



UH266

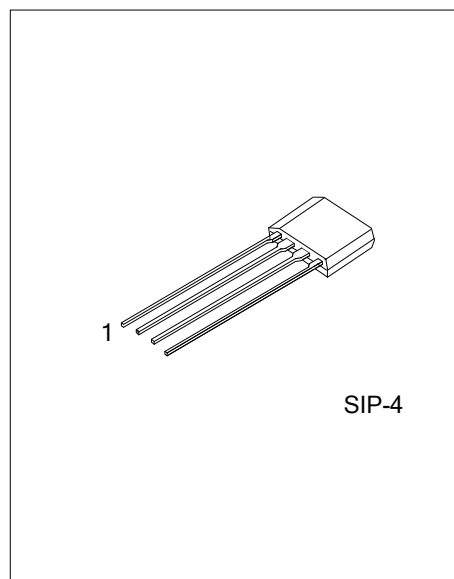
LINEAR INTEGRATED CIRCUIT

HIGH VOLTAGE HALL EFFECT LATCH

DESCRIPTION

The UTC **UH266** is a one-chip composed of Hall sensor and output coil drivers, applied to two-phase brush-less DC motor. The device includes an on-chip Hall plate for magnetic sensing, a amplifier for Hall voltage, and a Schmitt trigger to provide switching hysteresis, and complementary darlington open-collector drivers for sinking large current loads. An internal bandgap regulator is used to provide temperature compensated supply voltage and allows a wide operating range.

If $B > B_{op}$, DO turn on (low) and DOB turn off (high). The outputs state is latched prior to reach release point (B_{rp}). if $B < B_{rp}$, DO turn off and DOB turn on. UTC **UH266** is rated for operation over temperature range from -20°C to 85°C and voltage range from 4V to 28V.



FEATURES

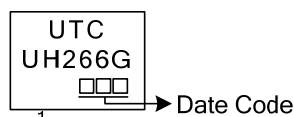
- * Operating voltage: 4V~28V
- * Output current: 400mA(Continuous, 25°C)
- * Output protection Zener breakdown $V_z=62\text{V(Typ)}$
- * Reverse power protection

ORDERING INFORMATION

Ordering Number	Package	Packing
UH266G-G04-K	SIP-4	Bulk

UH266G-G04-K	(1)Packing Type (2)Package Type (3)Green Package	(1) K: Bulk (2) G04: SIP-4 (3) G: Halogen Free and Lead Free
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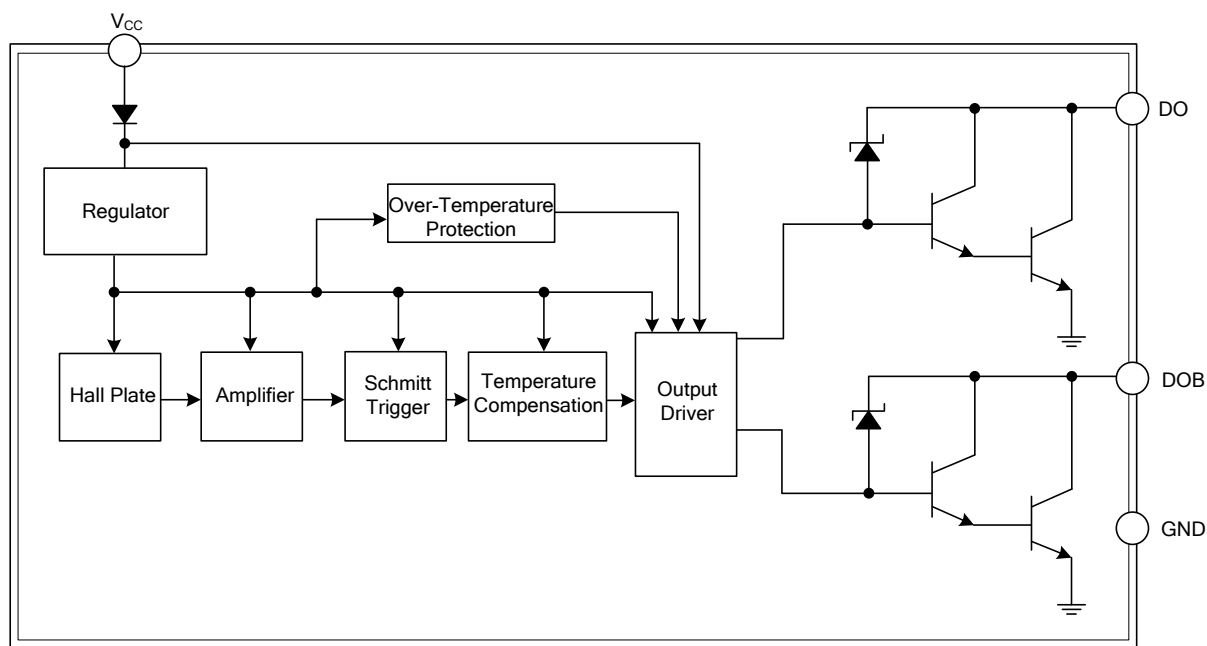
MARKING



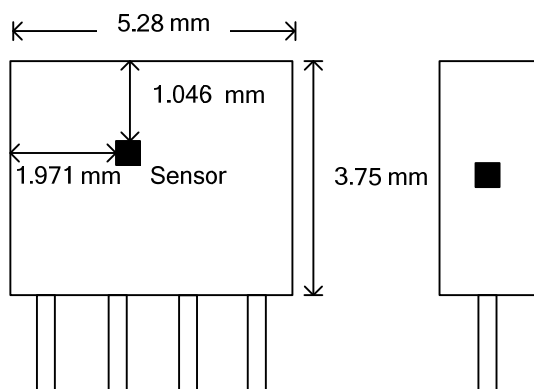
PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	V _{CC}	Positive Power Supply
2	DO	Output Pin
3	DOB	Output Pin
4	GND	Ground

BLOCK DIAGRAM



SENSOR LOCATIONS



■ ABSOLUTE MAXIMUM RATING (T_A=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V _{CC}	28	V
Output "OFF" Voltage	V _{OUT(OFF)}	28	V
Output "ON" Current	I _{O(con)}	400 (Note 2)	mA
	I _{O(hold)}	500	mA
	I _{O(peak)}	700	mA
Magnetic Flux Density	B	Unlimited	Gauss
Power Dissipation (Note 3)	P _D	550	mW
Operating Temperature Range	T _{OPR}	-20~+85	°C
Storage Temperature	T _{STG}	-65~+150	°C

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

2. I_{O(con)} is 150mA at 85°C

3. See Performance Characteristic for other conditions

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ _{JA}	227	°C/W

■ ELECTRICAL CHARACTERISTICS (T_A=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V _{CC}		4		28	V
Output Zener Breakdown	V _Z	Output Turn Off	50			V
Output Saturation Voltage	V _{CE(sat)}	V _{CC} =24V, I _C =400mA		1.1	1.5	V
Output Leakage Current	I _{CEX}	V _{CC} =24V, V _{CE} =24V		< 0.1	10	μA
Supply Current	I _{CC}	V _{CC} =24V, Output Open		5	10	mA
Output Rise Time	t _R	V _{CC} =24V, R _L =820Ω, C _L =20pF		1.0	5	μs
Output Falling Time	t _F			1.0	1.5	μs
Switch Time Differential	Δt			3.0	10	μs

■ MAGNETIC CHARACTERISTICS (T_A=25°C)

A grade

(1mT=10Gauss)

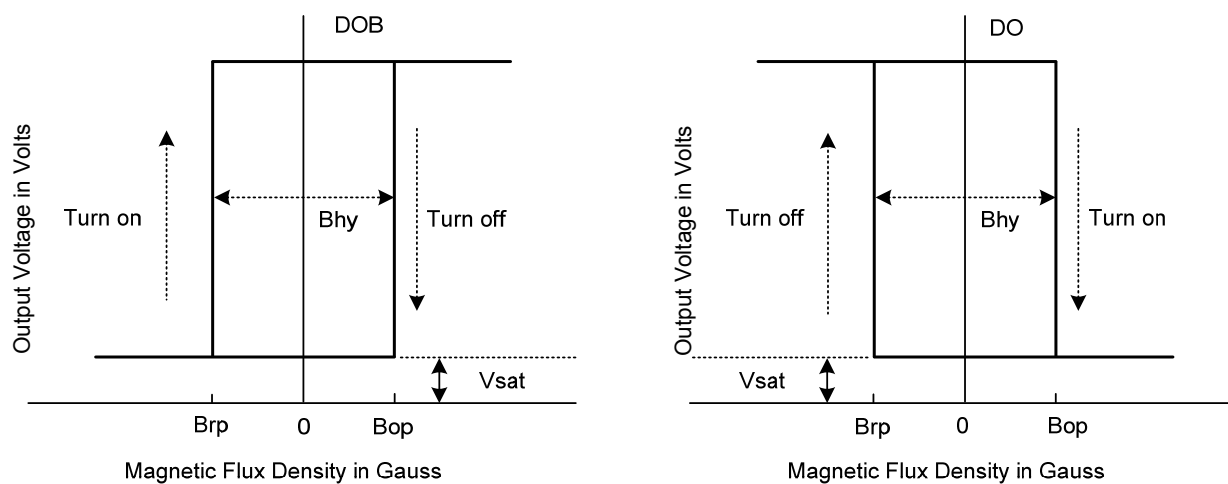
PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Operate Point	B _{op}	10		70	Gauss
Release Point	B _{rp}	-70		-10	Gauss
Hysteresis	B _{hy}		80		Gauss

B grade

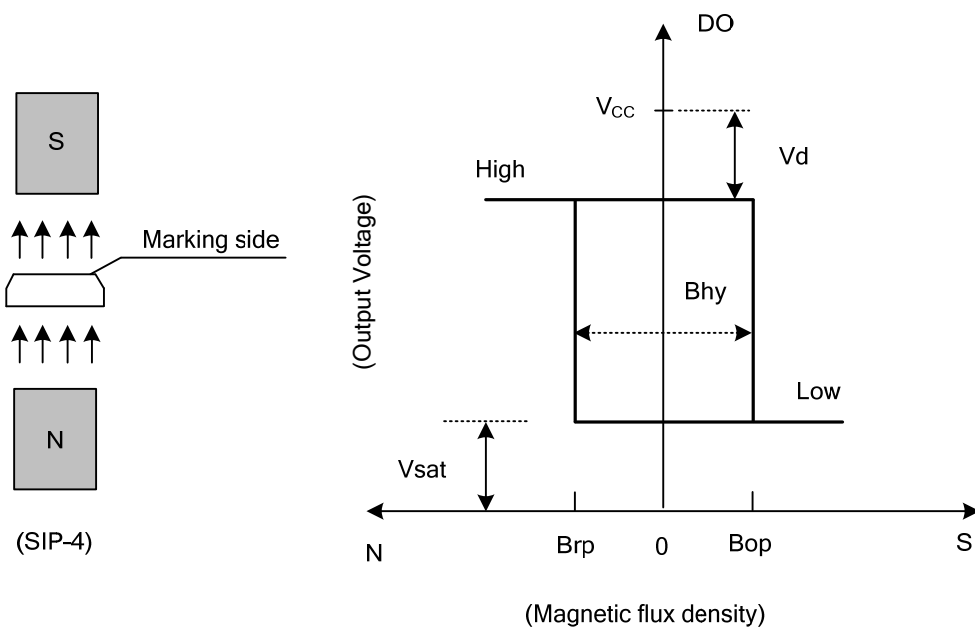
(1mT=10Gauss)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Operate Point	B _{op}			100	Gauss
Release Point	B _{rp}	-100			Gauss
Hysteresis	B _{hy}		80		Gauss

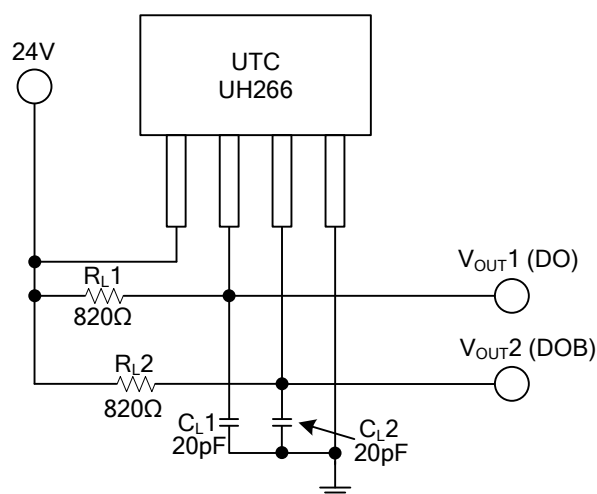
■ HYSTERESIS CHARACTERISTICS



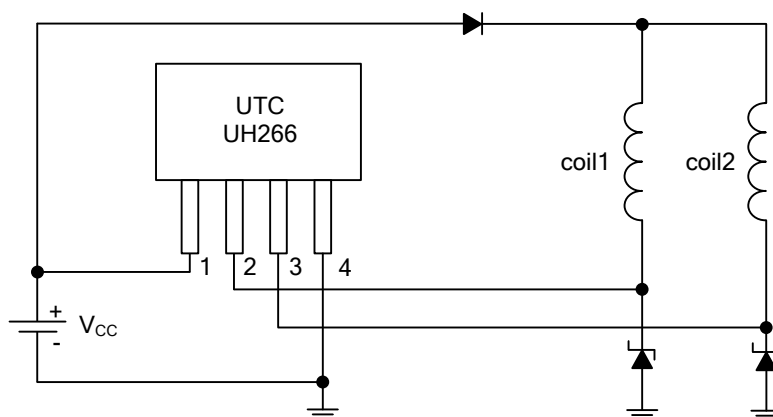
■ OPERATION CHARACTERISTICS



■ TEST CIRCUIT



■ TYPICAL APPLICATION CIRCUIT



Brush-less DC Fan

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