

## PNP SILICON DARLINGTON POWER TRANSISTORS 2SB794, 2SB795

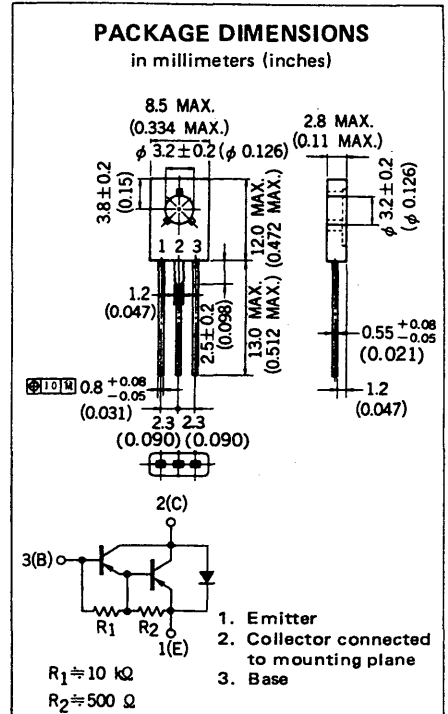
**DESCRIPTION** The 2SB794, 2SB795 are darlington transistors built-in diode at C-E. They are suitable for use operating from IC without predriver, such as hammer driver.

- FEATURES**
- High DC Current Gain.
  - Low Collector Saturation Voltage.
  - Built-in a diode at C-E.
  - Complementary to the NEC 2SD985, 2SD986 NPN Transistors.

**ABSOLUTE MAXIMUM RATINGS**

Maximum Temperatures	
Storage Temperature	-55 to +150 °C
Junction Temperature	+150 °C Maximum
Maximum Power Dissipations	
Total Power Dissipation (T <sub>a</sub> = 25 °C)	1.0 W
Total Power Dissipation (T <sub>c</sub> = 25 °C)	10 W
Maximum Voltages and Currents (T <sub>a</sub> = 25 °C)	
	2SB794    2SB795
V <sub>CB0</sub> Collector to Base Voltage	-60    -80 V
V <sub>CEO</sub> Collector to Emitter Voltage	-60    -80 V
V <sub>EBO</sub> Emitter to Base Voltage	-8.0    V
I <sub>C(DC)</sub> Collector Current	±1.5    A
I <sub>C(pulse)*</sub> Collector Current	±3.0    A

\* PW ≤ 10 ms, Duty Cycle ≤ 50 %



**ELECTRICAL CHARACTERISTICS (T<sub>a</sub> = 25 °C)**

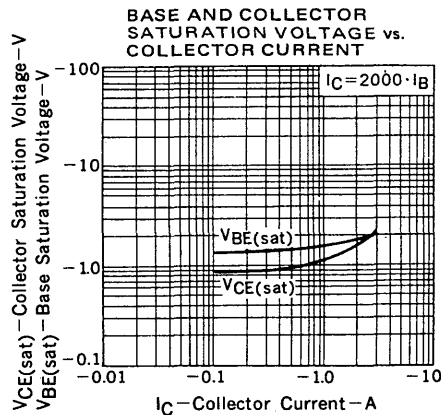
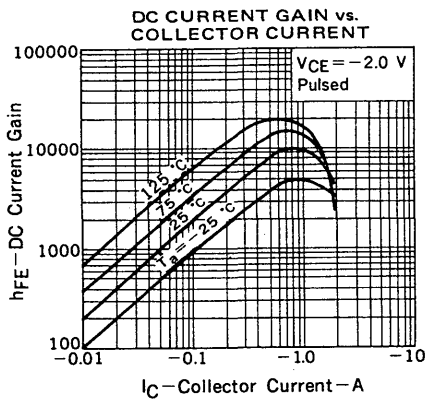
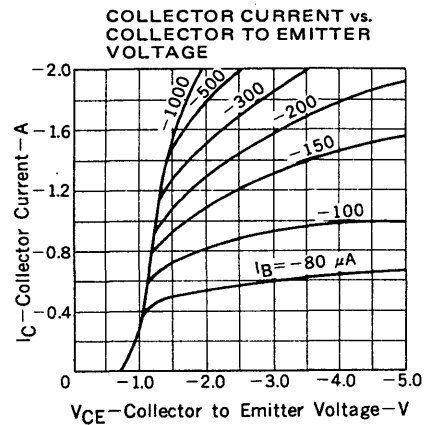
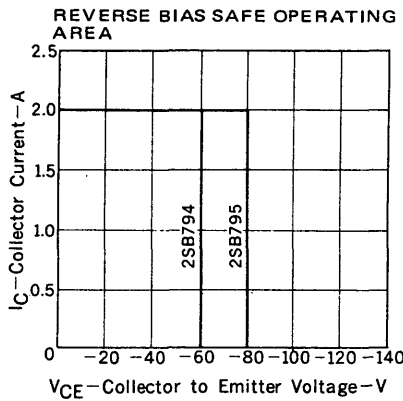
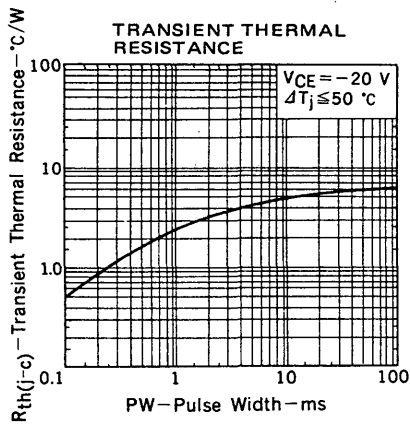
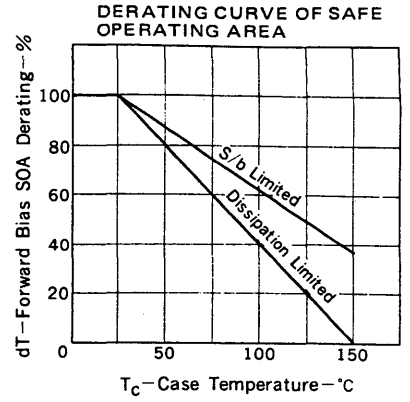
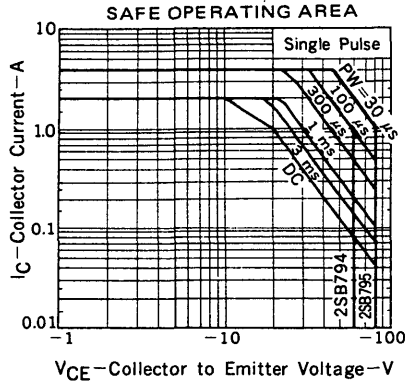
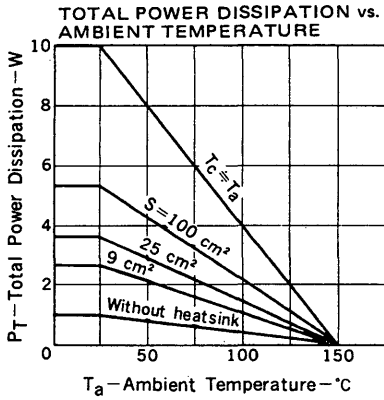
SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h <sub>FE1</sub>	DC Current Gain	1000			-	V <sub>CE</sub> = -2.0 V, I <sub>C</sub> = -0.5 A
h <sub>FE2</sub>	DC Current Gain	2000		30000	-	V <sub>CE</sub> = -2.0 V, I <sub>C</sub> = -1.0 A
t <sub>on</sub>	Turn On Time		0.5		μs	I <sub>C</sub> = -1.0 A, R <sub>L</sub> = 50 Ω I <sub>B1</sub> = -I <sub>B2</sub> = -1.0 mA, V <sub>CC</sub> = -50 V See Test Circuit.
t <sub>stg</sub>	Storage Time		1.0		μs	
t <sub>f</sub>	Fall Time		1.0		μs	
I <sub>CB0</sub>	Collector Cutoff Current			-1.0	μA	V <sub>CB</sub> = -60/-80 V, I <sub>E</sub> = 0
I <sub>EBO</sub>	Emitter Cutoff Current			-1.0	mA	V <sub>EB</sub> = -5.0 V, I <sub>C</sub> = 0
V <sub>CE(sat)</sub>	Collector Saturation Voltage			-15	V	I <sub>C</sub> = -1.0 A, I <sub>B</sub> = -1.0 mA
V <sub>BE(sat)</sub>	Base Saturation Voltage			-2.0	V	I <sub>C</sub> = -1.0 A, I <sub>B</sub> = -1.0 mA

**Classification of h<sub>FE1</sub>**

Rank	M	L	K
Range	2000 to 5000	4000 to 10000	8000 to 30000

Test Conditions: V<sub>CE</sub> = -2.0 V, I<sub>C</sub> = -1.0 A

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



SWITCHING TIME ( $t_{on}$ ,  $t_{stg}$ ,  $t_f$ ) TEST CIRCUIT

