



Series 223H

4.7x3.5mm Compact Tactile Switch

- Surface mount gull-wing and J bend terminal configurations
- Compatible with IR reflow and manual soldering



Ordering Information

| Series | Terminal Type | Actuating Direction | Actuator Height "L" | Actuator Force & Travel | Packaging | Boss | Ground Terminal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---------------------|---------------------|-------------------------|-------------------------|------|----------------------|---|--|------|-------|---|------|--|--|------|-------|---|-------|--|--|------|-------|---|--------------------------------|---|-------------------------------|---|--|------|-------|---|--------------------------|-------|------------------------|--|--|------|-------|---|-----------------------|---|--|------|-------|---|--|-------|--------------------|
| 223H | M | S | A | A | R | B | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Code | Spec. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M | Surface mount gull wing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| J | Surface mount J bend | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | Spec. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| S | Side | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | Spec. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | 4.5mm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | Spec. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | 160 gf, 0.25mm, white actuator | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | 220 gf, 0.3mm, black actuator | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | Spec. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | With boss, black housing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blank | No boss, white housing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | Spec. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| R | Tape & reel packaging | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Code | Spec. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G | With ground terminal, only for boss option | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blank | No ground terminal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Notes: Contact CTS for other common features not listed.



Electrical Specifications

| Parameter | Conditions & Remarks | Min | Max | Unit |
|-----------------------|------------------------------------|-----|--------------------|-----------------|
| Contact Resistance | | | 100 | milliohms |
| Insulation Resistance | Between insulated terminals | 100 | | Megohms |
| Dielectric Strength | 1 minute between adjacent switches | | 250 | VAC |
| Actuation Life | 160 gf 220 gf | | 200,000 100,000 | cycles |
| Nonswitching Rating | | | 50 or 12 | mA or VDC |

Mechanical and Environmental

| | |
|-----------------------------|--|
| Soldering | Maximum reflow temperature, 260°C for 5 seconds Maximum manual temperature, 350°C for 3 seconds |
| RoHS | Lead-Free. Fully compliant to RoHS Directive 2011/65/EU |
| Operating Force | 160, 220 gf |
| Actuator Strength | 3 Kgf maximum |
| Travel | 0.25, 0.3 mm |
| Packaging | Standard tape and reel packaging |
| Operating Temperature Range | -40°C to +85°C |
| Storage Temperature Range | -40°C to +85°C |

Mechanical Specifications

Figure 1 –223HM... Surface Mount Gull Wing, Without Ground Terminal

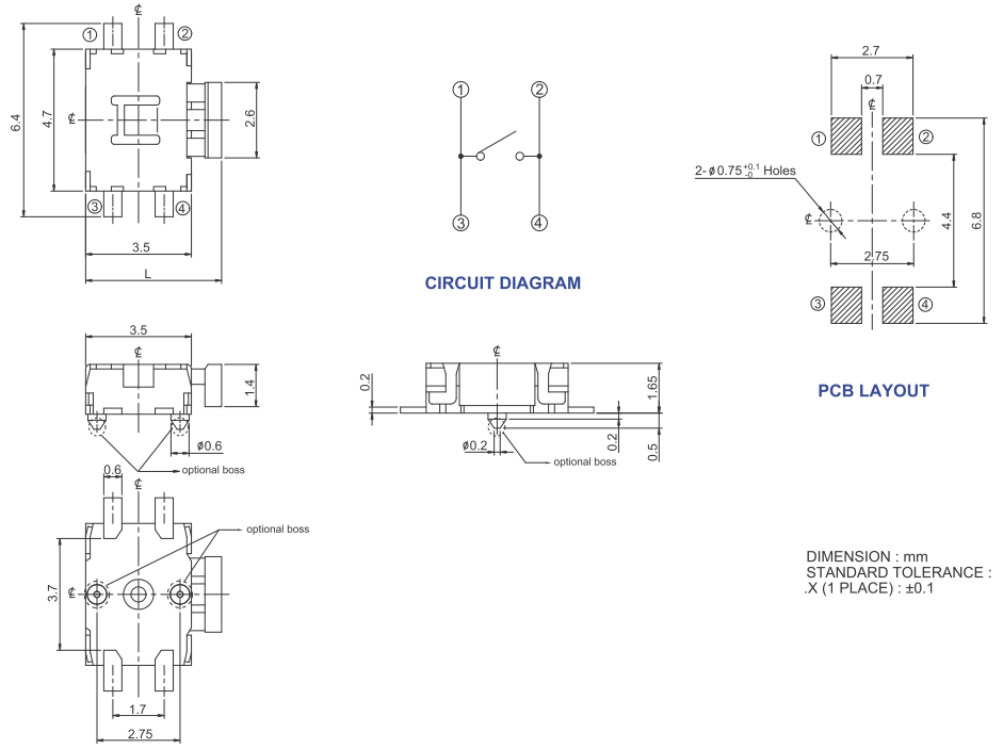


Figure 2 –223HM...G Surface Mount Gull Wing, With Ground Terminal

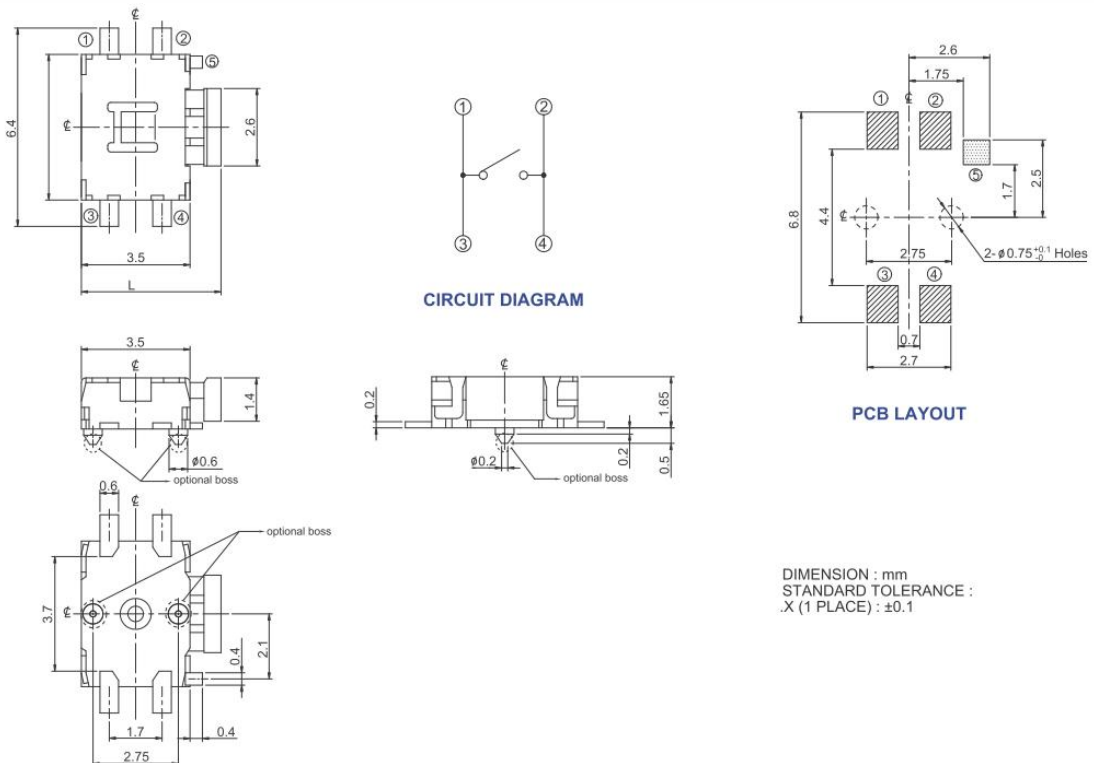


Figure 3 –223HJ... Surface Mount J Bend, Without Ground Terminal

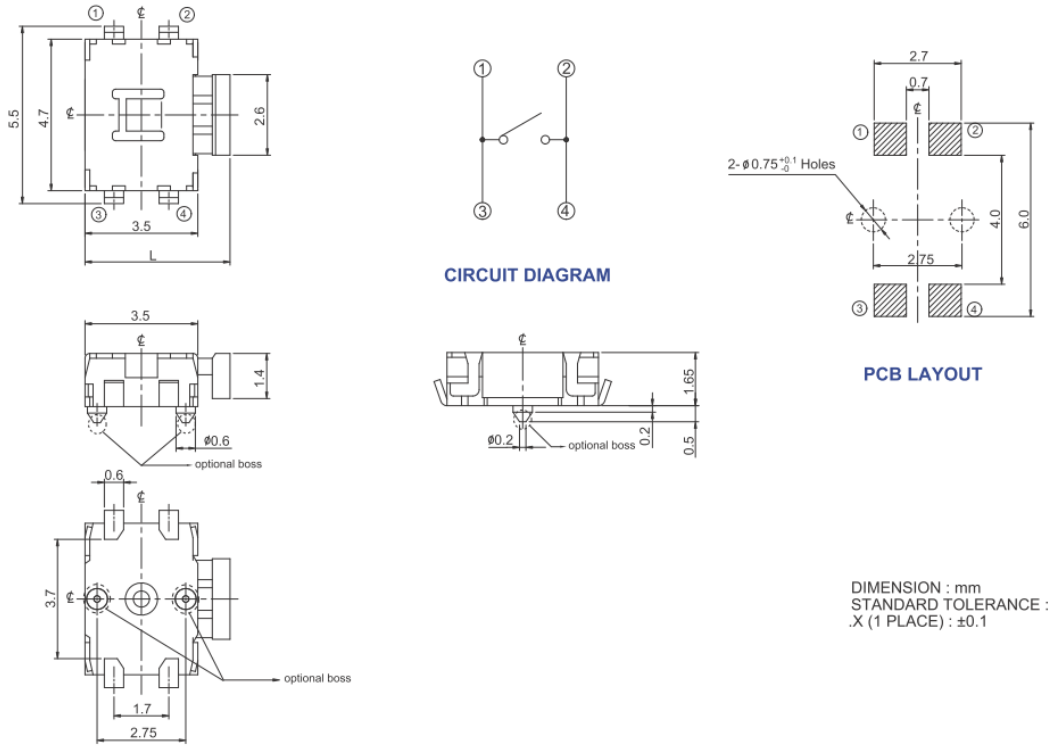
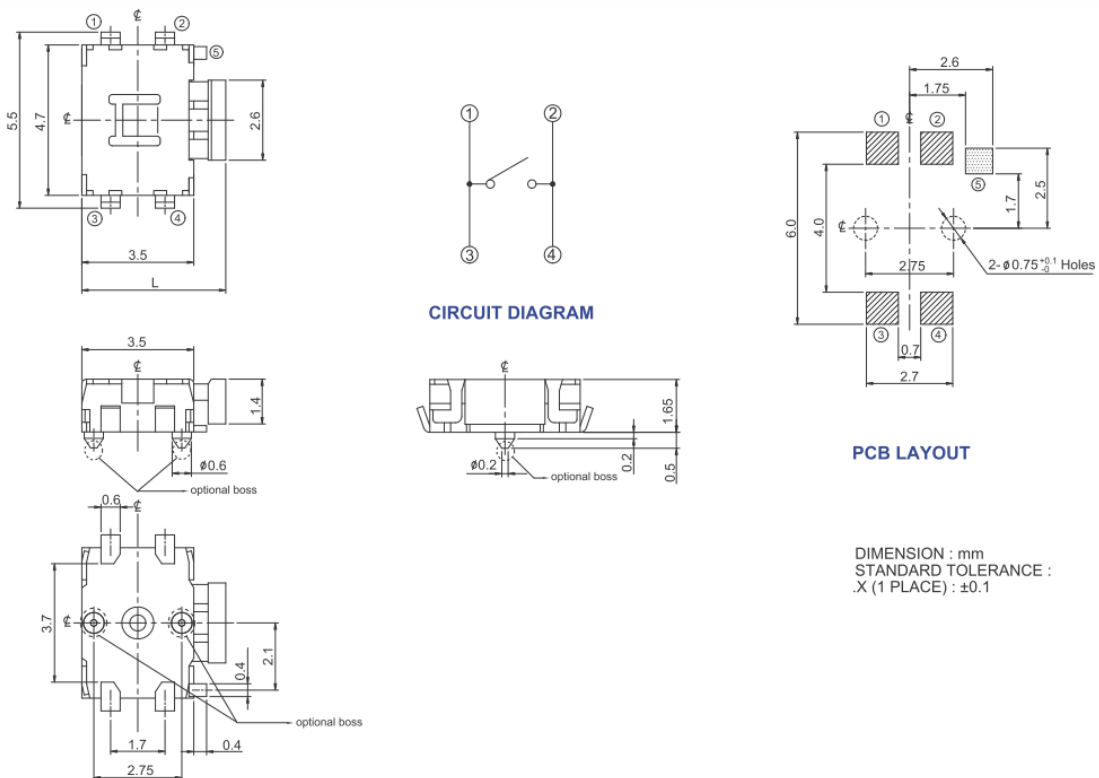


Figure 4 –223HJ...G Surface Mount J Bend, With Ground Terminal

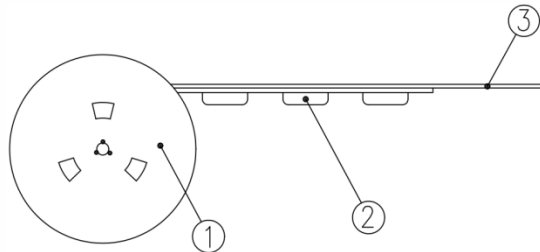


Packing: Tape and Reel

Surface Mount Gull Wing/J Bend

The packing specifications :

Structure and materials :



| | | |
|-----|--------------|-------------|
| ③ | COVER TAPE | POLYESTER |
| ② | CARRIER TAPE | POLYSTYRENE |
| ① | REEL | POLYSTYRENE |
| NO. | PARTS NAME | MATERIALS |

1. Packing quantity : 3,300 pcs/reel
2. More than 10 empty pockets should remain at each end of the carrier tape for each reel.
3. Shortage less than 10 pcs a reel is acceptable but no more than 3 consecutive empty pockets are allowed.
4. Stripping strength of cover tape is between 10 gf to 70 gf and stripping angle should be within 165°~180°.
5. The product in the pocket of carrier tape should be placed in a specified correct position.
6. Tape and reel per EIA-481
7. Dimensions :

