

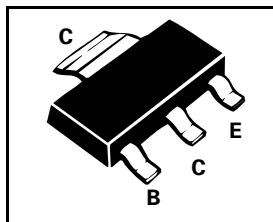
SOT223 PNP SILICON PLANAR MEDIUM POWER HIGH PERFORMANCE TRANSISTOR

ISSUE 2 - OCTOBER 1995

FZT589

PARTMARKING DETAILS - FZT589

COMPLEMENTARY TYPES - FZT489



ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|----------------|-------------|------------------|
| Collector-Base Voltage | V_{CBO} | -50 | V |
| Collector-Emitter Voltage | V_{CEO} | -30 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Peak Pulse Current | I_{CM} | -2 | A |
| Continuous Collector Current | I_C | -1 | A |
| Base Current | I_B | -200 | mA |
| Power Dissipation at $T_{amb}=25^\circ\text{C}$ | P_{tot} | 2 | W |
| Operating and Storage Temperature Range | $T_j; T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

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

| PARAMETER | SYMBOL | MIN. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|---------------|------------------------|----------------|------|--|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | -50 | | V | $I_C = -100\mu\text{A}$ |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | -30 | | V | $I_C = -1\text{mA}^*$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | -5 | | V | $I_E = -100\mu\text{A}$ |
| Collector Cut-Off Current | I_{CBO} | | -100 | nA | $V_{CB} = -30\text{V}$ |
| Collector Emitter Cut-Off Current | I_{CES} | | -100 | nA | $V_{CES} = -30\text{V}$ |
| Emitter Cut-Off Current | I_{EBO} | | -100 | nA | $V_{EB} = -4\text{V}$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | -0.35 -0.65 | V | $I_C = -1\text{A}, I_B = -100\text{mA}^*$ $I_C = -2\text{A}, I_B = -200\text{mA}^*$ |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | | -1.2 | V | $I_C = -1\text{A}, I_B = -100\text{mA}^*$ |
| Base-Emitter Turn-On Voltage | $V_{BE(on)}$ | | -1.1 | V | $I_C = -1\text{A}, V_{CE} = -2\text{V}^*$ |
| Static Forward Current Transfer Ratio | h_{FE} | 100 100 80 40 | 300 | | $I_C = -1\text{mA}, V_{CE} = -2\text{V}^*$ $I_C = -500\text{mA}, V_{CE} = -2\text{V}^*$ $I_C = -1\text{A}, V_{CE} = -2\text{V}^*$ $I_C = -2\text{A}, V_{CE} = -2\text{V}^*$ |
| Transition Frequency | f_T | 100 | | MHz | $I_C = -100\text{mA}, V_{CE} = -5\text{V}$ $f = 100\text{MHz}$ |
| Output Capacitance | C_{obo} | | 15 | pF | $V_{CB} = -10\text{V}, f = 1\text{MHz}$ |

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
For typical characteristics graphs see FMMT549 datasheet



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