

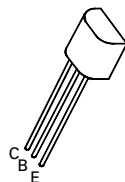
NPN SILICON PLANAR MEDIUM POWER HIGH VOLTAGE TRANSISTOR

ZTX458

ISSUE 2 – MARCH 1994

FEATURES

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



**E-Line
TO92 Compatible**

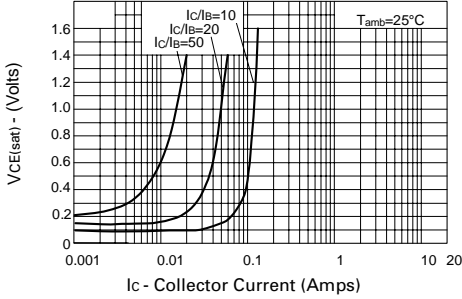
ABSOLUTE MAXIMUM RATINGS.

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 $T_{amb}=25^{\circ}C$	P_{tot}	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +200	$^{\circ}C$

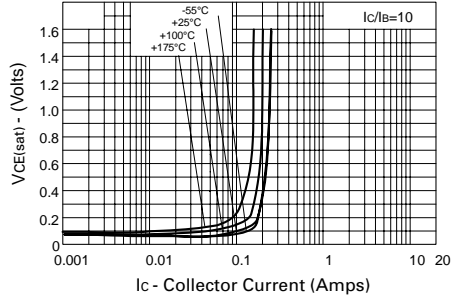
ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	400			V	$I_C = 100\mu A$
Collector-Emitter Breakdown Voltage	$V_{CEO(sus)}$	400			V	$I_C = 10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E = 100\mu A$
Collector Cut-Off Current	I_{CBO}			100	nA	$V_{CB} = 320V$
Collector Cut-Off Current	I_{CES}			100	nA	$V_{CE} = 320V$
Emitter Cut-Off Current	I_{EBO}			100	nA	$V_{EB} = 4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.2 0.5	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	$I_C = 50mA, V_{CE} = 10V$
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	$V_{CB} = 20V, f = 1MHz$

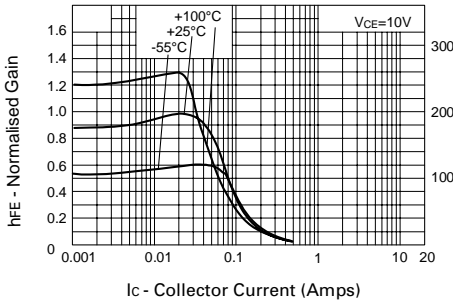
TYPICAL CHARACTERISTICS



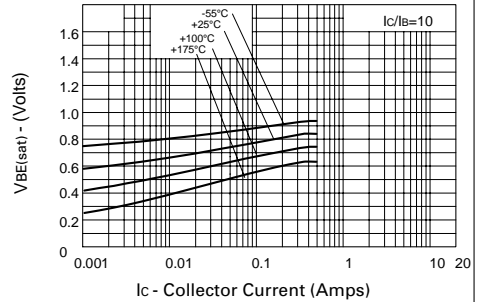
$V_{CE(sat)}$ v I_C



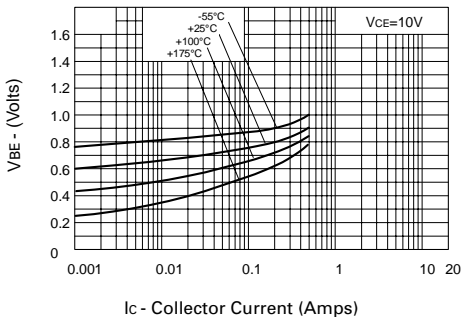
$V_{CE(sat)}$ v I_C



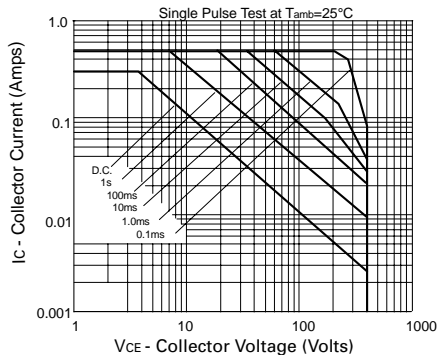
h_{FE} v I_C



$V_{BE(sat)}$ v I_C



$V_{BE(on)}$ v I_C



Safe Operating Area