

4-Channel Single ADC SAR 100ksps 10-bit Serial Automotive 16-Pin SOIC N Tube

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	SOIC-16
Product Type	Data Conversion ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for AD7817BRZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The AD7818 and AD7817 are 10-bit, single- and 4-channel A/D converters with on-chip temperature sensor that can operate from a single 2.7 V to 5.5 V power supply. Each part contains a 9  $\mu$ s successive-approximation converter based around a capacitor DAC, an on-chip temperature sensor with an accuracy of  $\pm 2^{\circ}\text{C}$ , an on-chip clock oscillator, inherent track-and-hold functionality and an on-chip reference (2.5 V). The AD7816 is a temperature monitoring only device in a SOIC/MSOP package.

The on-chip temperature sensor of the AD7817 and AD7818 can be accessed via Channel 0. When Channel 0 is selected and a conversion is initiated, the resulting ADC code at the end of the conversion gives a measurement of the ambient temperature with a resolution of  $\pm 0.25^{\circ}\text{C}$ . See Temperature Measurement section of this data sheet.

The AD7816, AD7817, and AD7818 have a flexible serial interface that allows easy interfacing to most microcontrollers. The interface is compatible with the Intel 8051, Motorola SPI<sup>®</sup> and QSPI<sup>™</sup> protocols and National Semiconductors MICROWIRE<sup>™</sup> protocol. For more information refer to the Serial Interface section of this data sheet.

The AD7817 is available in a narrow body 0.15" 16-lead small outline IC (SOIC), in a 16-lead, thin shrink small outline package (TSSOP), while the AD7816/AD7818 come in an 8-lead small outline IC (SOIC) and an 8-lead microsmall outline IC (MSOP).

## Features

10-Bit ADC with 9  $\mu$ s Conversion Time

One (AD7818) and Four (AD7817) Single-Ended Analog Input Channels

The AD7816 Is a Temperature Measurement Only Device

On-Chip Temperature Sensor

Resolution of 0.25°C

Wide Operating Supply Range 2.7 V to 5.5 V

Inherent Track-and-Hold Functionality

On-Chip Reference (2.5 V  $\pm$  1%)

Over-Temperature Indicator

Automatic Power-Down at the End of a Conversion

Low Power Operation

4  $\mu$ W at a Throughput Rate of 10 SPS

40  $\mu$ W at a Throughput Rate of 1 kSPS

400  $\mu$ W at a Throughput Rate of 10 kSPS

Flexible Serial Interface

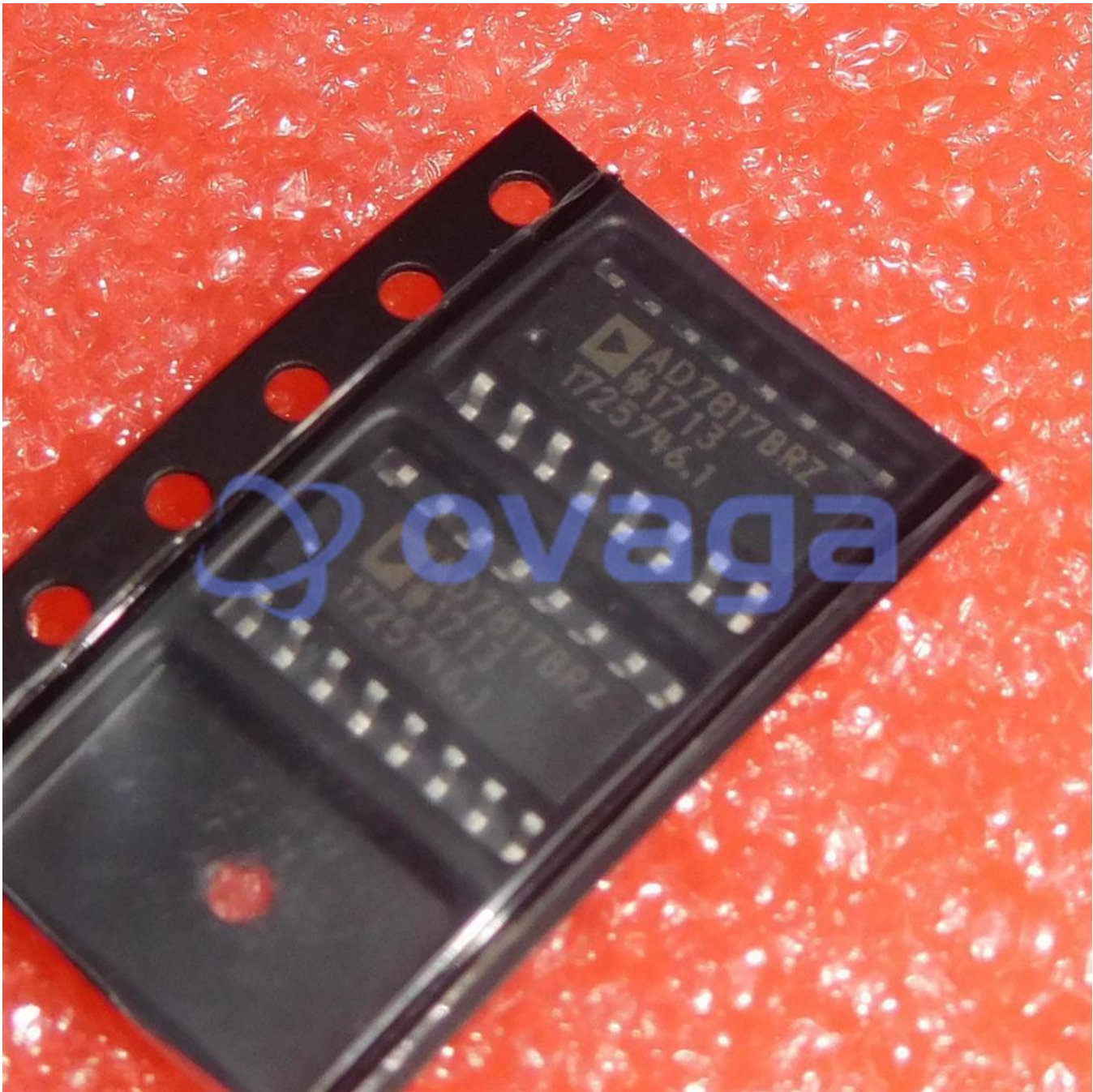
## Application

Data acquisition systems with ambient temperature monitoring

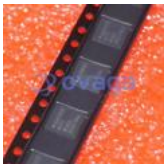
Industrial process control

Automotive

Battery charging applications

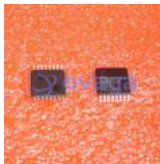


## Related Products



### [ADAS3022BCPZ](#)

Analog Devices, Inc  
LFCSP-40



### [AD7266BSUZ](#)

Analog Devices, Inc  
TQPF-32



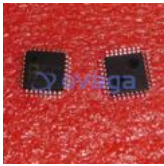
### [AD574AJNZ](#)

Analog Devices, Inc  
PDIP-28



### [AD7401YRWZ](#)

Analog Devices, Inc  
SOIC-16



[AD7938BSUZ](#)

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