

isc Silicon NPN Power Transistor

BD317

DESCRIPTION

- Excellent Safe Operating Area
- DC Current Gain- $h_{FE}=25(\text{Min.})@I_C=5A$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)}=1.0V(\text{Max})@I_C=8A$
- Complement to Type BD318
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

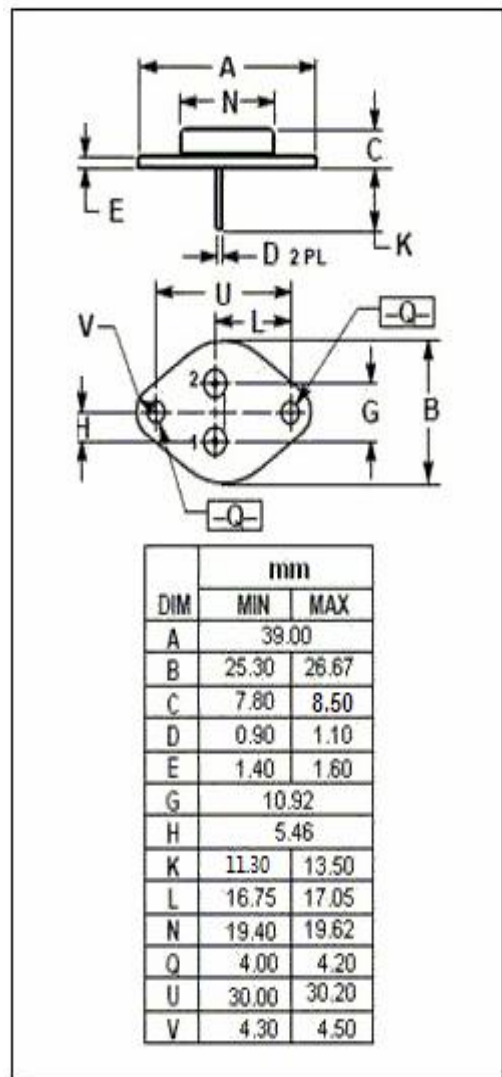
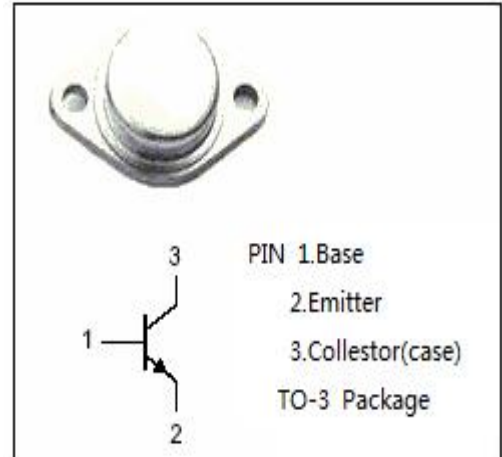
- Designed for high quality amplifiers operating up to 100 watts into 8 ohm load.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 100 | V |
| V_{CEO} | Collector-Emitter Voltage | 100 | V |
| V_{EBO} | Emitter-Base Voltage | 7 | V |
| I_C | Collector Current-Continuous | 16 | A |
| I_{CM} | Collector Current-Peak | 20 | A |
| I_B | Base Current-Continuous | 5 | A |
| P_C | Collector Power Dissipation@ $T_C=25^\circ\text{C}$ | 200 | W |
| T_J | Junction Temperature | 200 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -65~200 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|--------------|--------------------------------------|-------|--------------------|
| $R_{th j-c}$ | Thermal Resistance, Junction to Case | 0.875 | $^\circ\text{C/W}$ |



isc Silicon NPN Power Transistor**BD317****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|-----------------------|--------------------------------------|--|-----|-----|------|
| V _{CEQ(SUS)} | Collector-Emitter Sustaining Voltage | I _C =30mA; I _B =0 | 100 | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 8A; I _B = 0.8A | | 1.0 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = 8A; I _B = 0.8A | | 1.8 | V |
| V _{BE(on)} | Base-Emitter On Voltage | I _C = 8A; V _{CE} = 2V | | 1.5 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 100V; I _B =0 | | 1.0 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 7V; I _C =0 | | 1.0 | mA |
| h _{FE-1} | DC Current Gain | I _C = 5A; V _{CE} = 4V | 25 | | |
| h _{FE-2} | DC Current Gain | I _C = 10A; V _{CE} = 4V | 15 | | |
| f _T | Current Gain-Bandwidth Product | I _C = 1A; V _{CE} = 20V | 1 | | MHz |

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