

## 2SB1433

**Silicon PNP Epitaxial  
Low Frequency Power Amplifier**

### Features

- Low saturation voltage  
 $V_{CE(sat)} \leq -0.2 \text{ V}$
- Large current capacitance  
 $I_C = -2 \text{ A}$

**Table 1 Absolute Maximum Ratings**  
( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	-50	V
Collector to emitter voltage	$V_{CEO}$	-50	V
Emitter to base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-2	A
Peak collector current	$i_{C(\text{peak})}$	-3	A
Collector power dissipation	$P_C$	0.9	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-55 to +150	$^\circ\text{C}$

TO-92MOD



1. Emitter
2. Collector
3. Base

**Table 2 Electrical Characteristics** ( $T_a = 25^\circ\text{C}$ )

Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to base breakdown voltage	$V_{(BR)CBO}$	-50	—	—	V	$I_C = -10 \mu\text{A}$ , $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	-50	—	—	V	$I_C = -1 \text{ mA}$ , $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	-5	—	—	V	$I_E = -10 \mu\text{A}$ , $I_C = 0$
Collector cutoff current	$I_{CBO}$	—	—	-1	$\mu\text{A}$	$V_{CB} = -40 \text{ V}$ , $I_E = 0$
Collector cutoff current	$I_{CEO}$	—	—	-5	$\mu\text{A}$	$V_{CE} = -40 \text{ V}$ , $R_{BE} = \infty$
Emitter cutoff current	$I_{EBO}$	—	—	-1	$\mu\text{A}$	$V_{EB} = -4 \text{ V}$ , $I_C = 0$
DC current transfer ratio	$h_{FE1}$	120	—	—	—	$V_{CE} = -2 \text{ V}$ , $I_C = -0.5 \text{ A}^*$
DC current transfer ratio	$h_{FE2}$	40	—	—	—	$V_{CE} = -2 \text{ V}$ , $I_C = -1.5 \text{ A}^*$

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Table 2 Electrical Characteristics (Ta = 25°C) (cont)

Item	Symbol	Min	Typ	Max	Unit	Test condition
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	—	-0.2	V	$I_C = -1\text{ A}, I_B = -50\text{ mA}^*$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	-1.2	V	$I_C = -1\text{ A}, I_B = -50\text{ mA}^*$

\* Pulse test



