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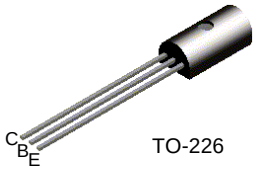
ZTX614

NPN Darlington Transistor

- These device is designed for applications requiring extremely high gain at collector currents to 0.5A and high breakdown voltage.
- Sourced from process 06.



TO-226

Absolute Maximum Ratings* T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	100	V
V_{CBO}	Collector-Base Voltage	120	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current - Continuous	800	mA
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 ~ +150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:
1) These ratings are based on a maximum junction temperature of 150°C.
2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristics						
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage*	I_C = 10mA, I_B = 0	100			V
$V_{(BR)CBO}$	Collector-Emitter Breakdown Voltage	I_C = 100µA, I_E = 0	120			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 100µA, I_C = 0	10			
I_{CBO}	Collector Cutoff Current	V_{CB} = 60V, I_E = 0			0.1	µA
I_{EBO}	Emitter Cutoff Current	V_{EB} = 8V, I_C = 0			0.1	µA
On Characteristics*						
h_{FE}	DC Current Gain	I_C = 100mA, V_{CE} = 5V I_C = 500mA, V_{CE} = 5V	5000 10000			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = 800mA, I_B = 8mA			1.25	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C = 800mA, V_{BE} = 5V			1.8	V

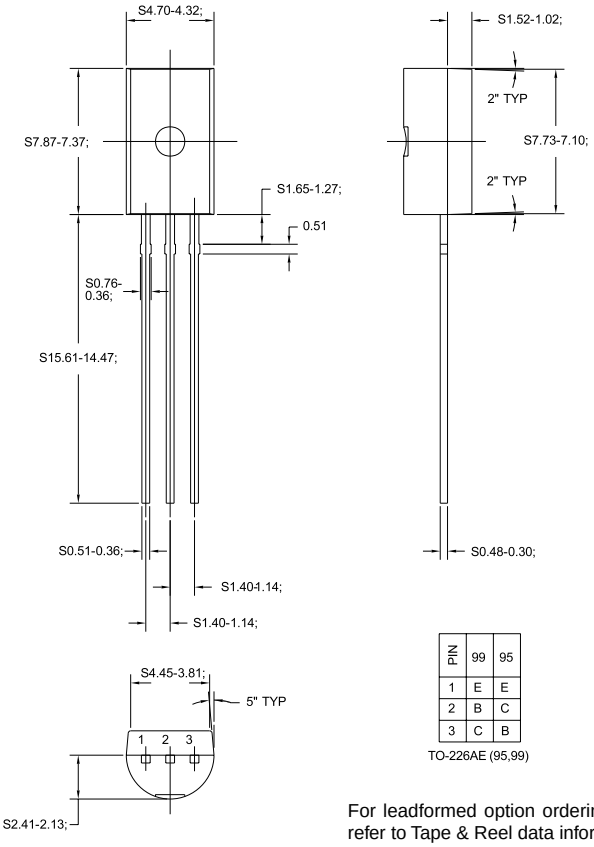
* Pulse Test: Pulse Width ≤ 300µs, Duty Cycle ≤ 1.0%

Thermal Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	1000 8	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	50	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	125	°C/W

Package Dimensions

TO-226



PIN	99	95
1	E	E
2	B	C
3	C	B

TO-226AE (95,99)

For leadformed option ordering,
refer to Tape & Reel data information.

Dimensions in Millimeters

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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