

# PZTA96ST1

Preferred Device

## High Voltage Transistor

### PNP Silicon

#### Features

- Pb-Free Package is Available

#### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO}$	-450	Vdc
Collector-Base Voltage	$V_{CBO}$	-450	Vdc
Emitter-Base Voltage	$V_{EBO}$	-5.0	Vdc
Collector Current	$I_C$	-500	mAdc
Total Power Dissipation Up to $T_A = 25^\circ\text{C}$ (Note 1)	$P_D$	1.5	W
Storage Temperature Range	$T_{stg}$	-65 to +150	$^\circ\text{C}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$

#### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction-to-Ambient (Note 1)	$R_{\theta JA}$	83.3	$^\circ\text{C}$

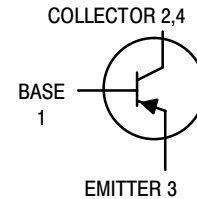
Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

- Device mounted on a glass epoxy printed circuit board 1.575 in. x 1.575 in. x 0.059 in.; mounting pad for the collector lead min. 0.93 in<sup>2</sup>.



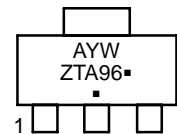
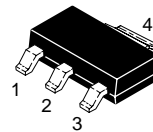
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<http://onsemi.com>



#### MARKING DIAGRAM

SOT-223 (TO-261)  
CASE 318E  
STYLE 1



A = Assembly Location  
Y = Year  
W = Work Week  
▪ = Pb-Free Package

(Note: Microdot may be in either location)

#### ORDERING INFORMATION

Device	Package	Shipping†
PZTA96ST1	SOT-223	1000/Tape & Reel
PZTA96ST1G	SOT-223 (Pb-Free)	1000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

Preferred devices are recommended choices for future use and best overall value.

# PZTA96ST1

## ELECTRICAL CHARACTERISTICS (Note 2)

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Collector–Emitter Breakdown Voltage ( $I_C = -1.0 \text{ mAdc}$ , $I_B = 0$ )	$V_{(BR)CEO}$	-450	-	Vdc
Collector–Emitter Breakdown Voltage ( $I_C = -100 \text{ } \mu\text{Adc}$ , $I_E = 0$ )	$V_{(BR)CBO}$	-450	-	Vdc
Emitter–Base Breakdown Voltage ( $I_E = -10 \text{ } \mu\text{Adc}$ , $I_C = 0$ )	$V_{(BR)EBO}$	-5.0	-	Vdc
Collector–Base Cutoff Current ( $V_{CB} = -400 \text{ Vdc}$ , $I_E = 0$ )	$I_{CBO}$	-	-0.1	$\mu\text{Adc}$
Emitter–Base Cutoff Current ( $V_{BE} = -4.0 \text{ Vdc}$ , $I_C = 0$ )	$I_{EBO}$	-	-0.1	$\mu\text{Adc}$
<b>ON CHARACTERISTICS</b>				
DC Current Gain (Note 3) ( $I_C = -10 \text{ mAdc}$ , $V_{CE} = -10 \text{ Vdc}$ )	$h_{FE}$	50	150	-
Saturation Voltages ( $I_C = -20 \text{ mAdc}$ , $I_B = -2.0 \text{ mAdc}$ ) ( $I_C = -20 \text{ mAdc}$ , $I_B = -2.0 \text{ mAdc}$ )	$V_{CE(sat)}$ $V_{BE(sat)}$	- -	-0.6 -1.0	Vdc

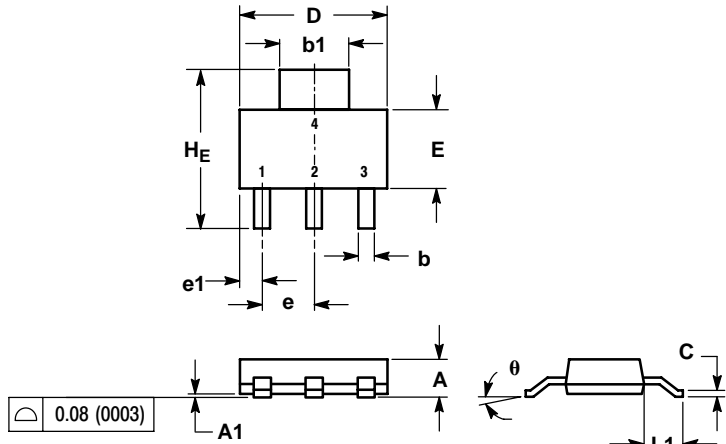
2.  $T_A = 25^\circ\text{C}$  unless otherwise noted.

3. Pulse Test: Pulse Width  $\leq 300 \text{ } \mu\text{s}$ ; Duty Cycle = 2.0%.

# PZTA96ST1

## PACKAGE DIMENSIONS

SOT-223  
(TO-261)  
PLASTIC PACKAGE  
CASE 318E-04  
ISSUE L

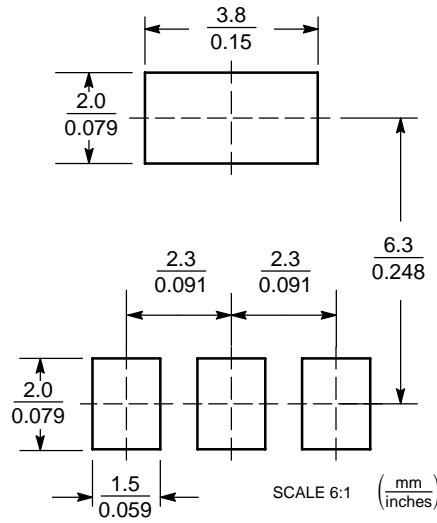


- NOTES:  
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.  
2. CONTROLLING DIMENSION: INCH.

DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.50	1.63	1.75	0.060	0.064	0.068
A1	0.02	0.06	0.10	0.001	0.002	0.004
b	0.60	0.75	0.89	0.024	0.030	0.035
b1	2.90	3.06	3.20	0.115	0.121	0.126
c	0.24	0.29	0.35	0.009	0.012	0.014
D	6.30	6.50	6.70	0.249	0.256	0.263
E	3.30	3.50	3.70	0.130	0.138	0.145
e	2.20	2.30	2.40	0.087	0.091	0.094
e1	0.85	0.94	1.05	0.033	0.037	0.041
L1	1.50	1.75	2.00	0.060	0.069	0.078
HE	6.70	7.00	7.30	0.264	0.276	0.287
theta	0°	-	10°	0°	-	10°

- STYLE 1:  
PIN 1. BASE  
2. COLLECTOR  
3. EMITTER  
4. COLLECTOR

### SOLDERING FOOTPRINT\*



\*For additional information on our Pb-Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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