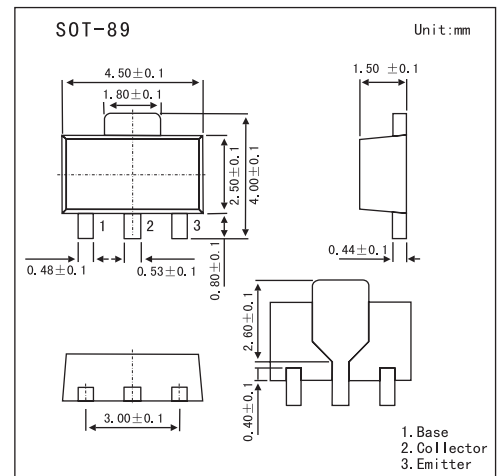


## Silicon NPN epitaxial planer type

## 2SD968, 2SD968A

## ■ Features

- High collector to emitter voltage  $V_{CE0}$ .
- Large collector power dissipation  $P_c$ .

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

Parameter	Symbol	Rating	Unit	
Collector to base voltage	2SD968 2SD968A	$V_{CB0}$	100	V
			120	V
Collector to emitter voltage	2SD968 2SD968A	$V_{CE0}$	100	V
			120	V
Emitter to base voltage	$V_{EB0}$	5	V	
Peak collector current	$I_{CP}$	1	A	
Collector current	$I_C$	0.5	A	
Collector power dissipation	$P_c^*$	1	W	
Junction temperature	$T_j$	150	$^\circ\text{C}$	
Storage temperature	$T_{stg}$	-55 to 150	$^\circ\text{C}$	

\* Printed circuit board: Copper foil area of  $1\text{cm}^2$  or more, and the board thickness of 1.7mm for the collector portion

**2SD968, 2SD968A**

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector to emitter voltage 2SD968	V <sub>CEO</sub>	I <sub>C</sub> = 100μA, I <sub>B</sub> = 0	100			V
2SD968A	V <sub>CEO</sub>	I <sub>C</sub> = 100μA, I <sub>B</sub> = 0	120			V
Emitter to base voltage	V <sub>EBO</sub>	I <sub>E</sub> = 10μA, I <sub>C</sub> = 0	5			V
Forward current transfer ratio	h <sub>FE</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 150mA*	90		220	
		V <sub>CE</sub> = 5V, I <sub>C</sub> = 500mA*	50	100		
Collector to emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 500mA, I <sub>B</sub> = 50mA*		0.2	0.6	V
Base to emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 500mA, I <sub>B</sub> = 50mA*		0.85	1.2	V
Transition frequency	f <sub>T</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = -50mA, f = 200MHz		120		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f = 1MHz		11	20	pF

\* Pulse measurement

## ■ hFE Classification

Marking Symbol	2SD968	WQ	WR
	2SD968A	VQ	VR
Rank		Q	R
hFE		90~155	130~220