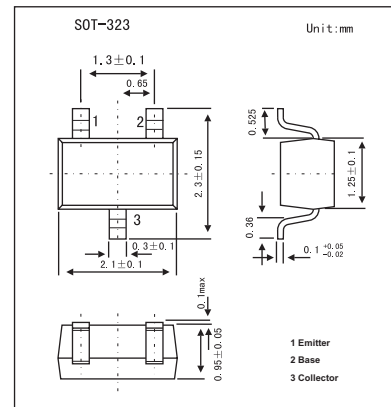


## PNP Epitaxial Planar Silicon Transistors

## 2SA1687

## ■ Features

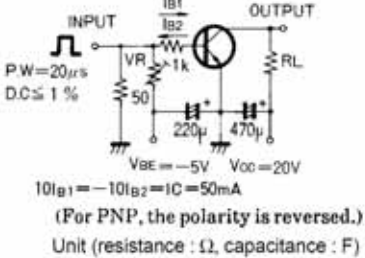
- Very small-sized package.
- High  $V_{EBO}$ .

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	-60	V
Collector-emitter voltage	$V_{CEO}$	-50	V
Emitter-base voltage	$V_{EBO}$	-15	V
Collector current	$I_C$	-150	A
Collector current	$I_{CP}$	-300	A
Base current	$I_B$	-30	mA
Collector dissipation	$P_C$	150	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

## 2SA1687

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector cutoff current	IcBO	V <sub>CB</sub> = -40V , I <sub>E</sub> = 0			-0.1	μA	
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = -120V , I <sub>C</sub> = 0			-0.1	μA	
DC current Gain	h <sub>FE</sub>	V <sub>CE</sub> = -6V , I <sub>C</sub> = -1mA	135		600		
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = -6V , I <sub>C</sub> = -1mA		130		MHz	
Collector-to-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -50mA , I <sub>B</sub> = -5mA		-0.25	-0.5	V	
Base-to-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = -50mA , I <sub>B</sub> = -5mA		-0.85	-1.2	V	
Collector-to-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = -10μA , I <sub>E</sub> = 0	-60			V	
Collector-to-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = -1mA , R <sub>BE</sub> = ∞	-50			V	
Emitter-to-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = -10μA , I <sub>C</sub> = 0	-15			V	
Common base output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -6V , f = 1MHz		3.5		pF	
Delay time	t <sub>on</sub>			50		ns	
Storage time	t <sub>stg</sub>				460		ns
Fall time	t <sub>f</sub>				60		ns

## ■ hFE Classification

Marking	D		
	5	6	7
hFE	60~120	90~180	135~270