

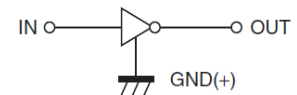
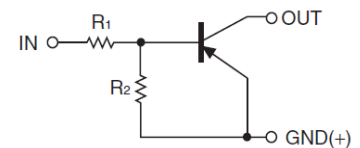


Features

- 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-23
(TO-236-3(SOT-23-3))



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
HDTB143ECT116	SOT-23 (TO-236-3(SOT-23-3))	13	3000

Maxmim Ratings (Ta=25 unless otherwise noted)

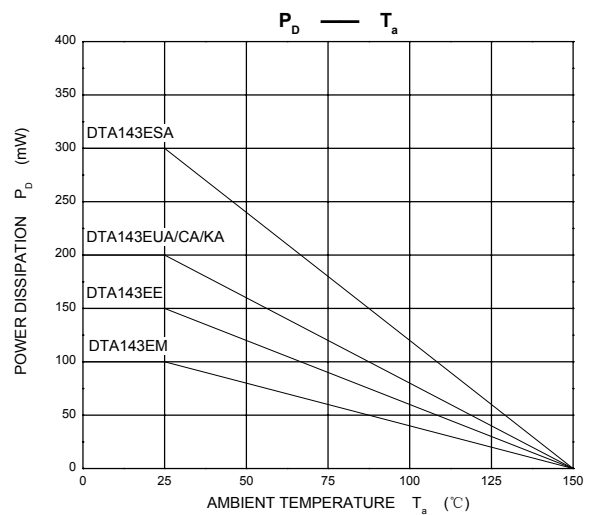
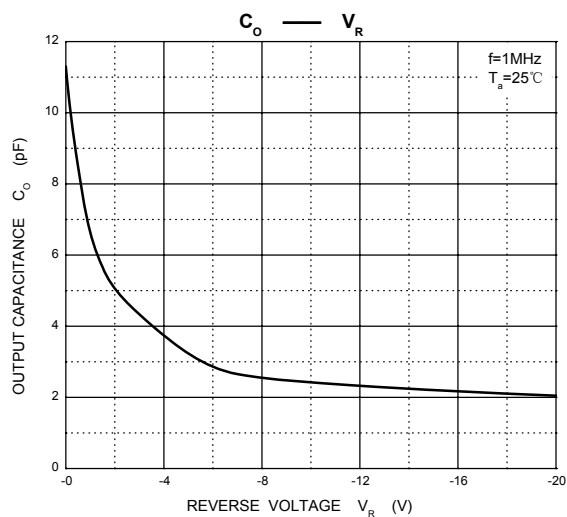
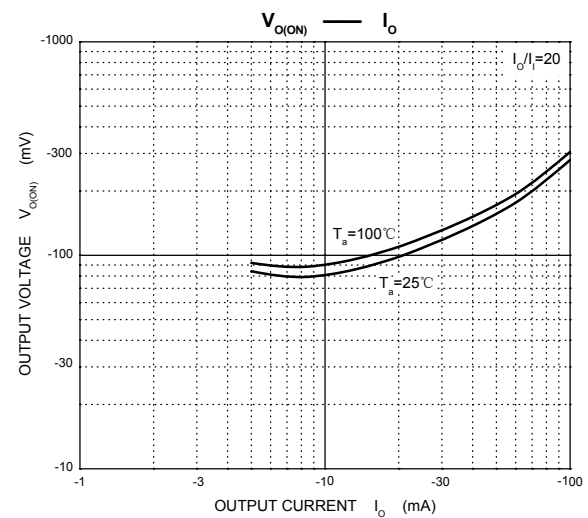
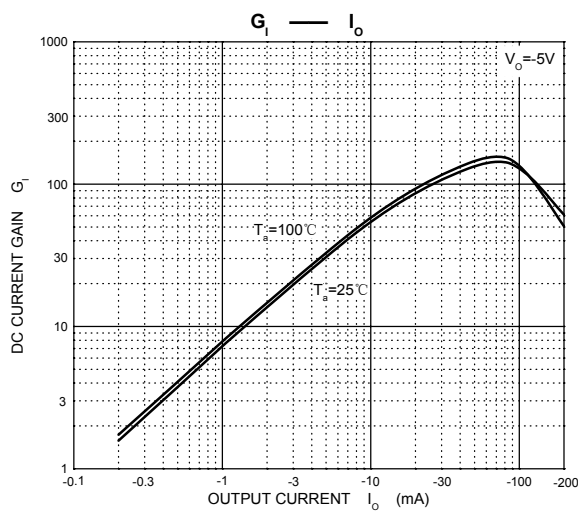
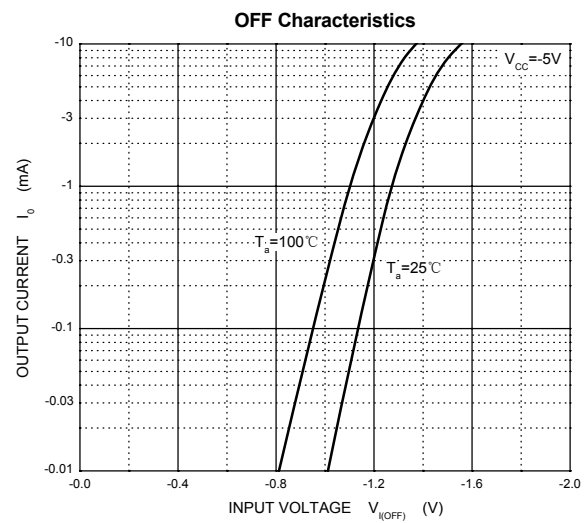
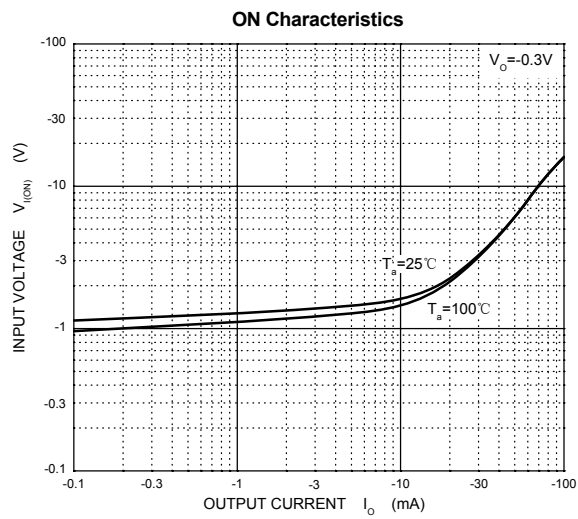
Symbol	Parameter	Limits	Unit
V_{CC}	Supply Voltage	-50	V
V_{IN}	Input Voltage	-30 ~ +10	V
I_O	Output Current	-100	mA
P_D	Power Dissipation	200	mW
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55 ~ +150	°C

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
	$V_{I(on)}$	$V_O = -0.3V, I_O = -20 mA$			-3	V
Output voltage	$V_{O(on)}$	$I_O/I_I = -10mA/-0.5mA$			-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		0.8	1	1.2	
Transition frequency	f_T	$V_O = -10V, I_O = -5mA, f = 100MHz$		250		MHz



Typical Characteristics





SOT-23(TO-236-3(SOT-23-3)) Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23(TO-236-3(SOT-23-3)) 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.



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