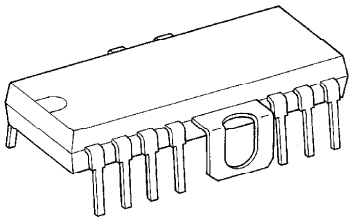
TOSHIBA BIPOLAR LINEAR INTEGRATED CIRCUIT SILICON MONOLITHIC

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.



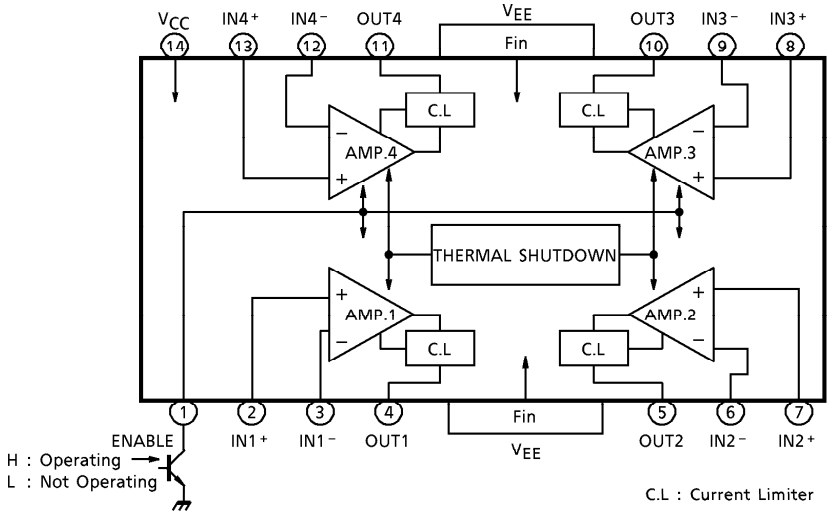
HDIP14-P-500-2.54A

Weight : 3.00g (Typ.)

FEATURES

- High Output Current : $I_{O\ (PEAK)} = 0.6A / ch$
  $I_{O\ (AVE)} = 0.4A / ch$
- Built-in Current Limiter : 1.0A (Typ.)
- Built-in Output Enable : GND or V_{EE} : Enable
  : Open or V_{CC} : Disenable
- Thermal Shut Down Circuit

BLOCK DIAGRAM



961001EBA2

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)

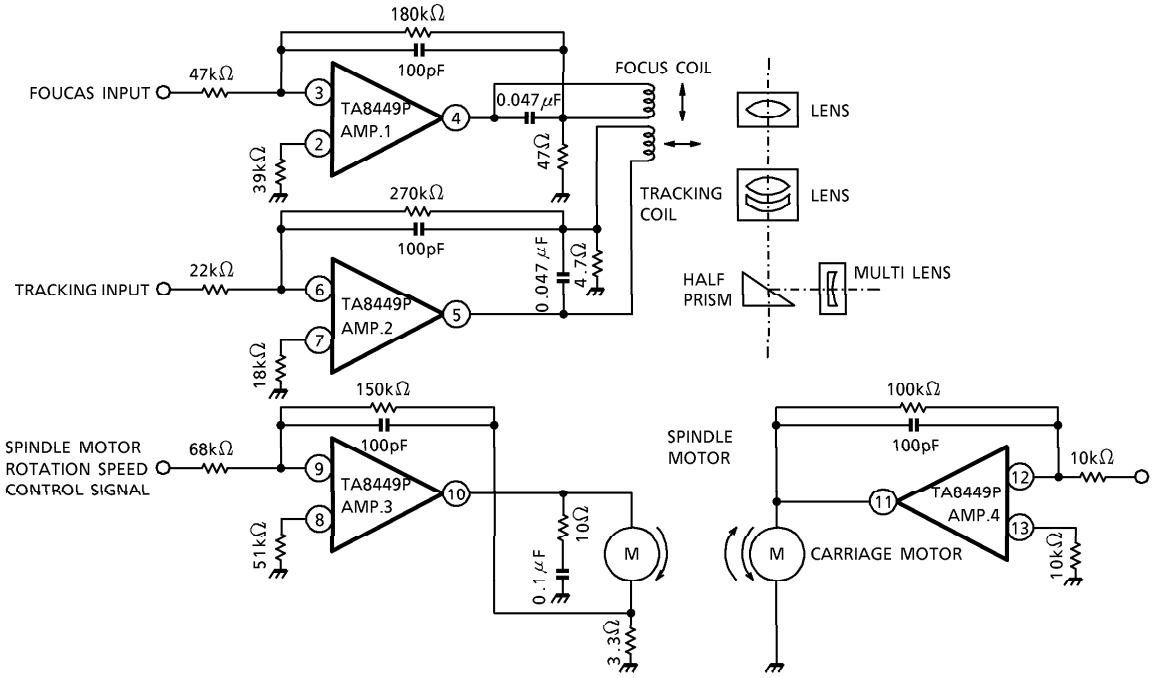
CHARACTERISTIC	SYMBOL	RATING	UNIT
Power Supply Voltage	V_{CC}	± 15	V
	V_{EE}		
Output Current	$I_{O\ (PEAK)}$	0.6 (*1)	A
	$I_{O\ (AVE.)}$	0.4	
Power Dissipation	P_D	2.3 (*2)	W
Operating Temperature	T_{opr}	−30~85	°C
Storage Temperature	T_{stg}	−55~150	°C

(*1) Single pulse 100ms.
(*2) No heat sink

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

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 = 0.1A	12.0	13.3	—	V
	Lower	V_{OL}	—		—	− 13.5	− 12.0	
	Upper	V_{OH}	—	I_O = 0.4A	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°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	°C

APPLICATION CIRCUIT (Actuator for CD player)

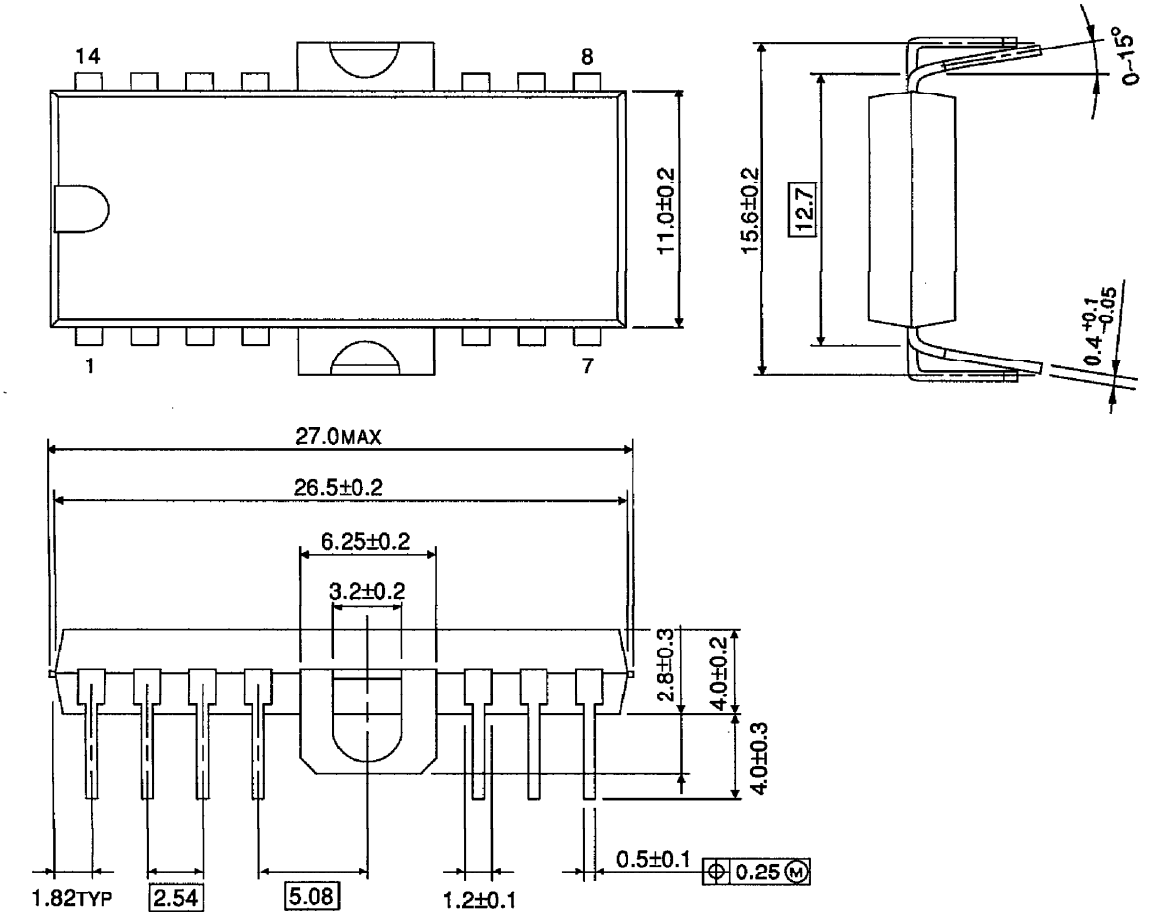


(Note) Utmost care is necessary in the design of the output line, V_{CC}, V_{EE} and GND line since IC may be destroyed due to short-circuit between outputs, air contamination fault, or fault by improper grounding.

OUTLINE DRAWING

HDIP14-P-500-2.54A

Unit : mm



Weight : 3.00g (Typ.)