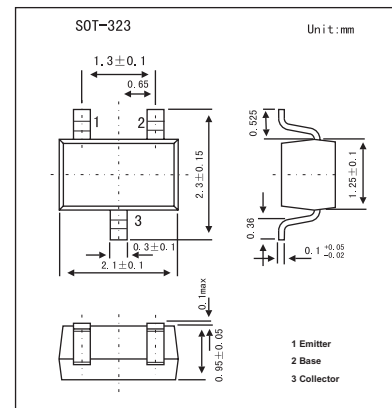


## General Small Signal Amplifier

## 2SA1980UF

## ■ Features

- Low collector saturation voltage.
- Low output capacitance.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-50	V
Collector-emitter voltage	$V_{CE0}$	-50	V
Emitter-base voltage	$V_{EB0}$	-5	V
Collector current	$I_C$	-150	mA
Collector dissipation	$P_C$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$BV_{CB0}$	$I_C = -100\mu\text{A}, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$BV_{CE0}$	$I_C = -1\text{mA}, I_B = 0$	-50			V
Emitter-base breakdown voltage	$BV_{EB0}$	$I_E = -10\mu\text{A}, I_C = 0$	-5			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = -50\text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	$\mu\text{A}$
DC current transfer ratio	$h_{FE}$	$V_{CE} = -6\text{V}, I_C = -2\text{mA}$	70		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}, I_B = -10\text{mA}$			-0.3	V
Transition frequency	$f_T$	$V_{CE} = -10\text{V}, I_C = -1\text{mA}$	80			MHz
Output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$		4	7	pF
Noise figure	NF	$V_{CE} = -6\text{V}, I_C = -0.1\text{mA}, f = 1\text{KHz}, R_g = 10\text{K}\Omega$			10	dB

## ■ hFE Classification

Marking	C			
Rank	O	Y	G	L
hFE	70~140	120~240	200~400	300~700