

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 mechanical drawing shows the top and side views of the SOT-323 package. Dimensions include: total width 2.1±0.1 mm, base width 1.25±0.05 mm, total height 2.0±0.2 mm, base height 1.30±0.1 mm, emitter height 0.30±0.1 mm, collector height 0.15±0.05 mm, and a minimum lead length of 0.1 mm. Pin 1 is the base, pin 2 is the emitter, and pin 3 is the collector.

Equivalent Circuit

The equivalent circuit shows a PNP transistor with an input terminal B(IN) connected to the base through resistor R1, and the emitter connected to a common terminal E(COMMON) through resistor R2. The collector terminal is labeled C(OUT).

PIN Connections

1. Base
2. Emitter
3. Collector

R ₁	R ₂
10KΩ	10KΩ

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 $I_o - V_{I(ON)}$

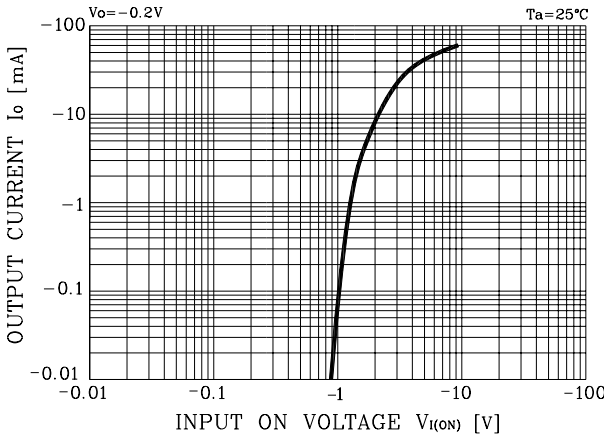


Fig. 2 $I_o - V_{I(OFF)}$

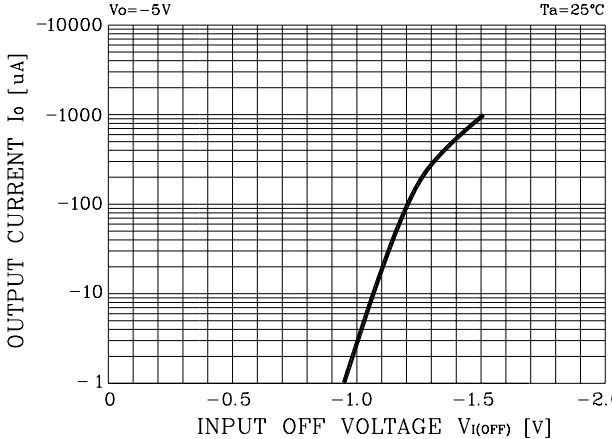


Fig. 3 $G_I - I_o$

