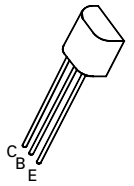
NPN SILICON PLANAR MEDIUM POWER TRANSISTORS

ZTX450
ZTX451

ISSUE 2 – MARCH 1994

FEATURES

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



E-Line
TO92 Compatible

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°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	ZTX450		ZTX451		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	60		80		V	I_C=100μA
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=100μA
Collector Cut-Off Current	I_{CBO}		0.1		0.1	μA μA	V_{CB}=45V V_{CB}=60V
Emitter Cut-Off Current	I_{EBO}		0.1		0.1	μA	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

ZTX450
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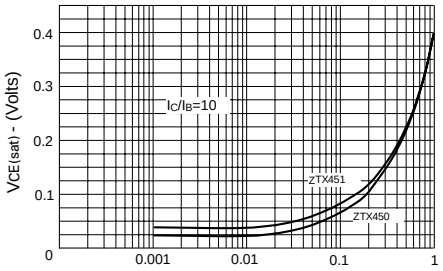
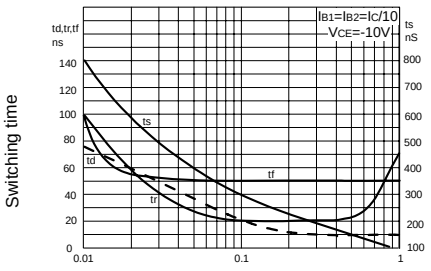
TYPICAL CHARACTERISTICS



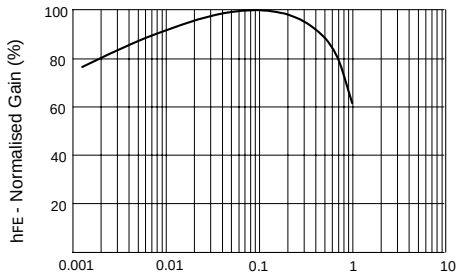
IC - Collector Current (Amps)

VCE(sat) v IC



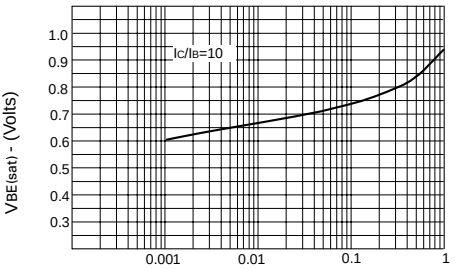
IC - Collector Current (Amps)

Typical Switching Speeds



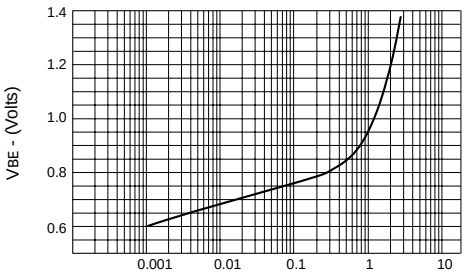
IC - Collector Current (Amps)

hFE v IC



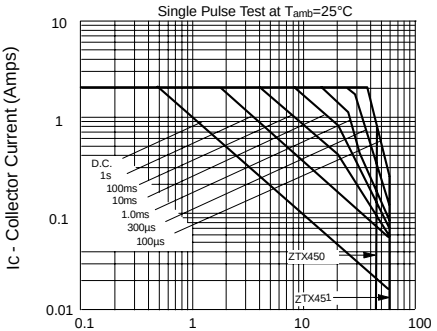
IC - Collector Current (Amps)

VBE(sat) v IC



IC - Collector Current (Amps)

VBE(on) v IC



VCE - Collector Voltage (Volts)

Safe Operating Area