

2SB1122/2SD1622

Low-Frequency Power Amplifier Applications

Applications

· Voltage regulators relay drivers, lamp drivers, electrical equipment.

Features

- · Adoption of FBET process..
- · Very small size making it easy to provide highdensity hybrid IC's.

(): 2SB1122

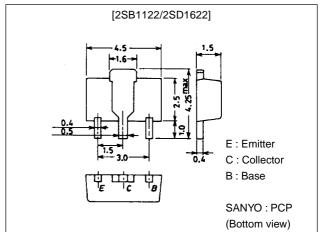
Specifications

Absolute Maximum Ratings at Ta = 25°C

Package Dimensions

unit:mm

2038



Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V _{CBO}		(-)60	V
Collector-to-Emitter Voltage	V _{CEO}		(-)50	V
Emitter-to-Base Voltage	V _{EBO}		(–)5	V
Collector Current	I _C		(-)1	Α
Collector Current (Pulse)	I _{CP}		(-)2	Α
Collector Dissipation	PC		500	mW
		Mounted on ceramic board (250mm²×0.8mm)	1.3	W
Junction Temperature	Tj		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions		Unit		
Falanielei	Symbol	Conditions	min	typ	max	
Collector Cutoff Current	ICBO	V _{CB} =(-)50V, I _E =0			(-)100	nA
Emitter Cutoff Current	IEBO	V _{EB} =(-)4V, I _C =0			(-)100	nA
DC Current Gain	h _{FE} 1	V _{CE} =(-)2V, I _C =(-)100mA	100*		560*	
	h _{FE} 2	V _{CE} =(-)2V, I _C =(-)1A	30			
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)50mA		150		MHz
Output Capacitance	C _{ob}	V _{CB} =(-)10V, f=1MHz		(12)		pF
				8.5		pF

 $[\]ensuremath{^*}$; The 2SB1122/2SD1622 are classified by 100mA $\ensuremath{h_{FE}}$ as follows :

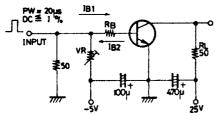
	100	R	200	140	S	280	200	Т	400	280	U	560
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Parameter	Symbol	Conditions		Unit			
Farameter	Symbol	Conditions	min	typ	max	Uill	
Collector-to-Emitter Saturation Voltage	VCE(sat)	I _C =(-)500mA, I _B =(-)50mA		(-180)	(-500)	mV	
				120	300	mV	
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =(-)500mA, I _B =(-)50mA		(-)0.9	(-)1.2	V	
Collector-to-Base Breakdown Voltage	V(BR)CBO	I _C =(-)10μA, I _E =0	(–)60			V	
Collector-to-Emitter Breakdown Voltage	V(BR)CEO	I _C =(–)1mA, R _{BE} =∞	(–)50			V	
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =(-)10μA, I _C =0	(–)5			V	
Turn-ON Time	ton	See specified Test Circuit.		40		ns	
				(40)		ns	
Storage Time	t _{stg}	See specified Test Circuit.		350		ns	
				(300)		ns	
Fall Time	t _f	See specified Test Circuit.		30		ns	
				(30)		ns	

Switching Time Test Circuit

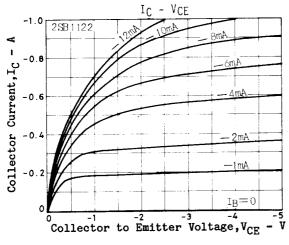


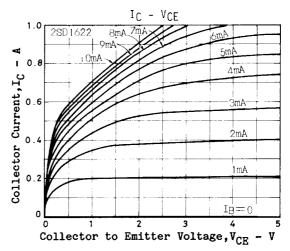
Marking 2SB1122:BE 2SD1622:DE

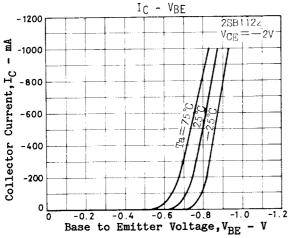
h_{FE} rank :R,S,T,U

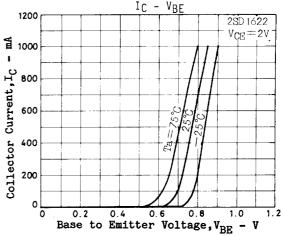
I C=10 I B1=-10 I B2=500mA

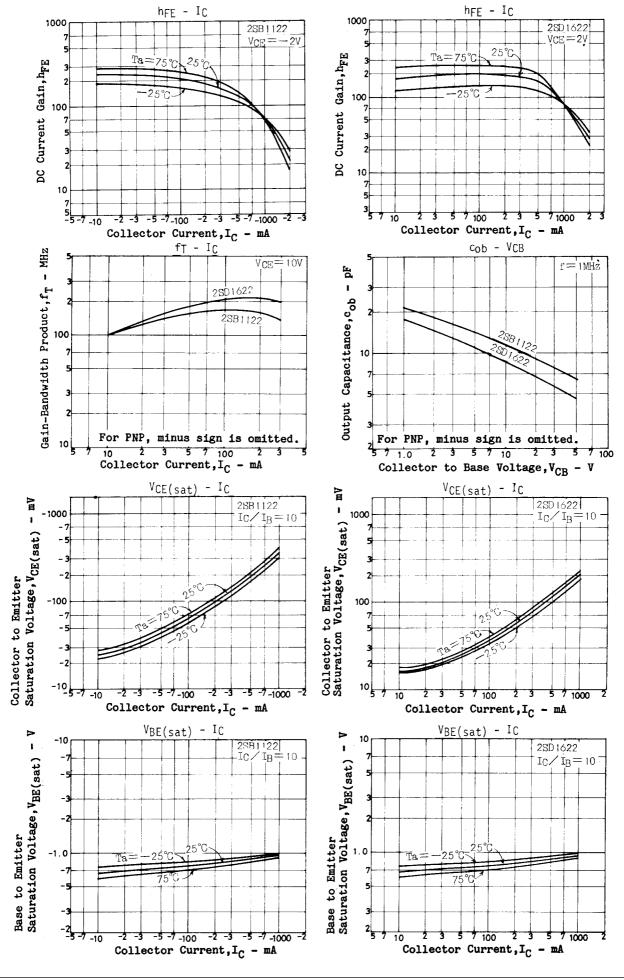
(For PNP, the polarity is reversed.)
Unit (resistance: Ω, capacitance: F)



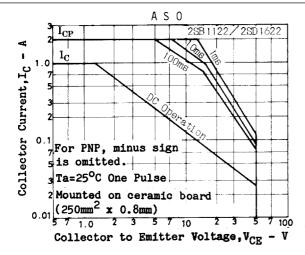


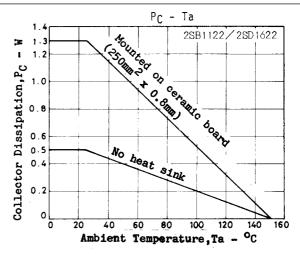






2SB1122/2SD1622





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