NEW PRODUCT

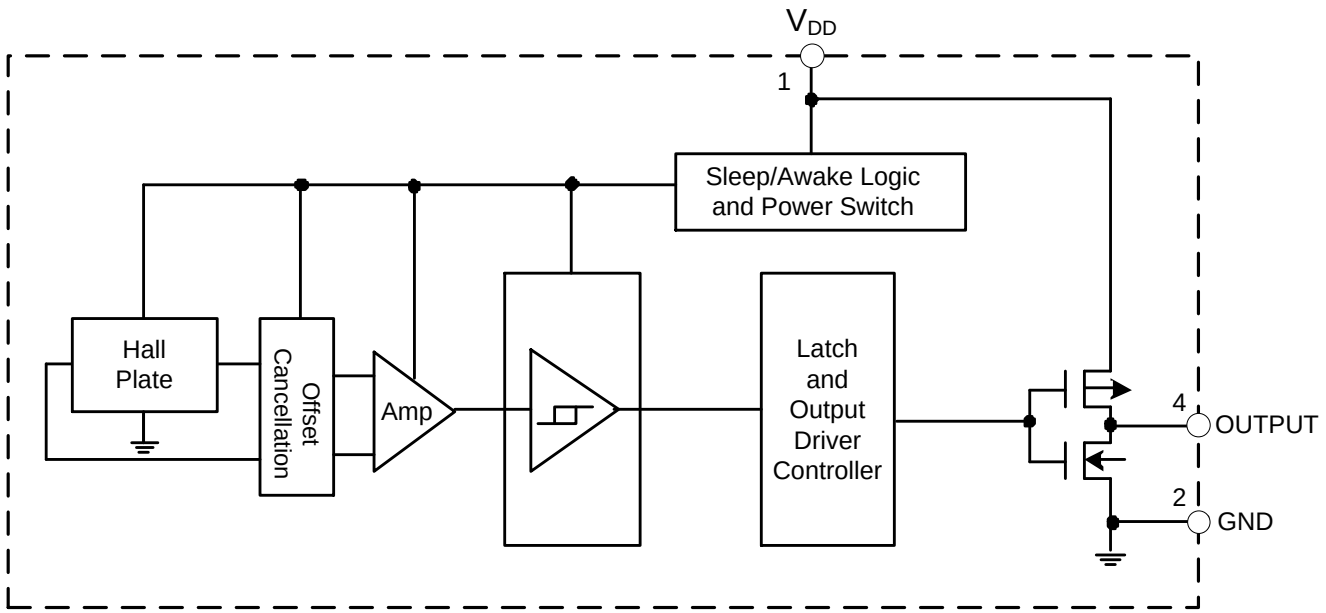
Pin Descriptions

Package: X1-DFN1216-4 (Type D)

Pin Number	Pin Name	Function
1	V_{DD}	Power Supply Input
2	GND	Ground Pin
3	NC	No Connection (Note 5)
4	OUTPUT	Output Pin

Note: 5. NC is “No Connection” pin and is not connected internally. This pin can be left open or tied to ground.

Functional Block Diagram



NEW PRODUCT

Absolute Maximum Ratings (Note 6) (@T_A = +25°C, unless otherwise specified.)

Symbol	Parameter		Rating	Unit
V_{DD}	Supply Voltage (Note 7)		6	V
V_{DD_REV}	Reverse Supply Voltage		-0.3	V
I_{OUTPUT}	Output Current (Source and Sink)		3	mA
B	Magnetic Flux Density		Unlimited	
P_D	Package Power Dissipation	X1-DFN1216-4 (Type D)	230	mW
T_{STG}	Storage Temperature Range		-65 to +150	°C
T_J	Maximum Junction Temperature		+150	°C
ESD HBM	Human Body Model (HBM) ESD Capability		8	kV

Notes: 6. Stresses greater than the '*Absolute Maximum Ratings*' specified above can 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 can be affected by exposure to absolute maximum rating conditions for extended periods of time.

7. The absolute maximum V_{DD} of 6V is a transient stress rating and is not meant as a functional operating condition. It is not recommended to operate the device at the absolute maximum rated conditions for any period of time.

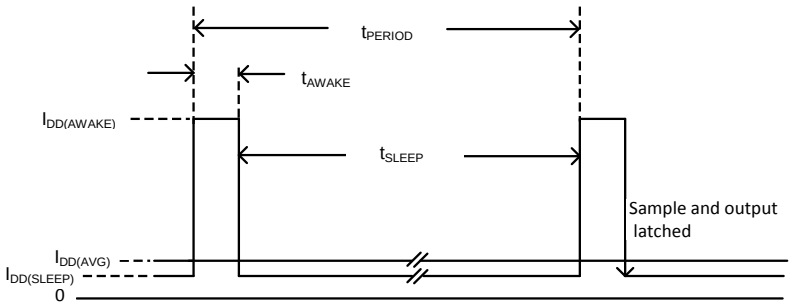
Recommended Operating Conditions (@T_A = +25°C, unless otherwise specified.)

Symbol	Parameter	Conditions	Rating	Unit
V_{DD}	Supply Voltage	Operating	1.6V to 3.6V	V
T_A	Operating Temperature Range	Operating	-40 to +85	°C

Electrical Characteristics (@T_A = +25°C, V_{DD} = 3.0V, unless otherwise specified.)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_{OL}	Output Low Voltage (On)	I_{OUT} = 1mA	—	0.1	0.2	V
V_{OH}	Output High Voltage (Off)	I_{OUT} = -1mA	V_{DD} -0.2	V_{DD} -0.1	—	V
I_{OFF}	Output Leakage Current	V_{OUT} = 3.6V, Output off	—	<0.1	1	µA
$I_{DD(AWAKE)}$	Supply Current	During 'awake' period	—	2.1	—	mA
$I_{DD(SLEEP)}$		During 'sleep' period	—	2.5	—	µA
$I_{DD(AVG)}$	Average Supply Current	T_A = +25°C, V_{DD} = 1.8V	—	4.3	8	µA
		T_A = +25°C, V_{DD} = 3.6V	—	7.2	13	µA
t_{AWAKE}	Awake Time	(Note 8)	—	50	100	µs
t_{PERIOD}	Period	(Note 8)	—	50	100	ms
D.C.	Duty Cycle	—	—	0.1	—	%

Note: 8. When power is initially turned on, the operating V_{DD} (1.6V to 3.6V) must be applied to guaranteed the output sampling. The output state is valid after the second operating cycle (typical 100ms).

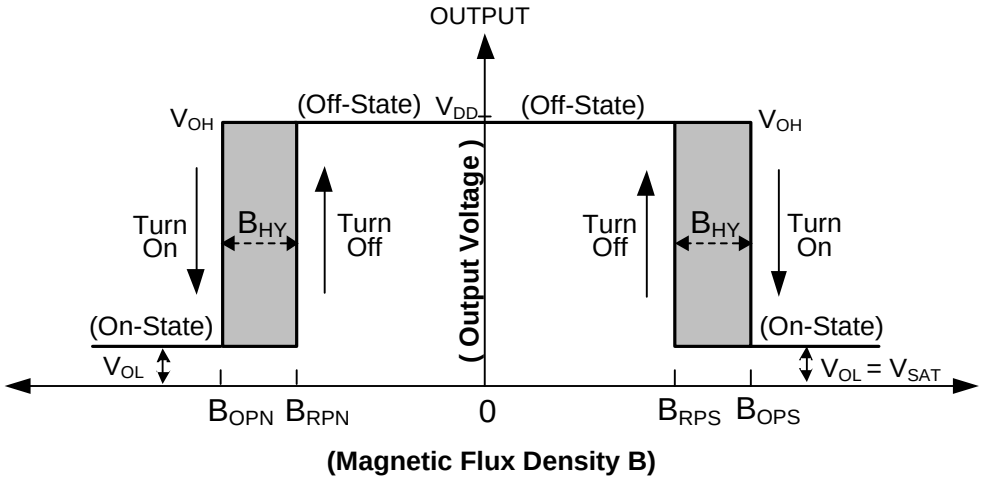


NEW PRODUCT

Magnetic Characteristics (T_A = +25°C, V_{DD} = 3.0V, unless otherwise specified.)

(1mT=10 Gauss)

Symbol	Characteristics	Min	Typ	Max	Unit
B_{OPS} (South Pole to Part Marking Side)	Operation Point	14	30	40	Gauss
B_{OPN} (North Pole to Part Marking Side)		-40	-30	-14	
B_{RPS} (South Pole to Part Marking Side)	Release Point	10	20	35	
B_{RPN} (North Pole to Part Marking Side)		-35	-20	-10	
B_{HY} (|Bopx|-|Brpx|)	Hysteresis	—	10	—	



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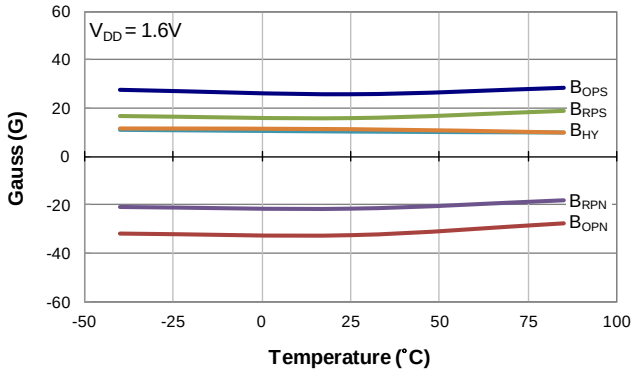
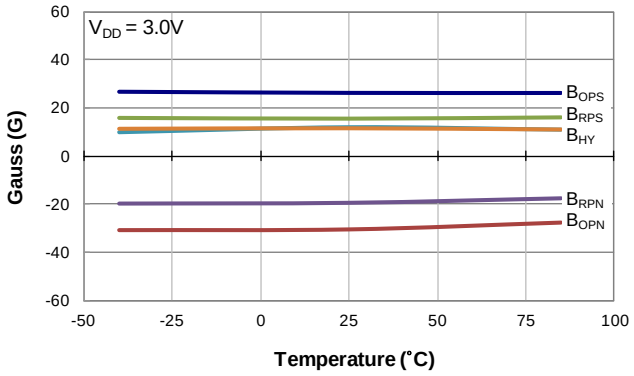
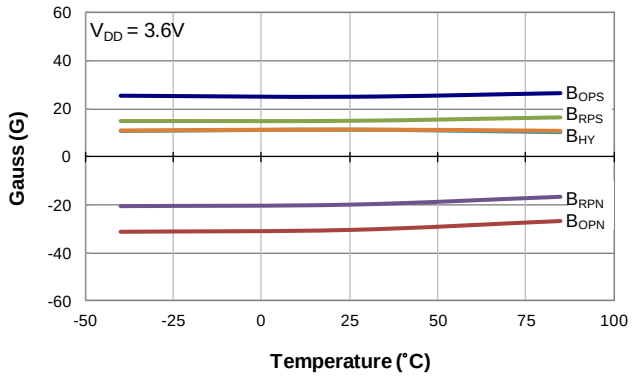
Typical Operating Characteristics



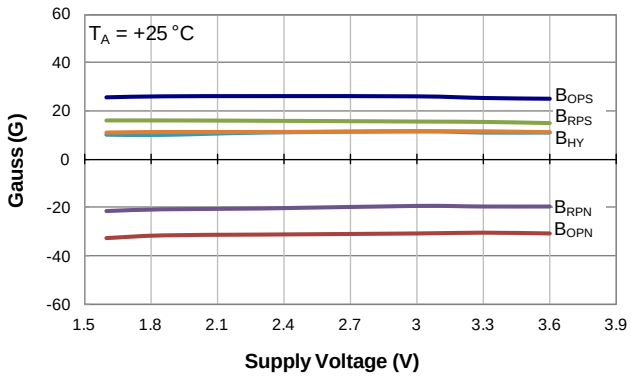
Switch Points vs Temperature



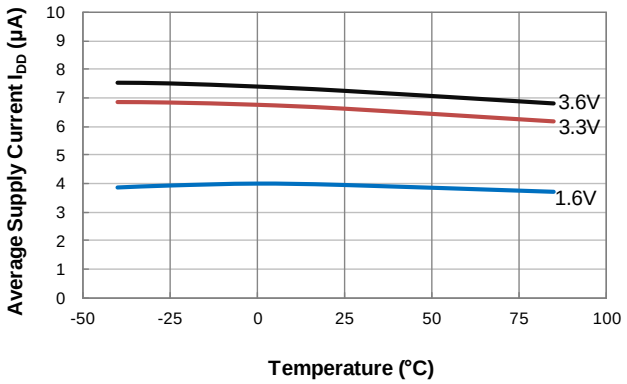
Switch Points vs Temperature



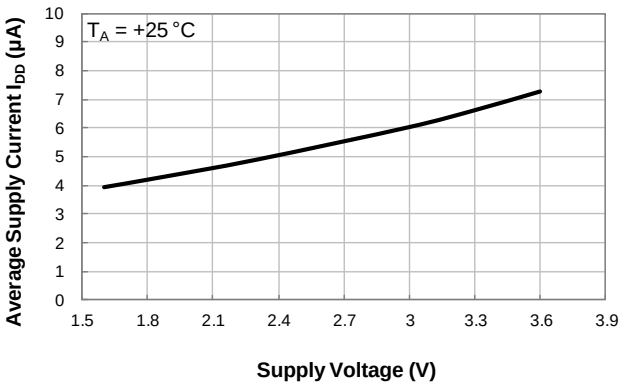
Switch Points vs Temperature



Switch Points vs Supply Voltage



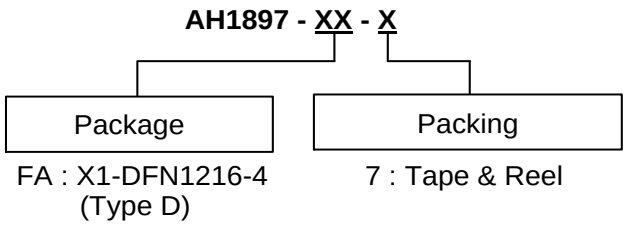
Average Supply Current vs. Temperature



Average Supply Current vs. Supply Voltage

NEW PRODUCT

Ordering Information

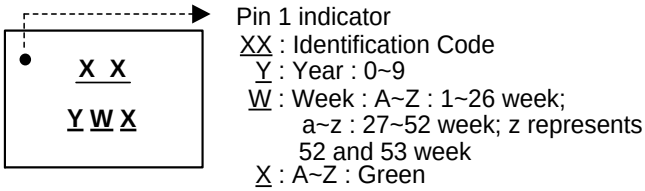


Part Number	Package Code	Packaging	7" Tape and Reel	
			Quantity	Part Number Suffix
AH1897-FA-7	FA	X1-DFN1216-4 (Type D)	3000/Tape & Reel	-7

Marking Information

(1) Package Type: X1-DFN1216-4 (Type D)

(Top View)



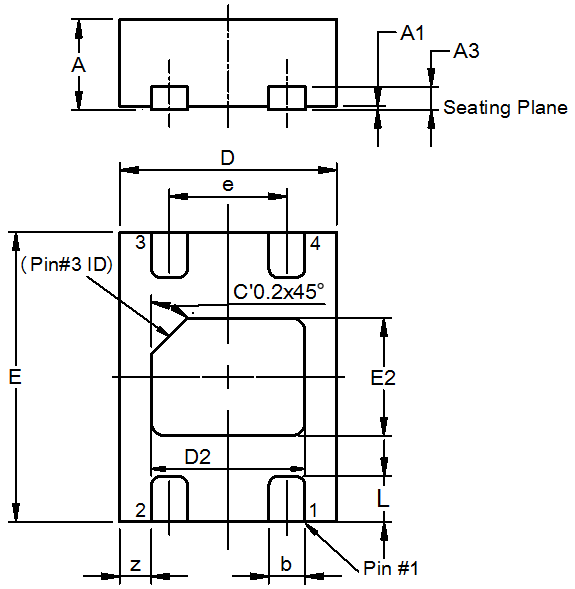
Part Number	Package	Identification Code
AH1897-FA-7	X1-DFN1216-4 (Type D)	B7

NEW PRODUCT

Package Outline Dimensions

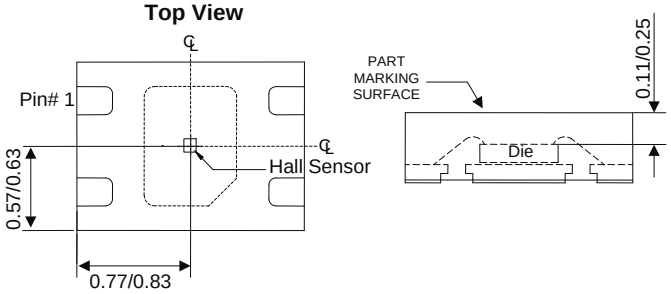
Please see http://www.diodes.com/package-outlines.html for the latest version.

(1) Package Type: X1-DFN1216-4 (Type D)



Bottom View

X1-DFN1216-4 (Type D)			
Dim	**Min**	**Max**	**Typ**
A	0.47	0.53	0.50
A1	0.00	0.05	0.02
A3	--	--	0.13
b	0.15	0.25	0.20
D	1.15	1.25	1.20
D2	0.75	0.95	0.85
E	1.55	1.65	1.60
E2	0.55	0.75	0.65
e	-	-	0.65
L	0.20	0.30	0.25
Z	-	-	0.175
All Dimensions in mm			



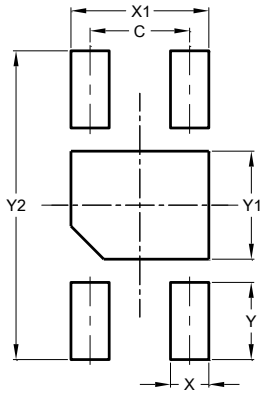
Sensor Location

NEW PRODUCT

Suggested Pad Layout

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

(1) Package Type: X1-DFN1216-4 (Type D)



Dimensions	Value (in mm)
C	0.65
X	0.25
X1	0.90
Y	0.50
Y1	0.70
Y2	2.00

NEW PRODUCT

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