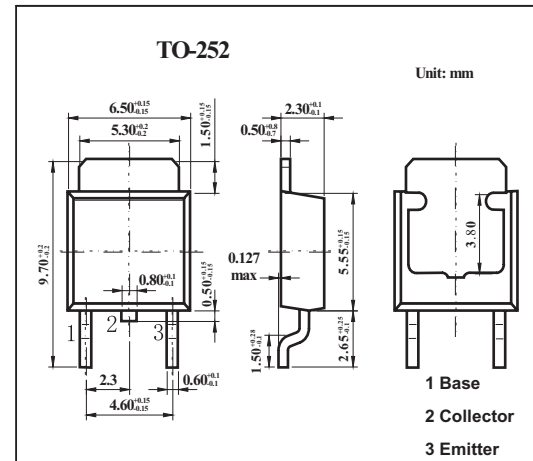


Silicon NPN Triple Diffusion Junction Type

2SD1251,2SD1251A

■ Features

- Wide area of safe operation.

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

Parameter		Symbol	Rating	Unit
Collector-base voltage	2SD1251	V_{CBO}	60	V
	2SD1251A		80	V
Collector-emitter voltage	2SD1251	V_{CEO}	60	V
	2SD1251A		80	V
Emitter-base voltage		V_{EBO}	8	V
Collector current		I_C	4	A
Peak collector current		I_{CP}	6	A
Base current		I_B	1	A
Collector power dissipation	$T_a = 25^\circ\text{C}$	P_C	1.3	W
	$T_c = 25^\circ\text{C}$		30	W
Junction temperature		T_j	150	$^\circ\text{C}$
Storage temperature		T_{stg}	-55 to +150	$^\circ\text{C}$

2SD1251,2SD1251A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base cutoff current	ICBO	V _{CB} = 20 V, I _E = 0			30	μA
Emitter-base cutoff current	IEBO	V _{EB} = 8 V, I _C = 0			1	mA
Collector to emitter voltage	2SD1251	V _{CEO(sus)} I _C = 0.25 A, L = 25 mH	60			
	2SD1251A		80			
Forward current transfer ratio	h _{FE}	V _{CE} = 3 V, I _C = 1 A	30		160	
Forward current transfer ratio		V _{CE} = 3 V, I _C = 0.1 A	40			
Base-emitter voltage	V _{BE}	V _{CE} = 3 V, I _C = 1 A			1.2	V
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 2 A, I _B = 0.4 A			1	V
Transition frequency	f _T	V _{CE} = 10 V, I _C = 0.2 A, f = 0.5 MHz		1		MHz

■ hFE Classification

Rank	Q	P	O
hFE	30~60	50~100	80~160