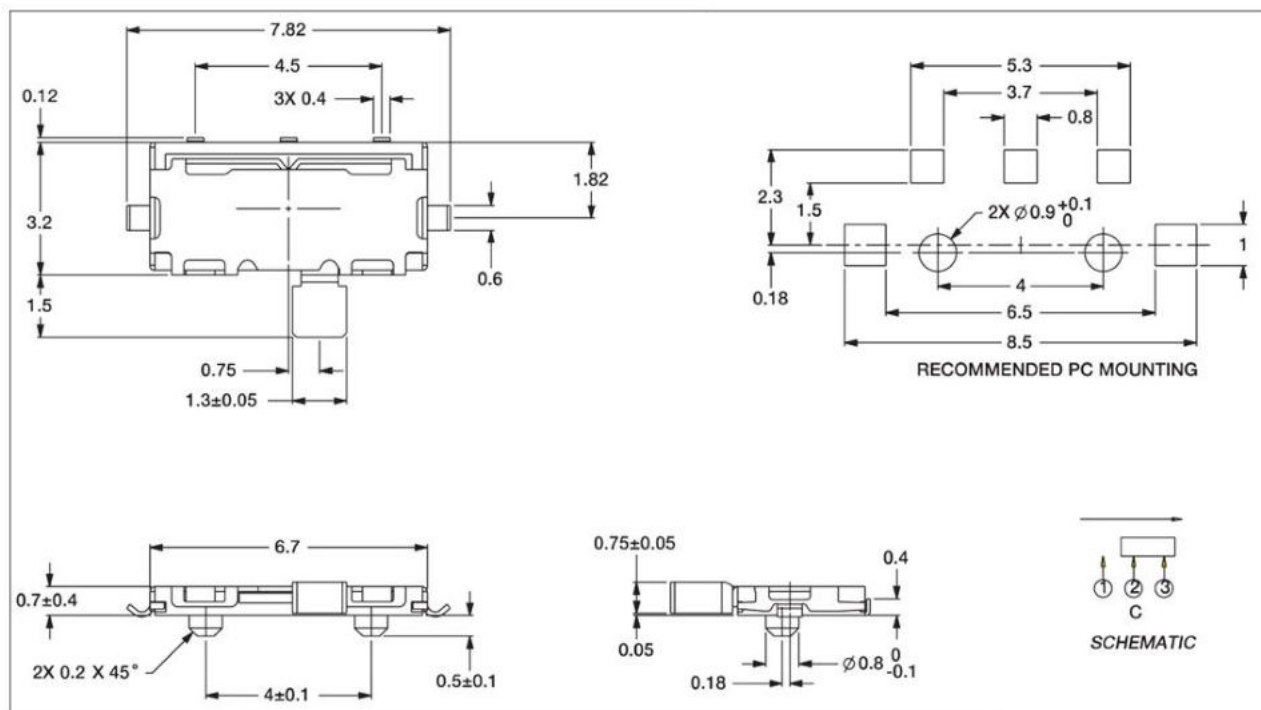




Mini Side Slide Knob SW MK-12C03-G1.5

МК-12С03-Г1.5



12*12 PUSH Button Switch

PBS-1230-1-350

1=черная кнопка 350=рабочее усилие 350gf 3=белая кнопка 6=синяя кнопка

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	10mA, 30V DC
	Insulation resistance	100MΩ min. 500V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	10,000 Cycles min.
Operating force		350gf

No.	Dimensions	Circuit Diagram
1	 Push No Lock(无锁) Push To Lock(自锁) Operating Type(操作类型)	 Circuit Diagram PCB Layout Recommended
2	 Push No Lock(无锁) Push To Lock(自锁) Operating Type(操作类型)	 Circuit Diagram PCB Layout Recommended
3	 Push No Sound No Lock(无声无锁) Push No Lock(无锁) Push To Lock(自锁) Operating Type(操作类型)	 Circuit Diagram PCB Layout Recommended



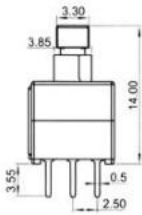
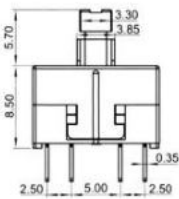
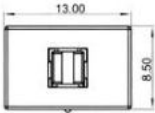
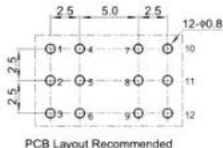
8.5*8.5 PUSH Button Switch

PBS-2288-1-240

1=черная кнопка 240=рабочее усилие 240 gf 3=белая кнопка 6=синяя кнопка

Specification

Items		Standard
Operating temperature range		-30 C to +85 C
Electrical performance	Rating	10mA, 30V DC
	Insulation resistance	100MΩ min. 500V DC
	Dielectric strength	500V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	10,000 Cycles min.
Operating force		240gf

No.	Dimensions	Circuit Diagram
1	 Push No Sound No Lock(无声无锁) Push No Lock(无锁) Push To Lock(自锁) Operating Type(操作类型)	 Circuit Diagram  PCB Layout Recommended



8.5*8.5 PUSH Button Switch

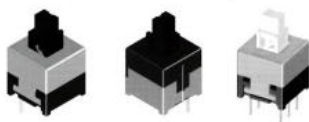
PBS-2287-1-240

1=черная кнопка 240=рабочее усилие 240gf 3=белая кнопка 6=синяя кнопка

Specification

Items		Standard
Operating temperature range		-30 ℃ to +85 ℃
Electrical performance	Rating	10mA. 30V DC
	Insulation resistance	100MΩ min. 500V DC
	Dielectric strength	500V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	10,000 Cycles min.
Operating force		240gf

No.	Dimensions	Circuit Diagram
1		
2		
3		



8.45*8.45 PUSH Button Switch

PBS-2286-1-180

1=черная кнопка 200=рабочее усилие 200gf 3=белая кнопка 240=рабочее усилие 240gf 6=синяя кнопка

Specification

Items		Standard
Operating temperature range		-30 C to +85 C
Electrical performance	Rating	10mA, 30V DC
	Insulation resistance	100MΩ min. 500V DC
	Dielectric strength	500V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	10,000 Cycles min.
Operating force		F:200gf C:240gf

No.	Dimensions	Circuit Diagram
1		
2		
3		



8*8 PUSH Button Switch

PBS-2285-1-180

1=черная кнопка 180=рабочее усилие 180gf 3=белая кнопка 6=синяя кнопка

Specification

Items		Standard
Operating temperature range		-30 C to +85 C
Electrical performance	Rating	10mA. 30V DC
	Insulation resistance	100MΩ min. 500V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	10,000 Cycles min.
Operating force		180gf

No.	Dimensions	Circuit Diagram																									
1	<table><tr><td>Push No Sound No Lock</td><td>无声音无锁</td><td>White(白色)</td><td>Black(黑色)</td><td>White(白色)</td></tr><tr><td>Push No Lock</td><td>无锁</td><td>White(白色)</td><td>Black(黑色)</td><td>Black(黑色)</td></tr><tr><td>Push To Lock</td><td>自锁</td><td>Black(黑色)</td><td>White(白色)</td><td>Black(黑色)</td></tr><tr><td>Operating Type</td><td>操作类型</td><td>Color base</td><td>Base color color</td><td>Guide core color</td></tr><tr><td></td><td></td><td>(底座颜色)</td><td>(杆的颜色)</td><td>(导芯颜色)</td></tr></table>	Push No Sound No Lock	无声音无锁	White(白色)	Black(黑色)	White(白色)	Push No Lock	无锁	White(白色)	Black(黑色)	Black(黑色)	Push To Lock	自锁	Black(黑色)	White(白色)	Black(黑色)	Operating Type	操作类型	Color base	Base color color	Guide core color			(底座颜色)	(杆的颜色)	(导芯颜色)	Circuit Diagram PCB Layout Recommended
Push No Sound No Lock	无声音无锁	White(白色)	Black(黑色)	White(白色)																							
Push No Lock	无锁	White(白色)	Black(黑色)	Black(黑色)																							
Push To Lock	自锁	Black(黑色)	White(白色)	Black(黑色)																							
Operating Type	操作类型	Color base	Base color color	Guide core color																							
		(底座颜色)	(杆的颜色)	(导芯颜色)																							
2	<table><tr><td>Push No Sound No Lock</td><td>无声音无锁</td><td>White(白色)</td><td>Black(黑色)</td><td>White(白色)</td></tr><tr><td>Push No Lock</td><td>无锁</td><td>White(白色)</td><td>Black(黑色)</td><td>Black(黑色)</td></tr><tr><td>Push To Lock</td><td>自锁</td><td>Black(黑色)</td><td>White(白色)</td><td>Black(黑色)</td></tr><tr><td>Operating Type</td><td>操作类型</td><td>Color base</td><td>Base color color</td><td>Guide core color</td></tr><tr><td></td><td></td><td>(底座颜色)</td><td>(杆的颜色)</td><td>(导芯颜色)</td></tr></table>	Push No Sound No Lock	无声音无锁	White(白色)	Black(黑色)	White(白色)	Push No Lock	无锁	White(白色)	Black(黑色)	Black(黑色)	Push To Lock	自锁	Black(黑色)	White(白色)	Black(黑色)	Operating Type	操作类型	Color base	Base color color	Guide core color			(底座颜色)	(杆的颜色)	(导芯颜色)	Circuit Diagram PCB Layout Recommended
Push No Sound No Lock	无声音无锁	White(白色)	Black(黑色)	White(白色)																							
Push No Lock	无锁	White(白色)	Black(黑色)	Black(黑色)																							
Push To Lock	自锁	Black(黑色)	White(白色)	Black(黑色)																							
Operating Type	操作类型	Color base	Base color color	Guide core color																							
		(底座颜色)	(杆的颜色)	(导芯颜色)																							
3	<table><tr><td>Push No Sound No Lock</td><td>无声音无锁</td><td>White(白色)</td><td>Black(黑色)</td><td>White(白色)</td></tr><tr><td>Push No Lock</td><td>无锁</td><td>White(白色)</td><td>Black(黑色)</td><td>Black(黑色)</td></tr><tr><td>Push To Lock</td><td>自锁</td><td>Black(黑色)</td><td>White(白色)</td><td>Black(黑色)</td></tr><tr><td>Operating Type</td><td>操作类型</td><td>Color base</td><td>Base color color</td><td>Guide core color</td></tr><tr><td></td><td></td><td>(底座颜色)</td><td>(杆的颜色)</td><td>(导芯颜色)</td></tr></table>	Push No Sound No Lock	无声音无锁	White(白色)	Black(黑色)	White(白色)	Push No Lock	无锁	White(白色)	Black(黑色)	Black(黑色)	Push To Lock	自锁	Black(黑色)	White(白色)	Black(黑色)	Operating Type	操作类型	Color base	Base color color	Guide core color			(底座颜色)	(杆的颜色)	(导芯颜色)	Circuit Diagram PCB Layout Recommended
Push No Sound No Lock	无声音无锁	White(白色)	Black(黑色)	White(白色)																							
Push No Lock	无锁	White(白色)	Black(黑色)	Black(黑色)																							
Push To Lock	自锁	Black(黑色)	White(白色)	Black(黑色)																							
Operating Type	操作类型	Color base	Base color color	Guide core color																							
		(底座颜色)	(杆的颜色)	(导芯颜色)																							



PBS-2284-3-230

1=черная кнопка 230=рабочее усилие 230gf 3=белая кнопка 6=синяя кнопка

Specification

Items		Standard
Operating temperature range		-30 °C to +85 °C
Electrical performance	Rating	10mA, 30V DC
	Insulation resistance	100MΩ min, 500V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	10,000 Cycles min.
Operating force		230gf

No.	Dimensions	Circuit Diagram
1	Technical drawing of a 2-pin push button switch (Type 1) showing top, side, and front views with dimensions: - Top View: 7.00 x 7.00 mm square footprint, 3.80 mm wide terminal area, 2.00 mm pin spacing. - Side View: 7.15 mm total height, 5.55 mm mounting height, 3.00 mm terminal width, 0.30 mm pin diameter. - Front View: 3.55 mm button height, 2.00 mm pin diameter, 0.60 mm pin spacing. Operating Type (操作类型): - Push No Sound No Lock (无声无锁) - Push No Lock (无锁) - Push To Lock (自锁)	Circuit Diagram PCB Layout Recommended
2	Technical drawing of a 2-pin push button switch (Type 2) showing top, side, and front views with dimensions: - Top View: 7.00 x 7.00 mm square footprint, 3.80 mm wide terminal area, 2.00 mm pin spacing. - Side View: 7.15 mm total height, 2.55 mm mounting height, 3.00 mm terminal width, 0.30 mm pin diameter. - Front View: 3.55 mm button height, 2.00 mm pin diameter, 0.60 mm pin spacing. Operating Type (操作类型): - Push No Sound No Lock (无声无锁) - Push No Lock (无锁) - Push To Lock (自锁)	Circuit Diagram PCB Layout Recommended



5.8*5.8 PUSH Button Switch

PBS-2283-3-180

1=черная кнопка 180=рабочее усилие180gf 3=белая кнопка 6=синяя кнопка

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	10mA, 30V DC
	Insulation resistance	100MΩ min. 500V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	10,000 Cycles min.
Operating force		180gf

No.	Dimensions	Circuit Diagram
1	Push No Sound No Lock(无声无锁) Push No Lock(无锁) Push To Lock(自锁) Operating Type(操作类型)	Circuit Diagram PCB Layout Recommended
2	Push No Sound No Lock(无声无锁) Push No Lock(无锁) Push To Lock(自锁) Operating Type(操作类型)	Circuit Diagram PCB Layout Recommended
3	Push No Sound No Lock(无声无锁) Push No Lock(无锁) Push To Lock(自锁) Operating Type(操作类型)	Circuit Diagram PCB Layout Recommended

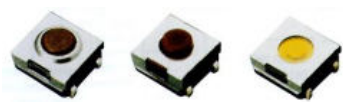


TS-1103A-0-160

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■ 200,000 Cycles ■ 100,000 Cycles
Mechanical performance	Operating force	■ 160gf ■ 250gf
	Travel	0.35 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout							
		H							
1	Technical drawing of component 1. Front view: width 14.1, height 3.5, mounting hole diameter $\phi 6.7$, distance between mounting holes 12.5, mounting hole offset 0.3 MAX. Side view: mounting hole diameter $\phi 6.7$, distance between mounting holes 12.5, mounting hole offset 0.3 MAX. Top view: square footprint 12x12, mounting holes at corners, distance between mounting holes 12.5, mounting hole offset 0.3 MAX.	<table><tr><th>H</th></tr><tr><td>4.3</td></tr><tr><td>5.0</td></tr><tr><td>6.0</td></tr><tr><td>7.0</td></tr><tr><td>...</td></tr></table>	H	4.3	5.0	6.0	7.0	...	Circuit diagram and pad layout for component 1. The circuit diagram shows a single input terminal (1) connected to a switch, which is connected to a single output terminal (2). The pad layout shows a square footprint 12x12, mounting holes at corners, distance between mounting holes 12.5, mounting hole offset 0.3 MAX.
H									
4.3									
5.0									
6.0									
7.0									
...									
2	Technical drawing of component 2. Front view: width 14.1, height 7.3, mounting hole diameter $\phi 6.7$, distance between mounting holes 12.5, mounting hole offset 0.3 MAX. Side view: mounting hole diameter $\phi 6.7$, distance between mounting holes 12.5, mounting hole offset 0.3 MAX. Top view: square footprint 12x12, mounting holes at corners, distance between mounting holes 12.5, mounting hole offset 0.3 MAX.	<table><tr><th>H</th></tr><tr><td>4.3</td></tr><tr><td>5.0</td></tr><tr><td>6.0</td></tr><tr><td>7.0</td></tr><tr><td>...</td></tr></table>	H	4.3	5.0	6.0	7.0	...	Circuit diagram and pad layout for component 2. The circuit diagram shows a single input terminal (1) connected to a switch, which is connected to a single output terminal (2). The pad layout shows a square footprint 12x12, mounting holes at corners, distance between mounting holes 12.5, mounting hole offset 0.3 MAX.
H									
4.3									
5.0									
6.0									
7.0									
...									
3	Technical drawing of component 3. Front view: width 14.1, height 3.5, mounting hole diameter $\phi 6.7$, distance between mounting holes 12.5, mounting hole offset 0.3 MAX. Side view: mounting hole diameter $\phi 6.7$, distance between mounting holes 12.5, mounting hole offset 0.3 MAX. Top view: square footprint 12x12, mounting holes at corners, distance between mounting holes 12.5, mounting hole offset 0.3 MAX.	<table><tr><th>H</th></tr><tr><td>4.3</td></tr><tr><td>5.0</td></tr><tr><td>6.0</td></tr><tr><td>7.0</td></tr><tr><td>...</td></tr></table>	H	4.3	5.0	6.0	7.0	...	Circuit diagram and pad layout for component 3. The circuit diagram shows a single input terminal (1) connected to a switch, which is connected to a single output terminal (2). The pad layout shows a square footprint 12x12, mounting holes at corners, distance between mounting holes 12.5, mounting hole offset 0.3 MAX.
H									
4.3									
5.0									
6.0									
7.0									
...									



6.2*6.2 Washable Tact Switch SMT Type, водонепроницаемая

TS-0012A-1-160

A=H2.3 0=без кнопки 160=рабочее усилие 160gf B=H3.1 1=черная кнопка 250=рабочее усилие 250gf C=H5.2 2=красная кнопка

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■ 200,000 Cycles ■ 100,000 Cycles
Mechanical performance	Operating force	■ 160gf ■ 250gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1		
2		
3		



6.2*6.2 Dust-Proof Type Tact Switch, пыленепроницаемый

TS-0004A-1-160 (1250)

A=H3.1 1=черная кнопка 160=рабочее усилие 160gf B=H5.0 3=белая
кнопка 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■ 500,000 Cycles ■ 300,000 Cycles
Mechanical performance	Operating force	■ 160gf ■ 250gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram			
		Pad Layout			
1	<table><tr><td>H</td></tr><tr><td>3.1</td></tr><tr><td>5.0</td></tr></table>	H	3.1	5.0	
H					
3.1					
5.0					



9.1*7.3 Multiple Type Tact Switch

TS-0024-1-160

1=с кнопкой 160=рабочее усилие 160gf 0=без кнопки 250=рабочее усилие 250gf 090=рабочее усилие 90gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	100,000 Cycles min
Mechanical performance	Operating force	■ 90gf ■ 160gf ■ 250gf
	Travel	0.20 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout
1		



TS-1101HLA-1-160

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■300,000 Cycles ■100,000 Cycles
Mechanical performance	Operating force	■ 90gf ■ 160gf ■ 250gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout	
		H	A
1		4.3	3.5
		5	3.5



6*6 Radial Taping Type Tact Switch

TS-1102HLA-1-160

A=H4.3 1=черная кнопка 160=рабочее усилие 160gf B=H5.0 3=белая
кнопка 250=рабочее усилие 250gf
C=H7.0 130=рабочее усилие 130gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■ 300,000 Cycles ■ 100,000 Cycles
Mechanical performance	Operating force	■ 90gf ■ 160gf ■ 250gf ■ 130gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout	
1			



6*6 Bracket Shape Type Tact Switch, с кронштейном

TS-1102VLA-1-160

A=H: L+1.15 1=черная кнопка 090=рабочее усилие 90gf 2=красная кнопка 160=рабочее усилие 160gf 3=белая кнопка 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■ 300,000 Cycles ■ 100,000 Cycles
Mechanical performance	Operating force	■ 90gf ■ 160gf ■ 250gf
	Travel	0.25 ± 0.1mm

No.	Dimensions		Circuit Diagram												
			Pad Layout												
1			<table><tr><th>L</th><th>A</th></tr><tr><td>3.15</td><td>3.5</td></tr><tr><td>3.85</td><td>3.5</td></tr><tr><td>5.85</td><td>3.3</td></tr><tr><td>8.35</td><td>3</td></tr><tr><td>15.85</td><td>3</td></tr></table>	L	A	3.15	3.5	3.85	3.5	5.85	3.3	8.35	3	15.85	3
			L	A											
			3.15	3.5											
			3.85	3.5											
			5.85	3.3											
8.35	3														
15.85	3														
2			<table><tr><th>L</th><th>A</th></tr><tr><td>3.15</td><td>3.5</td></tr><tr><td>3.85</td><td>3.5</td></tr><tr><td>5.85</td><td>3.3</td></tr><tr><td>8.35</td><td>3</td></tr><tr><td>15.85</td><td>3</td></tr></table>	L	A	3.15	3.5	3.85	3.5	5.85	3.3	8.35	3	15.85	3
			L	A											
			3.15	3.5											
			3.85	3.5											
			5.85	3.3											
8.35	3														
15.85	3														
3			<table><tr><th>L</th><th>A</th></tr><tr><td>3.15</td><td>3.5</td></tr><tr><td>3.85</td><td>3.5</td></tr><tr><td>5.85</td><td>3.3</td></tr><tr><td>8.35</td><td>3</td></tr><tr><td>15.85</td><td>3</td></tr></table>	L	A	3.15	3.5	3.85	3.5	5.85	3.3	8.35	3	15.85	3
			L	A											
			3.15	3.5											
			3.85	3.5											
			5.85	3.3											
8.35	3														
15.85	3														



6*6 DIP TYPE TACT SWITCH

TS-1102A-1-160

Отсутствие буквы = Н:4.3 1=круглая черная кнопка 160=рабочее усилие 160gf А=Н:5.0 3=квадратная черная кнопка 250=рабочее усилие 250gf
В=Н:6.0 400=рабочее усилие 400gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■300,000 Cycles ■100,000 Cycles ■50,000 Cycles
Mechanical performance	Operating force	■90gf ■70gf ■160gf ■130gf ■160gf ■210gf ■320gf ■400gf ■250gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram														
		Pad Layout														
1	<table><tr><th>H</th><th>A</th></tr><tr><td>4.3</td><td>3.5</td></tr><tr><td>5</td><td>3.5</td></tr><tr><td>7</td><td>3.3</td></tr><tr><td>9.5</td><td>3</td></tr><tr><td>13</td><td>3</td></tr><tr><td>17</td><td>3</td></tr></table>	H	A	4.3	3.5	5	3.5	7	3.3	9.5	3	13	3	17	3	
H	A															
4.3	3.5															
5	3.5															
7	3.3															
9.5	3															
13	3															
17	3															
2	<table><tr><th>H</th><th>A</th></tr><tr><td>4.3</td><td>3.5</td></tr><tr><td>5</td><td>3.5</td></tr><tr><td>7</td><td>3.3</td></tr><tr><td>9.5</td><td>3</td></tr></table>	H	A	4.3	3.5	5	3.5	7	3.3	9.5	3					
H	A															
4.3	3.5															
5	3.5															
7	3.3															
9.5	3															
3	<table><tr><th>H</th><th>A</th></tr><tr><td>4.3</td><td>3.5</td></tr><tr><td>5</td><td>3.5</td></tr><tr><td>7</td><td>3.3</td></tr><tr><td>9.5</td><td>3</td></tr></table>	H	A	4.3	3.5	5	3.5	7	3.3	9.5	3					
H	A															
4.3	3.5															
5	3.5															
7	3.3															
9.5	3															



5.2*5.2 SMT TYPE TACT SWITCH

TS-1187A-1-160

A=H: 1.5 1=черная кнопка 090=рабочее усилие 90gf
B=H: 1.7 2=красная кнопка 130=рабочее усилие 130gf
C=H: 2.0 3=белая кнопка 250=рабочее усилие 250gf
Отсутствие буквы = без кнопки 4=медная кнопка 400=рабочее усилие 400gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■200,000 Cycles ■100,000 Cycles
Mechanical performance	Operating force	■90gf ■160gf ■250gf ■70gf ■130gf ■320gf ■400gf ■520gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1		



4.8*4.8 Low-profile SMT TYPE TACT SWITCH

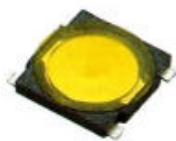
TS-0013-0-160

160=рабочее усилие 160gf
250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-20℃ to +70℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	100V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■500,000 Cycles ■200,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.20 ± 0.05mm

No.	Dimensions	Circuit Diagram Pad Layout
1		



4.5*4.5 Low-profile SMT TYPE TACT SWITCH

TS-0009-0-160

160=рабочее усилие 160gf
250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-20℃ to +70℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	100V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■500,000 Cycles ■200,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.15 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout
1		



4.3*4.5 SMT Type Tact Switch

TS-0004A-1-160

A=с фиксацией 1=черная кнопка 160=рабочее усилие 160gf
N=без фиксации 3=белая кнопка 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■300,000 Cycles ■100,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.15 ± 0.05mm

No.	Dimensions	Circuit Diagram Pad Layout
1		
2		



4.5*4.5 DIP & SMT TYPE TACT SWITCH

TS-1109S-1-160

Отсутствие буквы =DIP 0=завышенная кнопка 160=рабочее усилие 160gf
S=SMT 1=завышенная кнопка 250=рабочее усилие 250gf
E=с заземлением 2=завышенная кнопка

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■100,000 Cycles ■ 50,000 Cycles
Mechanical performance	Operating force	■160gf ■ 250gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout															
1		<table><tr><td>H</td></tr><tr><td>3.8</td></tr><tr><td>4.3</td></tr><tr><td>4.8</td></tr><tr><td>5.0</td></tr><tr><td>6.0</td></tr><tr><td>7.0</td></tr></table>	H	3.8	4.3	4.8	5.0	6.0	7.0								
			H														
			3.8														
			4.3														
			4.8														
			5.0														
6.0																	
7.0																	
2		<table><tr><td>H</td></tr><tr><td>3.8</td></tr><tr><td>4.3</td></tr><tr><td>4.8</td></tr><tr><td>5.0</td></tr><tr><td>6.0</td></tr><tr><td>7.0</td></tr></table>	H	3.8	4.3	4.8	5.0	6.0	7.0								
			H														
			3.8														
			4.3														
			4.8														
			5.0														
6.0																	
7.0																	
3		<table><tr><td>L</td><td>H</td></tr><tr><td>6.5</td><td>3.8</td></tr><tr><td>7.0</td><td>4.3</td></tr><tr><td>7.5</td><td>4.8</td></tr><tr><td></td><td>5.0</td></tr><tr><td></td><td>6.0</td></tr><tr><td></td><td>7.0</td></tr></table>	L	H	6.5	3.8	7.0	4.3	7.5	4.8		5.0		6.0		7.0	
			L	H													
			6.5	3.8													
			7.0	4.3													
			7.5	4.8													
				5.0													
	6.0																
	7.0																



3.8*6 Normal Closed Type Tact Switch 常闭按键

TS-0022-1-160

1=черная кнопка 160=рабочее усилие 160gf
3=белая кнопка 250=рабочее усилие 250gf
6=синяя кнопка

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■50,000 Cycles ■30,000 Cycles ■100,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1		



3.5*6 Through Hole & SMT TYPE TACT SWITCH

TS-0020-1-160

1=черная кнопка 180=рабочее усилие 180gf
3=белая кнопка 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■50,000Cycles ■30,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf ■180gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout
1		
2		



3.7*6.1 SMT TYPE Tact SWITCH

TS-1205A-1-160

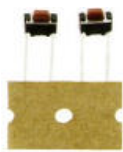
Отсутствие буквы = Н 2.5
А=Н 2.7

1= черная кнопка 160=рабочее усилие160gf
2= красная кнопка 250=рабочее усилие 250gf
3 =белая кнопка 320=рабочее усилие 320gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■50,000Cycles ■30,000 Cycles ■100,000 Cycles
Mechanical performance	Operating force	■90gf ■160gf ■250gf ■70gf ■130gf ■320gf ■180gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram	
		Pad Layout	
1			
2			
3			



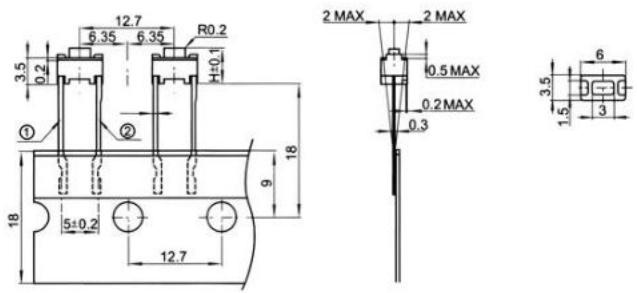
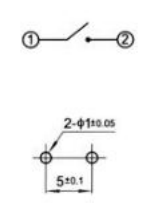
3.5*6 Taping Type TACT SW

TS-0016-1-160

Отсутствие буквы =Н 4.3 1=черная кнопка 160=рабочее усилие 160gf
A=H5.0 3=белая кнопка 250=рабочее усилие 250gf
180=рабочее усилие 180gf

Specification

Items		Standard
Operating temperature range		-20℃ to +70℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■50,000Cycles ■30,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf ■180gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1		



3.5*6 Vertical Push Tact Switch SMT TYPE

TS-1101S-1-160

S=SMT TYPE 1=черная кнопка 180=рабочее усилие 180gf
3=белая кнопка 250=рабочее усилие 250gf
070=рабочее усилие 70gf

Specification

Items		Standard
Operating temperature range		-20 ℃ to +70 ℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■50,000Cycles ■30,000 Cycles ■100,000 Cycles
Mechanical performance	Operating force	■90gf J:160gf ■250gf ■70gf ■130gf ■320gf ■180gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram									
		Pad Layout									
1		<table><tr><th>H</th><th>A</th></tr><tr><td>4.3</td><td>8.2</td></tr><tr><td>5.0</td><td>8.7</td></tr><tr><td></td><td>10.2</td></tr></table>	H	A	4.3	8.2	5.0	8.7		10.2	
		H	A								
4.3	8.2										
5.0	8.7										
	10.2										



TS-1101-1-160

D=прямые ножки	1=черная кнопка	160=рабочее усилие 160gf
A= ножки типа V	3=белая кнопка	130=рабочее усилие 130gf
		180=рабочее усилие 180gf

Specification

Items		Standard
Operating temperature range		-20℃ to +70℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■50,000Cycles ■30,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf ■70gf ■130gf ■180gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout			
1	<table><tr><td>H</td></tr><tr><td>4.3</td></tr><tr><td>5.0</td></tr></table>	H	4.3	5.0	
H					
4.3					
5.0					
2	<table><tr><td>H</td></tr><tr><td>4.3</td></tr><tr><td>5.0</td></tr></table>	H	4.3	5.0	
H					
4.3					
5.0					
3	<table><tr><td>H</td></tr><tr><td>4.3</td></tr><tr><td>5.0</td></tr></table>	H	4.3	5.0	
H					
4.3					
5.0					



3.5*6 Horizontal Push & Bracket Shape TACT SW
TS-1101VL-1-160

V=без кронштейна 1=черная кнопка 160=рабочее усилие 160gf
VL=с кронштейном 3=белая кнопка 250=рабочее усилие 250gf
070=рабочее усилие 70gf

Specification

Items		Standard
Operating temperature range		-30 C to +85 C
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■ 50,000Cycles ■ 30,000 Cycles
Mechanical performance	Operating force	■ 160gf ■ 250gf ■ 70gf ■ 130gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1		
2		



2.5*7 SMT & Right Angle Mini TACT SWITCH

TS-1112E-1-160

A=без фиксирующей опоры 1=черная кнопка 160=рабочее усилие160gf
D=0.6 фиксирующая опора 3=белая кнопка 250=рабочее усилие 250gf
E=0.8 фиксирующая опора 070=рабочее усилие 70gf

Specification

Items		Standard
Operating temperature range		-30 ℃ to +85 ℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■50,000Cycles ■G:30,000 Cycles
Mechanical performance	Operating force	■250gf ■70gf ■130gf ■160gf ■320gf
	Travel	0.25 ± 0.1mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1	A φ0.6 φ0.8	
2		



3.5*4.7 Vertical Push Tact Switch

TS-0023-1-160

1=плоские ножки 160=рабочее усилие160gf
0=ножки типа V 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	100,000 Cycles.
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.20 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout
1		
2		



3.5*4.7 Miniature Type Vertical Push Tact Switch

TS-0028A-1-160

1=плоские ножки 160=рабочее усилие 160gf
0= ножки типа V 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	50,000 Cycles.
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.20 ± 0.1mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1		
2		



3.7*3.7 Mini Tact SW TS-0022

TS-0022-1-160

1=с кнопкой 160=рабочее усилие 160gf
0=без кнопки 250=рабочее усилие 250gf
 130=рабочее усилие 90gf

Specification

Items		Standard
Operating temperature range		-30 C to +85 C
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	100,000 Cycles.
Mechanical performance	Operating force	■180gf ■250gf ■130gf
	Travel	0.15 ± 0.05

No.	Dimensions	Circuit Diagram Pad Layout
1		



3.5*4.7 Horizontal Push Tact SW TS-1114

TS-1114-1-160

1=плоские ножки 160=рабочее усилие160gf
0= ножки типа V 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30 C° to +85 C°
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf ■210gf
	Travel	0.20 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout
1		
2		



2.56*4.5 Miniature Type Horizontal Push TACT SWITCH

TS-1123A-1-160

A=2.56*4.5 1=черная кнопка 160=рабочее усилие 160gf
B=2.6*6.1 3=белая кнопка 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	500mΩ max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.20 ± 0.1mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1		
2		



3.2*4.2 Mini Type Compact High Operating Force TactSW TS-0010

TS-0010-1-160

1=плоские ножки 160=рабочее усилие160gf
0= ножки типа V 250=рабочее усилие 250gf
400=рабочее усилие 400gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	500mΩ max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf ■400gf
	Travel	0.20 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout
1		
2		



2.9*3.9 Mini Tact SW TS-1118

TS-1118-1-160

1=плоские ножки 160=рабочее усилие 160gf
0= ножки типа V 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.20 ± 0.1mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1		
2		



TS-1116A-1-160

A=H 1.5	1=черная кнопка	160=рабочее усилие 160gf
B=H 2.0	3=белая кнопка	250=рабочее усилие 250gf
C=H 2.5		120=рабочее усилие 120gf
D=H 3.0		

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	■90gf ■160gf ■250gf ■120gf
	Travel	0.13 ± 0.05mm

No.	Dimensions	Circuit Diagram Pad Layout	
1	Top view: 5±0.2, 3.9, 2.9, 1.4, 0.5, 0.12, Stem, $\phi 1.8 \pm 0.1$ Side view: 2±0.05, 1.8 Front view: 4.4±0.1, 1.4±0.1, 0.5, 0.12, Stem, $\phi 1.8 \pm 0.1$	H	
		1.5	
		2.0	
		2.5	
		3.0	
2	Top view: 3.9, 2.9, 1.4, 0.5, 0.6, 4.4±0.1, Stem, $\phi 1.8 \pm 0.1$ Side view: 2±0.05, 1.8 Front view: 4.4±0.1, 1.4±0.1, 0.5, 0.6, Stem, $\phi 1.8 \pm 0.1$	H	
		1.5	
		2.0	
		2.5	
		3.0	



2.3*4.6 Mini Tact SW TS-1122, боковое расположение кнопки

TS-1122A-1-160

A=с фиксирующей опорой 1=черная кнопка 160=рабочее усилие 160gf
B=без фиксирующей опоры 3=белая кнопка 250=рабочее усилие 250gf
100=рабочее усилие 100gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■J:50,000 Cycles ■30,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf ■140gf
	Travel	0.15 ± 0.05mm

No.	Dimensions	Circuit Diagram Pad Layout
1		
2		



2.3*4.6 Mini Tact SW TS-1121, боковое расположение кнопки

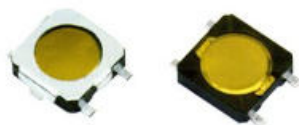
TS-1121K-3-180

К=с фиксирующей опорой 1=черная кнопка 120=рабочее усилие 120gf
В=без фиксирующей опоры 2=красная кнопка 180=рабочее усилие 180gf
3=белая кнопка 260=рабочее усилие 260gf

Specification

Items		Standard
Operating temperature range		-30 ℃ to +85 ℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■50,000 Cycles ■30,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf ■140gf
	Travel	0.15 ± 0.05mm

No.	Dimensions	Circuit Diagram Pad Layout
1		
2		



3.3*3.3 Miniature Type Tact SW TS-0017

TS-0017-1-160

1=с кнопкой 160=рабочее усилие 160gf
0=без кнопки 250=рабочее усилие 250gf
090=рабочее усилие 90 gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	■90gf ■160gf ■250gf
	Travel	0.20 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout
1		
2		



TS-1188 A-1-160

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	■ 90gf ■ 160gf ■ 250gf
	Travel	0.20 ± 0.1mm

No.	Dimensions	Circuit Diagram Pad Layout	
		H	
1		1.5	
		2.0	



TS-1115-1-160

1=с кнопкой	160=рабочее усилие 160gf
0=без кнопки	250=рабочее усилие 250gf

Items		Standard
Operating temperature range		-30 ℃ to +85 ℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.13 ± 0.05mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1		
2		



2.7*3 Miniature Type Vertical Push Tact Switch

TS-0019-1-160

1=с кнопкой 160=рабочее усилие 160gf
0=без кнопки 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30 C to +85 C
Electrical performance	Rating	20mA. 12V DC
	Insulation resistance	50MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩ max.
Durability	Lifetime	■100,000 Cycles ■50,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.15 ± 0.05mm

No.	Dimensions	Circuit Diagram
		Pad Layout
1		
2		



2*3 Miniature Type Vertical Push Tact Switch

TS-0025-1-160

1=с кнопкой 160=рабочее усилие 160gf
0=без кнопки 250=рабочее усилие 250gf

Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	20mA. 15V DC
	Insulation resistance	50MΩ min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	500mΩ max.
Durability	Lifetime	■100,000 Cycles ■50,000 Cycles
Mechanical performance	Operating force	■160gf ■250gf
	Travel	0.15 ± 0.05mm

No.	Dimensions	Circuit Diagram Pad Layout
1		