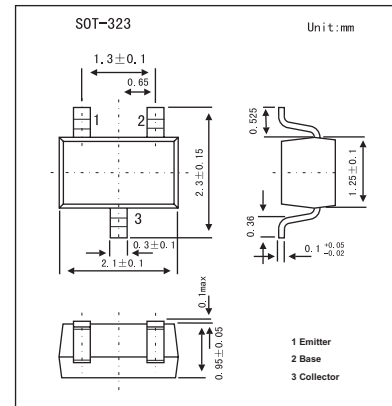


## Medium Power Amplifier

## 2SA1979UF

## ■ Features

- Large collector current.
- Suitable for low-voltage operation because of its low saturation voltage.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-40	V
Collector-emitter voltage	$V_{CE0}$	-32	V
Emitter-base voltage	$V_{EB0}$	-5	V
Collector current	$I_C$	-500	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	$BV_{CB0}$	$I_C = -100\mu\text{A}$ , $I_E = 0$	-40			V
Collector-emitter breakdown voltage	$BV_{CE0}$	$I_C = -1\text{mA}$ , $I_B = 0$	-32			V
Emitter-base breakdown voltage	$BV_{EB0}$	$I_E = -10\mu\text{A}$ , $I_C = 0$	-5			V
Collector cutoff current	$I_{CB0}$	$V_{CB} = -40\text{V}$ , $I_E = 0$			-0.1	$\mu\text{A}$
Emitter cutoff current	$I_{EB0}$	$V_{EB} = -5\text{V}$ , $I_C = 0$			-0.1	$\mu\text{A}$
DC current transfer ratio	$h_{FE}$	$V_{CE} = -1\text{V}$ , $I_C = -100\text{mA}$	70		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}$ , $I_B = -10\text{mA}$			-0.25	V
Transition frequency	$f_T$	$V_{CE} = -6\text{V}$ , $I_C = -20\text{mA}$		200		MHz
Output capacitance	$C_{ob}$	$V_{CB} = -6\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$		7.5		pF

■  $h_{FE}$  Classification

Marking	A	
Rank	O	Y
$h_{FE}$	70~140	120~240