

SOT23 NPN SILICON PLANAR HIGH PERFORMANCE TRANSISTOR

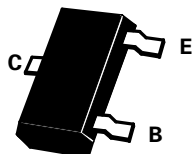
FMMT455

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FEATURES

- * 140 Volt V_{CE0}
- * 1 Amp continuous current
- * P_{tot} = 500 mW

PARTMARKING DETAIL – 455



SOT23

ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|----------------|-------------|------------------|
| Collector-Base Voltage | V_{CBO} | 160 | V |
| Collector-Emitter Voltage | V_{CEO} | 140 | 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} | 500 | mW |
| Operating and Storage Temperature Range | $T_j; T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

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

| PARAMETER | SYMBOL | MIN. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|----------------|---------------|------|---------------|---|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | 160 | | V | $I_C=100\mu\text{A}$ |
| Collector-Emitter Sustaining Voltage | $V_{CEO(sus)}$ | 140 | | 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} | | 0.1 | μA | $V_{CB}=140\text{V}$ |
| Emitter Cut-Off Current | I_{EBO} | | 0.1 | μA | $V_{EB}=4\text{V}$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | 0.7 | V | $I_C=150\text{mA}$, $I_B=15\text{mA}$ |
| Static Forward Current Transfer Ratio | h_{FE} | 100 10 Typ | 300 | | $I_C=150\text{mA}$, $V_{CE}=10\text{V}^*$ $I_C=1\text{A}$, $V_{CE}=10\text{V}^*$ |
| Transition Frequency | f_T | 100 | | MHz | $I_C=50\text{mA}$, $V_{CE}=10\text{V}$ $f=100\text{MHz}$ |
| 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 $\leq 2\%$
Spice parameter data is available upon request for this device

TYPICAL CHARACTERISTICS

