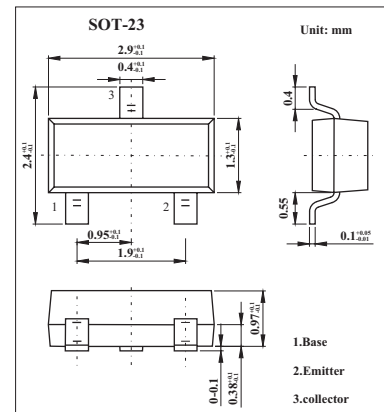


## PNP Epitaxial Planar Silicon Transistors

## 2SA1607

## ■ Features

- Fast switching speed.
- High gain-bandwidth product.
- Low saturation voltage.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-40	V
Collector-emitter voltage	$V_{CE0}$	-20	V
Emitter-base voltage	$V_{EB0}$	-5	V
Collector current	$I_C$	-150	mA
Collector current (pulse)	$I_{CP}$	-300	mA
Base current	$I_B$	-30	mA
Collector dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

**2SA1607**■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -30V, I_E = 0$			-0.1	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -4V, I_C = 0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE} = -1V, I_C = -10\text{mA}$	60		180	
Gain bandwidth product	$f_T$	$V_{CE} = -10V, I_C = -10\text{mA}$		400		MHz
Output capacitance	$C_{ob}$	$V_{CB} = -10V, f = 1.0\text{MHz}$		2.9		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$		-0.07	-0.2	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$		-0.75	-1	V
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, R_{BE} = \infty$	-20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5			V
Delay time	$t_d$			14	20	ns
Rise time	$t_r$			11	20	ns
Storage time	$t_{stg}$			80	180	ns
Fall time	$t_f$			16	25	ns

## ■ hFE Classification

Marking	YL	
	3	4
hFE	60~120	90~180