

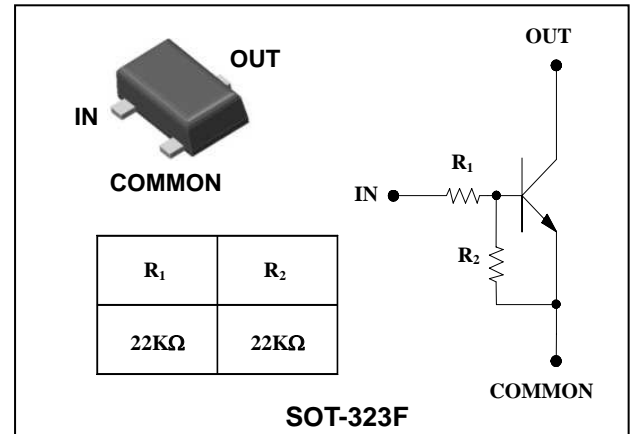
## Descriptions

- 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

## PIN Connection



## Ordering Information

Type NO.	Marking	Package Code
SRC1203UF	R3  ① ②	SOT-323F

① Device Code ② Year & Week Code

## Absolute Maximum Ratings

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Output voltage	V <sub>O</sub>	50	V
Input voltage	V <sub>I</sub>	40, -10	V
Output current	I <sub>O</sub>	100	mA
Power dissipation	P <sub>D</sub>	200	mW
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55 ~ 150	°C

## Electrical Characteristics

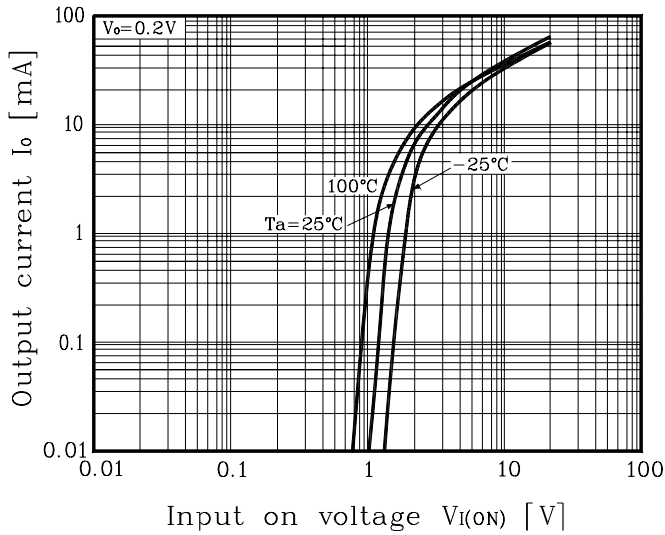
(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output cut-off current	I <sub>O(OFF)</sub>	V <sub>O</sub> = 50V, V <sub>I</sub> = 0	-	-	500	nA
DC current gain	G <sub>I</sub>	V <sub>O</sub> = 5V, I <sub>O</sub> = 10mA	70	120	-	-
Output voltage	V <sub>O(ON)</sub>	I <sub>O</sub> = 10mA, I <sub>I</sub> = 0.5mA	-	0.1	0.3	V
Input voltage (ON)	V <sub>I(ON)</sub>	V <sub>O</sub> = 0.2V, I <sub>O</sub> = 5mA	-	2.1	3.0	V
Input voltage (OFF)	V <sub>I(OFF)</sub>	V <sub>O</sub> = 5V, I <sub>O</sub> = 0.1mA	1.0	1.2	-	V
Transition frequency	f <sub>T</sub> *	V <sub>O</sub> = 10V, I <sub>O</sub> = 5mA, f= 1MHz	-	200	-	MHz
Input current	I <sub>I</sub>	V <sub>I</sub> = 5V, I <sub>O</sub> = 0	-	-	0.36	mA
Input resistor (Input to base)	R <sub>1</sub>	-	15.4	22	28.6	KΩ
Input resistor (Base to common)	R <sub>2</sub>	-	15.4	22	28.6	KΩ

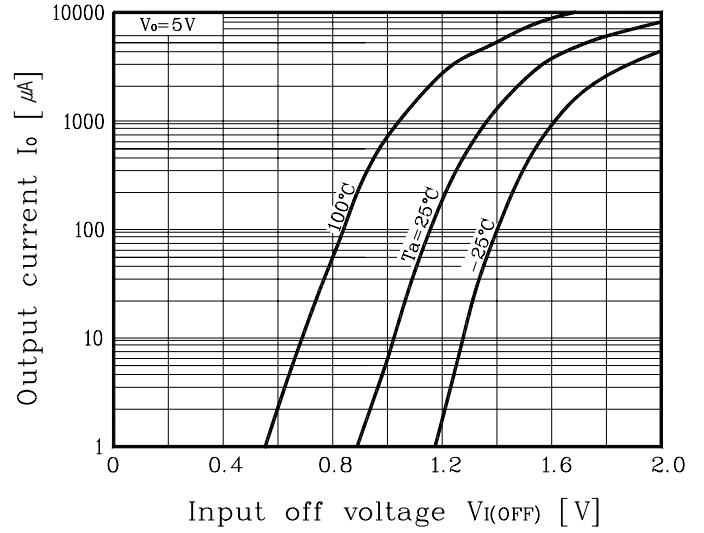
\* : Characteristic of transistor only

## Electrical Characteristic Curves

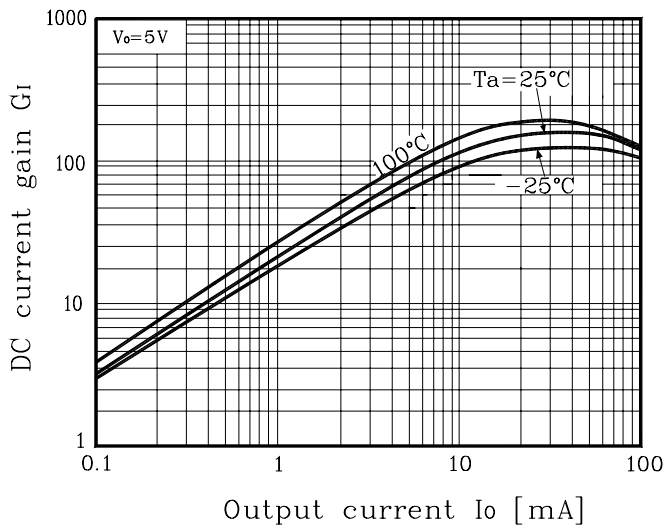
**Fig. 1  $I_O - V_{I(ON)}$**



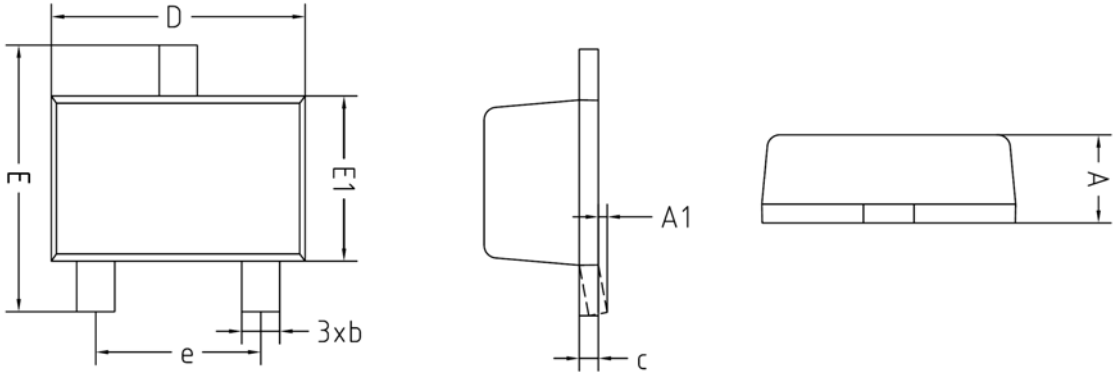
**Fig. 2  $I_O - V_{I(OFF)}$**



**Fig. 3  $G_I - I_O$**

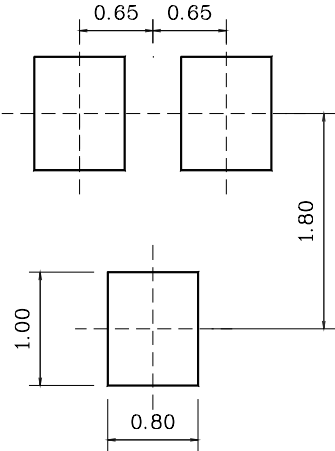


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.60	-	0.80	
A1	0.00	-	0.10	
b	0.30	-	0.40	
c	0.08	-	0.16	
D	1.90	2.00	2.10	
E	1.95	2.10	2.25	
E1	1.20	1.30	1.40	
e	1.30BSC			

※Recommend PCB solder land [Unit: mm]



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