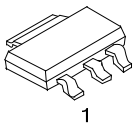
# PZTA92/93

***PNP SILICON TRANSISTOR***

## HIGH VOLTAGE TRANSISTOR




SOT-223

### ■ DESCRIPTION

The UTC **PZTA92/93** are high voltage PNP transistors, designed for telephone signal switching and for high voltage amplifier.

### ■ FEATURES

* Collector-emitter voltage: $V_{CEO}$=-300V (UTC PZTA92)
  $V_{CEO}$=-200V (UTC PZTA93)
* Complement to UTC PZTA42/43
* Collector power dissipation: $P_{C(MAX)}$=1W

### ■ ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|---|---|---|---|---|---|---|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| PZTA92L-AA3-R | PZTA92G-AA3-R | SOT-223 | B | C | E | Tape Reel |
| PZTA93L-AA3-R | PZTA93G-AA3-R | SOT-223 | B | C | E | Tape Reel |

PZTA92L-AA3-R
(1) Packing Type
(2) Package Type
(3) Lead Free

(1) R: Tape Reel
(2) AA3: SOT-223
(3) G: Halogen Free, L: Lead Free

## ■ ABSOLUTE MAXIMUM RATING ($T_A$=25°C)

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|---|---|---|---|---|
| Collector-Base Voltage | PZTA92 | $V_{CBO}$ | -300 | V |
| | PZTA93 | | -200 | V |
| Collector-Emitter Voltage | PZTA92 | $V_{CEO}$ | -300 | V |
| | PZTA93 | | -200 | V |
| Emitter-Base Voltage | | $V_{EBO}$ | -5 | V |
| Collector Current | | $I_C$ | -500 | mA |
| Collector Power Dissipation | | Pc | 1 | W |
| Junction Temperature | | $T_J$ | 150 | °C |
| Storage Temperature | | $T_{STG}$ | -55 ~ +150 | °C |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

## ■ ELECTRICAL CHARACTERISTICS ($T_A$=25°C, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|---|
| Collector-Base Breakdown Voltage | $BV_{CBO}$ | $I_C$=-100μA, $I_E$=0 | PZTA92 | -300 | | | V |
| | | | PZTA93 | -200 | | | V |
| Collector-Emitter Breakdown Voltage | $BV_{CEO}$ | $I_C$ =-1mA, $I_B$=0 | PZTA92 | -300 | | | V |
| | | | PZTA93 | -200 | | | V |
| Emitter-Base Breakdown Voltage | $BV_{EBO}$ | $I_E$=-100μA, $I_C$ =0 | | -5 | | | V |
| Collector Cut-Off Current | $I_{CBO}$ | $V_{CB}$=-200V, $I_E$=0 | PZTA92 | | | -0.25 | μA |
| | | $V_{CB}$=-160V, $I_E$=0 | PZTA93 | | | -0.25 | μA |
| Emitter Cut-Off Current | $I_{EBO}$ | $V_{EB}$=-3V, $I_C$ =0 | | | | -0.10 | μA |
| DC Current Gain (Note) | $h_{FE}$ | $V_{CE}$=-10V, $I_C$ =-1mA | | 60 | | | |
| | | $V_{CE}$=-10V, $I_C$ =-10mA | | 80 | | | |
| | | $V_{CE}$=-10V, $I_C$ =-30mA | | 80 | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C$ =-20mA, $I_B$=-2mA | | | | -0.5 | V |
| Base-Emitter Saturation Voltage | $V_{BE(SAT)}$ | $I_C$ =-20mA, $I_B$=-2mA | | | | -0.90 | V |
| Current Gain Bandwidth Product | $f_T$ | $V_{CE}$=-20V,Ic=-10mA, f=100MHz | | 50 | | | MHz |
| Collector Base Capacitance | $C_{CB}$ | $V_{CB}$=-20V, $I_E$=0, f=1MHz | PZTA92 | | | 6 | pF |
| | | | PZTA93 | | | 8 | pF |

Note: Pulse test: $P_W$<300μs, Duty Cycle<2%, $V_{CE\ (SAT)}$ <200mV (Class SIN)

## ■ TYPICAL CHARACTERISTICS