

2SC5725

Silicon NPN epitaxial planar type

For DC-DC converter

■ Features

- 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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	20	V
Collector-emitter voltage (Base open)	V_{CEO}	15	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_C	2	A
Peak collector current	I_{CP}	6	A
Collector power dissipation *	P_C	600	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

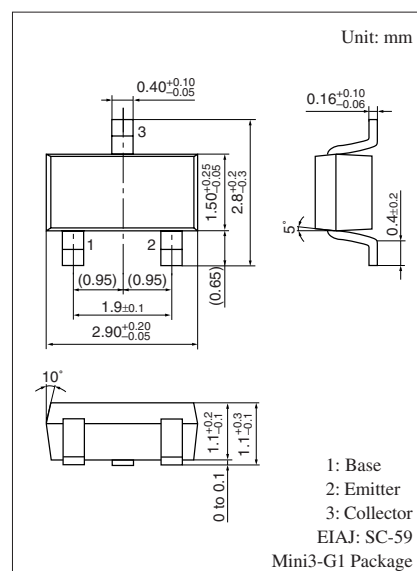
Note) *: Measure on the ceramic substrate at 15 mm × 15 mm × 0.6 mm

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = 10\ \mu\text{A}$, $I_E = 0$	20			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = 1\ \text{mA}$, $I_B = 0$	15			V
Emitter-base voltage (Collector open)	V_{EBO}	$I_E = 10\ \mu\text{A}$, $I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 10\ \text{V}$, $I_E = 0$			0.1	μA
Forward current transfer ratio *	h_{FE1}	$V_{CE} = 2\ \text{V}$, $I_C = 100\ \text{mA}$	200		800	—
	h_{FE2}	$V_{CE} = 2\ \text{V}$, $I_C = 1.5\ \text{A}$	120			
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 0.5\ \text{A}$, $I_B = 25\ \text{mA}$		40	100	mV
		$I_C = 1.5\ \text{A}$, $I_B = 30\ \text{mA}$		130	280	
Transition frequency	f_T	$V_{CB} = 10\ \text{V}$, $I_E = -50\ \text{mA}$, $f = 200\ \text{MHz}$		280		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 10\ \text{V}$, $I_E = 0$, $f = 1\ \text{MHz}$		15	25	pF

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

2. *: Pulse measurement



Marking Symbol: 3C

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