

AK09919C

MP

3-axis electronic compass IC

Description

The AK09919C is a 3-axis electronic compass IC, also known as a magnetometer, with high-sensitibity Hall sensor technology.

The AK09919C has a built-in hihg-sensitibity magnetic sensor that detects geomagnetism, a sensor drive circuit, a signal amplifier, and a processing calculation logic, and outputs the magnitude of the magnetic field in each of X, Y, Z axes as digital value.

The AK09919C is ideal for application such as smartphone and smart watch that provide azimuth information for pedestrian navigation functions.

Key Features

- Upward compatible with AK09918C
- Supports I3C bus interface
- Built-in FIFO (16 steps) & 1.2V IO is supported.

Applications

Smartphone, smart watch, Wireless headphone, AR/VR devices, etc.

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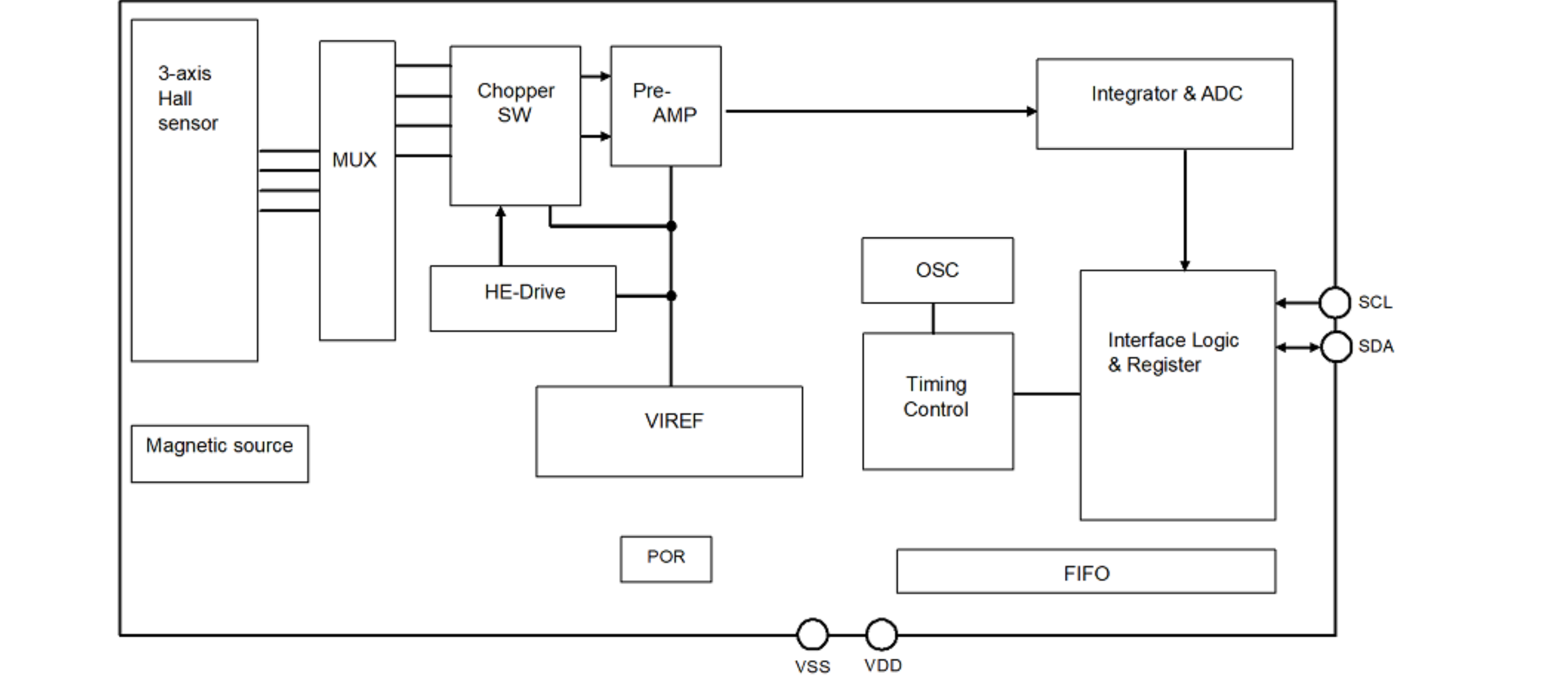
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|---------------------------------------------------|-------------|-------------------------------|-----------|
| Part Number                                       | AK09919C    | Part Status                   | MP        |
| Sensitivity (TYP.) [μT/LSB]                       | 0.15        | Pb Free                       | Yes       |
| Analog Power Supply Voltage (MIN.) [V]            | 1.65        | Halogen Free                  | Yes       |
| Analog Power Supply Voltage (TYP.) [V]            | 1.8         | MSL                           | MSL1      |
| Analog Power Supply Voltage (MAX.) [V]            | 1.95        | Packaging                     | TAPE      |
| Digital Interface Power Supply Voltage (MIN.) [V] |             | JEDEC Standard Packaging      | Compliant |
| Current Consumption Power-down (TYP.) [μA]        | 1           | Minimum Order Quantity [pcs.] | 15000     |
| Current Consumption Measurement (TYP.) [μA]       | 1100 @100Hz | Replacement P/N               |           |
| Control Interface                                 | I3C/I²C     |                               |           |
| Operating Temperature [°C]                        | -30 to 85   |                               |           |
| Device Package                                    | WLCSP       |                               |           |
| Number of Pins                                    | 4           |                               |           |

Block Diagram



Download

**AK09919C Datasheet**  
**English [200300034-E-00]**  
**(51 Pages PDF: 772KB)**

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