

Digital Transistors (Built-in Resistors)

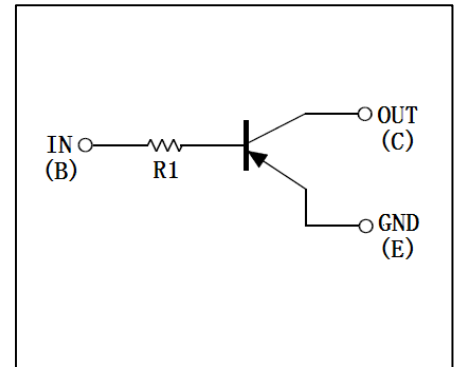
DTA114TE/DTA114TUA/DTA114TKA/DTA114TCA

DIGITAL TRANSISTOR (PNP)

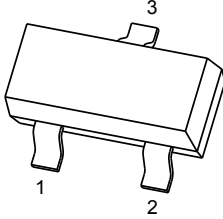
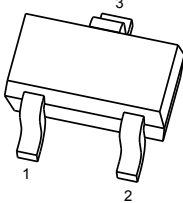
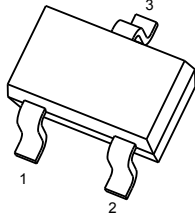
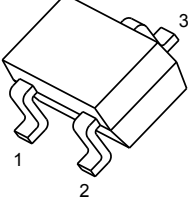
FEATURES

- 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

DTA114TCA 	SOT-23 1. IN 2. GND 3. OUT	DTA114TE 	SOT-523 1. IN 2. GND 3. OUT
DTA114TUA 	SOT-323 1. IN 2. GND 3. OUT	DTA114TKA 	SOT-23-3L 1. IN 2. GND 3. OUT

ORDERING INFORMATION

Part Number	MARKING	Package	Packing Method	Pack Quantity
DTA114TE	94	SOT-523	Reel	3000pcs/Reel
DTA114TUA	94	SOT-323	Reel	3000pcs/Reel
DTA114TKA	94	SOT-23-3L	Reel	3000pcs/Reel
DTA114TCA	94	SOT-23	Reel	3000pcs/Reel

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

Symbol	Parameter	Limits(DTA114T□)					Unit
			E	UA	KA	CA	
V _{CB0}	Collector-Base Voltage	-50					V
V _{CEO}	Collector-Emitter Voltage	-50					V
V _{EBO}	Emitter-Base Voltage	-5					V
I _C	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
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-50μA, I _E =0	-50			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-1mA, I _B =0	-50			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-50μA, I _C =0	-5			V
Collector cut-off current	I _{CB0}	V _{CB} =-50V, I _E =0			-0.5	μA
Emitter cut-off current	I _{EBO}	V _{EB} =-4V, I _C =0			-0.5	μA
DC current gain	h _{FE}	V _{CE} =-5V, I _C =-1mA	100	250	600	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-10mA, I _B =-1mA			-0.3	V
Transition frequency	f _T	V _{CE} =-10V, I _E =5mA, f=100MHz		250		MHz
Input resistor	R ₁		7	10	13	kΩ

Typical Characteristics

