

Power Transistor (–80V, –1A)

2SB1260 / 2SB1181 / 2SB1241

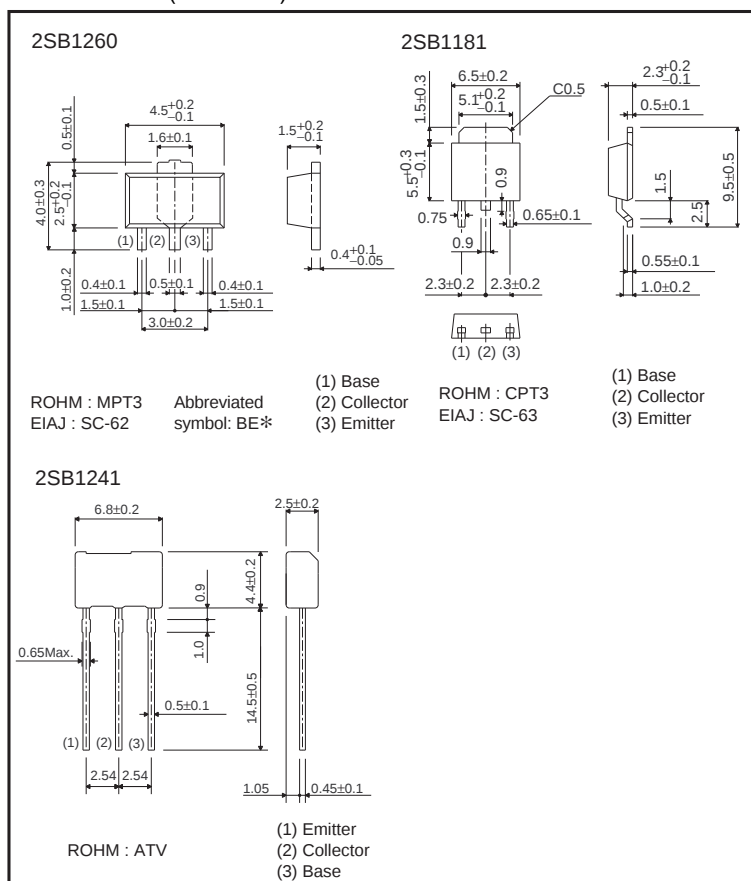
●Features

- 1) High breakdown voltage and high current.
 $BV_{CEO} = -80V$, $I_C = -1A$
 - 2) Good h_{FE} linearity.
 - 3) Low $V_{CE(sat)}$.
- Complements the 2SD1898 / 2SD1863 / 2SD1733.

●Structure

Epitaxial planar type
 PNP silicon transistor

●Dimensions (Unit : mm)



* Denotes h_{FE}

●Absolute maximum ratings ($T_a = 25^\circ C$)

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
	2SB1241, 2SB1181		2 *2	
	2SB1241, 2SB1181		1 *3	
	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 : $P_w = 20ms$, $duty = 1/2$

2SB1241 : Single pulse, $P_w = 100ms$

*2 2SB1260 : When mounted on a $40 \times 40 \times 0.7$ mm ceramic board.

*3 2SB1241 : Printed circuit board, 1.7mm thick, collector copper plating $100mm^2$ or larger.

●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 _{CE0}	-80	-	-	V	I _C = -1mA
Emitter-base breakdown voltage	BV _{EB0}	-5	-	-	V	I _E = -50μA
Collector cutoff current	I _{CB0}	-	-	-1	μA	V _{CB} = -60V
Emitter cutoff current	I _{EB0}	-	-	-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
		120	-	390	-	
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	TV2	T100
		Basic ordering unit (pieces)	2500	2500	1000
2SB1260	QR		-	-	○
2SB1241	QR		-	○	-
2SB1181	QR		○	-	-

h_{FE} values are classified as follows :

Item	Q	R
h _{FE}	120 to 270	180 to 390

●Electrical characteristic curves

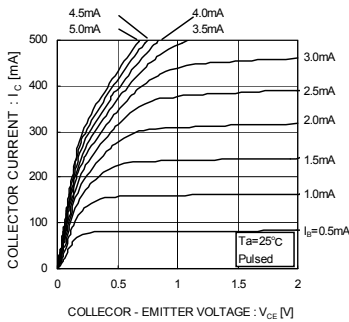


Fig.1 Ground Emitter Output Characteristics

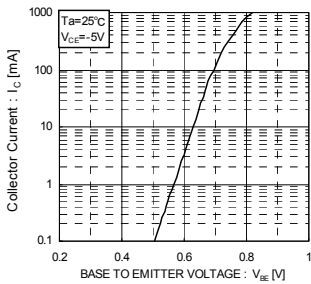


Fig.2 Grounded Emitter Propagation Characteristics

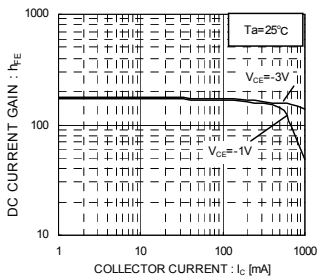


Fig.3 DC Current Gain vs Collector Current

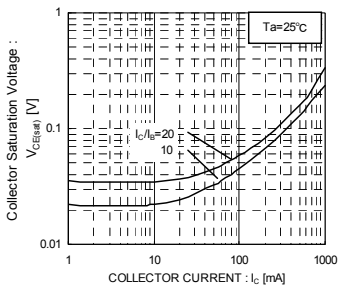


Fig.4 Collector-Emitter Saturation Voltage vs Collector Current

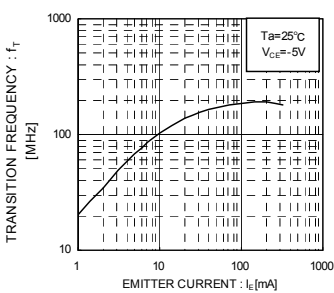


Fig.5 Transition Frequency vs Emitter Current

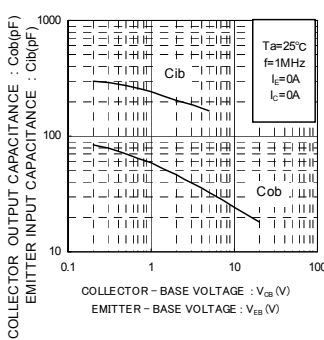


Fig.6 Emitter Input Capacitance vs. Emitter-Base Voltage
Collector Output Capacitance vs. Collector-Base

Notes

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