

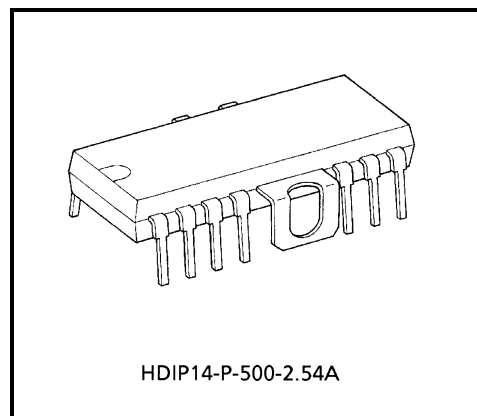
TA8449P

QUAD POWER OP. AMP

The TA8449P is 0.6A (PEAK) output current Quad type Power Operational Amplifier, and designed for CD player by 1chip (Focusing Tracking Actuator, Carriage and Spindle Motor). This IC is suitable for large current driver circuit, such as, Motor, Actuator and general purpose Power Operational Amplifier.

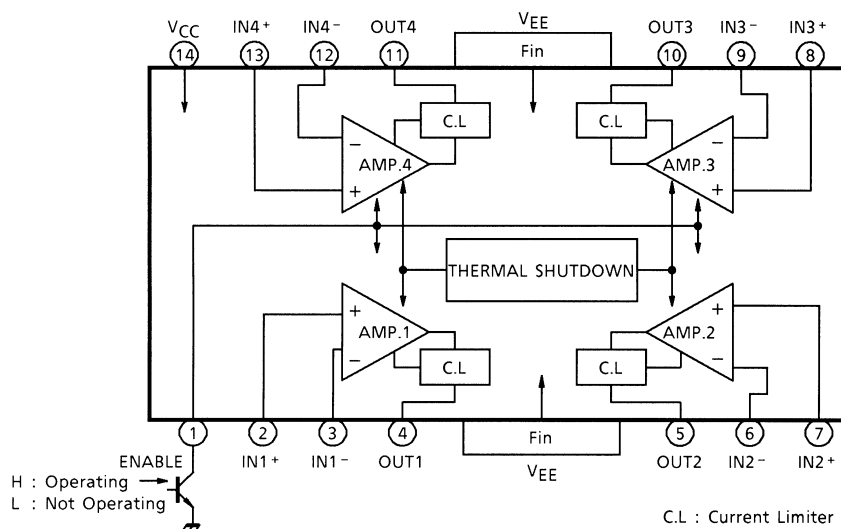
FEATURES

- High Output Current : I_O (PEAK) = 0.6 A / ch
 I_O (AVE) = 0.4 A / ch
- Built-in Current Limiter : 1.0 A (Typ.)
- Built-in Output Enable : GND or VEE : Enable
 : Open or VCC : Disenable
- Thermal Shut Down Circuit



Weight : 3.00 g (Typ.)

BLOCK DIAGRAM



PIN FUNCTION

| PIN No. | SYMBOL | FUNCTIONAL DESCRIPTION |
|---------|------------------|--|
| 1 | ENABLE | ENABLE terminal |
| 2 | IN1 ⁺ | AMP.1 input terminal (+) |
| 3 | IN1 ⁻ | AMP.1 input terminal (-) |
| 4 | OUT1 | AMP.1 Output terminal |
| 5 | OUT2 | AMP.2 Output terminal |
| 6 | IN2 ⁻ | AMP.2 input terminal (-) |
| 7 | IN2 ⁺ | AMP.2 input terminal (+) |
| 8 | IN3 ⁺ | AMP.3 input terminal (+) |
| 9 | IN3 ⁻ | AMP.3 input terminal (-) |
| 10 | OUT3 | AMP.3 output terminal |
| 11 | OUT4 | AMP.4 output terminal |
| 12 | IN4 ⁻ | AMP.4 input terminal (-) |
| 13 | IN4 ⁺ | AMP.4 input terminal (+) |
| 14 | V _{CC} | Power voltage supply terminal for possitive side |
| Fin | V _{EE} | Power voltage supply terminal for negative side |

MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-----------------------|-----------------------|--------------|------|
| Power Supply Voltage | V _{CC} | ±15 | V |
| | V _{EE} | | |
| Output Current | I _O (PEAK) | 0.6 (Note 1) | A |
| | I _O (AVE.) | 0.4 | |
| Power Dissipation | P _D | 2.3 (Note 2) | W |
| Operating Temperature | T _{opr} | -30~85 | °C |
| Storage Temperature | T _{stg} | -55~150 | °C |

Note 1: Single pulse 100 ms.

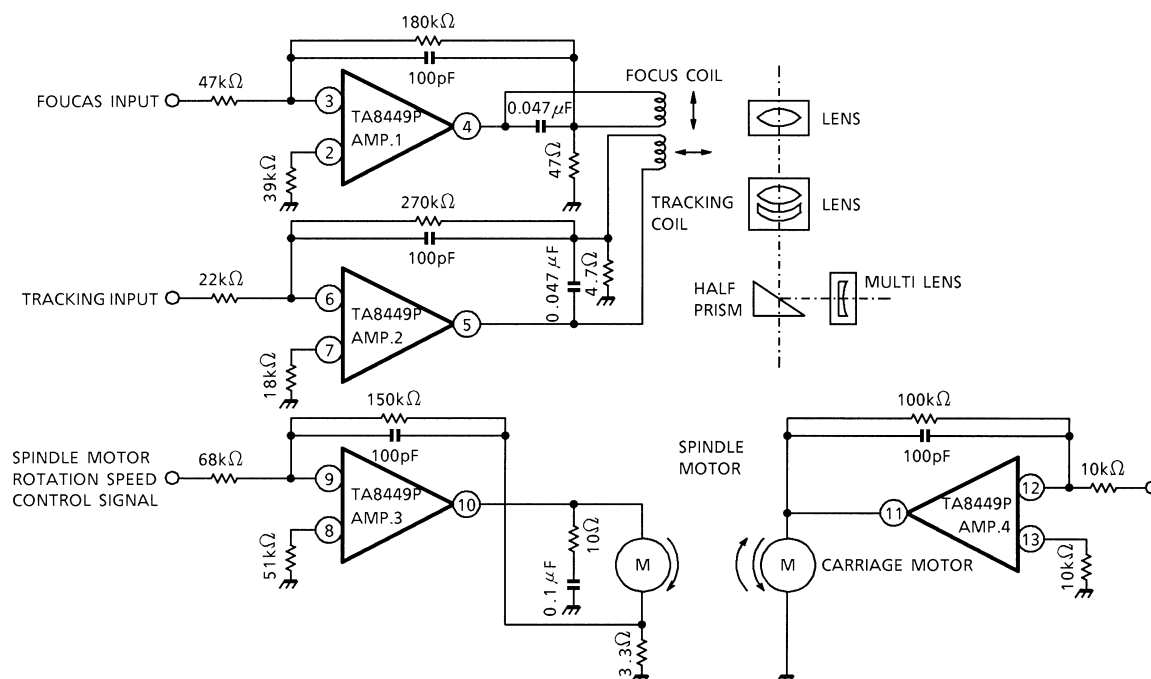
Note 2: No heat sink

ELECTRICAL CHARACTERISTICS

 (Unless otherwise specified, $T_a = 25^\circ\text{C}$, $V_{CC} = 15\text{ V}$, $V_{EE} = -15\text{ V}$)

| CHARACTERISTIC | | SYMBOL | Test Cir- cuit | TEST CONDITION | MIN | TYP. | MAX | UNIT |
|---|-------|-----------|-------------------|---------------------------------|------|----------|-------|-------------------|
| Power Supply Voltage | | I_{CC1} | — | at No Resistance | — | 16 | 35 | mA |
| | | I_{CC2} | — | at Disenable (1Pin = V_{CC}) | — | 0 | 20 | μA |
| Input Offset Current | | I_{IO} | — | — | — | — | 100 | nA |
| Input Bias Current | | I_I | — | — | — | — | 300 | nA |
| Input Offset Voltage | | V_{IO} | — | — | — | — | 6 | mV |
| Output Maximum Amplitude | Upper | V_{OH} | — | $I_O = 0.1\text{ A}$ | 12.0 | 13.3 | — | V |
| | Lower | V_{OL} | — | | — | -13.5 | -12.0 | |
| | Upper | V_{OH} | — | $I_O = 0.4\text{ A}$ | 12.0 | 13 | — | |
| | Lower | V_{OL} | — | | — | -13 | -12.0 | |
| Open Loop Gain | | G_{VO} | — | — | — | 100 | — | dB |
| Sync. Input Voltage Range | | CMR | — | — | — | ± 14 | — | V |
| Sync. Voltage | | CMRR | — | — | — | 80 | — | dB |
| Supply Voltage | | SVRR | — | — | — | 90 | — | dB |
| Band Width | | f_T | — | — | — | 1.0 | — | MHz |
| Through Rate | | SR | — | — | — | 0.9 | — | V / μs |
| Limiting Current | | I_{SC} | — | $T_J = 25^\circ\text{C}$ | — | 1.0 | — | A |
| Crosstalk | | C_T | — | — | — | 60 | — | dB |
| Enable Operating Current | | I_{EN} | — | Pin (1) = 0V | — | 1 | 2 | mA |
| Thermal Shut Down Operating Operating Temperature | | T_{SD} | — | — | 150 | 175 | 190 | $^\circ\text{C}$ |

APPLICATION CIRCUIT (Actuator for CD player)

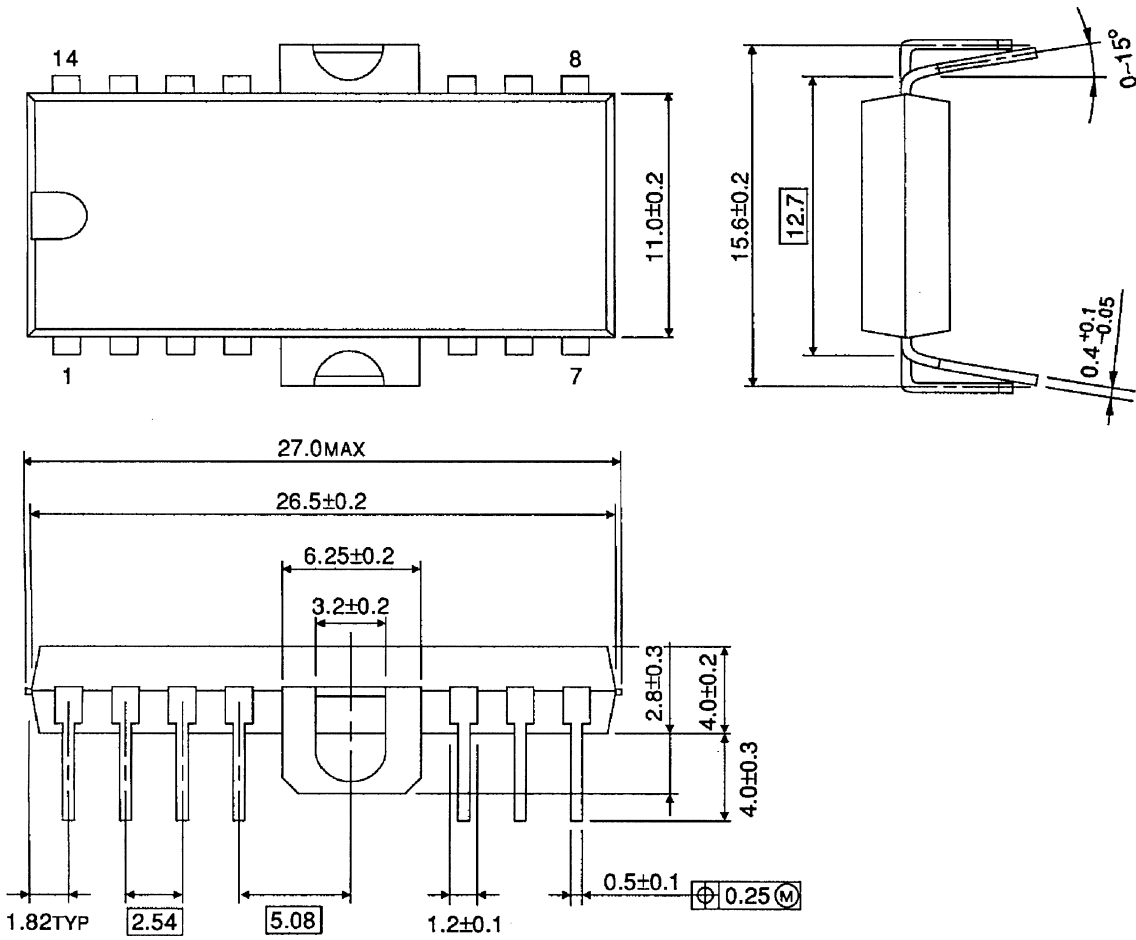


Note: Utmost care is necessary in the design of the output line, V_{CC} , V_{EE} and GND line since IC may be destroyed due to short-circuit between outputs, air contamination fault, or fault by improper grounding.

PACKAGE DIMENSIONS

HDIP14-P-500-2.54A

Unit : mm



Weight : 3.00 g (Typ.)

RESTRICTIONS ON PRODUCT USE

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