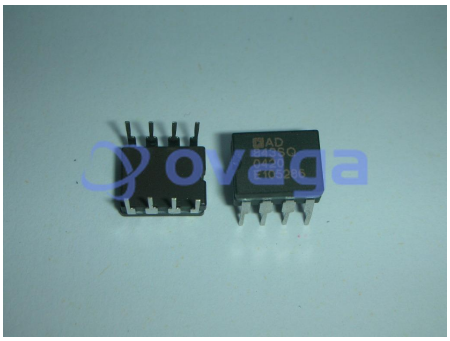
AD843SQ

Data Sheet

High Speed Operational Amplifiers 34MHz CBFET Fast Settling

Manufacturers	Analog Devices, Inc
Package/Case	CDIP-8
Product Type	Operational Amplifiers (Op Amps) ; JFET Input Op Amps
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for AD843SQ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The AD8436 is a new generation, translinear precision, lowpower, true rms-to-dc converter loaded with options. It computes a precise dc equivalent of the rms value of ac waveforms, includingcomplex patterns such as those generated by switch mode power supplies and triacs. Its accuracy spans a wide range of input levels and temperatures. The ensured accuracy of ≤±0.5% and ≤10 µV output offset result from the latest Analog Devices, Inc., technology. The crest factor error is <0.5% for CF valuesbetween 1 and 10.

The AD8436 delivers true rms results at less cost than misleading peak, averaging, or digital solutions. There is no programmingexpense or processor overhead to consider, and the 4 mm × 4 mmpackage easily fits into tight applications. On-board bufferamplifiers enable the widest range of options for any rms-to-dc converter available, regardless of cost. For minimal applications, only a single external averaging capacitor is required. The built-in high impedance FET buffer provides an interface for external attenuators, frequency compensation, or driving low impedance loads. A matched pair of internal resistors enables an easily configurable gain-of-two or more, extending the usable inputrange even lower. The low power, precision input buffer makes the AD8436 attractive for use in portable multi-meters and other battery-powered applications.

The precision dc output buffer minimizes errors when drivinglow impedance loads with extremely low offset voltages, thanks to internal bias current cancellation. Unlike digital solutions, the AD8436 has no switching circuitry limiting performance at high or low amplitudes. A usable response of <100 µVand >3 V extends the dynamic range with no external scaling,accommodating demanding low level signal conditions andallowing ample overrange without clipping.

The AD8436 operates from single or dual supplies of ±2.4 V(4.8 V) to ±18 V (36 V). A and J grades are available in a compact 4 mm × 4 mm, 20-lead chip-scale package; A and B grades areavailable in a 20-lead QSOP package. The operating temperatureranges are −40°C to 125°C for A and B grades and 0°C to 70°Cfor J grade.

Features

Delivers true rms or average rectified value of ac waveform

Fast settling at all input levels

Accuracy: ±10 μV ± 0.25% of reading (B grade)

Wide dynamic input range

100 μV rms to 3 V rms (8.5 V p-p) full-scale input range

Larger inputs with external scaling

Wide bandwidth:

1 MHz for −3 dB (300 mV)

65 kHz for additional 1% error

Zero converter dc output offset

No residual switching products

Specified at 300 mV rms input

Accurate conversion with crest factors up to 10

Low power: 300 μA typical at ±2.4 V

High-Z FET separately powered input buffer

RIN ≥ 1012 Ω, CIN ≤ 2 pF

Precision dc output buffer

Wide power supply voltage range

Dual: ±2.4 V to ±18 V; single: 4.8 V to 36 V

4 mm × 4 mm LFCSP and 8 mm × 6 mm QSOP packages

ESD protected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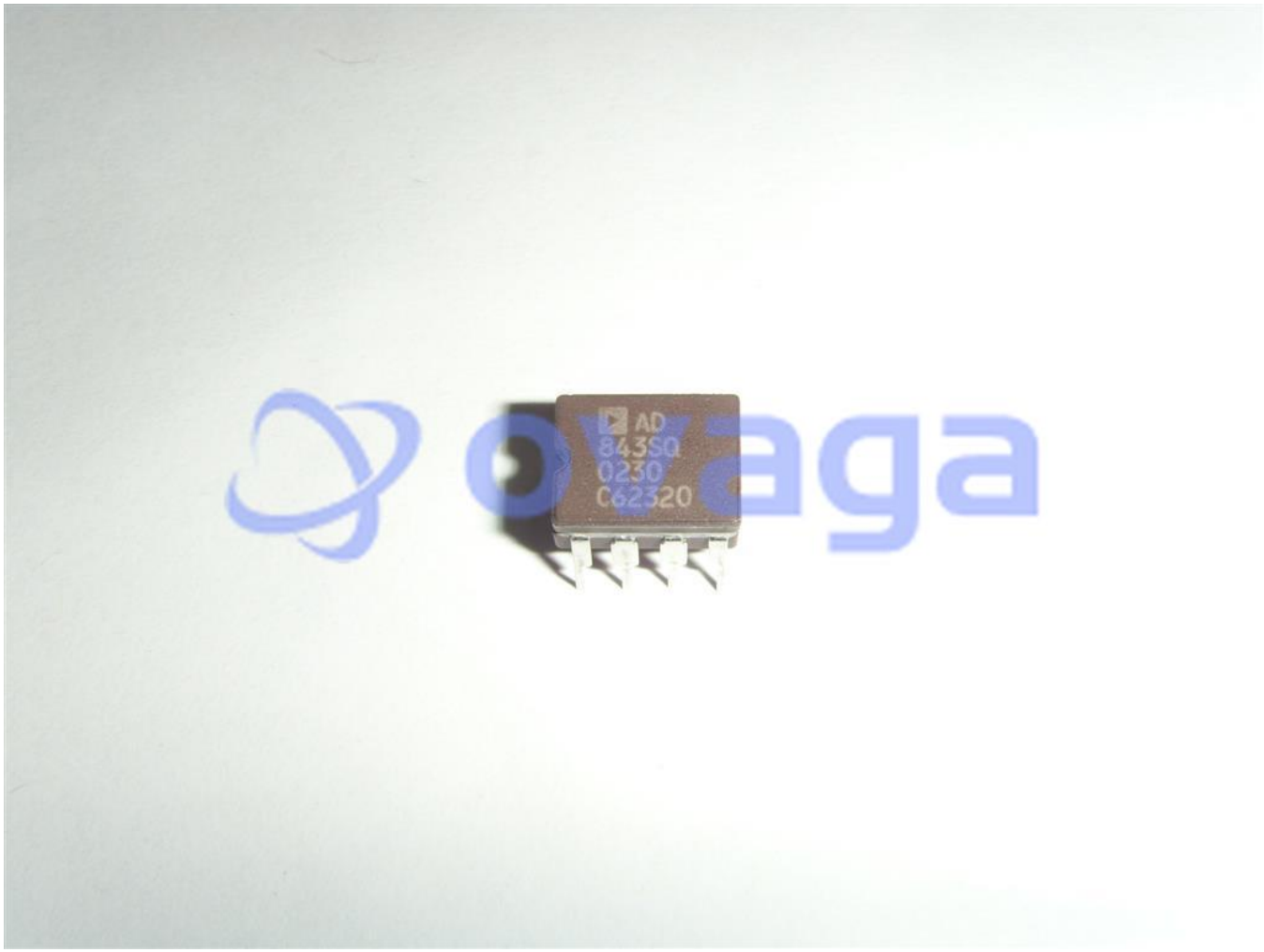
0420



Related Products

[AD8418BRMZ-RL](#)

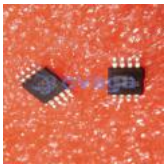
Analog Devices, Inc

MSOP-8

[ADA4528-2ARMZ-R7](#)

Analog Devices, Inc

MSOP-8



[ADA4084-2ARMZ](#)

Analog Devices, Inc

MSOP-8

[AD8062ARMZ](#)

Analog Devices, Inc

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[AD8567ARUZ](#)

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TSSOP-14

[AD8628AUJZ](#)

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SOP23

[AD8022ARMZ](#)

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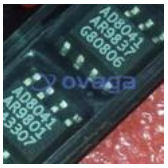

[AD8041AR](#)

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SOP-8