## 2SC5556

### Silicon NPN epitaxial planar type

#### For UHF band low-noise amplification

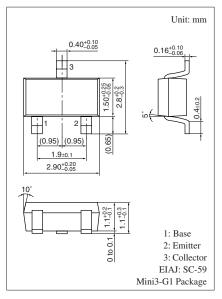
#### ■ Features

- Low noise figure NF
- High transition frequency f<sub>T</sub>
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

### ■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	15	V	
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	10	V	
Emitter-base voltage (Collector open)	$V_{EBO}$	2	V	
Collector current	$I_C$	80	mA	
Collector power dissipation *	P <sub>C</sub>	300	mW	
Junction temperature	$T_{j}$	150	°C	
Storage temperature	$T_{stg}$	-55 to +150	°C	

Note) \*: Copper plate at the collector is more than 1 cm<sup>2</sup> in area, 1.0 mm in thickness



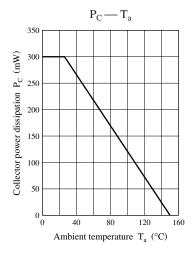
Marking Symbol: 3K

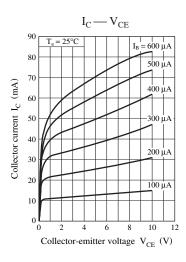
#### ■ Electrical Characteristics $T_a = 25$ °C $\pm 3$ °C

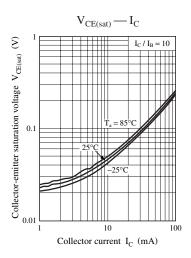
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	$I_C = 10 \mu\text{A},  I_E = 0$	15			V
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_C = 100 \ \mu A, I_B = 0$	10			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = 10 \text{ V}, I_{E} = 0$			1	μΑ
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = 2 \text{ V}, I_C = 0$			1	μΑ
Forward current transfer ratio	h <sub>FE</sub>	$V_{CE} = 8 \text{ V}, I_{C} = 20 \text{ mA}$	110		250	_
Transition frequency	$f_T$	$V_{CE} = 8 \text{ V}, I_{C} = 20 \text{ mA}, f = 800 \text{ MHz}$	5	6		GHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		0.9	1.2	pF
(Common base, input open circuited)						
Foward transfer gain	S <sub>21e</sub>   2	$V_{CE} = 8 \text{ V}, I_{C} = 20 \text{ mA}, f = 800 \text{ MHz}$	7.5	10.0		dB
Maximum unilateral power gain	$G_{UM}$	$V_{CE} = 8 \text{ V}, I_{C} = 20 \text{ mA}, f = 800 \text{ MHz}$		11.5		dB
Noise figure	NF	$V_{CE} = 8 \text{ V}, I_{C} = 20 \text{ mA}, f = 800 \text{ MHz}$		1.7		dB

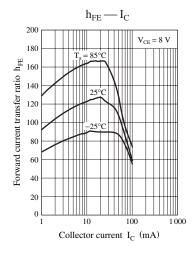
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

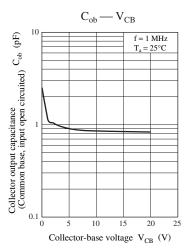
## **Panasonic**











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