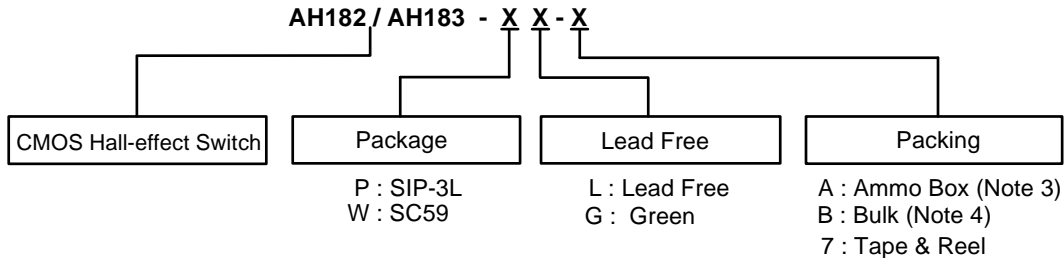


### Ordering Information



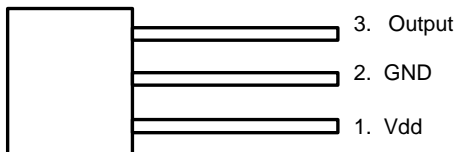
Device	Package Code	Packaging (Note 2)	Bulk		7" Tape and Reel		Ammo Box	
			Quantity	Part Number Suffix	Quantity	Part Number Suffix	Quantity	Part Number Suffix
AH182/AH183-PL-A	P	SIP-3L	NA	NA	NA	NA	4000/Box	-A
AH182/AH183-PL-B	P	SIP-3L	1000	-B	NA	NA	NA	NA
AH182/AH183-PG-A	P	SIP-3L	NA	NA	NA	NA	4000/Box	-A
AH182/AH183-PG-B	P	SIP-3L	1000	-B	NA	NA	NA	NA
AH182/AH183-WL-7	W	SC59	NA	NA	3000/Tape & Reel	-7	NA	NA
AH182/AH183-WG-7	W	SC59	NA	NA	3000/Tape & Reel	-7	NA	NA

- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at [http://www.diodes.com/products/lead\\_free.html](http://www.diodes.com/products/lead_free.html)
  2. Pad layout as shown on Diodes Inc. suggested pad layout document AP02001, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.
  3. Ammo Box is for SIP-3L Spread Lead.
  4. Bulk is for SIP-3L Straight Lead.

### Pin Assignments

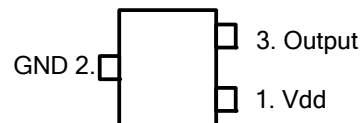
(1) SIP-3L

(Top view)



(2) SC59 (Commonly known as SOT23 in Asia)

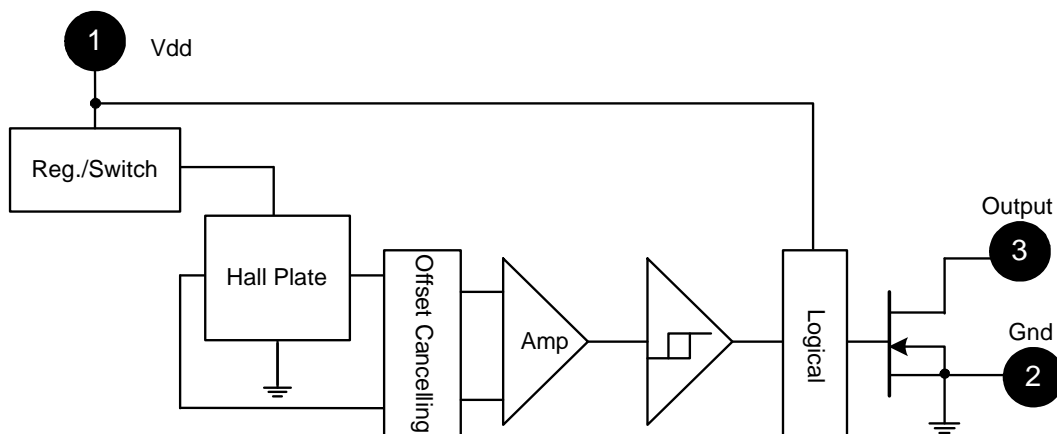
(Top view)



### Pin Description

Pin Name	P/I/O	Pin #	Description
Vdd	P/I	1	Power Supply Input
GND	P	2	Ground
Output	O	3	Output Pin

**Block Diagram**



**Absolute Maximum Ratings** ( $T_A = 25^\circ\text{C}$ )

Symbol	Parameter	Rating	Unit	
Vdd	Supply Voltage	7	V	
B	Magnetic Flux Density	Unlimited		
I <sub>OUT</sub>	Output current	10	mA	
P <sub>D</sub>	Power Dissipation	SIP-3L	550	mW
		SC59	230	mW
T <sub>J(MAX)</sub>	Maximum Junction Temperature	150	°C	
T <sub>ST</sub>	Storage Temperature Range	-65 to +150	°C	

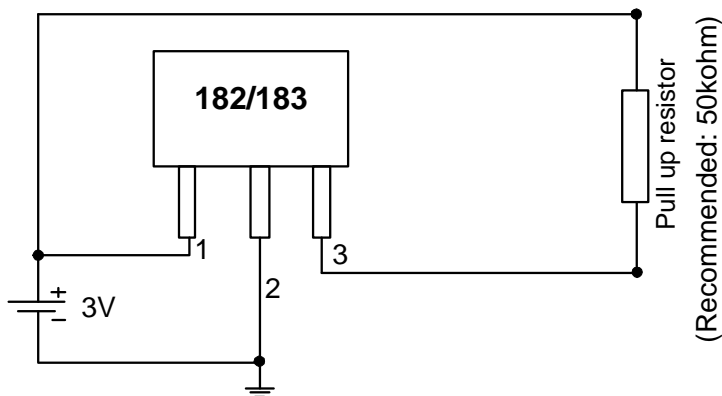
**Recommended Operating Conditions** ( $T_A = 25^\circ\text{C}$ )

Symbol	Parameter	Conditions	Min	Max	Unit
Vdd	Supply Voltage	Operating	2.5	5.5	V
T <sub>A</sub>	Operating Ambient Temperature	Operating	-40	85	°C

**Electrical Characteristics** ( $T_A = 25^\circ\text{C}$ ,  $V_{DD} = 3\text{V}$ )

Symbol	Characteristic	Conditions	Min	Typ.	Max	Unit
$V_{OUT}$	Output On Voltage	$I_{OUT} = 1\text{mA}$	-	0.1	0.3	V
$I_{off}$	Output Leakage Current	$V_{OUT} = 5.5\text{V}$ , $B < Brp$	-	<0.1	1	$\mu\text{A}$
$I_{dd(en)}$	Supply Current	Chip enable	-	-	2.0	mA
$I_{dd(dis)}$		Chip disable	-	-	8.0	$\mu\text{A}$
$I_{dd(ave)}$		AH182: average supply current	-	5	10	$\mu\text{A}$
$I_{dd(ave)}$		AH183: average supply current	-	280	500	$\mu\text{A}$
$T_{awake}$	Awake Time		-	50	100	$\mu\text{s}$
$T_{period}$	Period	AH182	-	50	100	ms
		AH183	-	200	400	$\mu\text{s}$
D.C.	Duty Cycle	AH182	-	0.1	-	%
		AH183	-	25	-	%

**Test Circuit**

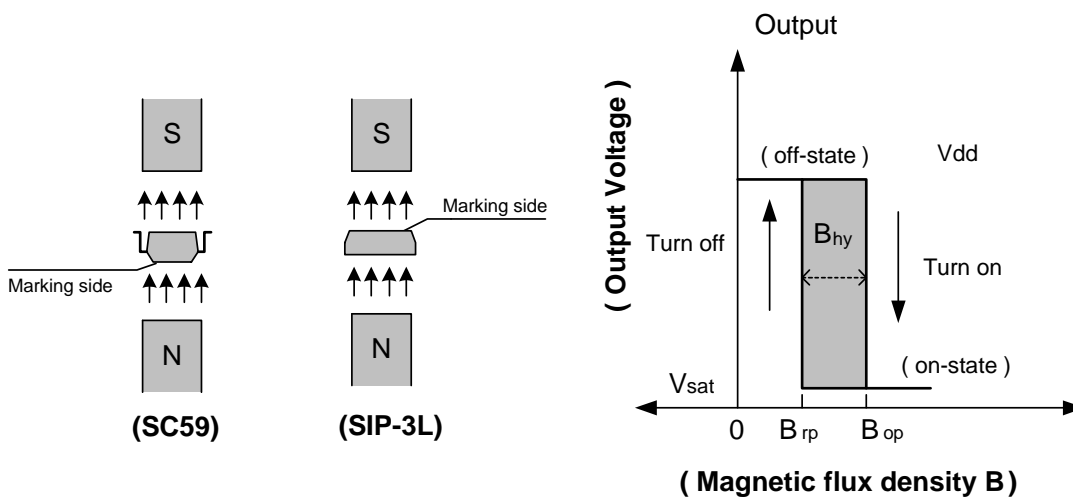


**Magnetic Characteristics** ( $T_A = 25^\circ\text{C}$ ,  $V_{dd} = 3\text{V}$ , Note 5)

(1mT = 10 Gauss)

Symbol	Parameter	Min	Typ.	Max	Unit
Bops(south pole to brand side)	Operation Point	-	40	60	Gauss
Brps(south pole to brand side)	Release Point	10	30	-	
Bhy( $ B_{opx} - B_{rpx} $ )	Hysteresis	-	10	-	

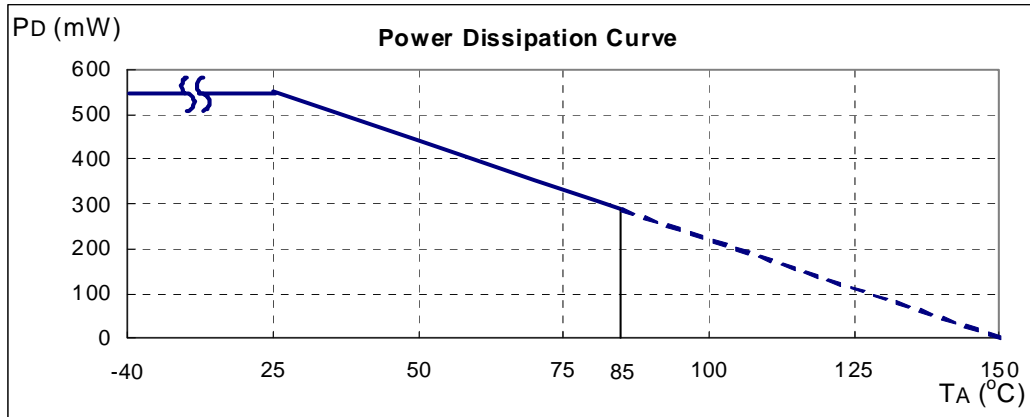
Notes: 5. Magnetic characteristics are for design information, which will vary with supply voltage, operating temperature and after soldering.



**Performance Characteristics**

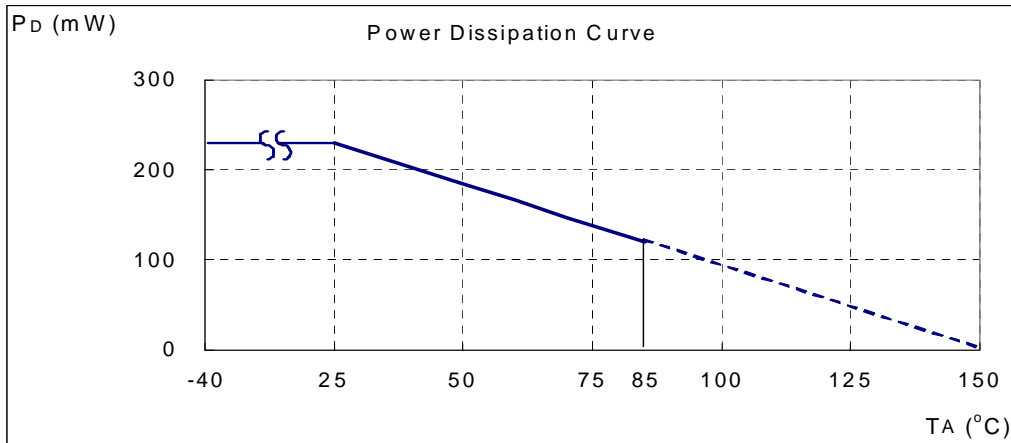
**(1) SIP-3L**

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



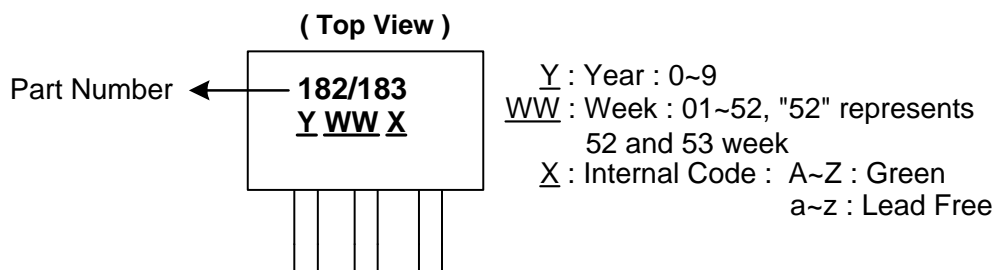
**(2) SC59 (Commonly known as SOT23 in Asia)**

<b>TA (°C)</b>	<b>25</b>	<b>50</b>	<b>60</b>	<b>70</b>	<b>80</b>	<b>85</b>	<b>90</b>	<b>100</b>	<b>110</b>	<b>120</b>	<b>130</b>	<b>140</b>	<b>150</b>
PD (mW)	230	184	166	147	129	120	110	92	74	55	37	18	0

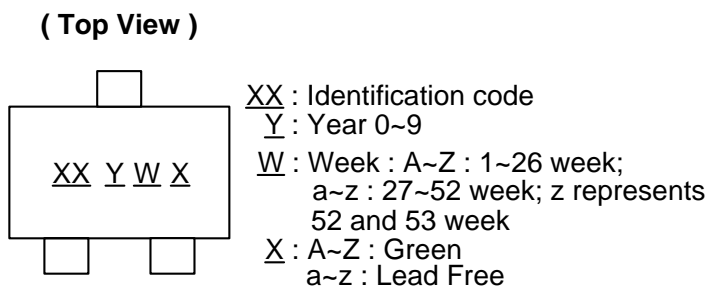


**Marking Information**

(1) SIP-3L



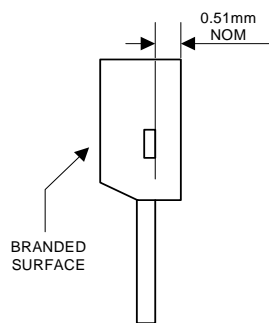
(2) SC59 (Commonly known as SOT23 in Asia)



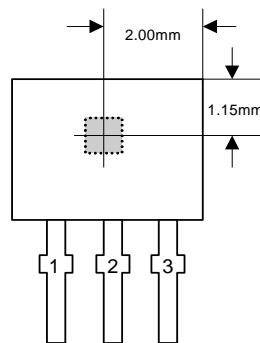
Part Number	Package	Identification Code
AH182	SC59	K2
AH183	SC59	K3

**Package Information** (All Dimensions in mm)

(1) Package Type: SIP-3L for Bulk only

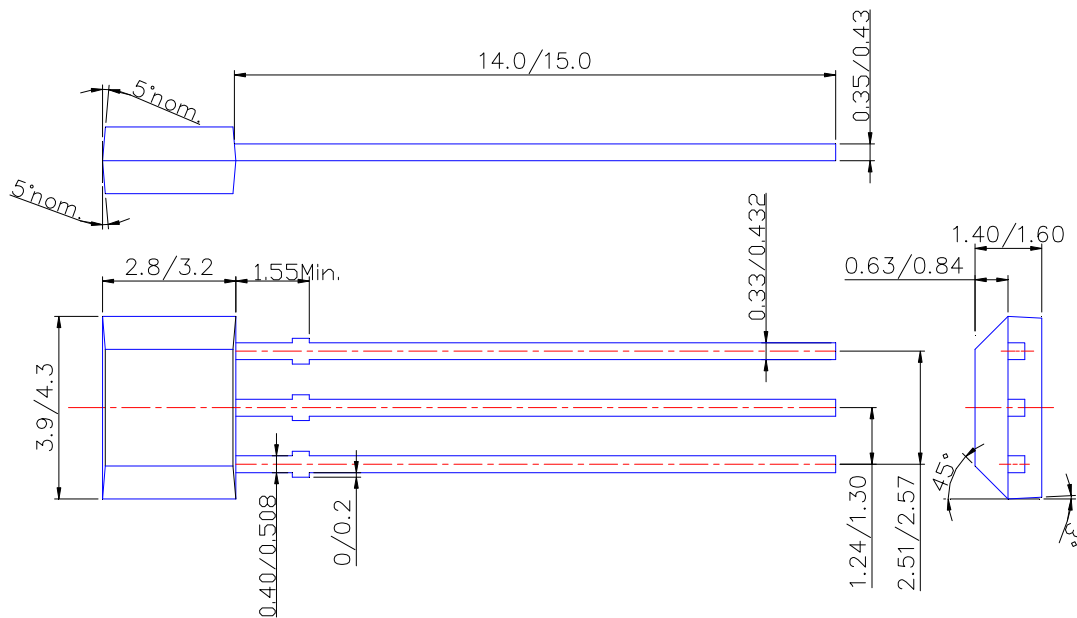


Active Area Depth



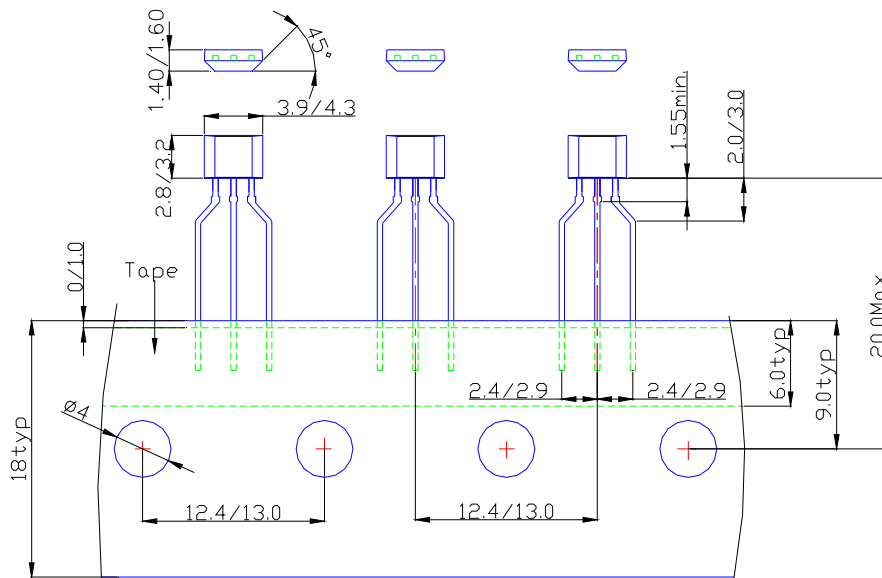
Sensor Location

**Package Dimension**

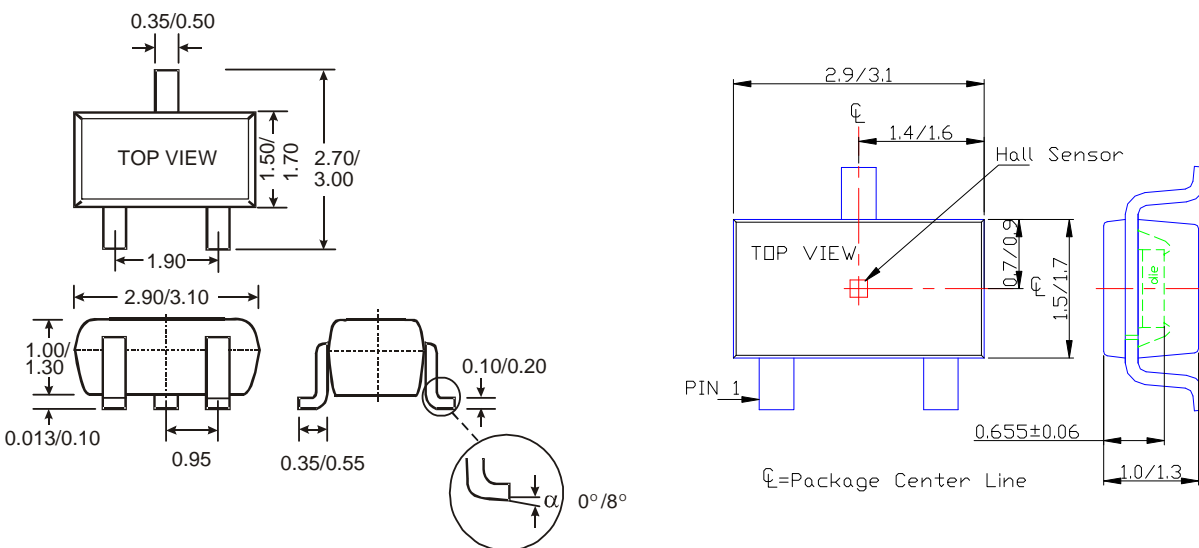


**Package Information (Continued)**

**(2) Package Type: SIP-3L for Ammo Pack-only**



**(3) Package Type: SC59 (commonly known as SOT23 in Asia)**





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