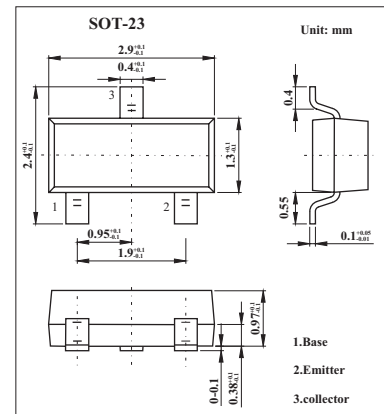


## PNP Epitaxial Planar Silicon Transistor

## 2SA1257

## ■ Features

- High breakdown voltage.
- Small output capacitance.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-180	V
Collector-emitter voltage	$V_{CE0}$	-160	V
Emitter-base voltage	$V_{EB0}$	-5	V
Collector current	$I_c$	-80	mA
Collector current (pulse)	$I_{CP}$	-150	mA
Collector dissipation	$P_c$	200	mW
Jumction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

## 2SA1257

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cutoff current	IcBO	V <sub>CB</sub> = -120V, I <sub>E</sub> = 0			-0.1	μA	
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = -4V, I <sub>C</sub> = 0			-0.1	μA	
DC current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -10 mA	60		270		
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = -10V, I <sub>C</sub> = -10 mA		130		MHz	
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, f = 1MHz		2.4	3.2	pF	
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = -5V, I <sub>C</sub> = -10 mA			-1.5	V	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -30mA, I <sub>B</sub> = -3mA			-0.7	V	
Collector-to-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -10μA, I <sub>E</sub> = 0	-180			V	
Collector-to-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA, R <sub>BE</sub> = ∞	-160			V	
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA, I <sub>C</sub> = 0	-5			V	
Turn-on time	t <sub>on</sub>			0.15		μs	
Storage time	t <sub>stg</sub>				0.95		μs
Fall time	t <sub>f</sub>				0.15		μs

## ■ hFE Classification

Rank	G3	G4	G5
hFE	60~120	90~180	135~270