

SOT-723 Plastic-Encapsulate Transistors

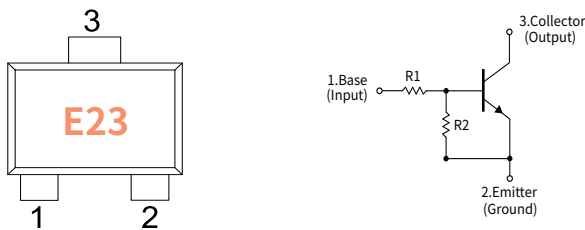
Features

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors(see equivalent circuit)
- The bias resistors consist of thin-film resistors with complete isolation to allow positive biasing of the input.They also have the advantage of almost completely eliminating parasitic effects
- Only the on/off conditions need to be set for operation, making device design easy

Mechanical Data

- Case: SOT-723
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram



Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOT-723	R1	0.0012	8000	80000	640000	7"

Maximum Ratings (Ta=25°C Unless otherwise specified)

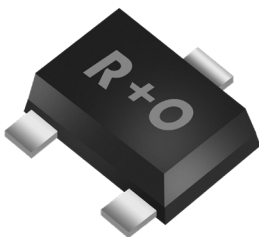
PARAMETER	SYMBOL	UNIT	VALUE
Supply Voltage	V _{CC}	V	50
Input Voltage	V _{IN}	V	-5~+30
Output Current	I _O	mA	100
Peak Collector Current	I _{CM}	mA	100
Power Dissipation	P _D	mW	100
Storage temperature	T _{stg}	°C	-55 ~+150
Junction temperature	T _j	°C	-55 ~+150

Small-signal Characteristics

ITEM	SYMBOL	Condition	UNIT	Min	Typ	Max
Transition frequency	f _T	I _O = 5mA, V _O = 10V	MHz	-	250	-

Supply Voltage
VCC 50V
Collector Current
0.1 Ampere

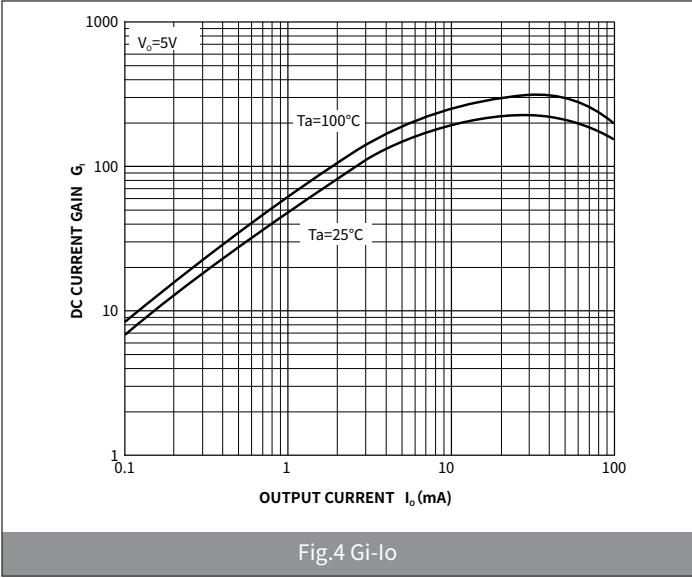
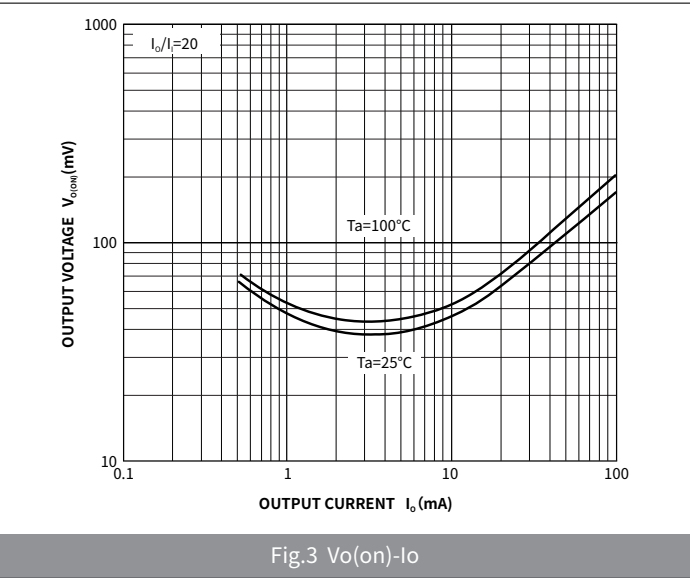
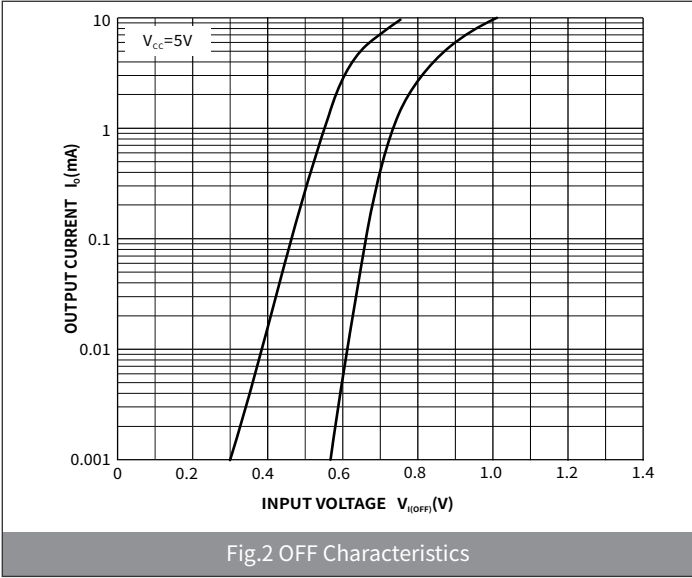
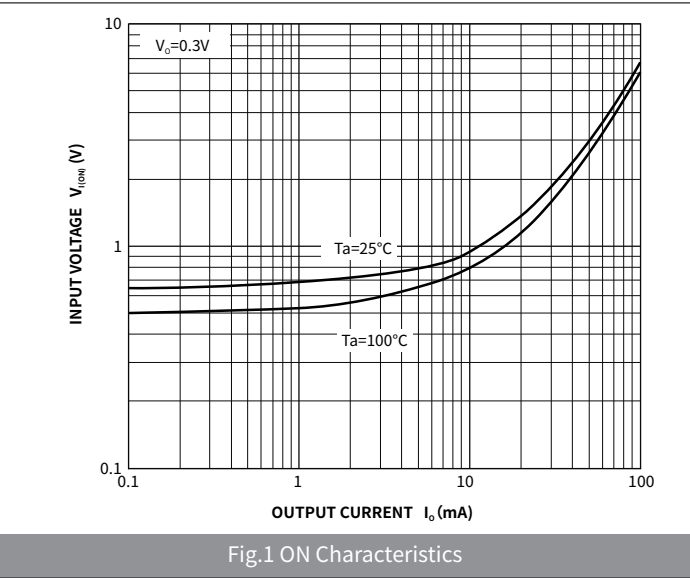
SOT-723



Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	SYMBOL	UNIT	Condition	Min	Typ	Max
Input voltage	$V_{I(off)}$	V	$I_o=100\mu A, V_{cc}=5V$	0.5	-	-
	$V_{I(on)}$		$I_o=5mA, V_o=0.3V$	-	-	1.3
Output voltage	$V_{O(on)}$		$I_o/I_i=5mA/0.25mA$	-	-	0.3
Input current	I_i	mA	$V_i=5V$	-		1.8
Output current	$I_{O(off)}$	μA	$V_{cc}=50V, V_i=0V$	-	-	0.5
DC Current Gain	h_{FE}	-	$V_o=5V, I_o=10mA$	80	-	-
Input resistance	R_i	k Ω	-	3.29	4.7	6.11
Resistance ratio	R_2/R_1	-	-	8	10	12

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



● Package Outline Dimensions (SOT-723)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.15	1.25	0.045	0.049
B	0.75	0.85	0.030	0.033
C	1.15	1.25	0.045	0.049
D	0.27	0.37	0.010	0.015
E	0.17	0.27	0.007	0.010
F	0.80TYP		0.032TYP	
G	-	0.50	-	0.020
H	0.08	0.15	0.003	0.006
I	0.43	0.5	0.017	0.020
θ	REF 7°			

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.30	0.50	0.012	0.020
B	0.70	0.90	0.028	0.035