

Power transistor

2SB1184

■ Features

- Low $V_{CE(sat)}$.
- PNP silicon transistor.
- Epitaxial planar type

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-60	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-3	A
Collector power dissipation($T_c=25^\circ\text{C}$)	P_C	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C = -50\mu\text{A}$	-60			V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = -1\text{mA}$	-50			V
Emitter-base breakdown voltage	BV_{EBO}	$I_E = -50\mu\text{A}$	-5			V
Collector cutoff current	I_{CBO}	$V_{CB} = -40\text{V}$			-1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -4\text{V}$			-1	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -2\text{A}, I_B = -0.2\text{A}$			-1	V
DC current transfer ratio	h_{FE}	$V_{CE} = -3\text{V}, I_C = -0.5\text{A}$	82		390	
Output capacitance	f_T	$V_{CE} = -5\text{V}, I_E = 0.5\text{A}, f = 30\text{MHz}$		70		MHz
Transition frequency	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0\text{A}, f = 1\text{MHz}$		50		pF

■ h_{FE} Classification

Rank	P	Q	R
h_{FE}	82~180	120~270	180~390