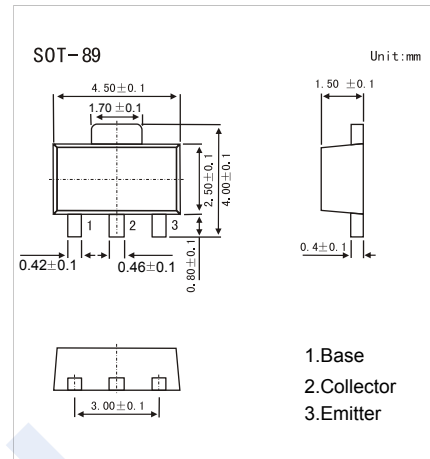


## NPN Transistors

## 2SD2098

## ■ Features

- Excellent DC current gain characteristics
- Complements the 2SB1386

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	50	V
Collector - Emitter Voltage	$V_{CE0}$	20	
Emitter - Base Voltage	$V_{EB0}$	6	
Collector Current - Continuous	$I_C$	5	A
Collector Power Dissipation	$P_C$	0.5	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C = 100 \mu\text{A}$ , $I_E = 0$	50			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = 1 \text{ mA}$ , $I_B = 0$	20			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 100 \mu\text{A}$ , $I_C = 0$	6			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 40 \text{ V}$ , $I_E = 0$			0.5	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = 5 \text{ V}$ , $I_C = 0$			0.5	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 4 \text{ A}$ , $I_B = 100 \text{ mA}$			1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 4 \text{ A}$ , $I_B = 100 \text{ mA}$			1.2	
DC current gain	$h_{FE}$	$V_{CE} = 2 \text{ V}$ , $I_C = 500 \text{ mA}$	120		390	
Collector output capacitance	$C_{ob}$	$V_{CB} = 20 \text{ V}$ , $I_E = 0$ , $f = 1 \text{ MHz}$		30		pF
Transition frequency	$f_T$	$V_{CE} = 6 \text{ V}$ , $I_C = 50 \text{ mA}$ , $f = 100 \text{ MHz}$		150		MHz

■ Classification of  $h_{FE}$ 

Type	2SD2098-Q	2SD2098-R
Range	120-270	180-390
Marking	AH Q*	AH R*