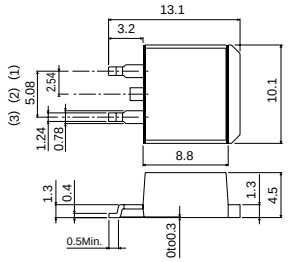
Power Transistor (–80V, –4A)

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.

●External dimensions (Units : mm)



ROHM : PSD3
EIAJ : SC-83A

(1) Base
(2) Collector
(3) Emitter

●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	Tj	150	°C
Storage temperature	Tstg	–55~+150	°C

* Single pulse, Pw = 100ms

●Packaging specifications and h_{FE}

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 = –50μA
Collector-emitter breakdown voltage	BV_{CEO}	–60	–	–	V	I_C = –1mA
Emitter-base breakdown voltage	BV_{EBO}	–5	–	–	V	I_E = –50μA
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	Cob	–	100	–	pF	V_{CB} = –10V , I_E = 0A , f = 1MHz

* Measured using pulse current.