## 2SC5863

## Silicon NPN epitaxial planar type

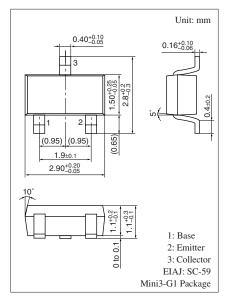
#### For general amplification

#### ■ Features

- ullet High collector-emitter voltage (Base open)  $V_{CEO}$
- High transition frequency f<sub>T</sub>

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

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	300	V	
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	300	V	
Emitter-base voltage (Collector open)	$V_{EBO}$	7	V	
Collector current	$I_C$	70	mA	
Peak collector current	$I_{CP}$	100	mA	
Collector power dissipation	$P_{C}$	200	mW	
Junction temperature	$T_{j}$	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	



Marking Symbol: 7H

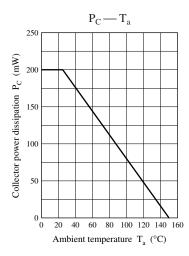
### ■ Electrical Characteristics $T_a = 25$ °C $\pm 3$ °C

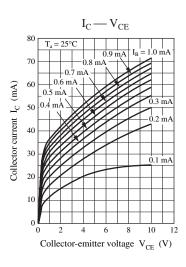
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_C = 100 \ \mu A, I_B = 0$	300			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 1 \mu A, I_C = 0$	7			V
Collector-emitter cutoff current (Base open)	$I_{CEO}$	$V_{CE} = 120 \text{ V}, I_B = 0$			1	μΑ
Forward current transfer ratio *	h <sub>FE</sub>	$V_{CE} = 10 \text{ V}, I_{C} = 5 \text{ mA}$	60		220	_
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_C = 50 \text{ mA}, I_B = 5 \text{ mA}$			1.2	V
Collector output capacitance	C <sub>ob</sub>	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			10	pF
(Common base, input open circuited)						
Transition frequency	$f_T$	$V_{CB} = 10 \text{ V}, I_E = -10 \text{ mA}, f = 200 \text{ MHz}$	50	80		MHz

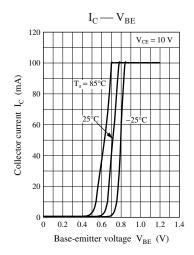
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

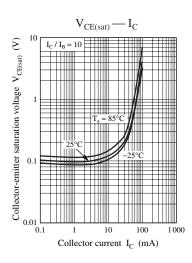
#### 2. \*: Rank classification

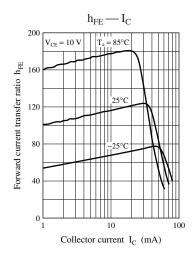
Rank	Q	R
$h_{FE}$	60 to 150	100 to 220

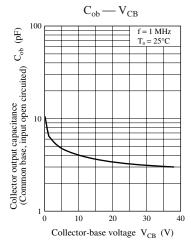












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