

Tactile "Key-Pad" Dome Switches



Mini Series - 8.4mm diameter



Compact Series - 10.0mm diameter



Maxi Series - 12.2mm diameter

"Key-Pad" Domes are ideal for keypad arrays that require long life or a sealed interface. These snap action switches provide positive feedback with an audible and tactile click. "Key-Pad" domes are made from nickel plated stainless steel which provides a reliable user interface with over one million cycles.

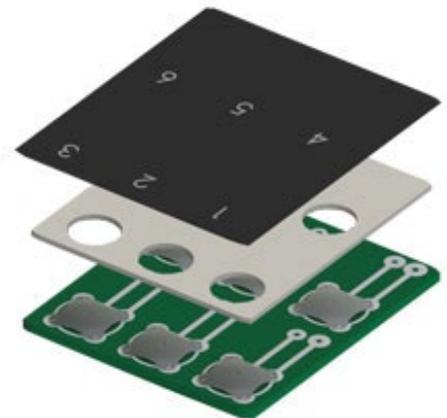
Exceptional tactile feel for single or double-sided PCBs.

Ideal for keypad arrays on a wide variety of switching surfaces
- single or double sided PCB's, flex circuits or membranes.

"Key-Pad" Domes float on PCB, no soldering recommended.

Supplied on tape and reel compatible with vacuum and mechanical pick and place systems.

Adhesive-backed spacer material for creating custom "Key-Pad" arrays is also available & provides the proper spacing between the circuit board, the dome and the device graphic layer.



Material Specifications:

Material: Stainless Steel, Nickel Plated
(Gold plating available)
Operating Temp.: -40°C to 105°C
Storage Temp.: -55°C to 125°C
Trip Force Range: 227g to 390g

Electrical Specifications:

Contact resistance: < 100 mOhm
Switching Voltage: 0.1 to 100VDC
Switching Current: 5 µAmp to 100 mAmp DC
Switching Capacity: 1 Watt

Applications

- Lightweight keypads
- ATMs
- Microwaves
- Whitegoods
- Vending machines
- Any application requiring substantial tactile response along with extensive actuation life.



If the device has a thicker or sculpted exterior package, the dome can be activated with an actuator.

See next page for more

“Key-Pad” Dome Switches

"Key-Pad" Dome switches are designed to be placed on the PCB, not soldered. The domes are held in place by using a "Key-Pad" adhesive spacer (Part No. K5200) which requires cut outs to be added in the proper locations. If the top sealing surface has an adhesive bottom side, it will help to keep the dome in the proper location (optional).

The low profile of the dome is ideal for thin, lightweight applications or applications that need to be sealed or easily cleaned. The domes can be activated from finger pressure through a thin flexible membrane that can be sealed against the product chassis so cleaning fluids, dust or weather will not damage the circuitry.

A "Key-Pad" Dome is available for almost any application with trip forces ranging from 227g to 390g and dome diameters from 8.4mm to 12.2mm. Trip forces are consistent from switch to switch per batch. This insures that a switch array will have a consistent feel from switch to switch. "Key-Pad" domes have a large sweet spot which allows the dome to be easily activated even though it was pushed off center. Gold plated domes are available upon request.



Tape & Reel
(5000 switches / reel)

Mini Series Key-Pad Dome

| Part Number | Actuator Height off PCB, (Vertical) | Operating Force |
|-------------|-------------------------------------|-----------------|
| K5133TR | 0.45mm | 220g |
| K5134TR | 0.50mm | 280g |
| K5135TR | 0.55mm | 340g |
| K5136TR | 0.55mm | 400g |

Compact Series Key-Pad Dome

| Part Number | Actuator Height off PCB, (Vertical) | Operating Force |
|-------------|-------------------------------------|-----------------|
| K5153TR | 0.65mm | 220g |
| K5154TR | 0.55mm | 280g |
| K5155TR | 0.60mm | 340g |
| K5156TR | 0.80mm | 400g |

Maxi Series Key-Pad Dome

| Part Number | Actuator Height off PCB, (Vertical) | Operating Force |
|-------------|-------------------------------------|-----------------|
| K5173TR | 0.65mm | 220g |
| K5174TR | 0.75mm | 280g |
| K5175TR | 0.75mm | 340g |
| K5176TR | 0.80mm | 400g |

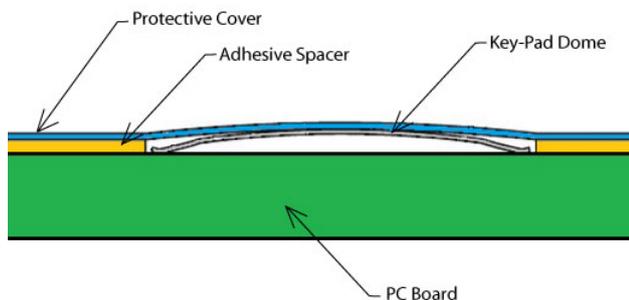
Keypad Dome Adhesive Spacer

Spacer material is designed to provide the proper spacing between the circuit board, the dome and the device graphic layer. The spacer will ensure that the edges of the domes will not cut or damage the graphic layer and still allow for this layer to flex enough to activate the dome.

Clear material allows the board to be visible during the assembly process.

Supplied as an uncut sheet with an acrylic adhesive on one side to allow the spacer to be mounted directly to the PCB.

Holes need to be punched (prior to mounting) to make space for the "Key-Pad" dome array. Pockets left in the holes of the spacer material will help keep the "Key-Pad" domes in place during the assembly process.



- Part No.:** K5200
- Color:** Clear
- Material:** Polyester
- Thickness:** 0.24mm
Polyester Spacer: 185 µm
Acrylic Adhesive: 50µm
- Supplied as:** 965mm x 610mm sheets.

COMPLETE DOME ASSEMBLIES AVAILABLE

For a quote, please forward dome layout sketch to:
sales@npa.com.au

