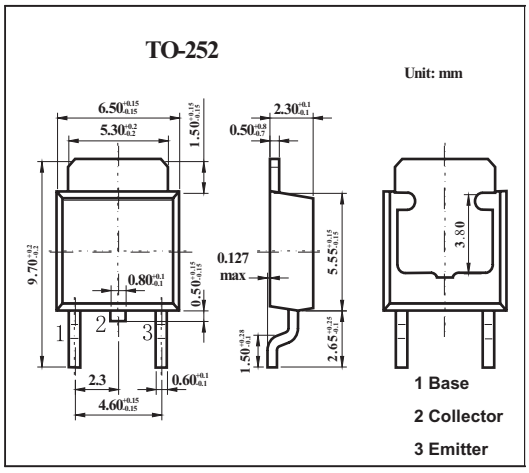
Silicon NPN Triple Diffusion Junction Type

2SD1251,2SD1251A



■ Features

- Wide area of safe operation.

■ Absolute Maximum Ratings Ta = 25℃

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 Ta = 25℃		P_C	1.3	W
Tc = 25℃			30	W
Junction temperature		T_j	150	℃
Storage temperature		T_{stg}	-55 to +150	℃

2SD1251,2SD1251A

■ Electrical Characteristics Ta = 25℃

Parameter		Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base cutoff current		I_{CBO}	V_{CB} = 20 V, I_E = 0			30	μA
Emitter-base cutoff current		I_{EBO}	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

■ h_{FE} Classification

Rank	Q	P	O
h_{FE}	30～60	50～100	80～160