



ZTX956

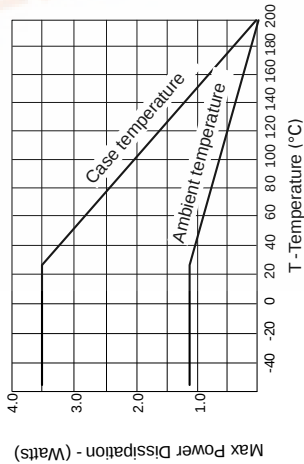
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Base-Emitter Turn-On Voltage	V _{BE(on)}		-770	-900	mV	I _C =-2A, V _{CE} =-5V*
Static Forward Current Transfer Ratio	h _{FE}	100	200	300		I _C =-10mA, V _{CE} =-5V*
		100	200			I _C =-1A, V _{CE} =-5V*
		100	150			I _C =-2A, V _{CE} =-5V*
		50	10			I _C =-5A, V _{CE} =-5V*
Transition Frequency	f _T		110		MHz	I _C =-100mA, V _{CE} =-10V f=50MHz
Output Capacitance	C _{obo}		32		pF	V _{CB} =-20V, f=1MHz
Switching Times	t _{on}		67		ns	I _C =-1A, I _{B1} =-100mA
	t _{off}		1140		ns	I _{B2} =-100mA, V _{CE} =-50V

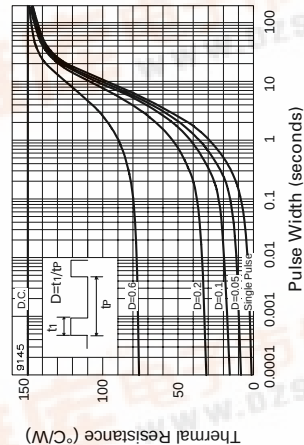
Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤2%

HERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX.	UNIT
Thermal Resistance: Junction to Ambient Junction to Case	R _{th(j-amb)}	150	°C/W
	R _{th(j-case)}	50	°C/W



Derating curve



Maximum transient thermal impedance

PNP SILICON PLANAR MEDIUM POWER HIGH CURRENT TRANSISTOR

ISSUE 3 - JUNE 94

FEATURES

- * 2 Amps continuous current
- * Up to 5 Amps peak current
- * Very low saturation voltage
- * Excellent gain characteristics up to 2 Amps
- * Spice model available

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V _{CBO}	-220	V
Collector-Emitter Voltage	V _{CEO}	-200	V
Emitter-Base Voltage	V _{EB0}	-6	V
Peak Pulse Current	I _{CM}	-5	A
Continuous Collector Current	I _C	-2	A
Practical Power Dissipation*	P _{top}	1.58	W
Power Dissipation at T _{amb} =25°C	P _{tot}	1.2	W
Operating and Storage Temperature Range	T _J ; T _{stg}	-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 unless otherwise stated)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	V _{(BR)CBO}	-220	-300		V	I _C =-100μA
Collector-Emitter Breakdown Voltage	V _{(BR)CER}	-220	-300		V	I _C =-1μA, R _B ≤ 1KΩ
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-200	-240		V	I _C =-10mA*
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-6	-8		V	I _E =-100μA
Collector Cut-Off Current	I _{CBO}			-50 -1	nA μA	V _{CB} =-200V V _{CE} =-200V, T _{amb} =100°C
Collector Cut-Off Current	I _{CER} R ≤ 1KΩ			-50 -1	nA μA	V _{CB} =-200V V _{CE} =-200V, T _{amb} =100°C
Emitter Cut-Off Current	I _{EBO}			-10	nA	V _{EB} =-6V
Collector-Emitter Saturation Voltage	V _{CE(sat)}		-30 -110 -150		mV	I _C =-100mA, I _B =-10mA*
			-150 -250		mV	I _C =-1A, I _B =-100mA*
			-920	-1050	mV	I _C =-2A, I _B =-400mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}				mV	I _C =-2A, I _B =-400mA

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PNP SILICON PLANAR MEDIUM POWER
HIGH CURRENT TRANSISTOR

ISSUE 3 - JUNE 94

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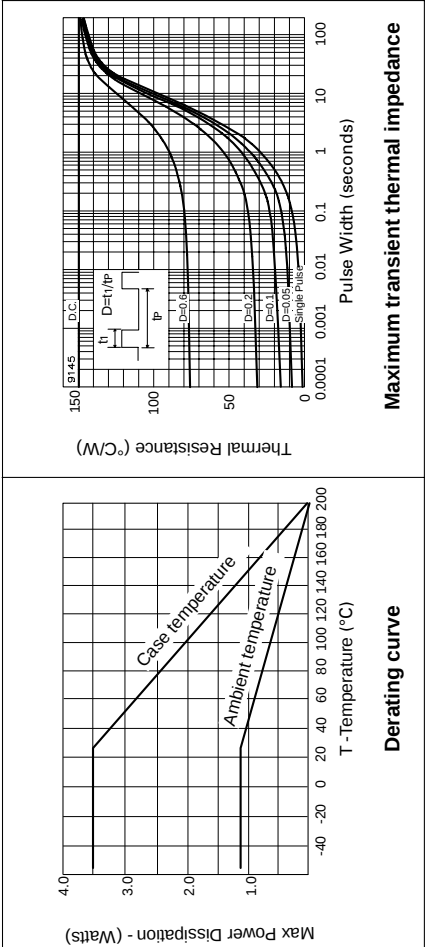
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Switching Times	t _{on}		67		ns	I _C =-1A, I _B =-100mA
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Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤2%

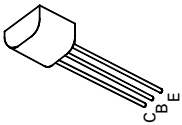
HERMAL CHARACTERISTICS

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FEATURES

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E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

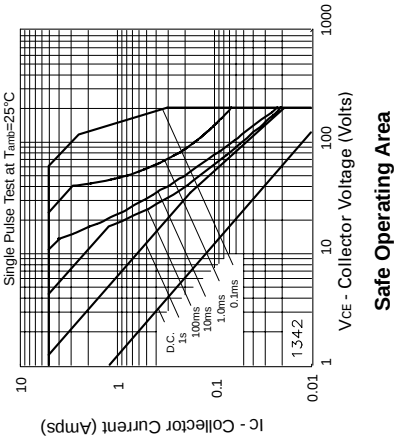
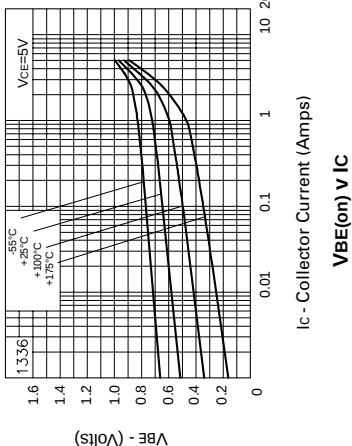
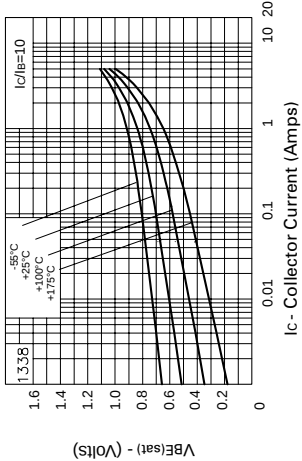
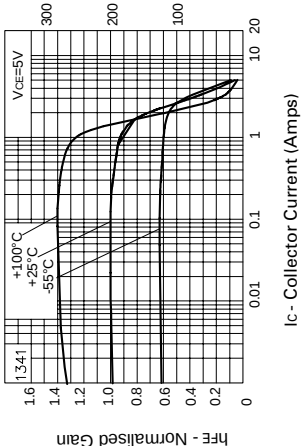
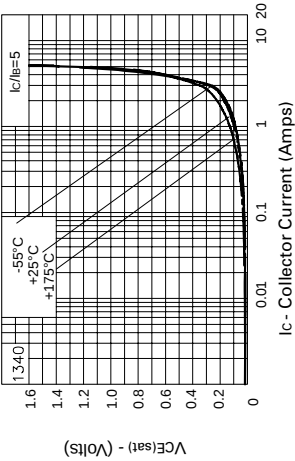
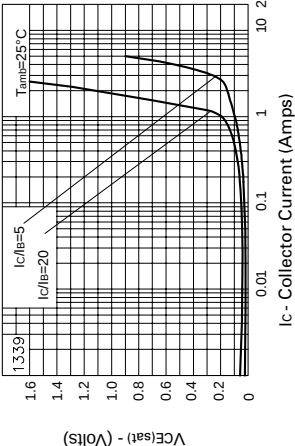
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Collector-Emitter Breakdown Voltage	V _{(BR)CE}	-220	-300		V	I _C =-1µA, R _B ≤ 1KΩ
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-200	-240		V	I _C =-10mA*
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-6	-8		V	I _E =-100µA
Collector Cut-Off Current	I _{CBO}			-50 -1	nA µA	V _{CB} =-200V V _{CE} =-200V, T _{amb} =100°C
Collector Cut-Off Current	I _{CER} R ≤ 1KΩ			-50 -1	nA µA	V _{CB} =-200V V _{CE} =-200V, T _{amb} =100°C
Emitter Cut-Off Current	I _{EBO}			-10	nA	V _{EB} =-6V
Collector-Emitter Saturation Voltage	V _{CE(sat)}		-30 -110 -150		mV	I _C =-100mA, I _B =-10mA*
			-150 -250		mV	I _C =-1A, I _B =-100mA*
			-920	-1050	mV	I _C =-2A, I _B =-400mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}				mV	I _C =-2A, I _B =-400mA

TYPICAL CHARACTERISTICS



Safe Operating Area