

NPN Silicon Transistor

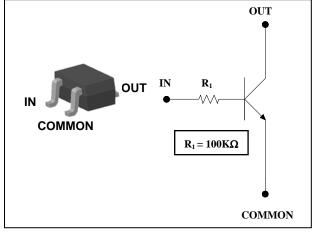
Descriptions

- Switching application
- Interface circuit and driver circuit application

Features

- With built-in bias resistor
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- High packing density

PIN Connection



Ordering Information

Type NO.	Marking	Package Code
SRC1212U	<u>RB</u> □ ① ②	SOT-323
	Device Code 2Vear&Week Code	

1Device Code 2Year&Week Code

Absolute Maximum Ratings

Absolute Maximum Ratings			(Ta=25°C)
Characteristic	Symbol	Rating	Unit
Output voltage	Vo	50	V
Input voltage	VI	40, -5	V
Output current	Ι _ο	100	mA
Power dissipation	P _D	200	mW
Junction temperature	TJ	150	°C
Storage temperature range	T _{stg}	-55 ~ 150	°C

Electrical Characteristics

Electrical Characteristics					(Ta:	=25°C)
Characteristic	Symbol	Test Condition	Min.	Тур.	Max.	Unit
Output cut-off current	I _{O(OFF)}	$V_0 = 50V, V_1 = 0$	-	-	500	nA
DC current gain	Gı	$V_0 = 5V$, $I_0 = 10mA$	120	-	-	-
Output voltage	V _{O(ON)}	I ₀ =10mA, I ₁ =0.5mA	-	0.1	0.3	V
Input voltage (ON)	V _{I(ON)}	$V_0 = 0.2V$, $I_0 = 5mA$	-	-	4.4	V
Input voltage (OFF)	V _{I(OFF)}	$V_0 = 5V$, $I_0 = 0.1mA$	0.3	-	-	V
Transition frequency	f _T *	$V_0=10V$, $I_0=5mA$, $f=1MHz$	-	200	-	MHz
Input current	I ₁	$V_1 = 5V, I_0 = 0$	-	-	0.1	mA
Input resistor (Input to base)	R_1	-	70	100	130	KΩ

* : Characteristic of transistor only

Electrical Characteristic Curves

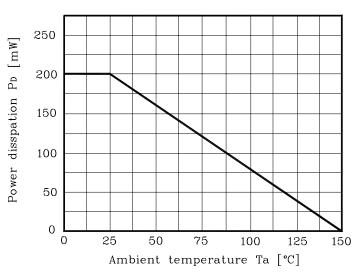


Fig. 1 P_D - Ta

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

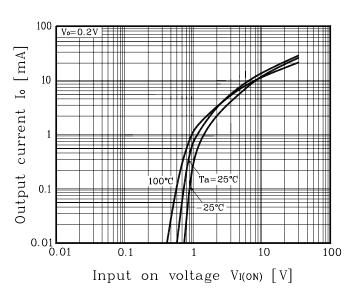
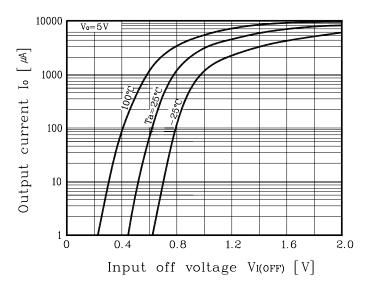
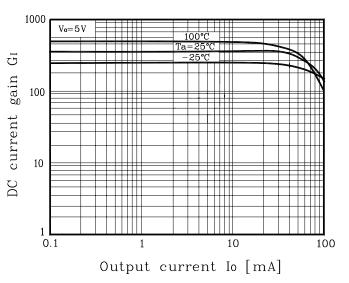


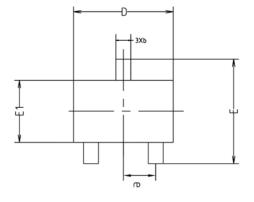
Fig. 3 I_O - V_{I(OFF)}

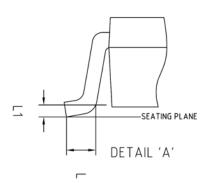


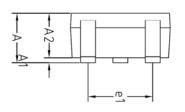


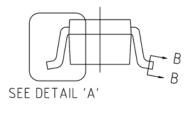


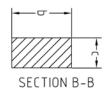
Outline Dimension





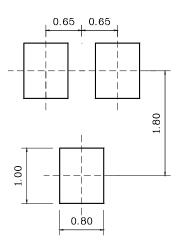






SYMBOL	MILLIMETERS			NOTE	
STRIDUL	MINIMUM	NOMINAL	MAXIMUM	NUTE	
A	0.90	-	1.25		
A1	0.00	-	0.10		
A2	0.85	0.90	0.95		
b	0.30	-	0.40		
с	0.10	-	0.25		
D	1.90	2.00	2.10		
E	1.95	2.10	2.25		
E1	1.15	1.25	1.35		
е	0.65BSC				
e1	1.20	-	1.40		
L	0.10	-	-		
L1	0.12BSC				

*Recommend PCB solder land [Unit: mm]



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