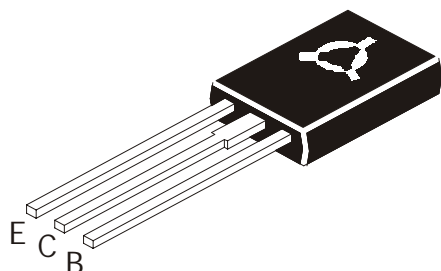


## NPN PLASTIC POWER TRANSISTOR

**CSD882**

**TO126**

**Plastic Package**



**Complementary CSB772**

### Audio Frequency Power Amplifier and Low Speed Switching Applications

#### ABSOLUTE MAXIMUM RATINGS(Ta=25°C unless specified otherwise)

| DESCRIPTION                           | SYMBOL    | VALUE       | UNIT |
|---------------------------------------|-----------|-------------|------|
| Collector Base Voltage(open emitter)  | $V_{CBO}$ | >40         | V    |
| Collector Emitter Voltage (open base) | $V_{CEO}$ | >30         | V    |
| Emitter Base Voltage(open collector)  | $V_{EBO}$ | >5.0        | V    |
| Collector Current (DC)                | $I_C$     | <3.0        | A    |
| Collector Current (Pulse)             | $I_C$     | <7          | A    |
| Base Curent (DC)                      | $I_B$     | <0.6        | A    |
| Total Power Dissipation@ Ta=25°C      | $P_{tot}$ | <1.0        | W    |
| Total Power Dissipation@ Tc=25°C      | $P_{tot}$ | <10         | W    |
| Junction Temperature                  | $T_j$     | 150         | °C   |
| Storage Temperature Range             | $T_{stg}$ | -65 to +150 | °C   |

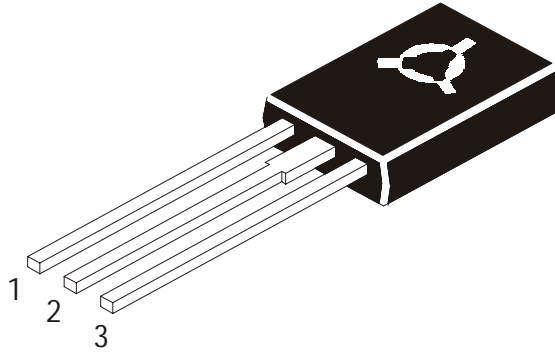
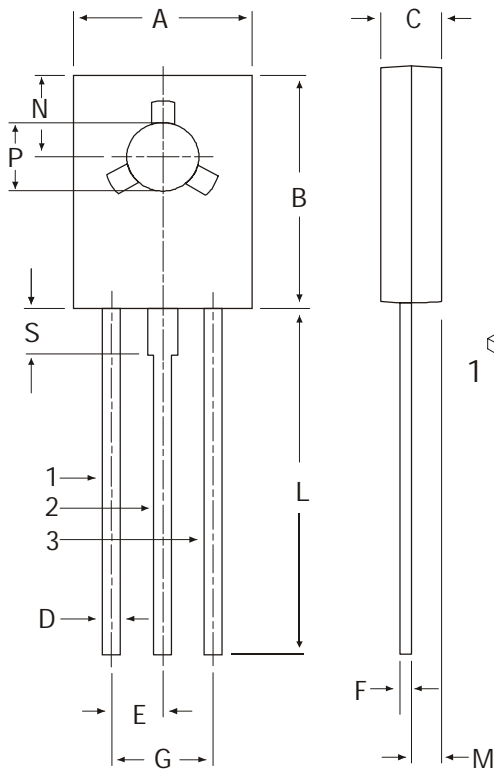
#### ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)

| DESCRIPTION                  | SYMBOL          | TEST CONDITION               | MIN | TYP | MAX | UNIT |
|------------------------------|-----------------|------------------------------|-----|-----|-----|------|
| Collector-Cut off Current    | $I_{CBO}$       | $I_E = 0, V_{CB} = 30V$      |     |     | 1.0 | μA   |
| Emitter cut -off Current     | $I_{EBO}$       | $I_C = 0, V_{EB} = 3V$       |     |     | 1.0 | μA   |
| Breakdown Voltages           | $V_{CEO}$       | $I_C = 1mA, I_B = 0$         | 30  |     |     | V    |
|                              | $V_{CBO}$       | $I_C = 1mA, I_E = 0$         | 40  |     |     | V    |
|                              | $V_{EBO}$       | $I_C = 0, I_E = 1mA$         | 5   |     |     | V    |
| Saturation Voltages          | $V_{CE(sat)}$ * | $I_C = 2A, I_B = 0.2A$       |     |     | 0.5 | V    |
|                              | $V_{BE(sat)}$ * | $I_C = 2A, I_B = 0.2A$       |     |     | 2.0 | V    |
| DC Current Gain              | $h_{FE}^*$      | $I_C = 20mA, V_{CE} = 2V$    | 30  |     |     |      |
|                              | $h_{FE}^*$      | $I_C = 1A, V_{CE} = 2V^{**}$ | 60  |     | 400 |      |
| Output Capacitance at f=1MHz | $C_o$           | $I_E = 0, V_{CB} = 10V,$     |     | 45  |     | pF   |
| Transition Frequency         | $f_T$           | $I_C = 0.1A, V_{CE} = 5V$    |     | 90  |     | MHz  |

\* Pulse test : pulse width  $\leq 350\mu s$  ; duty cycle  $\leq 2\%$

\*\* $h_{FE}$  classification : R : 60-120 Q: 100-200 P: 160-320 E: 200-400

## TO-126 (SOT-32) Plastic Package



## Pin Configuration

1. Emitter
2. Collector
3. Base

| DIM | MIN       | MAX  |
|-----|-----------|------|
| A   | 7.4       | 7.8  |
| B   | 10.5      | 10.8 |
| C   | 2.4       | 2.7  |
| D   | 0.7       | 0.9  |
| E   | 2.25 TYP. |      |
| F   | 0.49      | 0.75 |
| G   | 4.5 TYP.  |      |
| L   | 15.7 TYP. |      |
| M   | 1.27 TYP. |      |
| N   | 3.75 TYP. |      |
| P   | 3.0       | 3.2  |
| S   | 2.5 TYP.  |      |

All dimensions in mm.

## Packing Detail

| PACKAGE     | STANDARD PACK   |                | INNER CARTON BOX  |     | OUTER CARTON BOX  |     |        |
|-------------|-----------------|----------------|-------------------|-----|-------------------|-----|--------|
|             | Details         | Net Weight/Qty | Size              | Qty | Size              | Qty | Gr Wt  |
| TO-126 Bulk | 500 pcs/polybag | 340 gm/500 pcs | 3" x 7.5" x 7.5"  | 2K  | 17" x 15" x 13.5" | 32K | 31 kgs |
| TO-126 Tube | 50 pcs/tube     | 73 gm/50 pcs   | 3" x 3.7" x 21.5" | 1K  | 19" x 19" x 19"   | 10K | 15 kgs |

### Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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