

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

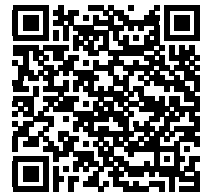
Part Number: AK9255NK
Manufacturer: Asahi Kasei Microdevices/AKM
Package: 16-VFQFN Exposed Pad
Availability: Please confirm with sales

Product Page:

<https://antrexco.com/product/details/asahi-kasei-microdevices-akm/ak9255nk.html>

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Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

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Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.



AK9255A/56A

Dual 16/14-Bit 0.54MSPS ZDS-NS A/D Converter

1. General Description

The AK9255A/56A are 16/14-bit 0.54MSPS ZDS-NS (* 1) A/D converters. They have noise suppression function and are capable of improving the system accuracy. The AK9255A/56A are available in a small package, saving space on the printed circuit board.

Notes:

* 1. ZDS-NS: Zero latency Delta Sigma with Noise Suppression Function

A ZDS-NS A/D converter realizes ultrafast response of SAR while maintaining high accuracy conversion like a delta-sigma converter, based on AKM's accumulated experience and know-how in analog-digital LSI technology. A ZDS-NS A/D converter has smaller input capacitance than SARs, reducing the buffer load of the input stage of the IC. Furthermore, the oversampling process is executed inside of the IC, and the averaging process is carried out with a built-in digital filter. Therefore, analog input signal noise can be suppressed, contributing to improving noise characteristics of the system. It also contributes to high-speed processing of a system that needs a noise averaging.

Application

- Motor Control : Position Measurement Using SinCos Encoders
- Three-Phase Power Controls
- Programmable Logic Controllers
- Power Quality Measurement
- Industrial Automation

2. Features

- | | | |
|--------------------------|--|---|
| ☐ | 2ch Simultaneous Sampling ZDS-NS A/D Converter | |
| ☐ | Resolution, Sampling Rate: | <div>16-bit, 0.54 MSPS AK9255A</div> <div>14-bit, 0.62 MSPS AK9256A</div> |
| ☐ | Differential Input / Pseudo Differential Input | |
| ☐ | Noise Suppression Function | |
| ☐ | 16bit No Missing Code | INL: ± 3.0 LSB(Typ.) AK9255A |
| ☐ | 14bit No Missing Code | INL: ± 1.0 LSB(Typ.) AK9256A |
| ☐ | S/N | <div>86 dBFS(Typ.) AK9255A (NS Setting1)</div> <div>90 dBFS(Typ.) AK9255A (NS Setting4)</div> <div>82 dBFS(Typ.) AK9256A (NS Setting1)</div> <div>85 dBFS(Typ.) AK9256A (NS Setting4)</div> |
| ☐ | Power Dissipation: | <div>VDD : 26 mA (Typ.)</div> <div>DRVDD : 0.3 mA (Typ.)</div> <div>(fs= 0.54MSPS, VDD= 3.3 V, DRVDD= 3.3 V, NS Setting1)</div> |
| ☐ | Power Supply: | <div>VDD : 3.0 ~ 3.6 V</div> <div>DRVDD : 3.0 ~ 3.6 V</div> |
| ☐ | Operating Temperature Range: | -40 ~ 105 °C |
| ☐ | Package: | Small 16-pin QFN (3mm x 3mm, 0.5mm pitch) |

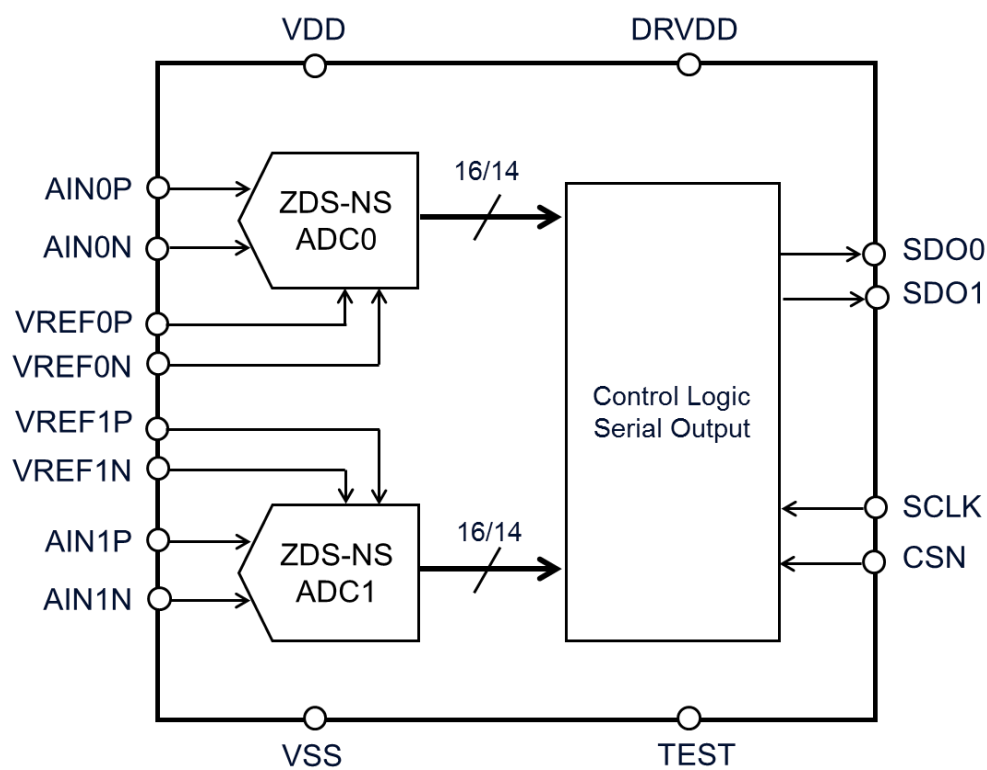
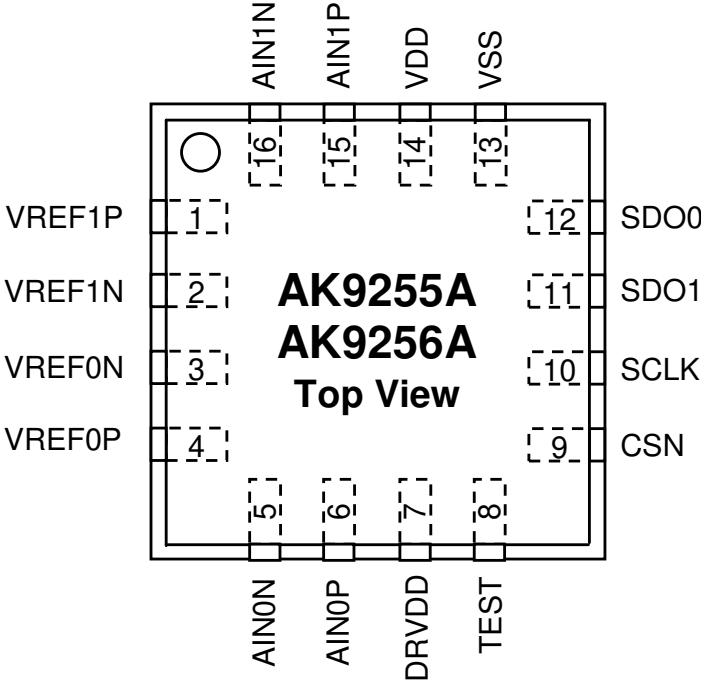
3. Block Diagram

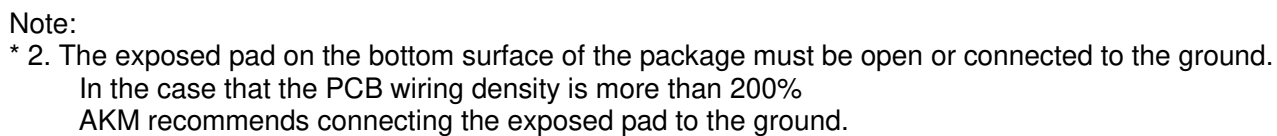
Figure 1. Block Diagram

4. Pin Configurations

■ Pin Configurations



■ Outline Dimensions



Thank you for your access to AKM product information.

**More detail product information is available,
please contact our sales office or authorized distributors.**

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