

# SUR537H

#### **Epitaxial planar PNP silicon transistor**

### **Description**

• Dual chip digital transistor

#### **Features**

- Two SRA2211 chips in SOT-353 package
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

Package: SOT-353

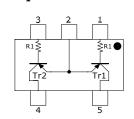
### **Ordering Information**

Type NO.	Marking	Package Code
SUR537H	37H□	SOT-353

□ : Year & Week Code

## **Equivalent circuit & PIN Connections**

### • Equivalent Circuit



	$\mathbf{R}_1$
Tr1	10ΚΩ
Tr2	10ΚΩ

#### **PIN Connections**

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

Absolute Maximu Ratings [Tr1,Tr2]

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Output voltage	Vo	-50	V
Input voltage	V <sub>I</sub>	-30, 5	V
Output current	I <sub>O</sub>	-100	mA
Power dissipation	P <sub>D</sub> **	200	mW
Junction temperature	T <sub>3</sub>	150	°C
Storage temperature range	$T_{stg}$	-55 ~ 150	°C

\*: Total rating

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

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Тур.	Max.	Unit
Output cut-off current	I <sub>O(OFF)</sub>	V <sub>O</sub> =-50V, V <sub>I</sub> =0	-	-	-500	nA
DC current gain	$G_{\mathrm{I}}$	V <sub>O</sub> =-5V, I <sub>O</sub> =-10mA	120	ı	-	-
Output voltage	V <sub>O(ON)</sub>	$I_{O}$ =-10mA, $I_{I}$ =-0.5mA	ı	-0.1	-0.3	V
Input voltage (ON)	$V_{I(ON)}$	V <sub>O</sub> =-0.2V, I <sub>O</sub> =-5mA	ı	-0.9	-1.4	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> *	$V_O$ =-10V, $I_O$ =-5mA, f=1MHz	ı	200	ı	MHz
Input current	$I_{\rm I}$	$V_{\rm I}$ =-5V, $I_{\rm O}$ =0	ı	ı	-0.88	mA
Input resistor (Input to base)	R <sub>1</sub>	-	7	10	13	ΚΩ

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

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# **Electrical Characteristic Curves**

## [Tr1,Tr2]

Fig. 1 I<sub>O</sub> - V<sub>I(ON)</sub>

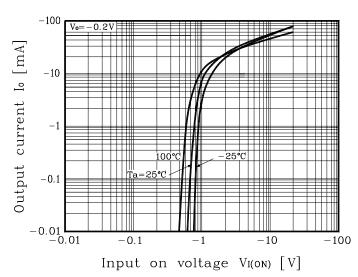


Fig. 2  $I_O$  -  $V_{I(OFF)}$ 

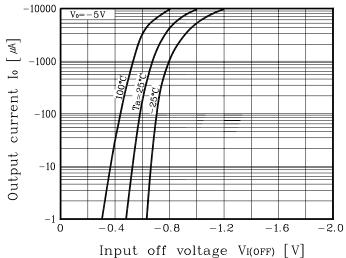
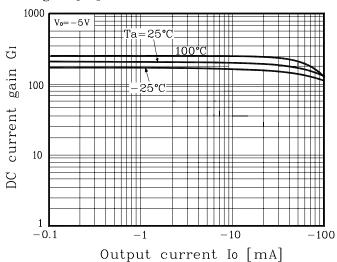
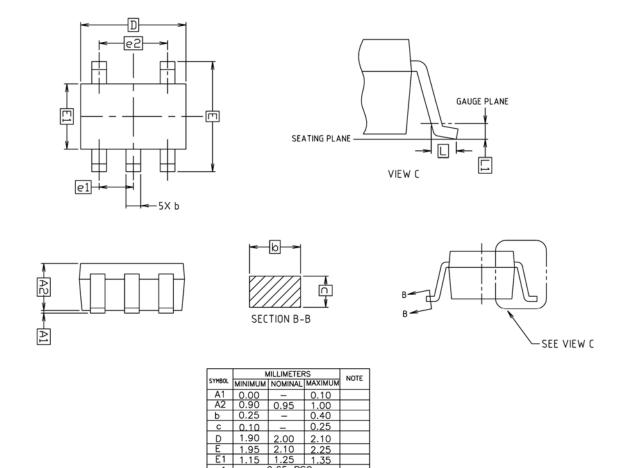


Fig. 3  $G_I$  -  $I_O$ 

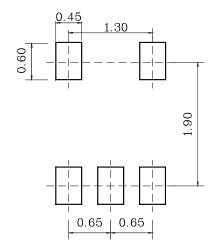


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# **Outline Dimension**



### \* Recommend PCB solder land [Unit: mm]



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