

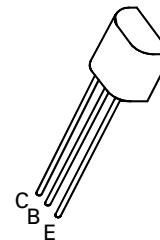
NPN SILICON PLANAR MEDIUM POWER HIGH VOLTAGE TRANSISTOR

ZTX457

ISSUE 2 – MARCH 1994

FEATURES

- * 300 Volt V_{CEO}
- * 0.5 Amp continuous current
- * $P_{tot} = 1$ Watt



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|--|----------------|-------------|-------------|
| Collector-Base Voltage | V_{CBO} | 300 | V |
| Collector-Emitter Voltage | V_{CEO} | 300 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Peak Pulse Current | I_{CM} | 1 | A |
| Continuous Collector Current | I_C | 500 | mA |
| Power Dissipation at $T_{amb}=25^{\circ}C$ | P_{tot} | 1 | W |
| Operating and Storage Temperature Range | $T_j; T_{stg}$ | -55 to +200 | $^{\circ}C$ |

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

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|----------------|----------------|------|-----------|---------------|---|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | 300 | | | V | $I_C=100\mu A, I_E=0$ |
| Collector-Emitter Breakdown Voltage | $V_{CEO(sus)}$ | 300 | | | V | $I_C=10mA, I_B=0^*$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | 5 | | | V | $I_E=100\mu A$ |
| Collector Cut-Off Current | I_{CBO} | | | 100 10 | nA μA | $V_{CB}=200V$ $V_{CB}=200V, T_{amb}=100^{\circ}C$ |
| Emitter Cut-Off Current | I_{EBO} | | | 100 | nA | $V_{EB}=4V$ |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | | 0.3 | V | $I_C=100mA, I_B=10mA^*$ |
| Base-Emitter Saturation Voltage | $V_{BE(sat)}$ | | | 1 | V | $I_C=100mA, I_B=10mA^*$ |
| Base-Emitter Turn On Voltage | $V_{BE(on)}$ | | | 1 | V | $I_C=100mA, V_{CE}=10V^*$ |
| Static Forward Current Transfer Ratio | h_{FE} | 50 50 25 | | 300 | | $I_C=10mA, V_{CE}=10V^*$ $I_C=50mA, V_{CE}=10V^*$ $I_C=100mA, V_{CE}=10V^*$ |
| Transition Frequency | f_T | 75 | | | MHz | $I_C=50mA, V_{CE}=10V$ $f=20MHz$ |

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