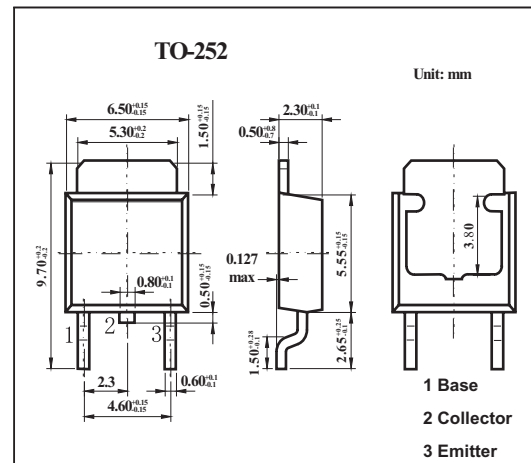


Silicon NPN Triple Diffusion Planar Type Darlington

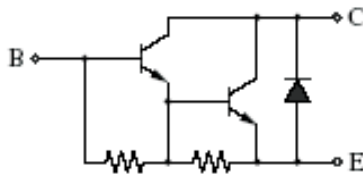
2SD1611

■ Features

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



■ Internal Connection

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	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	Testconditions	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	μA
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

