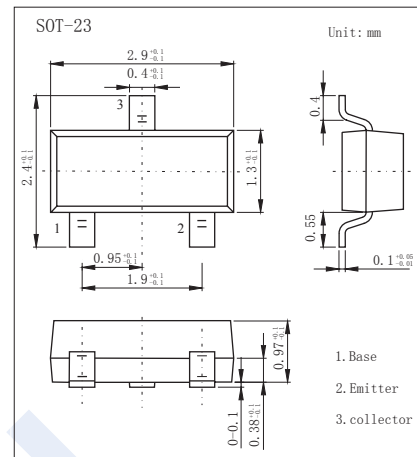


PNP Transistors

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	μA
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}

Type	2SA1171-D	2SA1171-E
Range	250-500	400-800
Marking	PD	PE

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■ Typical Characteristics

