



*Representative photograph, actual product appearance may vary.*

*Due to regional agency approval requirements, some products may not be available in your area. Please contact your regional Honeywell office regarding your product of choice.*

## SS543AT

**SS500 Series Hall-Effect Digital Position Sensor in surface mount package with current sinking output; available in 1,000/tape and reel**

### Features

- Quad Hall design virtually eliminates mechanical stress effects
- Temperature compensated magnetics
- Super high sensitivity available
- Symmetry of operate/release points about zero gauss (bipolar/latching)
- Low current consumption
- High output current capability

### Description

The temperature compensated Hall effect sensor consists of a quad Hall sensing element in a square integrated circuit chip, which is then encapsulated in a glass-filled thermoset molding material. The small SOT89 style package surface mounts on PC boards and flexible circuits.

The integrated circuit is thermally balanced for predictable performance over specified temperature range. Built-in temperature compensation has a negative slope (operate and release points decrease as temperature increases). This slope is optimized to match the negative temperature coefficient of low cost magnets, to track their performance over temperature. Bipolar, unipolar and latching magnetics are available.

Band gap regulation provides extremely stable operation over the full supply voltage range. SS500 series sensors can use existing power supply sources in most applications, and can be directly interfaced with many electronic components without buffering or compensation circuitry.

**NOTE:** Do not wave solder this product. This process may negatively affect sensor performance and reliability, and will void Honeywell's warranty. Honeywell recommends a convection infrared

reflow process with peak temperatures not to exceed 220 °C [428 °F] for 10 seconds maximum.

**NOTE:** Interruption of power to a latching device may cause the output to change state when power is restored. If a magnetic field of sufficient strength is present, the sensor output will be in the condition dictated by the magnetic field.



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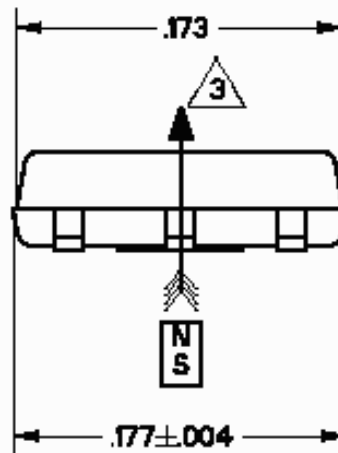
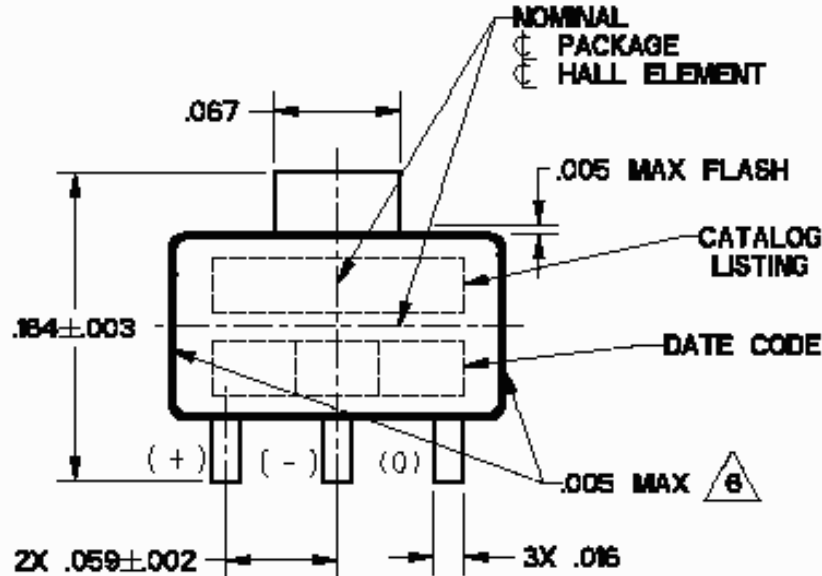
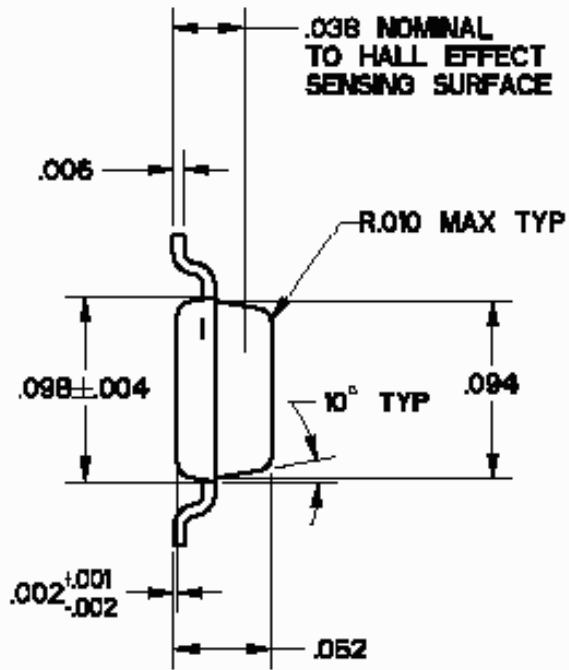
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Product Specifications	
Product Type	Hall-Effect Digital Position Sensor
Package Quantity/Type	Available in 1,000/Tape and Reel
Package Style	Surface Mount
Supply Voltage	3.8 Vdc to 30.0 Vdc
Output Type	Sink
Magnetic Actuation Type	Unipolar
Operating Temperature Range	-40 °C to 150 °C [-40 °F to 302 °F]
Output Voltage	0.4 Vdc max.
Switching Time Rise (10 % to 90 %)	1.5 µs max.
Switching Time Fall (90 % to 10 %)	1.5 µs max.
Availability	Global
Supply Current (max. @ 25 °C)	7.5 mA typ.
Output Current (max.)	20 mA
Operate Point @ 25 °C	14.5 mT [145 G] typ.
Release Point @ 25 °C	11.5 mT [115 G] typ.
Leakage Current max.	10 µA
Differential	3.0 mT [30 G] typ.
Series Name	SS500 Series



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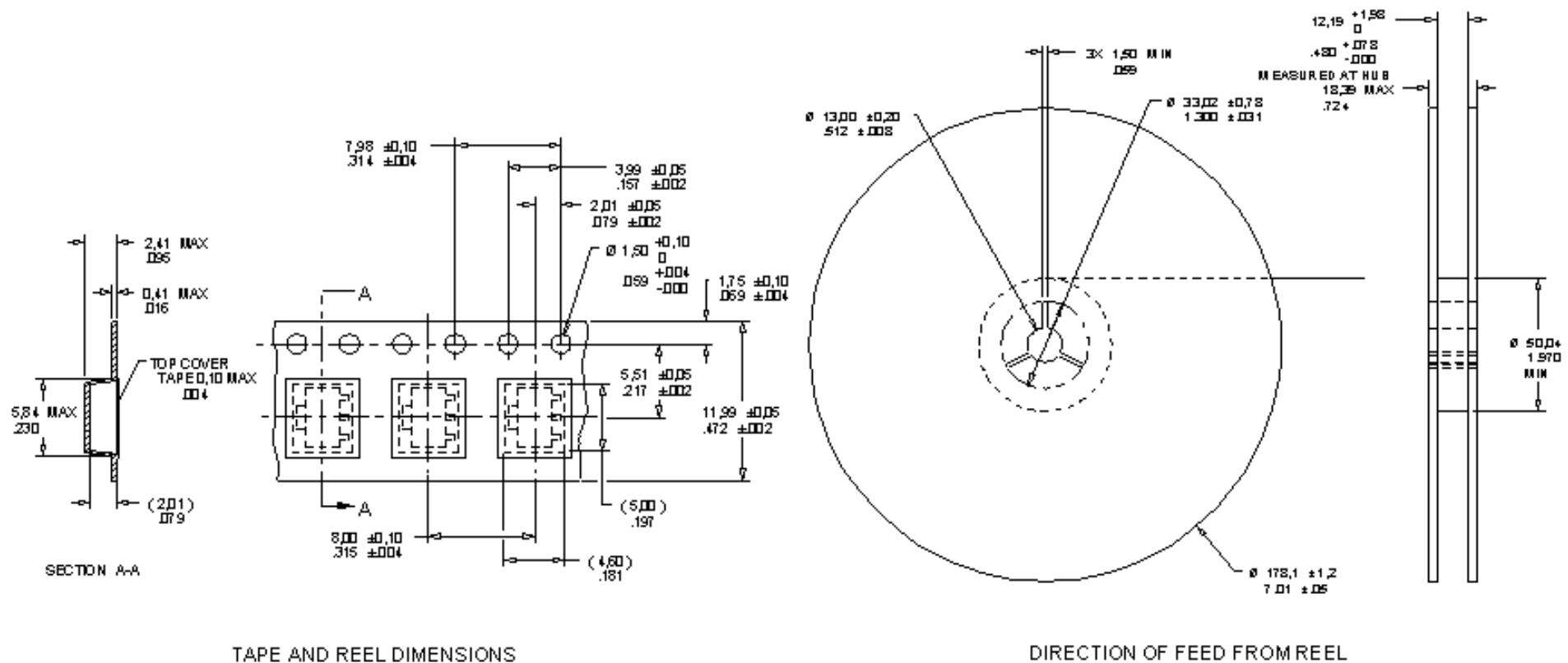
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** WARNING**

**PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

** WARNING**

**MISUSE OF DOCUMENTATION**

- The information presented in this product sheet (or catalog) is for reference only. DO NOT USE this document as product installation information.
- Complete installation, operation and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

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