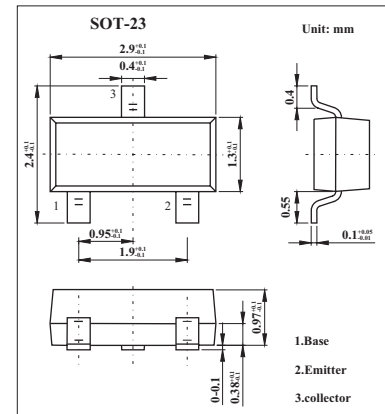


## Silicon NPN Epitaxial

## 2SC3123

## ■ Features

- High Conversion Gain :  $G_{ce}=23\text{dB(TYP.)}$
- Low Reverse Transfer Capacitance :  $C_{re}=0.4\text{F(TYP.)}$

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	30	V
Collector-emitter voltage	$V_{CEO}$	20	V
Emitter-base voltage	$V_{EBO}$	3	V
Collector current	$I_C$	50	mA
Base current	$I_B$	25	mA
Collector Power Dissipation	$P_C$	150	mW
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature Range	$T_{stg}$	-55 to +125	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 25\text{V}, I_E = 0$			100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 3\text{V}, I_C = 0$			1000	nA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	20			V
DC current gain	$h_{FE}$	$V_{CE} = 10\text{V}, I_C = 5\text{mA}$	40	150	300	
Reverse Transfer Capacitance	$C_{re}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		0.4	0.5	pF
Transition Frequency	$f_T$	$V_{CE} = 10\text{V}, I_C = 5\text{mA}$	900	1400		MHz
Conversion Gain	$G_{ce}$	$V_{CC} = 12\text{V}, f_L = 260\text{MHz}, f = 200\text{MHz}$	20	23		dB
Noise Figure	NF			3.8	5.5	dB

## ■ Marking

Marking	HE