

## Silicon PNP Epitaxial

## 2SB1002

## ■ Features

- Low frequency power amplifier

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	-70	V
Collector to emitter voltage	$V_{CEO}$	-50	V
Emitter to base voltage	$V_{EBO}$	-6	V
Collector current	$I_C$	-1	A
peak collector current	$I_{CP} *1$	-1.5	A
Collector power dissipation	$P_C *2$	1	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

\*1.  $PW \leq 10 \text{ ms}$ ;  $d \leq 0.02$ .

\*2. Value on the alumina ceramic board (12.5 X 20 X 0.7 mm)

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10 \mu\text{A}$ , $I_E = 0$	-70			V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1 \text{ mA}$ , $R_{BE} = \infty$	-50			V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10 \mu\text{A}$ , $I_C = 0$	-6			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = -50\text{V}$ , $I_E = 0$			-0.1	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -4 \text{ V}$ , $I_C = 0$			-0.1	$\mu\text{A}$
DC current transfer ratio	$h_{FE}$	$V_{CE} = -2 \text{ V}$ , $I_C = -0.1 \text{ A}$	100		320	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1 \text{ A}$ , $I_B = -0.1 \text{ A}$			-0.6	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1 \text{ A}$ , $I_B = -0.1 \text{ A}$			-1.2	V
Gain bandwidth product	$f_T$	$V_{CE} = -2 \text{ V}$ , $I_C = -10 \text{ mA}$		150		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$		35		pF

## ■ hFE Classification

Marking	CH	CJ
hFE	100~200	160~320

