

For Power Amplification (–60V, –3A)

2SB1566

●Structure

PNP Silicon Epitaxial Planar Transistor

●Features

- 1) Low $V_{CE(sat)}$.
- 2) Wide SOA.

●Applications

Relay drive
DC-DC converter
Stabilized power supply

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	–60	V
Collector-emitter voltage	V_{CEO}	–50	V
Emitter-base voltage	V_{EBO}	–5	V
Collector current	DC	I_C	–3 A(DC)
	Pulse	I_{CP}	–4.5 A(Pulse)*1
Collector power dissipation	P_C	2	W(Ta=25°C)
		25	W(Tc=25°C)
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	–55 to +150	°C

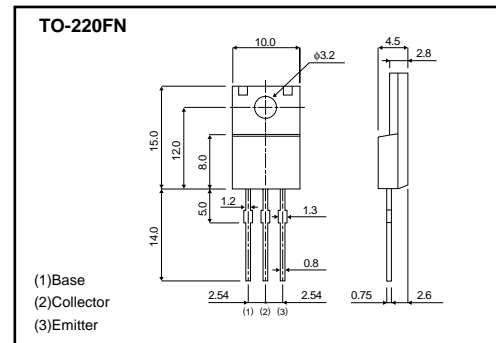
*1 Pw=100ms, single pulse

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CEO}	–50	–	–	V	$I_C = -1\text{mA}$
Collector-base breakdown voltage	BV_{CBO}	–60	–	–	V	$I_C = -50\mu\text{A}$
Emitter-base breakdown voltage	BV_{EBO}	–5	–	–	V	$I_E = -50\mu\text{A}$
Collector cutoff current	I_{CBO}	–	–	–1.0	μA	$V_{CB} = -60\text{V}$
Emitter cutoff current	I_{EBO}	–	–	–1.0	μA	$V_{EB} = -4\text{V}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–	–1.0	V	$I_C/I_B = -2A/-0.2A$ *1
Base-emitter saturation voltage	$V_{BE(sat)}$	–	–	–1.5	V	$I_C/I_B = -2A/-0.2A$ *1
DC current gain	h_{FE}	100	–	320	–	$V_{CE} = -3\text{V}$, $I_C = -0.5\text{A}$
Transition frequency	f_T	–	60	–	MHz	$V_{CE} = -5\text{V}$, $I_E = 0.5\text{A}$, $f = 30\text{MHz}$ *1
Collector output capacitance	C_{ob}	–	40	–	pF	$V_{CB} = -10\text{V}$, $I_E = 0\text{A}$, $f = 1\text{MHz}$

*1 Pulse test

●External dimensions (Unit : mm)



●Complements

PNP	NPN
2SB1566	2SD2395

●Packaging specifications and hFE

Type	hFE	Package	Taping
		Code	–
		Basic ordering unit (pieces)	500
2SB1566	EF		○

h_{FE} values are classified as follows:

Item	E	F
h_{FE}	100 to 200	160 to 320

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