

## Features

- Temperature Sensor for high resolution temperature measurement
- Ultra low IQ <1 uA (0.1Hz sampling)
- High noise immunity by concept (Delta-Sigma ADC)
- 0.2 °C resolution
- Wide sensor range (NTC, Vbe, Delta-Vbe)
- Core area: 0.1 mm<sup>2</sup>

## General Description

Temperature Sensor: The SGC24012 is an accurate high resolution temperature measurement core with flexible utilization. It was specially designed for predictive protection systems but its high accuracy makes it also the ideal solution for temperature compensation of crystal oscillators. To achieve excellent repeatability and high PSRR the SGC24012 uses a 12-bit advanced multiphase pseudo fully differential Delta-Sigma ADC. Additionally a large range of input gains makes it suitable for virtually any type of temperature sensor. It is specified from  $T_J = -40\text{ }^{\circ}\text{C}$  to  $+125\text{ }^{\circ}\text{C}$  and it is designed to achieve 2.0 % overall temperature accuracy.

## Applications

## Quick Reference

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