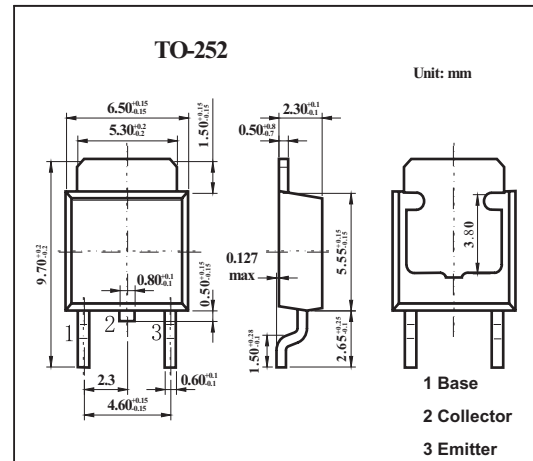


## Silicon NPN Triple Diffusion Planar Type

## 2SD2453

## ■ Features

- High forward current transfer ratio hFE.
- Low collector-emitter saturation voltage  $V_{CE(sat)}$ .

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

Parameter	Symbol	Rating	Unit	
Collector-base voltage	$V_{CBO}$	80	V	
Collector-emitter voltage	$V_{CEO}$	60	V	
Emitter-base voltage	$V_{EBO}$	6	V	
Collector current	$I_C$	2	A	
Peak collector current	$I_{CP}$	4	A	
Base current	$I_B$	1	A	
Collector power dissipation	$P_C$	$T_a = 25^\circ\text{C}$	1	W
		$T_c = 25^\circ\text{C}$	10	W
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-emitter voltage	$V_{CEO}$	$I_C = 25\text{mA}$ , $I_B = 0$	60			V
Collector-base cutoff current	$I_{CBO}$	$V_{CB} = 80\text{V}$ , $I_E = 0$			100	$\mu\text{A}$
Collector cutoff current	$I_{CEO}$	$V_{CE} = 40\text{V}$ , $I_B = 0$			100	$\mu\text{A}$
Emitter-base cutoff current	$I_{EBO}$	$V_{EB} = 6\text{V}$ , $I_C = 0$			100	$\mu\text{A}$
Forward current transfer ratio	hFE	$V_{CE} = 4\text{V}$ , $I_C = 0.5\text{A}$	500		2500	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2\text{A}$ , $I_B = 0.05\text{A}$			1	V
Transition frequency	$f_T$	$V_{CE} = 12\text{V}$ , $I_C = 0.2\text{A}$ , $f = 10\text{MHz}$		50		MHz

## ■ hFE Classification

Rank	Q	R	S
hFE	500~1000	800~1500	1200~2500