

## Descriptions

- Dual chip digital transistor

## Features

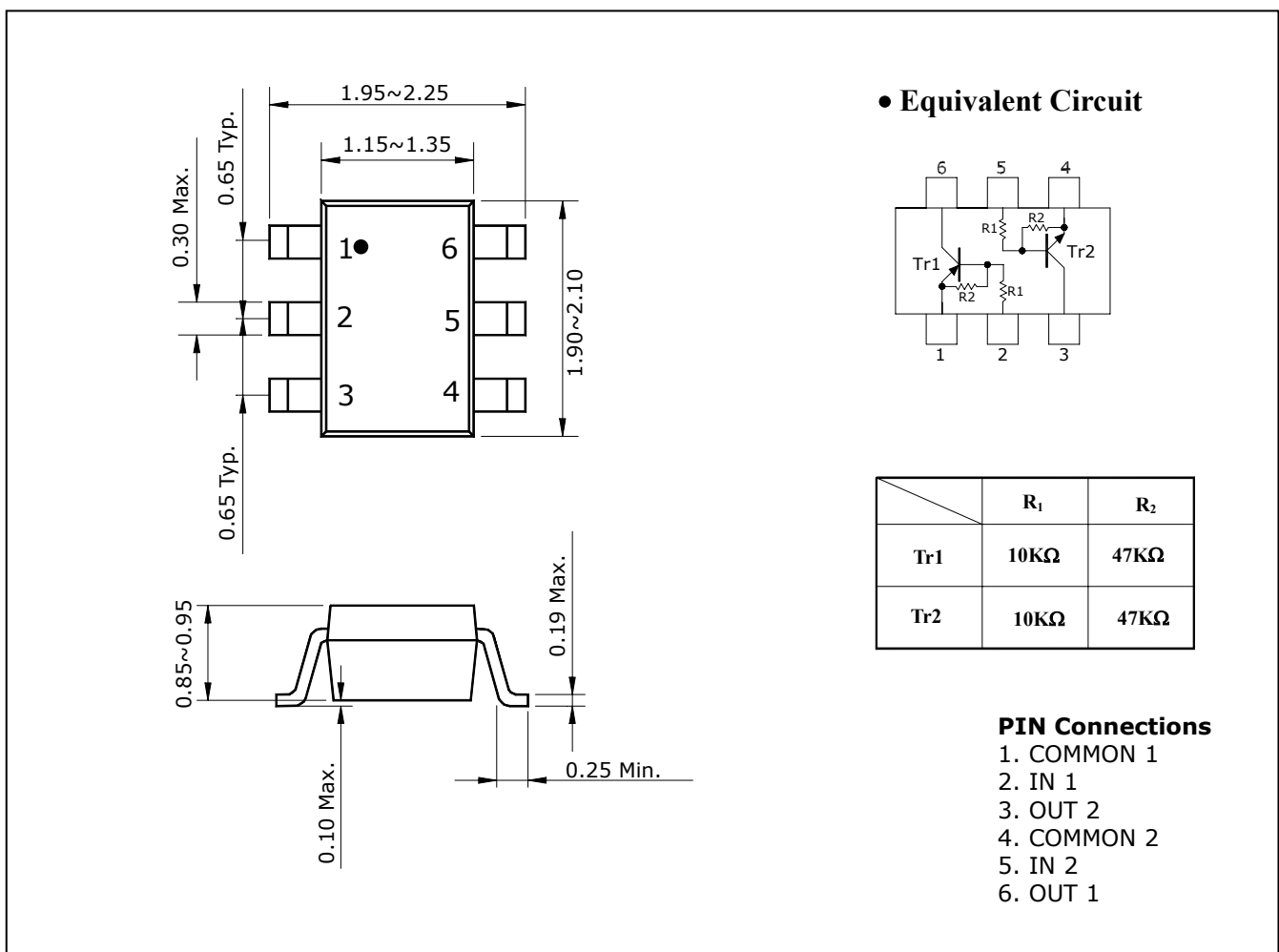
- Both SRA2207 and SRC1207 Chips in SOT-363 package
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

## Ordering Information

Type NO.	Marking	Package Code
SUR501J	GX	SOT-363

## Outline Dimensions

unit : mm



## Absolute Maximum Ratings [Tr1, Tr2]

(Ta=25°C)

Characteristic	Symbol	Rating		Unit
		Tr1	Tr2	
Output voltage	$V_O$	-50	50	V
Input voltage	$V_I$	-30,6	30,-6	V
Output current	$I_O$	-100	100	mA
Power dissipation	$P_D^{**}$	200		mW
Junction temperature	$T_J$	150		°C
Storage temperature range	$T_{stg}$	-55 ~ 150		°C

※: Total rating

## Electrical Characteristics [Tr1]

(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	150	-	-
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	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	$I_I$	$V_I = -5V, I_O = 0$	-	-	-0.88	mA
Input resistor (Input to base)	$R_1$	-	7	10	13	KΩ
Input resistor (Base to common)	$R_2$	-	33	47	61	KΩ

\* : Characteristic of transistor only

## Electrical Characteristics [Tr2]

(Ta=25°C)

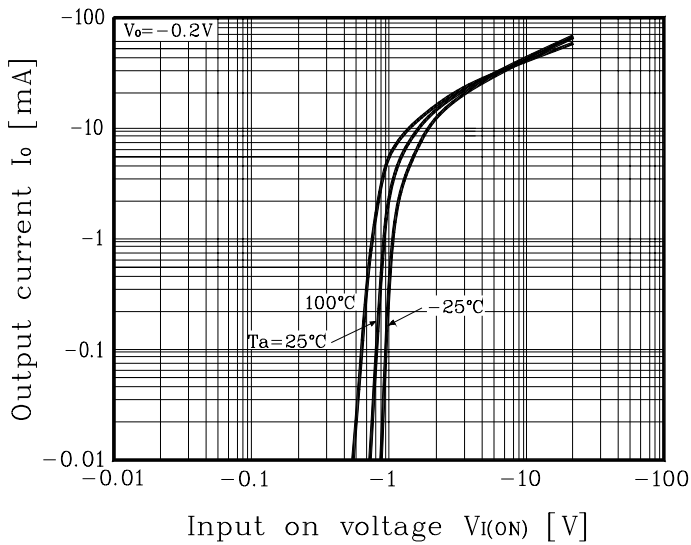
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output cut-off current	$I_{O(OFF)}$	$V_O = 50V, V_I = 0$	-	-	500	nA
DC current gain	$G_I$	$V_O = 5V, I_O = 10mA$	80	150	-	-
Output voltage	$V_{O(ON)}$	$I_O = 10mA, I_I = 0.5mA$	-	0.1	0.3	V
Input voltage (ON)	$V_{I(ON)}$	$V_O = 0.2V, I_O = 5mA$	-	-	1.8	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	$I_I$	$V_I = 5V, I_O = 0$	-	-	0.88	mA
Input resistor (Input to base)	$R_1$	-	7	10	13	KΩ
Input resistor (Base to common)	$R_2$	-	33	47	61	KΩ

\* : Characteristic of transistor only

Electrical Characteristic Curves

[Tr1]

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



[Tr2]

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

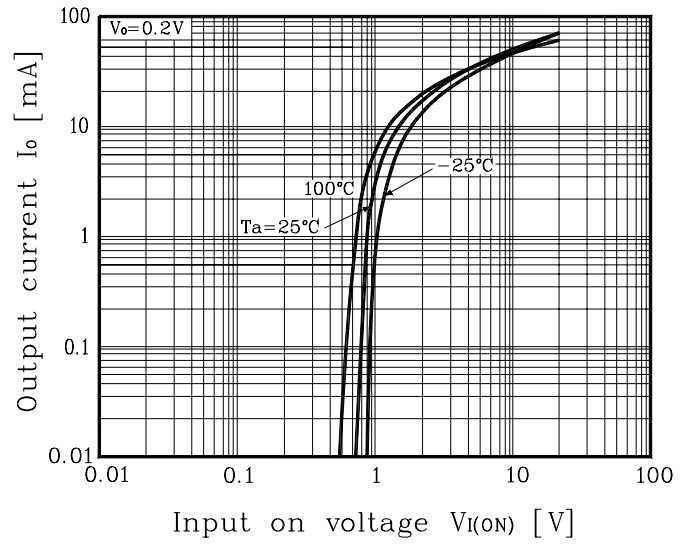


Fig. 2  $I_O - V_{I(OFF)}$

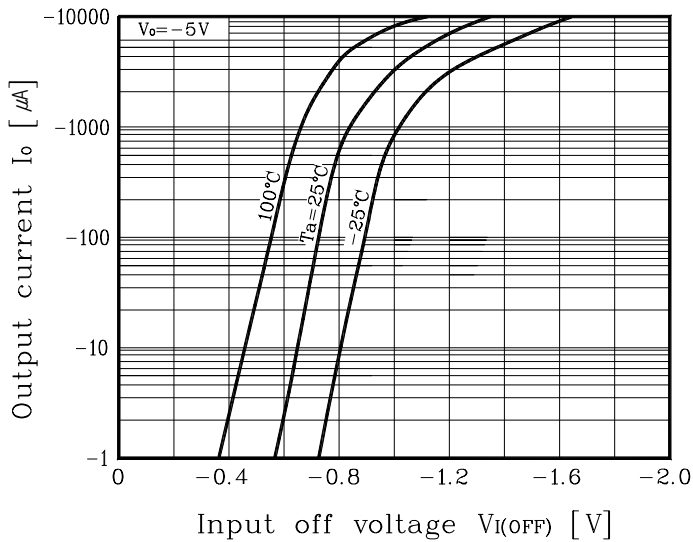


Fig. 2  $I_O - V_{I(OFF)}$

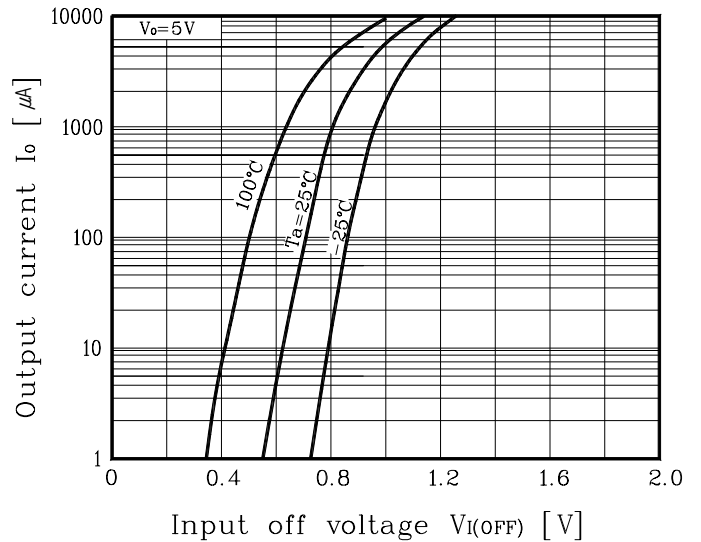


Fig. 3  $G_I - I_O$

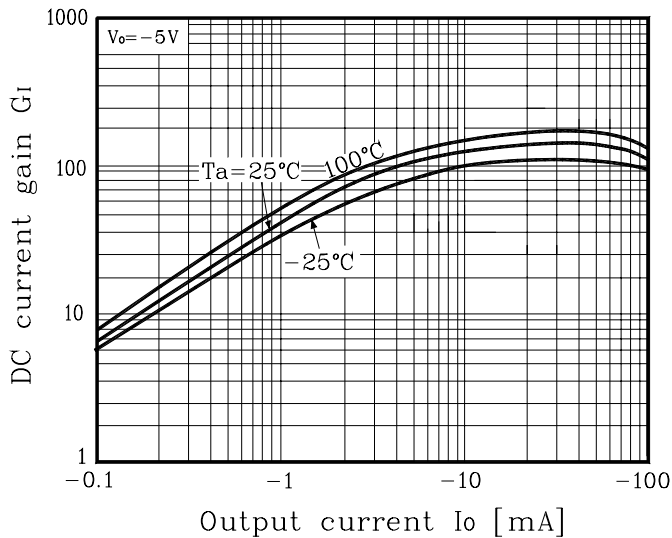
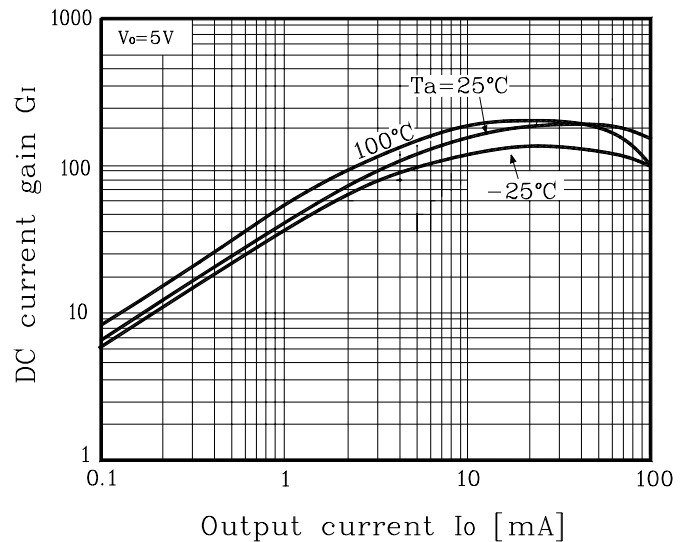


Fig. 3  $G_I - I_O$



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