

2SA2010

Silicon PNP epitaxial planar type

For DC-DC converter
For various driver circuits

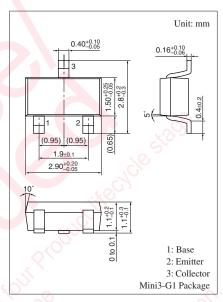
■ Features

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

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

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V_{CBO}	V _{CBO} -15		
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	°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



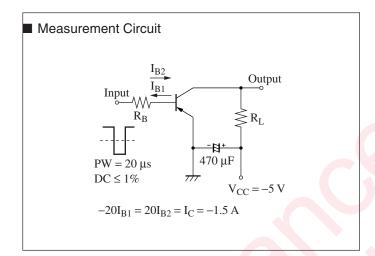
Marking Symbol: AS

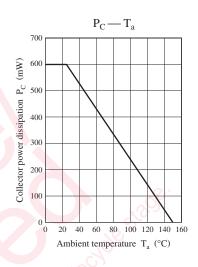
■ Electrical Characteristics T_a = 25°C ± 3°C

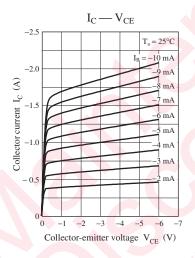
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_{\rm C} = -10 \ \mu A, I_{\rm E} = 0$	-15	, o		V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -1 \text{ mA}, I_B = 0$	-15			V
Emitter-base voltage (Collector open)	V _{EBO}	$I_E = -10 \mu\text{A}, I_C = 0$	-5			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -10 \text{ V}, I_E = 0$			- 0.1	μΑ
Forward current transfer ratio *	h _{FE1}	$V_{CE} = -2 \text{ V}, I_{C} = -100 \text{ mA}$	200		560	_
	h _{FE2}	$V_{CE} = -2 \text{ V}, I_{C} = -2.5 \text{ A}$	100			
Collector-emitter saturation voltage *	V _{CE(sat)}	$I_C = -1 \text{ A}, I_B = -10 \text{ mA}$		-140		mV
		$I_C = -2.5 \text{ A}, I_B = -50 \text{ mA}$		-270	-320	
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}	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		40		pF
(Common base, input open circuited)						
Turn-on time	t _{on}	Refer to the measurement circuit		35		ns
Turn-off time	t _{off}			10		ns
Storage time	t _{stg}			110		ns

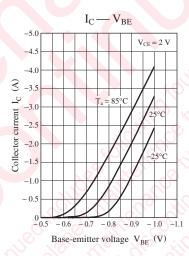
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

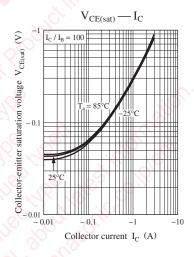
2. *: Pulse measurement

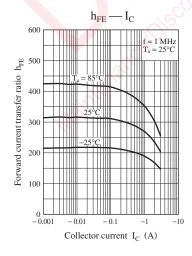


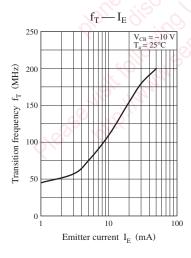


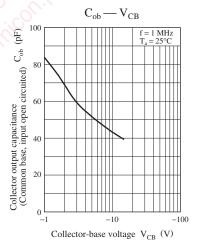












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