# NPN SILICON PLANAR MEDIUM POWER **DARLINGTON TRANSISTOR**

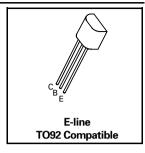
**ZTX614** 

#### ISSUE 1 – APRIL 94

### FEATURES

- \* 100 Volt V<sub>CEO</sub>
  \* 800 mA continuous current
- \* Gain of 10K at I<sub>C</sub>=500mA
- \* P<sub>tot</sub>=1 Watt

REFER TO BCX38 FOR GRAPHS



## **ABSOLUTE MAXIMUM RATINGS.**

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V <sub>CBO</sub>	120	V
Collector-Emitter Voltage	V <sub>CEO</sub>	100	V
Emitter-Base Voltage	$V_{EBO}$	10	٧
Continuous Collector Current	I <sub>C</sub>	800	mA
Power Dissipation at T <sub>amb</sub> =25°C derate above 25°C	P <sub>tot</sub>	1.0 5.7	W mW/°C
Operating and Storage Temperature Range	T <sub>j</sub> :T <sub>stg</sub>	-55 to +200	°C

## ELECTRICAL CHARACTERISTICS (at T<sub>amb</sub> = 25°C).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	120			V	I <sub>C</sub> =10μA, I <sub>E</sub> =0
Collector-Emitter Sustaining Voltage	V <sub>CEO(sus)</sub>	100			V	I <sub>C</sub> =10mA, I <sub>B</sub> =0*
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	10			V	$I_{E}=10\mu A$ , $I_{C}=0$
Collector Cut-Off Current	I <sub>CBO</sub>			100	nA	V <sub>CB</sub> =60V, I <sub>E</sub> =0
Emitter Cut-Off Current	I <sub>EBO</sub>			100	nA	V <sub>EB</sub> =8V, I <sub>C</sub> =0
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>			1.25	V	I <sub>C</sub> =800mA, I <sub>B</sub> =8mA*
Base-Emitter Turn-On Voltage	V <sub>BE(on)</sub>			1.8	V	IC=800mA, V <sub>CE</sub> =5V*
Static Forward Current Transfer Ratio	h <sub>FE</sub>	5000 10000				I <sub>C</sub> =100mA, V <sub>CE</sub> =5V* I <sub>C</sub> =500mA, V <sub>CE</sub> =5V*

<sup>\*</sup>Measured under pulsed conditions. Pulse Width=300µs. Duty cycle ≤2%

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