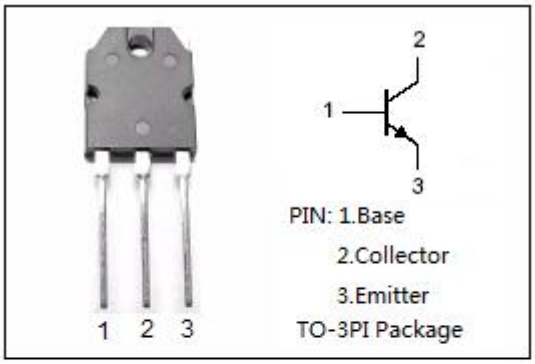
# SPTECH Silicon NPN Power Transistor




## DESCRIPTION

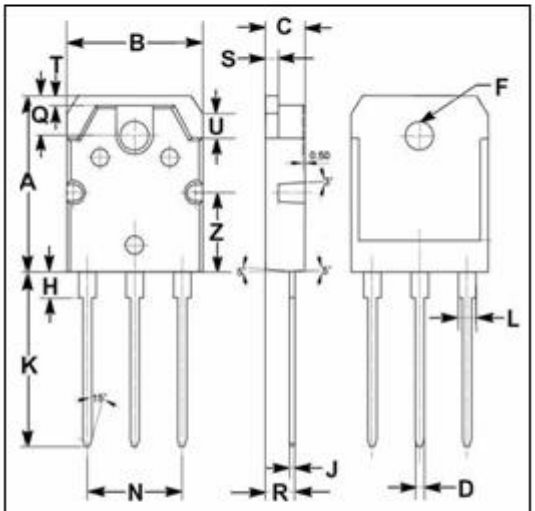
- High Collector Breakdown Voltage-
  : $V_{(BR)CEO}$= 230V(Min.)
- Good Linearity of $h_{FE}$
- Complement to Type 2SA1962

## APPLICATIONS

- Power amplifier applications
- Recommend for 80W high fidelity audio frequency amplifier output stage applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 230 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 230 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 5 | V |
| $I_C$ | Collector Current-Continuous | 15 | A |
| $I_B$ | Base Current-Continuous | 1.5 | A |
| $P_C$ | Collector Power Dissipation @ $T_C$=25℃ | 130 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |




| DIM | mm MIN | MAX |
|---|---|---|
| A | 19.60 | 20.10 |
| B | 15.30 | 15.70 |
| C | 4.00 | 4.60 |
| D | 0.90 | 1.10 |
| F | 3.20 | 3.40 |
| H | 2.90 | 3.10 |
| J | 0.50 | 0.70 |
| K | 19.90 | 21.30 |
| L | 1.20 | 2.20 |
| N | 10.80 | 11.00 |
| Q | 4.40 | 4.60 |
| R | 3.30 | 3.35 |
| S | 1.40 | 1.60 |
| T | 1.00 | 1.20 |
| U | 2.10 | 2.30 |
| Z | 7.90 | 9.10 |

# SPTECH Silicon NPN Power Transistor

## ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= 50mA ; $I_B$= 0 | 230 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= 8A; $I_B$= 0.8A | | | 3.0 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C$= 7A ; $V_{CE}$= 5V | | | 1.5 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= 230V ; $I_E$= 0 | | | 5 | μA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 5V; $I_C$= 0 | | | 5 | μA |
| $h_{FE-1}$ | DC Current Gain | $I_C$= 1A ; $V_{CE}$= 5V | 55 | | 160 | |
| $h_{FE-2}$ | DC Current Gain | $I_C$= 7A ; $V_{CE}$= 5V | 35 | | | |
| $C_{OB}$ | Output Capacitance | $I_E$= 0; $V_{CB}$= 10V; $f_{test}$= 1.0MHz | | 200 | | pF |
| $f_T$ | Current-Gain—Bandwidth Product | $I_C$= 1A ; $V_{CE}$= 5V | | 30 | | MHz |

◆ **$h_{FE-1}$ Classifications**

| R | O |
|---|---|
| 55-110 | 80-160 |