

# Si440 Silicon Diode Temperature Sensor

Si440 Silicon Diodes offer a great value for applications requiring a wide temperature range. They are interchangeable with the Si430 in applications below 400K but are rugged enough to withstand exposure to 500K. The new CAP package is the smallest encapsulated diode mount on the market.

### Specifications

**Range:** 1.5K – 500K

**Excitation:** 10 $\mu$ A  $\pm$ 0.1%

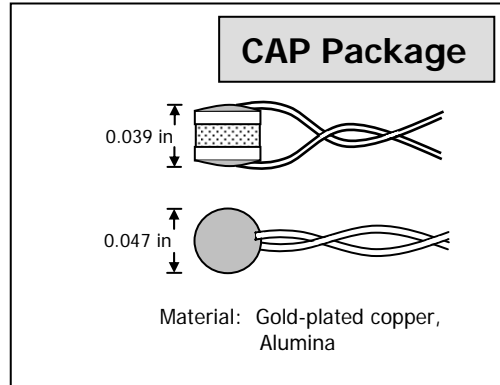
**Repeatability:** 75mK @4.2K, 0.35K @77K, 0.25K @273K

**Magnetic Field Use:** Not recommended for fields above 0.1 Tesla below 40K

**Use in Radiation:** Not recommended for use in high radiation environments.

**Leads:** 37 AWG Copper, Polyimide insulation, 3 inches standard length

**Mounting Options:** CAP, Canister, 22 Bobbin, 25 Bobbin (see Reverse)

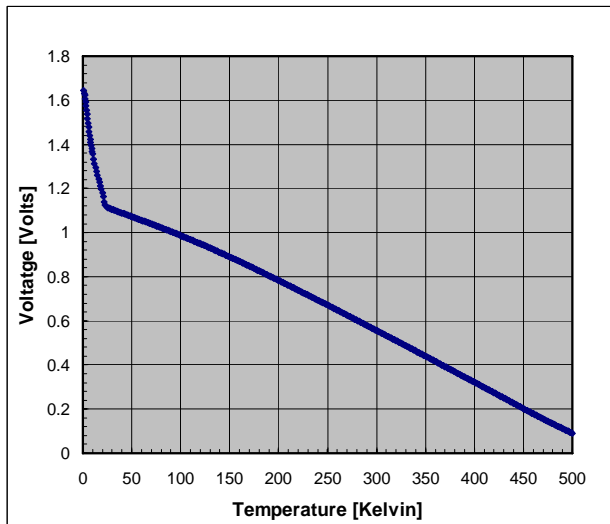


### Tolerance

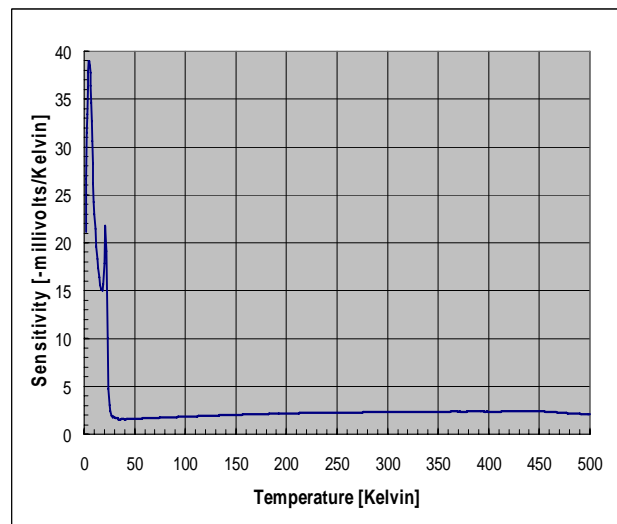
	1.5K to 30K	30K to 100K	100K to 500K
<b>Standard</b>	$\pm$ 0.25K	$\pm$ 1.0K	$\pm$ 2.0K

Temperature	Sensitivity
4.2 K	38 mV/K
77 K	1.7 mV/K
273 K	2.3 mV/K

**Response Curve**



**Sensitivity**



## Custom Leads for Cans and Bobbins

### Two Wire Options

36 AWG Phosphor-Bronze, Twisted  
Insulation: Polyimide

32 AWG Copper, Twisted  
Insulation: Polyimide

30 AWG Phosphor-Bronze, Twisted  
Insulation: Polyimide

### Four Wire Options

36 AWG Phosphor-Bronze, Twisted  
Insulation: Polyimide

32 AWG Phosphor-Bronze, Twisted  
Insulation: Polyimide

Available in lengths from 6 inches to 15 feet

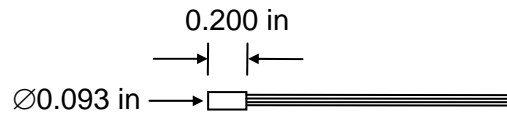
Teflon sheathing available.

### Calibration Ranges

R 4.2K to 500K

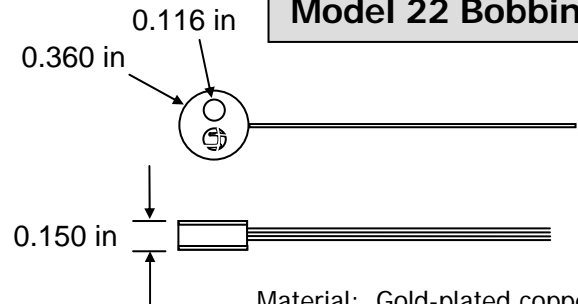
RR 1.5K to 500K

### Canister Package



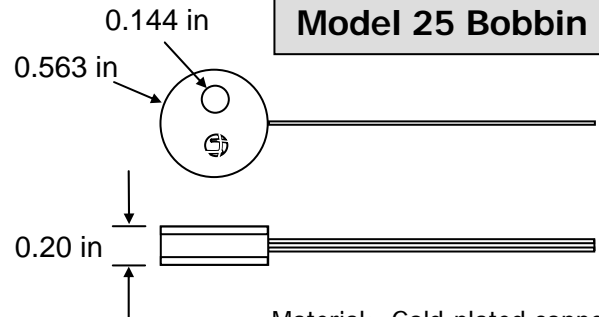
Material: Gold-plated copper,  
Stycast® Epoxy

### Model 22 Bobbin



Material: Gold-plated copper,  
Stycast® Epoxy

### Model 25 Bobbin



Material: Gold-plated copper,  
Stycast® Epoxy

