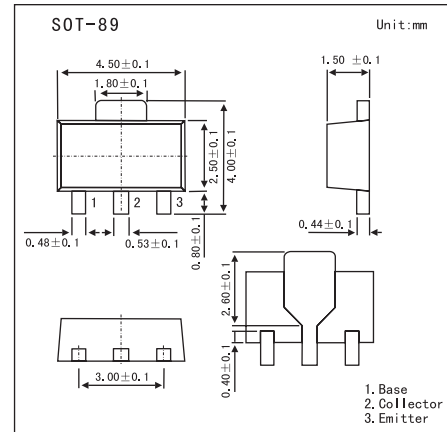


Wide-Band Amplifier Applications

2SA1575

■ Features

- High f_T .
- 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	μA
Emitter-base cutoff current	I_{EBO}	$V_{EB} = -2\text{ V}$, $I_C = 0$			-1.0	μA
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