



Micro Commercial Components



Micro Commercial Components  
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## DTA114TUA

### 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
- Halogen free available upon request by adding suffix "-HF"

### 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	°C
Storage Temperature Range	$T_{STG}$	-55~150	°C

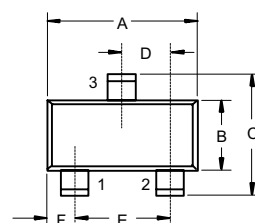
### Electrical Characteristics

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	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	K $\Omega$
$f_T$	Transition Frequency ( $V_{CE}=-10V$ , $I_C=-5mA$ , $f=100MHz$ )	---	250	---	MHz

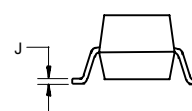
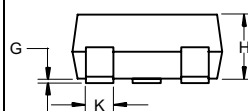
\*Marking: 94

## PNP Digital Transistor

### SOT-323

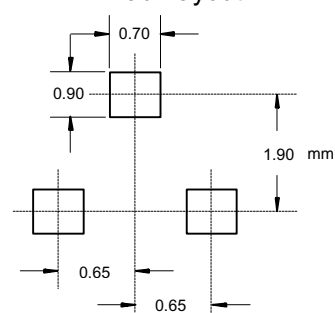


1: Base  
2: Emitter  
3: Collector



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.071	.087	1.80	2.20	
B	.045	.053	1.15	1.35	
C	.083	.096	2.10	2.45	
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	.006	.016	.15	.40	

### Suggested Solder Pad Layout



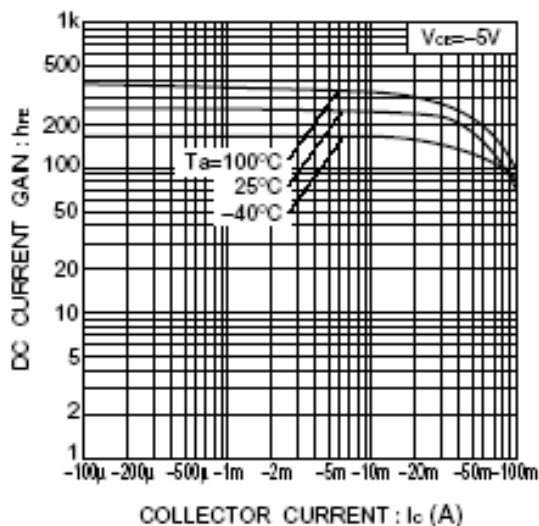


Fig.1 DC current gain vs. collector current

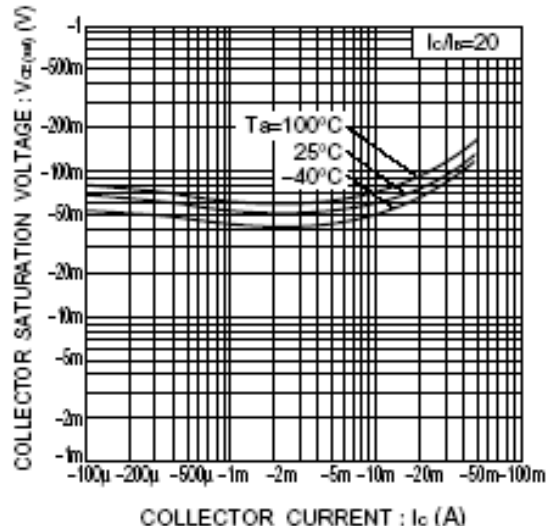
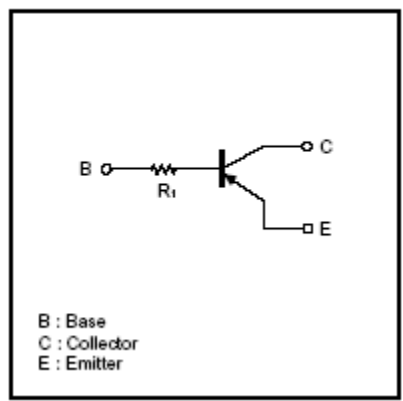


Fig.2 Collector-emitter saturation voltage vs. collector current

●Equivalent circuit



## Ordering Information :

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

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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