

Power Transistor (–80V, –4A)

2SB1644

●Features

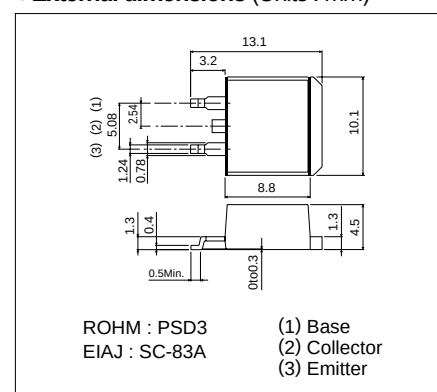
- 1) Low saturation voltage.
(Typ. $V_{CE(sat)} = -0.5V$ at $I_C / I_B = -3A / -0.3A$)
- 2) Excellent DC current gain characteristics.

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	–80	V
Collector-emitter voltage	V_{CEO}	–80	V
Emitter-base voltage	V_{EBO}	–5	V
Collector current	I_C	–4	A (DC)
		–6	A (Pulse) ★
Collector power dissipation	P_C	30	W (Tc = 25°C)
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	–55~+150	°C

★ Single pulse, Pw = 100ms

●External dimensions (Units : mm)



●Packaging specifications and hFE

Type	2SB1644
Package	PSD3
h_{FE}	EF
Code	T100
Basic ordering unit (pieces)	1000

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	–80	–	–	V	$I_C = -50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	–60	–	–	V	$I_C = -1mA$
Emitter-base breakdown voltage	BV_{EBO}	–5	–	–	V	$I_E = -50\mu A$
Collector cutoff current	I_{CBO}	–	–	–10	μA	$V_{CB} = -80V$
Emitter cutoff current	I_{EBO}	–	–	–10	μA	$V_{EB} = -4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	–1.5	V	$I_C/I_B = -3A/-0.3A$ ★
Base-emitter saturation voltage	$V_{BE(sat)}$	–	–	–1.5	V	$I_C/I_B = -3A/-0.3A$ ★
DC current transfer ratio	h_{FE}	100	–	320	–	$V_{CE}/I_C = -5V/-1A$
Transition frequency	f_T	–	12	–	MHz	$V_{CE} = -5V, I_E = 0.5A, f = 5MHz$ ★
Output capacitance	C_{ob}	–	100	–	pF	$V_{CB} = -10V, I_E = 0A, f = 1MHz$

★ Measured using pulse current.