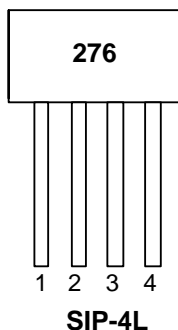


Pin Assignments

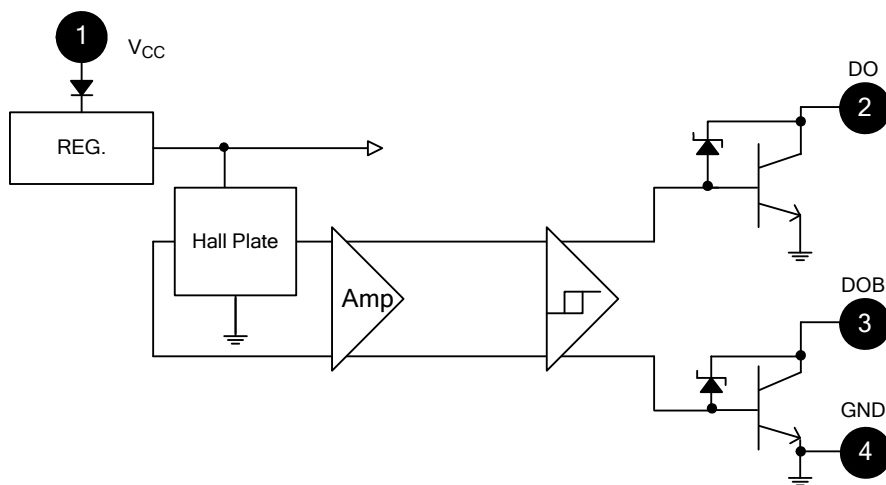
(Top View)



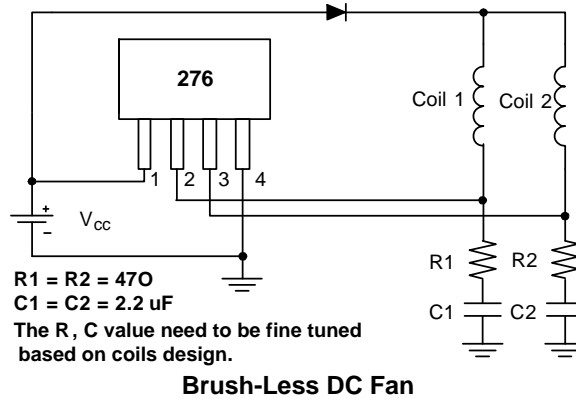
Pin Descriptions

Name	P/I/O	Pin #	Description
V _{CC}	P	1	Power Supply Input
DO	O	2	Output Pin
DOB	O	3	Output Pin
GND	P	4	Ground

Block Diagram



Typical Application Circuit



Absolute Maximum Ratings ($T_A = 25^\circ C$)

Symbol	Characteristics	Values	Unit
V_{CC}	Supply Voltage	20	V
V_{RCC}	Reverse V_{CC} Polarity Voltage	-20	V
B	Magnetic Flux Density	Unlimited	
I_c	Output "on" Current	Continuous	0.4
		Hold	0.5
		Peak (Start Up)	0.7
T_S	Storage Temperature Range	-65~+150	$^\circ C$
P_D	Package Power Dissipation	550	mW
T_J	Maximum Junction Temperature	150	$^\circ C$

Recommended Operating Conditions

Symbol	Characteristic	Conditions	Min	Max	Unit
V_{CC}	Supply Voltage (Note 4)	Operating	3.5	20	V
T_A	Operating Ambient Temperature (Note 5)	Operating	-20	85	$^\circ C$

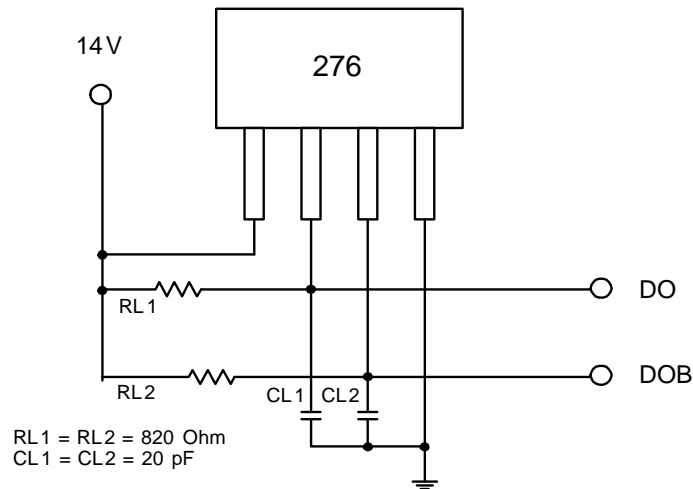
Notes: 4. The output DO/DOB is switching as magnetic field change (S>300G, N<-300G).
5. Shall not exceed P_D and Safety Operation Area.

Electrical Characteristics (T_A = +25°C, V_{CC} = 4.0V to 20V)

Symbol	Characteristic	Conditions	Min	Typ.	Max	Units
V _{ce}	Low Supply Voltage	V _{CC} = 3.5V, I _L = 100mA		0.4		V
V _Z	Output Zener Breakdown	(Note 6)		46		V
V _{ce(SAT)}	Output Saturation Voltage	V _{CC} = 14V, I _L = 300mA		0.3	0.6	V
I _{ceX}	Output Leakage Current	V _{ce} = 14V, V _{CC} = 14V		<0.1	10	μA
I _{CC}	Supply Current	V _{CC} = 20V, Output Open		16	25	mA
t _r	Output Rise Time	V _{CC} = 14V, R _L = 820Ω, C _L = 20pF		3.0	10	μs
t _f	Output Falling Time	V _{CC} = 14V, R _L = 820Ω, C _L = 20pF		0.3	1.5	μs
Δt	Switch Time Differential	V _{CC} = 14V, R _L = 820Ω, C _L = 20pF		3.0	10	μs

Notes: 6. The V_Z may vary with the inductance/resistance of DC Fan. In order to reduce the risk of dynamic operation, the capacitor/ resistor is recommended to add below the DO/DOB as Application Circuit (see General Description on page 1).

Test Circuit



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

(1mT = 10 Gauss)

A grade

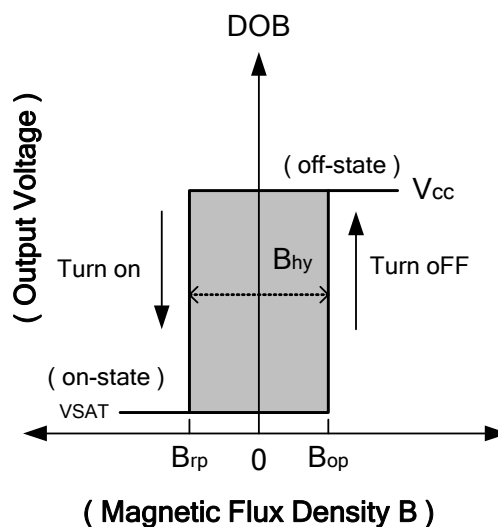
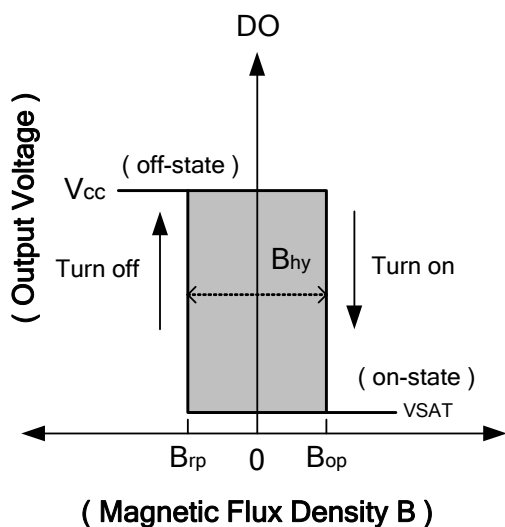
Symbol	Characteristic	Min	Typ.	Max	Unit
Bop	Operation Point	10	-	50	Gauss
Brp	Release Point	-50	-	-10	Gauss
Bhy	Hysteresis	-	75	-	Gauss

B grade

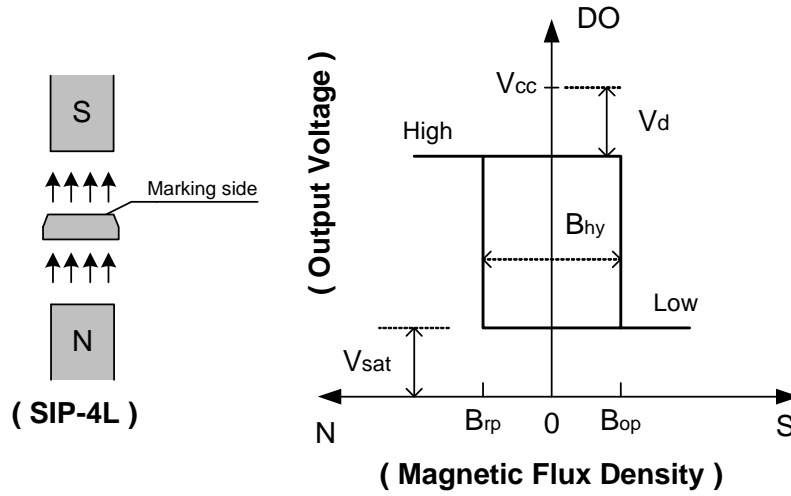
Symbol	Characteristic	Min	Typ.	Max	Unit
Bop	Operation Point	5	-	70	Gauss
Brp	Release Point	-70	-	-5	Gauss
Bhy	Hysteresis	-	75	-	Gauss

C grade

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

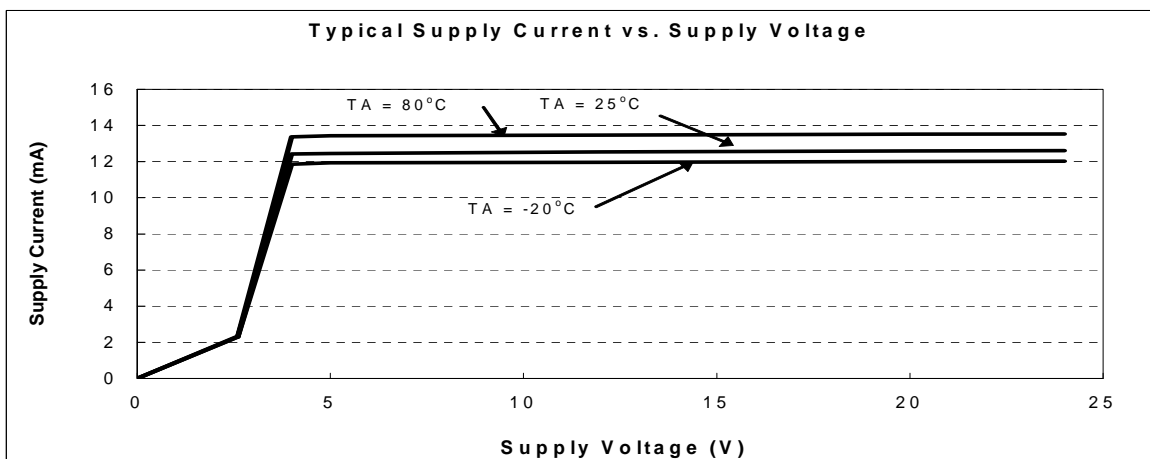
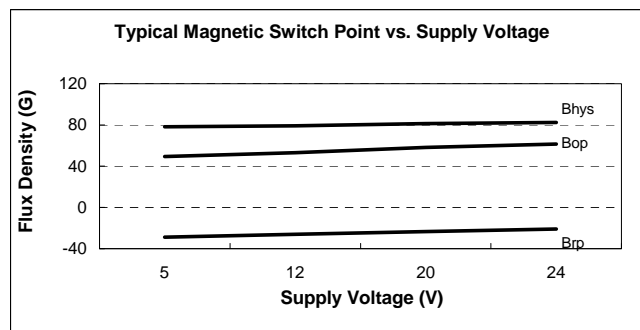
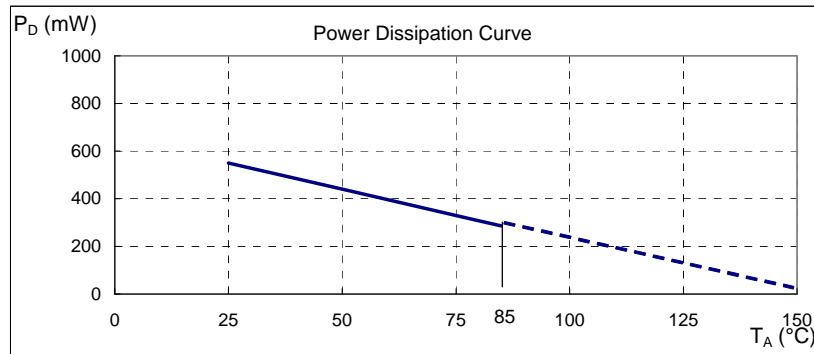


Operating Characteristics

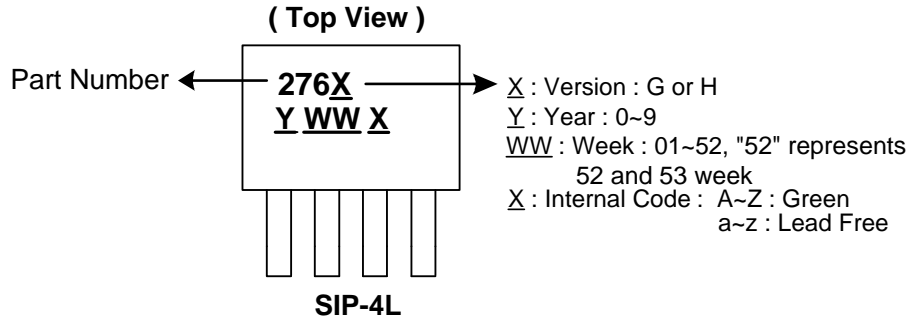


Performance Characteristics

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

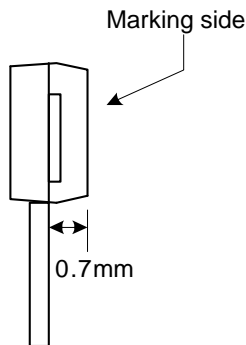


Marking Information

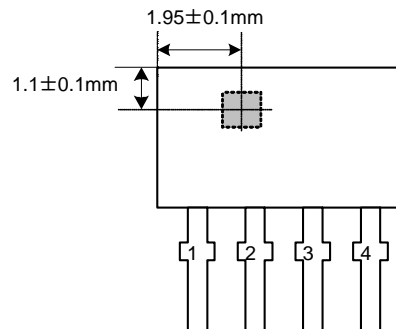


Package Information (All Dimensions in mm)

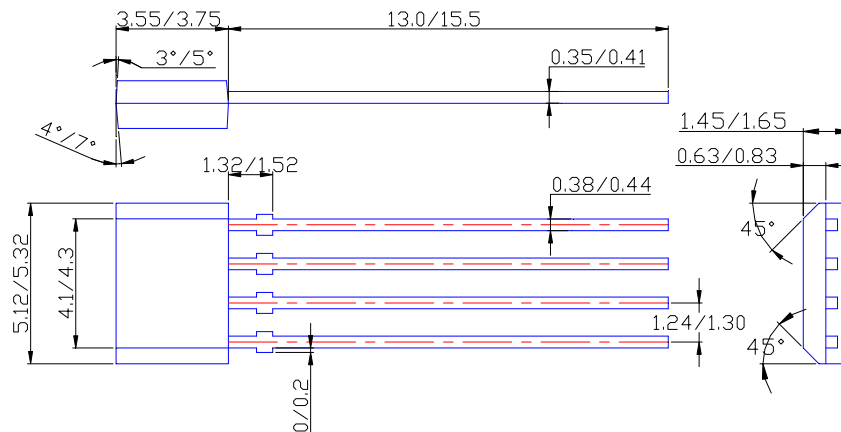
Active Area Depth



Package Sensor Location



Package Dimension



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