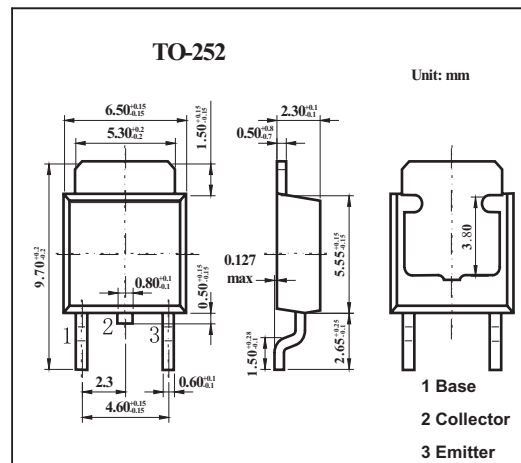


Silicon NPN Epitaxial

2SD2122S

■ Features

●

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CB0}	180	V
Collector to emitter voltage	V_{CE0}	120	V
Emitter to base voltage	V_{EB0}	5	V
Collector current	I_C	1.5	A
Collector peak current	$I_{C(\text{peak})}$	3	A
Collector power dissipation	P_C^{*1}	18	A
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

*1 . Value at $T_C = 25^\circ\text{C}$ ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector to base breakdown voltage	$V_{(BR)CBO}$	$I_C = 1\text{ mA}, I_E = 0$	180			V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\text{ mA}, R_{BE} = \infty$	120			V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1\text{ mA}, I_C = 0$	5			V
Collector cutoff current	I_{CBO}	$V_{CB} = 160\text{ V}, I_E = 0$			10	μA
DC current transfer ratio	h_{FE}	$V_{CE} = 5\text{ V}, I_C = 150\text{ mA}^*$	60		200	A
		$V_{CE} = 5\text{ V}, I_C = 500\text{ mA}^*$	30			
Collector to emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C = 500\text{ mA}, I_B = 50\text{ mA}^*$			1	V
Base to emitter voltage	V_{BE}	$V_{CE} = 5\text{ V}, I_C = 150\text{ mA}^*$			1.5	V
Gain bandwidth product	f_T	$V_{CE} = 5\text{ V}, I_C = 150\text{ mA}^*$		180		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$		14		pF

*Pulse test

■ h_{FE} Classification

Rank	B	C
h_{FE}	60 to 120	100 to 200