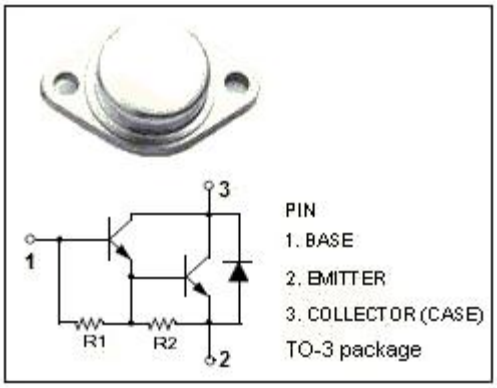
# isc Silicon NPN Darlington Power Transistor BUX28

## DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  $V_{CEO(SUS)}$= 350V(Min)
- High Reliability
- DARLINGTON
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

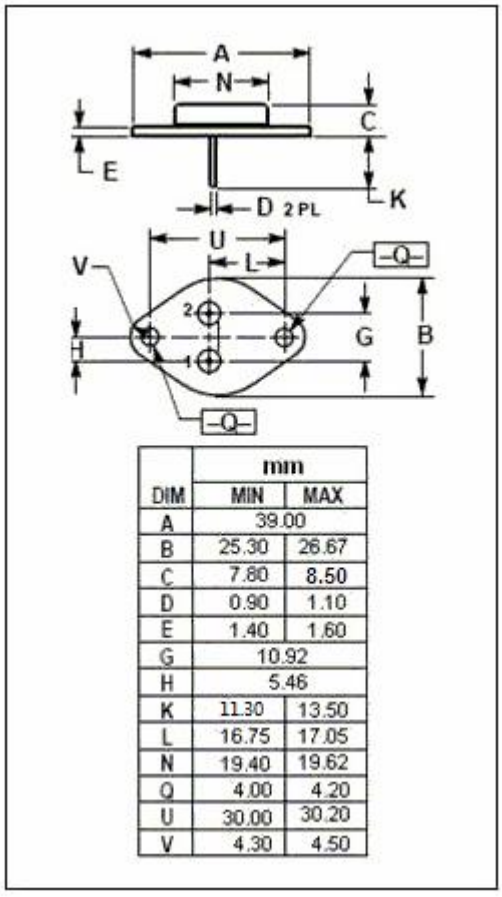



## APPLICATIONS

- Designed for use in firing circuits of cars and general purpose switching applications at high voltages.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CER}$ | Collector-Emitter Voltage | 350 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 350 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 8 | V |
| $I_C$ | Collector Current-Continuous | 8 | A |
| $I_{CM}$ | Collector Current-peak | 12 | A |
| $I_B$ | Base Current | 1.5 | A |
| $P_C$ | Collector Power Dissipation @$T_C$=25℃ | 80 | W |
| $T_j$ | Junction Temperature | 175 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -65~175 | ℃ |




| 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 Rresistance,Junction to Case | 1.2 | ℃/W |

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## ELECTRICAL CHARACTERISTICS

**Tj=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{CEO(SUS)}$ | Collector-Emitter Sustaining Voltage | $I_C$= 30mA ;$I_B$= 0 | 350 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= 8A; $I_B$= 0.3A | | | 2.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= 8A; $I_B$= 0.3A | | | 2.5 | V |
| $I_{CEO}$ | Collector Cutoff Current | $V_{CE}$= 350V; $I_B$= 0<br>$V_{CE}$= 350V; $I_B$= 0;$T_C$=125℃ | | | 1.0<br>10 | mA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 6V; $I_C$= 0 | | | 20 | mA |
| $h_{FE-1}$ | DC Current Gain | $I_C$= 5A ; $V_{CE}$= 1.5V | 50 | | | |
| $h_{FE-2}$ | DC Current Gain | $I_C$= 7A ; $V_{CE}$= 1.5V | 30 | | | |
| $V_{ECF}$ | C-E Diode Forward Voltage | $I_F$= 7A | | | 1.5 | V |