

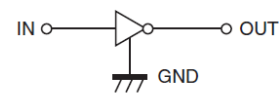
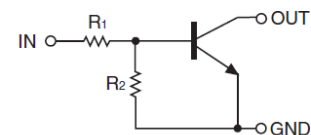


## Features

- 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



SOT-323



## Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
DTC114EUA	SOT-323	24	3000

## Maxmim Ratings (Ta=25 unless otherwise noted)

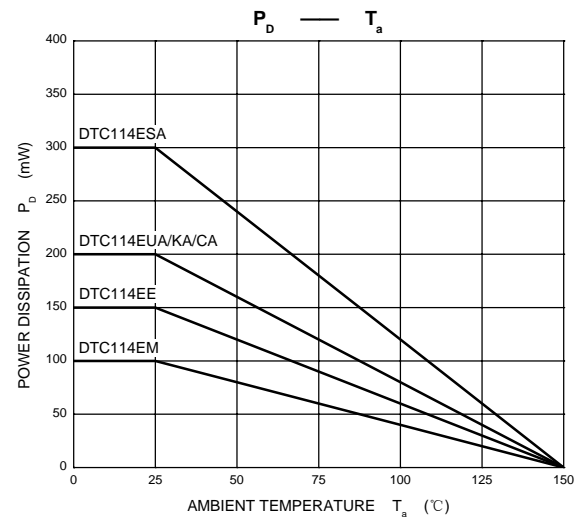
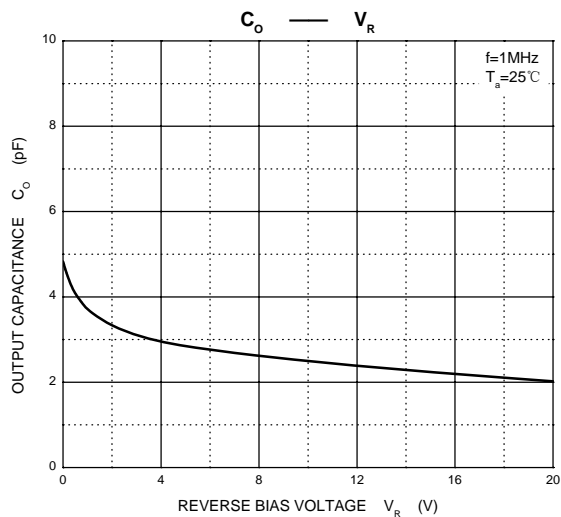
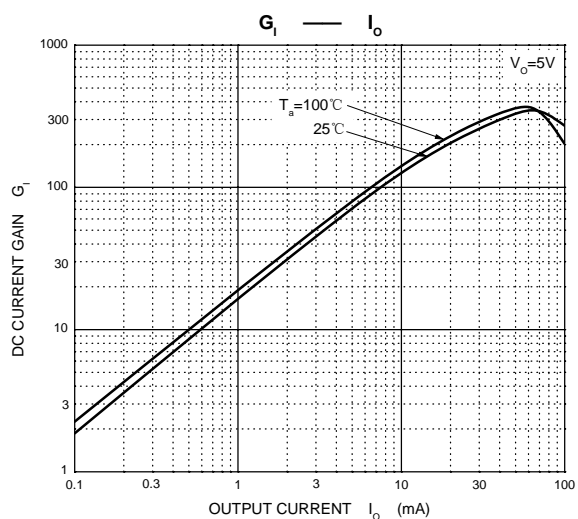
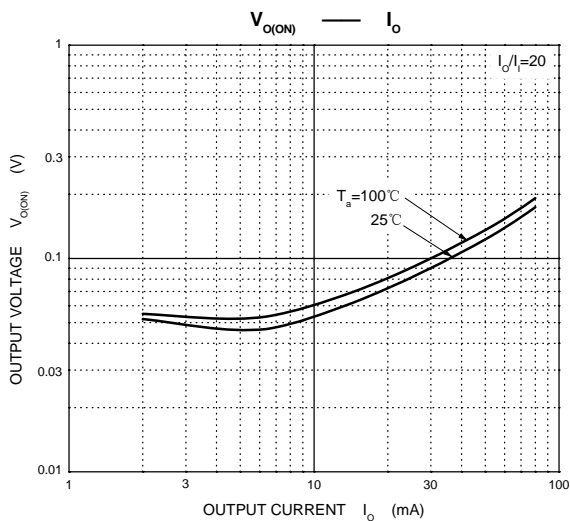
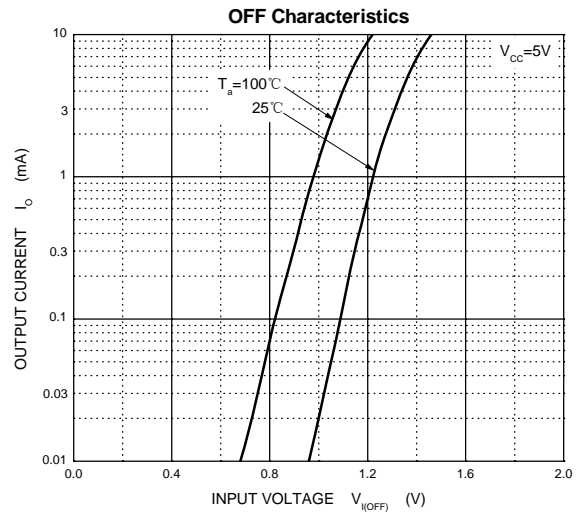
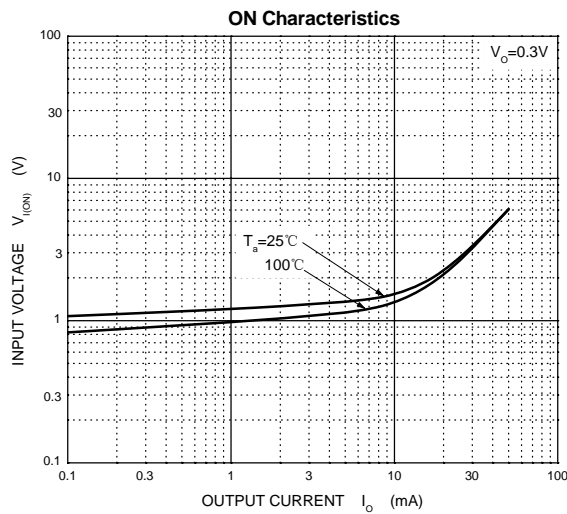
Symbol	Parameter	Limits	Unit
$V_{CC}$	Supply Voltage	50	V
$V_{IN}$	Input Voltage	-10 ~ +40	V
$I_O$	Output Current	50	mA
$I_{CM}$	Peak Collector Current	100	mA
$P_D$	Power Dissipation	200	mW
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55 ~ +150	°C

## Electrcal Charcteristics (Ta=25 unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Input voltage	$V_{I(off)}$	$V_{CC}=5V, I_O=100\mu A$	0.5			V
	$V_{I(on)}$	$V_O=0.3V, I_O=10mA$			3	V
Output voltage	$V_{O(on)}$	$I_O/I_I=10mA/0.5mA$			0.3	V
Input current	$I_I$	$V_I=5V$			0.88	mA
Output current	$I_{O(off)}$	$V_{CC}=50V, V_I=0$			0.5	$\mu A$
DC current gain	$G_I$	$V_O=5V, I_O=5mA$	30			
Input resistance	$R_1$		7	10	13	k $\Omega$
Resistance ratio	$R_2/R_1$		0.8	1	1.2	
Transition frequency	$f_T$	$V_O=10V, I_O=5mA, f=100MHz$		250		MHz

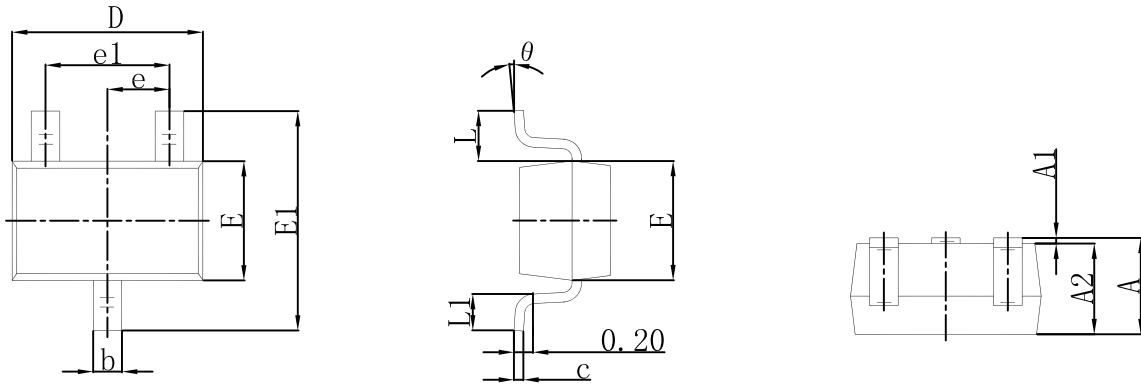


## Typical Characteristics





### SOT-323 Package Information



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°



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