

# 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

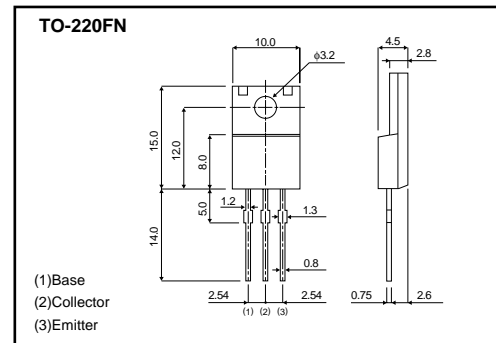
\*1 Pw=100ms, single pulse

### ●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	$\mu\text{A}$	$V_{CB} = -60\text{V}$
Emitter cutoff current	$I_{EBO}$	–	–	–1.0	$\mu\text{A}$	$V_{EB} = -4\text{V}$
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		○

hFE values are classified as follows:

Item	E	F
hFE	100 to 200	160 to 320

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