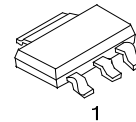


**PZT751****PNP SILICON TRANSISTOR****PNP CURRENT DRIVER  
TRANSISTOR****DESCRIPTION**

The UTC **PZT751** is designed for power amplifier, regulator, and switching circuits where speed is important.

**FEATURES**

- \* Collector-Emitter voltage:  
 $V_{CEO} = -80V$
- \* Collector Dissipation:  
 $P_{D(MAX)} = 1.2W$
- \* Low collector-Emitter saturation voltage
- \* Complementary of NPN PZT651

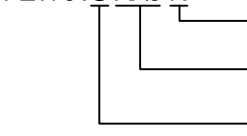


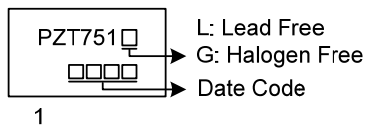
SOT-223

**ORDERING INFORMATION**

| Ordering Number |               | Package | Pin Assignment |   |   | Packing   |
|-----------------|---------------|---------|----------------|---|---|-----------|
| Lead Free       | Halogen Free  |         | 1              | 2 | 3 |           |
| PZT751L-AA3-R   | PZT751G-AA3-R | SOT-223 | B              | C | E | Tape Reel |

Note: Pin Assignment: E: Emitter C: Case B: Base

|                                                                                                                                                                                                                              |                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>PZT751G-AA3-R</p>  <ul style="list-style-type: none"><li>(1) Packing Type</li><li>(2) Package Type</li><li>(3) Green Package</li></ul> | <ul style="list-style-type: none"><li>(1) R: Tape Reel</li><li>(2) AA3: SOT-223</li><li>(3) G: Halogen Free and Lead Free, L: Lead Free</li></ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|

**MARKING**

### ■ ABSOLUTE MAXIMUM RATINGS (NOTE 2, 3)

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at  $T_A=25^{\circ}\text{C}$ , unless otherwise specified

| PARAMETER                            | SYMBOL    | RATINGS    | UNIT               |
|--------------------------------------|-----------|------------|--------------------|
| Collector-Base Voltage               | $V_{CBO}$ | -80        | V                  |
| Collector-Emitter Voltage            | $V_{CEO}$ | -60        | V                  |
| Emitter-Base Voltage                 | $V_{EBO}$ | -5         | V                  |
| Collector Power Dissipation (Note 4) | $P_C$     | 1.2        | W                  |
| Collector Current                    | $I_C$     | -4         | A                  |
| Junction Temperature                 | $T_J$     | +150       | $^{\circ}\text{C}$ |
| Storage Temperature                  | $T_{STG}$ | -40 ~ +150 | $^{\circ}\text{C}$ |

Notes: 1. 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.

2. These ratings are based on a maximum junction temperature of  $150^{\circ}\text{C}$ .

3. These are steady-state limits.

4. Device is mounted on FR-4 PCB 76mm×114mm×1.57mm (3.0 inch x 4.5 inch x 0.062 inch) with minimum land pattern size.

### ■ THERMAL DATA ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

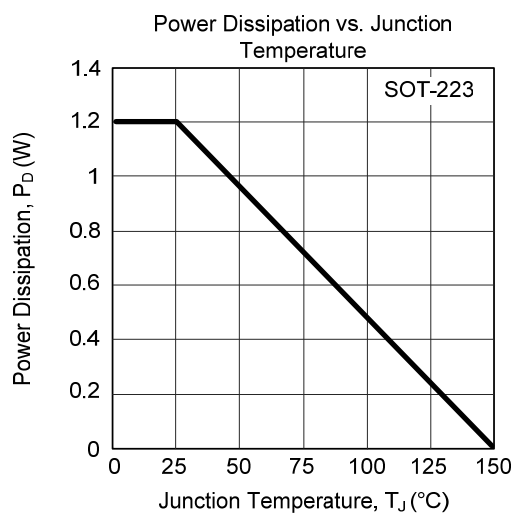
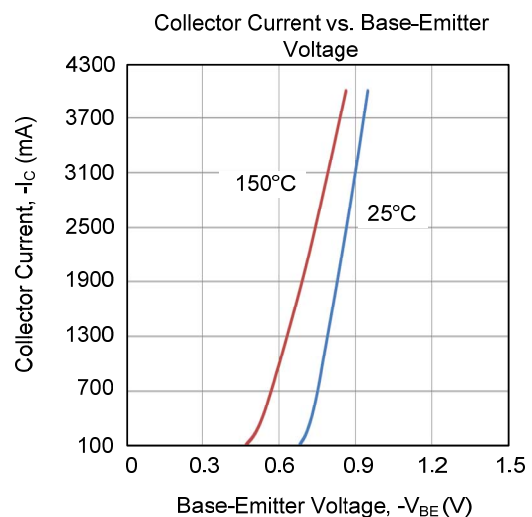
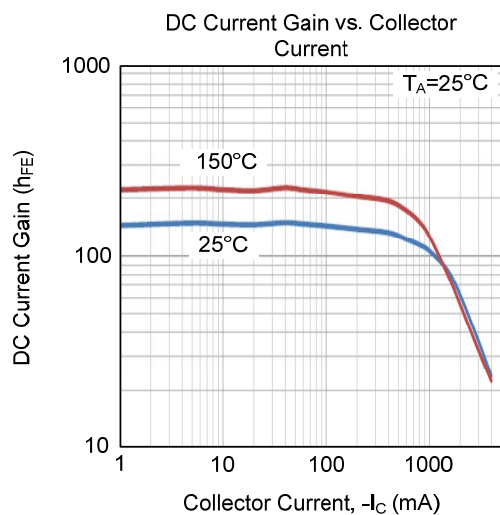
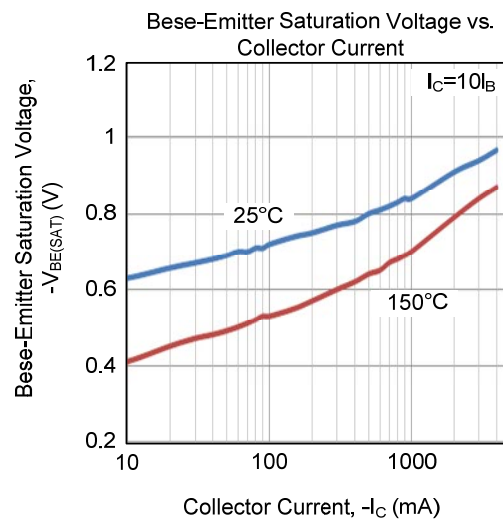
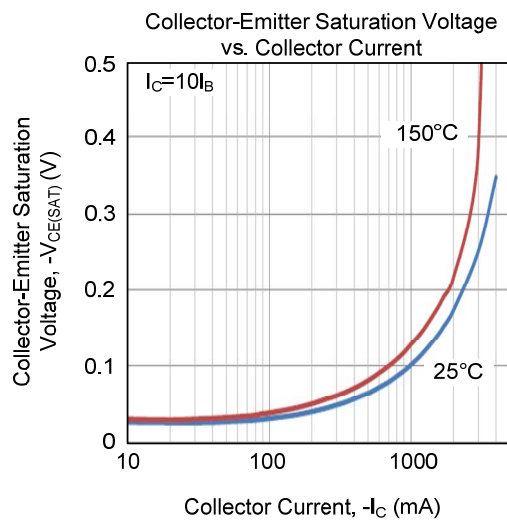
| PARAMETER           | SYMBOL        | RATINGS | UNIT                 |
|---------------------|---------------|---------|----------------------|
| Junction to Ambient | $\theta_{JA}$ | 103     | $^{\circ}\text{C/W}$ |

### ■ ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ , unless otherwise specified)

| PARAMETER                              | SYMBOL        | TEST CONDITIONS                                              | MIN | TYP | MAX  | UNIT          |
|----------------------------------------|---------------|--------------------------------------------------------------|-----|-----|------|---------------|
| Collector-Base Breakdown Voltage       | $BV_{CBO}$    | $I_C=-100\mu\text{A}$ , $I_E=0$                              | -80 |     |      | V             |
| Collector-Emitter Breakdown Voltage    | $BV_{CEO}$    | $I_C=-10\text{mA}$ , $I_B=0$                                 | -60 |     |      | V             |
| Emitter-Base Breakdown Voltage         | $BV_{EBO}$    | $I_E=-10\mu\text{A}$ , $I_C=0$                               | -5  |     |      | V             |
| Collector Cut-off Current              | $I_{CBO}$     | $V_{CB}=-80\text{V}$ , $I_E=0$                               |     |     | -100 | nA            |
| Emitter Cut-off Current                | $I_{EBO}$     | $V_{EB}=-4\text{V}$ , $I_C=0$                                |     |     | 0.1  | $\mu\text{A}$ |
| DC Current Gain (Note)                 | $h_{FE}$      | $V_{CE}=-2\text{V}$ , $I_C=-50\text{mA}$                     | 75  |     |      |               |
|                                        |               | $V_{CE}=-2\text{V}$ , $I_C=-500\text{mA}$                    | 75  |     |      |               |
|                                        |               | $V_{CE}=-2\text{V}$ , $I_C=-1\text{A}$                       | 75  |     |      |               |
|                                        |               | $V_{CE}=-2\text{V}$ , $I_C=-2\text{A}$                       | 40  |     |      |               |
| Collector-Emitter Saturation Voltage   | $V_{CE(SAT)}$ | $I_C=-1\text{A}$ , $I_B=-100\text{mA}$                       |     |     | -0.3 | V             |
|                                        |               | $I_C=-2\text{A}$ , $I_B=-200\text{mA}$                       |     |     | -0.5 | V             |
| Base-Emitter Saturation Voltage (Note) | $V_{BE(SAT)}$ | $I_C=-1\text{A}$ , $I_B=-100\text{mA}$                       |     |     | -1.2 | V             |
| Base Emitter On Voltage (Note)         | $V_{BE(ON)}$  | $I_C=-1\text{A}$ , $V_{CE}=-2\text{V}$                       |     |     | -1   | V             |
| Current Gain Bandwidth Product         | $f_T$         | $I_C=-50\text{mA}$ , $V_{CE}=-5\text{V}$ , $f=100\text{MHz}$ | 75  |     |      | MHz           |

Note: Pulse test: Pulse Width  $\leq 300\mu\text{s}$ , Duty Cycle  $\leq 2\%$ .

## ■ TYPICAL CHARACTERISTICS



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