



ZTX795A

PNP SILICON PLANAR MEDIUM POWER HIGH GAIN TRANSISTOR

ZTX795A

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Transition Frequency	f _t	100			MHz	I _C =50mA, V _{CE} =5V, f=50MHz
Input Capacitance	C _{ibo}		225		pF	V _{EB} =-0.5V, f=1MHz
Output Capacitance	C _{obo}		15		pF	V _{CB} =-10V, f=1MHz
Switching Times	t _{on}		100		ns	I _C =100mA, I _B =10mA
	t _{off}		1900		ns	I _{BZ} =-10mA, V _{CC} =-50V

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

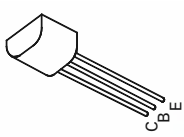
HERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX.	UNIT
Thermal Resistance Junction to Ambient ₁	R _{th(j-amb)1}	175	°CW
Junction to Ambient ₂	R _{th(j-amb)2}	116	°CW
Junction to Case	R _{th(j-case)}	70	°CW

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

FEATURES

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



E-Line
TO92 Compatible

查询ZTX795A供应商

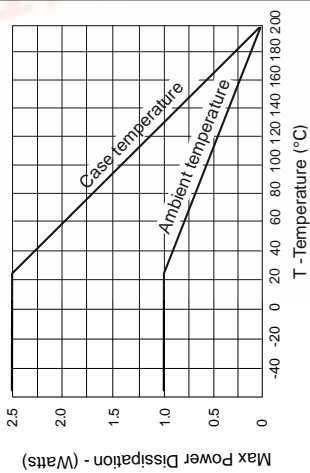
ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V _{CB0}	-140	V
Collector-Emitter Voltage	V _{CE0}	-140	V
Emitter-Base Voltage	V _{EB0}	-5	V
Peak Pulse Current	I _{CM}	-1	A
Continuous Collector Current	I _C	-0.5	A
Practical Power Dissipation*	P _{totp}	1.5	W
Power Dissipation at T _{amb} =25°C derate above 25°C	P _{tot}	1 5.7	W mW/°C
Operating and Storage Temperature Range	T _{j, Tstg}	-55 to +200	°C

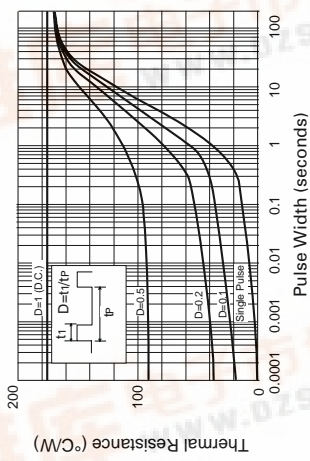
*The power which can be dissipated assuming the device is mounted in a typical manner on a P.C.B. with copper equal to 1 inch square minimum

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	V _{(BR)CBO}	-140			V	I _C =100μA
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-140			V	I _C =10mA*
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-5			V	I _E =100μA
Collector Cut-Off Current	I _{CBO}			-0.1	μA	V _{CB} =-100V
Emitter Cut-Off Current	I _{EBO}			-0.1	μA	V _{EB} =-4V
Collector-Emitter Saturation Voltage	V _{CE(sat)}			-0.3	V	I _C =100mA, I _B =1mA*
				-0.3	V	I _C =200mA, I _B =5mA*
				-0.25	V	I _C =500mA, I _B =50mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}			-0.95	V	I _C =500mA, I _B =50mA*
Base-Emitter Turn-On Voltage	V _{BE(on)}		-0.75		V	I _C =500mA, V _{CE} =2V*
Static Forward Current Transfer Ratio	h _{FE}	300		800		I _C =10mA, V _{CE} =2V*
		250				I _C =200mA, V _{CE} =2V*
		100				I _C =300mA, V _{CE} =2V*



Derating curve



Maximum transient thermal impedance

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ISSUE 1 - APRIL 94

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	$I_C=100\text{mA}$, $I_B=10\text{mA}$
	t_{off}		1900		ns	$I_B=10\text{mA}$, $V_{CC}=-50\text{V}$

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

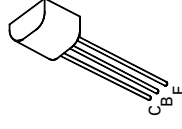
HERMAL CHARACTERISTICS

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.

FEATURES

- * 140 Volt V_{CEO}
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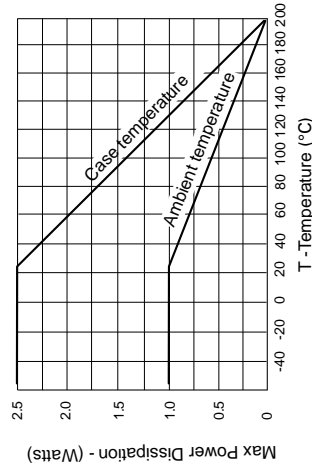
ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	-140	V
Collector-Emitter Voltage	V_{CEO}	-140	V
Emitter-Base Voltage	V_{EBO}	-5	V
Peak Pulse Current	I_{CM}	-1	A
Continuous Collector Current	I_C	-0.5	A
Practical Power Dissipation*	P_{totp}	1.5	W
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	$^{\circ}\text{C}$

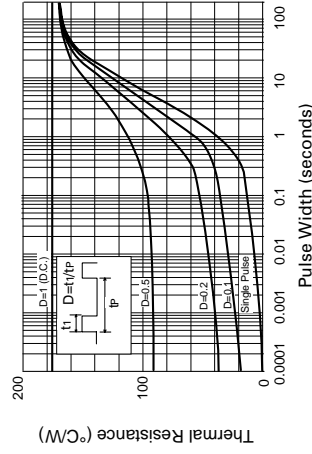
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ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-140			V	$I_C=100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-140			V	$I_C=10\text{mA}^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E=100\mu\text{A}$
Collector Cut-Off Current	I_{CBO}			-0.1	μA	$V_{CB}=-100\text{V}$
Emitter Cut-Off Current	I_{EBO}			-0.1	μA	$V_{EB}=-4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.3	V	$I_C=100\text{mA}$, $I_B=1\text{mA}^*$
				-0.3	V	$I_C=200\text{mA}$, $I_B=5\text{mA}^*$
				-0.25	V	$I_C=500\text{mA}$, $I_B=50\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-0.95	V	$I_C=500\text{mA}$, $I_B=50\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-0.75		V	$I_C=500\text{mA}$, $V_{CE}=2\text{V}^*$
Static Forward Current Transfer Ratio	h_{FE}	300		800		$I_C=10\text{mA}$, $V_{CE}=2\text{V}^*$
		250				$I_C=200\text{mA}$, $V_{CE}=2\text{V}^*$
		100				$I_C=300\text{mA}$, $V_{CE}=2\text{V}^*$



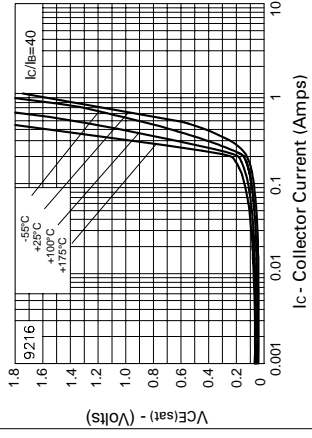
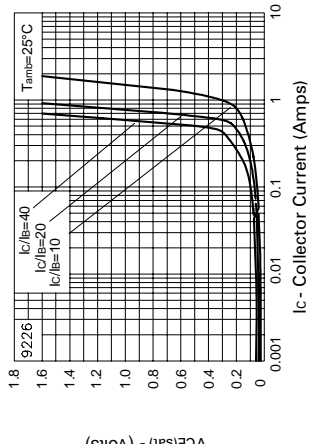
Derating curve



Maximum transient thermal impedance

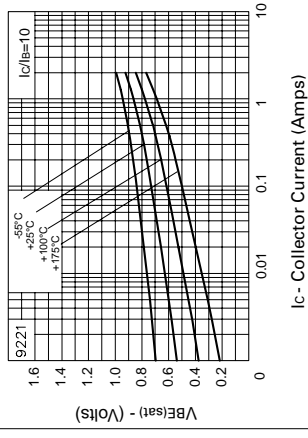
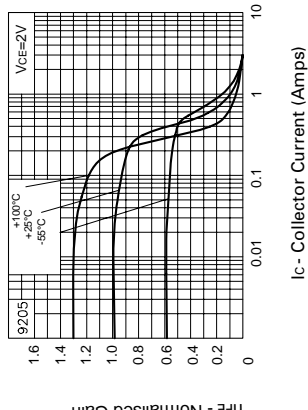
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TYPICAL CHARACTERISTICS



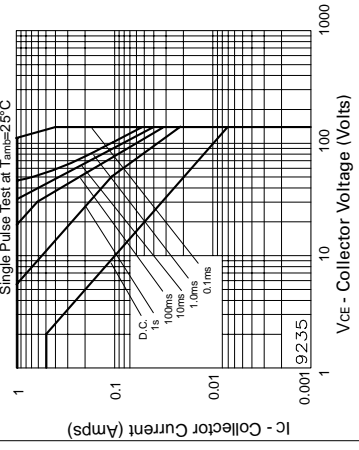
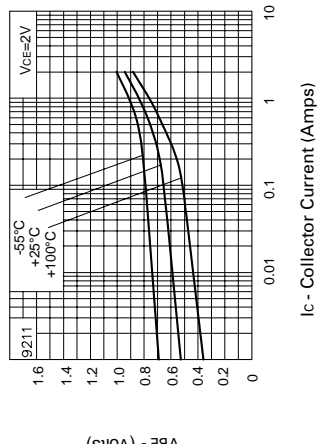
VCE(sat) v IC

VCE(sat) v IC



hFE v IC

VBE(sat) v IC



VBE(on) v IC

Safe Operating Area