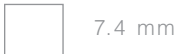


24-pin SSOP

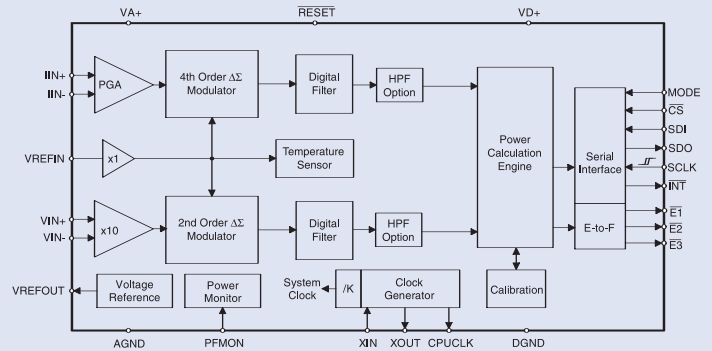
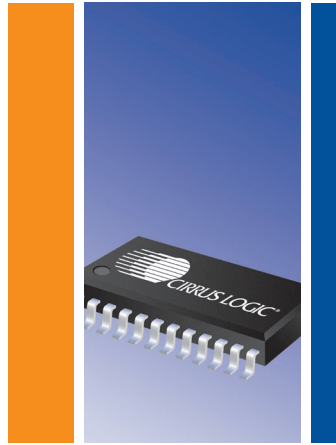


7.4 mm

7.9 mm

IC dimensions

(pin-to-pin nominal)



## CS5463 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/Apparent/Reactive Power, Fundamental Power, Harmonic Power, Energy-to-pulse Conversion, Power Factor, Line Frequency
- 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 Real/Apparent/Reactive Power
- Power supply configurations:  $VA+ = +5\text{ V}$ ;  $AGND = 0\text{ V}$ ;  $VD+ = +3.3\text{ V to }+5\text{ V}$
- Package: 24-pin SSOP

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

### ACCURATE CALCULATIONS OF ADVANCED POWER MEASUREMENTS

The CS5463 enables digital power-meter manufacturers to provide highly accurate, cost-effective solutions for advanced power measurements. 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, extended phase compensation, and three configurable energy output pins. Designed for residential single-phase or industrial three-phase power-meter applications, the IC accurately measures instantaneous current and voltage while calculating instantaneous power,  $I_{RMS}$  and  $V_{RMS}$ , real power, apparent power, reactive power, fundamental power, harmonic power, power factor, and line frequency.

The CS5463 is easy to design in as a pin-compatible upgrade to Cirrus Logic's popular CS5460A and CS5461A. It retains all the functionality of its predecessors, while also providing additional calculations and functionality. For communication with a microcontroller, the IC features a bi-directional serial interface, which is initialized and fully functional upon reset. The CS5463 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 CS5463 delivers accurate power usage measurements and is ideal for electronic power-meter applications.

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