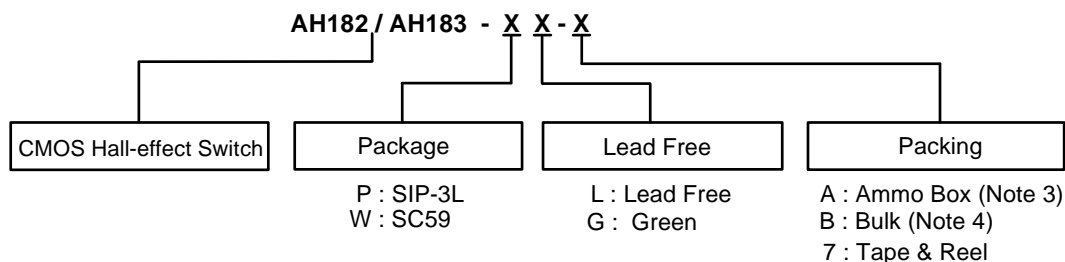








Ordering Information



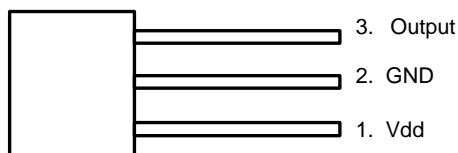
Device	Package Code	Packaging (Note 2)	Bulk		7" Tape and Reel		Ammo Box	
			Quantity	Part Number Suffix	Quantity	Part Number Suffix	Quantity	Part Number Suffix
 AH182/AH183-PL-A	P	SIP-3L	NA	NA	NA	NA	4000/Box	-A
 AH182/AH183-PL-B	P	SIP-3L	1000	-B	NA	NA	NA	NA
 AH182/AH183-PG-A	P	SIP-3L	NA	NA	NA	NA	4000/Box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

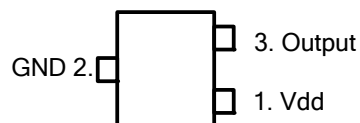
(1) SIP-3L

(Top view)



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

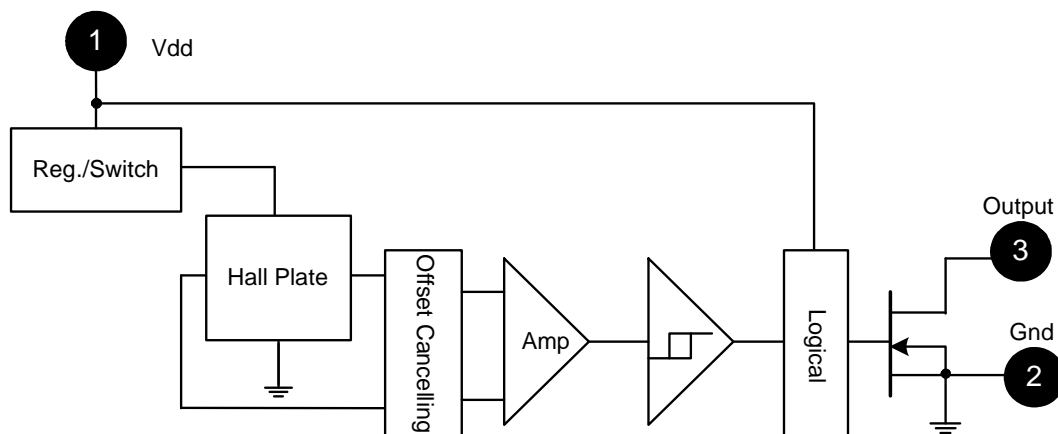
(Top view)



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°C)

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

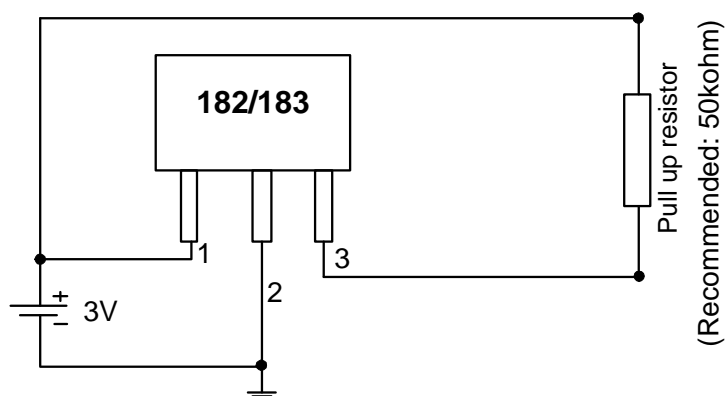
Recommended Operating Conditions (T_A = 25°C)

Symbol	Parameter	Conditions	Min	Max	Unit
V _{DD}	Supply Voltage	Operating	2.5	5.5	V
T _A	Operating Ambient Temperature	Operating	-40	85	°C

Electrical Characteristics (T_A = 25°C, V_{dd} = 3V)

Symbol	Characteristic	Conditions	Min	Typ.	Max	Unit
V _{OUT}	Output On Voltage	I _{OUT} = 1mA	-	0.1	0.3	V
I _{off}	Output Leakage Current	V _{OUT} = 5.5V, B < Brp	-	<0.1	1	μA
I _{dd(en)}	Supply Current	Chip enable	-	-	2.0	mA
I _{dd(dis)}		Chip disable	-	-	8.0	μA
I _{dd(avg)}		AH182: average supply current	-	5	10	μA
I _{dd(avg)}		AH183: average supply current	-	280	500	μA
T _{awake}	Awake Time		-	50	100	μs
T _{period}	Period	AH182	-	50	100	ms
		AH183	-	200	400	us
D.C.	Duty Cycle	AH182	-	0.1	-	%
		AH183	-	25	-	%

Test Circuit

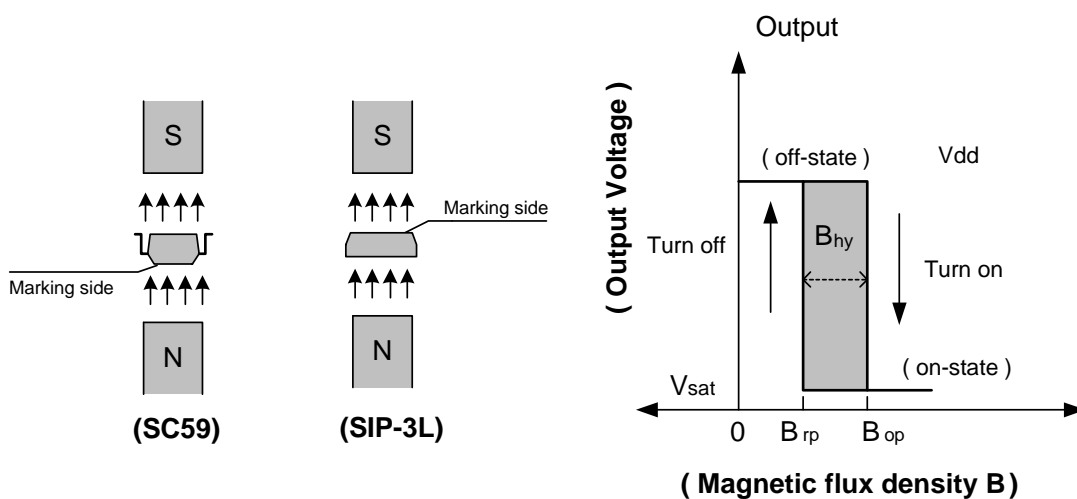


Magnetic Characteristics ($T_A = 25^\circ\text{C}$, $V_{dd} = 3\text{V}$, Note 5)

(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	-	

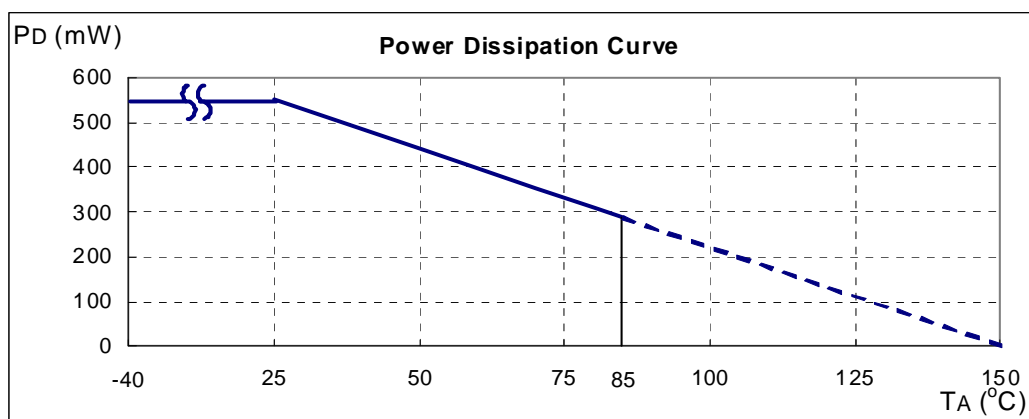
Notes: 5. Magnetic characteristics are for design information, which will vary with supply voltage, operating temperature and after soldering.



Performance Characteristics

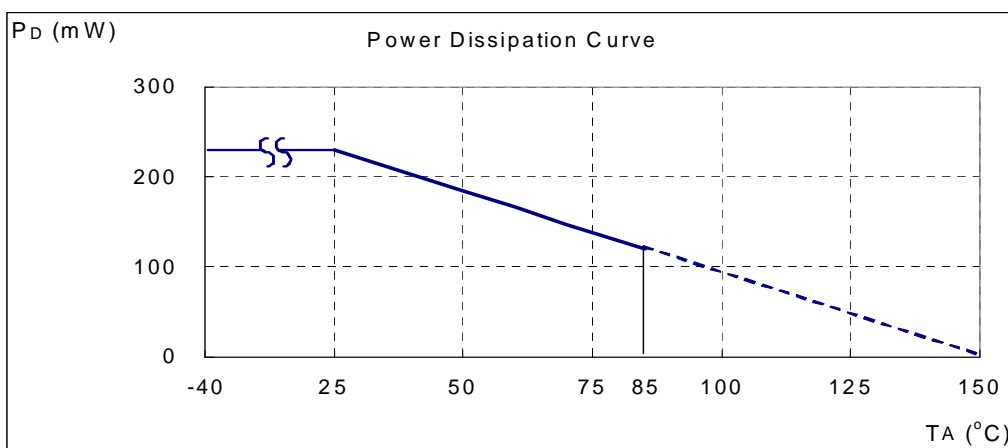
(1) SIP-3L

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



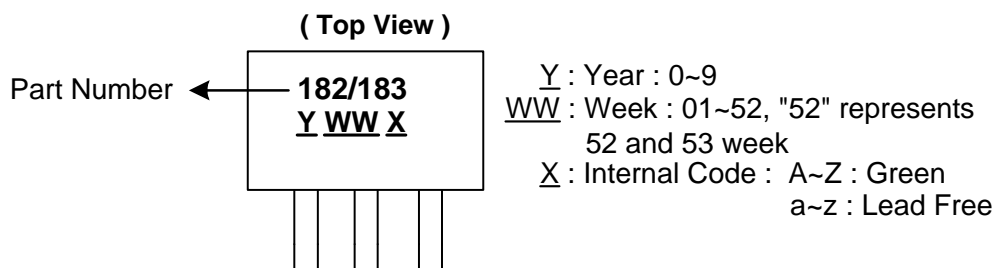
(2) SC59 (Commonly known as SOT23 in Asia)

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

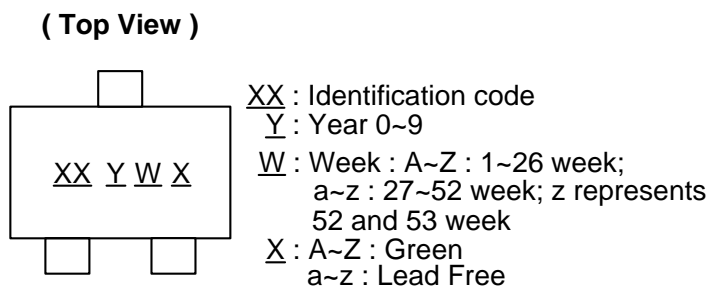


Marking Information

(1) SIP-3L



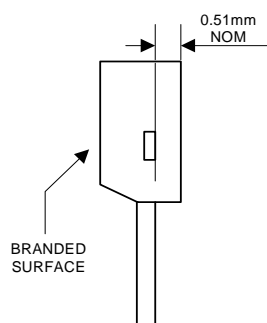
(2) SC59 (Commonly known as SOT23 in Asia)



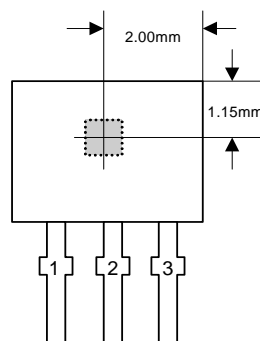
Part Number	Package	Identification Code
AH182	SC59	K2
AH183	SC59	K3

Package Information (All Dimensions in mm)

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

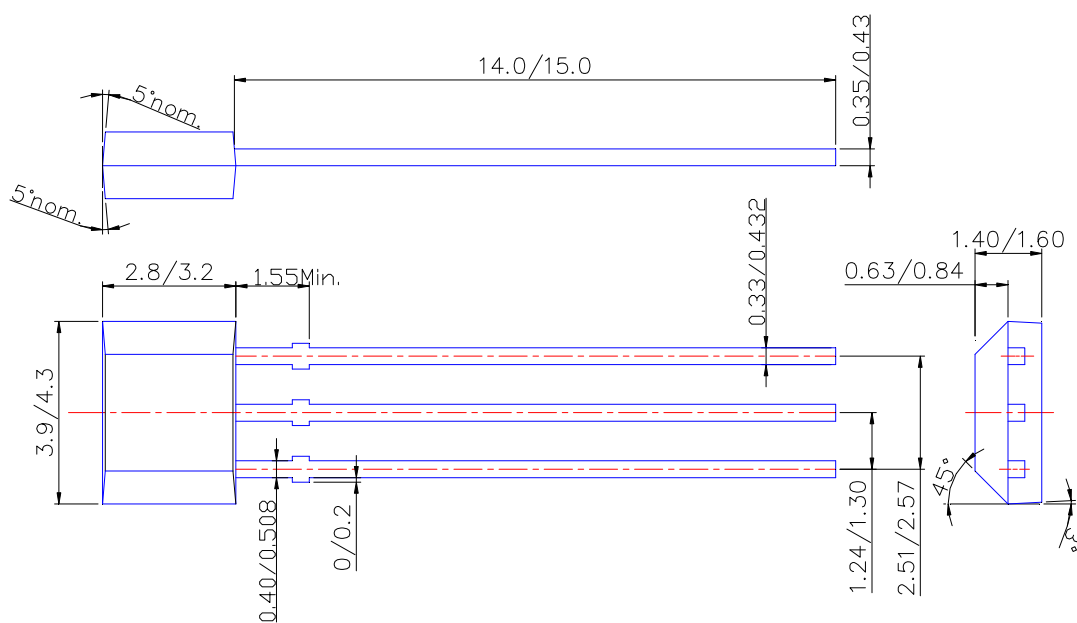


Active Area Depth



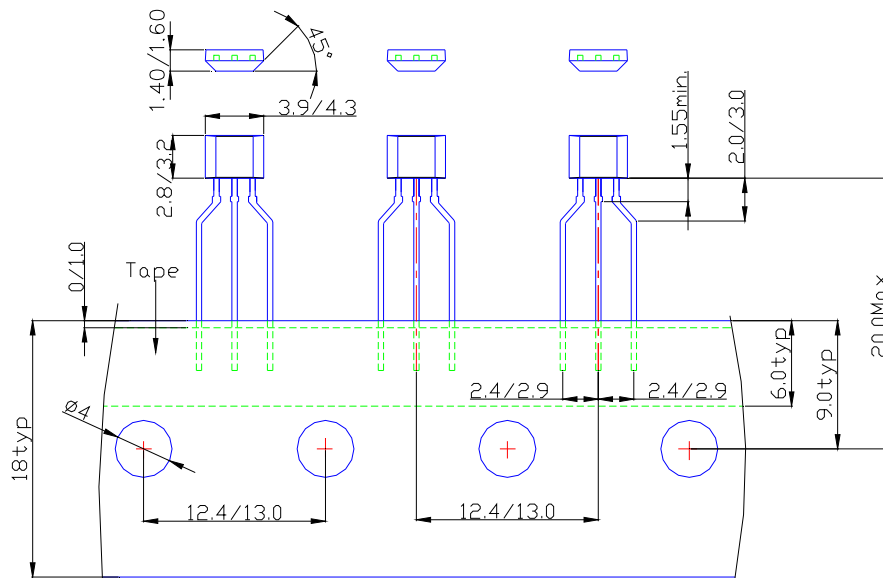
Sensor Location

Package Dimension

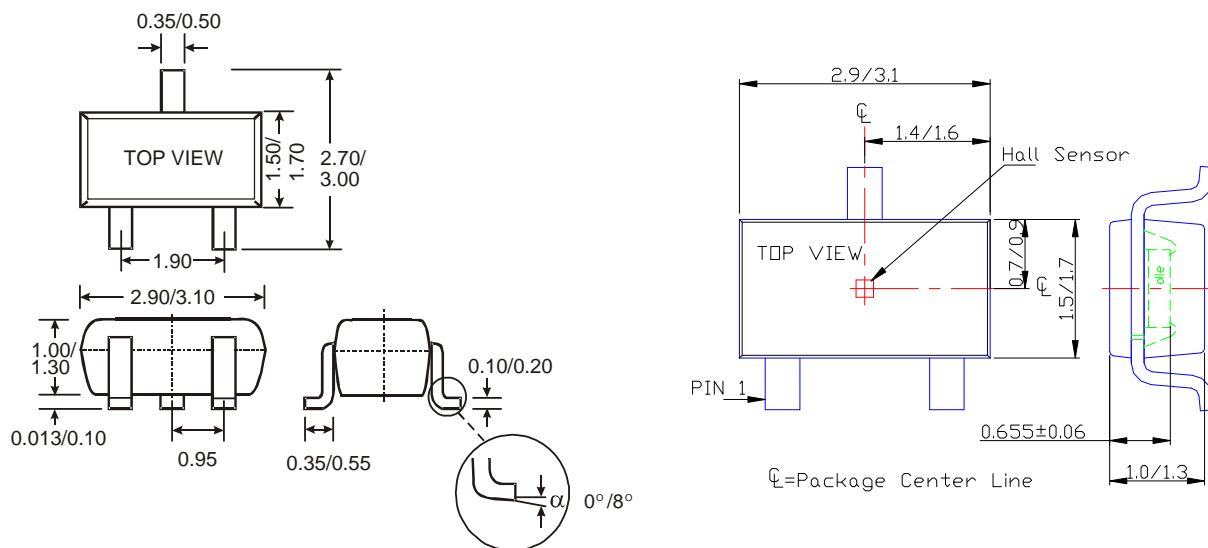


Package Information (Continued)

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



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



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