

# NPN SILICON PLANAR MEDIUM POWER DARLINGTON TRANSISTOR

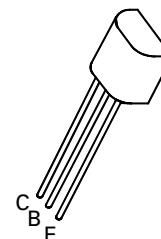
## ZTX614

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### FEATURES

- \* 100 Volt  $V_{CEO}$
- \* 800 mA continuous current
- \* Gain of 10K at  $I_C=500\text{mA}$
- \*  $P_{tot}=1$  Watt

REFER TO BCX38 FOR GRAPHS



E-line  
TO92 Compatible

### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	120	V
Collector-Emitter Voltage	$V_{CEO}$	100	V
Emitter-Base Voltage	$V_{EBO}$	10	V
Continuous Collector Current	$I_C$	800	mA
Power Dissipation at $T_{amb}=25^\circ\text{C}$ derate above $25^\circ\text{C}$	$P_{tot}$	1.0 5.7	W mW/°C
Operating and Storage Temperature Range	$T_j:T_{stg}$	-55 to +200	°C

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	120			V	$I_C=10\mu\text{A}$ , $I_E=0$
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	100			V	$I_C=10\text{mA}$ , $I_B=0^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	10			V	$I_E=10\mu\text{A}$ , $I_C=0$
Collector Cut-Off Current	$I_{CBO}$			100	nA	$V_{CB}=60\text{V}$ , $I_E=0$
Emitter Cut-Off Current	$I_{EBO}$			100	nA	$V_{EB}=8\text{V}$ , $I_C=0$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			1.25	V	$I_C=800\text{mA}$ , $I_B=8\text{mA}^*$
Base-Emitter Turn-On Voltage	$V_{BE(on)}$			1.8	V	$I_C=800\text{mA}$ , $V_{CE}=5\text{V}^*$
Static Forward Current Transfer Ratio	$h_{FE}$	5000 10000				$I_C=100\text{mA}$ , $V_{CE}=5\text{V}^*$ $I_C=500\text{mA}$ , $V_{CE}=5\text{V}^*$

\*Measured under pulsed conditions. Pulse Width=300 $\mu\text{s}$ . Duty cycle  $\leq 2\%$