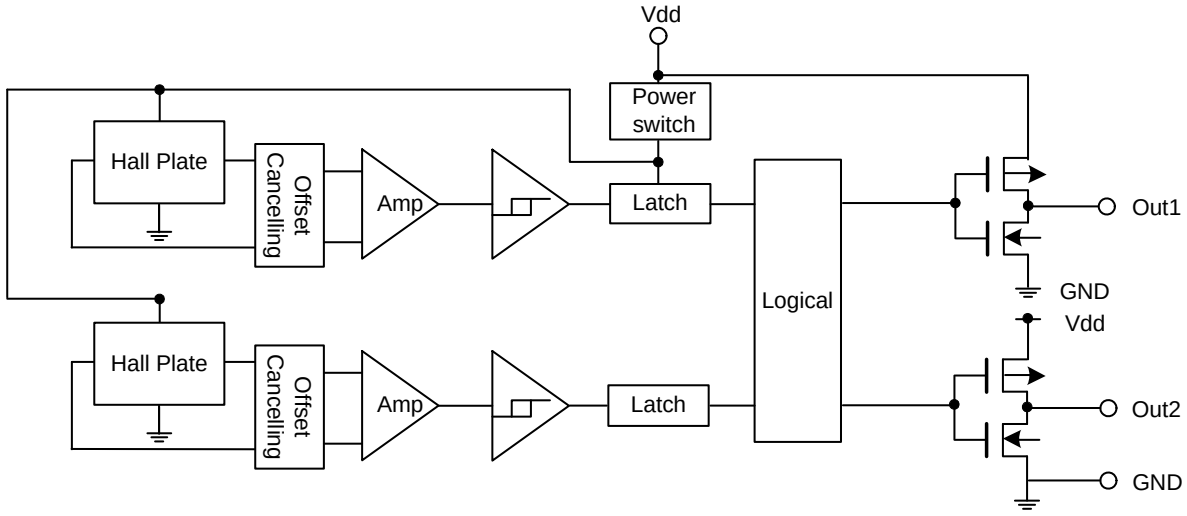
Pin Descriptions

Pin Name	P/I/O	Pin #	Description
Out 2 (Note 1)	O	1	Output Pin (active Low)
GND	P/I	2	Ground
NC		3	No Connection
Vdd	P/I	4	Power Supply Voltage
Out 1 (Note 1)	O	5	Output Pin (active Low)

Notes: 1. Output1 responds to South pole; Output2 responds to North pole.

Functional Block Diagram



Absolute Maximum Ratings (T_A = 25°C)

Symbol	Characteristics	Values	Unit
Vdd	Supply voltage	5	V
B	Magnetic flux density	Unlimited	
T_S	Storage Temperature Range	-65 to +150	°C
P_D	Package Power Dissipation	230	mW
T_J	Maximum Junction Temperature	150	°C

Recommended Operating Conditions (T_A = 25°C)

Symbol	Parameter	Conditions	Rating	Unit
Vdd	Supply Voltage	Operating	1.65 to 3.3	V
T_A	Operating Temperature Range	Operating	-40 to +85	°C

Electrical Characteristics (T_A = 25°C, Vdd = 1.8V, unless otherwise specified)

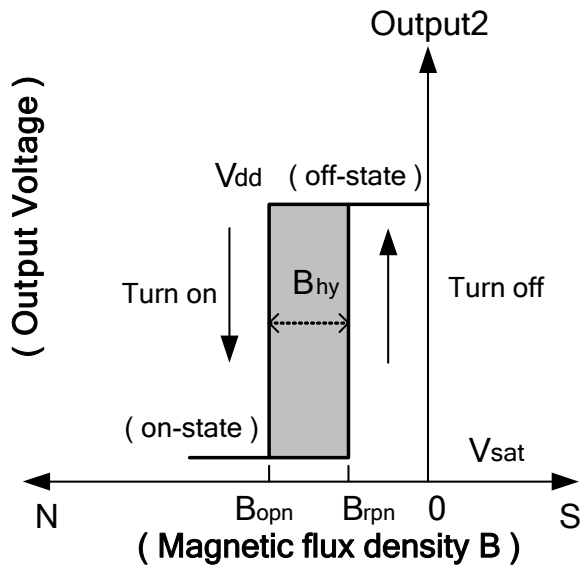
Symbol	Characteristic	Conditions	Min	Typ.	Max	Unit
V_{OH}	Output On Voltage (High side)	I_O= -0.5mA	Vdd-0.2	-	-	V
V_{OL}	Output On Voltage (Low side)	I_O= 0.5mA	-	-	0.2	V
Idd(en)	Supply Current	Chip enable	-	2	4	mA
Idd(dis)		Chip disable	-	5	8	uA
Idd(avg)		average supply current	-	7	12	uA
Tawake	Awake Time		-	50	100	μs
Tperiod	Period		-	50	100	ms
D.C.	Duty Cycle		-	0.1	-	%

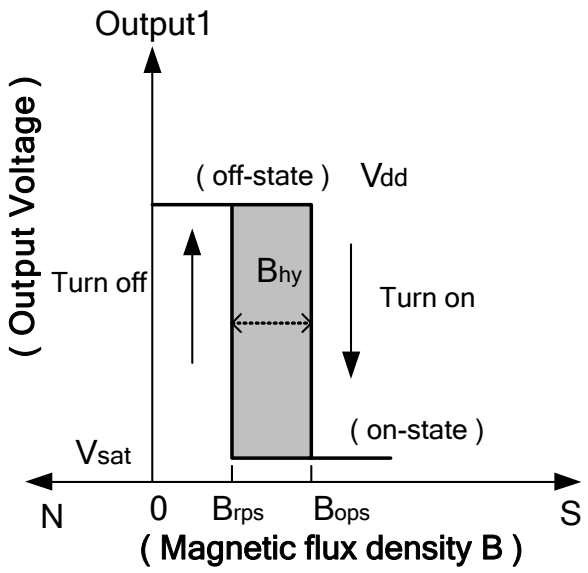
Magnetic Characteristics (T_A = 25°C, Vdd = 1.8V~3.0V, Note 2, 3, 4)

(1mT=10 Gauss)

Symbol	Characteristic	Min	Typ.	Max	Unit
Bops(south pole to brand side)	Operate Point	-	35	50	Gauss
Bopn(north pole to brand side)		-50	-35	-	
Brps(south pole to brand side)	Release Point	6	20	-	
Brpn(north pole to brand side)		-	-20	-6	
Bhy(|Bopx|-|Brpx|)	Hysteresis	3	15	-	

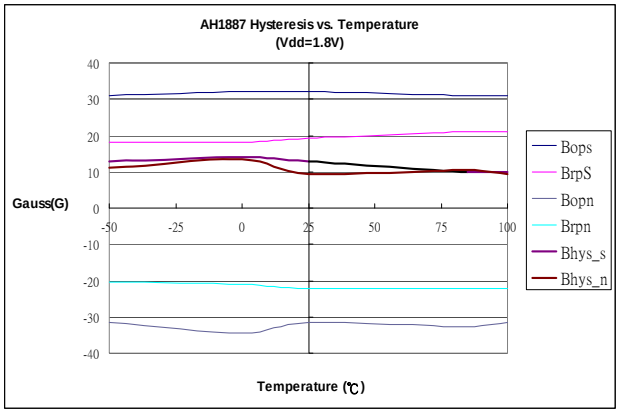
Notes: 2. Typical data is at Ta = 25°C, Vdd = 3V, and for design information only.
3. Bops & Brps for Output 1 responds to South pole; Bopn & Brpn for Output 2 responds to North pole.
4. The magnetic characteristics may vary with supply voltage, operating temperature and after soldering.

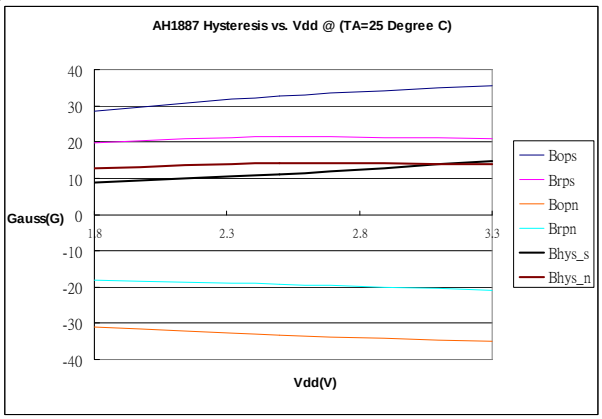




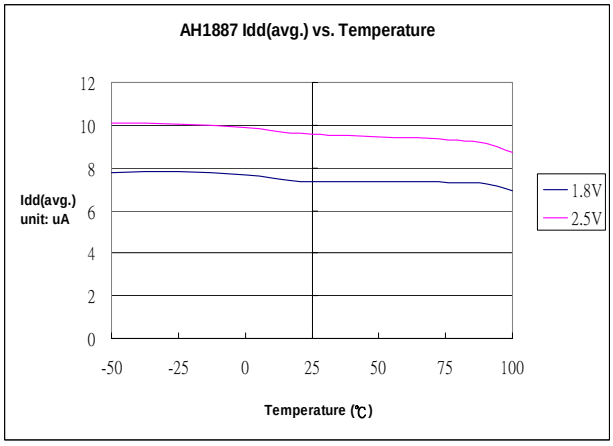
Typical Operating Characteristics

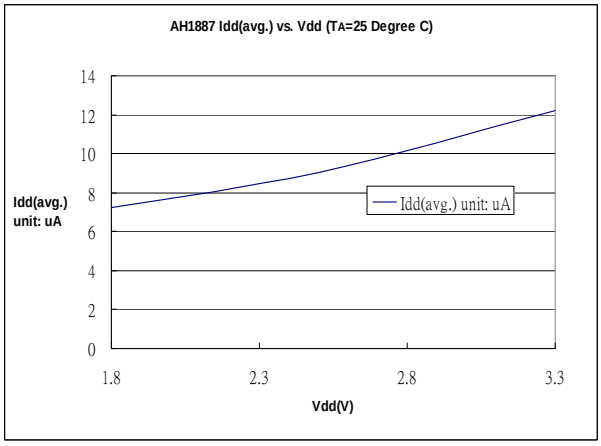
Switching Point





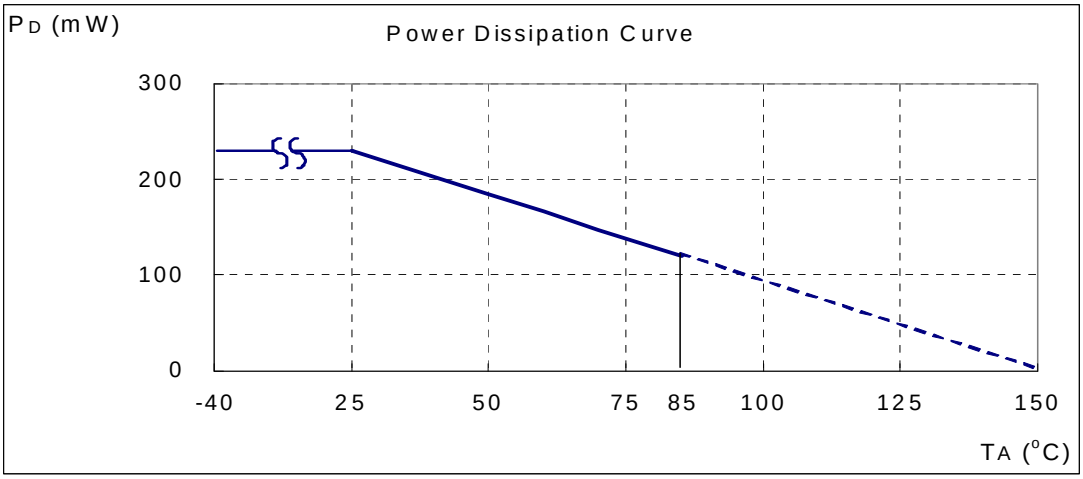
Supply Current



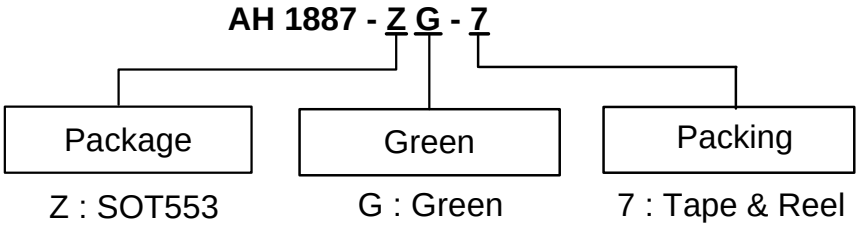


Performance Characteristics

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



Ordering Information



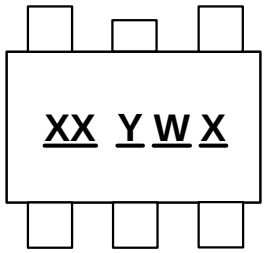
Device	Package Code	Packaging (Note 5 & 6)	7" Tape and Reel	
			Quantity	Part Number Suffix
AH1887-ZG-7	Z	SOT553	3000/Tape & Reel	-7

Notes: 5. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at http://www.diodes.com/products/lead_free.html.
6. 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.

Marking Information

(1) SOT553

(Top View)

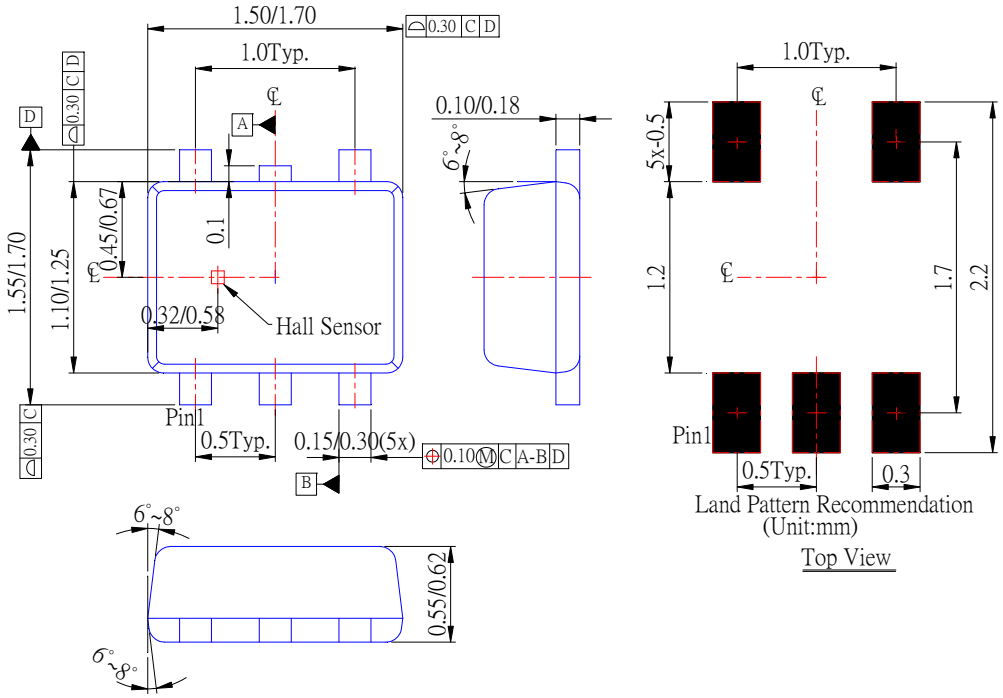


XX : Identification Code
Y : Year : 0~9
W : Week : A~Z : 1~26 week;
a~z : 27~52 week;
z represents 52 and 53 week
X : A~Z : Green

Part Number	Package	Identification Code
AH1887	SOT553	KU

Package Outline Dimensions (All Dimensions in mm)

(1) Package Type: SOT553



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