Low frequency amplifier

2SB1698

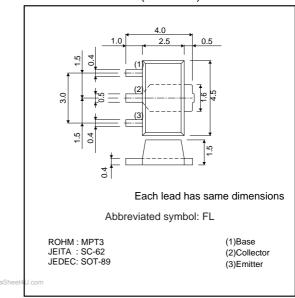
Application

Low frequency amplifier Driver

● Features

- 1) A collector current is large.
- 2) $V_{CE(sat)} \le -370 mV$ at $I_C = -1A / I_B = -50 mA$

●External dimensions (Units : mm)



● Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Symbol Limits			
Collector-base voltage	Vсво	-30	V		
Collector-emitter voltage	Vceo	-30	V		
Emitter-base voltage	Vево	-6	V		
Collector current	Ic	-1.5	Α		
Collector current	Іср	-3	A*1		
Power dissipation	Pc	500	mW		
Power dissipation	FC	2	W*2		
Junction temperature	Tj	150	°C		
Range of storage temperature	Tstg	<i>−</i> 55~+150	°C		
1 0 1 1 1 1 D 1 1 1 1 D 1 1 1 1 1 D 1					

^{*1} Single pulse, Pw=1ms *2 Mounted on a 40 ×40×0.7(mm)CERAMIC SUBSTRATE

Packaging specifications

	Package	Taping
Туре	Code	T100
	Basic ordering unit (pieces)	1000
2SB1698		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*		
Collector output capacitance	Cob	_	13	_	pF	Vcb=-10V, Ie=0A, f=1MHz		

^{*} Pulsed

Electrical characteristic curves

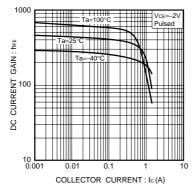


Fig.1 DC current gain vs. collector current

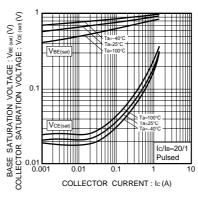


Fig.2 Collector-emitter saturation voltage base-emitter saturation voltage vs. collector current

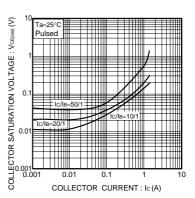


Fig.3 Collector-emitter saturation voltage vs. collector current

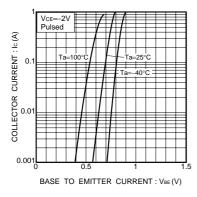


Fig.4 Grounded emitter propagation characteristics

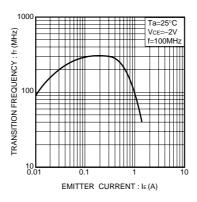


Fig.5 Gain bandwidth product vs. emitter current

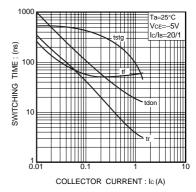


Fig.6 Switching time

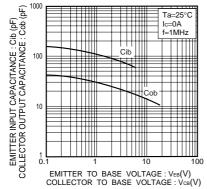


Fig.7 Collector output capacitance vs. collector-base voltage Emitter input capacitance vs. emitter-base voltage

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