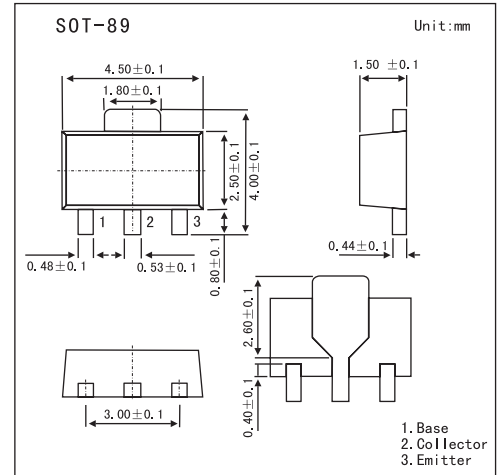


Silicon NPN Epitaxial

2SD1421

■ Features

- Low frequency power amplifier

■ 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_{CEO}	160	V
Emitter to base voltage	V_{EBO}	5	V
Collector current	I_C	1.5	A
Collector peak current	$i_{C(\text{peak})}^{*1}$	3	A
Collector power dissipation	P_C^{*2}	1	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to 150	$^\circ\text{C}$

*1 $PW \leq 10\text{ms}$, duty cycle $\leq 20\%$

*2 Value on the alumina ceramic board (12.5 X 20 X 0.7 mm)

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

Parameter	Symbol	Testconditions	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	$V_{(BR)CEO}$	$I_C = 10\text{ mA}$, $R_{BE} = \infty$	160			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}	$V_{CE} = 5\text{ V}$, $I_C = 0.15\text{ A}$	60		200	
		$V_{CE} = 5\text{ V}$, $I_C = 0.5\text{ A}$	30			
Collector to emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C = 0.5\text{ A}$, $I_B = 50\text{ mA}$, pulse			1.0	V
Base to emitter voltage	V_{BE}	$V_{CE} = 5\text{ V}$, $I_C = 0.15\text{ mA}$, pulse			0.9	V

■ h_{FE} Classification

Marking	ED	EE
h_{FE}	60~120	100~200