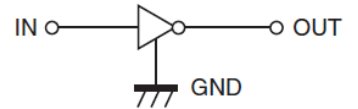
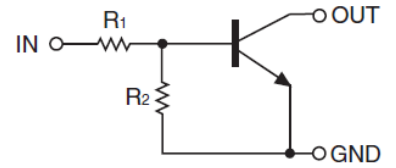




DTC114WM/DTC114WE/DTC114WUA DTC114WKA /DTC114WCA/DTC114WSA

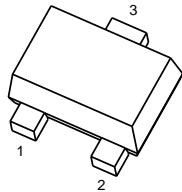
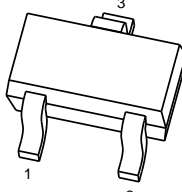
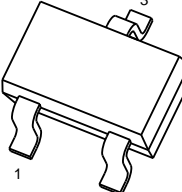
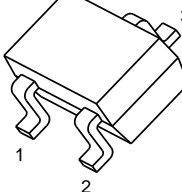
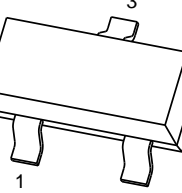
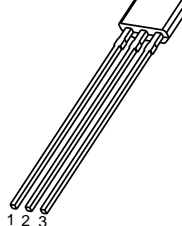
DIGITAL TRANSISTOR (NPN)



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

PIN CONNENCTIONS and MARKING

<p>DTC114WM</p>  <p>SOT-723</p> <p>1.IN 2.GND 3.OUT</p>	<p>DTC114WE</p>  <p>SOT-523</p> <p>1. IN 2. GND 3. OUT</p>
<p>DTC114WUA</p>  <p>SOT-323</p> <p>1.IN 2.GND 3.OUT</p>	<p>DTC114WKA</p>  <p>SOT-23-3L</p> <p>1. IN 2. GND 3. OUT</p>
<p>DTC114WCA</p>  <p>SOT-23</p> <p>1.IN 2.GND 3.OUT</p>	<p>DTC114WSA</p>  <p>TO-92S</p> <p>1. GND 2. OUT 3. IN</p>



ORDERING INFORMATION

Part Number	MARKING	Package
DTC114Y M	84	SOT-723
DTC114Y E	84	SOT-523
DTC114Y UA	84	SOT-323
DTC114Y KA	84	SOT-23-3L
DTC114Y CA	84	SOT-23

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

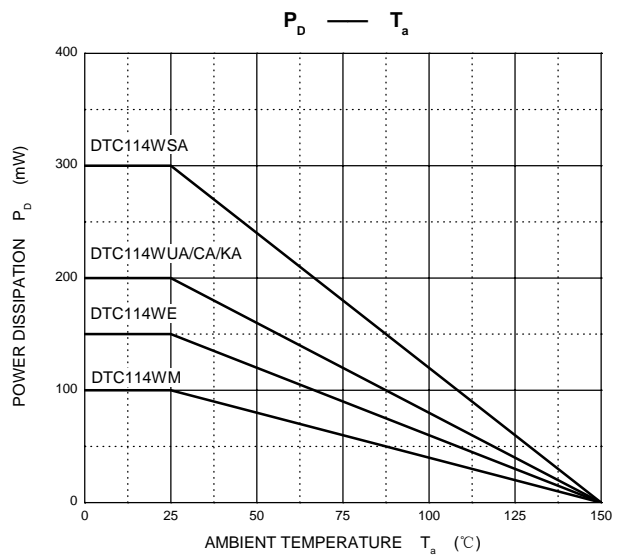
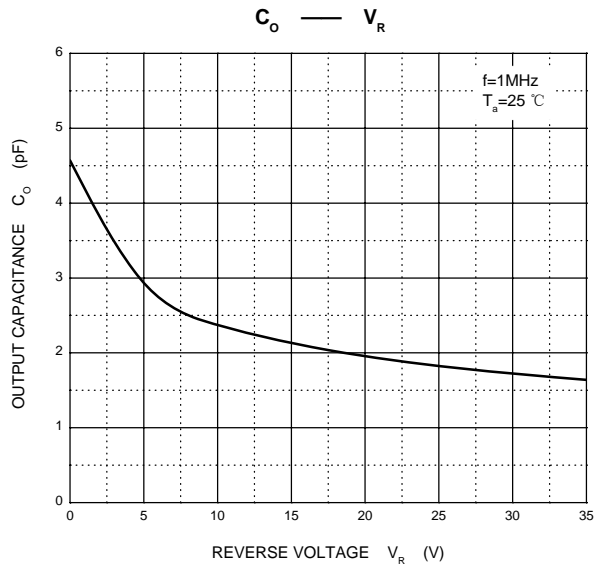
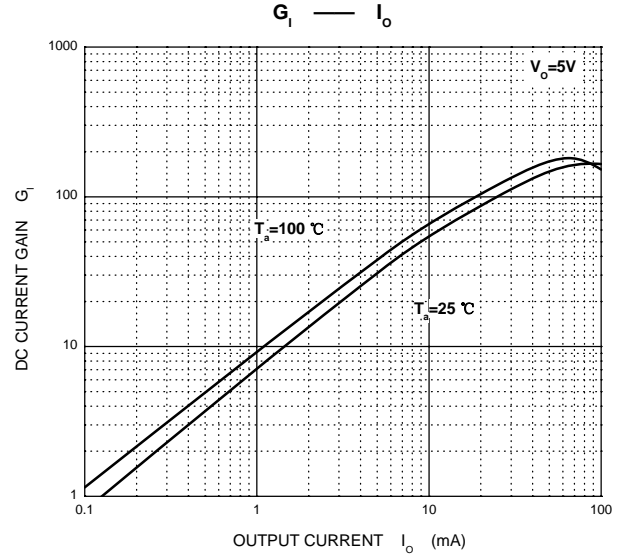
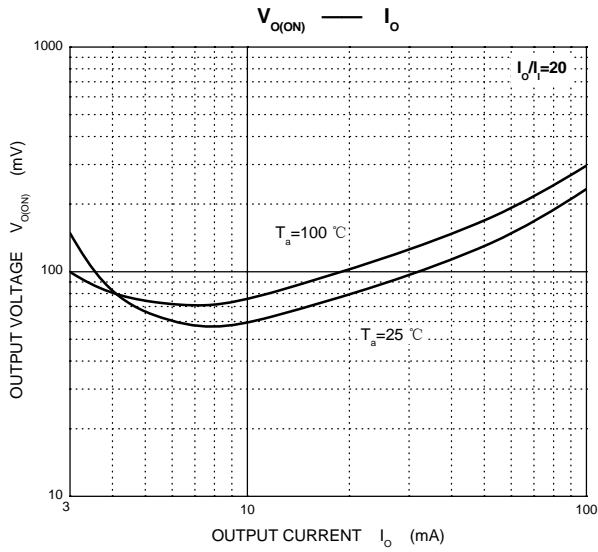
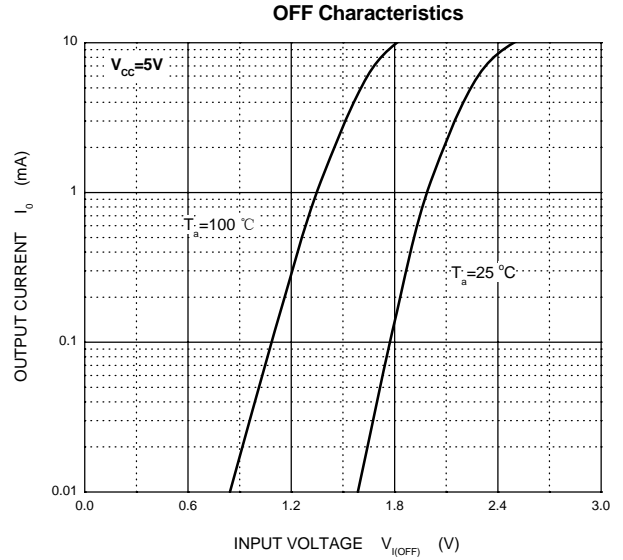
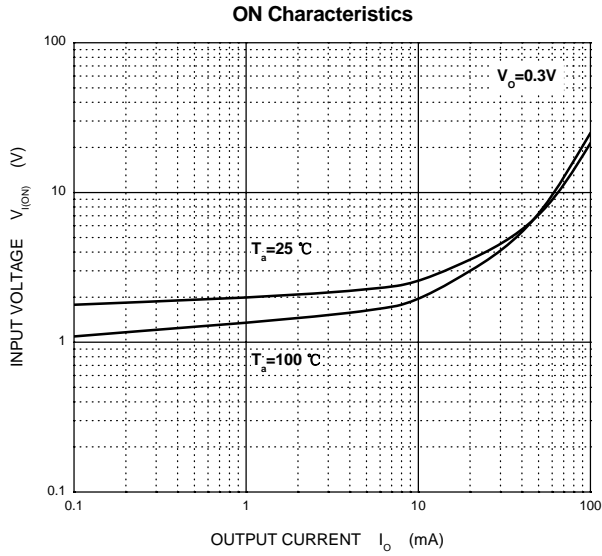
Symbol	Parameter	Limits(DTC114W□)						Unit
		M	E	UA	CA	KA	SA	
V _{CC}	Supply Voltage	50						V
V _{IN}	Input Voltage	-10~+30						V
I _O	Output Current	100						mA
P _D	Power Dissipation	100	150	200	200	200	300	mW
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150						°C

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Input voltage	V _{I(off)}	V _{CC} =5V, I _O =100μA	0.8			V
	V _{I(on)}	V _O =0.3V, I _O =2 mA			3	V
Output voltage	V _{O(on)}	I _O /I _I =10mA/0.5mA		0.1	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	μA
DC current gain	G _I	V _O =5V, I _O =10mA	24			
Input resistance	R ₁		7	10	13	kΩ
Resistance ratio	R ₂ /R ₁		0.37	0.47	0.57	
Transition frequency	f _T	V _O =10V, I _O =5mA, f=100MHz		250		MHz



Typical Characteristics

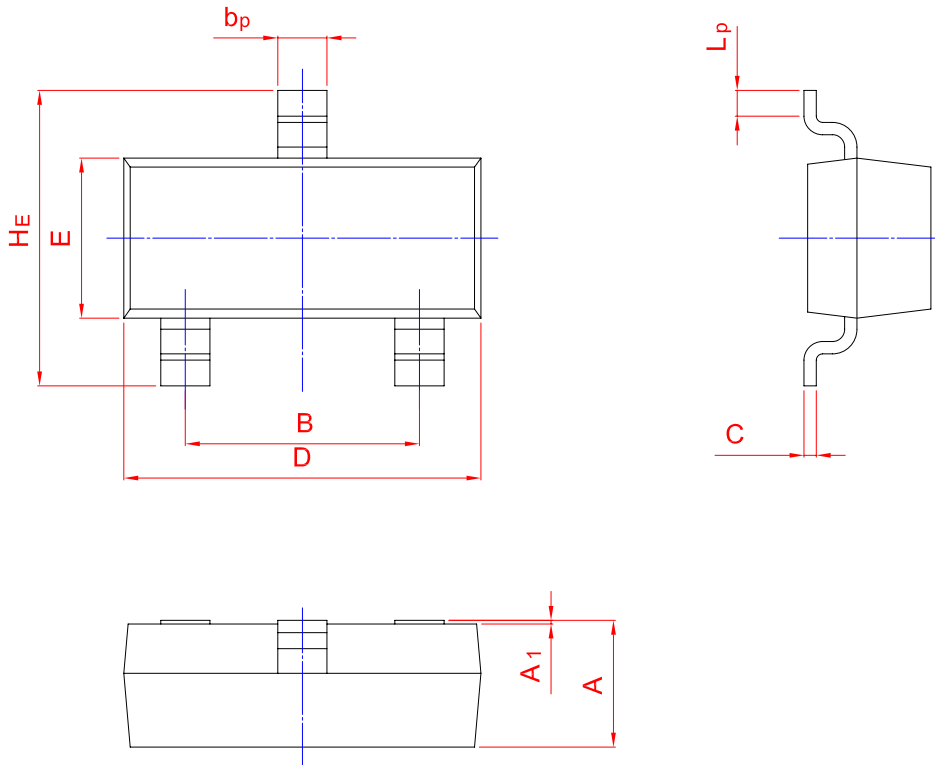
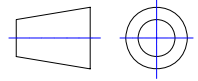




PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b _p	C	D	E	H _E	A ₁	L _p
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20