

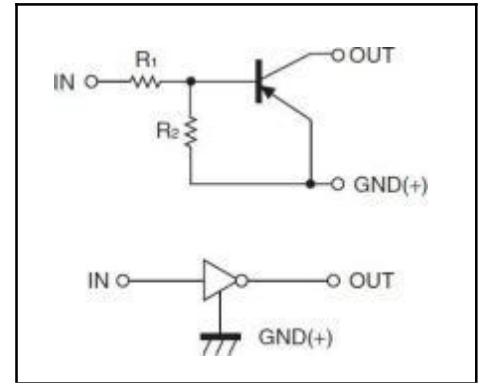
Digital Transistors (Built-in Resistors)

• Equivalent Circuit

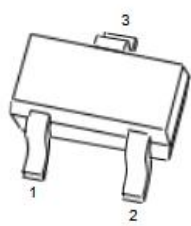
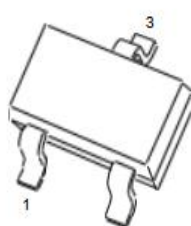
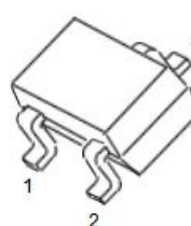
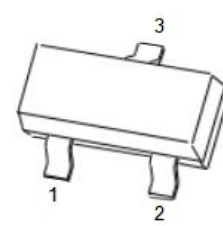
DIGITAL TRANSISTOR (PNP)

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 negative 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



PIN CONNENCTIONS and MARKING

DTA143ZE  1. IN 2. GND 3. OUT	SOT-523	DTA143ZUA  1. IN 2. GND 3. OUT	SOT-323
DTA143ZKA  1. IN 2. GND 3. OUT	SOT-23-3L	DTA143ZCA  1. IN 2. GND 3. OUT	SOT-23

ORDERING INFORMATION

Part Number	MARKING ⁽¹⁾	Package	Packing Method	Pack Quantity
DTA143ZE	E13	SOT-523	Reel	3000pcs/Reel
DTA143ZUA	E13	SOT-323	Reel	3000pcs/Reel
DTA143ZKA	E13	SOT-23-3L	Reel	3000pcs/Reel
DTA143ZCA	E13	SOT-23	Reel	3000pcs/Reel

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

Symbol	Parameter	Limits(DTA143Z□)					Unit
			E	UA	KA	CA	
V _{CC}	Supply Voltage	-50					V
V _{IN}	Input Voltage	-30~+5					V
I _O	Output Current	-100					mA
P _D	Power Dissipation		150	200	200	200	mW
T _J	Junction Temperature	150					°C
T _{stg}	Storage Temperature	-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 =-5mA			-1.3	V
Output voltage	V _{O(on)}	I _O /I _I =-5mA/-0.25mA			-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	80			
Input resistance	R _I		3.29	4.7	6.11	kΩ
Resistance ratio	R ₂ /R ₁		8	10	12	
Transition frequency	f _T	V _O =-10V, I _O =-5mA, f=100MHz		250		MHz

Typical Characteristics

