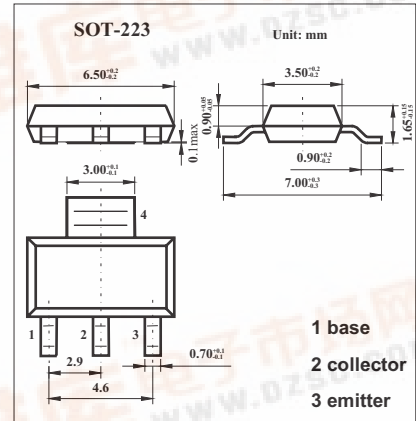


SMD Type Transistors

PNP Silicon Planar Medium Power High Gain Transistor  
FZT788B

Features

- Low equivalent on-resistance;  $R_{CE(sat)}$  93mΩ at 3A.
- Gain of 300 at  $I_c=2$  Amps and Very low saturation voltage.



Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$

| Parameter                               | Symbol         | Rating      | Unit             |
|---|----------------|-------------|------------------|
| Collector-base voltage                  | $V_{CB0}$      | -15         | V                |
| Collector-emitter voltage               | $V_{CE0}$      | -15         | V                |
| Emitter-base voltage                    | $V_{EB0}$      | -5          | V                |
| Continuous collector current            | $I_{CM}$       | -8          | A                |
| Peak pulse current                      | $I_c$          | -3          | A                |
| Power dissipation                       | $P_{tot}$      | 2           | W                |
| Operating and storage temperature range | $T_j, T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

## FZT788B

## ■ Electrical Characteristics Ta = 25°C

| Parameter                              | Symbol               | Testconditions   | Min | Typ   | Max                             | Unit |
|--|----------------------|--|-----|-------|---------------------------------|------|
| Collector-base breakdown voltage       | V <sub>(BR)CBO</sub> | I <sub>C</sub> =-100μA   | -15 |       |                                 | V    |
| Collector-emitter breakdown voltage *  | V <sub>(BR)CEO</sub> | I <sub>C</sub> =-10mA  | -15 |       |                                 | V    |
| Emitter-base breakdown voltage         | V <sub>(BR)EBO</sub> | I <sub>E</sub> =-100μA   | -5  |       |                                 | V    |
| Collector-base cut-off current         | I <sub>CBO</sub>     | V <sub>CB</sub> =-10V  |     |       | -0.1                            | μA   |
| Emitter Cut-Off Current                | I <sub>EBO</sub>     | V <sub>EB</sub> =-4V   |     |       | -0.1                            | μA   |
| Collector-emitter saturation voltage * | V <sub>CE(sat)</sub> | I <sub>C</sub> =-0.5A, I <sub>B</sub> =-2.5mA<br>I <sub>C</sub> =-1A, I <sub>B</sub> =-5mA<br>I <sub>C</sub> =-2A, I <sub>B</sub> =-10mA<br>I <sub>C</sub> =-3A, I <sub>B</sub> =-50mA |     |       | -0.15<br>-0.25<br>-0.45<br>-0.5 | V    |
| Base-emitter saturation voltage *      | V <sub>BE(sat)</sub> | I <sub>C</sub> =-1A, I <sub>B</sub> =-5mA  |     |       | -0.9                            | V    |
| Base-emitter ON voltage *              | V <sub>BE(on)</sub>  | I <sub>C</sub> =-1A, V <sub>CE</sub> =-2V  |     | -0.75 |                                 | V    |
| Static Forward Current Transfer Ratio  | h <sub>FE</sub>      | I <sub>C</sub> =-10mA, V <sub>CE</sub> =-2V *  | 500 |       | 1500                            |      |
|  |                      | I <sub>C</sub> =-1A, V <sub>CE</sub> =-2V*   | 400 |       |                                 |      |
|  |                      | I <sub>C</sub> =-2A, V <sub>CE</sub> =-2V*   | 300 |       |                                 |      |
|  |                      | I <sub>C</sub> =-6A, V <sub>CE</sub> =-2V*   | 150 |       |                                 |      |
| Transitional frequency                 | f <sub>T</sub>       | I <sub>C</sub> =-50mA, V <sub>CE</sub> =-5V, f=50MHz   | 100 |       |                                 | MHz  |
| Input capacitance                      | C <sub>ibo</sub>     | V <sub>EB</sub> =-0.5V, f=1MHz   |     | 225   |                                 | pF   |
| Output capacitance                     | C <sub>obo</sub>     | V <sub>CB</sub> =-10V, f=1MHz  |     | 25    |                                 | pF   |
| Turn-on time                           | t <sub>(on)</sub>    | I <sub>C</sub> =-500mA, V <sub>CC</sub> =-10V  |     | 35    |                                 | ns   |
| Turn-off time                          | t <sub>(off)</sub>   | I <sub>B1</sub> =I <sub>B2</sub> =-50mA  |     | 400   |                                 | ns   |

\* Pulse test: tp = 300 μs; d ≤ 0.02.

## ■ Marking

|         |         |
|---------|---------|
| Marking | FZT788B |
|---------|---------|