

## Installation Instructions for the SS51T Surface Mount Hall Effect Sensor

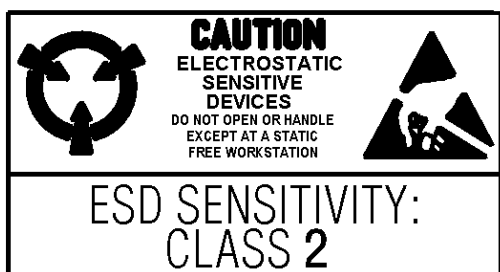
ISSUE 2  
PK 80078

### WARNING

#### PERSONAL INJURY

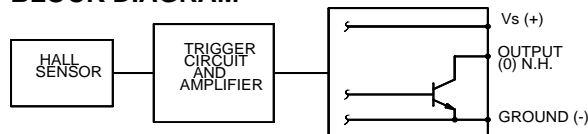
- DO NOT USE these products as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury.

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



**NOTE:** To prevent damage to the leads, SS51T surface mount sensors are supplied **only** on tape and reel.

#### BLOCK DIAGRAM



#### SOLDERING INSTRUCTIONS

MICRO SWITCH recommends an infrared reflow process with peak temperatures not to exceed 230°C (446°F) for 10 seconds maximum.

### NOTICE

**DO NOT wave solder this product.** Wave soldering may negatively affect sensor performance and reliability. Subjecting the sensor to wave soldering will void Honeywell's warranty.

#### ABSOLUTE MAXIMUM RATINGS\*

Supply Voltage	-28 to +28 VDC
Applied Output Voltage	+28 VDC, Off condition only -0.5 VDC, On or Off
Output Current	20 mA
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. However, the electrical and magnetic characteristics are not guaranteed as the maximum limits are approached, nor will the device necessarily operate at absolute maximum rating.

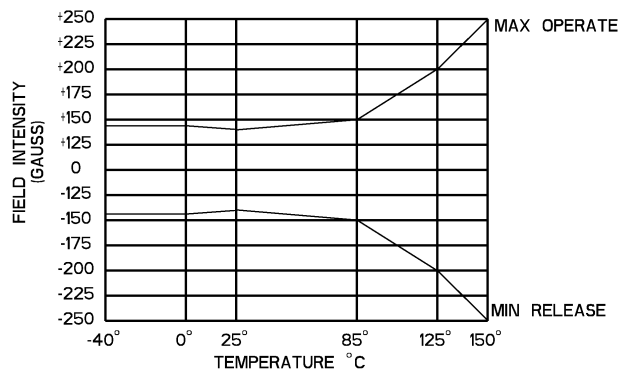
#### MAGNETIC CHARACTERISTICS

	°C	-40	0	25	85	125	150
	°F	-40	32	77	185	257	302
Max. Op.		145	145	140	150	200	250
Min. Rel.		-145	-145	-140	-150	-200	-250
Min. Diff.		40	50	50	50	60	—

### NOTICE

Bipolar Hall effect sensors may have an initial output in either the On or Off state, if powered up with an applied magnetic field in the differential zone (applied magnetic field > Brp and < Bop). MICRO SWITCH recommends allowing 10 μsec for output voltage to stabilize after supply voltage has reached 5 volts.

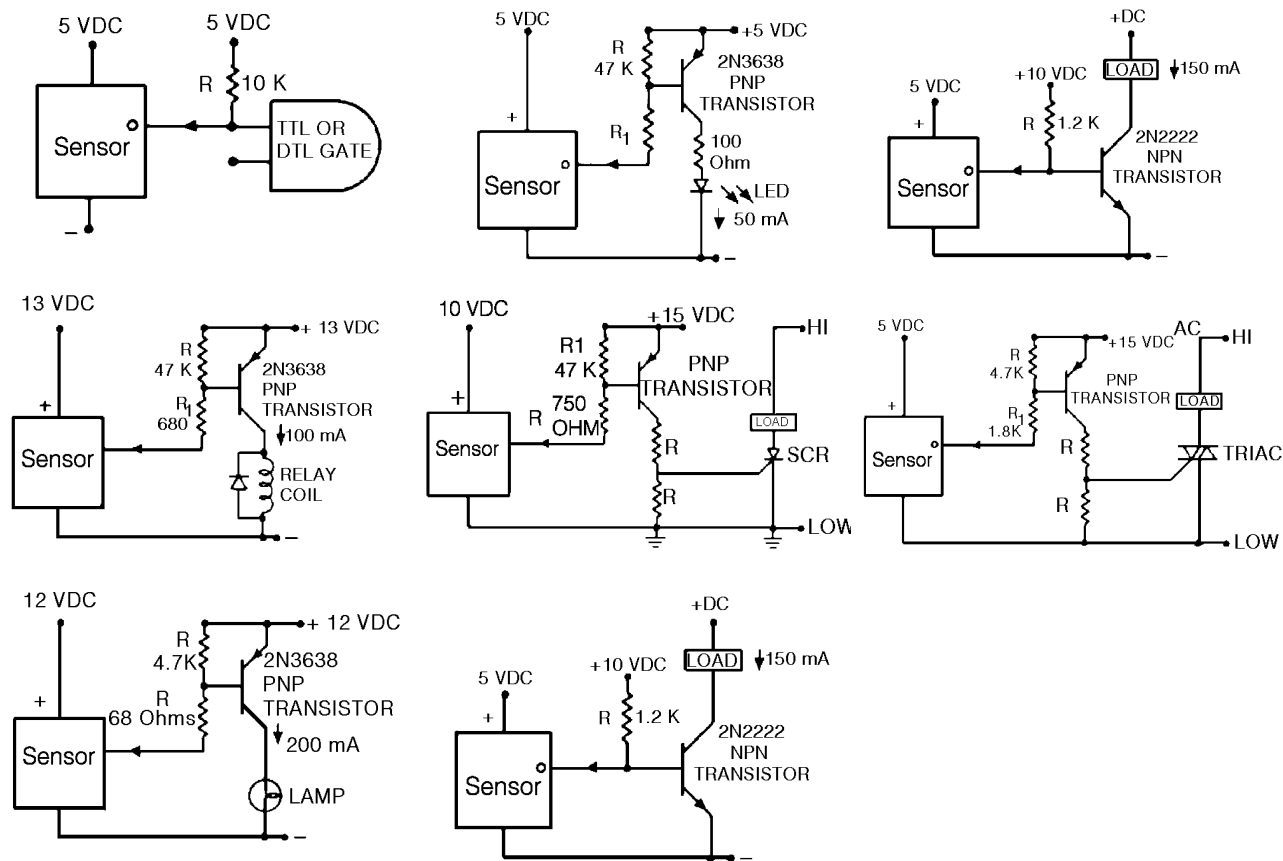
#### OPERATE AND RELEASE VS TEMPERATURE



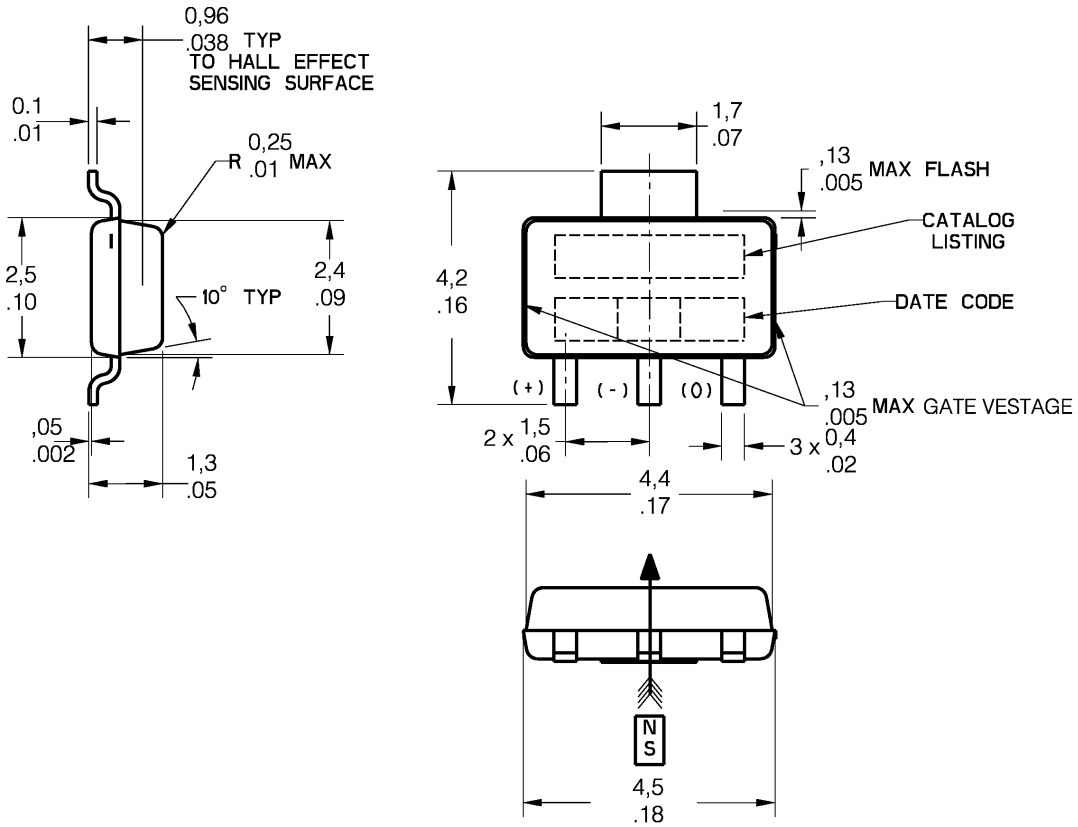
## ELECTRICAL CHARACTERISTICS over Operating Voltage and temperature, unless otherwise noted

	Typ.	Max.	Remarks
Supply Current (Output Off)	—	10	mA
Supply Current (Output On)	—	11.3	mA
Output Voltage @ 25°C	0.15	0.40	Sinking 20 mA max.
Output Current (NPN)	—	20.0	mA
Output Leakage Current, released	—	10.0	µA, leakage into sensor output
Output Switching Time			
Rise (10-90%)	0.2	1.5	µs
Fall (90-10%)	0.5	1.5	µs
Operating Temperature Range	-40 to +150°C (-40 to +302°F)		

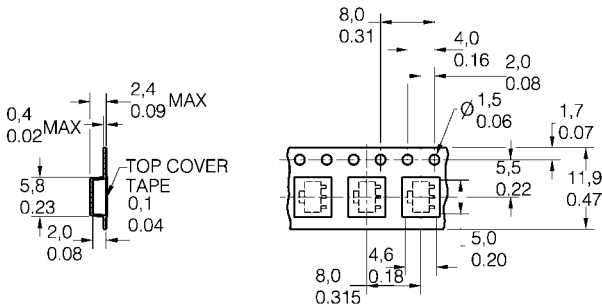
## INTERFACING DIAGRAMS



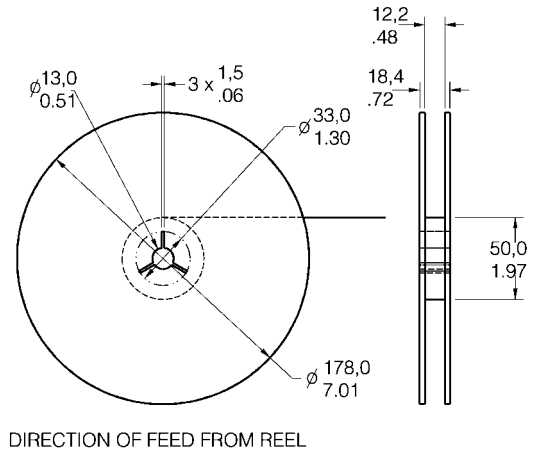
## MOUNTING DIMENSIONS (for reference only)



## TAPE DIMENSIONS



## REEL DIMENSIONS



**NOTE:** This product is sold in tape and reel form **only**, per EIA STD 481. There are 1,000 parts per reel.

## WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Contact your local sales office for warranty information. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace without charge those items it finds defective. The foregoing is Buyer's sole remedy and is **in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose.**

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact a nearby sales office. Or call:

1-800-537-6945 USA  
1-800-737-3360 Canada  
1-815-235-6847 International

## FAX

1-815-235-6545 USA

## INTERNET

[www.honeywell.com/sensing](http://www.honeywell.com/sensing)  
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# Honeywell

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