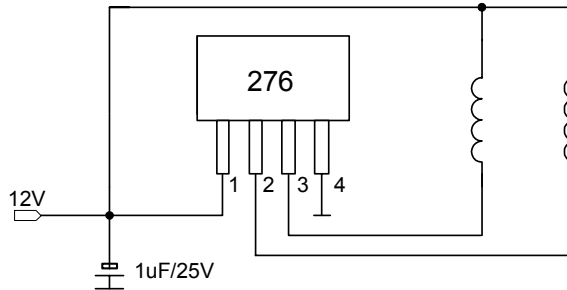


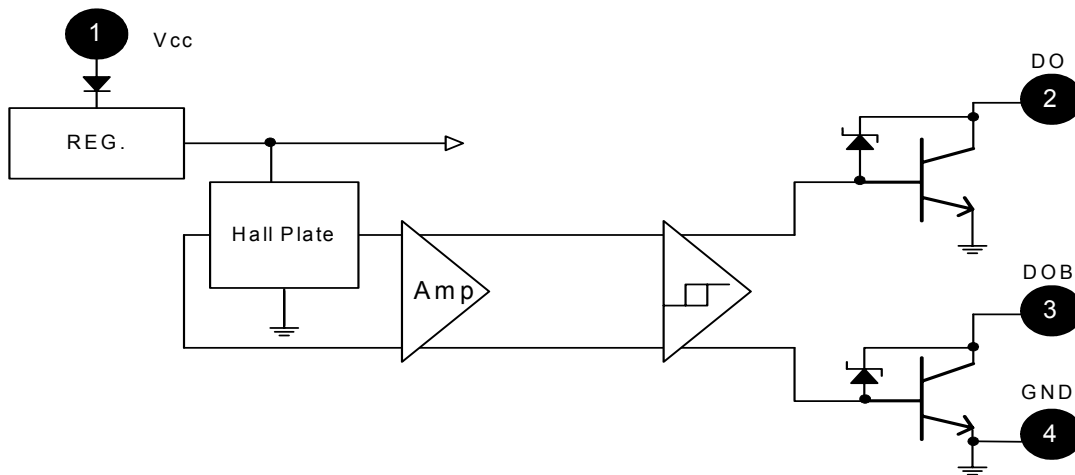


**Typical Application Circuit**

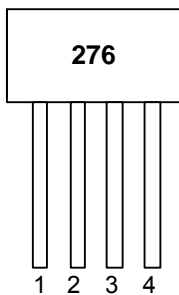


**Brush-less DC Fan**

**Block Diagram**



**Pin Assignment**



Front View

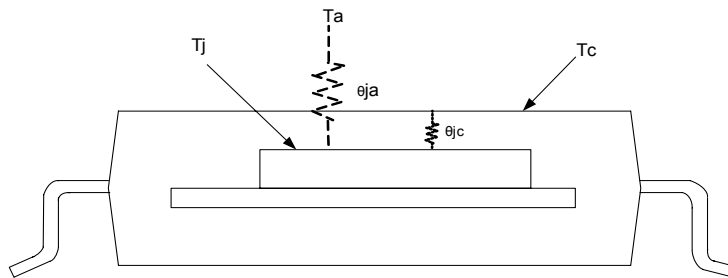
- 1 : Vcc
- 2 : DO
- 3 : DOB
- 4 : GND

Name	P/I/O	Pin #	Description
Vcc	P	1	Power Supply Input
DO	O	2	Output Pin
DOB	O	3	Output Pin
GND	P	4	Ground

**Absolute Maximum Ratings ( @ TA=25°C )**

Characteristics	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	20	V
Reverse V <sub>CC</sub> Polarity Voltage	V <sub>RCC</sub>	-20	V
Magnetic flux density	B	Unlimited	
Output "on" current*	Continuous	0.4	A
	Hold	0.5	
	Peak (Start Up)	0.7	
Operating temperature range	T <sub>A</sub>	-20~+85	°C
Storage temperature range	T <sub>s</sub>	-65~+150	°C
Package Power Dissipation (SIP-4)	P <sub>D</sub>	550	mW
Maximum Junction Temp	T <sub>j</sub>	150	°C
Thermal Resistance (SIP-4)	θ <sub>jc</sub>	227	°C/W

\*Note: 4. P<sub>d</sub> shall be within Safety Operation Area.



**Electrical Characteristics (TA=+25°C)**

Characteristic	Symbol	Conditions	Min	Typ	Max	Units
Supply Voltage	V <sub>cc</sub>	(Note 5)	3.5	-	20	V
Output Zener Breakdown	V <sub>z</sub>	(Note 6)	-	35	-	V
Output Saturation Voltage	V <sub>ce(sat)</sub>	V <sub>cc</sub> =14V, I <sub>L</sub> =400mA	-	0.6	0.9	V
Output Leakage Current	I <sub>ceX</sub>	V <sub>ce</sub> =14V, V <sub>cc</sub> =14V	-	<0.1	10	μA
Supply Current	I <sub>cc</sub>	V <sub>cc</sub> =20V, Output Open	7	16	25	mA

Note: 5. The output DO/DOB is switching as magnetic field change (S>300G, N<-300G).  
6. V<sub>z</sub> is a typical value for design reference. V<sub>z</sub> will vary with different coils design.

**Magnetic Characteristics** ( $T_A=+25^{\circ}\text{C}$ ,  $V_{CC}=14\text{V}$ , Note 7)

**A grade**

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Operate Point	Bop	10	-	50	Gauss
Release Point	Brp	-50	-	-10	Gauss
Hysteresis	Bhy	-	75	-	Gauss

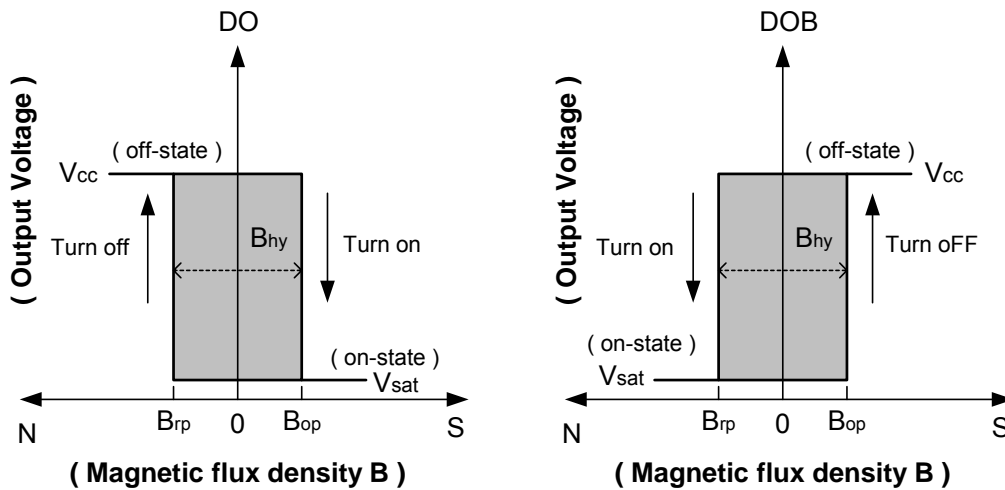
**B grade**

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Operate Point	Bop	5	-	70	Gauss
Release Point	Brp	-70	-	-5	Gauss
Hysteresis	Bhy	-	75	-	Gauss

**C grade**

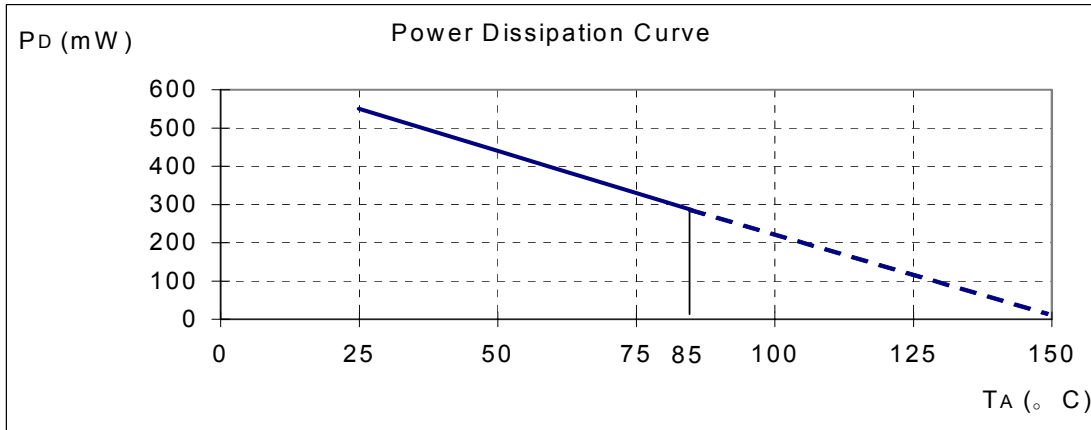
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Operate Point	Bop	-	-	100	Gauss
Release Point	Brp	-100	-	-	Gauss
Hysteresis	Bhy	-	75	-	Gauss

Note: 7. Magnetic characteristics are for design information, which will vary with supply voltage, operating temperature and after soldering.

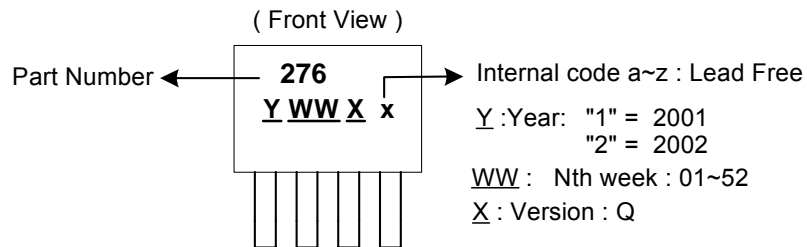


**Performance Characteristics (SIP-4L)**

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

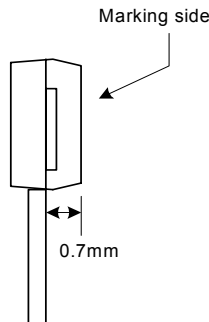


**Marking Information**

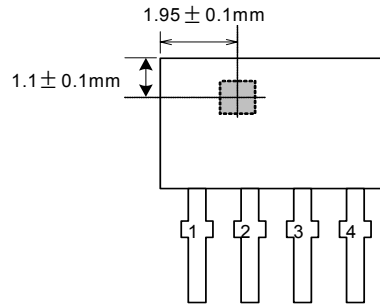


**Sensor Location** ( unit: mm )

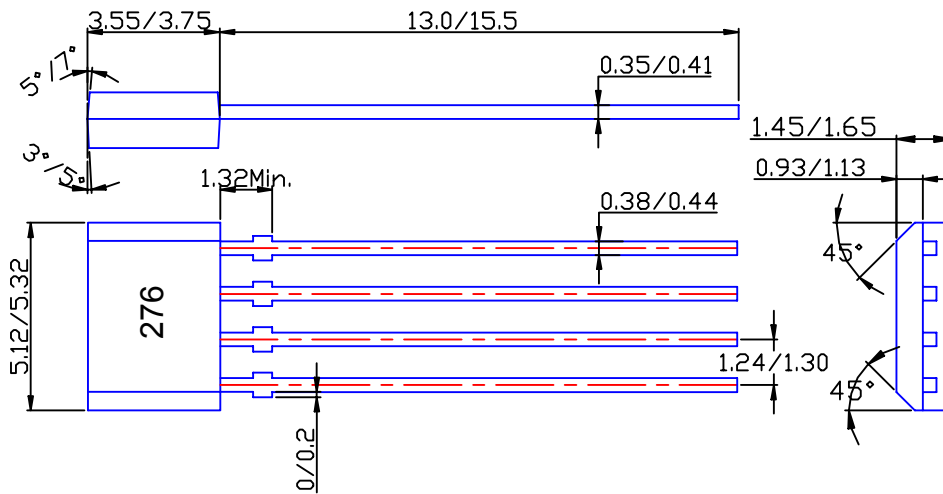
Active Area Depth



Package Sensor Location



**Package Information** ( unit: mm )



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