

The AD590 is a 2-terminal integrated circuit temperature transducer that produces an output current proportional to absolute temperature. For supply voltages between 4 V and 30 V, the device acts as a high impedance, constant current regulator passing 1 $\mu\text{A}/\text{K}$. Laser trimming of the chip's thin-film resistors is used to calibrate the device to 298.2 μA output at 298.2 K (25°C).



Typical Applications

- Refrigerator,
- Air conditioner,
- Granary,
- Ice house,
- Industrial equipment

Features

- Wide power supply range: 4 V to 30 V
- Linear current output: 1 $\mu\text{A}/\text{K}$
- Wide temperature range: -55°C to +150°C
- 2-terminal device: voltage in/current out
- Excellent linearity: $\pm 0.3^\circ\text{C}$ over full range (AD590M)

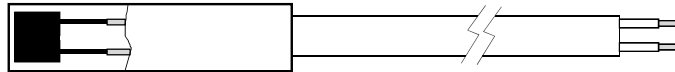
Technical Data

Parameter	Temperature			
Power Supply	4 - 30V			
Sensor	DA590J	DA590K	DA590L	DA590M
Measurement Range	-55°C to +150°C			
Accuracy ⁽¹⁾ (°C)	±5.0	±2.5	±1.0	±0.5
Output Current @ 25°C	298.2 μA			
Temperature Coefficient	1 $\mu\text{A}/\text{K}$			
Response	20 μs			
Output	Current Output			
Reverse Bias Leakage Current ⁽²⁾	10pA			

Note :

- (1) 25°C and VS = 5 V, unless otherwise noted.
- (2) Leakage current doubles every 10°C.
- (3) Detailed specification see Analog Devices AD590 Datasheet.

Sensor Assembly



Ordering Guide

SERIES	SENSOR	OUTPUT	T-SCALING	HOUSES ⁽¹⁾
FST	- (AD590x ⁽²⁾): AD590	- (C): Current Output	(T7): -55°C to +150°C	

Note:

- (1) Please contact with sales department
- (2) X-optional alphabet J,K,L,M.