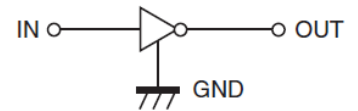
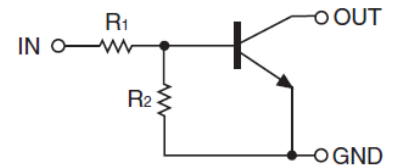




DTC114WM/DTC114WE/DTC114WUA DTC114WKA /DTC114WCA/DTC114WSA

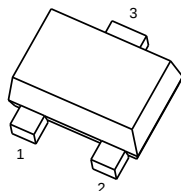
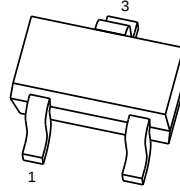
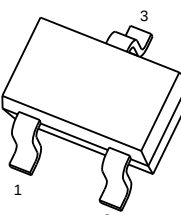
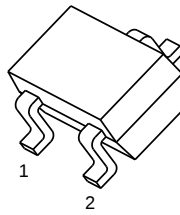
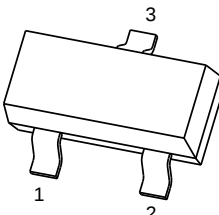
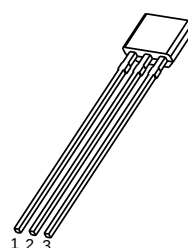
DIGITAL TRANSISTOR (NPN)



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

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



ORDERING INFORMATION

Part Number	MARKING	Package
DTC114WM	84	SOT-723
DTC114WE	84	SOT-523
DTC114WUA	84	SOT-323
DTC114WKA	84	SOT-23-3L
DTC114WCA	84	SOT-23

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

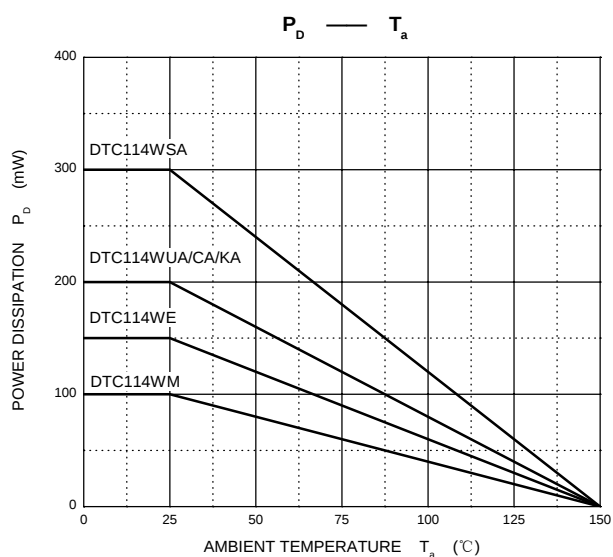
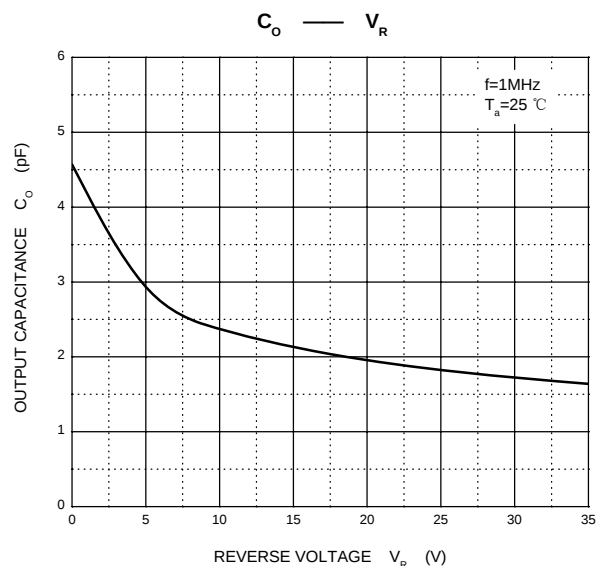
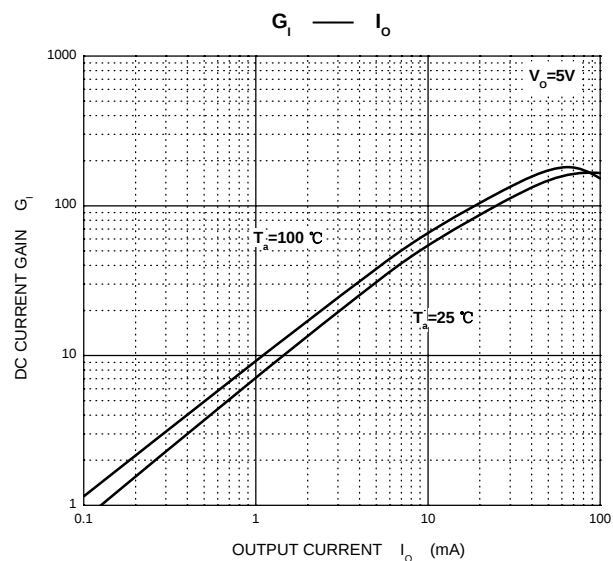
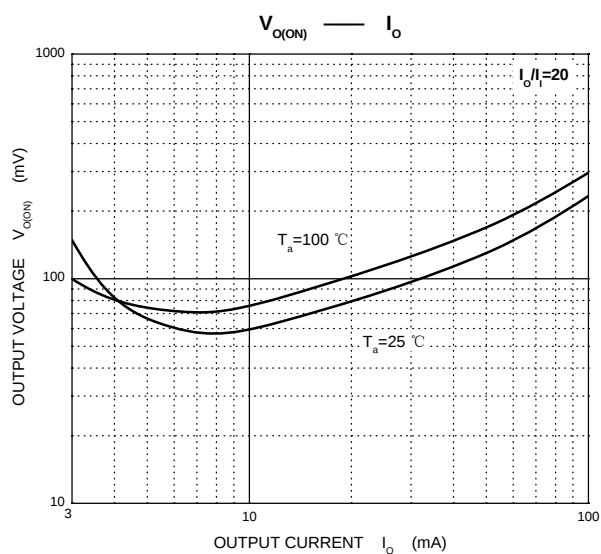
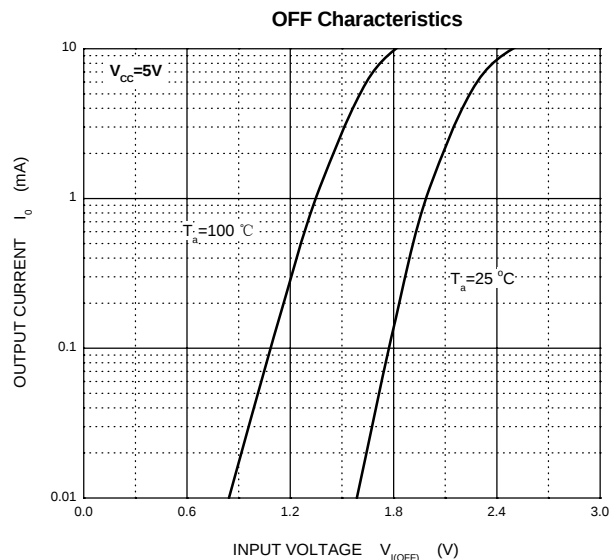
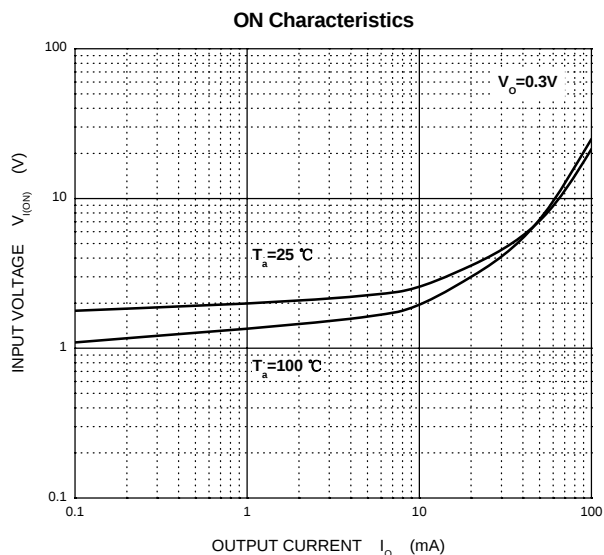
Symbol	Parameter	Limits(DTC114W□)						Unit
		M	E	UA	CA	KA	SA	
V _{CC}	Supply Voltage	50						V
V _{IN}	Input Voltage	-10~+30						V
I _O	Output Current	100						mA
P _D	Power Dissipation	100	150	200	200	200	300	mW
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150						°C

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

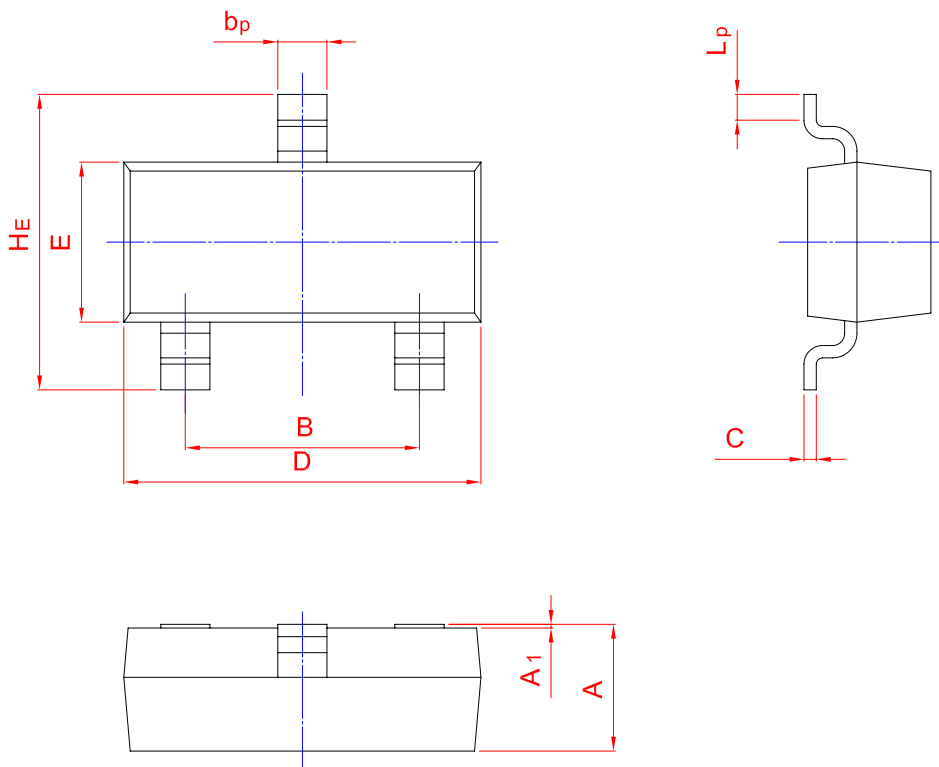
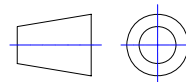




PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20