

Medium power transistor (-32V, -2A)

2SB1182 / 2SB1240

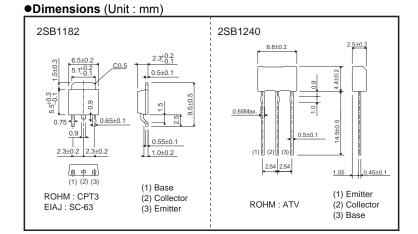
Features

1) Low VCE(sat). VCE(sat) = -0.5V (Typ.)(Ic/IB = -2A / -0.2A)

2) Complements 2SD1758 / 2SD1862.

Structure

Epitaxial planar type PNP silicon transistor



● Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit	
Collector-base voltage		Vсво	-40	V	
Collector-emitter voltage		Vceo	-32	V	
Emitter-base voltage		VEBO	-5	V	
Collector current		Ic	-2	A(DC)	
			-3	A (Pulse) *1	
Collector power	2SB1182	В	10	W (Tc=25°C)	
dissipation	2SB1240	Pc	1	W *2	
Junction temperature		Tj	150	°C	
Storage temperature		Tstg	-55 to 150	°C	

^{*1} Single pulse, Pw=100ms

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions	
Collector-base breakdown voltage	ВУсво	-40	_	_	V	Ic= -50μA	
Collector-emitter breakdown voltage	BVceo	-32	_	_	V	Ic= -1mA	
Emitter-base breakdown voltage	ВУево	-5	_	_	V	Iε= −50μA	
Collector cutoff current	Ісво	_	_	-1	μΑ	VcB= -20V	
Emitter cutoff current	ІЕВО	-	_	-1	μΑ	V _{EB} = -4V	
Collector-emitter saturation voltage	VCE(sat)	_	-0.5	-0.8	V	Ic/I _B = -2A/ -0.2A	*
DC current transfer ratio	hfe	120	_	390	_	Vce= -3V, Ic= -0.5A	*
Transition frequency	f⊤	_	100	_	MHz	Vce= -5V, Ie=0.5A, f=100MHz	
Output capacitance	Cob	_	50	_	pF	Vсв= −10V, I _E =0A, f=1МНz	

^{*} Measured using pulse current.

^{*2} Printed circuit board, 1.7mm thick, collector copper plating 100mm² or larger.

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●Packaging specifications and hFE

		Package	Taping	
		Code	TL	TV2
Туре	hfe	Basic ordering unit (pieces)	2500	2500
2SB1182	QR		0	_
2SB1240	QR		-	0

hre values are classified as follows:

Item	Q	R	
hfE	120 to 270	180 to 390	

•Electrical characteristic curves

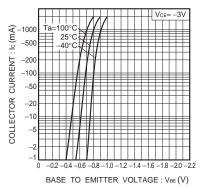


Fig.1 Grounded emitter propagation characteristics

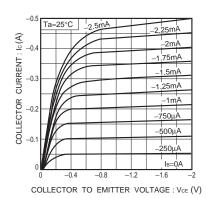


Fig.2 Grounded emitter output characteristics

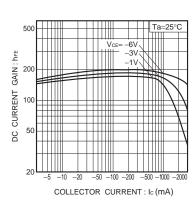


Fig.3 DC current gain vs. collector curren (I)

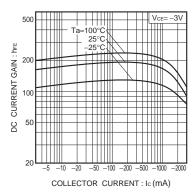


Fig.4 DC current gain vs. collector current (II)

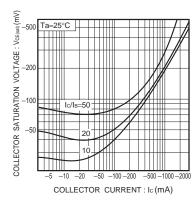


Fig.5 Collector-emitter saturation voltage vs. collector current (I)

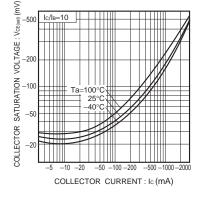


Fig.6 Collector-emitter saturation voltage vs. collector current (II)

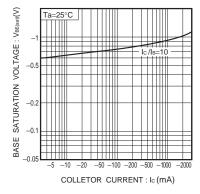


Fig.7 Base-emitter saturation voltage vs. collector current

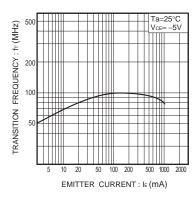
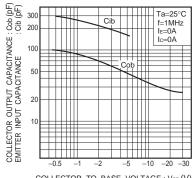


Fig.8 Gain bandwidth product vs. emitter current



COLLECTOR TO BASE VOLTAGE: VCB (V) EMITTER TO BASE VOLTAGE: VEB (V)

Fig.9 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

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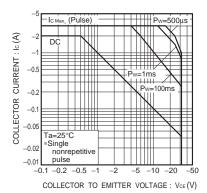


Fig.10 Safe operation area (2SB1182)

Notes

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