

[查询ZTX1147A供应商](#)

[捷多邦, 专业PCB打样工厂](#)

**PNP SILICON PLANAR MEDIUM POWER** , 24小时加急出货

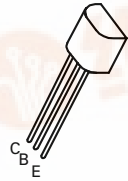
**HIGH GAIN TRANSISTOR**

**ZTX1147A**

**ISSUE 1 - JANUARY 1997**

**FEATURES**

- \*  $V_{CEO} = -12V$
- \* 4 Amp Continuous Current
- \* 20 Amp pulse Current
- \* Low Saturation Voltage
- \* High Gain



**E-Line  
TO92 Compatible**

**ABSOLUTE MAXIMUM RATINGS.**

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-15	V
Collector-Emitter Voltage	$V_{CEO}$	-12	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Peak Pulse Current	$I_{CM}$	-20	A
Continuous Collector Current	$I_C$	-4	A
Base Current	$I_B$	-500	mA
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	1	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +200	$^{\circ}C$



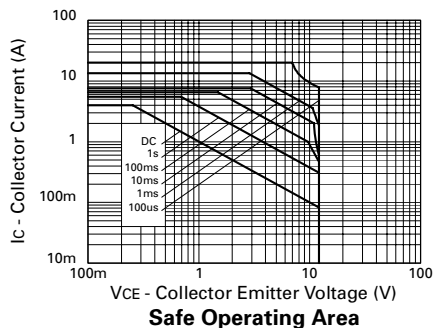
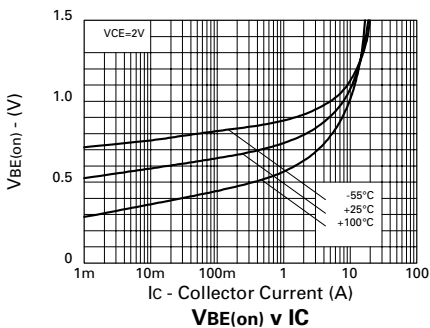
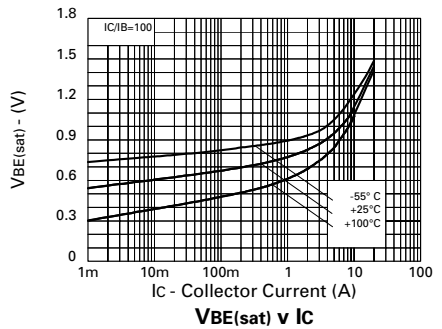
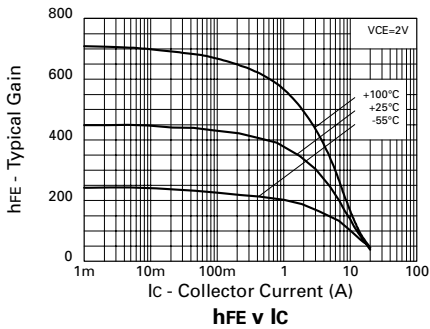
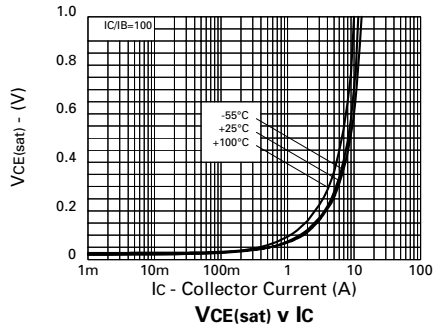
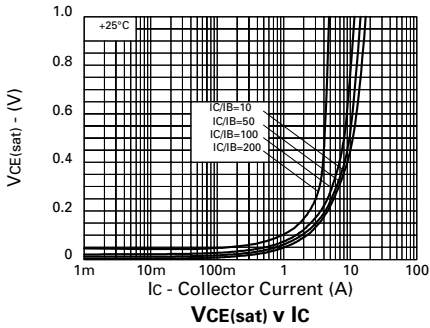
# ZTX1147A

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

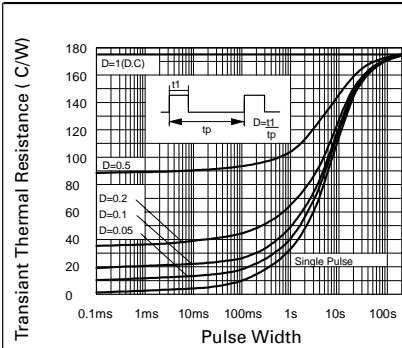
PARAMETER	SYMBOL	VALUE			UNIT	CONDITIONS.
		MIN.	TYP.	MAX.		
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-15	-35		V	$I_C = -100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CES}$	-12	-25		V	$I_C = -100\mu\text{A}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-12	-25		V	$I_C = -10\text{mA}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEV}$	-12	-25		V	$I_C = -100\mu\text{A}, V_{EB} = +1\text{V}$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-8.5		V	$I_E = -100\mu\text{A}$
Collector Cut-Off Current	$I_{CBO}$		-0.3	-100	nA	$V_{CB} = -12\text{V}$
Emitter Cut-Off Current	$I_{EBO}$		-0.3	-100	nA	$V_{EB} = -4\text{V}$
Collector Emitter Cut-Off Current	$I_{CES}$		-0.3	-100	nA	$V_{CE} = -10\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-25 -70 -90 -115 -175	-50 -110 -130 -170 -235	mV mV mV mV mV	$I_C = -0.1\text{A}, I_B = -1\text{mA}^*$ $I_C = -0.5\text{A}, I_B = -2.5\text{mA}^*$ $I_C = -1\text{A}, I_B = -6\text{mA}^*$ $I_C = -2\text{A}, I_B = -20\text{mA}^*$ $I_C = -4\text{A}, I_B = -70\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-890	-1000	mV	$I_C = -4\text{A}, I_B = -70\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$		-830	-950	mV	$I_C = -4\text{A}, V_{CE} = -2\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	270 250 200 170 90	450 400 340 270 150 50	850		$I_C = -10\text{mA}, V_{CE} = -2\text{V}^*$ $I_C = -0.5\text{A}, V_{CE} = -2\text{V}^*$ $I_C = -2.0\text{A}, V_{CE} = -2\text{V}^*$ $I_C = -4.0\text{A}, V_{CE} = -2\text{V}^*$ $I_C = -10\text{A}, V_{CE} = -2\text{V}^*$ $I_C = -20\text{A}, V_{CE} = -2\text{V}^*$
Transition Frequency	$f_T$		115		MHz	$I_C = -50\text{mA}, V_{CE} = -10\text{V}$ $f = 50\text{MHz}$
Out Capacitance	$C_{cb}$		80		pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$
Switching Times	$t_{on}$		150		ns	$I_C = -4\text{A}, I_B = -40\text{mA},$ $V_{CC} = -10\text{V}$
	$t_{off}$		220		ns	$I_C = -4\text{A}, I_B = \pm 40\text{mA},$ $V_{CC} = -10\text{V}$

# ZTX1147A

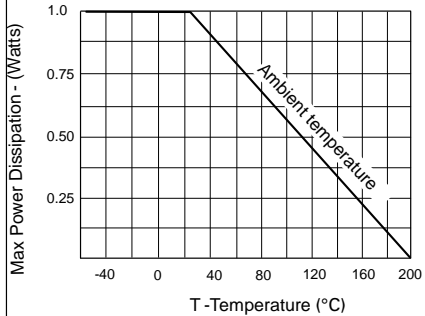
## TYPICAL CHARACTERISTICS



# ZTX1147A



**Transient Thermal Resistance**



**Derating curve**

## SPICE PARAMETERS

\* ZETEX ZTX1147 Spice model Last revision 10/12/96

\*

.MODEL ZTX1147 PNP IS=1.272e-12 NF=0.989 ISE=2.5e-13 NE=1.65

+ BF=500 VAF=14.59 IKF=8 NR=1 ISC=8e-14 NC= 1.6

+ BR=90 VAR=3.1 IKR=1.2 RE=15e-3 RB=145e-3

+ RC=13e-3 CJE=560e-12

+ CJC=255e-12 VJC=0.6288

+ MJC=0.4048 TF=1.2e-9 TR=13e-9

\*

## © 1995 ZETEX PLC

The copyright in this model and the design embodied belong to Zetex PLC ("Zetex"). It is supplied free of charge by Zetex for the purpose of research and design and may be used or copied intact (including this notice) for that purpose only. All other rights are reserved. The model is believed accurate but no condition or warranty as to its merchantability or fitness for purpose is given and no liability in respect of any use is accepted by Zetex PLC, its distributors or agents.



Zetex plc.

Fields New Road, Chadderton, Oldham, OL9-8NP, United Kingdom.

Telephone: (44)161 622 4422 (Sales), (44)161 622 4444 (General Enquiries)

Fax: (44)161 622 4420

Zetex GmbH  
Streitfeldstraße 19  
D-81673 München  
Germany

Telephone: (49) 89 45 49 49 0

Fax: (49) 89 45 49 49 49

Zetex Inc.  
47 Mall Drive, Unit 4  
Commack NY 11725  
USA

Telephone: (516) 543-7100

Fax: (516) 864-7630

Zetex (Asia) Ltd.  
3510 Metroplaza, Tower 2  
Hing Fong Road,  
Kwai Fong, Hong Kong

Telephone: (852) 26100 611

Fax: (852) 24250 494

These are supported by  
agents and distributors in  
major countries world-wide  
©Zetex plc 1997

Internet: <http://www.zetex.com>