

Analog Temperature Sensor

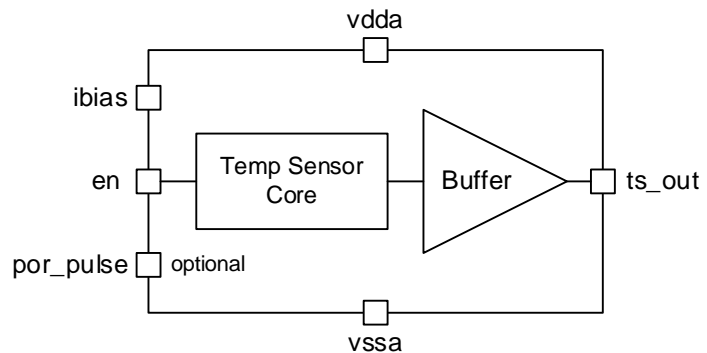
Description

The HX11TA is a highly linear and accurate analog temperature sensor capable of < 0.5°C error with a single room temperature calibration. Suitable in environments from -55°C to 125°C, the temperature sensor is compatible with an ADC to implement a digital temperature sensor.

Features

- 6.75mV/°C sensitivity
- 0.109°C/LSB accuracy
- 1.53°C uncalibrated error
- 0.354°C residual error
- Output range of 0V to analog supply
- 3.3V analog supply
- Extended temperature range: -55°C to 125°C
- Dimensions: 280um x 220um (0.062mm²)
- Qualified in ON Semiconductor ONC18

Block Diagram



Applications

- General purpose

Specifications

| Parameter | Conditions | Min | Typ | Max | Unit |
|-----------------------|--------------------------|------|-------|-------|--------|
| Analog Supply Voltage | ±10% | 2.97 | 3.3 | 3.63 | V |
| Temperature Range | | -55 | 27 | 125 | °C |
| Resolution | | | 6.75 | | mV/°C |
| Accuracy | | | 0.109 | | °C/LSB |
| Uncalibrated Error | | | | 1.53 | °C |
| Residual Error | Single point calibration | | | 0.354 | °C |
| Linearity | -40C to 125C | | 0.6 | | % |
| | 70C to 125C | | 0.2 | | |

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