

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 | $^\circ\text{C}$ |

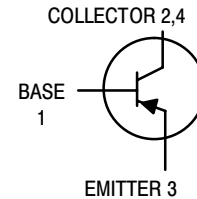
Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur 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 in².



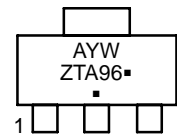
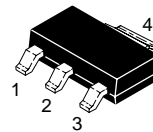
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MARKING DIAGRAM

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.

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ELECTRICAL CHARACTERISTICS (Note 2)

| Characteristic | Symbol | Min | Max | Unit |
|---|--------------------------------|--------|--------------|-----------------|
| OFF CHARACTERISTICS | | | | |
| Collector-Emitter Breakdown Voltage ($I_C = -1.0 \text{ mAdc}$, $I_B = 0$) | $V_{(BR)CEO}$ | -450 | - | Vdc |
| Collector-Emitter Breakdown Voltage ($I_C = -100 \mu\text{Adc}$, $I_E = 0$) | $V_{(BR)CBO}$ | -450 | - | Vdc |
| Emitter-Base Breakdown Voltage ($I_E = -10 \mu\text{Adc}$, $I_C = 0$) | $V_{(BR)EBO}$ | -5.0 | - | Vdc |
| Collector-Base Cutoff Current ($V_{CB} = -400 \text{ Vdc}$, $I_E = 0$) | I_{CBO} | - | -0.1 | μAdc |
| Emitter-Base Cutoff Current ($V_{BE} = -4.0 \text{ Vdc}$, $I_C = 0$) | I_{EBO} | - | -0.1 | μAdc |
| ON CHARACTERISTICS | | | | |
| 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 |

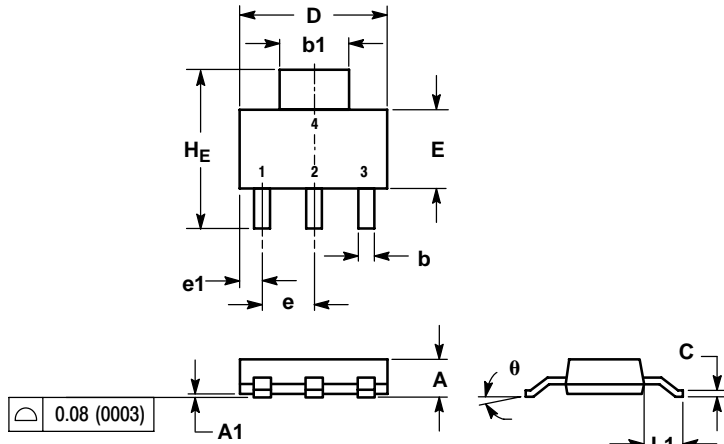
2. $T_A = 25^\circ\text{C}$ unless otherwise noted.

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

PZTA96ST1

PACKAGE DIMENSIONS

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

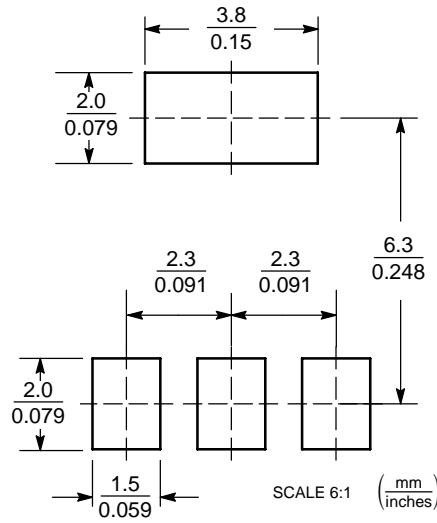


- NOTES:
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

| 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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