Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


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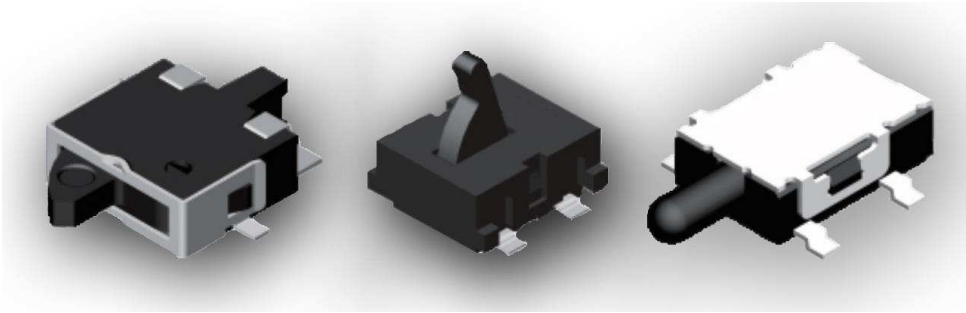
## Applications

- Automotive
- Instrumentation
- White goods
- Telecommunications

## Benefits

- RoHS Compliant
- Halogen and Lead Free
- Sharp detection feeling
- Compact Size

# JJ Series – Detector Switches



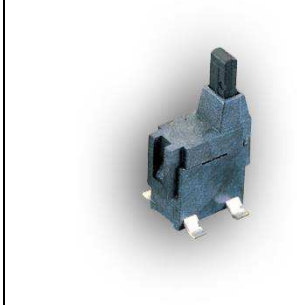
TE Connectivity is pleased to introduce its JJ Series of Detector Switches, suitable for a wide variety of applications given their several presentations ranging from horizontal or vertical actuated options as well as Gull-winged, J-leaded and Through-Hole mounting possibilities.

The Detector Switches will be offered in a wide range of sizes giving the possibility for countless applications going from automotive to telecommunications.

## JJ Series – Family Classification

| Series | Body Size |
|---|---|
| JJA | 3.5x2.8 mm |
| JJB | 3.5x2.98 mm |
| JJC | 3.5x3.3 mm |
| JJD | 4.2x3.6 mm |
| JJE | 4.7x3.5 mm |
| JJF | 4.7x3.8 mm |
| JJG | 5.7x4.0 mm (High-Rating) |
| JJH | 5.7x4.0 mm (Standard-Rating) |
| JJI | 5.0x4.4 mm |
| JJJ | 6.0x4.85 mm / 5.5x4.7 mm |
| JJK | 6.3x3.0 mm |
| JJL | 6.5x3.9 mm |
| JJM | 5.7x4.0 mm |
| JJN | 5.7x4.0 mm (Wedge) |
| JJO | 10.0x3.8 mm |
| JJP | 10.6x10.0 mm |

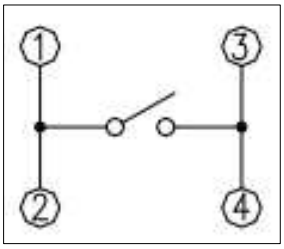
## JJK Family – *6.3x3.0 mm*



| | |
|---|---|
| Contact Rating | 100mA, 30VDC |
| Contact Resistance | 1Ω Max. |
| Insulation Resistance | 100MΩ Min. 100VDC |
| Dielectric Strength | 100VAC/1 minute |
| Operating Force | 100gF Max. |
| Operating Life | 50,000 cycles |
| Operating Temperature | -40˚C to +85˚C |

| Features | Applications |
|---|---|
| • Easy orientation offered by guiding post.<br>• Soft feeling on operation actions<br>• SMT type and reflow soldering for surface mounting | • Notebooks<br>• Position mode detection mechanisms<br>• Mobile phones and still cameras |

## Circuit

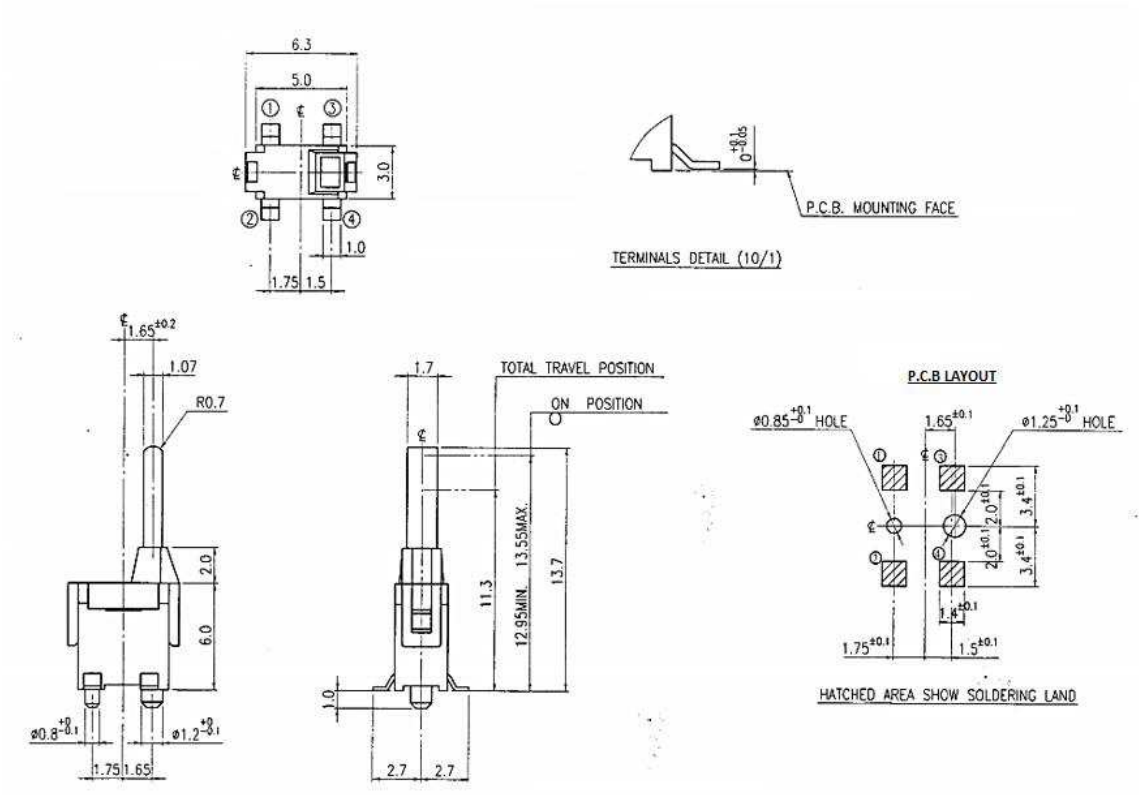



## How To Order

**JJK – V0 – U – G – 1300 – NO – P – P – R - TB**

- **Family: JJK**
- **Orientation:** V0 – Vertical (Push)
- **Grounding:** U – Ungrounded
- **Mounting:** G – Gull-winged
- **Height:** 1300 – 13.7mm
- **Packaging:** TB – Tube
- **Contact/Terminal Plating:** R – Silver Plating
- **Cover:** P – Plastic Cover
- **Guiding post:** P – Post
- **Circuit:** NO – Normal Open

## Diagrams




## PN List

| Smart PN | Orientation | Grounding | Mounting | Height | Circuit | Guiding Post | Cover | Plating | Packaging | MOQ | TE PN |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JJKV0UG1300NOPPRTB | Vertical Push | Ungrounded | Gull-winged | 13.7mm | NO | Post | Plastic | Silver | Tube | 2,000 | 2331350-1 |

**1. Test Conditions**

Standard test conditions shall be 5 to 35℃ in temperature, 45 to 85% in humidity and 86 to 106kPa in atmospheric pressure. Should any doubt arise in judgment, tests shall be conducted at 20±2℃ in temperature, 60 to 70% in humidity and 86 to 106kPa in atmospheric pressure.

**2. Operating Temperature Range:** -40 to 85℃

**3. Construction:**

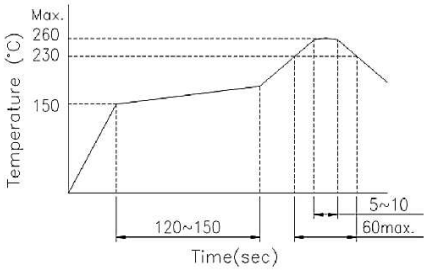
-Shape and dimension are subject to attached drawing regulation.
-Appearance: whole should be a good completion, no rust, no crack and good plating.

**4. Current Rating:** 1mA, 30VDC

**5. Type of Actuation:** Tactile feedback

**6. Test Sequence:**

| | Item | Description | Test Conditions | Requirements |
|---|---|---|---|---|
| Appearance | 1 | Visual Examination | Physical inspection without applying any external forces. | There shall be no defects that affect the serviceability of the product. |
| Electric Performance | 2 | Contact Resistance | Shall be measured at 1Khz ± 200Hz (Max. 20mV, Max. 50mA) Or 1A, 5VDC. By voltage drop method. | 1Ω Max. |
| | 3 | Insulation Resistance | Measurements shall be made at 100 VDC potential between terminals and cover. | 100MΩ Min. |
| | 4 | Dielectric Withstanding Voltage | Apply 100 VAC (50Hz or 60Hz) between terminals and cover for 1 minute | There shall be no breakdown or flashover |

| | | | | |
|---|---|---|---|---|
| Mechanical Performance | 5 | Operating Force | ---------- | Shall be in accordance with individual specified |
| | 6 | Terminal Strength | The static load of 300gF shall be applied on top of the terminal in every direction for 1 minute, in optional direction on condition of once for one terminal. | No deformation of appearance, no breakdown of plastic part and no hindrance for electrical function. |
| | 7 | Control Strength | The static load of 1KgF shall be applied in the operating direction from the tip of the switch lever | No deformation of appearance, no breakdown of plastic part and no hindrance for electrical function. |
| | 8 | Solder Heat Resistance | 1) Manual soldering:<br>-Put in solder for 3 to 4 Sec. at 300℃±10℃<br>2)Soldering by dip:<br>-Put in solder for 5±1 Sec. at 260℃±5℃<br>3) Reflow Soldering:<br>-By far infrared ray<br>  <br><br>Above mentioned time-temperature chart is based on the temperature on the parts-mounting surface of PCB. | No deformation of appearance, no breakdown of plastic part and no hindrance for electrical function. |
| | 9 | Solderability | 1) Solder temperature: 260 to 10℃<br>2) Immersion time: 3 ± 0.5 Sec. at 260℃±10℃ | More than 75% of the dipping part shall be covered by solder—Excluding the cutting Surface. |
| Durability | 10 | Life test | -With load:<br>50,000 times by 15-20 cycles/minute with load 30V DC 1mA (Resistive load).<br>-Without load:<br>50,000 times by 15-20 cycles/minute without load. | 1) Contact resistance: 2Ω Max.<br>2) Insulation resistance: 10MΩ Min.<br>3)Withstanding voltage: 100V AC for 1 Min.<br>4) Operating force: Within ±30% of initial value.<br>5) Appearance: Every part should not defect in appearance and mechanical performance. |

| | | | | |
|---|---|---|---|---|
| Water-Proof | 11 | Resistance Low Temperature | Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made:<br>1) Temperature: -20±2℃<br>2) Time: 96 hours | 1) Contact resistance: 1Ω Max.<br>2) Insulation resistance: 10MΩ Min.<br>3)Withstanding voltage: 100V AC for 1 Min.<br>4) Operating force: Within ±30% of initial value.<br>5) Appearance: Every part should not defect in appearance and mechanical performance. |
| | 12 | Heat Resistance | Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made:<br>1) Temperature:85±2℃<br>2) Time: 96 hours | 1) Contact resistance: 1Ω Max.<br>2) Insulation resistance: 10MΩ Min.<br>3)Withstanding voltage: 100V AC for 1 Min.<br>4) Operating force: Within ±30% of initial value.<br>5) Appearance: Every part should not defect in appearance and mechanical performance. |
| | 13 | Humidity Resistance | Following the test set forth below the sample shall be left in normal temperature and humidity conditions for 1 hour before the measurements are made:<br>1) Temperature:40±2℃<br>2) Relative Humidity: 90~95%<br>3) Time: 96 hours | 1) Contact resistance: 1Ω Max.<br>2) Insulation resistance: 10MΩ Min.<br>3)Withstanding voltage: 100V AC for 1 Min.<br>4) Operating force: Within ±30% of initial value.<br>5) Appearance: Every part should not defect in appearance and mechanical performance. |

■ Precautions in Handling

1. Care must be taken to ensure excess flux on the top surface of the printed circuit board does not adhere to the switch.
2. Do not wash the switch.

■ Recommended storage conditions:

Store the products in the original packaging material. After opening the package, the remaining products must be stored in the appropriate moisture-proof & airtight environment.

Do not store the switch in the following environment or it may affect performance and solderability:

1. temperatures below -10° C to 40°C & humidity at 85% (min)

2. environment with corrosive gas

3. storage over 6 months

4. place in direct sunlight