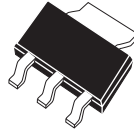


CZTA44HC

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

**POWER  
223**



**SOT-223 CASE**

**Central**<sup>TM</sup>  
**Semiconductor Corp.**

**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 CODE: FULL PART NUMBER**

**MAXIMUM RATINGS:** (T<sub>A</sub>=25°C)

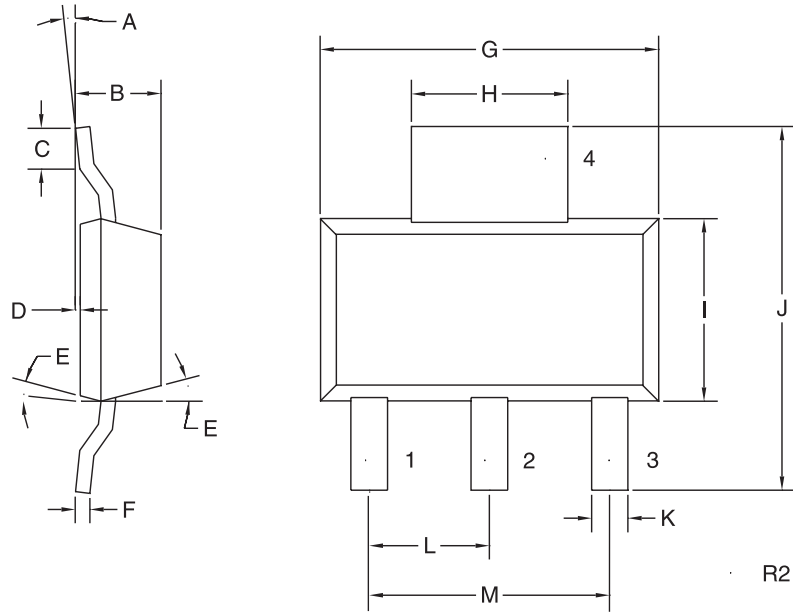
	SYMBOL		UNITS
Collector-Base Voltage	V <sub>CBO</sub>	450	V
Collector-Emitter Voltage	V <sub>CEO</sub>	400	V
Emitter-Base Voltage	V <sub>EBO</sub>	7.0	V
Collector Current	I <sub>C</sub>	2.0	A
Collector Current (Peak)	I <sub>CM</sub>	3.0	A
Power Dissipation	P <sub>D</sub>	2.0	W
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	65 to +150	°C
Thermal Resistance	θ <sub>JA</sub>	62.5	°C/W

**ELECTRICAL CHARACTERISTICS:** (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =400V		500	nA
I <sub>EBO</sub>	V <sub>BE</sub> =5.0V		500	nA
BV <sub>CBO</sub>	I <sub>C</sub> =50μA	450		V
BV <sub>CEO</sub>	I <sub>C</sub> =1.0mA	400		V
BV <sub>EBO</sub>	I <sub>E</sub> =50μA	7.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA		0.25	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =1.0A, I <sub>B</sub> =100mA		0.50	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =2.0A, I <sub>B</sub> =200mA		1.5	V
V <sub>BE(SAT)</sub>	I <sub>C</sub> =1.0A, I <sub>B</sub> =1.0mA		1.5	V
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA	35		
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =500mA	35		
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1.0A	30		
h <sub>FE</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =2.0A	15		
f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA, f=10MHz	10		MHz
C <sub>ob</sub>	V <sub>CB</sub> =20V, I <sub>E</sub> =0, f=1.0MHz		30	pF
C <sub>ib</sub>	V <sub>EB</sub> =0.5V, I <sub>C</sub> =0, f=1.0MHz		1000	pF

R2 (14-November 2002)

**SOT-223 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) BASE
- 2) COLLECTOR
- 3) EMITTER
- 4) COLLECTOR

**MARKING CODE:**

**FULL PART NUMBER**

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0°	7°	0°	7°
B	0.063	0.067	1.60	1.70
C	0.022		0.55	
D	0.001	0.004	0.03	0.10
E	15°		15°	
F	0.009	0.013	0.23	0.33
G	0.248	0.264	6.30	6.71
H	0.114	0.122	2.90	3.10
I	0.130	0.146	3.30	3.71
J	0.264	0.287	6.71	7.29
K	0.024	0.031	0.61	0.79
L	0.091		2.31	
M	0.181		4.60	

SOT-223 (REV: R2)

R2 (14-November 2002)