

isc Silicon NPN Power Transistor
2SC1871
DESCRIPTION

- Collector-Emitter Breakdown Voltage
 $-V_{(BR)CEO} = 400V(\text{Min})$
- Collector-Emitter Saturation Voltage
 $-V_{CE(sat)} = 1.0V(\text{Max}) @ I_C = 4A$

APPLICATIONS

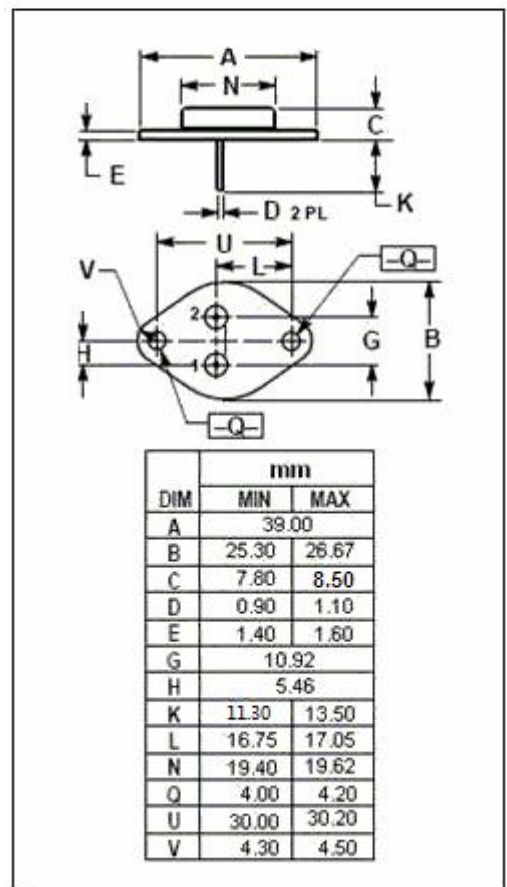
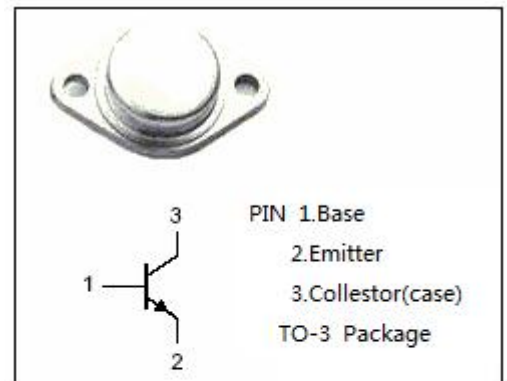
- Designed for power amplifier, high speed switching and regulated power supply applications.

ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|------------------------------|---------|------|
| V _{CBO} | Collector-Base Voltage | 450 | V |
| V _{CEO} | Collector-Emitter Voltage | 400 | V |
| V _{EBO} | Emitter-Base Voltage | 7 | V |
| I _C | Collector Current-Continuous | 20 | A |
| P _C | Collector Power Dissipation | 120 | W |
| T _J | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature Range | -55~150 | °C |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------------|--------------------------------------|------|------|
| R _{th j-c} | Thermal Resistance, Junction to Case | 1.25 | °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 = 30mA ; I _B = 0 | 400 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 4A; I _B = 0.8A | | | 1.0 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = 4A; I _B = 0.8A | | | 1.5 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 450V, I _E = 0 | | | 0.1 | mA |
| I _{CEO} | Collector Cutoff Current | V _{CE} = 400V, I _B = 0 | | | 1.0 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 7V; I _C = 0 | | | 0.1 | mA |
| h _{FE-1} | DC Current Gain | I _C =5A; V _{CE} = 5V | 15 | | | |
| h _{FE-2} | DC Current Gain | I _C =10A; V _{CE} = 5V | 10 | | | |

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