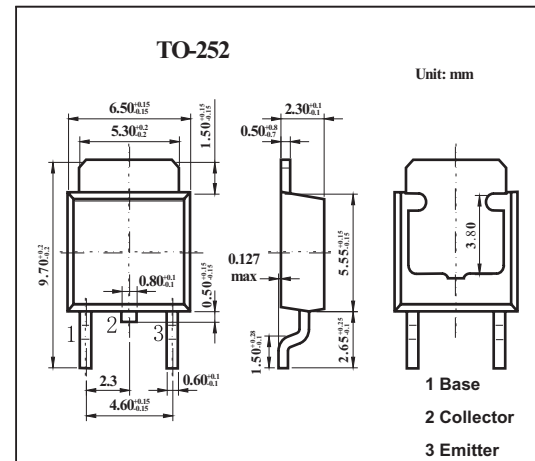


Silicon NPN Epitaxial Transistor

2SD1220



■ Features

- Power Amplifier Applications

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	150	V
Collector-emitter voltage	V_{CE0}	150	V
Emitter-base voltage	V_{EB0}	6	V
Collector current	I_C	1.5	A
Base current	I_B	1	A
Collector power dissipation	P_C	1	W
$T_a = 25^\circ\text{C}$ $T_c = 25^\circ\text{C}$		10	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 150\text{ V}, I_E = 0$			1.0	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 6\text{ V}, I_C = 0$			1.0	μA
Collector-emitter breakdown voltage	$V_{(BR)CE0}$	$I_C = 10\text{ mA}, I_B = 0$	150			V
DC current gain	h_{FE}	$V_{CE} = 5\text{ V}, I_C = 200\text{ mA}$	60		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{ mA}, I_B = 50\text{ mA}$			1.5	V
Base-emitter voltage	V_{BE}	$V_{CE} = 5\text{ V}, I_C = 5\text{ mA}$	0.5		0.8	V
Transition frequency	f_T	$V_{CE} = 5\text{ V}, I_C = 200\text{ mA}$	20	100		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$		13	20	pF

■ hFE Classification

Marking	D1220		
Rank	R	O	Y
hFE	60 to 120	100 to 200	160 to 320