

PNP SILICON DARLINGTON POWER TRANSISTORS 2SB794, 2SB795

DESCRIPTION The 2SB794, 2SB795 are darlington transistors built-in dumper diodes 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 dumper 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

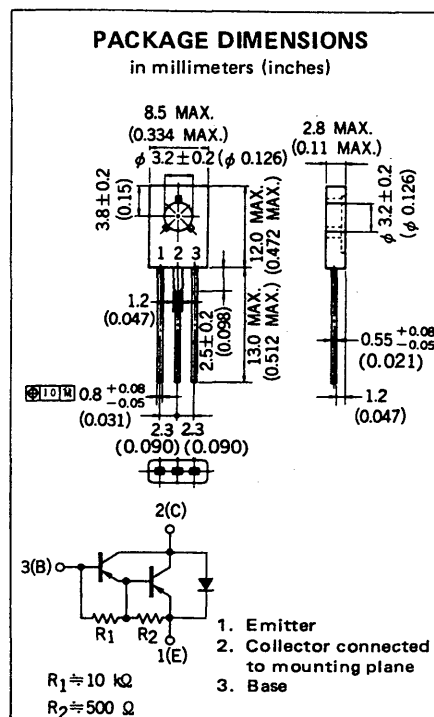
Total Power Dissipation ($T_a = 25\text{ °C}$) 1.0 W

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

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

		2SB794	2SB795
V_{CB0}	Collector to Base Voltage. . .	-60	-80 V
V_{CE0}	Collector to Emitter Voltage. .	-60	-80 V
V_{EB0}	Emitter to Base Voltage. . . .	-8.0	V
$I_{C(DC)}$	Collector Current.	±1.5	A
$I_{C(pulse)}^*$	Collector Current.	±3.0	A

* $PW \leq 10\text{ ms}$, Duty Cycle $\leq 50\%$



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

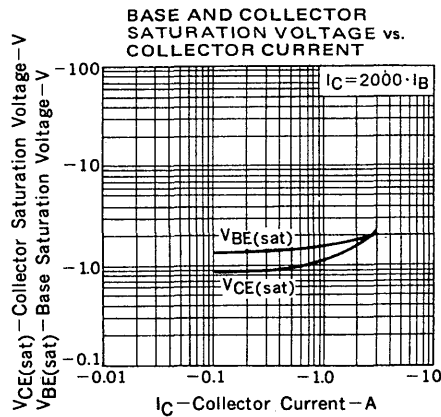
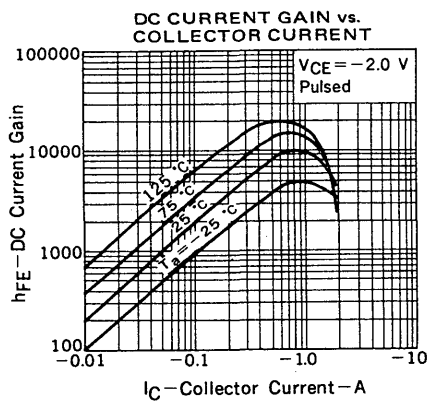
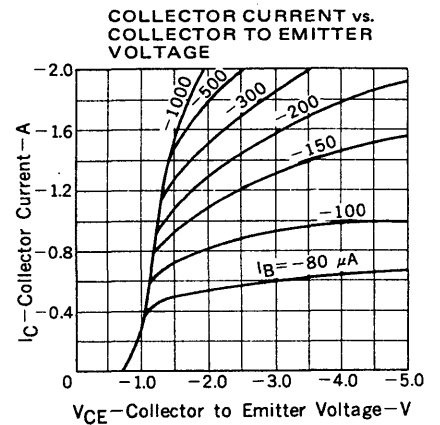
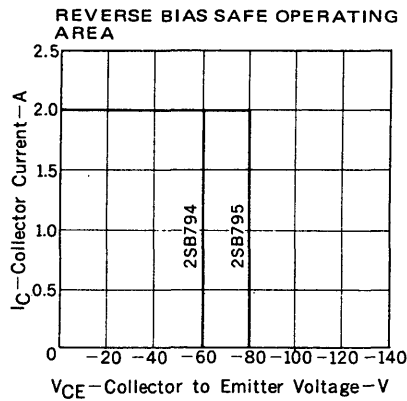
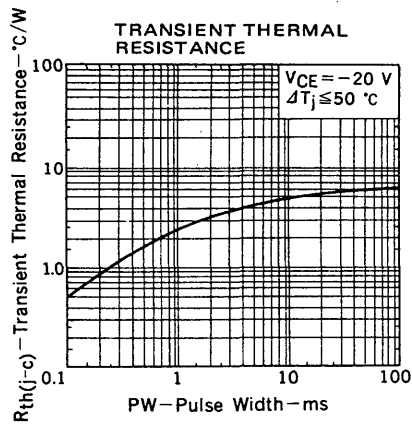
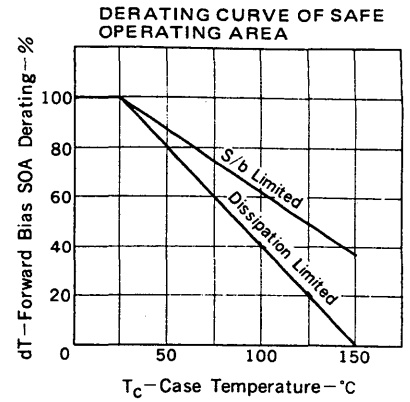
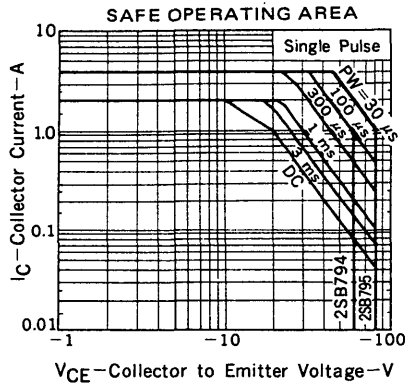
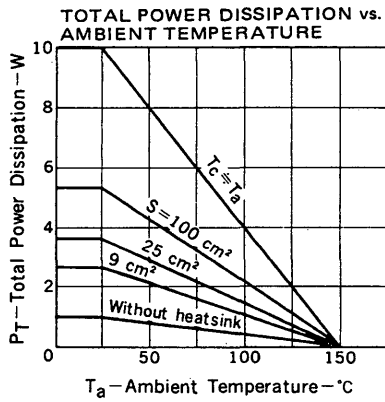
SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
h_{FE1}	DC Current Gain	1000			—	$V_{CE} = -2.0\text{ V}$, $I_C = -0.5\text{ A}$
h_{FE2}	DC Current Gain	2000		30000	—	$V_{CE} = -2.0\text{ V}$, $I_C = -1.0\text{ A}$
t_{on}	Turn On Time		0.5		μs	$I_C = -1.0\text{ A}$, $R_L = 50\text{ }\Omega$
t_{stg}	Storage Time		1.0		μs	$I_{B1} = -I_{B2} = -1.0\text{ mA}$, $V_{CC} = -50\text{ V}$
t_f	Fall Time		1.0		μs	See Test Circuit.
I_{CBO}	Collector Cutoff Current			-1.0	μA	$V_{CB} = -60/-80\text{ V}$, $I_E = 0$
I_{EBO}	Emitter Cutoff Current			-1.0	mA	$V_{EB} = -5.0\text{ V}$, $I_C = 0$
$V_{CE(sat)}$	Collector Saturation Voltage			-15	V	$I_C = -1.0\text{ A}$, $I_B = -1.0\text{ mA}$
$V_{BE(sat)}$	Base Saturation Voltage			-2.0	V	$I_C = -1.0\text{ A}$, $I_B = -1.0\text{ mA}$

Classification of h_{FE1}

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

Test Conditions: $V_{CE} = -2.0\text{ V}$, $I_C = -1.0\text{ A}$

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



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