

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

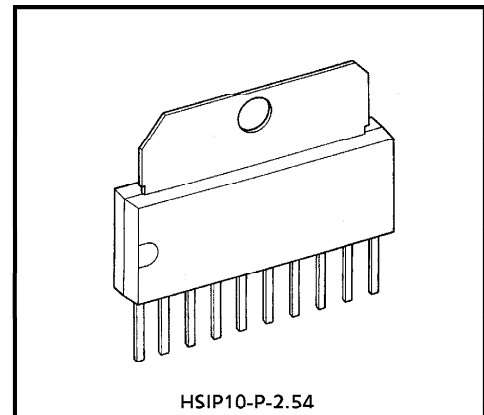
# TA8464K

## DUAL POWER OPERATIONAL AMPLIFIER

The TA8464K is a dual power operational amplifier with the output current 1.2A (PEAK).

This amplifier is usable for CD player arm driver, brushed motor forward/reverse rotation control driver, and FDD/HDD voice coil motor.

Furthermore, this amplifier is best suited for LDP focus tracking actuator driver because of its high through rate.

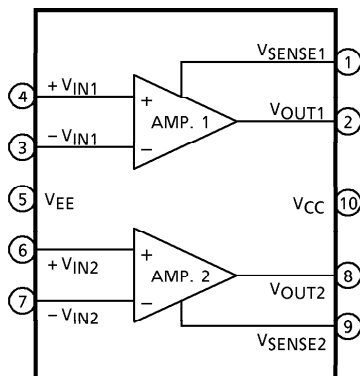


Weight : 2.47g (Typ.)

### FEATURES

- Provided with a Current Limiter.
- High Output Current :  $I_O$  (PEAK) = 1.2A
- Internal Phase Compensation Type.
- Less Crosstalk :  $C_T$  = 55dB (Typ.)
- High Slew Rate : SR = 1.0V /  $\mu$ s (Typ.)

### BLOCK DIAGRAM



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**PIN FUNCTION**

PIN No.	SYMBOL	FUNCTIONAL DESCRIPTION
1	V <sub>SENSE1</sub>	AMP. 1 output current detective terminal
2	V <sub>OUT1</sub>	AMP. 1 output terminal
3	-V <sub>IN1</sub>	AMP. 1 input terminal (-)
4	+V <sub>IN1</sub>	AMP. 1 input terminal (+)
5	V <sub>EE</sub>	Negative-side voltage supply terminal
6	+V <sub>IN2</sub>	AMP. 2 input terminal (+)
7	-V <sub>IN2</sub>	AMP. 2 input terminal (-)
8	V <sub>OUT2</sub>	AMP. 2 output terminal
9	V <sub>SENSE2</sub>	AMP. 2 output current detective terminal
10	V <sub>CC</sub>	Positive-side voltage supply terminal

**MAXIMUM RATINGS (Ta = 25°C)**

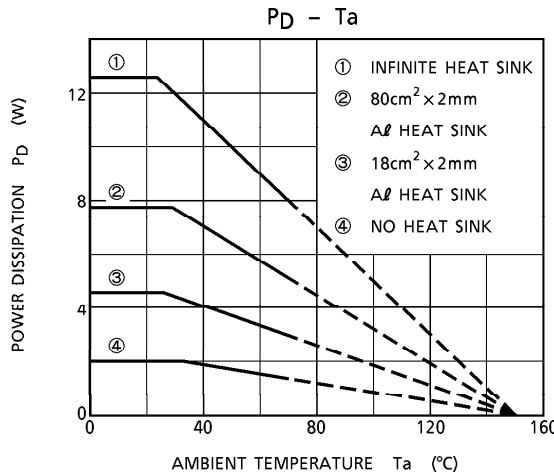
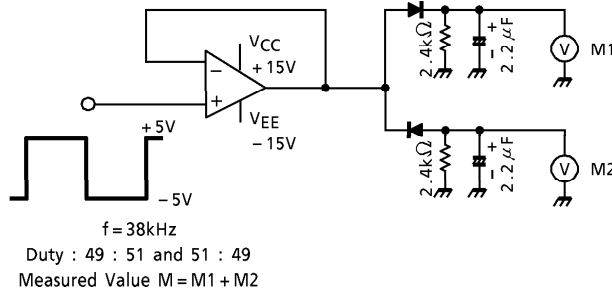
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub> , V <sub>EE</sub>	± 18	V
Output Current	I <sub>O</sub> (PEAK)	1.2	A
Power Dissipation	P <sub>D</sub>	12.5 (Note)	W
Operating Temperature	T <sub>opr</sub>	- 30~75	°C
Storage Temperature	T <sub>stg</sub>	- 55~150	°C

(Note) T<sub>c</sub> = 25°C

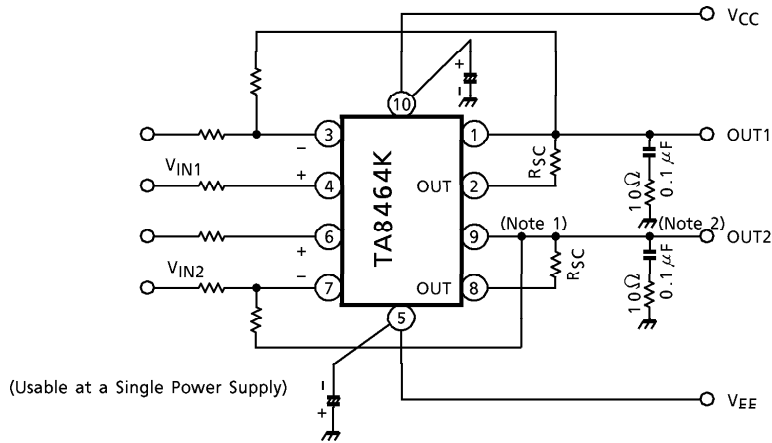
**ELECTRICAL CHARACTERISTICS (Unless otherwise specified, V<sub>CC</sub> = 15V, V<sub>EE</sub> = - 15V, Ta = 25°C)**

CHARACTERISTIC		SYM-BOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current		I <sub>CC</sub>	—	—	—	17	25	mA
Input Offset Current		I <sub>IO</sub>	—	—	—	3	100	nA
Input Bias Current		I <sub>I</sub>	—	—	—	98	300	nA
Input Offset Voltage		V <sub>IO</sub>	—	—	—	0	7	mV
Maximum Output Voltage	Upper	V <sub>OH</sub>	—	V <sub>CC</sub> = ± 15V, I <sub>O</sub> = 300mA	12.2	13.3	—	V
	Lower	V <sub>OL</sub>	—		- 12.2	- 13.3	—	
	Upper	V <sub>OH</sub>	—	V <sub>CC</sub> = ± 6V, I <sub>O</sub> = 1A	2.0	3.9	—	V
	Lower	V <sub>OL</sub>	—		- 2.0	- 4.0	—	
Open Loop Gain		G <sub>VO</sub>	—	—	—	80	—	dB
Input Common Mode Voltage Range		CMR	—	—	± 13	± 14	—	V
Common Mode Rejection Ratio		CMRR	—	V <sub>IN</sub> = - 10~10V	90	113	—	dB
Supply Voltage Rejection Ratio		SVRR	—	V <sub>CC</sub> = -V <sub>EE</sub> = 6~15V ± 1V	—	65	100	μV/V
Slew Rate		SR	—	—	—	1.0	—	V / μs
Output Limiting Current		I <sub>SC</sub>	—	R <sub>SC</sub> = 0.68Ω	0.8	1.0	—	A
Crosstalk		C <sub>T</sub>	—	V <sub>IN</sub> = - 14~14V	—	55	—	dB
Slew Rate Symmetry		SR'	1	INPUT : Duty (49 : 51 / 51 : 49) Square wave	—	0.02	1.0	V

TEST CIRCUIT 1 Slew rate, symmetry SR'



APPLICATION CIRCUIT 1

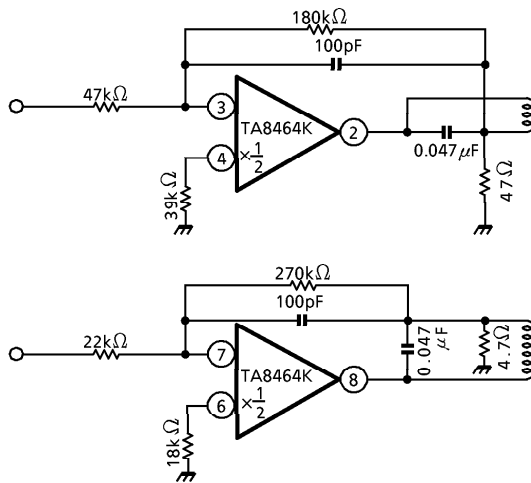


(Note 1)  $I_{SC} \doteq \frac{0.7 (V)}{R_{SC} (\Omega)} (A)$

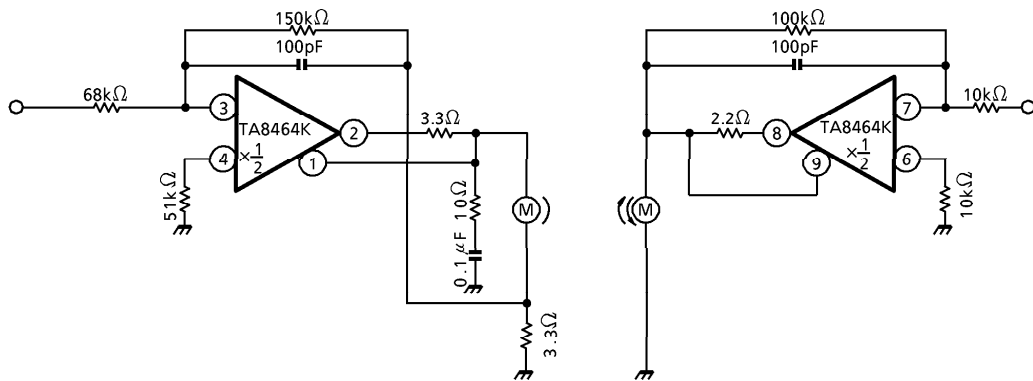
(Note 2) If crosstalk is recognizable remarkably in applications above 80kHz, change a capacitor to one having a value of about  $0.33\mu\text{F}$  as a compensating circuit. Further, no resistor is needed in this case.

(Note 3) Utmost care is necessary in the design of the output line,  $V_{CC}$  and GND line since IC may be destroyed due to short-circuit between outputs, air contamination fault, or fault by improper grounding.

APPLICATION CIRCUIT 2

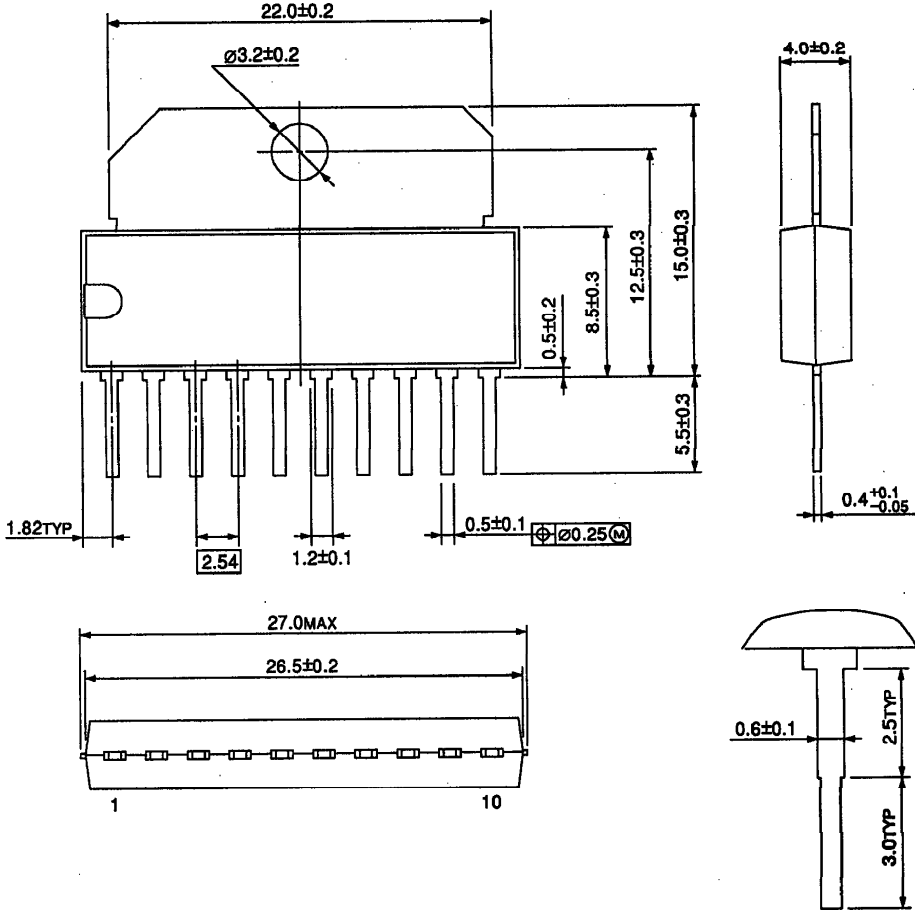


APPLICATION CIRCUIT 3



OUTLINE DRAWING  
HSIP10-P-2.54

Unit : mm



Weight : 2.47g (Typ.)