

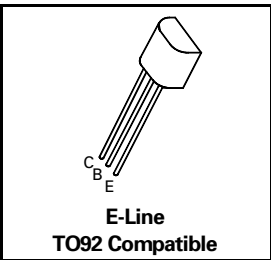
# PNP SILICON PLANAR MEDIUM POWER HIGH VOLTAGE TRANSISTORS

**ZTX556**  
**ZTX557**

ISSUE 1 – JULY 94

## FEATURES

- \* 300 Volt  $V_{CE0}$
- \* 0.5 Amp continuous current
- \*  $P_{tot} = 1$  Watt



## ABSOLUTE MAXIMUM RATINGS.

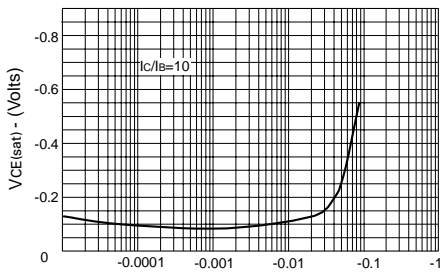
| PARAMETER                               | SYMBOL        | ZTX556 | ZTX557      | UNIT |
|---|---------------|--------|-------------|------|
| Collector-Base Voltage                  | $V_{CBO}$     | -200   | -300        | V    |
| Collector-Emitter Voltage               | $V_{CEO}$     | -200   | -300        | V    |
| Emitter-Base Voltage                    | $V_{EBO}$     |        | -5          | V    |
| Peak Pulse Current                      | $I_{CM}$      |        | -1          | A    |
| Continuous Collector Current            | $I_C$         |        | -0.5        | A    |
| Power Dissipation                       | $P_{tot}$     |        | 1.0         | W    |
| Operating and Storage Temperature Range | $T_j:T_{stg}$ |        | -55 to +200 | °C   |

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

| PARAMETER                             | SYMBOL        | ZTX556   |      | ZTX557   |      | UNIT          | CONDITIONS.  |
|---------------------------------------|---------------|----------|------|----------|------|---------------|--|
|                                       |               | MIN.     | MAX  | MIN.     | MAX  |               |  |
| Collector-Base Breakdown Voltage      | $V_{(BR)CBO}$ | -200     |      | -300     |      | V             | $I_C = -100\mu\text{A}$  |
| Collector-Emitter Breakdown Voltage   | $V_{(BR)CEO}$ | -200     |      | -300     |      | V             | $I_C = -10\text{mA}^*$   |
| Emitter-Base Breakdown Voltage        | $V_{(BR)EBO}$ | -5       |      | -5       |      | V             | $I_E = -100\mu\text{A}$  |
| Collector Cut-Off Current             | $I_{CBO}$     |          | -0.1 |          | -0.1 | $\mu\text{A}$ | $V_{CB} = -160\text{V}$<br>$V_{CE} = -200\text{V}$   |
| Emitter Cut-Off Current               | $I_{EBO}$     |          | -0.1 |          | -0.1 | $\mu\text{A}$ | $V_{EB} = -4\text{V}$  |
| Collector-Emitter Saturation Voltage  | $V_{CE(sat)}$ |          | -0.3 |          | -0.3 | V             | $I_C = -50\text{mA}$ , $I_B = -5\text{mA}^*$   |
| Base-Emitter Saturation Voltage       | $V_{BE(sat)}$ |          | -1   |          | -1   | V             | $I_C = -50\text{mA}$ , $I_B = -5\text{mA}^*$   |
| Base-Emitter Turn-on Voltage          | $V_{BE(on)}$  |          | -1   |          | -1   | V             | $I_C = -50\text{mA}$ , $V_{CE} = -10\text{V}^*$  |
| Static Forward Current Transfer Ratio | $h_{FE}$      | 50<br>50 | 300  | 50<br>50 | 300  |               | $I_C = -10\text{mA}$ , $V_{CE} = -10\text{V}^*$<br>$I_C = -50\text{mA}$ , $V_{CE} = -10\text{V}^*$ |
| Transition Frequency                  | $f_T$         | 75       |      | 75       |      | MHz           | $I_C = -50\text{mA}$ , $V_{CE} = -10\text{V}$<br>$f = 100\text{MHz}$                               |

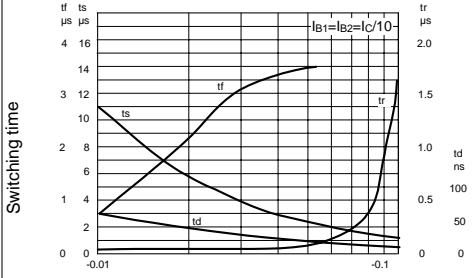
# ZTX556 ZTX557

## TYPICAL CHARACTERISTICS



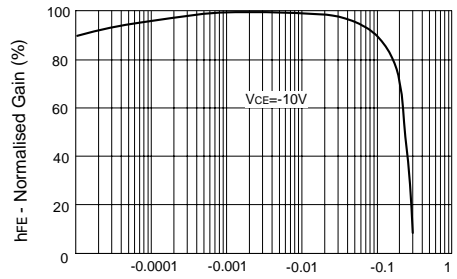
IC - Collector Current (Amps)

**VCE(sat) v IC**



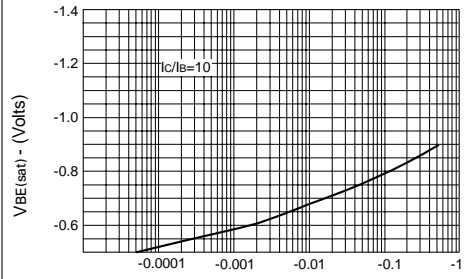
IC - Collector Current (Amps)

**Switching Speeds**



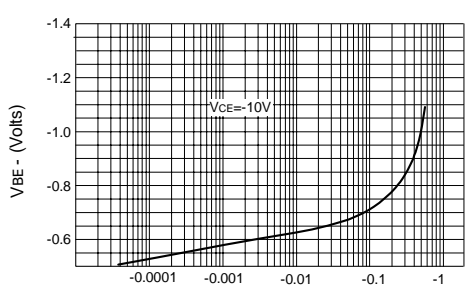
IC - Collector Current (Amps)

**hFE v IC**



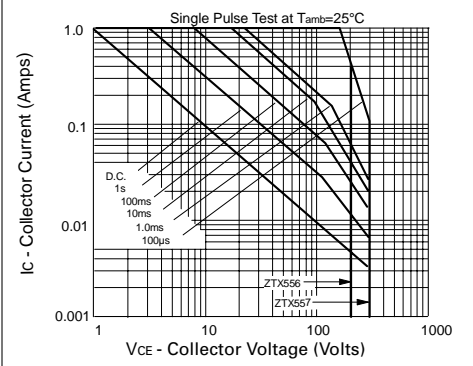
IC - Collector Current (Amps)

**VBE(sat) v IC**



IC - Collector Current (Amps)

**VBE(on) v IC**



**Safe Operating Area**