

NPN SILICON POWER TRANSISTORS 2SD794, 2SD794A

DESCRIPTION The 2SD794, 2SD794A is an NPN general purpose transistor designed for use in Audio frequency amplifier.

- FEATURES**
- High Voltage and Large Current capacity.
 - Complementary to NEC 2SB744, 2SB744A PNP transistor.

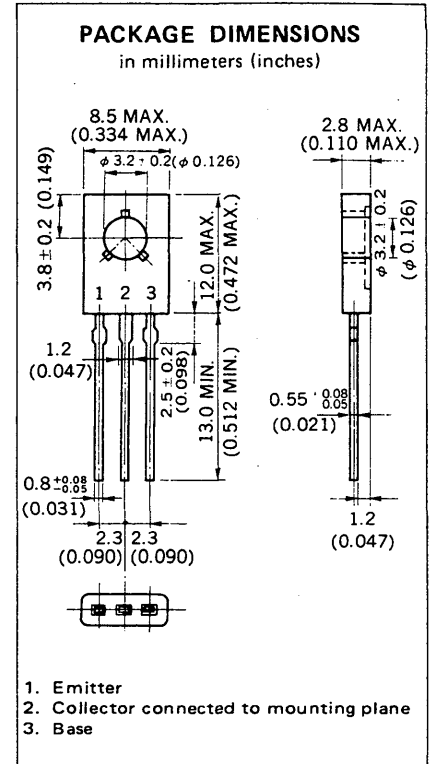
ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures
 Storage Temperature -55 to +150 °C
 Junction Temperature 150 °C Maximum

Maximum Power Dissipations
 Total Power Dissipation ($T_a = 25\text{ °C}$) 1.0 W
 Total Power Dissipation ($T_c = 25\text{ °C}$) 10 W

Maximum Voltages and Currents ($T_a = 25\text{ °C}$)

| | | | |
|----------------|--|-----|-------|
| | 2SD794, 2SD794A | | |
| V_{CBO} | Collector to Base Voltage . | 70 | 70 V |
| V_{CEO} | Collector to Emitter Voltage | 45 | 60 V |
| V_{EBO} | Emitter to Base Voltage . . | 5.0 | 5.0 V |
| $I_{C(DC)}$ | Collector Current (DC) . . | 3.0 | 3.0 A |
| $I_{C(pulse)}$ | Collector Current (pulse) . | 5.0 | 5.0 A |



ELECTRICAL CHARACTERISTICS ($T_a = 25\text{ °C}$)

| SYMBOL | CHARACTERISTIC | MIN. | TYP. | MAX. | UNIT | TEST CONDITIONS |
|---------------|------------------------------|------|------|------|---------------|---|
| h_{FE1} | DC Current Gain | 30 | 70 | | | $V_{CE} = 5.0\text{ V}, I_C = 20\text{ mA}^*$ |
| h_{FE2} | DC Current Gain | 60 | 100 | 320 | | $V_{CE} = 5.0\text{ V}, I_C = 0.5\text{ A}^*$ |
| f_T | Gain Bandwidth Product | | 60 | | MHz | $V_{CE} = 5.0\text{ V}, I_C = 0.1\text{ A}$ |
| C_{ob} | Output Capacitance | | 40 | | pF | $V_{CB} = 10\text{ V}, I_E = 0, f = 1.0\text{ MHz}$ |
| I_{CBO} | Collector Cutoff Current | | | 1.0 | μA | $V_{CB} = 45\text{ V}, I_E = 0$ |
| I_{EBO} | Emitter Cutoff Current | | | 1.0 | μA | $V_{EB} = 3.0\text{ V}, I_C = 0$ |
| $V_{CE(sat)}$ | Collector Saturation Voltage | | 0.3 | 2.0 | V | $I_C = 1.5\text{ A}, I_B = 0.15\text{ A}^*$ |
| $V_{BE(sat)}$ | Base Saturation Voltage | | 0.8 | 2.0 | V | $I_C = 1.5\text{ A}, I_B = 0.15\text{ A}^*$ |

*Pulse Test : $PW \leq 350\text{ }\mu\text{s}$, Duty Cycle $\leq 2\%$

Classification of h_{FE2}

| Rank | R | Q | P |
|-------|-----------|------------|------------|
| Range | 60 to 120 | 100 to 200 | 160 to 320 |

Test Conditions : $V_{CE} = 5.0\text{ V}, I_C = 0.5\text{ A}$

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

