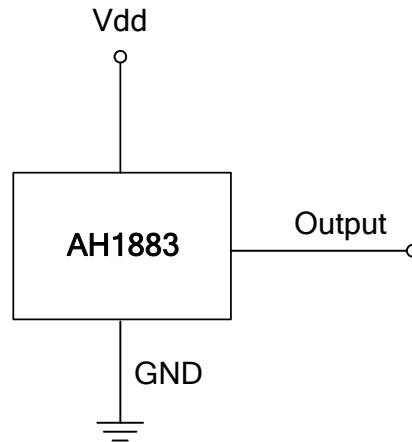


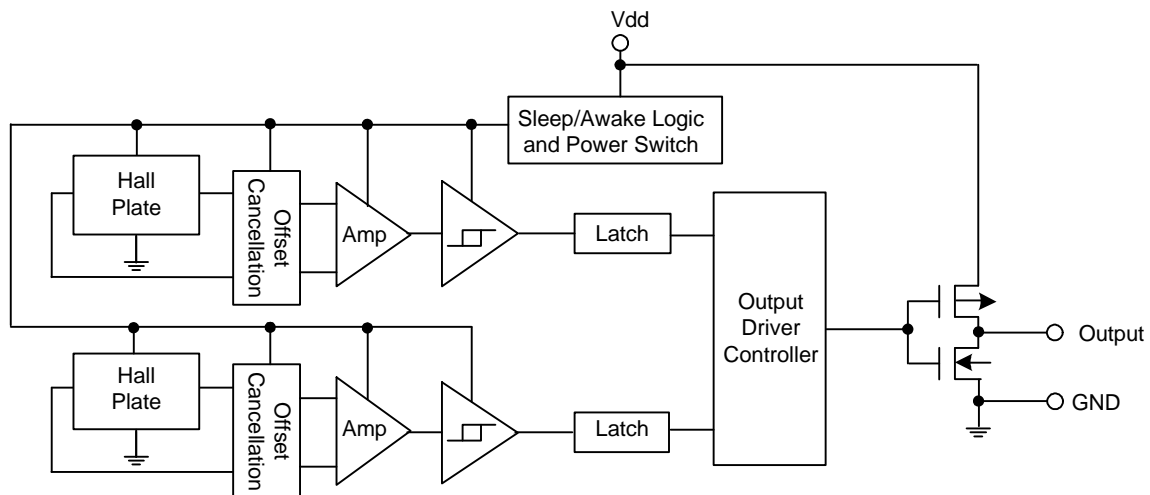
Typical Application Circuit



Pin Descriptions

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

Functional Block Diagram



Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$, Note 1)

Symbol	Characteristics	Values	Unit
V _{DD}	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

Notes: 1. Stresses greater than the 'Absolute Maximum Ratings' specified above, may cause permanent damage to the device. These are stress ratings only; functional operation of the device at these or any other conditions exceeding those indicated in this specification is not implied. Device reliability may be affected by exposure to absolute maximum rating conditions for extended periods of time

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

Symbol	Parameter	Conditions	Rating	Unit
V _{DD}	Supply Voltage	Operating	1.65 to 3.3	V
T _A	Operating Temperature Range	Operating	-40 to +85	°C

Electrical Characteristics ($T_A = 25^\circ\text{C}$, V_{DD} = 1.8V, unless otherwise specified)

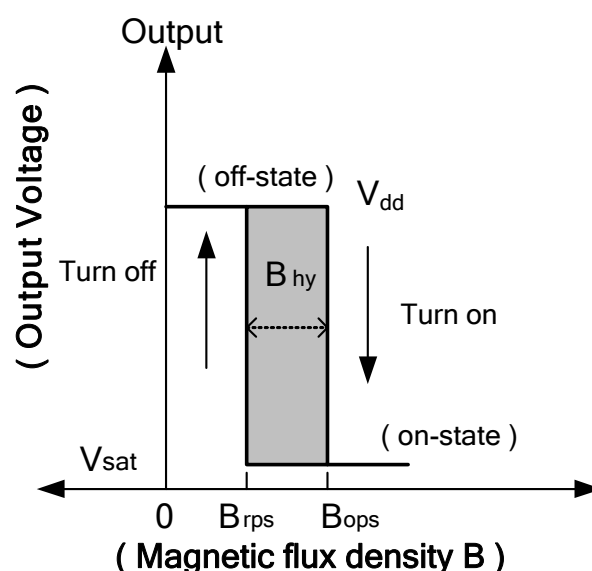
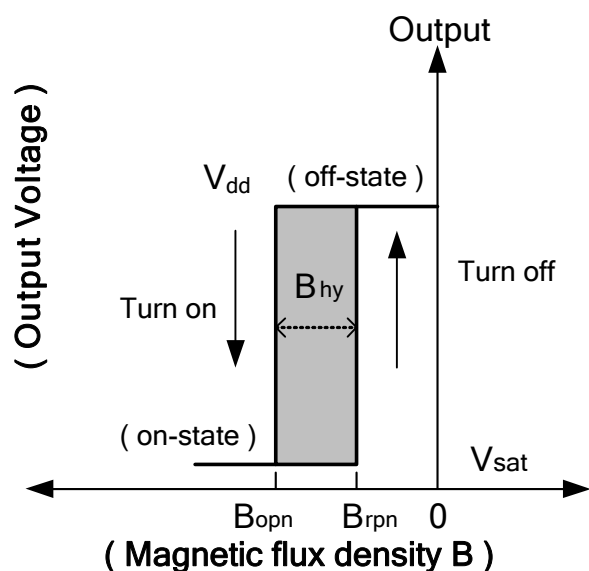
Symbol	Characteristic	Conditions	Min	Typ.	Max	Unit
V _{OH}	Output On Voltage (High side)	I _O = -0.5mA	V _{DD} -0.2	-	-	V
V _{OL}	Output On Voltage (Low side)	I _O = 0.5mA	-	-	0.2	V
I _{DD} (en)	Supply Current	Chip enable	-	2	4	mA
I _{DD} (dis)		Chip disable	-	5	8	uA
I _{DD} (avg)		average supply current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

Magnetic Characteristics ($T_A = 25^\circ\text{C}$, $V_{dd} = 1.8\text{V} \sim 3.0\text{V}$, Note 2 & 3)

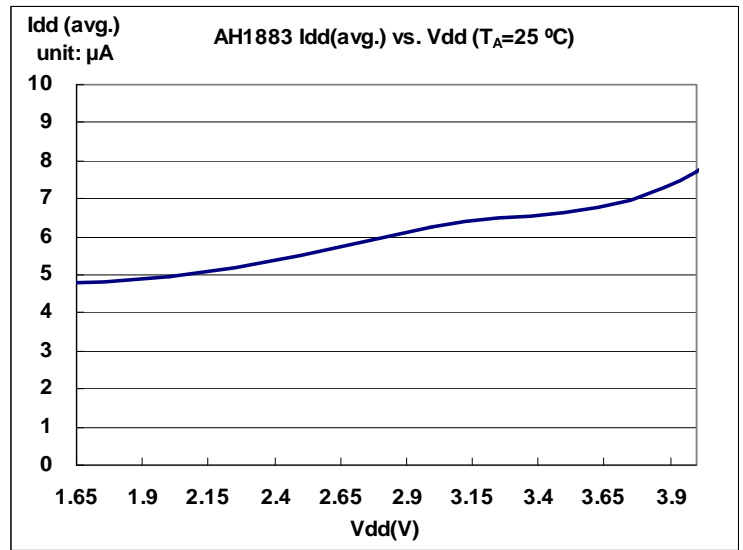
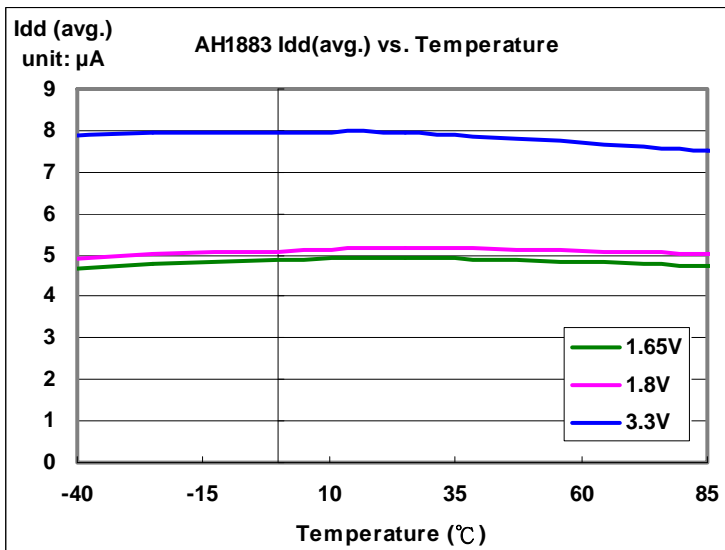
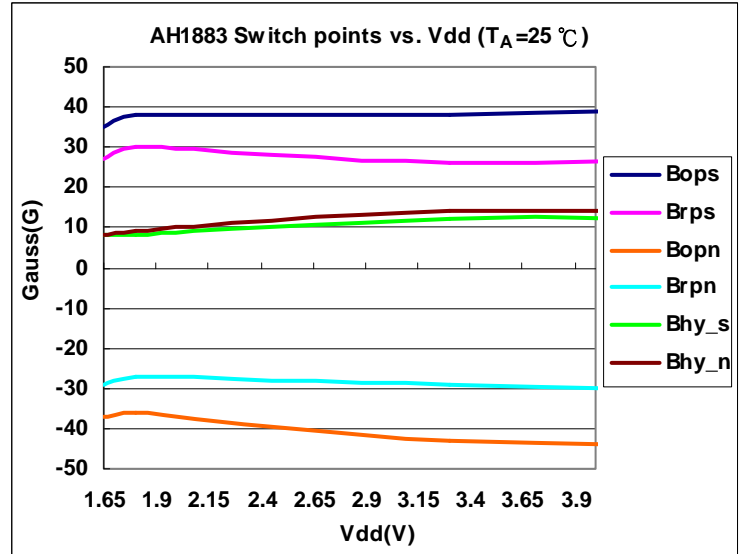
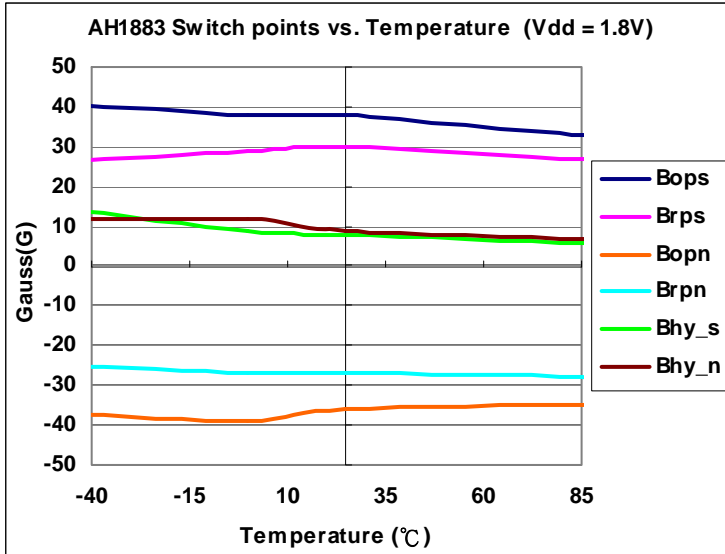
(1mT=10 Gauss)

Symbol	Characteristic	Min	Typ.	Max	Unit
Bops(south pole to brand side)	Operate Point	-	37	55	Gauss
Bopn(north pole to brand side)		-55	-37	-	
Brps(south pole to brand side)	Release Point	6	29	-	
Brpn(north pole to brand side)		-	-29	-6	
Bhy(Bopx - Brpx)	Hysteresis	3	8	-	

Notes: 2. Typical data is at $T_A = 25^\circ\text{C}$, $V_{dd} = 3\text{V}$, and for design information only.
3. The magnetic characteristics may vary with supply voltage, operating temperature and after soldering.



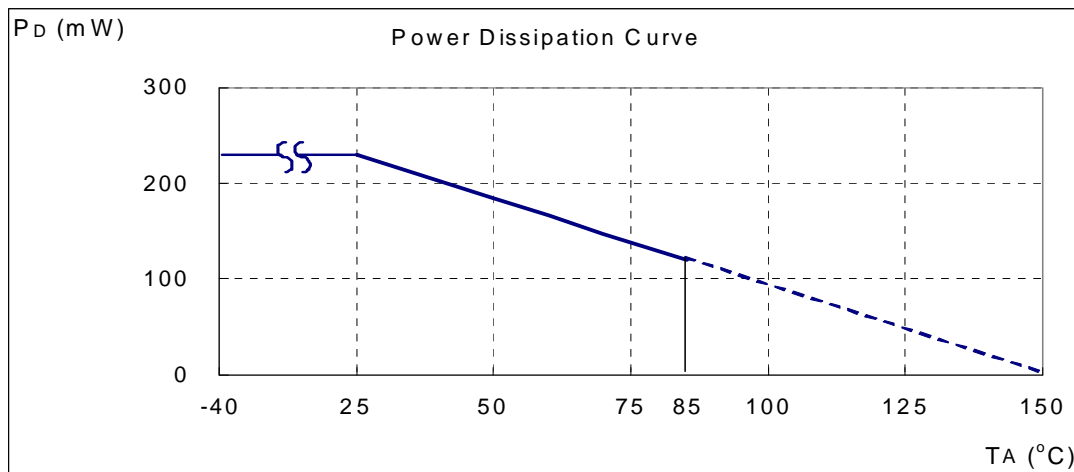
Typical Operating Characteristics



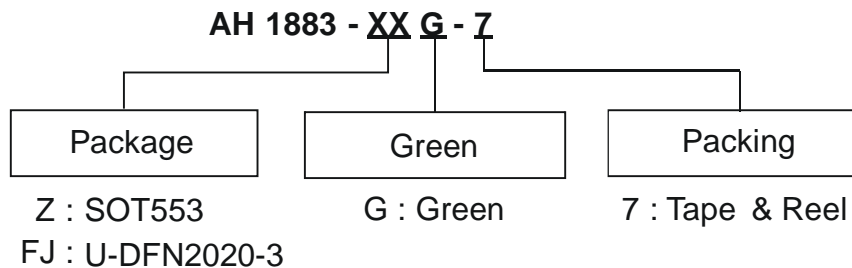
Performance Characteristics

For SOT553 and U-DFN2020-3

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



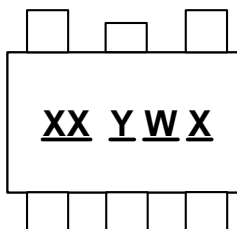
Device	Package Code	Packaging (Note 4 & 5)	7" Tape and Reel	
			Quantity	Part Number Suffix
AH1883-ZG-7	Z	SOT553	3000/Tape & Reel	-7
AH1883-FJG-7	FJ	U-DFN2020-3	3000/Tape & Reel	-7

Notes: 4. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at http://www.diodes.com/products/lead_free.html.
 5. 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)

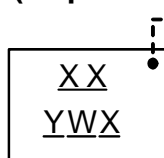


XX : Identification Code
Y : Year : 0~9
W : Week : A~Z : 1~26 week;
a~z : 27~52 week;
z represents 52 and 53 week
X : Internal code

Part Number	Package	Identification Code
AH1883	SOT553	KP

(2) U-DFN2020-3

(Top View)



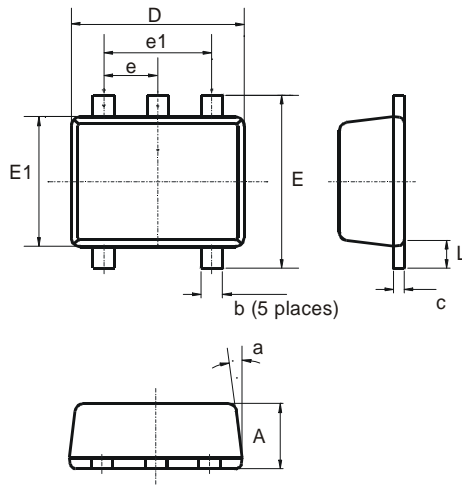
Pin 1 indicator

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 : Internal code

Part Number	Package	Identification Code
AH1883	U-DFN2020-3	KP

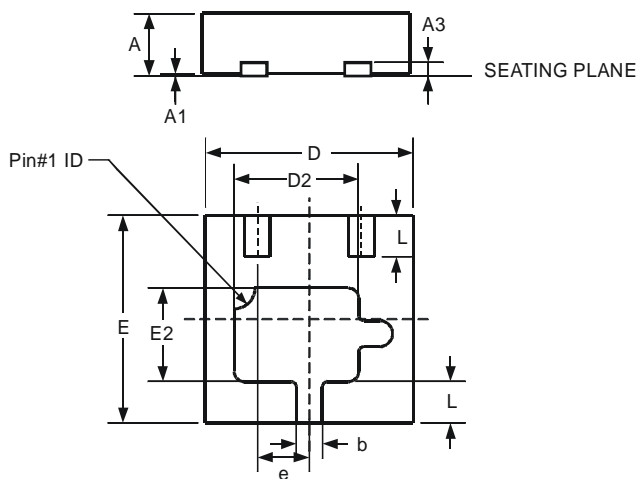
Package Outline Dimensions (All Dimensions in mm)

(1) Package Type: SOT553



SOT553			
Dim	Min	Max	Typ
A	0.55	0.60	0.60
c	0.10	0.18	0.15
D	1.50	1.70	1.60
E	1.55	1.70	1.60
E1	1.10	1.25	1.20
L	0.10	0.30	0.20
b	0.15	0.30	0.20
e	0.50 Typ		
e1	1.00 Typ		
a	6°	8°	7°
All Dimensions in mm			

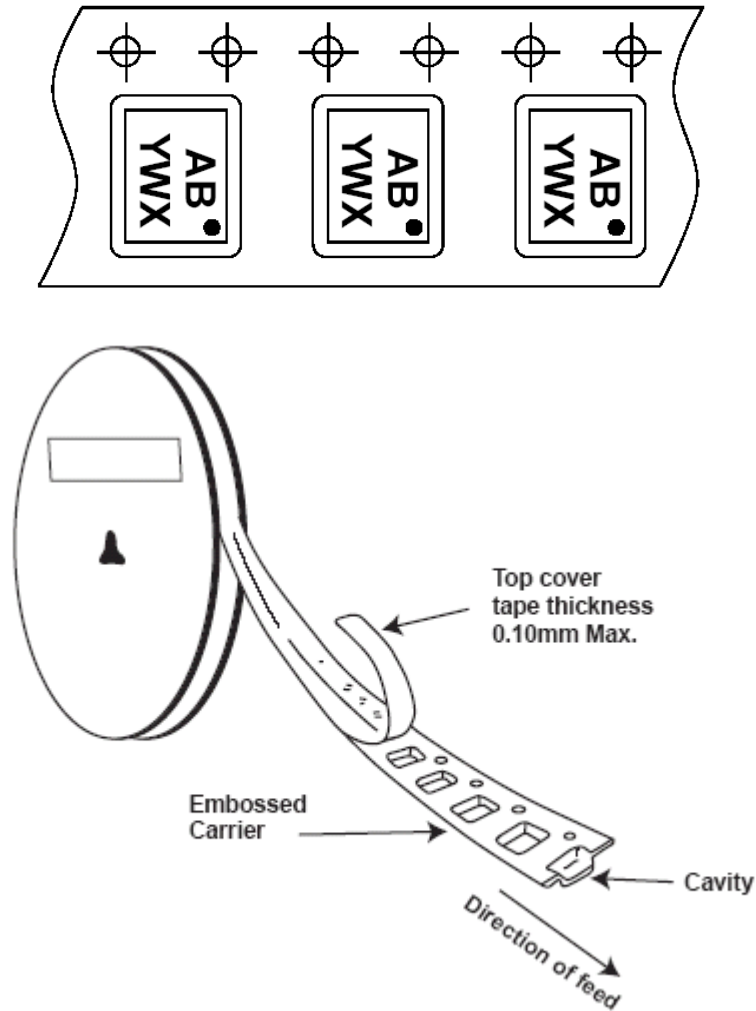
(2) Package Type: U-DFN2020-3



U-DFN2020-3			
Dim	Min	Max	Typ
A	0.57	0.63	0.60
A1	0	0.05	0.02
A3	—	—	0.152
b	0.20	0.30	0.25
D	1.95	2.075	2.00
D2	1.10	1.30	1.20
e	—	—	0.50
E	1.95	2.075	2.00
E2	0.80	1.00	0.90
L	0.35	0.45	0.40
All Dimensions in mm			

Taping Orientation (Note 6)

For U-DFN2020-3



Notes: 6. The taping orientation of the other package type can be found on our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

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