

TA8464K

DUAL POWER OPERATIONAL AMPLIFIER

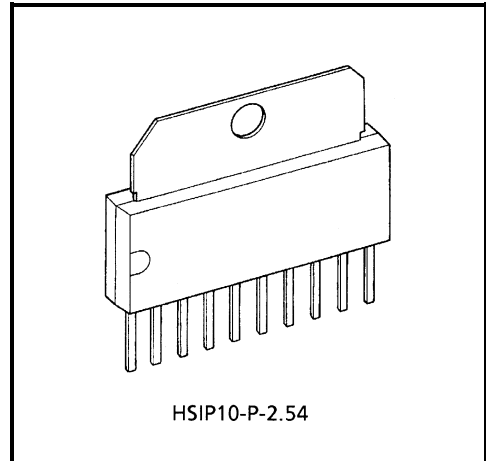
The TA8464K is a dual power operational amplifier with the output current 1.2 A (PEAK).

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.

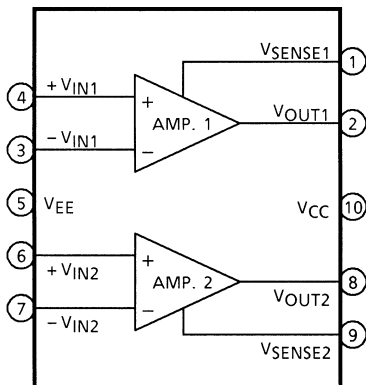
FEATURES

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



Weight: 2.47 g (Typ.)

BLOCK DIAGRAM



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

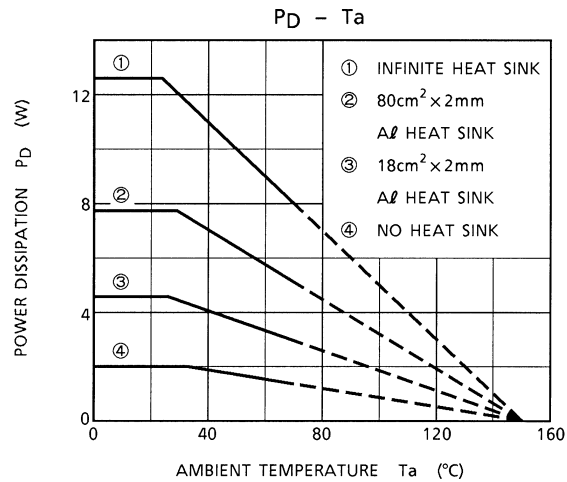
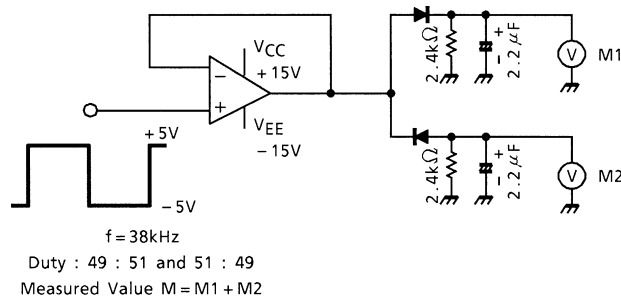
ELECTRICAL CHARACTERISTICS

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

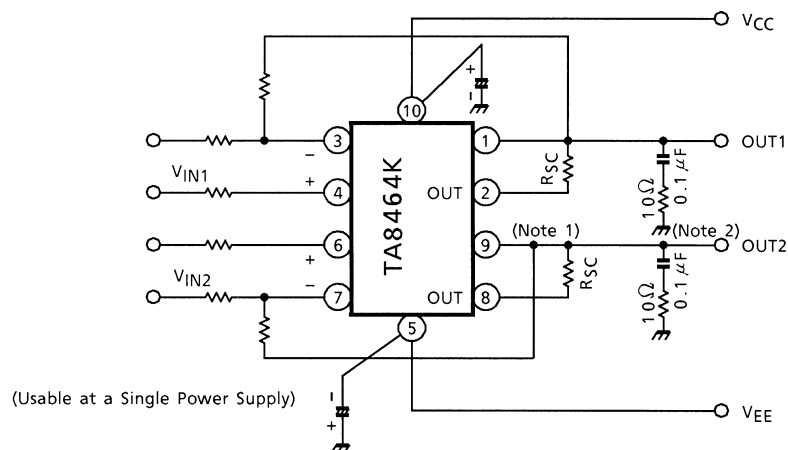
| CHARACTERISTIC | SYMBOL | TEST CIRCUIT | TEST CONDITION | MIN | TYP. | MAX | UNIT |
|---------------------------------|-----------------|-----------------|----------------------------------------------------|-------|-------|-----|--------|
| Supply Current | I _{CC} | — | — | — | 17 | 25 | mA |
| Input 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} = ±15 V, I _O = 300 mA | 12.2 | 13.3 | — | V |
| | Lower | V _{OL} | | -12.2 | -13.3 | — | |
| | Upper | V _{OH} | V _{CC} = ±6 V, I _O = 1 A | 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} = -10~10 V | 90 | 113 | — | dB |
| Supply Voltage Rejection Ratio | SVRR | — | V _{CC} = -V _{EE} = 6~15 V±1 V | — | 65 | 100 | μV / V |
| Slew Rate | SR | — | — | — | 1.0 | — | V / μs |
| Output Limiting Current | I _{SC} | — | R _{SC} = 0.68 Ω | 0.8 | 1.0 | — | A |
| Crosstalk | C _T | — | V _{IN} = -14~14 V | — | 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

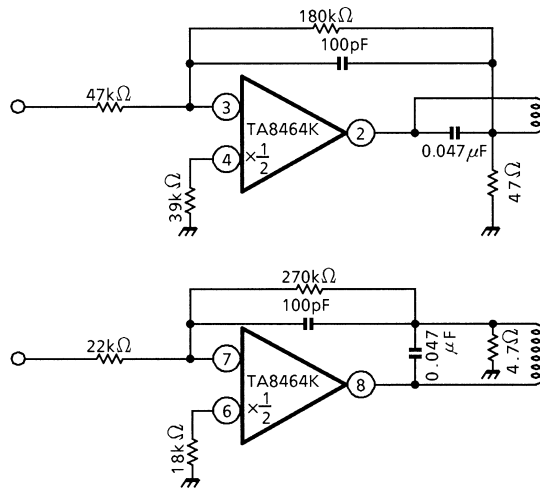


Note 1: $I_{SC} \approx \frac{0.7(V)}{R_{SC}(\Omega)} (A)$

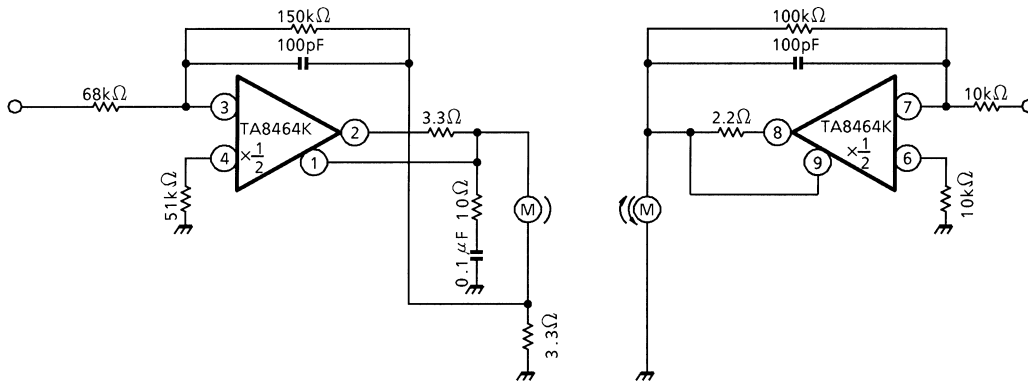
Note 2: If crosstalk is recognizable remarkably in applications above 80 kHz, change a capacitor to one having a value of about $0.33 \mu\text{F}$ as a compensating circuit. Further, no resistor is needed in this case.

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



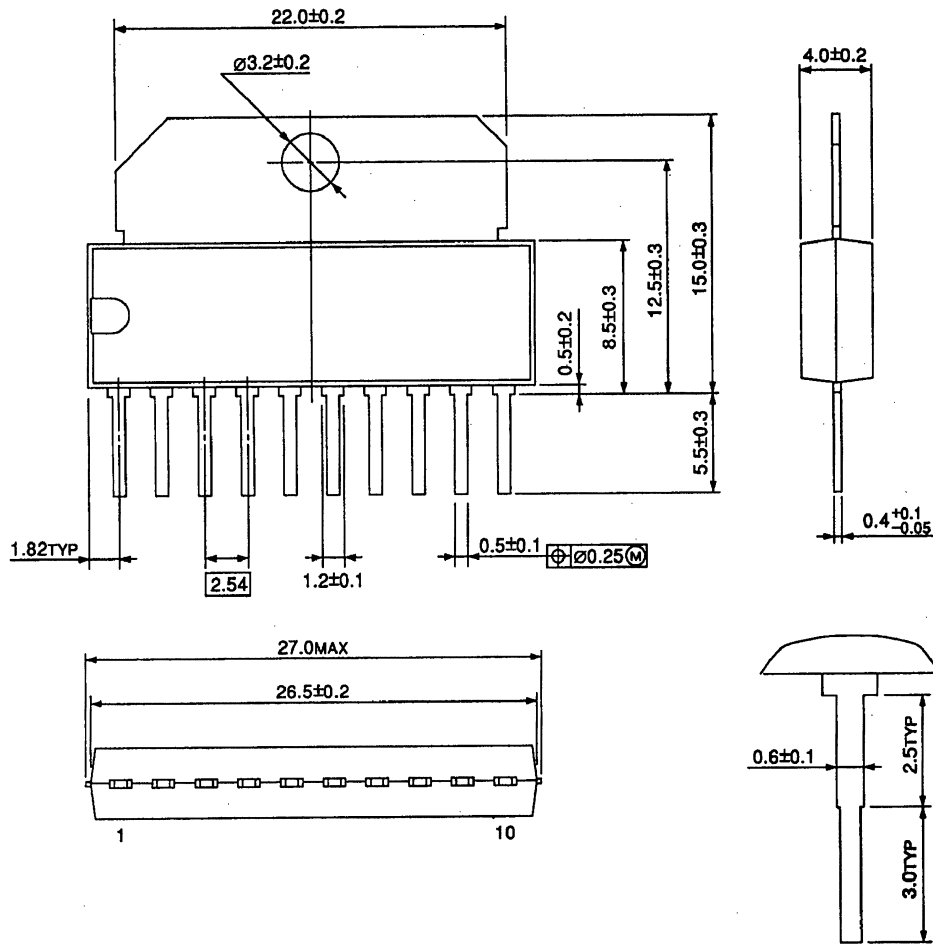
APPLICATION CIRCUIT 3



PACKAGE DIMENSIONS

HSIP10-P-2.54

Unit : mm



Weight : 2.47 g (Typ.)

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