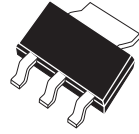


**CZTA46**  
**SURFACE MOUNT**  
**NPN**  
**EXTREMELY HIGH VOLTAGE**  
**SILICON TRANSISTOR**



**SOT-223 CASE**

# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZTA46 type is a surface mount epoxy molded NPN silicon planar epitaxial transistors designed for extremely high voltage applications.

**MARKING CODE: FULL PART NUMBER**

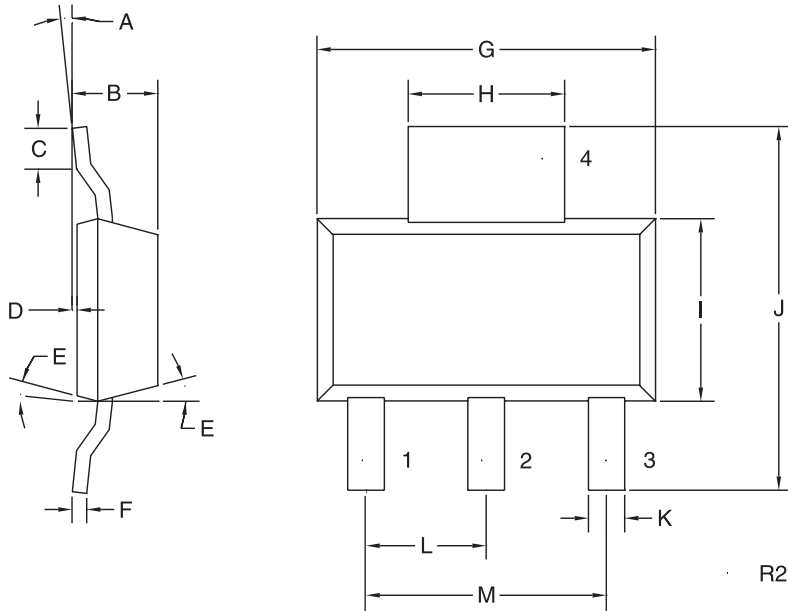
**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

	SYMBOL		UNITS
Collector-Base Voltage	$V_{CB0}$	450	V
Collector-Emitter Voltage	$V_{CEO}$	450	V
Emitter-Base Voltage	$V_{EBO}$	6.0	V
Collector Current	$I_C$	500	mA
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)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{CBO}$	$V_{CB}=400\text{V}$			100	nA
$I_{EBO}$	$V_{BE}=4.0\text{V}$			100	nA
$B_{VCBO}$	$I_C=100\mu\text{A}$	450	610		V
$B_{VCEO}$	$I_C=1.0\text{mA}$	450	490		V
$B_{VEBO}$	$I_E=10\mu\text{A}$	6.0	8.7		V
$V_{CE(SAT)}$	$I_C=1.0\text{mA}, I_B=0.1\text{mA}$			0.20	V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$			0.30	V
$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5.0\text{mA}$		0.15	0.50	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=1.0\text{mA}$			1.0	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	40	108		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	50	110	200	
$h_{FE}$	$V_{CE}=10\text{V}, I_C=50\text{mA}$	45	95		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=100\text{mA}$	25	35		
$f_T$	$V_{CE}=10\text{V}, I_C=10\text{mA}, f=10\text{MHz}$	20			MHz
$C_{ob}$	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$			7.0	pF
$C_{ib}$	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$			130	pF

**SOT-223 - 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)