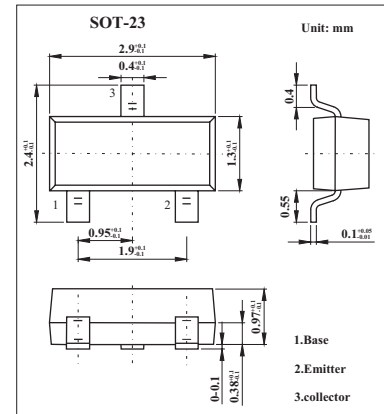


## PNP Transistor

### 2SA1015

#### ■ Features

- High voltage and high current  
 $V_{CE0}=-50V(\text{min.}), I_C=-150mA(\text{max.})$
- Low noise:  $NF=1dB(\text{Typ.})$  at  $f=1KHz$



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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	-50	V
Collector-Emitter Voltage	$V_{CE0}$	-50	V
Emitter-Base Voltage	$V_{EB0}$	-5	V
Collector Current -Continuous	$I_C$	150	mA
Collector Power Dissipation	$P_C$	200	mW
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to 125	$^\circ\text{C}$

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

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{CB0}$	$I_C = -100 \mu\text{A}, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{CE0}$	$I_C = -0.1\text{mA}, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	$I_{CB0}$	$V_{CB} = -50\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Collector cut-off current	$I_{CE0}$	$V_{CE} = -50\text{V}, I_B = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE} = -6\text{V}, I_C = -2\text{mA}$	130		400	
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C = -100\text{mA}, I_B = -10\text{mA}$			-0.3	V
Base-emitter saturation voltage	$V_{BE(\text{sat})}$	$I_C = -100\text{mA}, I_B = -10\text{mA}$			-1.1	V
Transition frequency	$f_T$	$V_{CE} = -10\text{V}, I_C = -1\text{mA}, f = 30\text{MHz}$	80			MHz

#### ■ $h_{FE}$ Classification

Marking	BA	
	L	H
$h_{FE}$	130~200	200~400