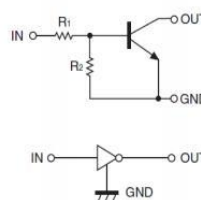


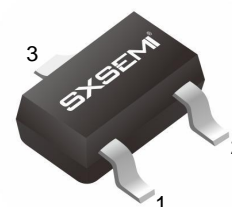
FEATURES

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
- Surface mount package ideally suited for Automatic Insertion

Equivalent Circuit



SOT-323



MARKING: E42

1. IN 2. GND 3. OUT

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

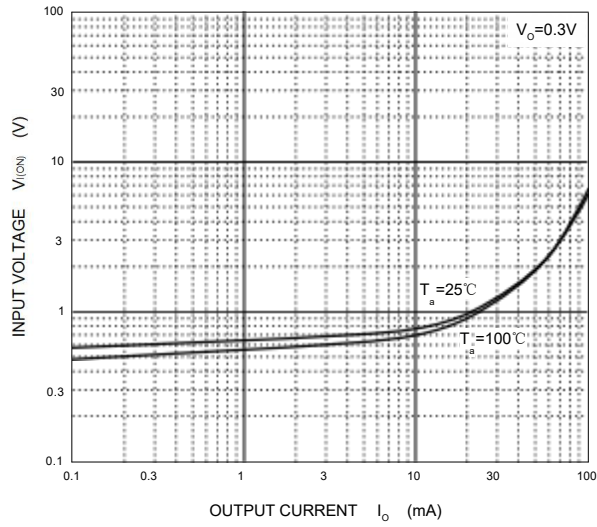
Symbol	Parameter	Limits	Unit
V _{CC}	Supply Voltage	50	V
V _{IN}	Input Voltage	-5 ~ +12	V
I _O	Output Current	100	mA
P _D	Power Dissipation	200	mW
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55 ~ +150	°C

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

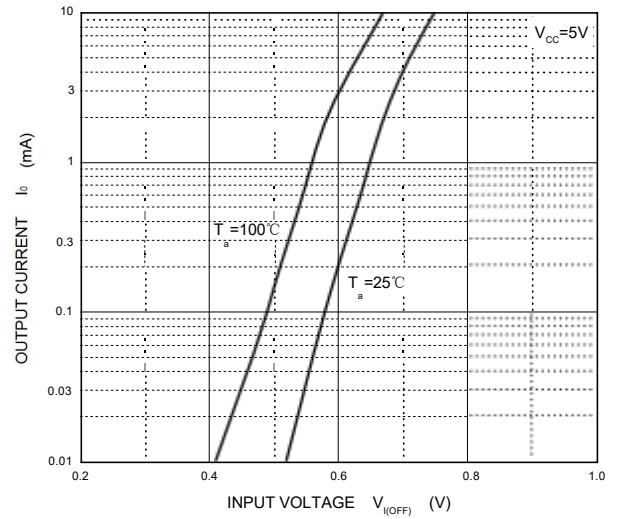
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Input voltage	V _{I(off)}	V _{CC} =5V, I _O =100μA	0.5			V
	V _{I(on)}	V _O =0.3V, I _O =5mA			1.1	V
Output voltage	V _{O(on)}	I _O /I _I =5mA/0.25mA		0.1	0.3	V
Input current	I _I	V _I =5V			3.6	mA
Output current	I _{O(off)}	V _{CC} =50V, V _I =0			0.5	μA
DC current gain	G _I	V _O =5V, I _O =10mA	80			
Input resistance	R _I		1.54	2.2	2.86	kΩ
Resistance ratio	R ₂ /R ₁		17	21	26	
Transition frequency	f _T	V _O =10V, I _O =5mA, f=100MHz		250		MHz

Typical Characteristics

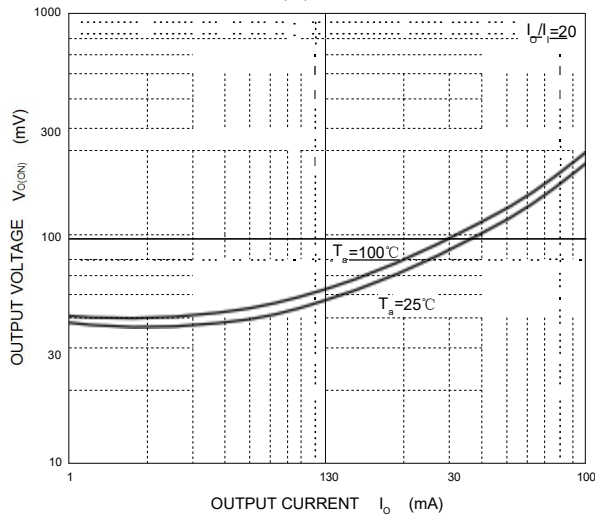
ON Characteristics



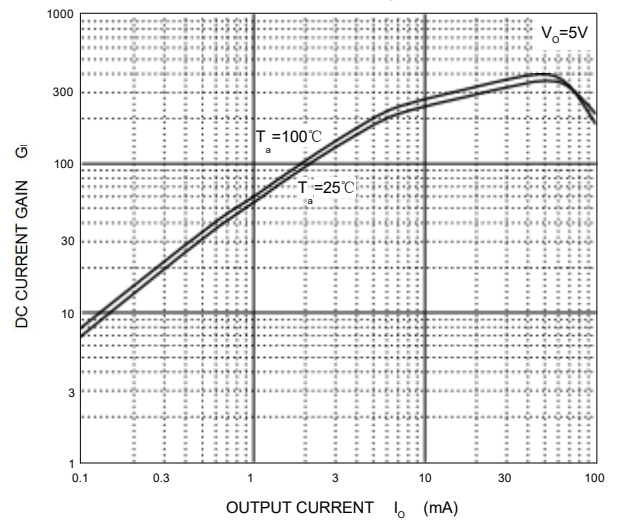
OFF Characteristics



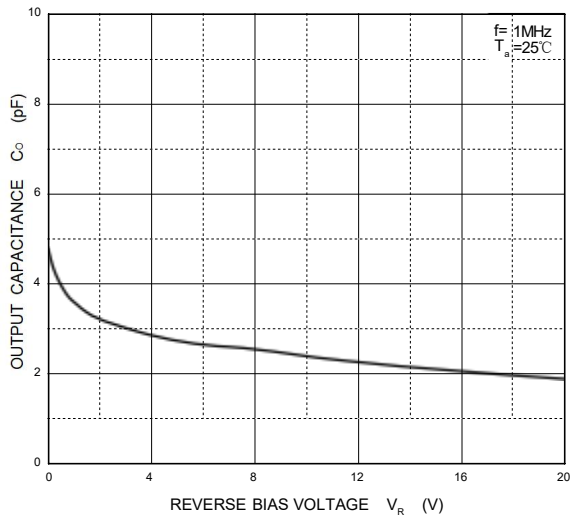
$V_{o(ON)}$ — I_o



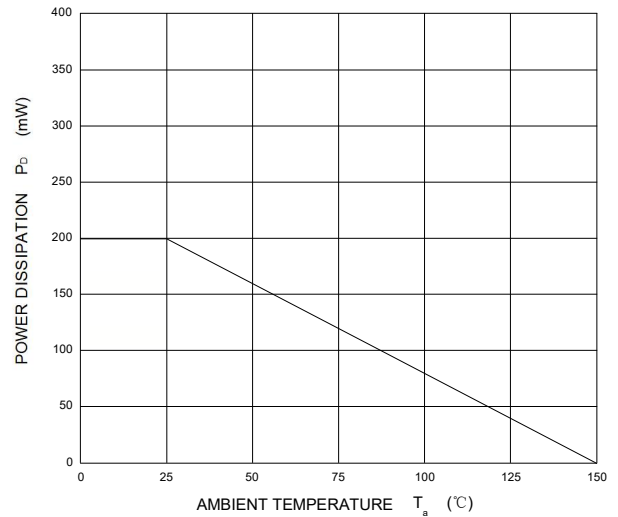
G_i — I_o



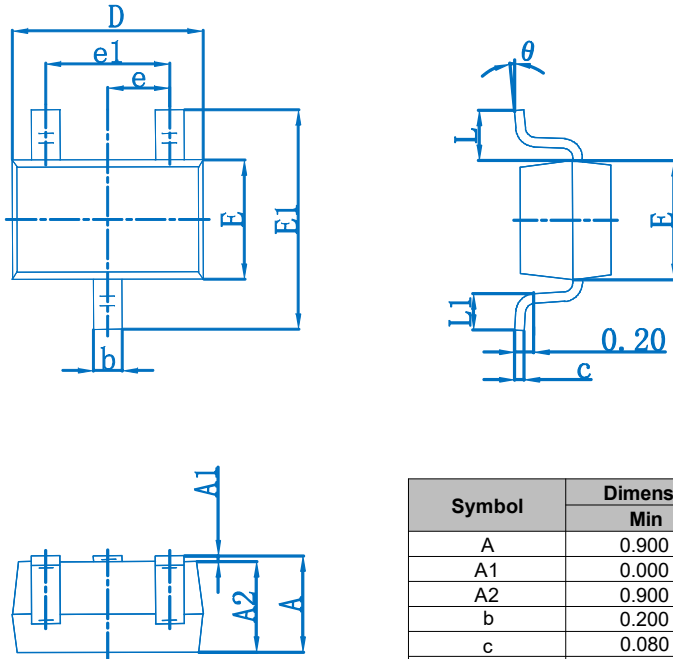
C_o — V_R



P_D — T_a

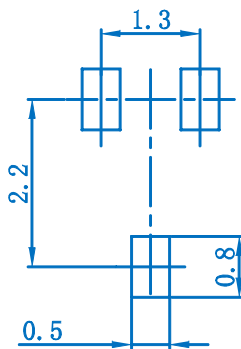


SOT-323 Package Outline Dimensions



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°

SOT-323 Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.