



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

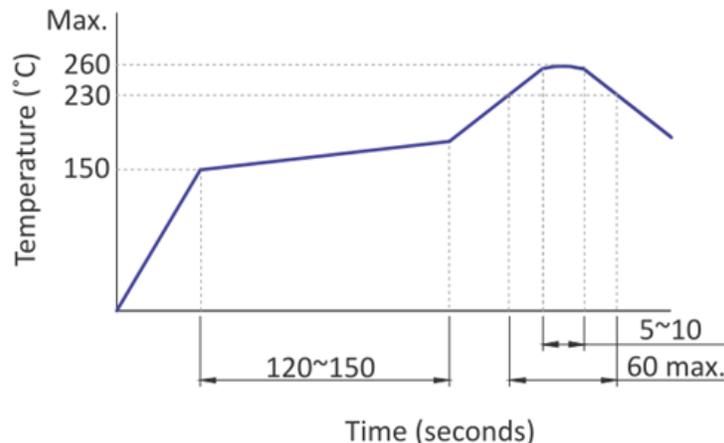
Electrical Specifications

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

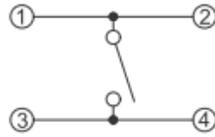
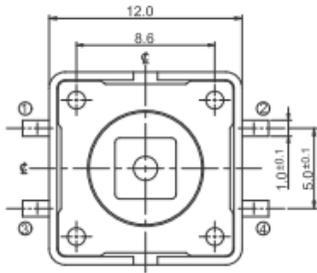
Soldering	Maximum reflow temperature, 260°C for 5 seconds Maximum manual temperature, 350°C for 3 seconds
RoHS	Lead-Free. Fully compliant to RoHS Directive 2011/65/EU and 2015/863/EU
Operating Force	120±50 gf 160±50 gf 260±70 gf
Actuation Life	120 gf: 1,000,000 cycles 160 gf: 500,000 cycles 260 gf: 300,000 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

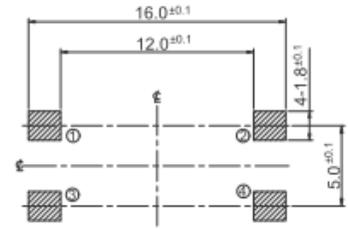


Mechanical Specifications

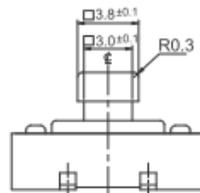
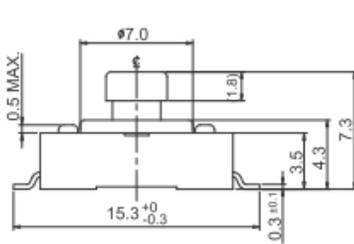
Figure 1 –224AMVA... Surface Mount Gull Wing, Actuator Height 7.3mm



CIRCUIT DIAGRAM

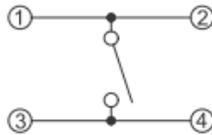
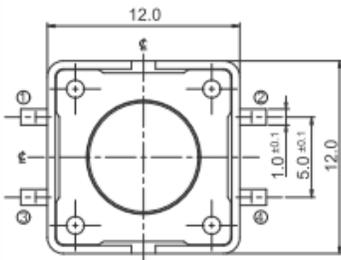


PCB LAYOUT

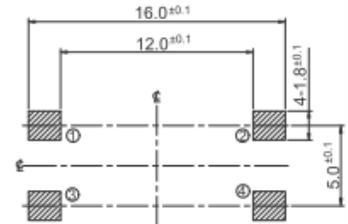


DIMENSION : mm
 STANDARD TOLERANCE :
 .X (1 PLACE) : ±0.20

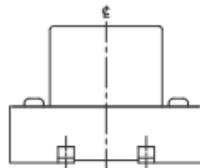
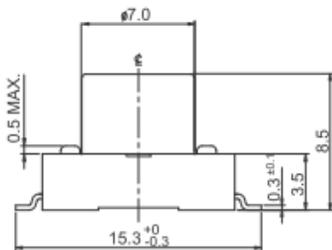
Figure 2 –224AMVB... Surface Mount Gull Wing, Actuator Height 8.5mm



CIRCUIT DIAGRAM



PCB LAYOUT



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

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

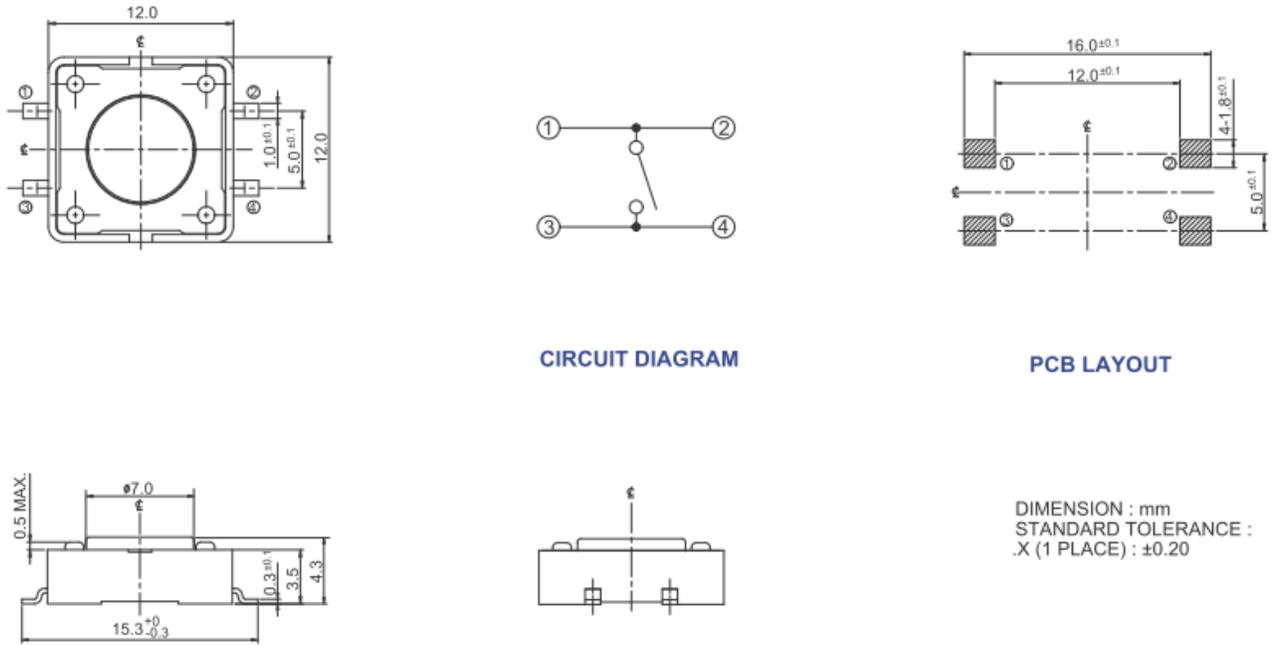


Figure 4 –224ADVA... Standard Through Hole, Actuator Height 7.3mm

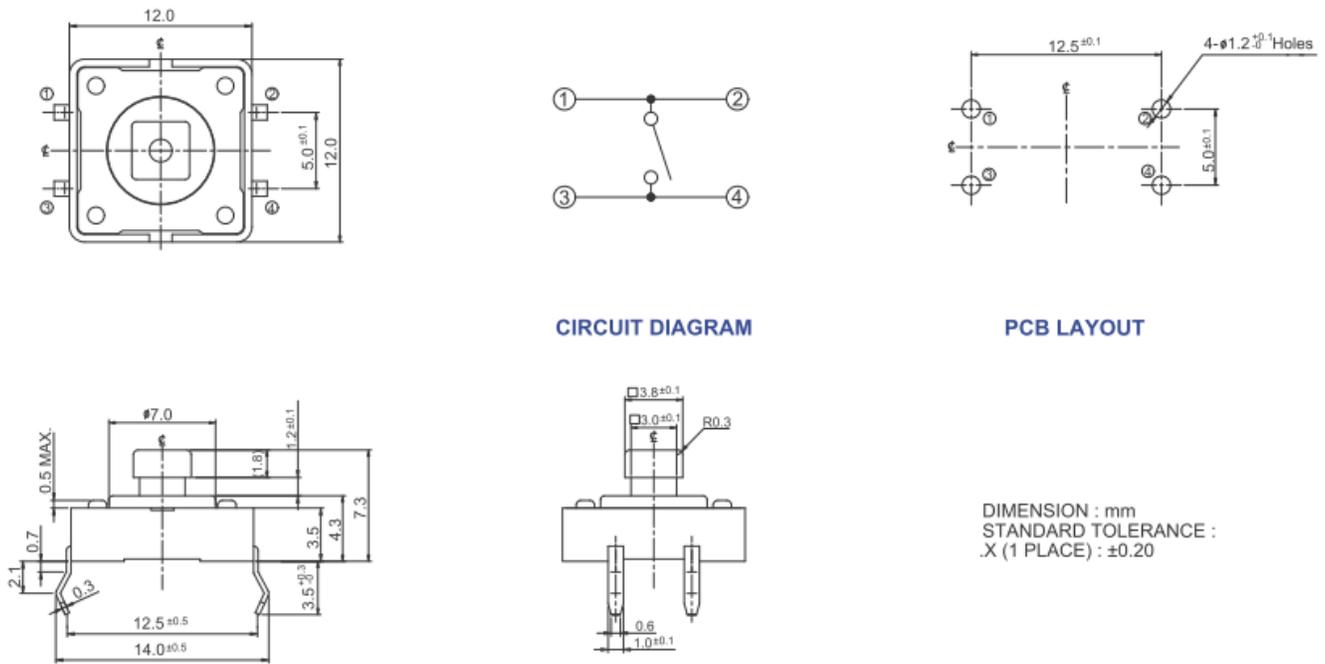
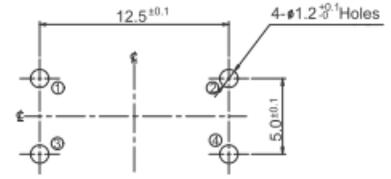
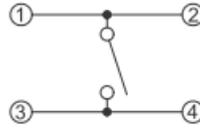
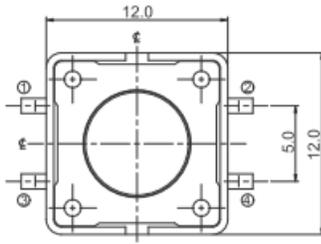
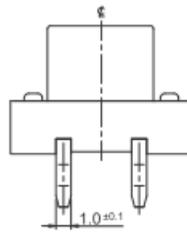
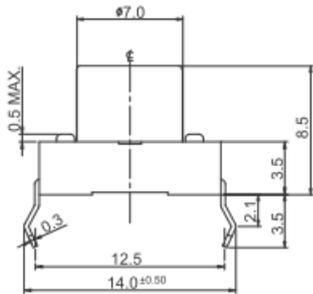


Figure 5 –224ADVB... Standard Through Hole, Actuator Height 8.5mm



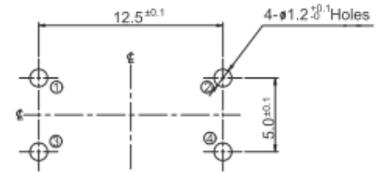
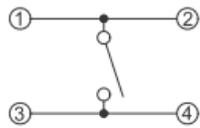
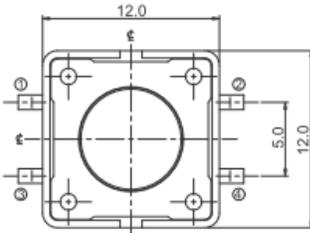
CIRCUIT DIAGRAM

PCB LAYOUT



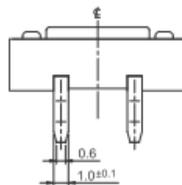
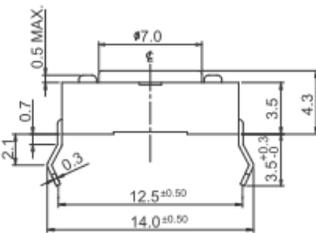
DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.20

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



CIRCUIT DIAGRAM

PCB LAYOUT



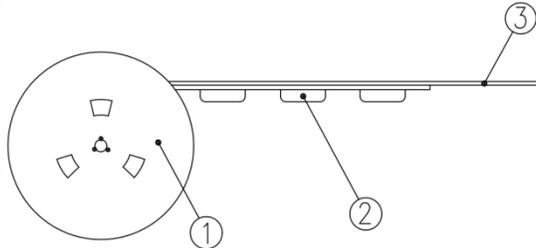
DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.20

Packing: Tape and Reel

Surface Mount Gull Wing

The packing specifications :

Structure and materials :



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

1. Packing quantity : 250 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 :

