Central
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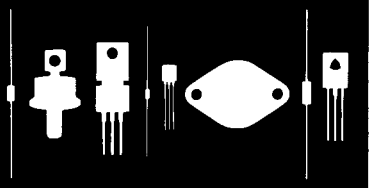

# PN4916
# PN4917

## PNP SILICON TRANSISTOR

JEDEC TO-92 CASE (EBC)

## DESCRIPTION

The CENTRAL SEMICONDUCTOR PN4916, PN4917 series types are epoxy molded silicon PNP small signal transistors manufactured by the epitaxial planar process for general purpose amplifier and switching applications.

## MAXIMUM RATINGS (TA=25°C unless otherwise noted)

| | SYMBOL | | UNIT |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | 30 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | 30 | V |
| Emitter-Base Voltage | $V_{EBO}$ | 5.0 | V |
| Collector Current | $I_C$ | 100 | mA |
| Power Dissipation | $P_D$ | 625 | mW |
| Power Dissipation ($T_C$=25°C) | $P_D$ | 1.5 | W |
| Operating and Storage Junction Temperature | $T_J$, $T_{STG}$ | -65 TO +150 | °C |

## ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

| | | PN4916 | | PN4917 | | |
|---|---|---|---|---|---|---|
| SYMBOL | TEST CONDITIONS | MIN | MAX | MIN | MAX | UNIT |
| $I_{CES}$ | $V_{CE}$=15V | | 25 | | 25 | nA |
| $I_{CES}$ | $V_{CE}$=15V, $T_A$=65°C | | 25 | | 25 | µA |
| $BV_{CBO}$ | $I_C$=10µA | 30 | | 30 | | V |
| $BV_{CES}$ | $I_C$=10µA | 30 | | 30 | | V |
| $BV_{CEO}$ | $I_C$=10mA | 30 | | 30 | | V |
| $BV_{EBO}$ | $I_E$=10µA | 5.0 | | 5.0 | | V |
| $V_{CE(SAT)}$ | $I_C$=1.0mA, $I_B$=0.1mA | | 0.13 | | 0.13 | V |
| $V_{CE(SAT)}$ | $I_C$=10mA, $I_B$=1.0mA | | 0.14 | | 0.14 | V |
| $V_{CE(SAT)}$ | $I_C$=50mA, $I_B$=5.0mA | | 0.3 | | 0.3 | V |
| $V_{BE(SAT)}$ | $I_C$=1.0mA, $I_B$=0.1mA | | 0.75 | | 0.75 | V |
| $V_{BE(SAT)}$ | $I_C$=10mA, $I_B$=1.0mA | 0.7 | 0.9 | 0.7 | 0.9 | V |
| $V_{BE(SAT)}$ | $I_C$=50mA, $I_B$=5.0mA | 0.75 | 1.1 | 0.75 | 1.1 | V |
| $h_{FE}$ | $V_{CE}$=1.0V, $I_C$=100µA | 40 | - | 100 | - | |
| $h_{FE}$ | $V_{CE}$=1.0V, $I_C$=1.0mA | 60 | - | 150 | - | |
| $h_{FE}$ | $V_{CE}$=1.0V, $I_C$=10mA | 70 | 200 | 150 | 300 | |
| $h_{FE}$ | $V_{CE}$=1.0V, $I_C$=50mA | 15 | - | 30 | - | |
| $f_T$ | $V_{CE}$=20V, $I_C$=10mA, f=100MHz | 400 | | 450 | | MHz |
| $C_{ob}$ | $V_{CE}$=10V, $I_E$=0, | | 4.5 | | 4.5 | pF |
| $C_{ib}$ | $V_{EB}$=0.5V, $I_C$=0, | | 8.0 | | 8.0 | pF |
| $t_{on}$ | $I_C$=50mA, $I_{B1}$=5.0mA | | 40 | | 40 | ns |
| $t_{off}$ | $I_C$=50mA, $I_{B1}$=5.0mA, $I_{B2}$=5.0mA | | 150 | | 150 | ns |
| $r_{b'Cc}$ | $V_{CE}$=20V, $I_C$=10mA, f=80MHz | | 50 | | 50 | ps |
| NF | $V_{CE}$=5.0V, $I_C$=1.0mA, $R_S$=100Ω, $B_W$=15MHz, f=100MHz | | 6.0 | | 6.0 | dB |
| NF | $V_{CE}$=5.0V, $I_C$=100µA, $R_S$=1.0kΩ, $B_W$=15.7kHz, 3.0 dB Points @ 10Hz and 10kHz | | 4.0 | | 4.0 | dB |

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