

isc Silicon PNP Power Transistor

2SA1357

DESCRIPTION

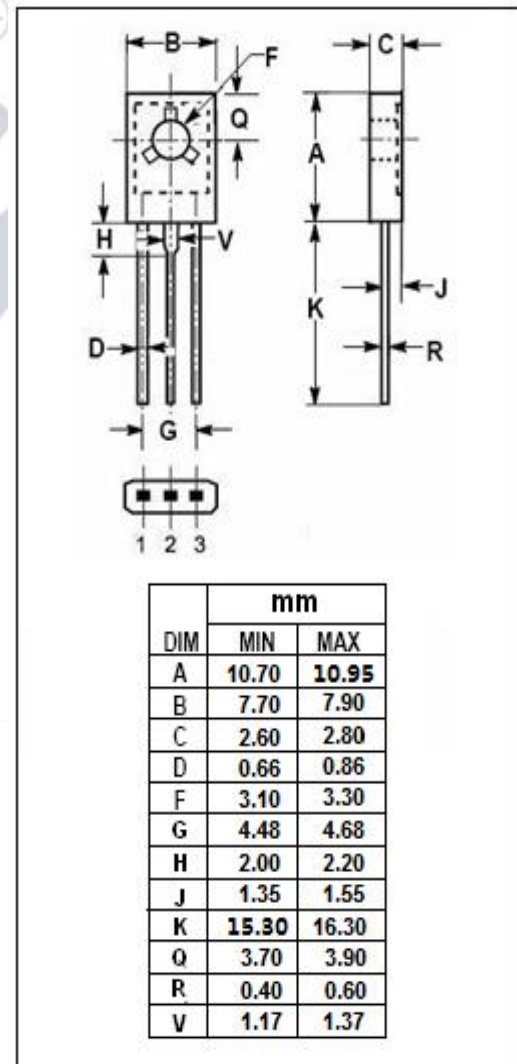
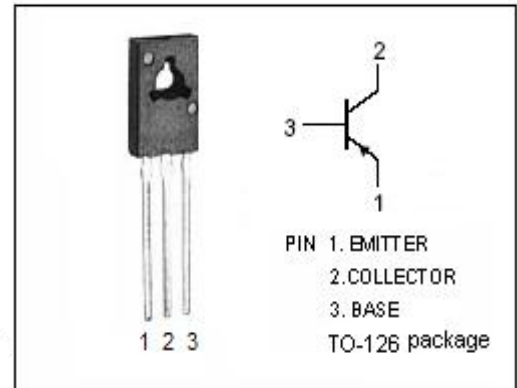
- High Collector Current- $I_C = -5.0A$
- DC Current Gain-
: $h_{FE} = 70(\text{Min}) @ I_C = -4A$
- Low Saturation Voltage
: $V_{CE(\text{sat})} = -1.0V(\text{Max}) @ I_C = -4A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Strobe flash applications.
- Audio power amplifier applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | -35 | V |
| V_{CEO} | Collector-Emitter Voltage | -20 | V |
| V_{EBO} | Emitter-Base Voltage | -8 | V |
| I_C | Collector Current-Continuous | -5 | A |
| I_{CP} | Collector Current-Pulse | -8 | A |
| I_B | Base Current-Continuous | -1 | A |
| P_C | Collector Power Dissipation @ $T_C = 25^\circ\text{C}$ | 10 | W |
| | Collector Power Dissipation @ $T_a = 25^\circ\text{C}$ | 1.5 | |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



isc Silicon PNP Power Transistor**2SA1357****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|---|-----|------|------|---------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C = -10\text{mA}$; $I_B = 0$ | -20 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -4\text{A}$; $I_B = -0.1\text{A}$ | | | -1.0 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C = -4\text{A}$; $V_{CE} = -2\text{V}$ | | | -1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB} = -35\text{V}$; $I_E = 0$ | | | -0.1 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB} = -8\text{V}$; $I_C = 0$ | | | -0.1 | μA |
| h_{FE-1} | DC Current Gain | $I_C = -0.5\text{A}$; $V_{CE} = -2\text{V}$ | 100 | | 320 | |
| h_{FE-2} | DC Current Gain | $I_C = -4\text{A}$; $V_{CE} = -2\text{V}$ | 70 | | | |
| f_T | Current-Gain—Bandwidth Product | $I_C = -0.5\text{A}$; $V_{CE} = -2\text{V}$ | | 170 | | MHz |
| C_{OB} | Output Capacitance | $I_E = 0$; $V_{CB} = -10\text{V}$, $f_{test} = 1\text{MHz}$ | | 62 | | pF |

◆ **h_{FE-1} Classifications**

| O | Y |
|---------|---------|
| 100-200 | 160-320 |

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