

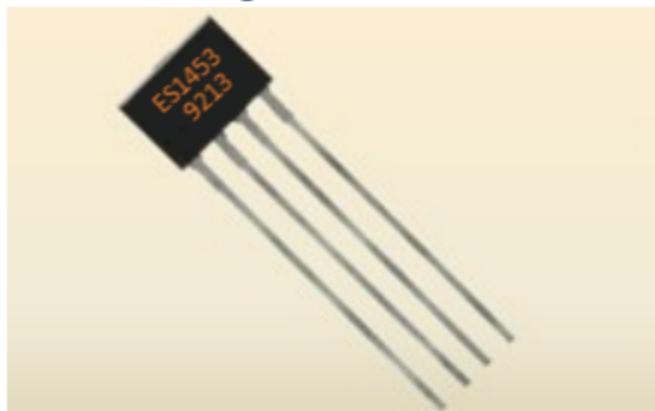
1. Description

The ES1453 is a dual channel switch Hall sensor with two Hall sensing elements. It outputs two digital signals for speed processing.

The ES1453 internally includes two Hall sensing elements located 0.95mm apart, an on-chip Hall voltage generator, voltage regulator for operation with supply voltage 2.8 to 24V, temperature compensation circuitry, small-signal amplifier, Hall sensor with dynamic offset cancellation system, Schmitt trigger and internal pull-up resistor. Signal processing of speed and signals is easy.

The ES1453 provides a variety of packages to customers: flat TO-94 for through-hole mount and SOT-23-6L for surface mount. All packages are RoHS compliant.

2. Product Image



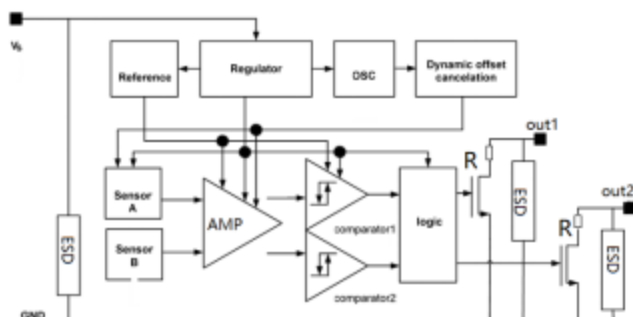
3. Features

- ◆ 0.95mm Hall Elements Spacing
- ◆ Dual channel and internal pull-up resistors
- ◆ High Magnetic Sensitivity: +/-18GS
- ◆ Supply Voltage Range: 2.8 ~ 24V
- ◆ Specified Operation Temperature Range: -40°C ~ 150°C
- ◆ Antistatic ability 4KV HBM

4. Applications

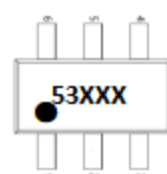
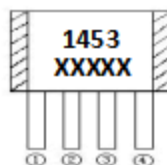
- ◆ Magnetic encoder
- ◆ Speed detection
- ◆ Direction detection
- ◆ UAV
- ◆ Robots
- ◆ Fitness equipment

5. Functional Block Diagram



6. Pin Definitions and Descriptions

TO	SOT	名称	功能
1	4	VDD	Supply voltage
2	1	OUT1	Output 1
3	3	OUT2	Output 2
4	5/6	GND	Ground



7. Absolute Maximum Ratings

Parameter	Value	Units
Supply Voltage (V _{CC})	-15 ~ +30	V
Junction Temperature	165	°C
Operating Temperature Range	-40 ~ 150	°C
Storage Temperature Range	-55 ~ 150	°C

Note: Absolute maximum ratings are limiting values to be applied individually, and beyond which the serviceability of the circuit may be impaired. Functional operability is not necessarily implied. Exposure to absolute maximum rating conditions for an extended period of time may affect device reliability.

8. Electrical and Magnetic Characteristic

9. Typical Application circuit

TO-94 Package

10. Typical Output maveform

11. Package Information

11.1 VK (TO - 94)

11.2 S6(SOT23-6L)

12. Ordering Information