



# THE DATASHEET OF ZTX795A



# ZTX795A

# PNP SILICON PLANAR ME HIGH GAIN TRANSISTOR

ISSUE 1 – APRIL 94

## FEATURES

- \* 140 Volt  $V_{CE0}$
- \* Gain of 250 at  $I_C=0.2$  Amps
- \* Very low saturation voltage

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Transition Frequency	$f_T$	100			MHz	$I_C=50\text{mA}$ , $V_{CE}=5\text{V}$ $f=50\text{MHz}$
Input Capacitance	$C_{ibo}$		225		pF	$V_{EB}=0.5\text{V}$ , $f=1\text{MHz}$
Output Capacitance	$C_{obo}$		15		pF	$V_{CB}=-10\text{V}$ , $f=1\text{MHz}$
Switching Times	$t_{on}$		100		ns	$I_C=100\text{mA}$ , $I_B=-10\text{mA}$ $I_B=-10\text{mA}$ , $V_{CC}=-50\text{V}$
	$t_{off}$		1900		ns	

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

## THERMAL 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	$^\circ\text{C/W}$
	$R_{th(j-amb)2}^\dagger$	116	$^\circ\text{C/W}$
	$R_{th(j-case)}$	70	$^\circ\text{C/W}$

$^\dagger$  Device mounted on P.C.B. with copper equal to 1 sq. Inch minimum.

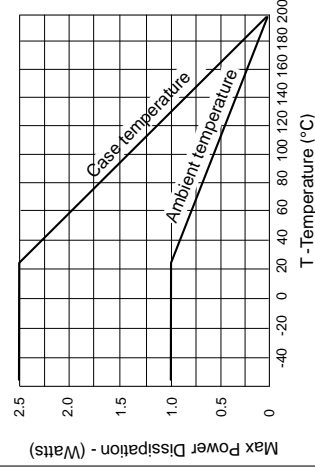
## ABSOLUTE MAXIMUM RATINGS

PARAMETER	
Collector-Base Voltage	
Collector-Emitter Voltage	
Emitter-Base Voltage	
Peak Pulse Current	
Continuous Collector Current	
Practical Power Dissipation*	
Power Dissipation	at $T_{amb}=25^\circ\text{C}$ derate above $25^\circ\text{C}$
Operating and Storage Temperature Range	

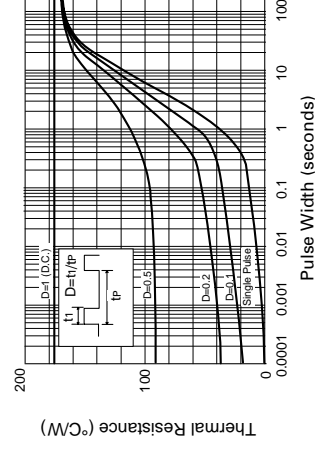
\*The power which can be dissipated as P.C.B. with copper equal to 1 inch square

## ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$
Collector Cut-Off Current	$I_{CBO}$
Emitter Cut-Off Current	$I_{EBO}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$
Static Forward Current Transfer Ratio	$h_{FE}$



Derating curve



Maximum transient thermal impedance

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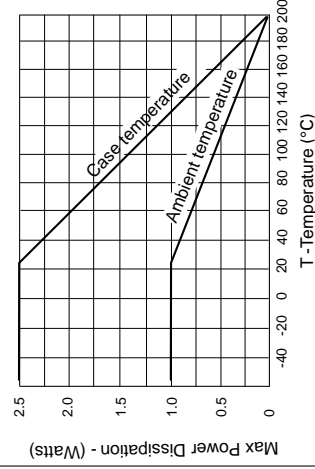
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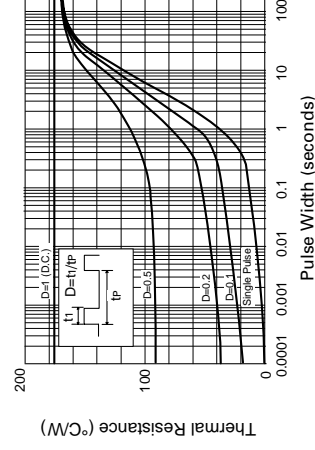
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Base-Emitter Turn-On Voltage	$V_{BE(on)}$
Static Forward Current Transfer Ratio	$h_{FE}$



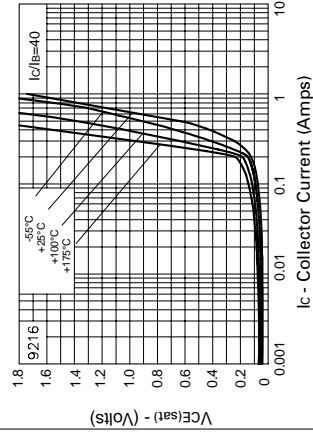
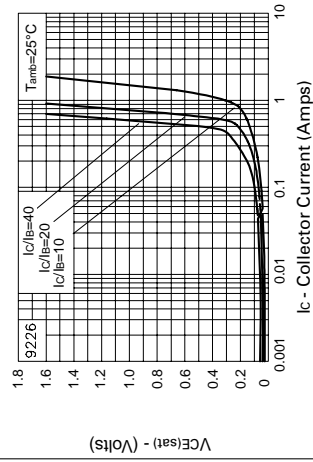
Derating curve



Maximum transient thermal impedance

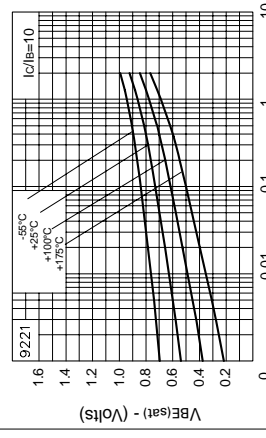
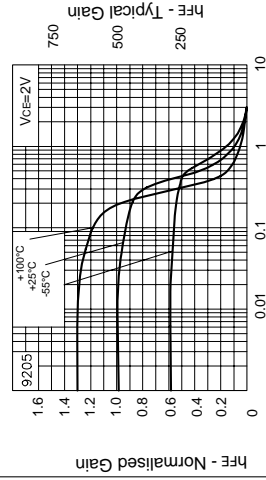
# ZTX795A

## TYPICAL CHARACTERISTICS



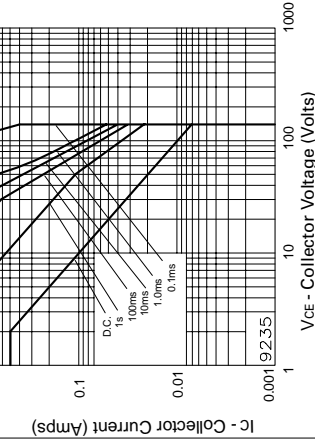
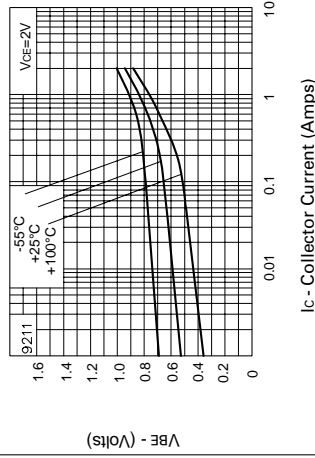
VCE(sat) v IC

VCE(sat) v IC



hFE v IC

VBE(sat) v IC





VBE(on) v IC

Safe Operating Area

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