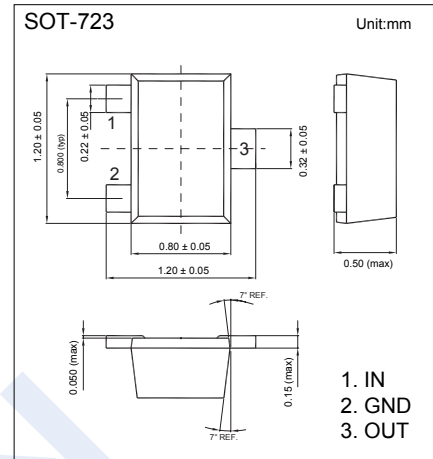
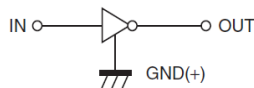
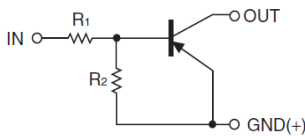


## Digital Transistors

### DTA114EM (KDTA114EM)

#### ■ 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	$V_{IN}$	-40~+10	
Output Current	$I_o$	-50	mA
Peak Collector Current	$I_{CM}$	-100	
Power Dissipation	$P_D$	100	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	$V_{I(off)}$	$V_{CC} = -5\text{ V}, I_o = -100\text{ uA}$	-0.5			V
	$V_{I(on)}$	$V_o = -0.3\text{ V}, I_o = -10\text{ mA}$			-3	
Output voltage	$V_{O(on)}$	$I_o = -10\text{ mA}, I_i = -0.5\text{ mA}$			-0.3	
Input current	$I_i$	$V_i = -5\text{ V}$			-0.88	mA
Output current	$I_{o(off)}$	$V_{CC} = -50\text{ V}, V_i = 0$			-0.5	$\mu\text{A}$
DC current gain	$G_i$	$V_o = -5\text{ V}, I_o = -5\text{ mA}$	30			
Input resistance	$R_1$		7	10	13	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	14
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# Digital Transistors

## DTA114EM (KDTA114EM)

■ Typical Characteristics

