## 2SD1211

### Silicon NPN epitaxial planar type

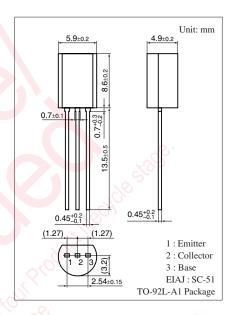
#### For low-frequency amplification

#### ■ Features

- ullet High collector-emitter voltage (Base open)  $V_{CEO}$
- Optimum for the driver-stage of a low-frequency and 40 W to 60 W output amplifier.

### ■ Absolute Maximum Ratings $T_a = 25$ °C

Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	120	V	
Collector-emitter voltage (Base open)	$V_{CEO}$	120	V	
Emitter-base voltage (Collector open)	$V_{EBO}$	5	V	
Collector current	$I_{C}$	0.5	A	
Peak collector current	$I_{CP}$	1	A	
Collector power dissipation	$P_{\rm C}$	1	W	
Junction temperature	T <sub>j</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-55 to +150	°C	



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

Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_C = 0.1 \text{ mA}, I_B = 0$	120	55		V
Emitter-base voltage (Collector open)	$V_{EBO}$	$I_E = 10 \mu\text{A}, I_C = 0$	5			V
Forward current transfer ratio *1	h <sub>FE1</sub> *2	$V_{CE} = 10 \text{ V}, I_{C} = 150 \text{ mA}$	130		330	_
	h <sub>FE</sub>	$V_{CE} = 5 \text{ V}, I_{C} = 500 \text{ mA}$	50			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	$I_C = 300 \text{ mA}, I_B = 30 \text{ mA}$			1	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	$I_C = 300 \text{ A}, I_B = 30 \text{ mA}$			1.2	V
Transition frequency	$f_T$	$V_{CB} = 10 \text{ V}, I_E = -50 \text{ mA}, f = 200 \text{ MHz}$		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)		76.0 KITA				

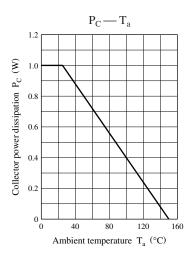
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

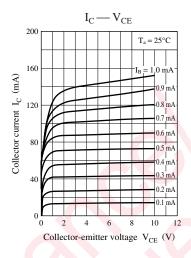
2. \*1: Pulse measurement

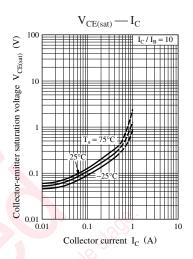
\*2: Rank classification

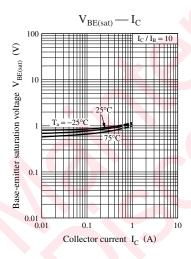
Rank	R	S
h <sub>FE1</sub>	130 to 220	185 to 330

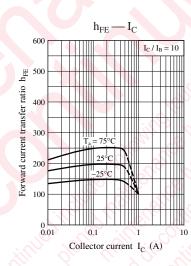
## **Panasonic**

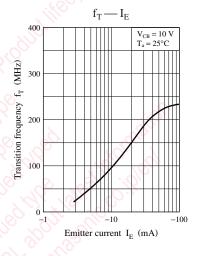


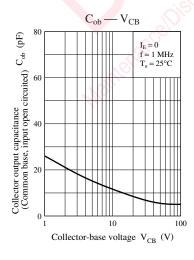


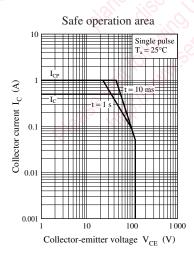












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