

# ESD Ceramic type (ZJ)

## General notes:

- » Zirconia Toughened Alumina (ZTA)
- » a superior combination of high strength (from zirconia) and high hardness (from alumina)
- » relatively low density
- » no open porosity
- » very hard surface, good abrasion and wear resistance
- » good flexural strength and fracture toughness
- » excellent thermal properties and high temperature stability
- » extreme corrosion resistance, nearly chemically inert
- » **ESD Safe static dissipative material**
- » typically applications includes **handling of EOS/ESD** sensitive components, handling of components during thermal, chemical and soldering processes. Generally used when very rigid tips are required.

## Thermal properties

|                               |                   |              |
|-------------------------------|-------------------|--------------|
| Thermal conductivity          | <b>5 W/m K</b>    |              |
| Coef. of lin. therm expansion | <b>9.5 E-6/°C</b> | 25°C-1.000°C |
| Continuous Use Temperature    | <b>1400°C</b>     | 20.000 h     |
| Shock resistance, ΔT          | <b>325°C</b>      |              |

## Electrical properties

|                     |  |           |
|---------------------|--|-----------|
| Surface resistivity | <b>10<sup>7</sup>-10<sup>9</sup> Ohm/sq.</b> | 100 V     |
| Decay time          | <b>&lt;0.5 sec</b>                           | 1.000-10V |