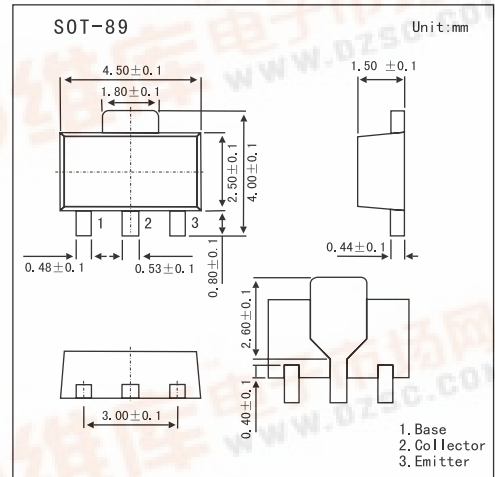


SMD Type Transistors

NPN Silicon Epitaxia
2SD1950

Features

- High dc current gain and good hFE.
- Low collector saturation voltage.
- High V_{EB0}.



Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	30	V
Collector-emitter voltage	V _{CEO}	25	V
Emitter-base voltage	V _{EB0}	15	V
Collector current	I _c	2	A
Collector current (Pulse) *	I _c	3	A
Total power dissipation	P _T	2	W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-55 to +150	°C

* PW ≤ 10ms, duty cycle ≤ 50%

Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I _{CB0}	V _{CB} = 30 V, I _E = 0			100	nA
Emitter cutoff current	I _{EB0}	V _{EB} = 10 V, I _c = 0			100	nA
DC current gain *	h _{FE}	V _{CE} = 5.0 V, I _c = 1.0 A	800	1500	3200	
		V _{CE} = 5.0 V, I _c = 2.0 A	400			
Collector saturation voltage	V _{CE(sat)}	I _c = 1 A, I _B = 10 mA		0.18	0.3	V
Base saturation voltage	V _{BE(sat)}	I _c = 1 A, I _B = 10 mA		0.83	1.2	V
Base to emitter voltage *	V _{BE}	V _{CE} = 5.0 V, I _c = 300 mA	600	660	700	mV
Gain bandwidth product	f _T	V _{CE} = 10 V, I _E = -500 mA	150	350		MHz
Output capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1.0 MHz		26	35	pF

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

hFE Classification

Marking	VM	VL	VK
hFE	800~1600	1200~2400	2000~3200

