

## Description

- Dual chip digital transistor



## Features

- Both SRC1204 chip and SRA2219 chip in SOT-353 package
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- “Green” device and RoHS compliant device
- Available in full lead (Pb)-free device



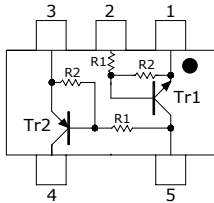
## Ordering Information

Type NO.	Marking	Package Code
SUR482H	X5□	SOT-353

□ : Year & Week Code

## Equivalent circuit & PIN Connections

### • Equivalent Circuit



	R <sub>1</sub>	R <sub>2</sub>
Tr1	47KΩ	47KΩ
Tr2	4.7KΩ	10KΩ

### PIN Connections

1. COMMON 1
2. IN 1
3. COMMON 2
4. OUT 2
5. OUT 1, IN 2

## Absolute Maximum Ratings [Tr1,Tr2]

(Ta=25°C)

Characteristic	Symbol	Rating		Unit
		Tr1	Tr2	
Output voltage	V <sub>O</sub>	50	-50	V
Input voltage	V <sub>I</sub>	40,-10	-20,-7	V
Output current	I <sub>O</sub>	100	-100	mA
Power dissipation	P <sub>D</sub> <sup>*</sup>	200		mW
Junction temperature	T <sub>J</sub>	150		°C
Storage temperature range	T <sub>stg</sub>	-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	200	-	-
Output voltage	$V_{O(ON)}$	$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	V
Input voltage (ON)	$V_{I(ON)}$	$V_O=0.2V, I_O=5mA$	-	2.8	5.0	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	$I_I$	$V_I=5V, I_O=0$	-	-	0.18	mA
Input resistor (Input to base)	$R_1$	-	33	47	61	K $\Omega$
Input resistor (Base to common)	$R_2$	-	33	47	61	K $\Omega$

\* : Characteristic of transistor only

## Electrical Characteristics [Tr2]

(Ta=25°C)

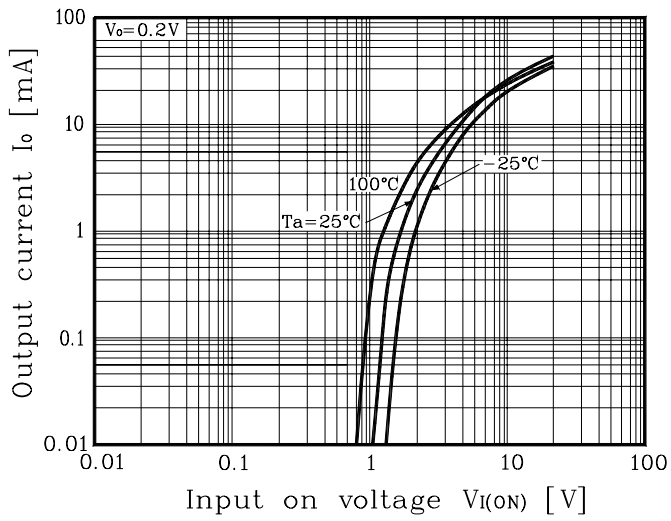
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output cut-off current	$I_{O(OFF)}$	$V_O=-50V, V_I=0$	-	-	-500	nA
DC current gain	$G_I$	$V_O=-5V, I_O=-10mA$	30	-	-	-
Output voltage	$V_{O(ON)}$	$I_O=-10mA, I_I=-0.5mA$	-	-0.1	-0.3	V
Input voltage (ON)	$V_{I(ON)}$	$V_O=-0.2V, I_O=-5mA$	-	-1.2	-1.6	V
Input voltage (OFF)	$V_{I(OFF)}$	$V_O=-5V, I_O=-0.1mA$	-0.5	-0.82	-	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 $\Omega$
Input resistor (Base to common)	$R_2$	-	7	10	13	K $\Omega$

\* : Characteristic of transistor only

Electrical Characteristic Curves

[Tr1]

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



[Tr2]

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

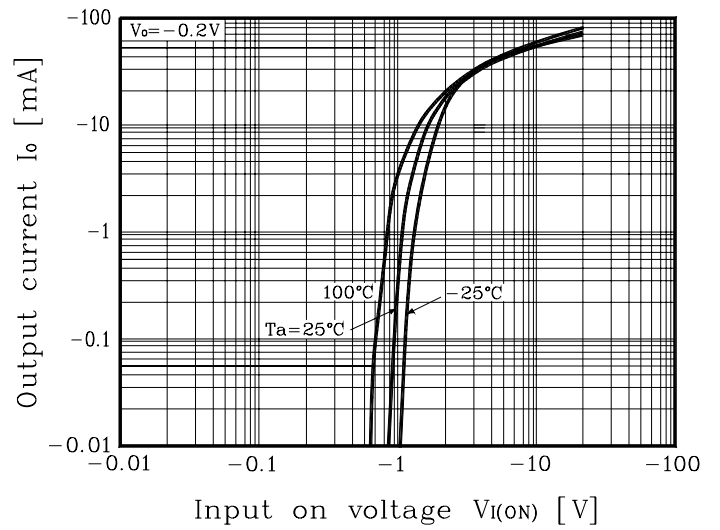


Fig. 2  $I_O - V_{I(OFF)}$

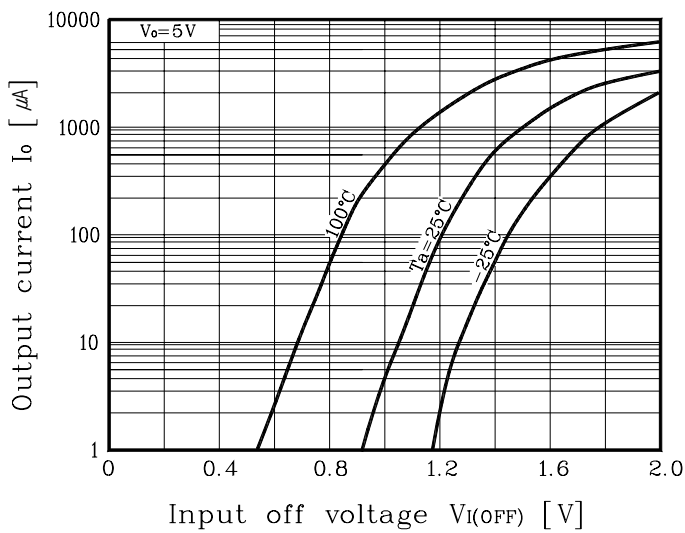


Fig. 2  $I_O - V_{I(OFF)}$

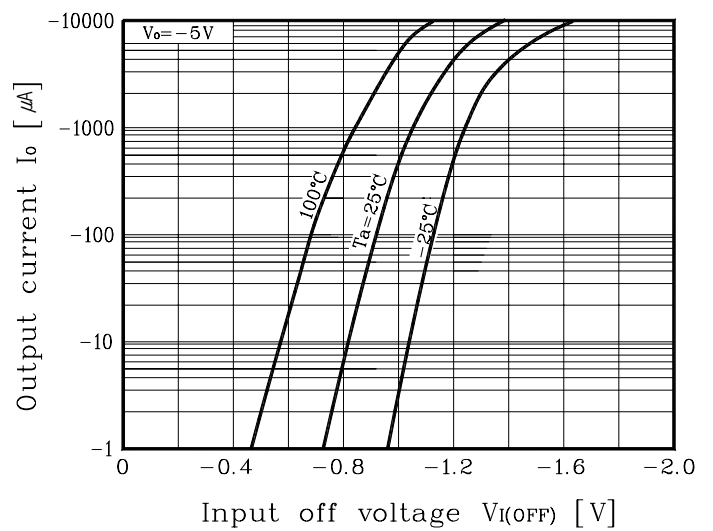


Fig. 3  $G_I - I_O$

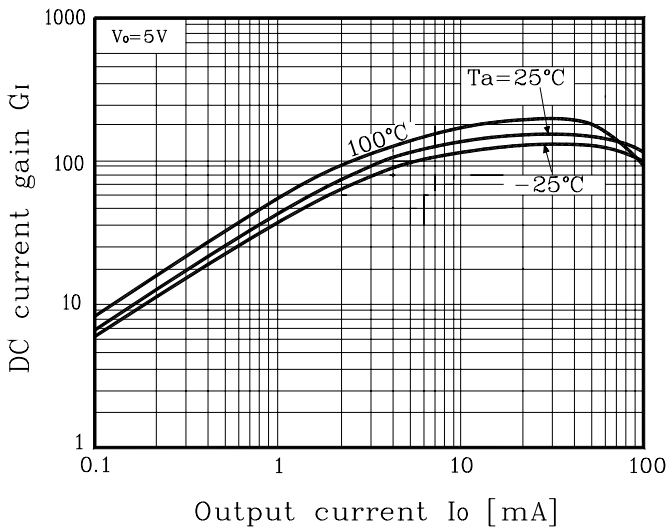
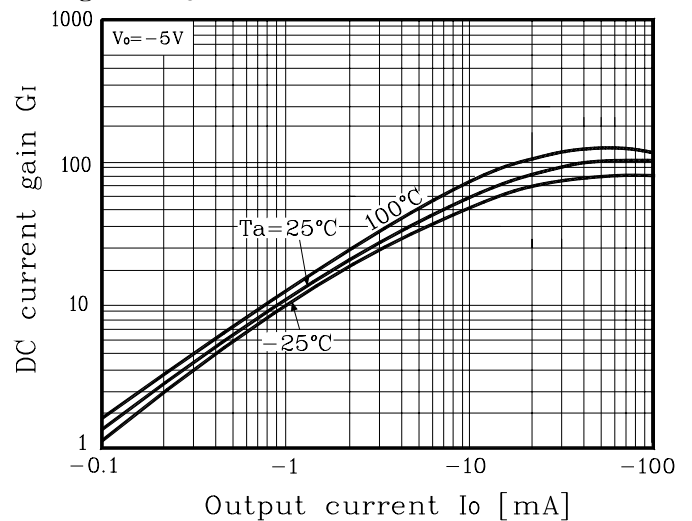
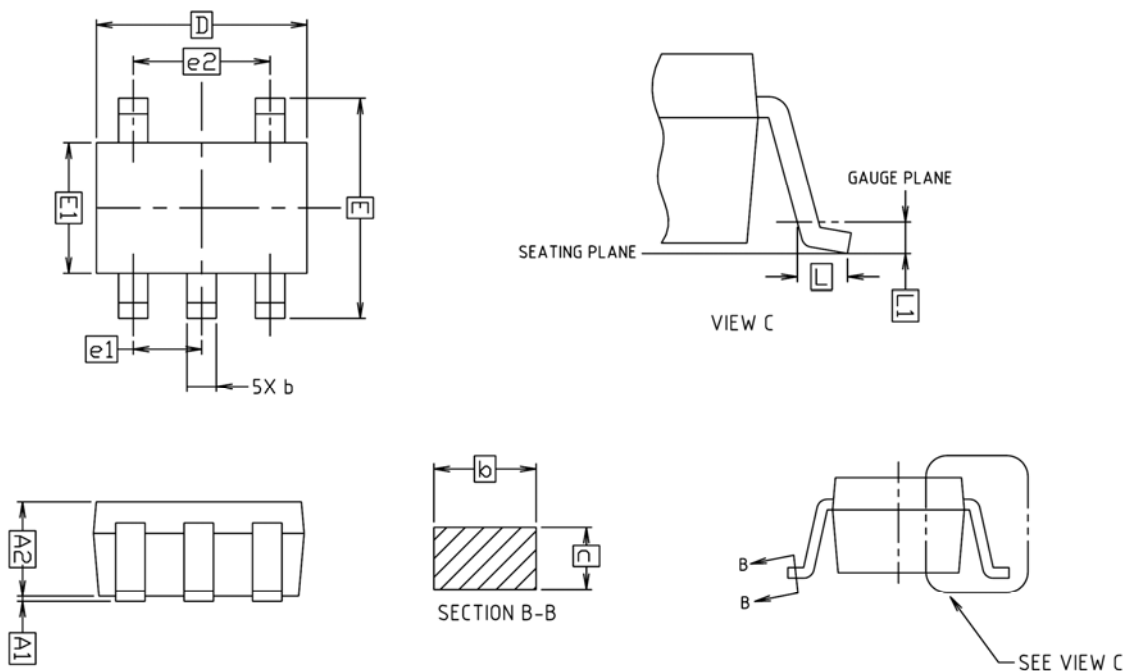


Fig. 3  $G_I - I_O$

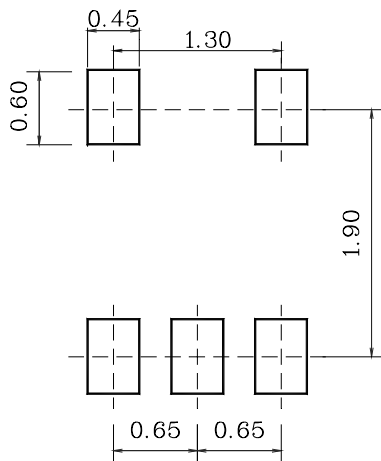


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	-	0.10	
A2	0.90	0.95	1.00	
b	0.25	-	0.40	
c	0.10	-	0.25	
D	1.90	2.00	2.10	
E	1.95	2.10	2.25	
E1	1.15	1.25	1.35	
e1		0.65 BSC		
e2		1.30 BSC		
L	0.25	-	-	
L1		0.15 BSC		

※ Recommend PCB solder land [Unit: mm]



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