

UTC UNISONIC TECHNOLOGIES CO., LTD

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>Bop, DO turn on (low) and DOB turn off (high). The outputs state is latched prior to reach release point (Brp). if B<Brp, 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 Vz=62V(Typ)
- * Reverse power protection

ORDERING INFORMATION

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

UH266 <u>G</u> - <u>G04</u> -Ķ		
	(1)Packing Type	(1) K: Bulk
	(2)Package Type	(2) G04: SIP-4
	(3)Green Package	(3) G: Halogen Free and Lead Free

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





■ 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
	I _{O(con)}	400 (Note 2)	mA
Output "ON" Current	I _{O(hold)}	500	mA
	I _{O(peak)}	700	mA
Magnetic Flux Density	В	Unlimited	Gauss
Power Dissipation (Note 3)	PD	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. I₀(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		TYP	MAX	UNIT
Supply Voltage	V _{cc}		4		28	V
Output Zener Breakdown	Vz	Output Turn Off	54	62	70	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	Icc	V _{CC} =24V, Output Open		5	10	mA
Output Rise Time	t _R			1.0	5	μs
Output Falling Time	t _F	V _{CC} =24V, R _L =820Ω, C _L =20pF		1.0	1.5	μs
Switch Time Differential	Δt			3.0	10	μs

■ MAGNETIC CHARACTERISTICS (T_A=25°C)

A grade (1mT=10Gauss					
SYMBOL	MIN	TYP	MAX	UNIT	
Вор	10		70	Gauss	
Brp	-70		-10	Gauss	
Bhy		80		Gauss	
	SYMBOL Bop Brp Bhy	SYMBOLMINBop10Brp-70Bhy	SYMBOLMINTYPBop10Brp-70Bhy80	SYMBOLMINTYPMAXBop1070Brp-70-10Bhy80	

B grade (1mT=10Gaus					
PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Operate Point	Вор			100	Gauss
Release Point	Brp	-100			Gauss
Hysteresis	Bhy		80		Gauss



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CHYSTERESIS CHARACTERISTICS



OPERATION CHARACTERISTICS





TEST CIRCUIT



TYPICAL APPLICATION CIRCUIT



Brush-less DC Fan

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