

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 $+150^{\circ}\text{C}$

Junction Temperature 150 °C Maximum

Maximum Power Dissipations

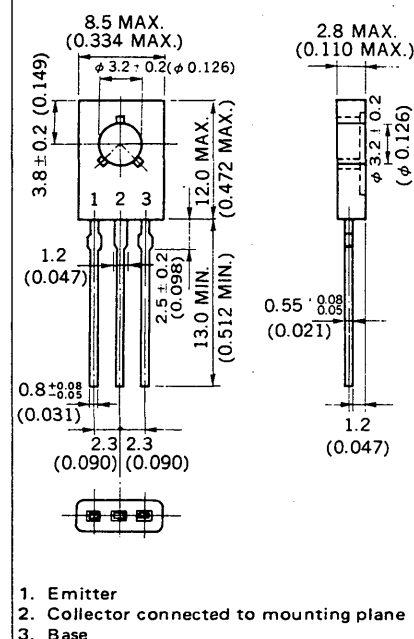
Total Power Dissipation ($T_a = 25^\circ\text{C}$) 1.0 W

Total Power Dissipation ($T_C = 25^\circ\text{C}$) 10 W

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

		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

PACKAGE DIMENSIONS
in millimeters (inches)



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

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 : $PW \leq 350 \mu s$, 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 ($T_a = 25^\circ\text{C}$)

