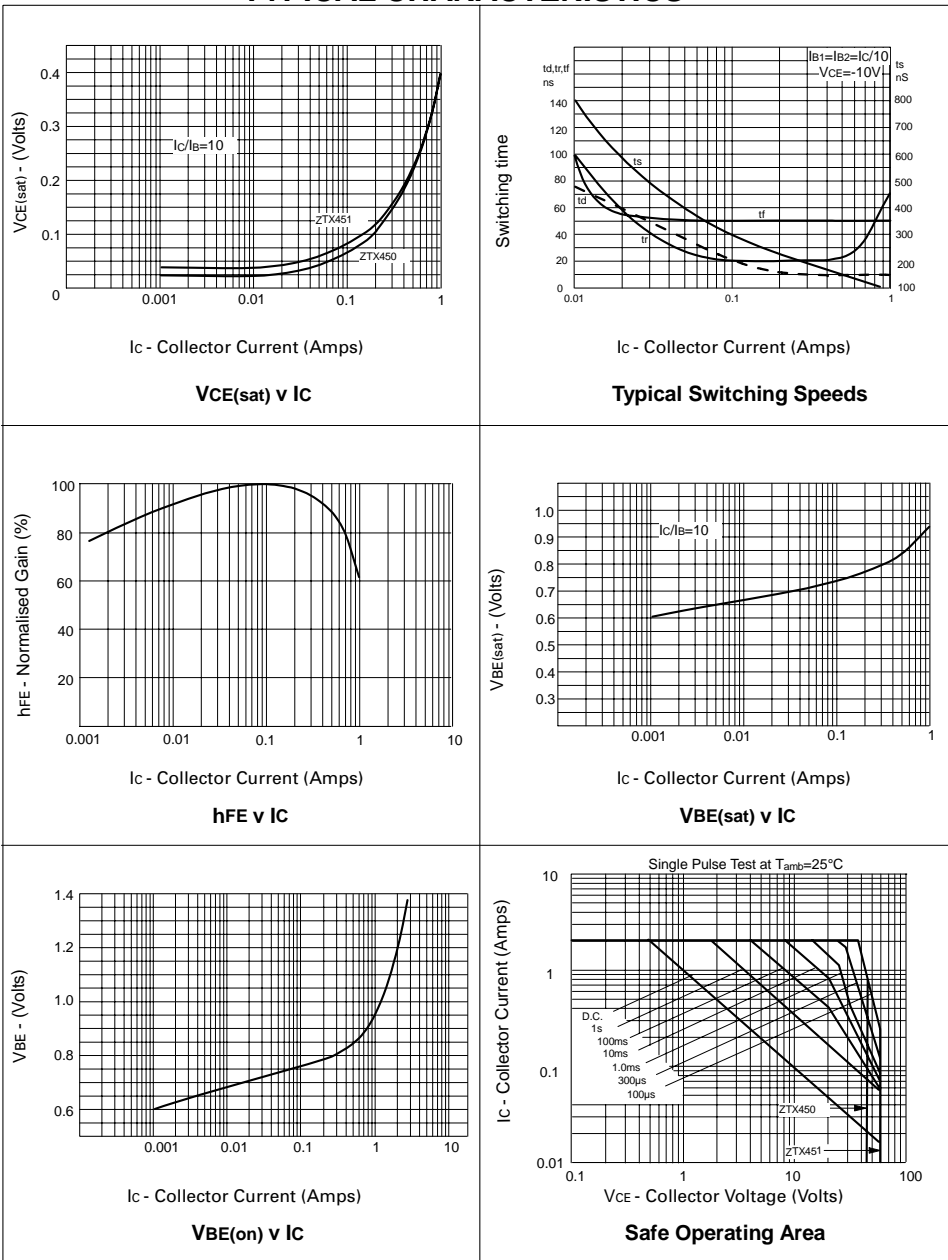


# ZTX450 ZTX451

## TYPICAL CHARACTERISTICS



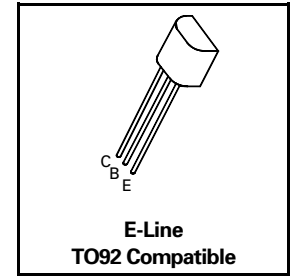
# NPN SILICON PLANAR MEDIUM POWER TRANSISTORS

ISSUE 2 - MARCH 1994

## FEATURES

- \* 60 Volt  $V_{CE0}$
- \* 1 Amp continuous current
- \*  $P_{tot} = 1$  Watt

# ZTX450 ZTX451



## ABSOLUTE MAXIMUM RATINGS.

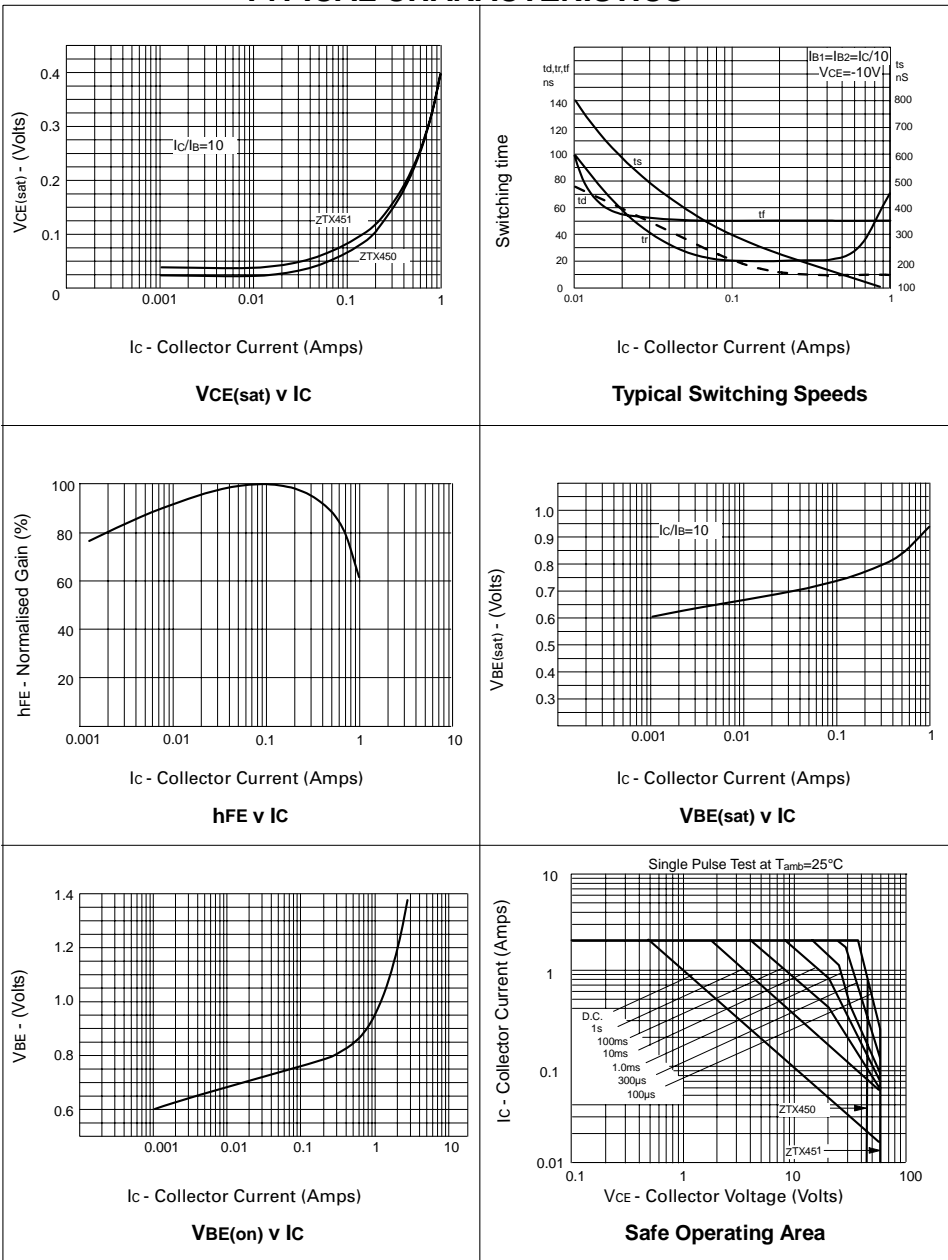
PARAMETER	SYMBOL	ZTX450	ZTX451	UNIT
Collector-Base Voltage	$V_{CBO}$	60	80	V
Collector-Emitter Voltage	$V_{CEO}$	45	60	V
Emitter-Base Voltage	$V_{EBO}$		5	V
Peak Pulse Current	$I_{CM}$		2	A
Continuous Collector Current	$I_C$		1	A
Power Dissipation at $T_{amb}=25^\circ\text{C}$	$P_{tot}$		1	W
Operating 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	$\mu\text{A}$	$V_{CB}=45\text{V}$ $V_{CB}=60\text{V}$
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



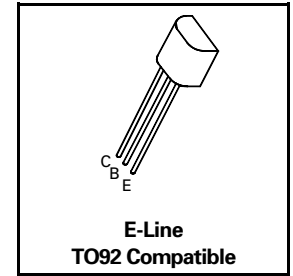
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Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	45		60		V	$I_C=10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5		5		V	$I_E=100\mu A$
Collector Cut-Off Current	$I_{CBO}$		0.1		0.1	$\mu A$	$V_{CB}=45V$ $V_{CB}=60V$
Emitter Cut-Off Current	$I_{EBO}$		0.1		0.1	$\mu A$	$V_{EB}=4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.25		0.35	V	$I_C=150mA, I_B=15mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.1		1.1	V	$I_C=150mA, I_B=15mA^*$
Static Forward Current Transfer Ratio	$h_{FE}$	100 15	300	50 10	150		$I_C=150mA, V_{CE}=10V^*$ $I_C=1A, V_{CE}=10V^*$
Transition Frequency	$f_T$	150		150		MHz	$I_C=50mA, V_{CE}=10V$ $f=100MHz$
Output Capacitance	$C_{obo}$		15		15	pF	$V_{CB}=10V, f=1MHz$

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