

Power Transistor (−80V, −1A)

2SB1260 / 2SB1181

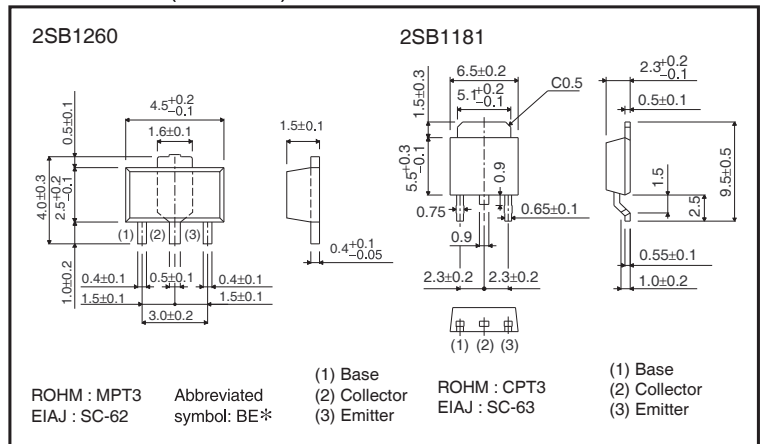
●Features

- 1) High breakdown voltage and high current.
BV_{CEO} = −80V, I_c = −1A
- 2) Good h_{FE} linearity.
- 3) Low V_{CE(sat)}.
- 4) Complements the 2SD1898 / 2SD1733.

●Structure

Epitaxial planar type
PNP silicon transistor

●Dimensions (Unit : mm)



* Denotes h_{FE}

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	−80	V
Collector-emitter voltage	V _{CEO}	−80	V
Emitter-base voltage	V _{EBO}	−5	V
Collector current	I _c	−1	A (DC)
	I _{cP}	−2 *1	A (Pulse)
Collector power dissipation	P _c	0.5	W
		2 *2	
		10	W (T _c =25°C)
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	−55 to +150	°C

*1 2SB1260 : P_w=20ms duty=1/2

*2 2SB1260 : When mounted on a 40×40×0.7 mm ceramic board.

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	−80	−	−	V	I _c = −50μA
Collector-emitter breakdown voltage	BV _{CEO}	−80	−	−	V	I _c = −1mA
Emitter-base breakdown voltage	BV _{EBO}	−5	−	−	V	I _E = −50μA
Collector cutoff current	I _{CB0}	−	−	−1	μA	V _{CB} = −60V
Emitter cutoff current	I _{EBO}	−	−	−1	μA	V _{EB} = −4V
Collector-emitter saturation voltage	V _{CE(sat)}	−	−	−0.4	V	I _c /I _B = −500mA/ −50mA
DC current transfer ratio	h _{FE}	120	−	390	−	V _{CE} = −3V, I _c = −0.1A
Transition frequency	f _T	−	100	−	MHz	V _{CE} = −10V, I _E = 50mA, f = 100MHz
Output capacitance	C _{ob}	−	20	−	pF	V _{CB} = −10V I _E = 0A f = 1MHz
		−	25	−	pF	

●Packaging specifications and h_{FE}

Type	h_{FE}	Package	Taping	
		Code	TL	T100
		Basic ordering unit (pieces)	2500	1000
2SB1260	QR		-	○
2SB1181	QR		○	-

h_{FE} values are classified as follows :

Item	Q	R
h_{FE}	120 to 270	180 to 390

●Electrical characteristic curves

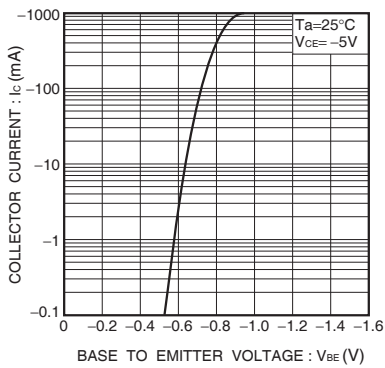


Fig.1 Grounded emitter propagation characteristics

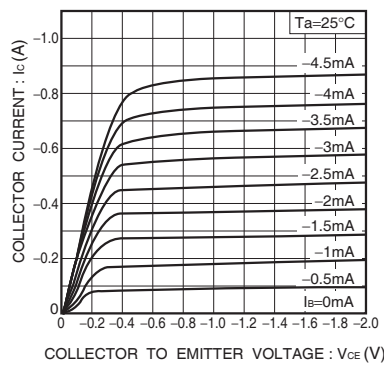


Fig.2 Grounded emitter output characteristics

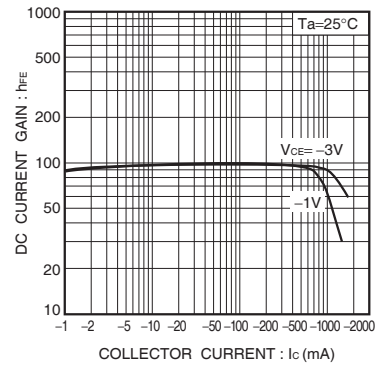


Fig.3 DC current gain vs. collector current

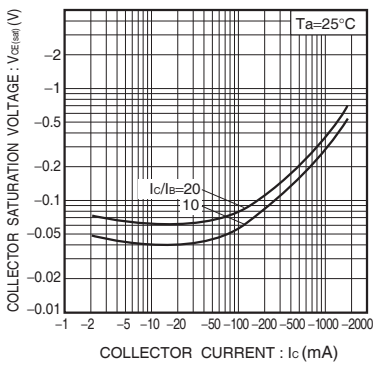


Fig.4 Collector-emitter saturation voltage vs. collector current

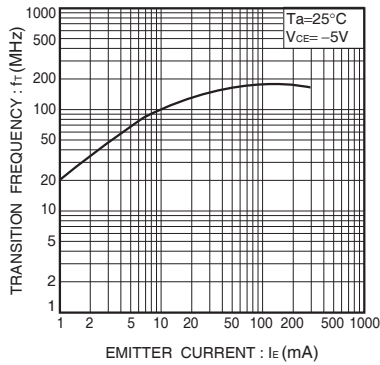


Fig.5 Gain bandwidth product vs. emitter current

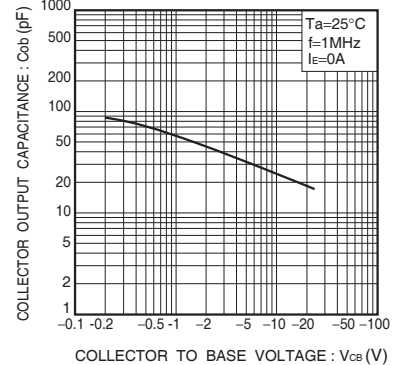


Fig.6 Collector output capacitance vs. collector-base voltage

Notes

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