

Magnetic Sensor ICs

Tri-Axial Digital Geomagnetic Sensor



AS1518

● General Description

The AS1518 is a low-power digital geomagnetic sensor for consumer e-compass applications. A highly sensitive Hall-effect magnetic sensor is directly integrated with the signal conditioning IC in a monolithic wafer process. The 4-pin wafer level chip scale package (WLCSP) measures only 0.8×0.8×0.5mm³. This small package size dramatically increases the design flexibility to developers of compact mobile devices.

AS1518 can work harmoniously with the 3-axis digital accelerometer for directional information. The magnetometer detects the terrestrial magnetism to be compensated by the tilt angle determined from the accelerometer for providing precise navigation heading.

The device is a RoHS and Green compliant WLCSP-4B package.

● Applications

- Mobile Phones and Smart Phones
- Mobile Handsets
- Electronic Compass
- Wristwatch
- Navigation Heading
- Gaming/Augmented Reality and LBS Applications
- Smart User Interface

● Features

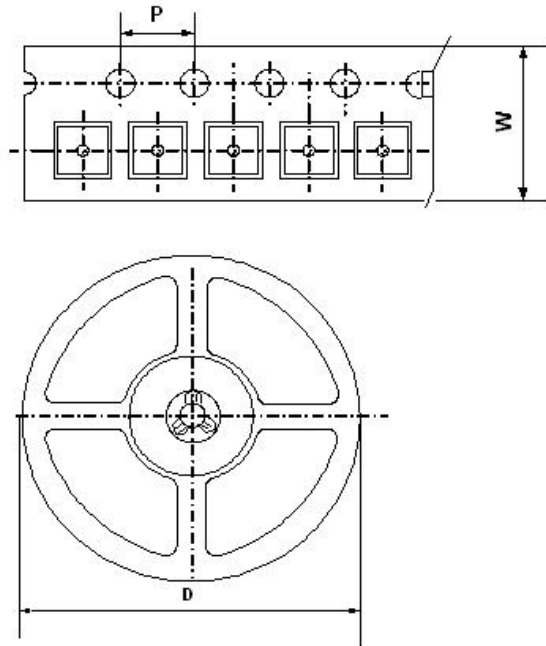
- 3-Axis Magnetometer Device for Consumer e-compass Application
- Built-in 16-bit ADC for magnetometer data outputs
- Input Voltage Range V_{DD}: 1.65V to 1.95V
- Operation Current: 1.2mA (typ.) at 100Hz Operating Frequency ODR
- Extended Dynamic Range of ±49Gauss Gives Extra Large Room for the Sensor Placement
- Configurable magnetic sensitivity level and measurable range for example:
 - High sensitivity mode: ±4.9mT at 0.15uT/LSB (16-bit ADC)
- Programmable Through I²C Compatible Interface: Fast and Standard Mode
- Power Down to 1uA Current
- Various Operation Modes: Power-down Mode, Single and Continuous Measurement Mode
- Self-test Function with Internal Magnetic Source
- RoHS and Green Compliant
- 4-pin WLCSP(0.8mm x 0.8mm x 0.5mm) Packages
- -40°C to +85 °C Temperature Range

■ Ordering Information



Part Number	Function	Package Type	Package Qty	Temperature	Eco Plan
AS1518BRN	E-Compass Magnetometer	WLCSP-4B	7-in reel 3000pcs/reel	-40~85°C	Green

■ Packing Information



Package Type	Carrier Width(W)	Pitch(P)	Reel Size(D)	Packing Minimum
WLCSP-4B	8.0±0.1 mm	4.0±0.1 mm	180±1 mm	3000pcs

Note: Carrier Tape Dimension, Reel Size and Packing Minimum