

# 2SC5556

## Silicon NPN epitaxial planar type

For UHF band low-noise amplification

### ■ Features

- Low noise figure NF
- High transition frequency  $f_T$
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

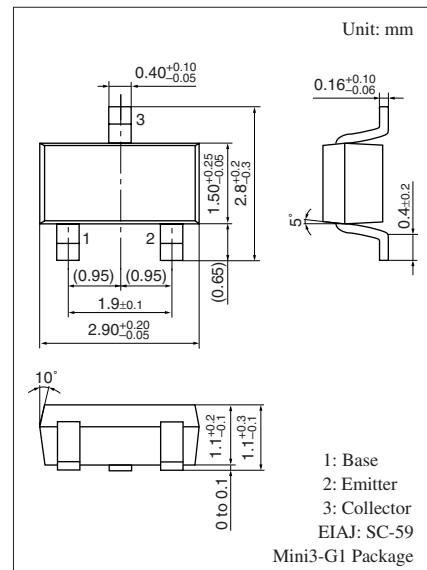
### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	15	V
Collector to emitter voltage	$V_{CEO}$	10	V
Emitter to base voltage	$V_{EBO}$	2	V
Collector current	$I_C$	80	mA
Collector power dissipation *	$P_C$	300	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

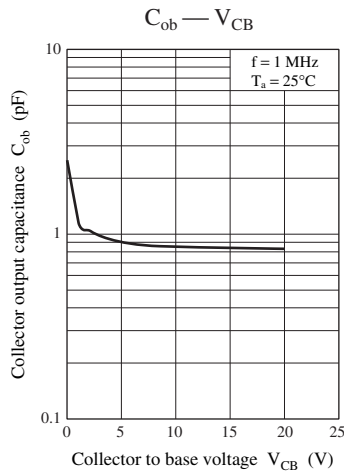
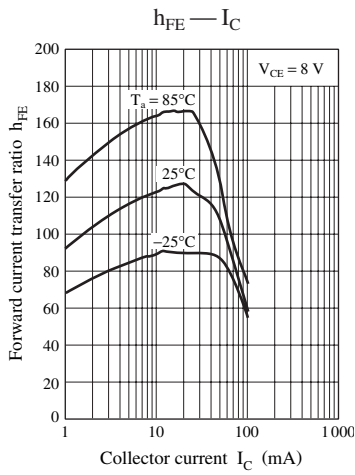
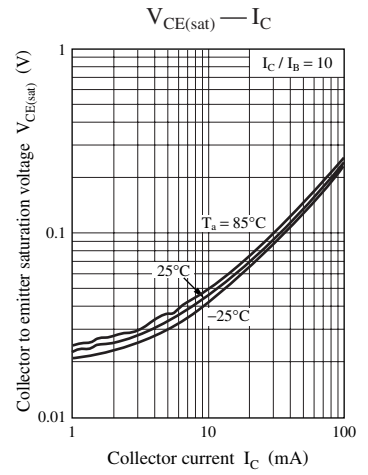
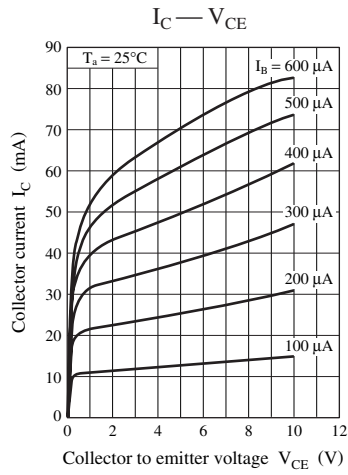
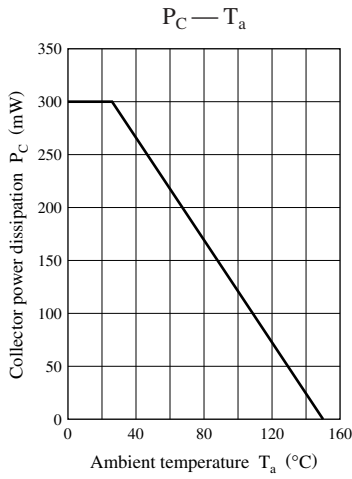
Note) \*: Copper plate at the collector is more than  $1.0\text{ mm}^2$  in area, 1.0 mm in thickness

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	$V_{CBO}$	$I_C = 10\ \mu\text{A}, I_E = 0$	15			V
Collector to emitter voltage	$V_{CEO}$	$I_C = 100\ \mu\text{A}, I_B = 0$	10			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 10\ \text{V}, I_E = 0$			1	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 2\ \text{V}, I_C = 0$			1	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 8\ \text{V}, I_C = 20\ \text{mA}$	110		250	
Forward transfer gain	$ S_{21e} ^2$	$V_{CE} = 8\ \text{V}, I_C = 20\ \text{mA}, f = 800\ \text{MHz}$	7.5	10		dB
Noise figure	NF	$V_{CE} = 8\ \text{V}, I_C = 20\ \text{mA}, f = 800\ \text{MHz}$		1.7		dB
Maximum unilateral power gain	GUM	$V_{CE} = 8\ \text{V}, I_C = 20\ \text{mA}, f = 800\ \text{MHz}$		11.5		dB
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\ \text{V}, I_E = 0, f = 1\ \text{MHz}$		0.9	1.2	pF
Gain bandwidth product	$f_T$	$V_{CE} = 8\ \text{V}, I_C = 20\ \text{mA}, f = 800\ \text{MHz}$	5.0	6.0		GHz



Marking symbol: 3K



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