

Digital Transistors (Built-in Resistors)

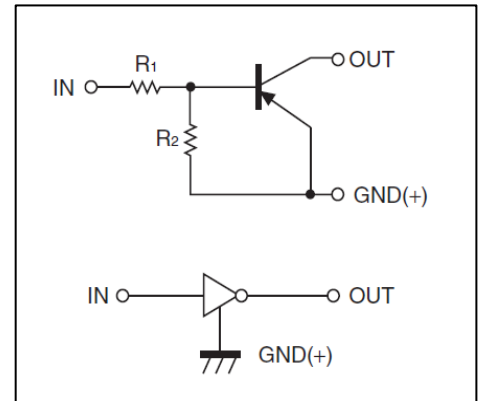
DTA123JE/DTA123JUA/DTA123JKA/DTA123JCA

DIGITAL TRANSISTOR (PNP)

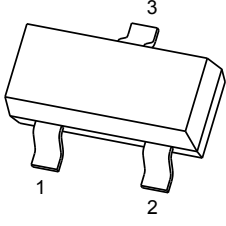
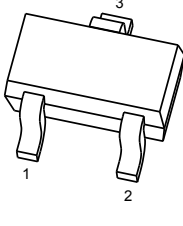
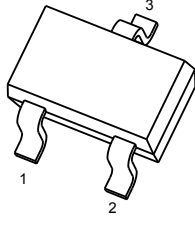
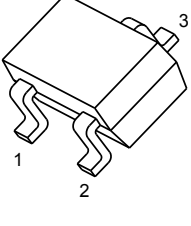
FEATURES

- 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>DTA123JCA</p>  <p>SOT-23</p> <p>1. IN 2. GND 3. OUT</p>	<p>DTA123JE</p>  <p>SOT-523</p> <p>1. IN 2. GND 3. OUT</p>
<p>DTA123JUA</p>  <p>SOT-323</p> <p>1. IN 2. GND 3. OUT</p>	<p>DTA123JKA</p>  <p>SOT-23-3L</p> <p>1. IN 2. GND 3. OUT</p>

ORDERING INFORMATION

Part Number	MARKING	Package	Packing Method	Pack Quantity
DTA123JE	E32	SOT-523	Reel	3000pcs/Reel
DTA123JUA	E32	SOT-323	Reel	3000pcs/Reel
DTA123JKA	E32	SOT-23-3L	Reel	3000pcs/Reel
DTA123JCA	E32	SOT-23	Reel	3000pcs/Reel



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

Symbol	Parameter	Limits(DTA123J)					Unit
		E	UA	KA	CA		
V _{CC}	Supply Voltage	-50					V
V _{IN}	Input Voltage	-12~+5					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	-0.5			V
	V _{I(on)}	V _O =-0.3V,I _O =-5 mA			-1.1	V
Output voltage	V _{O(on)}	I _O /I _I =-5mA/-0.25mA		-0.1	-0.3	V
Input current	I _I	V _I =-5V			-3.6	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	80			
Input resistance	R ₁		1.54	2.2	2.86	kΩ
Resistance ratio	R ₂ /R ₁		17	21	26	
Transition frequency	f _T	V _O =-10V,I _O =-5mA,f=100MHz		250		MHz

Typical Characteristics

