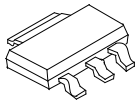
# PNP SILICON PLANAR HIGH CURRENT (HIGH PERFORMANCE) TRANSISTORS




SOT-223

## ■ FEATURES

* 0.5 Amp continuous current
* Up to 1.5 Amps peak current
* Very low saturation voltage
* Excellent gain characteristics specified up to 1 Amp

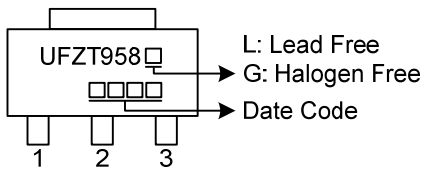
## ■ ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|---|---|---|---|---|---|---|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| UFZT958L-AA3-R | UFZT958G-AA3-R | SOT-223 | B | C | E | Tape Reel |

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

| | |
|---|---|
| UFZT958G-AA3-R<br>(1)Packing Type<br>(2)Package Type<br>(3)Green Package | (1) R: Tape Reel<br>(2) AA3: SOT-223<br>(3) G: Halogen Free and Lead Free, L: Lead Free |

## ■ MARKING



## ■ ABSOLUTE MAXIMUM RATINGS ($T_A$=25°C, unless otherwise specified)

| PARAMETER | | SYMBOL | RATINGS | UNIT |
|---|---|---|---|---|
| Collector-Base Voltage | | $V_{CBO}$ | -400 | V |
| Collector-Emitter Voltage | | $V_{CEO}$ | -400 | V |
| Emitter-Base Voltage | | $V_{EBO}$ | -7 | V |
| Collector Current | DC | $I_C$ | -0.5 | A |
| | Pulse(Note2) | $I_{CP}$ | -1.5 | A |
| Collector Dissipation | | $P_C$ | 1.6 | W |
| Junction Temperature | | $T_J$ | -55 ~ +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.

## ■ THERMAL DATA

| PARAMETER | SYMBOL | RATINGS | UNIT |
|---|---|---|---|
| Junction to Ambient | $\theta_{JA}$ | 78 | °C/W |

Note: Device mounted on FR-4 substrate $P_C$ board, 2oz copper, with 1inch square copper plate.

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

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| **OFF CHARACTERISTICS** | | | | | | |
| Collector-Base Breakdown Voltage | $BV_{CBO}$ | $I_C$=-100μA | -400 | | | V |
| Collector-Emitter Breakdown Voltage | $BV_{CEO}$ | $I_C$=-10mA (Note) | -400 | | | V |
| Emitter-Base Breakdown Voltage | $BV_{EBO}$ | $I_E$=-100μA | -6 | | | V |
| Collector Cut-off Current | $I_{CBO}$ | $V_{CB}$=-300V | | | -50 | nA |
| Emitter Cut-off Current | $I_{EBO}$ | $V_{EB}$=-6V | | | -10 | nA |
| **ON CHARACTERISTICS** | | | | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C$=-10mA, $I_B$=-1mA (Note) | | | -150 | mV |
| | | $I_C$=-100mA, $I_B$=-10mA (Note) | | | -200 | mV |
| | | $I_C$=-500mA, $I_B$=-100mA (Note) | | | -400 | mV |
| Base -Emitter Saturation Voltage | $V_{BE(SAT)}$ | $I_C$=-500mA, $I_B$=-100mA (Note) | | | -950 | mV |
| Base-Emitter On Voltage | $V_{BE(ON)}$ | $I_C$=-500mA, $V_{CE}$=-10V | | | -840 | mV |
| DC Current Gain | $h_{FE}$ | $I_C$=-10mA, $V_{CE}$=-10V | 100 | | | |
| | | $I_C$=-500mA, $V_{CE}$=-10V | 100 | | 300 | |
| | | $I_C$=-1A, $V_{CE}$=-10V | 10 | | | |
| **SMALL-SIGNAL CHARACTERISTICS** | | | | | | |
| Transition Frequency | $f_T$ | $I_C$=-100mA, $V_{CE}$=-10V, f=50MHz | | 85 | | MHz |

Note: Measured under pulsed conditions. Pulse width = 300ms. Duty cycle ≤ 2%.