

**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

Tactile Switches



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



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



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**FSMJ Series 6 x 6, THT . . . . .page C10**



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



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

**Product Range** (Continued)



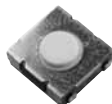
**FSMRAJ Series 6 x 6, Right Angle, THT** .....page C17



**FSMJSM Series 6 x 6, SMT** .....page C19



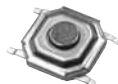
**FSMLP Series 6 x 6, Low Profile, SMT** .....page C21



**FSMJEL Series 6 x 6, Extended Life, SMT** .....page C23



**FSMJX Series 6 x 6, Extreme Life Cycle, SMT** .....page C25



**FSMCT Series 5.2 x 5.2, Ultra Low Profile, SMT** .....page C26



**FSMLPU Series 4.8 x 4.8, Slimline, SMT** .....page C27



**FSMJS6 Series 6 x 6, Sealed, SMT** .....page C28



**FSMJS Series 7.6 x 7.3, Sealed, SMT & THT** .....page C29

**Product Range** (Continued)



**FSMRAJS Series 6 x 6, Sealed, Right Angle, SMT & THT . . . . .page C32**



**FSMRAJSA Series 8.1 x 8.1, Sealed, Right Angle, SMT . . . . .page C34**



**FSM10 Series 12 x 12, THT . . . . .page C36**



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**FSMMSH Series 2.55 x 4.5, Miniature Side Action, SMT . . . . .page C41**



**FSMMS Series 3 x 5 Miniature Side Action, SMT . . . . .page C43**



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**FSMMDS Series 7.5 x 7.5 Multidirectional, SMT . . . . .page C47**



**FSM . MD Series 12 x 12 Multidirectional, THT & SMT . . . . .page 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)**

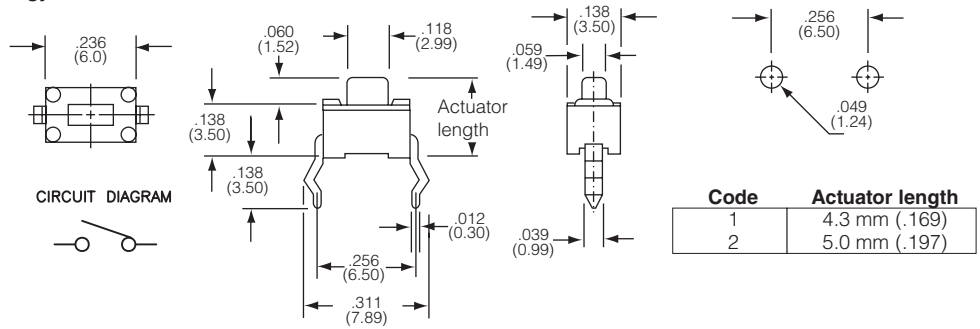
**Terminal**



**blank through hole technology**



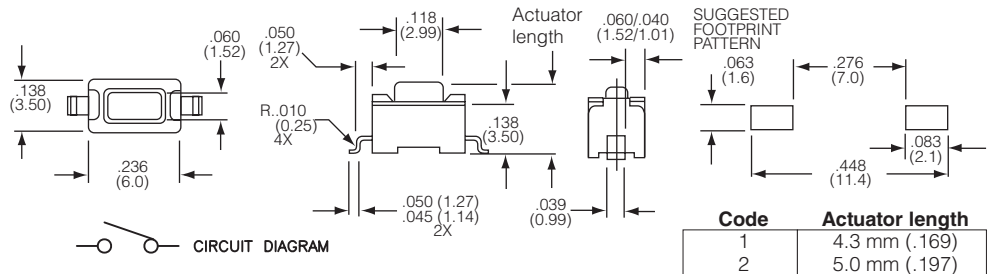
FSM1



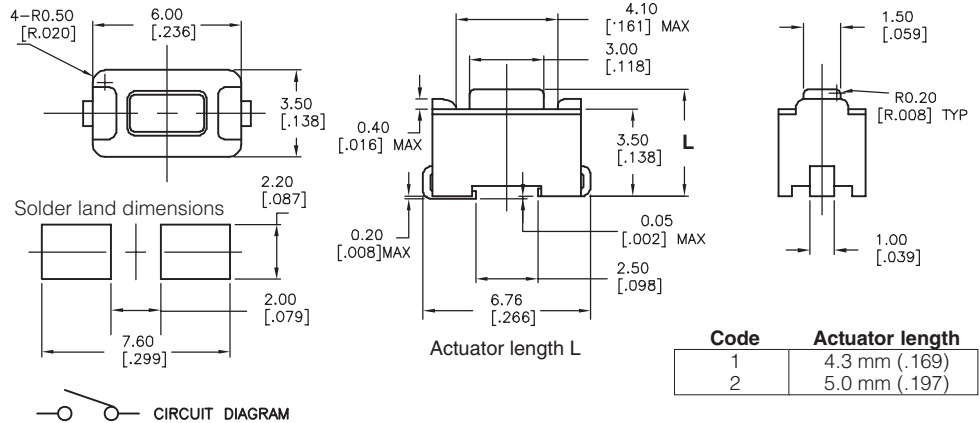
**SM surface mount SMT**



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
<b>FSM1JMTR</b>					Silver		<b>147873-2</b>
<b>FSM1L</b>		20,000	THT	1.3±0.5 N (130±50 gf)		bulk	<b>1825966-1</b>
<b>FSM1SM</b>			SMT	1.8±0.5 N (180±50 gf)			<b>1437566-3</b>
<b>FSM1SMTR</b>						tape & reel	<b>1437566-4</b>
FSM2JMSNTR	5.0 mm	40,000	J-lead, SMT		Tin		147873-4
<b>FSM2JMTR</b>	(.196)				Silver		<b>147873-1</b>
<b>FSM2L</b>		20,000	THT	1.3±0.5 N (130±50 gf)		bulk	<b>1825965-1</b>

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)**

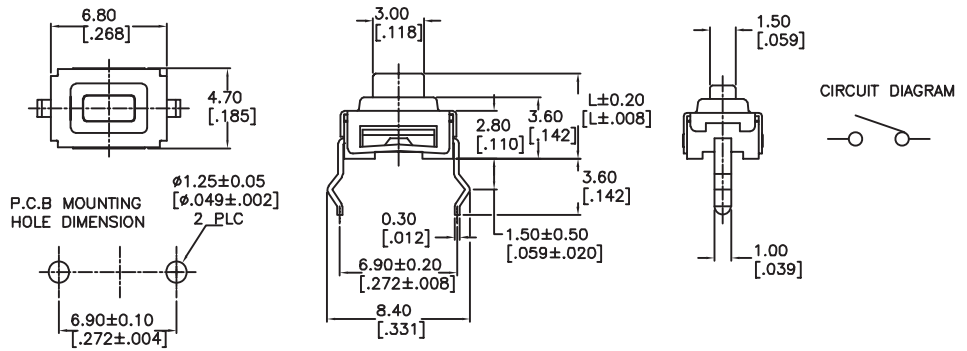
**Terminal**



**blank through hole - THT**



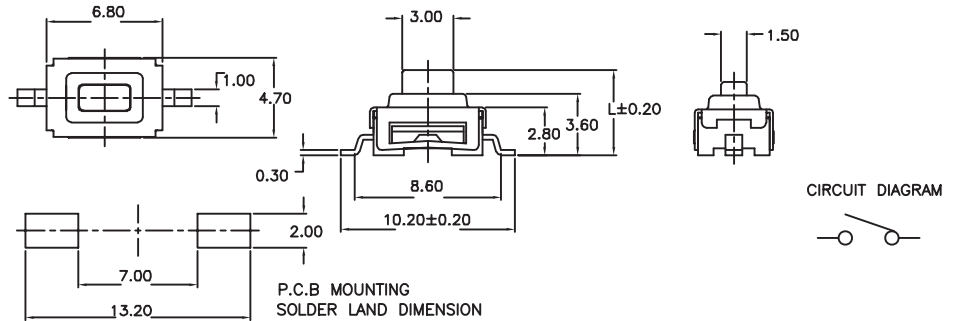
FSM2S



**SM surface mount - SMT**



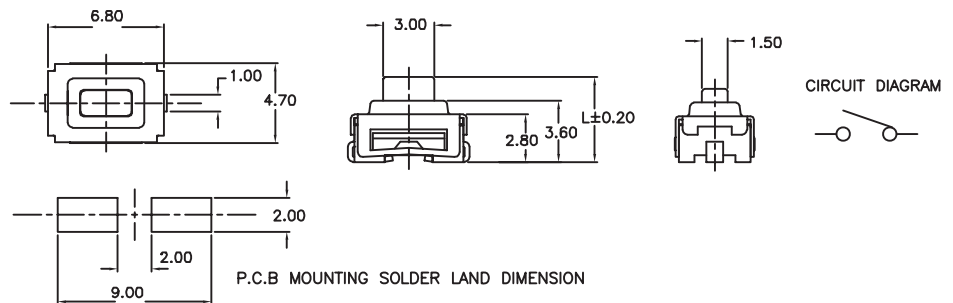
FSM2SSM



**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
<b>FSM1SJMTR</b>				tape & reel	<b>1571299-2</b>
<b>FSM2S</b>	5.0 mm		THT	bulk	<b>1571297-1</b>
FSM2SJM			J-lead, SMT		1571299-3
<b>FSM2SJMTR</b>				tape & reel	<b>1571299-4</b>
FSM2SSM			SMT	bulk	1571298-1
<b>FSM2SSMTR</b>				tape & reel	<b>1571298-2</b>

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



Tactile Switches

**Typical performance characteristics**

Contact configuration . . . . . SPST  
 Contact rating max. . . . . 50 mA @ 32VDC  
 Contact rating min. . . . . 20  $\mu$ 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
<b>Type</b>	FSM Low profile tactile switch 4.2 x 6.0 mm					
<b>Terminal</b>	JM J-lead surface mount - SMT	SM surface mount - SMT				
<b>Version</b>	LP low profile version					
<b>Actuation force</b>	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)			
<b>Packaging</b>	TR tape & reel					



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

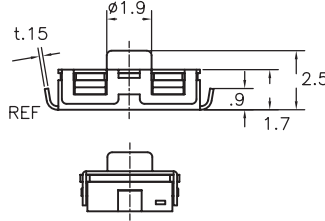
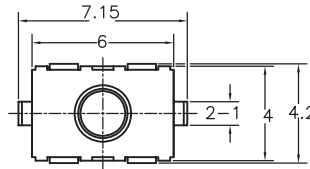
**Terminal**



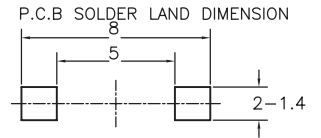
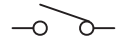
**JM J-lead surface mount**



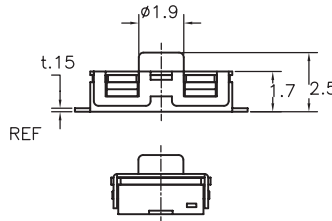
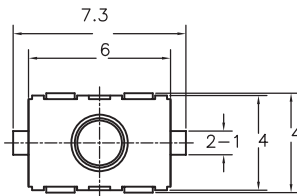
FSMJMPTR



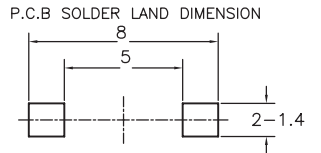
CIRCUIT DIAGRAM



**SM surface mount**



CIRCUIT DIAGRAM



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

<b>FSM</b>	<b>2</b>	<b>J</b>	<b>A</b>	<b>H</b>
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**Type**

**FSM** Tactile switch 6 x 6 mm

**Grounding terminal & actuator length**

without grounding terminal, actuator length

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

with grounding terminal, actuator length

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

**Version**

**J** through hole version

**Actuation force**

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

**Temperature**

**H** high temperature version, high solder heat resistance

**FSMJ Series 6 x 6, THT (Continued)**

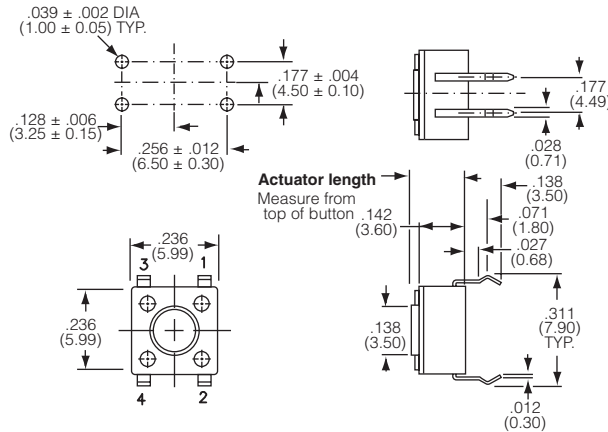
**Grounding terminal & actuator length**



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



FSM2J

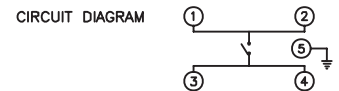
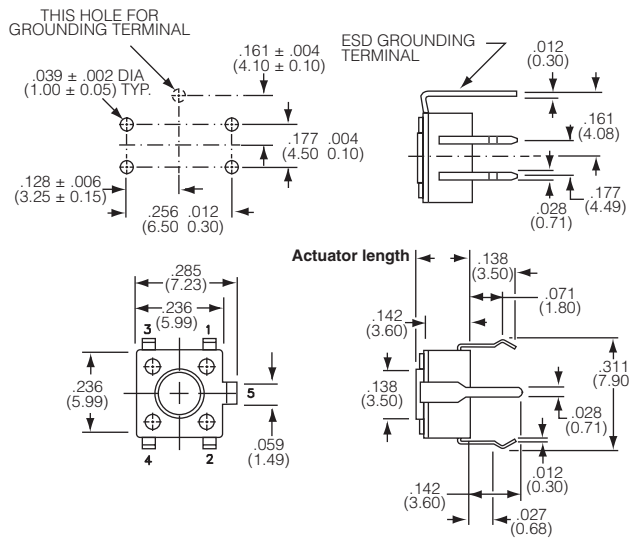


Code	Actuator length
2	4.3 mm (.169)
4	5.0 mm (.196)
6	7.0 mm (.276)
8	9.5 mm (.374)
10	7.3 mm (.287)
12	8.0 mm (.315)
14	13.0 mm (.512)
16	17.0 mm (.669)
18	8.5 mm (.335)

**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	4.3 mm	through hole	1.0±0.5 N (100±50 gf)	high	1825910-1
<b>FSM2JH</b>	grounding	(.169)	version	1.6±0.5 N (160±50 gf)	temperature	<b>1825910-2</b>
<b>FSM2JAH</b>	terminal			2.6±0.5 N (260±50 gf)	version	<b>1825910-3</b>
FSM2JAAH				5.2±1.0 N (520±100 gf)	high solder heat	1825910-4
FSM4JLH		5.0 mm		1.0±0.5 N (100±50 gf)	resistance	1825910-5
FSM4JH		(.196)		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		1.0±0.5 N (100±50 gf)		1825910-9
FSM6JH		(.276)		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		1.0±0.5 N (100±50 gf)		1-1825910-3
FSM8JH		(.374)		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		1.0±0.5 N (100±50 gf)		1-1825910-7
FSM10JH		(.287)		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		1.0±0.5 N (100±50 gf)		2-1825910-1
FSM12JH		(.315)		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		1.0±0.5 N (100±50 gf)		2-1825910-6
FSM14JH		(.512)		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		1.0±0.5 N (100±50 gf)		3-1825910-0
FSM16JH		(.669)		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		1.0±0.5 N (100±50 gf)		3-1825910-4
FSM18JH		(.335)		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	4.3 mm		1.0±0.5 N (100±50 gf)		1825955-1
FSM1JH	grounding	(.169)		1.6±0.5 N (160±50 gf)		1825955-2
FSM1JAH	terminal			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		1.0±0.5 N (100±50 gf)		1825955-5
FSM3JH		(.196)		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		1.0±0.5 N (100±50 gf)		1825955-9
FSM5JH		(.276)		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		1.0±0.5 N (100±50 gf)		1-1825955-3
FSM7JH		(.374)		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		1.0±0.5 N (100±50 gf)		1-1825955-7
FSM9JH		(.287)		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		1.0±0.5 N (100±50 gf)		2-1825955-1
FSM11JH		(.315)		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		1.0±0.5 N (100±50 gf)		2-1825955-5
FSM13JH		(.512)		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		1.0±0.5 N (100±50 gf)		2-1825955-9
FSM15JH		(.669)		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		1.0±0.5 N (100±50 gf)		3-1825955-3
FSM17JH		(.335)		1.6±0.5 N (160±50 gf)		3-1825955-4
FSM17JAH				2.6±0.5 N (260±50 gf)		3-1825955-5
FSM17JAAH				5.2±1.0 N (520±100 gf)		3-1825955-6

Preferred parts in bold print

**FSMCD Series 6 x 6, Square Button, THT**

**Features**

- Square actuator
- Vertical and right angle



**Typical performance characteristics**

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

**Environmental specification**

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

**Material specifications**

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

**Product key**

Typical product key

**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)**

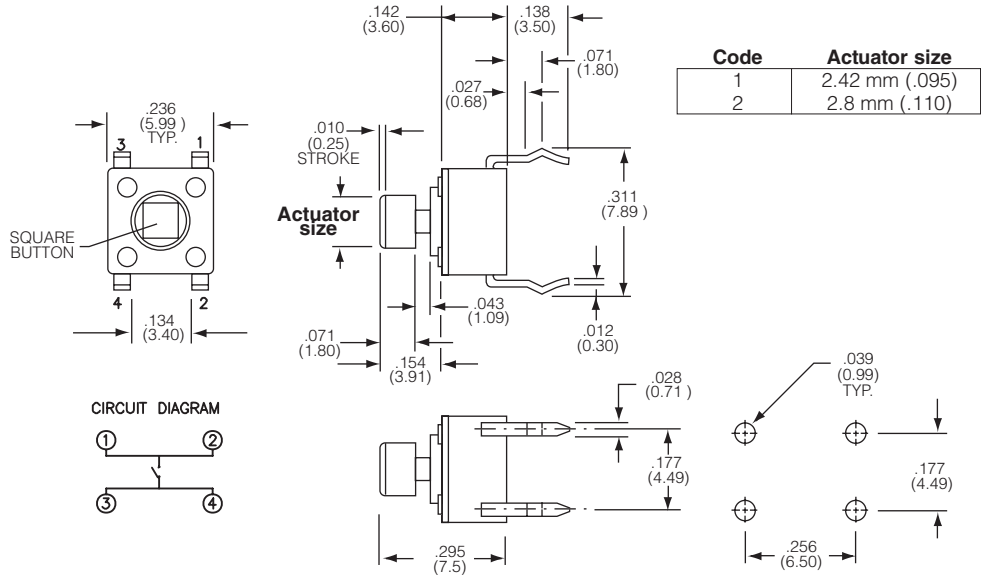
Operating direction



blank vertical version



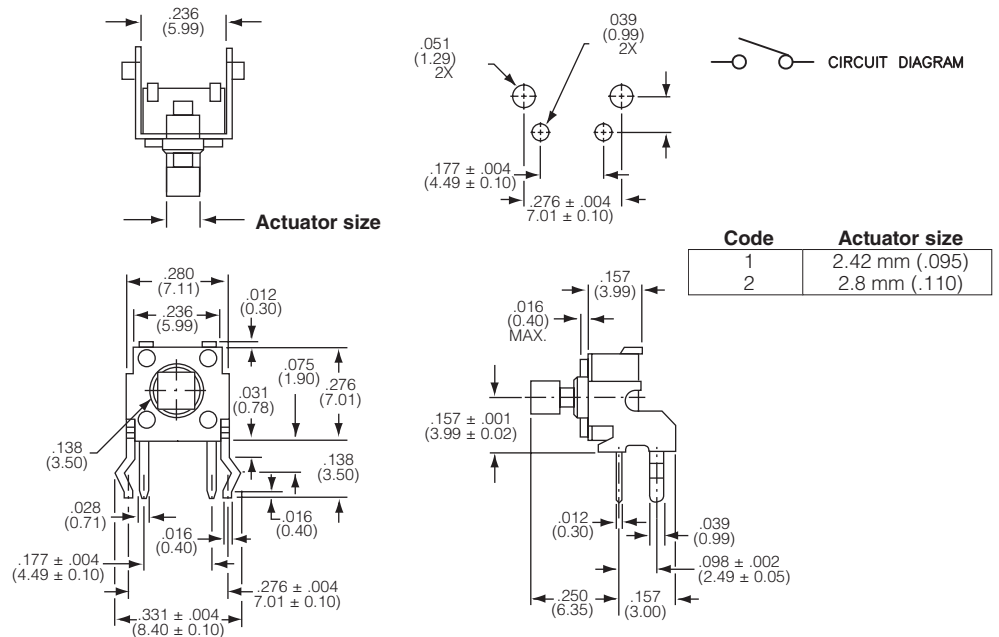
FSMCDA



RA right angle version



FSMRACDA



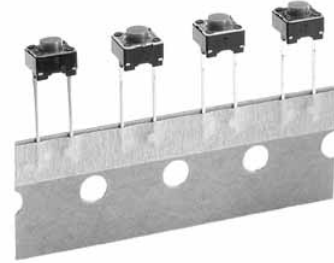
Product key	Operating direction	Version	Actuatore size	Actuation force	Temperature	Part Number
<b>FSMCD2H</b>	vertical	square button	2.80 mm (.110)	1.6±0.5 N (160±50 gf)	high	<b>1825967-2</b>
<b>FSMCD1H</b>	(.374)	version	2.42 mm (.095)		temperature	<b>1825967-1</b>
<b>FSMRACD2AH</b>	horizontal		2.80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

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**

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

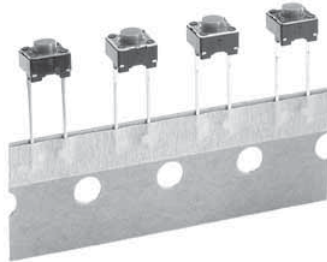
**FSMJRT Series 6 x 6, Radial Tape, THT (Continued)**

Actuator length

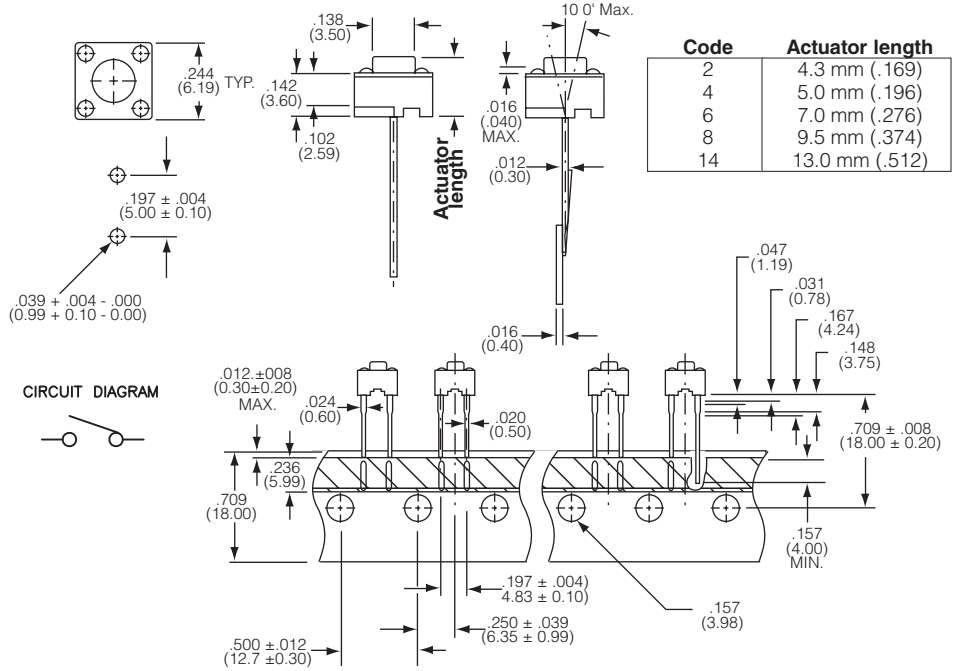


Codes 2, 4, 6, 8, 10, 12, 14, 16, 18

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**

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

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

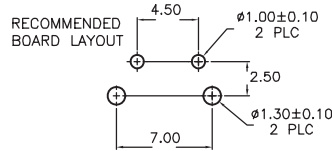
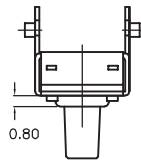
Actuator length



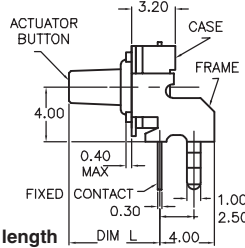
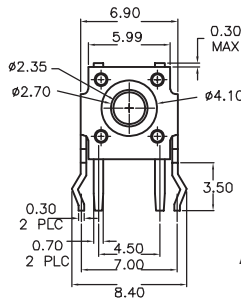
Codes 1, 2, 3, 4, 5, 6, 7, 8



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)

Tactile Switches

Product key	Version	Actuator length	Version	Actuation force	Part Number
FSMRA1JHL	version		resistance	1.0±0.3 N (100±30 gf)	1825027-1
<b>FSMRA1JH</b>	right angle	(.124)	high solder heat	1.6±0.5 N (160±50 gf)	<b>1825027-2</b>
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
<b>FSMRA2JH</b>		(.152)	high	1.6±0.5 N (160±50 gf)	<b>1825027-5</b>
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
<b>FSMRA3JH</b>		(.230)		1.6±0.5 N (160±50 gf)	<b>1825027-8</b>
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
<b>FSMRA4JH</b>		(.329)		1.6±0.5 N (160±50 gf)	<b>1-1825027-1</b>
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
<b>FSMRA5JH</b>		(.242)		1.6±0.5 N (160±50 gf)	<b>1-1825027-4</b>
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
<b>FSMRA6JH</b>		(.270)		1.6±0.5 N (160±50 gf)	<b>1-1825027-7</b>
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
<b>FSMRA7JH</b>		(.467)		1.6±0.5 N (160±50 gf)	<b>2-1825027-0</b>
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
<b>FSMRA8JH</b>		(.624)		1.6±0.5 N (160±50 gf)	<b>2-1825027-3</b>
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

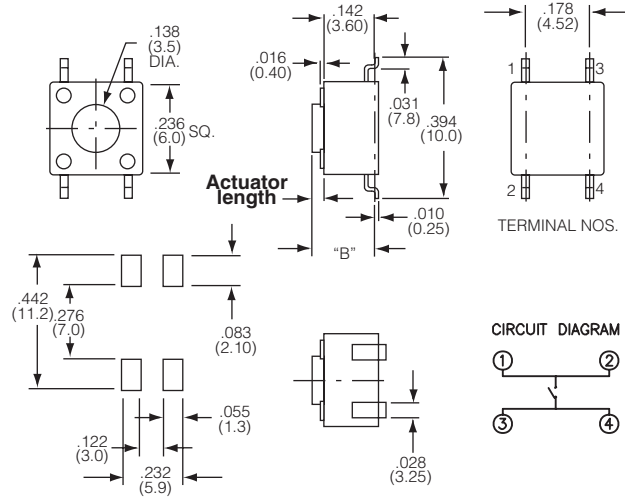
Product key		Typical product key		FSM	2	JSM	L	S	TR
<b>Type</b>	FSM Tactile switch 6 x 6 mm								
<b>Actuator length</b>									
2	4.3 mm (.169)	8	9.5 mm (.374)						
4	5.0 mm (.196)	14	13.0 mm (.512)						
6	7.0 mm (.276)								
<b>Version</b>	JSM surface mount version								
<b>Actuation force</b>									
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)						
<b>Switching dome</b>	S steel dome								
<b>Packaging</b>	blank bulk								
	TR tape & reel								

**FSMJSM Series 6 x 6, SMT (Continued)**

Actuator length



Codes 2, 4, 6, 8, 14



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

Preferred parts in bold print

**FSMLP Series 6 x 6, Low Profile, SMT**

**Features**

- Low profile design



**Typical performance characteristics**

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

**Environmental specification**

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

**Material specifications**

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

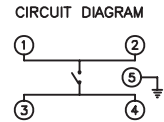
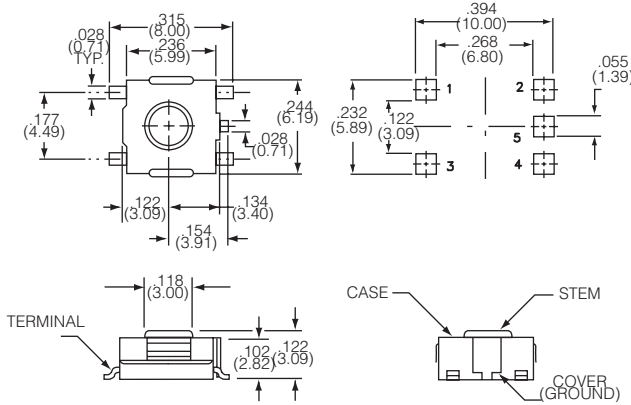
Product key		Typical product key					
		FSM	1	LP	A	S	TR
<b>Type</b>	FSM Tactile switch 6 x 6 mm						
<b>Actuator length &amp; grounding terminal</b>							
1	3.1mm (.122), with grounding						
4	4.3mm (.169), without grounding						
<b>Version</b>	LP low profile version						
<b>Actuation force</b>							
blank	1.6±0.5 N (160±50 gf)						
A	2.6±0.5 N (260±50 gf)						
<b>Switching dome</b>	S steel dome						
<b>Packaging</b>							
blank	bulk						
TR	tape & reel						

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

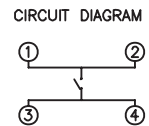
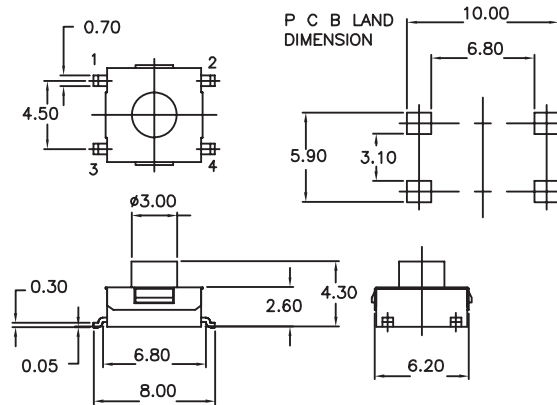


**Actuator length & grounding terminal**

**Code 1 with grounding terminal, 3.1 mm**



**Code 4 without grounding terminal, 4.3 mm**



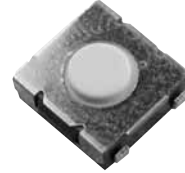
Product key	Actuator length	Version	Actuation force	Packaging	Part Number
<b>FSM1LPS</b>	3.1 mm	low profile	1.6±0.5 N (160±50 gf)	bulk	<b>1977263-1</b>
<b>FSM1LPAS</b>	(.169)	version	2.6±0.5 N (260±50 gf)		<b>1977263-2</b>
<b>FSM1LPASTR</b>				tape & reel	<b>1977263-3</b>
<b>FSM1LPSTR</b>			1.6±0.5 N (160±50 gf)		<b>1977263-4</b>
<b>FSM4LPAS</b>	4.3 mm		2.6±0.5 N (260±50 gf)	bulk	1977264-1
<b>FSM4LPASTR</b>	(.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**

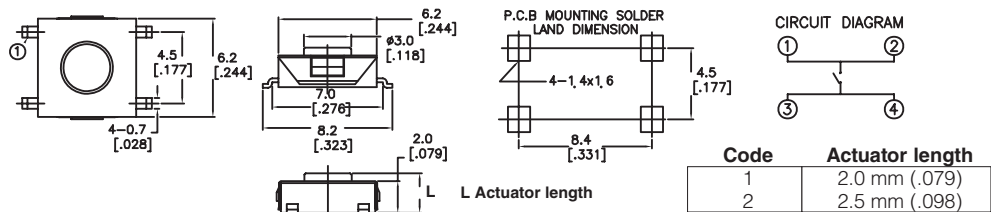
Contacts . . . . . stainless steel silver finish  
 Actuator . . . . . nylon  
 Terminals . . . . . copper alloy silver finish  
 Base . . . . . PPS  
 Cover . . . . . copper alloy, tin finish or stainless steel  
 RoHS Directive 2002/95/EC . . . . . compliant

<b>Product key</b>	Typical product key						<b>FSM</b>	<b>1</b>	<b>JEL</b>	<b>G</b>	<b>TR</b>
<b>Type</b>	FSM Tactile switch 6 x 6 mm										
<b>Actuator length</b>											
<b>1</b>	2.0 mm (.079)										
<b>2</b>	2.5 mm (.098)										
<b>Version</b>	JEL extended life version										
<b>Terminals</b>											
<b>G</b>	gullwing										
<b>GE</b>	gullwing with ground terminal										
<b>J</b>	J-lead										
<b>Actuation force</b>											
<b>XL</b>	0.5±0.3 N (50±30 gf), 1,000,000 cycles						<b>blank</b>	1.6±0.5 N (160±50 gf), 1,000,000.cycles			
<b>L</b>	1.0±0.5 N (100±50 gf), 1,000,000 cycles						<b>A</b>	2.6±0.5 N (520±50 gf), 100,000 cycles			
<b>Packaging</b>											
<b>blank</b>	bulk										
<b>TR</b>	tape & reel										

**Terminal**



**G gullwing terminal**







**FSMJX Series 6 x 6, Extreme Life Cycle, SMT**

**Features**

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



**Typical performance characteristics**

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

**Environmental specification**

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

**Material specifications**

Contacts	stainless steel silver finish
Actuator	silcon 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

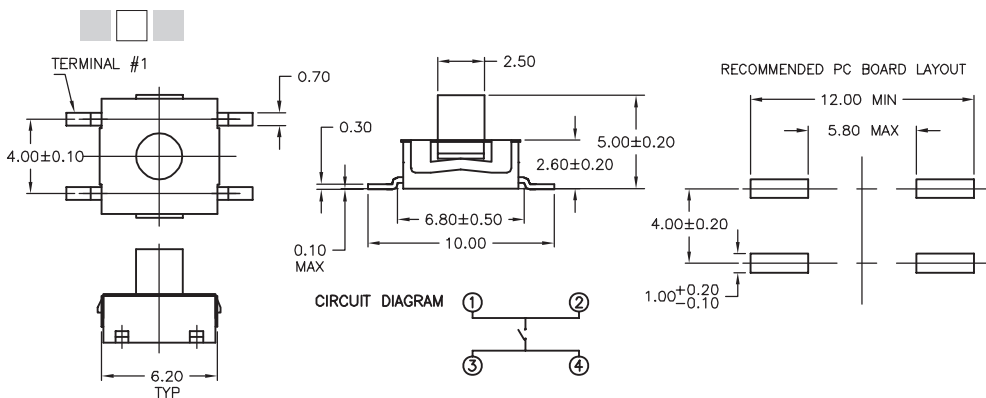
**Packaging**

**blank** bulk  
**TR** tape & reel

**Extreme life cycle version**



FSMJX



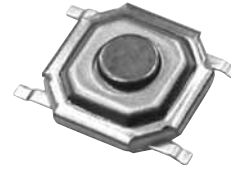
Product key	Version	Packaging	Part Number
FSMJX	extreme	bulk	1571634-1
FSMJXTR	life cycle	tape & reel	1571634-2

**FSMCT Series 5.2 x 5.2, Ultra Low Profile, SMT**

Tactile Switches

**Features**

- Ultra low profile design
- Metal actuator



**Typical performance characteristics**

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

**Environmental specification**

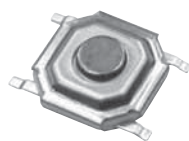
Operating temperature	-35 to +105°C
Storage temperature	-35 to +105°C
Solder heat resistance	260°C/10s reflow

**Material specifications**

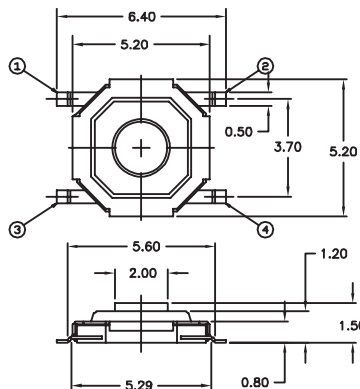
Contacts	stainless steel silver finish
Actuator	copper alloy
Terminals	copper alloy silver finish
Base	nylon 46
Cover	stainless steel
RoHS Directive 2002/95/EC	compliant

Product key		Typical product key		FSM	CT	TR
Type	<b>FSM</b> Tactile switch 5.2 x 5.2 mm					
Version	<b>CT</b> ultra low profile version					
Actuation force	<b>blank</b> 1.6±0.5 N (160±50 gf), 1,000,000 cycles <b>A</b> 2.6±0.5 N (260±50 gf), 500,000 cycles					
Packaging	<b>TR</b> tape & reel					

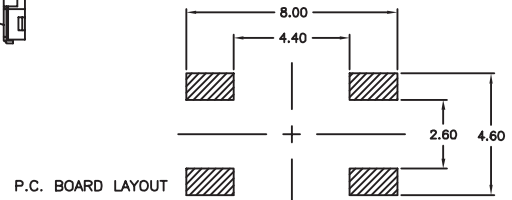
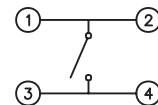
**Ultra low profile version**



FSMCTTR



CIRCUIT DIAGRAM



Product key	Version	Actuation force	Life	Packaging	Part Number
<b>FSMCTTR</b>	ultra low	1.6±0.5 N (160±50 gf)	1,000,000	tape & reel	<b>8-1437565-0</b>
<b>FSMCTATR</b>	profile version	2.6±0.5 N (260±50 gf)	500,000		<b>8-1437565-1</b>

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

<b>FSM</b>	<b>LPU</b>	<b>TR</b>
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**Type**

**FSM** Tactile switch 4.8 x 4.8 mm

**Version**

**LPU** slimline version

**Packaging**

**TR** tape & reel

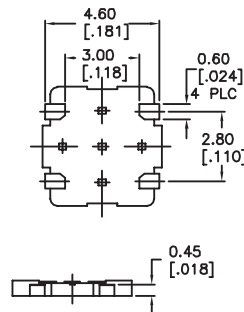
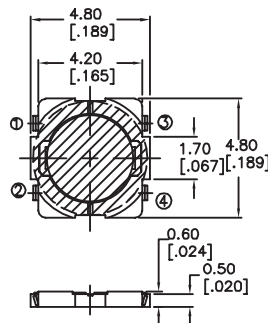
**Version**



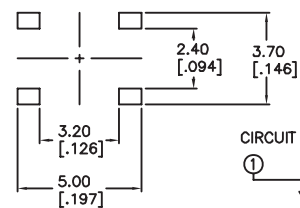
**LPU slimline version**



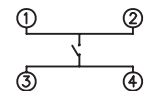
FSMLPUTR



**SOLDER PAD LAYOUT**



**CIRCUIT DIAGRAM**



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

Preferred parts in bold print

**FSMJ6 Series 6 x 6, Sealed, SMT**

**Features**

- Sealed to IP67
- Tape & reel available



Tactile Switches

**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

**Product key**

Typical product key

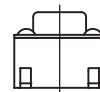
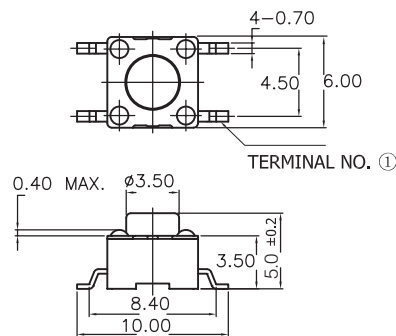
**FSM 2 JS6 SM TR**

<b>Type</b>	<b>FSM</b> Tactile switch 6 x 6 mm, sealed
<b>Actuator length</b>	<b>2</b> 4.3 mm
<b>Version</b>	<b>JS6</b> sealed version 6 x 6
<b>Terminal</b>	<b>SM</b> surface mount - SMD
<b>Packaging</b>	<b>blank</b> bulk <b>TR</b> tape & reel

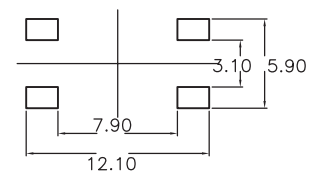
**Version**



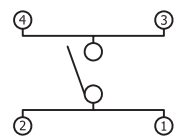
**JS6 sealed version 6 x 6 mm**



**P.C.B. LAND DIMENSION**



**CIRCUIT DIAGRAM**



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

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

**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)**

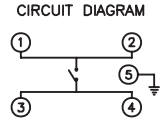
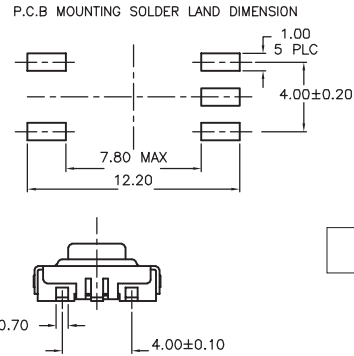
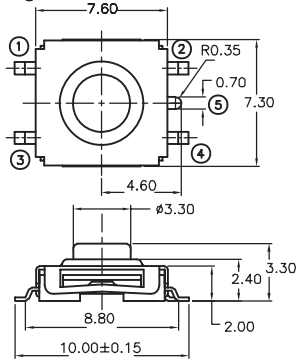
Tactile Switches

**Actuator length & grounding terminal, THT & SMT**

**Code 1 SMT, with grounding terminal**



FSM1JSSM

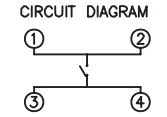
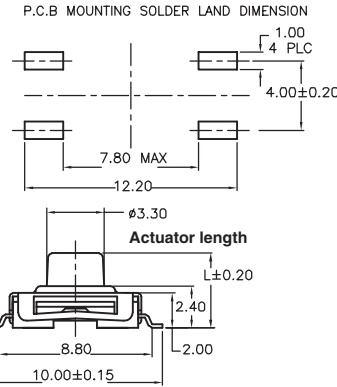
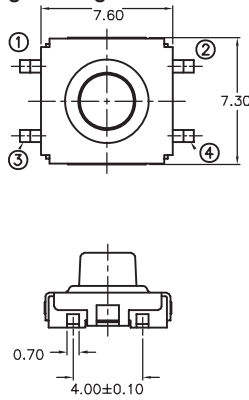


Code	Actuator length
1	3.3mm (.130) with Gnd

**Codes 2, 4 SMT, without grounding terminal**



FSM2JSSM

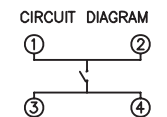
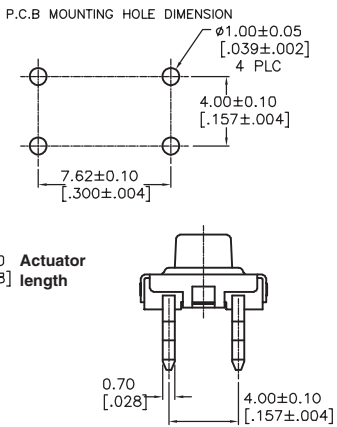
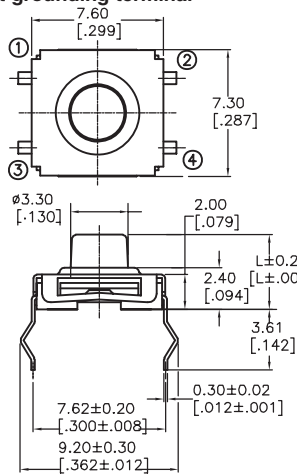


Code	Actuator length
2	4.3mm (.169)
4	5.0mm (.197)

**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
<b>FSM2JSSM</b>	sealed version	4.3 mm	without ground	SMT	1.6±0.5 N (160±50 gf)	bulk	<b>1571294-1</b>
<b>FSM2JSSMTR</b>		(.169)			1.6±0.5 N (160±50 gf)	tape & reel	<b>1571294-2</b>
<b>FSM4JSSM</b>		5.0 mm			1.6±0.5 N (160±50 gf)	bulk	<b>1571294-3</b>
<b>FSM4JSSMTR</b>		(.196)			1.6±0.5 N (160±50 gf)	tape & reel	<b>1571294-4</b>
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
<b>FSM1JSSM</b>		3.3 mm	with		1.6±0.5 N (160±50 gf)	bulk	<b>1571296-1</b>
<b>FSM1JSSMTR</b>		(.130)	ground		1.6±0.5 N (160±50 gf)	tape & reel	<b>1571296-2</b>
<b>FSM2JS</b>		4.3 mm (.169)	without	THT	1.6±0.5 N (160±50 gf)	bulk	<b>1571295-1</b>
<b>FSM4JS</b>		5.0 mm (.196)	ground		1.6±0.5 N (160±50 gf)		<b>1571295-2</b>

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)**

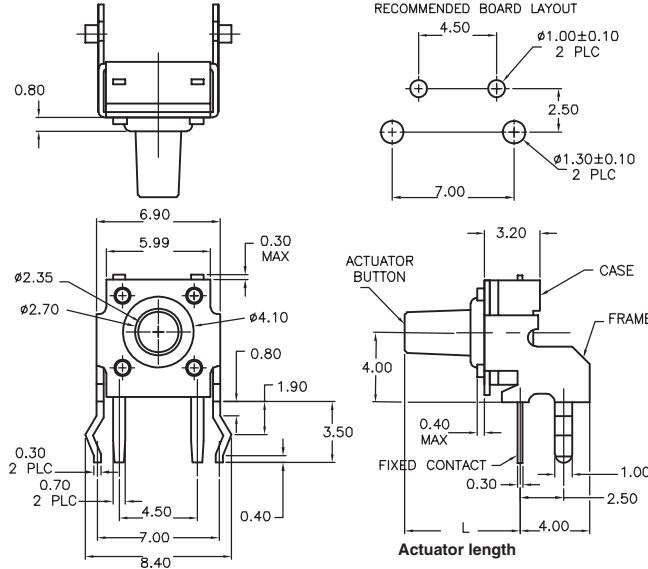
THT version



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)

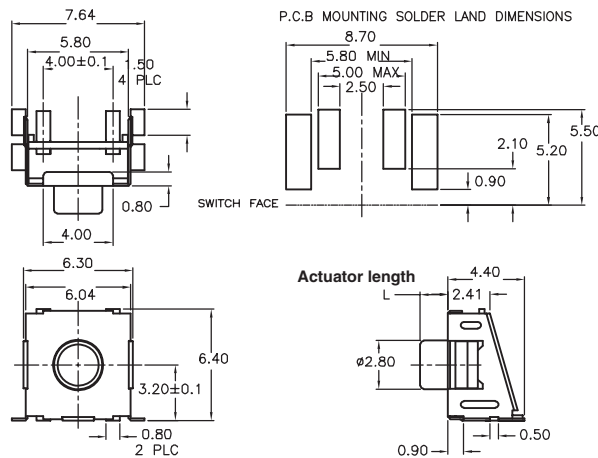
SMT version



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
<b>FSMRAJS1SMTR</b>	right angle	1.60 mm		tape & reel	<b>1571407-2</b>
<b>FSMRAJS1SM</b>	version			bulk	<b>1571407-1</b>
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



**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**

<b>0</b>	4.3 mm (.169)	<b>3</b>	7.3 mm (.287)
<b>1</b>	8.5 mm (.335)	<b>4</b>	9.0 mm (.354), right angle
<b>2</b>	12.0 mm (.472)		

**Actuation force**

**blank** 1.6 N (160 gf)  
**A** 2.6 N (260 gf)

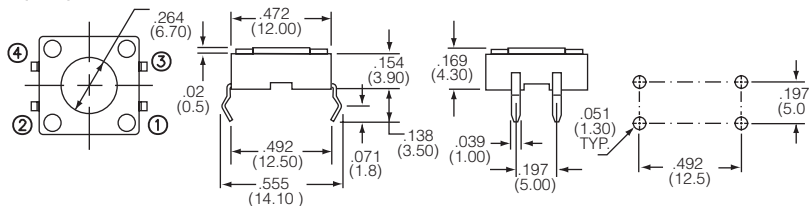
**Actuator length**



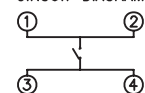
**0** actuator length 4.3 mm (.169)



FSM100



**CIRCUIT DIAGRAM**

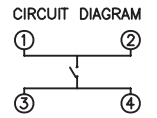
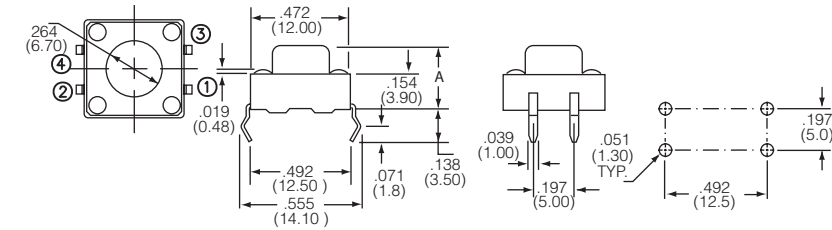


**FSM10 Series 12 x 12, THT (Continued)**

**1 actuator length 8.5 mm (.335)**



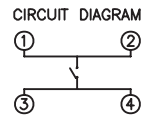
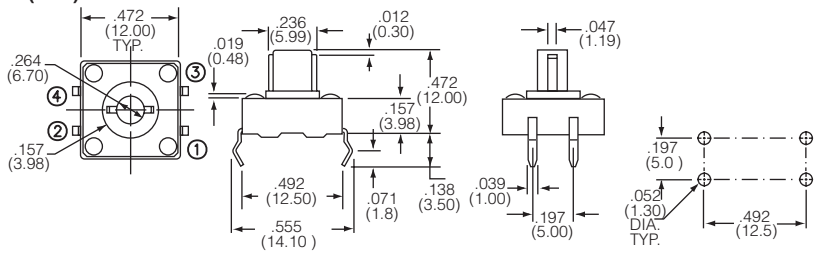
FSM10



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



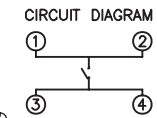
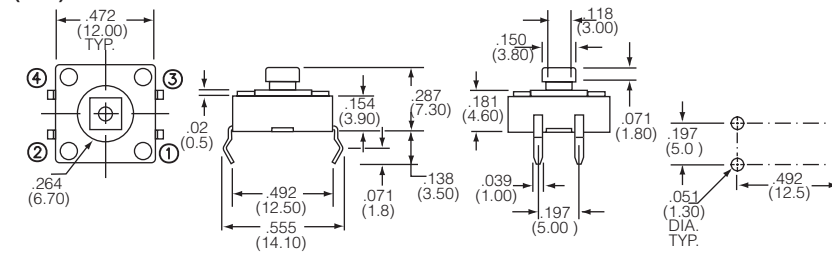
FSM102



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



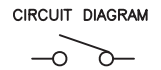
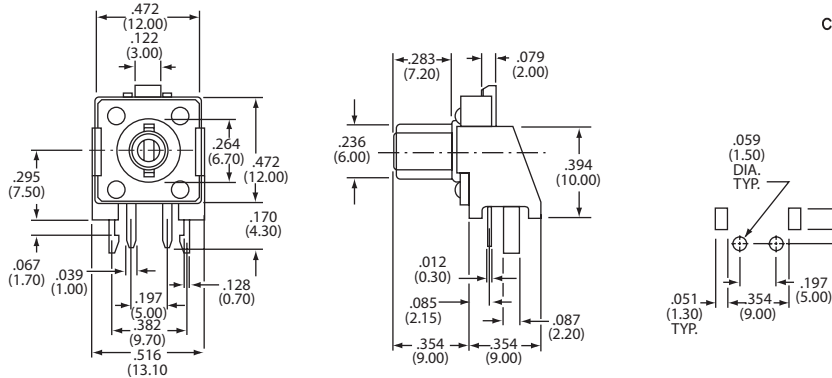
FSM103



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



FSM104



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

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

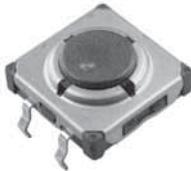
<b>Product key</b>	Typical product key	<b>FSM</b>	<b>10</b>	<b>3</b>	<b>S</b>		<b>SM</b>	<b>TR</b>
<b>Type</b>	<b>FSM</b> Tactile switch 12 x 12 mm							
<b>Version</b>	<b>10</b> standard							
<b>Actuator length</b>	<b>0</b> 4.3 mm (.169) <b>3</b> 7.3 mm (.287) square							
<b>Version</b>	<b>S</b>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

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

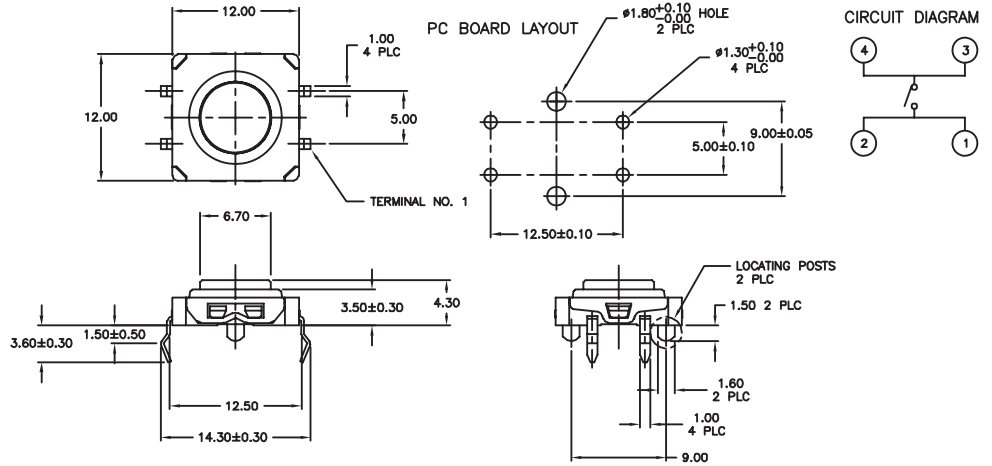
Actuator length, Location pins, Terminal



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



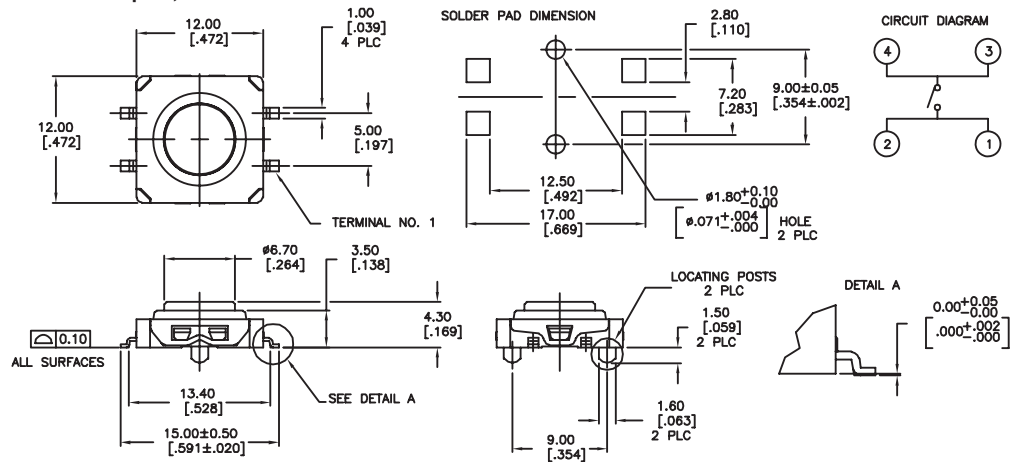
FSM100S



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



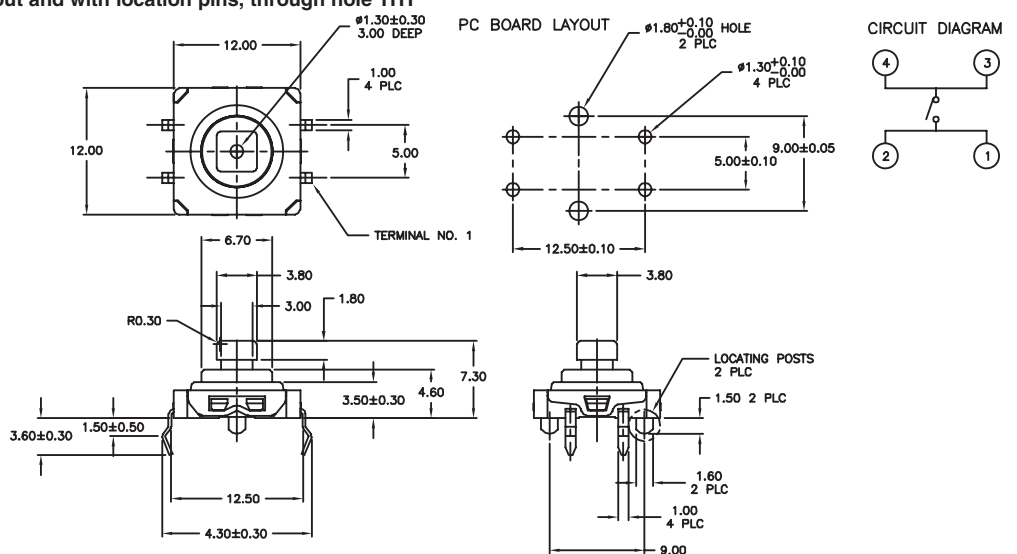
FSM100SM



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



FSM103S

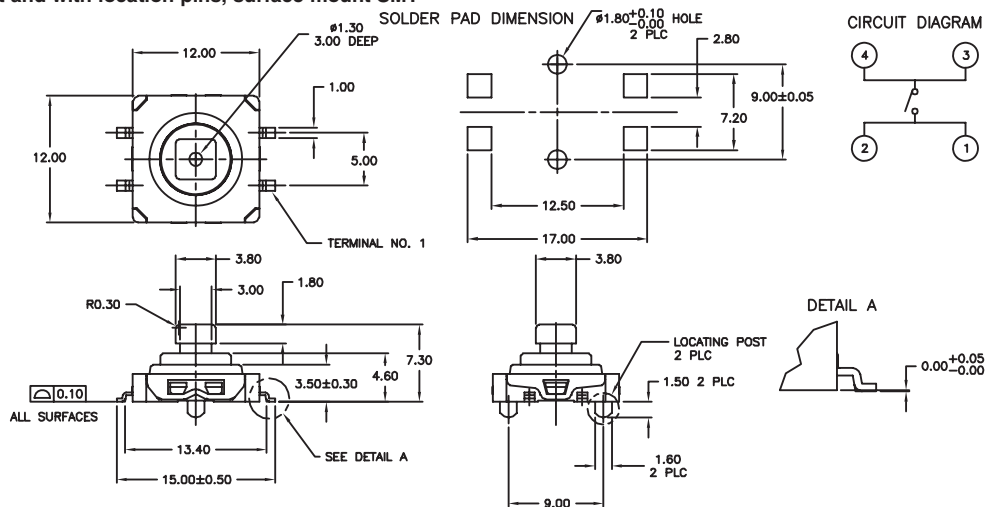


**FSM10 Series 12 x 12, Sealed, SMT & THT (Continued)**

**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 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



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

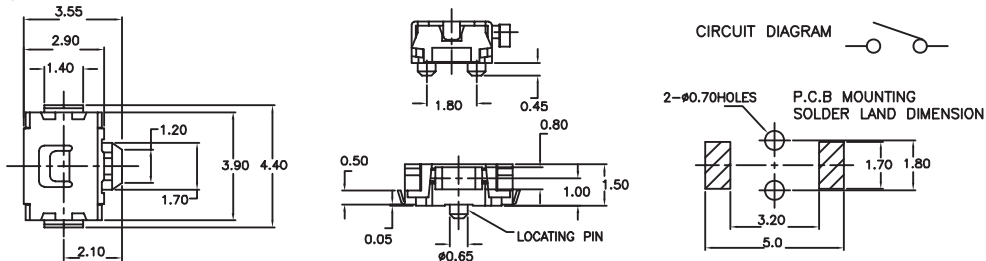
**FSMMS Series 3 x 5 Miniature Side Action, SMT** (Continued)

Tactile Switches

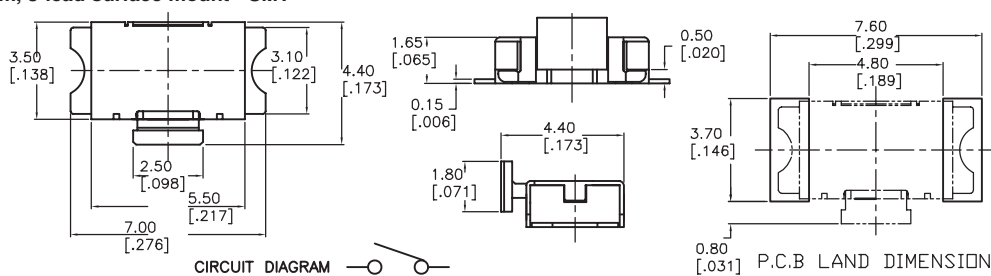
**Actuator length, Terminal**



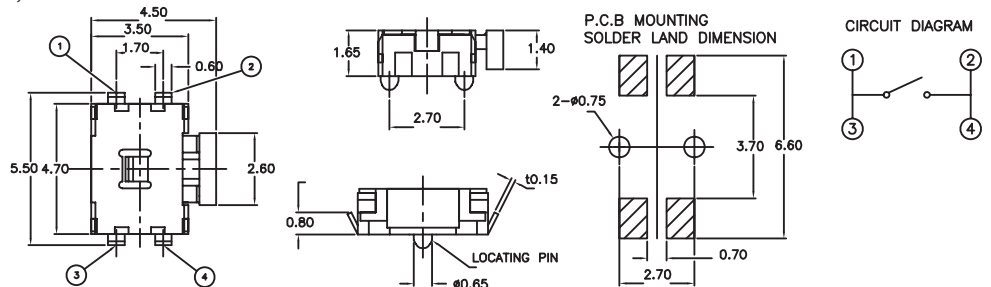
**1 actuator length 3.55 mm, J-lead surface mount - SMT**



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



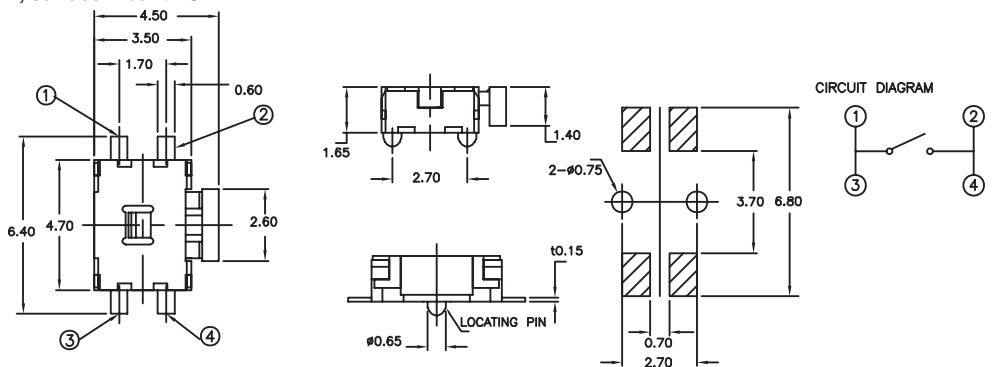
**3 actuator length 4.50 mm, J-lead surface mount - SMT**



**3 actuator length 4.50 mm, surface mount - SMT**



FSM3MSSMTR



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

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

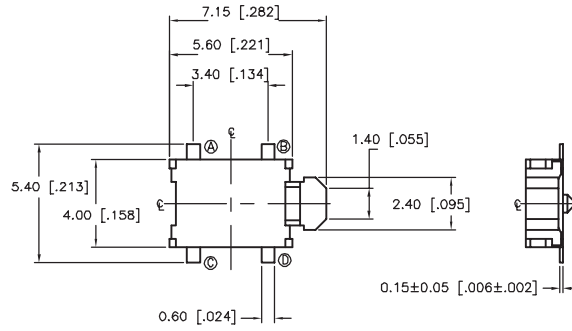
**FSMMST Series "Turtle" Style, SMT** (Continued)

Tactile Switches

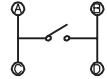
FSMMST Series



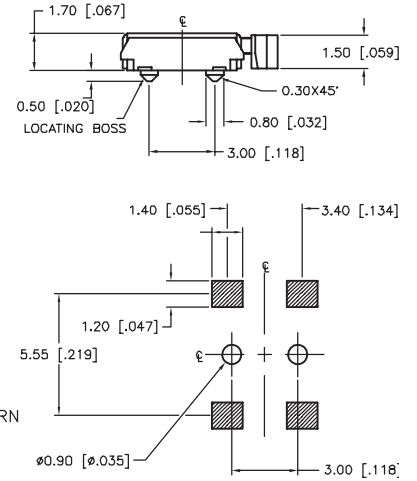
FSMMST



SCHEMATIC



RECOMMENDED LAND PATTERN



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

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)**

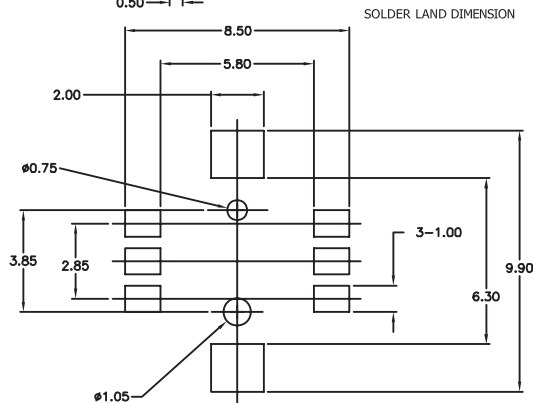
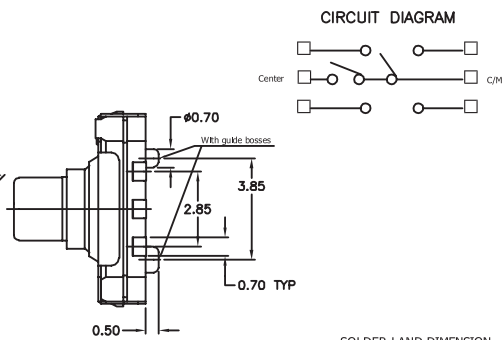
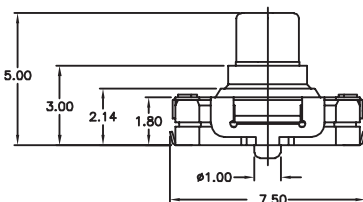
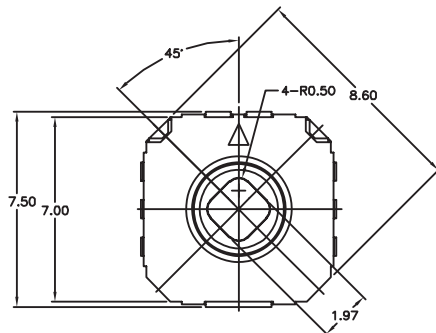
Version



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



FSMMDS



Tactile Switches

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**

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

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

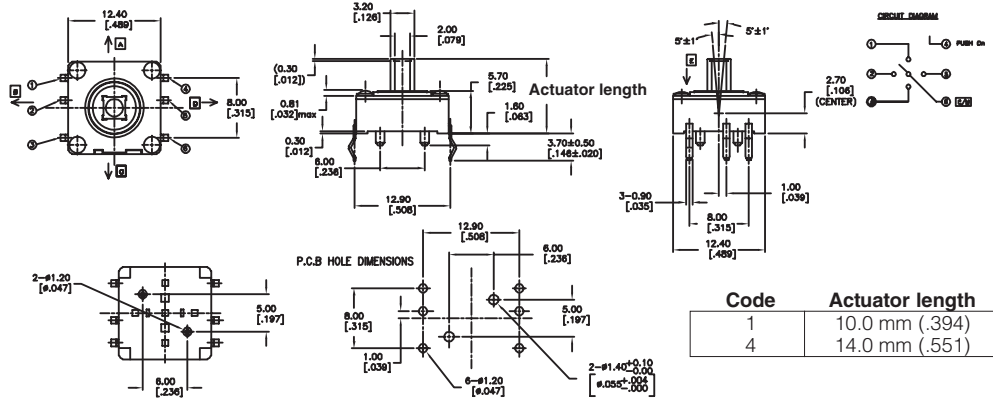
**Terminal**



blank through hole - THT



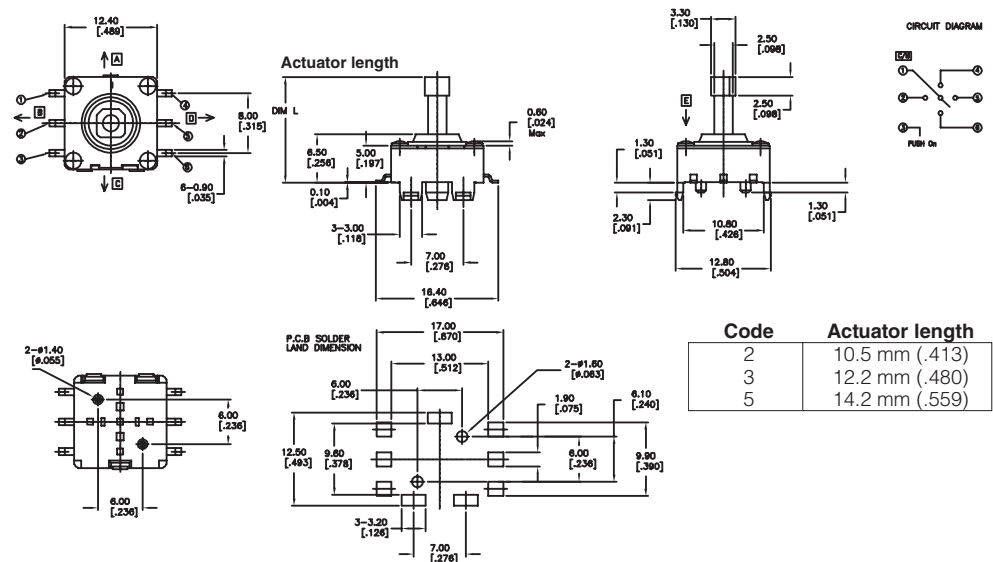
FSM1MD



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