



SUR501J

NPN/PNP Epitaxial Planar type Silicon Transistor

Descriptions

- Digital transistor

Features

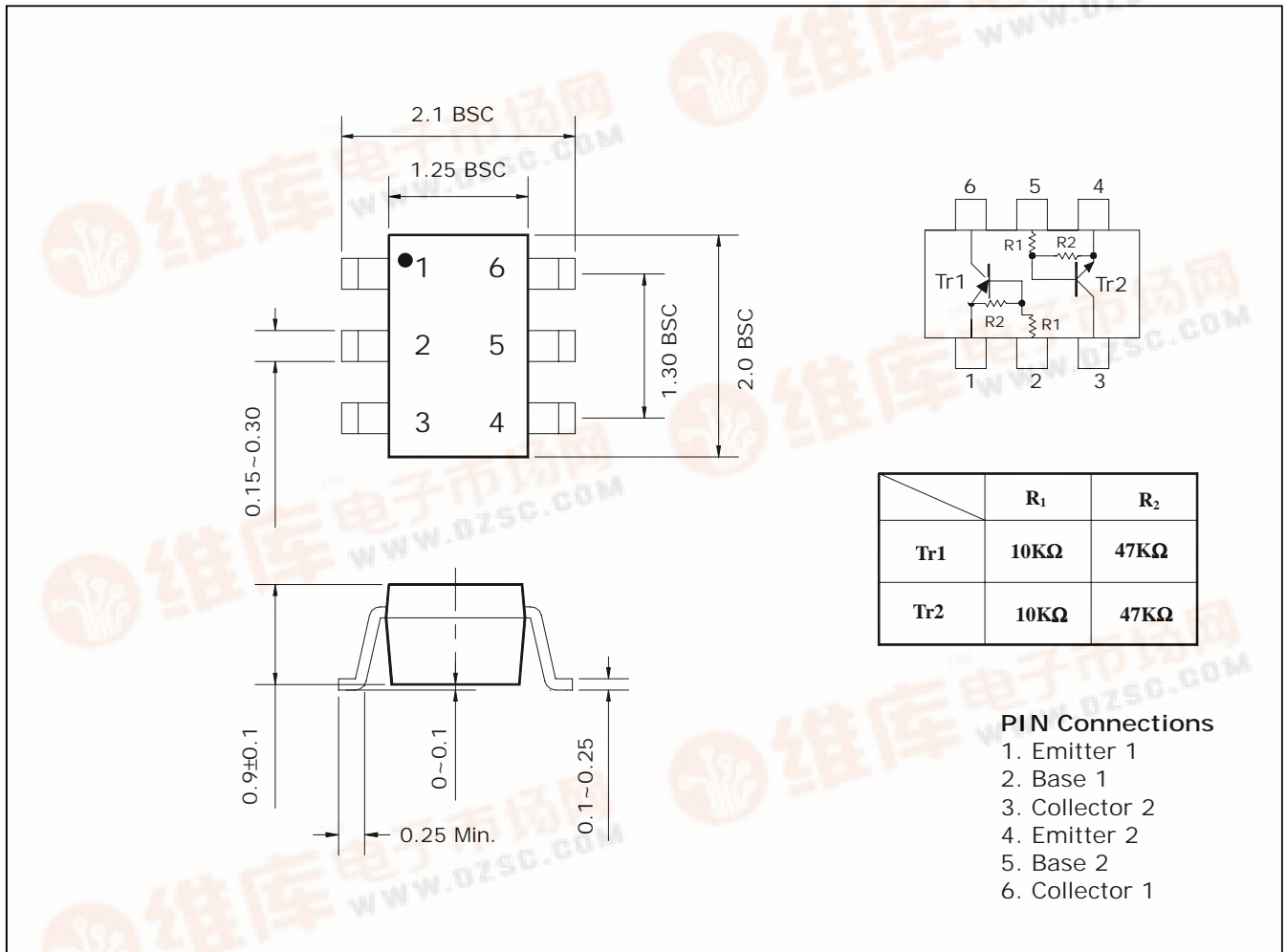
- Both SRC1207 and SRA2207 Chips in SOT-363 package
- With built-in bias resistors

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	Ratings		Unit
		Tr1	Tr2	
Out Voltage	V_O	-50	50	V
Input Voltage	V_I	-30	30	V
Out Current	I_O	-100	100	mA
Power Dissipation	P_D	150		mW
Junction Temperature	T_J	150		°C
Storage Temperature	T_{STG}	-55 ~ 150		°C

Electrical Characteristics(Tr1 : PNP)

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^*	$V_O = -10V, I_O = -5mA$	-	200	-	MHz
Input Current	I_I	$V_I = -5V$	-	-	-0.88	mA

* : Characteristic of Transistor Only

Electrical Characteristics(Tr2 : NPN)

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^*	$V_O = 10V, I_O = 5mA$	-	200	-	MHz
Input Current	I_I	$V_I = 5V$	-	-	0.88	mA

* : Characteristic of Transistor Only

Electrical Characteristic Curves

Tr1 : PNP

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

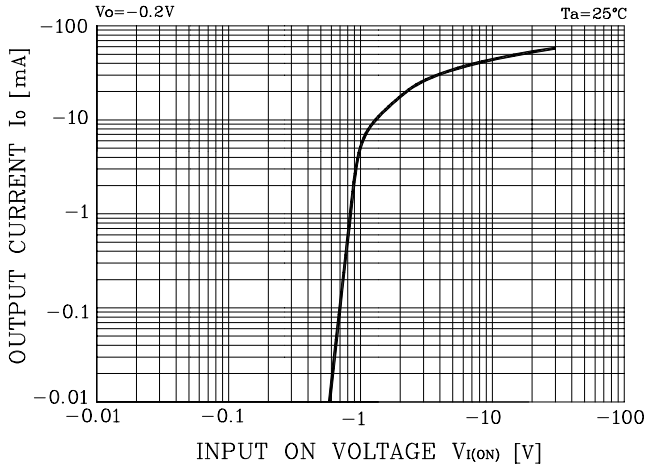
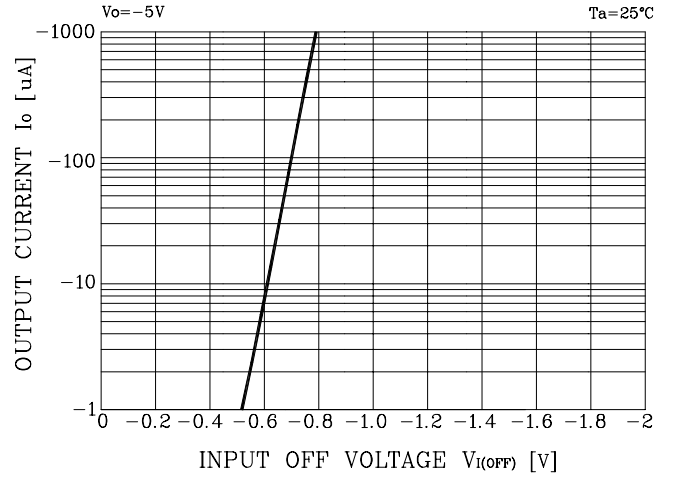


Fig. 2 $I_O - V_{I(OFF)}$



Tr2 : NPN

Fig. 3 $G_I - I_O$

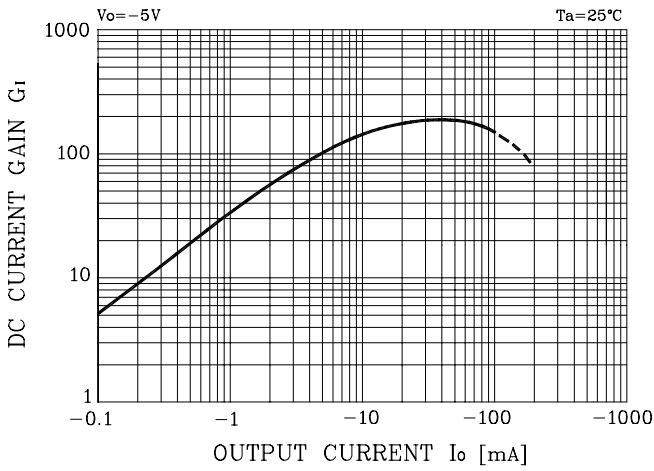


Fig. 1 $I_O - V_{I(ON)}$

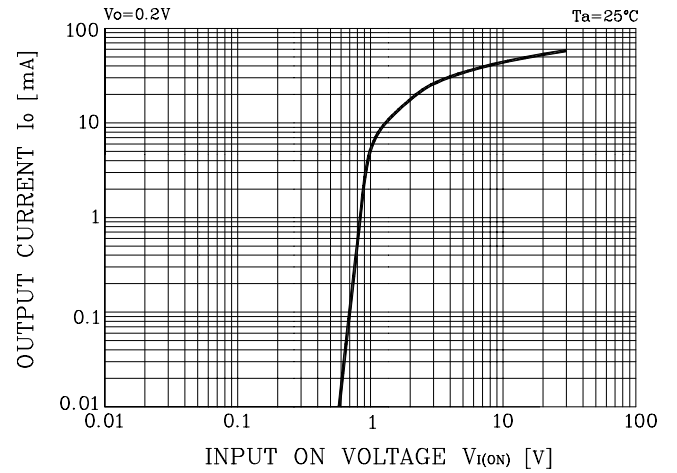


Fig. 2 $I_O - V_{I(OFF)}$

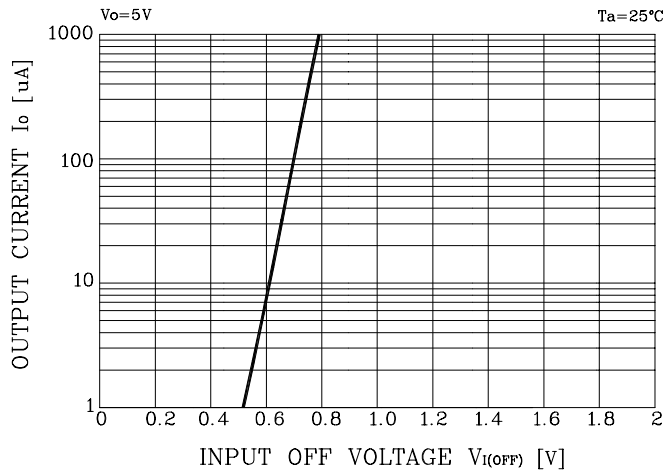


Fig. 3 $G_I - I_O$

