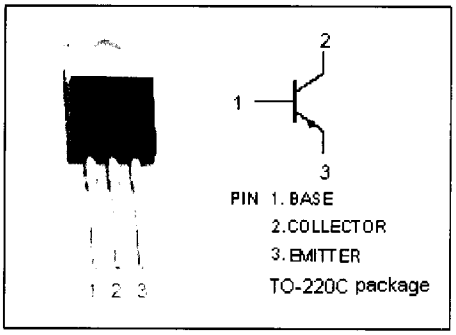
*New Jersey Semi-Conductor Products, Inc.*

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

# Silicon PNP Power Transistor — 2SA957

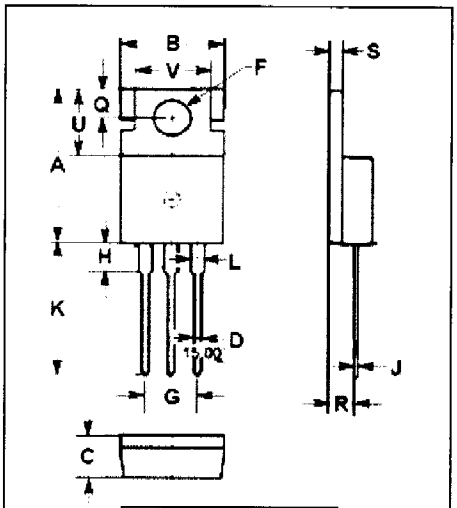



## DESCRIPTION

- Collector-Emitter Breakdown Voltage
  : $V_{(BR)CEO}$= -150V(Min)
- Good Linearity of $h_{FE}$

## APPLICATIONS

- Designed for general purpose applications.




| DIM | mm MIN | mm MAX |
|---|---|---|
| A | 15.50 | 15.90 |
| B | 9.90 | 10.20 |
| C | 4.20 | 4.50 |
| D | 0.70 | 0.90 |
| F | 3.40 | 3.70 |
| G | 4.98 | 5.18 |
| H | 2.68 | 2.90 |
| J | 0.44 | 0.60 |
| K | 13.00 | 13.40 |
| L | 1.20 | 1.45 |
| Q | 2.70 | 2.90 |
| R | 2.30 | 2.70 |
| S | 1.29 | 1.35 |
| U | 6.45 | 6.65 |
| V | 8.66 | 8.86 |

## ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -150 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -150 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -6 | V |
| $I_C$ | Collector Current-Continuous | -2 | A |
| $I_B$ | Base Current-Continuous | -1 | A |
| $P_C$ | Total Power Dissipation @ $T_C$=25℃ | 30 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |

## ELECTRICAL CHARACTERISTICS

**$T_C$=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= -25mA; $I_B$= 0 | -150 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= -0.7A; $I_B$= -70mA | | | -1.5 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= -150V; $I_E$= 0 | | | -100 | μ A |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= -6V; $I_C$= 0 | | | -1.0 | mA |
| $h_{FE}$ | DC Current Gain | $I_C$= -0.7A; $V_{CE}$= -10V | 40 | | | |
| $f_T$ | Current-Gain—Bandwidth Product | $I_E$= 0.2A; $V_{CE}$= -12V | | 20 | | MHz |

Switching times

| | | | | | | |
|---|---|---|---|---|---|---|
| $t_r$ | Rise Time | $I_C$= -1A, $R_L$= 20Ω , $I_{B1}$= -$I_{B2}$= -0.1A, $V_{CC}$= -20V | | 0.4 | | μ s |
| $t_{stg}$ | Storage Time | | | 1.5 | | μ s |
| $t_f$ | Fall Time | | | 0.5 | | μ s |