

TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

TA8464K

DUAL POWER OPERATIONAL AMPLIFIER

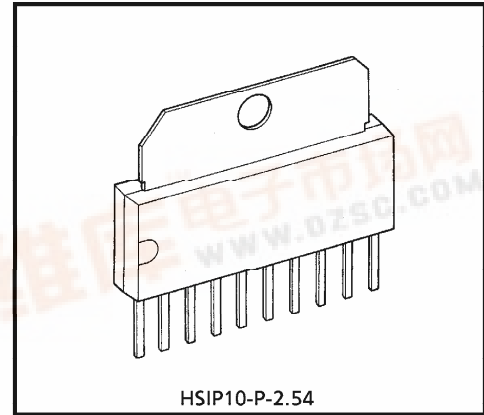
The TA8464K is a dual power operational amplifier with the output current 1.2A (PEAK).

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.

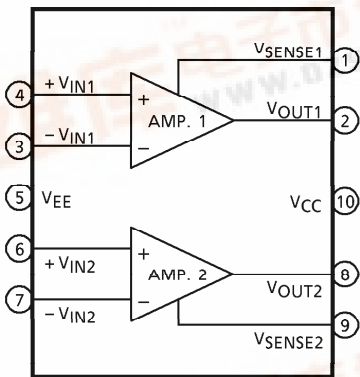
FEATURES

- 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 / μ s (Typ.)



Weight : 2.47g (Typ.)

BLOCK DIAGRAM



961001EBA2

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PIN FUNCTION

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

MAXIMUM RATINGS (Ta = 25°C)

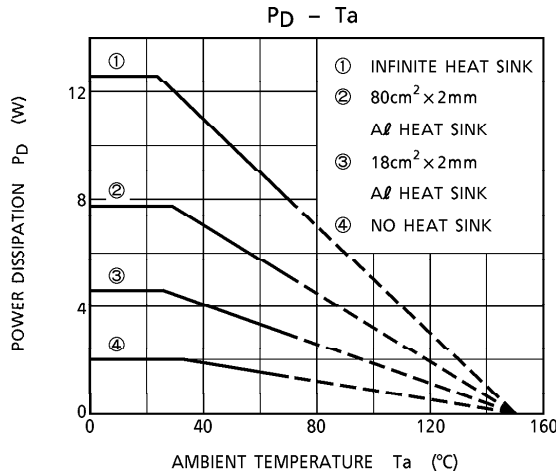
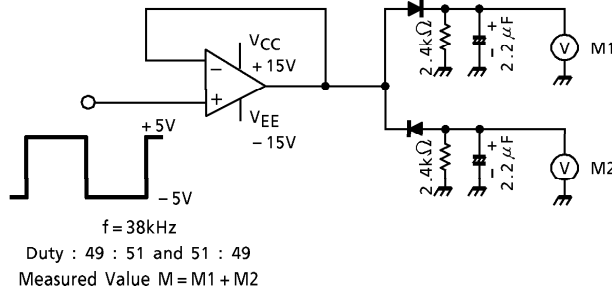
| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------|-----------------------------------|-------------|------|
| Supply Voltage | V _{CC} , V _{EE} | ± 18 | V |
| Output Current | I _O (PEAK) | 1.2 | A |
| Power Dissipation | P _D | 12.5 (Note) | W |
| Operating Temperature | T _{opr} | - 30~75 | °C |
| Storage Temperature | T _{stg} | - 55~150 | °C |

(Note) T_c = 25°C

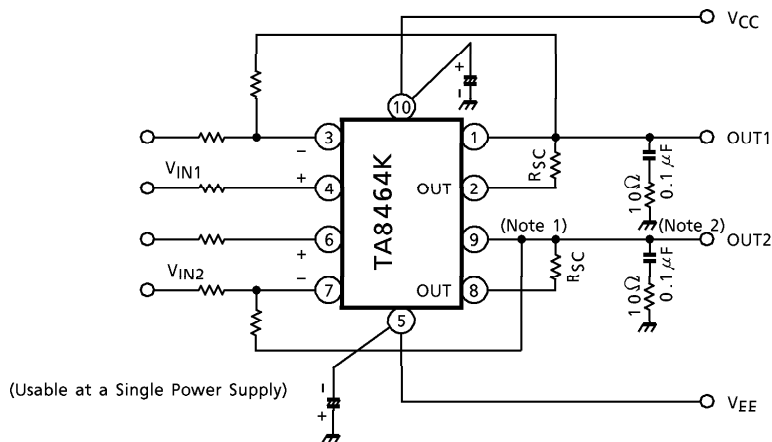
ELECTRICAL CHARACTERISTICS (Unless otherwise specified, V_{CC} = 15V, V_{EE} = - 15V, Ta = 25°C)

| CHARACTERISTIC | | SYM-BOL | TEST CIR-CUIT | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---------------------------------|-------|-----------------|---------------|--|--------|--------|------|--------|
| Supply Current | | I _{CC} | — | — | — | 17 | 25 | mA |
| Input Offset Current | | I _{IO} | — | — | — | 3 | 100 | nA |
| Input Bias Current | | I _I | — | — | — | 98 | 300 | nA |
| Input Offset Voltage | | V _{IO} | — | — | — | 0 | 7 | mV |
| Maximum Output Voltage | Upper | V _{OH} | — | V _{CC} = ± 15V, I _O = 300mA | 12.2 | 13.3 | — | V |
| | Lower | V _{OL} | | | - 12.2 | - 13.3 | — | |
| | Upper | V _{OH} | — | V _{CC} = ± 6V, I _O = 1A | 2.0 | 3.9 | — | V |
| | Lower | V _{OL} | | | - 2.0 | - 4.0 | — | |
| Open Loop Gain | | G _{VO} | — | — | — | 80 | — | dB |
| Input Common Mode Voltage Range | | CMR | — | — | ± 13 | ± 14 | — | V |
| Common Mode Rejection Ratio | | CMRR | — | V _{IN} = - 10~10V | 90 | 113 | — | dB |
| Supply Voltage Rejection Ratio | | SVRR | — | V _{CC} = -V _{EE} = 6~15V ± 1V | — | 65 | 100 | μV/V |
| Slew Rate | | SR | — | — | — | 1.0 | — | V / μs |
| Output Limiting Current | | I _{SC} | — | R _{SC} = 0.68Ω | 0.8 | 1.0 | — | A |
| Crosstalk | | C _T | — | V _{IN} = - 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

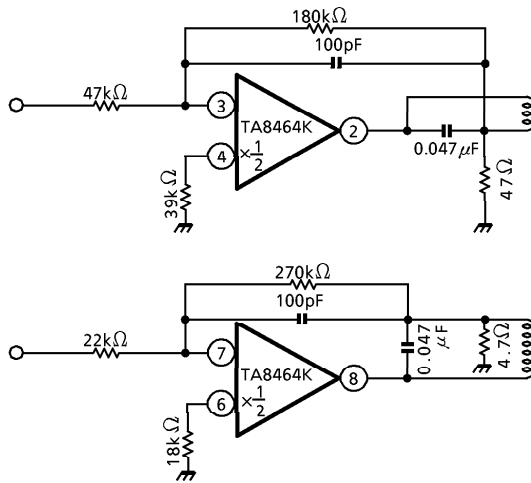


(Note 1) $I_{SC} \doteq \frac{0.7 (V)}{R_{SC} (\Omega)} (A)$

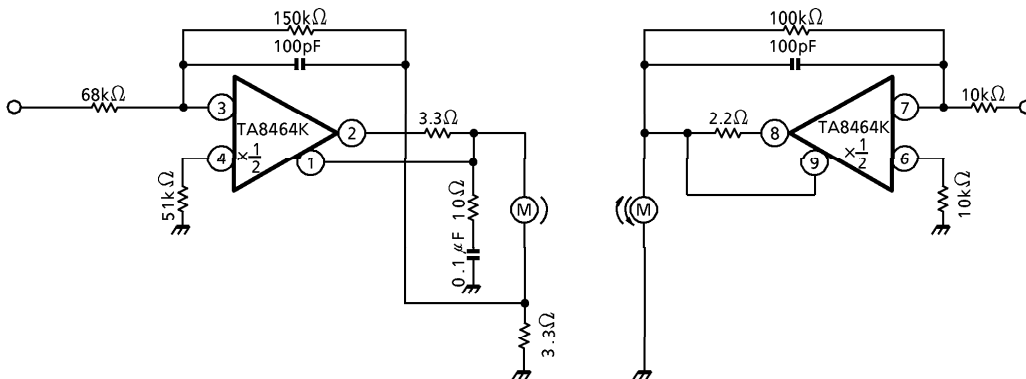
(Note 2) If crosstalk is recognizable remarkably in applications above 80kHz, change a capacitor to one having a value of about 0.33μF as a compensating circuit. Further, no resistor is needed in this case.

(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

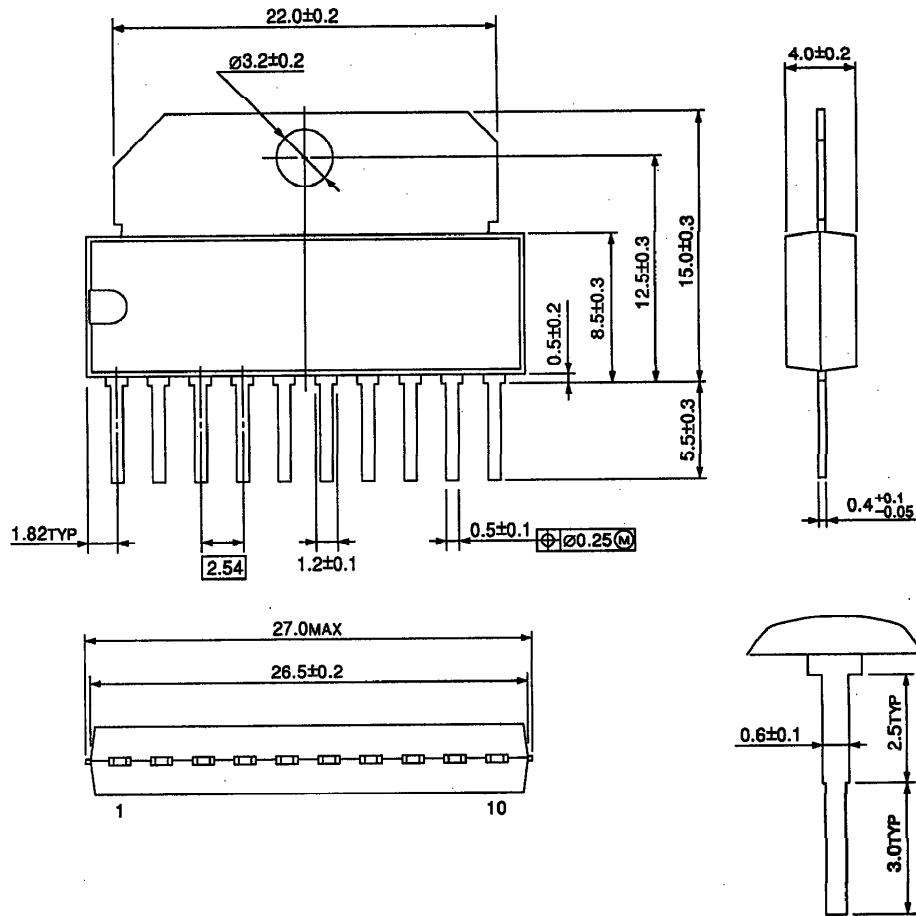


APPLICATION CIRCUIT 3



OUTLINE DRAWING
HSIP10-P-2.54

Unit : mm



Weight : 2.47g (Typ.)