



ZTX948

PNP SILICON PLANAR MEDIUM POWER HIGH CURRENT TRANSISTOR

ZTX948

ISSUE 2 - JUNE 94

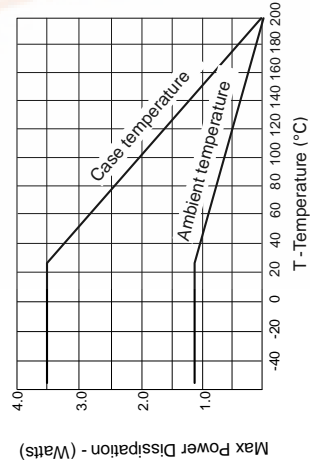
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Base-Emitter Turn-On Voltage	V _{BE(on)}		-860	-1000	mV	I _C =5A, V _{CE} =1V*
Static Forward Current Transfer Ratio	h _{FE}	100	200	300		I _C =10mA, V _{CE} =1V
		100	200			I _C =1A, V _{CE} =1V*
		75	160			I _C =5A, V _{CE} =1V*
		60	130			I _C =10A, V _{CE} =1V*
		15	40			I _C =20A, V _{CE} =1V*
Transition Frequency	f _T		80		MHz	I _C =100mA, V _{CE} =10V f=50MHz
Output Capacitance	C _{obo}		163		pF	V _{CE} =10V, f=1MHz
Switching Times	t _{on}		120		ns	I _C =4A, I _B =400mA
	t _{off}		126		ns	I _B =400mA, V _{CE} =10V

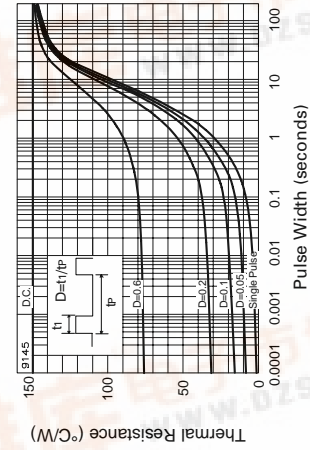
Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤2%

HERMAL CHARACTERISTICS

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



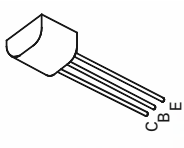
Derating curve



Maximum transient thermal impedance

FEATURES

- * 4.5 Amps continuous current
- * Up to 20 Amps peak current
- * Very low saturation voltage
- * Excellent gain up to 20 Amps
- * Very low leakage
- * Exceptional gain linearity down to 10mA
- * Spice model available



E-Line
TO92 Compatible

ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V _{CB0}	-40	V
Collector-Emitter Voltage	V _{CE0}	-20	V
Emitter-Base Voltage	V _{EB0}	-6	V
Peak Pulse Current	I _{CM}	-20	A
Continuous Collector Current	I _C	-4.5	A
Practical Power Dissipation*	P _{totp}	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}	-40	-55		V	I _C =100µA
Collector-Emitter Breakdown Voltage	V _{(BR)CER}	-40	-55		V	I _C =1µA, R _B ≤1KΩ
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-20	-30		V	I _C =10mA*
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-6	-8		V	I _E =100µA
Collector Cut-Off Current	I _{CBO}			-50	nA	V _{CB} =30V
				-1	µA	V _{CB} =30V, T _{amb} =100°C
Collector Cut-Off Current	I _{CER} R _{≤1KΩ}			-50	nA	V _{CB} =30V
				-1	µA	V _{CB} =30V, T _{amb} =100°C
Emitter Cut-Off Current	I _{EBO}			-10	nA	V _{EB} =6V
Collector-Emitter Saturation Voltage	V _{CE(sat)}			-45	mV	I _C =0.5A, I _B =10mA*
				-90	mV	I _C =2A, I _B =200mA*
				-180	mV	I _C =4A, I _B =400mA*
				-310	mV	I _C =5A, I _B =300mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}			-960	mV	I _C =5A, I _B =300mA*

查询ZTX948供应商

捷多邦, 专业PCB打样工厂, 24小时加急出货

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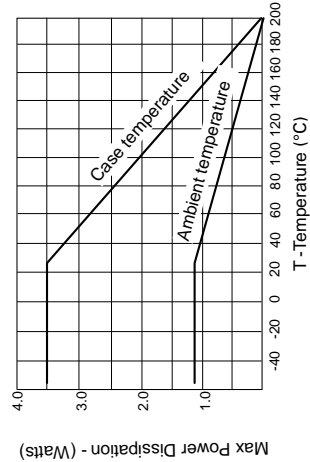
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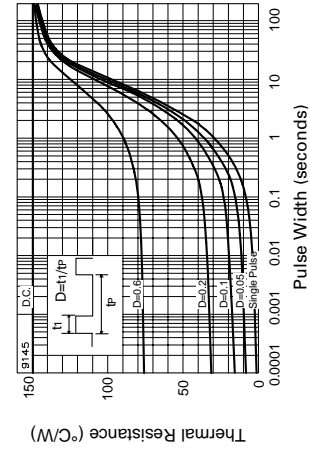
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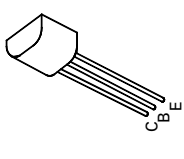
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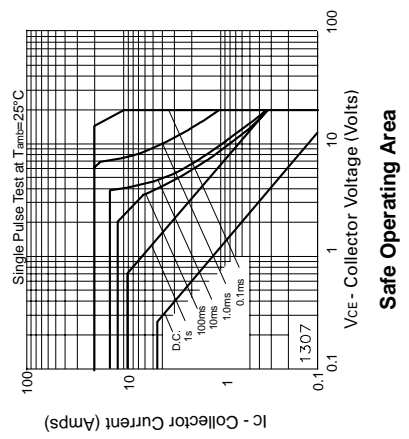
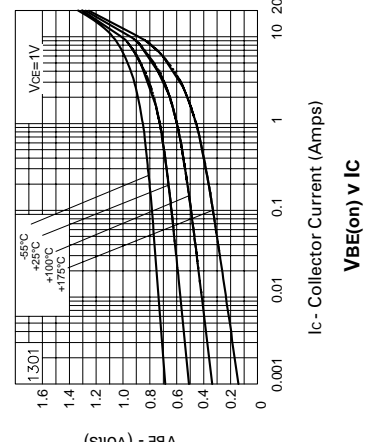
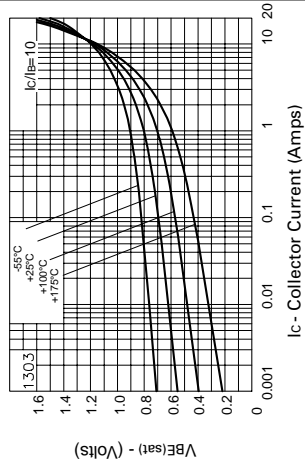
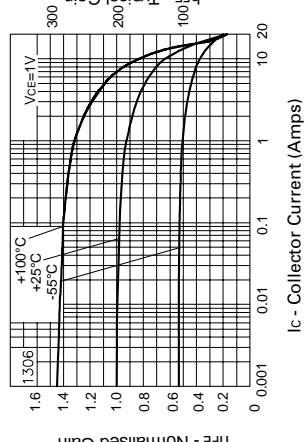
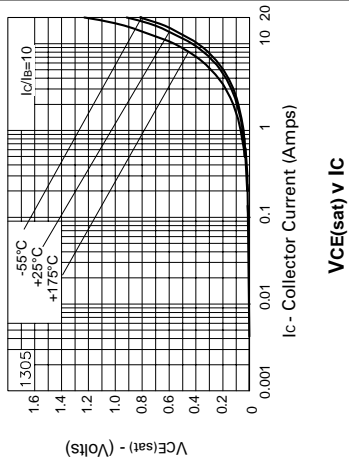
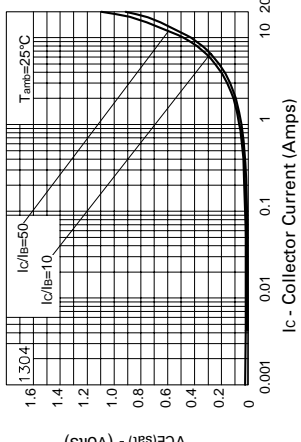
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Collector-Emitter Breakdown Voltage	V _{(BR)CE}	-40	-55		V	I _C =1µA, R _B ≤1KΩ
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-20	-30		V	I _C =10mA*
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-6	-8		V	I _E =100µA
Collector Cut-Off Current	I _{CBO}			-50	nA	V _{CB} =30V
				-1	µA	V _{CB} =30V, T _{amb} =100°C
Collector Cut-Off Current	I _{CER} R _{≤1KΩ}			-50	nA	V _{CB} =30V
				-1	µA	V _{CB} =30V, T _{amb} =100°C
Emitter Cut-Off Current	I _{EBO}			-10	nA	V _{EB} =6V
Collector-Emitter Saturation Voltage	V _{CE(sat)}		-45	-100	mV	I _C =0.5A, I _B =10mA*
			-90	-150	mV	I _C =2A, I _B =200mA*
			-180	-250	mV	I _C =4A, I _B =400mA*
			-230	-310	mV	I _C =5A, I _B =300mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}		-960	-1100	mV	I _C =5A, I _B =300mA*

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TYPICAL CHARACTERISTICS



Safe Operating Area