

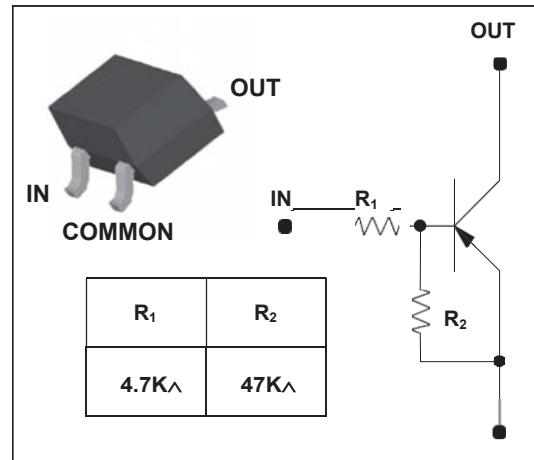
## SOT-23 Plastic-Encapsulate Transistors

### FEATURES

- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- High packing density
- PNP Silicon Transistor

### MECHANICAL DATA

- Case style:SOT-23 molded plastic
- Mounting position:any



### MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Characteristic	Symbol	Rating	Unit
Output voltage	$V_O$	-50	V
Input voltage	$V_I$	-20, 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

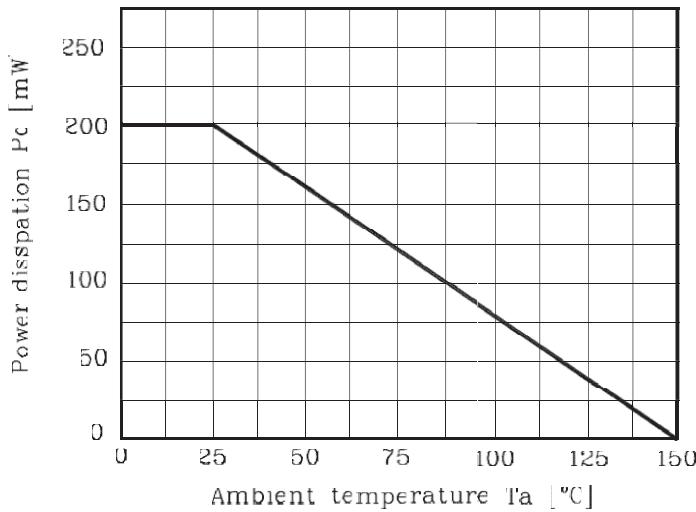
**Electrical Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified).

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	200	-	-
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	-1.3	V
Input voltage (OFF)	$V_{I(OFF)}$	$V_O=-5V, I_O=-0.1mA$	-0.5	-0.65	-	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)	$R_1$	-	3.3	4.7	6.1	kΩ
Input resistor (Base to common)	$R_2$	-	33	47	61	kΩ

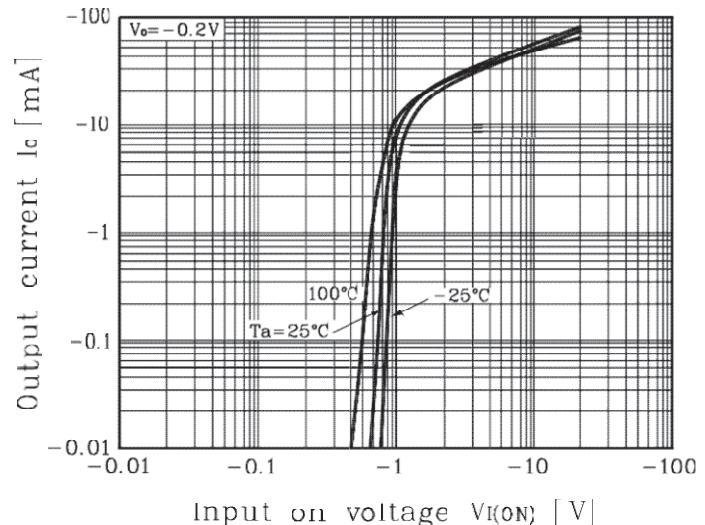
\* : Characteristic of transistor only

## RATINGS AND CHARACTERISTIC CURVES

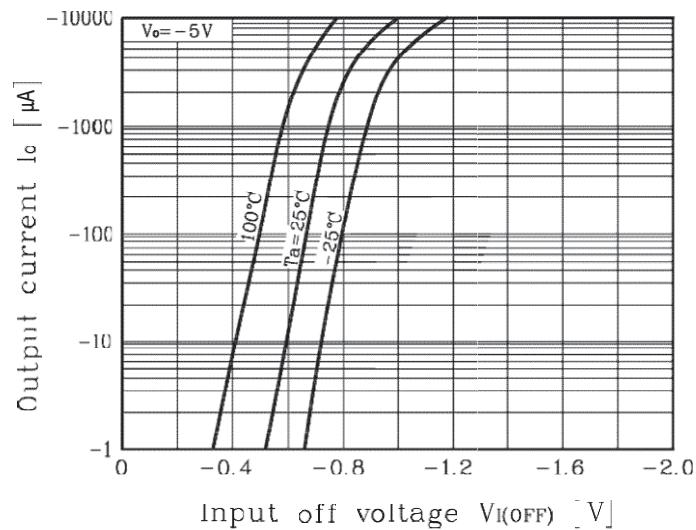
**Fig. 1**  $P_c$  -  $T_a$



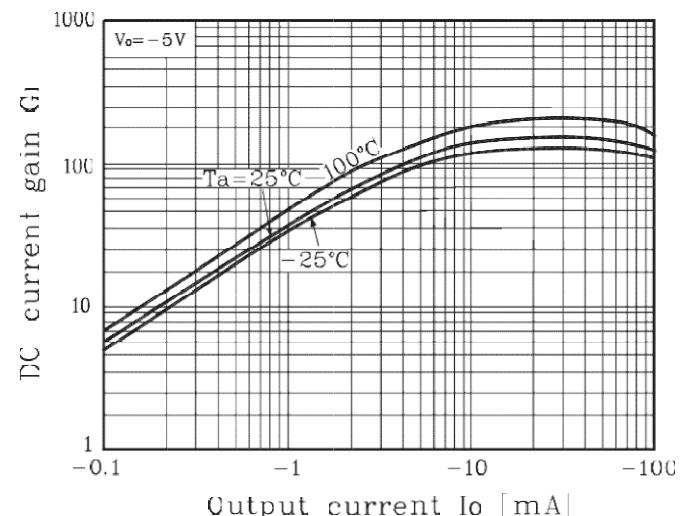
**Fig. 2**  $I_o$  -  $V_{I(ON)}$

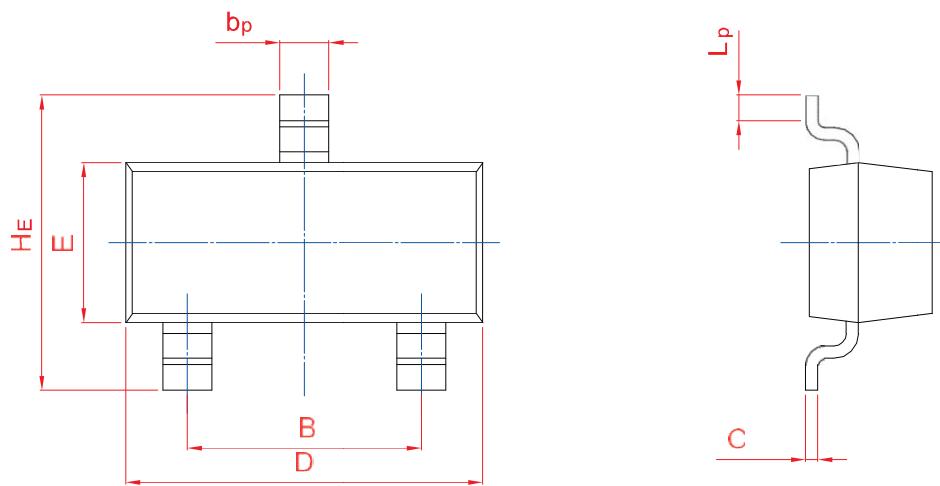


**Fig. 3**  $I_o$  -  $V_{I(OFF)}$



**Fig. 4**  $G_I$  -  $I_o$





UNIT	A	B	$b_p$	C	D	E	$H_E$	$A_1$	$L_p$
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20