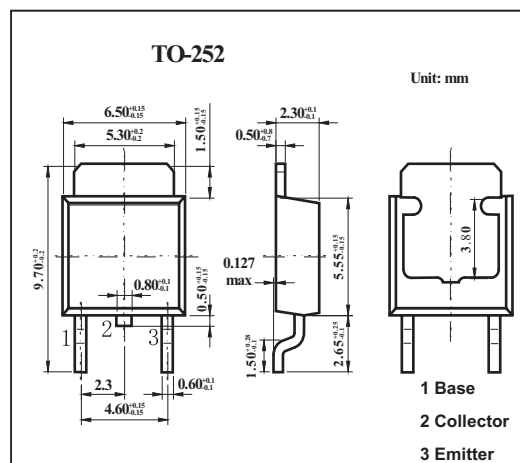


## Low Frequency Transistor

## 2SB1412



## ■ Features

- Low  $V_{CE(sat)}$ .
- PNP silicon transistor.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-30	V
Collector-emitter voltage	$V_{CEO}$	-20	V
Emitter-base voltage	$V_{EBO}$	-6	V
Collector current	$I_C$	-5	A(DC)
		-10	A (Pulse)*
Collector current pulse	$I_{CP}$	-10	A
Collector power dissipation	$P_C$	1	W
	$(T_c=25^\circ\text{C})$	10	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

\* Single pulse ,PW=10ms

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

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$BV_{CB0}$	$I_C=-50\mu\text{A}$	-30			V
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C=-1\text{mA}$	-20			V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_E=-50\mu\text{A}$	-6			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=-20\text{V}$			-0.5	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB}=-5\text{V}$			-0.5	$\mu\text{A}$
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -4\text{A}, I_B = -0.1\text{A}$		-0.35	-1.0	V
DC current transfer ratio	$h_{FE}$	$V_{CE} = -2\text{V}, I_C = -0.5\text{A}$	82		390	
Output capacitance	$f_t$	$V_{CE} = -6\text{V}, I_E = 50\text{mA}, f = 100\text{MHz}$		120		MHz
Transition frequency	$C_{ob}$	$V_{CB} = -20\text{V}, I_E = 0\text{A}, f = 1\text{MHz}$		60		pF

## ■ hFE Classification

Rank	P	Q	R
hFE	82~180	120~270	180~390