

Audio Power Applications

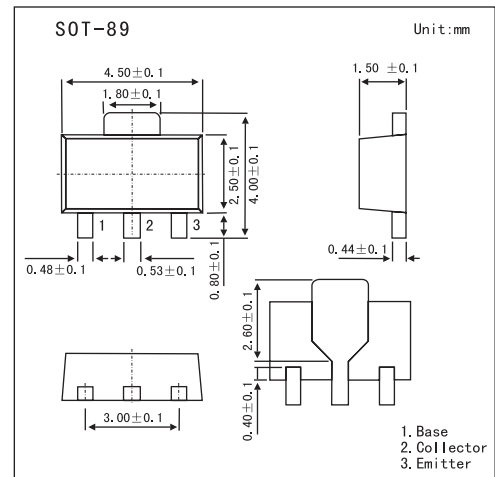
2SA1314

■ Features

- Low Saturation Voltage

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

- Small Flat Package
- Complementary to 2SC2982

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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	-20	V
Collector-Emitter Voltage	V_{CE0}	-10	V
Emitter-Base Voltage	V_{EB0}	-6	V
Collector Current (DC)	I_C	-2	A
Collector Current (Pulsed) *1	I_{CP}	-4	A
Base Current	I_B	-2	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 ceramic substrate (250 mm² x 0.8 t)

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector Cut-off Current	I_{CBO}	$V_{CB} = -20V$, $I_E = 0$			-100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -6V$, $I_C = 0$			-100	nA
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	
		$V_{CE} = -1V$, $I_C = -4A$	60	120		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -2A$, $I_B = -50mA$		-0.2	-0.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = -1V$, $I_C = -2A$		-0.83	-1.5	V
Transition Frequency	f_T	$V_{CE} = -1V$, $I_C = -0.5A$		140		MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10V$, $I_E = 0$, $f = 1MHz$		50		pF

2SA1314

hFE Classification

Marking	T		
Rank	A	B	C
hFE	140 ~ 280	200 ~ 400	300 ~ 600

Electrical Characteristics Curves

