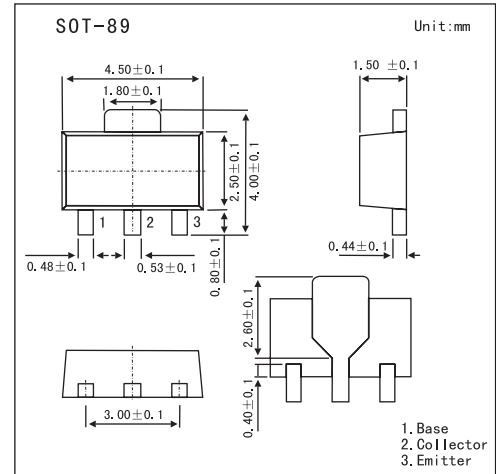


NPN Silicon Epitaxia

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