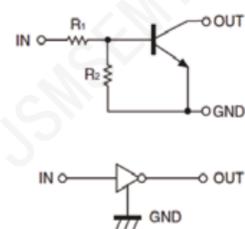


## Features

- ◆ 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 negative 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


 1.IN  
 2.GND  
 3.OUT  
 Equivalent Circuit

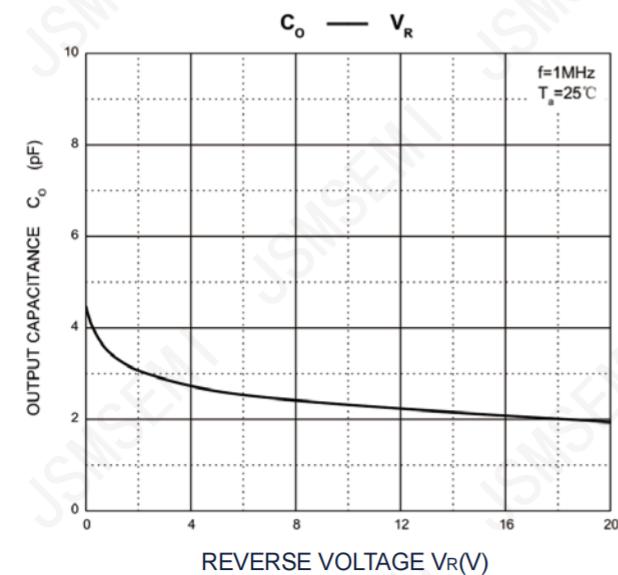
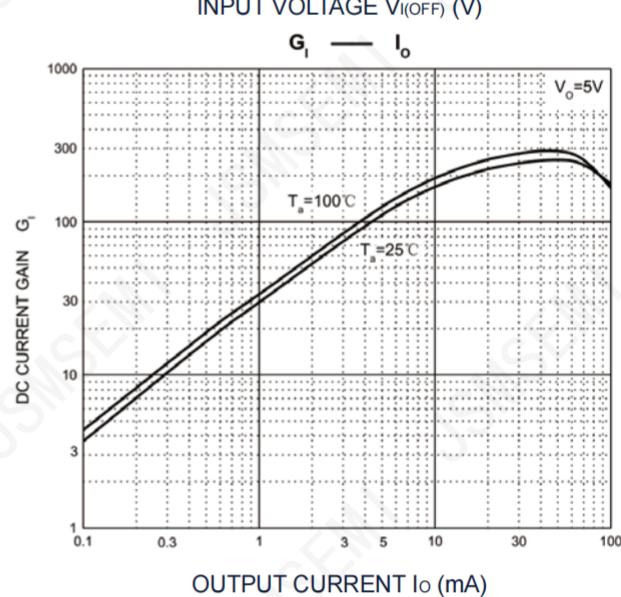
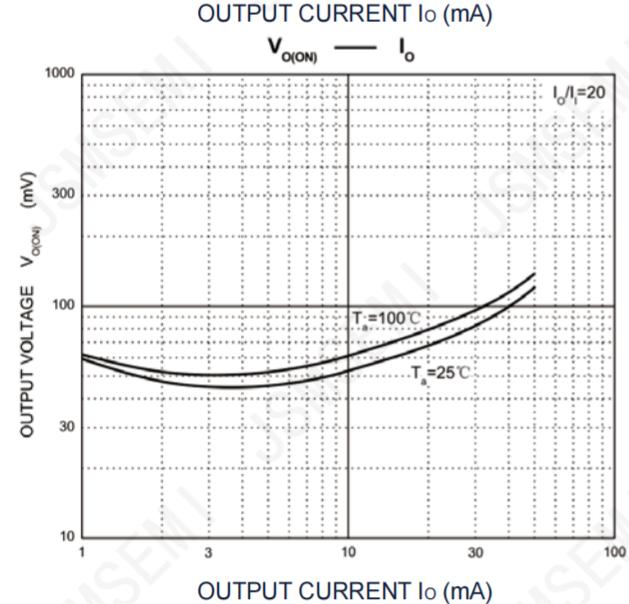
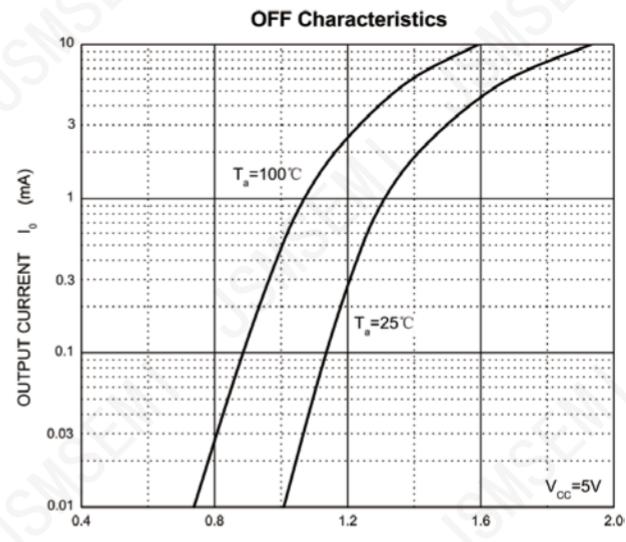
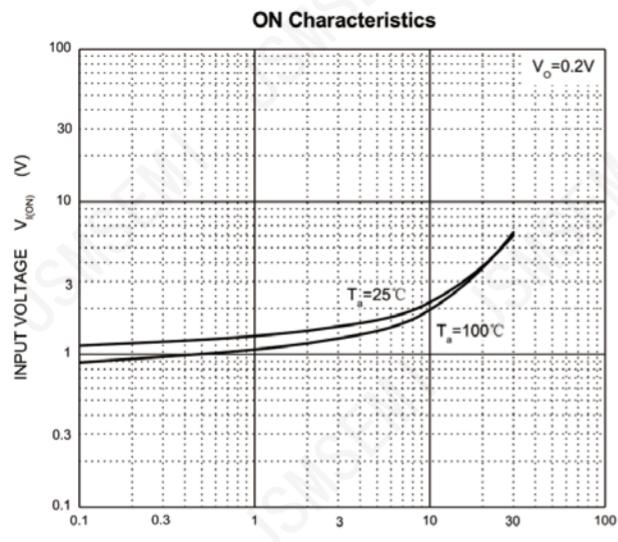
## Absolute Maximum Ratings (TA=25°C)

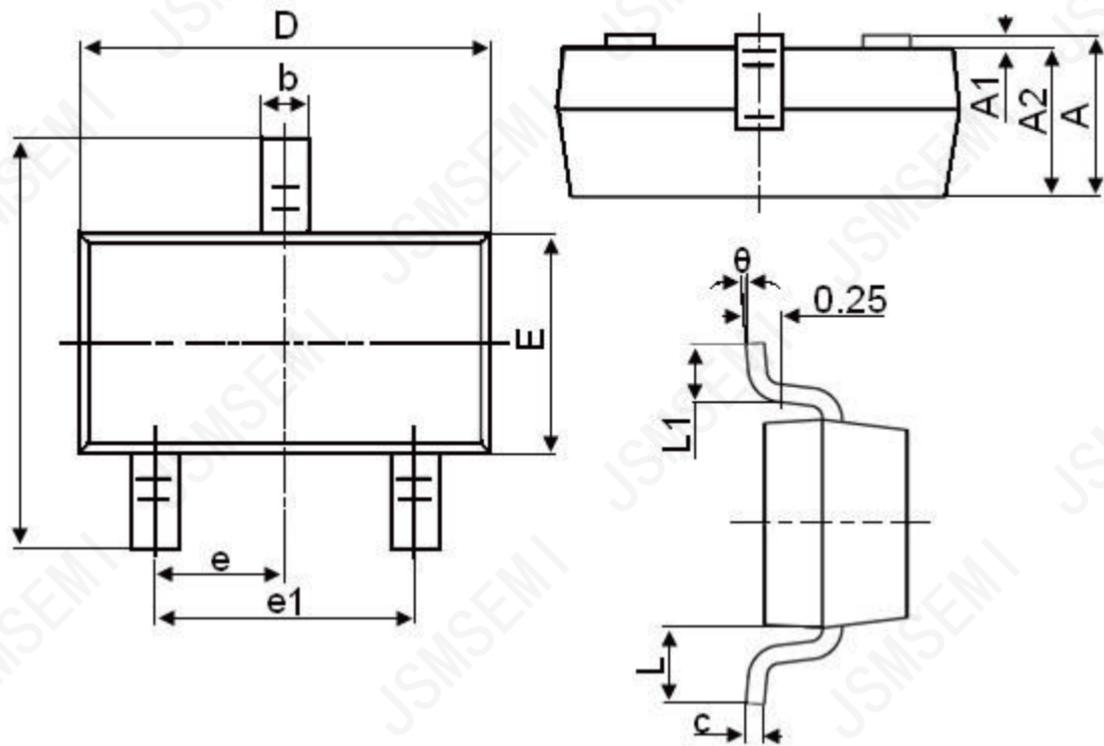
Symbol	Parameter	Limits	Unit
V <sub>CC</sub>	Supply Voltage	50	V
V <sub>IN</sub>	Input Voltage	-10 ~ +40	V
I <sub>O</sub>	Output Current	30	mA
I <sub>CM</sub>	Peak Collector Current	100	mA
P <sub>D</sub>	Power Dissipation	200	mW
T <sub>J</sub> , T <sub>STG</sub>	Operation Junction and Storage Temperature Range	-55 ~ +150	°C

## Electrical Characteristics (TA=25°C unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V <sub>I(off)</sub>	Input voltage	V <sub>CC</sub> =5V, I <sub>O</sub> =100μA	0.5			V
V <sub>I(on)</sub>		V <sub>O</sub> =0.2V, I <sub>O</sub> =5mA			3	V
V <sub>O(on)</sub>	Output voltage	I <sub>O</sub> /I <sub>I</sub> =10mA/0.5mA		0.1	0.3	V
I <sub>I</sub>	Input current	V <sub>I</sub> =5V			0.36	mA
I <sub>O(off)</sub>	Output current	V <sub>CC</sub> =50V, V <sub>I</sub> =0			0.5	μA
G <sub>I</sub>	DC current gain	V <sub>O</sub> =5V, I <sub>O</sub> =5mA	56			
R <sub>1</sub>	Input resistance		15.4	22	28.6	kΩ
R <sub>2</sub> /R <sub>1</sub>	Resistance ratio		0.8	1	1.2	
f <sub>T</sub>	Transition frequency	V <sub>O</sub> =10V, I <sub>O</sub> =5mA, f=100MHz		250		MHz

## Typical Characteristics



**SOT23 Package Outline Dimensions**


Symbol	Dimensions in Millimeters	
	mm	
	Min	Max
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

## Revision History

Rev.	Change	Date
V1.0	Initial version	6/27/2021

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