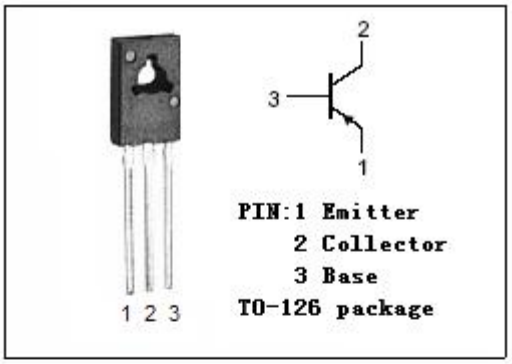
# *isc* Silicon PNP Power Transistor — 2SB1009

## DESCRIPTION

- High Collector Current -$I_C$= -2A
- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= -32V(Min)
- Good Linearity of $h_{FE}$
- Low Saturation Voltage
- Complement to Type 2SD1380
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

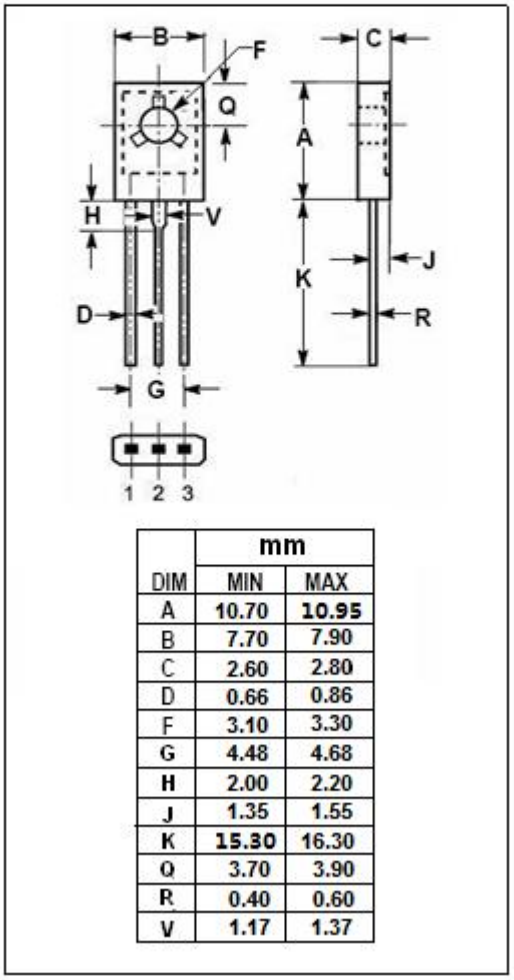



## APPLICATIONS

- Designed for low frequency power amplifier applications.

## ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -40 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -32 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -5 | V |
| $I_C$ | Collector Current-Continuous | -2 | A |
| $I_{CP}$ | Collector Current-Pulse | -3 | A |
| $P_C$ | Collector Power Dissipation @ $T_C$=25℃ | 10 | W |
| | Collector Power Dissipation @ $T_a$=25℃ | 1.2 | |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |




| DIM | mm MIN | MAX |
|---|---|---|
| A | 10.70 | 10.95 |
| B | 7.70 | 7.90 |
| C | 2.60 | 2.80 |
| D | 0.66 | 0.86 |
| F | 3.10 | 3.30 |
| G | 4.48 | 4.68 |
| H | 2.00 | 2.20 |
| J | 1.35 | 1.55 |
| K | 15.30 | 16.30 |
| Q | 3.70 | 3.90 |
| R | 0.40 | 0.60 |
| V | 1.17 | 1.37 |

# *isc* Silicon PNP Power Transistor 2SB1009

## ELECTRICAL CHARACTERISTICS

**$T_C$=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= -1mA; $I_B$=0 | -32 | | | V |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C$= -50 μ A; $I_E$= 0 | -40 | | | V |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage | $I_E$= -50 μ A; $I_C$= 0 | -5 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= -2A; $I_B$= -0.2A | | | -0.8 | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= -20V; $I_E$= 0 | | | -1.0 | μ A |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= -4V; $I_C$= 0 | | | -1.0 | μ A |
| $h_{FE}$ | DC Current Gain | $I_C$= -0.5A; $V_{CE}$= -5V | 82 | | 390 | |

◆ **$h_{FE}$ Classifications**

| P | Q | R |
|---|---|---|
| 82-180 | 120-270 | 180-390 |