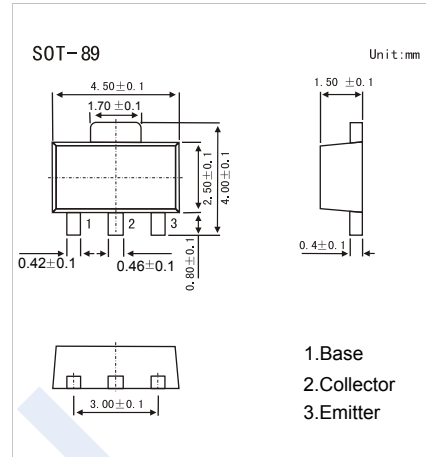


## NPN Transistors

### 2SC2982-HF

#### ■ Features

- Low saturation voltage
- Small flat package
- $P_c = 1.0$  to  $2.0$  W (mounted on a ceramic substrate)
- Complementary to 2SA1314-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	30	V
Collector - Emitter Voltage	$V_{CE0}$	10	
Emitter - Base Voltage	$V_{EB0}$	6	
Collector Current - Continuous	$I_C$	2	A
Collector Current - Pulse (Note.1)	$I_{cp}$	4	
Collector Power Dissipation	$P_C$	500	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

Note 1: Pulse test: Pulse width = 10 ms (max), duty cycle = 30% (max)

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C = 1\text{ mA}$ , $I_E = 0$	30			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = 10\text{ mA}$ , $I_B = 0$	10			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 1\text{ mA}$ , $I_C = 0$	6			
Collector- Base cut-off current	$I_{CB0}$	$V_{CB} = 30\text{ V}$ , $I_E = 0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = 6\text{ V}$ , $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 2\text{ A}$ , $I_B = 50\text{ mA}$		0.2	0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 2\text{ A}$ , $I_B = 50\text{ mA}$			1.2	
Base - emitter voltage	$V_{BE}$	$V_{CE} = 1\text{ V}$ , $I_C = 2\text{ A}$		0.86	1.5	
DC current gain	$h_{FE}$	$V_{CE} = 1\text{ V}$ , $I_C = 0.5\text{ A}$	140		600	
		$V_{CE} = 1\text{ V}$ , $I_C = 2\text{ A}$	70	140		
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$		27		pF
Transition frequency	$f_T$	$V_{CE} = 1\text{ V}$ , $I_C = 0.5\text{ A}$		150		MHz

#### ■ Classification of $h_{fe}(1)$

Type	2SC2982-A-HF	2SC2982-B-HF	2SC2982-C-HF	2SC2982-D-HF
Range	140-240	200-330	300-450	420-600
Marking	SA* <sub>F</sub>	SB* <sub>F</sub>	SC* <sub>F</sub>	SD* <sub>F</sub>

### NPN Transistors

### 2SC2982-HF

■ Typical Characteristics

