



# Series 222E

## 5.0 x 5.0mm Compact Tactile Switch

- Surface mount gull-wing and J-bend terminal configurations
- Compatible with IR reflow and manual soldering
- Variety of operating force & actuator height options
- With ground terminal

### Description

Excellent tactile feedback provides user with simple and intuitive operation. Common product dimensions provide options to match your existing applications. The miniature product dimensions can make this an ideal choice for use in limited space applications.



### Ordering Information

Series	Terminal Type	Actuating Direction	Actuator Height	Actuator Force	Packaging
222E	M1	V	A	A	R

Code	Spec.
M1	Surface mount gull wing, square top
J1	Surface mount J bend, square top
J2	Surface mount J bend, round top

Code	Spec.
V	Vertical

Code	Spec.
A	1.5mm, not available for surface mount J bend round top
B	No actuator, only available for surface mount J bend round top

Code	Spec.
A	160 gf
B	260 gf

Code	Spec.
R	Tape & reel packaging

Notes: Contact CTS for other common features not listed.



## Electrical Specifications

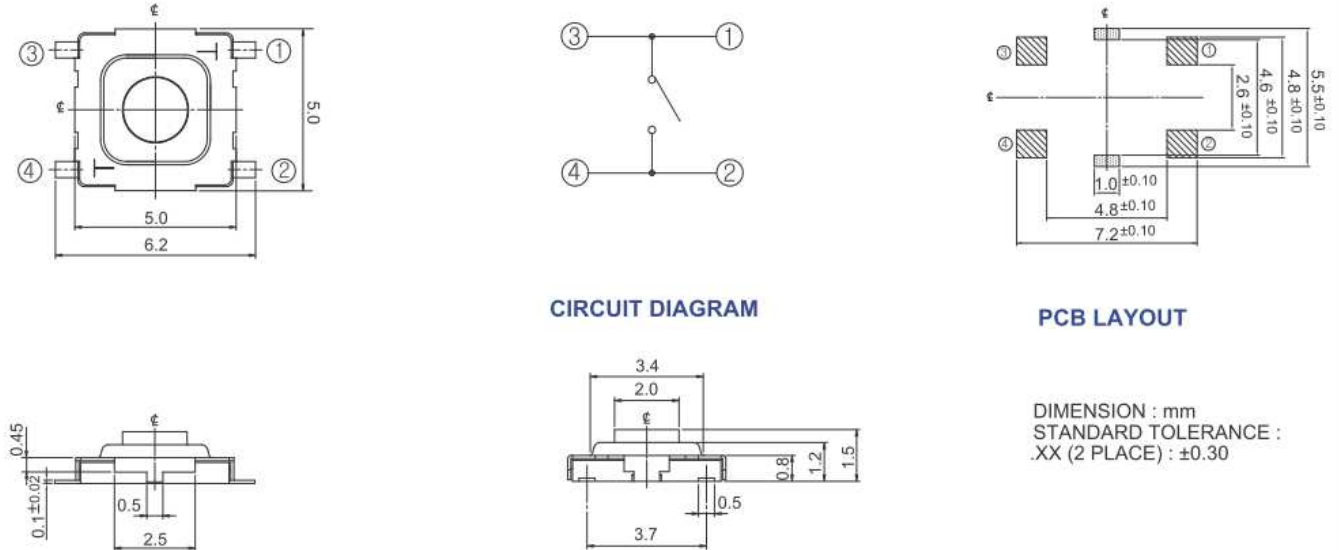
Parameter	Conditions & Remarks	Min	Max	Unit
Contact Resistance			100	milliohms
Insulation Resistance	Between insulated terminals	100		Megohms
Dielectric Strength	1 minute between adjacent switches		250	VAC
Actuation Life	160 gf 260 gf		1,000,000 200,000	cycles
Nonswitching Rating			50 or 12	mA or VDC

## 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	120, 160, or 240 gf
Actuator Strength	3 Kgf maximum
Travel	0.15mm
Packaging	Standard tape and reel packaging
Storage Temperature Range	-40°C to +85°C

**Mechanical Specifications**

Figure 1 – 222EM1VA, Surface Mount Gull Wing, Square Top, With Ground Terminal

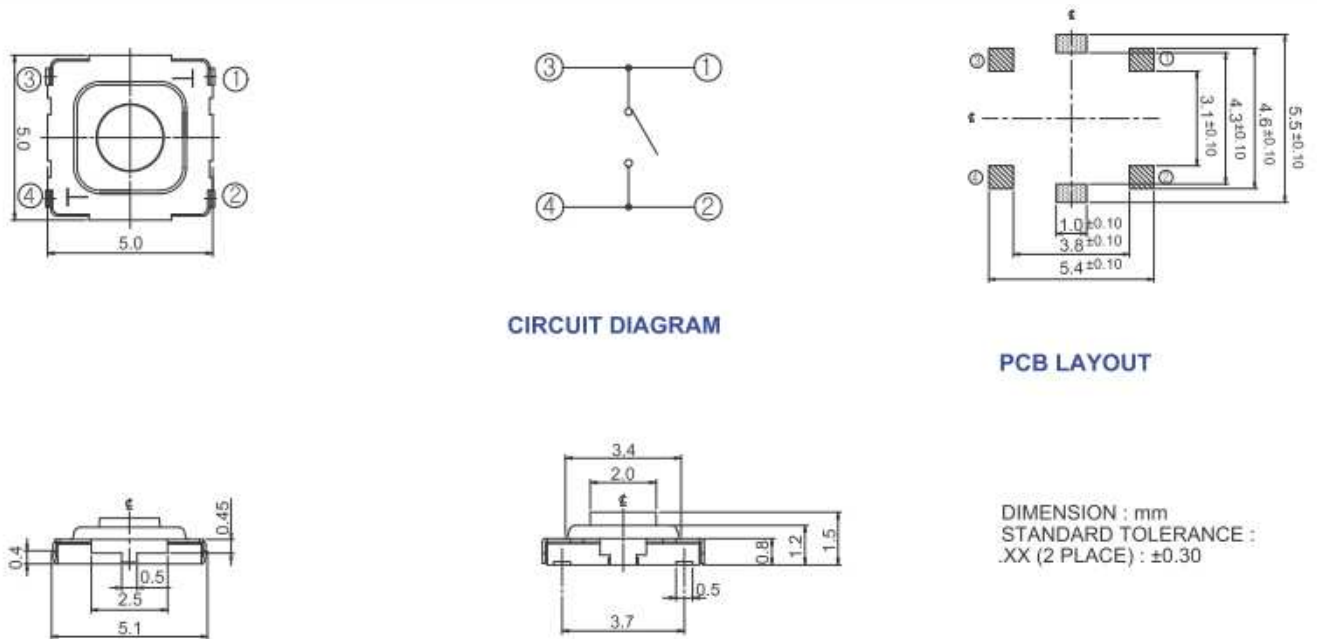


**CIRCUIT DIAGRAM**

**PCB LAYOUT**

DIMENSION : mm  
 STANDARD TOLERANCE :  
 .XX (2 PLACE) : ±0.30

Figure 2 – 222EJ1VA, Surface Mount J Bend Terminal, Square Top, With Ground Terminal

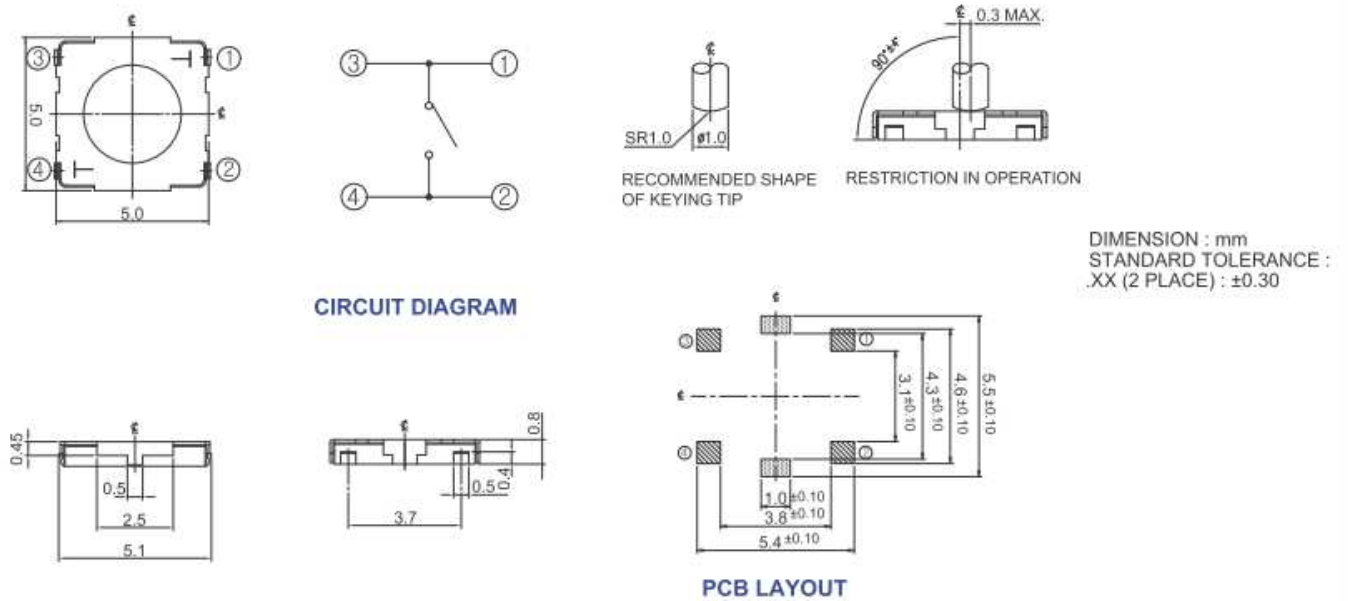


**CIRCUIT DIAGRAM**

**PCB LAYOUT**

DIMENSION : mm  
 STANDARD TOLERANCE :  
 .XX (2 PLACE) : ±0.30

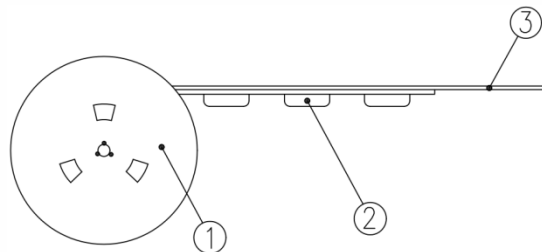
Figure 3 – Surface Mount J Bend Terminal, Round Top, No Actuator, With Ground Terminal



**Packing: Tape and Reel**

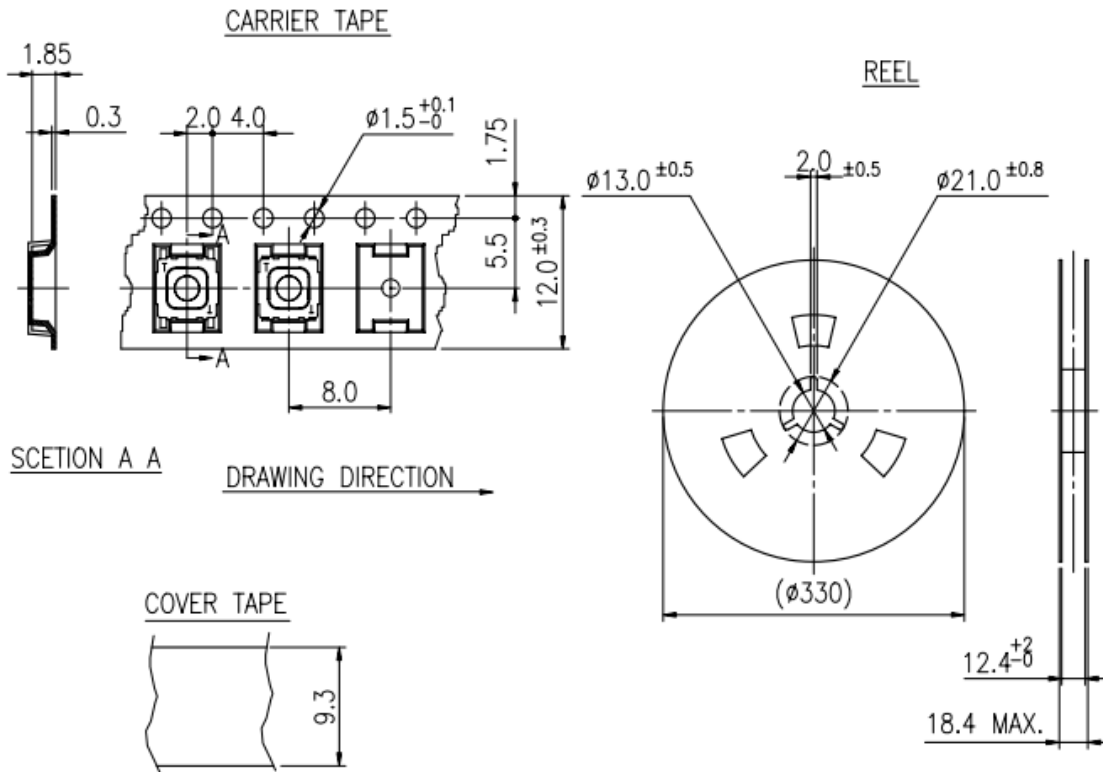
**Surface Mount Gull Wing/J Bend, Square Top with 1.5mm Actuator Height**

The packing specifications:  
Structure and materials:



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

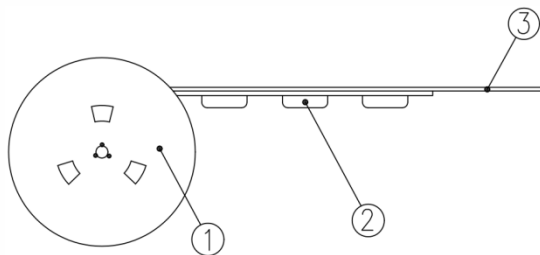
1. Packing quantity: 4,000 pcs/reel
2. More than 10 empty pockets should remain at each end of the carrier tape for each reel.
3. Shortage less than 10 pcs a reel is acceptable but no more than 3 consecutive empty pockets are allowed.
4. Stripping strength of cover tape is between 10 gf to 70 gf and 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:



## Packing: Tape and Reel

### Surface Mount J Bend, Round Top with No Actuator

The packing specifications :  
Structure and materials :



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

1. Packing quantity: 5,000 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:

