# SOT323 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

**ZUMT807-25**
**ZUMT807-40**

**ISSUE 2 – FEBRUARY 1999**

PARTMARKING DETAILS ZUMT807-25 - T8
ZUMT807-40 - T24

COMPLEMENTARY TYPES ZUMT807-25 - ZUMT817-25
ZUMT807-40 - ZUMT817-40

## ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | -50 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | -45 | V |
| Emitter-Base Voltage | $V_{EBO}$ | -5 | V |
| Peak Pulse Current | $I_{CM}$ | -1 | A |
| Continuous Collector Current | $I_C$ | -500 | mA |
| Base Current | $I_B$ | -100 | mA |
| Peak Base Current | $I_{BM}$ | -200 | mA |
| Power Dissipation at $T_{amb}$=25°C | $P_{tot}$ | 330 | mW |
| Operating and Storage Temperature Range | $T_j$:$T_{stg}$ | -55 to +150 | °C |

## ELECTRICAL CHARACTERISTICS (at $T_{amb}$ = 25°C unless otherwise stated).

| PARAMETER | | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---|---|---|---|---|---|---|---|
| Collector Cut-Off Current | | $I_{CBO}$ | | | -0.1<br>-5 | µA<br>µA | $V_{CB}$=-20V, $I_E$=0<br>$V_{CB}$=-20V, $I_E$=0, $T_{amb}$=150°C |
| Emitter Cut-Off Current | | $I_{EBO}$ | | | -10 | µA | $V_{EB}$=-5V, $I_C$=0 |
| Collector-Emitter Saturation Voltage | | $V_{CE(sat)}$ | | | -700 | mV | $I_C$=-500mA, $I_B$=-50mA* |
| Base-Emitter Turn-on Voltage | | $V_{BE(on)}$ | | | -1.2 | V | $I_C$=-500mA, $V_{CE}$=-1V* |
| Static Forward Current Transfer Ratio | | $h_{FE}$ | 100<br>40 | | 600 | | $I_C$=-100mA, $V_{CE}$=-1V*<br>$I_C$=-500mA, $V_{CE}$=-1V* |
| | -25 | | 160 | | 400 | | $I_C$=-100mA, $V_{CE}$=-1V* |
| | -40 | | 250 | | 600 | | $I_C$=-100mA, $V_{CE}$=-1V* |
| Transition Frequency | | $f_T$ | | 100 | | MHz | $I_C$=-10mA, $V_{CE}$=-5V<br>f=35MHz |
| Collector-base Capacitance | | $C_{obo}$ | | 8.0 | | pF | $I_E$=$I_e$=0, $V_{CB}$=-10V<br>f=1MHz |

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