

SGC24212\_01\_TSMC\_CLN05

## 12 BIT HIGH RESOLUTION JTM / ADC

### Features

- High resolution temperature and voltage measurement
- Wide sensor range ( $\Delta V_{be}$  and absolute voltage measurement modes)
- High noise immunity ( $\Delta \Sigma$  ADC)
- 0.2°C resolution

### General Description

*SGC24212\_01\_TSMC\_CLN05* is an accurate high-resolution ADC for voltage or temperature measurements. Due to its high accuracy, it presents a wide range of applications from predictive protection systems to temperature compensation of crystal oscillators. Making use of a 12-bit advanced fully differential  $\Delta \Sigma$  ADC, the *SGC24212\_01\_TSMC\_CLN05* offers excellent repeatability and high PSRR. Designed to achieve 2% overall temperature accuracy, it is specified from  $T_j = -40^\circ\text{C}$  to  $125^\circ\text{C}$ .

### Applications

- Battery monitoring
- General-purpose ADC
- Temperature monitoring
- Predictive temperature protection
- Crystal temperature curve compensation

### Quick Reference

| SYMBOL     | DESCRIPTION           | MIN  | TYP  | MAX   | UNIT |
|------------|-----------------------|------|------|-------|------|
| $V_{AVDD}$ | Analog Sup.           | 1.10 | 1.20 | 1.32  | V    |
| $V_{DVDD}$ | Digital Sup.          | 0.65 | 0.75 | 0.825 | V    |
| $F_{CLK}$  | $\Delta \Sigma$ Freq. | 250  | 500  | 750   | kHz  |