

**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
SRC1202EF	R2	SOT-523F

**Outline Dimensions**

unit : mm

**• Equivalent Circuit**

The equivalent circuit shows an NPN transistor with a base terminal (B(IN)) connected to a resistor R<sub>1</sub>. The emitter terminal (E(COMMON)) is connected to a resistor R<sub>2</sub>. The collector terminal (C(OUT)) is the output. The base is labeled 1, emitter 2, and collector 3.

**PIN Connections**

1. Base
2. Emitter
3. Collector

R <sub>1</sub>	R <sub>2</sub>
10KΩ	10KΩ



# SRC1202EF

## Absolute maximum ratings

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Out Voltage	$V_O$	50	V
Input Voltage	$V_I$	30	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	$G_I$	$V_O=5V, I_O=10mA$	50	80	-	-
Output Voltage	$V_{O(ON)}$	$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	V
Input Voltage (ON)	$V_{I(ON)}$	$V_O=0.2V, I_O=5mA$	-	1.8	2.4	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	$I_I$	$V_I=5V$	-	-	0.88	mA

\* : Characteristic of Transistor Only

Electrical Characteristic Curves

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

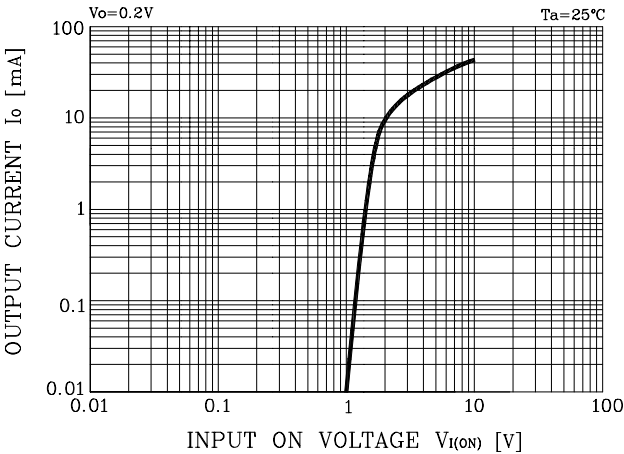


Fig. 2  $I_o - V_{I(OFF)}$

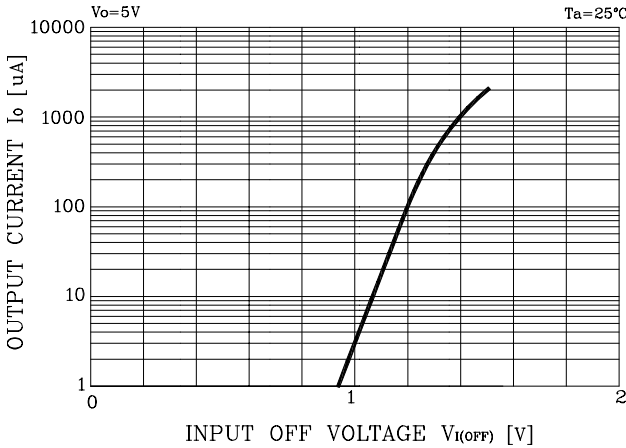


Fig. 3  $G_I - I_o$

