

## DTC144TSA

### Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates 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
- 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

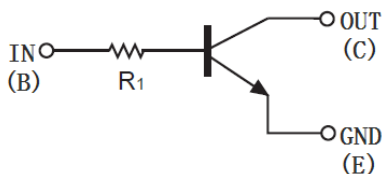
### Absolute maximum ratings @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
$V_{CEO}$	Collector-Emitter Voltage	---	50	---	V
$V_{CBO}$	Collector-Base Voltage	---	50	---	V
$V_{EBO}$	Emitter-Base Voltage	---	50	---	V
$I_O$	Output current	---	100	---	mA
$P_d$	Power dissipation	---	300	---	mW
$T_j$	Junction temperature	---	150	---	°C
$T_{stg}$	Storage temperature	-55	---	150	°C

### Electrical Characteristics @ 25°C Unless Otherwise Specified

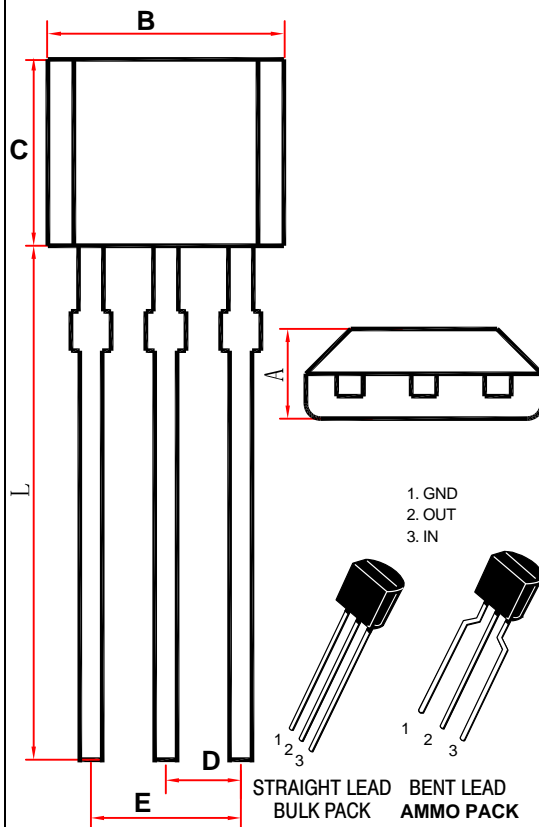
Symbol	Parameter	Min	Typ	Max	Unit
$V_{CEO}$	Collector-Emitter Voltage ( $I_C=1mA, I_B=0$ )	50	---	---	V
$V_{CBO}$	Collector-Base Voltage ( $I_C=0.05mA, I_E=0$ )	50	---	---	V
$V_{EBO}$	Emitter-Base Voltage ( $I_E=0.05mA, I_C=0$ )	5.0	---	---	V
$I_{CBO}$	Collector cut-off Current ( $V_{CB}=50V, I_E=0$ )	---	---	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	---	600	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=5mA, I_B=0.5mA$ )	---	---	0.3	V
$R_1$	Input resistor	32.9	47	61.1	K $\Omega$
$f_T$	Transition Frequency ( $V_{CE}=10Vdc, I_E=-5.0mA, f=100MHz$ )	---	250	---	MHz

### Equivalent Circuit



## Digital Transistors

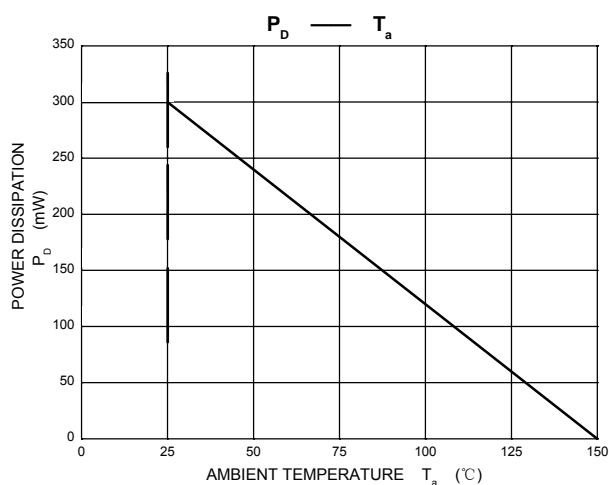
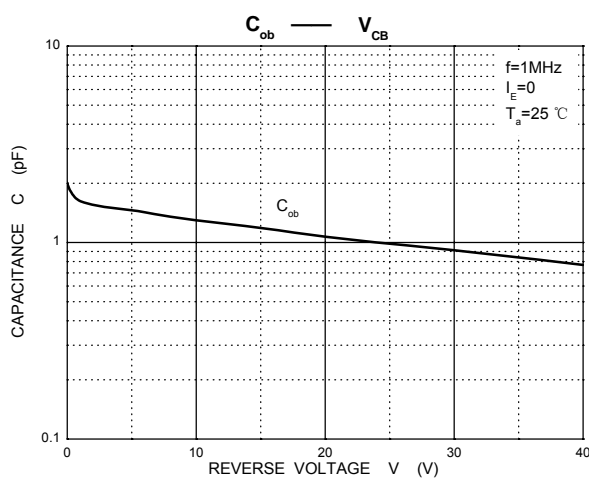
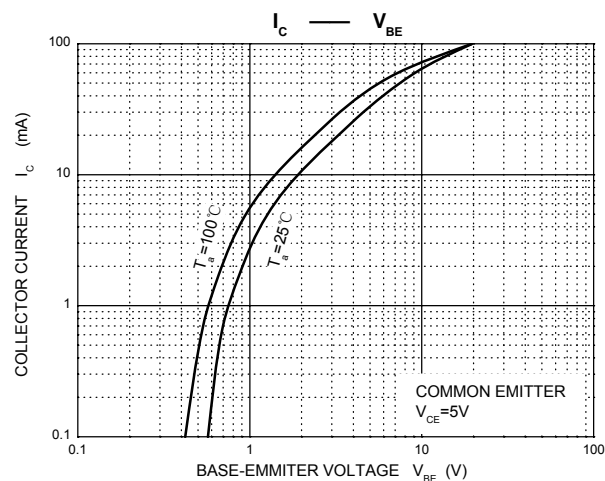
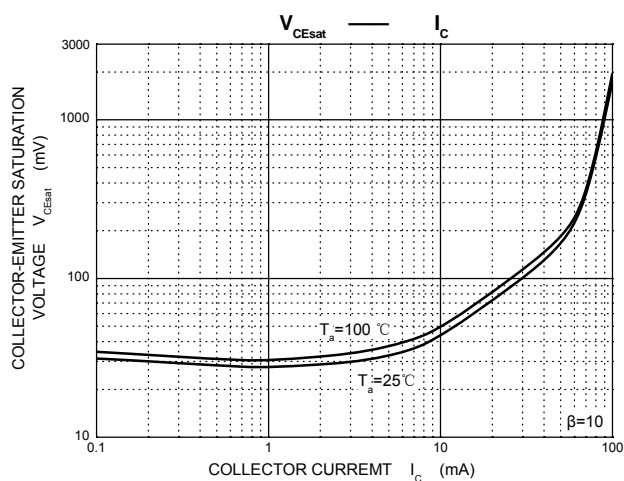
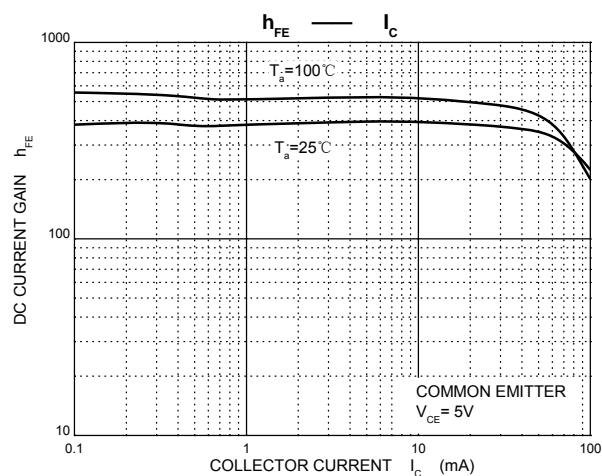
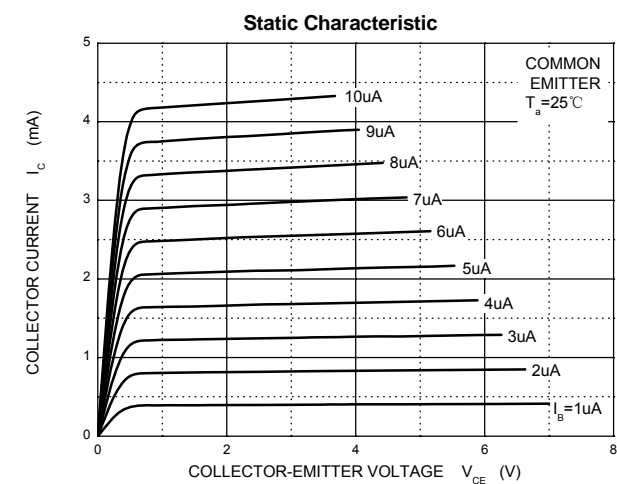
### TO-92S



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.056	.064	1.42	1.62	
B	.154	.161	3.90	4.10	
C	.120	.128	3.05	3.25	
D	.050		1.27		Straight Lead
	.086	.110	2.20	2.80	Bent Lead
E	.096	.104	2.44	2.64	Straight Lead
	.173	.220	4.40	5.60	Bent Lead
L	.594	.610	15.10	15.50	

\* For ammo packing detailed specification, click here to visit our website of product packaging for details.

## Typical Characteristics



## Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 30Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

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

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