

CZTA44HC

**SURFACE MOUNT  
HIGH CURRENT  
HIGH VOLTAGE  
NPN SILICON TRANSISTOR**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZTA44HC type is a surface mount epoxy molded silicon planar epitaxial transistor designed for extremely high voltage and high current applications.

**MARKING: FULL PART NUMBER**

**POWER  
223**



**SOT-223 CASE**

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

	<b>SYMBOL</b>		<b>UNITS</b>
Collector-Base Voltage	$V_{CBO}$	450	V
Collector-Emitter Voltage	$V_{CEO}$	400	V
Emitter-Base Voltage	$V_{EBO}$	7.0	V
Continuous Collector Current	$I_C$	2.0	A
Peak Collector Current	$I_{CM}$	3.0	A
Power Dissipation	$P_D$	2.0	W
Operating and Storage Junction Temperature	$T_J, T_{stg}$	65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	62.5	$^\circ\text{C/W}$

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

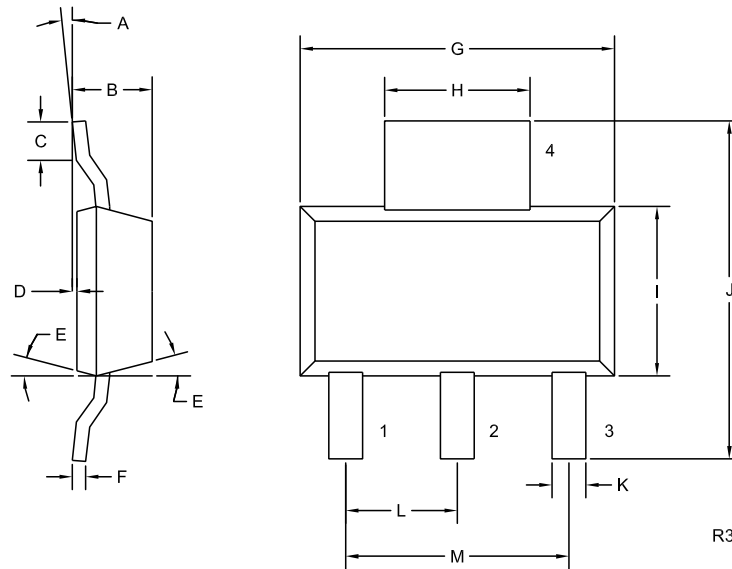
<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>MAX</b>	<b>UNITS</b>
$I_{CBO}$	$V_{CB}=400\text{V}$		500	nA
$I_{EBO}$	$V_{BE}=5.0\text{V}$		500	nA
$BV_{CBO}$	$I_C=50\mu\text{A}$	450		V
$BV_{CEO}$	$I_C=1.0\text{mA}$	400		V
$BV_{EBO}$	$I_E=50\mu\text{A}$	7.0		V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.25	V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		0.50	V
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=200\text{mA}$		1.5	V
$V_{BE(SAT)}$	$I_C=1.0\text{A}, I_B=1.0\text{mA}$		1.5	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	35		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	35		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{A}$	30		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=2.0\text{A}$	15		
$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=10\text{MHz}$	10		MHz
$C_{ob}$	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$		30	pF
$C_{ib}$	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		1000	pF

R4 (1-March 2010)

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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	15°		15°	
F	0.009	0.014	0.23	0.35
G	0.248	0.264	6.30	6.70
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: R3)

R4 (1-March 2010)

## 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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### CONTACT US

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