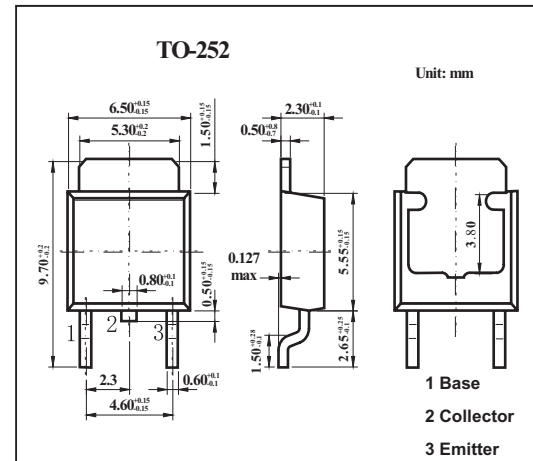


## NPN Silicon Epitaxial Transistor

## 2SC2946

## ■ Features

- High Voltage  $V_{CE0}=200V$
- High speed  $t_f < \mu s$

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	330	V
Collector to emitter voltage	$V_{CEO}$	200	V
Emitter to base voltage	$V_{EBO}$	7	V
Collector current	$I_{CP}$	2	A
Collector peak current *1	$I_C$	4	A
Total Power dissipation $T_a = 25^\circ C$ *2	$P_T$	2	W
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ C$

\*1  $PW \leq 10ms$ , Duty cycle  $\leq 50\%$

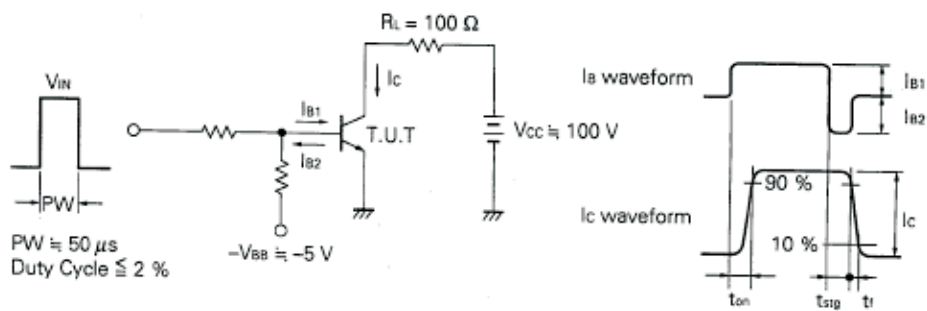
\*2 when mounted on ceramic substrate of  $7.5cm^2 \times 0.7mm$

## 2SC2946

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
collector cutoff current	$I_{CBO}$	$V_{CB}=250\text{V}, I_E=0$			1	$\mu\text{A}$
emitter cutoff current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			1	$\mu\text{A}$
DC current Gain *	$h_{FE}$	$V_{CE}=5\text{V}, I_C=100\text{mA}$	20	60	160	
		$V_{CE}=5\text{V}, I_C=1\text{A}$	15			
Collector Saturation Voltage *	$V_{CE(sat)}$	$I_C=1\text{A}, I_B=0.1\text{A}$			1	V
Base Saturation Voltage *	$V_{BE(sat)}$	$I_C=1\text{A}, I_B=0.1\text{A}$			1.5	V
Turn-on Time	$t_{on}$	see Test circuit			1	$\mu\text{s}$
Storage Time	$t_{stg}$				2	
Fall Time	$t_f$				1	

\* Pulsed:  $PW \leq 350\mu\text{s}$ , Duty Cycle  $\leq 2\%$

■ Switching Time( $t_{on}, t_{stg}, t_f$ ) Test Circuit■  $h_{FE}$  Classification

Marking	N	M	L	K
$h_{FE}$	20 to 50	30 to 70	50 to 100	80 to 160