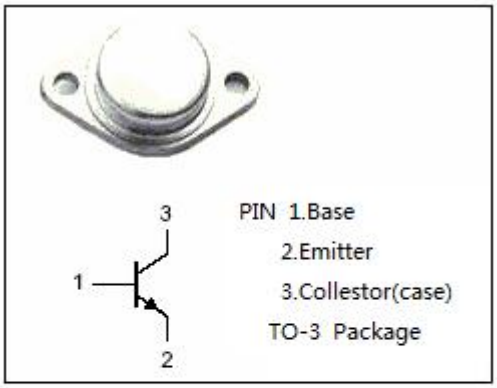
# isc Silicon NPN Power Transistors — BU126

## DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  :$V_{CEO(SUS)}$ = 300V(Min.)
- Collector Current- $I_C$= 3A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

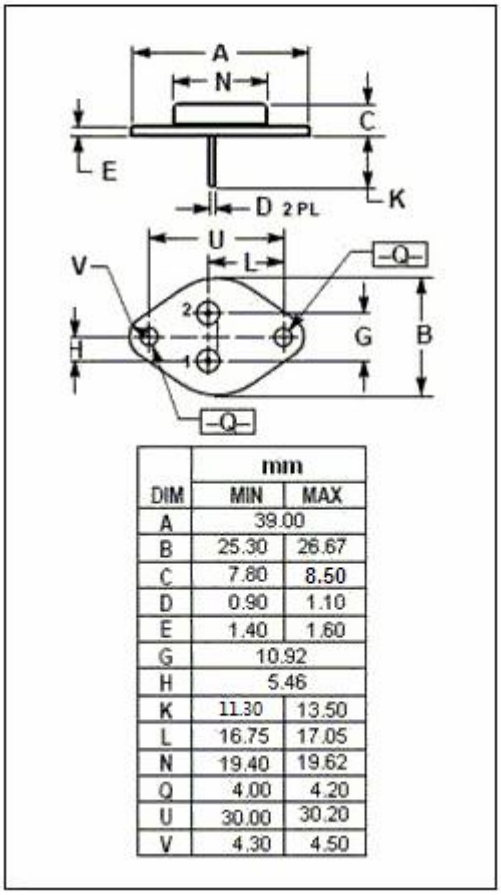



## APPLICATIONS

- Designed for use in regulator, inverter, switching mode power supply.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CES}$ | Collector-Emitter Voltage | 750 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 300 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 6 | V |
| $I_C$ | Collector Current-Continuous | 3 | A |
| $I_{CM}$ | Collector Current-Peak | 6 | A |
| $I_B$ | Base Current-Continuous | 2 | A |
| $P_C$ | Collector Power Dissipation @$T_C$= 25℃ | 40 | W |
| $T_j$ | Junction Temperature | 125 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -65~125 | ℃ |




| DIM | mm MIN | MAX |
|---|---|---|
| A | 39.00 | |
| B | 25.30 | 26.67 |
| C | 7.80 | 8.50 |
| D | 0.90 | 1.10 |
| E | 1.40 | 1.60 |
| G | 10.92 | |
| H | 5.46 | |
| K | 11.30 | 13.50 |
| L | 16.75 | 17.05 |
| N | 19.40 | 19.62 |
| Q | 4.00 | 4.20 |
| U | 30.00 | 30.20 |
| V | 4.30 | 4.50 |

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | 2.5 | ℃/W |

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## ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{CEO(SUS)}$ | Collector-Emitter Sustaining Voltage | $I_C$= 50mA; $I_B$= 0 | 300 | | | V |
| $V_{(BR)EBO}$ | Collector-Base Breakdown Voltage | $I_E$= 1mA; $I_C$= 0 | 6 | | | V |
| $V_{CE(sat)-1}$ | Collector-Emitter Saturation Voltage | $I_C$= 2.5A; $I_B$= 0.25A | | | 10 | V |
| $V_{CE(sat)-2}$ | Collector-Emitter Saturation Voltage | $I_C$= 4A; $I_B$= 1A | | | 5.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= 4A; $I_B$= 1A | | | 1.5 | V |
| $I_{CES}$ | Collector Cutoff Current | $V_{CE}$= 750V; $V_{BE}$= 0<br>$V_{CE}$= 750V; $V_{BE}$= 0; Ta= 125℃ | | | 0.5<br>2.0 | mA |
| $h_{FE}$ | DC Current Gain | $I_C$= 1A; $V_{CE}$= 15V | 15 | | | |
| $f_T$ | Current-Gain—Bandwidth Product | $I_C$= 0.2A; $V_{CE}$= 10V | | 10 | | MHz |
| $t_f$ | Fall Time | $I_C$= 2.5A; $I_B$= 0.25A | | 0.2 | | μs |