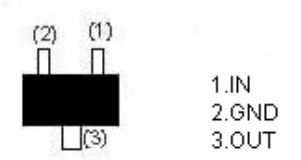
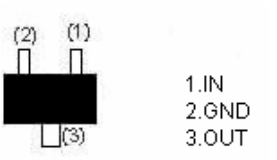
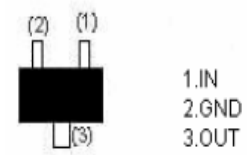
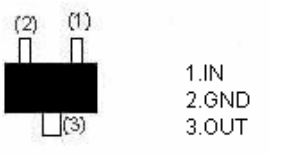
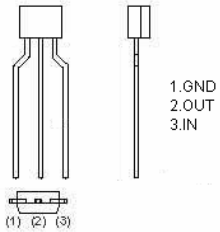
Elektronische Bauelemente

DTC144TE / DTC144TUA
DTC144TCA / DTC144TSA / DTC144TM
NPN Digital Transistors (Built-in Resistors)

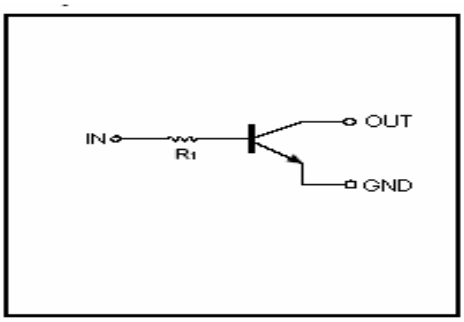
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

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.

DTC144TE (SOT-523)	DTC144TUA (SOT-323)
 Addreviated symbol：06	 Addreviated symbol：06
DTC144TM (SOT-723)	**DTC144TCA (SOT-23)**
 Addreviated symbol：06	 Addreviated symbol：06
DTA143TSA (TO-92S)	
	

EQUIVALENT CIRCUIT



ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Limits (DTC144T□)					Unit
		M	E	UA	CA	SA	
Collector-Base Voltage	$V_{(BR)CBO}$	50					V
Collector-Emitter Voltage	$V_{(BR)CEO}$	50					V
Emitter-Base Voltage	$V_{(BR)EBO}$	5					mA
Collector Current	I_C	100					
Collector Dissipation	P_C	100	150	200		300	mW
Junction & Storage temperature	T_J, T_{STG}	150, -55~150					℃

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	50	-	-	V	I_C=50μA, I_E=0
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	50	-	-	V	I_C=1mA, I_B=0
Emitter-base breakdown voltage	$V_{(BR)EBO}$	5	-	-	V	I_E=50μA, I_C=0
Collector cut-off current	I_{CBO}	-	-	0.5	μA	V_{CB}=50V, I_E=0
Emitter cut-off current	I_{EBO}	-	-	0.5	μA	V_{EB}=4V, I_C=0
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.3	V	I_C=5mA, I_B=0.5mA
DC current transfer ratio	h_{FE}	100	300	600		V_{CE}=5V, I_C=1mA
Input resistance	R_1	32.9	47	61.1	KΩ	
Transition frequency	f_T	250	-	-	MHz	V_O=10V, I_E= -5mA, f=100MHz