Low frequency amplifier

2SB1695K

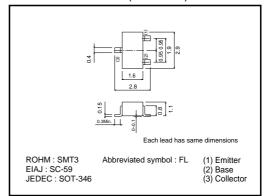
Application

Low frequency amplifier Driver

● Features

- 1) A collector current is large.
- 2) $V_{CE(sat)} \le -370 \text{mV}$ At Ic =- 1A / IB = -50 mA

●External dimensions (Units : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit			
Collector-base voltage	Vсво	-30	V			
Collector-emitter voltage	Vceo	-30	V			
Emitter-base voltage	Vebo	-6	V			
Collector current	Ic	-1.5	Α			
Collector current	ICP	-3	Α*			
Power dissipation	Pc	200	mW			
Junction temperature	Tj	150	°C			
Range of storage temperature	Tstg	-55~+150	°C			

*Single pulse, Pw=1ms

Packaging specifications

	Package	Taping
	Code	T146
Туре	Basic ordering unit (pieces)	3000
2SB1695K		0

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	-30	_	_	V	Ic=-10μA
Collector-emitter breakdown voltage	BVcEo	-30	_	_	V	Ic=-1mA
Emitter-base breakdown voltage	ВVево	-6	_	_	V	Iε=-10μA
Collector cutoff current	Ісво	_	_	-100	nA	Vcb=-30V
Emitter cutoff current	ІЕВО	_	-	-100	nA	V _{EB} =-6V
Collector-emitter saturation voltage	VCE(sat)	_	-200	-370	mV	Ic=-1A, Iв=-50mA
DC current gain	hfe	270	_	680	_	Vce=-2V, Ic=-100mA*
Transition frequency	f⊤	_	280	_	MHz	Vce=-2V, Ie=100mA, f=100MHz*
Corrector output capacitance	Cob	_	13	_	pF	Vcb=-10V, Ie=0A, f=1MHz

^{*} Pulsed

Electrical characteristic curves

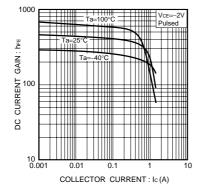


Fig.1 DC current gain vs. collector current

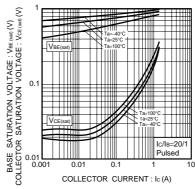


Fig.2 Collector-emitter saturation voltage base-emitter saturation voltage vs. collector current

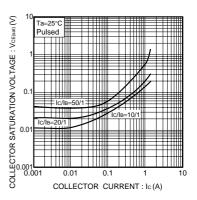


Fig.3 Collector-emitter saturation voltage vs. collector current

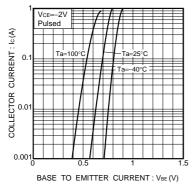


Fig.4 Grounded emitter propagation characteristics

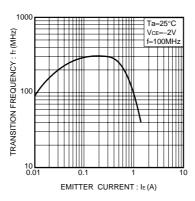


Fig.5 Gain bandwidth product vs. emitter current

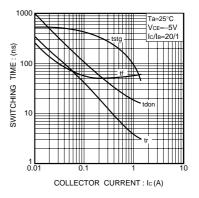


Fig.6 Switching time

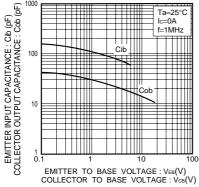


Fig.7 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

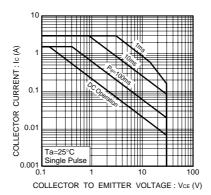


Fig.8 Safe Operating Area

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