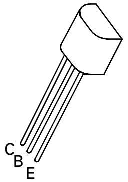
NPN SILICON PLANAR MEDIUM POWER TRANSISTORS

ZTX452
ZTX453

ISSUE 2 – MARCH 1994

FEATURES

- 100 Volt V_{CEO}
- 1 Amp continuous current
- P_{tot} = 1 Watt



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	ZTX452	ZTX453	UNIT
Collector-Base Voltage	V_{CBO}	100	120	V
Collector-Emitter Voltage	V_{CEO}	80	100	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	ZTX452		ZTX453		UNIT	CONDITIONS.
		MIN.	MAX.	MIN.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	100		120		V	I_C=100µA
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	80		100		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}=80V V_{CB}=100V
Emitter Cut-Off Current	I_{EBO}		0.1		0.1	µA	V_{EB}=4V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.7		0.7	V	I_C=150mA, I_B=15mA*
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.3		1.3	V	I_C=150mA, I_B=15mA*
Static Forward Current Transfer Ratio	h_{FE}	40 10	150	40 10	200		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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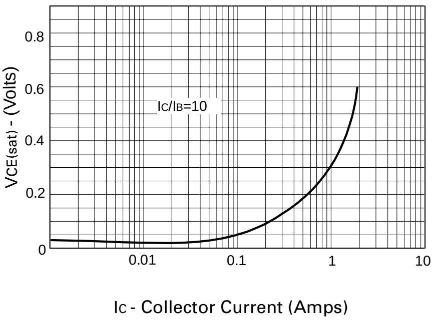
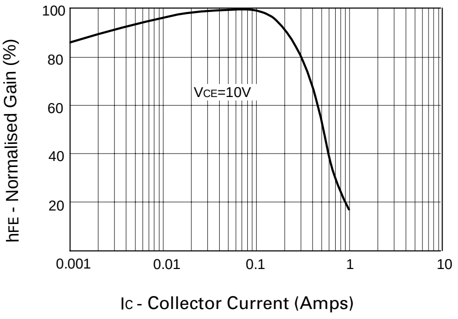
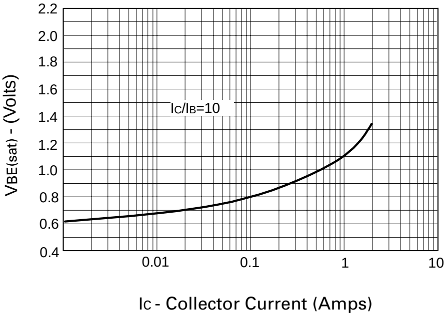
TYPICAL CHARACTERISTICS



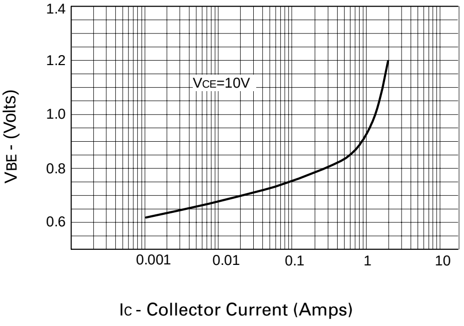
$V_{CE(sat)}$ v I_C



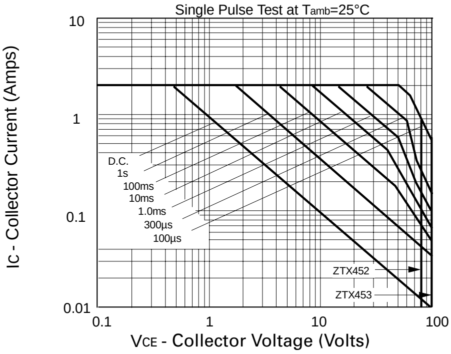
h_{FE} v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area