

CZT3150

**SURFACE MOUNT NPN  
SILICON POWER TRANSISTOR**

**POWER  
223™**



**SOT-223 CASE**

**Central™**  
Semiconductor Corp.

[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZT3150 type is a NPN Silicon Power Transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high current, high gain, fast switching 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
Continuous Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

**SYMBOL**

$V_{CBO}$	50
$V_{CEO}$	25
$V_{EBO}$	7.0
$I_C$	5.0
$I_B$	1.0
$P_D$	2.0
$T_J, T_{stg}$	-65 to +150
$\theta_{JA}$	62.5

**UNITS**

V
V
V
A
A
W
$^\circ\text{C}$
$^\circ\text{C/W}$

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

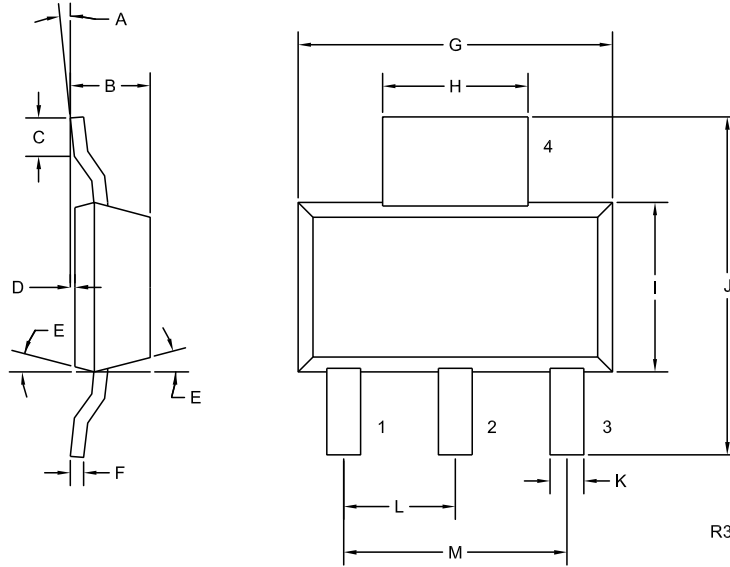
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{CBO}$	$V_{CB}=50\text{V}$			1.0	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=7.0\text{V}$			1.0	$\mu\text{A}$
$BV_{CEO}$	$I_C=10\text{mA}$	25			V
$V_{CE(SAT)}$	$I_C=3.0\text{A}, I_B=150\text{mA}$			0.5	V
$V_{CE(SAT)}$	$I_C=4.0\text{A}, I_B=200\text{mA}$			0.6	V
$V_{BE(SAT)}$	$I_C=3.0\text{A}, I_B=150\text{mA}$			1.10	V
$V_{BE(SAT)}$	$I_C=4.0\text{A}, I_B=200\text{mA}$			1.40	V
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	250		550	
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=2.0\text{A}$	150			
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=5.0\text{A}$	50			
$f_T$	$V_{CE}=6.0\text{V}, I_C=50\text{mA}, f=200\text{MHz}$		150		MHz
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			50	pF

R6 (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		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)

R6 (1-March 2010)