

# isc Silicon NPN Power Transistor

## 2SC1449

### DESCRIPTION

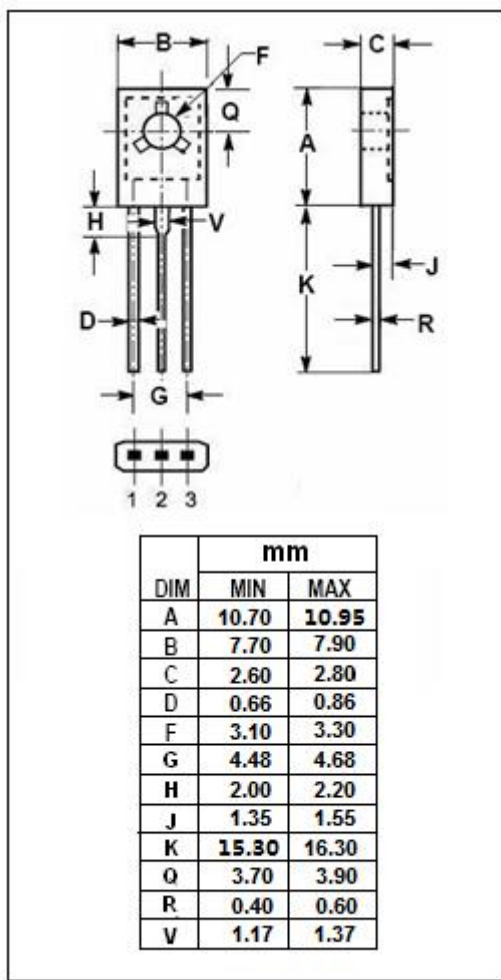
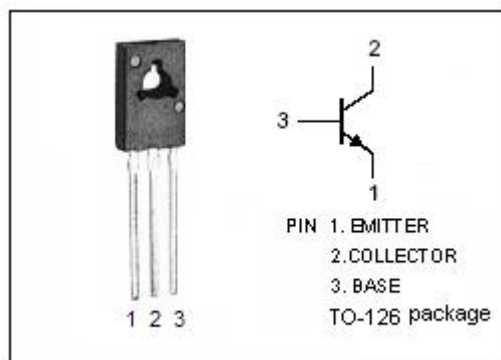
- High Collector Current  $I_C = 2.0A$
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = 35V(\text{Min})$
- Good Linearity of  $h_{FE}$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Designed for low frequency power amplifier applications.

### ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ C$ )

| SYMBOL    | PARAMETER   | VALUE   | UNIT       |
|-----------|---|---------|------------|
| $V_{CBO}$ | Collector-Base Voltage                              | 40      | V          |
| $V_{CEO}$ | Collector-Emitter Voltage                           | 35      | V          |
| $V_{EBO}$ | Emitter-Base Voltage                                | 5       | V          |
| $I_C$     | Collector Current-Continuous                        | 2.0     | A          |
| $P_C$     | Collector Power Dissipation<br>@ $T_C = 25^\circ C$ | 1       | W          |
|           | Collector Power Dissipation<br>@ $T_a = 25^\circ C$ | 10      |            |
| $T_J$     | Junction Temperature                                | 150     | $^\circ C$ |
| $T_{stg}$ | Storage Temperature Range                           | -55~150 | $^\circ C$ |



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## ELECTRICAL CHARACTERISTICS

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

| SYMBOL        | PARAMETER                            | CONDITIONS                           | MIN | TYP. | MAX | UNIT          |
|---------------|--------------------------------------|--------------------------------------|-----|------|-----|---------------|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage     | $I_C=1\text{mA}; I_E=0$              | 40  |      |     | V             |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage  | $I_C=10\text{mA}; R_{BE}=\infty$     | 35  |      |     | V             |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage       | $I_E=1\text{mA}; I_C=0$              | 5   |      |     | V             |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=0.5\text{A}; I_B=0.05\text{A}$  |     |      | 0.7 | V             |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage      | $I_C=0.5\text{A}; I_B=0.05\text{A}$  |     |      | 1.5 | V             |
| $I_{CBO}$     | Collector Cutoff Current             | $V_{CB}=40\text{V}; I_E=0$           |     |      | 100 | $\mu\text{A}$ |
| $h_{FE}$      | DC Current Gain                      | $I_C=300\text{mA}; V_{CE}=2\text{V}$ | 40  |      | 250 |               |
| $f_T$         | Current-Gain—Bandwidth Product       | $I_C=100\text{mA}; V_{CE}=5\text{V}$ |     | 55   |     | MHz           |

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