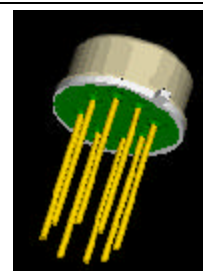


PART NUMBER: SEN-0002H  
Rev A

## CURRENT AMPLIFIER

**Features:**

- Replacement for industry standard LH0002
- Available as DSCC 7801301XX
- Various packages available, including surface mount (consult factory)

**Applications:**

- Line Driver
- 30 MHz buffer
- D/A conversion
- Precision current source

**Maximum Ratings**

| Description                                   | Symbol        | Value      | Units                |
|---|---------------|------------|----------------------|
| Supply voltage range                          | $V_S$         | $\pm 22$   | V                    |
| Input voltage range                           |               | $\pm 22$   | V                    |
| Storage temperature range                     |               | -65 to 150 | $^{\circ}\text{C}$   |
| Power dissipation, $T_A = 25^{\circ}\text{C}$ | $P_D$         | 600        | mW                   |
| Lead temperature (10 seconds)                 |               | 300        | $^{\circ}\text{C}$   |
| Thermal resistance (junct. to case)           | $\Theta_{JC}$ | 40         | $^{\circ}\text{C/W}$ |
| Junction temperature                          | $T_J$         | 175        | $^{\circ}\text{C}$   |

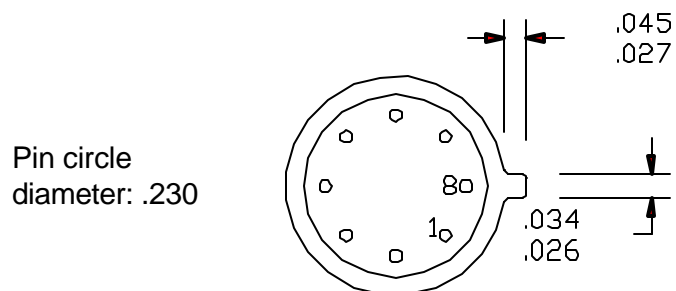
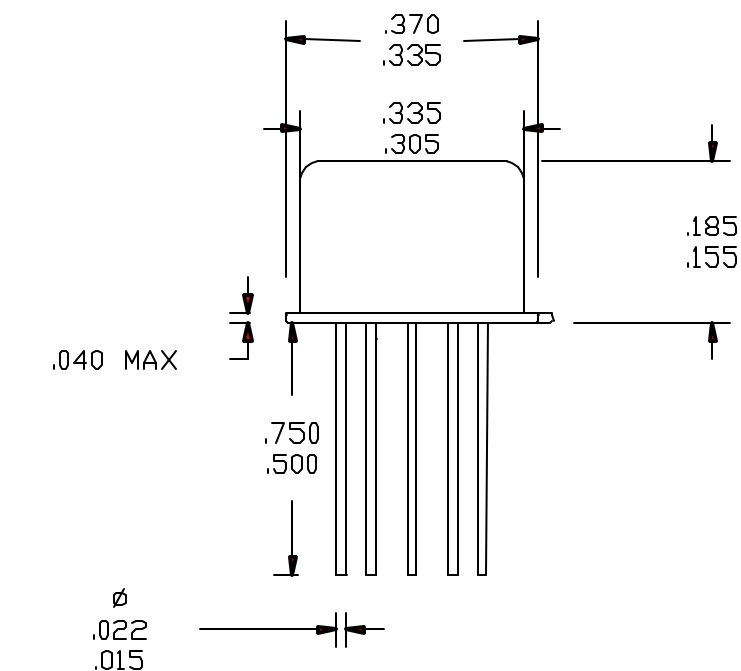
**Electrical Characteristics**  $-55^{\circ}\text{C} < T_A < 125^{\circ}\text{C}$  unless otherwise specified.

| Test Conditions  | Symbol    | Min.      | Max.  | Units            |
|--|-----------|-----------|-------|------------------|
| $R_S = 10\text{k}\Omega$ , $R_L = 1.0\text{k}\Omega$   | $I_{IO}$  | -10       | +10   | $\mu\text{A}$    |
| $R_S = 300\Omega$ , $R_L = 1.0\text{k}\Omega$  | $V_{IO}$  | -30       | 30    | mV               |
| $V_{IN} = \pm 12\text{V}$ , $R_L = 1.0\text{k}\Omega$ , $T_A = +25^{\circ}\text{C}$  | $V_O$     | $\pm 10$  |       | V                |
| $V_{IN} = \pm 10\text{V}$ , $R_L = 100\Omega$ , $T_A = +25^{\circ}\text{C}$<br>$V_S = \pm 15\text{V}$                                      |           | $\pm 9.5$ |       | V                |
| $R_S = 10\text{k}\Omega$ , $R_L = 1.0\text{k}\Omega$ , $V_{IN} = 0\text{V}$ ,<br>$T_A = 25^{\circ}\text{C}$                                | $+I_{CC}$ |           | +10.0 | mA               |
| $R_S = 10\text{k}\Omega$ , $R_L = 1.0\text{k}\Omega$ , $V_{IN} = 0\text{V}$ ,<br>$T_A = 25^{\circ}\text{C}$                                | $-I_{CC}$ | -10.0     |       |                  |
| $V_{IN} = 3.0\text{V}_{pp}$ , $R_S = 10\text{k}\Omega$ , $R_L = 1.0\text{k}\Omega$ ,<br>$f = 1.0\text{kHz}$                                | $A_V$     | 0.95      |       |                  |
| $V_{IN} = 1.0\text{V}_{rms}$ , $R_S = 200\text{k}\Omega$ , $R_L = 1.0\text{k}\Omega$ ,<br>$f = 1.0\text{kHz}$ , $T_A = 25^{\circ}\text{C}$ | $Z_{IN}$  | 180       |       | $\text{k}\Omega$ |
| $V_{IN} = 1.0\text{V}_{rms}$ , $R_S = 10\text{k}\Omega$ , $R_L = 50\Omega$ ,<br>$f = 1.0\text{kHz}$ , $T_A = 25^{\circ}\text{C}$           | $Z_{OUT}$ |           | 10    | $\Omega$         |
| $V_{OUT} = 2.5\text{V}_{pp}$ , $R_S = 100\Omega$ , $R_L = 50\Omega$ ,<br>$T_A = 25^{\circ}\text{C}$  | $t_r$     |           | 12    | ns               |

PART NUMBER: SEN-0002H, Rev A

**MECHANICAL DIMENSIONS (standard package): in inches**

Consult factory for alternate packages



BOTTOM

|   |     |
|---|-----|
| 1 | V1+ |
| 2 | V2+ |
| 3 | E3  |
| 4 | OUT |
| 5 | E4  |
| 6 | V2- |
| 7 | V1- |
| 8 | IN  |

**TECHNICAL DATA**

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