KODENSHI AUK

SRC1231S

NPN Silicon Transistor

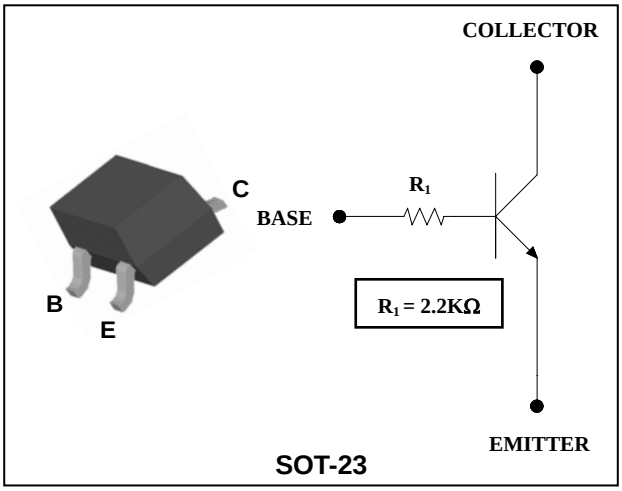
Descriptions

- 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
SRC1231S	C31 □ (① ②)	SOT-23

①Device Code ②Year&Week Code

Absolute Maximum Ratings (Ta=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector current	I_C	300	mA
Collector Power dissipation	P_D	200	mW
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-55 ~ 150	°C

Electrical Characteristics (Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	I_C=50μA, I_E=0	30	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	I_C=1mA, I_B=0	15	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	I_E=50μA, I_C=0	5	-	-	V
Collector cut-off current	I_{CBO}	V_{CB}=30V, I_E=0	-	-	0.5	μA
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA, I_B=2.5mA	-	60	150	mV
DC current gain	h_{FE}	V_{CE}=5V, I_C=50mA	200	350	800	-
Input resistor (Input to base)	R_1	-	1.54	2.2	2.86	KΩ
Transition frequency	f_T*	V_{CE}=10V I_E=50mA, f=100MHz	-	200	-	MHz

* : Characteristic of transistor only

Electrical Characteristic Curves

Fig. 1 P_C - T_a

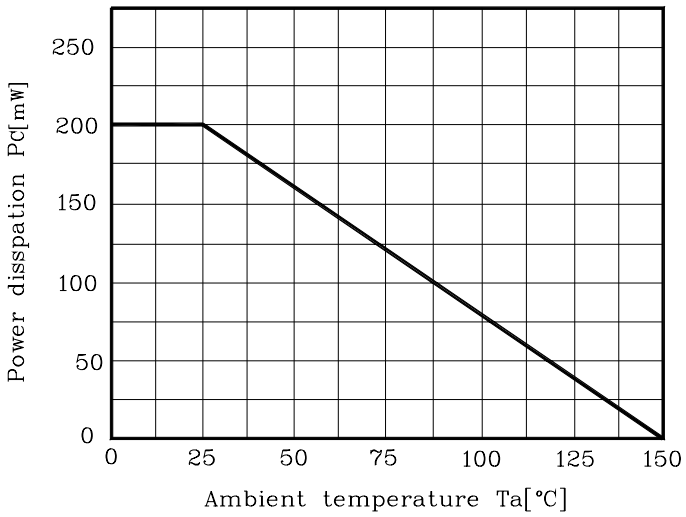


Fig. 2 h_{FE} - I_C

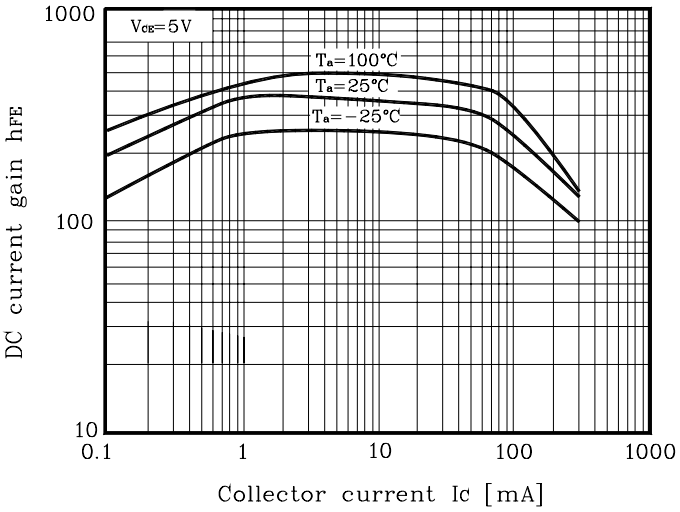


Fig. 3 I_C - $V_{CE(SAT)}$

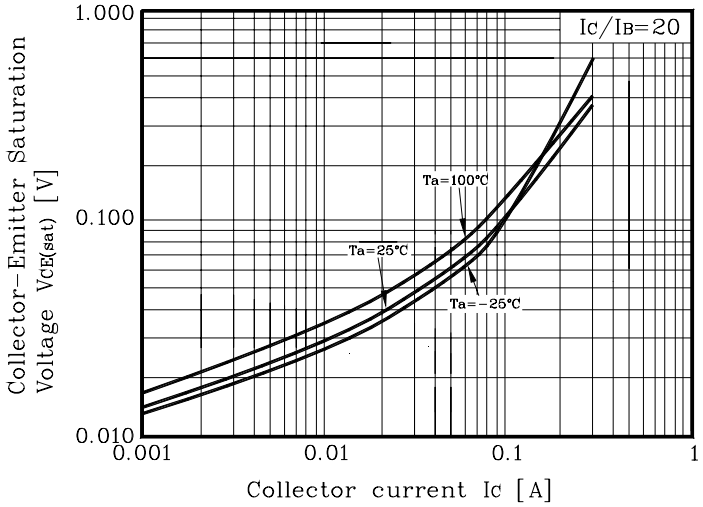


Fig. 4 I_C – $V_{BE(ON)}$

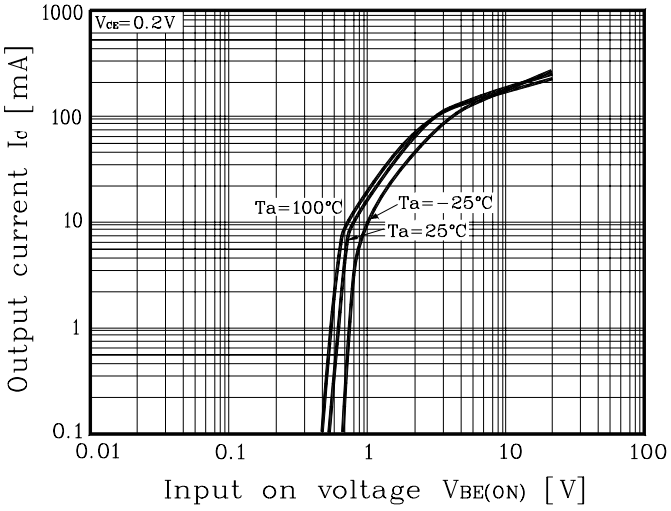
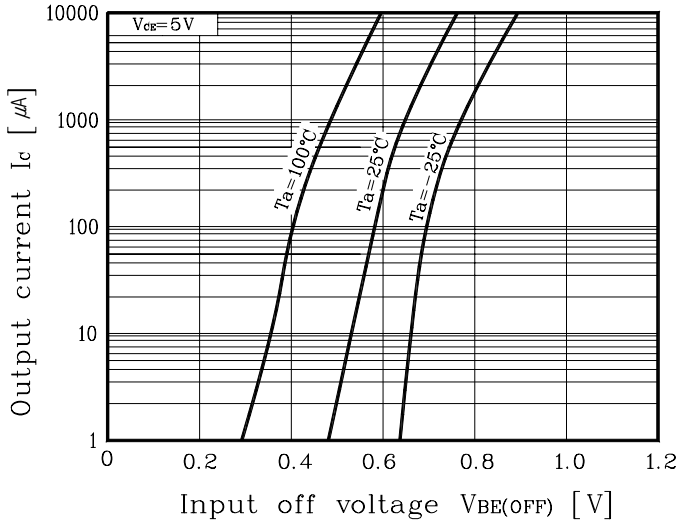
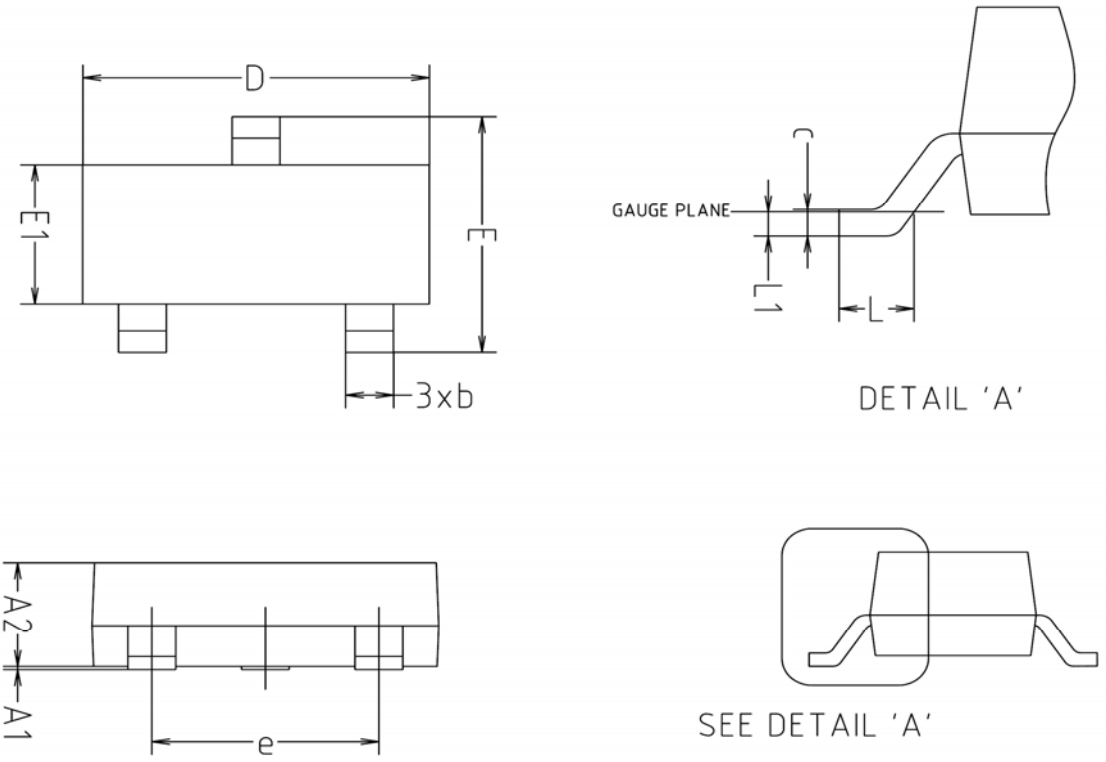


Fig. 5 I_C – $V_{BE(OFF)}$

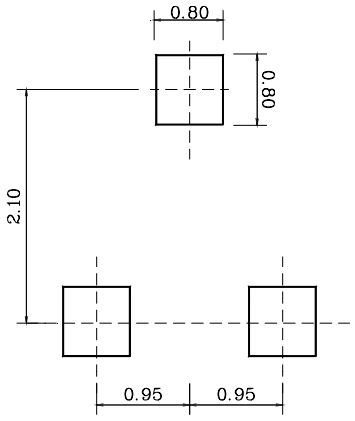


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	-	0.10	
A2	0.82	-	1.02	
b	0.39	0.42	0.45	
c	0.09	0.12	0.15	
D	2.80	2.90	3.00	
E	2.20	2.40	2.60	
E1	1.20	1.30	1.40	
e	1.90BSC			
L	0.20	-	-	
L1	0.12BSC			

※Recommend PCB solder land [Unit: mm]



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