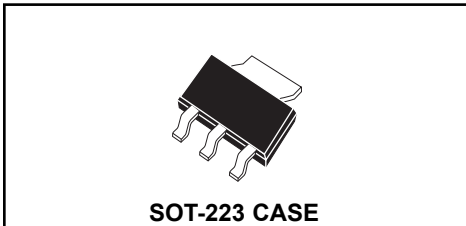


**CZTA42 NPN  
CZTA92 PNP**

**SURFACE MOUNT  
COMPLEMENTARY  
HIGH VOLTAGE SILICON TRANSISTOR**



# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZTA42, CZTA92 types are complementary surface mount epoxy molded silicon planar epitaxial transistors designed for high voltage applications.

**MARKING CODE: FULL PART NUMBER**

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

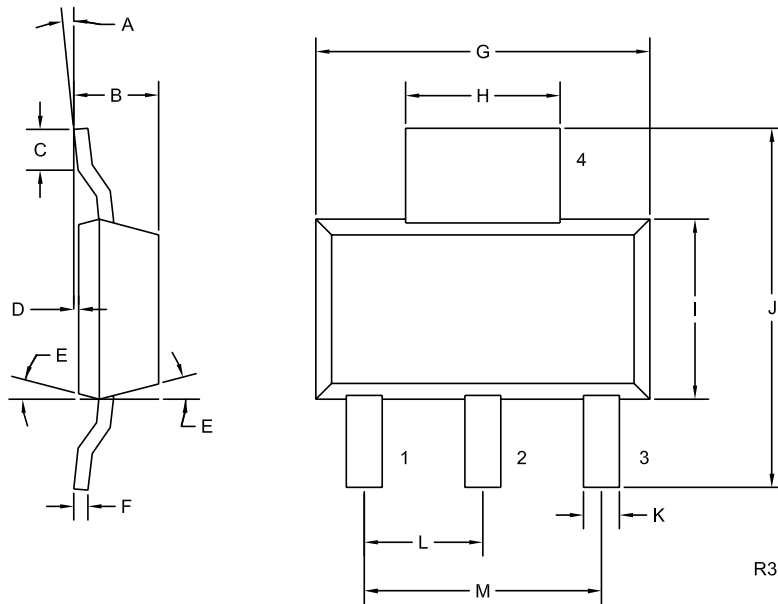
	<b>SYMBOL</b>	<b>CZTA42</b>	<b>CZTA92</b>	<b>UNITS</b>
Collector-Base Voltage	$V_{CBO}$	300	300	V
Collector-Emitter Voltage	$V_{CEO}$	300	300	V
Emitter-Base Voltage	$V_{EBO}$	6.0	5.0	V
Continuous Collector Current	$I_C$		500	mA
Power Dissipation	$P_D$		2.0	W
Operating and Storage				
Junction Temperature	$T_J, T_{stg}$	-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)

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>CZTA42</b>		<b>CZTA92</b>		<b>UNITS</b>
		<b>MIN</b>	<b>MAX</b>	<b>MIN</b>	<b>MAX</b>	
$I_{CBO}$	$V_{CB}=200\text{V}$		100		250	nA
$I_{EBO}$	$V_{BE}=6.0\text{V}$		100		-	nA
$I_{EBO}$	$V_{BE}=3.0\text{V}$		-		100	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	300		300		V
$BV_{CEO}$	$I_C=1.0\text{mA}$	300		300		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	6.0		5.0		V
$V_{CE(SAT)}$	$I_C=20\text{mA}, I_B=2.0\text{mA}$		0.5		0.5	V
$V_{BE(SAT)}$	$I_C=20\text{mA}, I_B=2.0\text{mA}$		0.9		0.9	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{mA}$	25		25		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	40		40		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=30\text{mA}$	40		25		
$f_T$	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	50		50		MHz
$C_{ob}$	$V_{CB}=20\text{V}, I_E=0, f=1.0\text{MHz}$		3.0		6.0	pF

R2 (17-June 2004)

**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°	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)

R2 (17-June 2004)