



Digital transistors (built-in resistors)

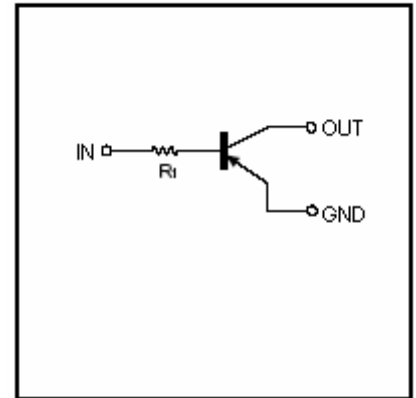
**DTA144TE/ DTA144TUA
DTA144TCA/DTA144TKA/DTA144TSA**

DIGITAL TRANSISTOR (PNP)

FEATURES

- 1) Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see equivalent circuit)
- 2) 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
- 3) Only the on/off conditions need to be set for operation, making device design easy

●Equivalent circuit



PIN CONNENCTIONS AND MARKING

<p>DTA144TE</p> <p>(1) IN (2) GND (3) OUT</p> <p>SOT-523 Abbreviated symbol: 96</p>	<p>DTA144TUA</p> <p>(1) IN (2) GND (3) OUT</p> <p>SOT-323 Abbreviated symbol: 96</p>
<p>DTA144TKA</p> <p>(1) IN (2) GND (3) OUT</p> <p>SOT-23-3L Abbreviated symbol: 96</p>	<p>DTA144TCA</p> <p>(1) IN (2) GND (3) OUT</p> <p>SOT-23 Abbreviated symbol: 96</p>
<p>DTA144TSA</p> <p>(1) GND (2) OUT (3) IN</p> <p>TO-92S</p>	

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

Symbol	Parameter	Limits(DTA144T□)					Units
		E	UA	KA	CA	SA	
V _{CBO}	Collector-Base Voltage	-50					V
V _{CEO}	Collector-Emitter Voltage	-50					V
V _{EBO}	Emitter-Base Voltage	-5					V
I _C	Collector Current -Continuous	-100					mA
P _C	Collector Dissipation	150	200		300		mW
T _j	Junction temperature	150					°C
T _J , T _{stg}	Junction and Storage Temperature	-55~+150					°C

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test 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 _{CBO}	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	300	600	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = -5mA, I _B = -0.5mA			-0.3	V
Transition frequency	f _T	V _{CE} = -10V, I _E = 5mA, f = 100MHz		250		MHz
Input resistor	R ₁		32.9	47	61.1	KΩ