

Silicon PNP Power Transistor

BD318

DESCRIPTION

- Excellent Safe Operating Area
- DC Current Gain- $h_{FE} = 25(\text{Min.}) @ I_C = -5A$
- Collector-Emitter Saturation Voltage-
 $V_{CE(\text{sat})} = -1.0 \text{ V}(\text{Max}) @ I_C = -8A$
- Complement to Type BD317

APPLICATIONS

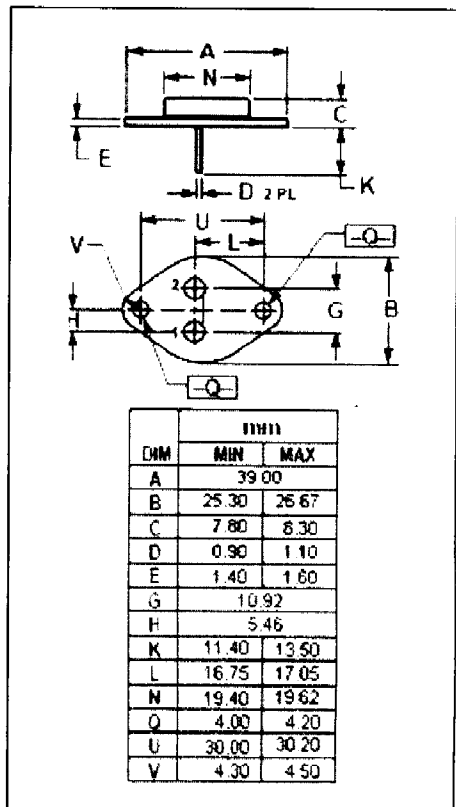
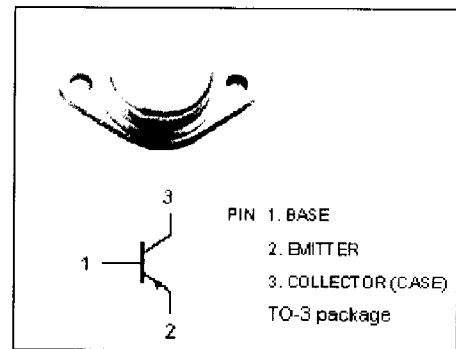
- Designed for high quality amplifiers operating up to 100 watts into 8 ohm load.

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-jc} | Thermal Resistance, Junction to Case | 0.875 | $^\circ\text{C/W}$ |



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ELECTRICAL CHARACTERISTICS

$T_c=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|----------------|--------------------------------------|--------------------------------------|------|------|------|
| $V_{CEO(SUS)}$ | Collector-Emitter Sustaining Voltage | $I_C=-200\text{mA}; I_B=0$ | -100 | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=-8\text{A}; I_B=-0.8\text{A}$ | | -1.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C=-8\text{A}; I_B=-0.8\text{A}$ | | -1.8 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C=-8\text{A}; V_{CE}=-2\text{V}$ | | -1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB}=-80\text{V}; I_B=0$ | | -1.0 | mA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}=-7\text{V}; I_C=0$ | | -1.0 | mA |
| h_{FE-1} | DC Current Gain | $I_C=-5\text{A}; V_{CE}=-4\text{V}$ | 25 | | |
| h_{FE-2} | DC Current Gain | $I_C=-10\text{A}; V_{CE}=-4\text{V}$ | 15 | | |
| f_T | Current Gain-Bandwidth Product | $I_C=-1\text{A}; V_{CE}=-20\text{V}$ | 1 | | MHz |