2SC5813

Silicon NPN epitaxial planar type

For DC-DC converter

■ Features

- ullet Low collector-emitter saturation voltage $V_{CE(sat)}$
- Mini type package, allowing downsizing of the equipment and automatic insertion through the tape packing

■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V _{CBO}	80	V	
Collector-emitter voltage (Base open)	V _{CEO}	80	V	
Emitter-base voltage (Collector open)	V_{EBO}	5	V	
Collector current	I_C	1.5	A	
Peak collector current	I_{CP}	3	A	
Collector power dissipation *	P _C	600	mW	
Junction temperature	T_{j}	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	

Note) *: Measure on the ceramic substrate at 15 mm $\times\,15$ mm $\times\,0.6$ mm

Unit: mm 0.40^{+0.10}/_{-0.05} 0.16^{+0.10}/_{-0.06} 0.16^{+0.10}/_{-0.06} 1.19±0.1 2.90^{+0.20}/_{-0.05} 1.29±0.20 2.90^{+0.20}/_{-0.05} 1.3 Base 2. Emitter 3. Collector EIAJ: SC-59 Mini3-GI Package

Marking Symbol: 5H

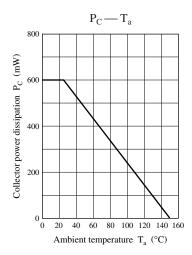
■ Electrical Characteristics $T_a = 25$ °C ± 3 °C

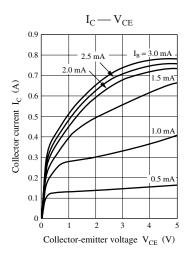
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V _{CBO}	$I_C = 10 \mu\text{A}, I_E = 0$	80			V
Collector-emitter voltage (Base open)	V _{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	80			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10 \ \mu A, I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 40 \text{ V}, I_{E} = 0$			0.1	μΑ
Forward current transfer ratio *	h _{FE}	$V_{CE} = 2 \text{ V}, I_{C} = 100 \text{ mA}$	200			_
Collector-emitter saturation voltage *	V _{CE(sat)}	$I_C = 1 \text{ A}, I_B = 20 \text{ mA}$		350	500	mV
Transition frequency	f_T	$V_{CB} = 10 \text{ V}, I_{E} = -50 \text{ mA}, f = 200 \text{ MHz}$		180		MHz
Collector output capacitance	C _{ob}	$V_{CB} = 10 \text{ V}, I_{E} = 0, f = 1 \text{ MHz}$		15	25	pF
(Common base, input open circuited)						

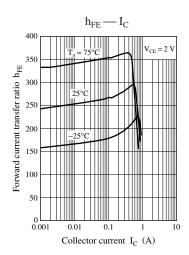
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

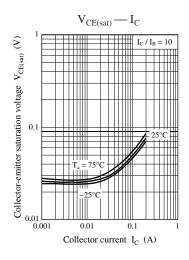
^{2. *:} Pulse measurement

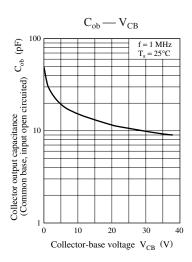
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