



SRC1204EF

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
SRC1204EF	R4	SOT-523F

Outline Dimensions

unit : mm

Top View Dimensions:

- Total width: 1.60 ± 0.1
- Distance between pins 1 and 2: 1.00 ± 0.1
- Distance between pins 2 and 3: 0.88 ± 0.1
- Pin 1 width: 0.68
- Pin 2 width: $0 - 0.1$
- Pin 3 width: 0.11 ± 0.05

Side View Dimensions:

- Height: 1.60 ± 0.1
- Base thickness: $0.25 - 0.30$
- Emitter thickness: $0.25 - 0.30$

• Equivalent Circuit

PIN Connections

1. Base
2. Emitter
3. Collector

R ₁	R ₂
47KΩ	47KΩ



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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 $I_o - V_{I(ON)}$

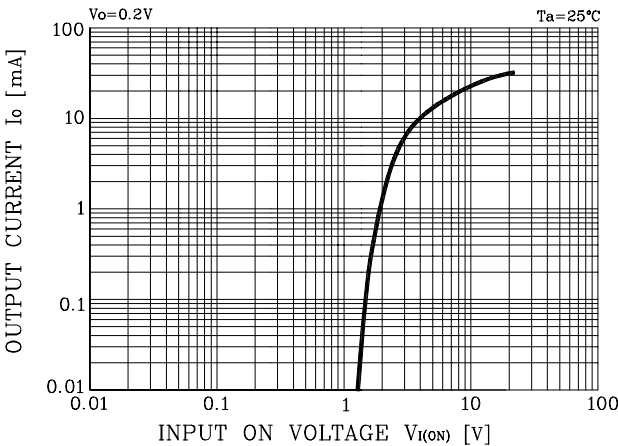


Fig. 2 $I_o - V_{I(OFF)}$

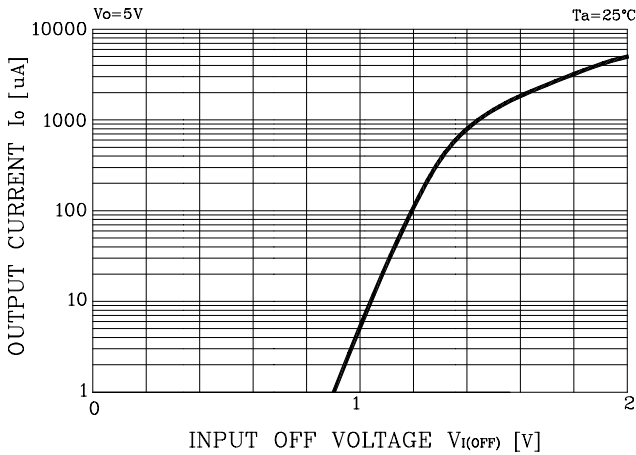


Fig. 3 $G_I - I_o$

