

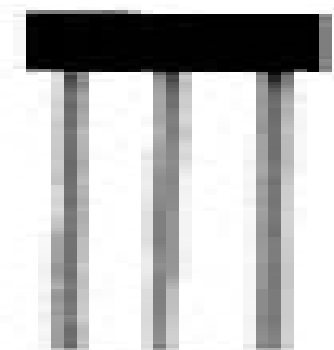


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SS494B-T2



Actual product appearance may vary.

SS494 Series Miniature Ratiometric Linear Hall-Effect Sensor; radial lead IC package; tape-and-box (ammopack) version with formed leads

Features

- Small size
- Low power consumption
- Single current sinking or current sourcing linear output
- Built-in thin-film resistors - laser trimmed for precise sensitivity and temperature compensation
- Rail-to-rail operation provides more useable signal for higher accuracy
- Responds to either positive or negative gauss
- Quad Hall sensing element for stable output)

Potential Applications

- Current sensing
- Motor control
- Position sensing
- Magnetic code reading
- Rotary encoder
- Ferrous metal detector
- Vibration sensing
- Liquid level sensing
- Weight sensing

Description

SS494 Series MRL (Miniature Ratiometric Linear) sensors have a ratiometric output voltage, set by the supply voltage. It varies in proportion to the strength of the magnetic field.

A new Hall effect integrated circuit chip provides increased temperature stability and sensitivity. Laser trimmed thin film resistors on the chip provide high accuracy and temperature compensation to reduce null and gain shift over temperature. The quad Hall sensing element minimizes the effects of mechanical or thermal stress on the output. The positive temperature coefficient of the sensitivity helps compensate for the negative temperature coefficients of low cost magnets, providing a robust design over a wide temperature range.

NOTE: Products ordered in bulk packaging (plastic bags) may not have perfectly straight leads as a result of normal handling and shipping operations. Please order tape packaging option for applications with critical lead straightness requirements.

Supporting Documentation

[▶ Dimensions](#)

[▶ Required Accessories—Magnets](#)

[▶ Engineering Drawing](#)

| Product Specifications | |
|------------------------------------|--|
| Product Type | Miniature Hall-Effect Linear Position Sensor IC |
| Package Quantity/Type | Available in 5,000/Box |
| Package Style | Radial Lead IC |
| Supply Voltage | 4.5 Vdc to 10.5 Vdc |
| Output Type | Sink/Source |
| Termination Type | PC Board |
| Magnetic Actuation Type | Ratiometric |
| Operating Temperature Range | -40 °C to 150 °C [-40 °F to 302 °F] |
| Storage Temperature | -55 °C to 165 °C [-67 °F to 329 °F] |
| Output Voltage | 0.2 Vdc to (V _s - 0.2 Vdc) typ., 0.4 Vdc to (V _s - 0.4 Vdc) min. |
| Linearity (% of Span) | -1.0 % typ. |
| Output Voltage Span (min.) | 0.4 Vdc to (V _s - 0.4 Vdc) |
| Availability | Global |
| Supply Current (max. @ 25 °C) | 8.7 mA @ 5 Vdc |
| Sensitivity @ 25 °C | 5.0 mV ± 0.4 mV/G |
| Output Voltage Swing (Negative G) | 0.4 Vdc |
| Output Voltage Swing (Positive G) | V _s - 0.4 Vdc |
| Temperature_Error_25_Null_Shift_2 | ± 0.08 |
| Temperature_Error_25_Sensitivity_1 | -0.02 min., 0.08 max. |
| Output_Current_Typical_Source_45 | 1.5 mA |
| Output_Current_Minimum_Source_45 | 1 mA |
| Output_Current_Minimum_Sink_45 | 0.6 mA |
| Output_Current_Minimum_Sink_5 | 1 mA |
| Magnetic Range (typ.) | -42 mT to 42 mT [-420 G to 420 G] |
| Magnetic Range (min.) | -37.5 mT to 37.5 mT [-375 G to 375 G] |
| Output Voltage Span (typ.) | 0.2 Vdc to (V _s - 0.2 Vdc) |
| Null (Output @ 0 G) | 2.50 Vdc ± 0.075 Vdc |
| Response Time (µs) | 3 µs |
| Series Name | SS494 |

Keyword Search

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All Sensing and Control

Product Search

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Specification Search