

2SC5592

Silicon NPN epitaxial planar type

For DC-DC converter

For various driver circuits

■ Features

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

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

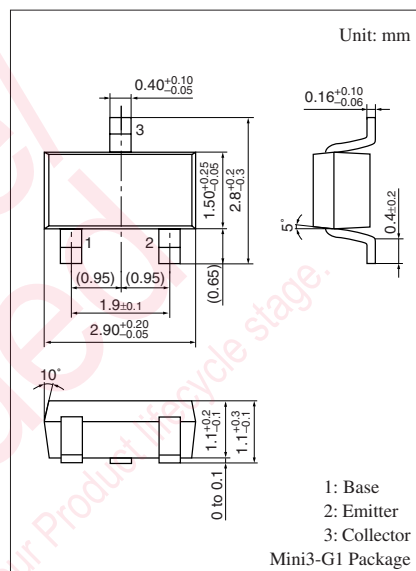
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	15	V
Collector-emitter voltage (Base open)	V_{CEO}	15	V
Emitter-base voltage (Collector open)	V_{EBO}	5	V
Collector current	I_C	2.5	A
Peak collector current	I_{CP}	10	A
Collector power dissipation *	P_C	600	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

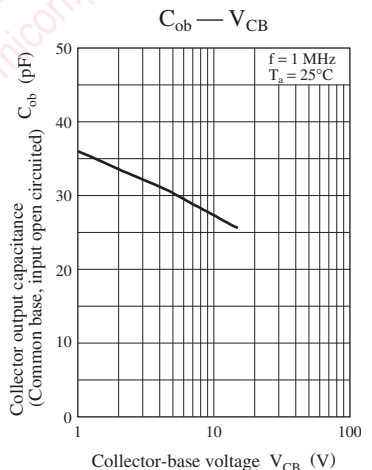
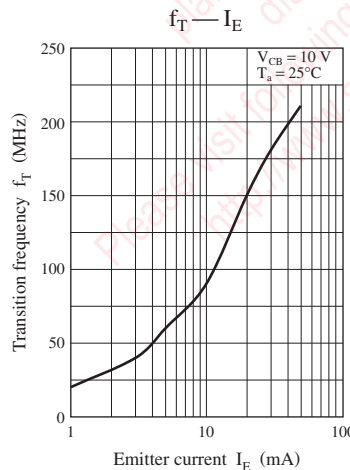
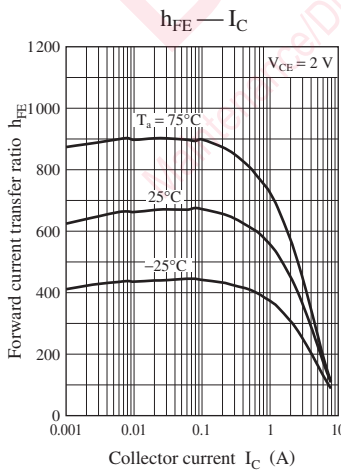
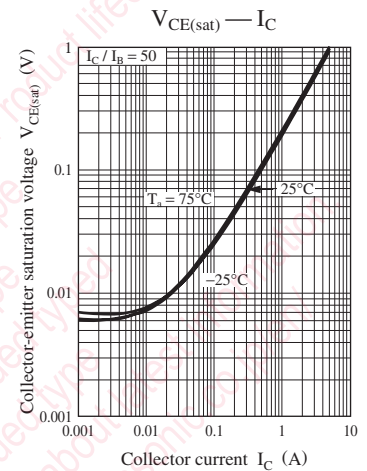
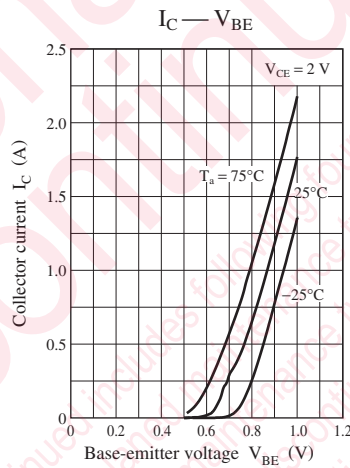
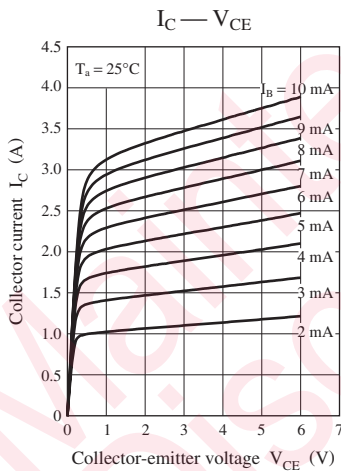
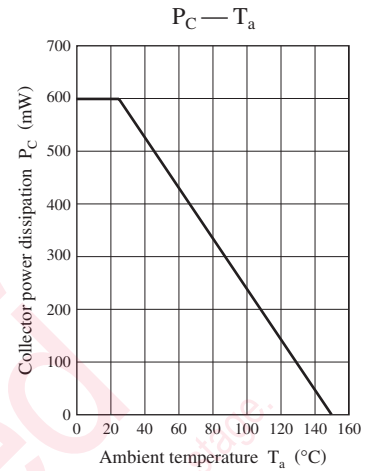
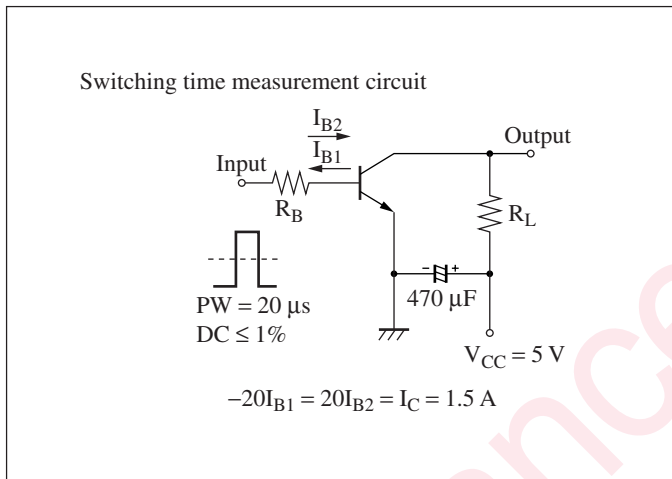
(Note) *: Measure on the ceramic substrate at $15\text{ mm} \times 15\text{ mm} \times 0.6\text{ mm}$

■ 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}	$I_C = 10\ \mu\text{A}, I_E = 0$	15			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}	$V_{CE} = 2\ \text{V}, I_C = 100\ \text{mA}$	400		1000	—
	h_{FE2}	$V_{CE} = 2\ \text{V}, I_C = 2.5\ \text{A}$	280			
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 1\ \text{A}, I_B = 10\ \text{mA}$		110		mV
		$I_C = 2.5\ \text{A}, I_B = 50\ \text{mA}$		220	320	
Transition frequency	f_T	$V_{CB} = 10\ \text{V}, I_E = -50\ \text{mA}, f = 200\ \text{MHz}$		180		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 10\ \text{V}, I_E = 0, f = 1\ \text{MHz}$		30		pF
Turn-on time	t_{on}	Refer to the switching time measurement circuit		30		ns
Storage time	t_{stg}			100		ns
Fall time	t_f			10		ns

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

2. *: Pulse measurement ($\leq 1\ \text{ms}$)



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