



Digital Transistors (Built-in Resistors)

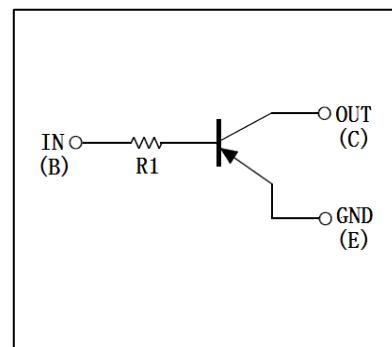
DTA144TM/DTA144TE/DTA144TUA DTA144TKA /DTA144TCA/DTA144TSA

DIGITAL TRANSISTOR (PNP)

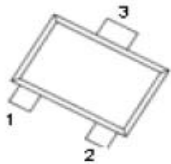
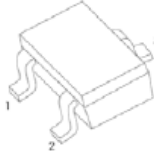
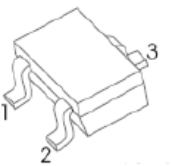
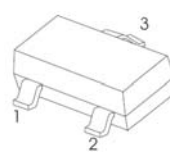
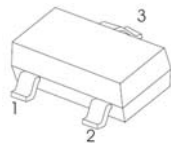
FEATURES

- 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

DTA144TM  MARKING:96	SOT-723 1. IN 2. GND 3. OUT	DTA144TE  MARKING:96	SOT-523 1. IN 2. GND 3. OUT
DTA144TUA  MARKING:96	SOT-323 1. IN 2. GND 3. OUT	DTA144TKA  MARKING:96	SOT-23-3L 1. IN 2. GND 3. OUT
DTA144TCA  MARKING:96	SOT-23 1. IN 2. GND 3. OUT	DTA144TSA  123	TO-92S 1. GND 2. OUT 3. IN

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

Symbol	Parameter	Limits(DTA144T□)						Unit
		M	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	-100						mA
P_D	Power Dissipation	100	150	200	200	200	300	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
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-50\mu A, I_E=0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1mA, I_B=0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-50\mu A, I_C=0$	-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
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-5mA, I_B=-0.5mA$			-0.3	V
DC current gain	h_{FE}	$V_{CE}=-5V, I_C=-1mA$	100	300	600	
Input resistor	R_1		32.9	47	61.1	k Ω
Transition frequency	f_T	$V_{CE}=-10V, I_E=5mA, f=100MHz$		250		MHz

Typical Characteristics

DTA144TXX

