

NPN SILICON PLANAR MEDIUM POWER TRANSISTOR

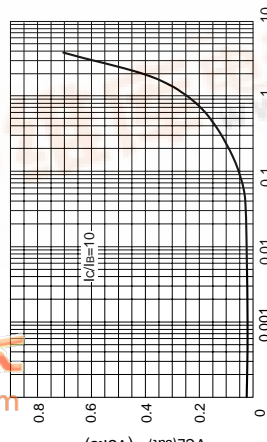
ZTX449

ISSUE 2 - MARCH 1994

FEATURES

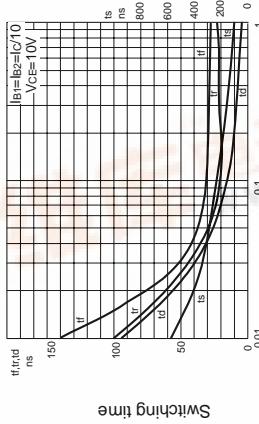
- * 30 Volt V_{CE0}
- * 1 Amp continuous current
- * $P_{tot} = 1$ Watt

TYPICAL CHARACTERISTICS



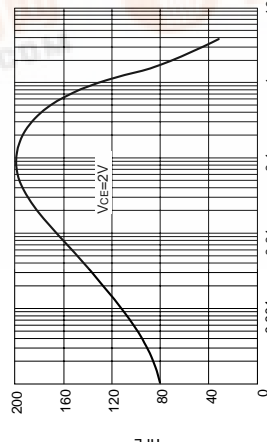
I_C - Collector Current (Amps)

$V_{CE(sat)}$ v I_C



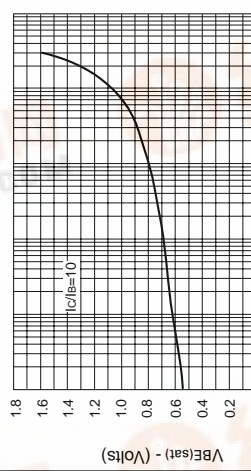
I_C - Collector Current (Amps)

Switching Speeds



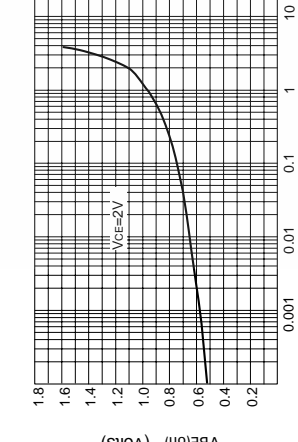
I_C - Collector Current (Amps)

h_{FE} v I_C



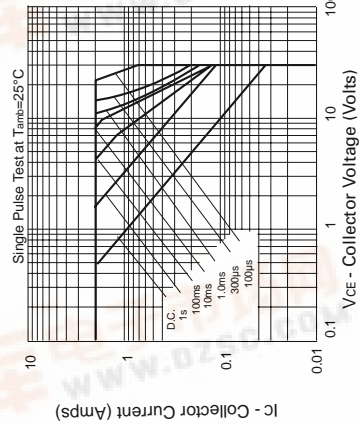
I_C - Collector Current (Amps)

$V_{BE(sat)}$ v I_C



I_C - Collector Current (Amps)

$V_{BE(on)}$ v I_C



Safe Operating Area

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	30	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 $T_{amb} = 25^\circ C$	P_{tot}	1	W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 to +200	$^\circ C$

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	50			V	$I_C = 100\mu A, I_E = 0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	30			V	$I_C = 10mA, I_B = 0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	5			V	$I_E = 100\mu A, I_C = 0$
Collector Cut-Off Current	I_{CBO}		0.1	10	μA	$V_{CB} = 40V, V_{CE} = 40V, T_{amb} = 100^\circ C$
Emitter Cut-Off Current	I_{EBO}		0.1		μA	$V_{EB} = 4V, I_C = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.5	1	V	$I_C = 1A, I_B = 100mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		1.25		V	$I_C = 2A, I_B = 200mA^*$
Base-Emitter Turn-on Voltage	$V_{BE(on)}$		1		V	$I_C = 1A, V_{CE} = 2V^*$
Static Forward Current Transfer Ratio	h_{FE}	70	100	300		$I_C = 50mA, V_{CE} = 2V^*$ $I_C = 500mA, V_{CE} = 2V^*$ $I_C = 1A, V_{CE} = 2V^*$ $I_C = 2A, V_{CE} = 2V^*$
Transition Frequency	f_T	150			MHz	$I_C = 50mA, V_{CE} = 10V, f = 100MHz$
Output Capacitance	C_{obo}			15	pF	$V_{CB} = 10V, f = 1MHz$

*Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤ 2%

查询ZTX449供应商

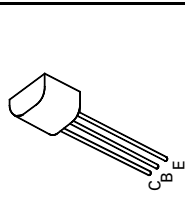
捷多邦, 专业PCB打样工厂, 24小时加急出货

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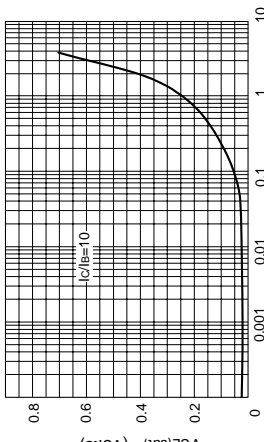
TYPICAL CHARACTERISTICS

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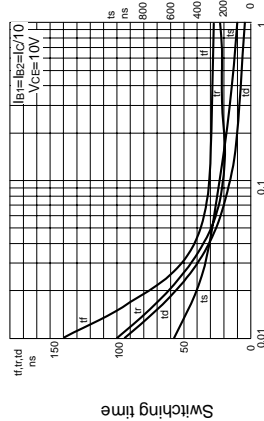


E-Line
TO92 Compatible



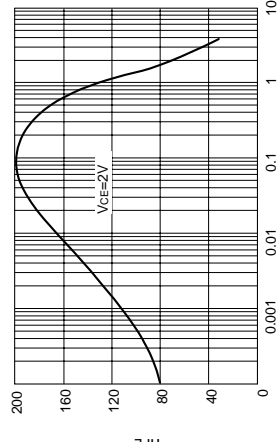
$V_{CE(sat)}$ v I_C

$I_C/I_B=10$



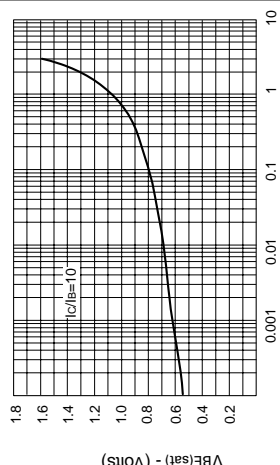
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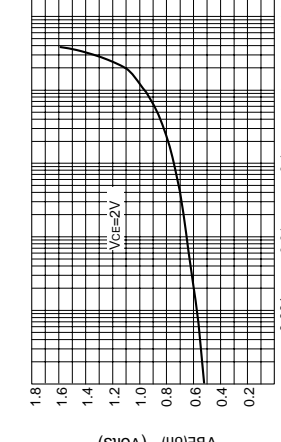
h_{FE} v I_C

$V_{CE}=2V$



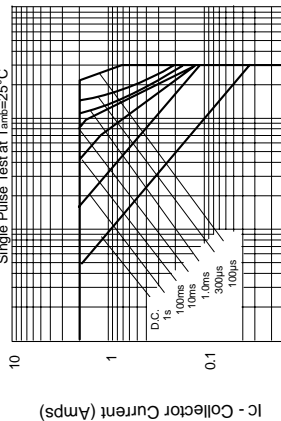
$V_{BE(sat)}$ v I_C

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$V_{BE(on)}$ v I_C

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Collector Cut-Off Current	I_{CBO}			0.1 10	μA μA	$V_{CB} = 40V$ $V_{CB} = 40V, T_{amb} = 100^\circ C$
Emitter Cut-Off Current	I_{EBO}			0.1	μA	$V_{EB} = 4V, I_C = 0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.5 1	V V	$I_C = 1A, I_B = 100mA^*$ $I_C = 2A, I_B = 200mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			1.25	V	$I_C = 1A, I_B = 100mA^*$
Base-Emitter Turn-on Voltage	$V_{BE(on)}$			1	V	$I_C = 1A, V_{CE} = 2V^*$
Static Forward Current Transfer Ratio	h_{FE}	70 100 80 40		300		$I_C = 50mA, V_{CE} = 2V^*$ $I_C = 500mA, V_{CE} = 2V^*$ $I_C = 1A, V_{CE} = 2V^*$ $I_C = 2A, V_{CE} = 2V^*$
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