

isc Silicon PNP Power Transistor

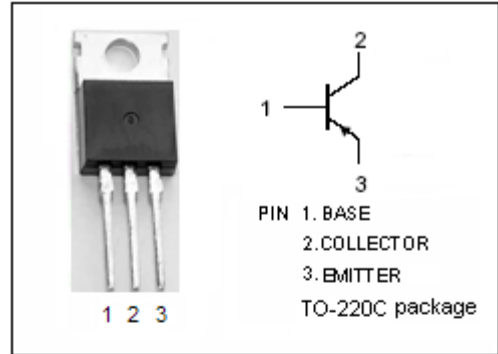
BD304

DESCRIPTION

- DC Current Gain -
: $h_{FE} = 30(\text{Min.}) @ I_C = -2A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -60V(\text{Min.})$
- Complement to Type BD303

APPLICATIONS

- Designed for audio output stages up to 25W, vertical deflection circuits in color TV receivers.

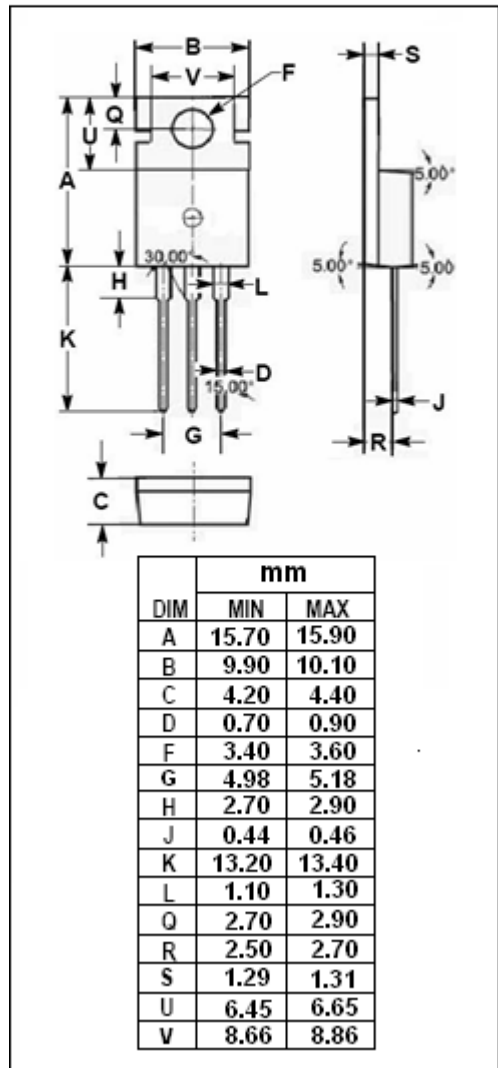


ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

| 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 | -8 | A |
| I_{CM} | Collector Current-Peak | -12 | A |
| I_B | Base Current-Continuous | -2 | A |
| P_C | Collector Power Dissipation @ $T_C=25^\circ\text{C}$ | 55 | 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 | 2.3 | $^\circ\text{C/W}$ |



isc Silicon PNP Power Transistor**BD304****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---------------|--------------------------------------|--|-----|------|------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C = -200\text{mA}; I_B = 0$ | -60 | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -3\text{A}; I_B = -0.3\text{A}$ | | -1.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C = -3\text{A}; I_B = -0.3\text{A}$ | | -1.5 | V |
| I_{CEO} | Collector Cutoff Current | $V_{CE} = -30\text{V}; I_B = 0$ | | -1.0 | mA |
| I_{CBO} | Collector Cutoff Current | $V_{CB} = -40\text{V}; I_E = 0; T_C = 150^\circ\text{C}$ | | -1.0 | mA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB} = -5\text{V}; I_C = 0$ | | -5.0 | mA |
| h_{FE} | DC Current Gain | $I_C = -2\text{A}; V_{CE} = -2\text{V}$ | 30 | | |
| f_T | Current-Gain—Bandwidth Product | $I_C = -0.3\text{A}; V_{CE} = -3\text{V}$ | 3 | | MHz |