



Series 224A

12x12x3.5mm Compact Tactile Switch

- Surface mount gull-wing terminal and standard through hole configurations
- Compatible with IR reflow, wave and manual soldering
- Compatible with automatically dip-soldering
- Variety of operating force & actuator height options



Ordering Information

| Series | Terminal Type | Actuating Direction | Actuator Height "L" | Actuator Force | Packaging |
|--------|---------------|---------------------|---------------------|----------------|-----------|
| 224A | M | V | A | A | R |

| Code | Spec. |
|------|-------------------------|
| M | Surface mount gull wing |
| D | Standard through hole |

| Code | Spec. |
|------|-----------------------------|
| A | 7.3mm (cubic column button) |
| B | 8.5mm(cylinder button) |
| C | 4.3mm(cylinder button) |

| Code | Spec. |
|------|----------|
| V | Vertical |

| Code | Spec. |
|-------|--|
| Blank | Bag packaging (Standard through hole only) |
| R | Tape & reel packaging (Surface mount only) |

| Code | Spec. |
|------|----------------|
| A | 160 gf, black |
| B | 260gf, natural |
| C | 120gf, gray |

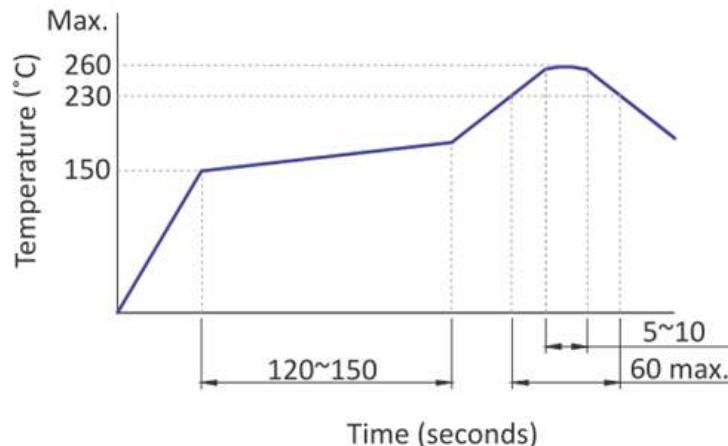
Electrical Specifications

| 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 |
| 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 and 2015/863/EU |
| Operating Force | 120±50 gf 160±50 gf 260±70 gf |
| Actuation Life | 120 gf: 1,000,000 cycles 160 gf: 500,000 cycles 260 gf: 300,000 cycles |
| Actuator Strength | 3 Kgf maximum |
| Travel | 0.3±0.1 mm |
| Packaging | Bag packaging Standard tape and reel packaging |
| Operating Temperature Range | -40°C to +85°C |
| Storage Temperature Range | -40°C to +85°C |

Soldering Profile



Mechanical Specifications

Figure 1 –224AMVA... Surface Mount Gull Wing, Actuator Height 7.3mm

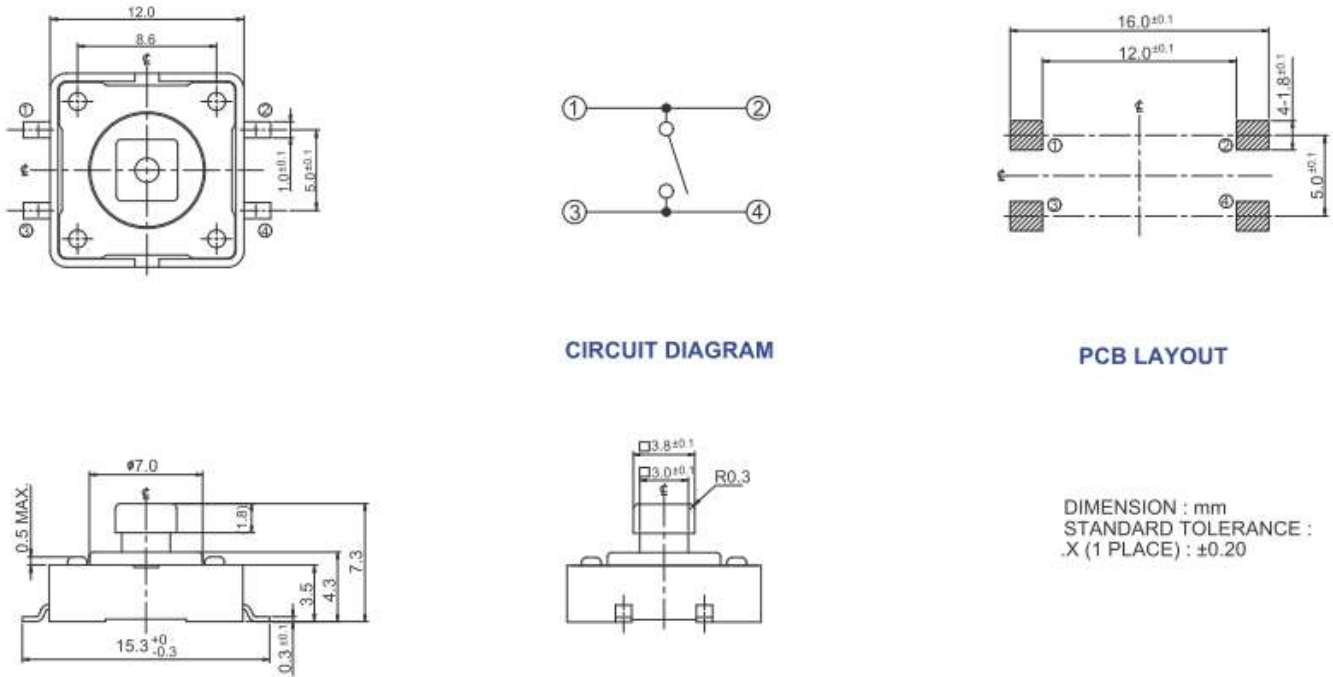


Figure 2 –224AMVB... Surface Mount Gull Wing, Actuator Height 8.5mm

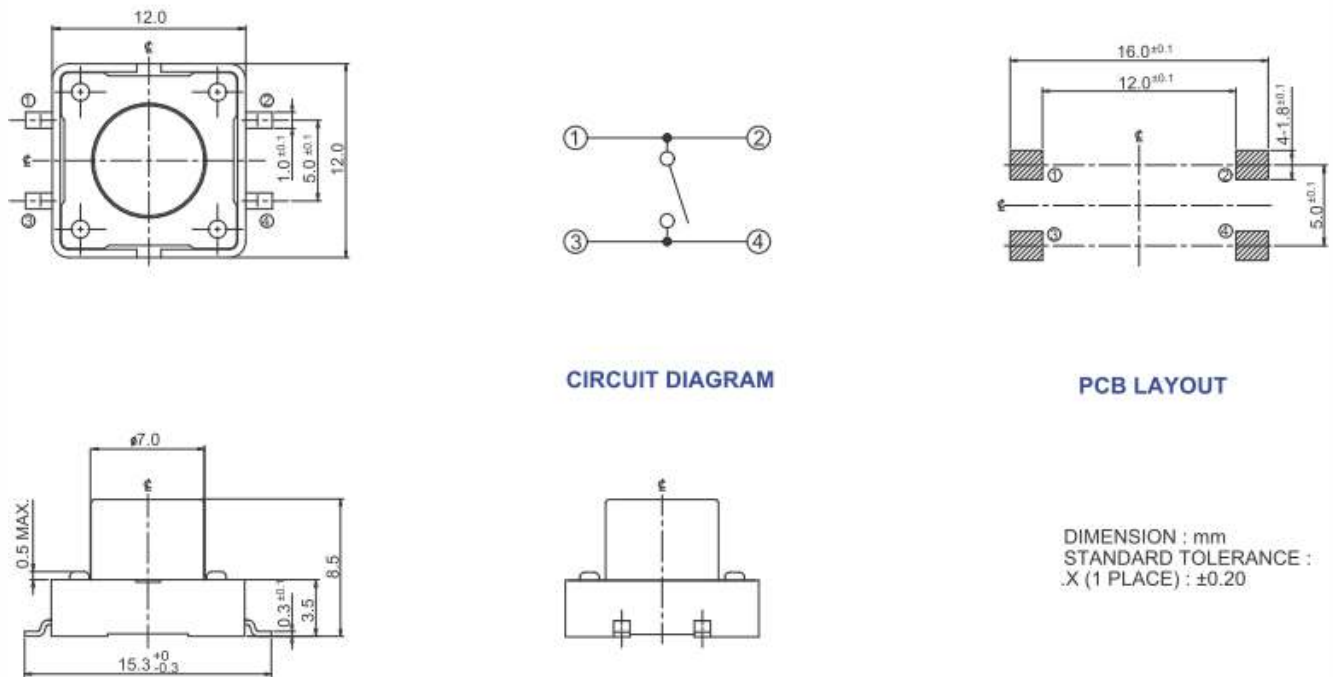


Figure 3 –224AMVC... Surface Mount Gull Wing, Actuator Height 4.3mm

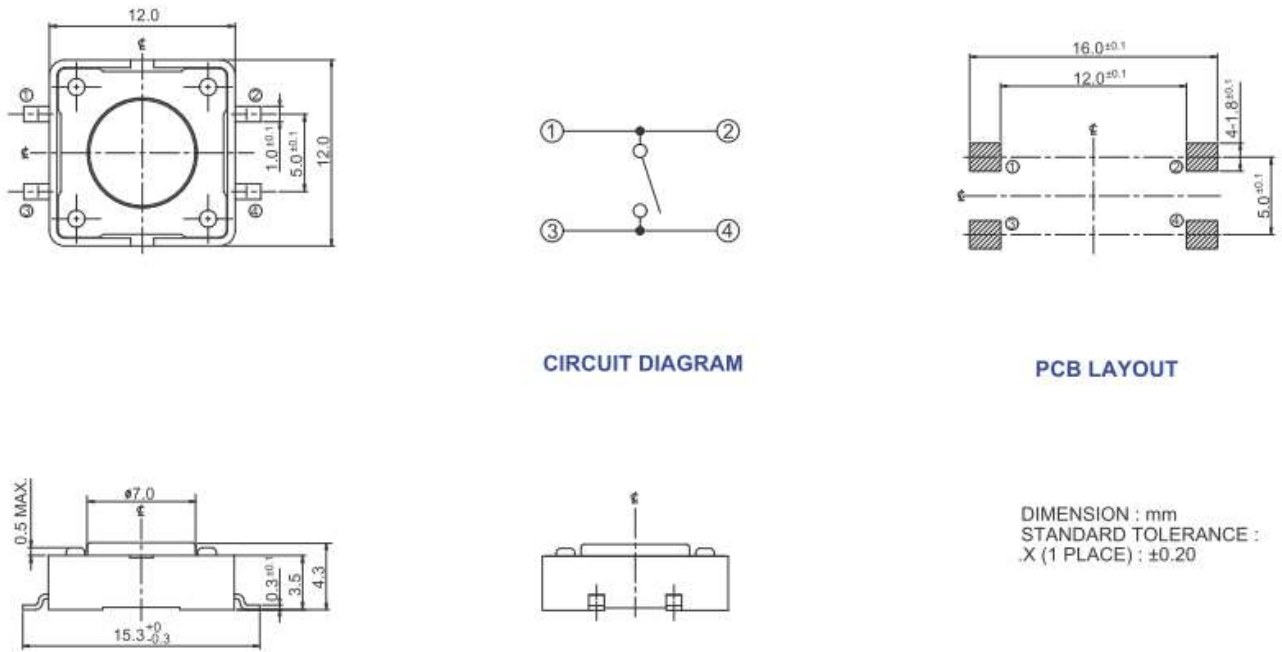


Figure 4 –224ADVA... Standard Through Hole, Actuator Height 7.3mm

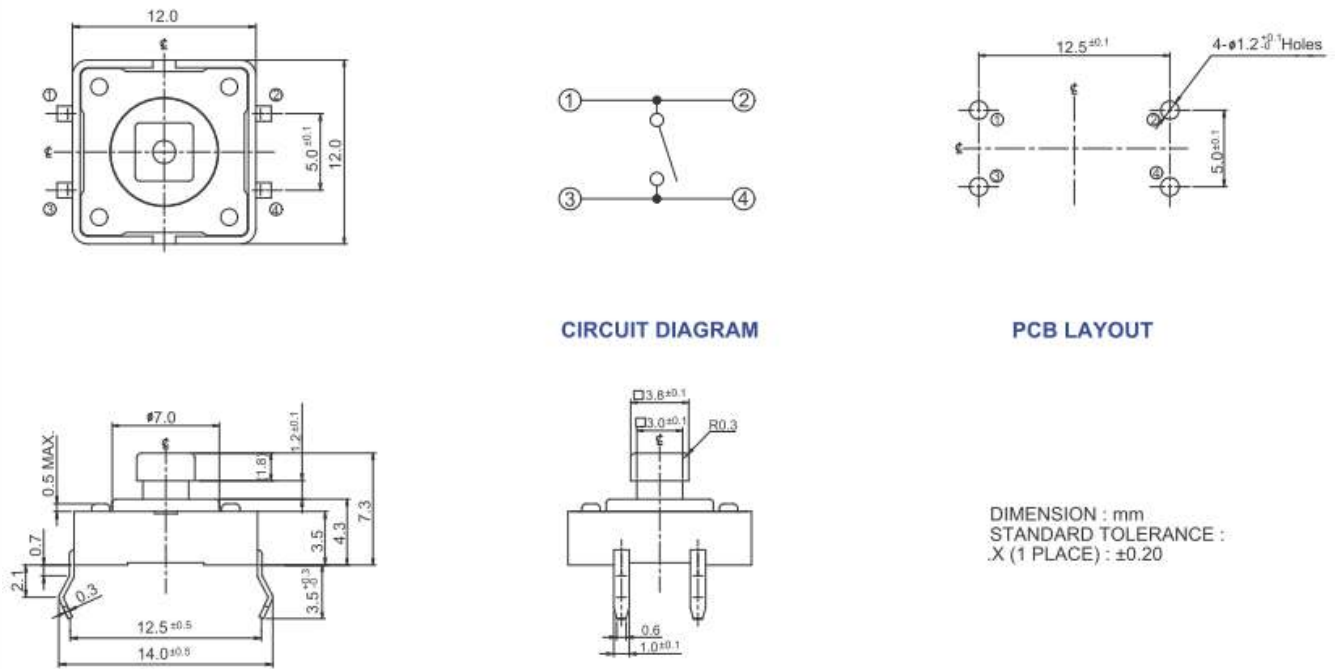
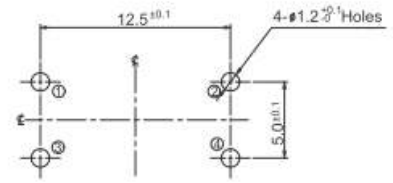
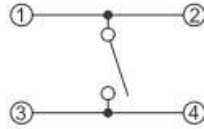
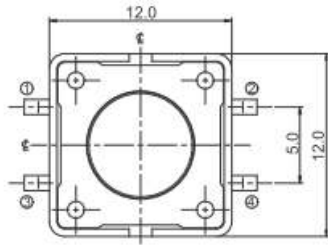
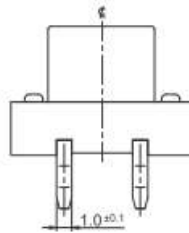
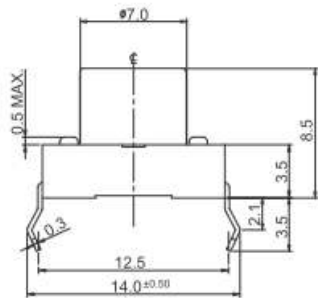


Figure 5 –224ADVB... Standard Through Hole, Actuator Height 8.5mm



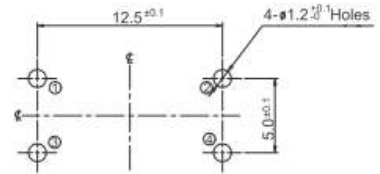
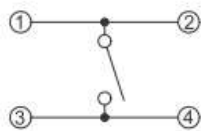
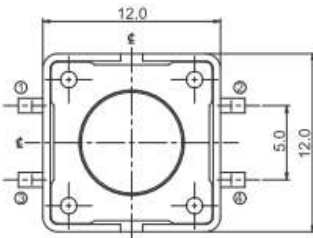
CIRCUIT DIAGRAM

PCB LAYOUT



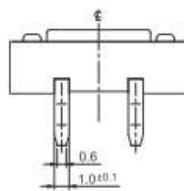
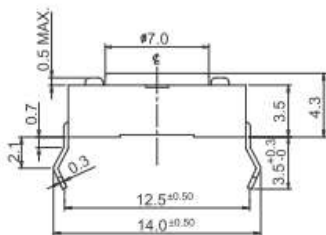
DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.20

Figure 6 –224ADVC... Standard Through Hole, Actuator Height 4.3mm



CIRCUIT DIAGRAM

PCB LAYOUT



DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.20

