

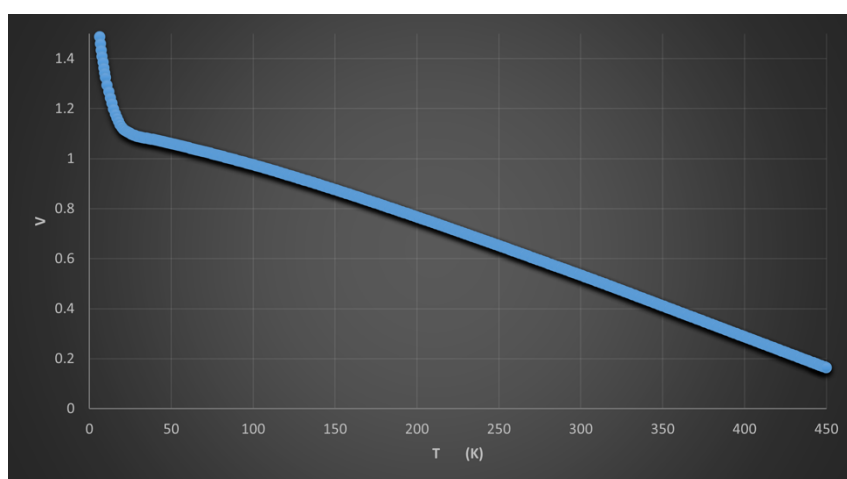
# Si540



## Silicon Diode Temperature Sensor

The Scientific Instruments Model Si-540 Silicon Diode Temperature Sensors operate over a wide temperature range (1.5K to 450K) and are miniature in size. They are linear over a wide temperature range interval, have high sensitivity in their lower range, and are interchangeable to a standard V/T curve. We offer several different accuracy groupings based on each sensor's adherence to the typical response curve. See below for more information:

### Response Curve



### Si-540 Interchangeable Accuracy Groupings

#### Model Si-540 Group "AA" Accuracy    Model Si-540 Group "C" Accuracy

+/- 0.1K from 1.5K to 25K  
+/- 0.5K from 25K to 450K

+/- 0.5K from 1.5K to 450K  
+/- 1K from 25K to 450K

#### Model Si-540 Group "A" Accuracy    Model Si-540 Group "D" Accuracy

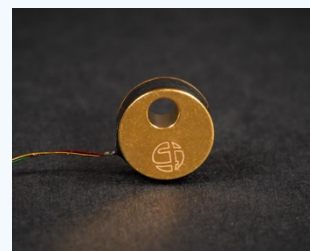
+/- 0.3K from 1.5K to 25K  
+/- 0.5K from 25K to 450K

+/- 1K from 1.5K to 25K  
+/- 2K from 25K to 450K

#### Model Si-540 Group "B" Accuracy    Model Si-540 Uncalibrated Accuracy

+/- 0.5K from 1.5K to 450K

+/- 2K from 1.5K to 25K  
+/- 5K from 25K to 450K



**Model Si-540 Calibrated "N" Range**  
(4.2K to 450K)

**Model Si-540 Calibrated "NN" Range**  
(1.5K to 450K)

Calibrated Accuracy:  
+/- 0.03K from 1.5K to 25K  
+/- 0.1K from 25K to 450K

\*Data is subject to change as a result of product improvement



SCIENTIFIC INSTRUMENTS

# Si540

Model Si-540 sensors are normally mounted in a gold-plated copper canister with four 36 AWG polyimide coated, color-coded, phosphor bronze leads. Canister size is 0.093" diameter by 0.250" long. Leads of phosphor bronze, manganin, or copper wire are available at various lengths. Other packages can be supplied, contact us for details!

## FEATURES

- Interchangeability
- Repeatability
- NIST Traceable standard
- Rugged

## PHYSICAL SPECIFICATIONS

- Gold Plated OFHC Copper Enclosure, Dia. 0.093" (2.4mm) x Length 0.250" (5.1mm)
- Standard configuration Phosphor Bronze lead wire, 4-leaded, Polyimide coated, 36 AWG

**\*\* Custom Leads Available**

ISO9001  
CERTIFIED

## Four-Wire Options

\*36 AWG Copper, Twisted  
Insulation: Teflon

\*30 AWG Copper, Twisted  
(Model 25 Only)  
Insulation: Teflon

\*36 AWG Phosphor-Bronze,  
Bonded  
Insulation: Polyimide

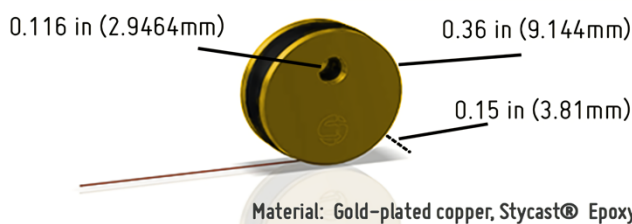
\*32 AWG Phosphor-Bronze,  
Bonded

\*30 AWG Phosphor-Bronze,  
Bonded  
Insulation: Polyimide

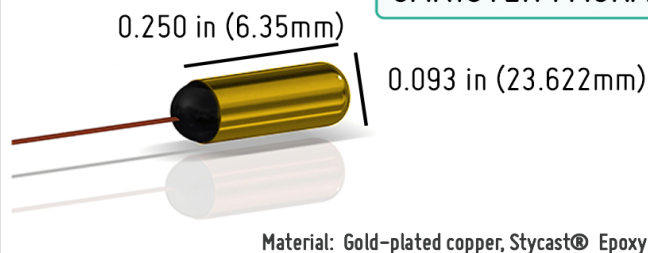
Insulation: Polyimide

**\*\*Two-Wire Configurations  
Available upon Request**

## Model 22 Bobbin



## CANISTER PACKAGE



## Model 25 Bobbin

