

**2SB1566**

### PNP Silicon Epitaxial Planar Transistor

1) Low  $V_{CE}(\text{sat})$ .

- 2) Wide SOA.

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### Relay drive

DC-DC converter

### Stabilized power supply

Technical drawing of the TO-220FN package showing front and side views with dimensions in millimeters.

**Front View Dimensions:**

- Top width: 10.0
- Top hole diameter:  $\phi 3.2$
- Base width: 14.0
- Base to collector distance: 15.0
- Collector to emitter distance: 12.0
- Collector to emitter distance (alternative): 8.0
- Emitter to base distance: 5.0
- Emitter to base distance (alternative): 1.2
- Emitter to base distance (alternative): 1.3
- Emitter to base distance (alternative): 0.8
- Emitter to base distance (alternative): 2.54
- Emitter to base distance (alternative): 2.54

**Side View Dimensions:**

- Top width: 4.5
- Top hole diameter: 2.8
- Base width: 0.75
- Base to collector distance: 2.6

**Pin Labels:**

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

PNP	NPN
2SB1566	2SD2395

●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( $T_a=25^{\circ}\text{C}$ )
			25	W( $T_c=25^{\circ}\text{C}$ )
Junction temperature		$T_j$	150	$^{\circ}\text{C}$
Storage temperature		$T_{stg}$	-55 to +150	$^{\circ}\text{C}$

\*1 Pw=100ms, single pulse

### ●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
$h_{EE}$	100 to 200	160 to 320

●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	$I_C/I_B = -2A/-0.2A$
Base-emitter saturation voltage	$V_{BE(sat)}$	-	-	-1.5	V	$I_C/I_B = -2A/-0.2A$
DC current gain	$h_{FE}$	100	-	320	-	$V_{CE} = -3\text{V}$ , $I_C = -0.5\text{A}$
Transition frequency	$f_T$	-	60	-	MHz	$V_{CE} = -5\text{V}$ , $I_E = 0.5\text{A}$ , $f = 30\text{MHz}$
Collector output capacitance	$C_{ob}$	-	40	-	pF	$V_{CB} = -10\text{V}$ , $I_E = 0\text{A}$ , $f = 1\text{MHz}$

\*1 Pulse test

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