Transistors Panasonic

2SA2164

Silicon PNP epitaxial planar type

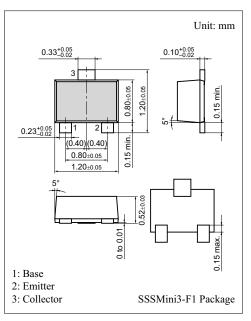
For high-frequency amplification

■ Features

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

■ Absolute Maximum Ratings $T_a = 25$ °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}	-5	V	
Collector current	I_{C}	-30	mA	
Collector power dissipation	P _C	100	mW	
Junction temperature	T _j	125	°C	
Storage temperature	T _{stg}	-55 to +125	°C	



Marking Symbol: E

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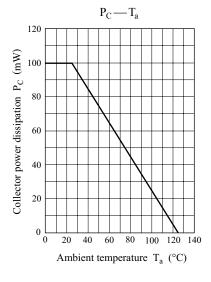
■ Electrical Characteristics $T_a = 25$ °C±3°C

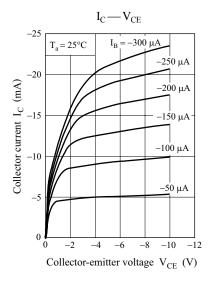
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Base-emitter voltage	$V_{ m BE}$	$V_{CE} = -10 \text{ V}, I_{C} = -1 \text{ mA}$		-0.7		V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{\rm CB} = -10 \text{V}, I_{\rm E} = 0$			-0.1	μΑ
Collector-emitter cut-off current (Base open)	I _{CEO}	$V_{CE} = -20 \text{ V}, I_{B} = 0$			-100	μА
Emitter-base cut-off current (Collector open)	I_{EBO}	$V_{EB} = -5 \text{ V}, I_{C} = 0$			-10	μА
Forward current transfer ratio	h_{FE}	$V_{\rm CB} = -10 \text{V}, I_{\rm E} = 1 \text{mA}$	70		220	_
Collector-emitter saturation voltage	V _{CE(sat)}	$I_{\rm C} = -10 \text{mA}, I_{\rm B} = -1 \text{mA}$		-0.1		V
Transition frequency	f_T	$V_{CB} = -10 \text{ V}, I_E = 1 \text{ mA}, f = 200 \text{ MHz}$	150	300		MHz
Noise figure	NF	$V_{CB} = -10 \text{ V}, I_E = 1 \text{ mA}, f = 5 \text{ MHz}$		2.8		dB
Reverse transfer impedance	Z _{rb}	$V_{CB} = -10 \text{ V}, I_E = 1 \text{ mA}, f = 2 \text{ MHz}$		22		Ω
Common-emitter reverse transfer capacitance	C _{re}	$V_{CB} = -10 \text{ V}, I_E = 1 \text{ mA}, f = 10.7 \text{ MHz}$		1.2		pF

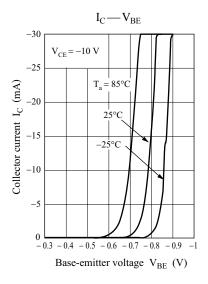
 $Note)\ \ Measuring\ methods\ are\ based\ on\ JAPANESE\ INDUSTRIAL\ STANDARD\ JIS\ C\ 7030\ measuring\ methods\ for\ transistors.$

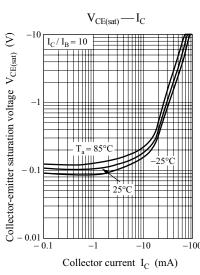
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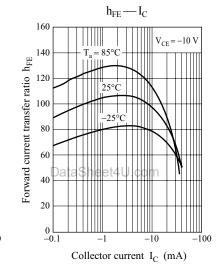
2SA2164 Panasonic

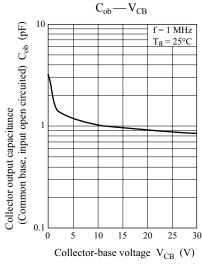












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