

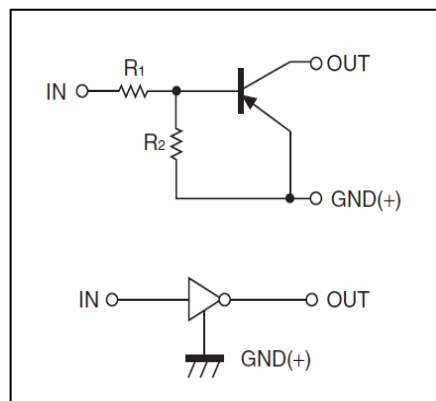
Digital Transistors (Built-in Resistors)

DIGITAL TRANSISTOR (PNP)

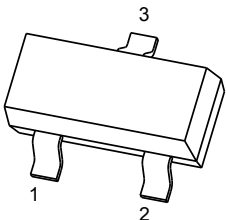
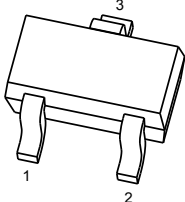
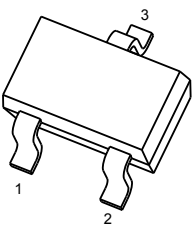
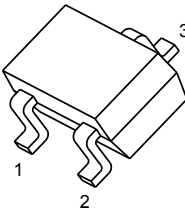
FEATURES

- 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

DTA123YCA 	SOT-23 1. IN 2. GND 3 . OUT	DTA123YE 	SOT -523 1. IN 2. GND 3. OUT
DTA123YUA 	SOT -323 1. IN 2. GND 3. OUT	DTA123YKA 	SOT -23-3L 1. IN 2. GND 3. OUT

ORDERING INFORMATION

Part Number	MARKING ⁽¹⁾	Package	Packing Method	Pack Quantity
DTA123YCA	52	SOT-23	Reel	3000pcs/Reel
DTA123YE	52	SOT-523	Reel	3000pcs/Reel
DTA123YUA	52	SOT-323	Reel	3000pcs/Reel
DTA123YKA	52	SOT-23-3L	Reel	3000pcs/Reel

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

Symbol	Parameter	Limits(DTA123Y□)						Unit
		M	E	UA	KA	CA	SA	
V _{CC}	Supply Voltage	-50						V
V _{IN}	Input Voltage	-12~+5						V
I _O	Output Current	-100						mA
P _D	Power Dissipation	100	150	200	200	200	300	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			-3	V
Output voltage	V _{O(on)}	I _O /I _I =-10mA/-0.5mA			-0.3	V
Input current	I _I	V _I =-5V			-3.8	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	33			
Input resistance	R ₁		1.54	2.2	2.86	kΩ
Resistance ratio	R ₂ /R ₁		3.6	4.5	5.5	
Transition frequency	f _T	V _O =-10V, I _O =-5mA, f=100MHz		250		MHz

Typical Characteristics

