

2SB1194

Silicon PNP Epitaxial Planar Darlington Type

Power Switching

Complementary Pair with 2SD1633

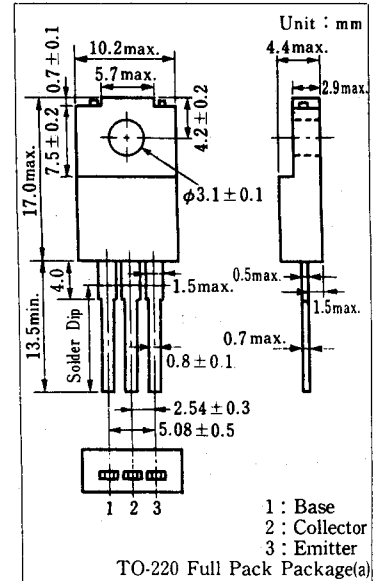
■ Features

- High speed switching
- Good linearity of DC current gain (h_{FE})
- High collector current (I_C)
- "Full Pack" package for simplified mounting on a heat sink with one screw

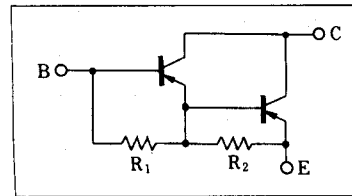
■ Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-base voltage	V_{CB0}	-100	V
Collector-emitter voltage	V_{CE0}	-100	V
Emitter-base voltage	V_{EB0}	-7	V
Peak collector current	I_{CP}	-8	A
Collector current	I_C	-5	A
Base current	I_B	-0.5	A
Collector power dissipation	P_C	$T_c=25^\circ\text{C}$	30
		$T_a=25^\circ\text{C}$	2
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

■ Package Dimensions



■ Inner Circuit



■ Electrical Characteristics ($T_c=25^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -100\text{ V}, I_E = 0$			-100	μA
	I_{CEO}	$V_{CE} = -100\text{ V}, I_B = 0$			-100	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -7\text{ V}, I_C = 0$			-5	mA
Collector-emitter voltage	$V_{CE(sus)}$	$I_C = -0.2\text{ A}$	-100			V
DC current gain	h_{FE}^*	$V_{CE} = -3\text{ V}, I_C = -3\text{ A}$	1500		10000	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -3\text{ A}, I_B = -3\text{ mA}$			-1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -3\text{ A}, I_B = -3\text{ mA}$			-2	V
Transition frequency	f_T	$V_{CE} = -10\text{ V}, I_C = -1\text{ A}, f = 10\text{ MHz}$		30		MH
Turn-on time	t_{on}	$I_C = -3\text{ A}, I_{B1} = -3\text{ mA}, I_{B2} = 3\text{ mA}$ $V_{CC} = -50\text{ V}$			3	μs
Storage time	t_{stg}				5	μs
Collector current fall time	t_f				3	μs

* h_{FE} Classifications

Class	Q	P
h_{FE}	1500 ~ 6000	4000 ~ 10000