

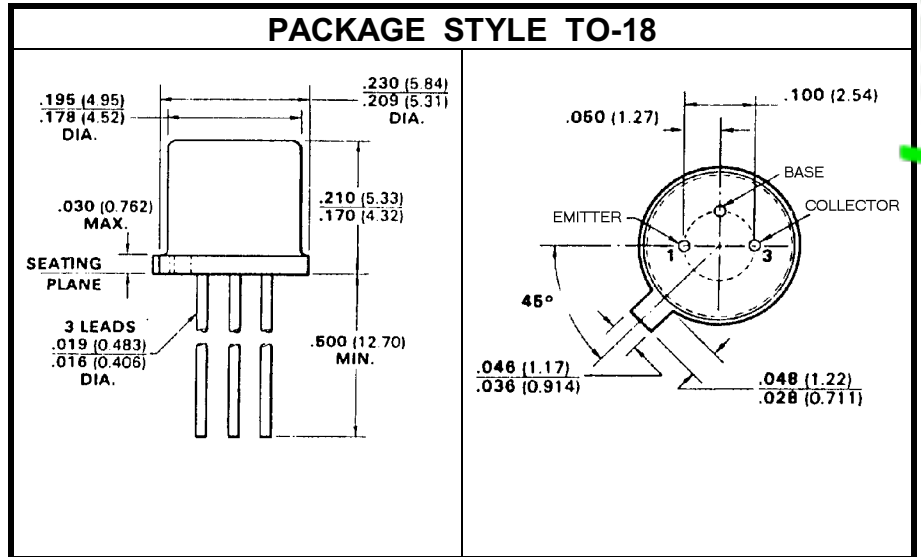
# SILICON PNP TRANSISTOR

**DESCRIPTION:**

The **2N2907A** is Designed for General Purpose Amplifier and Switching Applications.

**MAXIMUM RATING:**

|               |                                  |
|---------------|----------------------------------|
| $I_C$         | 600 mA                           |
| $V_{CE}$      | -60 V                            |
| $P_{DISS}$    | 1.8 W @ $T_C = 25^\circ\text{C}$ |
| $T_J$         | -65 °C to +200 °C                |
| $T_{STG}$     | -65 °C to +200 °C                |
| $\theta_{JC}$ | 97 °C/W                          |


**CHARACTERISTICS**  $T_C = 25^\circ\text{C}$ 

| SYMBOL        | TEST CONDITIONS  | MINIMUM                       | TYPICAL | MAXIMUM      | UNITS         |
|---------------|--|-------------------------------|---------|--------------|---------------|
| $BV_{CEO}$    | $I_C = 10\text{ mA}$   | -60                           |         |              | V             |
| $BV_{CBO}$    | $I_C = 10\ \mu\text{A}$  | -60                           |         |              | V             |
| $I_{CBO}$     | $V_{CB} = -50\text{ V}$  |                               |         | 0.01<br>10   | $\mu\text{A}$ |
| $I_{CEX}$     | $V_{CE} = -30\text{ V}$ $V_{BE} = 0.5\text{ V}$  |                               |         | 50           | nA            |
| $I_B$         | $V_{CE} = -30\text{ V}$ $V_{BE} = 0.5\text{ V}$  |                               |         | 50           | nA            |
| $BV_{EBO}$    | $I_E = 10\ \mu\text{A}$  | -5.0                          |         |              | V             |
| $h_{FE}$      | $V_{CE} = -10\text{ V}$<br>$I_C = 100\ \mu\text{A}$<br>$I_C = 1.0\text{ mA}$<br>$I_C = 10\text{ mA}$<br>$I_C = 150\text{ mA}$<br>$I_C = 500\text{ mA}$ | 75<br>100<br>100<br>100<br>50 | 300     |              | ---           |
| $V_{CE(SAT)}$ | $I_C = 150\text{ mA}$ $I_B = 15\text{ mA}$<br>$I_C = 500\text{ mA}$ $I_B = 50\text{ mA}$   |                               |         | -0.4<br>-1.6 | V             |
| $V_{BE(SAT)}$ | $I_C = 150\text{ mA}$ $I_B = 15\text{ mA}$<br>$I_C = 500\text{ mA}$ $I_B = 50\text{ mA}$   |                               |         | -1.3<br>-2.6 | V             |

**DYNAMIC CHARACTERISTICS**  $T_c = 25^\circ\text{C}$ 

| SYMBOL    | TEST CONDITIONS   | MINIMUM | TYPICAL | MAXIMUM | UNITS      |
|-----------|---|---------|---------|---------|------------|
| $f_t$     | $V_{CE} = -20\text{ V}$ $I_C = 50\text{ mA}$ $f = 100\text{ MHz}$               | 200     |         |         | <b>MHz</b> |
| $C_{ob}$  | $V_{CB} = -10\text{ V}$ $f = 100\text{ KHz}$                                    |         |         | 8.0     | <b>pF</b>  |
| $C_{ib}$  | $V_{EB} = -2.0\text{ V}$ $f = 100\text{ KHz}$                                   |         |         | 30      | <b>pF</b>  |
| $t_{on}$  | $V_{CC} = -30\text{ V}$ $I_C = 150\text{ mA}$ $I_{B1} = 15\text{ mA}$           |         |         | 45      | <b>nS</b>  |
| $t_d$     | $V_{CC} = -30\text{ V}$ $I_C = 150\text{ mA}$ $I_{B1} = 15\text{ mA}$           |         |         | 10      | <b>nS</b>  |
| $T_r$     | $V_{CC} = -30\text{ V}$ $I_C = 150\text{ mA}$ $I_{B1} = 15\text{ mA}$           |         |         | 40      | <b>nS</b>  |
| $t_{off}$ | $V_{CC} = -6.0\text{ V}$ $I_C = 150\text{ mA}$ $I_{B1} = I_{B2} = 15\text{ mA}$ |         |         | 100     | <b>nS</b>  |
| $t_s$     | $V_{CC} = -6.0\text{ V}$ $I_C = 150\text{ mA}$ $I_{B1} = I_{B2} = 15\text{ mA}$ |         |         | 80      | <b>nS</b>  |
| $t_f$     | $V_{CC} = -6.0\text{ V}$ $I_C = 150\text{ mA}$ $I_{B1} = I_{B2} = 15\text{ mA}$ |         |         | 30      | <b>nS</b>  |