



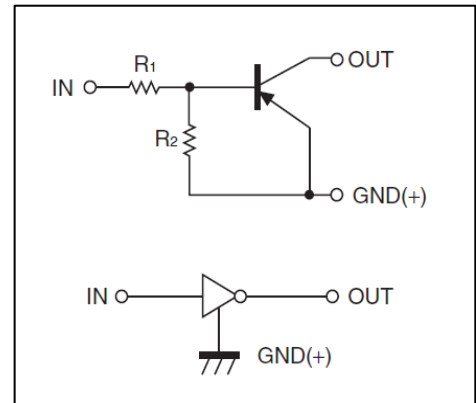
Digital Transistors (Built-in Resistors)

• Equivalent Circuit

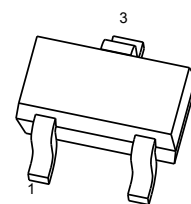
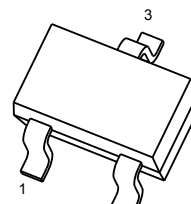
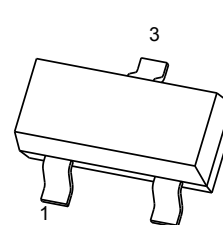
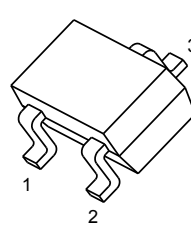
DIGITAL TRANSISTOR (PNP)

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 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



PIN CONNENCTIONS and MARKING

<p>DTA113ZE</p>  <p>SOT-523</p> <p>1. IN 2. GND 3 . OUT</p>	<p>DTA113ZUA</p>  <p>SOT-323</p> <p>1. IN 2. GND 3 . OUT</p>
<p>DTA113ZCA</p>  <p>SOT-23</p> <p>1. IN 2. GND 3 . OUT</p>	<p>DTA113ZKA</p>  <p>SOT-23-3L</p> <p>1. IN 2. GND 3. OUT</p>

ORDERING INFORMATION

Part Number	MARKING ⁽¹⁾	Package	Packing Method	Pack Quantity
DTA113ZE	E11	SOT-523	Reel	3000pcs/Reel
DTA113ZUA	E11	SOT-323	Reel	3000pcs/Reel
DTA113ZKA	E11	SOT-23-3L	Reel	3000pcs/Reel
DTA113ZCA	E11	SOT-23	Reel	3000pcs/Reel

Notes: (1). Solid dot= Green molding compound device, if none, the normal device.

(2). XXX=Code

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

Symbol	Parameter	Limits(DTA113Z)						Unit
		M	E	UA	CA	KA	SA	
V _{CC}	Supply Voltage	-50						V
V _{IN}	Input Voltage	-10~+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	Test 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			-7.2	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 =-5mA	33			
Input resistance	R ₁		0.7	1	1.3	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

