

## Descriptions

- Switching application
- Interface circuit and driver circuit application

## Features

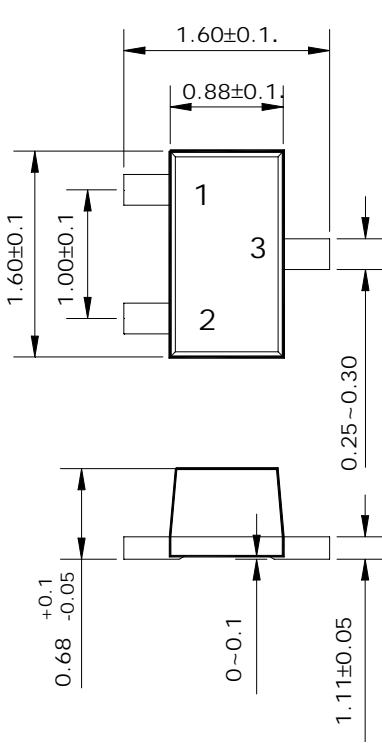
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- High packing density

## Ordering Information

Type NO.	Marking	Package Code
SRC1204EF	R4	SOT-523F

## Outline Dimensions

unit : mm



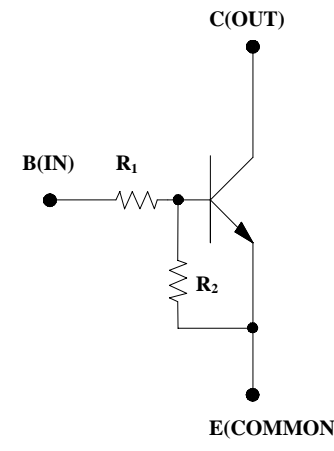
Top View Dimensions:

- Overall width:  $1.60 \pm 0.1$
- Internal width:  $0.88 \pm 0.1$
- Overall height:  $1.60 \pm 0.1$
- Emitter height:  $1.00 \pm 0.1$
- Collector height:  $0.25 \sim 0.30$

Side View Dimensions:

- Base thickness:  $0.68 \begin{smallmatrix} +0.1 \\ -0.05 \end{smallmatrix}$
- Emitter thickness:  $0 \sim 0.1$
- Collector thickness:  $1.11 \pm 0.05$

• Equivalent Circuit



PIN Connections

1. Base
2. Emitter
3. Collector

R <sub>1</sub>	R <sub>2</sub>
47KΩ	47KΩ

**Absolute maximum ratings**

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Out Voltage	$V_O$	50	V
Input Voltage	$V_I$	40	V
Out Current	$I_O$	100	mA
Power Dissipation	$P_D$	150	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{STG}$	-55 ~ 150	°C

**Electrical Characteristics**

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Cut-off Current	$I_{O(OFF)}$	$V_O=50V, V_I=0$	-	-	500	nA
DC Current Gain	$G_I$	$V_O=5V, I_O=10mA$	80	200	-	-
Output Voltage	$V_{O(ON)}$	$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	V
Input Voltage (ON)	$V_{I(ON)}$	$V_O=0.2V, I_O=5mA$	-	2.8	5.0	V
Input Voltage (OFF)	$V_{I(OFF)}$	$V_O=5V, I_O=0.1mA$	1.0	1.2	-	V
Transition Frequency	$f_T^*$	$V_O=10V, I_O=5mA$	-	200	-	MHz
Input Current	$I_I$	$V_I=5V$	-	-	0.18	mA

\* : Characteristic of Transistor Only

Electrical Characteristic Curves

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

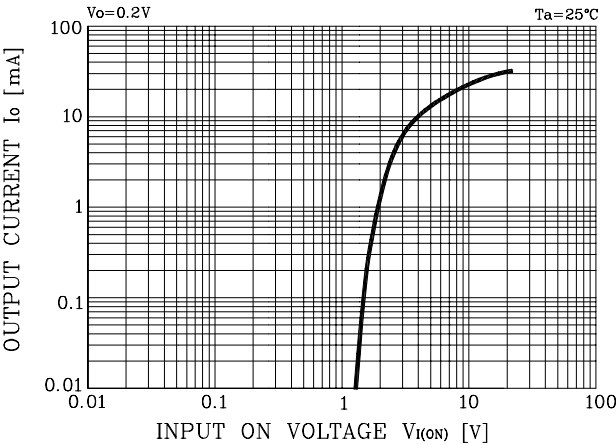


Fig. 2  $I_o - V_{I(OFF)}$

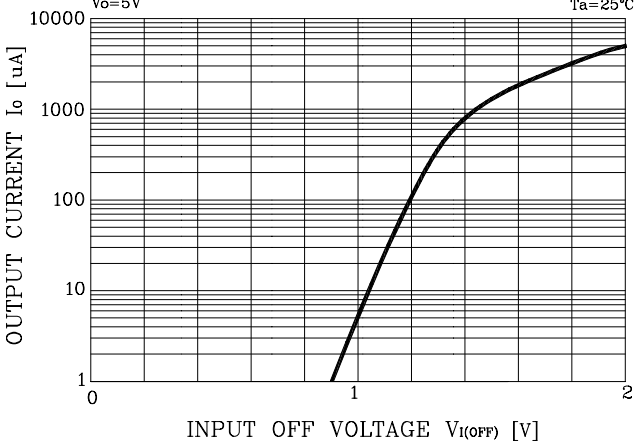


Fig. 3  $G_I - I_o$

