# 2SD0592A (2SD592A)

### Silicon NPN epitaxial planar type

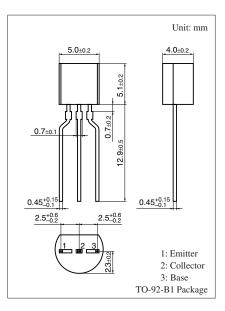
For low-frequency output amplification Complementary to 2SB0621A (2SB621A)

#### Features

- $\bullet$  Large collector power dissipation  $P_{C}$
- $\bullet$  Low collector-emitter saturation voltage  $V_{CE(sat)}$

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>	1	А	
Peak collector current	I <sub>CP</sub>	1.5	А	
Collector power dissipation	P <sub>C</sub>	750	mW	
Junction temperature	Tj	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	





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

Parameter	Symbol	Conditions	Min	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>	$I_{\rm C} = 2  {\rm mA},  I_{\rm B} = 0$	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>	$V_{CB} = 20 \text{ V}, I_E = 0$			0.1	μΑ
Forward current transfer ratio	h <sub>FE1</sub> *	$V_{CE} = 10 \text{ V}, I_C = 500 \text{ mA}$	85		340	
	h <sub>FE2</sub>	$V_{CE} = 5 V, I_C = 1 A$	50			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_{\rm C} = 500 \text{ mA}, I_{\rm B} = 50 \text{ mA}$		0.2	0.4	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	$I_{\rm C} = 500 \text{ mA}, I_{\rm B} = 50 \text{ mA}$		0.85	1.20	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>	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			20	pF
(Common base, input open circuited)						

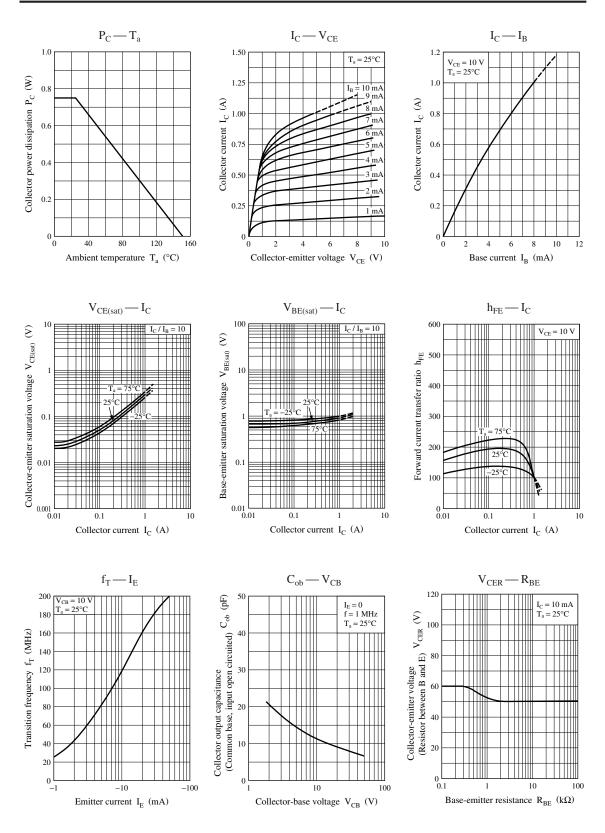
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

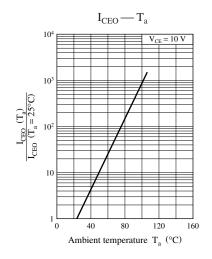
2. \*: Rank classification

Rank	Q	R	S
h <sub>FE1</sub>	85 to 170	120 to 240	170 to 340

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

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