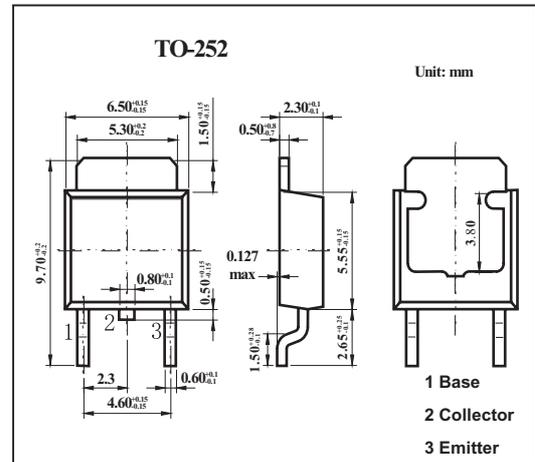


## NPN Silicon Triple Diffused

## 2SC3233

## ■ Features

- Excellent Switching Times  
 $t_r=1.0\mu s$  (Max.)  $t_f=1.0\mu s$  (Max.) at  $I_c=0.8A$
- High collector Breakdown Voltage:  $V_{CE0}=400V$

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	500	V
Collector to emitter voltage	$V_{CEO}$	400	V
Emitter to base voltage	$V_{EBO}$	7	V
Collector current	$I_C$	2	A
Base Current	$I_B$	0.5	A
Total Power dissipation $T_a = 25^\circ C$	$P_C$	1	W
$T_c = 25^\circ C$		20	W
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	$I_{CBO}$	$V_{CB}=400V, I_E=0$			100	$\mu A$	
emitter cutoff current	$I_{EBO}$	$V_{EB}=7V, I_C=0$			1	mA	
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=1mA, I_C=0$	500			V	
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	400			V	
DC current Gain	$h_{FE}$	$V_{CE}=5V, I_C=0.1A$	20				
		$V_{CE}=5V, I_C=1A$	8				
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=0.1A, I_B=0.2A$			1	V	
Base- Emitter Voltage	$V_{BE(sat)}$	$I_C=0.1A, I_B=0.2A$			1.5	V	
Switching time turn-On time	$t_r$	<p><math>I_{B1} = -I_{B2} = 0.08 A</math> <math>V_{CC} \approx 200 V</math> DUTY CYCLE &lt; 1%</p>			1.0	$\mu s$	
Switching storage time	$t_{stg}$					2.5	$\mu s$
Switching fall time	$t_f$					1	$\mu s$