# 2SD0602A (2SD602A)

### Silicon NPN epitaxial planar type

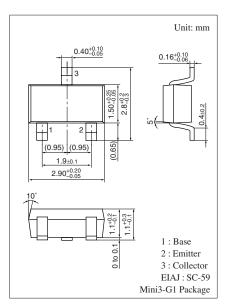
For general amplification Complementary to 2SB0710A (2SB710A)

#### Features

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

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

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	60	V	
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	50	V	
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	5	V	
Collector current	I <sub>C</sub>	500	mA	
Peak collector current	I <sub>CP</sub>	1	А	
Collector power dissipation	P <sub>C</sub>	200	mW	
Junction temperature	Tj	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	



#### Marking symbol: X

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

Parameter	Symbol	Conditions Mi		Тур	Max	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	$I_{\rm C} = 10 \ \mu A, \ I_{\rm E} = 0$	60			V
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_{\rm C} = 10 \text{ mA}, I_{\rm B} = 0$	50			V
Emitter-base voltage (Collector open)	V <sub>EBO</sub>	$I_E = 10 \ \mu A, \ I_C = 0$	5			V
Collector-base cutoff current (Emitter open)	I <sub>CBO</sub>	$V_{CB} = 20 V, I_E = 0$			0.1	μΑ
Forward current transfer ratio *1	h <sub>FE1</sub> *2	$V_{CE} = 10 \text{ V}, I_{C} = 150 \text{ mA}$	85		340	
	h <sub>FE2</sub>	$V_{CE} = -10 \text{ V}, I_C = 500 \text{ mA}$	40			
Collector-emitter saturation voltage *1	V <sub>CE(sat)</sub>	$I_{\rm C} = 300 \text{ mA}, I_{\rm B} = 30 \text{ mA}$		0.35	0.6	V
Transition frequency	f <sub>T</sub>	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		200		MHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		6	15	pF
(Common base, input open circuited)						

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

#### 2. \*1: Pulse measurement

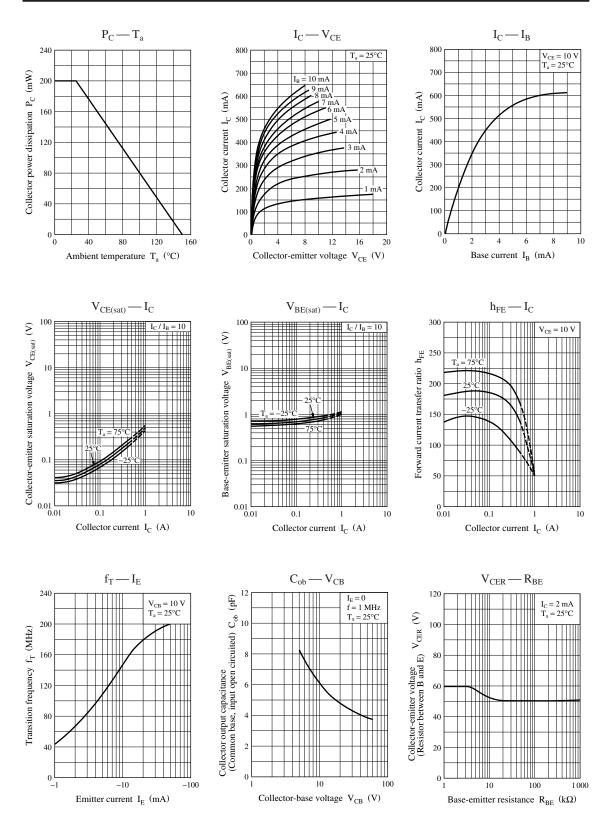
\*2: Rank classification

Rank	Q	R	S	No rank
$h_{\rm FE1}$	85 to 170	120 to 240	170 to 340	85 to 340
Marking symbol	XQ	XR	XS	Х

Product of no-rank is not classified and have no indication for rank.

Note) The part number in the parenthesis shows conventional part number.

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