# SUR553J

### Epitaxial planar NPN silicon transistor

## **Description**

• Dual chip digital transistor

#### **Features**

- Two SRC1210 chips in SOT-363 package
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

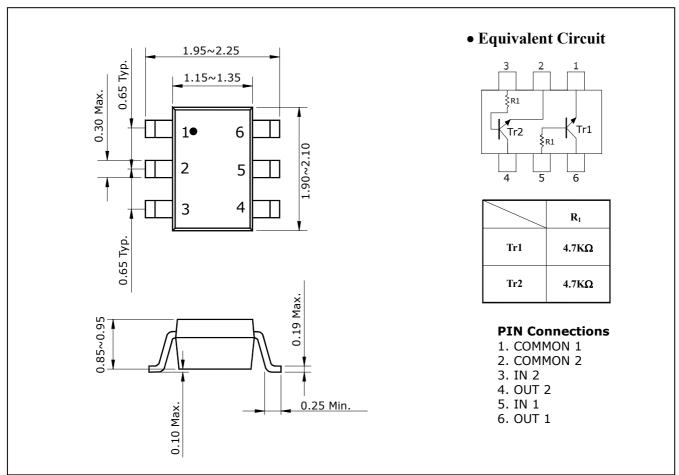
## **Ordering Information**

Type NO.	Marking	Package Code
SUR553J	53J	SOT-363

## **Outline Dimensions**



1



Absolute Maximum Ratings [Tr1,Tr2]

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Output voltage	Vo	50	V
Input voltage	$V_{\rm I}$	20, -5	V
Output current	$I_{O}$	100	mA
Power dissipation	P <sub>D</sub> **	200	mW
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	$T_{stg}$	-55 ~ 150	°C

<sup>\*:</sup> Total rating

# **Electrical Characteristics** [Tr1,Tr2]

(Ta=25°C)

2

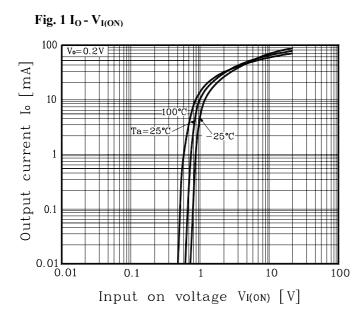
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output cut-off current	I <sub>O(OFF)</sub>	$V_0 = 50V, V_I = 0$	-	-	500	nA
DC current gain	$G_{\mathrm{I}}$	V <sub>O</sub> =5V, I <sub>O</sub> =10mA	120	-	-	-
Output voltage	V <sub>O(ON)</sub>	$I_O=10$ mA, $I_I=0.5$ mA	-	0.1	0.3	V
Input voltage (ON)	$V_{I(ON)}$	V <sub>O</sub> =0.2V, I <sub>O</sub> =5mA	-	0.8	1.2	V
Input voltage (OFF)	$V_{I(OFF)}$	V <sub>O</sub> =5V, I <sub>O</sub> =0.1mA	0.3	0.55	-	V
Transition frequency	f <sub>T</sub> *	$V_0=10V$ , $I_0=5$ mA, $f=1$ MHz	-	200	-	MHz
Input current	$I_{I}$	$V_I=5V$ , $I_O=0$	-	-	1.8	mA
Input resistor (Input to base)	R <sub>1</sub>	-	3.3	4.7	6.1	ΚΩ

<sup>\* :</sup> Characteristic of transistor only

KSD-R5S020-000

### **Electrical Characteristic Curves**

[Tr1, Tr2]



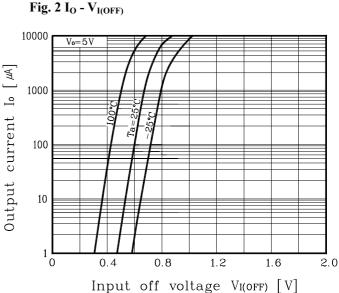
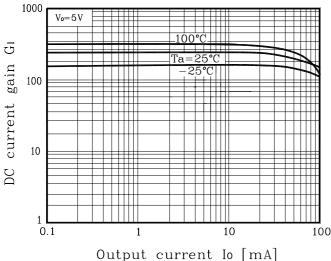


Fig. 3  $G_I$  -  $I_O$ 



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