

# Power Transistor (-100V , -2A)

## 2SB1580 / 2SB1316

### ●Features

- 1) Darlington connection for high DC current gain.
- 2) Built-in resistor between base and emitter.
- 3) Built-in damper diode.
- 4) Complements the 2SD2195 / 2SD1980.

### ●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V <sub>CB0</sub>	-100	V
Collector-emitter voltage	V <sub>CE0</sub>	-100	V
Emitter-base voltage	V <sub>EB0</sub>	-8	V
Collector current	I <sub>c</sub>	-2	A(DC)
		-3	A(Pulse) *1
Collector power dissipation	P <sub>c</sub>	2	W
		1	W
		10	W(Tc=25°C)
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55~+150	°C

\*1 Single pulse Pw=100ms

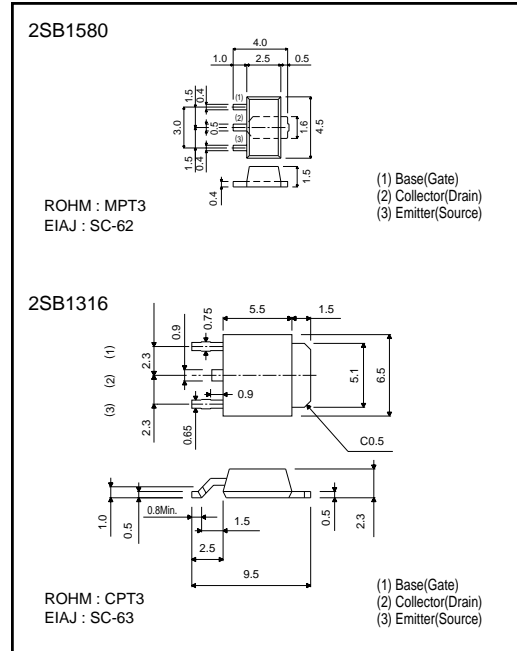
\*2 When mounted on a 40 x 40 x 0.7 mm ceramic board.

### ●Packaging specifications and hFE

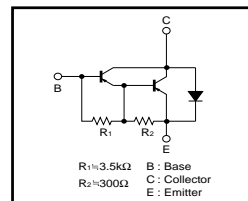
Type	2SB1580	2SB1316
Package	MPT3	CPT3
hFE	1k~10k	1k~10k
Marking	BN*	-
Code	T100	TL
Basic ordering unit (pieces)	1000	2500

\* Denotes hFE

### ●External dimensions (Units : mm)



### ●Equivalent circuit



### ●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV <sub>CB0</sub>	-100	-	-	V	I <sub>c</sub> = -50μA
Collector-emitter breakdown voltage	BV <sub>CE0</sub>	-100	-	-	V	I <sub>c</sub> = -5mA
Collector cutoff current	I <sub>cbo</sub>	-	-	-10	μA	V <sub>CB</sub> = -100V
Emitter cutoff current	I <sub>ebo</sub>	-	-	-3	mA	V <sub>EB</sub> = -7V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	-	-	-1.5	V	I <sub>c</sub> /I <sub>e</sub> = -1A/-1mA
DC current transfer ratio	h <sub>FE</sub>	1000	-	10000	-	V <sub>CE</sub> = -2V, I <sub>c</sub> = -1A
Output capacitance	C <sub>ob</sub>	-	35	-	pF	V <sub>CB</sub> = -10V, I <sub>E</sub> = 0A, f = 1MHz

\* Measured using pulse current.