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_{CBO}	−100	V
Collector-emitter voltage		V_{CEO}	−100	V
Emitter-base voltage		V_{EBO}	−8	V
Collector current		I_C	−2	A(DC)
			−3	A(Pulse) *1
Collector power dissipation	2SB1580	P_C	2	W *2
	2SB1316		1	
			10	W(Tc=25°C)
	2SB1567		2	W
			20	W(Tc=25°C)
Junction temperature		Tj	150	°C
Storage temperature		Tstg	−55~+150	°C

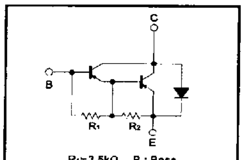
*1 Single pulse Pw=100ms
*2 When mounted on a 40 x 40 x 0.7 mm ceramic board.

●Packaging specifications and h_{FE}

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

* Denotes h_{FE}

●Circuit schematic

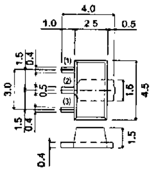


R1≈3.5kΩ
R2≈300Ω

B : Base
C : Collector
E : Emitter

●External dimensions (Units : mm)

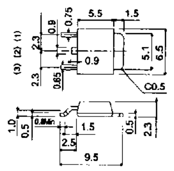
2SB1580



ROHM : MPT3
EIAJ : SC-62

(1) Base(Gate)
(2) Collector(Drain)
(3) Emitter(Source)

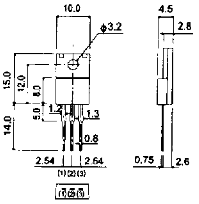
2SB1316



ROHM : CPT3
EIAJ : SC-63

(1) Base(Gate)
(2) Collector(Drain)
(3) Emitter(Source)

2SB1567



(1) Base(Gate)
(2) Collector(Drain)
(3) Emitter(Source)

ROHM : TO-220FN

●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	−100	−	−	V	I_C = −50μA
Collector-emitter breakdown voltage	BV_{CEO}	−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	h_{FE}	1000	−	10000	−	V_{CE} = −2V , I_C = −1A *
Output capacitance	Cob	−	35	−	pF	V_{CB} = −10V , I_E = 0A , f = 1MHz

* Measured using pulse current.