

# Central<sup>TM</sup> Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA  
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

2N4921

2N4922

2N4923

NPN Silicon Transistor  
General Purpose Power

JEDEC TO-126 Case

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4921, 2N4922, and 2N4923 are Silicon NPN Epitaxial Base Power Transistors designed for Medium power amplifier and switching applications.

## MAXIMUM RATINGS $(T_A=25^{\circ}\text{C}$ Unless otherwise noted)

|                                              |                | 2N4921 | 2N4922        | 2N4923 |
|----------------------------------------------|----------------|--------|---------------|--------|
| Collector-Base Voltage                       | $V_{CB0}$      | 40V    | 60V           | 80V    |
| Collector-Emitter Voltage                    | $V_{CE0}$      | 40V    | 60V           | 80V    |
| Emitter-Base Voltage                         | $V_{EB0}$      |        | 5.0V          |        |
| Collector Current, Continuous                | $I_C$          |        | 1.0A          |        |
| Collector Current, Peak                      | $I_{CM}$       |        | 3.0A          |        |
| Base Current                                 | $I_B$          |        | 1.0A          |        |
| Power Dissipation $(T_C=25^{\circ}\text{C})$ | $P_D$          |        | 30W           |        |
| Operating & Storage Junction Temperature     | $T_J, T_{stg}$ |        | -65 to +150°C |        |
| Thermal Resistance, Junction to Case         | $\theta_{J-C}$ |        | 3.12°C/W      |        |

## ELECTRICAL CHARACTERISTICS $(T_C=25^{\circ}\text{C})$

| SYMBOL       | TEST CONDITIONS                                        | MIN         | MAX | UNIT          |
|--------------|--------------------------------------------------------|-------------|-----|---------------|
| $I_{CB0}$    | $V_{CB}=\text{Rated } V_{CB}$                          |             | 100 | $\mu\text{A}$ |
| $I_{CEV}$    | $V_{CE}=\text{Rated } V_{CE0}, V_{EB}=1.5\text{V}$     |             | 100 | $\mu\text{A}$ |
| $I_{CE0}$    | $V_{CE}=0.5\times \text{Rated } V_{CE0}$               |             | 500 | $\mu\text{A}$ |
| $I_{EB0}$    | $V_{EB}=5.0\text{V}$                                   |             | 1.0 | mA            |
| $BV_{CE0}$   | $I_C=0.1\text{A}$                                      | 40 (2N4921) |     | V             |
|              |                                                        | 60 (2N4922) |     | V             |
|              |                                                        | 80 (2N4923) |     | V             |
| $V_{CE(s)}$  | $I_C=1.0\text{A}, I_B=0.1\text{A}$                     |             | 0.6 | V             |
| $V_{BE(s)}$  | $I_C=1.0\text{A}, I_B=0.1\text{A}$                     |             | 1.3 | V             |
| $V_{BE(on)}$ | $V_{CE}=1.0\text{V}, I_C=1.0\text{A}$                  |             | 1.3 | V             |
| $h_{FE}$     | $V_{CE}=1.0\text{V}, I_C=50\text{mA}$                  | 40          |     | -             |
| $h_{FE}$     | $V_{CE}=1.0\text{V}, I_C=500\text{mA}$                 | 20          | 100 | -             |
| $h_{FE}$     | $V_{CE}=1.0\text{V}, I_C=1.0\text{A}$                  | 10          |     | -             |
| $f_T$        | $V_{CE}=10\text{V}, I_C=250\text{mA}, f=1.0\text{MHz}$ | 3.0         |     | MHz           |
| $C_{ob}$     | $V_{CB}=10\text{V}, f=100\text{kHz}$                   |             | 100 | pF            |

