

# 2SC5580

## Silicon NPN epitaxial planer type

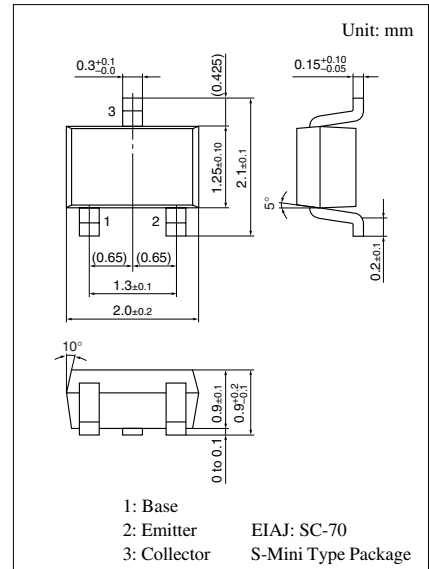
For high-frequency oscillation / switching

### ■ Features

- High transition frequency  $f_T$
- S-mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

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

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{\text{CBO}}$	15	V
Collector to emitter voltage	$V_{\text{CEO}}$	8	V
Emitter to base voltage	$V_{\text{EBO}}$	3	V
Collector current	$I_{\text{C}}$	50	mA
Collector power dissipation	$P_{\text{C}}$	150	mW
Junction temperature	$T_{\text{j}}$	150	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$	-55 to +150	$^\circ\text{C}$



Marking Symbol: 3R

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Emitter cutoff current	$I_{\text{EBO}}$	$V_{\text{EB}} = 2 \text{ V}, I_{\text{C}} = 0$			2	$\mu\text{A}$
Collector to base voltage	$V_{\text{CBO}}$	$I_{\text{C}} = 100 \mu\text{A}, I_{\text{E}} = 0$	15			V
Forward current transfer ratio	$h_{\text{FE}}$	$V_{\text{CE}} = 4 \text{ V}, I_{\text{C}} = 2 \text{ mA}$	100		350	
$h_{\text{FE}}$ ratio	$h_{\text{FE(RATIO)}}$	$V_{\text{CE}} = 4 \text{ V}, I_{\text{C}} = 100 \mu\text{A}/2 \text{ mA}$	0.6		1.5	dB
Collector to emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}} = 20 \text{ mA}, I_{\text{B}} = 4 \text{ mA}$			0.5	V
Transition frequency	$f_{\text{T}}$	$V_{\text{CE}} = 5 \text{ V}, I_{\text{C}} = 15 \text{ mA}, f = 200 \text{ MHz}$	0.6	1.1		GHz
Collector output capacitance	$C_{\text{ob}}$	$V_{\text{CB}} = 10 \text{ V}, I_{\text{E}} = 0, f = 1 \text{ MHz}$		1.2	1.6	pF