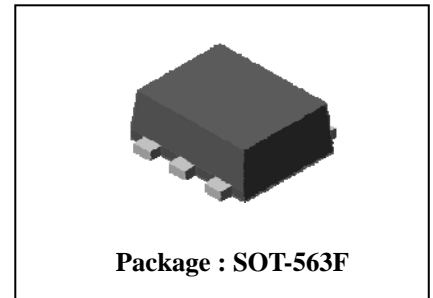


Description

- Dual chip digital transistor

Features

- Both SRC1210 chip and SRA2210 chip in SOT-563F package
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

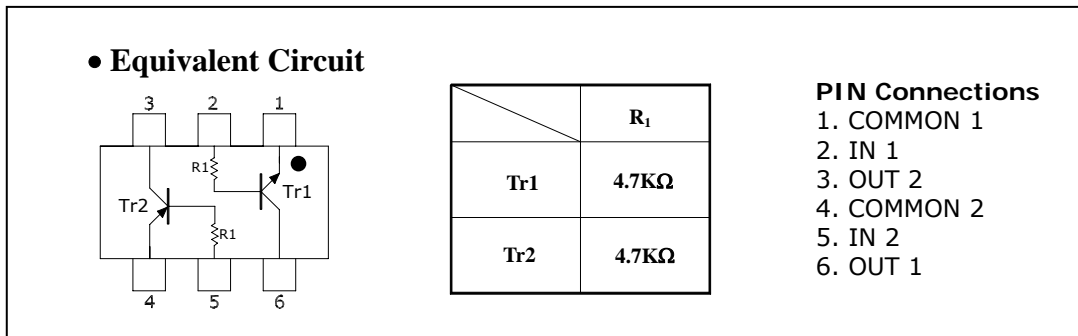


Ordering Information

Type NO.	Marking	Package Code
SUR540EF	SJ□	SOT-563F

□ : Year & Week Code

Equivalent circuit & PIN Connections



Absolute maximum ratings (Tr1, Tr2) Ta=25°C

Characteristic	Symbol	Rating		Unit
		Tr1	Tr2	
Output voltage	V _O	50	-50	
Input voltage	V _I	20,-5	-20,5	V
Output current	I _O	100	-100	mA
Power dissipation	P _D [*]	150		mW
Junction temperature	T _J	150		°C
Storage temperature range	T _{stg}	-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	$V_O=5V, I_O=10mA$	120	-	-	-
Output voltage	$V_{O(ON)}$	$I_O=10mA, I_I=0.5mA$	-	0.1	0.3	V
Input voltage (ON)	$V_{I(ON)}$	$V_O=0.2V, I_O=5mA$	-	0.8	1.2	V
Input voltage (OFF)	$V_{I(OFF)}$	$V_O=5V, I_O=0.1mA$	0.3	0.55	-	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_I	-	3.3	4.7	6.1	KΩ

* : Characteristic of transistor only

Electrical Characteristics [Tr2]

(Ta=25°C)

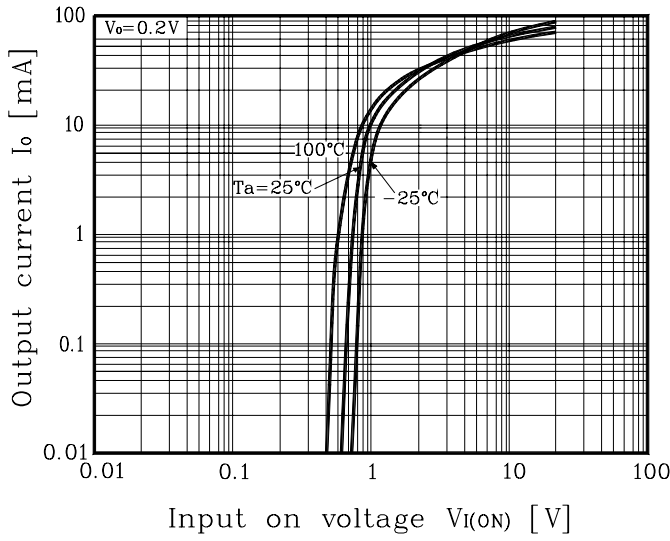
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output cut-off current	$I_{O(OFF)}$	$V_O=-50V, V_I=0$	-	-	-500	nA
DC current gain	G_I	$V_O=-5V, I_O=-10mA$	120	-	-	-
Output voltage	$V_{O(ON)}$	$I_O=-10mA, I_I=-0.5mA$	-	-0.1	-0.3	V
Input voltage (ON)	$V_{I(ON)}$	$V_O=-0.2V, I_O=-5mA$	-	-0.8	-1.2	V
Input voltage (OFF)	$V_{I(OFF)}$	$V_O=-5V, I_O=-0.1mA$	-0.3	-0.55	-	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_I	-	3.3	4.7	6.1	KΩ

* : Characteristic of transistor only

Electrical Characteristic Curves

[Tr1]

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



[Tr2]

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

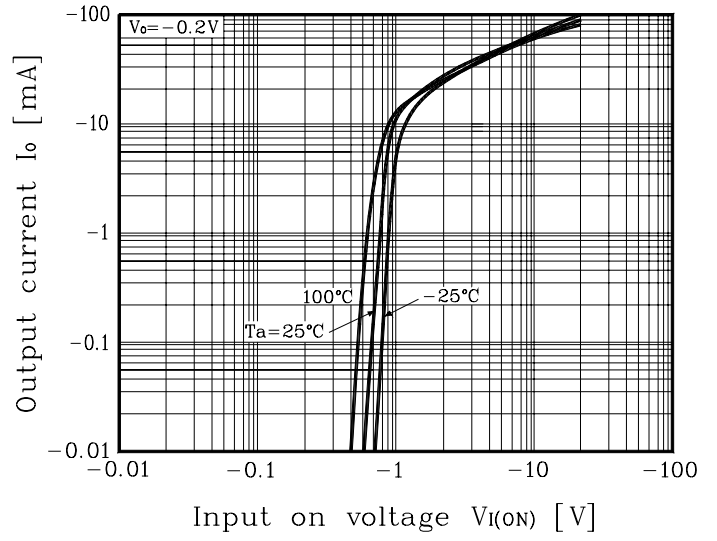


Fig. 2 $I_o - V_{I(OFF)}$

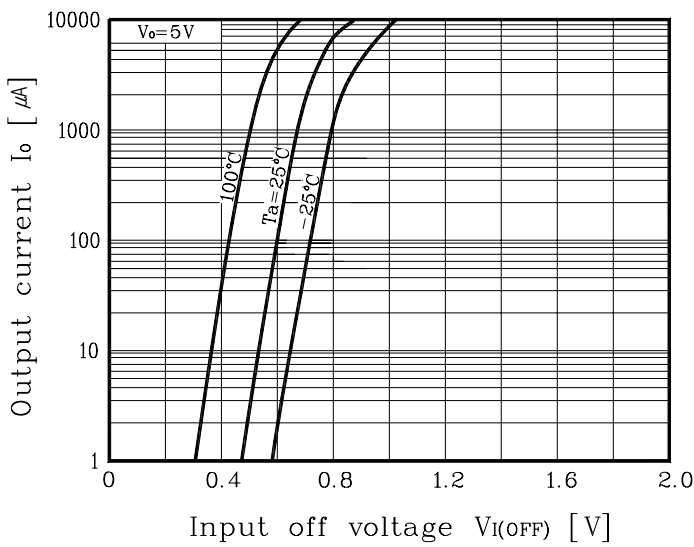


Fig. 2 $I_o - V_{I(OFF)}$

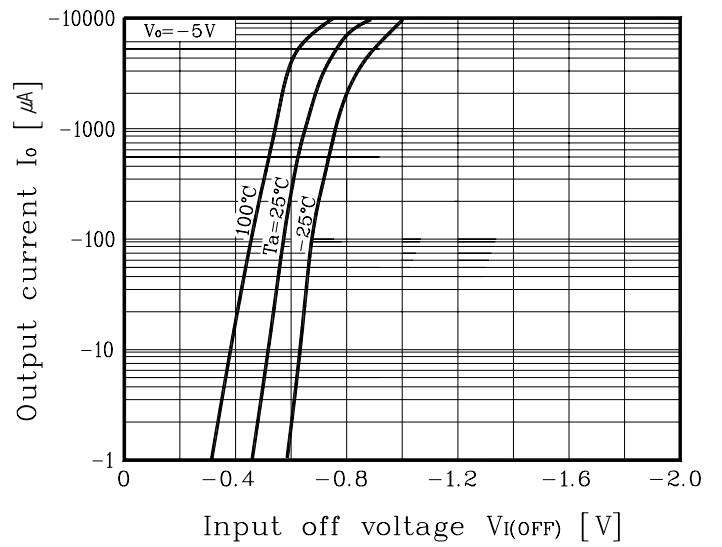


Fig. 3 $G_I - I_o$

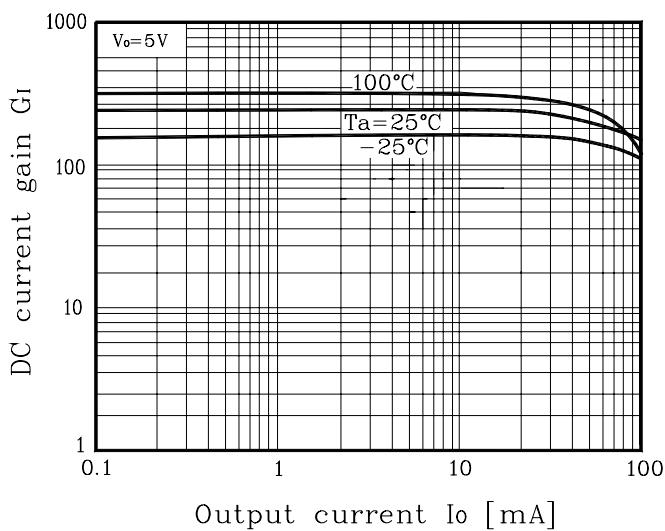
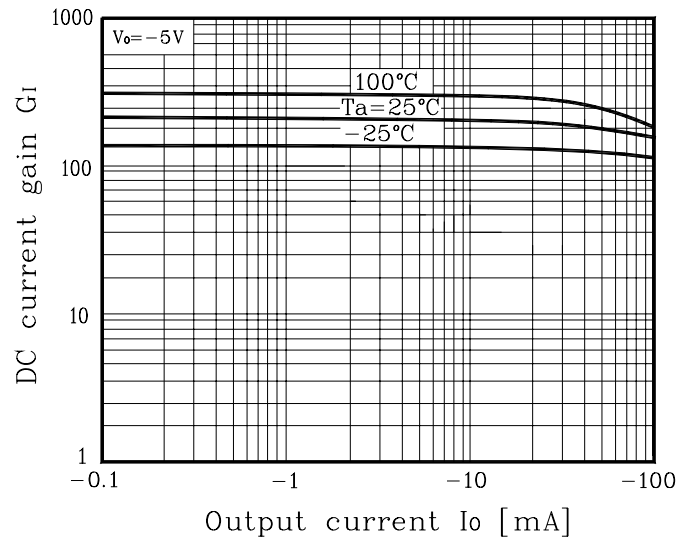
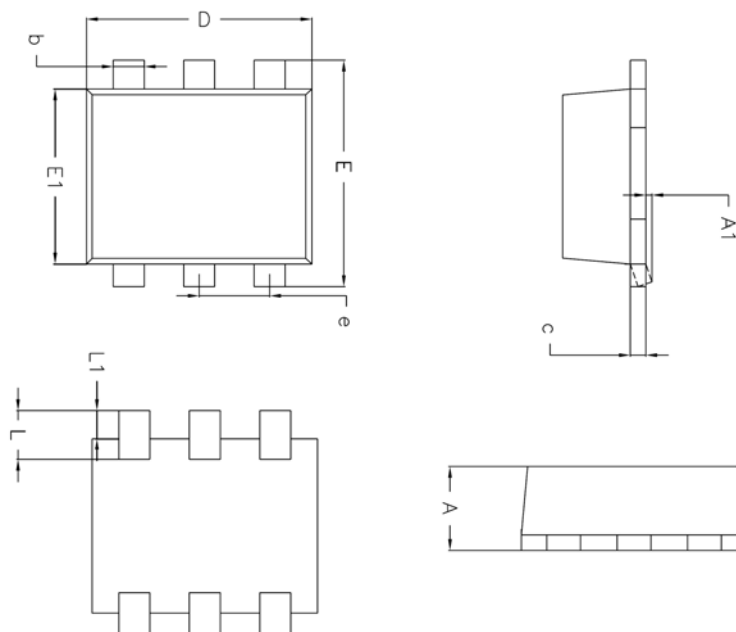


Fig. 3 $G_I - I_o$

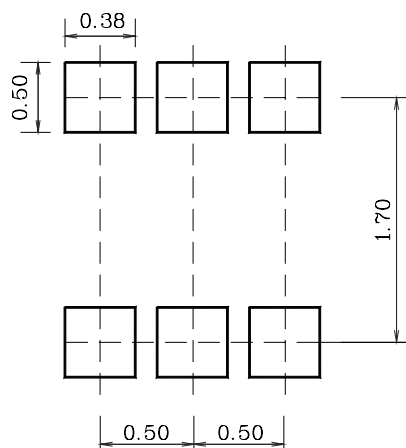


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.53	0.58	0.62	
A1	0.00	—	0.10	
A2	—	—	—	
b	0.15	0.20	0.30	
c	0.10	0.11	0.18	
D	1.50	1.60	1.70	
E	1.50	1.60	1.70	
E1	1.10	1.20	1.30	
e	0.50 BSC			
L	0.25	0.35	0.45	
L1	0.13	0.20	0.27	

※ Recommend PCB solder land [Unit: mm]



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