# 2SC4805

### Silicon NPN epitaxial planar type

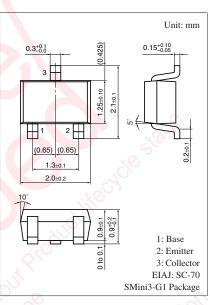
For 2 GHz band low-noise amplification

#### Features

- $\bullet$  High transition frequency  $f_{\rm T}$
- S-Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing

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

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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 <sub>EBO</sub>	2	V
Collector current	I <sub>C</sub>	65	mA
Collector power dissipation	P <sub>C</sub>	150	mW
Junction temperature	Tj	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C



#### Marking Symbol: 3S

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

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base cutoff current (Emitter open)	I <sub>CBO</sub>	$V_{CB} = 10 \text{ V}, I_E = 0$	20	S	1	μΑ
Emitter-base cutoff current (Collector open)	I <sub>EBO</sub>	$V_{EB} = 1 V, I_C = 0$	í dí	, v	1	μΑ
Forward current transfer ratio *	h <sub>FE</sub>	$V_{CE} = 8 \text{ V}, I_{C} = 20 \text{ mA}$	50		300	
Transition frequency	f <sub>T</sub>	$V_{CE} = 8 V, I_C = 15 mA, f = 1.5 GHz$	7.0	8.5		GHz
Collector output capacitance (Common base, input open circuited)	C <sub>ob</sub>	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		0.6	1.0	pF
Forward transfer gain	$ S_{21e} ^2$	$V_{CE} = 8 \text{ V}, I_{C} = 15 \text{ mA}, f = 1.5 \text{ GHz}$	7	9		dB
Maximum unilateral power gain	G <sub>UM</sub>	$V_{CE} = 8 \text{ V}, I_{C} = 15 \text{ mA}, f = 1.5 \text{ GHz}$		10		dB
Noise figure	NF	$V_{CE} = 8 V, I_C = 7 mA, f = 1.5 GHz$		2.2	3.0	dB

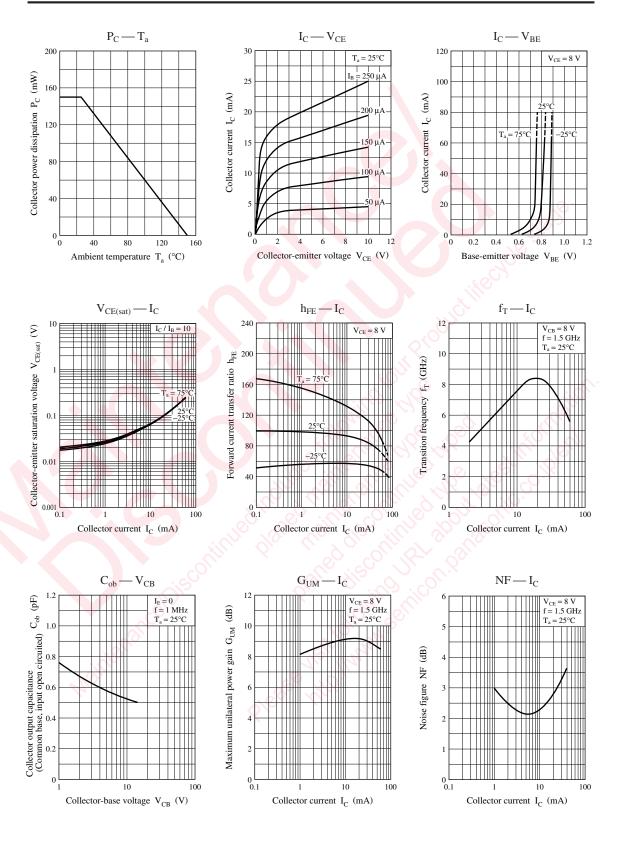
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

2. \*: Rank classification

Rank	Q	R	S	No-rank	
$h_{FE}$	50 to 120	100 to 170	150 to 300	50 to 300	
Marking symbol	3SQ	3SR	3SS	3S	

Product of no-rank is not classified and have no indication for rank.

### Panasonic



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