



Digital Transistors (Built-in Resistors)

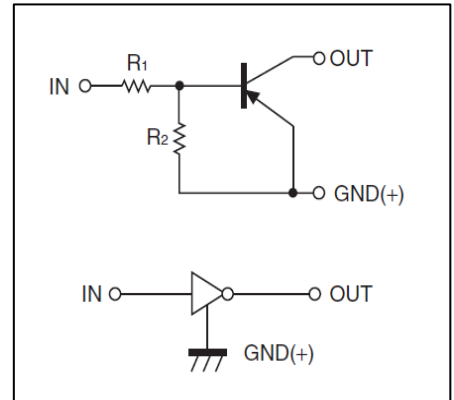
DTA143XE/DTA143XUA DTA143XKA/DTA143XCA

DIGITAL TRANSISTOR (PNP)

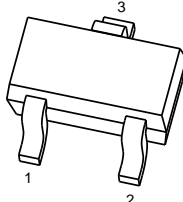
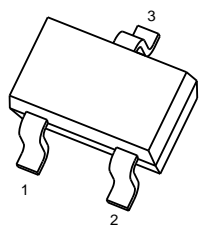
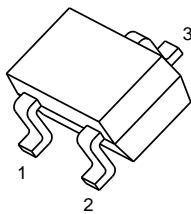
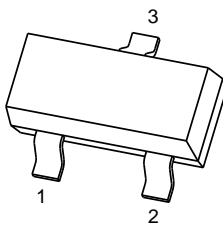
FEATURES

- 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

• Equivalent Circuit



PIN CONNENCTIONS and MARKING

<p>DTA143XE</p>  <p>SOT-523</p> <p>1. IN 2. GND 3. OUT</p> <p>MARKING:33</p>	<p>DTA143XUA</p>  <p>SOT-323</p> <p>1. IN 2. GND 3. OUT</p> <p>MARKING:33</p>
<p>DTA143XKA</p>  <p>SOT-23-3L</p> <p>1. IN 2. GND 3. OUT</p> <p>MARKING:33</p>	<p>DTA143XCA</p>  <p>SOT-23</p> <p>1. IN 2. GND 3. OUT</p> <p>MARKING:33</p>



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

Symbol	Parameter	Limits(DTA143X□)				Unit
		E	UA	CA	KA	
V _{CC}	Supply Voltage	-50				V
V _{IN}	Input Voltage	-20~+7				V
I _O	Output Current	-100				mA
P _D	Power Dissipation	150	200	200	200	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	-0.3			V
	V _{I(on)}	V _O =-0.3V ,I _O =-20mA			-2.5	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			-1.8	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	30			
Input resistance	R ₁		3.29	4.7	6.11	kΩ
Resistance ratio	R ₂ /R ₁		1.7	2.1	2.6	
Transition frequency	f _T	V _O =-10V,I _O =-5mA,f=100MHz		250		MHz



Typical Characteristics

