

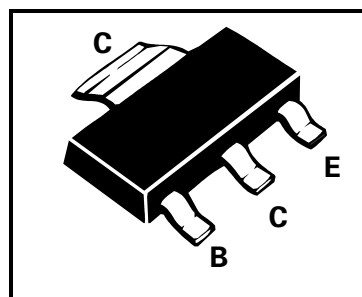
SOT223 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

ISSUE 3 - NOVEMBER 1995



FZT591

COMPLEMENTARY TYPE FZT491
PARTMARKING DETAIL - FZT591



ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|--|----------------|-------------|-------------|
| Collector-Base Voltage | V_{CBO} | -80 | V |
| Collector-Emitter Voltage | V_{CEO} | -60 | 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 $T_{amb}=25^{\circ}C$ | 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. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|---------------|------------------------|--------------|------|--|
| Breakdown Voltages | $V_{(BR)CBO}$ | -80 | | V | $I_C = -100\mu A, I_E = 0$ |
| | $V_{(BR)CEO}$ | -60 | | V | $I_C = -10mA, I_B = 0^*$ |
| | $V_{(BR)EBO}$ | -5 | | V | $I_E = -100\mu A, I_C = 0$ |
| Collector Cut-Off Current | I_{CBO} | | -100 | nA | $V_{CB} = -60V$ |
| Emitter Cut-Off Current | I_{EBO} | | -100 | nA | $V_{EB} = -4V, I_C = 0$ |
| Collector-Emitter Cut-Off Current | I_{CES} | | -100 | nA | $V_{CES} = -60V$ |
| Emitter Saturation Voltages | $V_{CE(sat)}$ | | -0.3 -0.6 | V | $I_C = -500mA, I_B = -50mA^*$ $I_C = -1A, I_B = -100mA^*$ |
| | $V_{BE(sat)}$ | | -1.2 | V | $I_C = -1A, I_B = -100mA^*$ |
| Base-Emitter Turn-on Voltage | $V_{BE(on)}$ | | -1.0 | V | $I_C = -1A, V_{CE} = -5V^*$ |
| Static Forward Current Transfer Ratio | h_{FE} | 100 100 80 15 | 300 | | $I_C = -1mA, V_{CE} = -5V^*$ $I_C = -500mA, V_{CE} = -5V^*$ $I_C = -1A, V_{CE} = -5V^*$ $I_C = -2A, V_{CE} = -5V^*$ |
| Transition Frequency | f_T | 150 | | MHz | $I_C = -50mA, V_{CE} = -10V$ $f = 100MHz$ |
| Output Capacitance | C_{obo} | | 10 | pF | $V_{CB} = -10V, f = 1MHz$ |

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
For typical Characteristics graphs see FMMT591 datasheet