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## 2N2925

### Silicon NPN Transistor General Purpose TO-92 Type Package

**Absolute Maximum Ratings:**

|  |                                     |
|--|-------------------------------------|
| Collector-Emitter Voltage, $V_{CEO}$ .....                                   | 25V                                 |
| Collector-Base Voltage, $V_{CBO}$ .....                                      | 25V                                 |
| Emitter-Base Voltage, $V_{EBO}$ .....  | 5V                                  |
| Continuous Collector Current (Note 1), $I_C$ .....                           | 100mA                               |
| Total Power Dissipation ( $T_A \leq +25^\circ\text{C}$ ), $P_T$ .....        | 360mW                               |
| Derate Above $+25^\circ\text{C}$ .....                                       | 3.6mW/ $^\circ\text{C}$             |
| Total Power Dissipation ( $T_A \leq +55^\circ\text{C}$ ), $P_T$ .....        | 250mW                               |
| Derate Above $+25^\circ\text{C}$ .....                                       | 3.6mW/ $^\circ\text{C}$             |
| Operating Junction Temperature Range, $T_J$ .....                            | $-55^\circ$ to $+150^\circ\text{C}$ |
| Storage Temperature Range, $T_{stg}$ .....                                   | $-55^\circ$ to $+150^\circ\text{C}$ |
| Lead Temperature (During Soldering, 1/16" from case, 10sec max), $T_L$ ..... | $+260^\circ\text{C}$                |

Note 1. Determined from power limitations due to saturation voltages at this current

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

| Parameter                                   | Symbol    | Test Conditions   | Min | Typ | Max | Unit          |
|---|-----------|---|-----|-----|-----|---------------|
| Collector Cutoff Current                    | $I_{CBO}$ | $V_{CB} = 25\text{V}$   | -   | -   | 0.1 | $\mu\text{A}$ |
|   |           | $V_{CB} = 25\text{V}, T_A = +100^\circ\text{C}$   | -   | -   | 15  | $\mu\text{A}$ |
| Emitter Cutoff Current                      | $I_{EBO}$ | $V_{EB} = 5\text{V}$  | -   | -   | 0.1 | $\mu\text{A}$ |
| DC Forward Current Transfer Ratio           | $h_{FE}$  | $V_{CE} = 4.5\text{V}, I_C = 2\text{mA}$  | -   | 215 | -   |               |
| Small-Signal Forward Current Transfer Ratio | $h_{fe}$  | $V_{CE} = 10\text{V}, I_C = 2\text{mA}, f = 1\text{kHz}$  | 235 | -   | -   |               |
| Input Impedance                             | $h_{fb}$  | $V_{CE} = 10\text{V}, I_C = 2\text{mA}, f = 1\text{kHz}$  | -   | 15  | -   | $\Omega$      |
| Gain Bandwidth Product                      | $f_T$     | $V_{CB} = 5\text{V}, I_C = 4\text{mA}$  | -   | 160 | -   | MHz           |
| Noise Figure                                | NF        | $I_C = 100\mu\text{A}, V_{CE} = 5\text{V},$<br>$R_g = 2000\Omega, f = 10\text{kHz},$<br>$BW = 1\text{Hz}$ | -   | 2.6 | -   | dB            |
| Collector Capacitance                       | $C_{cbo}$ | $V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$   | 4.5 | 7.0 | 10  | pF            |

