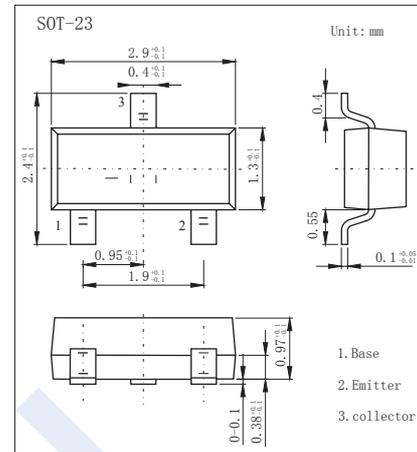


## PNP Transistors

### 2SA1171



#### ■ Features

- Low frequency small signal amplifier

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CB0}$	-90	V
Collector to emitter voltage	$V_{CE0}$	-90	V
Emitter to base voltage	$V_{EB0}$	-5	V
Collector current	$I_C$	-50	mA
Collector power dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

#### ■ Electrical Characteristics $T_a = 25$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C = -100 \mu\text{A}$ , $I_E = 0$	-90			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = -1 \text{ mA}$ , $R_{BE} = \infty$	-90			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-5			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = -75 \text{ V}$ , $I_E = 0$			-0.5	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = -5 \text{ V}$ , $I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10 \text{ mA}$ , $I_B = -1 \text{ mA}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -10 \text{ mA}$ , $I_B = -1 \text{ mA}$			-1.2	
Base-emitter voltage	$V_{BE}$	$V_{CE} = -12 \text{ V}$ , $I_C = -2 \text{ mA}$			-0.75	
DC current transfer ratio	$h_{FE}$	$V_{CE} = -12 \text{ V}$ , $I_C = -2 \text{ mA}$	250		800	
Collector output capacitance	$C_{ob}$	$V_{CB} = -25 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$		1.6		pF
Transition frequency	$f_T$	$V_{CE} = -12 \text{ V}$ , $I_C = -2 \text{ mA}$		200		MHz

#### ■ Classification of $h_{FE}$

Marking	PD	PE
$h_{FE}$	250~500	400~800

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## ■ Typical Characteristics

