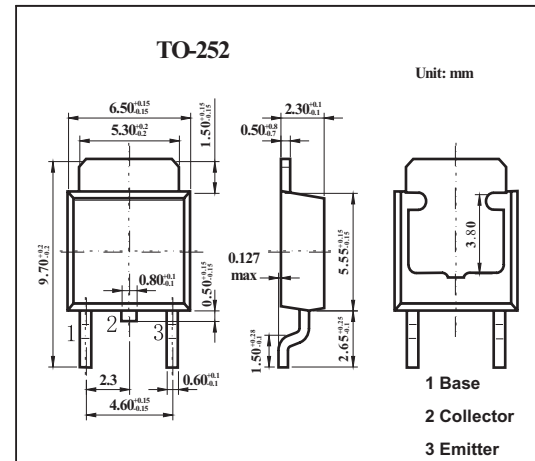


Silicon NPN Triple Diffusion Planar Type

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	μA
Collector cutoff current	I_{CEO}	$V_{CE} = 40\text{V}, I_B = 0$			100	μA
Emitter-base cutoff current	I_{EBO}	$V_{EB} = 6\text{V}, I_C = 0$			100	μA
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