

# TA7256P

## DUAL POWER OPERATIONAL AMPLIFIER

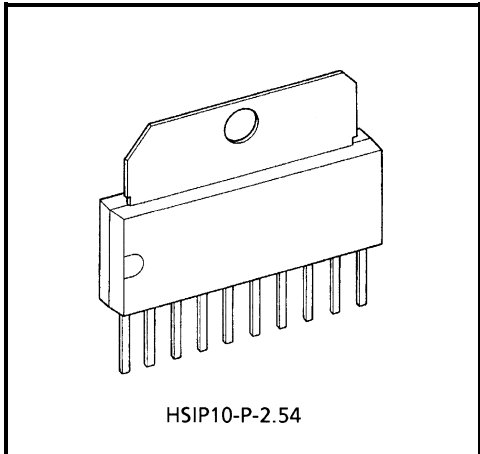
The TA7256P is a dual power operational amplifier.

It is intended for use especially DC MOTOR positioning system applications such as, Arm Driver (for Audiodisk Players), head or voice coil motor drivers (for Floppy and Winchester Disk Drivers) and any other power driver applications.

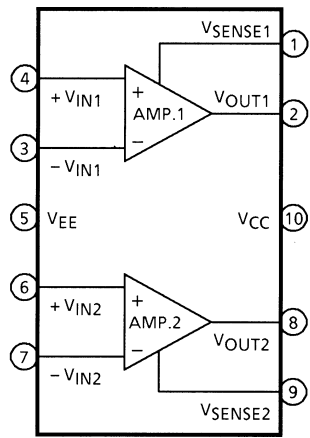
### FEATURES

- HSIP 10Pin Power Package Capsealed.
- Build-in Over Current Protector.
- Few External Parts Required.
- Output Current Up to 1.0 A (PEAK)

### BLOCK DIAGRAM



Weight: 2.47 g (Typ.)



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## PIN FUNCTION

| PIN No. | PIN SYMBOL          | FUNCTIONAL DESCRIPTION                 |
|---------|---------------------|--|
| 1       | V <sub>SENSE1</sub> | AMP.1 output current sensing terminal. |
| 2       | V <sub>OUT1</sub>   | AMP.1 output terminal.                 |
| 3       | -V <sub>IN1</sub>   | AMP.1 input terminal (-).              |
| 4       | +V <sub>IN1</sub>   | AMP.1 input terminal (+).              |
| 5       | V <sub>EE</sub>     | Negative-side power supply terminal.   |
| 6       | +V <sub>IN2</sub>   | AMP.2 input terminal (+).              |
| 7       | -V <sub>IN2</sub>   | AMP.2 input terminal (-).              |
| 8       | V <sub>OUT2</sub>   | AMP.2 output terminal.                 |
| 9       | V <sub>SENSE2</sub> | AMP.2 output current sensing terminal. |
| 10      | V <sub>CC</sub>     | Positive-side power supply terminal.   |

## MAXIMUM RATINGS (Ta = 25°C)

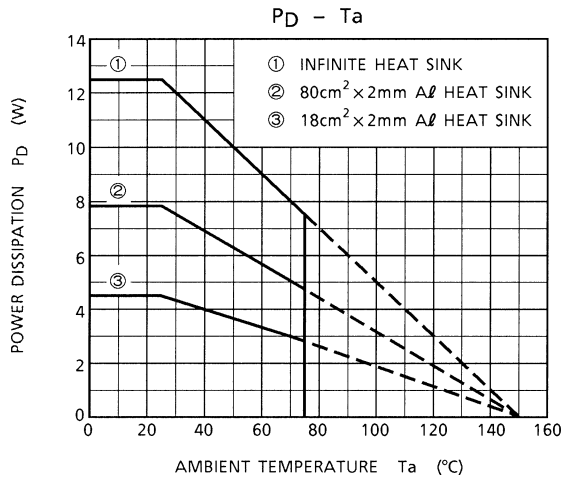
| CHARACTERISTIC        | SYMBOL                            | RATING  | UNIT |
|-----------------------|-----------------------------------|---------|------|
| Supply Voltage        | V <sub>CC</sub> , V <sub>EE</sub> | ±18     | V    |
| Output Current        | I <sub>O</sub> (AVE.)             | 0.5     | A    |
| Power Dissipation     | P <sub>D</sub> (Note)             | 12.5    | W    |
| Operating Temperature | T <sub>opr</sub>                  | -30~75  | °C   |
| Storage Temperature   | T <sub>stg</sub>                  | -55~150 | °C   |

Note: T<sub>c</sub> = 25°C

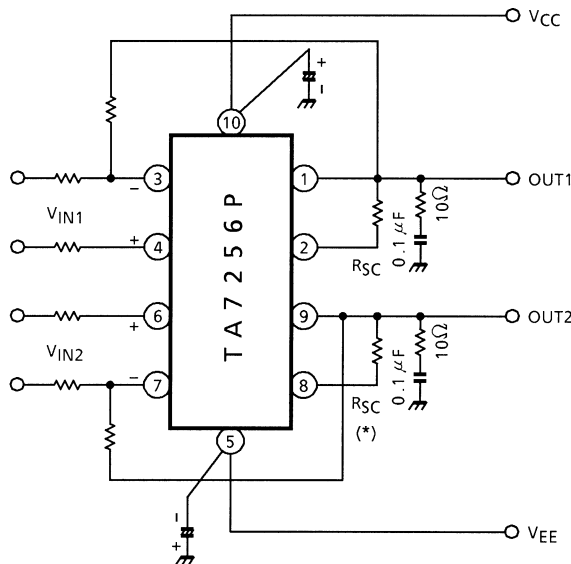
## ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, V<sub>CC</sub> = 15 V, V<sub>EE</sub> = -15 V, Ta = 25°C)

| CHARACTERISTIC                  | SYMBOL          | TEST CIR-CUIT   | TEST CONDITION  | MIN | TYP.  | MAX | UNIT   |
|---------------------------------|-----------------|-----------------|---|-----|-------|-----|--------|
| Quiescent Current               | I <sub>CC</sub> | —               | —   | —   | 10    | 20  | mA     |
| Input Off Set Current           | I <sub>IO</sub> | —               | —   | —   | 10    | 200 | nA     |
| Input Bias Current              | I <sub>I</sub>  | —               | —   | —   | 100   | 700 | nA     |
| Input Off Set Voltage           | V <sub>IO</sub> | —               | —   | —   | 2     | 6   | mV     |
| Output Voltage Swing            | Upper           | V <sub>OH</sub> | R <sub>L</sub> = 33 Ω   | 12  | 13.0  | —   | V      |
|                                 | Lower           | V <sub>OL</sub> |   | -12 | -13.0 | —   |        |
| Open Loop Gain                  | G <sub>VO</sub> | —               | —   | —   | 100   | —   | dB     |
| Input Common Mode Voltage Range | CMR             | —               | —   | ±12 | ±14   | —   |        |
| Common Mode Rejection Ratio     | CMRR            | —               | —   | 70  | 90    | —   | dB     |
| Supply Voltage Rejection Ratio  | SVRR            | —               | —   | —   | 50    | 150 | μV / V |
| Band Width                      | f <sub>T</sub>  | —               | Open loop   | —   | 1.0   | —   | MHz    |
| Slew Rate                       | SR              | —               | G <sub>V</sub> = 0, R <sub>L</sub> = 33 Ω<br>R = 10 Ω, C = 0.1 μF | —   | 0.15  | —   | V / μs |
| Short Circuit Current           | I <sub>SC</sub> | —               | R <sub>SC</sub> = 2.2 Ω   | —   | 0.35  | —   | A      |
| Cross Talk                      | C <sub>T</sub>  | —               | R <sub>L</sub> = 33 Ω, V <sub>OUT</sub> = 1 V <sub>P-P</sub>      | —   | 60    | —   | dB     |



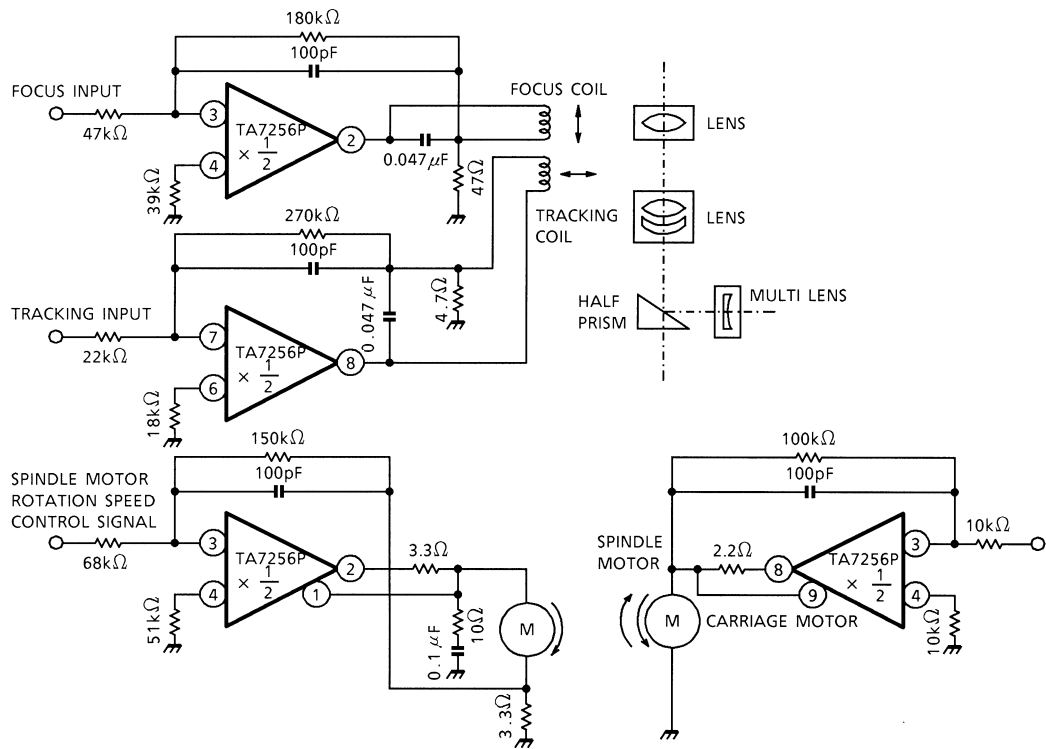
**APPLICATION CIRCUIT 1**



\*:  $I_{SC} \approx \frac{0.77(V)}{R_{SC}(\Omega)} (A)$

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

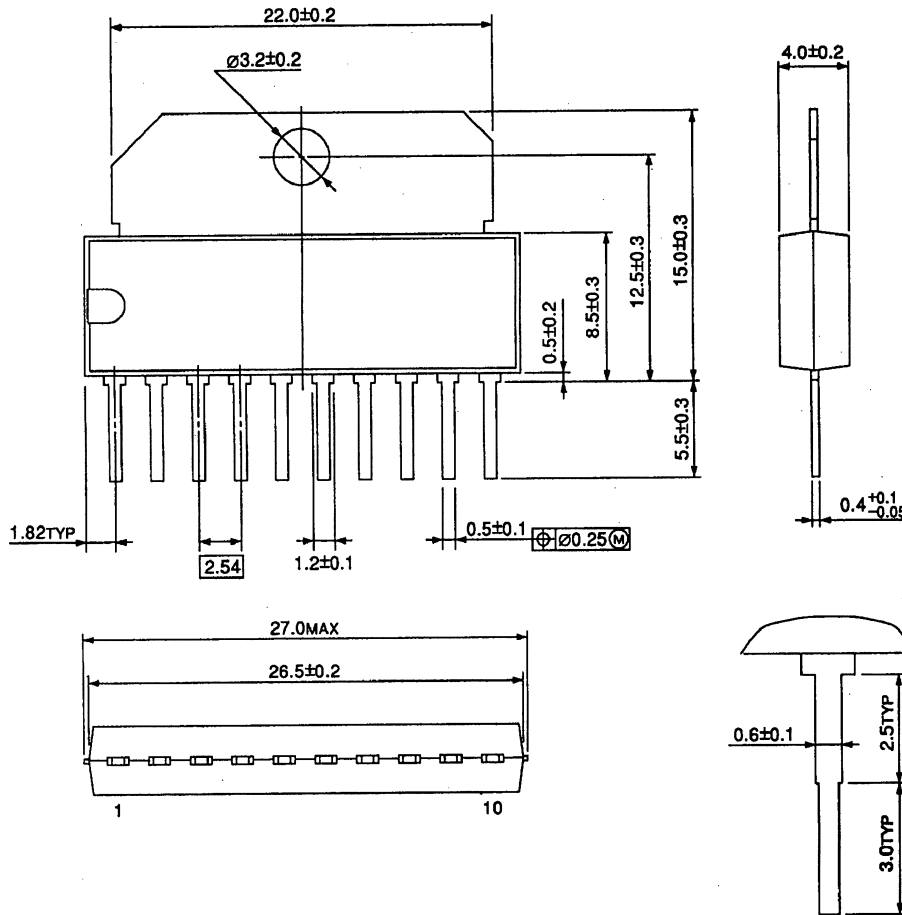
**APPLICATION CIRCUIT 2 (Compact disk player use actuator system)**



## OUTLINE DRAWING

HSIP10-P-2.54

Unit: mm



Weight: 2.47 g (Typ.)