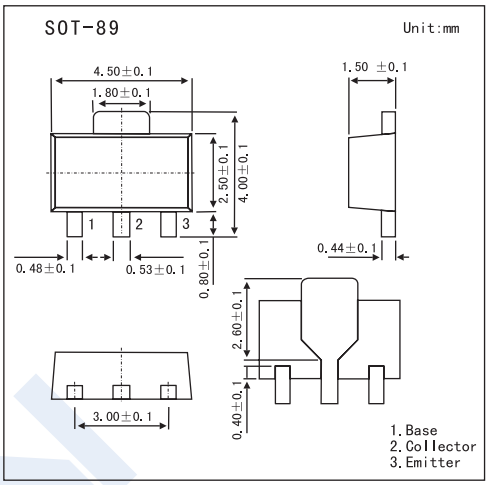
Medium Power Amplifier Applications

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 Ta = 25℃

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	
Jumction temperature	T_j	150	℃
Storage temperature Range	T_{stg}	-55 to +150	℃

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

*2 Mounted on a ceramic substrate (250 mm^2 x 0.8 t)

■ Electrical Characteristics Ta = 25℃

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