

## Installation Instructions for the 2SS52M Series Magneto-resistive Position Sensors

ISSUE 1  
**PK 80077**

### **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.

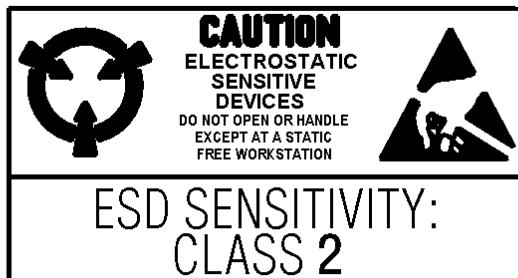
**Failure to comply with these instructions could result in death or serious injury.**

#### **OPERATING MODE**

2SS52M Series are operated by magnetic fields (North or South) **parallel** to the sensor package.

### **NOTICE**

Due to the inherently high sensitivity of the 2SS52M, stray magnetic fields parallel to the IC may affect operation.



#### **SOLDERING/ASSEMBLY**

Leads **must** be adequately supported during any forming/shearing operation to ensure that the leads are not stressed inside the plastic case. Recommended PC board wave soldering temperature is 250 to 260°C (482 to 500°F) for 3 seconds maximum.

#### **ABSOLUTE MAXIMUM RATINGS\***

Supply voltage	3.8 to +30 VDC
Voltage externally applied to output	+24 VDC max. (OFF cond. only) -0.5 VDC min. (OFF or ON cond.)
Output ON current	20 mA max.
Temperature	-40 to +150°C (-40 to +302°F)
Magnetic flux	No limit. Circuit cannot be damaged by magnetic overdrive.

\* Absolute maximum ratings are the extreme limits that the device will withstand without damage to the device. However, the electrical and mechanical characteristics are not guaranteed as the maximum limits (above recommended operating conditions) are approached, nor will the device necessarily operate at absolute maximum ratings.

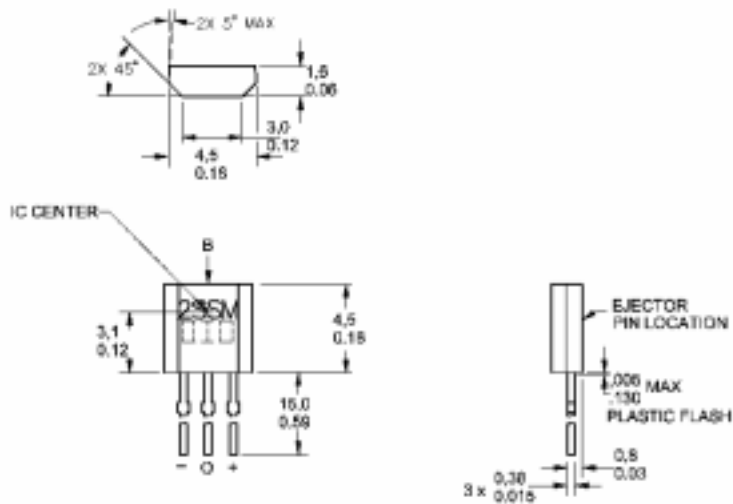
#### **ELECTRICAL SPECIFICATIONS** over 3.8 to 30 VDC and -40 to +150°C unless otherwise noted

	Typ.	Max.	Remarks
Supply Current (without load) at 25°C, with 16V supply	6 mA	11 mA 10 mA	Max. operated Max. released
Output Voltage (operated)	0.25 V	0.40 V	Sinking 20 mA max.
Output Leakage Current (released)		10 µA	Leakage into sensor output
Output Switching Time	Rise 0.2 µs Fall 0.1 µs	1.5 µs 1.5 µs	10 to 90%, 1600 Ω, 20 pF load 90 to 10%, 1600 Ω, 20 pF load

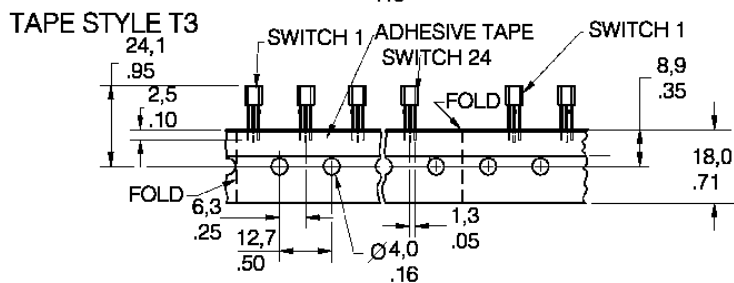
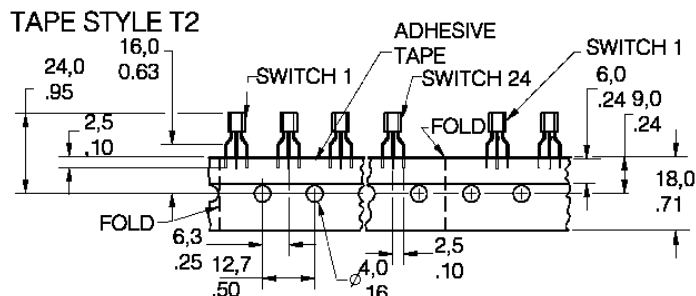
#### **MAGNETIC CHARACTERISTICS** over 3.8 to 30 VDC Supply Voltage

Temperature Range	Max. Operate	Min. Release	Max. Differential
-25 to +85°C (-13 to +185°F)	25 gauss	5 gauss	7 gauss
-40 to +150°C (-40 to +302°F)	25 gauss	4 gauss	8 gauss

## MOUNTING DIMENSIONS (for reference only)

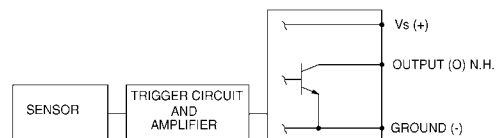


## 2SS52M-S Dimensions (Surface Mount)

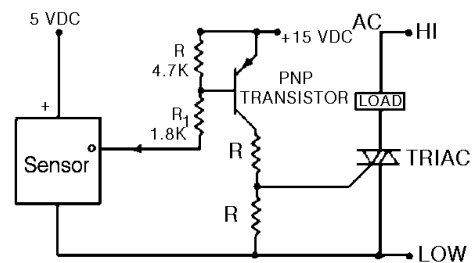
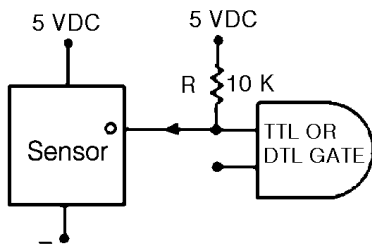
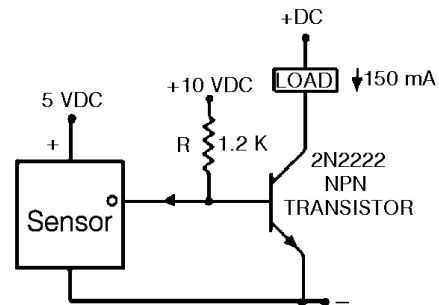
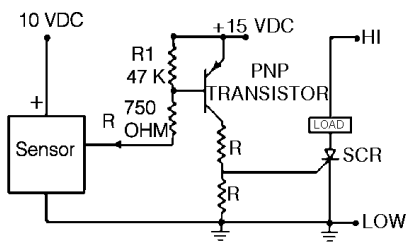
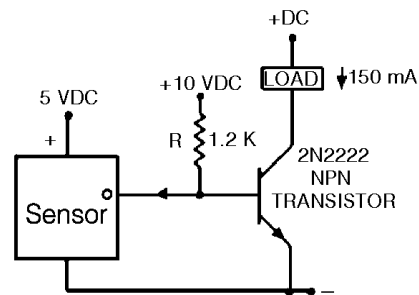
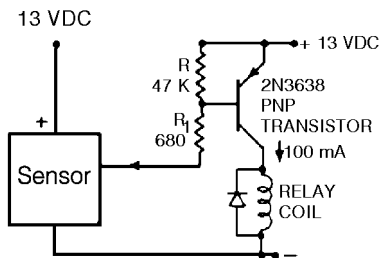
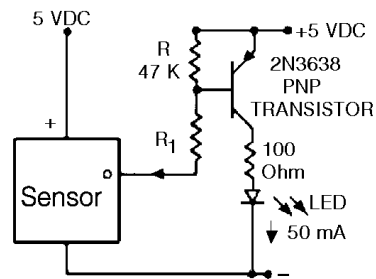
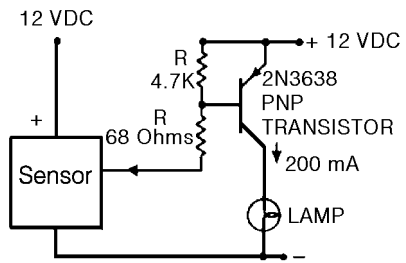


Tape styles T2 and T3 are available in ammo style package.

## BLOCK DIAGRAM CURRENT SINKING OUTPUT (NPN)



## INTERFACE DIAGRAMS NPN (CURRENT SINKING) OUTPUT



## WARRANTY/REMEDY

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For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact a nearby sales office. Or call:  
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While we provide application assistance, personally and through our literature, it is up to the customer to determine the suitability of the product in the application.

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