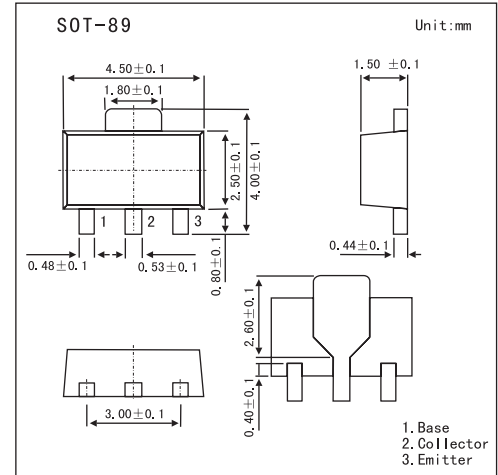


## Silicon NPN Epitaxial

## 2SD1418



### Features

- Low frequency power amplifier.

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CB0}$	120	V
Collector to emitter voltage	$V_{CE0}$	80	V
Emitter to base voltage	$V_{EB0}$	5	V
Collector current	$I_C$	1	A
Peak collector current	$I_{CP}^{*1}$	2	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.  $PW \leq 10 \text{ ms}$ ;  $d \leq 0.02$ .

\*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	$V_{(BR)CB0}$	$I_C = 10 \mu\text{A}, I_E = 0$	120			V
Collector to emitter breakdown voltage	$V_{(BR)CE0}$	$I_C = 1 \text{ mA}, R_{BE} = \infty$	80			V
Emitter to base breakdown voltage	$V_{(BR)EB0}$	$I_E = 10 \mu\text{A}, I_C = 0$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 100 \text{ V}, I_E = 0$			10	$\mu\text{A}$
DC current transfer ratio	$h_{FE}$	$V_{CE} = 5 \text{ V}, I_C = 150 \text{ mA}$	60		320	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$			1	V
Base to emitter voltage	$V_{BE}$	$V_{CE} = 5 \text{ V}, I_C = 150 \text{ mA}$			1.5	V
Gain bandwidth product	$f_T$	$V_{CE} = 5 \text{ V}, I_C = 150 \text{ mA}$		140		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		12		pF

### hFE Classification

Marking	D		
	A	B	C
hFE	60~120	100~200	160~320