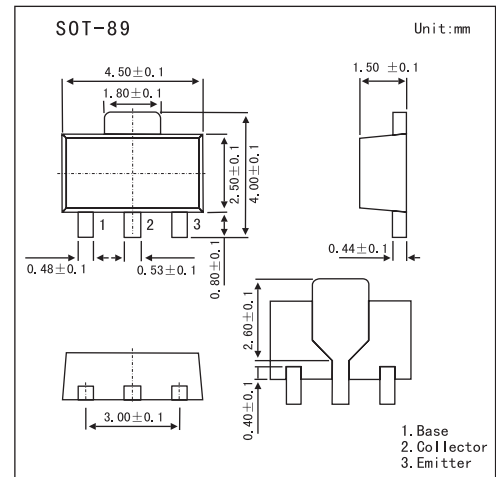


PNP Epitaxial Planar Silicon Transistors

2SB1302

■ Features

- Adoption of FBET, MBIT processes.
- Low collector-to-emitter saturation voltage.
- Large current capacity.
- Fast switching speed.
- Very small size making it easy to provide highdensity,
- small-sized hybrid ICs.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-25	V
Collector-emitter voltage	V_{CEO}	-20	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-5	A
Collector current (pulse)	I_{CP}	-8	A
Collector dissipation	P_C	1.3	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

2SB1302

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cutoff current	ICBO	V _{CB} = -20V , I _E = 0			-500	nA	
Emitter cutoff current	IEBO	V _{EB} = -4V , I _E = 0			-500	nA	
DC current Gain	hFE	V _{CE} = -2V , I _C = -500mA	100		400		
Gain bandwidth product	f _T	V _{CE} = -5V , I _C = -200mA		320		MHz	
Output capacitance	C _{ob}	V _{CB} = -10V , f = 1MHz		60		pF	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = -3A , I _B = -60mA		-250	-500	V	
Base-emitter saturation voltage	V _{BE(sat)}	I _C = -3A , I _B = -60mA		-1	-1.3	V	
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = -10μA , I _E = 0	-25			V	
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = -1mA , R _{BE} = ∞	-20			V	
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = -10μA , I _C = 0	-5				
Turn-on time	ton			40		ns	
Storage time	tstg				200		ns
Fall time	tf				10		ns

■ hFE Classification

Marking	BJ		
	R	S	T
hFE	100~200	140~280	200~400