

Power Transistor (–80V, –1A)

2SB1260 / 2SB1181 / 2SB1241

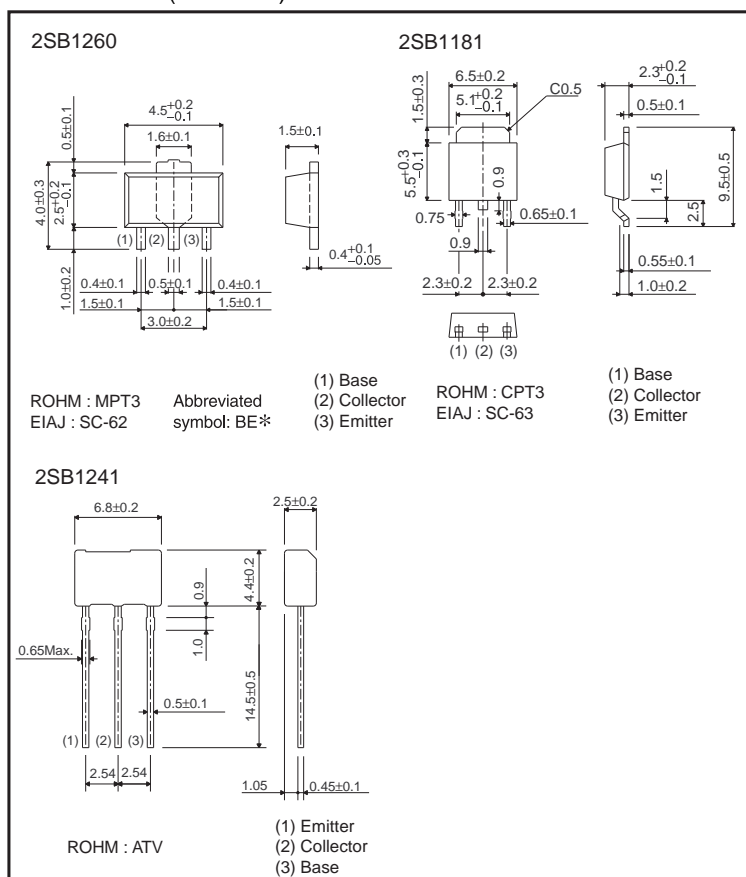
●Features

- 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	
	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 40×40×0.7 mm ceramic board.

*3 2SB1241 : Printed circuit board, 1.7mm thick, collector copper plating 100mm² or larger.

●Electrical characteristics (Ta=25°C)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage		BV _{CBO}	−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 _{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	2SB1260, 2SB1181	h _{FE}	120	−	390	−	V _{CE} = −3V, I _C = −0.1A
	2SB1241		120	−	390	−	
Transition frequency	2SB1181	f _r	−	100	−	MHz	V _{CE} = −10V, I _E =50mA, f=100MHz
Output capacitance	2SB1260	C _{ob}	−	20	−	pF	V _{CB} = −10V I _E =0A
	2SB1181, 2SB1241		−	25	−	pF	f=1MHz

●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

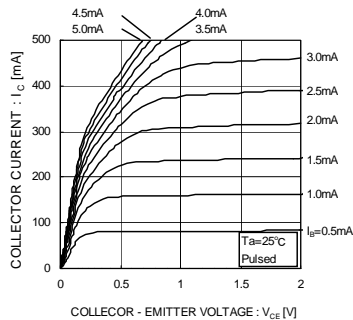


Fig.1 Ground Emitter Output Characteristics

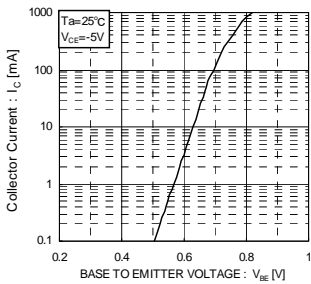


Fig.2 Grounded Emitter Propagation Characteristics

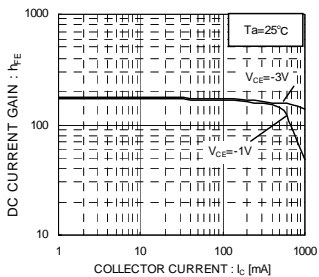


Fig.3 DC Current Gain vs Collector Current

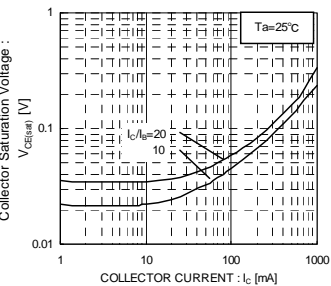


Fig.4 Collector-Emitter Saturation Voltage vs Collector Current

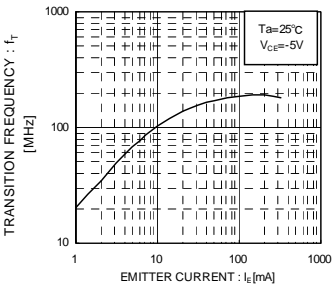


Fig.5 Transition Frequency vs Emitter Current

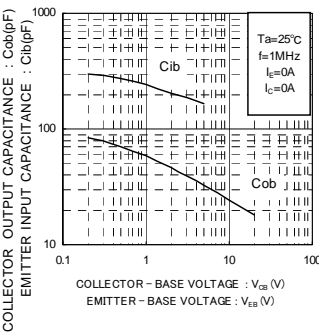


Fig.6 Emitter Input Capacitance vs. Emitter-Base Voltage
Collector Output Capacitance vs. Collector-Base

Notes

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