

## SMD Type

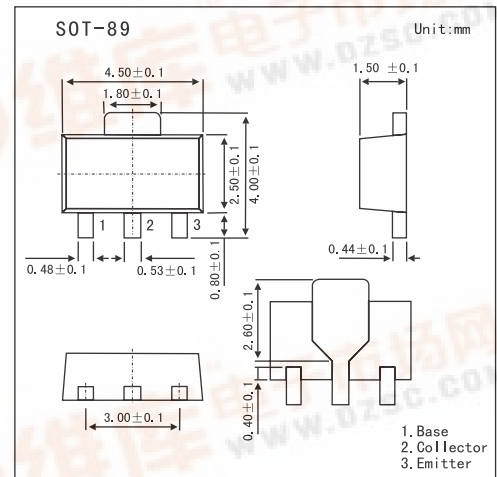
## Transistors

## Silicon NPN Epitaxial

## 2SD1368

## ■ Features

- Low frequency power amplifier.

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CB0}$	100	V
Collector to emitter voltage	$V_{CE0}$	50	V
Emitter to base voltage	$V_{EB0}$	6	V
Collector current	$I_C$	1	A
Peak collector current	$I_{CP}^{*1}$	1.5	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.  $P_W \leq 10 \text{ ms}$ ;  $d \leq 0.02$ .

\*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	$V_{(BR)CBO}$	$I_C = 10 \mu\text{A}$ , $I_E = 0$	100			V
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 \text{ mA}$ , $R_{BE} = \infty$	50			V
Emitter to base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10 \mu\text{A}$ , $I_C = 0$	6			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 80 \text{ V}$ , $I_E = 0$			0.1	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 4 \text{ V}$ , $I_C = 0$			0.1	$\mu\text{A}$
DC current transfer ratio	$h_{FE}$	$V_{CE} = 2 \text{ V}$ , $I_C = 0.1 \text{ A}$	100		500	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1 \text{ A}$ , $I_B = 0.1 \text{ A}$			0.3	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 1 \text{ A}$ , $I_B = 0.1 \text{ A}$			1.2	V
Gain bandwidth product	$f_T$	$V_{CE} = 2 \text{ V}$ , $I_C = 10 \text{ mA}$		100		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$		20		pF

■  $h_{FE}$  Classification

Marking	CA	CB	CC
$h_{FE}$	100~200	160~320	250~500