

# **SRC1211S**

**NPN Silicon Transistor** 

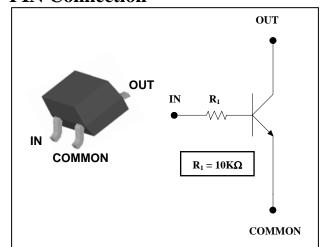
## **Descriptions**

- Switching application
- Interface circuit and driver circuit application

#### **Features**

- With built-in bias resistor
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- High packing density

#### **PIN Connection**



## **Ordering Information**

Type NO.	Marking	Package Code	
SRC1211S	<u>RCD</u> □ ① ②	SOT-23	

<sup>1)</sup> Device Code 2) Year & Week Code

#### **Absolute Maximum Ratings**

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Output voltage	Vo	50	V
Input voltage	V <sub>I</sub>	30, -5	V
Output current	Io	100	mA
Power dissipation	$P_{D}$	200	mW
Junction temperature	TJ	150	°C
Storage temperature range	$T_{stg}$	-55 ~ 150	°C

## **Electrical Characteristics**

(Ta=25°C)

Characteristic	Symbol	<b>Test Condition</b>	Min.	Тур.	Max.	Unit
Output cut-off current	I <sub>O(OFF)</sub>	$V_0 = 50V, V_1 = 0$	-	-	500	nA
DC current gain	Gı	$V_O=5V$ , $I_O=10mA$	120	-	-	-
Output voltage	$V_{O(ON)}$	$I_0 = 10 \text{mA}, I_1 = 0.5 \text{mA}$	-	0.1	0.3	V
Input voltage (ON)	V <sub>I(ON)</sub>	$V_0 = 0.2V$ , $I_0 = 5mA$	-	0.9	1.4	V
Input voltage (OFF)	$V_{I(OFF)}$	$V_0 = 5V$ , $I_0 = 0.1 \text{mA}$	0.3	0.55	-	V
Transition frequency	$f_{T}^{}^{\star}}$	$V_O=10V$ , $I_O=5mA$ , $f=1MHz$	-	200	-	MHz
Input current	I <sub>1</sub>	$V_1 = 5V, I_0 = 0$	-	-	0.88	mA
Input resistor (Input to base)	R <sub>1</sub>	-	7	10	13	ΚΩ

<sup>\* :</sup> Characteristic of transistor only

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### **Electrical Characteristic Curves**

Fig. 1  $P_D$  - Ta

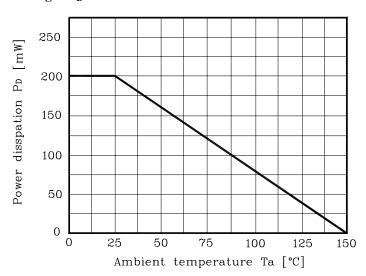
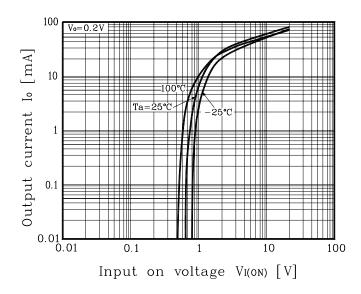
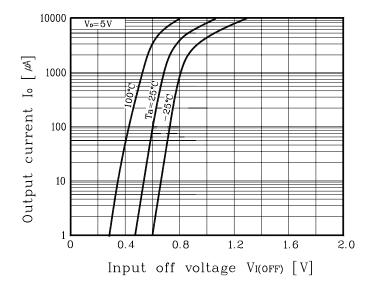


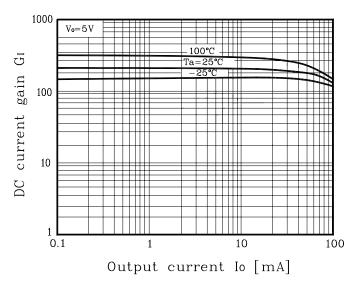
Fig. 2  $I_{O}\!-\!V_{I(ON)}$ 



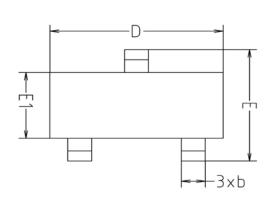
 $Fig.~3~I_O - V_{I(OFF)}$ 

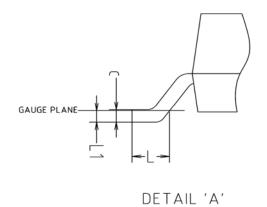


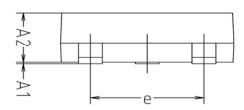
**Fig. 4 G<sub>I</sub> - I<sub>O</sub>** 



## **Outline Dimension**



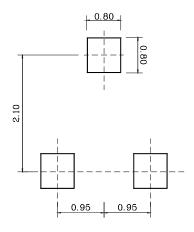






SYMBOL	MILLIMETERS			NOTE	
3111000	MINIMUM	NOMINAL	MAXIMUM	NOTE	
A1	0.00	-	0.10		
Α2	0.82	-	1.02		
Ь	0.39	0.42	0.45		
С	0.09	0.12	0.15		
D	2.80	2.90	3.00		
E	2.20	2.40	2.60		
E1	1.20	1.30	1.40		
е	1.90BSC				
L	0.20	-	-		
L1	0.12BSC				

## **\*Recommend PCB solder land [Unit: mm]**



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