

2SC5946

Silicon NPN epitaxial planar type

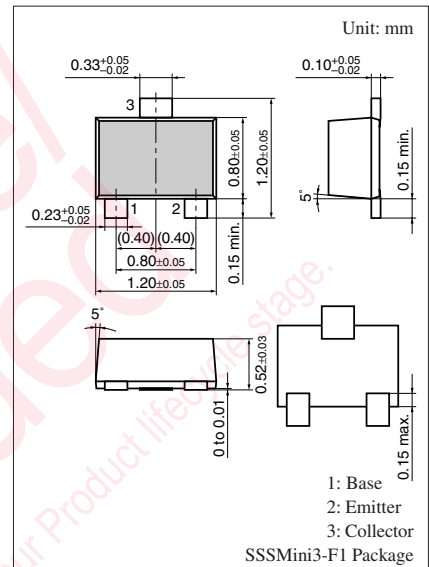
For high-frequency amplification/oscillation/mixing

■ Features

- High transition frequency f_T
- SSS-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	30	V
Collector-emitter voltage (Base open)	V_{CEO}	20	V
Emitter-base voltage (Collector open)	V_{EBO}	3	V
Collector current	I_C	50	mA
Collector power dissipation	P_C	100	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +125	$^\circ\text{C}$



Marking Symbol: 9N

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 100 \mu\text{A}$, $I_E = 0$	30			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \mu\text{A}$, $I_C = 0$	3			V
Base-emitter voltage	V_{BE}	$V_{CB} = 10 \text{ V}$, $I_E = -2 \text{ mA}$		720		mV
Forward current transfer ratio	h_{FE}	$V_{CB} = 10 \text{ V}$, $I_E = -2 \text{ mA}$	25		250	—
Transition frequency *	f_T	$V_{CB} = 10 \text{ V}$, $I_E = -15 \text{ mA}$, $f = 200 \text{ MHz}$	800		1600	MHz
Reverse transfer capacitance (Common base)	C_{rb}	$V_{CE} = 6 \text{ V}$, $I_C = 0$, $f = 1 \text{ MHz}$		0.8		pF
Reverse transfer capacitance (Common emitter)	C_{re}	$V_{CB} = 10 \text{ V}$, $I_E = -1 \text{ mA}$, $f = 10.7 \text{ MHz}$		1.0	1.5	pF
Power gain	PG	$V_{CB} = 10 \text{ V}$, $I_E = -1 \text{ mA}$, $f = 200 \text{ MHz}$		20		dB

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. *: Pulse measurement

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