

SOT223 PNP SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

FZT788B

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FEATURES

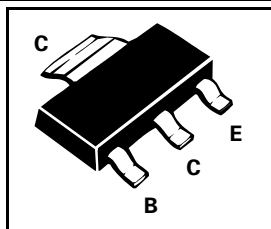
- * Low equivalent on-resistance; $R_{CE(sat)}$ **93mΩ at 3A**
- * Gain of 300 at $I_C=2$ Amps and Very low saturation voltage

APPLICATIONS

- * Battery powered circuits

COMPLEMENTARY TYPE – FZT688B

PARTMARKING DETAIL – FZT788B



ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|--|----------------|-------------|-------------|
| Collector-Base Voltage | V_{CBO} | -15 | V |
| Collector-Emitter Voltage | V_{CEO} | -15 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Peak Pulse Current | I_{CM} | -8 | A |
| Continuous Collector Current | I_C | -3 | A |
| Power Dissipation at $T_{amb}=25^{\circ}C$ | P_{tot} | 2 | W |
| Operating and Storage Temperature Range | $T_j; T_{stg}$ | -55 to +150 | $^{\circ}C$ |

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$)

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|-----------------------|--------------------------|-----------|---------------------------------|----------|--|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | -15 | | | V | $I_C=-100\mu A$ |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | -15 | | | V | $I_C=-10mA^*$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | -5 | | | V | $I_E=-100\mu A$ |
| Collector Cut-Off Current | I_{CBO} | | | -0.1 | μA | $V_{CE}=-10V$ |
| Emitter Cut-Off Current | I_{EBO} | | | -0.1 | μA | $V_{EB}=-4V$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | | -0.15 -0.25 -0.45 -0.5 | V | $I_C=-0.5A, I_B=-2.5mA^*$ $I_C=-1A, I_B=-5mA^*$ $I_C=-2A, I_B=-10mA^*$ $I_C=-3A, I_B=-50mA^*$ |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | | | -0.9 | V | $I_C=-1A, I_B=-5mA^*$ |
| Base-Emitter Turn-On Voltage | $V_{BE(on)}$ | | -0.75 | | V | $I_C=-1A, V_{CE}=-2V^*$ |
| Static Forward Current Transfer Ratio | h_{FE} | 500 400 300 150 | | 1500 | | $I_C=-10mA, V_{CE}=-2V^*$ $I_C=-1A, V_{CE}=-2V^*$ $I_C=-2A, V_{CE}=-2V^*$ $I_C=-6A, V_{CE}=-2V^*$ |
| Transition Frequency | f_T | 100 | | | MHz | $I_C=-50mA, V_{CE}=-5V$ $f=50MHz$ |
| Input Capacitance | C_{ibo} | | 225 | | pF | $V_{EB}=-0.5V, f=1MHz$ |
| Output Capacitance | C_{obo} | | 25 | | pF | $V_{CB}=-10V, f=1MHz$ |
| Switching Times | t_{on} t_{off} | | 35 400 | | ns ns | $I_C=-500mA, I_{B1}=-50mA$ $I_{B2}=-50mA, V_{CC}=-10V$ |

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device

TYPICAL CHARACTERISTICS

