

isc Silicon NPN Power Transistor

KSD794A

DESCRIPTION

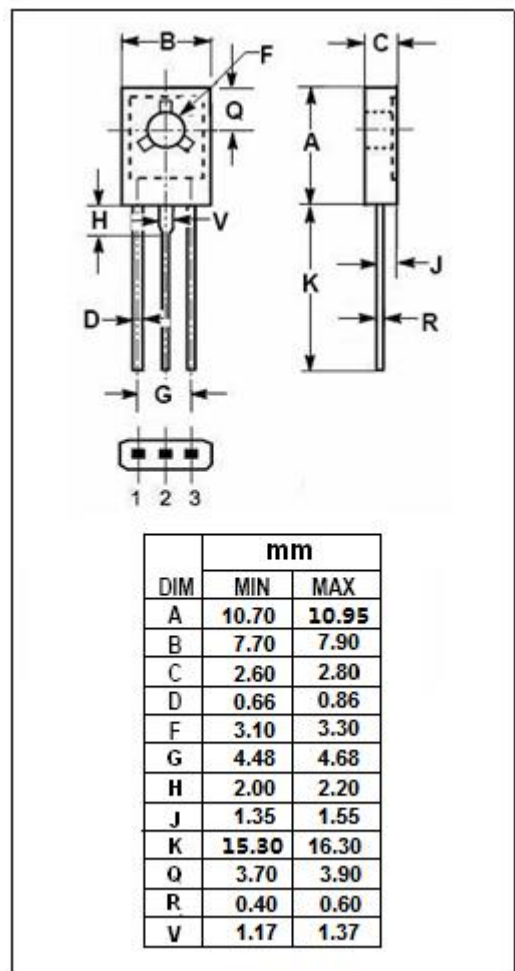
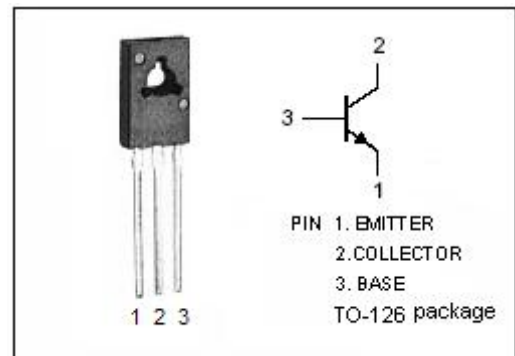
- High Collector Current $-I_C = 3A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 45V(\text{Min})$
- Complement to Type KSB744A
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in audio frequency amplifier.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 70 | V |
| V_{CEO} | Collector-Emitter Voltage | 45 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current-Continuous | 3 | A |
| I_{CP} | Collector Current-Pulse | 5 | A |
| I_B | Base Current-Continuous | 0.6 | A |
| P_C | Collector Power Dissipation @ $T_C = 25^\circ\text{C}$ | 10 | W |
| | Collector Power Dissipation @ $T_a = 25^\circ\text{C}$ | 1 | |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



isc Silicon NPN Power Transistor**KSD794A****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|--|-----|------|-----|---------------|
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = 1.5\text{A}; I_B = 0.15\text{A}$ | | | 2.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C = 1.5\text{A}; I_B = 0.15\text{A}$ | | | 2.0 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB} = 45\text{V}; I_E = 0$ | | | 1.0 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB} = 3\text{V}; I_C = 0$ | | | 1.0 | μA |
| h_{FE-1} | DC Current Gain | $I_C = 20\text{mA}; V_{CE} = 5\text{V}$ | 30 | | | |
| h_{FE-2} | DC Current Gain | $I_C = 0.5\text{A}; V_{CE} = 5\text{V}$ | 60 | | 320 | |
| f_T | Current-Gain—Bandwidth Product | $I_C = 0.1\text{A}; V_{CE} = 5\text{V}$ | | 60 | | MHz |
| C_{OB} | Output Capacitance | $I_E = 0; V_{CB} = 10\text{V}, f_{test} = 1\text{MHz}$ | | 40 | | pF |

◆ h_{FE-2} Classifications

| R | O | Y |
|--------|---------|---------|
| 60-120 | 100-200 | 160-320 |

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