

# TA8066AS

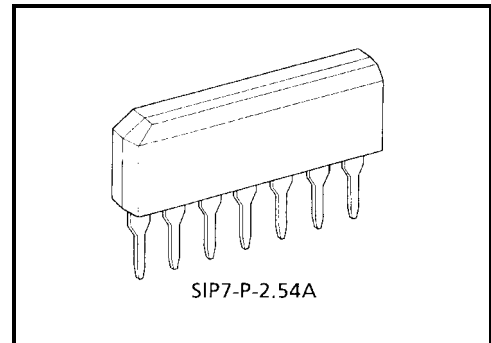
## DUAL LOWSIDE DRIVER

The TA8066AS is a 0.3A low side driver containing two circuits in one package.

The input level is TTL compatible so that the output can be controlled directly from CPU system and the like. Protective functions are built in to protect IC and load from destruction caused of over stress.

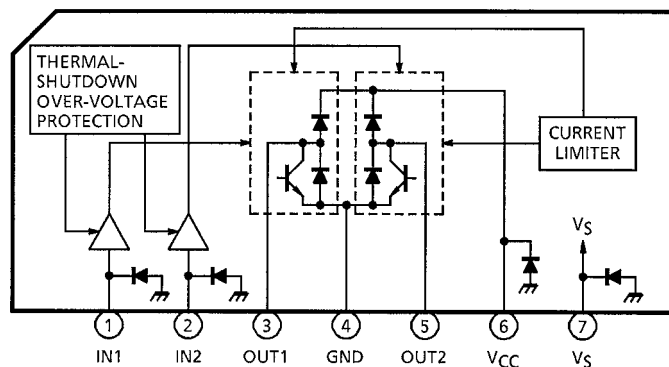
### FEATURES

- 2 circuit in one package.
- Output current capacity : 0.3A
- Low Standby Current : 100  $\mu$  A (Max.)
- Protective function : Over-voltage Protection  
Current Limiter  
Thermal-Shutdown
- Separated Power Supply of Power Portion and Logic portion.
- Built-in Counter Electromotive Force Absorption Diodes.
- SIP 7pin Plastic Package.



Weight: 0.7 g (typ.)

### BLOCK DIAGRAM AND PIN LAYOUT



## PIN DESCRIPTION

PIN No.	SYMBOL	DESCRIPTION
1	IN1	These terminals control output condition. The input level is TTL Compatible. (IN1, IN2) →(Low, Low) : Low Standby Current Mode 100μA (Max.)
2	IN2	
3	OUT1	PNP-NPN complementary output pin with a current capacity of 0.3A. When the output pin is supplied with a current exceeding the detection current (typically 0.55A) because of load short-circuit, the output is limited to protect the IC.
5	OUT2	
4	GND	Ground terminal.
6	V <sub>CC</sub>	Power supply terminal for the output part of IC. Built-in over-voltage function protects IC and load when the supplied voltage is higher than 30V.
7	V <sub>S</sub>	Power supply terminal for the control part of IC and this pin is separated from V <sub>CC</sub> .

## TRUTH TABLE

INPUT		OUTPUT	
DI1	DI2	OUT1	OUT2
H	H	L (ON)	L (ON)
H	L	L (ON)	H (OFF)
L	H	H (OFF)	L (ON)
L	L	H (OFF)	H (OFF)

\*: Standby Mode

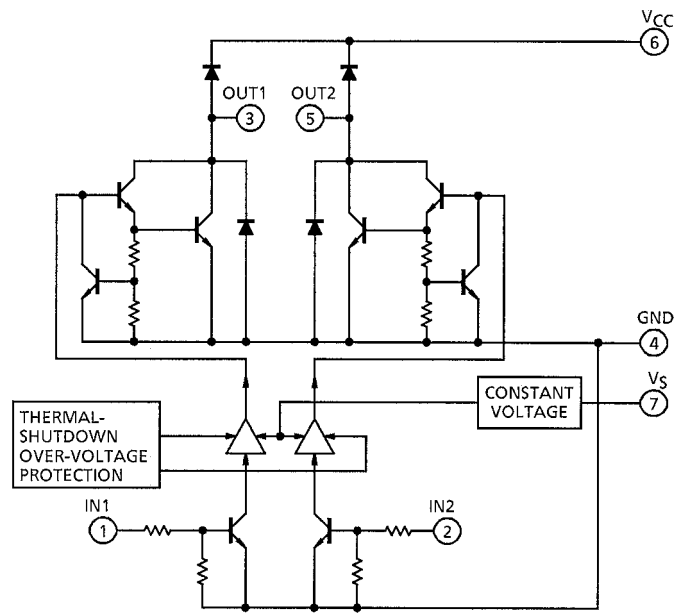
## MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V <sub>CC</sub>	50 (1s)	V
Input Voltage	V <sub>IN</sub>	-0.3~V <sub>CC</sub> +0.3	V
Output Current	I <sub>OUT</sub>	300	mA
Power Dissipation	P <sub>D</sub>	0.92	W
Operation Temperature	T <sub>opr</sub>	-40~85	°C
Storage Temperature	T <sub>stg</sub>	-55~150	°C
Lead Temperature-Time	T <sub>sol</sub>	260 (10s)	°C

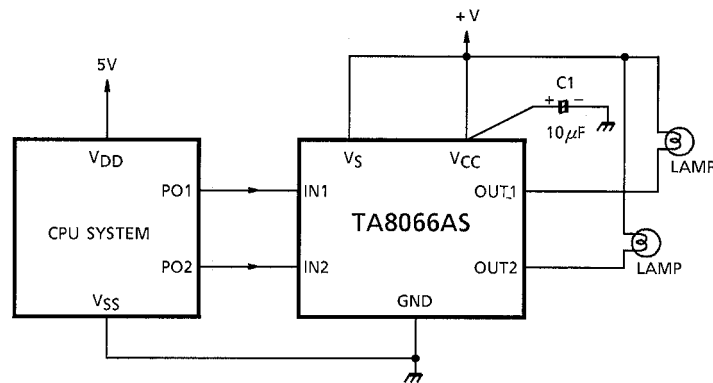
## ELECTRICAL CHARACTERISTICS ( $V_S, V_{CC} = 8\sim 16V, T_a = -40\sim 85^\circ C$ )

CHARACTERISTIC	SYMBOL	PIN	TEST CIR-CUIT	TEST CONDITION	MIN	TYP.	MAX	UNIT
Supply Current (I)	$I_{S1}$	$V_S$	—	(IN1, IN2) = (L, L)	—	—	0.05	mA
	$I_{S2}$		—	(IN1, IN2) = (L, H) or (H, L)	—	6	15	
	$I_{S3}$		—	(IN1, IN2) = (H, H)	—	9	20	
Supply Current (II)	$I_{CC1}$	$V_{CC}$	—	(IN1, IN2) = (L, L)	—	—	0.05	mA
	$I_{CC2}$		—	(IN1, IN2) = (L, H) or (H, L)	—	—	0.05	
	$I_{CC3}$		—	(IN1, IN2) = (H, H)	—	—	0.05	
Input Voltage	$V_{IL}$	IN1/ IN2	—		—	—	0.8	V
	$V_{IH}$				2.0	—	—	
Input Current	$I_{IL}$	IN1/ IN2	—	$V_{IN} = 0.4V$	—	10	20	$\mu A$
	$I_{IH}$			$V_{IN} = 5V$	—	170	350	
Output Saturation Voltage	$V_{sat}$	OUT1 / OUT2	—	$I_O = 300mA$	—	1.0	1.5	V
Output Leakage Current	$I_{LEAK}$	OUT1 / OUT2	—	$V_{OUT} = 0V$	-100	—	—	$\mu A$
Diode Forward Voltage	$V_F$	OUT1 / OUT2	—	$I_F = 200mA$	—	1.1	—	V
Output Limit Current	ISC	OUT1 / OUT2	—		0.3	0.55	—	A
Shutdown Temperature	TSD-H	OUT1 / OUT2	—	OUT = ON → OFF	—	150	—	$^\circ C$
	TSD-L			OUT = OFF → ON	—	130	—	
Over-voltage Detection	$V_{SD}$	$V_{CC}$	—		27	30	33	V
Transfer Delay Time	$t_{PLH}$		—		—	1	10	$\mu s$
	$t_{PHL}$				—	1	10	

## EQUIVALENT CIRCUIT



## APPLICATION CIRCUIT



Cautions for wirings

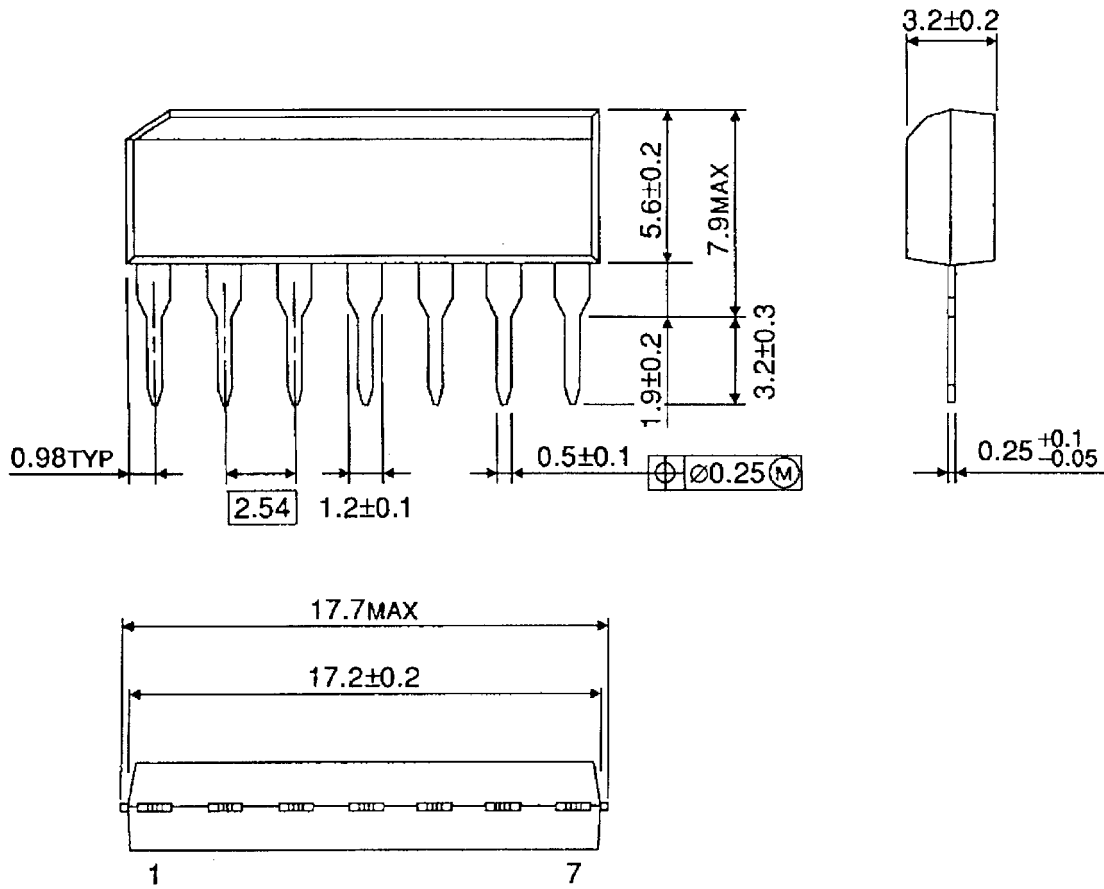
C<sub>1</sub> is for absorbing disturbance, noise, etc.

Connect it as close to the IC as possible.

## PACKAGE DIMENSIONS

SIP7-P-2.54A

Unit : mm



Weight: 0.7 g (Typ.)

**RESTRICTIONS ON PRODUCT USE**

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