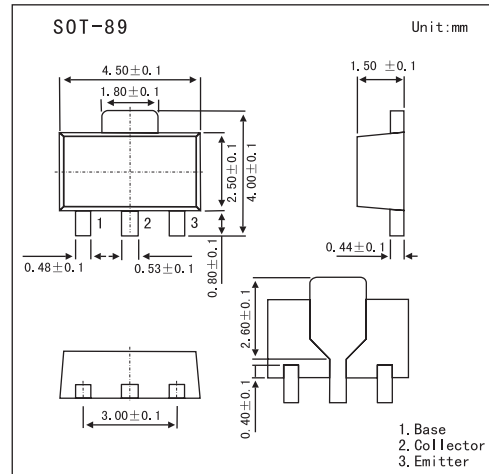


## NPN Silicon Epitaxial Transistor

## 2SD1006



### ■ Features

- High collector to emitter voltage:  $V_{CE0} > 100V$ .

### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	100	V
Collector-emitter voltage	$V_{CE0}$	100	V
Emitter-base voltage	$V_{EB0}$	5	V
Collector current	$I_C$	0.7	A
Collector current (pulse) *	$I_{C(pu)}$	1.2	A
Collector I power dissipation	$P_C$	2	W
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ C$

\*.  $PW \leq 10ms$ , duty cycle  $\leq 50\%$

### ■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Base-emitter voltage *	$V_{BE}$	$V_{CE} = 10V, I_C = 10mA$	550	620	650	mV
Collector cutoff current	$I_{CB0}$	$V_{CB} = 100V, I_E = 0$			100	nA
Emitter cutoff current	$I_{EB0}$	$V_{EB} = 5V, I_C = 0$			100	nA
DC current gain *	$h_{FE}$	$V_{CE} = 1V, I_C = 5.0mA$	45	200		
		$V_{CE} = 1V, I_C = 100mA$	90	200	400	
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA$		0.3	0.6	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 500mA, I_B = 50mA$		0.9	1.5	V
Output capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1.0MHz$		10		pF
Transition product	$f_T$	$V_{CE} = 10V, I_E = -10mA$		90		MHz

\*.  $PW \leq 350\mu s$ , duty cycle  $\leq 2\%$

### ■ hFE Classification

Marking	HM	HL	HK
hFE	90~180	135~270	200~400