

TOSHIBA

TA8062S

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

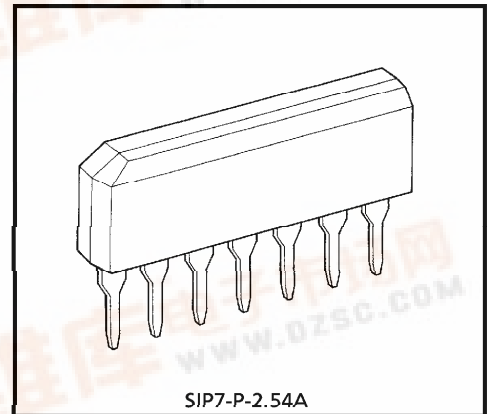
TA8062S

DUAL HIGHSIDE DRIVER

The TA8062S is a 0.3A highside 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.

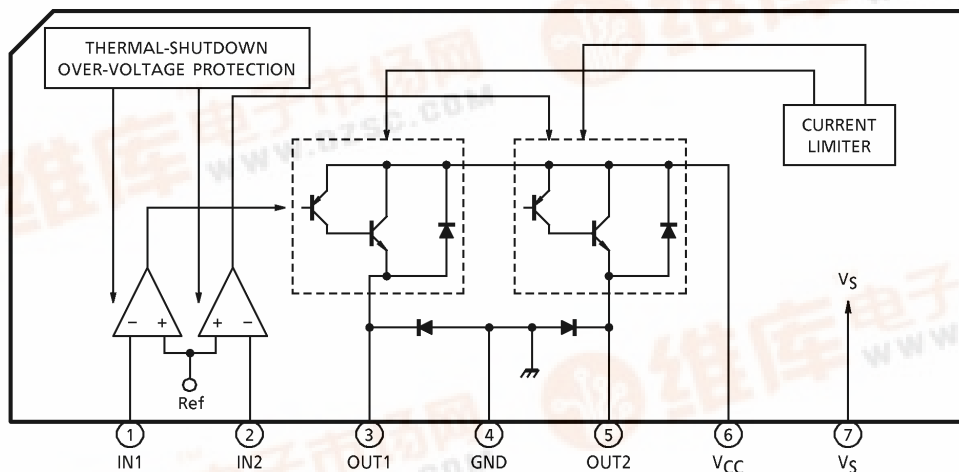


Weight : 0.7g (Typ.)

FEATURES

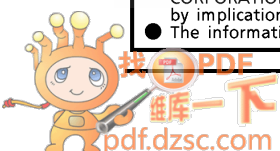
- 2 circuit in one package.
- Output current capacity : 0.3A
- Protective function : Over-voltage Protection
Current Limiter
Thermal-Shutdown
- Separated Power Supply of Power Portion and Logic portion.
- Built-in Counter Electromotive Force Absorption Diodes.
- SIP7pin Plastic Package.

BLOCK DIAGRAM AND PIN LAYOUT



961001EBA2

- TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.
- The products described in this document are subject to foreign exchange and foreign trade control laws.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
- The information contained herein is subject to change without notice.



PIN DESCRIPTION

PIN No.	SYMBOL	DESCRIPTION
1	IN1	These terminals control output condition. The input level is TTL Compatible.
2	IN2	
3	OUT1	PNP-type 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 _{CC}	Power supply terminal for the output part of IC. Built-in over-voltage function protects IC and load when the supplied voltages higher than 30V.
7	V _S	Power supply terminal for the control part of IC and this pin is separated from V _{CC} .

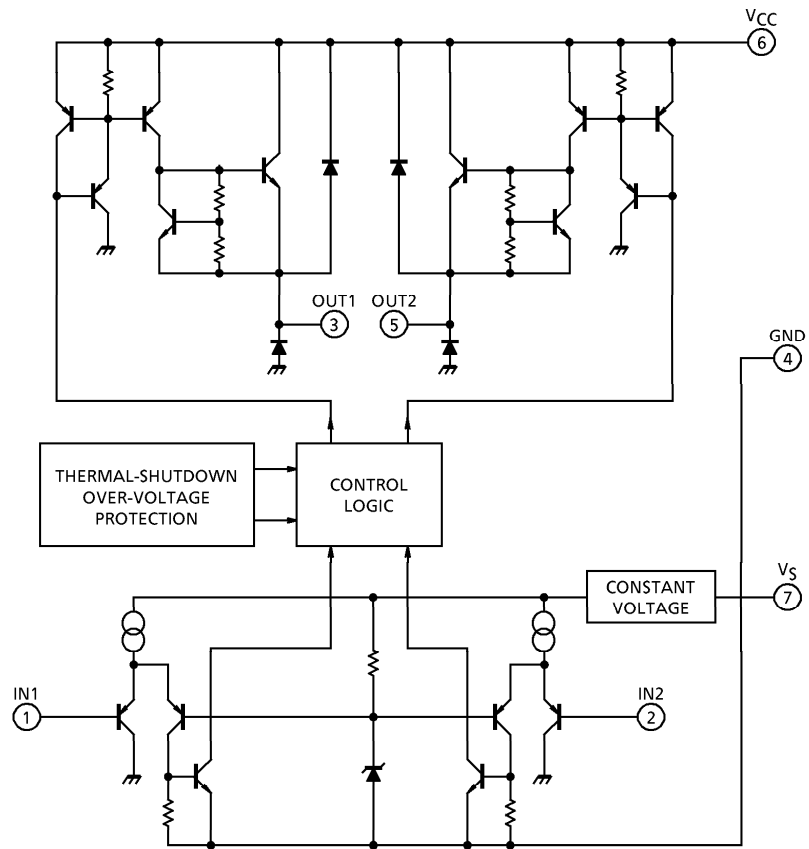
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V _{CC}	50 (1s)	V
Input Voltage	V _{IN}	-0.3~V _{CC} +0.3	V
Output Current	I _{out}	300	mA
Power Dissipation	P _D	0.92	W
Operating Temperature	T _{opr}	-40~110	°C
Storage Temperature	T _{stg}	-55~150	°C
Lead Temperature·Time	T _{sol}	260 (10s)	°C

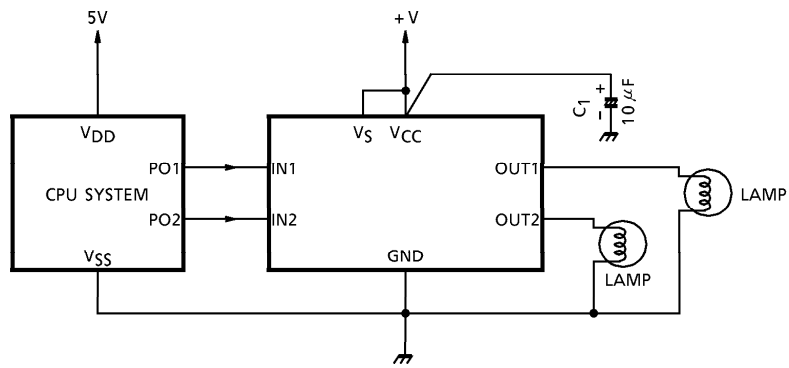
ELECTRICAL CHARACTERISTICS ($V_S, V_{CC} = 8 \sim 16V, T_a = -40 \sim 110^\circ C$)

CHARACTERISTIC	SYMBOL	PIN	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Power Supply Current (I)	I_{S1}	V_S	—	(IN1, IN2) = (L, L)	—	2.5	6	mA
	I_{S2}		—	(IN1, IN2) = (L, H) or (H, L)	—	4	9.5	
	I_{S3}		—	(IN1, IN2) = (H, H)	—	4	9.5	
Power Supply Current (II)	I_{CC1}	V_{CC}	—	(IN1, IN2) = (L, L)	—	—	1	mA
	I_{CC2}		—	(IN1, IN2) = (L, H) or (H, L)	—	7.5	15	
	I_{CC3}		—	(IN1, IN2) = (H, H)	—	14	30	
Input Voltage	V_{IL}	IN1 /	—	—	—	—	0.8	V
	V_{IH}	IN2	—	—	2.0	—	—	
Input Current	I_{IL}	IN1 /	—	$V_{IN} = 0.4V$	-20	—	—	μA
	I_{IH}	IN2	—	$V_{IN} = V_{CC}$	—	—	10	
Output Saturation Voltage	V_{sat}	OUT1 / OUT2	—	$I_{OUT} = 300mA$	—	1.0	1.5	V
Output Leakage Current	I_{LEAK}	OUT1 / OUT2	—	$V_{out} = 0V$	-100	—	—	μA
Diode Forward Voltage	V_F	OUT1 / OUT2	—	$I_F = 200mA$	—	1.1	—	V
Output Limit Current	I_{SC}	OUT1 / OUT2	—	$T_a = 25^\circ C$	0.3	0.55	—	A
Shutdown Temperature	T_{SD-H}	OUT1 / OUT2	—	OUT = ON \rightarrow OFF	—	-150	—	$^\circ C$
	T_{SD-L}	—	—	OUT = OFF \rightarrow ON	—	130	—	
Over-Voltage Detection	V_{SD}	V_{CC}	—	—	27	30	33	V
Transfer Delay Time	t_{pLH}	—	—	—	—	1	10	μs
	t_{pHL}	—	—	—	—	1	10	

EQUIVALENT CIRCUIT



APPLICATION CIRCUIT



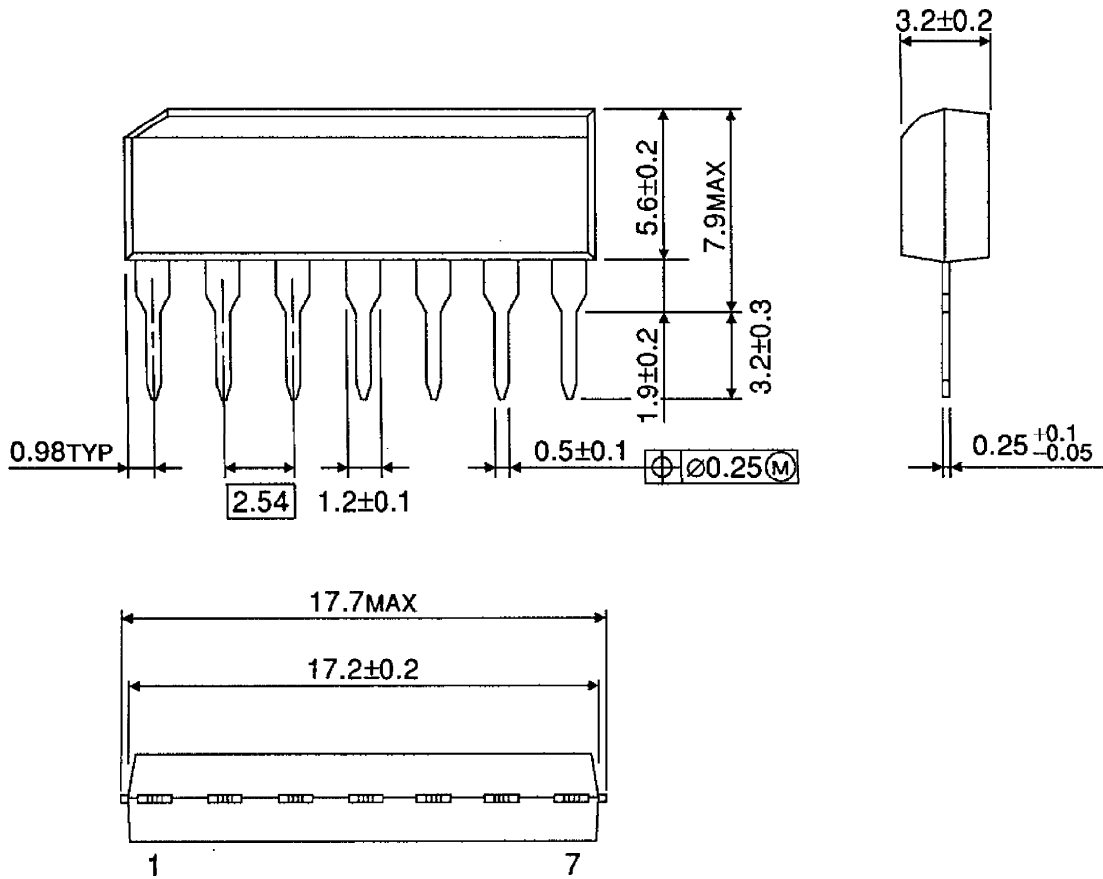
Cautions for wirings

C₁ is for absorbing disturbance, noise, etc.

Connect it as close to the IC as possible.

OUTLINE DRAWING
SIP7-P-2.54A

Unit : mm



Weight : 0.7g (Typ.)