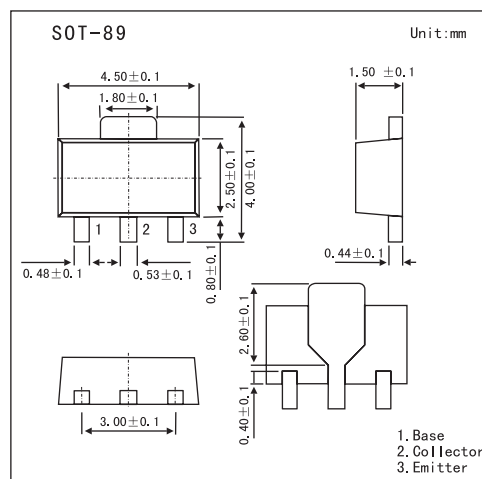


## NPN Silicon Epitaxia

## 2SC3736



## ■ Features

- High speed, high voltage switching.
- Low collector saturation voltage.

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	80	V
Collector-emitter voltage	$V_{CE0}$	45	V
Emitter-base voltage	$V_{EB0}$	5	V
Collector current	$I_C$	1	A
Collector current (Pulse)*	$I_{CP}$	2	A
Total power dissipation	$P_T$	2	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 45\text{V}$ , $I_E = 0$			0.5	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 4\text{V}$ , $I_C = 0$			0.5	nA
DC current gain *	$h_{FE}$	$V_{CE} = 10\text{V}$ , $I_C = 50\text{mA}$	60		200	
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 500\text{mA}$ , $I_B = 50\text{mA}$		0.17	0.4	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 500\text{mA}$ , $I_B = 50\text{mA}$		0.9	1.2	V
Gain bandwidth product	$f_T$	$V_{CE} = 10\text{V}$ , $I_E = -100\text{mA}$	300	380		MHz
Output capacitance	$C_{ob}$	$V_{CB} = 10\text{V}$ , $I_E = 0$ , $f = 1.0\text{MHz}$		6.7	10	pF
Turn-on time	$t_{on}$	$I_C = 500\text{mA}$ , $I_{B1} = I_{B2} = 50\text{mA}$		20	40	ns
Storage time	$t_{stg}$			55	80	ns
Turn-off time	$t_{off}$			72	100	ns

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

■  $h_{FE}$  Classification

Marking	OL	OK
$h_{FE}$	60~120	100~200