

CZTA42 NPN
CZTA92 PNP

**SURFACE MOUNT
COMPLEMENTARY
HIGH VOLTAGE
SILICON TRANSISTORS**



SOT-223 CASE



www.centalsemi.com

DESCRIPTION:

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

MARKING: FULL PART NUMBER

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

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	Θ_{JA}		62.5	$^\circ\text{C/W}$

SYMBOL	<u>CZTA42</u>	<u>CZTA92</u>	UNITS
V_{CBO}	300	300	V
V_{CEO}	300	300	V
V_{EBO}	6.0	5.0	V
I_C		500	mA
P_D		2.0	W
T_J, T_{stg}		-65 to +150	$^\circ\text{C}$
Θ_{JA}		62.5	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	<u>CZTA42</u>		<u>CZTA92</u>		UNITS
		MIN	MAX	MIN	MAX	
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

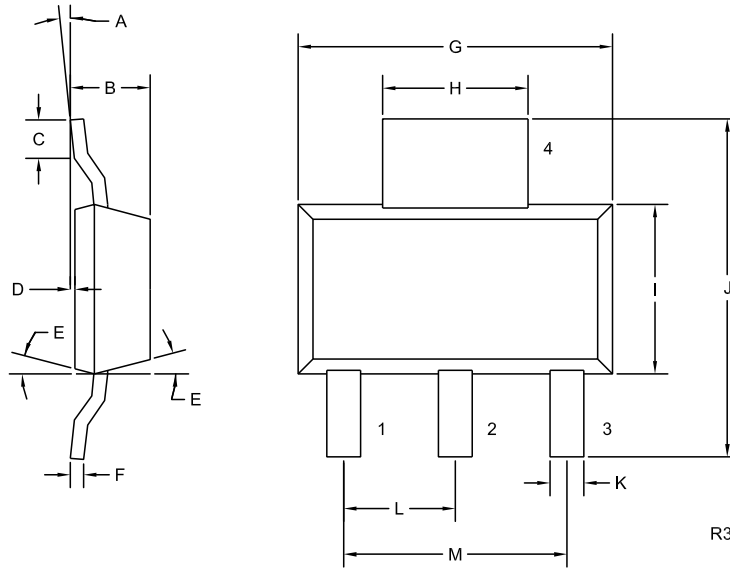
R3 (1-March 2010)

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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)

R3 (1-March 2010)