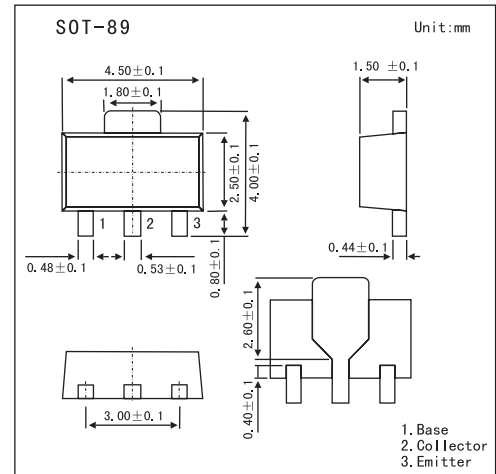


## NPN Epitaxial Planar Silicon Transistors

## 2SC4080

## ■ Features

- High Ft
- High breakdown voltage
- Small reverse transfer capacitance excellent high-frequency characteristic
- Adoption of FBET process



## ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
collector-base voltage	V <sub>CB0</sub>	200	V
collector-emitter voltage	V <sub>CE0</sub>	200	V
emitter-base voltage	V <sub>EB0</sub>	4	V
collector current	I <sub>C</sub>	100	mA
Collector Current (pulse)	I <sub>CP</sub>	200	mA
Collector Dissipation	P <sub>C</sub>	500	mA
		1.3	W
Junction Temperature	T <sub>J</sub>	150	°C
storage Temperature	T <sub>stg</sub>	-55 to 150	°C

\*Mounted on ceramic board (250mm<sup>2</sup>X0.8mm)

**2SC4080**■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
collector cutoff Current	$I_{CBO}$	$V_{CB}=150V, I_E=0$			0.1	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB}=2V, I_C=0$			1.0	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=10V, I_C=10\text{mA}$	40		320	
		$V_{CE}=10V, I_C=100\text{mA}$	20			
Gain-Bandwidth product	$f_T$	$V_{CE}=30V, I_C=30\text{mA}$		400		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=30V, f=1\text{MHz}$		1.8		pF
Reverse Transfer	$C_{re}$	$V_{CB}=30V, f=1\text{MHz}$		1.4		
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=20\text{mA}, I_B=2\text{mA}$			1	V
Base to Emitter Stauration Voltage	$V_{BE(sat)}$	$I_C=20\text{mA}, I_B=2\text{mA}$			1	V
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	200			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	200			V
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=100\mu\text{A}, I_C=0$	4			V

## ■ hFE Classification

Marking	CI			
	C	D	E	F
Type	40 to 80	60 to 120	100 to 200	160 to 320