

# JIANFU ELECTRONICS

## A SERIES TACT SWITCH



THAF01



TVAF02



TVAF03



THAM05



TVAF06



TVAU10



THAM12



THAF14



THAM16



TVAU19-H

# A SERIES

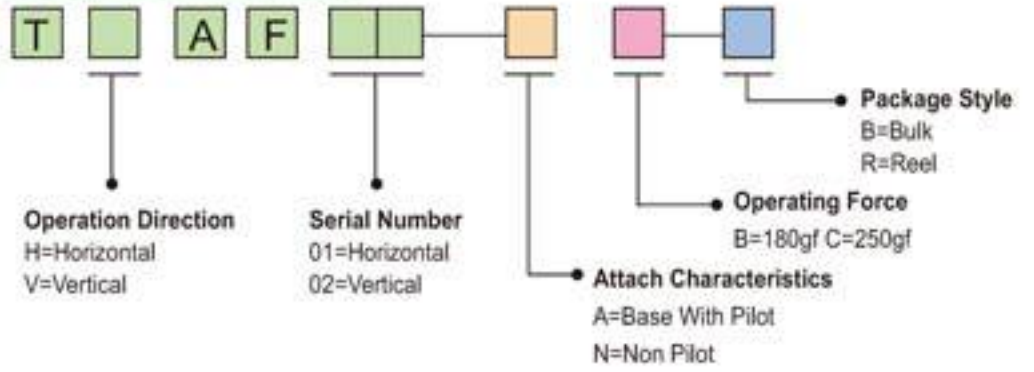
## 3.0x3.5 Miniature Type Horizontal Push & Vertical Push Tact Switch



TACT SWITCH



### HOW TO ORDER



### Features

- Improve mounting density of components on PC board.
- Reflow solderable
- Sharp "click" feel with a positive tactile feedback
- Packaged with a 12mm wide embossed taping.

### Applications

- Portable audio
- Mobile phones and personal digital assistants
- Operation of various digital devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles min.
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.13 ± 0.05mm

### Diagram

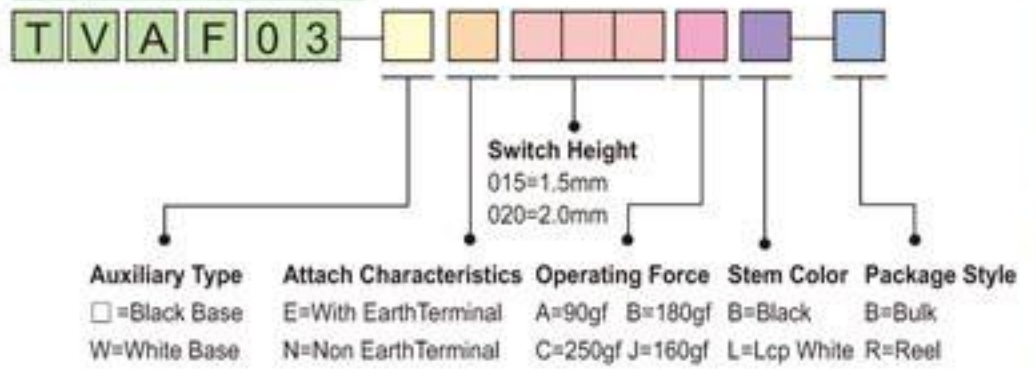
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THAF01</li> </ul>	
2	<ul style="list-style-type: none"> <li>• TVAF02</li> </ul>	

# A SERIES

## 3.3x3.3 Miniature Type Tact Switch



### HOW TO ORDER



### Features

- Improve mounting density of components on PC board.
- Reflow solderable
- Contacts are completely sealed, enhancing reliability
- Available with ground terminal for electrostatic discharge
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various mobile devices
- For operating various devices that require high density mounting such as mobile phones, communication devices, compact electronic devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles min.
Mechanical performance	Operating force	A:90gf B:180gf C:250gf J:160gf
	Travel	0.20 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TVAF03</p> <p>H 1.5 2.0</p>	

# A SERIES

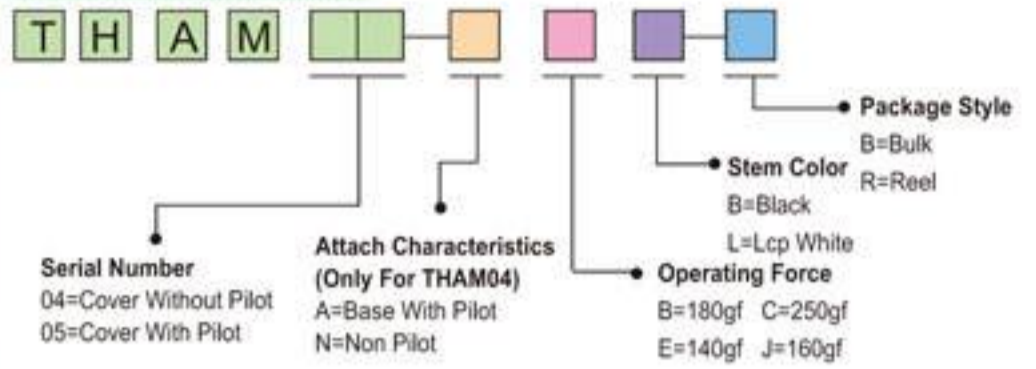
## 2.3x4.6 Miniature Type Tact Switch



TACT SWITCH



### HOW TO ORDER



### Features

- Improve mounting density of components on PC board.
- Reflow solderable
- Contacts are completely sealed, enhancing reliability
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various mobile devices
- For operating various devices that require high density mounting such as mobile phones, communication devices, compact electronic devices

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:B:E:50,000 Cycles min. C:30,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf E:140gf
	Travel	0.15 ± 0.05mm

### Diagram

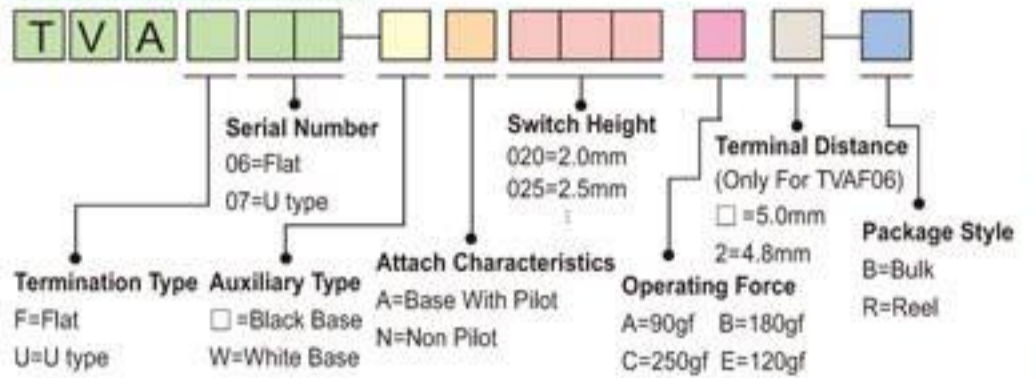
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• THAM04</p>	
2	<p>• THAM05</p>	

# A SERIES

## 2.9x3.9 Miniature Type Vertical Push Tact Switch



### HOW TO ORDER



### Features

- Improve mounting density of components on PC board.
- Reflow solderable
- Contacts are completely sealed, enhancing reliability
- Packaged with a 12mm wide embossed taping.

### Applications

- Portable audio
- Mobile phones and personal digital assistants
- Operation of various digital devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles min.
Mechanical performance	Operating force	A:90gf B:180gf C:250gf E:120gf
	Travel	0.13 ± 0.05mm

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout					
		Circuit Diagram	Pad Layout				
1	<p>• TVAF06</p> <table border="1"> <tr><th>H</th></tr> <tr><td>1.5</td></tr> <tr><td>2.0</td></tr> <tr><td>2.5</td></tr> <tr><td>3.0</td></tr> </table>	H	1.5	2.0	2.5	3.0	
H							
1.5							
2.0							
2.5							
3.0							
2	<p>• TVAU07</p> <table border="1"> <tr><th>H</th></tr> <tr><td>1.5</td></tr> <tr><td>2.0</td></tr> <tr><td>2.5</td></tr> <tr><td>3.0</td></tr> </table>	H	1.5	2.0	2.5	3.0	
H							
1.5							
2.0							
2.5							
3.0							

# A SERIES

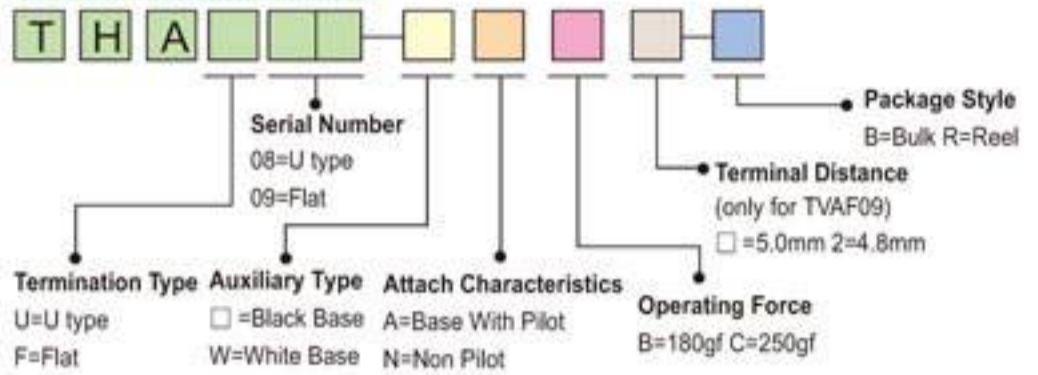
## 2.9x3.9 Miniature Type Horizontal Push Tact Switch



TACT SWITCH



### HOW TO ORDER



### Features

- Suitable for high-density mounting.
- Reflow solderable
- Horizontal type capable of operating in horizontal to PC board
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various mobile devices
- For operating various devices that require high density mounting such as mobile phones, communication devices, compact electronic devices

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles min.
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.20 ± 0.1mm

### Diagram

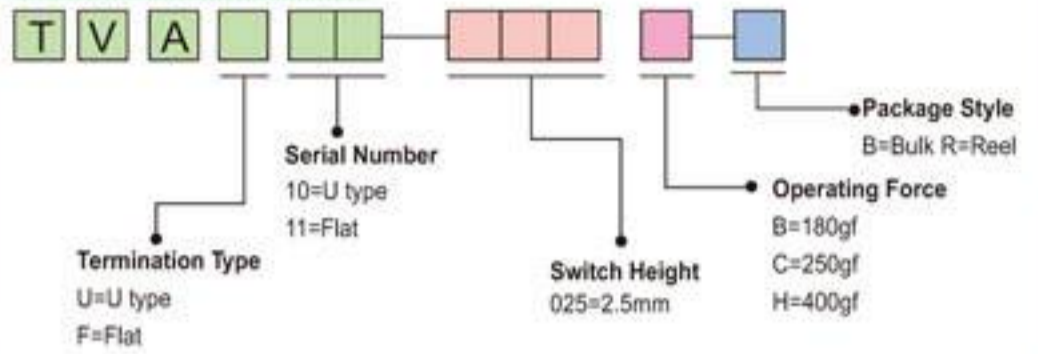
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• THAU08</p>	
2	<p>• THAF09</p>	

# A SERIES

## 3.2x4.2 Miniature Type Compact High Operating Force Tact Switch



### HOW TO ORDER



### Features

- Its compact size contributes to make application units to be smaller and lighter.
- Large stem top surface. Excellence in operability and mountability.
- Packaged with a 12mm wide embossed taping.

### Applications

- Car audio, car navigation systems, Keyless entry systems
- For operating various electronic devices such as audio devices, automotive units, communication devices, measuring instruments, etc.

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	500mW max.
Durability	Lifetime	100,000 Cycles min.
Mechanical performance	Operating force	B:180gf C:250gf H:400gf
	Travel	0.20 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	• TVAU10 	
2	• TVAF11 	

TACT SWITCH

# A SERIES

## 2.56x4.5 Miniature Type Horizontal Push Tact Switch

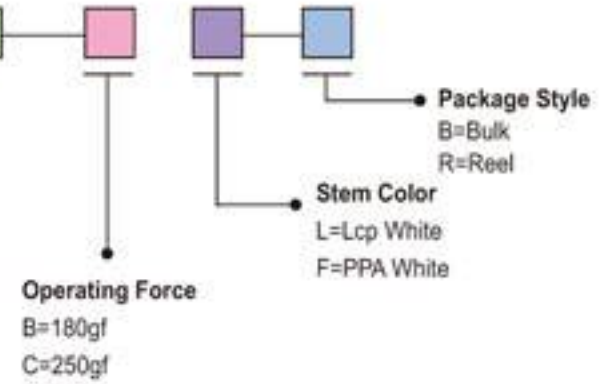


TACT SWITCH



### HOW TO ORDER

**T H A M 1 2**



### Features

- Horizontal type capable of horizontal operation to the PC board.
- The switch is supplied in 12mm embossed tapping system.

### Applications

- Portable devices
- Mobile phones and personal digital assistants
- Operation of various digital devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	500mW max.
Durability	Lifetime	100,000 Cycles min.
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.20 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THAM12</li> </ul>	





# A SERIES

## 3.5x4.7 Miniature Type With Ground Terminal Tact Switch

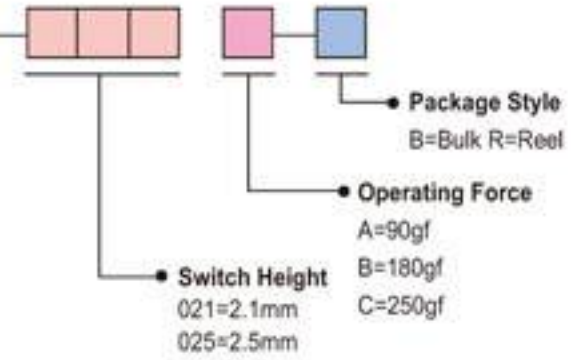


TACT SWITCH



### HOW TO ORDER

**T V A U 1 5**



### Features

- Compact, low-profile surface-mounting type keyboard switches ideal for high-density mounting
- Contacts are completely sealed, enhancing reliability
- Reflow solderable
- Available with ground terminal for electrostatic discharge

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles min.
Mechanical performance	Operating force	A:90gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVAU15</li> </ul>	

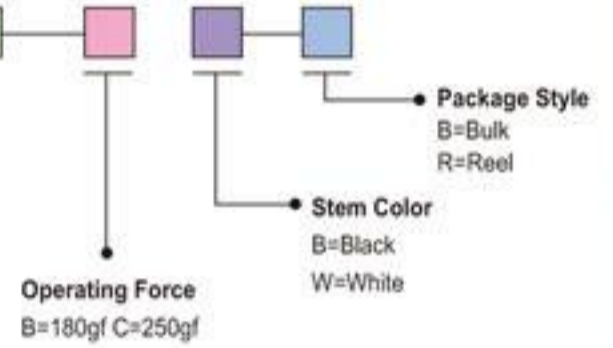
# A SERIES

## 2.6x6.1 Miniature Type Horizontal Push Tact Switch



### HOW TO ORDER

**T H A M 1 6**



### Features

- Compact, low-profile surface-mounting type keyboard switches ideal for high-density mounting
- Contacts are completely sealed, enhancing reliability
- Reflow solderable
- Sharp "click" feel with a positive tactile feedback

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

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

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THAM16</li> </ul>	

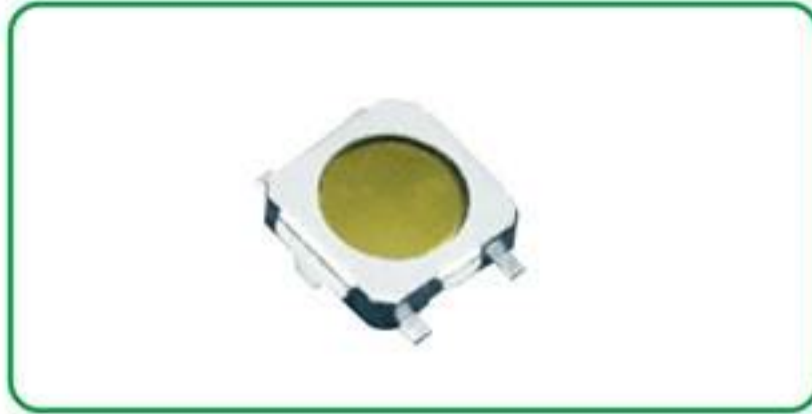
TACT SWITCH

# A SERIES

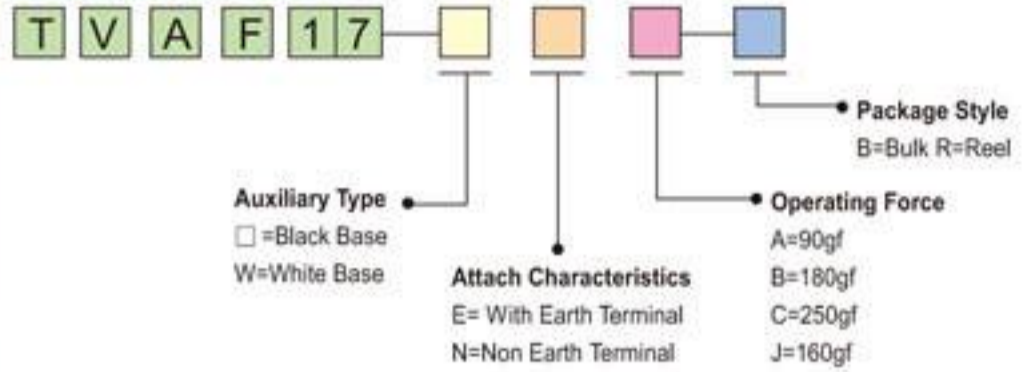
## 3.3x3.3 Miniature Type Tact Switch



TACT SWITCH



### HOW TO ORDER



### Features

- Improve mounting density of components on PC board.
- Reflow solderable
- Contacts are completely sealed, enhancing reliability
- Available with ground terminal for electrostatic discharge
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various mobile devices
- For operating various devices that require high density mounting such as mobile phones, communication devices, compact electronic devices

### Specification

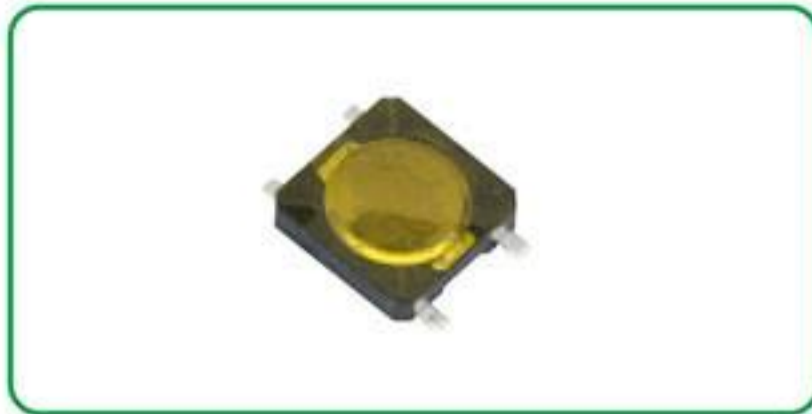
Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles min.
Mechanical performance	Operating force	A:90gf B:180gf C:250gf J:160gf
	Travel	0.20 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVAF17</li> </ul>	

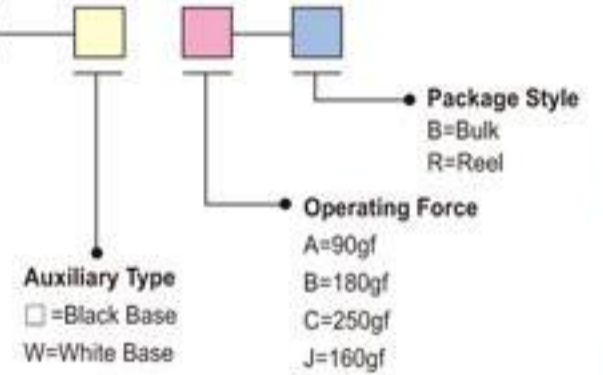
# A SERIES

## 3.1x3.1 Miniature Type Vertical Push Tact Switch



### HOW TO ORDER

T V A F 1 8



### Features

- Improve mounting density of components on PC board.
- Reflow solderable
- Contacts are completely sealed, enhancing reliability

### Applications

- For operating various mobile devices
- For operating various devices that require high density mounting such as mobile phones, communication devices, compact electronic devices

### 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 min.
Mechanical performance	Operating force	A:90gf B:180gf C:250gf J:160gf
	Travel	0.20 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVAF18</li> </ul>	

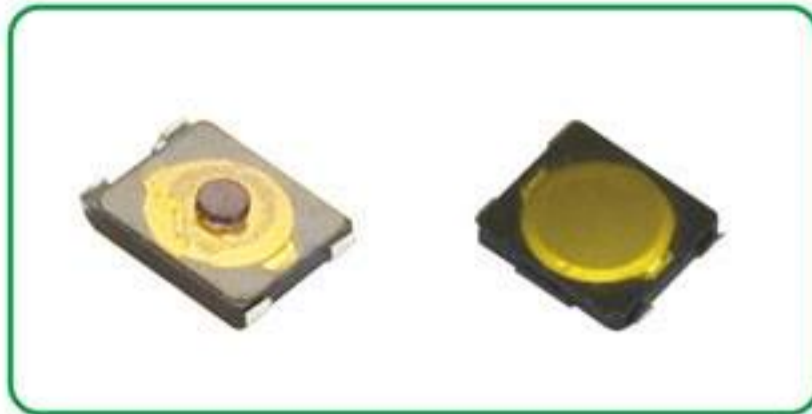
TACT SWITCH

# A SERIES

## 2.7x3.0 Miniature Type Vertical Push Tact Switch

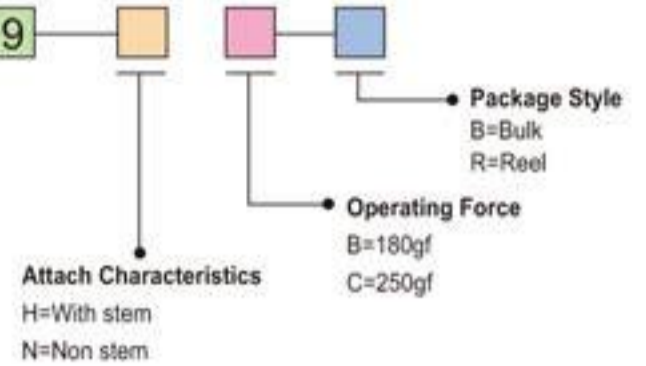


TACT SWITCH



### HOW TO ORDER

**T V A U 1 9**



### Features

- Improve mounting density of components on PC board.
- Reflow solderable
- Contacts are completely sealed, enhancing reliability
- Packaged with a 12mm wide embossed taping.

### Applications

- Portable audio
- Mobile phones and personal digital assistants
- Operation of various digital devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	20mA, 15V DC
	Insulation resistance	50MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	500mW max.
Durability	Lifetime	B:100,000 Cycles min. C:50,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.15 ± 0.05mm

### Diagram

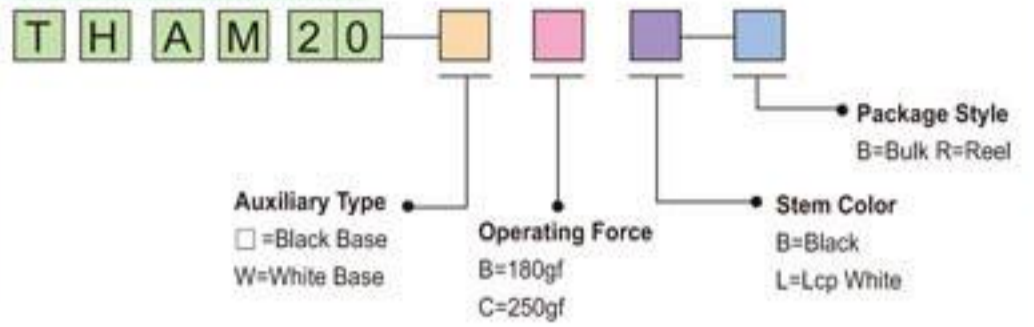
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TVAU19-H</p>	
2	<p>• TVAU19-N</p>	

# A SERIES

## 2.0x4.0 Dust-proof Miniature Type Tact Switch



### HOW TO ORDER



### Features

- Improve mounting density of components on PC board. Reflow solderable
- Contacts are completely sealed, enhancing reliability
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various mobile devices
- For operating various devices that require high density mounting such as mobile phones, communication devices, compact electronic devices

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:B:E:50,000 Cycles min. C:30,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.15 ± 0.05mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THAM20</li> </ul>	

TACT SWITCH

# A SERIES

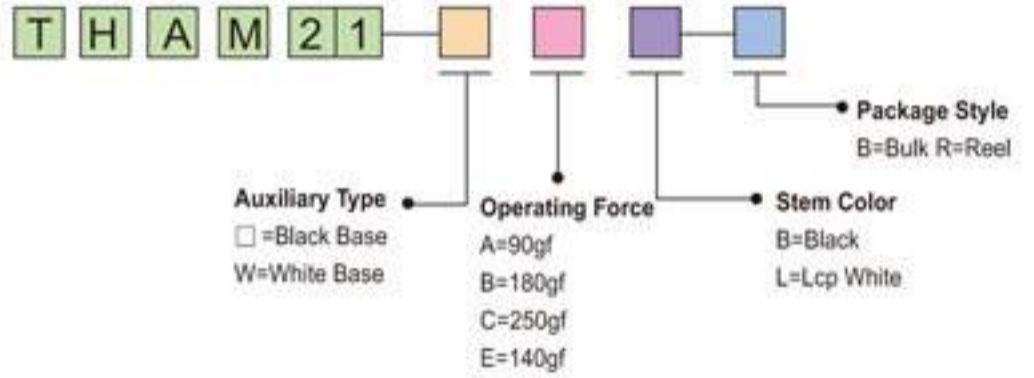
## 2.4x4.6 Dust-Proof Miniature Type Tact Switch



TACT SWITCH



### HOW TO ORDER



### Features

- Improve mounting density of components on PC board.  
Reflow solderable
- Contacts are completely sealed, enhancing reliability
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various mobile devices
- For operating various devices that require high density mounting such as mobile phones, communication devices, compact electronic devices

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:B:E:50,000 Cycles min. C:30,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf E:140gf
	Travel	0.15 ± 0.05mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THAM21</li> </ul>	



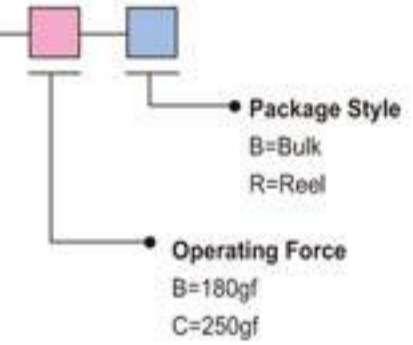
# A SERIES

## 3.7x3.7 Miniature Type Tact Switch



### HOW TO ORDER

T V A U 2 2



### Features

- Improve mounting density of components on PC board.
- Reflow solderable
- Contacts are completely sealed, enhancing reliability

### Applications

- For operating various mobile devices
- For operating various devices that require high density mounting such as mobile phones, communication devices, compact electronic devices

### Specification

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

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>● TVAU22</li> </ul>	

TACT SWITCH

# A SERIES

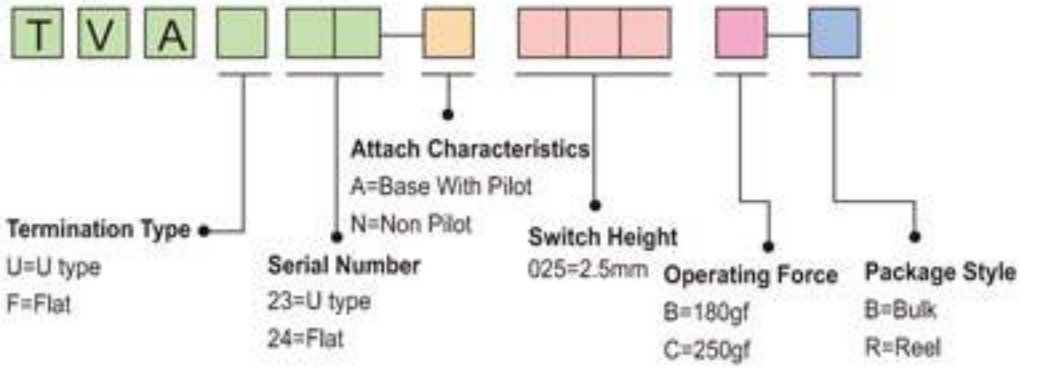
## 3.5x4.7 Vertical Push Tact Switch



TACT SWITCH



### HOW TO ORDER



### Features

- Improve mounting density of components on PC board.
- Reflow solderable
- Contacts are completely sealed, enhancing reliability
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various mobile devices
- For operating various devices that require high density mounting such as mobile phones, communication devices, compact electronic devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles min.
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.20 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout
1	<p>• TVAU23</p>	
2	<p>• TVAF24</p>	

# JIANFU ELECTRONICS

## B SERIES TACT SWITCH



THBM02



THBM05



TVBF09



TVBU13



TVBR14



TVBF18



TVBF22



THBP04



THBP07



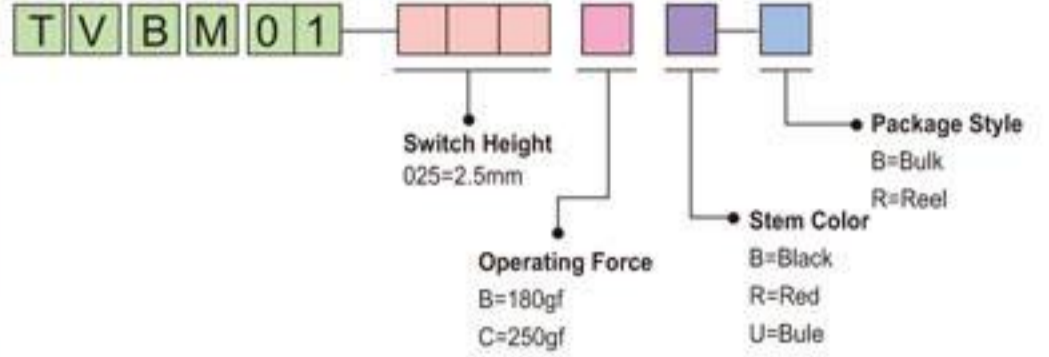
TVBP21

# B SERIES

## 3.7x6.3 SMT & Soft Feeling Switch



### HOW TO ORDER



TACT SWITCH

### Features

- Compact, low-profile surface-mounting type keyboard switches
- Contacts are completely sealed, enhancing reliability
- Reflow solderable

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:100,000 Cycles C:50,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.40 ± 0.1mm

### Diagram

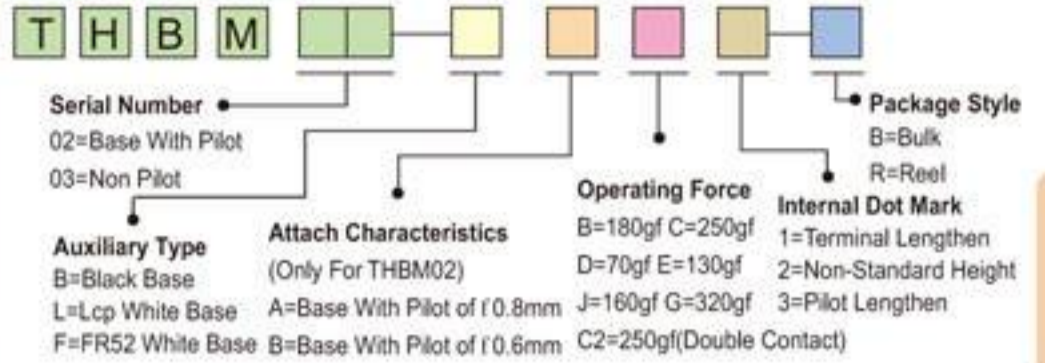
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVBM01</li> </ul>	

# B SERIES

## 2.5x7.0 SMT & Right Angle Tact Switch



### HOW TO ORDER



### Features

- Horizontal type capable of operating in the horizontal direction to the PC board.
- Reflow solderable.
- Packaged with a 16mm wide embossed taping.

### Applications

- Various portable electronic devices
- For operating various compact electronic devices such as mobile phones and communication devices, that require high density mounting
- For operating various MP4, MP3.

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	J:D:E:B:50,000Cycles C:G:30,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf D:70gf E:130gf J:160gf G:320gf
	Travel	0.25 ± 0.1mm

### Diagram

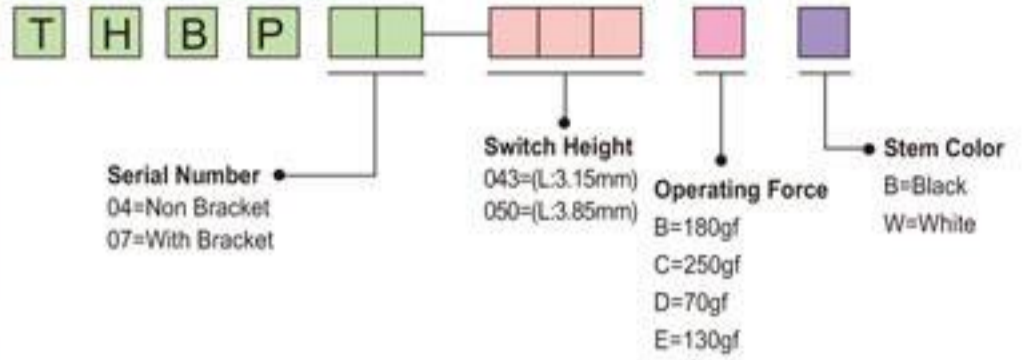
No.	Dimensions	Circuit Diagram			
		Pad Layout			
1	<ul style="list-style-type: none"> <li>• THBM02</li> </ul> <table border="1"> <tr> <td>A</td> </tr> <tr> <td>r0.6</td> </tr> <tr> <td>r0.8</td> </tr> </table>	A	r0.6	r0.8	
A					
r0.6					
r0.8					
2	<ul style="list-style-type: none"> <li>• THBM03</li> </ul>				

# B SERIES

## 3.5x6.0 Horizontal Push & Bracket Shape Tact Switch



### HOW TO ORDER



### Features

- Horizontal type capable of operating in the horizontal direction to the PC board.
- Reflow solderable.
- Packaged with a 16mm wide embossed taping.

### Applications

- Various portable electronic devices
- For operating various compact electronic devices such as mobile phones and communication devices, that require high density mounting
- For operating various MP4, MP3.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	D:E:B:50,000Cycles C:30,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf D:70gf E:130gf
	Travel	0.25 ± 0.1mm

### Diagram

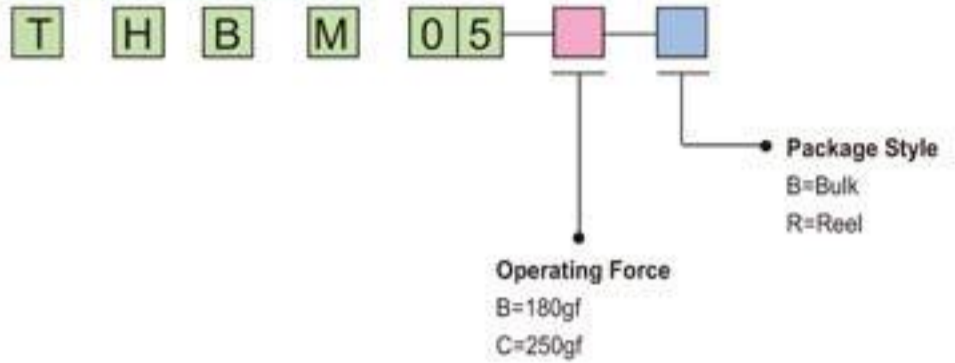
No.	Dimensions	Circuit Diagram			
		Pad Layout			
1	<p>• THBP04</p> <table border="1"> <tr><td>L</td></tr> <tr><td>3.15</td></tr> <tr><td>3.85</td></tr> </table>	L	3.15	3.85	
L					
3.15					
3.85					
2	<p>• THBP07</p> <table border="1"> <tr><td>L</td></tr> <tr><td>3.15</td></tr> <tr><td>3.85</td></tr> </table>	L	3.15	3.85	
L					
3.15					
3.85					

# B SERIES

## 4.0x6.1 Horizontal Push Tact Switch



### HOW TO ORDER



### Features

- Horizontal type capable of horizontally operating to the PC board.
- Reflow solderable.
- Packaged with a 16mm wide embossed taping.

### Applications

- For operating various electronic devices such as audio devices, video recorders, communication devices, cameras, home appliances etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	50,000 Cycles min.
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.30 ± 0.1mm

### Diagram

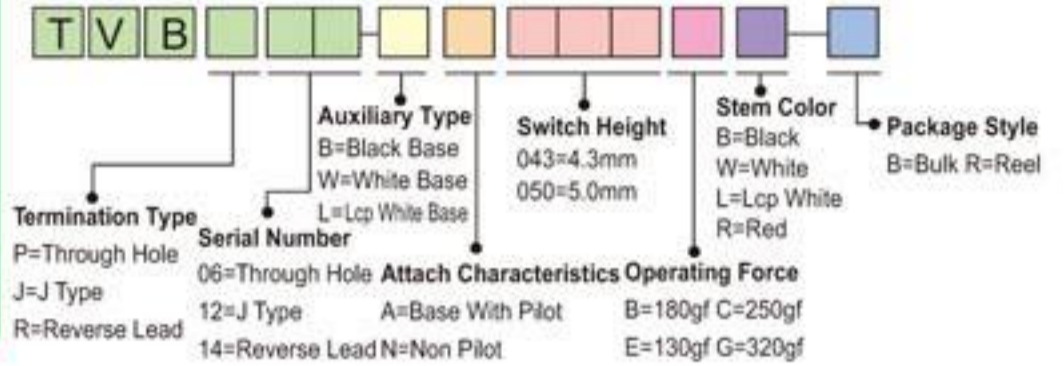
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THBM05</li> </ul>	

# B SERIES

## 3.5x6.0 Vertical Push Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Sharp "click" feel with a positive tactile feedback

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-20°C to +70°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	D:E:B:50,000Cycles C:30,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf D:70gf E:130gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram			
		Pad Layout			
1	<p>• TVBP06</p> <table border="1"> <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	<p>• TVBJ12</p> <table border="1"> <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	<p>• TVBR14</p> <table border="1"> <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					

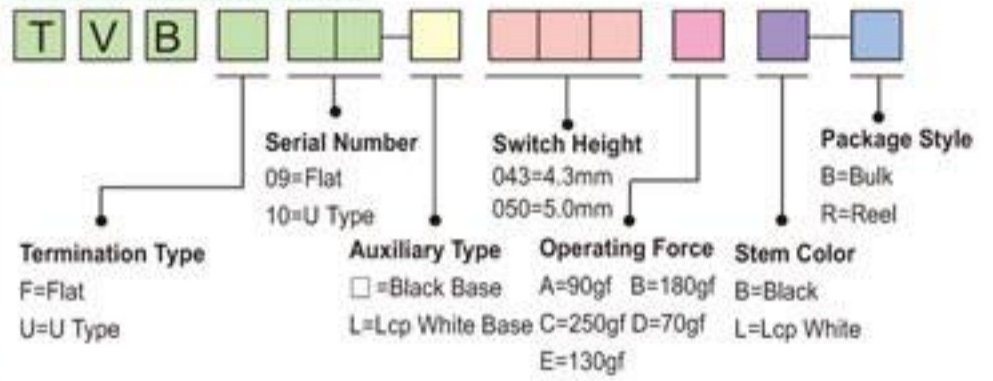


# B SERIES

## 3.5x6.0 Vertical Push Tact Switch



### HOW TO ORDER



### Features

- Reflow solderable.
- Packaged with a 16mm wide embossed taping.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-20°C to +70°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:D:E:B:50,000Cycles C:30,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf D:70gf E:130gf
	Travel	0.25 ± 0.1mm

### Diagram

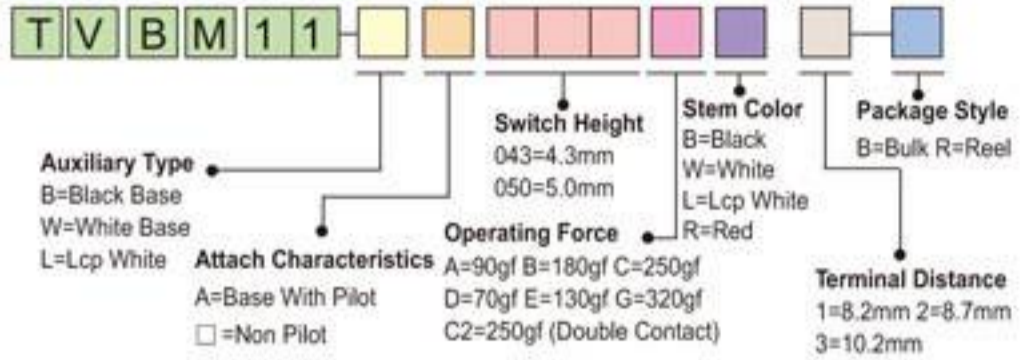
No.	Dimensions	Circuit Diagram			
		Pad Layout			
1	<p>• TVBF09</p> <table border="1"> <tr><th>H</th></tr> <tr><td>4.3</td></tr> <tr><td>5.0</td></tr> </table>	H	4.3	5.0	
H					
4.3					
5.0					
2	<p>• TVBU10</p> <table border="1"> <tr><th>H</th></tr> <tr><td>4.3</td></tr> <tr><td>5.0</td></tr> </table>	H	4.3	5.0	
H					
4.3					
5.0					

# B SERIES

## 3.5x6.0 SMT Type Tact Switch



### HOW TO ORDER



TACT SWITCH

### Features

- Reflow solderable
- Sharp "click" feel with a positive tactile feedback

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

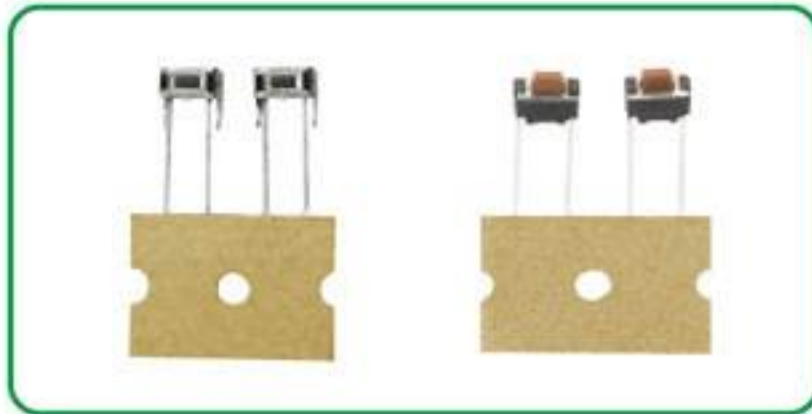
Items		Standard
Operating temperature range		-20°C to +70°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:D:E:B:50,000Cycles C:G:30,000 Cycles C2:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf D:70gf E:130gf G:320gf
	Travel	0.25 ± 0.1mm

### Diagram

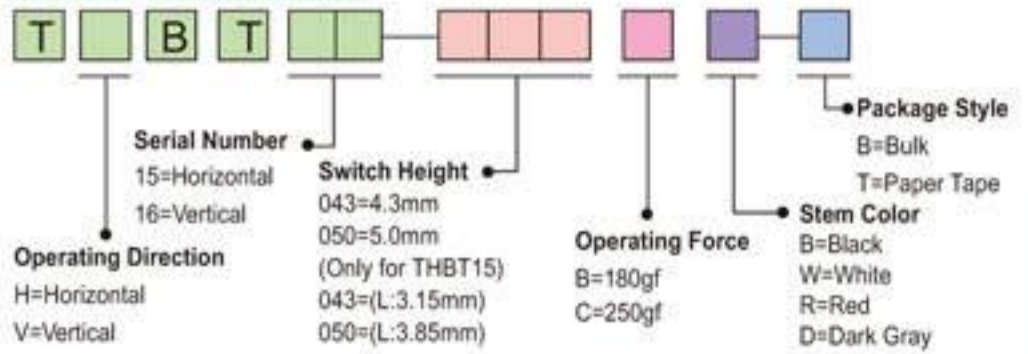
No.	Dimensions	Circuit Diagram								
		Pad Layout								
1	<ul style="list-style-type: none"> <li>• TVBM11</li> </ul> <table border="1"> <tr> <td>H</td> <td>A</td> </tr> <tr> <td>4.3</td> <td>8.2</td> </tr> <tr> <td>5.0</td> <td>8.7</td> </tr> <tr> <td></td> <td>10.2</td> </tr> </table>	H	A	4.3	8.2	5.0	8.7		10.2	
H	A									
4.3	8.2									
5.0	8.7									
	10.2									

# B SERIES

## 3.5x6.0 Taping Type Tact Switch



### HOW TO ORDER



### Features

- Supplied with radial taping.
- Allows automatic insertion onto PC board with the radial auto insertion machine

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

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

### Diagram

No.	Dimensions	Circuit Diagram			
		Pad Layout			
1	<p>• THBT15</p> <table border="1"> <tr><th>L</th></tr> <tr><td>3.15</td></tr> <tr><td>3.85</td></tr> </table>	L	3.15	3.85	
L					
3.15					
3.85					
2	<p>• TVBT16</p> <table border="1"> <tr><th>H</th></tr> <tr><td>4.3</td></tr> <tr><td>5.0</td></tr> </table>	H	4.3	5.0	
H					
4.3					
5.0					

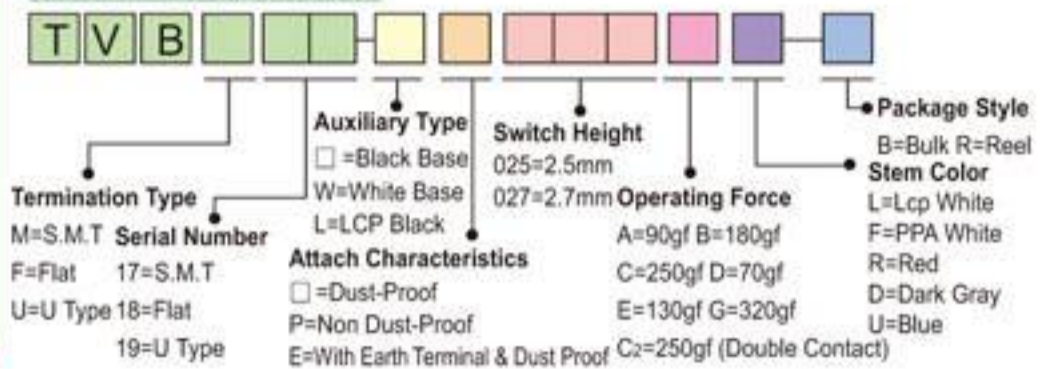
TACT SWITCH

# B SERIES

## 3.7x6.1 SMT Type Tact Switch



### HOW TO ORDER



### Features

- Highly reliable contacts sealed structure.
- Larger top surface of stem improves mounting speed.
- Reflow solderable.
- Packaged with a 16mm wide embossed taping.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### 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	A:D:E:8:50,000 Cycles C:G:30,000 Cycles C2:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf D:70gf E:130gf G:320gf
	Travel	0.25 ± 0.1mm

### Diagram

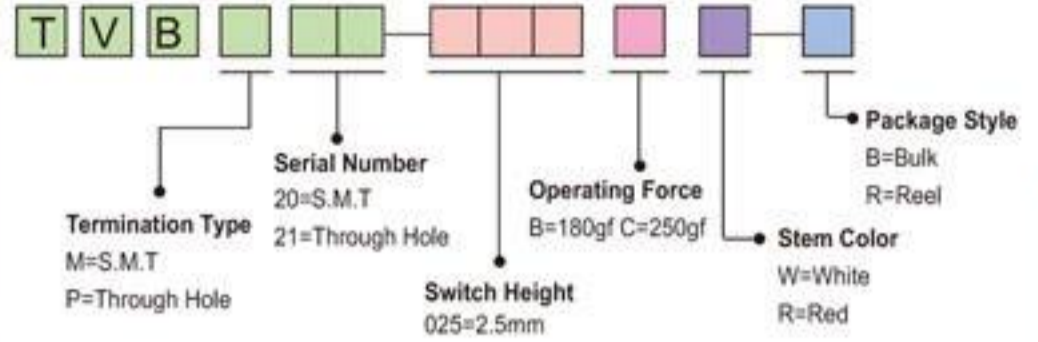
No.	Dimensions	Circuit Diagram Pad Layout	
		Circuit Diagram	Pad Layout
1	<p>• TVBM17</p>		
2	<p>• TVBF18</p>		
3	<p>• TVBU19</p>		

# B SERIES

## 3.5x6.1 Through Hole & SMT Type Tact Switch



### HOW TO ORDER



### Features

- Highly reliable contacts sealed structure.
- Larger top surface of stem improves mounting speed.
- Reflow solderable.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

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

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>● TVBM20</p>	
2	<p>● TVBP21</p>	

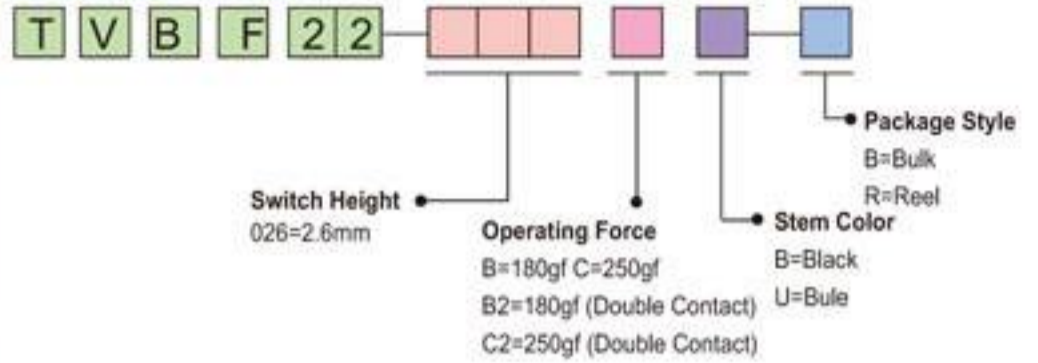
TACT SWITCH

# B SERIES

## 3.8x6.0 Normal Closed Type Tact Switch



### HOW TO ORDER



TACT SWITCH

### Features

- Highly reliable contacts sealed structure.
- Larger top surface of stem improves mounting speed.
- Reflow solderable.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:50,000 Cycles C:30,000 Cycles B2:C2:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

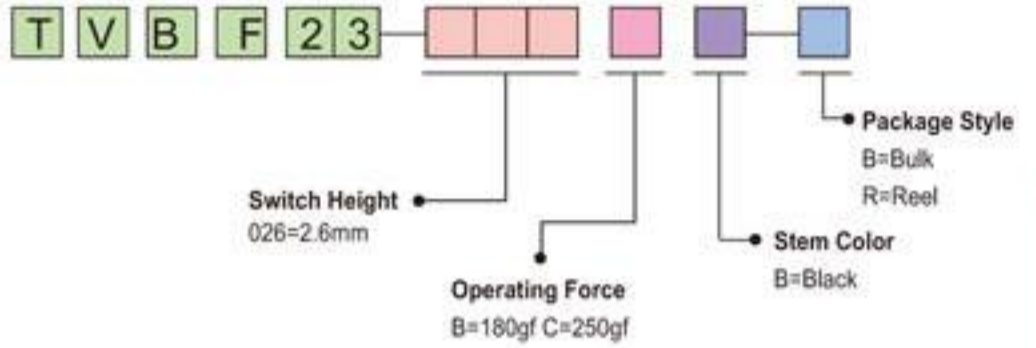
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>TVBF22</li> </ul>	

# B SERIES

## 3.8x6.0 Normal Closed Type Tact Switch



### HOW TO ORDER



### Features

- Highly reliable contacts sealed structure.
- Larger top surface of stem improves mounting speed.
- Reflow solderable.
- Packaged with a 16mm wide embossed taping.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

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

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVBF23</li> </ul>	

# JIANFU ELECTRONICS

## C SERIES TACT SWITCH



TVCM01



TVCM10



TVCU12



TVCU13



TVCU14



TVCU18



TVCF20

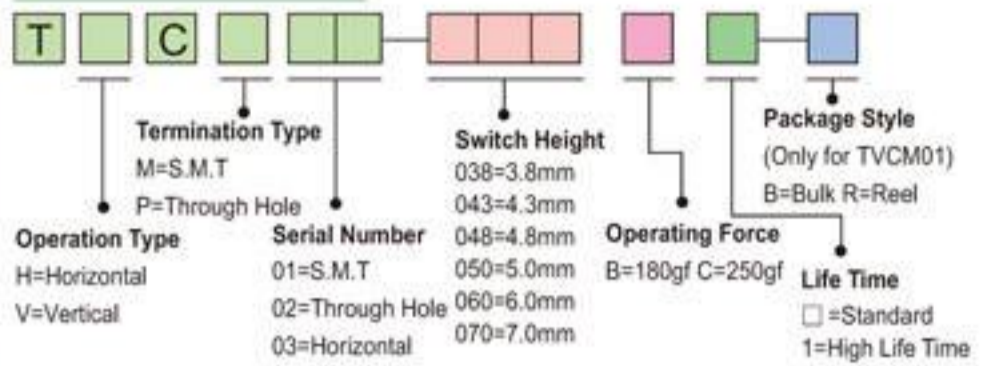


TVCP02



# C SERIES

## 4.5x4.5 Through Hole & SMT Type Tact Switch



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

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

### Diagram

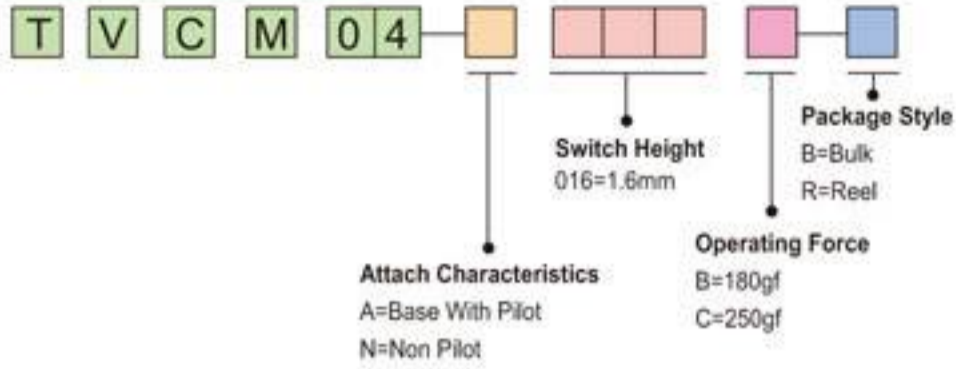
No.	Dimensions	Circuit Diagram Pad Layout	
		Circuit Diagram	Pad Layout
1	<p>• TVCM01</p> <p>Dimensions: 7.5±0.1, 4.5, 4.5, 0.7, 3, 4.5, 4.5, 4.5, 4.5, 4.5, H±0.1, 2.9, H</p> <p>Switch Height: 3.8, 4.3, 4.8, 5.0, 6.0, 7.0</p>	<p>Dimensions: 7.2, 4, 0.9</p>	
2	<p>• TVCP02</p> <p>Dimensions: 4.5, 4.5, 4.5, 4.5, 4.5, H±0.1, 2.9, 0.25, 3, 0.7, H</p> <p>Switch Height: 3.8, 4.3, 4.8, 5.0, 6.0, 7.0</p>	<p>Dimensions: 5.5, 4-41</p>	
3	<p>• THCP03</p> <p>Dimensions: 3.2, 4.6, 4.6, 4.6, 4.6, H±0.1, 0.25, 1.95, 3, 3, 6.5, 2.8, H</p> <p>Switch Height: 3.8, 4.3, 4.8, 5.0, 6.0, 7.0</p>	<p>Dimensions: 3.1, 3-40.8, 1.95</p>	

# C SERIES

## 4.3x4.5 SMT Type Tact Switch



### HOW TO ORDER



### Features

- Contact sealed structure offers a highly reliable switch.
- Reflow solderable.
- Packaged with a 12mm wide embossed taping.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

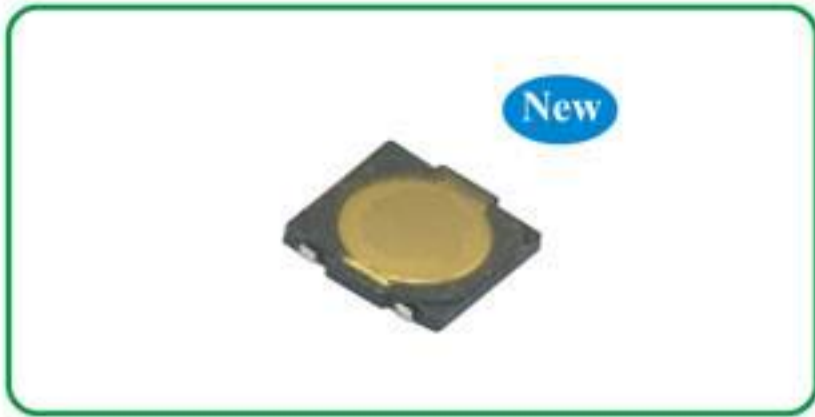
Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:300,000 Cycles C:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.15 ± 0.05mm

### Diagram

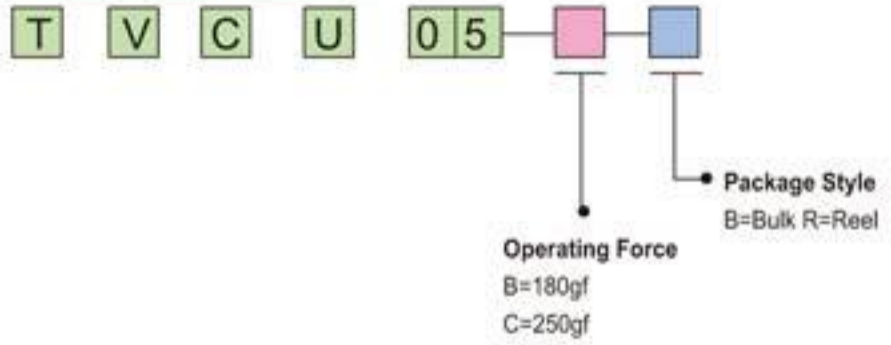
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TVCM04-A</p>	
2	<p>• TVCM04-N</p>	

# C SERIES

## 4.5x4.5 Low-Profile Type Tact Switch



### HOW TO ORDER



### Features

- 4.5x4.5mm dimensions with 0.5mm height, suitable for high density mounting
- Reflow solderable
- Paackaged with a 12mm wide embossed taping.

### Applications

- For operating various devices such as mobile phones, communication devices, video recorders, cameras and audio devices that require lowprofile and lightweight design

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:500,000 Cycles C:200,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.15 ± 0.05mm

### Diagram

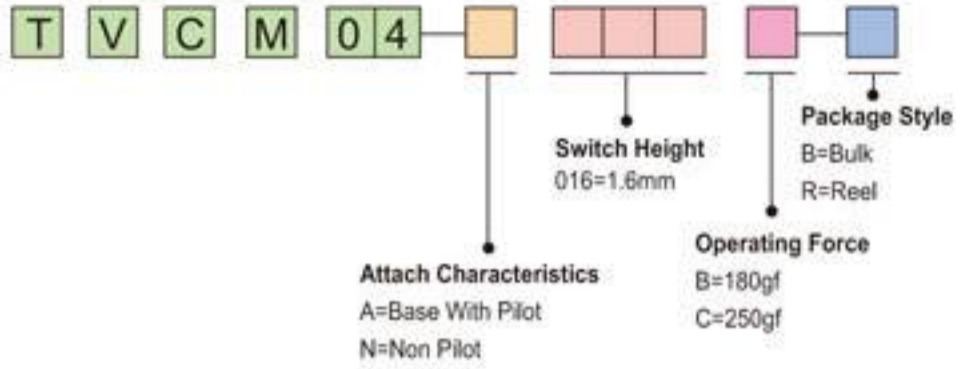
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVCU05</li> </ul>	

# C SERIES

## 4.3x4.5 SMT Type Tact Switch



### HOW TO ORDER



### Features

- Contact sealed structure offers a highly reliable switch.
- Reflow solderable.
- Packaged with a 12mm wide embossed taping.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:300,000 Cycles C:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.15 ± 0.05mm

### Diagram

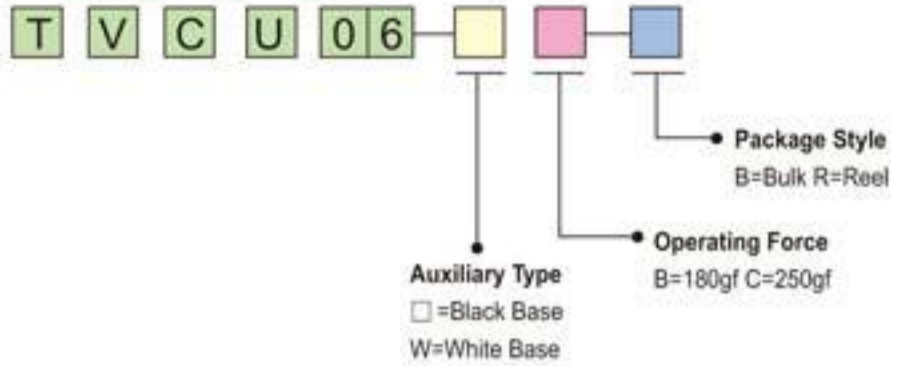
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TVCM04-A</p>	
2	<p>• TVCM04-N</p>	

# C SERIES

## 4.5x4.5 SMT Type Tact Switch



### HOW TO ORDER



### Features

- 4.5x4.5mm dimensions with 0.40mm height, suitable for high density mounting
- Reflow solderable
- Paackaged with a 12mm wide embossed taping.

### Applications

- For operating various devices such as mobile phones, communication devices, video recorders, cameras and audio devices that require lowprofile and lightweight design

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:500,000 Cycles C:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.15 ± 0.05mm

### Diagram

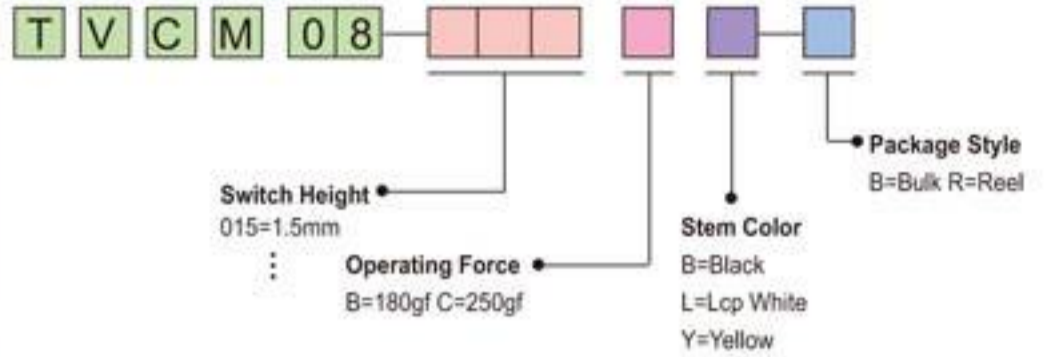
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVCU06</li> </ul>	

# C SERIES

## 4.5x4.5 SMT Type Tact Switch



### HOW TO ORDER



### Features

- 4.5x4.5mm dimensions with 1.5mm height, suitable for high density mounting
- Save 13% mounting space than conventional 5.2x5.2 Type
- Reflow solderable
- Paackaged with a 12mm wide embossed taping.

### Applications

- For operating various devices such as mobile phones, communication devices, video recorders, cameras and audio devices that require lowprofile and lightweight design

### Specification

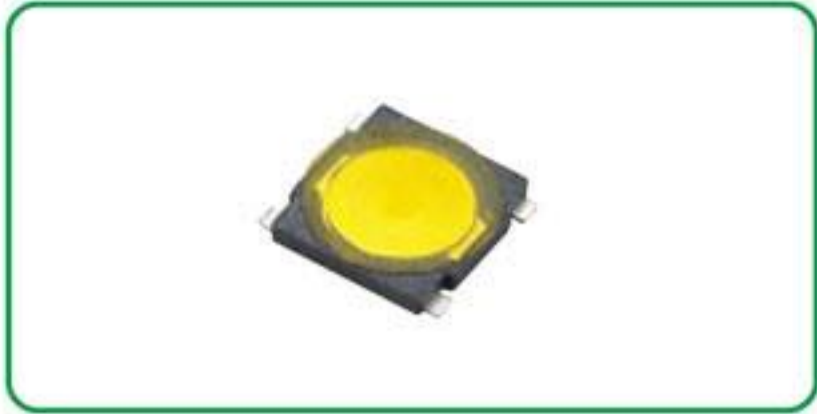
Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:200,000 Cycles C:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.15 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVCM08</li> </ul>	

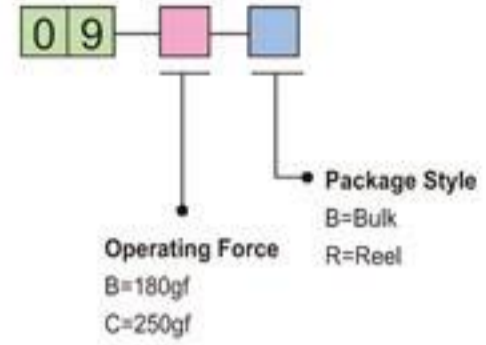
# C SERIES

## 4.5x4.5 Low-profile SMT Tact Switch



### HOW TO ORDER

T V C M 0 9



### Features

- 4.5x4.5mm dimensions with 0.55mm height, suitable for high density mounting.
- Reflow solderable.
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various devices such as mobile phones, communication devices, video recorders, cameras and audio devices that require low-profile and lightweight design

### Specification

Items		Standard
Operating temperature range		-20°C to +70°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	100V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:500,000 Cycles C:200,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.15 ± 0.1mm

### Diagram

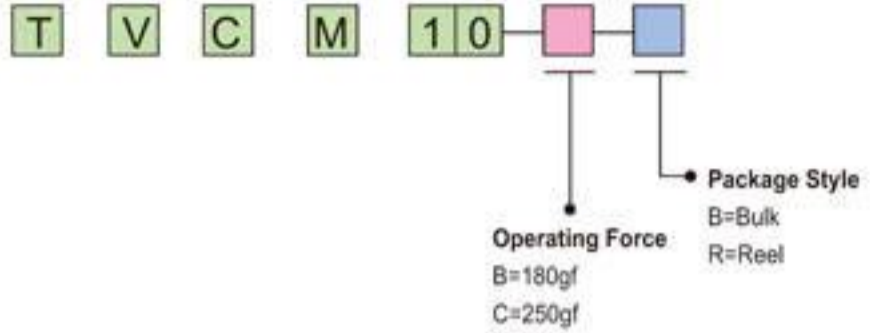
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVCM09</li> </ul>	

# C SERIES

## 4.5x4.5 Low-profile SMT Tact Switch



### HOW TO ORDER



### Features

- High reliable dust-proof structure.
- Switch stem covered with insulator sheet can be operated by plated key top.
- Contribute to downsizing and lighter weight of application devices.
- Reflow solderable.
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various devices such as mobile phones, communication devices, video recorders units, cameras, and automotive sets that require low-profile and lightweight design
- For operating various audio devices

### Specification

Items		Standard
Operating temperature range		-20℃ to +70℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	100V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:500,000 Cycles C:200,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.15 ± 0.1mm

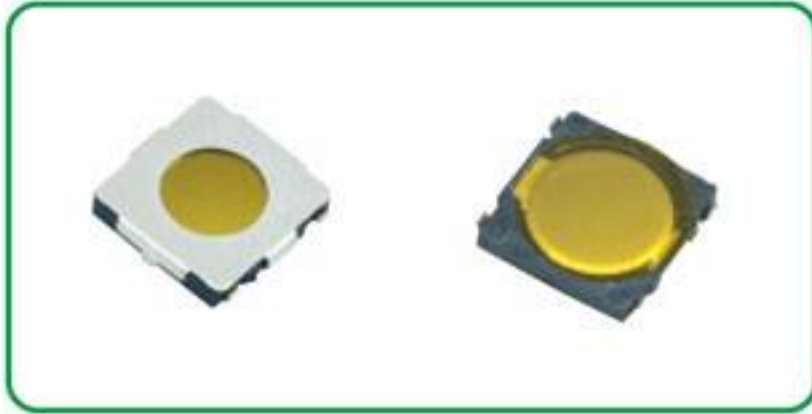
### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVCM10</li> </ul>	



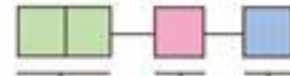
# C SERIES

## 5.2mm Square Low-Profile Type



### HOW TO ORDER

T V C U



**Serial Number**  
11=With Cover  
12=Non Cover

**Operating Force**  
A=90gf B=180gf  
C=250gf D=70gf  
E=130gf G=320gf

**Package Style**  
B=Bulk R=Reel

### Features

- 5.2x5.2mm dimensions suitable for high density mounting. Flat type with 0.8mm height in pursuit, for thin design. "With stem" type
- in pursuit for easier use.
- Available with ground terminal for electrostatic discharge
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various devices such as audio devices, video recorders, communication device, cameras and automotive sets that require low-profile and lightweight design

### Specification

Items		Standard
Operating temperature range		-20°C to +70°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	100V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:B:D:E:F:200,000 Cycles C:G:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf D:70gf E:130gf G:320gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TVCU11</p>	
2	<p>• TVCU12</p>	

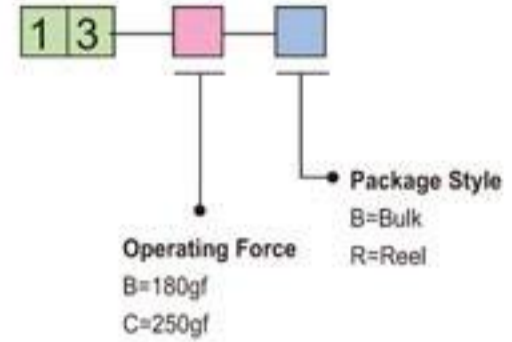
# C SERIES

## 4.8x4.8 Low-profile SMT Tact Switch



### HOW TO ORDER

T V C U 1 3



### Features

- 4.8x4.8mm dimensions with 0.55mm height, suitable for high density mounting.
- Contributes to downsizing and lighter weight of application devices.
- Reflow solderable.
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various devices such as audio devices, video recorders, communication device, cameras and automotive sets that require low-profile and lightweight design
- Mobile phone

### Specification

Items		Standard
Operating temperature range		-20°C to +70°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	100V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:500,000 Cycles C:200,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.20 ± 0.05mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVCU13</li> </ul>	

# C SERIES

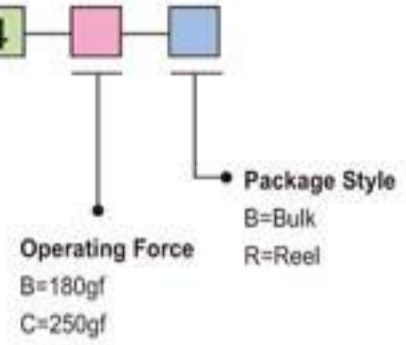
## 4.8x4.8 Low-profile SMT Tact Switch



### HOW TO ORDER

T V C U

1 4



### Features

- 4.8x4.8mm dimensions with 0.5mm height, suitable for high density mounting.
- Contributes to downsizing and lighter weight of application devices.
- Reflow solderable.
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various devices such as audio devices, video recorders, communication device, cameras and automotive sets that require low-profile and lightweight design
- Mobile phone

### Specification

Items		Standard
Operating temperature range		-20°C to +70°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	100V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:100,000 Cycles
Mechanical performance	Operating force	B:180gf
	Travel	0.20 ± 0.05mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVCU14</li> </ul>	

# C SERIES

## 5.2x5.2 SMT Tact Switch



### HOW TO ORDER

**T V C M 1 5**

#### Auxiliary Type

- =Black Base
- W=White Base
- L=LCP Black Base

#### Switch Height

- 010=1.0mm(With Cover)
- 008=0.8mm(Non Cover)

#### Operating Force

- A=90gf B=180gf
- C=250gf D=70gf
- E=130gf G=320gf

#### Package Style

- B=Bulk
- R=Reel

### Features

- 5.2x5.2mm dimensions suitable for high density mounting.
- Flat type with 0.8mm height in pursuit, for thin design. "With stem" type in pursuit for easier use.
- Contact sealed construction offers a highly reliable switch.
- Reflow solderable.
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various electronic devices such as audio devices, video recorders, communication devices, cameras, automotive sets, electric home appliances, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	E:B:200,000 Cycles C:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf D:70gf E:130gf G:320gf
	Travel	0.25 ± 0.1mm

### Diagram

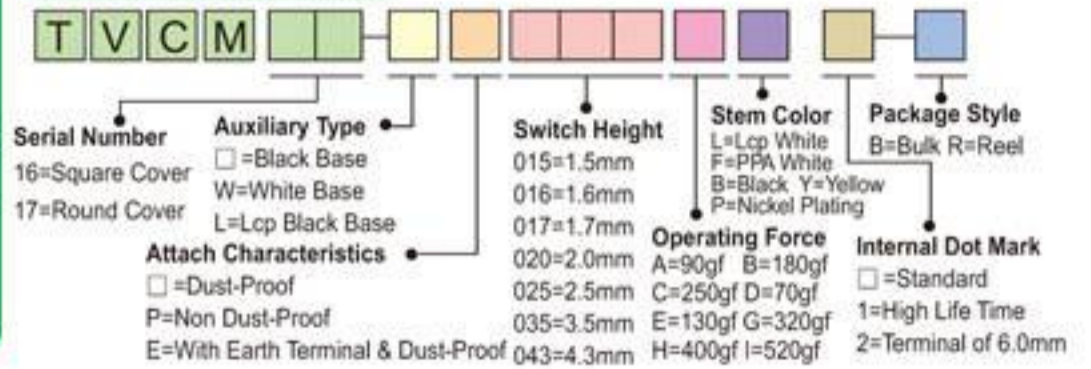
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TVCM15-010</p>	
2	<p>• TVCM15-008</p>	

# C SERIES

## 5.2x5.2 SMT Tact Switch



### HOW TO ORDER



### Features

- 5.2x5.2mm dimensions suitable for high density mounting.
- Contact sealed construction offers a highly reliable switch.
- Reflow solderable.
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various electronic devices such as audio devices, video recorders, communication devices, cameras, automotive sets, electric home appliances, etc.

### 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	A:B:D:E:200,000 Cycles C::G:H:I:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf D:70gf E:130gf G:320gf H:400gf I:520gf
	Travel	0.25 ± 0.1mm

### Diagram

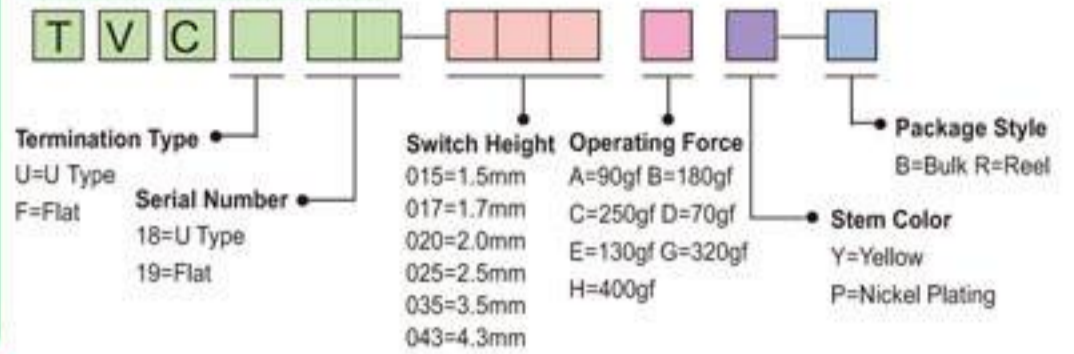
No.	Dimensions	Circuit Diagram Pad Layout	
1	<p>• TVCM16</p>	H	
		1.5	
2	<p>• TVCM17</p>	1.7	
		2.0	
		...	
		...	

# C SERIES

## 5.2x5.2 With Ground Terminal Tact Switch



### HOW TO ORDER



### Features

- 5.2x5.2mm dimensions suitable for high density mounting.
- Available with ground terminal for electrostatic discharge
- Contact sealed construction offers a highly reliable switch.
- Reflow solderable.
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various electronic devices such as audio devices, video recorders, communication devices, cameras, automotive sets, electric home appliances, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:B:D:E:200,000 Cycles C:G:H:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf D:70gf E:130gf G:320gf H:400gf
	Travel	0.25 ± 0.1mm

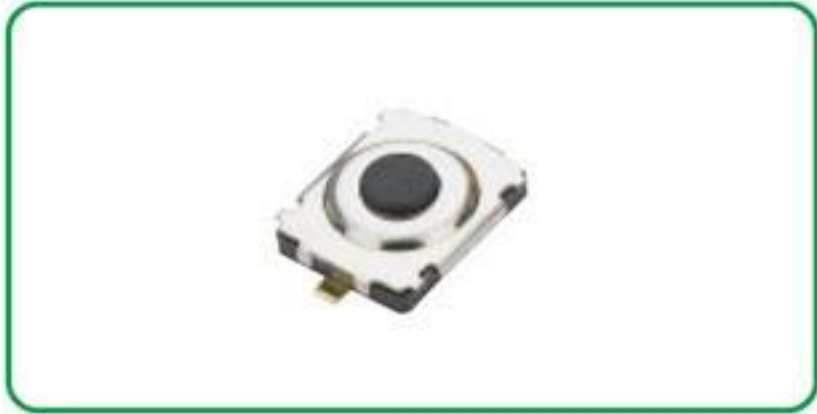
### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVCU18</li> </ul>	
2	<ul style="list-style-type: none"> <li>• TVCF19</li> </ul>	

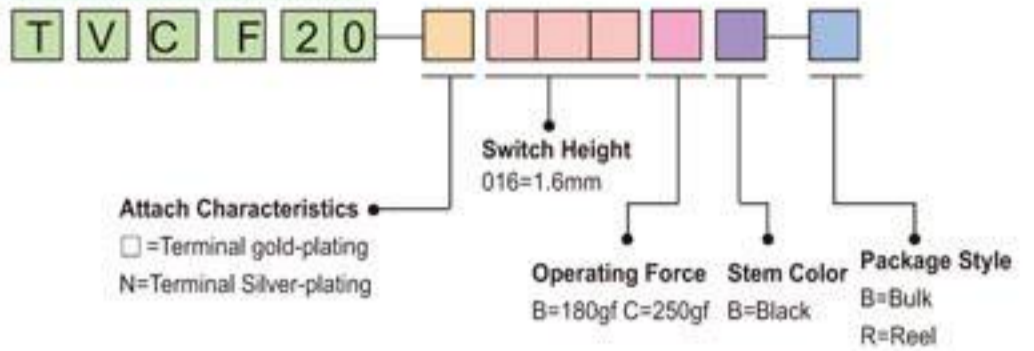
TACT SWITCH

# C SERIES

## 5.0x6.2 Normal Closed Tact Switch



### HOW TO ORDER



### Features

- Highly reliable contacts sealing structure.
- Larger top surface of stem improve mounting speed.
- Reflow solderable.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

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

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVCF20</li> </ul>	 

# JIANFU ELECTRONICS

## D SERIES TACT SWITCH



TVDM04



THDM13



TVDP01



TVDP23-C



TVDJ06



THDP07



THDP08



THDP10



THDP11



THDP12

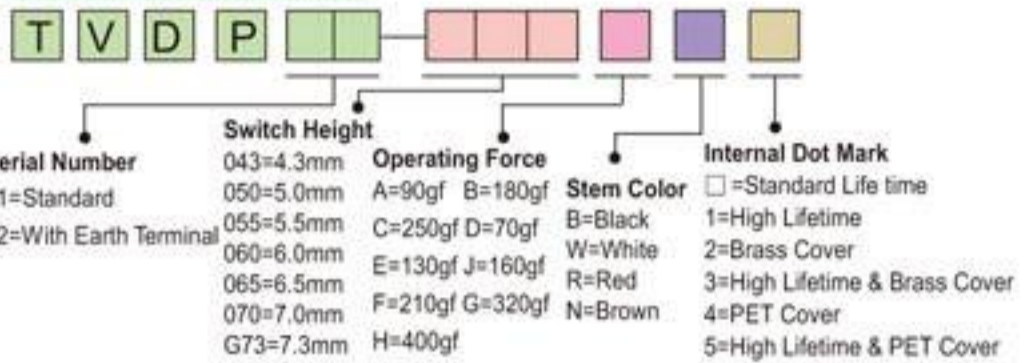


# D SERIES

## 6.0x6.0 Through Hole Type Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy
- Available with anti-ESD ground terminal.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:D:300,000 Cycles B:E:J:F:C:100,000 Cycles G:H:50,000 Cycles
Mechanical performance	Operating force	A:90gf D:70gf B:180gf E:130gf J:160gf F:210gf G:320gf H:400gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

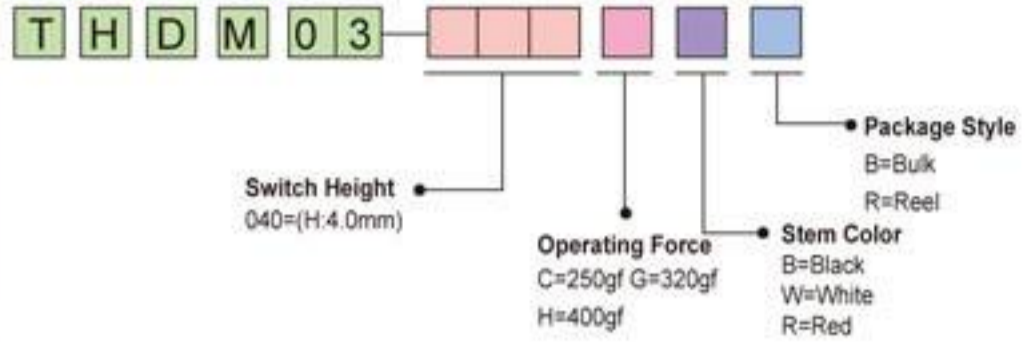
No.	Dimensions	Circuit Diagram Pad Layout															
		Pad Layout															
1	<p>• TVDP01</p> <table border="1"> <thead> <tr> <th>H</th> <th>A</th> </tr> </thead> <tbody> <tr><td>4.3</td><td>3.5</td></tr> <tr><td>5</td><td>3.5</td></tr> <tr><td>7</td><td>3.3</td></tr> <tr><td>9.5</td><td>3</td></tr> <tr><td>13</td><td>3</td></tr> <tr><td>17</td><td>3</td></tr> </tbody> </table>	H	A	4.3	3.5	5	3.5	7	3.3	9.5	3	13	3	17	3		
H	A																
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5	3.5																
7	3.3																
9.5	3																
13	3																
17	3																
2	<p>• TVDP01-G73</p>																
3	<p>• TVDP02</p> <table border="1"> <thead> <tr> <th>H</th> <th>A</th> </tr> </thead> <tbody> <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> </tbody> </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																

# D SERIES

## 6.0x6.0 Bracket Shape Type Tact Switch



### HOW TO ORDER



### Features

- Improve mounting density of components on PC board.
- Reflow solderable.
- Contacts are completely sealed, enhancing reliability.
- Packaged with a 12mm wide embossed taping.

### Applications

- For operating various mobile devices.
- For operating various devices that require high density mounting such as mobile phones, communication devices, compact electronic devices.

### Specification

Items		Standard
Operating temperature range		-20°C to +70°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	C:50,000 Cycles G:H:30,000 Cycles
Mechanical performance	Operating force	C:250gf G:320gf H:400gf
	Travel	0.30 ± 0.1mm

### Diagram

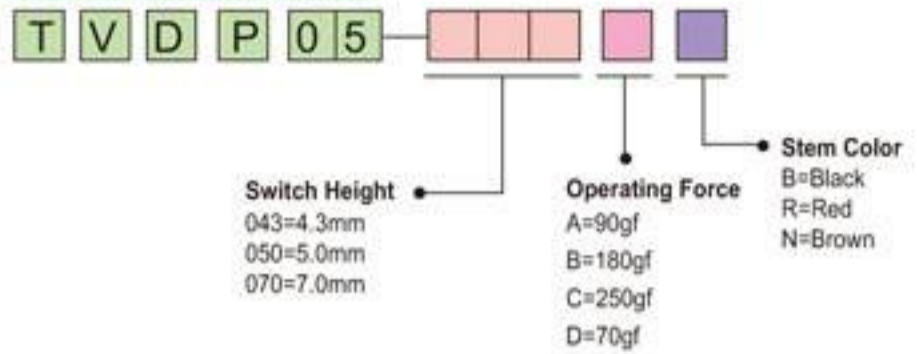
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>● THDM03</li> </ul>	 

# D SERIES

## 6.0x6.0 Other Terminal Shape Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Strengthen the structure with the fixed terminal

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs video recorders, automotive test, etc.

### Specification

Items		Standard
Operating temperature range		-20°C to +70°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles min
Mechanical performance	Operating force	A:90gf B:180gf C:250gf D:70gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram								
		Pad Layout								
1	<ul style="list-style-type: none"> <li>• TVDP05</li> </ul> <table border="1"> <thead> <tr> <th>H</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>4.3</td> <td>∅3.5</td> </tr> <tr> <td>5.0</td> <td>∅3.4</td> </tr> <tr> <td>7.0</td> <td>∅3.3</td> </tr> </tbody> </table>	H	A	4.3	∅3.5	5.0	∅3.4	7.0	∅3.3	
H	A									
4.3	∅3.5									
5.0	∅3.4									
7.0	∅3.3									

# D SERIES

## 6.0x6.0 Surface Mounting Tact Switch



### HOW TO ORDER

**TVDM04**

<b>Terminal Type</b>	<b>Switch Height</b>	<b>Operating Force</b>	<b>Stem Color</b>	<b>Internal Dot Mark</b>
A=8.2mm B=9.2mm C=10.2mm	043=4.3mm 050=5.0mm 055=5.5mm 060=6.0mm 065=6.5mm 070=7.0mm G73=7.3mm	A=90gf B=180gf C=250gf D=70gf E=130gf J=160gf G=320gf H=400gf I=520gf	B=Black W=White R=Red D=Dark Gray N=Brown	□=Standard Lifetime 1=High Lifetime 2=Brass Cover 3=High Lifetime & Brass Cover 4=PET Cover 5=High Lifetime & PET Cover

**Package Style**  
B=Bulk R=Reel

### Features

- Reflow solderable
- Packaged with a 16mm wide embossed taping.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:D:300,000 Cycles B:E:J:C:100,000 Cycles G:H:50,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf D:70gf E:130gf G:320gf H:400gf I:520gf J:160gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram														
		Pad Layout														
1	<p>● TVDM04</p> <table border="1"> <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	<p>● TVDM04-G73</p>															

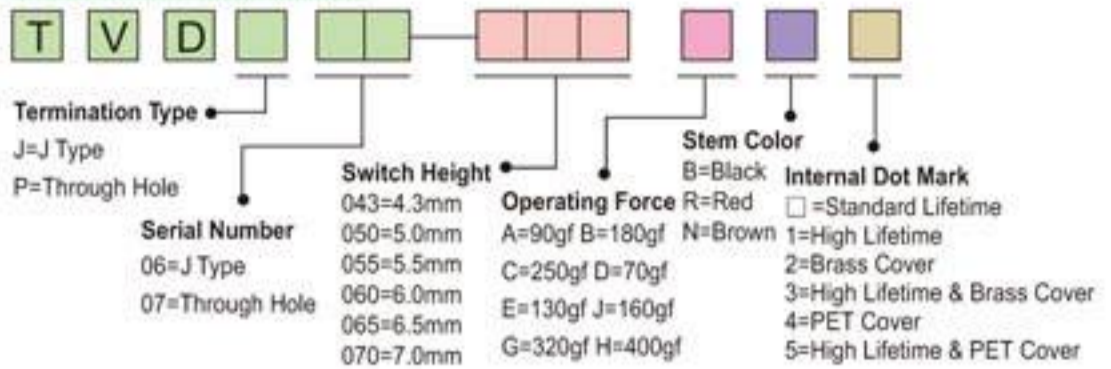
TACT SWITCH

# D SERIES

## 6.0x6.0 Other Terminal Shape Tact Switch



### HOW TO ORDER



### Features

- May make to order Other Terminal Shape
- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:D:300,000 Cycles B:E:F:C:100,000 Cycles G:H:50,000 Cycles
Mechanical performance	Operating force	A:90gf D:70gf B:180gf E:130gf C:250gf J:160gf G:320gf H:400gf
	Travel	0.25 ± 0.1mm

### Diagram

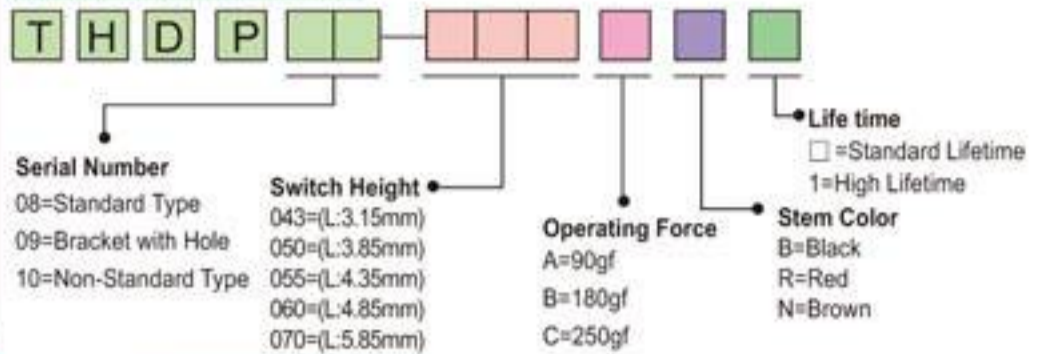
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		H	A
1	• TVDJ06 	4.3	r3.5
		5.0	r3.4
2	• THDP07 	5.5	r3.4
		6.0	r3.3
		6.5	r3.3
		7.0	r3.3

# D SERIES

## 6.0x6.0 Bracket Shape Type Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Available with anti-ESD ground terminal.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MΩmin. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩmax.
Durability	Lifetime	A:300,000 Cycles B: C:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout												
1	<p>• THDP08</p> <table border="1"> <thead> <tr> <th>L</th> <th>A</th> </tr> </thead> <tbody> <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> </tbody> </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	<p>• THDP09</p> <table border="1"> <thead> <tr> <th>L</th> <th>A</th> </tr> </thead> <tbody> <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> </tbody> </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	<p>• THDP10</p> <table border="1"> <thead> <tr> <th>L</th> <th>A</th> </tr> </thead> <tbody> <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> </tbody> </table>	L	A	3.15	3.5	3.85	3.5	5.85	3.3	8.35	3	15.85	3	
L	A													
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3.85	3.5													
5.85	3.3													
8.35	3													
15.85	3													

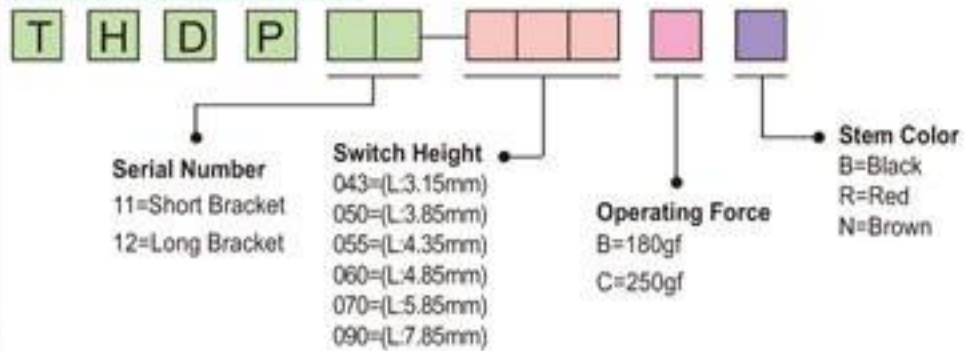
TACT SWITCH

# D SERIES

## 6.0x6.0 Other Bracket Shape Type Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Available with anti-ESD ground terminal.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

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

### Diagram

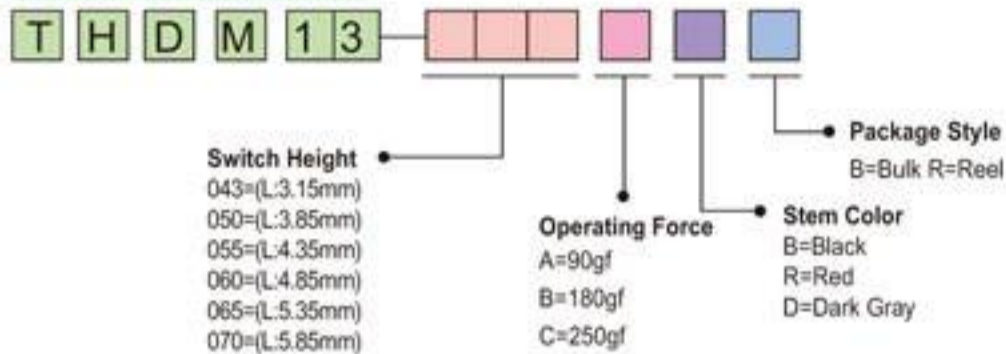
No.	Dimensions	Circuit Diagram												
		Pad Layout												
1	<p>• THDP11</p> <table border="1"> <thead> <tr> <th>L</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>3.15</td> <td>3.5</td> </tr> <tr> <td>3.85</td> <td>3.5</td> </tr> <tr> <td>5.85</td> <td>3.3</td> </tr> <tr> <td>8.35</td> <td>3</td> </tr> <tr> <td>15.85</td> <td>3</td> </tr> </tbody> </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	<p>• THDP12</p> <table border="1"> <thead> <tr> <th>L</th> <th>A</th> </tr> </thead> <tbody> <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> </tbody> </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													

# D SERIES

## 6.0x6.0 SMT & Bracket Shape Type Tact Switch



### HOW TO ORDER



### Features

- Reflow solderable
- Sharp "click" feel with a positive tactile feedback

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:300,000 Cycles B:C:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram														
		Pad Layout														
1	<p>● THDM13</p> <table border="1"> <thead> <tr> <th>L</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>3.15</td> <td>3.5</td> </tr> <tr> <td>3.85</td> <td>3.5</td> </tr> <tr> <td>4.35</td> <td>3.3</td> </tr> <tr> <td>4.85</td> <td>3.3</td> </tr> <tr> <td>5.35</td> <td>3.3</td> </tr> <tr> <td>5.85</td> <td>3.3</td> </tr> </tbody> </table>	L	A	3.15	3.5	3.85	3.5	4.35	3.3	4.85	3.3	5.35	3.3	5.85	3.3	
L	A															
3.15	3.5															
3.85	3.5															
4.35	3.3															
4.85	3.3															
5.35	3.3															
5.85	3.3															

TACT SWITCH

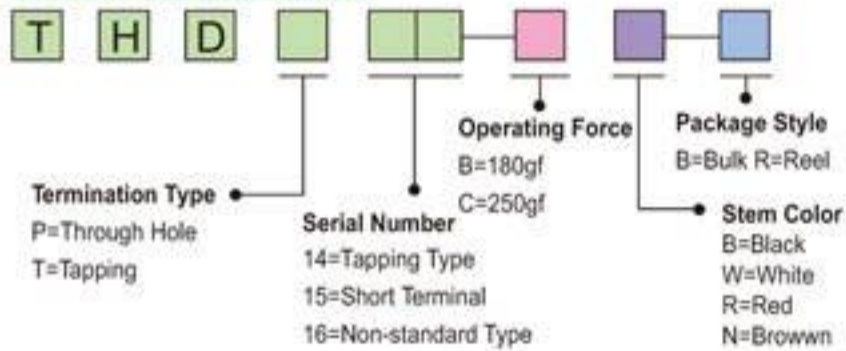


# D SERIES

## 6.0x6.0 Radial Taping Type Tact Switch



### HOW TO ORDER



### Features

- Supplied with radial taping.
- Allows automatic insertion onto PC board with the radial auto insertion machine.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:300,000 Cycles B:C:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THDT14</li> </ul>	
2	<ul style="list-style-type: none"> <li>• THDP15</li> </ul>	
3	<ul style="list-style-type: none"> <li>• THDP16</li> </ul>	

TACT SWITCH

# D SERIES

## 6.0x6.0 Radial Taping Type Tact Switch



### HOW TO ORDER

**TVDT17**

**Terminal Length**  
 □ = Standard Terminal  
 A=3.5mm  
 B=4.5mm  
 C=5.5mm

**Switch Height**  
 043=4.3mm  
 050=5.0mm  
 055=5.5mm  
 060=6.0mm  
 065=6.5mm  
 070=7.0mm

**Operating Force**  
 A=90gf  
 B=180gf  
 C=250gf

**Stem Color**  
 B=Black  
 W=White  
 R=Red  
 N=Brown

**Internal Dot Mark**  
 □ = Standard Life time  
 1=High Lifetime  
 2=Brass Cover  
 3=High Lifetime & Brass Cover  
 4=PET Cover  
 5=High Lifetime & PET Cover

**Package Style**  
 B=Bulk T=Paper Tape

### Features

- Supplied with radial taping.
- Allows automatic insertion onto PC board with the radial auto insertion machine.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min, 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mWmax.
Durability	Lifetime	A:300,000 Cycles B:C:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout	
		H	A
1	<ul style="list-style-type: none"> <li>• TVDT17</li> </ul>	4.3	3.5
		5	3.5
		7	3.3
		7.3	3.3
		9.5	3

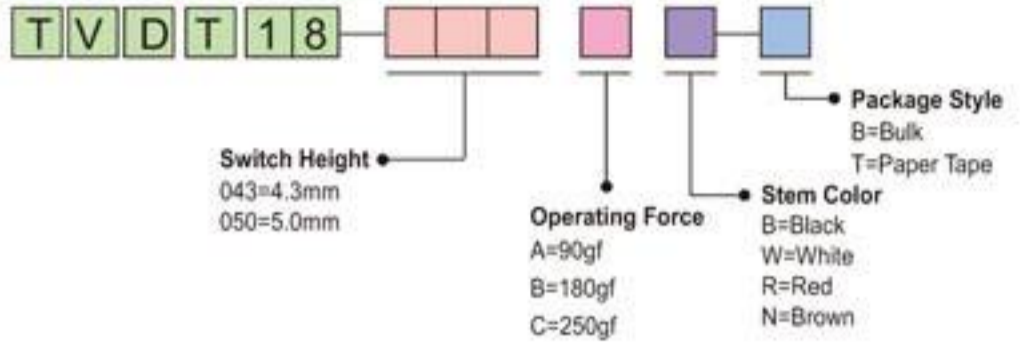
TACT SWITCH

# D SERIES

## 6.0x6.0 Radial Taping Type Tact Switch



### HOW TO ORDER



### Features

- Supplied with radial taping.
- Round terminals are most suitable for radial auto-insertion mounting on the PC board.
- Improved solderability resulting from absence of terminal cutout section.

### Applications

- For operating various electronic devices such as audio devices, office equipment, communication devices, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30 °C to +85 °C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:300,000 Cycles B:C:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram						
		Pad Layout						
1	<ul style="list-style-type: none"> <li>• TVDT18</li> </ul> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>H</td> <td>A</td> </tr> <tr> <td>4.3</td> <td>3.5</td> </tr> <tr> <td>5</td> <td>3.5</td> </tr> </table>	H	A	4.3	3.5	5	3.5	
H	A							
4.3	3.5							
5	3.5							

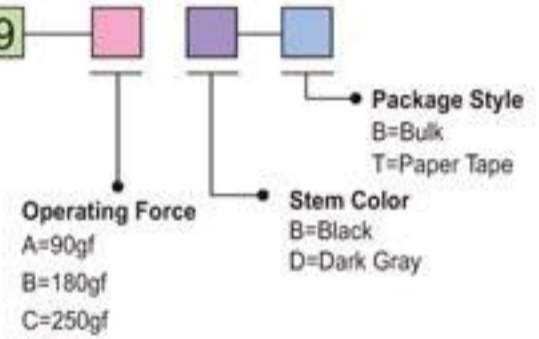
# D SERIES

## 6.0x6.0 Radial Taping Type Tact Switch



### HOW TO ORDER

**T H D T 1 9**



### Features

- Supplied with radial taping.
- Round terminals are most suitable for radial auto-insertion/ mounting on the PC board.

### Applications

- Operation of TVs and display monitors
- Operation of video recorders, various audio devices, communication devices and automotive sets
- For operating various electroic devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:500,000 Cycles B:300,000 Cycles C:100,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

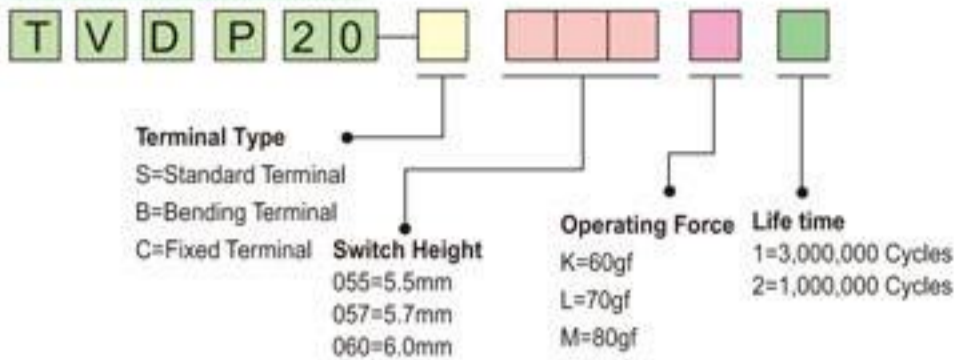
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THDT19</li> </ul>	 

# D SERIES

## 6.2x6.2 Long-Life Type Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Sharp "click" feel with a positive tactile feedback
- 3 million times life cycles maximum

### Applications

- Widely used in computer peripherals (mouse, printer, etc.)

### Specification

Items		Standard
Operating temperature range		-25°C to +75°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	1,000,000 Cycles min
Mechanical performance	Operating force	K:60gf L:70gf M:80gf
	Travel	0.30 ± 0.1mm

### Diagram

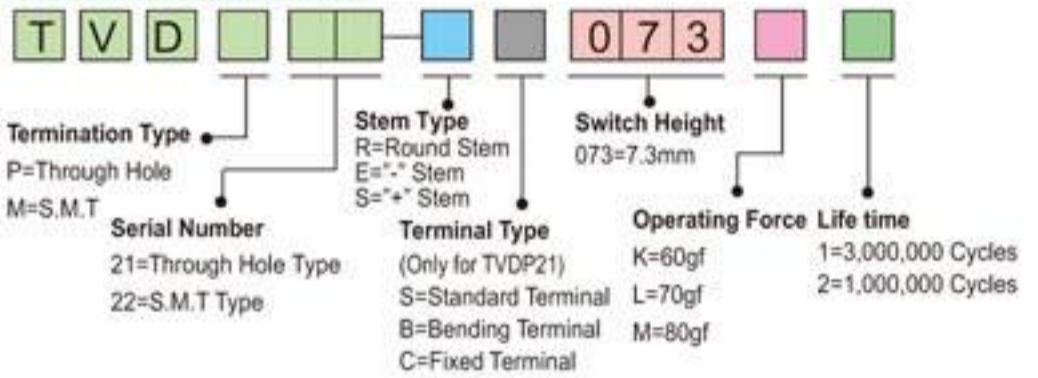
No.	Dimensions	Circuit Diagram Pad Layout					
1	<ul style="list-style-type: none"> <li>• TVDP20</li> </ul>	<table border="1"> <tr> <td>H</td> </tr> <tr> <td>5.5</td> </tr> <tr> <td>5.7</td> </tr> <tr> <td>6.0</td> </tr> </table>	H	5.5	5.7	6.0	
H							
5.5							
5.7							
6.0							

# D SERIES

## 6.2x6.2 Long-Life Type Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Sharp "click" feel with a positive tactile feedback
- 3 million times life cycles maximum

### Applications

- Widely used in computer peripherals (mouse, printer, etc.)

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	1,000,000 Cycles min
Mechanical performance	Operating force	K:60gf L:70gf M:80gf
	Travel	0.30 ± 0.1mm

### Diagram

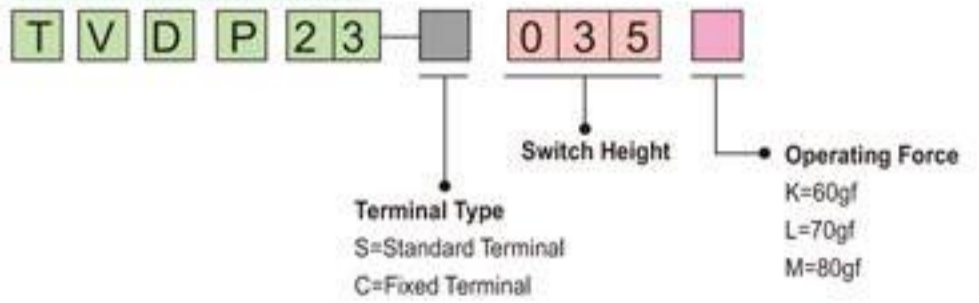
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVDP21-□ S</li> </ul>	
2	<ul style="list-style-type: none"> <li>• TVDP21-□ B</li> </ul>	
3	<ul style="list-style-type: none"> <li>• TVDM22</li> </ul>	

# D SERIES

## 6.3x6.3 Long-Life Type Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Sharp "click" feel with a positive tactile feedback.
- 3 million times life cycles maximum

### Applications

- Widely used in computer peripherals (mouse, printer, etc.)

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	1,000,000 Cycles min
Mechanical performance	Operating force	K:60gf L:70gf M:80gf
	Travel	0.30 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVDP23-C</li> </ul>	

# D SERIES

## 6.0x6.0 Long-Life & Bracket Shape Type Tact Switch



### HOW TO ORDER

**T H D P 2 4**

**0 5 5**



Switch Height  
055=5.5mm

Operating Force  
K=60gf  
L=70gf  
M=80gf

### Features

- Snap-in type, which can be directly mounted on PC board.
- Sharp "click" feel with a positive tactile feedback
- 3 million times life cycles maximum

### Applications

- Widely used in computer peripherals (mouse, printer, etc.)

### 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	1,000,000 Cycles min
Mechanical performance	Operating force	K:60gf L:70gf M:80gf
	Travel	0.30 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THDP24</li> </ul>	

TACT SWITCH



# JIANFU ELECTRONICS

## E SERIES TACT SWITCH



TVEU01



TVEF02



TVEM05



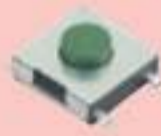
TVEM06



TVEF09



TVEJ10



TVEM04



TVEF13



THEU14



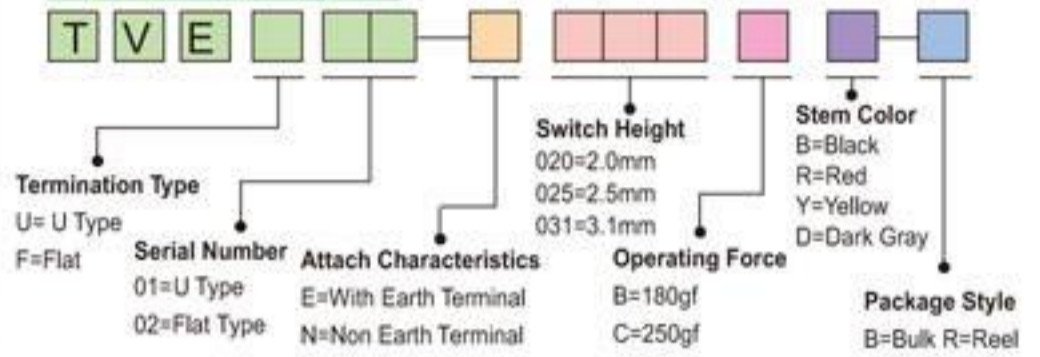
TVEJ08

# E SERIES

## 6.2x6.2 Flat & U-Type Terminals Type Tact Switch



### HOW TO ORDER



### Features

- Reflow solderable.
- Available with anti-ESD ground terminal.
- Packaged with a 16mm wide embossed taping.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:500,000 Cycles C:300,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout				
		Circuit Diagram	Pad Layout			
1	<p>● TVEU01</p>	<table border="1"> <tr><th>H</th></tr> <tr><td>3.1</td></tr> <tr><td>2.5</td></tr> <tr><td>2.0</td></tr> </table>	H	3.1	2.5	2.0
H						
3.1						
2.5						
2.0						
2	<p>● TVEF02</p>	<table border="1"> <tr><th>H</th></tr> <tr><td>3.1</td></tr> <tr><td>2.5</td></tr> <tr><td>2.0</td></tr> </table>	H	3.1	2.5	2.0
H						
3.1						
2.5						
2.0						

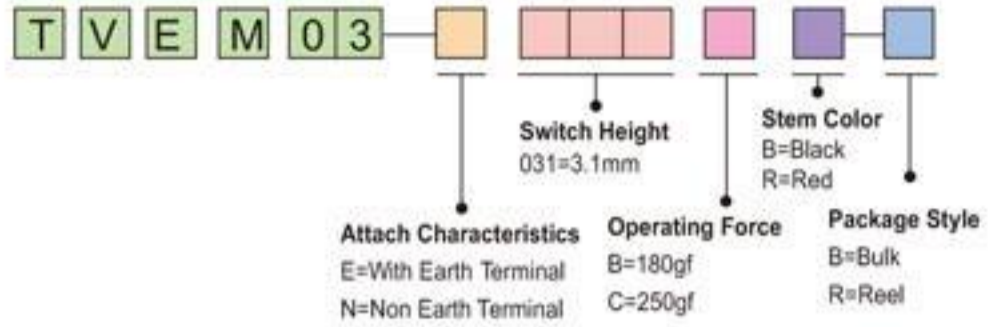
TACT SWITCH

# E SERIES

## 6.2x6.2 Non-rotating Stem Type Tact Switch



### HOW TO ORDER



### Features

- Reflow solderable.
- Available with anti-ESD ground terminal.
- Packaged with a 16mm wide embossed taping.
- For high-speed SMT processing

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:500,000 Cycles C:300,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVEM03</li> </ul>	

# E SERIES

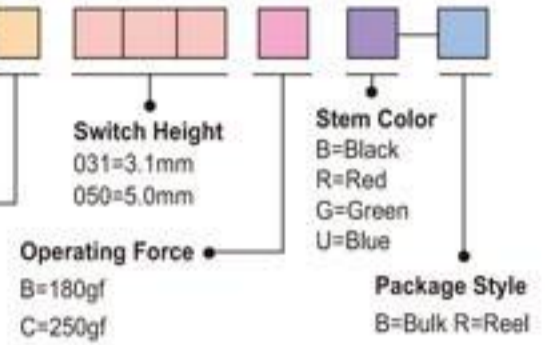
## 6.2x6.2 Dust-Proof Type Tact Switch



### HOW TO ORDER

**T V E M 0 4**

**Attach Characteristics**  
E=With Earth Terminal  
N=Non Earth Terminal



### Features

- Reflow solderable.
- Contacts are completely sealed, enhancing reliability
- Packaged with a 16mm wide embossed taping.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:500,000 Cycles C:300,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

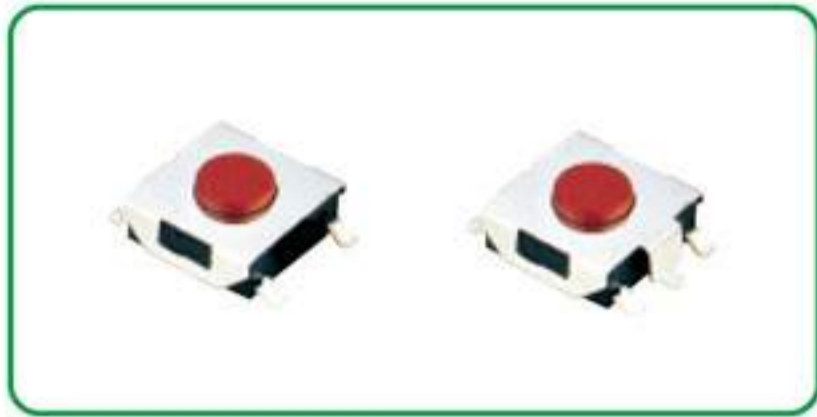
### Diagram

No.	Dimensions	Circuit Diagram Pad Layout	
1	<ul style="list-style-type: none"> <li>● TVEM04</li> </ul>		

TACT SWITCH

# E SERIES

## 6.2x6.2 SMT Terminals Type Tact Switch



### HOW TO ORDER

**T V E M 0 5**

**Attach Characteristics**  
E=With Earth Terminal  
N=Non Earth Terminal

**Switch Height**  
025=2.5mm  
031=3.1mm  
034=3.4mm

**Operating Force**  
A=90gf B=180gf  
C=250gf D=70gf  
J=160gf

**Stem Color**  
B=Black  
R=Red

**Package Style**  
B=Bulk  
R=Reel

### Features

- Reflow solderable.
- Available with anti-ESD ground terminal.
- Packaged with a 16mm wide embossed taping.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

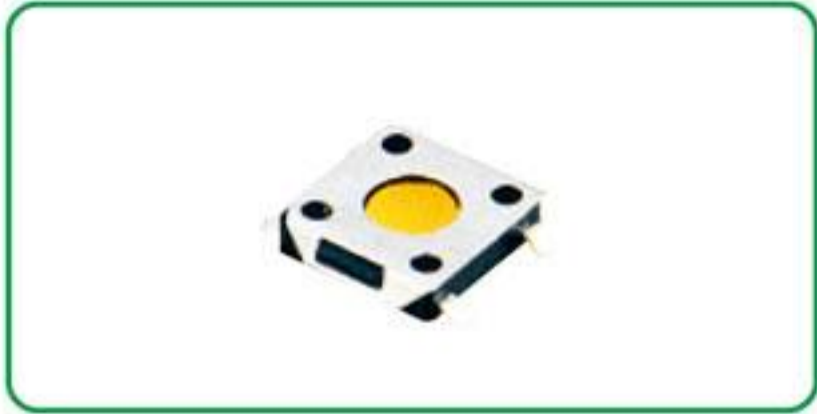
Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:D:J:B:500,000 Cycles C:300,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf D:70gf J:120gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram				
		Pad Layout				
1	<p>● TVEM05-N</p> <table border="1"> <tr><td>H</td></tr> <tr><td>3.4</td></tr> <tr><td>3.1</td></tr> <tr><td>2.5</td></tr> </table>	H	3.4	3.1	2.5	
H						
3.4						
3.1						
2.5						
2	<p>● TVEM05-E</p> <table border="1"> <tr><td>H</td></tr> <tr><td>3.4</td></tr> <tr><td>3.1</td></tr> <tr><td>2.5</td></tr> </table>	H	3.4	3.1	2.5	
H						
3.4						
3.1						
2.5						

# E SERIES

## 6.2x6.2 SMT Terminals Type Tact Switch



### HOW TO ORDER

**T V E M 0 6**

Terminal Distance  
 A=8.0mm  
 B=9.0mm  
 C=10.0mm

Operating Force  
 B=180gf  
 C=250gf  
 E=130gf

Package Style  
 B=Bulk  
 R=Reel

### Features

- Reflow solderable.
- Available with anti-ESD ground terminal.
- Packaged with a 16mm wide embossed taping.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:200,000 Cycles C:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVEM06</li> </ul>	

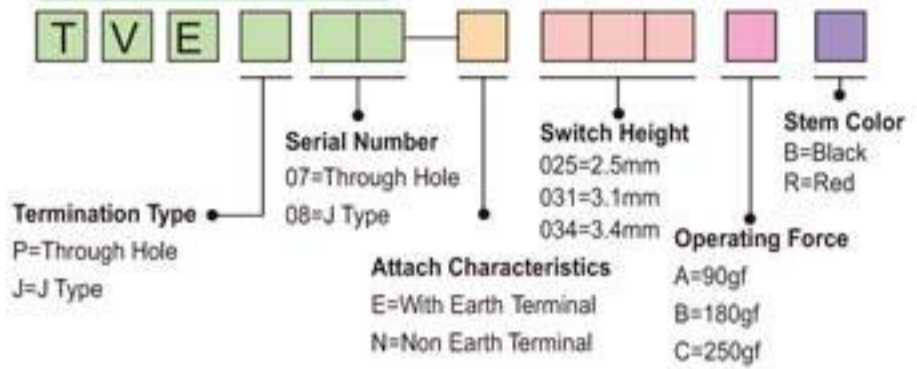
TACT SWITCH

# E SERIES

## 6.2x6.2 Through Hole Terminals Type Tact Switch



### HOW TO ORDER



### Features

- Reflow solderable.
- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	A:B:500,000 Cycles C:300,000 Cycles
Mechanical performance	Operating force	A:90gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

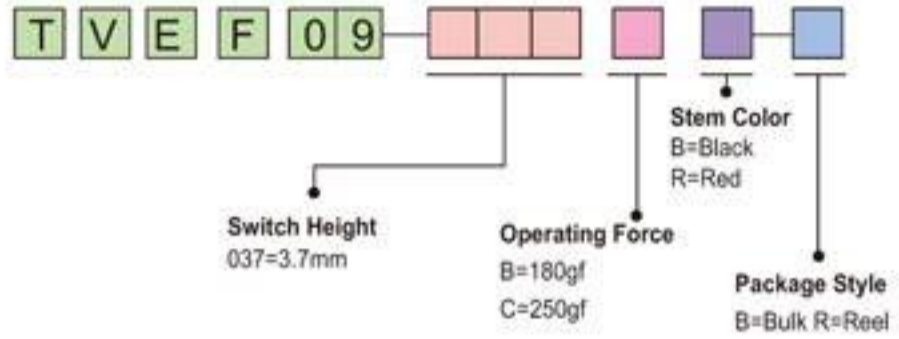
No.	Dimensions	Circuit Diagram Pad Layout					
		Circuit Diagram	Pad Layout				
1	<p>● TVEP07</p>	<table border="1"> <tr><th>H</th></tr> <tr><td>3.4</td></tr> <tr><td>3.1</td></tr> <tr><td>2.5</td></tr> </table>	H	3.4	3.1	2.5	
			H				
3.4							
3.1							
2.5							
2	<p>● TVEJ08</p>	<table border="1"> <tr><th>H</th></tr> <tr><td>3.4</td></tr> <tr><td>3.1</td></tr> <tr><td>2.5</td></tr> </table>	H	3.4	3.1	2.5	
			H				
3.4							
3.1							
2.5							

# E SERIES

## 6.2x6.2 Normal Closed Type Tact Switch



### HOW TO ORDER



### Features

- Reflow solderable
- Available with anti-ESD ground terminal.
- Packaged with a 16mm wide embossed taping

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:200,000 Cycles C:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.30 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>● TVEF09</li> </ul>	

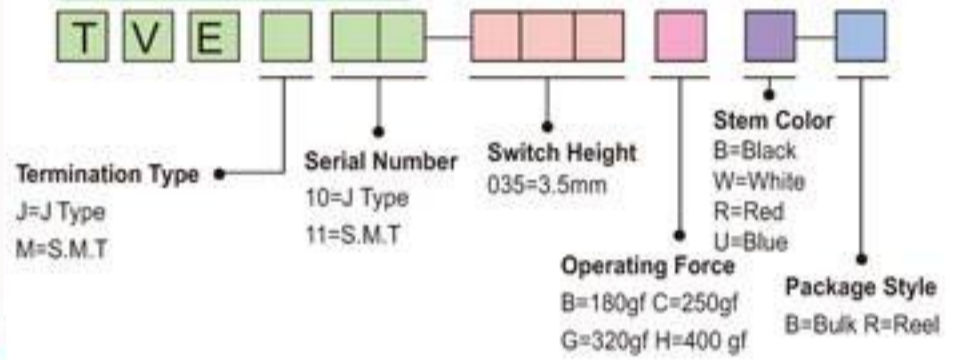


# E SERIES

## 6.2x6.2 With Middle-travel (SMT) Type Tact Switch



### HOW TO ORDER



### Features

- Rubber Stem achieves excellent operability with pre-travel and over-travel.
- Reflow solderable.
- Packaged with a 16mm wide embossed taping.

### Applications

- Electric home appliances
- Car navigation systems, car audio systems
- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:C:200,000 Cycles G:H:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf G:320gf H:400gf
	Travel	0.35 ± 0.1mm

### Diagram

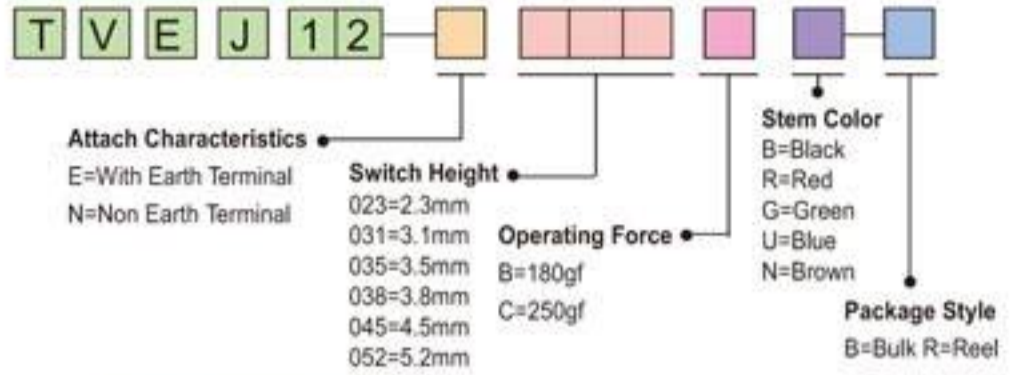
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TVEJ10</p>	
2	<p>• TVEM11</p>	

# E SERIES

## 6.2x6.2 (J SMT )Series With Washable Type Tact Switch



### HOW TO ORDER



### Features

- Reflow solderable.
- Available with anti-ESD ground terminal.
- Packaged with a 16mm wide embossed taping.
- Water-proof type is available to have advantage in dusty environment.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:200,000 Cycles C:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

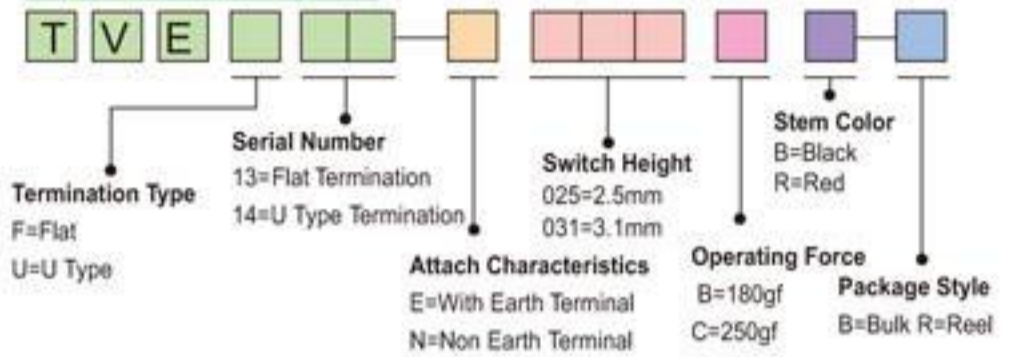
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>● TVEJ12-□ 031</li> </ul>	
2	<ul style="list-style-type: none"> <li>● TVEJ12-□ 052</li> </ul>	
3	<ul style="list-style-type: none"> <li>● TVEJ12-□ 023</li> </ul>	

# E SERIES

## 6.2x6.2 SMT Terminals Type Tact Switch



### HOW TO ORDER



### Features

- SMT type and reflow-soldering for surface mounting
- Wide product variety
- Available with ground terminal
- Dust protection type is available to have advantage in dusty environment

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:500,000 Cycles C:300,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

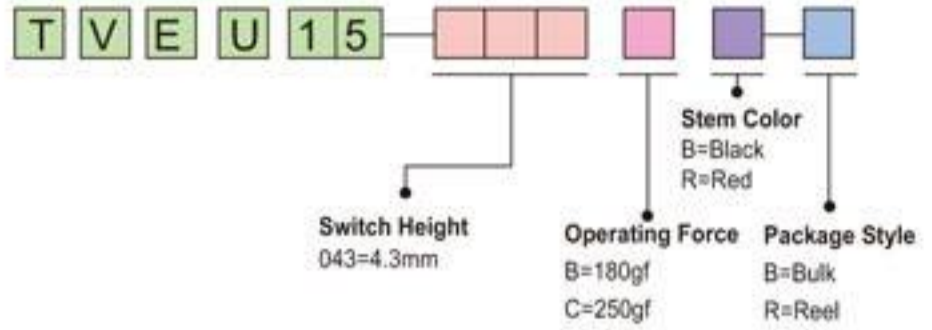
No.	Dimensions	Circuit Diagram			
		Pad Layout			
1	<p>• TVEF13</p> <table border="1"> <tr><td>H</td></tr> <tr><td>2.5</td></tr> <tr><td>3.1</td></tr> </table>	H	2.5	3.1	
H					
2.5					
3.1					
2	<p>• TVEU14</p> <table border="1"> <tr><td>H</td></tr> <tr><td>2.5</td></tr> <tr><td>3.1</td></tr> </table>	H	2.5	3.1	
H					
2.5					
3.1					

# E SERIES

## 6.2x6.2 SMT Terminals Type Tact Switch



### HOW TO ORDER



### Features

- SMT type and reflow-soldering for surface mounting
- Dust protection type is available to have advantage in dusty environment

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:500,000 Cycles C:300,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVEU15</li> </ul>	

TACT SWITCH

# JIANFU ELECTRONICS

## F SERIES TACT SWITCH



TVFU01



TVFM02



TVFP10



TVFT11



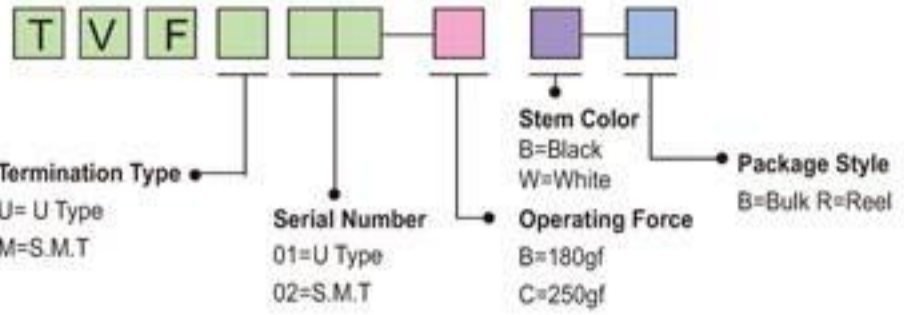
TVFP12

# F SERIES

## 6.0x6.0 Long Travel Tact Switch



### HOW TO ORDER



### Features

- Steady and low contact resistance
- Improved operation by using a larger push plate
- Excellent solderability

### Applications

- Car electronics equipment
- Input operation switches for telephones, electronic musical instruments

### Specification

Items		Standard
Operating temperature range		-40°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min, 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:C:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	1.30 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>● TVFU01</p>	
2	<p>● TVFM02</p>	

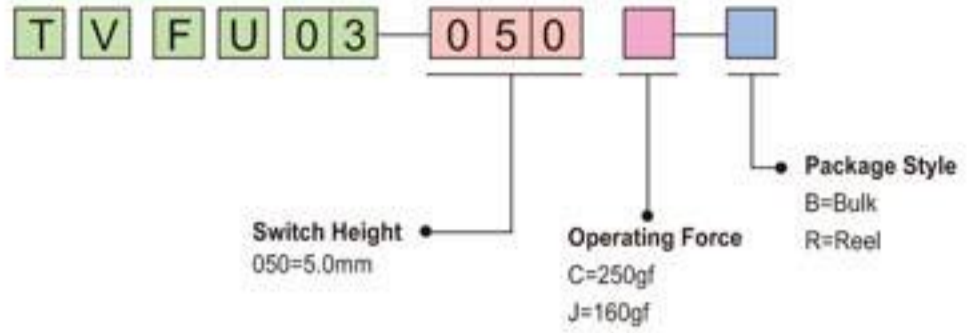
TACT SWITCH

# F SERIES

## 6.0x6.0 Long Travel Tact Switch



### HOW TO ORDER



### Features

- Steady and low contact resistance
- Improved operation by using a larger push plate
- Excellent solderability

### Applications

- Car electronics equipment
- Input operation switches for telephones, electronic musical instruments

### Specification

Items		Standard
Operating temperature range		-40°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:C:100,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	1.30 ± 0.1mm

### Diagram

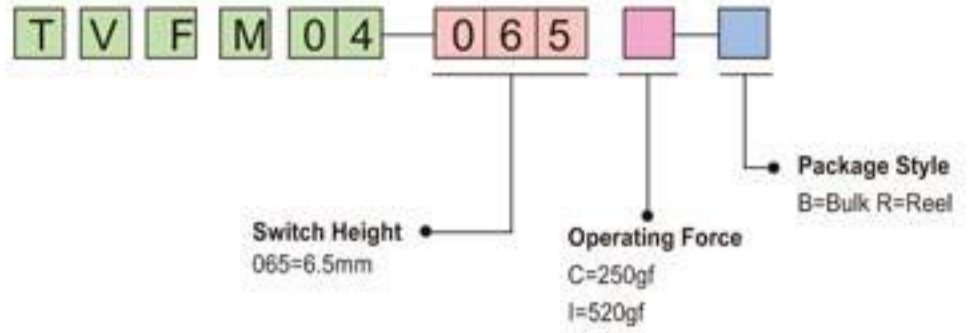
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>TVFU03</li> </ul>	

# F SERIES

## 6.0x6.0 Long Travel Tact Switch



### HOW TO ORDER



### Features

- Steady and low contact resistance
- Improved operation by using a larger push plate
- Excellent solderability

### Applications

- Car electronics equipment
- Input operation switches for telephones, electronic musical instruments

### Specification

Items		Standard
Operating temperature range		-40°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	C:I:100,000 Cycles
Mechanical performance	Operating force	C:250gf I:520gf
	Travel	1.0 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>TVFM04</li> </ul>	

TACT SWITCH

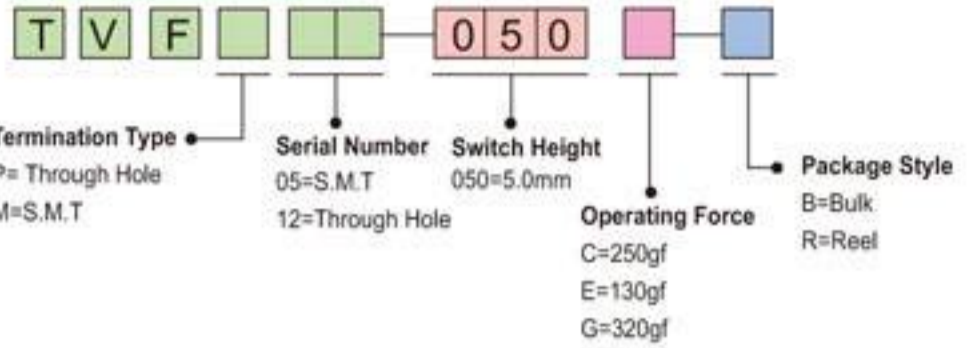


# F SERIES

## 6.0x6.0 Long Travel Tact Switch



### HOW TO ORDER



### Features

- Rubber dome
- High operating force which prevents incorrect operation
- Snap-in type, can be mounted directly on PC board

### Applications

- For operating various electronic devices such as audio devices such as audio devices, communication devices, measuring instruments, automotive sets, etc

### Specification

Items		Standard
Operating temperature range		-40°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	C:E:G:50,000 Cycles
Mechanical performance	Operating force	C:250gf E:130gf G:320gf
	Travel	1.10 ± 0.1mm

### Diagram

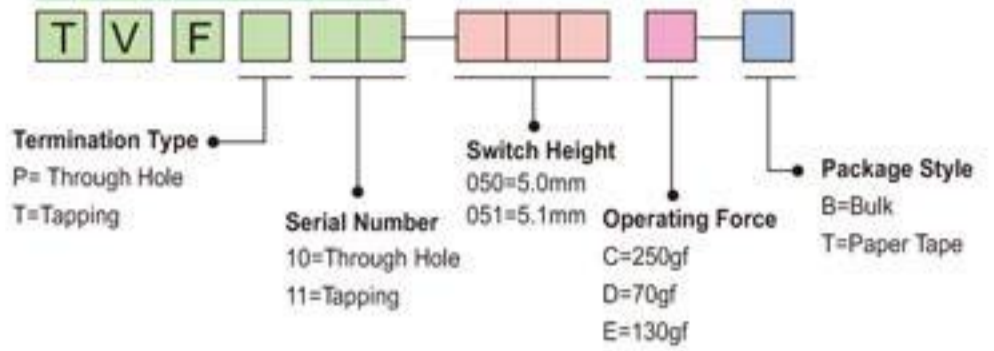
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVFM05</li> </ul>	
2	<ul style="list-style-type: none"> <li>• TVFP12</li> </ul>	

# F SERIES

## 7.8x7.8 Long Travel Tact Switch



### HOW TO ORDER



### Features

- Supplied with radial tapping.
- Allows automatic insertion onto printed circuit board with the radial auto insertion machine.

### Applications

- Operating switches in all types of electronic equipment such as audio devices, office devices, communication devices, measuring instruments, TVs, video recorders, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	D:E:C:100,000 Cycles
Mechanical performance	Operating force	D:70gf E:130gf C:250gf
	Travel	1.20 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TVFP10</p>	
2	<p>• TVFT11</p>	

# JIANFU ELECTRONICS

## G SERIES TACT SWITCH



TVGM03



TVGP01



TVGP02



TVGP01-A



TVGP01-□ G73



TVGP06



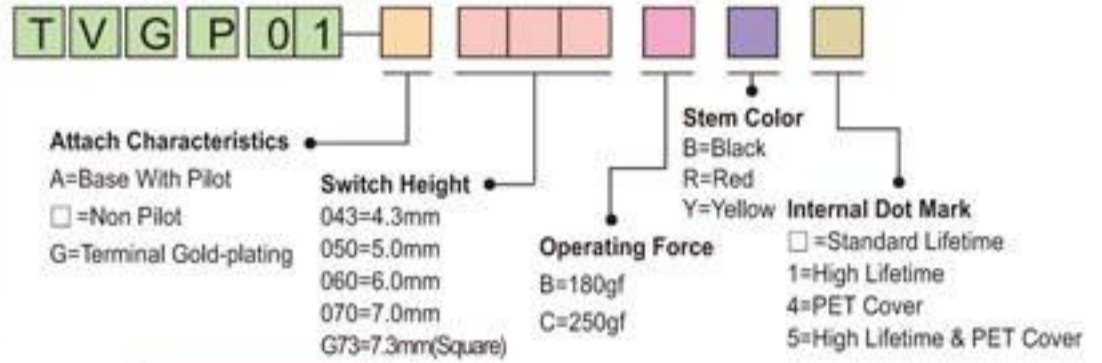
THGP07

# G SERIES

## 12.0x12.0 Flat Stem With Stable Operation Feeling Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:200,000 Cycles    C:100,000 Cycles
Mechanical performance	Operating force	B:180gf    C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TVGP01</p>	
2	<p>• TVGP01-□ G73</p>	
3	<p>• TVGP01-A</p>	

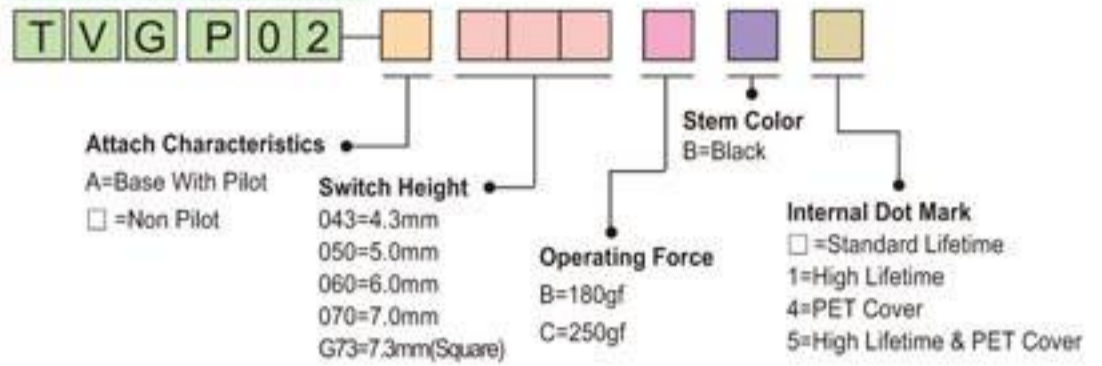
TACT SWITCH

# G SERIES

## 12.0x12.0 Flat Stem With Stable Operation Feeling Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc.

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:200,000 Cycles    C:100,000 Cycles
Mechanical performance	Operating force	B:180gf    C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

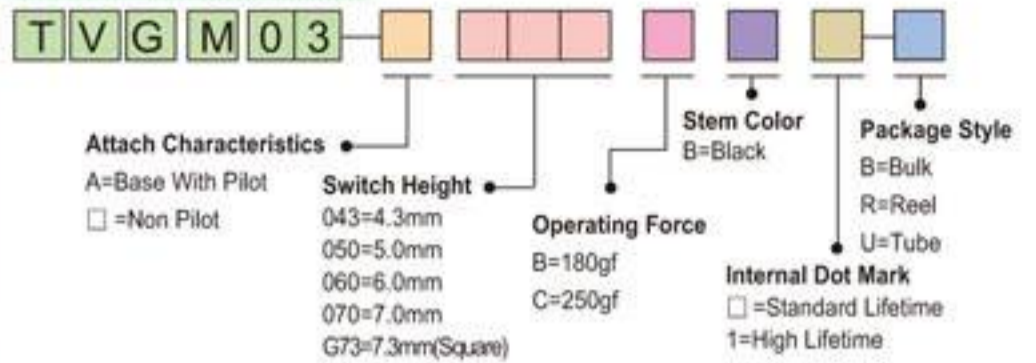
No.	Dimensions	Circuit Diagram Pad Layout							
1	<ul style="list-style-type: none"> <li>• TVGP02</li> </ul>	<table border="1"> <tr><th>H</th></tr> <tr><td>4.3</td></tr> <tr><td>5.0</td></tr> <tr><td>6.0</td></tr> <tr><td>7.0</td></tr> <tr><td>...</td></tr> </table>	H	4.3	5.0	6.0	7.0	...	
		H							
4.3									
5.0									
6.0									
7.0									
...									

# G SERIES

## 12.0x12.0 Flat Stem With Stable Operation Feeling Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.
- SMT Type Available

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc.

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:200,000 Cycles    C:100,000 Cycles
Mechanical performance	Operating force	B:180gf    C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout						
1	<ul style="list-style-type: none"> <li>• TVGM03</li> </ul>	<table border="1"> <tr><td>H</td></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> </table>	H	4.3	5.0	6.0	7.0	
H								
4.3								
5.0								
6.0								
7.0								

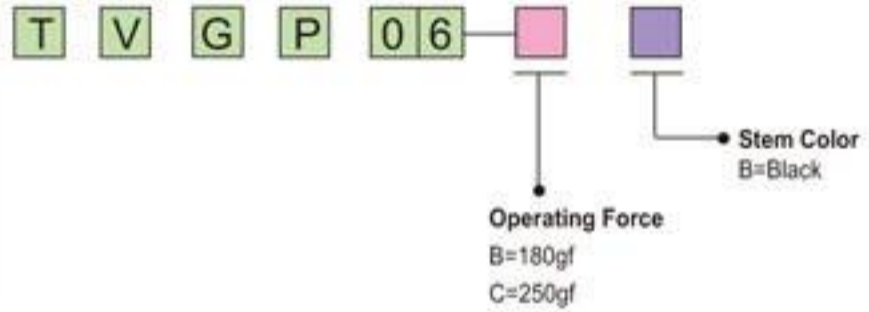
TACT SWITCH

# G SERIES

## 12.0x12.0 Flat Stem With Stable Operation Feeling Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc.

### 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	B:200,000 Cycles    C:100,000 Cycles
Mechanical performance	Operating force	B:180gf    C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

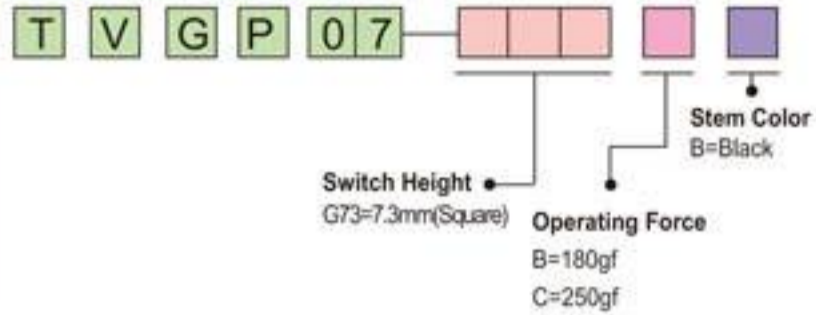
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVGP06</li> </ul>	

# G SERIES

## 12.0x12.0 Flat Stem With Stable Operation Feeling Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communication apparatus, measuring instruments, TV sets, VCRs, etc.

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW/min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:200,000 Cycles    C:100,000 Cycles
Mechanical performance	Operating force	B:180gf    C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THGP07</li> </ul>	



# JIANFU ELECTRONICS

## H SERIES MULTI-FUNCTION SWITCH



TMHF07



TMHU09



TMHF11



TMHU12



TMHM15



TMHU21



TMHU23



TMHU28



TMHM31



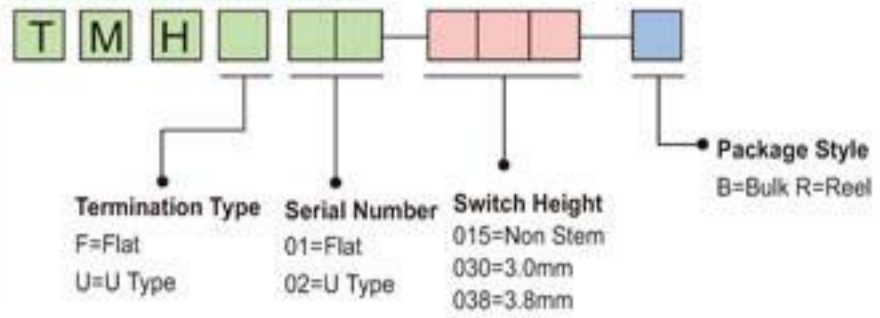
TMHU33

# H SERIES

## 6.0x6.4 Double Action Type Tact Switch



### HOW TO ORDER



### Features

- Sharp click feel with a positive tactile feedback
- Ultraminiature and light weight structure suitable for high density mounting, Economical but reliable
- Insert molding in the contact with special treatment prevents flux build-up during soldering and permits auto-dipping.

### Applications

- Cameras, digital still cameras
- Digital video camcorders
- Compact portable devices
- For operating the other multifunctional electronic devices

### Specification

Items		Standard	Items		Standard
Operating temperature range		-30°C to +85°C	Durability	Lifetime	30,000 Cycles
Electrical performance	Rating	50mA, 12V DC	Mechanical performance	Operating force	1 st 100 ± 50gf    2 st 260 ± 50gf
	Insulation resistance	100MW/min. 100V DC		Travel	1 st 0.5 ± 0.1mm    2 st 0.7 ± 0.1mm
	Dielectric strength	250V AC for 1 min.			
	Contact resistance	100mW max.			

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TMHF01</li> </ul>	
2	<ul style="list-style-type: none"> <li>• TMHU02</li> </ul>	

# H SERIES

## 3.6x4.7 Double Action Type Tact Switch



### Features

- Double action side operation
- Small, low-profile and space saving
- Long operation life

### Applications

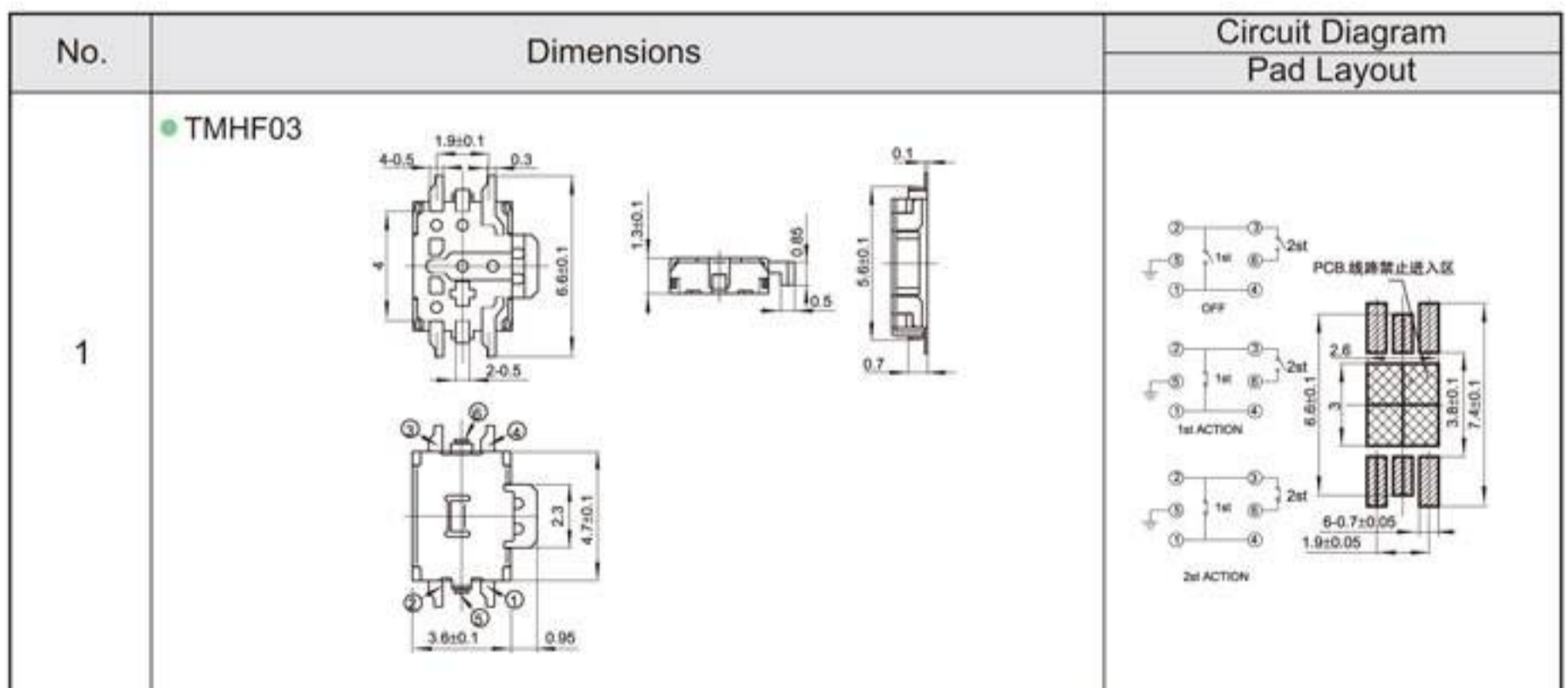
- For operating various electronic devices such as audio devices, communication devices, measuring instruments, automotive sets, etc.

### 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.

Items		Standard	
Durability	Lifetime	100,000 Cycles	
Mechanical performance	Operating force	1 st 100 ± 50gf	2 st 200 ± 50gf
	Travel	1 st 0.2 ± 0.15mm	2 st 0.4 ± 0.15mm

### Diagram

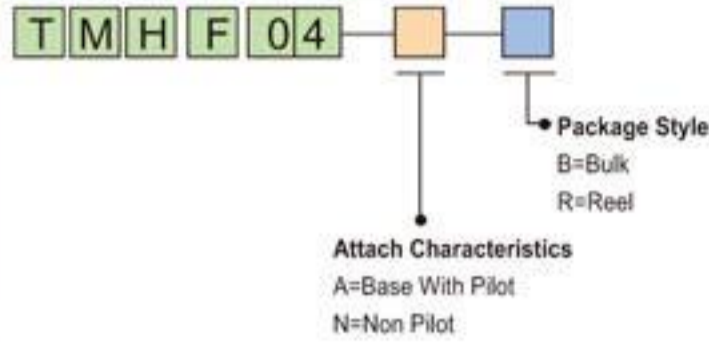


# H SERIES

## 5x5.5 Double Action Type Tact Switch



### HOW TO ORDER



### Features

- Double action side operation
- Small, low-profile and space saving
- Long operation life

### Applications

- For operating various electronic devices such as audio devices, communication devices, measuring instruments, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.

Items		Standard	
Durability	Lifetime	100,000 Cycles	
Mechanical performance	Operating force	1 st 100 ± 50gf	2 st 200 ± 50gf
	Travel	1 st 0.2 ± 0.15mm	2 st 0.4 ± 0.15mm

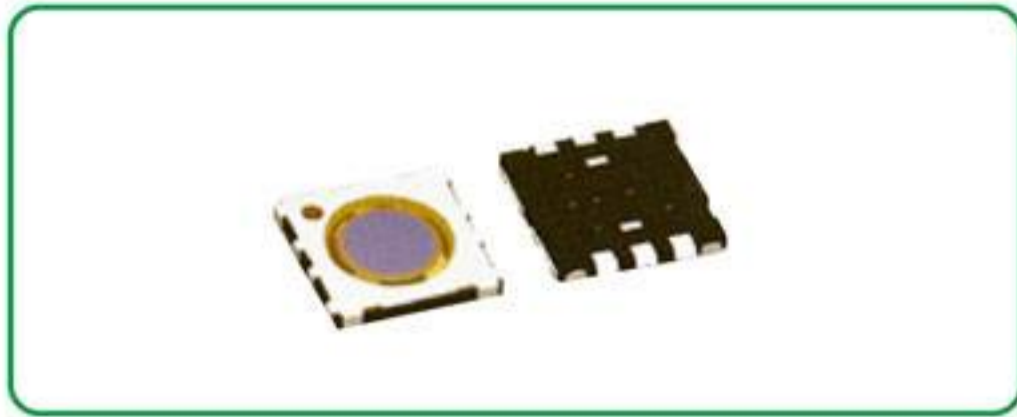
### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TMHF04</li> </ul>	

MULTI-FUNCTION SWITCH

# H SERIES

## 4.1x4.3 Double Action Type Tact Switch



### Features

- Double action side operation
- Small, low-profile and space saving
- Long operation life

### Applications

- For operating various electronic devices such as audio devices, communication devices, measuring instruments, automotive sets, etc.

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW/min, 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.

Items		Standard	
Durability	Lifetime	100,000 Cycles	
Mechanical performance	Operating force	1 st 90 ± 40gf	2 st 190 ± 60gf
	Travel	1 st 0.5 ± 0.1mm	2 st 0.3 ± 0.15mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TMHU05</li> </ul>	

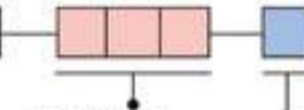
# H SERIES

## 6.2x6.5 Double Action Type Tact Switch



### HOW TO ORDER

**T M H F 0 7**



Switch Height  
038=3.8mm  
020=2.0mm(Non Stem)

Package Style  
B=Bulk  
R=Reel

### Features

- Sharp click feel with a positive tactile feedback
- Ultraminiature and light weight structure suitable for high density mounting, Economical but reliable
- Insert molding in the contact with special treatment prevents flux build-up during soldering and permits auto-dipping

### Applications

- Cameras, digital still cameras
- Digital video camcorders
- Compact portable devices
- For operating the other multifunctional electronic devices

### Specification

Items		Standard	
Operating temperature range		-30°C to +85°C	
Electrical performance	Rating	50mA, 12V DC	
	Insulation resistance	100MW min. 100V DC	
	Dielectric strength	250V AC for 1 min.	
	Contact resistance	100mW max.	
Durability	Lifetime	10,000 Cycles	
Mechanical performance	Operating force	1 st 100 ± 40gf	2 st 250 ± 80gf
	Travel	1 st 0.3 ± 0.1mm	2 st 0.55 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout	
1	<ul style="list-style-type: none"> <li>• TMHF07</li> </ul>		

# H SERIES

## 3.9x4.1 Double Action Type Tact Switch



### Features

- Sharp click feel with a positive tactile feedback
- Ultraminiature and light weight structure suitable for high density mounting, Economical but reliable
- Insert molding in the contact with special treatment prevents flux build-up during soldering and permits auto-dipping

### Applications

- Cameras, digital still cameras
- Digital video camcorders
- Compact portable devices
- For operating the other multifunctional electronic devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	50,000 Cycles
Mechanical performance	Operating force	1 st 90 ± 40gf      2 st 190 ± 60gf
	Travel	1 st 0.15 ± 0.1mm    2 st 0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TMHU08</li> </ul>	

# H SERIES

## 3.7x5.7 Double Action Type Tact Switch



### Features

- Sharp click feel with a positive tactile feedback
- Ultraminiature and light weight structure suitable for high density mounting, Economical but reliable
- Insert molding in the contact with special treatment prevents flux build-up during soldering and permits auto-dipping

### Applications

- Cameras, digital still cameras
- Digital video camcorders
- Compact portable devices
- For operating the other multifunctional electronic devices

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	1 st 100 ± 40gf 2 st 250 ± 80gf
	Travel	1 st 0.4 ± 0.1mm 2 st 0.6 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>● TMHU09</li> </ul>	 

MULTI-FUNCTION SWITCH



# H SERIES

## 3.2x3.5 Double Action Type Tact Switch



### Features

- Sharp click feel with a positive tactile feedback
- Ultraminiature and light weight structure suitable for high density mounting, Economical but reliable
- Insert molding in the contact with special treatment prevents flux build-up during soldering and permits auto-dipping

### Applications

- Cameras, digital still cameras
- Digital video camcorders
- Compact portable devices
- For operating the other multifunctional electronic devices

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	1 st 60 ± 40gf 2 st 160 ± 80gf
	Travel	1 st 0.1 ± 0.1mm 2 st 0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TMHF34</p>	

# H SERIES

## 3.9x4.1 Double Action Type Tact Switch



### Features

- Sharp click feel with a positive tactile feedback
- Ultraminiature and light weight structure suitable for high density mounting, Economical but reliable
- Insert molding in the contact with special treatment prevents flux build-up during soldering and permits auto-dipping

### Applications

- Cameras, digital still cameras
- Digital video camcorders
- Compact portable devices
- For operating the other multifunctional electronic devices

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	500,000 Cycles
Mechanical performance	Operating force	1 st 90 ± 40gf 2 st 190 ± 60gf
	Travel	1 st 0.15 ± 0.1mm 2 st 0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>● TMHU35</li> </ul>	

# H SERIES

## 2.4x4.5 Double Action Type Tact Switch



### Features

- Sharp click feel with a positive tactile feedback
- Ultraminiature and light weight structure suitable for high density mounting, Economical but reliable
- Insert molding in the contact with special treatment prevents flux build-up during soldering and permits auto-dipping

### Applications

- Cameras, digital still cameras
- Digital video camcorders
- Compact portable devices
- For operating the other multifunctional electronic devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles
Mechanical performance	Operating force	1 st 80 ± 40gf 2 st 180 ± 60gf
	Travel	1 st 0.15 ± 0.1mm 2 st 0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TMHF36</li> </ul>	

# H SERIES

## 6.0x6.2 4-direction & center-push Tact Switch



### HOW TO ORDER

**T M H U 10**

Switch Height  
045=4.5mm  
050=5.0mm

Stem Color  
B=Black  
W=White  
R=Red

Package Style  
B=Bulk  
R=Reel

### Features

- Multi directional input type allowing 4-direction + center-push operations.
- Reflow solderable.
- Packaged with a 16mm wide embossed taping.

### Applications

- For digital still cameras and digital camcorders
- For portable audio devices
- For operating controls of other various digital devices

### Specification

Items		Standard
Operating temperature range		-25°C to +70°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	500mW max.
Durability	Lifetime	20,000 Cycles
Mechanical performance	Operating force	4-direction 160 ± 40gf    Center push 240 ± 80gf
	Travel	4-direction 0.25 ± 0.1mm    Center push 0.15 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TMHU10</p> <p>Dimensions: H (4.5, 5.0), 1.45, 2.0, 2.0, 3.0, 0.3, T3=0.2, 45°, 4-0.2, 4-R0.5, 6.2, 6.65, 6.4, 2.1, 2.1, 2.1, 2.1, 1.75, 1.75, 1.75, 1.75, 3, 1.7Max, 0.85, 0.7, 0.5, 2-0.6, 2-0.15, 0.7, 3.5</p> <p>(Silicon Position) 0° ± 3° (Amount of Ration Lossing) 2° ± 2°</p> <p>An Arrow Is The Operation</p> <p>Push Operating Direction</p>	<p>REFLOW SOLDERING CONDITIONS</p> <p>Circuit Diagram: CENTER, 1, 2, 3, 4, 5, 6</p> <p>Pad Layout: 6-0.8, 5.6, 3.5, 0.75, 2-1.45, 5.6, 4-1, 4-0.8, 0.75, 1.05</p>

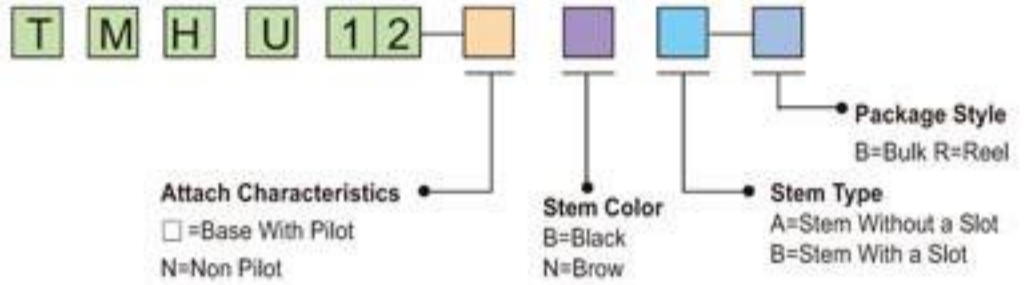


# H SERIES

## 6.1x6.5 4-direction & center-push Tact Switch



### HOW TO ORDER



### Features

- The operation function of the control unit enables center push operation.
- Compound operation using a single knob is realized.
- Compact size and low-profile forms are available for reflow soldering. Available for tape and reel packaging.

### Applications

- Digital still cameras and digital video camcorders
- Portable audio devices
- Mobile phones and personal digital assistant
- Operation of various digital devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	4-direction 200mW max    Center push 100mW max.
Durability	Lifetime	200,000 Cycles
Mechanical performance	Operating force	4-direction 140 ± 50gf    Center push 220 ± 80gf
	Travel	4-direction 5° ± 2°    Center push 0.20 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram																																								
		Pad Layout																																								
1	<ul style="list-style-type: none"> <li>• TMHU12</li> </ul> <table border="1" style="margin-top: 10px;"> <tr> <td>A</td> <td>①</td> <td>②</td> <td>③</td> <td>④</td> <td>⑤</td> <td>⑥</td> <td>⑦</td> </tr> <tr> <td>B</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> </tr> <tr> <td>C</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> </tr> <tr> <td>D</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> </tr> <tr> <td>E</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> <td>→</td> </tr> </table>	A	①	②	③	④	⑤	⑥	⑦	B	→	→	→	→	→	→	→	C	→	→	→	→	→	→	→	D	→	→	→	→	→	→	→	E	→	→	→	→	→	→	→	 
A	①	②	③	④	⑤	⑥	⑦																																			
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E	→	→	→	→	→	→	→																																			

# H SERIES

## 7.5x7.5 4-direction & center-push Tact Switch



### HOW TO ORDER

**T M H U 1 3**

**Attach Characteristics**  
 □ = Base With Pilot  
 N = Non Pilot

**Stem Color**  
 B = Black  
 W = White

**Package Style**  
 B = Bulk  
 R = Reel

### Features

- The operation function of the control unit enables center push operation.
- Compound operation using a sing knob is realized.
- Compact size and low-profile forms are available for reflow soldering. Available for tape and reel packaging.

### Applications

- Digital still cameras and digital video camcorders
- Portable audio devices
- Mobile phones and personal digital assistant
- Operation of various digital devices

### Specification

Items		Standard	
Operating temperature range		-30°C to +85°C	
Electrical performance	Rating	50mA. 12V DC	
	Insulation resistance	100MW min. 100V DC	
	Dielectric strength	250V AC for 1 min.	
	Contact resistance	500mW max.	
Durability	Lifetime	200,000 Cycles	
Mechanical performance	Operating force	4-direction 160 ± 50gf	Center push 280 ± 100gf
	Travel	4-direction 0.20 ± 0.1mm	Center push 0.15 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout
1	<p>• TMHU13</p>	

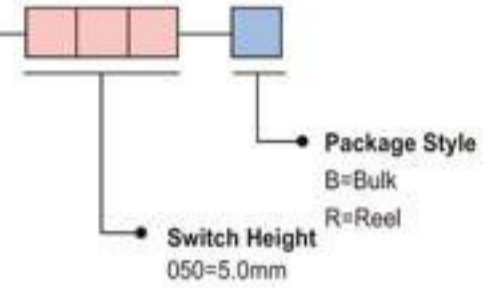
# F SERIES

## 10.0x10.4 4-direction & center-push Tact Switch



### HOW TO ORDER

**T M H M 1 4**



### Features

- The operation function of the control unit enables center push operation.
- Compound operation using a single knob is realized.
- Compact size and low-profile forms are available for reflow soldering. Available for tape and reel packaging.

### Applications

- Digital still cameras and digital video camcorders
- Portable audio devices
- Mobile phones and personal digital assistant
- Operation of various digital devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	20mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	50,000 Cycles
Mechanical performance	Operating force	4-direction 160 ± 80gf    Center push 300 ± 150gf
	Travel	4-direction 4° ± 2°    Center push 0.20 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TMHM14</p>	



# H SERIES

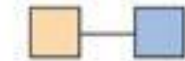
## 11.0x11.5 Encoder series (8-Section) Tact Switch



### HOW TO ORDER

**T M H M 1 5**

**Auxiliary Type**  
 B=Black Base & 7 Circuit  
 N=Brown & 8 Circuit



**Package Style**  
 B=Bulk R=Reel  
**Attach Characteristics**  
 E=With Earth Terminal  
 N=Non Earth Terminal

### Features

- Low-profile type
- Easy to be designed into applied applications
- Non operation feeling type is available

### Applications

- Digital still cameras and digital video camcorders
- Operation of various digital devices

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Non-switching	100mA. 50V DC
	Switching rating	25mA. 24V DC
	Insulation resistance	100MW min. 500V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	10,000 Cycles
Mechanical performance	Operating force	N=130 ± 50gf
		B=40 ± 30gf

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout																																								
1	<p>• TMHM15</p>	<table border="1"> <caption>Changeover Angle</caption> <thead> <tr> <th>MODE</th> <th>MODE2</th> <th>MODE3</th> <th>MODE4</th> <th>MODE5</th> <th>MODE6</th> <th>MODE7</th> <th>MODE8</th> </tr> </thead> <tbody> <tr> <td>COM A</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>ON</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>COM B</td> <td>ON</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>ON</td> </tr> <tr> <td>COM C</td> <td>ON</td> <td>ON</td> <td>ON</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> </tr> <tr> <td>COM D</td> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>ON</td> <td>ON</td> <td>OFF</td> <td>OFF</td> </tr> </tbody> </table>	MODE	MODE2	MODE3	MODE4	MODE5	MODE6	MODE7	MODE8	COM A	OFF	OFF	OFF	OFF	ON	ON	OFF	COM B	ON	OFF	OFF	OFF	OFF	OFF	ON	COM C	ON	ON	ON	OFF	OFF	OFF	OFF	COM D	OFF	OFF	OFF	ON	ON	OFF	OFF
MODE	MODE2	MODE3	MODE4	MODE5	MODE6	MODE7	MODE8																																			
COM A	OFF	OFF	OFF	OFF	ON	ON	OFF																																			
COM B	ON	OFF	OFF	OFF	OFF	OFF	ON																																			
COM C	ON	ON	ON	OFF	OFF	OFF	OFF																																			
COM D	OFF	OFF	OFF	ON	ON	OFF	OFF																																			

MULTIFUNCTION SWITCH

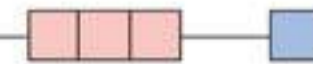
# H SERIES

## 10.0x10.7 4-direction & center-push Tact Switch



### HOW TO ORDER

**T M H M 1 6**



Switch Height  
065=6.5mm

Package Style  
B=Bulk R=Reel

### Features

- The operation function of the control unit enables center push operation.
- Compound operation using a single knob is realized.
- Compact size and low-profile forms are available for reflow soldering. Available for tape and reel packaging.

### Applications

- Digital still cameras and digital video camcorders
- Portable audio devices
- Mobile phones and personal digital assistant
- Operation of various digital devices

### Specification

Items		Standard	
Operating temperature range		-30°C to +85°C	
Electrical performance	Rating	20mA, 12V DC	
	Insulation resistance	100MW min. 100V DC	
	Dielectric strength	250V AC for 1 min.	
	Contact resistance	100mW max.	
Durability	Lifetime	50,000 Cycles	
Mechanical performance	Operating force	4-direction 160 ± 80gf	Center push 300 ± 150gf
	Travel	4-direction 4° ± 2°	Center push 0.20 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout	
1	<ul style="list-style-type: none"> <li>• TMHM16</li> </ul>		



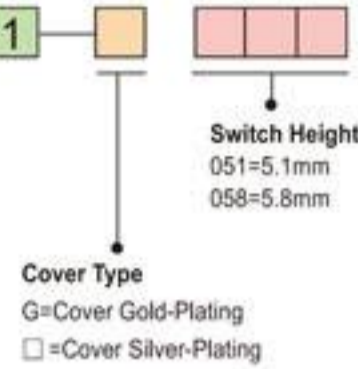
# H SERIES

## 7.8x7.8 4-direction & center-push Tact Switch



### HOW TO ORDER

**T M H U 2 1**



### Features

- A sharp click feel with tactile feedback characteristic.
- Malfunction protected, dust-proof structure, with ground terminal

### Applications

- Operation switches for menu scrolling and confirmation for portable equipment Compact, portable unit such as cameras, PDA etc.

### Specification

Items		Standard	
Operating temperature range		-30°C to +85°C	
Electrical performance	Rating	20mA, 12V DC	
	Insulation resistance	100MW min. 100V DC	
	Dielectric strength	250V AC for 1 min.	
	Contact resistance	100mW max.	
Durability	Lifetime	200,000 Cycles	
Mechanical performance	Operating force	4-direction 130 ± 80gf	Center push 260 ± 150gf
	Travel	4-direction 5° ± 2.5°	Center push 0.15 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TMHU21-058</p>	
2	<p>• TMHU21-051</p>	



# H SERIES

## 9.8x9.8 4-direction & center-push Tact Switch



### Features

- Available shprp click feel with a positive tactile feedback
- Insert molding in the contact with special treatment prevents flux build-up during soldering and permits auto-dipping.

### Applications

- Operation switches for menu scrolling and confirmation for portable equipment
- Compact, portable unit such as cameras, PDA etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	20mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	200,000 Cycles
Mechanical performance	Operating force	4-direction 160 ± 80gf    Center push 320 ± 150gf
	Travel	4-direction 0.25 ± 0.1mm    Center push 0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TMHU24</li> </ul>	

MULTI-FUNCTION SWITCH

# H SERIES

9.95x11.5(Octagon) 4-direction & center-push Tact Switch



## Features

- Compact and low profile with enhanced freedom of set design.
- Uniform operating force in any operating direction, with excellent operational feel

## Applications

- Portable electronic devices such as mobile phones, personal digital assistant, etc.

## Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	20mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	200,000 Cycles
Mechanical performance	Operating force	4-direction 160 ± 70gf    Center push 250 ± 150gf
	Travel	4-direction 0.20 ± 0.1mm    Center push 0.30 ± 0.1mm

## Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• TMHU25</p>	

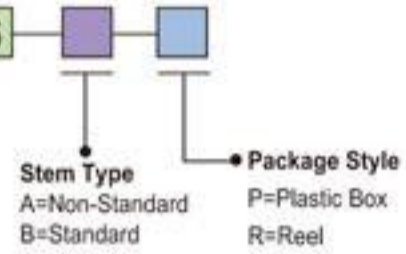
# H SERIES

## Lever and Push Operation Type Switch Tact Switch



### HOW TO ORDER

T M H U 2 6



### Features

- The control unit provides both momentary operation by lever and center push operation.
- Using a single knob enables compound actions with simple operations.
- Reflow solderable.

### Applications

- For the operation of telecommunication equipment such as mobile phones, etc.
- Compact, portable units such as camcoders, portable audios, car radios, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	10mA, 5V DC
	Output voltage	1V max. at 1mA 5V DC
	Contact resistance	100mW max.
	Lifetime	100,000 Cycles
Durability	Operating force	Lever portion 70 ± 40gf    Push portion 200 ± 100gf
Mechanical performance	Travel	4-direction -25° -0° - +25°
		Push portion 0.90 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram																
		Pad Layout																
1	<p>• TMHU26</p> <p>Code table</p> <table border="1"> <thead> <tr> <th>Angle</th> <th>25° (18°)</th> <th>CW 0°</th> <th>CCW 25° (18°)</th> </tr> </thead> <tbody> <tr> <td>Terminal ①</td> <td>Shaded</td> <td></td> <td></td> </tr> <tr> <td>Terminal ②</td> <td></td> <td></td> <td>Shaded</td> </tr> <tr> <td>Terminal ③</td> <td>Shaded</td> <td>Shaded</td> <td>Shaded</td> </tr> </tbody> </table>	Angle	25° (18°)	CW 0°	CCW 25° (18°)	Terminal ①	Shaded			Terminal ②			Shaded	Terminal ③	Shaded	Shaded	Shaded	
Angle	25° (18°)	CW 0°	CCW 25° (18°)															
Terminal ①	Shaded																	
Terminal ②			Shaded															
Terminal ③	Shaded	Shaded	Shaded															



# H SERIES

## Lever and Push Operation Type Switch Tact Switch



### Features

- The control unit provides both momentary operation by lever and center push operation.
- Using a single knob enables compound actions with simple operations.
- Reflow solderable.

### Applications

- For the operation of telecommunication equipment such as mobile phones, etc.
- Compact, portable units such as camcoders, portable audios, car radios, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	10mA, 5V DC
	Output voltage	1V max. at 1mA 5V DC
	Contact resistance	100mW max.
	Lifetime	100,000 Cycles
Durability	Operating force	Lever portion 70 ± 40gf    Push portion 200 ± 100gf
Mechanical performance	Travel	4-direction -25° - 0° - +25°
		Push portion 0.90 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram																																				
		Pad Layout																																				
1	<p>• TMHU27</p> <p>Code table</p> <table border="1"> <tr> <td></td> <td>25° )</td> <td>CW</td> <td>0°</td> <td>CCW</td> <td>25° )</td> </tr> <tr> <td>Angle</td> <td colspan="2">(18°)</td> <td></td> <td colspan="2">(18°)</td> </tr> <tr> <td>Terminal</td> <td colspan="2"></td> <td></td> <td colspan="2"></td> </tr> <tr> <td>①</td> <td colspan="2"></td> <td></td> <td colspan="2"></td> </tr> <tr> <td>②</td> <td colspan="2"></td> <td></td> <td colspan="2"></td> </tr> <tr> <td>③</td> <td colspan="2"></td> <td></td> <td colspan="2"></td> </tr> </table>		25° )	CW	0°	CCW	25° )	Angle	(18°)			(18°)		Terminal						①						②						③						
	25° )	CW	0°	CCW	25° )																																	
Angle	(18°)			(18°)																																		
Terminal																																						
①																																						
②																																						
③																																						

# H SERIES

## Lever and Push Operation Type Switch Tact Switch



### Features

- The control unit provides both momentary operation by lever and center push operation.
- Using a single knob enables compound actions with simple operations.
- Reflow solderable.

### Applications

- For the operation of telecommunication equipment such as mobile phones, etc.
- Compact, portable units such as camcoders, portable audios, car radios, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	10mA, 5V DC
	Output voltage	1V max. at 1mA 5V DC
	Contact resistance	100mW max.
	Lifetime	100,000 Cycles
Durability	Operating force	Lever portion 70 ± 40gf    Push portion 200 ± 100gf
Mechanical performance	Travel	4-direction -25° - 0° - +25°
		Push portion 0.85 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram																				
		Pad Layout																				
1	<p>• TMHU28</p> <p>• TMHU29</p> <p>Code table</p> <table border="1"> <thead> <tr> <th rowspan="2">Terminal</th> <th colspan="2">25° ) CW — 0° — CCW 25° )</th> </tr> <tr> <th>(21.5° ) (11° )</th> <th>(11° ) (21.5° )</th> </tr> </thead> <tbody> <tr> <td>①</td> <td>Shaded</td> <td></td> </tr> <tr> <td>②</td> <td>Shaded</td> <td></td> </tr> <tr> <td>③</td> <td></td> <td>Shaded</td> </tr> <tr> <td>④</td> <td></td> <td>Shaded</td> </tr> <tr> <td>⑤</td> <td>Shaded</td> <td>Shaded</td> </tr> </tbody> </table>	Terminal	25° ) CW — 0° — CCW 25° )		(21.5° ) (11° )	(11° ) (21.5° )	①	Shaded		②	Shaded		③		Shaded	④		Shaded	⑤	Shaded	Shaded	
Terminal	25° ) CW — 0° — CCW 25° )																					
	(21.5° ) (11° )	(11° ) (21.5° )																				
①	Shaded																					
②	Shaded																					
③		Shaded																				
④		Shaded																				
⑤	Shaded	Shaded																				

# H SERIES

## Lever and Push Operation Type Switch Tact Switch



### Features

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- Using a single knob enables compound actions with simple operations.
- Reflow solderable.

### Applications

- For the operation of telecommunication equipment such as mobile phones, etc.
- Compact, portable units such as camcoders, portable audios, car radios, etc.

### Specification

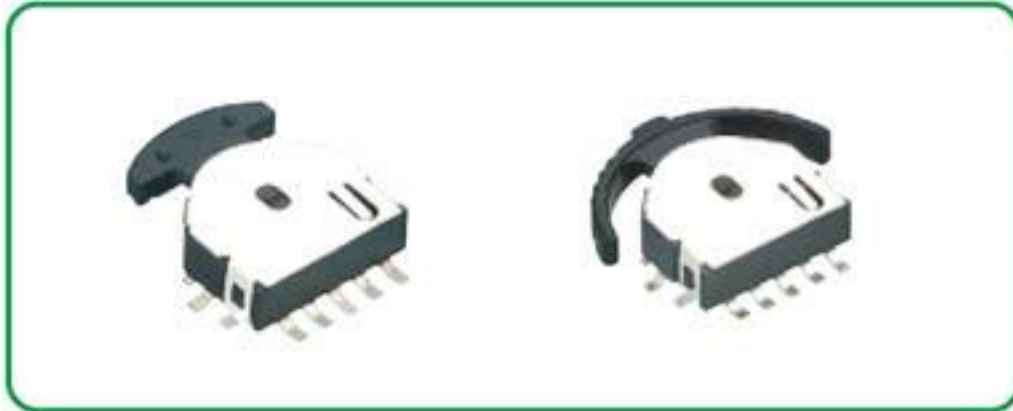
Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	10mA, 5V DC
	Output voltage	1V max. at 1mA 5V DC
	Contact resistance	100mW max.
	Lifetime	100,000 Cycles
Durability	Operating force	Lever portion 70 ± 40gf    Push portion 250 ± 100gf
Mechanical performance	Travel	4-direction -20° -0° - +20°
		Push portion 0.70 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram								
		Pad Layout								
1	<p>• TMHU32</p>									
2	<p>• TMHU33</p> <p>Code table</p> <table border="1"> <thead> <tr> <th>Angle</th> <th>Terminal</th> </tr> </thead> <tbody> <tr> <td>20°</td> <td>(15°)</td> </tr> <tr> <td>0°</td> <td>(15°)</td> </tr> <tr> <td>20°</td> <td>(15°)</td> </tr> </tbody> </table>	Angle	Terminal	20°	(15°)	0°	(15°)	20°	(15°)	
Angle	Terminal									
20°	(15°)									
0°	(15°)									
20°	(15°)									

# H SERIES

## Lever and Push Operation Type Switch Tact Switch



### Features

- The control unit provides both momentary operation by lever and center push operation.
- Using a single knob enables compound actions with simple operations.
- Reflow solderable.

### Applications

- For the operation of telecommunication equipment such as mobile phones, etc.
- Compact, portable units such as camcoders, portable audios, car radios, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	10mA, 5V DC
	Output voltage	1V max. at 1mA 5V DC
	Contact resistance	100mW max.
	Lifetime	100,000 Cycles
Durability	Operating force	Lever portion 70 ± 40gf    Push portion 200 ± 100gf
Mechanical performance	Travel	4-direction -25° -0° - +25°
		Push portion 0.85 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram																								
		Pad Layout																								
1	<p>• TMHM30      • TMHM31</p> <p>Code table</p> <table border="1"> <thead> <tr> <th>Angle</th> <th>35° (30°) (10°)</th> <th>(10°) (30°) 35°</th> </tr> </thead> <tbody> <tr> <td>Terminal a</td> <td></td> <td></td> </tr> <tr> <td>Terminal b</td> <td></td> <td></td> </tr> <tr> <td>Terminal c</td> <td></td> <td></td> </tr> <tr> <td>Terminal d</td> <td></td> <td></td> </tr> <tr> <td>Terminal e</td> <td></td> <td></td> </tr> <tr> <td>Terminal f</td> <td></td> <td></td> </tr> <tr> <td>Terminal g</td> <td></td> <td></td> </tr> </tbody> </table>	Angle	35° (30°) (10°)	(10°) (30°) 35°	Terminal a			Terminal b			Terminal c			Terminal d			Terminal e			Terminal f			Terminal g			
Angle	35° (30°) (10°)	(10°) (30°) 35°																								
Terminal a																										
Terminal b																										
Terminal c																										
Terminal d																										
Terminal e																										
Terminal f																										
Terminal g																										

# H SERIES

## 360/Degree Rotation Function Keys



### HOW TO ORDER

T M H F 3 7



**Stem Color**  
 B=Black  
 W=White  
 R=Red  
 G=Green  
 U=Blue

**Package Style**  
 P=Plastic Box  
 R=Reel

### Features

- Flexible operation capabilities
- Various colors are available

### Applications

- Mainly used in mobile phones operating on the function keys

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	10mA, 5V DC
	Output voltage	1V max. at 1mA 5V DC
	Lifetime	100,000 Cycles
Durability	Operating force	70 ± 40gf
Mechanical performance	Rotation	360°
	Travel	0.55 ± 0.2mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TMHF37</li> </ul>	

# JIANFU ELECTRONICS

## I SERIES LIGHT SWITCH



LS601



LS603



LS604



LS606



LS607



LS609



LS610



LS1201



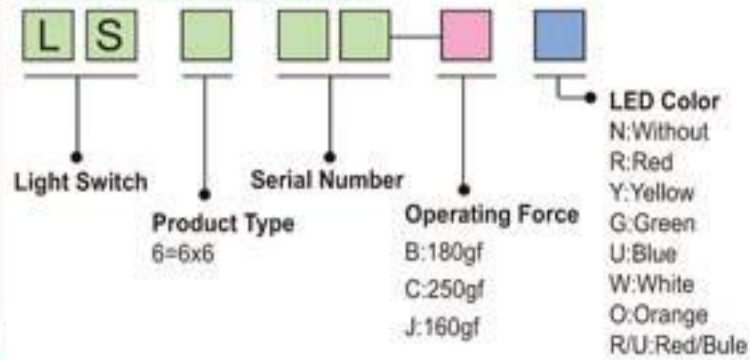
LS1202

# I SERIES

## 6.0x6.0 Led Built-in Type



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-25℃ to +85℃
Electrical performance	Rating	100mA, 30V DC
	Insulation resistance	100MWmin. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mWmax.
Durability	Lifetime	100,000 Cycles Min
Mechanical performance	Operating force	J:160gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

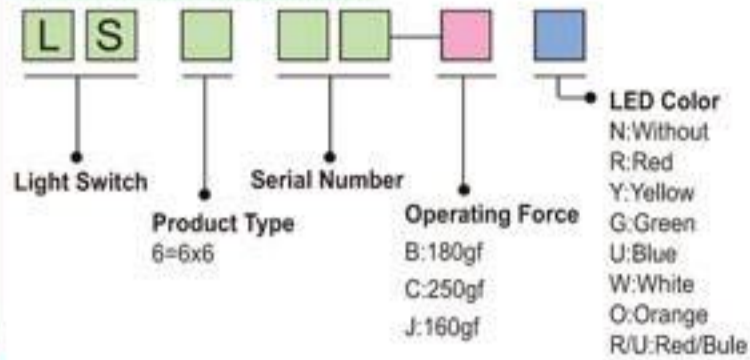
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• LS601</p>	
2	<p>• LS602</p>	

# I SERIES

## 6.0x6.0 Led Built-in Type



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-25℃ to +85℃
Electrical performance	Rating	100mA, 30V DC
	Insulation resistance	100MW/min, 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles Min
Mechanical performance	Operating force	J:160gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• LS603</p>	
2	<p>• LS604</p>	

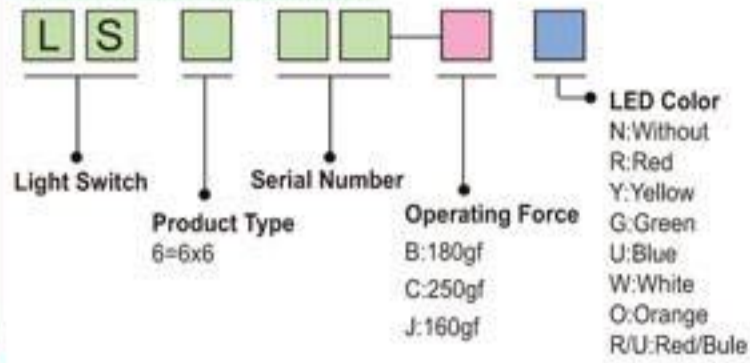


# I SERIES

## 6.0x6.0 Led Built-in Type



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-25℃ to +85℃
Electrical performance	Rating	100mA, 30V DC
	Insulation resistance	100MWmin, 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles Min
Mechanical performance	Operating force	J:160gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

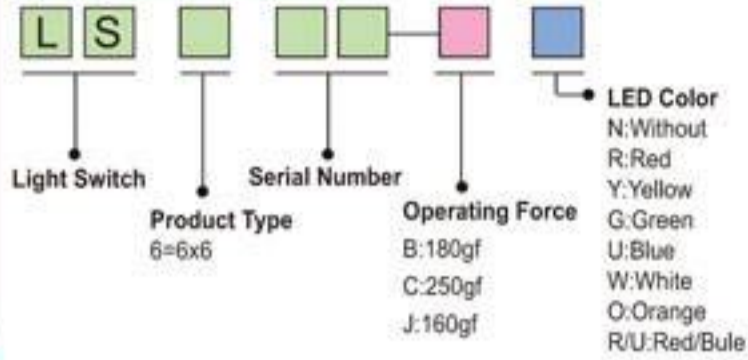
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• LS605</p>	
2	<p>• LS606</p>	

# I SERIES

## 6.0x6.0 Led Built-in Type



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-25℃ to +85℃
Electrical performance	Rating	100mA, 30V DC
	Insulation resistance	100MW/min, 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles Min
Mechanical performance	Operating force	J:160gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

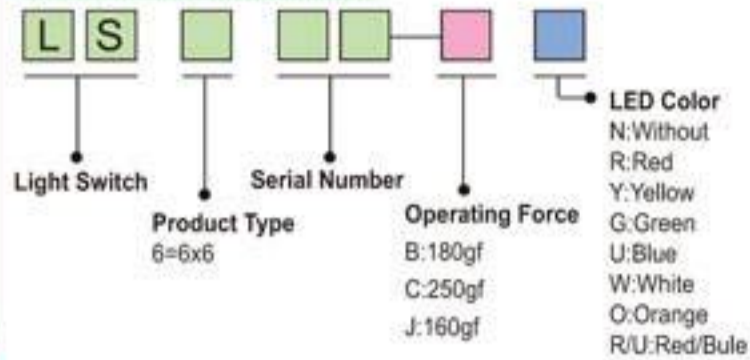
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• LS607</li> </ul>	
2	<ul style="list-style-type: none"> <li>• LS608</li> </ul>	

# I SERIES

## 6.0x6.0 Led Built-in Type



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-25℃ to +85℃
Electrical performance	Rating	100mA, 30V DC
	Insulation resistance	100MWmin, 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles Min
Mechanical performance	Operating force	J:160gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

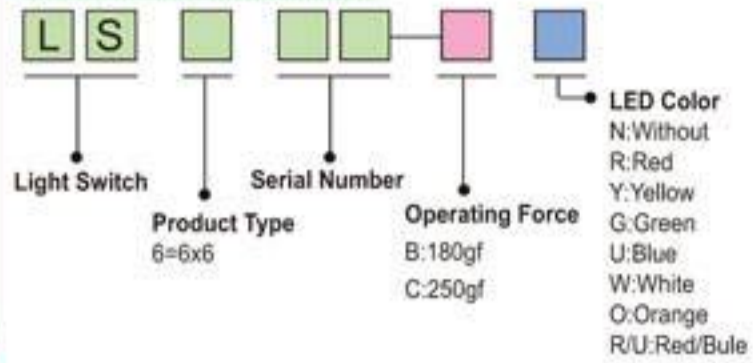
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• LS609</p>	
2	<p>• LS610</p>	

# I SERIES

## 6.0x6.0 Led Built-in Type



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-25℃ to +85℃
Electrical performance	Rating	100mA, 30V DC
	Insulation resistance	100MWmin, 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles Min
Mechanical performance	Operating force	J:160gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

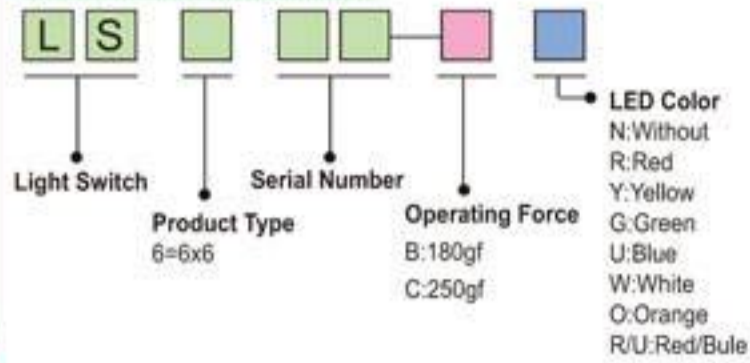
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• LS611</p>	
2	<p>• LS612</p>	

# I SERIES

## 6.0x6.0 Led Built-in Type



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-25℃ to +85℃
Electrical performance	Rating	100mA, 30V 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	J:160gf B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

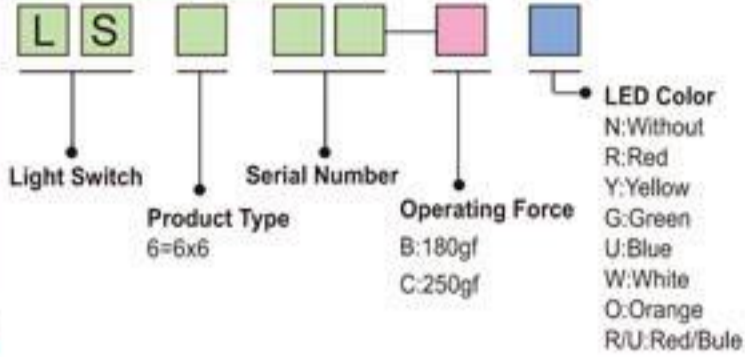
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• LS613</p>	
2	<p>• LS614</p>	

# I SERIES

## 6.0x6.0 Led Built-in Type



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-25°C to +85°C
Electrical performance	Rating	100mA, 30V 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	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

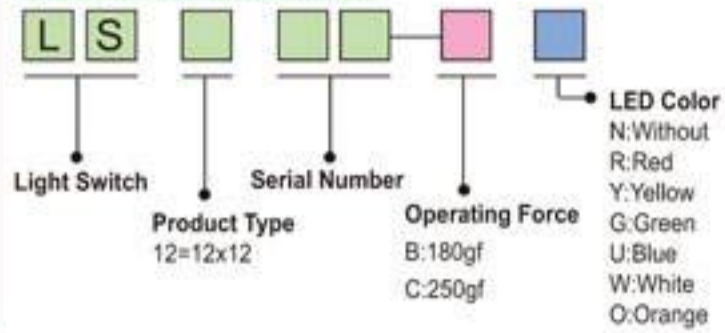
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• LS615</li> </ul>	
2	<ul style="list-style-type: none"> <li>• LS616</li> </ul>	

# I SERIES

## 12.0x12.0 With Light Tact Switch



### HOW TO ORDER



### Features

- High Brilliance Lighted Switch
- High Reliability
- Variety of colors
- Fully back-lit for high brilliance

### Applications

- Control panels
- Variety of applications

### Specification

Items		Standard
Operating temperature range		-10°C to +60°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	100,000 Cycles min
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.30 ± 0.1mm

### LED Data

Peak Reverse Voltage	See ordering guide
Max. Forward Current	20mA
Color	IF Forward Direct Current (mA)
Yellow	25
Red	25
Green	25

VF Forward Voltage (v) TYP.	NN Peak Emission Wavelength(nm)
4.2	630
4.2	565
4.2	589

### Diagram

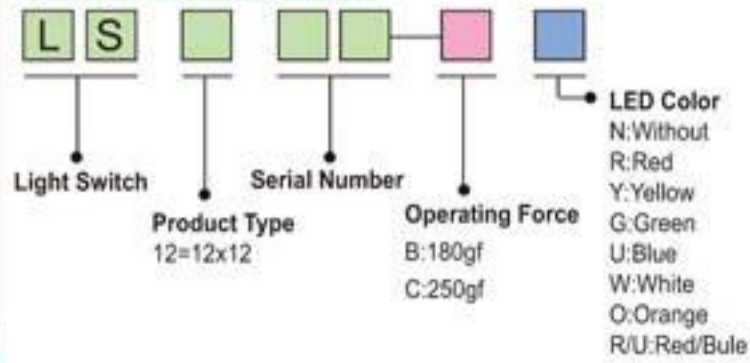
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• LS1201</li> </ul>	

# I SERIES

## 12x12 Led Built-in Type



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted on PC board.
- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- Standard knobs are available.

### Applications

- Operating switches in all types of electronic equipment such as audio apparatus, office equipment, communications apparatus, measuring instruments, TV sets, VCRs, etc

### Specification

Items		Standard
Operating temperature range		-25°C to +85°C
Electrical performance	Rating	100mA, 30V 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	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	<p>• LS1202</p>	
2	<p>• LS1203</p>	



# JIANFU ELECTRONICS

## J SERIES TACT SWITCH



TVJP01



THJP03



TVJP04



THJP05



TVJP06



TVJP11

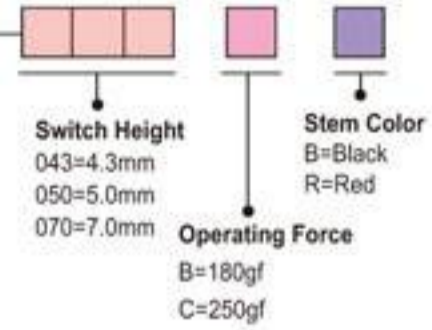
# J SERIES

## 6.0x6.0 Sealed Tact Switch



### HOW TO ORDER

T V J P 0 1



### Features

- Some of output terminals can be also used as jumper leads, thus making circuit design easy.

### Applications

- Operating switches in all types of electronic equipment, such as audio devices, office equipment, communication devices, measuring instruments, TVs, video recorders, etc.

### Specification

Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:300,000 Cycles C:200,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.30 ± 0.1mm

### Diagram

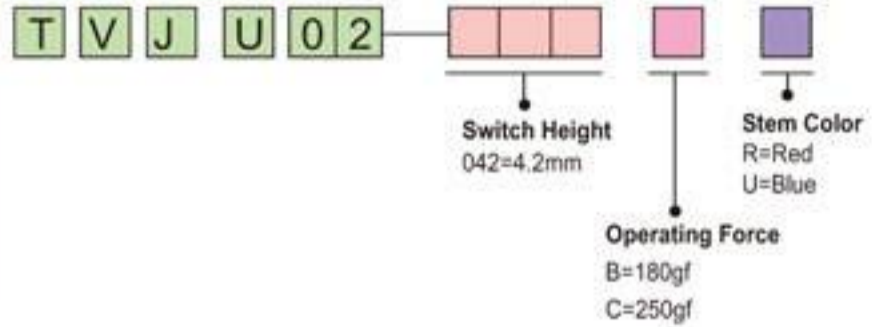
No.	Dimensions	Circuit Diagram Pad Layout				
1	<ul style="list-style-type: none"> <li>TVJP01</li> </ul> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td>H</td></tr> <tr><td>4.3</td></tr> <tr><td>5.0</td></tr> <tr><td>7.0</td></tr> </table>	H	4.3	5.0	7.0	
H						
4.3						
5.0						
7.0						

# J SERIES

## 6.8x6.8 Sealed Tact Switch



### HOW TO ORDER



### Features

- Some of output terminals can be also used as jumper leads, thus making circuit design easy.
- This switch is assembling from the P.C.board bottom of surface insert,the movement part in the frontage,which is suitable to switch's highly lowest environment.

### Applications

- Operating switches in all types of electronic equipment, such as audio devices, office equipment, communication devices, measuring instruments, TVs, video recorders, etc.

### Specification

Items		Standard
Operating temperature range		-30℃ to +85℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:300,000 Cycles C:200,000 Cycles
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

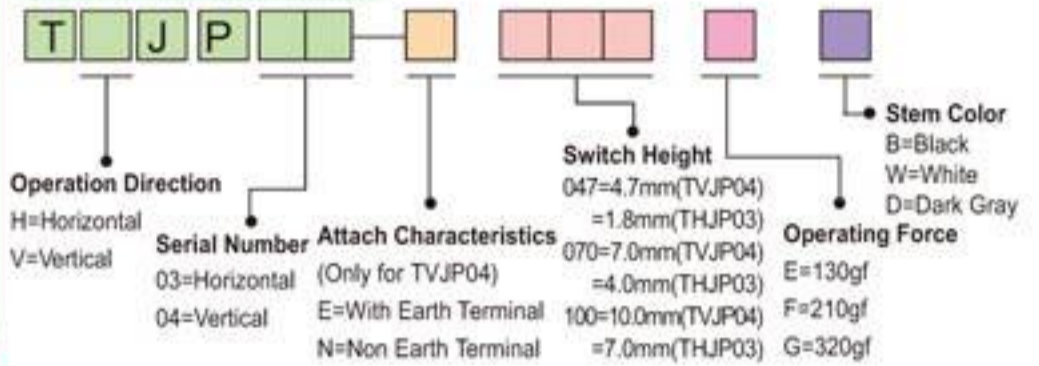
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• TVJU02</li> </ul>	

# J SERIES

## 8.0x8.0 Sealed Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted onto a PC board.
- Part of output terminals can be used as jumper leads, thus making circuit design easy.

### Applications

- For operating various electronic devices such as washing machines requiring water proof construction

### Specification

Items		Standard
Operating temperature range		-40°C to +90°C
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	500mW max.
Durability	Lifetime	100,000 Cycles Min
Mechanical performance	Operating force	E:130gf F:210gf G:320gf
	Travel	0.25 ± 0.1mm

### Diagram

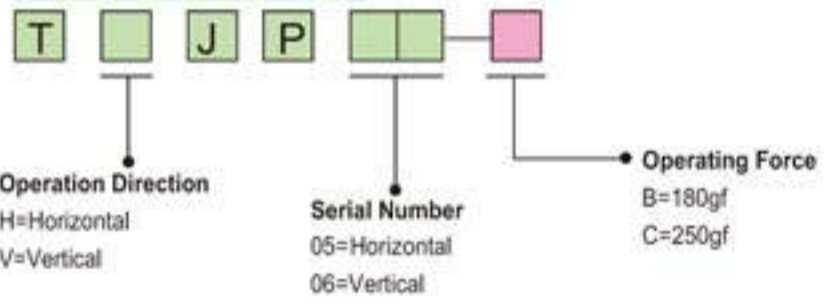
No.	Dimensions	Circuit Diagram Pad Layout	
1	<p>• THJP03</p>		
2	<p>• TVJP04</p>		

# J SERIES

## 7.0x7.0 Sealed Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted onto a PC board.
- Part of output terminals can be used as jumper leads, thus making circuit design easy.

### Applications

- For operating various electronic devices such as washing machines requiring water proof construction

### Specification

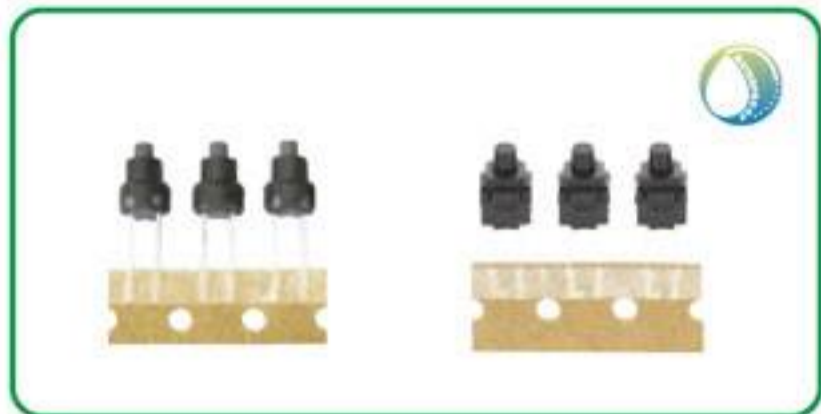
Items		Standard
Operating temperature range		-40℃ to +90℃
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	500mW max.
Durability	Lifetime	100,000 Cycles Min
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Diagram

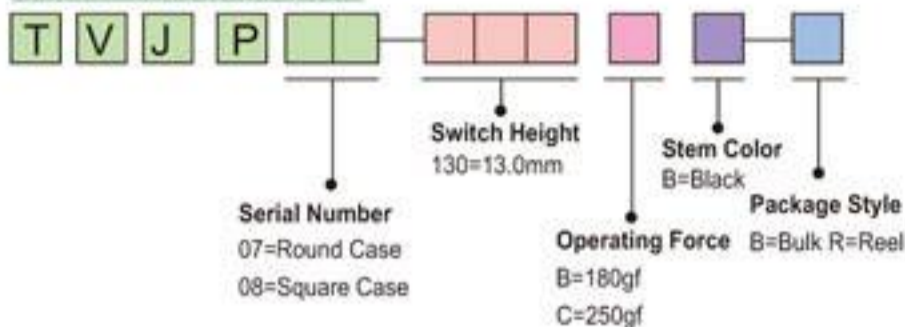
No.	Dimensions	Circuit Diagram
		Pad Layout
1	<ul style="list-style-type: none"> <li>• THJP05</li> </ul>	
2	<ul style="list-style-type: none"> <li>• TVJP06</li> </ul>	

# J SERIES

## 8.0x8.0 Washable Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted onto a PC board.
- Part of output terminals can be used as jumper leads, thus making circuit design easy.

### Applications

- For operating various electronic devices such as washing machines requiring water proof construction

### Specification

Items	Standard	
Operating temperature range	-40℃ to +90℃	
Electrical performance	Rating	50mA, 12V DC
	Insulation resistance	100MΩmin. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mΩmax.

Items	Standard	
Durability	Lifetime	100,000 Cycles Min
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.25 ± 0.1mm

### Water Resisting Performance

Temperature of water	60℃
Depth of water	10cm
Immersion duration	240h

### Diagram

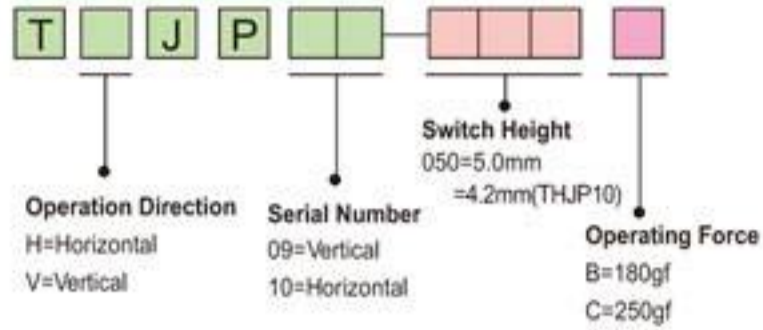
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		Pad Layout
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2	<ul style="list-style-type: none"> <li>● TVJP08</li> </ul>	

# J SERIES

## 10.0x10.0 Washable Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted onto a PC board.
- Part of output terminals can be used as jumper leads, thus making circuit design easy.

### Applications

- For operating various electronic devices such as washing machines requiring water proof construction

### Specification

Items		Standard	Items		Standard
Operating temperature range		-40°C to +90°C	Durability	Lifetime	100,000 Cycles Min
Electrical performance	Rating	50mA, 12V DC	Mechanical performance	Operating force	B:180gf C:250gf
	Insulation resistance	100MW min. 100V DC		Travel	0.30 ± 0.1mm
	Dielectric strength	250V AC for 1 min.			
	Contact resistance	500mW max.			

### Water Resisting Performance

Items	Model	Vertical type	Horizontal type
Temperature of water		60°C	60°C
Depth of water		10cm	10cm
Immersion duration		240h	1h

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	• TVJP09 	
2	• THJP10 	

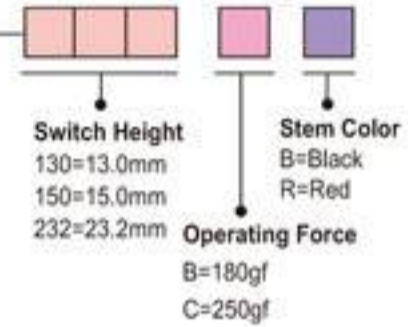
# J SERIES

## 10.0x10.0 Washable Tact Switch



### HOW TO ORDER

T V J P 1 1



### Features

- Snap-in type, which can be directly mounted onto a PC board.
- Part of output terminals can be used as jumper leads, thus making circuit design easy.

### Applications

- For operating various electronic devices such as washing machines requiring water proof construction

### Specification

Items		Standard
Operating temperature range		-40℃ to +90℃
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	500mW max.
Durability	Lifetime	100,000 Cycles Min
Mechanical performance	Operating force	B:180gf C:250gf
	Travel	0.30 ± 0.1mm

### Water Resisting Performance

Temperature of water	60℃
Depth of water	10cm
Immersion duration	240h

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout									
		Pad Layout									
1	<p>• TVJP11</p> <table border="1"> <thead> <tr> <th>H</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>3.8</td> </tr> <tr> <td>15</td> <td>3.5</td> </tr> <tr> <td>23.2</td> <td>3.5</td> </tr> </tbody> </table>	H	A	13	3.8	15	3.5	23.2	3.5		
H	A										
13	3.8										
15	3.5										
23.2	3.5										

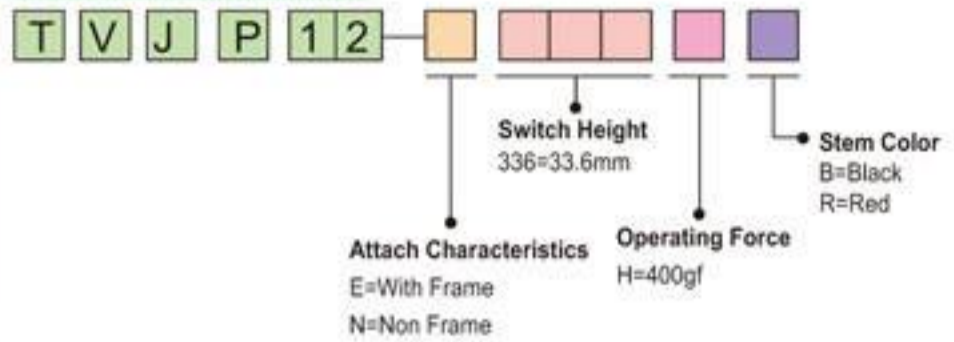


# J SERIES

## 10.0x10.0 Washable Tact Switch



### HOW TO ORDER



### Features

- Snap-in type, which can be directly mounted onto a PC board.
- Part of output terminals can be used as jumper leads, thus making circuit design easy.

### Applications

- For operating various electronic devices such as washing machines requiring water proof construction

### Specification

Items		Standard	Items		Standard
Operating temperature range		-20°C to +70°C	Durability	Lifetime	100,000 Cycles Min
Electrical performance	Rating	50mA, 12V DC	Mechanical performance	Operating force	H:400gf ± 70gf
	Insulation resistance	100MW min. 100V DC		Travel	0.40 ± 0.2mm
	Dielectric strength	250V AC for 1 min.			
	Contact resistance	100mW max.			

### Water Resisting Performance

Items	Model	Vertical type	Horizontal type
Temperature of water		60°C	60°C
Depth of water		10cm	10cm
Immersion duration		240h	1h

### Diagram

No.	Dimensions	Circuit Diagram
		Pad Layout
1	• TVJP12-N 	
2	• TVJP12-E 	

# J SERIES

## 6.0x6.0 Washable Tact Switch



### HOW TO ORDER

T V J P 1 3



#### Switch Height

- 050=5.0mm
- 055=5.5mm
- 060=6.0mm
- 065=6.5mm
- 070=7.0mm

#### Operating Force

- B=180gf
- C=250gf

### Features

- Snap-in type, which can be directly mounted onto a PC board.
- Part of output terminals can be used as jumper leads, thus making circuit design easy.

### Applications

- For operating various electronic devices such as washing machines requiring water proof construction

### Specification

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

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout													
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# J SERIES

## 8.0x8.0 Washable Tact Switch



### HOW TO ORDER

T V J P 1 4



#### Switch Height

065=6.5mm

070=7.0mm

075=7.5mm

080=8.0mm

085=8.5mm

#### Operating Force

B=180gf

C=250gf

### Features

- Snap-in type, which can be directly mounted onto a PC board.
- Part of output terminals can be used as jumper leads, thus making circuit design easy.

### Applications

- For operating various electronic devices such as washing machines requiring water proof construction

### Specification

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

### Diagram

No.	Dimensions	Circuit Diagram Pad Layout												
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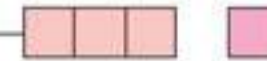
# J SERIES

## 12x12 Washable Tact Switch



### HOW TO ORDER

T V J P 1 5



#### Switch Height

065=6.5mm

070=7.0mm

075=7.5mm

080=8.0mm

085=8.5mm

#### Operating Force

B=180gf

C=250gf

### Features

- Some of output terminals can be also used as jumper leads, thus making circuit design easy.

### Applications

- Operating switches in all types of electronic equipment, such as audio devices, office equipment, communication devices, measuring instruments, TVs, video recorders, etc.

### Specification

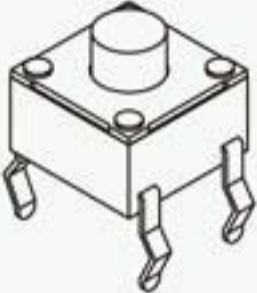
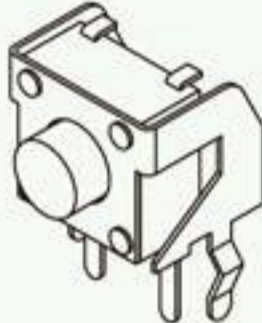
Items		Standard
Operating temperature range		-30°C to +85°C
Electrical performance	Rating	50mA. 12V DC
	Insulation resistance	100MW min. 100V DC
	Dielectric strength	250V AC for 1 min.
	Contact resistance	100mW max.
Durability	Lifetime	B:C:100,000 Cycles
Mechanical performance	Operating force	B:180gf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

### Diagram

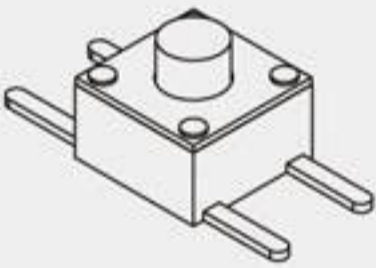
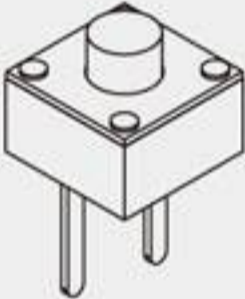
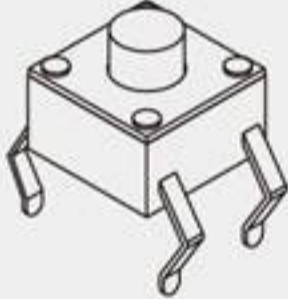
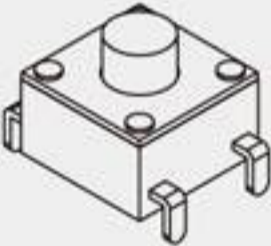
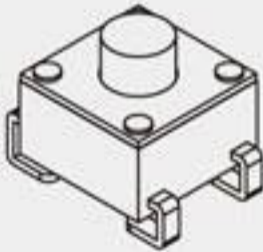
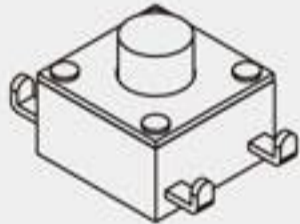
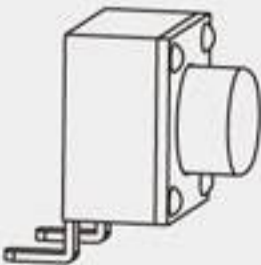
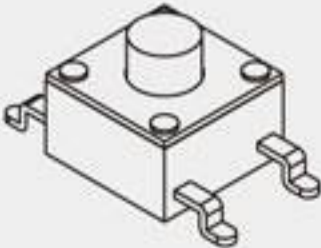
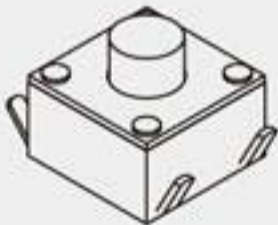
No.	Dimensions	Circuit Diagram Pad Layout												
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# TERMINAL TYPE

■ When order switch, please refer to the following illustration for your terminal choice

Vertical	Horizontal
	

## ■ Terminal Type

 <p data-bbox="319 1703 592 1748">F: Flat Terminal</p>	 <p data-bbox="921 1703 1100 1748">T: Tapping</p>	 <p data-bbox="1367 1703 1829 1748">P: Through Hole Terminals</p>
 <p data-bbox="375 2166 525 2211">J: J type</p>	 <p data-bbox="917 2175 1066 2220">J: J type</p>	 <p data-bbox="1484 2172 1780 2217">R: Reverse Lead</p>
 <p data-bbox="363 2650 531 2694">M: S.M.T</p>	 <p data-bbox="921 2650 1089 2694">M: S.M.T</p>	 <p data-bbox="1530 2644 1688 2689">U:U type</p>

## CAUTION

### Caution

1. Note that terminals might suffer deformation of the switch and the defects in electrical performance, if the load is applied to the terminals during soldering.

2. If you use a through-hole PC board or a PC board thinner or thicker than the recommendation, there may be greater heat stress. Verify the soldering conditions thoroughly before use.

3. When soldering twice, wait until the first soldered portion cools to normal temperature. Continuous heating will deform the external portions, loosen or dislodge terminals, or may deteriorate their electrical characteristics.

4. Verify soldering conditions under actual mass production conditions.

5. This product is designed and manufactured assuming that it is to be used with the resistance for direct current. If you use other kinds of resistance [inductive (L) or capacitive (C)], consult with us beforehand.

6. For the sizes of holes and patterns on a PC board for mounting a switch, refer to the recommended dimensions in the outline drawings.

7. This switch is designed for manually operated units. Do not use this switch in a mechanical detection unit. For detection purposes, please use our detection switch.

8. The switch will break if you apply a greater stress than that specified. Take great care not to let the switch be subject to greater stress than specified.

9. Do not press the side of the stem.

10. Be sure to push the center position of a flat stem switch. Extreme care is required for a hinge structure type because the stem press position moves when it is pressed.

11. If you put the board with the switch in the oven so as to harden adhesive for other parts, consult with us.

12. When corrosive gas is generated by a peripheral material of a product using the TACT switch, malfunctions such as imperfect contacts can occur. Check this point thoroughly in advance.

13. The contact resistance of a rubber contact type changes depending on pressure load. Confirm that it functions sufficiently when you use this TACT switch with a voltage divider circuit.

14. Be aware of dust intrusion into an unsealed-type TACT switch.

15. Storage method


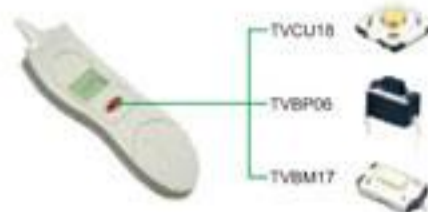

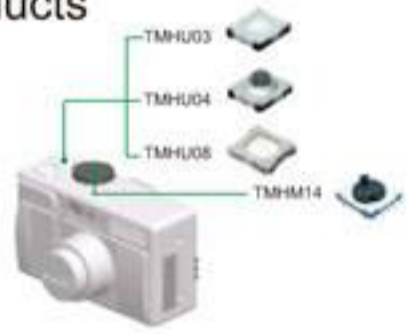
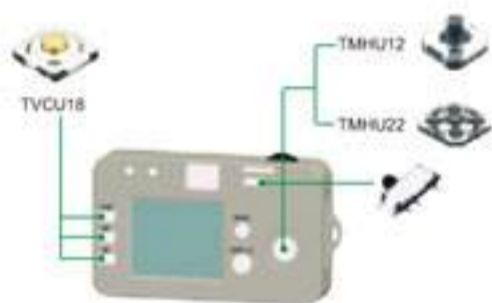
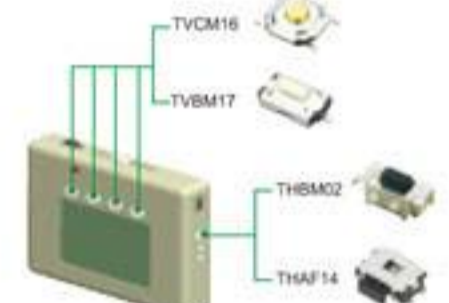
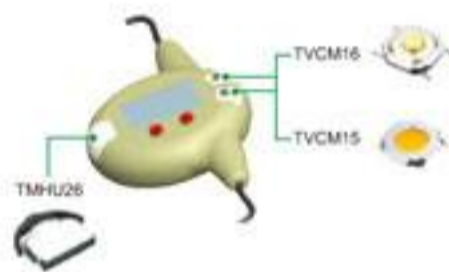

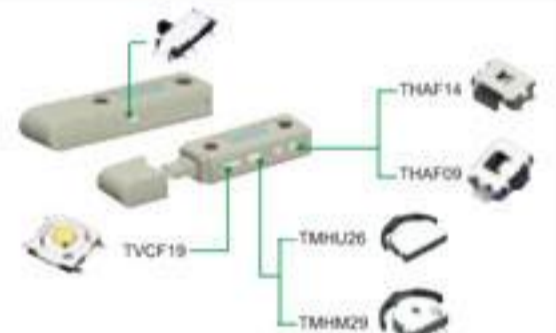


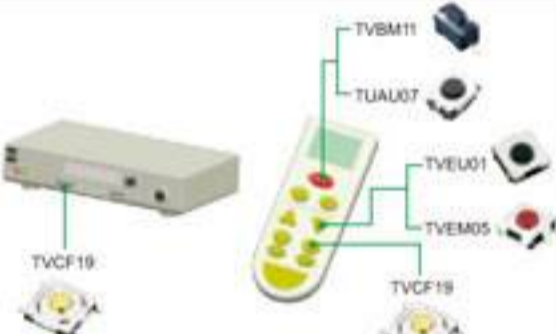



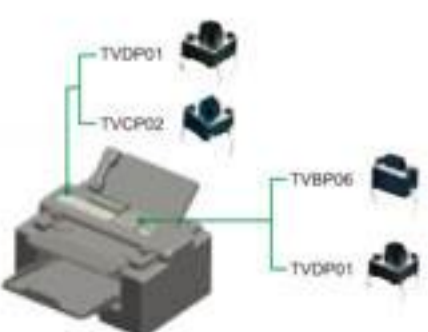
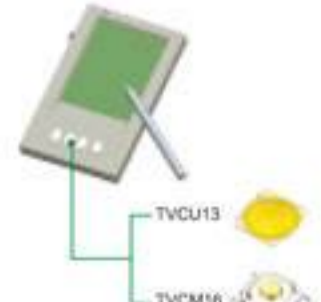

(1) If you do not use the product immediately, store it just as delivered in the following environment: with neither direct sunshine nor corrosive gas and in normal temperatures. However, it is recommended that you should use it as soon as possible or within six months from the date of delivery at the most.

(2) After you break the seal, you should put the remainder in a plastic bag to shut out outside air, and store it in the same environment mentioned above. You should use it up as soon as possible.



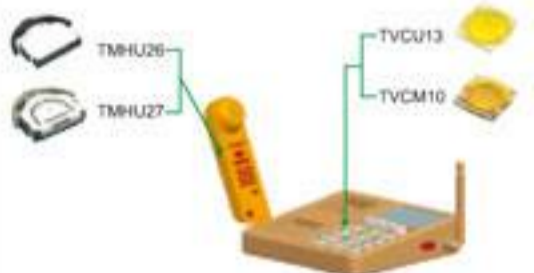
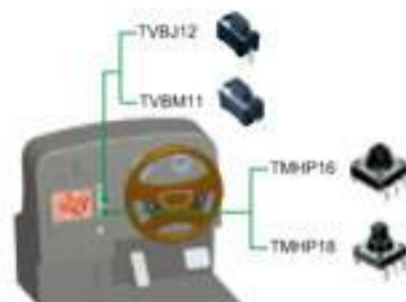
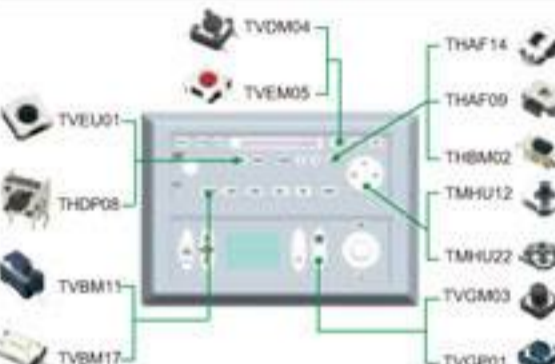

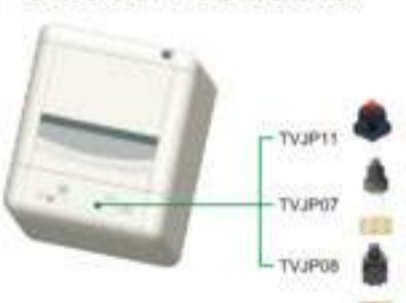
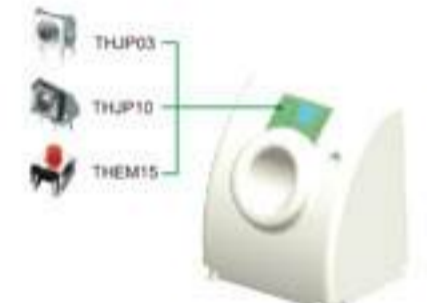
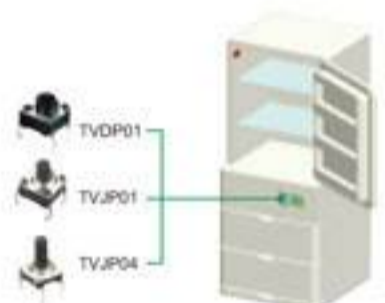



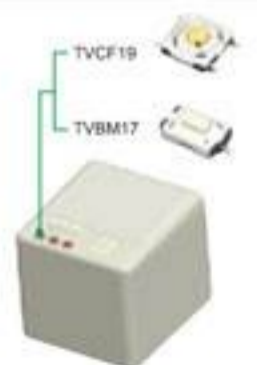





(3) Do not stack too many switches for safety.

(4) Store the key switches with the switch in the released position.

# APPLICATION

<p><b>Medical Products</b></p>  <p>TVBU10 TVBM17 LS601</p>	 <p>TVCU18 TVBP06 TVBM17</p>	 <p>TVCM15 TVEU01 TVCM01 TVGP01</p>
<p><b>AV Products</b></p>  <p>TMHU03 TMHU04 TMHU05 TMHM14</p>	 <p>TVCU18 TMHU12 TMHU22</p>	 <p>TVCM16 TVBM17 THBM02 THAF14</p>
 <p>TMHU26 TVCM16 TVCM15</p>	 <p>TMHM14 THBM02 THAF14</p>	 <p>THAF14 THAF09 TVCF19 TMHU26 TMHM29</p>
 <p>TVDP01 THDP08 THBP07</p>	 <p>TVCU18 THBP07</p>	 <p>TVBM11 TUAU07 TVEU01 TVEM05 TVCF19 TVCF19</p>
<p><b>Information Equipment Products</b></p>  <p>TVDP01 TVCP02</p>	 <p>TVDP01 TVGP01</p>	 <p>TVEU01 TVCF19 THBP07</p>
 <p>TVDP01 TVCP02 TVBP06 TVDP01</p>	 <p>TVCU13 TVCM16</p>	 <p>TVDP01 THDP08 TVDT17 TVDP01</p>

# APPLICATION

<p><b>Information Equipment Products</b></p>  <p>THAM04 THAM05 TVCM16</p>	 <p>THAM04 THAF01 THAF09 TMHU09 TMHU12 TMHU22</p>	 <p>TMHU26 TMHU27 TVCU13 TVCM10</p>
 <p>TVBJ12 TVBM11 TMHP16 TMHP18</p>	 <p>TVDM04 TVEM05 THAF14 THAF09 THBM02 TMHU12 TMHU22 TVGM03 TVGP01</p>	 <p>TVEM05 TVDM04 TVEM11</p>
<p><b>White Goods Products</b></p>  <p>TVJP11 TVJP07 TVJP08</p>	 <p>THUP03 THJP10 THEM15</p>	 <p>TVDP01 TVJP01 TVJP04</p>
 <p>TVDP01 TVBP06</p>	 <p>TVJP01 TVDP01</p>	 <p>TVDP01 TVBP06</p>
 <p>TVCF19 TVBM17</p>	 <p>THBM02 THDM13</p>	 <p>TVCM16 TVBM17 THBM02</p>
 <p>TVJP07 TVJP08 TVJP01</p>	 <p>TVDP01 TVEM05</p>	 <p>TVJP01 TVJP04</p>





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# switches



2011 VERSION



# JIANFU

ELECTRONICS



## 公司简介

键富电子有限公司创建于2002年，是专业生产、开发轻触开关系列的厂家。在开关市场细分中我们选择了轻触开关，依靠过硬的技术优势通过不断的研发和积累制造经验，致力于打造轻触开关最优秀的生产商。

公司主要产品有：微型MINI、防尘防水、带灯、多功能、柔软型等系列轻触开关，产品被广泛用于各种音响设备、办公设备、通讯设备、测量仪器、TV、VCR等各种操作。

键富电子经过不断的发展壮大，现已通过ISO9001:2008质量管理体系及ISO14001:2004环境管理体系认证，2005年度被市政府评为民营诚信企业，并成为松下、Sony等国际大型企业的绿色合作伙伴。公司采用国内一流的生产和测试设备，不断引进国外的先进生产工艺，实现全自动化生产。检测流水线。本公司坚持“高起点、高质量、高速度”的发展战略，本着“追求卓越、创造一流”的经营宗旨，努力提高检测手段，加强质量控制力度，为顾客提供满意的产品。

## Brief Introduction

Zhejiang Jianfu Electronics Co., Ltd, founded in 2002, is a professional manufacturer engaged in producing&developing tact switches. Rely on technological superiority, 20 years' production and development experience, we are dedicated to growing into an excellent manufacturer of tact switch.

Our main products, divided into mini type, snap-in type, SMD type, dust-proof & waterproof type, illuminated type, multi-function type, soft-feeling type are tact switches are widely used in all kinds of electronic equipment such as acoustic equipment, office facilities, communication apparatus, measuring instrument, Audio Visual Equipment etc.

Through the continuous development and expansion, we have obtained the certificates of ISO9001:2008 and ISO14001:2004 and become green partner of Japanese Panasonic & Sony, well known for their rigid quality standards. We have accomplished full-automatic producing&testing line by adopting the top-notch producing & testing equipment and continually brought in advanced production technology from Japan and Korea. To supply our customers with satisfied products, we insist on the developing stratagem of "high starting point, high quality, high speed", follow the business principle of "pursue excellence, create first class products", upgrade our testing methods and reinforce the quality control.



































































键富标志主体由“键富”的拼音大写“J.F.”组成。  
金色，代表财富、高贵、辉煌，有着太阳般的光辉，  
象征键富积极向上、蓬勃发展。  
蓝色，代表冷静、诚实、安详，有着天空辽阔的蔚蓝，  
象征键富诚信对人、和谐共处。  
金色与蓝色相配，显得美丽、清新。
































由“J”和“F”演变成一只飞翔的领头雁，加上代表太阳的椭圆外框，与金色阳光形成一体，寓意丰富，整体造型自然流畅，简洁有力，视觉效果强烈，表明企业及全体员工团结一致，对目标坚定不移，一旦展翅高飞，它们就义无反顾，永远成群成列，不离航向。













































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Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page
				W	D	H				
Tact Switch	Surface	THAF01	 Horizontal Push	3.5	3	1.4	—		4Kpcs/Reel	2
		TVAF02	 Miniature	3.5	3	1.8	—		3Kpcs/Reel	
		TVAF03	 Miniature	3.35	3.35	1.5/2.0			4Kpcs/Reel	3
		THAM04	 Horizontal Push	4.6	2.3	1.8	—		3Kpcs/Reel	4
		THAM05	 Horizontal Push	4.6	2.3	1.8	—		3Kpcs/Reel	
		TVAF06	 Miniature	3.9	2.9	2.0	—		3Kpcs/Reel	5
		TVAU07	 Miniature	3.9	2.9	2.0	—		3Kpcs/Reel	
		THAU08	 Horizontal Push	3.9	2.9	1.5	—		4Kpcs/Reel	6
		THAF09	 Horizontal Push	3.9	2.9	1.5	—		4Kpcs/Reel	
		TVAU10	 Compact High Operating Force	4.2	3.2	2.5	—		3Kpcs/Reel	7
		TVAF11	 Compact High Operating Force	4.2	3.2	2.5	—		3Kpcs/Reel	
		THAM12	 Horizontal Push	4.5	2.56	3.3	—		2Kpcs/Reel	8
		THAU13	 Horizontal Push	4.7	3.5	1.6	—		3Kpcs/Reel	9
		THAF14	 Horizontal Push	4.7	3.5	1.6	—		3Kpcs/Reel	
		TVAU15	 Miniature	4.7	3.5	2.1/2.5			4Kpcs/Reel	10
		THAM16	 Embedded	5.7	2.5	3.5	—		2Kpcs/Reel	11
		TVAF17	 Miniature	3.35	3.35	0.85			5Kpcs/Reel	12
		TVAF18	 Miniature	3.1	3.1	0.75	—		5Kpcs/Reel	13
		TVAU19-H	 Miniature	3	2.7	0.65	—		10Kpcs/Reel	14
		TVAU19-N	 Low-Profile	3	2.7	0.55	—		10Kpcs/Reel	
		THAM20	 Horizontal Push	4.0	2.0	1.5	—		3Kpcs/Reel	15
		THAM21	 Horizontal Push	4.6	2.4	1.7	—		3Kpcs/Reel	16
		TVAU22	 Miniature	3.7	3.7	0.35	—		10Kpcs/Reel	17
		TVAU23	 Miniature	4.7	3.5	2.5	—		3Kpcs/Reel	18
TVAF24	 Miniature	4.7	3.5	2.5	—		3Kpcs/Reel			
Item	Type	Series	Features	Dimensions(mm)			Earth	Halogen -Free	Package	Page
Tact Switch < B Series >	Surface Mount	TVBM01	 Soft Feeling	6.3	3.7	2.5	—	—	3Kpcs/Reel	20
		THBM02	 Horizontal Push	7.0	2.5	3.5	—		2Kpcs/Reel	21
		THBM03	 Horizontal Push	7.0	2.5	3.5	—		2Kpcs/Reel	
		THBM05	 Horizontal Push	6.1	4.0	1.8	—	—	2Kpcs/Reel	23
		TVBR14	 Miniature	6.0	3.5	4.3/5.0	—		1.5Kpcs/Reel	24
		TVBF09	 Miniature	6.0	3.5	4.3/5.0	—		1.5Kpcs/Reel	25
		TVBU10	 Miniature	6.0	3.5	4.3/5.0	—		1.5Kpcs/Reel	


# INDEX

Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page	
				W	D	H					
Tact Switch < B Series >	Surface Mount	TVBM11			6.0	3.5	4.3/5.0	—	○	1.5Kpcs/Reel	26
		TVBM17		Dust-Proof	6.1	3.7	2.5	○	○	3Kpcs/Reel	28
		TVBF18		Dust-Proof	6.1	3.7	2.5	○	○	3Kpcs/Reel	
		TVBU19		Dust-Proof	6.1	3.7	2.5	○	○	3Kpcs/Reel	
		TVBM20			6.1	3.5	2.5	—	—	3Kpcs/Reel	29
		TVBF22		Normal Closed	6.0	3.8	2.6	—	○	3Kpcs/Reel	30
	TVBF23		Normal Closed	6.0	3.8	2.6	—	—	3Kpcs/Reel	31	
	Snap-in	THBP04		Horizontal Push	6.0	3.5	3.5	—	—	1Kpcs/Bulk	22
		THBP07		Horizontal Push	7.3	6	4.3	—	—	1Kpcs/Bulk	
		TVBP06			6.0	3.5	4.3/5.0	—	○	1Kpcs/Bulk	24
TVBJ12				6.0	3.5	4.3/5.0	—	○	1Kpcs/Bulk		
TVBP21				6.1	3.5	2.5	—	—	1Kpcs/Bulk	29	
Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page	
				W	D	H					
Tact Switch < C Series >	Surface Mount	TVCM01			4.5	4.5	3.8~7.0	—	○	2Kpcs/Reel (H=3.54, 3/15.0) 800pcs/Reel (H=6.0/7.0)	33
		TVCM04		Low-Profile	4.5	4.3	1.6	—	○	4Kpcs/Reel	34
		TVCU05		Low-Profile	4.5	4.5	0.5	—	○	10Kpcs/Reel	35
		TVCU06		Low-Profile	4.5	4.5	0.4	—	○	10Kpcs/Reel	36
		TVCM08		Dust-Proof	4.5	4.5	1.5	—	○	4Kpcs/Reel	37
		TVCM09		Low-Profile	4.5	4.5	0.55	—	○	5Kpcs/Reel	38
		TVCM10		Low-Profile	4.5	4.5	0.55	—	○	10Kpcs/Reel	39
		TVCU11		Low-Profile	5.2	5.2	0.9	○	○	4Kpcs/Reel	40
		TVCU12		Low-Profile	5.2	5.2	0.8	—	○	5Kpcs/Reel	
		TVCU13		Low-Profile	4.8	4.8	0.55	—	○	5Kpcs/Reel	41
		TVCU14		Low-Profile	4.8	4.8	0.5	—	○	5Kpcs/Reel	42
		TVCM15		Dust-Proof	5.2	5.2	1.0	○	○	4Kpcs/Reel	43
		TVCM16		Dust-Proof	5.2	5.2	1.5~4.3	○	○	4Kpcs/Reel	44
		TVCM17		Dust-Proof	5.2	5.2	1.5~4.3	○	○	4Kpcs/Reel	
		TVCU18		Dust-Proof	5.2	5.2	1.5	○	○	4Kpcs/Reel	45
		TVCF19		Dust-Proof	5.2	5.2	1.5	○	○	4Kpcs/Reel	
		TVCF20		Normal Closed	6.2	5.0	1.6	—	—	3Kpcs/Reel	46
		Snap-in	TVCP02			4.5	4.5	3.8~7.0	—	○	1Kpcs/Bulk
	TVCP03				4.5	4.5	3.8~7.0	—	○	1Kpcs/Bulk	























































# INDEX

Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page			
				W	D	H							
Tact Switch < D Series >	Surface Mount	THDM03		Horizontal Push	6.0	6.0	7.4	—		400pcs/Bulk	49		
		TVDM04			6.0	6.0	4.3~17.0	—		1Kpcs/Reel (H=4.35.0)	51		
		TVDM04-G73			6.0	6.0	7.3	—		750pcs/Reel (H=7.0) 500pcs/Reel (H=5.5/5.5)			
		THDM13		Horizontal Push	7.5	6.55	8.1	—	—	500pcs/Reel		55	
		TVDM22		Long-Life	6.2	6.2	7.3	—	—	700pcs/Reel	61		
	Snap-in	TVDP01			6.0	6.0	4.3~17.0		—	1Kpcs/Bulk	48		
		TVDP01-G73			6.0	6.0	7.3			1Kpcs/Bulk			
		TVDP02			6.0	6.0	4.3~9.5	—		1Kpcs/Bulk			
		TVDP05			6.0	6.0	4.3~17.0	—	—	1Kpcs/Bulk	50		
		TVDJ06			6.0	6.0	4.3~7.0	—	—	1Kpcs/Bulk	52		
		THDP07		Horizontal Push	7.5	6.55	4.3~7.0	—	—	1Kpcs/Bulk			
		THDP08		Horizontal Push	7.5	6.55	7.1	—	—	1Kpcs/Bulk	53		
		THDP09		Horizontal Push	7.5	6.55	7.1	—	—	1Kpcs/Bulk			
		THDP10		Horizontal Push	7.5	6.35	7.1	—	—	1Kpcs/Bulk			
		THDP11		Horizontal Push	7.5	7.5	7.0	—	—	1Kpcs/Bulk	54		
		THDP12		Horizontal Push	6.2	6.2	11.25	—	—	500pcs/Bulk			
		TVDP20		Long-Life	6.2	6.2	5.5~6.0	—	—	1Kpcs/Bulk	60		
		TVDP21		Long-Life	6.2	6.2	1.5~4.3	—	—	1Kpcs/Bulk	61		
		TVDP23		Long-Life	6.3	6.3	3.5	—	—	1Kpcs/Bulk	62		
		THDP24		Long-Life	7.4	7.7	6.4	—	—	1Kpcs/Bulk	63		
		Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page	
						W	D	H					
		Tact Switch < E Series >	Surface Mount	TVEU01			6.4	6.2	2.0/2.5/3.1	—		1.5Kpcs/Reel	65
				TVEF02			6.4	6.2	2.0/2.5/3.1			1.5Kpcs/Reel	
TVEM03				Non-rotating stem	6.2	6.2	3.1			1.5Kpcs/Reel	66		
TVEM04				Dust-Proof	6.2	6.2	3.1/5.0			1.5Kpcs/Reel	67		
TVEM05					6.2	6.2	2.5/3.1/3.4			1.5Kpcs/Reel	68		
TVEM06					6.2	6.2	1.4	—		1.5Kpcs/Reel	69		
TVEF09				Normal Closed	6.2	6.2	3.7		—	1.5Kpcs/Reel	71		
TVEJ10				Middle-travel	6.2	6.2	3.5	—		1.5Kpcs/Reel	72		
TVEM11				Middle-travel	6.2	6.2	3.5	—		1.5Kpcs/Reel			

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Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page
				W	D	H				
Tact Switch < E Series >	Surface Mount	TVEF13 		6.2	6.2	2.5/3.1	—		2Kpcs/Reel (H=2.5) 1.5Kpcs/Reel (H=3.1)	74
		TVEU14 		6.2	6.2	2.5/3.1	—		2Kpcs/Reel (H=2.5) 1.5Kpcs/Reel (H=3.1)	
		TVEU15 		6.2	6.2	4.3	—		1Kpcs/Reel	75
	Snap-in	TVEP07 		6.2	6.2	2.5/3.1/3.4			1Kpcs/Bulk	70
		TVEJ08 		6.2	6.2	2.5/3.1/3.4			1Kpcs/Bulk	
Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page
W	D	H								
Tact Switch < F Series >	Surface Mount	TVFU01 	Long-travel	6.0	6.0	5.0	—		1Kpcs/Reel	77
		TVFM02 	Long-travel	6.0	6.0	5.0	—		1Kpcs/Reel	
		TVFU03 	Long-travel	6.0	6.0	5.0	—		1Kpcs/Reel	78
		TVFM04 	Long-travel	6.0	6.0	6.5	—		1Kpcs/Reel	79
		TVFM05 	Long-travel	6.0	6.0	5.0	—		1Kpcs/Bulk	80
	Snap-in	TVFP12 	Long-travel	6.0	6.0	5.0	—		1Kpcs/Reel	
		TVFP10 	Long-travel	7.8	7.8	5.0	—	—	1Kpcs/Bulk	81
		TVFT11 	Long-travel	7.8	7.8	5.1	—	—	800pcs/Box	
Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page
W	D	H								
Tact Switch < G Series >	Surface Mount	TVGM03 		12.0	12.0	4.3~7.0	—		40pcs/Tube 700pcs/Reel (H=4.3/5.0) 600pcs/Reel (H=6.0) 500pcs/Reel (H=7.0/7.3)	85
	Snap-in	TVGP01 		12.0	12.0	4.3~17.0	—		500pcs/Bulk	83
		TVGP01-□ G73 		12.0	12.0	7.3	—		500pcs/Bulk	
		TVGP02 		12.0	12.0	4.3~17.0	—		500pcs/Bulk	84
		TVGM06 		12.0	12.0	12.0	—		500pcs/Bulk	86
		THGP07 		13.1	10.1	15.6	—		500pcs/Bulk	87
Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page
W	D	H								
Tact Switch < H Series >	Surface Mount	TMHF01 	Double Action	6.4	6.0	1.5	—		3Kpcs/Reel	89
		TMHU02 	Double Action	6.4	6.0	3.0/3.8	—		2Kpcs/Reel	
		TMHF03 	Double Action	4.7	3.6	1.3			3Kpcs/Reel	90
		TMHF04 	Double Action	5.5	5.0	1.7	—		2Kpcs/Reel	91
		TMHU05 	Double Action	4.3	4.1	0.6			10Kpcs/Reel	92
		TMHF07 	Double Action	6.5	6.2	2.0/3.8	—		1Kpcs/Reel	93
		TMHU08 	Double Action	3.9	4.1	0.6			10Kpcs/Reel	94
		TMHU09 	Double Action	5.7	3.7	3.5	—		1.2Kpcs/Reel	95

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Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page	
				W	D	H					
Tact Switch < H Series >	Surface Mount	TMHF34		Double Action	3.5	3.2	0.6			10Kpcs/Reel	96
		TMHU35		Double Action	4.1	3.9	0.6			10Kpcs/Reel	97
		TMHF36		Double Action	4.5	2.4	3.0	—		3.4Kpcs/Reel	98
	Multiway	TMHU10		4-direction & center-push	6.2	6.0	4.5/5.0	—	—	1Kpcs/Reel	99
		TMHF11		4-direction & center-push	6.7	6.7	5.0		—	1Kpcs/Reel	100
		TMHU12		4-direction & center-push	6.5	6.1	5.0			1.2Kpcs/Reel	101
		TMHU13		4-direction & center-push	7.5	7.5	5.0		—	1Kpcs/Reel	102
		TMHM14		4-direction & center-push	10.4	10.0	5.0	—	—	1Kpcs/Reel	103
		TMHM15		8-section	11.5	11.0	4.25		—	900pcs/Reel	104
		TMHM16		4-direction & center-push	10.7	10.0	6.50	—	—	650pcs/Reel	105
		TMHP17-071		4-direction	10.0	10.0	7.10	—	—	500pcs/Reel	106
		TMHU18-071		4-direction	10.0	10.0	7.10	—	—	750Kpcs/Reel	
		TMHP17-100		4-direction & center-push	10.0	10.0	10.0	—	—	500pcs/Reel	
		TMHU18-086		4-direction & center-push	10.0	10.0	8.6	—	—	600pcs/Reel	
		TMHU21-058		4-direction & center-push	7.8	7.8	5.8	—		1Kpcs/Reel	107
		TMHU21-051		4-direction & center-push	7.8	7.8	5.1	—		1Kpcs/Reel	
		TMHU23		4-direction & center-push	9.8	9.8	1.55	—		1.5Kpcs/Reel	108
		TMHU24		4-direction & center-push	9.8	9.8	5.0	—		1Kpcs/Reel	109
		TMHU25		4-direction & center-push	11.5	9.95	5.85	—	—	600pcs/Reel	110
		Control SW	TMHU26		Push & Lever	11.8	11.7	2.5	—		1Kpcs/Reel
	TMHU27			Push & Lever	12.0	11.8	2.5	—		1Kpcs/Reel	112
	TMHU28			Push & Lever	11.8	11.3	3.0	—		1Kpcs/Reel	113
	TMHU29			Push & Lever	11.8	11.4	3.0	—		1Kpcs/Reel	
	TMHM30			Push & Lever	8.8	11.1	2.9			1.5Kpcs/Reel	114
	TMHM31			Push & Lever	8.8	10.9	2.9			1.5Kpcs/Reel	
	TMHU32			Push & Lever	9.5	8.15	2.2			1.5Kpcs/Reel	115
	TMHU33			Push & Lever	9.5	8.8	2.2			1.5Kpcs/Reel	
TMHF37			360° rotation	10.5	9.0	6.4	—	—	500pcs/Reel	116	



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Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page
				W	D	H				
Tact Switch < I Series >	Snap-in	LS601	 illuminated	6.0	6.0	7.2	—	—	200pcs/Tray	118
		LS602	 illuminated	7.5	7.5	8.2	—	—	150pcs/Tray	
		LS603	 illuminated	7.5	7.5	8.2	—	—	150pcs/Tray	119
		LS604	 illuminated	10.0	10.0	8.5	—	—	150pcs/Tray	
		LS605	 illuminated	6.0	6.0	8.5	—	—	200pcs/Tray	120
		LS606	 illuminated	7.5	7.5	9.6	—	—	150pcs/Tray	
		LS607	 illuminated	11.6	11.1	10.0	—	—	150pcs/Tray	121
		LS608	 illuminated	11.6	11.1	10.8	—	—	150pcs/Tray	
		LS609	 illuminated	10.0	10.0	9.7	—	—	150pcs/Tray	122
		LS610	 illuminated	f10		9.4	—	—	150pcs/Tray	
		LS611	 illuminated	6.0	6.0	7.0	—	—	200pcs/Tray	123
		LS612	 illuminated	6.0	6.0	7.2	—	—	200pcs/Tray	
		LS613	 illuminated	10.0	10.0	10.0	—	—	150pcs/Tray	124
		LS614	 illuminated	10.0	10.0	10.0	—	—	150pcs/Tray	
		LS616	 illuminated	f14		10.0	—	—	100pcs/Tray	125
		LS1201	 illuminated	12.0	12.0	7.3	—	—	100pcs/Tray	126
		LS1202	 illuminated	12.0	12.0	8.0	—	—	100pcs/Tray	127
Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page
				W	D	H				
Tact Switch < J Series >	Surface Mount	TVEJ12-□031	 Washable	6.2	6.2	3.1	—		1.5Kpcs/Reel	73
		TVEJ12-□052	 Washable	6.2	6.2	5.0	—		1.5Kpcs/Reel	
		TVEJ12-□023	 Washable	6.2	6.2	2.3	—		1.5Kpcs/Reel	
	Snap-in	TVJP01	 Sealed	6.0	6.0	4.3/5.0/7.0	—		1Kpcs/Bulk	129
		TVJU02	 Sealed	6.8	6.8	4.2	—		1Kpcs/Bulk	130
		THJP03	 Sealed	8.0	6.0	8.0	—		500pcs/Bulk	131
		TVJP04	 Sealed	8.0	8.0	4.7~10.0	—		500pcs/Bulk	
		THJP05	 Sealed	7.45	5.0	7.45	—		500pcs/Bulk	132
		TVJP06	 Sealed	7.20	7.20	2.70	—		500pcs/Bulk	
		TVJP09	 Washable	10.0	10.0	5.0	—		500pcs/Bulk	134
		THJP10	 Washable	11.5	11.1	11.0	—		500pcs/Bulk	
		TVJP11	 Washable	10.0	10.0	13/23.2	—		500pcs/Bulk	135
TVJP12	 Washable	10.0	10.0	33.6	—		200pcs/Bulk	136		

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Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page
				W	D	H				
Tact Switch		LS615	 Washable & Light	6.8	6.8	10.2	—	—	150pcs/Tray	125
		TVJP13	 Washable	6.0	6.0	4.3~9.5	—		1Kpcs/Bulk	137
		TVJP14	 Washable	8.0	8.0	6.5~13.0	—		1Kpcs/Bulk	138
		TVJP15	 Washable	12.0	12.0	6.5~12.0	—		500pcs/Bulk	139
Item	Type	Series	Features	Dimensions(mm)			Earth Terminal	Halogen -Free	Package	Page
				W	D	H				
Tact Switch	Radial	THBT15	 Horizontal Push	7.3	6.0	4.3	—	—	1Kpcs/Box	27
		TVBT16	 Horizontal Push	6.0	3.5	4.3/5.0	—	—	1Kpcs/Box	
		THDT14	 Horizontal Push	7.4	9.25	7.1	—	—	700pcs/Box	56
		TVDT17	 Horizontal Push	6.0	6.0	4.3~9.5	—		1Kpcs/Box	57
		TVDT18	 Circle	f6		4.3~5.0	—		1Kpcs/Box	58
		THDT19	 Horizontal Push	7.3	6.85	7.1	—		700pcs/Box	59
		TVJP07	 Washable	f10		13.0	—		1Kpcs/Box	133
		TVJP08	 Washable	8.0	8.0	13.0	—		1Kpcs/Box	