

NTC Thermistor : Introduction



NTC thermistors are resistors with large negative temperature coefficient. Change in resistance of the NTC thermistors can be brought about either externally by a change in ambient temperature or internally by self-heating resulting from a current flowing through the device. This predictable change in resistance as temperature changes is the basis for all applications of thermistors.

The semi conducting material of NTC thermistors usually consists of a sintered ceramic fabricated in a variety of shapes and sizes from a mixture of oxides chosen from Mn, Co, Ni, Cu, Fe, etc. By varying the composition and the size of the semi-conducting elements, resistance values between 10^0 and 10^6 ohms at room temperature can be achieved with temperature coefficients lying between -2% and -6.5% per $^{\circ}\text{C}$.

