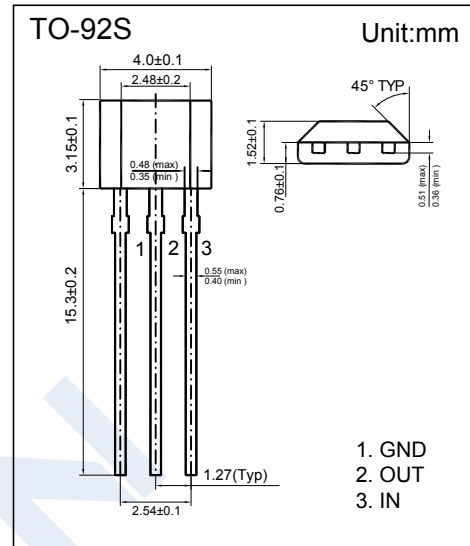
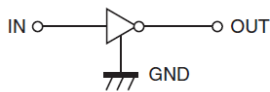
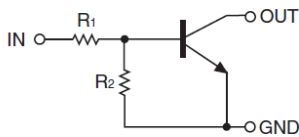


## Digital Transistors

### DTC124ESA (KDTC124ESA)

#### ■ 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 Ta = 25°C

Parameter	Symbol	Rating	Unit
Supply Voltage	V <sub>CC</sub>	50	V
Input Voltage	V <sub>IN</sub>	-10~+40	
Output Current	I <sub>O</sub>	30	mA
Peak Collector Current	I <sub>CM</sub>	100	
Power Dissipation	P <sub>D</sub>	200	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature range	T <sub>stg</sub>	-55 to 150	

#### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input voltage	V <sub>I(off)</sub>	V <sub>CC</sub> = 5 V , I <sub>O</sub> =100 uA	0.5			V
	V <sub>I(on)</sub>	V <sub>O</sub> = 0.2 V , I <sub>O</sub> =5 mA			3	
Output voltage	V <sub>O(on)</sub>	I <sub>O</sub> = 10 mA, I <sub>I</sub> =0.5 mA			0.3	
Input current	I <sub>I</sub>	V <sub>I</sub> = 5 V			0.36	mA
Output current	I <sub>O(off)</sub>	V <sub>CC</sub> = 50 V , V <sub>I</sub> =0			0.5	uA
DC current gain	G <sub>I</sub>	V <sub>O</sub> =5V,I <sub>O</sub> =5mA	56			
Input resistance	R <sub>1</sub>		15.4	22	28.6	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

# Digital Transistors

## DTC124ESA (KDTC124ESA)

■ Typical Characteristics

