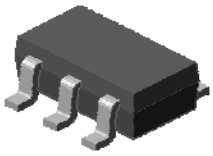
KODENSHI AUK

SUR542J

Epitaxial planar NPN silicon transistor

Description

- Dual chip digital transistor



Package : SOT-363

Features

- Two SRC1211 chips in SOT-363 package
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process

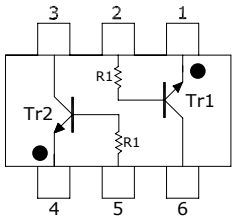
Ordering Information

Type NO.	Marking	Package Code
SUR542J	HZH□	SOT-363

□ : Year & Week Code

Equivalent circuit & PIN Connections

- **Equivalent Circuit**



	R_1
Tr1	10KΩ
Tr2	10KΩ

PIN Connections
1. COMMON 1
2. IN 1
3. OUT 2
4. COMMON 2
5. IN 2
6. OUT 1

Absolute Maximum Ratings [Tr1, Tr2] (Ta=25°C)

Characteristic	Symbol	Rating	Unit
Output voltage	V_O	50	V
Input voltage	V_I	30, -5	V
Output current	I_O	100	mA
Power dissipation	P_D※	200	mW
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-55 ~ 150	°C

※: Total rating

Electrical Characteristics [Tr1,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	-	0.9	1.4	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	-	-	0.88	mA
Input resistor (Input to base)	R_1	-	7	10	13	KΩ

* : Characteristic of Transistor Only

Electrical Characteristic Curves

[Tr1, Tr2]

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

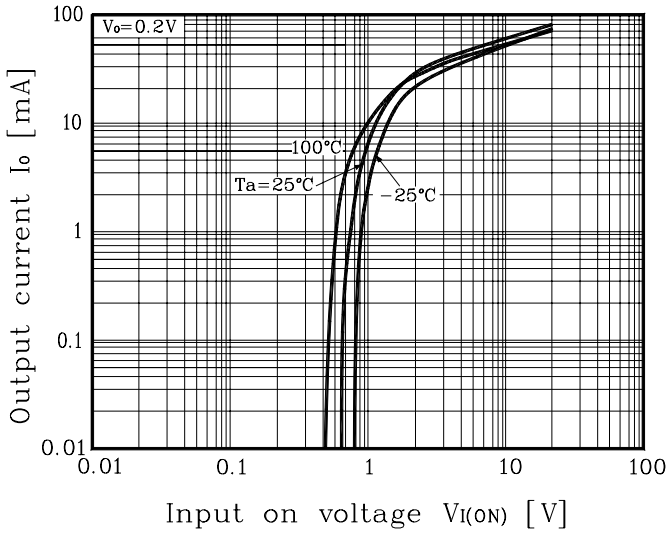
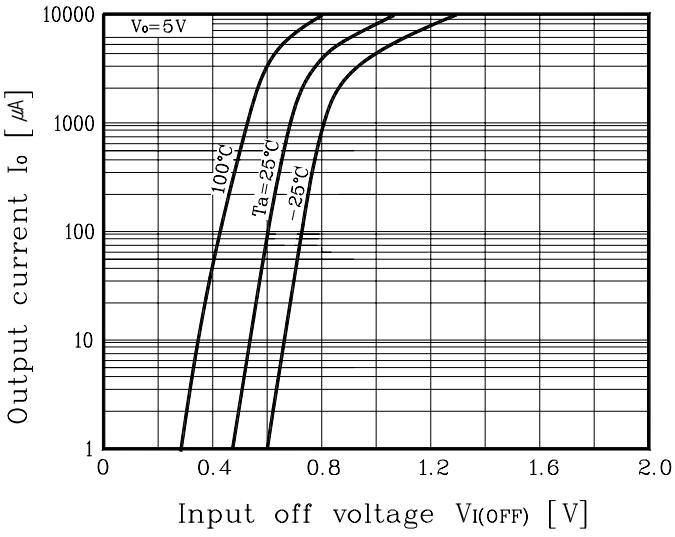
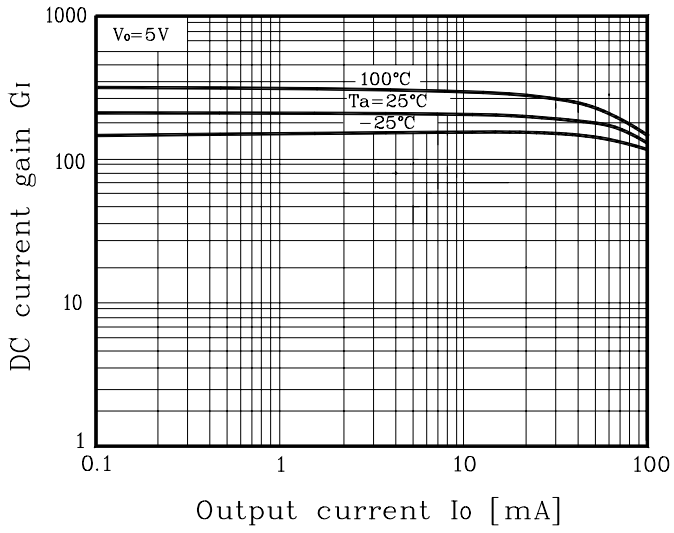
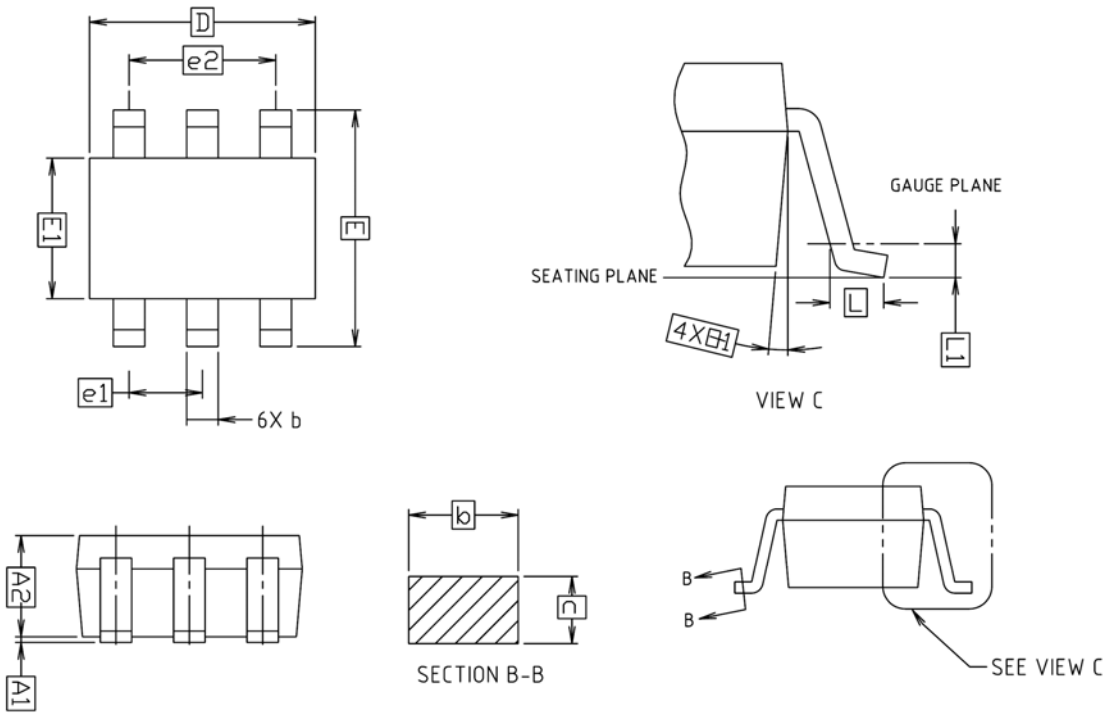


Fig. 2 I_O - $V_{I(OFF)}$



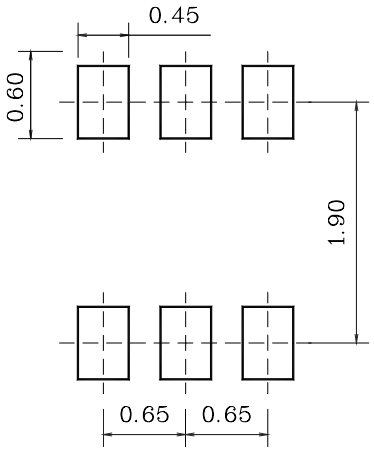


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	–	0.10	
A2	0.90	0.95	1.00	
b	0.25	–	0.40	
c	0.10	–	0.25	
D	1.90	2.00	2.10	
E	1.95	2.10	2.25	
E1	1.15	1.25	1.35	
e1	0.65 BSC			
e2	1.30 BSC			
L	0.25	–	–	
L1	0.15 BSC			

※ Recommend PCB solder land [Unit: mm]



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