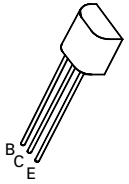
# NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

# FXT455

**ISSUE 1 – SEPT 93**

FEATURES

* 140 Volt $V_{CEO}$
* 1 Amp continuous current
* $P_{tot}$= 1 Watt




**E-Line**
**TO92 Compatible**

REFER TO ZTX455 FOR GRAPHS

## 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 |
| Power Dissipation at $T_{amb}$=25°C | $P_{tot}$ | 1 | W |
| Operating and Storage Temperature Range | $T_j$:$T_{stg}$ | -55 to +200 | °C |

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

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---|---|---|---|---|---|---|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | 160 | | | V | $I_C$=100μA, $I_E$=0 |
| Collector-Emitter Sustaining Voltage | $V_{CEO(sus)}$ | 140 | | | V | $I_C$=10mA, $I_B$=0* |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | 5 | | | V | $I_E$=100μA, $I_C$=0 |
| Collector Cut-Off Current | $I_{CBO}$ | | | 0.1 | μA | $V_{CB}$=140V, $I_E$=0 |
| Emitter Cut-Off Current | $I_{EBO}$ | | | 0.1 | μA | $V_{EB}$=4V, $I_C$=0 |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | | | 0.7 | V | $I_C$=150mA, $I_B$=15mA* |
| Static Forward Current Transfer Ratio | $h_{FE}$ | 100<br>10 | | 300 | | $I_C$=150mA, $V_{CE}$=10V*<br>$I_C$=1A, $V_{CE}$=10V* |
| Transition Frequency | $f_T$ | 100 | | | MHz | $I_C$=50mA, $V_{CE}$=10V<br>f=100MHz |
| Output Capacitance | $C_{obo}$ | | | 15 | pF | $V_{CB}$=10V, f=1MHz |

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

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