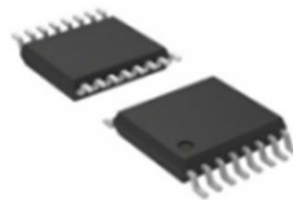


Low Noise, Low Power Dissipation, 16/24-Bit Σ - Δ ADC

PRODUCT DESCRIPTION

The MS5192TA/MS5193TA is a 16bit/24bit ADC with low power dissipation, low noise, three differential input channels. It integrates input buffer and low-noise instrumentation amplifier. When the gain is set to 64 and the update rate is 4.17Hz, the root mean square noise is 25nV. The MS5192TA/MS5193TA integrates internal band gap reference featured by high-precision, low noise and low drift. It can also use external differential reference voltage. The programmable excitation current source, burnout current source and bias voltage generator are also integrated. The bias voltage generator can set the channel common-mode voltage to $0.5 \times AVDD$.

The chip uses an external clock or internal clock, and the output data rate can be set from 4.17Hz to 470Hz by register settings. The power supply ranges from 2.7V to 5.25V. The MS5192TA/MS5193TA is available in TSSOP16 package.



TSSOP16

FEATURES

- RMS Noise: 25nV @4.17Hz; 30nV@16.7Hz
- Power Dissipation: 380 μ A (Typ)
- Integrated PGA
- Integrated Voltage Reference with Low Temperature Drift
- Update Rate: 4.17Hz to 470Hz
- Integrated 50Hz/60Hz Rejection Filter
- Integrated Programmable Current Source
- Integrated Bias Voltage Generator
- Power Supply: 2.7V to 5.25V
- Operating Temperature Range: -40°C to 105°C
- AEC-Q100 Authentication

APPLICATIONS

- Thermocouple, RTD Measurement
- Stress Detection
- Gas Analysis and Blood Analysis
- Industrial Process Control and Instrumentation
- Liquid and Gas Chromatograph
- Smart Transmitter
- 6-bit DVM

PRODUCT SPECIFICATION

| Part Number | Package | Marking |
|-------------|---------|----------|
| MS5192TA | TSSOP16 | MS5192TA |
| MS5193TA | TSSOP16 | MS5193TA |