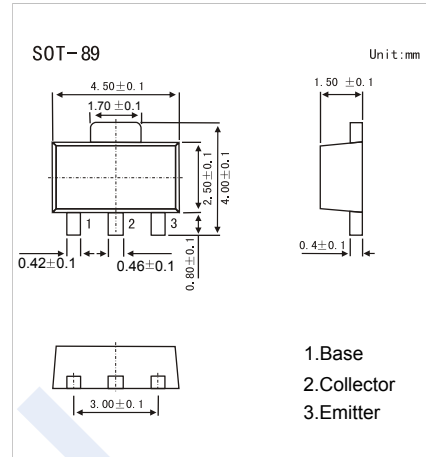


NPN Transistors

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	μA
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* _F	SB* _F	SC* _F	SD* _F

NPN Transistors

2SC2982-HF

Typical Characteristics

