

SERIES: TS16 | **DESCRIPTION:** TACTILE SWITCH

FEATURES

- black and red actuator options
- surface mount
- 7.5-9.5 mm actuator


SPECIFICATIONS

| parameter | conditions/description | min | typ | max | units |
|-----------------------|---|------|-----------------------------|------|----------------------------|
| rated voltage | | 1 | | 12 | Vdc |
| rated current | | 0.01 | | 50 | mA |
| withstanding voltage | for 1 minute | | 250 | | Vac |
| contact resistance | applying load of 2 times operating force at 5 Vdc, 10 mA | | | 100 | mΩ |
| insulation resistance | at 100 Vdc for 1 minute | 100 | | | MΩ |
| operating force | see force table | | | | |
| actuator travel | | 0.25 | 0.35 | 0.45 | mm |
| operating temperature | | -30 | | 80 | °C |
| storage temperature | | -40 | | 90 | °C |
| life | rated load, 2 cycles/second, 1.5 times operating force 100 gf models 160 gf models 260 gf models | | 100,000 80,000 60,000 | | cycles cycles cycles |
| vibration | 10-55-10 Hz, 1.5 mm amplitude, 2 hours on each XYZ | | | | |
| flammability rating | see material table | | | | |
| RoHS | yes | | | | |

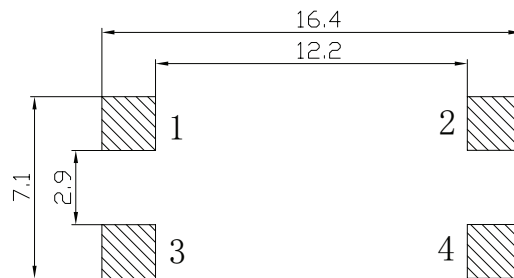
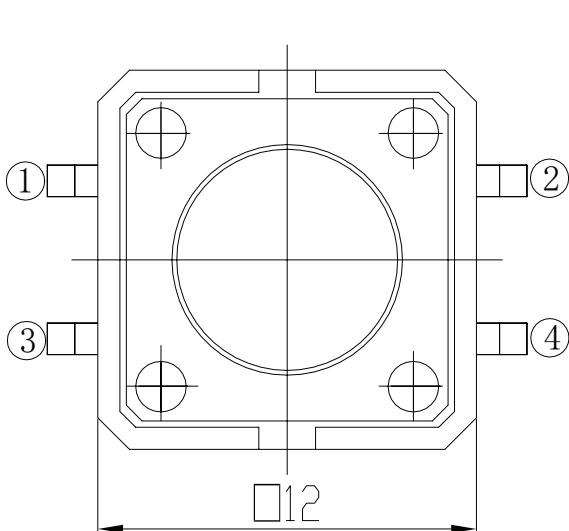
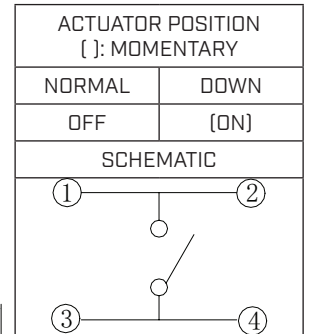
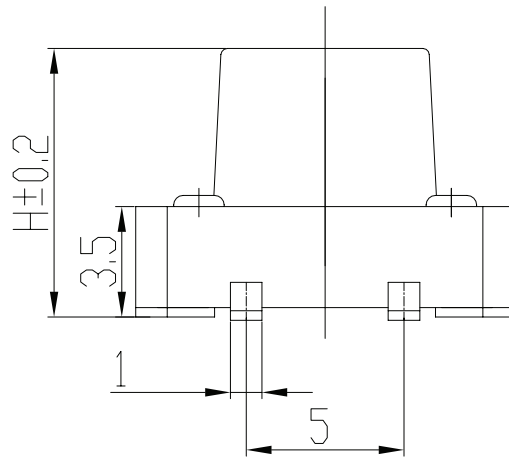
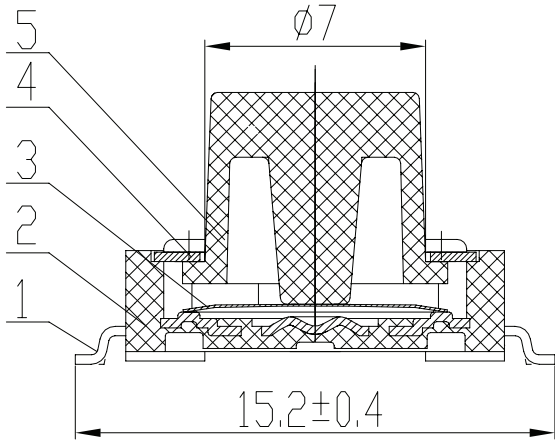
PART NUMBER KEY

| | | | |
|---|---|--|---|
| TS16 - 1212 - XX - XX - XXX - SMT - TR | | | |
| Base Number | Actuator Height: 75 = 7.5 mm 85 = 8.5 mm 95 = 9.5 mm | Actuator Color: R = red BK = black | Push Force: 100 = 100 gf 160 = 160 gf 260 = 260 gf |

MECHANICAL DRAWING

units: mm
 tolerance: ±0.2 mm
 unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL | PLATING/COLOR |
|------|-------------|-----------------|---------------|
| 1 | terminals | brass | silver |
| 2 | housing | FR52 (UL94V-0) | black |
| 3 | contacts | phosphor bronze | silver |
| 4 | cover | stainless steel | |
| 5 | stem | FR52 (UL94V-0) | |



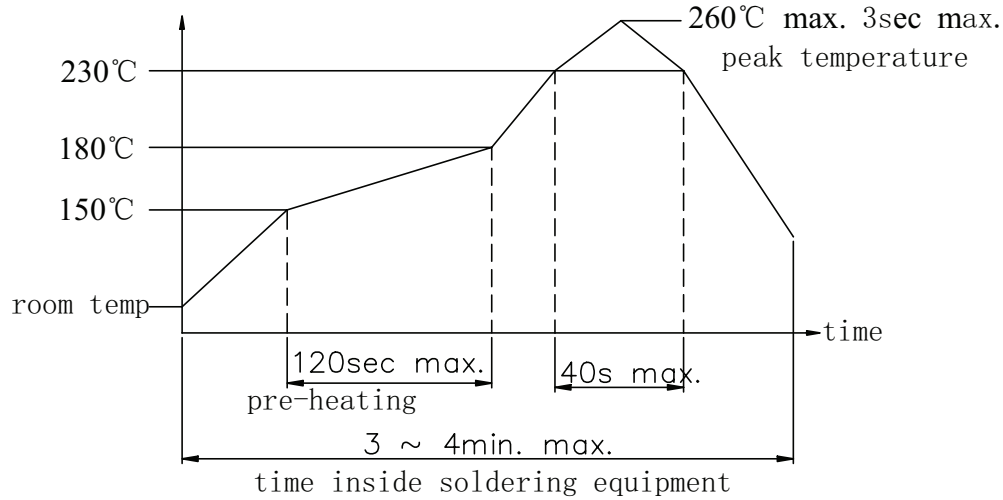
Recommended PCB Layout
Top View

| Operating Force Table | | |
|-----------------------|------------------|-------------------|
| Model | Press Force [gf] | Return Force [gf] |
| 100 | 100±30 | >20 |
| 160 | 160±50 | >20 |
| 260 | 260±50 | >20 |

SOLDERABILITY

| parameter | conditions/description | min | typ | max | units |
|-------------------------------|------------------------|-----|-----|-----|-------|
| hand soldering | for maximum 3 seconds | | | 350 | °C |
| reflow soldering ¹ | see reflow profile | | | 260 | °C |

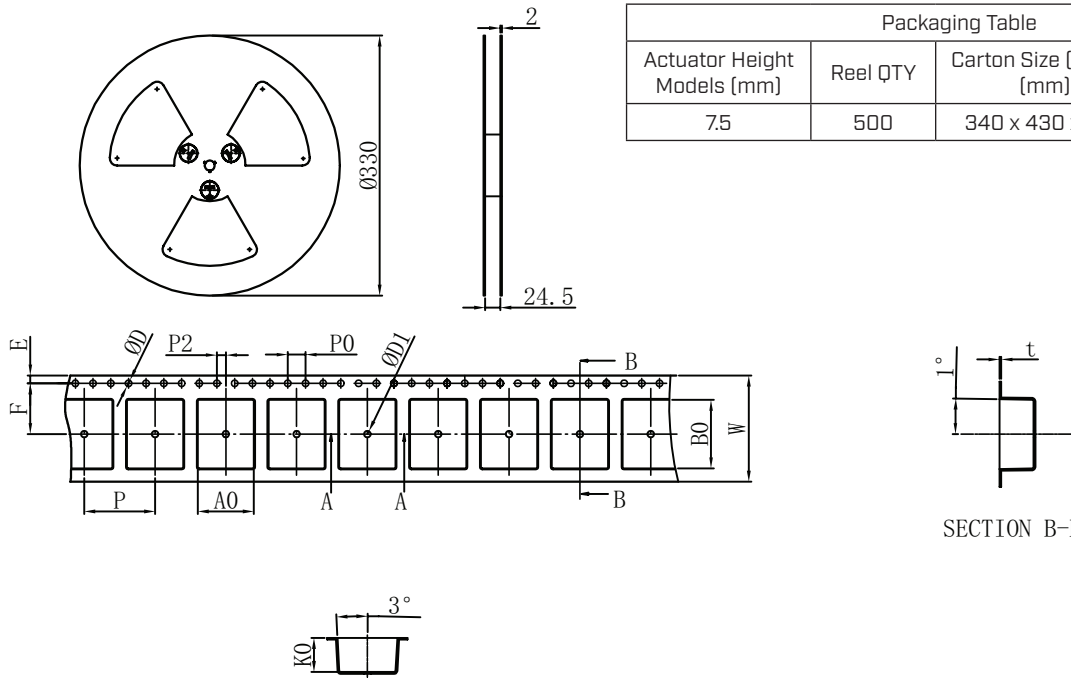
Notes: 1. Do not exceed 2 reflow cycles.



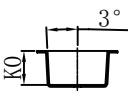
PACKAGING (7.5 HEIGHT MODEL)

| | | | | | |
|---------|-----------------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|
| Item | W | A0 | B0 | K0 | P |
| DIM(mm) | 24.0 ^{+0.30/-0.10} | 12.2 ^{+0.10/-0.10} | 15.5 ^{+0.10/-0.10} | 7.7 ^{+0.10/-0.10} | 16.0 ^{+0.10/-0.10} |
| Item | F | E | D | D1 | P0 |
| DIM(mm) | 11.5 ^{+0.10/-0.10} | 1.75 ^{+0.10/-0.10} | 1.50 ^{+0.10/-0.0} | 1.50 ^{+0.10/-0.0} | 4.0 ^{+0.10/-0.10} |
| Item | P2 | t | -- | -- | -- |
| DIM(mm) | 2.0 ^{+0.10/-0.10} | 0.4 ^{+0.05/-0.05} | -- | -- | -- |

| Actuator Height Models (mm) | Reel QTY | Carton Size (XxYxZ) (mm) | Carton QTY |
|-----------------------------|----------|--------------------------|------------|
| 7.5 | 500 | 340 x 430 x 340 | 7,000 |



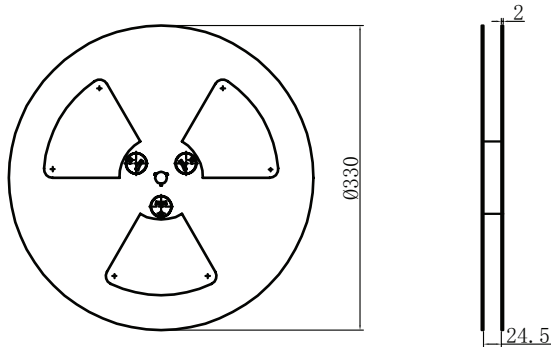
SECTION B-B



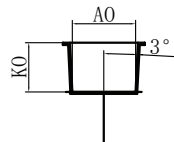
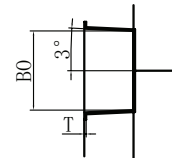
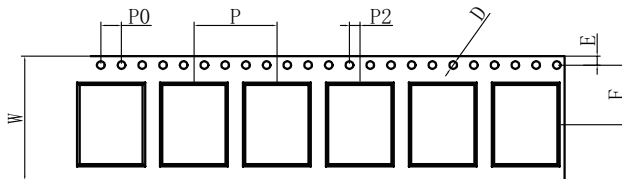
SECTION A-A

PACKAGING (8.5 & 9.5 HEIGHT MODELS)

| | | | | | |
|---------|-----------------------------|-----------------------------|-----------------------------|----------------------------|-----------------------------|
| Item | W | A0 | B0 | K0 | P |
| DIM(mm) | 24.0 ^{+0.30/-0.30} | 12.3 ^{+0.10/-0.10} | 15.6 ^{+0.10/-0.10} | 9.5 ^{+0.10/-0.10} | 16.0 ^{+0.10/-0.10} |
| Item | F | E | D | P0 | P2 |
| DIM(mm) | 11.5 ^{+0.10/-0.10} | 1.75 ^{+0.10/-0.10} | 1.50 ^{+0.10/-0.10} | 4.0 ^{+0.10/-0.10} | 2.0 ^{+0.10/-0.10} |
| Item | t | -- | -- | -- | -- |
| DIM(mm) | 0.4 ^{+0.05/-0.05} | -- | -- | -- | -- |



| Actuator Height Models (mm) | Reel QTY | Carton Size (XxYxZ) (mm) | Carton QTY |
|-----------------------------|----------|--------------------------|------------|
| 8.5~ 9.5 | 400 | 340 x 430 x 340 | 5,600 |



REVISION HISTORY

| rev. | description | date |
|------|------------------------------|------------|
| 1.0 | initial release | 04/13/2022 |
| 1.01 | logo, datasheet style update | 08/05/2022 |

The revision history provided is for informational purposes only and is believed to be accurate.



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