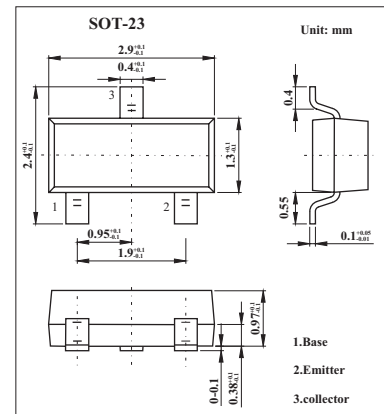


## NPN Silicon Epitaxial Transistor

## 2SC3360

## ■ Features

- High DC current gain.  $h_{FE}=90$  to 450
- High voltage  $V_{CE0}=200V$

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	200	V
Collector-emitter voltage	$V_{CE0}$	200	V
Emitter-base voltage	$V_{EB0}$	5	V
Collector current	$I_C$	100	mA
Total power dissipation	$P_T$	200	mW
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ C$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 200V, I_E = 0$			100	nA
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$			100	nA
DC current gain *	$h_{FE}$	$V_{CE} = 10V, I_C = 10mA$	90	200	450	
		$V_{CE} = 10V, I_C = 50mA$	50	200		
Base-emitter voltage *	$V_{BE}$	$V_{CE} = 10V, I_C = 10mA$	0.6	0.64	0.7	V
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 50mA, I_B = 5mA$		0.1	0.3	V
Base saturation voltage *	$V_{BE(sat)}$	$I_C = 50mA, I_B = 5mA$		0.8	1.2	V
Gain bandwidth product	$f_T$	$V_{CE} = 10V, I_E = -10mA$		160		MHz
Output capacitance	$C_{ob}$	$V_{CB} = 30V, I_E = 0, f = 1.0MHz$		2.8		pF
Turn-on time	$t_{on}$	$I_C = 10mA, I_{B1} = -I_{B2} = 1mA,$		0.15		$\mu s$
Storage time	$t_{stg}$	$V_{CC} = 10V$		1.3		$\mu s$
Fall time	$t_f$	$V_{BE(off)} = -2.5V$		0.3		$\mu s$

\* Pulse test:  $t_p \leq 350 \mu s; d \leq 0.02$ .

## ■ hFE Classification

Marking	N15	N16	N17
hFE	90~180	135~270	200~450