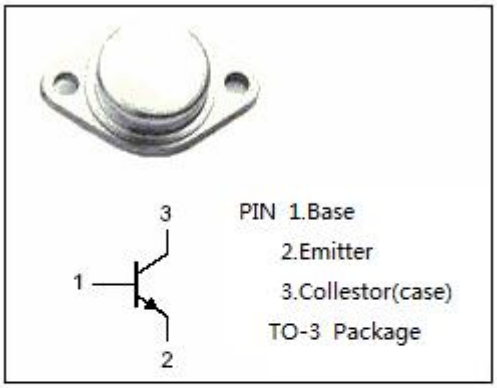
# isc Silicon NPN Power Transistor BUX88

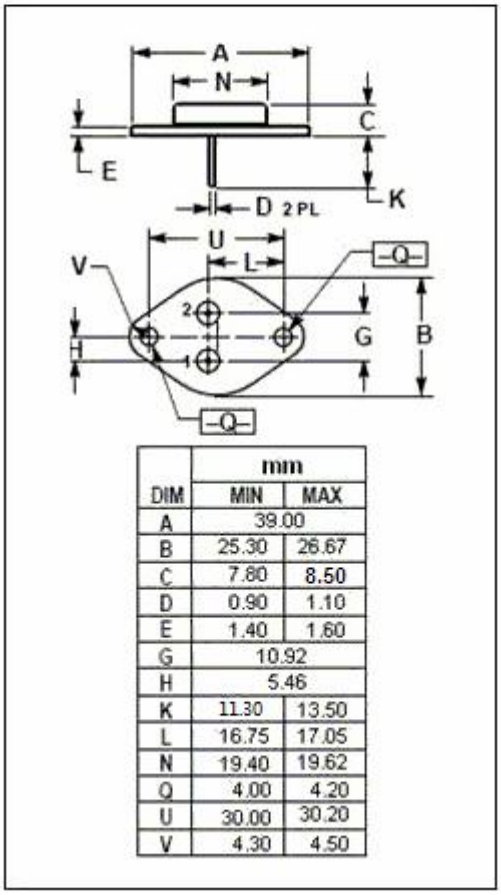
## DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 800V(Min)
- High Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Designed for use in three-phase AC motor control systems.




| 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 |

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CES}$ | Collector-Emitter Voltage $V_{BE}$= 0 | 1200 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 800 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 5 | V |
| $I_C$ | Collector Current-Continuous | 12 | A |
| $I_{CM}$ | Collector Current-Peak | 20 | A |
| $I_B$ | Base Current-Continuous | 8 | A |
| $I_{BM}$ | Base Current-Peak | 12 | A |
| $P_C$ | Collector Power Dissipation@$T_C$=25℃ | 160 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature | -65~150 | ℃ |

## THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}c}$ | Thermal Resistance,Junction to Case | 0.78 | ℃/W |

# isc Silicon NPN Power Transistor BUX88

## 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 | 800 | | | V |
| $V_{CE(sat)-1}$ | Collector-Emitter Saturation Voltage | $I_C$= 9A; $I_B$= 4A | | | 1.0 | V |
| $V_{CE(sat)-2}$ | Collector-Emitter Saturation Voltage | $I_C$= 12A; $I_B$= 6A | | | 3.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= 9A; $I_B$= 4A | | | 1.5 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= 1200V; $I_E$= 0<br>$V_{CB}$= 1200V; $I_E$= 0; $T_C$= 125℃ | | | 1.0<br>4.0 | mA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 5V; $I_C$=0 | | | 10 | mA |
| $h_{FE}$ | DC Current Gain | $I_C$= 0.5A ; $V_{CE}$= 5V | 6 | | | |