

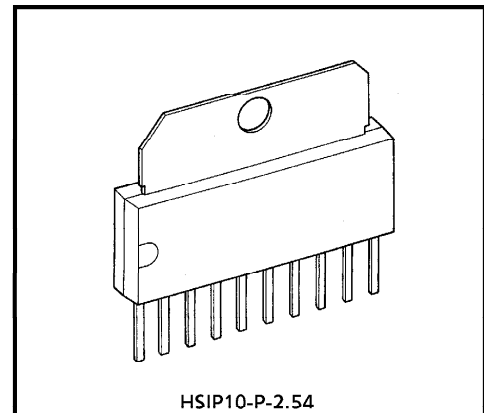
# TA8464K

## 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.



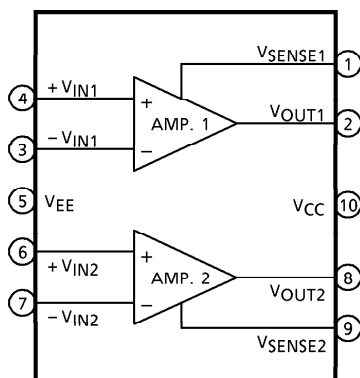
HSIP10-P-2.54

Weight : 2.47g (Typ.)

### FEATURES

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

### BLOCK DIAGRAM



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 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)**

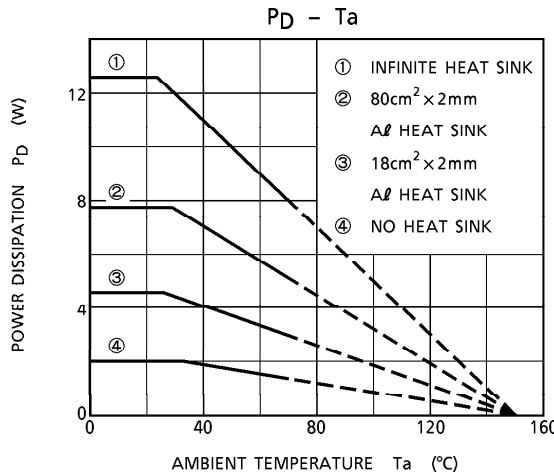
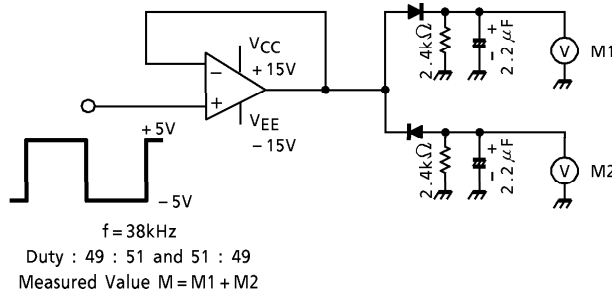
CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V <sub>CC</sub> , V <sub>EE</sub>	± 18	V
Output Current	I <sub>O</sub> (PEAK)	1.2	A
Power Dissipation	P <sub>D</sub>	12.5 (Note)	W
Operating Temperature	T <sub>opr</sub>	- 30~75	°C
Storage Temperature	T <sub>stg</sub>	- 55~150	°C

(Note) T<sub>c</sub> = 25°C

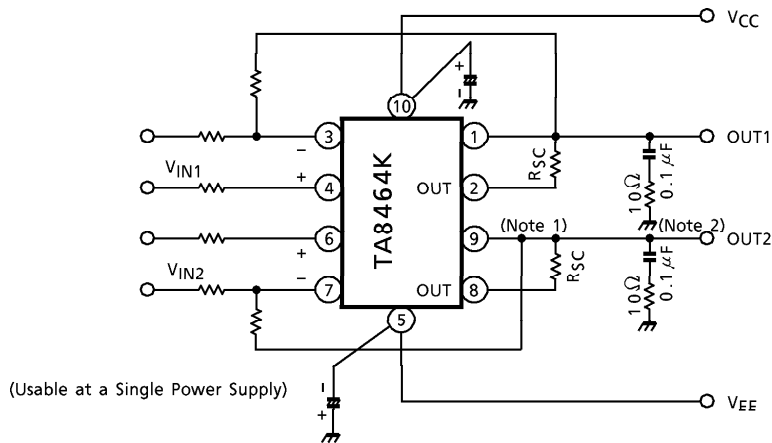
**ELECTRICAL CHARACTERISTICS (Unless otherwise specified, V<sub>CC</sub> = 15V, V<sub>EE</sub> = - 15V, Ta = 25°C)**

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

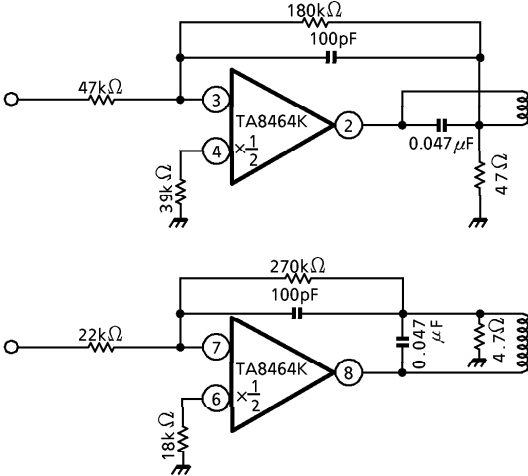


(Note 1)  $I_{SC} \doteq \frac{0.7 (V)}{R_{SC} (\Omega)} (A)$

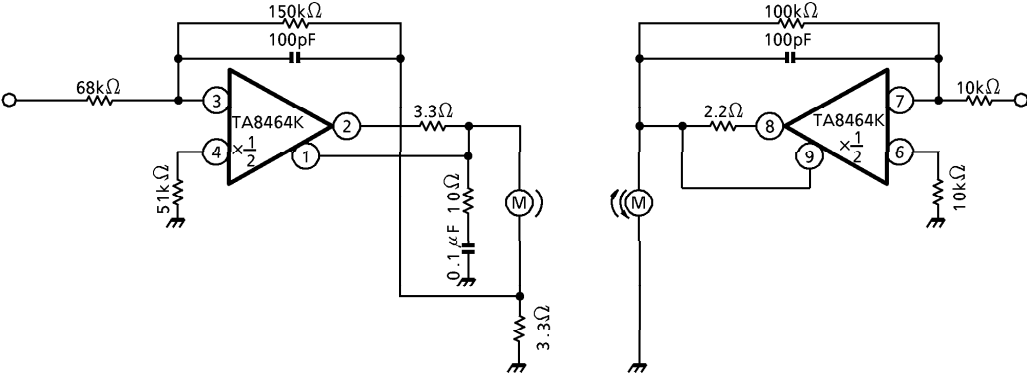
(Note 2) If crosstalk is recognizable remarkably in applications above 80kHz, change a capacitor to one having a value of about 0.33μF as a compensating circuit. Further, no resistor is needed in this case.

(Note 3) Utmost care is necessary in the design of the output line, VCC 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

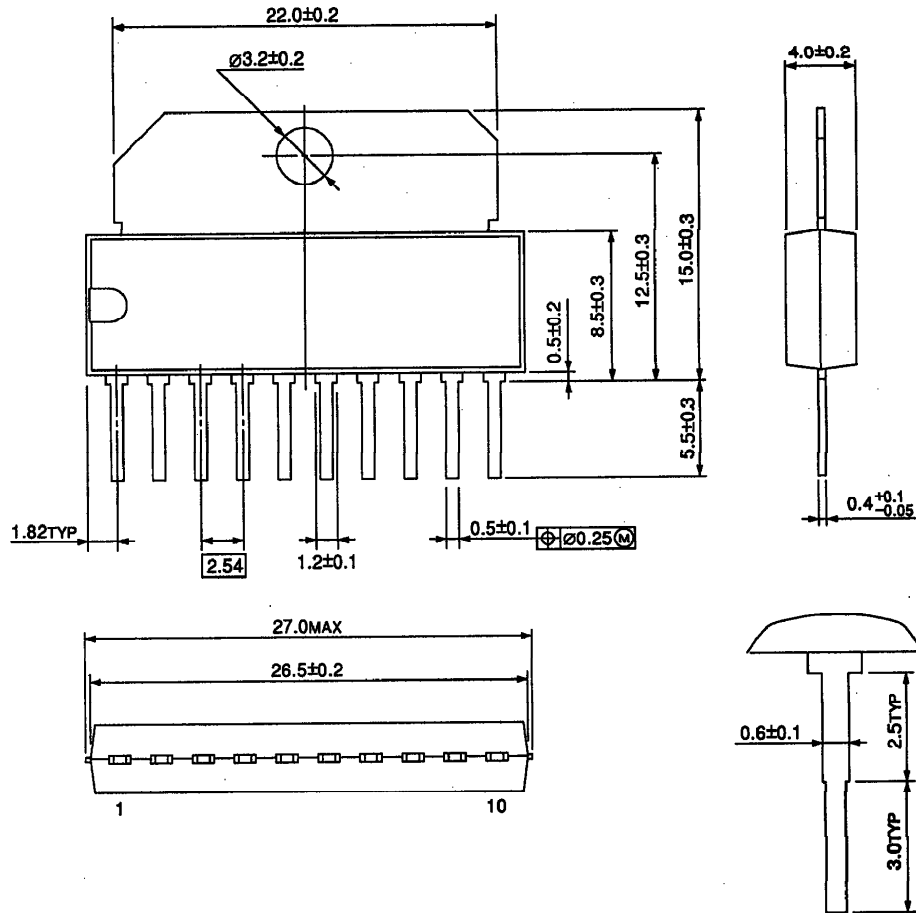


APPLICATION CIRCUIT 3



OUTLINE DRAWING  
HSIP10-P-2.54

Unit : mm



Weight : 2.47g (Typ.)