## 2SA2046

**Transistors** 

## Silicon PNP epitaxial planar type

#### For DC-DC converter

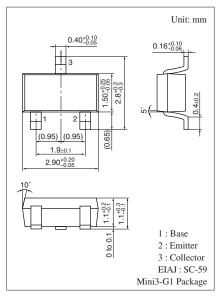
#### ■ Features

- ullet Low collector-emitter saturation voltage  $V_{\text{CE(sat)}}$
- 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 <sub>CBO</sub>	V <sub>CBO</sub> -30		
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	-20	V	
Emitter-base voltage (Collector open)	$V_{EBO}$	-5	V	
Collector current	$I_{C}$	-1.5	A	
Peak collector current	$I_{CP}$	-5	A	
Collector power dissipation *	P <sub>C</sub>	400	mW	
Junction temperature	$T_{j}$	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	

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



Marking Symbol: 3Z

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

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	$I_C = -10 \ \mu A, I_E = 0$	-30			V
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_{\rm C} = -1  \text{mA},  I_{\rm B} = 0$	-20			V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = -10 \ \mu A, I_C = 0$	-5			V
Forward current transfer ratio *	h <sub>FE</sub>	$V_{CE} = -2 \text{ V}, \ I_{C} = -100 \text{ mA}$	160		560	_
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	$I_C = -500 \text{ mA}, I_B = -25 \text{ mA}$		-50	-150	mV
Transition frequency	$f_T$	$V_{CB} = -10 \text{ V}, I_E = 20 \text{ mA}, f = 200 \text{ MHz}$		170		MHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		25	35	pF
(Common base, input open circuited)						

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

<sup>2. \*:</sup> Pulse measurement

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