# DID YOU KNOW?

## UIPMA/C, UFPMA/C

The purpose of an ultra flat potentiometer membrane is to convert a mechanical position (angular or linear) into an electrical signal.

To enable this capability, Vishay MCB has developed two highly innovative technologies to address a large performance spectrum:

- UIPMA / UIPMC resistive layer over a polyester membrane (the industrial design)
- UFPMA / UFPMC resistive layer over a polyimide membrane (for enhanced temperature range)

In both cases, the principle remains the same.

The contact is achieved by the elastic deformation of the upper membrane, which comes into contact with the lower membrane (Fig 1).

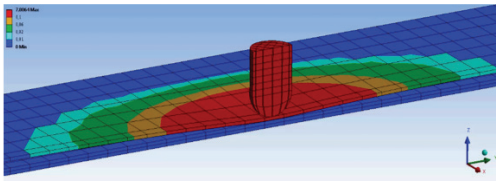
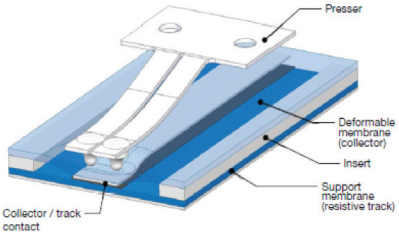


Fig 1




In this way, the contact between the collector track and resistive track is achieved and we know the exact position of the wiper by the voltage value. The voltage varies depending on the position of the presser on the deformable membrane (Fig 2).

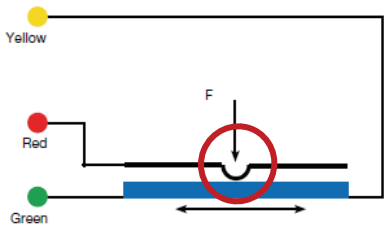



Fig 2

Active Area

There is NO direct contact between the wiper and the track, so there is NO wearing of the track.

## Applications:

- Industrial devices: electrical actuators, AC valve opening control, door systems, specific tools, irrigation systems, automatic food processing systems, goods dispensers
- Medical devices: syringe plungers, actuators for hospital beds and surgical tables
- Off-road: mast position, steering control, steering wheel position, seat adjustment, joystick applications
- Telecom: electrical actuators for antennas
- Aeronautic: electrical actuators for business-class seats
- Mining: survey of ground movements