12-Bit 10 MSPS Pipeline ADC IP

# Features

- TSMC CL018G 1.8V Technology
- Low power consumption of 10mW
- Max Conversion Rate 10MSPS
- True 10 bit Performance
- 2 V Differential Input Range
- Temperature range -40 °C – 125 °C
- Supply voltage 1.8V +/- 10%

# Application

High-Speed, High-Resolution A/D conversion applications

# General Description

The CISADC12T018 is a high-speed pipeline ADC capable of providing conversion rates of up to 10MSPS while maintaining a conversion accuracy of 10 bits. Inputs required are AVDD, DVDD, AGND, DGND, VINP, VINN and CLK. The ADC block uses AVDD as a voltage reference. An external voltage reference is not required for operation.

The ADC provides a buffered 12-bit output, which can be connected directly to internal digital processing logic.

The ADC includes an optional input sample and hold (SH) buffer.

| **Technology** | TSMC CL018G | | | |
|---|---|---|---|---|
| **Area** | | | | |
| ADC with SH Buffer | 600um x 570um | | | |
| ADC with out SH Buffer | 485um x 570u | | | |
| | | | | |
| **Parameter** | **Min.** | **Typ.** | **Max.** | **Units** |
| Supply Voltage | 1.6 | 1.8 | 2.0 | Volts |
| Power Dissipation at 10 MSPS | | 10 | | mW |
| Effective Number of Bits | | 10 | | |
| Data Format | 2's Complement | | | |


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