

# Solders



- 1. 221 °C (SN96):**  
The eutectic, SN96 (96.5Sn, Ag3.5 (small % of Pb)) has a melting point of 221C. Normally used for soldering alumina (Al<sub>2</sub>O<sub>3</sub>) substrates to Kovar carriers. It is available in sheet, and wire forms.
- 2. 183 °C (SN63):**  
The eutectic tin-lead (63 Sn, 37 Pb) alloy solder is used for soldering discrete components, and transistor leads to alumina substrates, and PC boards. It is available in sheet, and wire forms. Thermal coefficient of expansion is  $24.6 \times 10^{-6}$ .
- 3. 118 °C (Indium #1E):**  
This indium based (52In, 48Sn) solder is eutectic, and useful where lower temperature is required. It has excellent wettability, and can be used on non-metallic materials. Typical applications in RF packaging include soldering of gold or tin plated Kovar carriers to plated Magnesium or Aluminum housing, and transistors to Kovar carriers. The solder density is 0.2635 lb/in<sup>3</sup>. It is available in foil, and wire forms. 1 mil thick foil is commonly used in RF applications.