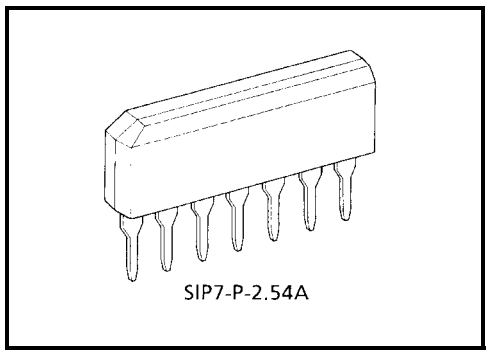
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

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.

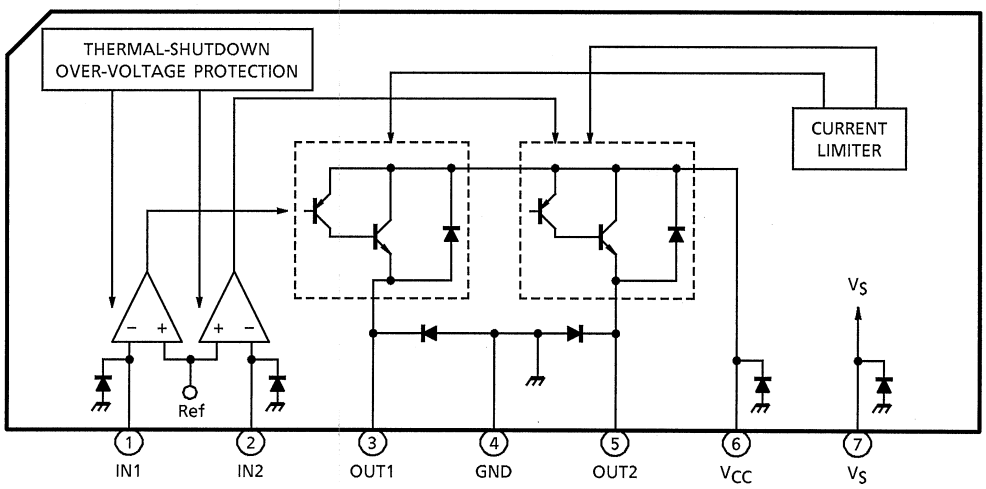


Weight: 0.7 g (typ.)

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



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}

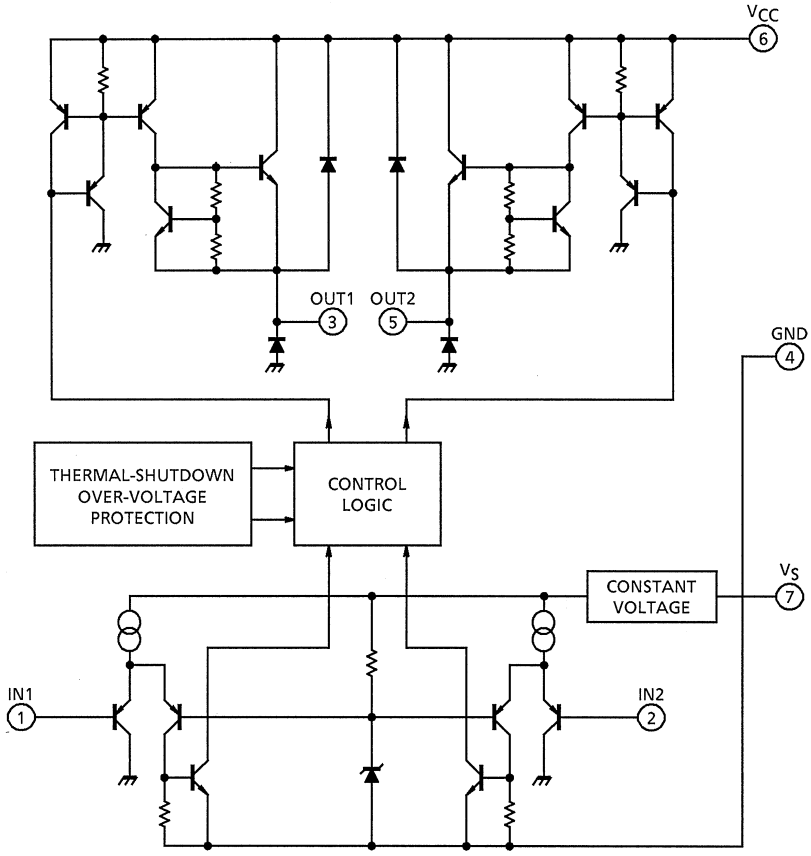
MAXIMUM RATINGS (Ta = 25°C)

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
Operation Temperature	T_{opr}	−40~85	°C
Storage Temperature	T_{stg}	−55~150	°C
Lead Temperature Time	T_{sol}	260 (10s)	°C

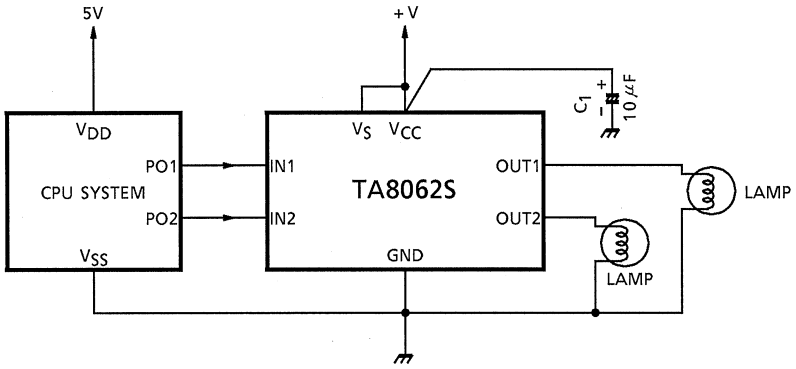
ELECTRICAL CHARACTERISTICS (V_S, V_{CC} = 8~16V, Ta = −40~85°C)

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/ IN2	—		—	—	0.8	V
	V_{IH}				2.0	—	—	
Input Current	I_{IL}	IN1/ IN2	—	V_{IN} = 0.4V	−20	—	—	μA
	I_{IH}		—	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	—		0.3	0.55	—	A
Shutdown Temperature	T_{SD-H}	OUT1 / OUT2	—	OUT = ON → OFF	—	150	—	°C
	T_{SD-L}		—	OUT = OFF → 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



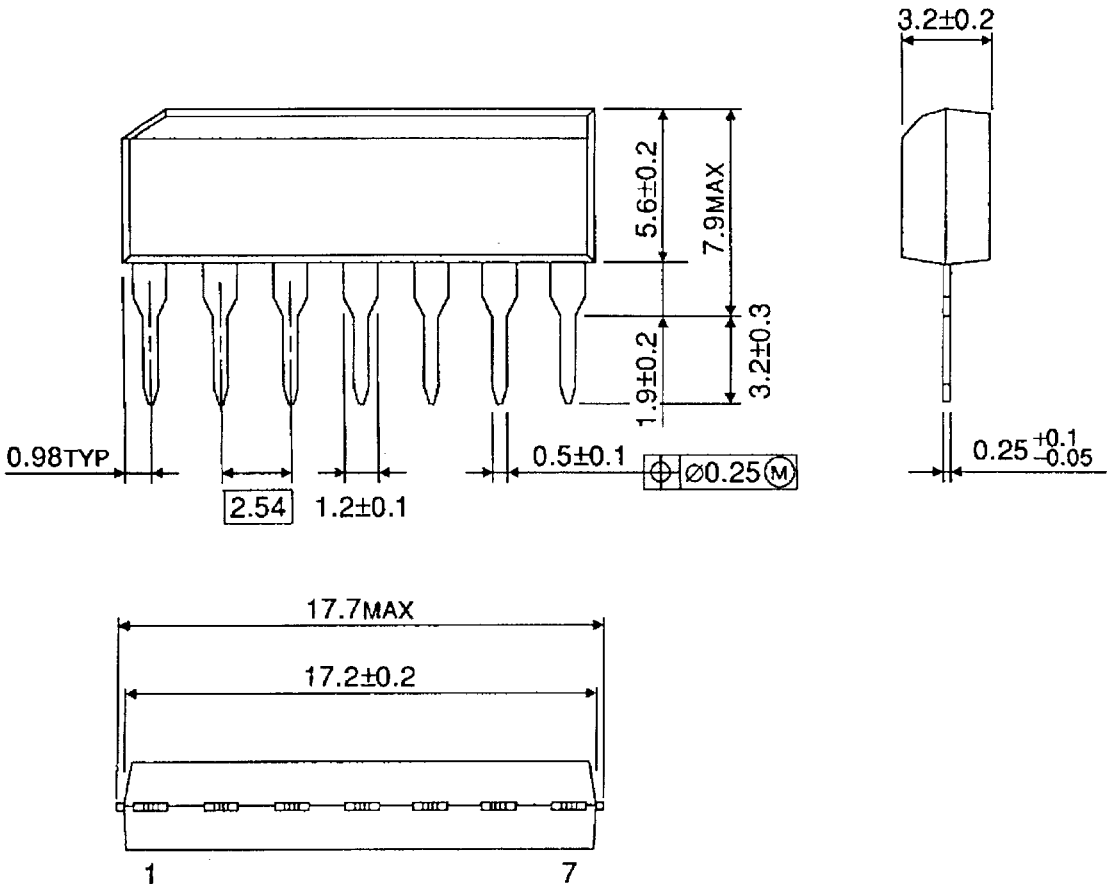
APPLICATION CIRCUIT



Cautions for wirings
C_1 is for absorbing disturbance, noise, etc.
Connect it as close to the IC as possible.

PACKAGE DIMENSIONS

SIP7-P-2.54A Unit : mm



Weight: 0.7g (Typ.)

RESTRICTIONS ON PRODUCT USE

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