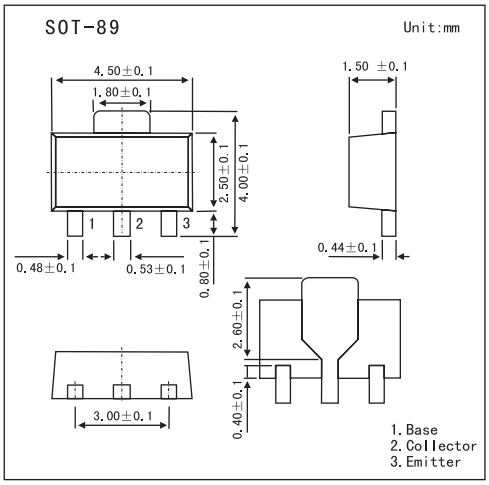
NPN Epitaxial Planar Silicon Transistor

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 Ta = 25℃

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	℃
Storage temperature	T_{stg}	-55 to +150	℃

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

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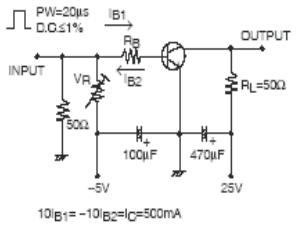
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	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 timie	ton	 $10I_{B1}=-10I_{B2}=I_C=500mA$		60		ns
Storage time	tstg			550		ns
Turn-off time	tf			30		ns

■ h_{FE} Classification

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