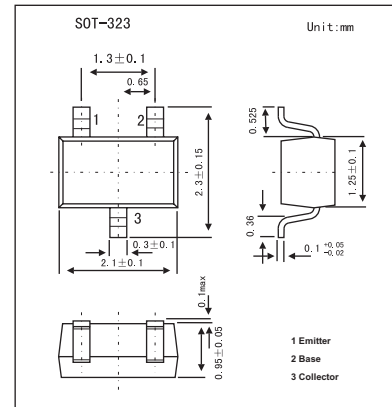


## PNP Silicon Epitaxia

## 2SA1611

## ■ Features

- High DC Current Gain.
- High Voltage.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-60	V
Collector-emitter voltage	$V_{CEO}$	-50	V
Emitter-base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-100	mA
Total power dissipation	$P_T$	150	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -60\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	$\mu\text{A}$
DC current gain *	$h_{FE}$	$V_{CE} = -6\text{V}, I_C = -1\text{mA}$	90	200	600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}, I_B = -10\text{mA}$		-0.18	-0.3	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = -6\text{V}, I_C = 1\text{mA}$	-0.58	-0.62	-0.68	V
Gain bandwidth product	$f_T$	$V_{CE} = -6\text{V}, I_E = 10\text{mA}$		180		MHz
Output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}, I_E = 0, f = 1.0\text{MHz}$		4.5		pF

\* Pulse test:  $t_p \leq 300 \mu\text{s}$ ;  $d \leq 0.02$ .

■  $h_{FE}$  Classification

Marking	M4	M5	M6	M7
$h_{FE}$	90~180	135~270	200~400	300~600