

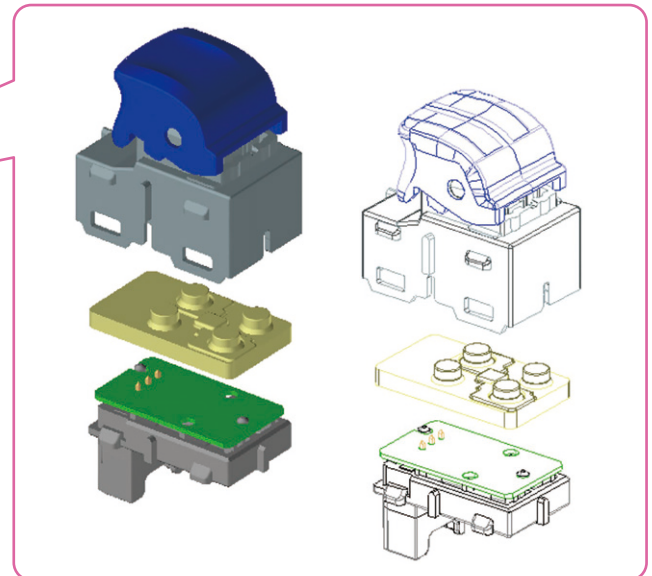


Inner Contact Rubber

What is ICR

ICR stands for Inner **C**ontact **R**ubber.

This product has switch function (ON-OFF) and forms electrical continuity part on the silicone rubber.



Features

We design stroke and skirt form of the button based on particular repelling force of silicone rubber and provide parts at customer's target force and click ratio.

〈Types of electric continuity contact and features〉

	Type	Resistance Value	Features
a	Conductive Printing	Less than 100 Ω	Low cost and shape of contact area can be designed freely such as circle, oval, lune.
b	Carbon Pill	Less than 50 Ω	Lower cost than metal pill. Only circular contact with the following diameter sizes are available. (ϕ 2, 2.5, 3, 3.5, 4, 5, 6, 7, 8)
c	Metal Pill	Less than 2 Ω	Low resistance / High reliability

※Resistance value is measured by using pectinate gold plating basal plate made by SEKISUI POLYMATECH. (The above resistance values are reference value measured under the following specimen composition. Pattern Pitch : 0.6mm Pattern width : 0.3mm Diameter of conductive area : ϕ 3)

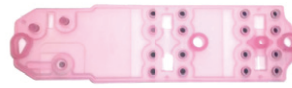
※If diameter of conductive printing is no more than ϕ 2.5, resistance value will be set 300 Ω or less.



Applications



Musical Instruments (Electric Piano)



Power Window Switch (In-car use)



Steering Switch (In-car use)



Audio Switch (In-car use)



Development Flow

Information required from a customer

- Operation force
- Stroke
- Click ratio
- Contact resistance / Contact design

Design Review

- Geometric simulation(FEM)

Prototype

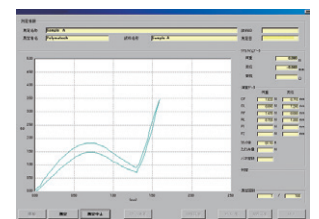
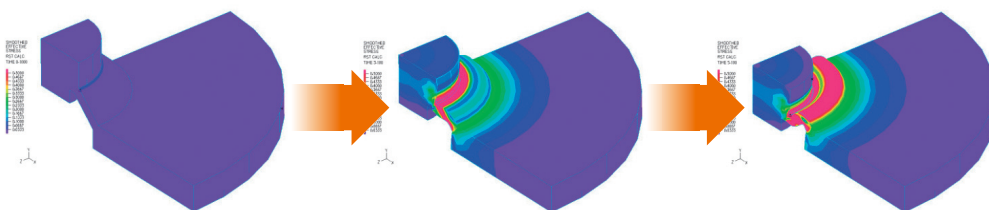
- Tooling kick off
- Making samples

Data Collecting

- F-S Specification

Finalizing Design

- Making delivery specification
- Starting part and tool qualification



F-S Specification