

# **SRC1211S**

NPN Silicon Transistor

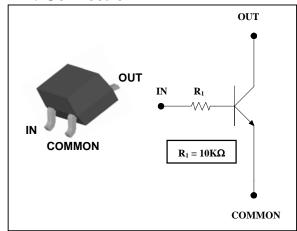
#### **Descriptions**

- 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	

①Device Code ②Year&Week Code

### **Absolute Maximum Ratings**

 $(Ta=25^{\circ}C)$ 

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 <sub>stg</sub>	-55 ~ 150	°C

#### **Electrical Characteristics**

(Ta=25°C)

Characteristic	Symbol	Test Condition	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	$V_0 = 5V$ , $I_0 = 10mA$	120	ı	-	-
Output voltage	V <sub>O(ON)</sub>	$I_0 = 10 \text{mA}, I_1 = 0.5 \text{mA}$	-	0.1	0.3	V
Input voltage (ON)	V <sub>I(ON)</sub>	V <sub>O</sub> =0.2V, I <sub>O</sub> =5mA	-	0.9	1.4	V
Input voltage (OFF)	V <sub>I(OFF)</sub>	$V_0 = 5V$ , $I_0 = 0.1 \text{mA}$	0.3	0.55	-	V
Transition frequency	$f_{T}^{}^{\star}}$	$V_O=10V$ , $I_O=5$ mA, $f=1$ MHz	-	200	-	MHz
Input current	$I_1$	$V_1 = 5V, I_0 = 0$	-	1	0.88	mA
Input resistor (Input to base)	R <sub>1</sub>	-	7	10	13	ΚΩ

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

### **Electrical Characteristic Curves**

Fig. 1 P<sub>D</sub> - Ta

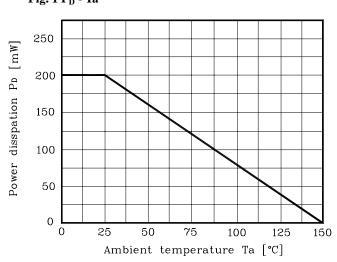
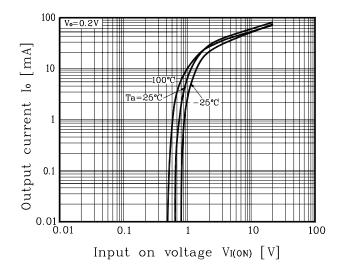


Fig. 2  $I_O - V_{I(ON)}$ 



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

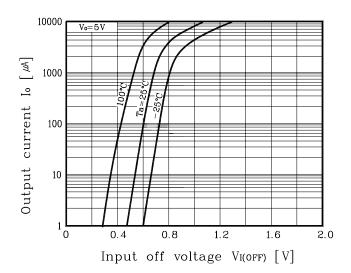
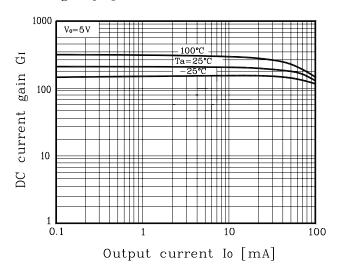
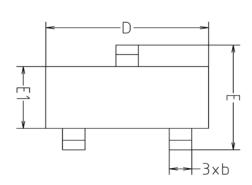


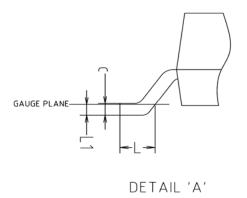
Fig. 4 G<sub>I</sub> - I<sub>O</sub>

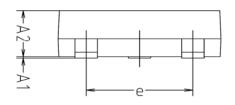


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## **Outline Dimension**



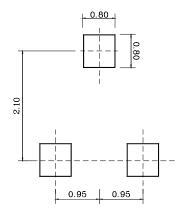






SYMBOL	MILLIMETERS			NOTE
STITLE	MINIMUM	NOMINAL	MAXIMUM	NOTE
A1	0.00	-	0.10	
A2	0.82	-	1.02	
Ь	0.39	0.42	0.45	
С	0.09	0.12	0.15	
D	2.80	2.90	3.00	
Е	2.20	2.40	2.60	
E1	1.20	1.30	1.40	
е	1.90BSC			
L	0.20	-	-	
L1	0.12BSC			

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



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