

# **Semiconductor Diodes**

## **SEMICONDUCTOR MATERIALS: Ge, Si, AND GaAs:**

Semiconductors are a special class of elements having a conductivity between that of a good conductor and that of an insulator.

The three semiconductors used most frequently in the construction of electronic devices are Ge, Si, and GaAs.

This brief review of the history of semiconductor materials is not meant to imply that GaAs will soon be the only material appropriate for solid-state construction. Germanium devices are still being manufactured, although for a limited range of applications. Even though it is a temperature-sensitive semiconductor, it does have characteristics that find application in a limited number of areas. Given its availability and low manufacturing costs, it will continue to find its place in product catalogs. As noted earlier, Si has the benefit of years of development, and is the leading semiconductor material for electronic components and ICs. In fact, Si is still the fundamental building block for Intel's new line of processors.