

**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
SRA2202U	2R	SOT-323

**Outline Dimensions**

unit : mm

The technical drawing shows the physical dimensions of the SRA2202U transistor in millimeters. The top view shows a rectangular package with a total width of  $2.1 \pm 0.1$  mm and a distance between the base and emitter pins of  $1.25 \pm 0.05$  mm. The height of the package is  $2.0 \pm 0.2$  mm. The distance from the top edge to the base pin is  $1.30 \pm 0.1$  mm. The distance from the top edge to the emitter pin is  $0.30 \pm 0.1$  mm. The distance from the top edge to the collector pin is  $0.15 \pm 0.05$  mm. The side view shows a maximum height of  $0.90 \pm 0.1$  mm, a base thickness of  $0 \sim 0.1$  mm, and a minimum lead length of  $0.1$  Min. mm.

**Equivalent Circuit**

The equivalent circuit diagram shows a PNP transistor with an input terminal B(IN) connected to the base through a resistor  $R_1$ . The emitter is connected to a common terminal E(COMMON). The collector is connected to an output terminal C(OUT) through a resistor  $R_2$ .

**PIN Connections**

1. Base
2. Emitter
3. Collector

$R_1$	$R_2$
10K $\Omega$	10K $\Omega$

**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	$P_D$	200	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  $I_o - V_{I(ON)}$

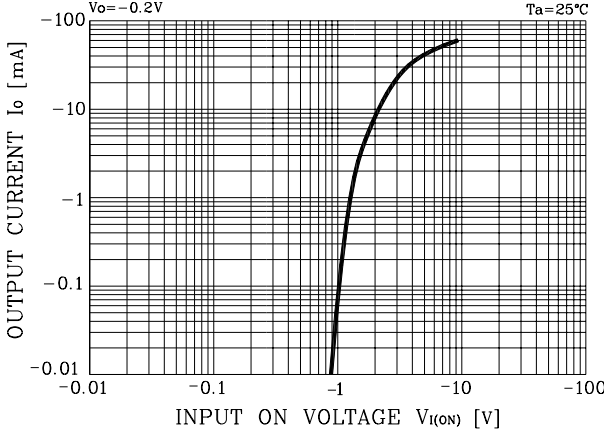


Fig. 2  $I_o - V_{I(OFF)}$

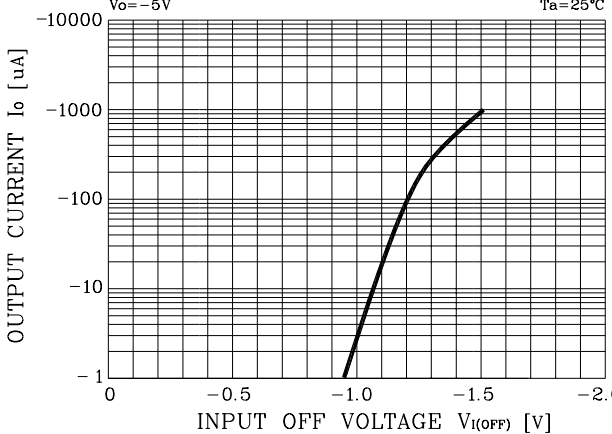


Fig. 3  $G_I - I_o$

