

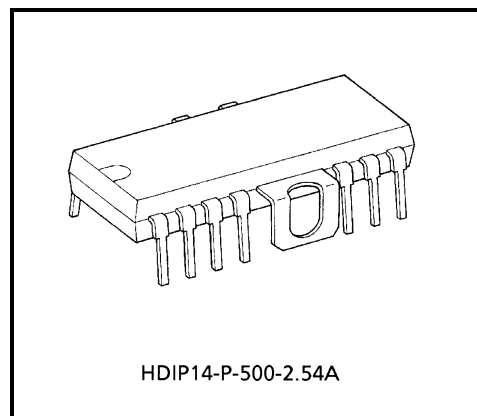
# TA8449P

## 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.

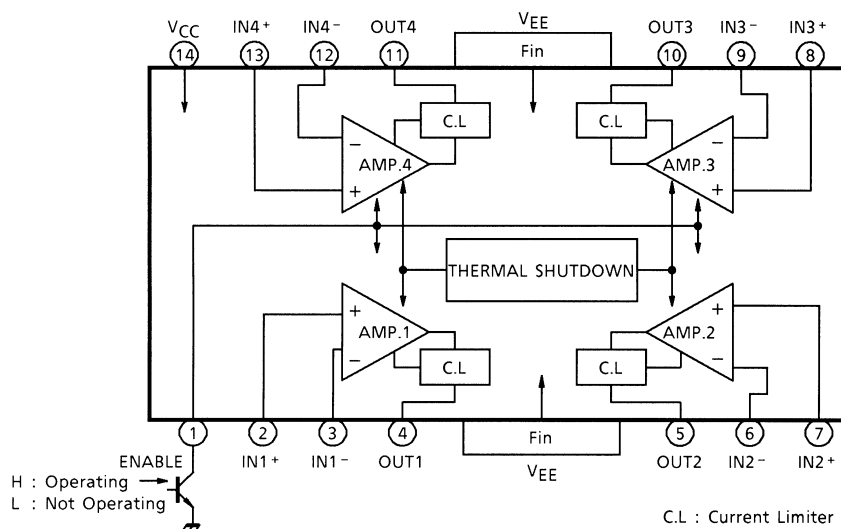
## FEATURES

- 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 <sup>+</sup>	AMP.1 input terminal (+)
3	IN1 <sup>-</sup>	AMP.1 input terminal (-)
4	OUT1	AMP.1 Output terminal
5	OUT2	AMP.2 Output terminal
6	IN2 <sup>-</sup>	AMP.2 input terminal (-)
7	IN2 <sup>+</sup>	AMP.2 input terminal (+)
8	IN3 <sup>+</sup>	AMP.3 input terminal (+)
9	IN3 <sup>-</sup>	AMP.3 input terminal (-)
10	OUT3	AMP.3 output terminal
11	OUT4	AMP.4 output terminal
12	IN4 <sup>-</sup>	AMP.4 input terminal (-)
13	IN4 <sup>+</sup>	AMP.4 input terminal (+)
14	V <sub>CC</sub>	Power voltage supply terminal for possitive side
Fin	V <sub>EE</sub>	Power voltage supply terminal for negative side

## MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V <sub>CC</sub>	±15	V
	V <sub>EE</sub>		
Output Current	I <sub>O</sub> (PEAK)	0.6 (Note 1)	A
	I <sub>O</sub> (AVE.)	0.4	
Power Dissipation	P <sub>D</sub>	2.3 (Note 2)	W
Operating Temperature	T <sub>opr</sub>	-30~85	°C
Storage Temperature	T <sub>stg</sub>	-55~150	°C

Note 1: Single pulse 100 ms.

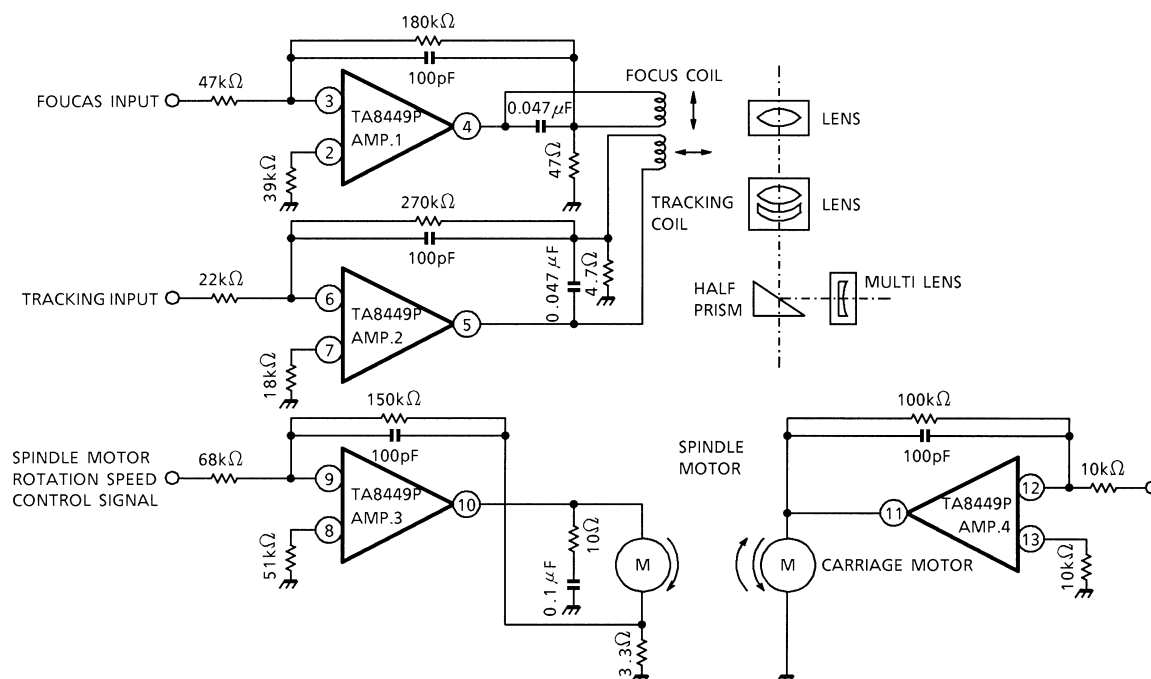
Note 2: No heat sink

## 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	$\mu\text{A}$
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	—	—	—	$\pm 14$	—	V
Sync. Voltage		CMRR	—	—	—	80	—	dB
Supply Voltage		SVRR	—	—	—	90	—	dB
Band Width		$f_T$	—	—	—	1.0	—	MHz
Through Rate		SR	—	—	—	0.9	—	V / $\mu\text{s}$
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)

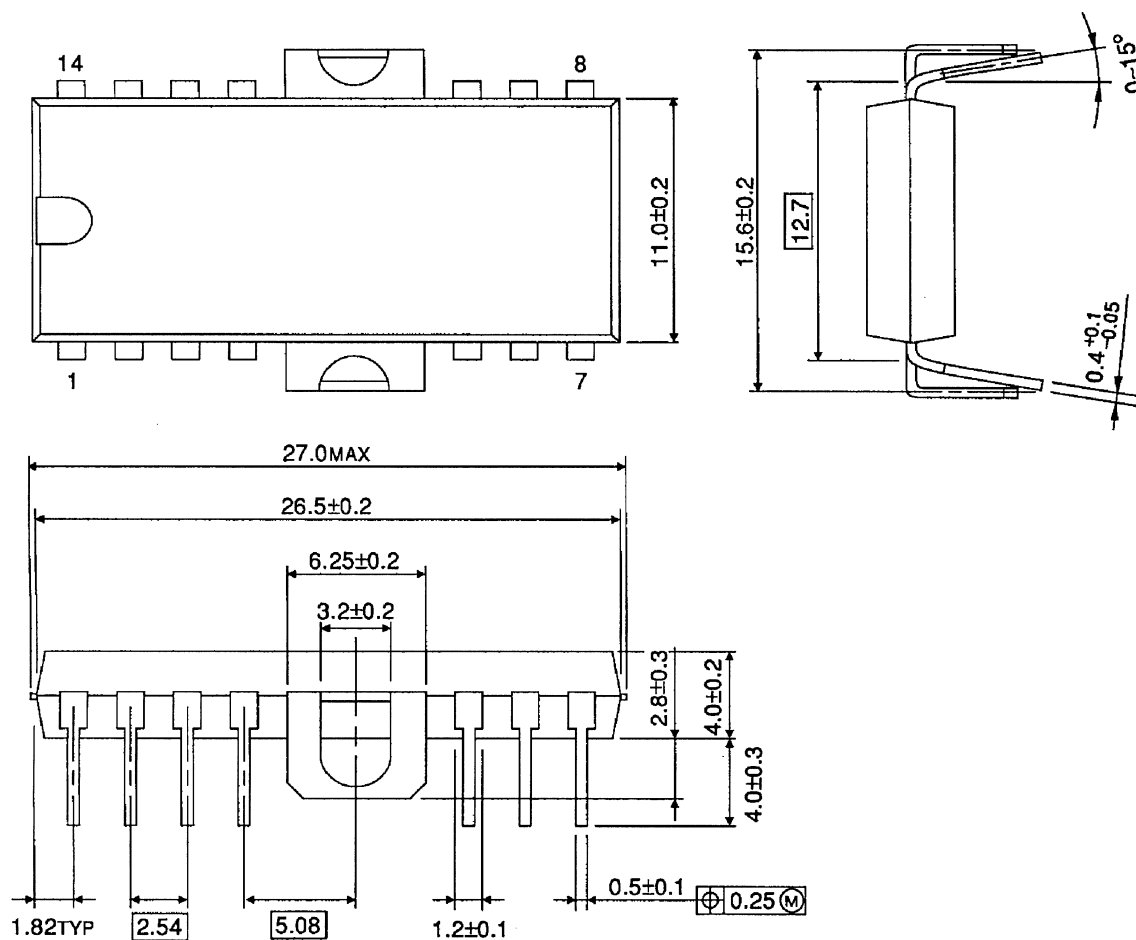


Note: Utmost care is necessary in the design of the output line,  $V_{CC}$ ,  $V_{EE}$  and GND line since IC may be destroyed due to short-circuit between outputs, air contamination fault, or fault by improper grounding.

## PACKAGE DIMENSIONS

HDIP14-P-500-2.54A

Unit : mm



Weight : 3.00 g (Typ.)

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