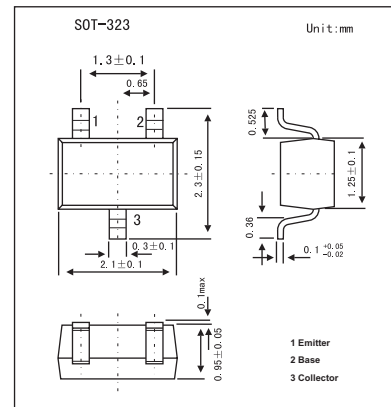


PNP Epitaxial Planar Silicon Transistors

2SA1687

■ Features

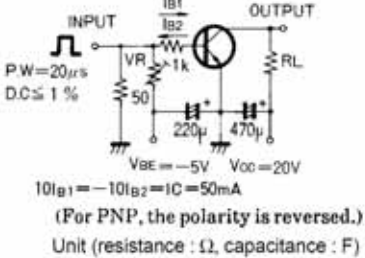
- Very small-sized package.
- High V_{EBO} .

■ 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 _{CB} = -40V , I _E = 0			-0.1	μA	
Emitter cutoff current	I _{EBO}	V _{EB} = -120V , I _C = 0			-0.1	μA	
DC current Gain	h _{FE}	V _{CE} = -6V , I _C = -1mA	135		600		
Gain bandwidth product	f _T	V _{CE} = -6V , I _C = -1mA		130		MHz	
Collector-to-emitter saturation voltage	V _{CE(sat)}	I _C = -50mA , I _B = -5mA		-0.25	-0.5	V	
Base-to-emitter saturation voltage	V _{BE(sat)}	I _C = -50mA , I _B = -5mA		-0.85	-1.2	V	
Collector-to-base breakdown voltage	V _{(BR)CBO}	I _C = -10μA , I _E = 0	-60			V	
Collector-to-emitter breakdown voltage	V _{(BR)CEO}	I _C = -1mA , R _{BE} = ∞	-50			V	
Emitter-to-base breakdown voltage	V _{(BR)EBO}	I _E = -10μA , I _C = 0	-15			V	
Common base output capacitance	C _{ob}	V _{CB} = -6V , f = 1MHz		3.5		pF	
Delay time	t _{on}			50		ns	
Storage time	t _{stg}				460		ns
Fall time	t _f				60		ns

■ hFE Classification

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