

SOT323 PNP SILICON PLANAR HIGH PERFORMANCE TRANSISTOR

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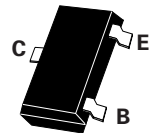
ZUMT591

FEATURES

- * Extremely low saturation voltage
- * 500mW power dissipation
- * 1 Amp continuous collector current (I_C)

APPLICATIONS

- * Ideally suited for space / weight critical applications



SOT323

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 $T_{amb}=25^\circ\text{C}$ | 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. | TYP. | MAX. | UNIT | CONDITIONS. |
|--------------------------------------|----------------|------|------|--------------|------|--|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | -80 | | | V | $I_C = -100\mu\text{A}$, $I_E = 0$ |
| Collector-Emitter Breakdown Voltage | $V_{CEO(sus)}$ | -60 | | | V | $I_C = -10\text{mA}^*$, $I_B = 0$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | -5 | | | V | $I_E = -100\mu\text{A}$, $I_C = 0$ |
| Collector Cut-Off Current | I_{CBO} | | | -100 | nA | $V_{CB} = -60\text{V}$ |
| Collector Cut-Off Current | I_{CES} | | | -100 | nA | $V_{CE} = -60\text{V}$ |
| Emitter Cut-Off Current | I_{EBO} | | | -100 | nA | $V_{EB} = -4\text{V}$, $I_C = 0$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | | -0.3 -0.6 | V | $I_C = -500\text{mA}$, $I_B = -50\text{mA}^*$ $I_C = -1\text{A}$, $I_B = -100\text{mA}^*$ |
| 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 | $V_{BE(on)}$ | | | -1.0 | V | $I_C = -1\text{A}$, $V_{CE} = -5\text{V}^*$ |

* Measured under pulsed conditions. Pulse width=300 μs . Duty cycle@2%

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

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|-----------|------------------------|------|------|------|--|
| Static Forward Current Transfer Ratio | h_{FE} | 100 100 80 15 | | 300 | | $I_C = -1\text{mA}, V_{CE} = -5\text{V}^*$ $I_C = -500\text{mA}, V_{CE} = -5\text{V}^*$ $I_C = -1\text{A}, V_{CE} = -5\text{V}^*$ $I_C = -2\text{A}, V_{CE} = -5\text{V}^*$ |
| Transition Frequency | f_T | 150 | | | MHz | $I_C = -50\text{mA}, V_{CE} = -10\text{V}^*$ $f = 100\text{MHz}$ |
| Output Capacitance | C_{obo} | | | 10 | pF | $V_{CB} = -10\text{V}, f = 1\text{MHz}$ |

* Measured under pulsed conditions. Pulse width=300 μs . Duty cycle@2%

NOTE

This data is derived from development material and does not necessarily mean that the device will go into production

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