

CZT2000

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



SOT-223 CASE



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

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

V_{CBO} 200
 V_{CES} 200
 V_{EBO} 10
 I_C 600
 P_D 2.0
 T_J, T_{stg} -65 to +150
 Θ_{JA} 62.5

UNITS

V
V
V
mA
W
 $^{\circ}\text{C}$
 $^{\circ}\text{C/W}$

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		

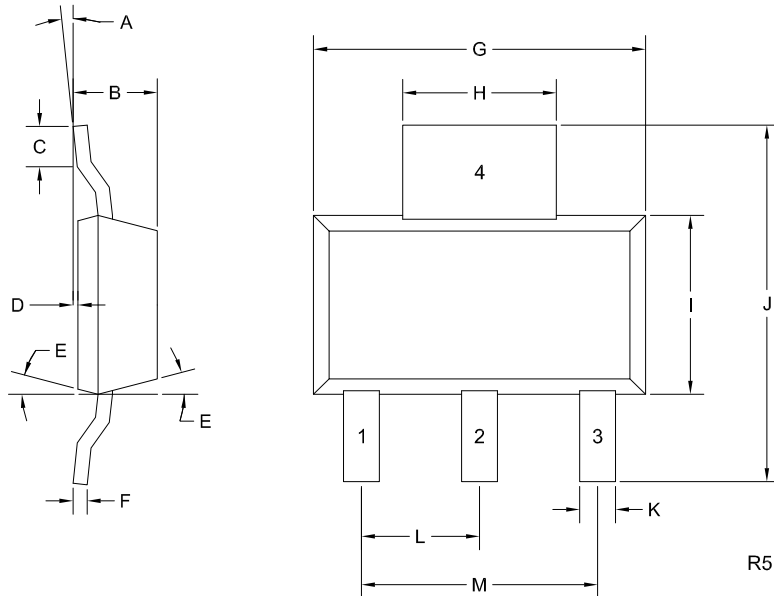
R8 (7-May 2019)

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SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING:

FULL PART NUMBER

SYMBOL	DIMENSIONS			
	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)

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OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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).

CONTACT US

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