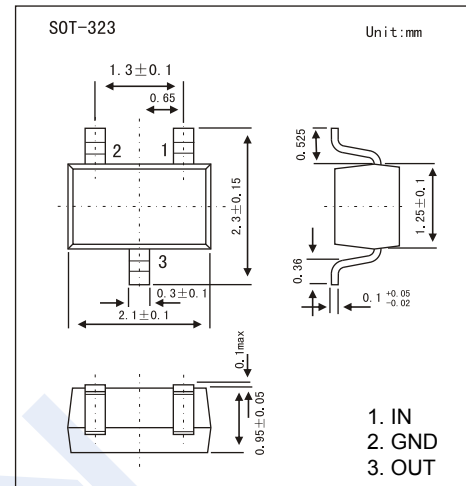
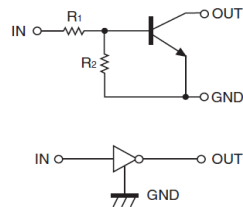


## Digital Transistors

### DTC144EUA (KDTC144EUA)

#### ■ 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



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Supply Voltage	$V_{CC}$	50	V
Input Voltage	$V_{IN}$	-10~40	
Output Current	$I_O$	30	mA
Peak Collector Current	$I_{CM}$	100	
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature range	$T_{stg}$	-55 to 150	

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input voltage	$V_{I(off)}$	$V_{CC} = 5\text{ V}$ , $I_O = 100\ \mu\text{A}$	0.5			V
	$V_{I(on)}$	$V_O = 0.3\text{ V}$ , $I_O = 2\text{ mA}$			3	
Output voltage	$V_{O(on)}$	$I_O = 10\text{ mA}$ , $I_I = 0.5\text{ mA}$			0.3	
Input current	$I_I$	$V_I = 5\text{ V}$			0.18	mA
Output current	$I_{O(off)}$	$V_{CC} = -50\text{ V}$ , $V_I = 0$			0.5	$\mu\text{A}$
DC current gain	$G_I$	$V_O = 5\text{ V}$ , $I_O = 5\text{ mA}$	68			
Input resistance	$R_1$		32.9	47	61.1	K $\Omega$
Resistance ratio	$R_2/R_1$		0.8	1	1.2	
Transition frequency	$f_T$	$V_O = 10\text{ V}$ , $I_O = 5\text{ mA}$ , $f = 100\text{ MHz}$		250		MHz

#### ■ Marking

Marking	26
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# Digital Transistors

## DTC144EUA (KDTC144EUA)

■ Typical Characteristics

