



## Thermistors Used in Seat Heater Applications



### Application

The temperature of a heated automobile seat is measured by a NTC thermistor that is embedded between the foam pads of the seat. The thermistor monitors the seats temperature and feeds this information back to the controller that regulates the seats temperature. Seat heaters for furniture recliners also use similar technology.

### Installation

The thermistor and its wire leads must be small enough so that it is not felt by the person in the seat and rugged and flexible enough to withstand the changing pressure of people getting in, sitting in and then getting out of the seat over its life.

### Advantages

The customer relied on our broad product portfolio and experience to find them a thermistor solution that would work in their application. We took an existing product and converted the rigid single conductor leads over to a flexible multi-stranded wire to yield a more rugged sensor.

### Equipment

This particular application called out for a Type TK95 Interchangeable thermistor. This thermistor has a very tight tolerance over a wide temperature range and long leads to enable it to be embedded in different section of the seat. Other seat heater technologies use either the Type DK diode thermistor or Type SMD thermistors.

Please refer to AAS data sheets AAS-920-320D, AAS-920-324E and AAS-920-273E for more information on the Type Diode and Melf, SMD Chips and Type Interchangeable.

### Specifications

#### Type TK95F502W thermistor:

- Resistance at 25°C = 5000 ohms
- Accuracy is  $\pm 0.2^\circ\text{C}$  from 0 to 70°C
- Leads are 26 AWG stranded wire
- Lead length = 6 inches.
- Temperature range:  $-80^\circ\text{C}$  to  $150^\circ\text{C}$



### Datasheet Links:

<http://www.amphenol-sensors.com/en/component/edocman/114-ntc-diode-thermometrics-thermistors-brochure/download?Itemid=0>

<http://www.amphenol-sensors.com/en/component/edocman/111-ntc-interchangeable-type-95-series-thermometrics-thermistors-brochure/download?Itemid=0>

<http://www.amphenol-sensors.com/en/component/edocman/82-ntc-type-smd-surface-mount-devices-brochure/download?Itemid=7966%20%27>