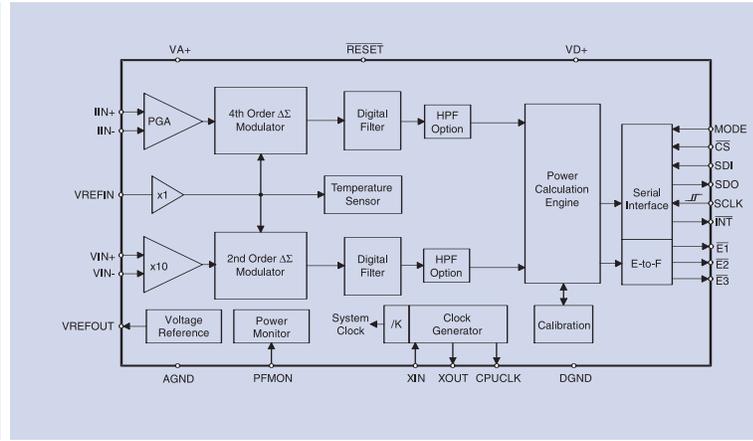


24-pin SSOP



7.9 mm
IC dimensions
(pin-to-pin nominal)



CS5461A FEATURES

- Energy data linearity: $\pm 0.1\%$ of reading over 1000:1 dynamic range
- On-chip Functions:
Instantaneous Voltage, Current and Power, I_{RMS} and V_{RMS} , Average Real and Apparent Power, Energy-to-pulse Conversion
- Meets accuracy spec for IEC, ANSI, JIS
- Low power consumption
- Adjustable input range on current channel
- GND-referenced signals with single supply
- On-chip temperature sensor
- On-chip 2.5 V reference (typ 25 ppm/°C)
- AC/DC system calibrations
- Phase compensation
- Simple 3-wire digital serial interface
- Power supply monitor
- Programmable energy-to-pulse output function
- Configurable pulse outputs for stepper motor or mechanical counter
- Power supply configurations:
VA+ = +5 V; AGND = 0 V;
VD+ = +3.3 V to +5 V
- Package: 24-pin SSOP

Next-Generation IC is Ideal for Electronic Power-Measurement Applications

DELIVERS ACCURATE POWER-USAGE MEASUREMENTS

The CS5461A enables digital power-meter manufacturers to provide highly accurate, cost-effective solutions for measuring power usage. This new IC is an integrated power-measurement device that combines two Delta-Sigma A/D converters, high-speed power calculation functions, and a serial interface on a single chip. Additional features include AC and DC calibration and phase compensation. Designed for residential single-phase or industrial three-phase power-meter applications, the IC accurately measures instantaneous current and voltage while calculating instantaneous power, real power, apparent power, I_{RMS} and V_{RMS} .

The CS5461A is easy to design in as a pin-compatible upgrade to the popular Cirrus Logic CS5460A. It retains all the functionality of its predecessor, while also providing an on-chip temperature sensor which can be used to lower the temperature coefficient, allowing for higher accuracy over temperature. For communication with a microcontroller, the IC features a bi-directional serial interface, which is initialized and fully functional upon reset. The CS5461A can interface to a low-cost shunt resistor or transformer for current measurement and to a resistive divider or potential transformer for voltage measurement. The CS5461A delivers accurate power usage measurements and is ideal for electronic power-meter applications.

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