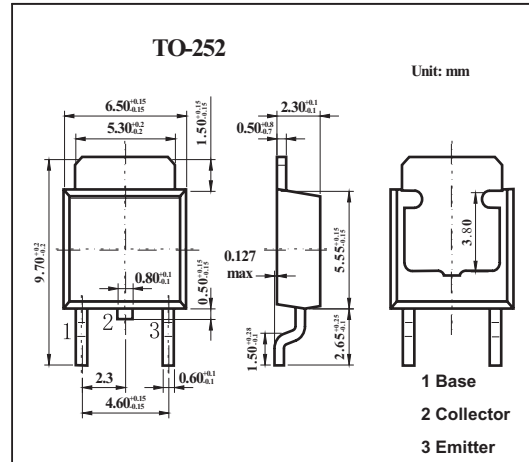


# 2SD1251, 2SD1251A

■ Features

- Wide area of safe operation.



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

Parameter	Symbol	Rating	Unit	
Collector-base voltage	V <sub>CBO</sub>	2SD1251	60	V
		2SD1251A	80	V
Collector-emitter voltage	V <sub>CEO</sub>	2SD1251	60	V
		2SD1251A	80	V
Emitter-base voltage	V <sub>EBO</sub>	8	V	
Collector current	I <sub>C</sub>	4	A	
Peak collector current	I <sub>CP</sub>	6	A	
Base current	I <sub>B</sub>	1	A	
Collector power dissipation	P <sub>C</sub>	$T_a = 25^\circ\text{C}$	1.3	W
		$T_c = 25^\circ\text{C}$	30	W
Junction temperature	T <sub>j</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	

## 2SD1251, 2SD1251A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base cutoff current	ICBO	V <sub>CB</sub> = 20 V, I <sub>E</sub> = 0			30	μA
Emitter-base cutoff current	IEBO	V <sub>EB</sub> = 8 V, I <sub>C</sub> = 0			1	mA
Collector to emitter voltage	V <sub>CEO(sus)</sub>	I <sub>C</sub> = 0.25 A, L = 25 mH	60			
			80			
Forward current transfer ratio	h <sub>FE</sub>	V <sub>CE</sub> = 3 V, I <sub>C</sub> = 1 A	30		160	
Forward current transfer ratio		V <sub>CE</sub> = 3 V, I <sub>C</sub> = 0.1 A	40			
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> = 3 V, I <sub>C</sub> = 1 A			1.2	V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 2 A, I <sub>B</sub> = 0.4 A			1	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 0.2 A, f = 0.5 MHz		1		MHz

■ hFE Classification

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