THE DATASHEET OF

ZTX694B

ZTX694B

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

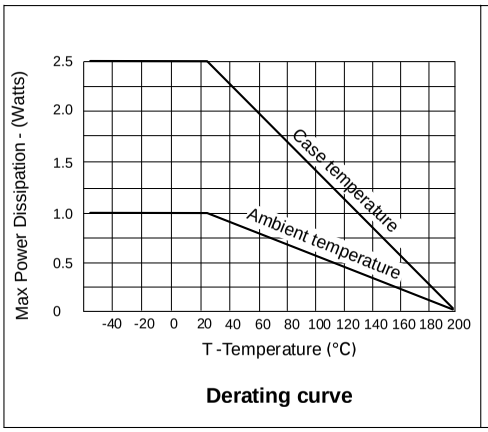
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Transition Frequency	f_T	130			MHz	I_C=50mA, V_{CE}=5V f=50MHz
Input Capacitance	C_{ibo}		200		pF	V_{EB}=0.5V, f=1MHz
Output Capacitance	C_{obo}		9		pF	V_{CB}=10V, f=1MHz
Switching Times	t_{on} t_{off}		80 2900		ns ns	I_C=100mA, $I_{B!}$=10mA I_{B2}=10mA, V_{CC}=50V

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

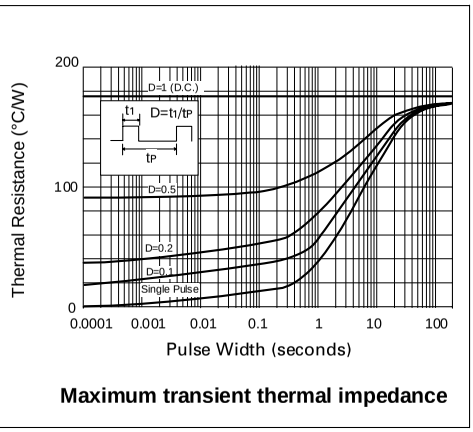
THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX.	UNIT
Thermal Resistance:Junction to Ambient$_1$ Junction to Ambient$_2$ Junction to Case	$R_{th(j\text{-}amb)1}$ $R_{th(j\text{-}amb)2}$† $R_{th(j\text{-}case)}$	175 116 70	°C/W °C/W °C/W

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



Derating curve



Maximum transient thermal impedance

NPN SILICON PLANAR ME
HIGH GAIN TRANSISTOR

ISSUE 1 – APRII 94

FEATURES

* 120 Volt V_{CEO}
* Gain of 400 at I_C=200mA
* Very low saturation voltage

APPLICATIONS

* Darlington replacement
* Relay / solenoid driver
* Battery powered circuits
* Motor drivers

ABSOLUTE MAXIMUM RATINGS

PARAMETER
Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Peak Pulse Current
Continuous Collector Current
Practical Power Dissipation*
Power Dissipation T_{amb}=25°C derate above 25°C
Operating and Storage Temperature Ran

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

ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBO
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}

ZTX694B

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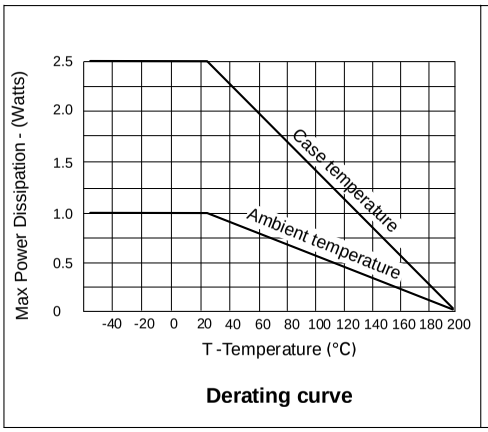
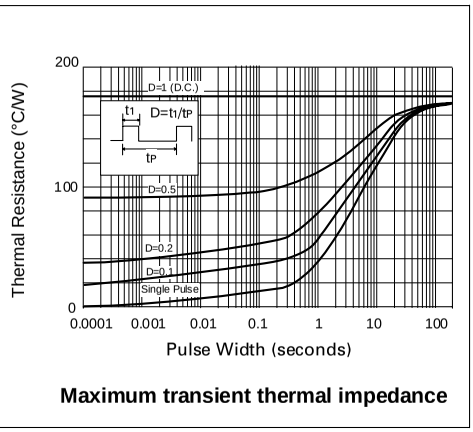


Derating curve



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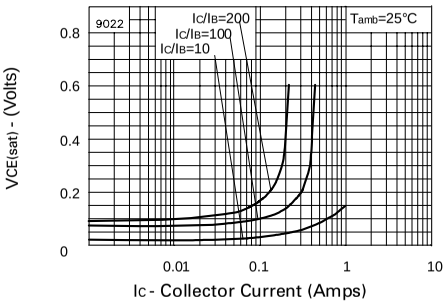
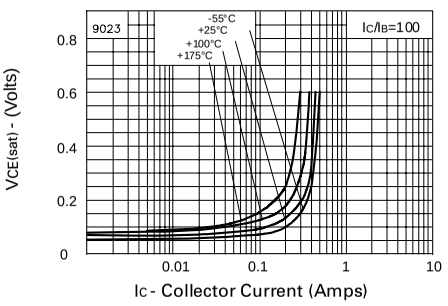
Base-Emitter Turn-On Voltage	$V_{BE(on)}$
Static Forward Current Transfer Ratio	h_{FE}

ZTX694B

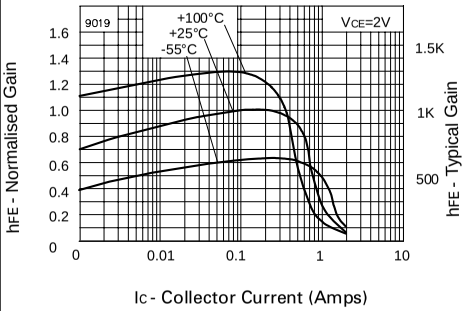
TYPICAL CHARACTERISTICS



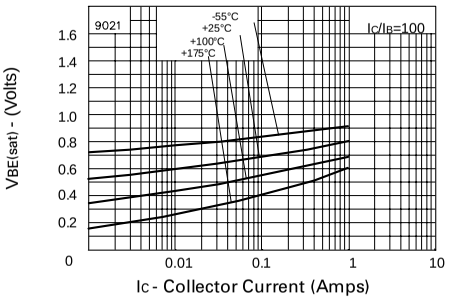
VCE(sat) v IC



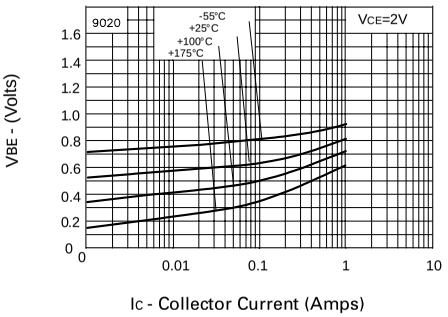
VCE(sat) v IC



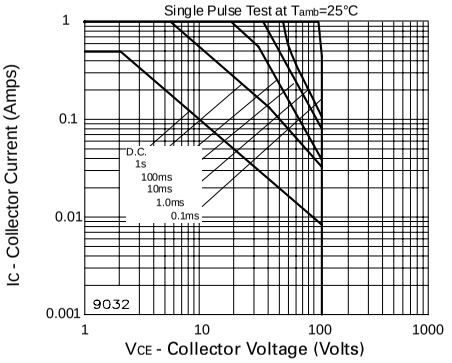
hFE v IC



VBE(sat) v IC



VBE(on) v IC



Safe Operating Area

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