

# TPA Series Multidirection SMT Navigation Switch



## Features/Benefits

- One touch, 5 way switching
- Distinctive tactile feel for scanning and select functions
- Normally open momentary contacts
- Push down to select possible in any position
- Optional pegs for improved mechanical strength and easier PCB positionning
- RoHS compliant and compatible

## Typical Applications

- Electronic devices requiring direct control on LCD display
- MP3 player
- Bluetooth Headset
- Digital cameras
- GPS navigation systems
- Home entertainment systems
- Security



Navigation

## Construction

FUNCTION: Multi-directional momentary action  
 CONTACT ARRANGEMENT: Make contact = SP, N.O.  
 TERMINALS: Gullwing type for SMT  
 IP50

## Mechanical

SHAFT DISPLACEMENT:  
 Orthogonal 4 horizontal directions  
 Vertical Push down  
 TRAVEL TO MAKE:  
 Orthogonal 0.35 mm±0.15 mm  
 Push to select 0.25 mm±0.15 mm  
 OPERATING FORCE:  
 Scanning Orthogonal 1.8 N ± 0.5 N  
 Push to select Vertical 4.0 N ± 0.8 N  
 MAXIMUM APPLIED FORCE:  
 Scanning 20N  
 Select 40N  
 Button design may prevent overload (see next page)  
 LIFE EXPECTANCY:  
 Scanning 200,000 operations in each direction  
 Push to select 200,000 operations

## Electrical

	Silver	Gold
MAXIMUM POWER:	1 VA	0.2 VA
MAXIMUM VOLTAGE:	24 V	24 V
MAXIMUM CURRENT DC:	50 mA	10 mA
MINIMUM CURRENT DC:	1 mA	1 mA

DIELECTRIC STRENGTH: 250 Vrms  
 CONTACT RESISTANCE, INITIAL: 200 mΩ  
 INSULATION RESISTANCE (100 VDC): 100 MΩ  
 BOUNCE TIME: < 10 ms

## Environmental

	Silver	Gold
OPERATING TEMPERATURE:	-40°C to +85°C	-40°C to +85°C
STORAGE TEMPERATURE:	-40°C to +85°C	-40°C to +85°C

## Packaging

Tape and reels in reels of 1,000 pieces.  
 External diameter 330mm ± 2mm.

## Process

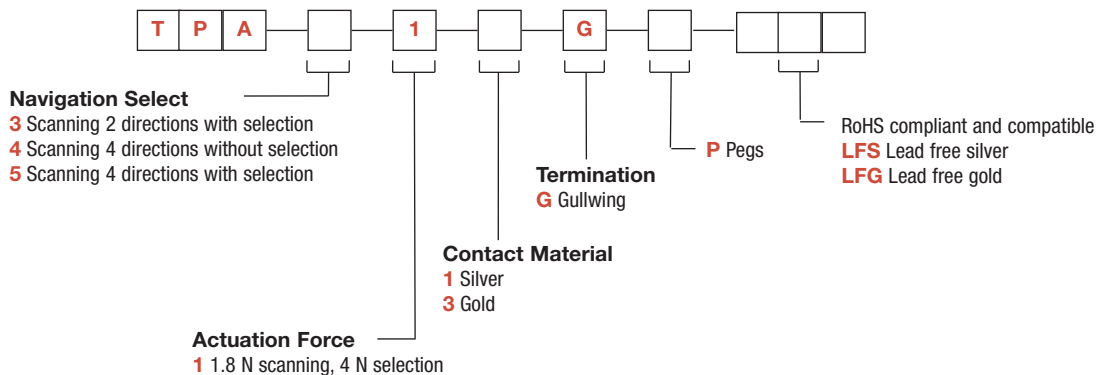
Infrared reflow soldering in accordance with IEC 61760-1

**Note:** Specifications listed above are for switches with standard options.

## How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

### SWITCH



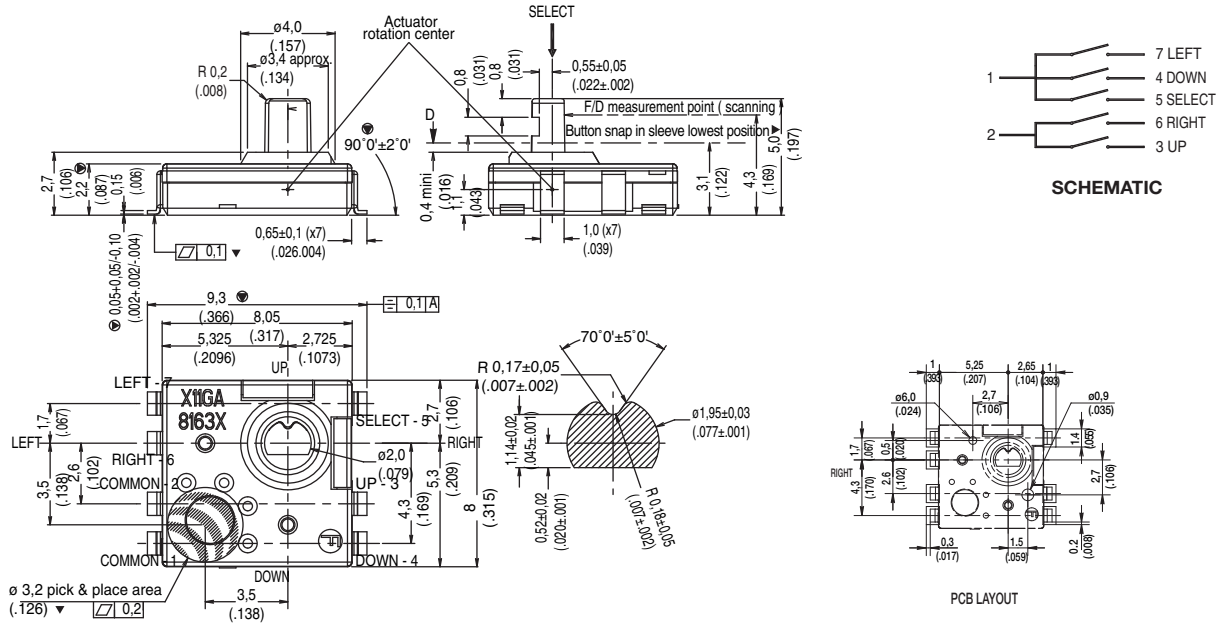
Dimensions are shown: mm

Specifications and dimensions subject to change

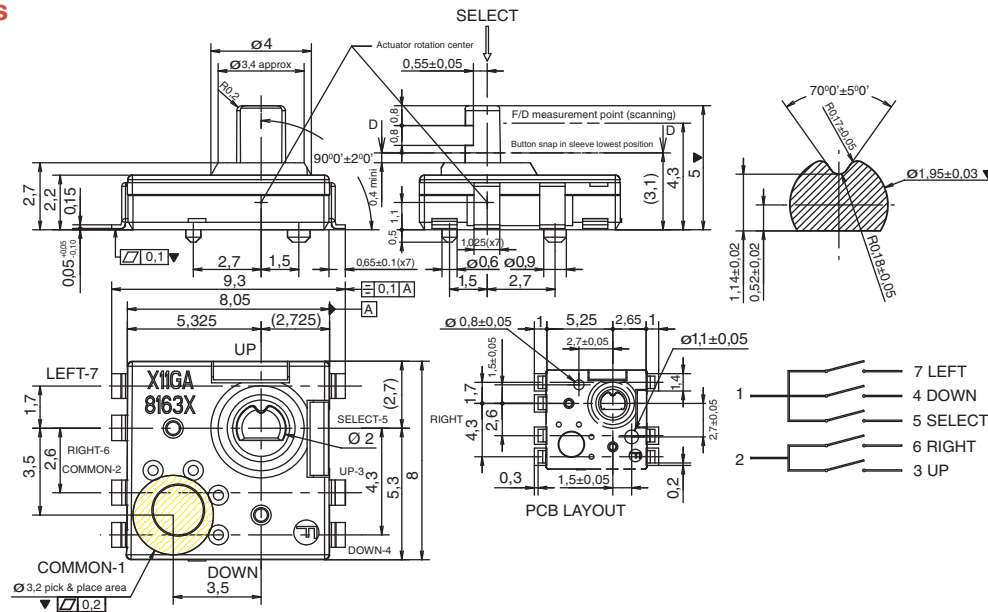


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## TPA

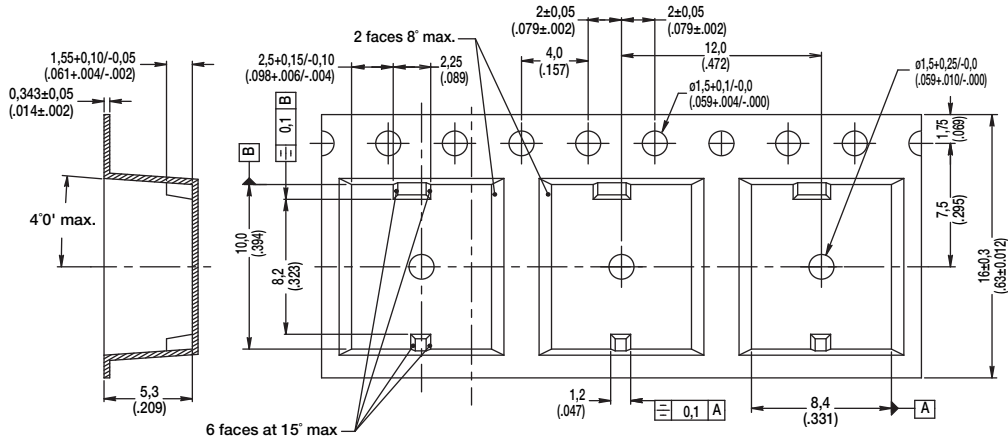


## TPA with Pegs



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## TAPE & REEL

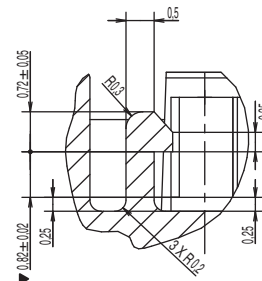
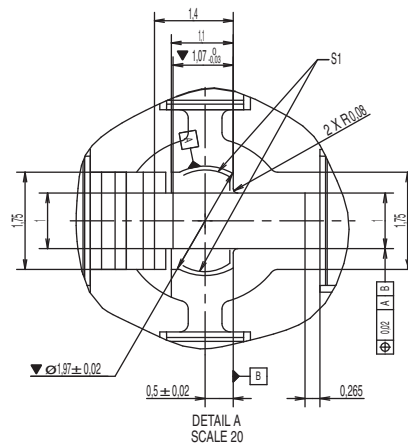
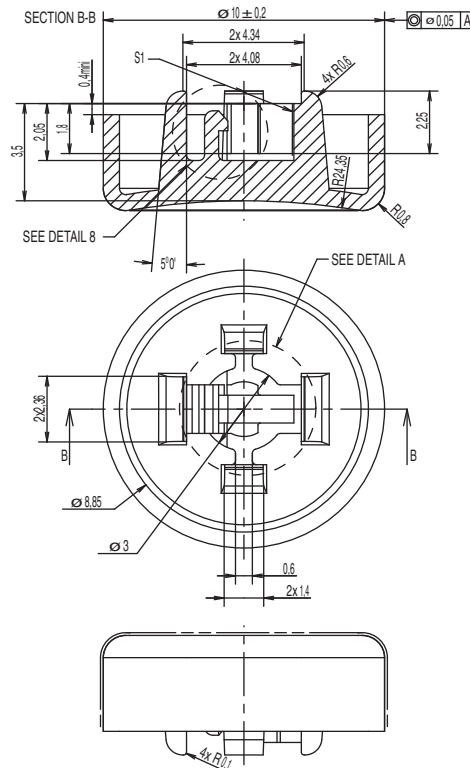


## STANDARD BUTTON

This drawings shows our standard available product but also provides the dimensional guidelines for a specific button integration, the main points being:

- shaft clip
- 4 travel stop to avoid overload

- To be ordered separately
- TPA Button - Y431091000P
  - Color: Black only
  - Bags of 1,000 pieces



Dimensions are shown: mm  
Specifications and dimensions subject to change

# Mouser Electronics

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## C&K Components:

[TPA311GFLOTTANT](#) [TPA511G](#) [TPA413G](#) [TPA411G](#) [BOUTON TPA](#) [TPA411G LFS](#) [TPA413GLFG](#) [TPA311GLFS](#)  
[TPA511GLFS](#) [TPA513GLFG](#) [TPA313GLFG](#) [Y43109100OP](#) [TPA411GPLFS](#)