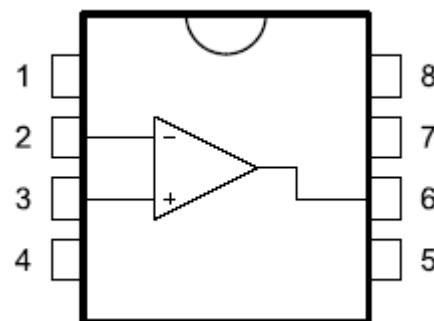


# GENERAL PURPOSE SINGLE OPERATIONAL AMPLIFIER

## FEATURES

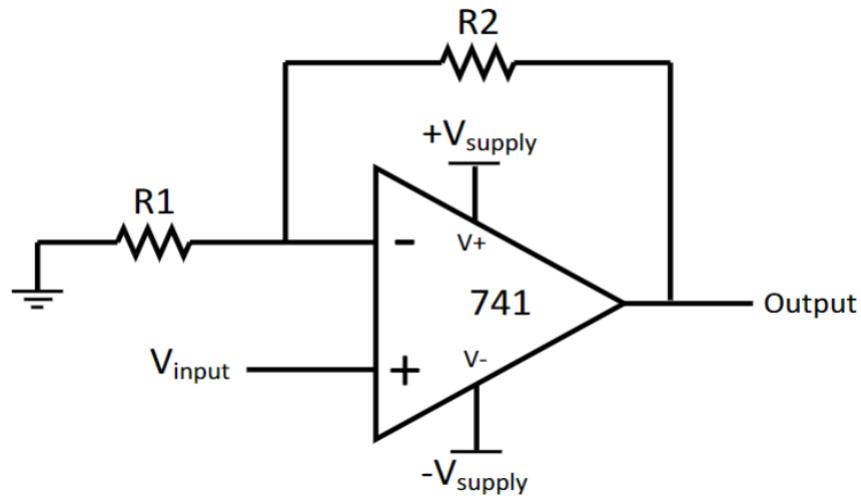
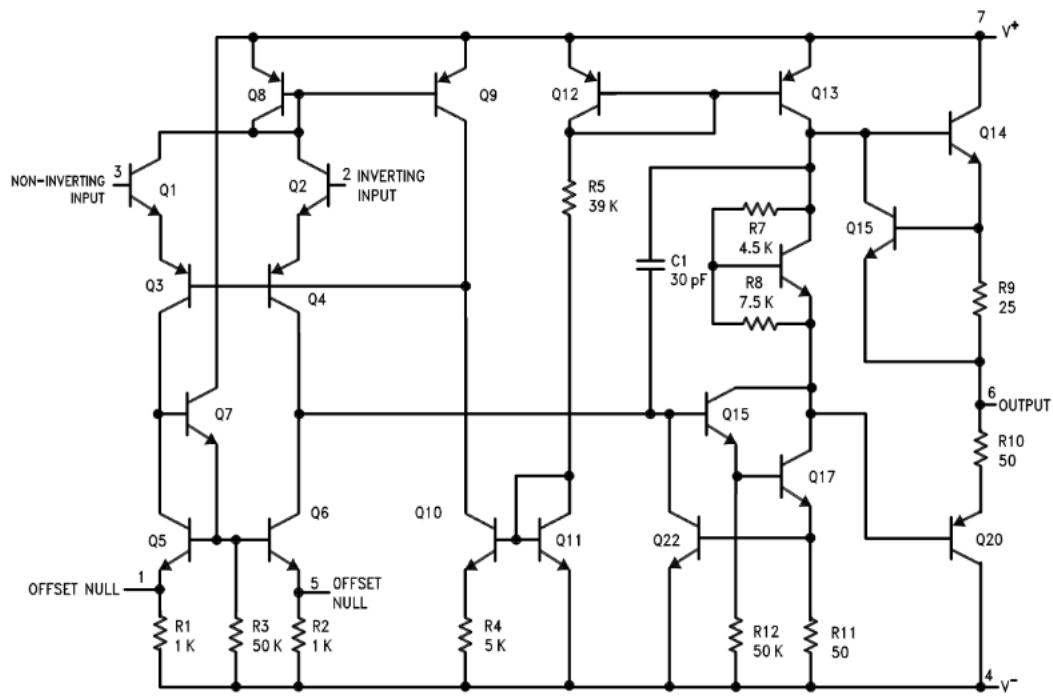
- Large input voltage range
- No latch-up
- High gain
- Short-circuit protection
- No frequency compensation

## PIN CONNECTIONS



## PIN LOCATION AND FUNCTIONAL PURPOSE

| PIN                |      | I/O | DESCRIPTION  |
|--------------------|------|-----|--|
| NAME               | NO.  |     |  |
| INVERTING INPUT    | 2    | I   | Inverting signal input   |
| NC                 | 8    | N/A | No Connect, should be left floating  |
| NONINVERTING INPUT | 3    | I   | Noninverting signal input  |
| OFFSET NULL        | 1, 5 | I   | Offset null pin used to eliminate the offset voltage and balance the input voltages. |
| OFFSET NULL        |      |     |  |
| OUTPUT             | 6    | O   | Amplified signal output  |
| V+                 | 7    | I   | Positive supply voltage  |
| V-                 | 4    | I   | Negative supply voltage  |

**Typical Application**

**Functional Block Diagram**


## ELECTRICAL CHARACTERISTICS

Electrical characteristics at  $V_{cc} = \pm 15$  V,  $T_{amb} = 25^\circ\text{C}$  (unless otherwise specified)

| Parameter, unit   | Symbol         | $T_{min} \leq T_{amb} \leq T_{max}$<br>(0°C) (70°C) |            | $T_{amb} = (25 \pm 5)^\circ\text{C}$ |            |
|---|----------------|---|------------|--------------------------------------|------------|
|   |                | min   | max        | min                                  | max        |
| 1. Input offset voltage, mV   | $U_{IO}$       | -6,0  | 6,0        | -5,0                                 | 5,0        |
| 2. Input current, nA  | $I_I$          | -200,0  | 200        | -100,0                               | 100,0      |
| 3. Input offset current, nA   | $I_{IO}$       | -70,0   | 70,00      | -30,0                                | 30,0       |
| 4. Large signal voltage gain, V/mV<br>( $R_L = 2$ kΩ)   | $A_u$          | 25  | -          | 50                                   | -          |
| 5. Supply voltage rejection ratio, dB   | $K_{SVR}$      | 77  | -          | 77                                   | -          |
| 6. Supply current, no load, mA<br>$(I_{CC1}, I_{CC2})$  | $I_{CC}$       | -   | 3,3        | -                                    | 2,8        |
| 7. Input common mode voltage range, V   | $U_{IC}$ max   | 12  | -12        | 12                                   | -12        |
| 8. Common mode rejection ratio, dB  | $K_{CMR}$      | 70  | -          | 70                                   | -          |
| 9. Output voltage swing, V<br>$R_L = 10$ kΩ<br>$R_L = 2$ kΩ                                   | $U_o$ max      | 12<br>10  | -12<br>-10 | 12<br>10                             | -12<br>-10 |
| 10. Output short-circuit current, mA  | $I_{OS}^{1)}$  | -   | -          | 10                                   | -          |
| 11. Slew rate, V/μs<br>$R_L=2$ kΩ, $C_L=100$ pF, $U_I \pm 10$ V                               | $S_{VOM}^{1)}$ | -   | -          | 0,25                                 | -          |
| 12. Gain bandwidth product, MHz<br>$U_I = 10$ mV, $R_L = 2$ kΩ, $C_L = 100$ pF, $f = 100$ kHz | $f_1^{1)}$     | -   | -          | 0,7                                  | -          |
| 13. Input resistance, MΩ  | $R_I^{1)}$     | -   | -          | 0,3                                  | -          |

<sup>1)</sup> Parameter is guaranteed

## MAXIMUM AND ABSOLUTE MAXIMUM RATINGS

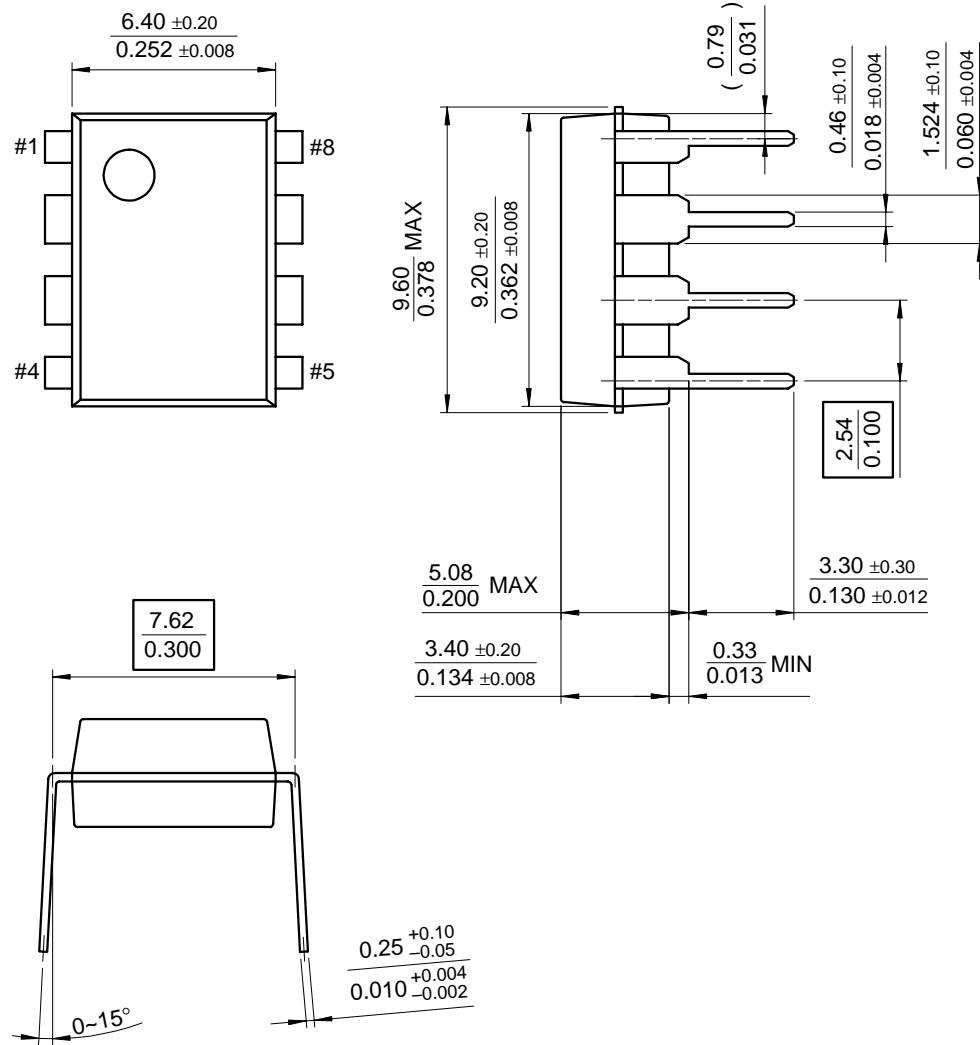
| Parameter, unit                    | Symbol    | Maximum ratings |          | Absolute maximum ratings |          |
|------------------------------------|-----------|-----------------|----------|--------------------------|----------|
|                                    |           | min             | max      | min                      | max      |
| Supply voltage, V                  | $U_{CC}$  | $\pm 5$         | $\pm 18$ | $\pm 4,5$                | $\pm 20$ |
| Common mode input voltage range, V | $U_{ICM}$ | -               | $\pm 12$ | -                        | $\pm 15$ |

## Mechanical Dimensions

### Package

Dimensions in millimeters

### 8-DIP



**Mechanical Dimensions (Continued)**
**Package**
**Dimensions in millimeters**
**8-SOP**
