

Digital Transistors (Built-in Resistors)

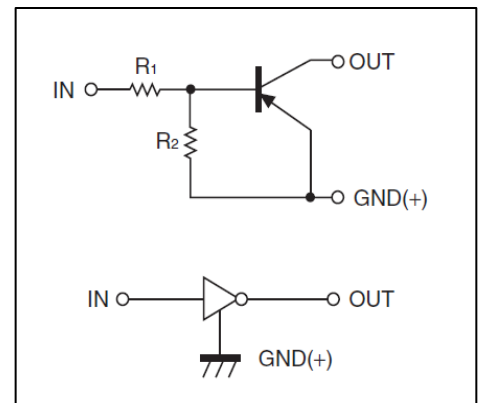
DTA114ECA/DTA114EE DTA114EUA /DTA114EKA

DIGITAL TRANSISTOR (PNP)

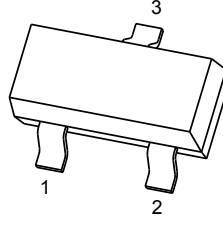
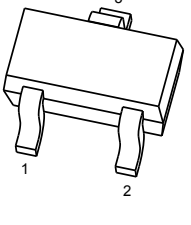
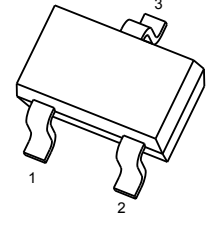
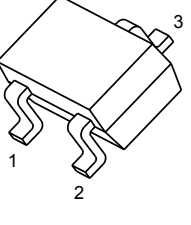
FEATURES

- 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

DTA114ECA		SOT-23	1. IN 2. GND 3. OUT	DTA114EE		SOT-523	1. IN 2. GND 3. OUT
DTA114EUA		SOT-323	1. IN 2. GND 3. OUT	DTA114EKA		SOT-23-3L	1. IN 2. GND 3. OUT

ORDERING INFORMATION

Part Number	MARKING ⁽¹⁾	Package	Packing Method	Pack Quantity
DTA114EE	14	SOT-523	Reel	3000pcs/Reel
DTA114EUA	14	SOT-323	Reel	3000pcs/Reel
DTA114EKA	14	SOT-23-3L	Reel	3000pcs/Reel
DTA114ECA	14	SOT-23	Reel	3000pcs/Reel

Notes: (1). Solid dots represent automotive products, if not present, they are considered normal products

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

Symbol	Parameter	Limits(DTA114E□)				Unit
		E	UA	CA	KA	
V _{CC}	Supply Voltage	-50				V
V _{IN}	Input Voltage	-40~+10				V
I _o	Output Current	-50				mA
I _{CM}	Peak Collector 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 =-10 mA			-3	V
Output voltage	V _{O(on)}	I _o /I _f =-10mA/-0.5mA			-0.3	V
Input current	I _I	V _I =-5V			-0.88	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	30			
Input resistance	R ₁		7	10	13	kΩ
Resistance ratio	R ₂ /R ₁		0.8	1	1.2	
Transition frequency	f _T	V _O =-10V,I _o =-5mA,f=100MHz		250		MHz



Typical Characteristics

