

SOT-23 Plastic-Encapsulate Transistors

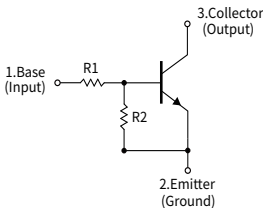
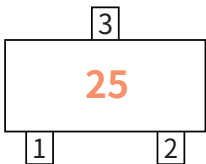
Features

- 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

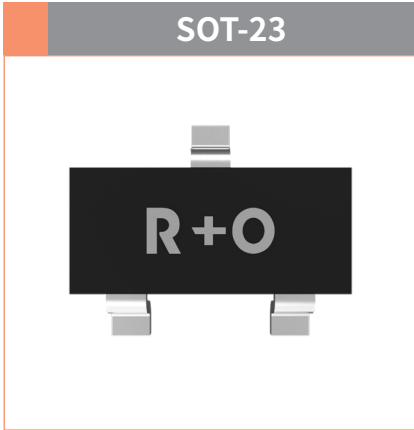
Mechanical Data

- Case: SOT-23
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026

Function Diagram



Supply Voltage
VCC 50V
Collector Current
0.03 Ampere



Ordering Information

Table with 7 columns: PACKAGE, PACKAGE CODE, UNIT WEIGHT(g), REEL(pcs), BOX(pcs), CARTON(pcs), DELIVERY MODE. Row 1: SOT-23, R1, 0.0085, 3000, 15000, 150000, 7"

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

Table with 4 columns: PARAMETER, SYMBOL, UNIT, VALUE. Rows include Supply Voltage (VCC, V, 50), Input Voltage (VIN, V, -10~+40), Output Current (IO, mA, 30), Power Dissipation (PD, mW, 200), Storage temperature (Tstg, °C, -55 ~+150), and Junction temperature (Tj, °C, -55 ~+150).

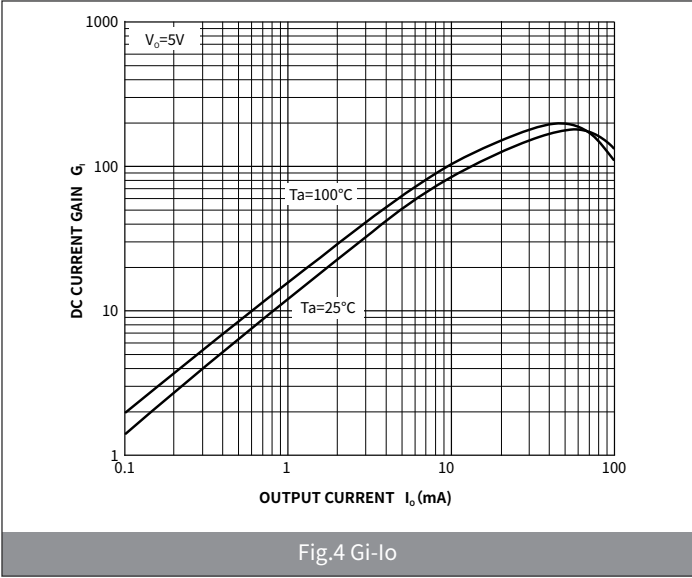
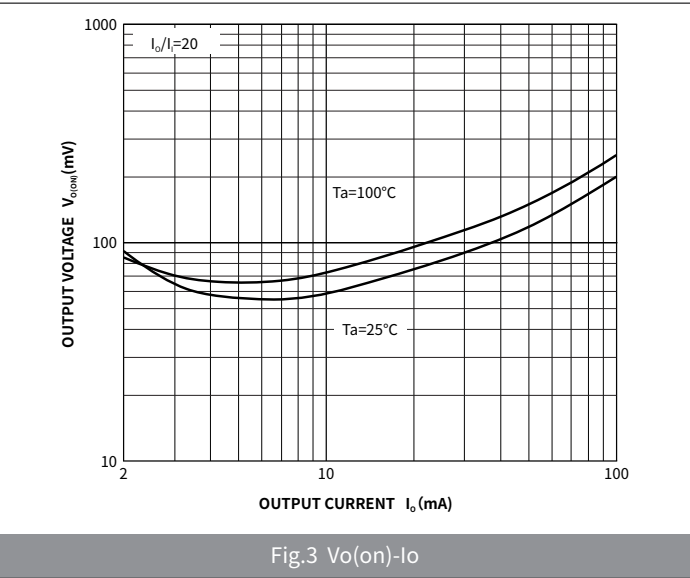
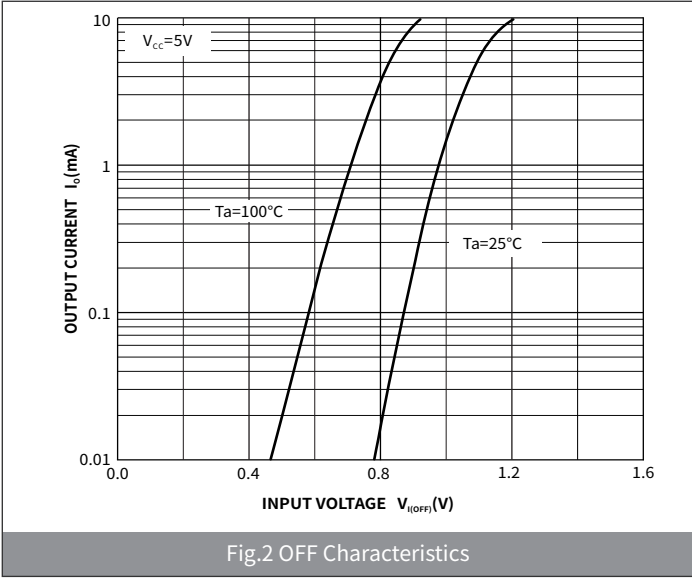
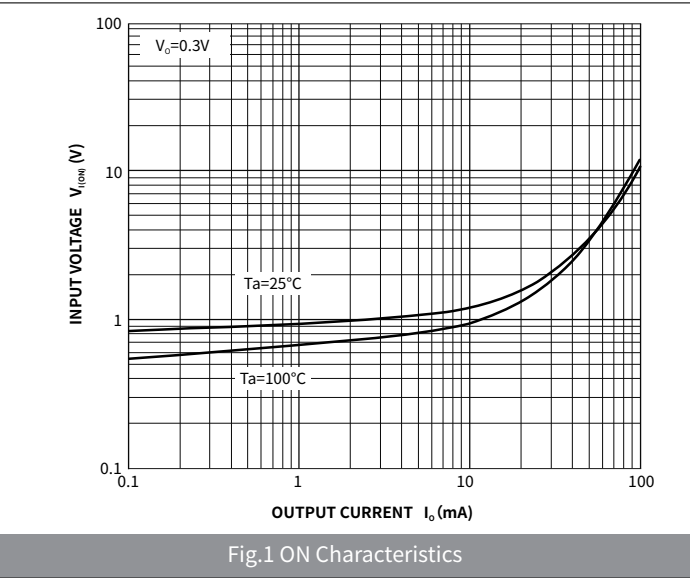
Small-signal Characteristics

Table with 7 columns: ITEM, SYMBOL, Condition, UNIT, Min, Typ, Max. Row 1: Transition frequency, fT, IO= 5mA, VO= 10V, MHz, -, 250, -

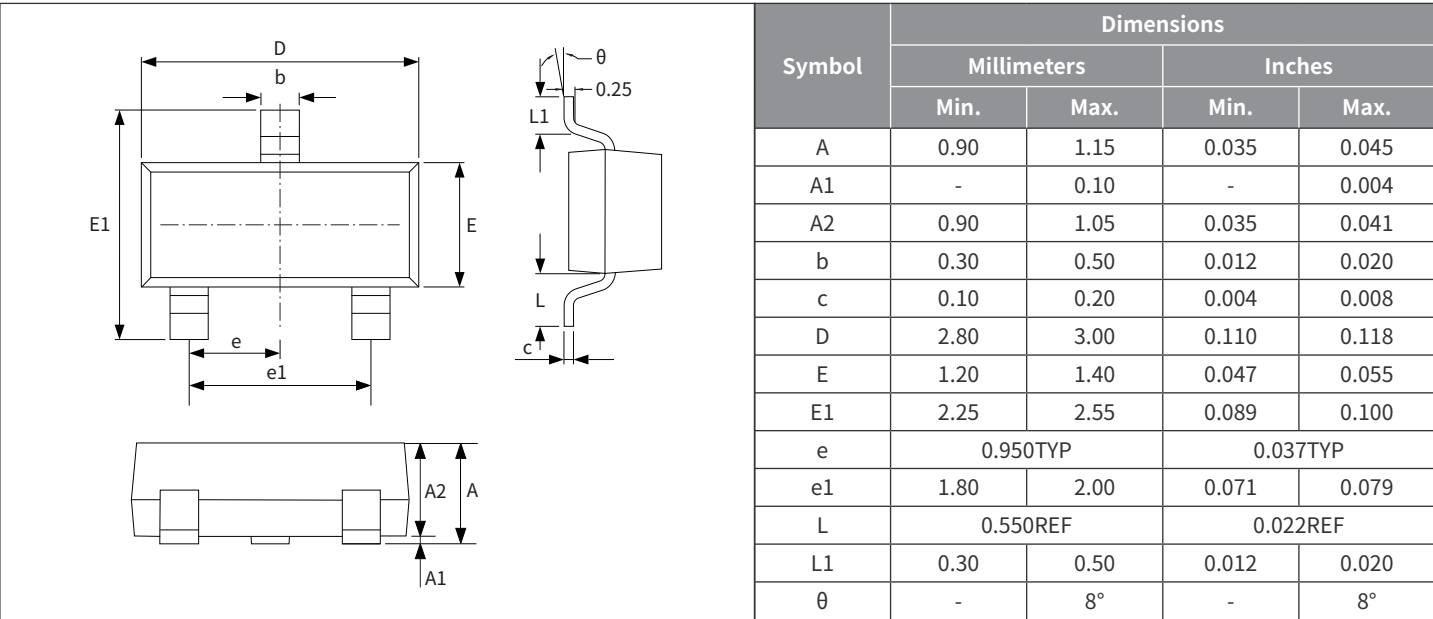
Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	SYMBOL	UNIT	Condition	Min	Typ	Max
Input voltage	$V_{I(off)}$	V	$I_o=100\mu A, V_{cc}=5V$	0.5	-	-
	$V_{I(on)}$		$I_o=5mA, V_o=0.2V$	-	-	3
Output voltage	$V_{O(on)}$		$I_o/I_i=10mA/0.5mA$	-	-	0.3
Input current	I_i	mA	$V_i=5V$	-		0.36
Output current	$I_{O(off)}$	μA	$V_{cc}=50V, V_i=0V$	-	-	0.5
DC Current Gain	G_i	-	$V_o=5V, I_o=5mA$	56	-	-
Input resistance	R_i	k Ω	-	15.4	22	28.6
Resistance ratio	R_2/R_1	-	-	0.8	1	1.2

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



● Package Outline Dimensions (SOT-23)



● Suggested Pad Layout

