

## Medium Power Amplifier Applications

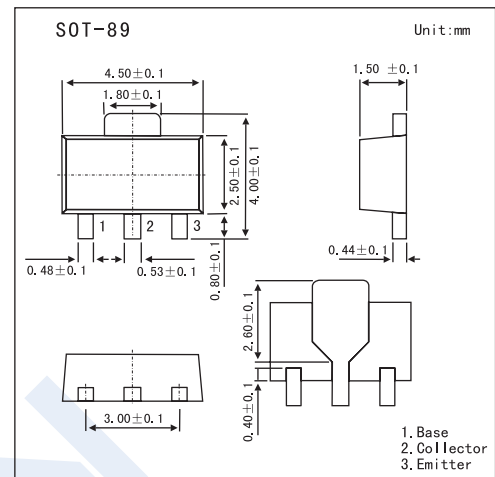
## 2SC2982

## ■ Features

- Low Saturation Voltage

:  $V_{CE(sat)} = 0.5V$  (max) ( $I_C = 2A$ ,  $I_B = 50mA$ )

- Small Flat Package
- Complementary to 2SA1314

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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CBO}$	20	V
Collector-Emitter Voltage	$V_{CEO}$	10	V
Emitter-Base Voltage	$V_{EBO}$	6	V
Collector Current (DC)	$I_C$	2	A
Collector Current (Pulsed) *1	$I_{CP}$	4	A
Base Current (DC)	$I_B$	0.4	A
Base Current (Pulse) *1	$I_{BP}$	0.8	A
Collector Power Dissipation	$P_C$	500	mW
	$P_C$ *2	1000	
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature Range	$T_{stg}$	-55 to +150	$^\circ C$

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

\*2 Mounted on a ceramic substrate (250 mm<sup>2</sup> x 0.8 t)

■ Electrical Characteristics  $T_a = 25^\circ C$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 30V$ , $I_E = 0$			0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 6V$ , $I_C = 0$			0.1	$\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10mA$ , $I_B = 0$	10			V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1mA$ , $I_C = 0$	6			V
DC Current Gain	$h_{FE}$	$V_{CE} = 1V$ , $I_C = 0.5A$	140		600	
		$V_{CE} = 1V$ , $I_C = 2A$	70	140		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 2A$ , $I_B = 50mA$		0.2	0.5	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = 1V$ , $I_C = 2A$		0.86	1.5	V
Transition Frequency	$f_T$	$V_{CE} = 1V$ , $I_C = 0.5A$		150		MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 10V$ , $I_E = 0$ , $f = 1MHz$		27		pF

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### hFE Classification

Marking	S			
Rank	A	B	C	D
hFE	140 ~ 240	200 ~ 330	300 ~ 450	420 ~ 600

### Electrical Characteristics Curves

