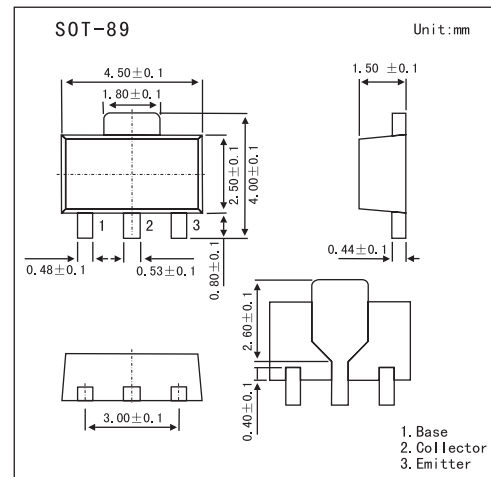


NPN Epitaxial Planar Silicon Transistor

2SD1623

■ Features

- Adoption of FBET, MBIT processes.
- Low collector-to-emitter saturation voltage.
- Large current capacity and wide ASO.
- Fast switching speed.
- The ultraminiature package facilitates higher-density mounting, thus allows the applied hybrid IC's further miniaturization.

■ 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}	6	V
Collector current	I_C	2	A
Collector current (pulse)	I_{CP}	4	A
Collector dissipation	P_C	0.5	W
	P_{C^*}	1.3	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* Mounted on ceramic board(250mm2X0.8mm)

2SD1623

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Collector cutoff current	IcBO	V _{CB} = 50 V, I _E =0			100	nA	
Emitter cutoff current	I _{EBO}	V _{EB} = 4 V, I _C =0			100	nA	
DC current gain	h _{FE}	V _{CE} = 2 V, I _C = 100 mA	100		560		
Gain bandwidth product	f _T	V _{CE} = 10 V, I _C = 50 mA		150		MHz	
Output capacitance	C _{ob}	V _{CB} = 10 V, f = 1.0MHz		12		pF	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 1 A, I _B = 50 mA		0.15	0.4	V	
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 1 A, I _B = 50 mA		0.9	1.2	V	
Collector-base breakdown voltage	V _{(BR)CBO}	I _C = 10μA, I _E = 0	60			V	
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = 1mA, R _{BE} = ∞	50			V	
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = 10μA, I _C = 0	6			V	
Turn-on time	ton			60		ns	
Storage time	tstg				550		ns
Turn-off time	tf				30		ns

■ hFE Classification

Marking	DF			
	R	S	T	U
hFE	100~200	140~280	200~400	280~560