

Descriptions

- Switching application
- Interface circuit and driver circuit application

Features

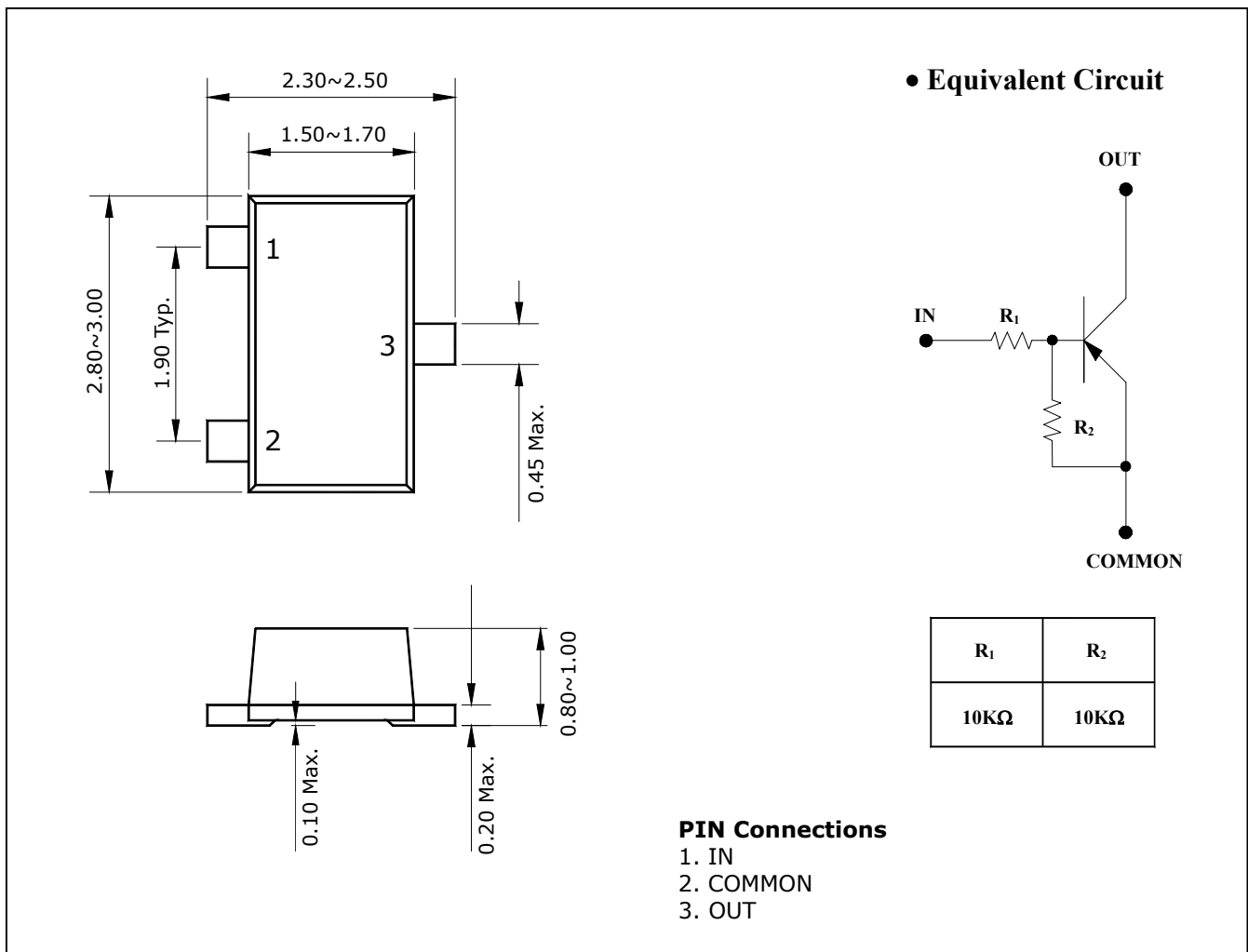
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- High packing density

Ordering Information

Type NO.	Marking	Package Code
SRA2202SF	RA2	SOT-23F

Outline Dimensions

unit : mm



The image shows the mechanical dimensions and electrical equivalent circuit for the SRA2202SF PNP Silicon Transistor. The mechanical drawing includes a top view and a side view. The top view shows a rectangular package with dimensions: total width 2.30~2.50 mm, inner width 1.50~1.70 mm, total height 2.80~3.00 mm, and a typical height of 1.90 mm. Pin 1 is on the left, pin 2 is on the bottom, and pin 3 is on the right. The maximum thickness of the package is 0.45 mm. The side view shows a maximum base thickness of 0.10 mm, a maximum lead height of 0.20 mm, and a maximum total height of 0.80~1.00 mm.

The equivalent circuit diagram shows a PNP transistor with an input terminal (IN) connected to the base through a resistor R₁. The emitter is connected to a common terminal (COMMON) through a resistor R₂. The collector is connected to an output terminal (OUT).

R ₁	R ₂
10KΩ	10KΩ

PIN Connections
 1. IN
 2. COMMON
 3. OUT

Absolute Maximum Ratings

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Output voltage	V_O	-50	V
Input voltage	V_I	-30, 10	V
Output current	I_O	-100	mA
Power dissipation	P_D	200	mW
Junction temperature	T_J	150	°C
Storage temperature range	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^*	$V_O=-10V, I_O=-5mA, f=1MHz$	-	200	-	MHz
Input current	I_I	$V_I=-5V, I_O=0$	-	-	-0.88	mA
Input resistor (Input to base)	R_1	-	7	10	13	K Ω
Input resistor (Base to common)	R_2	-	7	10	13	K Ω

* : Characteristic of transistor only

Electrical Characteristic Curves

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

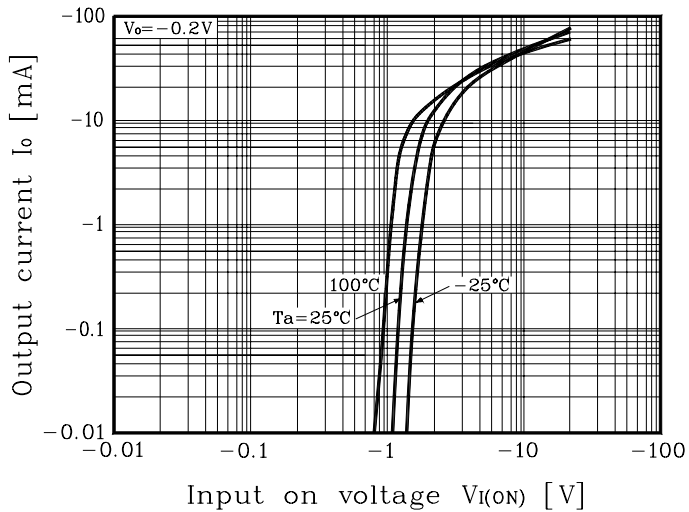


Fig. 2 $I_o - V_{I(OFF)}$

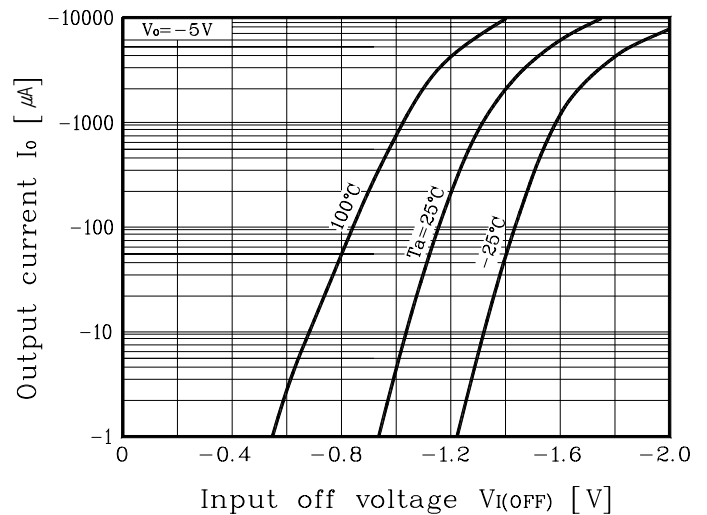
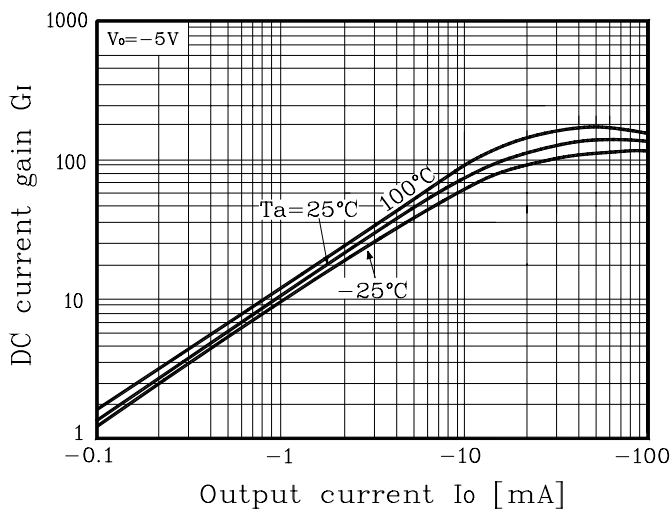


Fig. 3 $G_I - I_o$



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