

NPN SILICON PLANAR MEDIUM POWER DARLINGTON TRANSISTOR

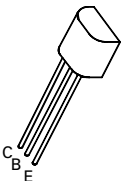
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FEATURES

- * 100 Volt V_{CE0}
- * 800 mA continuous current
- * Gain of 10K at $I_C=500\text{mA}$
- * $P_{\text{tot}}=1$ Watt

REFER TO BCX38 FOR GRAPHS

ZTX614



**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 $T_{\text{amb}}=25^\circ\text{C}$ derate above 25°C	P_{tot}	1.0 5.7	W mW/ $^\circ\text{C}$
Operating and Storage Temperature Range	$T_j; T_{\text{stg}}$	-55 to +200	$^\circ\text{C}$

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

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 μs . Duty cycle $\leq 2\%$