

## Digital Transistors (Built-in Resistors)

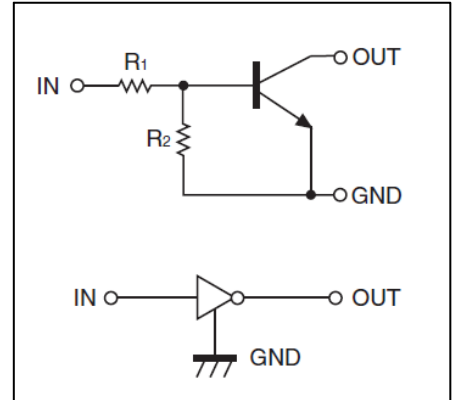
### DTC144EE/DTC144EUA DTC144EKA /DTC144ECA

DIGITAL TRANSISTOR (NPN)

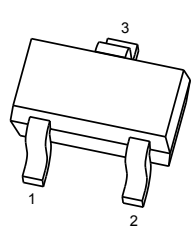
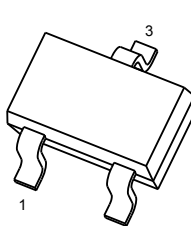
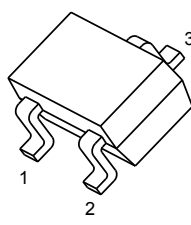
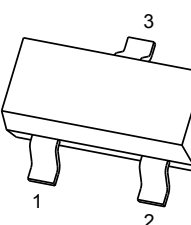
#### FEATURES

- 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

#### • Equivalent Circuit



#### PIN CONNENCTIONS and MARKING

<p><b>DTC144EE</b></p>  <p><b>SOT-523</b></p> <p>1. IN 2. GND 3. OUT</p> <p><b>MARKING: 26</b></p>	<p><b>DTC144EUA</b></p>  <p><b>SOT-323</b></p> <p>1. IN 2. GND 3. OUT</p> <p><b>MARKING: 26</b></p>
<p><b>DTC144EKA</b></p>  <p><b>SOT-23-3L</b></p> <p>1. IN 2. GND 3. OUT</p> <p><b>MARKING: 26</b></p>	<p><b>DTC144ECA</b></p>  <p><b>SOT-23</b></p> <p>1. IN 2. GND 3. OUT</p> <p><b>MARKING: 26</b></p>

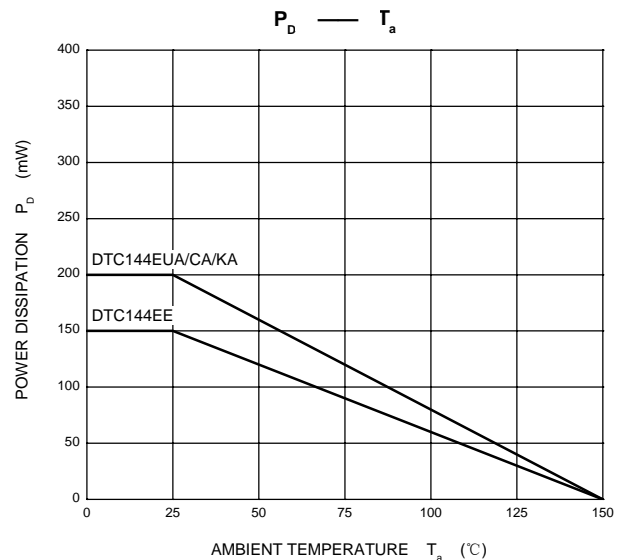
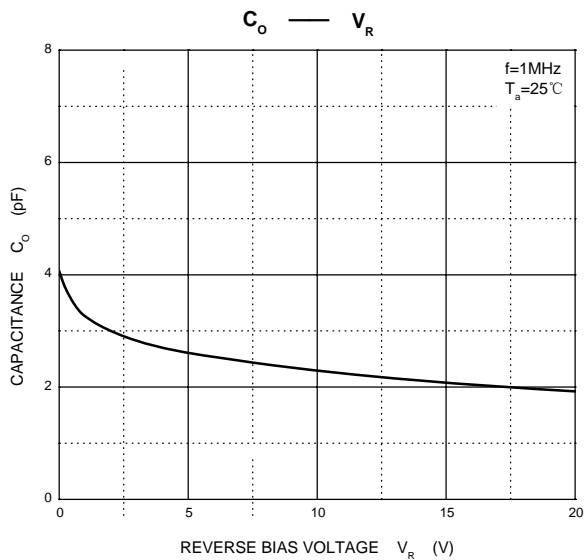
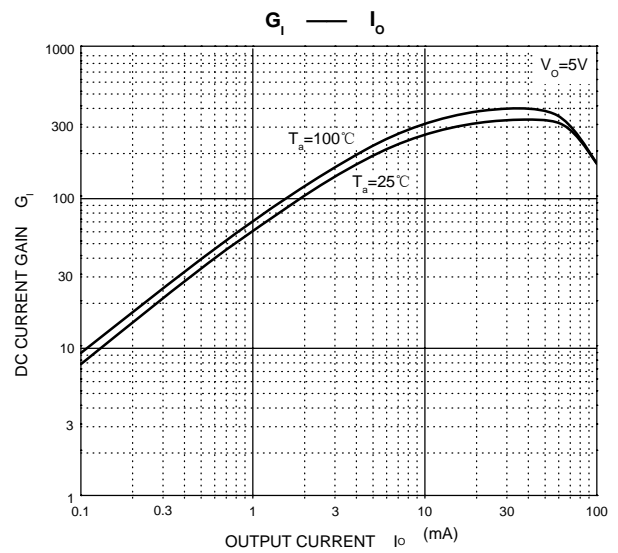
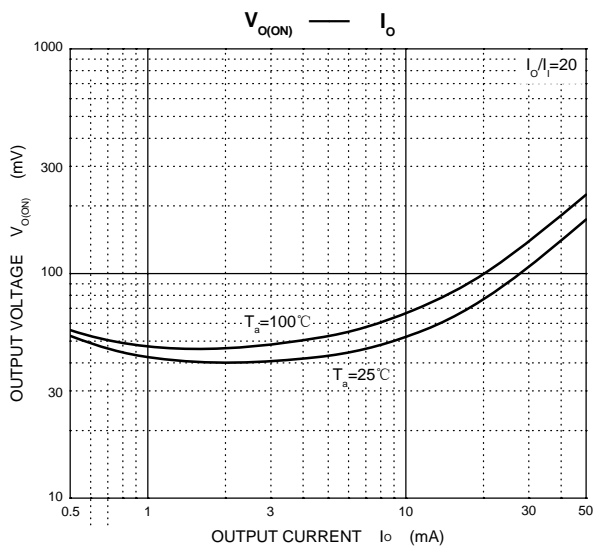
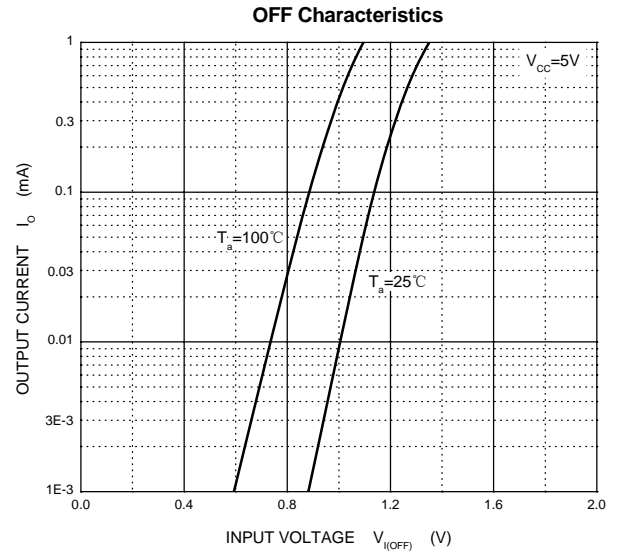
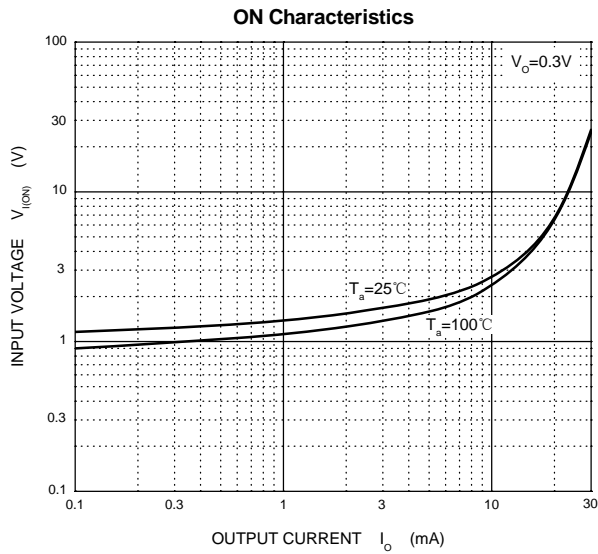
## MAXIMUM RATINGS(Ta=25°C unless otherwise noted)

Symbol	Parameter	Limits(DTC144E□)				Unit
		E	UA	CA	KA	
V <sub>CC</sub>	Supply Voltage	50				V
V <sub>IN</sub>	Input Voltage	-10~+40				V
I <sub>O</sub>	Output Current	30				mA
I <sub>CM</sub>	Peak Collector Current	100				mA
P <sub>D</sub>	Power Dissipation	150	200	200	200	mW
T <sub>j</sub>	Junction Temperature	150				°C
T <sub>stg</sub>	Storage Temperature	-55~+150				°C

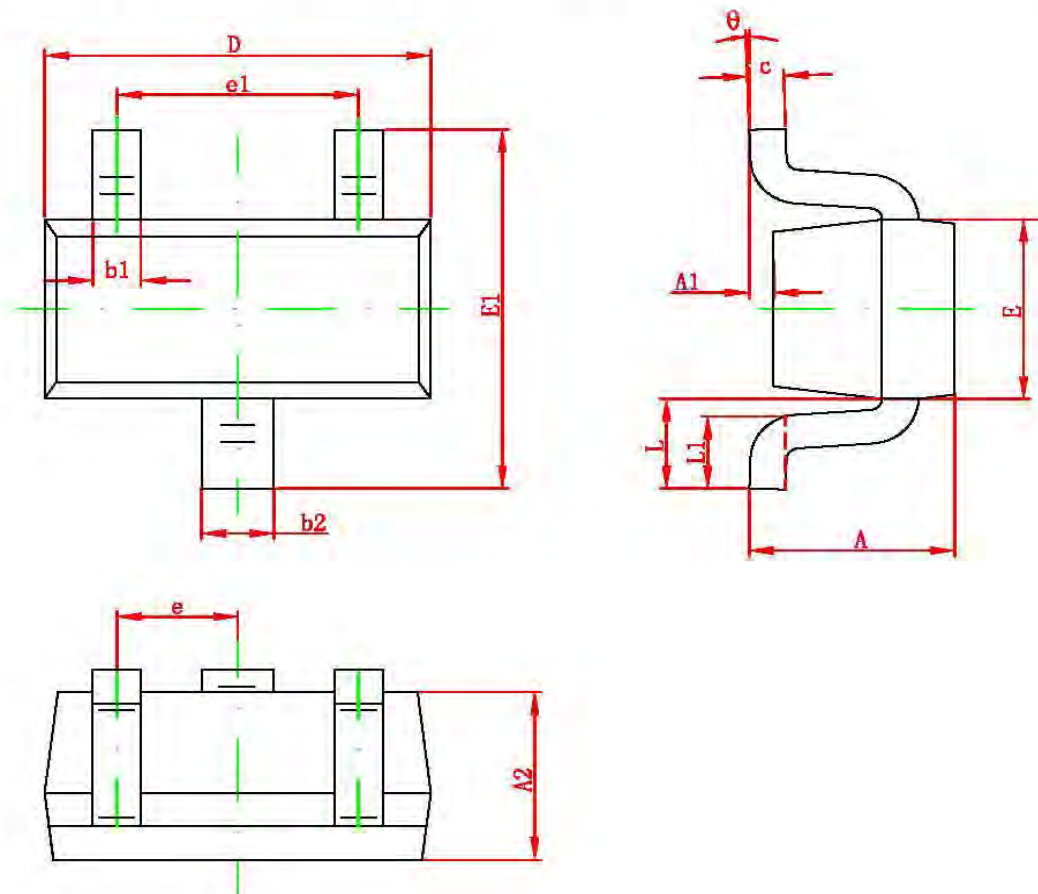
## ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Input voltage	V <sub>I(off)</sub>	V <sub>CC</sub> =5V, I <sub>O</sub> =100μA	0.5			V
	V <sub>I(on)</sub>	V <sub>O</sub> =0.3V, I <sub>O</sub> =2mA			3	V
Output voltage	V <sub>O(on)</sub>	I <sub>O</sub> /I <sub>I</sub> =10mA/0.5mA			0.3	V
Input current	I <sub>I</sub>	V <sub>I</sub> =5V			0.18	mA
Output current	I <sub>O(off)</sub>	V <sub>CC</sub> =50V, V <sub>I</sub> =0			0.5	μA
DC current gain	G <sub>I</sub>	V <sub>O</sub> =5V, I <sub>O</sub> =5mA	68			
Input resistance	R <sub>1</sub>		32.9	47	61.1	kΩ
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>		0.8	1	1.2	
Transition frequency	f <sub>T</sub>	V <sub>O</sub> =10V, I <sub>O</sub> =5mA, f=100MHz		250		MHz

## Typical Characteristics



## SOT-523 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

单击下面可查看定价，库存，交付和生命周期等信息

[>>SHIKUES\(时科\)](#)