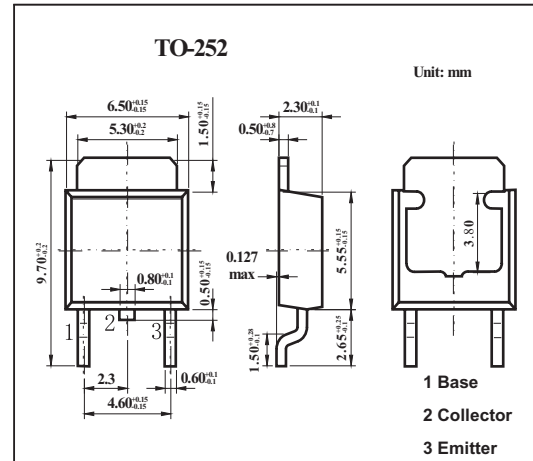


## Silicon NPN Triple Diffusion Planar Type

## 2SD1249, 2SD1249A

## ■ Features

- High collector-base voltage (Emitter open)  $V_{CB0}$

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CB0}$	350 400	V V
Collector-emitter voltage (Base open)	$V_{CEO}$	250 300	V V
Emitter-base voltage (Collector open)	$V_{EBO}$	5	V
Collector current	$I_C$	0.75	A
Peak collector current	$I_{CP}$	1.5	A
Collector power dissipation $T_a = 25^\circ\text{C}$	$P_C$	35 1.3	W W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

**2SD1249, 2SD1249A**■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector-emitter voltage (Base open)	2SD1249 2SD1249A	$V_{CEO}$	$I_C = 30\text{ mA}, I_B = 0$	250			V
				300			V
Collector-emitter cutoff current (E-B short)	2SD1249 2SD1249A	$I_{CES}$	$V_{CE} = 350\text{ V}, V_{BE} = 0$			1	mA
						1	mA
Collector-emitter cutoff current (Base open)	2SD1249 2SD1249A	$I_{CEO}$	$V_{CE} = 150\text{ V}, I_B = 0$			1	mA
						1	mA
Emitter-base cutoff current (Collector open)		$I_{EBO}$	$V_{EB} = 5\text{ V}, I_C = 0$			1	mA
Forward current transfer ratio		$h_{FE}$	$V_{CE} = 10\text{ V}, I_C = 0.3\text{ A}$	40		250	
				10			
Base-emitter voltage		$V_{BE}$	$V_{CE} = 10\text{ V}, I_C = 1\text{ A}$			1.5	V
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = 1\text{ A}, I_B = 0.2\text{ A}$			1.0	V
Transition frequency		$f_T$	$V_{CE} = 10\text{ V}, I_C = 0.2\text{ A}, f = 10\text{ MHz}$		30		MHz
Turn-on time		$t_{on}$	$I_C = 1\text{ A}$		0.5		$\mu\text{s}$
Strage time		$t_{stg}$	$I_{B1} = 0.1\text{ A}, I_{B2} = ? 0.1\text{ A}$		2.0		$\mu\text{s}$
Fall time		$t_f$	$V_{CC} = 50\text{ V}$		0.5		$\mu\text{s}$

## ■ hFE Classification

Rank	R	Q	P
hFE	40 to 90	70 to 150	120 to 250