

# SUR522H

#### Epitaxial planar NPN silicon transistor

#### **Description**

• Dual chip digital transistor

#### **Features**

- Two SRC1211 chips in SOT-353 package
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

# J

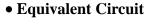
Package: SOT-353

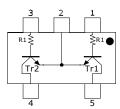
## **Ordering Information**

Type NO.	Marking	Package Code		
SUR522H	22H□	SOT-353		

□ : Year & Week Code

### **Equivalent circuit & PIN Connections**





	$\mathbf{R}_{1}$
Tr1	10ΚΩ
Tr2	10ΚΩ

#### **PIN Connections**

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

Absolute Maximum 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	Tı	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>	$V_0 = 50V, V_I = 0$	-	-	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>	$I_{O}$ =10mA, $I_{I}$ =0.5mA	-	0.1	0.3	V
Input voltage (ON)	$V_{I(ON)}$	V <sub>O</sub> =0.2V, I <sub>O</sub> =5mA	-	0.9	1.4	V
Input voltage (OFF)	V <sub>I(OFF)</sub>	$V_O=5V$ , $I_O=0.1$ mA	0.3	0.55	-	V
Transition frequency	f <sub>T</sub> *	V <sub>O</sub> =10V, I <sub>O</sub> =5mA, f=1MHz	-	200	-	MHz
Input current	II	V <sub>I</sub> =5V, I <sub>O</sub> =0	-	-	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  $I_O$  -  $V_{I(ON)}$ 

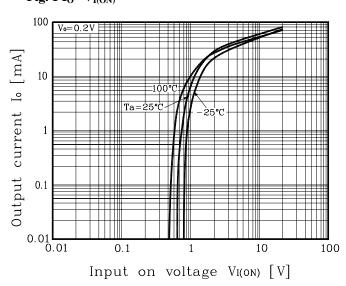


Fig. 2  $I_O$  -  $V_{I(OFF)}$ 

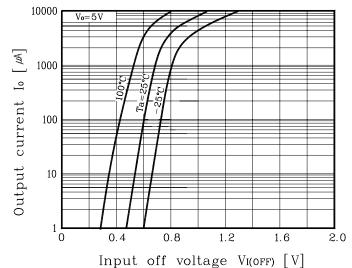
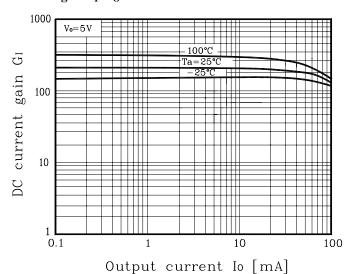


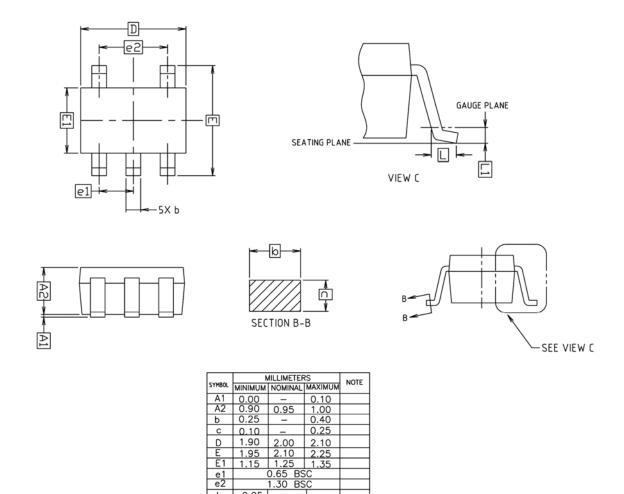
Fig. 3  $G_I$  -  $I_O$ 



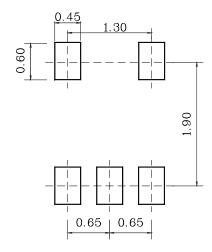
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## **Outline Dimension**



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



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