

# **SRC1219K**

**NPN Silicon Transistor** 

#### **Descriptions**

- Switching application
- Interface circuit and driver circuit application

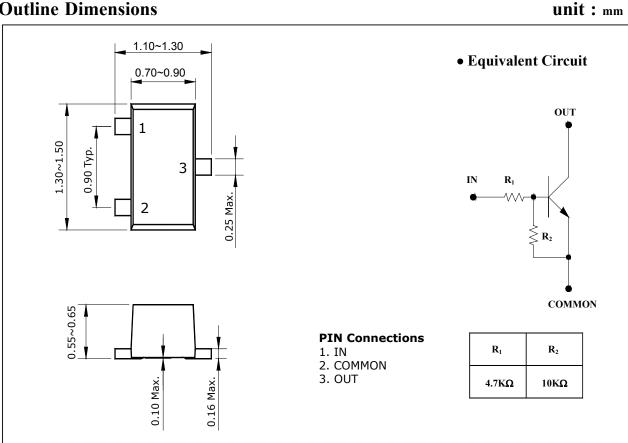
#### **Features**

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

### **Ordering Information**

Type NO.	Marking Package Code		de	
SRC1219K	RC	SOT-623F		

## **Outline Dimensions**



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**Absolute Maximum Ratings** 

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Output voltage	Vo	50	V
Input voltage	$V_{\mathrm{I}}$	20,-7	V
Output current	$I_{O}$	100	mA
Power dissipation	$P_{D}$	100	mW
Junction temperature	T <sub>J</sub>	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>	$V_0 = 50V, V_I = 0$	-	1	500	nA
DC current gain	$G_{\mathrm{I}}$	V <sub>O</sub> =5V, I <sub>O</sub> =10mA	30	-	-	-
Output voltage	$V_{O(ON)}$	$I_O=10$ mA, $I_I=0.5$ mA	-	0.1	0.3	V
Input voltage (ON)	$V_{I(ON)}$	V <sub>O</sub> =0.2V, I <sub>O</sub> =5mA	-	1.2	1.6	٧
Input voltage (OFF)	$V_{I(OFF)}$	V <sub>O</sub> =5V, I <sub>O</sub> =0.1mA	0.5	0.82	-	V
Transition frequency	f <sub>T</sub> *	$V_0=10V$ , $I_0=5$ mA, $f=1$ MHz	-	200	-	MHz
Input current	$I_{\mathrm{I}}$	$V_I=5V$ , $I_O=0$	-	-	1.8	mA
Input resistor (Input to base)	$R_1$	-	3.3	4.7	6.1	<b>K</b> Ω
Input resistor (Base to common)	R <sub>2</sub>	-	7	10	13	<b>K</b> Ω

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

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#### **Electrical Characteristic Curves**

Fig. 1  $I_O$  -  $V_{I(ON)}$ 

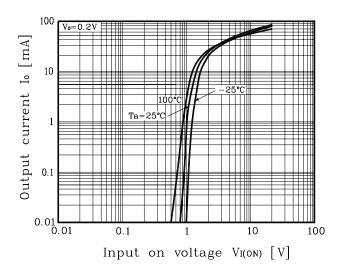


Fig. 2  $I_O$  -  $V_{I(OFF)}$ 

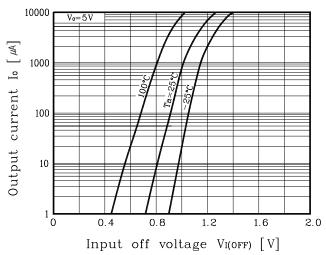
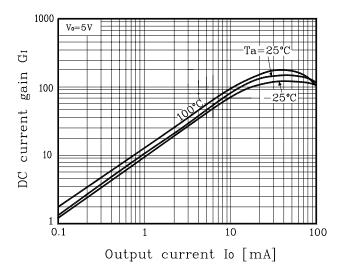


Fig. 3 G<sub>I</sub>-I<sub>O</sub>



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