

GW9121

12-Bit 1MSPS Low Power Analog-to-Digital Converter

Description

The GW9121 is a high speed, low power, 12-bit, successive-approximation analog-to-digital converter (SAR ADC) that operates from a wide single power supply range of 2.7V to 5.25V. The GW9121 features a serial interface capable of 1MSPS throughput rate, making it suitable for interfacing with microprocessors or DSPs. The GW9121 provides various solutions for battery-powered systems including medical instruments and portable systems.

Features

- Up to 1MSPS Sampling Rate
- 2.7V to 5.25V Power Supply
- Analog Input Range of 0V to V_{DD}
- 68dB SNR at 5V, 1MSPS, 100kHz input
- Low-power Consumption:
 - 3mW max at 3V, 1MSPS
 - 10mW max at 5V, 1MSPS
- Power-Down Mode
 - 0.5uA max at 3V Power-Down Mode
 - 1uA max at 5V Power-Down Mode
- Flexible Power/Throughput Rate Management
- SPI Interface
- Temperature Range: -40°C to $+105^{\circ}\text{C}$

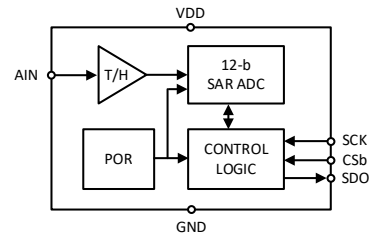
Physical Characteristics

- Available in 8-lead MSOP and SOIC packages

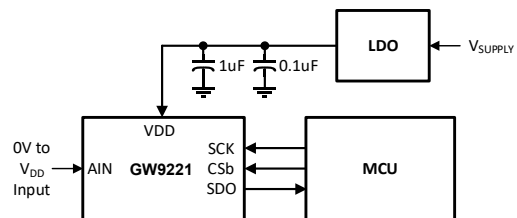
Typical Applications

- Battery-powered systems
- Medical instruments
- Portable systems
- Data acquisition systems
- Energy harvesting systems

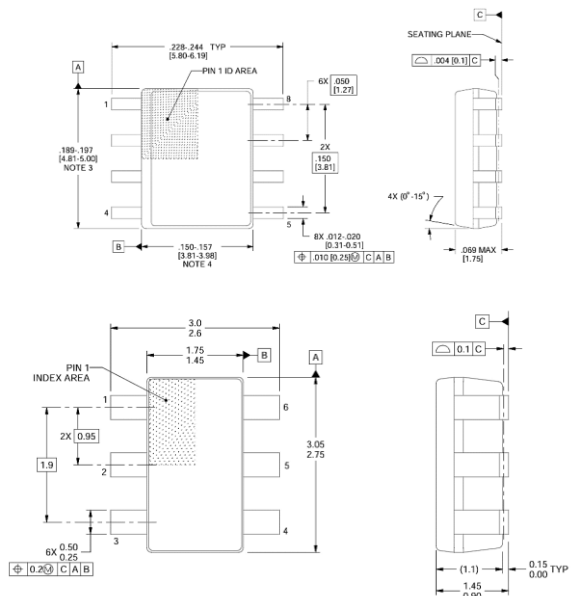
Functional Block Diagram



Basic Application Diagram



Package Information



Ordering Information

Device name	Package	Remark
GW9121IDDCR	1.6mm x 2.9mm 0.95mm pitch	6-Lead SOT-23
GW9121IDDAR	5.0mm x 4.0mm	8-pin SOP

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