

Medium Power Amplifier Applications

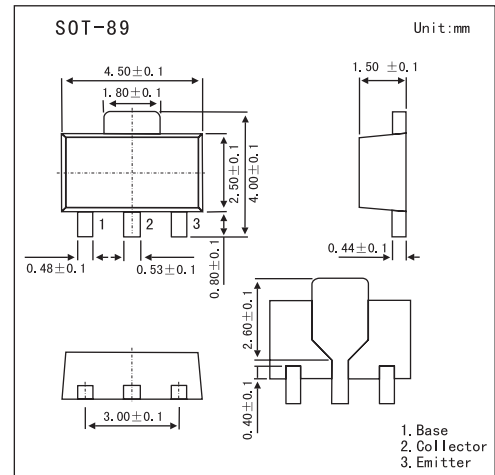
2SC2982

■ 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 mm² x 0.8 t)

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

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB} = 30V$, $I_E = 0$			0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 6V$, $I_C = 0$			0.1	μA
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

2SC2982

hFE Classification

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

Electrical Characteristics Curves

