

NPN SILICON POWER TRANSISTORS 2SD794, 2SD794A

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

FEATURES

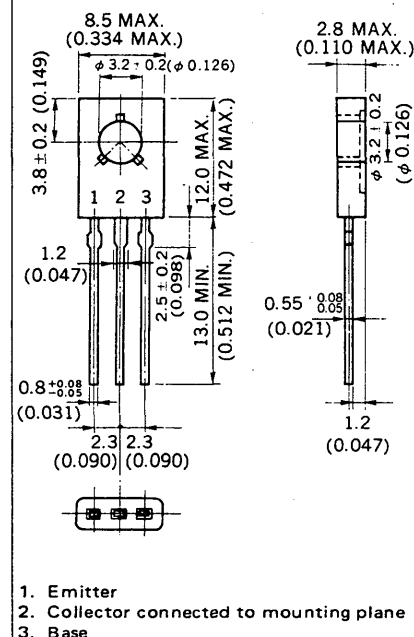
- High Voltage and Large Current capacity.
- Complementary to NEC 2SB744, 2SB744A PNP transistor.

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

PACKAGE DIMENSIONS in millimeters (inches)



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

