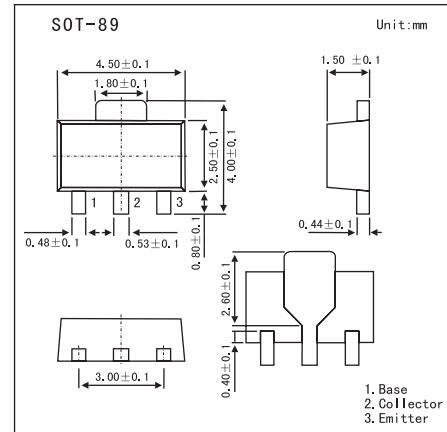


## Wide-Band Amplifier Applications

## 2SA1575

## ■ Features

- High fr..
- High breakdown voltage.
- Small reverse transfer capacitance and excellent.  
High-frequency characteristic.
- Adoption of FBET process.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	-200	V
Collector-emitter voltage (Base open)	$V_{CEO}$	-200	V
Emitter-base voltage (Collector open)	$V_{EBO}$	-4	V
Collector current	$I_C$	-100	mA
Collector current (pulse)	$I_{CP}$	-200	mA
Collector power dissipation	$P_C$	500	mW
		1.3	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

## Wide-Band Amplifier Applications

## 2SA1575

■ Electrical Characteristics  $T_A=25^\circ\text{C} \pm 3^\circ\text{C}$ 

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base Breakdown voltage	$BV_{CBO}$	$I_C = -10 \mu\text{A}$ , $I_E = 0$	-200			V
Collector-emitter Breakdown voltage	$BV_{CEO}$	$I_C = -1\text{mA}$ , $R_{BE} = \infty$	-200			V
Emitter-base Breakdown voltage	$BV_{EBO}$	$I_E = -100 \mu\text{A}$ , $I_C = 0$	-4			V
Collector-base cutoff current	$I_{CBO}$	$V_{CB} = -150\text{V}$ , $I_E = 0$			-0.1	$\mu\text{A}$
Emitter-base cutoff current	$I_{EBO}$	$V_{EB} = -2\text{V}$ , $I_C = 0$			-1.0	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = -10\text{V}$ , $I_C = -10\text{mA}$ $V_{CE} = -10\text{V}$ , $I_C = -60\text{mA}$	40 20		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -20\text{mA}$ , $I_B = -2\text{mA}$			-1.0	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_E = -20\text{mA}$ , $I_B = -2\text{mA}$			-1.0	V
Transition frequency	$f_T$	$V_{CE} = -30\text{V}$ , $I_C = -30\text{mA}$		400		MHz
Collector output capacitance (Common base, input open circuited)	$C_{ob}$	$V_{CB} = -30\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$		2.3		pF
Reverse Transfer Capacitance	$C_{re}$	$V_{CB} = -30\text{V}$ , $f = 1\text{MHz}$		1.7		pF

■  $h_{FE}$  Classification

Marking	C	D	E	F
$h_{FE}$	40 to 80	60 to 120	100 to 200	160 to 320