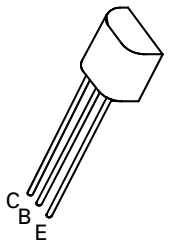
NPN SILICON PLANAR MEDIUM POWER HIGH VOLTAGE TRANSISTOR

ZTX458

ISSUE 2 – MARCH 1994

FEATURES

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



E-Line
TO92 Compatible

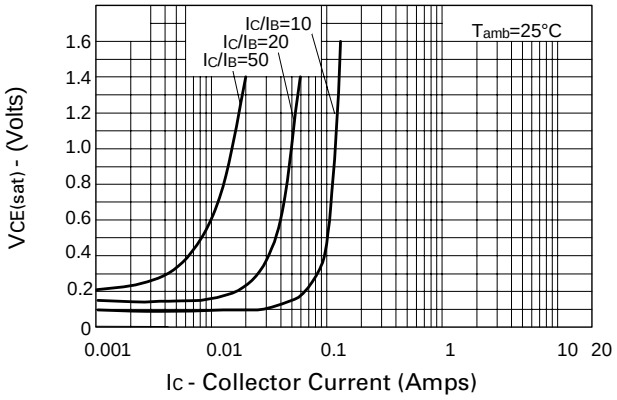
ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	400	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emitter-Base Voltage	V_{EBO}	5	V
Continuous Collector Current	I_C	300	mA
Power Dissipation at T_{amb}=25°C	P_{tot}	1	W
Operating and Storage Temperature Range	T_j:T_{stg}	-55 to +200	°C

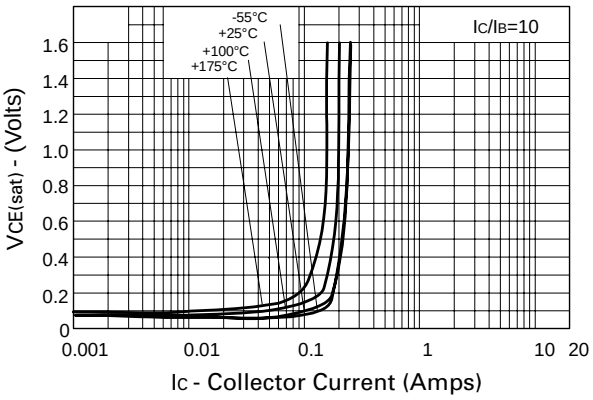
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	400			V	I_C=100μA
Collector-Emitter Breakdown Voltage	$V_{CEO(sus)}$	400			V	I_C=10mA*
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	I_E=100μA
Collector Cut-Off Current	I_{CBO}			100	nA	V_{CB}=320V
Collector Cut-Off Current	I_{CES}			100	nA	VCE=320V
Emitter Cut-Off Current	I_{EBO}			100	nA	V_{EB}=4V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.2 0.5	V V	I_C=20mA, I_B=2mA I_C=50mA, I_B=6mA
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			0.9	V	I_C=50mA, I_B=5mA
Base-Emitter Turn On Voltage	$V_{BE(on)}$			0.9	V	IC=50mA, V_{CE}=10V
Static Forward Current Transfer Ratio	h_{FE}	100 100 15		300		I_C=1mA, V_{CE}=10V I_C=50mA, V_{CE}=10V I_C=100mA, V_{CE}=10V*
Transition Frequency	f_T	50			MHz	I_C=10mA, V_{CE}=20V f=20MHz
Collector-Base Breakdown Voltage	C_{obo}			5	pF	V_{CB}=20V, f=1MHz

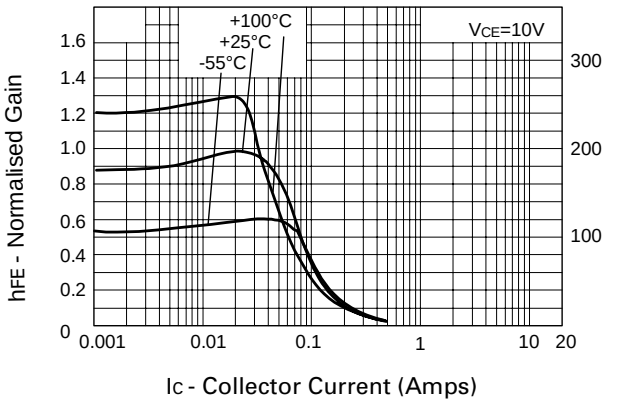
TYPICAL CHARACTERISTICS



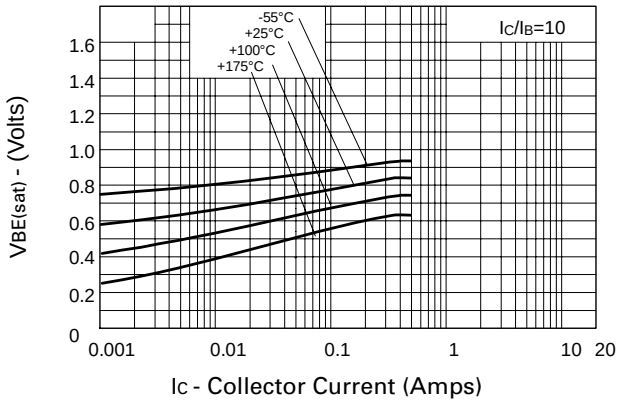
VCE(sat) v IC



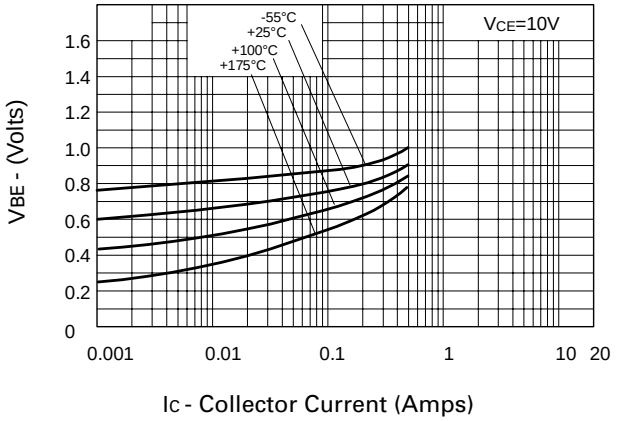
VCE(sat) v IC



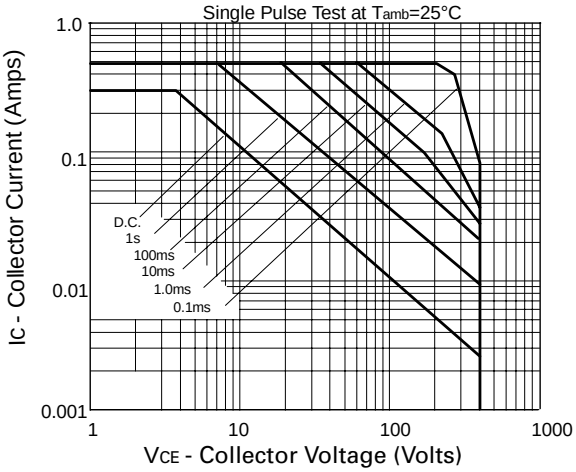
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area