**Data Sheet**

**Central™**
**Semiconductor Corp.**
145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

2N3704
2N3705
2N3706

SILICON NPN TRANSISTOR

JEDEC TO-92 CASE (ECB)

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3704 thru 2N3706 are NPN Silicon Planar Transistors for general purpose switching and amplifier applications.

## MAXIMUM RATINGS ($T_A$=25°C)

| | SYMBOL | 2N3704<br>2N3705 | 2N3706 | UNIT |
|---|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 50 | 40 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 30 | 20 | V |
| Emitter-Base Voltage | $V_{EBO}$ | 5.0 | 5.0 | V |
| Collector Current | $I_C$ | 800 | 800 | mA |
| Power Dissipation | $P_D$ | 625 | 625 | mW |
| Operating and Storage Junction Temperature | $T_J$, $T_{STG}$ | -65 TO +150 | | °C |

## ELECTRICAL CHARACTERISTICS ($T_A$=25°C)

| | | 2N3704 | | 2N3705 | | 2N3706 | | |
|---|---|---|---|---|---|---|---|---|
| SYMBOL | TEST CONDITIONS | MIN | MAX | MIN | MAX | MIN | MAX | UNIT |
| $I_{CBO}$ | $V_{CB}$=20V | | 100 | | 100 | | 100 | nA |
| $I_{EBO}$ | $V_{EB}$=3.0V | | 100 | | 100 | | 100 | nA |
| $BV_{CBO}$ | $I_C$=100μA | 50 | | 50 | | 40 | | V |
| $BV_{CEO}$ | $I_C$=10mA | 30 | | 30 | | 20 | | V |
| $BV_{EBO}$ | $I_E$=100μA | 5.0 | | 5.0 | | 5.0 | | V |
| $h_{FE}$ | $V_{CE}$=2.0V, $I_C$=50mA | 100 | 300 | 50 | 150 | 30 | 600 | - |
| $V_{BE(ON)}$ | $V_{CE}$=2.0V, $I_C$=100mA | 0.5 | 1.0 | 0.5 | 1.0 | 0.5 | 1.0 | V |
| $V_{CE(SAT)}$ | $I_C$=100mA, $I_B$=5.0mA | | 0.6 | | 0.8 | | 1.0 | V |
| $f_T$ | $V_{CE}$=2.0V, $I_C$=50mA | 100 | | 100 | | 100 | | MHz |
| $C_{ob}$ | $V_{CB}$=10V, f=1.0MHz | | 12 | | 12 | | 12 | pF |