

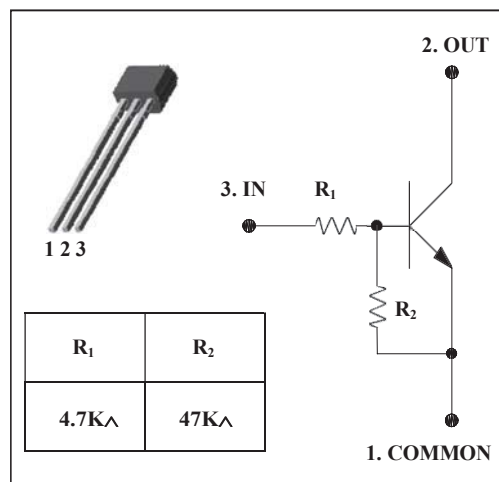
TO-92M Plastic-Encapsulate Transistors

FEATURES

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

MECHANICAL DATA

- Case style:TO-92M 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	400	mW
Junction temperature	T _J	150	°C
Storage temperature range	T _{stg}	-55 ~ 150	°C

Electrical Specification (@T_A=25 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	K Ω
Input resistor (Base to common)	R ₂	-	33	47	61	K Ω

* : Characteristic of transistor only

RATINGS AND CHARACTERISTIC CURVES

Fig. 1 $P_D - T_a$

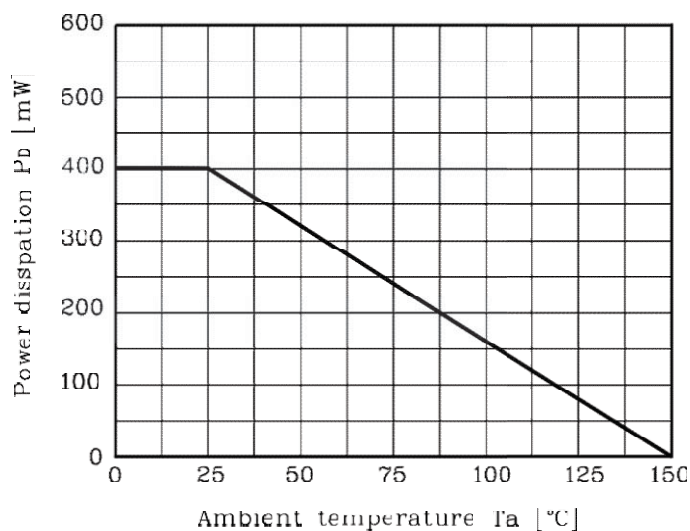


Fig. 2 $I_O - V_{I(ON)}$

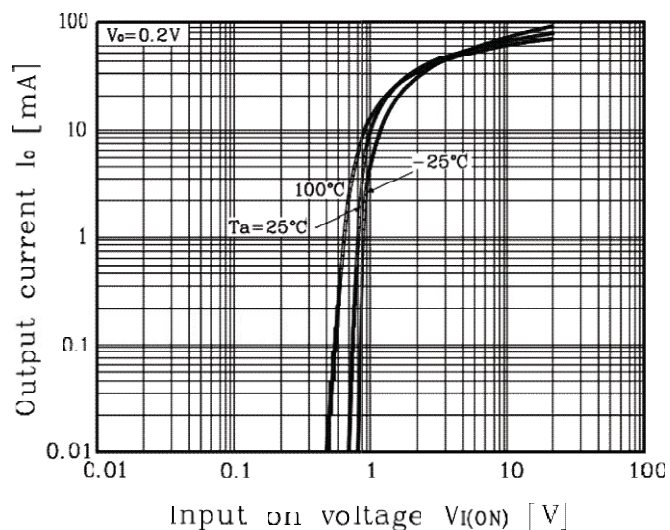


Fig. 3 $I_O - V_{I(OFF)}$

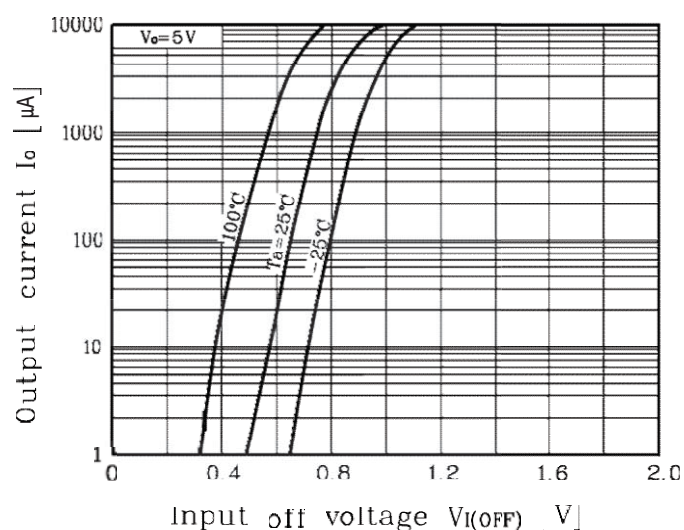
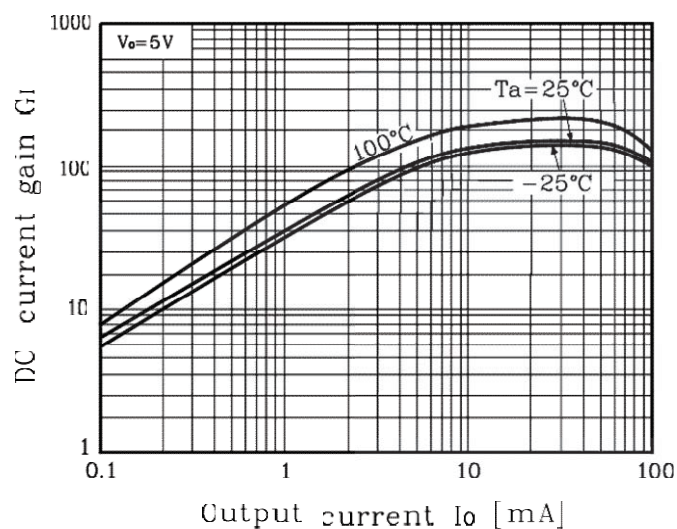
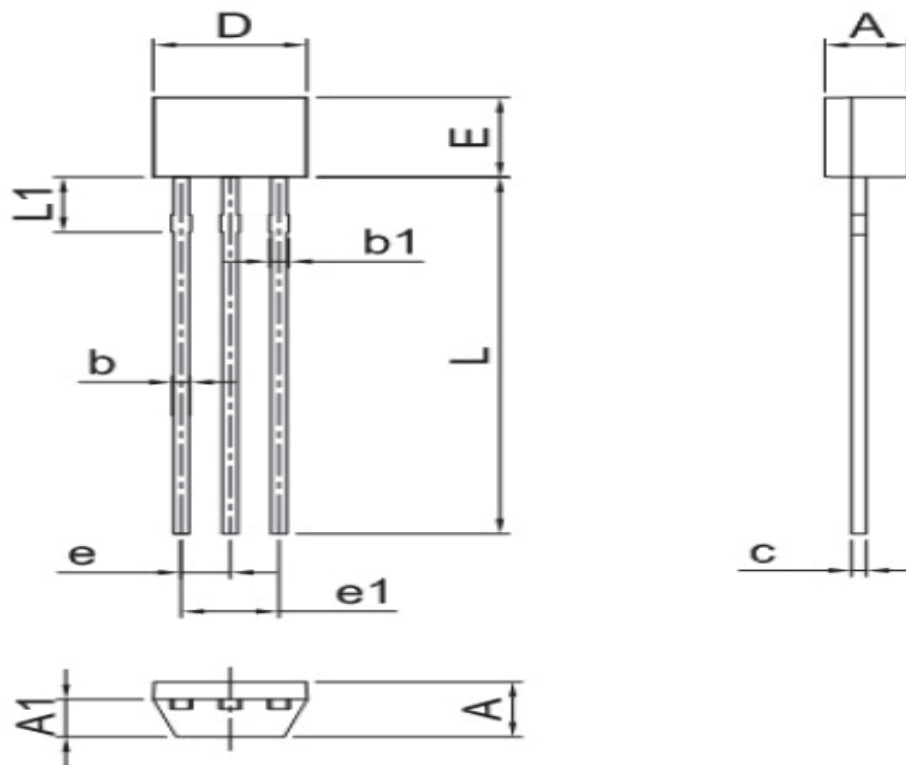


Fig. 4 $G_I - I_O$





Symbol	TO-92 M		
	Min.	Typ	Max.
A	2.10	2.20	2.30
A1	1.30	1.50	1.70
b	0.40	0.45	0.50
b1	0.50	0.55	0.60
c	0.35	0.40	0.45
D	3.80	4.00	4.20
E	2.80	3.00	3.20
e	1.17	1.27	1.37
e1	2.34	2.54	2.64
L	12.80	13.30	13.80
L1	2.00	2.20	2.40