

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)



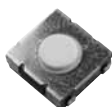
FSMRAJ Series 6 x 6, Right Angle, THTpage C17



FSMJSM Series 6 x 6, SMTpage C19



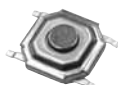
FSMLP Series 6 x 6, Low Profile, SMTpage C21



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



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)

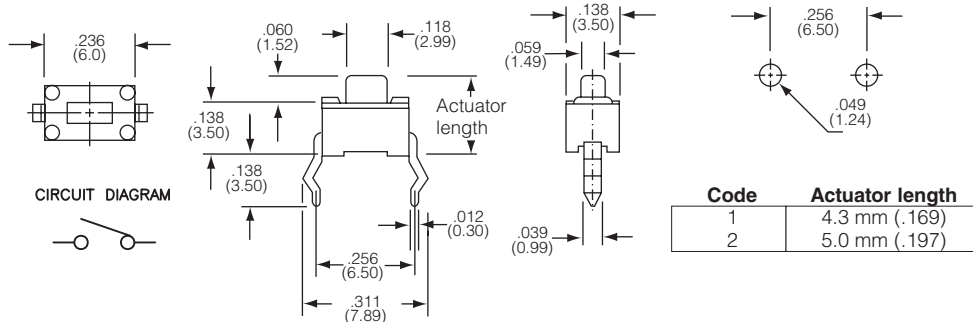
Terminal



blank through hole technology



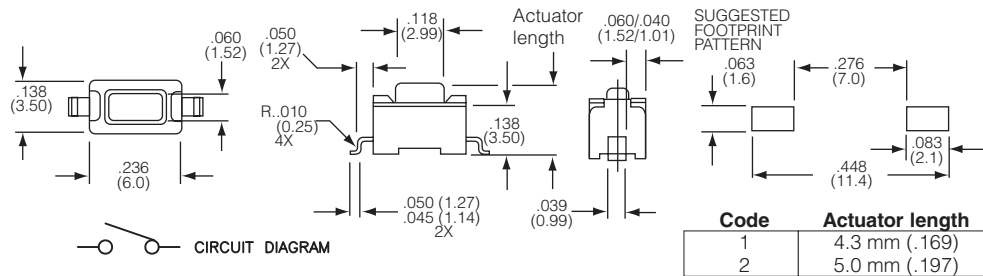
FSM1



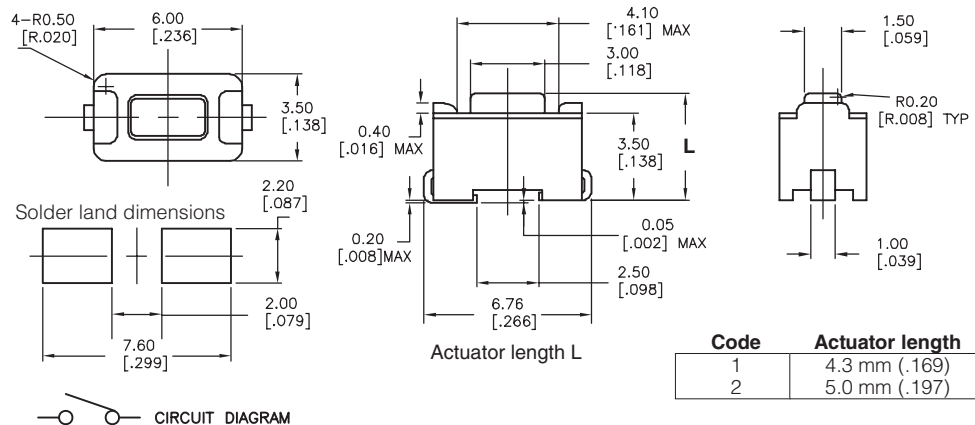
SM surface mount SMT



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



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)

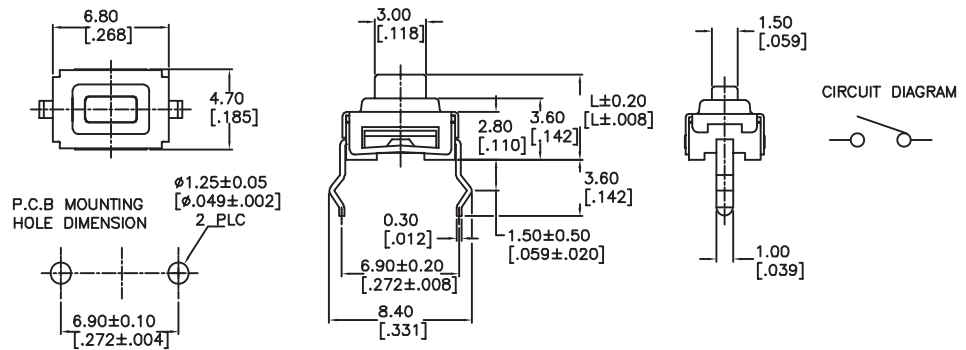
Terminal



blank through hole - THT



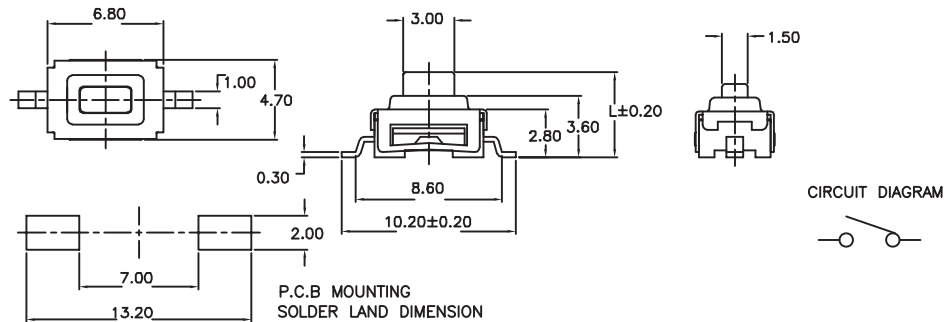
FSM2S



SM surface mount - SMT



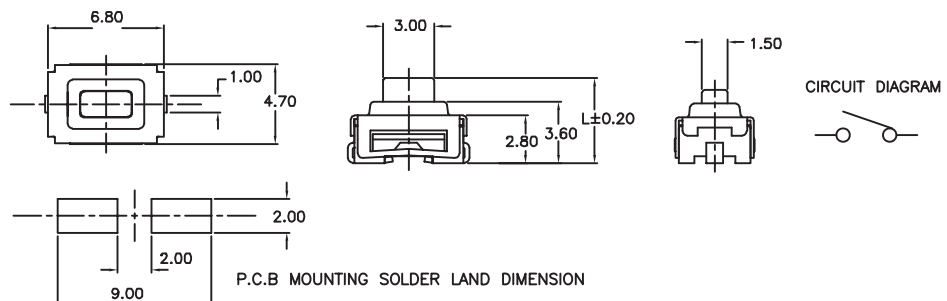
FSM2SSM



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

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 μ A @ 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	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)

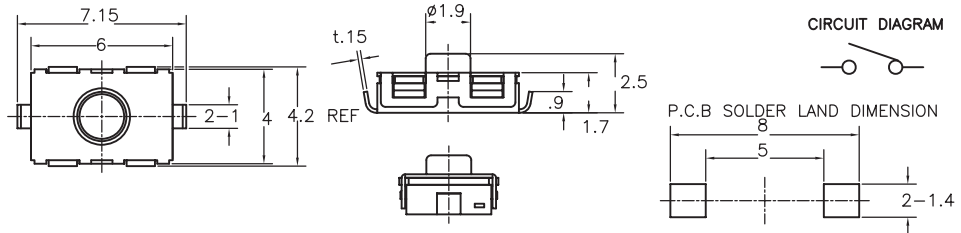
Terminal



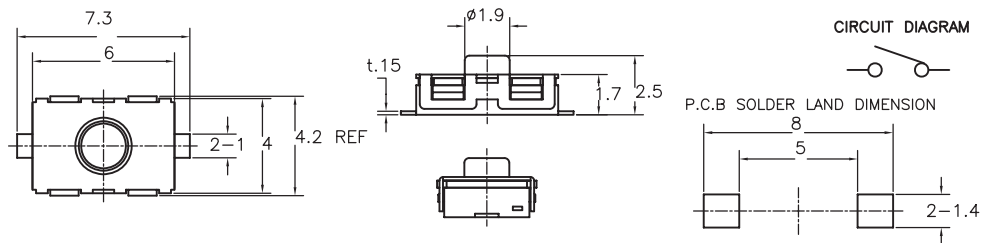
JM J-lead surface mount



FSMJMLPTR



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 μ A @ 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 $\pm$ 0.5 N (100 $\pm$ 50 gf)	A 2.6 $\pm$ 0.5 N (260 $\pm$ 50 gf)
blank 1.6 $\pm$ 0.5 N (160 $\pm$ 50 gf)	AA 5.2 $\pm$ 1.0 N (520 $\pm$ 100 gf)

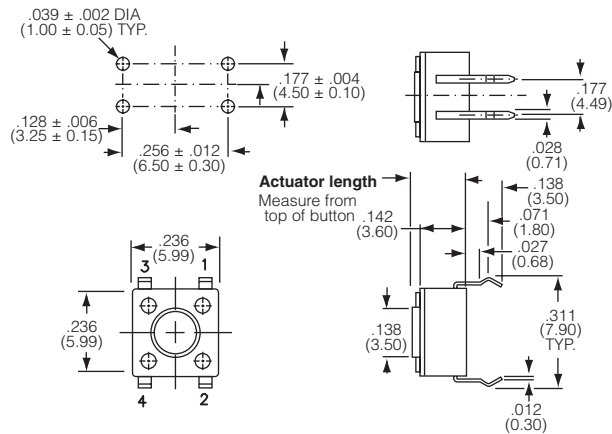
Temperature

H high temperature version, high solder heat resistance

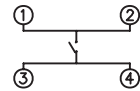
FSMJ Series 6 x 6, THT (Continued)

Grounding terminal & actuator length

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

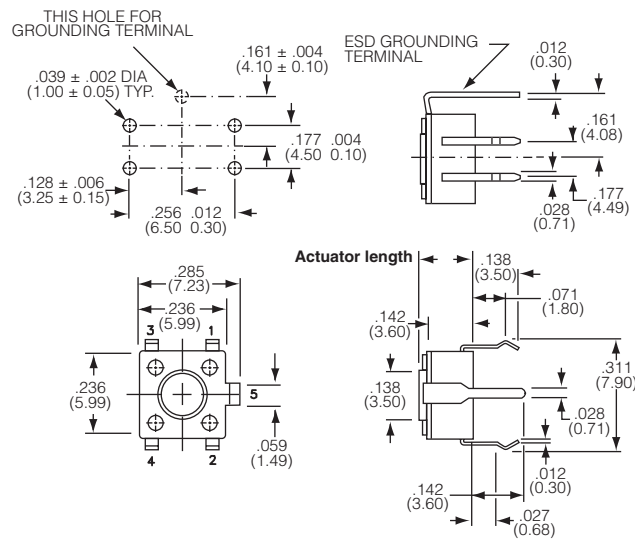


CIRCUIT DIAGRAM

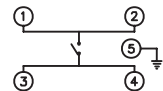


Code	Actuator length
2	4.3 mm (.169)
4	5.0 mm (.196)
6	7.0 mm (.276)
8	9.5 mm (.374)
10	7.3 mm (.287)
12	8.0 mm (.315)
14	13.0 mm (.512)
16	17.0 mm (.669)
18	8.5 mm (.335)

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



CIRCUIT DIAGRAM



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	1825910-1
FSM2JH				1.6±0.5 N (160±50 gf)	temperature	1825910-2
FSM2JAH		2.6±0.5 N (260±50 gf)		version	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		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		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 μ A @ 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

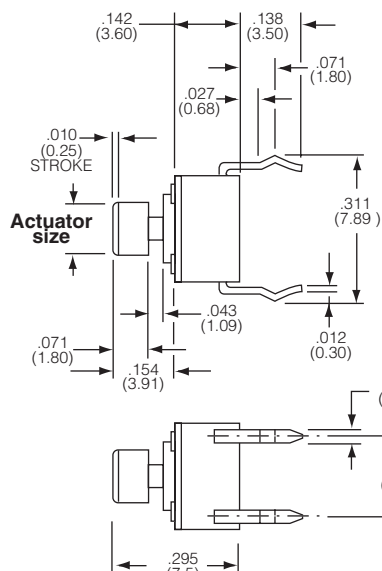
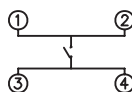
Contacts & terminals copper alloy silver finish
 Actuator & base nylon 6/6
 Cover steel, tin finish
 RoHS Directive 2002/95/EC compliant

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						

Tactile Switches

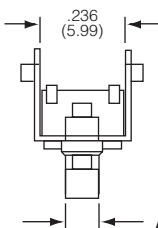
Page 10 of 10

blank vertical version

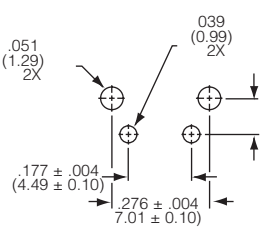


Code	Actuator size
1	2.42 mm (.095)
2	2.8 mm (110)

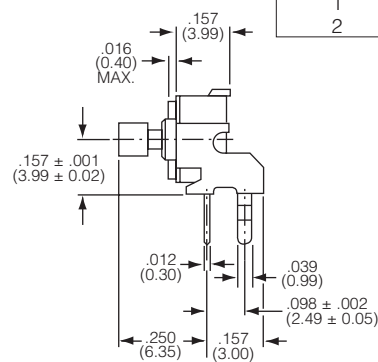
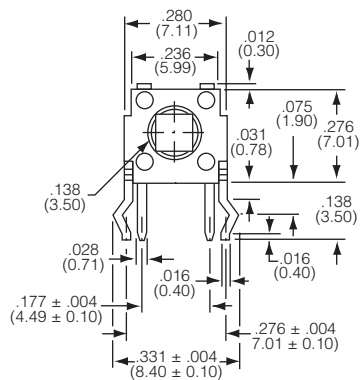
RA right angle version



Actuator size



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



Product key	Operating direction	Version	Actuator 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

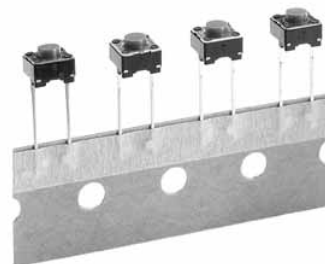
Dimensions are in mm and inches and are shown for reference purposes only.

www.tycoelectronics.com

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 μ A @ 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 $\pm$ 0.5 N (160 $\pm$ 50 gf)
A	2.6 $\pm$ 0.5 N (260 $\pm$ 50 gf)

Packaging

RT radial tape

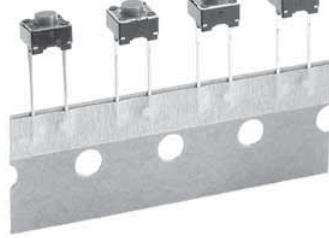
FSMJRT Series 6 x 6, Radial Tape, THT (Continued)

Actuator length

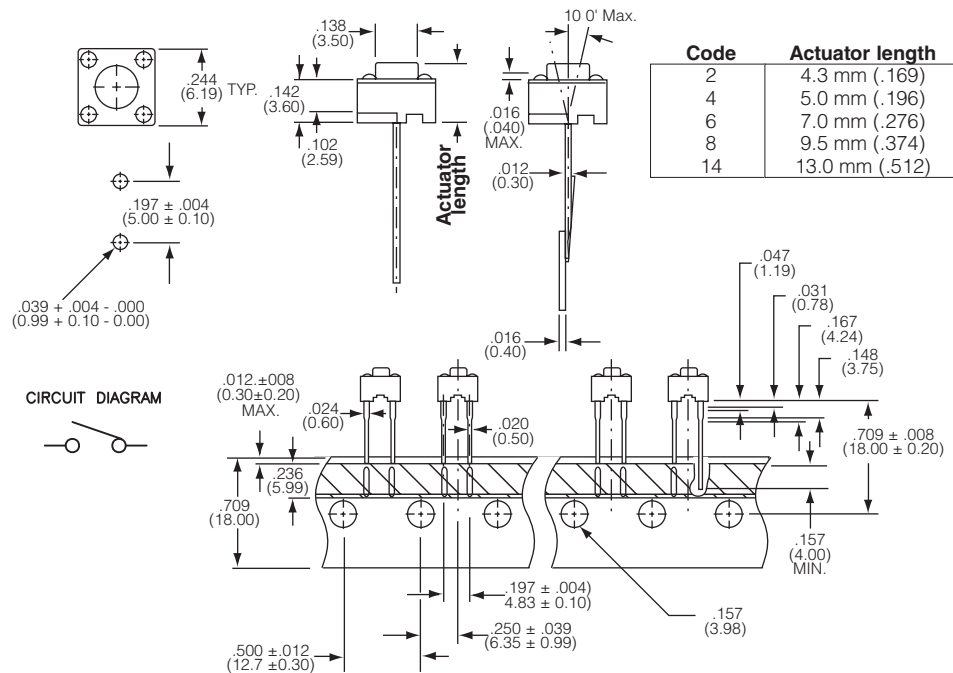


Codes 2, 4, 6, 8, 10, 12, 14, 16, 18

Tactile Switches



FSM4JRT



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)

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 μ A @ 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)

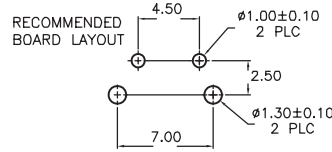
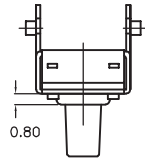
Actuator length



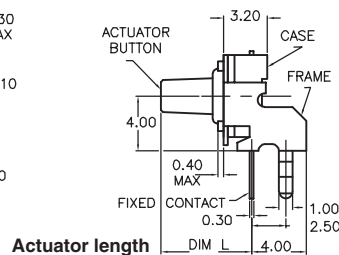
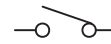
Codes 1, 2, 3, 4, 5, 6, 7, 8



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/-.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)

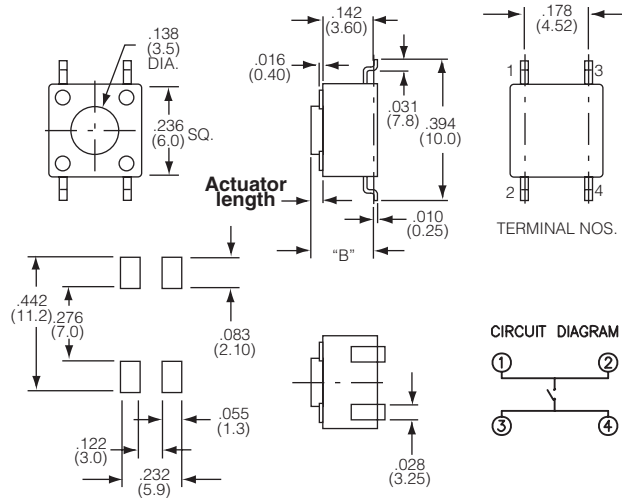
Actuator length



Codes 2, 4, 6, 8, 14



FSM2JSMA



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)

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
FSM2JSMAAS		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
FSM4JSMAAS			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
FSM6JSMAAS			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
FSM8JSMAAS			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
FSM14JSMAAS	(.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 μ A @ 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 $\pm$ 0.5 N (160 $\pm$ 50 gf)
A	2.6 $\pm$ 0.5 N (260 $\pm$ 50 gf)

Switching dome

S steel dome

Packaging

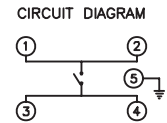
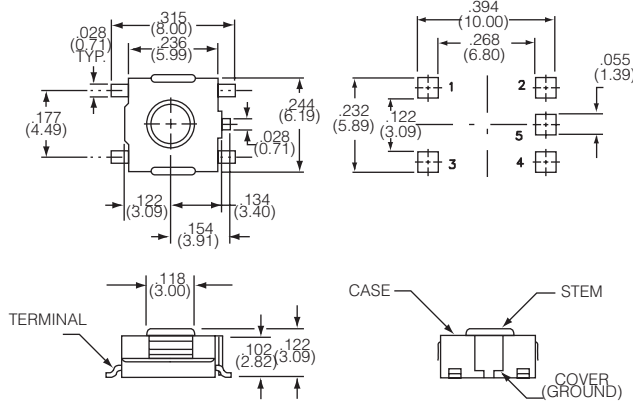
blank	bulk
TR	tape & reel

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

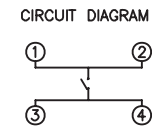
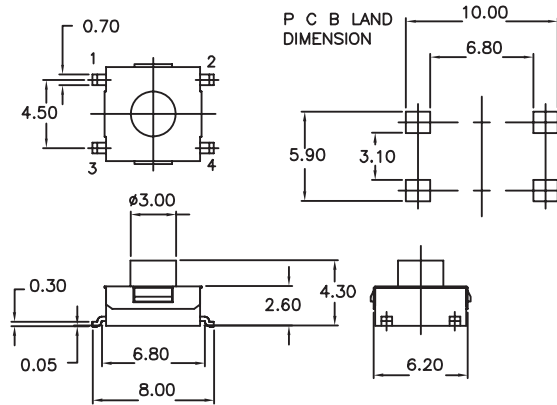
Actuator length & grounding terminal



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 μ A @ 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

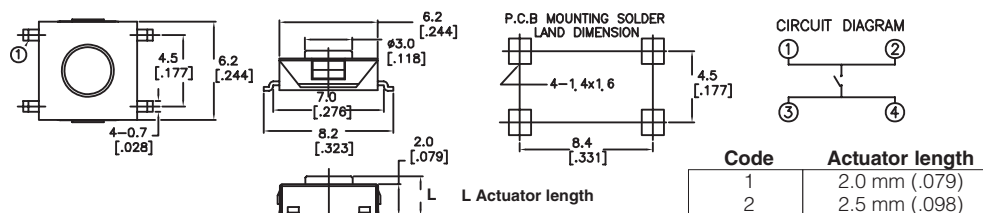
Contacts	stainless steel silver finish
Actuator	nylon
Terminals	copper alloy silver finish
Base	PPS
Cover	copper alloy, tin finish or stainless steel
RoHS Directive 2002/95/EC	compliant

Product key		Typical product key					
Type		FSM	1	JEL	G		TR
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

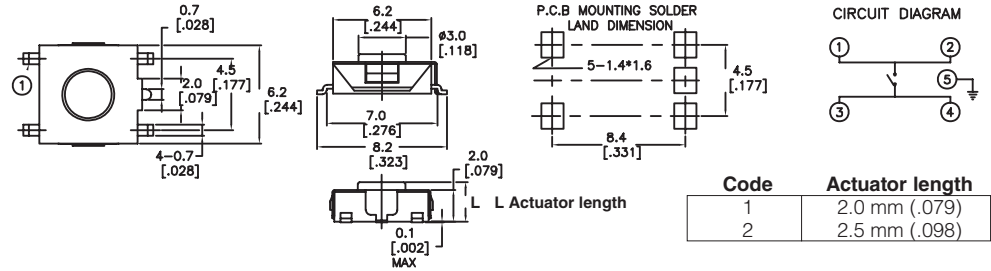


G gullwing terminal

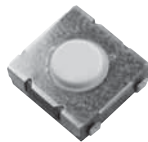


FSMJEL Series 6 x 6, Extended Life, SMT (Continued)

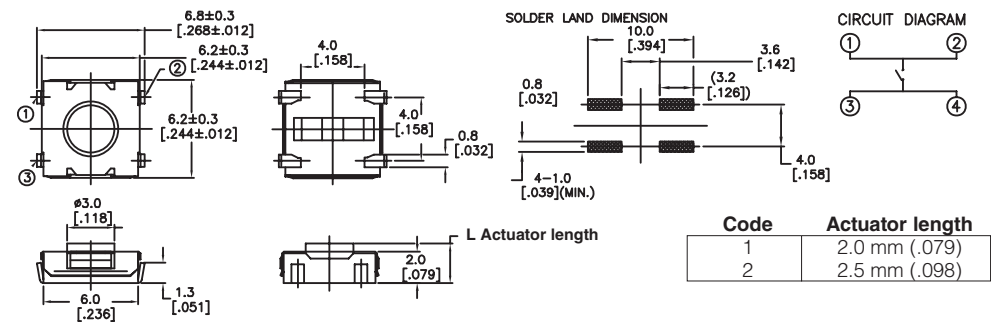
GE gullwing with ground terminal



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				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)						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		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)			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				1.6±0.5 N (160±50 gf)			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		1571625-7
FSM2JELJATR						tape & reel	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)			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

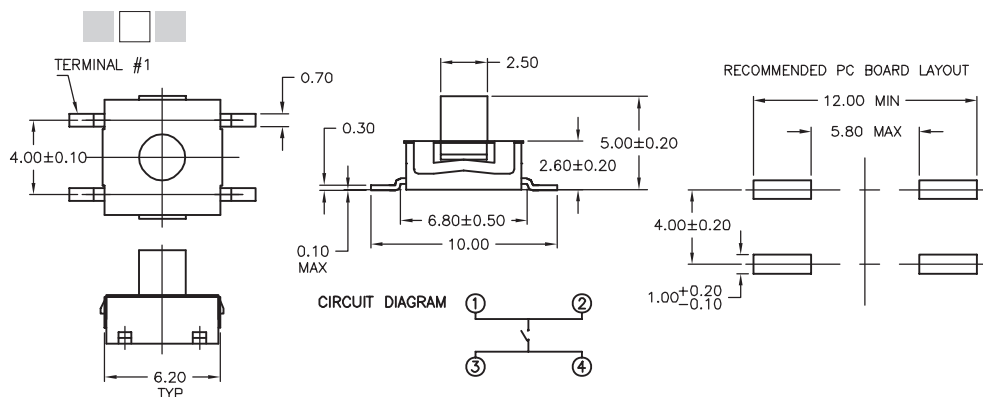
Packaging

blank bulk
TR tape & reel

Extreme life cycle version



FSMJX

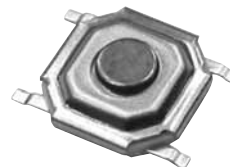


Product key	Version	Packaging	Part Number
FSMJX	extreme	bulk	1571634-1
FSMJXTR	life cycle	tape & reel	1571634-2

FSMCT Series 5.2 x 5.2, Ultra Low Profile, SMT

Features

- Ultra low profile design
- Metal actuator



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	50 mA @ 24 VDC
Contact rating min.	10 μ A @ 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

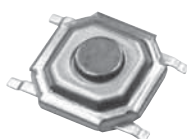
Actuation force

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

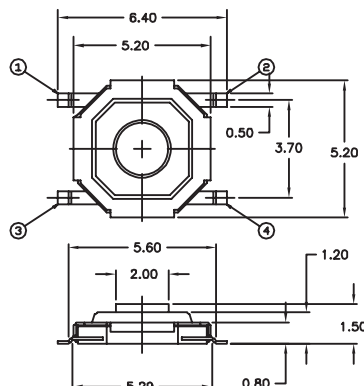
Packaging

TR tape & reel

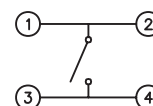
Ultra low profile version



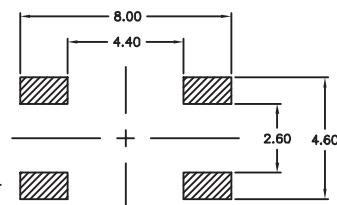
FSMCTTR



CIRCUIT DIAGRAM



P.C. BOARD LAYOUT



Product key	Version	Actuation force	Life	Packaging	Part Number
FSMCTTR	ultra low	1.6 $\pm$ 0.5 N (160 $\pm$ 50 gf)	1,000,000	tape & reel	8-1437565-0
FSMCTATR	profile version	2.6 $\pm$ 0.5 N (260 $\pm$ 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 μ A @ 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

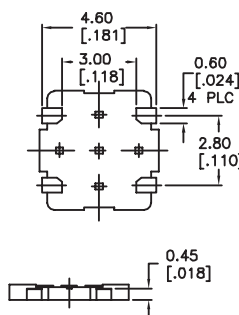
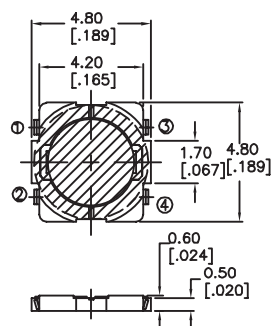
TR tape & reel

Version

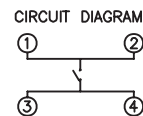
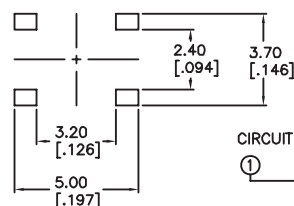
LPU slimline version



FSMLPUTR



SOLDER PAD LAYOUT



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 mA @ 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

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

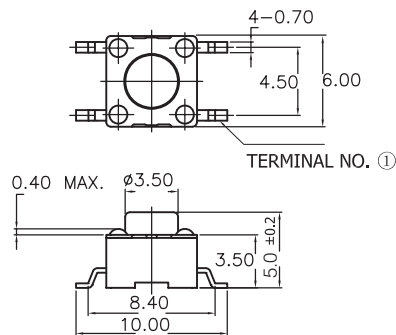
Version



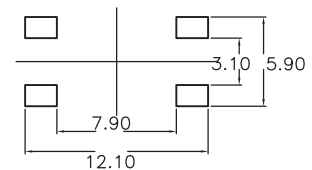
JS6 sealed version 6 x 6 mm



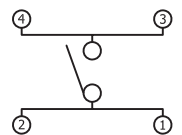
FSM2JS6SM



P.C.B. LAND DIMENSION



CIRCUIT DIAGRAM



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

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 & base	46 nylon
Terminals	copper alloy silver finish
Bracket	nickel silver
Seal	silicon rubber
RoHS Directive 2002/95/EC	compliant

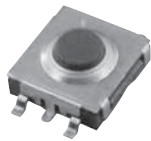
Product key		Typical product key					TR
Type	FSM	Tactile switch 7.6 x 7.3 mm	FSM	2	JS	SM	
Actuator length & grounding terminal							
1		3.3mm (.130) with Gnd					
2		4.3mm (.169)					
4		5.0mm (.197)					
Version	JS	sealed version					
Terminal	blank	through hole - THT					
	SM	surface mount - SMD					
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)

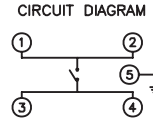
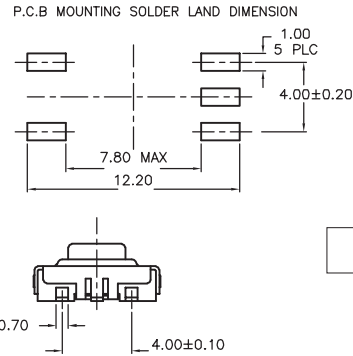
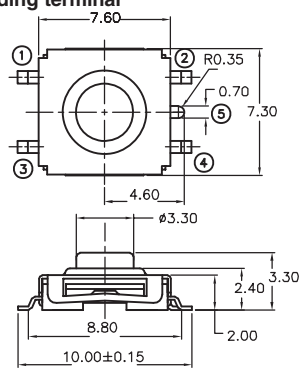
Actuator length & grounding terminal, THT & SMT



Code 1 SMT, with grounding terminal



FSM1JSSM

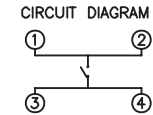
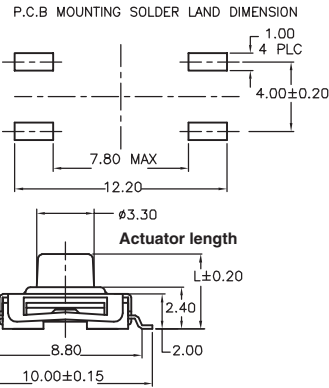
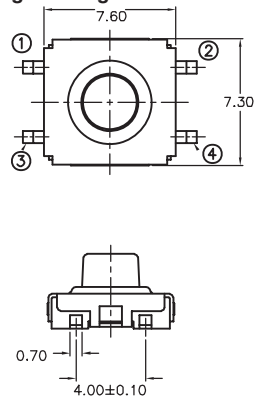


Code	Actuator length
1	3.3mm (.130) with Gnd

Codes 2, 4 SMT, without grounding terminal



FSM2JSSM

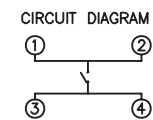
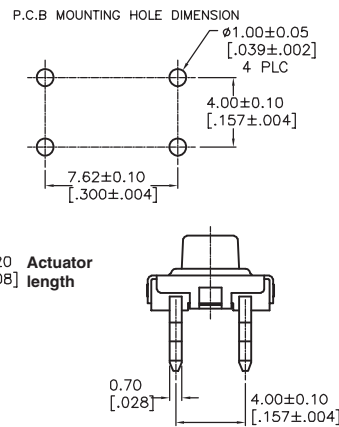
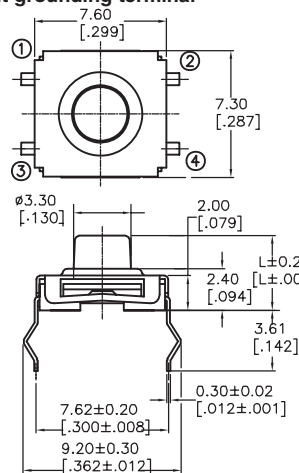


Code	Actuator length
2	4.3mm (.169)
4	5.0mm (.197)

Codes 2, 4 THT, without grounding terminal



FSM2JS



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

FSMJ5 Series 7.6 x 7.3, Sealed, SMT & THT (Continued)

Product key	Version	Actuator length	Grounding	Terminal	Actuation force	Packaging	Part Number
FSMJ2JSSM	sealed	4.3 mm	without	SMT	1.6±0.5 N (160±50 gf)	bulk	1571294-1
FSMJ2JSSMTR	version	(.169)	ground		1.6±0.5 N (160±50 gf)	tape & reel	1571294-2
FSMJ4JSSM		5.0 mm			1.6±0.5 N (160±50 gf)	bulk	1571294-3
FSMJ4JSSMTR		(.196)			1.6±0.5 N (160±50 gf)	tape & reel	1571294-4
FSMJ2JSSMA		4.3 mm			2.6±0.5 N (260±50 gf)	bulk	1571294-5
FSMJ2JSSMATR		(.169)			2.6±0.5 N (260±50 gf)	tape & reel	1571294-6
FSMJ1JSSM		3.3 mm	with		1.6±0.5 N (160±50 gf)	bulk	1571296-1
FSMJ1JSSMTR		(.130)	ground		1.6±0.5 N (160±50 gf)	tape & reel	1571296-2
FSMJ2JS		4.3 mm (.169)	without	THT	1.6±0.5 N (160±50 gf)	bulk	1571295-1
FSMJ4JS		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)

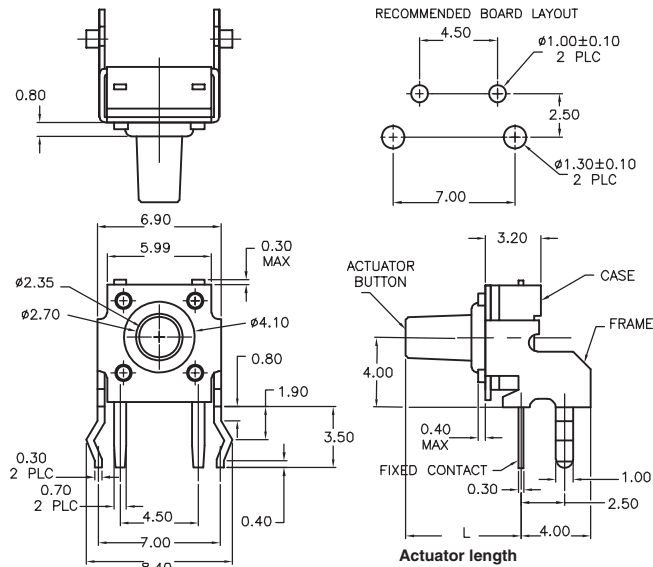
THT version



Actuator length, codes 1, 2, 3, 4



FSMRAJS2



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)

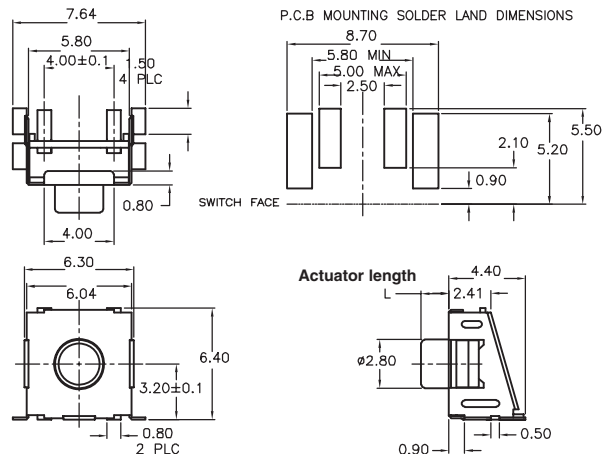
SMT version



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



Typical performance characteristics

Contact configuration	SPST
Contact rating max.	50 mA @ 24 VDC
Contact rating min.	10 μ A @ 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)

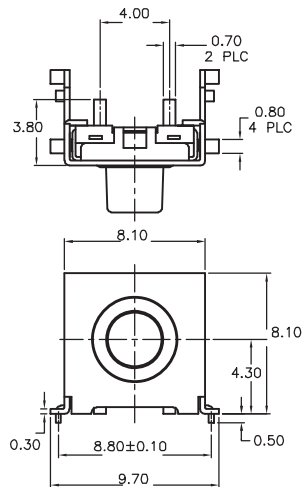
Location pin



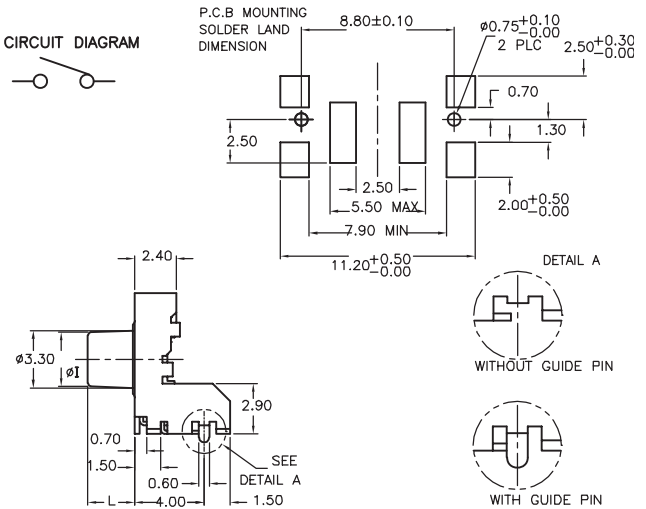
Codes blank, P without/with location pins



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 μ A @ 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

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)

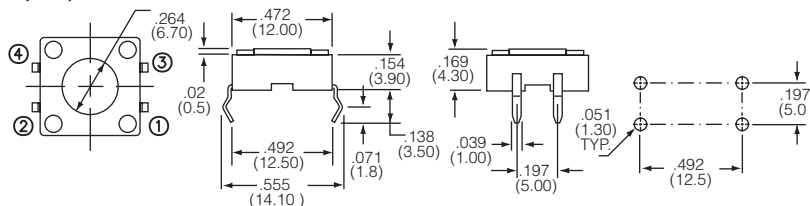
Actuator length



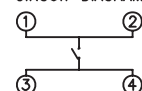
0 actuator length 4.3 mm (.169)



FSM100

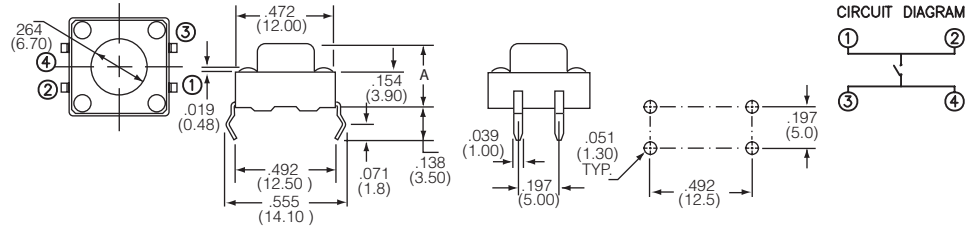


CIRCUIT DIAGRAM

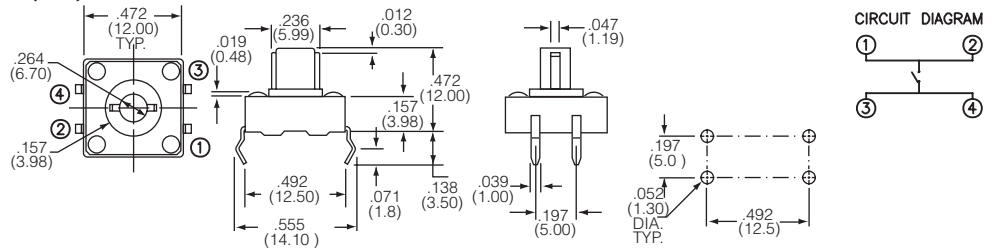


FSM10 Series 12 x 12, THT (Continued)

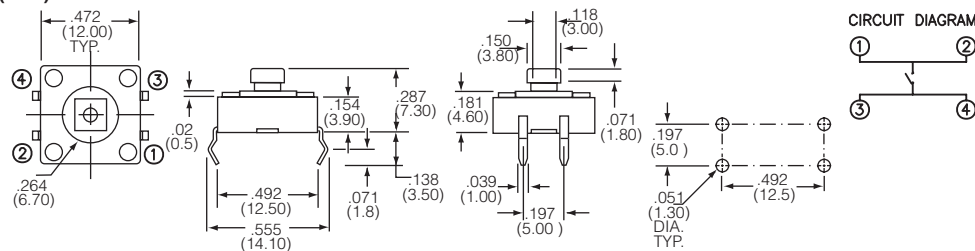
1 actuator length 8.5 mm (.335)



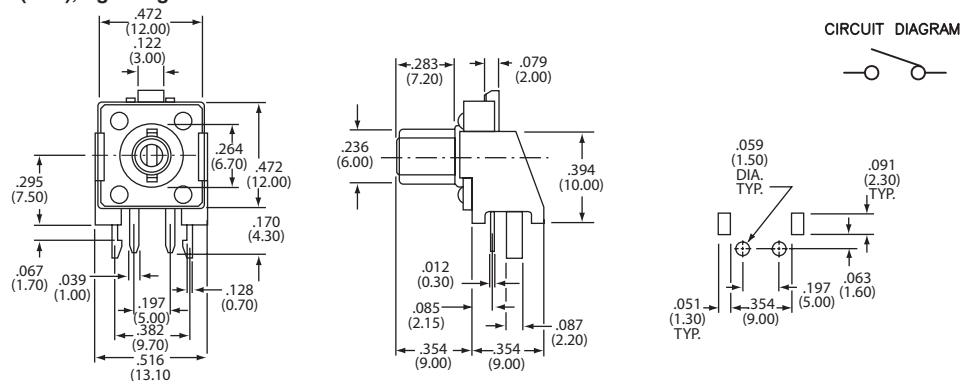
2 actuator length 12.0 mm (.472)



3 actuator length 7.3 mm (.287)



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



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



Typical performance characteristics

Contact configuration SPST
Contact rating max. max 50 mA @ 24 VDC
Contact rating min. min 10 μ A @ 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

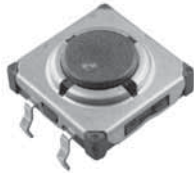
Product key		Typical product key							
		FSM	10	3	S			SM	TR
Type									
FSM		Tactile switch 12 x 12 mm							
Version									
10		standard							
Actuator length									
0		4.3 mm (.169)							
3		7.3 mm (.287) square							
Version									
S		sealed version							
Location pins									
blank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

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

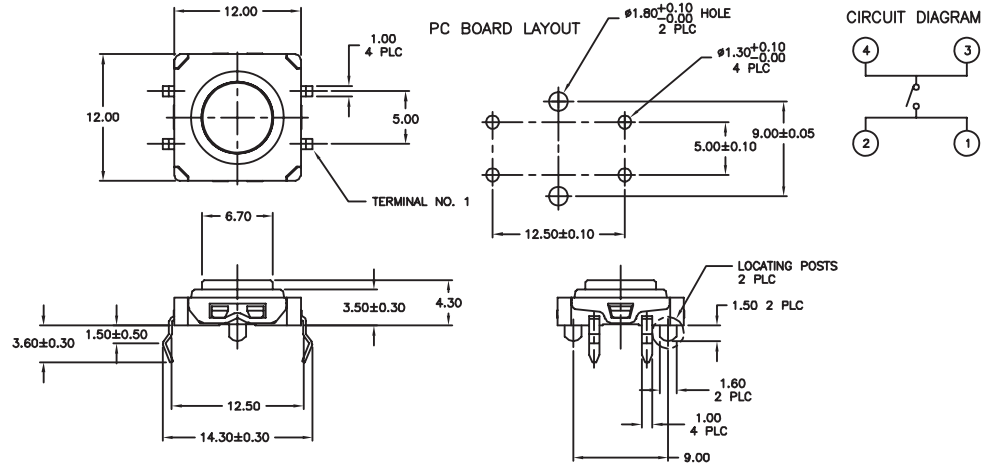
Actuator length, Location pins, Terminal



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



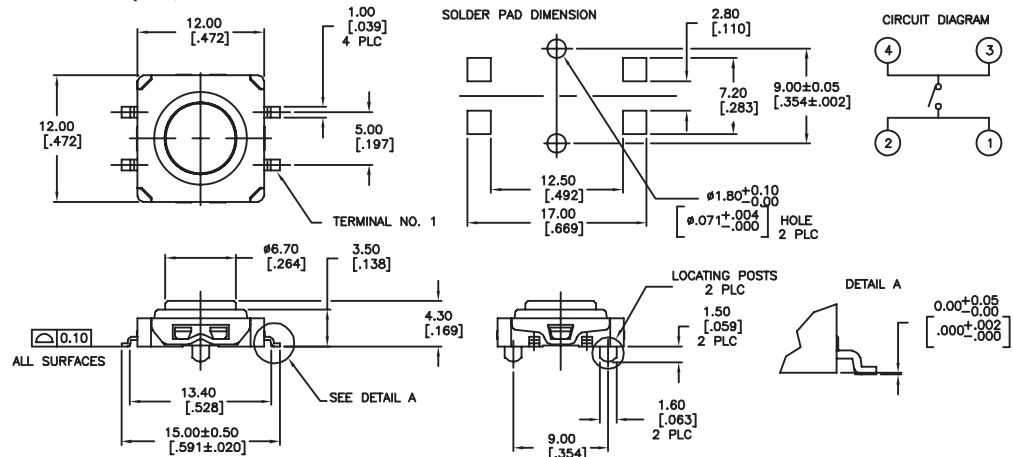
FSM100S



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



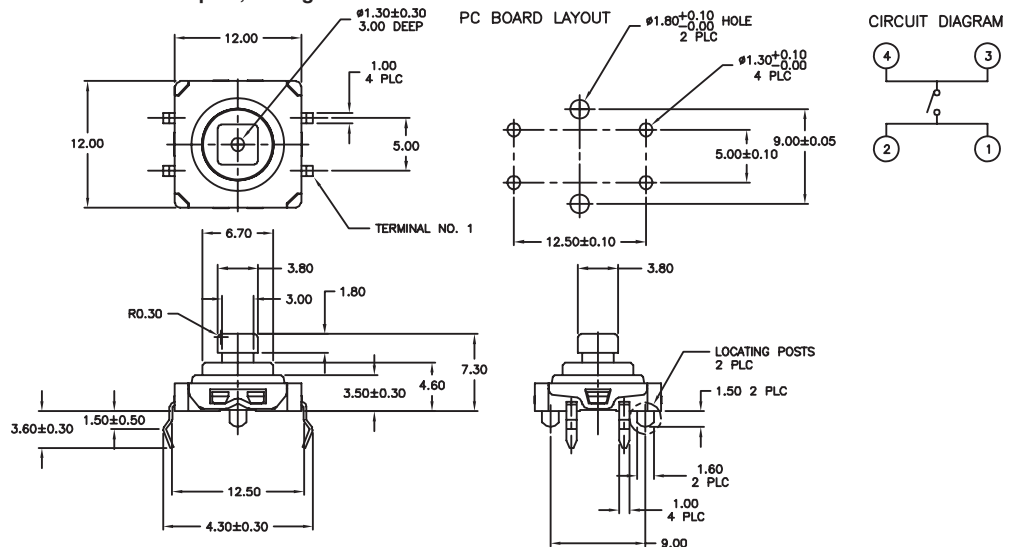
FSM100SM



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



FSM103S

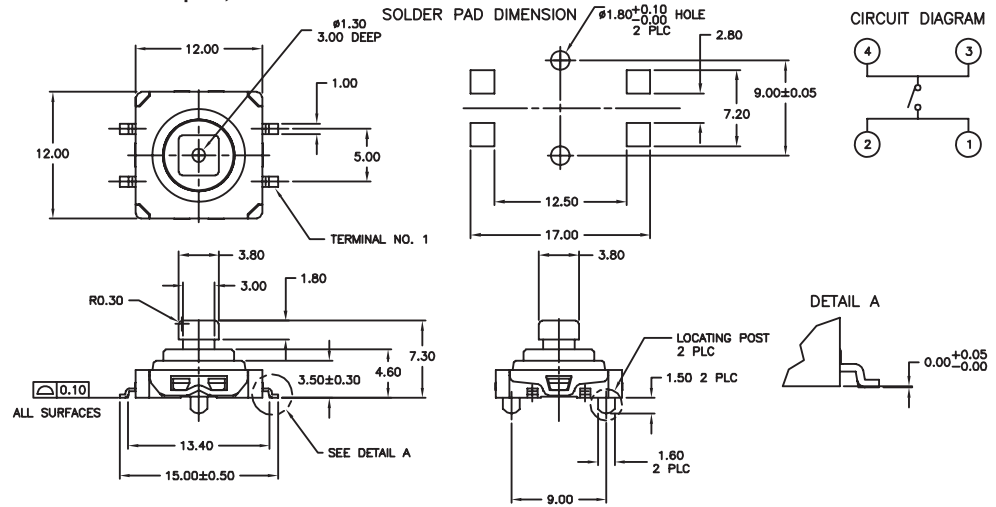


FSM10 Series 12 x 12, Sealed, SMT & THT (Continued)

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				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 μ A @ 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)

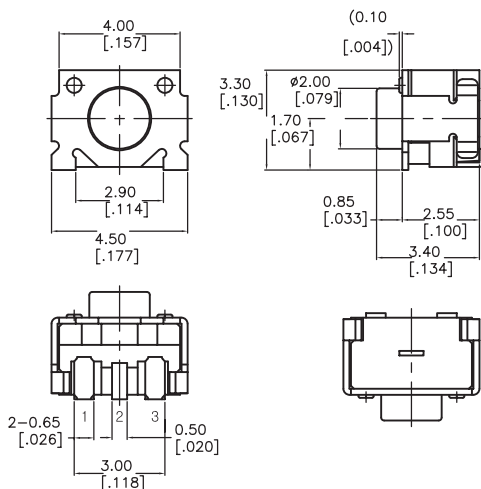
Location pins



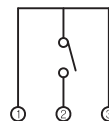
blank no location pins



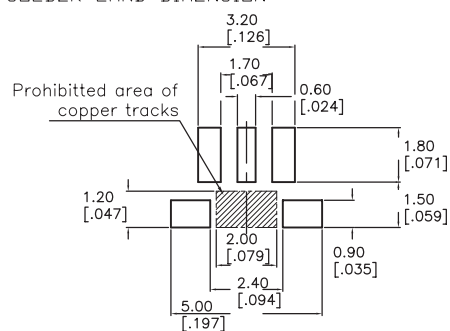
FSMMSHTR



CIRCUIT DIAGRAM



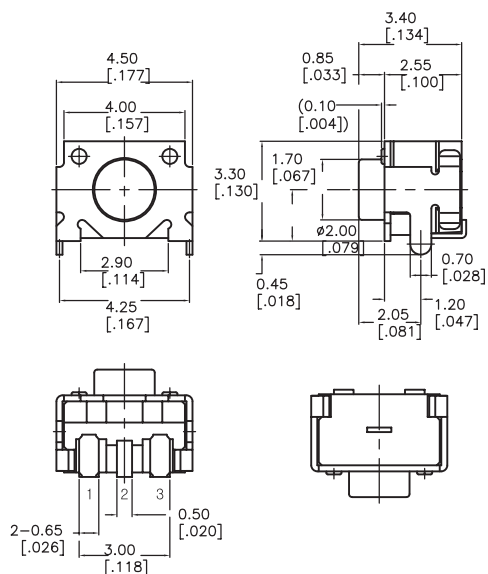
P.C.B MOUNTING
SOLDER LAND DIMENSION



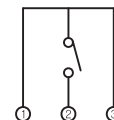
P with location pins



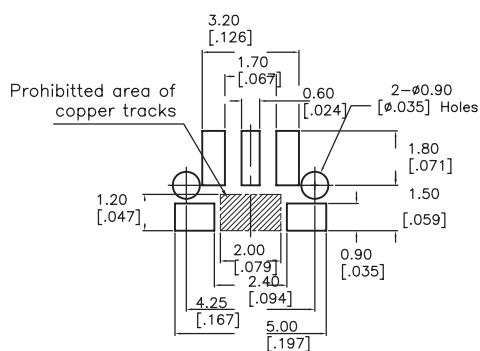
FSMMSHPTR



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 μ A @ 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

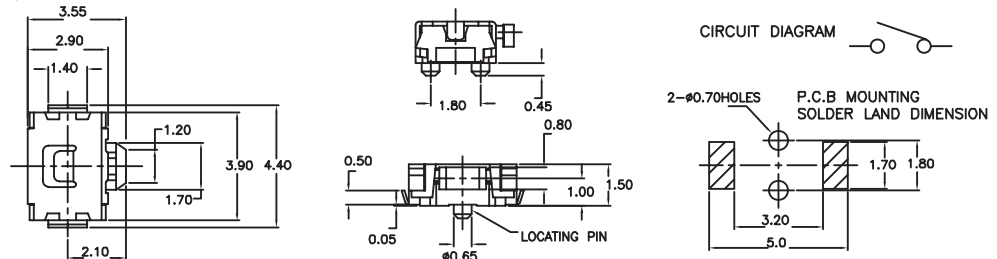
Product key		Typical product key						
		FSM	3	MS	SM	A	P	TR
Type	FSM Side action tactile switch, 3 x 5 mm							
Actuator length								
1	3.55 mm (.140)		3	4.50 mm (.177)				
2	4.40 mm (.173)							
Version	MS standard							
Terminal								
SM	surface mount - SMT							
JM	J-lead surface mount - SMT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

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

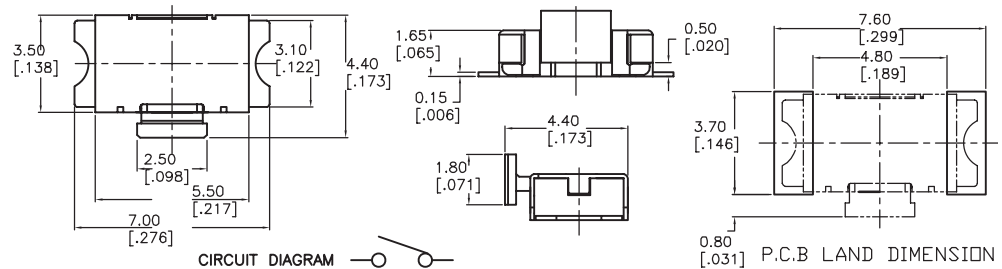
Actuator length, Terminal



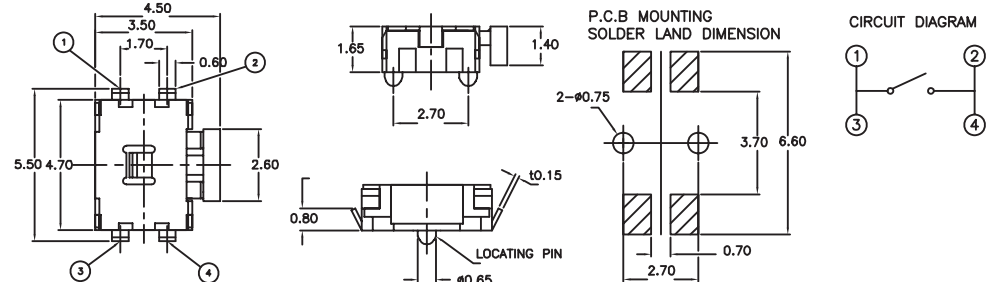
1 actuator length 3.55 mm, J-lead surface mount - SMT



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



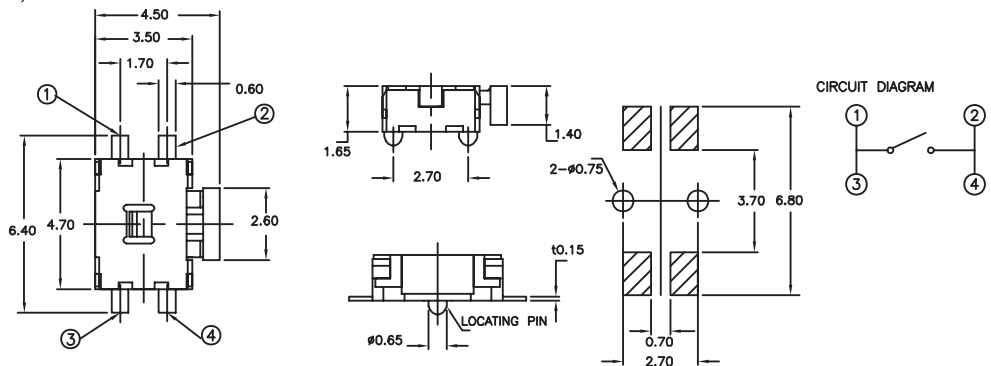
3 actuator length 4.50 mm, J-lead surface mount - SMT



3 actuator length 4.50 mm, surface mount - SMT



FSM3MSSMTR



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

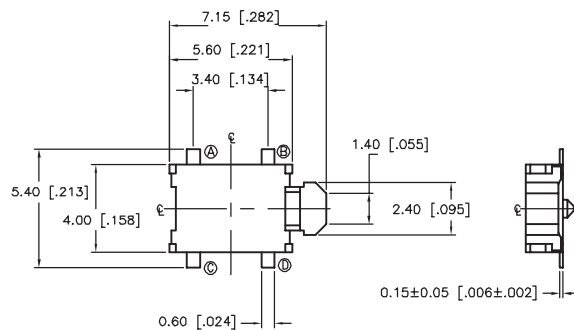
blank bulk
TR tape & reel

FSMMST Series "Turtle" Style, SMT (Continued)

FSMMST Series



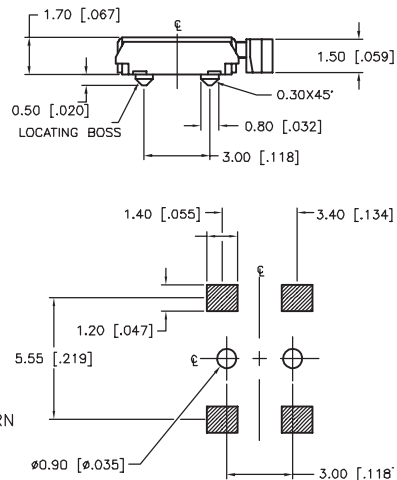
FSMMST



SCHEMATIC



RECOMMENDED LAND PATTERN



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 μ A @ 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)

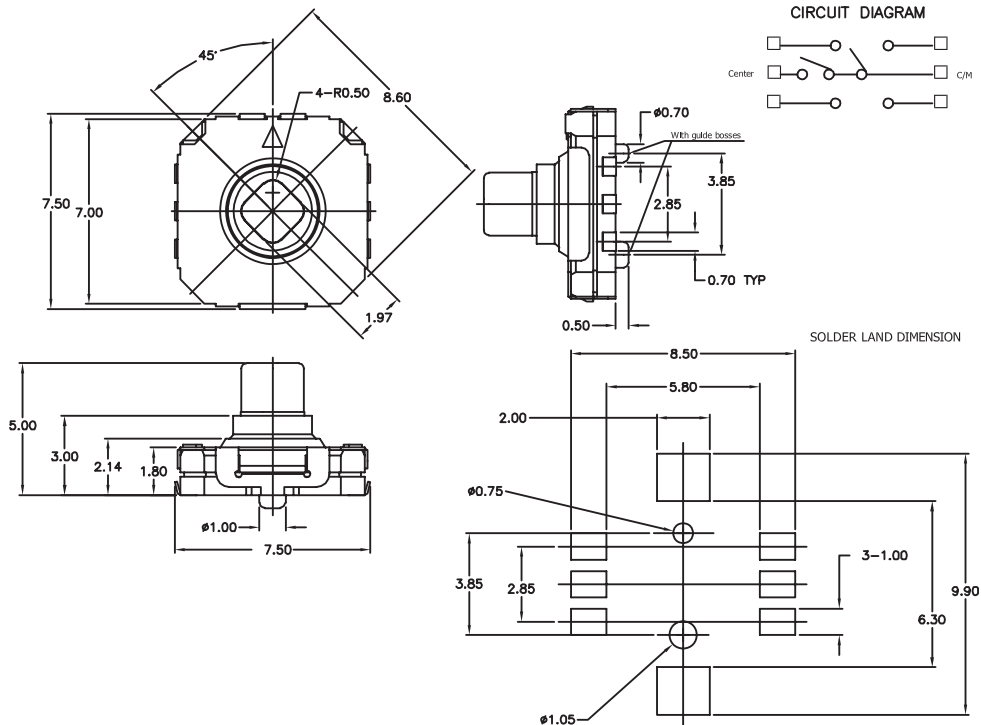
Version



MDS standard version, without and with location pins



FSMMDS



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

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)

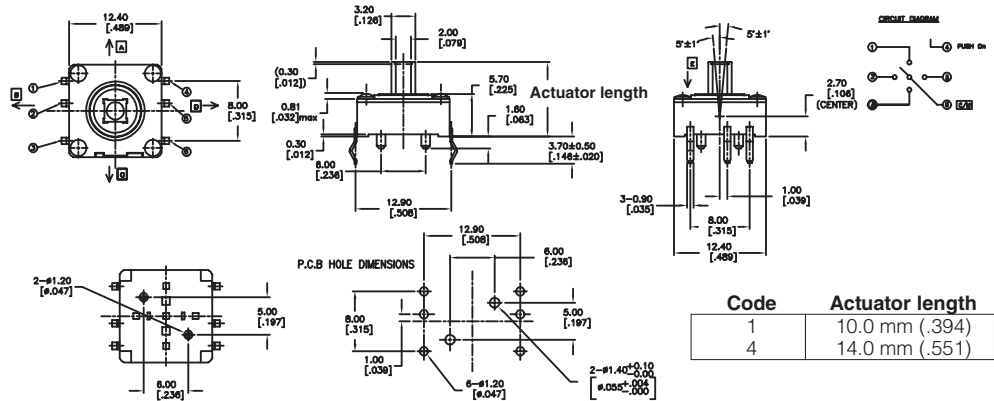
Terminal



blank through hole - THT



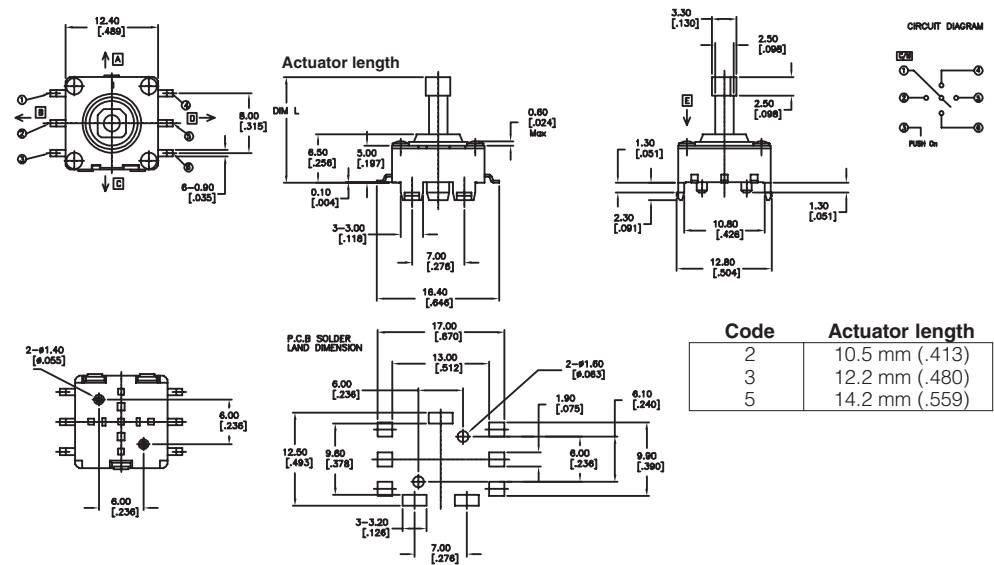
FSM1MD



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