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DTA114TCA

PNP Digital Transistor

Features

- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- 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 negative 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

Absolute Maximum Ratings

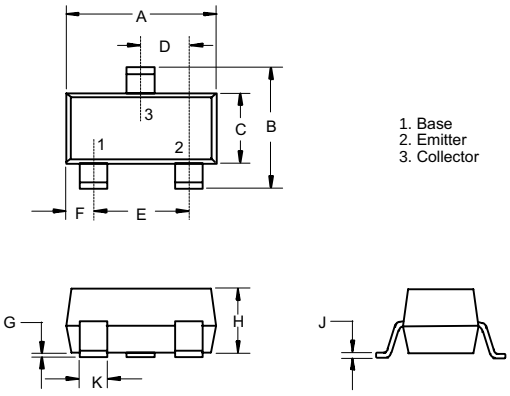
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-100	mA
Collector Dissipation	P_C	200	mW
Junction Temperature Range	T_J	-55~150	℃
Storage Temperature Range	T_{STG}	-55~150	℃

Electrical Characteristics

Sym	Parameter	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage (I_C=-50uA, I_E=0)	-50	---	---	V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage (I_C=-1mA, I_B=0)	-50	---	---	V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage (I_E=-50uA, I_C=0)	-5	---	---	V
I_{CBO}	Collector Cut-off Current (V_{CB}=-50V, I_E=0)	---	---	-0.5	uA
I_{EBO}	Emitter Cut-off Current (V_{EB}=-4V, I_C=0)	---	---	-0.5	uA
h_{FE}	DC Current Gain (V_{CE}=-5V, I_C=-1mA)	100	250	600	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage (I_C=-10mA, I_B=-1mA)	---	---	-0.3	V
R_1	Input Resistor	7	10	13	KΩ
f_T	Transition Frequency (V_{CE}=-10V, I_C=-5mA, f=100MHz)	---	250	---	MHz

*Marking: 94

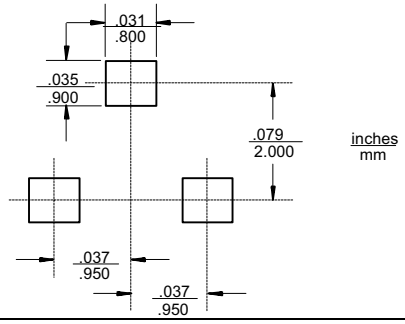
SOT-23



1. Base
2. Emitter
3. Collector

DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



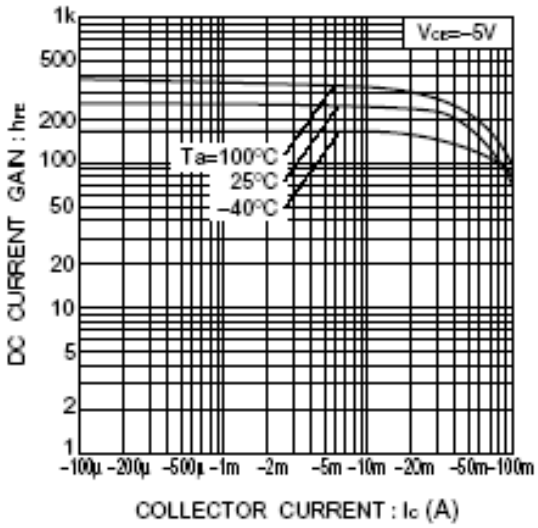


Fig.1 DC current gain vs. collector current

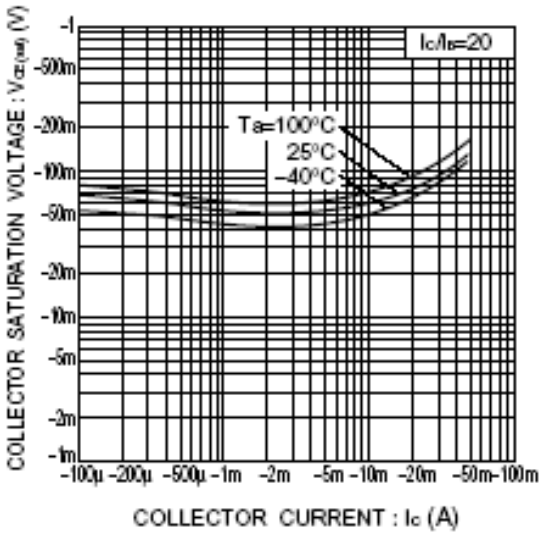
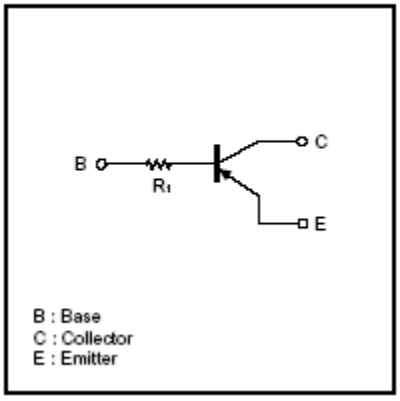


Fig.2 Collector-emitter saturation voltage vs. collector current

●Equivalent circuit



Ordering Information

Device	Packing
(Part Number)-TP	Tape&Reel;3Kpcs/Reel

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