

CZTA46

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



SOT-223 CASE



www.centrasemi.com

DESCRIPTION:

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

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} 450
 V_{CEO} 450
 V_{EBO} 6.0
 I_C 500
 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	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=400\text{V}$			100	nA
I_{EBO}	$V_{BE}=4.0\text{V}$			100	nA
BV_{CBO}	$I_C=100\mu\text{A}$	450	610		V
BV_{CEO}	$I_C=1.0\text{mA}$	450	490		V
BV_{EBO}	$I_E=10\mu\text{A}$	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

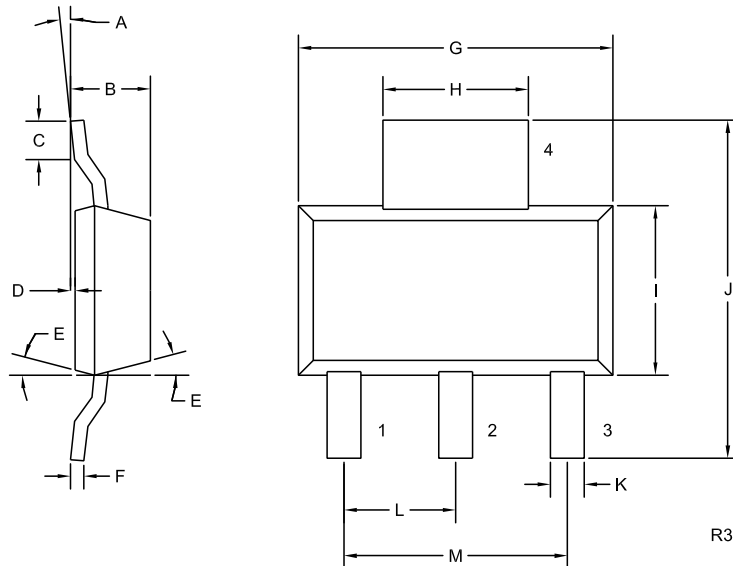
R4 (1-March 2010)

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SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

**MARKING:
FULL PART NUMBER**

DIMENSIONS				
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	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)

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

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