

# PNP Digital Transistor

DTA143ZE

## Features

- **Pb-Free package is available**  
RoHS product for packing code suffix "G"  
Halogen free product for packing code suffix "H"
- 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

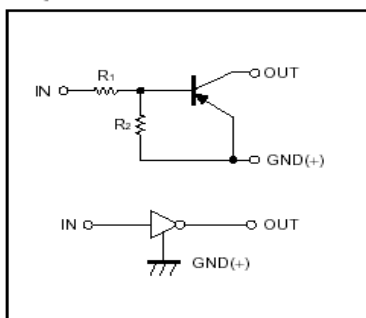
## Absolute maximum ratings @ 25°C

Symbol	Parameter	Min	Typ	Max	Unit
$V_{CC}$	Supply voltage	---	-50	---	V
$V_{IN}$	Input voltage	-30	---	5.0	V
$I_O$ $I_{C(MAX)}$	Output current	---	-100	---	mA
$P_d$	Power dissipation	---	150	---	mW
$T_j$	Junction temperature	---	150	---	°C
$T_{stg}$	Storage temperature	-55	---	150	°C

## Electrical Characteristics @ 25°C

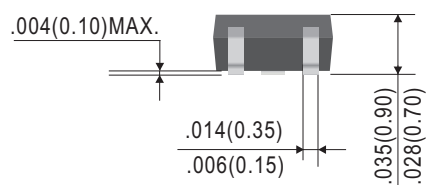
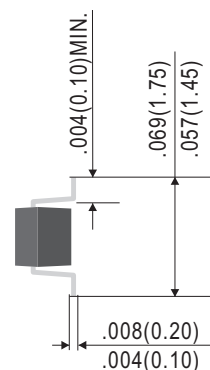
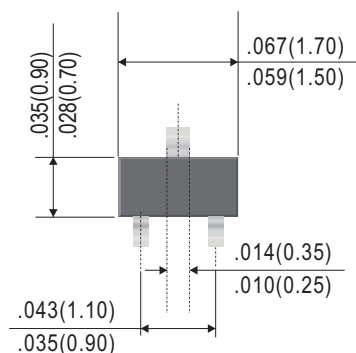
Symbol	Parameter	Min	Typ	Max	Unit
$V_{I(off)}$	Input voltage ( $V_{CC}=-5V, I_O=-100\mu A$ ) ( $V_O=-0.3V, I_O=-5mA$ )	-0.5	---	---	V
$V_{I(on)}$		---	---	-1.3	V
$V_{O(on)}$	Output voltage ( $I_O/I_I=-5mA/-0.25mA$ )	---	---	-0.3	V
$I_I$	Input current ( $V_I=-5V$ )	---	---	-1.8	mA
$I_{O(off)}$	Output current ( $V_{CC}=-50V, V_I=0$ )	---	---	-0.5	$\mu A$
$G_I$	DC current gain ( $V_O=-5V, I_O=-10mA$ )	80	---	---	
$R_1$	Input resistance	3.29	4.7	6.11	K $\Omega$
$R_2/R_1$	Resistance ratio	8.0	10	12	
$f_T$	Transition frequency ( $V_O=-10V, I_O=5mA, f=100MHz$ )	---	250	---	MHz

### Equivalent circuit



\*Marking: E13

## SOT-523



Dimensions in inches and (millimeters)



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## Typical Characteristics

