

Features

- High resolution temperature and voltage measurement
- High noise immunity ($\Delta\Sigma$ ADC)
- 0.18°C resolution
- Wide sensor range (ΔV_{be} and absolute voltage measurement modes)

General Description

SGC24212_01_GF_22FDSOI is an accurate compact high-resolution ADC for temperature or voltage monitoring. Due to its high accuracy, it has a wide range of applications ranging from predictive protection systems to temperature compensation of crystal oscillators. Making use of an advanced fully differential $\Delta\Sigma$ ADC, the *SGC24212_01_GF_22FDSOI* offers excellent repeatability and high *PSRR*. Additionally, due to its range of input gains, it is the suitable solution for any type of temperature or voltage measurement applications. Specified from $T_j = -40^\circ\text{C}$ to $+125^\circ\text{C}$, it is designed to achieve 2.0% overall temperature accuracy.

Applications

- In chip temperature monitoring
- Battery monitoring
- General purpose ADC
- Crystal oscillator temperature curve compensation

Quick Reference

| SYMBOL | DESCRIPTION | MIN | TYP | MAX | UNIT |
|------------|----------------------|------|------|------|------|
| V_{AVDD} | Analog Sup. | 1.50 | - | 1.98 | V |
| V_{DVDD} | Digital Sup. | 0.60 | - | 0.90 | V |
| F_{CLK} | $\Delta\Sigma$ Freq. | 0.50 | 1.00 | 1.50 | MHz |