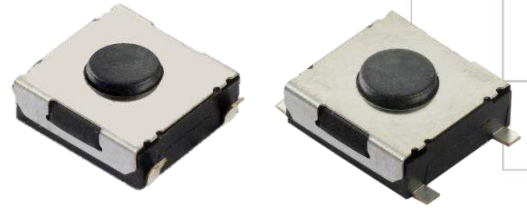




Series 222D

6.2 x 6.2mm 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



Ordering Information

Series	Terminal Type	Actuating Direction	Actuator Height "L"	Actuation Force	Packaging	Ground Terminal																																				
222D	M	V	A	A	R	G																																				
	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>M</td> <td>Surface mount gull wing</td> </tr> <tr> <td>J</td> <td>Surface mount J-bend</td> </tr> </tbody> </table>	Code	Spec.	M	Surface mount gull wing	J	Surface mount J-bend	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>V</td> <td>Vertical</td> </tr> </tbody> </table>	Code	Spec.	V	Vertical	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>2.5mm</td> </tr> <tr> <td>B</td> <td>3.1mm</td> </tr> <tr> <td>C</td> <td>3.5mm</td> </tr> </tbody> </table>	Code	Spec.	A	2.5mm	B	3.1mm	C	3.5mm	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>160 gf, black</td> </tr> <tr> <td>B</td> <td>360 gf, salmon</td> </tr> <tr> <td>C</td> <td>260 gf, brown</td> </tr> </tbody> </table>	Code	Spec.	A	160 gf, black	B	360 gf, salmon	C	260 gf, brown	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>R</td> <td>Tape & reel packaging</td> </tr> </tbody> </table>	Code	Spec.	R	Tape & reel packaging	<table border="1"> <thead> <tr> <th>Code</th> <th>Spec.</th> </tr> </thead> <tbody> <tr> <td>Blank</td> <td>Without</td> </tr> <tr> <td>*G</td> <td>With</td> </tr> </tbody> </table> <p>*Ground terminal option is not available for (1) Surface mount gull wing type (2) 3.5mm actuator height (3) 360 gf actuator force)</p>	Code	Spec.	Blank	Without	*G	With
Code	Spec.																																									
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Blank	Without																																									
*G	With																																									

Notes: Contact CTS for other common features not listed.

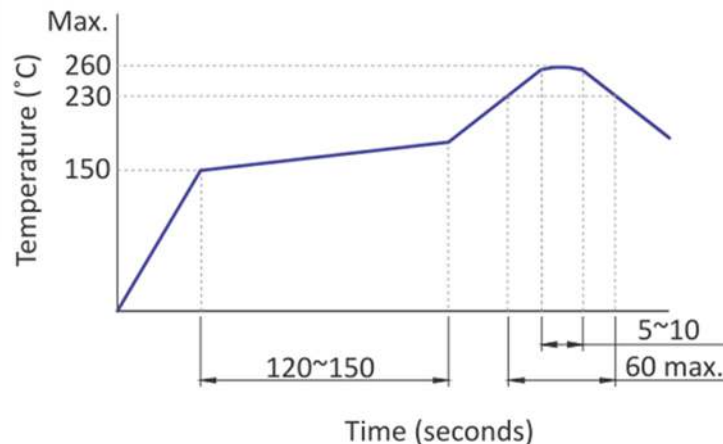
Electrical Specifications

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
Nonswitching Rating			50 or 12	mA or VDC

Mechanical and Environmental

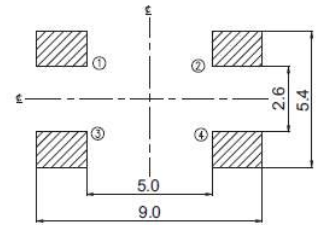
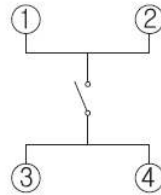
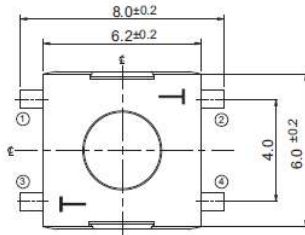
Soldering	Maximum reflow temperature, 260°C for 5 seconds Maximum manual temperature, 350°C for 3 seconds
RoHS	Lead-Free. Fully compliant to RoHS Directive 2011/65/EU
Operating Force	160±50 gf 260±50 gf 360±80 gf
Actuation Life	160 gf: 1,000,000 cycles 260 gf: 500,000 cycles 360 gf: 200,000 cycles
Actuator Strength	3 Kgf maximum
Travel	0.25 ^{+0.2} _{-0.1} mm
Packaging	Standard tape and reel packaging
Operating Temperature Range	-40°C to +85°C
Storage Temperature Range	-40°C to +85°C

Soldering Profile



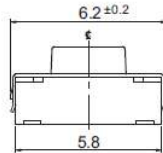
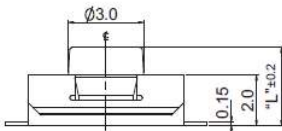
Mechanical Specifications

Figure 1 – 222DM, Surface Mount Gull Wing, Without Ground Terminal



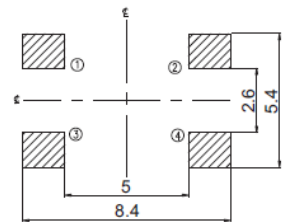
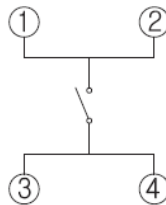
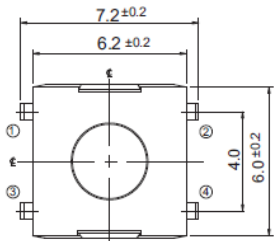
CIRCUIT DIAGRAM

PCB LAYOUT



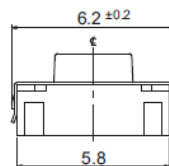
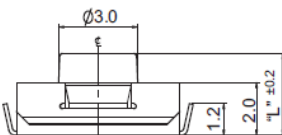
DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.10

Figure 2 – 222DJ, Surface Mount J-Bend Terminal, Without Ground Terminal



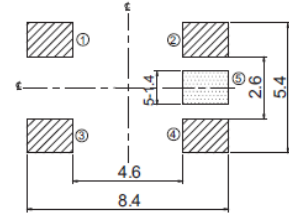
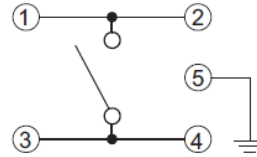
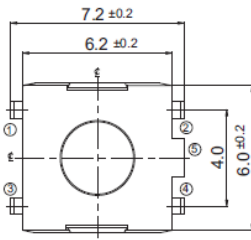
CIRCUIT DIAGRAM

PCB LAYOUT



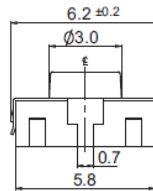
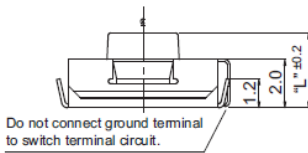
DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.10

Figure 3 – 222DJ...G, Surface Mount J Bend Terminal, With Ground Terminal



CIRCUIT DIAGRAM

PCB LAYOUT



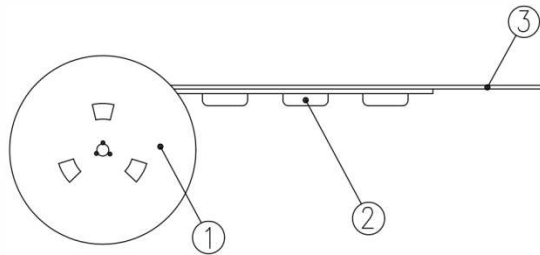
DIMENSION : mm
STANDARD TOLERANCE :
.X (1 PLACE) : ±0.10

Packing: Tape and Reel

Surface Mount Gull Wing/J-Bend, Without Ground Terminal

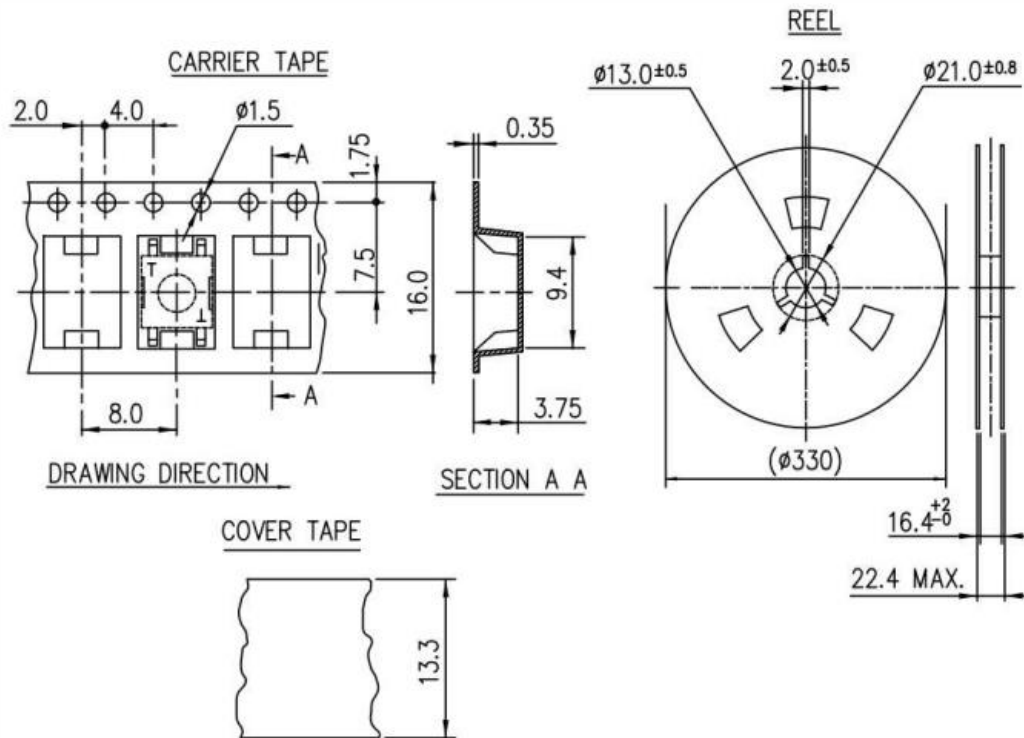
The packing specifications:

Structure and materials:



No	PART NAME	MATERIAL
①	REEL	POLYSTYRENE
②	CARRIER TAPE	POLYSTYRENE
③	COVER TAPE	POLYESTER

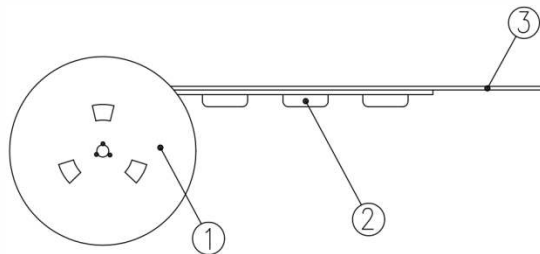
1. Packing quantity: 2,000 pcs/reel
2. More than 10 empty pockets should remain at each end of the carrier tape for each reel.
3. Shortage of less than 10 pcs a reel is acceptable but no more than 3 consecutive empty pockets are allowed.
4. Stripping strength of cover tape is between 10 gf to 70 gf and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



Surface Mount J-Bend, With Ground Terminal

The packing specifications:

Structure and materials:



No	PART NAME	MATERIAL
①	REEL	POLYSTYRENE
②	CARRIER TAPE	POLYSTYRENE
③	COVER TAPE	POLYESTER

1. Packing quantity: 2,200 pcs/reel
2. More than 10 empty pockets should remain at each end of the carrier tape for each reel.
3. Shortage of 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:

