

Medium Power Transistor (-32V, -1A)

2SB1132 / 2SA1515S / 2SB1237

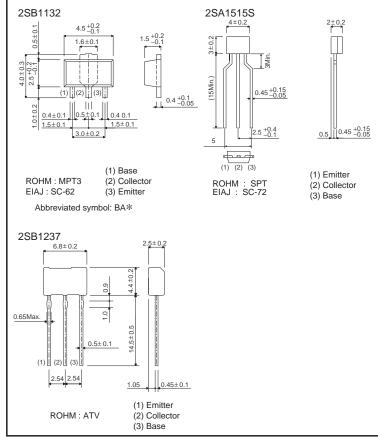
Features

1) Low V_{CE(sat)}. $V_{CE(sat)} = -0.2V(Typ.)$ (Ic / I_B = -500mA / -50mA) 2) Compliments 2SD1664 / 2SD1858

Structure

Epitaxial planar type PNP silicon transistor

●Dimensions (Unit: mm)



* Denotes her

●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		1-	-1	A(DC)
		lc lc	-2	A(Pulse) *1
Collector power dissipation	2SB1132		0.5	
			2	*2 W
	2SA1515S	Pc	0.3	VV
	2SB1237		1	*3
Junction temperature		Tj	150	°C
Storage temperature		Tstg	-55 to +150	°C

●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		ВVево	-5	_	_	V	IE= -50μA	
Collector cutoff current		Ісво	_	_	-0.5	μΑ	VcB= -20V	
Emitter cutoff current		ІЕВО	_	_	-0.5	μΑ	V _{EB} = -4V	
Collector-emitter saturation voltage		VCE(sat)	_	-0.2	-0.5	V	Ic/I _B = -500mA/-50mA *	
DC current transfer ratio	2SB1132, 2SB1237	hre	120	_	390	_	*	
	2SA1515S		120	_	390	_	VCE= -3V, IC= -0.1A	
Transition frequency		fτ	_	150	_	MHz	Vce= -5V, Ie=50mA, f=30MHz	
Output capacitance		Cob	-	20	30	pF	Vcb= -10V, Ie=0A, f=1MHz	

 * Measured using pulse current.

●Packaging specifications and hfe

		Package	Taping		
		Code	T100	TP	TU2
Туре	hfe	Basic ordering unit (pieces)	1000	5000	2500
2SB1132	QR		0	-	_
2SA1515S	QR		_	0	_
2SB1237	QR		-	-	0

hee values are classified as follows:

Item Q		R	
hfE	120 to 270	180 to 390	

^{*1} Single pulse, Pw=100ms
*2 When mounted on a 40×40×0.7 mm ceramic board.
*3 Printed circuit board, 1.7 mm thick, collector copper plating 100mm² or larger.

•Electrical characteristics curves

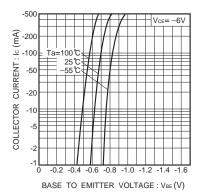


Fig.1 Grounded emitter propagation characteristics

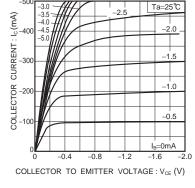


Fig.2 Grounded emitter output characteristics

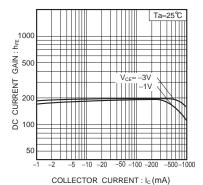


Fig.3 DC current gain vs. collector current(I)

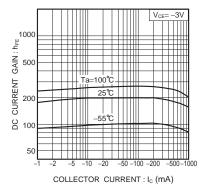


Fig.4 DC current gain vs. collector current(II)

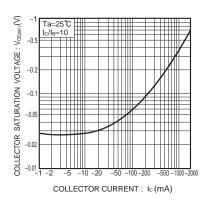


Fig.5 Collector-emitter saturation voltage vs. collector current

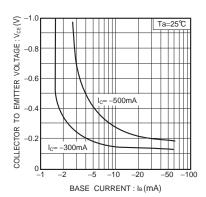


Fig.6 Collector-emitter saturation voltage vs. base current

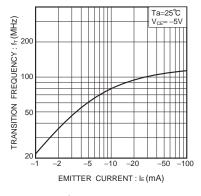


Fig.7 Gain bandwidth product vs. emitter current

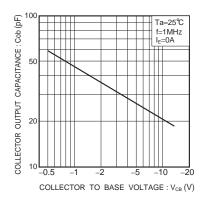


Fig.8 Collector output capacitance vs.collector-base voltage

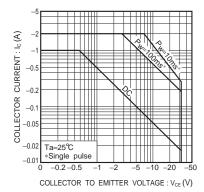


Fig.9 Safe operation area (2SB1132)

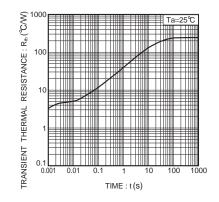


Fig.10 Transient thermal resistance (2SB1132)

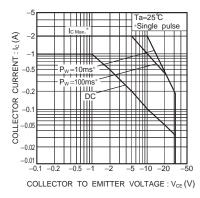


Fig.11 Safe operation area (2SB1237)

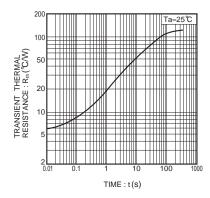


Fig.12 Transient thermal resistance (2SB1237)

Notes

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