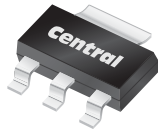


**CZT2000****SURFACE MOUNT SILICON  
EXTREMELY HIGH VOLTAGE  
NPN DARLINGTON TRANSISTOR**[www.centrasemi.com](http://www.centrasemi.com)**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZT2000 is an NPN epitaxial planar silicon darlington transistor manufactured in an epoxy molded surface mount package, designed for applications requiring extremely high voltages and high gain capability.

**MARKING: FULL PART NUMBER****SOT-223 CASE****MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL		UNITS
$V_{CBO}$	200	V
$V_{CES}$	200	V
$V_{EBO}$	10	V
$I_C$	600	mA
$P_D$	2.0	W
$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
$\Theta_{JA}$	62.5	$^\circ\text{C/W}$

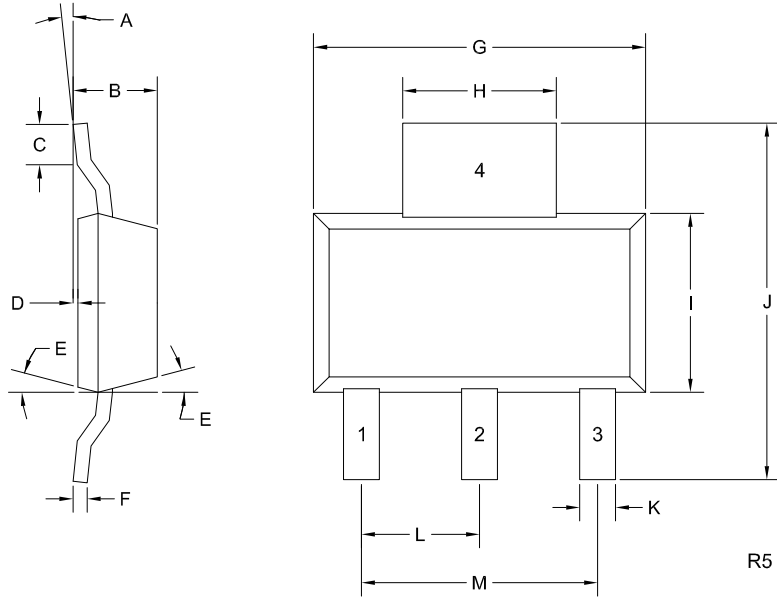
**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=180\text{V}$		500	nA
$I_{EBO}$	$V_{BE}=10\text{V}$		100	nA
$BV_{CES}$	$I_C=1.0\text{mA}$	200		V
$V_{CE(SAT)}$	$I_C=20\text{mA}, I_B=25\mu\text{A}$		0.9	V
$V_{CE(SAT)}$	$I_C=80\text{mA}, I_B=40\mu\text{A}$		1.1	V
$V_{CE(SAT)}$	$I_C=160\text{mA}, I_B=100\mu\text{A}$		1.2	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=160\text{mA}$		2.0	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=100\mu\text{A}$	3000		
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	3000		
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=160\text{mA}$	3000		

**CZT2000**  
**SURFACE MOUNT SILICON**  
**EXTREMELY HIGH VOLTAGE**  
**NPN DARLINGTON TRANSISTOR**



**SOT-223 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) Base
- 2) Collector
- 3) Emitter
- 4) Collector

**MARKING:**

**FULL PART NUMBER**

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0°	10°	0°	10°
B	0.059	0.071	1.50	1.80
C	0.018	---	0.45	---
D	0.000	0.004	0.00	0.10
E	10°		10°	
F	0.009	0.014	0.23	0.35
G	0.248	0.270	6.30	6.85
H	0.114	0.122	2.90	3.10
I	0.130	0.146	3.30	3.70
J	0.264	0.287	6.70	7.30
K	0.024	0.033	0.60	0.85
L	0.091		2.30	
M	0.181		4.60	

SOT-223 (REV: R5)

R8 (7-May 2019)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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