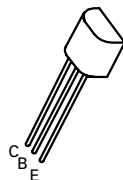


# PNP SILICON PLANAR SMALL SIGNAL TRANSISTOR

ISSUE 1 – MARCH 94

## ZTX500



E-Line  
TO92 Compatible

### ABSOLUTE MAXIMUM RATINGS.

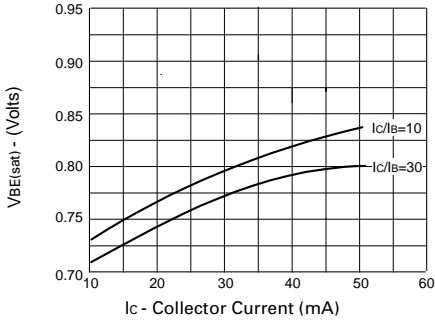
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-25	V
Collector-Emitter Voltage	$V_{CEO}$	-25	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Continuous Collector Current	$I_C$	-500	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	300	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +175	$^{\circ}C$

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

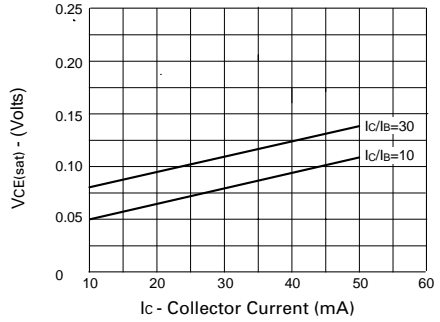
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-25			V	$I_C = -10\mu A$
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	-25			V	$I_C = -5mA$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E = -10\mu A$
Collector Cut-Off Current	$I_{CBO}$			-0.2	$\mu A$	$V_{CB} = -25V$
Emitter Cut-Off Current	$I_{EBO}$			-0.2	$\mu A$	$V_{EB} = -4V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.35	V	$I_C = -50mA, I_B = -5mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-0.65		-1	V	$I_C = -10mA, I_B = -1mA^*$
Static Forward Current Transfer Ratio	$h_{FE}$	50		300		$I_C = -10mA, V_{CE} = -6V^*$
Transition Frequency	$f_T$	150			MHz	$I_C = -10mA, V_{CE} = -6V$ $f = 100MHz$
Output Capacitance	$C_{obo}$			6	pF	$V_{CB} = -6V, f = 1MHz$
Noise Figure	N		7		dB	$I_C = -100\mu A, R_S = 1.5K\Omega$ $f = 1KHz$

# ZTX500

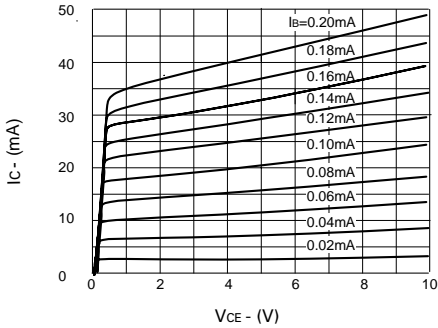
## TYPICAL CHARACTERISTICS



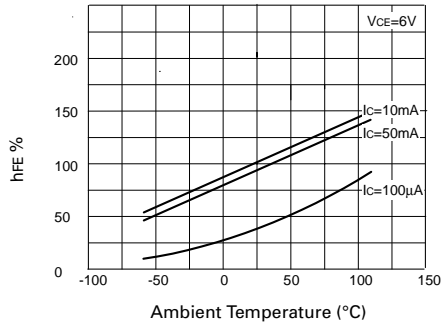
**$V_{BE(sat)}$  v  $I_C$**



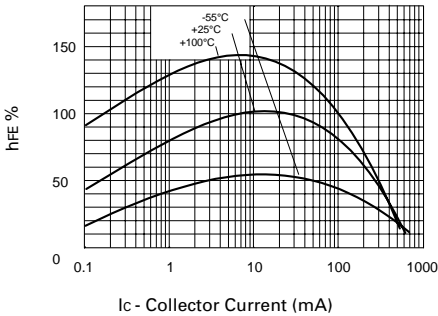
**$V_{CE(sat)}$  v  $I_C$**



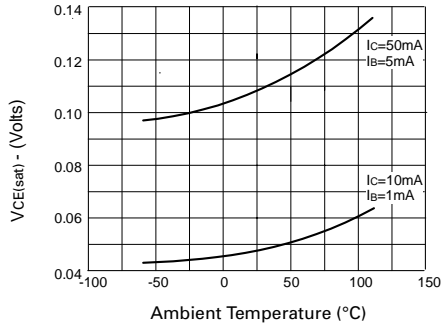
**$V_{CE}$  v  $I_C$**



**$h_{FE}$  v Ambient Temperature**



**$h_{FE}$  v  $I_C$**



**$V_{CE(sat)}$  v Ambient Temperature**