

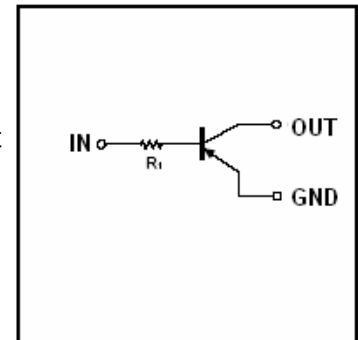


Digital transistors (built-in resistors)

DTA143TM/DTA143TE/DTA143TUA DTA143TSA/ DTA143TCA/DTA143TKA

DIGITAL TRANSISTOR (PNP)

equivalent circuit



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

PIN CONNENCTIONS AND MARKING

DTA143TE 1.IN 2.GND 3.OUT SOT-523 Abbreviated symbol: 93	DTA143TUA 1.IN 2.GND 3.OUT SOT-323 Abbreviated symbol: 93
DTA143TKA 1.IN 2.GND 3.OUT SOT-23-3L Abbreviated symbol: 93	DTA143TCA 1.IN 2.GND 3.OUT SOT-23 Abbreviated symbol: 93
DTA143TSA 1.GND 2.OUT 3.IN TO-92S	DTA143TM 1.IN 2.GND 3.OUT SOT-723 Abbreviated symbol: 93

Absolute maximum ratings(Ta=25℃)

Parameter	Symbol	Limits (DTA143T□)						Unit
		M	E	UA	CA	KA	SA	
Collector-base voltage	V _{(BR)CBO}	-50						V
Collector-emitter voltage	V _{(BR)CEO}	-50						V
Emitter-base voltage	V _{(BR)EBO}	-5						V
Collector current	I _C	-100						mA
Collector Power dissipation	P _C	100	150	200			300	mW
Junction temperature	T _J	150						℃
Storage temperature	T _{stg}	-55~150						℃

Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	-50			V	$I_C=-50\mu A$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-50			V	$I_C=-1mA$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-5			V	$I_E=-50\mu A$
Collector cut-off current	I_{CBO}			-0.5	μA	$V_{CB}=-50V$
Emitter cut-off current	I_{EBO}			-0.5	μA	$V_{EB}=-4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$			-0.3	V	$I_C=-5mA, I_B=-0.25mA$
DC current transfer ratio	h_{FE}	100		600		$V_{CE}=-5V, I_C=-1mA$
Input resistance	R_1	3.29	4.7	6.11	K Ω	
Transition frequency	f_T		250		MHz	$V_{CE}=-10V, I_E=5mA, f=100MHz$

Typical Characteristics

DTA143TCA

