Low frequency amplifier 2SB1708

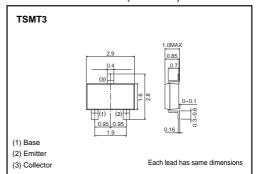
Application

Low frequency amplifier Driver

● Features

- 1) A collector current is large. (3A)
- 2) $V_{CE(sat)} \le -250 \text{mV}$ At $I_{C} = -1.5 \text{A} / I_{B} = -30 \text{mA}$

●External dimensions (Unit: 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	Vево	-6	V
Collector current	Ic	-3	Α
Collector current	Іср	-6	Α*
Power dissipation	Pc	500	mW
Junction temperature	Tj	150	°C
Range of storage temperature	Tstg	-55 to +150	°C

^{*}Single pulse, Pw=1ms

Packaging specifications

	Package	Taping
Туре	Code	TL
	Basic ordering unit (pieces)	3000
2SB1708		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	I _E =-10μA
Collector cutoff current	Ісво	_	_	-100	nA	Vcb=-30V
Emitter cutoff current	І ЕВО	_	_	-100	nA	V _{EB} =-6V
Collector-emitter saturation voltage	VCE(sat)	_	-180	-250	mV	Ic=-1.5A, I _B =-30mA
DC current gain	hfe	270	_	680	_	Vce=-2V, Ic=-200mA *
Transition frequency	f⊤	_	200	_	MHz	Vce=-2V, Ie=200mA, f=100MHz*
Collector output capacitance	Cob	_	40	_	pF	Vcb=-10V, Ie=0A, f=1MHz

Electrical characteristic curves

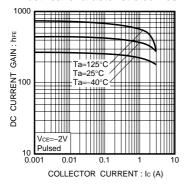


Fig.1 DC Current Gain vs. Collector Current

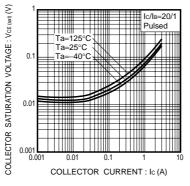


Fig.2 Collector-Emitter Saturation Voltage vs. Collector Current

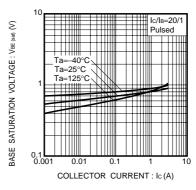


Fig.3 Base-emitter saturation voltage vs. Collector Current

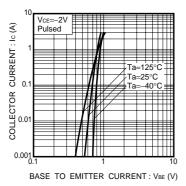


Fig.4 Grounded Emitter
Propagation Characteristics

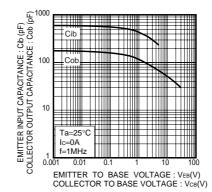


Fig.5 Collector Output Capacitance vs. Collector-Base Voltage Emitter Input Capacitance vs. Emitter-Base Voltage

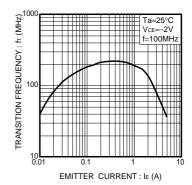


Fig.6 Gain Bandwidth Product vs. Emitter Current

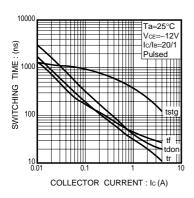


Fig.7 Switching Time

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