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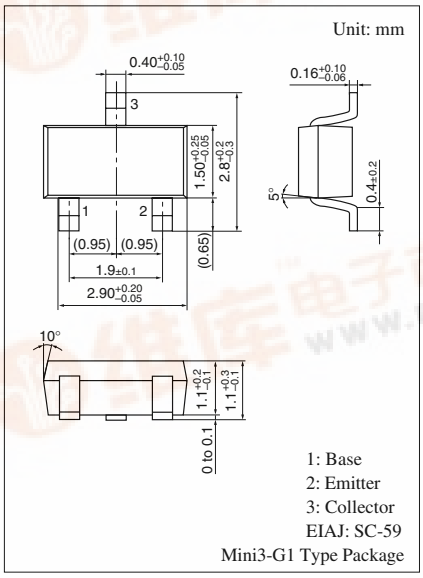
2SC5725

Silicon NPN epitaxial planer type

For DC-DC converter

■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$
- Mini3-G1 type package, allowing downsizing and thinning of the equipment and automatic insertion through the tape packing



Marking Symbol: 3C

■ Absolute Maximum Ratings $T_a = 25°C$

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	20	V
Collector to emitter voltage	V_{CEO}	15	V
Emitter to base voltage	V_{EBO}	5	V
Peak collector current	I_{CP}	6	A
Collector current	I_C	2.0	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 × 15 × 0.6 mm^3

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

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

Note) *: Pulse measurement

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