

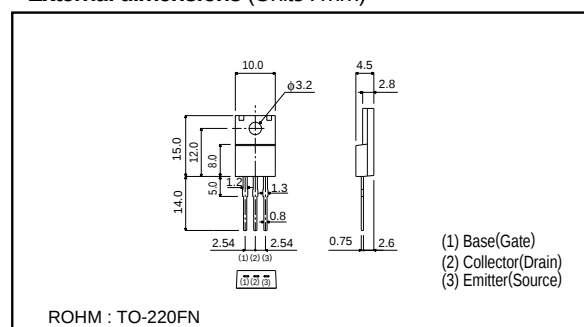
Power Transistor (–60V, –3A)

2SB1565

●Features

- 1) Low $V_{CE(sat)}$. (Typ. –0.3V at $I_C/I_B = -2/-0.2A$)
- 2) Excellent DC current gain characteristics.
- 3) Wide SOA (safe operating area).

●External dimensions (Units : mm)



●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	–80	V
Collector-emitter voltage	V_{CEO}	–60	V
Emitter-base voltage	V_{EBO}	–7	V
Collector current	I_C	–3	A (DC)
	I_{CP}	–6	A (Pulse) *
Collector power dissipation	P_C	2	W
		25	W (Tc = 25°C)
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	–55~+150	°C

* Single pulse Pw = 100ms

●Packaging specifications and hFE

Type	2SB1565
Package	TO-220FN
hFE	EF
Code	–
Basic ordering unit (pieces)	500

●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}	–7	–	–	V	$I_E = -50\mu A$
Collector cutoff current	I_{CBO}	–	–	–10	μA	$V_{CB} = -60V$
Emitter cutoff current	I_{EBO}	–	–	–10	μA	$V_{EB} = -7V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	–1.5	V	$I_C/I_B = -2A/-0.2A$ *
Base-emitter saturation voltage	$V_{BE(sat)}$	–	–	–1.5	V	$I_C/I_B = -2A/-0.2A$ *
DC current transfer ratio	h_{FE}	100	–	320	–	$V_{CE}/I_C = -5V/-0.5A$
Transition frequency	f_T	–	15	–	MHz	$V_{CE} = -5V$, $I_E = 0.5A$, $f = 5MHz$ *
Output capacitance	C_{ob}	–	50	–	pF	$V_{CB} = -10V$, $I_E = 0A$, $f = 1MHz$

* Measured using pulse current.