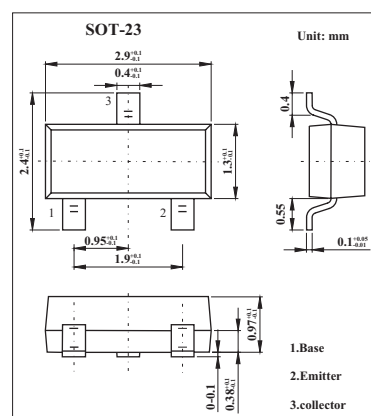


## NPN Silicon Epitaxia

## 2SC3734

## ■ Features

- High speed :  $t_{stg} < 200\text{ns}$ .

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CEO}$	40	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	200	mA
Total power dissipation at $25^\circ\text{C}$ ambient temperature	$P_T$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 30\text{V}, I_E = 0$			100	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 3\text{V}, I_C = 0$			100	nA
DC current gain *	$h_{FE}$	$V_{CE} = 1\text{V}, I_C = 10\text{mA}$	75	200	300	
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$		0.12	0.3	V
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 50\text{mA}, I_B = 5\text{mA}$		0.8	0.95	V
Gain bandwidth product	$f_T$	$V_{CE} = 20\text{V}, I_E = -10\text{mA}$	300	510		MHz
Output capacitance	$C_{ob}$	$V_{CB} = 5\text{V}, I_E = 0, f = 1.0\text{MHz}$		3.0	4.0	pF
Turn-on time	$t_{on}$	$V_{CC} = 3\text{V},$			70	ns
Storage time	$t_{stg}$	$I_C = 10\text{mA},$		100	200	ns
Turn-off time	$t_{off}$	$I_{B1} = -I_{B2} = 1\text{mA}$			250	ns

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

■  $h_{FE}$  Classification

Marking	B22	B23	B24
$h_{FE}$	75~150	100~200	150~300