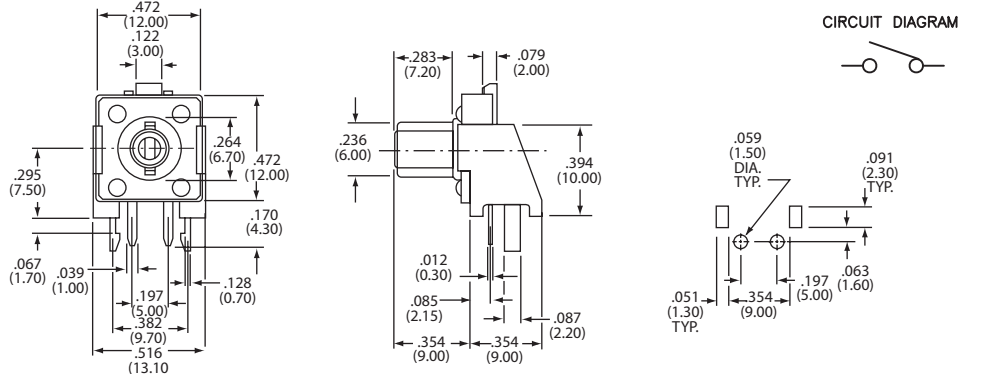
FSM103



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



FSM104



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



Tactile Switches

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

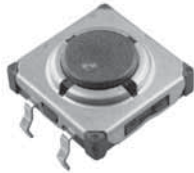
Product key	Typical product key	FSM	10	3	S		SM	TR
Type	FSM Tactile switch 12 x 12 mm							
Version	10 standard							
Actuator length	0 4.3 mm (.169) 3 7.3 mm (.287) square							
Version	S sealed version							
Location pins	blank no pins P with pins							
Terminal	blank through hole - THT SM surface 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)

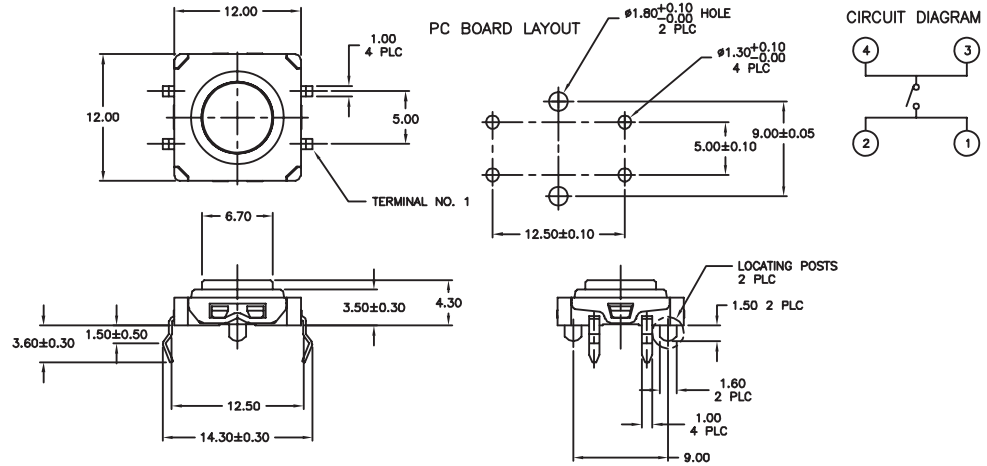
Actuator length, Location pins, Terminal



0 4.3 mm, without and with location pins, through hole THT



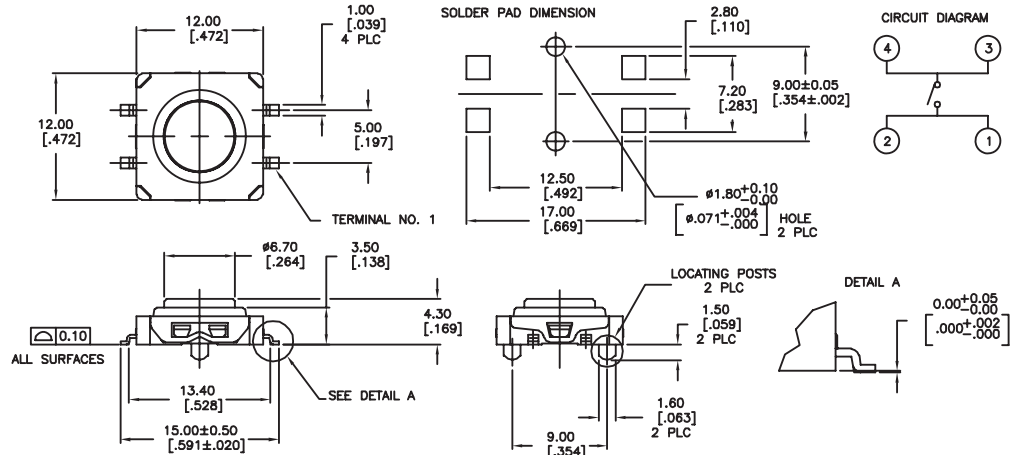
FSM100S



0 4.3 mm, without and with location pins, surface mount SMT



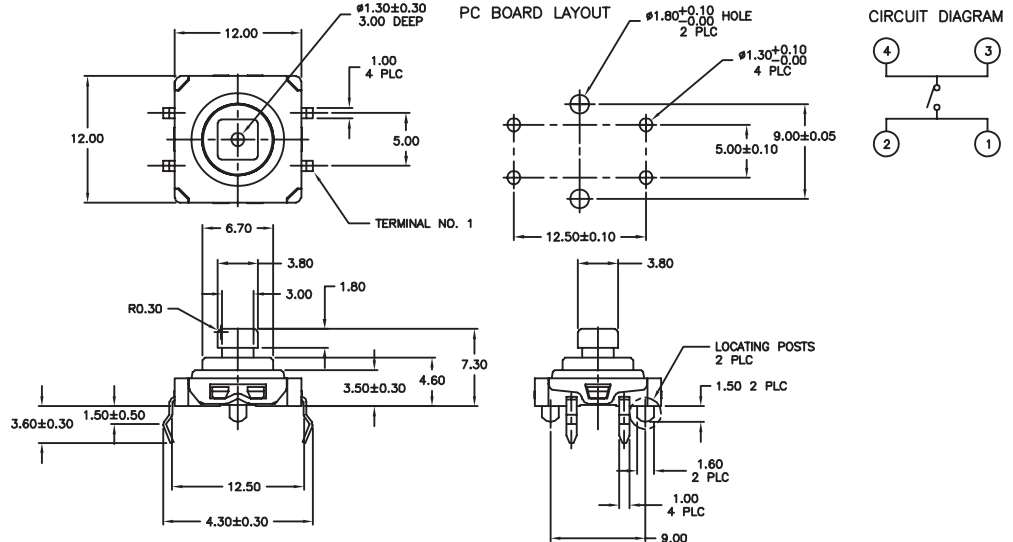
FSM100SM



3 7.3 mm square, without and with location pins, through hole THT



FSM103S

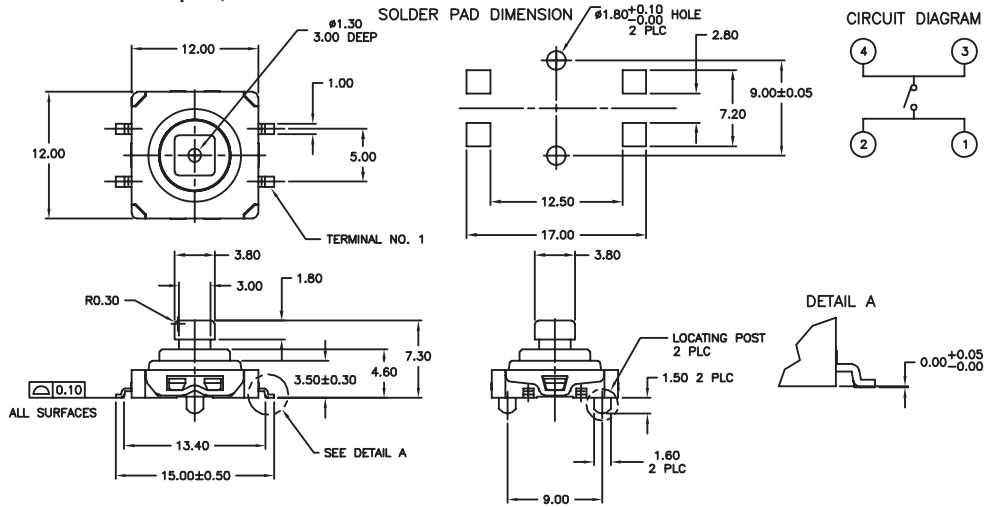


FSM10 Series 12 x 12, Sealed, SMT & THT (Continued)

3 7.3 mm square, without and with location pins, surface mount SMT



FSM103SM



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

FSM MSH P TR

Type

FSM Side action tactile switch, 2.55 x 4.5 mm

Version

MSH standard

Location pins

blank no pins **P** with pins

Packaging

TR tape & reel

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

Tactile Switches

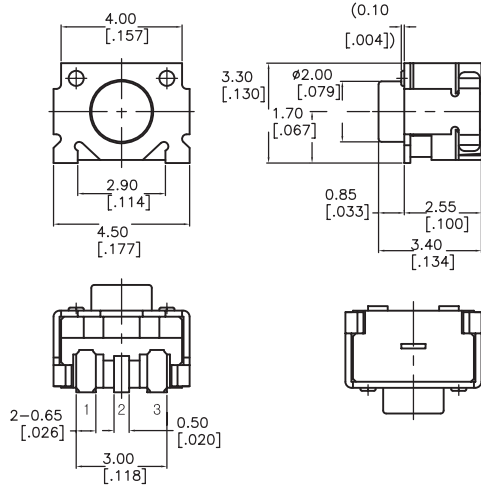
Location pins



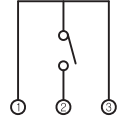
blank no location pins



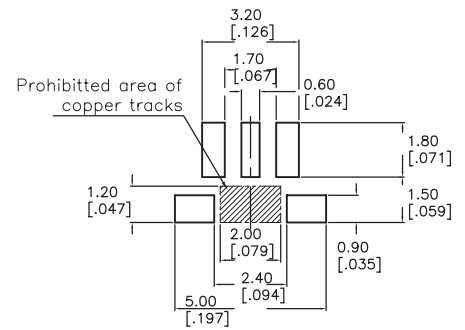
FSMMSHTR



CIRCUIT DIAGRAM



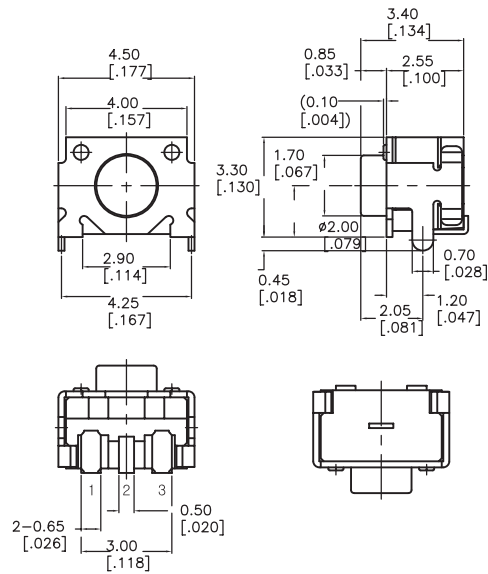
P.C.B MOUNTING
SOLDER LAND DIMENSION



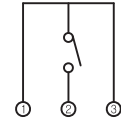
P with location pins



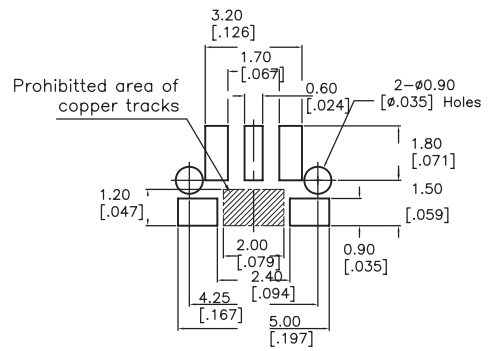
FSMMSHPTR



CIRCUIT DIAGRAM



P.C.B MOUNTING
SOLDER LAND DIMENSION



Product key	Location pins	Actuation force	Packaging	Part Number
FSMMSHPTR	with pins	1.6±.5 N (160±50 gf)	tape & reel	1977066-1
FSMMSHTR	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
 Actuator 46 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								

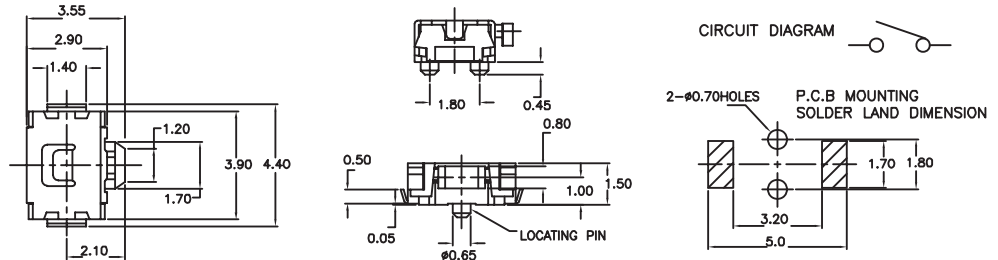
FSMMS Series 3 x 5 Miniature Side Action, SMT (Continued)

Tactile Switches

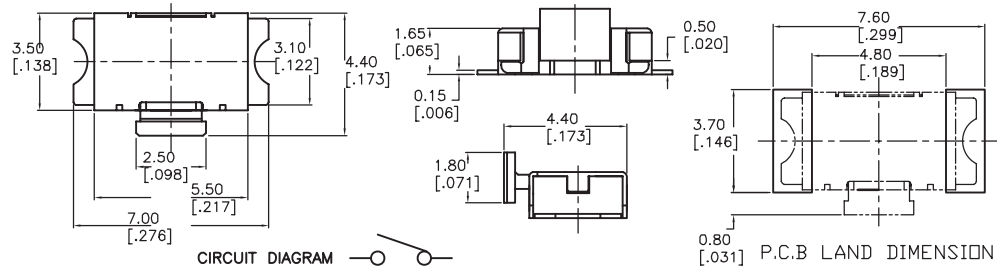
Actuator length, Terminal



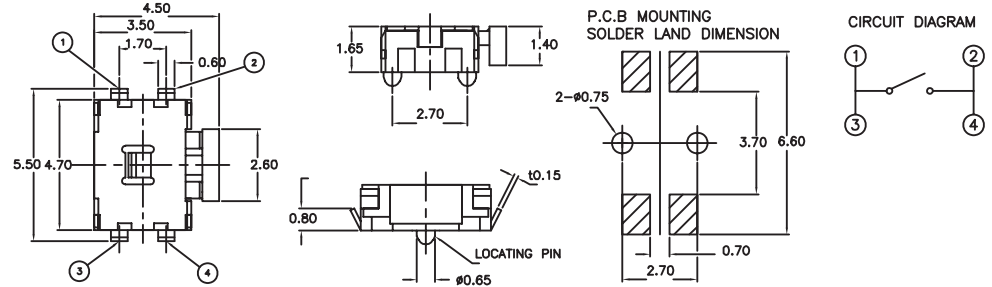
1 actuator length 3.55 mm, J-lead surface mount - SMT



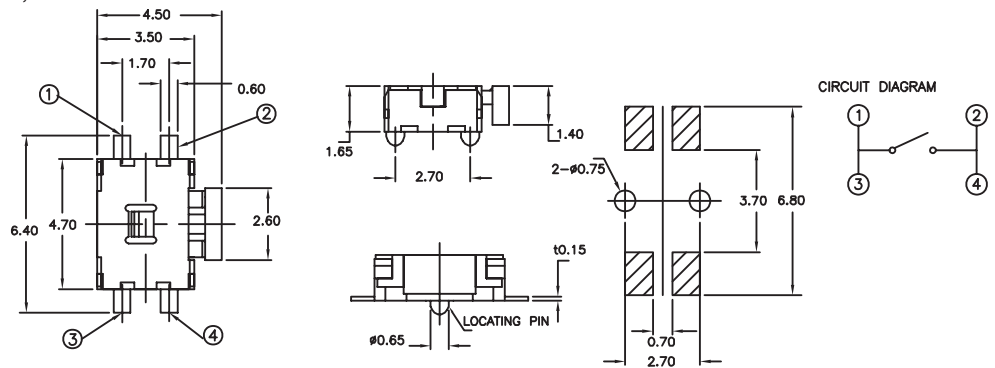
2 actuator length 4.40 mm, J-lead surface mount - SMT



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	lcp
Terminals	copper alloy silver finish
Base	lcp
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 "Turtle" Style, SMT (Continued)

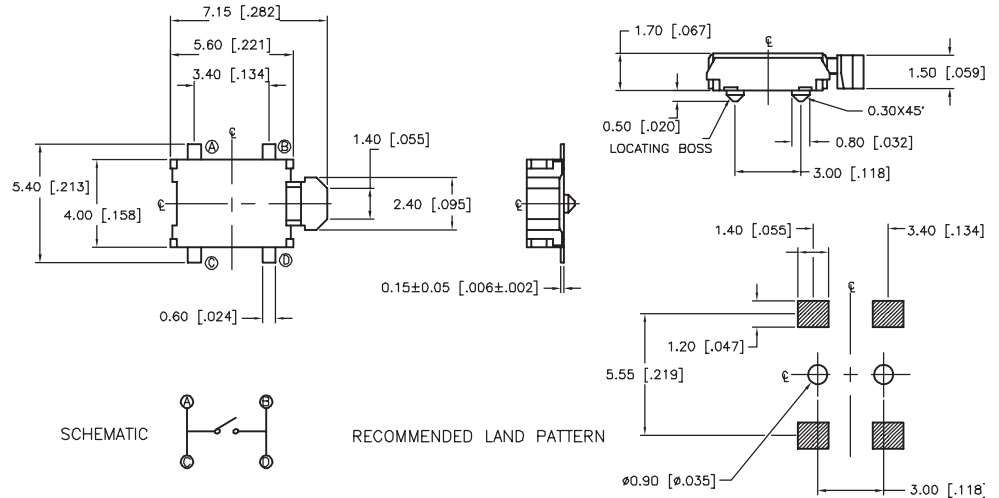
FSMMST Series



Tactile Switches



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
FSMMSTTR			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 lcp
 Terminals copper alloy silver finish
 Base nylon
 Cover stainless steel
 RoHS Directive 2002/95/EC compliant

Product key

Typical product key

FSM	MDS	P
------------	------------	----------

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

FSMMDS Series 7.5 x 7.5 Multidirectional, SMT (Continued)

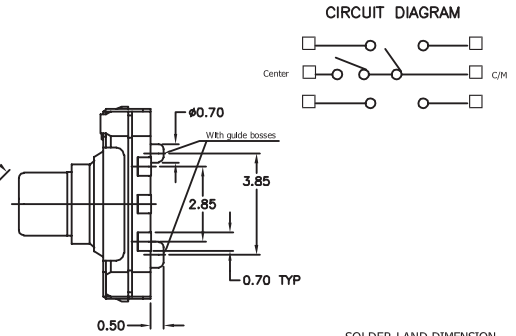
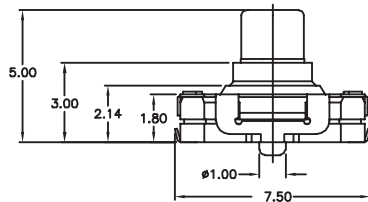
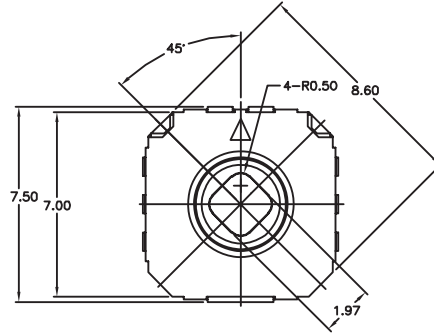
Version



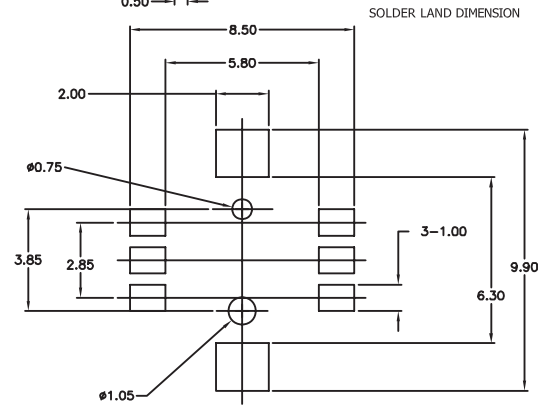
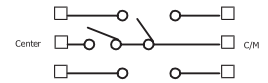
MDS standard version, without and with location pins



FSMMDS



CIRCUIT DIAGRAM



Product key	Version	Location pins	Part Number
FSMMDS	standard	no pins	1825446-1
FSMMDSP		with pins	1825446-2

Tactile Switches

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)

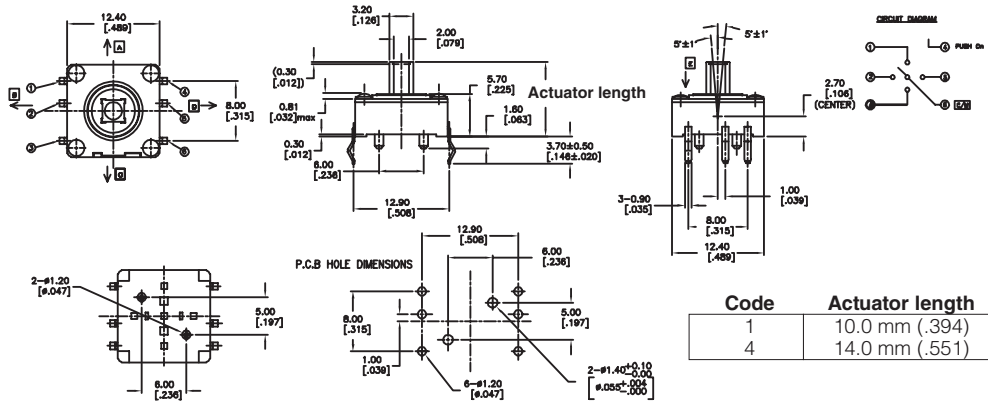
Terminal



blank through hole - THT



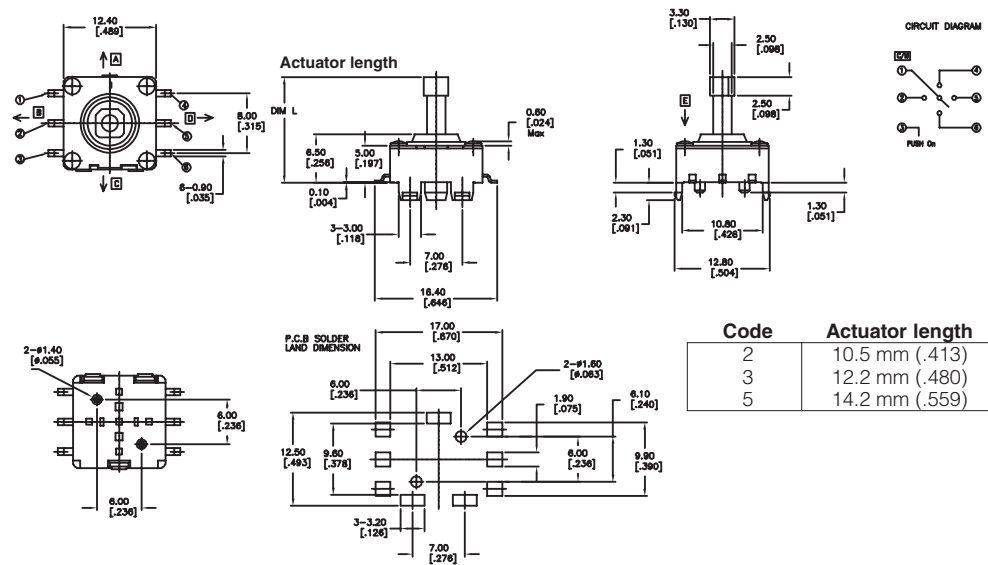
FSM1MD



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