

## Description

- Digital transistor

## Features

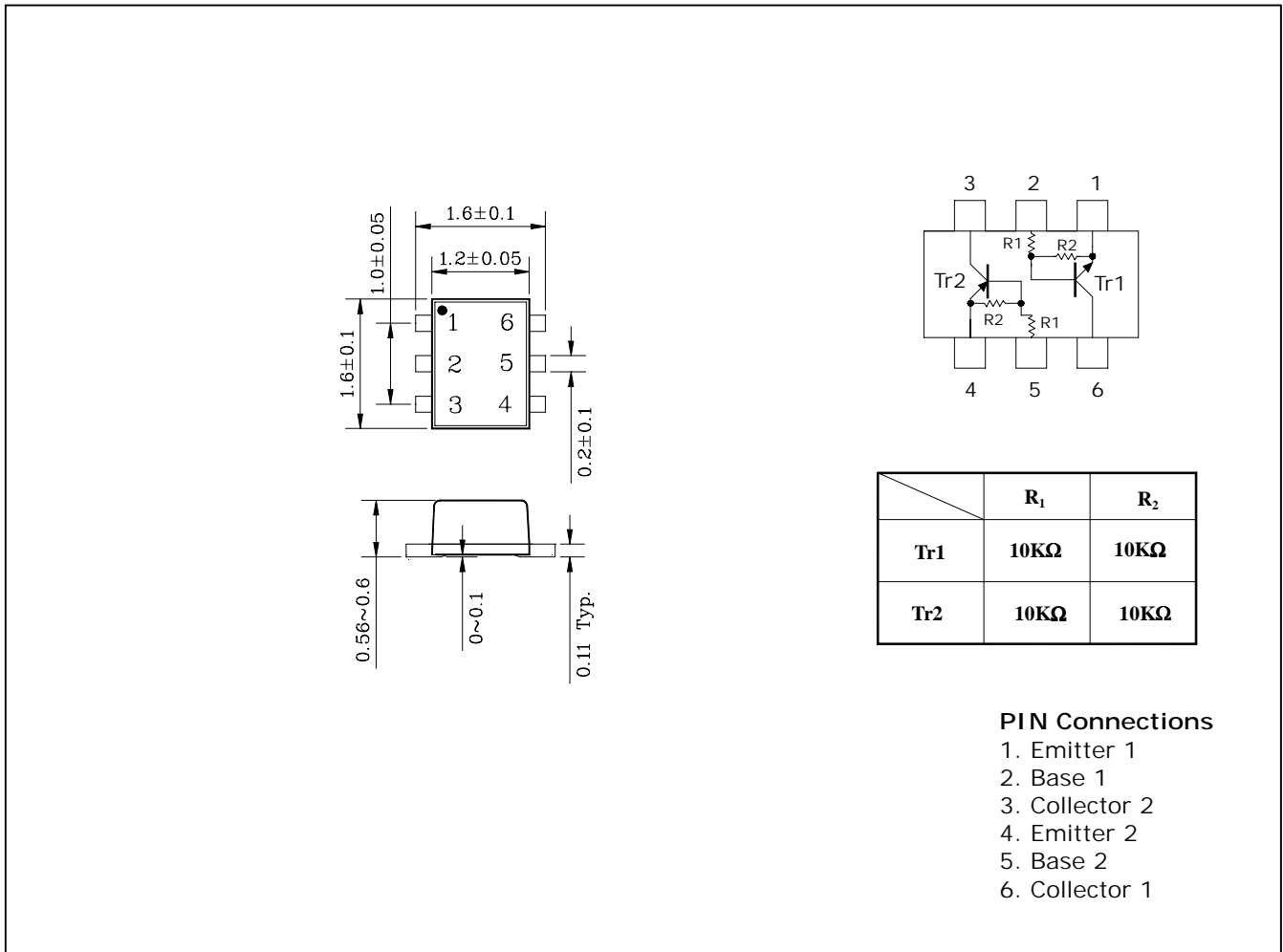
- Both SRC1202 chip and SRA2202 chip in SOT-563F package
- With built-in bias resistors

## Ordering Information

Type NO.	Marking	Package Code
SUR511EF	BX	SOT-563F

## Outline Dimensions

unit : mm



## Absolute maximum ratings (Tr1, Tr2)

Ta=25°C

Characteristic	Symbol	Ratings		Unit
		Tr1	Tr2	
Out Voltage	$V_O$	50	-50	V
Input Voltage	$V_I$	30	-30	V
Out Current	$I_O$	100	-100	mA
Power Dissipation	$P_D$	100		mW
Junction Temperature	$T_J$	150		°C
Storage Temperature	$T_{STG}$	-55 ~ 150		°C

## Electrical Characteristics(Tr1 : NPN)

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 Characteristics(Tr2 : PNP)

Ta=25°C

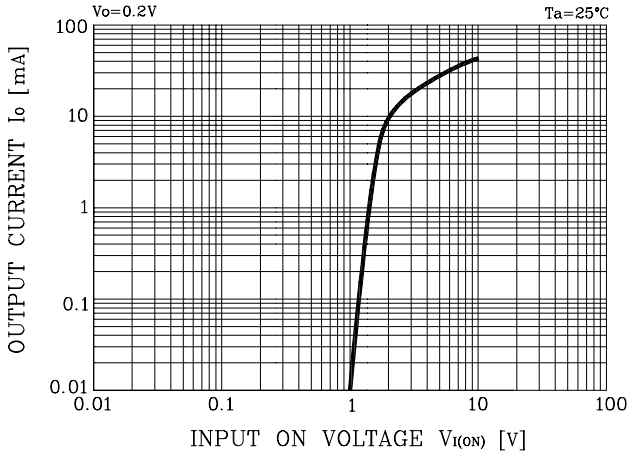
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Cut-off Current	$I_{O(OFF)}$	$V_O=-50V, V_I=0$	-	-	-500	nA
DC Current Gain	$G_I$	$V_O=-5V, I_O=-10mA$	50	80	-	-
Output Voltage	$V_{O(ON)}$	$I_O=-10mA, I_I=-0.5mA$	-	-0.1	-0.3	V
Input Voltage (ON)	$V_{I(ON)}$	$V_O=-0.2V, I_O=-5mA$	-	-1.8	-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

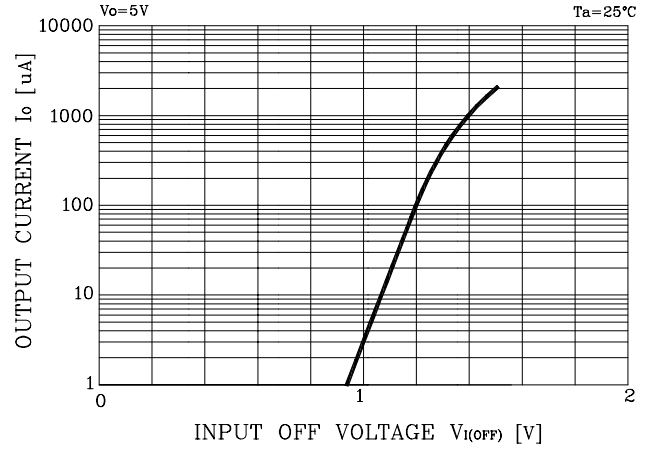
**Electrical Characteristic Curves**

**Tr1 : NPN**

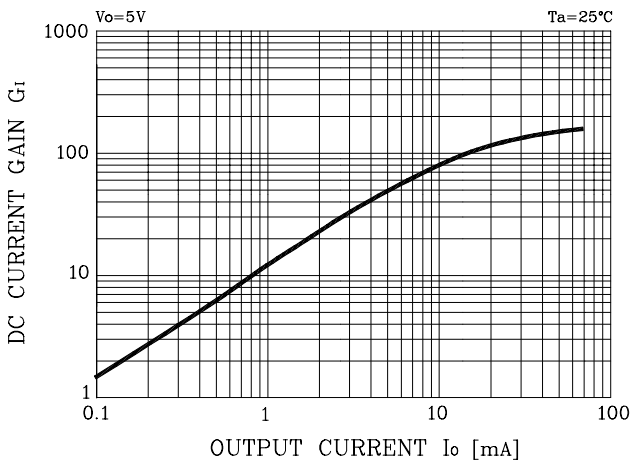
**Fig. 1  $I_o - V_{I(ON)}$**



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

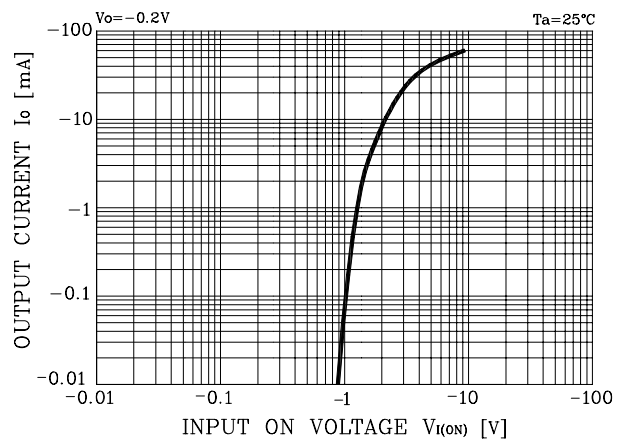


**Fig. 3  $G_I - I_o$**

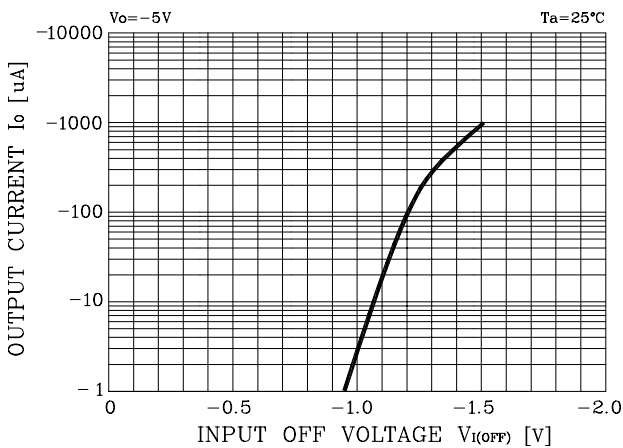


**Tr2 : PNP**

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



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



**Fig. 3  $G_I - I_o$**

