

SOT23 PNP SILICON PLANAR HIGH VOLTAGE TRANSISTOR

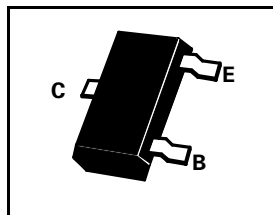
FMMT560

ISSUE 1 – NOVEMBER 1998

FEATURES

- * Excellent h_{FE} characteristics up to $I_C=50\text{mA}$
- * Low Saturation voltages

PARTMARKING DETAIL – 560



ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|----------------|-------------|------|
| Collector-Base Voltage | V_{CBO} | -500 | V |
| Collector-Emitter Voltage | V_{CEO} | -500 | V |
| Emitter-Base Voltage | V_{EBO} | -5 | V |
| Peak Pulse Current | I_{CM} | -500 | mA |
| Continuous Collector Current | I_C | -150 | mA |
| Power Dissipation | P_{tot} | 500 | mW |
| Operating and Storage Temperature Range | $T_j; T_{stg}$ | -55 to +150 | °C |

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

| PARAMETER | SYMBOL | MIN. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|-----------------------|----------------------|--------------|---------------------|--|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | -500 | | V | $I_C=-100\mu\text{A}$ |
| Collector-Emitter Breakdown Voltage | $V_{BR(CEO)}$ | -500 | | V | $I_C=-10\text{mA}^*$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | -5 | | V | $I_E=-100\mu\text{A}$ |
| Collector Cut-Off Current | $I_{CBO}; I_{CES}$ | | -100 | nA | $V_{CB}=-500\text{V}; V_{CE}=-500\text{V}$ |
| Emitter Cut-Off Current | I_{EBO} | | -100 | nA | $V_{EB}=-5\text{V}$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | -0.2 -0.5 | V | $I_C=-20\text{mA}, I_B=-2\text{mA}^*$ $I_C=-50\text{mA}, I_B=-10\text{mA}^*$ |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | | -0.9 | V | $I_C=-50\text{mA}, I_B=-10\text{mA}^*$ |
| Base-Emitter Turn On Voltage | $V_{BE(on)}$ | | -0.9 | V | $I_C=-50\text{mA}, V_{CE}=-10\text{V}^*$ |
| Static Forward Current Transfer Ratio | h_{FE} | 100 80 15 typ | 300 300 | | $I_C=-1\text{mA}, V_{CE}=-10\text{V}$ $I_C=-50\text{mA}, V_{CE}=-10\text{V}^*$ $I_C=-100\text{mA}, V_{CE}=-10\text{V}^*$ |
| Transition Frequency | f_T | 60 | | MHz | $V_{CE}=-20\text{V}, I_C=-10\text{mA}, f=50\text{MHz}$ |
| Output Capacitance | C_{obo} | | 8 | pF | $V_{CB}=-20\text{V}, f=1\text{MHz}$ |
| Switching times | t_{on} t_{off} | 110 typ. 1.5 typ. | | ns μs | $V_{CE}=-100\text{V}, I_C=-50\text{mA}, I_{B1}=-5\text{mA}, I_{B2}=10\text{mA}$ |

* Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$

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TYPICAL CHARACTERISTICS

