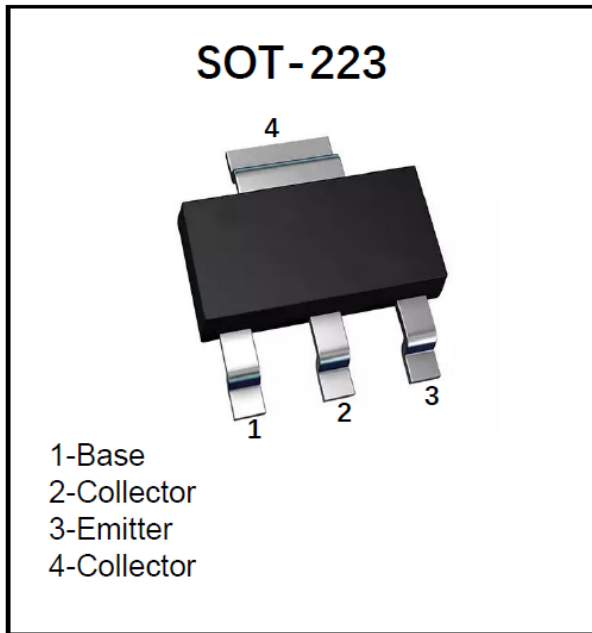


PNP Transistor



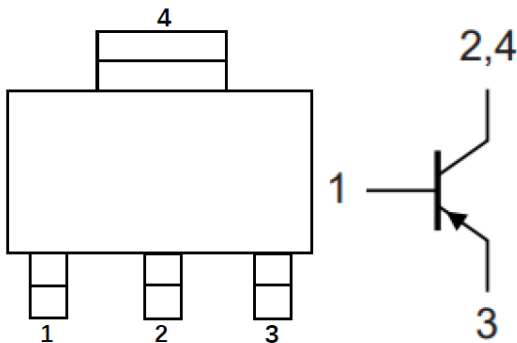
Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1

Mechanical Data

- **Package:** SOT-223
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** ZT2907A

■Equivalent circuit



■Maximum Ratings (Ta=25°C unless otherwise noted)

| Item | Symbol | Unit | Conditions | Value |
|---|-----------------|------|-------------------------------------|-------------|
| Minimum Collector-Emitter Voltage | V_{CEO} | V | $I_C = -10\text{mA}$, $I_B = 0$ | -60 |
| Minimum Collector-Base Voltage | V_{CBO} | V | $I_C = -100\mu\text{A}$, $I_E = 0$ | -60 |
| Minimum Emitter-Base Voltage | V_{EBO} | V | $I_E = -100\mu\text{A}$, $I_C = 0$ | -5 |
| Collector Current | I_C | A | | -0.6 |
| Power Dissipation | P_D | W | | 1 |
| Thermal Resistance From Junction To Ambient | $R_{\theta JA}$ | °C/W | | 125 |
| Operation Junction Temperature | T_j | °C | | -55 to +150 |
| Storage Temperature | T_{stg} | °C | | -55 to +150 |



PZT2907A

■Electrical Characteristics (Ta=25°C unless otherwise noted)

| Item | Symbol | Unit | Conditions | Min | Max |
|--------------------------------------|----------------|------|---|-----|------|
| Collector-base breakdown voltage | V_{CBO} | V | $I_C=-100\mu A, I_E=0$ | -60 | - |
| Collector-emitter breakdown voltage | V_{CEO} | V | $I_C=-10mA, I_B=0$ | -60 | - |
| Emitter-base breakdown voltage | V_{EBO} | V | $I_E=-100\mu A, I_C=0$ | -5 | - |
| Collector-base cut-off current | I_{CBO} | nA | $V_{CB}=-50V, I_E=0$ | - | -10 |
| Collector-emitter cut-off current | I_{EBO} | nA | $V_{EB}=-5V, I_C=0$ | - | -50 |
| DC current gain | h_{FE} | | $V_{CE}=-10V, I_C=-0.1mA$ | 75 | - |
| | h_{FE} | | $V_{CE}=-10V, I_C=-1mA$ | 100 | - |
| | h_{FE} | | $V_{CE}=-10V, I_C=-10mA$ | 100 | - |
| | h_{FE} | | $V_{CE}=-10V, I_C=-150mA$ | 100 | 300 |
| | h_{FE} | | $V_{CE}=-10V, I_C=-500mA$ | 50 | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | V | $I_C=-150mA, I_B=-15mA$ | - | -0.4 |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | V | $I_C=-500mA, I_B=-50mA$ | - | -1.6 |
| Base-emitter saturation voltage | $V_{BE(sat)*}$ | V | $I_C=-150mA, I_B=-15mA$ | - | -1.3 |
| Base-emitter saturation voltage | $V_{BE(sat)*}$ | V | $I_C=-500mA, I_B=-50mA$ | - | -2.6 |
| Transition frequency | F_t | MHz | $V_{CE}=-20V, I_C=-50mA, f=100MHz$ | 200 | - |
| Delay time | t_d | ns | $V_{CC}=-30V, I_C=-150mA, I_{B1}=-15mA$ | - | 10 |
| Rise time | t_r | ns | | - | 25 |
| Storage time | t_s | ns | $V_{CC}=-6V, I_C=-150mA, I_{B1}=I_{B2}=-15mA$ | - | 225 |
| Fall time | t_f | ns | | - | 60 |

■Ordering Information (Example)

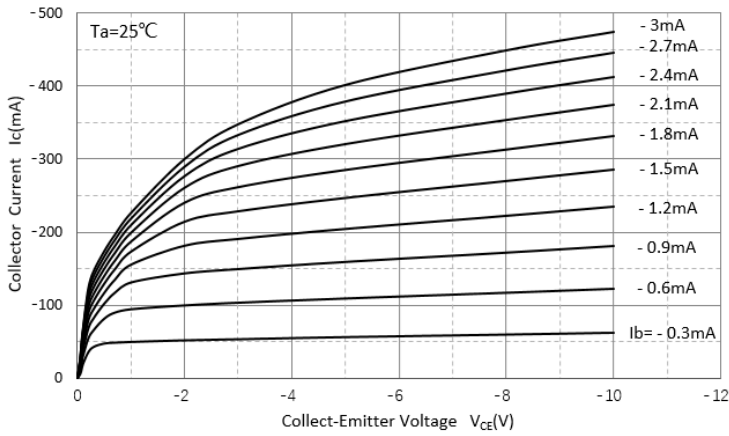
| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|------------------|----------------------|-------------------------|----------------------------|---------------|
| PZT2907A | F2 | Approximate 0.11 | 2500 | 5000 | 25000 | 13" reel |



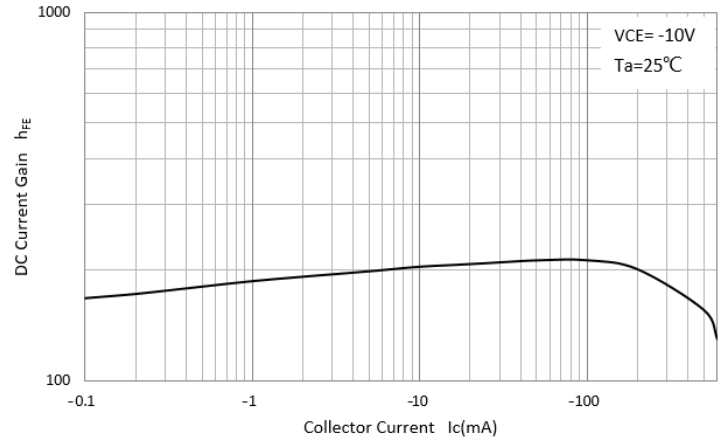
PZT2907A

■ Characteristics (Typical)

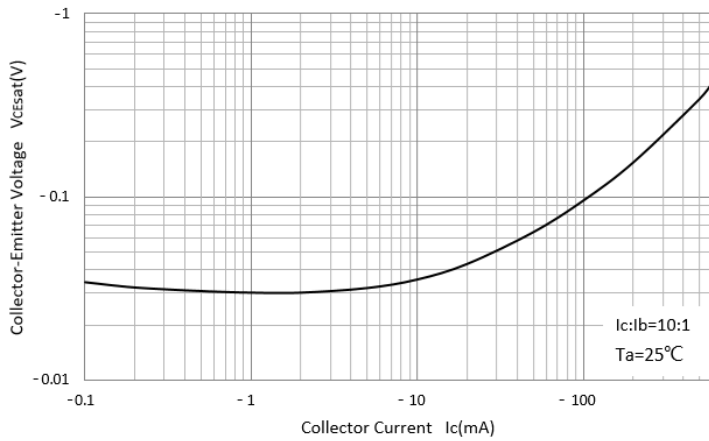
Static Characteristic



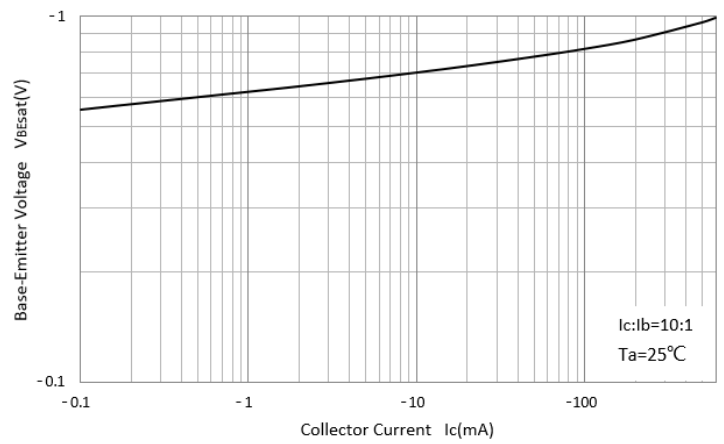
DC Current Gain



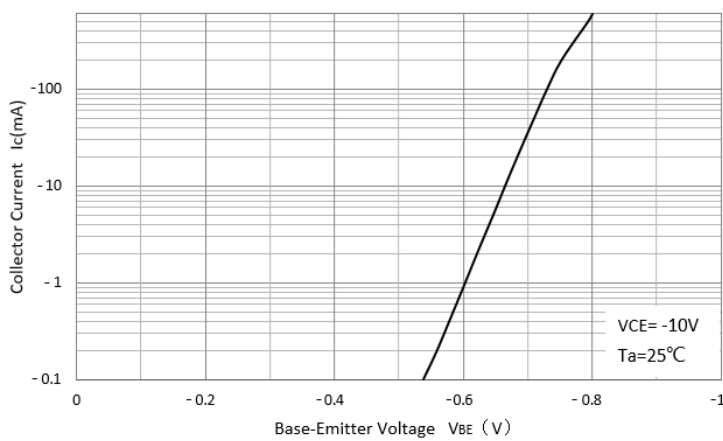
Collector-Emitter Saturation Voltage



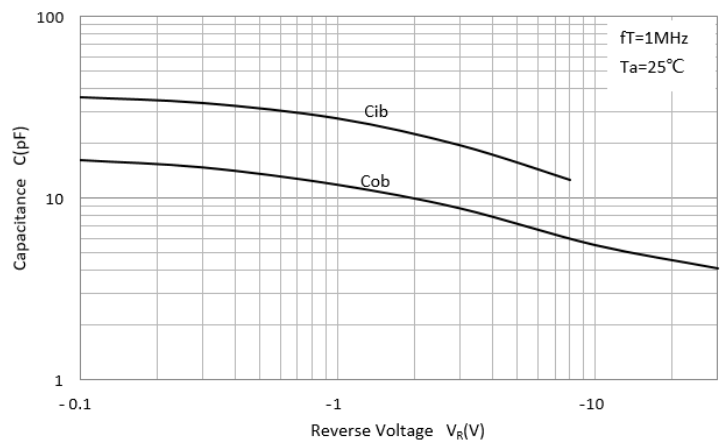
Base-Emitter Saturation Voltage

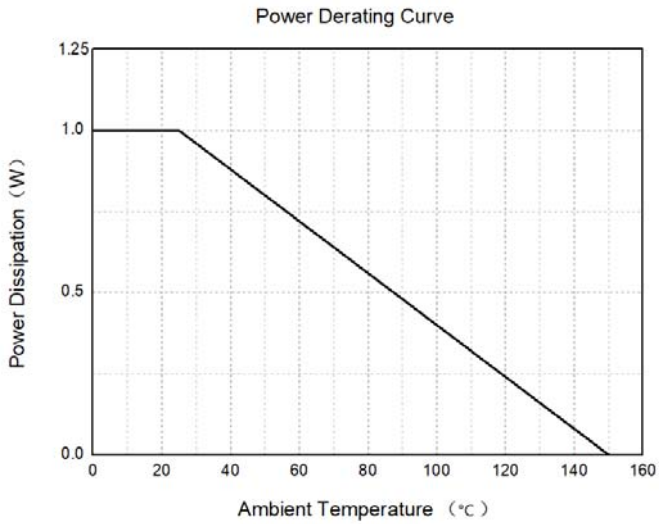


Base-Emitter On Voltage

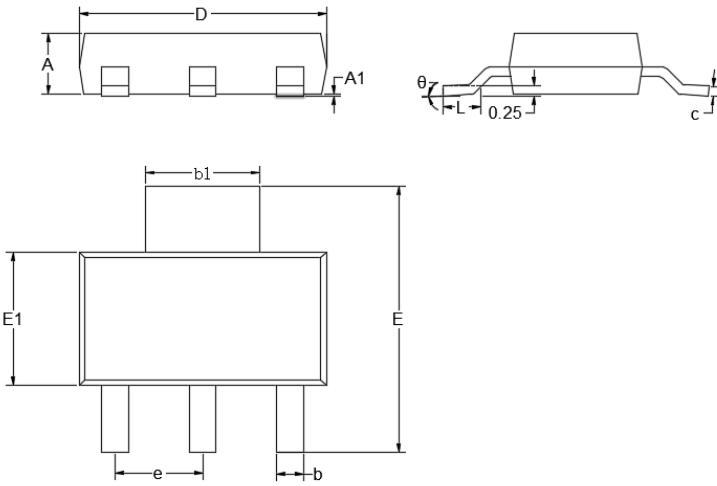


Cob/Cib-V_{CB}/V_{EB}



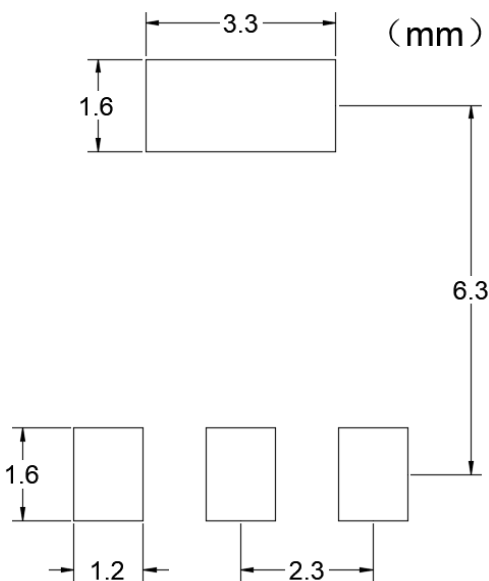


■SOT-223 Package Outline Dimensions



| DIMENSIONS | | | | |
|------------|--------|--------|--------|--------|
| DIM | INCHES | | MM | |
| | MIN | MAX | MIN | MAX |
| A | 0.0591 | 0.0670 | 1.5000 | 1.7000 |
| A1 | 0.0008 | 0.0039 | 0.0200 | 0.1000 |
| b | 0.0259 | 0.0330 | 0.6600 | 0.8400 |
| b1 | 0.1140 | 0.1220 | 2.9000 | 3.1000 |
| c | 0.0090 | 0.0138 | 0.2300 | 0.3500 |
| D | 0.2480 | 0.2640 | 6.3000 | 6.7000 |
| E | 0.2637 | 0.2874 | 6.7000 | 7.3000 |
| E1 | 0.1290 | 0.1460 | 3.3000 | 3.7000 |
| e | 0.0866 | 0.0945 | 2.2000 | 2.4000 |
| L | 0.0295 | 0.0492 | 0.7500 | 1.2500 |
| θ | 0° | 10° | 0° | 10° |

■SOT-223 Suggested Pad Layout





PZT2907A

Disclaimer

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