High-gain Amplifier Transistor (-32V, -0.3A) 2SB852K

Features

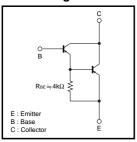
- 1) Darlington connection for high DC current gain.
- 2) Built-in $4k\Omega$ resistor between base and emitter.
- 3) Complements the 2SD1383K.

Packaging specifications

Туре	2SB852K		
Package	SMT3		
hfE	В		
Marking	U*		
Code	T146		
Basic ordering unit (pieces)	3000		

^{*} Denotes hre

●Circuit diagram



● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit	
Collector-base voltage	Vсво	-40	V	
Collector-emitter voltage	Vces -32		V *	
Emitter-base voltage	Vево	-6	V	
Collector current	lc	-0.3	Α	
Collector power dissipation	Pc	0.2	W	
Junction temperature	Tj	150	°C	
Storage temperature	Tstg	-55 to +150	°C	

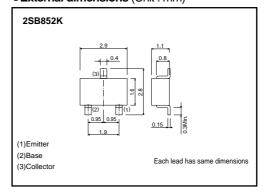
^{*} R_{BE}=0Ω

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions	
Collector-base breakdown voltage	ВУсво	-40	_	-	V	Ic=-100μA	
Collector-emitter breakdown voltage	BVces	-32	_	-	V	Ic=-1mA	
Emitter-base breakdown voltage	ВУЕВО	-6	-	-	V	I _E = -100μA	
Collector cutoff current	Ісво	-	-	-1	μΑ	Vcb=-24V	
Emitter cutoff current	Ієво	-	_	-1	μΑ	V _{EB} = -4.5V	
DC current transfer ratio	hfe	5000	-	-	-	Vc=-5V, Ic=-0.1A	
Collector-emitter saturation voltage	VCE(sat)	-	_	-1.5	V	Ic= -200mA, I _B = -0.4mA *1	
Transition frequency	f⊤	-	200	-	MHz	Vc=-5V, I=10mA, f=100MHz *2	
Output capacitance	Cob	-	3	-	pF	Vcb= -10V, Ie=0A, f=1MHz	

^{*1} Measured using pulse current. *2 Transition frequency of the device.

●External dimensions (Unit: mm)



Rev.B

•Electrical characteristic curves

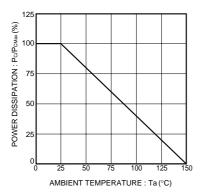


Fig.1 Power dissipation curves

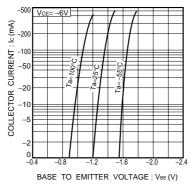


Fig.2 Ground emitter propagation characteristisc

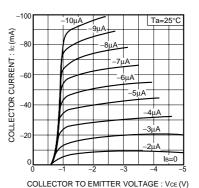


Fig.3 Ground emitter output characteristics

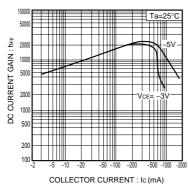


Fig.4 DC current gain vs. collector current (I)

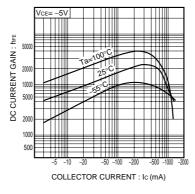


Fig.5 DC current gain vs. collector current (II)

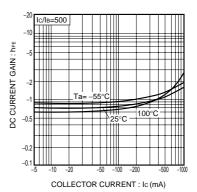


Fig.6 Collector-emitter saturation voltage vs. collector current

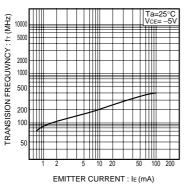


Fig.7 Gain bandwidth product vs. emitter current

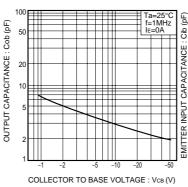


Fig.8 Collector output capacitance vs. collector-base voltage

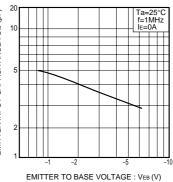


Fig.9 Emitter input capacitance vs. emitter-base voltage

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