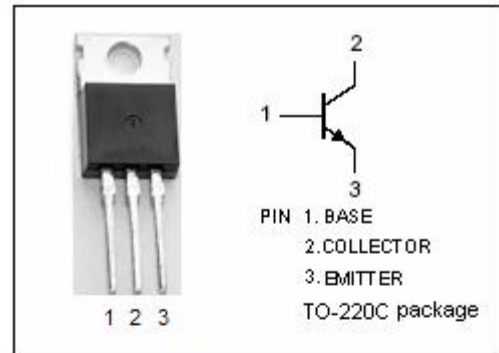


isc Silicon NPN Power Transistor

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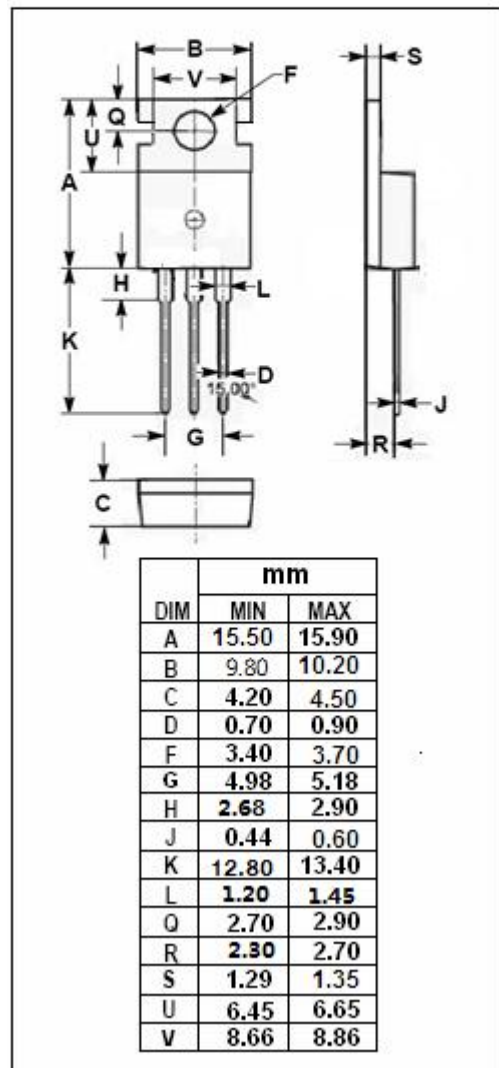
DESCRIPTION

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



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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 1100 | V |
| V_{CEO} | Collector-Emitter Voltage | 800 | V |
| V_{EBO} | Emitter-Base Voltage | 7 | V |
| I_C | Collector Current-Continuous | 3 | A |
| I_{CM} | Collector Current-Peak | 10 | A |
| I_B | Base Current-Continuous | 1.5 | A |
| P_C | Collector Power Dissipation @ $T_C = 25^\circ\text{C}$ | 50 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature | -55~150 | $^\circ\text{C}$ |



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ELECTRICAL CHARACTERISTICS

T_j=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|----------------------|--------------------------------------|--|------|------|-----|------|
| BV _{EBO} | Emitter -Base Breakdown Voltage | I _E = 1mA; I _C = 0 | 7 | | | V |
| BV _{CEO} | Collector- Emitter Breakdown Voltage | I _C = 5mA; I _B = 0 | 800 | | | V |
| BV _{CBO} | Collector- Base Breakdown Voltage | I _C = 1mA; I _E = 0 | 1100 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 1.5A; I _B = 0.3A | | | 2.0 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = 1.5A; I _B = 0.3A | | | 1.5 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 800V; I _E = 0 | | | 10 | μ A |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 5V; I _C = 0 | | | 10 | μ A |
| h _{FE1} | DC Current Gain | I _C = 0.2A; V _{CE} = 5V | 10 | | 40 | |
| h _{FE2} | DC Current Gain | I _C = 1A; V _{CE} = 5V | 8 | | | |
| C _{OB} | Output Capacitance | I _E = 0; V _{CB} = 10V; f= 1MHz | | 60 | | pF |
| f _T | Current-Gain—Bandwidth Product | I _E = 0.2A; V _{CE} = 10V | | 12 | | MHz |

hFE1 : N: 10 ~ 20 R: 15 ~ 30 O: 20 ~ 40

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