

Power Transistor (-80V , -1A)

2SB1260 / 2SB1181

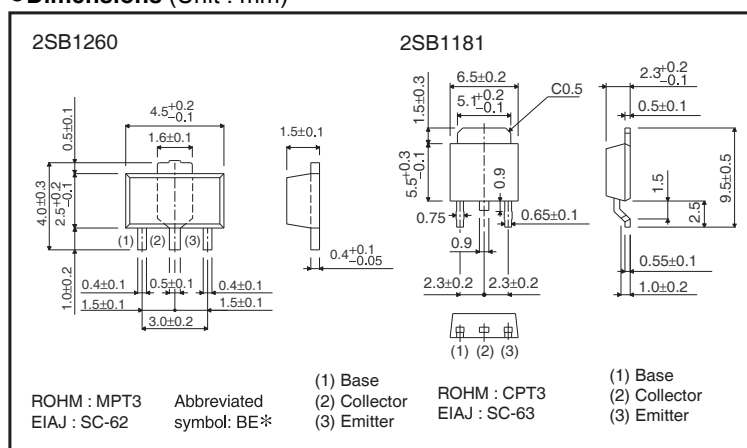
●Features

- 1) High breakdown voltage and high current.
 $V_{CE0} = -80V$, $I_C = -1A$
- 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 hFF

●Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V_{CBO}	-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	2SB1260	P_C	0.5	W
			2 *2	
	2SB1181		1	
	2SB1181		10	W ($T_C=25^{\circ}C$)
Junction temperature		T_j	150	$^{\circ}C$
Storage temperature		T_{stg}	-55 to +150	$^{\circ}C$

*1 2SB1260 : Pw=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_{CBO}	-80	-	-	V	$I_C = -50\mu A$
Collector-emitter breakdown voltage		BV_{CEO}	-80	-	-	V	$I_C = -1mA$
Emitter-base breakdown voltage		BV_{EBO}	-5	-	-	V	$I_E = -50\mu A$
Collector cutoff current		I_{CBO}	-	-	-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	2SB1181	f_T	-	100	-	MHz	$V_{CE} = -10V, I_E = 50mA, f = 100MHz$
Output capacitance	2SB1260	Cob	-	20	-	pF	$V_{CB} = -10V$
	2SB1181		-	25	-	pF	$I_E = 0A$ $f = 1MHz$

●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

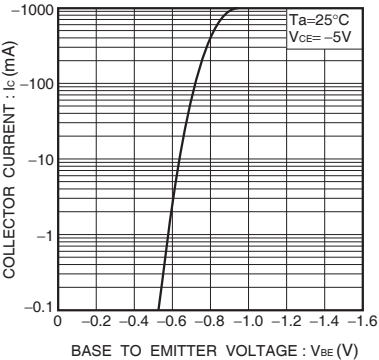


Fig.1 Grounded emitter propagation characteristics

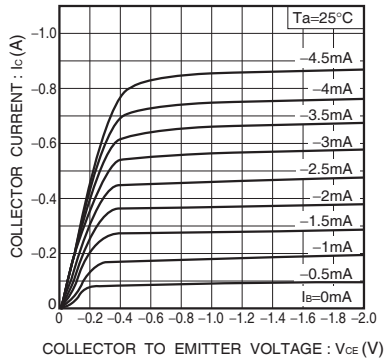


Fig.2 Grounded emitter output characteristics

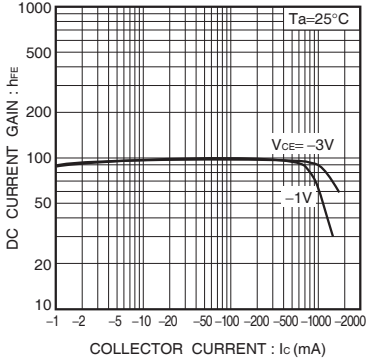


Fig.3 DC current gain vs. collector current

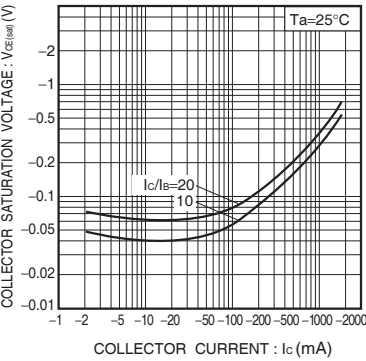


Fig.4 Collector-emitter saturation voltage vs. collector current

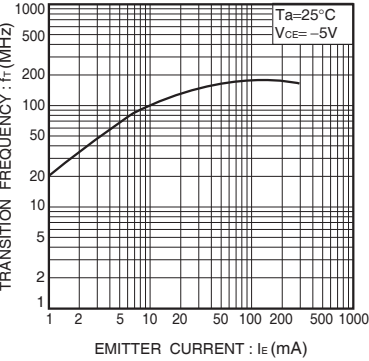


Fig.5 Gain bandwidth product vs. emitter current

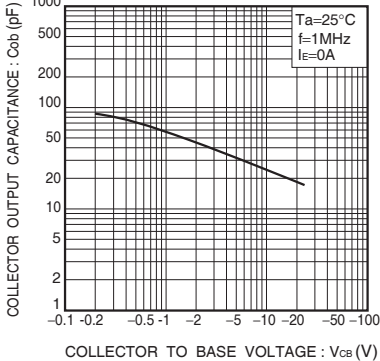


Fig.6 Collector output capacitance vs. collector-base voltage

Notes

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