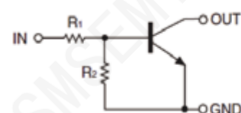
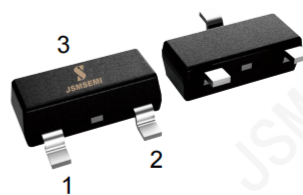


Features

- ◆ 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



Equivalent Circuit

1.IN
2.GND
3.OUT

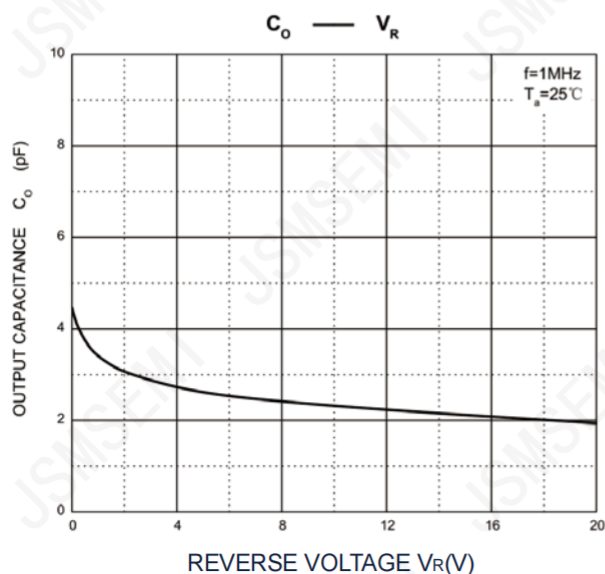
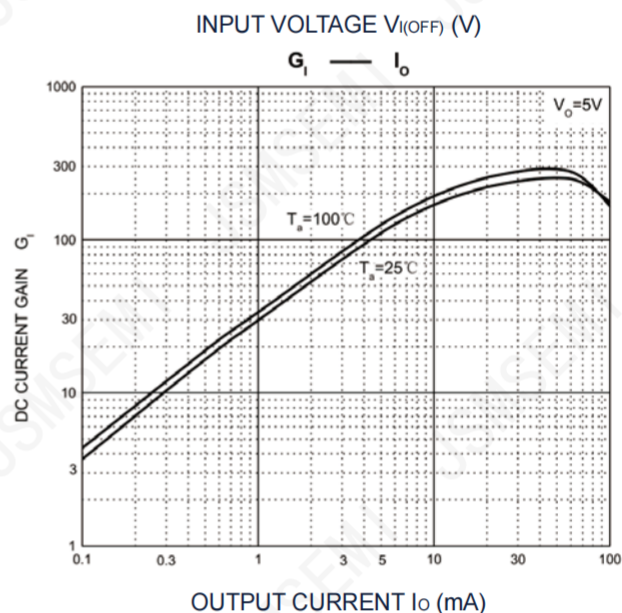
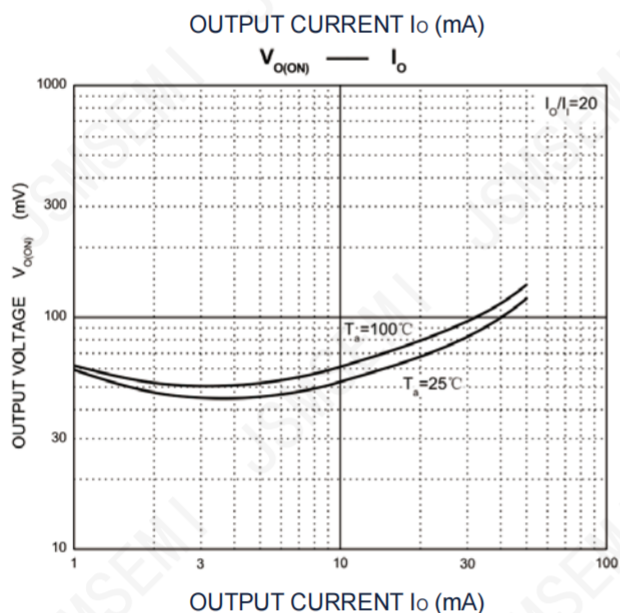
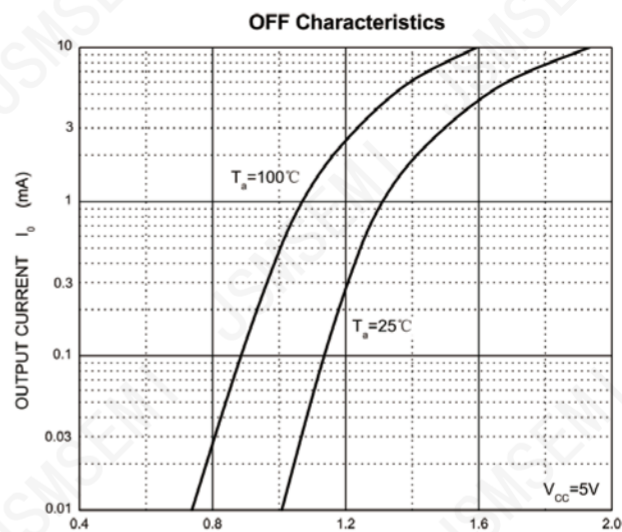
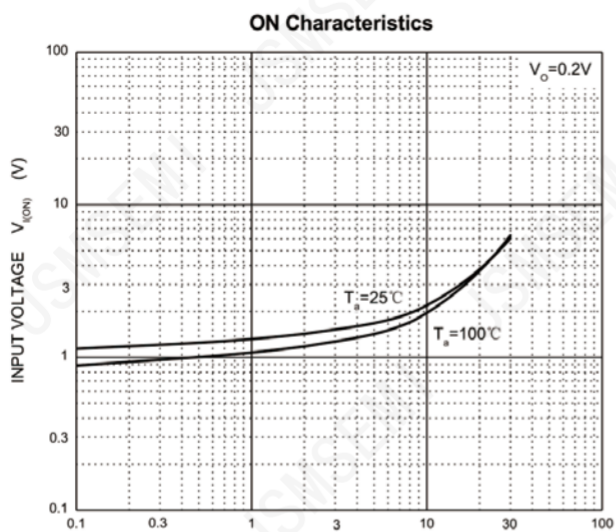
Absolute Maximum Ratings (TA=25°C)

Symbol	Parameter	Limits	Uniat
V _{CC}	Supply Voltage	50	V
V _{IN}	Input Voltage	-10 ~ +40	V
I _O	Output Current	30	mA
I _{CM}	Peak Collector Current	100	mA
P _D	Power Dissipation	200	mW
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55 ~ +150	°C

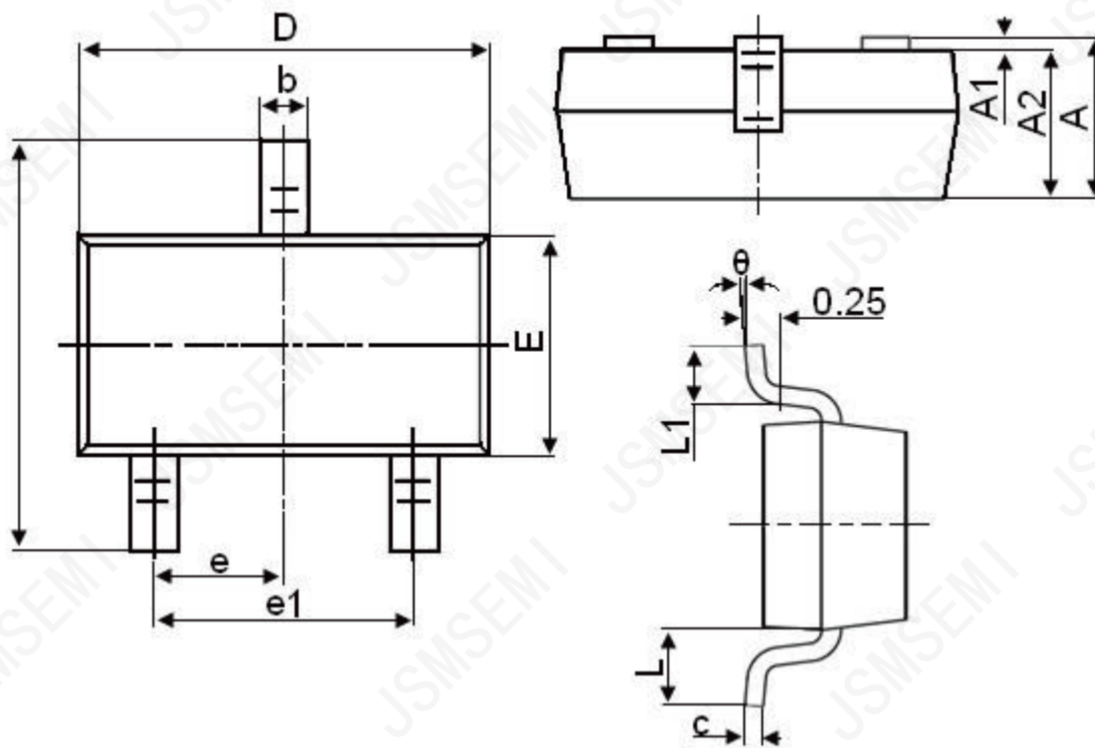
Electrical Characteristics (TA=25°C unless otherwise specified)

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

Important Notice

JSMSEMI Semiconductor (JSMSEMI) PRODUCTS ARE NEITHER DESIGNED NOR INTENDED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS UNLESS THE SPECIFIC JSMSEMI PRODUCTS ARE SPECIFICALLY DESIGNATED BY JSMSEMI FOR SUCH USE. BUYERS ACKNOWLEDGE AND AGREE THAT ANY SUCH USE OF JSMSEMI PRODUCTS WHICH JSMSEMI HAS NOT DESIGNATED FOR USE IN MILITARY AND/OR AEROSPACE, AUTOMOTIVE OR MEDICAL DEVICES OR SYSTEMS IS SOLELY AT THE BUYER' S RISK.

JSMSEMI assumes no liability for application assistance or customer product design. Customers are responsible for their products and applications using JSMSEMI products.

Resale of JSMSEMI products or services with statements diferent from or beyond the parameters stated by JSMSEMI for that product or service voids all express and any implied warranties for the associated JSMSEMI product or s ervice. JSMSEMI is not responsible or liable for any such statements.

JSMSEMI All Rights Reserved. Information and data in this document are owned by JSMSEMI wholly and may not be edited, reproduced, or redistributed in any way without the express written consent from JSMSEMI.

Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the JSMSEMI product that you intend to use.

For additional information please contact Kevin@jsemsemi.com or visit www.jsemsemi.com