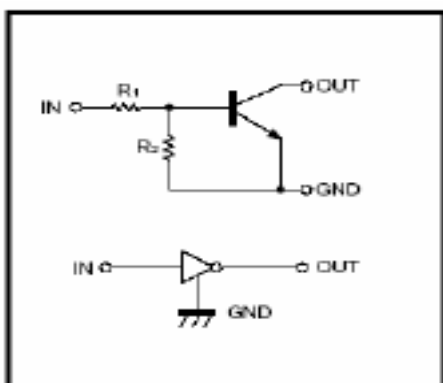


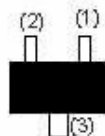

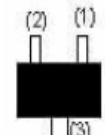
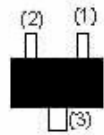
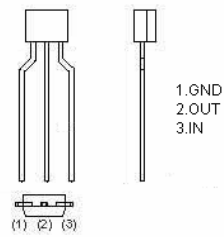
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

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 positive 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



<p>DTC144EE (SOT-523)</p>  <p>1.IN 2.GND 3.OUT</p> <p>Abbreviated symbol : 26</p>	<p>DTC144EUA (SOT-323)</p>  <p>1.IN 2.GND 3.OUT</p> <p>Abbreviated symbol : 26</p>
<p>DTC144EM (SOT-723)</p>  <p>1.IN 2.GND 3.OUT</p> <p>Abbreviated symbol : 26</p>	<p>DTC144ECA (SOT-23)</p>  <p>1.IN 2.GND 3.OUT</p> <p>Abbreviated symbol : 26</p>
<p>DTA144ESA (TO-92S)</p>  <p>1.GND 2.OUT 3.IN</p>	

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

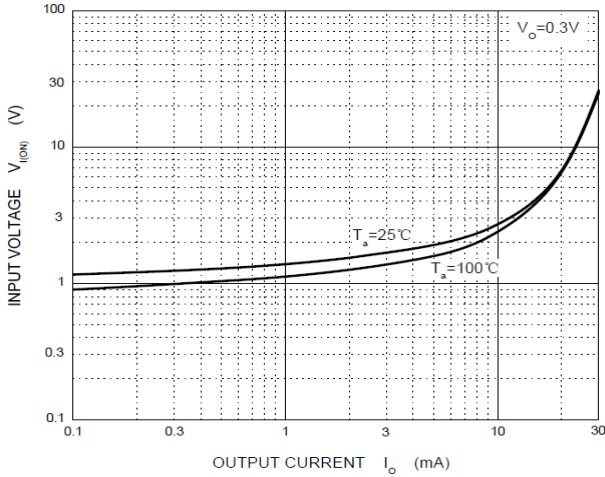
Parameter	Symbol	Limits (DTC144E□)					Unit
		M	E	UA	CA	SA	
Collector-Base Voltage	V _{CC}	50					V
Input Voltage	V _{IN}	-10~40					V
Output Current	I _O	30					mA
	I _{C(MAX)}	100					
Power Dissipation	P _D	100	150	200		300	mW
Junction and Storage Temperature	T _J , T _{STG}	150, -55~150					°C

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

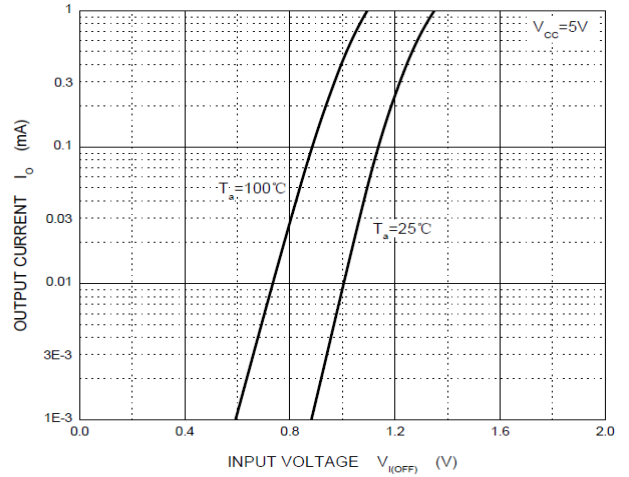
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Input Voltage	$V_{I(off)}$	-	-	0.5	V	$V_{CC}=5V, I_O=100\mu A$
	$V_{I(on)}$	3	-	-		$V_O=0.3V, I_O=2mA$
Output Voltage	$V_{O(on)}$	-	-	0.3	V	$I_O/I_I=10mA/0.5mA$
Input Current	I_I	-	-	0.18	mA	$V_I=5V$
Output Current	$I_{O(off)}$	-	-	0.5	μA	$V_{CC}=50V, V_I=0$
DC Current Gain	G_I	68	-	-		$V_O=5V, I_O=5mA$
Input Resistance	R_I	32.9	47	61.1	K Ω	
Resistance Ratio	R_2/R_1	0.8	1	1.2		
Transition Frequency	f_T	-	250	-	MHz	$V_O=10V, I_O=5mA, f=100MHz$

CHARACTERISTIC CURVES

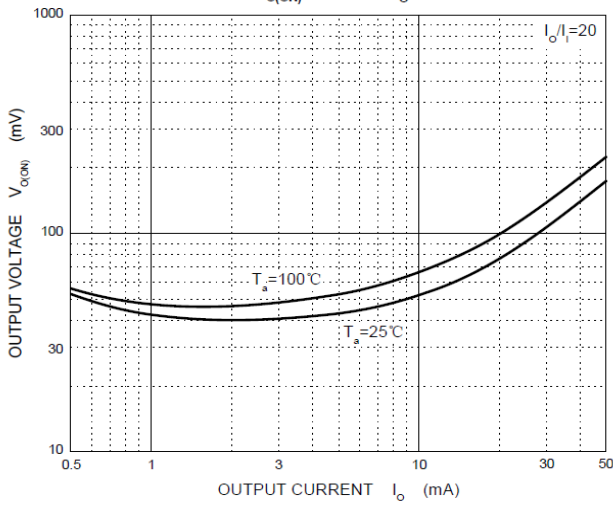
ON Characteristics



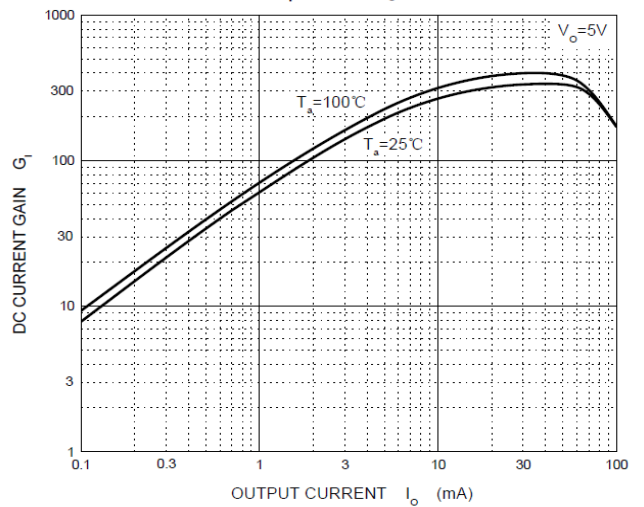
OFF Characteristics



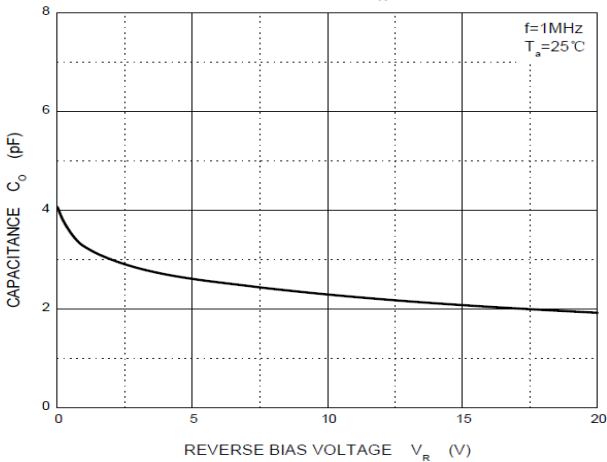
$V_{O(ON)}$ — I_O



G_I — I_O



C_O — V_R



P_D — T_a

