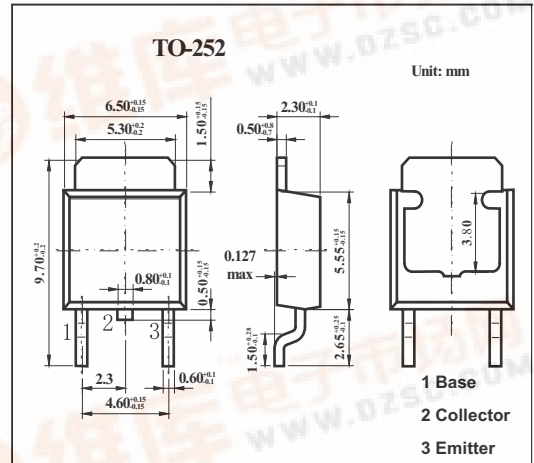


SMD Type Transistors

NPN Silicon Epitaxial Transistor
2SC2946

■ Features

- High Votage $V_{CE0}=200V$
- 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 $7.5cm^2 \times 0.7mm$

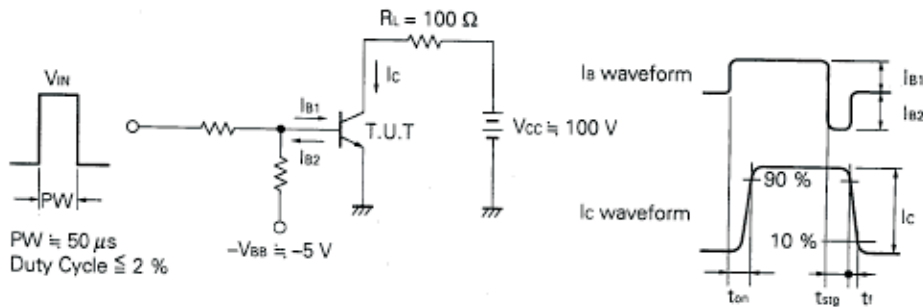
2SC2946

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
collector cutoff current	ICBO	V _{CB} =250V, I _E =0			1	μA
emitter cutoff current	IEBO	V _{EB} =5V, I _C =0			1	μA
DC current Gain *	hFE	V _{CE} =5V, I _C =100mA	20	60	160	
		V _{CE} =5V, I _C =1A	15			
Collector Saturation Voltage *	V _{CE(sat)}	I _C =1A, I _B =0.1A			1	V
Base Satruation Voltage *	V _{BE(sat)}	I _C =1A, I _B =0.1A			1.5	V
Turn-on Time	t _{on}	see Test circuit			1	μs
Storage Time	t _{stg}				2	
Fall Time	t _f				1	

* Pulsed: PW ≤ 350μs, Duty Cycle ≤ 2%

■ Switching Time(t_{on}, t_{stg}, t_r) Test Circuit



■ hFE Classification

Marking	N	M	L	K
hFE	20 to 50	30 to 70	50 to 100	80 to 160