

2SB1194

Silicon PNP Epitaxial Planar Darlington Type

Power Switching
Complementary Pair with 2SD1633

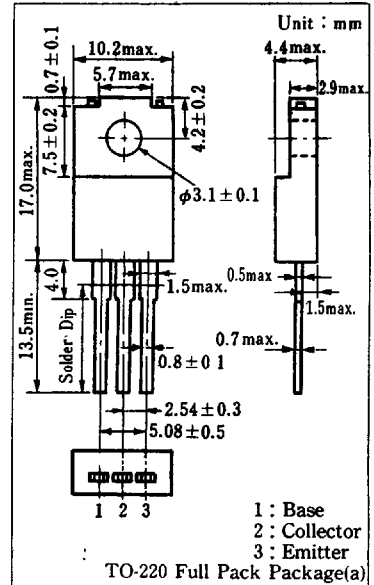
Features

- 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

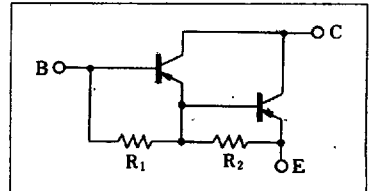
Absolute Maximum Ratings ($T_c=25^\circ C$)

Item	Symbol	Value	Unit	
Collector-base voltage	V_{CBO}	-100	V	
Collector-emitter voltage	V_{CEO}	-100	V	
Emitter-base voltage	V_{EBO}	-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	$T_c=25^\circ C$	30	W
		$T_a=25^\circ C$	2	
Junction temperature	T_j	150	$^\circ C$	
Storage temperature	T_{stg}	-55 ~ +150	$^\circ C$	

Package Dimensions



Inner Circuit



Electrical Characteristics ($T_c=25^\circ C$)

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

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