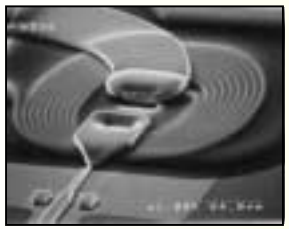
Process Technologies

Light weight and down sizing, high accuracy, high mechanical strength



Heads

Capacitors, Chip inductors

Ferrite cores

Thin-film technology

Thick-film technology

Powder process technology

nm **μm** **mm**

From millimeters to micrometers and now to nanometers

As Demand for Electronic Devices Grows, So Too Will Demand for TDK's Products

Example

ICs and magnetic materials are inseparable

All electronic devices require DC power supplies

↓

Ferrite is the best material for energy conversion devices

↓

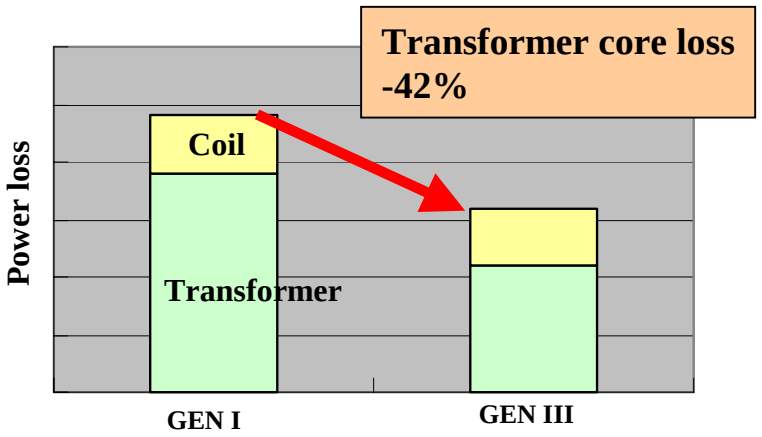
There are no substitutes for ferrite in the high-frequency ranges that are used in switching power supplies (1KHz to several MHz)

Materials Technology That Underpin Compact, Highly Efficient Power Supplies

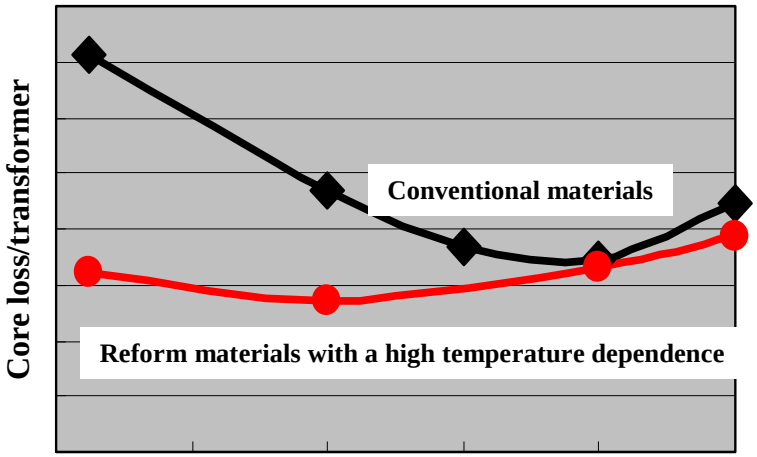
Low-loss ferrite

Lower power loss implemented by ferrite development with flat temperature dependence of loss

More compact components by using materials with a high B value at high temperatures



Magnetic materials that reduce power loss in power supplies



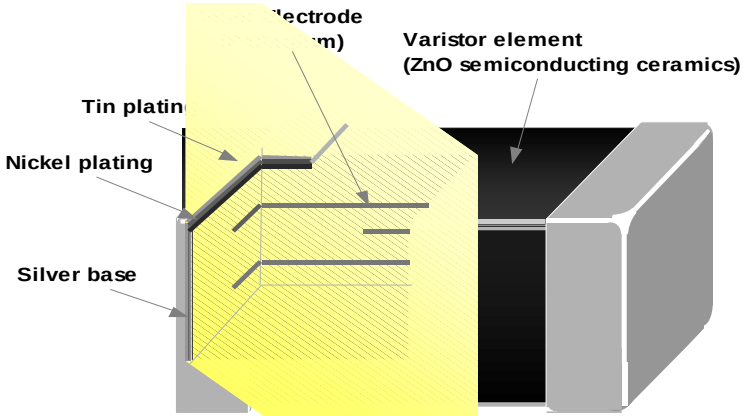
Ferrite with improved temperature dependence

The World's Smallest Chip Varistor

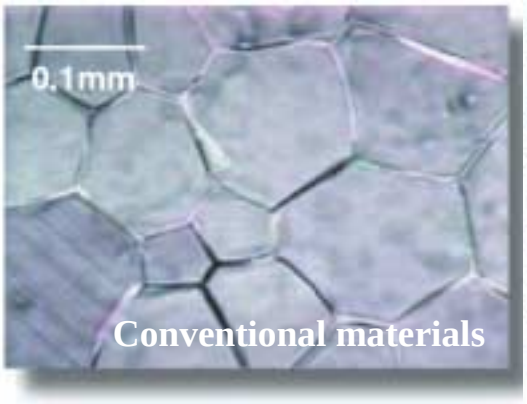
ZnO-Pr based varistor material for protection against static electricity

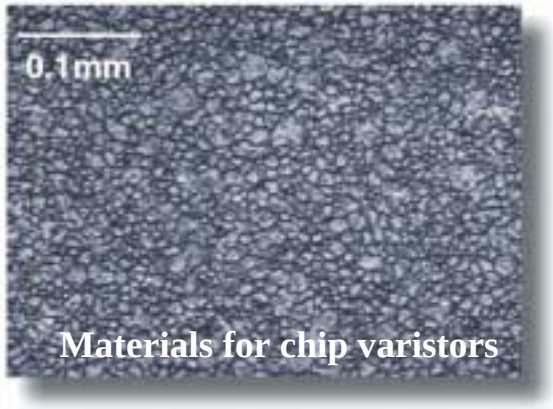
A microstructure made up of microscopic crystals of fine and homogenous grain size

Multilayer technology that achieves the highest possible accuracy

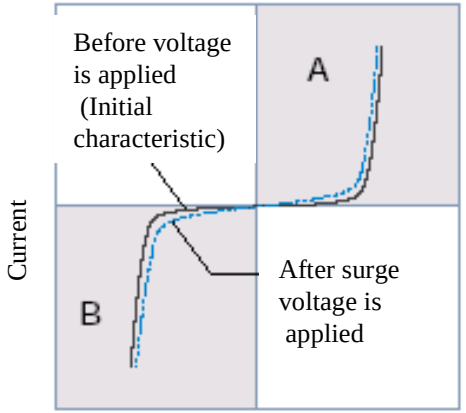


Structure of Chip Varistor





An extremely fine and homogenous microstructure



Stable varistor performance even after a surge voltage is applied