

Power Transistor (−100V , −2A)

2SB1580 / 2SB1316 / 2SB1567

●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 / 2SD2398.

●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	−100	V
Collector-emitter voltage	V_{CE0}	−100	V
Emitter-base voltage	V_{EB0}	−8	V
Collector current	I_C	−2	A(DC)
		−3	A(Pulse) *1
Collector power dissipation	P_C	2	W *2
		1	W
		10	W(Tc=25°C)
		2	W
Junction temperature	T_J	150	°C
		20	W(Tc=25°C)
Storage temperature	T_{stg}	−55−150	°C

*1 Single pulse Pw=100ms

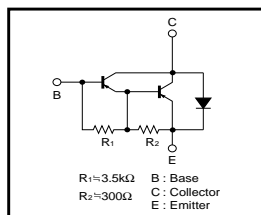
*2 When mounted on a 40 x 40 x 0.7 mm ceramic board.

●Packaging specifications and hFE

Type	2SB1580	2SB1316	2SB1567
Package	MPT3	CPT3	TO-220FN
hFE	1k – 10k	1k – 10k	1k – 10k
Marking	BN*	—	—
Code	T100	TL	—
Basic ordering unit (pieces)	1000	2500	500

* Denotes hFE

●Circuit schematic



●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CB0}	−100	—	—	V	$I_C = -50\mu A$
Collector-emitter breakdown voltage	BV_{CE0}	−100	—	—	V	$I_C = -5mA$
Collector cutoff current	I_{CBO}	—	—	−10	μA	$V_{CB} = -100V$
Emitter cutoff current	I_{EBO}	—	—	−3	mA	$V_{EB} = -7V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	−1.5	V	$I_C/I_B = -1A/-1mA$
DC current transfer ratio	hFE	1000	—	10000	—	$V_{CE} = -2V, I_C = -1A$
Output capacitance	C_{ob}	—	35	—	pF	$V_{CB} = -10V, I_E = 0A, f = 1MHz$

* Measured using pulse current.

●External dimensions (Units : mm)

