

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
SRA2206S	RA6	SOT-23

Outline Dimensions

unit : mm

The mechanical drawing shows the SOT-23 package with dimensions: overall width 2.20~2.60 mm, pin spacing 1.20~1.40 mm, height 2.80~3.00 mm, and pin height 1.90 Typ. The pin 1 height is 0.43 Max. The bottom view shows a base width of 0.90~1.02 mm, a central pad width of 0.10 Max., a base thickness of 0.20 Min., and a lead height of 0.19 Max.

• Equivalent Circuit

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

R ₁	R ₂
4.7KΩ	47KΩ

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	-20, 5	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	$V_O=-5V, I_O=-10mA$	80	200	-	-
Output voltage	$V_{O(ON)}$	$I_O=-10mA, I_I=-0.5mA$	-	-0.1	-0.3	V
Input voltage (ON)	$V_{I(ON)}$	$V_O=-0.2V, I_O=-5mA$	-	-0.9	-1.3	V
Input voltage (OFF)	$V_{I(OFF)}$	$V_O=-5V, I_O=-0.1mA$	-0.5	-0.65	-	V
Transition frequency	f_T^*	$V_O=-10V, I_O=-5mA, f=1MHz$	-	200	-	MHz
Input current	I_I	$V_I=-5V, I_O=0$	-	-	-1.8	mA
Input resistor (Input to base)	R_1	-	3.3	4.7	6.1	K Ω
Input resistor (Base to common)	R_2	-	33	47	61	K Ω

* : Characteristic of transistor only

Electrical Characteristic Curves

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

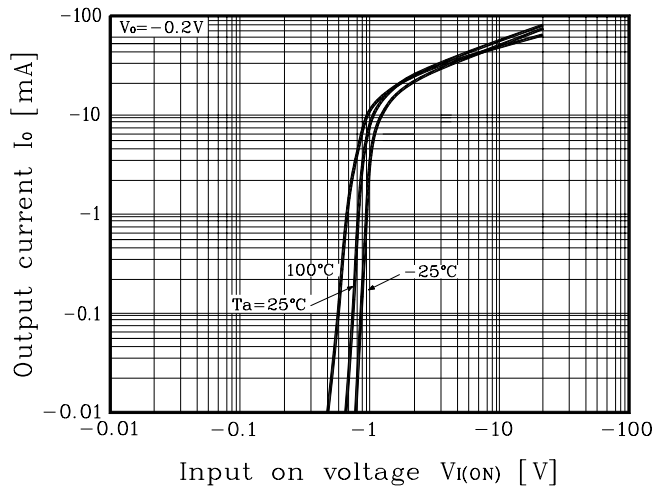


Fig. 2 $I_O - V_{I(OFF)}$

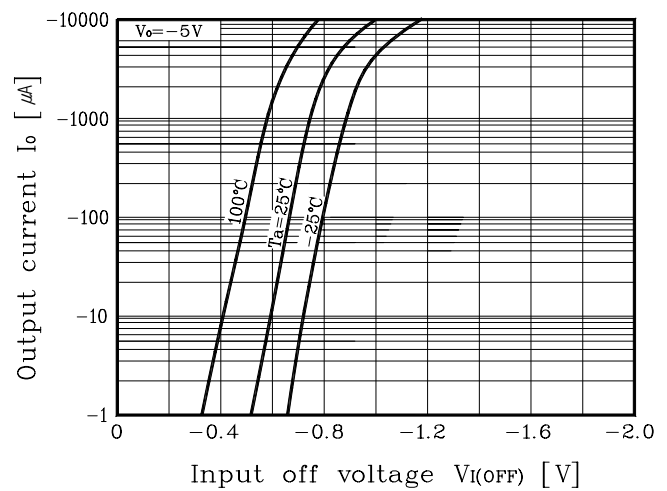
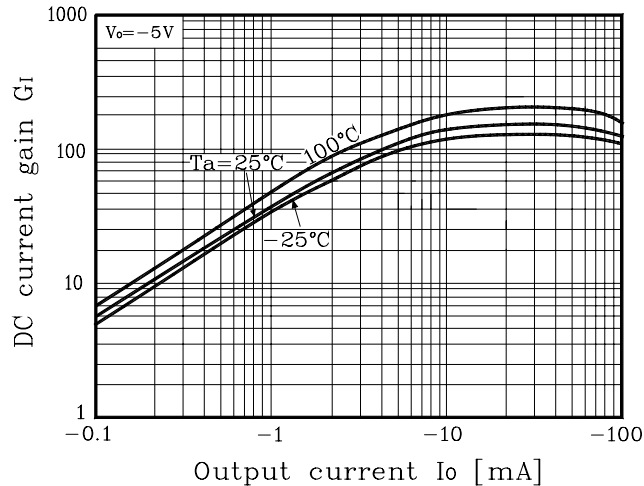


Fig. 3 $G_I - I_O$



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