

AdSem, Inc. (www.adsem.com), a manufacturer of unique performance Ge and Si temperature sensors for high-, low- and ultra-low temperatures extended its Si cryogenic thermistor family to the same operating temperature ranges as its existing Ge thermistors. Using special doping techniques AdSem has developed high performance Si NTC thermistors for temperature ranges of 300K - 77K, 300K - 0.3K and 4.2K - 1mK. These Si thermistors have increased thermosensitivity, decreased sensitivity to magnetic field at helium temperatures, higher thermoconductivity (this is a specially important at ultra-low temperatures $T \ll 1K$) and almost two orders of magnitude higher radiation hardness in comparison with germanium thermistors. Such thermistors are important for temperature measurements in presence of nuclear radiation, for example, in neutron “cold” sources, polarizing filters, accelerators with superconducting magnets, for measurements in space, including nuclear calorimeters/X-ray detectors (instead of thin ion-implanted Si thermistors), etc. AdSem offers these Si cryogenic thermistors with the leads (2 or 4) or as dies with surface area down to $100 \times 100 \mu m^2$.



AdSem, Inc.

**Unique Si & Ge
NTC Thermistors**

High T: up to 500°C
Cryogenic T: 300K-0.3K
Ultra-Low T: 4K -1mK