



Micro Commercial Components



Micro Commercial Components  
20736 Marilla Street Chatsworth  
CA 91311  
Phone: (818) 701-4933  
Fax: (818) 701-4939

## DTC114TUA

### Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 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	$V_{CB0}$	50	V
Collector-Emitter Voltage	$V_{CE0}$	50	V
Emitter-Base voltage	$V_{EB0}$	5	V
Collector Current-Continuous	$I_C$	100	mA
Collector Dissipation	$P_C$	200	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55~150	°C

### Electrical Characteristics

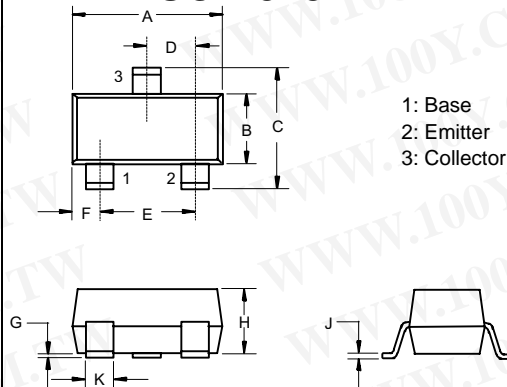
Sym	Parameter	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage ( $I_C=50\mu A$ , $I_E=0$ )	50	---	---	V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage ( $I_C=1mA$ , $I_B=0$ )	50	---	---	V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=50\mu A$ , $I_C=0$ )	5	---	---	V
$I_{CBO}$	Collector Cut-off Current ( $V_{CB}=50V$ , $I_E=0$ )	---	---	0.5	$\mu A$
$I_{EBO}$	Emitter Cut-off Current ( $V_{EB}=4V$ , $I_C=0$ )	---	---	0.5	$\mu A$
$h_{FE}$	DC Current Gain ( $V_{CE}=5V$ , $I_C=1mA$ )	100	300	600	---
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=10mA$ , $I_B=1mA$ )	---	---	0.3	V
$R_1$	Input Resistor	7	10	13	K $\Omega$
$f_T$	Transition Frequency ( $V_{CE}=10V$ , $I_C=-5mA$ , $f=100MHz$ )	---	250	---	MHz

\*Marking: 04

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-34970699  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

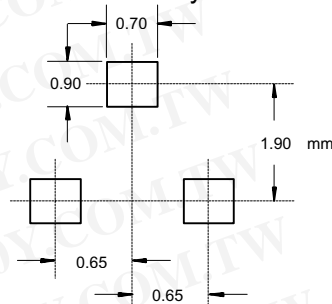
### NPN Digital Transistor

#### SOT-323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.079	.087	2.00	2.20	
D	.026 Nominal		0.65Nominal		
E	.047	.055	1.20	1.40	
F	.012	.016	.30	.40	
G	.000	.004	.000	.100	
H	.035	.039	.90	1.00	
J	.004	.010	.100	.250	
K	.012	.016	.30	.40	

#### Suggested Solder Pad Layout



# DTC114TUA

**M.C.C.**

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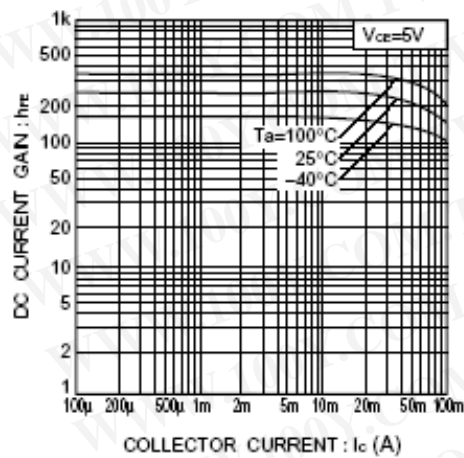


Fig.1 DC current gain vs. collector current

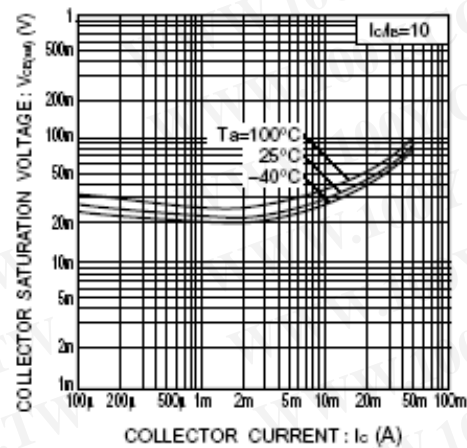
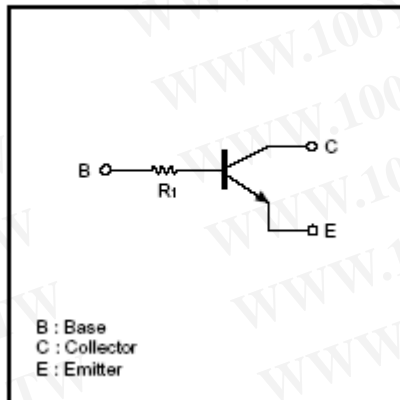


Fig.2 Collector-emitter saturation voltage vs. collector current

## ●Equivalent circuit



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## Ordering Information :

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

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