

isc Silicon NPN Power Transistor
BUX98A
DESCRIPTION

- High Voltage Capability
- High Current Capability
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

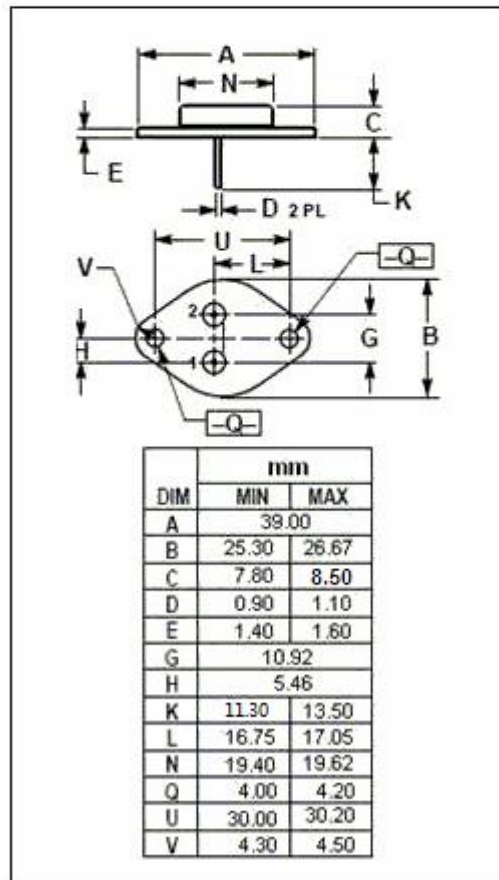
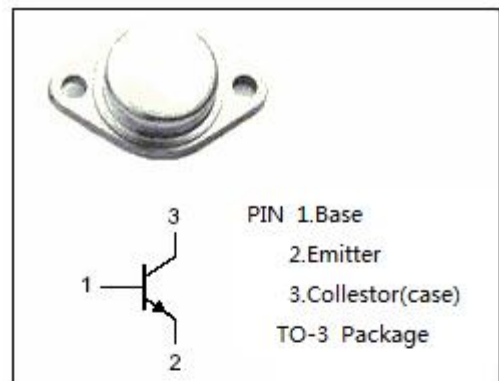
- High frequency and efficiency converters
- Linear and switching industrial equipment

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|---|---------|------|
| V _{CB0} | Collector-Base Voltage | 1000 | V |
| V _{CEO} | Collector-Emitter Voltage | 450 | V |
| V _{EBO} | Emitter-Base Voltage | 7 | V |
| I _C | Collector Current-Continuous | 30 | A |
| I _{CM} | Collector Current-peak (t _p <5 ms) | 60 | A |
| I _B | Base Current-Continuous | 8 | A |
| I _{BM} | Base Current-peak (t _p <5 ms) | 30 | A |
| P _C | Collector Power Dissipation @T _C =25°C | 250 | W |
| T _J | Junction Temperature | 200 | °C |
| T _{stg} | Storage Temperature Range | -65~200 | °C |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|--------------------------------------|-----|------|
| R _{th j-c} | Thermal Resistance, Junction to Case | 0.7 | °C/W |



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ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-------------------------|--------------------------------------|--|------|------|----------|------|
| ☆V _{CEO(SUS)} | Collector-Emitter Sustaining Voltage | I _C = 50mA ; I _B = 0 | 450 | | | V |
| V _{CER(SUS)} | Collector-Emitter Sustaining Voltage | I _C = 1mA | 1000 | | | V |
| ☆V _{CE(sat)-1} | Collector-Emitter Saturation Voltage | I _C = 16A ; I _B = 3.2A | | | 1.5 | V |
| ☆V _{CE(sat)-2} | Collector-Emitter Saturation Voltage | I _C = 24A ; I _B = 5A | | | 5.0 | V |
| ☆V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = 16A ; I _B = 3.2A | | | 1.6 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} =1000V; I _E = 0 V _{CB} =1000V; I _E = 0 T _C =125°C | | | 0.4 4 | mA |
| I _{CEO} | Collector Cutoff Current | V _{CE} = 450V; I _B = 0 | | | 2 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 5V; I _C = 0 | | | 2 | mA |
| h _{FE} | DC Current Gain | I _C = 1A ; V _{CE} = 5V | 15 | | 50 | |

☆ Pulsed: Pulse duration = 300 ms, duty cycle = 1.5 %

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