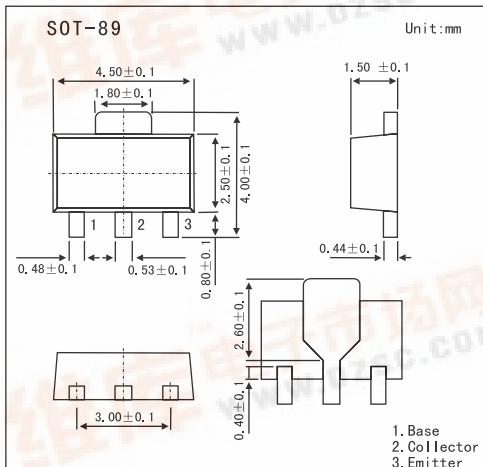


SMD Type

Transistors

NPN Silicon Epitaxial Transistor

2SD1000



■ Features

- World standard miniature package:SOT-89.
- Low collector saturation voltage.

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CBO}	60	V
Collector-emitter voltage	V _{CEO}	50	V
Emitter-base voltage	V _{EBO}	5	V
Collector current (DC)	I _C	0.7	A
Collector Current (pulse) *	I _C	1.0	A
Total power dissipation	P _T	2.0	W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

* Pulse Test PW ≤ 10ms, Duty Cycle ≤ 50%.

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I _{CB0}	V _{CB} = 60 V, I _E = 0 A			100	nA
Emitter cutoff current	I _{EB0}	V _{EB} = 5.0 V, I _C = 0 A			100	nA
DC current gain *	h _{FE}	V _{CE} = 1.0 V, I _C = 100 mA	90	200	400	
		V _{CE} = 1.0 V, I _C = 500 mA	50	150		
Collector saturation voltage *	V _{CE(sat)}	I _C = 500 mA, I _B = 50 mA		0.12	0.4	V
Base saturation voltage *	V _{BE(sat)}	I _C = 500 mA, I _B = 50 mA		0.9	1.2	V
Base-emitter voltage *	V _{BE}	V _{CE} = 6.0 V, I _C = 10 mA	600	635	700	mV
Gain bandwidth product	f _T	V _{CE} = 6.0 V, I _E = -10 mA		110		MHz
Output capacitance	C _{ob}	V _{CB} = 6 V, I _E = 0, f = 1.0 MHz		13		pF

* Pulsed: PW ≤ 350 μs, duty cycle ≤ 2%

■ hFE Classification

Marking	LM	LL	LK
	90~180	135~270	200~400