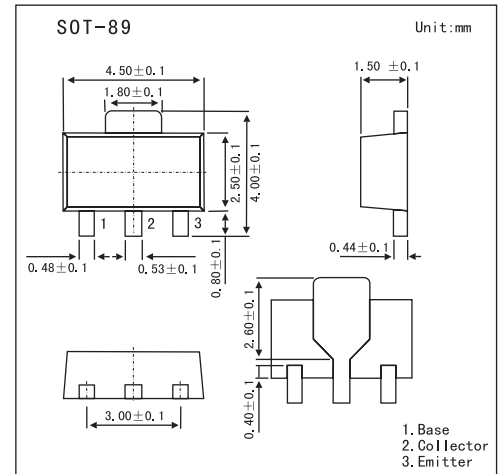


## Power Transistor

## 2SD1963

## ■ Features

- Low saturation voltage.
- Excellent DC current gain characteristics.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	50	V
Collector-emitter voltage	$V_{CEO}$	20	V
Emitter-base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	3	A
Collector power dissipation	$P_C$	0.5	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$BV_{CB0}$	$I_C=50\mu\text{A}$	50			V
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C=1\text{mA}$	20			V
Emitter-base breakdown voltage	$BV_{EBO}$	$I_E=50\mu\text{A}$	6			V
Collector cutoff current	$I_{CBO}$	$V_{CB}=40\text{V}$			0.5	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB}=5\text{V}$			0.5	$\mu\text{A}$
DC current transfer ratio	$h_{FE}$	$V_{CE}=2\text{V}, I_C=0.5\text{A}$	180		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=1.5\text{A}, I_B=0.15\text{A}$		0.25	0.45	V
Output capacitance	$f_T$	$V_{CE}=6\text{V}, I_E=-50\text{mA}, f=100\text{MHz}$		150		MHz
Transition frequency	$C_{ob}$	$V_{CB}=20\text{V}, I_E=0\text{A}, f=1\text{MHz}$		35		pF

■  $h_{FE}$  Classification

Marking	DG	
	R	S
$h_{FE}$	180~390	270~560