

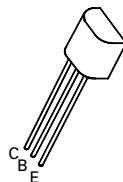
NPN SILICON PLANAR MEDIUM POWER HIGH VOLTAGE TRANSISTOR

ZTX457

ISSUE 2 – MARCH 1994

FEATURES

- * 300 Volt V_{CE0}
- * 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}	300	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter-Base Voltage	V_{EBO}	5	V
Peak Pulse Current	I_{CM}	1	A
Continuous Collector Current	I_C	500	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$	P_{tot}	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +200	$^\circ\text{C}$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	300			V	$I_C=100\mu\text{A}$, $I_E=0$
Collector-Emitter Breakdown Voltage	$V_{CEO(sus)}$	300			V	$I_C=10\text{mA}$, $I_B=0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E=100\mu\text{A}$
Collector Cut-Off Current	I_{CBO}			100 10	nA μA	$V_{CB}=200\text{V}$ $V_{CB}=200\text{V}$, $T_{amb}=100^\circ\text{C}$
Emitter Cut-Off Current	I_{EBO}			100	nA	$V_{EB}=4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.3	V	$I_C=100\text{mA}$, $I_B=10\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1	V	$I_C=100\text{mA}$, $I_B=10\text{mA}^*$
Base-Emitter Turn On Voltage	$V_{BE(on)}$			1	V	$I_C=100\text{mA}$, $V_{CE}=10\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	50 50 25		300		$I_C=10\text{mA}$, $V_{CE}=10\text{V}^*$ $I_C=50\text{mA}$, $V_{CE}=10\text{V}^*$ $I_C=100\text{mA}$, $V_{CE}=10\text{V}^*$
Transition Frequency	f_T	75			MHz	$I_C=50\text{mA}$, $V_{CE}=10\text{V}$ $f=20\text{MHz}$

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$