

# TPA Series Navigation Tact Switch for SMT



## Features/Benefits

- One touch, 5 way switching
- Distinctive tactile feel for scanning and select functions
- Allows panel sealing
- Normally open momentary contacts
- Subminiature overall dimensions
- Push down to select possible in any position

## Typical Applications

- Electronic devices requiring direct control on LCD display
- Cellular phones
- PDA
- Digital cameras
- GPS navigation systems
- Home entertainment systems
- Security

## Construction

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

## Mechanical

SHAFT DISPLACEMENT:  
Orthogonal 4 horizontal directions  
Vertical Push down  
TRAVEL TO MAKE:  
Scanning  
Orthogonal 0.35 mm±0.15 mm  
Push to select 0.25 mm±0.15 mm  
OPERATING FORCE:  
Scanning Orthogonal 1.85 N ± 0.5 N  
Push to select Vertical 4.0 N ± 0.8 N  
MAXIMUM APPLIED FORCE:  
Horizontal 10 N  
Vertical 40 N  
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 VDC  
CONTACT RESISTANCE, INITIAL: ≤ 200 mΩ  
INSULATION RESISTANCE (100 VDC): 10<sup>9</sup>Ω  
BOUNCE TIME: < 10 ms

## Environmental

	Silver	Gold
OPERATING TEMPERATURE:	-40°C to 85°C	-40°C to 110°C
STORAGE TEMPERATURE:	-55°C to 85°C	-55°C to 125°C

## Process

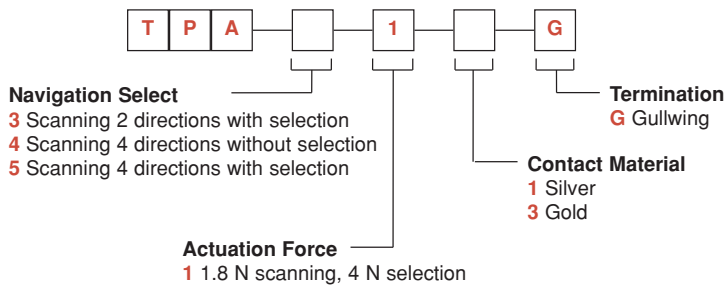
Soldering process: Infrared reflow according to CECC 0802  
No washing  
Hand soldering max. 350° 3S (CEI 68-2-20)

**NOTE:** Specifications listed above are for switches with standard options.  
For information on specific and custom switches, consult Customer Service Center.

## How To Order

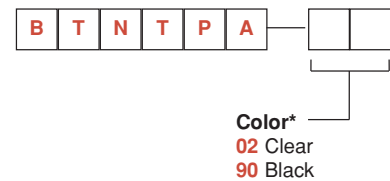
Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

### Switch



### Button

Buttons ordered separately in bulk, 500 pieces.



\* Other colors by request



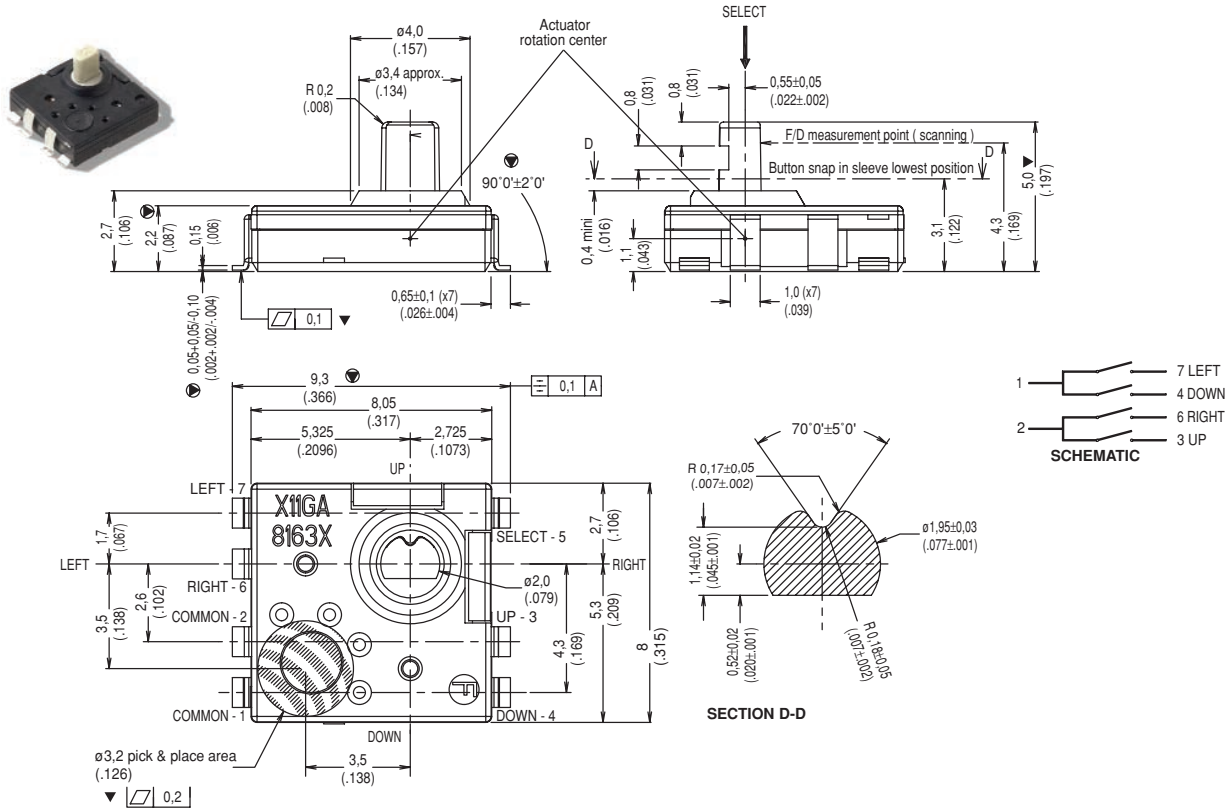
C

Navigation

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SERIES 

## TPA



## NAVIGATION SELECT

OPTION CODE	ARRANGEMENT
<b>3</b>	Scanning 2 directions with selection
<b>4</b>	Scanning 4 directions without selection
<b>5</b>	Scanning 4 directions with selection

## ACTUATION FORCE

**1** 1.8 N SCANNING, 4 N SELECTION

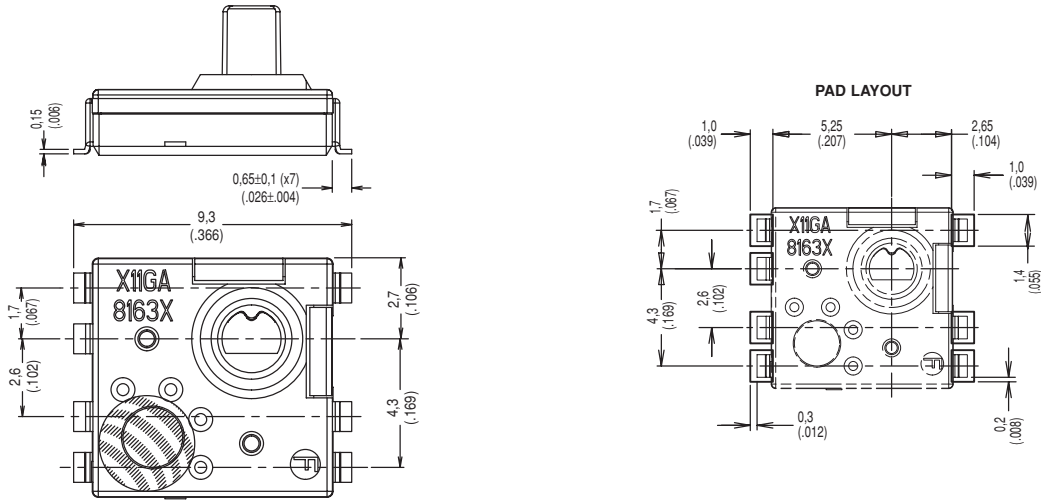
## CONTACT MATERIAL

OPTION CODE	MATERIAL
<b>1</b>	SILVER
<b>3</b>	GOLD

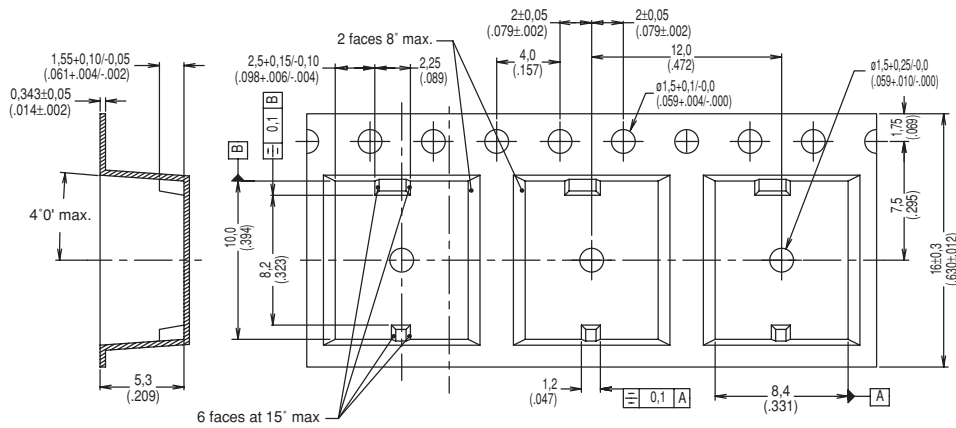
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## TERMINATION

**G** GULLWING

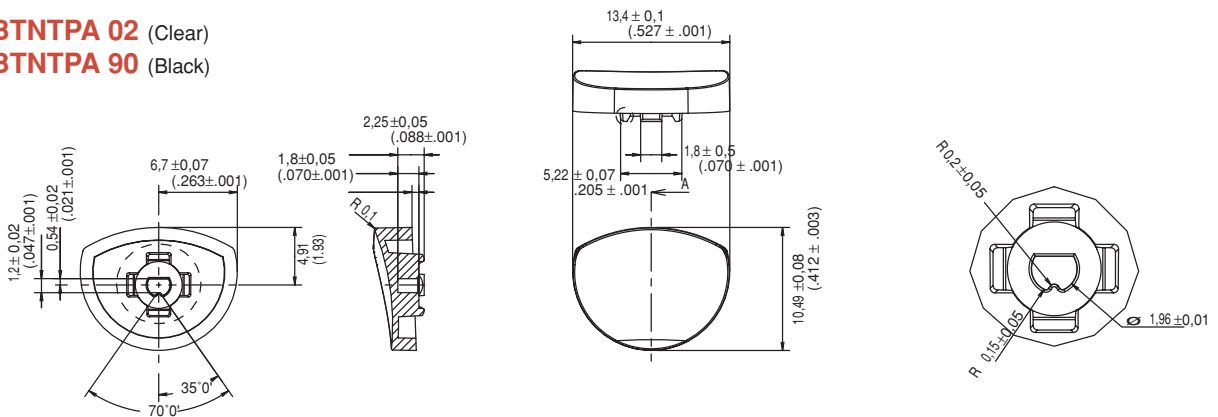


## TAPE & REEL



## BUTTON AVAILABLE

**BTNTPA 02** (Clear)  
**BTNTPA 90** (Black)



Navigation