

# ZTX752 ZTX753

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

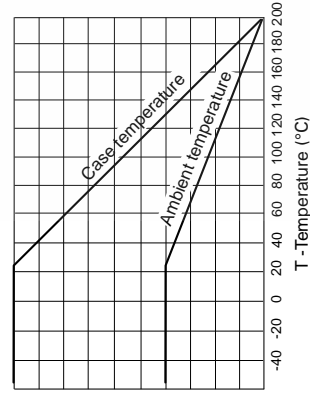
PARAMETER	SYMBOL	ZTX752		ZTX753		UNIT	CONDITIONS.
		MIN.	TYP.	MAX.	MIN.		
Transition Frequency	$f_T$	100	140	100	140	MHz	$I_C = 100\text{mA}$ , $V_{CE} = 5\text{V}$ $f = 100\text{MHz}$
Switching Times	$t_{on}$	40		40		ns	$I_C = 500\text{mA}$ , $V_{CC} = 10\text{V}$ $I_B = I_{B2} = 50\text{mA}$
	$t_{off}$	600		600		ns	
Output Capacitance	$C_{obo}$	30		30		pF	$V_{CB} = 10\text{V}$ $f = 1\text{MHz}$

Measured under pulsed conditions. Pulse width=300 $\mu\text{s}$ . Duty cycle  $\leq 2\%$

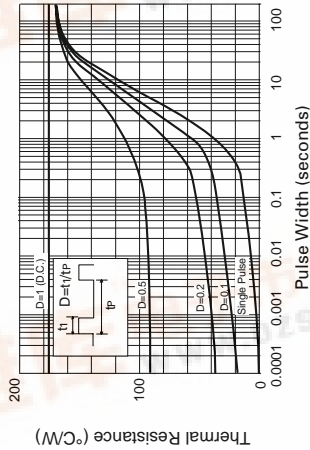
## HERMAL CHARACTERISTICS

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

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



Derating curve



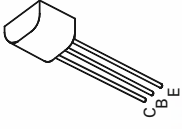
Maximum transient thermal impedance

# PNP SILICON PLANAR MEDIUM POWER TRANSISTORS

ISSUE 2 - JULY 94

## FEATURES

- \* 100 Volt  $V_{CE}$
- \* 2 Amp continuous current
- \* Low saturation voltage
- \*  $P_{tot} = 1$  Watt



E-Line  
TO92 Compatible

## ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	ZTX752	ZTX753	UNIT
Collector-Base Voltage	$V_{CB0}$	-100	-120	V
Collector-Emitter Voltage	$V_{CE0}$	-80	-100	V
Emitter-Base Voltage	$V_{EB0}$		-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 $25^{\circ}\text{C}$	$P_{tot}$		1	W
Operating and Storage Temperature Range	$T_j, T_{stg}$		5.7	$\text{mW}/^{\circ}\text{C}$
			-55 to +200	$^{\circ}\text{C}$

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

PARAMETER	SYMBOL	ZTX752			ZTX753			UNIT	CONDITIONS.
		MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-100			-120			V	$I_C = 100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-80			-100			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					$\mu\text{A}$	$V_{CB} = 80\text{V}$
			-10		-0.1			$\mu\text{A}$	$V_{CB} = 100\text{V}$
Emitter Cut-Off Current	$I_{EBO}$		-0.1					$\mu\text{A}$	$V_{CB} = 80\text{V}, T_{amb} = 100^{\circ}\text{C}$
			-0.1		-0.1			$\mu\text{A}$	$V_{CB} = 100\text{V}, T_{amb} = 100^{\circ}\text{C}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.17					V	$I_C = 1\text{A}, I_B = 100\text{mA}^*$
			-0.30		-0.30			V	$I_C = 2\text{A}, I_B = 200\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.9					V	$I_C = 1\text{A}, I_B = 100\text{mA}^*$
			-1.25		-0.9			V	$I_C = 1\text{A}, I_B = 100\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$	-0.8			-0.8			V	$I_C = 1\text{A}, V_{CE} = 2\text{V}^*$

查询ZTX752供应商

捷多邦, 专业PCB打样工厂, 24小时加急出货

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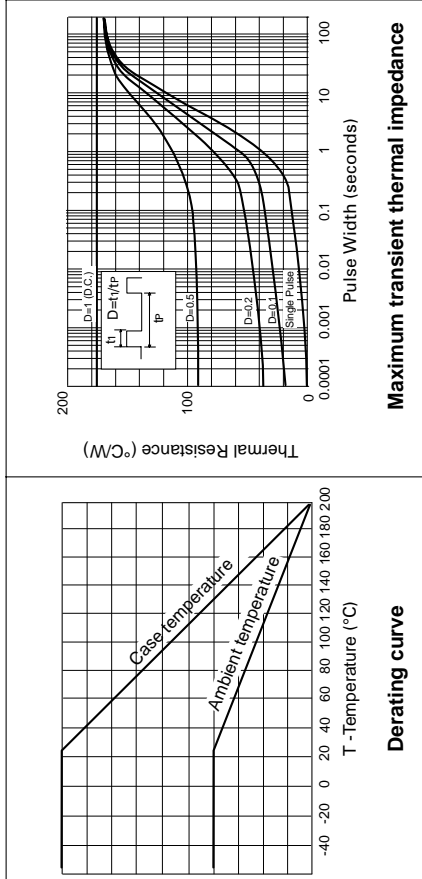
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Switching Times	$t_{on}$		40			40	ns $I_C=500\text{mA}, V_{CC}=10\text{V}$ $I_B=I_{B2}=50\text{mA}$
	$t_{off}$		600			600	ns
Output Capacitance	$C_{obo}$		30			30	pF $V_{CE}=10\text{V}, f=1\text{MHz}$

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

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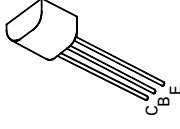


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ISSUE 2 - JULY 94

## FEATURES

- \* 100 Volt  $V_{CE}$
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- \* Low saturation voltage
- \*  $P_{tot}=1$  Watt



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TO92 Compatible

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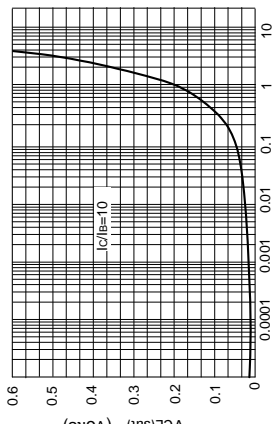
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Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			-5			V	$I_E=100\mu\text{A}$
Collector Cut-Off Current	$I_{CBO}$			-0.1			-0.1	$\mu\text{A}$	$V_{CB}=80\text{V}$ $V_{CB}=100\text{V}$ $V_{CB}=80\text{V}, T_{amb}=100^{\circ}\text{C}$ $V_{CB}=100\text{V}, T_{amb}=100^{\circ}\text{C}$
Emitter Cut-Off Current	$I_{EBO}$			-0.1			-0.1	$\mu\text{A}$	$V_{EB}=4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.17	-0.3		-0.17	-0.3	V	$I_C=1\text{A}, I_B=100\text{mA}^*$ $I_C=2\text{A}, I_B=200\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-0.9	-1.25		-0.9	-1.25	V	$I_C=1\text{A}, I_B=100\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-0.8	-1		-0.8	-1	V	$I_C=1\text{A}, V_{CE}=2\text{V}^*$

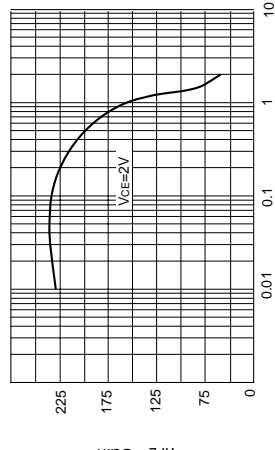
# ZTX752 ZTX753

## TYPICAL CHARACTERISTICS



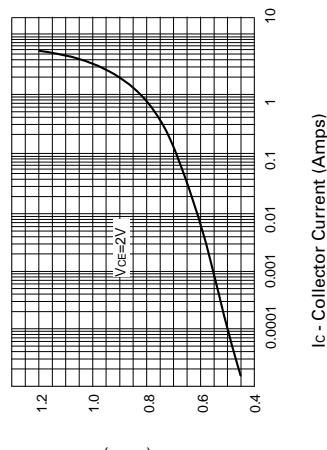
$I_C$  - Collector Current (Amps)

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



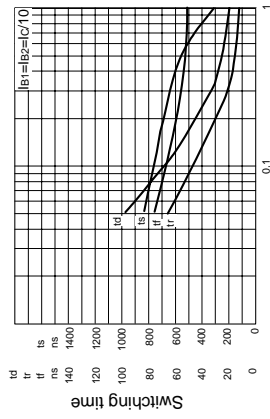
$I_C$  - Collector Current (Amps)

$h_{FE}$  v  $I_C$



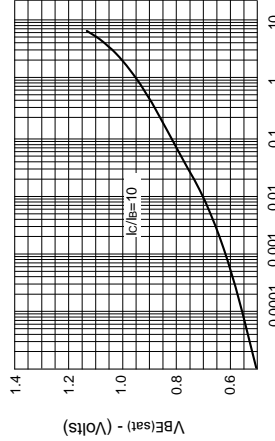
$I_C$  - Collector Current (Amps)

$V_{BE(on)}$  v  $I_C$



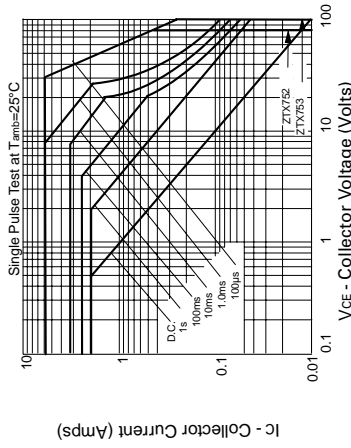
$I_C$  - Collector Current (Amps)

Switching Speeds



$I_C$  - Collector Current (Amps)

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



$V_{CE}$  - Collector Voltage (Volts)

Safe Operating Area