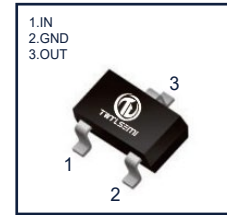
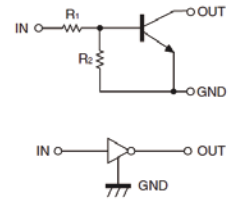


Features

- 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



SOT23



Equivalent Circuit

Absolute Maximum Ratings(TA=25℃)

Symbol	Parameter	Limits	Uniat
V _{CC}	Supply Voltage	50	V
V _{IN}	Input Voltage	-7 ~ +20	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	℃

Electrical Characteristics (TA=25℃ unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V _{I(off)}	Input voltage	V _{CC} =5V,I _O =100μA	0.3			V
V _{I(on)}		V _O =0.3V,I _O =20mA			2.5	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			1.8	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 =10mA	30			
R _I	Input resistance		3.29	4.7	6.11	kΩ
R ₂ /R ₁	Resistance ratio		1.7	2.1	2.6	
f _T	Transition frequency	V _O =10V,I _O =5mA,f=100MHz		250		MHz

Ordering information

Product ID	Marking	Naming rule	Pack	Qty(PCS)
DTC143XCA	43	DTC143XCA ↓ 产品名称 product name	SOT23	3000



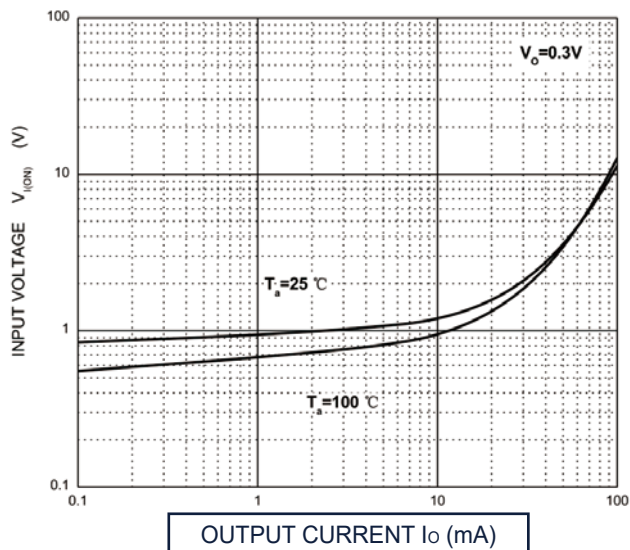
TWTLSEMI

TL-DTC143XCA

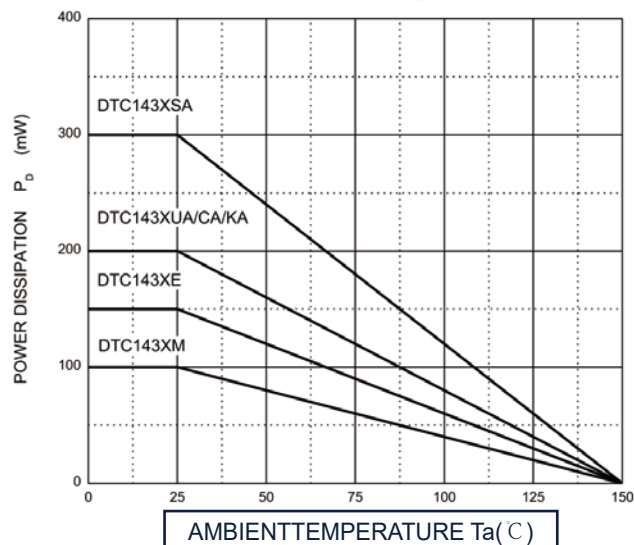
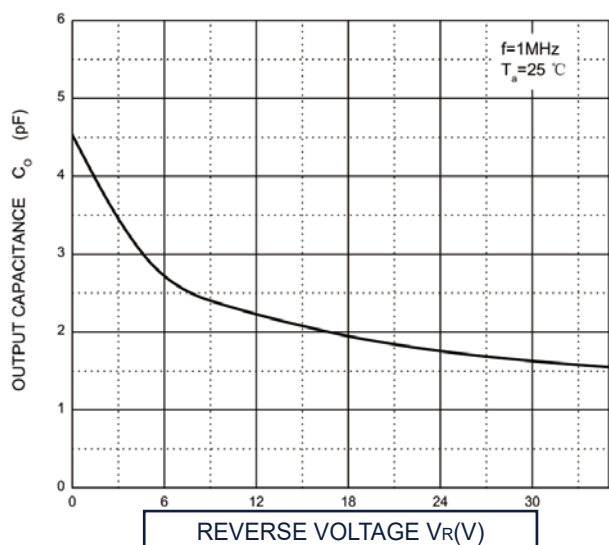
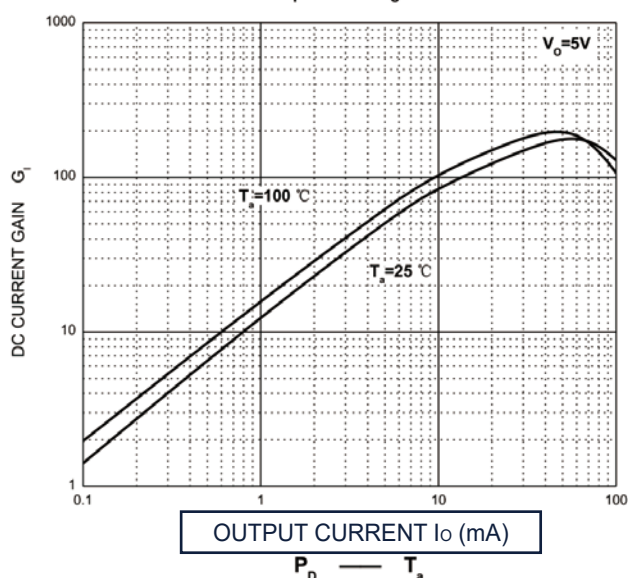
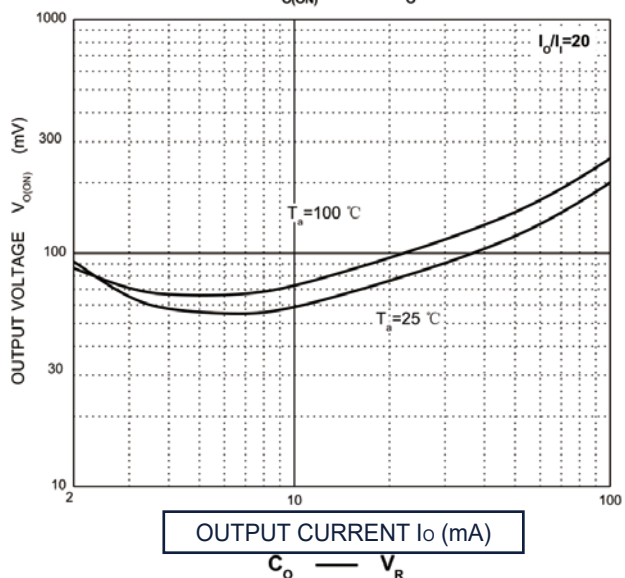
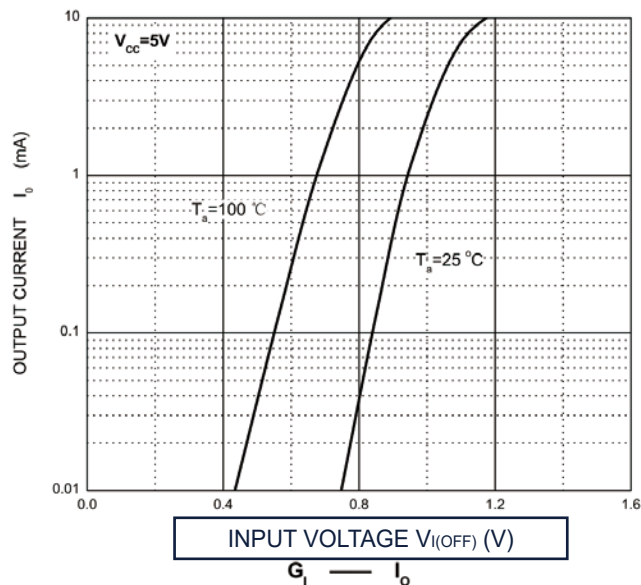
SOT-23 DIGITAL TRANSISTOR (NPN)

Typical Characteristics

ON Characteristics

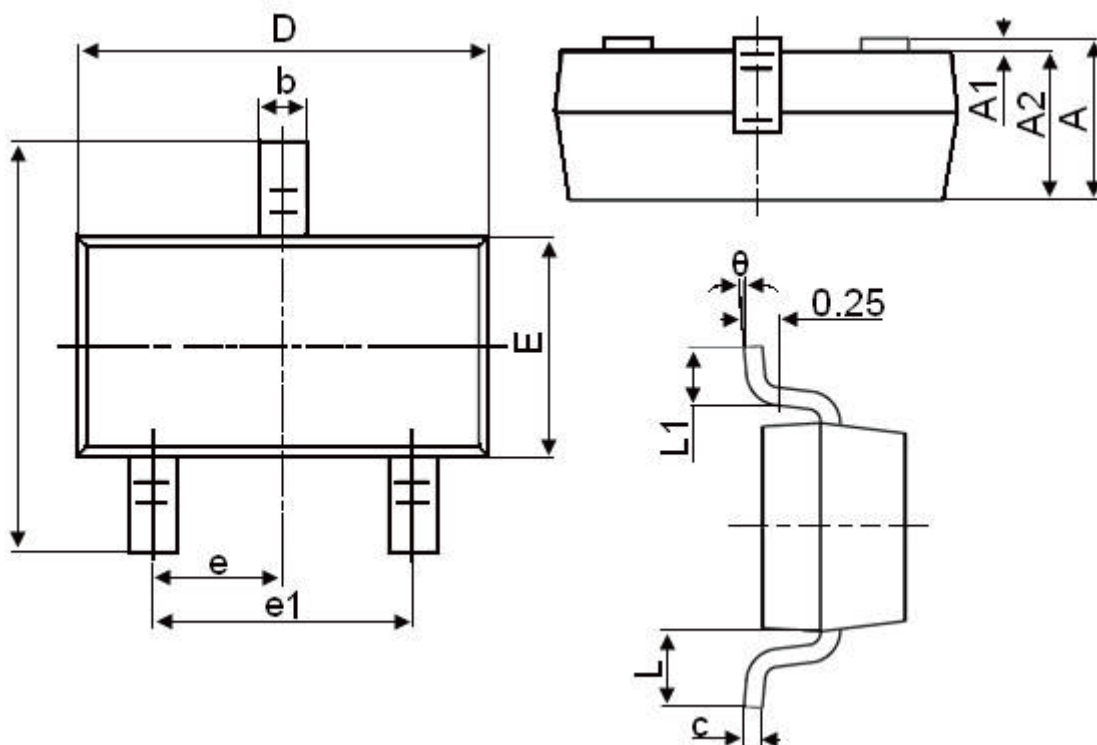


OFF Characteristics





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°