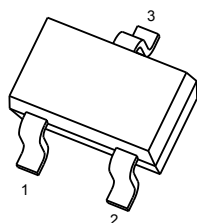


FEATURES

- 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

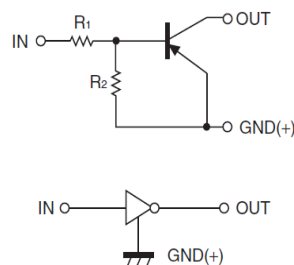
PIN CONNENCTIONS and MARKING

MARKING:33



SOT-323

1. IN
2. GND
3. OUT



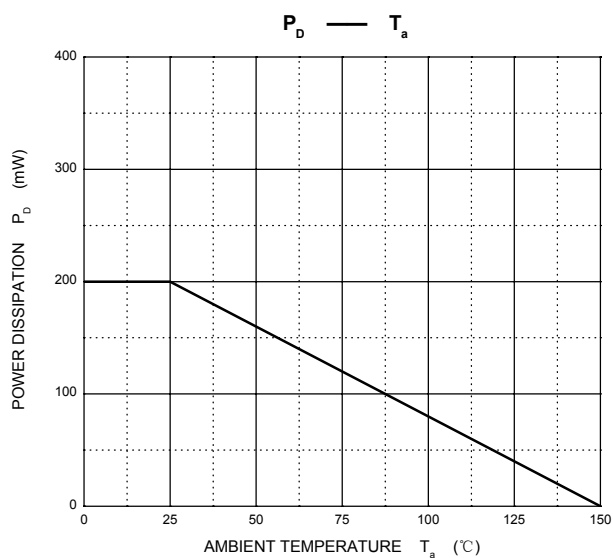
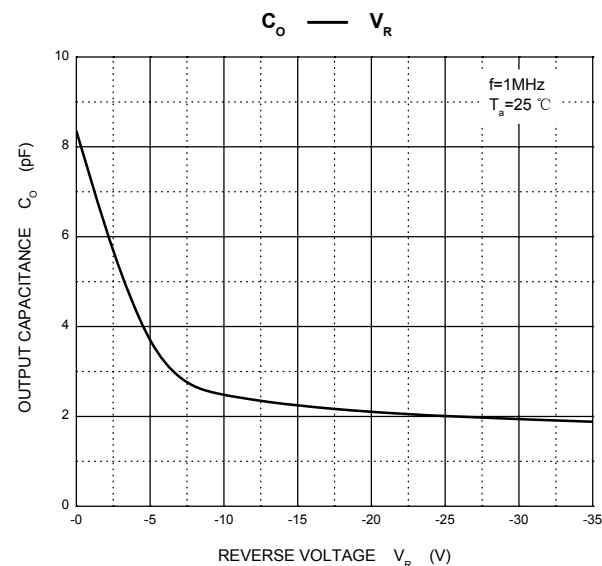
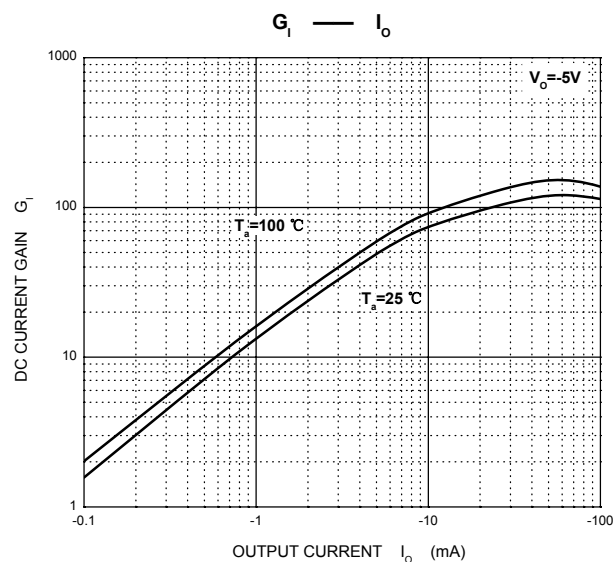
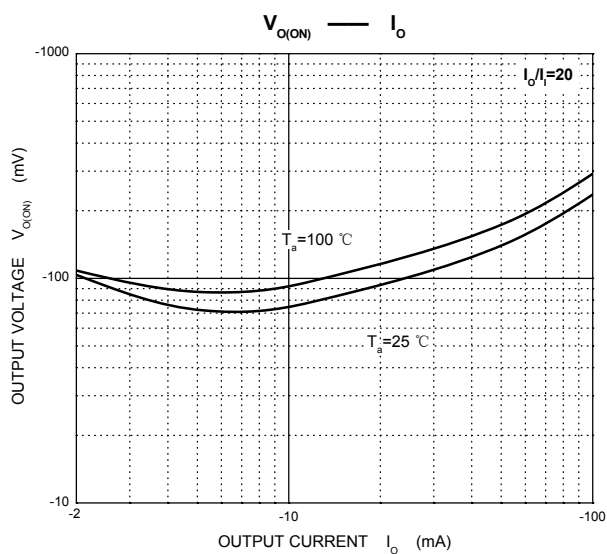
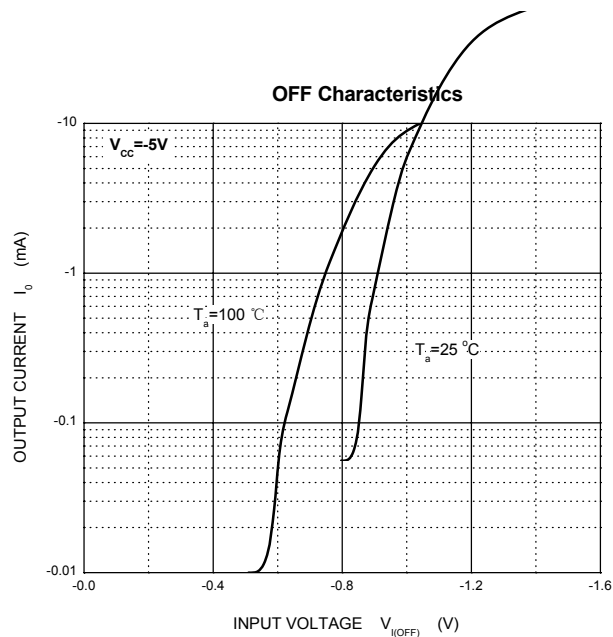
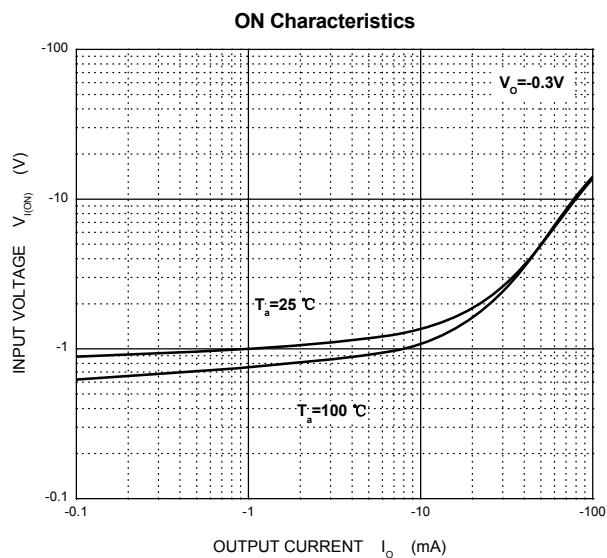
MAXIMUM RATINGS(Ta=25°C unless otherwise noted)

Symbol	Parameter	Limits	Unit
V_{CC}	Supply Voltage	-50	V
V_{IN}	Input Voltage	-20~+7	V
I_O	Output Current	-100	mA
P_D	Power Dissipation	200	mW
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

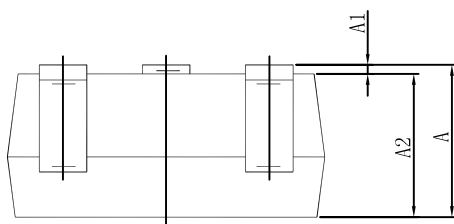
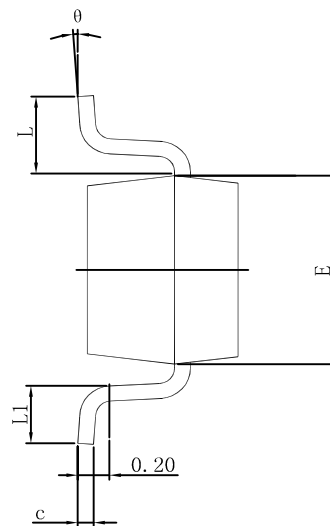
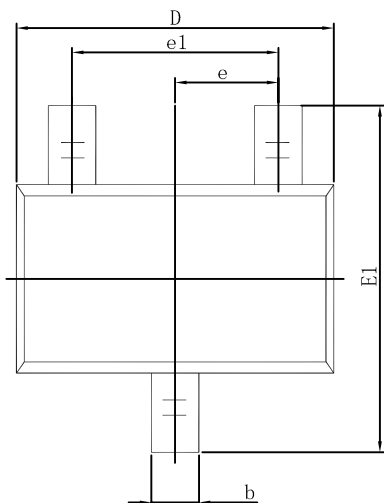
ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Input voltage	$V_{I(off)}$	$V_{CC}=-5V, I_O=-100\mu A$	-0.3			V
	$V_{I(on)}$	$V_O=-0.3V, I_O=-20mA$			-2.5	V
Output voltage	$V_{O(on)}$	$I_O/I_I=-10mA/-0.5mA$		-0.1	-0.3	V
Input current	I_I	$V_I=-5V$			-1.8	mA
Output current	$I_{O(off)}$	$V_{CC}=-50V, V_I=0$			-0.5	μA
DC current gain	G_I	$V_O=-5V, I_O=-10mA$	30			
Input resistance	R_1		3.29	4.7	6.11	k Ω
Resistance ratio	R_2/R_1		1.7	2.1	2.6	
Transition frequency	f_T	$V_O=-10V, I_O=-5mA, f=100MHz$		250		MHz

Typical Characteristics



SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°