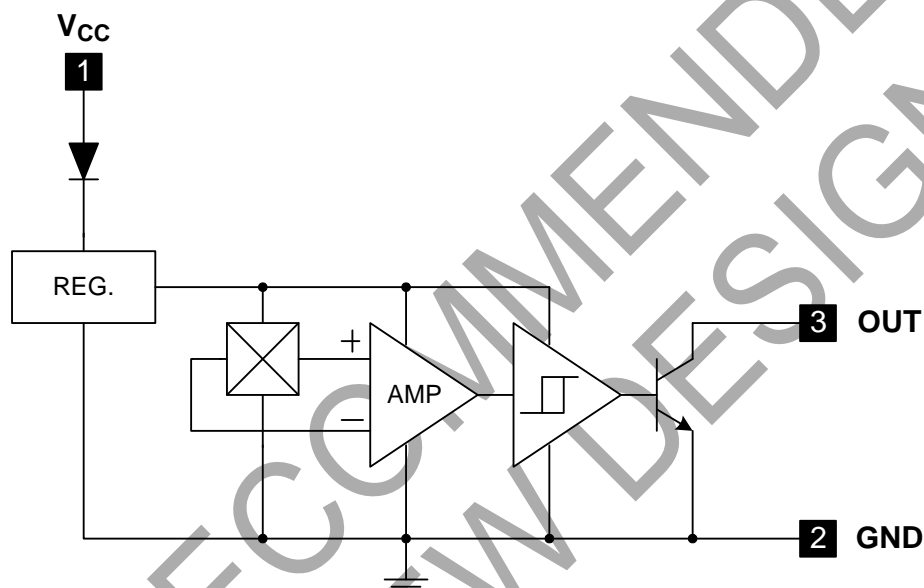


## Pin Descriptions

Pin Name	Description
V <sub>CC</sub>	Input Power
GND	Ground
OUT	Output Stage

## Functional Block Diagram



## Absolute Maximum Ratings (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Symbol	Parameter		Rating	Unit
V <sub>CC</sub>	Supply Voltage		20	V
V <sub>OUT</sub> (off)	Output "OFF" Voltage		20	V
I <sub>O</sub> (sink)	Output "ON" Current		100	mA
T <sub>ST</sub>	Storage Temperature Range		-65 to +150	°C
T <sub>J(MAX)</sub>	Maximum Junction Temperature		+150	°C
P <sub>D</sub>	Power Dissipation	SIP3	550	mW
		SC59 and SC59R	230	mW

## Recommended Operating Conditions

Symbol	Parameter	Conditions	Min	Max	Unit
$V_{CC}$	Supply Voltage	Operating (Note 4)	3.5	20	V
$T_A$	Operating Temperature Range	Operating	-40	+125	°C

Note: 4. Operating, the output is switching as magnetic field change ( $S > 300G$ ,  $N < -300G$ ).

## Electrical Characteristics (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
$V_{OUT(SAT)}$	Output Saturation Voltage	$V_{CC} = 12V$ , OUT "ON" $I_O = 50mA$	-	200	300	mV
$I_{CC}$	Supply Current	$V_{CC} = 12V$ , OUT "OFF"	-	3.5	6	mA

## Magnetic Characteristics (@ $T_A = +25^\circ\text{C}$ , $V_{CC} = 4V$ to $20V$ , unless otherwise specified. Note 5)

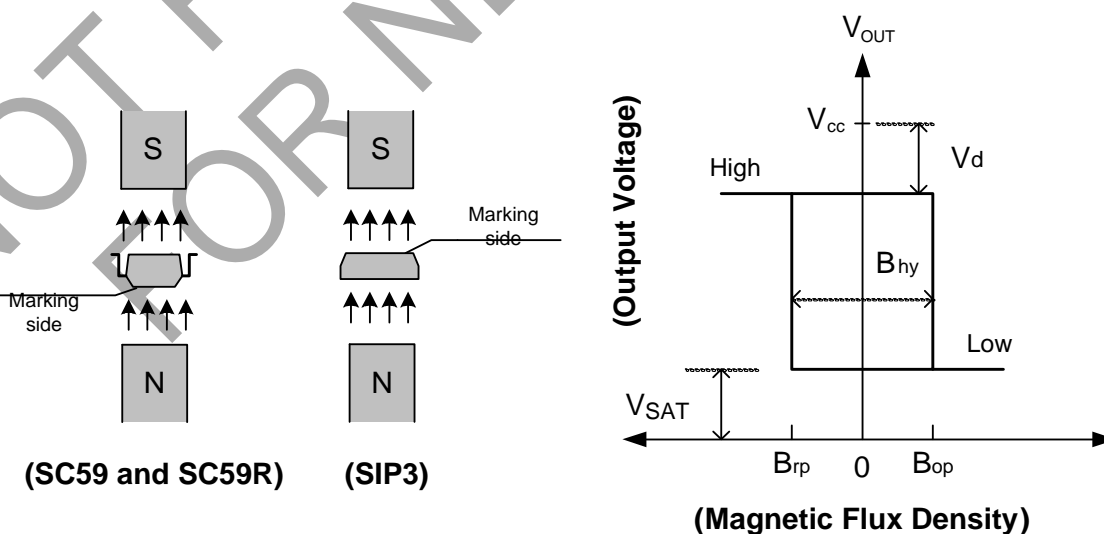
A grade

(1mT = 10 Gauss)

Symbol	Parameter	Min	Typ.	Max	Unit
Bops (south pole to brand side)	Operation Point	5	-	70	Gauss
Brps (south pole to brand side)	Release Point	-70	-	-5	Gauss
$B_{hy} ( B_{opx} - B_{rpx} )$	Hysteresis	-	75	-	Gauss

Notes: 5. Magnetic characteristics are for design information, which will vary with supply voltage, operating temperature and after soldering.

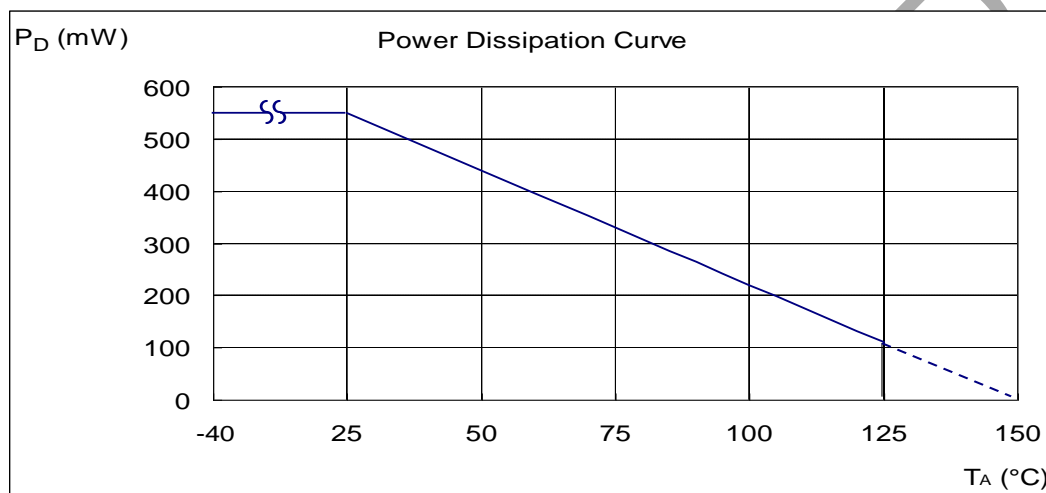
## Operating Characteristics



## Performance Characteristics

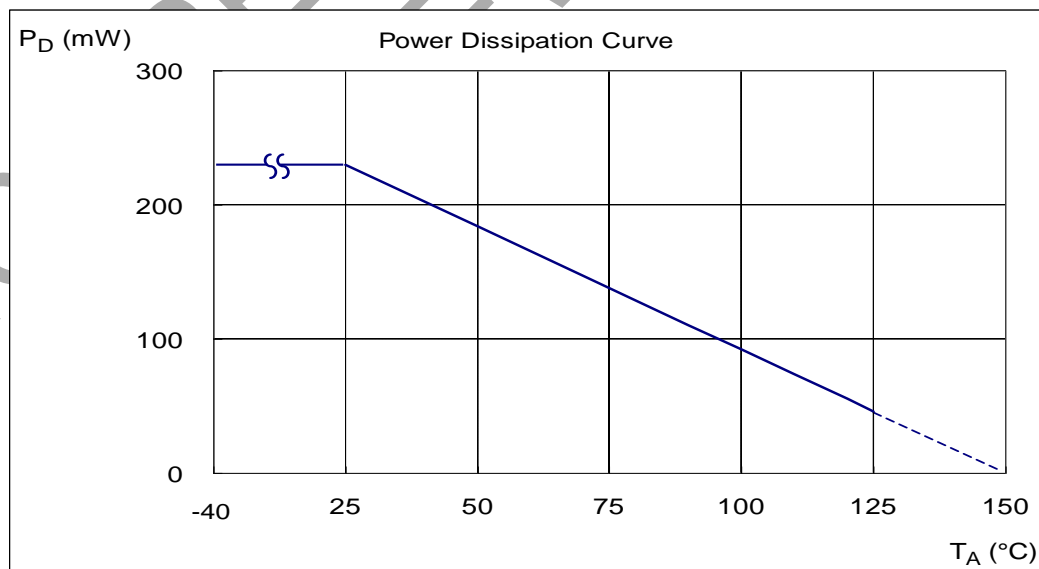
### (1) SIP3

$T_A$ (°C)	25	50	60	70	80	85	90	95	100
$P_D$ (mW)	550	440	396	352	308	286	264	242	220
$T_A$ (°C)	105	110	115	120	125	130	135	140	150
$P_D$ (mW)	198	176	154	132	110	88	66	44	0



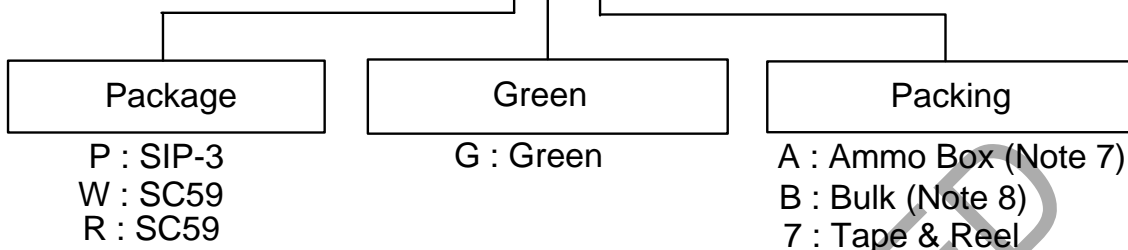
### (2) SC59 and SC59R (Commonly known as SOT23 in Asia)

$T_A$ (°C)	25	50	60	70	80	90	100	110	120	125	130	140	150
$P_D$ (mW)	230	184	166	147	129	110	92	74	55	46	37	18	0



## Ordering Information

**AH1751 -X X -X**



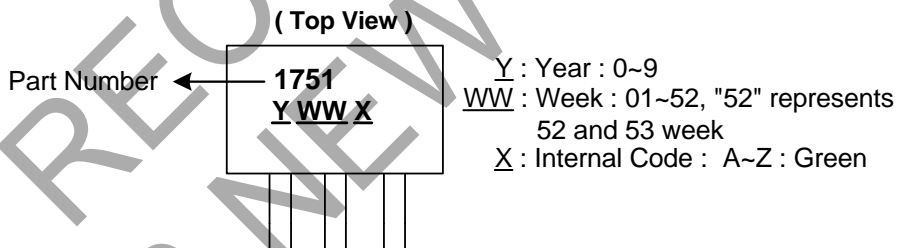
Part Number	Status (Note 9)	Package Code	Packaging (Note 6)	Bulk		7" Tape and Reel		Ammo Box	
				Quantity	Part Number Suffix	Quantity	Part Number Suffix	Quantity	Part Number Suffix
AH1751-PG-A-A	NRND	P	SIP-3	NA	NA	NA	NA	4000/Box	A
AH1751-PG-B-A	NRND	P	SIP-3	1000	-B	NA	NA	NA	NA
AH1751-WG-7-A	NRND	W	SC59	NA	NA	3000/Tape & Reel	-7	NA	NA
AH1751-RG-7-A	NRND	W	SC59R	NA	NA	3000/Tape & Reel	-7	NA	NA

Notes:

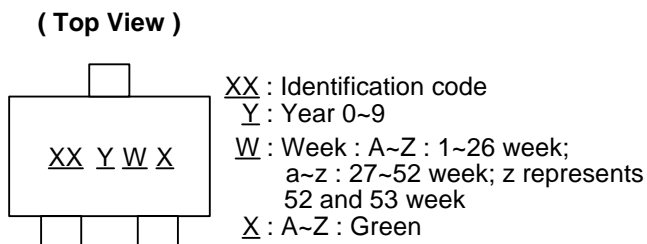
6. Pad layout as shown on Diodes Inc. suggested pad layout document, which can be found on our website at <http://www.diodes.com/package-outlines.html>.
7. Ammo Box is for SIP3 Spread Lead.
8. Bulk is for SIP-3 Straight Lead.
9. NRND = Not Recommended for New Design

## Marking Information

(1) Package Type: SIP-3 (Ammo Pack), SIP-3 (Bulk Pack)



(2) Package Type: SC59 and SC59R (Commonly known as SOT23 in Asia)

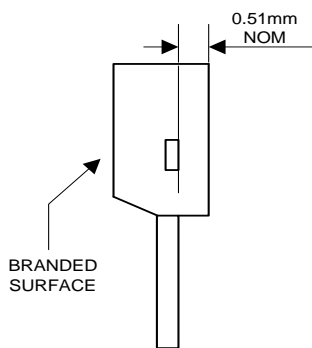


Part Number	Package	Identification Code
AH1751	SC59	RK
AH1751	SC59R	SK

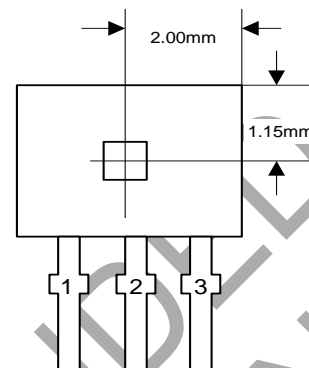
**Package Outline Dimensions and Suggested Pad Layout** (All dimensions in mm.)

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**(1) Package Type: SIP3 for Bulk pack**

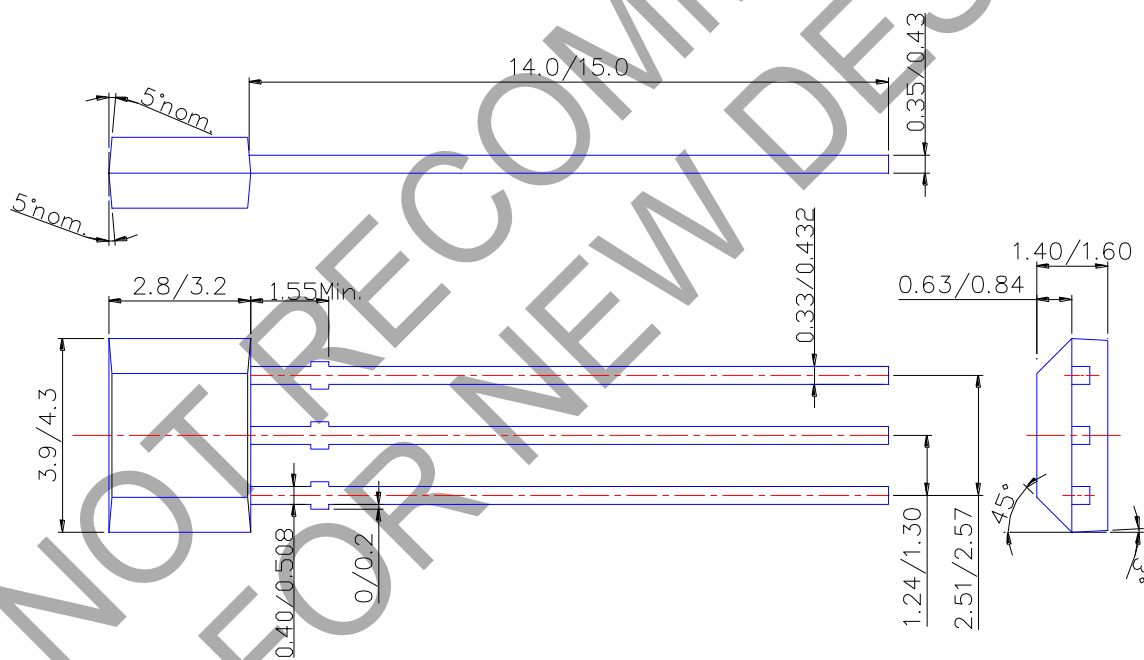


**Active Area Depth**



**Sensor Location**

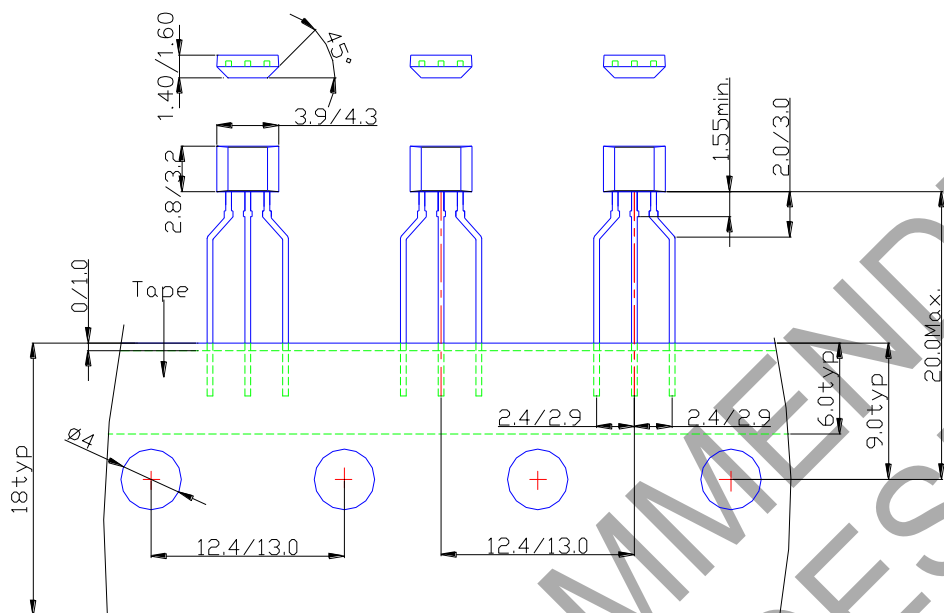
**Package Dimension**



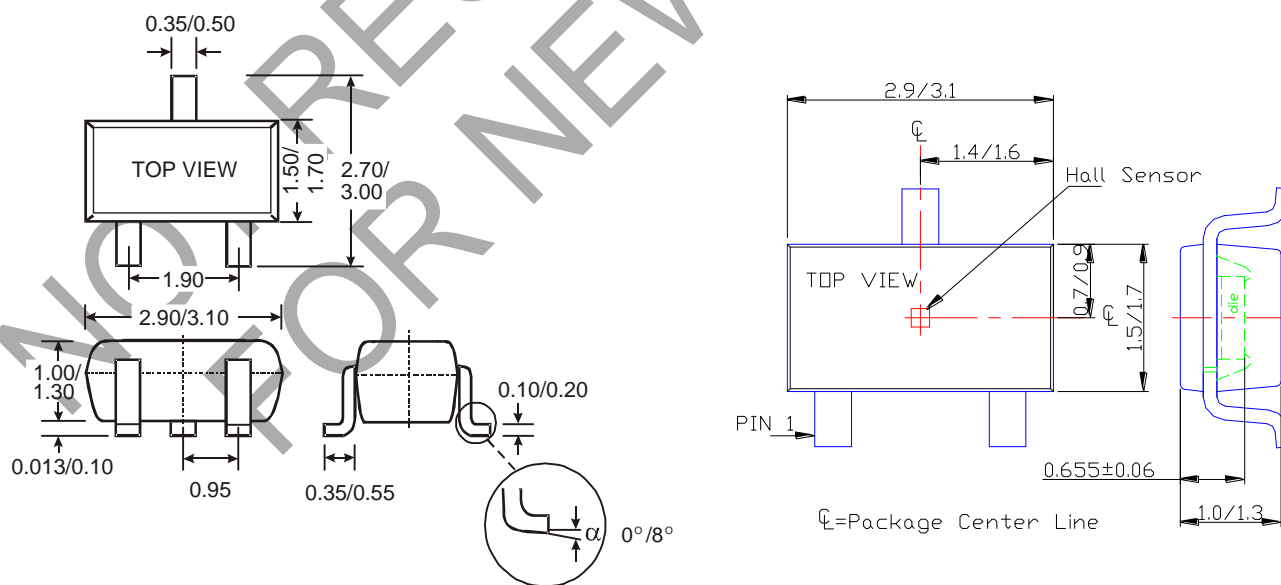
**Package Outline Dimensions and Suggested Pad Layout** (All dimensions in mm. Cont.)

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**(2) Package Type: SIP3 for Ammo Pack**



**(3) Package Type: SC59 and SC59R (Commonly known as SOT23 in Asia)**



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