

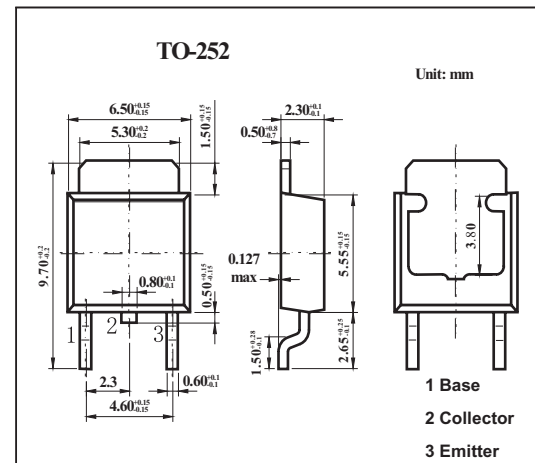
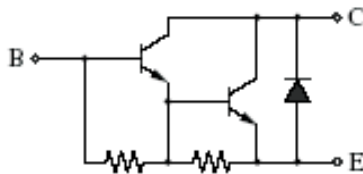
## Silicon NPN Triple Diffusion Planar Type Darlington

## 2SD1611

## ■ Features

- High forward current transfer ratio  $h_{FE}$
- High collector-base voltage (Emitter open)  $V_{CB0}$

## ■ Internal Connection

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CB0}$	500	V
Collector-emitter voltage (Base open)	$V_{CEO}$	400	V
Emitter-base voltage (Collector open)	$V_{EBO}$	5	V
Collector current	$I_C$	6	A
Peak collector current	$I_{CP}$	10	A
Collector power dissipation $T_a = 25^\circ\text{C}$	$P_C$	40	A
		1.3	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

## 2SD1611

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 0.1\text{ A}, I_C = 0$	5			V
Collector-emitter sustaining voltage*	$V_{CEO(SUS)}$	$I_C = 2\text{ A}, L = 10\text{ mH}$	400			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 350\text{ V}, I_E = 0$			100	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 2\text{ V}, I_C = 2\text{ A}$	500			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 3\text{ A}, I_B = 0.06\text{ A}$			1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 3\text{ A}, I_B = 0.06\text{ A}$			2.5	V
Transition frequency	$f_T$	$V_{CE} = 10\text{ V}, I_C = 1\text{ A}, f = 1\text{ MHz}$		15		MHz

\*.  $V_{CEO(SUS)}$  Test circuit

