

ZTX750
ZTX751

PNP SILICON PLANAR
MEDIUM POWER TRANSISTORS

ZTX750
ZTX751

ISSUE 2 - JULY 94

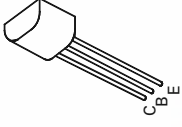
ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise stated).

PARAMETER	SYMBOL	ZTX750			ZTX751			UNIT	CONDITIONS.
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Transition Frequency	f_T	100	140		100	140		MHz	$I_C = 100\text{mA}$, $V_{CE} = 5\text{V}$ $f = 100\text{MHz}$
Switching Times	t_{on}	40			40			ns	$I_C = 500\text{mA}$, $V_{CE} = 10\text{V}$ $I_B = I_B = 50\text{mA}$
	t_{off}	450			450			ns	
Output Capacitance	C_{obo}			30			30	pF	$V_{CB} = 10\text{V}$ $f = 1\text{MHz}$

Measured under pulsed conditions. Pulse width=300 μ s. Duty cycle \leq 2%

FEATURES

- * 60 Volt V_{CEO}
- * 2 Amp continuous current
- * Low saturation voltage
- * $P_{tot} = 1$ Watt



E-Line
TO92 Compatible

查询ZTX750供应商

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	ZTX750	ZTX751	UNIT
Collector-Base Voltage	V_{CBO}	-60	-80	V
Collector-Emitter Voltage	V_{CEO}	-45	-60	V
Emitter-Base Voltage	V_{EBO}		-5	V
Peak Pulse Current	I_{CM}		-6	A
Continuous Collector Current	I_C		-2	A
Power Dissipation: at $T_{amb} = 25^{\circ}\text{C}$ derate above 25°C	P_{tot}		1 5.7	W mW/ $^{\circ}\text{C}$
Operating and Storage Temperature Range	T_j, T_{stg}		-55 to +200	$^{\circ}\text{C}$

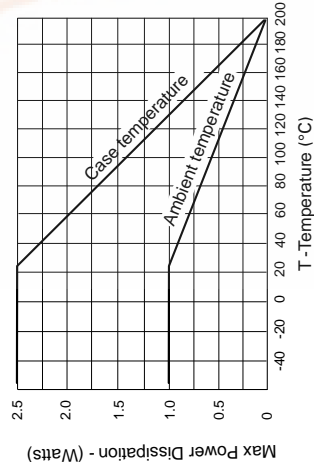
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PARAMETER	SYMBOL	ZTX750			ZTX751			UNIT	CONDITIONS.
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-60			-80			V	$I_C = 100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-45			-60			V	$I_C = 10\text{mA}$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			-5			V	$I_E = 100\mu\text{A}$
Collector Cut-Off Current	I_{CBO}		-0.1					μA	$V_{CB} = 45\text{V}$
			-10					μA	$V_{CB} = 60\text{V}$ $V_{CB} = 45\text{V}, T_{amb} = 100^{\circ}\text{C}$
Emitter Cut-Off Current	I_{EBO}		-0.1					μA	$V_{CB} = 60\text{V}, T_{amb} = 100^{\circ}\text{C}$
			-0.1					μA	$V_{EB} = 4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.15	-0.3				V	$I_C = 1\text{A}, I_B = 100\text{mA}$
			-0.28	-0.5				V	$I_C = 2\text{A}, I_B = 200\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.9	-1.25				V	$I_C = 1\text{A}, I_B = 100\text{mA}$
			-0.9	-1.25				V	

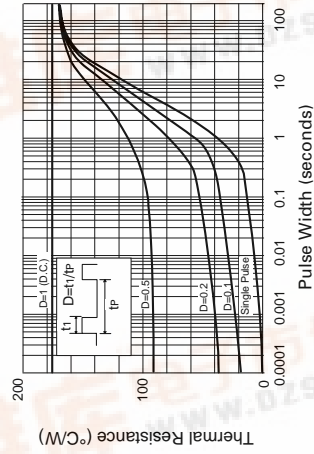
HERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX.	UNIT
Thermal Resistance: Junction to Ambient ₁	$R_{th(j-amb)1}$	175	$^{\circ}\text{C/W}$
Junction to Ambient ₂	$R_{th(j-amb)2}$	116	$^{\circ}\text{C/W}$
Junction to Case	$R_{th(j-case)}$	70	$^{\circ}\text{C/W}$

Device mounted on P.C.B. with copper equal to 1 sq. Inch minimum.



Derating curve



Maximum transient thermal impedance

捷多邦, 专业PCB打样工厂, 24小时加急出货

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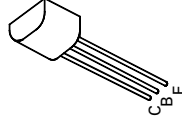
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	t_{off}		450			450		ns	
Output Capacitance	C_{obo}			30			30	pF	$V_{CE} = 10\text{V}$ $f = 1\text{MHz}$

Measured under pulsed conditions. Pulse width=300 μ s. Duty cycle \leq 2%

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Peak Pulse Current	I_{CM}	-6	-6	A
Continuous Collector Current	I_C	-2	-2	A
Power Dissipation: at $T_{amb} = 25^{\circ}\text{C}$ derate above 25°C	P_{tot}	1	5.7	W mW/ $^{\circ}\text{C}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 to +200		$^{\circ}\text{C}$

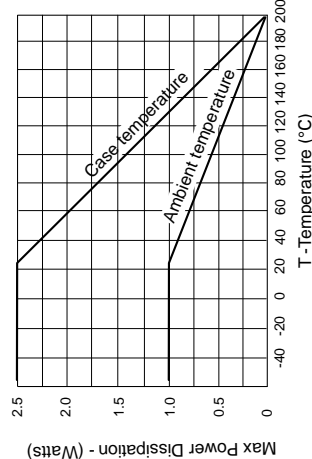
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Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			-5			V	$I_E = 100\mu\text{A}$
Collector Cut-Off Current	I_{CBO}		-0.1					μA	$V_{CB} = 45\text{V}$
			-0.15					μA	$V_{CB} = 60\text{V}$
			-0.28					μA	$V_{CB} = 45\text{V}, T_{amb} = 100^{\circ}\text{C}$
			-0.9					μA	$V_{CB} = 60\text{V}, T_{amb} = 100^{\circ}\text{C}$
Emitter Cut-Off Current	I_{EBO}		-0.1					μA	$V_{EB} = 4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.15	-0.3				V	$I_C = 1\text{A}, I_B = 100\text{mA}$
			-0.28	-0.5				V	$I_C = 2\text{A}, I_B = 200\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.9	-1.25				V	$I_C = 1\text{A}, I_B = 100\text{mA}$

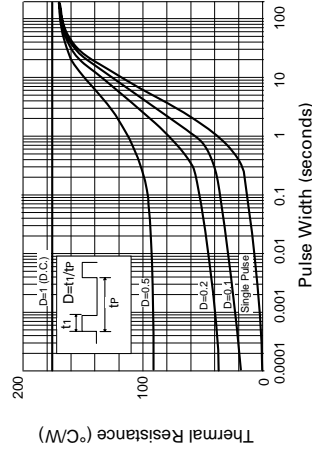
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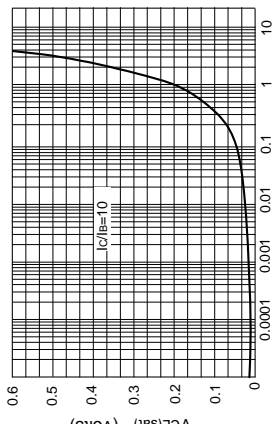
Derating curve



Maximum transient thermal impedance

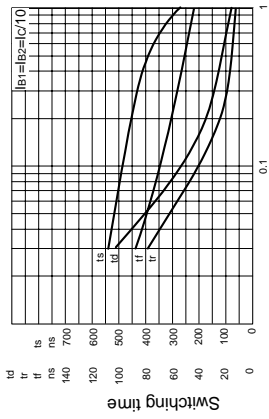
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TYPICAL CHARACTERISTICS



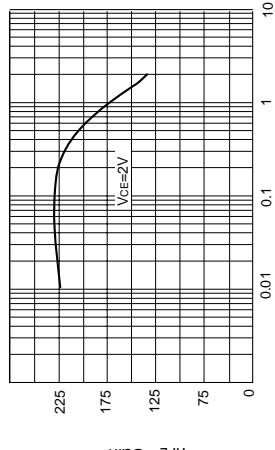
IC - Collector Current (Amps)

VCE(sat) v IC



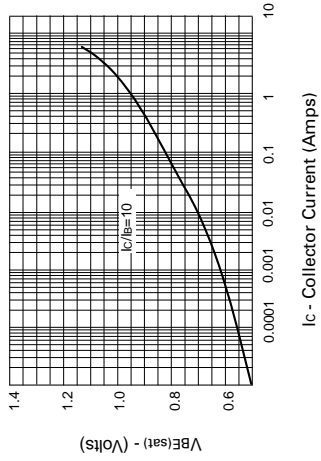
IC - Collector Current (Amps)

Switching Speeds



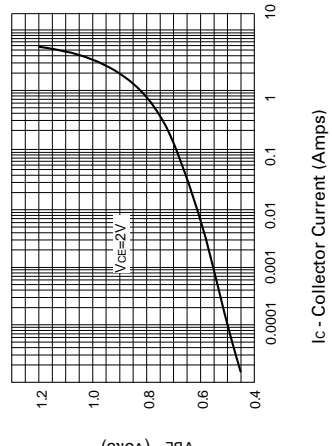
IC - Collector Current (Amps)

hFE v IC



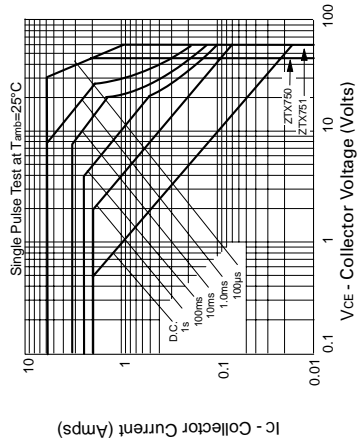
IC - Collector Current (Amps)

VBE(sat) v IC



IC - Collector Current (Amps)

VBE(on) v IC



VCE - Collector Voltage (Volts)

Safe Operating Area