

isc Silicon NPN Power Transistors

TIP29A

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CE(SUS)} = 60V(\text{Min})$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 0.7V(\text{Max.})@I_C = 1.0A$
- Complement to Type TIP30A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

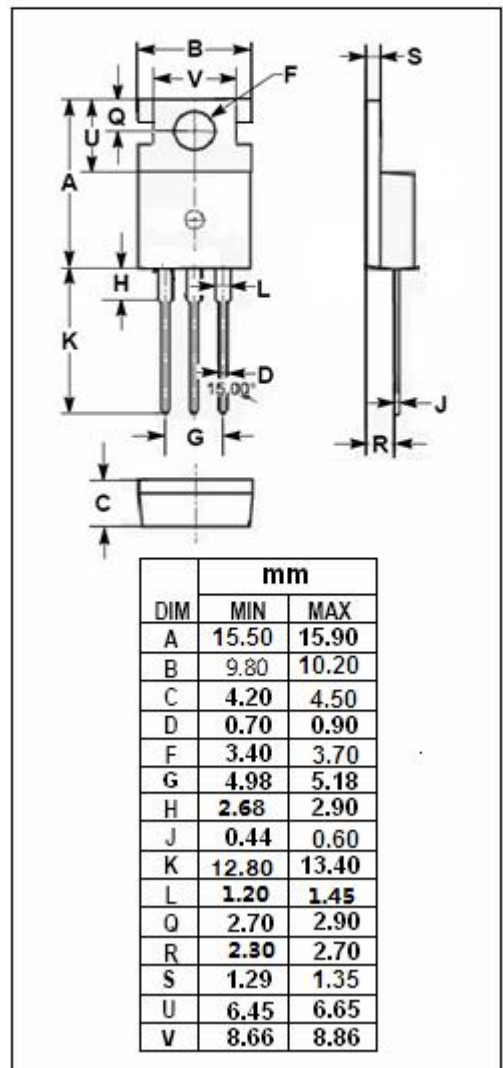
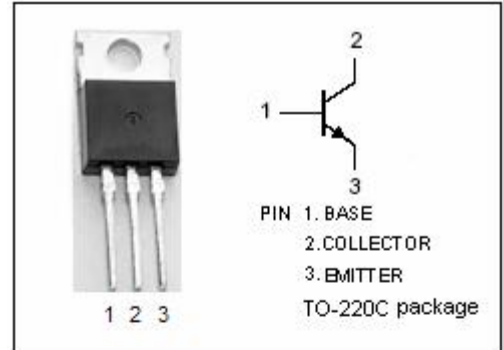
- Designed for use in general purpose amplifier and switching applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 60 | V |
| V_{CEO} | Collector-Emitter Voltage | 60 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current-Continuous | 1 | A |
| I_{CM} | Collector Current-Pulse | 3 | A |
| I_B | Base Current | 0.4 | A |
| P_C | Collector Power Dissipation $T_c=25^\circ\text{C}$ | 30 | W |
| T_j | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -65~150 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|---|------|--------------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 4.17 | $^\circ\text{C/W}$ |
| $R_{th\ j-a}$ | Thermal Resistance, Junction to Ambient | 62.5 | $^\circ\text{C/W}$ |



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|-----------------------|--------------------------------------|--|-----|-----|------|
| V _{CE0(SUS)} | Collector-Emitter Sustaining Voltage | I _C = 30mA; I _B = 0 | 60 | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = 1A; I _B = 0.125A | | 0.7 | V |
| V _{BE(on)} | Base-Emitter On Voltage | I _C = 1A; V _{CE} = 4V | | 1.3 | V |
| I _{CES} | Collector Cutoff Current | V _{CE} = 60V; V _{EB} = 0 | | 0.2 | mA |
| I _{CEO} | Collector Cutoff Current | V _{CE} = 60V; I _B = 0 | | 0.3 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 5V; I _C = 0 | | 1.0 | mA |
| h _{FE-1} | DC Current Gain | I _C = 0.2A; V _{CE} = 4V | 40 | | |
| h _{FE-2} | DC Current Gain | I _C = 1A; V _{CE} = 4V | 15 | 75 | |
| f _T | Current-Gain—Bandwidth Product | I _C = 0.2A ; V _{CE} = 10V; f= 1MHz | 3 | | MHz |

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