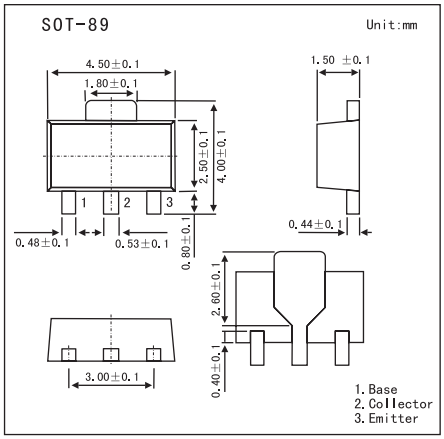
Wide-Band Amplifier Applications

2SA1575



■ Features

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

■ Absolute Maximum Ratings T_A=25℃

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 1.3	mW W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

Wide-Band Amplifier Applications

2SA1575

■ Electrical Characteristics T_A=25℃±3℃

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

■ h_{FE} Classification

Marking	C	D	E	F
hFE	40 to 80	60 to 120	100 to 200	160 to 320