

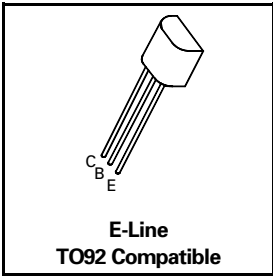
# NPN SILICON PLANAR MEDIUM POWER TRANSISTORS

**ZTX450**  
**ZTX451**

**ISSUE 2 – MARCH 1994**

## FEATURES

- \* 60 Volt  $V_{CEO}$
- \* 1 Amp continuous current
- \*  $P_{tot} = 1$  Watt



## ABSOLUTE MAXIMUM RATINGS.

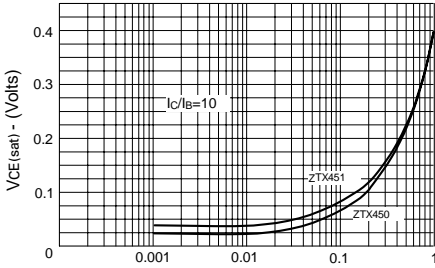
PARAMETER	SYMBOL	ZTX450	ZTX451	UNIT
Collector-Base Voltage	$V_{CBO}$	60	80	V
Collector-Emitter Voltage	$V_{CEO}$	45	60	V
Emitter-Base Voltage	$V_{EBO}$	5		V
Peak Pulse Current	$I_{CM}$	2		A
Continuous Collector Current	$I_C$	1		A
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$	1		W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +200		$^\circ\text{C}$

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

PARAMETER	SYMBOL	ZTX450		ZTX451		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	60		80		V	$I_C = 100\mu\text{A}$
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	45		60		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	$\mu\text{A}$	$V_{CB} = 45\text{V}$ $V_{CE} = 60\text{V}$
Emitter Cut-Off Current	$I_{EBO}$		0.1		0.1	$\mu\text{A}$	$V_{EB} = 4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.25		0.35	V	$I_C = 150\text{mA}$ , $I_B = 15\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.1		1.1	V	$I_C = 150\text{mA}$ , $I_B = 15\text{mA}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	100 15	300	50 10	150		$I_C = 150\text{mA}$ , $V_{CE} = 10\text{V}^*$ $I_C = 1\text{A}$ , $V_{CE} = 10\text{V}^*$
Transition Frequency	$f_T$	150		150		MHz	$I_C = 50\text{mA}$ , $V_{CE} = 10\text{V}$ $f = 100\text{MHz}$
Output Capacitance	$C_{obo}$		15		15	pF	$V_{CB} = 10\text{V}$ , $f = 1\text{MHz}$

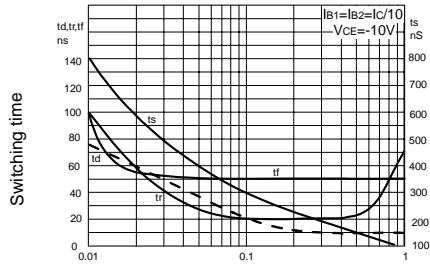
# ZTX450 ZTX451

## TYPICAL CHARACTERISTICS



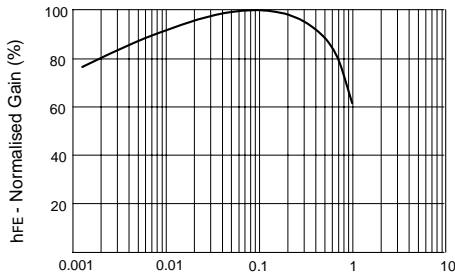
$I_C$  - Collector Current (Amps)

**$V_{CE(sat)}$  v  $I_C$**



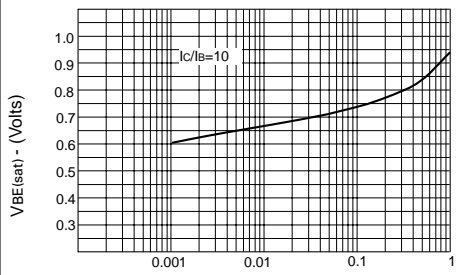
$I_C$  - Collector Current (Amps)

**Typical Switching Speeds**



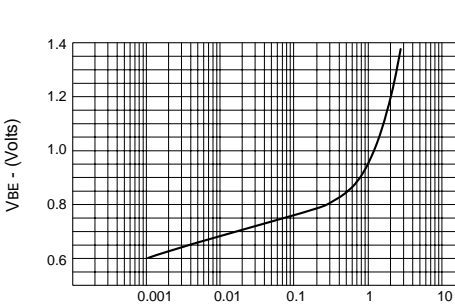
$I_C$  - Collector Current (Amps)

**$h_{FE}$  v  $I_C$**



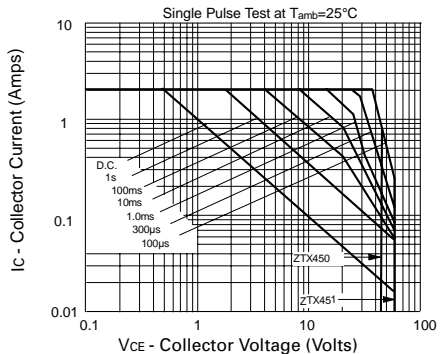
$I_C$  - Collector Current (Amps)

**$V_{BE(sat)}$  v  $I_C$**



$I_C$  - Collector Current (Amps)

**$V_{BE(on)}$  v  $I_C$**



Single Pulse Test at  $T_{amb}=25^{\circ}C$

$V_{CE}$  - Collector Voltage (Volts)

**Safe Operating Area**

单击下面可查看定价，库存，交付和生命周期等信息

[>>Diodes Incorporated\(达尔科技\)](#)