AUK Semiconductor

SRC1205N

NPN Silicon Transistor

Descriptions

- Switching application
- Interface circuit and driver circuit application

Features

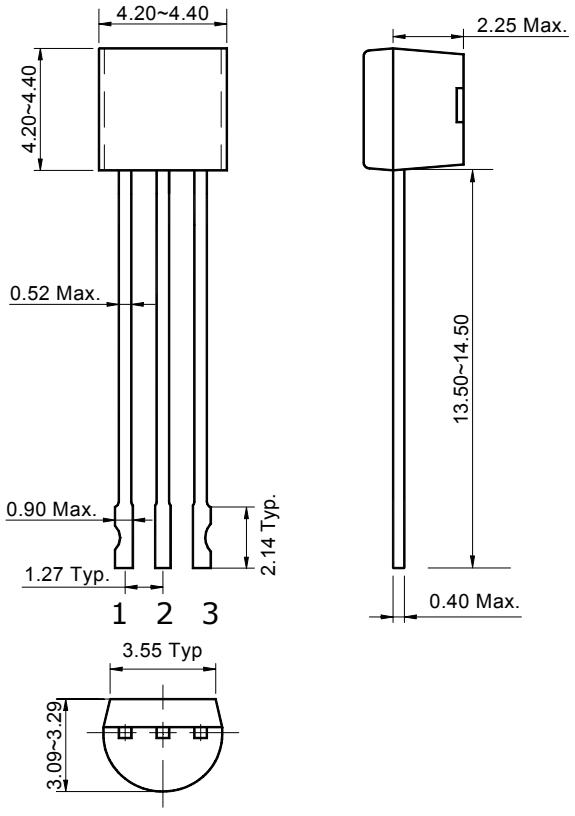
- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- Complementary pair with SRA2205N

Ordering Information

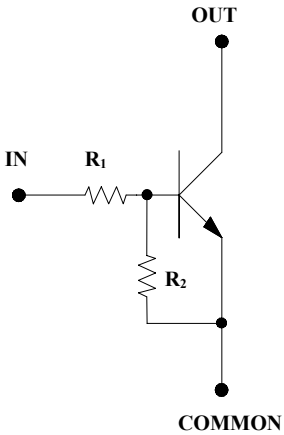
Type NO.	Marking	Package Code
SRC1205N	SRC1205	TO-92N

Outline Dimensions

unit : mm



• Equivalent Circuit



R_1	R_2
2.2KΩ	47KΩ

PIN Connections
1. COMMON
2. OUT
3. IN

Absolute Maximum Ratings (Ta=25°C)

Characteristic	Symbol	Rating	Unit
Output voltage	V_O	50	V
Input voltage	V_I	15,-5	V
Output current	I_O	100	mA
Power dissipation	P_D	400	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	-	-	1.1	V
Input voltage (OFF)	$V_{I(OFF)}$	V_O=5V, I_O=0.1mA	0.5	-	-	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	-	-	3.6	mA
Input resistor (Input to base)	R_1	-	1.54	2.2	2.86	KΩ
Input resistor (Base to common)	R_2	-	33	47	61	KΩ

* : Characteristic of transistor only

Electrical Characteristic Curves

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

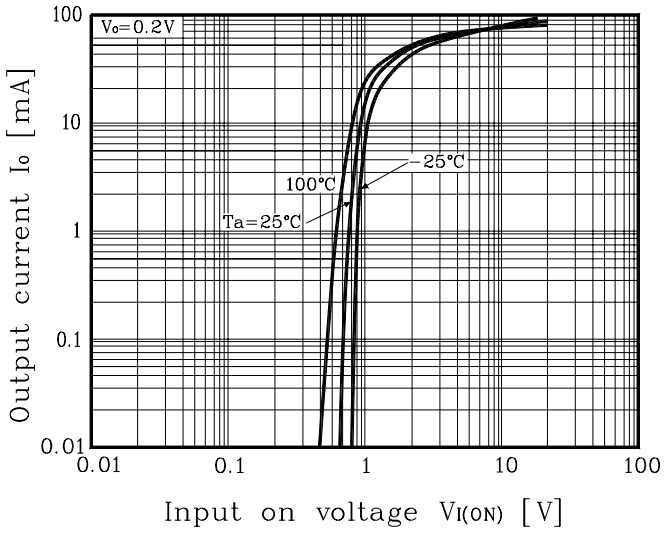


Fig. 2 I_O - $V_{I(OFF)}$

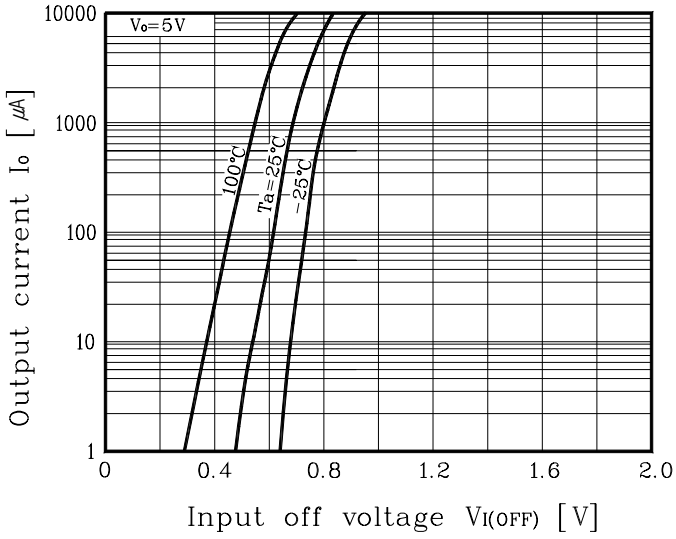
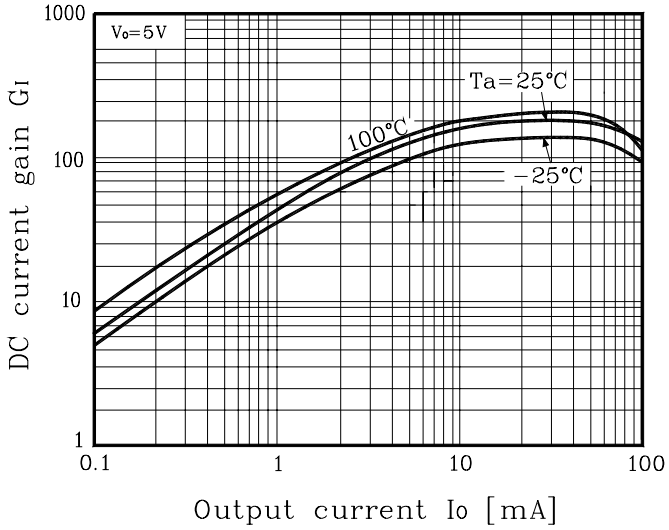


Fig. 3 G_I - I_O



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