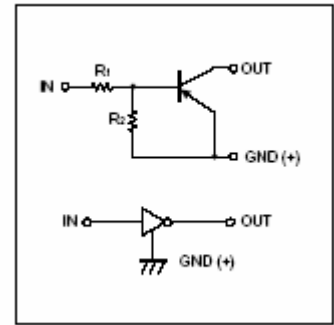




Digital transistors (built-in resistors)

●Equivalent circuit



DTA144EE/DTA144EUA

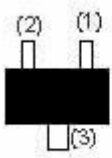
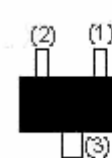

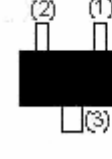
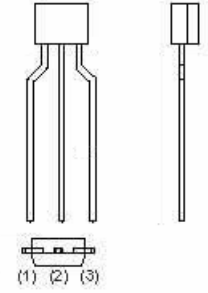
DTA144ECA /DTA144EKA/DTA144ESA

DIGITAL TRANSISTOR (PNP)

FEATURES

1. Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors(see equivalent circuit)
2. 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
3. Only the on/off conditions need to be set for operation, making device design easy

PIN CONNENCTIONS AND MARKING

<p>DTA144EE</p>  <p>1.IN 2.GND 3.OUT</p> <p>SOT-523 Abbreviated symbol: 16</p>	<p>DTA144EUA</p>  <p>1.IN 2.GND 3.OUT</p> <p>SOT-323 Abbreviated symbol: 16</p>
<p>DTA144EKA</p>  <p>1.IN 2.GND 3.OUT</p> <p>SOT-23-3L Abbreviated symbol: 16</p>	<p>DTA144ECA</p>  <p>1.IN 2.GND 3.OUT</p> <p>SOT-23 Abbreviated symbol: 16</p>
<p>DTA144ESA</p>  <p>1.GND 2.OUT 3.IN</p> <p>TO-92S</p>	

Absolute maximum ratings(Ta=25°C)

Parameter	Symbol	Limits (DTA144E□)					Unit
		E	UA	KA	CA	SA	
Supply voltage	V_{CC}	-50					V
Input voltage	V_{IN}	-40~+10					V
Output current	I_O	-30					mA
	$I_{C(MAX)}$	-100					
Power dissipation	P_d	150	200		300		mW
Junction temperature	T_J	150					°C
Storage temperature	T_{stg}	-55~150					°C

Electrical characteristics (Ta=25°C)

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